



Draft Corridor Analysis

**McKinney – Cole Corridor
Two-Way Conversion Feasibility Report**

Uptown Dallas, Inc.

Dallas, Texas

August 21, 2015

Kimley-Horn and Associates, Inc.
Dallas, Texas

Project #064485900
Registered Firm F-928

Kimley»Horn

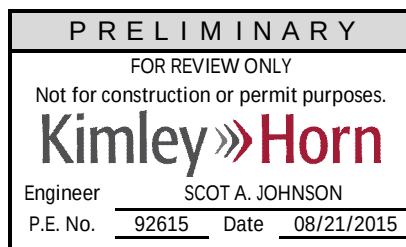
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EXECUTIVE SUMMARY

This traffic engineering study was conducted on behalf of Uptown Dallas, Inc. in order to examine the feasibility of converting McKinney Avenue and Cole Avenue/Carlisle Street from one-way to two-way operation. The study was conducted using traffic count data collected in 2015 and was focused on traffic conditions during the weekday AM and PM peak hours. This study is intended to evaluate traffic operations of vehicular traffic at the study intersections, identify intersection and thoroughfare deficiencies of the proposed two-way conversion traffic demands, and recommend transportation improvements needed to maintain traffic flow in the study area.

The existing configuration of McKinney Avenue and Cole Avenue/Carlisle Street is a one-way couplet. A one-way couplet is a roadway which provides two-way operation on two separate one-way roadways. McKinney Avenue becomes a one-way couplet north of the intersection with Oak Grove Avenue and Allen Street. From there, McKinney Avenue continues generally as a three-lane northbound couplet until the intersection with Harvard Avenue. Likewise, Cole Avenue forms the southbound one-way couplet from Harvard Avenue until Lemmon Avenue where Cole Avenue changes names to Carlisle Street. Carlisle Street continues southbound and users must take Allen Street to return to the two-way section of McKinney Avenue at Oak Grove Avenue.

One-way couplet roadways tend to focus on automobile movements, which leads to higher operating speeds. The proposed two-way conversion would naturally enforce the speed limit and the slower speeds increase the safety of the corridor. Travel speed is directly related to reactions time, injury severity to pedestrians, and awareness of the roadway surroundings.

In general, south of Blackburn Street, McKinney Avenue would have two lanes northbound and one lane southbound. Similarly, Cole Avenue would have two lanes southbound and one lane northbound. The proposed two-way conversion requires modifications to the Allen Street intersections. Reconfiguring the angled, one-way intersections may result in opportunities for new public spaces like plazas. North of Blackburn Street, the roadway configuration would be changed to one lane northbound and one lane southbound on both McKinney Avenue and Cole Avenue to maintain space for flexible use lanes. Possible applications of the flexible use lane would be bicycle lanes, parking, or other multimodal facilities. Flexible use lanes would end at the major intersections to provide north- and southbound left-turns.

Traffic operations were analyzed at the study intersections for existing volumes, year 2035 background traffic volumes with no roadway changes, and year 2035 traffic volumes with the conversion of McKinney Avenue and Cole Avenue to two-way operations. Conditions were analyzed for the weekday AM and PM peak hours. The 2035 traffic conditions was based on existing traffic with compound annual growth rates.

Based on the analysis and observations presented in this report, **the proposed two-way conversion of McKinney Avenue and Cole Avenue/Carlisle Street can be successfully incorporated without unreasonably hindering vehicle operations.** Some roadway changes are necessary to maintain traffic flow within the area, and future potential trolley modifications can be made to reduce conflict points.

The following existing intersections were selected to be part of this study:

South of Blackburn Street

- McKinney Avenue at Oak Grove Avenue;
- McKinney Avenue at Bowen Street;
- McKinney Avenue at Hall Street;
- McKinney Avenue at Lemmon Avenue;
- McKinney Avenue at Lemmon Avenue East
- McKinney Avenue at Cityplace Boulevard;
- McKinney Avenue at Blackburn Street;
- Allen Street at Sneed Street;
- Carlisle Street at Bowen Street;
- Carlisle Street at Hall Street;
- Cole Avenue at Lemmon Avenue;
- Cole Avenue at Lemmon Avenue East;
- Cole Avenue at Blackburn Street;

Between Blackburn Street and North Fitzhugh Avenue

- McKinney Avenue at Haskell Avenue;
- McKinney Avenue at North Dallas High School;
- McKinney Avenue at Cambrick Street;
- McKinney Avenue at Elizabeth Street;
- Cole Avenue at Haskell Avenue;
- Cole Avenue at North Dallas High School;
- Cole Avenue at Cambrick Street;
- Cole Avenue at Elizabeth Street;

North of North Fitzhugh Avenue

- McKinney Avenue at North Fitzhugh Avenue;
- McKinney Avenue at Armstrong Avenue;
- McKinney Avenue at Knox Street;
- McKinney Avenue at Monticello Avenue;
- McKinney Avenue at Harvard Avenue;
- Cole Avenue at North Fitzhugh Avenue;
- Cole Avenue at Armstrong Avenue;
- Cole Avenue at Knox Street;
- Cole Avenue at Monticello Avenue; and
- Cole Avenue at Harvard Avenue.

The M-Line Trolley is an important part of the Uptown district and is capable of working in its existing configuration with the two-way conversion. However, some modifications could improve the compatibility of the trolley with the proposed two-way streets. These potential modifications include realigning the southbound trolley at the proposed intersection of McKinney Avenue at Allen Street at Oak Grove Street, realigning the northbound trolley at the same intersection to remain in the outside lane, and move the trolley from the eastern side of Cole Avenue, between Lemmon Avenue and Blackburn Street, to the western side.

With the proposed two-way conversion, parking adjustments would have to be made. The conversion removes the 7 or 8 spaces of on-street parallel parking on McKinney Avenue between Hall Street and Lemmon Avenue, and the 3 angled parking spots on the southeast

corner of Knox Street and McKinney Avenue. However, additional parking may be added between Armstrong Avenue and Blackburn Street, if the flexible use lanes are used for this purpose. The proposed two-way conversion retains most of the existing parking, and the flexible use lanes can be utilized without time restrictions.

The following proposed changes to accommodate two-way operation were included in the analysis and shown in **Exhibit 3**. If an intersection is not included, it follows the default two-and-one or one-and-one lane configurations noted above, with the cross street maintaining its existing lane configuration. Except where noted, existing angled parking is maintained, but it might be necessary to change the direction of striping.

At the proposed intersection of Howell Street at McKinney Avenue:

- Change Howell Street from right-in/right-out operation to full-access operation.

At the proposed intersection of Oak Grove Avenue, Allen Street, and McKinney Avenue:

- Reconstruct as a single four-leg signalized intersection with left-turn lanes at all approaches.
- Potential future trolley modifications to keep the rails in the curb lane.

At the intersection of Allen Street and Cole Avenue:

- Provide an all-way stop at the intersection to maintain trolley safety and add pedestrian safety.
- Restripe Allen Street for one lane westbound and two lanes eastbound.

At the proposed intersection of Allen Street and Carlisle Street:

- Reconstruct Allen Street to intersect Carlisle Street orthogonally. Provide an all-way stop at the intersection.
- Restripe Allen Street for one lane westbound, and Carlisle Street for one lane northbound, one lane southbound, and a southbound left-turn lane.

At the intersection of McKinney Avenue and Hall Street:

- Restripe McKinney Avenue for two lanes northbound, one lane southbound, and maintain the existing lanes on Hall Street.
- Prohibit southbound left-turns from McKinney Avenue to Hall Street due to lack of dimension for a left-turn lane and no ROW available for widening.

At the intersection of McKinney Avenue and Lemmon Avenue (Eastbound):

- Restripe McKinney Avenue for two lanes northbound, one lane southbound, a southbound left-turn lane, and maintain the existing lanes on Lemmon Avenue.
- Widen the southbound approach to provide for the southbound left-turn lane. A corner clip would be necessary at the southwest corner of the intersection to accommodate for the offset through movement. No parking would be affected.

At the intersection of Carlisle Street/Cole Avenue and Lemmon Avenue (Eastbound):

- Restripe Carlisle Street/Cole Avenue for one lane northbound, one lane southbound, a southbound left-turn lane, and maintain the existing lanes on Lemmon Avenue.
- Widen the southbound approach if the trolley remains in the contraflow condition. If the trolley is relocated to the western edge of Cole Avenue, maintain the existing cross section of Cole Avenue.

At the intersection of Cole Avenue and Lemmon Avenue East (Westbound):

- Restripe Cole Avenue for one lane northbound, one lane southbound, and maintain the existing lanes on Lemmon Avenue.
- The contraflow trolley condition would operate southbound along the eastern edge of Cole Avenue, protected from the adjacent northbound lane by a physical barrier.

At the intersection of McKinney Avenue and Cityplace Boulevard:

- Restripe McKinney Avenue for two lanes northbound, one lane southbound, and maintain the existing lanes on Cityplace Boulevard.
- Change Cityplace Boulevard from right-in/right-out operation to full-access operation.

At the intersection of McKinney Avenue and Blackburn Street:

- Restripe McKinney Avenue for one lane northbound, a northbound left-turn lane, one lane southbound, a southbound left-turn lane, and on Blackburn Street restripe the inside westbound through lane to a left-turn-only lane. The westbound approach should be monitored for construction of a left-turn lane in the existing median, making the approach a left-turn-only lane, two through lanes, and a shared through-right lane.

At the intersection of Cole Avenue and Blackburn Street:

- Restripe Cole Avenue for one lane northbound, one lane southbound, a southbound left-turn lane, and on Blackburn Street construct an eastbound left-turn lane. The westbound approach would maintain the existing lanes. The additional pavement needed for the eastbound left-turn lane could be split between the existing median, and the southern side of Blackburn Street. This would allow more green space within the median, where mature trees exist.

At the intersection of Cole Avenue and Haskell Avenue:

- Restripe Cole Avenue for one lane northbound, one lane southbound, one flexible use lane on the western side of Cole Avenue, and maintain the existing lanes of Haskell Avenue.
- The northeast corner of the intersection has a large unused triangular piece of pavement. Ideally, this area would be reclaimed from the right-of-way with the conversion of McKinney Avenue and Cole Avenue.

At the intersection of McKinney Avenue and North Fitzhugh Avenue:

- Restripe McKinney Avenue for one lane northbound, a northbound left-turn lane, a northbound right-turn lane, one lane southbound, a southbound left-turn lane, construct a westbound left-turn lane, and maintain the existing lanes of the eastbound approach.
- Widen the northbound approach within the existing ROW to provide for the northbound right-turn lane.
- The flexible use lane would end before the intersection to provide for the north- and southbound left-turns.
- Widen the westbound approach within the existing median to construct the westbound left-turn lane.

At the intersection of Cole Avenue and North Fitzhugh Avenue:

- Restripe Cole Avenue for one lane northbound, a northbound left-turn lane, one lane southbound, a southbound left-turn lane, construct an eastbound left-turn lane, and maintain the existing lanes of the westbound approach.
- The flexible use lane would end before the intersection to provide for the north- and southbound left-turns.
- Widen the eastbound approach within the existing median to construct the eastbound left-turn lane.

At the intersection of McKinney Avenue and Armstrong Avenue:

- Restripe McKinney Avenue for one lane northbound, one lane southbound, one flexible use lane on the western side of McKinney Avenue, and maintain the existing lanes on Armstrong Avenue.
- Monitor the intersection for signalization.

At the intersection of Cole Avenue and Armstrong Avenue:

- Restripe Cole Avenue for one lane northbound, one lane southbound, one flexible use lane on the western side of Cole Avenue south of Armstrong Avenue, one flexible use lane on the eastern side of Cole Avenue both north and south of Armstrong Avenue, and maintain the existing lanes of Armstrong Avenue.
- Monitor the intersection for signalization.

At the intersection of McKinney Avenue and Knox Street:

- Restripe McKinney Avenue for one lane northbound, a northbound left-turn lane, a northbound right-turn lane, one lane southbound, a southbound left-turn lane, and maintain the existing lanes of Knox Street.
- Widen the northbound approach within the existing ROW to provide for the northbound right-turn lane, removing some angled parking, but resulting in additional pedestrian or patio space on the corner.
- The flexible use lane would end before the intersection to provide for the north- and southbound left-turns.

At the intersection of Cole Avenue and Knox Street:

- Restripe Cole Avenue for one lane northbound, a northbound left-turn lane, one lane southbound, a southbound left-turn lane, and maintain the existing lanes of the Knox Street.
- The flexible use lane would end before the intersection to provide for the north- and southbound left-turns.

At the intersection of McKinney Avenue and Monticello Avenue:

- Restripe McKinney Avenue for one lane northbound, one lane southbound, one flexible use lane on the western side of McKinney Avenue, and maintain the existing lanes on Monticello Avenue.
- Monitor the intersection for signalization.

At the intersection of McKinney Avenue and Harvard Avenue:

- Restripe McKinney Avenue for one lane northbound, a northbound right-turn lane, one lane southbound, one flexible use lane on the eastern side of Harvard Avenue, and maintain the existing lanes on McKinney Avenue.

At the intersection of Cole Avenue and Harvard Avenue:

- Restripe Cole Avenue for one lane northbound, one lane eastbound, one lane westbound, and a flexible use lane on the eastern side of Cole Avenue.
- Investigate intersection modifications to improve the safety of the Katy Trail (i.e. reconfigure the intersection to make the Katy Trail the crosswalk of the eastbound approach).

I. INTRODUCTION

A. Purpose

Kimley-Horn was retained to conduct a feasibility study of future traffic conditions associated with the conversion of McKinney Avenue and Cole Avenue/Carlisle Street from one-way to two-way operation. A vicinity map is provided as **Exhibit 1**, identifying the study intersections. This study is intended to evaluate traffic operations of vehicular traffic at the study intersections, identify intersection and thoroughfare deficiencies of the projected two-way conversion traffic demands, and recommend transportation improvements needed to maintain traffic flow in the study area.

B. Methodology

The traffic evaluation was comprised of three scenarios for which weekday AM and PM peak hour intersection level of service analyses were performed. The year 2035 was used as the regional buildout year. The first scenario analyzed existing traffic conditions (2015); the second analyzed background traffic conditions with no roadway changes in the regional buildout year (2035); and the third scenario analyzed the proposed two-way conversion traffic conditions in the regional buildout year (2035). For both unsignalized and signalized intersections, the capacity analyses were conducted using the *Synchro*TM software package and its associated *Intersection* reports for signalized intersections and *Highway Capacity Manual* reports for unsignalized intersections.

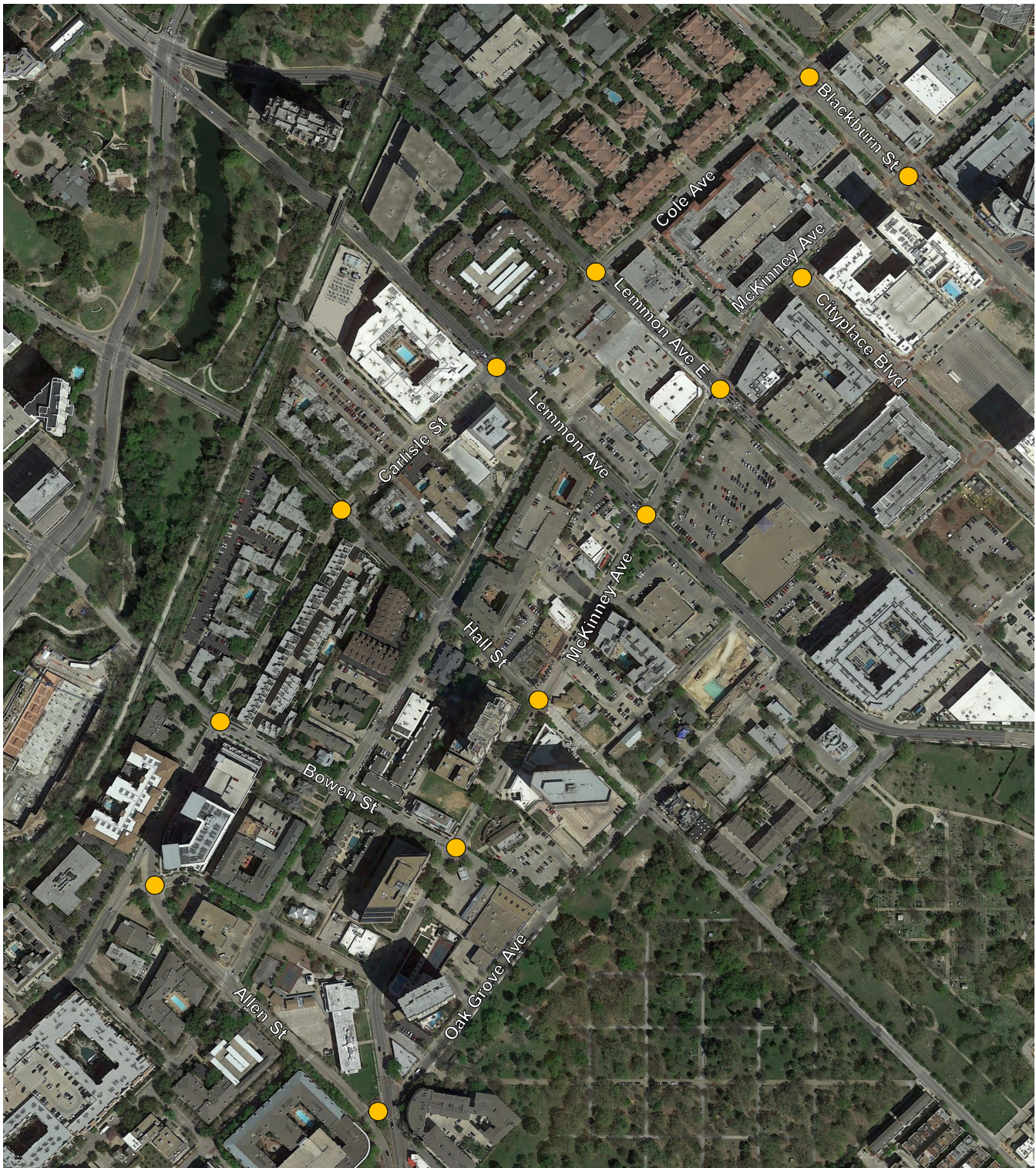


EXHIBIT 1

Vicinity Map (South of Blackburn Street)

McKinney-Cole Uptown Study



North
↑
Not To Scale

LEGEND:
● = Study Intersection

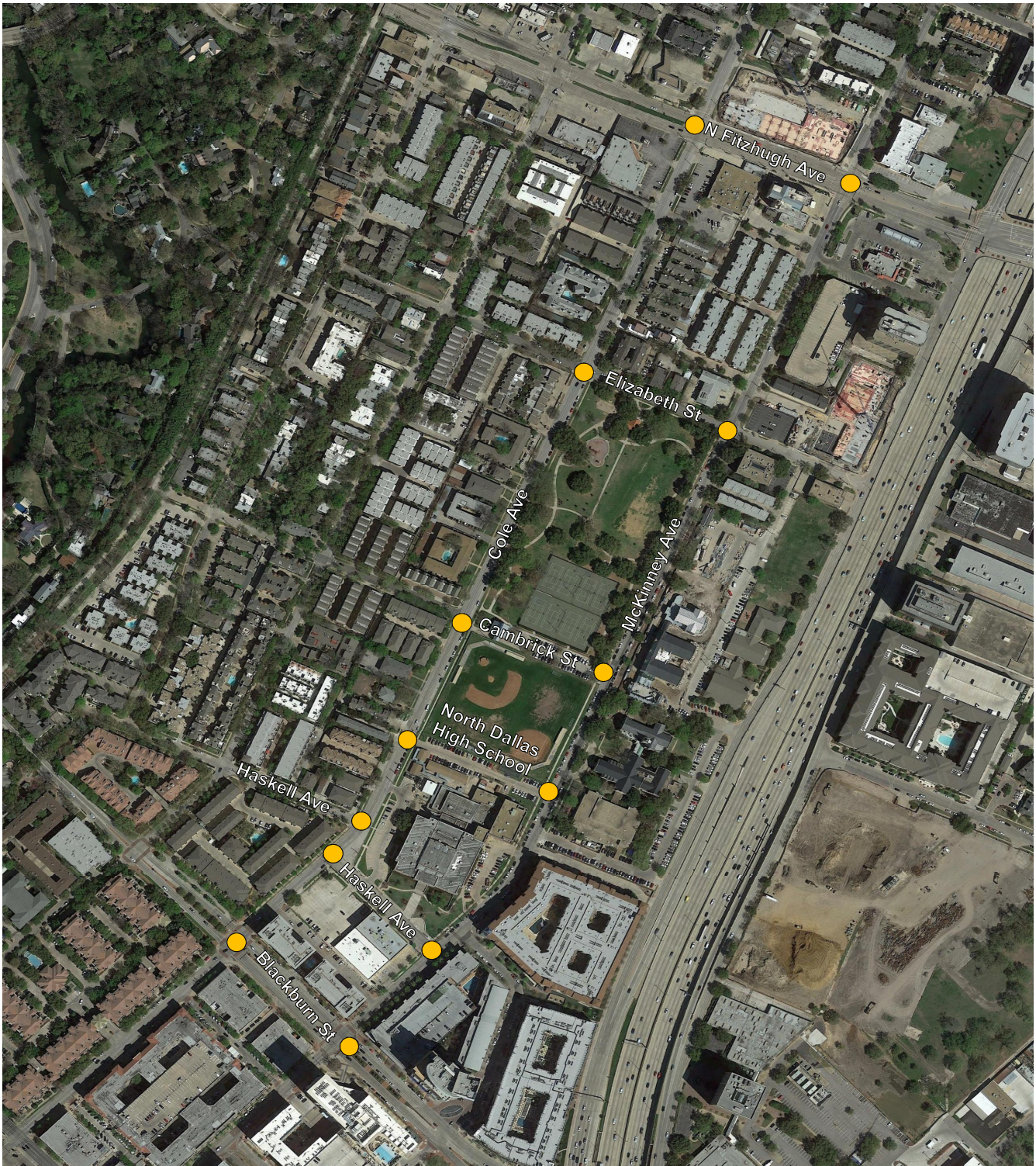


EXHIBIT 1

Vicinity Map (Between Blackburn Street & Fitzhugh Avenue)

McKinney-Cole Uptown Study

Kimley»Horn

North



Not To Scale

LEGEND:

 = Study Intersection

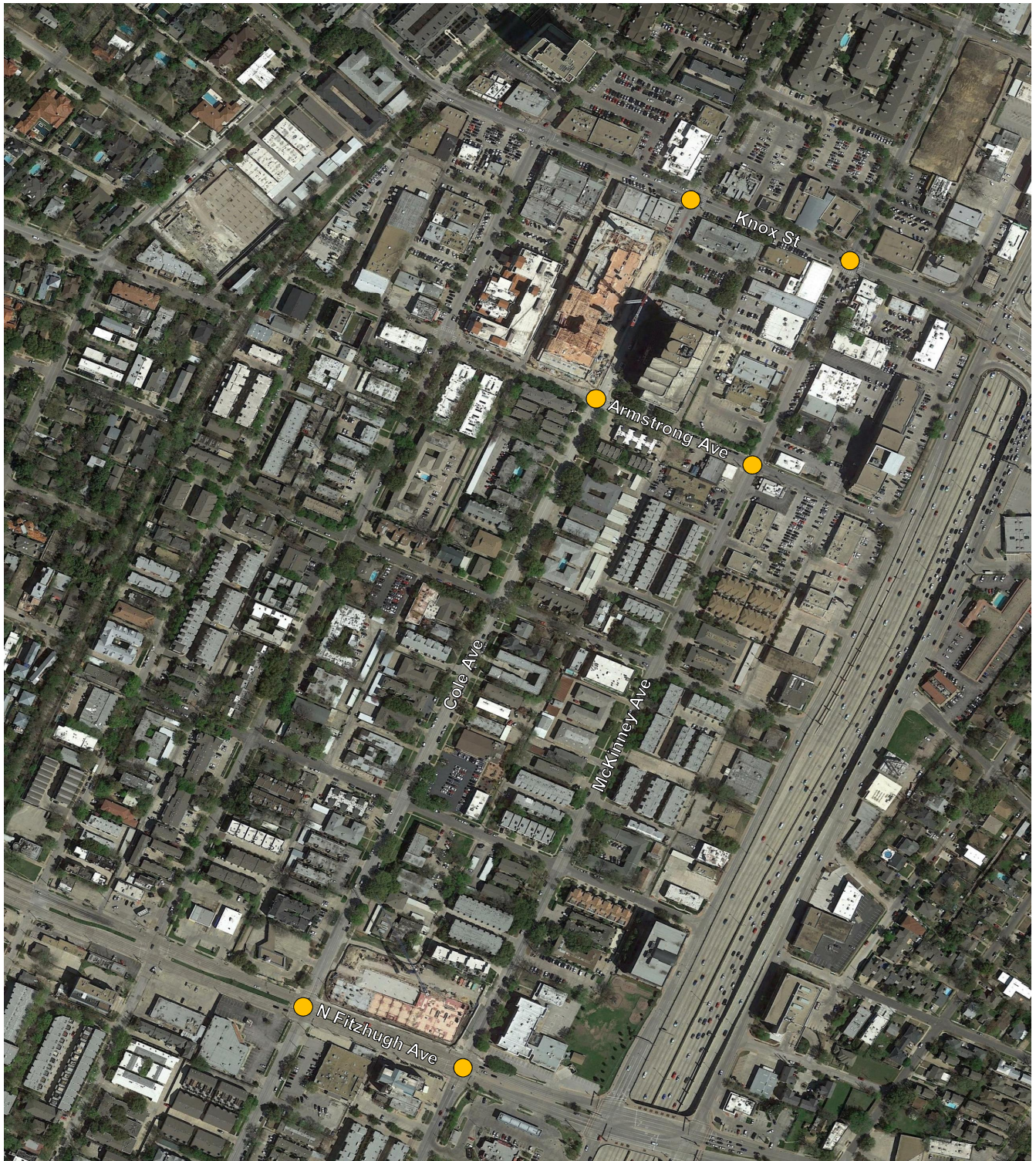


EXHIBIT 1

Vicinity Map (Between Fitzhugh Avenue & Knox Street)

McKinney-Cole Uptown Study

Kimley»Horn

North



Not To Scale

LEGEND:

 = Study Intersection

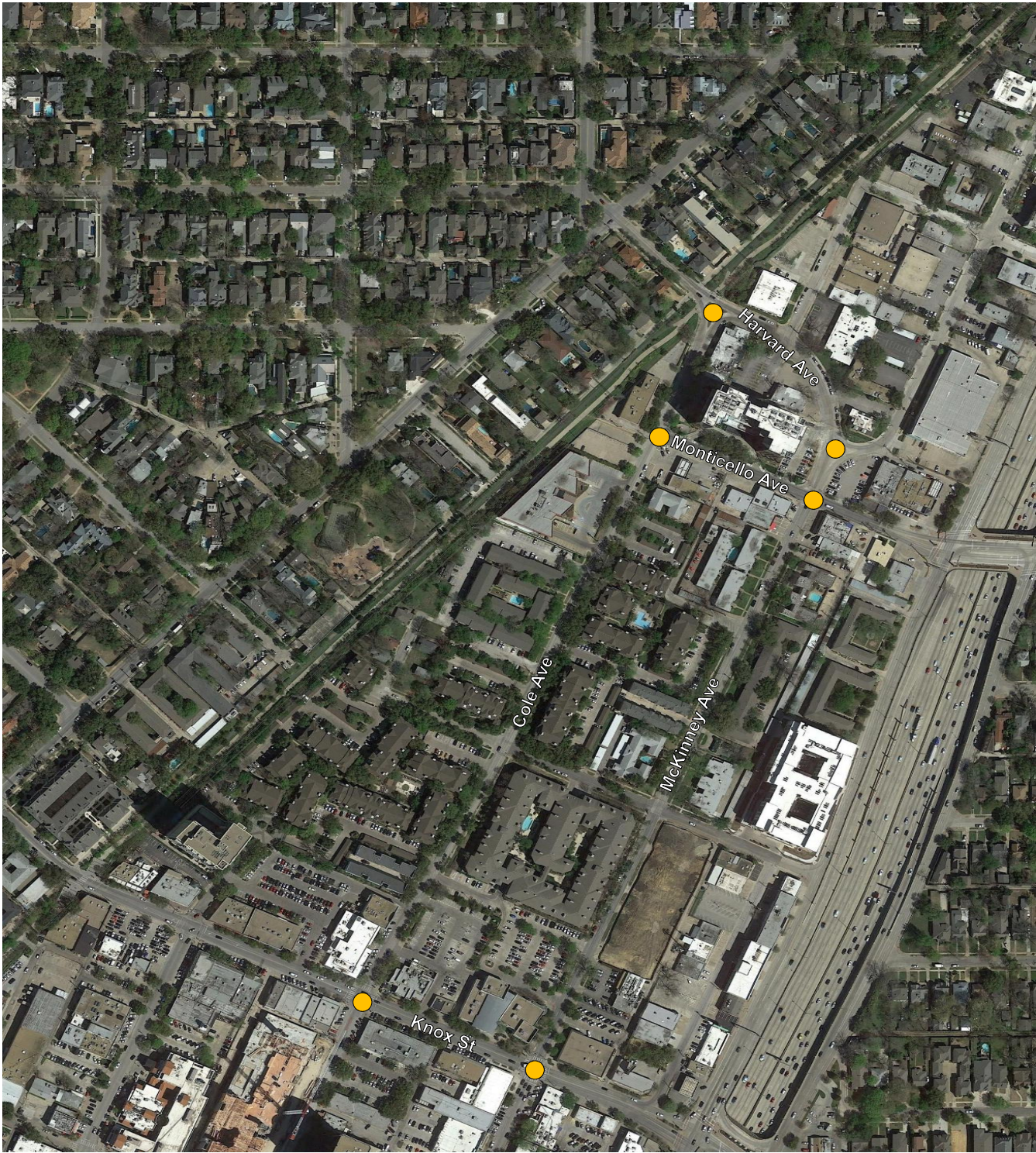


EXHIBIT 1

Vicinity Map (North of Knox)

McKinney-Cole Uptown Study



North
↑
Not To Scale

LEGEND:
 = Study Intersection

II. EXISTING AND FUTURE AREA CONDITIONS

A. Roadway Characteristics

The following existing intersections were selected to be part of this study:

South of Blackburn Street

- McKinney Avenue at Oak Grove Avenue;
- McKinney Avenue at Bowen Street;
- McKinney Avenue at Hall Street;
- McKinney Avenue at Lemmon Avenue;
- McKinney Avenue at Lemmon Avenue East
- McKinney Avenue at Cityplace Boulevard;
- McKinney Avenue at Blackburn Street;
- Allen Street at Sneed Street;
- Carlisle Street at Bowen Street;
- Carlisle Street at Hall Street;
- Cole Avenue at Lemmon Avenue;
- Cole Avenue at Lemmon Avenue East;
- Cole Avenue at Blackburn Street;

Between Blackburn Street and North Fitzhugh Avenue

- McKinney Avenue at Haskell Avenue;
- McKinney Avenue at North Dallas High School;
- McKinney Avenue at Cambrick Street;
- McKinney Avenue at Elizabeth Street;
- Cole Avenue at Haskell Avenue;
- Cole Avenue at North Dallas High School;
- Cole Avenue at Cambrick Street;
- Cole Avenue at Elizabeth Street;

North of North Fitzhugh Avenue

- McKinney Avenue at North Fitzhugh Avenue;
- McKinney Avenue at Armstrong Avenue;
- McKinney Avenue at Knox Street;
- McKinney Avenue at Monticello Avenue;
- McKinney Avenue at Harvard Avenue;
- Cole Avenue at North Fitzhugh Avenue;
- Cole Avenue at Armstrong Avenue;
- Cole Avenue at Knox Street;
- Cole Avenue at Monticello Avenue; and
- Cole Avenue at Harvard Avenue.

The major study area roadways are described below.

McKinney Avenue – is a three-lane one-way couplet roadway. The roadway is a northbound thoroughfare. In the project vicinity, McKinney Avenue has numerous signalized intersections with east-west thoroughfares and numerous unsignalized intersections with residential streets and commercial driveways. The speed limit is 30 MPH throughout the corridor. McKinney Avenue is classified as a minor arterial on the

City's Thoroughfare Plan. McKinney Avenue and Cole Avenue are proposed to be converted to two-way operation.

Cole Avenue/Carlisle Street – is a three-lane one-way couplet roadway. The roadway is a southbound thoroughfare. In the project vicinity, Cole Avenue has numerous signalized intersections with east-west thoroughfares and numerous residential streets and commercial driveways. The speed limit is 30 MPH nearest throughout the corridor. Cole Avenue is classified as a minor arterial on the City's Thoroughfare Plan. Cole Avenue changes names to Carlisle Street when it crosses Lemmon Avenue. Carlisle Street continues with the same roadway configuration until the intersection with Allen Street. After the intersection with Allen Street, Carlisle Street changes to two-way operation with two lanes southbound and one lane northbound.

Allen Street – is a three-lane one-way roadway that connects Carlisle Street to McKinney Avenue. The speed limit is 30 MPH. In the study area, Allen Street has a few unsignalized intersections with residential streets and commercial driveways. Allen Street is shown as an extension of Carlisle Street on the City's Thoroughfare Plan.

Bowen Street – is an undivided roadway that generally runs east-west. The speed limit is 30 MPH. Bowen Street is identified as a collector on the City's Thoroughfare Plan.

Hall Street – is a two-lane undivided roadway that generally runs east-west. The speed limit is 30 MPH. At the intersection with McKinney Avenue, Bowen Street is two-lane undivided section, but at the intersection with Carlisle Street, the cross section is four-lanes undivided. Hall Street west of US 75 is not identified on the City's Thoroughfare Plan.

Lemmon Avenue – is a four-lane one-way couplet that generally runs southeast. Lemmon Avenue is part of a one-way couplet with Lemmon Avenue East. The speed limit is 35 MPH. Lemmon Avenue is identified as a principal arterial on the City's thoroughfare plan.

Lemmon Avenue East – is a four-lane one-way couplet that generally runs northwest. Lemmon Avenue East is the other part of the one-way couplet with Lemmon Avenue. The speed limit is 35 MPH. Lemmon Avenue East is identified as a principal arterial on the City's thoroughfare plan.

Cityplace Boulevard – is a two-lane divided roadway that currently is right-in/right-out to McKinney Avenue. The speed limit is 30 MPH.

Blackburn Street – is a six-lane divided roadway that generally runs east-west. West of Cole Avenue, Blackburn Street reduces to a four-lane divided roadway. The speed limit is 30 MPH. On the south side of Blackburn Street, the trolley runs contraflow to the eastbound traffic. The trolley is separated by a raised curb, with one driveway opening between McKinney Avenue and Cole Avenue. Blackburn Street has signalized intersections with McKinney Avenue and Cole Avenue and is identified as a collector on the City's thoroughfare plan.

Haskell Avenue – is a two-lane undivided roadway that serves North Dallas High School and as a connection between McKinney Avenue and Cole Avenue. Haskell

Avenue extends west of Cole Avenue with a speed limit of 30 MPH. Haskell Avenue has unsignalized intersections with McKinney Avenue and Cole Avenue. At the intersection of Cole Avenue and Haskell Avenue, there is a large unused triangular section of pavement. Ideally, this area would be reclaimed from the right-of-way with the conversion of McKinney Avenue and Cole Avenue.

North Dallas High School Drive – is a two-lane undivided roadway that serves North Dallas High School as a connection between McKinney Avenue and Cole Avenue. Head-in parking exists for North Dallas High School.

Cambrick Street – is a two-lane undivided roadway that generally runs east-west. In between McKinney Avenue and Cole Avenue, Cambrick Street serves as a parking lot for Cole Park. Bollards exist that prevent the connection of McKinney Avenue and Cole Avenue via Cambrick Street. Cambrick Street extends west of Cole Avenue and east of McKinney Avenue as a two-lane undivided local street.

Elizabeth Street – is a two-lane undivided roadway that generally runs east-west. On-street parallel parking exists on both the north and south side of Elizabeth Street. Elizabeth Street has unsignalized intersections with McKinney Avenue and Cole Avenue. The speed limit is 30 MPH.

North Fitzhugh Avenue – is a six-lane divided roadway that generally runs east-west. North Fitzhugh Avenue is identified as a minor arterial on the City's thoroughfare plan and the speed limit is 30 MPH. North Fitzhugh Avenue has signalized intersections with McKinney Avenue and Cole Avenue. With the conversion, a westbound left-turn lane would be constructed on North Fitzhugh Avenue at the intersection with McKinney Avenue, and an eastbound left-turn lane on North Fitzhugh Avenue at the intersection with Cole Avenue.

Armstrong Avenue – is a two-lane undivided roadway that generally runs east-west. On-street parallel parking exists on the north and south side of Armstrong Avenue. Armstrong Avenue has unsignalized intersections with McKinney Avenue and Cole Avenue, but they are recommended to be monitored for signalization with the proposed conversion.

Knox Street – is a four-lane undivided roadway. The roadway is an east-west thoroughfare in Dallas. In the project vicinity, Knox Street has signalized intersections at Cole Avenue and McKinney Avenue, along with a few unsignalized intersections with commercial driveways. The speed limit adjacent to the site is 30 MPH. Knox Street is identified as a collector on the City's thoroughfare plan. In the future, Knox Street is proposed to be reduced to a three-lane undivided roadway with a center two-way left-turn lane (TWLTL). The future conditions are modeled and discussed in a separate report.

Monticello Avenue – is a two-lane undivided roadway that generally runs east-west. Monticello Avenue has an all-way stop at the intersection with McKinney Avenue, and is two-way stop controlled at the intersection with Cole Avenue.

Harvard Avenue – is a two-lane undivided roadway that connects Cole Avenue to McKinney Avenue. At the intersection of Harvard Avenue and McKinney Avenue,

McKinney Avenue veers to the right and Harvard Street continues as the connection to Cole Avenue.

The McKinney Avenue Transit Authority M-Line Trolley operates throughout Uptown. The trolley line runs north along McKinney Avenue, turns onto Cityplace Boulevard, goes through a turntable at the end of the street, and then returns to McKinney Avenue. The trolley continues on McKinney Avenue, then turns west along Blackburn Street, then turns south onto Cole Avenue until Lemmon Avenue, where the trolley follows the offset east to Cole Avenue. The trolley continues along Cole Avenue until the intersection with Allen Street, where it turns east onto Allen Street and makes its way back to McKinney Avenue.

The M-Line Trolley is an important part of the Uptown district and is capable of working in its existing configuration with the two-way conversion. However, some modifications could improve the compatibility of the trolley with the proposed two-way streets. These potential modifications include realigning the southbound trolley at the proposed intersection of McKinney Avenue at Allen Street at Oak Grove Street, realigning the northbound trolley at the same intersection to remain in the outside lane, and move the trolley from the eastern side of Cole Avenue, between Lemmon Avenue and Blackburn Street, to the western side. These modifications are explained in detail in a later section.

Exhibit 2 illustrates the intersection geometry used for the existing traffic analyses, and **Exhibit 3** illustrates the intersection geometry used for the McKinney Avenue and Cole Avenue conversion to two-way operation. **Exhibit 2** and **3** are bound separately from this report.

B. Existing Study Area

The existing configuration of McKinney Avenue and Cole Avenue/Carlisle Street is a one-way couplet. A one-way couplet is a roadway which provides two-way operation on two separate one-way roadways. McKinney Avenue becomes a one-way couplet north of the intersection with Oak Grove Avenue and Allen Street. From there, McKinney Avenue continues generally as a three-lane northbound couplet until the intersection with Harvard Avenue. Likewise, Cole Avenue forms the southbound one-way couplet from Harvard Avenue until Lemmon Avenue where Cole Avenue changes names to Carlisle Street. Carlisle Street continues southbound and users must take Allen Street to return to the two-way section of McKinney Avenue at Oak Grove Avenue. **Exhibit 2** shows the existing intersection geometries.

C. Proposed Area Improvements

In general, south of Blackburn Street, McKinney Avenue would have two lanes northbound and one lane southbound. Similarly, Cole Avenue would have two lanes southbound and one lane northbound. The proposed two-way conversion requires modifications to the Allen Street intersections. Reconfiguring the angled, one-way intersections may result in opportunities for new public spaces like plazas. North of Blackburn Street, the roadway configuration would be changed to one lane northbound and one lane southbound on both McKinney Avenue and Cole Avenue to maintain space for flexible use lanes. Possible applications of the flexible use lane would be bicycle lanes, parking, or other multimodal facilities. Flexible use lanes would end at the

major intersections to provide north- and southbound left-turns. **Exhibit 3** shows the proposed roadway changes and intersection geometries.

D. Existing Traffic Volumes

Weekday AM and PM peak hour turning movement counts were collected in April of 2015 at the major study intersections. 24-hour machine counts were also collected adjacent to the site on McKinney Avenue south of Lemmon Avenue East (11,523 vehicles per day (vpd)), McKinney Avenue south of Cambrick Street (7,366 vpd), McKinney Avenue south of Knox Street (7,907 vpd), Cole Avenue south of Lemmon Avenue East (9,787 vpd), Cole Avenue south of Elizabeth Street (4,945 vpd), and Cole Avenue south of Knox Street (5,705 vpd). **Exhibit 4** shows the existing weekday AM, and PM peak hour traffic volumes. The raw count sheets are provided in the **Appendix**, as well as a comparison between the 24-hour volumes collected and previous 24-hour counts.

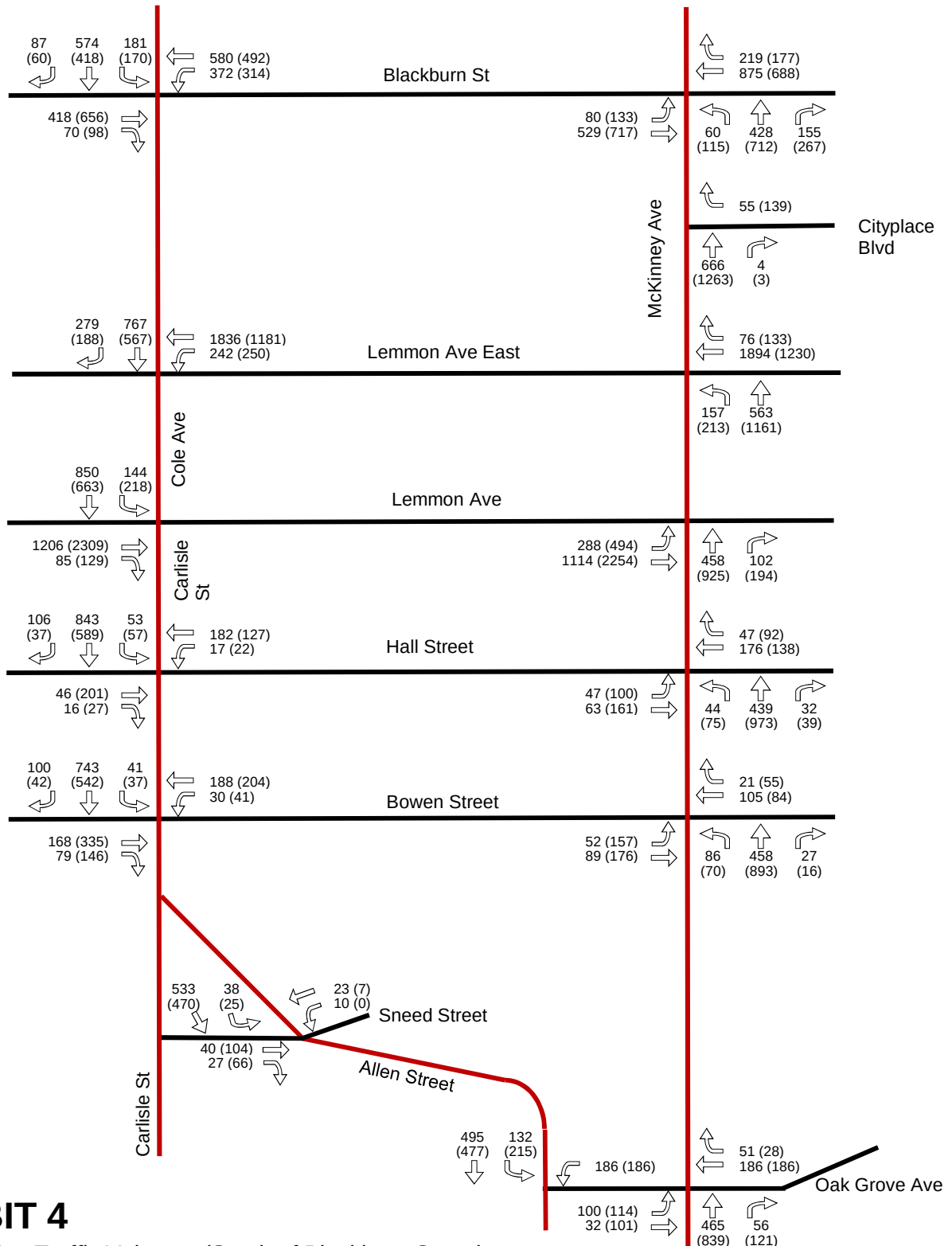


EXHIBIT 4

2015 Existing Traffic Volumes (South of Blackburn Street)

McKinney-Cole Uptown Study

Kimley»Horn

North



Not To Scale

LEGEND:

X (Y)

X = Weekday AM Peak Hour Turning Movements

(Y) = Weekday PM Peak Hour Turning Movements

Volumes may not sum from point to point due to rounding and presence of smaller driveways not included in analysis.

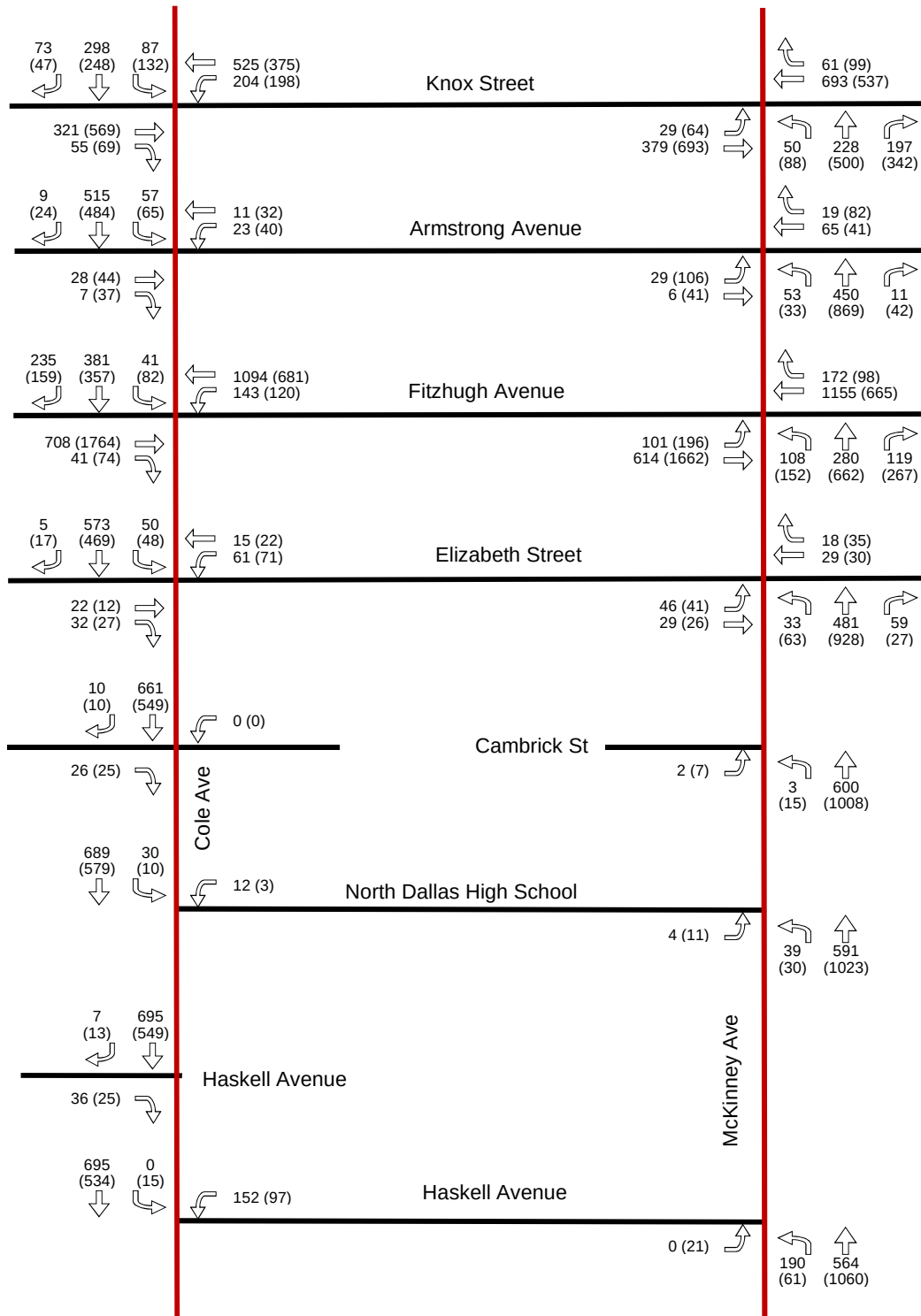


EXHIBIT 4

2015 Existing Traffic Volumes (Between Blackburn Street & Knox Street)

McKinney-Cole Uptown Study

Kimley»Horn

North



Not To Scale

LEGEND:

X (Y)

X = Weekday AM Peak Hour Turning Movements

(Y) = Weekday PM Peak Hour Turning Movements

Volumes may not sum from point to point due to rounding and presence of smaller driveways not included in analysis.

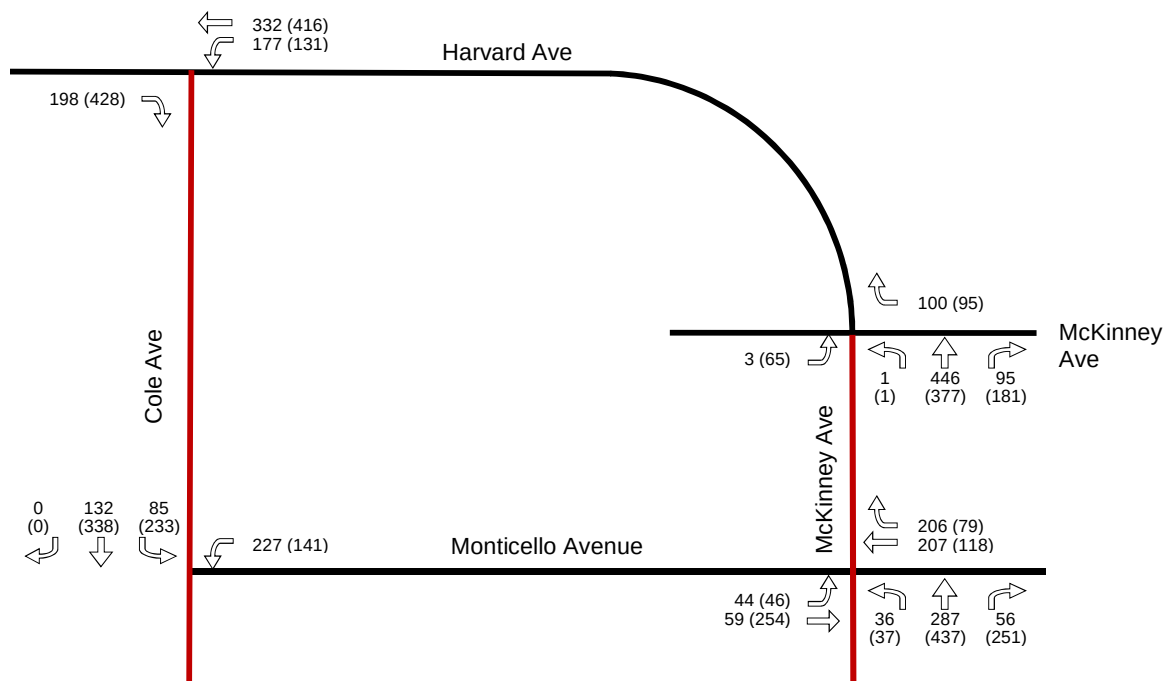


EXHIBIT 4

2015 Existing Traffic Volumes (North of Knox Street)

McKinney-Cole Uptown Study



North
↖
Not To Scale

LEGEND:
X (Y)
X = Weekday AM Peak Hour Turning Movements
(Y) = Weekday PM Peak Hour Turning Movements
Volumes may not sum from point to point due to rounding
and presence of smaller driveways not included in analysis.

III. TRAFFIC REASSIGNMENT

A. Two-Way Conversion Distribution Assumptions

With the proposed two-way conversion of McKinney Avenue and Cole Avenue/Carlisle Street, existing vehicle traffic would have the option to alter their route choices. It was assumed that two-thirds of the northbound traffic would still utilize McKinney Avenue, with one-third shifting to use the proposed northbound section of Cole Avenue, following the proposed lane configuration south of Blackburn Street. Likewise, two-thirds of the southbound traffic would still utilize Cole Avenue, with one-third shifting to use the proposed southbound section of McKinney Avenue, following the proposed lane configuration south of Blackburn Street. The east and westbound turning movements were developed using the same methodology.

B. Development of 2035 Background Traffic

In order to obtain the 2035 traffic volumes, the existing traffic counts and historical volumes throughout the corridor were compared to find expected growth trends within the study area. Based on the recent growth in the area, an annual growth rate of 0.5% was assumed for the background traffic. To find the 2035 background traffic, the existing 2015 counts were grown by 0.5% annually for 20 years. **Exhibit 5** shows the resulting traffic volumes applied to the 2035 background scenario.

C. Development of 2035 Two-Way Conversion Traffic

In order to obtain the 2035 two-way conversion traffic, the same 0.5% was applied to the converted volumes for 20 years. **Exhibit 6** shows the resulting traffic volumes applied to the 2035 two-way conversion traffic.

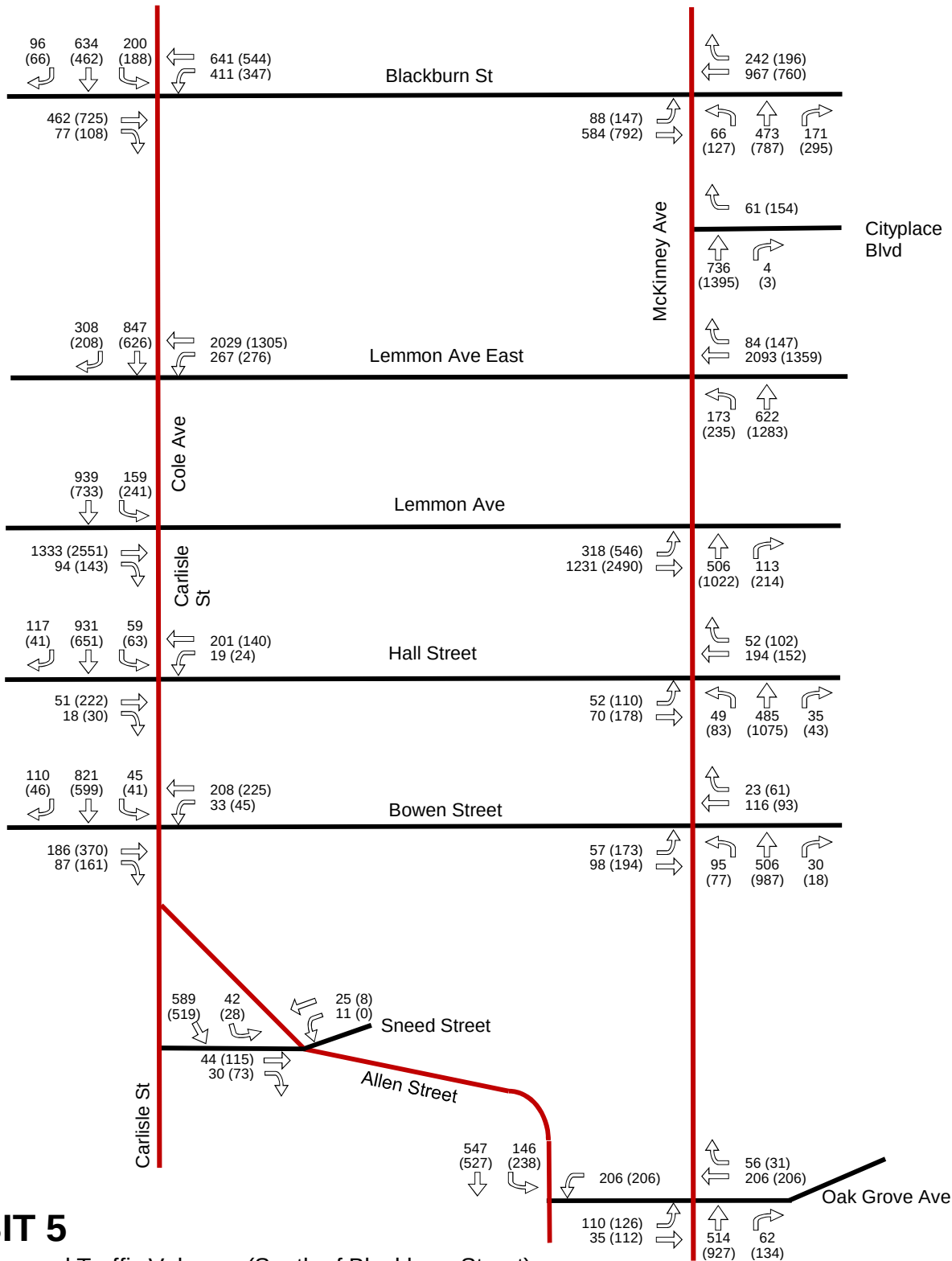


EXHIBIT 5

2035 Background Traffic Volumes (South of Blackburn Street)

McKinney-Cole Uptown Study



North
↖
Not To Scale

LEGEND:
X (Y)
X = Weekday AM Peak Hour Turning Movements
(Y) = Weekday PM Peak Hour Turning Movements
Volumes may not sum from point to point due to rounding
and presence of smaller driveways not included in analysis.

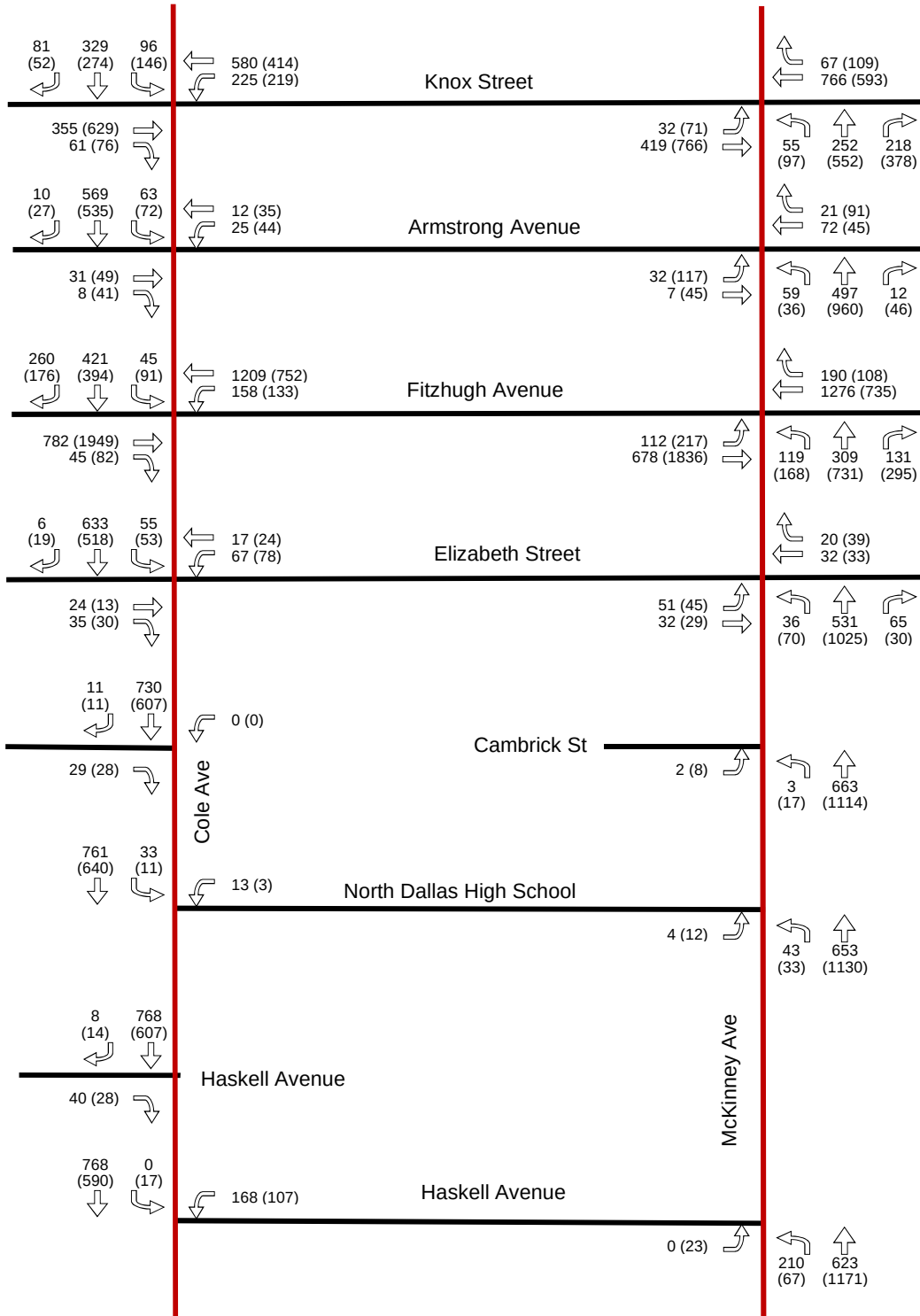


EXHIBIT 5

2035 Background Traffic Volumes (Between Blackburn Street & Knox Street)

McKinney-Cole Uptown Study

Kimley»Horn

North



Not To Scale

LEGEND:

X (Y)

X = Weekday AM Peak Hour Turning Movements

(Y) = Weekday PM Peak Hour Turning Movements

Volumes may not sum from point to point due to rounding and presence of smaller driveways not included in analysis.

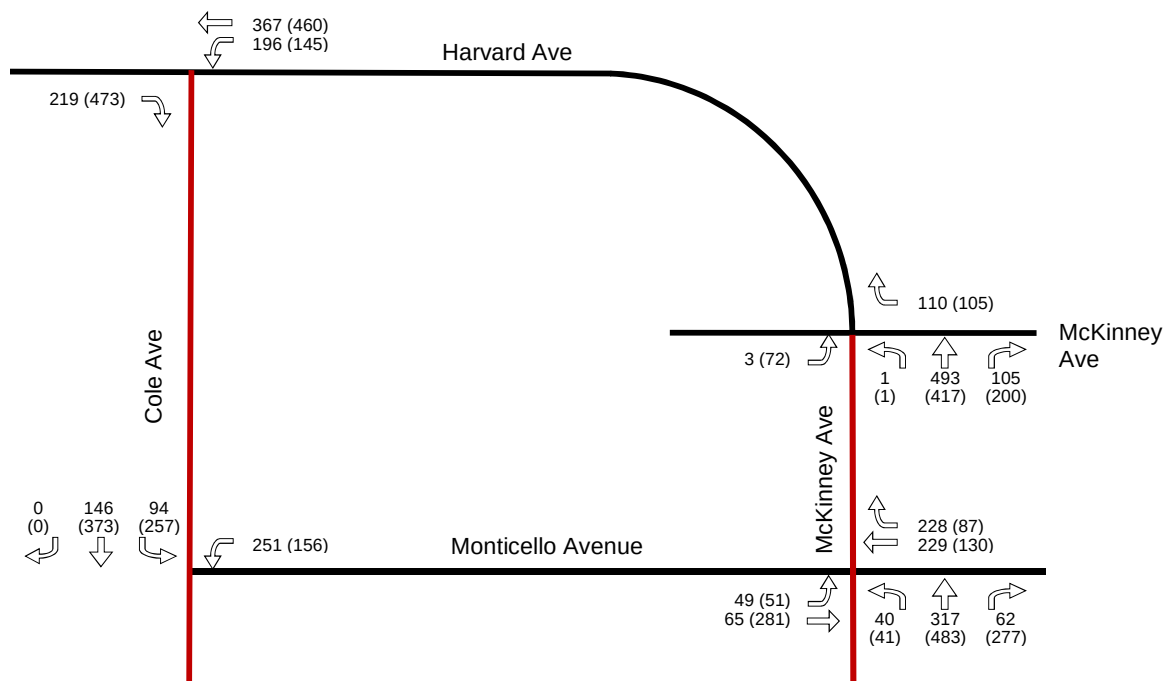


EXHIBIT 5

2035 Background Traffic Volumes (North of Knox Street)

McKinney-Cole Uptown Study



North
↖
Not To Scale

LEGEND:
X (Y)
X = Weekday AM Peak Hour Turning Movements
Y = Weekday PM Peak Hour Turning Movements
Volumes may not sum from point to point due to rounding
and presence of smaller driveways not included in analysis.

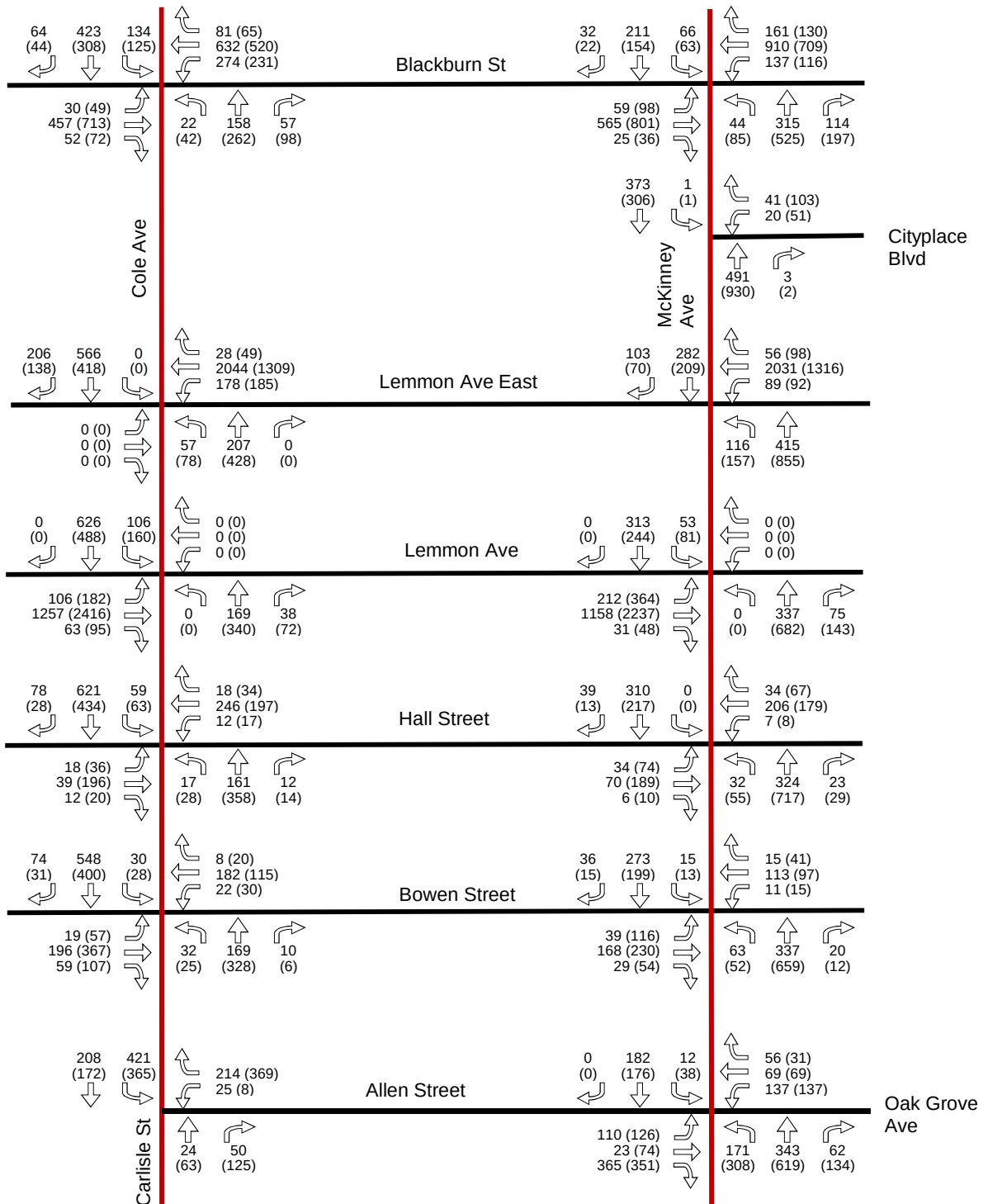


EXHIBIT 6

2035 Conversion Traffic Volumes (South of Blackburn Street)

McKinney-Cole Uptown Study



North



Not To Scale

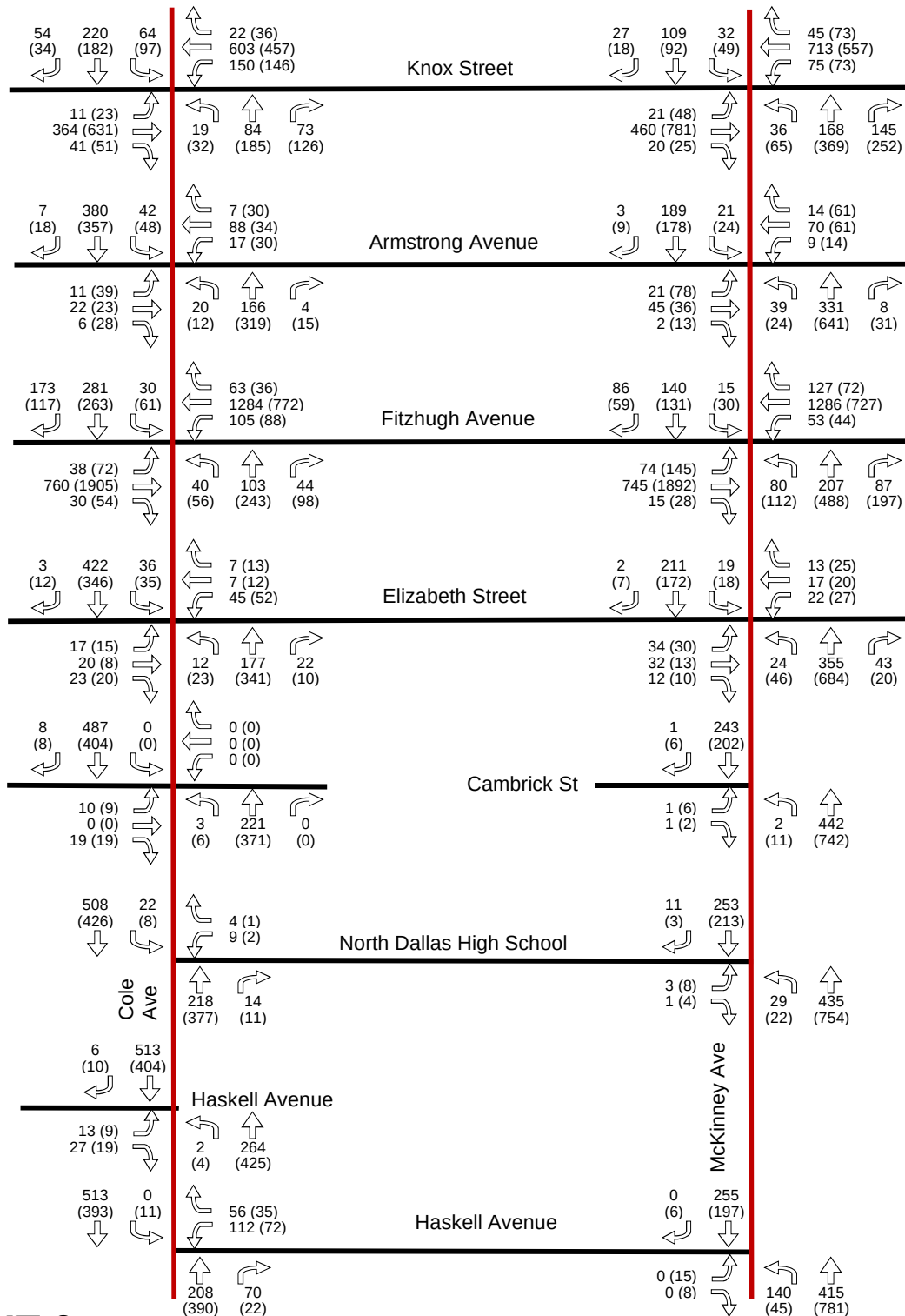
LEGEND:

$$\overline{X(Y)}$$

X = Weekday AM Peak Hour Turning Movements

(Y) = Weekday PM Peak Hour Turning Movements

Volumes may not sum from point to point due to rounding and presence of smaller driveways not included in analysis.



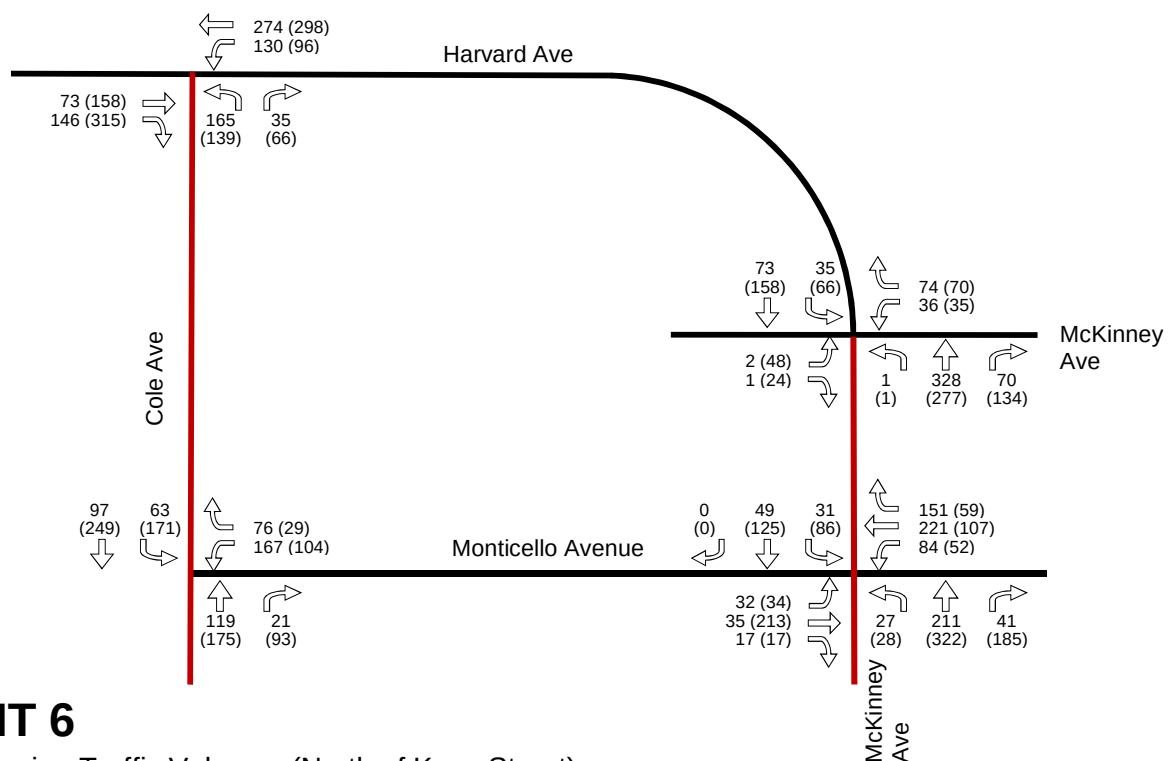


EXHIBIT 6

2035 Conversion Traffic Volumes (North of Knox Street)

McKinney-Cole Uptown Study



North
↖
Not To Scale

LEGEND:
X (Y)
X = Weekday AM Peak Hour Turning Movements
(Y) = Weekday PM Peak Hour Turning Movements
Volumes may not sum from point to point due to rounding
and presence of smaller driveways not included in analysis.

IV. TRAFFIC OPERATIONS ANALYSIS

Kimley-Horn conducted a traffic operations analysis to determine potential capacity deficiencies in the existing and 2035 study years at the study intersections. The acknowledged source for determining overall capacity is the current edition of the *Highway Capacity Manual*.

A. Analysis Methodology

Capacity analysis results are listed in terms of Level of Service (LOS). LOS is a qualitative term describing operating conditions a driver will experience while traveling on a particular street or highway during a specific time interval. It ranges from A (very little delay) to F (long delays and congestion). **Table 5** shows the definition of level of service for signalized and unsignalized intersections. LOS D is considered the threshold for acceptable operations for signalized intersections.

Table 1 – Level of Service Definitions

Level of Service	Signalized Intersection Average Total Delay (sec/veh)	Unsignalized Intersection Average Total Delay (sec/veh)
A	≤10	≤10
B	>10 and ≤20	>10 and ≤15
C	>20 and ≤35	>15 and ≤25
D	>35 and ≤55	>25 and ≤35
E	>55 and ≤80	>35 and ≤50
F	>80	>50

Definitions provided from the Highway Capacity Manual, Special Report 209, Transportation Research Board, 2010.

Study area intersections were analyzed based on average total delay analysis for signalized and unsignalized intersections. For the unsignalized analysis, the level of service (LOS) for a two-way stop controlled intersection is defined for each movement. Unlike signalized intersections which define LOS for each approach and for the intersection as a whole, LOS for two-way stop-controlled intersections is not defined as a whole.

Calculations for the level of service at the key intersections identified for study are provided in the **Appendix**. The analyses assumed the lane geometry and intersection control shown in **Exhibit 3** and **4**. Signal timing was based on existing conditions for the 2015 scenario. For the 2035 background scenario, timing adjustments were made to accommodate changes in lane configuration or traffic volumes due to background growth, replicating how City staff will periodically review signal operations in the future. For the 2035 two-way conversion scenario, phasing adjustments as well as timing adjustments were made to accommodate the two-way traffic.

B. Analysis Results

Table 2 and **3** show the intersection operational results for the weekday AM and PM peak hours, respectively.

Table 2 – Traffic Operational Results – AM Peak Hour – Signalized Intersections

SIGNALIZED INTERSECTION	APPROACH	2015 Existing Traffic		2035 Background Traffic		2035 Realignment Traffic	
		AM Peak Hour		AM Peak Hour		AM Peak Hour	
		DELAY (SEC/VB-H)	LOS	DELAY (SEC/VB-H)	LOS	DELAY (SEC/VB-H)	LOS
McKinney @ Oak Grove	EB	2.0	A	1.8	A	25.7	C
	WB	25.0	C	26.5	C	52.5	D
	NB	12.0	B	13.6	B	9.3	A
	SB	-	-	-	-	7.0	A
	Overall	14.0	B	15.4	B	21.6	C
Allen @ Oak Grove	WB	21.8	C	20.3	C	-	-
	SB	11.5	B	12.1	B	-	-
	Overall	13.9	B	13.9	B	-	-
McKinney @ Bowen	EB	12.7	B	13.5	B	8.3	A
	WB	6.8	A	7.0	A	12.0	B
	NB	14.9	B	15.3	B	12.5	B
	SB	-	-	-	-	22.0	C
	Overall	13.2	B	13.7	B	14.0	B
Carlisle @ Bowen	EB	15.1	B	16.3	B	18.6	B
	WB	23.8	C	23.6	C	21.7	C
	NB	-	-	-	-	4.6	A
	SB	1.3	A	1.3	A	3.1	A
	Overall	7.3	A	7.6	A	9.4	A
McKinney @ Hall	EB	20.2	C	21.4	C	17.6	B
	WB	23.8	C	24.0	C	24.8	C
	NB	2.3	A	2.5	A	2.2	A
	SB	-	-	-	-	5.6	A
	Overall	10.6	B	10.9	B	10.3	B
Carlisle @ Hall	EB	14.5	B	13.9	B	16.0	B
	WB	35.9	D	36.2	D	20.9	C
	NB	-	-	-	-	10.2	B
	SB	2.6	A	2.8	A	6.6	A
	Overall	8.9	A	9.1	A	10.9	B
McKinney @ Lemmon	EB	2.0	A	2.0	A	3.7	A
	NB	28.8	C	29.5	C	24.0	C
	SB	-	-	-	-	14.9	B
	Overall	9.9	A	10.0	B	9.5	A
Cole @ Lemmon	EB	31.6	C	32.9	C	34.9	C
	NB	-	-	-	-	17.4	B
	SB	9.1	A	11.0	B	10.5	B
	Overall	21.7	C	23.2	C	25.7	C

Table 3 – Traffic Operational Results – AM Peak Hour – Signalized Intersections (cont.)

SIGNALIZED INTERSECTION	APPROACH	2015 Existing Traffic		2035 Background Traffic		2035 Realignment Traffic	
		AM Peak Hour		AM Peak Hour		AM Peak Hour	
		DELAY (SEC/VBH)	LOS	DELAY (SEC/VBH)	LOS	DELAY (SEC/VBH)	LOS
McKinney @ Lemmon East	WB	46.9	D	69.9	E	26.8	C
	NB	12.3	B	12.1	B	15.3	B
	SB	-	-	-	-	25.5	C
	Overall	37.5	D	54.3	D	24.6	C
Cole @ Lemmon East	WB	2.7	A	4.7	A	24.8	C
	NB	-	-	-	-	36.4	D
	SB	43.6	D	49.6	D	40.8	D
	Overall	16.1	B	19.4	B	29.4	C
McKinney @ Cityplace	WB	0.1	A	0.1	A	4.8	A
	NB	40.2	D	39.9	D	22.8	C
	SB	-	-	-	-	27.4	C
	Overall	37.1	D	36.9	D	23.5	C
McKinney @ Blackburn	EB	23.4	C	24.6	C	34.8	C
	WB	27.9	C	39.6	D	38.2	D
	NB	11.5	B	11.7	B	29.9	C
	SB	-	-	-	-	26.5	C
	Overall	22.3	C	28.1	C	34.6	C
Cole @ Blackburn	EB	22.2	C	25.8	C	53.9	D
	WB	7.4	A	9.3	A	26.6	C
	NB	-	-	-	-	26.0	C
	SB	22.7	C	21.8	C	23.2	C
	Overall	16.2	B	17.4	B	31.2	C
McKinney @ Fitzhugh	EB	6.0	A	8.8	A	11.6	B
	WB	11.0	B	13.6	B	6.6	A
	NB	21.0	C	19.5	B	23.3	C
	SB	-	-	-	-	26.6	C
	Overall	11.8	B	13.6	B	11.6	B
Cole @ Fitzhugh	EB	7.0	A	7.4	A	17.7	B
	WB	8.4	A	9.2	A	6.8	A
	NB	-	-	-	-	15.1	B
	SB	23.1	C	24.9	C	26.3	C
	Overall	11.7	B	12.6	B	13.4	B
McKinney @ Knox	EB	8.2	A	8.5	A	5.9	A
	WB	22.9	C	26.7	C	12.9	B
	NB	7.6	A	7.7	A	11.3	B
	SB	-	-	-	-	15.9	B
	Overall	14.6	B	16.5	B	11.0	B
Cole @ Knox	EB	4.2	A	4.4	A	7.5	A
	WB	5.2	A	5.9	A	6.6	A
	NB	-	-	-	-	9.6	A
	SB	24.5	C	23.8	C	19.2	B
	Overall	11.0	B	11.2	B	9.8	A

- No movements in Time Period

Table 4 – Traffic Operational Results – AM Peak Hour – Unsignalized Intersections

UNSIGNALIZED INTERSECTION	APPROACH	2015 Existing Traffic		2035 Background Traffic		2035 Realignment Traffic	
		AM Peak Hour		AM Peak Hour		AM Peak Hour	
		DELAY (SEC/VEH)	LOS	DELAY (SEC/VEH)	LOS	DELAY (SEC/VEH)	LOS
Allen @ Sneed	EB*	14.3	B	15.5	C	-	-
	WB*	15.2	C	16.4	C	-	-
	SBL	1.1	A	1.1	A	-	-
Allen @ Carlisle	WB*	-	-	-	-	11.1	B
	NB*	-	-	-	-	8.8	A
	SB*	-	-	-	-	18.9	C
	Overall	-	-	-	-	16.1	C
McKinney @ Haskell	EB*	-	-	-	-	-	-
	NBL	5.1	A	5.2	A	3.0	A
Cole @ Haskell WB	WB*	11.5	B	12.1	B	19.9	C
	SBL	-	-	-	-	-	-
Cole @ Haskell EB	EB*	10.1	B	10.4	B	14.1	B
	SBL	-	-	-	-	0.1	A
McKinney @ North Dallas High School	EB*	10.6	B	10.8	B	14.3	B
	NBL	2.0	A	2.0	A	0.7	A
Cole @ North Dallas High School	WB*	10.7	B	11.0	B	14.3	B
	SBL	1.4	A	1.4	A	0.5	A
McKinney @ Cambrick	EB*	9.9	A	10.0	B	12.1	B
	NBL	0.2	A	0.2	A	0.1	A
Cole @ Cambrick	EB*	10.0	A	10.2	B	13.9	B
	NBL	-	-	-	-	0.1	A
McKinney @ Elizabeth	EB*	14.0	B	15.2	C	19.0	C
	WB*	13.3	B	14.1	B	17.3	C
	NBL	1.7	A	1.7	A	0.6	A
	SBL	-	-	-	-	0.8	A
Cole @ Elizabeth	EB*	13.0	B	13.9	B	16.6	C
	WB*	14.7	B	16.1	C	20.6	C
	NBL	-	-	-	-	0.6	A
	SBL	2.1	A	2.1	A	0.9	A
McKinney @ Armstrong	EB*	13.4	B	14.5	B	19.9	C
	WB*	15.1	C	16.6	C	18.6	C
	NBL	2.5	A	2.6	A	1.1	A
	SBL	-	-	-	-	1.0	A
Cole @ Armstrong	EB*	15.0	B	16.2	C	18.3	C
	WB*	13.6	B	14.5	B	21.7	C
	NBL	-	-	-	-	1.0	A
	SBL	2.5	A	2.5	A	1.1	A
McKinney @ Monticello	EB*	10.9	B	11.5	B	9.9	A
	WB*	19.3	C	25.6	D	19.0	C
	NB*	10.7	B	11.4	B	13.6	B
	SB*					10.3	B
	Overall	14.7	B	18.0	C	15.7	C
Cole @ Monticello	WB*	13.4	B	14.7	B	14.8	B
	SBL	5.4	A	5.4	A	3.2	A
McKinney @ Harvard	EB*	12.3	B	13.0	B	13.0	B
	WB*	10.5	B	10.9	B	12.6	B
	NBL	0.1	A	0.1	A	0.1	A
	SBL	-	-	-	-	2.8	A
Cole @ Harvard	WB	-	-	-	-	3.0	A
	NB*	-	-	-	-	25.2	D

- No movements in Time Period

* Stop-Controlled Approach

Table 5 – Traffic Operational Results – PM Peak Hour – Signalized Intersections

SIGNALIZED INTERSECTION	APPROACH	2015 Existing Traffic		2035 Background Traffic		2035 Realignment Traffic	
		PM Peak Hour		PM Peak Hour		PM Peak Hour	
		DELAY (SEC/VB-H)	LOS	DELAY (SEC/VB-H)	LOS	DELAY (SEC/VB-H)	LOS
McKinney @ Oak Grove	EB	2.2	A	1.8	A	38.5	D
	WB	20.9	C	22.3	C	35.6	D
	NB	18.0	B	20.9	C	19.2	B
	SB	-	-	-	-	28.1	C
	Overall	16.0	B	18.6	B	27.2	C
Allen @ Oak Grove	WB	22.9	C	22.2	C	-	-
	SB	14.9	B	15.6	B	-	-
	Overall	16.6	B	17.0	B	-	-
McKinney @ Bowen	EB	56.1	E	83.8	F	7.7	A
	WB	10.8	B	11.4	B	7.9	A
	NB	8.8	A	9.2	A	13.3	B
	SB	-	-	-	-	7.3	A
	Overall	20.3	C	27.1	C	10.3	B
Carlisle @ Bowen	EB	16.7	B	17.8	B	20.7	C
	WB	24.3	C	23.0	C	15.0	B
	NB	-	-	-	-	8.4	A
	SB	3.0	A	3.4	A	3.0	A
	Overall	11.6	B	11.9	B	11.6	B
McKinney @ Hall	EB	45.4	D	42.0	D	20.7	C
	WB	26.5	C	23.2	C	17.7	B
	NB	12.8	B	16.7	B	18.5	B
	SB	-	-	-	-	4.8	A
	Overall	20.6	C	22.1	C	17.0	B
Carlisle @ Hall	EB	27.0	C	26.8	C	29.7	C
	WB	30.4	C	30.7	C	24.8	C
	NB	-	-	-	-	12.7	B
	SB	2.5	A	3.1	A	6.8	A
	Overall	12.3	B	12.6	B	16.0	B
McKinney @ Lemmon	EB	45.1	D	52.4	D	13.9	B
	NB	25.9	C	28.8	C	41.8	D
	SB	-	-	-	-	15.7	B
	Overall	39.4	D	45.4	D	20.3	C
Cole @ Lemmon	EB	20.4	C	30.9	C	34.8	C
	NB	-	-	-	-	54.7	D
	SB	16.0	B	17.7	B	25.1	C
	Overall	19.2	B	27.3	C	35.1	D

Table 6 – Traffic Operational Results – PM Peak Hour – Signalized Intersections (cont.)

SIGNALIZED INTERSECTION	APPROACH	2015 Existing Traffic		2035 Background Traffic		2035 Realignment Traffic	
		PM Peak Hour		PM Peak Hour		PM Peak Hour	
		DELAY (SEC/VB)	LOS	DELAY (SEC/VB)	LOS	DELAY (SEC/VB)	LOS
McKinney @ Lemmon East	WB	38.5	D	40.9	D	35.8	D
	NB	9.9	A	10.7	B	10.8	B
	SB	-	-	-	-	22.6	C
	Overall	24.1	C	25.7	C	25.4	C
Cole @ Lemmon East	WB	3.3	A	4.1	A	10.9	B
	NB	-	-	-	-	26.4	C
	SB	35.0	C	39.3	D	28.3	C
	Overall	14.0	B	16.0	B	17.3	B
McKinney @ Cityplace	WB	0.5	A	1.3	A	5.2	A
	NB	52.6	D	18.4	B	17.5	B
	SB	-	-	-	-	10.7	B
	Overall	47.5	D	16.7	B	14.6	B
McKinney @ Blackburn	EB	19.6	B	6.5	A	41.9	D
	WB	21.3	C	23.0	C	53.6	D
	NB	6.4	A	10.0	B	69.7	E
	SB	-	-	-	-	17.4	B
	Overall	15.0	B	13.0	B	51.6	D
Cole @ Blackburn	EB	21.1	C	30.3	C	52.6	D
	WB	19.8	B	14.4	B	16.6	B
	NB	-	-	-	-	40.3	D
	SB	18.3	B	12.3	B	20.5	C
	Overall	19.8	B	19.0	B	31.4	C
McKinney @ Fitzhugh	EB	18.3	B	19.6	B	8.3	A
	WB	15.4	B	16.0	B	22.4	C
	NB	18.1	B	19.9	B	26.6	C
	SB	-	-	-	-	34.3	C
	Overall	17.6	B	18.9	B	16.9	B
Cole @ Fitzhugh	EB	11.6	B	14.0	B	34.3	C
	WB	10.4	B	8.8	A	8.2	A
	NB	-	-	-	-	30.8	C
	SB	27.1	C	25.2	C	52.9	D
	Overall	14.3	B	14.8	B	29.6	C
McKinney @ Knox	EB	43.1	D	18.8	B	15.4	B
	WB	39.7	D	23.2	C	40.3	D
	NB	13.1	B	33.3	C	17.8	B
	SB	-	-	-	-	12.6	B
	Overall	29.7	C	26.0	C	23.8	C
Cole @ Knox	EB	6.2	A	5.9	A	8.3	A
	WB	9.4	A	19.0	B	9.1	A
	NB	-	-	-	-	22.4	C
	SB	17.6	B	19.1	B	24.6	C
	Overall	10.5	B	14.2	B	13.5	B

- No movements in Time Period

Table 7 – Traffic Operational Results – PM Peak Hour – Unsignalized Intersections

UNSIGNALIZED INTERSECTION	APPROACH	2015 Existing Traffic		2035 Background Traffic		2035 Realignment Traffic	
		PM Peak Hour		PM Peak Hour		PM Peak Hour	
		DELAY (SEC/VB)	LOS	DELAY (SEC/VB)	LOS	DELAY (SEC/VB)	LOS
Allen @ Sneed	EB*	16.0	C	18.2	C	-	-
	WB*	13.6	B	14.4	B	-	-
	SBL	0.8	A	0.9	A	-	-
Allen @ Carlisle	WB*	-	-	-	-	16.2	C
	NB*	-	-	-	-	11.4	B
	SB*	-	-	-	-	20.1	C
	Overall	-	-	-	-	17.3	C
McKinney @ Haskell	EB*	13.1	-	13.9	-	22.1	C
	NBL	1.9	A	1.9	A	1.0	A
Cole @ Haskell WB	WB*	10.7	B	11.1	B	19.0	C
	SBL	1.0	-	1.0	-	0.3	A
Cole @ Haskell EB	EB*	9.7	A	9.8	A	13.4	B
	NBL	-	-	-	-	0.1	A
McKinney @ North Dallas High School	EB*	11.8	B	12.4	B	18.7	C
	NBL	1.1	A	1.1	A	0.5	A
Cole @ North Dallas High School	WB*	9.9	A	10.1	B	14.8	B
	SBL	0.6	A	0.6	A	0.2	A
McKinney @ Cambrick	EB*	11.4	B	11.8	B	17.3	C
	NBL	0.6	A	0.6	A	0.2	A
Cole @ Cambrick	EB*	9.7	A	9.8	A	13.8	B
	NBL	-	-	-	-	0.2	A
McKinney @ Elizabeth	EB*	24.6	C	31.4	D	31.6	D
	WB*	20.6	C	24.9	C	29.3	D
	NBL	1.8	A	1.9	A	1.0	A
	SBL	-	-	-	-	1.1	A
Cole @ Elizabeth	EB*	11.3	B	11.7	B	16.9	C
	WB*	13.8	B	14.9	B	24.6	C
	NBL	-	-	-	-	0.7	A
	SBL	2.3	A	2.3	A	1.0	A
McKinney @ Armstrong	EB*	32.2	D	50.1	F	112.5	F
	WB*	18.5	C	21.9	C	32.5	D
	NBL	1.1	A	1.1	A	0.5	A
	SBL	-	-	-	-	1.3	A
Cole @ Armstrong	EB*	14.2	B	15.5	C	24.8	C
	WB*	16.1	C	18.0	C	23.1	C
	NBL	-	-	-	-	0.4	A
	SBL	2.8	A	2.8	A	1.3	A
McKinney @ Monticello	EB*	20.7	C	26.4	D	19.9	C
	WB*	14.1	B	15.9	C	17.1	C
	NB*	15.5	C	18.8	C	62.9	F
	SB*	-	-	-	-	16.7	C
	Overall	16.6	C	20.2	C	37.6	E
Cole @ Monticello	WB*	25.8	D	34.4	D	30.9	D
	SBL	5.9	A	6.0	A	4.2	A
McKinney @ Harvard	EB*	12.7	B	13.5	B	16.5	C
	WB*	10.2	B	10.4	B	13.3	B
	NBL	0.1	A	0.1	A	0.1	A
	SBL	-	-	-	-	2.7	A
Cole @ Harvard	WB	-	-	-	-	2.4	A
	NB*	-	-	-	-	29.4	D

- No movements in Time Period

* Stop-Controlled Approach

C. 2015 Existing Traffic Operations

The analysis of the 2015 existing traffic operations shows the signalized intersections operating at LOS D or better, in the AM peak hour. The existing one-way couplet handles the northbound and southbound movements with reasonable delays at the side streets. In the PM peak hour, the signalized intersections operate at LOS D or better, except for the eastbound approach of Bowen Street at McKinney Avenue. This approach operates at LOS E due to the number of left-turning vehicles through a single lane.

The unsignalized intersections operate at acceptable LOS C or better in the AM peak hour. In the PM peak hour, the unsignalized intersections operate at LOS D or better. The LOS D locations are the stop-controlled eastbound approach of Armstrong Avenue at McKinney Avenue, and the stop-controlled westbound approach of Monticello Avenue at Cole Avenue.

D. 2035 Background Traffic Operations

Twenty years of background growth causes an increase in delays at the signalized intersections, but no significant changes occur in the AM or PM peak hour. Operations continue at acceptable LOS D or better, except for the eastbound approach of Bowen Street at McKinney Avenue. This approach operates at LOS F due to the same reason for the LOS E in the 2015 scenario. The increase in delay is directly related to the increase in traffic.

The unsignalized intersections operate at relatively the same levels in the AM peak hour, with no significant LOS changes. In the PM peak hour, operations remain at acceptable LOS, except for the eastbound approach of Armstrong Avenue at McKinney Avenue. This approach changes from LOS D to LOS F as compared to the 2015 scenario.

E. 2035 Two-Way Conversion Operations

The proposed two-way conversion, with the assumed configuration shown in **Exhibit 3**, operates at acceptable LOS in both the AM and PM peak hour. In the AM peak hour, the signalized intersections operate at overall LOS C or better, with only a few approaches operating at LOS D. In the PM peak hour, the signalized intersections operate at overall LOS D or better, with only one approach operating at LOS E. This approach is the northbound approach at the intersection of McKinney Avenue and Blackburn Street. The large amount of northbound right-turns causes this LOS. There is ROW available for a northbound right-turn lane, but is not recommended in order to maintain the pedestrian environment.

The unsignalized intersections operate at acceptable LOS in the AM peak and only a few changes occur in the PM peak hour. In the PM peak hour, the eastbound approach of Armstrong Avenue at McKinney Avenue continues into LOS F. The northbound approach of McKinney Avenue at Monticello Avenue changes from LOS C to F. Potential mitigation efforts for these locations are discussed in a later section.

F. Proposed Street Conditions Assumptions

The analysis above included the proposed street conditions as shown in **Exhibit 3**, and the mitigation efforts are recommended to maintain traffic flow within the corridor. The following assumptions of intersection geometry were included in the analysis.

At the proposed intersection of Howell Street at McKinney Avenue:

- Change Howell Street from right-in/right-out operation to full-access operation.

At the proposed intersection of Oak Grove Avenue, Allen Street, and McKinney Avenue:

- Reconstruct as a single four-leg signalized intersection with left-turn lanes at all approaches.
- Potential future trolley modifications to keep the rails in the curb lane.

At the intersection of Allen Street and Cole Avenue:

- Provide an all-way stop at the intersection to maintain trolley safety and add pedestrian safety.
- Restripe Allen Street for one lane westbound and two lanes eastbound.

At the proposed intersection of Allen Street and Carlisle Street:

- Reconstruct Allen Street to intersect Carlisle Street orthogonally. Provide an all-way stop at the intersection.
- Restripe Allen Street for one lane westbound, and Carlisle Street for one lane northbound, one lane southbound, and a southbound left-turn lane.

At the intersection of McKinney Avenue and Bowen Street:

- Restripe McKinney Avenue for two lanes northbound, one lane southbound, and maintain the existing lanes on Bowen Street.

At the intersection of Carlisle Street and Bowen Street:

- Restripe Carlisle Street for one lane northbound, two lanes southbound, and maintain the existing lanes on Bowen Street.

At the intersection of McKinney Avenue and Hall Street:

- Restripe McKinney Avenue for two lanes northbound, one lane southbound, and maintain the existing lanes on Hall Street.
- Prohibit southbound left-turns from McKinney Avenue to Hall Street due to lack of dimension for a left-turn lane and no ROW available for widening.

At the intersection of Carlisle Street and Hall Street:

- Restripe Carlisle Street for one lane northbound, two lanes southbound, and maintain the existing lanes on Hall Street.

At the intersection of McKinney Avenue and Lemmon Avenue (Eastbound):

- Restripe McKinney Avenue for two lanes northbound, one lane southbound, a southbound left-turn lane, and maintain the existing lanes on Lemmon Avenue.
- Widen the southbound approach to provide for the southbound left-turn lane. A corner clip would be necessary at the southwest corner of the intersection to accommodate for the offset through movement. No parking would be affected.

At the intersection of Carlisle Street/Cole Avenue and Lemmon Avenue (Eastbound):

- Restripe Carlisle Street/Cole Avenue for one lane northbound, one lane southbound, a southbound left-turn lane, and maintain the existing lanes on Lemmon Avenue.
- Widen the southbound approach if the trolley remains in the contraflow condition. If the trolley is relocated to the western edge of Cole Avenue, maintain the existing cross section of Cole Avenue.

At the intersection of McKinney Avenue and Lemmon Avenue East (Westbound):

- Restripe McKinney Avenue for two lanes northbound, one lane southbound, and maintain the existing lanes on Lemmon Avenue East.

At the intersection of Cole Avenue and Lemmon Avenue East (Westbound):

- Restripe Cole Avenue for one lane northbound, one lane southbound, and maintain the existing lanes on Lemmon Avenue.
- The contraflow trolley condition would operate southbound along the eastern edge of Cole Avenue, protected from the adjacent northbound lane by a physical barrier.

At the intersection of McKinney Avenue and Cityplace Boulevard:

- Restripe McKinney Avenue for two lanes northbound, one lane southbound, and maintain the existing lanes on Cityplace Boulevard.
- Change Cityplace Boulevard from right-in/right-out operation to full-access operation.

At the intersection of McKinney Avenue and Blackburn Street:

- Restripe McKinney Avenue for one lane northbound, a northbound left-turn lane, one lane southbound, a southbound left-turn lane, and on Blackburn Street restripe the inside westbound through lane to a left-turn-only lane. The westbound approach should be monitored for construction of a left-turn lane in the existing median, making the approach a left-turn-only lane, two through lanes, and a shared through-right lane.

At the intersection of Cole Avenue and Blackburn Street:

- Restripe Cole Avenue for one lane northbound, one lane southbound, a southbound left-turn lane, and on Blackburn Street construct an eastbound left-turn lane. The westbound approach would maintain the existing lanes. The additional pavement needed for the eastbound left-turn lane could be split between the existing median, and the southern side of Blackburn Street. This would allow more green space within the median, where mature trees exist.

At the intersection of McKinney Avenue and Haskell Avenue:

- Restripe McKinney Avenue for one lane northbound, one lane southbound, and maintain the existing lanes on Haskell Avenue.

At the intersection of Cole Avenue and Haskell Avenue:

- Restripe Cole Avenue for one lane northbound, one lane southbound, one flexible use lane on the western side of Cole Avenue, and maintain the existing lanes of Haskell Avenue.
- The northeast corner of the intersection has a large unused triangular piece of pavement. Ideally, this area would be reclaimed from the right-of-way with the conversion of McKinney Avenue and Cole Avenue.

At the intersection of McKinney Avenue and North Dallas High School Drive:

- Restripe McKinney Avenue for one lane northbound, one lane southbound, one flexible use lane on the western side of McKinney Avenue, and maintain the existing lanes on North Dallas High School Drive.

At the intersection of Cole Avenue and North Dallas High School Drive:

- Restripe Cole Avenue for one lane northbound, one lane southbound, one flexible use lane on the western side of Cole Avenue, one flexible use lane on the eastern side of Cole Avenue, and maintain the existing lanes of North Dallas High School Drive.

At the intersection of McKinney Avenue and Cambrick Street:

- Restripe McKinney Avenue for one lane northbound, one lane southbound, one flexible use lane on the western side of McKinney Avenue, and maintain the existing lanes on Cambrick Street.

At the intersection of Cole Avenue and Cambrick Street:

- Restripe Cole Avenue for one lane northbound, one lane southbound, one flexible use lane on the western side of Cole Avenue, one flexible use lane on the eastern side of Cole Avenue, and maintain the existing lanes of Cambrick Street.

At the intersection of McKinney Avenue and Elizabeth Street:

- Restripe McKinney Avenue for one lane northbound, one lane southbound, one flexible use lane on the western side of McKinney Avenue, and maintain the existing lanes on Elizabeth Street.

At the intersection of Cole Avenue and Elizabeth Street:

- Restripe Cole Avenue for one lane northbound, one lane southbound, one flexible use lane on the western side of Cole Avenue, one flexible use lane on the eastern side of Cole Avenue, and maintain the existing lanes of Elizabeth Street.

At the intersection of McKinney Avenue and North Fitzhugh Avenue:

- Restripe McKinney Avenue for one lane northbound, a northbound left-turn lane, a northbound right-turn lane, one lane southbound, a southbound left-turn lane, construct a westbound left-turn lane, and maintain the existing lanes of the eastbound approach.
- Widen the northbound approach within the existing ROW to provide for the northbound right-turn lane.
- The flexible use lane would end before the intersection to provide for the north- and southbound left-turns.
- Widen the westbound approach within the existing median to construct the westbound left-turn lane.

At the intersection of Cole Avenue and North Fitzhugh Avenue:

- Restripe Cole Avenue for one lane northbound, a northbound left-turn lane, one lane southbound, a southbound left-turn lane, construct an eastbound left-turn lane, and maintain the existing lanes of the westbound approach.
- The flexible use lane would end before the intersection to provide for the north- and southbound left-turns.
- Widen the eastbound approach within the existing median to construct the eastbound left-turn lane.

At the intersection of McKinney Avenue and Armstrong Avenue:

- Restripe McKinney Avenue for one lane northbound, one lane southbound, one flexible use lane on the western side of McKinney Avenue, and maintain the existing lanes on Armstrong Avenue.
- Monitor the intersection for signalization.

At the intersection of Cole Avenue and Armstrong Avenue:

- Restripe Cole Avenue for one lane northbound, one lane southbound, one flexible use lane on the western side of Cole Avenue south of Armstrong Avenue, one flexible use lane on the eastern side of Cole Avenue both north and south of Armstrong Avenue, and maintain the existing lanes of Armstrong Avenue.
- Monitor the intersection for signalization.

At the intersection of McKinney Avenue and Knox Street:

- Restripe McKinney Avenue for one lane northbound, a northbound left-turn lane, a northbound right-turn lane, one lane southbound, a southbound left-turn lane, and maintain the existing lanes of Knox Street.
- Widen the northbound approach within the existing ROW to provide for the northbound right-turn lane, removing some angled parking, but resulting in additional pedestrian or patio space on the corner.
- The flexible use lane would end before the intersection to provide for the north- and southbound left-turns.

At the intersection of Cole Avenue and Knox Street:

- Restripe Cole Avenue for one lane northbound, a northbound left-turn lane, one lane southbound, a southbound left-turn lane, and maintain the existing lanes of the Knox Street.
- The flexible use lane would end before the intersection to provide for the north- and southbound left-turns.

At the intersection of McKinney Avenue and Monticello Avenue:

- Restripe McKinney Avenue for one lane northbound, one lane southbound, one flexible use lane on the western side of McKinney Avenue, and maintain the existing lanes on Monticello Avenue.
- Monitor the intersection for signalization.

At the intersection of Cole Avenue and Monticello Avenue:

- Restripe Cole Avenue for one lane northbound, one lane southbound, one flexible use lane on the eastern side of Cole Avenue, and maintain the existing lanes of Monticello Avenue.

At the intersection of McKinney Avenue and Harvard Avenue:

- Restripe McKinney Avenue for one lane northbound, a northbound right-turn lane, one lane southbound, one flexible use lane on the eastern side of Harvard Avenue, and maintain the existing lanes on McKinney Avenue.

At the intersection of Cole Avenue and Harvard Avenue:

- Restripe Cole Avenue for one lane northbound, one lane eastbound, one lane westbound, and a flexible use lane on the eastern side of Cole Avenue.
- Investigate intersection modifications to improve the safety of the Katy Trail (i.e. reconfigure the intersection to make the Katy Trail the crosswalk of the eastbound approach).

G. Potential Trolley Modifications

The existing trolley tracks are compatible with the proposed two-way conversion, but future trolley modifications can be incorporated to reduce vehicular conflicts and improve the safety of the corridor.

At the proposed plaza between Howell Street and Allen Street, the existing southbound trolley line bisects the plaza. In order to maximize pedestrian space and comfort, the trolley line could be realigned to follow the southern edge of the proposed Allen Street curb. The trolley would have a free right operation at the intersection of Allen Street at McKinney Avenue at Oak Grove Avenue. The trolley line would then tie into the existing track just north of Howell Street. The trolley would tie into the existing track where southbound McKinney Avenue is widening from a three-lane section to a four-lane section to tie into the existing two-way four-lane section south of Allen Street and Oak Grove Avenue. Because of this, the trolley would enter the existing track in the middle lane without having to cross a lane of vehicular traffic.

The next potential trolley modification is at the same intersection, but for the northbound trolley line. The northbound trolley line shifts one lane from the outside lane to middle northbound lane, then back to the outside lane north of the intersection. The trolley line could be realigned to stay in the outside lane. The realignment would start at Howell Street and tie into the existing line just north of the intersection of Oak Grove Avenue at McKinney Avenue at Allen Street.

The last location of potential trolley modification extends from Lemmon Avenue to Blackburn Street on Cole Avenue. The southbound trolley line is currently on the eastern side of Cole Avenue. With the proposed conversion, a contraflow trolley line would work with some roadway modification at the intersection of Lemmon Avenue and Cole Avenue. The contraflow trolley would have one vehicle lane in each direction and the trolley line in its own lane, separated by a raised median. The potential trolley modification would be to move the trolley line from the eastern side of Cole Avenue to the western side. This would allow southbound traffic to operate with the trolley line. This would eliminate the need for widening at the Cole Avenue and Lemmon Avenue intersection since the trolley would not need a separate travel lane. The lane configuration would be two lanes southbound and one lane northbound, with the trolley operating in the outside southbound travel lane.

H. Parking

With the proposed conversion, parking adjustments would have to be made. The on-street parallel parking on McKinney Avenue between Hall Street and Lemmon Avenue would have to be removed for the southbound travel lane. The on-street parallel parking has about 7 to 8 spots. While on-street parking exists north of Blackburn Street on McKinney Avenue and Cole Avenue, these parking spaces are described as flexible use

lanes, since the use could be reconsidered with the conversion. A flexible use lane is one that may be used for bicycle lanes, parking, or other multimodal facilities.

North of Blackburn Street, the proposed configuration is one lane in each direction to maintain space for a flexible use lane for bicycle lanes, parking, or other multimodal facilities. At the major intersections, the flexible use lane would end and allow north- and southbound left-turn lanes. Because of the varying cross section width of McKinney Avenue and Cole Avenue, additional space for bicycle lanes, parking, or other multimodal facilities may be feasible on east and west sides.

Between Blackburn Street and Haskell Avenue on McKinney Avenue, a flexible use lane may be provided on the west side, and likewise on Cole Avenue. North of Haskell Avenue, North Dallas High School would maintain the space that is currently used for on-street parking on both McKinney Avenue and Cole Avenue.

On Cole Avenue, the existing space on the east side would remain for a flexible use lane, except the flexible use lane would be allowed at all times throughout the day. Currently, parking is restricted from 4:00pm to 6:00pm on the east side. On the west side of Cole Avenue, additional space for bicycle lanes, on-street parking, or other multimodal facilities may be provided between Blackburn Street and Armstrong Avenue, as the cross section is wider through that segment. The only section that does not have additional space on the west side of Cole Avenue is between Fitzhugh Avenue and Oliver Street. Currently, parking is allowed on the west side on Sundays only for Trinity Church Dallas on the southeast corner of Cole Avenue and Lee Street. This parking may be kept or changed to bicycle lanes or other multimodal facilities.

On McKinney Avenue, Sunday parking is allowed on the east side in front of Church of the Incarnation. With the conversion, this parking would be removed. The demand for Sunday parking could be replaced on Cole Avenue if the additional space is used for this purpose.

The proposed section of McKinney Avenue with a flexible use lane on the west side, and Cole Avenue with a flexible use lane on the east side and additional space on the west side, would extend to Fitzhugh Avenue. Before Fitzhugh Avenue, the flexible use lane would end and a north- and southbound left-turn lane would be formed. North of Fitzhugh Avenue, the southbound left-turn lane would end and the flexible use lane would continue.

On McKinney Avenue north of Fitzhugh Avenue, the flexible use lane would be on the east side of McKinney Avenue in order to maintain space in front of Ben Milam Elementary School. North of the school, the flexible use lane would switch to the west side of McKinney Avenue as it currently exists. The flexible use lane on the west side would extend to Knox Street.

On Cole Avenue north of Fitzhugh Avenue, the east side flexible use lane would be maintained and additional space on the west side for bicycle lanes, parking, or other multimodal facilities would extend to Armstrong Avenue. North of Armstrong Avenue, the width of Cole Avenue reduces and therefore would only have enough space for one flexible use lane on the east side. Between Armstrong Avenue and Knox Street, one flexible use lane on the east side is proposed.

At the intersection of Knox Street, the flexible use lane would end and a north- and southbound left-turn lane would be formed on McKinney Avenue and Cole Avenue. North of Knox Street, the southbound left-turn lanes on McKinney Avenue and Cole Avenue would end and a flexible use lane would continue on the east side of Cole Avenue and the west side of McKinney Avenue. A flexible use lane would extend in this configuration until the intersection of Harvard Avenue and Cole Avenue.

The decision for the use of the flexible use lanes should be based on a regional mobility plan of the area. While on-street parking currently exists, the flexible use lanes could be used for bicycle lanes, or other multimodal facilities, such as an extension of the M-Line Trolley through the northern section of Uptown.

V. CONCLUSIONS AND RECOMMENDATIONS

One-way couplet roadways tend to focus on automobile movements, which leads to higher operating speeds. The proposed two-way conversion would naturally enforce the speed limit and the slower speeds increase the safety of the corridor. Travel speed is directly related to reactions time, injury severity to pedestrians, and awareness of the roadway surroundings.

In general, south of Blackburn Street, McKinney Avenue would have two lanes northbound and one lane southbound. Similarly, Cole Avenue would have two lanes southbound and one lane northbound. The proposed two-way conversion requires modifications to the Allen Street intersections. Reconfiguring the angled, one-way intersections may result in opportunities for new public spaces like plazas. North of Blackburn Street, the roadway configuration would be changed to one lane northbound and one lane southbound on both McKinney Avenue and Cole Avenue to maintain space for flexible use lanes. Possible applications of the flexible use lane would be bicycle lanes, parking, or other multimodal facilities. Flexible use lanes would end at the major intersections to provide north- and southbound left-turns.

Based on the analysis and observations presented in this report, **the proposed two-way conversion of McKinney Avenue and Cole Avenue/Carlisle Street can be successfully incorporated without unreasonably hindering vehicle operations.** Some roadway changes are necessary to maintain traffic flow within the area, and future potential trolley modifications can be made to reduce conflict points.

The M-Line Trolley is an important part of the Uptown district and is capable of working in its existing configuration with the two-way conversion. However, some modifications could improve the compatibility of the trolley with the proposed two-way streets. These potential modifications include realigning the southbound trolley at the proposed intersection of McKinney Avenue at Allen Street at Oak Grove Street, realigning the northbound trolley at the same intersection to remain in the outside lane, and move the trolley from the eastern side of Cole Avenue, between Lemmon Avenue and Blackburn Street, to the western side.

With the proposed two-way conversion, parking adjustments would have to be made. The conversion removes the 7 or 8 spaces of on-street parallel parking on McKinney Avenue between Hall Street and Lemmon Avenue, and the 3 angled parking spots on the southeast corner of Knox Street and McKinney Avenue. However, additional parking may be added between Armstrong Avenue and Blackburn Street, if the flexible use lanes are used for this purpose. The proposed two-way conversion retains most of the existing parking, and the flexible use lanes can be utilized without time restrictions.

APPENDIX

Traffic Counts and Historical Data

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
OAK GROVE
Site Code:
Start Date: 04/14/2015
Page No: 1

Turning Movement Data

Start Time	MCKINNEY Southbound					OAK GROVE Westbound					MCKINNEY Northbound					OAK GROVE Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
7:00 AM	0	0	0	0	0	21	0	3	0	24	0	53	15	1	69	6	5	51	0	62	155
7:15 AM	0	0	0	0	0	37	0	12	0	49	0	57	18	0	75	3	7	62	0	72	196
7:30 AM	0	0	0	0	0	32	0	15	0	47	0	81	17	0	98	15	5	86	0	106	251
7:45 AM	0	0	0	0	0	52	0	16	0	68	0	101	29	0	130	23	6	94	0	123	321
Hourly Total	0	0	0	0	0	142	0	46	0	188	0	292	79	1	372	47	23	293	0	363	923
8:00 AM	0	0	0	0	0	42	0	16	0	58	0	122	15	0	137	35	9	98	0	142	337
8:15 AM	0	0	0	0	0	41	0	21	0	62	0	121	11	0	132	29	15	143	0	187	381
8:30 AM	0	0	0	0	0	48	0	8	0	56	0	105	13	0	118	23	5	121	0	149	323
8:45 AM	0	0	0	0	0	55	0	6	0	61	0	117	17	0	134	13	3	133	0	149	344
Hourly Total	0	0	0	0	0	186	0	51	0	237	0	465	56	0	521	100	32	495	0	627	1385
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:30 AM	0	0	0	0	0	34	2	5	0	41	0	150	25	0	175	18	7	81	0	106	322
11:45 AM	0	0	0	0	0	37	0	6	0	43	0	172	16	0	188	12	7	74	0	93	324
Hourly Total	0	0	0	0	0	71	2	11	0	84	0	322	41	0	363	30	14	155	0	199	646
12:00 PM	0	0	0	0	0	33	0	4	0	37	0	138	22	0	160	23	6	71	0	100	297
12:15 PM	0	0	0	0	0	41	0	7	0	48	0	141	24	0	165	20	8	102	0	130	343
12:30 PM	0	0	0	0	0	37	0	2	0	39	0	139	26	0	165	7	13	86	0	106	310
12:45 PM	0	0	0	0	0	47	0	9	0	56	0	138	19	0	157	15	20	102	0	137	350
Hourly Total	0	0	0	0	0	158	0	22	0	180	0	556	91	0	647	65	47	361	0	473	1300
1:00 PM	0	0	0	0	0	39	0	4	0	43	0	142	28	0	170	12	9	126	0	147	360
1:15 PM	0	0	0	0	0	35	0	3	0	38	0	141	25	0	166	9	5	111	0	125	329
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	74	0	7	0	81	0	283	53	0	336	21	14	237	0	272	689
4:30 PM	0	0	0	0	0	29	0	9	0	38	0	157	31	0	188	16	11	74	1	102	328
4:45 PM	0	0	0	0	0	26	0	8	0	34	0	150	26	0	176	23	13	88	0	124	334
Hourly Total	0	0	0	0	0	55	0	17	0	72	0	307	57	0	364	39	24	162	1	226	662
5:00 PM	0	0	0	0	0	49	0	10	0	59	0	193	32	0	225	43	23	104	0	170	454
5:15 PM	0	0	0	0	0	44	0	5	0	49	0	216	26	0	242	25	22	119	0	166	457
5:30 PM	0	0	0	0	0	49	0	6	0	55	0	212	29	0	241	28	33	114	0	175	471
5:45 PM	0	0	0	0	0	44	0	7	0	51	0	218	34	0	252	18	23	140	0	181	484
Hourly Total	0	0	0	0	0	186	0	28	0	214	0	839	121	0	960	114	101	477	0	692	1866
6:00 PM	0	0	0	0	0	43	0	5	0	48	0	186	25	0	211	28	24	110	0	162	421
6:15 PM	0	0	0	0	0	36	0	5	0	41	0	204	19	0	223	16	21	121	0	158	422
Grand Total	0	0	0	0	0	951	2	192	0	1145	0	3454	542	1	3997	460	300	2411	1	3172	8314
Approach %	NaN	NaN	NaN	NaN	-	83.1	0.2	16.8	0.0	-	0.0	86.4	13.6	0.0	-	14.5	9.5	76.0	0.0	-	-
Total %	0.0	0.0	0.0	0.0	0.0	11.4	0.0	2.3	0.0	13.8	0.0	41.5	6.5	0.0	48.1	5.5	3.6	29.0	0.0	38.2	-
Lights	0	0	0	0	0	940	2	188	0	1130	0	3372	534	1	3907	453	297	2353	1	3104	8141
% Lights	-	-	-	-	-	98.8	100.0	97.9	-	98.7	-	97.6	98.5	100.0	97.7	98.5	99.0	97.6	100.0	97.9	97.9
Mediums	0	0	0	0	0	10	0	4	0	14	0	72	7	0	79	6	3	52	0	61	154
% Mediums	-	-	-	-	-	1.1	0.0	2.1	-	1.2	-	2.1	1.3	0.0	2.0	1.3	1.0	2.2	0.0	1.9	1.9
Articulated Trucks	0	0	0	0	0	1	0	0	0	1	0	10	1	0	11	1	0	6	0	7	19
% Articulated Trucks	-	-	-	-	-	0.1	0.0	0.0	-	0.1	-	0.3	0.2	0.0	0.3	0.2	0.0	0.2	0.0	0.2	0.2

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
OAK GROVE
Site Code:
Start Date: 04/14/2015
Page No: 3

Turning Movement Peak Hour Data (8:00 AM)

Start Time	MCKINNEY Southbound					OAK GROVE Westbound					MCKINNEY Northbound					OAK GROVE Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
8:00 AM	0	0	0	0	0	42	0	16	0	58	0	122	15	0	137	35	9	98	0	142	337
8:15 AM	0	0	0	0	0	41	0	21	0	62	0	121	11	0	132	29	15	143	0	187	381
8:30 AM	0	0	0	0	0	48	0	8	0	56	0	105	13	0	118	23	5	121	0	149	323
8:45 AM	0	0	0	0	0	55	0	6	0	61	0	117	17	0	134	13	3	133	0	149	344
Total	0	0	0	0	0	186	0	51	0	237	0	465	56	0	521	100	32	495	0	627	1385
Approach %	NaN	NaN	NaN	NaN	-	78.5	0.0	21.5	0.0	-	0.0	89.3	10.7	0.0	-	15.9	5.1	78.9	0.0	-	-
Total %	0.0	0.0	0.0	0.0	0.0	13.4	0.0	3.7	0.0	17.1	0.0	33.6	4.0	0.0	37.6	7.2	2.3	35.7	0.0	45.3	-
PHF	0.000	0.000	0.000	0.000	0.000	0.845	0.000	0.607	0.000	0.956	0.000	0.953	0.824	0.000	0.951	0.714	0.533	0.865	0.000	0.838	0.909
Lights	0	0	0	0	0	183	0	50	0	233	0	447	56	0	503	100	32	487	0	619	1355
% Lights	-	-	-	-	-	98.4	-	98.0	-	98.3	-	96.1	100.0	-	96.5	100.0	100.0	98.4	-	98.7	97.8
Mediums	0	0	0	0	0	3	0	1	0	4	0	18	0	0	18	0	0	8	0	8	30
% Mediums	-	-	-	-	-	1.6	-	2.0	-	1.7	-	3.9	0.0	-	3.5	0.0	0.0	1.6	-	1.3	2.2
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	-	-	-	-	-	0.0	-	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
OAK GROVE
Site Code:
Start Date: 04/14/2015
Page No: 7

Turning Movement Peak Hour Data (5:00 PM)

Start Time	MCKINNEY Southbound					OAK GROVE Westbound					MCKINNEY Northbound					OAK GROVE Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
5:00 PM	0	0	0	0	0	49	0	10	0	59	0	193	32	0	225	43	23	104	0	170	454
5:15 PM	0	0	0	0	0	44	0	5	0	49	0	216	26	0	242	25	22	119	0	166	457
5:30 PM	0	0	0	0	0	49	0	6	0	55	0	212	29	0	241	28	33	114	0	175	471
5:45 PM	0	0	0	0	0	44	0	7	0	51	0	218	34	0	252	18	23	140	0	181	484
Total	0	0	0	0	0	186	0	28	0	214	0	839	121	0	960	114	101	477	0	692	1866
Approach %	NaN	NaN	NaN	NaN	-	86.9	0.0	13.1	0.0	-	0.0	87.4	12.6	0.0	-	16.5	14.6	68.9	0.0	-	-
Total %	0.0	0.0	0.0	0.0	0.0	10.0	0.0	1.5	0.0	11.5	0.0	45.0	6.5	0.0	51.4	6.1	5.4	25.6	0.0	37.1	-
PHF	0.000	0.000	0.000	0.000	0.000	0.949	0.000	0.700	0.000	0.907	0.000	0.962	0.890	0.000	0.952	0.663	0.765	0.852	0.000	0.956	0.964
Lights	0	0	0	0	0	186	0	28	0	214	0	834	119	0	953	111	98	470	0	679	1846
% Lights	-	-	-	-	-	100.0	-	100.0	-	100.0	-	99.4	98.3	-	99.3	97.4	97.0	98.5	-	98.1	98.9
Mediums	0	0	0	0	0	0	0	0	0	0	0	5	2	0	7	2	3	6	0	11	18
% Mediums	-	-	-	-	-	0.0	-	0.0	-	0.0	-	0.6	1.7	-	0.7	1.8	3.0	1.3	-	1.6	1.0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	2
% Articulated Trucks	-	-	-	-	-	0.0	-	0.0	-	0.0	-	0.0	0.0	-	0.0	0.9	0.0	0.2	-	0.3	0.1

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: ALLEN @ SNEED
Site Code:
Start Date: 04/14/2015
Page No: 1

Turning Movement Data

Start Time	ALLEN Southbound					SNEED Westbound					ALLEN Northbound					SNEED Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
7:00 AM	1	51	0	0	52	1	4	0	0	5	0	0	0	0	0	0	6	4	0	10	67
7:15 AM	12	64	0	0	76	0	5	0	0	5	0	0	0	0	0	0	9	2	0	11	92
7:30 AM	9	85	0	0	94	1	7	0	0	8	0	0	0	0	0	0	5	9	0	14	116
7:45 AM	5	106	0	0	111	0	6	0	0	6	0	0	0	0	0	0	7	6	0	13	130
Hourly Total	27	306	0	0	333	2	22	0	0	24	0	0	0	0	0	0	27	21	0	48	405
8:00 AM	8	127	0	0	135	3	11	0	0	14	0	0	0	0	0	0	11	12	0	23	172
8:15 AM	8	161	0	0	169	1	7	0	0	8	0	0	0	0	0	0	10	4	0	14	191
8:30 AM	7	110	0	0	117	1	3	0	0	4	0	0	0	0	0	0	10	6	0	16	137
8:45 AM	15	135	0	0	150	5	2	0	0	7	0	0	0	0	0	0	9	5	0	14	171
Hourly Total	38	533	0	0	571	10	23	0	0	33	0	0	0	0	0	0	40	27	0	67	671
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:30 AM	1	68	0	0	69	1	2	0	0	3	0	0	0	0	0	0	12	14	0	26	98
11:45 AM	3	72	0	0	75	1	3	0	0	4	0	0	0	0	0	1	12	5	0	18	97
Hourly Total	4	140	0	0	144	2	5	0	0	7	0	0	0	0	0	1	24	19	0	44	195
12:00 PM	3	65	0	0	68	0	3	0	0	3	0	0	0	0	0	0	13	11	0	24	95
12:15 PM	1	93	0	0	94	1	1	0	0	2	0	0	0	0	0	0	13	11	0	24	120
12:30 PM	6	88	0	0	94	0	1	0	0	1	0	0	0	0	0	0	8	9	0	17	112
12:45 PM	8	101	0	0	109	1	2	0	0	3	0	0	0	0	0	0	10	10	0	20	132
Hourly Total	18	347	0	0	365	2	7	0	0	9	0	0	0	0	0	0	44	41	0	85	459
1:00 PM	3	109	0	0	112	0	4	0	0	4	0	0	0	0	0	0	9	3	0	12	128
1:15 PM	8	109	0	0	117	0	4	0	0	4	0	0	0	0	0	0	15	9	0	24	145
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	11	218	0	0	229	0	8	0	0	8	0	0	0	0	0	0	24	12	0	36	273
4:30 PM	0	74	0	0	74	1	0	0	0	1	0	0	0	0	0	0	19	10	0	29	104
4:45 PM	6	90	0	0	96	1	2	0	0	3	0	0	0	0	0	0	21	10	0	31	130
Hourly Total	6	164	0	0	170	2	2	0	0	4	0	0	0	0	0	0	40	20	0	60	234
5:00 PM	7	92	0	0	99	1	7	0	0	8	0	0	0	0	0	0	23	25	0	48	155
5:15 PM	5	107	0	0	112	0	2	0	0	2	0	0	0	0	0	0	23	15	0	38	152
5:30 PM	4	122	0	0	126	0	3	0	0	3	0	0	0	0	0	0	21	18	0	39	168
5:45 PM	5	130	0	0	135	0	0	0	0	0	0	0	0	0	0	1	29	17	0	47	182
Hourly Total	21	451	0	0	472	1	12	0	0	13	0	0	0	0	0	1	96	75	0	172	657
6:00 PM	6	105	0	0	111	0	2	0	0	2	0	0	0	0	0	0	28	16	0	44	157
6:15 PM	10	113	0	0	123	0	2	0	0	2	0	0	0	0	0	0	26	15	0	41	166
Grand Total	141	2377	0	0	2518	19	83	0	0	102	0	0	0	0	0	2	349	246	0	597	3217
Approach %	5.6	94.4	0.0	0.0	-	18.6	81.4	0.0	0.0	-	NaN	NaN	NaN	NaN	-	0.3	58.5	41.2	0.0	-	-
Total %	4.4	73.9	0.0	0.0	78.3	0.6	2.6	0.0	0.0	3.2	0.0	0.0	0.0	0.0	0.0	0.1	10.8	7.6	0.0	18.6	-
Lights	133	2341	0	0	2474	18	82	0	0	100	0	0	0	0	0	2	343	244	0	589	3163
% Lights	94.3	98.5	-	-	98.3	94.7	98.8	-	-	98.0	-	-	-	-	-	100.0	98.3	99.2	-	98.7	98.3
Mediums	8	35	0	0	43	1	1	0	0	2	0	0	0	0	0	0	6	0	0	6	51
% Mediums	5.7	1.5	-	-	1.7	5.3	1.2	-	-	2.0	-	-	-	-	-	0.0	1.7	0.0	-	1.0	1.6
Articulated Trucks	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	3
% Articulated Trucks	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	-	-	-	-	-	0.0	0.0	0.8	-	0.3	0.1

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: ALLEN @ SNEED
Site Code:
Start Date: 04/14/2015
Page No: 3

Turning Movement Peak Hour Data (8:00 AM)

Start Time	ALLEN Southbound					SNEED Westbound					ALLEN Northbound					SNEED Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
8:00 AM	8	127	0	0	135	3	11	0	0	14	0	0	0	0	0	0	11	12	0	23	172
8:15 AM	8	161	0	0	169	1	7	0	0	8	0	0	0	0	0	0	10	4	0	14	191
8:30 AM	7	110	0	0	117	1	3	0	0	4	0	0	0	0	0	0	10	6	0	16	137
8:45 AM	15	135	0	0	150	5	2	0	0	7	0	0	0	0	0	0	9	5	0	14	171
Total	38	533	0	0	571	10	23	0	0	33	0	0	0	0	0	0	40	27	0	67	671
Approach %	6.7	93.3	0.0	0.0	-	30.3	69.7	0.0	0.0	-	NaN	NaN	NaN	NaN	-	0.0	59.7	40.3	0.0	-	-
Total %	5.7	79.4	0.0	0.0	85.1	1.5	3.4	0.0	0.0	4.9	0.0	0.0	0.0	0.0	0.0	0.0	6.0	4.0	0.0	10.0	-
PHF	0.633	0.828	0.000	0.000	0.845	0.500	0.523	0.000	0.000	0.589	0.000	0.000	0.000	0.000	0.000	0.000	0.909	0.563	0.000	0.728	0.878
Lights	37	527	0	0	564	10	23	0	0	33	0	0	0	0	0	0	40	27	0	67	664
% Lights	97.4	98.9	-	-	98.8	100.0	100.0	-	-	100.0	-	-	-	-	-	-	100.0	100.0	-	100.0	99.0
Mediums	1	6	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
% Mediums	2.6	1.1	-	-	1.2	0.0	0.0	-	-	0.0	-	-	-	-	-	-	0.0	0.0	-	0.0	1.0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	-	-	-	-	-	-	0.0	0.0	-	0.0	0.0

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: ALLEN @ SNEED
Site Code:
Start Date: 04/14/2015
Page No: 7

Turning Movement Peak Hour Data (5:30 PM)

Start Time	ALLEN Southbound					SNEED Westbound					ALLEN Northbound					SNEED Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
5:30 PM	4	122	0	0	126	0	3	0	0	3	0	0	0	0	0	0	21	18	0	39	168
5:45 PM	5	130	0	0	135	0	0	0	0	0	0	0	0	0	0	1	29	17	0	47	182
6:00 PM	6	105	0	0	111	0	2	0	0	2	0	0	0	0	0	0	28	16	0	44	157
6:15 PM	10	113	0	0	123	0	2	0	0	2	0	0	0	0	0	0	26	15	0	41	166
Total	25	470	0	0	495	0	7	0	0	7	0	0	0	0	0	1	104	66	0	171	673
Approach %	5.1	94.9	0.0	0.0	-	0.0	100.0	0.0	0.0	-	NaN	NaN	NaN	NaN	-	0.6	60.8	38.6	0.0	-	-
Total %	3.7	69.8	0.0	0.0	73.6	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.1	15.5	9.8	0.0	25.4	-
PHF	0.625	0.904	0.000	0.000	0.917	0.000	0.583	0.000	0.000	0.583	0.000	0.000	0.000	0.000	0.000	0.250	0.897	0.917	0.000	0.910	0.924
Lights	25	465	0	0	490	0	7	0	0	7	0	0	0	0	0	1	103	66	0	170	667
% Lights	100.0	98.9	-	-	99.0	-	100.0	-	-	100.0	-	-	-	-	-	100.0	99.0	100.0	-	99.4	99.1
Mediums	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	6
% Mediums	0.0	1.1	-	-	1.0	-	0.0	-	-	0.0	-	-	-	-	-	0.0	1.0	0.0	-	0.6	0.9
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	0.0	0.0	-	-	0.0	-	0.0	-	-	0.0	-	-	-	-	-	0.0	0.0	0.0	-	0.0	0.0

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
BOWEN
Site Code:
Start Date: 04/14/2015
Page No: 1

Turning Movement Data

Start Time	MCKINNEY Southbound					BOWEN Westbound					MCKINNEY Northbound					BOWEN Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
7:00 AM	0	0	0	0	0	0	17	2	0	19	9	40	2	0	51	4	18	0	0	22	92
7:15 AM	0	0	0	0	0	0	14	5	0	19	8	61	3	0	72	8	19	0	0	27	118
7:30 AM	0	0	0	0	0	0	19	1	0	20	23	69	5	0	97	12	30	0	0	42	159
7:45 AM	0	0	0	0	0	0	31	6	0	37	23	100	8	0	131	10	27	0	0	37	205
Hourly Total	0	0	0	0	0	0	81	14	0	95	63	270	18	0	351	34	94	0	0	128	574
8:00 AM	0	0	0	0	0	0	23	4	0	27	24	130	9	0	163	12	19	0	0	31	221
8:15 AM	0	0	0	0	0	0	24	4	0	28	20	126	7	0	153	14	25	0	0	39	220
8:30 AM	0	0	0	0	0	0	27	7	0	34	19	102	3	0	124	16	18	0	0	34	192
8:45 AM	0	0	0	0	0	0	34	7	0	41	16	108	1	0	125	15	23	0	0	38	204
Hourly Total	0	0	0	0	0	0	108	22	0	130	79	466	20	0	565	57	85	0	0	142	837
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:30 AM	0	0	0	0	0	0	15	9	0	24	8	153	7	0	168	31	34	0	0	65	257
11:45 AM	0	0	0	0	0	0	11	12	0	23	19	165	4	0	188	22	37	0	0	59	270
Hourly Total	0	0	0	0	0	0	26	21	0	47	27	318	11	0	356	53	71	0	0	124	527
12:00 PM	0	0	0	0	0	0	20	9	0	29	15	139	4	0	158	24	17	0	0	41	228
12:15 PM	0	0	0	0	0	0	11	15	0	26	13	139	2	0	154	23	28	0	0	51	231
12:30 PM	0	0	0	0	0	0	20	17	0	37	13	131	8	0	152	31	17	0	0	48	237
12:45 PM	0	0	0	0	0	0	24	19	0	43	14	125	7	0	146	19	24	0	0	43	232
Hourly Total	0	0	0	0	0	0	75	60	0	135	55	534	21	0	610	97	86	0	0	183	928
1:00 PM	0	0	0	0	0	0	21	16	0	37	20	124	3	0	147	19	25	0	0	44	228
1:15 PM	0	0	0	0	0	0	14	14	0	28	15	128	4	0	147	22	30	0	0	52	227
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	35	30	0	65	35	252	7	0	294	41	55	0	0	96	455
4:30 PM	0	0	0	0	0	0	10	14	0	24	15	149	2	0	166	20	42	0	0	62	252
4:45 PM	0	0	0	0	0	0	16	6	0	22	13	157	2	0	172	21	27	0	0	48	242
Hourly Total	0	0	0	0	0	0	26	20	0	46	28	306	4	0	338	41	69	0	0	110	494
5:00 PM	0	0	0	0	0	0	21	15	0	36	13	225	6	0	244	37	41	0	0	78	358
5:15 PM	0	0	0	0	0	0	27	15	0	42	25	223	3	0	251	37	49	0	0	86	379
5:30 PM	0	0	0	0	0	0	15	12	0	27	14	216	4	0	234	48	49	0	0	97	358
5:45 PM	0	0	0	0	0	0	21	13	0	34	18	229	3	0	250	35	37	0	0	72	356
Hourly Total	0	0	0	0	0	0	84	55	0	139	70	893	16	0	979	157	176	0	0	333	1451
6:00 PM	0	0	0	0	0	0	20	10	0	30	17	185	5	0	207	39	48	0	0	87	324
6:15 PM	0	0	0	0	0	0	20	7	0	27	8	219	6	0	233	44	32	0	0	76	336
Grand Total	0	0	0	0	0	0	475	239	0	714	382	3443	108	0	3933	563	716	0	0	1279	5926
Approach %	NaN	NaN	NaN	NaN	-	0.0	66.5	33.5	0.0	-	9.7	87.5	2.7	0.0	-	44.0	56.0	0.0	0.0	-	-
Total %	0.0	0.0	0.0	0.0	0.0	0.0	8.0	4.0	0.0	12.0	6.4	58.1	1.8	0.0	66.4	9.5	12.1	0.0	0.0	21.6	-
Lights	0	0	0	0	0	0	463	234	0	697	356	3360	106	0	3822	553	701	0	0	1254	5773
% Lights	-	-	-	-	-	-	97.5	97.9	-	97.6	93.2	97.6	98.1	-	97.2	98.2	97.9	-	-	98.0	97.4
Mediums	0	0	0	0	0	0	11	4	0	15	25	78	2	0	105	8	11	0	0	19	139
% Mediums	-	-	-	-	-	-	2.3	1.7	-	2.1	6.5	2.3	1.9	-	2.7	1.4	1.5	-	-	1.5	2.3
Articulated Trucks	0	0	0	0	0	0	1	1	0	2	1	5	0	0	6	2	4	0	0	6	14
% Articulated Trucks	-	-	-	-	-	-	0.2	0.4	-	0.3	0.3	0.1	0.0	-	0.2	0.4	0.6	-	-	0.5	0.2

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
BOWEN
Site Code:
Start Date: 04/14/2015
Page No: 3

Turning Movement Peak Hour Data (7:45 AM)

Start Time	MCKINNEY Southbound					BOWEN Westbound					MCKINNEY Northbound					BOWEN Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
7:45 AM	0	0	0	0	0	0	31	6	0	37	23	100	8	0	131	10	27	0	0	37	205
8:00 AM	0	0	0	0	0	0	23	4	0	27	24	130	9	0	163	12	19	0	0	31	221
8:15 AM	0	0	0	0	0	0	24	4	0	28	20	126	7	0	153	14	25	0	0	39	220
8:30 AM	0	0	0	0	0	0	27	7	0	34	19	102	3	0	124	16	18	0	0	34	192
Total	0	0	0	0	0	0	105	21	0	126	86	458	27	0	571	52	89	0	0	141	838
Approach %	NaN	NaN	NaN	NaN	-	0.0	83.3	16.7	0.0	-	15.1	80.2	4.7	0.0	-	36.9	63.1	0.0	0.0	-	-
Total %	0.0	0.0	0.0	0.0	0.0	0.0	12.5	2.5	0.0	15.0	10.3	54.7	3.2	0.0	68.1	6.2	10.6	0.0	0.0	16.8	-
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.847	0.750	0.000	0.851	0.896	0.881	0.750	0.000	0.876	0.813	0.824	0.000	0.000	0.904	0.948
Lights	0	0	0	0	0	0	100	21	0	121	77	434	26	0	537	48	83	0	0	131	789
% Lights	-	-	-	-	-	-	95.2	100.0	-	96.0	89.5	94.8	96.3	-	94.0	92.3	93.3	-	-	92.9	94.2
Mediums	0	0	0	0	0	0	5	0	0	5	8	23	1	0	32	3	5	0	0	8	45
% Mediums	-	-	-	-	-	-	4.8	0.0	-	4.0	9.3	5.0	3.7	-	5.6	5.8	5.6	-	-	5.7	5.4
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	1	1	0	0	2	4
% Articulated Trucks	-	-	-	-	-	-	0.0	0.0	-	0.0	1.2	0.2	0.0	-	0.4	1.9	1.1	-	-	1.4	0.5

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
BOWEN
Site Code:
Start Date: 04/14/2015
Page No: 7

Turning Movement Peak Hour Data (5:00 PM)

Start Time	MCKINNEY Southbound					BOWEN Westbound					MCKINNEY Northbound					BOWEN Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
5:00 PM	0	0	0	0	0	0	21	15	0	36	13	225	6	0	244	37	41	0	0	78	358
5:15 PM	0	0	0	0	0	0	27	15	0	42	25	223	3	0	251	37	49	0	0	86	379
5:30 PM	0	0	0	0	0	0	15	12	0	27	14	216	4	0	234	48	49	0	0	97	358
5:45 PM	0	0	0	0	0	0	21	13	0	34	18	229	3	0	250	35	37	0	0	72	356
Total	0	0	0	0	0	0	84	55	0	139	70	893	16	0	979	157	176	0	0	333	1451
Approach %	NaN	NaN	NaN	NaN	-	0.0	60.4	39.6	0.0	-	7.2	91.2	1.6	0.0	-	47.1	52.9	0.0	0.0	-	-
Total %	0.0	0.0	0.0	0.0	0.0	0.0	5.8	3.8	0.0	9.6	4.8	61.5	1.1	0.0	67.5	10.8	12.1	0.0	0.0	22.9	-
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.778	0.917	0.000	0.827	0.700	0.975	0.667	0.000	0.975	0.818	0.898	0.000	0.000	0.858	0.957
Lights	0	0	0	0	0	0	84	55	0	139	68	882	16	0	966	156	176	0	0	332	1437
% Lights	-	-	-	-	-	-	100.0	100.0	-	100.0	97.1	98.8	100.0	-	98.7	99.4	100.0	-	-	99.7	99.0
Mediums	0	0	0	0	0	0	0	0	0	0	2	10	0	0	12	1	0	0	0	1	13
% Mediums	-	-	-	-	-	-	0.0	0.0	-	0.0	2.9	1.1	0.0	-	1.2	0.6	0.0	-	-	0.3	0.9
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
% Articulated Trucks	-	-	-	-	-	-	0.0	0.0	-	0.0	0.0	0.1	0.0	-	0.1	0.0	0.0	-	-	0.0	0.1

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: CARLISLE @
BOWEN
Site Code:
Start Date: 04/14/2015
Page No: 1

Turning Movement Data

Start Time	CARLISLE Southbound					HALL Westbound					CARLISLE Northbound					HALL Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
7:00 AM	4	76	11	0	91	3	38	0	0	41	0	0	0	0	0	0	21	11	0	32	164
7:15 AM	9	91	19	0	119	4	39	0	0	43	0	0	0	0	0	0	31	17	0	48	210
7:30 AM	9	123	39	0	171	5	49	0	0	54	0	0	0	0	0	0	33	10	0	43	268
7:45 AM	10	155	36	0	201	5	68	0	0	73	0	0	0	0	0	0	37	19	0	56	330
Hourly Total	32	445	105	0	582	17	194	0	0	211	0	0	0	0	0	0	122	57	0	179	972
8:00 AM	3	193	29	0	225	3	51	0	0	54	0	0	2	0	2	0	35	14	0	49	330
8:15 AM	7	210	30	0	247	11	48	0	0	59	0	0	1	0	1	0	44	19	0	63	370
8:30 AM	15	161	22	0	198	12	43	0	0	55	0	0	0	0	0	0	42	16	0	58	311
8:45 AM	16	179	19	0	214	4	46	0	0	50	0	0	0	0	0	0	47	30	0	77	341
Hourly Total	41	743	100	0	884	30	188	0	0	218	0	0	3	0	3	0	168	79	0	247	1352
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:30 AM	9	85	7	0	101	4	33	0	0	37	0	0	0	0	0	0	59	15	0	74	212
11:45 AM	7	75	5	0	87	2	34	0	0	36	0	0	0	0	0	0	41	18	0	59	182
Hourly Total	16	160	12	0	188	6	67	0	0	73	0	0	0	0	0	0	100	33	0	133	394
12:00 PM	5	97	7	0	109	11	31	0	0	42	0	0	0	0	0	0	51	22	0	73	224
12:15 PM	10	107	11	0	128	5	26	0	0	31	0	0	0	0	0	0	44	21	0	65	224
12:30 PM	15	115	11	0	141	6	43	0	0	49	0	0	0	0	0	0	39	25	0	64	254
12:45 PM	11	143	12	0	166	7	31	0	0	38	0	0	0	0	0	0	43	23	0	66	270
Hourly Total	41	462	41	0	544	29	131	0	0	160	0	0	0	0	0	0	177	91	0	268	972
1:00 PM	11	149	10	0	170	8	42	0	0	50	0	0	0	0	0	0	45	17	0	62	282
1:15 PM	12	159	8	0	179	4	22	0	0	26	0	0	0	0	0	0	62	21	0	83	288
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	23	308	18	0	349	12	64	0	0	76	0	0	0	0	0	0	107	38	0	145	570
4:30 PM	2	102	17	0	121	5	28	0	0	33	0	0	0	0	0	0	70	19	0	89	243
4:45 PM	2	107	13	0	122	10	47	0	0	57	0	0	0	0	0	0	51	33	0	84	263
Hourly Total	4	209	30	0	243	15	75	0	0	90	0	0	0	0	0	0	121	52	0	173	506
5:00 PM	7	119	19	0	145	9	55	0	0	64	0	0	0	0	0	0	77	26	0	103	312
5:15 PM	13	113	16	0	142	9	62	0	0	71	0	0	0	0	0	0	86	31	0	117	330
5:30 PM	11	128	11	0	150	10	46	0	0	56	0	0	0	0	0	0	99	35	0	134	340
5:45 PM	8	172	6	0	186	14	48	0	0	62	0	0	0	0	0	0	72	42	0	114	362
Hourly Total	39	532	52	0	623	42	211	0	0	253	0	0	0	0	0	0	334	134	0	468	1344
6:00 PM	5	129	9	0	143	8	48	0	0	56	0	0	0	0	0	0	78	38	0	116	315
6:15 PM	9	139	13	0	161	9	55	0	0	64	0	0	0	0	0	0	64	38	0	102	327
Grand Total	210	3127	380	0	3717	168	1033	0	0	1201	0	0	3	0	3	0	1271	560	0	1831	6752
Approach %	5.6	84.1	10.2	0.0	-	14.0	86.0	0.0	0.0	-	0.0	0.0	100.0	0.0	-	0.0	69.4	30.6	0.0	-	-
Total %	3.1	46.3	5.6	0.0	55.1	2.5	15.3	0.0	0.0	17.8	0.0	0.0	0.0	0.0	0.0	0.0	18.8	8.3	0.0	27.1	-
Lights	201	3083	375	0	3659	158	1011	0	0	1169	0	0	3	0	3	0	1245	536	0	1781	6612
% Lights	95.7	98.6	98.7	-	98.4	94.0	97.9	-	-	97.3	-	-	100.0	-	100.0	-	98.0	95.7	-	97.3	97.9
Mediums	9	30	5	0	44	8	18	0	0	26	0	0	0	0	0	0	23	24	0	47	117
% Mediums	4.3	1.0	1.3	-	1.2	4.8	1.7	-	-	2.2	-	-	0.0	-	0.0	-	1.8	4.3	-	2.6	1.7
Articulated Trucks	0	14	0	0	14	2	4	0	0	6	0	0	0	0	0	0	3	0	0	3	23
% Articulated Trucks	0.0	0.4	0.0	-	0.4	1.2	0.4	-	-	0.5	-	-	0.0	-	0.0	-	0.2	0.0	-	0.2	0.3

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: CARLISLE @
BOWEN
Site Code:
Start Date: 04/14/2015
Page No: 3

Turning Movement Peak Hour Data (8:00 AM)

Start Time	CARLISLE Southbound					HALL Westbound					CARLISLE Northbound					HALL Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
8:00 AM	3	193	29	0	225	3	51	0	0	54	0	0	2	0	2	0	35	14	0	49	330
8:15 AM	7	210	30	0	247	11	48	0	0	59	0	0	1	0	1	0	44	19	0	63	370
8:30 AM	15	161	22	0	198	12	43	0	0	55	0	0	0	0	0	0	42	16	0	58	311
8:45 AM	16	179	19	0	214	4	46	0	0	50	0	0	0	0	0	0	47	30	0	77	341
Total	41	743	100	0	884	30	188	0	0	218	0	0	3	0	3	0	168	79	0	247	1352
Approach %	4.6	84.0	11.3	0.0	-	13.8	86.2	0.0	0.0	-	0.0	0.0	100.0	0.0	-	0.0	68.0	32.0	0.0	-	-
Total %	3.0	55.0	7.4	0.0	65.4	2.2	13.9	0.0	0.0	16.1	0.0	0.0	0.2	0.0	0.2	0.0	12.4	5.8	0.0	18.3	-
PHF	0.641	0.885	0.833	0.000	0.895	0.625	0.922	0.000	0.000	0.924	0.000	0.000	0.375	0.000	0.375	0.000	0.894	0.658	0.000	0.802	0.914
Lights	40	736	99	0	875	26	183	0	0	209	0	0	3	0	3	0	160	74	0	234	1321
% Lights	97.6	99.1	99.0	-	99.0	86.7	97.3	-	-	95.9	-	-	100.0	-	100.0	-	95.2	93.7	-	94.7	97.7
Mediums	1	6	1	0	8	4	3	0	0	7	0	0	0	0	0	0	8	5	0	13	28
% Mediums	2.4	0.8	1.0	-	0.9	13.3	1.6	-	-	3.2	-	-	0.0	-	0.0	-	4.8	6.3	-	5.3	2.1
Articulated Trucks	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	3
% Articulated Trucks	0.0	0.1	0.0	-	0.1	0.0	1.1	-	-	0.9	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	0.2

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: CARLISLE @
BOWEN
Site Code:
Start Date: 04/14/2015
Page No: 7

Turning Movement Peak Hour Data (5:15 PM)

Start Time	CARLISLE Southbound					HALL Westbound					CARLISLE Northbound					HALL Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
5:15 PM	13	113	16	0	142	9	62	0	0	71	0	0	0	0	0	0	86	31	0	117	330
5:30 PM	11	128	11	0	150	10	46	0	0	56	0	0	0	0	0	0	99	35	0	134	340
5:45 PM	8	172	6	0	186	14	48	0	0	62	0	0	0	0	0	0	72	42	0	114	362
6:00 PM	5	129	9	0	143	8	48	0	0	56	0	0	0	0	0	0	78	38	0	116	315
Total	37	542	42	0	621	41	204	0	0	245	0	0	0	0	0	0	335	146	0	481	1347
Approach %	6.0	87.3	6.8	0.0	-	16.7	83.3	0.0	0.0	-	NaN	NaN	NaN	NaN	-	0.0	69.6	30.4	0.0	-	-
Total %	2.7	40.2	3.1	0.0	46.1	3.0	15.1	0.0	0.0	18.2	0.0	0.0	0.0	0.0	0.0	0.0	24.9	10.8	0.0	35.7	-
PHF	0.712	0.788	0.656	0.000	0.835	0.732	0.823	0.000	0.000	0.863	0.000	0.000	0.000	0.000	0.000	0.000	0.846	0.869	0.000	0.897	0.930
Lights	36	539	42	0	617	41	201	0	0	242	0	0	0	0	0	0	334	145	0	479	1338
% Lights	97.3	99.4	100.0	-	99.4	100.0	98.5	-	-	98.8	-	-	-	-	-	-	99.7	99.3	-	99.6	99.3
Mediums	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	1	1	0	2	4
% Mediums	2.7	0.0	0.0	-	0.2	0.0	0.5	-	-	0.4	-	-	-	-	-	-	0.3	0.7	-	0.4	0.3
Articulated Trucks	0	3	0	0	3	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	5
% Articulated Trucks	0.0	0.6	0.0	-	0.5	0.0	1.0	-	-	0.8	-	-	-	-	-	-	0.0	0.0	-	0.0	0.4

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
HALL
Site Code:
Start Date: 04/14/2015
Page No: 1

Turning Movement Data

Start Time	MCKINNEY Southbound						HALL Westbound						MCKINNEY Northbound						HALL Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:00 AM	0	0	0	0	2	0	0	31	5	0	2	36	1	42	2	0	1	45	3	4	0	0	2	7	88
7:15 AM	0	0	0	0	1	0	0	29	7	0	3	36	12	53	4	0	2	69	3	16	0	0	5	19	124
7:30 AM	0	0	0	0	1	0	0	34	7	0	6	41	10	60	9	0	2	79	9	9	0	0	3	18	138
7:45 AM	0	0	0	0	1	0	0	42	14	0	3	56	10	93	9	0	2	112	13	14	0	0	4	27	195
Hourly Total	0	0	0	0	5	0	0	136	33	0	14	169	33	248	24	0	7	305	28	43	0	0	14	71	545
8:00 AM	0	0	0	0	0	0	0	40	16	0	3	56	12	121	10	0	0	143	11	17	0	0	1	28	227
8:15 AM	0	0	0	0	1	0	0	44	6	0	2	50	15	109	9	0	0	133	9	21	0	0	3	30	213
8:30 AM	0	0	0	0	1	0	0	50	11	0	6	61	7	116	4	0	0	127	14	11	0	0	2	25	213
8:45 AM	0	0	0	0	3	0	0	44	7	0	3	51	9	106	4	0	3	119	7	14	1	0	5	22	192
Hourly Total	0	0	0	0	5	0	0	178	40	0	14	218	43	452	27	0	3	522	41	63	1	0	11	105	845
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	1	0	0	3	1	0	32	16	0	7	48	21	147	14	0	0	182	16	18	0	1	13	35	266
11:45 AM	0	0	0	0	3	0	0	26	24	0	15	50	15	167	16	0	2	198	20	16	0	0	22	36	284
Hourly Total	0	1	0	0	6	1	0	58	40	0	22	98	36	314	30	0	2	380	36	34	0	1	35	71	550
12:00 PM	0	0	0	0	12	0	0	31	15	0	19	46	14	131	14	0	5	159	19	15	0	0	17	34	239
12:15 PM	0	0	0	0	6	0	0	33	27	0	10	60	22	153	18	0	10	193	16	22	0	0	20	38	291
12:30 PM	0	0	0	0	2	0	0	35	25	0	5	60	14	141	12	0	2	167	18	15	0	0	26	33	260
12:45 PM	0	0	0	0	2	0	0	45	17	0	7	62	15	139	9	0	7	163	17	21	0	0	15	38	263
Hourly Total	0	0	0	0	22	0	0	144	84	0	41	228	65	564	53	0	24	682	70	73	0	0	78	143	1053
1:00 PM	0	0	0	0	1	0	0	40	8	0	7	48	12	136	12	0	6	160	12	20	0	0	21	32	240
1:15 PM	0	0	0	0	8	0	0	48	17	0	12	65	20	135	10	0	19	165	19	14	0	0	25	33	263
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	9	0	0	88	25	0	19	113	32	271	22	0	25	325	31	34	0	0	46	65	503
4:30 PM	0	0	0	0	1	0	0	36	12	0	3	48	15	163	5	0	2	183	12	33	0	0	8	45	276
4:45 PM	0	0	0	0	0	0	0	35	13	0	1	48	8	163	8	0	2	179	20	29	0	0	4	49	276
Hourly Total	0	0	0	0	1	0	0	71	25	0	4	96	23	326	13	0	4	362	32	62	0	0	12	94	552
5:00 PM	0	0	0	0	0	0	0	40	27	0	5	67	16	243	15	0	8	274	25	40	0	0	6	65	406
5:15 PM	0	0	0	0	1	0	0	38	24	0	2	62	21	225	11	0	3	257	24	39	0	0	10	63	382
5:30 PM	0	0	0	0	0	0	0	36	29	0	4	65	19	258	6	0	7	283	20	35	0	0	7	55	403
5:45 PM	0	0	0	0	3	0	0	24	12	0	5	36	19	247	7	0	4	273	31	47	0	0	10	78	387
Hourly Total	0	0	0	0	4	0	0	138	92	0	16	230	75	973	39	0	22	1087	100	161	0	0	33	261	1578
6:00 PM	0	0	0	0	1	0	0	27	26	0	10	53	16	212	10	0	5	238	21	27	0	0	7	48	339
6:15 PM	0	0	0	0	13	0	0	17	20	0	14	37	21	238	13	0	3	272	26	25	0	0	17	51	360
Grand Total	0	1	0	0	66	1	0	857	385	0	154	1242	344	3598	231	0	95	4173	385	522	1	1	253	909	6325
Approach %	0.0	100.0	0.0	0.0	-	-	0.0	69.0	31.0	0.0	-	-	8.2	86.2	5.5	0.0	-	-	42.4	57.4	0.1	0.1	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	13.5	6.1	0.0	-	19.6	5.4	56.9	3.7	0.0	-	66.0	6.1	8.3	0.0	0.0	-	14.4	-
Lights	0	1	0	0	-	1	0	833	382	0	-	1215	337	3518	230	0	-	4085	379	513	1	1	-	894	6195
% Lights	-	100.0	-	-	-	100.0	-	97.2	99.2	-	-	97.8	98.0	97.8	99.6	-	-	97.9	98.4	98.3	100.0	100.0	-	98.3	97.9
Mediums	0	0	0	0	-	0	0	18	2	0	-	20	5	66	1	0	-	72	5	8	0	0	-	13	105
% Mediums	-	0.0	-	-	-	0.0	-	2.1	0.5	-	-	1.6	1.5	1.8	0.4	-	-	1.7	1.3	1.5	0.0	0.0	-	1.4	1.7
Articulated Trucks	0	0	0	0	-	0	0	6	1	0	-	7	2	14	0	0	-	16	1	1	0	0	-	2	25
% Articulated Trucks	-	0.0	-	-	-	0.0	-	0.7	0.3	-	-	0.6	0.6	0.4	0.0	-	-	0.4	0.3	0.2	0.0	0.0	-	0.2	0.4
Pedestrians	-	-	-	-	66	-	-	-	-	-	154	-	-	-	-	-	95	-	-	-	-	-	253	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
HALL
Site Code:
Start Date: 04/14/2015
Page No: 3

Turning Movement Peak Hour Data (7:45 AM)

Start Time	MCKINNEY Southbound						HALL Westbound						MCKINNEY Northbound						HALL Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:45 AM	0	0	0	0	1	0	0	42	14	0	3	56	10	93	9	0	2	112	13	14	0	0	4	27	195
8:00 AM	0	0	0	0	0	0	0	40	16	0	3	56	12	121	10	0	0	143	11	17	0	0	1	28	227
8:15 AM	0	0	0	0	1	0	0	44	6	0	2	50	15	109	9	0	0	133	9	21	0	0	3	30	213
8:30 AM	0	0	0	0	1	0	0	50	11	0	6	61	7	116	4	0	0	127	14	11	0	0	2	25	213
Total	0	0	0	0	3	0	0	176	47	0	14	223	44	439	32	0	2	515	47	63	0	0	10	110	848
Approach %	NaN	NaN	NaN	NaN	-	-	0.0	78.9	21.1	0.0	-	-	8.5	85.2	6.2	0.0	-	-	42.7	57.3	0.0	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	20.8	5.5	0.0	-	26.3	5.2	51.8	3.8	0.0	-	60.7	5.5	7.4	0.0	0.0	-	13.0	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.000	0.880	0.734	0.000	-	0.914	0.733	0.907	0.800	0.000	-	0.900	0.839	0.750	0.000	0.000	-	0.917	0.934
Lights	0	0	0	0	-	0	0	171	46	0	-	217	41	419	32	0	-	492	47	61	0	0	-	108	817
% Lights	-	-	-	-	-	-	-	97.2	97.9	-	-	97.3	93.2	95.4	100.0	-	-	95.5	100.0	96.8	-	-	-	98.2	96.3
Mediums	0	0	0	0	-	0	0	3	0	0	-	3	3	16	0	0	-	19	0	2	0	0	-	2	24
% Mediums	-	-	-	-	-	-	-	1.7	0.0	-	-	1.3	6.8	3.6	0.0	-	-	3.7	0.0	3.2	-	-	-	1.8	2.8
Articulated Trucks	0	0	0	0	-	0	0	2	1	0	-	3	0	4	0	0	-	4	0	0	0	0	-	0	7
% Articulated Trucks	-	-	-	-	-	-	-	1.1	2.1	-	-	1.3	0.0	0.9	0.0	-	-	0.8	0.0	0.0	-	-	-	0.0	0.8
Pedestrians	-	-	-	-	3	-	-	-	-	-	14	-	-	-	-	-	2	-	-	-	-	-	10	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
HALL
Site Code:
Start Date: 04/14/2015
Page No: 7

Turning Movement Peak Hour Data (5:00 PM)

Start Time	MCKINNEY Southbound						HALL Westbound						MCKINNEY Northbound						HALL Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
5:00 PM	0	0	0	0	0	0	0	40	27	0	5	67	16	243	15	0	8	274	25	40	0	0	6	65	406
5:15 PM	0	0	0	0	1	0	0	38	24	0	2	62	21	225	11	0	3	257	24	39	0	0	10	63	382
5:30 PM	0	0	0	0	0	0	0	36	29	0	4	65	19	258	6	0	7	283	20	35	0	0	7	55	403
5:45 PM	0	0	0	0	3	0	0	24	12	0	5	36	19	247	7	0	4	273	31	47	0	0	10	78	387
Total	0	0	0	0	4	0	0	138	92	0	16	230	75	973	39	0	22	1087	100	161	0	0	33	261	1578
Approach %	NaN	NaN	NaN	NaN	-	-	0.0	60.0	40.0	0.0	-	-	6.9	89.5	3.6	0.0	-	-	38.3	61.7	0.0	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	8.7	5.8	0.0	-	14.6	4.8	61.7	2.5	0.0	-	68.9	6.3	10.2	0.0	0.0	-	16.5	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.000	0.863	0.793	0.000	-	0.858	0.893	0.943	0.650	0.000	-	0.960	0.806	0.856	0.000	0.000	-	0.837	0.972
Lights	0	0	0	0	-	0	0	136	92	0	-	228	75	961	39	0	-	1075	100	160	0	0	-	260	1563
% Lights	-	-	-	-	-	-	-	98.6	100.0	-	-	99.1	100.0	98.8	100.0	-	-	98.9	100.0	99.4	-	-	-	99.6	99.0
Mediums	0	0	0	0	-	0	0	2	0	0	-	2	0	11	0	0	-	11	0	1	0	0	-	1	14
% Mediums	-	-	-	-	-	-	-	1.4	0.0	-	-	0.9	0.0	1.1	0.0	-	-	1.0	0.0	0.6	-	-	-	0.4	0.9
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	1
% Articulated Trucks	-	-	-	-	-	-	-	0.0	0.0	-	-	0.0	0.0	0.1	0.0	-	-	0.1	0.0	0.0	-	-	-	0.0	0.1
Pedestrians	-	-	-	-	4	-	-	-	-	-	16	-	-	-	-	-	22	-	-	-	-	-	33	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: CARLISLE @
HALL
Site Code:
Start Date: 04/14/2015
Page No: 1

Turning Movement Data

Start Time	CARLISLE Southbound						HALL Westbound						CARLISLE Northbound						HALL Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:00 AM	4	87	13	0	1	104	2	27	0	0	4	29	0	0	0	0	4	0	0	6	4	0	3	10	143
7:15 AM	17	119	14	0	1	150	5	38	0	0	1	43	0	0	0	0	3	0	0	12	0	0	4	12	205
7:30 AM	11	169	20	0	1	200	4	37	0	0	2	41	0	0	0	0	2	0	0	11	4	0	1	15	256
7:45 AM	8	191	31	0	1	230	6	43	0	0	0	49	0	0	0	0	4	0	0	14	3	0	0	17	296
Hourly Total	40	566	78	0	4	684	17	145	0	0	7	162	0	0	0	0	13	0	0	43	11	0	8	54	900
8:00 AM	14	226	20	0	2	260	2	42	0	0	4	44	0	0	0	0	1	0	0	8	5	0	2	13	317
8:15 AM	21	231	29	0	1	281	3	52	0	0	0	55	0	0	0	0	0	0	0	13	2	0	0	15	351
8:30 AM	10	195	26	0	2	231	6	45	0	0	1	51	0	0	0	0	2	0	0	11	6	0	0	17	299
8:45 AM	11	194	23	0	0	228	5	46	0	0	2	51	0	0	0	0	1	0	0	10	6	0	0	16	295
Hourly Total	56	846	98	0	5	1000	16	185	0	0	7	201	0	0	0	0	4	0	0	42	19	0	2	61	1262
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:30 AM	15	91	11	0	0	117	8	19	0	0	1	27	0	0	0	0	2	0	0	20	2	0	6	22	166
11:45 AM	15	87	15	0	1	117	2	33	0	0	0	35	0	0	0	0	0	0	0	17	5	0	0	22	174
Hourly Total	30	178	26	0	1	234	10	52	0	0	1	62	0	0	0	0	2	0	0	37	7	0	6	44	340
12:00 PM	10	91	11	0	0	112	9	27	1	0	4	37	0	0	0	0	1	0	0	29	6	0	1	35	184
12:15 PM	30	124	13	0	0	167	6	26	0	0	3	32	0	0	0	0	3	0	0	16	2	0	2	18	217
12:30 PM	9	133	12	0	1	154	8	38	0	0	2	46	0	0	0	0	0	0	0	13	0	0	2	13	213
12:45 PM	23	150	9	0	0	182	10	41	0	0	1	51	0	0	0	0	1	0	0	10	2	0	0	12	245
Hourly Total	72	498	45	0	1	615	33	132	1	0	10	166	0	0	0	0	5	0	0	68	10	0	5	78	859
1:00 PM	16	162	15	0	2	193	7	37	0	0	0	44	0	0	0	0	0	0	0	10	4	0	2	14	251
1:15 PM	19	161	14	0	3	194	5	49	0	0	2	54	0	0	0	0	4	0	0	10	3	0	4	13	261
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	35	323	29	0	5	387	12	86	0	0	2	98	0	0	0	0	4	0	0	20	7	0	6	27	512
4:30 PM	10	116	11	0	6	137	7	39	0	0	3	46	0	0	0	0	4	0	0	36	0	0	4	36	219
4:45 PM	12	116	10	0	3	138	5	27	0	0	0	32	0	0	0	0	4	0	0	37	2	0	1	39	209
Hourly Total	22	232	21	0	9	275	12	66	0	0	3	78	0	0	0	0	8	0	0	73	2	0	5	75	428
5:00 PM	13	145	15	0	0	173	3	36	0	0	6	39	0	0	0	0	4	0	0	56	4	0	1	60	272
5:15 PM	13	129	5	0	4	147	5	36	0	0	4	41	0	0	0	0	2	0	0	45	3	0	2	48	236
5:30 PM	13	146	9	0	1	168	10	33	0	0	3	43	0	0	0	0	5	0	0	53	11	0	3	64	275
5:45 PM	18	169	8	0	2	195	4	22	0	0	3	26	0	0	0	0	6	0	0	47	9	0	2	56	277
Hourly Total	57	589	37	0	7	683	22	127	0	0	16	149	0	0	0	0	17	0	0	201	27	0	8	228	1060
6:00 PM	20	144	16	0	6	180	2	37	0	0	4	39	0	0	0	0	4	0	0	29	3	0	2	32	251
6:15 PM	17	154	8	0	4	179	4	20	0	0	1	24	0	0	0	0	7	0	0	43	6	0	5	49	252
Grand Total	349	3530	358	0	42	4237	128	850	1	0	51	979	0	0	0	0	64	0	0	556	92	0	47	648	5864
Approach %	8.2	83.3	8.4	0.0	-	-	13.1	86.8	0.1	0.0	-	-	NaN	NaN	NaN	NaN	-	-	0.0	85.8	14.2	0.0	-	-	-
Total %	6.0	60.2	6.1	0.0	-	72.3	2.2	14.5	0.0	0.0	-	16.7	0.0	0.0	0.0	0.0	-	0.0	0.0	9.5	1.6	0.0	-	11.1	-
Lights	342	3480	352	0	-	4174	117	831	1	0	-	949	0	0	0	0	-	0	0	551	91	0	-	642	5765
% Lights	98.0	98.6	98.3	-	-	98.5	91.4	97.8	100.0	-	-	96.9	-	-	-	-	-	-	-	99.1	98.9	-	-	99.1	98.3
Mediums	6	45	6	0	-	57	9	18	0	0	-	27	0	0	0	0	-	0	0	3	1	0	-	4	88
% Mediums	1.7	1.3	1.7	-	-	1.3	7.0	2.1	0.0	-	-	2.8	-	-	-	-	-	-	-	0.5	1.1	-	-	0.6	1.5
Articulated Trucks	1	5	0	0	-	6	2	1	0	0	-	3	0	0	0	0	-	0	0	2	0	0	-	2	11
% Articulated Trucks	0.3	0.1	0.0	-	-	0.1	1.6	0.1	0.0	-	-	0.3	-	-	-	-	-	-	-	0.4	0.0	-	-	0.3	0.2
Pedestrians	-	-	-	-	42	-	-	-	-	-	51	-	-	-	-	-	64	-	-	-	-	-	47	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: CARLISLE @
HALL
Site Code:
Start Date: 04/14/2015
Page No: 3

Turning Movement Peak Hour Data (7:45 AM)

Start Time	CARLISLE Southbound						HALL Westbound						CARLISLE Northbound						HALL Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:45 AM	8	191	31	0	1	230	6	43	0	0	0	49	0	0	0	0	4	0	0	14	3	0	0	17	296
8:00 AM	14	226	20	0	2	260	2	42	0	0	4	44	0	0	0	0	1	0	0	8	5	0	2	13	317
8:15 AM	21	231	29	0	1	281	3	52	0	0	0	55	0	0	0	0	0	0	0	13	2	0	0	15	351
8:30 AM	10	195	26	0	2	231	6	45	0	0	1	51	0	0	0	0	2	0	0	11	6	0	0	17	299
Total	53	843	106	0	6	1002	17	182	0	0	5	199	0	0	0	0	7	0	0	46	16	0	2	62	1263
Approach %	5.3	84.1	10.6	0.0	-	-	8.5	91.5	0.0	0.0	-	-	NaN	NaN	NaN	NaN	-	-	0.0	74.2	25.8	0.0	-	-	-
Total %	4.2	66.7	8.4	0.0	-	79.3	1.3	14.4	0.0	0.0	-	15.8	0.0	0.0	0.0	0.0	-	0.0	0.0	3.6	1.3	0.0	-	4.9	-
PHF	0.631	0.912	0.855	0.000	-	0.891	0.708	0.875	0.000	0.000	-	0.905	0.000	0.000	0.000	0.000	-	0.000	0.000	0.821	0.667	0.000	-	0.912	0.900
Lights	51	833	105	0	-	989	16	178	0	0	-	194	0	0	0	0	-	0	0	46	16	0	-	62	1245
% Lights	96.2	98.8	99.1	-	-	98.7	94.1	97.8	-	-	-	97.5	-	-	-	-	-	-	-	100.0	100.0	-	-	100.0	98.6
Mediums	2	10	1	0	-	13	1	3	0	0	-	4	0	0	0	0	-	0	0	0	0	0	-	0	17
% Mediums	3.8	1.2	0.9	-	-	1.3	5.9	1.6	-	-	-	2.0	-	-	-	-	-	-	-	0.0	0.0	-	-	0.0	1.3
Articulated Trucks	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	1
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	0.0	0.5	-	-	-	0.5	-	-	-	-	-	-	-	0.0	0.0	-	-	0.0	0.1
Pedestrians	-	-	-	-	6	-	-	-	-	-	5	-	-	-	-	-	7	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: CARLISLE @
HALL
Site Code:
Start Date: 04/14/2015
Page No: 7

Turning Movement Peak Hour Data (5:00 PM)

Start Time	CARLISLE Southbound						HALL Westbound						CARLISLE Northbound						HALL Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
5:00 PM	13	145	15	0	0	173	3	36	0	0	6	39	0	0	0	0	4	0	0	56	4	0	1	60	272
5:15 PM	13	129	5	0	4	147	5	36	0	0	4	41	0	0	0	0	2	0	0	45	3	0	2	48	236
5:30 PM	13	146	9	0	1	168	10	33	0	0	3	43	0	0	0	0	5	0	0	53	11	0	3	64	275
5:45 PM	18	169	8	0	2	195	4	22	0	0	3	26	0	0	0	0	6	0	0	47	9	0	2	56	277
Total	57	589	37	0	7	683	22	127	0	0	16	149	0	0	0	0	17	0	0	201	27	0	8	228	1060
Approach %	8.3	86.2	5.4	0.0	-	-	14.8	85.2	0.0	0.0	-	-	NaN	NaN	NaN	NaN	-	-	0.0	88.2	11.8	0.0	-	-	-
Total %	5.4	55.6	3.5	0.0	-	64.4	2.1	12.0	0.0	0.0	-	14.1	0.0	0.0	0.0	0.0	-	0.0	0.0	19.0	2.5	0.0	-	21.5	-
PHF	0.792	0.871	0.617	0.000	-	0.876	0.550	0.882	0.000	0.000	-	0.866	0.000	0.000	0.000	0.000	-	0.000	0.000	0.897	0.614	0.000	-	0.891	0.957
Lights	57	582	37	0	-	676	22	126	0	0	-	148	0	0	0	0	-	0	0	201	27	0	-	228	1052
% Lights	100.0	98.8	100.0	-	-	99.0	100.0	99.2	-	-	-	99.3	-	-	-	-	-	-	-	100.0	100.0	-	-	100.0	99.2
Mediums	0	6	0	0	-	6	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	7
% Mediums	0.0	1.0	0.0	-	-	0.9	0.0	0.8	-	-	-	0.7	-	-	-	-	-	-	-	0.0	0.0	-	-	0.0	0.7
Articulated Trucks	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1
% Articulated Trucks	0.0	0.2	0.0	-	-	0.1	0.0	0.0	-	-	-	0.0	-	-	-	-	-	-	-	0.0	0.0	-	-	0.0	0.1
Pedestrians	-	-	-	-	7	-	-	-	-	-	16	-	-	-	-	-	17	-	-	-	-	-	8	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
LEMMON SOUTH
Site Code:
Start Date: 04/14/2015
Page No: 1

Turning Movement Data

Start Time	MCKINNEY Southbound						LEMMON SOUTH Westbound						MCKINNEY Northbound						LEMMON SOUTH Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	39	11	0	1	50	28	234	0	0	2	262	312
7:15 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	59	14	0	3	73	47	261	0	0	1	308	381
7:30 AM	0	0	0	0	2	0	0	0	0	0	6	0	0	51	21	0	3	72	39	285	0	0	2	324	396
7:45 AM	0	0	0	0	1	0	0	0	0	0	3	0	0	118	25	0	2	143	75	275	0	0	3	350	493
Hourly Total	0	0	0	0	3	0	0	0	0	0	12	0	0	267	71	0	9	338	189	1055	0	0	8	1244	1582
8:00 AM	0	0	0	0	3	0	0	0	0	0	1	0	0	114	25	0	0	139	69	298	0	0	3	367	506
8:15 AM	0	0	0	0	3	0	0	0	0	0	5	0	0	118	30	0	1	148	69	254	0	0	1	323	471
8:30 AM	0	0	0	0	0	0	0	0	0	0	5	0	0	108	22	0	1	130	75	287	0	0	3	362	492
8:45 AM	0	0	0	0	2	0	0	0	0	0	1	0	0	107	28	0	0	135	73	273	0	0	0	346	481
Hourly Total	0	0	0	0	8	0	0	0	0	0	12	0	0	447	105	0	2	552	286	1112	0	0	7	1398	1950
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:30 AM	0	0	0	0	4	0	0	0	0	0	7	0	0	146	30	0	0	176	83	328	0	0	3	411	587
11:45 AM	0	0	0	0	4	0	0	0	0	0	8	0	0	164	34	0	2	198	78	330	0	0	4	408	606
Hourly Total	0	0	0	0	8	0	0	0	0	0	15	0	0	310	64	0	2	374	161	658	0	0	7	819	1193
12:00 PM	0	0	0	0	0	0	0	0	0	0	7	0	0	127	33	0	2	160	98	354	0	0	4	452	612
12:15 PM	0	0	0	0	3	0	0	0	0	0	9	0	0	149	31	0	1	180	113	358	0	0	8	471	651
12:30 PM	0	0	0	0	2	0	0	0	0	0	7	0	0	134	39	1	12	174	83	353	0	0	12	436	610
12:45 PM	0	0	0	0	1	0	0	0	0	0	6	0	0	133	38	0	1	171	77	373	0	0	4	450	621
Hourly Total	0	0	0	0	6	0	0	0	0	0	29	0	0	543	141	1	16	685	371	1438	0	0	28	1809	2494
1:00 PM	0	0	0	0	1	0	0	0	0	0	4	0	0	121	32	0	1	153	71	355	0	0	4	426	579
1:15 PM	0	0	0	0	0	0	0	0	0	0	9	0	0	139	36	0	4	175	70	327	0	0	15	397	572
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	1	0	0	0	0	0	13	0	0	260	68	0	5	328	141	682	0	0	19	823	1151
4:30 PM	0	0	0	0	0	0	0	0	0	0	5	0	0	144	37	0	4	181	102	512	0	0	6	614	795
4:45 PM	0	0	0	0	6	0	0	0	0	0	5	0	0	173	37	0	2	210	93	466	0	0	6	559	769
Hourly Total	0	0	0	0	6	0	0	0	0	0	10	0	0	317	74	0	6	391	195	978	0	0	12	1173	1564
5:00 PM	0	0	0	0	4	0	0	0	0	0	10	0	0	211	54	0	4	265	111	593	0	0	4	704	969
5:15 PM	0	0	0	0	2	0	0	0	0	0	7	0	0	228	53	0	6	281	130	550	0	0	7	680	961
5:30 PM	0	0	0	0	0	0	0	0	0	0	6	0	0	239	47	0	5	286	128	592	0	0	3	720	1006
5:45 PM	0	0	0	0	1	0	0	0	0	0	10	0	0	247	40	0	4	287	125	519	0	0	9	644	931
Hourly Total	0	0	0	0	7	0	0	0	0	0	33	0	0	925	194	0	19	1119	494	2254	0	0	23	2748	3867
6:00 PM	0	0	0	0	4	0	0	0	0	0	9	0	0	192	43	0	5	235	139	542	0	0	4	681	916
6:15 PM	0	0	0	0	3	0	0	0	0	0	4	0	0	215	57	0	7	272	119	522	0	0	10	641	913
Grand Total	0	0	0	0	46	0	0	0	0	0	137	0	0	3476	817	1	71	4294	2095	9241	0	0	118	11336	15630
Approach %	NaN	NaN	NaN	NaN	-	-	NaN	NaN	NaN	NaN	-	-	0.0	81.0	19.0	0.0	-	-	18.5	81.5	0.0	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	22.2	5.2	0.0	-	27.5	13.4	59.1	0.0	0.0	-	72.5	-
Lights	0	0	0	0	-	0	0	0	0	0	-	0	0	3418	785	1	-	4204	2066	9101	0	0	-	11167	15371
% Lights	-	-	-	-	-	-	-	-	-	-	-	-	-	98.3	96.1	100.0	-	97.9	98.6	98.5	-	-	-	98.5	98.3
Mediums	0	0	0	0	-	0	0	0	0	0	-	0	0	49	27	0	-	76	28	119	0	0	-	147	223
% Mediums	-	-	-	-	-	-	-	-	-	-	-	-	-	1.4	3.3	0.0	-	1.8	1.3	1.3	-	-	-	1.3	1.4
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	9	5	0	-	14	1	21	0	0	-	22	36
% Articulated Trucks	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	0.6	0.0	-	0.3	0.0	0.2	-	-	-	0.2	0.2
Pedestrians	-	-	-	-	46	-	-	-	-	-	137	-	-	-	-	-	71	-	-	-	-	-	118	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
LEMMON SOUTH
Site Code:
Start Date: 04/14/2015
Page No: 3

Turning Movement Peak Hour Data (7:45 AM)

Start Time	MCKINNEY Southbound						LEMMON SOUTH Westbound						MCKINNEY Northbound						LEMMON SOUTH Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:45 AM	0	0	0	0	1	0	0	0	0	0	3	0	0	118	25	0	2	143	75	275	0	0	3	350	493
8:00 AM	0	0	0	0	3	0	0	0	0	0	1	0	0	114	25	0	0	139	69	298	0	0	3	367	506
8:15 AM	0	0	0	0	3	0	0	0	0	0	5	0	0	118	30	0	1	148	69	254	0	0	1	323	471
8:30 AM	0	0	0	0	0	0	0	0	0	0	5	0	0	108	22	0	1	130	75	287	0	0	3	362	492
Total	0	0	0	0	7	0	0	0	0	0	14	0	0	458	102	0	4	560	288	1114	0	0	10	1402	1962
Approach %	NaN	NaN	NaN	NaN	-	-	NaN	NaN	NaN	NaN	-	-	0.0	81.8	18.2	0.0	-	-	20.5	79.5	0.0	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	23.3	5.2	0.0	-	28.5	14.7	56.8	0.0	0.0	-	71.5	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	0.000	0.000	0.970	0.850	0.000	-	0.946	0.960	0.935	0.000	0.000	-	0.955	0.969
Lights	0	0	0	0	-	0	0	0	0	0	-	0	0	445	95	0	-	540	281	1088	0	0	-	1369	1909
% Lights	-	-	-	-	-	-	-	-	-	-	-	-	-	97.2	93.1	-	-	96.4	97.6	97.7	-	-	-	97.6	97.3
Mediums	0	0	0	0	-	0	0	0	0	0	-	0	0	11	6	0	-	17	7	22	0	0	-	29	46
% Mediums	-	-	-	-	-	-	-	-	-	-	-	-	-	2.4	5.9	-	-	3.0	2.4	2.0	-	-	-	2.1	2.3
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	2	1	0	-	3	0	4	0	0	-	4	7
% Articulated Trucks	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4	1.0	-	-	0.5	0.0	0.4	-	-	-	0.3	0.4
Pedestrians	-	-	-	-	7	-	-	-	-	-	14	-	-	-	-	-	4	-	-	-	-	-	10	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
LEMMON SOUTH
Site Code:
Start Date: 04/14/2015
Page No: 7

Turning Movement Peak Hour Data (5:00 PM)

Start Time	MCKINNEY Southbound						LEMMON SOUTH Westbound						MCKINNEY Northbound						LEMMON SOUTH Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
5:00 PM	0	0	0	0	4	0	0	0	0	0	10	0	0	211	54	0	4	265	111	593	0	0	4	704	969
5:15 PM	0	0	0	0	2	0	0	0	0	0	7	0	0	228	53	0	6	281	130	550	0	0	7	680	961
5:30 PM	0	0	0	0	0	0	0	0	0	0	6	0	0	239	47	0	5	286	128	592	0	0	3	720	1006
5:45 PM	0	0	0	0	1	0	0	0	0	0	10	0	0	247	40	0	4	287	125	519	0	0	9	644	931
Total	0	0	0	0	7	0	0	0	0	0	33	0	0	925	194	0	19	1119	494	2254	0	0	23	2748	3867
Approach %	NaN	NaN	NaN	NaN	-	-	NaN	NaN	NaN	NaN	-	-	0.0	82.7	17.3	0.0	-	-	18.0	82.0	0.0	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	23.9	5.0	0.0	-	28.9	12.8	58.3	0.0	0.0	-	71.1	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	0.000	0.000	0.936	0.898	0.000	-	0.975	0.950	0.950	0.000	0.000	-	0.954	0.961
Lights	0	0	0	0	-	0	0	0	0	0	-	0	0	918	191	0	-	1109	493	2238	0	0	-	2731	3840
% Lights	-	-	-	-	-	-	-	-	-	-	-	-	-	99.2	98.5	-	-	99.1	99.8	99.3	-	-	-	99.4	99.3
Mediums	0	0	0	0	-	0	0	0	0	0	-	0	0	6	3	0	-	9	1	16	0	0	-	17	26
% Mediums	-	-	-	-	-	-	-	-	-	-	-	-	-	0.6	1.5	-	-	0.8	0.2	0.7	-	-	-	0.6	0.7
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	1
% Articulated Trucks	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.0	-	-	0.1	0.0	0.0	-	-	-	0.0	0.0
Pedestrians	-	-	-	-	7	-	-	-	-	-	33	-	-	-	-	-	19	-	-	-	-	-	23	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: COLE @
LEMMON SOUTH
Site Code:
Start Date: 04/14/2015
Page No: 1

Turning Movement Data

Start Time	COLE Southbound						LEMMON SOUTH Westbound						COLE Northbound						LEMMON SOUTH Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:00 AM	26	88	0	0	0	114	0	0	0	0	2	0	0	0	0	0	1	0	0	206	17	0	0	223	337
7:15 AM	26	112	0	0	0	138	0	0	0	0	3	0	0	0	0	0	3	0	0	257	15	0	2	272	410
7:30 AM	29	163	0	0	3	192	0	0	0	0	1	0	0	0	0	0	1	0	0	272	14	0	1	286	478
7:45 AM	29	190	0	0	1	219	0	0	0	0	1	0	0	0	0	0	1	0	0	284	18	0	4	302	521
Hourly Total	110	553	0	0	4	663	0	0	0	0	7	0	0	0	0	0	6	0	0	1019	64	0	7	1083	1746
8:00 AM	35	224	0	0	2	259	0	0	0	0	1	0	0	0	0	0	0	0	0	319	24	0	1	343	602
8:15 AM	35	237	0	0	1	272	0	0	0	0	4	0	0	0	0	0	0	0	0	278	21	0	2	299	571
8:30 AM	34	197	0	0	0	231	0	0	0	0	2	0	0	0	0	0	1	0	0	306	16	0	0	322	553
8:45 AM	40	192	0	0	0	232	0	0	0	0	2	0	0	0	0	0	2	0	0	303	24	0	1	327	559
Hourly Total	144	850	0	0	3	994	0	0	0	0	9	0	0	0	0	0	3	0	0	1206	85	0	4	1291	2285
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:30 AM	49	94	0	0	0	143	0	0	0	0	1	0	0	0	0	0	0	0	0	343	25	0	4	368	511
11:45 AM	37	101	0	0	2	138	0	0	0	0	0	0	0	0	0	0	0	0	0	345	25	0	6	370	508
Hourly Total	86	195	0	0	2	281	0	0	0	0	1	0	0	0	0	0	0	0	0	688	50	0	10	738	1019
12:00 PM	40	110	0	0	1	150	0	0	0	0	2	0	0	0	0	0	1	0	0	398	22	0	0	420	570
12:15 PM	64	134	0	0	1	198	0	0	0	0	5	0	0	0	0	0	1	0	0	369	34	0	10	403	601
12:30 PM	52	149	0	0	1	201	0	0	0	0	1	0	0	0	0	0	5	0	0	366	24	0	6	390	591
12:45 PM	51	161	0	0	4	212	0	0	0	0	1	0	0	0	0	0	2	0	0	378	31	0	5	409	621
Hourly Total	207	554	0	0	7	761	0	0	0	0	9	0	0	0	0	0	9	0	0	1511	111	0	21	1622	2383
1:00 PM	70	162	0	0	2	232	0	0	0	0	6	0	0	0	0	0	2	0	0	329	29	0	9	358	590
1:15 PM	58	165	0	0	0	223	0	0	0	0	1	0	0	0	0	0	1	0	0	300	39	0	2	339	562
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	128	327	0	0	2	455	0	0	0	0	7	0	0	0	0	0	3	0	0	629	68	0	11	697	1152
4:30 PM	40	117	0	0	1	157	0	0	0	0	0	0	0	0	0	0	1	0	0	550	20	0	4	570	727
4:45 PM	51	143	0	0	0	194	0	0	0	0	1	0	0	0	0	0	4	0	0	502	16	0	2	518	712
Hourly Total	91	260	0	0	1	351	0	0	0	0	1	0	0	0	0	0	5	0	0	1052	36	0	6	1088	1439
5:00 PM	48	139	0	0	0	187	0	0	0	0	5	0	0	0	0	0	2	0	0	603	30	0	0	633	820
5:15 PM	56	136	1	0	2	193	0	0	0	0	0	0	0	0	0	0	5	0	0	587	33	0	5	620	813
5:30 PM	48	159	0	0	0	207	0	0	0	0	0	0	0	0	0	0	1	0	0	612	36	0	2	648	855
5:45 PM	47	189	0	0	0	236	0	0	0	0	15	0	0	0	0	0	10	0	0	555	29	0	3	584	820
Hourly Total	199	623	1	0	2	823	0	0	0	0	20	0	0	0	0	0	18	0	0	2357	128	0	10	2485	3308
6:00 PM	62	143	0	0	8	205	0	0	0	0	1	0	0	0	0	0	1	0	0	581	35	0	7	616	821
6:15 PM	61	172	0	0	0	233	0	0	0	0	0	0	0	0	0	0	4	0	0	561	29	0	2	590	823
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	1088	3677	1	0	29	4766	0	0	0	0	55	0	0	0	0	0	49	0	0	9604	606	0	78	10210	14976
Approach %	22.8	77.2	0.0	0.0	-	-	NaN	NaN	NaN	NaN	-	-	NaN	NaN	NaN	NaN	-	-	0.0	94.1	5.9	0.0	-	-	-
Total %	7.3	24.6	0.0	0.0	-	31.8	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	64.1	4.0	0.0	-	68.2	-
Lights	1034	3628	0	0	-	4662	0	0	0	0	-	0	0	0	0	0	-	0	0	9474	593	0	-	10067	14729
% Lights	95.0	98.7	0.0	-	-	97.8	-	-	-	-	-	-	-	-	-	-	-	-	-	98.6	97.9	-	-	98.6	98.4
Mediums	53	43	0	0	-	96	0	0	0	0	-	0	0	0	0	0	-	0	0	117	10	0	-	127	223
% Mediums	4.9	1.2	0.0	-	-	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	1.2	1.7	-	-	1.2	1.5
Articulated Trucks	1	6	1	0	-	8	0	0	0	0	-	0	0	0	0	0	-	0	0	13	3	0	-	16	24
% Articulated Trucks	0.1	0.2	100.0	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.5	-	-	0.2	0.2
Pedestrians	-	-	-	-	29	-	-	-	-	-	55	-	-	-	-	-	49	-	-	-	-	-	78	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: COLE @
LEMMON SOUTH
Site Code:
Start Date: 04/14/2015
Page No: 3

Turning Movement Peak Hour Data (8:00 AM)

Start Time	COLE Southbound						LEMMON SOUTH Westbound						COLE Northbound						LEMMON SOUTH Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
8:00 AM	35	224	0	0	2	259	0	0	0	0	1	0	0	0	0	0	0	0	0	319	24	0	1	343	602
8:15 AM	35	237	0	0	1	272	0	0	0	0	4	0	0	0	0	0	0	0	0	278	21	0	2	299	571
8:30 AM	34	197	0	0	0	231	0	0	0	0	2	0	0	0	0	0	1	0	0	306	16	0	0	322	553
8:45 AM	40	192	0	0	0	232	0	0	0	0	2	0	0	0	0	0	2	0	0	303	24	0	1	327	559
Total	144	850	0	0	3	994	0	0	0	0	9	0	0	0	0	0	3	0	0	1206	85	0	4	1291	2285
Approach %	14.5	85.5	0.0	0.0	-	-	NaN	NaN	NaN	NaN	-	-	NaN	NaN	NaN	NaN	-	-	0.0	93.4	6.6	0.0	-	-	-
Total %	6.3	37.2	0.0	0.0	-	43.5	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	52.8	3.7	0.0	-	56.5	-
PHF	0.900	0.897	0.000	0.000	-	0.914	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	0.000	0.000	0.945	0.885	0.000	-	0.941	0.949
Lights	137	838	0	0	-	975	0	0	0	0	-	0	0	0	0	0	-	0	0	1181	84	0	-	1265	2240
% Lights	95.1	98.6	-	-	-	98.1	-	-	-	-	-	-	-	-	-	-	-	-	-	97.9	98.8	-	-	98.0	98.0
Mediums	7	12	0	0	-	19	0	0	0	0	-	0	0	0	0	0	-	0	0	22	1	0	-	23	42
% Mediums	4.9	1.4	-	-	-	1.9	-	-	-	-	-	-	-	-	-	-	-	-	-	1.8	1.2	-	-	1.8	1.8
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	3	0	0	-	3	3
% Articulated Trucks	0.0	0.0	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	0.0	-	-	0.2	0.1
Pedestrians	-	-	-	-	3	-	-	-	-	-	9	-	-	-	-	-	3	-	-	-	-	-	4	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: COLE @
LEMMON SOUTH
Site Code:
Start Date: 04/14/2015
Page No: 7

Turning Movement Peak Hour Data (5:30 PM)

Start Time	COLE Southbound						LEMMON SOUTH Westbound						COLE Northbound						LEMMON SOUTH Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
5:30 PM	48	159	0	0	0	207	0	0	0	0	0	0	0	0	0	0	1	0	0	612	36	0	2	648	855
5:45 PM	47	189	0	0	0	236	0	0	0	0	15	0	0	0	0	0	10	0	0	555	29	0	3	584	820
6:00 PM	62	143	0	0	8	205	0	0	0	0	1	0	0	0	0	0	1	0	0	581	35	0	7	616	821
6:15 PM	61	172	0	0	0	233	0	0	0	0	0	0	0	0	0	0	4	0	0	561	29	0	2	590	823
Total	218	663	0	0	8	881	0	0	0	0	16	0	0	0	0	0	16	0	0	2309	129	0	14	2438	3319
Approach %	24.7	75.3	0.0	0.0	-	-	NaN	NaN	NaN	NaN	-	-	NaN	NaN	NaN	NaN	-	-	0.0	94.7	5.3	0.0	-	-	-
Total %	6.6	20.0	0.0	0.0	-	26.5	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	69.6	3.9	0.0	-	73.5	-
PHF	0.879	0.877	0.000	0.000	-	0.933	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	0.000	0.000	0.943	0.896	0.000	-	0.941	0.970
Lights	210	659	0	0	-	869	0	0	0	0	-	0	0	0	0	0	-	0	0	2300	129	0	-	2429	3298
% Lights	96.3	99.4	-	-	-	98.6	-	-	-	-	-	-	-	-	-	-	-	-	-	99.6	100.0	-	-	99.6	99.4
Mediums	8	4	0	0	-	12	0	0	0	0	-	0	0	0	0	0	-	0	0	9	0	0	-	9	21
% Mediums	3.7	0.6	-	-	-	1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4	0.0	-	-	0.4	0.6
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	0.0	0.0	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	-	-	0.0	0.0
Pedestrians	-	-	-	-	8	-	-	-	-	-	16	-	-	-	-	-	16	-	-	-	-	-	14	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
LEMMON NORTH
Site Code:
Start Date: 04/14/2015
Page No: 1

Turning Movement Data

Start Time	MCKINNEY Southbound						LEMMON NORTH Westbound						MCKINNEY Northbound						LEMMON NORTH Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:00 AM	0	0	0	0	0	0	0	423	11	0	0	434	21	43	0	0	0	64	0	0	0	0	3	0	498
7:15 AM	0	0	0	0	0	0	0	504	9	0	2	513	33	70	0	0	2	103	0	0	0	0	1	0	616
7:30 AM	0	0	0	0	0	0	0	520	7	0	3	527	21	78	0	0	3	99	0	0	0	0	6	0	626
7:45 AM	0	0	0	0	0	0	0	482	10	0	4	492	35	126	0	0	0	161	0	0	0	0	2	0	653
Hourly Total	0	0	0	0	0	0	0	1929	37	0	9	1966	110	317	0	0	5	427	0	0	0	0	12	0	2393
8:00 AM	0	0	0	0	2	0	0	472	21	0	4	493	44	140	0	0	1	184	0	0	0	0	0	0	677
8:15 AM	0	0	0	0	1	0	0	474	15	0	9	489	35	147	0	0	0	182	0	0	0	0	0	0	671
8:30 AM	0	0	0	0	0	0	0	466	30	0	5	496	43	150	0	0	0	193	0	0	0	0	2	0	689
8:45 AM	0	0	0	0	0	0	0	459	25	0	4	484	19	144	0	0	1	163	0	0	0	0	0	0	647
Hourly Total	0	0	0	0	3	0	0	1871	91	0	22	1962	141	581	0	0	2	722	0	0	0	0	2	0	2684
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	8	0	0	275	29	0	7	304	52	176	0	0	2	228	0	0	0	0	9	0	532
11:45 AM	0	0	0	0	1	0	0	270	32	0	6	302	53	169	0	0	2	222	0	0	0	0	1	0	524
Hourly Total	0	0	0	0	9	0	0	545	61	0	13	606	105	345	0	0	4	450	0	0	0	0	10	0	1056
12:00 PM	0	0	0	0	0	0	0	267	24	0	2	291	51	173	0	0	1	224	0	0	0	0	6	0	515
12:15 PM	0	0	0	0	3	0	0	256	42	0	8	298	69	200	0	0	1	269	0	0	0	0	7	0	567
12:30 PM	0	0	0	0	0	0	0	314	33	0	4	347	56	163	0	0	0	219	0	0	0	0	10	0	566
12:45 PM	0	0	0	0	2	0	0	328	23	0	12	351	52	150	0	0	9	202	0	0	0	0	21	0	553
Hourly Total	0	0	0	0	5	0	0	1165	122	0	26	1287	228	686	0	0	11	914	0	0	0	0	44	0	2201
1:00 PM	0	0	0	0	3	0	0	339	24	0	1	363	52	141	0	0	0	193	0	0	0	0	7	0	556
1:15 PM	0	0	0	0	2	0	0	342	27	0	10	369	58	140	0	0	1	198	0	0	0	0	8	0	567
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	5	0	0	681	51	0	11	732	110	281	0	0	1	391	0	0	0	0	15	0	1123
4:30 PM	0	0	0	0	3	0	0	273	24	0	8	297	36	220	0	0	3	256	0	0	0	0	7	0	553
4:45 PM	0	0	0	0	2	0	0	334	28	0	6	362	36	223	0	0	4	259	0	0	0	0	8	0	621
Hourly Total	0	0	0	0	5	0	0	607	52	0	14	659	72	443	0	0	7	515	0	0	0	0	15	0	1174
5:00 PM	0	0	0	0	6	0	0	301	22	0	13	323	52	253	0	0	3	305	0	0	0	0	2	0	628
5:15 PM	0	0	0	0	6	0	0	319	26	0	7	345	52	295	0	0	4	347	0	0	0	0	8	0	692
5:30 PM	0	0	0	0	3	0	0	273	33	0	15	306	49	312	0	0	7	361	0	0	0	0	3	0	667
5:45 PM	0	0	0	0	11	0	0	337	52	0	19	389	60	301	0	0	9	361	0	0	0	0	10	0	750
Hourly Total	0	0	0	0	26	0	0	1230	133	0	54	1363	213	1161	0	0	23	1374	0	0	0	0	23	0	2737
6:00 PM	0	0	0	0	4	0	0	253	32	0	4	285	53	285	0	0	4	338	0	0	0	0	8	0	623
6:15 PM	0	0	0	0	5	0	0	300	35	0	14	335	58	258	0	0	4	316	0	0	0	0	10	0	651
Grand Total	0	0	0	0	62	0	0	8581	614	0	167	9195	1090	4357	0	0	61	5447	0	0	0	0	139	0	14642
Approach %	NaN	NaN	NaN	NaN	-	-	0.0	93.3	6.7	0.0	-	-	20.0	80.0	0.0	0.0	-	-	NaN	NaN	NaN	NaN	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	58.6	4.2	0.0	-	62.8	7.4	29.8	0.0	0.0	-	37.2	0.0	0.0	0.0	0.0	-	0.0	-
Lights	0	0	0	0	-	0	0	8439	599	0	-	9038	1070	4290	0	0	-	5360	0	0	0	0	-	0	14398
% Lights	-	-	-	-	-	-	-	98.3	97.6	-	-	98.3	98.2	98.5	-	-	-	98.4	-	-	-	-	-	-	98.3
Mediums	0	0	0	0	-	0	0	117	13	0	-	130	16	61	0	0	-	77	0	0	0	0	-	0	207
% Mediums	-	-	-	-	-	-	-	1.4	2.1	-	-	1.4	1.5	1.4	-	-	-	1.4	-	-	-	-	-	-	1.4
Articulated Trucks	0	0	0	0	-	0	0	25	2	0	-	27	4	6	0	0	-	10	0	0	0	0	-	0	37
% Articulated Trucks	-	-	-	-	-	-	-	0.3	0.3	-	-	0.3	0.4	0.1	-	-	-	0.2	-	-	-	-	-	-	0.3
Pedestrians	-	-	-	-	62	-	-	-	-	-	167	-	-	-	-	-	61	-	-	-	-	-	139	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
LEMMON NORTH
Site Code:
Start Date: 04/14/2015
Page No: 3

Turning Movement Peak Hour Data (7:45 AM)

Start Time	MCKINNEY Southbound						LEMMON NORTH Westbound						MCKINNEY Northbound						LEMMON NORTH Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:45 AM	0	0	0	0	0	0	0	482	10	0	4	492	35	126	0	0	0	161	0	0	0	0	2	0	653
8:00 AM	0	0	0	0	2	0	0	472	21	0	4	493	44	140	0	0	1	184	0	0	0	0	0	0	677
8:15 AM	0	0	0	0	1	0	0	474	15	0	9	489	35	147	0	0	0	182	0	0	0	0	0	0	671
8:30 AM	0	0	0	0	0	0	0	466	30	0	5	496	43	150	0	0	0	193	0	0	0	0	2	0	689
Total	0	0	0	0	3	0	0	1894	76	0	22	1970	157	563	0	0	1	720	0	0	0	0	4	0	2690
Approach %	NaN	NaN	NaN	NaN	-	-	0.0	96.1	3.9	0.0	-	-	21.8	78.2	0.0	0.0	-	-	NaN	NaN	NaN	NaN	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	70.4	2.8	0.0	-	73.2	5.8	20.9	0.0	0.0	-	26.8	0.0	0.0	0.0	0.0	-	0.0	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.000	0.982	0.633	0.000	-	0.993	0.892	0.938	0.000	0.000	-	0.933	0.000	0.000	0.000	0.000	-	0.000	0.976
Lights	0	0	0	0	-	0	0	1865	73	0	-	1938	151	549	0	0	-	700	0	0	0	0	-	0	2638
% Lights	-	-	-	-	-	-	-	98.5	96.1	-	-	98.4	96.2	97.5	-	-	-	97.2	-	-	-	-	-	-	98.1
Mediums	0	0	0	0	-	0	0	25	2	0	-	27	5	12	0	0	-	17	0	0	0	0	-	0	44
% Mediums	-	-	-	-	-	-	-	1.3	2.6	-	-	1.4	3.2	2.1	-	-	-	2.4	-	-	-	-	-	-	1.6
Articulated Trucks	0	0	0	0	-	0	0	4	1	0	-	5	1	2	0	0	-	3	0	0	0	0	-	0	8
% Articulated Trucks	-	-	-	-	-	-	-	0.2	1.3	-	-	0.3	0.6	0.4	-	-	-	0.4	-	-	-	-	-	-	0.3
Pedestrians	-	-	-	-	3	-	-	-	-	-	22	-	-	-	-	-	1	-	-	-	-	-	4	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
LEMMON NORTH
Site Code:
Start Date: 04/14/2015
Page No: 7

Turning Movement Peak Hour Data (5:00 PM)

Start Time	MCKINNEY Southbound						LEMMON NORTH Westbound						MCKINNEY Northbound						LEMMON NORTH Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
5:00 PM	0	0	0	0	6	0	0	301	22	0	13	323	52	253	0	0	3	305	0	0	0	0	2	0	628
5:15 PM	0	0	0	0	6	0	0	319	26	0	7	345	52	295	0	0	4	347	0	0	0	0	8	0	692
5:30 PM	0	0	0	0	3	0	0	273	33	0	15	306	49	312	0	0	7	361	0	0	0	0	3	0	667
5:45 PM	0	0	0	0	11	0	0	337	52	0	19	389	60	301	0	0	9	361	0	0	0	0	10	0	750
Total	0	0	0	0	26	0	0	1230	133	0	54	1363	213	1161	0	0	23	1374	0	0	0	0	23	0	2737
Approach %	NaN	NaN	NaN	NaN	-	-	0.0	90.2	9.8	0.0	-	-	15.5	84.5	0.0	0.0	-	-	NaN	NaN	NaN	NaN	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	44.9	4.9	0.0	-	49.8	7.8	42.4	0.0	0.0	-	50.2	0.0	0.0	0.0	0.0	-	0.0	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.000	0.912	0.639	0.000	-	0.876	0.888	0.930	0.000	0.000	-	0.952	0.000	0.000	0.000	0.000	-	0.000	0.912
Lights	0	0	0	0	-	0	0	1215	131	0	-	1346	212	1152	0	0	-	1364	0	0	0	0	-	0	2710
% Lights	-	-	-	-	-	-	-	98.8	98.5	-	-	98.8	99.5	99.2	-	-	-	99.3	-	-	-	-	-	-	99.0
Mediums	0	0	0	0	-	0	0	12	2	0	-	14	1	8	0	0	-	9	0	0	0	0	-	0	23
% Mediums	-	-	-	-	-	-	-	1.0	1.5	-	-	1.0	0.5	0.7	-	-	-	0.7	-	-	-	-	-	-	0.8
Articulated Trucks	0	0	0	0	-	0	0	3	0	0	-	3	0	1	0	0	-	1	0	0	0	0	-	0	4
% Articulated Trucks	-	-	-	-	-	-	-	0.2	0.0	-	-	0.2	0.0	0.1	-	-	-	0.1	-	-	-	-	-	-	0.1
Pedestrians	-	-	-	-	26	-	-	-	-	-	54	-	-	-	-	-	23	-	-	-	-	-	23	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: COLE @
LEMMON NORTH
Site Code:
Start Date: 04/14/2015
Page No: 1

Turning Movement Data

Start Time	COLE Southbound						LEMMON NORTH Westbound						COLE Northbound						LEMMON NORTH Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:00 AM	0	79	60	0	1	139	30	421	0	0	3	451	0	0	0	0	2	0	0	0	0	0	0	0	590
7:15 AM	0	111	80	0	1	191	39	501	0	0	4	540	0	0	0	0	0	0	0	0	0	0	0	0	731
7:30 AM	0	133	71	0	4	204	49	482	0	0	1	531	0	0	0	0	1	0	0	0	0	0	0	0	735
7:45 AM	0	171	62	0	4	233	63	471	0	0	3	534	0	0	0	0	1	0	0	0	0	0	0	0	767
Hourly Total	0	494	273	0	10	767	181	1875	0	0	11	2056	0	0	0	0	4	0	0	0	0	0	0	0	2823
8:00 AM	0	201	66	0	0	267	53	472	0	0	1	525	0	0	0	0	2	0	0	0	0	0	0	0	792
8:15 AM	0	219	81	0	3	300	74	437	0	0	8	511	0	0	0	0	3	0	0	0	0	0	1	0	811
8:30 AM	0	176	70	0	2	246	52	456	0	0	2	508	0	0	0	0	0	0	0	0	0	0	0	0	754
8:45 AM	0	162	68	0	4	230	66	403	0	0	4	469	0	0	0	0	0	0	0	0	0	0	0	0	699
Hourly Total	0	758	285	0	9	1043	245	1768	0	0	15	2013	0	0	0	0	5	0	0	0	0	0	1	0	3056
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:30 AM	0	96	38	0	1	134	54	278	0	0	22	332	0	0	0	0	2	0	0	0	0	0	1	0	466
11:45 AM	0	97	48	0	4	145	41	287	0	0	1	328	0	0	0	0	1	0	0	0	0	0	0	0	473
Hourly Total	0	193	86	0	5	279	95	565	0	0	23	660	0	0	0	0	3	0	0	0	0	0	1	0	939
12:00 PM	0	104	35	0	2	139	51	251	0	0	2	302	0	0	0	0	1	0	0	0	0	0	0	0	441
12:15 PM	0	130	34	0	5	164	63	262	0	0	15	325	0	0	0	0	4	0	0	0	0	0	0	0	489
12:30 PM	0	128	50	0	1	178	70	281	0	0	3	351	0	0	0	0	1	0	0	0	0	0	0	0	529
12:45 PM	0	148	64	0	3	212	60	335	0	0	2	395	0	0	0	0	3	0	0	0	0	0	0	0	607
Hourly Total	0	510	183	0	11	693	244	1129	0	0	22	1373	0	0	0	0	9	0	0	0	0	0	0	0	2066
1:00 PM	0	157	59	0	0	216	74	300	0	0	5	374	0	0	0	0	3	0	0	0	0	0	2	0	590
1:15 PM	0	160	50	0	0	210	61	337	0	0	0	398	0	0	0	0	1	0	0	0	0	0	0	0	608
1:30 PM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	317	109	0	0	426	136	637	0	0	5	773	0	0	0	0	4	0	0	0	0	0	2	0	1199
4:30 PM	0	106	51	0	1	157	55	289	0	0	3	344	0	0	0	0	3	0	0	0	0	0	0	0	501
4:45 PM	0	140	56	0	5	196	52	287	0	0	9	339	0	0	0	0	4	0	0	0	0	0	0	0	535
Hourly Total	0	246	107	0	6	353	107	576	0	0	12	683	0	0	0	0	7	0	0	0	0	0	0	0	1036
5:00 PM	0	129	59	0	0	188	55	329	0	0	1	384	0	0	0	0	2	0	0	0	0	0	0	0	572
5:15 PM	0	150	44	0	2	194	52	289	0	0	0	341	0	0	0	0	3	0	0	0	0	0	0	0	535
5:30 PM	0	124	37	0	6	161	73	273	0	0	3	346	0	1	0	0	5	1	0	0	0	0	0	0	508
5:45 PM	0	164	48	0	2	212	70	290	0	0	7	360	0	0	0	0	1	0	0	0	0	0	0	0	572
Hourly Total	0	567	188	0	10	755	250	1181	0	0	11	1431	0	1	0	0	11	1	0	0	0	0	0	0	2187
6:00 PM	0	134	44	0	5	178	73	251	0	0	1	324	0	0	0	0	5	0	0	0	0	0	4	0	502
6:15 PM	0	158	48	0	9	206	72	269	0	0	1	341	0	0	0	0	3	0	0	0	0	0	5	0	547
6:30 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	3377	1323	0	65	4700	1403	8252	0	0	101	9655	0	1	0	0	51	1	0	0	0	0	13	0	14356
Approach %	0.0	71.9	28.1	0.0	-	-	14.5	85.5	0.0	0.0	-	-	0.0	100.0	0.0	0.0	-	-	NaN	NaN	NaN	NaN	-	-	-
Total %	0.0	23.5	9.2	0.0	-	32.7	9.8	57.5	0.0	0.0	-	67.3	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-
Lights	0	3303	1303	0	-	4606	1372	8112	0	0	-	9484	0	1	0	0	-	1	0	0	0	0	-	0	14091
% Lights	-	97.8	98.5	-	-	98.0	97.8	98.3	-	-	-	98.2	-	100.0	-	-	-	100.0	-	-	-	-	-	-	98.2
Mediums	0	74	19	0	-	93	27	122	0	0	-	149	0	0	0	0	-	0	0	0	0	0	-	0	242
% Mediums	-	2.2	1.4	-	-	2.0	1.9	1.5	-	-	-	1.5	-	0.0	-	-	-	0.0	-	-	-	-	-	-	1.7
Articulated Trucks	0	0	1	0	-	1	4	18	0	0	-	22	0	0	0	0	-	0	0	0	0	0	-	0	23
% Articulated Trucks	-	0.0	0.1	-	-	0.0	0.3	0.2	-	-	-	0.2	-	0.0	-	-	-	0.0	-	-	-	-	-	-	0.2
Pedestrians	-	-	-	-	65	-	-	-	-	-	101	-	-	-	-	-	51	-	-	-	-	-	13	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: COLE @
LEMMON NORTH
Site Code:
Start Date: 04/14/2015
Page No: 3

Turning Movement Peak Hour Data (7:45 AM)

Start Time	COLE Southbound						LEMMON NORTH Westbound						COLE Northbound						LEMMON NORTH Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:45 AM	0	171	62	0	4	233	63	471	0	0	3	534	0	0	0	0	1	0	0	0	0	0	0	0	767
8:00 AM	0	201	66	0	0	267	53	472	0	0	1	525	0	0	0	0	2	0	0	0	0	0	0	0	792
8:15 AM	0	219	81	0	3	300	74	437	0	0	8	511	0	0	0	0	3	0	0	0	0	0	1	0	811
8:30 AM	0	176	70	0	2	246	52	456	0	0	2	508	0	0	0	0	0	0	0	0	0	0	0	0	754
Total	0	767	279	0	9	1046	242	1836	0	0	14	2078	0	0	0	0	6	0	0	0	0	0	1	0	3124
Approach %	0.0	73.3	26.7	0.0	-	-	11.6	88.4	0.0	0.0	-	-	NaN	NaN	NaN	NaN	-	-	NaN	NaN	NaN	NaN	-	-	-
Total %	0.0	24.6	8.9	0.0	-	33.5	7.7	58.8	0.0	0.0	-	66.5	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-
PHF	0.000	0.876	0.861	0.000	-	0.872	0.818	0.972	0.000	0.000	-	0.973	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	0.000	0.963
Lights	0	753	274	0	-	1027	232	1805	0	0	-	2037	0	0	0	0	-	0	0	0	0	0	-	0	3064
% Lights	-	98.2	98.2	-	-	98.2	95.9	98.3	-	-	-	98.0	-	-	-	-	-	-	-	-	-	-	-	-	98.1
Mediums	0	14	5	0	-	19	10	27	0	0	-	37	0	0	0	0	-	0	0	0	0	0	-	0	56
% Mediums	-	1.8	1.8	-	-	1.8	4.1	1.5	-	-	-	1.8	-	-	-	-	-	-	-	-	-	-	-	-	1.8
Articulated Trucks	0	0	0	0	-	0	0	4	0	0	-	4	0	0	0	0	-	0	0	0	0	0	-	0	4
% Articulated Trucks	-	0.0	0.0	-	-	0.0	0.0	0.2	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	0.1
Pedestrians	-	-	-	-	9	-	-	-	-	-	14	-	-	-	-	-	6	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: COLE @
LEMMON NORTH
Site Code:
Start Date: 04/14/2015
Page No: 7

Turning Movement Peak Hour Data (5:00 PM)

Start Time	COLE Southbound						LEMMON NORTH Westbound						COLE Northbound						LEMMON NORTH Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
5:00 PM	0	129	59	0	0	188	55	329	0	0	1	384	0	0	0	0	2	0	0	0	0	0	0	0	572
5:15 PM	0	150	44	0	2	194	52	289	0	0	0	341	0	0	0	0	3	0	0	0	0	0	0	0	535
5:30 PM	0	124	37	0	6	161	73	273	0	0	3	346	0	1	0	0	5	1	0	0	0	0	0	0	508
5:45 PM	0	164	48	0	2	212	70	290	0	0	7	360	0	0	0	0	1	0	0	0	0	0	0	0	572
Total	0	567	188	0	10	755	250	1181	0	0	11	1431	0	1	0	0	11	1	0	0	0	0	0	0	2187
Approach %	0.0	75.1	24.9	0.0	-	-	17.5	82.5	0.0	0.0	-	-	0.0	100.0	0.0	0.0	-	-	NaN	NaN	NaN	NaN	-	-	-
Total %	0.0	25.9	8.6	0.0	-	34.5	11.4	54.0	0.0	0.0	-	65.4	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-
PHF	0.000	0.864	0.797	0.000	-	0.890	0.856	0.897	0.000	0.000	-	0.932	0.000	0.250	0.000	0.000	-	0.250	0.000	0.000	0.000	0.000	-	0.000	0.956
Lights	0	555	187	0	-	742	250	1165	0	0	-	1415	0	1	0	0	-	1	0	0	0	0	-	0	2158
% Lights	-	97.9	99.5	-	-	98.3	100.0	98.6	-	-	-	98.9	-	100.0	-	-	-	100.0	-	-	-	-	-	-	98.7
Mediums	0	12	1	0	-	13	0	14	0	0	-	14	0	0	0	0	-	0	0	0	0	0	-	0	27
% Mediums	-	2.1	0.5	-	-	1.7	0.0	1.2	-	-	-	1.0	-	0.0	-	-	-	0.0	-	-	-	-	-	-	1.2
Articulated Trucks	0	0	0	0	-	0	0	2	0	0	-	2	0	0	0	0	-	0	0	0	0	0	-	0	2
% Articulated Trucks	-	0.0	0.0	-	-	0.0	0.0	0.2	-	-	-	0.1	-	0.0	-	-	-	0.0	-	-	-	-	-	-	0.1
Pedestrians	-	-	-	-	10	-	-	-	-	-	11	-	-	-	-	-	11	-	-	-	-	0	-	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
CITYPLACE
Site Code:
Start Date: 04/14/2015
Page No: 1

Turning Movement Data

Start Time	MCKINNEY Southbound						CITYPLACE Westbound						MCKINNEY Northbound						Eastbound St. Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:00 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	65	1	0	0	66	0	0	0	0	0	0	68
7:15 AM	0	0	0	0	1	0	0	0	7	0	4	7	0	79	2	0	0	81	0	0	0	0	0	0	88
7:30 AM	0	0	0	0	4	0	0	0	9	0	1	9	0	90	1	0	1	91	0	0	0	0	6	0	100
7:45 AM	0	0	0	0	1	0	0	0	13	1	2	14	0	128	0	0	0	128	0	0	0	0	3	0	142
Hourly Total	0	0	0	0	6	0	0	0	31	1	7	32	0	362	4	0	1	366	0	0	0	0	9	0	398
8:00 AM	0	0	0	0	4	0	0	0	18	0	5	18	0	162	1	0	0	163	0	0	0	0	2	0	181
8:15 AM	0	0	0	0	2	0	0	0	12	0	5	12	0	147	1	0	0	148	0	0	0	0	7	0	160
8:30 AM	0	0	0	0	3	0	0	0	12	0	2	12	0	180	1	0	0	181	0	0	0	0	6	0	193
8:45 AM	0	0	0	0	1	0	0	0	13	0	2	13	0	177	1	0	0	178	0	0	0	0	1	0	191
Hourly Total	0	0	0	0	10	0	0	0	55	0	14	55	0	666	4	0	0	670	0	0	0	0	16	0	725
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
11:30 AM	0	0	0	0	2	0	0	0	14	1	2	15	0	198	0	0	1	198	0	0	0	0	11	0	213
11:45 AM	0	0	0	0	2	0	0	0	23	0	4	23	0	195	0	0	0	195	0	0	0	0	14	0	218
Hourly Total	0	0	0	0	4	0	0	0	37	1	6	38	0	393	0	0	1	393	0	0	0	0	25	0	431
12:00 PM	0	0	0	0	5	0	0	0	22	0	4	22	0	189	0	0	0	189	0	0	0	0	13	0	211
12:15 PM	0	0	0	0	4	0	0	0	17	0	9	17	0	224	0	0	0	224	0	0	0	0	15	0	241
12:30 PM	0	0	0	0	16	0	0	0	18	0	10	18	0	204	1	0	0	205	0	0	0	0	19	0	223
12:45 PM	0	0	0	0	8	0	0	0	22	0	9	22	0	193	2	0	0	195	0	0	0	0	13	0	217
Hourly Total	0	0	0	0	33	0	0	0	79	0	32	79	0	810	3	0	0	813	0	0	0	0	60	0	892
1:00 PM	0	0	0	0	4	0	0	0	24	0	3	24	0	179	1	0	0	180	1	0	0	0	13	1	205
1:15 PM	0	0	0	0	8	0	0	0	13	0	7	13	0	170	1	0	0	171	0	0	0	0	6	0	184
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Hourly Total	0	0	0	0	12	0	0	0	37	0	10	37	0	349	2	0	0	351	1	0	0	0	19	1	389
4:30 PM	0	0	0	0	18	0	0	0	12	0	16	12	0	242	1	0	0	243	0	0	0	0	15	0	255
4:45 PM	0	0	0	0	5	0	0	0	21	1	8	22	0	229	1	0	0	230	0	0	0	0	18	0	252
Hourly Total	0	0	0	0	23	0	0	0	33	1	24	34	0	471	2	0	0	473	0	0	0	0	33	0	507
5:00 PM	0	0	0	0	5	0	0	0	20	2	5	22	0	275	1	0	0	276	0	0	0	0	5	0	298
5:15 PM	0	0	0	0	4	0	0	0	30	0	3	30	0	290	1	0	2	291	0	0	0	0	18	0	321
5:30 PM	0	0	0	0	10	0	0	0	42	1	11	43	0	323	1	0	0	324	0	0	0	0	12	0	367
5:45 PM	0	0	0	0	3	0	0	0	38	0	15	38	0	349	1	0	1	350	0	0	0	0	11	0	388
Hourly Total	0	0	0	0	22	0	0	0	130	3	34	133	0	1237	4	0	3	1241	0	0	0	0	46	0	1374
6:00 PM	0	0	0	0	7	0	0	0	29	0	15	29	0	301	0	0	3	301	0	0	0	0	11	0	330
6:15 PM	0	0	0	0	8	0	0	0	24	0	13	24	0	285	1	0	0	286	0	0	0	0	21	0	310
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Grand Total	0	0	0	0	125	0	0	0	455	6	155	461	0	4874	20	0	8	4894	1	0	0	0	240	1	5356
Approach %	NaN	NaN	NaN	NaN	-	-	0.0	0.0	98.7	1.3	-	-	0.0	99.6	0.4	0.0	-	-	100.0	0.0	0.0	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	8.5	0.1	-	8.6	0.0	91.0	0.4	0.0	-	91.4	0.0	0.0	0.0	0.0	-	0.0	-
Lights	0	0	0	0	-	0	0	0	421	6	-	427	0	4816	2	0	-	4818	0	0	0	0	-	0	5245
% Lights	-	-	-	-	-	-	-	-	92.5	100.0	-	92.6	-	98.8	10.0	-	-	98.4	0.0	-	-	-	-	0.0	97.9
Mediums	0	0	0	0	-	0	0	0	25	0	-	25	0	50	13	0	-	63	1	0	0	0	-	1	89
% Mediums	-	-	-	-	-	-	-	-	5.5	0.0	-	5.4	-	1.0	65.0	-	-	1.3	100.0	-	-	-	-	100.0	1.7
Articulated Trucks	0	0	0	0	-	0	0	0	9	0	-	9	0	8	5	0	-	13	0	0	0	0	-	0	22
% Articulated Trucks	-	-	-	-	-	-	-	-	2.0	0.0	-	2.0	-	0.2	25.0	-	-	0.3	0.0	-	-	-	-	0.0	0.4
Pedestrians	-	-	-	-	125	-	-	-	-	-	155	-	-	-	-	-	8	-	-	-	-	-	240	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
CITYPLACE
Site Code:
Start Date: 04/14/2015
Page No: 3

Turning Movement Peak Hour Data (8:00 AM)

Start Time	MCKINNEY Southbound						CITYPLACE Westbound						MCKINNEY Northbound						Eastbound St. Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
8:00 AM	0	0	0	0	4	0	0	0	18	0	5	18	0	162	1	0	0	163	0	0	0	0	2	0	181
8:15 AM	0	0	0	0	2	0	0	0	12	0	5	12	0	147	1	0	0	148	0	0	0	0	7	0	160
8:30 AM	0	0	0	0	3	0	0	0	12	0	2	12	0	180	1	0	0	181	0	0	0	0	6	0	193
8:45 AM	0	0	0	0	1	0	0	0	13	0	2	13	0	177	1	0	0	178	0	0	0	0	1	0	191
Total	0	0	0	0	10	0	0	0	55	0	14	55	0	666	4	0	0	670	0	0	0	0	16	0	725
Approach %	NaN	NaN	NaN	NaN	-	-	0.0	0.0	100.0	0.0	-	-	0.0	99.4	0.6	0.0	-	-	NaN	NaN	NaN	NaN	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	7.6	0.0	-	7.6	0.0	91.9	0.6	0.0	-	92.4	0.0	0.0	0.0	0.0	-	0.0	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.764	0.000	-	0.764	0.000	0.925	1.000	0.000	-	0.925	0.000	0.000	0.000	0.000	-	0.000	0.939
Lights	0	0	0	0	-	0	0	0	49	0	-	49	0	652	0	0	-	652	0	0	0	0	-	0	701
% Lights	-	-	-	-	-	-	-	-	89.1	-	-	89.1	-	97.9	0.0	-	-	97.3	-	-	-	-	-	-	96.7
Mediums	0	0	0	0	-	0	0	0	4	0	-	4	0	8	4	0	-	12	0	0	0	0	-	0	16
% Mediums	-	-	-	-	-	-	-	-	7.3	-	-	7.3	-	1.2	100.0	-	-	1.8	-	-	-	-	-	-	2.2
Articulated Trucks	0	0	0	0	-	0	0	0	2	0	-	2	0	6	0	0	-	6	0	0	0	0	-	0	8
% Articulated Trucks	-	-	-	-	-	-	-	-	3.6	-	-	3.6	-	0.9	0.0	-	-	0.9	-	-	-	-	-	-	1.1
Pedestrians	-	-	-	-	10	-	-	-	-	-	14	-	-	-	-	-	0	-	-	-	-	-	16	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
CITYPLACE
Site Code:
Start Date: 04/14/2015
Page No: 7

Turning Movement Peak Hour Data (5:15 PM)

Start Time	MCKINNEY Southbound						CITYPLACE Westbound						MCKINNEY Northbound						Eastbound St. Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
5:15 PM	0	0	0	0	4	0	0	0	30	0	3	30	0	290	1	0	2	291	0	0	0	0	18	0	321
5:30 PM	0	0	0	0	10	0	0	0	42	1	11	43	0	323	1	0	0	324	0	0	0	0	12	0	367
5:45 PM	0	0	0	0	3	0	0	0	38	0	15	38	0	349	1	0	1	350	0	0	0	0	11	0	388
6:00 PM	0	0	0	0	7	0	0	0	29	0	15	29	0	301	0	0	3	301	0	0	0	0	11	0	330
Total	0	0	0	0	24	0	0	0	139	1	44	140	0	1263	3	0	6	1266	0	0	0	0	52	0	1406
Approach %	NaN	NaN	NaN	NaN	-	-	0.0	0.0	99.3	0.7	-	-	0.0	99.8	0.2	0.0	-	-	NaN	NaN	NaN	NaN	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	9.9	0.1	-	10.0	0.0	89.8	0.2	0.0	-	90.0	0.0	0.0	0.0	0.0	-	0.0	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.827	0.250	-	0.814	0.000	0.905	0.750	0.000	-	0.904	0.000	0.000	0.000	0.000	-	0.000	0.906
Lights	0	0	0	0	-	0	0	0	135	1	-	136	0	1257	0	0	-	1257	0	0	0	0	-	0	1393
% Lights	-	-	-	-	-	-	-	-	97.1	100.0	-	97.1	-	99.5	0.0	-	-	99.3	-	-	-	-	-	-	99.1
Mediums	0	0	0	0	-	0	0	0	1	0	-	1	0	5	1	0	-	6	0	0	0	0	-	0	7
% Mediums	-	-	-	-	-	-	-	-	0.7	0.0	-	0.7	-	0.4	33.3	-	-	0.5	-	-	-	-	-	-	0.5
Articulated Trucks	0	0	0	0	-	0	0	0	3	0	-	3	0	1	2	0	-	3	0	0	0	0	-	0	6
% Articulated Trucks	-	-	-	-	-	-	-	-	2.2	0.0	-	2.1	-	0.1	66.7	-	-	0.2	-	-	-	-	-	-	0.4
Pedestrians	-	-	-	-	24	-	-	-	-	-	44	-	-	-	-	-	6	-	-	-	-	-	52	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
BLACKBURN
Site Code:
Start Date: 04/14/2015
Page No: 1

Turning Movement Data

Start Time	MCKINNEY Southbound						BLACKBURN Westbound						MCKINNEY Northbound						BLACKBURN Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:00 AM	0	0	0	0	2	0	0	184	18	0	1	202	10	22	24	0	0	56	5	63	0	0	3	68	326
7:15 AM	0	0	0	0	2	0	0	187	20	0	1	207	9	38	33	0	1	80	9	97	0	0	0	106	393
7:30 AM	0	0	0	0	2	0	0	242	23	0	4	265	12	42	29	0	2	83	7	120	0	1	2	128	476
7:45 AM	0	0	0	0	6	0	0	219	31	0	5	250	10	73	41	0	1	124	8	123	0	0	4	131	505
Hourly Total	0	0	0	0	12	0	0	832	92	0	11	924	41	175	127	0	4	343	29	403	0	1	9	433	1700
8:00 AM	0	0	0	0	6	0	0	239	54	0	3	293	17	87	44	0	2	148	12	132	0	1	6	145	586
8:15 AM	0	0	0	0	4	0	0	211	51	1	6	263	10	104	49	0	0	163	23	132	0	1	5	156	582
8:30 AM	0	0	0	0	12	0	0	220	60	0	13	280	14	117	27	0	1	158	20	137	0	1	3	158	596
8:45 AM	0	0	0	0	10	0	0	205	54	0	6	259	19	120	35	0	0	174	25	128	0	3	4	156	589
Hourly Total	0	0	0	0	32	0	0	875	219	1	28	1095	60	428	155	0	3	643	80	529	0	6	18	615	2353
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:30 AM	0	0	0	0	8	0	1	138	23	1	0	163	16	93	32	0	3	141	14	79	0	7	2	100	404
11:45 AM	0	0	0	0	20	0	0	182	39	0	6	221	15	82	40	0	1	137	22	121	0	4	7	147	505
Hourly Total	0	0	0	0	28	0	1	320	62	1	6	384	31	175	72	0	4	278	36	200	0	11	9	247	909
12:00 PM	0	0	0	0	16	0	0	139	27	1	18	167	35	90	44	0	2	169	18	96	0	4	15	118	454
12:15 PM	0	0	0	0	7	0	0	131	40	0	10	171	21	101	55	0	10	177	11	100	0	5	10	116	464
12:30 PM	0	0	0	0	8	0	0	149	25	0	9	174	29	98	49	0	7	176	28	100	0	2	15	130	480
12:45 PM	0	0	0	0	7	0	0	172	35	1	8	208	38	86	49	0	5	173	27	94	0	3	1	124	505
Hourly Total	0	0	0	0	38	0	0	591	127	2	45	720	123	375	197	0	24	695	84	390	0	14	41	488	1903
1:00 PM	0	0	0	0	6	0	0	212	36	1	5	249	26	87	50	0	4	163	19	115	0	6	6	140	552
1:15 PM	0	0	0	0	14	0	0	185	23	0	13	208	34	64	56	0	4	154	16	123	0	4	13	143	505
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	20	0	0	397	59	1	18	457	60	151	106	0	8	317	35	238	0	10	19	283	1057
4:30 PM	0	0	0	0	3	0	0	173	45	0	3	218	25	118	62	0	2	205	25	175	0	4	5	204	627
4:45 PM	0	0	0	0	7	0	0	171	42	1	10	214	20	126	72	0	7	218	24	173	0	8	11	205	637
Hourly Total	0	0	0	0	10	0	0	344	87	1	13	432	45	244	134	0	9	423	49	348	0	12	16	409	1264
5:00 PM	0	0	0	0	5	0	0	159	59	0	8	218	25	148	66	0	1	239	38	202	0	6	10	246	703
5:15 PM	0	0	0	0	10	0	0	183	40	0	8	223	25	192	61	0	4	278	25	172	0	3	11	200	701
5:30 PM	0	0	0	0	15	0	0	174	35	0	7	209	32	172	77	0	11	281	37	163	0	3	15	203	693
5:45 PM	0	0	0	0	10	0	0	172	43	0	9	215	33	200	63	0	7	296	33	180	0	2	8	215	726
Hourly Total	0	0	0	0	40	0	0	688	177	0	32	865	115	712	267	0	23	1094	133	717	0	14	44	864	2823
6:00 PM	0	0	0	0	21	0	0	172	39	0	12	211	36	155	64	0	11	255	31	177	0	5	13	213	679
6:15 PM	0	0	0	0	12	0	0	155	23	1	22	179	36	135	78	0	4	249	24	158	0	3	8	185	613
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	213	0	1	4374	885	7	187	5267	547	2550	1200	0	90	4297	501	3160	0	76	177	3737	13301
Approach %	NaN	NaN	NaN	NaN	-	-	0.0	83.0	16.8	0.1	-	-	12.7	59.3	27.9	0.0	-	-	13.4	84.6	0.0	2.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	32.9	6.7	0.1	-	39.6	4.1	19.2	9.0	0.0	-	32.3	3.8	23.8	0.0	0.6	-	28.1	-
Lights	0	0	0	0	-	0	1	4317	859	7	-	5184	537	2500	1187	0	-	4224	494	3098	0	75	-	3667	13075
% Lights	-	-	-	-	-	-	100.0	98.7	97.1	100.0	-	98.4	98.2	98.0	98.9	-	-	98.3	98.6	98.0	-	98.7	-	98.1	98.3
Mediums	0	0	0	0	-	0	0	55	26	0	-	81	8	47	11	0	-	66	7	62	0	1	-	70	217
% Mediums	-	-	-	-	-	-	0.0	1.3	2.9	0.0	-	1.5	1.5	1.8	0.9	-	-	1.5	1.4	2.0	-	1.3	-	1.9	1.6
Articulated Trucks	0	0	0	0	-	0	0	2	0	0	-	2	2	3	2	0	-	7	0	0	0	0	-	0	9
% Articulated Trucks	-	-	-	-	-	-	0.0	0.0	0.0	0.0	-	0.0	0.4	0.1	0.2	-	-	0.2	0.0	0.0	-	0.0	-	0.0	0.1
Pedestrians	-	-	-	-	213	-	-	-	-	-	187	-	-	-	-	-	90	-	-	-	-	-	177	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
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DRAFT

Count Name: MCKINNEY @
BLACKBURN
Site Code:
Start Date: 04/14/2015
Page No: 3

Turning Movement Peak Hour Data (8:00 AM)

Start Time	MCKINNEY Southbound						BLACKBURN Westbound						MCKINNEY Northbound						BLACKBURN Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
8:00 AM	0	0	0	0	6	0	0	239	54	0	3	293	17	87	44	0	2	148	12	132	0	1	6	145	586
8:15 AM	0	0	0	0	4	0	0	211	51	1	6	263	10	104	49	0	0	163	23	132	0	1	5	156	582
8:30 AM	0	0	0	0	12	0	0	220	60	0	13	280	14	117	27	0	1	158	20	137	0	1	3	158	596
8:45 AM	0	0	0	0	10	0	0	205	54	0	6	259	19	120	35	0	0	174	25	128	0	3	4	156	589
Total	0	0	0	0	32	0	0	875	219	1	28	1095	60	428	155	0	3	643	80	529	0	6	18	615	2353
Approach %	NaN	NaN	NaN	NaN	-	-	0.0	79.9	20.0	0.1	-	-	9.3	66.6	24.1	0.0	-	-	13.0	86.0	0.0	1.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	37.2	9.3	0.0	-	46.5	2.5	18.2	6.6	0.0	-	27.3	3.4	22.5	0.0	0.3	-	26.1	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.000	0.915	0.913	0.250	-	0.934	0.789	0.892	0.791	0.000	-	0.924	0.800	0.965	0.000	0.500	-	0.973	0.987
Lights	0	0	0	0	-	0	0	864	210	1	-	1075	58	418	151	0	-	627	77	517	0	6	-	600	2302
% Lights	-	-	-	-	-	-	-	98.7	95.9	100.0	-	98.2	96.7	97.7	97.4	-	-	97.5	96.3	97.7	-	100.0	-	97.6	97.8
Mediums	0	0	0	0	-	0	0	11	9	0	-	20	1	10	3	0	-	14	3	12	0	0	-	15	49
% Mediums	-	-	-	-	-	-	-	1.3	4.1	0.0	-	1.8	1.7	2.3	1.9	-	-	2.2	3.8	2.3	-	0.0	-	2.4	2.1
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	1	0	1	0	-	2	0	0	0	0	-	0	2
% Articulated Trucks	-	-	-	-	-	-	-	0.0	0.0	0.0	-	0.0	1.7	0.0	0.6	-	-	0.3	0.0	0.0	-	0.0	-	0.0	0.1
Pedestrians	-	-	-	-	32	-	-	-	-	-	28	-	-	-	-	-	3	-	-	-	-	-	18	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
BLACKBURN
Site Code:
Start Date: 04/14/2015
Page No: 7

Turning Movement Peak Hour Data (5:00 PM)

Start Time	MCKINNEY Southbound						BLACKBURN Westbound						MCKINNEY Northbound						BLACKBURN Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
5:00 PM	0	0	0	0	5	0	0	159	59	0	8	218	25	148	66	0	1	239	38	202	0	6	10	246	703
5:15 PM	0	0	0	0	10	0	0	183	40	0	8	223	25	192	61	0	4	278	25	172	0	3	11	200	701
5:30 PM	0	0	0	0	15	0	0	174	35	0	7	209	32	172	77	0	11	281	37	163	0	3	15	203	693
5:45 PM	0	0	0	0	10	0	0	172	43	0	9	215	33	200	63	0	7	296	33	180	0	2	8	215	726
Total	0	0	0	0	40	0	0	688	177	0	32	865	115	712	267	0	23	1094	133	717	0	14	44	864	2823
Approach %	NaN	NaN	NaN	NaN	-	-	0.0	79.5	20.5	0.0	-	-	10.5	65.1	24.4	0.0	-	-	15.4	83.0	0.0	1.6	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	24.4	6.3	0.0	-	30.6	4.1	25.2	9.5	0.0	-	38.8	4.7	25.4	0.0	0.5	-	30.6	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.000	0.940	0.750	0.000	-	0.970	0.871	0.890	0.867	0.000	-	0.924	0.875	0.887	0.000	0.583	-	0.878	0.972
Lights	0	0	0	0	-	0	0	683	173	0	-	856	114	707	264	0	-	1085	132	706	0	14	-	852	2793
% Lights	-	-	-	-	-	-	-	99.3	97.7	-	-	99.0	99.1	99.3	98.9	-	-	99.2	99.2	98.5	-	100.0	-	98.6	98.9
Mediums	0	0	0	0	-	0	0	5	4	0	-	9	0	5	3	0	-	8	1	11	0	0	-	12	29
% Mediums	-	-	-	-	-	-	-	0.7	2.3	-	-	1.0	0.0	0.7	1.1	-	-	0.7	0.8	1.5	-	0.0	-	1.4	1.0
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	1	0	0	0	-	1	0	0	0	0	-	0	1
% Articulated Trucks	-	-	-	-	-	-	-	0.0	0.0	-	-	0.0	0.9	0.0	0.0	-	-	0.1	0.0	0.0	-	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	40	-	-	-	-	-	32	-	-	-	-	-	23	-	-	-	-	-	44	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: COLE @
BLACKBURN
Site Code:
Start Date: 04/14/2015
Page No: 1

Turning Movement Data

Start Time	COLE Southbound						BLACKBURN Westbound						COLE Northbound						BLACKBURN Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:00 AM	17	50	6	0	0	73	77	113	0	2	3	192	0	0	0	0	2	0	0	50	6	0	0	56	321
7:15 AM	21	72	8	0	3	101	83	119	0	5	1	207	0	0	0	0	2	0	0	77	7	0	3	84	392
7:30 AM	37	117	11	0	0	165	80	149	0	6	2	235	0	0	0	0	4	0	0	90	8	0	0	98	498
7:45 AM	37	106	17	0	3	160	85	162	0	3	0	250	0	0	0	0	3	0	0	106	18	0	1	124	534
Hourly Total	112	345	42	0	6	499	325	543	0	16	6	884	0	0	0	0	11	0	0	323	39	0	4	362	1745
8:00 AM	48	156	21	0	6	225	100	139	0	2	5	241	0	0	0	0	3	0	0	96	14	0	0	110	576
8:15 AM	46	157	26	0	9	229	103	135	0	2	3	240	0	0	0	0	7	0	0	109	21	0	1	130	599
8:30 AM	50	155	23	0	8	228	84	144	0	5	14	233	0	0	0	0	5	0	0	107	17	0	4	124	585
8:45 AM	40	135	26	0	7	201	74	139	0	4	8	217	0	0	0	0	1	0	0	96	13	0	0	109	527
Hourly Total	184	603	96	0	30	883	361	557	0	13	30	931	0	0	0	0	16	0	0	408	65	0	5	473	2287
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:30 AM	26	51	3	0	3	80	77	92	0	7	3	176	0	0	0	0	6	0	0	74	14	0	1	88	344
11:45 AM	23	56	11	0	3	90	81	119	0	4	1	204	0	0	0	0	2	0	0	117	18	0	2	135	429
Hourly Total	49	107	14	0	6	170	158	211	0	11	4	380	0	0	0	0	8	0	0	191	32	0	3	223	773
12:00 PM	25	77	16	0	3	118	69	99	0	6	6	174	0	0	0	0	2	0	0	84	21	0	0	105	397
12:15 PM	22	67	11	0	8	100	75	78	0	7	7	160	0	0	0	0	6	0	0	91	14	0	0	105	365
12:30 PM	34	90	9	0	4	133	72	102	0	4	1	178	0	0	0	0	4	0	0	75	20	0	3	95	406
12:45 PM	30	94	7	0	1	131	83	119	0	1	1	203	0	0	0	0	6	0	0	88	11	0	2	99	433
Hourly Total	111	328	43	0	16	482	299	398	0	18	15	715	0	0	0	0	18	0	0	338	66	0	5	404	1601
1:00 PM	34	75	15	0	5	124	100	140	0	2	3	242	0	0	0	0	7	0	0	91	16	0	2	107	473
1:15 PM	33	88	11	0	6	132	102	123	0	6	3	231	0	0	0	0	1	0	0	97	14	0	0	111	474
1:30 PM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	67	165	26	0	11	258	202	263	0	8	6	473	0	0	0	0	8	0	0	188	30	0	2	218	949
4:30 PM	52	73	18	0	5	143	90	122	0	5	5	217	0	0	0	0	1	0	0	151	13	0	1	164	524
4:45 PM	37	98	14	0	6	149	72	100	0	2	8	174	0	0	0	0	2	0	0	155	13	0	1	168	491
Hourly Total	89	171	32	0	11	292	162	222	0	7	13	391	0	0	0	0	3	0	0	306	26	0	2	332	1015
5:00 PM	59	100	12	0	4	171	80	106	0	4	3	190	0	0	0	0	0	0	0	183	19	0	3	202	563
5:15 PM	33	108	14	0	7	155	72	138	0	2	4	212	0	0	0	0	5	0	0	145	16	0	1	161	528
5:30 PM	41	96	21	0	13	158	67	125	0	2	2	194	0	0	0	0	4	0	0	182	29	0	3	211	563
5:45 PM	37	114	13	0	7	164	95	123	0	0	6	218	0	0	0	0	5	0	0	146	34	0	0	180	562
Hourly Total	170	418	60	0	31	648	314	492	0	8	15	814	0	0	0	0	14	0	0	656	98	0	7	754	2216
6:00 PM	27	100	10	0	15	137	75	125	0	4	0	204	0	0	0	0	4	0	0	180	19	0	4	199	540
6:15 PM	36	90	10	0	14	136	81	112	0	2	6	195	0	0	0	0	7	0	0	139	29	0	3	168	499
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	845	2327	333	0	140	3505	1977	2923	0	87	95	4987	0	0	0	0	89	0	0	2729	404	0	35	3133	11625
Approach %	24.1	66.4	9.5	0.0	-	-	39.6	58.6	0.0	1.7	-	-	NaN	NaN	NaN	NaN	-	-	0.0	87.1	12.9	0.0	-	-	-
Total %	7.3	20.0	2.9	0.0	-	30.2	17.0	25.1	0.0	0.7	-	42.9	0.0	0.0	0.0	0.0	-	0.0	0.0	23.5	3.5	0.0	-	27.0	-
Lights	828	2287	328	0	-	3443	1950	2877	0	85	-	4912	0	0	0	0	-	0	0	2677	399	0	-	3076	11431
% Lights	98.0	98.3	98.5	-	-	98.2	98.6	98.4	-	97.7	-	98.5	-	-	-	-	-	-	-	98.1	98.8	-	-	98.2	98.3
Mediums	17	40	5	0	-	62	25	44	0	2	-	71	0	0	0	0	-	0	0	52	5	0	-	57	190
% Mediums	2.0	1.7	1.5	-	-	1.8	1.3	1.5	-	2.3	-	1.4	-	-	-	-	-	-	-	1.9	1.2	-	-	1.8	1.6
Articulated Trucks	0	0	0	0	-	0	2	2	0	0	-	4	0	0	0	0	-	0	0	0	0	0	-	0	4
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	0.1	0.1	-	0.0	-	0.1	-	-	-	-	-	-	-	0.0	0.0	-	-	0.0	0.0
Pedestrians	-	-	-	-	140	-	-	-	-	-	95	-	-	-	-	-	89	-	-	-	-	-	35	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: COLE @
BLACKBURN
Site Code:
Start Date: 04/14/2015
Page No: 3

Turning Movement Peak Hour Data (7:45 AM)

Start Time	COLE Southbound						BLACKBURN Westbound						COLE Northbound						BLACKBURN Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:45 AM	37	106	17	0	3	160	85	162	0	3	0	250	0	0	0	0	3	0	0	106	18	0	1	124	534
8:00 AM	48	156	21	0	6	225	100	139	0	2	5	241	0	0	0	0	3	0	0	96	14	0	0	110	576
8:15 AM	46	157	26	0	9	229	103	135	0	2	3	240	0	0	0	0	7	0	0	109	21	0	1	130	599
8:30 AM	50	155	23	0	8	228	84	144	0	5	14	233	0	0	0	0	5	0	0	107	17	0	4	124	585
Total	181	574	87	0	26	842	372	580	0	12	22	964	0	0	0	0	18	0	0	418	70	0	6	488	2294
Approach %	21.5	68.2	10.3	0.0	-	-	38.6	60.2	0.0	1.2	-	-	NaN	NaN	NaN	NaN	-	-	0.0	85.7	14.3	0.0	-	-	-
Total %	7.9	25.0	3.8	0.0	-	36.7	16.2	25.3	0.0	0.5	-	42.0	0.0	0.0	0.0	0.0	-	0.0	0.0	18.2	3.1	0.0	-	21.3	-
PHF	0.905	0.914	0.837	0.000	-	0.919	0.903	0.895	0.000	0.600	-	0.964	0.000	0.000	0.000	0.000	-	0.000	0.000	0.959	0.833	0.000	-	0.938	0.957
Lights	176	565	86	0	-	827	367	571	0	12	-	950	0	0	0	0	-	0	0	408	69	0	-	477	2254
% Lights	97.2	98.4	98.9	-	-	98.2	98.7	98.4	-	100.0	-	98.5	-	-	-	-	-	-	-	97.6	98.6	-	-	97.7	98.3
Mediums	5	9	1	0	-	15	4	9	0	0	-	13	0	0	0	0	-	0	0	10	1	0	-	11	39
% Mediums	2.8	1.6	1.1	-	-	1.8	1.1	1.6	-	0.0	-	1.3	-	-	-	-	-	-	-	2.4	1.4	-	-	2.3	1.7
Articulated Trucks	0	0	0	0	-	0	1	0	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	1
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	0.3	0.0	-	0.0	-	0.1	-	-	-	-	-	-	-	0.0	0.0	-	-	0.0	0.0
Pedestrians	-	-	-	-	26	-	-	-	-	-	22	-	-	-	-	-	18	-	-	-	-	-	6	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: COLE @
BLACKBURN
Site Code:
Start Date: 04/14/2015
Page No: 7

Turning Movement Peak Hour Data (5:00 PM)

Start Time	COLE Southbound						BLACKBURN Westbound						COLE Northbound						BLACKBURN Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
5:00 PM	59	100	12	0	4	171	80	106	0	4	3	190	0	0	0	0	0	0	0	183	19	0	3	202	563
5:15 PM	33	108	14	0	7	155	72	138	0	2	4	212	0	0	0	0	5	0	0	145	16	0	1	161	528
5:30 PM	41	96	21	0	13	158	67	125	0	2	2	194	0	0	0	0	4	0	0	182	29	0	3	211	563
5:45 PM	37	114	13	0	7	164	95	123	0	0	6	218	0	0	0	0	5	0	0	146	34	0	0	180	562
Total	170	418	60	0	31	648	314	492	0	8	15	814	0	0	0	0	14	0	0	656	98	0	7	754	2216
Approach %	26.2	64.5	9.3	0.0	-	-	38.6	60.4	0.0	1.0	-	-	NaN	NaN	NaN	NaN	-	-	0.0	87.0	13.0	0.0	-	-	-
Total %	7.7	18.9	2.7	0.0	-	29.2	14.2	22.2	0.0	0.4	-	36.7	0.0	0.0	0.0	0.0	-	0.0	0.0	29.6	4.4	0.0	-	34.0	-
PHF	0.720	0.917	0.714	0.000	-	0.947	0.826	0.891	0.000	0.500	-	0.933	0.000	0.000	0.000	0.000	-	0.000	0.000	0.896	0.721	0.000	-	0.893	0.984
Lights	162	413	58	0	-	633	311	487	0	8	-	806	0	0	0	0	-	0	0	651	96	0	-	747	2186
% Lights	95.3	98.8	96.7	-	-	97.7	99.0	99.0	-	100.0	-	99.0	-	-	-	-	-	-	-	99.2	98.0	-	-	99.1	98.6
Mediums	8	5	2	0	-	15	2	5	0	0	-	7	0	0	0	0	-	0	0	5	2	0	-	7	29
% Mediums	4.7	1.2	3.3	-	-	2.3	0.6	1.0	-	0.0	-	0.9	-	-	-	-	-	-	-	0.8	2.0	-	-	0.9	1.3
Articulated Trucks	0	0	0	0	-	0	1	0	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	1
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	0.3	0.0	-	0.0	-	0.1	-	-	-	-	-	-	-	0.0	0.0	-	-	0.0	0.0
Pedestrians	-	-	-	-	31	-	-	-	-	-	15	-	-	-	-	-	14	-	-	-	-	-	7	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
HASKELL
Site Code:
Start Date: 04/16/2015
Page No: 1

Turning Movement Data

Start Time	MCKINNEY Southbound						HASKELL Westbound						MCKINNEY Northbound						HASKELL Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	2	0	10	46	0	0	0	56	0	0	0	0	0	0	56
7:15 AM	0	0	0	0	0	0	0	0	0	0	3	0	19	50	0	0	0	69	0	0	0	0	1	0	69
7:30 AM	0	0	1	0	0	1	0	0	0	0	6	0	20	65	0	0	0	85	0	0	0	0	2	0	86
7:45 AM	0	0	0	0	1	0	0	0	0	0	6	0	25	87	0	0	1	112	0	0	0	0	2	0	112
Hourly Total	0	0	1	0	1	1	0	0	0	0	17	0	74	248	0	0	1	322	0	0	0	0	5	0	323
8:00 AM	0	0	0	0	2	0	0	0	0	0	7	0	45	129	0	0	0	174	0	0	0	0	2	0	174
8:15 AM	0	0	0	0	7	0	0	0	0	0	7	0	56	138	0	0	0	194	0	0	0	0	4	0	194
8:30 AM	0	0	0	0	1	0	0	0	0	0	3	0	43	149	0	0	0	192	0	0	0	0	9	0	192
8:45 AM	0	0	0	0	3	0	0	0	0	0	7	0	46	148	0	0	4	194	0	0	0	0	6	0	194
Hourly Total	0	0	0	0	13	0	0	0	0	0	24	0	190	564	0	0	4	754	0	0	0	0	21	0	754
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	15	0	0	0	0	0	7	0	31	180	0	0	4	211	5	0	0	0	6	5	216
4:45 PM	0	0	0	0	2	0	0	0	0	0	3	0	29	209	0	0	0	238	1	0	0	1	7	2	240
Hourly Total	0	0	0	0	17	0	0	0	0	0	10	0	60	389	0	0	4	449	6	0	0	1	13	7	456
5:00 PM	0	0	0	0	2	0	0	0	0	0	4	0	18	240	0	0	0	258	3	0	1	0	4	4	262
5:15 PM	0	0	0	0	5	0	0	0	0	0	6	0	15	267	0	0	1	282	6	0	0	0	10	6	288
5:30 PM	0	0	0	0	0	0	0	0	0	0	3	0	9	271	0	0	0	280	10	0	0	0	5	10	290
5:45 PM	0	0	0	0	4	0	0	0	1	0	7	1	19	282	0	0	1	301	2	0	0	0	12	2	304
Hourly Total	0	0	0	0	11	0	0	0	1	0	20	1	61	1060	0	0	2	1121	21	0	1	0	31	22	1144
6:00 PM	0	0	0	0	2	0	0	0	0	0	14	0	16	234	1	0	0	251	5	0	0	0	2	5	256
6:15 PM	0	0	0	0	9	0	0	1	0	0	13	1	20	203	0	0	3	223	8	0	0	0	12	8	232
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	1	0	53	1	0	1	1	0	98	2	421	2698	1	0	14	3120	40	0	1	1	84	42	3165
Approach %	0.0	0.0	100.0	0.0	-	-	0.0	50.0	50.0	0.0	-	-	13.5	86.5	0.0	0.0	-	-	95.2	0.0	2.4	2.4	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.1	13.3	85.2	0.0	0.0	-	98.6	1.3	0.0	0.0	0.0	-	1.3	-
Lights	0	0	1	0	-	1	0	1	1	0	-	2	394	2668	1	0	-	3063	40	0	1	1	-	42	3108
% Lights	-	-	100.0	-	-	100.0	-	100.0	100.0	-	-	100.0	93.6	98.9	100.0	-	-	98.2	100.0	-	100.0	100.0	-	100.0	98.2
Mediums	0	0	0	0	-	0	0	0	0	0	-	0	27	30	0	0	-	57	0	0	0	0	-	0	57
% Mediums	-	-	0.0	-	-	0.0	-	0.0	0.0	-	-	0.0	6.4	1.1	0.0	-	-	1.8	0.0	-	0.0	0.0	-	0.0	1.8
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	-	0.0	-	-	0.0	-	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	53	-	-	-	-	-	98	-	-	-	-	-	14	-	-	-	-	-	84	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
HASKELL
Site Code:
Start Date: 04/16/2015
Page No: 3

Turning Movement Peak Hour Data (8:00 AM)

Start Time	MCKINNEY Southbound						HASKELL Westbound						MCKINNEY Northbound						HASKELL Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
8:00 AM	0	0	0	0	2	0	0	0	0	0	7	0	45	129	0	0	0	174	0	0	0	0	2	0	174
8:15 AM	0	0	0	0	7	0	0	0	0	0	7	0	56	138	0	0	0	194	0	0	0	0	4	0	194
8:30 AM	0	0	0	0	1	0	0	0	0	0	3	0	43	149	0	0	0	192	0	0	0	0	9	0	192
8:45 AM	0	0	0	0	3	0	0	0	0	0	7	0	46	148	0	0	4	194	0	0	0	0	6	0	194
Total	0	0	0	0	13	0	0	0	0	0	24	0	190	564	0	0	4	754	0	0	0	0	21	0	754
Approach %	NaN	NaN	NaN	NaN	-	-	NaN	NaN	NaN	NaN	-	-	25.2	74.8	0.0	0.0	-	-	NaN	NaN	NaN	NaN	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	25.2	74.8	0.0	0.0	-	100.0	0.0	0.0	0.0	0.0	-	0.0	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	0.000	0.848	0.946	0.000	0.000	-	0.972	0.000	0.000	0.000	0.000	-	0.000	0.972
Lights	0	0	0	0	-	0	0	0	0	0	-	0	176	555	0	0	-	731	0	0	0	0	-	0	731
% Lights	-	-	-	-	-	-	-	-	-	-	-	-	92.6	98.4	-	-	-	96.9	-	-	-	-	-	-	96.9
Mediums	0	0	0	0	-	0	0	0	0	0	-	0	14	9	0	0	-	23	0	0	0	0	-	0	23
% Mediums	-	-	-	-	-	-	-	-	-	-	-	-	7.4	1.6	-	-	-	3.1	-	-	-	-	-	-	3.1
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	-	-	-	0.0	-	-	-	-	-	-	0.0
Pedestrians	-	-	-	-	13	-	-	-	-	-	24	-	-	-	-	-	4	-	-	-	-	-	21	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
HASKELL
Site Code:
Start Date: 04/16/2015
Page No: 5

Turning Movement Peak Hour Data (5:00 PM)

Start Time	MCKINNEY Southbound						HASKELL Westbound						MCKINNEY Northbound						HASKELL Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
5:00 PM	0	0	0	0	2	0	0	0	0	0	4	0	18	240	0	0	0	258	3	0	1	0	4	4	262
5:15 PM	0	0	0	0	5	0	0	0	0	0	6	0	15	267	0	0	1	282	6	0	0	0	10	6	288
5:30 PM	0	0	0	0	0	0	0	0	0	0	3	0	9	271	0	0	0	280	10	0	0	0	5	10	290
5:45 PM	0	0	0	0	4	0	0	0	1	0	7	1	19	282	0	0	1	301	2	0	0	0	12	2	304
Total	0	0	0	0	11	0	0	0	1	0	20	1	61	1060	0	0	2	1121	21	0	1	0	31	22	1144
Approach %	NaN	NaN	NaN	NaN	-	-	0.0	0.0	100.0	0.0	-	-	5.4	94.6	0.0	0.0	-	-	95.5	0.0	4.5	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.1	0.0	-	0.1	5.3	92.7	0.0	0.0	-	98.0	1.8	0.0	0.1	0.0	-	1.9	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.250	0.000	-	0.250	0.803	0.940	0.000	0.000	-	0.931	0.525	0.000	0.250	0.000	-	0.550	0.941
Lights	0	0	0	0	-	0	0	0	1	0	-	1	54	1050	0	0	-	1104	21	0	1	0	-	22	1127
% Lights	-	-	-	-	-	-	-	-	100.0	-	-	100.0	88.5	99.1	-	-	-	98.5	100.0	-	100.0	-	-	100.0	98.5
Mediums	0	0	0	0	-	0	0	0	0	0	-	0	7	10	0	0	-	17	0	0	0	0	-	0	17
% Mediums	-	-	-	-	-	-	-	-	0.0	-	-	0.0	11.5	0.9	-	-	-	1.5	0.0	-	0.0	-	-	0.0	1.5
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	-	-	-	-	-	-	-	0.0	-	-	0.0	0.0	0.0	-	-	-	0.0	0.0	-	0.0	-	-	0.0	0.0
Pedestrians	-	-	-	-	11	-	-	-	-	-	20	-	-	-	-	-	2	-	-	-	-	-	31	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: COLE @
HASKELL
Site Code:
Start Date: 04/16/2015
Page No: 1

Turning Movement Data

Start Time	COLE Southbound						HASKELL Westbound						COLE Northbound						HASKELL Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:00 AM	0	59	1	0	0	60	10	0	0	0	0	10	0	0	0	0	0	0	0	0	5	0	0	5	75
7:15 AM	0	68	1	0	0	69	19	0	0	0	2	19	0	0	0	0	0	0	0	0	10	0	1	10	98
7:30 AM	0	99	0	0	0	99	18	0	0	0	1	18	0	0	0	0	0	0	0	0	8	0	0	8	125
7:45 AM	0	160	1	0	0	161	20	0	0	0	0	20	0	0	0	0	0	0	0	0	5	0	2	5	186
Hourly Total	0	386	3	0	0	389	67	0	0	0	3	67	0	0	0	0	0	0	0	0	28	0	3	28	484
8:00 AM	0	188	1	0	1	189	40	0	0	0	2	40	0	0	0	0	0	0	0	0	13	0	0	13	242
8:15 AM	0	193	3	0	1	196	44	0	0	0	2	44	0	0	0	0	0	0	0	0	11	0	0	11	251
8:30 AM	0	154	2	0	1	156	48	0	0	0	8	48	0	0	0	0	0	0	0	0	7	0	2	7	211
8:45 AM	0	127	1	0	7	128	43	0	0	0	1	43	0	0	0	0	0	0	0	0	12	0	1	12	183
Hourly Total	0	662	7	0	10	669	175	0	0	0	13	175	0	0	0	0	0	0	0	0	43	0	3	43	887
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	4	93	6	0	0	103	37	0	0	0	1	37	0	0	0	3	0	3	0	0	4	0	2	4	147
4:45 PM	3	120	1	0	0	124	39	0	0	0	0	39	0	0	0	0	0	0	0	0	5	0	0	5	168
Hourly Total	7	213	7	0	0	227	76	0	0	0	1	76	0	0	0	3	0	3	0	0	9	0	2	9	315
5:00 PM	3	147	1	0	0	151	25	0	0	0	1	25	0	0	0	0	0	0	0	0	9	0	2	9	185
5:15 PM	2	129	5	0	0	136	20	0	0	0	1	20	0	0	0	0	0	0	0	2	4	0	2	6	162
5:30 PM	5	138	6	0	0	149	13	0	0	0	3	13	0	0	0	0	1	0	0	0	7	2	4	9	171
5:45 PM	1	133	1	0	1	135	22	0	0	0	3	22	0	0	0	0	1	0	0	1	8	0	2	9	166
Hourly Total	11	547	13	0	1	571	80	0	0	0	8	80	0	0	0	0	2	0	0	3	28	2	10	33	684
6:00 PM	5	114	1	0	3	120	21	0	0	0	6	21	0	0	0	0	2	0	0	0	7	0	0	7	148
6:15 PM	4	130	3	0	2	137	19	0	0	0	3	19	0	0	0	0	1	0	0	1	10	1	2	12	168
Grand Total	27	2052	34	0	16	2113	438	0	0	0	34	438	0	0	0	3	5	3	0	4	125	3	20	132	2686
Approach %	1.3	97.1	1.6	0.0	-	-	100.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	100.0	-	-	0.0	3.0	94.7	2.3	-	-	-
Total %	1.0	76.4	1.3	0.0	-	78.7	16.3	0.0	0.0	0.0	-	16.3	0.0	0.0	0.0	0.1	-	0.1	0.0	0.1	4.7	0.1	-	4.9	-
Lights	27	2023	33	0	-	2083	417	0	0	0	-	417	0	0	0	3	-	3	0	4	124	3	-	131	2634
% Lights	100.0	98.6	97.1	-	-	98.6	95.2	-	-	-	-	95.2	-	-	-	100.0	-	100.0	-	100.0	99.2	100.0	-	99.2	98.1
Mediums	0	29	1	0	-	30	21	0	0	0	-	21	0	0	0	0	-	0	0	0	1	0	-	1	52
% Mediums	0.0	1.4	2.9	-	-	1.4	4.8	-	-	-	-	4.8	-	-	-	0.0	-	0.0	-	0.0	0.8	0.0	-	0.8	1.9
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	0.0	-	-	-	-	0.0	-	-	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	16	-	-	-	-	-	34	-	-	-	-	-	5	-	-	-	-	-	20	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: COLE @
HASKELL
Site Code:
Start Date: 04/16/2015
Page No: 3

Turning Movement Peak Hour Data (7:45 AM)

Start Time	COLE Southbound						HASKELL Westbound						COLE Northbound						HASKELL Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App.Total	Left	Thru	Right	U-Turn	Peds	App.Total	Left	Thru	Right	U-Turn	Peds	App.Total	Left	Thru	Right	U-Turn	Peds	App.Total	
7:45 AM	0	160	1	0	0	161	20	0	0	0	0	20	0	0	0	0	0	0	0	0	5	0	2	5	186
8:00 AM	0	188	1	0	1	189	40	0	0	0	2	40	0	0	0	0	0	0	0	0	13	0	0	13	242
8:15 AM	0	193	3	0	1	196	44	0	0	0	2	44	0	0	0	0	0	0	0	0	11	0	0	11	251
8:30 AM	0	154	2	0	1	156	48	0	0	0	8	48	0	0	0	0	0	0	0	0	7	0	2	7	211
Total	0	695	7	0	3	702	152	0	0	0	12	152	0	0	0	0	0	0	0	0	36	0	4	36	890
Approach %	0.0	99.0	1.0	0.0	-	-	100.0	0.0	0.0	0.0	-	-	NaN	NaN	NaN	NaN	-	-	0.0	0.0	100.0	0.0	-	-	-
Total %	0.0	78.1	0.8	0.0	-	78.9	17.1	0.0	0.0	0.0	-	17.1	0.0	0.0	0.0	0.0	-	0.0	0.0	4.0	0.0	-	4.0	-	
PHF	0.000	0.900	0.583	0.000	-	0.895	0.792	0.000	0.000	0.000	-	0.792	0.000	0.000	0.000	0.000	-	0.000	0.000	0.692	0.000	-	0.692	0.886	
Lights	0	685	6	0	-	691	146	0	0	0	-	146	0	0	0	0	-	0	0	35	0	-	35	872	
% Lights	-	98.6	85.7	-	-	98.4	96.1	-	-	-	-	96.1	-	-	-	-	-	-	-	-	97.2	-	-	97.2	98.0
Mediums	0	10	1	0	-	11	6	0	0	0	-	6	0	0	0	0	-	0	0	1	0	-	1	18	
% Mediums	-	1.4	14.3	-	-	1.6	3.9	-	-	-	-	3.9	-	-	-	-	-	-	-	-	2.8	-	-	2.8	2.0
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	-	0	0	
% Articulated Trucks	-	0.0	0.0	-	-	0.0	0.0	-	-	-	-	0.0	-	-	-	-	-	-	-	-	0.0	-	-	0.0	0.0
Pedestrians	-	-	-	-	3	-	-	-	-	-	12	-	-	-	-	-	0	-	-	-	-	4	-	-	
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	100.0	-	-	

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: COLE @
HASKELL
Site Code:
Start Date: 04/16/2015
Page No: 5

Turning Movement Peak Hour Data (4:45 PM)

Start Time	COLE Southbound						HASKELL Westbound						COLE Northbound						HASKELL Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
4:45 PM	3	120	1	0	0	124	39	0	0	0	0	39	0	0	0	0	0	0	0	0	5	0	0	5	168
5:00 PM	3	147	1	0	0	151	25	0	0	0	1	25	0	0	0	0	0	0	0	0	9	0	2	9	185
5:15 PM	2	129	5	0	0	136	20	0	0	0	1	20	0	0	0	0	0	0	0	2	4	0	2	6	162
5:30 PM	5	138	6	0	0	149	13	0	0	0	3	13	0	0	0	0	1	0	0	0	7	2	4	9	171
Total	13	534	13	0	0	560	97	0	0	0	5	97	0	0	0	0	1	0	0	2	25	2	8	29	686
Approach %	2.3	95.4	2.3	0.0	-	-	100.0	0.0	0.0	0.0	-	-	NaN	NaN	NaN	NaN	-	-	0.0	6.9	86.2	6.9	-	-	-
Total %	1.9	77.8	1.9	0.0	-	81.6	14.1	0.0	0.0	0.0	-	14.1	0.0	0.0	0.0	0.0	-	0.0	0.0	0.3	3.6	0.3	-	4.2	-
PHF	0.650	0.908	0.542	0.000	-	0.927	0.622	0.000	0.000	0.000	-	0.622	0.000	0.000	0.000	0.000	-	0.000	0.000	0.250	0.694	0.250	-	0.806	0.927
Lights	13	526	13	0	-	552	90	0	0	0	-	90	0	0	0	0	-	0	0	2	25	2	-	29	671
% Lights	100.0	98.5	100.0	-	-	98.6	92.8	-	-	-	-	92.8	-	-	-	-	-	-	-	100.0	100.0	100.0	-	100.0	97.8
Mediums	0	8	0	0	-	8	7	0	0	0	-	7	0	0	0	0	-	0	0	0	0	0	-	0	15
% Mediums	0.0	1.5	0.0	-	-	1.4	7.2	-	-	-	-	7.2	-	-	-	-	-	-	-	0.0	0.0	0.0	-	0.0	2.2
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	0.0	-	-	-	-	0.0	-	-	-	-	-	-	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	5	-	-	-	-	-	1	-	-	-	-	-	8	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
NORTH DALLAS HIGH
SCHOOL
Site Code:
Start Date: 04/16/2015
Page No: 1

Turning Movement Data

Start Time	MCKINNEY Southbound						Westbound St. Westbound						MCKINNEY Northbound						NORTH DALLAS HIGH SCHOOL Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	3	50	0	0	0	53	0	0	0	0	1	0	53
7:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	1	52	0	0	0	53	3	0	0	0	4	3	56
7:30 AM	0	0	0	0	0	0	0	0	0	0	4	0	5	76	0	0	0	81	1	0	0	0	2	1	82
7:45 AM	0	0	0	0	0	0	0	0	0	0	2	0	7	99	0	0	0	106	0	0	0	0	3	0	106
Hourly Total	0	0	0	0	0	0	0	0	0	0	9	0	16	277	0	0	0	293	4	0	0	0	10	4	297
8:00 AM	0	0	0	0	0	0	0	0	0	0	3	0	7	137	0	0	0	144	1	0	0	0	0	1	145
8:15 AM	0	0	0	0	0	0	0	0	0	0	5	0	12	150	0	0	0	162	1	0	0	0	5	1	163
8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	11	157	0	0	0	168	1	0	0	0	4	1	169
8:45 AM	0	0	0	0	0	0	0	0	0	0	3	0	9	147	0	0	0	156	1	0	0	0	11	1	157
Hourly Total	0	0	0	0	0	0	0	0	0	0	12	0	39	591	0	0	0	630	4	0	0	0	20	4	634
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:30 PM	0	0	0	0	0	0	0	0	0	0	5	0	6	209	0	0	0	215	3	0	0	0	10	3	218
4:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	2	200	0	0	0	202	3	0	0	0	14	3	205
Hourly Total	0	0	0	0	1	0	0	0	0	0	5	0	8	409	0	0	0	417	6	0	0	0	24	6	423
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	7	229	0	0	0	236	2	0	0	0	11	2	238
5:15 PM	0	0	0	0	0	0	0	0	0	0	5	0	11	259	0	0	0	270	2	0	0	0	13	2	272
5:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	6	250	0	0	0	256	4	0	0	0	11	4	260
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	4	280	0	0	0	284	5	0	0	0	5	5	289
Hourly Total	0	0	0	0	0	0	0	0	0	0	8	0	28	1018	0	0	0	1046	13	0	0	0	40	13	1059
6:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	9	234	0	0	0	243	0	0	0	0	1	0	243
6:15 PM	0	0	0	0	0	0	0	0	0	0	4	0	3	193	0	0	0	196	3	0	0	0	7	3	199
Grand Total	0	0	0	0	1	0	0	0	0	0	39	0	103	2722	0	0	0	2825	30	0	0	0	102	30	2855
Approach %	NaN	NaN	NaN	NaN	-	-	NaN	NaN	NaN	NaN	-	-	3.6	96.4	0.0	0.0	-	-	100.0	0.0	0.0	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	3.6	95.3	0.0	0.0	-	98.9	1.1	0.0	0.0	0.0	-	1.1	-
Lights	0	0	0	0	-	0	0	0	0	0	-	0	99	2691	0	0	-	2790	29	0	0	0	-	29	2819
% Lights	-	-	-	-	-	-	-	-	-	-	-	-	96.1	98.9	-	-	-	98.8	96.7	-	-	-	-	96.7	98.7
Mediums	0	0	0	0	-	0	0	0	0	0	-	0	4	31	0	0	-	35	1	0	0	0	-	1	36
% Mediums	-	-	-	-	-	-	-	-	-	-	-	-	3.9	1.1	-	-	-	1.2	3.3	-	-	-	-	3.3	1.3
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	-	-	-	0.0	0.0	-	-	-	-	0.0	0.0
Pedestrians	-	-	-	-	1	-	-	-	-	-	39	-	-	-	-	-	0	-	-	-	-	-	102	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
NORTH DALLAS HIGH
SCHOOL
Site Code:
Start Date: 04/16/2015
Page No: 3

Turning Movement Peak Hour Data (8:00 AM)

Start Time	MCKINNEY Southbound						Westbound St. Westbound						MCKINNEY Northbound						NORTH DALLAS HIGH SCHOOL Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
8:00 AM	0	0	0	0	0	0	0	0	0	0	3	0	7	137	0	0	0	144	1	0	0	0	0	1	145
8:15 AM	0	0	0	0	0	0	0	0	0	0	5	0	12	150	0	0	0	162	1	0	0	0	5	1	163
8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	11	157	0	0	0	168	1	0	0	0	4	1	169
8:45 AM	0	0	0	0	0	0	0	0	0	0	3	0	9	147	0	0	0	156	1	0	0	0	11	1	157
Total	0	0	0	0	0	0	0	0	0	0	12	0	39	591	0	0	0	630	4	0	0	0	20	4	634
Approach %	NaN	NaN	NaN	NaN	-	-	NaN	NaN	NaN	NaN	-	-	6.2	93.8	0.0	0.0	-	-	100.0	0.0	0.0	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	6.2	93.2	0.0	0.0	-	99.4	0.6	0.0	0.0	0.0	-	0.6	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	0.000	0.813	0.941	0.000	0.000	-	0.938	1.000	0.000	0.000	0.000	-	1.000	0.938
Lights	0	0	0	0	-	0	0	0	0	0	-	0	39	579	0	0	-	618	3	0	0	0	-	3	621
% Lights	-	-	-	-	-	-	-	-	-	-	-	-	100.0	98.0	-	-	-	98.1	75.0	-	-	-	-	75.0	97.9
Mediums	0	0	0	0	-	0	0	0	0	0	-	0	0	12	0	0	-	12	1	0	0	0	-	1	13
% Mediums	-	-	-	-	-	-	-	-	-	-	-	-	0.0	2.0	-	-	-	1.9	25.0	-	-	-	-	25.0	2.1
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	-	-	-	0.0	0.0	-	-	-	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	12	-	-	-	-	-	0	-	-	-	-	-	20	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
NORTH DALLAS HIGH
SCHOOL
Site Code:
Start Date: 04/16/2015
Page No: 5

Turning Movement Peak Hour Data (5:15 PM)

Start Time	MCKINNEY Southbound						Westbound St. Westbound						MCKINNEY Northbound						NORTH DALLAS HIGH SCHOOL Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
5:15 PM	0	0	0	0	0	0	0	0	0	0	5	0	11	259	0	0	0	270	2	0	0	0	13	2	272
5:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	6	250	0	0	0	256	4	0	0	0	11	4	260
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	4	280	0	0	0	284	5	0	0	0	5	5	289
6:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	9	234	0	0	0	243	0	0	0	0	1	0	243
Total	0	0	0	0	0	0	0	0	0	0	9	0	30	1023	0	0	0	1053	11	0	0	0	30	11	1064
Approach %	NaN	NaN	NaN	NaN	-	-	NaN	NaN	NaN	NaN	-	-	2.8	97.2	0.0	0.0	-	-	100.0	0.0	0.0	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	2.8	96.1	0.0	0.0	-	99.0	1.0	0.0	0.0	0.0	-	1.0	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	0.000	0.682	0.913	0.000	0.000	-	0.927	0.550	0.000	0.000	0.000	-	0.550	0.920
Lights	0	0	0	0	-	0	0	0	0	0	-	0	28	1017	0	0	-	1045	11	0	0	0	-	11	1056
% Lights	-	-	-	-	-	-	-	-	-	-	-	-	93.3	99.4	-	-	-	99.2	100.0	-	-	-	-	100.0	99.2
Mediums	0	0	0	0	-	0	0	0	0	0	-	0	2	6	0	0	-	8	0	0	0	0	-	0	8
% Mediums	-	-	-	-	-	-	-	-	-	-	-	-	6.7	0.6	-	-	-	0.8	0.0	-	-	-	-	0.0	0.8
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	-	-	-	0.0	0.0	-	-	-	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	9	-	-	-	-	-	0	-	-	-	-	-	30	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: COLE @ NORTH
DALLAS HIGH SCHOOL
Site Code:
Start Date: 04/16/2015
Page No: 1

Turning Movement Data

Start Time	COLE Southbound						NORTH DALLAS HIGH SCHOOL Westbound						COLE Northbound						NORTH DALLAS HIGH SCHOOL Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:00 AM	1	60	0	0	0	61	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	62
7:15 AM	2	69	0	0	0	71	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	71
7:30 AM	4	96	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100
7:45 AM	5	155	0	0	0	160	5	0	0	0	1	5	0	0	0	0	0	0	0	0	0	0	0	0	165
Hourly Total	12	380	0	0	0	392	6	0	0	0	3	6	0	0	0	0	0	0	0	0	0	0	0	0	398
8:00 AM	13	185	0	0	0	198	4	0	0	0	1	4	0	0	0	0	0	0	0	0	1	0	0	1	203
8:15 AM	7	193	0	0	0	200	2	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	202
8:30 AM	5	156	0	0	0	161	1	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	162
8:45 AM	12	126	0	0	0	138	1	0	0	0	8	1	0	0	0	0	1	0	0	0	0	0	0	0	139
Hourly Total	37	660	0	0	0	697	8	0	0	0	13	8	0	0	0	0	1	0	0	0	1	0	0	1	706
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:30 PM	1	101	0	0	0	102	6	0	0	0	3	6	0	0	0	0	0	0	0	0	0	0	0	0	108
4:45 PM	2	120	0	0	0	122	4	0	0	0	7	4	0	0	0	0	0	0	0	0	0	0	0	0	126
Hourly Total	3	221	0	0	0	224	10	0	0	0	10	10	0	0	0	0	0	0	0	0	0	0	0	0	234
5:00 PM	2	159	0	0	0	161	1	0	0	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	162
5:15 PM	3	134	0	0	0	137	1	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	138
5:30 PM	4	154	0	0	0	158	1	0	0	0	2	1	0	0	0	0	0	0	0	1	0	0	0	1	160
5:45 PM	1	132	0	0	0	133	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	133
Hourly Total	10	579	0	0	0	589	3	0	0	0	11	3	0	0	0	0	0	0	0	1	0	0	0	1	593
6:00 PM	0	120	0	0	0	120	1	0	0	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	121
6:15 PM	0	133	0	0	0	133	1	0	1	0	5	2	0	0	0	0	0	0	0	0	0	0	0	0	135
Grand Total	62	2093	0	0	0	2155	29	0	1	0	48	30	0	0	0	0	1	0	0	1	1	0	0	2	2187
Approach %	2.9	97.1	0.0	0.0	-	-	96.7	0.0	3.3	0.0	-	-	NaN	NaN	NaN	NaN	-	-	0.0	50.0	50.0	0.0	-	-	-
Total %	2.8	95.7	0.0	0.0	-	98.5	1.3	0.0	0.0	0.0	-	1.4	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.1	-	-
Lights	61	2069	0	0	-	2130	25	0	1	0	-	26	0	0	0	0	-	0	0	1	1	0	-	2	2158
% Lights	98.4	98.9	-	-	-	98.8	86.2	-	100.0	-	-	86.7	-	-	-	-	-	-	-	100.0	100.0	-	-	100.0	98.7
Mediums	1	24	0	0	-	25	4	0	0	0	-	4	0	0	0	0	-	0	0	0	0	0	-	0	29
% Mediums	1.6	1.1	-	-	-	1.2	13.8	-	0.0	-	-	13.3	-	-	-	-	-	-	-	0.0	0.0	-	-	0.0	1.3
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	0.0	0.0	-	-	-	0.0	0.0	-	0.0	-	-	0.0	-	-	-	-	-	-	-	0.0	0.0	-	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	48	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

[illegible]

[illegible]

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
CAMBRICK
Site Code:
Start Date: 04/16/2015
Page No: 1

Turning Movement Data

Start Time	MCKINNEY Southbound						CAMBRICK Westbound						MCKINNEY Northbound						CAMBRICK Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:00 AM	0	0	0	0	1	0	0	0	0	0	12	0	2	47	0	0	3	49	1	0	0	0	2	1	50
7:15 AM	0	0	0	0	1	0	0	0	0	0	2	0	2	56	0	0	3	58	0	0	0	0	6	0	58
7:30 AM	0	0	0	0	0	0	0	0	0	0	4	0	0	76	0	0	0	76	1	0	0	0	4	1	77
7:45 AM	0	0	0	0	1	0	0	0	0	0	2	0	1	97	0	0	1	98	0	0	0	0	7	0	98
Hourly Total	0	0	0	0	3	0	0	0	0	0	20	0	5	276	0	0	7	281	2	0	0	0	19	2	283
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	140	0	0	0	140	1	0	0	0	1	1	141
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	151	0	0	0	153	0	0	0	0	6	0	153
8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	152	0	0	1	152	1	0	0	0	6	1	153
8:45 AM	0	0	0	0	0	0	0	0	0	0	2	0	1	157	0	0	0	158	0	0	0	0	11	0	158
Hourly Total	0	0	0	0	0	0	0	0	0	0	3	0	3	600	0	0	1	603	2	0	0	0	24	2	605
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	3	204	0	0	9	207	2	0	0	0	12	2	209
4:45 PM	0	0	0	0	3	0	0	0	0	0	0	0	3	207	0	0	0	210	2	0	0	0	18	2	212
Hourly Total	0	0	0	0	3	0	0	0	0	0	1	0	6	411	0	0	9	417	4	0	0	0	30	4	421
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	227	0	0	0	229	1	0	0	0	11	1	230
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	264	0	0	0	267	1	0	0	0	10	1	268
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	4	249	0	0	0	253	4	0	0	0	10	4	257
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	4	269	0	0	0	273	1	0	0	0	6	1	274
Hourly Total	0	0	0	0	0	0	0	0	0	0	1	0	13	1009	0	0	0	1022	7	0	0	0	37	7	1029
6:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	4	226	0	0	0	230	1	0	0	0	4	1	231
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	194	0	0	0	197	3	0	0	0	11	3	200
Grand Total	0	0	0	0	6	0	0	0	0	0	26	0	34	2716	0	0	17	2750	19	0	0	0	125	19	2769
Approach %	NaN	NaN	NaN	NaN	-	-	NaN	NaN	NaN	NaN	-	-	1.2	98.8	0.0	0.0	-	-	100.0	0.0	0.0	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	1.2	98.1	0.0	0.0	-	99.3	0.7	0.0	0.0	0.0	-	0.7	-
Lights	0	0	0	0	-	0	0	0	0	0	-	0	33	2683	0	0	-	2716	19	0	0	0	-	19	2735
% Lights	-	-	-	-	-	-	-	-	-	-	-	-	97.1	98.8	-	-	-	98.8	100.0	-	-	-	-	100.0	98.8
Mediums	0	0	0	0	-	0	0	0	0	0	-	0	1	33	0	0	-	34	0	0	0	0	-	0	34
% Mediums	-	-	-	-	-	-	-	-	-	-	-	-	2.9	1.2	-	-	-	1.2	0.0	-	-	-	-	0.0	1.2
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	-	-	-	0.0	0.0	-	-	-	-	0.0	0.0
Pedestrians	-	-	-	-	6	-	-	-	-	-	26	-	-	-	-	-	17	-	-	-	-	-	125	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

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DRAFT

Count Name: MCKINNEY @
CAMBRICK
Site Code:
Start Date: 04/16/2015
Page No: 3

Turning Movement Peak Hour Data (8:00 AM)

Start Time	MCKINNEY Southbound						CAMBRICK Westbound						MCKINNEY Northbound						CAMBRICK Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	140	0	0	0	140	1	0	0	0	1	1	141
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	151	0	0	0	153	0	0	0	0	6	0	153
8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	152	0	0	1	152	1	0	0	0	6	1	153
8:45 AM	0	0	0	0	0	0	0	0	0	0	2	0	1	157	0	0	0	158	0	0	0	0	11	0	158
Total	0	0	0	0	0	0	0	0	0	0	3	0	3	600	0	0	1	603	2	0	0	0	24	2	605
Approach %	NaN	NaN	NaN	NaN	-	-	NaN	NaN	NaN	NaN	-	-	0.5	99.5	0.0	0.0	-	-	100.0	0.0	0.0	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.5	99.2	0.0	0.0	-	99.7	0.3	0.0	0.0	0.0	-	0.3	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	0.000	0.375	0.955	0.000	0.000	-	0.954	0.500	0.000	0.000	0.000	-	0.500	0.957
Lights	0	0	0	0	-	0	0	0	0	0	-	0	3	587	0	0	-	590	2	0	0	0	-	2	592
% Lights	-	-	-	-	-	-	-	-	-	-	-	-	100.0	97.8	-	-	-	97.8	100.0	-	-	-	-	100.0	97.9
Mediums	0	0	0	0	-	0	0	0	0	0	-	0	0	13	0	0	-	13	0	0	0	0	-	0	13
% Mediums	-	-	-	-	-	-	-	-	-	-	-	-	0.0	2.2	-	-	-	2.2	0.0	-	-	-	-	0.0	2.1
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	-	-	-	0.0	0.0	-	-	-	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	1	-	-	-	-	-	24	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

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Count Name: MCKINNEY @
CAMBRICK
Site Code:
Start Date: 04/16/2015
Page No: 5

Turning Movement Peak Hour Data (5:15 PM)

Start Time	MCKINNEY Southbound						CAMBRICK Westbound						MCKINNEY Northbound						CAMBRICK Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	264	0	0	0	267	1	0	0	0	10	1	268
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	4	249	0	0	0	253	4	0	0	0	10	4	257
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	4	269	0	0	0	273	1	0	0	0	6	1	274
6:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	4	226	0	0	0	230	1	0	0	0	4	1	231
Total	0	0	0	0	0	0	0	0	0	0	2	0	15	1008	0	0	0	1023	7	0	0	0	30	7	1030
Approach %	NaN	NaN	NaN	NaN	-	-	NaN	NaN	NaN	NaN	-	-	1.5	98.5	0.0	0.0	-	-	100.0	0.0	0.0	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	1.5	97.9	0.0	0.0	-	99.3	0.7	0.0	0.0	0.0	-	0.7	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	0.000	0.938	0.937	0.000	0.000	-	0.937	0.438	0.000	0.000	0.000	-	0.438	0.940
Lights	0	0	0	0	-	0	0	0	0	0	-	0	14	1002	0	0	-	1016	7	0	0	0	-	7	1023
% Lights	-	-	-	-	-	-	-	-	-	-	-	-	93.3	99.4	-	-	-	99.3	100.0	-	-	-	-	100.0	99.3
Mediums	0	0	0	0	-	0	0	0	0	0	-	0	1	6	0	0	-	7	0	0	0	0	-	0	7
% Mediums	-	-	-	-	-	-	-	-	-	-	-	-	6.7	0.6	-	-	-	0.7	0.0	-	-	-	-	0.0	0.7
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	-	-	-	0.0	0.0	-	-	-	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	30	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

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Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: COLE @
CAMBRICK
Site Code:
Start Date: 04/16/2015
Page No: 1

Turning Movement Data

Start Time	COLE Southbound						Westbound St. Westbound						COLE Northbound						CAMBRICK Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:00 AM	0	47	1	0	0	48	0	0	0	0	2	0	0	0	0	0	1	0	0	0	6	0	0	6	54
7:15 AM	0	68	2	0	1	70	0	0	0	0	2	0	0	0	0	0	0	0	0	0	5	0	1	5	75
7:30 AM	0	92	5	0	1	97	0	0	0	0	1	0	0	0	0	0	0	0	0	0	7	0	0	7	104
7:45 AM	0	147	2	0	1	149	0	0	0	0	2	0	0	0	0	0	0	0	0	0	6	0	1	6	155
Hourly Total	0	354	10	0	3	364	0	0	0	0	7	0	0	0	0	0	1	0	0	0	24	0	2	24	388
8:00 AM	0	182	2	0	1	184	0	0	0	0	2	0	0	0	0	0	1	0	0	0	7	0	0	7	191
8:15 AM	0	184	3	0	4	187	0	0	0	0	2	0	0	0	0	0	0	0	0	0	7	0	2	7	194
8:30 AM	0	148	3	0	0	151	0	0	0	0	7	0	0	0	0	0	1	0	0	0	6	0	1	6	157
8:45 AM	0	132	2	0	3	134	0	0	0	0	3	0	0	0	0	0	1	0	0	0	7	0	0	7	141
Hourly Total	0	646	10	0	8	656	0	0	0	0	14	0	0	0	0	0	3	0	0	0	27	0	3	27	683
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:30 PM	0	83	2	0	0	85	0	0	0	0	1	0	0	0	0	0	0	0	0	0	6	0	0	6	91
4:45 PM	0	108	3	0	1	111	0	0	0	0	7	0	0	0	0	0	1	0	0	0	3	0	0	3	114
Hourly Total	0	191	5	0	1	196	0	0	0	0	8	0	0	0	0	0	1	0	0	0	9	0	0	9	205
5:00 PM	0	146	2	0	2	148	0	0	0	0	5	0	0	0	0	0	1	0	0	0	5	0	2	5	153
5:15 PM	0	141	4	0	2	145	0	0	0	0	5	0	0	0	0	0	2	0	0	0	6	0	0	6	151
5:30 PM	0	130	5	0	4	135	0	0	0	0	2	0	0	0	0	0	3	0	0	0	9	0	4	9	144
5:45 PM	0	132	2	0	2	134	0	0	0	0	3	0	0	0	0	0	0	0	0	0	5	0	1	5	139
Hourly Total	0	549	13	0	10	562	0	0	0	0	15	0	0	0	0	0	6	0	0	0	25	0	7	25	587
6:00 PM	0	111	1	0	3	112	0	0	0	0	6	0	0	0	0	0	2	0	0	0	4	0	3	4	116
6:15 PM	0	122	3	0	0	125	1	0	0	0	6	1	0	0	0	0	2	0	0	0	8	0	1	8	134
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1973	42	0	25	2015	1	0	0	0	56	1	0	0	0	0	15	0	0	0	97	0	16	97	2113
Approach %	0.0	97.9	2.1	0.0	-	-	100.0	0.0	0.0	0.0	-	-	NaN	NaN	NaN	NaN	-	-	0.0	0.0	100.0	0.0	-	-	-
Total %	0.0	93.4	2.0	0.0	-	95.4	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	4.6	0.0	-	4.6	-
Lights	0	1951	42	0	-	1993	1	0	0	0	-	1	0	0	0	0	-	0	0	0	97	0	-	97	2091
% Lights	-	98.9	100.0	-	-	98.9	100.0	-	-	-	-	100.0	-	-	-	-	-	-	-	-	100.0	-	-	100.0	99.0
Mediums	0	22	0	0	-	22	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	22
% Mediums	-	1.1	0.0	-	-	1.1	0.0	-	-	-	-	0.0	-	-	-	-	-	-	-	-	0.0	-	-	0.0	1.0
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	-	0.0	0.0	-	-	-	-	0.0	-	-	-	-	-	-	-	-	0.0	-	-	0.0	0.0
Pedestrians	-	-	-	-	25	-	-	-	-	-	56	-	-	-	-	-	15	-	-	-	-	-	16	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

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DRAFT

Count Name: COLE @
CAMBRICK
Site Code:
Start Date: 04/16/2015
Page No: 3

Turning Movement Peak Hour Data (7:45 AM)

Start Time	COLE Southbound						Westbound St. Westbound						COLE Northbound						CAMBRICK Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:45 AM	0	147	2	0	1	149	0	0	0	0	2	0	0	0	0	0	0	0	0	0	6	0	1	6	155
8:00 AM	0	182	2	0	1	184	0	0	0	0	2	0	0	0	0	0	1	0	0	0	7	0	0	7	191
8:15 AM	0	184	3	0	4	187	0	0	0	0	2	0	0	0	0	0	0	0	0	0	7	0	2	7	194
8:30 AM	0	148	3	0	0	151	0	0	0	0	7	0	0	0	0	0	1	0	0	0	6	0	1	6	157
Total	0	661	10	0	6	671	0	0	0	0	13	0	0	0	0	0	2	0	0	0	26	0	4	26	697
Approach %	0.0	98.5	1.5	0.0	-	-	NaN	NaN	NaN	NaN	-	-	NaN	NaN	NaN	NaN	-	-	0.0	0.0	100.0	0.0	-	-	-
Total %	0.0	94.8	1.4	0.0	-	96.3	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	3.7	0.0	-	3.7	-
PHF	0.000	0.898	0.833	0.000	-	0.897	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.929	0.000	-	0.929	0.898
Lights	0	653	10	0	-	663	0	0	0	0	-	0	0	0	0	0	-	0	0	0	26	0	-	26	689
% Lights	-	98.8	100.0	-	-	98.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	100.0	98.9
Mediums	0	8	0	0	-	8	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	8
% Mediums	-	1.2	0.0	-	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	0.0	1.1
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	0.0	0.0
Pedestrians	-	-	-	-	6	-	-	-	-	-	13	-	-	-	-	-	2	-	-	-	-	-	4	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

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Count Name: COLE @
CAMBRICK
Site Code:
Start Date: 04/16/2015
Page No: 5

Turning Movement Peak Hour Data (5:00 PM)

Start Time	COLE Southbound						Westbound St. Westbound						COLE Northbound						CAMBRICK Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
5:00 PM	0	146	2	0	2	148	0	0	0	0	5	0	0	0	0	0	1	0	0	0	5	0	2	5	153
5:15 PM	0	141	4	0	2	145	0	0	0	0	5	0	0	0	0	0	2	0	0	0	6	0	0	6	151
5:30 PM	0	130	5	0	4	135	0	0	0	0	2	0	0	0	0	0	3	0	0	0	9	0	4	9	144
5:45 PM	0	132	2	0	2	134	0	0	0	0	3	0	0	0	0	0	0	0	0	0	5	0	1	5	139
Total	0	549	13	0	10	562	0	0	0	0	15	0	0	0	0	0	6	0	0	0	25	0	7	25	587
Approach %	0.0	97.7	2.3	0.0	-	-	NaN	NaN	NaN	NaN	-	-	NaN	NaN	NaN	NaN	-	-	0.0	0.0	100.0	0.0	-	-	-
Total %	0.0	93.5	2.2	0.0	-	95.7	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	4.3	0.0	-	4.3	-
PHF	0.000	0.940	0.650	0.000	-	0.949	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.694	0.000	-	0.694	0.959
Lights	0	545	13	0	-	558	0	0	0	0	-	0	0	0	0	0	-	0	0	0	25	0	-	25	583
% Lights	-	99.3	100.0	-	-	99.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	100.0	99.3
Mediums	0	4	0	0	-	4	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	4
% Mediums	-	0.7	0.0	-	-	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	0.0	0.7
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	0.0	0.0
Pedestrians	-	-	-	-	10	-	-	-	-	-	15	-	-	-	-	-	6	-	-	-	-	-	7	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
ELIZABETH
Site Code:
Start Date: 04/16/2015
Page No: 1

Turning Movement Data

Start Time	MCKINNEY Southbound					ELIZABETH Westbound					MCKINNEY Northbound					ELIZABETH Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
7:00 AM	0	0	0	0	0	0	0	3	1	4	5	41	3	0	49	0	6	0	0	6	59
7:15 AM	0	0	0	0	0	0	2	2	0	4	3	44	4	0	51	8	4	0	0	12	67
7:30 AM	0	0	0	0	0	0	3	4	0	7	4	63	10	0	77	5	5	0	0	10	94
7:45 AM	0	0	0	0	0	0	7	2	0	9	2	80	13	0	95	8	4	0	0	12	116
Hourly Total	0	0	0	0	0	0	12	11	1	24	14	228	30	0	272	21	19	0	0	40	336
8:00 AM	0	0	0	0	0	0	11	0	0	11	5	103	23	0	131	13	6	0	0	19	161
8:15 AM	0	0	0	0	0	0	7	8	0	15	10	125	9	0	144	16	3	0	0	19	178
8:30 AM	0	0	0	0	0	0	5	7	0	12	10	123	16	0	149	6	11	0	0	17	178
8:45 AM	0	0	0	0	0	0	6	3	0	9	8	130	11	0	149	11	9	0	0	20	178
Hourly Total	0	0	0	0	0	0	29	18	0	47	33	481	59	0	573	46	29	0	0	75	695
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:30 PM	0	0	0	0	0	0	3	7	0	10	12	185	15	0	212	8	6	0	0	14	236
4:45 PM	0	0	0	0	0	0	2	8	0	10	14	187	8	0	209	4	2	0	0	6	225
Hourly Total	0	0	0	0	0	0	5	15	0	20	26	372	23	0	421	12	8	0	0	20	461
5:00 PM	0	0	0	0	0	0	7	13	0	20	10	203	7	0	220	10	9	0	0	19	259
5:15 PM	0	0	0	0	0	0	4	15	0	19	18	248	4	0	270	15	11	0	0	26	315
5:30 PM	0	0	0	0	0	0	7	4	0	11	18	226	9	0	253	14	4	0	0	18	282
5:45 PM	0	0	0	0	0	0	12	3	0	15	17	251	7	0	275	2	2	0	0	4	294
Hourly Total	0	0	0	0	0	0	30	35	0	65	63	928	27	0	1018	41	26	0	0	67	1150
6:00 PM	0	0	0	0	0	0	6	3	0	9	16	206	8	0	230	9	1	0	0	10	249
6:15 PM	0	0	0	0	0	0	4	2	0	6	15	174	5	0	194	9	2	0	0	11	211
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	86	84	1	171	167	2389	152	0	2708	138	85	0	0	223	3102
Approach %	NaN	NaN	NaN	NaN	-	0.0	50.3	49.1	0.6	-	6.2	88.2	5.6	0.0	-	61.9	38.1	0.0	0.0	-	-
Total %	0.0	0.0	0.0	0.0	0.0	0.0	2.8	2.7	0.0	5.5	5.4	77.0	4.9	0.0	87.3	4.4	2.7	0.0	0.0	7.2	-
Lights	0	0	0	0	0	0	86	81	1	168	164	2361	149	0	2674	138	85	0	0	223	3065
% Lights	-	-	-	-	-	-	100.0	96.4	100.0	98.2	98.2	98.8	98.0	-	98.7	100.0	100.0	-	-	100.0	98.8
Mediums	0	0	0	0	0	0	0	3	0	3	3	27	3	0	33	0	0	0	0	0	36
% Mediums	-	-	-	-	-	-	0.0	3.6	0.0	1.8	1.8	1.1	2.0	-	1.2	0.0	0.0	-	-	0.0	1.2
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
% Articulated Trucks	-	-	-	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	-	-	0.0	0.0

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
ELIZABETH
Site Code:
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Page No: 3

Turning Movement Peak Hour Data (8:00 AM)

Start Time	MCKINNEY Southbound					ELIZABETH Westbound					MCKINNEY Northbound					ELIZABETH Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
8:00 AM	0	0	0	0	0	0	11	0	0	11	5	103	23	0	131	13	6	0	0	19	161
8:15 AM	0	0	0	0	0	0	7	8	0	15	10	125	9	0	144	16	3	0	0	19	178
8:30 AM	0	0	0	0	0	0	5	7	0	12	10	123	16	0	149	6	11	0	0	17	178
8:45 AM	0	0	0	0	0	0	6	3	0	9	8	130	11	0	149	11	9	0	0	20	178
Total	0	0	0	0	0	0	29	18	0	47	33	481	59	0	573	46	29	0	0	75	695
Approach %	NaN	NaN	NaN	NaN	-	0.0	61.7	38.3	0.0	-	5.8	83.9	10.3	0.0	-	61.3	38.7	0.0	0.0	-	-
Total %	0.0	0.0	0.0	0.0	0.0	0.0	4.2	2.6	0.0	6.8	4.7	69.2	8.5	0.0	82.4	6.6	4.2	0.0	0.0	10.8	-
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.659	0.563	0.000	0.783	0.825	0.925	0.641	0.000	0.961	0.719	0.659	0.000	0.000	0.938	0.976
Lights	0	0	0	0	0	0	29	17	0	46	31	472	57	0	560	46	29	0	0	75	681
% Lights	-	-	-	-	-	-	100.0	94.4	-	97.9	93.9	98.1	96.6	-	97.7	100.0	100.0	-	-	100.0	98.0
Mediums	0	0	0	0	0	0	0	1	0	1	2	8	2	0	12	0	0	0	0	0	13
% Mediums	-	-	-	-	-	-	0.0	5.6	-	2.1	6.1	1.7	3.4	-	2.1	0.0	0.0	-	-	0.0	1.9
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
% Articulated Trucks	-	-	-	-	-	-	0.0	0.0	-	0.0	0.0	0.2	0.0	-	0.2	0.0	0.0	-	-	0.0	0.1

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
ELIZABETH
Site Code:
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Page No: 5

Turning Movement Peak Hour Data (5:00 PM)

Start Time	MCKINNEY Southbound					ELIZABETH Westbound					MCKINNEY Northbound					ELIZABETH Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
5:00 PM	0	0	0	0	0	0	7	13	0	20	10	203	7	0	220	10	9	0	0	19	259
5:15 PM	0	0	0	0	0	0	4	15	0	19	18	248	4	0	270	15	11	0	0	26	315
5:30 PM	0	0	0	0	0	0	7	4	0	11	18	226	9	0	253	14	4	0	0	18	282
5:45 PM	0	0	0	0	0	0	12	3	0	15	17	251	7	0	275	2	2	0	0	4	294
Total	0	0	0	0	0	0	30	35	0	65	63	928	27	0	1018	41	26	0	0	67	1150
Approach %	NaN	NaN	NaN	NaN	-	0.0	46.2	53.8	0.0	-	6.2	91.2	2.7	0.0	-	61.2	38.8	0.0	0.0	-	-
Total %	0.0	0.0	0.0	0.0	0.0	0.0	2.6	3.0	0.0	5.7	5.5	80.7	2.3	0.0	88.5	3.6	2.3	0.0	0.0	5.8	-
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.583	0.000	0.813	0.875	0.924	0.750	0.000	0.925	0.683	0.591	0.000	0.000	0.644	0.913
Lights	0	0	0	0	0	0	30	34	0	64	62	921	27	0	1010	41	26	0	0	67	1141
% Lights	-	-	-	-	-	-	100.0	97.1	-	98.5	98.4	99.2	100.0	-	99.2	100.0	100.0	-	-	100.0	99.2
Mediums	0	0	0	0	0	0	0	1	0	1	1	7	0	0	8	0	0	0	0	0	9
% Mediums	-	-	-	-	-	-	0.0	2.9	-	1.5	1.6	0.8	0.0	-	0.8	0.0	0.0	-	-	0.0	0.8
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	-	-	-	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	-	-	0.0	0.0

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: COLE @
ELIZABETH
Site Code:
Start Date: 04/16/2015
Page No: 1

Turning Movement Data

Start Time	COLE Southbound					ELIZABETH Westbound					COLE Northbound					ELIZABETH Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
7:00 AM	2	42	3	0	47	5	1	0	1	7	0	0	1	0	1	0	1	3	0	4	59
7:15 AM	6	58	1	0	65	5	1	0	0	6	0	0	0	0	0	0	3	6	0	9	80
7:30 AM	8	79	1	0	88	8	2	0	0	10	0	0	0	0	0	0	3	4	0	7	105
7:45 AM	5	135	5	0	145	10	3	0	0	13	0	0	0	0	0	0	6	6	0	12	170
Hourly Total	21	314	10	0	345	28	7	0	1	36	0	0	1	0	1	0	13	19	0	32	414
8:00 AM	14	155	1	0	170	18	2	0	0	20	0	0	0	0	0	0	6	7	0	13	203
8:15 AM	14	152	0	0	166	14	7	0	0	21	0	0	0	0	0	0	5	13	0	18	205
8:30 AM	10	122	3	0	135	20	2	0	0	22	0	0	0	0	0	0	6	6	0	12	169
8:45 AM	12	144	1	0	157	9	4	0	0	13	0	0	0	0	0	0	5	6	0	11	181
Hourly Total	50	573	5	0	628	61	15	0	0	76	0	0	0	0	0	0	22	32	0	54	758
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:30 PM	9	71	6	0	86	14	3	0	0	17	0	0	0	0	0	0	4	1	0	5	108
4:45 PM	3	106	4	0	113	6	6	0	0	12	0	0	0	0	0	0	2	3	0	5	130
Hourly Total	12	177	10	0	199	20	9	0	0	29	0	0	0	0	0	0	6	4	0	10	238
5:00 PM	13	125	4	0	142	15	6	0	0	21	0	0	0	0	0	0	5	5	0	10	173
5:15 PM	10	124	2	0	136	18	5	0	0	23	0	0	0	0	0	0	7	9	0	16	175
5:30 PM	17	109	5	0	131	15	6	0	0	21	0	0	1	0	1	0	0	9	0	9	162
5:45 PM	8	111	6	0	125	23	5	0	0	28	0	0	0	0	0	0	0	4	0	4	157
Hourly Total	48	469	17	0	534	71	22	0	0	93	0	0	1	0	1	0	12	27	0	39	667
6:00 PM	9	96	2	0	107	15	7	0	0	22	0	0	0	0	0	0	4	6	0	10	139
6:15 PM	7	107	5	0	119	14	4	0	0	18	0	0	0	0	0	0	5	6	0	11	148
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	147	1736	49	0	1932	209	64	0	1	274	0	0	2	0	2	0	62	94	0	156	2364
Approach %	7.6	89.9	2.5	0.0	-	76.3	23.4	0.0	0.4	-	0.0	0.0	100.0	0.0	-	0.0	39.7	60.3	0.0	-	-
Total %	6.2	73.4	2.1	0.0	81.7	8.8	2.7	0.0	0.0	11.6	0.0	0.0	0.1	0.0	0.1	0.0	2.6	4.0	0.0	6.6	-
Lights	147	1715	48	0	1910	206	64	0	1	271	0	0	2	0	2	0	62	93	0	155	2338
% Lights	100.0	98.8	98.0	-	98.9	98.6	100.0	-	100.0	98.9	-	-	100.0	-	100.0	-	100.0	98.9	-	99.4	98.9
Mediums	0	21	1	0	22	3	0	0	0	3	0	0	0	0	0	0	0	1	0	1	26
% Mediums	0.0	1.2	2.0	-	1.1	1.4	0.0	-	0.0	1.1	-	-	0.0	-	0.0	-	0.0	1.1	-	0.6	1.1
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

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DRAFT

Count Name: COLE @
ELIZABETH
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Page No: 3

Turning Movement Peak Hour Data (8:00 AM)

Start Time	COLE Southbound					ELIZABETH Westbound					COLE Northbound					ELIZABETH Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
8:00 AM	14	155	1	0	170	18	2	0	0	20	0	0	0	0	0	0	6	7	0	13	203
8:15 AM	14	152	0	0	166	14	7	0	0	21	0	0	0	0	0	0	5	13	0	18	205
8:30 AM	10	122	3	0	135	20	2	0	0	22	0	0	0	0	0	0	6	6	0	12	169
8:45 AM	12	144	1	0	157	9	4	0	0	13	0	0	0	0	0	0	5	6	0	11	181
Total	50	573	5	0	628	61	15	0	0	76	0	0	0	0	0	0	22	32	0	54	758
Approach %	8.0	91.2	0.8	0.0	-	80.3	19.7	0.0	0.0	-	NaN	NaN	NaN	NaN	-	0.0	40.7	59.3	0.0	-	-
Total %	6.6	75.6	0.7	0.0	82.8	8.0	2.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	4.2	0.0	7.1	-
PHF	0.893	0.924	0.417	0.000	0.924	0.763	0.536	0.000	0.000	0.864	0.000	0.000	0.000	0.000	0.000	0.000	0.917	0.615	0.000	0.750	0.924
Lights	50	560	5	0	615	59	15	0	0	74	0	0	0	0	0	0	22	32	0	54	743
% Lights	100.0	97.7	100.0	-	97.9	96.7	100.0	-	-	97.4	-	-	-	-	-	-	100.0	100.0	-	100.0	98.0
Mediums	0	13	0	0	13	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	15
% Mediums	0.0	2.3	0.0	-	2.1	3.3	0.0	-	-	2.6	-	-	-	-	-	-	0.0	0.0	-	0.0	2.0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	0.0	0.0	0.0	-	0.0	0.0	0.0	-	-	0.0	-	-	-	-	-	-	0.0	0.0	-	0.0	0.0

GRAM Traffic NTX Inc.

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Count Name: COLE @
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Page No: 5

Turning Movement Peak Hour Data (5:00 PM)

Start Time	COLE Southbound					ELIZABETH Westbound					COLE Northbound					ELIZABETH Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
5:00 PM	13	125	4	0	142	15	6	0	0	21	0	0	0	0	0	0	5	5	0	10	173
5:15 PM	10	124	2	0	136	18	5	0	0	23	0	0	0	0	0	0	7	9	0	16	175
5:30 PM	17	109	5	0	131	15	6	0	0	21	0	0	1	0	1	0	0	9	0	9	162
5:45 PM	8	111	6	0	125	23	5	0	0	28	0	0	0	0	0	0	0	4	0	4	157
Total	48	469	17	0	534	71	22	0	0	93	0	0	1	0	1	0	12	27	0	39	667
Approach %	9.0	87.8	3.2	0.0	-	76.3	23.7	0.0	0.0	-	0.0	0.0	100.0	0.0	-	0.0	30.8	69.2	0.0	-	-
Total %	7.2	70.3	2.5	0.0	80.1	10.6	3.3	0.0	0.0	13.9	0.0	0.0	0.1	0.0	0.1	0.0	1.8	4.0	0.0	5.8	-
PHF	0.706	0.938	0.708	0.000	0.940	0.772	0.917	0.000	0.000	0.830	0.000	0.000	0.250	0.000	0.250	0.000	0.429	0.750	0.000	0.609	0.953
Lights	48	467	16	0	531	70	22	0	0	92	0	0	1	0	1	0	12	27	0	39	663
% Lights	100.0	99.6	94.1	-	99.4	98.6	100.0	-	-	98.9	-	-	100.0	-	100.0	-	100.0	100.0	-	100.0	99.4
Mediums	0	2	1	0	3	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	4
% Mediums	0.0	0.4	5.9	-	0.6	1.4	0.0	-	-	1.1	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	0.6
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	0.0	0.0	0.0	-	0.0	0.0	0.0	-	-	0.0	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

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Count Name: MCKINNEY @ N
FITZHUGH
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Start Date: 04/16/2015
Page No: 1

Turning Movement Data

Start Time	MCKINNEY Southbound						N FITZHUGH Westbound						MCKINNEY Northbound						N FITZHUGH Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:00 AM	0	0	0	0	0	0	0	236	12	1	1	249	16	24	15	0	0	55	11	98	0	0	2	109	413
7:15 AM	0	0	0	0	0	0	0	275	17	0	0	292	15	30	17	0	0	62	9	104	0	0	0	113	467
7:30 AM	0	0	0	0	0	0	0	294	43	0	2	337	23	35	24	0	0	82	20	181	0	0	0	201	620
7:45 AM	0	0	0	0	0	0	0	316	77	0	0	393	16	63	23	0	0	102	22	163	0	0	0	185	680
Hourly Total	0	0	0	0	0	0	0	1121	149	1	3	1271	70	152	79	0	0	301	62	546	0	0	2	608	2180
8:00 AM	0	0	0	0	0	0	0	295	34	0	2	329	27	57	30	0	0	114	27	149	0	1	0	177	620
8:15 AM	0	0	0	0	0	0	0	268	27	0	4	295	38	70	32	0	0	140	21	161	0	0	0	182	617
8:30 AM	0	0	0	0	1	0	0	276	34	0	4	310	27	90	34	0	1	151	31	141	0	1	1	173	634
8:45 AM	0	0	0	0	0	0	0	271	20	1	4	292	32	70	49	0	1	151	25	183	0	1	0	209	652
Hourly Total	0	0	0	0	1	0	0	1110	115	1	14	1226	124	287	145	0	2	556	104	634	0	3	1	741	2523
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:30 PM	0	0	0	0	0	0	1	149	11	0	0	161	27	126	60	0	0	213	45	305	0	0	1	350	724
4:45 PM	0	0	0	0	0	0	0	159	23	1	4	183	21	139	49	0	0	209	38	338	0	1	1	377	769
Hourly Total	0	0	0	0	0	0	1	308	34	1	4	344	48	265	109	0	0	422	83	643	0	1	2	727	1493
5:00 PM	0	0	0	0	1	0	0	169	21	0	3	190	41	142	74	0	5	257	40	416	0	1	1	457	904
5:15 PM	0	0	0	0	0	0	0	170	25	0	1	195	33	185	64	0	1	282	52	425	0	1	2	478	955
5:30 PM	0	0	0	0	1	0	0	157	21	0	1	178	31	159	69	0	0	259	47	420	0	1	2	468	905
5:45 PM	0	0	0	0	1	0	0	169	31	0	1	200	47	176	60	0	2	283	57	401	1	0	0	459	942
Hourly Total	0	0	0	0	3	0	0	665	98	0	6	763	152	662	267	0	8	1081	196	1662	1	3	5	1862	3706
6:00 PM	0	0	0	0	2	0	0	160	16	0	0	176	31	147	65	0	2	243	65	400	0	0	0	465	884
6:15 PM	0	0	0	0	1	0	0	164	14	0	0	178	39	126	49	0	3	214	58	355	0	2	0	415	807
Grand Total	0	0	0	0	7	0	1	3528	426	3	27	3958	464	1639	714	0	15	2817	568	4240	1	9	10	4818	11593
Approach %	NaN	NaN	NaN	NaN	-	-	0.0	89.1	10.8	0.1	-	-	16.5	58.2	25.3	0.0	-	-	11.8	88.0	0.0	0.2	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	30.4	3.7	0.0	-	34.1	4.0	14.1	6.2	0.0	-	24.3	4.9	36.6	0.0	0.1	-	41.6	-
Lights	0	0	0	0	-	0	1	3494	417	3	-	3915	462	1613	712	0	-	2787	562	4202	1	9	-	4774	11476
% Lights	-	-	-	-	-	-	100.0	99.0	97.9	100.0	-	98.9	99.6	98.4	99.7	-	-	98.9	98.9	99.1	100.0	100.0	-	99.1	99.0
Mediums	0	0	0	0	-	0	0	30	7	0	-	37	2	26	2	0	-	30	6	33	0	0	-	39	106
% Mediums	-	-	-	-	-	-	0.0	0.9	1.6	0.0	-	0.9	0.4	1.6	0.3	-	-	1.1	1.1	0.8	0.0	0.0	-	0.8	0.9
Articulated Trucks	0	0	0	0	-	0	0	4	2	0	-	6	0	0	0	0	-	0	0	5	0	0	-	5	11
% Articulated Trucks	-	-	-	-	-	-	0.0	0.1	0.5	0.0	-	0.2	0.0	0.0	0.0	-	-	0.0	0.0	0.1	0.0	0.0	-	0.1	0.1
Pedestrians	-	-	-	-	7	-	-	-	-	-	27	-	-	-	-	-	15	-	-	-	-	-	10	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
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Count Name: MCKINNEY @ N
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Turning Movement Peak Hour Data (7:45 AM)

Start Time	MCKINNEY Southbound						N FITZHUGH Westbound						MCKINNEY Northbound						N FITZHUGH Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:45 AM	0	0	0	0	0	0	0	316	77	0	0	393	16	63	23	0	0	102	22	163	0	0	0	185	680
8:00 AM	0	0	0	0	0	0	0	295	34	0	2	329	27	57	30	0	0	114	27	149	0	1	0	177	620
8:15 AM	0	0	0	0	0	0	0	268	27	0	4	295	38	70	32	0	0	140	21	161	0	0	0	182	617
8:30 AM	0	0	0	0	1	0	0	276	34	0	4	310	27	90	34	0	1	151	31	141	0	1	1	173	634
Total	0	0	0	0	1	0	0	1155	172	0	10	1327	108	280	119	0	1	507	101	614	0	2	1	717	2551
Approach %	NaN	NaN	NaN	NaN	-	-	0.0	87.0	13.0	0.0	-	-	21.3	55.2	23.5	0.0	-	-	14.1	85.6	0.0	0.3	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	45.3	6.7	0.0	-	52.0	4.2	11.0	4.7	0.0	-	19.9	4.0	24.1	0.0	0.1	-	28.1	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.000	0.914	0.558	0.000	-	0.844	0.711	0.778	0.875	0.000	-	0.839	0.815	0.942	0.000	0.500	-	0.969	0.938
Lights	0	0	0	0	-	0	0	1145	167	0	-	1312	106	270	119	0	-	495	100	607	0	2	-	709	2516
% Lights	-	-	-	-	-	-	-	99.1	97.1	-	-	98.9	98.1	96.4	100.0	-	-	97.6	99.0	98.9	-	100.0	-	98.9	98.6
Mediums	0	0	0	0	-	0	0	10	5	0	-	15	2	10	0	0	-	12	1	7	0	0	-	8	35
% Mediums	-	-	-	-	-	-	-	0.9	2.9	-	-	1.1	1.9	3.6	0.0	-	-	2.4	1.0	1.1	-	0.0	-	1.1	1.4
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	-	-	-	-	-	-	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	1	-	-	-	-	-	10	-	-	-	-	-	1	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
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Count Name: MCKINNEY @ N
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Turning Movement Peak Hour Data (5:00 PM)

Start Time	MCKINNEY Southbound						N FITZHUGH Westbound						MCKINNEY Northbound						N FITZHUGH Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
5:00 PM	0	0	0	0	1	0	0	169	21	0	3	190	41	142	74	0	5	257	40	416	0	1	1	457	904
5:15 PM	0	0	0	0	0	0	0	170	25	0	1	195	33	185	64	0	1	282	52	425	0	1	2	478	955
5:30 PM	0	0	0	0	1	0	0	157	21	0	1	178	31	159	69	0	0	259	47	420	0	1	2	468	905
5:45 PM	0	0	0	0	1	0	0	169	31	0	1	200	47	176	60	0	2	283	57	401	1	0	0	459	942
Total	0	0	0	0	3	0	0	665	98	0	6	763	152	662	267	0	8	1081	196	1662	1	3	5	1862	3706
Approach %	NaN	NaN	NaN	NaN	-	-	0.0	87.2	12.8	0.0	-	-	14.1	61.2	24.7	0.0	-	-	10.5	89.3	0.1	0.2	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	17.9	2.6	0.0	-	20.6	4.1	17.9	7.2	0.0	-	29.2	5.3	44.8	0.0	0.1	-	50.2	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.000	0.978	0.790	0.000	-	0.954	0.809	0.895	0.902	0.000	-	0.955	0.860	0.978	0.250	0.750	-	0.974	0.970
Lights	0	0	0	0	-	0	0	658	98	0	-	756	152	655	267	0	-	1074	194	1646	1	3	-	1844	3674
% Lights	-	-	-	-	-	-	-	98.9	100.0	-	-	99.1	100.0	98.9	100.0	-	-	99.4	99.0	99.0	100.0	100.0	-	99.0	99.1
Mediums	0	0	0	0	-	0	0	5	0	0	-	5	0	7	0	0	-	7	2	14	0	0	-	16	28
% Mediums	-	-	-	-	-	-	-	0.8	0.0	-	-	0.7	0.0	1.1	0.0	-	-	0.6	1.0	0.8	0.0	0.0	-	0.9	0.8
Articulated Trucks	0	0	0	0	-	0	0	2	0	0	-	2	0	0	0	0	-	0	0	2	0	0	-	2	4
% Articulated Trucks	-	-	-	-	-	-	-	0.3	0.0	-	-	0.3	0.0	0.0	0.0	-	-	0.0	0.0	0.1	0.0	0.0	-	0.1	0.1
Pedestrians	-	-	-	-	3	-	-	-	-	-	6	-	-	-	-	-	8	-	-	-	-	-	5	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
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DRAFT

Count Name: COLE @ N
FITZHUGH
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Page No: 1

Turning Movement Data

Start Time	COLE Southbound						N FITZHUGH Westbound						COLE Northbound						N FITZHUGH Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:00 AM	8	22	25	0	1	55	14	238	0	0	0	252	0	0	0	0	0	0	0	107	2	0	0	109	416
7:15 AM	9	36	50	0	0	95	19	262	0	1	0	282	0	0	0	0	0	0	0	101	6	0	4	107	484
7:30 AM	11	52	54	0	1	117	25	282	0	2	0	309	0	0	0	0	2	0	0	192	8	1	0	201	627
7:45 AM	11	98	66	0	0	175	35	288	0	2	0	325	0	0	1	0	0	1	0	169	5	0	0	174	675
Hourly Total	39	208	195	0	2	442	93	1070	0	5	0	1168	0	0	1	0	2	1	0	569	21	1	4	591	2202
8:00 AM	7	123	58	0	0	188	41	267	0	0	0	308	0	0	0	0	0	0	0	179	16	0	0	195	691
8:15 AM	12	108	57	0	0	177	42	257	0	3	0	302	0	0	0	0	0	0	0	168	12	0	1	180	659
8:30 AM	20	71	49	0	0	140	43	259	0	2	0	304	0	0	0	0	1	0	0	165	15	0	2	180	624
8:45 AM	21	62	43	0	0	126	44	248	0	1	0	293	0	0	0	0	1	0	0	182	16	0	2	198	617
Hourly Total	60	364	207	0	0	631	170	1031	0	6	0	1207	0	0	0	0	2	0	0	694	59	0	5	753	2591
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:30 PM	12	58	30	0	1	100	21	155	0	0	0	176	0	0	0	0	0	0	1	334	14	0	0	349	625
4:45 PM	9	76	31	0	0	116	25	153	0	1	0	179	0	0	0	0	1	0	0	378	19	0	0	397	692
Hourly Total	21	134	61	0	1	216	46	308	0	1	0	355	0	0	0	0	1	0	1	712	33	0	0	746	1317
5:00 PM	25	110	36	0	1	171	26	183	0	2	3	211	0	0	0	0	5	0	0	425	12	0	0	437	819
5:15 PM	23	94	45	0	0	162	24	176	0	1	0	201	0	0	0	0	0	0	0	475	17	0	0	492	855
5:30 PM	11	82	46	0	0	139	35	139	0	1	0	175	0	0	0	0	1	0	0	422	18	0	0	440	754
5:45 PM	23	71	32	0	1	126	35	183	0	0	0	218	0	0	0	0	1	0	0	442	27	0	1	469	813
Hourly Total	82	357	159	0	2	598	120	681	0	4	3	805	0	0	0	0	7	0	0	1764	74	0	1	1838	3241
6:00 PM	28	85	38	0	0	151	34	155	0	0	1	189	0	0	0	0	0	0	0	428	17	0	1	445	785
6:15 PM	10	73	31	0	1	114	22	185	0	1	1	208	0	0	0	0	2	0	0	416	25	0	1	441	763
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	240	1221	691	0	6	2152	485	3430	0	17	5	3932	0	0	1	0	14	1	1	4583	229	1	12	4814	10899
Approach %	11.2	56.7	32.1	0.0	-	-	12.3	87.2	0.0	0.4	-	-	0.0	0.0	100.0	0.0	-	-	0.0	95.2	4.8	0.0	-	-	-
Total %	2.2	11.2	6.3	0.0	-	19.7	4.4	31.5	0.0	0.2	-	36.1	0.0	0.0	0.0	0.0	-	0.0	0.0	42.0	2.1	0.0	-	44.2	-
Lights	235	1206	685	0	-	2126	481	3407	0	16	-	3904	0	0	1	0	-	1	1	4550	227	1	-	4779	10810
% Lights	97.9	98.8	99.1	-	-	98.8	99.2	99.3	-	94.1	-	99.3	-	-	100.0	-	-	100.0	100.0	99.3	99.1	100.0	-	99.3	99.2
Mediums	4	15	6	0	-	25	4	21	0	1	-	26	0	0	0	0	-	0	0	30	2	0	-	32	83
% Mediums	1.7	1.2	0.9	-	-	1.2	0.8	0.6	-	5.9	-	0.7	-	-	0.0	-	-	0.0	0.0	0.7	0.9	0.0	-	0.7	0.8
Articulated Trucks	1	0	0	0	-	1	0	2	0	0	-	2	0	0	0	0	-	0	0	3	0	0	-	3	6
% Articulated Trucks	0.4	0.0	0.0	-	-	0.0	0.0	0.1	-	0.0	-	0.1	-	-	0.0	-	-	0.0	0.0	0.1	0.0	0.0	-	0.1	0.1
Pedestrians	-	-	-	-	6	-	-	-	-	-	5	-	-	-	-	-	14	-	-	-	-	-	12	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

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Turning Movement Peak Hour Data (7:30 AM)

Start Time	COLE Southbound						N FITZHUGH Westbound						COLE Northbound						N FITZHUGH Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:30 AM	11	52	54	0	1	117	25	282	0	2	0	309	0	0	0	0	2	0	0	192	8	1	0	201	627
7:45 AM	11	98	66	0	0	175	35	288	0	2	0	325	0	0	1	0	0	1	0	169	5	0	0	174	675
8:00 AM	7	123	58	0	0	188	41	267	0	0	0	308	0	0	0	0	0	0	0	179	16	0	0	195	691
8:15 AM	12	108	57	0	0	177	42	257	0	3	0	302	0	0	0	0	0	0	0	168	12	0	1	180	659
Total	41	381	235	0	1	657	143	1094	0	7	0	1244	0	0	1	0	2	1	0	708	41	1	1	750	2652
Approach %	6.2	58.0	35.8	0.0	-	-	11.5	87.9	0.0	0.6	-	-	0.0	0.0	100.0	0.0	-	-	0.0	94.4	5.5	0.1	-	-	-
Total %	1.5	14.4	8.9	0.0	-	24.8	5.4	41.3	0.0	0.3	-	46.9	0.0	0.0	0.0	0.0	-	0.0	0.0	26.7	1.5	0.0	-	28.3	-
PHF	0.854	0.774	0.890	0.000	-	0.874	0.851	0.950	0.000	0.583	-	0.957	0.000	0.000	0.250	0.000	-	0.250	0.000	0.922	0.641	0.250	-	0.933	0.959
Lights	41	376	233	0	-	650	142	1090	0	6	-	1238	0	0	1	0	-	1	0	700	41	1	-	742	2631
% Lights	100.0	98.7	99.1	-	-	98.9	99.3	99.6	-	85.7	-	99.5	-	-	100.0	-	-	100.0	-	98.9	100.0	100.0	-	98.9	99.2
Mediums	0	5	2	0	-	7	1	4	0	1	-	6	0	0	0	0	-	0	0	7	0	0	-	7	20
% Mediums	0.0	1.3	0.9	-	-	1.1	0.7	0.4	-	14.3	-	0.5	-	-	0.0	-	-	0.0	-	1.0	0.0	0.0	-	0.9	0.8
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	1
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	0.0	-	0.0	-	-	0.0	-	-	0.0	-	0.1	0.0	0.0	-	0.1	0.0
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: COLE @ N
FITZHUGH
Site Code:
Start Date: 04/16/2015
Page No: 5

Turning Movement Peak Hour Data (5:00 PM)

Start Time	COLE Southbound						N FITZHUGH Westbound						COLE Northbound						N FITZHUGH Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
5:00 PM	25	110	36	0	1	171	26	183	0	2	3	211	0	0	0	0	5	0	0	425	12	0	0	437	819
5:15 PM	23	94	45	0	0	162	24	176	0	1	0	201	0	0	0	0	0	0	0	475	17	0	0	492	855
5:30 PM	11	82	46	0	0	139	35	139	0	1	0	175	0	0	0	0	1	0	0	422	18	0	0	440	754
5:45 PM	23	71	32	0	1	126	35	183	0	0	0	218	0	0	0	0	1	0	0	442	27	0	1	469	813
Total	82	357	159	0	2	598	120	681	0	4	3	805	0	0	0	0	7	0	0	1764	74	0	1	1838	3241
Approach %	13.7	59.7	26.6	0.0	-	-	14.9	84.6	0.0	0.5	-	-	NaN	NaN	NaN	NaN	-	-	0.0	96.0	4.0	0.0	-	-	-
Total %	2.5	11.0	4.9	0.0	-	18.5	3.7	21.0	0.0	0.1	-	24.8	0.0	0.0	0.0	0.0	-	0.0	0.0	54.4	2.3	0.0	-	56.7	-
PHF	0.820	0.811	0.864	0.000	-	0.874	0.857	0.930	0.000	0.500	-	0.923	0.000	0.000	0.000	0.000	-	0.000	0.000	0.928	0.685	0.000	-	0.934	0.948
Lights	78	355	158	0	-	591	120	675	0	4	-	799	0	0	0	0	-	0	0	1753	73	0	-	1826	3216
% Lights	95.1	99.4	99.4	-	-	98.8	100.0	99.1	-	100.0	-	99.3	-	-	-	-	-	-	-	99.4	98.6	-	-	99.3	99.2
Mediums	4	2	1	0	-	7	0	6	0	0	-	6	0	0	0	0	-	0	0	9	1	0	-	10	23
% Mediums	4.9	0.6	0.6	-	-	1.2	0.0	0.9	-	0.0	-	0.7	-	-	-	-	-	-	-	0.5	1.4	-	-	0.5	0.7
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	2	0	0	-	2	2
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	0.0	-	0.0	-	-	-	-	-	-	-	0.1	0.0	-	-	0.1	0.1
Pedestrians	-	-	-	-	2	-	-	-	-	-	3	-	-	-	-	-	7	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
ARMSTRONG
Site Code:
Start Date: 04/16/2015
Page No: 1

Turning Movement Data

Start Time	MCKINNEY Southbound					ARMSTRONG Westbound					MCKINNEY Northbound					ARMSTRONG Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
7:00 AM	0	0	0	0	0	0	8	0	0	8	1	34	0	0	35	4	0	0	0	4	47
7:15 AM	0	0	0	0	0	0	6	0	0	6	9	44	1	0	54	6	6	0	0	12	72
7:30 AM	0	0	0	0	0	0	10	0	0	10	6	54	1	0	61	4	0	0	0	4	75
7:45 AM	0	0	0	0	0	0	9	2	0	11	8	84	3	0	95	7	2	0	0	9	115
Hourly Total	0	0	0	0	0	0	33	2	0	35	24	216	5	0	245	21	8	0	0	29	309
8:00 AM	0	0	0	0	0	0	13	7	0	20	11	93	2	0	106	9	0	0	0	9	135
8:15 AM	0	0	0	0	0	0	18	3	0	21	12	120	5	0	137	9	0	0	0	9	167
8:30 AM	0	0	0	0	0	0	14	2	0	16	13	127	2	0	142	4	1	0	0	5	163
8:45 AM	0	0	0	0	0	0	20	7	0	27	17	110	2	0	129	7	5	0	0	12	168
Hourly Total	0	0	0	0	0	0	65	19	0	84	53	450	11	0	514	29	6	0	0	35	633
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:30 PM	0	0	0	0	0	0	10	19	0	29	11	165	7	0	183	18	8	0	0	26	238
4:45 PM	0	0	0	0	0	0	12	21	0	33	3	165	11	0	179	17	11	0	0	28	240
Hourly Total	0	0	0	0	0	0	22	40	0	62	14	330	18	0	362	35	19	0	0	54	478
5:00 PM	0	0	0	0	0	0	4	11	0	15	7	192	14	0	213	44	12	0	0	56	284
5:15 PM	0	0	0	0	0	0	12	14	0	26	7	242	6	0	255	19	11	0	0	30	311
5:30 PM	0	0	0	0	0	0	5	31	0	36	7	205	11	0	223	37	12	0	0	49	308
5:45 PM	0	0	0	0	0	0	10	13	0	23	11	232	11	0	254	16	7	0	0	23	300
Hourly Total	0	0	0	0	0	0	31	69	0	100	32	871	42	0	945	116	42	0	0	158	1203
6:00 PM	0	0	0	0	0	0	14	24	0	38	8	190	14	0	212	34	11	0	0	45	295
6:15 PM	0	0	0	0	0	0	12	29	0	41	15	174	9	0	198	19	12	0	0	31	270
Grand Total	0	0	0	0	0	0	177	183	0	360	146	2231	99	0	2476	254	98	0	0	352	3188
Approach %	NaN	NaN	NaN	NaN	-	0.0	49.2	50.8	0.0	-	5.9	90.1	4.0	0.0	-	72.2	27.8	0.0	0.0	-	-
Total %	0.0	0.0	0.0	0.0	0.0	0.0	5.6	5.7	0.0	11.3	4.6	70.0	3.1	0.0	77.7	8.0	3.1	0.0	0.0	11.0	-
Lights	0	0	0	0	0	0	173	182	0	355	142	2206	97	0	2445	247	96	0	0	343	3143
% Lights	-	-	-	-	-	-	97.7	99.5	-	98.6	97.3	98.9	98.0	-	98.7	97.2	98.0	-	-	97.4	98.6
Mediums	0	0	0	0	0	0	4	0	0	4	4	25	2	0	31	6	2	0	0	8	43
% Mediums	-	-	-	-	-	-	2.3	0.0	-	1.1	2.7	1.1	2.0	-	1.3	2.4	2.0	-	-	2.3	1.3
Articulated Trucks	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	1	2
% Articulated Trucks	-	-	-	-	-	-	0.0	0.5	-	0.3	0.0	0.0	0.0	-	0.0	0.4	0.0	-	-	0.3	0.1

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
ARMSTRONG
Site Code:
Start Date: 04/16/2015
Page No: 3

Turning Movement Peak Hour Data (8:00 AM)

Start Time	MCKINNEY Southbound					ARMSTRONG Westbound					MCKINNEY Northbound					ARMSTRONG Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
8:00 AM	0	0	0	0	0	0	13	7	0	20	11	93	2	0	106	9	0	0	0	9	135
8:15 AM	0	0	0	0	0	0	18	3	0	21	12	120	5	0	137	9	0	0	0	9	167
8:30 AM	0	0	0	0	0	0	14	2	0	16	13	127	2	0	142	4	1	0	0	5	163
8:45 AM	0	0	0	0	0	0	20	7	0	27	17	110	2	0	129	7	5	0	0	12	168
Total	0	0	0	0	0	0	65	19	0	84	53	450	11	0	514	29	6	0	0	35	633
Approach %	NaN	NaN	NaN	NaN	-	0.0	77.4	22.6	0.0	-	10.3	87.5	2.1	0.0	-	82.9	17.1	0.0	0.0	-	-
Total %	0.0	0.0	0.0	0.0	0.0	0.0	10.3	3.0	0.0	13.3	8.4	71.1	1.7	0.0	81.2	4.6	0.9	0.0	0.0	5.5	-
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.813	0.679	0.000	0.778	0.779	0.886	0.550	0.000	0.905	0.806	0.300	0.000	0.000	0.729	0.942
Lights	0	0	0	0	0	0	64	18	0	82	51	442	11	0	504	27	5	0	0	32	618
% Lights	-	-	-	-	-	-	98.5	94.7	-	97.6	96.2	98.2	100.0	-	98.1	93.1	83.3	-	-	91.4	97.6
Mediums	0	0	0	0	0	0	1	0	0	1	2	8	0	0	10	2	1	0	0	3	14
% Mediums	-	-	-	-	-	-	1.5	0.0	-	1.2	3.8	1.8	0.0	-	1.9	6.9	16.7	-	-	8.6	2.2
Articulated Trucks	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
% Articulated Trucks	-	-	-	-	-	-	0.0	5.3	-	1.2	0.0	0.0	0.0	-	0.0	0.0	0.0	-	-	0.0	0.2

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
ARMSTRONG
Site Code:
Start Date: 04/16/2015
Page No: 5

Turning Movement Peak Hour Data (5:15 PM)

Start Time	MCKINNEY Southbound					ARMSTRONG Westbound					MCKINNEY Northbound					ARMSTRONG Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
5:15 PM	0	0	0	0	0	0	12	14	0	26	7	242	6	0	255	19	11	0	0	30	311
5:30 PM	0	0	0	0	0	0	5	31	0	36	7	205	11	0	223	37	12	0	0	49	308
5:45 PM	0	0	0	0	0	0	10	13	0	23	11	232	11	0	254	16	7	0	0	23	300
6:00 PM	0	0	0	0	0	0	14	24	0	38	8	190	14	0	212	34	11	0	0	45	295
Total	0	0	0	0	0	0	41	82	0	123	33	869	42	0	944	106	41	0	0	147	1214
Approach %	NaN	NaN	NaN	NaN	-	0.0	33.3	66.7	0.0	-	3.5	92.1	4.4	0.0	-	72.1	27.9	0.0	0.0	-	-
Total %	0.0	0.0	0.0	0.0	0.0	0.0	3.4	6.8	0.0	10.1	2.7	71.6	3.5	0.0	77.8	8.7	3.4	0.0	0.0	12.1	-
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.732	0.661	0.000	0.809	0.750	0.898	0.750	0.000	0.925	0.716	0.854	0.000	0.000	0.750	0.976
Lights	0	0	0	0	0	0	41	82	0	123	33	863	41	0	937	105	40	0	0	145	1205
% Lights	-	-	-	-	-	-	100.0	100.0	-	100.0	100.0	99.3	97.6	-	99.3	99.1	97.6	-	-	98.6	99.3
Mediums	0	0	0	0	0	0	0	0	0	0	0	6	1	0	7	1	1	0	0	2	9
% Mediums	-	-	-	-	-	-	0.0	0.0	-	0.0	0.0	0.7	2.4	-	0.7	0.9	2.4	-	-	1.4	0.7
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	-	-	-	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	-	-	0.0	0.0

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: COLE @
ARMSTRONG
Site Code:
Start Date: 04/16/2015
Page No: 1

Turning Movement Data

Start Time	COLE Southbound					ARMSTRONG Westbound					COLE Northbound					ARMSTRONG Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
7:00 AM	4	44	1	0	49	3	1	0	0	4	0	0	0	0	0	0	3	1	0	4	57
7:15 AM	9	71	1	0	81	5	1	0	0	6	0	0	0	0	0	0	6	0	0	6	93
7:30 AM	12	110	2	0	124	7	1	0	0	8	0	0	0	0	0	0	4	4	0	8	140
7:45 AM	12	132	2	0	146	4	3	0	0	7	0	0	0	0	0	0	7	1	0	8	161
Hourly Total	37	357	6	0	400	19	6	0	0	25	0	0	0	0	0	0	20	6	0	26	451
8:00 AM	13	136	3	0	152	6	2	0	0	8	0	0	0	0	0	0	10	1	0	11	171
8:15 AM	20	137	2	0	159	6	5	0	0	11	0	0	0	0	0	0	7	1	0	8	178
8:30 AM	12	97	6	0	115	5	4	0	0	9	0	0	0	0	0	0	3	2	0	5	129
8:45 AM	12	102	1	0	115	7	6	0	0	13	0	0	0	0	0	0	6	2	0	8	136
Hourly Total	57	472	12	0	541	24	17	0	0	41	0	0	0	0	0	0	26	6	0	32	614
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	13	90	5	0	108	15	10	0	0	25	0	0	0	0	0	0	8	3	0	11	144
4:45 PM	13	100	7	0	120	6	12	1	0	19	0	0	0	0	0	0	10	5	0	15	154
Hourly Total	26	190	12	0	228	21	22	1	0	44	0	0	0	0	0	0	18	8	0	26	298
5:00 PM	22	132	6	0	160	7	10	0	0	17	0	0	0	0	0	0	15	8	0	23	200
5:15 PM	15	129	2	0	146	12	7	0	0	19	0	0	0	0	0	0	9	11	0	20	185
5:30 PM	19	121	7	0	147	11	6	0	0	17	0	0	0	0	0	0	9	9	0	18	182
5:45 PM	9	102	9	0	120	10	9	0	0	19	0	0	0	0	0	0	11	9	0	20	159
Hourly Total	65	484	24	0	573	40	32	0	0	72	0	0	0	0	0	0	44	37	0	81	726
6:00 PM	18	117	5	0	140	12	9	1	0	22	0	0	0	0	0	0	17	8	0	25	187
6:15 PM	14	94	8	0	116	12	17	0	0	29	0	0	1	0	1	0	9	4	0	13	159
Grand Total	217	1714	67	0	1998	128	103	2	0	233	0	0	1	0	1	0	134	69	0	203	2435
Approach %	10.9	85.8	3.4	0.0	-	54.9	44.2	0.9	0.0	-	0.0	0.0	100.0	0.0	-	0.0	66.0	34.0	0.0	-	-
Total %	8.9	70.4	2.8	0.0	82.1	5.3	4.2	0.1	0.0	9.6	0.0	0.0	0.0	0.0	0.0	0.0	5.5	2.8	0.0	8.3	-
Lights	210	1694	63	0	1967	126	98	2	0	226	0	0	1	0	1	0	132	64	0	196	2390
% Lights	96.8	98.8	94.0	-	98.4	98.4	95.1	100.0	-	97.0	-	-	100.0	-	100.0	-	98.5	92.8	-	96.6	98.2
Mediums	6	19	3	0	28	2	5	0	0	7	0	0	0	0	0	0	2	5	0	7	42
% Mediums	2.8	1.1	4.5	-	1.4	1.6	4.9	0.0	-	3.0	-	-	0.0	-	0.0	-	1.5	7.2	-	3.4	1.7
Articulated Trucks	1	1	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
% Articulated Trucks	0.5	0.1	1.5	-	0.2	0.0	0.0	0.0	-	0.0	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	0.1

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: COLE @
ARMSTRONG
Site Code:
Start Date: 04/16/2015
Page No: 3

Turning Movement Peak Hour Data (7:30 AM)

Start Time	COLE Southbound					ARMSTRONG Westbound					COLE Northbound					ARMSTRONG Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
7:30 AM	12	110	2	0	124	7	1	0	0	8	0	0	0	0	0	0	4	4	0	8	140
7:45 AM	12	132	2	0	146	4	3	0	0	7	0	0	0	0	0	0	7	1	0	8	161
8:00 AM	13	136	3	0	152	6	2	0	0	8	0	0	0	0	0	0	10	1	0	11	171
8:15 AM	20	137	2	0	159	6	5	0	0	11	0	0	0	0	0	0	7	1	0	8	178
Total	57	515	9	0	581	23	11	0	0	34	0	0	0	0	0	0	28	7	0	35	650
Approach %	9.8	88.6	1.5	0.0	-	67.6	32.4	0.0	0.0	-	NaN	NaN	NaN	NaN	-	0.0	80.0	20.0	0.0	-	-
Total %	8.8	79.2	1.4	0.0	89.4	3.5	1.7	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	4.3	1.1	0.0	5.4	-
PHF	0.713	0.940	0.750	0.000	0.914	0.821	0.550	0.000	0.000	0.773	0.000	0.000	0.000	0.000	0.000	0.000	0.700	0.438	0.000	0.795	0.913
Lights	55	513	9	0	577	21	9	0	0	30	0	0	0	0	0	0	28	3	0	31	638
% Lights	96.5	99.6	100.0	-	99.3	91.3	81.8	-	-	88.2	-	-	-	-	-	-	100.0	42.9	-	88.6	98.2
Mediums	2	2	0	0	4	2	2	0	0	4	0	0	0	0	0	0	0	4	0	4	12
% Mediums	3.5	0.4	0.0	-	0.7	8.7	18.2	-	-	11.8	-	-	-	-	-	-	0.0	57.1	-	11.4	1.8
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	0.0	0.0	0.0	-	0.0	0.0	0.0	-	-	0.0	-	-	-	-	-	-	0.0	0.0	-	0.0	0.0

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: COLE @
ARMSTRONG
Site Code:
Start Date: 04/16/2015
Page No: 5

Turning Movement Peak Hour Data (5:00 PM)

Start Time	COLE Southbound					ARMSTRONG Westbound					COLE Northbound					ARMSTRONG Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
5:00 PM	22	132	6	0	160	7	10	0	0	17	0	0	0	0	0	0	15	8	0	23	200
5:15 PM	15	129	2	0	146	12	7	0	0	19	0	0	0	0	0	0	9	11	0	20	185
5:30 PM	19	121	7	0	147	11	6	0	0	17	0	0	0	0	0	0	9	9	0	18	182
5:45 PM	9	102	9	0	120	10	9	0	0	19	0	0	0	0	0	0	11	9	0	20	159
Total	65	484	24	0	573	40	32	0	0	72	0	0	0	0	0	0	44	37	0	81	726
Approach %	11.3	84.5	4.2	0.0	-	55.6	44.4	0.0	0.0	-	NaN	NaN	NaN	NaN	-	0.0	54.3	45.7	0.0	-	-
Total %	9.0	66.7	3.3	0.0	78.9	5.5	4.4	0.0	0.0	9.9	0.0	0.0	0.0	0.0	0.0	0.0	6.1	5.1	0.0	11.2	-
PHF	0.739	0.917	0.667	0.000	0.895	0.833	0.800	0.000	0.000	0.947	0.000	0.000	0.000	0.000	0.000	0.000	0.733	0.841	0.000	0.880	0.908
Lights	63	476	23	0	562	40	32	0	0	72	0	0	0	0	0	0	43	37	0	80	714
% Lights	96.9	98.3	95.8	-	98.1	100.0	100.0	-	-	100.0	-	-	-	-	-	-	97.7	100.0	-	98.8	98.3
Mediums	1	8	1	0	10	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	11
% Mediums	1.5	1.7	4.2	-	1.7	0.0	0.0	-	-	0.0	-	-	-	-	-	-	2.3	0.0	-	1.2	1.5
Articulated Trucks	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Articulated Trucks	1.5	0.0	0.0	-	0.2	0.0	0.0	-	-	0.0	-	-	-	-	-	-	0.0	0.0	-	0.0	0.1

GRAM Traffic North Texas, Inc.

1120 W Lovers Lane
Arlington, TX 76013

DRAFT

File Name : KNOX @ MCKINNEY

Site Code : 117

Start Date : 4/16/2015

Page No : 1

Groups Printed- Unshifted

	MCKINNEY Southbound					KNOX ST Westbound					MCKINNEY Northbound					KNOX ST Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00	0	0	0	0	0	0	105	8	4	117	8	13	17	0	38	2	51	0	1	54	209
07:15	0	0	0	0	0	0	152	10	0	162	9	17	26	0	52	3	58	0	2	63	277
07:30	0	0	0	2	2	0	177	6	2	185	8	37	21	0	66	2	66	0	1	69	322
07:45	0	0	0	0	0	0	135	15	1	151	3	41	42	0	86	6	85	0	4	95	332
Total	0	0	0	2	2	0	569	39	7	615	28	108	106	0	242	13	260	0	8	281	1140
08:00	0	0	0	0	0	0	172	13	2	187	10	45	52	1	108	3	96	0	2	101	396
08:15	0	0	0	1	1	0	163	16	2	181	13	53	47	0	113	7	83	0	1	91	386
08:30	0	0	0	2	2	0	180	16	0	196	15	66	54	0	135	10	107	0	0	117	450
08:45	0	0	0	0	0	0	178	16	1	195	12	64	44	0	120	9	93	0	1	103	418
Total	0	0	0	3	3	0	693	61	5	759	50	228	197	1	476	29	379	0	4	412	1650
11:30	0	0	0	8	8	0	126	23	3	152	26	49	52	0	127	11	93	0	14	118	405
11:45	0	0	0	6	6	0	140	30	2	172	23	44	65	4	136	14	110	0	24	148	462
Total	0	0	0	14	14	0	266	53	5	324	49	93	117	4	263	25	203	0	38	266	867
12:00	0	0	0	9	9	0	153	26	4	183	37	44	75	2	158	11	99	0	16	126	476
12:15	0	0	0	4	4	0	137	29	9	175	31	51	82	2	166	14	129	0	22	165	510
12:30	0	0	0	9	9	0	119	21	18	158	30	56	70	5	161	8	100	0	19	127	455
12:45	0	0	0	11	11	0	139	24	22	185	29	62	61	7	159	10	114	0	26	150	505
Total	0	0	0	33	33	0	548	100	53	701	127	213	288	16	644	43	442	0	83	568	1946
13:00	0	0	0	3	3	0	127	22	22	171	29	60	95	6	190	12	122	0	14	148	512
13:15	0	0	0	3	3	0	127	22	20	169	33	65	77	3	178	9	123	0	19	151	501
Total	0	0	0	6	6	0	254	44	42	340	62	125	172	9	368	21	245	0	33	299	1013
16:30	0	0	0	6	6	0	99	23	8	130	18	71	85	2	176	11	143	0	18	172	484
16:45	0	0	0	8	8	0	100	24	7	131	17	83	72	3	175	8	130	0	15	153	467
Total	0	0	0	14	14	0	199	47	15	261	35	154	157	5	351	19	273	0	33	325	951
17:00	0	0	0	4	4	0	116	31	10	157	17	99	80	4	200	15	178	0	11	204	565
17:15	0	0	0	7	7	0	116	22	6	144	22	130	95	0	247	18	152	0	7	177	575
17:30	0	0	0	7	7	0	127	20	8	155	24	132	79	2	237	18	189	0	18	225	624
17:45	0	0	0	3	3	0	128	26	12	166	26	147	88	2	263	13	173	0	20	206	638
Total	0	0	0	21	21	0	487	99	36	622	89	508	342	8	947	64	692	0	56	812	2402
18:00	0	0	1	5	6	0	156	22	7	185	19	115	78	4	216	17	173	0	15	205	612
18:15	0	0	0	2	2	0	126	31	8	165	19	106	97	3	225	16	158	0	16	190	582
Grand Total	0	0	1	100	101	0	3298	496	178	3972	478	1650	1554	50	3732	247	2825	0	286	3358	11163
Apprch %	0	0	1	99		0	83	12.5	4.5		12.8	44.2	41.6	1.3		7.4	84.1	0	8.5		
Total %	0	0	0	0.9	0.9	0	29.5	4.4	1.6	35.6	4.3	14.8	13.9	0.4	33.4	2.2	25.3	0	2.6	30.1	

GRAM Traffic North Texas, Inc.

1120 W Lovers Lane
Arlington, TX 76013

DRAFT

File Name : KNOX @ MCKINNEY
Site Code : 117
Start Date : 4/16/2015
Page No : 2

	MCKINNEY Southbound					KNOX ST Westbound					MCKINNEY Northbound					KNOX ST Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00																					
08:00	0	0	0	0	0	0	172	13	2	187	10	45	52	1	108	3	96	0	2	101	396
08:15	0	0	0	1	1	0	163	16	2	181	13	53	47	0	113	7	83	0	1	91	386
08:30	0	0	0	2	2	0	180	16	0	196	15	66	54	0	135	10	107	0	0	117	450
08:45	0	0	0	0	0	0	178	16	1	195	12	64	44	0	120	9	93	0	1	103	418
Total Volume	0	0	0	3	3	0	693	61	5	759	50	228	197	1	476	29	379	0	4	412	1650
% App. Total	0	0	0	100		0	91.3	8	0.7		10.5	47.9	41.4	0.2		7	92	0	1		
PHF	.000	.000	.000	.375	.375	.000	.963	.953	.625	.968	.833	.864	.912	.250	.881	.725	.886	.000	.500	.880	.917

Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 12:15

12:15	0	0	0	4	4	0	137	29	9	175	31	51	82	2	166	14	129	0	22	165	510
12:30	0	0	0	9	9	0	119	21	18	158	30	56	70	5	161	8	100	0	19	127	455
12:45	0	0	0	11	11	0	139	24	22	185	29	62	61	7	159	10	114	0	26	150	505
13:00	0	0	0	3	3	0	127	22	22	171	29	60	95	6	190	12	122	0	14	148	512
Total Volume	0	0	0	27	27	0	522	96	71	689	119	229	308	20	676	44	465	0	81	590	1982
% App. Total	0	0	0	100		0	75.8	13.9	10.3		17.6	33.9	45.6	3		7.5	78.8	0	13.7		
PHF	.000	.000	.000	.614	.614	.000	.939	.828	.807	.931	.960	.923	.811	.714	.889	.786	.901	.000	.779	.894	.968

Peak Hour Analysis From 14:00 to 18:15 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 17:30

17:30	0	0	0	7	7	0	127	20	8	155	24	132	79	2	237	18	189	0	18	225	624
17:45	0	0	0	3	3	0	128	26	12	166	26	147	88	2	263	13	173	0	20	206	638
18:00	0	0	1	5	6	0	156	22	7	185	19	115	78	4	216	17	173	0	15	205	612
18:15	0	0	0	2	2	0	126	31	8	165	19	106	97	3	225	16	158	0	16	190	582
Total Volume	0	0	1	17	18	0	537	99	35	671	88	500	342	11	941	64	693	0	69	826	2456
% App. Total	0	0	5.6	94.4		0	80	14.8	5.2		9.4	53.1	36.3	1.2		7.7	83.9	0	8.4		
PHF	.000	.000	.250	.607	.643	.000	.861	.798	.729	.907	.846	.850	.881	.688	.894	.889	.917	.000	.863	.918	.962

GRAM Traffic North Texas, Inc.

1120 W Lovers Lane
Arlington, TX 76013

DRAFT

File Name : KNOX @ COLE

Site Code : 117

Start Date : 4/16/2015

Page No : 1

Groups Printed- Unshifted

Start Time	COLE Southbound					KNOX ST Westbound					COLE Northbound					KNOX ST Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
07:00	2	21	4	0	27	30	81	0	4	115	0	0	0	5	5	0	45	3	1	49	196
07:15	7	45	6	2	60	47	108	0	8	163	0	0	0	2	2	0	50	2	3	55	280
07:30	16	50	21	1	88	66	119	0	7	192	0	0	0	4	4	0	57	8	2	67	351
07:45	17	83	27	7	134	42	95	0	5	142	0	0	0	1	1	0	67	14	1	82	359
Total	42	199	58	10	309	185	403	0	24	612	0	0	0	12	12	0	219	27	7	253	1186
08:00	20	87	25	4	136	57	121	0	3	181	0	0	0	0	0	0	81	11	0	92	409
08:15	23	86	16	2	127	49	123	0	7	179	0	0	0	2	2	0	62	12	1	75	383
08:30	27	56	15	0	98	43	145	0	1	189	0	0	0	3	3	0	92	13	2	107	397
08:45	17	69	17	2	105	55	136	0	5	196	0	0	0	2	2	0	86	19	0	105	408
Total	87	298	73	8	466	204	525	0	16	745	0	0	0	7	7	0	321	55	3	379	1597
11:30	19	29	6	18	72	39	98	0	16	153	0	0	0	3	3	0	81	19	4	104	332
11:45	12	30	19	12	73	45	102	0	10	157	0	0	0	4	4	0	100	11	4	115	349
Total	31	59	25	30	145	84	200	0	26	310	0	0	0	7	7	0	181	30	8	219	681
12:00	27	37	21	24	109	51	118	0	9	178	0	0	0	2	2	0	67	10	5	82	371
12:15	28	37	5	6	76	35	120	0	11	166	0	0	0	5	5	0	92	14	2	108	355
12:30	20	46	12	17	95	40	102	0	12	154	0	0	0	3	3	0	86	22	5	113	365
12:45	26	36	12	4	78	31	122	0	13	166	0	0	0	2	2	0	83	14	1	98	344
Total	101	156	50	51	358	157	462	0	45	664	0	0	0	12	12	0	328	60	13	401	1435
13:00	21	47	6	3	77	37	96	0	21	154	0	0	0	7	7	0	101	11	7	119	357
13:15	19	44	11	7	81	47	104	0	17	168	0	0	0	2	2	0	93	18	7	118	369
Total	40	91	17	10	158	84	200	0	38	322	0	0	0	9	9	0	194	29	14	237	726
16:30	22	42	9	17	90	30	89	0	16	135	0	0	0	3	3	0	129	12	4	145	373
16:45	20	44	11	21	96	36	70	0	14	120	0	0	0	3	3	0	105	17	8	130	349
Total	42	86	20	38	186	66	159	0	30	255	0	0	0	6	6	0	234	29	12	275	722
17:00	31	68	13	7	119	43	80	0	10	133	0	0	0	6	6	0	142	16	6	164	422
17:15	25	56	16	6	103	37	86	0	12	135	0	0	0	1	1	0	147	15	1	163	402
17:30	32	60	11	7	110	50	89	0	18	157	0	0	0	3	3	0	166	13	6	185	455
17:45	34	75	11	15	135	54	89	0	22	165	0	0	0	9	9	0	142	17	5	164	473
Total	122	259	51	35	467	184	344	0	62	590	0	0	0	19	19	0	597	61	18	676	1752
18:00	34	60	18	13	125	50	103	0	14	167	0	0	0	1	1	0	143	18	4	165	458
18:15	32	53	7	10	102	44	94	0	17	155	0	0	0	1	1	0	118	21	8	147	405
Grand Total	531	1261	319	205	2316	1058	2490	0	272	3820	0	0	0	74	74	0	2335	330	87	2752	8962
Apprch %	22.9	54.4	13.8	8.9		27.7	65.2	0	7.1		0	0	0	100		0	84.8	12	3.2		
Total %	5.9	14.1	3.6	2.3	25.8	11.8	27.8	0	3	42.6	0	0	0	0.8	0.8	0	26.1	3.7	1	30.7	

GRAM Traffic North Texas, Inc.

1120 W Lovers Lane
Arlington, TX 76013

DRAFT

File Name : KNOX @ COLE

Site Code : 117

Start Date : 4/16/2015

Page No : 2

	COLE Southbound					KNOX ST Westbound					COLE Northbound					KNOX ST Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00																					
08:00	20	87	25	4	136	57	121	0	3	181	0	0	0	0	0	0	81	11	0	92	409
08:15	23	86	16	2	127	49	123	0	7	179	0	0	0	2	2	0	62	12	1	75	383
08:30	27	56	15	0	98	43	145	0	1	189	0	0	0	3	3	0	92	13	2	107	397
08:45	17	69	17	2	105	55	136	0	5	196	0	0	0	2	2	0	86	19	0	105	408
Total Volume	87	298	73	8	466	204	525	0	16	745	0	0	0	7	7	0	321	55	3	379	1597
% App. Total	18.7	63.9	15.7	1.7		27.4	70.5	0	2.1		0	0	0	100		0	84.7	14.5	0.8		
PHF	.806	.856	.730	.500	.857	.895	.905	.000	.571	.950	.000	.000	.000	.583	.583	.000	.872	.724	.375	.886	.976

Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 11:45

11:45	12	30	19	12	73	45	102	0	10	157	0	0	0	4	4	0	100	11	4	115	349
12:00	27	37	21	24	109	51	118	0	9	178	0	0	0	2	2	0	67	10	5	82	371
12:15	28	37	5	6	76	35	120	0	11	166	0	0	0	5	5	0	92	14	2	108	355
12:30	20	46	12	17	95	40	102	0	12	154	0	0	0	3	3	0	86	22	5	113	365
Total Volume	87	150	57	59	353	171	442	0	42	655	0	0	0	14	14	0	345	57	16	418	1440
% App. Total	24.6	42.5	16.1	16.7		26.1	67.5	0	6.4		0	0	0	100		0	82.5	13.6	3.8		
PHF	.777	.815	.679	.615	.810	.838	.921	.000	.875	.920	.000	.000	.000	.700	.700	.000	.863	.648	.800	.909	.970

Peak Hour Analysis From 14:00 to 18:15 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 17:30

17:30	32	60	11	7	110	50	89	0	18	157	0	0	0	3	3	0	166	13	6	185	455
17:45	34	75	11	15	135	54	89	0	22	165	0	0	0	9	9	0	142	17	5	164	473
18:00	34	60	18	13	125	50	103	0	14	167	0	0	0	1	1	0	143	18	4	165	458
18:15	32	53	7	10	102	44	94	0	17	155	0	0	0	1	1	0	118	21	8	147	405
Total Volume	132	248	47	45	472	198	375	0	71	644	0	0	0	14	14	0	569	69	23	661	1791
% App. Total	28	52.5	10	9.5		30.7	58.2	0	11		0	0	0	100		0	86.1	10.4	3.5		
PHF	.971	.827	.653	.750	.874	.917	.910	.000	.807	.964	.000	.000	.000	.389	.389	.000	.857	.821	.719	.893	.947

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
MONTICELLO
Site Code:
Start Date: 04/16/2015
Page No: 1

Turning Movement Data

Start Time	MCKINNEY Southbound					MONTICELLO Westbound					MCKINNEY Northbound					MONTICELLO Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
7:00 AM	0	0	0	0	0	0	18	25	0	43	4	20	7	0	31	1	9	0	0	10	84
7:15 AM	0	0	0	0	0	0	22	37	0	59	7	21	6	0	34	4	2	0	0	6	99
7:30 AM	0	0	0	0	0	0	38	36	0	74	11	27	6	0	44	5	5	0	0	10	128
7:45 AM	0	0	0	0	0	0	61	49	0	110	8	40	15	0	63	8	14	0	0	22	195
Hourly Total	0	0	0	0	0	0	139	147	0	286	30	108	34	0	172	18	30	0	0	48	506
8:00 AM	0	0	0	0	0	0	57	43	0	100	9	56	19	0	84	14	16	0	0	30	214
8:15 AM	0	0	0	0	0	1	54	59	0	114	11	67	18	0	96	10	17	0	0	27	237
8:30 AM	0	0	0	0	0	0	52	61	0	113	12	80	8	0	100	9	11	0	0	20	233
8:45 AM	0	0	0	0	0	0	44	43	0	87	4	84	11	0	99	11	15	0	0	26	212
Hourly Total	0	0	0	0	0	1	207	206	0	414	36	287	56	0	379	44	59	0	0	103	896
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:30 PM	0	0	0	0	0	0	22	20	0	42	12	90	36	0	138	12	47	1	0	60	240
4:45 PM	0	0	0	0	0	0	30	20	0	50	7	90	41	0	138	9	31	0	0	40	228
Hourly Total	0	0	0	0	0	0	52	40	0	92	19	180	77	0	276	21	78	1	0	100	468
5:00 PM	0	0	0	0	0	0	27	17	0	44	17	94	50	0	161	10	75	0	0	85	290
5:15 PM	0	0	0	0	0	0	30	21	0	51	9	110	70	0	189	12	46	0	0	58	298
5:30 PM	0	0	0	0	0	0	28	25	0	53	5	113	61	0	179	10	72	0	0	82	314
5:45 PM	0	0	0	0	0	0	33	16	0	49	6	120	70	0	196	14	61	0	0	75	320
Hourly Total	0	0	0	0	0	0	118	79	0	197	37	437	251	0	725	46	254	0	0	300	1222
6:00 PM	0	0	0	0	0	0	23	17	0	40	10	85	58	0	153	15	51	0	0	66	259
6:15 PM	0	0	0	0	0	0	21	19	0	40	7	84	62	0	153	11	52	0	0	63	256
Grand Total	0	0	0	0	0	1	560	508	0	1069	139	1181	538	0	1858	155	524	1	0	680	3607
Approach %	NaN	NaN	NaN	NaN	-	0.1	52.4	47.5	0.0	-	7.5	63.6	29.0	0.0	-	22.8	77.1	0.1	0.0	-	-
Total %	0.0	0.0	0.0	0.0	0.0	0.0	15.5	14.1	0.0	29.6	3.9	32.7	14.9	0.0	51.5	4.3	14.5	0.0	0.0	18.9	-
Lights	0	0	0	0	0	1	546	502	0	1049	137	1164	537	0	1838	152	522	1	0	675	3562
% Lights	-	-	-	-	-	100.0	97.5	98.8	-	98.1	98.6	98.6	99.8	-	98.9	98.1	99.6	100.0	-	99.3	98.8
Mediums	0	0	0	0	0	0	14	6	0	20	2	17	1	0	20	3	2	0	0	5	45
% Mediums	-	-	-	-	-	0.0	2.5	1.2	-	1.9	1.4	1.4	0.2	-	1.1	1.9	0.4	0.0	-	0.7	1.2
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	-	-	-	-	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
MONTICELLO
Site Code:
Start Date: 04/16/2015
Page No: 3

Turning Movement Peak Hour Data (8:00 AM)

Start Time	MCKINNEY Southbound					MONTICELLO Westbound					MCKINNEY Northbound					MONTICELLO Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
8:00 AM	0	0	0	0	0	0	57	43	0	100	9	56	19	0	84	14	16	0	0	30	214
8:15 AM	0	0	0	0	0	1	54	59	0	114	11	67	18	0	96	10	17	0	0	27	237
8:30 AM	0	0	0	0	0	0	52	61	0	113	12	80	8	0	100	9	11	0	0	20	233
8:45 AM	0	0	0	0	0	0	44	43	0	87	4	84	11	0	99	11	15	0	0	26	212
Total	0	0	0	0	0	1	207	206	0	414	36	287	56	0	379	44	59	0	0	103	896
Approach %	NaN	NaN	NaN	NaN	-	0.2	50.0	49.8	0.0	-	9.5	75.7	14.8	0.0	-	42.7	57.3	0.0	0.0	-	-
Total %	0.0	0.0	0.0	0.0	0.0	0.1	23.1	23.0	0.0	46.2	4.0	32.0	6.3	0.0	42.3	4.9	6.6	0.0	0.0	11.5	-
PHF	0.000	0.000	0.000	0.000	0.000	0.250	0.908	0.844	0.000	0.908	0.750	0.854	0.737	0.000	0.948	0.786	0.868	0.000	0.000	0.858	0.945
Lights	0	0	0	0	0	1	201	203	0	405	35	283	56	0	374	42	58	0	0	100	879
% Lights	-	-	-	-	-	100.0	97.1	98.5	-	97.8	97.2	98.6	100.0	-	98.7	95.5	98.3	-	-	97.1	98.1
Mediums	0	0	0	0	0	0	6	3	0	9	1	4	0	0	5	2	1	0	0	3	17
% Mediums	-	-	-	-	-	0.0	2.9	1.5	-	2.2	2.8	1.4	0.0	-	1.3	4.5	1.7	-	-	2.9	1.9
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	-	-	-	-	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	-	-	0.0	0.0

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
MONTICELLO
Site Code:
Start Date: 04/16/2015
Page No: 5

Turning Movement Peak Hour Data (5:00 PM)

Start Time	MCKINNEY Southbound					MONTICELLO Westbound					MCKINNEY Northbound					MONTICELLO Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
5:00 PM	0	0	0	0	0	0	27	17	0	44	17	94	50	0	161	10	75	0	0	85	290
5:15 PM	0	0	0	0	0	0	30	21	0	51	9	110	70	0	189	12	46	0	0	58	298
5:30 PM	0	0	0	0	0	0	28	25	0	53	5	113	61	0	179	10	72	0	0	82	314
5:45 PM	0	0	0	0	0	0	33	16	0	49	6	120	70	0	196	14	61	0	0	75	320
Total	0	0	0	0	0	0	118	79	0	197	37	437	251	0	725	46	254	0	0	300	1222
Approach %	NaN	NaN	NaN	NaN	-	0.0	59.9	40.1	0.0	-	5.1	60.3	34.6	0.0	-	15.3	84.7	0.0	0.0	-	-
Total %	0.0	0.0	0.0	0.0	0.0	0.0	9.7	6.5	0.0	16.1	3.0	35.8	20.5	0.0	59.3	3.8	20.8	0.0	0.0	24.5	-
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.894	0.790	0.000	0.929	0.544	0.910	0.896	0.000	0.925	0.821	0.847	0.000	0.000	0.882	0.955
Lights	0	0	0	0	0	0	115	78	0	193	37	431	250	0	718	45	254	0	0	299	1210
% Lights	-	-	-	-	-	-	97.5	98.7	-	98.0	100.0	98.6	99.6	-	99.0	97.8	100.0	-	-	99.7	99.0
Mediums	0	0	0	0	0	0	3	1	0	4	0	6	1	0	7	1	0	0	0	1	12
% Mediums	-	-	-	-	-	-	2.5	1.3	-	2.0	0.0	1.4	0.4	-	1.0	2.2	0.0	-	-	0.3	1.0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	-	-	-	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	-	-	0.0	0.0

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: COLE @
MONTICELLO
Site Code:
Start Date: 04/16/2015
Page No: 1

Turning Movement Data

Start Time	COLE Southbound					MONTICELLO Westbound					COLE Northbound					MONTICELLO Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
7:00 AM	8	5	0	0	13	21	0	0	0	21	0	0	0	0	0	0	0	0	0	0	34
7:15 AM	3	18	0	0	21	24	0	0	0	24	0	0	0	0	0	0	0	0	0	0	45
7:30 AM	8	26	0	0	34	39	0	0	0	39	0	0	0	0	0	0	0	0	0	0	73
7:45 AM	19	32	1	0	52	63	0	0	0	63	0	0	0	0	0	0	0	0	0	0	115
Hourly Total	38	81	1	0	120	147	0	0	0	147	0	0	0	0	0	0	0	0	0	0	267
8:00 AM	23	37	0	0	60	60	0	0	0	60	0	0	0	0	0	0	0	0	0	0	120
8:15 AM	24	32	1	0	57	60	0	0	0	60	0	0	0	0	0	0	0	0	0	0	117
8:30 AM	19	31	0	0	50	44	1	0	0	45	0	0	0	0	0	0	0	0	0	0	95
8:45 AM	26	38	1	0	65	48	1	0	0	49	0	0	0	0	0	0	0	0	0	0	114
Hourly Total	92	138	2	0	232	212	2	0	0	214	0	0	0	0	0	0	0	0	0	0	446
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	52	40	2	0	94	24	1	0	0	25	0	0	0	0	0	0	1	0	0	1	120
4:45 PM	33	40	6	0	79	32	4	1	1	38	0	0	0	0	0	0	0	0	0	0	117
Hourly Total	85	80	8	0	173	56	5	1	1	63	0	0	0	0	0	0	1	0	0	1	237
5:00 PM	60	88	0	0	148	31	2	0	0	33	1	0	1	0	2	0	1	0	0	1	184
5:15 PM	48	79	0	0	127	39	0	0	0	39	0	0	0	0	0	0	0	0	0	0	166
5:30 PM	60	86	0	0	146	37	0	0	0	37	0	0	2	0	2	0	1	0	0	1	186
5:45 PM	65	85	0	0	150	34	0	0	0	34	0	0	0	0	0	0	0	0	0	0	184
Hourly Total	233	338	0	0	571	141	2	0	0	143	1	0	3	0	4	0	2	0	0	2	720
6:00 PM	55	66	0	0	121	30	0	0	0	30	0	0	0	0	0	0	0	0	0	0	151
6:15 PM	59	61	0	0	120	28	0	0	0	28	0	0	0	0	0	0	0	0	0	0	148
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	562	764	11	0	1337	614	9	1	1	625	1	0	3	0	4	0	3	0	0	3	1969
Approach %	42.0	57.1	0.8	0.0	-	98.2	1.4	0.2	0.2	-	25.0	0.0	75.0	0.0	-	0.0	100.0	0.0	0.0	-	-
Total %	28.5	38.8	0.6	0.0	67.9	31.2	0.5	0.1	0.1	31.7	0.1	0.0	0.2	0.0	0.2	0.0	0.2	0.0	0.0	0.2	-
Lights	558	755	10	0	1323	599	8	1	1	609	1	0	3	0	4	0	3	0	0	3	1939
% Lights	99.3	98.8	90.9	-	99.0	97.6	88.9	100.0	100.0	97.4	100.0	-	100.0	-	100.0	-	100.0	-	-	100.0	98.5
Mediums	3	9	1	0	13	15	1	0	0	16	0	0	0	0	0	0	0	0	0	0	29
% Mediums	0.5	1.2	9.1	-	1.0	2.4	11.1	0.0	0.0	2.6	0.0	-	0.0	-	0.0	-	0.0	-	-	0.0	1.5
Articulated Trucks	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Articulated Trucks	0.2	0.0	0.0	-	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	-	0.0	-	0.0	-	-	0.0	0.1

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: COLE @
MONTICELLO
Site Code:
Start Date: 04/16/2015
Page No: 5

Turning Movement Peak Hour Data (5:00 PM)

Start Time	COLE Southbound					MONTICELLO Westbound					COLE Northbound					MONTICELLO Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
5:00 PM	60	88	0	0	148	31	2	0	0	33	1	0	1	0	2	0	1	0	0	1	184
5:15 PM	48	79	0	0	127	39	0	0	0	39	0	0	0	0	0	0	0	0	0	0	166
5:30 PM	60	86	0	0	146	37	0	0	0	37	0	0	2	0	2	0	1	0	0	1	186
5:45 PM	65	85	0	0	150	34	0	0	0	34	0	0	0	0	0	0	0	0	0	0	184
Total	233	338	0	0	571	141	2	0	0	143	1	0	3	0	4	0	2	0	0	2	720
Approach %	40.8	59.2	0.0	0.0	-	98.6	1.4	0.0	0.0	-	25.0	0.0	75.0	0.0	-	0.0	100.0	0.0	0.0	-	-
Total %	32.4	46.9	0.0	0.0	79.3	19.6	0.3	0.0	0.0	19.9	0.1	0.0	0.4	0.0	0.6	0.0	0.3	0.0	0.0	0.3	-
PHF	0.896	0.960	0.000	0.000	0.952	0.904	0.250	0.000	0.000	0.917	0.250	0.000	0.375	0.000	0.500	0.000	0.500	0.000	0.000	0.500	0.968
Lights	232	334	0	0	566	138	2	0	0	140	1	0	3	0	4	0	2	0	0	2	712
% Lights	99.6	98.8	-	-	99.1	97.9	100.0	-	-	97.9	100.0	-	100.0	-	100.0	-	100.0	-	-	100.0	98.9
Mediums	1	4	0	0	5	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	8
% Mediums	0.4	1.2	-	-	0.9	2.1	0.0	-	-	2.1	0.0	-	0.0	-	0.0	-	0.0	-	-	0.0	1.1
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0	-	0.0	-	0.0	-	0.0	-	-	0.0	0.0

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
HARVARD
Site Code:
Start Date: 04/16/2015
Page No: 1

Turning Movement Data

Start Time	HARVARD Southbound					MCKINNEY Westbound					MCKINNEY Northbound					DRIVEWAY Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
7:00 AM	0	0	0	0	0	0	0	5	0	5	0	43	1	0	44	0	0	0	0	0	49
7:15 AM	0	0	0	0	0	0	0	9	0	9	0	53	11	0	64	0	0	0	0	0	73
7:30 AM	0	0	0	0	0	0	0	19	0	19	0	61	7	0	68	0	0	0	0	0	87
7:45 AM	0	0	0	0	0	0	0	21	0	21	0	73	22	0	95	0	0	0	0	0	116
Hourly Total	0	0	0	0	0	0	0	54	0	54	0	230	41	0	271	0	0	0	0	0	325
8:00 AM	0	0	0	0	0	0	0	24	0	24	0	93	18	0	111	0	0	0	0	0	135
8:15 AM	0	0	0	0	0	0	0	30	0	30	0	120	23	0	143	0	0	0	0	0	173
8:30 AM	0	0	0	0	0	0	0	22	0	22	0	117	25	0	142	2	0	0	0	2	166
8:45 AM	0	0	0	0	0	0	0	24	0	24	1	116	29	0	146	1	0	0	0	1	171
Hourly Total	0	0	0	0	0	0	0	100	0	100	1	446	95	0	542	3	0	0	0	3	645
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:30 PM	0	0	0	0	0	0	0	17	0	17	0	81	43	0	124	10	0	0	0	10	151
4:45 PM	0	0	0	0	0	0	0	28	0	28	0	83	34	0	117	8	0	0	0	8	153
Hourly Total	0	0	0	0	0	0	0	45	0	45	0	164	77	0	241	18	0	0	0	18	304
5:00 PM	0	0	0	0	0	0	0	18	0	18	1	78	40	0	119	19	0	0	0	19	156
5:15 PM	0	0	0	0	0	0	0	25	0	25	0	82	57	0	139	18	0	0	0	18	182
5:30 PM	0	0	0	0	0	0	0	30	0	30	0	104	45	0	149	19	0	0	0	19	198
5:45 PM	0	0	0	0	0	0	0	22	0	22	0	113	39	0	152	9	1	0	0	10	184
Hourly Total	0	0	0	0	0	0	0	95	0	95	1	377	181	0	559	65	1	0	0	66	720
6:00 PM	0	0	0	0	0	0	4	20	0	24	0	83	29	0	112	11	0	0	0	11	147
6:15 PM	0	0	0	0	0	0	7	14	0	21	1	87	27	0	115	12	0	0	0	12	148
Grand Total	0	0	0	0	0	0	11	328	0	339	3	1387	450	0	1840	109	1	0	0	110	2289
Approach %	NaN	NaN	NaN	NaN	-	0.0	3.2	96.8	0.0	-	0.2	75.4	24.5	0.0	-	99.1	0.9	0.0	0.0	-	-
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.5	14.3	0.0	14.8	0.1	60.6	19.7	0.0	80.4	4.8	0.0	0.0	0.0	4.8	-
Lights	0	0	0	0	0	0	11	324	0	335	3	1377	439	0	1819	109	1	0	0	110	2264
% Lights	-	-	-	-	-	-	100.0	98.8	-	98.8	100.0	99.3	97.6	-	98.9	100.0	100.0	-	-	100.0	98.9
Mediums	0	0	0	0	0	0	0	4	0	4	0	10	11	0	21	0	0	0	0	0	25
% Mediums	-	-	-	-	-	-	0.0	1.2	-	1.2	0.0	0.7	2.4	-	1.1	0.0	0.0	-	-	0.0	1.1
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	-	-	-	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	-	-	0.0	0.0

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
HARVARD
Site Code:
Start Date: 04/16/2015
Page No: 3

Turning Movement Peak Hour Data (8:00 AM)

Start Time	HARVARD Southbound					MCKINNEY Westbound					MCKINNEY Northbound					DRIVEWAY Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
8:00 AM	0	0	0	0	0	0	0	24	0	24	0	93	18	0	111	0	0	0	0	0	135
8:15 AM	0	0	0	0	0	0	0	30	0	30	0	120	23	0	143	0	0	0	0	0	173
8:30 AM	0	0	0	0	0	0	0	22	0	22	0	117	25	0	142	2	0	0	0	2	166
8:45 AM	0	0	0	0	0	0	0	24	0	24	1	116	29	0	146	1	0	0	0	1	171
Total	0	0	0	0	0	0	0	100	0	100	1	446	95	0	542	3	0	0	0	3	645
Approach %	NaN	NaN	NaN	NaN	-	0.0	0.0	100.0	0.0	-	0.2	82.3	17.5	0.0	-	100.0	0.0	0.0	0.0	-	-
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.5	0.0	15.5	0.2	69.1	14.7	0.0	84.0	0.5	0.0	0.0	0.0	0.5	-
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.833	0.000	0.833	0.250	0.929	0.819	0.000	0.928	0.375	0.000	0.000	0.000	0.375	0.932
Lights	0	0	0	0	0	0	0	97	0	97	1	440	90	0	531	3	0	0	0	3	631
% Lights	-	-	-	-	-	-	-	97.0	-	97.0	100.0	98.7	94.7	-	98.0	100.0	-	-	-	100.0	97.8
Mediums	0	0	0	0	0	0	0	3	0	3	0	6	5	0	11	0	0	0	0	0	14
% Mediums	-	-	-	-	-	-	-	3.0	-	3.0	0.0	1.3	5.3	-	2.0	0.0	-	-	-	0.0	2.2
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	-	-	-	-	-	-	-	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	-	-	-	0.0	0.0

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: MCKINNEY @
HARVARD
Site Code:
Start Date: 04/16/2015
Page No: 5

Turning Movement Peak Hour Data (5:00 PM)

Start Time	HARVARD Southbound					MCKINNEY Westbound					MCKINNEY Northbound					DRIVEWAY Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
5:00 PM	0	0	0	0	0	0	0	18	0	18	1	78	40	0	119	19	0	0	0	19	156
5:15 PM	0	0	0	0	0	0	0	25	0	25	0	82	57	0	139	18	0	0	0	18	182
5:30 PM	0	0	0	0	0	0	0	30	0	30	0	104	45	0	149	19	0	0	0	19	198
5:45 PM	0	0	0	0	0	0	0	22	0	22	0	113	39	0	152	9	1	0	0	10	184
Total	0	0	0	0	0	0	0	95	0	95	1	377	181	0	559	65	1	0	0	66	720
Approach %	NaN	NaN	NaN	NaN	-	0.0	0.0	100.0	0.0	-	0.2	67.4	32.4	0.0	-	98.5	1.5	0.0	0.0	-	-
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.2	0.0	13.2	0.1	52.4	25.1	0.0	77.6	9.0	0.1	0.0	0.0	9.2	-
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.792	0.000	0.792	0.250	0.834	0.794	0.000	0.919	0.855	0.250	0.000	0.000	0.868	0.909
Lights	0	0	0	0	0	0	0	94	0	94	1	375	177	0	553	65	1	0	0	66	713
% Lights	-	-	-	-	-	-	-	98.9	-	98.9	100.0	99.5	97.8	-	98.9	100.0	100.0	-	-	100.0	99.0
Mediums	0	0	0	0	0	0	0	1	0	1	0	2	4	0	6	0	0	0	0	0	7
% Mediums	-	-	-	-	-	-	-	1.1	-	1.1	0.0	0.5	2.2	-	1.1	0.0	0.0	-	-	0.0	1.0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	-	-	-	-	-	-	-	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	-	-	0.0	0.0

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: COLE @
HARVARD
Site Code:
Start Date: 04/16/2015
Page No: 1

Turning Movement Data

Start Time	Southbound St. Southbound					HARVARD Westbound					COLE Northbound					HARVARD Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
7:00 AM	0	0	0	0	0	10	35	0	0	45	0	0	0	0	0	0	0	12	0	12	57
7:15 AM	0	0	0	0	0	9	46	0	0	55	0	0	0	0	0	0	0	20	0	20	75
7:30 AM	0	0	0	0	0	21	57	0	0	78	0	0	0	0	0	0	0	29	0	29	107
7:45 AM	0	0	0	0	0	24	64	0	0	88	0	0	0	0	0	0	0	44	0	44	132
Hourly Total	0	0	0	0	0	64	202	0	0	266	0	0	0	0	0	0	0	105	0	105	371
8:00 AM	0	0	0	0	0	38	70	0	0	108	0	0	0	0	0	0	0	48	0	48	156
8:15 AM	0	0	0	0	0	44	93	0	0	137	0	0	0	0	0	0	0	52	0	52	189
8:30 AM	0	0	0	0	0	51	83	0	0	134	0	0	0	0	0	0	0	47	0	47	181
8:45 AM	0	0	0	0	0	44	86	0	0	130	0	0	0	0	0	0	0	51	0	51	181
Hourly Total	0	0	0	0	0	177	332	0	0	509	0	0	0	0	0	0	0	198	0	198	707
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	19	91	0	0	110	0	0	0	0	0	0	0	65	0	65	175
4:45 PM	0	0	0	0	0	24	107	0	0	131	0	0	0	0	0	0	0	55	0	55	186
Hourly Total	0	0	0	0	0	43	198	0	0	241	0	0	0	0	0	0	0	120	0	120	361
5:00 PM	0	0	0	0	0	39	100	0	0	139	0	0	0	0	0	0	0	107	0	107	246
5:15 PM	0	0	0	0	0	31	94	0	0	125	0	0	0	0	0	0	0	90	0	90	215
5:30 PM	0	0	0	0	0	35	115	0	0	150	0	0	0	0	0	0	0	113	0	113	263
5:45 PM	0	0	0	0	0	26	107	0	0	133	0	0	0	0	0	0	0	118	0	118	251
Hourly Total	0	0	0	0	0	131	416	0	0	547	0	0	0	0	0	0	0	428	0	428	975
6:00 PM	0	0	0	0	0	28	75	0	0	103	0	0	0	0	0	0	0	98	0	98	201
6:15 PM	0	0	0	0	0	20	79	0	0	99	0	0	0	0	0	0	0	98	0	98	197
Grand Total	0	0	0	0	0	463	1302	0	0	1765	0	0	0	0	0	0	0	1047	0	1047	2812
Approach %	NaN	NaN	NaN	NaN	-	26.2	73.8	0.0	0.0	-	NaN	NaN	NaN	NaN	-	0.0	0.0	100.0	0.0	-	-
Total %	0.0	0.0	0.0	0.0	0.0	16.5	46.3	0.0	0.0	62.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	37.2	0.0	37.2	-
Lights	0	0	0	0	0	458	1294	0	0	1752	0	0	0	0	0	0	0	1041	0	1041	2793
% Lights	-	-	-	-	-	98.9	99.4	-	-	99.3	-	-	-	-	-	-	-	99.4	-	99.4	99.3
Mediums	0	0	0	0	0	5	8	0	0	13	0	0	0	0	0	0	0	6	0	6	19
% Mediums	-	-	-	-	-	1.1	0.6	-	-	0.7	-	-	-	-	-	-	-	0.6	-	0.6	0.7
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	-	-	-	-	-	0.0	0.0	-	-	0.0	-	-	-	-	-	-	-	0.0	-	0.0	0.0

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: COLE @
HARVARD
Site Code:
Start Date: 04/16/2015
Page No: 3

Turning Movement Peak Hour Data (8:00 AM)

Start Time	Southbound St. Southbound					HARVARD Westbound					COLE Northbound					HARVARD Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
8:00 AM	0	0	0	0	0	38	70	0	0	108	0	0	0	0	0	0	0	48	0	48	156
8:15 AM	0	0	0	0	0	44	93	0	0	137	0	0	0	0	0	0	0	52	0	52	189
8:30 AM	0	0	0	0	0	51	83	0	0	134	0	0	0	0	0	0	0	47	0	47	181
8:45 AM	0	0	0	0	0	44	86	0	0	130	0	0	0	0	0	0	0	51	0	51	181
Total	0	0	0	0	0	177	332	0	0	509	0	0	0	0	0	0	0	198	0	198	707
Approach %	NaN	NaN	NaN	NaN	-	34.8	65.2	0.0	0.0	-	NaN	NaN	NaN	NaN	-	0.0	0.0	100.0	0.0	-	-
Total %	0.0	0.0	0.0	0.0	0.0	25.0	47.0	0.0	0.0	72.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.0	0.0	28.0	-
PHF	0.000	0.000	0.000	0.000	0.000	0.868	0.892	0.000	0.000	0.929	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.952	0.000	0.952	0.935
Lights	0	0	0	0	0	174	328	0	0	502	0	0	0	0	0	0	0	195	0	195	697
% Lights	-	-	-	-	-	98.3	98.8	-	-	98.6	-	-	-	-	-	-	-	98.5	-	98.5	98.6
Mediums	0	0	0	0	0	3	4	0	0	7	0	0	0	0	0	0	0	3	0	3	10
% Mediums	-	-	-	-	-	1.7	1.2	-	-	1.4	-	-	-	-	-	-	-	1.5	-	1.5	1.4
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	-	-	-	-	-	0.0	0.0	-	-	0.0	-	-	-	-	-	-	-	0.0	-	0.0	0.0

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

DRAFT

Count Name: COLE @
HARVARD
Site Code:
Start Date: 04/16/2015
Page No: 5

Turning Movement Peak Hour Data (5:00 PM)

Start Time	Southbound St. Southbound					HARVARD Westbound					COLE Northbound					HARVARD Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
5:00 PM	0	0	0	0	0	39	100	0	0	139	0	0	0	0	0	0	0	107	0	107	246
5:15 PM	0	0	0	0	0	31	94	0	0	125	0	0	0	0	0	0	0	90	0	90	215
5:30 PM	0	0	0	0	0	35	115	0	0	150	0	0	0	0	0	0	0	113	0	113	263
5:45 PM	0	0	0	0	0	26	107	0	0	133	0	0	0	0	0	0	0	118	0	118	251
Total	0	0	0	0	0	131	416	0	0	547	0	0	0	0	0	0	0	428	0	428	975
Approach %	NaN	NaN	NaN	NaN	-	23.9	76.1	0.0	0.0	-	NaN	NaN	NaN	NaN	-	0.0	0.0	100.0	0.0	-	-
Total %	0.0	0.0	0.0	0.0	0.0	13.4	42.7	0.0	0.0	56.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	43.9	0.0	43.9	-
PHF	0.000	0.000	0.000	0.000	0.000	0.840	0.904	0.000	0.000	0.912	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.907	0.000	0.907	0.927
Lights	0	0	0	0	0	130	414	0	0	544	0	0	0	0	0	0	0	426	0	426	970
% Lights	-	-	-	-	-	99.2	99.5	-	-	99.5	-	-	-	-	-	-	-	99.5	-	99.5	99.5
Mediums	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	0	2	0	2	5
% Mediums	-	-	-	-	-	0.8	0.5	-	-	0.5	-	-	-	-	-	-	-	0.5	-	0.5	0.5
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	-	-	-	-	-	0.0	0.0	-	-	0.0	-	-	-	-	-	-	-	0.0	-	0.0	0.0

McKinney-Cole Uptown Evaluation

Historical Link Volumes and Growth Rates

McKinney Avenue						
Record	Year	Link Start	Link End	Source	24-Hour Volume	Annual Growth Rate
1	2004	Lemmon Ave	Lemmon Ave East	TxDOT	11,523	-
1	2015	Lemmon Ave	Lemmon Ave East	KH	9,952	-1.3%
2	2009	Haskell Ave	Cambrick Street	TxDOT	7,366	-
2	2015	Haskell Ave	Cambrick Street	KH	7,648	0.6%
3	2015	Armstrong Ave	Knox Street	KH	7,907	-

Cole Avenue / Carlisle Street						
Record	Year	Link Start	Link End	Source	24-Hour Volume	Annual Growth Rate
1	2004	Lemmon Ave	Lemmon Ave East	TxDOT	9,563	-
1	2015	Lemmon Ave	Lemmon Ave East	KH	9,787	0.2%
2	2002	Cambrick Street	Elizabeth Street	COD	4,638	-
2	2015	Cambrick Street	Elizabeth Street	KH	4,945	0.5%
3	2015	Armstrong Ave	Knox Street	KH	5,705	-

NB MCKINNEY SOUTH OF LEMMON AVE EAST

Start Date: 4/13/2015
 Start Time: 12:30:00 PM
 Site Code: 67

Date	Time	NB
4/14/2015	12:00 AM	44
4/14/2015	12:15 AM	41
4/14/2015	12:30 AM	41
4/14/2015	12:45 AM	34
4/14/2015	01:00 AM	30
4/14/2015	01:15 AM	22
4/14/2015	01:30 AM	18
4/14/2015	01:45 AM	26
4/14/2015	02:00 AM	34
4/14/2015	02:15 AM	42
4/14/2015	02:30 AM	35
4/14/2015	02:45 AM	20
4/14/2015	03:00 AM	12
4/14/2015	03:15 AM	9
4/14/2015	03:30 AM	4
4/14/2015	03:45 AM	10
4/14/2015	04:00 AM	7
4/14/2015	04:15 AM	5
4/14/2015	04:30 AM	7
4/14/2015	04:45 AM	1
4/14/2015	05:00 AM	6
4/14/2015	05:15 AM	4
4/14/2015	05:30 AM	11
4/14/2015	05:45 AM	7
4/14/2015	06:00 AM	35
4/14/2015	06:15 AM	14
4/14/2015	06:30 AM	27
4/14/2015	06:45 AM	44
4/14/2015	07:00 AM	54
4/14/2015	07:15 AM	57
4/14/2015	07:30 AM	68
4/14/2015	07:45 AM	80
4/14/2015	08:00 AM	120
4/14/2015	08:15 AM	142
4/14/2015	08:30 AM	131
4/14/2015	08:45 AM	140
4/14/2015	09:00 AM	118
4/14/2015	09:15 AM	102
4/14/2015	09:30 AM	78
4/14/2015	09:45 AM	78
4/14/2015	10:00 AM	92
4/14/2015	10:15 AM	85
4/14/2015	10:30 AM	82
4/14/2015	10:45 AM	103
4/14/2015	11:00 AM	121
4/14/2015	11:15 AM	108
4/14/2015	11:30 AM	141
4/14/2015	11:45 AM	173
4/14/2015	12:00 PM	196
4/14/2015	12:15 PM	164
4/14/2015	12:30 PM	178
4/14/2015	12:45 PM	148
4/14/2015	01:00 PM	158
4/14/2015	01:15 PM	153
4/14/2015	01:30 PM	172
4/14/2015	01:45 PM	152
4/14/2015	02:00 PM	146
4/14/2015	02:15 PM	128
4/14/2015	02:30 PM	146
4/14/2015	02:45 PM	132
4/14/2015	03:00 PM	142
4/14/2015	03:15 PM	158
4/14/2015	03:30 PM	130
4/14/2015	03:45 PM	134
4/14/2015	04:00 PM	156
4/14/2015	04:15 PM	143
4/14/2015	04:30 PM	166
4/14/2015	04:45 PM	178
4/14/2015	05:00 PM	188
4/14/2015	05:15 PM	248
4/14/2015	05:30 PM	242
4/14/2015	05:45 PM	248
4/14/2015	06:00 PM	238
4/14/2015	06:15 PM	220
4/14/2015	06:30 PM	246
4/14/2015	06:45 PM	206
4/14/2015	07:00 PM	209
4/14/2015	07:15 PM	194
4/14/2015	07:30 PM	178
4/14/2015	07:45 PM	159
4/14/2015	08:00 PM	151
4/14/2015	08:15 PM	147
4/14/2015	08:30 PM	139
4/14/2015	08:45 PM	154
4/14/2015	09:00 PM	140
4/14/2015	09:15 PM	128
4/14/2015	09:30 PM	124
4/14/2015	09:45 PM	120
4/14/2015	10:00 PM	75
4/14/2015	10:15 PM	94
4/14/2015	10:30 PM	90
4/14/2015	10:45 PM	56
4/14/2015	11:00 PM	62
4/14/2015	11:15 PM	62
4/14/2015	11:30 PM	47
4/14/2015	11:45 PM	44

NB MCKINNEY AVE SOUTH OF CAMBRICK

Start Date: 4/13/2015
 Start Time: 12:30:00 PM
 Site Code: 213

Date	Time	NB
4/14/2015	12:00 AM	19
4/14/2015	12:15 AM	7
4/14/2015	12:30 AM	10
4/14/2015	12:45 AM	5
4/14/2015	01:00 AM	5
4/14/2015	01:15 AM	2
4/14/2015	01:30 AM	6
4/14/2015	01:45 AM	3
4/14/2015	02:00 AM	10
4/14/2015	02:15 AM	8
4/14/2015	02:30 AM	3
4/14/2015	02:45 AM	6
4/14/2015	03:00 AM	2
4/14/2015	03:15 AM	1
4/14/2015	03:30 AM	3
4/14/2015	03:45 AM	2
4/14/2015	04:00 AM	1
4/14/2015	04:15 AM	3
4/14/2015	04:30 AM	3
4/14/2015	04:45 AM	2
4/14/2015	05:00 AM	2
4/14/2015	05:15 AM	2
4/14/2015	05:30 AM	7
4/14/2015	05:45 AM	12
4/14/2015	06:00 AM	14
4/14/2015	06:15 AM	14
4/14/2015	06:30 AM	36
4/14/2015	06:45 AM	47
4/14/2015	07:00 AM	46
4/14/2015	07:15 AM	48
4/14/2015	07:30 AM	72
4/14/2015	07:45 AM	96
4/14/2015	08:00 AM	133
4/14/2015	08:15 AM	126
4/14/2015	08:30 AM	158
4/14/2015	08:45 AM	176
4/14/2015	09:00 AM	179
4/14/2015	09:15 AM	141
4/14/2015	09:30 AM	68
4/14/2015	09:45 AM	70
4/14/2015	10:00 AM	54
4/14/2015	10:15 AM	52
4/14/2015	10:30 AM	74
4/14/2015	10:45 AM	69
4/14/2015	11:00 AM	91
4/14/2015	11:15 AM	86
4/14/2015	11:30 AM	114
4/14/2015	11:45 AM	124
4/14/2015	12:00 PM	121
4/14/2015	12:15 PM	140
4/14/2015	12:30 PM	120
4/14/2015	12:45 PM	132
4/14/2015	01:00 PM	140
4/14/2015	01:15 PM	98
4/14/2015	01:30 PM	118
4/14/2015	01:45 PM	102
4/14/2015	02:00 PM	86
4/14/2015	02:15 PM	94
4/14/2015	02:30 PM	106
4/14/2015	02:45 PM	123
4/14/2015	03:00 PM	144
4/14/2015	03:15 PM	108
4/14/2015	03:30 PM	93
4/14/2015	03:45 PM	114
4/14/2015	04:00 PM	103
4/14/2015	04:15 PM	226
4/14/2015	04:30 PM	170
4/14/2015	04:45 PM	164
4/14/2015	05:00 PM	200
4/14/2015	05:15 PM	231
4/14/2015	05:30 PM	213
4/14/2015	05:45 PM	258
4/14/2015	06:00 PM	207
4/14/2015	06:15 PM	180
4/14/2015	06:30 PM	170
4/14/2015	06:45 PM	142
4/14/2015	07:00 PM	130
4/14/2015	07:15 PM	115
4/14/2015	07:30 PM	128
4/14/2015	07:45 PM	96
4/14/2015	08:00 PM	114
4/14/2015	08:15 PM	68
4/14/2015	08:30 PM	87
4/14/2015	08:45 PM	98
4/14/2015	09:00 PM	70
4/14/2015	09:15 PM	64
4/14/2015	09:30 PM	61
4/14/2015	09:45 PM	62
4/14/2015	10:00 PM	45
4/14/2015	10:15 PM	40
4/14/2015	10:30 PM	33
4/14/2015	10:45 PM	26
4/14/2015	11:00 PM	32
4/14/2015	11:15 PM	24
4/14/2015	11:30 PM	26
4/14/2015	11:45 PM	14
		7648

NB MCKINNEY AVE SOUTH OF KNOX ST

Start Date: 4/13/2015
 Start Time: 12:45:00 PM
 Site Code: 74

Date	Time	NB
4/14/2015	12:00 AM	16
4/14/2015	12:15 AM	10
4/14/2015	12:30 AM	3
4/14/2015	12:45 AM	2
4/14/2015	01:00 AM	1
4/14/2015	01:15 AM	1
4/14/2015	01:30 AM	3
4/14/2015	01:45 AM	5
4/14/2015	02:00 AM	2
4/14/2015	02:15 AM	3
4/14/2015	02:30 AM	4
4/14/2015	02:45 AM	2
4/14/2015	03:00 AM	5
4/14/2015	03:15 AM	0
4/14/2015	03:30 AM	2
4/14/2015	03:45 AM	3
4/14/2015	04:00 AM	1
4/14/2015	04:15 AM	1
4/14/2015	04:30 AM	0
4/14/2015	04:45 AM	3
4/14/2015	05:00 AM	2
4/14/2015	05:15 AM	2
4/14/2015	05:30 AM	8
4/14/2015	05:45 AM	12
4/14/2015	06:00 AM	13
4/14/2015	06:15 AM	11
4/14/2015	06:30 AM	8
4/14/2015	06:45 AM	28
4/14/2015	07:00 AM	36
4/14/2015	07:15 AM	49
4/14/2015	07:30 AM	65
4/14/2015	07:45 AM	84
4/14/2015	08:00 AM	104
4/14/2015	08:15 AM	124
4/14/2015	08:30 AM	126
4/14/2015	08:45 AM	138
4/14/2015	09:00 AM	98
4/14/2015	09:15 AM	94
4/14/2015	09:30 AM	86
4/14/2015	09:45 AM	82
4/14/2015	10:00 AM	61
4/14/2015	10:15 AM	80
4/14/2015	10:30 AM	80
4/14/2015	10:45 AM	90
4/14/2015	11:00 AM	86
4/14/2015	11:15 AM	94
4/14/2015	11:30 AM	126
4/14/2015	11:45 AM	150
4/14/2015	12:00 PM	157
4/14/2015	12:15 PM	168
4/14/2015	12:30 PM	164
4/14/2015	12:45 PM	156
4/14/2015	01:00 PM	186
4/14/2015	01:15 PM	173
4/14/2015	01:30 PM	158
4/14/2015	01:45 PM	115
4/14/2015	02:00 PM	131
4/14/2015	02:15 PM	120
4/14/2015	02:30 PM	114
4/14/2015	02:45 PM	106
4/14/2015	03:00 PM	150
4/14/2015	03:15 PM	116
4/14/2015	03:30 PM	121
4/14/2015	03:45 PM	133
4/14/2015	04:00 PM	145
4/14/2015	04:15 PM	129
4/14/2015	04:30 PM	168
4/14/2015	04:45 PM	172
4/14/2015	05:00 PM	200
4/14/2015	05:15 PM	252
4/14/2015	05:30 PM	234
4/14/2015	05:45 PM	252
4/14/2015	06:00 PM	212
4/14/2015	06:15 PM	198
4/14/2015	06:30 PM	176
4/14/2015	06:45 PM	164
4/14/2015	07:00 PM	166
4/14/2015	07:15 PM	118
4/14/2015	07:30 PM	114
4/14/2015	07:45 PM	126
4/14/2015	08:00 PM	100
4/14/2015	08:15 PM	104
4/14/2015	08:30 PM	72
4/14/2015	08:45 PM	86
4/14/2015	09:00 PM	63
4/14/2015	09:15 PM	62
4/14/2015	09:30 PM	59
4/14/2015	09:45 PM	53
4/14/2015	10:00 PM	44
4/14/2015	10:15 PM	39
4/14/2015	10:30 PM	32
4/14/2015	10:45 PM	20
4/14/2015	11:00 PM	30
4/14/2015	11:15 PM	18
4/14/2015	11:30 PM	7
4/14/2015	11:45 PM	20

7907

SB CARLISLE ST SOUTH OF LEMMON AVE EAST

Start Date: 4/13/2015
 Start Time: 12:00:00 PM
 Site Code: 000000000094

Date	Time	SB
4/14/2015	12:00 AM	19
4/14/2015	12:15 AM	12
4/14/2015	12:30 AM	17
4/14/2015	12:45 AM	15
4/14/2015	01:00 AM	8
4/14/2015	01:15 AM	6
4/14/2015	01:30 AM	6
4/14/2015	01:45 AM	9
4/14/2015	02:00 AM	10
4/14/2015	02:15 AM	12
4/14/2015	02:30 AM	6
4/14/2015	02:45 AM	6
4/14/2015	03:00 AM	1
4/14/2015	03:15 AM	4
4/14/2015	03:30 AM	0
4/14/2015	03:45 AM	2
4/14/2015	04:00 AM	5
4/14/2015	04:15 AM	1
4/14/2015	04:30 AM	3
4/14/2015	04:45 AM	2
4/14/2015	05:00 AM	5
4/14/2015	05:15 AM	11
4/14/2015	05:30 AM	17
4/14/2015	05:45 AM	37
4/14/2015	06:00 AM	22
4/14/2015	06:15 AM	35
4/14/2015	06:30 AM	62
4/14/2015	06:45 AM	81
4/14/2015	07:00 AM	102
4/14/2015	07:15 AM	124
4/14/2015	07:30 AM	178
4/14/2015	07:45 AM	206
4/14/2015	08:00 AM	244
4/14/2015	08:15 AM	256
4/14/2015	08:30 AM	210
4/14/2015	08:45 AM	214
4/14/2015	09:00 AM	160
4/14/2015	09:15 AM	122
4/14/2015	09:30 AM	112
4/14/2015	09:45 AM	100
4/14/2015	10:00 AM	93
4/14/2015	10:15 AM	86
4/14/2015	10:30 AM	85
4/14/2015	10:45 AM	86
4/14/2015	11:00 AM	93
4/14/2015	11:15 AM	104
4/14/2015	11:30 AM	122
4/14/2015	11:45 AM	130
4/14/2015	12:00 PM	132
4/14/2015	12:15 PM	171
4/14/2015	12:30 PM	174
4/14/2015	12:45 PM	192
4/14/2015	01:00 PM	194
4/14/2015	01:15 PM	204
4/14/2015	01:30 PM	184
4/14/2015	01:45 PM	150
4/14/2015	02:00 PM	141
4/14/2015	02:15 PM	118
4/14/2015	02:30 PM	102
4/14/2015	02:45 PM	105
4/14/2015	03:00 PM	104
4/14/2015	03:15 PM	140
4/14/2015	03:30 PM	85
4/14/2015	03:45 PM	132
4/14/2015	04:00 PM	126
4/14/2015	04:15 PM	154
4/14/2015	04:30 PM	133
4/14/2015	04:45 PM	156
4/14/2015	05:00 PM	166
4/14/2015	05:15 PM	169
4/14/2015	05:30 PM	189
4/14/2015	05:45 PM	218
4/14/2015	06:00 PM	172
4/14/2015	06:15 PM	199
4/14/2015	06:30 PM	193
4/14/2015	06:45 PM	220
4/14/2015	07:00 PM	174
4/14/2015	07:15 PM	178
4/14/2015	07:30 PM	172
4/14/2015	07:45 PM	167
4/14/2015	08:00 PM	141
4/14/2015	08:15 PM	140
4/14/2015	08:30 PM	170
4/14/2015	08:45 PM	133
4/14/2015	09:00 PM	124
4/14/2015	09:15 PM	125
4/14/2015	09:30 PM	112
4/14/2015	09:45 PM	88
4/14/2015	10:00 PM	84
4/14/2015	10:15 PM	66
4/14/2015	10:30 PM	62
4/14/2015	10:45 PM	52
4/14/2015	11:00 PM	39
4/14/2015	11:15 PM	36
4/14/2015	11:30 PM	33
4/14/2015	11:45 PM	27

9787

SB CARLISLE ST SOUTH OF ELIZABETH

Start Date: 4/13/2015
 Start Time: 1:15:00 PM
 Site Code: 76

Date	Time	SB
4/14/2015	12:00 AM	5
4/14/2015	12:15 AM	4
4/14/2015	12:30 AM	7
4/14/2015	12:45 AM	6
4/14/2015	01:00 AM	5
4/14/2015	01:15 AM	4
4/14/2015	01:30 AM	2
4/14/2015	01:45 AM	2
4/14/2015	02:00 AM	2
4/14/2015	02:15 AM	4
4/14/2015	02:30 AM	6
4/14/2015	02:45 AM	2
4/14/2015	03:00 AM	2
4/14/2015	03:15 AM	1
4/14/2015	03:30 AM	1
4/14/2015	03:45 AM	0
4/14/2015	04:00 AM	0
4/14/2015	04:15 AM	3
4/14/2015	04:30 AM	1
4/14/2015	04:45 AM	1
4/14/2015	05:00 AM	3
4/14/2015	05:15 AM	7
4/14/2015	05:30 AM	4
4/14/2015	05:45 AM	8
4/14/2015	06:00 AM	19
4/14/2015	06:15 AM	9
4/14/2015	06:30 AM	16
4/14/2015	06:45 AM	34
4/14/2015	07:00 AM	37
4/14/2015	07:15 AM	49
4/14/2015	07:30 AM	64
4/14/2015	07:45 AM	114
4/14/2015	08:00 AM	126
4/14/2015	08:15 AM	162
4/14/2015	08:30 AM	154
4/14/2015	08:45 AM	140
4/14/2015	09:00 AM	126
4/14/2015	09:15 AM	102
4/14/2015	09:30 AM	64
4/14/2015	09:45 AM	63
4/14/2015	10:00 AM	48
4/14/2015	10:15 AM	48
4/14/2015	10:30 AM	47
4/14/2015	10:45 AM	39
4/14/2015	11:00 AM	39
4/14/2015	11:15 AM	52
4/14/2015	11:30 AM	60
4/14/2015	11:45 AM	52
4/14/2015	12:00 PM	65
4/14/2015	12:15 PM	77
4/14/2015	12:30 PM	69
4/14/2015	12:45 PM	85
4/14/2015	01:00 PM	88
4/14/2015	01:15 PM	88
4/14/2015	01:30 PM	91
4/14/2015	01:45 PM	80
4/14/2015	02:00 PM	70
4/14/2015	02:15 PM	57
4/14/2015	02:30 PM	54
4/14/2015	02:45 PM	49
4/14/2015	03:00 PM	44
4/14/2015	03:15 PM	66
4/14/2015	03:30 PM	64
4/14/2015	03:45 PM	52
4/14/2015	04:00 PM	66
4/14/2015	04:15 PM	71
4/14/2015	04:30 PM	86
4/14/2015	04:45 PM	80
4/14/2015	05:00 PM	82
4/14/2015	05:15 PM	108
4/14/2015	05:30 PM	116
4/14/2015	05:45 PM	110
4/14/2015	06:00 PM	116
4/14/2015	06:15 PM	123
4/14/2015	06:30 PM	104
4/14/2015	06:45 PM	96
4/14/2015	07:00 PM	103
4/14/2015	07:15 PM	79
4/14/2015	07:30 PM	82
4/14/2015	07:45 PM	71
4/14/2015	08:00 PM	60
4/14/2015	08:15 PM	64
4/14/2015	08:30 PM	47
4/14/2015	08:45 PM	54
4/14/2015	09:00 PM	48
4/14/2015	09:15 PM	56
4/14/2015	09:30 PM	59
4/14/2015	09:45 PM	38
4/14/2015	10:00 PM	23
4/14/2015	10:15 PM	30
4/14/2015	10:30 PM	26
4/14/2015	10:45 PM	25
4/14/2015	11:00 PM	27
4/14/2015	11:15 PM	18
4/14/2015	11:30 PM	16
4/14/2015	11:45 PM	18

SB COLE ST SOUTH OF KNOX ST

Start Date: 4/13/2015
 Start Time: 12:45:00 PM
 Site Code: 200

Date	Time	SB
4/14/2015	12:00 AM	2
4/14/2015	12:15 AM	3
4/14/2015	12:30 AM	2
4/14/2015	12:45 AM	5
4/14/2015	01:00 AM	2
4/14/2015	01:15 AM	1
4/14/2015	01:30 AM	0
4/14/2015	01:45 AM	1
4/14/2015	02:00 AM	2
4/14/2015	02:15 AM	3
4/14/2015	02:30 AM	1
4/14/2015	02:45 AM	2
4/14/2015	03:00 AM	0
4/14/2015	03:15 AM	0
4/14/2015	03:30 AM	1
4/14/2015	03:45 AM	2
4/14/2015	04:00 AM	3
4/14/2015	04:15 AM	2
4/14/2015	04:30 AM	3
4/14/2015	04:45 AM	3
4/14/2015	05:00 AM	7
4/14/2015	05:15 AM	4
4/14/2015	05:30 AM	13
4/14/2015	05:45 AM	17
4/14/2015	06:00 AM	16
4/14/2015	06:15 AM	30
4/14/2015	06:30 AM	36
4/14/2015	06:45 AM	49
4/14/2015	07:00 AM	59
4/14/2015	07:15 AM	92
4/14/2015	07:30 AM	120
4/14/2015	07:45 AM	149
4/14/2015	08:00 AM	155
4/14/2015	08:15 AM	148
4/14/2015	08:30 AM	120
4/14/2015	08:45 AM	142
4/14/2015	09:00 AM	89
4/14/2015	09:15 AM	80
4/14/2015	09:30 AM	72
4/14/2015	09:45 AM	66
4/14/2015	10:00 AM	55
4/14/2015	10:15 AM	54
4/14/2015	10:30 AM	63
4/14/2015	10:45 AM	58
4/14/2015	11:00 AM	64
4/14/2015	11:15 AM	74
4/14/2015	11:30 AM	87
4/14/2015	11:45 AM	100
4/14/2015	12:00 PM	112
4/14/2015	12:15 PM	103
4/14/2015	12:30 PM	119
4/14/2015	12:45 PM	98
4/14/2015	01:00 PM	101
4/14/2015	01:15 PM	112
4/14/2015	01:30 PM	104
4/14/2015	01:45 PM	100
4/14/2015	02:00 PM	94
4/14/2015	02:15 PM	74
4/14/2015	02:30 PM	74
4/14/2015	02:45 PM	66
4/14/2015	03:00 PM	74
4/14/2015	03:15 PM	76
4/14/2015	03:30 PM	72
4/14/2015	03:45 PM	94
4/14/2015	04:00 PM	80
4/14/2015	04:15 PM	82
4/14/2015	04:30 PM	98
4/14/2015	04:45 PM	104
4/14/2015	05:00 PM	140
4/14/2015	05:15 PM	120
4/14/2015	05:30 PM	123
4/14/2015	05:45 PM	142
4/14/2015	06:00 PM	138
4/14/2015	06:15 PM	128
4/14/2015	06:30 PM	103
4/14/2015	06:45 PM	112
4/14/2015	07:00 PM	86
4/14/2015	07:15 PM	71
4/14/2015	07:30 PM	64
4/14/2015	07:45 PM	60
4/14/2015	08:00 PM	61
4/14/2015	08:15 PM	54
4/14/2015	08:30 PM	44
4/14/2015	08:45 PM	48
4/14/2015	09:00 PM	60
4/14/2015	09:15 PM	54
4/14/2015	09:30 PM	28
4/14/2015	09:45 PM	28
4/14/2015	10:00 PM	22
4/14/2015	10:15 PM	28
4/14/2015	10:30 PM	21
4/14/2015	10:45 PM	29
4/14/2015	11:00 PM	18
4/14/2015	11:15 PM	15
4/14/2015	11:30 PM	8
4/14/2015	11:45 PM	6

5705

SynchroTM Output - 2015 Existing Traffic

McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings2015 Existing - AM Peak Hour
1: Oak Grove & McKinney

	←	↖	↗	↑	↘	↙	↓	↘	↗	↖	↗	↖
Lane Group	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	ø2	ø5
Lane Configurations	↖			↗	↖				↖			
Volume (vph)	186	51	0	465	56	0	0	0	100	32		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Storage Length (ft)	0	0	0		137	0		0	0	0		
Storage Lanes	1	0	0		1	0		0	1	0		
Taper Length (ft)	25		25			25			25			
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00		
Frt	0.969				0.850				0.967			
Flt Protected	0.963								0.964			
Satd. Flow (prot)	1738	0	0	3539	1583	0	0	0	1736	0		
Flt Permitted	0.963								0.964			
Satd. Flow (perm)	1738	0	0	3539	1583	0	0	0	1736	0		
Right Turn on Red		Yes			Yes			Yes				
Satd. Flow (RTOR)	109				95							
Link Speed (mph)	30			30			30		30			
Link Distance (ft)	339			335			848		87			
Travel Time (s)	7.7			7.6			19.3		2.0			
Peak Hour Factor	0.92	0.83	0.92	0.91	0.92	0.89	0.77	0.92	0.92	0.92		
Adj. Flow (vph)	202	61	0	511	61	0	0	0	109	35		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	263	0	0	511	61	0	0	0	144	0		
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No		
Lane Alignment	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right		
Median Width(ft)	12			0			0		12			
Link Offset(ft)	0			-12			12		0			
Crosswalk Width(ft)	16			16			16		16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)	15	9	15		9	15		9	15	9		
Number of Detectors	1			1	1				1			
Detector Template	Left								Left			
Leading Detector (ft)	20			50	50				20			
Trailing Detector (ft)	0			0	0				0			
Detector 1 Position(ft)	0			0	0				0			
Detector 1 Size(ft)	20			50	50				20			
Detector 1 Type	CH+Ex			CH+Ex	CH+Ex				CH+Ex			
Detector 1 Channel												
Detector 1 Extend (s)	0.0			0.0	0.0				0.0			
Detector 1 Queue (s)	0.0			0.0	0.0				0.0			
Detector 1 Delay (s)	0.0			0.0	0.0				0.0			
Turn Type	NA			NA	Perm				NA			
Protected Phases	8!			6					5 8!	2	5	
Permitted Phases					6							
Detector Phase	8			6	6				5 8			
Switch Phase												
Minimum Initial (s)	8.0			10.0	10.0					10.0	4.0	
Minimum Split (s)	18.5			20.5	20.5					20.5	9.0	
Total Split (s)	28.0			27.0	27.0					47.0	20.0	
Total Split (%)	37.3%			36.0%	36.0%					63%	27%	

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - AM Peak Hour

Synchro 8 Report
Page 1McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings2015 Existing - AM Peak Hour
1: Oak Grove & McKinney

	←	↖	↗	↑	↘	↙	↓	↘	↗	↖	↗	↖
Lane Group	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	ø2	ø5
Maximum Green (s)	23.5			21.5	21.5						41.5	15.0
Yellow Time (s)	3.5			4.0	4.0						4.0	3.0
All-Red Time (s)	1.0			1.5	1.5						1.5	2.0
Lost Time Adjust (s)	0.0			-1.5	-1.5							
Total Lost Time (s)	4.5			4.0	4.0							
Lead/Lag				Lag	Lag							Lead
Lead-Lag Optimize?				Yes	Yes							Yes
Vehicle Extension (s)	2.0			2.0	2.0						2.0	3.0
Recall Mode	None			C-Max	C-Max						C-Max	None
Walk Time (s)	5.0			5.0	5.0							
Flash Dont Walk (s)	8.0			8.0	8.0							
Pedestrian Calls (#/hr)	0			0	0							
Act Effct Green (s)	13.0			37.2	37.2					28.8		
Actuated g/C Ratio	0.17			0.50	0.50					0.38		
v/c Ratio	0.67			0.29	0.07					0.22		
Control Delay	24.9			13.3	1.9					2.0		
Queue Delay	0.1			0.0	0.0					0.0		
Total Delay	25.0			13.3	1.9					2.0		
LOS	C			B	A					A		
Approach Delay	25.0			12.0						2.0		
Approach LOS	C			B						A		

Intersection Summary

Area Type: Other

Cycle Length: 75

Actuated Cycle Length: 75

Offset: 65 (87%), Referenced to phase 2:SET and 6:, Start of Yellow

Natural Cycle: 50

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.67

Intersection Signal Delay: 14.0

Intersection LOS: B

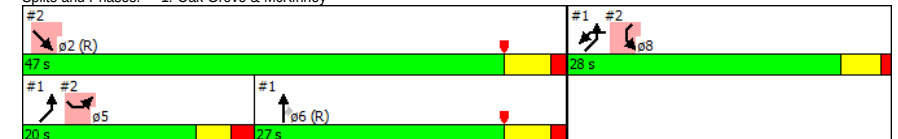
Intersection Capacity Utilization 45.0%

ICU Level of Service A

Analysis Period (min) 15

! Phase conflict between lane groups.

Splits and Phases: 1: Oak Grove & McKinney



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - AM Peak Hour

Synchro 8 Report
Page 2

McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2015 Existing - AM Peak Hour
2: Allen & Oak Grove

Lane Group	SEL	SET	NWT	NWR	SWL	SWR	ø6
Lane Configurations							
Volume (vph)	132	495	0	0	186	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	150				0	0	
Storage Lanes	1				0	1	
Taper Length (ft)	25				25		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	
Frt							
Flt Protected	0.950				0.950		
Satd. Flow (prot)	1770	3539	0	0	1770	0	
Flt Permitted	0.950				0.950		
Satd. Flow (perm)	1770	3539	0	0	1770	0	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)							
Link Speed (mph)		30	30		30		
Link Distance (ft)		1012	296		87		
Travel Time (s)		23.0	6.7		2.0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	143	538	0	0	202	0	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	143	538	0	0	202	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(ft)		12	12		12		
Link Offset(ft)		0	0		0		
Crosswalk Width(ft)		16	16		16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15			9	15	9	
Number of Detectors	1	2			1		
Detector Template	Left	Thru			Left		
Leading Detector (ft)	20	100			20		
Trailing Detector (ft)	0	0			0		
Detector 1 Position(ft)	0	0			0		
Detector 1 Size(ft)	20	6			20		
Detector 1 Type	CI+Ex	CI+Ex			CI+Ex		
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0			0.0		
Detector 1 Queue (s)	0.0	0.0			0.0		
Detector 1 Delay (s)	0.0	0.0			0.0		
Detector 2 Position(ft)		94					
Detector 2 Size(ft)		6					
Detector 2 Type		CI+Ex					
Detector 2 Channel							
Detector 2 Extend (s)		0.0					
Turn Type	Prot	NA			NA		
Protected Phases	5	2			8	6	
Permitted Phases							
Detector Phase	5	2			8		

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - AM Peak Hour

Synchro 8 Report
Page 3

McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2015 Existing - AM Peak Hour
2: Allen & Oak Grove

Lane Group	SEL	SET	NWT	NWR	SWL	SWR	ø6
Switch Phase							
Minimum Initial (s)	4.0	10.0			8.0		10.0
Minimum Split (s)	9.0	20.5			18.5		20.5
Total Split (s)	20.0	47.0			28.0		27.0
Total Split (%)	26.7%	62.7%			37.3%		36%
Maximum Green (s)	15.0	41.5			23.5		21.5
Yellow Time (s)	3.0	4.0			3.5		4.0
All-Red Time (s)	2.0	1.5			1.0		1.5
Lost Time Adjust (s)	0.0	0.0			0.0		
Total Lost Time (s)	5.0	5.5			4.5		
Lead/Lag	Lead						Lag
Lead-Lag Optimize?	Yes						Yes
Vehicle Extension (s)	3.0	2.0			2.0		2.0
Recall Mode	None	C-Max			None		C-Max
Walk Time (s)					5.0		5.0
Flash Dont Walk (s)					8.0		8.0
Pedestrian Calls (#/hr)					0		0
Act Effct Green (s)	11.3	52.0			13.0		
Actuated g/C Ratio	0.15	0.69			0.17		
v/c Ratio	0.54	0.22			0.66		
Control Delay	36.3	4.9			21.8		
Queue Delay	0.0	0.0			0.0		
Total Delay	36.3	4.9			21.8		
LOS	D	A			C		
Approach Delay		11.5			21.8		
Approach LOS		B			C		

Intersection Summary

Area Type: Other

Cycle Length: 75

Actuated Cycle Length: 75

Offset: 65 (87%), Referenced to phase 2:SET and 6:, Start of Yellow

Natural Cycle: 50

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.67

Intersection Signal Delay: 13.9

Intersection LOS: B

Intersection Capacity Utilization 32.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 2: Allen & Oak Grove



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - AM Peak Hour

Synchro 8 Report
Page 4

McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2015 Existing - AM Peak Hour
4: McKinney & Bowen

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↗			↖↗				
Volume (vph)	52	89	0	0	105	21	86	458	27	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.974			0.991				
Flt Protected		0.981						0.991				
Satd. Flow (prot)	0	1827	0	0	1814	0	0	4994	0	0	0	0
Flt Permitted		0.854						0.991				
Satd. Flow (perm)	0	1591	0	0	1814	0	0	4994	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					30			18				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		229			304			848			502	
Travel Time (s)		5.2			6.9			19.3			11.4	
Peak Hour Factor	0.79	0.88	1.00	1.00	0.81	0.67	0.71	0.92	0.68	1.00	1.00	1.00
Adj. Flow (vph)	66	101	0	0	130	31	121	498	40	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	167	0	0	161	0	0	659	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1		1	1				
Detector Template												
Leading Detector (ft)	50	50			50		50	50				
Trailing Detector (ft)	0	0			0		0	0				
Detector 1 Position(ft)	0	0			0		0	0				
Detector 1 Size(ft)	50	50			50		50	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4			4			2				
Permitted Phases	4						2					
Detector Phase	4	4			4		2	2				
Switch Phase												
Minimum Initial (s)	6.0	6.0			6.0		10.0	10.0				
Minimum Split (s)	15.2	15.2			15.2		15.2	15.2				
Total Split (s)	35.0	35.0			35.0		25.0	25.0				
Total Split (%)	58.3%	58.3%			58.3%		41.7%	41.7%				
Maximum Green (s)	30.8	30.8			30.8		20.8	20.8				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	1.0	1.0			1.0		1.0	1.0				

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2015 Existing - AM Peak Hour
4: McKinney & Bowen

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-0.2			-0.2			-0.2				
Total Lost Time (s)		4.0			4.0			4.0				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		2.5			2.5			4.0		4.0		
Recall Mode		Max			Max			C-Max		C-Max		
Walk Time (s)		4.0			4.0			4.0		4.0		
Flash Dont Walk (s)		7.0			7.0			7.0		7.0		
Pedestrian Calls (#/hr)		0			0			0		0		
Act Effct Green (s)		31.0			31.0			21.0				
Actuated g/C Ratio		0.52			0.52			0.35				
v/c Ratio		0.20			0.17			0.37				
Control Delay		12.7			6.8			14.9				
Queue Delay		0.0			0.0			0.0				
Total Delay		12.7			6.8			14.9				
LOS		B			A			B				
Approach Delay		12.7			6.8			14.9				
Approach LOS		B			A			B				

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 8 (13%), Referenced to phase 2:NBT, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.37

Intersection Signal Delay: 13.2

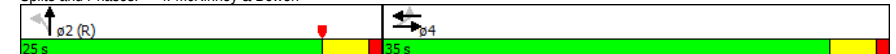
Intersection LOS: B

Intersection Capacity Utilization 35.6%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 4: McKinney & Bowen



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2015 Existing - AM Peak Hour
5: Carlisle & Bowen

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑						↑↑↑	
Volume (vph)	0	168	79	30	188	0	0	0	0	41	743	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.950									0.980	
Flt Protected					0.991						0.997	
Satd. Flow (prot)	0	3362	0	0	3507	0	0	0	0	0	4969	0
Flt Permitted					0.842						0.997	
Satd. Flow (perm)	0	3362	0	0	2980	0	0	0	0	0	4969	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		93									67	
Link Speed (mph)		30			30				30		30	
Link Distance (ft)		361			568				386		773	
Travel Time (s)		8.2			12.9				8.8		17.6	
Peak Hour Factor	1.00	0.91	0.85	0.60	0.86	1.00	1.00	1.00	1.00	0.65	0.84	0.70
Adj. Flow (vph)	0	185	93	50	219	0	0	0	0	63	885	143
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	278	0	0	269	0	0	0	0	0	1091	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0				0		0	
Link Offset(ft)		0			0				0		0	
Crosswalk Width(ft)		16			16				16		16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1		1	1					1	1	
Detector Template												
Leading Detector (ft)		50		50	50					50	50	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		50		50	50					50	50	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			4						2	
Permitted Phases				4						2		
Detector Phase		4		4	4					2	2	
Switch Phase												
Minimum Initial (s)		10.0		10.0	10.0					8.0	8.0	
Minimum Split (s)		19.5		19.5	19.5					19.5	19.5	
Total Split (s)		26.0		26.0	26.0					34.0	34.0	
Total Split (%)		43.3%		43.3%	43.3%					56.7%	56.7%	
Maximum Green (s)		21.5		21.5	21.5					29.5	29.5	
Yellow Time (s)		3.5		3.5	3.5					3.5	3.5	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2015 Existing - AM Peak Hour
5: Carlisle & Bowen

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-0.5			-0.5						-0.5	
Total Lost Time (s)		4.0			4.0						4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		2.5		2.5	2.5						2.0	2.0
Recall Mode		Min		Min	Min						C-Max	C-Max
Walk Time (s)		7.0		7.0	7.0						7.0	7.0
Flash Dont Walk (s)		8.0		8.0	8.0						8.0	8.0
Pedestrian Calls (#/hr)		0		0	0						0	0
Act Effct Green (s)		11.6			11.6						40.4	
Actuated g/C Ratio		0.19			0.19						0.67	
v/c Ratio		0.38			0.47						0.32	
Control Delay		15.1			23.8						1.3	
Queue Delay		0.0			0.0						0.0	
Total Delay		15.1			23.8						1.3	
LOS		B			C						A	
Approach Delay		15.1			23.8						1.3	
Approach LOS		B			C						A	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 31 (52%), Referenced to phase 2:SBTL, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.47

Intersection Signal Delay: 7.3

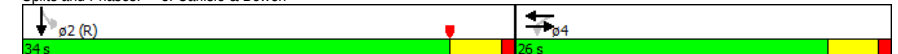
Intersection LOS: A

Intersection Capacity Utilization 44.1%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 5: Carlisle & Bowen



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - AM Peak Hour

Synchro 8 Report
Page 8

McKinney - Cole Uptown Evaluation

2015 Existing - AM Peak Hour

Lanes, Volumes, Timings

6: McKinney & Hall

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔↔↔				
Volume (vph)	47	63	0	0	176	47	44	439	32	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.971			0.991				
Flt Protected		0.980						0.995				
Satd. Flow (prot)	0	1825	0	0	1809	0	0	5014	0	0	0	0
Flt Permitted		0.678						0.995				
Satd. Flow (perm)	0	1263	0	0	1809	0	0	5014	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					27			17				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		790			243			502			693	
Travel Time (s)		18.0			5.5			11.4			15.8	
Peak Hour Factor	0.83	0.78	1.00	1.00	0.85	0.82	0.76	0.89	0.86	0.25	1.00	1.00
Adj. Flow (vph)	57	81	0	0	207	57	58	493	37	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	138	0	0	264	0	0	588	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1		1	1				
Detector Template												
Leading Detector (ft)	50	50			50		50	50				
Trailing Detector (ft)	0	0			0		0	0				
Detector 1 Position(ft)	0	0			0		0	0				
Detector 1 Size(ft)	50	50			50		50	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	3	8			4			2				
Permitted Phases	8						2					
Detector Phase	3	8			4		2	2				
Switch Phase												
Minimum Initial (s)	3.0	6.0			6.0		10.0	10.0				
Minimum Split (s)	8.0	14.2			14.2		16.2	16.2				
Total Split (s)	13.0	40.0			27.0		20.0	20.0				
Total Split (%)	21.7%	66.7%			45.0%		33.3%	33.3%				
Maximum Green (s)	8.0	35.8			22.8		15.8	15.8				
Yellow Time (s)	3.0	3.2			3.2		3.2	3.2				
All-Red Time (s)	2.0	1.0			1.0		1.0	1.0				

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2015 Existing - AM Peak Hour

Lanes, Volumes, Timings

6: McKinney & Hall

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-0.2			-0.2			-0.2				
Total Lost Time (s)		4.0			4.0			4.0				
Lead/Lag		Lag			Lead							
Lead-Lag Optimize?		Yes			Yes							
Vehicle Extension (s)		2.0			3.0			2.0		2.0		
Recall Mode		None			Ped			C-Max		C-Max		
Walk Time (s)		4.0			4.0			6.0		6.0		
Flash Dont Walk (s)		6.0			6.0			6.0		6.0		
Pedestrian Calls (#/hr)		0			0			0		0		
Act Effct Green (s)		13.9			13.9			38.1				
Actuated g/C Ratio		0.23			0.23			0.64				
v/c Ratio		0.47			0.60			0.18				
Control Delay		20.2			23.8			2.3				
Queue Delay		0.0			0.0			0.0				
Total Delay		20.2			23.8			2.3				
LOS		C			C			A				
Approach Delay		20.2			23.8			2.3				
Approach LOS		C			C			A				

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 18 (30%), Referenced to phase 2:NBTL, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 10.6

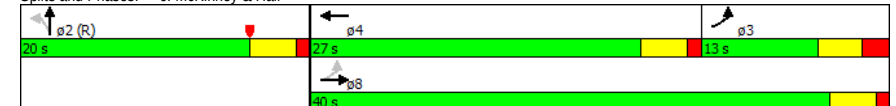
Intersection LOS: B

Intersection Capacity Utilization 38.1%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 6: McKinney & Hall



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - AM Peak Hour

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McKinney - Cole Uptown Evaluation

2015 Existing - AM Peak Hour

Lanes, Volumes, Timings

7: Carlisle & Hall

	↖	→	↘	↙	←	↖	↙	↑	↘	↙	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↖					↖↗↘		
Volume (vph)	0	46	16	17	182	0	0	0	0	53	843	106
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.960									0.984	
Flt Protected					0.995						0.997	
Satd. Flow (prot)	0	1788	0	0	1853	0	0	0	0	0	4989	0
Flt Permitted					0.965						0.997	
Satd. Flow (perm)	0	1788	0	0	1798	0	0	0	0	0	4989	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23									45	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		182			790			773			627	
Travel Time (s)		4.1			18.0			17.6			14.3	
Peak Hour Factor	1.00	0.84	0.69	0.68	0.84	1.00	1.00	1.00	1.00	0.83	0.91	0.92
Adj. Flow (vph)	0	55	23	25	217	0	0	0	0	64	926	115
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	78	0	0	242	0	0	0	0	0	1105	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1		1	1					1	1	
Detector Template												
Leading Detector (ft)		50		50	50					50	50	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		50		50	50					50	50	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			4						2	
Permitted Phases				4						2		
Detector Phase		4		4	4					2	2	
Switch Phase												
Minimum Initial (s)		8.0		8.0	8.0					8.0	8.0	
Minimum Split (s)		18.2		18.2	18.2					18.2	18.2	
Total Split (s)		28.0		28.0	28.0					32.0	32.0	
Total Split (%)		46.7%		46.7%	46.7%					53.3%	53.3%	
Maximum Green (s)		23.8		23.8	23.8					27.8	27.8	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2015 Existing - AM Peak Hour

Lanes, Volumes, Timings

7: Carlisle & Hall

	↖	→	↘	↙	←	↖	↙	↑	↘	↙	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-0.2			-0.2						-0.2	
Total Lost Time (s)		4.0			4.0						4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		2.0		2.0	2.0						4.0	4.0
Recall Mode		Min		Min	Min						C-Max	C-Max
Walk Time (s)		6.0		6.0	6.0						6.0	6.0
Flash Dont Walk (s)		8.0		8.0	8.0						8.0	8.0
Pedestrian Calls (#/hr)		0		0	0						0	0
Act Effct Green (s)		12.8			12.8						39.2	
Actuated g/C Ratio		0.21			0.21						0.65	
v/c Ratio		0.20			0.63						0.34	
Control Delay		14.5			35.9						2.6	
Queue Delay		0.0			0.0						0.0	
Total Delay		14.5			35.9						2.6	
LOS		B			D						A	
Approach Delay		14.5			35.9						2.6	
Approach LOS		B			D						A	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 12 (20%), Referenced to phase 2:SBTL, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.63

Intersection Signal Delay: 8.9

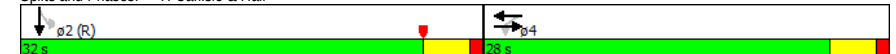
Intersection LOS: A

Intersection Capacity Utilization 43.6%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 7: Carlisle & Hall



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2015 Existing - AM Peak Hour

Lanes, Volumes, Timings

8: McKinney & Lemmon

	↖	→	↘	↙	←	↖	↙	↑	↘	↙	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↖↖					↖↖↖	↖↖↖				
Volume (vph)	288	1114	0	0	0	0	0	458	102	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.91	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	1.00	1.00
Frt								0.972				
Flt Protected	0.950											
Satd. Flow (prot)	1770	5085	0	0	0	0	0	4943	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1770	5085	0	0	0	0	0	4943	0	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)	184							50				
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		651			455			693			457	
Travel Time (s)		12.7			8.9			15.8			10.4	
Peak Hour Factor	0.97	0.94	1.00	1.00	1.00	1.00	1.00	0.92	0.88	1.00	1.00	1.00
Adj. Flow (vph)	297	1185	0	0	0	0	0	498	116	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	297	1185	0	0	0	0	0	614	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1						1				
Detector Template												
Leading Detector (ft)	50	50						50				
Trailing Detector (ft)	0	0						0				
Detector 1 Position(ft)	0	0						0				
Detector 1 Size(ft)	50	50						50				
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0				
Detector 1 Queue (s)	0.0	0.0						0.0				
Detector 1 Delay (s)	0.0	0.0						0.0				
Turn Type	Perm	NA						NA				
Protected Phases		2						4				
Permitted Phases	2											
Detector Phase	2	2						4				
Switch Phase												
Minimum Initial (s)	14.0	14.0						14.0				
Minimum Split (s)	18.5	18.5						18.5				
Total Split (s)	72.0	72.0						48.0				
Total Split (%)	60.0%	60.0%						40.0%				
Maximum Green (s)	67.5	67.5						43.5				
Yellow Time (s)	3.5	3.5						3.5				
All-Red Time (s)	1.0	1.0						1.0				

McKinney - Cole Uptown Evaluation

2015 Existing - AM Peak Hour

Lanes, Volumes, Timings

8: McKinney & Lemmon

	↖	→	↘	↙	←	↖	↙	↑	↘	↙	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-0.5	-0.5						-0.5				
Total Lost Time (s)	4.0	4.0						4.0				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	0.2	0.2						0.2				
Recall Mode	C-Max	C-Max						Max				
Walk Time (s)	7.0	7.0						4.0				
Flash Dont Walk (s)	7.0	7.0						7.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)	68.0	68.0						44.0				
Actuated g/C Ratio	0.57	0.57						0.37				
v/c Ratio	0.27	0.41						0.33				
Control Delay	0.5	2.4						28.8				
Queue Delay	0.0	0.0						0.0				
Total Delay	0.5	2.4						28.8				
LOS	A	A						C				
Approach Delay								28.8				
Approach LOS		A						C				

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 15 (13%), Referenced to phase 2:EBTL, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.41

Intersection Signal Delay: 9.9

Intersection LOS: A

Intersection Capacity Utilization 67.4%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 8: McKinney & Lemmon



McKinney - Cole Uptown Evaluation

2015 Existing - AM Peak Hour

Lanes, Volumes, Timings

9: Carlisle/Cole & Lemmon

	←	→	↙	↘	←	↙	↘	↑	↗	↖	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑↑									↓↓↓	
Volume (vph)	0	1206	85	0	0	0	0	0	0	144	850	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00
Frt		0.988										
Flt Protected											0.992	
Satd. Flow (prot)	0	6331	0	0	0	0	0	0	0	0	5045	0
Flt Permitted											0.992	
Satd. Flow (perm)	0	6331	0	0	0	0	0	0	0	0	5045	0
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)		19									14	
Link Speed (mph)		35			35				30		30	
Link Distance (ft)		687			651				627		431	
Travel Time (s)		13.4			12.7				14.3		9.8	
Peak Hour Factor	1.00	0.95	0.75	1.00	1.00	1.00	1.00	1.00	1.00	0.83	0.93	1.00
Adj. Flow (vph)	0	1269	113	0	0	0	0	0	0	173	914	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1382	0	0	0	0	0	0	0	0	1087	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0				0		0	
Link Offset(ft)		0			0				0		0	
Crosswalk Width(ft)		16			16				16		16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1								1	1	
Detector Template												
Leading Detector (ft)		50								50	50	
Trailing Detector (ft)		0								0	0	
Detector 1 Position(ft)		0								0	0	
Detector 1 Size(ft)		50								50	50	
Detector 1 Type		Cl+Ex								Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0								0.0	0.0	
Detector 1 Queue (s)		0.0								0.0	0.0	
Detector 1 Delay (s)		0.0								0.0	0.0	
Turn Type		NA								Perm	NA	
Protected Phases		2									4	
Permitted Phases										4		
Detector Phase		2								4	4	
Switch Phase												
Minimum Initial (s)		8.0								8.0	8.0	
Minimum Split (s)		18.5								18.5	18.5	
Total Split (s)		48.0								72.0	72.0	
Total Split (%)		40.0%								60.0%	60.0%	
Maximum Green (s)		43.5								67.5	67.5	
Yellow Time (s)		3.5								3.5	3.5	
All-Red Time (s)		1.0								1.0	1.0	

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2015 Existing - AM Peak Hour

Lanes, Volumes, Timings

9: Carlisle/Cole & Lemmon

	←	→	↙	↘	←	↙	↘	↑	↗	↖	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-0.5									-0.5	
Total Lost Time (s)		4.0									4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		2.0									2.0	2.0
Recall Mode		C-Max									Max	Max
Walk Time (s)		7.0									7.0	7.0
Flash Dont Walk (s)		7.0									7.0	7.0
Pedestrian Calls (#/hr)		0									0	0
Act Effct Green (s)		44.0									68.0	
Actuated g/C Ratio		0.37									0.57	
v/c Ratio		0.59									0.38	
Control Delay		31.6									9.0	
Queue Delay		0.0									0.2	
Total Delay		31.6									9.1	
LOS		C									A	
Approach Delay		31.6									9.1	
Approach LOS		C									A	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 102 (85%), Referenced to phase 2:EBT, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.59

Intersection Signal Delay: 21.7

Intersection LOS: C

Intersection Capacity Utilization 44.9%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 9: Carlisle/Cole & Lemmon



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2015 Existing - AM Peak Hour
10: McKinney & Lemmon East

	←	→	↖	↗	←	↖	↗	↑	↖	↗	↓	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑↑↑↑			↑↑↑↑				
Volume (vph)	0	0	0	0	1894	76	157	563	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.86	0.86	0.91	0.91	1.00	1.00	1.00	1.00
Frt					0.994							
Flt Protected								0.988				
Satd. Flow (prot)	0	0	0	0	6369	0	0	5024	0	0	0	0
Flt Permitted								0.988				
Satd. Flow (perm)	0	0	0	0	6369	0	0	5024	0	0	0	0
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)					8			23				
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		510			744			457			444	
Travel Time (s)		9.9			14.5			10.4			10.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	0.89	0.83	0.81	0.89	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	0	2128	92	194	633	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	2220	0	0	827	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors					1		1	1				
Detector Template												
Leading Detector (ft)					50		50	50				
Trailing Detector (ft)					0		0	0				
Detector 1 Position(ft)					0		0	0				
Detector 1 Size(ft)					50		50	50				
Detector 1 Type					Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)					0.0		0.0	0.0				
Detector 1 Queue (s)					0.0		0.0	0.0				
Detector 1 Delay (s)					0.0		0.0	0.0				
Turn Type					NA		Perm	NA				
Protected Phases					2			4				
Permitted Phases							4					
Detector Phase					2		4	4				
Switch Phase												
Minimum Initial (s)					14.0		12.0	12.0				
Minimum Split (s)					19.5		16.5	16.5				
Total Split (s)					48.0		72.0	72.0				
Total Split (%)					40.0%		60.0%	60.0%				
Maximum Green (s)					42.5		67.5	67.5				
Yellow Time (s)					3.5		3.5	3.5				
All-Red Time (s)					2.0		1.0	1.0				

McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2015 Existing - AM Peak Hour
10: McKinney & Lemmon East

	←	→	↖	↗	←	↖	↗	↑	↖	↗	↓	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)					-1.5			-0.5				
Total Lost Time (s)					4.0			4.0				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)					0.2		0.2	0.2				
Recall Mode					C-Max		Max	Max				
Walk Time (s)					7.0		4.0	4.0				
Flash Dont Walk (s)					7.0		7.0	7.0				
Pedestrian Calls (#/hr)					0		0	0				
Act Effct Green (s)					44.0			68.0				
Actuated g/C Ratio					0.37			0.57				
v/c Ratio					0.95			0.29				
Control Delay					46.9			12.3				
Queue Delay					0.0			0.0				
Total Delay					46.9			12.3				
LOS					D			B				
Approach Delay					46.9			12.3				
Approach LOS					D			B				

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 4 (3%), Referenced to phase 2:WBT, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.95

Intersection Signal Delay: 37.5 Intersection LOS: D

Intersection Capacity Utilization 49.4% ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 10: McKinney & Lemmon East



McKinney - Cole Uptown Evaluation

2015 Existing - AM Peak Hour

Lanes, Volumes, Timings

11: Cole & Lemmon East

	←	→	↙	↘	←	↙	↘	↑	↗	↖	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑↑↑↑						↑↑↑	
Volume (vph)	0	0	0	242	1836	0	0	0	0	0	767	279
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	1.00	1.00	1.00	1.00	1.00	0.91	0.91
Frt											0.957	
Flt Protected					0.994							
Satd. Flow (prot)	0	0	0	0	6369	0	0	0	0	0	4867	0
Flt Permitted					0.994							
Satd. Flow (perm)	0	0	0	0	6369	0	0	0	0	0	4867	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)					26						12	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		238			510			431			877	
Travel Time (s)		4.6			9.9			9.8			19.9	
Peak Hour Factor	1.00	1.00	1.00	0.87	0.88	1.00	1.00	1.00	1.00	0.30	0.93	0.85
Adj. Flow (vph)	0	0	0	278	2086	0	0	0	0	0	825	328
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	2364	0	0	0	0	0	1153	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	1						1	
Detector Template												
Leading Detector (ft)				50	50						50	
Trailing Detector (ft)				0	0						0	
Detector 1 Position(ft)				0	0						0	
Detector 1 Size(ft)				50	50						50	
Detector 1 Type				Cl+Ex	Cl+Ex						Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0						0.0	
Detector 1 Queue (s)				0.0	0.0						0.0	
Detector 1 Delay (s)				0.0	0.0						0.0	
Turn Type				Perm	NA						NA	
Protected Phases					2						4	
Permitted Phases				2								
Detector Phase				2	2						4	
Switch Phase												
Minimum Initial (s)				12.0	12.0						14.0	
Minimum Split (s)				18.5	18.5						18.5	
Total Split (s)				80.0	80.0						40.0	
Total Split (%)				66.7%	66.7%						33.3%	
Maximum Green (s)				75.5	75.5						35.5	
Yellow Time (s)				3.5	3.5						3.5	
All-Red Time (s)				1.0	1.0						1.0	

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2015 Existing - AM Peak Hour

Lanes, Volumes, Timings

11: Cole & Lemmon East

	←	→	↙	↘	←	↙	↘	↑	↗	↖	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)					-0.5						-0.5	
Total Lost Time (s)					4.0						4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0						2.0	
Recall Mode				C-Max	C-Max						Max	
Walk Time (s)				7.0	7.0						7.0	
Flash Dont Walk (s)				7.0	7.0						7.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effct Green (s)					76.0						36.0	
Actuated g/C Ratio					0.63						0.30	
v/c Ratio					0.58						0.79	
Control Delay					2.7						43.6	
Queue Delay					0.0						0.0	
Total Delay					2.7						43.6	
LOS					A						D	
Approach Delay					2.7						43.6	
Approach LOS					A						D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 16 (13%), Referenced to phase 2:WBT, Start of Yellow

Natural Cycle: 45

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 16.1

Intersection LOS: B

Intersection Capacity Utilization 58.0%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 11: Cole & Lemmon East



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2015 Existing - AM Peak Hour
12: McKinney & Cityplace

	↖	↗	↑	↘	↙	↓	
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø1
Lane Configurations		↗	↗↗↗				
Volume (vph)	0	55	666	4	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	0.91	0.91	1.00	1.00	
Frt		0.865	0.999				
Flt Protected							
Satd. Flow (prot)	0	1611	5080	0	0	0	
Flt Permitted							
Satd. Flow (perm)	0	1611	5080	0	0	0	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)		281	1				
Link Speed (mph)	30		30			30	
Link Distance (ft)	723		444			442	
Travel Time (s)	16.4		10.1			10.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	0	60	724	4	0	0	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	60	728	0	0	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Right	Left	Left	
Median Width(ft)	20		0			0	
Link Offset(ft)	0		0			0	
Crosswalk Width(ft)	16		16			16	
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9		9	15		
Number of Detectors		1	2				
Detector Template		Right	Thru				
Leading Detector (ft)		20	100				
Trailing Detector (ft)		0	0				
Detector 1 Position(ft)		0	0				
Detector 1 Size(ft)		20	6				
Detector 1 Type		Cl+Ex	Cl+Ex				
Detector 1 Channel							
Detector 1 Extend (s)		0.0	0.0				
Detector 1 Queue (s)		0.0	0.0				
Detector 1 Delay (s)		0.0	0.0				
Detector 2 Position(ft)			94				
Detector 2 Size(ft)			6				
Detector 2 Type			Cl+Ex				
Detector 2 Channel							
Detector 2 Extend (s)			0.0				
Turn Type		custom	NA				
Protected Phases			4			1	
Permitted Phases		2					
Detector Phase		2	4				
Switch Phase							
Minimum Initial (s)		4.0	4.0			4.0	
Minimum Split (s)		20.0	20.0			8.0	

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - AM Peak Hour

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McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2015 Existing - AM Peak Hour
12: McKinney & Cityplace

	↖	↗	↑	↘	↙	↓	
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø1
Total Split (s)		57.0	48.0				15.0
Total Split (%)		47.5%	40.0%				13%
Maximum Green (s)		53.0	44.0				11.0
Yellow Time (s)		3.5	3.5				3.5
All-Red Time (s)		0.5	0.5				0.5
Lost Time Adjust (s)		0.0	0.0				
Total Lost Time (s)		4.0	4.0				
Lead/Lag		Lag					Lead
Lead-Lag Optimize?		Yes					Yes
Vehicle Extension (s)		3.0	3.0				3.0
Recall Mode		C-Max	None				None
Walk Time (s)		5.0	5.0				
Flash Dont Walk (s)		11.0	11.0				
Pedestrian Calls (#/hr)		0	0				
Act Effct Green (s)		87.2	24.8				
Actuated g/C Ratio		0.73	0.21				
v/c Ratio		0.05	0.69				
Control Delay		0.1	40.2				
Queue Delay		0.0	0.0				
Total Delay		0.1	40.2				
LOS		A	D				
Approach Delay			40.2				
Approach LOS			D				

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 58 (48%), Referenced to phase 2:WBR, Start of Yellow

Natural Cycle: 50

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 37.1

Intersection LOS: D

Intersection Capacity Utilization 23.0%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 12: McKinney & Cityplace



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2015 Existing - AM Peak Hour

Lanes, Volumes, Timings

13: McKinney & Blackburn

	←	→	↙	↘	←	↙	↘	↑	↗	↖	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↗			↗			↗				
Volume (vph)	80	529	0	0	875	219	60	428	155	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	0.91	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.963			0.961				
Flt Protected	0.950							0.995				
Satd. Flow (prot)	1770	3539	0	0	4897	0	0	4863	0	0	0	0
Flt Permitted	0.200							0.995				
Satd. Flow (perm)	373	3539	0	0	4897	0	0	4863	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					132			178				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		419			236			442			368	
Travel Time (s)		9.5			5.4			10.0			8.4	
Peak Hour Factor	0.83	0.91	1.00	1.00	0.94	0.73	0.84	0.94	0.83	1.00	1.00	1.00
Adj. Flow (vph)	96	581	0	0	931	300	71	455	187	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	96	581	0	0	1231	0	0	713	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		18			18			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1		1	1				
Detector Template												
Leading Detector (ft)	50	50			50		50	50				
Trailing Detector (ft)	0	0			0		0	0				
Detector 1 Position(ft)	0	0			0		0	0				
Detector 1 Size(ft)	50	50			50		50	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	1	6			2			8				
Permitted Phases	6						8					
Detector Phase	1	6			2		8	8				
Switch Phase												
Minimum Initial (s)	3.0	14.0			10.0		14.0	14.0				
Minimum Split (s)	8.0	20.0			20.0		33.5	33.5				
Total Split (s)	12.0	32.0			20.0		28.0	28.0				
Total Split (%)	20.0%	53.3%			33.3%		46.7%	46.7%				
Maximum Green (s)	7.0	27.0			15.0		22.5	22.5				
Yellow Time (s)	3.0	4.0			4.0		4.0	4.0				
All-Red Time (s)	2.0	1.0			1.0		1.5	1.5				

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2015 Existing - AM Peak Hour

Lanes, Volumes, Timings

13: McKinney & Blackburn

	←	→	↙	↘	←	↙	↘	↑	↗	↖	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0			-1.0							-1.5
Total Lost Time (s)	4.0	4.0			4.0							4.0
Lead/Lag	Lag				Lead							
Lead-Lag Optimize?	Yes				Yes							
Vehicle Extension (s)	1.5	2.0			2.0		2.0	2.0				
Recall Mode	Min	Min			Min		C-Max	C-Max				
Walk Time (s)		7.0			7.0		7.0	7.0				
Flash Dont Walk (s)		8.0			8.0		21.0	21.0				
Pedestrian Calls (#/hr)		0			0		0	0				
Act Effct Green (s)	25.4	25.4			16.0			26.6				
Actuated g/C Ratio	0.42	0.42			0.27			0.44				
v/c Ratio	0.34	0.39			0.88			0.32				
Control Delay	29.4	22.4			27.9			11.5				
Queue Delay	0.0	0.0			0.0			0.0				
Total Delay	29.4	22.4			27.9			11.5				
LOS	C	C			C			B				
Approach Delay		23.4			27.9			11.5				
Approach LOS		C			C			B				

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 50 (83%), Referenced to phase 8:NBTL, Start of Yellow

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 22.3

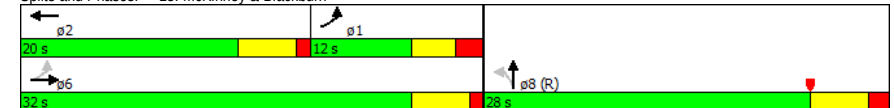
Intersection LOS: C

Intersection Capacity Utilization 61.1%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 13: McKinney & Blackburn



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2015 Existing - AM Peak Hour

Lanes, Volumes, Timings

14: Cole & Blackburn

	←	→	↖	↗	←	↖	↗	→	↖	↗	→	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑						↑↑↑	
Volume (vph)	0	418	70	372	580	0	0	0	0	181	574	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.977									0.980	
Flt Protected				0.950							0.988	
Satd. Flow (prot)	0	3458	0	1770	3539	0	0	0	0	0	4924	0
Flt Permitted				0.257							0.988	
Satd. Flow (perm)	0	3458	0	479	3539	0	0	0	0	0	4924	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		32									58	
Link Speed (mph)		30			30				30		30	
Link Distance (ft)		216			419				877		400	
Travel Time (s)		4.9			9.5				19.9		9.1	
Peak Hour Factor	1.00	0.94	0.89	0.92	0.87	0.25	1.00	1.00	1.00	0.79	0.94	0.68
Adj. Flow (vph)	0	445	79	404	667	0	0	0	0	229	611	128
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	524	0	404	667	0	0	0	0	0	968	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12				0		0	
Link Offset(ft)		0			0				0		0	
Crosswalk Width(ft)		16			16				16		16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1		1	1					1	1	
Detector Template												
Leading Detector (ft)		50		50	50					50	50	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		50		50	50					50	50	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		6		5	2						4	
Permitted Phases				2						4		
Detector Phase		6		5	2					4	4	
Switch Phase												
Minimum Initial (s)		6.0		3.0	6.0					10.0	10.0	
Minimum Split (s)		20.0		8.0	20.0					33.5	33.5	
Total Split (s)		19.0		12.0	31.0					29.0	29.0	
Total Split (%)		31.7%		20.0%	51.7%					48.3%	48.3%	
Maximum Green (s)		14.0		7.0	26.0					23.5	23.5	
Yellow Time (s)		4.0		3.0	4.0					4.0	4.0	
All-Red Time (s)		1.0		2.0	1.0					1.5	1.5	

McKinney - Cole Uptown Evaluation

2015 Existing - AM Peak Hour

Lanes, Volumes, Timings

14: Cole & Blackburn

	←	→	↖	↗	←	↖	↗	→	↖	↗	→	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-1.0		-1.0	-1.0							-1.5
Total Lost Time (s)		4.0		4.0	4.0							4.0
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		1.5		2.0	1.5					2.0	2.0	
Recall Mode		C-Min		Min	C-Min					None	None	
Walk Time (s)		7.0			7.0					7.0	7.0	
Flash Dont Walk (s)		8.0			8.0					21.0	21.0	
Pedestrian Calls (#/hr)		0			0					0	0	
Act Effct Green (s)		14.7		34.1	34.1						17.9	
Actuated g/C Ratio		0.24		0.57	0.57						0.30	
v/c Ratio		0.60		0.67	0.33						0.64	
Control Delay		22.2		16.0	2.1						22.7	
Queue Delay		0.0		0.0	0.0						0.0	
Total Delay		22.2		16.0	2.1						22.7	
LOS		C		B	A						C	
Approach Delay		22.2		7.4							22.7	
Approach LOS		C		A							C	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 30 (50%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.67

Intersection Signal Delay: 16.2

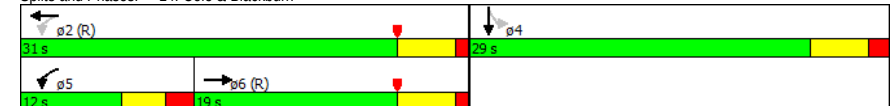
Intersection LOS: B

Intersection Capacity Utilization 61.1%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 14: Cole & Blackburn



McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2015 Existing - AM Peak Hour
24: McKinney & Fitzhugh

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	101	614	0	0	1155	172	108	280	119	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	152		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.978			0.963				
Flt Protected	0.950							0.988				
Satd. Flow (prot)	1770	5085	0	0	4973	0	0	4838	0	0	0	0
Flt Permitted	0.098							0.988				
Satd. Flow (perm)	183	5085	0	0	4973	0	0	4838	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					36			74				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		297			318			837			1927	
Travel Time (s)		6.8			7.2			19.0			43.8	
Peak Hour Factor	0.93	0.96	1.00	1.00	0.84	0.73	0.76	0.91	0.81	1.00	1.00	1.00
Adj. Flow (vph)	109	640	0	0	1375	236	142	308	147	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	109	640	0	0	1611	0	0	597	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1		1	1				
Detector Template												
Leading Detector (ft)	50	50			50		50	50				
Trailing Detector (ft)	0	0			0		0	0				
Detector 1 Position(ft)	0	0			0		0	0				
Detector 1 Size(ft)	50	50			50		50	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	21	6 26			2 22			4 24				
Permitted Phases	6 26						4 24					
Detector Phase	21	6 26			2 22		4 24	4 24				
Switch Phase												
Minimum Initial (s)	4.0											
Minimum Split (s)	9.0											
Total Split (s)	10.0											
Total Split (%)	8.3%											

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2015 Existing - AM Peak Hour
24: McKinney & Fitzhugh

Lane Group	ø2	ø4	ø6	ø22	ø24	ø26
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Turn Type						
Protected Phases	2	4	6	22	24	26
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	10.0	8.0	10.0	10.0	8.0	10.0
Minimum Split (s)	19.7	25.3	19.7	20.0	25.3	20.0
Total Split (s)	37.0	25.0	37.0	25.0	23.0	35.0
Total Split (%)	31%	21%	31%	21%	19%	29%

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

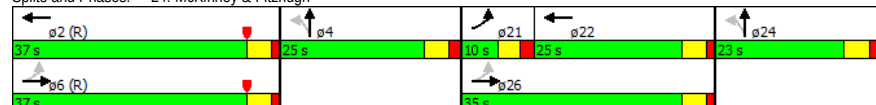
2015 Existing - AM Peak Hour
24: McKinney & Fitzhugh

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)	5.0											
Yellow Time (s)	3.0											
All-Red Time (s)	2.0											
Lost Time Adjust (s)	-1.0											
Total Lost Time (s)	4.0											
Lead/Lag	Lead											
Lead-Lag Optimize?	Yes											
Vehicle Extension (s)	3.0											
Recall Mode	None											
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effect Green (s)	79.4	79.4			65.6			24.6				
Actuated g/C Ratio	0.66	0.66			0.55			0.20				
v/c Ratio	0.44	0.19			0.59			0.57				
Control Delay	25.9	2.6			11.0			21.0				
Queue Delay	0.0	0.0			0.0			0.0				
Total Delay	25.9	2.6			11.0			21.0				
LOS	C	A			B			C				
Approach Delay		6.0			11.0			21.0				
Approach LOS		A			B			C				

Intersection Summary

Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 58 (48%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 11.8	Intersection LOS: B
Intersection Capacity Utilization 52.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 24: McKinney & Fitzhugh



McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2015 Existing - AM Peak Hour
24: McKinney & Fitzhugh

Lane Group	ø2	ø4	ø6	ø22	ø24	ø26
Maximum Green (s)	32.3	19.7	32.3	20.3	17.7	30.3
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.2	1.8	1.2	1.2	1.8	1.2
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag				Lag		
Lead-Lag Optimize?				Yes		
Vehicle Extension (s)	2.0	1.8	2.0	3.0	3.0	3.0
Recall Mode	C-Max	None	C-Max	None	None	None
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Flash Dont Walk (s)	8.0	16.0	8.0	8.0	16.0	8.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effect Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						

Intersection Summary

McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings2015 Existing - AM Peak Hour
25: Cole & Fitzhugh

	↖	→	↘	↙	←	↖	↙	↑	↘	↙	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑		↖	↑↑↑						↑↑↑	
Volume (vph)	0	708	41	143	1094	0	0	0	0	41	381	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	162		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.990									0.945	
Flt Protected				0.950							0.996	
Satd. Flow (prot)	0	5034	0	1770	5085	0	0	0	0	0	4786	0
Flt Permitted				0.320							0.996	
Satd. Flow (perm)	0	5034	0	596	5085	0	0	0	0	0	4786	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16									83	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		231			172			802			1956	
Travel Time (s)		5.3			3.9			18.2			44.5	
Peak Hour Factor	1.00	0.98	0.76	0.86	0.88	1.00	1.00	1.00	1.00	0.73	0.95	0.88
Adj. Flow (vph)	0	722	54	166	1243	0	0	0	0	56	401	267
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	776	0	166	1243	0	0	0	0	0	724	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Right	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1		1	1					1	1	
Detector Template												
Leading Detector (ft)		50		50	50					50	50	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		50		50	50					50	50	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		6 26		25	2 22						4 24	
Permitted Phases				2 22						4 24		
Detector Phase		6 26		25	2 22					4 24	4 24	
Switch Phase												
Minimum Initial (s)				4.0								
Minimum Split (s)				9.0								
Total Split (s)				10.0								
Total Split (%)				8.3%								

McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings2015 Existing - AM Peak Hour
25: Cole & Fitzhugh

Lane Group	ø2	ø4	ø6	ø22	ø24	ø26
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Turn Type						
Protected Phases	2	4	6	22	24	26
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	10.0	4.0	10.0	10.0	4.0	10.0
Minimum Split (s)	27.0	27.0	20.0	26.0	27.0	21.0
Total Split (s)	51.0	18.0	51.0	34.0	17.0	24.0
Total Split (%)	43%	15%	43%	28%	14%	20%

McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

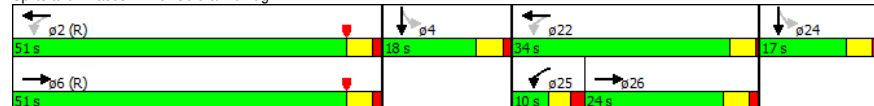
2015 Existing - AM Peak Hour
25: Cole & Fitzhugh

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)				5.0								
Yellow Time (s)				3.0								
All-Red Time (s)				2.0								
Lost Time Adjust (s)				-1.0								
Total Lost Time (s)				4.0								
Lead/Lag				Lead								
Lead-Lag Optimize?				Yes								
Vehicle Extension (s)				3.0								
Recall Mode				None								
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effect Green (s)	68.8			79.2	79.2							24.8
Actuated g/C Ratio	0.57			0.66	0.66							0.21
v/c Ratio	0.27			0.36	0.37							0.69
Control Delay	7.0			10.4	8.1							23.1
Queue Delay	0.0			0.0	0.0							0.0
Total Delay	7.0			10.4	8.1							23.1
LOS	A			B	A							C
Approach Delay	7.0				8.4							23.1
Approach LOS	A				A							C

Intersection Summary

Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 48 (40%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 11.7	Intersection LOS: B
Intersection Capacity Utilization 52.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 25: Cole & Fitzhugh



McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2015 Existing - AM Peak Hour
25: Cole & Fitzhugh

Lane Group	Ø2	Ø4	Ø6	Ø22	Ø24	Ø26
Maximum Green (s)	46.0	13.0	46.0	30.0	12.0	19.0
Yellow Time (s)	3.6	3.6	3.6	3.5	3.6	3.6
All-Red Time (s)	1.4	1.4	1.4	0.5	1.4	1.4
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag						Lag
Lead-Lag Optimize?						Yes
Vehicle Extension (s)	2.0	2.0	2.0	3.0	2.0	3.0
Recall Mode	C-Max	None	C-Max	Max	None	Max
Walk Time (s)	6.0	6.0	5.0	6.0	6.0	5.0
Flash Dont Walk (s)	16.0	16.0	10.0	16.0	16.0	10.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effect Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						

Intersection Summary

McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2015 Existing - AM Peak Hour
28: McKinney & Knox

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕↕↕				
Volume (vph)	29	379	0	0	693	61	50	228	197	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.985			0.945				
Flt Protected		0.996						0.994				
Satd. Flow (prot)	0	3525	0	0	3486	0	0	4777	0	0	0	0
Flt Permitted		0.898						0.994				
Satd. Flow (perm)	0	3178	0	0	3486	0	0	4777	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					20			207				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		461			315			685			1670	
Travel Time (s)		10.5			7.2			15.6			38.0	
Peak Hour Factor	0.86	0.90	1.00	0.38	0.92	0.74	0.79	0.78	0.95	1.00	1.00	1.00
Adj. Flow (vph)	34	421	0	0	753	82	63	292	207	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	455	0	0	835	0	0	562	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1		1	1				
Detector Template												
Leading Detector (ft)	50	50			50		50	50				
Trailing Detector (ft)	0	0			0		0	0				
Detector 1 Position(ft)	0	0			0		0	0				
Detector 1 Size(ft)	50	50			50		50	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	1	6			2			4				
Permitted Phases	6						4					
Detector Phase	1	6			2		4	4				
Switch Phase												
Minimum Initial (s)	4.0	12.0			12.0		12.0	12.0				
Minimum Split (s)	9.0	17.0			17.0		17.0	17.0				
Total Split (s)	13.0	36.0			23.0		24.0	24.0				
Total Split (%)	21.7%	60.0%			38.3%		40.0%	40.0%				
Maximum Green (s)	8.0	31.0			18.0		19.0	19.0				
Yellow Time (s)	3.0	3.4			3.4		3.4	3.4				
All-Red Time (s)	2.0	1.6			1.6		1.6	1.6				

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2015 Existing - AM Peak Hour
28: McKinney & Knox

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-1.0			-1.0						-1.0	
Total Lost Time (s)		4.0			4.0						4.0	
Lead/Lag	Lead				Lag							
Lead-Lag Optimize?	Yes				Yes							
Vehicle Extension (s)	1.0	1.5			1.5			3.0	3.0			
Recall Mode	Max	C-Max			Max			Max	Max			
Walk Time (s)		6.0			6.0			4.0	4.0			
Flash Dont Walk (s)		6.0			6.0			8.0	8.0			
Pedestrian Calls (#/hr)		0			0			0	0			
Act Effect Green (s)		32.0			19.0			20.0				
Actuated g/C Ratio		0.53			0.32			0.33				
v/c Ratio		0.26			0.75			0.32				
Control Delay		8.2			22.9			7.6				
Queue Delay		0.0			0.0			0.0				
Total Delay		8.2			22.9			7.6				
LOS		A			C			A				
Approach Delay		8.2			22.9			7.6				
Approach LOS		A			C			A				

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 58 (97%), Referenced to phase 6:EBTL, Start of Yellow

Natural Cycle: 45

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 14.6

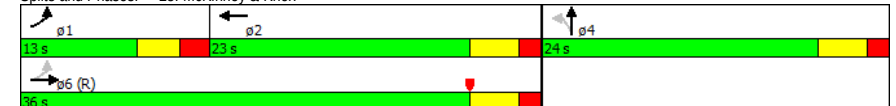
Intersection LOS: B

Intersection Capacity Utilization 49.2%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 28: McKinney & Knox



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2015 Existing - AM Peak Hour

Lanes, Volumes, Timings

29: Cole & Knox

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑						↑↑	
Volume (vph)	0	321	55	204	525	0	0	0	0	87	298	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt	0.977					0.975						
Flt Protected					0.985						0.990	
Satd. Flow (prot)	0	3458	0	0	3486	0	0	0	0	0	4909	0
Flt Permitted					0.698						0.990	
Satd. Flow (perm)	0	3458	0	0	2470	0	0	0	0	0	4909	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18									38	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		239			461			672			1685	
Travel Time (s)		5.4			10.5			15.3			38.3	
Peak Hour Factor	0.25	0.95	0.88	0.83	0.96	1.00	1.00	1.00	1.00	0.77	0.87	0.81
Adj. Flow (vph)	0	338	62	246	547	0	0	0	0	113	343	90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	400	0	0	793	0	0	0	0	0	546	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1		1	1					1	1	
Detector Template												
Leading Detector (ft)		50		50	50					50	50	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		50		50	50					50	50	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		6 26		5 25	2 22						4 24	
Permitted Phases				2 22						4 24		
Detector Phase		6 26		5 25	2 22					4 24	4 24	
Switch Phase												
Minimum Initial (s)												
Minimum Split (s)												
Total Split (s)												
Total Split (%)												
Maximum Green (s)												
Yellow Time (s)												
All-Red Time (s)												

McKinney - Cole Uptown Evaluation

2015 Existing - AM Peak Hour

Lanes, Volumes, Timings

29: Cole & Knox

Lane Group	ø2	ø4	ø5	ø6	ø22	ø24	ø25	ø26
Lane Configurations								
Volume (vph)								
Ideal Flow (vphpl)								
Lane Util. Factor								
Frt								
Flt Protected								
Satd. Flow (prot)								
Flt Permitted								
Satd. Flow (perm)								
Right Turn on Red								
Satd. Flow (RTOR)								
Link Speed (mph)								
Link Distance (ft)								
Travel Time (s)								
Peak Hour Factor								
Adj. Flow (vph)								
Shared Lane Traffic (%)								
Lane Group Flow (vph)								
Enter Blocked Intersection								
Lane Alignment								
Median Width(ft)								
Link Offset(ft)								
Crosswalk Width(ft)								
Two way Left Turn Lane								
Headway Factor								
Turning Speed (mph)								
Number of Detectors								
Detector Template								
Leading Detector (ft)								
Trailing Detector (ft)								
Detector 1 Position(ft)								
Detector 1 Size(ft)								
Detector 1 Type								
Detector 1 Channel								
Detector 1 Extend (s)								
Detector 1 Queue (s)								
Detector 1 Delay (s)								
Turn Type								
Protected Phases	2	4	5	6	22	24	25	26
Permitted Phases								
Detector Phase								
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	19.0	19.0	9.0	19.0	20.0	20.0	8.0	20.0
Total Split (s)	38.0	20.0	15.0	23.0	32.0	30.0	10.0	22.0
Total Split (%)	32%	17%	13%	19%	27%	25%	8%	18%
Maximum Green (s)	33.0	15.0	10.0	18.0	28.0	26.0	6.0	18.0
Yellow Time (s)	3.5	3.5	3.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.5	1.5	2.0	1.5	0.5	0.5	0.5	0.5

McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

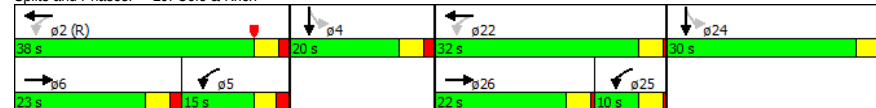
2015 Existing - AM Peak Hour
29: Cole & Knox

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)												
Total Lost Time (s)												
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)												
Recall Mode												
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	78.9			78.9						25.1		
Actuated g/C Ratio	0.66			0.66						0.21		
v/c Ratio	0.18			0.49						0.52		
Control Delay	4.2			5.0						24.5		
Queue Delay	0.0			0.1						0.0		
Total Delay	4.2			5.2						24.5		
LOS	A			A						C		
Approach Delay	4.2			5.2						24.5		
Approach LOS	A			A						C		

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 31 (26%), Referenced to phase 2:WBTL, Start of Yellow
 Natural Cycle: 95
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.52
 Intersection Signal Delay: 11.0 Intersection LOS: B
 Intersection Capacity Utilization 50.2% ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 29: Cole & Knox



McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2015 Existing - AM Peak Hour
29: Cole & Knox

Lane Group	ø2	ø4	ø5	ø6	ø22	ø24	ø25	ø26
Lost Time Adjust (s)								
Total Lost Time (s)								
Lead/Lag				Lag	Lead		Lag	Lead
Lead-Lag Optimize?				Yes	Yes		Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	Max	None	Max	None	None	None	None
Walk Time (s)	8.0	4.0		4.0	5.0	5.0		5.0
Flash Dont Walk (s)	6.0	10.0		10.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0		0	0	0		0
Act Effct Green (s)								
Actuated g/C Ratio								
v/c Ratio								
Control Delay								
Queue Delay								
Total Delay								
LOS								
Approach Delay								
Approach LOS								

Intersection Summary

McKinney - Cole Uptown Evaluation
HCM 2010 AWSC

2015 Existing - AM Peak Hour
30: McKinney & Monticello

Intersection												
Intersection Delay, s/veh	14.7											
Intersection LOS	B											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	44	59	0	0	207	206	36	287	56	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	48	64	0	0	225	224	39	312	61	0	0	0
Number of Lanes	0	1	0	0	1	0	0	3	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	3	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	3	0	1
HCM Control Delay	10.9	19.3	10.7
HCM LOS	B	C	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1
Vol Left, %	33%	0%	0%	43%	0%
Vol Thru, %	67%	100%	56%	57%	50%
Vol Right, %	0%	0%	44%	0%	50%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	108	144	128	103	413
LT Vol	72	144	72	59	207
Through Vol	0	0	56	0	206
RT Vol	36	0	0	44	0
Lane Flow Rate	117	156	139	112	449
Geometry Grp	7	7	7	7	7
Degree of Util (X)	0.206	0.266	0.225	0.202	0.684
Departure Headway (Hd)	6.317	6.148	5.837	6.494	5.489
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	569	585	615	553	660
Service Time	4.048	3.879	3.568	4.232	3.217
HCM Lane V/C Ratio	0.206	0.267	0.226	0.203	0.68
HCM Control Delay	10.7	11.1	10.3	10.9	19.3
HCM Lane LOS	B	B	B	B	C
HCM 95th-tile Q	0.8	1.1	0.9	0.7	5.4

Notes

~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2015 Existing - AM Peak Hour
3: Allen & Sneed

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement												
Lane Configurations		↔			↔						↔↔	
Volume (veh/h)	0	40	27	10	23	0	0	0	0	38	533	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	43	29	11	25	0	0	0	0	41	579	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)								1012			553	
pX, platoon unblocked												
vC, conflicting volume	674	662	290	423	662	0	579			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	674	662	290	423	662	0	579			0		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	88	96	98	93	100	100			97		
cM capacity (veh/h)	316	371	707	440	371	1084	991			1622		
Direction, Lane #	EB 1	WB 1	SB 1	SB 2								
Volume Total	73	36	331	290								
Volume Left	0	11	41	0								
Volume Right	29	0	0	0								
cSH	459	390	1622	1700								
Volume to Capacity	0.16	0.09	0.03	0.17								
Queue Length 95th (ft)	14	8	2	0								
Control Delay (s)	14.3	15.2	1.1	0.0								
Lane LOS	B	C	A									
Approach Delay (s)	14.3	15.2	0.6									
Approach LOS	B	C										
Intersection Summary												
Average Delay			2.7									
Intersection Capacity Utilization			30.9%			ICU Level of Service		A				
Analysis Period (min)			15									

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2015 Existing - AM Peak Hour
15: McKinney & Haskell

	EBL	EBR	NBL	NBT	SBT	SBR
Movement						
Lane Configurations	↔			↔↔↔		
Volume (veh/h)	0	0	190	564	0	0
Sign Control		Stop		Free	Free	
Grade		0%		0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	207	613	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				368		
pX, platoon unblocked						
vC, conflicting volume	617	0	0			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	617	0	0			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	87			
cM capacity (veh/h)	368	1084	1622			
Direction, Lane #	EB 1	NB 1	NB 2	NB 3		
Volume Total	0	329	245	245		
Volume Left	0	207	0	0		
Volume Right	0	0	0	0		
cSH	1700	1622	1700	1700		
Volume to Capacity	0.00	0.13	0.14	0.14		
Queue Length 95th (ft)	0	11	0	0		
Control Delay (s)	0.0	5.1	0.0	0.0		
Lane LOS	A	A				
Approach Delay (s)	0.0	2.1				
Approach LOS	A					
Intersection Summary						
Average Delay			2.1			
Intersection Capacity Utilization			34.8%		ICU Level of Service	A
Analysis Period (min)			15			

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2015 Existing - AM Peak Hour
16: Cole & Haskell

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	152	0	0	0	0	695
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	165	0	0	0	0	755
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)			400			
pX, platoon unblocked						
vC, conflicting volume	252	0			0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	252	0			0	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	77	100			100	
cM capacity (veh/h)	715	1084			1622	
Direction, Lane #	WB 1	SB 1	SB 2	SB 3		
Volume Total	165	151	302	302		
Volume Left	165	0	0	0		
Volume Right	0	0	0	0		
cSH	715	1622	1700	1700		
Volume to Capacity	0.23	0.00	0.18	0.18		
Queue Length 95th (ft)	22	0	0	0		
Control Delay (s)	11.5	0.0	0.0	0.0		
Lane LOS	B					
Approach Delay (s)	11.5	0.0				
Approach LOS	B					
Intersection Summary						
Average Delay			2.1			
Intersection Capacity Utilization			34.8%		ICU Level of Service	A
Analysis Period (min)			15			

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2015 Existing - AM Peak Hour
17: Cole & Haskell EB

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	36	0	0	695	7
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	39	0	0	755	8
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				528		
pX, platoon unblocked						
vC, conflicting volume	759	256	763			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	759	256	763			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	95	100			
cM capacity (veh/h)	342	744	845			
Direction, Lane #	EB 1	SB 1	SB 2	SB 3		
Volume Total	39	302	302	159		
Volume Left	0	0	0	0		
Volume Right	39	0	0	8		
cSH	744	1700	1700	1700		
Volume to Capacity	0.05	0.18	0.18	0.09		
Queue Length 95th (ft)	4	0	0	0		
Control Delay (s)	10.1	0.0	0.0	0.0		
Lane LOS	B					
Approach Delay (s)	10.1	0.0				
Approach LOS	B					
Intersection Summary						
Average Delay			0.5			
Intersection Capacity Utilization			23.6%		ICU Level of Service	A
Analysis Period (min)			15			

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2015 Existing - AM Peak Hour
18: McKinney & North Dallas High School

	EBL	EBR	NBL	NBT	SBT	SBR
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	4	0	39	591	0	0
Volume (veh/h)	4	0	39	591	0	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	0	42	642	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				978		
pX, platoon unblocked						
vC, conflicting volume	299	0	0			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	299	0	0			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	100	97			
cM capacity (veh/h)	651	1084	1622			
Direction, Lane #	EB 1	NB 1	NB 2	NB 3		
Volume Total	4	171	257	257		
Volume Left	4	42	0	0		
Volume Right	0	0	0	0		
cSH	651	1622	1700	1700		
Volume to Capacity	0.01	0.03	0.15	0.15		
Queue Length 95th (ft)	1	2	0	0		
Control Delay (s)	10.6	2.0	0.0	0.0		
Lane LOS	B	A				
Approach Delay (s)	10.6	0.5				
Approach LOS	B					
Intersection Summary						
Average Delay			0.6			
Intersection Capacity Utilization			35.7%		ICU Level of Service	A
Analysis Period (min)			15			

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2015 Existing - AM Peak Hour
19: Cole & North Dallas High School

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						  
Volume (veh/h)	12	0	0	0	30	689
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	0	0	0	33	749
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)			816			
pX, platoon unblocked						
vC, conflicting volume	315	0			0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	315	0			0	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			98	
cM capacity (veh/h)	640	1084			1622	
Direction, Lane #	WB 1	SB 1	SB 2	SB 3		
Volume Total	13	182	300	300		
Volume Left	13	33	0	0		
Volume Right	0	0	0	0		
cSH	640	1622	1700	1700		
Volume to Capacity	0.02	0.02	0.18	0.18		
Queue Length 95th (ft)	2	2	0	0		
Control Delay (s)	10.7	1.4	0.0	0.0		
Lane LOS	B	A				
Approach Delay (s)	10.7	0.3				
Approach LOS	B					
Intersection Summary						
Average Delay			0.5			
Intersection Capacity Utilization			35.7%		ICU Level of Service	A
Analysis Period (min)			15			

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2015 Existing - AM Peak Hour
20: McKinney & Cambrick

	EBL	EBR	NBL	NBT	SBT	SBR
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖			↗↖↗		
Volume (veh/h)	2	0	3	600	0	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	0	3	652	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	224	0	0			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	224	0	0			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	743	1084	1622			
Direction, Lane #	EB 1	NB 1	NB 2	NB 3		
Volume Total	2	134	261	261		
Volume Left	2	3	0	0		
Volume Right	0	0	0	0		
cSH	743	1622	1700	1700		
Volume to Capacity	0.00	0.00	0.15	0.15		
Queue Length 95th (ft)	0	0	0	0		
Control Delay (s)	9.9	0.2	0.0	0.0		
Lane LOS	A	A				
Approach Delay (s)	9.9	0.0				
Approach LOS	A					
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			21.7%		ICU Level of Service	A
Analysis Period (min)			15			

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2015 Existing - AM Peak Hour
21: Cole & Cambrick

	EBL	EBR	NBL	NBT	SBT	SBR
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↖			↗↖↗	
Volume (veh/h)	0	26	0	0	661	10
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	28	0	0	718	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				1239		
pX, platoon unblocked						
vC, conflicting volume	724	245	729			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	724	245	729			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	96	100			
cM capacity (veh/h)	361	755	870			
Direction, Lane #	EB 1	SB 1	SB 2	SB 3		
Volume Total	28	287	287	155		
Volume Left	0	0	0	0		
Volume Right	28	0	0	11		
cSH	755	1700	1700	1700		
Volume to Capacity	0.04	0.17	0.17	0.09		
Queue Length 95th (ft)	3	0	0	0		
Control Delay (s)	10.0	0.0	0.0	0.0		
Lane LOS	A					
Approach Delay (s)	10.0	0.0				
Approach LOS	A					
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			23.0%		ICU Level of Service	A
Analysis Period (min)			15			

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2015 Existing - AM Peak Hour
22: McKinney & Elizabeth

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement												
Lane Configurations		↔			↔			↔↔↔				
Volume (veh/h)	46	29	0	0	29	18	33	481	59	0	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	50	32	0	0	32	20	36	523	64	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)											837	
pX, platoon unblocked												
vC, conflicting volume	281	659	0	642	627	206	0			587		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	281	659	0	642	627	206	0			587		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	91	92	100	100	92	98	98			100		
cM capacity (veh/h)	584	374	1084	330	390	800	1622			984		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3							
Volume Total	82	51	167	261	195							
Volume Left	50	0	36	0	0							
Volume Right	0	20	0	0	64							
cSH	480	485	1622	1700	1700							
Volume to Capacity	0.17	0.11	0.02	0.15	0.11							
Queue Length 95th (ft)	15	9	2	0	0							
Control Delay (s)	14.0	13.3	1.7	0.0	0.0							
Lane LOS	B	B	A									
Approach Delay (s)	14.0	13.3	0.5									
Approach LOS	B	B										
Intersection Summary												
Average Delay			2.8									
Intersection Capacity Utilization			28.7%			ICU Level of Service		A				
Analysis Period (min)			15									

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2015 Existing - AM Peak Hour
23: Cole & Elizabeth

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement												
Lane Configurations		↔			↔						↔↔↔	
Volume (veh/h)	0	22	32	61	15	0	0	0	0	50	573	5
Sign Control		Stop			Stop				Free		Free	
Grade		0%			0%				0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	24	35	66	16	0	0	0	0	54	623	5
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)											802	
pX, platoon unblocked												
vC, conflicting volume	742	734	210	363	737	0	628			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	742	734	210	363	737	0	628			0		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	93	96	87	95	100	100			97		
cM capacity (veh/h)	285	334	795	500	333	1084	950			1622		
Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3							
Volume Total	59	83	210	311	161							
Volume Left	0	66	54	0	0							
Volume Right	35	0	0	0	5							
cSH	509	455	1622	1700	1700							
Volume to Capacity	0.12	0.18	0.03	0.18	0.09							
Queue Length 95th (ft)	10	16	3	0	0							
Control Delay (s)	13.0	14.7	2.1	0.0	0.0							
Lane LOS	B	B	A									
Approach Delay (s)	13.0	14.7	0.6									
Approach LOS	B	B										
Intersection Summary												
Average Delay			2.9									
Intersection Capacity Utilization			29.7%			ICU Level of Service		A				
Analysis Period (min)			15									

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2015 Existing - AM Peak Hour
26: McKinney & Armstrong

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement												
Lane Configurations		↔			↔			↔↔↔				
Volume (veh/h)	29	6	0	0	65	19	53	450	11	0	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	32	7	0	0	71	21	58	489	12	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)											685	
pX, platoon unblocked												
vC, conflicting volume	334	616	0	614	610	169	0			501		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	334	616	0	614	610	169	0			501		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	94	98	100	100	82	98	96			100		
cM capacity (veh/h)	487	390	1084	361	393	845	1622			1059		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3							
Volume Total	38	91	180	245	134							
Volume Left	32	0	58	0	0							
Volume Right	0	21	0	0	12							
cSH	467	447	1622	1700	1700							
Volume to Capacity	0.08	0.20	0.04	0.14	0.08							
Queue Length 95th (ft)	7	19	3	0	0							
Control Delay (s)	13.4	15.1	2.5	0.0	0.0							
Lane LOS	B	C	A									
Approach Delay (s)	13.4	15.1	0.8									
Approach LOS	B	C										
Intersection Summary												
Average Delay			3.4									
Intersection Capacity Utilization			25.3%			ICU Level of Service		A				
Analysis Period (min)			15									

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2015 Existing - AM Peak Hour
27: Cole & Armstrong

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement												
Lane Configurations		↔			↔						↔↔↔	
Volume (veh/h)	0	28	7	23	11	0	0	0	0	57	515	9
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	30	8	25	12	0	0	0	0	62	560	10
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)											672	
pX, platoon unblocked												
vC, conflicting volume	695	689	191	333	693	0	570			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	695	689	191	333	693	0	570			0		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	91	99	95	97	100	100			96		
cM capacity (veh/h)	311	353	818	536	351	1084	999			1622		
Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3							
Volume Total	38	37	202	280	150							
Volume Left	0	25	62	0	0							
Volume Right	8	0	0	0	10							
cSH	399	458	1622	1700	1700							
Volume to Capacity	0.10	0.08	0.04	0.16	0.09							
Queue Length 95th (ft)	8	7	3	0	0							
Control Delay (s)	15.0	13.6	2.5	0.0	0.0							
Lane LOS	B	B	A									
Approach Delay (s)	15.0	13.6	0.8									
Approach LOS	B	B										
Intersection Summary												
Average Delay			2.2									
Intersection Capacity Utilization			26.5%			ICU Level of Service		A				
Analysis Period (min)			15									

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2015 Existing - AM Peak Hour
31: Cole & Monticello

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement												
Lane Configurations		↔			↔						↔↔↔	
Volume (veh/h)	0	0	0	227	0	0	0	0	0	85	132	2
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	247	0	0	0	0	0	92	143	2
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	329	329	49	233	330	0	146			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	329	329	49	233	330	0	146			0		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	63	100	100	100			94		
cM capacity (veh/h)	574	555	1009	672	554	1084	1434			1622		
Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3							
Volume Total	0	247	128	72	38							
Volume Left	0	247	92	0	0							
Volume Right	0	0	0	0	2							
cSH	1700	672	1622	1700	1700							
Volume to Capacity	0.00	0.37	0.06	0.04	0.02							
Queue Length 95th (ft)	0	42	5	0	0							
Control Delay (s)	0.0	13.4	5.4	0.0	0.0							
Lane LOS	A	B	A									
Approach Delay (s)	0.0	13.4	2.9									
Approach LOS	A	B										
Intersection Summary												
Average Delay			8.3									
Intersection Capacity Utilization			24.0%			ICU Level of Service		A				
Analysis Period (min)			15									

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2015 Existing - AM Peak Hour
32: McKinney & Harvard

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement												
Lane Configurations	↔					↔		↔↔	↔			
Volume (veh/h)	3	0	0	0	0	100	1	446	95	0	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	0	0	0	0	109	1	485	103	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	353	487	0	487	487	242	0			485		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	353	487	0	487	487	242	0			485		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	100	100	100	86	100			100		
cM capacity (veh/h)	494	479	1084	463	479	758	1622			1074		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3							
Volume Total	3	109	163	323	103							
Volume Left	3	0	1	0	0							
Volume Right	0	109	0	0	103							
cSH	494	758	1622	1700	1700							
Volume to Capacity	0.01	0.14	0.00	0.19	0.06							
Queue Length 95th (ft)	0	12	0	0	0							
Control Delay (s)	12.3	10.5	0.1	0.0	0.0							
Lane LOS	B	B	A									
Approach Delay (s)	12.3	10.5	0.0									
Approach LOS	B	B										
Intersection Summary												
Average Delay			1.7									
Intersection Capacity Utilization			31.9%			ICU Level of Service		A				
Analysis Period (min)			15									

McKinney - Cole Uptown Evaluation
 HCM Unsignalized Intersection Capacity Analysis

2015 Existing - AM Peak Hour
 33: Cole & Harvard

	→	↗	↖	←	↙	↘
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations		↗	↖	↗		
Volume (veh/h)	0	198	177	332	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	215	192	361	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			0	746	0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol				746	0	
tC, single (s)			4.1	6.4	6.2	
tC, 2 stage (s)						
tF (s)			2.2	3.5	3.3	
p0 queue free %			88	100	100	
cM capacity (veh/h)			1623	336	1085	
Direction, Lane #	EB 1	WB 1	WB 2			
Volume Total	215	192	361			
Volume Left	0	192	0			
Volume Right	215	0	0			
cSH	1700	1623	1700			
Volume to Capacity	0.13	0.12	0.21			
Queue Length 95th (ft)	0	10	0			
Control Delay (s)	0.0	7.5	0.0			
Lane LOS		A				
Approach Delay (s)	0.0	2.6				
Approach LOS						
Intersection Summary						
Average Delay		1.9				
Intersection Capacity Utilization		28.7%		ICU Level of Service	A	
Analysis Period (min)		15				

McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2015 Existing - PM Peak Hour
1: Oak Grove & McKinney

												
Lane Group	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	ø2	ø5
Lane Configurations												
Volume (vph)	186	28	0	839	121	0	0	0	114	101		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Storage Length (ft)	0	0	0		137	0		0	0	0		
Storage Lanes	1	0	0		1	0		0	1	0		
Taper Length (ft)	25		25			25			25			
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00		
Frt	0.981				0.850				0.937			
Flt Protected	0.959								0.974			
Satd. Flow (prot)	1752	0	0	3539	1583	0	0	0	1700	0		
Flt Permitted	0.959								0.974			
Satd. Flow (perm)	1752	0	0	3539	1583	0	0	0	1700	0		
Right Turn on Red		Yes			Yes			Yes				
Satd. Flow (RTOR)	109				122							
Link Speed (mph)	30			30			30		30			
Link Distance (ft)	339			335			848		87			
Travel Time (s)	7.7			7.6			19.3		2.0			
Peak Hour Factor	0.92	0.83	0.92	0.91	0.92	0.89	0.77	0.92	0.92	0.92		
Adj. Flow (vph)	202	34	0	922	132	0	0	0	124	110		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	236	0	0	922	132	0	0	0	234	0		
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No		
Lane Alignment	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right		
Median Width(ft)	12			0			0		12			
Link Offset(ft)	0			-12			12		0			
Crosswalk Width(ft)	16			16			16		16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)	15	9	15		9	15		9	15	9		
Number of Detectors	1			1	1				1			
Detector Template	Left								Left			
Leading Detector (ft)	20			50	50				20			
Trailing Detector (ft)	0			0	0				0			
Detector 1 Position(ft)	0			0	0				0			
Detector 1 Size(ft)	20			50	50				20			
Detector 1 Type	C+Ex			C+Ex	C+Ex				C+Ex			
Detector 1 Channel												
Detector 1 Extend (s)	0.0			0.0	0.0				0.0			
Detector 1 Queue (s)	0.0			0.0	0.0				0.0			
Detector 1 Delay (s)	0.0			0.0	0.0				0.0			
Turn Type	NA			NA	Perm				NA			
Protected Phases	8!			6					5 8!		2	5
Permitted Phases					6							
Detector Phase	8			6	6				5 8			
Switch Phase												
Minimum Initial (s)	8.0			10.0	10.0						10.0	4.0
Minimum Split (s)	18.5			20.5	20.5						20.5	9.0
Total Split (s)	28.0			27.0	27.0						47.0	20.0
Total Split (%)	37.3%			36.0%	36.0%						63%	27%

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - PM Peak Hour

Synchro 8 Report
Page 1

McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2015 Existing - PM Peak Hour
1: Oak Grove & McKinney

												
Lane Group	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	ø2	ø5
Maximum Green (s)	23.5			21.5	21.5						41.5	15.0
Yellow Time (s)	3.5			4.0	4.0						4.0	3.0
All-Red Time (s)	1.0			1.5	1.5						1.5	2.0
Lost Time Adjust (s)	0.0			-1.5	-1.5							
Total Lost Time (s)	4.5			4.0	4.0							
Lead/Lag				Lag	Lag							Lead
Lead-Lag Optimize?				Yes	Yes							Yes
Vehicle Extension (s)	2.0			2.0	2.0						2.0	3.0
Recall Mode	None			C-Max	C-Max						C-Max	None
Walk Time (s)	5.0			5.0	5.0							
Flash Dont Walk (s)	8.0			8.0	8.0							
Pedestrian Calls (#/hr)	0			0	0							
Act Effct Green (s)	13.2			33.4	33.4				32.6			
Actuated g/C Ratio	0.18			0.45	0.45				0.43			
v/c Ratio	0.59			0.58	0.17				0.32			
Control Delay	20.8			19.9	5.1				2.2			
Queue Delay	0.1			0.0	0.0				0.0			
Total Delay	20.9			19.9	5.1				2.2			
LOS	C			B	A				A			
Approach Delay	20.9			18.0					2.2			
Approach LOS	C			B					A			

Intersection Summary

Area Type: Other

Cycle Length: 75

Actuated Cycle Length: 75

Offset: 8 (11%), Referenced to phase 2:SET and 6:, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.67

Intersection Signal Delay: 16.0

Intersection LOS: B

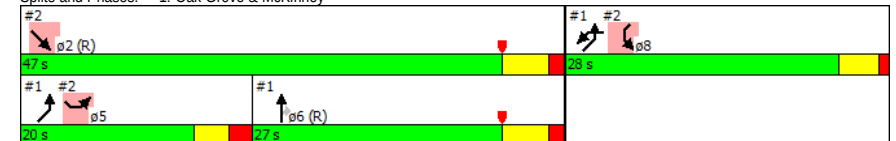
Intersection Capacity Utilization 59.0%

ICU Level of Service B

Analysis Period (min) 15

! Phase conflict between lane groups.

Splits and Phases: 1: Oak Grove & McKinney



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - PM Peak Hour

Synchro 8 Report
Page 2

McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2015 Existing - PM Peak Hour
2: Allen & Oak Grove

Lane Group	SEL	SET	NWT	NWR	SWL	SWR	#6
Lane Configurations							
Volume (vph)	215	477	0	0	186	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	150			0	0	0	
Storage Lanes	1			0	1	0	
Taper Length (ft)	25				25		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	
Frt							
Frt Protected	0.950				0.950		
Satd. Flow (prot)	1770	3539	0	0	1770	0	
Frt Permitted	0.950				0.950		
Satd. Flow (perm)	1770	3539	0	0	1770	0	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)							
Link Speed (mph)		30	30		30		
Link Distance (ft)		1012	296		87		
Travel Time (s)		23.0	6.7		2.0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	234	518	0	0	202	0	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	234	518	0	0	202	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(ft)		12	12		12		
Link Offset(ft)		0	0		0		
Crosswalk Width(ft)		16	16		16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15			9	15	9	
Number of Detectors	1	2			1		
Detector Template	Left	Thru			Left		
Leading Detector (ft)	20	100			20		
Trailing Detector (ft)	0	0			0		
Detector 1 Position(ft)	0	0			0		
Detector 1 Size(ft)	20	6			20		
Detector 1 Type	CI+Ex	CI+Ex			CI+Ex		
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0			0.0		
Detector 1 Queue (s)	0.0	0.0			0.0		
Detector 1 Delay (s)	0.0	0.0			0.0		
Detector 2 Position(ft)		94					
Detector 2 Size(ft)		6					
Detector 2 Type		CI+Ex					
Detector 2 Channel							
Detector 2 Extend (s)		0.0					
Turn Type	Prot	NA			NA		
Protected Phases	5	2			8	6	
Permitted Phases							
Detector Phase	5	2			8		

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2015 Existing - PM Peak Hour
2: Allen & Oak Grove

Lane Group	SEL	SET	NWT	NWR	SWL	SWR	#6
Switch Phase							
Minimum Initial (s)	4.0	10.0			8.0		10.0
Minimum Split (s)	9.0	20.5			18.5		20.5
Total Split (s)	20.0	47.0			28.0		27.0
Total Split (%)	26.7%	62.7%			37.3%		36%
Maximum Green (s)	15.0	41.5			23.5		21.5
Yellow Time (s)	3.0	4.0			3.5		4.0
All-Red Time (s)	2.0	1.5			1.0		1.5
Lost Time Adjust (s)	0.0	0.0			0.0		
Total Lost Time (s)	5.0	5.5			4.5		
Lead/Lag	Lead						Lag
Lead-Lag Optimize?	Yes						Yes
Vehicle Extension (s)	3.0	2.0			2.0		2.0
Recall Mode	None	C-Max			None		C-Max
Walk Time (s)					5.0		5.0
Flash Dont Walk (s)					8.0		8.0
Pedestrian Calls (#/hr)					0		0
Act Effct Green (s)	14.9	51.8			13.2		
Actuated g/C Ratio	0.20	0.69			0.18		
v/c Ratio	0.67	0.21			0.65		
Control Delay	36.9	5.0			22.9		
Queue Delay	0.0	0.0			0.0		
Total Delay	36.9	5.0			22.9		
LOS	D	A			C		
Approach Delay		14.9			22.9		
Approach LOS		B			C		

Intersection Summary

Area Type: Other

Cycle Length: 75

Actuated Cycle Length: 75

Offset: 8 (11%), Referenced to phase 2:SET and 6:, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.67

Intersection Signal Delay: 16.6

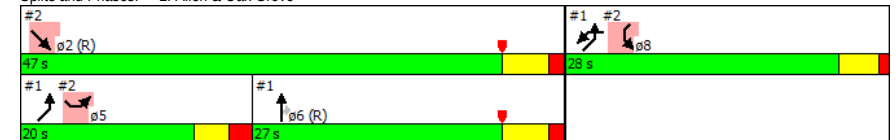
Intersection LOS: B

Intersection Capacity Utilization 31.8%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 2: Allen & Oak Grove



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2015 Existing - PM Peak Hour

Lanes, Volumes, Timings

4: McKinney & Bowen

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	157	176	0	0	84	55	70	893	16	0	0	0
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00
Lane Util. Factor												
Frt					0.940			0.997				
Flt Protected	0.976							0.995				
Satd. Flow (prot)	0	1818	0	0	1751	0	0	5045	0	0	0	0
Flt Permitted	0.726							0.995				
Satd. Flow (perm)	0	1352	0	0	1751	0	0	5045	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					71			8				
Link Speed (mph)	30				30			30			30	
Link Distance (ft)	229				304			848			502	
Travel Time (s)	5.2				6.9			19.3			11.4	
Peak Hour Factor	0.79	0.88	1.00	1.00	0.81	0.67	0.71	0.92	0.68	1.00	1.00	1.00
Adj. Flow (vph)	199	200	0	0	104	82	99	971	24	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	399	0	0	186	0	0	1094	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)	16				16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1		1	1				
Detector Template												
Leading Detector (ft)	50	50			50		50	50				
Trailing Detector (ft)	0	0			0		0	0				
Detector 1 Position(ft)	0	0			0		0	0				
Detector 1 Size(ft)	50	50			50		50	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4			4			2				
Permitted Phases	4						2					
Detector Phase	4	4			4		2	2				
Switch Phase												
Minimum Initial (s)	6.0	6.0			6.0		10.0	10.0				
Minimum Split (s)	15.2	15.2			15.2		15.2	15.2				
Total Split (s)	24.0	24.0			24.0		36.0	36.0				
Total Split (%)	40.0%	40.0%			40.0%		60.0%	60.0%				
Maximum Green (s)	19.8	19.8			19.8		31.8	31.8				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	1.0	1.0			1.0		1.0	1.0				

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2015 Existing - PM Peak Hour

Lanes, Volumes, Timings

4: McKinney & Bowen

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-0.2				-0.2			-0.2				
Total Lost Time (s)	4.0				4.0			4.0				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	2.5			2.5		4.0	4.0				
Recall Mode	Max	Max			Max		C-Max	C-Max				
Walk Time (s)	4.0	4.0			4.0		4.0	4.0				
Flash Dont Walk (s)	7.0	7.0			7.0		7.0	7.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effect Green (s)	20.0				20.0			32.0				
Actuated g/C Ratio	0.33				0.33			0.53				
v/c Ratio	0.89				0.29			0.41				
Control Delay	56.1				10.8			8.8				
Queue Delay	0.0				0.0			0.0				
Total Delay	56.1				10.8			8.8				
LOS	E				B			A				
Approach Delay	56.1				10.8			8.8				
Approach LOS	E				B			A				

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 52 (87%), Referenced to phase 2:NBTL, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 20.3

Intersection LOS: C

Intersection Capacity Utilization 54.8%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 4: McKinney & Bowen



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - PM Peak Hour

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McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings2015 Existing - PM Peak Hour
5: Carlisle & Bowen

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕						↕↕↕	
Volume (vph)	0	335	146	41	204	0	0	0	0	37	542	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.952									0.988	
Flt Protected					0.989						0.996	
Satd. Flow (prot)	0	3369	0	0	3500	0	0	0	0	0	5004	0
Flt Permitted					0.680						0.996	
Satd. Flow (perm)	0	3369	0	0	2407	0	0	0	0	0	5004	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		154									29	
Link Speed (mph)		30			30				30		30	
Link Distance (ft)		361			568				386		483	
Travel Time (s)		8.2			12.9				8.8		11.0	
Peak Hour Factor	1.00	0.91	0.85	0.60	0.86	1.00	1.00	1.00	1.00	0.65	0.84	0.70
Adj. Flow (vph)	0	368	172	68	237	0	0	0	0	57	645	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	540	0	0	305	0	0	0	0	0	762	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0				0		0	
Link Offset(ft)		0			0				0		0	
Crosswalk Width(ft)		16			16				16		16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1		1	1					1	1	
Detector Template												
Leading Detector (ft)		50		50	50					50	50	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		50		50	50					50	50	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			4						2	
Permitted Phases				4						2		
Detector Phase		4		4	4					2	2	
Switch Phase												
Minimum Initial (s)		10.0		10.0	10.0					8.0	8.0	
Minimum Split (s)		19.5		19.5	19.5					19.5	19.5	
Total Split (s)		30.0		30.0	30.0					30.0	30.0	
Total Split (%)		50.0%		50.0%	50.0%					50.0%	50.0%	
Maximum Green (s)		25.5		25.5	25.5					25.5	25.5	
Yellow Time (s)		3.5		3.5	3.5					3.5	3.5	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - PM Peak Hour

Synchro 8 Report
Page 7McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings2015 Existing - PM Peak Hour
5: Carlisle & Bowen

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-0.5			-0.5						-0.5	
Total Lost Time (s)		4.0			4.0						4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		2.5		2.5	2.5						2.0	2.0
Recall Mode		Min		Min	Min						C-Max	C-Max
Walk Time (s)		7.0		7.0	7.0						7.0	7.0
Flash Dont Walk (s)		8.0		8.0	8.0						8.0	8.0
Pedestrian Calls (#/hr)		0		0	0						0	0
Act Effct Green (s)		14.0			14.0						38.0	
Actuated g/C Ratio		0.23			0.23						0.63	
v/c Ratio		0.60			0.54						0.24	
Control Delay		16.7			24.3						3.0	
Queue Delay		0.0			0.0						0.0	
Total Delay		16.7			24.3						3.0	
LOS		B			C						A	
Approach Delay		16.7			24.3						3.0	
Approach LOS		B			C						A	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 55 (92%), Referenced to phase 2:SBTL, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 11.6

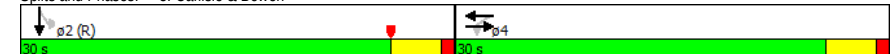
Intersection LOS: B

Intersection Capacity Utilization 44.4%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 5: Carlisle & Bowen



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2015 Existing - PM Peak Hour
6: McKinney & Hall

	↖	→	↘	↙	←	↖	↙	↑	↘	↙	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↘			↖↖↖				
Volume (vph)	100	161	0	0	138	92	75	973	39	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.945			0.995				
Flt Protected		0.982						0.996				
Satd. Flow (prot)	0	1829	0	0	1760	0	0	5040	0	0	0	0
Flt Permitted		0.617						0.996				
Satd. Flow (perm)	0	1149	0	0	1760	0	0	5040	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					32			6				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		790			243			502			693	
Travel Time (s)		18.0			5.5			11.4			15.8	
Peak Hour Factor	0.83	0.78	1.00	1.00	0.85	0.82	0.76	0.89	0.86	0.25	1.00	1.00
Adj. Flow (vph)	120	206	0	0	162	112	99	1093	45	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	326	0	0	274	0	0	1237	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1		1	1				
Detector Template												
Leading Detector (ft)	50	50			50		50	50				
Trailing Detector (ft)	0	0			0		0	0				
Detector 1 Position(ft)	0	0			0		0	0				
Detector 1 Size(ft)	50	50			50		50	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	3	8			4			2				
Permitted Phases	8						2					
Detector Phase	3	8			4		2	2				
Switch Phase												
Minimum Initial (s)	3.0	6.0			6.0		10.0	10.0				
Minimum Split (s)	8.0	14.2			14.2		16.2	16.2				
Total Split (s)	15.0	62.0			47.0		58.0	58.0				
Total Split (%)	12.5%	51.7%			39.2%		48.3%	48.3%				
Maximum Green (s)	10.0	57.8			42.8		53.8	53.8				
Yellow Time (s)	3.0	3.2			3.2		3.2	3.2				
All-Red Time (s)	2.0	1.0			1.0		1.0	1.0				

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2015 Existing - PM Peak Hour
6: McKinney & Hall

	↖	→	↘	↙	←	↖	↙	↑	↘	↙	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-0.2			-0.2						-0.2	
Total Lost Time (s)		4.0			4.0						4.0	
Lead/Lag	Lead				Lag							
Lead-Lag Optimize?	Yes				Yes							
Vehicle Extension (s)	2.0	3.0			3.0		2.0	2.0				
Recall Mode	None	Ped			Ped		C-Max	C-Max				
Walk Time (s)		4.0			4.0		6.0	6.0				
Flash Dont Walk (s)		6.0			6.0		6.0	6.0				
Pedestrian Calls (#/hr)		0			0		0	0				
Act Effct Green (s)		42.2			42.2			69.8				
Actuated g/C Ratio		0.35			0.35			0.58				
v/c Ratio		0.81			0.43			0.42				
Control Delay		45.4			26.5			12.6				
Queue Delay		0.0			0.0			0.2				
Total Delay		45.4			26.5			12.8				
LOS		D			C			B				
Approach Delay		45.4			26.5			12.8				
Approach LOS		D			C			B				

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 47 (39%), Referenced to phase 2:NBTL, Start of Yellow

Natural Cycle: 45

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 20.6

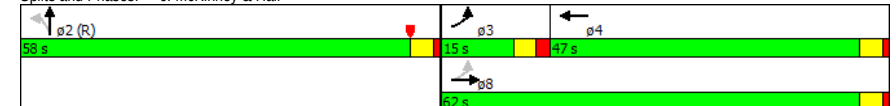
Intersection LOS: C

Intersection Capacity Utilization 58.1%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 6: McKinney & Hall



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - PM Peak Hour

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McKinney - Cole Uptown Evaluation

2015 Existing - PM Peak Hour

Lanes, Volumes, Timings

7: Carlisle & Hall

	↖	→	↗	↖	←	↖	↖	↑	↗	↗	↓	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↖						↖↖↖	
Volume (vph)	0	201	27	22	127	0	0	0	0	57	589	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.981									0.992	
Flt Protected					0.991						0.995	
Satd. Flow (prot)	0	1827	0	0	1846	0	0	0	0	0	5019	0
Flt Permitted					0.838						0.995	
Satd. Flow (perm)	0	1827	0	0	1561	0	0	0	0	0	5019	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16									19	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		182			790			290			627	
Travel Time (s)		4.1			18.0			6.6			14.3	
Peak Hour Factor	1.00	0.84	0.69	0.68	0.84	1.00	1.00	1.00	1.00	0.83	0.91	0.92
Adj. Flow (vph)	0	239	39	32	151	0	0	0	0	69	647	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	278	0	0	183	0	0	0	0	0	756	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1		1	1					1	1	
Detector Template												
Leading Detector (ft)		50		50	50					50	50	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		50		50	50					50	50	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			4						2	
Permitted Phases				4						2		
Detector Phase		4		4	4					2	2	
Switch Phase												
Minimum Initial (s)		8.0		8.0	8.0					8.0	8.0	
Minimum Split (s)		18.2		18.2	18.2					18.2	18.2	
Total Split (s)		28.0		28.0	28.0					32.0	32.0	
Total Split (%)		46.7%		46.7%	46.7%					53.3%	53.3%	
Maximum Green (s)		23.8		23.8	23.8					27.8	27.8	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - PM Peak Hour

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McKinney - Cole Uptown Evaluation

2015 Existing - PM Peak Hour

Lanes, Volumes, Timings

7: Carlisle & Hall

	↖	→	↗	↖	←	↖	↖	↑	↗	↗	↓	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-0.2			-0.2						-0.2	
Total Lost Time (s)		4.0			4.0						4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		2.0		2.0	2.0						4.0	4.0
Recall Mode		Min		Min	Min						C-Max	C-Max
Walk Time (s)		6.0		6.0	6.0						6.0	6.0
Flash Dont Walk (s)		8.0		8.0	8.0						8.0	8.0
Pedestrian Calls (#/hr)		0		0	0						0	0
Act Effct Green (s)		13.5			13.5						38.5	
Actuated g/C Ratio		0.22			0.22						0.64	
v/c Ratio		0.66			0.52						0.23	
Control Delay		27.0			30.4						2.5	
Queue Delay		0.0			0.0						0.0	
Total Delay		27.0			30.4						2.5	
LOS		C			C						A	
Approach Delay		27.0			30.4						2.5	
Approach LOS		C			C						A	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 42 (70%), Referenced to phase 2:SBTL, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 12.3

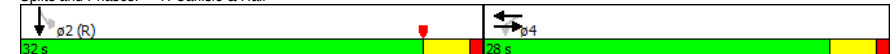
Intersection LOS: B

Intersection Capacity Utilization 43.5%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 7: Carlisle & Hall



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - PM Peak Hour

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McKinney - Cole Uptown Evaluation

2015 Existing - PM Peak Hour

Lanes, Volumes, Timings

8: McKinney & Lemmon

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↑↑↑					↑↑↑					
Volume (vph)	494	2254	0	0	0	0	0	925	194	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.91	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	1.00	1.00
Frt								0.973				
Flt Protected	0.950											
Satd. Flow (prot)	1770	5085	0	0	0	0	0	4948	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1770	5085	0	0	0	0	0	4948	0	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)	27							3				
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		651			405			693			457	
Travel Time (s)		12.7			7.9			15.8			10.4	
Peak Hour Factor	0.97	0.94	1.00	1.00	1.00	1.00	1.00	0.92	0.88	1.00	1.00	1.00
Adj. Flow (vph)	509	2398	0	0	0	0	0	1005	220	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	509	2398	0	0	0	0	0	1225	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1						1				
Detector Template												
Leading Detector (ft)	50	50						50				
Trailing Detector (ft)	0	0						0				
Detector 1 Position(ft)	0	0						0				
Detector 1 Size(ft)	50	50						50				
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0				
Detector 1 Queue (s)	0.0	0.0						0.0				
Detector 1 Delay (s)	0.0	0.0						0.0				
Turn Type	Perm	NA						NA				
Protected Phases		2						4				
Permitted Phases	2											
Detector Phase	2	2						4				
Switch Phase												
Minimum Initial (s)	14.0	14.0						14.0				
Minimum Split (s)	18.5	18.5						18.5				
Total Split (s)	72.0	72.0						48.0				
Total Split (%)	60.0%	60.0%						40.0%				
Maximum Green (s)	67.5	67.5						43.5				
Yellow Time (s)	3.5	3.5						3.5				
All-Red Time (s)	1.0	1.0						1.0				

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - PM Peak Hour

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McKinney - Cole Uptown Evaluation

2015 Existing - PM Peak Hour

Lanes, Volumes, Timings

8: McKinney & Lemmon

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-0.5	-0.5						-0.5				
Total Lost Time (s)	4.0	4.0						4.0				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	0.2	0.2						0.2				
Recall Mode	C-Max	C-Max						Max				
Walk Time (s)	7.0	7.0						4.0				
Flash Dont Walk (s)	7.0	7.0						7.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)	68.0	68.0						44.0				
Actuated g/C Ratio	0.57	0.57						0.37				
v/c Ratio	0.50	0.83						0.67				
Control Delay	12.6	22.9						25.9				
Queue Delay	0.9	28.9						0.0				
Total Delay	13.5	51.8						25.9				
LOS	B	D						C				
Approach Delay		45.1						25.9				
Approach LOS		D						C				

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 13 (11%), Referenced to phase 2:EBTL, Start of Yellow

Natural Cycle: 50

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 39.4

Intersection LOS: D

Intersection Capacity Utilization 114.6%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 8: McKinney & Lemmon



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - PM Peak Hour

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McKinney - Cole Uptown Evaluation

2015 Existing - PM Peak Hour

Lanes, Volumes, Timings

9: Carlisle/Cole & Lemmon

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑↑									↓↓↓	
Volume (vph)	0	2309	129	0	0	0	0	0	0	218	663	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00
Frt		0.990										
Flt Protected											0.987	
Satd. Flow (prot)	0	6344	0	0	0	0	0	0	0	0	5019	0
Flt Permitted											0.987	
Satd. Flow (perm)	0	6344	0	0	0	0	0	0	0	0	5019	0
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)		21									14	
Link Speed (mph)		35			35				30		30	
Link Distance (ft)		687			651				627		431	
Travel Time (s)		13.4			12.7				14.3		9.8	
Peak Hour Factor	1.00	0.95	0.75	1.00	1.00	1.00	1.00	1.00	1.00	0.83	0.93	1.00
Adj. Flow (vph)	0	2431	172	0	0	0	0	0	0	263	713	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2603	0	0	0	0	0	0	0	0	976	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0				0		0	
Link Offset(ft)		0			0				0		0	
Crosswalk Width(ft)		16			16				16		16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1								1	1	
Detector Template												
Leading Detector (ft)		50								50	50	
Trailing Detector (ft)		0								0	0	
Detector 1 Position(ft)		0								0	0	
Detector 1 Size(ft)		50								50	50	
Detector 1 Type		Cl+Ex								Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0								0.0	0.0	
Detector 1 Queue (s)		0.0								0.0	0.0	
Detector 1 Delay (s)		0.0								0.0	0.0	
Turn Type		NA								Perm	NA	
Protected Phases		2									4	
Permitted Phases										4		
Detector Phase		2								4	4	
Switch Phase												
Minimum Initial (s)		8.0								8.0	8.0	
Minimum Split (s)		18.5								18.5	18.5	
Total Split (s)		73.0								47.0	47.0	
Total Split (%)		60.8%								39.2%	39.2%	
Maximum Green (s)		68.5								42.5	42.5	
Yellow Time (s)		3.5								3.5	3.5	
All-Red Time (s)		1.0								1.0	1.0	

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - PM Peak Hour

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McKinney - Cole Uptown Evaluation

2015 Existing - PM Peak Hour

Lanes, Volumes, Timings

9: Carlisle/Cole & Lemmon

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-0.5									-0.5	
Total Lost Time (s)		4.0									4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		2.0									2.0	2.0
Recall Mode		C-Max									Max	Max
Walk Time (s)		7.0									7.0	7.0
Flash Dont Walk (s)		7.0									7.0	7.0
Pedestrian Calls (#/hr)		0									0	0
Act Effct Green (s)		69.0									43.0	
Actuated g/C Ratio		0.58									0.36	
v/c Ratio		0.71									0.54	
Control Delay		19.6									15.9	
Queue Delay		0.8									0.1	
Total Delay		20.4									16.0	
LOS		C									B	
Approach Delay		20.4									16.0	
Approach LOS		C									B	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 102 (85%), Referenced to phase 2:EBT, Start of Yellow

Natural Cycle: 45

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 19.2

Intersection LOS: B

Intersection Capacity Utilization 64.5%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 9: Carlisle/Cole & Lemmon



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2015 Existing - PM Peak Hour

Lanes, Volumes, Timings

10: McKinney & Lemmon East

	←	→	↖	↗	←	↖	↗	↑	↖	↗	↓	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑↑↑			↑↑↑				
Volume (vph)	0	0	0	0	1230	133	213	1161	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.86	0.86	0.91	0.91	1.00	1.00	1.00	1.00
Frt					0.984							
Flt Protected								0.992				
Satd. Flow (prot)	0	0	0	0	6305	0	0	5045	0	0	0	0
Flt Permitted								0.992				
Satd. Flow (perm)	0	0	0	0	6305	0	0	5045	0	0	0	0
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)					25			23				
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		510			744			457			444	
Travel Time (s)		9.9			14.5			10.4			10.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	0.89	0.83	0.81	0.89	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	0	1382	160	263	1304	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1542	0	0	1567	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors					1		1	1				
Detector Template												
Leading Detector (ft)					50		50	50				
Trailing Detector (ft)					0		0	0				
Detector 1 Position(ft)					0		0	0				
Detector 1 Size(ft)					50		50	50				
Detector 1 Type					Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)					0.0		0.0	0.0				
Detector 1 Queue (s)					0.0		0.0	0.0				
Detector 1 Delay (s)					0.0		0.0	0.0				
Turn Type					NA		Perm	NA				
Protected Phases					2			4				
Permitted Phases							4					
Detector Phase					2		4	4				
Switch Phase												
Minimum Initial (s)					14.0		12.0	12.0				
Minimum Split (s)					19.5		16.5	16.5				
Total Split (s)					43.0		77.0	77.0				
Total Split (%)					35.8%		64.2%	64.2%				
Maximum Green (s)					37.5		72.5	72.5				
Yellow Time (s)					3.5		3.5	3.5				
All-Red Time (s)					2.0		1.0	1.0				

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - PM Peak Hour

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McKinney - Cole Uptown Evaluation

2015 Existing - PM Peak Hour

Lanes, Volumes, Timings

10: McKinney & Lemmon East

	←	→	↖	↗	←	↖	↗	↑	↖	↗	↓	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)					-1.5			-0.5				
Total Lost Time (s)					4.0			4.0				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)					0.2		0.2	0.2				
Recall Mode					C-Max		Max	Max				
Walk Time (s)					7.0		4.0	4.0				
Flash Dont Walk (s)					7.0		7.0	7.0				
Pedestrian Calls (#/hr)					0		0	0				
Act Effct Green (s)					39.0			73.0				
Actuated g/C Ratio					0.32			0.61				
v/c Ratio					0.75			0.51				
Control Delay					38.2			9.9				
Queue Delay					0.3			0.1				
Total Delay					38.5			9.9				
LOS					D			A				
Approach Delay					38.5			9.9				
Approach LOS					D			A				

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 112 (93%), Referenced to phase 2:WBT, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 24.1

Intersection LOS: C

Intersection Capacity Utilization 53.5%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 10: McKinney & Lemmon East



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - PM Peak Hour

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McKinney - Cole Uptown Evaluation

2015 Existing - PM Peak Hour

Lanes, Volumes, Timings

11: Cole & Lemmon East

	←	→	↙	↘	←	↙	↘	↑	↗	↖	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					←←←←						→→→→	
Volume (vph)	0	0	0	250	1181	0	0	0	0	0	567	188
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	1.00	1.00	1.00	1.00	1.00	0.91	0.91
Frt											0.960	
Flt Protected					0.991							
Satd. Flow (prot)	0	0	0	0	6350	0	0	0	0	0	4882	0
Flt Permitted					0.991							
Satd. Flow (perm)	0	0	0	0	6350	0	0	0	0	0	4882	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)					72						64	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		238			510			431			877	
Travel Time (s)		4.6			9.9			9.8			19.9	
Peak Hour Factor	1.00	1.00	1.00	0.87	0.88	1.00	1.00	1.00	1.00	0.30	0.93	0.85
Adj. Flow (vph)	0	0	0	287	1342	0	0	0	0	0	610	221
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1629	0	0	0	0	0	831	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	1						1	
Detector Template												
Leading Detector (ft)				50	50						50	
Trailing Detector (ft)				0	0						0	
Detector 1 Position(ft)				0	0						0	
Detector 1 Size(ft)				50	50						50	
Detector 1 Type				Cl+Ex	Cl+Ex						Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0						0.0	
Detector 1 Queue (s)				0.0	0.0						0.0	
Detector 1 Delay (s)				0.0	0.0						0.0	
Turn Type				Perm	NA						NA	
Protected Phases					2						4	
Permitted Phases				2								
Detector Phase				2	2						4	
Switch Phase												
Minimum Initial (s)				12.0	12.0						14.0	
Minimum Split (s)				18.5	18.5						18.5	
Total Split (s)				80.0	80.0						40.0	
Total Split (%)				66.7%	66.7%						33.3%	
Maximum Green (s)				75.5	75.5						35.5	
Yellow Time (s)				3.5	3.5						3.5	
All-Red Time (s)				1.0	1.0						1.0	

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - PM Peak Hour

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McKinney - Cole Uptown Evaluation

2015 Existing - PM Peak Hour

Lanes, Volumes, Timings

11: Cole & Lemmon East

	←	→	↙	↘	←	↙	↘	↑	↗	↖	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)					-0.5						-0.5	
Total Lost Time (s)					4.0						4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0						2.0	
Recall Mode				C-Max	C-Max						Max	
Walk Time (s)				7.0	7.0						7.0	
Flash Dont Walk (s)				7.0	7.0						7.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effct Green (s)					76.0						36.0	
Actuated g/C Ratio					0.63						0.30	
v/c Ratio					0.40						0.55	
Control Delay					3.3						35.0	
Queue Delay					0.0						0.0	
Total Delay					3.3						35.0	
LOS					A						C	
Approach Delay					3.3						35.0	
Approach LOS					A						C	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 117 (98%), Referenced to phase 2:WBT, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.55

Intersection Signal Delay: 14.0

Intersection LOS: B

Intersection Capacity Utilization 42.7%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 11: Cole & Lemmon East



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - PM Peak Hour

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McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2015 Existing - PM Peak Hour
12: McKinney & Cityplace

	↖	↗	↑	↘	↙	↓	
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø1
Lane Configurations		↗	↑↑↑				
Volume (vph)	0	139	1263	3	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	0.91	0.91	1.00	1.00	
Frt		0.865					
Flt Protected							
Satd. Flow (prot)	0	1611	5085	0	0	0	
Flt Permitted							
Satd. Flow (perm)	0	1611	5085	0	0	0	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)		223					
Link Speed (mph)	30		30			30	
Link Distance (ft)	723		444			442	
Travel Time (s)	16.4		10.1			10.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	0	151	1373	3	0	0	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	151	1376	0	0	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Right	Left	Left	
Median Width(ft)	20		0			0	
Link Offset(ft)	0		0			0	
Crosswalk Width(ft)	16		16			16	
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9		9	15		
Number of Detectors		1	2				
Detector Template		Right	Thru				
Leading Detector (ft)		20	100				
Trailing Detector (ft)		0	0				
Detector 1 Position(ft)		0	0				
Detector 1 Size(ft)		20	6				
Detector 1 Type		Cl+Ex	Cl+Ex				
Detector 1 Channel							
Detector 1 Extend (s)		0.0	0.0				
Detector 1 Queue (s)		0.0	0.0				
Detector 1 Delay (s)		0.0	0.0				
Detector 2 Position(ft)			94				
Detector 2 Size(ft)			6				
Detector 2 Type			Cl+Ex				
Detector 2 Channel							
Detector 2 Extend (s)			0.0				
Turn Type		custom	NA				
Protected Phases			4				1
Permitted Phases		2					
Detector Phase		2	4				
Switch Phase							
Minimum Initial (s)		4.0	4.0				4.0
Minimum Split (s)		20.0	20.0				8.0

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - PM Peak Hour

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McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2015 Existing - PM Peak Hour
12: McKinney & Cityplace

	↖	↗	↑	↘	↙	↓	
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø1
Total Split (s)		57.0	48.0				15.0
Total Split (%)		47.5%	40.0%				13%
Maximum Green (s)		53.0	44.0				11.0
Yellow Time (s)		3.5	3.5				3.5
All-Red Time (s)		0.5	0.5				0.5
Lost Time Adjust (s)		0.0	0.0				
Total Lost Time (s)		4.0	4.0				
Lead/Lag		Lag					Lead
Lead-Lag Optimize?		Yes					Yes
Vehicle Extension (s)		3.0	3.0				3.0
Recall Mode		C-Max	None				None
Walk Time (s)		5.0	5.0				
Flash Dont Walk (s)		11.0	11.0				
Pedestrian Calls (#/hr)		0	0				
Act Effct Green (s)		70.1	41.9				
Actuated g/C Ratio		0.58	0.35				
v/c Ratio		0.15	0.78				
Control Delay		0.5	49.5				
Queue Delay		0.0	3.1				
Total Delay		0.5	52.6				
LOS		A	D				
Approach Delay			52.6				
Approach LOS			D				

Intersection Summary

Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 86 (72%), Referenced to phase 2:WBR, Start of Yellow	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 47.5	Intersection LOS: D
Intersection Capacity Utilization 39.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 12: McKinney & Cityplace



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - PM Peak Hour

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McKinney - Cole Uptown Evaluation

2015 Existing - PM Peak Hour

Lanes, Volumes, Timings

13: McKinney & Blackburn

	←	→	↖	↗	←	↖	↗	↑	↘	↙	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↗		↖	↗				
Volume (vph)	133	717	0	0	688	177	115	712	267	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	0.91	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.963			0.960				
Flt Protected	0.950							0.994				
Satd. Flow (prot)	1770	3539	0	0	4897	0	0	4853	0	0	0	0
Flt Permitted	0.211							0.994				
Satd. Flow (perm)	393	3539	0	0	4897	0	0	4853	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					136			148				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		419			123			442			368	
Travel Time (s)		9.5			2.8			10.0			8.4	
Peak Hour Factor	0.83	0.91	1.00	1.00	0.94	0.73	0.84	0.94	0.83	1.00	1.00	1.00
Adj. Flow (vph)	160	788	0	0	732	242	137	757	322	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	160	788	0	0	974	0	0	1216	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		18			18			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1		1	1				
Detector Template												
Leading Detector (ft)	50	50			50		50	50				
Trailing Detector (ft)	0	0			0		0	0				
Detector 1 Position(ft)	0	0			0		0	0				
Detector 1 Size(ft)	50	50			50		50	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	1	6			2			8				
Permitted Phases	6						8					
Detector Phase	1	6			2		8	8				
Switch Phase												
Minimum Initial (s)	3.0	14.0			10.0		14.0	14.0				
Minimum Split (s)	8.0	20.0			20.0		33.5	33.5				
Total Split (s)	20.0	40.0			20.0		20.0	20.0				
Total Split (%)	33.3%	66.7%			33.3%		33.3%	33.3%				
Maximum Green (s)	15.0	35.0			15.0		14.5	14.5				
Yellow Time (s)	3.0	4.0			4.0		4.0	4.0				
All-Red Time (s)	2.0	1.0			1.0		1.5	1.5				

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - PM Peak Hour

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McKinney - Cole Uptown Evaluation

2015 Existing - PM Peak Hour

Lanes, Volumes, Timings

13: McKinney & Blackburn

	←	→	↖	↗	←	↖	↗	↑	↘	↙	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0			-1.0							-1.5
Total Lost Time (s)	4.0	4.0			4.0							4.0
Lead/Lag	Lag				Lead							
Lead-Lag Optimize?	Yes				Yes							
Vehicle Extension (s)	1.5	2.0			2.0		2.0	2.0				
Recall Mode	Min	Min			Min		C-Max	C-Max				
Walk Time (s)		7.0			7.0		7.0	7.0				
Flash Dont Walk (s)		8.0			8.0		21.0	21.0				
Pedestrian Calls (#/hr)		0			0		0	0				
Act Effct Green (s)	25.6	25.6			15.0			26.4				
Actuated g/C Ratio	0.43	0.43			0.25			0.44				
v/c Ratio	0.50	0.52			0.74			0.55				
Control Delay	27.0	18.1			21.3			6.4				
Queue Delay	0.0	0.0			0.0			0.0				
Total Delay	27.0	18.1			21.3			6.4				
LOS	C	B			C			A				
Approach Delay		19.6			21.3			6.4				
Approach LOS		B			C			A				

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 5 (8%), Referenced to phase 8:NBTL, Start of Yellow

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 15.0

Intersection LOS: B

Intersection Capacity Utilization 61.5%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 13: McKinney & Blackburn



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - PM Peak Hour

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McKinney - Cole Uptown Evaluation

2015 Existing - PM Peak Hour

Lanes, Volumes, Timings

14: Cole & Blackburn

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↙	↕↕						↕↕↕	
Volume (vph)	0	656	98	314	492	0	0	0	0	170	418	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.980									0.982	
Flt Protected				0.950							0.986	
Satd. Flow (prot)	0	3468	0	1770	3539	0	0	0	0	0	4924	0
Flt Permitted				0.214							0.986	
Satd. Flow (perm)	0	3468	0	399	3539	0	0	0	0	0	4924	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		37									37	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		216			419			877			400	
Travel Time (s)		4.9			9.5			19.9			9.1	
Peak Hour Factor	1.00	0.94	0.89	0.92	0.87	0.25	1.00	1.00	1.00	0.79	0.94	0.68
Adj. Flow (vph)	0	698	110	341	566	0	0	0	0	215	445	88
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	808	0	341	566	0	0	0	0	0	748	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1		1	1					1	1	
Detector Template												
Leading Detector (ft)		50		50	50					50	50	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		50		50	50					50	50	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		6		5	2						4	
Permitted Phases				2						4		
Detector Phase		6		5	2					4	4	
Switch Phase												
Minimum Initial (s)		6.0		3.0	6.0					10.0	10.0	
Minimum Split (s)		20.0		8.0	20.0					33.5	33.5	
Total Split (s)		30.0		12.0	42.0					18.0	18.0	
Total Split (%)		50.0%		20.0%	70.0%					30.0%	30.0%	
Maximum Green (s)		25.0		7.0	37.0					12.5	12.5	
Yellow Time (s)		4.0		3.0	4.0					4.0	4.0	
All-Red Time (s)		1.0		2.0	1.0					1.5	1.5	

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - PM Peak Hour

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McKinney - Cole Uptown Evaluation

2015 Existing - PM Peak Hour

Lanes, Volumes, Timings

14: Cole & Blackburn

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-1.0		-1.0	-1.0							-1.5
Total Lost Time (s)		4.0		4.0	4.0							4.0
Lead/Lag		Lead		Lag								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		1.5		2.0	1.5						2.0	2.0
Recall Mode		Min		Min	Min						C-Max	C-Max
Walk Time (s)		7.0			7.0						7.0	7.0
Flash Dont Walk (s)		8.0			8.0						21.0	21.0
Pedestrian Calls (#/hr)		0			0						0	0
Act Effct Green (s)		18.8		34.5	34.5						17.5	
Actuated g/C Ratio		0.31		0.58	0.58						0.29	
v/c Ratio		0.73		0.69	0.28						0.51	
Control Delay		21.1		29.7	13.9						18.3	
Queue Delay		0.0		0.0	0.0						0.0	
Total Delay		21.1		29.7	13.9						18.3	
LOS		C		C	B						B	
Approach Delay		21.1			19.8						18.3	
Approach LOS		C			B						B	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 40 (67%), Referenced to phase 4:SBTL, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 19.8

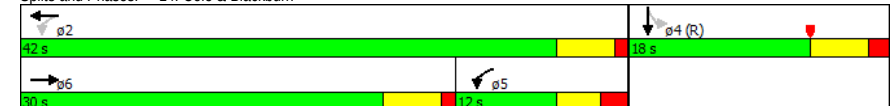
Intersection LOS: B

Intersection Capacity Utilization 61.5%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 14: Cole & Blackburn



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - PM Peak Hour

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McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2015 Existing - PM Peak Hour
24: McKinney & Fitzhugh

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	196	1662	0	0	665	98	152	662	267	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	152		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.978			0.961				
Flt Protected	0.950							0.992				
Satd. Flow (prot)	1770	5085	0	0	4973	0	0	4848	0	0	0	0
Flt Permitted	0.218							0.992				
Satd. Flow (perm)	406	5085	0	0	4973	0	0	4848	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					29			3				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		297			318			837			1927	
Travel Time (s)		6.8			7.2			19.0			43.8	
Peak Hour Factor	0.93	0.96	1.00	1.00	0.84	0.73	0.76	0.91	0.81	1.00	1.00	1.00
Adj. Flow (vph)	211	1731	0	0	792	134	200	727	330	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	211	1731	0	0	926	0	0	1257	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1		1	1				
Detector Template												
Leading Detector (ft)	50	50			50		50	50				
Trailing Detector (ft)	0	0			0		0	0				
Detector 1 Position(ft)	0	0			0		0	0				
Detector 1 Size(ft)	50	50			50		50	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	21	6 26			2 22			4 24				
Permitted Phases	6 26						4 24					
Detector Phase	21	6 26			2 22		4 24	4 24				
Switch Phase												
Minimum Initial (s)	4.0											
Minimum Split (s)	9.0											
Total Split (s)	10.0											
Total Split (%)	8.3%											

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2015 Existing - PM Peak Hour
24: McKinney & Fitzhugh

Lane Group	ø2	ø4	ø6	ø22	ø24	ø26
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Turn Type						
Protected Phases	2	4	6	22	24	26
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	10.0	8.0	10.0	10.0	8.0	10.0
Minimum Split (s)	19.7	25.3	19.7	20.0	25.3	20.0
Total Split (s)	26.0	26.0	26.0	22.0	36.0	32.0
Total Split (%)	22%	22%	22%	18%	30%	27%

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

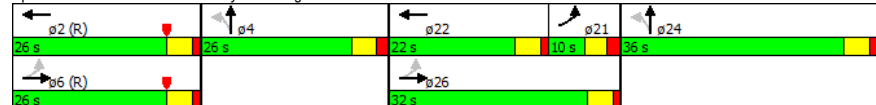
2015 Existing - PM Peak Hour
24: McKinney & Fitzhugh

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)	5.0											
Yellow Time (s)	3.0											
All-Red Time (s)	2.0											
Lost Time Adjust (s)	-1.0											
Total Lost Time (s)	4.0											
Lead/Lag	Lag											
Lead-Lag Optimize?	Yes											
Vehicle Extension (s)	3.0											
Recall Mode	None											
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effect Green (s)	59.1	59.1			45.8			44.9				
Actuated g/C Ratio	0.49	0.49			0.38			0.37				
v/c Ratio	0.69	0.69			0.48			0.69				
Control Delay	30.7	16.8			15.4			18.1				
Queue Delay	0.0	0.0			0.0			0.0				
Total Delay	30.7	16.8			15.4			18.1				
LOS	C	B			B			B				
Approach Delay		18.3			15.4			18.1				
Approach LOS		B			B			B				

Intersection Summary

Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 15 (13%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 17.6	Intersection LOS: B
Intersection Capacity Utilization 64.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 24: McKinney & Fitzhugh



McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2015 Existing - PM Peak Hour
24: McKinney & Fitzhugh

Lane Group	ø2	ø4	ø6	ø22	ø24	ø26
Maximum Green (s)	21.3	20.7	21.3	17.3	30.7	27.3
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.2	1.8	1.2	1.2	1.8	1.2
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag				Lead		
Lead-Lag Optimize?				Yes		
Vehicle Extension (s)	2.0	1.8	2.0	3.0	3.0	3.0
Recall Mode	C-Max	None	C-Max	None	None	None
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Flash Dont Walk (s)	8.0	16.0	8.0	8.0	16.0	8.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effect Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						

Intersection Summary

McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2015 Existing - PM Peak Hour
25: Cole & Fitzhugh

	↖	→	↘	↙	←	↖	↙	↑	↘	↙	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑		↘	↑↑↑						↑↑↑	
Volume (vph)	0	1764	74	120	681	0	0	0	0	82	357	159
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	162		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.992									0.959	
Flt Protected				0.950							0.992	
Satd. Flow (prot)	0	5045	0	1770	5085	0	0	0	0	0	4838	0
Flt Permitted				0.064							0.992	
Satd. Flow (perm)	0	5045	0	119	5085	0	0	0	0	0	4838	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11									70	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		231			172			802			1956	
Travel Time (s)		5.3			3.9			18.2			44.5	
Peak Hour Factor	1.00	0.98	0.76	0.86	0.88	1.00	1.00	1.00	1.00	0.73	0.95	0.88
Adj. Flow (vph)	0	1800	97	140	774	0	0	0	0	112	376	181
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1897	0	140	774	0	0	0	0	0	669	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Right	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1		1	1					1	1	
Detector Template												
Leading Detector (ft)		50		50	50					50	50	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		50		50	50					50	50	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		6 26		25	2 22						4 24	
Permitted Phases				2 22						4 24		
Detector Phase		6 26		25	2 22					4 24	4 24	
Switch Phase												
Minimum Initial (s)				4.0								
Minimum Split (s)				9.0								
Total Split (s)				14.0								
Total Split (%)				11.7%								

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2015 Existing - PM Peak Hour
25: Cole & Fitzhugh

Lane Group	ø2	ø4	ø6	ø22	ø24	ø26
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Turn Type						
Protected Phases	2	4	6	22	24	26
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	10.0	4.0	10.0	10.0	4.0	10.0
Minimum Split (s)	27.0	27.0	20.0	26.0	27.0	21.0
Total Split (s)	48.0	16.0	48.0	40.0	16.0	26.0
Total Split (%)	40%	13%	40%	33%	13%	22%

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

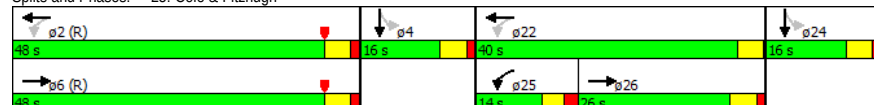
2015 Existing - PM Peak Hour
25: Cole & Fitzhugh

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)				9.0								
Yellow Time (s)				3.0								
All-Red Time (s)				2.0								
Lost Time Adjust (s)				-1.0								
Total Lost Time (s)				4.0								
Lead/Lag				Lead								
Lead-Lag Optimize?				Yes								
Vehicle Extension (s)				3.0								
Recall Mode				None								
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	67.7			81.0	81.0						23.0	
Actuated g/C Ratio	0.56			0.68	0.68						0.19	
v/c Ratio	0.67			0.68	0.23						0.68	
Control Delay	11.6			55.3	2.3						27.1	
Queue Delay	0.0			0.0	0.0						0.0	
Total Delay	11.6			55.3	2.3						27.1	
LOS	B			E	A						C	
Approach Delay	11.6				10.4						27.1	
Approach LOS	B				B						C	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 84 (70%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
 Natural Cycle: 115
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.68
 Intersection Signal Delay: 14.3
 Intersection LOS: B
 Intersection Capacity Utilization 64.5%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 25: Cole & Fitzhugh



McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2015 Existing - PM Peak Hour
25: Cole & Fitzhugh

Lane Group	ø2	ø4	ø6	ø22	ø24	ø26
Maximum Green (s)	43.0	11.0	43.0	36.0	11.0	21.0
Yellow Time (s)	3.6	3.6	3.6	3.5	3.6	3.6
All-Red Time (s)	1.4	1.4	1.4	0.5	1.4	1.4
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag						Lag
Lead-Lag Optimize?						Yes
Vehicle Extension (s)	2.0	2.0	2.0	3.0	2.0	3.0
Recall Mode	C-Max	None	C-Max	Max	None	Max
Walk Time (s)	6.0	6.0	5.0	6.0	6.0	5.0
Flash Dont Walk (s)	16.0	16.0	10.0	16.0	16.0	10.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						

Intersection Summary

McKinney - Cole Uptown Evaluation

2015 Existing - PM Peak Hour

Lanes, Volumes, Timings

28: McKinney & Knox

	←	→	↖	↗	←	↖	↗	↑	↘	↙	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕↕↕				
Volume (vph)	64	693	0	0	537	99	88	500	342	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.972			0.951				
Flt Protected		0.996						0.995				
Satd. Flow (prot)	0	3525	0	0	3440	0	0	4812	0	0	0	0
Flt Permitted		0.679						0.995				
Satd. Flow (perm)	0	2403	0	0	3440	0	0	4812	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					24			80				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		461			315			685			1670	
Travel Time (s)		10.5			7.2			15.6			38.0	
Peak Hour Factor	0.86	0.90	1.00	0.38	0.92	0.74	0.79	0.78	0.95	1.00	1.00	1.00
Adj. Flow (vph)	74	770	0	0	584	134	111	641	360	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	844	0	0	718	0	0	1112	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1		1	1				
Detector Template												
Leading Detector (ft)	50	50			50		50	50				
Trailing Detector (ft)	0	0			0		0	0				
Detector 1 Position(ft)	0	0			0		0	0				
Detector 1 Size(ft)	50	50			50		50	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	1	6			2			4				
Permitted Phases	6						4					
Detector Phase	1	6			2		4	4				
Switch Phase												
Minimum Initial (s)	4.0	12.0			12.0		12.0	12.0				
Minimum Split (s)	9.0	17.0			17.0		17.0	17.0				
Total Split (s)	10.0	50.0			40.0		70.0	70.0				
Total Split (%)	8.3%	41.7%			33.3%		58.3%	58.3%				
Maximum Green (s)	5.0	45.0			35.0		65.0	65.0				
Yellow Time (s)	3.0	3.4			3.4		3.4	3.4				
All-Red Time (s)	2.0	1.6			1.6		1.6	1.6				

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2015 Existing - PM Peak Hour

Lanes, Volumes, Timings

28: McKinney & Knox

	←	→	↖	↗	←	↖	↗	↑	↘	↙	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-1.0			-1.0						-1.0	
Total Lost Time (s)		4.0			4.0						4.0	
Lead/Lag		Lag			Lead							
Lead-Lag Optimize?		Yes			Yes							
Vehicle Extension (s)		1.0	1.5		1.5			3.0	3.0			
Recall Mode		Max	C-Max		Max			Max	Max			
Walk Time (s)		6.0			6.0			4.0	4.0			
Flash Dont Walk (s)		6.0			6.0			8.0	8.0			
Pedestrian Calls (#/hr)		0			0			0	0			
Act Effct Green (s)		46.0			36.0				66.0			
Actuated g/C Ratio		0.38			0.30				0.55			
v/c Ratio		0.86			0.69				0.41			
Control Delay		42.7			39.7				13.1			
Queue Delay		0.4			0.0				0.0			
Total Delay		43.1			39.7				13.1			
LOS		D			D				B			
Approach Delay		43.1			39.7				13.1			
Approach LOS		D			D				B			

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 26 (22%), Referenced to phase 6:EBTL, Start of Yellow

Natural Cycle: 45

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 29.7

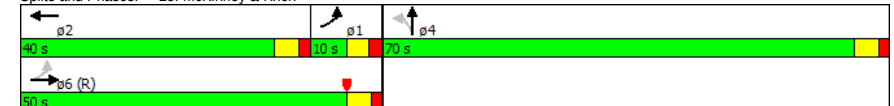
Intersection LOS: C

Intersection Capacity Utilization 68.1%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 28: McKinney & Knox



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2015 Existing - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2015 Existing - PM Peak Hour

Lanes, Volumes, Timings

29: Cole & Knox

	↖	→	↘	↙	←	↖	↙	↑	↘	↙	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕						↕↕↕	
Volume (vph)	0	569	69	198	375	0	0	0	0	132	248	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.983									0.983	
Flt Protected					0.981						0.984	
Satd. Flow (prot)	0	3479	0	0	3472	0	0	0	0	0	4919	0
Flt Permitted					0.601						0.984	
Satd. Flow (perm)	0	3479	0	0	2127	0	0	0	0	0	4919	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28									37	
Link Speed (mph)		30			30				30		30	
Link Distance (ft)		239			461				672		1685	
Travel Time (s)		5.4			10.5				15.3		38.3	
Peak Hour Factor	0.25	0.95	0.88	0.83	0.96	1.00	1.00	1.00	1.00	0.77	0.87	0.81
Adj. Flow (vph)	0	599	78	239	391	0	0	0	0	171	285	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	677	0	0	630	0	0	0	0	0	514	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0				0		0	
Link Offset(ft)		0			0				0		0	
Crosswalk Width(ft)		16			16				16		16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1		1	1					1	1	
Detector Template												
Leading Detector (ft)		50		50	50					50	50	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		50		50	50					50	50	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		6		5	2						4	
Permitted Phases				2						4		
Detector Phase		6		5	2					4	4	
Switch Phase												
Minimum Initial (s)		4.0		4.0	4.0					4.0	4.0	
Minimum Split (s)		19.0		9.0	19.0					19.0	19.0	
Total Split (s)		28.0		12.0	40.0					20.0	20.0	
Total Split (%)		46.7%		20.0%	66.7%					33.3%	33.3%	
Maximum Green (s)		23.0		7.0	35.0					15.0	15.0	
Yellow Time (s)		3.5		3.0	3.5					3.5	3.5	
All-Red Time (s)		1.5		2.0	1.5					1.5	1.5	

McKinney - Cole Uptown Evaluation

2015 Existing - PM Peak Hour

Lanes, Volumes, Timings

29: Cole & Knox

	↖	→	↘	↙	←	↖	↙	↑	↘	↙	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-1.0			-1.0						-1.0	
Total Lost Time (s)		4.0			4.0						4.0	
Lead/Lag		Lead			Lag							
Lead-Lag Optimize?		Yes			Yes							
Vehicle Extension (s)		2.0		2.0	2.0					2.0	2.0	
Recall Mode		Max		None	C-Max					Max	Max	
Walk Time (s)		4.0			8.0					4.0	4.0	
Flash Dont Walk (s)		10.0			6.0					10.0	10.0	
Pedestrian Calls (#/hr)		0			0					0	0	
Act Effct Green (s)		36.0			36.0						16.0	
Actuated g/C Ratio		0.60			0.60						0.27	
v/c Ratio		0.32			0.49						0.38	
Control Delay		6.2			9.4						17.6	
Queue Delay		0.0			0.0						0.0	
Total Delay		6.2			9.4						17.6	
LOS		A			A						B	
Approach Delay		6.2			9.4						17.6	
Approach LOS		A			A						B	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 31 (52%), Referenced to phase 2:WBT, Start of Yellow

Natural Cycle: 50

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.49

Intersection Signal Delay: 10.5

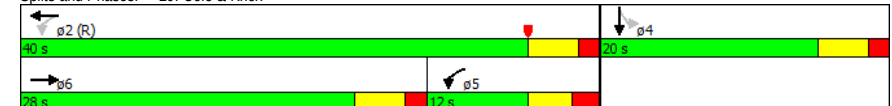
Intersection LOS: B

Intersection Capacity Utilization 52.6%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 29: Cole & Knox



McKinney - Cole Uptown Evaluation
HCM 2010 AWSC

2015 Existing - PM Peak Hour
30: McKinney & Monticello

Intersection												
Intersection Delay, s/veh	16.6											
Intersection LOS	C											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	46	254	0	0	118	79	37	437	251	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	50	276	0	0	128	86	40	475	273	0	0	0
Number of Lanes	0	1	0	0	1	0	0	3	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	3	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	3	0	1
HCM Control Delay	20.7	14.1	15.5
HCM LOS	C	B	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1
Vol Left, %	25%	0%	0%	15%	0%
Vol Thru, %	75%	100%	30%	85%	60%
Vol Right, %	0%	0%	70%	0%	40%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	146	219	360	300	197
LT Vol	109	219	109	254	118
Through Vol	0	0	251	0	79
RT Vol	37	0	0	46	0
Lane Flow Rate	159	238	392	326	214
Geometry Grp	7	7	7	7	7
Degree of Util (X)	0.285	0.417	0.634	0.627	0.404
Departure Headway (Hd)	6.454	6.326	5.831	6.922	6.791
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	555	568	619	522	527
Service Time	4.213	4.085	3.589	4.686	4.563
HCM Lane V/C Ratio	0.286	0.419	0.633	0.625	0.406
HCM Control Delay	11.8	13.6	18.2	20.7	14.1
HCM Lane LOS	B	B	C	C	B
HCM 95th-tile Q	1.2	2	4.5	4.3	1.9

Notes

~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2015 Existing - PM Peak Hour
3: Allen & Sneed

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement												
Lane Configurations		↔			↔						↔↔	
Volume (veh/h)	0	104	66	0	7	0	0	0	0	25	470	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	113	72	0	8	0	0	0	0	27	511	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)								1012			553	
pX, platoon unblocked												
vC, conflicting volume	569	565	255	438	565	0	511			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	569	565	255	438	565	0	511			0		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	73	90	100	98	100	100			98		
cM capacity (veh/h)	394	425	744	356	425	1084	1051			1622		
Direction, Lane #	EB 1	WB 1	SB 1	SB 2								
Volume Total	185	8	283	255								
Volume Left	0	0	27	0								
Volume Right	72	0	0	0								
cSH	510	425	1622	1700								
Volume to Capacity	0.36	0.02	0.02	0.15								
Queue Length 95th (ft)	41	1	1	0								
Control Delay (s)	16.0	13.6	0.8	0.0								
Lane LOS	C	B	A									
Approach Delay (s)	16.0	13.6	0.4									
Approach LOS	C	B										
Intersection Summary												
Average Delay			4.5									
Intersection Capacity Utilization			29.9%			ICU Level of Service		A				
Analysis Period (min)			15									

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2015 Existing - PM Peak Hour
15: McKinney & Haskell

	EBL	EBR	NBL	NBT	SBT	SBR
Movement						
Lane Configurations	↔			↔↔↔		
Volume (veh/h)	21	0	61	1060	0	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	23	0	66	1152	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				368		
pX, platoon unblocked						
vC, conflicting volume	517	0	0			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	517	0	0			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	100	96			
cM capacity (veh/h)	468	1084	1622			
Direction, Lane #	EB 1	NB 1	NB 2	NB 3		
Volume Total	23	297	461	461		
Volume Left	23	66	0	0		
Volume Right	0	0	0	0		
cSH	468	1622	1700	1700		
Volume to Capacity	0.05	0.04	0.27	0.27		
Queue Length 95th (ft)	4	3	0	0		
Control Delay (s)	13.1	1.9	0.0	0.0		
Lane LOS	B	A				
Approach Delay (s)	13.1	0.5				
Approach LOS	B					
Intersection Summary						
Average Delay			0.7			
Intersection Capacity Utilization			41.4%		ICU Level of Service	A
Analysis Period (min)			15			

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2015 Existing - PM Peak Hour
16: Cole & Haskell

	←	↖	↑	↗	↘	↓
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖					↗↘↙
Volume (veh/h)	97	0	0	0	15	534
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	105	0	0	0	16	580
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (ft)			400			
pX, platoon unblocked						
vC, conflicting volume	226	0			0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	226	0			0	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	86	100			99	
cM capacity (veh/h)	734	1084			1622	
Direction, Lane #	WB 1	SB 1	SB 2	SB 3		
Volume Total	105	132	232	232		
Volume Left	105	16	0	0		
Volume Right	0	0	0	0		
cSH	734	1622	1700	1700		
Volume to Capacity	0.14	0.01	0.14	0.14		
Queue Length 95th (ft)	12	1	0	0		
Control Delay (s)	10.7	1.0	0.0	0.0		
Lane LOS	B	A				
Approach Delay (s)	10.7	0.2				
Approach LOS	B					
Intersection Summary						
Average Delay			1.8			
Intersection Capacity Utilization			41.4%		ICU Level of Service	A
Analysis Period (min)			15			

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2015 Existing - PM Peak Hour
17: Cole & Haskell EB

	↖	↗	↖	↑	↓	↘
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↖			↗↘↙	
Volume (veh/h)	0	25	0	0	549	13
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	27	0	0	597	14
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				528		
pX, platoon unblocked						
vC, conflicting volume	604	206	611			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	604	206	611			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	97	100			
cM capacity (veh/h)	430	800	964			
Direction, Lane #	EB 1	SB 1	SB 2	SB 3		
Volume Total	27	239	239	133		
Volume Left	0	0	0	0		
Volume Right	27	0	0	14		
cSH	800	1700	1700	1700		
Volume to Capacity	0.03	0.14	0.14	0.08		
Queue Length 95th (ft)	3	0	0	0		
Control Delay (s)	9.7	0.0	0.0	0.0		
Lane LOS	A					
Approach Delay (s)	9.7	0.0				
Approach LOS	A					
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			20.9%		ICU Level of Service	A
Analysis Period (min)			15			

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2015 Existing - PM Peak Hour
18: McKinney & North Dallas High School

	EBL	EBR	NBL	NBT	SBT	SBR
Movement	↖	↗	↖	↗	↘	↙
Lane Configurations	↖			↗↗↗		
Volume (veh/h)	11	0	30	1023	0	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	12	0	33	1112	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				978		
pX, platoon unblocked						
vC, conflicting volume	436	0	0			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	436	0	0			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	100	98			
cM capacity (veh/h)	538	1084	1622			
Direction, Lane #	EB 1	NB 1	NB 2	NB 3		
Volume Total	12	255	445	445		
Volume Left	12	33	0	0		
Volume Right	0	0	0	0		
cSH	538	1622	1700	1700		
Volume to Capacity	0.02	0.02	0.26	0.26		
Queue Length 95th (ft)	2	2	0	0		
Control Delay (s)	11.8	1.1	0.0	0.0		
Lane LOS	B	A				
Approach Delay (s)	11.8	0.2				
Approach LOS	B					
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			41.5%		ICU Level of Service	A
Analysis Period (min)			15			

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2015 Existing - PM Peak Hour
19: Cole & North Dallas High School

	WBL	WBR	NBT	NBR	SBL	SBT
Movement	↖	↗	↗	↖	↖	↗
Lane Configurations	↖					↗↗↗
Volume (veh/h)	3	0	0	0	10	579
Sign Control	Stop			Free		Free
Grade	0%			0%		0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	0	0	0	11	629
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (ft)			816			
pX, platoon unblocked						
vC, conflicting volume	232	0			0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	232	0			0	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			99	
cM capacity (veh/h)	731	1084			1622	
Direction, Lane #	WB 1	SB 1	SB 2	SB 3		
Volume Total	3	137	252	252		
Volume Left	3	11	0	0		
Volume Right	0	0	0	0		
cSH	731	1622	1700	1700		
Volume to Capacity	0.00	0.01	0.15	0.15		
Queue Length 95th (ft)	0	1	0	0		
Control Delay (s)	9.9	0.6	0.0	0.0		
Lane LOS	A	A				
Approach Delay (s)	9.9	0.1				
Approach LOS	A					
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			41.5%		ICU Level of Service	A
Analysis Period (min)			15			

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2015 Existing - PM Peak Hour
20: McKinney & Cambrick

	EBL	EBR	NBL	NBT	SBT	SBR
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰	↱	↰	↱	↰	↱
Volume (veh/h)	7	0	15	1008	0	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	8	0	16	1096	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	398	0	0			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	398	0	0			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	100	99			
cM capacity (veh/h)	574	1084	1622			
Direction, Lane #	EB 1	NB 1	NB 2	NB 3		
Volume Total	8	235	438	438		
Volume Left	8	16	0	0		
Volume Right	0	0	0	0		
cSH	574	1622	1700	1700		
Volume to Capacity	0.01	0.01	0.26	0.26		
Queue Length 95th (ft)	1	1	0	0		
Control Delay (s)	11.4	0.6	0.0	0.0		
Lane LOS	B	A				
Approach Delay (s)	11.4	0.1				
Approach LOS	B					
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			29.8%		ICU Level of Service	A
Analysis Period (min)			15			

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2015 Existing - PM Peak Hour
21: Cole & Cambrick

	EBL	EBR	NBL	NBT	SBT	SBR
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰	↱	↰	↱	↰	↱
Volume (veh/h)	0	25	0	0	549	13
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	27	0	0	597	14
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				1239		
pX, platoon unblocked						
vC, conflicting volume	604	206	611			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	604	206	611			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	97	100			
cM capacity (veh/h)	430	800	964			
Direction, Lane #	EB 1	SB 1	SB 2	SB 3		
Volume Total	27	239	239	133		
Volume Left	0	0	0	0		
Volume Right	27	0	0	14		
cSH	800	1700	1700	1700		
Volume to Capacity	0.03	0.14	0.14	0.08		
Queue Length 95th (ft)	3	0	0	0		
Control Delay (s)	9.7	0.0	0.0	0.0		
Lane LOS	A					
Approach Delay (s)	9.7	0.0				
Approach LOS	A					
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			20.9%		ICU Level of Service	A
Analysis Period (min)			15			

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2015 Existing - PM Peak Hour
22: McKinney & Elizabeth

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	41	26	0	0	30	35	63	  	27	0	0	0
Sign Control	Stop			Stop			Free			Free		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	45	28	0	0	33	38	68	1009	29	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None			None		
Median storage (veh)												
Upstream signal (ft)	837											
pX, platoon unblocked												
vC, conflicting volume	528	1175	0	1174	1160	351	0				1038	
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	528	1175	0	1174	1160	351	0				1038	
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1				4.1	
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2				2.2	
p0 queue free %	87	84	100	100	82	94	96				100	
cM capacity (veh/h)	342	182	1084	125	186	645	1622				665	
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3							
Volume Total	73	71	321	504	282							
Volume Left	45	0	68	0	0							
Volume Right	0	38	0	0	29							
cSH	255	301	1622	1700	1700							
Volume to Capacity	0.29	0.23	0.04	0.30	0.17							
Queue Length 95th (ft)	29	22	3	0	0							
Control Delay (s)	24.6	20.6	1.8	0.0	0.0							
Lane LOS	C	C	A									
Approach Delay (s)	24.6	20.6	0.5									
Approach LOS	C	C										
Intersection Summary												
Average Delay				3.1								
Intersection Capacity Utilization				36.8%	ICU Level of Service			A				
Analysis Period (min)				15								

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2015 Existing - PM Peak Hour
23: Cole & Elizabeth

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	12	27	71	22	0	0	0	0	48	469	17
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	13	29	77	24	0	0	0	0	52	510	18
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None			None		
Median storage (veh)												
Upstream signal (ft)	802											
pX, platoon unblocked												
vC, conflicting volume	635	623	179	310	633	0	528				0	
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	635	623	179	310	633	0	528				0	
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1				4.1	
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2				2.2	
p0 queue free %	100	97	96	86	94	100	100				97	
cM capacity (veh/h)	337	388	833	568	383	1084	1035				1622	
Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3							
Volume Total	42	101	180	255	146							
Volume Left	0	77	52	0	0							
Volume Right	29	0	0	0	18							
cSH	615	510	1622	1700	1700							
Volume to Capacity	0.07	0.20	0.03	0.15	0.09							
Queue Length 95th (ft)	6	18	2	0	0							
Control Delay (s)	11.3	13.8	2.3	0.0	0.0							
Lane LOS	B	B	A									
Approach Delay (s)	11.3	13.8	0.7									
Approach LOS	B	B										
Intersection Summary												
Average Delay				3.2								
Intersection Capacity Utilization				28.8%	ICU Level of Service			A				
Analysis Period (min)				15								

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2015 Existing - PM Peak Hour
26: McKinney & Armstrong

																			
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR							
Lane Configurations																			
Volume (veh/h)	106	41	0	0	41	82	33	869	42	0	0	0							
Sign Control		Stop			Stop			Free			Free								
Grade		0%			0%			0%			0%								
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92							
Hourly flow rate (vph)	115	45	0	0	45	89	36	945	46	0	0	0							
Pedestrians																			
Lane Width (ft)																			
Walking Speed (ft/s)																			
Percent Blockage																			
Right turn flare (veh)																			
Median type								None			None								
Median storage (veh)																			
Upstream signal (ft)											685								
pX, platoon unblocked																			
vC, conflicting volume	498	1062	0	1061	1039	338	0			990									
vC1, stage 1 conf vol																			
vC2, stage 2 conf vol																			
vCu, unblocked vol	498	1062	0	1061	1039	338	0			990									
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1									
tC, 2 stage (s)																			
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2									
p0 queue free %	65	79	100	100	80	86	98			100									
cM capacity (veh/h)	328	217	1084	147	224	658	1622			694									
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3														
Volume Total	160	134	272	472	282														
Volume Left	115	0	36	0	0														
Volume Right	0	89	0	0	46														
cSH	287	400	1622	1700	1700														
Volume to Capacity	0.56	0.33	0.02	0.28	0.17														
Queue Length 95th (ft)	79	36	2	0	0														
Control Delay (s)	32.2	18.5	1.1	0.0	0.0														
Lane LOS	D	C	A																
Approach Delay (s)	32.2	18.5	0.3																
Approach LOS	D	C																	
Intersection Summary																			
Average Delay			6.0																
Intersection Capacity Utilization			43.6%	ICU Level of Service		A													
Analysis Period (min)			15																

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2015 Existing - PM Peak Hour
27: Cole & Armstrong

																			
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR							
Lane Configurations											 								
Volume (veh/h)	0	44	37	40	32	0	0	0	0	65	484	24							
Sign Control		Stop			Stop			Free			Free								
Grade		0%			0%			0%			0%								
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92							
Hourly flow rate (vph)	0	48	40	43	35	0	0	0	0	71	526	26							
Pedestrians																			
Lane Width (ft)																			
Walking Speed (ft/s)																			
Percent Blockage																			
Right turn flare (veh)																			
Median type								None			None								
Median storage (veh)																			
Upstream signal (ft)											672								
pX, platoon unblocked																			
vC, conflicting volume	698	680	188	381	693	0	552			0									
vC1, stage 1 conf vol																			
vC2, stage 2 conf vol																			
vCu, unblocked vol	698	680	188	381	693	0	552			0									
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1									
tC, 2 stage (s)																			
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2									
p0 queue free %	100	87	95	90	90	100	100			96									
cM capacity (veh/h)	292	355	822	455	349	1084	1014			1622									
Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3														
Volume Total	88	78	202	263	158														
Volume Left	0	43	71	0	0														
Volume Right	40	0	0	0	26														
cSH	480	401	1622	1700	1700														
Volume to Capacity	0.18	0.20	0.04	0.15	0.09														
Queue Length 95th (ft)	17	18	3	0	0														
Control Delay (s)	14.2	16.1	2.8	0.0	0.0														
Lane LOS	B	C	A																
Approach Delay (s)	14.2	16.1	0.9																
Approach LOS	B	C																	
Intersection Summary																			
Average Delay			3.9																
Intersection Capacity Utilization			28.4%	ICU Level of Service		A													
Analysis Period (min)			15																

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2015 Existing - PM Peak Hour
31: Cole & Monticello

																			
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR							
Lane Configurations																			
Volume (veh/h)	0	0	0	141	0	0	0	0	0	233	338	0							
Sign Control		Stop			Stop			Free			Free								
Grade		0%			0%			0%			0%								
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92							
Hourly flow rate (vph)	0	0	0	153	0	0	0	0	0	253	367	0							
Pedestrians																			
Lane Width (ft)																			
Walking Speed (ft/s)																			
Percent Blockage																			
Right turn flare (veh)																			
Median type								None			None								
Median storage (veh)																			
Upstream signal (ft)																			
pX, platoon unblocked																			
vC, conflicting volume	874	874	122	629	874	0	367			0									
vC1, stage 1 conf vol																			
vC2, stage 2 conf vol																			
vCu, unblocked vol	874	874	122	629	874	0	367			0									
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1									
tC, 2 stage (s)																			
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2									
p0 queue free %	100	100	100	53	100	100	100			84									
cM capacity (veh/h)	215	242	906	323	242	1084	1188			1622									
Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3														
Volume Total	0	153	345	184	92														
Volume Left	0	153	253	0	0														
Volume Right	0	0	0	0	0														
cSH	1700	323	1622	1700	1700														
Volume to Capacity	0.00	0.47	0.16	0.11	0.05														
Queue Length 95th (ft)	0	61	14	0	0														
Control Delay (s)	0.0	25.8	5.9	0.0	0.0														
Lane LOS	A	D	A																
Approach Delay (s)	0.0	25.8	3.3																
Approach LOS	A	D																	
Intersection Summary																			
Average Delay			7.8																
Intersection Capacity Utilization			27.4%			ICU Level of Service		A											
Analysis Period (min)			15																

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2015 Existing - PM Peak Hour
32: McKinney & Harvard

																			
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR							
Lane Configurations																			
Volume (veh/h)	65	1	0	0	0	95	1	377	181	0	0	0							
Sign Control		Stop			Stop			Free			Free								
Grade		0%			0%			0%			0%								
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92							
Hourly flow rate (vph)	71	1	0	0	0	103	1	410	197	0	0	0							
Pedestrians																			
Lane Width (ft)																			
Walking Speed (ft/s)																			
Percent Blockage																			
Right turn flare (veh)																			
Median type								None			None								
Median storage (veh)																			
Upstream signal (ft)																			
pX, platoon unblocked																			
vC, conflicting volume	310	412	0	412	412	205	0			410									
vC1, stage 1 conf vol																			
vC2, stage 2 conf vol																			
vCu, unblocked vol	310	412	0	412	412	205	0			410									
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1									
tC, 2 stage (s)																			
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2									
p0 queue free %	87	100	100	100	100	87	100			100									
cM capacity (veh/h)	539	528	1084	523	528	802	1622			1146									
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3														
Volume Total	72	103	138	273	197														
Volume Left	71	0	1	0	0														
Volume Right	0	103	0	0	197														
cSH	539	802	1622	1700	1700														
Volume to Capacity	0.13	0.13	0.00	0.16	0.12														
Queue Length 95th (ft)	11	11	0	0	0														
Control Delay (s)	12.7	10.2	0.1	0.0	0.0														
Lane LOS	B	B	A																
Approach Delay (s)	12.7	10.2	0.0																
Approach LOS	B	B																	
Intersection Summary																			
Average Delay			2.5																
Intersection Capacity Utilization			30.0%			ICU Level of Service		A											
Analysis Period (min)			15																

Synchro™ Output – 2035 Background Traffic

McKinney - Cole Uptown Evaluation

2035 Background - AM Peak Hour

Lanes, Volumes, Timings

1: Oak Grove & McKinney

	←	↖	↗	↑	↘	↙	↓	↘	↗	↖	↗	↖
Lane Group	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	ø2	ø5
Lane Configurations	↖			↗	↖				↖			
Volume (vph)	206	56	0	514	62	0	0	0	110	35		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Storage Length (ft)	0	0	0		137	0		0	0	0		
Storage Lanes	1	0	0		1	0		0	1	0		
Taper Length (ft)	25		25			25			25			
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00		
Frt	0.969				0.850				0.968			
Flt Protected	0.963								0.963			
Satd. Flow (prot)	1738	0	0	3539	1583	0	0	0	1736	0		
Flt Permitted	0.963								0.963			
Satd. Flow (perm)	1738	0	0	3539	1583	0	0	0	1736	0		
Right Turn on Red		Yes			Yes			Yes				
Satd. Flow (RTOR)	109				95							
Link Speed (mph)	30			30			30		30			
Link Distance (ft)	339			335			848		87			
Travel Time (s)	7.7			7.6			19.3		2.0			
Peak Hour Factor	0.92	0.83	0.92	0.91	0.92	0.89	0.77	0.92	0.92	0.92		
Adj. Flow (vph)	224	67	0	565	67	0	0	0	120	38		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	291	0	0	565	67	0	0	0	158	0		
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No		
Lane Alignment	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right		
Median Width(ft)	12			0			0		12			
Link Offset(ft)	0			-12			12		0			
Crosswalk Width(ft)	16			16			16		16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)	15	9	15		9	15		9	15	9		
Number of Detectors	1			1	1				1			
Detector Template	Left								Left			
Leading Detector (ft)	20			50	50				20			
Trailing Detector (ft)	0			0	0				0			
Detector 1 Position(ft)	0			0	0				0			
Detector 1 Size(ft)	20			50	50				20			
Detector 1 Type	CI+Ex			CI+Ex	CI+Ex				CI+Ex			
Detector 1 Channel												
Detector 1 Extend (s)	0.0			0.0	0.0				0.0			
Detector 1 Queue (s)	0.0			0.0	0.0				0.0			
Detector 1 Delay (s)	0.0			0.0	0.0				0.0			
Turn Type	NA			NA	Perm				NA			
Protected Phases	8!			6					5 8!	2	5	
Permitted Phases					6							
Detector Phase	8			6	6				5 8			
Switch Phase												
Minimum Initial (s)	8.0			10.0	10.0					10.0	4.0	
Minimum Split (s)	18.5			20.5	20.5					20.5	9.0	
Total Split (s)	28.0			27.0	27.0					47.0	20.0	
Total Split (%)	37.3%			36.0%	36.0%					63%	27%	

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - AM Peak Hour

Synchro 8 Report
Page 1

McKinney - Cole Uptown Evaluation

2035 Background - AM Peak Hour

Lanes, Volumes, Timings

1: Oak Grove & McKinney

	←	↖	↗	↑	↘	↙	↓	↘	↗	↖	↗	↖
Lane Group	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	ø2	ø5
Maximum Green (s)	23.5			21.5	21.5						41.5	15.0
Yellow Time (s)	3.5			4.0	4.0						4.0	3.0
All-Red Time (s)	1.0			1.5	1.5						1.5	2.0
Lost Time Adjust (s)	0.0			-1.5	-1.5							
Total Lost Time (s)	4.5			4.0	4.0							
Lead/Lag				Lag	Lag							Lead
Lead-Lag Optimize?				Yes	Yes							Yes
Vehicle Extension (s)	2.0			2.0	2.0						2.0	3.0
Recall Mode	None			C-Max	C-Max						C-Max	None
Walk Time (s)	5.0			5.0	5.0							
Flash Dont Walk (s)	8.0			8.0	8.0							
Pedestrian Calls (#/hr)	0			0	0							
Act Effct Green (s)	14.1			35.5	35.5					30.5		
Actuated g/C Ratio	0.19			0.47	0.47					0.41		
v/c Ratio	0.70			0.34	0.08					0.22		
Control Delay	26.4			14.9	2.6					1.8		
Queue Delay	0.1			0.0	0.0					0.0		
Total Delay	26.5			14.9	2.6					1.8		
LOS	C			B	A					A		
Approach Delay	26.5			13.6						1.8		
Approach LOS	C			B						A		

Intersection Summary

Area Type: Other

Cycle Length: 75

Actuated Cycle Length: 75

Offset: 65 (87%), Referenced to phase 2:SET and 6:, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.70

Intersection Signal Delay: 15.4

Intersection LOS: B

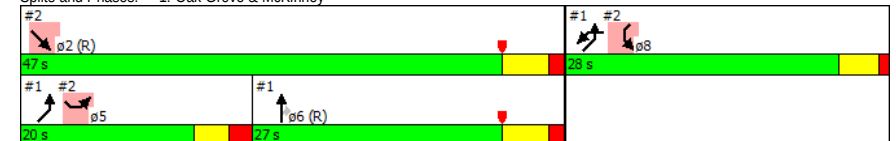
Intersection Capacity Utilization 48.5%

ICU Level of Service A

Analysis Period (min) 15

! Phase conflict between lane groups.

Splits and Phases: 1: Oak Grove & McKinney



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - AM Peak Hour

Synchro 8 Report
Page 2

McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2035 Background - AM Peak Hour
2: Allen & Oak Grove

Lane Group	SEL	SET	NWT	NWR	SWL	SWR	ø6
Lane Configurations							
Volume (vph)	146	547	0	0	206	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	150				0	0	
Storage Lanes	1				0	1	
Taper Length (ft)	25				25		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	
Frt							
Flt Protected	0.950				0.950		
Satd. Flow (prot)	1770	3539	0	0	1770	0	
Flt Permitted	0.950				0.950		
Satd. Flow (perm)	1770	3539	0	0	1770	0	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)							
Link Speed (mph)		30	30		30		
Link Distance (ft)		1012	296		87		
Travel Time (s)		23.0	6.7		2.0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	159	595	0	0	224	0	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	159	595	0	0	224	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(ft)		12	12		12		
Link Offset(ft)		0	0		0		
Crosswalk Width(ft)		16	16		16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15			9	15	9	
Number of Detectors	1	2			1		
Detector Template	Left	Thru			Left		
Leading Detector (ft)	20	100			20		
Trailing Detector (ft)	0	0			0		
Detector 1 Position(ft)	0	0			0		
Detector 1 Size(ft)	20	6			20		
Detector 1 Type	CI+Ex	CI+Ex			CI+Ex		
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0			0.0		
Detector 1 Queue (s)	0.0	0.0			0.0		
Detector 1 Delay (s)	0.0	0.0			0.0		
Detector 2 Position(ft)		94					
Detector 2 Size(ft)		6					
Detector 2 Type		CI+Ex					
Detector 2 Channel							
Detector 2 Extend (s)		0.0					
Turn Type	Prot	NA			NA		
Protected Phases	5	2			8	6	
Permitted Phases							
Detector Phase	5	2			8		

McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2035 Background - AM Peak Hour
2: Allen & Oak Grove

Lane Group	SEL	SET	NWT	NWR	SWL	SWR	ø6
Switch Phase							
Minimum Initial (s)	4.0	10.0			8.0		10.0
Minimum Split (s)	9.0	20.5			18.5		20.5
Total Split (s)	20.0	47.0			28.0		27.0
Total Split (%)	26.7%	62.7%			37.3%		36%
Maximum Green (s)	15.0	41.5			23.5		21.5
Yellow Time (s)	3.0	4.0			3.5		4.0
All-Red Time (s)	2.0	1.5			1.0		1.5
Lost Time Adjust (s)	0.0	0.0			0.0		
Total Lost Time (s)	5.0	5.5			4.5		
Lead/Lag	Lead						Lag
Lead-Lag Optimize?	Yes						Yes
Vehicle Extension (s)	3.0	2.0			2.0		2.0
Recall Mode	None	C-Max			None		C-Max
Walk Time (s)					5.0		5.0
Flash Dont Walk (s)					8.0		8.0
Pedestrian Calls (#/hr)					0		0
Act Effct Green (s)	11.9	50.9			14.1		
Actuated g/C Ratio	0.16	0.68			0.19		
v/c Ratio	0.57	0.25			0.68		
Control Delay	36.4	5.6			20.3		
Queue Delay	0.0	0.0			0.0		
Total Delay	36.4	5.6			20.3		
LOS	D	A			C		
Approach Delay		12.1			20.3		
Approach LOS		B			C		

Intersection Summary

Area Type: Other

Cycle Length: 75

Actuated Cycle Length: 75

Offset: 65 (87%), Referenced to phase 2:SET and 6:, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.70

Intersection Signal Delay: 13.9

Intersection LOS: B

Intersection Capacity Utilization 34.9%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 2: Allen & Oak Grove



McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings2035 Background - AM Peak Hour
4: McKinney & Bowen

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔↔↔				
Volume (vph)	57	98	0	0	116	23	95	506	30	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.974			0.991				
Flt Protected		0.981						0.991				
Satd. Flow (prot)	0	1827	0	0	1814	0	0	4994	0	0	0	0
Flt Permitted		0.846						0.991				
Satd. Flow (perm)	0	1576	0	0	1814	0	0	4994	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					30			18				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		229			304			848			502	
Travel Time (s)		5.2			6.9			19.3			11.4	
Peak Hour Factor	0.79	0.88	1.00	1.00	0.81	0.67	0.71	0.92	0.68	1.00	1.00	1.00
Adj. Flow (vph)	72	111	0	0	143	34	134	550	44	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	183	0	0	177	0	0	728	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1		1	1				
Detector Template												
Leading Detector (ft)	50	50			50		50	50				
Trailing Detector (ft)	0	0			0		0	0				
Detector 1 Position(ft)	0	0			0		0	0				
Detector 1 Size(ft)	50	50			50		50	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4			4			2				
Permitted Phases	4						2					
Detector Phase	4	4			4		2	2				
Switch Phase												
Minimum Initial (s)	6.0	6.0			6.0		10.0	10.0				
Minimum Split (s)	15.2	15.2			15.2		15.2	15.2				
Total Split (s)	35.0	35.0			35.0		25.0	25.0				
Total Split (%)	58.3%	58.3%			58.3%		41.7%	41.7%				
Maximum Green (s)	30.8	30.8			30.8		20.8	20.8				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	1.0	1.0			1.0		1.0	1.0				

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - AM Peak Hour

Synchro 8 Report
Page 5McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings2035 Background - AM Peak Hour
4: McKinney & Bowen

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-0.2			-0.2			-0.2				
Total Lost Time (s)		4.0			4.0			4.0				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	2.5			2.5		4.0	4.0				
Recall Mode	Max	Max			Max		C-Max	C-Max				
Walk Time (s)	4.0	4.0			4.0		4.0	4.0				
Flash Dont Walk (s)	7.0	7.0			7.0		7.0	7.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		31.0			31.0			21.0				
Actuated g/C Ratio		0.52			0.52			0.35				
v/c Ratio		0.22			0.19			0.41				
Control Delay		13.5			7.0			15.3				
Queue Delay		0.0			0.0			0.0				
Total Delay		13.5			7.0			15.3				
LOS		B			A			B				
Approach Delay		13.5			7.0			15.3				
Approach LOS		B			A			B				

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 8 (13%), Referenced to phase 2:NBT, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

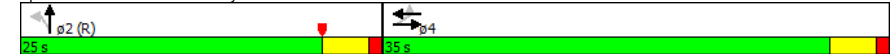
Maximum v/c Ratio: 0.41

Intersection Signal Delay: 13.7 Intersection LOS: B

Intersection Capacity Utilization 38.2% ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 4: McKinney & Bowen



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - AM Peak Hour

Synchro 8 Report
Page 6

McKinney - Cole Uptown Evaluation

2035 Background - AM Peak Hour

Lanes, Volumes, Timings

5: Carlisle & Bowen

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑						↑↑↑	
Volume (vph)	0	186	87	33	208	0	0	0	0	45	821	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.950									0.980	
Flt Protected					0.991						0.997	
Satd. Flow (prot)	0	3362	0	0	3507	0	0	0	0	0	4969	0
Flt Permitted					0.835						0.997	
Satd. Flow (perm)	0	3362	0	0	2955	0	0	0	0	0	4969	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		81									66	
Link Speed (mph)		30			30				30		30	
Link Distance (ft)		361			568				386		773	
Travel Time (s)		8.2			12.9				8.8		17.6	
Peak Hour Factor	1.00	0.91	0.85	0.60	0.86	1.00	1.00	1.00	1.00	0.65	0.84	0.70
Adj. Flow (vph)	0	204	102	55	242	0	0	0	0	69	977	157
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	306	0	0	297	0	0	0	0	0	1203	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0				0		0	
Link Offset(ft)		0			0				0		0	
Crosswalk Width(ft)		16			16				16		16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1		1	1					1	1	
Detector Template												
Leading Detector (ft)		50		50	50					50	50	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		50		50	50					50	50	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			4						2	
Permitted Phases				4						2		
Detector Phase		4		4	4					2	2	
Switch Phase												
Minimum Initial (s)		10.0		10.0	10.0					8.0	8.0	
Minimum Split (s)		19.5		19.5	19.5					19.5	19.5	
Total Split (s)		26.0		26.0	26.0					34.0	34.0	
Total Split (%)		43.3%		43.3%	43.3%					56.7%	56.7%	
Maximum Green (s)		21.5		21.5	21.5					29.5	29.5	
Yellow Time (s)		3.5		3.5	3.5					3.5	3.5	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	

McKinney - Cole Uptown Evaluation

2035 Background - AM Peak Hour

Lanes, Volumes, Timings

5: Carlisle & Bowen

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-0.5			-0.5						-0.5	
Total Lost Time (s)		4.0			4.0						4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		2.5		2.5	2.5						2.0	2.0
Recall Mode		Min		Min	Min						C-Max	C-Max
Walk Time (s)		7.0		7.0	7.0						7.0	7.0
Flash Dont Walk (s)		8.0		8.0	8.0						8.0	8.0
Pedestrian Calls (#/hr)		0		0	0						0	0
Act Effct Green (s)		12.2			12.2						39.8	
Actuated g/C Ratio		0.20			0.20						0.66	
v/c Ratio		0.41			0.49						0.36	
Control Delay		16.3			23.6						1.3	
Queue Delay		0.0			0.0						0.0	
Total Delay		16.3			23.6						1.3	
LOS		B			C						A	
Approach Delay		16.3			23.6						1.3	
Approach LOS		B			C						A	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 31 (52%), Referenced to phase 2:SBTL, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.49

Intersection Signal Delay: 7.6

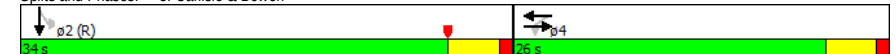
Intersection LOS: A

Intersection Capacity Utilization 45.9%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 5: Carlisle & Bowen



McKinney - Cole Uptown Evaluation

2035 Background - AM Peak Hour

Lanes, Volumes, Timings

6: McKinney & Hall

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↗			↖↗				
Volume (vph)	52	70	0	0	194	52	49	485	35	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.971			0.991				
Flt Protected		0.980						0.995				
Satd. Flow (prot)	0	1825	0	0	1809	0	0	5014	0	0	0	0
Flt Permitted		0.634						0.995				
Satd. Flow (perm)	0	1181	0	0	1809	0	0	5014	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					27			17				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		790			243			502			693	
Travel Time (s)		18.0			5.5			11.4			15.8	
Peak Hour Factor	0.83	0.78	1.00	1.00	0.85	0.82	0.76	0.89	0.86	0.25	1.00	1.00
Adj. Flow (vph)	63	90	0	0	228	63	64	545	41	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	153	0	0	291	0	0	650	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1		1	1				
Detector Template												
Leading Detector (ft)	50	50			50		50	50				
Trailing Detector (ft)	0	0			0		0	0				
Detector 1 Position(ft)	0	0			0		0	0				
Detector 1 Size(ft)	50	50			50		50	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	3	8			4			2				
Permitted Phases	8						2					
Detector Phase	3	8			4		2	2				
Switch Phase												
Minimum Initial (s)	3.0	6.0			6.0		10.0	10.0				
Minimum Split (s)	8.0	14.2			14.2		16.2	16.2				
Total Split (s)	13.0	40.0			27.0		20.0	20.0				
Total Split (%)	21.7%	66.7%			45.0%		33.3%	33.3%				
Maximum Green (s)	8.0	35.8			22.8		15.8	15.8				
Yellow Time (s)	3.0	3.2			3.2		3.2	3.2				
All-Red Time (s)	2.0	1.0			1.0		1.0	1.0				

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - AM Peak Hour

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McKinney - Cole Uptown Evaluation

2035 Background - AM Peak Hour

Lanes, Volumes, Timings

6: McKinney & Hall

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-0.2			-0.2				-0.2			
Total Lost Time (s)		4.0			4.0				4.0			
Lead/Lag		Lag			Lead							
Lead-Lag Optimize?		Yes			Yes							
Vehicle Extension (s)		2.0	3.0		3.0		2.0	2.0				
Recall Mode		None	Ped		Ped		C-Max	C-Max				
Walk Time (s)		4.0			4.0		6.0	6.0				
Flash Dont Walk (s)		6.0			6.0		6.0	6.0				
Pedestrian Calls (#/hr)		0			0		0	0				
Act Effct Green (s)		14.7			14.7			37.3				
Actuated g/C Ratio		0.24			0.24			0.62				
v/c Ratio		0.53			0.63			0.21				
Control Delay		21.4			24.0			2.5				
Queue Delay		0.0			0.0			0.0				
Total Delay		21.4			24.0			2.5				
LOS		C			C			A				
Approach Delay		21.4			24.0			2.5				
Approach LOS		C			C			A				

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 18 (30%), Referenced to phase 2:NBTL, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.63

Intersection Signal Delay: 10.9

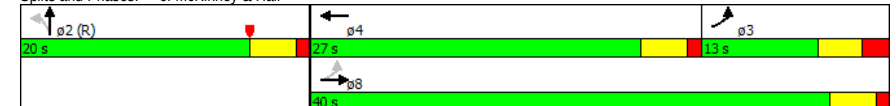
Intersection LOS: B

Intersection Capacity Utilization 41.1%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 6: McKinney & Hall



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2035 Background - AM Peak Hour

Lanes, Volumes, Timings

7: Carlisle & Hall

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↙						↗	↘
Volume (vph)	0	51	18	19	201	0	0	0	0	59	931	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.960									0.984	
Flt Protected					0.995						0.997	
Satd. Flow (prot)	0	1788	0	0	1853	0	0	0	0	0	4989	0
Flt Permitted					0.964						0.997	
Satd. Flow (perm)	0	1788	0	0	1796	0	0	0	0	0	4989	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26									45	
Link Speed (mph)		30			30				30		30	
Link Distance (ft)		182			790				773		627	
Travel Time (s)		4.1			18.0				17.6		14.3	
Peak Hour Factor	1.00	0.84	0.69	0.68	0.84	1.00	1.00	1.00	1.00	0.83	0.91	0.92
Adj. Flow (vph)	0	61	26	28	239	0	0	0	0	71	1023	127
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	87	0	0	267	0	0	0	0	0	1221	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0				0		0	
Link Offset(ft)		0			0				0		0	
Crosswalk Width(ft)		16			16				16		16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1		1	1					1	1	
Detector Template												
Leading Detector (ft)		50		50	50					50	50	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		50		50	50					50	50	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			4						2	
Permitted Phases				4						2		
Detector Phase		4		4	4					2	2	
Switch Phase												
Minimum Initial (s)		8.0		8.0	8.0					8.0	8.0	
Minimum Split (s)		18.2		18.2	18.2					18.2	18.2	
Total Split (s)		28.0		28.0	28.0					32.0	32.0	
Total Split (%)		46.7%		46.7%	46.7%					53.3%	53.3%	
Maximum Green (s)		23.8		23.8	23.8					27.8	27.8	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2035 Background - AM Peak Hour

Lanes, Volumes, Timings

7: Carlisle & Hall

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-0.2			-0.2						-0.2	
Total Lost Time (s)		4.0			4.0						4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		2.0		2.0	2.0						4.0	4.0
Recall Mode		Min		Min	Min						C-Max	C-Max
Walk Time (s)		6.0		6.0	6.0						6.0	6.0
Flash Dont Walk (s)		8.0		8.0	8.0						8.0	8.0
Pedestrian Calls (#/hr)		0		0	0						0	0
Act Effct Green (s)		13.6			13.6						38.4	
Actuated g/C Ratio		0.23			0.23						0.64	
v/c Ratio		0.21			0.66						0.38	
Control Delay		13.9			36.2						2.8	
Queue Delay		0.0			0.0						0.0	
Total Delay		13.9			36.2						2.8	
LOS		B			D						A	
Approach Delay		13.9			36.2						2.8	
Approach LOS		B			D						A	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 12 (20%), Referenced to phase 2:SBTL, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 9.1

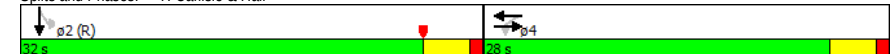
Intersection LOS: A

Intersection Capacity Utilization 46.8%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 7: Carlisle & Hall



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2035 Background - AM Peak Hour
8: McKinney & Lemmon

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↑↑↑					↑↑↑					
Volume (vph)	318	1231	0	0	0	0	0	506	113	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.91	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	1.00	1.00
Frt								0.972				
Flt Protected	0.950											
Satd. Flow (prot)	1770	5085	0	0	0	0	0	4943	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1770	5085	0	0	0	0	0	4943	0	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)	152							49				
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		651			455			693			457	
Travel Time (s)		12.7			8.9			15.8			10.4	
Peak Hour Factor	0.97	0.94	1.00	1.00	1.00	1.00	1.00	0.92	0.88	1.00	1.00	1.00
Adj. Flow (vph)	328	1310	0	0	0	0	0	550	128	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	328	1310	0	0	0	0	0	678	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1						1				
Detector Template												
Leading Detector (ft)	50	50						50				
Trailing Detector (ft)	0	0						0				
Detector 1 Position(ft)	0	0						0				
Detector 1 Size(ft)	50	50						50				
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0				
Detector 1 Queue (s)	0.0	0.0						0.0				
Detector 1 Delay (s)	0.0	0.0						0.0				
Turn Type	Perm	NA						NA				
Protected Phases		2						4				
Permitted Phases	2											
Detector Phase	2	2						4				
Switch Phase												
Minimum Initial (s)	14.0	14.0						14.0				
Minimum Split (s)	18.5	18.5						18.5				
Total Split (s)	72.0	72.0						48.0				
Total Split (%)	60.0%	60.0%						40.0%				
Maximum Green (s)	67.5	67.5						43.5				
Yellow Time (s)	3.5	3.5						3.5				
All-Red Time (s)	1.0	1.0						1.0				

McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2035 Background - AM Peak Hour
8: McKinney & Lemmon

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-0.5	-0.5						-0.5				
Total Lost Time (s)	4.0	4.0						4.0				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	0.2	0.2						0.2				
Recall Mode	C-Max	C-Max						Max				
Walk Time (s)	7.0	7.0						4.0				
Flash Dont Walk (s)	7.0	7.0						7.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)	68.0	68.0						44.0				
Actuated g/C Ratio	0.57	0.57						0.37				
v/c Ratio	0.31	0.45						0.37				
Control Delay	0.6	2.3						29.5				
Queue Delay	0.0	0.0						0.0				
Total Delay	0.6	2.3						29.5				
LOS	A	A						C				
Approach Delay								29.5				
Approach LOS		A						C				

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 15 (13%), Referenced to phase 2:EBTL, Start of Yellow
 Natural Cycle: 40
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.45
 Intersection Signal Delay: 10.0
 Intersection Capacity Utilization 74.3%
 Analysis Period (min) 15

Splits and Phases: 8: McKinney & Lemmon



McKinney - Cole Uptown Evaluation

2035 Background - AM Peak Hour

Lanes, Volumes, Timings

9: Carlisle/Cole & Lemmon

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑↑									↓↓↓	
Volume (vph)	0	1333	94	0	0	0	0	0	0	159	939	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00
Frt		0.988										
Flt Protected											0.992	
Satd. Flow (prot)	0	6331	0	0	0	0	0	0	0	0	5045	0
Flt Permitted											0.992	
Satd. Flow (perm)	0	6331	0	0	0	0	0	0	0	0	5045	0
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)		19									14	
Link Speed (mph)		35			35				30		30	
Link Distance (ft)		687			651				627		431	
Travel Time (s)		13.4			12.7				14.3		9.8	
Peak Hour Factor	1.00	0.95	0.75	1.00	1.00	1.00	1.00	1.00	1.00	0.83	0.93	1.00
Adj. Flow (vph)	0	1403	125	0	0	0	0	0	0	192	1010	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1528	0	0	0	0	0	0	0	0	1202	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0				0		0	
Link Offset(ft)		0			0				0		0	
Crosswalk Width(ft)		16			16				16		16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1								1	1	
Detector Template												
Leading Detector (ft)		50								50	50	
Trailing Detector (ft)		0								0	0	
Detector 1 Position(ft)		0								0	0	
Detector 1 Size(ft)		50								50	50	
Detector 1 Type		Cl+Ex								Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0								0.0	0.0	
Detector 1 Queue (s)		0.0								0.0	0.0	
Detector 1 Delay (s)		0.0								0.0	0.0	
Turn Type		NA								Perm	NA	
Protected Phases		2									4	
Permitted Phases										4		
Detector Phase		2								4	4	
Switch Phase												
Minimum Initial (s)		8.0								8.0	8.0	
Minimum Split (s)		18.5								18.5	18.5	
Total Split (s)		48.0								72.0	72.0	
Total Split (%)		40.0%								60.0%	60.0%	
Maximum Green (s)		43.5								67.5	67.5	
Yellow Time (s)		3.5								3.5	3.5	
All-Red Time (s)		1.0								1.0	1.0	

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2035 Background - AM Peak Hour

Lanes, Volumes, Timings

9: Carlisle/Cole & Lemmon

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-0.5									-0.5	
Total Lost Time (s)		4.0									4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		2.0								2.0	2.0	
Recall Mode		C-Max								Max	Max	
Walk Time (s)		7.0								7.0	7.0	
Flash Dont Walk (s)		7.0								7.0	7.0	
Pedestrian Calls (#/hr)		0								0	0	
Act Effct Green (s)		44.0									68.0	
Actuated g/C Ratio		0.37									0.57	
v/c Ratio		0.65									0.42	
Control Delay		32.9									10.7	
Queue Delay		0.0									0.3	
Total Delay		32.9									11.0	
LOS		C									B	
Approach Delay		32.9									11.0	
Approach LOS		C									B	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 102 (85%), Referenced to phase 2:EBT, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 23.2

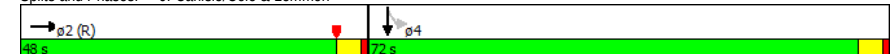
Intersection LOS: C

Intersection Capacity Utilization 48.9%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 9: Carlisle/Cole & Lemmon



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings2035 Background - AM Peak Hour
10: McKinney & Lemmon East

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑↑↑↑			↑↑↑↑				
Volume (vph)	0	0	0	0	2093	84	173	622	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.86	0.86	0.91	0.91	1.00	1.00	1.00	1.00
Frt					0.994							
Flt Protected								0.988				
Satd. Flow (prot)	0	0	0	0	6369	0	0	5024	0	0	0	0
Flt Permitted								0.988				
Satd. Flow (perm)	0	0	0	0	6369	0	0	5024	0	0	0	0
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)					8			23				
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		510			744			457			444	
Travel Time (s)		9.9			14.5			10.4			10.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	0.89	0.83	0.81	0.89	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	0	2352	101	214	699	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	2453	0	0	913	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors					1		1	1				
Detector Template												
Leading Detector (ft)					50		50	50				
Trailing Detector (ft)					0		0	0				
Detector 1 Position(ft)					0		0	0				
Detector 1 Size(ft)					50		50	50				
Detector 1 Type					Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)					0.0		0.0	0.0				
Detector 1 Queue (s)					0.0		0.0	0.0				
Detector 1 Delay (s)					0.0		0.0	0.0				
Turn Type					NA		Perm	NA				
Protected Phases					2			4				
Permitted Phases							4					
Detector Phase					2		4	4				
Switch Phase												
Minimum Initial (s)					14.0		12.0	12.0				
Minimum Split (s)					19.5		16.5	16.5				
Total Split (s)					48.0		72.0	72.0				
Total Split (%)					40.0%		60.0%	60.0%				
Maximum Green (s)					42.5		67.5	67.5				
Yellow Time (s)					3.5		3.5	3.5				
All-Red Time (s)					2.0		1.0	1.0				

McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings2035 Background - AM Peak Hour
10: McKinney & Lemmon East

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)					-1.5			-0.5				
Total Lost Time (s)					4.0			4.0				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)					0.2		0.2	0.2				
Recall Mode					C-Max		Max	Max				
Walk Time (s)					7.0		4.0	4.0				
Flash Dont Walk (s)					7.0		7.0	7.0				
Pedestrian Calls (#/hr)					0		0	0				
Act Effct Green (s)					44.0			68.0				
Actuated g/C Ratio					0.37			0.57				
v/c Ratio					1.05			0.32				
Control Delay					69.9			12.1				
Queue Delay					0.0			0.0				
Total Delay					69.9			12.1				
LOS					E			B				
Approach Delay					69.9			12.1				
Approach LOS					E			B				

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 4 (3%), Referenced to phase 2:WBT, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.05

Intersection Signal Delay: 54.3

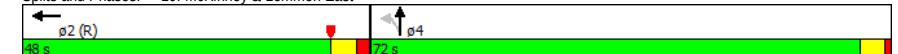
Intersection LOS: D

Intersection Capacity Utilization 53.9%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 10: McKinney & Lemmon East



McKinney - Cole Uptown Evaluation

2035 Background - AM Peak Hour

Lanes, Volumes, Timings

11: Cole & Lemmon East

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					◀ ▶						▶ ◀	
Volume (vph)	0	0	0	267	2029	0	0	0	0	0	847	308
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	1.00	1.00	1.00	1.00	1.00	0.91	0.91
Frt											0.957	
Flt Protected					0.994							
Satd. Flow (prot)	0	0	0	0	6369	0	0	0	0	0	4867	0
Flt Permitted					0.994							
Satd. Flow (perm)	0	0	0	0	6369	0	0	0	0	0	4867	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)					17						7	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		238			510			431			877	
Travel Time (s)		4.6			9.9			9.8			19.9	
Peak Hour Factor	1.00	1.00	1.00	0.87	0.88	1.00	1.00	1.00	1.00	0.30	0.93	0.85
Adj. Flow (vph)	0	0	0	307	2306	0	0	0	0	0	911	362
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	2613	0	0	0	0	0	1273	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	1						1	
Detector Template												
Leading Detector (ft)				50	50						50	
Trailing Detector (ft)				0	0						0	
Detector 1 Position(ft)				0	0						0	
Detector 1 Size(ft)				50	50						50	
Detector 1 Type				Cl+Ex	Cl+Ex						Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0						0.0	
Detector 1 Queue (s)				0.0	0.0						0.0	
Detector 1 Delay (s)				0.0	0.0						0.0	
Turn Type				Perm	NA						NA	
Protected Phases					2						4	
Permitted Phases				2								
Detector Phase				2	2						4	
Switch Phase												
Minimum Initial (s)				12.0	12.0						14.0	
Minimum Split (s)				18.5	18.5						18.5	
Total Split (s)				80.0	80.0						40.0	
Total Split (%)				66.7%	66.7%						33.3%	
Maximum Green (s)				75.5	75.5						35.5	
Yellow Time (s)				3.5	3.5						3.5	
All-Red Time (s)				1.0	1.0						1.0	

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2035 Background - AM Peak Hour

Lanes, Volumes, Timings

11: Cole & Lemmon East

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)					-0.5						-0.5	
Total Lost Time (s)					4.0						4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0						2.0	
Recall Mode				C-Max	C-Max						Max	
Walk Time (s)				7.0	7.0						7.0	
Flash Dont Walk (s)				7.0	7.0						7.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effct Green (s)					76.0						36.0	
Actuated g/C Ratio					0.63						0.30	
v/c Ratio					0.65						0.87	
Control Delay					4.7						49.6	
Queue Delay					0.0						0.0	
Total Delay					4.7						49.6	
LOS					A						D	
Approach Delay					4.7						49.6	
Approach LOS					A						D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 16 (13%), Referenced to phase 2:WBT, Start of Yellow

Natural Cycle: 45

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 19.4

Intersection LOS: B

Intersection Capacity Utilization 63.4%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 11: Cole & Lemmon East



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2035 Background - AM Peak Hour
12: McKinney & Cityplace

	↖	↗	↕	↙	↘	↓	
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø1
Lane Configurations		↖ ↗	↕				
Volume (vph)	0	61	736	4	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	0.91	0.91	1.00	1.00	
Frt		0.865	0.999				
Flt Protected							
Satd. Flow (prot)	0	1611	5080	0	0	0	
Flt Permitted							
Satd. Flow (perm)	0	1611	5080	0	0	0	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)		265	1				
Link Speed (mph)	30		30			30	
Link Distance (ft)	723		444			442	
Travel Time (s)	16.4		10.1			10.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	0	66	800	4	0	0	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	66	804	0	0	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Right	Left	Left	
Median Width(ft)	20		0			0	
Link Offset(ft)	0		0			0	
Crosswalk Width(ft)	16		16			16	
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9		9	15		
Number of Detectors		1	2				
Detector Template		Right	Thru				
Leading Detector (ft)		20	100				
Trailing Detector (ft)		0	0				
Detector 1 Position(ft)		0	0				
Detector 1 Size(ft)		20	6				
Detector 1 Type		Cl+Ex	Cl+Ex				
Detector 1 Channel							
Detector 1 Extend (s)		0.0	0.0				
Detector 1 Queue (s)		0.0	0.0				
Detector 1 Delay (s)		0.0	0.0				
Detector 2 Position(ft)			94				
Detector 2 Size(ft)			6				
Detector 2 Type			Cl+Ex				
Detector 2 Channel							
Detector 2 Extend (s)			0.0				
Turn Type		custom	NA				
Protected Phases			4			1	
Permitted Phases		2					
Detector Phase		2	4				
Switch Phase							
Minimum Initial (s)		4.0	4.0			4.0	
Minimum Split (s)		20.0	20.0			8.0	

McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2035 Background - AM Peak Hour
12: McKinney & Cityplace

	↖	↗	↕	↙	↘	↓	
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø1
Total Split (s)		57.0	48.0				15.0
Total Split (%)		47.5%	40.0%				13%
Maximum Green (s)		53.0	44.0				11.0
Yellow Time (s)		3.5	3.5				3.5
All-Red Time (s)		0.5	0.5				0.5
Lost Time Adjust (s)		0.0	0.0				
Total Lost Time (s)		4.0	4.0				
Lead/Lag		Lag					Lead
Lead-Lag Optimize?		Yes					Yes
Vehicle Extension (s)		3.0	3.0				3.0
Recall Mode		C-Max	None				None
Walk Time (s)		5.0	5.0				
Flash Dont Walk (s)		11.0	11.0				
Pedestrian Calls (#/hr)		0	0				
Act Effct Green (s)		85.1	26.9				
Actuated g/C Ratio		0.71	0.22				
v/c Ratio		0.05	0.71				
Control Delay		0.1	39.9				
Queue Delay		0.0	0.0				
Total Delay		0.1	39.9				
LOS		A	D				
Approach Delay			39.9				
Approach LOS			D				

Intersection Summary

Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 58 (48%), Referenced to phase 2:WBR, Start of Yellow	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 36.9	Intersection LOS: D
Intersection Capacity Utilization 24.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 12: McKinney & Cityplace



McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings2035 Background - AM Peak Hour
13: McKinney & Blackburn

	←	→	↖	↗	←	↖	↗	↑	↘	↙	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↗			↗				
Volume (vph)	88	584	0	0	967	242	66	473	171	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	0.91	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.963			0.961				
Flt Protected	0.950							0.995				
Satd. Flow (prot)	1770	3539	0	0	4897	0	0	4863	0	0	0	0
Flt Permitted	0.200							0.995				
Satd. Flow (perm)	373	3539	0	0	4897	0	0	4863	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					133			178				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		419			236			442			368	
Travel Time (s)		9.5			5.4			10.0			8.4	
Peak Hour Factor	0.83	0.91	1.00	1.00	0.94	0.73	0.84	0.94	0.83	1.00	1.00	1.00
Adj. Flow (vph)	106	642	0	0	1029	332	79	503	206	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	106	642	0	0	1361	0	0	788	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		18			18			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1		1	1				
Detector Template												
Leading Detector (ft)	50	50			50		50	50				
Trailing Detector (ft)	0	0			0		0	0				
Detector 1 Position(ft)	0	0			0		0	0				
Detector 1 Size(ft)	50	50			50		50	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	1	6			2			8				
Permitted Phases	6						8					
Detector Phase	1	6			2		8	8				
Switch Phase												
Minimum Initial (s)	3.0	14.0			10.0		14.0	14.0				
Minimum Split (s)	8.0	20.0			20.0		33.5	33.5				
Total Split (s)	12.0	32.0			20.0		28.0	28.0				
Total Split (%)	20.0%	53.3%			33.3%		46.7%	46.7%				
Maximum Green (s)	7.0	27.0			15.0		22.5	22.5				
Yellow Time (s)	3.0	4.0			4.0		4.0	4.0				
All-Red Time (s)	2.0	1.0			1.0		1.5	1.5				

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - AM Peak Hour

Synchro 8 Report
Page 23McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings2035 Background - AM Peak Hour
13: McKinney & Blackburn

	←	→	↖	↗	←	↖	↗	↑	↘	↙	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0			-1.0							-1.5
Total Lost Time (s)	4.0	4.0			4.0							4.0
Lead/Lag	Lag				Lead							
Lead-Lag Optimize?	Yes				Yes							
Vehicle Extension (s)	1.5	2.0			2.0		2.0	2.0				
Recall Mode	Min	Min			Min		C-Max	C-Max				
Walk Time (s)		7.0			7.0		7.0	7.0				
Flash Dont Walk (s)		8.0			8.0		21.0	21.0				
Pedestrian Calls (#/hr)		0			0		0	0				
Act Effct Green (s)	25.5	25.5			16.0			26.5				
Actuated g/C Ratio	0.42	0.42			0.27			0.44				
v/c Ratio	0.37	0.43			0.97			0.35				
Control Delay	29.9	23.7			39.6			11.7				
Queue Delay	0.0	0.0			0.0			0.0				
Total Delay	29.9	23.7			39.6			11.7				
LOS	C	C			D			B				
Approach Delay		24.6			39.6			11.7				
Approach LOS		C			D			B				

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 50 (83%), Referenced to phase 8:NBTL, Start of Yellow

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.97

Intersection Signal Delay: 28.1

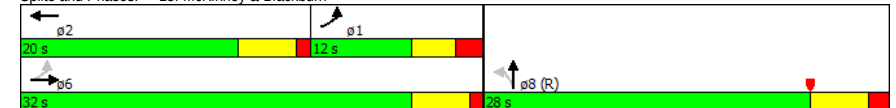
Intersection LOS: C

Intersection Capacity Utilization 66.4%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 13: McKinney & Blackburn



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2035 Background - AM Peak Hour
14: Cole & Blackburn

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↘	↕↕						↕↕↕	
Volume (vph)	0	462	77	411	641	0	0	0	0	200	634	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.977									0.980	
Flt Protected				0.950							0.988	
Satd. Flow (prot)	0	3458	0	1770	3539	0	0	0	0	0	4924	0
Flt Permitted				0.230							0.988	
Satd. Flow (perm)	0	3458	0	428	3539	0	0	0	0	0	4924	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		32									58	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		216			419			877			400	
Travel Time (s)		4.9			9.5			19.9			9.1	
Peak Hour Factor	1.00	0.94	0.89	0.92	0.87	0.25	1.00	1.00	1.00	0.79	0.94	0.68
Adj. Flow (vph)	0	491	87	447	737	0	0	0	0	253	674	141
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	578	0	447	737	0	0	0	0	0	1068	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12						0	
Link Offset(ft)		0			0						0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1		1	1					1	1	
Detector Template												
Leading Detector (ft)		50		50	50					50	50	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		50		50	50					50	50	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		6		5	2						4	
Permitted Phases				2						4		
Detector Phase		6		5	2					4	4	
Switch Phase												
Minimum Initial (s)		6.0		3.0	6.0					10.0	10.0	
Minimum Split (s)		20.0		8.0	20.0					33.5	33.5	
Total Split (s)		19.0		12.0	31.0					29.0	29.0	
Total Split (%)		31.7%		20.0%	51.7%					48.3%	48.3%	
Maximum Green (s)		14.0		7.0	26.0					23.5	23.5	
Yellow Time (s)		4.0		3.0	4.0					4.0	4.0	
All-Red Time (s)		1.0		2.0	1.0					1.5	1.5	

McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2035 Background - AM Peak Hour
14: Cole & Blackburn

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-1.0		-1.0	-1.0							-1.5
Total Lost Time (s)		4.0		4.0	4.0							4.0
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		1.5		2.0	1.5						2.0	2.0
Recall Mode		C-Min		Min	C-Min						None	None
Walk Time (s)		7.0			7.0						7.0	7.0
Flash Dont Walk (s)		8.0			8.0						21.0	21.0
Pedestrian Calls (#/hr)		0			0						0	0
Act Effct Green (s)		13.4		32.6	32.6							19.4
Actuated g/C Ratio		0.22		0.54	0.54							0.32
v/c Ratio		0.72		0.78	0.38							0.66
Control Delay		25.8		20.9	2.3							21.8
Queue Delay		0.0		0.0	0.0							0.0
Total Delay		25.8		20.9	2.3							21.8
LOS		C		C	A							C
Approach Delay		25.8			9.3							21.8
Approach LOS		C			A							C

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 30 (50%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 17.4

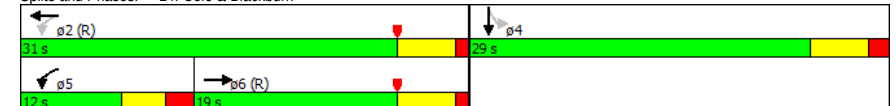
Intersection LOS: B

Intersection Capacity Utilization 66.4%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 14: Cole & Blackburn



McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2035 Background - AM Peak Hour
24: McKinney & Fitzhugh

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	112	678	0	0	1276	190	119	309	131	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	152		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.978			0.963				
Flt Protected	0.950							0.988				
Satd. Flow (prot)	1770	5085	0	0	4973	0	0	4838	0	0	0	0
Flt Permitted	0.070							0.988				
Satd. Flow (perm)	130	5085	0	0	4973	0	0	4838	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					36			74				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		297			318			837			1927	
Travel Time (s)		6.8			7.2			19.0			43.8	
Peak Hour Factor	0.93	0.96	1.00	1.00	0.84	0.73	0.76	0.91	0.81	1.00	1.00	1.00
Adj. Flow (vph)	120	706	0	0	1519	260	157	340	162	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	706	0	0	1779	0	0	659	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1		1	1				
Detector Template												
Leading Detector (ft)	50	50			50		50	50				
Trailing Detector (ft)	0	0			0		0	0				
Detector 1 Position(ft)	0	0			0		0	0				
Detector 1 Size(ft)	50	50			50		50	50				
Detector 1 Type	CI+Ex	CI+Ex			CI+Ex		CI+Ex	CI+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	21	6 26			2 22			4 24				
Permitted Phases	6 26						4 24					
Detector Phase	21	6 26			2 22		4 24	4 24				
Switch Phase												
Minimum Initial (s)	4.0											
Minimum Split (s)	9.0											
Total Split (s)	10.0											
Total Split (%)	8.3%											

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2035 Background - AM Peak Hour
24: McKinney & Fitzhugh

Lane Group	ø2	ø4	ø6	ø22	ø24	ø26
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Turn Type						
Protected Phases	2	4	6	22	24	26
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	10.0	8.0	10.0	10.0	8.0	10.0
Minimum Split (s)	19.7	25.3	19.7	20.0	25.3	20.0
Total Split (s)	37.0	25.0	37.0	25.0	23.0	35.0
Total Split (%)	31%	21%	31%	21%	19%	29%

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2035 Background - AM Peak Hour

Lanes, Volumes, Timings

24: McKinney & Fitzhugh

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)	5.0											
Yellow Time (s)	3.0											
All-Red Time (s)	2.0											
Lost Time Adjust (s)	-1.0											
Total Lost Time (s)	4.0											
Lead/Lag	Lead											
Lead-Lag Optimize?	Yes											
Vehicle Extension (s)	3.0											
Recall Mode	None											
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effect Green (s)	77.6	77.6			62.8			26.4				
Actuated g/C Ratio	0.65	0.65			0.52			0.22				
v/c Ratio	0.52	0.21			0.68			0.59				
Control Delay	42.6	3.1			13.6			19.5				
Queue Delay	0.0	0.0			0.0			0.0				
Total Delay	42.6	3.1			13.6			19.5				
LOS	D	A			B			B				
Approach Delay		8.8			13.6			19.5				
Approach LOS		A			B			B				

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 58 (48%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 13.6

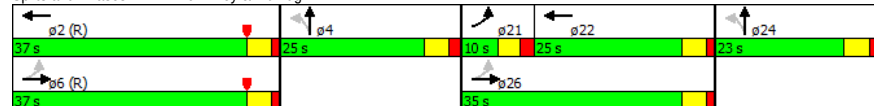
Intersection LOS: B

Intersection Capacity Utilization 56.4%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 24: McKinney & Fitzhugh



McKinney - Cole Uptown Evaluation

2035 Background - AM Peak Hour

Lanes, Volumes, Timings

24: McKinney & Fitzhugh

Lane Group	ø2	ø4	ø6	ø22	ø24	ø26
Maximum Green (s)	32.3	19.7	32.3	20.3	17.7	30.3
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.2	1.8	1.2	1.2	1.8	1.2
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag				Lag		
Lead-Lag Optimize?				Yes		
Vehicle Extension (s)	2.0	1.8	2.0	3.0	3.0	3.0
Recall Mode	C-Max	None	C-Max	None	None	None
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Flash Dont Walk (s)	8.0	16.0	8.0	8.0	16.0	8.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effect Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						

Intersection Summary

McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings2035 Background - AM Peak Hour
25: Cole & Fitzhugh

	↖	→	↘	↙	←	↖	↙	↑	↘	↙	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑		↖	↑↑↑						↑↑↑	
Volume (vph)	0	782	45	158	1209	0	0	0	0	45	421	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	162		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.990									0.945	
Flt Protected				0.950							0.996	
Satd. Flow (prot)	0	5034	0	1770	5085	0	0	0	0	0	4786	0
Flt Permitted				0.288							0.996	
Satd. Flow (perm)	0	5034	0	536	5085	0	0	0	0	0	4786	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16									62	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		231			172			802			1956	
Travel Time (s)		5.3			3.9			18.2			44.5	
Peak Hour Factor	1.00	0.98	0.76	0.86	0.88	1.00	1.00	1.00	1.00	0.73	0.95	0.88
Adj. Flow (vph)	0	798	59	184	1374	0	0	0	0	62	443	295
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	857	0	184	1374	0	0	0	0	0	800	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Right	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1		1	1					1	1	
Detector Template												
Leading Detector (ft)		50		50	50					50	50	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		50		50	50					50	50	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		6 26		25	2 22						4 24	
Permitted Phases				2 22						4 24		
Detector Phase		6 26		25	2 22					4 24	4 24	
Switch Phase												
Minimum Initial (s)				4.0								
Minimum Split (s)				9.0								
Total Split (s)				10.0								
Total Split (%)				8.3%								

McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings2035 Background - AM Peak Hour
25: Cole & Fitzhugh

Lane Group	ø2	ø4	ø6	ø22	ø24	ø26
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Turn Type						
Protected Phases	2	4	6	22	24	26
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	10.0	4.0	10.0	10.0	4.0	10.0
Minimum Split (s)	27.0	27.0	20.0	26.0	27.0	21.0
Total Split (s)	51.0	18.0	51.0	34.0	17.0	24.0
Total Split (%)	43%	15%	43%	28%	14%	20%

McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

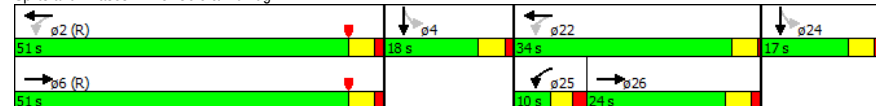
2035 Background - AM Peak Hour
25: Cole & Fitzhugh

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)				5.0								
Yellow Time (s)				3.0								
All-Red Time (s)				2.0								
Lost Time Adjust (s)				-1.0								
Total Lost Time (s)				4.0								
Lead/Lag				Lead								
Lead-Lag Optimize?				Yes								
Vehicle Extension (s)				3.0								
Recall Mode				None								
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effect Green (s)	67.9			78.1	78.1						25.9	
Actuated g/C Ratio	0.57			0.65	0.65						0.22	
v/c Ratio	0.30			0.45	0.42						0.74	
Control Delay	7.4			12.2	8.7						24.9	
Queue Delay	0.0			0.0	0.0						0.0	
Total Delay	7.4			12.2	8.8						24.9	
LOS	A			B	A						C	
Approach Delay	7.4				9.2						24.9	
Approach LOS	A				A						C	

Intersection Summary

Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 48 (40%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 12.6	Intersection LOS: B
Intersection Capacity Utilization 56.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 25: Cole & Fitzhugh



McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2035 Background - AM Peak Hour
25: Cole & Fitzhugh

Lane Group	ø2	ø4	ø6	ø22	ø24	ø26
Maximum Green (s)	46.0	13.0	46.0	30.0	12.0	19.0
Yellow Time (s)	3.6	3.6	3.6	3.5	3.6	3.6
All-Red Time (s)	1.4	1.4	1.4	0.5	1.4	1.4
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag						Lag
Lead-Lag Optimize?						Yes
Vehicle Extension (s)	2.0	2.0	2.0	3.0	2.0	3.0
Recall Mode	C-Max	None	C-Max	Max	None	Max
Walk Time (s)	6.0	6.0	5.0	6.0	6.0	5.0
Flash Dont Walk (s)	16.0	16.0	10.0	16.0	16.0	10.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effect Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						

Intersection Summary

McKinney - Cole Uptown Evaluation

2035 Background - AM Peak Hour

Lanes, Volumes, Timings

28: McKinney & Knox

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕↕↕				
Volume (vph)	32	419	0	0	766	67	55	252	218	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.985			0.945				
Flt Protected		0.996						0.994				
Satd. Flow (prot)	0	3525	0	0	3486	0	0	4777	0	0	0	0
Flt Permitted		0.848						0.994				
Satd. Flow (perm)	0	3001	0	0	3486	0	0	4777	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					20			229				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		461			315			685			1670	
Travel Time (s)		10.5			7.2			15.6			38.0	
Peak Hour Factor	0.86	0.90	1.00	0.38	0.92	0.74	0.79	0.78	0.95	1.00	1.00	1.00
Adj. Flow (vph)	37	466	0	0	833	91	70	323	229	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	503	0	0	924	0	0	622	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1		1	1				
Detector Template												
Leading Detector (ft)	50	50			50		50	50				
Trailing Detector (ft)	0	0			0		0	0				
Detector 1 Position(ft)	0	0			0		0	0				
Detector 1 Size(ft)	50	50			50		50	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	1	6			2			4				
Permitted Phases	6						4					
Detector Phase	1	6			2		4	4				
Switch Phase												
Minimum Initial (s)	4.0	12.0			12.0		12.0	12.0				
Minimum Split (s)	9.0	17.0			17.0		17.0	17.0				
Total Split (s)	13.0	36.0			23.0		24.0	24.0				
Total Split (%)	21.7%	60.0%			38.3%		40.0%	40.0%				
Maximum Green (s)	8.0	31.0			18.0		19.0	19.0				
Yellow Time (s)	3.0	3.4			3.4		3.4	3.4				
All-Red Time (s)	2.0	1.6			1.6		1.6	1.6				

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2035 Background - AM Peak Hour

Lanes, Volumes, Timings

28: McKinney & Knox

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-1.0			-1.0						-1.0	
Total Lost Time (s)		4.0			4.0						4.0	
Lead/Lag		Lead			Lag							
Lead-Lag Optimize?		Yes			Yes							
Vehicle Extension (s)		1.0	1.5		1.5			3.0	3.0			
Recall Mode		Max	C-Max		Max			Max	Max			
Walk Time (s)		6.0			6.0			4.0	4.0			
Flash Dont Walk (s)		6.0			6.0			8.0	8.0			
Pedestrian Calls (#/hr)		0			0			0	0			
Act Effct Green (s)		32.0			19.0			20.0				
Actuated g/C Ratio		0.53			0.32			0.33				
v/c Ratio		0.30			0.83			0.36				
Control Delay		8.5			26.7			7.7				
Queue Delay		0.0			0.0			0.0				
Total Delay		8.5			26.7			7.7				
LOS		A			C			A				
Approach Delay		8.5			26.7			7.7				
Approach LOS		A			C			A				

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 58 (97%), Referenced to phase 6:EBTL, Start of Yellow

Natural Cycle: 45

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 16.5

Intersection LOS: B

Intersection Capacity Utilization 53.5%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 28: McKinney & Knox



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2035 Background - AM Peak Hour

Lanes, Volumes, Timings

29: Cole & Knox

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑						↑↑↑	
Volume (vph)	0	355	61	225	580	0	0	0	0	96	329	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.977									0.975	
Flt Protected					0.985						0.990	
Satd. Flow (prot)	0	3458	0	0	3486	0	0	0	0	0	4909	0
Flt Permitted					0.681						0.990	
Satd. Flow (perm)	0	3458	0	0	2410	0	0	0	0	0	4909	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18									38	
Link Speed (mph)		30			30				30		30	
Link Distance (ft)		239			461				672		1685	
Travel Time (s)		5.4			10.5				15.3		38.3	
Peak Hour Factor	0.25	0.95	0.88	0.83	0.96	1.00	1.00	1.00	1.00	0.77	0.87	0.81
Adj. Flow (vph)	0	374	69	271	604	0	0	0	0	125	378	100
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	443	0	0	875	0	0	0	0	0	603	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0				0		0	
Link Offset(ft)		0			0				0		0	
Crosswalk Width(ft)		16			16				16		16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1		1	1					1	1	
Detector Template												
Leading Detector (ft)		50		50	50					50	50	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		50		50	50					50	50	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		6 26		5 25	2 22						4 24	
Permitted Phases				2 22						4 24		
Detector Phase		6 26		5 25	2 22					4 24	4 24	
Switch Phase												
Minimum Initial (s)												
Minimum Split (s)												
Total Split (s)												
Total Split (%)												
Maximum Green (s)												
Yellow Time (s)												
All-Red Time (s)												

McKinney - Cole Uptown Evaluation

2035 Background - AM Peak Hour

Lanes, Volumes, Timings

29: Cole & Knox

Lane Group	ø2	ø4	ø5	ø6	ø22	ø24	ø25	ø26
Lane Configurations								
Volume (vph)								
Ideal Flow (vphpl)								
Lane Util. Factor								
Frt								
Flt Protected								
Satd. Flow (prot)								
Flt Permitted								
Satd. Flow (perm)								
Right Turn on Red								
Satd. Flow (RTOR)								
Link Speed (mph)								
Link Distance (ft)								
Travel Time (s)								
Peak Hour Factor								
Adj. Flow (vph)								
Shared Lane Traffic (%)								
Lane Group Flow (vph)								
Enter Blocked Intersection								
Lane Alignment								
Median Width(ft)								
Link Offset(ft)								
Crosswalk Width(ft)								
Two way Left Turn Lane								
Headway Factor								
Turning Speed (mph)								
Number of Detectors								
Detector Template								
Leading Detector (ft)								
Trailing Detector (ft)								
Detector 1 Position(ft)								
Detector 1 Size(ft)								
Detector 1 Type								
Detector 1 Channel								
Detector 1 Extend (s)								
Detector 1 Queue (s)								
Detector 1 Delay (s)								
Turn Type								
Protected Phases	2	4	5	6	22	24	25	26
Permitted Phases								
Detector Phase								
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	19.0	19.0	9.0	19.0	20.0	20.0	8.0	20.0
Total Split (s)	38.0	20.0	15.0	23.0	32.0	30.0	10.0	22.0
Total Split (%)	32%	17%	13%	19%	27%	25%	8%	18%
Maximum Green (s)	33.0	15.0	10.0	18.0	28.0	26.0	6.0	18.0
Yellow Time (s)	3.5	3.5	3.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.5	1.5	2.0	1.5	0.5	0.5	0.5	0.5

McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

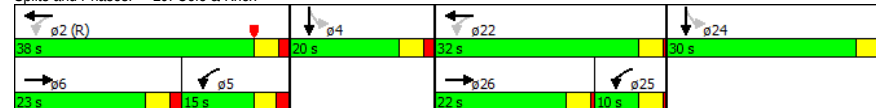
2035 Background - AM Peak Hour
29: Cole & Knox

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)												
Total Lost Time (s)												
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)												
Recall Mode												
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	78.0			78.0						26.0		
Actuated g/C Ratio	0.65			0.65						0.22		
v/c Ratio	0.20			0.56						0.55		
Control Delay	4.4			5.8						23.8		
Queue Delay	0.0			0.1						0.0		
Total Delay	4.4			5.9						23.8		
LOS	A			A						C		
Approach Delay	4.4			5.9						23.8		
Approach LOS	A			A						C		

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 31 (26%), Referenced to phase 2:WBTL, Start of Yellow
 Natural Cycle: 95
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.56
 Intersection Signal Delay: 11.2 Intersection LOS: B
 Intersection Capacity Utilization 54.4% ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 29: Cole & Knox



McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2035 Background - AM Peak Hour
29: Cole & Knox

Lane Group	ø2	ø4	ø5	ø6	ø22	ø24	ø25	ø26
Lost Time Adjust (s)								
Total Lost Time (s)								
Lead/Lag				Lag	Lead		Lag	Lead
Lead-Lag Optimize?				Yes	Yes		Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	Max	None	Max	None	None	None	None
Walk Time (s)	8.0	4.0		4.0	5.0	5.0		5.0
Flash Dont Walk (s)	6.0	10.0		10.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0		0	0	0		0
Act Effct Green (s)								
Actuated g/C Ratio								
v/c Ratio								
Control Delay								
Queue Delay								
Total Delay								
LOS								
Approach Delay								
Approach LOS								

Intersection Summary

McKinney - Cole Uptown Evaluation
HCM 2010 AWSC

2035 Background - AM Peak Hour
30: McKinney & Monticello

Intersection												
Intersection Delay, s/veh	18											
Intersection LOS	C											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	49	65	0	0	229	228	40	317	62	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	53	71	0	0	249	248	43	345	67	0	0	0
Number of Lanes	0	1	0	0	1	0	0	3	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	3	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	3	0	1
HCM Control Delay	11.5	25.6	11.4
HCM LOS	B	D	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1
Vol Left, %	34%	0%	0%	43%	0%
Vol Thru, %	66%	100%	56%	57%	50%
Vol Right, %	0%	0%	44%	0%	50%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	119	159	141	114	457
LT Vol	79	159	79	65	229
Through Vol	0	0	62	0	228
RT Vol	40	0	0	49	0
Lane Flow Rate	130	172	154	124	497
Geometry Grp	7	7	7	7	7
Degree of Util (X)	0.235	0.304	0.258	0.232	0.78
Departure Headway (Hd)	6.523	6.352	6.04	6.732	5.651
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	550	565	594	533	641
Service Time	4.267	4.097	3.785	4.485	3.389
HCM Lane V/C Ratio	0.236	0.304	0.259	0.233	0.775
HCM Control Delay	11.3	11.9	10.9	11.5	25.6
HCM Lane LOS	B	B	B	B	D
HCM 95th-tile Q	0.9	1.3	1	0.9	7.4

Notes

~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Background - AM Peak Hour
3: Allen & Sneed

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement												
Lane Configurations		↔			↔						↔↔	
Volume (veh/h)	0	44	30	11	25	0	0	0	0	42	589	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	48	33	12	27	0	0	0	0	46	640	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None			None		
Median storage (veh)												
Upstream signal (ft)							1012			553		
pX, platoon unblocked												
vC, conflicting volume	745	732	320	468	732	0	640			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	745	732	320	468	732	0	640			0		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	86	95	97	92	100	100			97		
cM capacity (veh/h)	278	337	676	397	337	1084	940			1622		
Direction, Lane #	EB 1	WB 1	SB 1	SB 2								
Volume Total	80	39	366	320								
Volume Left	0	12	46	0								
Volume Right	33	0	0	0								
cSH	423	354	1622	1700								
Volume to Capacity	0.19	0.11	0.03	0.19								
Queue Length 95th (ft)	17	9	2	0								
Control Delay (s)	15.5	16.4	1.1	0.0								
Lane LOS	C	C	A									
Approach Delay (s)	15.5	16.4	0.6									
Approach LOS	C	C										
Intersection Summary												
Average Delay			2.9									
Intersection Capacity Utilization			32.8%			ICU Level of Service		A				
Analysis Period (min)			15									

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Background - AM Peak Hour
15: McKinney & Haskell

	EBL	EBR	NBL	NBT	SBT	SBR
Movement						
Lane Configurations	↔			↔↔↔		
Volume (veh/h)	0	0	210	623	0	0
Sign Control		Stop		Free	Free	
Grade		0%		0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	228	677	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				368		
pX, platoon unblocked						
vC, conflicting volume	682	0	0			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	682	0	0			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	86			
cM capacity (veh/h)	329	1084	1622			
Direction, Lane #	EB 1	NB 1	NB 2	NB 3		
Volume Total	0	364	271	271		
Volume Left	0	228	0	0		
Volume Right	0	0	0	0		
cSH	1700	1622	1700	1700		
Volume to Capacity	0.00	0.14	0.16	0.16		
Queue Length 95th (ft)	0	12	0	0		
Control Delay (s)	0.0	5.2	0.0	0.0		
Lane LOS	A	A				
Approach Delay (s)	0.0	2.1				
Approach LOS	A					
Intersection Summary						
Average Delay			2.1			
Intersection Capacity Utilization			37.8%		ICU Level of Service	A
Analysis Period (min)			15			

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Background - AM Peak Hour
16: Cole & Haskell

	←	↖	↑	↗	↘	↓
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖					↗↗↗
Volume (veh/h)	168	0	0	0	0	768
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	183	0	0	0	0	835
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (ft)			400			
pX, platoon unblocked						
vC, conflicting volume	278	0			0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	278	0			0	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	73	100			100	
cM capacity (veh/h)	688	1084			1622	
Direction, Lane #	WB 1	SB 1	SB 2	SB 3		
Volume Total	183	167	334	334		
Volume Left	183	0	0	0		
Volume Right	0	0	0	0		
cSH	688	1622	1700	1700		
Volume to Capacity	0.27	0.00	0.20	0.20		
Queue Length 95th (ft)	27	0	0	0		
Control Delay (s)	12.1	0.0	0.0	0.0		
Lane LOS	B					
Approach Delay (s)	12.1	0.0				
Approach LOS	B					
Intersection Summary						
Average Delay			2.2			
Intersection Capacity Utilization			37.8%		ICU Level of Service	A
Analysis Period (min)			15			

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Background - AM Peak Hour
17: Cole & Haskell EB

	↖	↗	↖	↑	↓	↘
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↖			↗↗↗	
Volume (veh/h)	0	40	0	0	768	8
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	43	0	0	835	9
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				528		
pX, platoon unblocked						
vC, conflicting volume	839	283	843			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	839	283	843			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	94	100			
cM capacity (veh/h)	304	714	788			
Direction, Lane #	EB 1	SB 1	SB 2	SB 3		
Volume Total	43	334	334	176		
Volume Left	0	0	0	0		
Volume Right	43	0	0	9		
cSH	714	1700	1700	1700		
Volume to Capacity	0.06	0.20	0.20	0.10		
Queue Length 95th (ft)	5	0	0	0		
Control Delay (s)	10.4	0.0	0.0	0.0		
Lane LOS	B					
Approach Delay (s)	10.4	0.0				
Approach LOS	B					
Intersection Summary						
Average Delay			0.5			
Intersection Capacity Utilization			25.0%		ICU Level of Service	A
Analysis Period (min)			15			

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Background - AM Peak Hour
18: McKinney & North Dallas High School

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	4	0	43	653	0	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	0	47	710	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				978		
pX, platoon unblocked						
vC, conflicting volume	330	0	0			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	330	0	0			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	100	97			
cM capacity (veh/h)	621	1084	1622			
Direction, Lane #	EB 1	NB 1	NB 2	NB 3		
Volume Total	4	189	284	284		
Volume Left	4	47	0	0		
Volume Right	0	0	0	0		
cSH	621	1622	1700	1700		
Volume to Capacity	0.01	0.03	0.17	0.17		
Queue Length 95th (ft)	1	2	0	0		
Control Delay (s)	10.8	2.0	0.0	0.0		
Lane LOS	B	A				
Approach Delay (s)	10.8	0.5				
Approach LOS	B					
Intersection Summary						
Average Delay			0.6			
Intersection Capacity Utilization		36.5%		ICU Level of Service	A	
Analysis Period (min)		15				

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Background - AM Peak Hour
19: Cole & North Dallas High School

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	13	0	0	0	33	761
Sign Control	Stop			Free		Free
Grade	0%			0%		0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	14	0	0	0	36	827
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None		None
Median storage (veh)						
Upstream signal (ft)				816		
pX, platoon unblocked						
vC, conflicting volume	347	0			0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	347	0			0	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			98	
cM capacity (veh/h)	610	1084			1622	
Direction, Lane #	WB 1	SB 1	SB 2	SB 3		
Volume Total	14	201	331	331		
Volume Left	14	36	0	0		
Volume Right	0	0	0	0		
cSH	610	1622	1700	1700		
Volume to Capacity	0.02	0.02	0.19	0.19		
Queue Length 95th (ft)	2	2	0	0		
Control Delay (s)	11.0	1.4	0.0	0.0		
Lane LOS	B	A				
Approach Delay (s)	11.0	0.3				
Approach LOS	B					
Intersection Summary						
Average Delay			0.5			
Intersection Capacity Utilization		36.5%		ICU Level of Service	A	
Analysis Period (min)		15				

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Background - AM Peak Hour
20: McKinney & Cambrick

	EBL	EBR	NBL	NBT	SBT	SBR
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰			↰↰↰	↱	
Volume (veh/h)	2	0	3	663	0	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	0	3	721	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	247	0	0			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	247	0	0			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	719	1084	1622			
Direction, Lane #	EB 1	NB 1	NB 2	NB 3		
Volume Total	2	147	288	288		
Volume Left	2	3	0	0		
Volume Right	0	0	0	0		
cSH	719	1622	1700	1700		
Volume to Capacity	0.00	0.00	0.17	0.17		
Queue Length 95th (ft)	0	0	0	0		
Control Delay (s)	10.0	0.2	0.0	0.0		
Lane LOS	B	A				
Approach Delay (s)	10.0	0.0				
Approach LOS	B					
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			22.9%		ICU Level of Service	A
Analysis Period (min)			15			

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Background - AM Peak Hour
21: Cole & Cambrick

	EBL	EBR	NBL	NBT	SBT	SBR
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↰			↰↰↰	↱
Volume (veh/h)	0	29	0	0	730	11
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	32	0	0	793	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				1239		
pX, platoon unblocked						
vC, conflicting volume	799	270	805			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	799	270	805			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	96	100			
cM capacity (veh/h)	323	727	815			
Direction, Lane #	EB 1	SB 1	SB 2	SB 3		
Volume Total	32	317	317	171		
Volume Left	0	0	0	0		
Volume Right	32	0	0	12		
cSH	727	1700	1700	1700		
Volume to Capacity	0.04	0.19	0.19	0.10		
Queue Length 95th (ft)	3	0	0	0		
Control Delay (s)	10.2	0.0	0.0	0.0		
Lane LOS	B					
Approach Delay (s)	10.2	0.0				
Approach LOS	B					
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			24.3%		ICU Level of Service	A
Analysis Period (min)			15			

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Background - AM Peak Hour
22: McKinney & Elizabeth

																			
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR							
Lane Configurations																			
Volume (veh/h)	51	32	0	0	32	20	36	531	65	0	0	0							
Sign Control		Stop			Stop			Free			Free								
Grade		0%			0%			0%			0%								
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92							
Hourly flow rate (vph)	55	35	0	0	35	22	39	577	71	0	0	0							
Pedestrians																			
Lane Width (ft)																			
Walking Speed (ft/s)																			
Percent Blockage																			
Right turn flare (veh)																			
Median type								None			None								
Median storage (veh)																			
Upstream signal (ft)											837								
pX, platoon unblocked																			
vC, conflicting volume	310	726	0	708	691	228	0			648									
vC1, stage 1 conf vol																			
vC2, stage 2 conf vol																			
vCu, unblocked vol	310	726	0	708	691	228	0			648									
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1									
tC, 2 stage (s)																			
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2									
p0 queue free %	90	90	100	100	90	97	98			100									
cM capacity (veh/h)	547	341	1084	291	357	775	1622			934									
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3														
Volume Total	90	57	183	289	215														
Volume Left	55	0	39	0	0														
Volume Right	0	22	0	0	71														
cSH	444	451	1622	1700	1700														
Volume to Capacity	0.20	0.13	0.02	0.17	0.13														
Queue Length 95th (ft)	19	11	2	0	0														
Control Delay (s)	15.2	14.1	1.7	0.0	0.0														
Lane LOS	C	B	A																
Approach Delay (s)	15.2	14.1	0.5																
Approach LOS	C	B																	
Intersection Summary																			
Average Delay			3.0																
Intersection Capacity Utilization			30.3%		ICU Level of Service		A												
Analysis Period (min)			15																

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Background - AM Peak Hour
23: Cole & Elizabeth

																			
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR							
Lane Configurations											  								
Volume (veh/h)	0	24	35	67	17	0	0	0	0	55	633	6							
Sign Control		Stop			Stop			Free			Free								
Grade		0%			0%			0%			0%								
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92							
Hourly flow rate (vph)	0	26	38	73	18	0	0	0	0	60	688	7							
Pedestrians																			
Lane Width (ft)																			
Walking Speed (ft/s)																			
Percent Blockage																			
Right turn flare (veh)																			
Median type								None			None								
Median storage (veh)																			
Upstream signal (ft)											802								
pX, platoon unblocked																			
vC, conflicting volume	820	811	233	400	814	0	695			0									
vC1, stage 1 conf vol																			
vC2, stage 2 conf vol																			
vCu, unblocked vol	820	811	233	400	814	0	695			0									
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1									
tC, 2 stage (s)																			
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2									
p0 queue free %	100	91	95	84	94	100	100			96									
cM capacity (veh/h)	247	301	769	461	299	1084	897			1622									
Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3														
Volume Total	64	91	232	344	179														
Volume Left	0	73	60	0	0														
Volume Right	38	0	0	0	7														
cSH	471	416	1622	1700	1700														
Volume to Capacity	0.14	0.22	0.04	0.20	0.11														
Queue Length 95th (ft)	12	21	3	0	0														
Control Delay (s)	13.9	16.1	2.1	0.0	0.0														
Lane LOS	B	C	A																
Approach Delay (s)	13.9	16.1	0.6																
Approach LOS	B	C																	
Intersection Summary																			
Average Delay			3.1																
Intersection Capacity Utilization			31.4%		ICU Level of Service		A												
Analysis Period (min)			15																

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Background - AM Peak Hour
26: McKinney & Armstrong

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement												
Lane Configurations		↔			↔			↔↔↔				
Volume (veh/h)	32	7	0	0	72	21	59	497	12	0	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	35	8	0	0	78	23	64	540	13	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)											685	
pX, platoon unblocked												
vC, conflicting volume	370	682	0	679	675	187	0			553		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	370	682	0	679	675	187	0			553		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	92	98	100	100	78	97	96			100		
cM capacity (veh/h)	441	356	1084	322	359	824	1622			1013		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3							
Volume Total	42	101	199	270	148							
Volume Left	35	0	64	0	0							
Volume Right	0	23	0	0	13							
cSH	423	412	1622	1700	1700							
Volume to Capacity	0.10	0.25	0.04	0.16	0.09							
Queue Length 95th (ft)	8	24	3	0	0							
Control Delay (s)	14.5	16.6	2.6	0.0	0.0							
Lane LOS	B	C	A									
Approach Delay (s)	14.5	16.6	0.8									
Approach LOS	B	C										
Intersection Summary												
Average Delay			3.7									
Intersection Capacity Utilization			26.5%			ICU Level of Service			A			
Analysis Period (min)			15									

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Background - AM Peak Hour
27: Cole & Armstrong

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement												
Lane Configurations		↔			↔						↔↔↔	
Volume (veh/h)	0	31	8	25	12	0	0	0	0	63	569	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	34	9	27	13	0	0	0	0	68	618	11
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)											672	
pX, platoon unblocked												
vC, conflicting volume	767	761	212	369	766	0	629			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	767	761	212	369	766	0	629			0		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	89	99	95	96	100	100			96		
cM capacity (veh/h)	273	320	794	495	317	1084	949			1622		
Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3							
Volume Total	42	40	223	309	165							
Volume Left	0	27	68	0	0							
Volume Right	9	0	0	0	11							
cSH	364	419	1622	1700	1700							
Volume to Capacity	0.12	0.10	0.04	0.18	0.10							
Queue Length 95th (ft)	10	8	3	0	0							
Control Delay (s)	16.2	14.5	2.5	0.0	0.0							
Lane LOS	C	B	A									
Approach Delay (s)	16.2	14.5	0.8									
Approach LOS	C	B										
Intersection Summary												
Average Delay			2.3									
Intersection Capacity Utilization			27.8%			ICU Level of Service			A			
Analysis Period (min)			15									

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Background - AM Peak Hour
31: Cole & Monticello

																			
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR							
Lane Configurations																			
Volume (veh/h)	0	0	0	251	0	0	0	0	0	94	146	0							
Sign Control		Stop			Stop			Free			Free								
Grade		0%			0%			0%			0%								
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92							
Hourly flow rate (vph)	0	0	0	273	0	0	0	0	0	102	159	0							
Pedestrians																			
Lane Width (ft)																			
Walking Speed (ft/s)																			
Percent Blockage																			
Right turn flare (veh)																			
Median type							None				None								
Median storage (veh)																			
Upstream signal (ft)																			
pX, platoon unblocked																			
vC, conflicting volume	363	363	53	257	363	0	159			0									
vC1, stage 1 conf vol																			
vC2, stage 2 conf vol																			
vCu, unblocked vol	363	363	53	257	363	0	159			0									
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1									
tC, 2 stage (s)																			
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2									
p0 queue free %	100	100	100	58	100	100	100			94									
cM capacity (veh/h)	541	528	1003	642	528	1084	1418			1622									
Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3														
Volume Total	0	273	142	79	40														
Volume Left	0	273	102	0	0														
Volume Right	0	0	0	0	0														
cSH	1700	642	1622	1700	1700														
Volume to Capacity	0.00	0.42	0.06	0.05	0.02														
Queue Length 95th (ft)	0	53	5	0	0														
Control Delay (s)	0.0	14.7	5.4	0.0	0.0														
Lane LOS	A	B	A																
Approach Delay (s)	0.0	14.7	3.0																
Approach LOS	A	B																	
Intersection Summary																			
Average Delay				8.9															
Intersection Capacity Utilization				25.8%	ICU Level of Service			A											
Analysis Period (min)				15															

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Background - AM Peak Hour
32: McKinney & Harvard

																					
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR									
Lane Configurations																					
Volume (veh/h)	3	0	0	0	0	110	1	493	105	0	0	0									
Sign Control		Stop			Stop			Free			Free										
Grade		0%			0%			0%			0%										
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92									
Hourly flow rate (vph)	3	0	0	0	0	120	1	536	114	0	0	0									
Pedestrians																					
Lane Width (ft)																					
Walking Speed (ft/s)																					
Percent Blockage																					
Right turn flare (veh)																					
Median type								None			None										
Median storage (veh)																					
Upstream signal (ft)																					
pX, platoon unblocked																					
vC, conflicting volume	390	538	0	538	538	268	0			536											
vC1, stage 1 conf vol																					
vC2, stage 2 conf vol																					
vCu, unblocked vol	390	538	0	538	538	268	0			536											
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1											
tC, 2 stage (s)																					
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2											
p0 queue free %	99	100	100	100	100	84	100			100											
cM capacity (veh/h)	454	448	1084	426	448	730	1622			1028											
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3																
Volume Total	3	120	180	357	114																
Volume Left	3	0	1	0	0																
Volume Right	0	120	0	0	114																
cSH	454	730	1622	1700	1700																
Volume to Capacity	0.01	0.16	0.00	0.21	0.07																
Queue Length 95th (ft)	1	15	0	0	0																
Control Delay (s)	13.0	10.9	0.0	0.0	0.0																
Lane LOS	B	B	A																		
Approach Delay (s)	13.0	10.9	0.0																		
Approach LOS	B	B																			
Intersection Summary																					
Average Delay													1.7								
Intersection Capacity Utilization				33.8%	ICU Level of Service			A													
Analysis Period (min)				15																	

McKinney - Cole Uptown Evaluation

2035 Background - PM Peak Hour

Lanes, Volumes, Timings

1: Oak Grove & McKinney

												
Lane Group	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	ø2	ø5
Lane Configurations												
Volume (vph)	206	31	0	927	134	0	0	0	126	74		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Storage Length (ft)	0	0	0		137	0		0	0	0		
Storage Lanes	1	0	0		1	0		0	1	0		
Taper Length (ft)	25		25			25			25			
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00		
Frt	0.981				0.850				0.950			
Flt Protected	0.959								0.969			
Satd. Flow (prot)	1752	0	0	3539	1583	0	0	0	1715	0		
Flt Permitted	0.959								0.969			
Satd. Flow (perm)	1752	0	0	3539	1583	0	0	0	1715	0		
Right Turn on Red		Yes			Yes			Yes				
Satd. Flow (RTOR)	109				122							
Link Speed (mph)	30			30			30		30			
Link Distance (ft)	339			335			848		87			
Travel Time (s)	7.7			7.6			19.3		2.0			
Peak Hour Factor	0.92	0.83	0.92	0.91	0.92	0.89	0.77	0.92	0.92	0.92		
Adj. Flow (vph)	224	37	0	1019	146	0	0	0	137	80		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	261	0	0	1019	146	0	0	0	217	0		
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No		
Lane Alignment	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right		
Median Width(ft)	12			0			0		12			
Link Offset(ft)	0			-12			12		0			
Crosswalk Width(ft)	16			16			16		16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)	15	9	15		9	15		9	15	9		
Number of Detectors	1			1	1				1			
Detector Template	Left								Left			
Leading Detector (ft)	20			50	50				20			
Trailing Detector (ft)	0			0	0				0			
Detector 1 Position(ft)	0			0	0				0			
Detector 1 Size(ft)	20			50	50				20			
Detector 1 Type	CI+Ex			CI+Ex	CI+Ex				CI+Ex			
Detector 1 Channel												
Detector 1 Extend (s)	0.0			0.0	0.0				0.0			
Detector 1 Queue (s)	0.0			0.0	0.0				0.0			
Detector 1 Delay (s)	0.0			0.0	0.0				0.0			
Turn Type	NA			NA	Perm				NA			
Protected Phases	8!			6					5 8!		2	5
Permitted Phases					6							
Detector Phase	8			6	6				5 8			
Switch Phase												
Minimum Initial (s)	8.0			10.0	10.0						10.0	4.0
Minimum Split (s)	18.5			20.5	20.5						20.5	9.0
Total Split (s)	28.0			27.0	27.0						47.0	20.0
Total Split (%)	37.3%			36.0%	36.0%						63%	27%

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - PM Peak Hour

Synchro 8 Report
Page 1

McKinney - Cole Uptown Evaluation

2035 Background - PM Peak Hour

Lanes, Volumes, Timings

1: Oak Grove & McKinney

												
Lane Group	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	ø2	ø5
Maximum Green (s)	23.5			21.5	21.5						41.5	15.0
Yellow Time (s)	3.5			4.0	4.0						4.0	3.0
All-Red Time (s)	1.0			1.5	1.5						1.5	2.0
Lost Time Adjust (s)	0.0			-1.5	-1.5							
Total Lost Time (s)	4.5			4.0	4.0							
Lead/Lag				Lag	Lag							Lead
Lead-Lag Optimize?				Yes	Yes							Yes
Vehicle Extension (s)	2.0			2.0	2.0						2.0	3.0
Recall Mode	None			C-Max	C-Max						C-Max	None
Walk Time (s)	5.0			5.0	5.0							
Flash Dont Walk (s)	8.0			8.0	8.0							
Pedestrian Calls (#/hr)	0			0	0							
Act Effct Green (s)	14.0			31.8	31.8				34.2			
Actuated g/C Ratio	0.19			0.42	0.42				0.46			
v/c Ratio	0.63			0.68	0.20				0.28			
Control Delay	22.2			23.0	6.1				1.8			
Queue Delay	0.1			0.0	0.0				0.0			
Total Delay	22.3			23.0	6.1				1.8			
LOS	C			C	A				A			
Approach Delay	22.3			20.9					1.8			
Approach LOS	C			C					A			

Intersection Summary

Area Type: Other

Cycle Length: 75

Actuated Cycle Length: 75

Offset: 8 (11%), Referenced to phase 2:SET and 6:, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.70

Intersection Signal Delay: 18.6

Intersection LOS: B

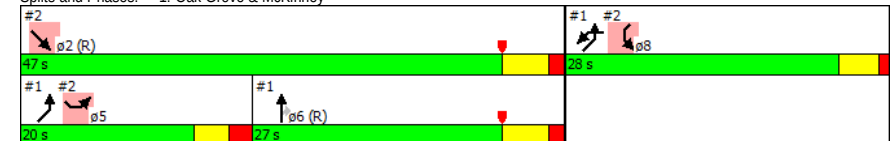
Intersection Capacity Utilization 61.7%

ICU Level of Service B

Analysis Period (min) 15

! Phase conflict between lane groups.

Splits and Phases: 1: Oak Grove & McKinney



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - PM Peak Hour

Synchro 8 Report
Page 2

McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2035 Background - PM Peak Hour
2: Allen & Oak Grove

Lane Group	SEL	SET	NWT	NWR	SWL	SWR	ø6
Lane Configurations							
Volume (vph)	238	527	0	0	206	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	150				0	0	
Storage Lanes	1				0	1	
Taper Length (ft)	25				25		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	
Frt							
Flt Protected	0.950				0.950		
Satd. Flow (prot)	1770	3539	0	0	1770	0	
Flt Permitted	0.950				0.950		
Satd. Flow (perm)	1770	3539	0	0	1770	0	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)							
Link Speed (mph)		30	30		30		
Link Distance (ft)		1012	296		87		
Travel Time (s)		23.0	6.7		2.0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	259	573	0	0	224	0	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	259	573	0	0	224	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(ft)		12	12		12		
Link Offset(ft)		0	0		0		
Crosswalk Width(ft)		16	16		16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15			9	15	9	
Number of Detectors	1	2			1		
Detector Template	Left	Thru			Left		
Leading Detector (ft)	20	100			20		
Trailing Detector (ft)	0	0			0		
Detector 1 Position(ft)	0	0			0		
Detector 1 Size(ft)	20	6			20		
Detector 1 Type	CI+Ex	CI+Ex			CI+Ex		
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0			0.0		
Detector 1 Queue (s)	0.0	0.0			0.0		
Detector 1 Delay (s)	0.0	0.0			0.0		
Detector 2 Position(ft)		94					
Detector 2 Size(ft)		6					
Detector 2 Type		CI+Ex					
Detector 2 Channel							
Detector 2 Extend (s)		0.0					
Turn Type	Prot	NA			NA		
Protected Phases	5	2			8	6	
Permitted Phases							
Detector Phase	5	2			8		

McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2035 Background - PM Peak Hour
2: Allen & Oak Grove

Lane Group	SEL	SET	NWT	NWR	SWL	SWR	ø6
Switch Phase							
Minimum Initial (s)	4.0	10.0			8.0		10.0
Minimum Split (s)	9.0	20.5			18.5		20.5
Total Split (s)	20.0	47.0			28.0		27.0
Total Split (%)	26.7%	62.7%			37.3%		36%
Maximum Green (s)	15.0	41.5			23.5		21.5
Yellow Time (s)	3.0	4.0			3.5		4.0
All-Red Time (s)	2.0	1.5			1.0		1.5
Lost Time Adjust (s)	0.0	0.0			0.0		
Total Lost Time (s)	5.0	5.5			4.5		
Lead/Lag	Lead						Lag
Lead-Lag Optimize?	Yes						Yes
Vehicle Extension (s)	3.0	2.0			2.0		2.0
Recall Mode	None	C-Max			None		C-Max
Walk Time (s)					5.0		5.0
Flash Dont Walk (s)					8.0		8.0
Pedestrian Calls (#/hr)					0		0
Act Effct Green (s)	15.7	51.0			14.0		
Actuated g/C Ratio	0.21	0.68			0.19		
v/c Ratio	0.70	0.24			0.68		
Control Delay	37.8	5.5			22.2		
Queue Delay	0.0	0.0			0.0		
Total Delay	37.8	5.5			22.2		
LOS	D	A			C		
Approach Delay		15.6			22.2		
Approach LOS		B			C		

Intersection Summary

Area Type: Other

Cycle Length: 75

Actuated Cycle Length: 75

Offset: 8 (11%), Referenced to phase 2:SET and 6:, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.70

Intersection Signal Delay: 17.0

Intersection LOS: B

Intersection Capacity Utilization 34.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 2: Allen & Oak Grove



McKinney - Cole Uptown Evaluation

2035 Background - PM Peak Hour

Lanes, Volumes, Timings

4: McKinney & Bowen

	↖	→	↘	↙	←	↖	↙	↑	↘	↙	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↘			↖↘↗				
Volume (vph)	173	194	0	0	93	61	77	987	18	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.940			0.997				
Flt Protected		0.976						0.996				
Satd. Flow (prot)	0	1818	0	0	1751	0	0	5050	0	0	0	0
Flt Permitted		0.696						0.996				
Satd. Flow (perm)	0	1296	0	0	1751	0	0	5050	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					71			8				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		229			304			848			502	
Travel Time (s)		5.2			6.9			19.3			11.4	
Peak Hour Factor	0.79	0.88	1.00	1.00	0.81	0.67	0.71	0.92	0.68	1.00	1.00	1.00
Adj. Flow (vph)	219	220	0	0	115	91	108	1073	26	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	439	0	0	206	0	0	1207	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1		1	1				
Detector Template												
Leading Detector (ft)	50	50			50		50	50				
Trailing Detector (ft)	0	0			0		0	0				
Detector 1 Position(ft)	0	0			0		0	0				
Detector 1 Size(ft)	50	50			50		50	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4			4			2				
Permitted Phases	4						2					
Detector Phase	4	4			4		2	2				
Switch Phase												
Minimum Initial (s)	6.0	6.0			6.0		10.0	10.0				
Minimum Split (s)	15.2	15.2			15.2		15.2	15.2				
Total Split (s)	24.0	24.0			24.0		36.0	36.0				
Total Split (%)	40.0%	40.0%			40.0%		60.0%	60.0%				
Maximum Green (s)	19.8	19.8			19.8		31.8	31.8				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	1.0	1.0			1.0		1.0	1.0				

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2035 Background - PM Peak Hour

Lanes, Volumes, Timings

4: McKinney & Bowen

	↖	→	↘	↙	←	↖	↙	↑	↘	↙	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-0.2			-0.2						-0.2	
Total Lost Time (s)		4.0			4.0						4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		2.5			2.5						4.0	
Recall Mode		Max			Max						C-Max	
Walk Time (s)		4.0			4.0						4.0	
Flash Dont Walk (s)		7.0			7.0						7.0	
Pedestrian Calls (#/hr)		0			0						0	
Act Effect Green (s)		20.0			20.0						32.0	
Actuated g/C Ratio		0.33			0.33						0.53	
v/c Ratio		1.02			0.33						0.45	
Control Delay		83.8			11.4						9.2	
Queue Delay		0.0			0.0						0.0	
Total Delay		83.8			11.4						9.2	
LOS		F			B						A	
Approach Delay		83.8			11.4						9.2	
Approach LOS		F			B						A	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 52 (87%), Referenced to phase 2:NBTL, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.02

Intersection Signal Delay: 27.1

Intersection LOS: C

Intersection Capacity Utilization 59.4%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 4: McKinney & Bowen



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2035 Background - PM Peak Hour

Lanes, Volumes, Timings

5: Carlisle & Bowen

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕						↕↕↕	
Volume (vph)	0	370	161	45	225	0	0	0	0	41	599	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.952									0.988	
Flt Protected					0.989						0.996	
Satd. Flow (prot)	0	3369	0	0	3500	0	0	0	0	0	5004	0
Flt Permitted					0.664						0.996	
Satd. Flow (perm)	0	3369	0	0	2350	0	0	0	0	0	5004	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		124									29	
Link Speed (mph)		30			30				30		30	
Link Distance (ft)		361			568				386		483	
Travel Time (s)		8.2			12.9				8.8		11.0	
Peak Hour Factor	1.00	0.91	0.85	0.60	0.86	1.00	1.00	1.00	1.00	0.65	0.84	0.70
Adj. Flow (vph)	0	407	189	75	262	0	0	0	0	63	713	66
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	596	0	0	337	0	0	0	0	0	842	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0				0		0	
Link Offset(ft)		0			0				0		0	
Crosswalk Width(ft)		16			16				16		16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1		1	1					1	1	
Detector Template												
Leading Detector (ft)		50		50	50					50	50	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		50		50	50					50	50	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			4						2	
Permitted Phases				4						2		
Detector Phase		4		4	4					2	2	
Switch Phase												
Minimum Initial (s)		10.0		10.0	10.0					8.0	8.0	
Minimum Split (s)		19.5		19.5	19.5					19.5	19.5	
Total Split (s)		30.0		30.0	30.0					30.0	30.0	
Total Split (%)		50.0%		50.0%	50.0%					50.0%	50.0%	
Maximum Green (s)		25.5		25.5	25.5					25.5	25.5	
Yellow Time (s)		3.5		3.5	3.5					3.5	3.5	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2035 Background - PM Peak Hour

Lanes, Volumes, Timings

5: Carlisle & Bowen

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-0.5			-0.5						-0.5	
Total Lost Time (s)		4.0			4.0						4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		2.5		2.5	2.5						2.0	2.0
Recall Mode		Min		Min	Min						C-Max	C-Max
Walk Time (s)		7.0		7.0	7.0						7.0	7.0
Flash Dont Walk (s)		8.0		8.0	8.0						8.0	8.0
Pedestrian Calls (#/hr)		0		0	0						0	0
Act Effct Green (s)		15.4			15.4						36.6	
Actuated g/C Ratio		0.26			0.26						0.61	
v/c Ratio		0.62			0.56						0.28	
Control Delay		17.8			23.0						3.4	
Queue Delay		0.0			0.0						0.0	
Total Delay		17.8			23.0						3.4	
LOS		B			C						A	
Approach Delay		17.8			23.0						3.4	
Approach LOS		B			C						A	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 55 (92%), Referenced to phase 2:SBTL, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.62

Intersection Signal Delay: 11.9

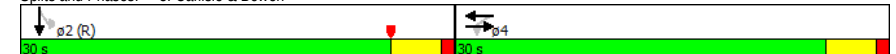
Intersection LOS: B

Intersection Capacity Utilization 47.1%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 5: Carlisle & Bowen



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2035 Background - PM Peak Hour

Lanes, Volumes, Timings

6: McKinney & Hall

	↖	→	↘	↙	←	↖	↙	↑	↘	↙	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↘			↖↗				
Volume (vph)	110	178	0	0	152	102	83	1075	43	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.945			0.995				
Flt Protected		0.982						0.996				
Satd. Flow (prot)	0	1829	0	0	1760	0	0	5040	0	0	0	0
Flt Permitted		0.619						0.996				
Satd. Flow (perm)	0	1153	0	0	1760	0	0	5040	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					32			6				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		790			243			502			693	
Travel Time (s)		18.0			5.5			11.4			15.8	
Peak Hour Factor	0.83	0.78	1.00	1.00	0.85	0.82	0.76	0.89	0.86	0.25	1.00	1.00
Adj. Flow (vph)	133	228	0	0	179	124	109	1208	50	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	361	0	0	303	0	0	1367	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1		1	1				
Detector Template												
Leading Detector (ft)	50	50			50		50	50				
Trailing Detector (ft)	0	0			0		0	0				
Detector 1 Position(ft)	0	0			0		0	0				
Detector 1 Size(ft)	50	50			50		50	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	3	8			4			2				
Permitted Phases	8						2					
Detector Phase	3	8			4		2	2				
Switch Phase												
Minimum Initial (s)	3.0	6.0			6.0		10.0	10.0				
Minimum Split (s)	8.0	14.2			14.2		16.2	16.2				
Total Split (s)	15.0	62.0			47.0		58.0	58.0				
Total Split (%)	12.5%	51.7%			39.2%		48.3%	48.3%				
Maximum Green (s)	10.0	57.8			42.8		53.8	53.8				
Yellow Time (s)	3.0	3.2			3.2		3.2	3.2				
All-Red Time (s)	2.0	1.0			1.0		1.0	1.0				

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2035 Background - PM Peak Hour

Lanes, Volumes, Timings

6: McKinney & Hall

	↖	→	↘	↙	←	↖	↙	↑	↘	↙	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-0.2			-0.2						-0.2	
Total Lost Time (s)		4.0			4.0						4.0	
Lead/Lag	Lead				Lag							
Lead-Lag Optimize?	Yes				Yes							
Vehicle Extension (s)	2.0	3.0			3.0		2.0	2.0				
Recall Mode	None	Ped			Ped		C-Max	C-Max				
Walk Time (s)		4.0			4.0		6.0	6.0				
Flash Dont Walk (s)		6.0			6.0		6.0	6.0				
Pedestrian Calls (#/hr)		0			0		0	0				
Act Effct Green (s)		48.4			48.4			63.6				
Actuated g/C Ratio		0.40			0.40			0.53				
v/c Ratio		0.78			0.42			0.51				
Control Delay		42.0			23.2			16.5				
Queue Delay		0.0			0.0			0.2				
Total Delay		42.0			23.2			16.7				
LOS		D			C			B				
Approach Delay		42.0			23.2			16.7				
Approach LOS		D			C			B				

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 47 (39%), Referenced to phase 2:NBTL, Start of Yellow

Natural Cycle: 45

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 22.1

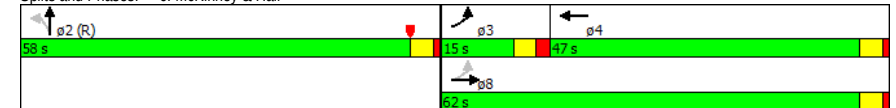
Intersection LOS: C

Intersection Capacity Utilization 63.1%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 6: McKinney & Hall



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2035 Background - PM Peak Hour

Lanes, Volumes, Timings

7: Carlisle & Hall

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↙					↗	↖	
Volume (vph)	0	222	30	24	140	0	0	0	0	63	651	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.981									0.992	
Flt Protected					0.991						0.995	
Satd. Flow (prot)	0	1827	0	0	1846	0	0	0	0	0	5019	0
Flt Permitted					0.799						0.995	
Satd. Flow (perm)	0	1827	0	0	1488	0	0	0	0	0	5019	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16									19	
Link Speed (mph)		30			30				30		30	
Link Distance (ft)		182			790				290		627	
Travel Time (s)		4.1			18.0				6.6		14.3	
Peak Hour Factor	1.00	0.84	0.69	0.68	0.84	1.00	1.00	1.00	1.00	0.83	0.91	0.92
Adj. Flow (vph)	0	264	43	35	167	0	0	0	0	76	715	45
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	307	0	0	202	0	0	0	0	0	836	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0				0		0	
Link Offset(ft)		0			0				0		0	
Crosswalk Width(ft)		16			16				16		16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1		1	1					1	1	
Detector Template												
Leading Detector (ft)		50		50	50					50	50	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		50		50	50					50	50	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			4						2	
Permitted Phases				4						2		
Detector Phase		4		4	4					2	2	
Switch Phase												
Minimum Initial (s)		8.0		8.0	8.0					8.0	8.0	
Minimum Split (s)		18.2		18.2	18.2					18.2	18.2	
Total Split (s)		28.0		28.0	28.0					32.0	32.0	
Total Split (%)		46.7%		46.7%	46.7%					53.3%	53.3%	
Maximum Green (s)		23.8		23.8	23.8					27.8	27.8	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - PM Peak Hour

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McKinney - Cole Uptown Evaluation

2035 Background - PM Peak Hour

Lanes, Volumes, Timings

7: Carlisle & Hall

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-0.2			-0.2						-0.2	
Total Lost Time (s)		4.0			4.0						4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		2.0		2.0	2.0						4.0	4.0
Recall Mode		Min		Min	Min						C-Max	C-Max
Walk Time (s)		6.0		6.0	6.0						6.0	6.0
Flash Dont Walk (s)		8.0		8.0	8.0						8.0	8.0
Pedestrian Calls (#/hr)		0		0	0						0	0
Act Effct Green (s)		14.4			14.4						37.6	
Actuated g/C Ratio		0.24			0.24						0.63	
v/c Ratio		0.68			0.57						0.27	
Control Delay		26.8			30.7						3.1	
Queue Delay		0.0			0.0						0.0	
Total Delay		26.8			30.7						3.1	
LOS		C			C						A	
Approach Delay		26.8			30.7						3.1	
Approach LOS		C			C						A	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 42 (70%), Referenced to phase 2:SBTL, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

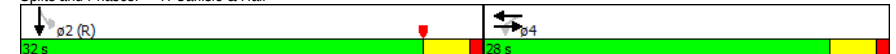
Maximum v/c Ratio: 0.68

Intersection Signal Delay: 12.7 Intersection LOS: B

Intersection Capacity Utilization 47.0% ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 7: Carlisle & Hall



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2035 Background - PM Peak Hour

Lanes, Volumes, Timings

8: McKinney & Lemmon

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗					↗	↗				
Volume (vph)	546	2490	0	0	0	0	0	1022	214	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.91	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	1.00	1.00
Frt								0.973				
Flt Protected	0.950											
Satd. Flow (prot)	1770	5085	0	0	0	0	0	4948	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1770	5085	0	0	0	0	0	4948	0	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)	14							2				
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		651			405			693			457	
Travel Time (s)		12.7			7.9			15.8			10.4	
Peak Hour Factor	0.97	0.94	1.00	1.00	1.00	1.00	1.00	0.92	0.88	1.00	1.00	1.00
Adj. Flow (vph)	563	2649	0	0	0	0	0	1111	243	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	563	2649	0	0	0	0	0	1354	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1						1				
Detector Template												
Leading Detector (ft)	50	50						50				
Trailing Detector (ft)	0	0						0				
Detector 1 Position(ft)	0	0						0				
Detector 1 Size(ft)	50	50						50				
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0				
Detector 1 Queue (s)	0.0	0.0						0.0				
Detector 1 Delay (s)	0.0	0.0						0.0				
Turn Type	Perm	NA						NA				
Protected Phases		2						4				
Permitted Phases	2											
Detector Phase	2	2						4				
Switch Phase												
Minimum Initial (s)	14.0	14.0						14.0				
Minimum Split (s)	18.5	18.5						18.5				
Total Split (s)	76.0	76.0						44.0				
Total Split (%)	63.3%	63.3%						36.7%				
Maximum Green (s)	71.5	71.5						39.5				
Yellow Time (s)	3.5	3.5						3.5				
All-Red Time (s)	1.0	1.0						1.0				

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - PM Peak Hour

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McKinney - Cole Uptown Evaluation

2035 Background - PM Peak Hour

Lanes, Volumes, Timings

8: McKinney & Lemmon

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-0.5	-0.5						-0.5				
Total Lost Time (s)	4.0	4.0						4.0				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	0.2	0.2						0.2				
Recall Mode	C-Max	C-Max						Max				
Walk Time (s)	7.0	7.0						4.0				
Flash Dont Walk (s)	7.0	7.0						7.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)	72.0	72.0						40.0				
Actuated g/C Ratio	0.60	0.60						0.33				
v/c Ratio	0.53	0.87						0.82				
Control Delay	10.0	20.9						28.8				
Queue Delay	1.1	40.2						0.0				
Total Delay	11.1	61.1						28.8				
LOS	B	E						C				
Approach Delay		52.4						28.8				
Approach LOS		D						C				

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 13 (11%), Referenced to phase 2:EBTL, Start of Yellow

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 45.4

Intersection LOS: D

Intersection Capacity Utilization 127.0%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 8: McKinney & Lemmon



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2035 Background - PM Peak Hour

Lanes, Volumes, Timings

9: Carlisle/Cole & Lemmon

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑↑									↓↓↓	
Volume (vph)	0	2551	143	0	0	0	0	0	0	241	733	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00
Frt		0.990										
Flt Protected											0.987	
Satd. Flow (prot)	0	6344	0	0	0	0	0	0	0	0	5019	0
Flt Permitted											0.987	
Satd. Flow (perm)	0	6344	0	0	0	0	0	0	0	0	5019	0
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)		21									14	
Link Speed (mph)		35			35				30		30	
Link Distance (ft)		687			651				627		431	
Travel Time (s)		13.4			12.7				14.3		9.8	
Peak Hour Factor	1.00	0.95	0.75	1.00	1.00	1.00	1.00	1.00	1.00	0.83	0.93	1.00
Adj. Flow (vph)	0	2685	191	0	0	0	0	0	0	290	788	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2876	0	0	0	0	0	0	0	0	1078	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0				0		0	
Link Offset(ft)		0			0				0		0	
Crosswalk Width(ft)		16			16				16		16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1								1	1	
Detector Template												
Leading Detector (ft)		50								50	50	
Trailing Detector (ft)		0								0	0	
Detector 1 Position(ft)		0								0	0	
Detector 1 Size(ft)		50								50	50	
Detector 1 Type		Cl+Ex								Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0								0.0	0.0	
Detector 1 Queue (s)		0.0								0.0	0.0	
Detector 1 Delay (s)		0.0								0.0	0.0	
Turn Type		NA								Perm	NA	
Protected Phases		2									4	
Permitted Phases										4		
Detector Phase		2								4	4	
Switch Phase												
Minimum Initial (s)		8.0								8.0	8.0	
Minimum Split (s)		18.5								18.5	18.5	
Total Split (s)		73.0								47.0	47.0	
Total Split (%)		60.8%								39.2%	39.2%	
Maximum Green (s)		68.5								42.5	42.5	
Yellow Time (s)		3.5								3.5	3.5	
All-Red Time (s)		1.0								1.0	1.0	

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2035 Background - PM Peak Hour

Lanes, Volumes, Timings

9: Carlisle/Cole & Lemmon

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-0.5									-0.5	
Total Lost Time (s)		4.0									4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		2.0									2.0	2.0
Recall Mode		C-Max									Max	Max
Walk Time (s)		7.0									7.0	7.0
Flash Dont Walk (s)		7.0									7.0	7.0
Pedestrian Calls (#/hr)		0									0	0
Act Effct Green (s)		69.0									43.0	
Actuated g/C Ratio		0.58									0.36	
v/c Ratio		0.79									0.60	
Control Delay		21.6									17.5	
Queue Delay		9.2									0.2	
Total Delay		30.9									17.7	
LOS		C									B	
Approach Delay		30.9									17.7	
Approach LOS		C									B	

Intersection Summary

Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 102 (85%), Referenced to phase 2:EBT, Start of Yellow	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 27.3	Intersection LOS: C
Intersection Capacity Utilization 71.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 9: Carlisle/Cole & Lemmon



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2035 Background - PM Peak Hour

Lanes, Volumes, Timings

10: McKinney & Lemmon East

	←	→	↖	↗	←	↖	↗	↑	↖	↗	↓	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑↑↑			↑↑↑				
Volume (vph)	0	0	0	0	1359	147	235	1283	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.86	0.86	0.91	0.91	1.00	1.00	1.00	1.00
Frt					0.984							
Flt Protected								0.992				
Satd. Flow (prot)	0	0	0	0	6305	0	0	5045	0	0	0	0
Flt Permitted								0.992				
Satd. Flow (perm)	0	0	0	0	6305	0	0	5045	0	0	0	0
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)					25			23				
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		510			744			457			444	
Travel Time (s)		9.9			14.5			10.4			10.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	0.89	0.83	0.81	0.89	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	0	1527	177	290	1442	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1704	0	0	1732	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors					1		1	1				
Detector Template												
Leading Detector (ft)					50		50	50				
Trailing Detector (ft)					0		0	0				
Detector 1 Position(ft)					0		0	0				
Detector 1 Size(ft)					50		50	50				
Detector 1 Type					Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)					0.0		0.0	0.0				
Detector 1 Queue (s)					0.0		0.0	0.0				
Detector 1 Delay (s)					0.0		0.0	0.0				
Turn Type					NA		Perm	NA				
Protected Phases					2			4				
Permitted Phases							4					
Detector Phase					2		4	4				
Switch Phase												
Minimum Initial (s)					14.0		12.0	12.0				
Minimum Split (s)					19.5		16.5	16.5				
Total Split (s)					43.0		77.0	77.0				
Total Split (%)					35.8%		64.2%	64.2%				
Maximum Green (s)					37.5		72.5	72.5				
Yellow Time (s)					3.5		3.5	3.5				
All-Red Time (s)					2.0		1.0	1.0				

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - PM Peak Hour

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McKinney - Cole Uptown Evaluation

2035 Background - PM Peak Hour

Lanes, Volumes, Timings

10: McKinney & Lemmon East

	←	→	↖	↗	←	↖	↗	↑	↖	↗	↓	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)					-1.5			-0.5				
Total Lost Time (s)					4.0			4.0				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)					0.2		0.2	0.2				
Recall Mode					C-Max		Max	Max				
Walk Time (s)					7.0		4.0	4.0				
Flash Dont Walk (s)					7.0		7.0	7.0				
Pedestrian Calls (#/hr)					0		0	0				
Act Effct Green (s)					39.0			73.0				
Actuated g/C Ratio					0.32			0.61				
v/c Ratio					0.82			0.56				
Control Delay					40.9			10.6				
Queue Delay					0.0			0.1				
Total Delay					40.9			10.7				
LOS					D			B				
Approach Delay					40.9			10.7				
Approach LOS					D			B				

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 112 (93%), Referenced to phase 2:WBT, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 25.7

Intersection LOS: C

Intersection Capacity Utilization 58.4%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 10: McKinney & Lemmon East



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2035 Background - PM Peak Hour

Lanes, Volumes, Timings

11: Cole & Lemmon East

	←	→	↙	↘	←	↙	↘	↑	↗	↖	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑↑↑↑						↑↑↑	
Volume (vph)	0	0	0	276	1305	0	0	0	0	0	626	208
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	1.00	1.00	1.00	1.00	1.00	0.91	0.91
Frt											0.960	
Flt Protected					0.991							
Satd. Flow (prot)	0	0	0	0	6350	0	0	0	0	0	4882	0
Flt Permitted					0.991							
Satd. Flow (perm)	0	0	0	0	6350	0	0	0	0	0	4882	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)					54						47	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		238			510			431			877	
Travel Time (s)		4.6			9.9			9.8			19.9	
Peak Hour Factor	1.00	1.00	1.00	0.87	0.88	1.00	1.00	1.00	1.00	0.30	0.93	0.85
Adj. Flow (vph)	0	0	0	317	1483	0	0	0	0	0	673	245
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1800	0	0	0	0	0	918	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	1						1	
Detector Template												
Leading Detector (ft)				50	50						50	
Trailing Detector (ft)				0	0						0	
Detector 1 Position(ft)				0	0						0	
Detector 1 Size(ft)				50	50						50	
Detector 1 Type				Cl+Ex	Cl+Ex						Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0						0.0	
Detector 1 Queue (s)				0.0	0.0						0.0	
Detector 1 Delay (s)				0.0	0.0						0.0	
Turn Type				Perm	NA						NA	
Protected Phases					2						4	
Permitted Phases				2								
Detector Phase				2	2						4	
Switch Phase												
Minimum Initial (s)				12.0	12.0						14.0	
Minimum Split (s)				18.5	18.5						18.5	
Total Split (s)				80.0	80.0						40.0	
Total Split (%)				66.7%	66.7%						33.3%	
Maximum Green (s)				75.5	75.5						35.5	
Yellow Time (s)				3.5	3.5						3.5	
All-Red Time (s)				1.0	1.0						1.0	

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - PM Peak Hour

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McKinney - Cole Uptown Evaluation

2035 Background - PM Peak Hour

Lanes, Volumes, Timings

11: Cole & Lemmon East

	←	→	↙	↘	←	↙	↘	↑	↗	↖	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)					-0.5						-0.5	
Total Lost Time (s)					4.0						4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0						2.0	
Recall Mode				C-Max	C-Max						Max	
Walk Time (s)				7.0	7.0						7.0	
Flash Dont Walk (s)				7.0	7.0						7.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effct Green (s)					76.0						36.0	
Actuated g/C Ratio					0.63						0.30	
v/c Ratio					0.45						0.61	
Control Delay					4.0						39.3	
Queue Delay					0.0						0.0	
Total Delay					4.1						39.3	
LOS					A						D	
Approach Delay					4.1						39.3	
Approach LOS					A						D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 117 (98%), Referenced to phase 2:WBT, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.61

Intersection Signal Delay: 16.0

Intersection LOS: B

Intersection Capacity Utilization 46.5%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 11: Cole & Lemmon East



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2035 Background - PM Peak Hour
12: McKinney & Cityplace

	↖	↗	↑	↘	↙	↓	
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø1
Lane Configurations		↗	↑↑↑				
Volume (vph)	0	154	1395	3	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	0.91	0.91	1.00	1.00	
Frt		0.865					
Flt Protected							
Satd. Flow (prot)	0	1611	5085	0	0	0	
Flt Permitted							
Satd. Flow (perm)	0	1611	5085	0	0	0	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)		221					
Link Speed (mph)	30		30			30	
Link Distance (ft)	723		444			442	
Travel Time (s)	16.4		10.1			10.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	0	167	1516	3	0	0	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	167	1519	0	0	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Right	Left	Left	
Median Width(ft)	20		0			0	
Link Offset(ft)	0		0			0	
Crosswalk Width(ft)	16		16			16	
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9		9	15		
Number of Detectors		1	2				
Detector Template		Right	Thru				
Leading Detector (ft)		20	100				
Trailing Detector (ft)		0	0				
Detector 1 Position(ft)		0	0				
Detector 1 Size(ft)		20	6				
Detector 1 Type		Cl+Ex	Cl+Ex				
Detector 1 Channel							
Detector 1 Extend (s)		0.0	0.0				
Detector 1 Queue (s)		0.0	0.0				
Detector 1 Delay (s)		0.0	0.0				
Detector 2 Position(ft)			94				
Detector 2 Size(ft)			6				
Detector 2 Type			Cl+Ex				
Detector 2 Channel							
Detector 2 Extend (s)			0.0				
Turn Type		custom	NA				
Protected Phases			4			1	
Permitted Phases		2					
Detector Phase		2	4				
Switch Phase							
Minimum Initial (s)		4.0	4.0			4.0	
Minimum Split (s)		20.0	20.0			8.0	

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2035 Background - PM Peak Hour
12: McKinney & Cityplace

	↖	↗	↑	↘	↙	↓	
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø1
Total Split (s)		57.0	48.0				15.0
Total Split (%)		47.5%	40.0%				13%
Maximum Green (s)		53.0	44.0				11.0
Yellow Time (s)		3.5	3.5				3.5
All-Red Time (s)		0.5	0.5				0.5
Lost Time Adjust (s)		0.0	0.0				
Total Lost Time (s)		4.0	4.0				
Lead/Lag		Lead					Lag
Lead-Lag Optimize?		Yes					Yes
Vehicle Extension (s)		3.0	3.0				3.0
Recall Mode		C-Max	None				None
Walk Time (s)		5.0	5.0				
Flash Dont Walk (s)		11.0	11.0				
Pedestrian Calls (#/hr)		0	0				
Act Effct Green (s)		63.3	48.7				
Actuated g/C Ratio		0.53	0.41				
v/c Ratio		0.18	0.74				
Control Delay		1.3	17.5				
Queue Delay		0.0	0.9				
Total Delay		1.3	18.4				
LOS		A	B				
Approach Delay			18.4				
Approach LOS			B				

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 26 (22%), Referenced to phase 2:WBR, Start of Yellow

Natural Cycle: 50

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 16.7

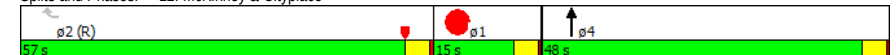
Intersection LOS: B

Intersection Capacity Utilization 43.2%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 12: McKinney & Cityplace



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings2035 Background - PM Peak Hour
13: McKinney & Blackburn

	←	→	↖	↗	←	↖	↗	↑	↖	↗	↓	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↗			↗				
Volume (vph)	147	792	0	0	760	196	127	787	295	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	0.91	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.963			0.960				
Flt Protected	0.950							0.994				
Satd. Flow (prot)	1770	3539	0	0	4897	0	0	4853	0	0	0	0
Flt Permitted	0.206							0.994				
Satd. Flow (perm)	384	3539	0	0	4897	0	0	4853	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					136			147				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		419			123			442			368	
Travel Time (s)		9.5			2.8			10.0			8.4	
Peak Hour Factor	0.83	0.91	1.00	1.00	0.94	0.73	0.84	0.94	0.83	1.00	1.00	1.00
Adj. Flow (vph)	177	870	0	0	809	268	151	837	355	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	177	870	0	0	1077	0	0	1343	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		18			18			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1		1	1				
Detector Template												
Leading Detector (ft)	50	50			50		50	50				
Trailing Detector (ft)	0	0			0		0	0				
Detector 1 Position(ft)	0	0			0		0	0				
Detector 1 Size(ft)	50	50			50		50	50				
Detector 1 Type	CI+Ex	CI+Ex			CI+Ex		CI+Ex	CI+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	1	6			2			8				
Permitted Phases	6						8					
Detector Phase	1	6			2		8	8				
Switch Phase												
Minimum Initial (s)	3.0	14.0			10.0		14.0	14.0				
Minimum Split (s)	13.0	20.0			20.0		33.5	33.5				
Total Split (s)	20.0	40.0			20.0		20.0	20.0				
Total Split (%)	33.3%	66.7%			33.3%		33.3%	33.3%				
Maximum Green (s)	15.0	35.0			15.0		14.5	14.5				
Yellow Time (s)	3.0	4.0			4.0		4.0	4.0				
All-Red Time (s)	2.0	1.0			1.0		1.5	1.5				

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - PM Peak Hour

Synchro 8 Report
Page 23McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings2035 Background - PM Peak Hour
13: McKinney & Blackburn

	←	→	↖	↗	←	↖	↗	↑	↖	↗	↓	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0			-1.0							-1.5
Total Lost Time (s)	4.0	4.0			4.0							4.0
Lead/Lag	Lag				Lead							
Lead-Lag Optimize?	Yes				Yes							
Vehicle Extension (s)	1.5	2.0			2.0		2.0	2.0				
Recall Mode	Min	Min			Min		C-Max	C-Max				
Walk Time (s)		7.0			7.0		7.0	7.0				
Flash Dont Walk (s)		8.0			8.0		21.0	21.0				
Pedestrian Calls (#/hr)		0			0		0	0				
Act Effct Green (s)	26.4	26.4			15.4			25.6				
Actuated g/C Ratio	0.44	0.44			0.26			0.43				
v/c Ratio	0.53	0.56			0.79			0.62				
Control Delay	12.2	5.3			23.0			10.0				
Queue Delay	0.0	0.0			0.0			0.0				
Total Delay	12.2	5.3			23.0			10.0				
LOS	B	A			C			B				
Approach Delay		6.5			23.0			10.0				
Approach LOS		A			C			B				

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 5 (8%), Referenced to phase 8:NBTL, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 13.0

Intersection LOS: B

Intersection Capacity Utilization 66.9%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 13: McKinney & Blackburn



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2035 Background - PM Peak Hour

Lanes, Volumes, Timings

14: Cole & Blackburn

	←	→	↙	↘	←	↙	↘	→	↙	↘	→	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↙	↑↑						↑↑	
Volume (vph)	0	725	108	347	544	0	0	0	0	188	462	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.980									0.982	
Flt Protected				0.950							0.986	
Satd. Flow (prot)	0	3468	0	1770	3539	0	0	0	0	0	4924	0
Flt Permitted				0.187							0.986	
Satd. Flow (perm)	0	3468	0	348	3539	0	0	0	0	0	4924	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30									43	
Link Speed (mph)		30			30				30		30	
Link Distance (ft)		216			419				877		400	
Travel Time (s)		4.9			9.5				19.9		9.1	
Peak Hour Factor	1.00	0.94	0.89	0.92	0.87	0.25	1.00	1.00	1.00	0.79	0.94	0.68
Adj. Flow (vph)	0	771	121	377	625	0	0	0	0	238	491	97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	892	0	377	625	0	0	0	0	0	826	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12				0		0	
Link Offset(ft)		0			0				0		0	
Crosswalk Width(ft)		16			16				16		16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1		1	1					1	1	
Detector Template												
Leading Detector (ft)		50		50	50					50	50	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		50		50	50					50	50	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		6		5	2						4	
Permitted Phases				2						4		
Detector Phase		6		5	2					4	4	
Switch Phase												
Minimum Initial (s)		6.0		3.0	6.0					10.0	10.0	
Minimum Split (s)		20.0		13.0	20.0					33.5	33.5	
Total Split (s)		22.0		13.0	35.0					25.0	25.0	
Total Split (%)		36.7%		21.7%	58.3%					41.7%	41.7%	
Maximum Green (s)		17.0		8.0	30.0					19.5	19.5	
Yellow Time (s)		4.0		3.0	4.0					4.0	4.0	
All-Red Time (s)		1.0		2.0	1.0					1.5	1.5	

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2035 Background - PM Peak Hour

Lanes, Volumes, Timings

14: Cole & Blackburn

	←	→	↙	↘	←	↙	↘	→	↙	↘	→	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-1.0		-1.0	-1.0							-1.5
Total Lost Time (s)		4.0		4.0	4.0							4.0
Lead/Lag		Lead		Lag								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		1.5		2.0	1.5						2.0	2.0
Recall Mode		Min		Min	Min						C-Max	C-Max
Walk Time (s)		7.0			7.0						7.0	7.0
Flash Dont Walk (s)		8.0			8.0						21.0	21.0
Pedestrian Calls (#/hr)		0			0						0	0
Act Effct Green (s)		17.4		31.0	31.0						21.0	
Actuated g/C Ratio		0.29		0.52	0.52						0.35	
v/c Ratio		0.87		0.93	0.34						0.47	
Control Delay		30.3		34.3	2.4						12.3	
Queue Delay		0.0		0.0	0.0						0.0	
Total Delay		30.3		34.3	2.4						12.3	
LOS		C		C	A						B	
Approach Delay		30.3			14.4						12.3	
Approach LOS		C			B						B	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 4:SBTL, Start of Yellow

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 19.0

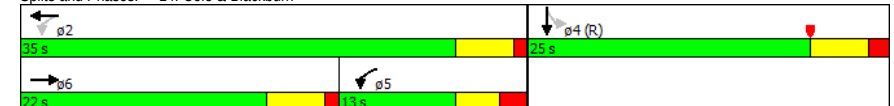
Intersection LOS: B

Intersection Capacity Utilization 66.9%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 14: Cole & Blackburn



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2035 Background - PM Peak Hour

Lanes, Volumes, Timings

24: McKinney & Fitzhugh

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	217	1836	0	0	735	108	168	731	295	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	152		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.978			0.961				
Flt Protected	0.950							0.992				
Satd. Flow (prot)	1770	5085	0	0	4973	0	0	4848	0	0	0	0
Flt Permitted	0.184							0.992				
Satd. Flow (perm)	343	5085	0	0	4973	0	0	4848	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					31			6				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		297			318			837			1927	
Travel Time (s)		6.8			7.2			19.0			43.8	
Peak Hour Factor	0.93	0.96	1.00	1.00	0.84	0.73	0.76	0.91	0.81	1.00	1.00	1.00
Adj. Flow (vph)	233	1912	0	0	875	148	221	803	364	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	233	1912	0	0	1023	0	0	1388	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1		1	1				
Detector Template												
Leading Detector (ft)	50	50			50		50	50				
Trailing Detector (ft)	0	0			0		0	0				
Detector 1 Position(ft)	0	0			0		0	0				
Detector 1 Size(ft)	50	50			50		50	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	21	6 26			2 22			4 24				
Permitted Phases	6 26						4 24					
Detector Phase	21	6 26			2 22		4 24	4 24				
Switch Phase												
Minimum Initial (s)	4.0											
Minimum Split (s)	13.0											
Total Split (s)	16.0											
Total Split (%)	13.3%											

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - PM Peak Hour

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McKinney - Cole Uptown Evaluation

2035 Background - PM Peak Hour

Lanes, Volumes, Timings

24: McKinney & Fitzhugh

Lane Group	ø2	ø4	ø6	ø22	ø24	ø26
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Turn Type						
Protected Phases	2	4	6	22	24	26
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	10.0	8.0	10.0	10.0	8.0	10.0
Minimum Split (s)	19.7	25.3	19.7	20.0	25.0	20.0
Total Split (s)	33.0	26.0	33.0	20.0	25.0	36.0
Total Split (%)	28%	22%	28%	17%	21%	30%

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - PM Peak Hour

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McKinney - Cole Uptown Evaluation

2035 Background - PM Peak Hour

24: McKinney & Fitzhugh

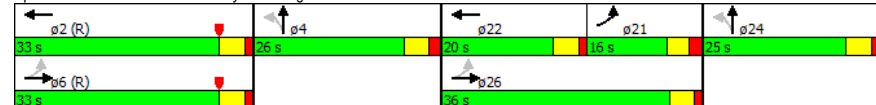
Lanes, Volumes, Timings

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)	11.0											
Yellow Time (s)	3.0											
All-Red Time (s)	2.0											
Lost Time Adjust (s)	-1.0											
Total Lost Time (s)	4.0											
Lead/Lag	Lag											
Lead-Lag Optimize?	Yes											
Vehicle Extension (s)	3.0											
Recall Mode	None											
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effect Green (s)	60.9	60.9			45.2			43.1				
Actuated g/C Ratio	0.51	0.51			0.38			0.36				
v/c Ratio	0.74	0.74			0.54			0.80				
Control Delay	36.2	17.6			16.0			19.9				
Queue Delay	0.0	0.0			0.0			0.0				
Total Delay	36.2	17.6			16.0			19.9				
LOS	D	B			B			B				
Approach Delay		19.6			16.0			19.9				
Approach LOS		B			B			B				

Intersection Summary

Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 18.9	Intersection LOS: B
Intersection Capacity Utilization 70.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 24: McKinney & Fitzhugh



McKinney - Cole Uptown Evaluation

2035 Background - PM Peak Hour

24: McKinney & Fitzhugh

Lanes, Volumes, Timings

Lane Group	ø2	ø4	ø6	ø22	ø24	ø26
Maximum Green (s)	28.3	20.7	28.3	15.3	19.7	31.3
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.2	1.8	1.2	1.2	1.8	1.2
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag				Lead		
Lead-Lag Optimize?				Yes		
Vehicle Extension (s)	2.0	1.8	2.0	3.0	3.0	3.0
Recall Mode	C-Max	None	C-Max	None	None	None
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Flash Dont Walk (s)	8.0	16.0	8.0	8.0	16.0	8.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effect Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						

Intersection Summary

McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2035 Background - PM Peak Hour
25: Cole & Fitzhugh

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑		↖	↑↑↑						↑↑↑	
Volume (vph)	0	1949	82	133	752	0	0	0	0	91	394	176
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	162		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.992									0.959	
Flt Protected				0.950							0.992	
Satd. Flow (prot)	0	5045	0	1770	5085	0	0	0	0	0	4838	0
Flt Permitted				0.056							0.992	
Satd. Flow (perm)	0	5045	0	104	5085	0	0	0	0	0	4838	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11									69	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		231			172			802			1956	
Travel Time (s)		5.3			3.9			18.2			44.5	
Peak Hour Factor	1.00	0.98	0.76	0.86	0.88	1.00	1.00	1.00	1.00	0.73	0.95	0.88
Adj. Flow (vph)	0	1989	108	155	855	0	0	0	0	125	415	200
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2097	0	155	855	0	0	0	0	0	740	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Right	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1		1	1					1	1	
Detector Template												
Leading Detector (ft)		50		50	50					50	50	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		50		50	50					50	50	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		6 26			2 22						4 24	
Permitted Phases				2 22						4 24		
Detector Phase		6 26		25	2 22					4 24	4 24	
Switch Phase												
Minimum Initial (s)				4.0								
Minimum Split (s)				13.0								
Total Split (s)				14.0								
Total Split (%)				11.7%								

McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2035 Background - PM Peak Hour
25: Cole & Fitzhugh

Lane Group	ø2	ø4	ø6	ø22	ø24	ø26
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Turn Type						
Protected Phases	2	4	6	22	24	26
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	10.0	4.0	10.0	10.0	4.0	10.0
Minimum Split (s)	27.0	27.0	20.0	26.0	27.0	21.0
Total Split (s)	48.0	16.0	48.0	40.0	16.0	26.0
Total Split (%)	40%	13%	40%	33%	13%	22%

McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

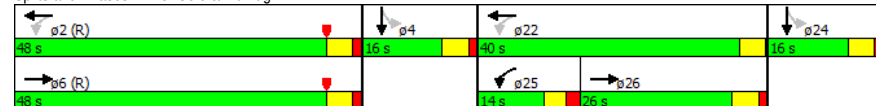
2035 Background - PM Peak Hour
25: Cole & Fitzhugh

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)				9.0								
Yellow Time (s)				3.0								
All-Red Time (s)				2.0								
Lost Time Adjust (s)				-1.0								
Total Lost Time (s)				4.0								
Lead/Lag				Lead								
Lead-Lag Optimize?				Yes								
Vehicle Extension (s)				3.0								
Recall Mode				None								
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effect Green (s)	66.9			80.5	80.5						23.5	
Actuated g/C Ratio	0.56			0.67	0.67						0.20	
v/c Ratio	0.74			0.77	0.25						0.74	
Control Delay	14.0			41.6	2.8						25.2	
Queue Delay	0.0			0.0	0.0						0.0	
Total Delay	14.0			41.6	2.8						25.2	
LOS	B			D	A						C	
Approach Delay	14.0				8.8						25.2	
Approach LOS	B				A						C	

Intersection Summary

Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 84 (70%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow	
Natural Cycle: 125	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 14.8	Intersection LOS: B
Intersection Capacity Utilization 70.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 25: Cole & Fitzhugh



McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2035 Background - PM Peak Hour
25: Cole & Fitzhugh

Lane Group	ø2	ø4	ø6	ø22	ø24	ø26
Maximum Green (s)	43.0	11.0	43.0	36.0	11.0	21.0
Yellow Time (s)	3.6	3.6	3.6	3.5	3.6	3.6
All-Red Time (s)	1.4	1.4	1.4	0.5	1.4	1.4
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag						Lag
Lead-Lag Optimize?						Yes
Vehicle Extension (s)	2.0	2.0	2.0	3.0	2.0	3.0
Recall Mode	C-Max	None	C-Max	Max	None	Max
Walk Time (s)	6.0	6.0	5.0	6.0	6.0	5.0
Flash Dont Walk (s)	16.0	16.0	10.0	16.0	16.0	10.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effect Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						

Intersection Summary

McKinney - Cole Uptown Evaluation

2035 Background - PM Peak Hour

Lanes, Volumes, Timings

28: McKinney & Knox

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕↕↕				
Volume (vph)	71	766	0	0	593	109	97	552	378	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.972			0.951				
Flt Protected		0.996						0.995				
Satd. Flow (prot)	0	3525	0	0	3440	0	0	4812	0	0	0	0
Flt Permitted		0.734						0.995				
Satd. Flow (perm)	0	2598	0	0	3440	0	0	4812	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					30			114				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		461			315			685			1670	
Travel Time (s)		10.5			7.2			15.6			38.0	
Peak Hour Factor	0.86	0.90	1.00	0.38	0.92	0.74	0.79	0.78	0.95	1.00	1.00	1.00
Adj. Flow (vph)	83	851	0	0	645	147	123	708	398	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	934	0	0	792	0	0	1229	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1		1	1				
Detector Template												
Leading Detector (ft)	50	50			50		50	50				
Trailing Detector (ft)	0	0			0		0	0				
Detector 1 Position(ft)	0	0			0		0	0				
Detector 1 Size(ft)	50	50			50		50	50				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	1	6			2			4				
Permitted Phases	6						4					
Detector Phase	1	6			2		4	4				
Switch Phase												
Minimum Initial (s)	4.0	12.0			12.0		12.0	12.0				
Minimum Split (s)	13.0	17.0			17.0		17.0	17.0				
Total Split (s)	13.0	72.0			59.0		48.0	48.0				
Total Split (%)	10.8%	60.0%			49.2%		40.0%	40.0%				
Maximum Green (s)	8.0	67.0			54.0		43.0	43.0				
Yellow Time (s)	3.0	3.4			3.4		3.4	3.4				
All-Red Time (s)	2.0	1.6			1.6		1.6	1.6				

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2035 Background - PM Peak Hour

Lanes, Volumes, Timings

28: McKinney & Knox

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-1.0			-1.0				-1.0			
Total Lost Time (s)		4.0			4.0				4.0			
Lead/Lag		Lag			Lead							
Lead-Lag Optimize?		Yes			Yes							
Vehicle Extension (s)		1.0	1.5		1.5			3.0	3.0			
Recall Mode		Max	C-Max		Max			Max	Max			
Walk Time (s)		6.0			6.0			4.0	4.0			
Flash Dont Walk (s)		6.0			6.0			8.0	8.0			
Pedestrian Calls (#/hr)		0			0			0	0			
Act Effect Green (s)		68.0			55.0				44.0			
Actuated g/C Ratio		0.57			0.46				0.37			
v/c Ratio		0.61			0.50				0.67			
Control Delay		18.5			23.2				33.3			
Queue Delay		0.3			0.0				0.0			
Total Delay		18.8			23.2				33.3			
LOS		B			C				C			
Approach Delay		18.8			23.2				33.3			
Approach LOS		B			C				C			

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 6:EBTL, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.67

Intersection Signal Delay: 26.0

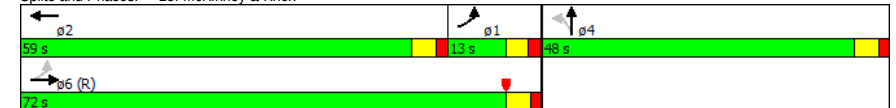
Intersection LOS: C

Intersection Capacity Utilization 74.2%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 28: McKinney & Knox



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Background - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings2035 Background - PM Peak Hour
29: Cole & Knox

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑						↑↑↑	
Volume (vph)	0	629	76	219	414	0	0	0	0	146	274	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.983									0.983	
Flt Protected					0.981						0.984	
Satd. Flow (prot)	0	3479	0	0	3472	0	0	0	0	0	4919	0
Flt Permitted					0.584						0.984	
Satd. Flow (perm)	0	3479	0	0	2067	0	0	0	0	0	4919	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28									36	
Link Speed (mph)		30			30				30		30	
Link Distance (ft)		239			461				672		1685	
Travel Time (s)		5.4			10.5				15.3		38.3	
Peak Hour Factor	0.25	0.95	0.88	0.83	0.96	1.00	1.00	1.00	1.00	0.77	0.87	0.81
Adj. Flow (vph)	0	662	86	264	431	0	0	0	0	190	315	64
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	748	0	0	695	0	0	0	0	0	569	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0				0		0	
Link Offset(ft)		0			0				0		0	
Crosswalk Width(ft)		16			16				16		16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1		1	1					1	1	
Detector Template												
Leading Detector (ft)		50		50	50					50	50	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		50		50	50					50	50	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		6		5	2						4	
Permitted Phases				2						4		
Detector Phase		6		5	2					4	4	
Switch Phase												
Minimum Initial (s)		4.0		4.0	4.0					4.0	4.0	
Minimum Split (s)		19.0		13.0	19.0					19.0	19.0	
Total Split (s)		28.0		13.0	41.0					19.0	19.0	
Total Split (%)		46.7%		21.7%	68.3%					31.7%	31.7%	
Maximum Green (s)		23.0		8.0	36.0					14.0	14.0	
Yellow Time (s)		3.5		3.0	3.5					3.5	3.5	
All-Red Time (s)		1.5		2.0	1.5					1.5	1.5	

McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings2035 Background - PM Peak Hour
29: Cole & Knox

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-1.0			-1.0						-1.0	
Total Lost Time (s)		4.0			4.0						4.0	
Lead/Lag		Lead			Lag							
Lead-Lag Optimize?		Yes			Yes							
Vehicle Extension (s)		2.0		2.0	2.0					2.0	2.0	
Recall Mode		Max		None	C-Max					Max	Max	
Walk Time (s)		4.0			8.0					4.0	4.0	
Flash Dont Walk (s)		10.0			6.0					10.0	10.0	
Pedestrian Calls (#/hr)		0			0					0	0	
Act Effct Green (s)		37.0			37.0						15.0	
Actuated g/C Ratio		0.62			0.62						0.25	
v/c Ratio		0.35			0.55						0.45	
Control Delay		5.9			19.0						19.1	
Queue Delay		0.0			0.0						0.0	
Total Delay		5.9			19.0						19.1	
LOS		A			B						B	
Approach Delay		5.9			19.0						19.1	
Approach LOS		A			B						B	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:WBTL, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.55

Intersection Signal Delay: 14.2

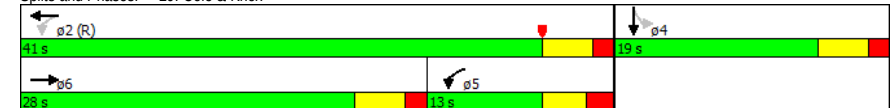
Intersection LOS: B

Intersection Capacity Utilization 57.0%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 29: Cole & Knox



McKinney - Cole Uptown Evaluation
HCM 2010 AWSC

2035 Background - PM Peak Hour
30: McKinney & Monticello

Intersection												
Intersection Delay, s/veh	20.2											
Intersection LOS	C											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	51	281	0	0	130	87	41	483	277	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	55	305	0	0	141	95	45	525	301	0	0	0
Number of Lanes	0	1	0	0	1	0	0	3	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	3	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	3	0	1
HCM Control Delay	26.4	15.9	18.8
HCM LOS	D	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1
Vol Left, %	25%	0%	0%	15%	0%
Vol Thru, %	75%	100%	30%	85%	60%
Vol Right, %	0%	0%	70%	0%	40%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	162	242	398	332	217
LT Vol	121	242	121	281	130
Through Vol	0	0	277	0	87
RT Vol	41	0	0	51	0
Lane Flow Rate	176	262	432	361	236
Geometry Grp	7	7	7	7	7
Degree of Util (X)	0.326	0.478	0.728	0.719	0.464
Departure Headway (Hd)	6.683	6.554	6.058	7.176	7.085
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	536	546	592	502	505
Service Time	4.457	4.328	3.832	4.955	4.873
HCM Lane V/C Ratio	0.328	0.48	0.73	0.719	0.467
HCM Control Delay	12.7	15.2	23.5	26.4	15.9
HCM Lane LOS	B	C	C	D	C
HCM 95th-tile Q	1.4	2.6	6.1	5.8	2.4

Notes

~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Background - PM Peak Hour
3: Allen & Sneed

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement												
Lane Configurations		↔			↔						↔↔	
Volume (veh/h)	0	115	73	0	8	0	0	0	0	28	519	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	125	79	0	9	0	0	0	0	30	564	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None			None		
Median storage (veh)												
Upstream signal (ft)							1012			553		
pX, platoon unblocked												
vC, conflicting volume	629	625	282	485	625	0	564			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	629	625	282	485	625	0	564			0		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	68	89	100	98	100	100			98		
cM capacity (veh/h)	355	392	715	307	392	1084	1004			1622		
Direction, Lane #	EB 1	WB 1	SB 1	SB 2								
Volume Total	204	9	312	282								
Volume Left	0	0	30	0								
Volume Right	79	0	0	0								
cSH	476	392	1622	1700								
Volume to Capacity	0.43	0.02	0.02	0.17								
Queue Length 95th (ft)	53	2	1	0								
Control Delay (s)	18.2	14.4	0.9	0.0								
Lane LOS	C	B	A									
Approach Delay (s)	18.2	14.4	0.4									
Approach LOS	C	B										
Intersection Summary												
Average Delay			5.1									
Intersection Capacity Utilization			32.3%			ICU Level of Service		A				
Analysis Period (min)			15									

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Background - PM Peak Hour
15: McKinney & Haskell

	EBL	EBR	NBL	NBT	SBT	SBR
Movement						
Lane Configurations	↔			↔↔↔		
Volume (veh/h)	23	0	67	1171	0	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	25	0	73	1273	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				368		
pX, platoon unblocked						
vC, conflicting volume	570	0	0			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	570	0	0			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	94	100	96			
cM capacity (veh/h)	431	1084	1622			
Direction, Lane #	EB 1	NB 1	NB 2	NB 3		
Volume Total	25	327	509	509		
Volume Left	25	73	0	0		
Volume Right	0	0	0	0		
cSH	431	1622	1700	1700		
Volume to Capacity	0.06	0.04	0.30	0.30		
Queue Length 95th (ft)	5	4	0	0		
Control Delay (s)	13.9	1.9	0.0	0.0		
Lane LOS	B	A				
Approach Delay (s)	13.9	0.5				
Approach LOS	B					
Intersection Summary						
Average Delay			0.7			
Intersection Capacity Utilization			43.7%		ICU Level of Service	A
Analysis Period (min)			15			

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Background - PM Peak Hour
16: Cole & Haskell

	←	↖	↑	↗	↘	↓
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖				↘↗↘	↗↗↗
Volume (veh/h)	107	0	0	0	17	590
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	116	0	0	0	18	641
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (ft)			400			
pX, platoon unblocked						
vC, conflicting volume	251	0			0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	251	0			0	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	84	100			99	
cM capacity (veh/h)	708	1084			1622	
Direction, Lane #	WB 1	SB 1	SB 2	SB 3		
Volume Total	116	147	257	257		
Volume Left	116	18	0	0		
Volume Right	0	0	0	0		
cSH	708	1622	1700	1700		
Volume to Capacity	0.16	0.01	0.15	0.15		
Queue Length 95th (ft)	15	1	0	0		
Control Delay (s)	11.1	1.0	0.0	0.0		
Lane LOS	B	A				
Approach Delay (s)	11.1	0.2				
Approach LOS	B					
Intersection Summary						
Average Delay			1.8			
Intersection Capacity Utilization			43.7%		ICU Level of Service	A
Analysis Period (min)			15			

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Background - PM Peak Hour
17: Cole & Haskell EB

	↖	↘	↖	↑	↓	↗
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↖			↗↗↗	↗
Volume (veh/h)	0	28	0	0	607	14
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	30	0	0	660	15
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				528		
pX, platoon unblocked						
vC, conflicting volume	667	228	675			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	667	228	675			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	96	100			
cM capacity (veh/h)	392	775	912			
Direction, Lane #	EB 1	SB 1	SB 2	SB 3		
Volume Total	30	264	264	147		
Volume Left	0	0	0	0		
Volume Right	30	0	0	15		
cSH	775	1700	1700	1700		
Volume to Capacity	0.04	0.16	0.16	0.09		
Queue Length 95th (ft)	3	0	0	0		
Control Delay (s)	9.8	0.0	0.0	0.0		
Lane LOS	A					
Approach Delay (s)	9.8	0.0				
Approach LOS	A					
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			22.0%		ICU Level of Service	A
Analysis Period (min)			15			

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Background - PM Peak Hour
18: McKinney & North Dallas High School

	EBL	EBR	NBL	NBT	SBT	SBR
Movement						
Lane Configurations	↰			↱↱↱		
Volume (veh/h)	12	0	33	1130	0	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	0	36	1228	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				978		
pX, platoon unblocked						
vC, conflicting volume	481	0	0			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	481	0	0			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	100	98			
cM capacity (veh/h)	503	1084	1622			
Direction, Lane #	EB 1	NB 1	NB 2	NB 3		
Volume Total	13	282	491	491		
Volume Left	13	36	0	0		
Volume Right	0	0	0	0		
cSH	503	1622	1700	1700		
Volume to Capacity	0.03	0.02	0.29	0.29		
Queue Length 95th (ft)	2	2	0	0		
Control Delay (s)	12.4	1.1	0.0	0.0		
Lane LOS	B	A				
Approach Delay (s)	12.4	0.2				
Approach LOS	B					
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization		43.7%		ICU Level of Service	A	
Analysis Period (min)		15				

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Background - PM Peak Hour
19: Cole & North Dallas High School

	WBL	WBR	NBT	NBR	SBL	SBT
Movement						
Lane Configurations	↰					↱↱↱
Volume (veh/h)	3	0	0	0	11	640
Sign Control	Stop			Free		Free
Grade	0%			0%		0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	0	0	0	12	696
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None		None
Median storage (veh)						
Upstream signal (ft)				816		
pX, platoon unblocked						
vC, conflicting volume	256	0			0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	256	0			0	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			99	
cM capacity (veh/h)	706	1084			1622	
Direction, Lane #	WB 1	SB 1	SB 2	SB 3		
Volume Total	3	151	278	278		
Volume Left	3	12	0	0		
Volume Right	0	0	0	0		
cSH	706	1622	1700	1700		
Volume to Capacity	0.00	0.01	0.16	0.16		
Queue Length 95th (ft)	0	1	0	0		
Control Delay (s)	10.1	0.6	0.0	0.0		
Lane LOS	B	A				
Approach Delay (s)	10.1	0.1				
Approach LOS	B					
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization		43.7%		ICU Level of Service	A	
Analysis Period (min)		15				

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Background - PM Peak Hour
20: McKinney & Cambrick

	EBL	EBR	NBL	NBT	SBT	SBR
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	8	0	17	1114	0	0
Volume (veh/h)	8	0	17	1114	0	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	9	0	18	1211	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	441	0	0			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	441	0	0			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	100	99			
cM capacity (veh/h)	539	1084	1622			
Direction, Lane #	EB 1	NB 1	NB 2	NB 3		
Volume Total	9	261	484	484		
Volume Left	9	18	0	0		
Volume Right	0	0	0	0		
cSH	539	1622	1700	1700		
Volume to Capacity	0.02	0.01	0.28	0.28		
Queue Length 95th (ft)	1	1	0	0		
Control Delay (s)	11.8	0.6	0.0	0.0		
Lane LOS	B	A				
Approach Delay (s)	11.8	0.1				
Approach LOS	B					
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			31.9%		ICU Level of Service	A
Analysis Period (min)			15			

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Background - PM Peak Hour
21: Cole & Cambrick

	EBL	EBR	NBL	NBT	SBT	SBR
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	0	28	0	0	607	11
Volume (veh/h)	0	28	0	0	607	11
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	30	0	0	660	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				1239		
pX, platoon unblocked						
vC, conflicting volume	666	226	672			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	666	226	672			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	96	100			
cM capacity (veh/h)	393	777	915			
Direction, Lane #	EB 1	SB 1	SB 2	SB 3		
Volume Total	30	264	264	144		
Volume Left	0	0	0	0		
Volume Right	30	0	0	12		
cSH	777	1700	1700	1700		
Volume to Capacity	0.04	0.16	0.16	0.08		
Queue Length 95th (ft)	3	0	0	0		
Control Delay (s)	9.8	0.0	0.0	0.0		
Lane LOS	A					
Approach Delay (s)	9.8	0.0				
Approach LOS	A					
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			22.0%		ICU Level of Service	A
Analysis Period (min)			15			

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Background - PM Peak Hour
22: McKinney & Elizabeth

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement												
Lane Configurations		↔			↔			↔↔↔				
Volume (veh/h)	45	29	0	0	33	39	70	1025	30	0	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	49	32	0	0	36	42	76	1114	33	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)											837	
pX, platoon unblocked												
vC, conflicting volume	584	1299	0	1298	1283	388	0			1147		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	584	1299	0	1298	1283	388	0			1147		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	83	79	100	100	77	93	95			100		
cM capacity (veh/h)	292	153	1084	97	156	611	1622			605		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3							
Volume Total	80	78	355	557	311							
Volume Left	49	0	76	0	0							
Volume Right	0	42	0	0	33							
cSH	215	262	1622	1700	1700							
Volume to Capacity	0.37	0.30	0.05	0.33	0.18							
Queue Length 95th (ft)	41	30	4	0	0							
Control Delay (s)	31.4	24.5	1.9	0.0	0.0							
Lane LOS	D	C	A									
Approach Delay (s)	31.4	24.5	0.5									
Approach LOS	D	C										
Intersection Summary												
Average Delay			3.7									
Intersection Capacity Utilization			39.2%			ICU Level of Service		A				
Analysis Period (min)			15									

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Background - PM Peak Hour
23: Cole & Elizabeth

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement												
Lane Configurations		↔			↔						↔↔↔	
Volume (veh/h)	0	13	30	78	24	0	0	0	0	53	518	19
Sign Control		Stop			Stop				Free		Free	
Grade		0%			0%				0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	14	33	85	26	0	0	0	0	58	563	21
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type									None		None	
Median storage (veh)												
Upstream signal (ft)											802	
pX, platoon unblocked												
vC, conflicting volume	702	689	198	343	699	0	584			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	702	689	198	343	699	0	584			0		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	96	96	84	93	100	100			96		
cM capacity (veh/h)	298	354	810	532	350	1084	987			1622		
Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3							
Volume Total	47	111	198	282	161							
Volume Left	0	85	58	0	0							
Volume Right	33	0	0	0	21							
cSH	583	474	1622	1700	1700							
Volume to Capacity	0.08	0.23	0.04	0.17	0.09							
Queue Length 95th (ft)	7	22	3	0	0							
Control Delay (s)	11.7	14.9	2.3	0.0	0.0							
Lane LOS	B	B	A									
Approach Delay (s)	11.7	14.9	0.7									
Approach LOS	B	B										
Intersection Summary												
Average Delay			3.3									
Intersection Capacity Utilization			30.4%			ICU Level of Service		A				
Analysis Period (min)			15									

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Background - PM Peak Hour
26: McKinney & Armstrong

																			
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR							
Lane Configurations																			
Volume (veh/h)	117	45	0	0	45	91	36	960	46	0	0	0							
Sign Control		Stop			Stop			Free			Free								
Grade		0%			0%			0%			0%								
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92							
Hourly flow rate (vph)	127	49	0	0	49	99	39	1043	50	0	0	0							
Pedestrians																			
Lane Width (ft)																			
Walking Speed (ft/s)																			
Percent Blockage																			
Right turn flare (veh)																			
Median type								None			None								
Median storage (veh)																			
Upstream signal (ft)											685								
pX, platoon unblocked																			
vC, conflicting volume	549	1172	0	1171	1147	373	0			1093									
vC1, stage 1 conf vol																			
vC2, stage 2 conf vol																			
vCu, unblocked vol	549	1172	0	1171	1147	373	0			1093									
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1									
tC, 2 stage (s)																			
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2									
p0 queue free %	54	74	100	100	75	84	98			100									
cM capacity (veh/h)	278	186	1084	116	193	625	1622			634									
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3														
Volume Total	176	148	300	522	311														
Volume Left	127	0	39	0	0														
Volume Right	0	99	0	0	50														
cSH	245	359	1622	1700	1700														
Volume to Capacity	0.72	0.41	0.02	0.31	0.18														
Queue Length 95th (ft)	122	49	2	0	0														
Control Delay (s)	50.1	21.9	1.1	0.0	0.0														
Lane LOS	F	C	A																
Approach Delay (s)	50.1	21.9	0.3																
Approach LOS	F	C																	
Intersection Summary																			
Average Delay			8.5																
Intersection Capacity Utilization			47.1%	ICU Level of Service		A													
Analysis Period (min)			15																

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Background - PM Peak Hour
27: Cole & Armstrong

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											  	
Volume (veh/h)	0	49	41	44	35	0	0	0	0	72	535	27
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	53	45	48	38	0	0	0	0	78	582	29
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)											672	
pX, platoon unblocked												
vC, conflicting volume	772	753	209	422	767	0	611			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	772	753	209	422	767	0	611			0		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	83	94	88	88	100	100			95		
cM capacity (veh/h)	253	321	797	410	315	1084	964			1622		
Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3							
Volume Total	98	86	224	291	175							
Volume Left	0	48	78	0	0							
Volume Right	45	0	0	0	29							
cSH	441	362	1622	1700	1700							
Volume to Capacity	0.22	0.24	0.05	0.17	0.10							
Queue Length 95th (ft)	21	23	4	0	0							
Control Delay (s)	15.5	18.0	2.8	0.0	0.0							
Lane LOS	C	C	A									
Approach Delay (s)	15.5	18.0	0.9									
Approach LOS	C	C										
Intersection Summary												
Average Delay			4.2									
Intersection Capacity Utilization			30.0%	ICU Level of Service		A						
Analysis Period (min)			15									

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Background - PM Peak Hour
31: Cole & Monticello

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	156	0	0	0	0	0	257	373	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	170	0	0	0	0	0	279	405	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	964	964	135	694	964	0	405			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	964	964	135	694	964	0	405			0		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	41	100	100	100			83		
cM capacity (veh/h)	182	210	889	286	210	1084	1150			1622		
Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3							
Volume Total	0	170	381	203	101							
Volume Left	0	170	279	0	0							
Volume Right	0	0	0	0	0							
cSH	1700	286	1622	1700	1700							
Volume to Capacity	0.00	0.59	0.17	0.12	0.06							
Queue Length 95th (ft)	0	88	16	0	0							
Control Delay (s)	0.0	34.4	6.0	0.0	0.0							
Lane LOS	A	D	A									
Approach Delay (s)	0.0	34.4	3.3									
Approach LOS	A	D										
Intersection Summary												
Average Delay			9.5									
Intersection Capacity Utilization			29.5%			ICU Level of Service		A				
Analysis Period (min)			15									

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Background - PM Peak Hour
32: McKinney & Harvard

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	72	0	0	0	0	105	1	417	200	0	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	78	0	0	0	0	114	1	453	217	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	343	455	0	455	455	227	0			453		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	343	455	0	455	455	227	0			453		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	84	100	100	100	100	85	100			100		
cM capacity (veh/h)	500	499	1084	488	499	776	1622			1104		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3							
Volume Total	78	114	152	302	217							
Volume Left	78	0	1	0	0							
Volume Right	0	114	0	0	217							
cSH	500	776	1622	1700	1700							
Volume to Capacity	0.16	0.15	0.00	0.18	0.13							
Queue Length 95th (ft)	14	13	0	0	0							
Control Delay (s)	13.5	10.4	0.1	0.0	0.0							
Lane LOS	B	B	A									
Approach Delay (s)	13.5	10.4	0.0									
Approach LOS	B	B										
Intersection Summary												
Average Delay			2.6									
Intersection Capacity Utilization			32.0%			ICU Level of Service		A				
Analysis Period (min)			15									

Synchro™ Output – 2035 Two-Way Conversion Traffic

McKinney - Cole Uptown Evaluation

2035 Conversion - AM Peak Hour

Lanes, Volumes, Timings

1: McKinney & Allen/Oak Grove

	←	→	↖	↗	←	↖	↗	↖	↗	↖	↗	↖	↗
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗		
Volume (vph)	110	23	365	137	69	56	171	343	62	12	182	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		0	100		0	150		137	150		0	
Storage Lanes	1		0	1		0	1		0	1		0	
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	
Frt		0.859			0.929			0.977					
Flt Protected	0.950			0.950			0.950			0.950			
Satd. Flow (prot)	1770	1600	0	1770	1730	0	1770	3458	0	1770	1863	0	
Flt Permitted	0.460			0.336			0.564			0.480			
Satd. Flow (perm)	857	1600	0	626	1730	0	1051	3458	0	894	1863	0	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)		397			41			22					
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		412			339			167			848		
Travel Time (s)		9.4			7.7			3.8			19.3		
Peak Hour Factor	0.92	0.92	0.92	0.90	0.92	0.83	0.92	0.91	0.92	0.89	0.77	0.92	
Adj. Flow (vph)	120	25	397	152	75	67	186	377	67	13	236	0	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	120	422	0	152	142	0	186	444	0	13	236	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)		12			12			12			12		
Link Offset(ft)		0			0			-12			12		
Crosswalk Width(ft)		16			16			16			16		
Two way Left Turn Lane													
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15		9	15		9	15		9	15		9	
Number of Detectors	1	2		1	2		1	1		1	1		
Detector Template	Left	Thru			Thru		Left						
Leading Detector (ft)	20	100		50	100		20	50		50	50		
Trailing Detector (ft)	0	0		0	0		0	0		0	0		
Detector 1 Position(ft)	0	0		0	0		0	0		0	0		
Detector 1 Size(ft)	20	6		50	6		20	50		50	50		
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel													
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Detector 2 Position(ft)		94			94								
Detector 2 Size(ft)		6			6								
Detector 2 Type		Cl+Ex			Cl+Ex								
Detector 2 Channel													
Detector 2 Extend (s)		0.0			0.0								
Turn Type	D,P+P	NA		D,P+P	NA		D,P+P	NA		Perm	NA		
Protected Phases	7	4		3	8		1	6			2		
Permitted Phases	8			4			2			2			
Detector Phase	7	4		3	8		1	6		2	2		

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - AM Peak Hour

Synchro 8 Report
Page 1

McKinney - Cole Uptown Evaluation

2035 Conversion - AM Peak Hour

Lanes, Volumes, Timings

1: McKinney & Allen/Oak Grove

	←	→	↖	↗	←	↖	↗	↖	↗	↖	↗	↖	↗
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Switch Phase													
Minimum Initial (s)	4.0	4.0		4.0	8.0		4.0	10.0		10.0	10.0		
Minimum Split (s)	13.0	21.5		13.0	18.5		13.0	20.5		20.5	20.5		
Total Split (s)	15.0	43.0		19.0	47.0		19.0	58.0		39.0	39.0		
Total Split (%)	12.5%	35.8%		15.8%	39.2%		15.8%	48.3%		32.5%	32.5%		
Maximum Green (s)	9.5	37.5		13.5	41.5		13.5	52.5		33.5	33.5		
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0		
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5		
Lost Time Adjust (s)	0.0	0.0		-0.5	0.0		0.0	-1.5		-1.0	-1.5		
Total Lost Time (s)	5.5	5.5		5.0	5.5		5.5	4.0		4.5	4.0		
Lead/Lag	Lag	Lead		Lag	Lead		Lag	Lead		Lead	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	2.0		3.0	2.0		2.0	2.0		
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max		
Walk Time (s)		5.0			5.0			5.0		5.0	5.0		
Flash Dont Walk (s)		11.0			8.0			8.0		8.0	8.0		
Pedestrian Calls (#/hr)		0			0			0		0	0		
Act Effct Green (s)	23.9	11.4		24.9	12.1		74.1	81.1		61.6	62.1		
Actuated g/C Ratio	0.20	0.10		0.21	0.10		0.62	0.68		0.51	0.52		
v/c Ratio	0.46	0.83		0.60	0.67		0.26	0.19		0.03	0.25		
Control Delay	44.3	20.5		53.0	51.9		11.6	8.3		8.0	7.0		
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Total Delay	44.3	20.5		53.0	51.9		11.6	8.3		8.0	7.0		
LOS	D	C		D	D		B	A		A	A		
Approach Delay		25.7			52.5			9.3			7.0		
Approach LOS		C			D			A			A		

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBSB and 6:NBT, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 21.6

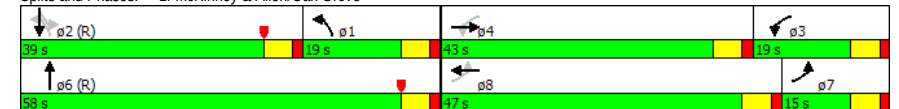
Intersection LOS: C

Intersection Capacity Utilization 67.1%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: McKinney & Allen/Oak Grove



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings2035 Conversion - AM Peak Hour
4: McKinney & Bowen

	↖	→	↘	↙	←	↖	↙	↑	↘	↙	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Volume (vph)	39	168	29	11	113	15	63	337	20	15	273	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Frt		0.985			0.983			0.991			0.985	
Flt Protected		0.991			0.997			0.991			0.998	
Satd. Flow (prot)	0	1818	0	0	1826	0	0	3476	0	0	1831	0
Flt Permitted		0.926			0.979			0.841			0.974	
Satd. Flow (perm)	0	1699	0	0	1793	0	0	2950	0	0	1787	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			15			14			14	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		229			304			848			502	
Travel Time (s)		5.2			6.9			19.3			11.4	
Peak Hour Factor	0.79	0.88	1.00	1.00	0.81	0.67	0.71	0.92	0.68	1.00	1.00	1.00
Adj. Flow (vph)	49	191	29	11	140	22	89	366	29	15	273	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	269	0	0	173	0	0	484	0	0	324	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			6	
Permitted Phases	4			4			2			6		
Detector Phase	4	4		4	4		2	2		6	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		10.0	10.0		4.0	4.0	
Minimum Split (s)	15.2	15.2		15.2	15.2		15.2	15.2		20.5	20.5	
Total Split (s)	28.0	28.0		28.0	28.0		32.0	32.0		32.0	32.0	
Total Split (%)	46.7%	46.7%		46.7%	46.7%		53.3%	53.3%		53.3%	53.3%	
Maximum Green (s)	23.8	23.8		23.8	23.8		27.8	27.8		27.8	27.8	
Yellow Time (s)	3.2	3.2		3.2	3.2		3.2	3.2		3.2	3.2	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - AM Peak Hour

Synchro 8 Report
Page 3McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings2035 Conversion - AM Peak Hour
4: McKinney & Bowen

	↖	→	↘	↙	←	↖	↙	↑	↘	↙	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-0.2			-0.2			-0.2			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.2	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	2.5		2.5	2.5		4.0	4.0		3.0	3.0	
Recall Mode	Max	Max		Max	Max		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		5.0	5.0	
Flash Dont Walk (s)	7.0	7.0		7.0	7.0		7.0	7.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		24.0			24.0			28.0			27.8	
Actuated g/C Ratio		0.40			0.40			0.47			0.46	
v/c Ratio		0.39			0.24			0.35			0.39	
Control Delay		8.3			12.0			12.5			22.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		8.3			12.0			12.5			22.0	
LOS		A			B			B			C	
Approach Delay		8.3			12.0			12.5			22.0	
Approach LOS		A			B			B			C	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 42 (70%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.39

Intersection Signal Delay: 14.0

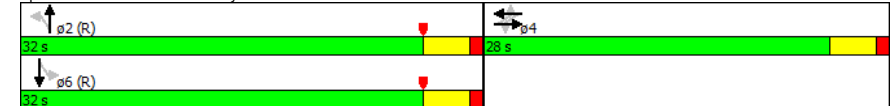
Intersection LOS: B

Intersection Capacity Utilization 61.1%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 4: McKinney & Bowen



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - AM Peak Hour

Synchro 8 Report
Page 4

McKinney - Cole Uptown Evaluation

2035 Conversion - AM Peak Hour

Lanes, Volumes, Timings

5: Carlisle & Bowen

	↗	→	↘	↙	←	↖	↗	↑	↘	↙	↓	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔			↔↔			↔↔	
Volume (vph)	19	196	59	22	182	8	32	169	10	30	548	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.966			0.995			0.994			0.980	
Flt Protected		0.997			0.993			0.992			0.997	
Satd. Flow (prot)	0	3409	0	0	3497	0	0	1837	0	0	3458	0
Flt Permitted		0.923			0.867			0.861			0.929	
Satd. Flow (perm)	0	3156	0	0	3053	0	0	1594	0	0	3222	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		67			6			7			45	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		361			568			386			773	
Travel Time (s)		8.2			12.9			8.8			17.6	
Peak Hour Factor	1.00	0.91	0.85	0.60	0.86	1.00	1.00	1.00	1.00	0.65	0.84	0.70
Adj. Flow (vph)	19	215	69	37	212	8	32	169	10	46	652	106
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	303	0	0	257	0	0	211	0	0	804	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		2	2	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	19.5	19.5		19.5	19.5		19.5	19.5		19.5	19.5	
Total Split (s)	23.0	23.0		23.0	23.0		37.0	37.0		37.0	37.0	
Total Split (%)	38.3%	38.3%		38.3%	38.3%		61.7%	61.7%		61.7%	61.7%	
Maximum Green (s)	18.5	18.5		18.5	18.5		32.5	32.5		32.5	32.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2035 Conversion - AM Peak Hour

Lanes, Volumes, Timings

5: Carlisle & Bowen

	↗	→	↘	↙	←	↖	↗	↑	↘	↙	↓	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-0.5			-0.5			0.0			-0.5	
Total Lost Time (s)		4.0			4.0			4.5			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.0	2.0		2.0	2.0	
Recall Mode	Min	Min		Min	Min		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	8.0	8.0		8.0	8.0		8.0	8.0		8.0	8.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		11.6			11.6			39.9			40.4	
Actuated g/C Ratio		0.19			0.19			0.66			0.67	
v/c Ratio		0.46			0.43			0.20			0.37	
Control Delay		18.6			21.7			4.6			3.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		18.6			21.7			4.6			3.1	
LOS		B			C			A			A	
Approach Delay		18.6			21.7			4.6			3.1	
Approach LOS		B			C			A			A	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 32 (53%), Referenced to phase 2:NBSB, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.46

Intersection Signal Delay: 9.4

Intersection LOS: A

Intersection Capacity Utilization 60.1%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 5: Carlisle & Bowen



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings2035 Conversion - AM Peak Hour
6: McKinney & Hall

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Volume (vph)	34	70	6	7	206	34	32	324	23	0	310	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Frt		0.994			0.981			0.991			0.985	
Flt Protected		0.985			0.999			0.995				
Satd. Flow (prot)	0	1824	0	0	1826	0	0	3490	0	0	1835	0
Flt Permitted		0.817			0.993			0.902				
Satd. Flow (perm)	0	1513	0	0	1815	0	0	3164	0	0	1835	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			16			15			14	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		790			243			502			693	
Travel Time (s)		18.0			5.5			11.4			15.8	
Peak Hour Factor	0.83	0.78	1.00	1.00	0.85	0.82	0.76	0.89	0.86	0.25	1.00	1.00
Adj. Flow (vph)	41	90	6	7	242	41	42	364	27	0	310	39
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	137	0	0	290	0	0	433	0	0	349	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1			1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50			50	
Trailing Detector (ft)	0	0		0	0		0	0			0	
Detector 1 Position(ft)	0	0		0	0		0	0			0	
Detector 1 Size(ft)	50	50		50	50		50	50			50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA			NA	
Protected Phases		8			4			2				6
Permitted Phases	8			4			2				6	
Detector Phase	8	8		4	4		2	2			6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		10.0	10.0			4.0	
Minimum Split (s)	14.2	14.2		14.2	14.2		16.2	16.2			20.2	
Total Split (s)	28.0	28.0		28.0	28.0		32.0	32.0			32.0	
Total Split (%)	46.7%	46.7%		46.7%	46.7%		53.3%	53.3%			53.3%	
Maximum Green (s)	23.8	23.8		23.8	23.8		27.8	27.8			27.8	
Yellow Time (s)	3.2	3.2		3.2	3.2		3.2	3.2			3.2	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0			1.0	

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - AM Peak Hour

Synchro 8 Report
Page 7McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings2035 Conversion - AM Peak Hour
6: McKinney & Hall

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-0.2			-0.2			-0.2			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.2	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	2.0			3.0	
Recall Mode	Ped	Ped		Ped	Ped		C-Max	C-Max			None	
Walk Time (s)	4.0	4.0		4.0	4.0		6.0	6.0			5.0	
Flash Dont Walk (s)	6.0	6.0		6.0	6.0		6.0	6.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0			0	
Act Effct Green (s)		14.8			14.8			37.2			37.0	
Actuated g/C Ratio		0.25			0.25			0.62			0.62	
v/c Ratio		0.36			0.63			0.22			0.31	
Control Delay		17.6			24.8			2.2			5.6	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		17.6			24.8			2.2			5.6	
LOS		B			C			A			A	
Approach Delay		17.6			24.8			2.2			5.6	
Approach LOS		B			C			A			A	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 53 (88%), Referenced to phase 2:NBTL, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.63

Intersection Signal Delay: 10.3

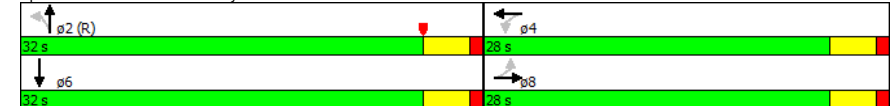
Intersection LOS: B

Intersection Capacity Utilization 61.9%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 6: McKinney & Hall



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2035 Conversion - AM Peak Hour

Lanes, Volumes, Timings

7: Carlisle & Hall

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	
Volume (vph)	18	39	12	12	246	18	17	161	12	59	621	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.972			0.993			0.991			0.985	
Flt Protected		0.989			0.997			0.996			0.996	
Satd. Flow (prot)	0	1791	0	0	1844	0	0	1839	0	0	3472	0
Flt Permitted		0.880			0.983			0.925			0.913	
Satd. Flow (perm)	0	1593	0	0	1818	0	0	1708	0	0	3183	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			5			10			36	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		182			790			773			627	
Travel Time (s)		4.1			18.0			17.6			14.3	
Peak Hour Factor	1.00	0.84	0.69	0.68	0.84	1.00	1.00	1.00	1.00	0.83	0.91	0.92
Adj. Flow (vph)	18	46	17	18	293	18	17	161	12	71	682	85
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	81	0	0	329	0	0	190	0	0	838	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			6			2	
Permitted Phases	4			4			6			2		
Detector Phase	4	4		4	4		6	6		2	2	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	18.2	18.2		18.2	18.2		18.2	18.2		18.2	18.2	
Total Split (s)	20.0	20.0		20.0	20.0		40.0	40.0		40.0	40.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%		66.7%	66.7%		66.7%	66.7%	
Maximum Green (s)	15.8	15.8		15.8	15.8		35.8	35.8		35.8	35.8	
Yellow Time (s)	3.2	3.2		3.2	3.2		3.2	3.2		3.2	3.2	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - AM Peak Hour

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McKinney - Cole Uptown Evaluation

2035 Conversion - AM Peak Hour

Lanes, Volumes, Timings

7: Carlisle & Hall

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-0.2			-0.2			0.0			-0.2	
Total Lost Time (s)		4.0			4.0			4.2			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		4.0	4.0		4.0	4.0	
Recall Mode	Min	Min		Min	Min		Max	Max		C-Max	C-Max	
Walk Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Flash Dont Walk (s)	8.0	8.0		8.0	8.0		8.0	8.0		8.0	8.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		13.9			13.9			37.9			38.1	
Actuated g/C Ratio		0.23			0.23			0.63			0.64	
v/c Ratio		0.21			0.77			0.18			0.41	
Control Delay		16.0			20.9			10.2			6.6	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		16.0			20.9			10.2			6.6	
LOS		B			C			B			A	
Approach Delay		16.0			20.9			10.2			6.6	
Approach LOS		B			C			B			A	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 8 (13%), Referenced to phase 2:SBTL, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 10.9

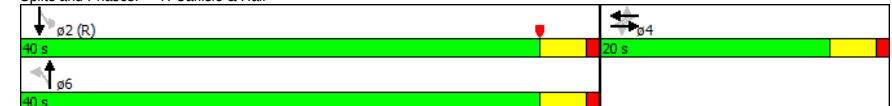
Intersection LOS: B

Intersection Capacity Utilization 50.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 7: Carlisle & Hall



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - AM Peak Hour

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McKinney - Cole Uptown Evaluation

2035 Conversion - AM Peak Hour

Lanes, Volumes, Timings

8: McKinney & Lemmon

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔↔↔						↔↔		↔	↔	
Volume (vph)	212	1158	31	0	0	0	0	337	75	53	313	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.91	0.91	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt	0.996						0.972					
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1770	5065	0	0	0	0	0	3440	0	1770	1863	0
Flt Permitted	0.950									0.426		
Satd. Flow (perm)	1770	5065	0	0	0	0	0	3440	0	794	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4						29				
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		651			455			693			457	
Travel Time (s)		12.7			8.9			15.8			10.4	
Peak Hour Factor	0.97	0.94	1.00	1.00	1.00	1.00	1.00	0.92	0.88	1.00	1.00	1.00
Adj. Flow (vph)	219	1232	31	0	0	0	0	366	85	53	313	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	219	1263	0	0	0	0	0	451	0	53	313	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1						1		1	1	
Detector Template												
Leading Detector (ft)	50	50						50		50	50	
Trailing Detector (ft)	0	0						0		0	0	
Detector 1 Position(ft)	0	0						0		0	0	
Detector 1 Size(ft)	50	50						50		50	50	
Detector 1 Type	CI+Ex	CI+Ex						CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0		0.0	0.0	
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		2						8			4	
Permitted Phases		2								4		
Detector Phase		2						8		4	4	
Switch Phase												
Minimum Initial (s)		14.0						14.0		14.0	14.0	
Minimum Split (s)		18.5						18.5		18.5	18.5	
Total Split (s)		66.0						54.0		54.0	54.0	
Total Split (%)		55.0%						45.0%		45.0%	45.0%	
Maximum Green (s)		61.5						49.5		49.5	49.5	
Yellow Time (s)		3.5						3.5		3.5	3.5	
All-Red Time (s)		1.0						1.0		1.0	1.0	

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2035 Conversion - AM Peak Hour

Lanes, Volumes, Timings

8: McKinney & Lemmon

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-0.5	-0.5						-0.5		0.0	0.0	
Total Lost Time (s)	4.0	4.0						4.0		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	0.2	0.2						0.2		0.2	0.2	
Recall Mode	C-Max	C-Max						Max		Max	Max	
Walk Time (s)	7.0	7.0						4.0		4.0	4.0	
Flash Dont Walk (s)	7.0	7.0						7.0		7.0	7.0	
Pedestrian Calls (#/hr)	0	0						0		0	0	
Act Effct Green (s)	62.0	62.0						50.0		49.5	49.5	
Actuated g/C Ratio	0.52	0.52						0.42		0.41	0.41	
v/c Ratio	0.24	0.48						0.31		0.16	0.41	
Control Delay	3.7	3.7						24.0		12.3	15.0	
Queue Delay	0.0	0.0						0.0		0.0	0.3	
Total Delay	3.7	3.7						24.0		12.3	15.3	
LOS	A	A						C		B	B	
Approach Delay		3.7						24.0			14.9	
Approach LOS		A						C			B	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 14 (12%), Referenced to phase 2:EBTL, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.48

Intersection Signal Delay: 9.5

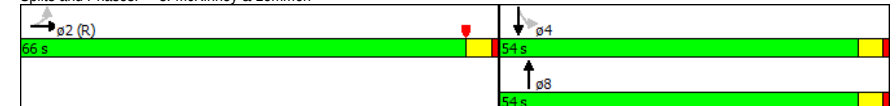
Intersection LOS: A

Intersection Capacity Utilization 56.9%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 8: McKinney & Lemmon



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2035 Conversion - AM Peak Hour
9: Carlisle/Cole & Lemmon

	↖	→	↗	↖	←	↖	↖	↑	↗	↘	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4111B						B		B		
Volume (vph)	106	1257	63	0	0	0	0	169	38	106	626	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	150		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992						0.975				
Flt Protected		0.997								0.950		
Satd. Flow (prot)	0	6338	0	0	0	0	0	1816	0	1770	1863	0
Flt Permitted		0.997								0.585		
Satd. Flow (perm)	0	6338	0	0	0	0	0	1816	0	1090	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11						11				
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		687			651			627			431	
Travel Time (s)		13.4			12.7			14.3			9.8	
Peak Hour Factor	1.00	0.95	0.75	1.00	1.00	1.00	1.00	1.00	1.00	0.83	0.93	1.00
Adj. Flow (vph)	106	1323	84	0	0	0	0	169	38	128	673	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1513	0	0	0	0	0	207	0	128	673	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1						1		1	1	
Detector Template												
Leading Detector (ft)	50	50						50		50	50	
Trailing Detector (ft)	0	0						0		0	0	
Detector 1 Position(ft)	0	0						0		0	0	
Detector 1 Size(ft)	50	50						50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0		0.0	0.0	
Turn Type	Perm	NA						NA		D,P+P	NA	
Protected Phases		2						8		7	4	
Permitted Phases	2									8		
Detector Phase	2	2						8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	8.0						4.0		4.0	8.0	
Minimum Split (s)	18.5	18.5						20.5		13.0	18.5	
Total Split (s)	46.0	46.0						53.0		13.0	66.0	
Total Split (%)	38.3%	38.3%						44.2%		10.8%	55.0%	

McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2035 Conversion - AM Peak Hour
9: Carlisle/Cole & Lemmon

Lane Group	ø3
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	8.0
Total Split (s)	8.0
Total Split (%)	7%

McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

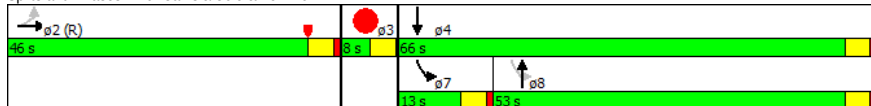
2035 Conversion - AM Peak Hour
9: Carlisle/Cole & Lemmon

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group												
Maximum Green (s)	41.5	41.5						48.5		8.5	61.5	
Yellow Time (s)	3.5	3.5						3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0						1.0		1.0	1.0	
Lost Time Adjust (s)		-0.5						0.0		-0.5	-0.5	
Total Lost Time (s)		4.0						4.5		4.0	4.0	
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?								Yes		Yes		
Vehicle Extension (s)	2.0	2.0						3.0		3.0	2.0	
Recall Mode	C-Max	C-Max						None		None	Max	
Walk Time (s)	7.0	7.0						5.0			7.0	
Flash Dont Walk (s)	7.0	7.0						11.0			7.0	
Pedestrian Calls (#/hr)	0	0						0			0	
Act Effect Green (s)		42.0						55.6		66.0	70.0	
Actuated g/C Ratio		0.35						0.46		0.55	0.58	
v/c Ratio		0.68						0.24		0.20	0.62	
Control Delay		34.9						17.4		6.6	8.7	
Queue Delay		0.0						0.0		0.0	2.6	
Total Delay		34.9						17.4		6.6	11.2	
LOS		C						B		A	B	
Approach Delay		34.9						17.4			10.5	
Approach LOS		C						B			B	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.68
 Intersection Signal Delay: 25.7
 Intersection Capacity Utilization 60.5%
 Analysis Period (min) 15

Splits and Phases: 9: Carlisle/Cole & Lemmon



McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2035 Conversion - AM Peak Hour
9: Carlisle/Cole & Lemmon

Lane Group	ø3
Maximum Green (s)	4.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effect Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings2035 Conversion - AM Peak Hour
10: McKinney & Lemmon East

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				←←←	←←←	←	←	←	←	←	←	←
Volume (vph)	0	0	0	89	2031	56	116	415	0	0	282	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	0.95	0.95	1.00	1.00	1.00	1.00
Frt				0.996							0.964	
Flt Protected					0.998			0.988				
Satd. Flow (prot)	0	0	0	0	6369	0	0	3497	0	0	1796	0
Flt Permitted					0.998			0.656				
Satd. Flow (perm)	0	0	0	0	6369	0	0	2322	0	0	1796	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					6						16	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		510			744			457			444	
Travel Time (s)		9.9			14.5			10.4			10.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	0.89	0.83	0.81	0.89	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	89	2282	67	143	466	0	0	282	103
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	2438	0	0	609	0	0	385	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	1		1	1			1	
Detector Template												
Leading Detector (ft)				50	50		50	50			50	
Trailing Detector (ft)				0	0		0	0			0	
Detector 1 Position(ft)				0	0		0	0			0	
Detector 1 Size(ft)				50	50		50	50			50	
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0			0.0	
Detector 1 Queue (s)				0.0	0.0		0.0	0.0			0.0	
Detector 1 Delay (s)				0.0	0.0		0.0	0.0			0.0	
Turn Type				Perm	NA		D.P+P	NA			NA	
Protected Phases					2		7	4			8	
Permitted Phases				2			8					
Detector Phase				2	2		7	4			8	
Switch Phase												
Minimum Initial (s)				14.0	14.0		4.0	12.0			4.0	
Minimum Split (s)				19.5	19.5		13.0	16.5			20.5	
Total Split (s)				64.0	64.0		13.0	56.0			43.0	
Total Split (%)				53.3%	53.3%		10.8%	46.7%			35.8%	
Maximum Green (s)				58.5	58.5		8.5	51.5			38.5	
Yellow Time (s)				3.5	3.5		3.5	3.5			3.5	
All-Red Time (s)				2.0	2.0		1.0	1.0			1.0	

McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings2035 Conversion - AM Peak Hour
10: McKinney & Lemmon East

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)					-1.5			-0.5				0.0
Total Lost Time (s)					4.0			4.0				4.5
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)				0.2	0.2		3.0	0.2			3.0	
Recall Mode				C-Max	C-Max		None	Max			None	
Walk Time (s)				7.0	7.0			4.0			5.0	
Flash Dont Walk (s)				7.0	7.0			7.0			11.0	
Pedestrian Calls (#/hr)				0	0			0			0	
Act Effct Green (s)					60.0			52.0			51.5	
Actuated g/C Ratio					0.50			0.43			0.43	
v/c Ratio					0.76			0.61			0.49	
Control Delay					26.3			15.3			20.8	
Queue Delay					0.6			0.0			4.6	
Total Delay					26.8			15.3			25.5	
LOS					C			B			C	
Approach Delay					26.8			15.3			25.5	
Approach LOS					C			B			C	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:WBTL, Start of Yellow

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 24.6

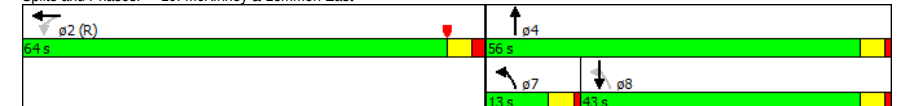
Intersection LOS: C

Intersection Capacity Utilization 78.1%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 10: McKinney & Lemmon East



McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings2035 Conversion - AM Peak Hour
11: Cole & Lemmon East

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				←←←←	←←←←	←	←	←	←	←	←	←
Volume (vph)	0	0	0	178	2044	28	57	207	0	0	566	206
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.998							0.962	
Flt Protected				0.996				0.989				
Satd. Flow (prot)	0	0	0	0	6369	0	0	1842	0	0	1792	0
Flt Permitted				0.996				0.351				
Satd. Flow (perm)	0	0	0	0	6369	0	0	654	0	0	1792	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)				2								
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		238			510			431			877	
Travel Time (s)		4.6			9.9			9.8			19.9	
Peak Hour Factor	1.00	1.00	1.00	0.87	0.88	1.00	1.00	1.00	1.00	0.30	0.93	0.85
Adj. Flow (vph)	0	0	0	205	2323	28	57	207	0	0	609	242
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	2556	0	0	264	0	0	851	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	1		1	1			1	
Detector Template												
Leading Detector (ft)				50	50		50	50			50	
Trailing Detector (ft)				0	0		0	0			0	
Detector 1 Position(ft)				0	0		0	0			0	
Detector 1 Size(ft)				50	50		50	50			50	
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0			0.0	
Detector 1 Queue (s)				0.0	0.0		0.0	0.0			0.0	
Detector 1 Delay (s)				0.0	0.0		0.0	0.0			0.0	
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					2			8				4
Permitted Phases				2			8					4
Detector Phase				2	2		8	8				4
Switch Phase												
Minimum Initial (s)				12.0	12.0		4.0	4.0			14.0	
Minimum Split (s)				18.5	18.5		20.5	20.5			18.5	
Total Split (s)				54.0	54.0		66.0	66.0			66.0	
Total Split (%)				45.0%	45.0%		55.0%	55.0%			55.0%	
Maximum Green (s)				49.5	49.5		61.5	61.5			61.5	
Yellow Time (s)				3.5	3.5		3.5	3.5			3.5	
All-Red Time (s)				1.0	1.0		1.0	1.0			1.0	

McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings2035 Conversion - AM Peak Hour
11: Cole & Lemmon East

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)					-0.5			0.0			-0.5	
Total Lost Time (s)					4.0			4.5			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0		3.0	3.0			2.0	
Recall Mode				C-Max	C-Max		None	None			Max	
Walk Time (s)				7.0	7.0		5.0	5.0			7.0	
Flash Dont Walk (s)				7.0	7.0		11.0	11.0			7.0	
Pedestrian Calls (#/hr)				0	0		0	0			0	
Act Effct Green (s)					50.0			61.5			62.0	
Actuated g/C Ratio					0.42			0.51			0.52	
v/c Ratio					0.96			0.79			0.92	
Control Delay					23.5			36.4			40.8	
Queue Delay					1.4			0.0			0.0	
Total Delay					24.8			36.4			40.8	
LOS					C			D			D	
Approach Delay					24.8			36.4			40.8	
Approach LOS					C			D			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:WBTL, Start of Yellow

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.96

Intersection Signal Delay: 29.4

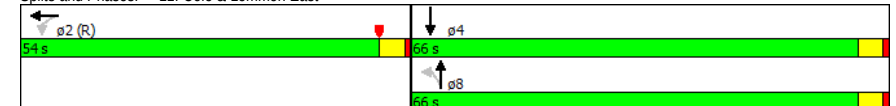
Intersection LOS: C

Intersection Capacity Utilization 99.6%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 11: Cole & Lemmon East



McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2035 Conversion - AM Peak Hour
12: McKinney & Cityplace

	↖	↗	↑	↘	↙	↓	
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø1
Lane Configurations	↖		↗			↘	
Volume (vph)	20	41	491	3	1	373	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00	
Frt	0.909		0.999				
Flt Protected	0.984						
Satd. Flow (prot)	1666	0	3536	0	0	1863	
Flt Permitted	0.984					0.999	
Satd. Flow (perm)	1666	0	3536	0	0	1861	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)	45		1				
Link Speed (mph)	30		30			30	
Link Distance (ft)	723		444			442	
Travel Time (s)	16.4		10.1			10.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	22	45	534	3	1	405	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	67	0	537	0	0	406	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Right	Left	Left	
Median Width(ft)	20		0			0	
Link Offset(ft)	0		0			0	
Crosswalk Width(ft)	16		16			16	
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9		9	15		
Number of Detectors	1		2		1	2	
Detector Template	Left		Thru		Left	Thru	
Leading Detector (ft)	20		100		20	100	
Trailing Detector (ft)	0		0		0	0	
Detector 1 Position(ft)	0		0		0	0	
Detector 1 Size(ft)	20		6		20	6	
Detector 1 Type	CI+Ex		CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0		0.0	0.0	
Detector 1 Queue (s)	0.0		0.0		0.0	0.0	
Detector 1 Delay (s)	0.0		0.0		0.0	0.0	
Detector 2 Position(ft)			94			94	
Detector 2 Size(ft)			6			6	
Detector 2 Type			CI+Ex			CI+Ex	
Detector 2 Channel							
Detector 2 Extend (s)			0.0			0.0	
Turn Type	NA		NA		Perm	NA	
Protected Phases	2		4		8	1	
Permitted Phases					8		
Detector Phase	2		4		8	8	
Switch Phase							
Minimum Initial (s)	4.0		4.0		4.0	4.0	
Minimum Split (s)	20.5		20.5		20.5	20.5	8.5

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2035 Conversion - AM Peak Hour
12: McKinney & Cityplace

	↖	↗	↑	↘	↙	↓	
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø1
Total Split (s)	22.5		29.0		29.0	29.0	8.5
Total Split (%)	37.5%		48.3%		48.3%	48.3%	14%
Maximum Green (s)	18.0		24.5		24.5	24.5	4.0
Yellow Time (s)	3.5		3.5		3.5	3.5	3.5
All-Red Time (s)	1.0		1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0			0.0	
Total Lost Time (s)	4.5		4.5			4.5	
Lead/Lag	Lag						Lead
Lead-Lag Optimize?	Yes						Yes
Vehicle Extension (s)	3.0		3.0		3.0	3.0	3.0
Recall Mode	C-Max		None		None	None	None
Walk Time (s)	5.0		5.0		5.0	5.0	
Flash Dont Walk (s)	11.0		11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0		0		0	0	
Act Effct Green (s)	32.5		18.5			18.5	
Actuated g/C Ratio	0.54		0.31			0.31	
v/c Ratio	0.07		0.49			0.71	
Control Delay	4.8		22.7			27.4	
Queue Delay	0.0		0.1			0.0	
Total Delay	4.8		22.8			27.4	
LOS	A		C			C	
Approach Delay	4.8		22.8			27.4	
Approach LOS	A		C			C	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:WBL and 6:, Start of Yellow

Natural Cycle: 50

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 23.5

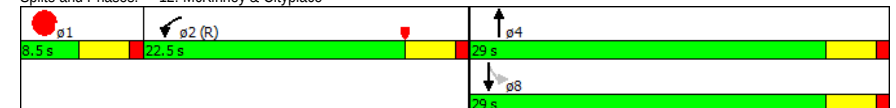
Intersection LOS: C

Intersection Capacity Utilization 31.6%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 12: McKinney & Cityplace



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings2035 Conversion - AM Peak Hour
13: McKinney & Blackburn

	↖	→	↗	↖	←	↖	↖	↑	↗	↗	↓	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗		↖	↖		↖	↖	
Volume (vph)	59	565	25	137	910	161	44	315	114	66	211	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994			0.972			0.956			0.980	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3518	0	1770	3440	0	1770	1781	0	1770	1825	0
Flt Permitted	0.085			0.283			0.547			0.308		
Satd. Flow (perm)	158	3518	0	527	3440	0	1019	1781	0	574	1825	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			29			20			7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		419			236			442			368	
Travel Time (s)		9.5			5.4			10.0			8.4	
Peak Hour Factor	0.83	0.91	1.00	1.00	0.94	0.73	0.84	0.94	0.83	1.00	1.00	1.00
Adj. Flow (vph)	71	621	25	137	968	221	52	335	137	66	211	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	71	646	0	137	1189	0	52	472	0	66	243	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		18			18			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	D,P+P	NA		D,P+P	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2		8	8		4	4	
Permitted Phases	2			6			8			4		
Detector Phase	1	6		5	2		8	8		4	4	
Switch Phase												
Minimum Initial (s)	4.0	14.0		4.0	10.0		14.0	14.0		4.0	4.0	
Minimum Split (s)	13.0	20.0		13.0	20.0		33.5	33.5		21.0	21.0	
Total Split (s)	13.0	56.0		13.0	56.0		51.0	51.0		51.0	51.0	
Total Split (%)	10.8%	46.7%		10.8%	46.7%		42.5%	42.5%		42.5%	42.5%	

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - AM Peak Hour

Synchro 8 Report
Page 23McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings2035 Conversion - AM Peak Hour
13: McKinney & Blackburn

	↖	→	↗	↖	←	↖	↖	↑	↗	↗	↓	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)	8.5	51.0		8.5	51.0		46.0	46.0		46.0	46.0	
Yellow Time (s)	3.5	4.0		3.5	4.0		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	-1.0	-1.0		0.0	-1.0		-1.5	-1.5		0.0	0.0	
Total Lost Time (s)	3.5	4.0		4.5	4.0		3.5	3.5		5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	2.0		3.0	2.0		2.0	2.0		3.0	3.0	
Recall Mode	None	Min		None	Min		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)		7.0			7.0		7.0	7.0		5.0	5.0	
Flash Dont Walk (s)		8.0			8.0		21.0	21.0		11.0	11.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effct Green (s)	54.9	44.3		52.2	47.1		55.3	55.3		53.8	53.8	
Actuated g/C Ratio	0.46	0.37		0.44	0.39		0.46	0.46		0.45	0.45	
v/c Ratio	0.38	0.50		0.43	0.87		0.11	0.57		0.26	0.30	
Control Delay	43.2	33.7		20.9	40.2		17.2	24.7		29.6	25.6	
Queue Delay	0.0	0.2		0.0	0.0		0.0	6.6		0.0	0.0	
Total Delay	43.2	33.9		20.9	40.2		17.2	31.3		29.6	25.6	
LOS	D	C		C	D		B	C		C	C	
Approach Delay		34.8			38.2			29.9			26.5	
Approach LOS		C			D			C			C	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0.5 (0%), Referenced to phase 4:SBTL and 8:NBTL, Start of Yellow

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 34.6

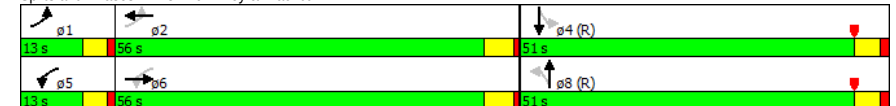
Intersection LOS: C

Intersection Capacity Utilization 75.0%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 13: McKinney & Blackburn



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings2035 Conversion - AM Peak Hour
14: Cole & Blackburn

	←	→	↙	↘	←	↙	↘	↗	↖	↗	↖	↘	↗
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↙	↕	↘	↙	↕	↘	↙	↕	↘	↙	↕	↘	
Volume (vph)	30	457	52	274	632	81	22	158	57	134	423	64	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	150		0	0		0	0		0	150		0	
Storage Lanes	1		0	1		0	0		0	1		0	
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.984			0.954			0.968			0.974		
Flt Protected	0.950			0.950				0.995		0.950			
Satd. Flow (prot)	1770	3483	0	1770	3376	0	0	1794	0	1770	1814	0	
Flt Permitted	0.211			0.175				0.925		0.563			
Satd. Flow (perm)	393	3483	0	326	3376	0	0	1668	0	1049	1814	0	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)		11			82			14			11		
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		216			419			877			400		
Travel Time (s)		4.9			9.5			19.9			9.1		
Peak Hour Factor	1.00	0.94	0.89	0.92	0.87	0.25	1.00	1.00	1.00	0.79	0.94	0.68	
Adj. Flow (vph)	30	486	58	298	726	324	22	158	57	170	450	94	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	30	544	0	298	1050	0	0	237	0	170	544	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)		12			12			12			12		
Link Offset(ft)		0			0			0			0		
Crosswalk Width(ft)		16			16			16			16		
Two way Left Turn Lane													
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15		9	15		9	15		9	15		9	
Number of Detectors	1	1		1	1		1	1		1	1		
Detector Template													
Leading Detector (ft)	50	50		50	50		50	50		50	50		
Trailing Detector (ft)	0	0		0	0		0	0		0	0		
Detector 1 Position(ft)	0	0		0	0		0	0		0	0		
Detector 1 Size(ft)	50	50		50	50		50	50		50	50		
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		
Detector 1 Channel													
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Turn Type	Perm	NA		D,P+P	NA		Perm	NA		D,P+P	NA		
Protected Phases		6		5	2			8		7	4		
Permitted Phases		6		6				8		8			
Detector Phase		6		5	2			8		8			
Switch Phase													
Minimum Initial (s)	6.0	6.0		3.0	6.0		4.0	4.0		4.0	10.0		
Minimum Split (s)	20.0	20.0		13.0	20.0		21.5	21.5		13.0	33.5		
Total Split (s)	37.0	37.0		25.0	62.0		45.0	45.0		13.0	58.0		
Total Split (%)	30.8%	30.8%		20.8%	51.7%		37.5%	37.5%		10.8%	48.3%		

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - AM Peak Hour

Synchro 8 Report
Page 25McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings2035 Conversion - AM Peak Hour
14: Cole & Blackburn

	←	→	↙	↘	←	↙	↘	↗	↖	↗	↖	↘	↗
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Maximum Green (s)	32.0	32.0		20.0	57.0		39.5	39.5		8.0	52.5		
Yellow Time (s)	4.0	4.0		3.0	4.0		4.0	4.0		3.0	4.0		
All-Red Time (s)	1.0	1.0		2.0	1.0		1.5	1.5		2.0	1.5		
Lost Time Adjust (s)	0.0	-1.0		-1.0	-1.0		0.0	0.0		-1.5	-1.5		
Total Lost Time (s)	5.0	4.0		4.0	4.0		5.5	5.5		3.5	4.0		
Lead/Lag	Lag	Lag		Lead			Lead	Lead		Lag			
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes			
Vehicle Extension (s)	1.5	1.5		2.0	1.5		3.0	3.0		3.0	2.0		
Recall Mode	Min	Min		Min	Min		C-Max	C-Max		None	C-Max		
Walk Time (s)	7.0	7.0		7.0			5.0	5.0			7.0		
Flash Dont Walk (s)	8.0	8.0		8.0			11.0	11.0			21.0		
Pedestrian Calls (#/hr)	0	0		0			0	0			0		
Act Effect Green (s)	22.4	23.4		42.8	46.8		50.7			62.2	65.2		
Actuated g/C Ratio	0.19	0.20		0.36	0.39		0.42			0.52	0.54		
v/c Ratio	0.41	0.79		0.85	0.77		0.33			0.28	0.55		
Control Delay	59.0	53.5		60.9	15.1		26.0			20.0	24.2		
Queue Delay	0.0	0.1		5.4	0.3		0.0			0.0	0.0		
Total Delay	59.0	53.6		66.3	15.4		26.0			20.0	24.2		
LOS	E	D		E	B		C			C	C		
Approach Delay		53.9			26.6		26.0				23.2		
Approach LOS		D			C		C				C		

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 118.5 (99%), Referenced to phase 4:SBT and 8:NBSB, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 31.2

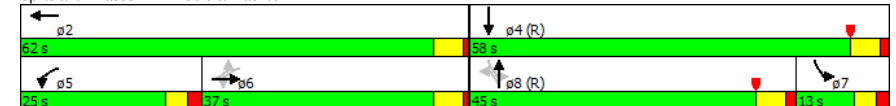
Intersection LOS: C

Intersection Capacity Utilization 83.2%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 14: Cole & Blackburn



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - AM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2035 Conversion - AM Peak Hour

Lanes, Volumes, Timings

25: Cole & Fitzhugh

	←	→	↖	↗	←	↖	↗	↑	↖	↗	↓	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↖ ↗		↖ ↗	↖ ↗		↖ ↗	↖ ↗		↖ ↗	↖ ↗	
Volume (vph)	38	760	30	105	1284	63	40	103	44	30	281	173
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	162		0	150		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993			0.994			0.955			0.940	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5050	0	1770	5055	0	1770	1779	0	1770	1751	0
Flt Permitted	0.204			0.270			0.208			0.663		
Satd. Flow (perm)	380	5050	0	503	5055	0	387	1779	0	1235	1751	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			15			40			18	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		231			469			802			1956	
Travel Time (s)		5.3			10.7			18.2			44.5	
Peak Hour Factor	1.00	0.98	0.76	0.86	0.88	1.00	1.00	1.00	1.00	0.73	0.95	0.88
Adj. Flow (vph)	38	776	39	122	1459	63	40	103	44	41	296	197
Shared Lane Traffic (%)												
Lane Group Flow (vph)	38	815	0	122	1522	0	40	147	0	41	493	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		D,P+P	NA		Perm	NA		Perm	NA	
Protected Phases		6		5	2			8			4	
Permitted Phases		6		6			8			4		
Detector Phase		6		5	2		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		4.0	10.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		13.0	27.0		21.0	21.0		27.0	27.0	
Total Split (s)	20.0	20.0		13.0	33.0		27.0	27.0		27.0	27.0	
Total Split (%)	33.3%	33.3%		21.7%	55.0%		45.0%	45.0%		45.0%	45.0%	

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - AM Peak Hour

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McKinney - Cole Uptown Evaluation

2035 Conversion - AM Peak Hour

Lanes, Volumes, Timings

25: Cole & Fitzhugh

	←	→	↖	↗	←	↖	↗	↑	↖	↗	↓	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)	15.0	15.0		8.0	28.0		22.0	22.0		22.0	22.0	
Yellow Time (s)	3.6	3.6		3.6	3.6		3.6	3.6		3.6	3.6	
All-Red Time (s)	1.4	1.4		1.4	1.4		1.4	1.4		1.4	1.4	
Lost Time Adjust (s)	0.0	-1.0		-1.0	-1.0		0.0	0.0		-1.0	-1.0	
Total Lost Time (s)	5.0	4.0		4.0	4.0		5.0	5.0		4.0	4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	2.0	2.0		3.0	2.0		3.0	3.0		2.0	2.0	
Recall Mode	C-Max	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)	5.0	5.0			6.0		5.0	5.0		6.0	6.0	
Flash Dont Walk (s)	10.0	10.0			16.0		11.0	11.0		16.0	16.0	
Pedestrian Calls (#/hr)	0	0		0			0	0		0	0	
Act Effect Green (s)	20.7	21.7		28.5	31.7		19.3	19.3		20.3	20.3	
Actuated g/C Ratio	0.34	0.36		0.48	0.53		0.32	0.32		0.34	0.34	
v/c Ratio	0.29	0.45		0.30	0.57		0.32	0.25		0.10	0.82	
Control Delay	26.7	17.3		7.7	6.7		23.6	12.8		12.1	27.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	26.7	17.3		7.7	6.7		23.6	12.8		12.1	27.5	
LOS	C	B		A	A		C	B		B	C	
Approach Delay		17.7			6.8			15.1			26.3	
Approach LOS		B			A			B			C	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBWB, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 13.4

Intersection LOS: B

Intersection Capacity Utilization 78.2%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 25: Cole & Fitzhugh



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - AM Peak Hour

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McKinney - Cole Uptown Evaluation

2035 Conversion - AM Peak Hour

28: McKinney & Knox

Lanes, Volumes, Timings

	←	→	↙	↘	←	↙	↘	↗	↖	↗	↖	↘	↗
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↔			↔		↔	↔	↔	↔	↔		
Volume (vph)	21	460	20	75	713	45	36	168	145	32	109	27	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		0	0		0	150		50	150		0	
Storage Lanes	0		0	0		0	1		1	1		0	
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.995			0.991				0.850		0.970		
Flt Protected		0.998			0.991		0.950			0.950			
Satd. Flow (prot)	0	3514	0	0	3476	0	1770	1863	1583	1770	1807	0	
Flt Permitted		0.896			0.721		0.670			0.561			
Satd. Flow (perm)	0	3155	0	0	2529	0	1248	1863	1583	1045	1807	0	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)		10			17				153		21		
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		461			315			685			1670		
Travel Time (s)		10.5			7.2			15.6			38.0		
Peak Hour Factor	0.86	0.90	1.00	0.38	0.92	0.74	0.79	0.78	0.95	1.00	1.00	1.00	
Adj. Flow (vph)	24	511	20	197	775	61	46	215	153	32	109	27	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	555	0	0	1033	0	46	215	153	32	136	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)		0			0			12			12		
Link Offset(ft)		0			0			0			0		
Crosswalk Width(ft)		16			16			16			16		
Two way Left Turn Lane													
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15		9	15		9	15		9	15		9	
Number of Detectors	1	1		1	1		1	1	1	1	1		
Detector Template													
Leading Detector (ft)	50	50		50	50		50	50	50	50	50		
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0		
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0		
Detector 1 Size(ft)	50	50		50	50		50	50	50	50	50		
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		
Detector 1 Channel													
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA		
Protected Phases		6			2			4			8		
Permitted Phases		6			2			4			8		
Detector Phase		6			2			4			8		
Switch Phase													
Minimum Initial (s)	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0		
Minimum Split (s)	17.0	17.0		17.0	17.0		17.0	17.0	17.0	17.0	17.0		
Total Split (s)	38.0	38.0		38.0	38.0		22.0	22.0	22.0	22.0	22.0		
Total Split (%)	63.3%	63.3%		63.3%	63.3%		36.7%	36.7%	36.7%	36.7%	36.7%		

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - AM Peak Hour

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McKinney - Cole Uptown Evaluation

2035 Conversion - AM Peak Hour

28: McKinney & Knox

Lanes, Volumes, Timings

	←	→	↙	↘	←	↙	↘	↗	↖	↗	↖	↘	↗
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Maximum Green (s)	33.0	33.0		33.0	33.0		17.0	17.0	17.0	17.0	17.0		
Yellow Time (s)	3.4	3.4		3.4	3.4		3.4	3.4	3.4	3.4	3.4		
All-Red Time (s)	1.6	1.6		1.6	1.6		1.6	1.6	1.6	1.6	1.6		
Lost Time Adjust (s)		-1.0			-1.0		-1.0	-1.0	0.0	0.0	0.0		
Total Lost Time (s)		4.0			4.0		4.0	4.0	5.0	5.0	5.0		
Lead/Lag													
Lead-Lag Optimize?													
Vehicle Extension (s)	1.5	1.5		1.5	1.5		3.0	3.0	3.0	1.5	1.5		
Recall Mode	C-Max	C-Max		Max	Max		Max	Max	Max	Max	Max		
Walk Time (s)	6.0	6.0		6.0	6.0		4.0	4.0	4.0	6.0	6.0		
Flash Dont Walk (s)	6.0	6.0		6.0	6.0		8.0	8.0	8.0	6.0	6.0		
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0		
Act Effect Green (s)		34.0			34.0		18.0	18.0	17.0	17.0	17.0		
Actuated g/C Ratio		0.57			0.57		0.30	0.30	0.28	0.28	0.28		
v/c Ratio		0.31			0.72		0.12	0.39	0.27	0.11	0.26		
Control Delay		5.9			12.9		14.3	16.2	3.4	17.2	15.6		
Queue Delay		0.0			0.0		0.0	0.0	0.0	0.0	0.0		
Total Delay		5.9			12.9		14.3	16.2	3.4	17.2	15.6		
LOS		A			B		B	B	A	B	B		
Approach Delay		5.9			12.9		11.3				15.9		
Approach LOS		A			B		B				B		

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 6:EBTL, Start of Yellow

Natural Cycle: 45

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 11.0

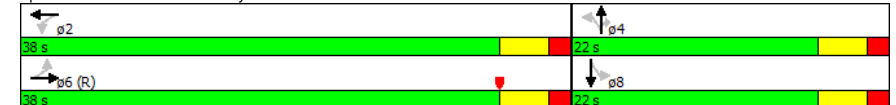
Intersection LOS: B

Intersection Capacity Utilization 71.4%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 28: McKinney & Knox



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - AM Peak Hour

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McKinney - Cole Uptown Evaluation

2035 Conversion - AM Peak Hour

Lanes, Volumes, Timings

29: Cole & Knox

	←	→	↙	↘	←	↙	↘	→	↙	↘	→	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔		↔	↔		↔	↔	
Volume (vph)	11	364	41	150	603	22	19	84	73	64	220	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	150		0	150		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.985			0.996			0.930			0.969	
Flt Protected		0.995			0.989		0.950			0.950		
Satd. Flow (prot)	0	3469	0	0	3486	0	1770	1732	0	1770	1805	0
Flt Permitted		0.844			0.740		0.413			0.657		
Satd. Flow (perm)	0	2942	0	0	2609	0	769	1732	0	1224	1805	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21			7			73			23	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		239			461			672			1685	
Travel Time (s)		5.4			10.5			15.3			38.3	
Peak Hour Factor	0.25	0.95	0.88	0.83	0.96	1.00	1.00	1.00	1.00	0.77	0.87	0.81
Adj. Flow (vph)	44	383	47	181	628	22	19	84	73	83	253	67
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	474	0	0	831	0	19	157	0	83	320	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		D,P+P	NA		Perm	NA		Perm	NA	
Protected Phases		6			5			8			4	
Permitted Phases		6			6			8			4	
Detector Phase		6			5			8			4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	19.0	19.0		13.0	19.0		21.0	21.0		19.0	19.0	
Total Split (s)	24.0	24.0		13.0	37.0		23.0	23.0		23.0	23.0	
Total Split (%)	40.0%	40.0%		21.7%	61.7%		38.3%	38.3%		38.3%	38.3%	

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McKinney - Cole Uptown Evaluation

2035 Conversion - AM Peak Hour

Lanes, Volumes, Timings

29: Cole & Knox

	←	→	↙	↘	←	↙	↘	→	↙	↘	→	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)	19.0	19.0		8.0	32.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.5	3.5		3.0	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		2.0	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		-1.0			-1.0		0.0	0.0		-1.0	-1.0	
Total Lost Time (s)		4.0			4.0		5.0	5.0		4.0	4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0		2.0	2.0	
Recall Mode	Max	Max		None	C-Max		None	None		Max	Max	
Walk Time (s)	4.0	4.0			8.0		5.0	5.0		4.0	4.0	
Flash Dont Walk (s)	10.0	10.0			6.0		11.0	11.0		10.0	10.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		33.0			33.0		18.0	18.0		19.0	19.0	
Actuated g/C Ratio		0.55			0.55		0.30	0.30		0.32	0.32	
v/c Ratio		0.29			0.58		0.08	0.28		0.21	0.55	
Control Delay		7.5			6.6		14.3	9.0		16.9	19.8	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		7.5			6.6		14.3	9.0		16.9	19.8	
LOS		A			A		B	A		B	B	
Approach Delay		7.5			6.6			9.6			19.2	
Approach LOS		A			A			A			B	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:WBT, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.58

Intersection Signal Delay: 9.8

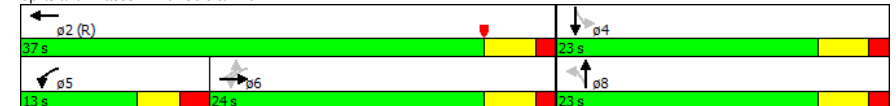
Intersection LOS: A

Intersection Capacity Utilization 65.8%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 29: Cole & Knox



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - AM Peak Hour

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McKinney - Cole Uptown Evaluation
HCM 2010 AWSC

2035 Conversion - AM Peak Hour
3: Carlisle & Allen

Intersection						
Intersection Delay, s/veh	16.1					
Intersection LOS	C					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	25	214	24	50	421	208
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	233	26	54	458	226
Number of Lanes	1	0	1	0	1	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	2	1	0
HCM Control Delay	11.1	8.8	18.9
HCM LOS	B	A	C

Lane	NBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	0%	10%	100%	0%
Vol Thru, %	32%	0%	0%	100%
Vol Right, %	68%	90%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	74	239	421	208
LT Vol	24	0	0	208
Through Vol	50	214	0	0
RT Vol	0	25	421	0
Lane Flow Rate	80	260	458	226
Geometry Grp	5	2	7	7
Degree of Util (X)	0.115	0.368	0.733	0.331
Departure Headway (Hd)	5.163	5.097	5.768	5.264
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	698	701	622	676
Service Time	3.163	3.158	3.561	3.057
HCM Lane V/C Ratio	0.115	0.371	0.736	0.334
HCM Control Delay	8.8	11.1	22.9	10.7
HCM Lane LOS	A	B	C	B
HCM 95th-tile Q	0.4	1.7	6.3	1.4

Notes

~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined

McKinney - Cole Uptown Evaluation
HCM 2010 AWSC

2035 Conversion - AM Peak Hour
30: McKinney & Monticello

Intersection												
Intersection Delay, s/veh	15.7											
Intersection LOS	C											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	32	35	17	84	221	151	27	211	41	31	49	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	35	38	18	91	240	164	29	229	45	34	53	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.9	19	13.6	10.3
HCM LOS	A	C	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	38%	18%	39%
Vol Thru, %	76%	42%	48%	61%
Vol Right, %	15%	20%	33%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	279	84	456	80
LT Vol	211	35	221	49
Through Vol	41	17	151	0
RT Vol	27	32	84	31
Lane Flow Rate	303	91	496	87
Geometry Grp	1	1	1	1
Degree of Util (X)	0.471	0.147	0.698	0.149
Departure Headway (Hd)	5.596	5.812	5.07	6.149
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	643	614	714	581
Service Time	3.644	3.872	3.109	4.212
HCM Lane V/C Ratio	0.471	0.148	0.695	0.15
HCM Control Delay	13.6	9.9	19	10.3
HCM Lane LOS	B	A	C	B
HCM 95th-tile Q	2.5	0.5	5.7	0.5

Notes

~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Conversion - AM Peak Hour
15: McKinney & Haskell

	EBL	EBR	NBL	NBT	SBT	SBR
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Left	Right	Left	Left	Left	Right
Volume (veh/h)	0	0	140	415	255	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	152	451	277	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				368		
pX, platoon unblocked	0.84					
vC, conflicting volume	1033	277	277			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	947	277	277			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	88			
cM capacity (veh/h)	216	762	1286			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	0	603	277			
Volume Left	0	152	0			
Volume Right	0	0	0			
cSH	1700	1286	1700			
Volume to Capacity	0.00	0.12	0.16			
Queue Length 95th (ft)	0	10	0			
Control Delay (s)	0.0	3.0	0.0			
Lane LOS	A	A				
Approach Delay (s)	0.0	3.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay		2.1				
Intersection Capacity Utilization		49.7%		ICU Level of Service	A	
Analysis Period (min)		15				

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Conversion - AM Peak Hour
16: Cole & Haskell

	WBL	WBR	NBT	NBR	SBL	SBT
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Left	Right	Left	Left	Left	Left
Volume (veh/h)	112	56	208	70	0	513
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	122	61	226	76	0	558
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (ft)			400			
pX, platoon unblocked						
vC, conflicting volume	822	264			302	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	822	264			302	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	65	92			100	
cM capacity (veh/h)	344	775			1259	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	183	302	558			
Volume Left	122	0	0			
Volume Right	61	76	0			
cSH	422	1700	1259			
Volume to Capacity	0.43	0.18	0.00			
Queue Length 95th (ft)	53	0	0			
Control Delay (s)	19.9	0.0	0.0			
Lane LOS	C					
Approach Delay (s)	19.9	0.0	0.0			
Approach LOS	C					
Intersection Summary						
Average Delay		3.5				
Intersection Capacity Utilization		43.3%		ICU Level of Service	A	
Analysis Period (min)		15				

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Conversion - AM Peak Hour
17: Cole & Haskell EB

	EBL	EBR	NBL	NBT	SBT	SBR
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Left	Thru	Thru	Left	Left	Thru
Volume (veh/h)	13	27	2	264	513	6
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	14	29	2	287	558	7
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				528		
pX, platoon unblocked						
vC, conflicting volume	852	561	564			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	852	561	564			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	96	94	100			
cM capacity (veh/h)	329	527	1007			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	43	289	564			
Volume Left	14	2	0			
Volume Right	29	0	7			
cSH	441	1007	1700			
Volume to Capacity	0.10	0.00	0.33			
Queue Length 95th (ft)	8	0	0			
Control Delay (s)	14.1	0.1	0.0			
Lane LOS	B	A				
Approach Delay (s)	14.1	0.1	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay			0.7			
Intersection Capacity Utilization			37.4%		ICU Level of Service	A
Analysis Period (min)			15			

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Conversion - AM Peak Hour
18: McKinney & North Dallas High School

	EBL	EBR	NBL	NBT	SBT	SBR
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Left	Thru	Thru	Left	Left	Thru
Volume (veh/h)	3	1	29	435	253	11
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	1	32	473	275	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				978		
pX, platoon unblocked						
vC, conflicting volume	817	281	287			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	817	281	287			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	100	98			
cM capacity (veh/h)	338	758	1275			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	4	504	287			
Volume Left	3	32	0			
Volume Right	1	0	12			
cSH	392	1275	1700			
Volume to Capacity	0.01	0.02	0.17			
Queue Length 95th (ft)	1	2	0			
Control Delay (s)	14.3	0.7	0.0			
Lane LOS	B	A				
Approach Delay (s)	14.3	0.7	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay			0.6			
Intersection Capacity Utilization			51.8%		ICU Level of Service	A
Analysis Period (min)			15			

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Conversion - AM Peak Hour
19: Cole & North Dallas High School

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	9	4	218	14	22	508
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	4	237	15	24	552
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)			816			
pX, platoon unblocked						
vC, conflicting volume	845	245			252	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	845	245			252	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	99			98	
cM capacity (veh/h)	327	794			1313	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	14	252	576			
Volume Left	10	0	24			
Volume Right	4	15	0			
cSH	400	1700	1313			
Volume to Capacity	0.04	0.15	0.02			
Queue Length 95th (ft)	3	0	1			
Control Delay (s)	14.3	0.0	0.5			
Lane LOS	B		A			
Approach Delay (s)	14.3	0.0	0.5			
Approach LOS	B					
Intersection Summary						
Average Delay			0.6			
Intersection Capacity Utilization			53.6%	ICU Level of Service		A
Analysis Period (min)			15			

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Conversion - AM Peak Hour
20: McKinney & Cambrick

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	1	1	2	442	243	1
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	1	2	480	264	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	749	265	265			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	749	265	265			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	379	774	1299			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	2	483	265			
Volume Left	1	2	0			
Volume Right	1	0	1			
cSH	508	1299	1700			
Volume to Capacity	0.00	0.00	0.16			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	12.1	0.1	0.0			
Lane LOS	B	A				
Approach Delay (s)	12.1	0.1	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			34.9%	ICU Level of Service		A
Analysis Period (min)			15			

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Conversion - AM Peak Hour
21: Cole & Cambrick

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	0	19	0	0	0	3	221	0	0	487	8
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	0	21	0	0	0	3	240	0	0	529	9
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)								1239				
pX, platoon unblocked												
vC, conflicting volume	780	780	534	801	785	240	538			240		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	780	780	534	801	785	240	538			240		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	100	96	100	100	100	100			100		
cM capacity (veh/h)	312	326	546	290	324	799	1030			1326		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	32	0	243	538								
Volume Left	11	0	3	0								
Volume Right	21	0	0	9								
cSH	434	1700	1030	1326								
Volume to Capacity	0.07	0.00	0.00	0.00								
Queue Length 95th (ft)	6	0	0	0								
Control Delay (s)	13.9	0.0	0.1	0.0								
Lane LOS	B	A	A									
Approach Delay (s)	13.9	0.0	0.1	0.0								
Approach LOS	B	A										
Intersection Summary												
Average Delay				0.6								
Intersection Capacity Utilization				36.1%			ICU Level of Service		A			
Analysis Period (min)				15								

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Conversion - AM Peak Hour
22: McKinney & Elizabeth

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	34	32	12	22	17	13	24	355	43	19	211	2
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	37	35	13	24	18	14	26	386	47	21	229	2
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)											837	
pX, platoon unblocked												
vC, conflicting volume	757	757	230	764	734	409	232			433		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	757	757	230	764	734	409	232			433		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	87	89	98	92	94	98	98			98		
cM capacity (veh/h)	295	324	809	282	334	642	1336			1127		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	85	57	459	252								
Volume Left	37	24	26	21								
Volume Right	13	14	47	2								
cSH	341	348	1336	1127								
Volume to Capacity	0.25	0.16	0.02	0.02								
Queue Length 95th (ft)	24	14	1	1								
Control Delay (s)	19.0	17.3	0.6	0.8								
Lane LOS	C	C	A	A								
Approach Delay (s)	19.0	17.3	0.6	0.8								
Approach LOS	C	C										
Intersection Summary												
Average Delay				3.6								
Intersection Capacity Utilization				39.6%			ICU Level of Service		A			
Analysis Period (min)				15								

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Conversion - AM Peak Hour
23: Cole & Elizabeth

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	17	20	23	45	7	7	12	177	22	36	422	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	18	22	25	49	8	8	13	192	24	39	459	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)											802	
pX, platoon unblocked												
vC, conflicting volume	780	781	460	805	771	204	462			216		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	780	781	460	805	771	204	462			216		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	94	93	96	82	98	99	99			97		
cM capacity (veh/h)	295	313	601	265	317	836	1099			1353		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	65	64	229	501								
Volume Left	18	49	13	39								
Volume Right	25	8	24	3								
cSH	375	294	1099	1353								
Volume to Capacity	0.17	0.22	0.01	0.03								
Queue Length 95th (ft)	16	20	1	2								
Control Delay (s)	16.6	20.6	0.6	0.9								
Lane LOS	C	C	A	A								
Approach Delay (s)	16.6	20.6	0.6	0.9								
Approach LOS	C	C										
Intersection Summary												
Average Delay			3.5									
Intersection Capacity Utilization			48.3%		ICU Level of Service			A				
Analysis Period (min)			15									

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Conversion - AM Peak Hour
26: McKinney & Armstrong

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	21	45	2	9	70	14	39	331	8	21	189	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	23	49	2	10	76	15	42	360	9	23	205	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)											685	
pX, platoon unblocked												
vC, conflicting volume	755	706	207	728	703	364	209			368		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	755	706	207	728	703	364	209			368		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	91	86	100	97	78	98	97			98		
cM capacity (veh/h)	254	343	833	290	344	681	1362			1190		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	74	101	411	232								
Volume Left	23	10	42	23								
Volume Right	2	15	9	3								
cSH	314	364	1362	1190								
Volume to Capacity	0.24	0.28	0.03	0.02								
Queue Length 95th (ft)	22	28	2	1								
Control Delay (s)	19.9	18.6	1.1	1.0								
Lane LOS	C	C	A	A								
Approach Delay (s)	19.9	18.6	1.1	1.0								
Approach LOS	C	C										
Intersection Summary												
Average Delay			4.9									
Intersection Capacity Utilization			41.8%		ICU Level of Service			A				
Analysis Period (min)			15									

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Conversion - AM Peak Hour
27: Cole & Armstrong

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	11	22	6	17	88	7	20	166	4	42	380	7
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	12	24	7	18	96	8	22	180	4	46	413	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)											672	
pX, platoon unblocked	0.97	0.97	0.97	0.97	0.97		0.97					
vC, conflicting volume	790	736	417	753	738	183	421			185		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	767	712	383	729	714	183	387			185		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	93	99	94	71	99	98			97		
cM capacity (veh/h)	228	329	644	295	328	860	1136			1390		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	42	122	207	466								
Volume Left	12	18	22	46								
Volume Right	7	8	4	8								
cSH	314	335	1136	1390								
Volume to Capacity	0.14	0.36	0.02	0.03								
Queue Length 95th (ft)	12	40	1	3								
Control Delay (s)	18.3	21.7	1.0	1.1								
Lane LOS	C	C	A	A								
Approach Delay (s)	18.3	21.7	1.0	1.1								
Approach LOS	C	C										
Intersection Summary												
Average Delay			4.9									
Intersection Capacity Utilization			43.0%		ICU Level of Service		A					
Analysis Period (min)			15									

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Conversion - AM Peak Hour
31: Cole & Monticello

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	167	0	76	0	119	21	63	97	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	182	0	83	0	129	23	68	105	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	466	395	105	383	383	141	105			152		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	466	395	105	383	383	141	105			152		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	67	100	91	100			95		
cM capacity (veh/h)	444	516	949	554	524	907	1486			1429		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	0	264	152	174								
Volume Left	0	182	0	68								
Volume Right	0	83	23	0								
cSH	1700	631	1486	1429								
Volume to Capacity	0.00	0.42	0.00	0.05								
Queue Length 95th (ft)	0	52	0	4								
Control Delay (s)	0.0	14.8	0.0	3.2								
Lane LOS	A	B		A								
Approach Delay (s)	0.0	14.8	0.0	3.2								
Approach LOS	A	B										
Intersection Summary												
Average Delay				7.6								
Intersection Capacity Utilization			40.0%		ICU Level of Service				A			
Analysis Period (min)			15									

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Conversion - AM Peak Hour
32: McKinney & Harvard

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement												
Lane Configurations		↔			↔			↔	↔		↔	
Volume (veh/h)	2	0	1	36	0	74	1	328	70	35	73	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	0	1	39	0	80	1	357	76	38	79	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None				None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	595	514	79	515	514	357	79			357		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	595	514	79	515	514	357	79			357		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	100	91	100	88	100			97		
cM capacity (veh/h)	359	449	981	458	449	688	1519			1202		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1							
Volume Total	3	120	358	76	117							
Volume Left	2	39	1	0	38							
Volume Right	1	80	0	76	0							
cSH	455	591	1519	1700	1202							
Volume to Capacity	0.01	0.20	0.00	0.04	0.03							
Queue Length 95th (ft)	1	19	0	0	2							
Control Delay (s)	13.0	12.6	0.0	0.0	2.8							
Lane LOS	B	B	A		A							
Approach Delay (s)	13.0	12.6	0.0		2.8							
Approach LOS	B	B										
Intersection Summary												
Average Delay			2.8									
Intersection Capacity Utilization			39.7%			ICU Level of Service		A				
Analysis Period (min)			15									

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Conversion - AM Peak Hour
33: Cole & Harvard

	EBT	EBR	WBL	WBT	NBL	NBR
Movement						
Lane Configurations	↔			↔	↔	
Volume (veh/h)	73	146	130	274	165	35
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	79	159	141	298	179	38
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			79		739	159
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			79		739	159
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			91		49	96
cM capacity (veh/h)			1519		349	887
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	238	439	217			
Volume Left	0	141	179			
Volume Right	159	0	38			
cSH	1700	1519	390			
Volume to Capacity	0.14	0.09	0.56			
Queue Length 95th (ft)	0	8	82			
Control Delay (s)	0.0	3.0	25.2			
Lane LOS		A	D			
Approach Delay (s)	0.0	3.0	25.2			
Approach LOS			D			
Intersection Summary						
Average Delay			7.6			
Intersection Capacity Utilization			55.7%		ICU Level of Service	B
Analysis Period (min)			15			

McKinney - Cole Uptown Evaluation

2035 Conversion - PM Peak Hour

Lanes, Volumes, Timings

1: McKinney & Allen/Oak Grove

	↖	→	↗	↖	←	↖	↖	↑	↗	↗	↓	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖		↖	↖		↖	↖		↖	↖	
Volume (vph)	126	74	351	137	69	31	308	619	134	38	176	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	150		137	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt		0.876			0.950			0.973				
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1632	0	1770	1770	0	1770	3444	0	1770	1863	0
Flt Permitted	0.652			0.148			0.509			0.241		
Satd. Flow (perm)	1215	1632	0	276	1770	0	948	3444	0	449	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		211			23			28				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		321			339			167			848	
Travel Time (s)		7.3			7.7			3.8			19.3	
Peak Hour Factor	0.92	0.92	0.92	0.90	0.92	0.83	0.92	0.91	0.92	0.89	0.77	0.92
Adj. Flow (vph)	137	80	382	152	75	37	335	680	146	43	229	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	137	462	0	152	112	0	335	826	0	43	229	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			-12			12	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	1		1	1	
Detector Template	Left	Thru			Thru		Left					
Leading Detector (ft)	20	100		50	100		20	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		50	6		20	50		50	50	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		CI+Ex			CI+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	D,P+P	NA		D,P+P	NA		D,P+P	NA		Perm	NA	
Protected Phases	7	4		3	8		1	6			2	
Permitted Phases	8			4			2			2		
Detector Phase	7	4		3	8		1	6		2	2	

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McKinney - Cole Uptown Evaluation

2035 Conversion - PM Peak Hour

Lanes, Volumes, Timings

1: McKinney & Allen/Oak Grove

	↖	→	↗	↖	←	↖	↖	↑	↗	↗	↓	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	10.0		10.0	10.0	
Minimum Split (s)	13.0	21.5		13.0	20.5		13.0	20.5		20.5	20.5	
Total Split (s)	13.0	44.0		16.0	47.0		25.0	60.0		35.0	35.0	
Total Split (%)	10.8%	36.7%		13.3%	39.2%		20.8%	50.0%		29.2%	29.2%	
Maximum Green (s)	7.5	38.5		10.5	42.5		19.5	54.5		29.5	29.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.5	1.5		1.5	0.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		-0.5	0.0		0.0	-1.5		-1.0	-1.5	
Total Lost Time (s)	5.5	5.5		5.0	4.5		5.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag					Lead	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	2.0		2.0	2.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Walk Time (s)		5.0			5.0			5.0		5.0	5.0	
Flash Dont Walk (s)		11.0			11.0			8.0		8.0	8.0	
Pedestrian Calls (#/hr)		0			0			0		0	0	
Act Effct Green (s)	36.8	26.6		37.8	30.3		61.2	68.2		42.7	43.2	
Actuated g/C Ratio	0.31	0.22		0.32	0.25		0.51	0.57		0.36	0.36	
v/c Ratio	0.34	0.88		0.69	0.24		0.54	0.42		0.27	0.34	
Control Delay	27.9	41.7		42.1	26.7		26.0	16.4		32.8	27.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	27.9	41.7		42.1	26.7		26.0	16.4		32.8	27.2	
LOS	C	D		D	C		C	B		C	C	
Approach Delay		38.5			35.6			19.2			28.1	
Approach LOS		D			D			B			C	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBSB and 6:NBT, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 27.2

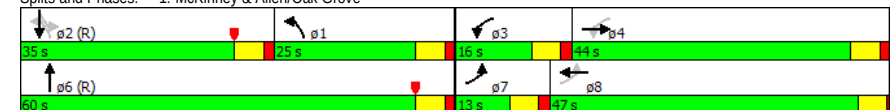
Intersection LOS: C

Intersection Capacity Utilization 78.3%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 1: McKinney & Allen/Oak Grove



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2035 Conversion - PM Peak Hour

4: McKinney & Bowen

Lanes, Volumes, Timings

	↖	→	↗	↖	←	↖	↖	↑	↗	↗	↓	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	116	230	54	15	97	41	52	659	12	13	199	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Frt		0.984			0.958			0.997			0.991	
Flt Protected		0.984			0.996			0.995			0.997	
Satd. Flow (prot)	0	1804	0	0	1777	0	0	3511	0	0	1840	0
Flt Permitted		0.836			0.962			0.903			0.948	
Satd. Flow (perm)	0	1532	0	0	1717	0	0	3186	0	0	1750	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			51			4			7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		229			304			848			502	
Travel Time (s)		5.2			6.9			19.3			11.4	
Peak Hour Factor	0.79	0.88	1.00	1.00	0.81	0.67	0.71	0.92	0.68	1.00	1.00	1.00
Adj. Flow (vph)	147	261	54	15	120	61	73	716	18	13	199	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	462	0	0	196	0	0	807	0	0	227	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		2	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	15.2	15.2		15.2	15.2		15.2	15.2		15.2	15.2	
Total Split (s)	32.0	32.0		32.0	32.0		28.0	28.0		28.0	28.0	
Total Split (%)	53.3%	53.3%		53.3%	53.3%		46.7%	46.7%		46.7%	46.7%	
Maximum Green (s)	27.8	27.8		27.8	27.8		23.8	23.8		23.8	23.8	
Yellow Time (s)	3.2	3.2		3.2	3.2		3.2	3.2		3.2	3.2	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	

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2035 Conversion - PM Peak Hour

4: McKinney & Bowen

Lanes, Volumes, Timings

	↖	→	↗	↖	←	↖	↖	↑	↗	↗	↓	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-0.2			-0.2			-0.2				0.0
Total Lost Time (s)		4.0			4.0			4.0				4.2
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	2.5		2.5	2.5		4.0	4.0		4.0	4.0	
Recall Mode	Max	Max		Max	Max		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Flash Dont Walk (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)		28.0			28.0			24.0			23.8	
Actuated g/C Ratio		0.47			0.47			0.40			0.40	
v/c Ratio		0.64			0.24			0.63			0.33	
Control Delay		7.7			7.9			13.3			7.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		7.7			7.9			13.3			7.3	
LOS		A			A			B			A	
Approach Delay		7.7			7.9			13.3			7.3	
Approach LOS		A			A			B			A	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 10 (17%), Referenced to phase 2:NBSB, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.64

Intersection Signal Delay: 10.3

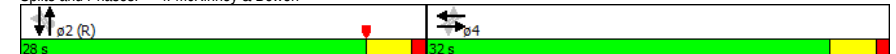
Intersection LOS: B

Intersection Capacity Utilization 71.0%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 4: McKinney & Bowen



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2035 Conversion - PM Peak Hour

Lanes, Volumes, Timings

5: Carlisle & Bowen

	↖	→	↗	↖	←	↖	↖	↑	↗	↗	↓	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Volume (vph)	57	367	107	30	115	20	25	328	6	28	400	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.968			0.985			0.998			0.988	
Flt Protected		0.995			0.988			0.997			0.996	
Satd. Flow (prot)	0	3409	0	0	3444	0	0	1853	0	0	3483	0
Flt Permitted		0.901			0.733			0.950			0.910	
Satd. Flow (perm)	0	3087	0	0	2555	0	0	1766	0	0	3182	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		66			20			2			21	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		361			568			386			483	
Travel Time (s)		8.2			12.9			8.8			11.0	
Peak Hour Factor	1.00	0.91	0.85	0.60	0.86	1.00	1.00	1.00	1.00	0.65	0.84	0.70
Adj. Flow (vph)	57	403	126	50	134	20	25	328	6	43	476	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	586	0	0	204	0	0	359	0	0	563	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		2	2	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	19.5	19.5		19.5	19.5		19.5	19.5		19.5	19.5	
Total Split (s)	26.0	26.0		26.0	26.0		34.0	34.0		34.0	34.0	
Total Split (%)	43.3%	43.3%		43.3%	43.3%		56.7%	56.7%		56.7%	56.7%	
Maximum Green (s)	21.5	21.5		21.5	21.5		29.5	29.5		29.5	29.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - PM Peak Hour

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McKinney - Cole Uptown Evaluation

2035 Conversion - PM Peak Hour

Lanes, Volumes, Timings

5: Carlisle & Bowen

	↖	→	↗	↖	←	↖	↖	↑	↗	↗	↓	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-0.5			-0.5			0.0			-0.5	
Total Lost Time (s)		4.0			4.0			4.5			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.0	2.0		2.0	2.0	
Recall Mode	Min	Min		Min	Min		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	8.0	8.0		8.0	8.0		8.0	8.0		8.0	8.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		16.1			16.1			35.4			35.9	
Actuated g/C Ratio		0.27			0.27			0.59			0.60	
v/c Ratio		0.67			0.29			0.34			0.29	
Control Delay		20.7			15.0			8.4			3.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		20.7			15.0			8.4			3.0	
LOS		C			B			A			A	
Approach Delay		20.7			15.0			8.4			3.0	
Approach LOS		C			B			A			A	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 56 (93%), Referenced to phase 2:NBSB, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.67

Intersection Signal Delay: 11.6

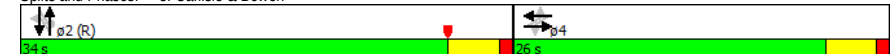
Intersection LOS: B

Intersection Capacity Utilization 69.2%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 5: Carlisle & Bowen



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings2035 Conversion - PM Peak Hour
6: McKinney & Hall

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Volume (vph)	74	189	10	8	179	67	55	717	29	0	217	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Frt		0.996			0.963			0.994			0.992	
Flt Protected		0.987			0.999			0.996				
Satd. Flow (prot)	0	1831	0	0	1792	0	0	3504	0	0	1848	0
Flt Permitted		0.798			0.989			0.911				
Satd. Flow (perm)	0	1481	0	0	1774	0	0	3205	0	0	1848	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			37			9			7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		790			243			502			693	
Travel Time (s)		18.0			5.5			11.4			15.8	
Peak Hour Factor	0.83	0.78	1.00	1.00	0.85	0.82	0.76	0.89	0.86	0.25	1.00	1.00
Adj. Flow (vph)	89	242	10	8	211	82	72	806	34	0	217	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	341	0	0	301	0	0	912	0	0	230	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1			1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50			50	
Trailing Detector (ft)	0	0		0	0		0	0			0	
Detector 1 Position(ft)	0	0		0	0		0	0			0	
Detector 1 Size(ft)	50	50		50	50		50	50			50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA			NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2					
Detector Phase	4	4		4	4		2	2			2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		10.0	10.0			10.0	
Minimum Split (s)	14.2	14.2		14.2	14.2		16.2	16.2			16.2	
Total Split (s)	28.0	28.0		28.0	28.0		32.0	32.0			32.0	
Total Split (%)	46.7%	46.7%		46.7%	46.7%		53.3%	53.3%			53.3%	
Maximum Green (s)	23.8	23.8		23.8	23.8		27.8	27.8			27.8	
Yellow Time (s)	3.2	3.2		3.2	3.2		3.2	3.2			3.2	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0			1.0	

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - PM Peak Hour

Synchro 8 Report
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Lanes, Volumes, Timings2035 Conversion - PM Peak Hour
6: McKinney & Hall

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-0.2			-0.2			-0.2				0.0
Total Lost Time (s)		4.0			4.0			4.0				4.2
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	2.0				2.0
Recall Mode	Ped	Ped		Ped	Ped		C-Max	C-Max				C-Max
Walk Time (s)	4.0	4.0		4.0	4.0		6.0	6.0				6.0
Flash Dont Walk (s)	6.0	6.0		6.0	6.0		6.0	6.0				6.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0				0
Act Effct Green (s)		18.3			18.3			33.7				33.5
Actuated g/C Ratio		0.30			0.30			0.56				0.56
v/c Ratio		0.75			0.53			0.50				0.22
Control Delay		20.7			17.7			18.5				4.8
Queue Delay		0.0			0.0			0.0				0.0
Total Delay		20.7			17.7			18.5				4.8
LOS		C			B			B				A
Approach Delay		20.7			17.7			18.5				4.8
Approach LOS		C			B			B				A

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:NBSB, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 17.0

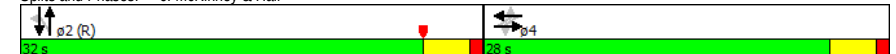
Intersection LOS: B

Intersection Capacity Utilization 76.6%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 6: McKinney & Hall



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2035 Conversion - PM Peak Hour

Lanes, Volumes, Timings

7: Carlisle & Hall

	↖	→	↗	↖	←	↖	↖	↑	↗	↗	↓	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	36	196	20	17	197	34	28	358	14	63	434	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	150		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.987			0.984			0.995			0.992	
Flt Protected		0.994			0.996			0.997			0.994	
Satd. Flow (prot)	0	1827	0	0	1826	0	0	1848	0	0	3490	0
Flt Permitted		0.918			0.955			0.948			0.860	
Satd. Flow (perm)	0	1688	0	0	1750	0	0	1757	0	0	3019	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			12			5			14	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		182			790			290			627	
Travel Time (s)		4.1			18.0			6.6			14.3	
Peak Hour Factor	1.00	0.84	0.69	0.68	0.84	1.00	1.00	1.00	1.00	0.83	0.91	0.92
Adj. Flow (vph)	36	233	29	25	235	34	28	358	14	76	477	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	298	0	0	294	0	0	400	0	0	583	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		2	2	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	18.2	18.2		18.2	18.2		18.2	18.2		18.2	18.2	
Total Split (s)	24.0	24.0		24.0	24.0		36.0	36.0		36.0	36.0	
Total Split (%)	40.0%	40.0%		40.0%	40.0%		60.0%	60.0%		60.0%	60.0%	

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - PM Peak Hour

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McKinney - Cole Uptown Evaluation

2035 Conversion - PM Peak Hour

Lanes, Volumes, Timings

7: Carlisle & Hall

	↖	→	↗	↖	←	↖	↖	↑	↗	↗	↓	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)	19.8	19.8		19.8	19.8		31.8	31.8		31.8	31.8	
Yellow Time (s)	3.2	3.2		3.2	3.2		3.2	3.2		3.2	3.2	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		-0.2			-0.2			0.0			-0.2	
Total Lost Time (s)		4.0			4.0			4.2			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		4.0	4.0		4.0	4.0	
Recall Mode	Min	Min		Min	Min		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Flash Dont Walk (s)	8.0	8.0		8.0	8.0		8.0	8.0		8.0	8.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)		14.5			14.5			37.3			37.5	
Actuated g/C Ratio		0.24			0.24			0.62			0.62	
v/c Ratio		0.72			0.68			0.37			0.31	
Control Delay		29.7			24.8			12.7			6.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		29.7			24.8			12.7			6.8	
LOS		C			C			B			A	
Approach Delay		29.7			24.8			12.7			6.8	
Approach LOS		C			C			B			A	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 38 (63%), Referenced to phase 2:NBSB, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 16.0

Intersection LOS: B

Intersection Capacity Utilization 68.7%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 7: Carlisle & Hall



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2035 Conversion - PM Peak Hour

Lanes, Volumes, Timings

8: McKinney & Lemmon

	↖	→	↗	↖	←	↖	↖	↑	↗	↗	↓	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↖↖						↖↖		↖	↖	
Volume (vph)	364	2237	48	0	0	0	0	682	143	81	244	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	150		0
Storage Lanes	1		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt		0.997						0.973				
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1770	5070	0	0	0	0	0	3444	0	1770	1863	0
Flt Permitted	0.950									0.108		
Satd. Flow (perm)	1770	5070	0	0	0	0	0	3444	0	201	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4						22				
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		651			405			693			457	
Travel Time (s)		12.7			7.9			15.8			10.4	
Peak Hour Factor	0.97	0.94	1.00	1.00	1.00	1.00	1.00	0.92	0.88	1.00	1.00	1.00
Adj. Flow (vph)	375	2380	48	0	0	0	0	741	162	81	244	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	375	2428	0	0	0	0	0	903	0	81	244	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1						1		1	1	
Detector Template												
Leading Detector (ft)	50	50						50		50	50	
Trailing Detector (ft)	0	0						0		0	0	
Detector 1 Position(ft)	0	0						0		0	0	
Detector 1 Size(ft)	50	50						50		50	50	
Detector 1 Type	CI+Ex	CI+Ex						CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0		0.0	0.0	
Turn Type	Perm	NA						NA		D,P+P	NA	
Protected Phases		2						8		7	4	
Permitted Phases		2								8		
Detector Phase		2	2					8		7	4	
Switch Phase												
Minimum Initial (s)	14.0	14.0						14.0		4.0	14.0	
Minimum Split (s)	18.5	18.5						18.5		13.0	18.5	
Total Split (s)	67.0	67.0						40.0		13.0	53.0	
Total Split (%)	55.8%	55.8%						33.3%		10.8%	44.2%	

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - PM Peak Hour

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McKinney - Cole Uptown Evaluation

2035 Conversion - PM Peak Hour

Lanes, Volumes, Timings

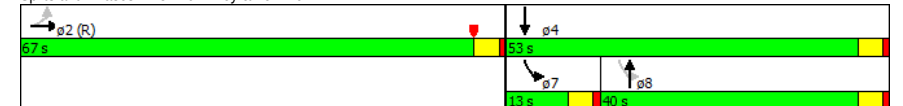
8: McKinney & Lemmon

	↖	→	↗	↖	←	↖	↖	↑	↗	↗	↓	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)	62.5	62.5						35.5		8.5	48.5	
Yellow Time (s)	3.5	3.5						3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0						1.0		1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5						-0.5		0.0	0.0	
Total Lost Time (s)	4.0	4.0						4.0		4.5	4.5	
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?								Yes		Yes		
Vehicle Extension (s)	0.2	0.2						0.2		3.0	0.2	
Recall Mode	C-Max	C-Max						Max		None	Max	
Walk Time (s)	7.0	7.0						4.0			4.0	
Flash Dont Walk (s)	7.0	7.0						7.0			7.0	
Pedestrian Calls (#/hr)	0	0						0			0	
Act Effect Green (s)	63.0	63.0						38.8		44.9	48.5	
Actuated g/C Ratio	0.52	0.52						0.32		0.37	0.40	
v/c Ratio	0.40	0.91						0.80		0.46	0.32	
Control Delay	10.9	14.1						41.8		29.1	11.3	
Queue Delay	0.0	0.2						0.0		0.0	0.0	
Total Delay	10.9	14.3						41.8		29.1	11.3	
LOS	B	B						D		C	B	
Approach Delay		13.9						41.8			15.7	
Approach LOS		B						D			B	

Intersection Summary

Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 20.3	Intersection LOS: C
Intersection Capacity Utilization 82.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 8: McKinney & Lemmon



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2035 Conversion - PM Peak Hour

Lanes, Volumes, Timings

9: Carlisle/Cole & Lemmon

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	182	2416	95	0	0	0	0	340	72	160	488	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		150	150		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993						0.976				
Flt Protected		0.997								0.950		
Satd. Flow (prot)	0	6344	0	0	0	0	0	1818	0	1770	1863	0
Flt Permitted		0.997								0.199		
Satd. Flow (perm)	0	6344	0	0	0	0	0	1818	0	371	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11						9				
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		687			651			627			431	
Travel Time (s)		13.4			12.7			14.3			9.8	
Peak Hour Factor	1.00	0.95	0.75	1.00	1.00	1.00	1.00	1.00	1.00	0.83	0.93	1.00
Adj. Flow (vph)	182	2543	127	0	0	0	0	340	72	193	525	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2852	0	0	0	0	0	412	0	193	525	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1						1		1	1	
Detector Template												
Leading Detector (ft)	50	50						50		50	50	
Trailing Detector (ft)	0	0						0		0	0	
Detector 1 Position(ft)	0	0						0		0	0	
Detector 1 Size(ft)	50	50						50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0		0.0	0.0	
Turn Type	Perm	NA						NA		D,P+P	NA	
Protected Phases		2						8		7	4	
Permitted Phases	2									8		
Detector Phase	2	2						8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	8.0						4.0		4.0	8.0	
Minimum Split (s)	18.5	18.5						20.5		13.0	18.5	
Total Split (s)	62.5	62.5						36.5		13.0	49.5	
Total Split (%)	52.1%	52.1%						30.4%		10.8%	41.3%	

McKinney - Cole Uptown Evaluation

2035 Conversion - PM Peak Hour

Lanes, Volumes, Timings

9: Carlisle/Cole & Lemmon

Lane Group	ø3
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	8.0
Total Split (s)	8.0
Total Split (%)	7%

McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2035 Conversion - PM Peak Hour
9: Carlisle/Cole & Lemmon

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)	58.0	58.0						32.0		8.5	45.0	
Yellow Time (s)	3.5	3.5						3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0						1.0		1.0	1.0	
Lost Time Adjust (s)		-0.5						0.0		-0.5	-0.5	
Total Lost Time (s)		4.0						4.5		4.0	4.0	
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?								Yes		Yes		
Vehicle Extension (s)	2.0	2.0						3.0		3.0	2.0	
Recall Mode	C-Max	C-Max						None		None	Max	
Walk Time (s)	7.0	7.0						5.0			7.0	
Flash Dont Walk (s)	7.0	7.0						11.0			7.0	
Pedestrian Calls (#/hr)	0	0						0			0	
Act Effct Green (s)		58.5						33.7		49.5	53.5	
Actuated g/C Ratio		0.49						0.28		0.41	0.45	
v/c Ratio		0.92						0.80		0.58	0.63	
Control Delay		34.6						54.7		27.3	21.9	
Queue Delay		0.3						0.0		0.0	2.4	
Total Delay		34.8						54.7		27.3	24.3	
LOS		C						D		C	C	
Approach Delay		34.8						54.7			25.1	
Approach LOS		C						D			C	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 35.1

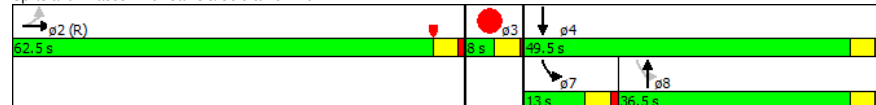
Intersection LOS: D

Intersection Capacity Utilization 80.9%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 9: Carlisle/Cole & Lemmon



McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2035 Conversion - PM Peak Hour
9: Carlisle/Cole & Lemmon

Lane Group	ø3
Maximum Green (s)	4.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

McKinney - Cole Uptown Evaluation

2035 Conversion - PM Peak Hour

Lanes, Volumes, Timings

10: McKinney & Lemmon East

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↔↔↔	↔↔	98	157	855	0	0	209	70
Volume (vph)	0	0	0	92	1316	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	0.95	0.95	1.00	1.00	1.00	1.00
Frt				0.990							0.966	
Flt Protected				0.997				0.992				
Satd. Flow (prot)	0	0	0	0	6325	0	0	3511	0	0	1799	0
Flt Permitted				0.997				0.789				
Satd. Flow (perm)	0	0	0	0	6325	0	0	2792	0	0	1799	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					15						19	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		510			744			457			444	
Travel Time (s)		9.9			14.5			10.4			10.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	0.89	0.83	0.81	0.89	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	92	1479	118	194	961	0	0	209	70
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1689	0	0	1155	0	0	279	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	1		1	1			1	
Detector Template												
Leading Detector (ft)				50	50		50	50			50	
Trailing Detector (ft)				0	0		0	0			0	
Detector 1 Position(ft)				0	0		0	0			0	
Detector 1 Size(ft)				50	50		50	50			50	
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0			0.0	
Detector 1 Queue (s)				0.0	0.0		0.0	0.0			0.0	
Detector 1 Delay (s)				0.0	0.0		0.0	0.0			0.0	
Turn Type				Perm	NA		D.P+P	NA			NA	
Protected Phases					2		7	4			8	
Permitted Phases					2		8					
Detector Phase					2		7	4			8	
Switch Phase												
Minimum Initial (s)				14.0	14.0		4.0	12.0			4.0	
Minimum Split (s)				19.5	19.5		13.0	16.5			20.5	
Total Split (s)				47.0	47.0		13.0	73.0			60.0	
Total Split (%)				39.2%	39.2%		10.8%	60.8%			50.0%	
Maximum Green (s)				41.5	41.5		8.5	68.5			55.5	
Yellow Time (s)				3.5	3.5		3.5	3.5			3.5	
All-Red Time (s)				2.0	2.0		1.0	1.0			1.0	

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - PM Peak Hour

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McKinney - Cole Uptown Evaluation

2035 Conversion - PM Peak Hour

Lanes, Volumes, Timings

10: McKinney & Lemmon East

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)					-1.5			-0.5			0.0	
Total Lost Time (s)					4.0			4.0			4.5	
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)				0.2	0.2		3.0	0.2			3.0	
Recall Mode				C-Max	C-Max		None	Max			None	
Walk Time (s)				7.0	7.0			4.0			5.0	
Flash Dont Walk (s)				7.0	7.0			7.0			11.0	
Pedestrian Calls (#/hr)				0	0			0			0	
Act Effct Green (s)					43.0			69.0			68.5	
Actuated g/C Ratio					0.36			0.58			0.57	
v/c Ratio					0.74			0.72			0.27	
Control Delay					35.8			10.2			21.6	
Queue Delay					0.0			0.6			1.0	
Total Delay					35.8			10.8			22.6	
LOS					D			B			C	
Approach Delay					35.8			10.8			22.6	
Approach LOS					D			B			C	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:WBTL, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 25.4

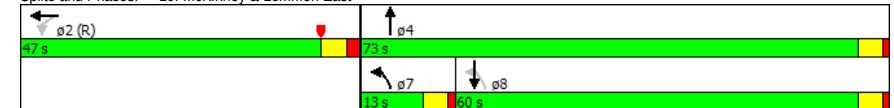
Intersection LOS: C

Intersection Capacity Utilization 76.0%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 10: McKinney & Lemmon East



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2035 Conversion - PM Peak Hour

Lanes, Volumes, Timings

11: Cole & Lemmon East

	←	→	↙	↘	←	↙	↘	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				411B				4			1B	
Volume (vph)	0	0	0	185	1309	49	78	428	0	0	418	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	150		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.996						0.964	
Frt Protected					0.994			0.992				
Satd. Flow (prot)	0	0	0	0	6344	0	0	1848	0	0	1796	0
Frt Permitted					0.994			0.629				
Satd. Flow (perm)	0	0	0	0	6344	0	0	1172	0	0	1796	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					5						6	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		238			510			431			877	
Travel Time (s)		4.6			9.9			9.8			19.9	
Peak Hour Factor	1.00	1.00	1.00	0.87	0.88	1.00	1.00	1.00	1.00	0.30	0.93	0.85
Adj. Flow (vph)	0	0	0	213	1488	49	78	428	0	0	449	162
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1750	0	0	506	0	0	611	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	1		1	1			1	
Detector Template												
Leading Detector (ft)				50	50		50	50			50	
Trailing Detector (ft)				0	0		0	0			0	
Detector 1 Position(ft)				0	0		0	0			0	
Detector 1 Size(ft)				50	50		50	50			50	
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0			0.0	
Detector 1 Queue (s)				0.0	0.0		0.0	0.0			0.0	
Detector 1 Delay (s)				0.0	0.0		0.0	0.0			0.0	
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					2			4			4	
Permitted Phases				2			4					
Detector Phase				2	2		4	4			4	
Switch Phase												
Minimum Initial (s)				12.0	12.0		14.0	14.0			14.0	
Minimum Split (s)				18.5	18.5		18.5	18.5			18.5	
Total Split (s)				52.0	52.0		68.0	68.0			68.0	
Total Split (%)				43.3%	43.3%		56.7%	56.7%			56.7%	

McKinney - Cole Uptown Evaluation

2035 Conversion - PM Peak Hour

Lanes, Volumes, Timings

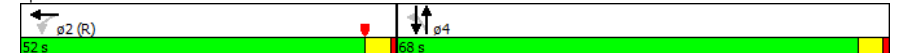
11: Cole & Lemmon East

	←	→	↙	↘	←	↙	↘	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)				47.5	47.5		63.5	63.5			63.5	
Yellow Time (s)				3.5	3.5		3.5	3.5			3.5	
All-Red Time (s)				1.0	1.0		1.0	1.0			1.0	
Lost Time Adjust (s)					-0.5			0.0			-0.5	
Total Lost Time (s)					4.0			4.5			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0		2.0	2.0			2.0	
Recall Mode				C-Max	C-Max		Max	Max			Max	
Walk Time (s)				7.0	7.0		7.0	7.0			7.0	
Flash Dont Walk (s)				7.0	7.0		7.0	7.0			7.0	
Pedestrian Calls (#/hr)				0	0		0	0			0	
Act Effect Green (s)					48.0			63.5			64.0	
Actuated g/C Ratio					0.40			0.53			0.53	
v/c Ratio					0.69			0.82			0.64	
Control Delay					10.8			24.6			28.2	
Queue Delay					0.1			1.8			0.1	
Total Delay					10.9			26.4			28.3	
LOS					B			C			C	
Approach Delay					10.9			26.4			28.3	
Approach LOS					B			C			C	

Intersection Summary

Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 3 (3%), Referenced to phase 2:WBTL, Start of Yellow	
Natural Cycle: 45	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 17.3	Intersection LOS: B
Intersection Capacity Utilization 90.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 11: Cole & Lemmon East



McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2035 Conversion - PM Peak Hour
12: McKinney & Cityplace

	↖	↗	↑	↘	↙	↓	
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø1
Lane Configurations	↖		↗			↘	
Volume (vph)	51	103	930	2	1	306	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00	
Frt	0.909						
Flt Protected	0.984						
Satd. Flow (prot)	1666	0	3539	0	0	1863	
Flt Permitted	0.984					0.998	
Satd. Flow (perm)	1666	0	3539	0	0	1859	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)	112						
Link Speed (mph)	30		30			30	
Link Distance (ft)	723		444			442	
Travel Time (s)	16.4		10.1			10.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	55	112	1011	2	1	333	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	167	0	1013	0	0	334	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Right	Left	Left	
Median Width(ft)	20		0			0	
Link Offset(ft)	0		0			0	
Crosswalk Width(ft)	16		16			16	
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9		9	15		
Number of Detectors	1		2		1	2	
Detector Template	Left		Thru		Left	Thru	
Leading Detector (ft)	20		100		20	100	
Trailing Detector (ft)	0		0		0	0	
Detector 1 Position(ft)	0		0		0	0	
Detector 1 Size(ft)	20		6		20	6	
Detector 1 Type	CI+Ex		CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0		0.0	0.0	
Detector 1 Queue (s)	0.0		0.0		0.0	0.0	
Detector 1 Delay (s)	0.0		0.0		0.0	0.0	
Detector 2 Position(ft)			94			94	
Detector 2 Size(ft)			6			6	
Detector 2 Type			CI+Ex			CI+Ex	
Detector 2 Channel							
Detector 2 Extend (s)			0.0			0.0	
Turn Type	NA		NA		Perm	NA	
Protected Phases	2		4		8	1	
Permitted Phases					8		
Detector Phase	2		4		8	8	
Switch Phase							
Minimum Initial (s)	4.0		4.0		4.0	4.0	
Minimum Split (s)	20.5		20.5		20.5	20.5	8.5

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation
Lanes, Volumes, Timings

2035 Conversion - PM Peak Hour
12: McKinney & Cityplace

	↖	↗	↑	↘	↙	↓	
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø1
Total Split (s)	21.5		30.0		30.0	30.0	8.5
Total Split (%)	35.8%		50.0%		50.0%	50.0%	14%
Maximum Green (s)	17.0		25.5		25.5	25.5	4.0
Yellow Time (s)	3.5		3.5		3.5	3.5	3.5
All-Red Time (s)	1.0		1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0			0.0	
Total Lost Time (s)	4.5		4.5			4.5	
Lead/Lag	Lag						Lead
Lead-Lag Optimize?	Yes						Yes
Vehicle Extension (s)	3.0		3.0		3.0	3.0	3.0
Recall Mode	C-Max		Max		None	None	None
Walk Time (s)	5.0		5.0		5.0	5.0	
Flash Dont Walk (s)	11.0		11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0		0		0	0	
Act Effct Green (s)	25.5		25.5			25.5	
Actuated g/C Ratio	0.42		0.42			0.42	
v/c Ratio	0.22		0.67			0.42	
Control Delay	5.2		17.2			10.7	
Queue Delay	0.0		0.3			0.0	
Total Delay	5.2		17.5			10.7	
LOS	A		B			B	
Approach Delay	5.2		17.5			10.7	
Approach LOS	A		B			B	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:WBL and 6:, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.67

Intersection Signal Delay: 14.6

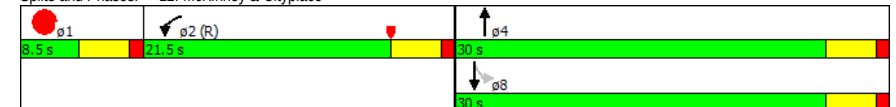
Intersection LOS: B

Intersection Capacity Utilization 42.4%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 12: McKinney & Cityplace



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation

2035 Conversion - PM Peak Hour

Lanes, Volumes, Timings

13: McKinney & Blackburn

	↖	→	↗	↖	←	↖	↖	↑	↗	↗	↓	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗		↖	↖		↖	↖	
Volume (vph)	98	801	36	116	709	130	85	525	197	63	154	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994			0.971			0.955			0.981	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3518	0	1770	3437	0	1770	1779	0	1770	1827	0
Flt Permitted	0.115			0.119			0.635			0.135		
Satd. Flow (perm)	214	3518	0	222	3437	0	1183	1779	0	251	1827	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			24			27			9	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		419			123			442			368	
Travel Time (s)		9.5			2.8			10.0			8.4	
Peak Hour Factor	0.83	0.91	1.00	1.00	0.94	0.73	0.84	0.94	0.83	1.00	1.00	1.00
Adj. Flow (vph)	118	880	36	116	754	178	101	559	237	63	154	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	118	916	0	116	932	0	101	796	0	63	176	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		18			18			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	D,P+P	NA		D,P+P	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2		8	8		4	4	
Permitted Phases	2			6			8			4		
Detector Phase	1	6		5	2		8	8		4	4	
Switch Phase												
Minimum Initial (s)	3.0	14.0		4.0	10.0		14.0	14.0		4.0	4.0	
Minimum Split (s)	13.0	20.0		13.0	20.0		33.5	33.5		21.0	21.0	
Total Split (s)	13.0	40.0		13.0	40.0		67.0	67.0		67.0	67.0	
Total Split (%)	10.8%	33.3%		10.8%	33.3%		55.8%	55.8%		55.8%	55.8%	

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - PM Peak Hour

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McKinney - Cole Uptown Evaluation

2035 Conversion - PM Peak Hour

Lanes, Volumes, Timings

13: McKinney & Blackburn

	↖	→	↗	↖	←	↖	↖	↑	↗	↗	↓	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)	8.0	35.0		7.5	35.0		61.5	61.5		62.0	62.0	
Yellow Time (s)	3.0	4.0		3.5	4.0		4.0	4.0		3.5	3.5	
All-Red Time (s)	2.0	1.0		2.0	1.0		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	-1.0	-1.0		0.0	-1.0		-1.5	-1.5		0.0	0.0	
Total Lost Time (s)	4.0	4.0		5.5	4.0		4.0	4.0		5.0	5.0	
Lead/Lag	Lag	Lag		Lead	Lead							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	1.5	2.0		3.0	2.0		2.0	2.0		3.0	3.0	
Recall Mode	Min	Min		None	Min		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)		7.0			7.0		7.0	7.0		5.0	5.0	
Flash Dont Walk (s)		8.0			8.0		21.0	21.0		11.0	11.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effct Green (s)	43.5	34.5		40.5	34.8		64.5	64.5		63.5	63.5	
Actuated g/C Ratio	0.36	0.29		0.34	0.29		0.54	0.54		0.53	0.53	
v/c Ratio	0.62	0.90		0.68	0.92		0.16	0.82		0.48	0.18	
Control Delay	29.7	28.7		45.2	54.7		13.2	27.0		31.1	12.5	
Queue Delay	0.0	14.8		0.0	0.0		0.0	49.8		0.0	0.0	
Total Delay	29.7	43.5		45.2	54.7		13.2	76.9		31.1	12.5	
LOS	C	D		D	D		B	E		C	B	
Approach Delay		41.9			53.6			69.7			17.4	
Approach LOS		D			D			E			B	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:SBTL and 8:NBTL, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 51.6

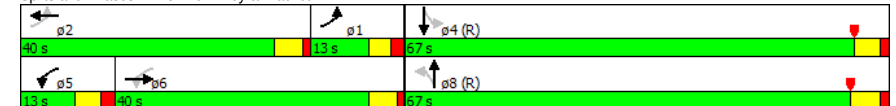
Intersection LOS: D

Intersection Capacity Utilization 88.2%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 13: McKinney & Blackburn



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - PM Peak Hour

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McKinney - Cole Uptown Evaluation

2035 Conversion - PM Peak Hour

Lanes, Volumes, Timings

14: Cole & Blackburn

	←	→	↙	↘	←	↙	↘	↗	↖	↗	↖	↘	↗
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↙	↕	↘	↙	↕	↘	↙	↕	↘	↙	↕	↘	
Volume (vph)	49	713	72	231	520	65	42	262	98	125	308	44	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	150		0	0		0	150		0	150		0	
Storage Lanes	1		0	1		0		0	1		0		
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.986			0.955			0.967			0.975		
Flt Protected	0.950			0.950				0.995		0.950			
Satd. Flow (prot)	1770	3490	0	1770	3380	0	0	1792	0	1770	1816	0	
Flt Permitted	0.147			0.119				0.922		0.379			
Satd. Flow (perm)	274	3490	0	222	3380	0	0	1661	0	706	1816	0	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)		10			86			13			10		
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		216			419			877			400		
Travel Time (s)		4.9			9.5			19.9			9.1		
Peak Hour Factor	1.00	0.94	0.89	0.92	0.87	0.25	1.00	1.00	1.00	0.79	0.94	0.68	
Adj. Flow (vph)	49	759	81	251	598	260	42	262	98	158	328	65	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	49	840	0	251	858	0	0	402	0	158	393	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)		12			12			12			12		
Link Offset(ft)		0			0			0			0		
Crosswalk Width(ft)		16			16			16			16		
Two way Left Turn Lane													
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15		9	15		9	15		9	15		9	
Number of Detectors	1	1		1	1		1	1		1	1		
Detector Template													
Leading Detector (ft)	50	50		50	50		50	50		50	50		
Trailing Detector (ft)	0	0		0	0		0	0		0	0		
Detector 1 Position(ft)	0	0		0	0		0	0		0	0		
Detector 1 Size(ft)	50	50		50	50		50	50		50	50		
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		
Detector 1 Channel													
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Turn Type	Perm	NA		D,P+P	NA		Perm	NA		D,P+P	NA		
Protected Phases		6		5	2			8		7	4		
Permitted Phases		6		6				8		8			
Detector Phase		6		5	2			8		8			
Switch Phase													
Minimum Initial (s)	6.0	6.0		3.0	6.0		4.0	4.0		4.0	10.0		
Minimum Split (s)	20.0	20.0		13.0	20.0		21.0	21.0		13.0	33.5		
Total Split (s)	43.0	43.0		24.0	67.0		39.0	39.0		14.0	53.0		
Total Split (%)	35.8%	35.8%		20.0%	55.8%		32.5%	32.5%		11.7%	44.2%		

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - PM Peak Hour

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McKinney - Cole Uptown Evaluation

2035 Conversion - PM Peak Hour

Lanes, Volumes, Timings

14: Cole & Blackburn

	←	→	↙	↘	←	↙	↘	↗	↖	↗	↖	↘	↗
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Maximum Green (s)	38.0	38.0		19.0	62.0		34.0	34.0		8.5	47.5		
Yellow Time (s)	4.0	4.0		3.0	4.0		3.5	3.5		3.5	4.0		
All-Red Time (s)	1.0	1.0		2.0	1.0		1.5	1.5		2.0	1.5		
Lost Time Adjust (s)	0.0	-1.0		-1.0	-1.0		0.0	0.0		-1.5	-1.5		
Total Lost Time (s)	5.0	4.0		4.0	4.0		5.0	5.0		4.0	4.0		
Lead/Lag	Lead	Lead		Lag			Lag	Lag		Lead			
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes			
Vehicle Extension (s)	1.5	1.5		2.0	1.5		3.0	3.0		3.0	2.0		
Recall Mode	Min	Min		Min	Min		C-Max	C-Max		None	C-Max		
Walk Time (s)	7.0	7.0		7.0			5.0	5.0			7.0		
Flash Dont Walk (s)	8.0	8.0		8.0			11.0	11.0			21.0		
Pedestrian Calls (#/hr)	0	0		0			0	0			0		
Act Effect Green (s)	32.6	33.6		50.1	54.1		41.9			53.9	57.9		
Actuated g/C Ratio	0.27	0.28		0.42	0.45		0.35			0.45	0.48		
v/c Ratio	0.66	0.85		0.82	0.55		0.68			0.38	0.45		
Control Delay	78.9	49.4		44.7	8.0		40.3			20.5	20.5		
Queue Delay	0.0	1.6		0.0	0.4		0.0			0.0	0.0		
Total Delay	78.9	51.1		44.7	8.4		40.3			20.5	20.5		
LOS	E	D		D	A		D			C	C		
Approach Delay		52.6			16.6		40.3				20.5		
Approach LOS		D			B		D				C		

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:SBT and 8:NBSB, Start of Yellow

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 31.4

Intersection LOS: C

Intersection Capacity Utilization 89.9%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 14: Cole & Blackburn



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - PM Peak Hour

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McKinney - Cole Uptown Evaluation

2035 Conversion - PM Peak Hour

24: McKinney & Fitzhugh

Lanes, Volumes, Timings

	←	→	↙	↘	←	↙	↘	→	↙	↘	→	↙	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↙	↑↑↑	↘	↙	↑↑↑	↘	↙	↑	↘	↙	↑	↘	
Volume (vph)	145	1892	28	44	727	72	112	488	197	30	131	59	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	152		0	0		0	100		150	150		0	
Storage Lanes	1		0	1		0	1		1	1		0	
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.998			0.985				0.850		0.953		
Flt Protected	0.950			0.950			0.950			0.950			
Satd. Flow (prot)	1770	5075	0	1770	5009	0	1770	1863	1583	1770	1775	0	
Flt Permitted	0.219			0.070			0.519			0.226			
Satd. Flow (perm)	408	5075	0	130	5009	0	967	1863	1583	421	1775	0	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)		2			21				149			18	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		469			318			837			1927		
Travel Time (s)		10.7			7.2			19.0			43.8		
Peak Hour Factor	0.93	0.96	1.00	1.00	0.84	0.73	0.76	0.91	0.81	1.00	1.00	1.00	
Adj. Flow (vph)	156	1971	28	44	865	99	147	536	243	30	131	59	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	156	1999	0	44	964	0	147	536	243	30	190	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)		12			12			12			12		
Link Offset(ft)		0			0			0			0		
Crosswalk Width(ft)		16			16			16			16		
Two way Left Turn Lane													
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15		9	15		9	15		9	15		9	
Number of Detectors	1	1		1	1		1	1	1	1	1		
Detector Template													
Leading Detector (ft)	50	50		50	50		50	50	50	50	50		
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0		
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0		
Detector 1 Size(ft)	50	50		50	50		50	50	50	50	50		
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		
Detector 1 Channel													
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Turn Type	D,P+P	NA		D,P+P	NA		D,P+P	NA	Perm	Perm	NA		
Protected Phases	1	6		5	2		3	8			4		
Permitted Phases	2			6			4		8	4			
Detector Phase	1	6		5	2		3	8	8	4	4		
Switch Phase													
Minimum Initial (s)	4.0	10.0		4.0	10.0		4.0	10.0	10.0	10.0	10.0		
Minimum Split (s)	13.0	19.7		13.0	19.7		13.0	19.7	19.7	19.7	19.7		
Total Split (s)	14.0	59.0		13.0	58.0		13.0	48.0	48.0	35.0	35.0		
Total Split (%)	11.7%	49.2%		10.8%	48.3%		10.8%	40.0%	40.0%	29.2%	29.2%		

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - PM Peak Hour

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McKinney - Cole Uptown Evaluation

2035 Conversion - PM Peak Hour

24: McKinney & Fitzhugh

Lanes, Volumes, Timings

	←	→	↙	↘	←	↙	↘	→	↙	↘	→	↙	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Maximum Green (s)	9.3	54.3		8.3	53.3		8.3	43.3	43.3	30.3	30.3		
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5		
All-Red Time (s)	1.2	1.2		1.2	1.2		1.2	1.2	1.2	1.2	1.2		
Lost Time Adjust (s)	-1.0	-0.7		0.0	-0.7		-1.3	-1.3	0.0	0.0	0.0		
Total Lost Time (s)	3.7	4.0		4.7	4.0		3.4	3.4	4.7	4.7	4.7		
Lead/Lag	Lag	Lag		Lead	Lead		Lead			Lag	Lag		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes		
Vehicle Extension (s)	3.0	2.0		3.0	2.0		3.0	2.0	2.0	2.0	2.0		
Recall Mode	None	C-Max		None	C-Max		None	Max	Max	Max	Max		
Walk Time (s)		4.0			4.0			4.0	4.0	4.0	4.0		
Flash Dont Walk (s)		8.0			8.0			8.0	8.0	8.0	8.0		
Pedestrian Calls (#/hr)		0			0			0	0	0	0		
Act Effect Green (s)	64.6	58.5		63.5	54.0		41.2	44.6	43.3	30.3	30.3		
Actuated g/C Ratio	0.54	0.49		0.53	0.45		0.34	0.37	0.36	0.25	0.25		
v/c Ratio	0.46	0.81		0.27	0.43		0.37	0.77	0.36	0.28	0.41		
Control Delay	6.9	7.6		16.3	22.6		23.9	35.3	9.1	40.9	33.2		
Queue Delay	0.0	0.9		0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total Delay	6.9	8.4		16.3	22.6		23.9	35.3	9.1	40.9	33.2		
LOS	A	A		B	C		C	D	A	D	C		
Approach Delay		8.3			22.4			26.6			34.3		
Approach LOS		A			C			C			C		

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBWB and 6:EBWB, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 16.9

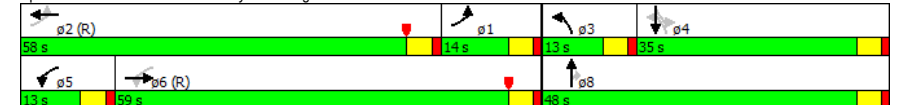
Intersection LOS: B

Intersection Capacity Utilization 89.0%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 24: McKinney & Fitzhugh



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - PM Peak Hour

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McKinney - Cole Uptown Evaluation

2035 Conversion - PM Peak Hour

Lanes, Volumes, Timings

25: Cole & Fitzhugh

	←	→	↖	↗	←	↖	↗	↑	↘	↙	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↖↖		↖	↖↖↖		↖	↖		↖	↖	
Volume (vph)	72	1905	54	88	772	36	56	243	98	61	263	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	162		0	150		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.995			0.994			0.957			0.951	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5060	0	1770	5055	0	1770	1783	0	1770	1771	0
Flt Permitted	0.258			0.073			0.147			0.520		
Satd. Flow (perm)	481	5060	0	136	5055	0	274	1783	0	969	1771	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			7			21			21	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		231			469			802			1956	
Travel Time (s)		5.3			10.7			18.2			44.5	
Peak Hour Factor	1.00	0.98	0.76	0.86	0.88	1.00	1.00	1.00	1.00	0.73	0.95	0.88
Adj. Flow (vph)	72	1944	71	102	877	36	56	243	98	84	277	133
Shared Lane Traffic (%)												
Lane Group Flow (vph)	72	2015	0	102	913	0	56	341	0	84	410	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		D,P+P	NA		D,P+P	NA		Perm	NA	
Protected Phases		6		5	2		3	8			4	
Permitted Phases		6		6			4			4		
Detector Phase		6		5	2		3	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		4.0	10.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		13.0	27.0		13.0	21.0		27.0	27.0	
Total Split (s)	50.0	50.0		14.0	64.0		13.0	56.0		43.0	43.0	
Total Split (%)	41.7%	41.7%		11.7%	53.3%		10.8%	46.7%		35.8%	35.8%	

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2035 Conversion - PM Peak Hour

Lanes, Volumes, Timings

25: Cole & Fitzhugh

	←	→	↖	↗	←	↖	↗	↑	↘	↙	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)	45.0	45.0		9.0	59.0		8.0	51.0		38.0	38.0	
Yellow Time (s)	3.6	3.6		3.6	3.6		3.6	3.6		3.6	3.6	
All-Red Time (s)	1.4	1.4		1.4	1.4		1.4	1.4		1.4	1.4	
Lost Time Adjust (s)	0.0	-1.0		-1.0	-1.0		0.0	0.0		-1.0	-1.0	
Total Lost Time (s)	5.0	4.0		4.0	4.0		5.0	5.0		4.0	4.0	
Lead/Lag	Lead	Lead		Lag			Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes			Yes	Yes	
Vehicle Extension (s)	2.0	2.0		3.0	2.0		3.0	3.0		2.0	2.0	
Recall Mode	C-Max	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)	5.0	5.0			6.0			5.0		6.0	6.0	
Flash Dont Walk (s)	10.0	10.0			16.0			11.0		16.0	16.0	
Pedestrian Calls (#/hr)	0	0			0			0		0	0	
Act Effect Green (s)	55.1	56.1		66.1	70.1		36.9	40.9		31.7	31.7	
Actuated g/C Ratio	0.46	0.47		0.55	0.58		0.31	0.34		0.26	0.26	
v/c Ratio	0.33	0.85		0.48	0.31		0.32	0.55		0.33	0.85	
Control Delay	30.3	34.4		33.6	5.3		29.6	30.9		37.6	56.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	30.3	34.4		33.6	5.3		29.6	30.9		37.6	56.0	
LOS	C	C		C	A		C	C		D	E	
Approach Delay		34.3			8.2			30.8			52.9	
Approach LOS		C			A			C			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBWB, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 29.6

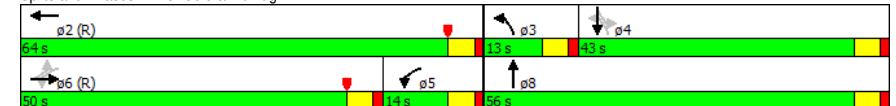
Intersection LOS: C

Intersection Capacity Utilization 81.4%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 25: Cole & Fitzhugh



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - PM Peak Hour

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2035 Conversion - PM Peak Hour

Lanes, Volumes, Timings

28: McKinney & Knox

	↖	→	↗	↖	←	↖	↖	↑	↗	↗	↓	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔		↖	↑	↖	↖	↖	
Volume (vph)	48	781	25	73	557	73	65	369	252	49	92	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	150		50	150		0
Storage Lanes	0		0	0		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.983				0.850		0.975	
Flt Protected		0.997			0.989		0.950			0.950		
Satd. Flow (prot)	0	3514	0	0	3441	0	1770	1863	1583	1770	1816	0
Flt Permitted		0.854			0.562		0.686			0.303		
Satd. Flow (perm)	0	3010	0	0	1955	0	1278	1863	1583	564	1816	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			30				92		18	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		461			315			685			1670	
Travel Time (s)		10.5			7.2			15.6			38.0	
Peak Hour Factor	0.86	0.90	1.00	0.38	0.92	0.74	0.79	0.78	0.95	1.00	1.00	1.00
Adj. Flow (vph)	56	868	25	192	605	99	82	473	265	49	92	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	949	0	0	896	0	82	473	265	49	110	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	50	50		50	50		50	50	50	50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		6			2			4			8	
Permitted Phases	6			2			4		4	8		
Detector Phase	6	6		2	2		4	4	4	8	8	
Switch Phase												
Minimum Initial (s)	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	
Minimum Split (s)	17.0	17.0		17.0	17.0		17.0	17.0	17.0	17.0	17.0	
Total Split (s)	32.0	32.0		32.0	32.0		28.0	28.0	28.0	28.0	28.0	
Total Split (%)	53.3%	53.3%		53.3%	53.3%		46.7%	46.7%	46.7%	46.7%	46.7%	

McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - PM Peak Hour

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McKinney - Cole Uptown Evaluation

2035 Conversion - PM Peak Hour

Lanes, Volumes, Timings

28: McKinney & Knox

	↖	→	↗	↖	←	↖	↖	↑	↗	↗	↓	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)	27.0	27.0		27.0	27.0		23.0	23.0	23.0	23.0	23.0	
Yellow Time (s)	3.4	3.4		3.4	3.4		3.4	3.4	3.4	3.4	3.4	
All-Red Time (s)	1.6	1.6		1.6	1.6		1.6	1.6	1.6	1.6	1.6	
Lost Time Adjust (s)		-1.0			-1.0		-1.0	-1.0	0.0	0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.0	4.0	5.0	5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	1.5		1.5	1.5		3.0	3.0	3.0	1.5	1.5	
Recall Mode	C-Max	C-Max		C-Max	C-Max		Max	Max	Max	Max	Max	
Walk Time (s)	6.0	6.0		6.0	6.0		4.0	4.0	4.0	6.0	6.0	
Flash Dont Walk (s)	6.0	6.0		6.0	6.0		8.0	8.0	8.0	6.0	6.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effect Green (s)		28.0			28.0		24.0	24.0	23.0	23.0	23.0	
Actuated g/C Ratio		0.47			0.47		0.40	0.40	0.38	0.38	0.38	
v/c Ratio		0.67			0.97		0.16	0.63	0.40	0.23	0.16	
Control Delay		15.4			40.3		14.7	21.0	13.1	15.9	11.1	
Queue Delay		0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		15.4			40.3		14.7	21.0	13.1	15.9	11.1	
LOS		B			D		B	C	B	B	B	
Approach Delay		15.4			40.3			17.8			12.6	
Approach LOS		B			D			B			B	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow

Natural Cycle: 50

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.97

Intersection Signal Delay: 23.8

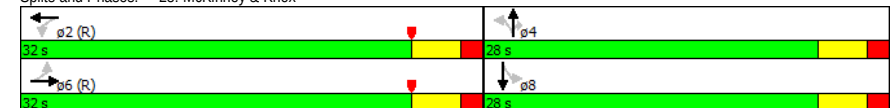
Intersection LOS: C

Intersection Capacity Utilization 87.2%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 28: McKinney & Knox



McKinney - Cole Uptown Evaluation 4:30 pm 6/2/2015 2035 Conversion - PM Peak Hour

Synchro 8 Report
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McKinney - Cole Uptown Evaluation
HCM 2010 AWSC

2035 Conversion - PM Peak Hour
3: Carlisle & Allen

Intersection							
Intersection Delay, s/veh	17.3						
Intersection LOS	C						
Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Vol, veh/h	8	369	63	125	365	172	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles, %	2	2	2	2	2	2	
Mvmt Flow	9	401	68	136	397	187	
Number of Lanes	1	0	1	0	1	1	

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	2	1	0
HCM Control Delay	16.2	11.4	20.1
HCM LOS	C	B	C

Lane	NBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	0%	2%	100%	0%
Vol Thru, %	34%	0%	0%	100%
Vol Right, %	66%	98%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	188	377	365	172
LT Vol	63	0	0	172
Through Vol	125	369	0	0
RT Vol	0	8	365	0
Lane Flow Rate	204	410	397	187
Geometry Grp	5	2	7	7
Degree of Util (X)	0.321	0.604	0.718	0.312
Departure Headway (Hd)	5.654	5.304	6.511	6.004
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	633	680	555	598
Service Time	3.707	3.352	4.254	3.747
HCM Lane V/C Ratio	0.322	0.603	0.715	0.313
HCM Control Delay	11.4	16.2	24.2	11.5
HCM Lane LOS	B	C	C	B
HCM 95th-tile Q	1.4	4.1	5.9	1.3

Notes

~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined

McKinney - Cole Uptown Evaluation
HCM 2010 AWSC

2035 Conversion - PM Peak Hour
30: McKinney & Monticello

Intersection												
Intersection Delay, s/veh	37.6											
Intersection LOS	E											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	34	213	17	52	107	59	28	322	185	86	125	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	37	232	18	57	116	64	30	350	201	93	136	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	19.9	17.1	62.9	16.7
HCM LOS	C	C	F	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	13%	24%	41%
Vol Thru, %	60%	81%	49%	59%
Vol Right, %	35%	6%	27%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	535	264	218	211
LT Vol	322	213	107	125
Through Vol	185	17	59	0
RT Vol	28	34	52	86
Lane Flow Rate	582	287	237	229
Geometry Grp	1	1	1	1
Degree of Util (X)	1	0.581	0.485	0.468
Departure Headway (Hd)	6.362	7.29	7.361	7.345
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	576	499	493	493
Service Time	4.362	5.28	5.357	5.36
HCM Lane V/C Ratio	1.01	0.575	0.481	0.465
HCM Control Delay	62.9	19.9	17.1	16.7
HCM Lane LOS	F	C	C	C
HCM 95th-tile Q	14.6	3.6	2.6	2.5

Notes

~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Conversion - PM Peak Hour
15: McKinney & Haskell

	EBL	EBR	NBL	NBT	SBT	SBR
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Left	Thru	Thru	Thru	Thru	Thru
Volume (veh/h)	15	8	45	781	197	6
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	9	49	849	214	7
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				368		
pX, platoon unblocked	0.62					
vC, conflicting volume	1164	217	221			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	961	217	221			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	90	99	96			
cM capacity (veh/h)	171	822	1349			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	25	898	221			
Volume Left	16	49	0			
Volume Right	9	0	7			
cSH	236	1349	1700			
Volume to Capacity	0.11	0.04	0.13			
Queue Length 95th (ft)	9	3	0			
Control Delay (s)	22.1	1.0	0.0			
Lane LOS	C	A				
Approach Delay (s)	22.1	1.0	0.0			
Approach LOS	C					
Intersection Summary						
Average Delay			1.2			
Intersection Capacity Utilization			67.7%		ICU Level of Service	C
Analysis Period (min)			15			

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Conversion - PM Peak Hour
16: Cole & Haskell

	WBL	WBR	NBT	NBR	SBL	SBT
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Left	Thru	Thru	Thru	Thru	Thru
Volume (veh/h)	72	35	390	22	11	393
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	78	38	424	24	12	427
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (ft)			400			
pX, platoon unblocked						
vC, conflicting volume	887	436			448	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	887	436			448	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	75	94			99	
cM capacity (veh/h)	311	620			1112	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	116	448	439			
Volume Left	78	0	12			
Volume Right	38	24	0			
cSH	372	1700	1112			
Volume to Capacity	0.31	0.26	0.01			
Queue Length 95th (ft)	33	0	1			
Control Delay (s)	19.0	0.0	0.3			
Lane LOS	C		A			
Approach Delay (s)	19.0	0.0	0.3			
Approach LOS	C					
Intersection Summary						
Average Delay			2.4			
Intersection Capacity Utilization			42.3%		ICU Level of Service	A
Analysis Period (min)			15			

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Conversion - PM Peak Hour
17: Cole & Haskell EB

	EBL	EBR	NBL	NBT	SBT	SBR
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	9	19	4	425	404	10
Volume (veh/h)	9	19	4	425	404	10
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	21	4	462	439	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				528		
pX, platoon unblocked						
vC, conflicting volume	915	445	450			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	915	445	450			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	97	100			
cM capacity (veh/h)	302	613	1110			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	30	466	450			
Volume Left	10	4	0			
Volume Right	21	0	11			
cSH	460	1110	1700			
Volume to Capacity	0.07	0.00	0.26			
Queue Length 95th (ft)	5	0	0			
Control Delay (s)	13.4	0.1	0.0			
Lane LOS	B	A				
Approach Delay (s)	13.4	0.1	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay			0.5			
Intersection Capacity Utilization			35.6%		ICU Level of Service	A
Analysis Period (min)			15			

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Conversion - PM Peak Hour
18: McKinney & North Dallas High School

	EBL	EBR	NBL	NBT	SBT	SBR
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	8	4	22	754	213	3
Volume (veh/h)	8	4	22	754	213	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	9	4	24	820	232	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				978		
pX, platoon unblocked	0.75					
vC, conflicting volume	1101	233	235			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	969	233	235			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	96	99	98			
cM capacity (veh/h)	208	806	1333			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	13	843	235			
Volume Left	9	24	0			
Volume Right	4	0	3			
cSH	276	1333	1700			
Volume to Capacity	0.05	0.02	0.14			
Queue Length 95th (ft)	4	1	0			
Control Delay (s)	18.7	0.5	0.0			
Lane LOS	C	A				
Approach Delay (s)	18.7	0.5	0.0			
Approach LOS	C					
Intersection Summary						
Average Delay			0.6			
Intersection Capacity Utilization			65.6%		ICU Level of Service	C
Analysis Period (min)			15			

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Conversion - PM Peak Hour
19: Cole & North Dallas High School

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	2	1	377	11	8	426
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	1	410	12	9	463
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (ft)			816			
pX, platoon unblocked						
vC, conflicting volume	896	416			422	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	896	416			422	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			99	
cM capacity (veh/h)	308	637			1137	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	3	422	472			
Volume Left	2	0	9			
Volume Right	1	12	0			
cSH	372	1700	1137			
Volume to Capacity	0.01	0.25	0.01			
Queue Length 95th (ft)	1	0	1			
Control Delay (s)	14.8	0.0	0.2			
Lane LOS	B		A			
Approach Delay (s)	14.8	0.0	0.2			
Approach LOS	B					
Intersection Summary						
Average Delay		0.2				
Intersection Capacity Utilization		38.8%		ICU Level of Service	A	
Analysis Period (min)		15				

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Conversion - PM Peak Hour
20: McKinney & Cambrick

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	6	2	11	742	202	6
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	7	2	12	807	220	7
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1053	223	226			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1053	223	226			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	100	99			
cM capacity (veh/h)	248	817	1342			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	9	818	226			
Volume Left	7	12	0			
Volume Right	2	0	7			
cSH	301	1342	1700			
Volume to Capacity	0.03	0.01	0.13			
Queue Length 95th (ft)	2	1	0			
Control Delay (s)	17.3	0.2	0.0			
Lane LOS	C	A				
Approach Delay (s)	17.3	0.2	0.0			
Approach LOS	C					
Intersection Summary						
Average Delay		0.3				
Intersection Capacity Utilization		57.8%		ICU Level of Service	B	
Analysis Period (min)		15				

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Conversion - PM Peak Hour
21: Cole & Cambrick

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement												
Lane Configurations		↔			↔			↔			↔	
Volume (veh/h)	9	0	19	0	0	0	6	371	0	0	404	8
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	0	21	0	0	0	7	403	0	0	439	9
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)								1239				
pX, platoon unblocked												
vC, conflicting volume	860	860	443	880	864	403	448			403		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	860	860	443	880	864	403	448			403		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	96	100	97	100	100	100	99			100		
cM capacity (veh/h)	275	292	614	257	290	647	1112			1155		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	30	0	410	448								
Volume Left	10	0	7	0								
Volume Right	21	0	0	9								
cSH	440	1700	1112	1155								
Volume to Capacity	0.07	0.00	0.01	0.00								
Queue Length 95th (ft)	6	0	0	0								
Control Delay (s)	13.8	0.0	0.2	0.0								
Lane LOS	B	A	A									
Approach Delay (s)	13.8	0.0	0.2	0.0								
Approach LOS	B	A										
Intersection Summary												
Average Delay			0.6									
Intersection Capacity Utilization			34.3%			ICU Level of Service		A				
Analysis Period (min)			15									

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Conversion - PM Peak Hour
22: McKinney & Elizabeth

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement												
Lane Configurations		↔			↔			↔			↔	
Volume (veh/h)	30	13	10	27	20	25	46	684	20	18	172	7
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	33	14	11	29	22	27	50	743	22	20	187	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)											837	
pX, platoon unblocked												
vC, conflicting volume	1122	1095	191	1102	1088	754	195			765		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1122	1095	191	1102	1088	754	195			765		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	78	93	99	83	89	93	96			98		
cM capacity (veh/h)	150	201	851	169	203	409	1379			848		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	58	78	815	214								
Volume Left	33	29	50	20								
Volume Right	11	27	22	8								
cSH	192	225	1379	848								
Volume to Capacity	0.30	0.35	0.04	0.02								
Queue Length 95th (ft)	30	37	3	2								
Control Delay (s)	31.6	29.3	1.0	1.1								
Lane LOS	D	D	A	A								
Approach Delay (s)	31.6	29.3	1.0	1.1								
Approach LOS	D	D										
Intersection Summary												
Average Delay			4.4									
Intersection Capacity Utilization			59.2%			ICU Level of Service		B				
Analysis Period (min)			15									

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Conversion - PM Peak Hour
23: Cole & Elizabeth

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	15	8	20	52	12	13	23	341	10	35	346	12
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	9	22	57	13	14	25	371	11	38	376	13
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)											802	
pX, platoon unblocked	0.89	0.89	0.89	0.89	0.89		0.89					
vC, conflicting volume	905	890	383	911	891	376	389			382		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	834	817	249	841	819	376	256			382		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	93	97	97	75	95	98	98			97		
cM capacity (veh/h)	232	263	705	231	263	670	1169			1177		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	47	84	407	427								
Volume Left	16	57	25	38								
Volume Right	22	14	11	13								
cSH	348	265	1169	1177								
Volume to Capacity	0.13	0.32	0.02	0.03								
Queue Length 95th (ft)	11	33	2	3								
Control Delay (s)	16.9	24.7	0.7	1.0								
Lane LOS	C	C	A	A								
Approach Delay (s)	16.9	24.7	0.7	1.0								
Approach LOS	C	C										
Intersection Summary												
Average Delay			3.7									
Intersection Capacity Utilization			44.4%		ICU Level of Service		A					
Analysis Period (min)			15									

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Conversion - PM Peak Hour
26: McKinney & Armstrong

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	78	36	13	14	61	61	24	641	31	24	178	9
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	85	39	14	15	66	66	26	697	34	26	193	10
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)											685	
pX, platoon unblocked												
vC, conflicting volume	1116	1033	198	1050	1021	714	203			730		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1116	1033	198	1050	1021	714	203			730		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	27	82	98	91	71	85	98			97		
cM capacity (veh/h)	117	221	843	168	225	432	1368			874		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	138	148	757	229								
Volume Left	85	15	26	26								
Volume Right	14	66	34	10								
cSH	150	274	1368	874								
Volume to Capacity	0.92	0.54	0.02	0.03								
Queue Length 95th (ft)	162	74	1	2								
Control Delay (s)	112.5	32.5	0.5	1.3								
Lane LOS	F	D	A	A								
Approach Delay (s)	112.5	32.5	0.5	1.3								
Approach LOS	F	D										
Intersection Summary												
Average Delay			16.5									
Intersection Capacity Utilization			64.9%		ICU Level of Service		C					
Analysis Period (min)			15									

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Conversion - PM Peak Hour
27: Cole & Armstrong

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement												
Lane Configurations		↔			↔			↔			↔	
Volume (veh/h)	39	23	28	30	34	30	12	319	15	48	357	18
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	42	25	30	33	37	33	13	347	16	52	388	20
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)											672	
pX, platoon unblocked	0.98	0.98	0.98	0.98	0.98		0.98					
vC, conflicting volume	934	891	398	926	893	355	408			363		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	924	881	379	916	882	355	389			363		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	79	91	95	85	86	95	99			96		
cM capacity (veh/h)	200	265	657	211	265	689	1150			1196		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	98	102	376	460								
Volume Left	42	33	13	52								
Volume Right	30	33	16	20								
cSH	278	299	1150	1196								
Volume to Capacity	0.35	0.34	0.01	0.04								
Queue Length 95th (ft)	38	37	1	3								
Control Delay (s)	24.8	23.1	0.4	1.3								
Lane LOS	C	C	A	A								
Approach Delay (s)	24.8	23.1	0.4	1.3								
Approach LOS	C	C										
Intersection Summary												
Average Delay			5.4									
Intersection Capacity Utilization			55.2%		ICU Level of Service			B				
Analysis Period (min)			15									

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Conversion - PM Peak Hour
31: Cole & Monticello

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement												
Lane Configurations		↔			↔			↔			↔	
Volume (veh/h)	0	0	0	104	0	29	0	175	93	171	249	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	113	0	32	0	190	101	186	271	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	915	934	271	883	883	241	271			291		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	915	934	271	883	883	241	271			291		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	52	100	96	100			85		
cM capacity (veh/h)	216	227	768	236	243	798	1293			1270		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	0	145	291	457								
Volume Left	0	113	0	186								
Volume Right	0	32	101	0								
cSH	1700	279	1293	1270								
Volume to Capacity	0.00	0.52	0.00	0.15								
Queue Length 95th (ft)	0	69	0	13								
Control Delay (s)	0.0	30.9	0.0	4.2								
Lane LOS	A	D		A								
Approach Delay (s)	0.0	30.9	0.0	4.2								
Approach LOS	A	D										
Intersection Summary												
Average Delay			7.2									
Intersection Capacity Utilization			55.0%		ICU Level of Service			A				
Analysis Period (min)			15									

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Conversion - PM Peak Hour
32: McKinney & Harvard

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement												
Lane Configurations		↔			↔			↔	↔		↔	
Volume (veh/h)	48	0	24	35	0	70	1	277	134	66	158	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	52	0	26	38	0	76	1	301	146	72	172	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None			None		
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	695	618	172	645	618	301	172			301		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	695	618	172	645	618	301	172			301		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	83	100	97	89	100	90	100			94		
cM capacity (veh/h)	306	381	872	357	381	739	1405			1260		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1							
Volume Total	78	114	302	146	243							
Volume Left	52	38	1	0	72							
Volume Right	26	76	0	146	0							
cSH	390	545	1405	1700	1260							
Volume to Capacity	0.20	0.21	0.00	0.09	0.06							
Queue Length 95th (ft)	18	20	0	0	5							
Control Delay (s)	16.5	13.3	0.0	0.0	2.7							
Lane LOS	C	B	A		A							
Approach Delay (s)	16.5	13.3	0.0		2.7							
Approach LOS	C	B										
Intersection Summary												
Average Delay			3.9									
Intersection Capacity Utilization			44.3%			ICU Level of Service		A				
Analysis Period (min)			15									

McKinney - Cole Uptown Evaluation
HCM Unsignalized Intersection Capacity Analysis

2035 Conversion - PM Peak Hour
33: Cole & Harvard

	EBT	EBR	WBL	WBT	NBL	NBR
Movement						
Lane Configurations	↔			↔	↔	
Volume (veh/h)	158	315	96	298	139	66
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	172	342	104	324	151	72
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			172		876	343
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			172		876	343
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		49	90
cM capacity (veh/h)			1405		296	700
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	514	428	223			
Volume Left	0	104	151			
Volume Right	342	0	72			
cSH	1700	1405	363			
Volume to Capacity	0.30	0.07	0.61			
Queue Length 95th (ft)	0	6	97			
Control Delay (s)	0.0	2.4	29.4			
Lane LOS		A	D			
Approach Delay (s)	0.0	2.4	29.4			
Approach LOS			D			
Intersection Summary						
Average Delay			6.5			
Intersection Capacity Utilization			70.4%		ICU Level of Service	C
Analysis Period (min)			15			