KNOXVILLE MULTI-USE STADIUM

TRAFFIC IMPACT STUDY

JACKSON AVENUE
KNOXVILLE, TN

CCI PROJECT NO. 00269-0020

CANNON & CANNON INC
CONSULTING ENGINEERS
FIELD SURVEYORS

PREPARED FOR:
S&ME, Inc.
6515 Nightingale Lane
Knoxville, TN 37909

SUBMITTED BY
Cannon & Cannon, Inc.
8550 Kingston Pike
Knoxville, TN 37919
865.670.8555

FEBRYARY 28
2022

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EXECUTIVE SUMMARY

This report provides a summary of a traffic impact study that was performed for the proposed Multi-Use Stadium development to be located in the "Old City" district of Knoxville, Tennessee. The project site is the existing Knox Rail Salvage property, which is bounded by Jackson Avenue to the north, Florida Street to the east, First Creek to the south, and the Hall of Fame Drive overpass to the west.

The conceptual development plan for this project proposes the following multi-use components:

- Minor League baseball stadium
- Approximately 83,000 square feet of general retail space
- Approximately 55,000 square feet of office space
- 466 multi-family residential units

The baseball stadium will be home to the Tennessee Smokies AA baseball team, and the stadium will host minor league baseball games and other events such as concerts. The capacity of the stadium will be 6,000 – 7,500 permanent seats.

The purpose of this study was the evaluation of the traffic operational and safety impacts of the proposed development upon roadways in the vicinity of the site. Appropriate intersection evaluations were conducted at the study intersections for existing and future conditions, both with and without traffic volumes generated from the proposed development, in order to determine the anticipated impacts and to establish recommended measures to mitigate these impacts. These evaluations consisted primarily of intersection capacity analyses utilizing the methods of the Highway Capacity Manual. Additionally, the presence of multimodal facilities within the vicinity of the development such as sidewalks, bike lanes, greenways, and transit stops were documented.

The primary conclusion of this study is that the traffic generated from the proposed development will have moderate impacts on study area traffic conditions. The following is a list of recommendations to mitigate traffic impacts resulting from increased traffic with the development:

1. Implement all-way stop control at the intersections of Jackson Avenue at Stadium Way and Willow Avenue / Patton Street at Stadium Way.
2. Restripe the James White Parkway Southbound Off-Ramp at Summit Hill Drive to include four approach lanes. This restriping would need to be accomplished via a high friction overlay. The lanes would be assigned as two exclusive left turn lanes and two exclusive right turn lanes. The existing bridge width on this ramp approach is approximately 50 feet; therefore, the travel lanes would need to be eleven feet wide in order to maintain several feet of shoulder on each side at the barrier rail and guardrail. The two outside left turn and right turn lanes should have a minimum storage of 250 feet. Signal display modifications for the ramp approach would need to accompany the new lane assignments.
3. Restripe the eastbound approach at the intersection of Summit Hill Drive at Hall of Fame Drive in order to modify the existing lane assignments. New lane assignments would include one exclusive left turn lane, one exclusive through lane, one shared through / right turn lane, and one exclusive right turn lane. Signal display modifications for the eastbound approach would need to accompany the new lane assignments.

4. Update signal timing at all traffic signals within the study area. The signal timing updates are critical at intersections in the immediate vicinity of the development and associated parking areas. Although signal timing changes at the intersections further away from the development may not be needed on an individual intersection basis, the timing should be updated along with the more critical intersections in order to maintain a coordinated signal system.
5. Develop a wayfinding signage plan in conjunction with the City of Knoxville, the Tennessee Department of Transportation, Knoxville-Knox County Planning, and Knoxville Area Transit. Strategic placement of wayfinding signage may alleviate expected traffic congestion on Summit Hill Drive and the James White Parkway Southbound Off-Ramp by directing traffic to the Interstate 40 at Hall of Fame Drive interchange.
6. Provide adequate sight distance at all development access points and public street intersections surrounding the development by ensuring that site grading, landscaping, signage, structures, and other site features do not restrict the driver visibility of cross streets.

INTRODUCTION & PURPOSE OF STUDY

This report provides a summary of a traffic impact study that was performed for the proposed Multi-Use Stadium development to be located in the "Old City" district of Knoxville, Tennessee. The project site is the existing Knox Rail Salvage property, which is bounded by Jackson Avenue to the north, Florida Street to the east, First Creek to the south, and the Hall of Fame Drive overpass to the west. FIGURE 1 is a location map identifying the major roadways in the project vicinity.

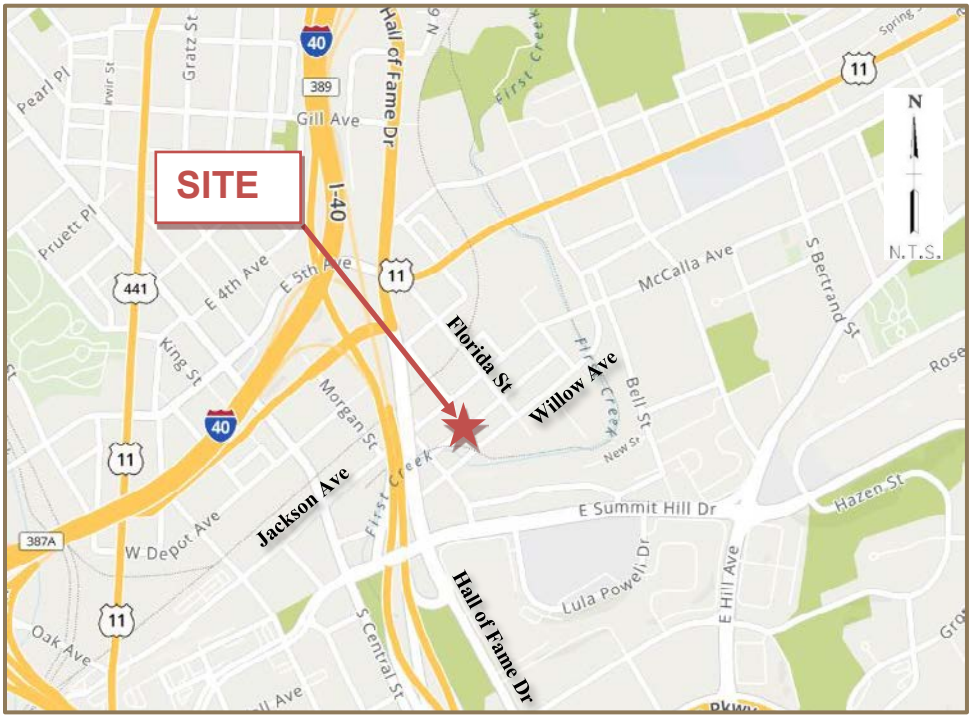


FIGURE 1
LOCATION MAP

PROJECT DESCRIPTION

The conceptual development plan for this project proposes the following multi-use components:

- Minor League baseball stadium
- Approximately 83,000 square feet of general retail space
- Approximately 55,000 square feet of office space
- 466 multi-family residential units

The baseball stadium will be home to the Tennessee Smokies AA baseball team, and the stadium will host minor league baseball games and other events such as concerts. The capacity of the stadium will be 6,000 – 7,500 permanent seats. The proposed stadium and multi-use development is anticipated to be completed in 2024. FIGURE 2 is a Conceptual Site Plan which illustrates the proposed site configuration and adjacent roadways.

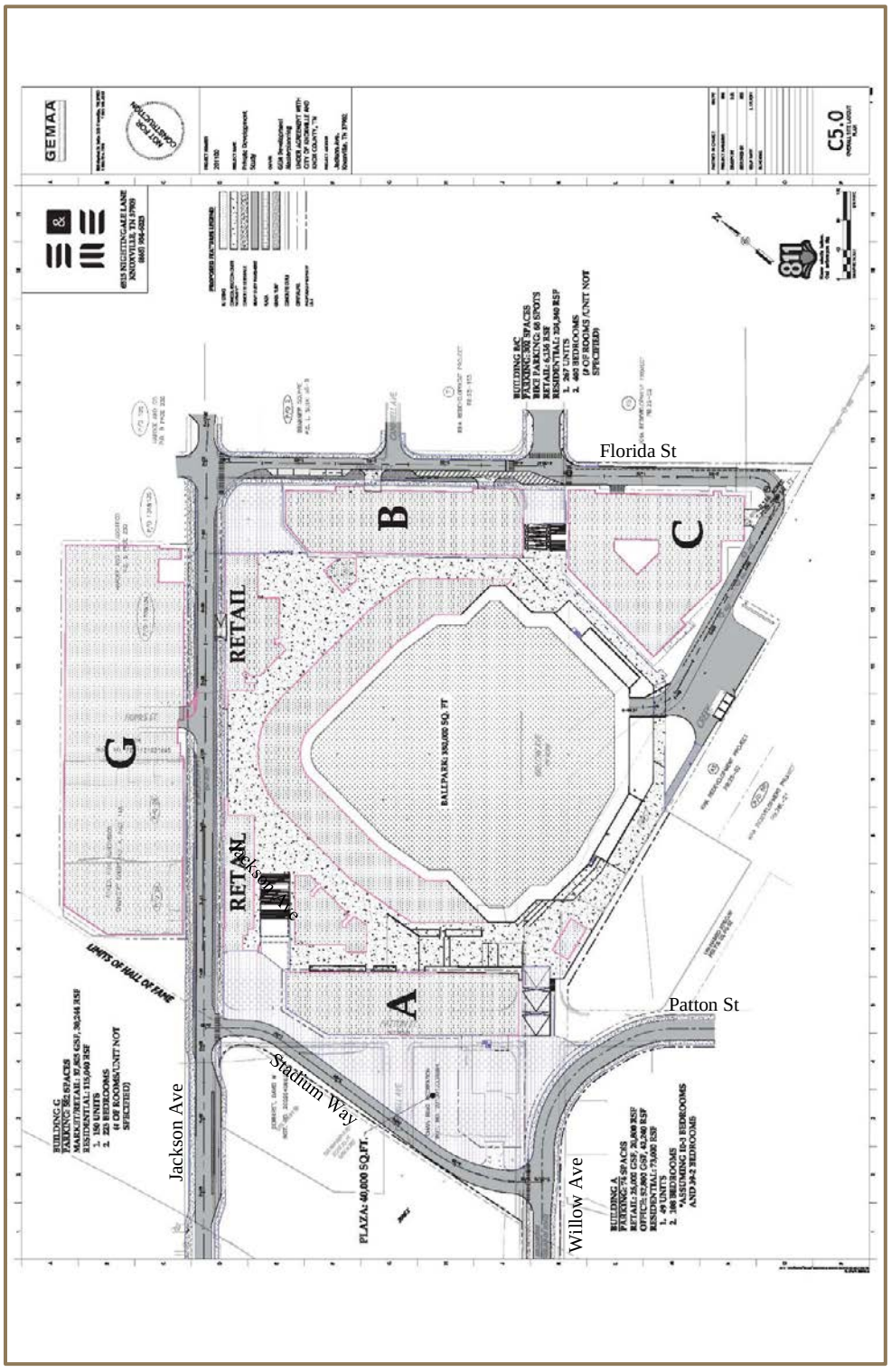


FIGURE 2
CONCEPTUAL SITE PLAN

STUDY AREA

The project study area consists of 12 key intersections, which are located both on the immediate site property and on the adjacent roadways surrounding the site, with a few being located some distance from the site. All of these were selected in consultation with representatives of the City of Knoxville, Knoxville-Knox County Planning, and the Tennessee Department of Transportation (TDOT) and were identified as intersections that have potential to be significantly impacted by traffic generated by the proposed development. The twelve study intersections include the following locations:

1. Jackson Avenue at Patton Street
2. Jackson Avenue at Florida Street / Randolph Street
3. Willow Avenue at Patton Street
4. Willow Avenue at Florida Street
5. Summit Hill Drive at Central Street
6. Summit Hill Drive at James White Parkway Southbound Off-Ramp
7. Summit Hill Drive at Hall of Fame Drive
8. Summit Hill Drive at Patton Street
9. Hall of Fame Drive at I-40 Westbound Ramps
10. Hall of Fame Drive at I-40 Eastbound Ramps
11. Hall of Fame Drive at 5th Avenue / Magnolia Avenue
12. Hall of Fame Drive at Howard Baker Jr. Avenue / Church Avenue

The purpose of this study was the evaluation of the traffic operational and safety impacts of the proposed development upon roadways in the vicinity of the site. Appropriate intersection evaluations were conducted at the study intersections for existing and future conditions, both with and without traffic volumes generated from the proposed development, in order to determine the anticipated impacts and to establish recommended measures to mitigate these impacts. These evaluations consisted primarily of intersection capacity analyses utilizing the methods of the Highway Capacity Manual. Additionally, the presence of multimodal facilities within the vicinity of the development such as sidewalks, bike lanes, greenways, and transit stops were documented.

EXISTING CONDITIONS

EXISTING ROADWAY CONDITIONS

Jackson Avenue is located to the immediate north of the project site and is classified as a Local Street. For purposes of this study, Jackson Avenue is considered an east-west roadway that runs from Broadway on the west end, where it changes names to Worlds Fair Park Drive, to First Creek on the east end, where it changes names to McCalla Avenue. Within the study limits from Patton Street to Florida Street, it consists of two travel lanes with bike lanes and sidewalk on both sides of the roadway. There is not a posted speed limit on Jackson Avenue.

Willow Avenue is located within the south end of the proposed project site, running parallel to Jackson Avenue. Willow Avenue is classified as a Local Street. It is considered an east-west roadway that runs from Central Street on the west end and makes a turn to the north where it intersects with McCalla Avenue and changes names to Jessamine Street on the east end. Within the study limits from Patton Street to Florida Street, it consists of two travel lanes with paved shoulders and sidewalk on both sides of the roadway. Willow Avenue is considered a comfortable bike route. There is not a posted speed limit on Willow Avenue.

Patton Street is located within the west end of the proposed project site, running perpendicular to Jackson Avenue and Willow Avenue. Patton Avenue is classified as a Local Street. It is considered a north-south roadway that runs from Summit Hill Drive on the south end to Jackson Avenue on the north end. Within the study limits from Summit Hill Drive to Jackson Avenue, it consists of two travel lanes with sidewalk on both sides of the roadway. There is not a posted speed limit on Patton Street.

Florida Street is located to the immediate east of the project site and is classified as a Local Street. Florida Street is a north-south roadway that runs perpendicular to Jackson Avenue and Willow Avenue, and it runs parallel to Patton Street. It runs from Willow Avenue on the south end to Jackson Avenue on the north end where it changes names to Randolph Street. Within the study limits from Willow Avenue to Jackson Avenue, it consists of two travel lanes with sidewalk on both sides of the roadway. There is not a posted speed limit on Florida Street.

Summit Hill Drive is located to the south of the project site and is classified as a Major Collector. Summit Hill Drive is considered an east-west roadway that runs from Broadway / Henley Street on the west end, where it changes names to Western Avenue, to Hill Avenue / Martin Luther King Jr. Avenue on the east end, where it changes names to Dandridge Avenue. Within the study limits from Central Street to Patton Street, Summit Hill Drive consists of four basic travel lanes (two in each direction) with sidewalk on both sides of the roadway. From Central Street to Hall of Fame Drive, it is undivided as it elevates to an overpass to cross James White Parkway. From Hall of Fame Drive to Patton Street, it is divided by a small concrete and brick median. The posted speed limit on Summit Hill Drive is 35 mph.

Hall of Fame Drive is located to the west of the project site and is considered a north-south roadway. Hall of Fame Drive runs from Hill Avenue on the south end, where is changes names to Volunteer Landing Lane, to Broadway on its north end. The southern end of Hall of Fame Drive within the study limits, from Howard Baker Jr. Avenue / Church Avenue to Summit Hill Drive, is classified as a Major

Collector. This section of roadway consists of four basic travel lanes (two in each direction) with sidewalks on both sides. It is undivided from Howard Baker Jr. Avenue / Church Avenue to the James White Parkway Northbound On-Ramp, and then it transitions to a divided section with a small raised concrete median going north to Summit Hill Drive. The posted speed limit along this section of Hall of Fame Drive is 35 mph.

The northern end of Hall of Fame Drive within the study limits, from Summit Hill Drive to the I-40 Westbound Ramps, is classified as a Minor Arterial. This section of roadway consists of four basic travel lanes (two in each direction) throughout, and the cross section varies between undivided sections, undivided with a center two-way left-turn lane, divided with a raised concrete median, and divided with a raised grass median. Sidewalks are present on both sides of the roadway except from 6th Avenue to the I-40 Westbound Ramps, and bike lanes are on both sides from Summit Hill Drive to 6th Avenue / Caswell Avenue. The posted speed limit along this section of Hall of Fame Drive is 45 mph.

TABLE 1 below shows a summary of characteristics for the roadways in the study area.

TABLE 1: ROADWAY CONDITIONS WITHIN STUDY AREA

NAME	OWNERSHIP	CLASSIFICATION	POSTED SPEED LIMIT	LANES	PEDESTRIAN FACILITIES	BICYCLE FACILITIES
Jackson Avenue	City of Knoxville	Local Street	N/A	2 undivided	Sidewalk on both sides	Bike lanes on both sides
Willow Avenue	City of Knoxville	Local Street	N/A	2 undivided	Sidewalk on both sides	Comfortable bike route
Patton Street	City of Knoxville	Local Street	N/A	2 undivided	Sidewalk on both sides	None
Florida Street	City of Knoxville	Local Street	N/A	2 undivided	Sidewalk on both sides	None
Summit Hill Drive	City of Knoxville	Major Collector	35	4 undivided and divided	Sidewalk on both sides	None
Hall of Fame Drive (southern end)	TDOT	Major Collector	35	4 undivided and divided	Sidewalk on both sides	None
Hall of Fame Drive (northern end)	TDOT	Minor Arterial	45	4 undivided and divided	Sidewalk on both sides	Bike lanes on both sides

EXISTING INTERSECTION CONDITIONS

As previously stated, this project study area consists of 12 key intersections, which are located both on the immediate site property and on the adjacent roadways surrounding the site, with a few being located some distance from the site. Descriptions of the existing geometric and traffic control conditions of these intersections are as follows, while FIGURE 3 provides a graphical representation of intersection geometry and traffic control.

Intersection #1: Jackson Avenue at Patton Street

This is a 3-legged "T" intersection with east, west, and south legs. Jackson Avenue is considered the east-west road, and Patton Street is considered the north-south road. All intersection approaches have single lanes. This intersection is unsignalized and has a stop sign for the northbound approach on Patton Street.

Curb ramps are located on the southeast and southwest corners of the intersection. There are no marked crosswalks at this intersection.

Intersection #2: Jackson Avenue at Florida Street / Randolph Street

This is a 4-legged intersection with east, west, north, and south legs. Jackson Avenue is considered the east-west road, and Florida Street / Randolph Street is considered the north-south road. Here, Florida Street comprises the south leg, and Randolph Street comprises the north leg. All intersection approaches have single lanes. This intersection is unsignalized and has stop signs for the northbound and southbound approaches on Florida Street and Randolph Street.

Curb ramps are located on all four corners of the intersection. There are no marked crosswalks at this intersection.

Intersection #3: Willow Avenue at Patton Street

This is a 4-legged intersection with east, west, north, and south legs. Willow Avenue is considered the east-west road, and Patton Street is considered the north-south road. All intersection approaches have single lanes. This intersection is unsignalized and has stop signs for the northbound and southbound approaches on Patton Street.

Curb ramps are located on all four corners of the intersection. There are no marked crosswalks at this intersection.

Intersection #4: Willow Avenue at Florida Street

The is a 3-legged "T" intersection with east, west, and north legs. Willow Avenue is considered the east-west road, and Florida Street is considered the north-south road. The eastbound and westbound approaches on Willow Avenue have single lanes. The southbound approach on Florida Street has two approach lanes; one exclusive right turn lane and one exclusive left turn lane. The right turn lane has a storage length of approximately 60 feet. This intersection is unsignalized and has a stop sign for the southbound approach on Florida Street.

Curb ramps are located on the northwest and northeast corners of the intersection. There are no marked crosswalks at this intersection.

Intersection #5: Summit Hill Drive at Central Street

This is a 4-legged intersection with east, west, north, and south legs. Summit Hill Drive is considered the east-west road, and Central Street is considered the north-south road. The south leg is one-way with only vehicles able to depart in the southbound direction; therefore, there is no northbound approach at this intersection. The lane configurations at the intersection are as follows:

- Summit Hill Drive eastbound approach: One exclusive left turn lane, one exclusive through lane, and one shared through / right turn lane. The left turn lane has a storage length of approximately 50 feet.
- Summit Hill Drive westbound approach: Two exclusive left turn lanes, one exclusive through lane, and one shared through / right turn lane. The two left turn lanes have continuous storage from the upstream intersection of Summit Hill Drive at the James White Parkway Southbound Off-Ramp.
- Central Street southbound approach: One shared left turn / through lane and one exclusive right turn lane. The right turn lane has a storage length of approximately 65 feet.

This intersection operates under signalized control. The signal runs coordinated timing plans with adjacent traffic signals. The eastbound and westbound approaches include separate left turn signal phases. The eastbound left turn phase is protected-permissive, and the westbound left turn phase is protected only.

Curb ramps are located on all four corners of the intersection. Marked crosswalks are present on all four legs at this intersection. Protected pedestrian signal phases exist crossing the east, north, and south legs.

Intersection #6: Summit Hill Drive at James White Parkway Southbound Off-Ramp

This is a 3-legged "T" intersection with east, west, and north legs. Summit Hill Drive is considered the east-west road, and the James White Parkway Southbound Off-Ramp is considered the north-south road. The lane configurations are as follows:

- Summit Hill Drive eastbound approach: Three through lanes. The rightmost through lane has continuous storage from the upstream intersection of Summit Hill Drive at Central Street.
- Summit Hill Drive westbound approach: Two through lanes.
- James White Parkway Southbound Off-Ramp southbound approach: One exclusive left turn lane and two exclusive right turn lanes. The rightmost right turn lane has a storage length of approximately 250 feet.

This intersection operates under signalized control. The signal runs coordinated timing plans with adjacent traffic signals.

Curb ramps are located on the northwest and northeast corners of the intersection. A marked crosswalk is present on the north leg at the intersection. A protected pedestrian signal phase exists crossing the north leg.

Intersection #7: Summit Hill Drive at Hall of Fame Drive

This is a 4-legged intersection with east, west, north, and south legs. Summit Hill Drive is considered the east-west road, and Hall of Fame Drive is considered the north-south road. The lane configurations are as follows:

- Summit Hill Drive eastbound approach: One exclusive left turn lane, two exclusive through lanes, and one exclusive right turn lane. The left turn lane has continuous storage from the upstream intersection of Summit Hill Drive at James White Parkway Southbound Off-Ramp. The right turn lane storge is dropped from a through lane at the same upstream intersection.
- Summit Hill Drive westbound approach: One exclusive left turn lane, one exclusive through lane, and shared through / right turn lane. The left turn lane has a storage length of approximately 165 feet.
- Hall of Fame Drive northbound approach: One exclusive left turn lane, one exclusive through lane, and one shared through / right turn lane. The left turn lane has a storage length of approximately 230 feet.
- Hall of Fame Drive southbound approach: One exclusive left turn lane, two exclusive through lanes, and one exclusive right turn lane. The left turn lane has a storage of approximately 165 feet, and the right turn lane has a storage of approximately 60 feet.

This intersection operates under signalized control. The signal runs coordinated timing plans with adjacent traffic signals. All four approaches include separate protected-permissive left turn signal phases. The eastbound and southbound approaches include right turn overlap phases.

Curb ramps are located on all four corners of the intersection. Marked crosswalks are present on all four legs of this intersection. Protected pedestrian signal phases exist crossing all four legs.

Intersection #8: Summit Hill Drive at Patton Street

This is a 3-legged "T" intersection with east, west, and north legs. Summit Hill Drive is considered the east-west road, and Patton Street is considered the north-south road. The lane configurations are as follows:

- Summit Hill Drive eastbound approach: One exclusive left turn lane and two though lanes. The left turn lane has a storage length of approximately 60'. Additionally, the eastbound departure has a left acceleration lane with an approximate storage length of 70'. This storage lane is utilized by vehicles making the southbound left turn movement.
- Summit Hill Drive westbound approach: One exclusive through lane and one shared through / right turn lane.
- Patton Street southbound approach: One shared left turn / right turn lane. This approach includes a raised channelization island for the right turn movement.

This intersection is unsignalized and has a stop sign for the southbound approach on Patton Street. Additionally, the channelized southbound right turn movement on Patton Street is controlled by a yield sign.

Curb ramps are located on the northwest and northeast corners of the intersection. There are no marked crosswalks at this intersection.

Intersection #9: Hall of Fame Drive at I-40 Westbound Ramps

This is a 4-legged intersection with east, west, north, and south legs. The I-40 Westbound Ramps are considered the east-west road, and Hall of Fame Drive is considered the north-south road. The west

leg is one-way with only vehicles able to depart in the westbound direction; therefore, there is no eastbound approach at this intersection. The lane configurations are as follows:

- I-40 Westbound Ramps westbound approach: One exclusive left turn lane and one shared left turn / right turn lane. This approach includes a large raised channelized island for the right turn movement. Although the rightmost lane is technically shared, the channelized island is so large that the right turn movement operates as if it has its own exclusive storage. The leftmost left turn lane has a storage length of approximately 475 feet.
- Hall of Fame Drive northbound approach: One exclusive left turn lane and two exclusive through lanes. The left turn lane has a storage length of approximately 155 feet.
- Hall of Fame Drive southbound approach: One exclusive through lane and one shared through / right turn lane. This approach includes a very large raised channelized island for the right turn movement. Although the rightmost lane is technically shared, the channelized island is so large that the right turn movement operates as if it has its own exclusive storage.

This intersection operates under signalized control, and the westbound and southbound right turn movements operate under yield control. The signal runs coordinated timing plans with adjacent traffic signals. The northbound approach includes a separate protected-permissive left turn signal phase. There are no pedestrian facilities at this intersection.

Intersection #10: Hall of Fame Drive at I-40 Eastbound Ramps

This is a 4-legged intersection with east, west, north, and south legs. The I-40 Eastbound Ramps are considered the east-west road, and Hall of Fame Drive is considered the north-south road. The east leg is one-way with only vehicles able to depart in the eastbound direction; therefore, there is no westbound approach at this intersection. The lane configurations are as follows:

- I-40 Eastbound Ramps eastbound approach: Two exclusive left turn lanes and one exclusive right turn lane. This approach includes a large raised channelized island for the right turn movement. The leftmost left turn lane has a storage length of approximately 200 feet, and the right turn lane has a storage length of approximately 210 feet.
- Hall of Fame Drive northbound approach: Two exclusive through lanes and one exclusive right turn lane. This approach includes a large raised channelized island for the right turn movement. The right turn lane has a storage length of approximately 290 feet.
- Hall of Fame Drive southbound approach: One exclusive left turn lane and two exclusive through lanes. The left turn lane has a storage length of approximately 190 feet.

This intersection operates under signalized control, and the eastbound and northbound right turn movements operate under yield control. The signal runs coordinated timing plans with adjacent traffic signals. The southbound approach includes a separate protected-permissive left turn signal phase. There are no pedestrian facilities at this intersection.

Intersection #11: Hall of Fame Drive at 5th Avenue / Magnolia Avenue

This is a 4-legged intersection with east, west, north, and south legs. 5th Avenue / Magnolia Avenue is considered the east-west road, and Hall of Fame Drive is considered the north-south road. Here, 5th

Avenue comprises the east leg, and Magnolia Avenue comprises the west leg. The lane configurations are as follows:

- 5th Avenue eastbound approach: One exclusive left turn lane, two exclusive through lanes, and one exclusive right turn lane. The left turn lane has a storage length of approximately 245 feet, and the right turn lane has a storage length of approximately 35 feet.
- Magnolia Avenue westbound approach: Two exclusive left turn lanes, one exclusive through lane, and one shared through / right turn lane. The left turn lanes have a storage length of approximately 295 feet.
- Hall of Fame Drive northbound approach: One exclusive left turn lane, two exclusive through lanes, and one exclusive right turn lane. The left turn lane has a storage length of approximately 230 feet, and the right turn lane has a storage length of approximately 245 feet.
- Hall of Fame Drive southbound approach: One exclusive left turn lane, two exclusive through lanes, and one exclusive right turn lane. The left turn lane has a storage length of approximately 175 feet, and the right turn lane has a storage length of approximately 175 feet.

This intersection operates under signalized control. The signal runs coordinated timing plans with adjacent traffic signals. All four approaches include separate left turn signal phases. The left turn phase for the westbound approach is protected only, and the other left turn phases are all protected-permissive. The eastbound and southbound approaches include right turn overlap phases.

Curb ramps are located on all four corners of the intersection. Marked crosswalks are present on all four legs of this intersection. Protected pedestrian signal phases exist crossing all four legs.

Intersection #12: Hall of Fame Drive at Howard Baker Jr. Avenue / Church Avenue

This is a 4-legged intersection with east, west, north, and south legs. Howard Baker Jr. Avenue / Church Avenue is considered the east-west road, and Hall of Fame Drive is considered the north-south road. Here, Church Avenue comprises the east leg, and Howard Baker Jr. Avenue comprises the west leg. The lane configurations are as follows:

- Church Avenue eastbound approach: One exclusive left turn lane and one shared through / right turn lane. This approach includes a raised channelization island for the right turn movement. The right turn is free flow and becomes an added lane on the southbound departure. The left turn lane has a storage length of approximately 60 feet.
- Howard Baker Jr. Avenue westbound approach: One exclusive left turn lane, one exclusive through lane, and one exclusive right turn lane. The left turn lane has a storage length of approximately 130 feet. The right turn lane storge is dropped from a through lane at the upstream intersection of Howard Baker Jr. Avenue at Hill Avenue.
- Hall of Fame Drive northbound approach: One shared left turn / through lane and one shared through / right turn lane.
- Hall of Fame Drive southbound approach: One shared left turn / through lane and one shared through / right turn lane.

This intersection operates under signalized control. The signal runs coordinated timing plans with adjacent traffic signals. The eastbound and westbound approaches include separate protected-permissive left turn signal phases.

Curb ramps are located on all four corners of the intersection. Marked crosswalks are present on all four legs of this intersection. Protected pedestrian signal phases exist crossing all four legs.

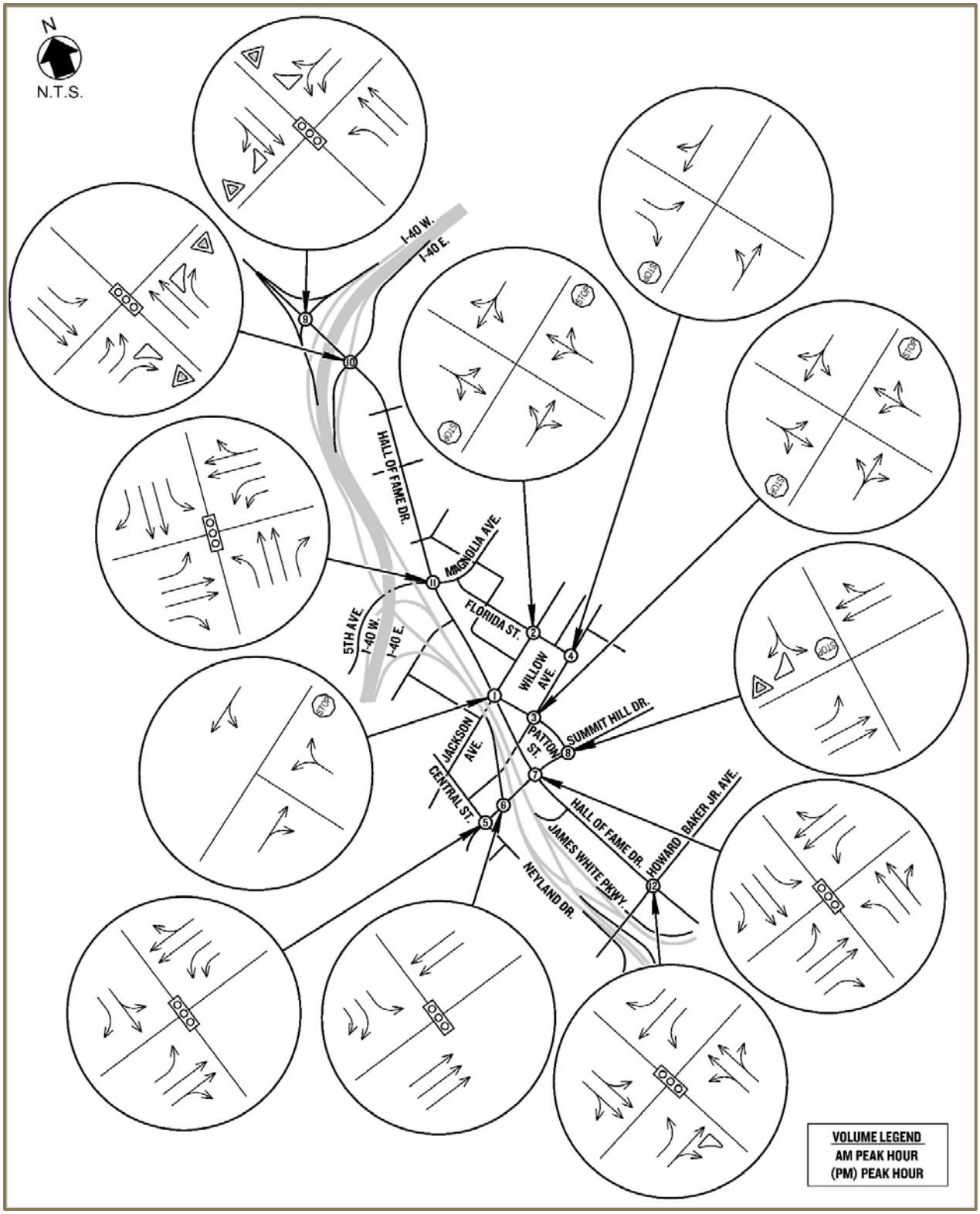


FIGURE 3
LANE CONFIGURATIONS AND INTERSECTION CONTROL

MULTIMODAL FACILITIES

As previously stated, the proposed development will be located in the "Old City" district of Knoxville, and much of the parking for trips destined to the development will occur at offsite parking lots and garages. Therefore, multimodal facilities serving pedestrians, bicyclists, and transit riders are expected to play an integral role in serving travel demand to the site. A multimodal inventory was performed in the immediate vicinity of the proposed development as well as along the path from the Knoxville Auditorium and Coliseum parking garages to the site. FIGURE 4 shows a graphical summary of the presence of sidewalk, bicycle lanes, and transit stops within the vicinity of the site, and a written description of these facilities is provided in the following paragraphs.

Due to the urban nature of the area surrounding the proposed development site, most roadways adjacent to the site and within the walking path from parking areas to the site include sidewalk on both sides. The exceptions to this are in spots along the north side of Jackson Avenue east of Florida Street and along much of the north and south sides of Campbell Avenue. Although Campbell Avenue does not contain any of the study intersections, it is located directly east of the site running between and parallel to Jackson Avenue and Willow Avenue. Its entire length is only one block from Florida Street on the west end to Kentucky Street on the east end. Where sidewalks are present in the vicinity of the development, the general widths range from four to eight feet.

Bike lanes are present on Jackson Avenue from Patton Street at the development and continuing east along Jackson Avenue and McCalla Avenue to Bertrand Street. Willow Avenue does not have dedicated bike lanes, but it is considered a "comfortable bike route" on Knoxville-Knox County Planning's regional bicycle facilities map.

There are three Knoxville Area Transit (KAT) bus stops along Jackson Avenue within two blocks of the proposed development. Several additional bus stops exist in the vicinity of the development along Willow Avenue, Summit Hill Drive, and Hall of Fame Drive.

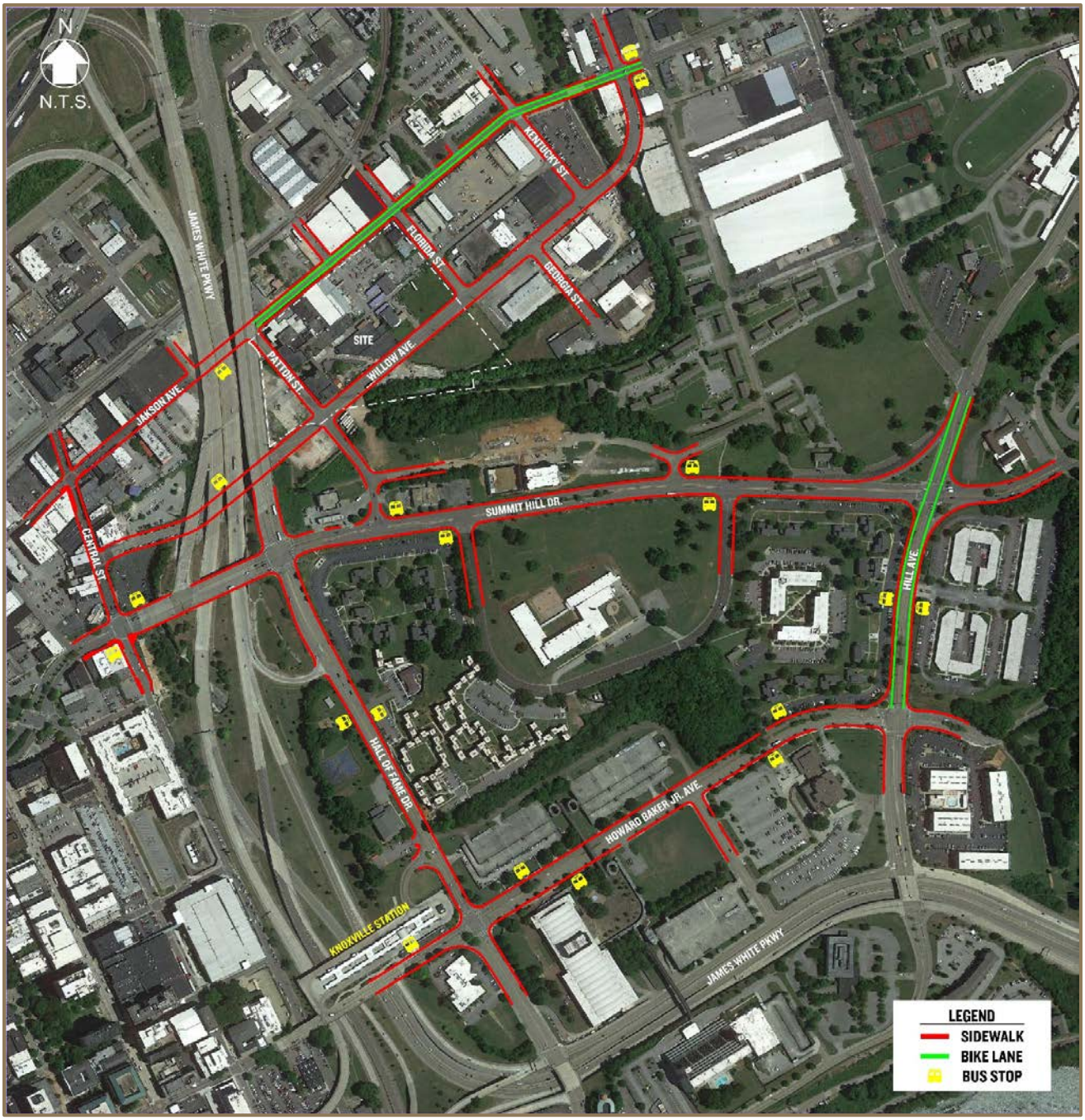


FIGURE 4
MULTIMODAL INVENTORY

EXISTING SITE CONDITIONS

The project site is the former Knox Rail Salvage property, which is bounded by Jackson Avenue to the north, Florida Street to the east, First Creek to the south, and the Hall of Fame Drive overpass to the west. Most of the site is currently zoned I-MU, while one parcel in the northwest quadrant of the intersection of Willow Avenue at Patton Street is zoned I-G. FIGURE 5 provides an aerial photograph of the existing site conditions.



FIGURE 5
EXISTING SITE CONDITIONS

EXISTING TRAFFIC DATA

The Tennessee Department of Transportation (TDOT) collects annual average daily traffic (AADT) data on roadways in the study area. Two count stations were identified on study roadways in the vicinity of the project site which are likely to have particular relevance for this study. The last ten years of traffic data from these two counts are summarized in TABLE 2.

TABLE 2: ANNUAL AVERAGE DAILY TRAFFIC COUNT SUMMARY

COUNT YEAR	STATION 47000373 SUMMIT HILL DRIVE EAST OF HALL OF FAME DRIVE	STATION 47000511 HALL OF FAME DRIVE NORTH OF 5TH AVENUE
2019	9,140	14,267
2018	10,510	13,915
2017	10,030	14,393
2016	9,995	14,274
2015	9,732	13,730
2014	10,031	14,146
2013	10,257	13,487
2012	10,415	14,819
2011	10,112	12,353
2010	9,796	12,291
2009	11,111	N/A

In addition to the available TDOT AADT data, traffic data was collected specifically for this study. Intersection turning movement counts (TMC) were conducted at the existing study intersections to determine the current peak hour operating volumes. The traffic counts were conducted during the hours of 7am – 9am, 11am – 1pm, and 4pm – 6pm on a typical weekday during February and March 2021. Additional ADT data was also collected at the following locations: Jackson Avenue east of Patton Street, Summit Hill Drive west of Central Street, and Hall of Fame Drive south of 5th Avenue / Magnolia Avenue. The ADT data was collected for a full 7-day weeklong period in February 2021.

During the time of traffic data collection, regional traffic volumes and patterns were recovering from COVID-19 pandemic restrictions including business and school closures and widespread telecommuting or working from home practices. In consultation with the Knoxville-Knox County Planning, the City of Knoxville, and TDOT, the collected intersection turning movement count data was increased by 20% to address reductions in typical travel volumes due to the ongoing pandemic.

Saturday traffic is being analyzed with this study due to the likelihood of the stadium hosting Saturday events. Since turning movement counts were not collected on a Saturday, a factor of the weekday midday was developed to estimate Saturday intersection traffic volumes. This factor was developed by comparing ADT data during the midday peak to Saturday ADT data. The factor was then applied to the midday peak hour TMC data in order estimate a Saturday TMC. TABLE 3 shows a summary of peak hours, traffic volumes, and factors used to derive the Saturday turning movement volumes.

TABLE 3: SATURDAY MIDDAY VOLUME FACTORS

ID	INTERSECTION	MD TMC PEAK HOUR	ADT LOCATION	ADT MD PEAK HOUR VOLUME	ADT SAT PEAK HOUR	ADT SAT PEAK HOUR VOLUME	SAT TMC FACTOR
1	Jackson at Patton	11:45am – 12:45pm	Jackson	124	2:00pm – 3:00pm	99	0.80
2	Jackson at Florida	11:45am – 12:45pm	Jackson	124	2:00pm – 3:00pm	99	0.80
3	Willow at Patton	12:00pm – 1:00pm	Jackson	117	2:00pm – 3:00pm	99	0.85
4	Willow at Florida	12:00pm – 1:00pm	Jackson	117	2:00pm – 3:00pm	99	0.85
5	Summit Hill at Central	12:00pm – 1:00pm	Summit Hill	558	5:00pm – 6:00pm	660	1.18
6	Summit Hill at James White SB	12:00pm – 1:00pm	Summit Hill	558	5:00pm – 6:00pm	660	1.18
7	Summit Hill at Hall of Fame	12:00pm – 1:00pm	Summit Hill	558	5:00pm – 6:00pm	660	1.18
8	Summit Hill at Patton	12:00pm – 1:00pm	Summit Hill	558	5:00pm – 6:00pm	660	1.18
9	Hall of Fame at I-40 WB	11:45am – 12:45pm	Hall of Fame	472	11:30am – 12:30pm	567	1.20
10	Hall of Fame at I-40 EB	11:45am – 12:45pm	Hall of Fame	472	11:30am – 12:30pm	567	1.20
11	Hall of Fame at Magnolia	12:00pm – 1:00pm	Hall of Fame	478	11:30am – 12:30pm	567	1.19
12	Hall of Fame at Howard Baker	12:00pm – 1:00pm	Hall of Fame	478	11:30am – 12:30pm	567	1.19

The raw 2021 peak hour volumes for the AM and midday (MD) traffic periods are shown on FIGURE 6, and FIGURE 6A shows the same data for the PM and Saturday midday (SAT) traffic periods. The adjusted 2021 volumes with the 20% COVID-19 increase applied are shown in FIGURES 7 and 7A. These peak hour volumes were the ones used for the intersection capacity analysis of existing conditions. The raw ADT and intersection turning movement data are contained in APPENDIX A.

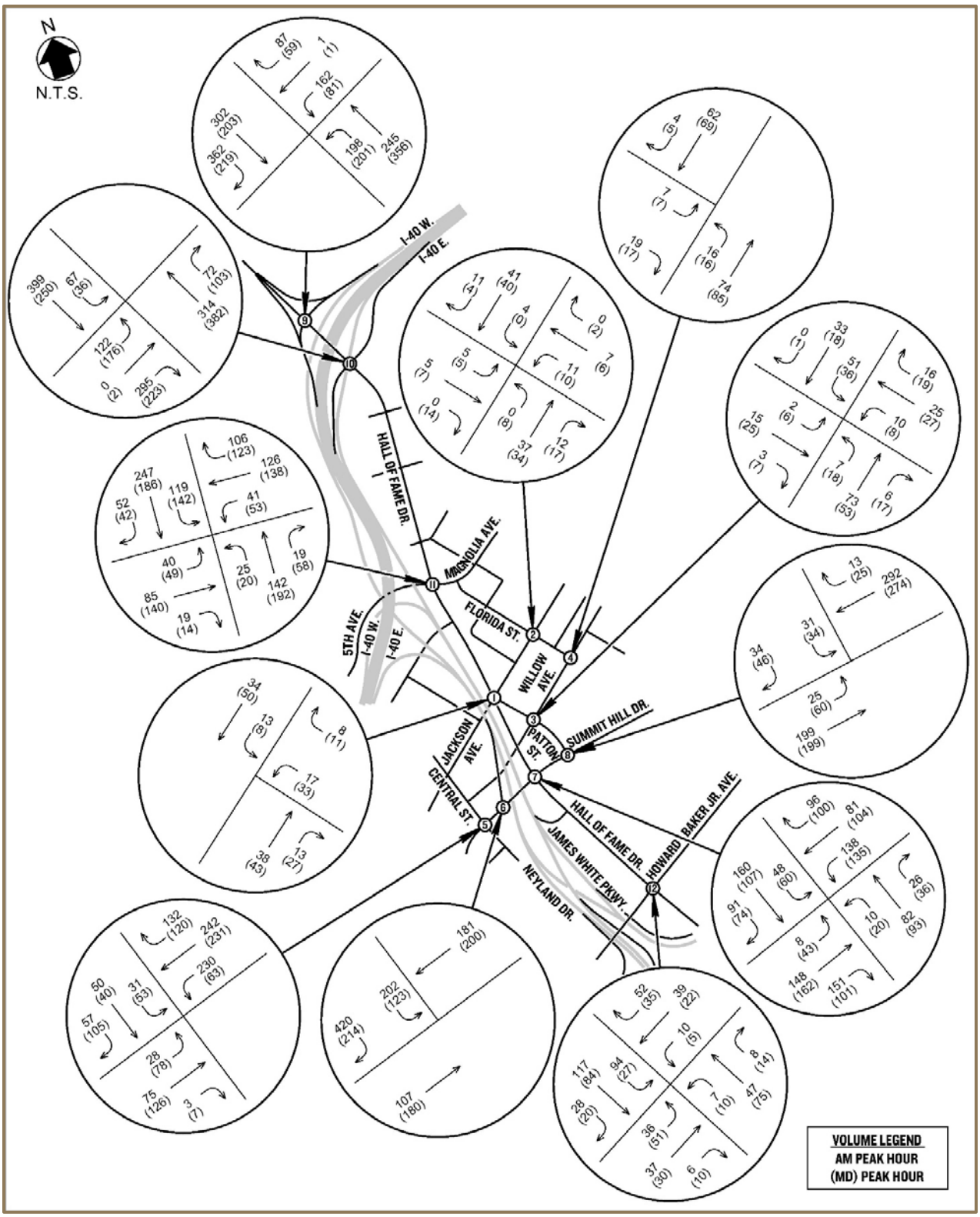


FIGURE 6
2021 EXISTING RAW TRAFFIC DATA (AM & MD)

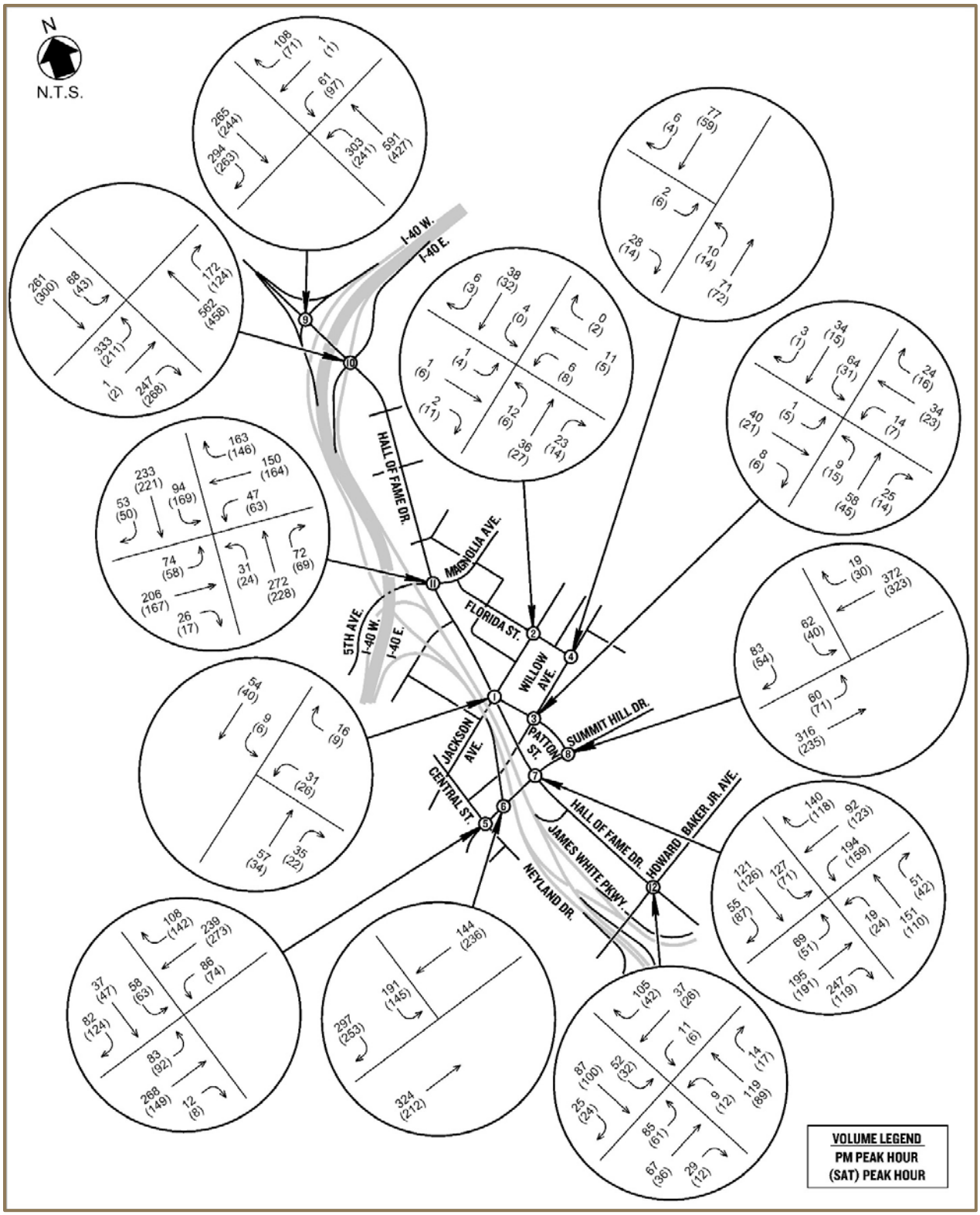


FIGURE 6A
2021 EXISTING RAW TRAFFIC DATA (PM & SAT)

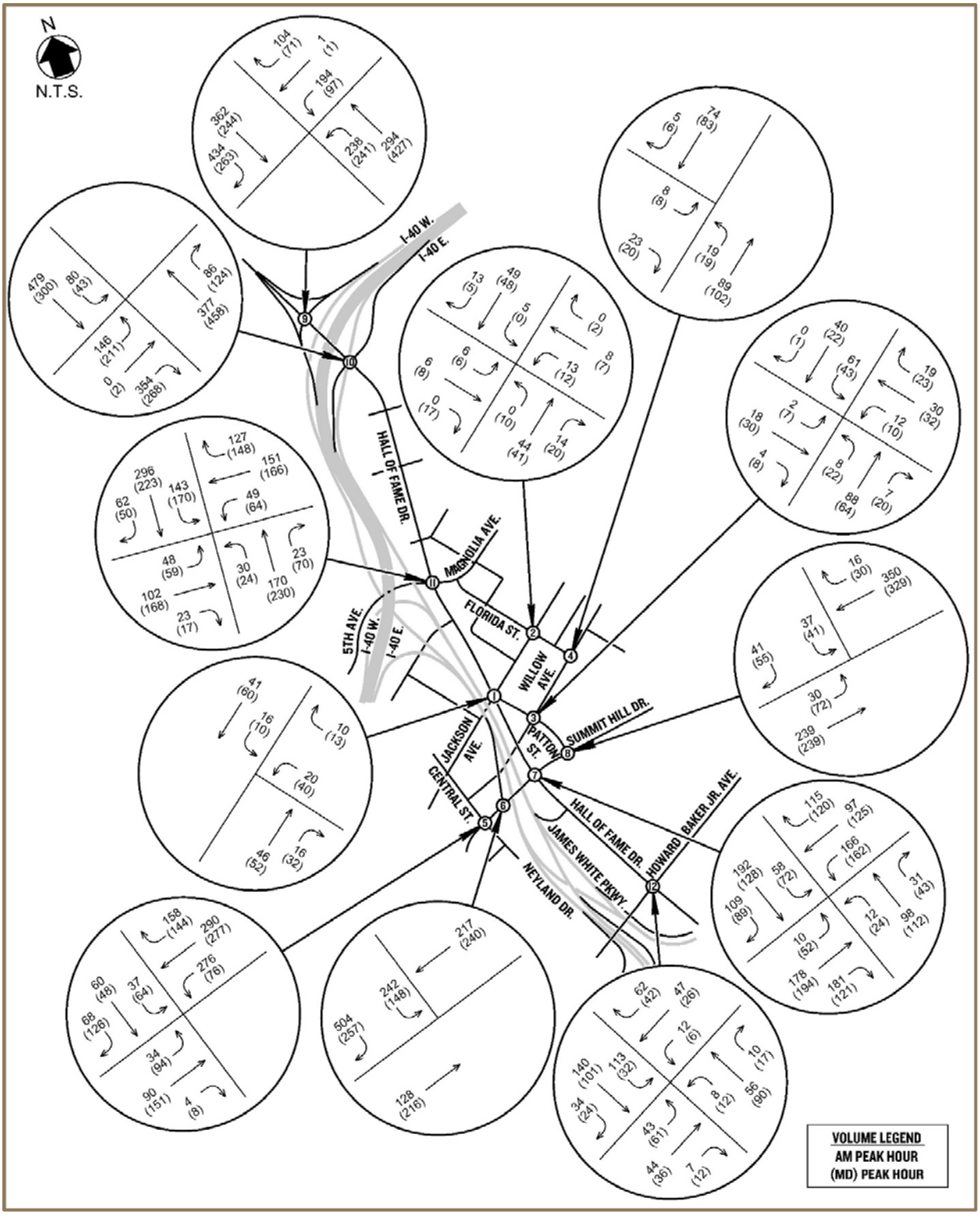


FIGURE 7
2021 EXISTING FACTORED TRAFFIC DATA (AM & MD)

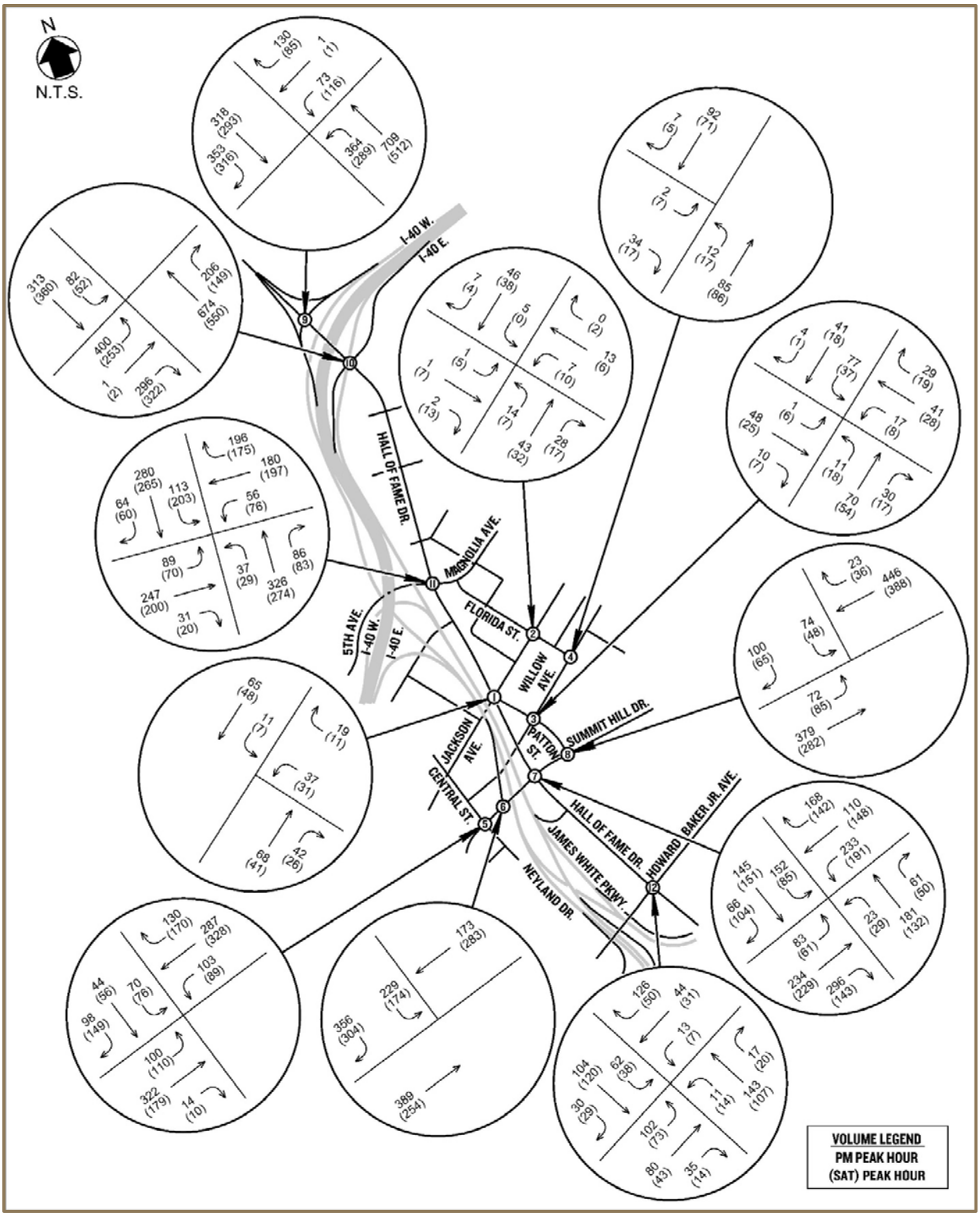


FIGURE 7A
2021 EXISTING FACTORED TRAFFIC DATA (PM & SAT)

EXISTING CAPACITY ANALYSES / LEVELS-OF-SERVICE

Capacity analyses for this project were conducted for the study intersections utilizing *Synchro 10* software. These evaluations were conducted for the AM, MD, PM, and SAT peak hours under existing intersection geometry and traffic control. Existing signal timing was obtained from the City of Knoxville, and the existing timing was input into the *Synchro* model at all signalized intersections for these evaluations. A description of the fundamentals of these procedures is contained in APPENDIX B, in the section entitled "Capacity and Level-of-Service Concepts".

The results of these analyses for the existing traffic conditions were that all side street movements at unsignalized intersections are operating at level-of-service (LOS) "B" or better, and all signalized intersections are operating at LOS "C" or better for the overall intersection during all peak traffic periods. TABLE 4 provides a summary of the capacity analyses results for existing conditions, and more detailed information is contained on the capacity software print-out summaries in APPENDIX B.

TABLE 4: EXISTING CONDITIONS CAPACITY ANALYSES SUMMARY

ID	INTERSECTION	TRAFFIC CONTROL	MOVEMENT / APPROACH	AM PEAK	MD PEAK	PM PEAK	SAT PEAK
1	Jackson at Patton	Side Street Stop	WB NB	A 2.1 A 9.2	A 1.1 A 9.5	A 1.1 A 9.6	A 0.9 A 9.2
2	Jackson at Florida	Side Street Stop	EB WB NB SB	A 0.0 A 0.5 A 9.7 A 9.7	A 1.0 A 0.0 A 9.7 A 9.3	A 1.2 A 0.6 B 10.2 A 9.3	A 0.9 A 0.0 A 9.5 A 9.1
3	Willow at Patton	Side Street Stop	EB WB NB SB	A 0.6 A 4.6 B 11.0 B 11.1	A 1.5 A 4.9 B 10.7 B 11.0	A 0.7 A 4.8 B 12.4 B 12.5	A 1.5 A 4.9 B 10.3 B 10.6
4	Willow at Florida	Side Street Stop	EB SBL SBR	A 1.3 A 9.8 A 8.8	A 1.2 B 10.1 A 8.9	A 0.9 A 9.8 A 9.0	A 1.2 A 9.8 A 8.8
5	Summit Hill at Central	Signal	EB WB SB Overall	A 7.2 C 23.0 D 35.9 C 23.1	A 5.5 B 11.4 C 28.1 B 13.9	A 6.4 B 13.8 C 34.7 B 14.8	A 6.2 B 12.6 C 28.0 B 14.7
6	Summit Hill at James White SB	Signal	EB WB SB Overall	B 13.7 A 6.4 B 15.1 B 13.2	A 6.4 A 6.7 B 17.5 B 11.7	B 12.9 A 8.9 B 18.0 B 14.9	A 7.3 A 7.7 B 16.6 B 11.8
7	Summit Hill at Hall of Fame	Signal	EB WB NB SB Overall	D 36.3 C 24.7 B 18.7 B 10.8 C 23.4	C 32.3 C 25.0 B 18.3 A 8.6 C 22.4	C 22.7 C 22.3 B 15.0 A 8.1 B 18.4	C 31.9 C 24.8 C 20.0 B 13.4 C 23.6
8	Summit Hill at Patton	Side Street Stop	EBL SB	A 8.2 A 9.6	A 8.3 A 9.6	A 8.7 B 12.6	A 8.5 B 10.8
9	Hall of Fame at I-40 WB	Signal	WB NB SB Overall	C 30.3 A 6.3 A 6.5 B 10.8	C 26.8 A 2.1 A 3.3 A 5.6	B 16.6 A 5.5 A 5.7 A 6.8	C 26.8 A 3.0 A 4.1 A 6.4
10	Hall of Fame at I-40 EB	Signal	EB NB SB Overall	B 13.9 A 4.0 A 3.0 A 6.9	C 21.0 A 3.6 A 1.4 A 9.0	C 27.0 A 7.3 A 4.2 B 13.6	C 21.3 A 5.5 A 1.5 A 9.9
11	Hall of Fame at Magnolia	Signal	EB WB NB SB Overall	C 32.8 C 31.7 A 9.0 A 8.7 B 18.3	D 37.1 C 31.3 A 8.2 A 8.9 B 19.8	C 35.0 C 29.1 B 13.1 B 10.8 C 21.3	D 36.1 C 28.9 B 12.9 B 10.3 C 20.5
12	Hall of Fame at Howard Baker	Signal	EB WB NB SB Overall	D 35.1 C 28.0 A 4.6 A 3.4 B 13.9	C 33.2 C 21.4 A 4.6 A 3.3 B 13.6	C 31.3 C 25.4 A 6.7 A 2.7 B 17.1	C 33.2 C 23.0 A 4.9 A 3.6 B 14.1

BACKGROUND CONDITIONS

BACKGROUND TRAFFIC GROWTH

The proposed development is anticipated to be constructed in one general phase with completion in year 2024. Therefore, year 2024 was established as the appropriate design / analysis year for the study. In order to determine traffic volumes resulting solely from background traffic growth to year 2024, it was necessary to establish an annual growth rate for existing traffic. The TDOT ADT values previously discussed, as well as knowledge of the area, were used to determine an appropriate annual growth rate. Based on the available data, a background annual growth rate of one percent (1.0%) was established. FIGURE 8 contains the AM and MD peak hour traffic volumes that would result from this annual growth rate from year 2021, when the counts were conducted, to year 2024. FIGURE 8A shows these background traffic volumes for the PM and SAT peak hours.

BACKGROUND CAPACITY ANALYSES / LEVELS-OF-SERVICE

As mentioned in the EXISTING CONDITIONS section of this report, capacity analyses for this project were conducted for the study intersections utilizing *Synchro 10* software. These evaluations were conducted for the AM, MD, PM, and SAT peak hours under existing intersection geometry and traffic control with the background volumes shown in FIGURES 8 and 8A.

The results of these analyses for the background traffic conditions were that all side street movements at unsignalized intersections will operate at LOS "B" or better, and all signalized intersections will operate at LOS "C" or better for the overall intersection during all peak traffic periods. TABLE 5 provides a summary of the capacity analyses results for background conditions, and more detailed information is contained on the capacity software print-out summaries in APPENDIX B.

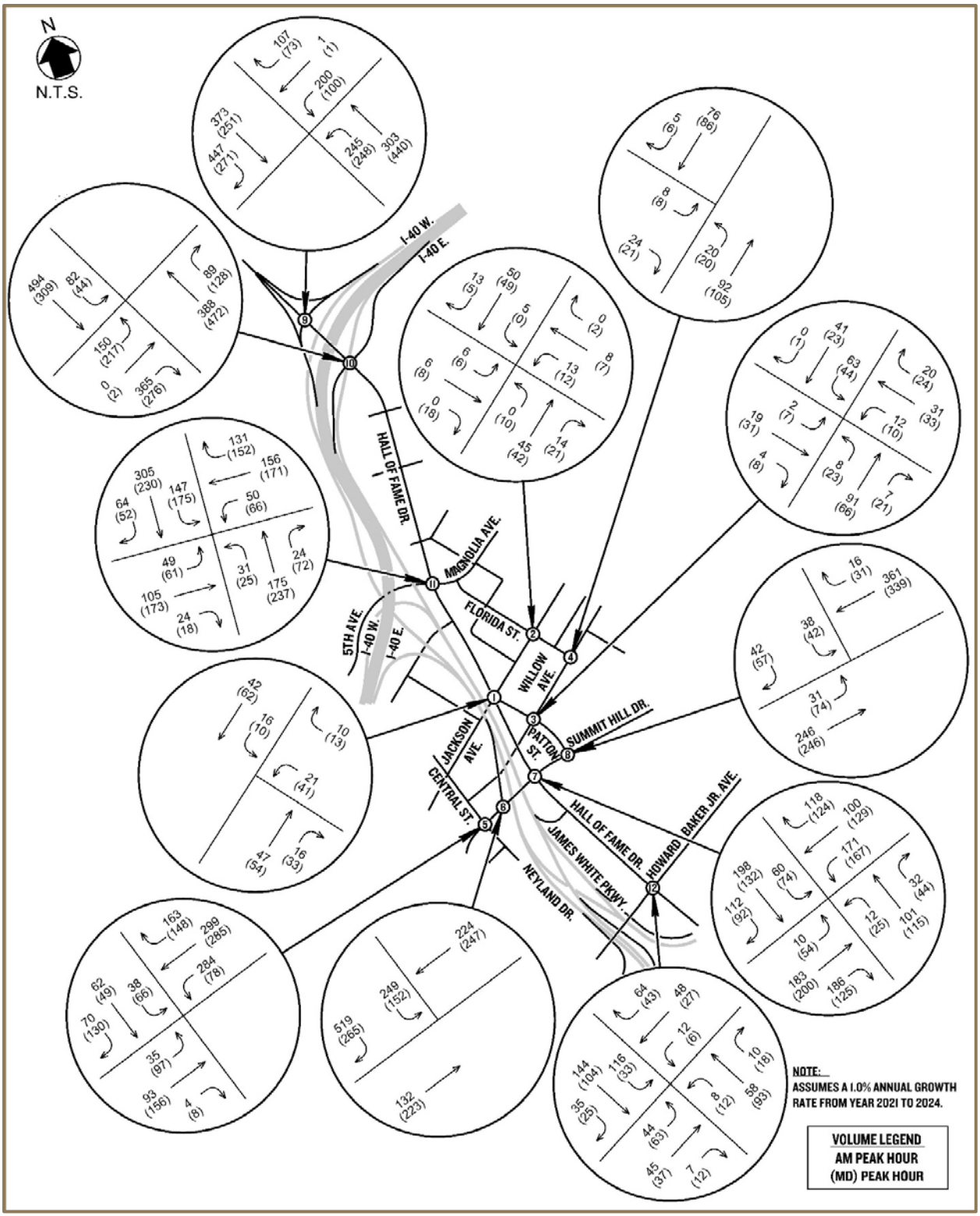


FIGURE 8
2024 BACKGROUND TRAFFIC DATA (AM & MD)

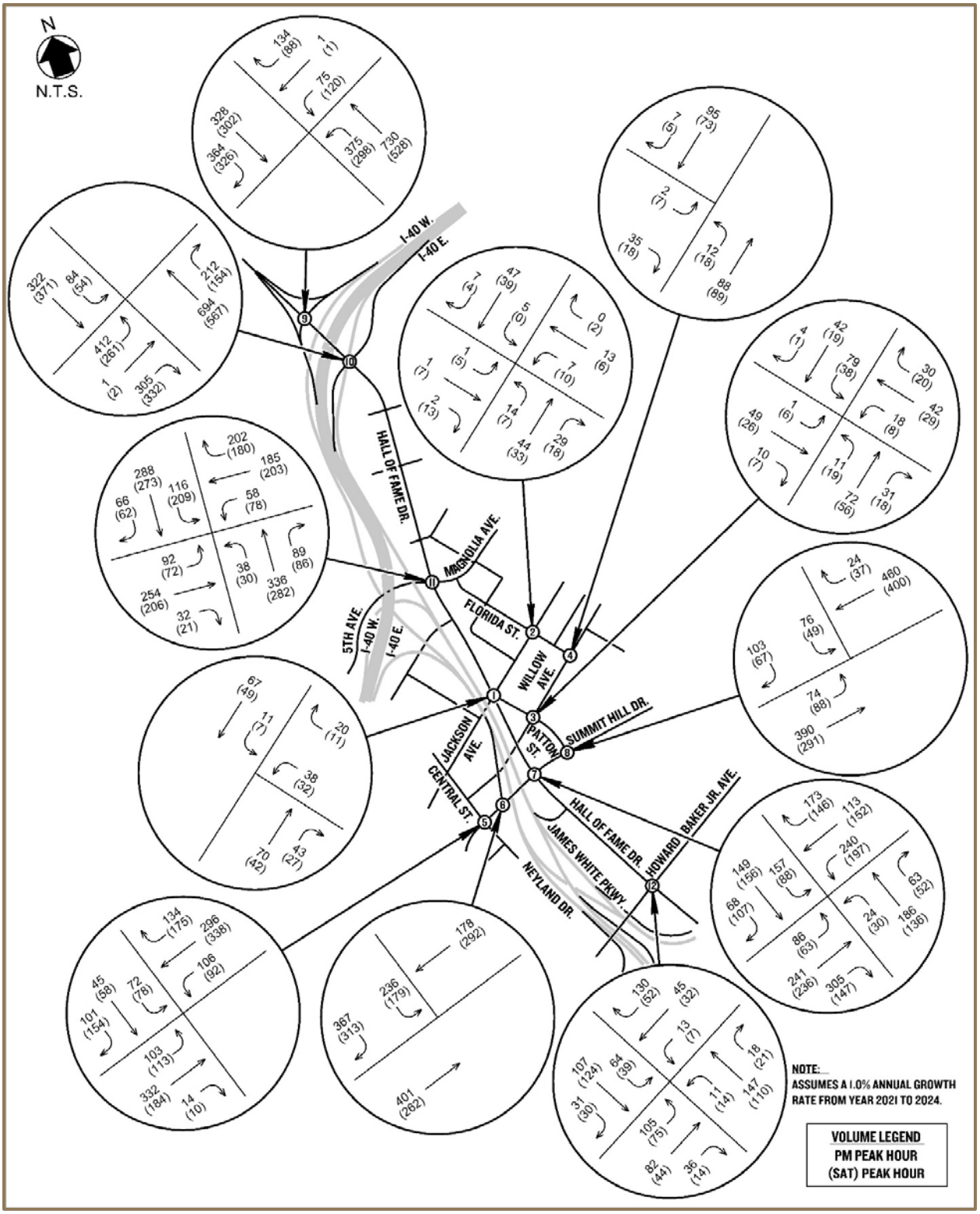


FIGURE 8A
2024 BACKGROUND TRAFFIC DATA (PM & SAT)

TABLE 5: BACKGROUND CONDITIONS CAPACITY ANALYSES SUMMARY

ID	INTERSECTION	TRAFFIC CONTROL	MOVEMENT / APPROACH	AM PEAK	MD PEAK	PM PEAK	SAT PEAK
1	Jackson at Patton	Side Street Stop	WB NB	A 2.0 A 9.3	A 1.0 A 9.5	A 1.1 A 9.7	A 0.9 A 9.2
2	Jackson at Florida	Side Street Stop	EB WB NB SB	A 0.0 A 0.5 A 9.8 A 9.8	A 1.0 A 0.0 A 9.8 A 9.3	A 1.2 A 0.6 B 10.2 A 9.3	A 0.9 A 0.0 A 9.5 A 9.1
3	Willow at Patton	Side Street Stop	EB WB NB SB	A 0.6 A 4.6 B 11.1 B 11.2	A 1.5 A 4.8 B 10.8 B 11.1	A 0.7 A 4.8 B 12.5 B 12.6	A 1.5 A 4.9 B 10.4 B 10.7
4	Willow at Florida	Side Street Stop	EB SBL SBR	A 1.3 A 9.8 A 8.8	A 1.2 B 10.2 A 8.9	A 0.9 A 9.8 A 9.0	A 1.2 A 9.9 A 8.8
5	Summit Hill at Central	Signal	EB WB SB Overall	A 7.4 C 23.1 D 36.1 C 23.2	A 5.6 B 11.5 C 28.0 B 14.0	A 6.5 B 13.9 C 34.8 B 15.0	A 6.4 B 12.8 C 28.0 B 14.8
6	Summit Hill at James White SB	Signal	EB WB SB Overall	B 13.8 A 6.5 B 15.0 B 13.2	A 6.5 A 6.8 B 17.4 B 11.7	B 13.1 A 9.2 B 17.9 B 15.0	A 7.4 A 7.8 B 16.5 B 11.8
7	Summit Hill at Hall of Fame	Signal	EB WB NB SB Overall	D 36.2 C 24.6 B 18.9 B 10.7 C 23.4	C 32.2 C 24.9 B 18.6 A 9.1 C 22.5	C 22.7 C 22.3 B 15.6 A 8.5 B 18.6	C 31.9 C 24.7 C 20.4 B 14.1 C 23.7
8	Summit Hill at Patton	Side Street Stop	EBL SB	A 8.3 A 9.7	A 8.3 A 9.7	A 8.7 B 13.2	A 8.6 B 11.0
9	Hall of Fame at I-40 WB	Signal	WB NB SB Overall	C 30.3 A 6.7 A 67.1 B 11.2	C 26.9 A 2.2 A 3.3 A 5.7	B 16.6 A 5.9 A 6.3 A 7.2	C 26.8 A 3.4 A 4.3 A 6.7
10	Hall of Fame at I-40 EB	Signal	EB NB SB Overall	B 13.9 A 4.1 A 3.1 A 7.0	C 21.1 A 3.6 A 1.5 A 9.1	C 26.9 A 7.5 A 4.3 B 13.7	C 21.2 A 6.0 A 1.5 B 10.1
11	Hall of Fame at Magnolia	Signal	EB WB NB SB Overall	C 32.6 C 31.6 A 9.6 A 9.1 B 18.5	D 36.9 C 31.4 A 8.6 A 9.1 B 19.9	D 36.2 C 28.6 B 13.4 B 11.0 C 21.5	D 35.9 C 28.9 B 13.6 B 10.5 C 20.7
12	Hall of Fame at Howard Baker	Signal	EB WB NB SB Overall	D 35.0 C 28.2 A 4.6 A 3.4 B 13.9	C 33.2 C 21.8 A 4.7 A 3.3 B 13.7	C 31.2 C 25.2 A 6.8 A 3.1 B 17.2	C 33.2 C 23.3 A 4.9 A 3.6 B 14.1

FUTURE CONDITIONS

SITE CHARACTERISTICS

As previously stated, the conceptual development plan for this project proposes the following multi-use components:

- 6,000 – 7,500 seat minor league baseball stadium
- Approximately 83,000 square feet of general retail space
- Approximately 55,000 square feet of office space
- 466 multi-family residential units

The baseball stadium will be home to the Tennessee Smokies AA baseball team, and the stadium will host minor league baseball games and other events such as concerts. The capacity of the stadium will be 6,000 – 7,500 permanent seats. Some non-sporting events may include temporary seating on the field that raises the capacity to over the value of the permanent seats. However, these instances are expected to be very infrequent; therefore, the evaluations in this study only account for capacity of the permanent seating. An Operations and Logistics Plan is being prepared for this development, and this plan will provide guidance for addressing operations of these events that would have increased capacity beyond the permanent seating.

The existing building at this site has been removed, and the site will be completely redeveloped. Additionally, the roadways surrounding the site, which includes Jackson Avenue, Willow Avenue, Patton Street, and Florida Street, will be completely rebuilt. Jackson Avenue will continue to operate as a two lane street with one travel lane in each direction. However, it will lose its existing bicycle lanes, and sharrow pavement markings will be installed in the travel lanes to indicate a shared vehicle / bicycle lane. Patton Street between Jackson Avenue and Nelson Avenue through the development will be realigned in order to create public plaza space, and it will potentially be renamed "Stadium Way" between Jackson Avenue and Willow Avenue. Willow Avenue will be permanently closed through the development between Patton Street and Florida Street. Finally, Florida Street between Jackson Avenue and Willow Avenue will be converted to one-way southbound only. As part of the redevelopment, new sidewalks will be constructed on Jackson Avenue, Stadium Way, and Florida Street. The sidewalks will be 6 feet in width, although the functional width of the sidewalks will be much larger in the pedestrian plaza area along Stadium Way.

The residential components of the development will be accessed via three separate onsite parking garages. There may be limited parking garage space to serve the retail and office site components; however, this study assumes that all trips to and from these components will be at offsite parking areas in the vicinity of the development. Parking for stadium events will primarily be provided by the existing public parking garages at the Knoxville Civic Auditorium and Coliseum along Howard Baker Jr. Avenue. Additional parking in the Old City and downtown Knoxville may also be utilized for stadium access. Buses will be available for transit of event attendees between the parking garages at the coliseum and the stadium. Guidance on bus routes and locations of drop off areas will be provided in the Operations and Logistics Plan. This plan will also provide guidance for non-transit drop off areas, such as for rideshares.

TRIP GENERATION

Various data were utilized to estimate expected traffic volumes to be generated by the proposed development, such as data from the Institute of Transportation Engineers (ITE) Trip Generation Manual, local trip generation data, and data from other traffic impact studies of similar scope. These trip generation estimates were developed for each separate land use category based on the sizes listed above. For those categories with a range of possible sizes, the largest size within that range was assumed in order to provide a more conservative estimate.

Once total trip estimates were developed for each of the individual land uses, several trip reduction factors were applied in order to estimate net external automobile trips. The first reduction applied was for internal trips. Estimates for internal trip reductions were performed by utilizing internal capture spreadsheets provided in the ITE *Trip Generation Manual* for the residential, retail, and office space land uses. These internal capture estimates were performed for daily, mid-day, and PM trips as provided by ITE. The same mid-day internal capture rates were also applied to Saturday trip generation estimates.

The second type of trip reduction applied was performed to account for non-auto trips (walking, bicycling, and mass transit). Per feedback from Knoxville-Knox County Planning, an assumed non-auto trip rate of 10% was applied.

The following subsections describe in detail the process for estimating development trips for each land use. Tables are provided within these subsections showing total trips, internal capture reductions, non-auto reductions, and total net external automobile trips for a weekday, AM peak hour, MD peak hour, PM peak hour, and SAT peak hour.

Residential Trip Generation

For the multi-family residential units, local trip generation rates developed by Knoxville-Knox County Planning were utilized to generate the estimated trips for a weekday and for the AM and PM peak hours of adjacent street traffic. Rates for ITE Code 220, Low-Rise Apartments, were utilized to estimate MD peak (AM peak hour of the generator) and SAT peak (Saturday peak hour of the generator). ITE rates were used to estimate these peak hours since the Knoxville-Knox County data did not have estimated for these time periods. TABLE 6 provides a summary of trip generation estimates for the residential component of the development.

TABLE 6: RESIDENTIAL TRIP GENERATION SUMMARY

TRIP TYPE	SOURCE	TOTAL TRIPS	INTERNAL TRIP REDUCTION	TOTAL EXTERNAL TRIPS	NON-AUTO TRIP REDUCTION	TOTAL EXTERNAL AUTO TRIPS
Weekday Trips	Local	3,806	-374	3,432	-343	3,089
Entering		1,903	-208	1,695	-170	1,525
Exiting		1,903	-166	1,737	-174	1,563
AM Peak Trips	Local	221	---	221	-22	199
Entering		49	---	49	-5	44
Exiting		172	---	172	-17	155
MD Peak Trips	ITE	241	-32	209	-21	188
Entering	Code	67	-19	48	-5	43
Exiting	220	174	-13	161	-16	145
PM Peak Trips	Local	327	-25	302	-30	272
Entering		177	-16	161	-16	145
Exiting		150	-9	141	-14	127
SAT Peak Trips	ITE	326	-32	294	-29	265
Entering	Code	179	-19	160	-16	144
Exiting	220	147	-13	134	-13	121

Office Trip Generation

ITE rates from Code 710, General Office Building, were utilized to develop trip generation estimates for the office component of the proposed development for weekday, AM peak (AM peak hour of adjacent street traffic), MD peak (AM peak hour of the generator), PM peak (PM peak hour of adjacent street traffic), and SAT peak (Saturday peak hour of the generator). TABLE 6A provides a summary of trip generation estimates for the office component of the development.

TABLE 6A: OFFICE TRIP GENERATION SUMMARY

TRIP TYPE	SOURCE	TOTAL TRIPS	INTERNAL TRIP REDUCTION	TOTAL EXTERNAL TRIPS	NON-AUTO TRIP REDUCTION	TOTAL EXTERNAL AUTO TRIPS
Weekday Trips	ITE	594	-116	478	-48	430
Entering	Code	297	-45	252	-25	227
Exiting	710	297	-71	226	-23	203
AM Peak Trips	ITE	78	---	78	-8	70
Entering	Code	67	---	67	-7	60
Exiting	710	11	---	11	-1	10
MD Peak Trips	ITE	98	-10	88	-9	79
Entering	Code	86	-8	78	-8	70
Exiting	710	12	-2	10	-1	9
PM Peak Trips	ITE	65	-6	59	-6	53
Entering	Code	10	-3	7	-1	6
Exiting	710	55	-3	52	-5	47
SAT Peak Trips	ITE	29	-9	20	-2	18
Entering	Code	16	-6	10	-1	9
Exiting	710	13	-3	10	-1	9

Retail Trip Generation

The proposed development is anticipated to include 83,000 square feet of general retail space, which will include a combination of shopping, restaurants, and entertainment. Specific uses for the retail space is unknown at this time, and the size and breakdown of these uses (how much shopping vs. restaurant vs. entertainment) is also unknown. Because of these unknowns, it was more appropriate to develop trip generation estimates from some of ITE's more general rates. Two of these rates are ITE Code 820, Shopping Center, and ITE Code 826, Specialty Retail.

Per the description of ITE Code 820 in ITE's *Trip Generation Manual* (10th Edition), "A shopping center also provides on-site parking facilities sufficient to serve its own parking demands." For the proposed development, parking for retail is expected to occur offsite. Therefore, ITE Code 820 was deemed the less appropriate of these two land uses for estimating retail trips from the proposed development.

Because ITE Code 826 is not provided in the 10th Edition of the *Trip General Manual*, data from the 9th Edition were utilized to develop trip generation estimates for weekday, MD peak (AM peak hour of the generator), PM peak (PM peak hour of adjacent street traffic), and SAT peak (AM peak hour of the generator). Data for the AM peak hour of adjacent street traffic is not provided by ITE; therefore, AM peak trips were not estimated. TABLE 6B provides a summary of trip generation estimates for the retail component of the development.

TABLE 6B: RETAIL TRIP GENERATION SUMMARY

TRIP TYPE	SOURCE	TOTAL TRIPS	INTERNAL TRIP REDUCTION	TOTAL EXTERNAL TRIPS	NON-AUTO TRIP REDUCTION	TOTAL EXTERNAL AUTO TRIPS
Weekday Trips	ITE	3,678	-478	3,200	-320	2,880
Entering	Code	1,839	-231	1,608	-161	1,447
Exiting	826	1,839	-247	1,592	-159	1,433
AM Peak Trips	ITE	---	---	---	---	---
Entering	Code	---	---	---	---	---
Exiting	826	---	---	---	---	---
MD Peak Trips	ITE	523	-42	481	-48	433
Entering	Code	251	-15	236	-24	212
Exiting	826	272	-27	245	-25	220
PM Peak Trips	ITE	221	-29	192	-19	173
Entering	Code	97	-11	86	-9	77
Exiting	826	124	-18	106	-11	95
SAT Peak Trips	ITE	523	-41	482	-48	434
Entering	Code	251	-16	235	-24	211
Exiting	826	272	-25	247	-25	222

Stadium Trip Generation

The minor league baseball stadium is expected to include 6,000 – 7,500 seats. The upper limit of 7,500 seats of this range was assumed in order to take a conservative approach to estimating stadium trips. Based on feedback from the developer, the vehicle occupancy rate of the stadium is expected to be approximately 3 persons per vehicle. Therefore, the expected total external entering and exiting trips for the stadium is expected to be the 7,500 seats divided by 3, or 2,500 trips both entering and exiting. Applying a 10% non-auto trip reduction results in 2,250 total entering and exiting external auto trips for a sold out event.

Because ITE has very limited data for stadium trip generation, research of other similar traffic impact studies was performed in order to develop estimates approved by other agencies. One such study was performed by Traffic Planning and Design, Inc., for a multi-use development with an arena in Allentown, Pennsylvania. Due to the similar nature of that study with the proposed development in Knoxville with the land uses and relative size of city, the methods performed in the Allentown study were utilized to develop trip generation estimates for the Knoxville stadium.

The Allentown study cited sources that provided a vehicle occupancy range of 2.0 – 3.5, with an average occupancy rate of 2.88. This research validates that the assumption of a vehicle occupancy rate of 3.0 as provided by the developer is reasonable.

Regarding the arrival times of event attendees, the Allentown study report stated:

> *"In 2002, The Traffic Group conducted a post-development study of a 6,000 seat minor league baseball stadium in Aberdeen, Maryland. The results of this study indicated that 61% of attendees arrived at the stadium during the hour prior to the event beginning. Additionally, a study published by the Transportation Research Board in 2001 found that for large special events approximately 60% of attendees will arrive within one hour of the start of the event.*
>
> *In order to verify these results, TBD reviewed trip generation data for two minor league stadiums. The above-referenced study in Aberdeen, MD concluded that a typical sold-out minor league baseball game (6,000 attendees) generated a total of 1,607 additional trips when compared to a non-game day. As noted above, 61% of traffic (980 trips) arrived in an hour prior to the event.*
>
> *As a final comparison, TBD conducted trip generation counts at Coca-Cola Park in Allentown, Pennsylvania. Coca-Cola Park was constructed in 2008 and is home to the Lehigh Valley Iron Pigs, AAA-affiliate of the Philadelphia Phillies. The capacity of the stadium is 10,000 fans. The counts were conducted from 5:00-7:30 PM on Friday, May 13, 2011. The first pitch of the game was at 7:05, and the attendance for the game was 9,660. A total of 2,709 trips were generated by the stadium between 5:00-7:30. 1,651 trips (61% of traffic) arrived from 6:00-7:00, which is consistent with the studies outlined above."*

Based on the above, this study assumed the same 61% event arrival rate within an hour before the event start time. Major events are likely to occur during weekday evenings and on the weekend;

therefore, stadium traffic was generated for the PM peak and SAT peak. In order to maintain a conservative approach, it was assumed that 61% of event attendees arrive in the PM and SAT peak hour. TABLE 6C provides a summary of trip generation estimates for the stadium component of the development. Since stadium departures at the ending of events are expected to occur outside of peak traffic periods, the evaluations in this study focus solely on arriving trips which would occur during the same time as existing peak traffic. Guidance for stadium departures will be addressed in the Operations and Logistics Plan.

TABLE 6C: STADIUM TRIP GENERATION SUMMARY

TRIP TYPE	SOURCE	TOTAL TRIPS	INTERNAL TRIP REDUCTION	TOTAL EXTERNAL TRIPS	NON-AUTO TRIP REDUCTION	TOTAL EXTERNAL AUTO TRIPS
Weekday Trips	Allentown	5,000	---	5,000	-500	4,500
Entering	Traffic	2,500	---	2,500	-250	2,250
Exiting	Study	2,500	---	2,500	-250	2,250
AM Peak Trips	Allentown	---	---	---	---	---
Entering	Traffic	---	---	---	---	---
Exiting	Study	---	---	---	---	---
MD Peak Trips	Allentown	---	---	---	---	---
Entering	Traffic	---	---	---	---	---
Exiting	Study	---	---	---	---	---
PM Peak Trips	Allentown	1,525	---	1,525	-153	1,372
Entering	Traffic	1,525	---	1,525	-153	1,372
Exiting	Study	0	---	0	0	0
SAT Peak Trips	Allentown	1,525	---	1,525	-153	1,372
Entering	Traffic	1,525	---	1,525	-153	1,372
Exiting	Study	0	---	0	0	0

Once trip generation estimates were developed for all individual land uses within the development, total trips were calculated for a weekday and for each of the peak hour analysis periods: AM peak, MD peak, PM peak without event, PM peak with event, SAT peak without event, and SAT peak with event. The peak hour analysis periods without events simply exclude the trips associated with the stadium. TABLE 7 provides a summary of these total trip generation estimates for the entire development. These total trips were the volumes utilized to develop estimates of newly generated trips at each of the study intersections associated with the proposed development.

TABLE 7: TOTAL TRIP GENERATION SUMMARY

TRIP TYPE	RESIDENTIAL	OFFICE	RETAIL	STADIUM	TOTAL
Weekday Trips	3,089	430	2,880	4,500	10,899
Entering	1,525	227	1,447	2,250	5,449
Exiting	1,563	203	1,433	2,250	5,449
AM Peak Trips	199	70	---	---	269
Entering	44	60	---	---	104
Exiting	155	10	---	---	165
MD Peak Trips	188	79	433	---	700
Entering	43	70	212	---	325
Exiting	145	9	220	---	374
PM Peak Trips (no Event)	272	53	173	---	497
Entering	145	6	77	---	228
Exiting	127	47	95	---	269
PM Peak Trips (with Event)	272	53	173	1,372	1,870
Entering	145	6	77	1,372	1,600
Exiting	127	47	95	0	269
SAT Peak Trips (no Event)	265	18	434	---	716
Entering	144	9	211	---	364
Exiting	121	9	222	---	352
SAT Peak Trips (with Event)	265	18	434	1,372	2,089
Entering	144	9	211	1,372	1,736
Exiting	121	9	222	0	352

TRIP DISTRIBUTION AND ASSIGNMENT

Trip origins and destinations to the proposed development were estimated through a review of U.S. Census block data for the area surrounding the site, existing travel patterns, local knowledge of the study area, proposed site location in relation to the surrounding roadway network, and engineering judgment. U.S. Census block data was the primary tool utilized in estimating general trip origins into the study area. This data reports where people who work in the central business district live (i.e., trip origins for the office and retail parts of the development) and where people who live in the central business district work (i.e., trip origins for the residential part of the development). This data is included in APPENDIX C.

Destinations were estimated based on anticipated parking availability for each of the different site land uses. It was assumed that the residential component of the development would include onsite parking; therefore, residential trips were distributed directly to the site. Trips for the office and retail land uses were distributed to the Old City parking lots just west of the site, and stadium trips were distributed to a combination of parking areas within the vicinity of the site. These areas include the parking garages at the Knoxville Civic Auditorium and Coliseum, various garages and surface lots in

downtown Knoxville, and parking lots in the Old City just west of the site. TABLES 8-8B show general trip origins for residential, office/retail, and stadium trips, respectively. TABLE 9 shows the general trip destinations for these components.

TABLE 8: RESIDENTIAL TRIP ORIGINS

DIRECTION TO/FROM	ROUTE	PERCENT TRIPS
East	I-40	10%
West	I-40 / James White Parkway	40%
North	Broadway / Hall of Fame Drive	15%
	I-275 / James White Parkway	15%
South	James White Parkway / Hill Avenue	2%
	Chapman Highway / Henley Street	8%
City Center	Summit Hill Drive	5%
	Hill Avenue / Hall of Fame Drive	5%

TABLE 8A: OFFICE/RETAIL TRIP ORIGINS

DIRECTION TO/FROM	ROUTE	PERCENT TRIPS
East	I-40	15%
	McCalla Avenue	3%
	Dandridge Avenue / MLK Jr. Avenue	2%
West	I-40 / James White Parkway	35%
North	Broadway / Hall of Fame Drive	15%
	I-275 / James White Parkway	15%
South	James White Parkway / Hill Avenue	3%
	Chapman Highway / Henley Street	7%
City Center	Summit Hill Drive	3%
	Hill Avenue / Hall of Fame Drive	2%

TABLE 8B: STADIUM TRIP ORIGINS

DIRECTION TO/FROM	ROUTE	PERCENT TRIPS
East	I-40	15%
	McCalla Avenue	3%
	Dandridge Avenue / MLK Jr. Avenue	2%
West	I-40 / James White Parkway	35%
North	Broadway / Hall of Fame Drive	15%
	I-275 / James White Parkway	15%
South	James White Parkway / Hill Avenue	3%
	Chapman Highway / Henley Street	7%
City Center	Summit Hill Drive	3%
	Hill Avenue / Hall of Fame Drive	2%

TABLE 9: TRIP DESTINATIONS

DESTINATION LAND USE	PARKING DESTINATION	PERCENT TRIPS
Residential	Site	100%
Office/Restaurant/Retail	Old City Lots	100%
Stadium	Civic Coliseum Garages	70%
	Downtown Garages / Lots	20%
	Old City Lots	10%

Once the above general trip origins and destinations were established, trip distribution percentages were developed at each of the study intersections. These percentages were developed separately for residential, office/retail, and stadium traffic. The stadium trip distribution percentages were further separated based on parking destination. Due to the large number of figures required to provide enough detail of these percentages, trip distribution figures are not contained in the body of this report. Instead, these figures are located in APPENDIX D.

After developing the different trip distribution percentages, the trip generation totals were applied to these percentages to calculate generated trips from the proposed development at each of the study intersections. These generated trips are broken down by residential, office/retail, and stadium in figures located in APPENDIX D. FIGURES 9-9B show the final total generated trips respectively for the AM and MD peak hours, PM and SAT peak hours without an event, and PM and SAT peak hours with an event.

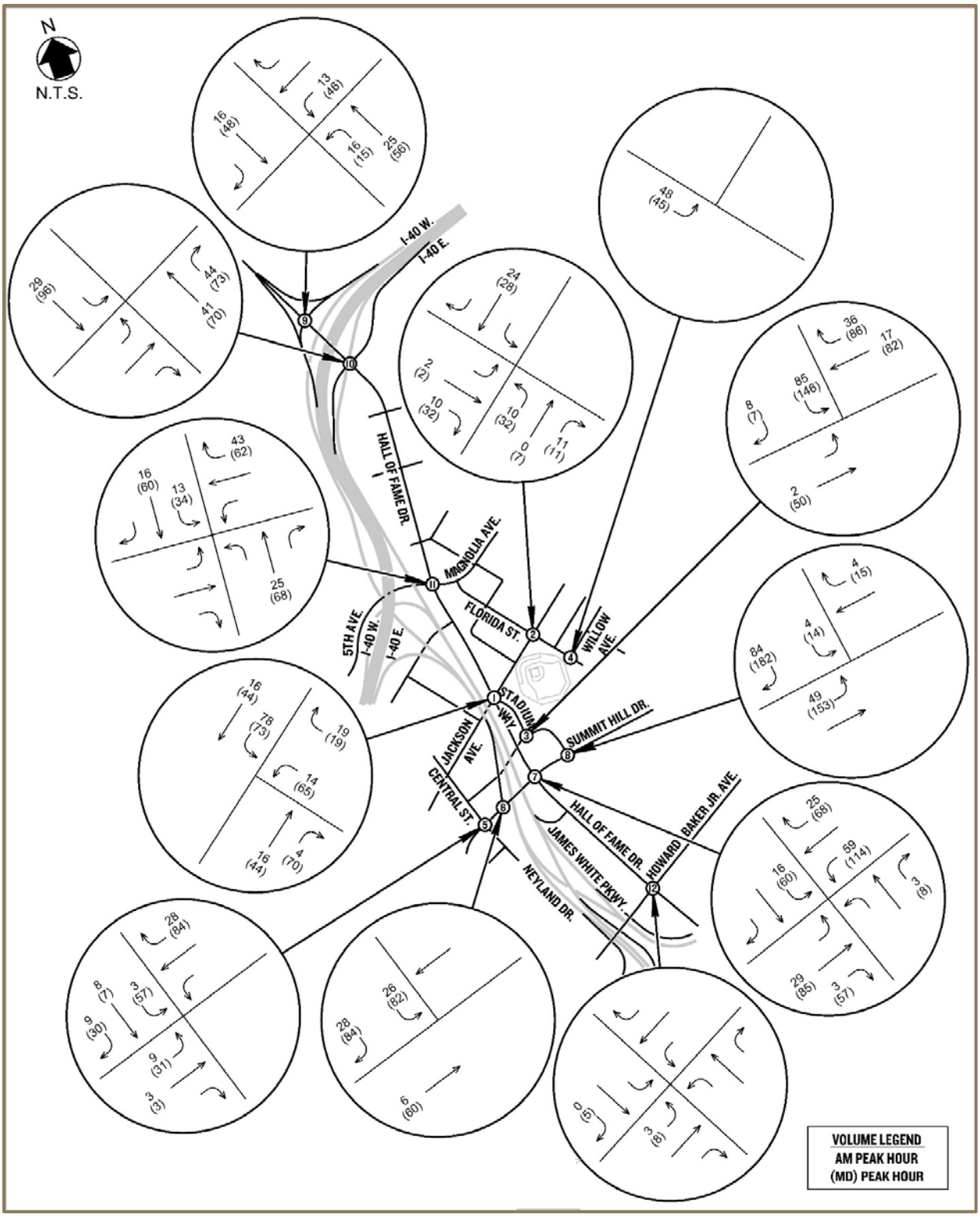


FIGURE 9
GENERATED TRIPS (AM & MD)

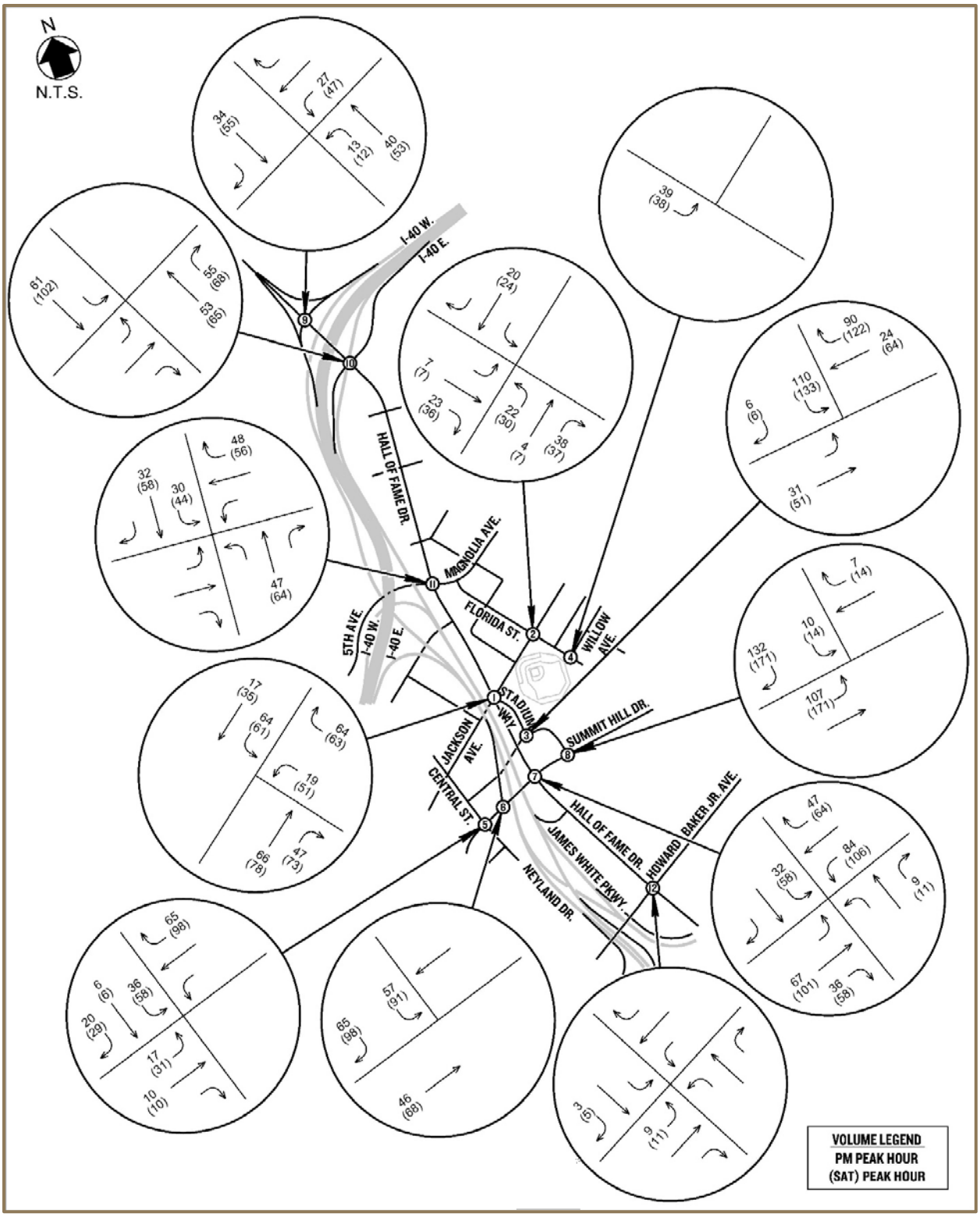


FIGURE 9A
GENERATED TRIPS (PM & SAT WITHOUT EVENT)

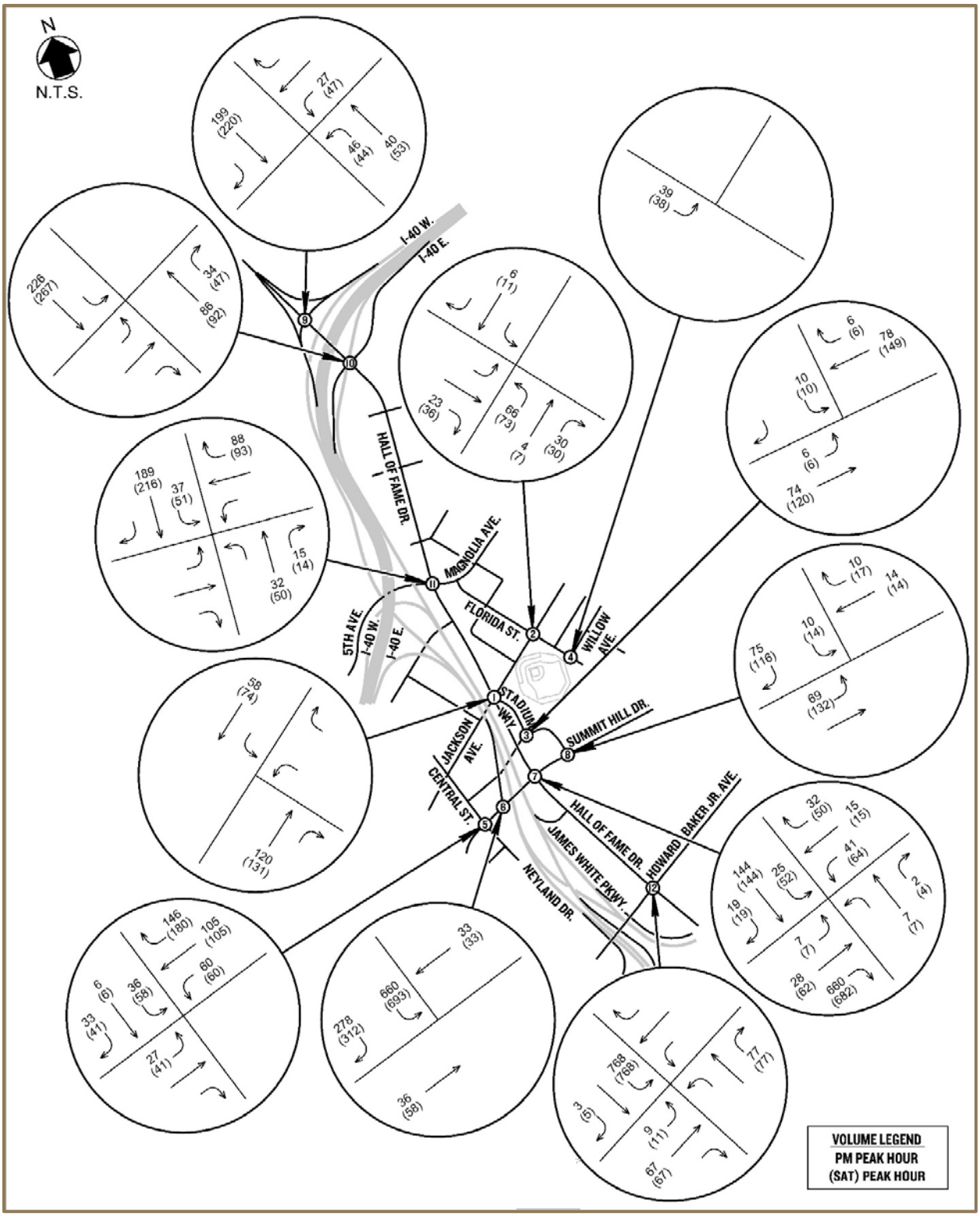


FIGURE 9B
GENERATED TRIPS (PM & SAT WITH EVENT)

FUTURE TRAFFIC VOLUMES

Future projected traffic volumes were developed by adding the generated trips shown in FIGURES 9, 9A, and 9B to the 2024 background traffic volumes developed in the previous section (FIGURES 8, 8A, and 8B). Additionally, background trips were redistributed in the immediate vicinity of the site due to planned roadway closures and one-way roadway conversions. The combined year volumes reflect the existing traffic, the background traffic growth, the redistributed background traffic, and the anticipated newly generated traffic from the proposed development. FIGURES 10 – 10B represent the 2024 combined traffic data with trips generated from the proposed development for the AM and MD peak hours, PM and SAT peak hours without an event, and PM and SAT peak hours with an event, respectively. The volumes shown on these are the combined volumes used in the analysis of the future conditions.

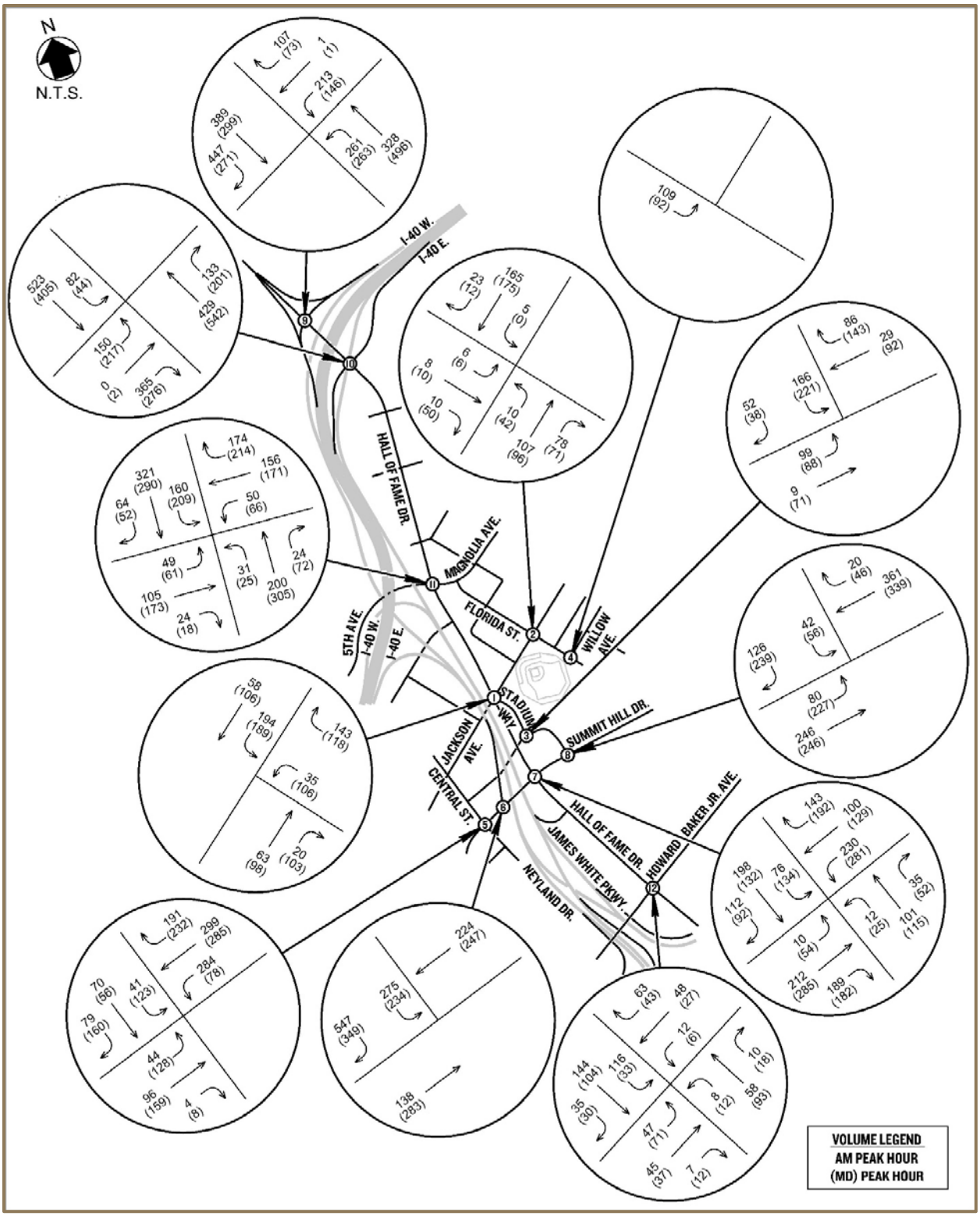


FIGURE 10
2024 COMBINED TRAFFIC DATA (AM & MD)

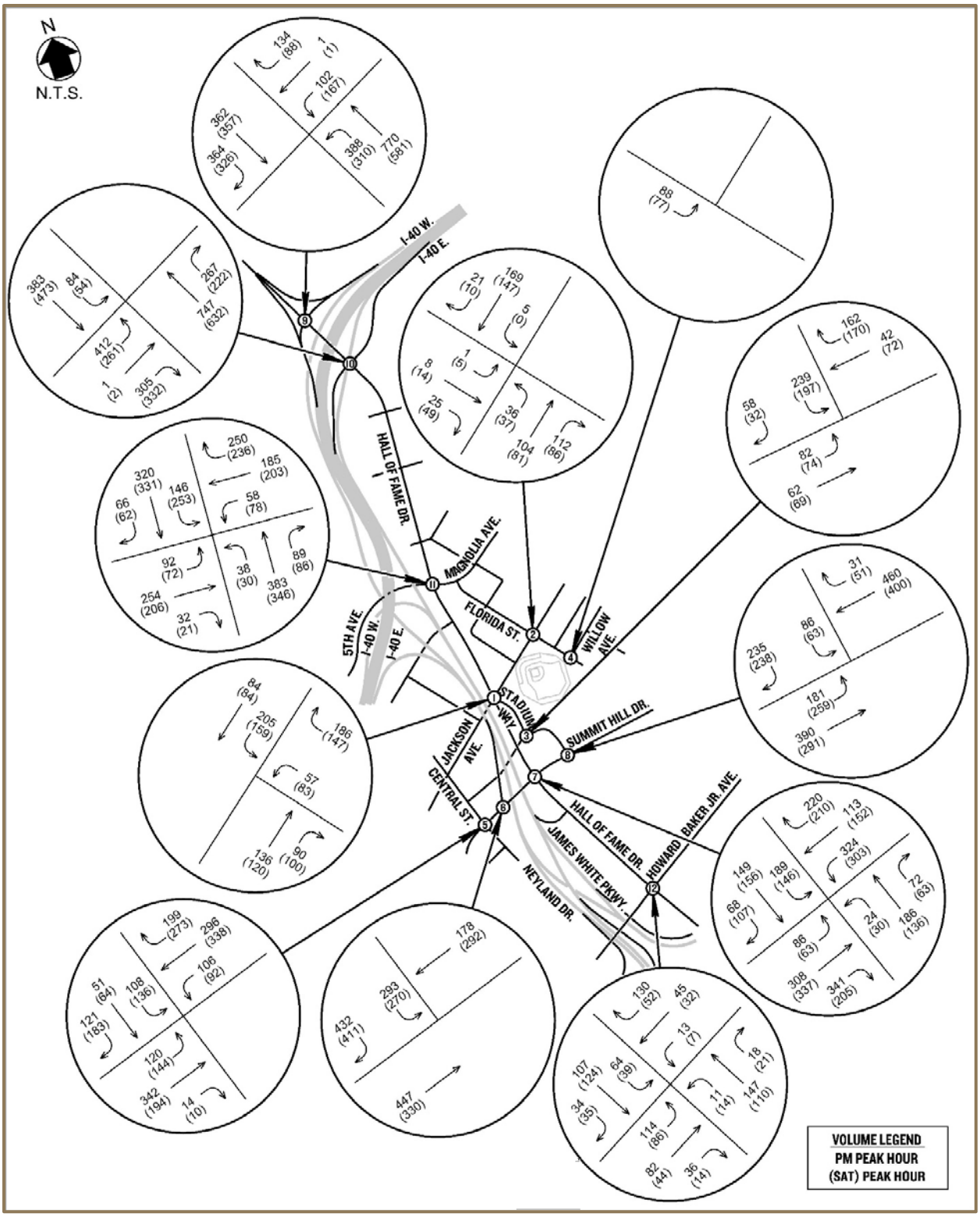


FIGURE 10A
2024 COMBINED TRAFFIC DATA (PM & SAT WITHOUT EVENT)

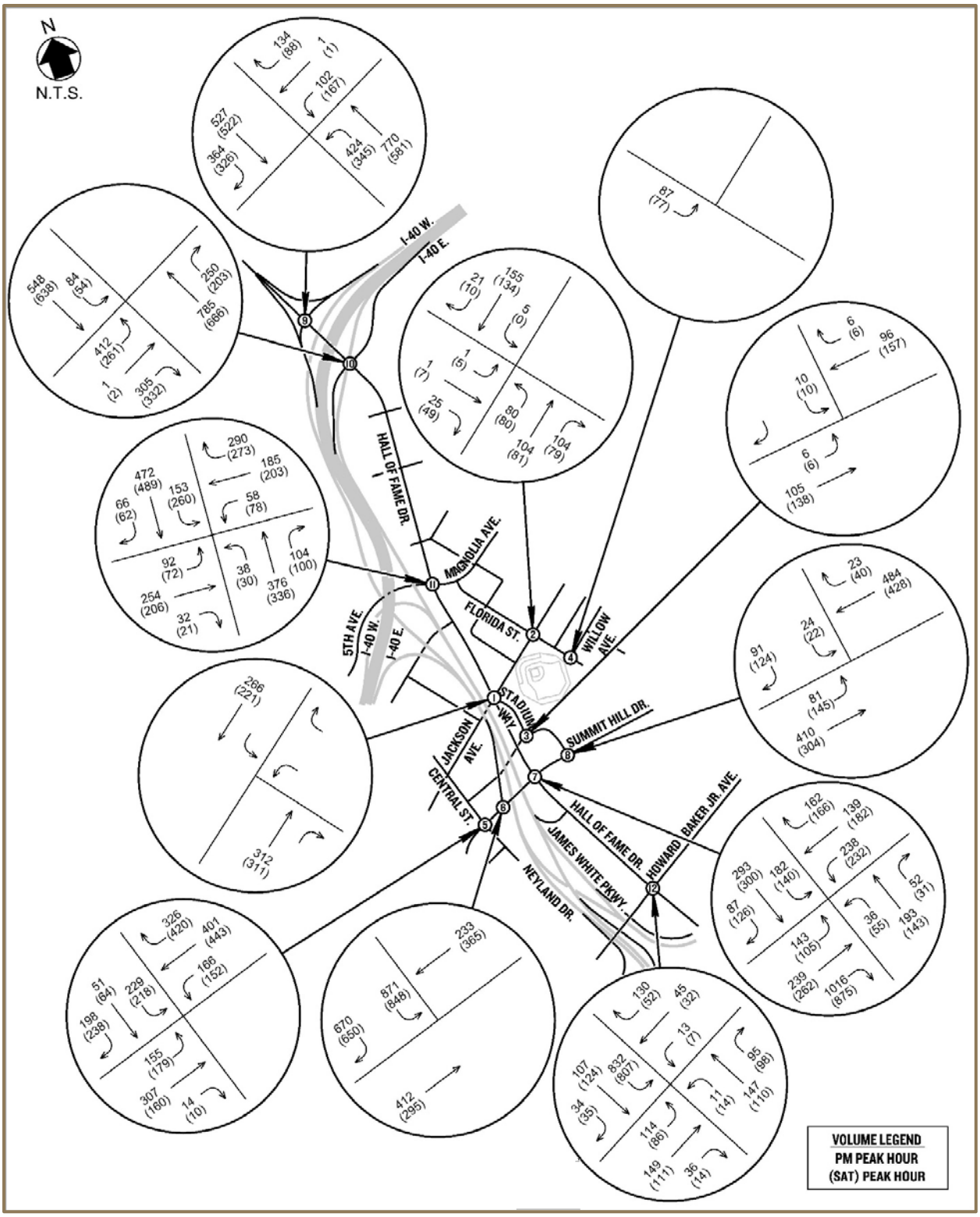


FIGURE 10B
2024 COMBINED TRAFFIC DATA (PM & SAT WITH EVENT)

FUTURE CAPACITY ANALYSES / LEVELS-OF-SERVICE

Capacity analyses for 2024 combined traffic conditions were conducted for the study intersections utilizing *Synchro 10* software. These evaluations were conducted for the AM, MD, PM, and SAT peak hours under existing intersection geometry and traffic control with the combined volumes shown in FIGURES 10 – 10B. Analyses for the PM and SAT peak hours were performed both with and without event traffic.

The exceptions to these analyses with existing geometry and traffic control were at the intersections of Willow Avenue at Patton Street, Jackson Avenue at Florida Street, and Willow Avenue at Florida Street. The conceptual site plan for the development proposes closing Willow Avenue between Patton Street and Florida Street; therefore, this section of Willow Avenue was removed from the analysis. Existing and background traffic that are using this section of Willow Avenue without the development were redistributed around the block to get back to the other side of the closed section. Additionally, Patton Street will be realigned between Summit Hill Drive and Willow Avenue, and it will curve and intersect Willow Avenue as an east leg instead of south leg. Finally, Florida Street will be one-way southbound between Jackson Avenue and Willow Avenue. Existing and background traffic that are currently driving northbound on this section were also redistributed for the combined analysis.

During events, Patton Street is proposed to be closed between Jackson Avenue and Willow Avenue. Therefore, through traffic utilizing this route was removed from this block and redistributed throughout the roadway network during PM and SAT peak hours with events. During this time, the proposed parking garage on Patton Street will still be accessible to residents via the intersection of Willow Avenue at Patton Street.

The results of these analyses for the combined traffic conditions were that most intersections will continue to operate at LOS "C" or better for side street movements at unsignalized intersections and for the overall intersection at signalized locations. The exceptions to this are the following intersections:

- Intersection #1, Jackson Avenue at Patton Street: The northbound approach at this intersection is expected to operate at LOS "F" during the MD and SAT peak periods and LOS "D" during the PM peak period. Due to the proposed closure of Patton Street during events, no traffic will be using the northbound approach for the event peak hour analyses.
- Intersection #3, Willow Avenue at Patton Street: The southbound approach is expected to operate at LOS "F" during the PM peak and SAT peak periods with event traffic included. Without event traffic, this approach is expected to operate at LOS "C". The amount of traffic experiencing LOS "F" during events will be minimal due to the through traffic closure of Patton Street.
- Intersection #6, Summit Hill Drive at James White Parkway Southbound Off-Ramp: The overall intersection is expected to operate at LOS "D" during the PM peak period with an event and LOS "E" during the SAT peak with an event. Without event traffic, the intersection is expected to operate at LOS "B" or better.

- Intersection #7, Summit Hill Drive at Hall of Fame Drive: The overall intersection is expected to operate at LOS "E" during the PM peak period with an event and LOS "D" during the SAT peak with an event. Additionally, the eastbound approach is expected to operate at LOS "F" and "E" for those peak periods, respectively. Without event traffic, the intersection is expected to operate at LOS "C" or better.

TABLE 10 provides a summary of the capacity analyses results for combined conditions, and more detailed information is contained on the capacity software print-out summaries in APPENDIX E.

TABLE 10: FUTURE CONDITIONS CAPACITY ANALYSES SUMMARY

ID	INTERSECTION	TRAFFIC CONTROL	MOVEMENT / APPROACH	AM PEAK	MD PEAK	PM PEAK	PM PEAK EVENT	SAT PEAK	SAT PEAK EVENT
1	Jackson at Stadium	Side Street Stop	WB	A 6.2	A 6.7	A 6.5	A 0.0	A 6.9	A 0.0
			NB	B 12.9	F 155.3	D 31.9	A 0.0	F 124.4	A 0.0
2	Jackson at Florida	Side Street Stop	EB	A 0.4	A 1.6	A 1.1	A 2.2	A 1.4	A 2.6
			WB	A 0.2	A 0.0	A 0.2	A 0.2	A 0.0	A 0.0
			SB	B 10.3	B 10.1	A 9.8	A 9.7	A 9.8	A 9.7
3	Willow at Stadium	Side Street Stop	EB	A 7.0	A 4.4	A 4.5	A 0.6	A 4.1	A 0.5
			SB	B 13.1	C 19.4	C 20.7	F 220.7	C 16.4	F 249.6
4	Willow at Florida	Side Street Stop[1]							
5	Summit Hill at Central	Signal	EB	A 7.4	A 7.2	A 7.5	B 10.8	A 8.1	B 10.9
			WB	C 22.2	B 10.9	B 12.4	C 24.1	B 12.0	B 19.6
			SB	D 36.7	C 29.2	D 35.4	D 40.4	C 29.9	D 36.5
			Overall	C 22.8	B 15.1	B 15.4	C 24.9	B 15.8	C 22.7
6	Summit Hill at James White SB	Signal	EB	B 14.0	A 9.1	B 14.2	B 19.9	B 10.3	B 16.9
			WB	A 7.2	A 9.4	B 12.4	C 22.6	B 10.7	B 18.2
			SB	B 15.2	B 16.6	B 16.7	D 51.9	B 15.7	F 80.9
			Overall	B 13.5	B 13.1	B 15.3	D 42.8	B 13.2	E 61.6
7	Summit Hill at Hall of Fame	Signal	EB	D 37.0	C 31.2	C 24.7	F 117.9	C 31.2	E 72.9
			WB	C 26.1	C 23.8	C 22.8	C 24.6	C 25.0	C 25.8
			NB	C 20.4	C 24.2	B 19.6	B 17.1	C 25.8	C 25.8
			SB	B 11.4	B 15.3	A 9.8	C 22.3	B 18.6	C 28.9
			Overall	C 24.7	C 24.3	C 20.5	E 70.3	C 25.7	D 48.8
8	Summit Hill at Patton	Side Street Stop	EBL	A 8.5	A 8.9	A 9.3	A 8.8	A 9.4	A 8.9
			SB	A 9.2	B 10.3	C 17.6	A 9.6	B 14.3	B 10.0
9	Hall of Fame at I-40 WB	Signal	WB	C 31.0	C 31.1	C 20.2	C 20.2	C 30.5	C 30.5
			NB	A 7.3	A 2.7	A 6.3	A 8.3	A 4.3	A 6.4
			SB	A 8.2	A 4.6	A 9.8	B 17.0	A 6.1	B 11.5
			Overall	B 12.1	A 7.4	A 9.1	B 12.9	A 8.6	B 11.6
10	Hall of Fame at I-40 EB	Signal	EB	B 13.9	C 21.1	C 26.9	C 26.9	C 21.2	C 21.2
			NB	A 3.7	A 4.3	A 8.0	A 9.5	A 7.0	A 7.6
			SB	A 3.4	A 1.2	A 5.8	A 9.8	A 1.3	A 0.9
			Overall	A 6.7	A 8.4	B 13.7	B 14.8	A 9.7	A 9.2
11	Hall of Fame at Magnolia	Signal	EB	C 32.1	D 36.1	D 35.6	C 34.8	D 35.4	C 34.9
			WB	C 28.7	C 28.0	C 26.5	C 24.6	C 26.4	C 24.9
			NB	B 12.3	B 14.6	B 14.2	B 13.5	B 18.5	B 16.9
			SB	A 9.8	A 9.5	A 19.8	A 9.9	B 11.2	B 13.7
			Overall	B 18.5	B 19.8	C 20.4	B 18.9	C 20.8	C 20.3
12	Hall of Fame at Howard Baker	Signal	EB	C 33.5	C 33.4	C 31.2	C 35.0	C 33.7	D 36.8
			WB	C 28.2	C 21.8	C 25.2	C 24.1	C 23.3	C 22.7
			NB	A 5.0	A 4.8	A 7.0	A 5.2	A 5.0	A 3.7
			SB	A 3.3	A 2.9	A 4.1	B 16.0	A 3.4	B 16.3
			Overall	B 13.8	B 13.8	B 17.5	B 18.6	B 14.5	B 17.7

[1]There are no expected conflicting traffic movements at this intersection; therefore, capacity analysis models show no delay.

EVALUATIONS

The primary evaluation methodology employed in this study involved capacity analyses of the project study intersections utilizing the methods of the Highway Capacity Manual. The results of these analyses for the existing, background and combined future traffic conditions are presented and discussed by individual intersection in the subsections below. Capacity analyses summaries are presented for each intersection in these individual subsections, which are accompanied by tables showing LOS and queuing results. More detailed information is contained on the capacity software printout summaries contained in APPENDICES B, E, and F, which also includes information pertaining to capacity and level-of-service concepts. Anticipated pedestrian volumes were taken into account and were part of the software inputs when evaluating capacity at the intersections.

Potential mitigation measures were identified at intersections experiencing poor LOS. These mitigation strategies, where applicable, are described for each intersection in their respective subsections. The accompanying LOS and queue length tables show comparisons between the intersection under existing geometry, traffic control, and signal timing to these mitigation strategies in order to provide a quantitative measure of effectiveness of the mitigation.

Intersection #1: Jackson Avenue at Stadium Way

Capacity analyses show that the side street (northbound) approach will deteriorate to LOS "F" during the MD and SAT peak traffic periods without mitigation. Additionally, the northbound approach during the PM peak period will worsen from LOS "A" under background conditions to LOS "D" under combined conditions. The increased delay on the side street is primarily due to a major increase in pedestrian activity at this intersection with people walking from Old City parking areas to the development. It should be noted that Stadium Way is planned to be closed during events; therefore, there is no anticipated delay for the northbound approach for peak period with event analyses. This intersection is expected to experience very high pedestrian activity during events with pedestrians accessing the stadium from Old City parking areas.

The mitigation strategy employed for this intersection was to convert it from side street stop control to all way stop control. As shown in TABLE 11, all way stop control results in all approaches and the overall intersection having an LOS of no worse than "B" for all peak periods.

TABLE 11: CAPACITY ANALYSES SUMMARY
JACKSON AVENUE AT STADIUM WAY

SCENARIO		MOVEMENT / APPROACH	AM PEAK	MD PEAK	PM PEAK	PM PEAK EVENT	SAT PEAK	SAT PEAK EVENT
2021 Existing	Without Mitigation	WB	A 2.1	A 1.1	A 1.1	---	A 0.9	---
		NB	A 9.2	A 9.5	A 9.6	---	A 9.2	---
2024 Background	Without Mitigation	WB	A 2.0	A 1.0	A 1.4	---	A 0.9	---
		NB	A 9.3	A 9.5	A 9.7	---	A 9.2	---
2024 Combined	Without Mitigation	WB	A 6.2	A 6.9	A 6.6	A 0.0	A 6.9	A 0.0
		NB	B 12.9	F 155.3	D 31.9	A 0.0	F 124.4	A 0.0
2024 Combined	With Mitigation	EB	A 8.3	A 9.4	B 10.2	A 9.9	A 9.5	A 9.6
		WB	B 10.5	B 11.5	B 12.1	A 9.4	B 10.6	A 8.8
		NB	A 8.9	B 10.3	B 10.7	A 0.0	A 10.0	A 0.0
		Overall	A 9.6	B 10.5	B 11.1	A 9.7	B 10.1	A 9.3

TABLE 12: 95TH PERCENTILE QUEUE SUMMARY
JACKSON AVENUE AT STADIUM WAY

SCENARIO		MOVEMENT / APPROACH	AM PEAK	MD PEAK	PM PEAK	PM PEAK EVENT	SAT PEAK	SAT PEAK EVENT
2021 Existing	Without Mitigation	WB	0'	0'	0'	---	0'	---
		NB	3'	5'	5'	---	5'	---
2024 Background	Without Mitigation	WB	0'	0'	0'	---	0'	---
		NB	3'	5'	5'	---	5'	---
2024 Combined	Without Mitigation	WB	15'	23'	20'	0'	20'	0'
		NB	33'	285'	123'	0'	263'	0'
2024 Combined	With Mitigation	EB	10'	28'	35'	48'	30'	43'
		WB	43'	53'	58'	38'	40'	28'
		NB	25'	35'	40'	0'	35'	0'

Intersection #2: Jackson Avenue at Florida Street / Randolph Street

As shown on the conceptual site plan in FIGURE 2, Florida Street will be converted to one-way southbound from Jackson Avenue to Willow Avenue. Therefore, a northbound approach will no longer exist upon completion of the development. TABLE 11A shows that under combined traffic conditions, the intersection is anticipated to experience an LOS of no worse than "B" for all approaches. Since the intersection as proposed would result in acceptable LOS, no mitigation strategies were analyzed.

TABLE 11A: CAPACITY ANALYSES SUMMARY
JACKSON AVENUE AT FLORIDA STREET / RANDOLPH STREET

SCENARIO		MOVEMENT / APPROACH	AM PEAK	MD PEAK	PM PEAK	PM PEAK EVENT	SAT PEAK	SAT PEAK EVENT
2021 Existing	Without Mitigation	EB	A 0.0	A 1.0	A 1.2	---	A 0.9	---
		WB	A 0.5	A 0.0	A 0.6	---	A 0.0	---
		NB	A 9.7	A 9.7	B 10.2	---	A 9.5	---
		SB	A 9.7	A 9.3	A 9.3	---	A 9.1	---
2024 Background	Without Mitigation	EB	A 0.0	A 1.0	A 1.2	---	A 0.9	---
		WB	A 0.5	A 0.0	A 0.6	---	A 0.0	---
		NB	A 9.8	A 9.8	B 10.2	---	A 9.5	---
		SB	A 9.8	A 9.3	A 9.3	---	A 9.1	---
2024 Combined	Without Mitigation	EB	A 0.4	A 1.6	A 1.1	A 2.2	A 1.4	A 2.6
		WB	A 0.2	A 0.0	A 0.2	A 0.2	A 0.0	A 0.0
		SB	B 10.3	B 10.1	A 9.8	A 9.7	A 9.8	A 9.7

TABLE 12A: 95TH PERCENTILE QUEUE SUMMARY
JACKSON AVENUE AT FLORIDA STREET / RANDOLPH STREET

SCENARIO		MOVEMENT / APPROACH	AM PEAK	MD PEAK	PM PEAK	PM PEAK EVENT	SAT PEAK	SAT PEAK EVENT
2021 Existing	Without Mitigation	EB	0'	0'	0'	---	0'	---
		WB	0'	0'	0'	---	0'	---
		NB	3'	3'	3'	---	3'	---
		SB	3'	3'	0'	---	3'	---
2024 Background	Without Mitigation	EB	0'	0'	0'	---	0'	---
		WB	0'	0'	0'	---	0'	---
		NB	3'	3'	3'	---	3'	---
		SB	3'	3'	0'	---	3'	---
2024 Combined	Without Mitigation	EB	0'	3'	3'	5'	3'	5'
		WB	0'	0'	0'	0'	0'	0'
		SB	3'	8'	5'	3'	8'	8'

Intersection #3: Willow Avenue / Patton Street at Stadium Way

As shown on the conceptual site plan in FIGURE 2, Willow Avenue will be closed between Patton Street and Florida Street. Additionally, Patton Street will be realigned and will become the eastern leg of this intersection. As currently proposed, the intersection will be 3-legged with side street stop control on the southbound (Stadium Way) approach. The eastbound (Willow Avenue) and westbound (Patton Street) approaches will be free flow, and there will be no northbound approach.

Stadium Way between Jackson Avenue and Willow Avenue is planned to be closed during events. However, local access via this intersection will remain for the residential parking garage proposed to be located on Stadium Way just north of Willow Avenue. Therefore, this intersection would still have some local southbound traffic during events. This intersection is expected to experience very high pedestrian activity during events with pedestrians accessing the stadium from Old City, Downtown, and Coliseum parking areas.

TABLE 11B shows that the southbound approach will operate under LOS "B" and "C" during non-event peak traffic periods. During events, the southbound approach will operate under LOS "F"; however, few vehicles would experience this delay due to the closure of Stadium Way to through traffic.

The mitigation strategy employed for this intersection was to convert it from side street stop control to all way stop control. As shown in TABLE 11B, all way stop control results in all approaches and the overall intersection having an LOS of no worse than "B" for all peak periods.

TABLE 11B: CAPACITY ANALYSES SUMMARY

WILLOW AVENUE / PATTON STREET AT STADIUM WAY

SCENARIO		MOVEMENT / APPROACH	AM PEAK	MD PEAK	PM PEAK	PM PEAK EVENT	SAT PEAK	SAT PEAK EVENT
2021 Existing	Without Mitigation	EB	A 0.6	A 1.5	A 0.7	---	A 1.5	---
		WB	A 4.6	A 4.9	A 4.8	---	A 4.9	---
		NB	B 11.0	B 10.7	B 12.4	---	B 10.3	---
		SB	B 11.1	B 11.0	B 12.5	---	B 10.6	---
2024 Background	Without Mitigation	EB	A 0.6	A 1.5	A 0.7	---	A 1.5	---
		WB	A 4.6	A 4.8	A 4.8	---	A 4.9	---
		NB	B 11.1	B 10.8	B 12.5	---	B 10.4	---
		SB	B 11.2	B 11.1	B 12.6	---	B 10.7	---
2024 Combined	Without Mitigation	EB	A 7.0	A 4.4	A 4.5	A 0.6	A 4.1	A 0.5
		SB	B 13.1	C 19.4	C 20.7	F 220.7	C 16.4	F 249.6
2024 Combined	With Mitigation	EB	A 8.8	A 9.9	B 10.2	A 7.8	A 9.5	A 8.1
		WB	A 8.0	A 9.9	A 9.9	A 7.7	A 9.6	A 8.2
		SB	A 9.5	B 11.6	B 13.0	A 7.8	B 10.8	A 7.9
		Overall	A 8.9	B 10.6	B 11.4	A 7.8	A 10.0	A 8.1

TABLE 12B: 95TH PERCENTILE QUEUE SUMMARY
WILLOW AVENUE / PATTON STREET AT STADIUM WAY

SCENARIO		MOVEMENT / APPROACH	AM PEAK	MD PEAK	PM PEAK	PM PEAK EVENT	SAT PEAK	SAT PEAK EVENT
2021 Existing	Without Mitigation	EB	0'	0'	0'	---	0'	---
		WB	3'	3'	5'	---	3'	---
		NB	8'	8'	15'	---	8'	---
		SB	3'	8'	10'	---	5'	---
2024 Background	Without Mitigation	EB	0'	3'	0'	---	0'	---
		WB	3'	3'	5'	---	3'	---
		NB	10'	10'	18'	---	8'	---
		SB	3'	8'	13'	---	5'	---
2024 Combined	Without Mitigation	EB	5'	5'	5'	0'	5'	0'
		SB	40'	80'	110'	35'	58'	35'
2024 Combined	With Mitigation	EB	15'	25'	25'	13'	23'	18'
		WB	13'	38'	35'	13'	38'	20'
		SB	33'	50'	70'	0'	40'	0'

Intersection #4: Willow Avenue at Florida Street

As shown on the conceptual site plan in FIGURE 2, Willow Avenue will be closed between Florida Street and Patton Street. Therefore, the west leg will no longer exist upon completion of the development. Additionally, Florida Street will be converted to one-way southbound from Jackson Avenue to Willow Avenue.

Due to the proposed geometric changes at this intersection, there are no anticipated conflicting vehicle trips. Although a westbound left turn movement from Willow Avenue would conflict with a southbound through movement on Florida Street, vehicles making the westbound left turn movement are expected to be a very rare occurrence. Therefore, the capacity analyses showed no delay at this intersection under combined traffic conditions.

TABLE 11C: CAPACITY ANALYSES SUMMARY
WILLOW AVENUE AT FLORIDA STREET

SCENARIO		MOVEMENT / APPROACH	AM PEAK	MD PEAK	PM PEAK	PM PEAK EVENT	SAT PEAK	SAT PEAK EVENT
2021 Existing	Without Mitigation	EB	A 1.3	A 1.2	A 0.9	---	A 1.2	---
		SBL	A 9.8	B 10.2	A 9.8	---	A 9.8	---
		SBR	A 8.8	A 8.9	A 9.0	---	A 8.8	---
2024 Background	Without Mitigation	EB	A 1.3	A 1.2	A 0.9	---	A 1.2	---
		SBL	A 9.8	B 10.1	A 9.8	---	A 9.9	---
		SBR	A 8.8	A 8.9	A 9.0	---	A 8.8	---
2024 Combined	Without Mitigation	WB	---	---	---	---	---	---
		SB	---	---	---	---	---	---

TABLE 12C: 95TH PERCENTILE QUEUE SUMMARY
WILLOW AVENUE AT FLORIDA STREET

SCENARIO		MOVEMENT / APPROACH	AM PEAK	MD PEAK	PM PEAK	PM PEAK EVENT	SAT PEAK	SAT PEAK EVENT
2021 Existing	Without Mitigation	EB	0'	0'	0'	---	0'	---
		SBL	0'	0'	0'	---	0'	---
		SBR	3'	3'	3'	---	3'	---
2024 Background	Without Mitigation	EB	0'	0'	0'	---	0'	---
		SBL	0'	0'	0'	---	0'	---
		SBR	3'	3'	3'	---	3'	---
2024 Combined	Without Mitigation	WB	---	---	---	---	---	---
		NB	---	---	---	---	---	---
		SB	---	---	---	---	---	---

Intersection #5: Summit Hill Drive at Central Street

Capacity analyses indicate that under combined conditions without mitigation, the intersection will operate at overall LOS "C" or better for all peak traffic periods. The mitigation strategy at this intersection was optimized signal timing using *Synchro's* Optimization tool. With optimized signal timing, the overall intersection LOS should improve to "B" or better for all peak traffic periods, as shown in TABLE 11D.

Regarding queue lengths, the 95th percentile queue for the eastbound left turn movement may slightly exceed the turn lane's 50 feet of storage during event peak traffic periods as shown in TABLE 12D. Additionally, the 95th percentile queue for the southbound right turn movement may slightly exceed the turn lane's 65 feet of storage during SAT event peak traffic periods. Because these queue spillbacks should rarely occur, and because the turn lane tapers appear to be sufficient to store an additional vehicle, additional mitigation strategies were not analyzed at this intersection.

If mitigation measures were to be provided at this intersection, then they should occur in the form of increased storage lengths of these two movements. In order to accommodate an expected 61 feet of storage for the 95th percentile queue in the eastbound left turn lane, the existing median would need to be cut to install more pavement. There are some electric utilities in the median, specifically a street light, that may be in conflict with a lengthened turn lane. The southbound right turn lane storage can be extended to accommodate an expected 95th percentile queue length of 81 feet with restriping. The striping for the southbound right turn lane storage would need to be extended into the Merchants of Beer access driveway, and one parallel parking space would be lost in order to provide for an adequate taper length.

Moderate pedestrian traffic is anticipated at this intersection during events for pedestrians accessing the stadium from Downtown parking areas. These anticipated pedestrian volumes were input into the capacity analysis model and are taken into account in the results shown below.

TABLE 11D: CAPACITY ANALYSES SUMMARY
SUMMIT HILL DRIVE AT CENTRAL STREET

SCENARIO		MOVEMENT / APPROACH	AM PEAK	MD PEAK	PM PEAK	PM PEAK EVENT	SAT PEAK	SAT PEAK EVENT
2021 Existing	Without Mitigation	EB	A 7.2	A 5.5	A 6.4	---	A 6.2	---
		WB	C 23.0	B 11.4	B 13.8	---	B 12.6	---
		SB	D 35.9	C 28.1	C 24.7	---	C 28.0	---
		Overall	C 23.1	B 13.9	B 14.8	---	B 14.7	---
2024 Background	Without Mitigation	EB	A 7.4	A 5.6	A 6.5	---	A 6.4	---
		WB	C 23.1	B 11.5	B 13.9	---	B 12.8	---
		SB	D 36.1	C 28.0	C 34.8	---	C 28.0	---
		Overall	C 23.2	B 14.0	B 15.0	---	B 14.8	---
2024 Combined	Without Mitigation	EB	A 7.4	A 7.2	A 7.5	B 10.8	A 8.1	B 10.9
		WB	C 22.2	B 10.9	B 12.4	C 24.1	B 12.0	B 19.6
		SB	D 36.7	C 29.2	D 35.4	D 40.4	C 29.9	D 36.5
		Overall	C 22.8	B 15.1	B 15.4	C 24.9	B 15.8	C 22.7
2024 Combined	With Mitigation	EB	A 8.3	A 8.0	A 8.8	B 11.9	A 9.1	B 11.3
		WB	B 15.1	A 9.0	B 10.6	B 15.5	A 8.9	B 12.5
		SB	C 22.5	C 22.2	C 23.8	C 27.1	C 21.9	C 28.4
		Overall	B 15.5	B 12.4	B 12.7	B 17.6	B 12.4	B 16.7

TABLE 12D: 95TH PERCENTILE QUEUE SUMMARY
SUMMIT HILL DRIVE AT CENTRAL STREET

SCENARIO		MOVEMENT / APPROACH	AM PEAK	MD PEAK	PM PEAK	PM PEAK EVENT	SAT PEAK	SAT PEAK EVENT
2021 Existing	Without Mitigation	EBL	12'	27'	29'	---	33'	---
		EBT/R	27'	34'	72'	---	42'	---
		WBL	136'	44'	63'	---	49'	---
		WBT/R	76'	66'	44'	---	87'	---
		SBL/T	113'	113'	127'	---	128'	---
		SBR	33'	49'	46'	---	51'	---
2024 Background	Without Mitigation	EBL	12'	27'	30'	---	34'	---
		EBT/R	28'	35'	74'	---	43'	---
		WBL	140'	44'	64'	---	51'	---
		WBT/R	79'	69'	47'	---	91'	---
		SBL/T	115'	115'	130'	---	131'	---
		SBR	35'	49'	46'	---	52'	---
2024 Combined	Without Mitigation	EBL	15'	45'	40'	62'	51'	63'
		EBT/R	30'	42'	84'	85'	53'	48'
		WBL	139'	44'	64'	93'	50'	71'
		WBT/R	75'	77'	43'	207'	102'	221'
		SBL/T	125'	159'	163'	264'	173'	253'
		SBR	42'	49'	48'	113'	63'	115'
2024 Combined	With Mitigation	EBL	14'	43'	37'	58'	49'	61'
		EBT/R	27'	41'	78'	82'	52'	42'
		WBL	88'	32'	47'	73'	38'	64'
		WBT/R	66'	78'	64'	148'	67'	118'
		SBL/T	90'	126'	117'	198'	136'	207'
		SBR	21'	43'	39'	63'	45'	81'

Intersection #6: Summit Hill Drive at James White Parkway Southbound Off-Ramp

As shown in TABLE 11E, capacity analyses indicate that during PM and SAT peak traffic periods with events, the overall intersection will operate at LOS "D" and "E", respectively. Additionally, southbound ramp queues are anticipated to spill back into James White Parkway.

There appears to be enough bridge width on the southbound ramp to accommodate four 11-foot wide travel lanes. Therefore, a mitigation strategy analyzed was to restripe the southbound approach to include four lanes: two exclusive left turn lanes and two exclusive right turn lanes. This signal timing was also optimized at this intersection to account for the major traffic pattern changes anticipated from the development. With these mitigation strategies implemented, the intersection is expected to experience LOS of "B" or better for all peak traffic periods, including events. These improvements should also significantly decrease the queue lengths on the southbound approach.

TABLE 11E: CAPACITY ANALYSES SUMMARY

SUMMIT HILL DRIVE AT JAMES WHITE PARKWAY SOUTHBOUND OFF-RAMP

SCENARIO		MOVEMENT / APPROACH	AM PEAK	MD PEAK	PM PEAK	PM PEAK EVENT	SAT PEAK	SAT PEAK EVENT
2021 Existing	Without Mitigation	EB	B 13.7	A 6.4	B 12.9	---	A 7.3	---
		WB	A 6.4	A 6.7	A 8.9	---	A 7.7	---
		SB	B 15.1	B 17.5	B 18.0	---	B 16.6	---
		Overall	B 13.2	B 11.7	B 14.9	---	B 11.8	---
2024 Background	Without Mitigation	EB	B 13.8	A 6.5	B 13.1	---	A 7.4	---
		WB	A 6.5	A 6.8	A 9.2	---	A 7.8	---
		SB	B 15.0	B 17.4	B 17.9	---	B 16.5	---
		Overall	B 13.2	B 11.7	B 15.0	---	B 11.8	---
2024 Combined	Without Mitigation	EB	B 14.0	A 9.1	B 14.2	B 19.9	B 10.3	B 16.9
		WB	A 7.2	A 9.4	B 12.4	C 22.6	B 10.7	B 18.2
		SB	B 15.2	B 16.6	B 16.7	D 51.9	B 15.7	F 80.9
		Overall	B 13.5	B 13.1	B 15.3	D 42.8	B 13.2	E 61.6
2024 Combined	With Mitigation	EB	A 5.6	A 4.4	A 6.6	B 17.6	A 6.3	B 15.4
		WB	B 10.7	A 5.7	B 10.2	B 17.9	A 9.3	B 17.4
		SB	A 9.7	B 12.6	B 11.5	A 9.7	B 11.8	B 12.3
		Overall	A 9.4	A 9.0	A 9.7	B 12.1	A 9.8	B 13.6

TABLE 12E: 95TH PERCENTILE QUEUE SUMMARY

SUMMIT HILL DRIVE AT JAMES WHITE PARKWAY SOUTHBOUND OFF-RAMP

SCENARIO		MOVEMENT / APPROACH	AM PEAK	MD PEAK	PM PEAK	PM PEAK EVENT	SAT PEAK	SAT PEAK EVENT
2021 Existing	Without Mitigation	EB	32'	30'	84'	---	37'	---
		WB	38'	48'	45'	---	62'	---
		SBL	208'	130'	199'	---	145'	---
		SBR	36'	32'	35'	---	33'	---
2024 Background	Without Mitigation	EB	33'	31'	88'	---	38'	---
		WB	37'	51'	46'	---	64'	---
		SBL	214'	134'	203'	---	148'	---
		SBR	37'	32'	35'	---	34'	---
2024 Combined	Without Mitigation	EB	33'	46'	97'	90'	57'	58'
		WB	31'	62'	54'	77'	77'	107'
		SBL	238'	179'	232'	918'	196'	866'
		SBR	38'	32'	34'	57'	32'	62'
2024 Combined	With Mitigation	EB	24'	20'	29'	72'	49'	71'
		WB	63'	30'	42'	70'	51'	104'
		SBL	75'	72'	81'	174'	76'	181'
		SBR	32'	31'	31'	57'	32'	92'

Intersection #7: Summit Hill Drive at Hall of Fame Drive

This intersection is expected to experience LOS "E" and "D" during the PM and SAT peak traffic periods with events, respectively. Additionally, the eastbound approach queues are anticipated to spill back into the intersection of Summit Hill Drive at James White Parkway Southbound Off-Ramp.

Mitigation strategies employed at this intersection included optimized signal timing and restriping of the eastbound approach to include one exclusive left turn lane, one exclusive through lane, one shared through / right turn lane, and one exclusive right turn lane. With these strategies, the overall intersection is expected to operate at LOS "B" or better for all peak traffic periods, including event traffic. The 95th percentile queue may slightly exceed the westbound left turn lane storage of 165 feet during the PM peak traffic period. Increasing the length of this turn lane would negatively impact the eastbound left turn lane at Summit Hill Drive's upstream intersection with Patton Street; therefore, mitigation was not considered here, especially considering the minor length of the spillback.

High pedestrian volumes are expected to cross the east leg of this intersection with event attendees who choose to walk to the stadium from the Coliseum parking areas. These anticipated pedestrian volumes were accounted for in the capacity analyses.

TABLE 11F: CAPACITY ANALYSES SUMMARY
SUMMIT HILL DRIVE AT HALL OF FAME DRIVE

SCENARIO		MOVEMENT / APPROACH	AM PEAK	MD PEAK	PM PEAK	PM PEAK EVENT	SAT PEAK	SAT PEAK EVENT
2021 Existing	Without Mitigation	EB	D 36.3	C 32.3	C 22.7	---	C 31.9	---
		WB	C 24.7	C 25.0	C 22.3	---	C 24.8	---
		NB	B 18.7	B 18.3	B 15.0	---	C 20.0	---
		SB	B 10.8	A 8.6	A 8.1	---	B 13.4	---
		Overall	C 23.4	C 22.4	B 18.4	---	C 23.6	---
2024 Background	Without Mitigation	EB	D 36.2	C 32.2	C 22.7	---	C 31.9	---
		WB	C 24.6	C 24.9	C 22.5	---	C 24.7	---
		NB	B 18.9	B 18.6	B 15.6	---	C 20.4	---
		SB	B 10.7	A 9.1	A 8.5	---	B 14.1	---
		Overall	C 23.4	C 22.5	B 18.6	---	C 23.7	---
2024 Combined	Without Mitigation	EB	D 37.0	C 31.2	C 24.7	F 117.9	C 31.2	E 72.9
		WB	C 26.1	C 23.8	C 22.8	C 24.6	C 25.0	C 25.8
		NB	C 20.4	C 24.2	B 19.6	B 17.1	C 25.8	C 25.8
		SB	B 11.4	B 15.3	A 9.8	C 22.3	B 18.6	C 28.9
		Overall	C 24.7	C 24.3	C 20.5	E 70.3	C 25.7	D 48.8
2024 Combined	With Mitigation	EB	B 14.4	B 16.4	B 17.5	C 20.1	B 17.5	B 15.8
		WB	B 15.0	B 14.4	B 18.0	C 22.3	B 14.5	C 20.7
		NB	B 15.5	B 16.1	B 19.4	B 16.5	B 16.9	B 13.5
		SB	B 12.7	B 13.7	B 11.3	B 14.0	A 8.5	B 10.4
		Overall	B 14.2	B 15.1	B 16.7	B 18.9	B 14.5	B 15.5

TABLE 12F: 95TH PERCENTILE QUEUE SUMMARY
SUMMIT HILL DRIVE AT HALL OF FAME DRIVE

SCENARIO		MOVEMENT / APPROACH	AM PEAK	MD PEAK	PM PEAK	PM PEAK EVENT	SAT PEAK	SAT PEAK EVENT
2021 Existing	Without Mitigation	EBL	15'	50'	51'	---	54'	---
		EBT	105'	99'	127'	---	113'	---
		EBR	92'	44'	153'	---	46'	---
		WBL	141'	128'	169'	---	143'	---
		WBT/R	61'	71'	66'	---	78'	---
		NBL	20'	28'	21'	---	34'	---
		NBT/R	56'	58'	86'	---	70'	---
		SBL	46'	33'	41'	---	90'	---
		SBT	62'	44'	21'	---	74'	---
		SBR	10'	5'	0'	---	11'	---
2024 Background	Without Mitigation	EBL	14'	51'	51'	---	54'	---
		EBT	107'	102'	131'	---	116'	---
		EBR	94'	45'	157'	---	47'	---
		WBL	145'	131'	172'	---	145'	---
		WBT/R	62'	72'	66'	---	80'	---
		NBL	20'	30'	21'	---	35'	---
		NBT/R	57'	61'	88'	---	73'	---
		SBL	45'	36'	42'	---	96'	---
		SBT	62'	47'	22'	---	78'	---
		SBR	8'	6'	0'	---	12'	---
2024 Combined	Without Mitigation	EBL	13'	47'	48'	60'	51'	81'
		EBT	120'	135'	140'	92'	154'	126'
		EBR	97'	50'	179'	924'	51'	823'
		WBL	191'	202'	223'	171'	212'	168'
		WBT/R	63'	71'	65'	80'	78'	95'
		NBL	20'	32'	23'	30'	37'	57'
		NBT/R	58'	66'	117'	96'	78'	77'
		SBL	54'	126'	45'	70'	157'	158'
		SBT	59'	61'	20'	105'	85'	152'
		SBR	5'	12'	0'	18'	16'	9'
2024 Combined	With Mitigation	EBL	8'	15'	15'	74'	14'	48'
		EBT	36'	87'	91'	106'	93'	24'
		EBR	0'	14'	23'	87'	17'	253'
		WBL	116'	127'	196'	162'	132'	136'
		WBT/R	44'	49'	48'	65'	53'	73'
		NBL	13'	21'	22'	17'	25'	27'
		NBT/R	43'	48'	75'	84'	56'	51'
		SBL	49'	78'	31'	16'	54'	13'
		SBT	67'	48'	48'	114'	47'	104'
		SBR	5'	0'	15'	54'	35'	72'

Intersection #8: Summit Hill Drive at Patton Street

As shown in TABLE 11G, the side street approach for this intersection is anticipated to operate at no worse than LOS "C" during all peak traffic periods under combined conditions. No mitigation was analyzed at this intersection. The intersection may experience high pedestrian volumes during events, but it is anticipated that most pedestrians would stay on the northwest corner and would not cross either roadway.

TABLE 11G: CAPACITY ANALYSES SUMMARY
SUMMIT HILL DRIVE AT PATTON STREET

SCENARIO		MOVEMENT / APPROACH	AM PEAK	MD PEAK	PM PEAK	PM PEAK EVENT	SAT PEAK	SAT PEAK EVENT
2021 Existing	Without Mitigation	EBL	A 8.2	A 8.3	A 8.7	---	A 8.5	---
		SB	A 9.6	A 9.6	B 12.6	---	B 10.8	---
2024 Background	Without Mitigation	EBL	A 8.3	A 8.3	A 8.7	---	A 8.6	---
		SB	A 9.7	A 9.7	B 13.2	---	B 11.0	---
2024 Combined	Without Mitigation	EBL	A 8.5	A 8.9	A 9.3	A 8.8	A 9.4	A 8.9
		SB	A 9.2	B 10.3	C 17.6	A 9.6	B 14.3	B 10.0

TABLE 12G: 95TH PERCENTILE QUEUE SUMMARY
SUMMIT HILL DRIVE AT PATTON STREET

SCENARIO		MOVEMENT / APPROACH	AM PEAK	MD PEAK	PM PEAK	PM PEAK EVENT	SAT PEAK	SAT PEAK EVENT
2021 Existing	Without Mitigation	EBL	3'	5'	5'	---	8'	---
		SB	8'	10'	30'	---	15'	---
2024 Background	Without Mitigation	EBL	3'	5'	5'	---	8'	---
		SB	10'	10'	33'	---	15'	---
2024 Combined	Without Mitigation	EBL	8'	20'	18'	8'	25'	13'
		SB	18'	33'	83'	10'	58'	15'

Intersection #9: Hall of Fame Drive at I-40 Westbound Ramps

Capacity analyses indicate that this intersection will operate at LOS "B" or better during all peak traffic periods for combined conditions. As with all signalized intersections, optimized signal timing was employed as a mitigation strategy. Although new signal timing may not be needed to decrease delay and queues at this intersection specifically, it may need to be updated with overall signal system changes.

TABLE 11H: CAPACITY ANALYSES SUMMARY
HALL OF FAME DRIVE AT I-40 WESTBOUND RAMPS

SCENARIO		MOVEMENT / APPROACH	AM PEAK	MD PEAK	PM PEAK	PM PEAK EVENT	SAT PEAK	SAT PEAK EVENT
2021 Existing	Without Mitigation	WB	C 30.3	C 26.8	B 16.6	---	C 26.8	---
		NB	A 6.3	A 2.1	A 5.5	---	A 3.0	---
		SB	A 6.5	A 3.3	A 5.7	---	A 4.1	---
		Overall	B 10.8	A 5.6	A 6.8	---	A 6.4	---
2024 Background	Without Mitigation	WB	C 30.3	C 26.9	B 16.6	---	C 26.8	---
		NB	A 6.7	A 2.2	A 5.9	---	A 3.4	---
		SB	A 7.1	A 3.3	A 6.3	---	A 4.3	---
		Overall	B 11.2	A 5.7	A 7.2	---	A 6.7	---
2024 Combined	Without Mitigation	WB	C 31.0	C 31.1	C 20.2	C 20.2	C 30.5	C 30.5
		NB	A 7.3	A 2.7	A 6.3	A 8.3	A 4.3	A 6.4
		SB	A 8.2	A 4.6	A 9.8	B 17.0	A 6.1	B 11.5
		Overall	B 12.1	A 7.4	A 9.1	B 12.9	A 8.6	B 11.6
2024 Combined	With Mitigation	WB	C 22.0	C 20.7	B 15.1	B 17.2	C 21.3	C 23.4
		NB	A 5.0	A 2.0	A 4.0	A 6.3	A 3.7	A 6.5
		SB	A 6.9	A 5.4	A 7.5	B 12.5	A 5.9	B 10.3
		Overall	A 9.0	A 5.9	A 6.4	A 9.8	A 7.0	B 10.2

TABLE 12H: 95TH PERCENTILE QUEUE SUMMARY
HALL OF FAME DRIVE AT I-40 WESTBOUND RAMPS

SCENARIO		MOVEMENT / APPROACH	AM PEAK	MD PEAK	PM PEAK	PM PEAK EVENT	SAT PEAK	SAT PEAK EVENT
2021 Existing	Without Mitigation	WBL	102'	55'	47'	---	63'	---
		WBR	0'	0'	0'	---	0'	---
		NBL	72'	11'	106'	---	22'	---
		NBT	38'	7'	65'	---	8'	---
		SBT	144'	51'	118'	---	69'	---
2024 Background	Without Mitigation	WBL	104'	57'	48'	---	65'	---
		WBR	0'	0'	0'	---	0'	---
		NBL	84'	12'	116'	---	32'	---
		NBT	40'	7'	68'	---	9'	---
		SBT	159'	53'	131'	---	74'	---
2024 Combined	Without Mitigation	WBL	109'	76'	61'	61'	84'	84'
		WBR	0'	0'	0'	0'	0'	0'
		NBL	107'	14'	125'	157'	84'	138'
		NBT	30'	9'	68'	66'	12'	12'
		SBT	180'	72'	176'	304'	110'	223'
2024 Combined	With Mitigation	WBL	82'	55'	47'	51'	63'	68'
		WBR	0'	0'	0'	0'	0'	0'
		NBL	41'	25'	52'	78'	40'	22'
		NBT	3'	3'	2'	2'	12'	0'
		SBT	120'	66'	117'	210'	81'	171'

Intersection #10: Hall of Fame Drive at I-40 Eastbound Ramps

Similar to the previous intersection of Hall of Fame Drive at the I-40 Westbound Ramps, capacity analyses indicate that this intersection will operate at LOS "B" or better during all peak traffic periods for combined conditions. Optimized signal timing was again employed as a mitigation strategy. Although new signal timing may not be needed to decrease delay and queues at this intersection specifically, it may need to be updated with overall signal system changes.

TABLE 11I: CAPACITY ANALYSES SUMMARY

HALL OF FAME DRIVE AT I-40 EASTBOUND RAMPS

SCENARIO		MOVEMENT / APPROACH	AM PEAK	MD PEAK	PM PEAK	PM PEAK EVENT	SAT PEAK	SAT PEAK EVENT
2021 Existing	Without Mitigation	EB	B 13.9	C 21.0	C 27.0	---	C 21.3	---
		NB	A 4.0	A 3.6	A 7.3	---	A 5.5	---
		SB	A 3.0	A 1.4	A 4.2	---	A 1.5	---
		Overall	A 6.9	A 9.0	B 13.6	---	A 9.9	---
2024 Background	Without Mitigation	EB	B 13.9	C 21.1	C 26.9	---	C 21.2	---
		NB	A 4.1	A 3.6	A 7.5	---	A 6.0	---
		SB	A 3.1	A 1.5	A 4.3	---	A 1.5	---
		Overall	A 7.0	A 9.1	B 13.7	---	B 10.1	---
2024 Combined	Without Mitigation	EB	B 13.9	C 21.1	C 26.9	C 26.9	C 21.2	C 21.2
		NB	A 3.7	A 4.3	A 8.0	A 9.5	A 7.0	A 7.6
		SB	A 3.4	A 1.2	A 5.8	A 9.8	A 1.3	A 0.9
		Overall	A 6.7	A 8.4	B 13.7	B 14.8	A 9.7	A 9.2
2024 Combined	With Mitigation	EB	A 8.9	B 13.4	B 18.1	B 19.8	B 13.6	B 14.9
		NB	A 7.3	A 6.4	A 8.1	A 9.3	A 4.9	A 4.7
		SB	A 4.5	A 4.3	A 6.1	A 7.7	A 4.9	A 7.1
		Overall	A 6.8	A 7.9	B 11.0	B 12.0	A 7.5	A 8.3

TABLE 12I: 95TH PERCENTILE QUEUE SUMMARY
HALL OF FAME DRIVE AT I-40 EASTBOUND RAMPS

SCENARIO		MOVEMENT / APPROACH	AM PEAK	MD PEAK	PM PEAK	PM PEAK EVENT	SAT PEAK	SAT PEAK EVENT
2021 Existing	Without Mitigation	EBL	80'	103'	181'	---	119'	---
		EBR	0'	0'	0'	---	0'	---
		NBT	54'	67'	157'	---	105'	---
		NBR	0'	0'	5'	---	0'	---
		SBL	24'	4'	28'	---	5'	---
		SBT	54'	10'	43'	---	12'	---
2024 Background	Without Mitigation	EBL	81'	106'	186'	---	122'	---
		EBR	0'	0'	0'	---	0'	---
		NBT	55'	69'	171'	---	118'	---
		NBR	0'	0'	6'	---	0'	---
		SBL	25'	5'	29'	---	5'	---
		SBT	56'	11'	45'	---	13'	---
2024 Combined	Without Mitigation	EBL	81'	106'	186'	186'	122'	122'
		EBR	0'	0'	0'	0'	0'	0'
		NBT	48'	96'	218'	246'	171'	184'
		NBR	0'	0'	10'	12'	71'	70'
		SBL	26'	4'	48'	76'	5'	3'
		SBT	61'	12'	87'	235'	14'	11'
2024 Combined	With Mitigation	EBL	59'	75'	130'	140'	86'	92'
		EBR	0'	0'	0'	0'	0'	0'
		NBT	82'	98'	155'	218'	98'	86'
		NBR	21'	28'	12'	31'	0'	0'
		SBL	33'	20'	34'	36'	26'	25'
		SBT	81'	59'	72'	140'	76'	138'

Intersection #11: Hall of Fame Drive at 5th Avenue / Magnolia Avenue

Under combined traffic conditions, this intersection is expected to operate at LOS "C" or better during all peak traffic periods. With optimized signal timing, which was the lone mitigation strategy analyzed here, the LOS should improve to "B" or better for all peak traffic periods.

TABLE 11J: CAPACITY ANALYSES SUMMARY
HALL OF FAME DRIVE AT 5TH AVENUE / MAGNOLIA AVENUE

SCENARIO		MOVEMENT / APPROACH	AM PEAK	MD PEAK	PM PEAK	PM PEAK EVENT	SAT PEAK	SAT PEAK EVENT
2021 Existing	Without Mitigation	EB	C 32.8	D 37.1	C 35.0	---	D 36.1	---
		WB	C 31.7	C 31.3	C 29.1	---	C 28.9	---
		NB	A 9.0	A 8.2	B 13.1	---	B 12.9	---
		SB	A 8.7	A 8.9	B 10.8	---	B 10.3	---
		Overall	B 18.3	B 19.8	C 21.3	---	C 20.5	---
2024 Background	Without Mitigation	EB	C 32.6	D 36.9	D 36.2	---	D 35.9	---
		WB	C 31.6	C 31.4	C 28.6	---	C 28.9	---
		NB	A 9.6	A 8.6	B 13.4	---	B 13.6	---
		SB	A 9.1	A 9.1	B 11.0	---	B 10.5	---
		Overall	B 18.5	B 19.9	C 21.5	---	C 20.7	---
2024 Combined	Without Mitigation	EB	C 32.1	D 36.1	D 35.6	C 34.8	D 35.4	C 34.9
		WB	C 28.7	C 28.0	C 26.5	C 24.6	C 26.4	C 24.9
		NB	B 12.3	B 14.6	B 14.2	B 13.5	B 18.5	B 16.9
		SB	A 9.8	A 9.5	A 9.8	A 9.9	B 11.2	B 13.7
		Overall	B 18.5	B 19.8	C 20.4	B 18.9	C 20.8	C 20.3
2024 Combined	With Mitigation	EB	B 15.6	B 19.9	C 23.7	C 25.3	C 23.8	C 25.5
		WB	B 15.3	B 16.0	B 18.3	B 18.3	C 20.1	C 20.4
		NB	B 15.8	B 15.2	B 15.0	B 15.4	B 18.4	B 16.0
		SB	B 12.9	B 11.3	A 8.4	A 6.6	A 9.3	A 6.9
		Overall	B 14.5	B 14.8	B 15.8	B 15.0	B 16.6	B 15.0

TABLE 12J: 95TH PERCENTILE QUEUE SUMMARY
HALL OF FAME DRIVE AT 5TH AVENUE / MAGNOLIA AVENUE

SCENARIO		MOVEMENT / APPROACH	AM PEAK	MD PEAK	PM PEAK	PM PEAK EVENT	SAT PEAK	SAT PEAK EVENT
2021 Existing	Without Mitigation	EBL	52'	59'	80'	---	64'	---
		EBT	57'	86'	118'	---	96'	---
		EBR	0'	0'	0'	---	0'	---
		WBL	35'	42'	39'	---	48'	---
		WBT/R	86'	98'	105'	---	111'	---
		NBL	14'	9'	18'	---	21'	---
		NBT	48'	78'	115'	---	124'	---
		NBR	0'	6'	18'	---	32'	---
		SBL	57'	98'	64'	---	121'	---
		SBT	82'	72'	84'	---	85'	---
		SBR	2'	6'	13'	---	7'	---
2024 Background	Without Mitigation	EBL	52'	61'	82'	---	66'	---
		EBT	59'	87'	121'	---	98'	---
		EBR	0'	0'	0'	---	0'	---
		WBL	35'	43'	40'	---	49'	---
		WBT/R	88'	101'	107'	---	113'	---
		NBL	15'	10'	16'	---	24'	---
		NBT	58'	84'	119'	---	132'	---
		NBR	0'	7'	19'	---	33'	---
		SBL	63'	102'	67'	---	125'	---
		SBT	87'	74'	86'	---	88'	---
		SBR	3'	6'	14'	---	7'	---
2024 Combined	Without Mitigation	EBL	51'	59'	81'	79'	65'	64'
		EBT	58'	85'	120'	118'	97'	97'
		EBR	0'	0'	0'	0'	0'	0'
		WBL	35'	43'	40'	40'	49'	49'
		WBT/R	88'	103'	108'	109'	116'	118'
		NBL	21'	19'	16'	18'	25'	26'
		NBT	90'	143'	134'	126'	167'	170'
		NBR	0'	27'	18'	23'	34'	43'
		SBL	75'	126'	57'	65'	150'	179'
		SBT	96'	92'	80'	101'	105'	168'
		SBR	3'	2'	5'	0'	6'	3'
2024 Combined	With Mitigation	EBL	30'	37'	58'	62'	49'	52'
		EBT	36'	55'	86'	91'	72'	76'
		EBR	0'	0'	0'	0'	0'	0'
		WBL	22'	27'	31'	32'	38'	40'
		WBT/R	56'	66'	80'	85'	86'	93'
		NBL	18'	15'	24'	28'	23'	23'
		NBT	56'	81'	100'	105'	120'	98'
		NBR	0'	3'	7'	34'	0'	19'
		SBL	64'	79'	34'	31'	83'	46'
		SBT	81'	70'	90'	52'	45'	47'
		SBR	0'	0'	4'	0'	1'	0'

Intersection #12: Hall of Fame Drive at Howard Baker Jr. Avenue / Church Avenue

Capacity analyses results show that this intersection is expected to operate at LOS "B" or better for all peak traffic periods under combined conditions, as shown in TABLE 11K. Signal timing will likely need to be updated with overall signal system modifications, although timing adjustments are not shown to be needed at this intersection individually.

Heavy pedestrian volumes are expected at this intersection during events for those choosing to walk to the stadium from the Coliseum parking areas. However, most pedestrian activity is anticipated to stay on the northeast corner and not cross the roadway.

TABLE 11K: CAPACITY ANALYSES SUMMARY

HALL OF FAME DRIVE AT HOWARD BAKER JR. AVENUE / CHURCH AVENUE

SCENARIO		MOVEMENT / APPROACH	AM PEAK	MD PEAK	PM PEAK	PM PEAK EVENT	SAT PEAK	SAT PEAK EVENT
2021 Existing	Without Mitigation	EB	D 35.1	C 33.2	C 31.3	---	C 33.2	---
		WB	C 28.0	C 21.4	C 25.4	---	C 23.0	---
		NB	A 4.6	A 4.6	A 6.7	---	A 4.9	---
		SB	A 3.4	A 3.3	A 2.7	---	A 3.6	---
		Overall	B 13.9	B 13.6	B 17.1	---	B 14.1	---
2024 Background	Without Mitigation	EB	D 35.0	C 33.2	C 31.2	---	C 33.2	---
		WB	C 28.2	C 21.8	C 25.2	---	C 23.3	---
		NB	A 4.6	A 4.7	A 6.8	---	A 4.9	---
		SB	A 3.4	A 3.3	A 3.1	---	A 3.6	---
		Overall	B 13.9	B 13.7	B 17.2	---	B 14.1	---
2024 Combined	Without Mitigation	EB	C 33.5	C 33.4	C 31.2	C 35.0	C 33.7	D 36.8
		WB	C 28.2	C 21.8	C 25.2	C 24.1	C 23.3	C 22.7
		NB	A 5.0	A 4.8	A 7.0	A 5.2	A 5.0	A 3.7
		SB	A 3.3	A 2.9	A 4.1	B 16.0	A 3.4	B 16.3
		Overall	B 13.8	B 13.8	B 17.5	B 18.6	B 14.5	B 17.7
2024 Combined	With Mitigation	EB	B 13.1	B 12.6	B 12.0	C 28.9	B 12.5	C 26.2
		WB	A 9.1	A 8.2	B 11.3	B 16.2	A 8.0	B 13.5
		NB	A 6.8	A 7.2	A 9.2	A 5.0	A 7.2	A 4.1
		SB	A 6.7	A 6.9	A 8.8	B 17.0	A 6.9	B 10.7
		Overall	A 8.3	A 8.6	B 10.4	B 17.2	A 8.5	B 12.1

TABLE 12K: 95TH PERCENTILE QUEUE SUMMARY
HALL OF FAME AT HOWARD BAKER JR. AVENUE / CHURCH AVENUE

SCENARIO		MOVEMENT / APPROACH	AM PEAK	MD PEAK	PM PEAK	PM PEAK EVENT	SAT PEAK	SAT PEAK EVENT
2021 Existing	Without Mitigation	EBL	52'	67'	97'	---	75'	---
		EBT/R	64'	56'	112'	---	63'	---
		WBL	22'	13'	21'	---	15'	---
		WBT	67'	43'	65'	---	49'	---
		WBR	28'	6'	56'	---	15'	---
		NBL/T/R	15'	21'	39'	---	25'	---
		SBL/T/R	15'	22'	21'	---	37'	---
2024 Background	Without Mitigation	EBL	53'	69'	100'	---	77'	---
		EBT/R	65'	57'	114'	---	64'	---
		WBL	22'	13'	21'	---	15'	---
		WBT	69'	45'	66'	---	50'	---
		WBR	30'	7'	56'	---	16'	---
		NBL/T/R	16'	22'	41'	---	26'	---
		SBL/T/R	16'	24'	26'	---	40'	---
2024 Combined	Without Mitigation	EBL	56'	74'	106'	102'	86'	84'
		EBT/R	65'	57'	113'	181'	64'	128'
		WBL	22'	13'	21'	20'	14'	14'
		WBT	69'	45'	66'	64'	50'	49'
		WBR	30'	7'	56'	55'	16'	16'
		NBL/T/R	16'	22'	41'	46'	26'	30'
		SBL/T/R	15'	21'	32'	188'	21'	275'
2024 Combined	With Mitigation	EBL	26'	34'	51'	76'	40'	62'
		EBT/R	37'	33'	62'	140'	37'	98'
		WBL	10'	7'	10'	15'	7'	11'
		WBT	37'	25'	36'	46'	27'	36'
		WBR	6'	0'	37'	43'	0'	3'
		NBL/T/R	16'	21'	35'	42'	24'	30'
		SBL/T/R	50'	26'	38'	429'	31'	340'

CONCLUSIONS & RECOMMENDATIONS

The primary conclusion of this study is that the traffic generated from the proposed development will have moderate impacts on study area traffic conditions. The following paragraphs list conclusions on a per intersection basis, which is followed by recommendations in both list and figure format.

Intersection #1: Jackson Avenue at Stadium Way

Increased vehicle traffic will have only minor operational impacts at this intersection. However, a significant increase in pedestrian traffic associated with both retail and stadium trips is anticipated. The increased pedestrian traffic will likely cause significant delay at this intersection during traffic periods with high retail and/or stadium-related activity. Implementation of all-way stop control would help to mitigate the increased delay.

Intersection #2: Jackson Avenue at Florida Street / Randolph Street

The proposed development is not expected to create significant traffic impacts at this intersection. Analyses show that the intersection will continue to operate at LOS "A" and "B" once the development and new roadway configuration are constructed.

Intersection #3: Willow Avenue / Patton Street at Stadium Way

Increased vehicle traffic will have only minor operational impacts at this intersection. However, a significant increase in pedestrian traffic associated with both retail and stadium trips is anticipated. The increased pedestrian traffic will likely cause significant delay at this intersection during traffic periods with high retail and/or stadium-related activity. Implementation of all-way stop control would help to mitigate the increased delay.

Intersection #4: Willow Avenue at Florida Street

The proposed development is not expected to create significant traffic impacts at this intersection. Analyses show that the intersection will continue to operate at LOS "A" and "B" once the development and new roadway configuration are constructed.

Intersection #5: Summit Hill Drive at Central Street

This intersection will experience moderate increases in traffic due to trips accessing the development via the Old City. However, this increase in traffic is not expected to result in significant operational impacts. Analyses show that without mitigation, the intersection will operate at LOS "C" or better during the peak traffic periods. With optimized signal timing, the intersection LOS may improve to "B" for all peak traffic periods.

Intersection #6: Summit Hill Drive at James White Parkway Southbound Off-Ramps

The proposed development will have significant traffic operational impacts on this intersection during events due to the large number of anticipated vehicles accessing the development via James White Parkway. Analyses indicate that the addition of a 4th approach lane on the James White Parkway Southbound Off-Ramp would mitigate these impacts, both from a delay and queue length standpoint. There appears to be sufficient width on the bridge to accomplish the addition of a 4th ramp lane via restriping and lane width reductions to eleven feet per lane.

Intersection #7: Summit Hill Drive at Hall of Fame Drive

Due to the large amounts of anticipated traffic accessing the Coliseum parking garages via James White Parkway and Summit Hill Drive, the proposed development will have significant traffic operational impacts on this intersection during events. As with the previous intersection, these impacts can be mitigated through restriping. These striping modifications would occur by re-assigning the eastbound approach lanes as discussed in the EVALUATIONS section of the report.

Intersection #8: Summit Hill Drive at Patton Street

The proposed development is not anticipated to create significant traffic impacts at this intersection. Upon completion of the development, the side street LOS at the intersection is expected to be "C" or better for all peak traffic periods.

Intersection #9: Hall of Fame Drive at I-40 Westbound Ramps

The impacts to this intersection from traffic generated by the proposed development are expected to be negligible. The overall intersection LOS is anticipated to be "B" or better upon completion of the development, and the intersection could operate at LOS "A" or better for all peak traffic periods with optimized signal timing.

Intersection #10: Hall of Fame Drive at I-40 Eastbound Ramps

The impacts to this intersection from traffic generated by the proposed development are expected to be negligible. The overall intersection LOS is anticipated to be "B" or better upon completion of the development.

Intersection #11: Hall of Fame Drive at 5th Avenue / Magnolia Avenue

The impacts to this intersection from traffic generated by the proposed development are expected to be negligible. The overall intersection LOS is anticipated to be "C" or better upon completion of the development, and the intersection could operate at LOS "B" or better for all peak traffic periods with optimized signal timing.

Intersection #12: Hall of Fame Drive at Howard Baker Jr. Avenue / Church Avenue

The proposed development will have moderate traffic operational impacts at this intersection during events due to traffic accessing the Coliseum parking garages. Analyses show that capacity is sufficient at this intersection to handle the increased traffic without additional lanes or restriping in order to modify current lane assignments. Optimizing traffic signal timing, especially during events, is critical at this intersection in order to minimize queue impacts for southbound traffic. The capacity analyses results show a shorter southbound queue for events in the scenario without mitigation; however, this shorter queue is due to the fact that traffic was being metered by the upstream signals of Summit Hill Drive at Hall of Fame Drive and Summit Hill Drive at James White Parkway Southbound Off-Ramp. Once improvements were input at the two upstream intersections, traffic was able to access this intersection faster, thereby creating a longer queue.

FIGURES 11 and 11A show in graphical format the recommendations resulting from the conclusions previously discussed. FIGURE 11 presents callouts describing recommendations per intersection, and

FIGURE 11A shows existing and proposed lane assignments. The following is a list of recommendations shown in these figures:

1. Implement all-way stop control at the intersections of Jackson Avenue at Stadium Way and Willow Avenue / Patton Street at Stadium Way.
2. Restripe the James White Parkway Southbound Off-Ramp at Summit Hill Drive to include four approach lanes. This restriping would need to be accomplished via a high friction overlay. The lanes would be assigned as two exclusive left turn lanes and two exclusive right turn lanes. The existing bridge width on this ramp approach is approximately 50 feet; therefore, the travel lanes would need to be eleven feet wide in order to maintain several feet of shoulder on each side at the barrier rail and guardrail. The two outside left turn and right turn lanes should have a minimum storage of 250 feet. Signal display modifications for the ramp approach would need to accompany the new lane assignments.
3. Restripe the eastbound approach at the intersection of Summit Hill Drive at Hall of Fame Drive in order to modify the existing lane assignments. New lane assignments would include one exclusive left turn lane, one exclusive through lane, one shared through / right turn lane, and one exclusive right turn lane. Signal display modifications for the eastbound approach would need to accompany the new lane assignments.
4. Update signal timing at all traffic signals within the study area. The signal timing updates are critical at intersections in the immediate vicinity of the development and associated parking areas. Although signal timing changes at the intersections further away from the development may not be needed on an individual intersection basis, the timing should be updated along with the more critical intersections in order to maintain a coordinated signal system.
5. Develop a wayfinding signage plan in conjunction with the City of Knoxville, the Tennessee Department of Transportation, Knoxville-Knox County Planning, and Knoxville Area Transit. Strategic placement of wayfinding signage may alleviate expected traffic congestion on Summit Hill Drive and the James White Parkway Southbound Off-Ramp by directing traffic to the Interstate 40 at Hall of Fame Drive interchange.
6. Provide adequate sight distance at all development access points and public street intersections surrounding the development by ensuring that site grading, landscaping, signage, structures, and other site features do not restrict the driver visibility of cross streets.

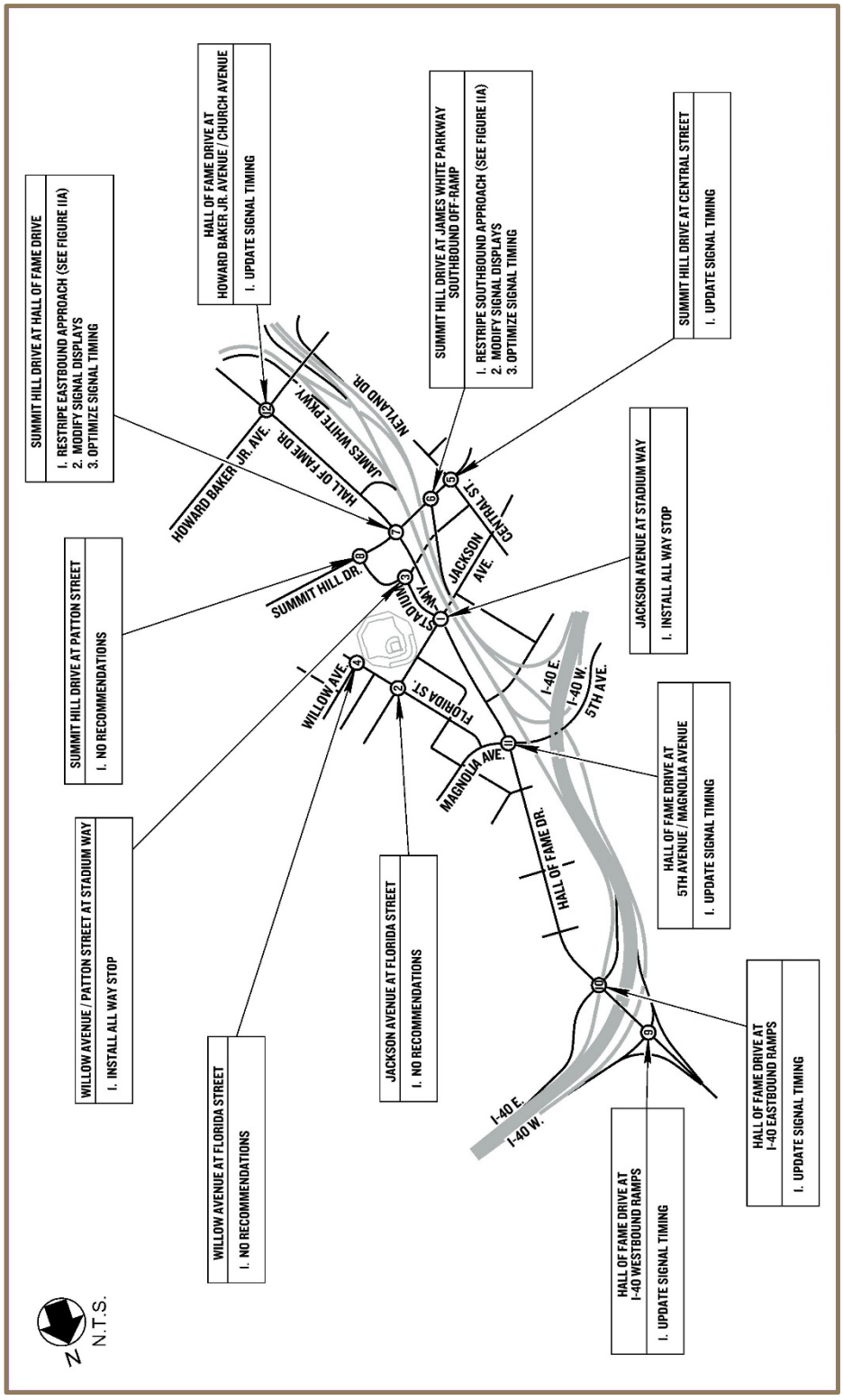


FIGURE 11
RECOMMENDED IMPROVEMENTS

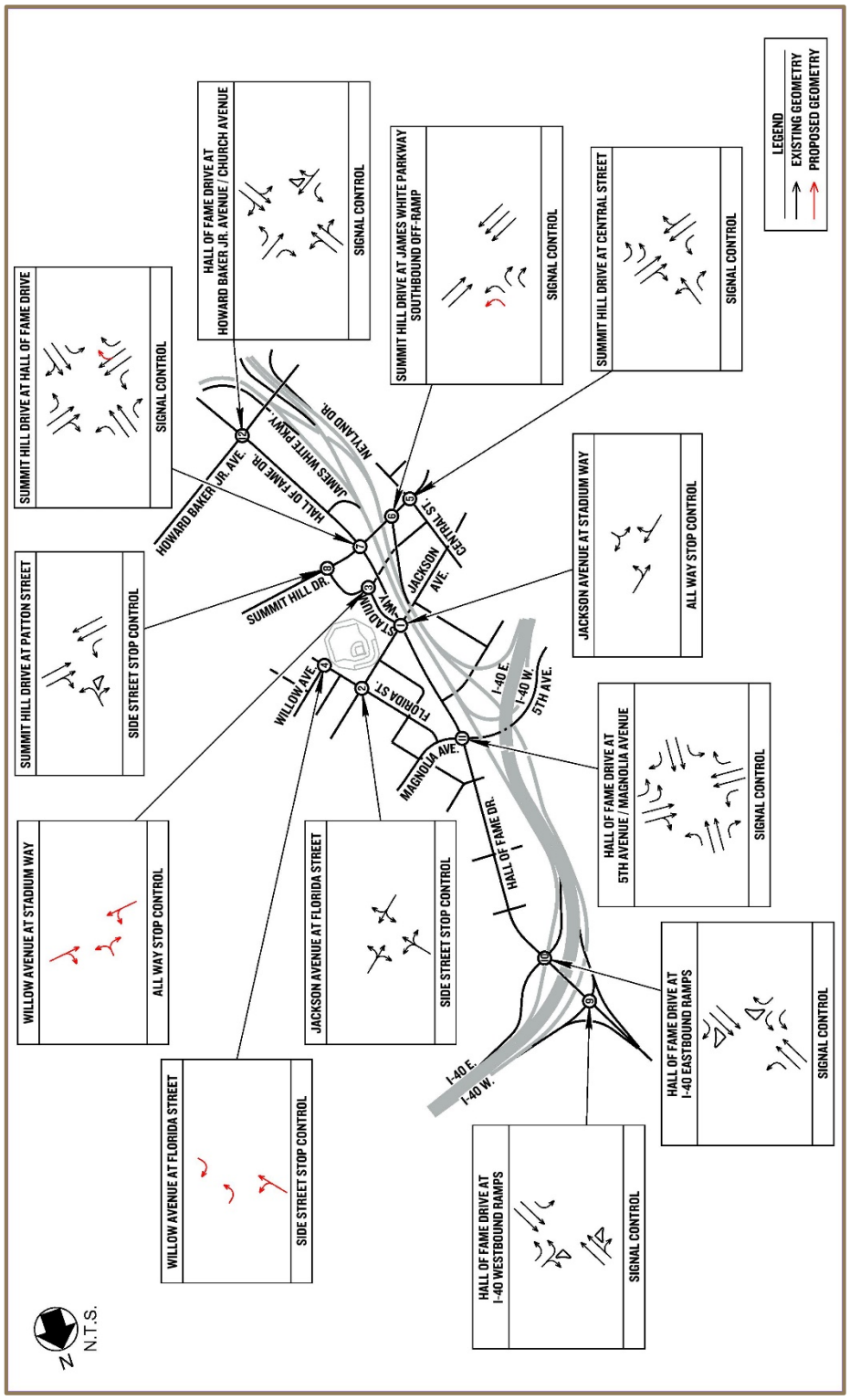


FIGURE 11A
EXISTING AND PROPOSED LANE ASSIGNMENTS

APPENDICES

APPENDIX A | TRAFFIC DATA

APPENDIX B | ANALYSES FOR EXISTING AND BACKGROUND TRAFFIC

APPENDIX C | TRIP GENERATION & INFORMATION

APPENDIX D | TRIP DISTRIBUTION AND ASSIGNMENT FIGURES

APPENDIX E | ANALYSES FOR COMBINED TRAFFIC

APPENDIX F | ANALYSES FOR COMBINED TRAFFIC WITH MITIGATION

APPENDIX G | COMMENT RESPONSE LETTER

APPENDIX A | TRAFFIC DATA

Prepared by National Data & Surveying Services

Patton St & E Jackson Ave

Peak Hour Turning Movement Count

ID: 21-190015-001
City: Knoxville

Day: Tuesday
Date: 03/23/2021

PEAK HOURS

AM	07:30 AM - 08:30 AM
NOON	11:45 AM - 12:45 PM
PM	04:00 PM - 05:00 PM

COUNT PERIODS

AM	7:00 AM - 09:00 AM
NOON	11:00 AM - 01:00 PM
PM	4:00 PM - 06:00 PM

SOUTHBOUND (Patton St)

AM	0	0	0	0	2	AM
NOON	0	0	0	0	2	NOON
PM	0	0	0	0	2	PM

EASTBOUND (E Jackson Ave)

AM	NOON	PM		
51	83	85	⇦	
0	0	0	↶	0
2	2	2	↱	0
38	43	57	→	1
13	27	35	↴	0
AM	NOON	PM		

WESTBOUND (E Jackson Ave)

PM	NOON	AM		
0	0	0	↰	0
54	50	34	←	1
9	8	13	↰	0
0	0	0	↶	0
73	54	46	⇨	
PM	NOON	AM		

NORTHBOUND (Patton St)

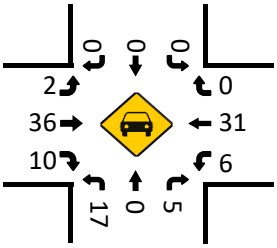
PM	44	0	31	0	16	PM
NOON	35	0	33	0	11	NOON
AM	26	0	17	0	8	AM

CONTROL: 1-Way Stop(NB)

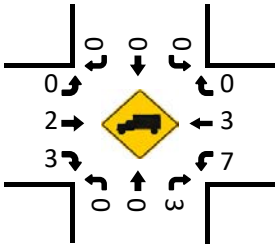
TEV	125 AM	174 NOON	204 PM
PHF	0.87	0.95	0.91

0 0 0 0 | 0 0 1 0

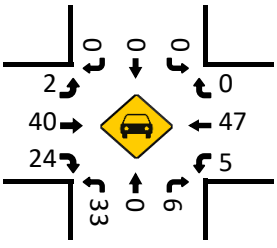
Cars (AM)



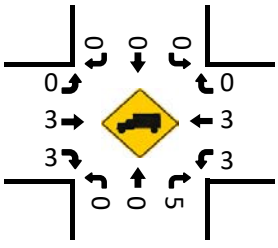
HT (AM)



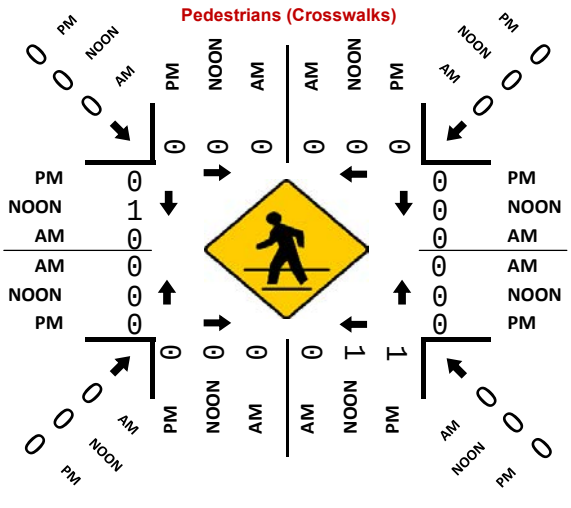
Cars (NOON)



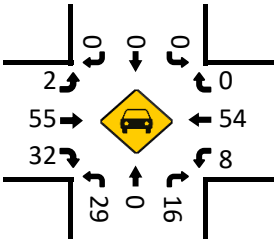
HT (NOON)



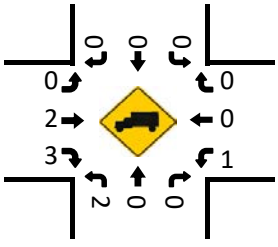
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Project ID: 21-190015-001
Location: Patton St & E Jackson Ave
City: Knoxville

Day: Tuesday
Date: 03/23/2021

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Patton St Northbound						Patton St Southbound						E Jackson Ave Eastbound						E Jackson Ave Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	2	0	1	0	0	3	0	0	0	0	0	0	0	11	3	0	0	14	2	4	0	0	0	6	23
7:15 AM	5	0	3	0	0	8	0	0	0	0	0	0	0	8	0	0	0	8	3	6	0	0	0	9	25
7:30 AM	1	0	2	0	0	3	0	0	0	0	0	0	0	11	4	0	0	15	3	8	0	0	0	11	29
7:45 AM	6	0	2	0	0	8	0	0	0	0	0	0	1	12	4	0	0	17	2	9	0	0	0	11	36
Total	14	0	8	0	0	22	0	0	0	0	0	0	1	42	11	0	0	54	10	27	0	0	0	37	113
8:00 AM	6	0	3	0	0	9	0	0	0	0	0	0	1	8	3	0	0	12	3	10	0	0	0	13	34
8:15 AM	4	0	1	0	0	5	0	0	0	0	0	0	0	7	2	0	0	9	5	7	0	0	0	12	26
8:30 AM	2	0	2	0	0	4	0	0	0	0	0	0	2	5	4	0	0	11	1	7	0	0	0	8	23
8:45 AM	5	0	1	0	2	6	0	0	0	0	0	0	2	8	3	0	1	13	1	7	0	0	2	8	27
Total	17	0	7	0	2	24	0	0	0	0	0	0	5	28	12	0	1	45	10	31	0	0	2	41	110
BREAK																									
11:00 AM	2	0	3	0	0	5	0	0	0	0	0	0	0	6	10	0	0	16	6	5	0	0	0	11	32
11:15 AM	6	0	2	0	1	8	0	0	0	0	0	0	0	10	8	0	2	18	5	4	0	0	1	9	35
11:30 AM	5	0	3	0	0	8	0	0	0	0	0	0	0	9	8	0	2	17	1	11	0	0	0	12	37
11:45 AM	7	0	1	0	1	8	0	0	0	0	0	0	1	5	6	0	1	12	5	17	0	0	0	22	42
Total	20	0	9	0	2	29	0	0	0	0	0	0	1	30	32	0	5	63	17	37	0	0	1	54	146
12:00 PM	7	0	4	0	0	11	0	0	0	0	0	0	1	12	13	0	0	26	1	8	0	0	0	9	46
12:15 PM	11	0	2	0	0	13	0	0	0	0	0	0	0	13	4	0	0	17	1	14	0	0	0	15	45
12:30 PM	8	0	4	0	0	12	0	0	0	0	0	0	0	13	4	0	0	17	1	11	0	0	0	12	41
12:45 PM	8	0	3	0	0	11	0	0	0	0	0	0	0	13	4	0	0	17	1	11	0	0	0	12	40
Total	34	0	13	0	0	47	0	0	0	0	0	0	1	51	25	0	0	77	4	44	0	0	0	48	172
BREAK																									
4:00 PM	5	0	1	0	0	6	0	0	0	0	0	0	0	13	9	0	0	22	4	18	0	0	0	22	50
4:15 PM	9	0	2	0	0	11	0	0	0	0	0	0	0	11	7	0	0	18	2	12	0	0	0	14	43
4:30 PM	4	0	4	0	1	8	0	0	0	0	0	0	1	20	7	0	0	28	3	16	0	0	0	19	55
4:45 PM	13	0	9	0	0	22	0	0	0	0	0	0	1	13	12	0	0	26	0	8	0	0	0	8	56
Total	31	0	16	0	1	47	0	0	0	0	0	0	2	57	35	0	0	94	9	54	0	0	0	63	204
5:00 PM	3	0	0	0	0	3	0	0	0	0	0	0	0	9	9	0	0	18	2	9	0	0	0	11	32
5:15 PM	4	0	0	0	1	4	0	0	0	0	0	0	1	13	8	0	0	22	2	8	0	0	1	10	36
5:30 PM	7	0	3	0	1	10	0	0	0	0	0	0	1	11	12	0	0	24	0	6	0	0	1	6	40
5:45 PM	6	0	1	0	0	7	0	0	0	0	0	0	1	6	4	0	0	11	0	7	0	0	0	7	25
Total	20	0	4	0	2	24	0	0	0	0	0	0	3	39	33	0	0	75	4	30	0	0	2	34	133
Grand Total	136	0	57	0	7	193	0	0	0	0	0	0	13	247	148	0	6	408	54	223	0	0	5	277	878
Apprch %	70.5	0.0	29.5	0.0	3.6		0.0	0.0	0.0	0.0	0.0		3.2	60.5	36.3	0.0	1.5		19.5	80.5	0.0	0.0	1.8		
Total %	15.5	0.0	6.5	0.0	0.8	22.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	28.1	16.9	0.0	0.7	46.5	6.2	25.4	0.0	0.0	0.6	31.5	
Cars, PU, Vans	131	0	46	0		177	0	0	0	0		0	13	230	128	0		371	37	212	0	0		249	797
% Cars, PU, Vans	96.3	0.0	80.7	0.0		91.7	0.0	0.0	0.0	0.0		0.0	100.0	93.1	86.5	0.0		90.9	68.5	95.1	0.0	0.0		89.9	90.8
Heavy trucks	5	0	11	0		16	0	0	0	0		0	0	17	20	0		37	17	11	0	0		28	81
%Heavy trucks	3.7	0.0	19.3	0.0		8.3	0.0	0.0	0.0	0.0		0.0	0.0	6.9	13.5	0.0		9.1	31.5	4.9	0.0	0.0		10.1	9.2

Project ID: 21-190015-001
Location: Patton St & E Jackson Ave
City: Knoxville

PEAK HOURS

Day: Tuesday
Date: 3/23/2021

AM

	Patton St Northbound					Patton St Southbound					E Jackson Ave Eastbound					E Jackson Ave Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM - 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
7:30 AM	1	0	2	0	3	0	0	0	0	0	0	11	4	0	15	3	8	0	0	11	29
7:45 AM	6	0	2	0	8	0	0	0	0	0	1	12	4	0	17	2	9	0	0	11	36
8:00 AM	6	0	3	0	9	0	0	0	0	0	1	8	3	0	12	3	10	0	0	13	34
8:15 AM	4	0	1	0	5	0	0	0	0	0	0	7	2	0	9	5	7	0	0	12	26
Total Volume	17	0	8	0	25	0	0	0	0	0	2	38	13	0	53	13	34	0	0	47	125
% App. Total	68.0	0.0	32.0	0.0	100	0.0	0.0	0.0	0.0	0	3.8	71.7	24.5	0.0	100	27.7	72.3	0.0	0.0	100	
PHF					0.694										0.779					0.904	0.868
Cars, PU, Vans	17	0	5	0	22	0	0	0	0	0	2	36	10	0	48	6	31	0	0	37	107
% Cars, PU, Vans	100.0	0.0	62.5	0.0	88.0	0.0	0.0	0.0	0.0	0.0	100.0	94.7	76.9	0.0	90.6	46.2	91.2	0.0	0.0	78.7	85.6
Heavy trucks	0	0	3	0	3	0	0	0	0	0	0	2	3	0	5	7	3	0	0	10	18
%Heavy trucks	0.0	0.0	37.5	0.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	23.1	0.0	9.4	53.8	8.8	0.0	0.0	21.3	14.4

NOON

	Patton St Northbound					Patton St Southbound					E Jackson Ave Eastbound					E Jackson Ave Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 11:00 AM - 01:00 PM																					
Peak Hour for Entire Intersection Begins at 11:45 AM																					
11:45 AM	7	0	1	0	8	0	0	0	0	0	1	5	6	0	12	5	17	0	0	22	42
12:00 PM	7	0	4	0	11	0	0	0	0	0	1	12	13	0	26	1	8	0	0	9	46
12:15 PM	11	0	2	0	13	0	0	0	0	0	0	13	4	0	17	1	14	0	0	15	45
12:30 PM	8	0	4	0	12	0	0	0	0	0	0	13	4	0	17	1	11	0	0	12	41
Total Volume	33	0	11	0	44	0	0	0	0	0	2	43	27	0	72	8	50	0	0	58	174
% App. Total	75.0	0.0	25.0	0.0	100	0.0	0.0	0.0	0.0	0	2.8	59.7	37.5	0.0	100	13.8	86.2	0.0	0.0	100	
PHF					0.846										0.692					0.659	0.946
Cars, PU, Vans	33	0	6	0	39	0	0	0	0	0	2	40	24	0	66	5	47	0	0	52	157
% Cars, PU, Vans	100.0	0.0	54.5	0.0	88.6	0.0	0.0	0.0	0.0	0.0	100.0	93.0	88.9	0.0	91.7	62.5	94.0	0.0	0.0	89.7	90.2
Heavy trucks	0	0	5	0	5	0	0	0	0	0	0	3	3	0	6	3	3	0	0	6	17
%Heavy trucks	0.0	0.0	45.5	0.0	11.4	0.0	0.0	0.0	0.0	0.0	0.0	7.0	11.1	0.0	8.3	37.5	6.0	0.0	0.0	10.3	9.8

PM

	Patton St Northbound					Patton St Southbound					E Jackson Ave Eastbound					E Jackson Ave Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM - 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
4:00 PM	5	0	1	0	6	0	0	0	0	0	0	13	9	0	22	4	18	0	0	22	50
4:15 PM	9	0	2	0	11	0	0	0	0	0	0	11	7	0	18	2	12	0	0	14	43
4:30 PM	4	0	4	0	8	0	0	0	0	0	1	20	7	0	28	3	16	0	0	19	55
4:45 PM	13	0	9	0	22	0	0	0	0	0	1	13	12	0	26	0	8	0	0	8	56
Total Volume	31	0	16	0	47	0	0	0	0	0	2	57	35	0	94	9	54	0	0	63	204
% App. Total	66.0	0.0	34.0	0.0	100	0.0	0.0	0.0	0.0	0	2.1	60.6	37.2	0.0	100	14.3	85.7	0.0	0.0	100	
PHF					0.534										0.839					0.716	0.911
Cars, PU, Vans	29	0	16	0	45	0	0	0	0	0	2	55	32	0	89	8	54	0	0	62	196
% Cars, PU, Vans	93.5	0.0	100.0	0.0	95.7	0.0	0.0	0.0	0.0	0.0	100.0	96.5	91.4	0.0	94.7	88.9	100.0	0.0	0.0	98.4	96.1
Heavy trucks	2	0	0	0	2	0	0	0	0	0	0	2	3	0	5	1	0	0	0	1	8
%Heavy trucks	6.5	0.0	0.0	0.0	4.3	0.0	0.0	0.0	0.0	0.0	0.0	3.5	8.6	0.0	5.3	11.1	0.0	0.0	0.0	1.6	3.9

Prepared by National Data & Surveying Services

Florida St/Randolph St & E Jackson Ave

Peak Hour Turning Movement Count

ID: 21-190005-002
City: Knoxville

Day: Thursday
Date: 2/4/2021

PEAK HOURS

AM	07:30 AM - 08:30 AM
NOON	11:45 AM - 12:45 PM
PM	04:15 PM - 05:15 PM

COUNT PERIODS

AM	7:00 AM - 09:00 AM
NOON	11:00 AM - 01:00 PM
PM	4:00 PM - 06:00 PM

SOUTHBOUND — Florida St/Randolph St

AM	0	5	5	0	18	AM
NOON	14	7	5	0	18	NOON
PM	2	1	1	0	29	PM

EASTBOUND — E Jackson Ave

AM	NOON	PM	
52	64	46	
0	0	0	0
0	8	12	0
37	34	36	1
12	17	23	0
AM	NOON	PM	

WESTBOUND — E Jackson Ave

PM	NOON	AM	
6	4	11	0
38	40	41	1
4	0	4	0
0	0	0	0
37	41	42	
PM	NOON	AM	

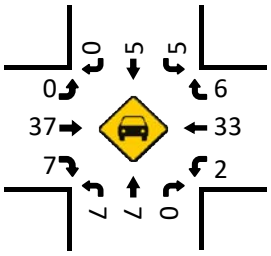
NORTHBOUND — Florida St/Randolph St

PM	28	0	6	11	0	PM
NOON	24	0	10	6	2	NOON
AM	21	0	11	7	0	AM

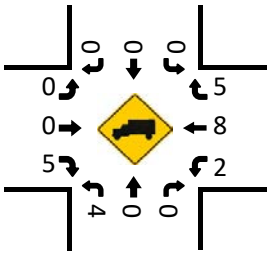
CONTROL: 2-Way Stop(NB/SB)

	AM	NOON	PM
TEV	133	147	140
PHF	0.83	0.88	0.81

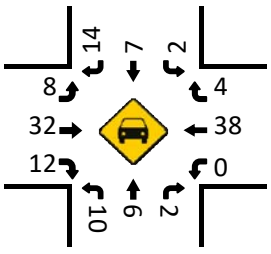
Cars (AM)



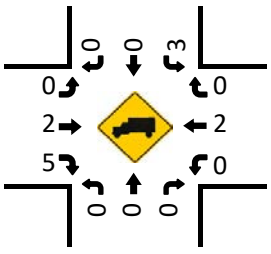
HT (AM)



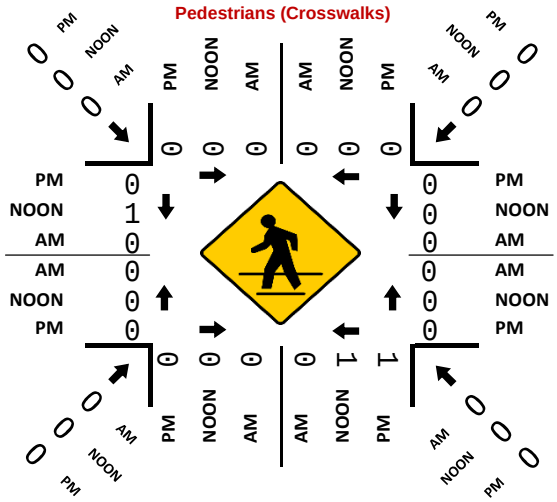
Cars (NOON)



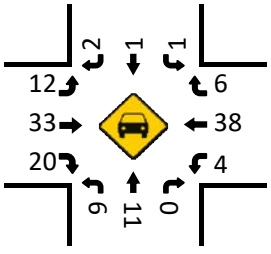
HT (NOON)



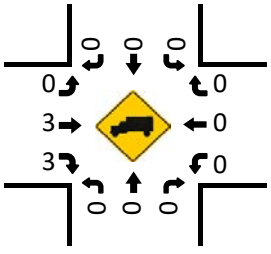
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



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Location: Florida St/Randolph St & E Jackson Ave
City: Knoxville

Day: Thursday
Date: 2/4/2021

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Florida St/Randolph St Northbound						Florida St/Randolph St Southbound						E Jackson Ave Eastbound						E Jackson Ave Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	1	1	0	0	1	2	0	0	0	0	0	0	0	5	5	0	0	10	0	2	1	0	0	3	15
7:15 AM	4	0	1	0	0	5	0	0	0	0	0	0	0	7	3	0	0	10	1	5	0	0	0	6	21
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	9	4	0	0	13	2	12	0	0	0	14	27
7:45 AM	5	1	0	0	0	6	1	2	0	0	0	3	0	11	2	0	0	13	1	10	4	0	0	15	37
Total	10	2	1	0	1	13	1	2	0	0	0	3	0	32	14	0	0	46	4	29	5	0	0	38	100
8:00 AM	5	3	0	0	0	8	3	2	0	0	0	5	0	12	4	0	0	16	1	6	4	0	0	11	40
8:15 AM	1	3	0	0	0	4	1	1	0	0	0	2	0	5	2	0	0	7	0	13	3	0	0	16	29
8:30 AM	1	2	2	0	0	5	1	1	0	0	0	2	0	9	2	0	0	11	0	6	0	0	0	6	24
8:45 AM	0	1	0	0	0	1	0	3	0	1	0	4	1	7	1	0	0	9	1	6	2	0	0	9	23
Total	7	9	2	0	0	18	5	7	0	1	0	13	1	33	9	0	0	43	2	31	9	0	0	42	116
BREAK																									
11:00 AM	1	2	1	0	0	4	0	1	1	0	0	2	2	4	3	0	0	9	0	7	3	0	0	10	25
11:15 AM	1	1	2	0	0	4	0	0	4	0	0	4	2	9	9	0	0	20	0	5	5	0	0	10	38
11:30 AM	4	2	0	0	1	6	4	4	0	0	0	8	4	5	4	0	0	13	0	9	2	0	0	11	38
11:45 AM	2	2	0	0	0	4	0	1	0	0	0	1	3	9	5	0	1	17	0	11	1	0	0	12	34
Total	8	7	3	0	1	18	4	6	5	0	0	15	11	27	21	0	1	59	0	32	11	0	0	43	135
12:00 PM	2	3	0	0	1	5	1	3	5	0	0	9	1	6	1	0	0	8	0	11	0	0	0	11	33
12:15 PM	3	1	2	0	0	6	2	2	7	0	0	11	1	9	2	0	0	12	0	12	1	0	0	13	42
12:30 PM	3	0	0	0	0	3	2	1	2	0	0	5	3	10	9	0	0	22	0	6	2	0	0	8	38
12:45 PM	3	1	1	0	2	5	0	2	1	0	0	3	0	9	5	0	0	14	0	8	3	0	0	11	33
Total	11	5	3	0	3	19	5	8	15	0	0	28	5	34	17	0	0	56	0	37	6	0	0	43	146
BREAK																									
4:00 PM	7	0	1	0	0	8	0	2	0	0	0	2	1	13	5	0	1	19	1	5	2	0	0	8	37
4:15 PM	1	1	0	0	1	2	0	1	1	0	0	2	4	10	5	0	0	19	1	12	2	0	0	15	38
4:30 PM	1	3	0	0	0	4	0	0	0	0	0	0	1	12	3	0	0	16	1	8	1	0	0	10	30
4:45 PM	1	2	0	0	0	3	1	0	0	0	0	1	1	3	7	0	0	11	1	10	3	0	0	14	29
Total	10	6	1	0	1	17	1	3	1	0	0	5	7	38	20	0	1	65	4	35	8	0	0	47	134
5:00 PM	3	5	0	0	0	8	0	0	1	0	0	1	6	11	8	0	0	25	1	8	0	0	0	9	43
5:15 PM	1	1	0	0	1	2	1	0	1	0	0	2	1	10	3	1	0	15	1	11	2	0	0	14	33
5:30 PM	2	0	0	0	0	2	1	1	2	0	0	4	0	8	4	0	0	12	0	6	0	0	0	6	24
5:45 PM	0	2	0	0	0	2	1	0	0	0	0	1	1	8	6	0	0	15	0	8	0	0	0	8	26
Total	6	8	0	0	1	14	3	1	4	0	0	8	8	37	21	1	0	67	2	33	2	0	0	37	126
Grand Total	52	37	10	0	7	99	19	27	25	1	0	72	32	201	102	1	2	336	12	197	41	0	0	250	757
Apprch %	52.5	37.4	10.1	0.0	7.1		26.4	37.5	34.7	1.4	0.0		9.5	59.8	30.4	0.3	0.6		4.8	78.8	16.4	0.0	0.0		
Total %	6.9	4.9	1.3	0.0	0.9	13.1	2.5	3.6	3.3	0.1	0.0	9.5	4.2	26.6	13.5	0.1	0.3	44.4	1.6	26.0	5.4	0.0	0.0	33.0	
Cars, PU, Vans	46	36	8	0		90	14	24	24	1		63	29	192	71	1		293	10	183	33	0		226	672
% Cars, PU, Vans	88.5	97.3	80.0	0.0		90.9	73.7	88.9	96.0	100.0		87.5	90.6	95.5	69.6	100.0		87.2	83.3	92.9	80.5	0.0		90.4	88.8
Heavy trucks	6	1	2	0		9	5	3	1	0		9	3	9	31	0		43	2	14	8	0		24	85
%Heavy trucks	11.5	2.7	20.0	0.0		9.1	26.3	11.1	4.0	0.0		12.5	9.4	4.5	30.4	0.0		12.8	16.7	7.1	19.5	0.0		9.6	11.2

Project ID: 21-190005-002
Location: Florida St/Randolph St & E Jackson Ave
City: Knoxville

PEAK HOURS

Day: Thursday
Date: 2/4/2021

AM

	Florida St/Randolph St Northbound					Florida St/Randolph St Southbound					E Jackson Ave Eastbound					E Jackson Ave Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM - 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	9	4	0	13	2	12	0	0	14	27
7:45 AM	5	1	0	0	6	1	2	0	0	3	0	11	2	0	13	1	10	4	0	15	37
8:00 AM	5	3	0	0	8	3	2	0	0	5	0	12	4	0	16	1	6	4	0	11	40
8:15 AM	1	3	0	0	4	1	1	0	0	2	0	5	2	0	7	0	13	3	0	16	29
Total Volume	11	7	0	0	18	5	5	0	0	10	0	37	12	0	49	4	41	11	0	56	133
% App. Total	61.1	38.9	0.0	0.0	100	50.0	50.0	0.0	0.0	100	0.0	75.5	24.5	0.0	100	7.1	73.2	19.6	0.0	100	
PHF					0.563					0.500					0.766					0.875	0.831
Cars, PU, Vans	7	7	0	0	14	5	5	0	0	10	0	37	7	0	44	2	33	6	0	41	109
% Cars, PU, Vans	63.6	100.0	0.0	0.0	77.8	100.0	100.0	0.0	0.0	100.0	0.0	100.0	58.3	0.0	89.8	50.0	80.5	54.5	0.0	73.2	82.0
Heavy trucks	4	0	0	0	4	0	0	0	0	0	0	0	5	0	5	2	8	5	0	15	24
%Heavy trucks	36.4	0.0	0.0	0.0	22.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	41.7	0.0	10.2	50.0	19.5	45.5	0.0	26.8	18.0

NOON

	Florida St/Randolph St Northbound					Florida St/Randolph St Southbound					E Jackson Ave Eastbound					E Jackson Ave Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 11:00 AM - 01:00 PM																					
Peak Hour for Entire Intersection Begins at 11:45 AM																					
11:45 AM	2	2	0	0	4	0	1	0	0	1	3	9	5	0	17	0	11	1	0	12	34
12:00 PM	2	3	0	0	5	1	3	5	0	9	1	6	1	0	8	0	11	0	0	11	33
12:15 PM	3	1	2	0	6	2	2	7	0	11	1	9	2	0	12	0	12	1	0	13	42
12:30 PM	3	0	0	0	3	2	1	2	0	5	3	10	9	0	22	0	6	2	0	8	38
Total Volume	10	6	2	0	18	5	7	14	0	26	8	34	17	0	59	0	40	4	0	44	147
% App. Total	55.6	33.3	11.1	0.0	100	19.2	26.9	53.8	0.0	100	13.6	57.6	28.8	0.0	100	0.0	90.9	9.1	0.0	100	
PHF					0.750					0.591					0.670					0.846	0.875
Cars, PU, Vans	10	6	2	0	18	2	7	14	0	23	8	32	12	0	52	0	38	4	0	42	135
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	40.0	100.0	100.0	0.0	88.5	100.0	94.1	70.6	0.0	88.1	0.0	95.0	100.0	0.0	95.5	91.8
Heavy trucks	0	0	0	0	0	3	0	0	0	3	0	2	5	0	7	0	2	0	0	2	12
%Heavy trucks	0.0	0.0	0.0	0.0	0.0	60.0	0.0	0.0	0.0	11.5	0.0	5.9	29.4	0.0	11.9	0.0	5.0	0.0	0.0	4.5	8.2

PM

	Florida St/Randolph St Northbound					Florida St/Randolph St Southbound					E Jackson Ave Eastbound					E Jackson Ave Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM - 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
4:15 PM	1	1	0	0	2	0	1	1	0	2	4	10	5	0	19	1	12	2	0	15	38
4:30 PM	1	3	0	0	4	0	0	0	0	0	1	12	3	0	16	1	8	1	0	10	30
4:45 PM	1	2	0	0	3	1	0	0	0	1	1	3	7	0	11	1	10	3	0	14	29
5:00 PM	3	5	0	0	8	0	0	1	0	1	6	11	8	0	25	1	8	0	0	9	43
Total Volume	6	11	0	0	17	1	1	2	0	4	12	36	23	0	71	4	38	6	0	48	140
% App. Total	35.3	64.7	0.0	0.0	100	25.0	25.0	50.0	0.0	100	16.9	50.7	32.4	0.0	100	8.3	79.2	12.5	0.0	100	
PHF					0.531					0.500					0.710					0.800	0.814
Cars, PU, Vans	6	11	0	0	17	1	1	2	0	4	12	33	20	0	65	4	38	6	0	48	134
% Cars, PU, Vans	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	91.7	87.0	0.0	91.5	100.0	100.0	100.0	0.0	100.0	95.7
Heavy trucks	0	0	0	0	0	0	0	0	0	0	0	3	3	0	6	0	0	0	0	0	6
%Heavy trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3	13.0	0.0	8.5	0.0	0.0	0.0	0.0	0.0	4.3

Prepared by National Data & Surveying Services

Patton St & Willow Ave

Peak Hour Turning Movement Count

ID: 21-190015-002
City: Knoxville

Day: Tuesday
Date: 03/23/2021

PEAK HOURS	
AM	07:15 AM - 08:15 AM
NOON	12:00 PM - 01:00 PM
PM	04:00 PM - 05:00 PM

COUNT PERIODS	
AM	7:00 AM - 09:00 AM
NOON	11:00 AM - 01:00 PM
PM	4:00 PM - 06:00 PM

SOUTHBOUND (Patton St)

AM	3	15	2	0	32	AM
NOON	7	25	6	0	46	NOON
PM	8	40	1	0	46	PM

EASTBOUND (Willow Ave)

AM	NOON	PM	
47	33	56	
1	0	0	0
7	18	9	0
73	53	58	1
6	17	25	0
AM	NOON	PM	

WESTBOUND (Willow Ave)

PM	NOON	AM	
3	1	0	0
34	18	33	1
64	36	51	0
1	0	0	0
84	78	91	
PM	NOON	AM	

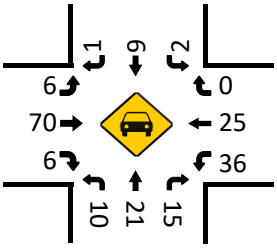
NORTHBOUND (Patton St)

PM	129	0	14	34	24	PM
NOON	78	0	8	27	19	NOON
AM	72	0	10	25	16	AM

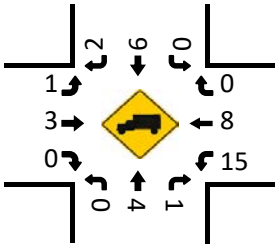
	0	0	1	0

CONTROL			
2-way Stop (NB/SB)			
TEV	242 AM	235 NOON	315 PM
PHF	0.90	0.89	0.82

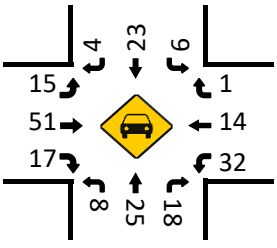
Cars (AM)



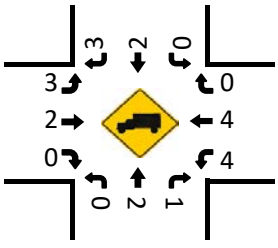
HT (AM)



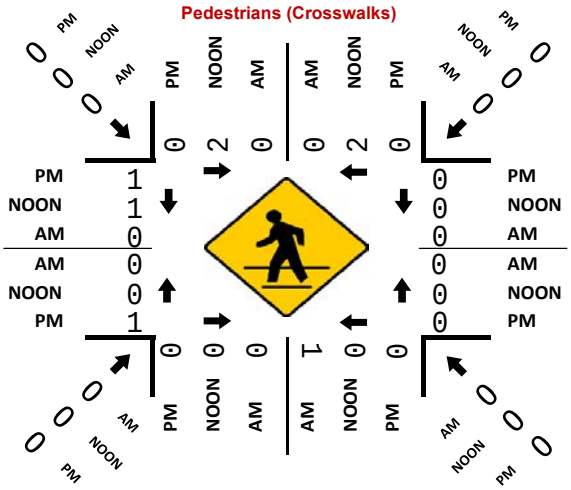
Cars (NOON)



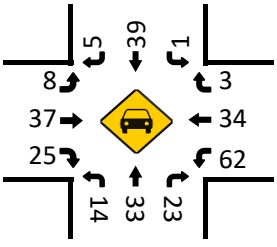
HT (NOON)



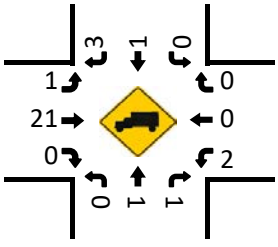
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Project ID: 21-190015-002
Location: Patton St & Willow Ave
City: Knoxville

Day: Tuesday
Date: 03/23/2021

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Patton St Northbound						Patton St Southbound						Willow Ave Eastbound						Willow Ave Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	0	4	2	0	0	6	1	5	1	0	0	7	0	15	1	0	0	16	10	4	0	0	0	14	43
7:15 AM	3	6	5	0	0	14	0	2	0	0	0	2	1	25	1	1	0	28	10	8	0	0	0	18	62
7:30 AM	1	3	2	0	1	6	1	4	1	0	0	6	1	16	2	0	0	19	14	8	0	0	0	22	53
7:45 AM	3	8	6	0	0	17	0	4	2	0	0	6	4	17	1	0	0	22	12	10	0	0	0	22	67
Total	7	21	15	0	1	43	2	15	4	0	0	21	6	73	5	1	0	85	46	30	0	0	0	76	225
8:00 AM	3	8	3	0	0	14	1	5	0	0	0	6	1	15	2	0	0	18	15	7	0	0	0	22	60
8:15 AM	0	3	8	0	0	11	0	5	2	0	0	7	2	13	1	0	0	16	11	7	1	0	0	19	53
8:30 AM	1	5	5	0	0	11	0	4	1	0	0	5	0	7	2	0	0	9	5	3	0	0	0	8	33
8:45 AM	0	6	4	0	0	10	0	4	1	0	0	5	0	3	0	0	0	3	7	2	1	0	0	10	28
Total	4	22	20	0	0	46	1	18	4	0	0	23	3	38	5	0	0	46	38	19	2	0	0	59	174
BREAK																									
11:00 AM	1	2	10	0	0	13	0	13	4	0	0	17	2	7	0	0	0	9	7	4	0	0	0	11	50
11:15 AM	2	5	8	0	0	15	0	6	3	0	0	9	1	6	1	0	0	8	13	2	1	0	0	16	48
11:30 AM	0	3	6	0	0	9	1	6	4	0	0	11	5	4	4	0	0	13	5	7	0	0	0	12	45
11:45 AM	1	5	9	0	0	15	0	9	4	0	0	13	3	10	2	1	1	16	6	3	0	0	0	9	53
Total	4	15	33	0	0	52	1	34	15	0	0	50	11	27	7	1	1	46	31	16	1	0	0	48	196
12:00 PM	4	7	2	0	0	13	1	13	2	0	0	16	4	13	6	0	1	23	5	2	1	0	0	8	60
12:15 PM	0	6	5	0	0	11	3	5	2	0	2	10	5	16	4	0	0	25	6	3	0	0	0	9	55
12:30 PM	1	8	7	0	0	16	1	4	2	0	2	7	6	15	3	0	0	24	12	7	0	0	0	19	66
12:45 PM	3	6	5	0	0	14	1	3	1	0	0	5	3	9	4	0	0	16	13	6	0	0	0	19	54
Total	8	27	19	0	0	54	6	25	7	0	4	38	18	53	17	0	1	88	36	18	1	0	0	55	235
BREAK																									
4:00 PM	5	2	8	0	0	15	1	11	2	0	0	14	3	7	4	0	0	14	14	6	1	0	0	21	64
4:15 PM	3	10	8	0	0	21	0	10	3	0	0	13	1	27	8	0	1	36	8	6	0	0	0	14	84
4:30 PM	2	6	3	0	0	11	0	7	1	0	0	8	2	9	4	0	1	15	24	12	0	1	0	37	71
4:45 PM	4	16	5	0	0	25	0	12	2	0	0	14	3	15	9	0	0	27	18	10	2	0	0	30	96
Total	14	34	24	0	0	72	1	40	8	0	0	49	9	58	25	0	2	92	64	34	3	1	0	102	315
5:00 PM	0	3	8	0	0	11	1	10	1	0	0	12	1	7	9	0	0	17	13	5	0	0	0	18	58
5:15 PM	3	3	5	0	0	11	0	7	2	0	1	9	1	11	8	0	0	20	9	3	0	0	0	12	52
5:30 PM	5	6	5	0	0	16	0	12	2	0	1	14	3	8	6	1	0	18	6	4	1	0	0	11	59
5:45 PM	4	5	1	1	2	11	0	5	1	0	0	6	2	12	12	0	2	26	5	2	0	0	0	7	50
Total	12	17	19	1	2	49	1	34	6	0	2	41	7	38	35	1	2	81	33	14	1	0	0	48	219
Grand Total	49	136	130	1	3	316	12	166	44	0	6	222	54	287	94	3	6	438	248	131	8	1	0	388	1364
Apprch %	15.5	43.0	41.1	0.3	0.9		5.4	74.8	19.8	0.0	2.7		12.3	65.5	21.5	0.7	1.4		63.9	33.8	2.1	0.3	0.0		
Total %	3.6	10.0	9.5	0.1	0.2	23.2	0.9	12.2	3.2	0.0	0.4	16.3	4.0	21.0	6.9	0.2	0.4	32.1	18.2	9.6	0.6	0.1	0.0	28.4	
Cars, PU, Vans	49	126	115	1		291	12	147	25	0		184	47	251	94	2		394	216	115	8	1		340	1209
% Cars, PU, Vans	100.0	92.6	88.5	100.0		92.1	100.0	88.6	56.8	0.0		82.9	87.0	87.5	100.0	66.7		90.0	87.1	87.8	100.0	100.0		87.6	88.6
Heavy trucks	0	10	15	0		25	0	19	19	0		38	7	36	0	1		44	32	16	0	0		48	155
%Heavy trucks	0.0	7.4	11.5	0.0		7.9	0.0	11.4	43.2	0.0		17.1	13.0	12.5	0.0	33.3		10.0	12.9	12.2	0.0	0.0		12.4	11.4

Project ID: 21-190015-002
Location: Patton St & Willow Ave
City: Knoxville

PEAK HOURS

Day: Tuesday
Date: 3/23/2021

AM

	Patton St Northbound					Patton St Southbound					Willow Ave Eastbound					Willow Ave Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM - 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
7:15 AM	3	6	5	0	14	0	2	0	0	2	1	25	1	1	28	10	8	0	0	18	62
7:30 AM	1	3	2	0	6	1	4	1	0	6	1	16	2	0	19	14	8	0	0	22	53
7:45 AM	3	8	6	0	17	0	4	2	0	6	4	17	1	0	22	12	10	0	0	22	67
8:00 AM	3	8	3	0	14	1	5	0	0	6	1	15	2	0	18	15	7	0	0	22	60
Total Volume	10	25	16	0	51	2	15	3	0	20	7	73	6	1	87	51	33	0	0	84	242
% App. Total	19.6	49.0	31.4	0.0	100	10.0	75.0	15.0	0.0	100	8.0	83.9	6.9	1.1	100	60.7	39.3	0.0	0.0	100	
PHF					0.750					0.833					0.777					0.955	0.903
Cars, PU, Vans	10	21	15	0	46	2	9	1	0	12	6	70	6	0	82	36	25	0	0	61	201
% Cars, PU, Vans	100.0	84.0	93.8	0.0	90.2	100.0	60.0	33.3	0.0	60.0	85.7	95.9	100.0	0.0	94.3	70.6	75.8	0.0	0.0	72.6	83.1
Heavy trucks	0	4	1	0	5	0	6	2	0	8	1	3	0	1	5	15	8	0	0	23	41
%Heavy trucks	0.0	16.0	6.3	0.0	9.8	0.0	40.0	66.7	0.0	40.0	14.3	4.1	0.0	100.0	5.7	29.4	24.2	0.0	0.0	27.4	16.9

NOON

	Patton St Northbound					Patton St Southbound					Willow Ave Eastbound					Willow Ave Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 11:00 AM - 01:00 PM																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	4	7	2	0	13	1	13	2	0	16	4	13	6	0	23	5	2	1	0	8	60
12:15 PM	0	6	5	0	11	3	5	2	0	10	5	16	4	0	25	6	3	0	0	9	55
12:30 PM	1	8	7	0	16	1	4	2	0	7	6	15	3	0	24	12	7	0	0	19	66
12:45 PM	3	6	5	0	14	1	3	1	0	5	3	9	4	0	16	13	6	0	0	19	54
Total Volume	8	27	19	0	54	6	25	7	0	38	18	53	17	0	88	36	18	1	0	55	235
% App. Total	14.8	50.0	35.2	0.0	100	15.8	65.8	18.4	0.0	100	20.5	60.2	19.3	0.0	100	65.5	32.7	1.8	0.0	100	
PHF					0.844					0.594					0.880					0.724	0.890
Cars, PU, Vans	8	25	18	0	51	6	23	4	0	33	15	51	17	0	83	32	14	1	0	47	214
% Cars, PU, Vans	100.0	92.6	94.7	0.0	94.4	100.0	92.0	57.1	0.0	86.8	83.3	96.2	100.0	0.0	94.3	88.9	77.8	100.0	0.0	85.5	91.1
Heavy trucks	0	2	1	0	3	0	2	3	0	5	3	2	0	0	5	4	4	0	0	8	21
%Heavy trucks	0.0	7.4	5.3	0.0	5.6	0.0	8.0	42.9	0.0	13.2	16.7	3.8	0.0	0.0	5.7	11.1	22.2	0.0	0.0	14.5	8.9

PM

	Patton St Northbound					Patton St Southbound					Willow Ave Eastbound					Willow Ave Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM - 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
4:00 PM	5	2	8	0	15	1	11	2	0	14	3	7	4	0	14	14	6	1	0	21	64
4:15 PM	3	10	8	0	21	0	10	3	0	13	1	27	8	0	36	8	6	0	0	14	84
4:30 PM	2	6	3	0	11	0	7	1	0	8	2	9	4	0	15	24	12	0	1	37	71
4:45 PM	4	16	5	0	25	0	12	2	0	14	3	15	9	0	27	18	10	2	0	30	96
Total Volume	14	34	24	0	72	1	40	8	0	49	9	58	25	0	92	64	34	3	1	102	315
% App. Total	19.4	47.2	33.3	0.0	100	2.0	81.6	16.3	0.0	100	9.8	63.0	27.2	0.0	100	62.7	33.3	2.9	1.0	100	
PHF					0.720					0.875					0.639					0.689	0.820
Cars, PU, Vans	14	33	23	0	70	1	39	5	0	45	8	37	25	0	70	62	34	3	1	100	285
% Cars, PU, Vans	100.0	97.1	95.8	0.0	97.2	100.0	97.5	62.5	0.0	91.8	88.9	63.8	100.0	0.0	76.1	96.9	100.0	100.0	100.0	98.0	90.5
Heavy trucks	0	1	1	0	2	0	1	3	0	4	1	21	0	0	22	2	0	0	0	2	30
%Heavy trucks	0.0	2.9	4.2	0.0	2.8	0.0	2.5	37.5	0.0	8.2	11.1	36.2	0.0	0.0	23.9	3.1	0.0	0.0	0.0	2.0	9.5

Prepared by National Data & Surveying Services

Florida St & Willow Ave

Peak Hour Turning Movement Count

ID: 21-190005-004
City: Knoxville

Day: Thursday
Date: 2/4/2021

PEAK HOURS

AM	07:15 AM - 08:15 AM
NOON	12:00 PM - 01:00 PM
PM	04:00 PM - 05:00 PM

COUNT PERIODS

AM	7:00 AM - 09:00 AM
NOON	11:00 AM - 01:00 PM
PM	4:00 PM - 06:00 PM

SOUTHBOUND (Florida St)

	L	T	R	U	Total	
AM	19	0	7	0	20	AM
NOON	17	0	7	0	20	NOON
PM	28	0	2	0	16	PM

EASTBOUND (Willow Ave)

	AM	NOON	PM
	81	87	105
U	0	1	0
L	16	15	10
T	74	85	71
R	0	0	0

WESTBOUND (Willow Ave)

	PM	NOON	AM
U	6	5	4
L	77	69	62
T	0	0	0
R	0	1	0
	73	93	81

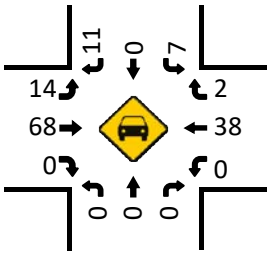
NORTHBOUND (Florida St)

	L	T	R	U	Total	
PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

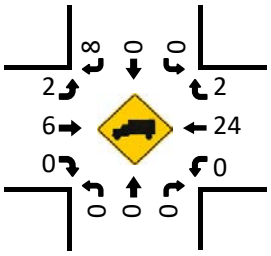
CONTROL: 1-Way Stop(SB)

	AM	NOON	PM
TEV	182	200	194
PHF	0.95	0.88	0.90

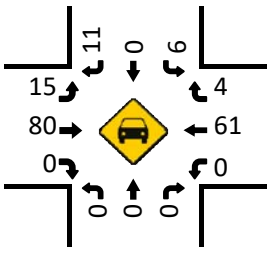
Cars (AM)



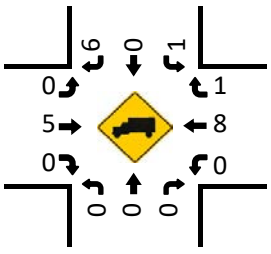
HT (AM)



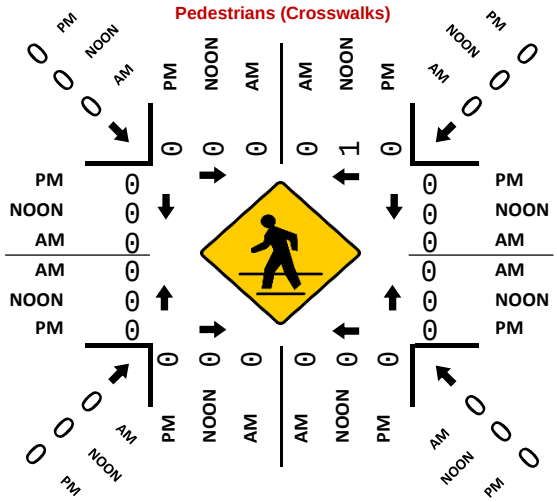
Cars (NOON)



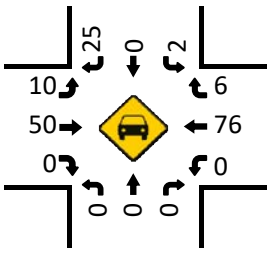
HT (NOON)



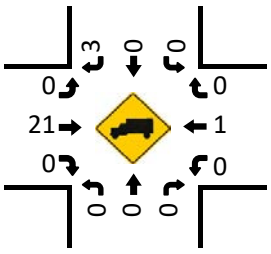
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Project ID: 21-190005-004
Location: Florida St & Willow Ave
City: Knoxville

Day: Thursday
Date: 2/4/2021

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Florida St Northbound						Florida St Southbound						Willow Ave Eastbound						Willow Ave Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	0	0	0	0	0	0	0	0	4	0	0	4	6	23	0	0	0	29	0	8	0	0	0	8	41
7:15 AM	0	0	0	0	0	0	1	0	2	0	0	3	7	17	0	0	0	24	0	20	1	0	0	21	48
7:30 AM	0	0	0	0	0	0	2	0	5	0	0	7	0	27	0	0	0	27	0	13	0	0	0	13	47
7:45 AM	0	0	0	0	0	0	2	0	5	0	0	7	4	19	0	0	0	23	0	10	2	0	0	12	42
Total	0	0	0	0	0	0	5	0	16	0	0	21	17	86	0	0	0	103	0	51	3	0	0	54	178
8:00 AM	0	0	0	0	0	0	2	0	7	0	0	9	5	11	0	0	0	16	0	19	1	0	0	20	45
8:15 AM	0	0	0	0	0	0	0	0	3	0	0	3	1	25	0	0	0	26	0	15	2	0	0	17	46
8:30 AM	0	0	0	0	0	0	0	0	3	0	0	3	4	14	0	0	0	18	0	13	1	0	0	14	35
8:45 AM	0	0	0	0	0	0	2	0	2	0	0	4	1	10	0	0	0	11	0	8	0	0	0	8	23
Total	0	0	0	0	0	0	4	0	15	0	0	19	11	60	0	0	0	71	0	55	4	0	0	59	149
BREAK																									
11:00 AM	0	0	0	0	0	0	0	0	4	0	0	4	1	12	0	1	0	14	0	15	3	0	0	18	36
11:15 AM	0	0	0	0	0	0	0	0	8	0	0	8	2	22	0	0	0	24	0	12	1	0	0	13	45
11:30 AM	0	0	0	0	0	0	1	0	5	0	1	6	5	17	0	0	1	22	0	9	1	0	0	10	38
11:45 AM	0	0	0	0	0	0	1	0	5	0	1	6	1	17	0	0	0	18	0	9	0	0	0	9	33
Total	0	0	0	0	0	0	2	0	22	0	2	24	9	68	0	1	1	78	0	45	5	0	0	50	152
12:00 PM	0	0	0	0	0	0	0	0	3	0	0	3	2	24	0	0	0	26	0	23	2	0	0	25	54
12:15 PM	0	0	0	0	0	0	1	0	1	0	0	2	6	21	0	0	0	27	0	15	1	1	0	17	46
12:30 PM	0	0	0	0	0	0	3	0	7	0	1	10	4	17	0	0	0	21	0	12	0	0	0	12	43
12:45 PM	0	0	0	0	0	0	3	0	6	0	0	9	3	23	0	1	0	27	0	19	2	0	0	21	57
Total	0	0	0	0	0	0	7	0	17	0	1	24	15	85	0	1	0	101	0	69	5	1	0	75	200
BREAK																									
4:00 PM	0	0	0	0	0	0	1	0	9	0	0	10	7	22	0	0	0	29	0	14	1	0	0	15	54
4:15 PM	0	0	0	0	0	0	0	0	6	0	0	6	1	23	0	0	0	24	0	22	1	0	0	23	53
4:30 PM	0	0	0	0	0	0	1	0	4	0	0	5	1	14	0	0	0	15	0	27	3	0	0	30	50
4:45 PM	0	0	0	0	0	0	0	0	9	0	0	9	1	12	0	0	0	13	0	14	1	0	0	15	37
Total	0	0	0	0	0	0	2	0	28	0	0	30	10	71	0	0	0	81	0	77	6	0	0	83	194
5:00 PM	0	0	0	0	0	0	1	0	9	0	1	10	4	16	0	0	0	20	0	16	4	0	0	20	50
5:15 PM	0	0	0	0	0	0	0	0	7	0	1	7	2	10	0	0	1	12	0	15	0	0	0	15	34
5:30 PM	0	0	0	0	0	0	0	0	5	0	0	5	2	14	0	0	0	16	0	5	0	0	0	5	26
5:45 PM	0	0	0	0	0	0	0	0	4	0	1	4	2	16	0	0	0	18	0	11	0	0	0	11	33
Total	0	0	0	0	0	0	1	0	25	0	3	26	10	56	0	0	1	66	0	47	4	0	0	51	143
Grand Total	0	0	0	0	0	0	21	0	123	0	6	144	72	426	0	2	2	500	0	344	27	1	0	372	1016
Apprch %	0.0	0.0	0.0	0.0	0.0		14.6	0.0	85.4	0.0	4.2		14.4	85.2	0.0	0.4	0.4		0.0	92.5	7.3	0.3	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	12.1	0.0	0.6	14.2	7.1	41.9	0.0	0.2	0.2	49.2	0.0	33.9	2.7	0.1	0.0	36.6	
Cars, PU, Vans	0	0	0	0		0	19	0	91	0		110	67	367	0	2		436	0	297	24	0		321	867
% Cars, PU, Vans	0.0	0.0	0.0	0.0		0.0	90.5	0.0	74.0	0.0		76.4	93.1	86.2	0.0	100.0		87.2	0.0	86.3	88.9	0.0		86.3	85.3
Heavy trucks	0	0	0	0		0	2	0	32	0		34	5	59	0	0		64	0	47	3	1		51	149
%Heavy trucks	0.0	0.0	0.0	0.0		0.0	9.5	0.0	26.0	0.0		23.6	6.9	13.8	0.0	0.0		12.8	0.0	13.7	11.1	100.0		13.7	14.7

Project ID: 21-190005-004
Location: Florida St & Willow Ave
City: Knoxville

PEAK HOURS

Day: Thursday
Date: 2/4/2021

AM

	Florida St Northbound					Florida St Southbound					Willow Ave Eastbound					Willow Ave Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM - 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
7:15 AM	0	0	0	0	0	1	0	2	0	3	7	17	0	0	24	0	20	1	0	21	48
7:30 AM	0	0	0	0	0	2	0	5	0	7	0	27	0	0	27	0	13	0	0	13	47
7:45 AM	0	0	0	0	0	2	0	5	0	7	4	19	0	0	23	0	10	2	0	12	42
8:00 AM	0	0	0	0	0	2	0	7	0	9	5	11	0	0	16	0	19	1	0	20	45
Total Volume	0	0	0	0	0	7	0	19	0	26	16	74	0	0	90	0	62	4	0	66	182
% App. Total	0.0	0.0	0.0	0.0	0	26.9	0.0	73.1	0.0	100	17.8	82.2	0.0	0.0	100	0.0	93.9	6.1	0.0	100	
PHF										0.722					0.833					0.786	0.948
Cars, PU, Vans	0	0	0	0	0	7	0	11	0	18	14	68	0	0	82	0	38	2	0	40	140
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	100.0	0.0	57.9	0.0	69.2	87.5	91.9	0.0	0.0	91.1	0.0	61.3	50.0	0.0	60.6	76.9
Heavy trucks	0	0	0	0	0	0	0	8	0	8	2	6	0	0	8	0	24	2	0	26	42
%Heavy trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.1	0.0	30.8	12.5	8.1	0.0	0.0	8.9	0.0	38.7	50.0	0.0	39.4	23.1

NOON

	Florida St Northbound					Florida St Southbound					Willow Ave Eastbound					Willow Ave Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 11:00 AM - 01:00 PM																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	0	0	0	0	0	0	0	3	0	3	2	24	0	0	26	0	23	2	0	25	54
12:15 PM	0	0	0	0	0	1	0	1	0	2	6	21	0	0	27	0	15	1	1	17	46
12:30 PM	0	0	0	0	0	3	0	7	0	10	4	17	0	0	21	0	12	0	0	12	43
12:45 PM	0	0	0	0	0	3	0	6	0	9	3	23	0	1	27	0	19	2	0	21	57
Total Volume	0	0	0	0	0	7	0	17	0	24	15	85	0	1	101	0	69	5	1	75	200
% App. Total	0.0	0.0	0.0	0.0	0	29.2	0.0	70.8	0.0	100	14.9	84.2	0.0	1.0	100	0.0	92.0	6.7	1.3	100	
PHF										0.600					0.935					0.750	0.877
Cars, PU, Vans	0	0	0	0	0	6	0	11	0	17	15	80	0	1	96	0	61	4	0	65	178
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	85.7	0.0	64.7	0.0	70.8	100.0	94.1	0.0	100.0	95.0	0.0	88.4	80.0	0.0	86.7	89.0
Heavy trucks	0	0	0	0	0	1	0	6	0	7	0	5	0	0	5	0	8	1	1	10	22
%Heavy trucks	0.0	0.0	0.0	0.0	0.0	14.3	0.0	35.3	0.0	29.2	0.0	5.9	0.0	0.0	5.0	0.0	11.6	20.0	100.0	13.3	11.0

PM

	Florida St Northbound					Florida St Southbound					Willow Ave Eastbound					Willow Ave Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM - 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
4:00 PM	0	0	0	0	0	1	0	9	0	10	7	22	0	0	29	0	14	1	0	15	54
4:15 PM	0	0	0	0	0	0	0	6	0	6	1	23	0	0	24	0	22	1	0	23	53
4:30 PM	0	0	0	0	0	1	0	4	0	5	1	14	0	0	15	0	27	3	0	30	50
4:45 PM	0	0	0	0	0	0	0	9	0	9	1	12	0	0	13	0	14	1	0	15	37
Total Volume	0	0	0	0	0	2	0	28	0	30	10	71	0	0	81	0	77	6	0	83	194
% App. Total	0.0	0.0	0.0	0.0	0	6.7	0.0	93.3	0.0	100	12.3	87.7	0.0	0.0	100	0.0	92.8	7.2	0.0	100	
PHF										0.750					0.698					0.692	0.898
Cars, PU, Vans	0	0	0	0	0	2	0	25	0	27	10	50	0	0	60	0	76	6	0	82	169
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	100.0	0.0	89.3	0.0	90.0	100.0	70.4	0.0	0.0	74.1	0.0	98.7	100.0	0.0	98.8	87.1
Heavy trucks	0	0	0	0	0	0	0	3	0	3	0	21	0	0	21	0	1	0	0	1	25
%Heavy trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.7	0.0	10.0	0.0	29.6	0.0	0.0	25.9	0.0	1.3	0.0	0.0	1.2	12.9

Prepared by National Data & Surveying Services

S Central St & E Summit Hill Dr

Peak Hour Turning Movement Count

ID: 21-190005-005
City: Knoxville

Day: Thursday
Date: 2/4/2021

PEAK HOURS

AM	07:30 AM - 08:30 AM
NOON	12:00 PM - 01:00 PM
PM	04:45 PM - 05:45 PM

COUNT PERIODS

AM	7:00 AM - 09:00 AM
NOON	11:00 AM - 01:00 PM
PM	4:00 PM - 06:00 PM

S Central St

SOUTHBOUND

AM	57	50	31	0	160	AM
NOON	105	40	53	0	196	NOON
PM	82	37	58	0	191	PM
	0	2	0	0		

EASTBOUND

AM	NOON	PM	
299	338	321	
0	2	0	0
28	76	83	1
75	126	268	2
3	7	12	0
AM	NOON	PM	

WESTBOUND

PM	NOON	AM	
108	120	132	0
239	231	242	2
86	63	230	2
0	0	0	0
326	179	106	
PM	NOON	AM	

CONTROL

Signalized

TEV	848 AM	823 NOON	973 PM
PHF	0.94	0.94	0.94

NORTHBOUND

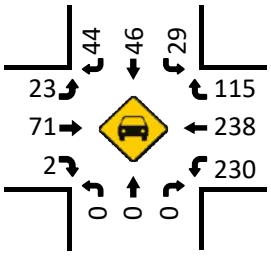
PM	135	0	0	0	0	PM
NOON	110	0	0	0	0	NOON
AM	283	0	0	0	0	AM
		0	0	0	0	

S Central St

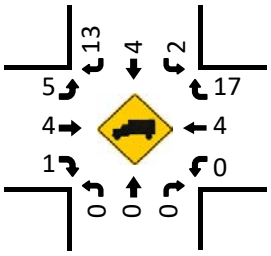
E Summit Hill Dr

E Summit Hill Dr

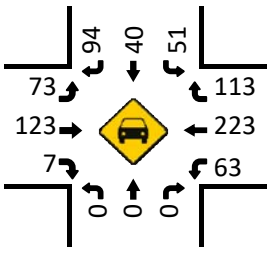
Cars (AM)



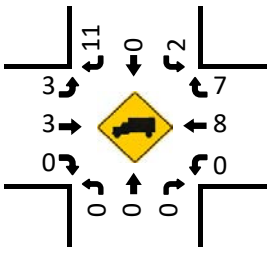
HT (AM)



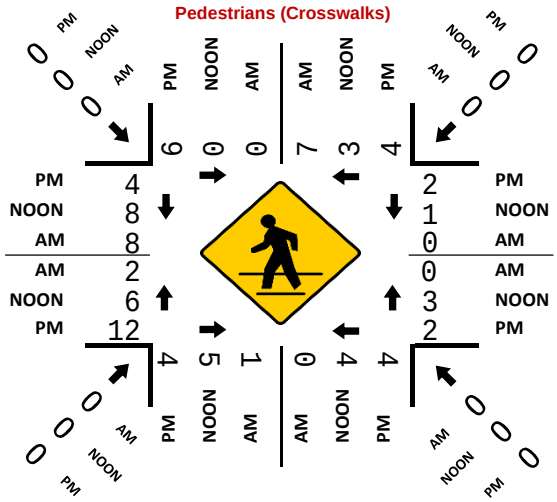
Cars (NOON)



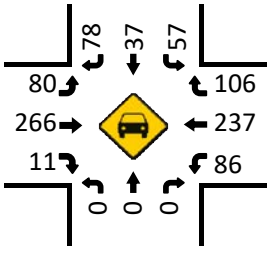
HT (NOON)



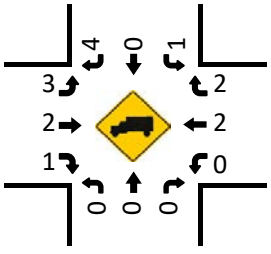
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Project ID: 21-190005-005
Location: S Central St & E Summit Hill Dr
City: Knoxville

Day: Thursday
Date: 2/4/2021

Groups Printed - Cars, PU, Vans - Heavy Trucks

	S Central St Northbound						S Central St Southbound						E Summit Hill Dr Eastbound						E Summit Hill Dr Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	0	0	0	0	0	0	5	3	5	0	2	13	5	5	0	0	1	10	16	31	35	0	0	82	105
7:15 AM	0	0	0	0	0	0	3	5	21	0	0	29	7	14	1	0	0	22	29	41	34	0	0	104	155
7:30 AM	0	0	0	0	0	0	7	11	23	0	0	41	7	20	0	0	0	27	57	61	40	0	0	158	226
7:45 AM	0	0	0	0	0	0	10	9	10	0	2	29	4	21	0	0	1	25	75	64	33	0	0	172	226
Total	0	0	0	0	0	0	25	28	59	0	4	112	23	60	1	0	2	84	177	197	142	0	0	516	712
8:00 AM	0	0	0	0	0	0	9	18	12	0	3	39	9	12	1	0	3	22	48	44	29	0	0	121	182
8:15 AM	0	0	0	0	1	0	5	12	12	0	2	29	8	22	2	0	6	32	50	73	30	0	0	153	214
8:30 AM	0	0	0	0	1	0	12	3	13	0	1	28	12	16	3	0	3	31	48	75	31	0	0	154	213
8:45 AM	0	0	0	0	2	0	4	6	14	0	1	24	6	28	3	0	3	37	51	74	33	0	2	158	219
Total	0	0	0	0	4	0	30	39	51	0	7	120	35	78	9	0	15	122	197	266	123	0	2	586	828
BREAK																									
11:00 AM	0	0	0	0	0	0	8	5	19	0	2	32	13	16	4	0	3	33	15	66	25	0	1	106	171
11:15 AM	0	0	0	0	2	0	10	9	14	0	0	33	20	23	2	0	1	45	11	46	21	0	0	78	156
11:30 AM	0	0	0	0	1	0	8	8	23	0	1	39	22	34	3	0	2	59	20	45	22	0	0	87	185
11:45 AM	0	0	0	0	2	0	9	9	24	0	0	42	25	28	2	0	0	55	12	54	19	0	0	85	182
Total	0	0	0	0	5	0	35	31	80	0	3	146	80	101	11	0	6	192	58	211	87	0	1	356	694
12:00 PM	0	0	0	0	1	0	10	9	26	0	0	45	19	35	4	1	2	59	11	63	21	0	1	95	199
12:15 PM	0	0	0	0	6	0	13	14	22	0	1	49	17	29	0	0	4	46	12	59	34	0	3	105	200
12:30 PM	0	0	0	0	2	0	11	9	26	0	0	46	22	34	2	1	3	59	18	56	27	0	0	101	206
12:45 PM	0	0	0	0	0	0	19	8	31	0	2	58	18	28	1	0	5	47	22	53	38	0	0	113	218
Total	0	0	0	0	9	0	53	40	105	0	3	198	76	126	7	2	14	211	63	231	120	0	4	414	823
BREAK																									
4:00 PM	0	0	0	0	1	0	8	8	15	0	0	31	17	38	5	0	4	60	14	54	27	0	1	95	186
4:15 PM	0	0	0	0	3	0	15	9	20	0	2	44	19	48	2	0	4	69	19	59	37	0	0	115	228
4:30 PM	0	0	0	0	2	0	12	3	19	0	4	34	19	49	3	0	5	71	20	53	36	0	0	109	214
4:45 PM	0	0	0	0	3	0	10	9	23	0	1	42	11	47	1	0	6	59	22	57	27	0	0	106	207
Total	0	0	0	0	9	0	45	29	77	0	7	151	66	182	11	0	19	259	75	223	127	0	1	425	835
5:00 PM	0	0	0	0	3	0	18	11	22	0	2	51	35	66	5	0	4	106	15	57	21	0	1	93	250
5:15 PM	0	0	0	0	1	0	12	11	17	0	0	40	22	79	2	0	4	103	24	59	32	0	1	115	258
5:30 PM	0	0	0	0	1	0	18	6	20	0	7	44	15	76	4	0	2	95	25	66	28	0	2	119	258
5:45 PM	0	0	0	0	5	0	12	4	13	0	4	29	20	44	3	0	8	67	18	55	37	0	0	110	206
Total	0	0	0	0	10	0	60	32	72	0	13	164	92	265	14	0	18	371	82	237	118	0	4	437	972
Grand Total	0	0	0	0	37	0	248	199	444	0	37	891	372	812	53	2	74	1239	652	1365	717	0	12	2734	4864
Apprch %	0.0	0.0	0.0	0.0	0.0		27.8	22.3	49.8	0.0	4.2		30.0	65.5	4.3	0.2	6.0		23.8	49.9	26.2	0.0	0.4		
Total %	0.0	0.0	0.0	0.0	0.8	0.0	5.1	4.1	9.1	0.0	0.8	18.3	7.6	16.7	1.1	0.0	1.5	25.5	13.4	28.1	14.7	0.0	0.2	56.2	
Cars, PU, Vans	0	0	0	0		0	243	194	399	0		836	340	791	48	2		1181	651	1333	662	0		2646	4663
% Cars, PU, Vans	0.0	0.0	0.0	0.0		0.0	98.0	97.5	89.9	0.0		93.8	91.4	97.4	90.6	100.0		95.3	99.8	97.7	92.3	0.0		96.8	95.9
Heavy trucks	0	0	0	0		0	5	5	45	0		55	32	21	5	0		58	1	32	55	0		88	201
%Heavy trucks	0.0	0.0	0.0	0.0		0.0	2.0	2.5	10.1	0.0		6.2	8.6	2.6	9.4	0.0		4.7	0.2	2.3	7.7	0.0		3.2	4.1

Project ID: 21-190005-005
Location: S Central St & E Summit Hill Dr
City: Knoxville

PEAK HOURS

Day: Thursday
Date: 2/4/2021

AM

	S Central St Northbound					S Central St Southbound					E Summit Hill Dr Eastbound					E Summit Hill Dr Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM - 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
7:30 AM	0	0	0	0	0	7	11	23	0	41	7	20	0	0	27	57	61	40	0	158	226
7:45 AM	0	0	0	0	0	10	9	10	0	29	4	21	0	0	25	75	64	33	0	172	226
8:00 AM	0	0	0	0	0	9	18	12	0	39	9	12	1	0	22	48	44	29	0	121	182
8:15 AM	0	0	0	0	0	5	12	12	0	29	8	22	2	0	32	50	73	30	0	153	214
Total Volume	0	0	0	0	0	31	50	57	0	138	28	75	3	0	106	230	242	132	0	604	848
% App. Total	0.0	0.0	0.0	0.0	0	22.5	36.2	41.3	0.0	100	26.4	70.8	2.8	0.0	100	38.1	40.1	21.9	0.0	100	
PHF										0.841					0.828					0.878	0.938
Cars, PU, Vans	0	0	0	0	0	29	46	44	0	119	23	71	2	0	96	230	238	115	0	583	798
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	93.5	92.0	77.2	0.0	86.2	82.1	94.7	66.7	0.0	90.6	100.0	98.3	87.1	0.0	96.5	94.1
Heavy trucks	0	0	0	0	0	2	4	13	0	19	5	4	1	0	10	0	4	17	0	21	50
%Heavy trucks	0.0	0.0	0.0	0.0	0.0	6.5	8.0	22.8	0.0	13.8	17.9	5.3	33.3	0.0	9.4	0.0	1.7	12.9	0.0	3.5	5.9

NOON

	S Central St Northbound					S Central St Southbound					E Summit Hill Dr Eastbound					E Summit Hill Dr Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 11:00 AM - 01:00 PM																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	0	0	0	0	0	10	9	26	0	45	19	35	4	1	59	11	63	21	0	95	199
12:15 PM	0	0	0	0	0	13	14	22	0	49	17	29	0	0	46	12	59	34	0	105	200
12:30 PM	0	0	0	0	0	11	9	26	0	46	22	34	2	1	59	18	56	27	0	101	206
12:45 PM	0	0	0	0	0	19	8	31	0	58	18	28	1	0	47	22	53	38	0	113	218
Total Volume	0	0	0	0	0	53	40	105	0	198	76	126	7	2	211	63	231	120	0	414	823
% App. Total	0.0	0.0	0.0	0.0	0	26.8	20.2	53.0	0.0	100	36.0	59.7	3.3	0.9	100	15.2	55.8	29.0	0.0	100	
PHF										0.853					0.894					0.916	0.944
Cars, PU, Vans	0	0	0	0	0	51	40	94	0	185	73	123	7	2	205	63	223	113	0	399	789
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	96.2	100.0	89.5	0.0	93.4	96.1	97.6	100.0	100.0	97.2	100.0	96.5	94.2	0.0	96.4	95.9
Heavy trucks	0	0	0	0	0	2	0	11	0	13	3	3	0	0	6	0	8	7	0	15	34
%Heavy trucks	0.0	0.0	0.0	0.0	0.0	3.8	0.0	10.5	0.0	6.6	3.9	2.4	0.0	0.0	2.8	0.0	3.5	5.8	0.0	3.6	4.1

PM

	S Central St Northbound					S Central St Southbound					E Summit Hill Dr Eastbound					E Summit Hill Dr Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM - 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
4:45 PM	0	0	0	0	0	10	9	23	0	42	11	47	1	0	59	22	57	27	0	106	207
5:00 PM	0	0	0	0	0	18	11	22	0	51	35	66	5	0	106	15	57	21	0	93	250
5:15 PM	0	0	0	0	0	12	11	17	0	40	22	79	2	0	103	24	59	32	0	115	258
5:30 PM	0	0	0	0	0	18	6	20	0	44	15	76	4	0	95	25	66	28	0	119	258
Total Volume	0	0	0	0	0	58	37	82	0	177	83	268	12	0	363	86	239	108	0	433	973
% App. Total	0.0	0.0	0.0	0.0	0	32.8	20.9	46.3	0.0	100	22.9	73.8	3.3	0.0	100	19.9	55.2	24.9	0.0	100	
PHF										0.868					0.856					0.910	0.943
Cars, PU, Vans	0	0	0	0	0	57	37	78	0	172	80	266	11	0	357	86	237	106	0	429	958
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	98.3	100.0	95.1	0.0	97.2	96.4	99.3	91.7	0.0	98.3	100.0	99.2	98.1	0.0	99.1	98.5
Heavy trucks	0	0	0	0	0	1	0	4	0	5	3	2	1	0	6	0	2	2	0	4	15
%Heavy trucks	0.0	0.0	0.0	0.0	0.0	1.7	0.0	4.9	0.0	2.8	3.6	0.7	8.3	0.0	1.7	0.0	0.8	1.9	0.0	0.9	1.5

Prepared by National Data & Surveying Services

James White Pkwy SB Off-Ramp & E Summit Hill Dr

Peak Hour Turning Movement Count

ID: 21-190005-006
City: Knoxville

Day: Thursday
Date: 2/4/2021

PEAK HOURS

AM	07:30 AM - 08:30 AM
NOON	12:00 PM - 01:00 PM
PM	05:00 PM - 06:00 PM

COUNT PERIODS

AM	7:00 AM - 09:00 AM
NOON	11:00 AM - 01:00 PM
PM	4:00 PM - 06:00 PM

SOUTHBOUND — James White Pkwy SB Off-Ramp

AM	420	0	202	0	0	AM
NOON	214	0	123	0	0	NOON
PM	297	0	191	0	0	PM

2 0 1 0

EASTBOUND — E Summit Hill Dr

AM	NOON	PM	
601	414	441	
0	0	0	0
0	0	0	0
107	180	324	3
0	0	0	0
AM	NOON	PM	

WESTBOUND — E Summit Hill Dr

PM	NOON	AM	
0	0	0	0
144	200	181	2
0	0	0	0
0	1	0	0
515	304	309	
PM	NOON	AM	

CONTROL

Signalized

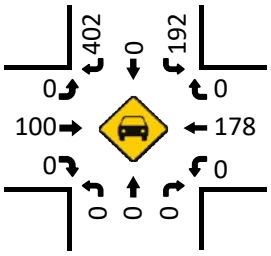
TEV	910 AM	718 NOON	956 PM
PHF	0.89	0.94	0.92

0 0 0 0

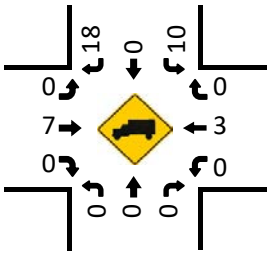
NORTHBOUND — James White Pkwy SB Off-Ramp

PM	0	0	0	0	PM
NOON	0	0	0	0	NOON
AM	0	0	0	0	AM

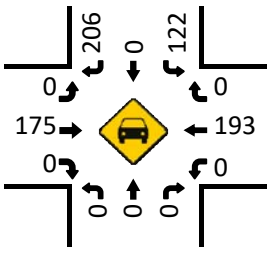
Cars (AM)



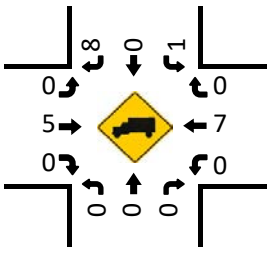
HT (AM)



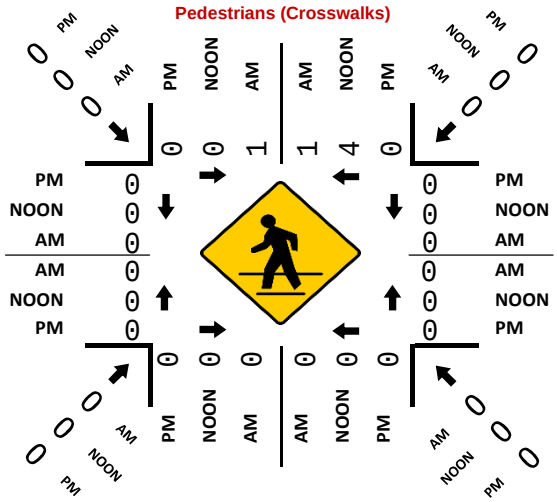
Cars (NOON)



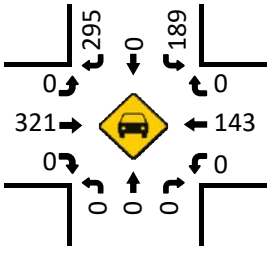
HT (NOON)



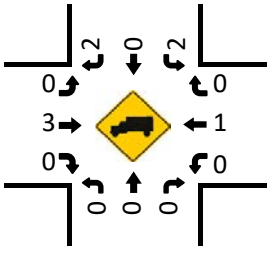
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Project ID: 21-190005-006
Location: James White Pkwy SB Off-Ramp & E Summit Hill Dr
City: Knoxville

Day: Thursday
Date: 2/4/2021

Groups Printed - Cars, PU, Vans - Heavy Trucks

	James White Pkwy SB Off-Ramp Northbound						James White Pkwy SB Off-Ramp Southbound						E Summit Hill Dr Eastbound						E Summit Hill Dr Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	0	0	0	0	0	0	47	0	58	0	0	105	0	11	0	0	0	11	0	24	0	0	0	24	140
7:15 AM	0	0	0	0	0	0	53	0	72	0	0	125	0	15	0	0	0	15	0	35	0	0	0	35	175
7:30 AM	0	0	0	0	0	0	53	0	114	0	1	167	0	27	0	0	0	27	0	42	0	0	0	42	236
7:45 AM	0	0	0	0	0	0	48	0	121	0	0	169	0	33	0	0	0	33	0	53	0	0	0	53	255
Total	0	0	0	0	0	0	201	0	365	0	1	566	0	86	0	0	0	86	0	154	0	0	0	154	806
8:00 AM	0	0	0	0	0	0	58	0	85	0	1	143	0	19	0	0	0	19	0	32	0	0	0	32	194
8:15 AM	0	0	0	0	0	0	43	0	100	0	0	143	0	28	0	0	0	28	0	54	0	0	0	54	225
8:30 AM	0	0	0	0	0	0	46	0	99	0	2	145	0	26	0	0	0	26	0	57	0	0	0	57	228
8:45 AM	0	0	0	0	0	0	28	0	118	0	1	146	0	34	0	0	0	34	0	38	0	0	0	38	218
Total	0	0	0	0	0	0	175	0	402	0	4	577	0	107	0	0	0	107	0	181	0	0	0	181	865
BREAK																									
11:00 AM	0	0	0	0	0	0	18	0	56	0	4	74	0	25	0	0	0	25	0	46	0	0	0	46	145
11:15 AM	0	0	0	0	0	0	37	0	43	0	1	80	0	29	0	0	0	29	0	35	0	0	0	35	144
11:30 AM	0	0	0	0	0	0	23	0	54	0	2	77	0	45	0	0	0	45	0	37	0	0	0	37	159
11:45 AM	0	0	0	0	0	0	43	0	49	0	0	92	0	36	0	0	0	36	0	32	0	0	0	32	160
Total	0	0	0	0	0	0	121	0	202	0	7	323	0	135	0	0	0	135	0	150	0	0	0	150	608
12:00 PM	0	0	0	0	0	0	31	0	42	0	0	73	0	47	0	0	0	47	0	53	0	0	0	53	173
12:15 PM	0	0	0	0	0	0	34	0	59	0	3	93	0	40	0	0	0	40	0	46	0	0	0	46	179
12:30 PM	0	0	0	0	0	0	25	0	50	0	0	75	0	47	0	0	0	47	0	53	0	1	0	54	176
12:45 PM	0	0	0	0	0	0	33	0	63	0	1	96	0	46	0	0	0	46	0	48	0	0	0	48	190
Total	0	0	0	0	0	0	123	0	214	0	4	337	0	180	0	0	0	180	0	200	0	1	0	201	718
BREAK																									
4:00 PM	0	0	0	0	0	0	45	0	48	0	1	93	0	44	0	0	1	44	0	45	0	0	0	45	182
4:15 PM	0	0	0	0	0	0	43	0	69	0	2	112	0	65	0	0	0	65	0	47	0	0	0	47	224
4:30 PM	0	0	0	0	0	0	41	0	58	0	1	99	0	59	0	0	0	59	0	51	0	0	0	51	209
4:45 PM	0	0	0	0	0	0	42	0	57	0	0	99	0	58	0	0	0	58	0	48	0	0	0	48	205
Total	0	0	0	0	0	0	171	0	232	0	4	403	0	226	0	0	1	226	0	191	0	0	0	191	820
5:00 PM	0	0	0	0	0	0	51	0	55	0	0	106	0	83	0	0	0	83	0	43	0	0	0	43	232
5:15 PM	0	0	0	0	0	0	44	0	79	0	0	123	0	92	0	0	0	92	0	35	0	0	0	35	250
5:30 PM	0	0	0	0	0	0	48	0	75	0	0	123	0	96	0	0	0	96	0	41	0	0	0	41	260
5:45 PM	0	0	0	0	0	0	48	0	88	0	0	136	0	53	0	0	0	53	0	25	0	0	0	25	214
Total	0	0	0	0	0	0	191	0	297	0	0	488	0	324	0	0	0	324	0	144	0	0	0	144	956
Grand Total	0	0	0	0	0	0	982	0	1712	0	20	2694	0	1058	0	0	1	1058	0	1020	0	1	0	1021	4773
Apprch %	0.0	0.0	0.0	0.0	0.0		36.5	0.0	63.5	0.0	0.7		0.0	100.0	0.0	0.0	0.1		0.0	99.9	0.0	0.1	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	20.6	0.0	35.9	0.0	0.4	56.4	0.0	22.2	0.0	0.0	0.0	22.2	0.0	21.4	0.0	0.0	0.0	21.4	
Cars, PU, Vans	0	0	0	0		0	963	0	1650	0		2613	0	1032	0	0		1032	0	995	0	1		996	4641
% Cars, PU, Vans	0.0	0.0	0.0	0.0		0.0	98.1	0.0	96.4	0.0		97.0	0.0	97.5	0.0	0.0		97.5	0.0	97.5	0.0	100.0		97.6	97.2
Heavy trucks	0	0	0	0		0	19	0	62	0		81	0	26	0	0		26	0	25	0	0		25	132
%Heavy trucks	0.0	0.0	0.0	0.0		0.0	1.9	0.0	3.6	0.0		3.0	0.0	2.5	0.0	0.0		2.5	0.0	2.5	0.0	0.0		2.4	2.8

Project ID: 21-190005-006
Location: James White Pkwy SB Off-Ramp & E Summit Hill I
City: Knoxville

PEAK HOURS

Day: Thursday
Date: 2/4/2021

AM

	James White Pkwy SB Off-Ramp Northbound					James White Pkwy SB Off-Ramp Southbound					E Summit Hill Dr Eastbound					E Summit Hill Dr Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM - 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
7:30 AM	0	0	0	0	0	53	0	114	0	167	0	27	0	0	27	0	42	0	0	42	236
7:45 AM	0	0	0	0	0	48	0	121	0	169	0	33	0	0	33	0	53	0	0	53	255
8:00 AM	0	0	0	0	0	58	0	85	0	143	0	19	0	0	19	0	32	0	0	32	194
8:15 AM	0	0	0	0	0	43	0	100	0	143	0	28	0	0	28	0	54	0	0	54	225
Total Volume	0	0	0	0	0	202	0	420	0	622	0	107	0	0	107	0	181	0	0	181	910
% App. Total	0.0	0.0	0.0	0.0	0	32.5	0.0	67.5	0.0	100	0.0	100.0	0.0	0.0	100	0.0	100.0	0.0	0.0	100	
PHF										0.920					0.811					0.838	0.892
Cars, PU, Vans	0	0	0	0	0	192	0	402	0	594	0	100	0	0	100	0	178	0	0	178	872
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	95.0	0.0	95.7	0.0	95.5	0.0	93.5	0.0	0.0	93.5	0.0	98.3	0.0	0.0	98.3	95.8
Heavy trucks	0	0	0	0	0	10	0	18	0	28	0	7	0	0	7	0	3	0	0	3	38
%Heavy trucks	0.0	0.0	0.0	0.0	0.0	5.0	0.0	4.3	0.0	4.5	0.0	6.5	0.0	0.0	6.5	0.0	1.7	0.0	0.0	1.7	4.2

NOON

	James White Pkwy SB Off-Ramp Northbound					James White Pkwy SB Off-Ramp Southbound					E Summit Hill Dr Eastbound					E Summit Hill Dr Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 11:00 AM - 01:00 PM																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	0	0	0	0	0	31	0	42	0	73	0	47	0	0	47	0	53	0	0	53	173
12:15 PM	0	0	0	0	0	34	0	59	0	93	0	40	0	0	40	0	46	0	0	46	179
12:30 PM	0	0	0	0	0	25	0	50	0	75	0	47	0	0	47	0	53	0	1	54	176
12:45 PM	0	0	0	0	0	33	0	63	0	96	0	46	0	0	46	0	48	0	0	48	190
Total Volume	0	0	0	0	0	123	0	214	0	337	0	180	0	0	180	0	200	0	1	201	718
% App. Total	0.0	0.0	0.0	0.0	0	36.5	0.0	63.5	0.0	100	0.0	100.0	0.0	0.0	100	0.0	99.5	0.0	0.5	100	
PHF										0.878					0.957					0.931	0.945
Cars, PU, Vans	0	0	0	0	0	122	0	206	0	328	0	175	0	0	175	0	193	0	1	194	697
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	99.2	0.0	96.3	0.0	97.3	0.0	97.2	0.0	0.0	97.2	0.0	96.5	0.0	100.0	96.5	97.1
Heavy trucks	0	0	0	0	0	1	0	8	0	9	0	5	0	0	5	0	7	0	0	7	21
%Heavy trucks	0.0	0.0	0.0	0.0	0.0	0.8	0.0	3.7	0.0	2.7	0.0	2.8	0.0	0.0	2.8	0.0	3.5	0.0	0.0	3.5	2.9

PM

	James White Pkwy SB Off-Ramp Northbound					James White Pkwy SB Off-Ramp Southbound					E Summit Hill Dr Eastbound					E Summit Hill Dr Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM - 06:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
5:00 PM	0	0	0	0	0	51	0	55	0	106	0	83	0	0	83	0	43	0	0	43	232
5:15 PM	0	0	0	0	0	44	0	79	0	123	0	92	0	0	92	0	35	0	0	35	250
5:30 PM	0	0	0	0	0	48	0	75	0	123	0	96	0	0	96	0	41	0	0	41	260
5:45 PM	0	0	0	0	0	48	0	88	0	136	0	53	0	0	53	0	25	0	0	25	214
Total Volume	0	0	0	0	0	191	0	297	0	488	0	324	0	0	324	0	144	0	0	144	956
% App. Total	0.0	0.0	0.0	0.0	0	39.1	0.0	60.9	0.0	100	0.0	100.0	0.0	0.0	100	0.0	100.0	0.0	0.0	100	
PHF										0.897					0.844					0.837	0.919
Cars, PU, Vans	0	0	0	0	0	189	0	295	0	484	0	321	0	0	321	0	143	0	0	143	948
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	99.0	0.0	99.3	0.0	99.2	0.0	99.1	0.0	0.0	99.1	0.0	99.3	0.0	0.0	99.3	99.2
Heavy trucks	0	0	0	0	0	2	0	2	0	4	0	3	0	0	3	0	1	0	0	1	8
%Heavy trucks	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.7	0.0	0.8	0.0	0.9	0.0	0.0	0.9	0.0	0.7	0.0	0.0	0.7	0.8

Prepared by National Data & Surveying Services

S Hall of Fame Dr & E Summit Hill Dr

Peak Hour Turning Movement Count

ID: 21-190005-007
City: Knoxville

Day: Thursday
Date: 2/4/2021

PEAK HOURS

AM	07:30 AM - 08:30 AM
NOON	12:00 PM - 01:00 PM
PM	04:45 PM - 05:45 PM

COUNT PERIODS

AM	7:00 AM - 09:00 AM
NOON	11:00 AM - 01:00 PM
PM	4:00 PM - 06:00 PM

SOUTHBOUND (S Hall of Fame Dr)

AM	91	160	48	0	186	AM
NOON	74	107	60	0	236	NOON
PM	55	121	127	0	360	PM

EASTBOUND (E Summit Hill Dr)

AM	NOON	PM	
182	198	166	⇦
0	0	0	0
8	43	69	1
148	162	195	2
151	101	247	1
AM	NOON	PM	

WESTBOUND (E Summit Hill Dr)

PM	NOON	AM	
140	100	96	0
92	104	81	2
194	135	138	1
0	1	1	0
373	259	223	⇨
PM	NOON	AM	

NORTHBOUND (S Hall of Fame Dr)

PM	562	0	19	151	51	PM
NOON	343	0	20	93	36	NOON
AM	449	0	10	82	26	AM

1	2	1	0
			0
			1
			2
			0

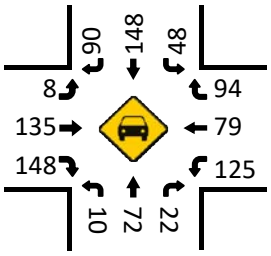
0	1	2	0

CONTROL

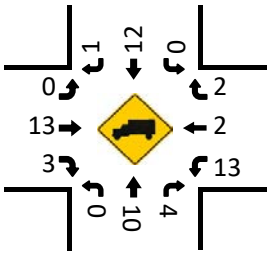
Signalized

TEV	1040 AM	1036 NOON	1461 PM
PHF	0.91	0.96	0.92

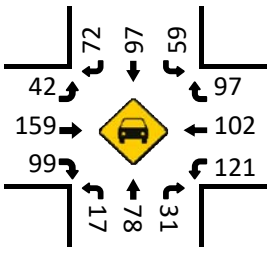
Cars (AM)



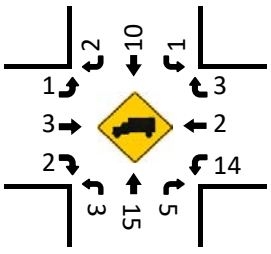
HT (AM)



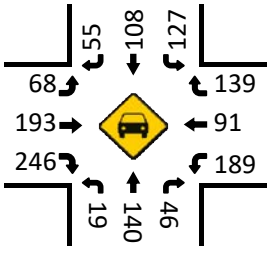
Cars (NOON)



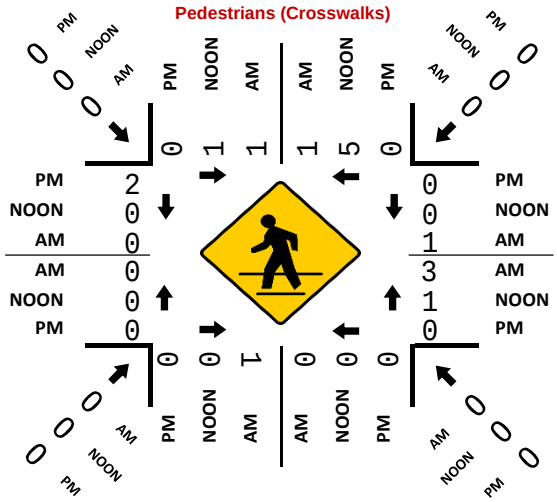
HT (NOON)



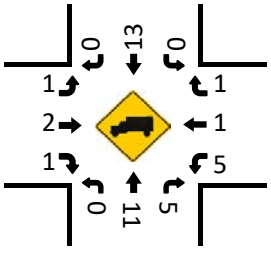
Cars (PM)



Pedestrians (Crosswalks)



HT (PM)



Project ID: 21-190005-007
Location: S Hall of Fame Dr & E Summit Hill Dr
City: Knoxville

Day: Thursday
Date: 2/4/2021

Groups Printed - Cars, PU, Vans - Heavy Trucks

	S Hall of Fame Dr Northbound						S Hall of Fame Dr Southbound						E Summit Hill Dr Eastbound						E Summit Hill Dr Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	6	6	3	0	0	15	12	22	8	0	0	42	2	36	22	0	0	60	33	9	10	0	0	52	169
7:15 AM	6	21	6	0	0	33	11	23	18	0	0	52	2	43	22	0	0	67	35	11	12	0	1	58	210
7:30 AM	3	20	6	0	1	29	8	43	19	0	1	70	3	40	35	0	0	78	46	21	21	0	1	88	265
7:45 AM	2	25	7	0	0	34	12	40	25	0	0	77	3	42	39	0	0	84	31	25	36	0	2	92	287
Total	17	72	22	0	1	111	43	128	70	0	1	241	10	161	118	0	0	289	145	66	79	0	4	290	931
8:00 AM	2	21	8	0	0	31	15	46	20	0	1	81	1	35	39	0	0	75	31	14	27	0	0	72	259
8:15 AM	3	16	5	0	0	24	13	31	27	0	0	71	1	31	38	0	0	70	30	21	12	1	1	64	229
8:30 AM	4	11	7	0	1	22	11	27	26	0	1	64	4	37	32	0	0	73	35	29	26	0	0	90	249
8:45 AM	2	15	6	0	1	23	12	38	15	0	2	65	9	30	22	0	0	61	33	18	19	0	0	70	219
Total	11	63	26	0	2	100	51	142	88	0	4	281	15	133	131	0	0	279	129	82	84	1	1	296	956
BREAK																									
11:00 AM	4	22	5	1	0	32	12	27	17	0	2	56	5	23	16	0	0	44	24	23	10	0	0	57	189
11:15 AM	3	21	11	0	1	35	23	14	18	0	2	55	9	35	20	0	0	64	34	16	18	0	0	68	222
11:30 AM	2	24	7	1	0	34	14	22	17	0	1	53	8	35	28	0	2	71	24	16	27	0	0	67	225
11:45 AM	3	32	7	0	0	42	14	15	16	0	0	45	11	42	23	0	0	76	24	18	22	0	0	64	227
Total	12	99	30	2	1	143	63	78	68	0	5	209	33	135	87	0	2	255	106	73	77	0	0	256	863
12:00 PM	3	29	3	0	0	35	12	24	15	0	1	51	10	47	24	0	0	81	34	30	22	1	0	87	254
12:15 PM	8	21	11	0	0	40	18	30	18	0	3	66	14	40	21	0	0	75	32	24	32	0	0	88	269
12:30 PM	4	26	12	0	0	42	14	25	19	0	1	58	8	35	27	0	0	70	31	27	29	0	0	87	257
12:45 PM	5	17	10	0	0	32	16	28	22	0	1	66	11	40	29	0	0	80	38	23	17	0	1	78	256
Total	20	93	36	0	0	149	60	107	74	0	6	241	43	162	101	0	0	306	135	104	100	1	1	340	1036
BREAK																									
4:00 PM	5	25	12	0	0	42	24	39	16	0	2	79	14	48	29	0	0	91	70	25	32	0	0	127	339
4:15 PM	2	24	17	0	0	43	26	36	16	0	0	78	10	50	44	0	1	104	64	28	30	0	0	122	347
4:30 PM	5	57	7	0	2	69	26	30	23	0	0	79	12	53	41	0	0	106	56	24	27	0	0	107	361
4:45 PM	8	35	14	0	0	57	31	27	15	0	0	73	16	49	34	0	0	99	47	24	39	0	0	110	339
Total	20	141	50	0	2	211	107	132	70	0	2	309	52	200	148	0	1	400	237	101	128	0	0	466	1386
5:00 PM	4	41	16	0	0	61	36	31	13	0	0	80	21	46	65	0	0	132	63	27	36	0	0	126	399
5:15 PM	5	44	12	0	0	61	28	26	12	0	0	66	16	52	69	0	2	137	46	18	32	0	0	96	360
5:30 PM	2	31	9	0	0	42	32	37	15	0	0	84	16	48	79	0	0	143	38	23	33	0	0	94	363
5:45 PM	4	30	10	0	0	44	22	34	11	0	1	67	10	52	40	0	1	102	50	10	31	0	0	91	304
Total	15	146	47	0	0	208	118	128	51	0	1	297	63	198	253	0	3	514	197	78	132	0	0	407	1426
Grand Total	95	614	211	2	6	922	442	715	421	0	19	1578	216	989	838	0	6	2043	949	504	600	2	6	2055	6598
Apprch %	10.3	66.6	22.9	0.2	0.7		28.0	45.3	26.7	0.0	1.2		10.6	48.4	41.0	0.0	0.3		46.2	24.5	29.2	0.1	0.3		
Total %	1.4	9.3	3.2	0.0	0.1	14.0	6.7	10.8	6.4	0.0	0.3	23.9	3.3	15.0	12.7	0.0	0.1	31.0	14.4	7.6	9.1	0.0	0.1	31.1	
Cars, PU, Vans	88	546	181	2		817	434	645	413	0		1492	211	962	826	0		1999	880	494	586	2		1962	6270
% Cars, PU, Vans	92.6	88.9	85.8	100.0		88.6	98.2	90.2	98.1	0.0		94.6	97.7	97.3	98.6	0.0		97.8	92.7	98.0	97.7	100.0		95.5	95.0
Heavy trucks	7	68	30	0		105	8	70	8	0		86	5	27	12	0		44	69	10	14	0		93	328
%Heavy trucks	7.4	11.1	14.2	0.0		11.4	1.8	9.8	1.9	0.0		5.4	2.3	2.7	1.4	0.0		2.2	7.3	2.0	2.3	0.0		4.5	5.0

Project ID: 21-190005-007
Location: S Hall of Fame Dr & E Summit Hill Dr
City: Knoxville

PEAK HOURS

Day: Thursday
Date: 2/4/2021

AM

	S Hall of Fame Dr Northbound					S Hall of Fame Dr Southbound					E Summit Hill Dr Eastbound					E Summit Hill Dr Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM - 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
7:30 AM	3	20	6	0	29	8	43	19	0	70	3	40	35	0	78	46	21	21	0	88	265
7:45 AM	2	25	7	0	34	12	40	25	0	77	3	42	39	0	84	31	25	36	0	92	287
8:00 AM	2	21	8	0	31	15	46	20	0	81	1	35	39	0	75	31	14	27	0	72	259
8:15 AM	3	16	5	0	24	13	31	27	0	71	1	31	38	0	70	30	21	12	1	64	229
Total Volume	10	82	26	0	118	48	160	91	0	299	8	148	151	0	307	138	81	96	1	316	1040
% App. Total	8.5	69.5	22.0	0.0	100	16.1	53.5	30.4	0.0	100	2.6	48.2	49.2	0.0	100	43.7	25.6	30.4	0.3	100	
PHF					0.868					0.923					0.914					0.859	0.906
Cars, PU, Vans	10	72	22	0	104	48	148	90	0	286	8	135	148	0	291	125	79	94	1	299	980
% Cars, PU, Vans	100.0	87.8	84.6	0.0	88.1	100.0	92.5	98.9	0.0	95.7	100.0	91.2	98.0	0.0	94.8	90.6	97.5	97.9	100.0	94.6	94.2
Heavy trucks	0	10	4	0	14	0	12	1	0	13	0	13	3	0	16	13	2	2	0	17	60
%Heavy trucks	0.0	12.2	15.4	0.0	11.9	0.0	7.5	1.1	0.0	4.3	0.0	8.8	2.0	0.0	5.2	9.4	2.5	2.1	0.0	5.4	5.8

NOON

	S Hall of Fame Dr Northbound					S Hall of Fame Dr Southbound					E Summit Hill Dr Eastbound					E Summit Hill Dr Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 11:00 AM - 01:00 PM																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	3	29	3	0	35	12	24	15	0	51	10	47	24	0	81	34	30	22	1	87	254
12:15 PM	8	21	11	0	40	18	30	18	0	66	14	40	21	0	75	32	24	32	0	88	269
12:30 PM	4	26	12	0	42	14	25	19	0	58	8	35	27	0	70	31	27	29	0	87	257
12:45 PM	5	17	10	0	32	16	28	22	0	66	11	40	29	0	80	38	23	17	0	78	256
Total Volume	20	93	36	0	149	60	107	74	0	241	43	162	101	0	306	135	104	100	1	340	1036
% App. Total	13.4	62.4	24.2	0.0	100	24.9	44.4	30.7	0.0	100	14.1	52.9	33.0	0.0	100	39.7	30.6	29.4	0.3	100	
PHF					0.887					0.913					0.944					0.966	0.963
Cars, PU, Vans	17	78	31	0	126	59	97	72	0	228	42	159	99	0	300	121	102	97	1	321	975
% Cars, PU, Vans	85.0	83.9	86.1	0.0	84.6	98.3	90.7	97.3	0.0	94.6	97.7	98.1	98.0	0.0	98.0	89.6	98.1	97.0	100.0	94.4	94.1
Heavy trucks	3	15	5	0	23	1	10	2	0	13	1	3	2	0	6	14	2	3	0	19	61
%Heavy trucks	15.0	16.1	13.9	0.0	15.4	1.7	9.3	2.7	0.0	5.4	2.3	1.9	2.0	0.0	2.0	10.4	1.9	3.0	0.0	5.6	5.9

PM

	S Hall of Fame Dr Northbound					S Hall of Fame Dr Southbound					E Summit Hill Dr Eastbound					E Summit Hill Dr Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM - 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
4:45 PM	8	35	14	0	57	31	27	15	0	73	16	49	34	0	99	47	24	39	0	110	339
5:00 PM	4	41	16	0	61	36	31	13	0	80	21	46	65	0	132	63	27	36	0	126	399
5:15 PM	5	44	12	0	61	28	26	12	0	66	16	52	69	0	137	46	18	32	0	96	360
5:30 PM	2	31	9	0	42	32	37	15	0	84	16	48	79	0	143	38	23	33	0	94	363
Total Volume	19	151	51	0	221	127	121	55	0	303	69	195	247	0	511	194	92	140	0	426	1461
% App. Total	8.6	68.3	23.1	0.0	100	41.9	39.9	18.2	0.0	100	13.5	38.2	48.3	0.0	100	45.5	21.6	32.9	0.0	100	
PHF					0.906					0.902					0.893					0.845	0.915
Cars, PU, Vans	19	140	46	0	205	127	108	55	0	290	68	193	246	0	507	189	91	139	0	419	1421
% Cars, PU, Vans	100.0	92.7	90.2	0.0	92.8	100.0	89.3	100.0	0.0	95.7	98.6	99.0	99.6	0.0	99.2	97.4	98.9	99.3	0.0	98.4	97.3
Heavy trucks	0	11	5	0	16	0	13	0	0	13	1	2	1	0	4	5	1	1	0	7	40
%Heavy trucks	0.0	7.3	9.8	0.0	7.2	0.0	10.7	0.0	0.0	4.3	1.4	1.0	0.4	0.0	0.8	2.6	1.1	0.7	0.0	1.6	2.7

Prepared by National Data & Surveying Services

Patton St & E Summit Hill Dr

Peak Hour Turning Movement Count

ID: 21-190005-008
City: Knoxville

Day: Thursday
Date: 2/4/2021

PEAK HOURS

AM	07:30 AM - 08:30 AM
NOON	12:00 PM - 01:00 PM
PM	04:15 PM - 05:15 PM

COUNT PERIODS

AM	7:00 AM - 09:00 AM
NOON	11:00 AM - 01:00 PM
PM	4:00 PM - 06:00 PM

SOUTHBOUND (Patton St)

AM	34	0	31	0	38	AM
NOON	46	0	34	0	75	NOON
PM	83	0	62	0	79	PM

0.5 0.5 0 0

EASTBOUND (E Summit Hill Dr)

AM	NOON	PM	
328	330	457	⇦
2	10	2	↶ 0
25	50	60	↱ 0
199	199	316	→ 3
0	0	0	↷ 0
AM	NOON	PM	

WESTBOUND (E Summit Hill Dr)

PM	NOON	AM	
19	25	13	0 ↷
372	274	292	2 ←
0	0	0	0 ↰
0	0	0	0 ↶
378	233	230	⇨
PM	NOON	AM	

CONTROL

1-Way Stop(SB)

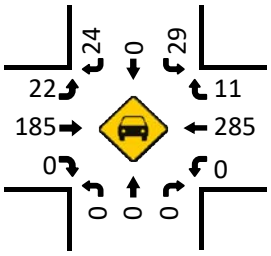
TEV	596 AM	638 NOON	914 PM
PHF	0.89	0.97	0.94

0 0 0 0

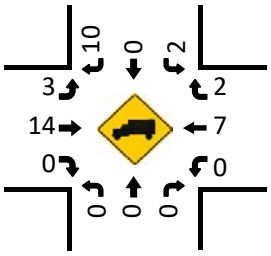
PM	0	0	0	0	PM
NOON	0	0	0	0	NOON
AM	0	0	0	0	AM

NORTHBOUND (Patton St)

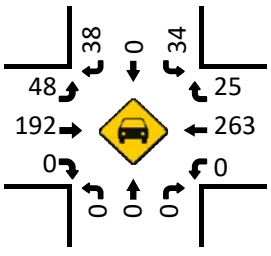
Cars (AM)



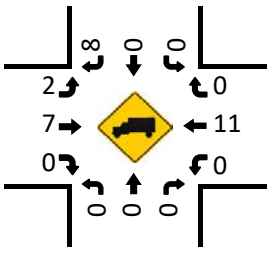
HT (AM)



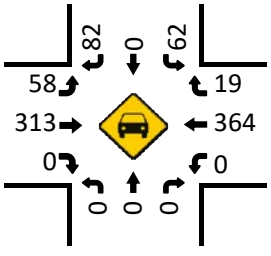
Cars (NOON)



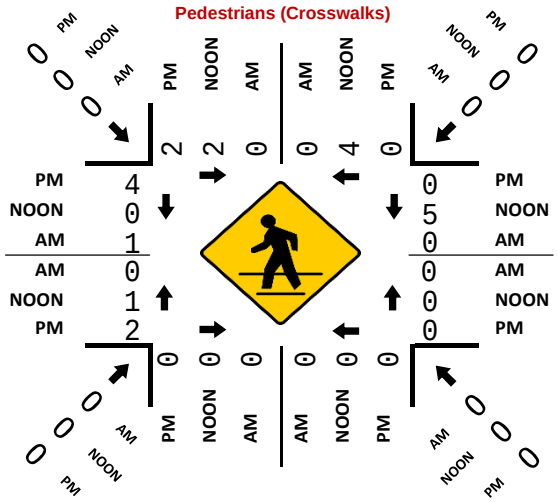
HT (NOON)



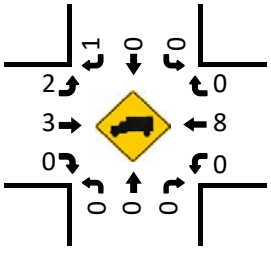
Cars (PM)



Pedestrians (Crosswalks)



HT (PM)



Project ID: 21-190005-008
Location: Patton St & E Summit Hill Dr
City: Knoxville

Day: Thursday
Date: 2/4/2021

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Patton St Northbound						Patton St Southbound						E Summit Hill Dr Eastbound						E Summit Hill Dr Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	0	0	0	0	0	0	2	0	10	0	1	12	6	43	0	0	1	49	0	45	3	0	1	48	109
7:15 AM	0	0	0	0	0	0	4	0	11	0	1	15	8	51	0	0	0	59	0	52	1	0	0	53	127
7:30 AM	0	0	0	0	0	0	8	0	9	0	0	17	4	51	0	0	1	55	0	88	2	0	0	90	162
7:45 AM	0	0	0	0	0	0	9	0	5	0	0	14	9	52	0	0	0	61	0	87	5	0	0	92	167
Total	0	0	0	0	0	0	23	0	35	0	2	58	27	197	0	0	2	224	0	272	11	0	1	283	565
8:00 AM	0	0	0	0	0	0	9	0	13	0	0	22	8	49	0	1	0	58	0	58	1	0	0	59	139
8:15 AM	0	0	0	0	0	0	5	0	7	0	0	12	4	47	0	1	0	52	0	59	5	0	0	64	128
8:30 AM	0	0	0	0	0	0	3	0	14	0	0	17	14	43	0	0	0	57	0	75	6	0	0	81	155
8:45 AM	0	0	0	0	0	0	14	0	10	0	0	24	7	41	0	0	0	48	0	65	5	0	0	70	142
Total	0	0	0	0	0	0	31	0	44	0	0	75	33	180	0	2	0	215	0	257	17	0	0	274	564
BREAK																									
11:00 AM	0	0	0	0	0	0	6	0	8	0	0	14	4	37	0	0	0	41	0	50	7	0	0	57	112
11:15 AM	0	0	0	0	0	0	11	0	14	0	1	25	7	60	0	1	0	68	0	51	6	0	0	57	150
11:30 AM	0	0	0	0	0	0	6	0	7	0	1	13	7	49	0	0	0	56	0	62	8	0	2	70	139
11:45 AM	0	0	0	0	0	0	7	0	9	0	0	16	10	52	0	2	0	64	0	49	8	0	1	57	137
Total	0	0	0	0	0	0	30	0	38	0	2	68	28	198	0	3	0	229	0	212	29	0	3	241	538
12:00 PM	0	0	0	0	0	0	5	0	14	0	2	19	8	51	0	3	0	62	0	73	5	0	3	78	159
12:15 PM	0	0	0	0	0	0	6	0	9	0	1	15	15	53	0	2	0	70	0	72	8	0	1	80	165
12:30 PM	0	0	0	0	0	0	15	0	8	0	1	23	12	46	0	2	0	60	0	71	5	0	0	76	159
12:45 PM	0	0	0	0	0	0	8	0	15	0	2	23	15	49	0	3	1	67	0	58	7	0	1	65	155
Total	0	0	0	0	0	0	34	0	46	0	6	80	50	199	0	10	1	259	0	274	25	0	5	299	638
BREAK																									
4:00 PM	0	0	0	0	0	0	9	0	20	0	2	29	20	60	0	0	0	80	0	102	10	0	0	112	221
4:15 PM	0	0	0	0	0	0	19	0	23	0	1	42	15	79	0	0	2	94	0	103	4	0	0	107	243
4:30 PM	0	0	0	0	0	0	13	0	21	0	1	34	10	79	0	1	4	90	0	84	2	0	0	86	210
4:45 PM	0	0	0	0	0	0	14	0	15	0	0	29	16	80	0	0	0	96	0	95	7	0	0	102	227
Total	0	0	0	0	0	0	55	0	79	0	4	134	61	298	0	1	6	360	0	384	23	0	0	407	901
5:00 PM	0	0	0	0	0	0	16	0	24	0	0	40	19	78	0	1	0	98	0	90	6	0	0	96	234
5:15 PM	0	0	0	0	0	0	12	0	14	0	1	26	16	75	0	0	0	91	0	92	6	0	0	98	215
5:30 PM	0	0	0	0	0	0	15	0	19	0	1	34	15	74	0	0	0	89	0	67	8	0	0	75	198
5:45 PM	0	0	0	0	0	0	9	0	12	0	2	21	12	70	0	1	1	83	0	81	3	1	0	85	189
Total	0	0	0	0	0	0	52	0	69	0	4	121	62	297	0	2	1	361	0	330	23	1	0	354	836
Grand Total	0	0	0	0	0	0	225	0	311	0	18	536	261	1369	0	18	10	1648	0	1729	128	1	9	1858	4042
Apprch %	0.0	0.0	0.0	0.0	0.0		42.0	0.0	58.0	0.0	3.4		15.8	83.1	0.0	1.1	0.6		0.0	93.1	6.9	0.1	0.5		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	5.6	0.0	7.7	0.0	0.4	13.3	6.5	33.9	0.0	0.4	0.2	40.8	0.0	42.8	3.2	0.0	0.2	46.0	
Cars, PU, Vans	0	0	0	0		0	221	0	270	0		491	245	1320	0	18		1583	0	1676	126	1		1803	3877
% Cars, PU, Vans	0.0	0.0	0.0	0.0		0.0	98.2	0.0	86.8	0.0		91.6	93.9	96.4	0.0	100.0		96.1	0.0	96.9	98.4	100.0		97.0	95.9
Heavy trucks	0	0	0	0		0	4	0	41	0		45	16	49	0	0		65	0	53	2	0		55	165
%Heavy trucks	0.0	0.0	0.0	0.0		0.0	1.8	0.0	13.2	0.0		8.4	6.1	3.6	0.0	0.0		3.9	0.0	3.1	1.6	0.0		3.0	4.1

Project ID: 21-190005-008
Location: Patton St & E Summit Hill Dr
City: Knoxville

PEAK HOURS

Day: Thursday
Date: 2/4/2021

AM

	Patton St Northbound					Patton St Southbound					E Summit Hill Dr Eastbound					E Summit Hill Dr Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM - 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
7:30 AM	0	0	0	0	0	8	0	9	0	17	4	51	0	0	55	0	88	2	0	90	162
7:45 AM	0	0	0	0	0	9	0	5	0	14	9	52	0	0	61	0	87	5	0	92	167
8:00 AM	0	0	0	0	0	9	0	13	0	22	8	49	0	1	58	0	58	1	0	59	139
8:15 AM	0	0	0	0	0	5	0	7	0	12	4	47	0	1	52	0	59	5	0	64	128
Total Volume	0	0	0	0	0	31	0	34	0	65	25	199	0	2	226	0	292	13	0	305	596
% App. Total	0.0	0.0	0.0	0.0	0	47.7	0.0	52.3	0.0	100	11.1	88.1	0.0	0.9	100	0.0	95.7	4.3	0.0	100	
PHF										0.739					0.926					0.829	0.892
Cars, PU, Vans	0	0	0	0	0	29	0	24	0	53	22	185	0	2	209	0	285	11	0	296	558
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	93.5	0.0	70.6	0.0	81.5	88.0	93.0	0.0	100.0	92.5	0.0	97.6	84.6	0.0	97.0	93.6
Heavy trucks	0	0	0	0	0	2	0	10	0	12	3	14	0	0	17	0	7	2	0	9	38
%Heavy trucks	0.0	0.0	0.0	0.0	0.0	6.5	0.0	29.4	0.0	18.5	12.0	7.0	0.0	0.0	7.5	0.0	2.4	15.4	0.0	3.0	6.4

NOON

	Patton St Northbound					Patton St Southbound					E Summit Hill Dr Eastbound					E Summit Hill Dr Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 11:00 AM - 01:00 PM																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	0	0	0	0	0	5	0	14	0	19	8	51	0	3	62	0	73	5	0	78	159
12:15 PM	0	0	0	0	0	6	0	9	0	15	15	53	0	2	70	0	72	8	0	80	165
12:30 PM	0	0	0	0	0	15	0	8	0	23	12	46	0	2	60	0	71	5	0	76	159
12:45 PM	0	0	0	0	0	8	0	15	0	23	15	49	0	3	67	0	58	7	0	65	155
Total Volume	0	0	0	0	0	34	0	46	0	80	50	199	0	10	259	0	274	25	0	299	638
% App. Total	0.0	0.0	0.0	0.0	0	42.5	0.0	57.5	0.0	100	19.3	76.8	0.0	3.9	100	0.0	91.6	8.4	0.0	100	
PHF										0.870					0.925					0.934	0.967
Cars, PU, Vans	0	0	0	0	0	34	0	38	0	72	48	192	0	10	250	0	263	25	0	288	610
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	100.0	0.0	82.6	0.0	90.0	96.0	96.5	0.0	100.0	96.5	0.0	96.0	100.0	0.0	96.3	95.6
Heavy trucks	0	0	0	0	0	0	0	8	0	8	2	7	0	0	9	0	11	0	0	11	28
%Heavy trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.4	0.0	10.0	4.0	3.5	0.0	0.0	3.5	0.0	4.0	0.0	0.0	3.7	4.4

PM

	Patton St Northbound					Patton St Southbound					E Summit Hill Dr Eastbound					E Summit Hill Dr Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM - 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
4:15 PM	0	0	0	0	0	19	0	23	0	42	15	79	0	0	94	0	103	4	0	107	243
4:30 PM	0	0	0	0	0	13	0	21	0	34	10	79	0	1	90	0	84	2	0	86	210
4:45 PM	0	0	0	0	0	14	0	15	0	29	16	80	0	0	96	0	95	7	0	102	227
5:00 PM	0	0	0	0	0	16	0	24	0	40	19	78	0	1	98	0	90	6	0	96	234
Total Volume	0	0	0	0	0	62	0	83	0	145	60	316	0	2	378	0	372	19	0	391	914
% App. Total	0.0	0.0	0.0	0.0	0	42.8	0.0	57.2	0.0	100	15.9	83.6	0.0	0.5	100	0.0	95.1	4.9	0.0	100	
PHF										0.863					0.964					0.914	0.940
Cars, PU, Vans	0	0	0	0	0	62	0	82	0	144	58	313	0	2	373	0	364	19	0	383	900
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	100.0	0.0	98.8	0.0	99.3	96.7	99.1	0.0	100.0	98.7	0.0	97.8	100.0	0.0	98.0	98.5
Heavy trucks	0	0	0	0	0	0	0	1	0	1	2	3	0	0	5	0	8	0	0	8	14
%Heavy trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.7	3.3	0.9	0.0	0.0	1.3	0.0	2.2	0.0	0.0	2.0	1.5

Prepared by National Data & Surveying Services

Hall of Fame Dr & I-40 WB Ramps

Peak Hour Turning Movement Count

ID: 21-190005-009
City: Knoxville

Day: Thursday
Date: 2/4/2021

PEAK HOURS

AM	07:30 AM - 08:30 AM
NOON	11:45 AM - 12:45 PM
PM	04:30 PM - 05:30 PM

COUNT PERIODS

AM	7:00 AM - 09:00 AM
NOON	11:00 AM - 01:00 PM
PM	4:00 PM - 06:00 PM

SOUTHBOUND — Hall of Fame Dr

AM	362	302	0	0	332	AM
NOON	219	203	0	0	415	NOON
PM	294	265	0	0	699	PM
	1	2	0	0		

EASTBOUND — I-40 WB Ramps

AM	NOON	PM	
561	421	598	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
AM	NOON	PM	

WESTBOUND — I-40 WB Ramps

PM	NOON	AM	
108	59	87	1
1	1	1	0
61	81	162	2
0	0	0	0
0	0	0	
PM	NOON	AM	

NORTHBOUND — Hall of Fame Dr

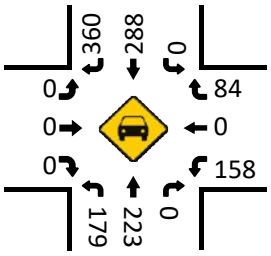
PM	326	0	303	591	0	PM
NOON	284	0	201	356	0	NOON
AM	464	0	198	245	0	AM
		0	1	2	0	

CONTROL

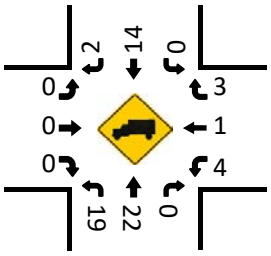
Signalized

TEV	1357 AM	1120 NOON	1623 PM
PHF	0.90	0.98	0.89

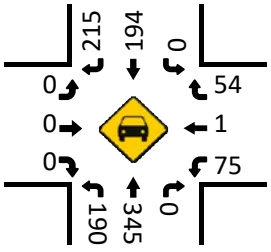
Cars (AM)



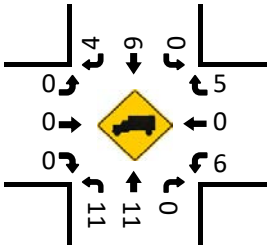
HT (AM)



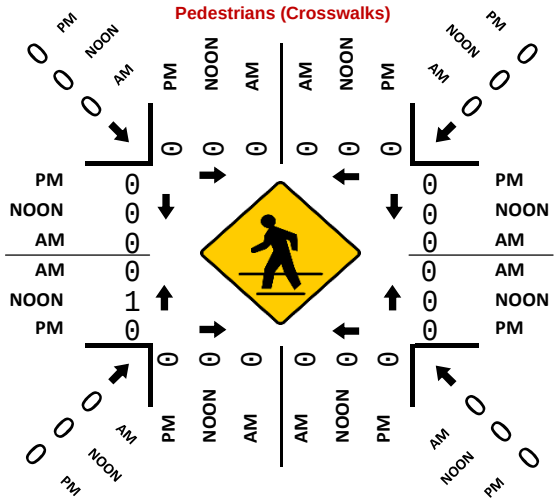
Cars (NOON)



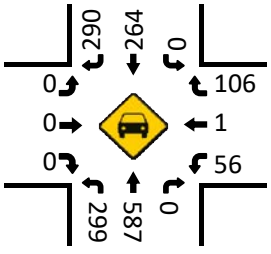
HT (NOON)



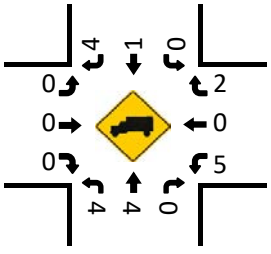
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Project ID: 21-190005-009
Location: Hall of Fame Dr & I-40 WB Ramps
City: Knoxville

Day: Thursday
Date: 2/4/2021

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Hall of Fame Dr Northbound						Hall of Fame Dr Southbound						I-40 WB Ramps Eastbound						I-40 WB Ramps Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	33	41	0	0	0	74	0	41	52	0	0	93	0	0	0	0	0	0	26	0	13	0	0	39	206
7:15 AM	44	52	0	0	0	96	0	51	87	0	0	138	0	0	0	0	0	0	29	0	18	0	0	47	281
7:30 AM	58	54	0	0	0	112	0	73	118	0	0	191	0	0	0	0	0	0	35	1	18	0	0	54	357
7:45 AM	56	74	0	0	0	130	0	84	88	0	0	172	0	0	0	0	0	0	53	0	21	0	0	74	376
Total	191	221	0	0	0	412	0	249	345	0	0	594	0	0	0	0	0	0	143	1	70	0	0	214	1220
8:00 AM	45	65	0	0	0	110	0	68	76	0	0	144	0	0	0	0	0	0	39	0	27	0	0	66	320
8:15 AM	39	52	0	0	0	91	0	77	80	0	0	157	0	0	0	0	0	0	35	0	21	0	0	56	304
8:30 AM	55	55	0	0	0	110	0	53	78	0	0	131	0	0	0	0	0	0	20	0	19	0	0	39	280
8:45 AM	31	50	0	0	0	81	0	47	59	0	0	106	0	0	0	0	0	0	35	1	15	0	0	51	238
Total	170	222	0	0	0	392	0	245	293	0	0	538	0	0	0	0	0	0	129	1	82	0	0	212	1142
BREAK																									
11:00 AM	46	89	0	1	0	136	0	52	41	0	0	93	0	0	0	0	0	0	19	0	9	0	0	28	257
11:15 AM	44	86	0	0	0	130	0	44	42	0	0	86	0	0	0	0	0	0	13	0	16	0	0	29	245
11:30 AM	48	93	0	0	0	141	0	44	58	0	0	102	0	0	0	0	0	0	14	0	18	0	0	32	275
11:45 AM	64	93	0	0	0	157	0	47	50	0	0	97	0	0	0	0	0	0	16	0	11	0	0	27	281
Total	202	361	0	1	0	564	0	187	191	0	0	378	0	0	0	0	0	0	62	0	54	0	0	116	1058
12:00 PM	56	80	0	0	0	136	0	62	49	0	0	111	0	0	0	0	1	0	19	1	19	0	0	39	286
12:15 PM	38	94	0	0	0	132	0	46	58	0	0	104	0	0	0	0	0	0	17	0	15	0	0	32	268
12:30 PM	43	89	0	0	0	132	0	48	62	0	0	110	0	0	0	0	0	0	29	0	14	0	0	43	285
12:45 PM	44	77	0	0	0	121	0	66	51	0	0	117	0	0	0	0	1	0	16	0	15	0	0	31	269
Total	181	340	0	0	0	521	0	222	220	0	0	442	0	0	0	0	2	0	81	1	63	0	0	145	1108
BREAK																									
4:00 PM	87	139	0	0	0	226	0	61	70	0	0	131	0	0	0	0	0	0	24	0	17	0	0	41	398
4:15 PM	74	116	0	0	0	190	0	61	60	0	0	121	0	0	0	0	0	0	20	0	37	0	0	57	368
4:30 PM	73	132	0	0	0	205	0	66	78	0	0	144	0	0	0	0	0	0	13	0	21	0	0	34	383
4:45 PM	61	158	0	0	0	219	0	66	63	0	0	129	0	0	0	0	0	0	17	0	31	0	0	48	396
Total	295	545	0	0	0	840	0	254	271	0	0	525	0	0	0	0	0	0	74	0	106	0	0	180	1545
5:00 PM	105	155	0	0	0	260	0	68	80	0	0	148	0	0	0	0	0	0	13	0	35	0	0	48	456
5:15 PM	64	146	0	0	0	210	0	65	73	0	0	138	0	0	0	0	0	0	18	1	21	0	0	40	388
5:30 PM	54	140	0	0	0	194	0	80	49	0	0	129	0	0	0	0	0	0	13	1	20	0	1	34	357
5:45 PM	52	131	0	0	0	183	0	57	65	0	0	122	0	0	0	0	0	0	23	0	21	0	0	44	349
Total	275	572	0	0	0	847	0	270	267	0	0	537	0	0	0	0	0	0	67	2	97	0	1	166	1550
Grand Total	1314	2261	0	1	0	3576	0	1427	1587	0	0	3014	0	0	0	0	2	0	556	5	472	0	1	1033	7623
Apprch %	36.7	63.2	0.0	0.0	0.0		0.0	47.3	52.7	0.0	0.0		0.0	0.0	0.0	0.0	0.0		53.8	0.5	45.7	0.0	0.1		
Total %	17.2	29.7	0.0	0.0	0.0	46.9	0.0	18.7	20.8	0.0	0.0	39.5	0.0	0.0	0.0	0.0	0.0	0.0	7.3	0.1	6.2	0.0	0.0	13.6	
Cars, PU, Vans	1250	2202	0	1		3453	0	1382	1555	0		2937	0	0	0	0		0	528	4	452	0		984	7374
% Cars, PU, Vans	95.1	97.4	0.0	100.0		96.6	0.0	96.8	98.0	0.0		97.4	0.0	0.0	0.0	0.0		0.0	95.0	80.0	95.8	0.0		95.3	96.7
Heavy trucks	64	59	0	0		123	0	45	32	0		77	0	0	0	0		0	28	1	20	0		49	249
%Heavy trucks	4.9	2.6	0.0	0.0		3.4	0.0	3.2	2.0	0.0		2.6	0.0	0.0	0.0	0.0		0.0	5.0	20.0	4.2	0.0		4.7	3.3

Project ID: 21-190005-009
Location: Hall of Fame Dr & I-40 WB Ramps
City: Knoxville

PEAK HOURS

Day: Thursday
Date: 2/4/2021

AM

	Hall of Fame Dr Northbound					Hall of Fame Dr Southbound					I-40 WB Ramps Eastbound					I-40 WB Ramps Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM - 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
7:30 AM	58	54	0	0	112	0	73	118	0	191	0	0	0	0	0	35	1	18	0	54	357
7:45 AM	56	74	0	0	130	0	84	88	0	172	0	0	0	0	0	53	0	21	0	74	376
8:00 AM	45	65	0	0	110	0	68	76	0	144	0	0	0	0	0	39	0	27	0	66	320
8:15 AM	39	52	0	0	91	0	77	80	0	157	0	0	0	0	0	35	0	21	0	56	304
Total Volume	198	245	0	0	443	0	302	362	0	664	0	0	0	0	0	162	1	87	0	250	1357
% App. Total	44.7	55.3	0.0	0.0	100	0.0	45.5	54.5	0.0	100	0.0	0.0	0.0	0.0	0	64.8	0.4	34.8	0.0	100	
PHF					0.852					0.869										0.845	0.902
Cars, PU, Vans	179	223	0	0	402	0	288	360	0	648	0	0	0	0	0	158	0	84	0	242	1292
% Cars, PU, Vans	90.4	91.0	0.0	0.0	90.7	0.0	95.4	99.4	0.0	97.6	0.0	0.0	0.0	0.0	0.0	97.5	0.0	96.6	0.0	96.8	95.2
Heavy trucks	19	22	0	0	41	0	14	2	0	16	0	0	0	0	0	4	1	3	0	8	65
%Heavy trucks	9.6	9.0	0.0	0.0	9.3	0.0	4.6	0.6	0.0	2.4	0.0	0.0	0.0	0.0	0.0	2.5	100.0	3.4	0.0	3.2	4.8

NOON

	Hall of Fame Dr Northbound					Hall of Fame Dr Southbound					I-40 WB Ramps Eastbound					I-40 WB Ramps Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 11:00 AM - 01:00 PM																					
Peak Hour for Entire Intersection Begins at 11:45 AM																					
11:45 AM	64	93	0	0	157	0	47	50	0	97	0	0	0	0	0	16	0	11	0	27	281
12:00 PM	56	80	0	0	136	0	62	49	0	111	0	0	0	0	0	19	1	19	0	39	286
12:15 PM	38	94	0	0	132	0	46	58	0	104	0	0	0	0	0	17	0	15	0	32	268
12:30 PM	43	89	0	0	132	0	48	62	0	110	0	0	0	0	0	29	0	14	0	43	285
Total Volume	201	356	0	0	557	0	203	219	0	422	0	0	0	0	0	81	1	59	0	141	1120
% App. Total	36.1	63.9	0.0	0.0	100	0.0	48.1	51.9	0.0	100	0.0	0.0	0.0	0.0	0	57.4	0.7	41.8	0.0	100	
PHF					0.887					0.950										0.820	0.979
Cars, PU, Vans	190	345	0	0	535	0	194	215	0	409	0	0	0	0	0	75	1	54	0	130	1074
% Cars, PU, Vans	94.5	96.9	0.0	0.0	96.1	0.0	95.6	98.2	0.0	96.9	0.0	0.0	0.0	0.0	0.0	92.6	100.0	91.5	0.0	92.2	95.9
Heavy trucks	11	11	0	0	22	0	9	4	0	13	0	0	0	0	0	6	0	5	0	11	46
%Heavy trucks	5.5	3.1	0.0	0.0	3.9	0.0	4.4	1.8	0.0	3.1	0.0	0.0	0.0	0.0	0.0	7.4	0.0	8.5	0.0	7.8	4.1

PM

	Hall of Fame Dr Northbound					Hall of Fame Dr Southbound					I-40 WB Ramps Eastbound					I-40 WB Ramps Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM - 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
4:30 PM	73	132	0	0	205	0	66	78	0	144	0	0	0	0	0	13	0	21	0	34	383
4:45 PM	61	158	0	0	219	0	66	63	0	129	0	0	0	0	0	17	0	31	0	48	396
5:00 PM	105	155	0	0	260	0	68	80	0	148	0	0	0	0	0	13	0	35	0	48	456
5:15 PM	64	146	0	0	210	0	65	73	0	138	0	0	0	0	0	18	1	21	0	40	388
Total Volume	303	591	0	0	894	0	265	294	0	559	0	0	0	0	0	61	1	108	0	170	1623
% App. Total	33.9	66.1	0.0	0.0	100	0.0	47.4	52.6	0.0	100	0.0	0.0	0.0	0.0	0	35.9	0.6	63.5	0.0	100	
PHF					0.860					0.944										0.885	0.890
Cars, PU, Vans	299	587	0	0	886	0	264	290	0	554	0	0	0	0	0	56	1	106	0	163	1603
% Cars, PU, Vans	98.7	99.3	0.0	0.0	99.1	0.0	99.6	98.6	0.0	99.1	0.0	0.0	0.0	0.0	0.0	91.8	100.0	98.1	0.0	95.9	98.8
Heavy trucks	4	4	0	0	8	0	1	4	0	5	0	0	0	0	0	5	0	2	0	7	20
%Heavy trucks	1.3	0.7	0.0	0.0	0.9	0.0	0.4	1.4	0.0	0.9	0.0	0.0	0.0	0.0	0.0	8.2	0.0	1.9	0.0	4.1	1.2

Prepared by National Data & Surveying Services

Hall of Fame Dr & I-40 EB Ramps

Peak Hour Turning Movement Count

ID: 21-190005-010
City: Knoxville

Day: Thursday
Date: 2/4/2021

PEAK HOURS

AM	07:30 AM - 08:30 AM
NOON	11:45 AM - 12:45 PM
PM	04:30 PM - 05:30 PM

COUNT PERIODS

AM	7:00 AM - 09:00 AM
NOON	11:00 AM - 01:00 PM
PM	4:00 PM - 06:00 PM

SOUTHBOUND (Hall of Fame Dr)

AM	0	399	67	0	436	AM
NOON	0	250	36	0	558	NOON
PM	0	261	68	0	895	PM

EASTBOUND (I-40 EB Ramps)

AM	NOON	PM	
0	0	0	
0	0	0	0
122	176	333	2
0	2	1	0
295	223	247	1
AM	NOON	PM	

WESTBOUND (I-40 EB Ramps)

PM	NOON	AM	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
241	141	139	
PM	NOON	AM	

NORTHBOUND (Hall of Fame Dr)

PM	508	0	0	562	172	PM
NOON	473	0	0	382	103	NOON
AM	694	0	0	314	72	AM

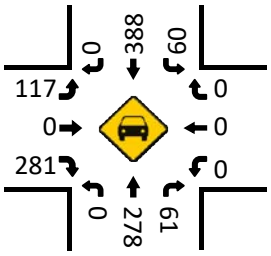
	0	2	1
	0	0	2
	0	0	0

CONTROL

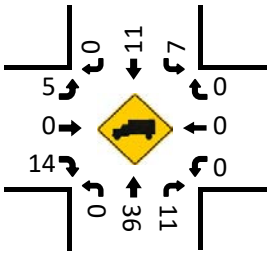
Signalized

	AM	NOON	PM
TEV	1269	1172	1644
PHF	0.84	0.97	0.90

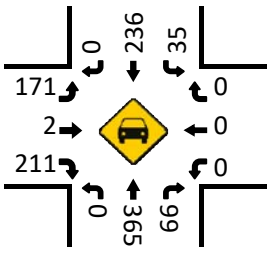
Cars (AM)



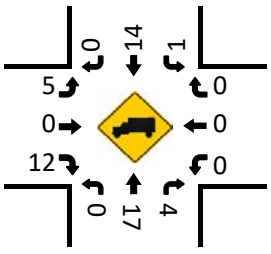
HT (AM)



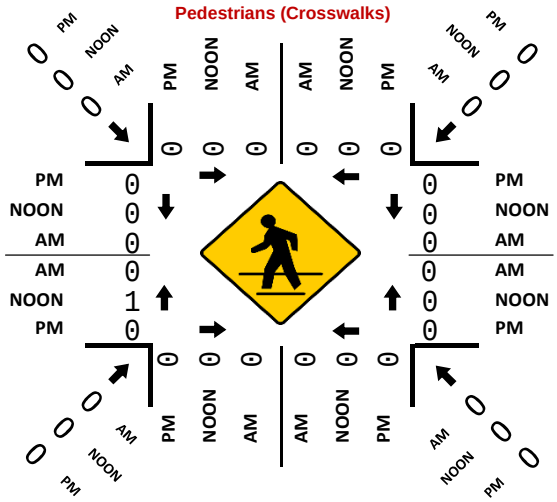
Cars (NOON)



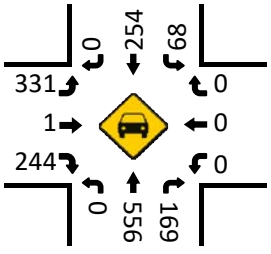
HT (NOON)



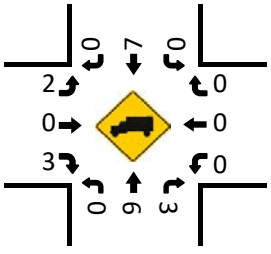
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Project ID: 21-190005-010
Location: Hall of Fame Dr & I-40 EB Ramps
City: Knoxville

Day: Thursday
Date: 2/4/2021

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Hall of Fame Dr Northbound						Hall of Fame Dr Southbound						I-40 EB Ramps Eastbound						I-40 EB Ramps Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	0	49	8	0	0	57	6	63	0	0	0	69	27	0	61	0	0	88	0	0	0	0	0	0	214
7:15 AM	0	70	4	0	0	74	12	65	0	0	0	77	32	0	69	0	0	101	0	0	0	0	0	0	252
7:30 AM	0	79	23	0	0	102	16	95	0	0	0	111	28	0	68	0	0	96	0	0	0	0	0	0	309
7:45 AM	0	98	17	0	0	115	17	118	0	0	0	135	34	0	92	0	0	126	0	0	0	0	0	0	376
Total	0	296	52	0	0	348	51	341	0	0	0	392	121	0	290	0	0	411	0	0	0	0	0	0	1151
8:00 AM	0	78	20	0	0	98	10	99	0	0	0	109	32	0	65	0	0	97	0	0	0	0	0	0	304
8:15 AM	0	59	12	0	0	71	24	87	0	0	0	111	28	0	70	0	0	98	0	0	0	0	0	0	280
8:30 AM	0	86	13	0	0	99	5	69	0	0	0	74	30	0	56	0	0	86	0	0	0	0	0	0	259
8:45 AM	0	46	18	0	0	64	12	70	0	0	0	82	28	0	62	0	0	90	0	0	0	0	0	0	236
Total	0	269	63	0	0	332	51	325	0	0	0	376	118	0	253	0	0	371	0	0	0	0	0	0	1079
BREAK																									
11:00 AM	0	87	26	0	0	113	11	59	0	0	0	70	46	0	45	0	0	91	0	0	0	0	0	0	274
11:15 AM	0	84	15	0	0	99	11	49	0	0	0	60	47	0	48	0	0	95	0	0	0	0	0	0	254
11:30 AM	0	99	21	0	0	120	10	45	0	0	0	55	40	1	49	0	0	90	0	0	0	0	0	0	265
11:45 AM	0	114	29	0	0	143	12	53	0	0	0	65	48	0	46	0	1	94	0	0	0	0	0	0	302
Total	0	384	91	0	0	475	44	206	0	0	0	250	181	1	188	0	1	370	0	0	0	0	0	0	1095
12:00 PM	0	93	27	0	0	120	9	69	0	0	0	78	39	1	57	0	0	97	0	0	0	0	0	0	295
12:15 PM	0	89	16	0	0	105	8	58	0	0	0	66	51	0	58	0	0	109	0	0	0	0	0	0	280
12:30 PM	0	86	31	0	0	117	7	70	0	0	0	77	38	1	62	0	0	101	0	0	0	0	0	0	295
12:45 PM	0	83	18	1	0	102	10	70	0	0	0	80	45	0	58	0	0	103	0	0	0	0	0	0	285
Total	0	351	92	1	0	444	34	267	0	0	0	301	173	2	235	0	0	410	0	0	0	0	0	0	1155
BREAK																									
4:00 PM	0	145	38	0	0	183	13	74	0	0	0	87	85	0	74	0	0	159	0	0	0	0	0	0	429
4:15 PM	0	114	33	0	0	147	10	68	0	0	0	78	71	0	71	0	0	142	0	0	0	0	0	0	367
4:30 PM	0	138	55	0	0	193	14	67	0	0	0	81	64	0	65	0	0	129	0	0	0	0	0	0	403
4:45 PM	0	132	29	0	0	161	18	65	0	0	0	83	92	1	58	0	0	151	0	0	0	0	0	0	395
Total	0	529	155	0	0	684	55	274	0	0	0	329	312	1	268	0	0	581	0	0	0	0	0	0	1594
5:00 PM	0	168	56	0	0	224	17	61	0	0	0	78	95	0	60	0	0	155	0	0	0	0	0	0	457
5:15 PM	0	124	32	0	0	156	19	68	0	0	0	87	82	0	64	0	0	146	0	0	0	0	0	0	389
5:30 PM	0	124	34	1	0	159	22	70	0	0	0	92	70	0	72	0	0	142	0	0	0	0	0	0	393
5:45 PM	0	93	24	0	0	117	14	63	0	0	0	77	91	0	61	0	0	152	0	0	0	0	0	0	346
Total	0	509	146	1	0	656	72	262	0	0	0	334	338	0	257	0	0	595	0	0	0	0	0	0	1585
Grand Total	0	2338	599	2	0	2939	307	1675	0	0	0	1982	1243	4	1491	0	1	2738	0	0	0	0	0	0	7659
Apprch %	0.0	79.6	20.4	0.1	0.0		15.5	84.5	0.0	0.0	0.0		45.4	0.1	54.5	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	30.5	7.8	0.0	0.0	38.4	4.0	21.9	0.0	0.0	0.0	25.9	16.2	0.1	19.5	0.0	0.0	35.7	0.0	0.0	0.0	0.0	0.0	0.0	
Cars, PU, Vans	0	2238	573	1		2812	292	1618	0	0		1910	1220	4	1440	0		2664	0	0	0	0		0	7386
% Cars, PU, Vans	0.0	95.7	95.7	50.0		95.7	95.1	96.6	0.0	0.0		96.4	98.1	100.0	96.6	0.0		97.3	0.0	0.0	0.0	0.0		0.0	96.4
Heavy trucks	0	100	26	1		127	15	57	0	0		72	23	0	51	0		74	0	0	0	0		0	273
%Heavy trucks	0.0	4.3	4.3	50.0		4.3	4.9	3.4	0.0	0.0		3.6	1.9	0.0	3.4	0.0		2.7	0.0	0.0	0.0	0.0		0.0	3.6

Project ID: 21-190005-010
Location: Hall of Fame Dr & I-40 WB Ramps
City: Knoxville

PEAK HOURS

Day: Thursday
Date: 2/4/2021

AM

	Hall of Fame Dr Northbound					Hall of Fame Dr Southbound					I-40 EB Ramps Eastbound					I-40 EB Ramps Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM - 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
7:30 AM	0	79	23	0	102	16	95	0	0	111	28	0	68	0	96	0	0	0	0	0	309
7:45 AM	0	98	17	0	115	17	118	0	0	135	34	0	92	0	126	0	0	0	0	0	376
8:00 AM	0	78	20	0	98	10	99	0	0	109	32	0	65	0	97	0	0	0	0	0	304
8:15 AM	0	59	12	0	71	24	87	0	0	111	28	0	70	0	98	0	0	0	0	0	280
Total Volume	0	314	72	0	386	67	399	0	0	466	122	0	295	0	417	0	0	0	0	0	1269
% App. Total	0.0	81.3	18.7	0.0	100	14.4	85.6	0.0	0.0	100	29.3	0.0	70.7	0.0	100	0.0	0.0	0.0	0.0	0	
PHF					0.839					0.863					0.827						0.844
Cars, PU, Vans	0	278	61	0	339	60	388	0	0	448	117	0	281	0	398	0	0	0	0	0	1185
% Cars, PU, Vans	0.0	88.5	84.7	0.0	87.8	89.6	97.2	0.0	0.0	96.1	95.9	0.0	95.3	0.0	95.4	0.0	0.0	0.0	0.0	0.0	93.4
Heavy trucks	0	36	11	0	47	7	11	0	0	18	5	0	14	0	19	0	0	0	0	0	84
%Heavy trucks	0.0	11.5	15.3	0.0	12.2	10.4	2.8	0.0	0.0	3.9	4.1	0.0	4.7	0.0	4.6	0.0	0.0	0.0	0.0	0.0	6.6

NOON

	Hall of Fame Dr Northbound					Hall of Fame Dr Southbound					I-40 EB Ramps Eastbound					I-40 EB Ramps Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 11:00 AM - 01:00 PM																					
Peak Hour for Entire Intersection Begins at 11:45 AM																					
11:45 AM	0	114	29	0	143	12	53	0	0	65	48	0	46	0	94	0	0	0	0	0	302
12:00 PM	0	93	27	0	120	9	69	0	0	78	39	1	57	0	97	0	0	0	0	0	295
12:15 PM	0	89	16	0	105	8	58	0	0	66	51	0	58	0	109	0	0	0	0	0	280
12:30 PM	0	86	31	0	117	7	70	0	0	77	38	1	62	0	101	0	0	0	0	0	295
Total Volume	0	382	103	0	485	36	250	0	0	286	176	2	223	0	401	0	0	0	0	0	1172
% App. Total	0.0	78.8	21.2	0.0	100	12.6	87.4	0.0	0.0	100	43.9	0.5	55.6	0.0	100	0.0	0.0	0.0	0.0	0	
PHF					0.848					0.917					0.920						0.970
Cars, PU, Vans	0	365	99	0	464	35	236	0	0	271	171	2	211	0	384	0	0	0	0	0	1119
% Cars, PU, Vans	0.0	95.5	96.1	0.0	95.7	97.2	94.4	0.0	0.0	94.8	97.2	100.0	94.6	0.0	95.8	0.0	0.0	0.0	0.0	0.0	95.5
Heavy trucks	0	17	4	0	21	1	14	0	0	15	5	0	12	0	17	0	0	0	0	0	53
%Heavy trucks	0.0	4.5	3.9	0.0	4.3	2.8	5.6	0.0	0.0	5.2	2.8	0.0	5.4	0.0	4.2	0.0	0.0	0.0	0.0	0.0	4.5

PM

	Hall of Fame Dr Northbound					Hall of Fame Dr Southbound					I-40 EB Ramps Eastbound					I-40 EB Ramps Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM - 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
4:30 PM	0	138	55	0	193	14	67	0	0	81	64	0	65	0	129	0	0	0	0	0	403
4:45 PM	0	132	29	0	161	18	65	0	0	83	92	1	58	0	151	0	0	0	0	0	395
5:00 PM	0	168	56	0	224	17	61	0	0	78	95	0	60	0	155	0	0	0	0	0	457
5:15 PM	0	124	32	0	156	19	68	0	0	87	82	0	64	0	146	0	0	0	0	0	389
Total Volume	0	562	172	0	734	68	261	0	0	329	333	1	247	0	581	0	0	0	0	0	1644
% App. Total	0.0	76.6	23.4	0.0	100	20.7	79.3	0.0	0.0	100	57.3	0.2	42.5	0.0	100	0.0	0.0	0.0	0.0	0	
PHF					0.819					0.945					0.937						0.899
Cars, PU, Vans	0	556	169	0	725	68	254	0	0	322	331	1	244	0	576	0	0	0	0	0	1623
% Cars, PU, Vans	0.0	98.9	98.3	0.0	98.8	100.0	97.3	0.0	0.0	97.9	99.4	100.0	98.8	0.0	99.1	0.0	0.0	0.0	0.0	0.0	98.7
Heavy trucks	0	6	3	0	9	0	7	0	0	7	2	0	3	0	5	0	0	0	0	0	21
%Heavy trucks	0.0	1.1	1.7	0.0	1.2	0.0	2.7	0.0	0.0	2.1	0.6	0.0	1.2	0.0	0.9	0.0	0.0	0.0	0.0	0.0	1.3

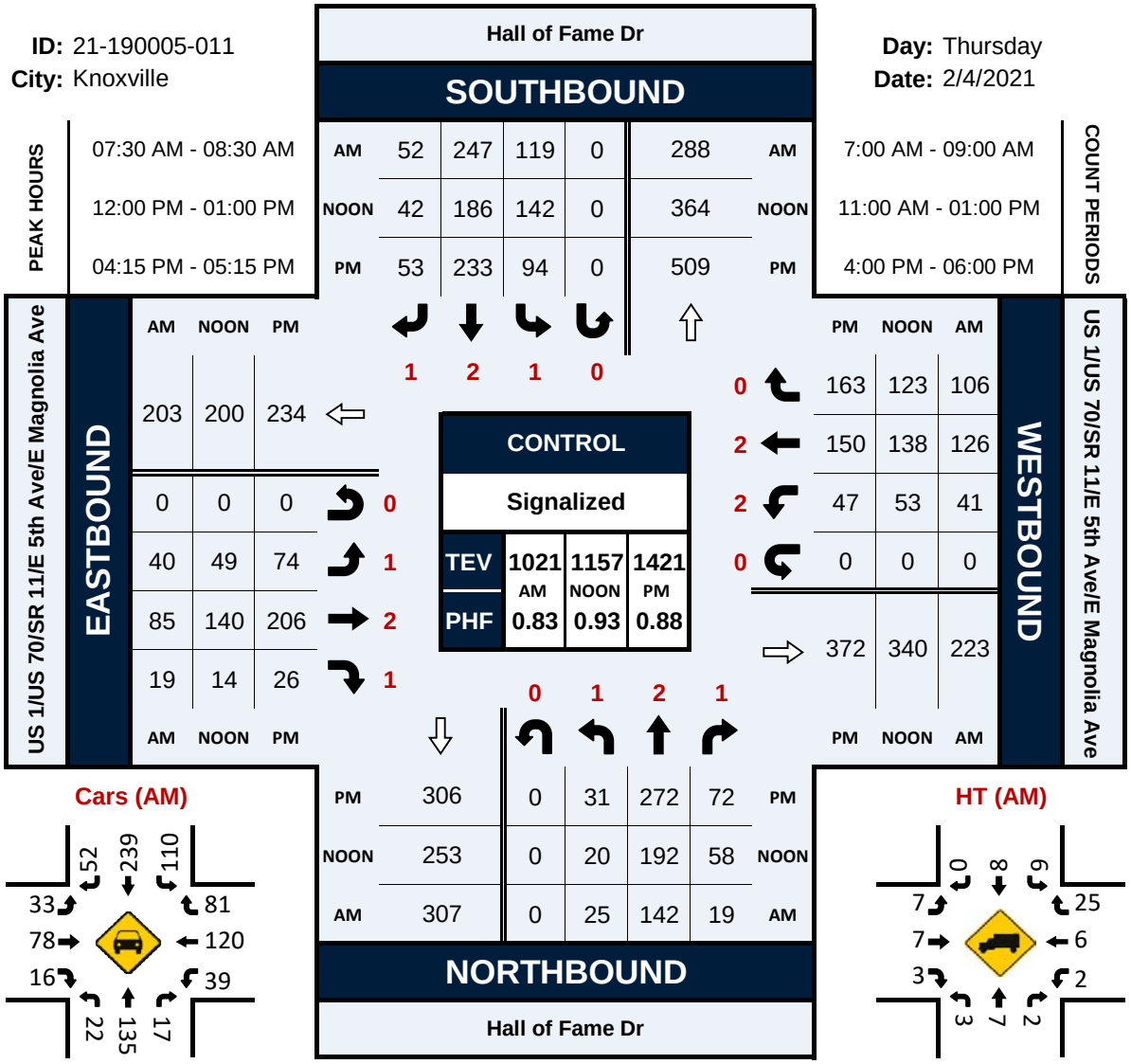
Prepared by National Data & Surveying Services

Hall of Fame Dr & US 1/US 70/SR 11/E 5th Ave/E Magnolia Ave

Peak Hour Turning Movement Count

ID: 21-190005-011
City: Knoxville

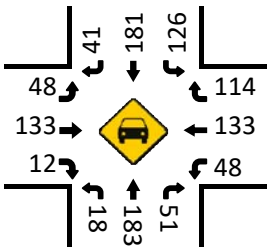
Day: Thursday
Date: 2/4/2021



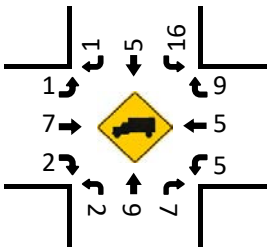
Cars (AM)

HT (AM)

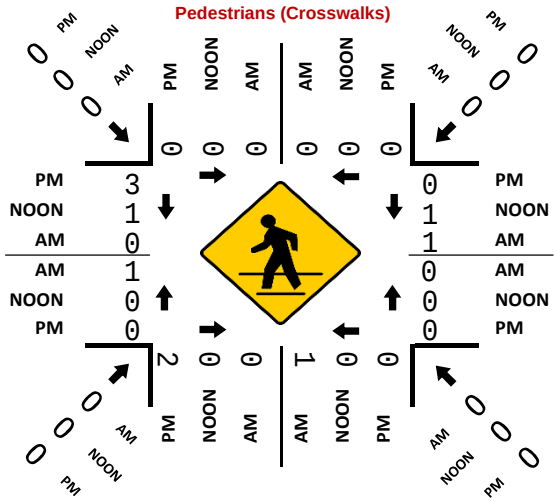
Cars (NOON)



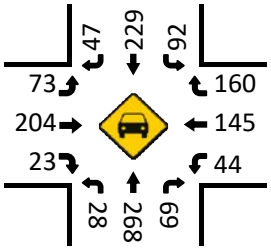
HT (NOON)



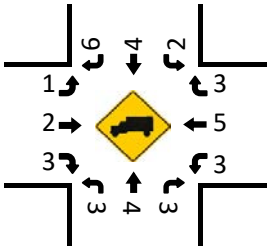
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Project ID: 21-190005-011
Location: Hall of Fame Dr & US 1/US 70/SR 11/E 5th Ave/E Magnolia Ave **Day: Thursday**
City: Knoxville **Date: 2/4/2021**

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Hall of Fame Dr Northbound						Hall of Fame Dr Southbound						US 1/US 70/SR 11/E 5th Ave/E Magnolia Ave Eastbound						US 1/US 70/SR 11/E 5th Ave/E Magnolia Ave Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	2	14	2	0	0	18	32	35	5	0	0	72	5	18	3	0	0	26	9	13	14	0	0	36	152
7:15 AM	5	24	7	0	0	36	32	33	14	0	0	79	1	22	1	0	0	24	19	34	15	0	0	68	207
7:30 AM	2	39	2	0	0	43	20	59	7	0	0	86	12	15	4	0	0	31	9	37	32	0	1	78	238
7:45 AM	14	42	7	0	1	63	45	65	16	0	0	126	15	22	4	0	0	41	11	36	31	0	0	78	308
Total	23	119	18	0	1	160	129	192	42	0	0	363	33	77	12	0	0	122	48	120	92	0	1	260	905
8:00 AM	6	39	5	0	0	50	30	67	15	0	0	112	7	26	5	0	0	38	10	31	23	0	0	64	264
8:15 AM	3	22	5	0	0	30	24	56	14	0	0	94	6	22	6	0	1	34	11	22	20	0	0	53	211
8:30 AM	5	30	8	0	0	43	20	52	5	0	0	77	9	24	0	0	0	33	15	28	23	0	0	66	219
8:45 AM	7	30	9	0	0	46	16	53	18	0	0	87	12	19	4	0	0	35	11	26	17	0	0	54	222
Total	21	121	27	0	0	169	90	228	52	0	0	370	34	91	15	0	1	140	47	107	83	0	0	237	916
BREAK																									
11:00 AM	6	25	13	0	0	44	23	47	8	0	1	78	11	32	2	0	1	45	9	28	31	0	0	68	235
11:15 AM	2	35	8	0	0	45	23	43	10	0	0	76	4	29	4	0	1	37	10	23	38	0	0	71	229
11:30 AM	9	47	16	0	0	72	30	36	4	0	0	70	12	22	10	0	0	44	10	30	41	0	0	81	267
11:45 AM	3	48	20	0	2	71	20	27	9	0	0	56	8	33	6	0	1	47	18	36	38	0	1	92	266
Total	20	155	57	0	2	232	96	153	31	0	1	280	35	116	22	0	3	173	47	117	148	0	1	312	997
12:00 PM	4	50	16	0	0	70	31	38	9	0	0	78	13	41	4	0	0	58	12	31	33	0	1	76	282
12:15 PM	7	56	19	0	0	82	42	47	11	0	0	100	14	35	4	0	0	53	16	34	26	0	0	76	311
12:30 PM	5	55	12	0	0	72	30	40	13	0	0	83	9	32	4	0	0	45	14	36	28	0	0	78	278
12:45 PM	4	31	11	0	0	46	39	61	9	0	0	109	13	32	2	0	1	47	11	37	36	0	0	84	286
Total	20	192	58	0	0	270	142	186	42	0	0	370	49	140	14	0	1	203	53	138	123	0	1	314	1157
BREAK																									
4:00 PM	7	46	20	0	0	73	20	49	13	0	0	82	16	50	5	0	0	71	16	45	56	0	0	117	343
4:15 PM	10	54	13	0	1	77	21	60	13	0	0	94	14	51	10	0	0	75	10	32	36	0	0	78	324
4:30 PM	5	69	22	0	0	96	29	58	11	0	0	98	22	55	4	0	1	81	10	41	42	0	0	93	368
4:45 PM	10	71	17	0	1	98	21	53	15	0	0	89	18	39	3	0	0	60	13	34	33	0	0	80	327
Total	32	240	72	0	2	344	91	220	52	0	0	363	70	195	22	0	1	287	49	152	167	0	0	368	1362
5:00 PM	6	78	20	0	0	104	23	62	14	0	0	99	20	61	9	0	2	90	14	43	52	0	0	109	402
5:15 PM	5	81	22	0	1	108	27	50	11	0	0	88	13	38	5	0	0	56	11	29	27	0	0	67	319
5:30 PM	7	78	18	0	0	103	27	55	7	0	0	89	15	37	11	0	0	63	17	29	39	0	0	85	340
5:45 PM	6	54	14	0	0	74	15	49	11	0	0	75	13	23	9	0	0	45	8	31	27	0	0	66	260
Total	24	291	74	0	1	389	92	216	43	0	0	351	61	159	34	0	2	254	50	132	145	0	0	327	1321
Grand Total	140	1118	306	0	6	1564	640	1195	262	0	1	2097	282	778	119	0	8	1179	294	766	758	0	3	1818	6658
Apprch %	9.0	71.5	19.6	0.0	0.4		30.5	57.0	12.5	0.0	0.0		23.9	66.0	10.1	0.0	0.7		16.2	42.1	41.7	0.0	0.2		
Total %	2.1	16.8	4.6	0.0	0.1	23.5	9.6	17.9	3.9	0.0	0.0	31.5	4.2	11.7	1.8	0.0	0.1	17.7	4.4	11.5	11.4	0.0	0.0	27.3	
Cars, PU, Vans	122	1077	285	0		1484	594	1160	250	0		2004	265	748	101	0		1114	266	731	690	0		1687	6289
% Cars, PU, Vans	87.1	96.3	93.1	0.0		94.9	92.8	97.1	95.4	0.0		95.6	94.0	96.1	84.9	0.0		94.5	90.5	95.4	91.0	0.0		92.8	94.5
Heavy trucks	18	41	21	0		80	46	35	12	0		93	17	30	18	0		65	28	35	68	0		131	369
%Heavy trucks	12.9	3.7	6.9	0.0		5.1	7.2	2.9	4.6	0.0		4.4	6.0	3.9	15.1	0.0		5.5	9.5	4.6	9.0	0.0		7.2	5.5

Project ID: 21-190005-011
Location: Hall of Fame Dr & US 1/US 70/SR 11/E 5th Ave/E M
City: Knoxville

PEAK HOURS

Day: Thursday
Date: 2/4/2021

AM

	Hall of Fame Dr Northbound					Hall of Fame Dr Southbound					1/US 70/SR 11/E 5th Ave/E Magnolia Eastbound					1/US 70/SR 11/E 5th Ave/E Magnolia Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM - 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
7:30 AM	2	39	2	0	43	20	59	7	0	86	12	15	4	0	31	9	37	32	0	78	238
7:45 AM	14	42	7	0	63	45	65	16	0	126	15	22	4	0	41	11	36	31	0	78	308
8:00 AM	6	39	5	0	50	30	67	15	0	112	7	26	5	0	38	10	31	23	0	64	264
8:15 AM	3	22	5	0	30	24	56	14	0	94	6	22	6	0	34	11	22	20	0	53	211
Total Volume	25	142	19	0	186	119	247	52	0	418	40	85	19	0	144	41	126	106	0	273	1021
% App. Total	13.4	76.3	10.2	0.0	100	28.5	59.1	12.4	0.0	100	27.8	59.0	13.2	0.0	100	15.0	46.2	38.8	0.0	100	
PHF					0.738					0.829					0.878					0.875	0.829
Cars, PU, Vans	22	135	17	0	174	110	239	52	0	401	33	78	16	0	127	39	120	81	0	240	942
% Cars, PU, Vans	88.0	95.1	89.5	0.0	93.5	92.4	96.8	100.0	0.0	95.9	82.5	91.8	84.2	0.0	88.2	95.1	95.2	76.4	0.0	87.9	92.3
Heavy trucks	3	7	2	0	12	9	8	0	0	17	7	7	3	0	17	2	6	25	0	33	79
%Heavy trucks	12.0	4.9	10.5	0.0	6.5	7.6	3.2	0.0	0.0	4.1	17.5	8.2	15.8	0.0	11.8	4.9	4.8	23.6	0.0	12.1	7.7

NOON

	Hall of Fame Dr Northbound					Hall of Fame Dr Southbound					1/US 70/SR 11/E 5th Ave/E Magnolia Eastbound					1/US 70/SR 11/E 5th Ave/E Magnolia Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 11:00 AM - 01:00 PM																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	4	50	16	0	70	31	38	9	0	78	13	41	4	0	58	12	31	33	0	76	282
12:15 PM	7	56	19	0	82	42	47	11	0	100	14	35	4	0	53	16	34	26	0	76	311
12:30 PM	5	55	12	0	72	30	40	13	0	83	9	32	4	0	45	14	36	28	0	78	278
12:45 PM	4	31	11	0	46	39	61	9	0	109	13	32	2	0	47	11	37	36	0	84	286
Total Volume	20	192	58	0	270	142	186	42	0	370	49	140	14	0	203	53	138	123	0	314	1157
% App. Total	7.4	71.1	21.5	0.0	100	38.4	50.3	11.4	0.0	100	24.1	69.0	6.9	0.0	100	16.9	43.9	39.2	0.0	100	
PHF					0.823					0.849					0.875					0.935	0.930
Cars, PU, Vans	18	183	51	0	252	126	181	41	0	348	48	133	12	0	193	48	133	114	0	295	1088
% Cars, PU, Vans	90.0	95.3	87.9	0.0	93.3	88.7	97.3	97.6	0.0	94.1	98.0	95.0	85.7	0.0	95.1	90.6	96.4	92.7	0.0	93.9	94.0
Heavy trucks	2	9	7	0	18	16	5	1	0	22	1	7	2	0	10	5	5	9	0	19	69
%Heavy trucks	10.0	4.7	12.1	0.0	6.7	11.3	2.7	2.4	0.0	5.9	2.0	5.0	14.3	0.0	4.9	9.4	3.6	7.3	0.0	6.1	6.0

PM

	Hall of Fame Dr Northbound					Hall of Fame Dr Southbound					1/US 70/SR 11/E 5th Ave/E Magnolia Eastbound					1/US 70/SR 11/E 5th Ave/E Magnolia Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM - 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
4:15 PM	10	54	13	0	77	21	60	13	0	94	14	51	10	0	75	10	32	36	0	78	324
4:30 PM	5	69	22	0	96	29	58	11	0	98	22	55	4	0	81	10	41	42	0	93	368
4:45 PM	10	71	17	0	98	21	53	15	0	89	18	39	3	0	60	13	34	33	0	80	327
5:00 PM	6	78	20	0	104	23	62	14	0	99	20	61	9	0	90	14	43	52	0	109	402
Total Volume	31	272	72	0	375	94	233	53	0	380	74	206	26	0	306	47	150	163	0	360	1421
% App. Total	8.3	72.5	19.2	0.0	100	24.7	61.3	13.9	0.0	100	24.2	67.3	8.5	0.0	100	13.1	41.7	45.3	0.0	100	
PHF					0.901					0.960					0.850					0.826	0.884
Cars, PU, Vans	28	268	69	0	365	92	229	47	0	368	73	204	23	0	300	44	145	160	0	349	1382
% Cars, PU, Vans	90.3	98.5	95.8	0.0	97.3	97.9	98.3	88.7	0.0	96.8	98.6	99.0	88.5	0.0	98.0	93.6	96.7	98.2	0.0	96.9	97.3
Heavy trucks	3	4	3	0	10	2	4	6	0	12	1	2	3	0	6	3	5	3	0	11	39
%Heavy trucks	9.7	1.5	4.2	0.0	2.7	2.1	1.7	11.3	0.0	3.2	1.4	1.0	11.5	0.0	2.0	6.4	3.3	1.8	0.0	3.1	2.7

Prepared by National Data & Surveying Services

Womens Basketball Hall of Fame Dr/S Hall of Fame Dr & Howard Baker Jr Blvd/E Church Ave

Peak Hour Turning Movement Count

ID: 21-190005-012
City: Knoxville

Day: Thursday
Date: 2/4/2021

PEAK HOURS

AM	07:30 AM - 08:30 AM
NOON	12:00 PM - 01:00 PM
PM	04:30 PM - 05:30 PM

COUNT PERIODS

AM	7:00 AM - 09:00 AM
NOON	11:00 AM - 01:00 PM
PM	4:00 PM - 06:00 PM

SOUTHBOUND — Womens Basketball Hall of Fame Dr/S Hall of Fame Dr

AM	28	117	94	0	135	AM
NOON	20	84	27	0	161	NOON
PM	25	87	52	0	309	PM

EASTBOUND — Howard Baker Jr Blvd/E Church Ave

AM	NOON	PM		
74	52	71		
0	0	0	0	
36	51	85	1	
37	30	67	1	
6	10	29	1	
AM	NOON	PM		

WESTBOUND — Howard Baker Jr Blvd/E Church Ave

PM	NOON	AM		
105	35	52	1	
37	22	39	1	
11	5	10	1	
0	0	0	0	
133	71	139		
PM	NOON	AM		

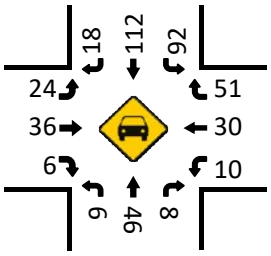
NORTHBOUND — Womens Basketball Hall of Fame Dr/S Hall of Fame Dr

PM	127	0	9	119	14	PM
NOON	99	0	10	75	14	NOON
AM	133	0	7	47	8	AM

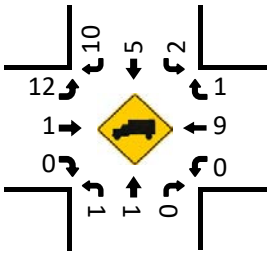
CONTROL: Signalized

	AM	NOON	PM
TEV	481	383	640
PHF	0.93	0.97	0.90

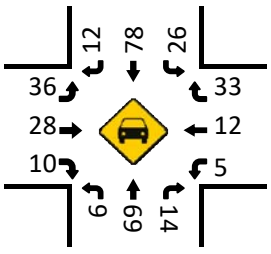
Cars (AM)



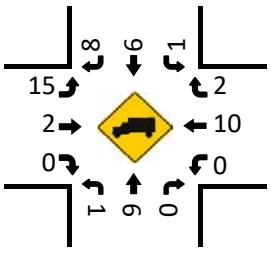
HT (AM)



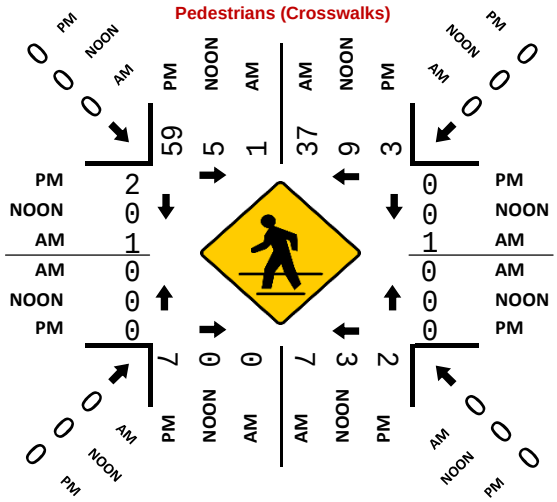
Cars (NOON)



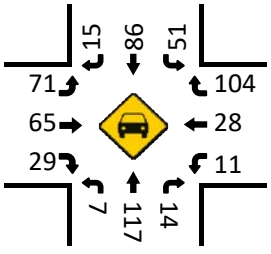
HT (NOON)



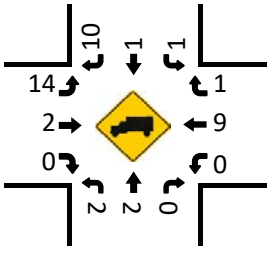
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Project ID: 21-190005-012

Location: Womens Basketball Hall of Fame Dr/S Hall of Fame Dr & Howard Baker Jr Blvd/E Church Ave **Day: Thursday**

City: Knoxville **Date: 2/4/2021**

Groups Printed - Cars, PU, Vans - Heavy Trucks

	ens Basketball Hall of Fame Dr/S Hall of Fa Northbound						ens Basketball Hall of Fame Dr/S Hall of Fa Southbound						Howard Baker Jr Blvd/E Church Ave Eastbound						Howard Baker Jr Blvd/E Church Ave Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	1	6	0	0	2	7	9	17	7	0	1	33	1	3	3	0	0	7	2	3	16	0	0	21	68
7:15 AM	0	7	2	0	0	9	13	20	8	0	3	41	11	8	2	0	0	21	2	11	14	0	0	27	98
7:30 AM	0	13	4	0	1	17	23	33	1	0	14	57	7	6	0	0	1	13	2	11	17	0	0	30	117
7:45 AM	2	14	0	0	2	16	21	28	9	0	8	58	14	9	2	0	0	25	3	14	14	0	1	31	130
Total	3	40	6	0	5	49	66	98	25	0	26	189	33	26	7	0	1	66	9	39	61	0	1	109	413
8:00 AM	4	10	3	0	2	17	27	30	11	0	9	68	6	11	3	0	0	20	2	5	15	0	0	22	127
8:15 AM	1	10	1	0	2	12	23	26	7	0	7	56	9	11	1	0	0	21	3	9	6	0	0	18	107
8:30 AM	1	8	4	0	1	13	17	26	4	0	6	47	10	10	6	0	0	26	2	11	11	0	0	24	110
8:45 AM	2	9	2	0	1	13	19	22	13	0	9	54	6	10	5	0	1	21	0	4	7	0	0	11	99
Total	8	37	10	0	6	55	86	104	35	0	31	225	31	42	15	0	1	88	7	29	39	0	0	75	443
BREAK																									
11:00 AM	4	17	3	0	0	24	3	14	3	0	3	20	10	5	1	0	0	16	1	8	11	0	0	20	80
11:15 AM	2	15	3	0	2	20	9	21	4	0	2	34	18	6	7	0	0	31	1	6	8	0	1	15	100
11:30 AM	5	18	3	0	0	26	6	17	2	0	0	25	15	6	4	0	1	25	2	7	7	0	0	16	92
11:45 AM	1	17	2	0	2	20	7	15	5	0	3	27	16	7	4	0	0	27	0	4	7	0	0	11	85
Total	12	67	11	0	4	90	25	67	14	0	8	106	59	24	16	0	1	99	4	25	33	0	1	62	357
12:00 PM	2	19	4	0	1	25	8	15	2	0	2	25	9	9	3	0	0	21	0	3	12	0	0	15	86
12:15 PM	3	18	2	0	2	23	6	23	8	0	2	37	15	5	2	0	0	22	1	7	9	0	0	17	99
12:30 PM	2	22	4	0	0	28	8	18	3	0	5	29	15	7	2	0	0	24	3	7	8	0	0	18	99
12:45 PM	3	16	4	0	0	23	5	28	7	0	5	40	12	9	3	0	0	24	1	5	6	0	0	12	99
Total	10	75	14	0	3	99	27	84	20	0	14	131	51	30	10	0	0	91	5	22	35	0	0	62	383
BREAK																									
4:00 PM	0	22	3	0	0	25	8	22	9	0	9	39	14	17	4	0	0	35	1	7	13	0	0	21	120
4:15 PM	0	20	4	0	0	24	10	30	7	0	5	47	22	9	5	0	0	36	5	8	13	0	0	26	133
4:30 PM	1	31	5	0	0	37	11	19	4	0	5	34	19	17	4	0	0	40	1	5	27	0	0	33	144
4:45 PM	3	28	4	0	1	35	7	24	5	0	17	36	19	15	7	0	0	41	3	8	26	0	0	37	149
Total	4	101	16	0	1	121	36	95	25	0	36	156	74	58	20	0	0	152	10	28	79	0	0	117	546
5:00 PM	3	32	3	0	5	38	17	28	7	0	27	52	20	15	10	0	0	45	3	7	33	0	0	43	178
5:15 PM	2	28	2	0	3	32	17	16	9	0	13	42	27	20	8	0	2	55	4	17	19	0	0	40	169
5:30 PM	3	23	0	0	2	26	16	22	6	0	14	44	16	10	15	0	0	41	2	8	18	0	0	28	139
5:45 PM	1	17	1	0	3	19	13	18	7	0	7	38	16	13	1	0	2	30	1	7	16	0	0	24	111
Total	9	100	6	0	13	115	63	84	29	0	61	176	79	58	34	0	4	171	10	39	86	0	0	135	597
Grand Total	46	420	63	0	32	529	303	532	148	0	176	983	327	238	102	0	7	667	45	182	333	0	2	560	2739
Apprch %	8.7	79.4	11.9	0.0	6.0		30.8	54.1	15.1	0.0	17.9		49.0	35.7	15.3	0.0	1.0		8.0	32.5	59.5	0.0	0.4		
Total %	1.7	15.3	2.3	0.0	1.2	19.3	11.1	19.4	5.4	0.0	6.4	35.9	11.9	8.7	3.7	0.0	0.3	24.4	1.6	6.6	12.2	0.0	0.1	20.4	
Cars, PU, Vans	39	410	63	0		512	293	509	94	0		896	245	228	102	0		575	45	127	320	0		492	2475
% Cars, PU, Vans	84.8	97.6	100.0	0.0		96.8	96.7	95.7	63.5	0.0		91.1	74.9	95.8	100.0	0.0		86.2	100.0	69.8	96.1	0.0		87.9	90.4
Heavy trucks	7	10	0	0		17	10	23	54	0		87	82	10	0	0		92	0	55	13	0		68	264
%Heavy trucks	15.2	2.4	0.0	0.0		3.2	3.3	4.3	36.5	0.0		8.9	25.1	4.2	0.0	0.0		13.8	0.0	30.2	3.9	0.0		12.1	9.6

Project ID: 21-190005-012
Location: Womens Basketball Hall of Fame Dr/S Hall of Fam
City: Knoxville

PEAK HOURS

Day: Thursday
Date: 2/4/2021

AM

	Basketball Hall of Fame Dr/S Hall o Northbound					Basketball Hall of Fame Dr/S Hall of Southbound					Howard Baker Jr Blvd/E Church Ave Eastbound					Howard Baker Jr Blvd/E Church Ave Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM - 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
7:30 AM	0	13	4	0	17	23	33	1	0	57	7	6	0	0	13	2	11	17	0	30	117
7:45 AM	2	14	0	0	16	21	28	9	0	58	14	9	2	0	25	3	14	14	0	31	130
8:00 AM	4	10	3	0	17	27	30	11	0	68	6	11	3	0	20	2	5	15	0	22	127
8:15 AM	1	10	1	0	12	23	26	7	0	56	9	11	1	0	21	3	9	6	0	18	107
Total Volume	7	47	8	0	62	94	117	28	0	239	36	37	6	0	79	10	39	52	0	101	481
% App. Total	11.3	75.8	12.9	0.0	100	39.3	49.0	11.7	0.0	100	45.6	46.8	7.6	0.0	100	9.9	38.6	51.5	0.0	100	
PHF					0.912					0.879					0.790					0.815	0.925
Cars, PU, Vans	6	46	8	0	60	92	112	18	0	222	24	36	6	0	66	10	30	51	0	91	439
% Cars, PU, Vans	85.7	97.9	100.0	0.0	96.8	97.9	95.7	64.3	0.0	92.9	66.7	97.3	100.0	0.0	83.5	100.0	76.9	98.1	0.0	90.1	91.3
Heavy trucks	1	1	0	0	2	2	5	10	0	17	12	1	0	0	13	0	9	1	0	10	42
%Heavy trucks	14.3	2.1	0.0	0.0	3.2	2.1	4.3	35.7	0.0	7.1	33.3	2.7	0.0	0.0	16.5	0.0	23.1	1.9	0.0	9.9	8.7

NOON

	Basketball Hall of Fame Dr/S Hall o Northbound					Basketball Hall of Fame Dr/S Hall of Southbound					Howard Baker Jr Blvd/E Church Ave Eastbound					Howard Baker Jr Blvd/E Church Ave Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 11:00 AM - 01:00 PM																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	2	19	4	0	25	8	15	2	0	25	9	9	3	0	21	0	3	12	0	15	86
12:15 PM	3	18	2	0	23	6	23	8	0	37	15	5	2	0	22	1	7	9	0	17	99
12:30 PM	2	22	4	0	28	8	18	3	0	29	15	7	2	0	24	3	7	8	0	18	99
12:45 PM	3	16	4	0	23	5	28	7	0	40	12	9	3	0	24	1	5	6	0	12	99
Total Volume	10	75	14	0	99	27	84	20	0	131	51	30	10	0	91	5	22	35	0	62	383
% App. Total	10.1	75.8	14.1	0.0	100	20.6	64.1	15.3	0.0	100	56.0	33.0	11.0	0.0	100	8.1	35.5	56.5	0.0	100	
PHF					0.884					0.819					0.948					0.861	0.967
Cars, PU, Vans	9	69	14	0	92	26	78	12	0	116	36	28	10	0	74	5	12	33	0	50	332
% Cars, PU, Vans	90.0	92.0	100.0	0.0	92.9	96.3	92.9	60.0	0.0	88.5	70.6	93.3	100.0	0.0	81.3	100.0	54.5	94.3	0.0	80.6	86.7
Heavy trucks	1	6	0	0	7	1	6	8	0	15	15	2	0	0	17	0	10	2	0	12	51
%Heavy trucks	10.0	8.0	0.0	0.0	7.1	3.7	7.1	40.0	0.0	11.5	29.4	6.7	0.0	0.0	18.7	0.0	45.5	5.7	0.0	19.4	13.3

PM

	Basketball Hall of Fame Dr/S Hall o Northbound					Basketball Hall of Fame Dr/S Hall of Southbound					Howard Baker Jr Blvd/E Church Ave Eastbound					Howard Baker Jr Blvd/E Church Ave Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM - 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
4:30 PM	1	31	5	0	37	11	19	4	0	34	19	17	4	0	40	1	5	27	0	33	144
4:45 PM	3	28	4	0	35	7	24	5	0	36	19	15	7	0	41	3	8	26	0	37	149
5:00 PM	3	32	3	0	38	17	28	7	0	52	20	15	10	0	45	3	7	33	0	43	178
5:15 PM	2	28	2	0	32	17	16	9	0	42	27	20	8	0	55	4	17	19	0	40	169
Total Volume	9	119	14	0	142	52	87	25	0	164	85	67	29	0	181	11	37	105	0	153	640
% App. Total	6.3	83.8	9.9	0.0	100	31.7	53.0	15.2	0.0	100	47.0	37.0	16.0	0.0	100	7.2	24.2	68.6	0.0	100	
PHF					0.934					0.788					0.823					0.890	0.899
Cars, PU, Vans	7	117	14	0	138	51	86	15	0	152	71	65	29	0	165	11	28	104	0	143	598
% Cars, PU, Vans	77.8	98.3	100.0	0.0	97.2	98.1	98.9	60.0	0.0	92.7	83.5	97.0	100.0	0.0	91.2	100.0	75.7	99.0	0.0	93.5	93.4
Heavy trucks	2	2	0	0	4	1	1	10	0	12	14	2	0	0	16	0	9	1	0	10	42
%Heavy trucks	22.2	1.7	0.0	0.0	2.8	1.9	1.1	40.0	0.0	7.3	16.5	3.0	0.0	0.0	8.8	0.0	24.3	1.0	0.0	6.5	6.6

Prepared by National Data & Surveying Services

VOLUME

E Jackson Ave E/O Patton St

Day: Thursday
Date: 2/4/2021

City: Knoxville
Project #: TN21_190006_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	851	620	1,471

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00					2		4		6		12:00					7		16		23	
00:15					0		2		2		12:15					17		18		35	
00:30					1		1		2		12:30					22		11		33	
00:45					1	4	4	11	5	15	12:45					14	60	12	57	26	117
01:00					1		1		2		13:00					15		10		25	
01:15					0		0		0		13:15					17		12		29	
01:30					2		0		2		13:30					10		2		12	
01:45					1	4	0	1	1	5	13:45					15	57	10	34	25	91
02:00					1		0		1		14:00					16		12		28	
02:15					0		0		0		14:15					18		8		26	
02:30					3		1		4		14:30					15		15		30	
02:45					2	6	0	1	2	7	14:45					24	73	15	50	39	123
03:00					2		1		3		15:00					20		12		32	
03:15					0		1		1		15:15					13		13		26	
03:30					1		0		1		15:30					10		15		25	
03:45					0	3	0	2	0	5	15:45					15	58	11	51	26	109
04:00					0		1		1		16:00					16		14		30	
04:15					1		0		1		16:15					16		17		33	
04:30					0		0		0		16:30					14		12		26	
04:45					1	2	2	3	3	5	16:45					11	57	9	52	20	109
05:00					1		3		4		17:00					23		16		39	
05:15					1		1		2		17:15					16		14		30	
05:30					2		1		3		17:30					12		11		23	
05:45					8	12	3	8	11	20	17:45					17	68	7	48	24	116
06:00					2		1		3		18:00					6		10		16	
06:15					3		5		8		18:15					15		3		18	
06:30					9		3		12		18:30					19		8		27	
06:45					24	38	0	9	24	47	18:45					13	53	6	27	19	80
07:00					12		2		14		19:00					7		6		13	
07:15					12		8		20		19:15					6		5		11	
07:30					13		10		23		19:30					12		4		16	
07:45					15	52	18	38	33	90	19:45					10	35	5	20	15	55
08:00					15		10		25		20:00					8		1		9	
08:15					6		18		24		20:15					9		2		11	
08:30					9		6		15		20:30					6		4		10	
08:45					7	37	5	39	12	76	20:45					4	27	3	10	7	37
09:00					14		10		24		21:00					7		6		13	
09:15					7		9		16		21:15					3		5		8	
09:30					9		5		14		21:30					8		5		13	
09:45					8	38	6	30	14	68	21:45					13	31	3	19	16	50
10:00					15		10		25		22:00					12		5		17	
10:15					6		8		14		22:15					3		2		5	
10:30					8		7		15		22:30					9		5		14	
10:45					10	39	9	34	19	73	22:45					1	25	0	12	1	37
11:00					11		7		18		23:00					6		3		9	
11:15					20		10		30		23:15					6		8		14	
11:30					9		17		26		23:30					2		0		2	
11:45					18	58	15	49	33	107	23:45					0	14	4	15	4	29
TOTALS						293		225		518	TOTALS						558		395		953
SPLIT %						56.6%		43.4%		35.2%	SPLIT %						58.6%		41.4%		64.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	851	620	1,471

AM Peak Hour			11:45	11:30	11:45	PM Peak Hour			14:15	12:00	14:15
AM Pk Volume			64	66	124	PM Pk Volume			77	57	127
Pk Hr Factor			0.727	0.917	0.886	Pk Hr Factor			0.802	0.792	0.814
7 - 9 Volume	0	0	89	77	166	4 - 6 Volume	0	0	125	100	225
7 - 9 Peak Hour			07:15	07:30	07:30	4 - 6 Peak Hour			17:00	16:15	16:15
7 - 9 Pk Volume	0	0	55	56	105	4 - 6 Pk Volume	0	0	68	54	118
Pk Hr Factor	0.000	0.000	0.917	0.778	0.795	Pk Hr Factor	0.000	0.000	0.739	0.794	0.756

Prepared by National Data & Surveying Services

VOLUME

E Jackson Ave E/O Patton St

Day: Friday
Date: 2/5/2021

City: Knoxville
Project #: TN21_190006_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	982	675	1,657

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			3		1		4		12:00			5		20		25	
00:15			5		1		6		12:15			15		12		27	
00:30			1		0		1		12:30			18		10		28	
00:45			1	10	1	3	2	13	12:45			13	51	13	55	26	106
01:00			2		0		2		13:00			11		11		22	
01:15			2		0		2		13:15			19		6		25	
01:30			2		0		2		13:30			14		10		24	
01:45			3	9	1	1	4	10	13:45			12	56	7	34	19	90
02:00			1		1		2		14:00			18		19		37	
02:15			0		0		0		14:15			11		11		22	
02:30			2		1		3		14:30			23		14		37	
02:45			2	5	0	2	2	7	14:45			16	68	15	59	31	127
03:00			0		2		2		15:00			23		12		35	
03:15			1		2		3		15:15			14		12		26	
03:30			0		0		0		15:30			18		18		36	
03:45			0	1	1	5	1	6	15:45			9	64	14	56	23	120
04:00			2		0		2		16:00			14		13		27	
04:15			5		0		5		16:15			20		19		39	
04:30			3		0		3		16:30			19		13		32	
04:45			0	10	2	2	2	12	16:45			14	67	10	55	24	122
05:00			2		1		3		17:00			14		13		27	
05:15			1		0		1		17:15			23		12		35	
05:30			1		1		2		17:30			19		14		33	
05:45			8	12	2	4	10	16	17:45			16	72	14	53	30	125
06:00			2		6		8		18:00			11		10		21	
06:15			5		1		6		18:15			21		9		30	
06:30			10		3		13		18:30			14		10		24	
06:45			21	38	4	14	25	52	18:45			14	60	4	33	18	93
07:00			17		6		23		19:00			16		11		27	
07:15			11		3		14		19:15			12		5		17	
07:30			12		8		20		19:30			10		6		16	
07:45			11	51	11	28	22	79	19:45			15	53	8	30	23	83
08:00			11		7		18		20:00			19		10		29	
08:15			10		6		16		20:15			14		6		20	
08:30			11		10		21		20:30			22		7		29	
08:45			9	41	9	32	18	73	20:45			20	75	3	26	23	101
09:00			8		3		11		21:00			8		7		15	
09:15			17		8		25		21:15			10		5		15	
09:30			6		9		15		21:30			8		9		17	
09:45			9	40	13	33	22	73	21:45			6	32	6	27	12	59
10:00			10		5		15		22:00			5		2		7	
10:15			14		7		21		22:15			17		4		21	
10:30			9		7		16		22:30			7		1		8	
10:45			10	43	23	42	33	85	22:45			13	42	1	8	14	50
11:00			6		8		14		23:00			15		6		21	
11:15			15		15		30		23:15			11		5		16	
11:30			14		15		29		23:30			4		2		6	
11:45			11	46	17	55	28	101	23:45			6	36	5	18	11	54
TOTALS				306		221		527	TOTALS				676		454		1130
SPLIT %				58.1%		41.9%		31.8%	SPLIT %				59.8%		40.2%		68.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	982	675	1,657

AM Peak Hour			06:45	11:15	11:15	PM Peak Hour			14:30	15:30	14:30
AM Pk Volume			61	67	112	PM Pk Volume			76	64	129
Pk Hr Factor			0.726	0.838	0.933	Pk Hr Factor			0.826	0.842	0.872
7 - 9 Volume	0	0	92	60	152	4 - 6 Volume	0	0	139	108	247
7 - 9 Peak Hour			07:00	07:45	07:00	4 - 6 Peak Hour			17:00	16:00	17:00
7 - 9 Pk Volume	0	0	51	34	79	4 - 6 Pk Volume	0	0	72	55	125
Pk Hr Factor	0.000	0.000	0.750	0.773	0.859	Pk Hr Factor	0.000	0.000	0.783	0.724	0.893

Prepared by National Data & Surveying Services

VOLUME

E Jackson Ave E/O Patton St

Day: Saturday
Date: 2/6/2021

City: Knoxville
Project #: TN21_190006_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	745	476	1,221

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			4	6	10	12:00			9	5	14
00:15			4	1	5	12:15			14	8	22
00:30			1	0	1	12:30			10	9	19
00:45			4	1	5	12:45			13	5	18
01:00			2	3	5	13:00			13	10	23
01:15			5	1	6	13:15			14	8	22
01:30			2	4	6	13:30			10	5	15
01:45			1	0	1	13:45			12	7	19
02:00			0	1	1	14:00			14	17	31
02:15			0	1	1	14:15			16	8	24
02:30			2	1	3	14:30			15	10	25
02:45			0	1	1	14:45			15	4	19
03:00			1	0	1	15:00			8	8	16
03:15			0	1	1	15:15			18	8	26
03:30			1	0	1	15:30			8	11	19
03:45			2	0	2	15:45			15	13	28
04:00			1	1	2	16:00			15	11	26
04:15			2	1	3	16:15			13	4	17
04:30			0	0	0	16:30			11	11	22
04:45			1	0	1	16:45			7	11	18
05:00			2	2	4	17:00			11	11	22
05:15			2	2	4	17:15			8	10	18
05:30			1	1	2	17:30			15	10	25
05:45			9	3	12	17:45			12	9	21
06:00			1	4	5	18:00			13	8	21
06:15			1	1	2	18:15			11	4	15
06:30			0	0	0	18:30			15	10	25
06:45			2	3	5	18:45			11	8	19
07:00			0	0	0	19:00			12	6	18
07:15			0	1	1	19:15			6	9	15
07:30			2	0	2	19:30			15	3	18
07:45			2	4	6	19:45			14	6	20
08:00			3	3	6	20:00			15	8	23
08:15			2	5	7	20:15			17	5	22
08:30			5	5	10	20:30			11	3	14
08:45			8	3	11	20:45			6	4	10
09:00			7	6	13	21:00			9	2	11
09:15			6	5	11	21:15			13	4	17
09:30			4	4	8	21:30			10	4	14
09:45			5	5	10	21:45			6	4	10
10:00			5	11	16	22:00			6	5	11
10:15			7	6	13	22:15			8	5	13
10:30			9	3	12	22:30			9	2	11
10:45			6	10	16	22:45			13	2	15
11:00			13	5	18	23:00			18	3	21
11:15			16	9	25	23:15			14	5	19
11:30			14	7	21	23:30			8	2	10
11:45			15	15	30	23:45			9	5	14
TOTALS				180	146	**326**	**TOTALS**			565	330	**895**
SPLIT %				55.2%	44.8%	**26.7%**	**SPLIT %**			63.1%	36.9%	**73.3%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	745	476	1,221

AM Peak Hour			11:00	11:45	**11:00**	**PM Peak Hour**			19:30	15:15	**13:45**
AM Pk Volume			58	37	**94**	**PM Pk Volume**			61	43	**99**
Pk Hr Factor			0.906	0.617	**0.783**	**Pk Hr Factor**			0.897	0.827	**0.798**
7 - 9 Volume	0	0	22	21	**43**	**4 - 6 Volume**	0	0	92	77	**169**
7 - 9 Peak Hour			08:00	07:45	**08:00**	**4 - 6 Peak Hour**			16:00	16:30	**17:00**
7 - 9 Pk Volume	0	0	18	17	**34**	**4 - 6 Pk Volume**	0	0	46	43	**86**
Pk Hr Factor	0.000	0.000	0.563	0.850	**0.773**	**Pk Hr Factor**	0.000	0.000	0.767	0.977	**0.860**

Prepared by National Data & Surveying Services

VOLUME

E Jackson Ave E/O Patton St

Day: Sunday
Date: 2/7/2021

City: Knoxville
Project #: TN21_190006_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	405	303	708

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			9		6		15		12:00			6		9		15	
00:15			2		0		2		12:15			5		8		13	
00:30			4		4		8		12:30			6		6		12	
00:45			4	19	2	12	6	31	12:45			8	25	7	30	15	55
01:00			3		2		5		13:00			13		10		23	
01:15			1		3		4		13:15			9		6		15	
01:30			3		1		4		13:30			11		7		18	
01:45			2	9	3	9	5	18	13:45			5	38	4	27	9	65
02:00			1		0		1		14:00			7		3		10	
02:15			1		1		2		14:15			9		5		14	
02:30			1		0		1		14:30			5		4		9	
02:45			1	4	0	1	1	5	14:45			8	29	5	17	13	46
03:00			2		0		2		15:00			13		6		19	
03:15			0		0		0		15:15			9		9		18	
03:30			2		0		2		15:30			11		12		23	
03:45			1	5	2	2	3	7	15:45			9	42	4	31	13	73
04:00			1		1		2		16:00			3		4		7	
04:15			0		0		0		16:15			8		6		14	
04:30			0		2		2		16:30			5		7		12	
04:45			0	1	0	3	0	4	16:45			9	25	5	22	14	47
05:00			0		1		1		17:00			12		3		15	
05:15			0		0		0		17:15			8		4		12	
05:30			2		1		3		17:30			9		10		19	
05:45			2	4	1	3	3	7	17:45			8	37	3	20	11	57
06:00			0		0		0		18:00			10		7		17	
06:15			1		1		2		18:15			6		2		8	
06:30			2		1		3		18:30			7		6		13	
06:45			0	3	2	4	2	7	18:45			11	34	3	18	14	52
07:00			1		0		1		19:00			6		1		7	
07:15			0		0		0		19:15			5		2		7	
07:30			0		0		0		19:30			3		3		6	
07:45			1	2	2	2	3	4	19:45			4	18	2	8	6	26
08:00			1		1		2		20:00			3		3		6	
08:15			4		3		7		20:15			2		2		4	
08:30			0		3		3		20:30			9		2		11	
08:45			3	8	2	9	5	17	20:45			4	18	1	8	5	26
09:00			2		2		4		21:00			3		4		7	
09:15			1		1		2		21:15			4		4		8	
09:30			1		0		1		21:30			8		2		10	
09:45			3	7	4	7	7	14	21:45			0	15	3	13	3	28
10:00			3		5		8		22:00			2		2		4	
10:15			4		3		7		22:15			2		3		5	
10:30			2		2		4		22:30			10		6		16	
10:45			4	13	7	17	11	30	22:45			4	18	2	13	6	31
11:00			9		4		13		23:00			2		0		2	
11:15			5		5		10		23:15			2		0		2	
11:30			5		10		15		23:30			2		1		3	
11:45			3	22	5	24	8	46	23:45			3	9	2	3	5	12
TOTALS				97		93		190	TOTALS				308		210		518
SPLIT %				51.1%		48.9%		26.8%	SPLIT %				59.5%		40.5%		73.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	405	303	708

AM Peak Hour			10:45	11:30	11:30	PM Peak Hour			15:00	14:45	14:45
AM Pk Volume			23	32	51	PM Pk Volume			42	32	73
Pk Hr Factor			0.639	0.800	0.850	Pk Hr Factor			0.808	0.667	0.793
7 - 9 Volume	0	0	10	11	21	4 - 6 Volume	0	0	62	42	104
7 - 9 Peak Hour			08:00	07:45	08:00	4 - 6 Peak Hour			16:45	16:00	16:45
7 - 9 Pk Volume	0	0	8	9	17	4 - 6 Pk Volume	0	0	38	22	60
Pk Hr Factor	0.000	0.000	0.500	0.750	0.607	Pk Hr Factor	0.000	0.000	0.792	0.786	0.789

Prepared by National Data & Surveying Services

VOLUME

E Jackson Ave E/O Patton St

Day: Monday
Date: 2/8/2021

City: Knoxville
Project #: TN21_190006_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	771	565	1,336

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			0		0		0		12:00			8		18		26	
00:15			3		2		5		12:15			14		9		23	
00:30			2		1		3		12:30			17		9		26	
00:45			1	6	1	4	2	10	12:45			18	57	16	52	34	109
01:00			1		1		2		13:00			28		18		46	
01:15			0		0		0		13:15			15		9		24	
01:30			1		0		1		13:30			13		11		24	
01:45			1	3	1	2	2	5	13:45			11	67	14	52	25	119
02:00			1		0		1		14:00			13		14		27	
02:15			2		0		2		14:15			14		10		24	
02:30			0		0		0		14:30			11		8		19	
02:45			0	3	0		0	3	14:45			5	43	8	40	13	83
03:00			0		0		0		15:00			10		9		19	
03:15			2		2		4		15:15			15		4		19	
03:30			1		0		1		15:30			20		16		36	
03:45			0	3	3	5	3	8	15:45			8	53	14	43	22	96
04:00			1		4		5		16:00			15		16		31	
04:15			1		0		1		16:15			17		6		23	
04:30			1		1		2		16:30			16		11		27	
04:45			0	3	1	6	1	9	16:45			13	61	10	43	23	104
05:00			0		1		1		17:00			6		12		18	
05:15			3		0		3		17:15			19		17		36	
05:30			4		2		6		17:30			8		4		12	
05:45			7	14	2	5	9	19	17:45			11	44	12	45	23	89
06:00			5		1		6		18:00			11		6		17	
06:15			3		2		5		18:15			16		8		24	
06:30			13		3		16		18:30			8		4		12	
06:45			19	40	4	10	23	50	18:45			9	44	8	26	17	70
07:00			9		3		12		19:00			12		7		19	
07:15			9		4		13		19:15			6		4		10	
07:30			9		10		19		19:30			7		4		11	
07:45			20	47	14	31	34	78	19:45			8	33	3	18	11	51
08:00			5		9		14		20:00			9		3		12	
08:15			12		14		26		20:15			6		6		12	
08:30			4		8		12		20:30			6		2		8	
08:45			7	28	6	37	13	65	20:45			2	23	2	13	4	36
09:00			13		16		29		21:00			6		1		7	
09:15			11		4		15		21:15			3		4		7	
09:30			12		5		17		21:30			6		5		11	
09:45			8	44	12	37	20	81	21:45			7	22	1	11	8	33
10:00			13		7		20		22:00			7		1		8	
10:15			10		16		26		22:15			4		4		8	
10:30			18		8		26		22:30			3		0		3	
10:45			9	50	14	45	23	95	22:45			3	17	2	7	5	24
11:00			11		6		17		23:00			4		2		6	
11:15			16		6		22		23:15			3		0		3	
11:30			11		11		22		23:30			2		1		3	
11:45			13	51	6	29	19	80	23:45			6	15	1	4	7	19
TOTALS				292		211		503	TOTALS				479		354		833
SPLIT %				58.1%		41.9%		37.6%	SPLIT %				57.5%		42.5%		62.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	771	565	1,336

AM Peak Hour			10:30	07:30	10:00	PM Peak Hour	12:30	12:45	12:30
AM Pk Volume			54	47	95	PM Pk Volume	78	54	130
Pk Hr Factor			0.750	0.839	0.913	Pk Hr Factor	0.696	0.750	0.707
7 - 9 Volume	0	0	75	68	143	4 - 6 Volume	0	0	105	88	193
7 - 9 Peak Hour			07:00	07:30	07:30	4 - 6 Peak Hour			16:00	16:30	16:00
7 - 9 Pk Volume	0	0	47	47	93	4 - 6 Pk Volume	0	0	61	50	104
Pk Hr Factor	0.000	0.000	0.588	0.839	0.684	Pk Hr Factor	0.000	0.000	0.897	0.735	0.839

Prepared by National Data & Surveying Services

VOLUME

E Jackson Ave E/O Patton St

Day: Tuesday
Date: 2/9/2021

City: Knoxville
Project #: TN21_190006_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	830	589	1,419

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00					1		2		3		12:00					17		19		36	
00:15					1		1		2		12:15					20		17		37	
00:30					1		3		4		12:30					10		17		27	
00:45					3	6	2	8	5	14	12:45					22	69	9	62	31	131
01:00					1		0		1		13:00					12		10		22	
01:15					3		0		3		13:15					19		11		30	
01:30					4		0		4		13:30					23		15		38	
01:45					1	9	1	1	2	10	13:45					9	63	10	46	19	109
02:00					0		0		0		14:00					15		9		24	
02:15					0		0		0		14:15					14		9		23	
02:30					0		0		0		14:30					19		13		32	
02:45					0		0		0		14:45					22	70	9	40	31	110
03:00					0		0		0		15:00					10		15		25	
03:15					2		1		3		15:15					11		11		22	
03:30					1		0		1		15:30					16		18		34	
03:45					2	5	2	3	4	8	15:45					13	50	15	59	28	109
04:00					2		0		2		16:00					18		16		34	
04:15					2		0		2		16:15					13		9		22	
04:30					3		1		4		16:30					19		13		32	
04:45					0	7	1	2	1	9	16:45					9	59	9	47	18	106
05:00					0		2		2		17:00					15		12		27	
05:15					0		1		1		17:15					12		10		22	
05:30					5		0		5		17:30					13		10		23	
05:45					4	9	1	4	5	13	17:45					12	52	6	38	18	90
06:00					7		2		9		18:00					3		6		9	
06:15					7		4		11		18:15					15		6		21	
06:30					11		6		17		18:30					14		8		22	
06:45					22	47	3	15	25	62	18:45					8	40	7	27	15	67
07:00					14		8		22		19:00					10		8		18	
07:15					11		4		15		19:15					10		2		12	
07:30					13		14		27		19:30					7		4		11	
07:45					9	47	11	37	20	84	19:45					8	35	1	15	9	50
08:00					7		9		16		20:00					10		4		14	
08:15					10		8		18		20:15					9		4		13	
08:30					12		13		25		20:30					7		5		12	
08:45					9	38	5	35	14	73	20:45					6	32	3	16	9	48
09:00					8		5		13		21:00					7		3		10	
09:15					5		5		10		21:15					4		1		5	
09:30					17		14		31		21:30					2		2		4	
09:45					20	50	7	31	27	81	21:45					5	18	5	11	10	29
10:00					13		9		22		22:00					3		3		6	
10:15					12		4		16		22:15					2		4		6	
10:30					11		10		21		22:30					2		1		3	
10:45					20	56	16	39	36	95	22:45					4	11	2	10	6	21
11:00					7		12		19		23:00					1		4		5	
11:15					11		11		22		23:15					2		0		2	
11:30					22		7		29		23:30					4		3		7	
11:45					9	49	4	34	13	83	23:45					1	8	2	9	3	17
TOTALS						323		209		532	TOTALS						507		380		887
SPLIT %						60.7%		39.3%		37.5%	SPLIT %						57.2%		42.8%		62.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	830	589	1,419

AM Peak Hour			11:30	11:45	11:30	PM Peak Hour			12:45	12:00	12:00
AM Pk Volume			68	57	115	PM Pk Volume			76	62	131
Pk Hr Factor			0.773	0.750	0.777	Pk Hr Factor			0.826	0.816	0.885
7 - 9 Volume	0	0	85	72	157	4 - 6 Volume	0	0	111	85	196
7 - 9 Peak Hour			07:00	07:30	07:00	4 - 6 Peak Hour			16:00	16:00	16:00
7 - 9 Pk Volume	0	0	47	42	84	4 - 6 Pk Volume	0	0	59	47	106
Pk Hr Factor	0.000	0.000	0.839	0.750	0.778	Pk Hr Factor	0.000	0.000	0.776	0.734	0.779

Prepared by National Data & Surveying Services

VOLUME

E Jackson Ave E/O Patton St

Day: Wednesday
Date: 2/10/2021

City: Knoxville
Project #: TN21_190006_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	955	710	1,665

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			2		1		3		12:00			17		10		27	
00:15			1		0		1		12:15			18		14		32	
00:30			1		1		2		12:30			24		17		41	
00:45			4	8	0	2	4	10	12:45			18	77	17	58	35	135
01:00			0		1		1		13:00			17		15		32	
01:15			1		2		3		13:15			19		19		38	
01:30			1		1		2		13:30			17		13		30	
01:45			0	2	1	5	1	7	13:45			28	81	10	57	38	138
02:00			1		1		2		14:00			14		20		34	
02:15			0		0		0		14:15			25		12		37	
02:30			0		1		1		14:30			11		13		24	
02:45			2	3	1	3	3	6	14:45			8	58	16	61	24	119
03:00			1		3		4		15:00			22		19		41	
03:15			0		1		1		15:15			18		12		30	
03:30			2		2		4		15:30			22		15		37	
03:45			1	4	1	7	2	11	15:45			24	86	13	59	37	145
04:00			1		0		1		16:00			25		23		48	
04:15			0		2		2		16:15			17		15		32	
04:30			1		1		2		16:30			17		20		37	
04:45			0	2	1	4	1	6	16:45			17	76	8	66	25	142
05:00			4		4		8		17:00			15		12		27	
05:15			0		1		1		17:15			20		16		36	
05:30			5		3		8		17:30			14		8		22	
05:45			9	18	1	9	10	27	17:45			12	61	10	46	22	107
06:00			5		3		8		18:00			16		10		26	
06:15			10		3		13		18:15			10		6		16	
06:30			8		2		10		18:30			9		1		10	
06:45			21	44	1	9	22	53	18:45			4	39	5	22	9	61
07:00			10		3		13		19:00			9		8		17	
07:15			13		3		16		19:15			8		7		15	
07:30			10		17		27		19:30			9		3		12	
07:45			12	45	8	31	20	76	19:45			11	37	6	24	17	61
08:00			8		7		15		20:00			11		7		18	
08:15			17		10		27		20:15			11		6		17	
08:30			13		16		29		20:30			9		4		13	
08:45			8	46	6	39	14	85	20:45			12	43	6	23	18	66
09:00			10		5		15		21:00			10		8		18	
09:15			15		11		26		21:15			6		3		9	
09:30			15		12		27		21:30			5		2		7	
09:45			11	51	6	34	17	85	21:45			9	30	1	14	10	44
10:00			4		9		13		22:00			4		6		10	
10:15			15		12		27		22:15			5		4		9	
10:30			17		13		30		22:30			4		4		8	
10:45			11	47	12	46	23	93	22:45			5	18	3	17	8	35
11:00			10		16		26		23:00			4		0		4	
11:15			17		16		33		23:15			3		1		4	
11:30			15		22		37		23:30			10		2		12	
11:45			18	60	16	70	34	130	23:45			2	19	1	4	3	23
TOTALS				330		259		**589**	**TOTALS**				625		451		**1076**
SPLIT %				56.0%		44.0%		**35.4%**	**SPLIT %**				58.1%		41.9%		**64.6%**

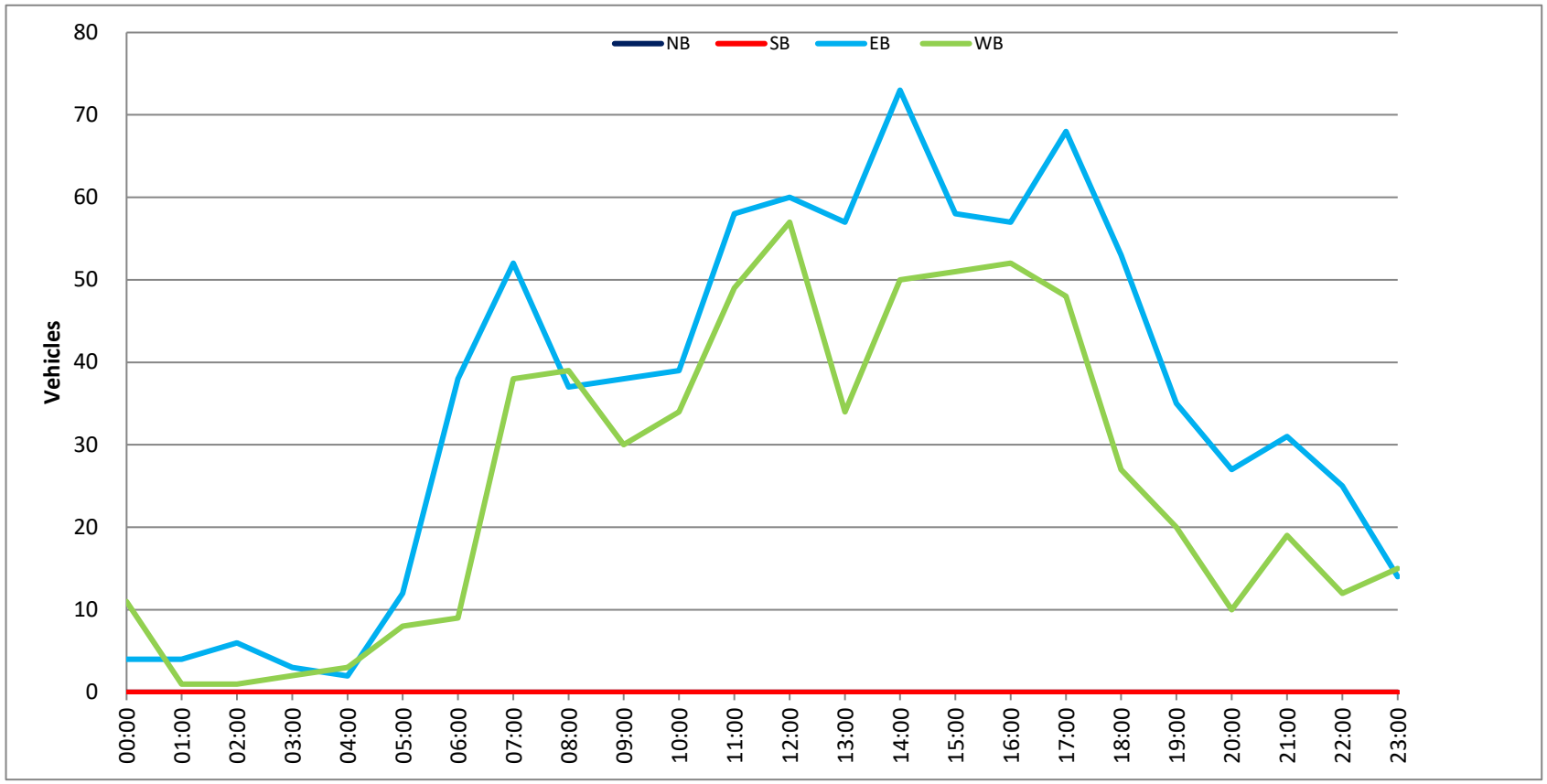
DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	955	710	1,665

AM Peak Hour			11:45	11:00	**11:45**	**PM Peak Hour**			15:15	15:45	**15:30**
AM Pk Volume			77	70	**134**	**PM Pk Volume**			89	71	**154**
Pk Hr Factor			0.802	0.795	**0.817**	**Pk Hr Factor**			0.890	0.772	**0.802**
7 - 9 Volume	0	0	91	70	**161**	**4 - 6 Volume**	0	0	137	112	**249**
7 - 9 Peak Hour			07:45	07:30	**07:45**	**4 - 6 Peak Hour**			16:00	16:00	**16:00**
7 - 9 Pk Volume	0	0	50	42	**91**	**4 - 6 Pk Volume**	0	0	76	66	**142**
Pk Hr Factor	0.000	0.000	0.735	0.618	**0.784**	**Pk Hr Factor**	0.000	0.000	0.760	0.717	**0.740**

Prepared by National Data & Surveying Services

Project #: TN21_190006_001 **City:** Knoxville

Location: E Jackson Ave E/O Patton St **Date:** 2/4/2021



Prepared by National Data & Surveying Services

Project #: TN21_190006_001 **City:** Knoxville

Location: E Jackson Ave E/O Patton St **Date:** 2/5/2021



Prepared by National Data & Surveying Services

Project #: TN21_190006_001 **City:** Knoxville

Location: E Jackson Ave E/O Patton St **Date:** 2/6/2021



Prepared by National Data & Surveying Services

Project #: TN21_190006_001 **City:** Knoxville

Location: E Jackson Ave E/O Patton St **Date:** 2/7/2021



Prepared by National Data & Surveying Services

Project #: TN21_190006_001 **City:** Knoxville

Location: E Jackson Ave E/O Patton St **Date:** 2/8/2021



Prepared by National Data & Surveying Services

Project #: TN21_190006_001 **City:** Knoxville

Location: E Jackson Ave E/O Patton St **Date:** 2/9/2021



Prepared by National Data & Surveying Services

Project #: TN21_190006_001 **City:** Knoxville

Location: E Jackson Ave E/O Patton St **Date:** 2/10/2021



Prepared by National Data & Surveying Services

VOLUME

W Summit Hill Dr W/O S Central St

Day: Thursday
Date: 2/4/2021

City: Knoxville
Project #: TN21_190006_002

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,225	4,342	7,567

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			10		7		17		12:00			60		87		147	
00:15			7		9		16		12:15			47		86		133	
00:30			9		4		13		12:30			59		86		145	
00:45			1	27	3	23	4	50	12:45			46	212	87	346	133	558
01:00			7		3		10		13:00			58		87		145	
01:15			7		3		10		13:15			48		71		119	
01:30			4		2		6		13:30			46		61		107	
01:45			4	22	0	8	4	30	13:45			34	186	73	292	107	478
02:00			1		5		6		14:00			43		61		104	
02:15			1		1		2		14:15			64		75		139	
02:30			0		5		5		14:30			59		70		129	
02:45			2	4	10	21	12	25	14:45			60	226	64	270	124	496
03:00			5		4		9		15:00			60		62		122	
03:15			1		1		2		15:15			61		75		136	
03:30			3		6		9		15:30			50		68		118	
03:45			2	11	4	15	6	26	15:45			72	243	84	289	156	532
04:00			1		1		2		16:00			61		71		132	
04:15			0		2		2		16:15			67		74		141	
04:30			4		5		9		16:30			70		76		146	
04:45			3	8	1	9	4	17	16:45			62	260	72	293	134	553
05:00			7		8		15		17:00			101		78		179	
05:15			4		9		13		17:15			102		73		175	
05:30			3		21		24		17:30			93		83		176	
05:45			6	20	21	59	27	79	17:45			68	364	69	303	137	667
06:00			5		27		32		18:00			89		80		169	
06:15			9		35		44		18:15			53		66		119	
06:30			18		55		73		18:30			61		58		119	
06:45			13	45	53	170	66	215	18:45			58	261	51	255	109	516
07:00			11		37		48		19:00			64		54		118	
07:15			23		68		91		19:15			45		55		100	
07:30			26		83		109		19:30			59		43		102	
07:45			25	85	79	267	104	352	19:45			37	205	47	199	84	404
08:00			22		59		81		20:00			36		41		77	
08:15			31		78		109		20:15			40		36		76	
08:30			33		87		120		20:30			37		38		75	
08:45			38	124	86	310	124	434	20:45			28	141	43	158	71	299
09:00			28		55		83		21:00			35		41		76	
09:15			42		63		105		21:15			48		26		74	
09:30			32		56		88		21:30			29		25		54	
09:45			31	133	57	231	88	364	21:45			27	139	30	122	57	261
10:00			33		57		90		22:00			54		31		85	
10:15			32		42		74		22:15			41		34		75	
10:30			28		60		88		22:30			26		22		48	
10:45			32	125	73	232	105	357	22:45			11	132	27	114	38	246
11:00			31		91		122		23:00			19		17		36	
11:15			47		62		109		23:15			16		18		34	
11:30			56		67		123		23:30			17		8		25	
11:45			58	192	79	299	137	491	23:45			8	60	14	57	22	117
TOTALS				796		1644		2440	TOTALS				2429		2698		5127
SPLIT %				32.6%		67.4%		32.2%	SPLIT %				47.4%		52.6%		67.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,225	4,342	7,567

AM Peak Hour			11:45	11:45	11:45	PM Peak Hour			17:00	12:00	17:00
AM Pk Volume			224	338	562	PM Pk Volume			364	346	667
Pk Hr Factor			0.933	0.971	0.956	Pk Hr Factor			0.892	0.994	0.932
7 - 9 Volume	0	0	209	577	786	4 - 6 Volume	0	0	624	596	1220
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			17:00	16:45	17:00
7 - 9 Pk Volume	0	0	124	310	434	4 - 6 Pk Volume	0	0	364	306	667
Pk Hr Factor	0.000	0.000	0.816	0.891	0.875	Pk Hr Factor	0.000	0.000	0.892	0.922	0.932

Prepared by National Data & Surveying Services

VOLUME

W Summit Hill Dr W/O S Central St

Day: Friday
Date: 2/5/2021

City: Knoxville
Project #: TN21_190006_002

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,856	5,272	9,128

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			8		8		16		12:00			51		95		146	
00:15			4		8		12		12:15			61		76		137	
00:30			9		9		18		12:30			65		89		154	
00:45			6	27	4	29	10	56	12:45			57	234	85	345	142	579
01:00			9		7		16		13:00			56		80		136	
01:15			7		2		9		13:15			74		75		149	
01:30			3		8		11		13:30			53		77		130	
01:45			6	25	8	25	14	50	13:45			66	249	83	315	149	564
02:00			0		3		3		14:00			60		75		135	
02:15			6		3		9		14:15			69		83		152	
02:30			3		6		9		14:30			57		74		131	
02:45			1	10	6	18	7	28	14:45			68	254	77	309	145	563
03:00			3		5		8		15:00			86		81		167	
03:15			5		5		10		15:15			80		92		172	
03:30			2		8		10		15:30			79		106		185	
03:45			1	11	3	21	4	32	15:45			60	305	77	356	137	661
04:00			1		6		7		16:00			74		109		183	
04:15			1		6		7		16:15			64		77		141	
04:30			2		9		11		16:30			86		87		173	
04:45			2	6	6	27	8	33	16:45			76	300	85	358	161	658
05:00			4		8		12		17:00			88		79		167	
05:15			6		10		16		17:15			89		90		179	
05:30			2		11		13		17:30			88		110		198	
05:45			1	13	12	41	13	54	17:45			66	331	103	382	169	713
06:00			4		16		20		18:00			86		104		190	
06:15			9		32		41		18:15			81		99		180	
06:30			14		40		54		18:30			50		86		136	
06:45			10	37	54	142	64	179	18:45			62	279	88	377	150	656
07:00			14		47		61		19:00			56		93		149	
07:15			32		75		107		19:15			68		86		154	
07:30			29		76		105		19:30			58		97		155	
07:45			36	111	73	271	109	382	19:45			64	246	77	353	141	599
08:00			32		78		110		20:00			60		67		127	
08:15			25		74		99		20:15			63		67		130	
08:30			33		80		113		20:30			56		68		124	
08:45			32	122	78	310	110	432	20:45			62	241	62	264	124	505
09:00			37		55		92		21:00			47		49		96	
09:15			29		42		71		21:15			56		48		104	
09:30			27		54		81		21:30			40		50		90	
09:45			41	134	90	241	131	375	21:45			38	181	43	190	81	371
10:00			30		58		88		22:00			58		48		106	
10:15			38		56		94		22:15			56		43		99	
10:30			38		65		103		22:30			47		28		75	
10:45			42	148	93	272	135	420	22:45			53	214	53	172	106	386
11:00			52		72		124		23:00			62		45		107	
11:15			53		95		148		23:15			39		35		74	
11:30			43		77		120		23:30			39		29		68	
11:45			65	213	71	315	136	528	23:45			25	165	30	139	55	304
TOTALS				857		1712		2569	TOTALS				2999		3560		6559
SPLIT %				33.4%		66.6%		28.1%	SPLIT %				45.7%		54.3%		71.9%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,856	5,272	9,128

AM Peak Hour			11:45	11:15	11:45	PM Peak Hour		16:45	17:30	17:30
AM Pk Volume			242	338	573	PM Pk Volume		341	416	737
Pk Hr Factor			0.931	0.889	0.930	Pk Hr Factor		0.958	0.945	0.931
7 - 9 Volume	0	0	233	581	814	4 - 6 Volume	0	631	740	1371
7 - 9 Peak Hour			07:15	08:00	08:00	4 - 6 Peak Hour		16:45	17:00	17:00
7 - 9 Pk Volume	0	0	129	310	432	4 - 6 Pk Volume	0	341	382	713
Pk Hr Factor	0.000	0.000	0.896	0.969	0.956	Pk Hr Factor	0.000	0.958	0.868	0.900

Prepared by National Data & Surveying Services

VOLUME

W Summit Hill Dr W/O S Central St

Day: Saturday
Date: 2/6/2021

City: Knoxville
Project #: TN21_190006_002

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,427	4,439	7,866

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			26		23		49		12:00			37		62		99	
00:15			24		15		39		12:15			51		75		126	
00:30			17		14		31		12:30			73		97		170	
00:45			16	83	12	64	28	147	12:45			49	210	50	284	99	494
01:00			20		17		37		13:00			56		81		137	
01:15			18		12		30		13:15			59		75		134	
01:30			11		10		21		13:30			53		76		129	
01:45			9	58	4	43	13	101	13:45			64	232	72	304	136	536
02:00			10		4		14		14:00			55		88		143	
02:15			7		5		12		14:15			64		77		141	
02:30			4		4		8		14:30			63		80		143	
02:45			5	26	3	16	8	42	14:45			67	249	72	317	139	566
03:00			2		1		3		15:00			56		73		129	
03:15			1		3		4		15:15			56		83		139	
03:30			1		2		3		15:30			50		77		127	
03:45			3	7	1	7	4	14	15:45			56	218	85	318	141	536
04:00			3		3		6		16:00			58		86		144	
04:15			4		4		8		16:15			63		70		133	
04:30			1		1		2		16:30			63		97		160	
04:45			3	11	4	12	7	23	16:45			59	243	91	344	150	587
05:00			1		6		7		17:00			71		95		166	
05:15			3		6		9		17:15			69		94		163	
05:30			2		3		5		17:30			64		99		163	
05:45			6	12	11	26	17	38	17:45			57	261	111	399	168	660
06:00			2		10		12		18:00			54		88		142	
06:15			3		17		20		18:15			69		93		162	
06:30			6		16		22		18:30			48		94		142	
06:45			6	17	26	69	32	86	18:45			65	236	76	351	141	587
07:00			9		7		16		19:00			61		83		144	
07:15			7		11		18		19:15			71		73		144	
07:30			10		20		30		19:30			45		71		116	
07:45			11	37	15	53	26	90	19:45			64	241	66	293	130	534
08:00			16		24		40		20:00			48		66		114	
08:15			17		29		46		20:15			63		69		132	
08:30			17		32		49		20:30			74		59		133	
08:45			25	75	38	123	63	198	20:45			45	230	58	252	103	482
09:00			26		35		61		21:00			45		65		110	
09:15			23		41		64		21:15			63		43		106	
09:30			32		41		73		21:30			41		51		92	
09:45			34	115	55	172	89	287	21:45			34	183	57	216	91	399
10:00			43		49		92		22:00			34		37		71	
10:15			45		51		96		22:15			47		38		85	
10:30			42		55		97		22:30			46		31		77	
10:45			36	166	60	215	96	381	22:45			45	172	44	150	89	322
11:00			43		61		104		23:00			44		46		90	
11:15			36		64		100		23:15			54		55		109	
11:30			46		64		110		23:30			44		24		68	
11:45			53	178	73	262	126	440	23:45			25	167	24	149	49	316
TOTALS				785		1062		1847	TOTALS				2642		3377		6019
SPLIT %				42.5%		57.5%		23.5%	SPLIT %				43.9%		56.1%		76.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,427	4,439	7,866

AM Peak Hour			11:45	11:45	11:45	PM Peak Hour		16:45	17:00	17:00
AM Pk Volume			214	307	521	PM Pk Volume		263	399	660
Pk Hr Factor			0.733	0.791	0.766	Pk Hr Factor		0.926	0.899	0.982
7 - 9 Volume	0	0	112	176	288	4 - 6 Volume	0	504	743	1247
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour		16:45	17:00	17:00
7 - 9 Pk Volume	0	0	75	123	198	4 - 6 Pk Volume	0	263	399	660
Pk Hr Factor	0.000	0.000	0.750	0.809	0.786	Pk Hr Factor	0.000	0.926	0.899	0.982

Prepared by National Data & Surveying Services

VOLUME

W Summit Hill Dr W/O S Central St

Day: Sunday
Date: 2/7/2021

City: Knoxville
Project #: TN21_190006_002

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,316	2,934	5,250

AM Period	NB		SB		EB		WB		TOTAL	
00:00					24		20		44	
00:15					20		14		34	
00:30					30		16		46	
00:45					16	90	13	63	29	153
01:00					20		14		34	
01:15					9		12		21	
01:30					17		8		25	
01:45					7	53	8	42	15	95
02:00					7		5		12	
02:15					4		9		13	
02:30					7		4		11	
02:45					6	24	3	21	9	45
03:00					3		5		8	
03:15					1		6		7	
03:30					5		2		7	
03:45					1	10	1	14	2	24
04:00					1		3		4	
04:15					0		4		4	
04:30					1		2		3	
04:45					0	2	0	9	0	11
05:00					3		1		4	
05:15					3		5		8	
05:30					1		7		8	
05:45					4	11	6	19	10	30
06:00					1		9		10	
06:15					1		9		10	
06:30					5		8		13	
06:45					5	12	14	40	19	52
07:00					6		9		15	
07:15					5		5		10	
07:30					7		16		23	
07:45					10	28	15	45	25	73
08:00					13		13		26	
08:15					7		10		17	
08:30					6		18		24	
08:45					18	44	21	62	39	106
09:00					9		27		36	
09:15					22		20		42	
09:30					13		29		42	
09:45					26	70	28	104	54	174
10:00					28		35		63	
10:15					28		38		66	
10:30					28		38		66	
10:45					40	124	44	155	84	279
11:00					44		37		81	
11:15					24		54		78	
11:30					28		63		91	
11:45					36	132	58	212	94	344
TOTALS						600		786		1386
SPLIT %						43.3%		56.7%		26.4%

PM Period	NB		SB		EB		WB		TOTAL	
12:00					41		60		101	
12:15					52		64		116	
12:30					36		60		96	
12:45					53	182	56	240	109	422
13:00					43		57		100	
13:15					61		57		118	
13:30					45		67		112	
13:45					39	188	76	257	115	445
14:00					39		59		98	
14:15					58		47		105	
14:30					50		57		107	
14:45					49	196	51	214	100	410
15:00					53		52		105	
15:15					35		67		102	
15:30					43		63		106	
15:45					60	191	52	234	112	425
16:00					45		65		110	
16:15					34		64		98	
16:30					49		58		107	
16:45					63	191	76	263	139	454
17:00					49		60		109	
17:15					53		51		104	
17:30					37		61		98	
17:45					46	185	72	244	118	429
18:00					45		48		93	
18:15					45		58		103	
18:30					45		50		95	
18:45					36	171	43	199	79	370
19:00					28		33		61	
19:15					23		39		62	
19:30					19		34		53	
19:45					13	83	33	139	46	222
20:00					13		31		44	
20:15					20		21		41	
20:30					20		20		40	
20:45					28	81	19	91	47	172
21:00					19		27		46	
21:15					24		16		40	
21:30					28		25		53	
21:45					24	95	21	89	45	184
22:00					22		31		53	
22:15					27		33		60	
22:30					24		35		59	
22:45					33	106	31	130	64	236
23:00					12		18		30	
23:15					13		14		27	
23:30					11		10		21	
23:45					11	47	6	48	17	95
TOTALS						1716		2148		3864
SPLIT %						44.4%		55.6%		73.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,316	2,934	5,250

AM Peak Hour			11:45	11:30	11:45
AM Pk Volume			165	245	407
Pk Hr Factor			0.793	0.957	0.877
7 - 9 Volume	0	0	72	107	179
7 - 9 Peak Hour			08:00	08:00	08:00
7 - 9 Pk Volume	0	0	44	62	106
Pk Hr Factor	0.000	0.000	0.611	0.738	0.679

PM Peak Hour			16:30	16:00	16:30
PM Pk Volume			214	263	459
Pk Hr Factor			0.849	0.865	0.826
4 - 6 Volume	0	0	376	507	883
4 - 6 Peak Hour			16:30	16:00	16:30
4 - 6 Pk Volume	0	0	214	263	459
Pk Hr Factor	0.000	0.000	0.849	0.865	0.826

Prepared by National Data & Surveying Services

VOLUME

W Summit Hill Dr W/O S Central St

Day: Monday
Date: 2/8/2021

City: Knoxville
Project #: TN21_190006_002

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,862	4,079	6,941

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			15		11		26		12:00			42		66		108	
00:15			11		5		16		12:15			51		76		127	
00:30			7		5		12		12:30			37		70		107	
00:45			2	35	9	30	11	65	12:45			60	190	77	289	137	479
01:00			3		2		5		13:00			48		86		134	
01:15			2		4		6		13:15			48		85		133	
01:30			4		2		6		13:30			47		79		126	
01:45			4	13	5	13	9	26	13:45			56	199	72	322	128	521
02:00			0		3		3		14:00			38		80		118	
02:15			1		2		3		14:15			48		56		104	
02:30			6		8		14		14:30			52		63		115	
02:45			4	11	2	15	6	26	14:45			54	192	69	268	123	460
03:00			2		3		5		15:00			50		65		115	
03:15			1		7		8		15:15			55		68		123	
03:30			0		5		5		15:30			52		76		128	
03:45			1	4	4	19	5	23	15:45			39	196	67	276	106	472
04:00			3		1		4		16:00			50		83		133	
04:15			3		3		6		16:15			63		66		129	
04:30			1		6		7		16:30			63		61		124	
04:45			2	9	7	17	9	26	16:45			74	250	70	280	144	530
05:00			5		7		12		17:00			98		73		171	
05:15			5		10		15		17:15			92		70		162	
05:30			5		16		21		17:30			85		80		165	
05:45			9	24	18	51	27	75	17:45			59	334	61	284	120	618
06:00			4		27		31		18:00			75		75		150	
06:15			5		47		52		18:15			45		58		103	
06:30			16		40		56		18:30			64		68		132	
06:45			9	34	54	168	63	202	18:45			44	228	58	259	102	487
07:00			17		38		55		19:00			45		37		82	
07:15			23		53		76		19:15			46		60		106	
07:30			30		69		99		19:30			21		46		67	
07:45			32	102	95	255	127	357	19:45			36	148	48	191	84	339
08:00			28		73		101		20:00			34		41		75	
08:15			28		71		99		20:15			34		34		68	
08:30			30		76		106		20:30			46		33		79	
08:45			26	112	80	300	106	412	20:45			32	146	29	137	61	283
09:00			32		52		84		21:00			43		18		61	
09:15			28		57		85		21:15			34		24		58	
09:30			30		54		84		21:30			18		35		53	
09:45			34	124	69	232	103	356	21:45			20	115	19	96	39	211
10:00			31		51		82		22:00			25		14		39	
10:15			32		75		107		22:15			27		11		38	
10:30			32		58		90		22:30			26		13		39	
10:45			22	117	70	254	92	371	22:45			7	85	11	49	18	134
11:00			40		71		111		23:00			10		11		21	
11:15			32		45		77		23:15			11		9		20	
11:30			32		56		88		23:30			13		10		23	
11:45			50	154	63	235	113	389	23:45			6	40	9	39	15	79
TOTALS				739		1589		2328	TOTALS				2123		2490		4613
SPLIT %				31.7%		68.3%		33.5%	SPLIT %				46.0%		54.0%		66.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,862	4,079	6,941

AM Peak Hour			11:45	07:45	11:45	PM Peak Hour			16:45	12:45	16:45
AM Pk Volume			180	315	455	PM Pk Volume			349	327	642
Pk Hr Factor			0.882	0.829	0.896	Pk Hr Factor			0.890	0.951	0.939
7 - 9 Volume	0	0	214	555	769	4 - 6 Volume	0	0	584	564	1148
7 - 9 Peak Hour			07:30	07:45	07:45	4 - 6 Peak Hour			16:45	16:45	16:45
7 - 9 Pk Volume	0	0	118	315	433	4 - 6 Pk Volume	0	0	349	293	642
Pk Hr Factor	0.000	0.000	0.922	0.829	0.852	Pk Hr Factor	0.000	0.000	0.890	0.916	0.939

Prepared by National Data & Surveying Services

VOLUME

W Summit Hill Dr W/O S Central St

Day: Tuesday
Date: 2/9/2021

City: Knoxville
Project #: TN21_190006_002

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,144	4,579	7,723

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			12		5		17		12:00			53		76		129	
00:15			5		7		12		12:15			38		61		99	
00:30			2		9		11		12:30			43		79		122	
00:45			8	27	7	28	15	55	12:45			62	196	73	289	135	485
01:00			1		5		6		13:00			41		77		118	
01:15			5		5		10		13:15			45		87		132	
01:30			5		3		8		13:30			46		82		128	
01:45			0	11	0	13	0	24	13:45			64	196	71	317	135	513
02:00			0		3		3		14:00			48		73		121	
02:15			1		2		3		14:15			45		105		150	
02:30			0		3		3		14:30			51		60		111	
02:45			2	3	2	10	4	13	14:45			63	207	76	314	139	521
03:00			2		3		5		15:00			66		63		129	
03:15			2		6		8		15:15			47		77		124	
03:30			1		6		7		15:30			67		86		153	
03:45			4	9	1	16	5	25	15:45			69	249	84	310	153	559
04:00			3		1		4		16:00			48		85		133	
04:15			5		4		9		16:15			52		92		144	
04:30			4		8		12		16:30			95		96		191	
04:45			2	14	6	19	8	33	16:45			86	281	106	379	192	660
05:00			4		12		16		17:00			108		82		190	
05:15			4		16		20		17:15			92		66		158	
05:30			6		15		21		17:30			94		83		177	
05:45			9	23	18	61	27	84	17:45			70	364	80	311	150	675
06:00			7		29		36		18:00			86		76		162	
06:15			5		39		44		18:15			59		70		129	
06:30			15		49		64		18:30			54		69		123	
06:45			16	43	46	163	62	206	18:45			50	249	61	276	111	525
07:00			25		48		73		19:00			35		70		105	
07:15			24		64		88		19:15			58		57		115	
07:30			28		68		96		19:30			40		56		96	
07:45			24	101	92	272	116	373	19:45			29	162	38	221	67	383
08:00			30		86		116		20:00			34		46		80	
08:15			27		79		106		20:15			28		42		70	
08:30			41		82		123		20:30			29		25		54	
08:45			36	134	72	319	108	453	20:45			33	124	19	132	52	256
09:00			23		60		83		21:00			42		28		70	
09:15			35		81		116		21:15			50		37		87	
09:30			27		67		94		21:30			29		25		54	
09:45			29	114	86	294	115	408	21:45			35	156	28	118	63	274
10:00			40		69		109		22:00			39		23		62	
10:15			34		68		102		22:15			19		28		47	
10:30			33		76		109		22:30			27		27		54	
10:45			49	156	64	277	113	433	22:45			18	103	24	102	42	205
11:00			23		72		95		23:00			16		14		30	
11:15			37		69		106		23:15			15		12		27	
11:30			56		79		135		23:30			17		12		29	
11:45			49	165	67	287	116	452	23:45			9	57	13	51	22	108
TOTALS				800		1759		2559	TOTALS				2344		2820		5164
SPLIT %				31.3%		68.7%		33.1%	SPLIT %				45.4%		54.6%		66.9%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,144	4,579	7,723

AM Peak Hour			11:30	07:45	11:15	PM Peak Hour			16:30	16:00	16:30
AM Pk Volume			196	339	486	PM Pk Volume			381	379	731
Pk Hr Factor			0.875	0.921	0.900	Pk Hr Factor			0.882	0.894	0.952
7 - 9 Volume	0	0	235	591	826	4 - 6 Volume	0	0	645	690	1335
7 - 9 Peak Hour			08:00	07:45	07:45	4 - 6 Peak Hour			16:30	16:00	16:30
7 - 9 Pk Volume	0	0	134	339	461	4 - 6 Pk Volume	0	0	381	379	731
Pk Hr Factor	0.000	0.000	0.817	0.921	0.937	Pk Hr Factor	0.000	0.000	0.882	0.894	0.952

Prepared by National Data & Surveying Services

VOLUME

W Summit Hill Dr W/O S Central St

Day: Wednesday
Date: 2/10/2021

City: Knoxville
Project #: TN21_190006_002

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,482	4,857	8,339

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			6		6		12		12:00			49		73		122	
00:15			7		10		17		12:15			45		84		129	
00:30			7		4		11		12:30			50		86		136	
00:45			5	25	3	23	8	48	12:45			69	213	86	329	155	542
01:00			6		6		12		13:00			60		87		147	
01:15			0		6		6		13:15			58		85		143	
01:30			7		7		14		13:30			45		82		127	
01:45			1	14	3	22	4	36	13:45			69	232	81	335	150	567
02:00			1		3		4		14:00			55		91		146	
02:15			5		6		11		14:15			46		88		134	
02:30			0		1		1		14:30			50		76		126	
02:45			3	9	4	14	7	23	14:45			60	211	86	341	146	552
03:00			4		4		8		15:00			61		68		129	
03:15			4		3		7		15:15			75		70		145	
03:30			4		10		14		15:30			63		109		172	
03:45			2	14	5	22	7	36	15:45			61	260	98	345	159	605
04:00			3		4		7		16:00			71		77		148	
04:15			3		1		4		16:15			62		98		160	
04:30			0		12		12		16:30			85		86		171	
04:45			3	9	2	19	5	28	16:45			103	321	93	354	196	675
05:00			4		9		13		17:00			108		104		212	
05:15			3		11		14		17:15			125		94		219	
05:30			8		21		29		17:30			89		86		175	
05:45			6	21	18	59	24	80	17:45			90	412	83	367	173	779
06:00			10		24		34		18:00			85		78		163	
06:15			6		49		55		18:15			102		78		180	
06:30			16		44		60		18:30			60		84		144	
06:45			11	43	52	169	63	212	18:45			70	317	65	305	135	622
07:00			18		43		61		19:00			61		77		138	
07:15			33		57		90		19:15			59		73		132	
07:30			19		84		103		19:30			70		69		139	
07:45			30	100	92	276	122	376	19:45			62	252	50	269	112	521
08:00			36		69		105		20:00			45		47		92	
08:15			24		74		98		20:15			37		51		88	
08:30			27		70		97		20:30			42		44		86	
08:45			28	115	83	296	111	411	20:45			34	158	39	181	73	339
09:00			42		57		99		21:00			39		32		71	
09:15			34		72		106		21:15			28		32		60	
09:30			29		75		104		21:30			28		23		51	
09:45			39	144	82	286	121	430	21:45			33	128	35	122	68	250
10:00			38		62		100		22:00			33		31		64	
10:15			33		70		103		22:15			33		37		70	
10:30			25		83		108		22:30			29		27		56	
10:45			35	131	58	273	93	404	22:45			18	113	21	116	39	229
11:00			42		60		102		23:00			17		17		34	
11:15			48		72		120		23:15			21		17		38	
11:30			39		71		110		23:30			16		15		31	
11:45			45	174	67	270	112	444	23:45			12	66	15	64	27	130
TOTALS				799		1729		2528	TOTALS				2683		3128		5811
SPLIT %				31.6%		68.4%		30.3%	SPLIT %				46.2%		53.8%		69.7%

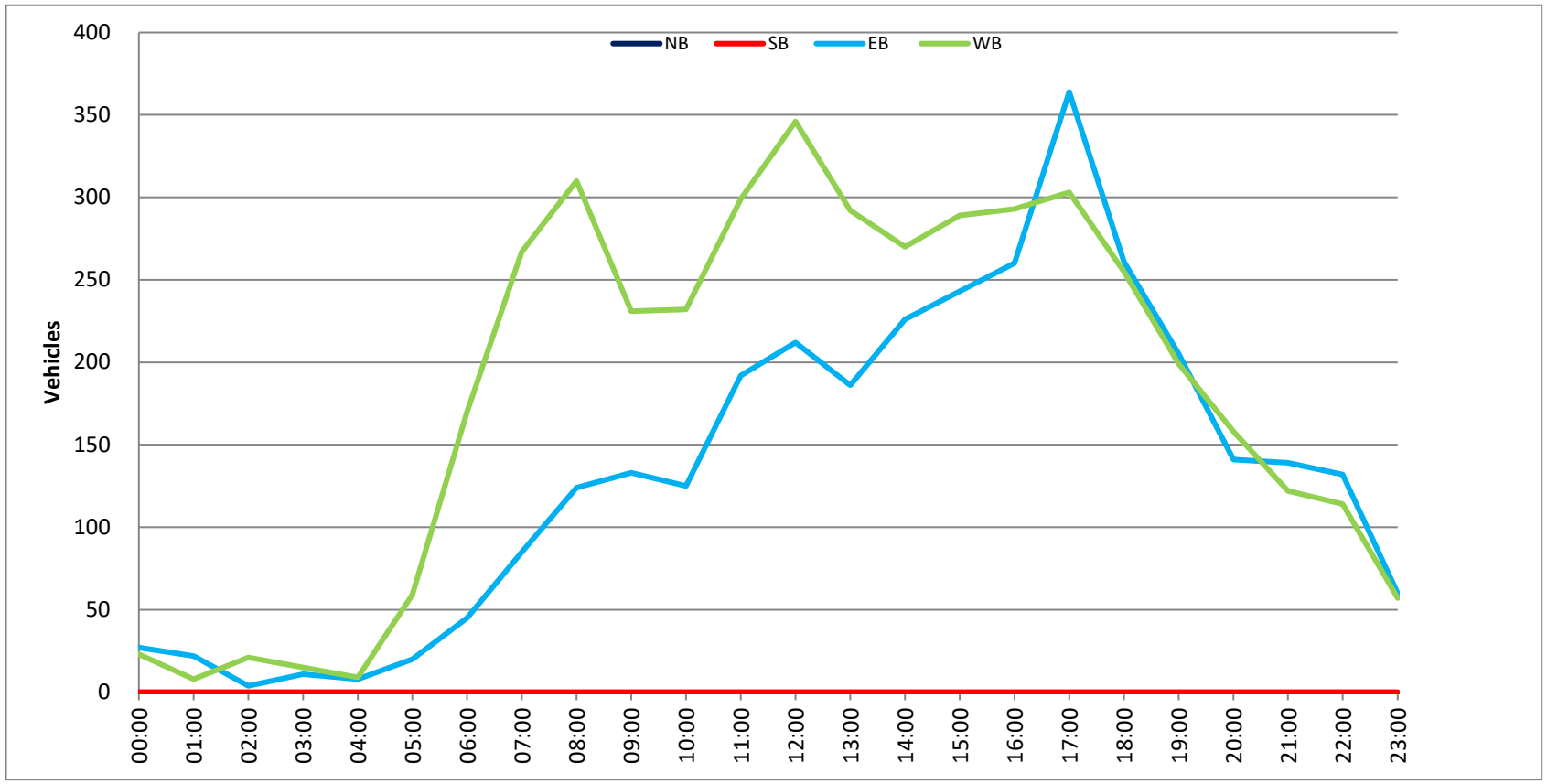
DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,482	4,857	8,339

AM Peak Hour			11:45	07:30	11:45	PM Peak Hour			16:45	15:30	16:45
AM Pk Volume			189	319	499	PM Pk Volume			425	382	802
Pk Hr Factor			0.945	0.867	0.917	Pk Hr Factor			0.850	0.876	0.916
7 - 9 Volume	0	0	215	572	787	4 - 6 Volume	0	0	733	721	1454
7 - 9 Peak Hour			07:15	07:30	07:30	4 - 6 Peak Hour			16:45	16:15	16:45
7 - 9 Pk Volume	0	0	118	319	428	4 - 6 Pk Volume	0	0	425	381	802
Pk Hr Factor	0.000	0.000	0.819	0.867	0.877	Pk Hr Factor	0.000	0.000	0.850	0.916	0.916

Prepared by National Data & Surveying Services

Project #: TN21_190006_002 **City:** Knoxville

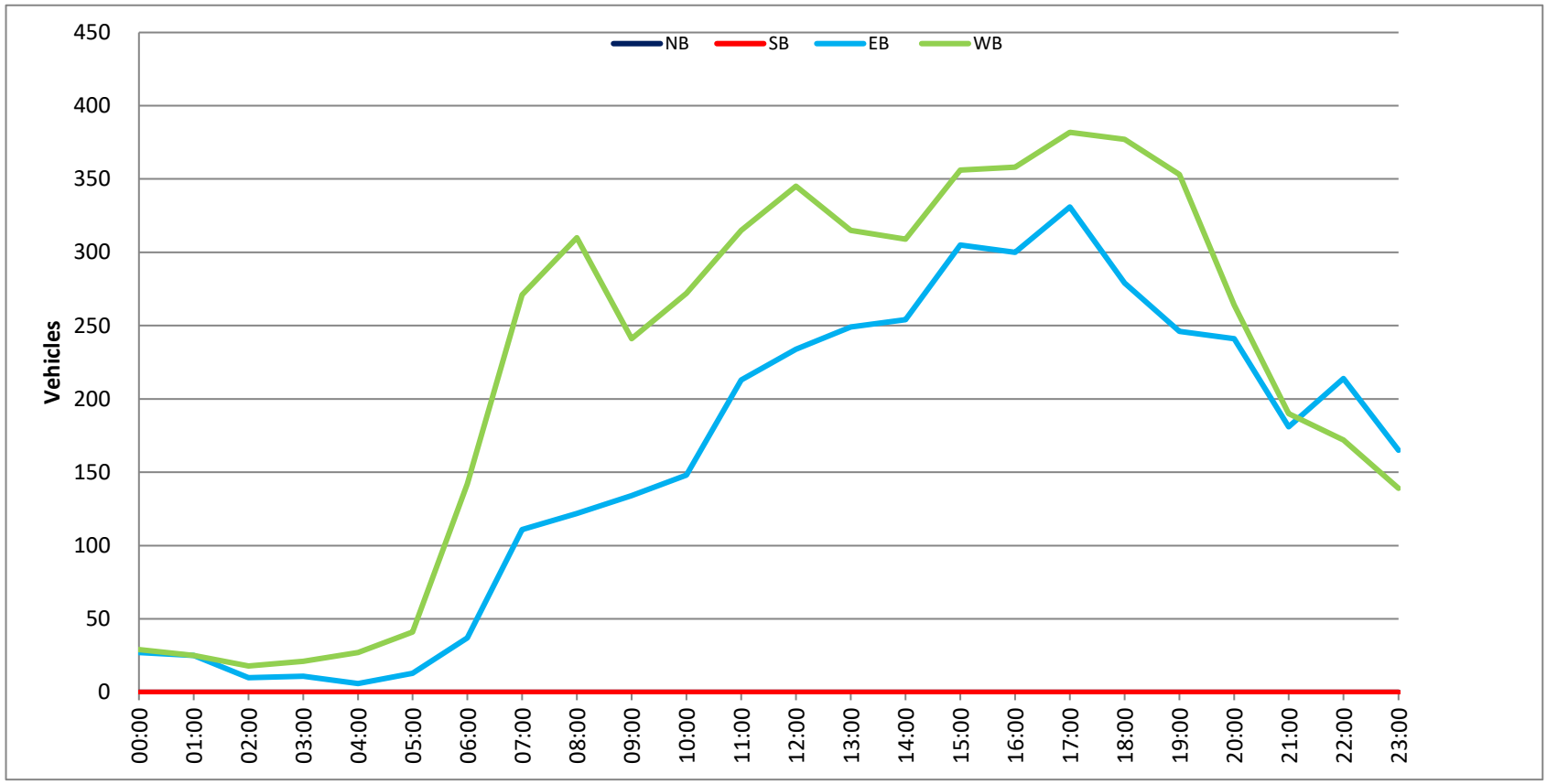
Location: W Summit Hill Dr W/O S Central St **Date:** 2/4/2021



Prepared by National Data & Surveying Services

Project #: TN21_190006_002 **City:** Knoxville

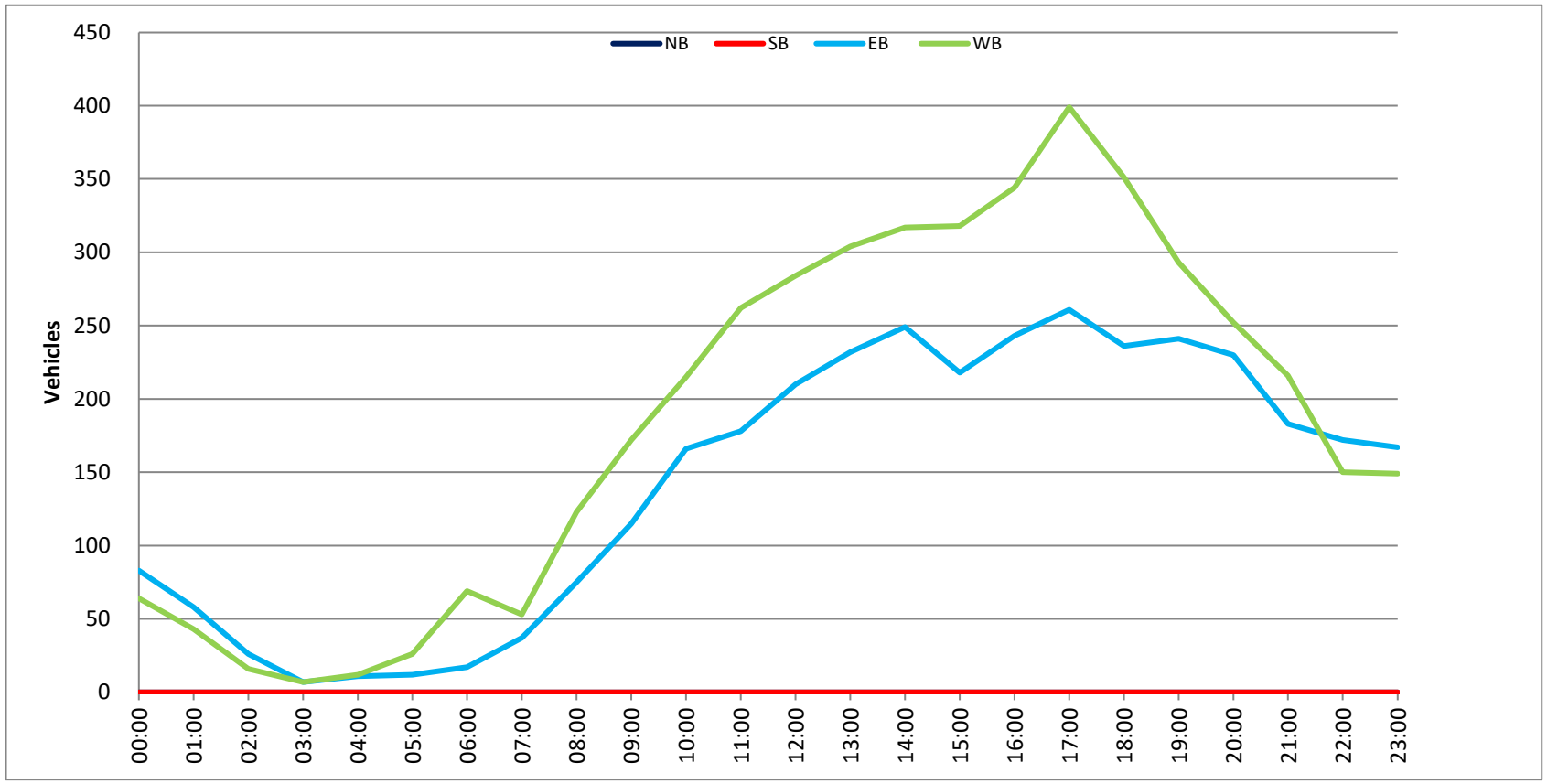
Location: W Summit Hill Dr W/O S Central St **Date:** 2/5/2021



Prepared by National Data & Surveying Services

Project #: TN21_190006_002 **City:** Knoxville

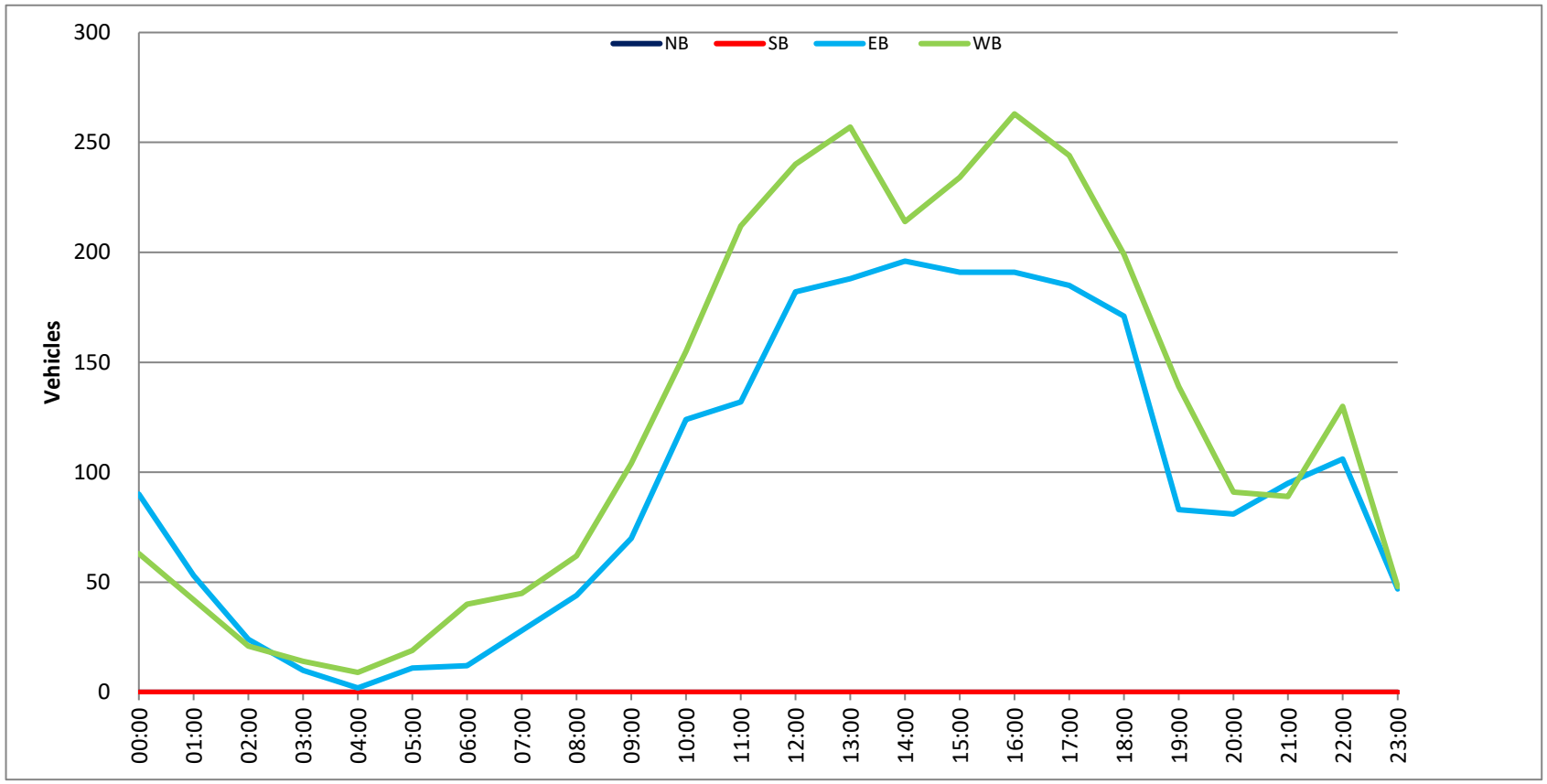
Location: W Summit Hill Dr W/O S Central St **Date:** 2/6/2021



Prepared by National Data & Surveying Services

Project #: TN21_190006_002 **City:** Knoxville

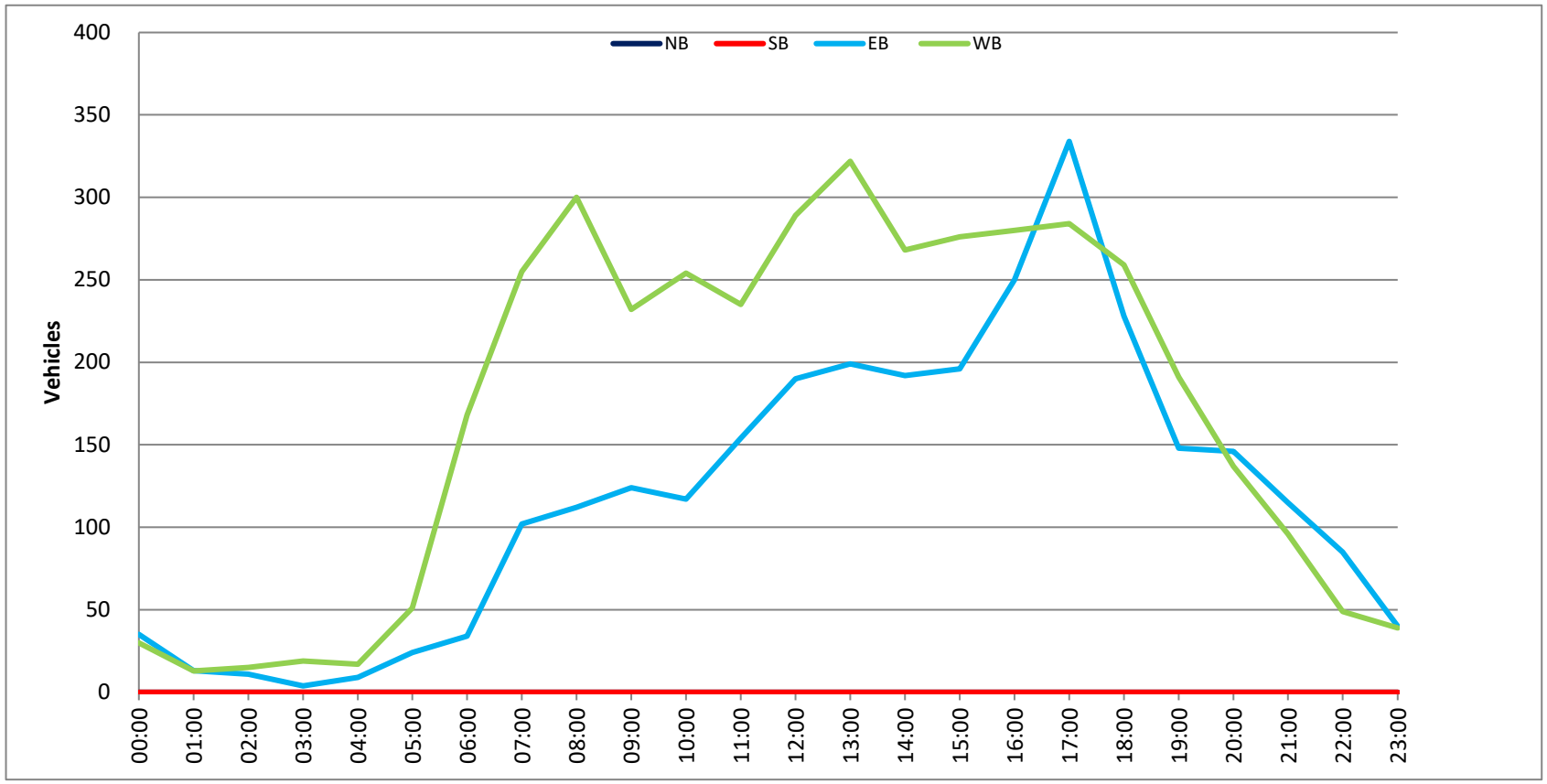
Location: W Summit Hill Dr W/O S Central St **Date:** 2/7/2021



Prepared by National Data & Surveying Services

Project #: TN21_190006_002 **City:** Knoxville

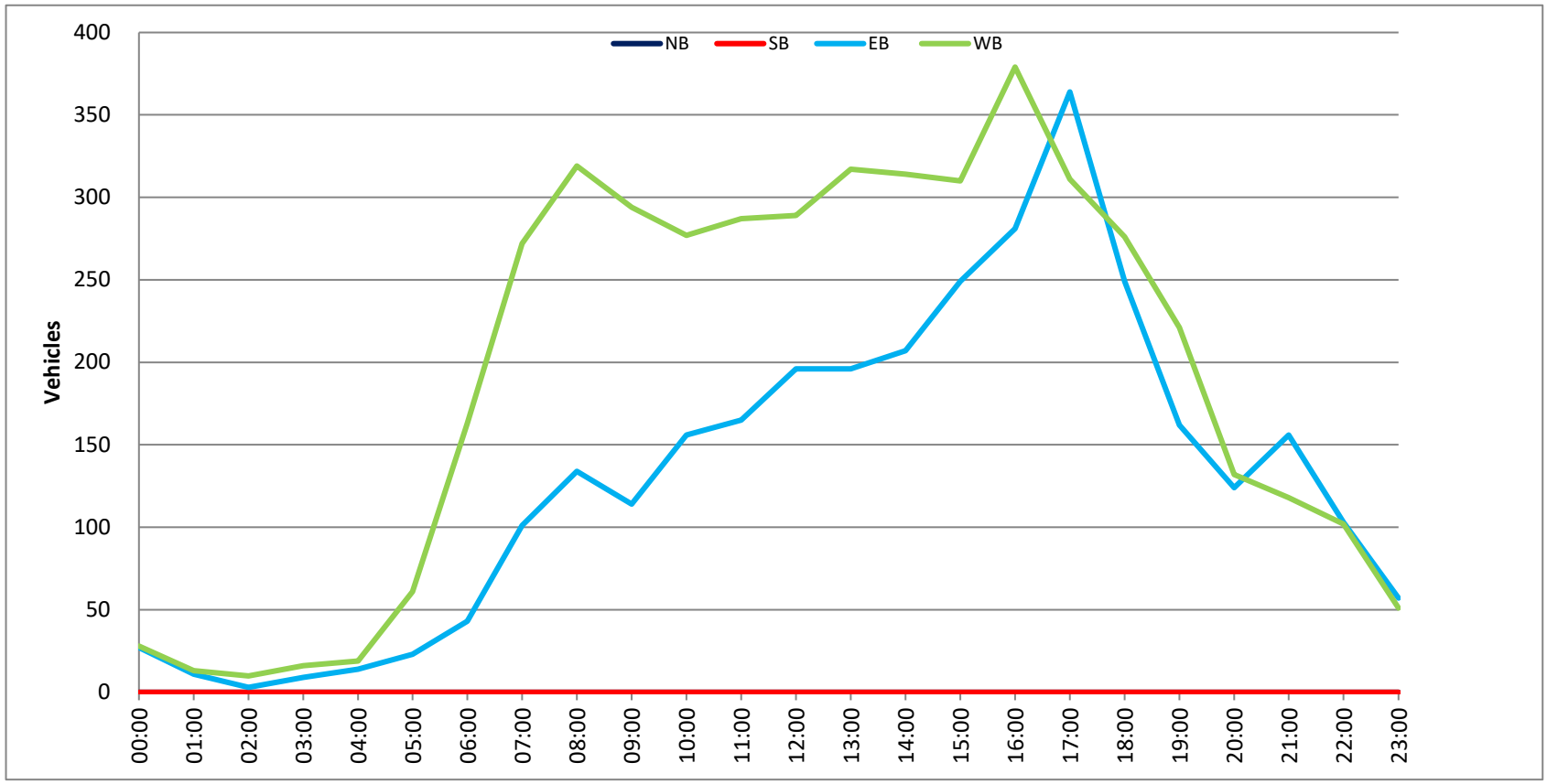
Location: W Summit Hill Dr W/O S Central St **Date:** 2/8/2021



Prepared by National Data & Surveying Services

Project #: TN21_190006_002 **City:** Knoxville

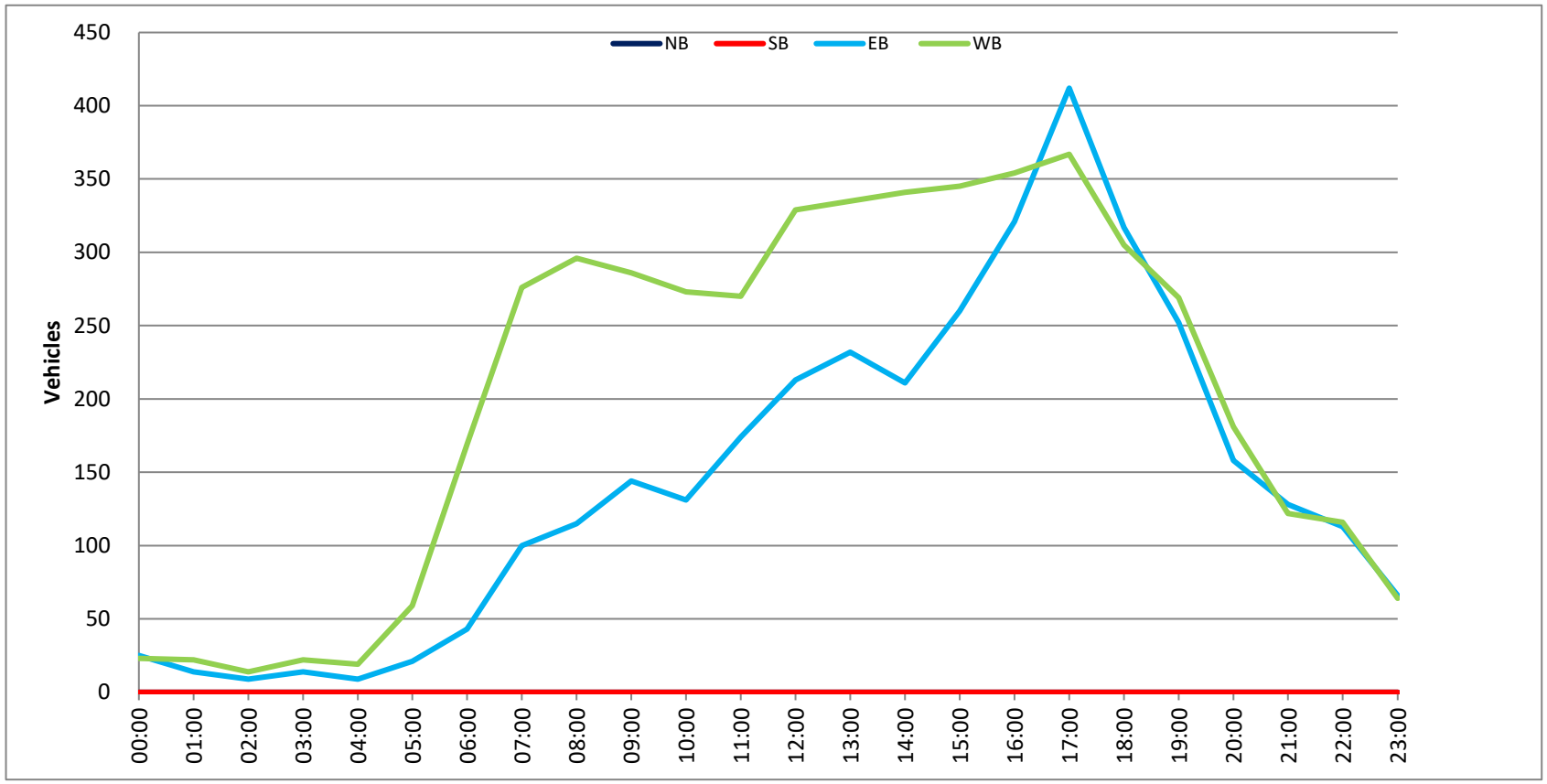
Location: W Summit Hill Dr W/O S Central St **Date:** 2/9/2021



Prepared by National Data & Surveying Services

Project #: TN21_190006_002 **City:** Knoxville

Location: W Summit Hill Dr W/O S Central St **Date:** 2/10/2021



Prepared by National Data & Surveying Services

VOLUME

Hall of Fame Dr S/O US 70/SR 1/E Magnolia Ave

Day: Thursday
Date: 2/4/2021

City: Knoxville
Project #: TN21_190006_003

DAILY TOTALS	NB	SB	EB	WB	Total
	3,728	3,934	0	0	7,662

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	18		8				26		12:00	60		50				110	
00:15	4		13				17		12:15	67		67				134	
00:30	11		2				13		12:30	63		58				121	
00:45	7	40	8	31			15	71	12:45	49	239	64	239			113	478
01:00	10		6				16		13:00	72		75				147	
01:15	2		5				7		13:15	61		68				129	
01:30	3		3				6		13:30	59		73				132	
01:45	4	19	2	16			6	35	13:45	51	243	59	275			110	518
02:00	5		4				9		14:00	69		74				143	
02:15	4		4				8		14:15	67		74				141	
02:30	2		2				4		14:30	69		60				129	
02:45	3	14	1	11			4	25	14:45	74	279	58	266			132	545
03:00	2		4				6		15:00	69		71				140	
03:15	9		4				13		15:15	77		70				147	
03:30	2		5				7		15:30	88		78				166	
03:45	5	18	4	17			9	35	15:45	75	309	84	303			159	612
04:00	5		1				6		16:00	69		75				144	
04:15	0		1				1		16:15	67		82				149	
04:30	6		3				9		16:30	90		80				170	
04:45	6	17	1	6			7	23	16:45	92	318	70	307			162	625
05:00	15		4				19		17:00	90		83				173	
05:15	6		10				16		17:15	97		67				164	
05:30	7		12				19		17:30	83		79				162	
05:45	8	36	16	42			24	78	17:45	71	341	68	297			139	638
06:00	14		26				40		18:00	71		79				150	
06:15	14		32				46		18:15	65		60				125	
06:30	23		32				55		18:30	60		57				117	
06:45	31	82	42	132			73	214	18:45	51	247	62	258			113	505
07:00	19		46				65		19:00	51		67				118	
07:15	35		51				86		19:15	54		55				109	
07:30	40		72				112		19:30	47		53				100	
07:45	67	161	77	246			144	407	19:45	36	188	38	213			74	401
08:00	51		78				129		20:00	40		35				75	
08:15	29		72				101		20:15	32		30				62	
08:30	43		65				108		20:30	32		31				63	
08:45	41	164	63	278			104	442	20:45	28	132	27	123			55	255
09:00	38		48				86		21:00	31		27				58	
09:15	34		52				86		21:15	39		25				64	
09:30	30		54				84		21:30	26		29				55	
09:45	53	155	47	201			100	356	21:45	31	127	21	102			52	229
10:00	45		51				96		22:00	31		24				55	
10:15	37		44				81		22:15	61		19				80	
10:30	35		63				98		22:30	36		19				55	
10:45	50	167	59	217			109	384	22:45	26	154	22	84			48	238
11:00	36		55				91		23:00	23		18				41	
11:15	48		59				107		23:15	24		13				37	
11:30	63		58				121		23:30	12		13				25	
11:45	60	207	47	219			107	426	23:45	12	71	7	51			19	122
TOTALS		1080		1416				2496	TOTALS		2648		2518				5166
SPLIT %		43.3%		56.7%				32.6%	SPLIT %		51.3%		48.7%				67.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	3,728	3,934	0	0	7,662

AM Peak Hour	11:30	07:30			07:30	PM Peak Hour	16:30	15:45			16:30
AM Pk Volume	250	299			486	PM Pk Volume	369	321			669
Pk Hr Factor	0.933	0.958			0.844	Pk Hr Factor	0.951	0.955			0.967
7 - 9 Volume	325	524	0	0	849	4 - 6 Volume	659	604	0	0	1263
7 - 9 Peak Hour	07:15	07:30			07:30	4 - 6 Peak Hour	16:30	16:15			16:30
7 - 9 Pk Volume	193	299	0	0	486	4 - 6 Pk Volume	369	315	0	0	669
Pk Hr Factor	0.720	0.958	0.000	0.000	0.844	Pk Hr Factor	0.951	0.949	0.000	0.000	0.967

Prepared by National Data & Surveying Services

VOLUME

Hall of Fame Dr S/O US 70/SR 1/E Magnolia Ave

Day: Friday
Date: 2/5/2021

City: Knoxville
Project #: TN21_190006_003

DAILY TOTALS	NB	SB	EB	WB	Total
	4,039	4,477	0	0	8,516

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	9		15				24		12:00	63		79				142	
00:15	6		9				15		12:15	57		65				122	
00:30	8		9				17		12:30	62		69				131	
00:45	6	29	10	43			16	72	12:45	65	247	71	284			136	531
01:00	8		6				14		13:00	74		64				138	
01:15	7		5				12		13:15	73		72				145	
01:30	5		7				12		13:30	62		65				127	
01:45	7	27	9	27			16	54	13:45	63	272	66	267			129	539
02:00	2		11				13		14:00	60		73				133	
02:15	1		2				3		14:15	69		92				161	
02:30	5		7				12		14:30	75		80				155	
02:45	3	11	3	23			6	34	14:45	55	259	68	313			123	572
03:00	6		3				9		15:00	84		82				166	
03:15	4		8				12		15:15	82		89				171	
03:30	4		2				6		15:30	88		91				179	
03:45	3	17	1	14			4	31	15:45	83	337	74	336			157	673
04:00	2		5				7		16:00	93		108				201	
04:15	3		2				5		16:15	97		78				175	
04:30	9		4				13		16:30	111		98				209	
04:45	5	19	3	14			8	33	16:45	95	396	81	365			176	761
05:00	6		7				13		17:00	89		90				179	
05:15	8		7				15		17:15	90		81				171	
05:30	5		15				20		17:30	83		93				176	
05:45	11	30	15	44			26	74	17:45	78	340	82	346			160	686
06:00	9		22				31		18:00	84		91				175	
06:15	25		26				51		18:15	75		67				142	
06:30	21		40				61		18:30	71		77				148	
06:45	34	89	39	127			73	216	18:45	55	285	64	299			119	584
07:00	22		52				74		19:00	53		75				128	
07:15	38		57				95		19:15	69		47				116	
07:30	49		77				126		19:30	44		67				111	
07:45	67	176	82	268			149	444	19:45	41	207	45	234			86	441
08:00	48		79				127		20:00	41		47				88	
08:15	46		67				113		20:15	46		36				82	
08:30	41		62				103		20:30	42		32				74	
08:45	40	175	62	270			102	445	20:45	37	166	32	147			69	313
09:00	39		47				86		21:00	31		43				74	
09:15	46		55				101		21:15	32		35				67	
09:30	46		53				99		21:30	32		27				59	
09:45	52	183	60	215			112	398	21:45	27	122	23	128			50	250
10:00	36		53				89		22:00	37		29				66	
10:15	42		57				99		22:15	34		37				71	
10:30	53		66				119		22:30	48		30				78	
10:45	58	189	56	232			114	421	22:45	25	144	25	121			50	265
11:00	51		54				105		23:00	35		27				62	
11:15	48		70				118		23:15	28		15				43	
11:30	54		82				136		23:30	20		17				37	
11:45	67	220	74	280			141	500	23:45	16	99	21	80			37	179
TOTALS		1165		1557				2722	TOTALS		2874		2920				5794
SPLIT %		42.8%		57.2%				32.0%	SPLIT %		49.6%		50.4%				68.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	4,039	4,477	0	0	8,516

AM Peak Hour	11:45	07:30			11:30	PM Peak Hour	16:00	16:00			16:00
AM Pk Volume	249	305			541	PM Pk Volume	396	365			761
Pk Hr Factor	0.929	0.930			0.952	Pk Hr Factor	0.892	0.845			0.910
7 - 9 Volume	351	538	0	0	889	4 - 6 Volume	736	711	0	0	1447
7 - 9 Peak Hour	07:30	07:30			07:30	4 - 6 Peak Hour	16:00	16:00			16:00
7 - 9 Pk Volume	210	305	0	0	515	4 - 6 Pk Volume	396	365	0	0	761
Pk Hr Factor	0.784	0.930	0.000	0.000	0.864	Pk Hr Factor	0.892	0.845	0.000	0.000	0.910

Prepared by National Data & Surveying Services

VOLUME

Hall of Fame Dr S/O US 70/SR 1/E Magnolia Ave

Day: Saturday
Date: 2/6/2021

City: Knoxville
Project #: TN21_190006_003

DAILY TOTALS	NB	SB	EB	WB	Total
	3,134	3,432	0	0	6,566

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	19		17				36		12:00	59		93				152	
00:15	21		12				33		12:15	53		75				128	
00:30	13		15				28		12:30	58		63				121	
00:45	13	66	12	56			25	122	12:45	32	202	52	283			84	485
01:00	10		11				21		13:00	56		70				126	
01:15	9		6				15		13:15	63		55				118	
01:30	14		13				27		13:30	54		69				123	
01:45	6	39	7	37			13	76	13:45	56	229	74	268			130	497
02:00	7		1				8		14:00	62		55				117	
02:15	8		10				18		14:15	60		59				119	
02:30	8		9				17		14:30	56		45				101	
02:45	8	31	11	31			19	62	14:45	41	219	64	223			105	442
03:00	7		3				10		15:00	51		61				112	
03:15	1		5				6		15:15	67		73				140	
03:30	5		4				9		15:30	76		66				142	
03:45	6	19	4	16			10	35	15:45	66	260	62	262			128	522
04:00	4		2				6		16:00	57		74				131	
04:15	1		8				9		16:15	73		58				131	
04:30	2		2				4		16:30	48		68				116	
04:45	1	8	7	19			8	27	16:45	46	224	56	256			102	480
05:00	10		2				12		17:00	50		68				118	
05:15	3		7				10		17:15	60		64				124	
05:30	7		4				11		17:30	52		59				111	
05:45	11	31	3	16			14	47	17:45	52	214	66	257			118	471
06:00	10		6				16		18:00	63		80				143	
06:15	4		6				10		18:15	59		69				128	
06:30	5		14				19		18:30	52		54				106	
06:45	5	24	14	40			19	64	18:45	50	224	44	247			94	471
07:00	14		14				28		19:00	47		45				92	
07:15	20		13				33		19:15	30		40				70	
07:30	17		18				35		19:30	33		50				83	
07:45	20	71	15	60			35	131	19:45	29	139	35	170			64	309
08:00	24		26				50		20:00	40		41				81	
08:15	27		25				52		20:15	44		46				90	
08:30	27		26				53		20:30	38		40				78	
08:45	25	103	32	109			57	212	20:45	24	146	27	154			51	300
09:00	27		36				63		21:00	29		35				64	
09:15	31		35				66		21:15	31		22				53	
09:30	30		31				61		21:30	24		23				47	
09:45	40	128	47	149			87	277	21:45	32	116	30	110			62	226
10:00	49		53				102		22:00	30		28				58	
10:15	40		53				93		22:15	38		17				55	
10:30	35		49				84		22:30	34		26				60	
10:45	41	165	56	211			97	376	22:45	32	134	25	96			57	230
11:00	41		64				105		23:00	29		31				60	
11:15	54		60				114		23:15	36		15				51	
11:30	68		77				145		23:30	24		22				46	
11:45	73	236	69	270			142	506	23:45	17	106	24	92			41	198
TOTALS		921		1014				1935	TOTALS		2213		2418				4631
SPLIT %		47.6%		52.4%				29.5%	SPLIT %		47.8%		52.2%				70.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	3,134	3,432	0	0	6,566

AM Peak Hour	11:15	11:30			11:30	PM Peak Hour	15:30	12:00			15:15
AM Pk Volume	254	314			567	PM Pk Volume	272	283			541
Pk Hr Factor	0.870	0.844			0.933	Pk Hr Factor	0.895	0.761			0.952
7 - 9 Volume	174	169	0	0	343	4 - 6 Volume	438	513	0	0	951
7 - 9 Peak Hour	08:00	08:00			08:00	4 - 6 Peak Hour	16:00	17:00			16:00
7 - 9 Pk Volume	103	109	0	0	212	4 - 6 Pk Volume	224	257	0	0	480
Pk Hr Factor	0.954	0.852	0.000	0.000	0.930	Pk Hr Factor	0.767	0.945	0.000	0.000	0.916

Prepared by National Data & Surveying Services

VOLUME

Hall of Fame Dr S/O US 70/SR 1/E Magnolia Ave

Day: Sunday
Date: 2/7/2021

City: Knoxville
Project #: TN21_190006_003

DAILY TOTALS	NB	SB	EB	WB	Total
	2,222	2,302	0	0	4,524

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	22		20				42		12:00	29		45				74	
00:15	14		13				27		12:15	53		45				98	
00:30	15		13				28		12:30	34		54				88	
00:45	13	64	9	55			22	119	12:45	52	168	50	194			102	362
01:00	14		8				22		13:00	29		50				79	
01:15	9		8				17		13:15	42		47				89	
01:30	7		13				20		13:30	39		49				88	
01:45	6	36	3	32			9	68	13:45	47	157	38	184			85	341
02:00	13		5				18		14:00	39		53				92	
02:15	9		8				17		14:15	47		40				87	
02:30	7		7				14		14:30	40		41				81	
02:45	11	40	9	29			20	69	14:45	48	174	46	180			94	354
03:00	3		5				8		15:00	45		54				99	
03:15	7		5				12		15:15	46		37				83	
03:30	2		5				7		15:30	40		38				78	
03:45	4	16	3	18			7	34	15:45	41	172	50	179			91	351
04:00	4		3				7		16:00	38		46				84	
04:15	2		3				5		16:15	36		48				84	
04:30	3		5				8		16:30	44		42				86	
04:45	0	9	3	14			3	23	16:45	35	153	45	181			80	334
05:00	7		3				10		17:00	39		54				93	
05:15	3		1				4		17:15	52		44				96	
05:30	5		2				7		17:30	49		41				90	
05:45	10	25	3	9			13	34	17:45	45	185	47	186			92	371
06:00	1		4				5		18:00	33		55				88	
06:15	2		3				5		18:15	43		52				95	
06:30	5		6				11		18:30	42		33				75	
06:45	4	12	9	22			13	34	18:45	30	148	36	176			66	324
07:00	5		11				16		19:00	27		30				57	
07:15	4		3				7		19:15	30		27				57	
07:30	5		8				13		19:30	25		23				48	
07:45	13	27	8	30			21	57	19:45	16	98	19	99			35	197
08:00	9		26				35		20:00	15		25				40	
08:15	13		15				28		20:15	32		14				46	
08:30	11		10				21		20:30	24		14				38	
08:45	11	44	19	70			30	114	20:45	22	93	14	67			36	160
09:00	18		23				41		21:00	21		20				41	
09:15	20		18				38		21:15	35		14				49	
09:30	20		22				42		21:30	25		17				42	
09:45	27	85	26	89			53	174	21:45	26	107	14	65			40	172
10:00	30		31				61		22:00	23		27				50	
10:15	28		26				54		22:15	21		24				45	
10:30	24		30				54		22:30	29		31				60	
10:45	32	114	40	127			72	241	22:45	20	93	21	103			41	196
11:00	34		36				70		23:00	20		20				40	
11:15	35		39				74		23:15	16		10				26	
11:30	36		33				69		23:30	9		8				17	
11:45	41	146	41	149			82	295	23:45	11	56	6	44			17	100
TOTALS		618		644				1262	TOTALS		1604		1658				3262
SPLIT %		49.0%		51.0%				27.9%	SPLIT %		49.2%		50.8%				72.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	2,222	2,302	0	0	4,524

AM Peak Hour	11:30	11:45			11:45	PM Peak Hour	17:00	12:30			17:00
AM Pk Volume	159	185			342	PM Pk Volume	185	201			371
Pk Hr Factor	0.750	0.856			0.872	Pk Hr Factor	0.889	0.931			0.966
7 - 9 Volume	71	100	0	0	171	4 - 6 Volume	338	367	0	0	705
7 - 9 Peak Hour	07:45	08:00			08:00	4 - 6 Peak Hour	17:00	16:15			17:00
7 - 9 Pk Volume	46	70	0	0	114	4 - 6 Pk Volume	185	189	0	0	371
Pk Hr Factor	0.885	0.673	0.000	0.000	0.814	Pk Hr Factor	0.889	0.875	0.000	0.000	0.966

Prepared by National Data & Surveying Services

VOLUME

Hall of Fame Dr S/O US 70/SR 1/E Magnolia Ave

Day: Monday
Date: 2/8/2021

City: Knoxville
Project #: TN21_190006_003

DAILY TOTALS	NB	SB	EB	WB	Total
	3,465	3,758	0	0	7,223

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	8		10				18		12:00	51		69				120	
00:15	7		11				18		12:15	69		73				142	
00:30	7		7				14		12:30	59		53				112	
00:45	3	25	7	35			10	60	12:45	64	243	56	251			120	494
01:00	7		4				11		13:00	48		88				136	
01:15	4		6				10		13:15	80		62				142	
01:30	5		3				8		13:30	51		70				121	
01:45	3	19	4	17			7	36	13:45	50	229	52	272			102	501
02:00	4		3				7		14:00	63		68				131	
02:15	3		2				5		14:15	53		57				110	
02:30	2		6				8		14:30	65		71				136	
02:45	1	10	7	18			8	28	14:45	67	248	64	260			131	508
03:00	3		1				4		15:00	59		54				113	
03:15	1		5				6		15:15	68		84				152	
03:30	3		2				5		15:30	77		84				161	
03:45	2	9	2	10			4	19	15:45	69	273	77	299			146	572
04:00	4		4				8		16:00	63		76				139	
04:15	1		0				1		16:15	83		79				162	
04:30	3		3				6		16:30	99		71				170	
04:45	5	13	5	12			10	25	16:45	85	330	68	294			153	624
05:00	5		5				10		17:00	92		76				168	
05:15	6		5				11		17:15	91		80				171	
05:30	6		20				26		17:30	84		68				152	
05:45	13	30	15	45			28	75	17:45	59	326	78	302			137	628
06:00	13		21				34		18:00	56		77				133	
06:15	18		30				48		18:15	68		60				128	
06:30	16		41				57		18:30	52		52				104	
06:45	31	78	33	125			64	203	18:45	47	223	44	233			91	456
07:00	16		29				45		19:00	35		44				79	
07:15	45		38				83		19:15	44		57				101	
07:30	46		68				114		19:30	42		43				85	
07:45	62	169	86	221			148	390	19:45	29	150	26	170			55	320
08:00	51		66				117		20:00	37		36				73	
08:15	44		63				107		20:15	40		34				74	
08:30	32		61				93		20:30	36		35				71	
08:45	32	159	52	242			84	401	20:45	31	144	31	136			62	280
09:00	38		53				91		21:00	25		26				51	
09:15	47		52				99		21:15	32		18				50	
09:30	34		54				88		21:30	22		18				40	
09:45	40	159	47	206			87	365	21:45	30	109	21	83			51	192
10:00	48		46				94		22:00	22		22				44	
10:15	43		36				79		22:15	25		16				41	
10:30	34		51				85		22:30	21		14				35	
10:45	45	170	54	187			99	357	22:45	17	85	25	77			42	162
11:00	53		57				110		23:00	16		14				30	
11:15	47		52				99		23:15	18		16				34	
11:30	51		48				99		23:30	10		11				21	
11:45	58	209	56	213			114	422	23:45	11	55	9	50			20	105
TOTALS		1050		1331				2381	TOTALS		2415		2427				4842
SPLIT %		44.1%		55.9%				33.0%	SPLIT %		49.9%		50.1%				67.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	3,465	3,758	0	0	7,223

AM Peak Hour	11:45	07:30			11:45	PM Peak Hour	16:30	15:15			16:30
AM Pk Volume	237	283			488	PM Pk Volume	367	321			662
Pk Hr Factor	0.859	0.823			0.859	Pk Hr Factor	0.927	0.955			0.968
7 - 9 Volume	328	463	0	0	791	4 - 6 Volume	656	596	0	0	1252
7 - 9 Peak Hour	07:15	07:30			07:30	4 - 6 Peak Hour	16:30	17:00			16:30
7 - 9 Pk Volume	204	283	0	0	486	4 - 6 Pk Volume	367	302	0	0	662
Pk Hr Factor	0.823	0.823	0.000	0.000	0.821	Pk Hr Factor	0.927	0.944	0.000	0.000	0.968

Prepared by National Data & Surveying Services

VOLUME

Hall of Fame Dr S/O US 70/SR 1/E Magnolia Ave

Day: Tuesday
Date: 2/9/2021

City: Knoxville
Project #: TN21_190006_003

DAILY TOTALS	NB	SB	EB	WB	Total
	3,659	3,973	0	0	7,632

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	12		8				20		12:00	76		54				130	
00:15	10		6				16		12:15	61		54				115	
00:30	9		11				20		12:30	60		72				132	
00:45	10	41	9	34			19	75	12:45	61	258	56	236			117	494
01:00	9		3				12		13:00	50		71				121	
01:15	7		5				12		13:15	49		65				114	
01:30	8		5				13		13:30	51		63				114	
01:45	12	36	3	16			15	52	13:45	65	215	75	274			140	489
02:00	2		6				8		14:00	58		79				137	
02:15	3		3				6		14:15	68		66				134	
02:30	5		4				9		14:30	70		52				122	
02:45	2	12	3	16			5	28	14:45	58	254	67	264			125	518
03:00	1		2				3		15:00	68		81				149	
03:15	1		3				4		15:15	69		75				144	
03:30	6		7				13		15:30	69		71				140	
03:45	4	12	0	12			4	24	15:45	79	285	89	316			168	601
04:00	0		0				0		16:00	76		68				144	
04:15	3		1				4		16:15	88		83				171	
04:30	1		3				4		16:30	100		74				174	
04:45	4	8	4	8			8	16	16:45	77	341	85	310			162	651
05:00	8		3				11		17:00	95		74				169	
05:15	7		6				13		17:15	96		90				186	
05:30	4		11				15		17:30	99		103				202	
05:45	6	25	10	30			16	55	17:45	59	349	71	338			130	687
06:00	8		23				31		18:00	64		65				129	
06:15	17		29				46		18:15	63		68				131	
06:30	21		49				70		18:30	54		60				114	
06:45	28	74	49	150			77	224	18:45	58	239	65	258			123	497
07:00	25		48				73		19:00	43		48				91	
07:15	29		72				101		19:15	55		42				97	
07:30	44		71				115		19:30	44		42				86	
07:45	50	148	78	269			128	417	19:45	39	181	32	164			71	345
08:00	64		81				145		20:00	47		50				97	
08:15	44		79				123		20:15	44		25				69	
08:30	56		71				127		20:30	29		24				53	
08:45	41	205	62	293			103	498	20:45	33	153	25	124			58	277
09:00	35		67				102		21:00	37		21				58	
09:15	49		43				92		21:15	41		21				62	
09:30	42		49				91		21:30	20		27				47	
09:45	44	170	42	201			86	371	21:45	29	127	13	82			42	209
10:00	46		63				109		22:00	17		16				33	
10:15	53		54				107		22:15	24		25				49	
10:30	45		46				91		22:30	30		28				58	
10:45	50	194	53	216			103	410	22:45	14	85	20	89			34	174
11:00	46		53				99		23:00	12		14				26	
11:15	47		51				98		23:15	20		10				30	
11:30	46		61				107		23:30	15		9				24	
11:45	50	189	70	235			120	424	23:45	11	58	5	38			16	96
TOTALS		1114		1480				2594	TOTALS		2545		2493				5038
SPLIT %		42.9%		57.1%				34.0%	SPLIT %		50.5%		49.5%				66.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	3,659	3,973	0	0	7,632

AM Peak Hour	11:45	07:30			07:45	PM Peak Hour	16:30	16:45			16:45
AM Pk Volume	247	309			523	PM Pk Volume	368	352			719
Pk Hr Factor	0.813	0.954			0.902	Pk Hr Factor	0.920	0.854			0.890
7 - 9 Volume	353	562	0	0	915	4 - 6 Volume	690	648	0	0	1338
7 - 9 Peak Hour	07:45	07:30			07:45	4 - 6 Peak Hour	16:30	16:45			16:45
7 - 9 Pk Volume	214	309	0	0	523	4 - 6 Pk Volume	368	352	0	0	719
Pk Hr Factor	0.836	0.954	0.000	0.000	0.902	Pk Hr Factor	0.920	0.854	0.000	0.000	0.890

Prepared by National Data & Surveying Services

VOLUME

Hall of Fame Dr S/O US 70/SR 1/E Magnolia Ave

Day: Wednesday
Date: 2/10/2021

City: Knoxville
Project #: TN21_190006_003

DAILY TOTALS	NB	SB	EB	WB	Total
	3,817	4,281	0	0	8,098

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	13		5				18		12:00	57		65				122	
00:15	3		13				16		12:15	65		70				135	
00:30	7		4				11		12:30	71		65				136	
00:45	6	29	10	32			16	61	12:45	73	266	61	261			134	527
01:00	6		6				12		13:00	58		86				144	
01:15	6		3				9		13:15	64		64				128	
01:30	3		4				7		13:30	65		76				141	
01:45	1	16	2	15			3	31	13:45	49	236	57	283			106	519
02:00	2		3				5		14:00	68		80				148	
02:15	5		5				10		14:15	55		64				119	
02:30	7		2				9		14:30	63		79				142	
02:45	3	17	2	12			5	29	14:45	59	245	89	312			148	557
03:00	0		2				2		15:00	67		61				128	
03:15	1		3				4		15:15	81		79				160	
03:30	4		3				7		15:30	79		100				179	
03:45	6	11	5	13			11	24	15:45	82	309	94	334			176	643
04:00	6		5				11		16:00	89		92				181	
04:15	2		2				4		16:15	81		81				162	
04:30	8		5				13		16:30	111		101				212	
04:45	2	18	3	15			5	33	16:45	90	371	94	368			184	739
05:00	8		4				12		17:00	85		89				174	
05:15	7		9				16		17:15	96		82				178	
05:30	6		16				22		17:30	87		78				165	
05:45	13	34	15	44			28	78	17:45	86	354	82	331			168	685
06:00	8		28				36		18:00	86		79				165	
06:15	14		34				48		18:15	89		74				163	
06:30	23		47				70		18:30	74		84				158	
06:45	30	75	43	152			73	227	18:45	61	310	40	277			101	587
07:00	22		51				73		19:00	51		72				123	
07:15	41		58				99		19:15	69		48				117	
07:30	46		61				107		19:30	45		46				91	
07:45	56	165	87	257			143	422	19:45	48	213	44	210			92	423
08:00	57		78				135		20:00	33		39				72	
08:15	50		86				136		20:15	47		39				86	
08:30	36		65				101		20:30	43		35				78	
08:45	41	184	75	304			116	488	20:45	26	149	40	153			66	302
09:00	49		60				109		21:00	27		25				52	
09:15	56		45				101		21:15	27		22				49	
09:30	29		60				89		21:30	22		28				50	
09:45	41	175	34	199			75	374	21:45	30	106	23	98			53	204
10:00	40		58				98		22:00	28		26				54	
10:15	46		59				105		22:15	17		26				43	
10:30	49		44				93		22:30	31		18				49	
10:45	48	183	55	216			103	399	22:45	23	99	25	95			48	194
11:00	47		51				98		23:00	18		19				37	
11:15	46		47				93		23:15	20		10				30	
11:30	56		81				137		23:30	10		15				25	
11:45	45	194	65	244			110	438	23:45	10	58	12	56			22	114
TOTALS		1101		1503				2604	TOTALS		2716		2778				5494
SPLIT %		42.3%		57.7%				32.2%	SPLIT %		49.4%		50.6%				67.8%

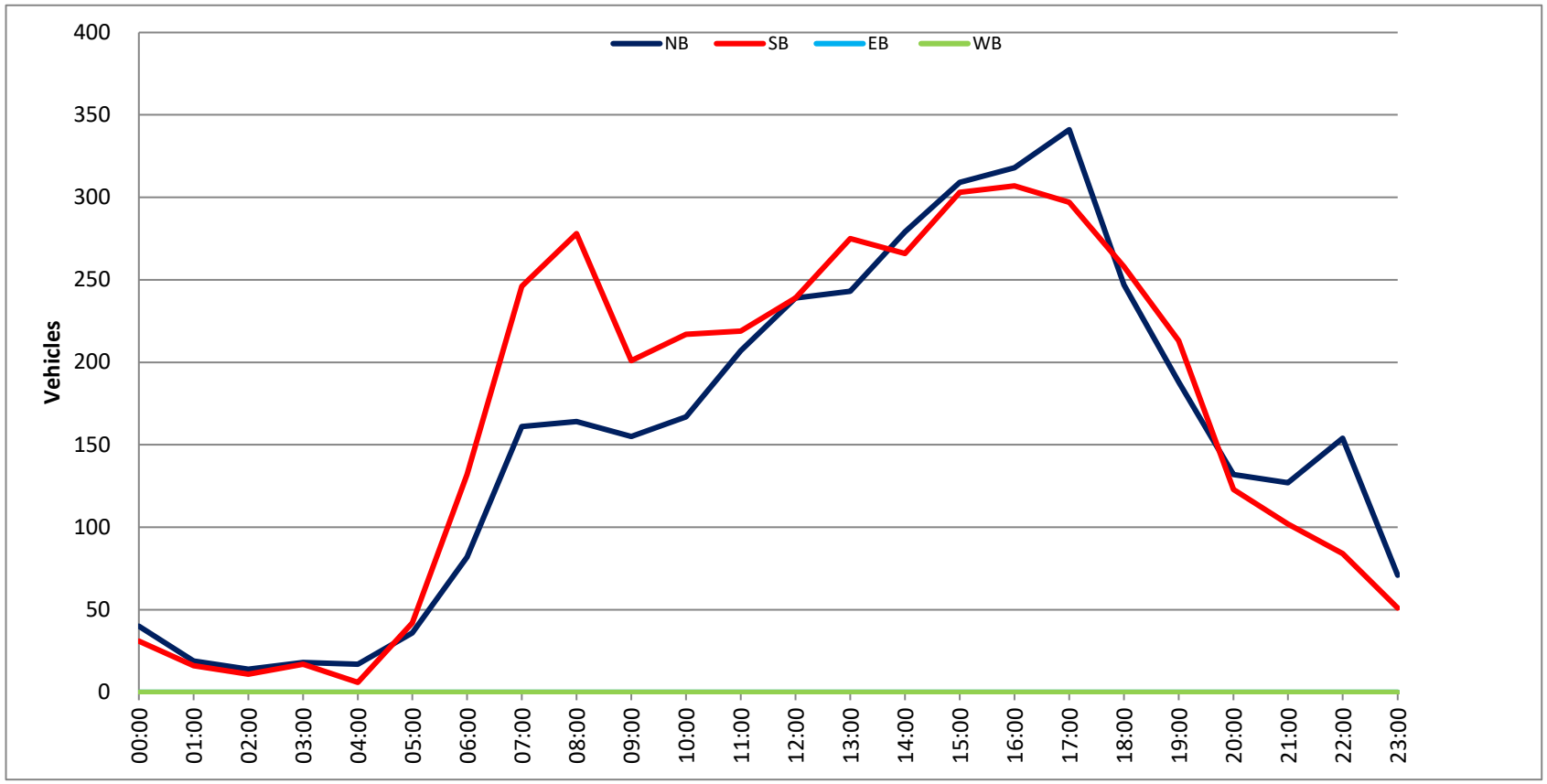
DAILY TOTALS	NB	SB	EB	WB	Total
	3,817	4,281	0	0	8,098

AM Peak Hour	11:45	07:45			07:30	PM Peak Hour	16:30	15:45			16:30
AM Pk Volume	238	316			521	PM Pk Volume	382	368			748
Pk Hr Factor	0.838	0.908			0.911	Pk Hr Factor	0.860	0.911			0.882
7 - 9 Volume	349	561	0	0	910	4 - 6 Volume	725	699	0	0	1424
7 - 9 Peak Hour	07:30	07:45			07:30	4 - 6 Peak Hour	16:30	16:00			16:30
7 - 9 Pk Volume	209	316	0	0	521	4 - 6 Pk Volume	382	368	0	0	748
Pk Hr Factor	0.917	0.908	0.000	0.000	0.911	Pk Hr Factor	0.860	0.911	0.000	0.000	0.882

Prepared by National Data & Surveying Services

Project #: TN21_190006_003 **City:** Knoxville

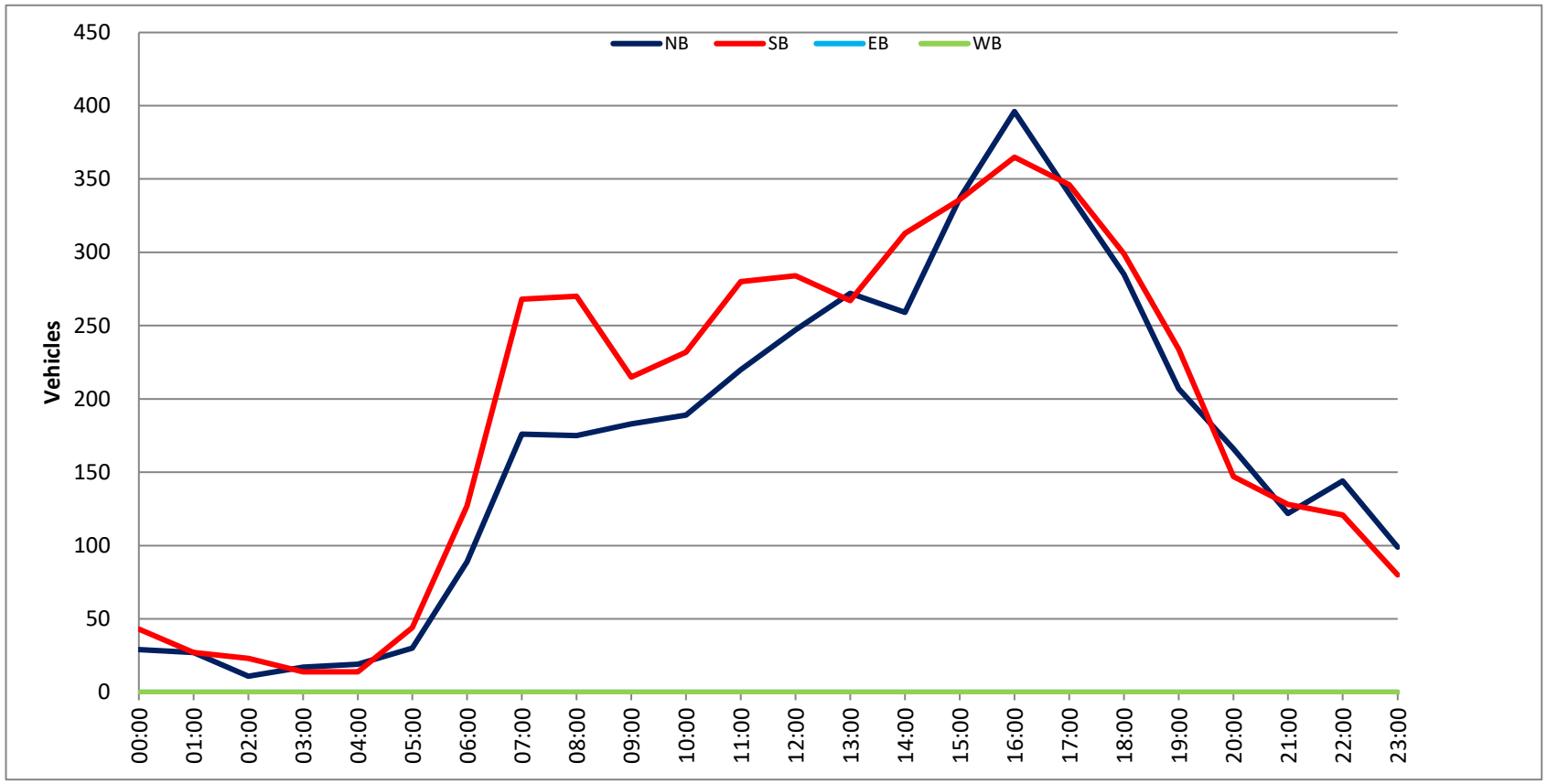
Location: Hall of Fame Dr S/O US 70/SR 1/E Magnolia **Date:** 2/4/2021



Prepared by National Data & Surveying Services

Project #: TN21_190006_003 **City:** Knoxville

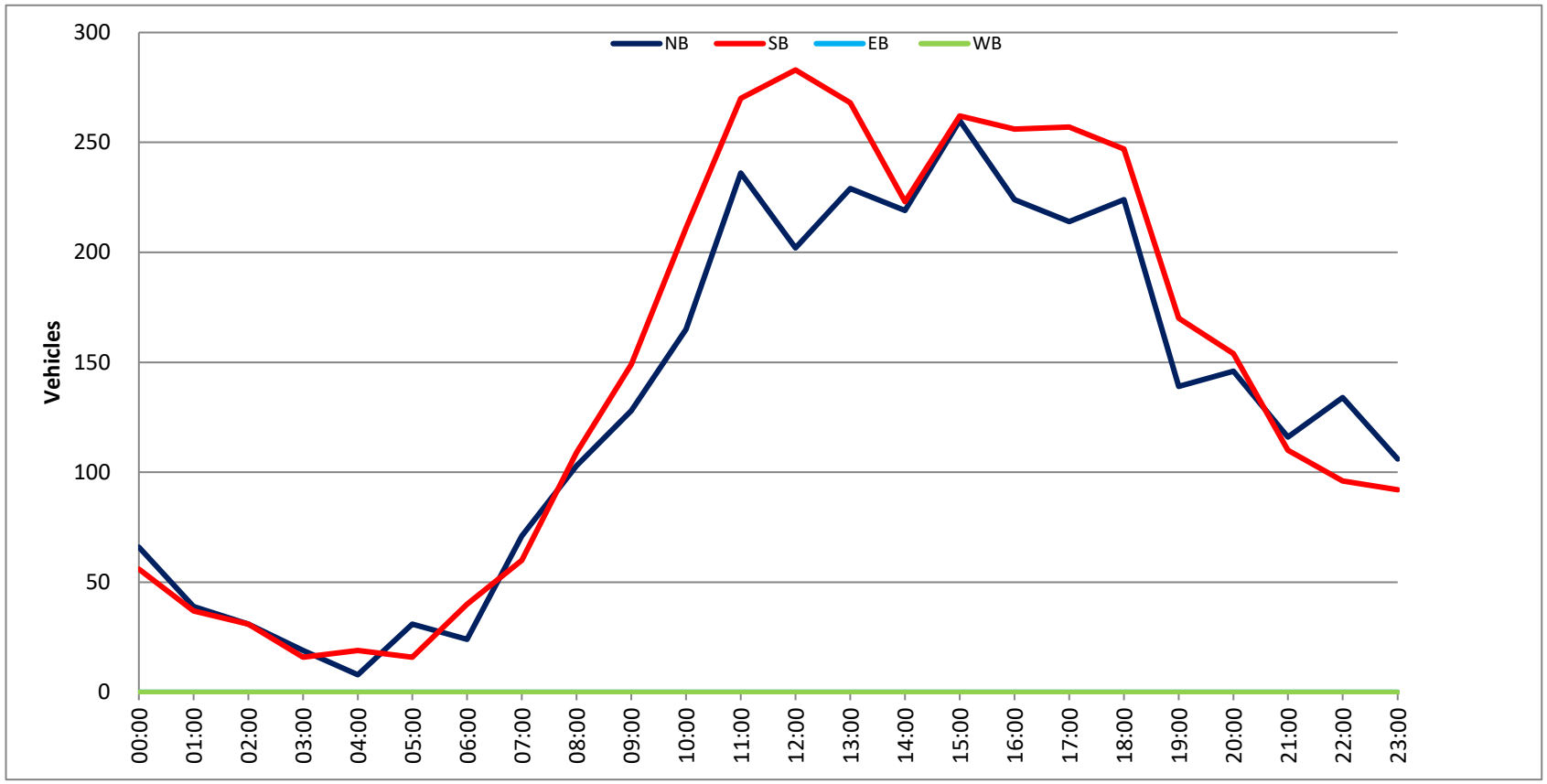
Location: Hall of Fame Dr S/O US 70/SR 1/E Magnolia **Date:** 2/5/2021



Prepared by National Data & Surveying Services

Project #: TN21_190006_003 **City:** Knoxville

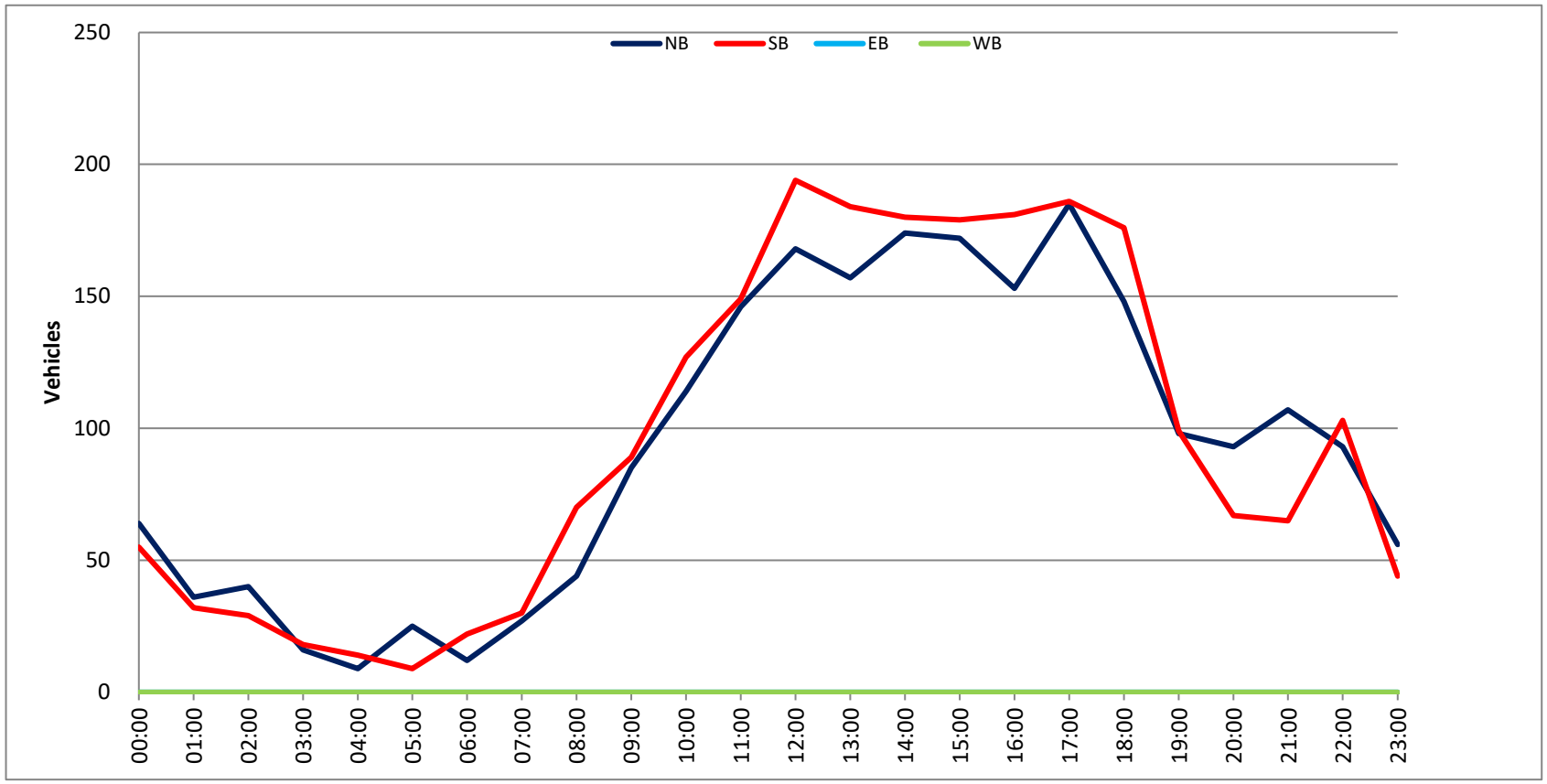
Location: Hall of Fame Dr S/O US 70/SR 1/E Magnolia **Date:** 2/6/2021



Prepared by National Data & Surveying Services

Project #: TN21_190006_003 **City:** Knoxville

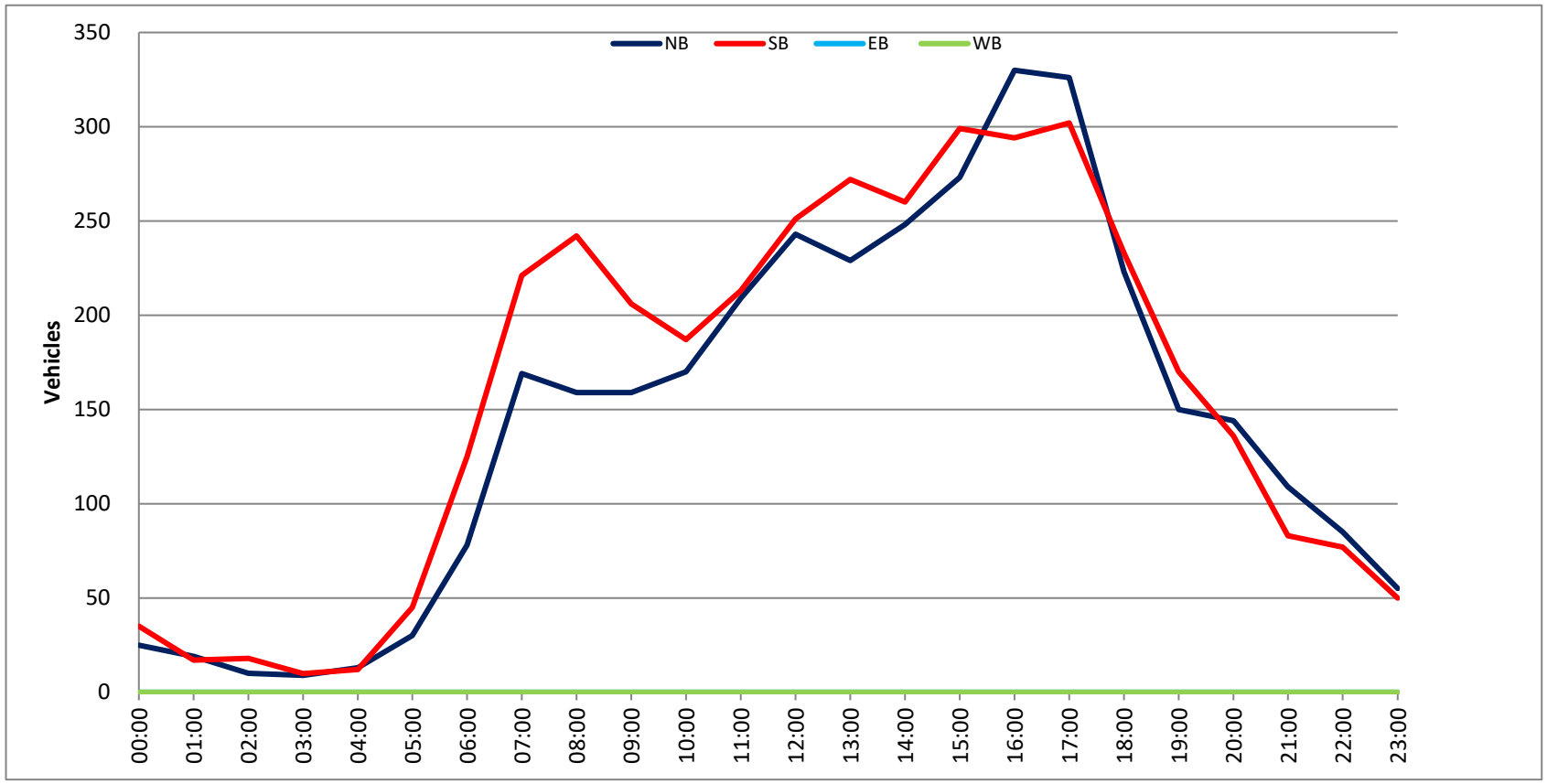
Location: Hall of Fame Dr S/O US 70/SR 1/E Magnolia **Date:** 2/7/2021



Prepared by National Data & Surveying Services

Project #: TN21_190006_003 **City:** Knoxville

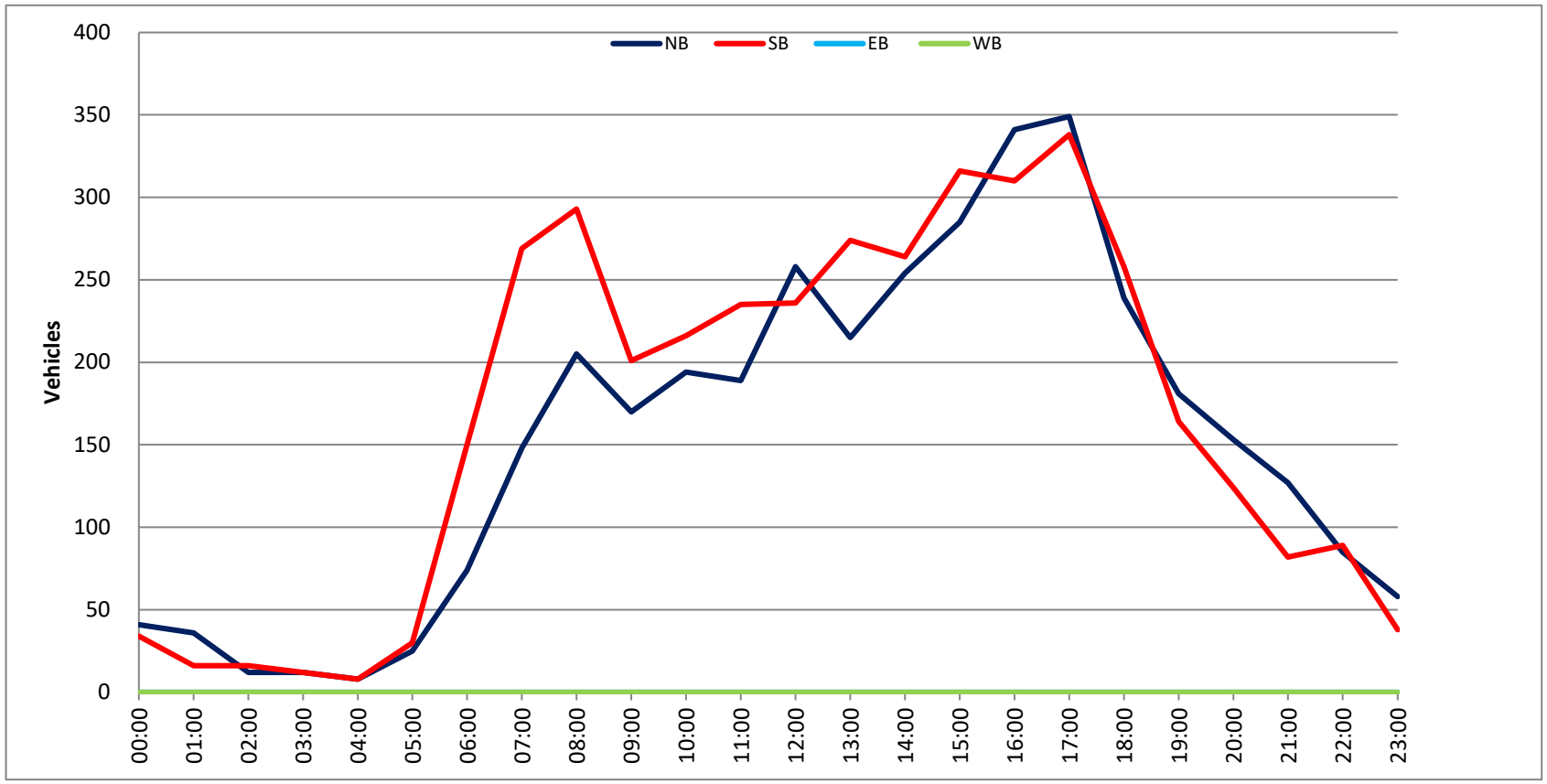
Location: Hall of Fame Dr S/O US 70/SR 1/E Magnolia **Date:** 2/8/2021



Prepared by National Data & Surveying Services

Project #: TN21_190006_003 **City:** Knoxville

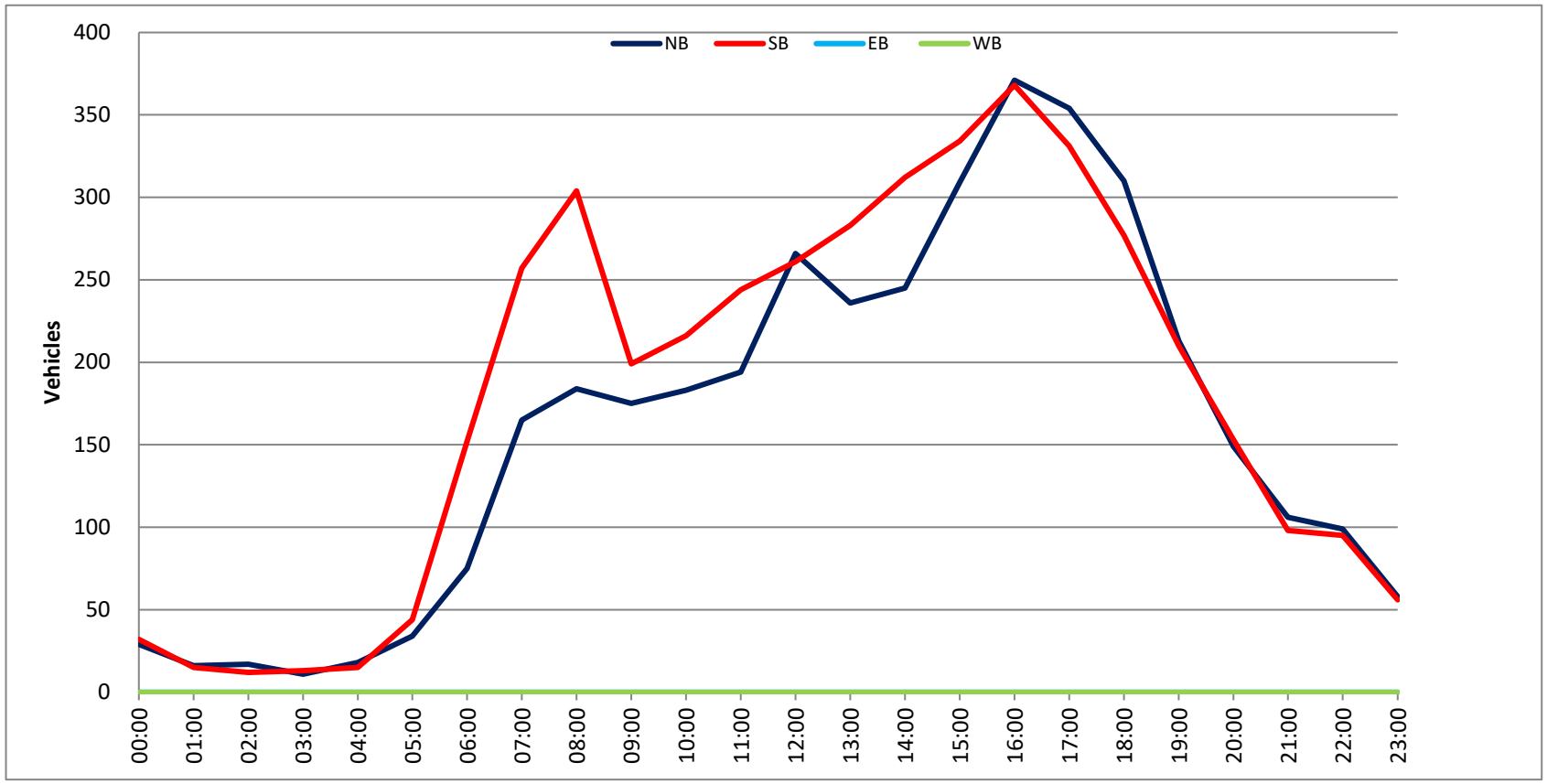
Location: Hall of Fame Dr S/O US 70/SR 1/E Magnolia **Date:** 2/9/2021



Prepared by National Data & Surveying Services

Project #: TN21_190006_003 **City:** Knoxville

Location: Hall of Fame Dr S/O US 70/SR 1/E Magnolia **Date:** 2/10/2021



APPENDIX B | ANALYSES FOR EXISTING AND BACKGROUND TRAFFIC

CAPACITY AND LEVEL-OF-SERVICE CONCEPTS

In a general sense, a roadway is similar to a pipeline or other material carrying conduit in that it has a certain capacity for the amount of material (vehicles) that it can efficiently carry. As the number of vehicles in a given time period gradually increases, the quality of traffic flow gradually decreases. On roadway sections this results in increasing turbulence in the traffic stream, and at intersections it results in increasing stops and delay. As the volumes begin to approach the capacity of the facility, these problems rapidly magnify, with resulting serious levels of congestion, stops, delay, excess fuel consumption, pollutant emissions, etc.

The Transportation Research Board has published the Year 2010 Highway Capacity Manual (HCM2010), which establishes theoretical techniques to quantify the capacity conditions on all types of roadways, intersections, ramps, pedestrian facilities, etc. A basic concept that is applicable to most of these techniques is the idea of level of service (LOS). This concept establishes a rating system that quantifies the quality of traffic flow, as perceived by motorists and/or passengers. The general system is similar to a school grade scale, and is outlined as follows:

Level of Service (LOS)	General Quality of Traffic Flow	Description of Corresponding Conditions
A	Excellent	Roadways – Free flow, high maneuverability Intersections – Very few stops, very low delay
B	Very Good	Roadways – Free flow, slightly lower maneuverability Intersections – Minor stops, low delay
C	Good	Roadways – Stable flow, restricted maneuverability Intersections – Significant stops, significant delay
D	Fair	Roadways – Marginally stable flow, congestion seriously restricts maneuverability Intersections – High stops, long but tolerable delay
E	Poor	Roadways – Unstable flow*, lower operating speeds, congestion severely restricts maneuverability Intersections – All vehicles stop, very long queues and very long intolerable delay
F	Very Poor	Roadways – Forced flow, stoppages may be lengthy, congestion severely restricts maneuverability Intersections – All vehicles stop, extensive queues and extremely long intolerable delay

*Unstable flow is such that minor fluctuations or disruptions can result in rapid degradation to LOS F.

LOS CRITERIA: SIGNALIZED & UNSIGNALIZED INTERSECTIONS

LOS	CONTROL DELAY (S/VEH)		
	SIGNALIZED	UNSIGNALIZED	ROUNDABOUT
A	≤10	≤10	≤10
B	>10-20	>10-15	>10-15
C	>20-35	>15-25	>15-25
D	>35-55	>25-35	>25-35
E	>55-80	>35-50	>35-50
F	>80	>50	>50

Another measure of intersection capacity that is often used in the evaluation of intersection operations is the volume to capacity (V/C) ratio. This ratio is defined as "the ratio of flow rate to capacity", and is a good measure of how much of an intersection's available capacity has been used up by the analysis volumes. Conversely, it also provides an indication of the reserve capacity available for future growth in traffic volumes.

The Intersection Capacity Utilization (ICU) is another measure that expresses a value similar to the V/C ratio. Specifically, the ICU method "sums the amount of the time required to serve all movements at saturation for a given cycle length and divides by that reference cycle length." The ICU is considered a more accurate measure of volume to capacity conditions for a signalized intersection, primarily because it accounts for the effects of the signal timing on intersection capacity.

Intersection	
Int Delay, s/veh	2.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	46	16	16	41	20	10
Future Vol, veh/h	46	16	16	41	20	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	53	18	18	47	23	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	71	0	145	62
Stage 1	-	-	-	-	62	-
Stage 2	-	-	-	-	83	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1529	-	847	1003
Stage 1	-	-	-	-	961	-
Stage 2	-	-	-	-	940	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1529	-	837	1003
Mov Cap-2 Maneuver	-	-	-	-	837	-
Stage 1	-	-	-	-	949	-
Stage 2	-	-	-	-	940	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.1	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	886	-	-	1529	-
HCM Lane V/C Ratio	0.039	-	-	0.012	-
HCM Control Delay (s)	9.2	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	44	14	5	49	13	13	8	0	6	6	0
Future Vol, veh/h	0	44	14	5	49	13	13	8	0	6	6	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	53	17	6	59	16	16	10	0	7	7	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	75	0	0	70	0	0	145	149	62	146	149	67
Stage 1	-	-	-	-	-	-	62	62	-	79	79	-
Stage 2	-	-	-	-	-	-	83	87	-	67	70	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1524	-	-	1531	-	-	824	743	1003	823	743	997
Stage 1	-	-	-	-	-	-	949	843	-	930	829	-
Stage 2	-	-	-	-	-	-	925	823	-	943	837	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1524	-	-	1531	-	-	816	740	1003	812	740	997
Mov Cap-2 Maneuver	-	-	-	-	-	-	816	740	-	812	740	-
Stage 1	-	-	-	-	-	-	949	843	-	930	826	-
Stage 2	-	-	-	-	-	-	913	820	-	932	837	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.5	9.7	9.7
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	785	1524	-	-	1531	-	-	774
HCM Lane V/C Ratio	0.032	-	-	-	0.004	-	-	0.019
HCM Control Delay (s)	9.7	0	-	-	7.4	0	-	9.7
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	8	88	7	61	40	0	12	30	19	2	18	4
Future Vol, veh/h	8	88	7	61	40	0	12	30	19	2	18	4
Conflicting Peds, #/hr	1	0	0	0	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	98	8	68	44	0	13	33	21	2	20	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	45	0	0	106	0	0	312	301	102	328	305	45
Stage 1	-	-	-	-	-	-	120	120	-	181	181	-
Stage 2	-	-	-	-	-	-	192	181	-	147	124	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1563	-	-	1485	-	-	641	612	953	625	608	1025
Stage 1	-	-	-	-	-	-	884	796	-	821	750	-
Stage 2	-	-	-	-	-	-	810	750	-	856	793	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1562	-	-	1485	-	-	596	579	953	561	575	1024
Mov Cap-2 Maneuver	-	-	-	-	-	-	596	579	-	561	575	-
Stage 1	-	-	-	-	-	-	879	791	-	815	714	-
Stage 2	-	-	-	-	-	-	747	714	-	797	788	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	4.6	11	11.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	664	1562	-	-	1485	-	-	619
HCM Lane V/C Ratio	0.102	0.006	-	-	0.046	-	-	0.043
HCM Control Delay (s)	11	7.3	0	-	7.5	0	-	11.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0.1	-	-	0.1

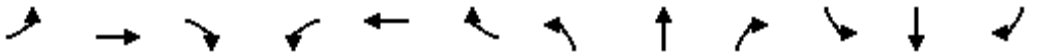
Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	19	89	74	5	8	23
Future Vol, veh/h	19	89	74	5	8	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	120	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	94	78	5	8	24

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	83	0	-	0	215	81
Stage 1	-	-	-	-	81	-
Stage 2	-	-	-	-	134	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1514	-	-	-	773	979
Stage 1	-	-	-	-	942	-
Stage 2	-	-	-	-	892	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1514	-	-	-	762	979
Mov Cap-2 Maneuver	-	-	-	-	762	-
Stage 1	-	-	-	-	929	-
Stage 2	-	-	-	-	892	-

Approach	EB	WB	SB
HCM Control Delay, s	1.3	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1514	-	-	-	762	979
HCM Lane V/C Ratio	0.013	-	-	-	0.011	0.025
HCM Control Delay (s)	7.4	0	-	-	9.8	8.8
HCM Lane LOS	A	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	0	0.1



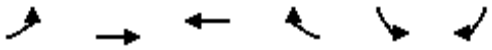
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	90	4	276	290	158	0	0	0	37	60	68
Future Volume (vph)	34	90	4	276	290	158	0	0	0	37	60	68
Lane Util. Factor	1.00	0.95	0.95	0.97	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		1.00	0.99							0.98
Frt		0.994			0.947							0.850
Flt Protected	0.950			0.950							0.981	
Satd. Flow (prot)	1770	3516	0	3433	3315	0	0	0	0	0	1827	1583
Flt Permitted	0.473			0.950							0.981	
Satd. Flow (perm)	879	3516	0	3428	3315	0	0	0	0	0	1827	1546
Satd. Flow (RTOR)		4			105							82
Confl. Peds. (#/hr)	7		1	1		7						10
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	36	100	0	294	477	0	0	0	0	0	103	72
Turn Type	pm+pt	NA		Prot	NA					Split	NA	Perm
Protected Phases	1	2		1	2					4	4	
Permitted Phases	2											4
Detector Phase	1	2		1	2					4	4	4
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0					7.0	7.0	7.0
Minimum Split (s)	9.0	15.5		9.0	15.5					12.0	12.0	12.0
Total Split (s)	34.0	36.0		34.0	36.0					30.0	30.0	30.0
Total Split (%)	34.0%	36.0%		34.0%	36.0%					30.0%	30.0%	30.0%
Maximum Green (s)	29.0	30.5		29.0	30.5					25.0	25.0	25.0
Yellow Time (s)	4.0	4.0		4.0	4.0					4.0	4.0	4.0
All-Red Time (s)	1.0	1.5		1.0	1.5					1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0						0.0	0.0
Total Lost Time (s)	5.0	5.5		5.0	5.5						5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	2.0	2.0		2.0	2.0					2.0	2.0	2.0
Recall Mode	None	C-Max		None	C-Max					None	None	None
Act Effct Green (s)	74.7	61.2		13.0	61.2						10.3	10.3
Actuated g/C Ratio	0.75	0.61		0.13	0.61						0.10	0.10
v/c Ratio	0.05	0.05		0.66	0.23						0.55	0.31
Control Delay	2.8	8.8		46.7	8.1						53.2	11.1
Queue Delay	0.0	0.0		0.0	0.3						0.0	0.0
Total Delay	2.8	8.8		46.7	8.4						53.2	11.1
LOS	A	A		D	A						D	B
Approach Delay		7.2			23.0						35.9	
Approach LOS		A			C						D	
Queue Length 50th (ft)	4	11		93	58						64	0
Queue Length 95th (ft)	12	27		136	76						113	33
Internal Link Dist (ft)		516			188			218			576	
Turn Bay Length (ft)	50											65
Base Capacity (vph)	958	2153		995	2070						456	448
Starvation Cap Reductn	0	0		0	955						0	0
Spillback Cap Reductn	0	0		0	0						0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0						0	0
Reduced v/c Ratio	0.04	0.05		0.30	0.43						0.23	0.16

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 8 (8%), Referenced to phase 2:EBWB, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 23.1	Intersection LOS: C
Intersection Capacity Utilization 35.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: Central Street & Summit Hill Drive

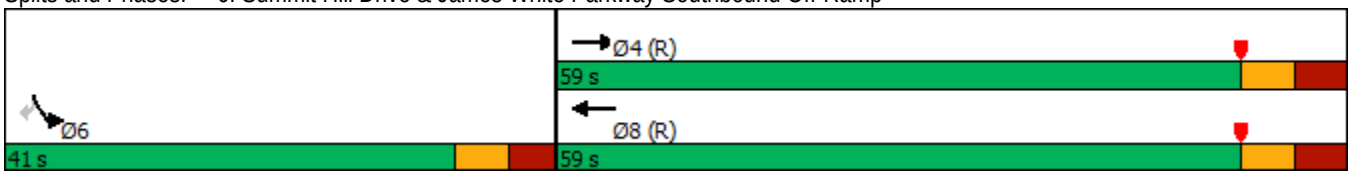




Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	128	217	0	242	504
Future Volume (vph)	0	128	217	0	242	504
Lane Util. Factor	1.00	0.91	0.95	1.00	1.00	0.88
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	5085	3539	0	1770	2787
Flt Permitted					0.950	
Satd. Flow (perm)	0	5085	3539	0	1770	2787
Satd. Flow (RTOR)						566
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	144	244	0	272	566
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		10.0	10.0		7.0	7.0
Minimum Split (s)		18.0	18.0		14.5	14.5
Total Split (s)		59.0	59.0		41.0	41.0
Total Split (%)		59.0%	59.0%		41.0%	41.0%
Maximum Green (s)		51.0	51.0		33.5	33.5
Yellow Time (s)		4.0	4.0		4.0	4.0
All-Red Time (s)		4.0	4.0		3.5	3.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0
Total Lost Time (s)		8.0	8.0		7.5	7.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		5.0	2.0		5.0	5.0
Recall Mode		C-Max	C-Max		None	None
Act Effct Green (s)		59.5	59.5		25.0	25.0
Actuated g/C Ratio		0.60	0.60		0.25	0.25
v/c Ratio		0.05	0.12		0.61	0.50
Control Delay		13.7	6.4		38.4	3.9
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		13.7	6.4		38.4	3.9
LOS		B	A		D	A
Approach Delay		13.7	6.4		15.1	
Approach LOS		B	A		B	
Queue Length 50th (ft)		17	13		154	0
Queue Length 95th (ft)		32	38		208	36
Internal Link Dist (ft)		188	373		516	
Turn Bay Length (ft)						250
Base Capacity (vph)		3023	2104		592	1310
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.05	0.12		0.46	0.43

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 46 (46%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 13.2	Intersection LOS: B
Intersection Capacity Utilization 38.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Summit Hill Drive & James White Parkway Southbound Off-Ramp

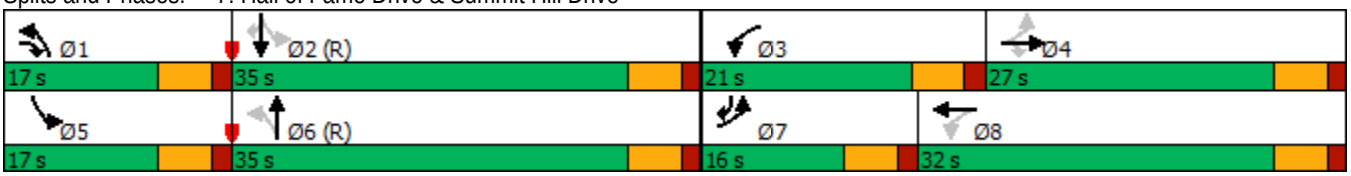


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	178	181	166	97	115	12	98	31	58	192	109
Future Volume (vph)	10	178	181	166	97	115	12	98	31	58	192	109
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00		0.99	1.00	0.99			1.00		1.00		
Frt			0.850		0.919			0.964				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3228	0	1770	3399	0	1770	3539	1583
Flt Permitted	0.607			0.404			0.620			0.661		
Satd. Flow (perm)	1129	3539	1563	752	3228	0	1155	3399	0	1228	3539	1583
Satd. Flow (RTOR)			199		126			34				120
Confl. Peds. (#/hr)	2		1	1		2			4	4		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	11	196	199	182	233	0	13	142	0	64	211	120
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	7	4	1	3	8		1	6		5	2	7
Permitted Phases	4		4	8			6			2		2
Detector Phase	7	4	1	3	8		1	6		5	2	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0		5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5		10.5	15.5	10.5
Total Split (s)	16.0	27.0	17.0	21.0	32.0		17.0	35.0		17.0	35.0	16.0
Total Split (%)	16.0%	27.0%	17.0%	21.0%	32.0%		17.0%	35.0%		17.0%	35.0%	16.0%
Maximum Green (s)	10.5	21.5	11.5	15.5	26.5		11.5	29.5		11.5	29.5	10.5
Yellow Time (s)	4.0	4.0	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	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		2.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	None
Act Effct Green (s)	15.2	9.9	15.0	27.5	17.2		55.6	51.5		56.6	50.4	61.2
Actuated g/C Ratio	0.15	0.10	0.15	0.28	0.17		0.56	0.52		0.57	0.50	0.61
v/c Ratio	0.05	0.56	0.49	0.54	0.35		0.02	0.08		0.09	0.12	0.12
Control Delay	23.8	49.2	24.3	34.3	17.2		15.6	19.0		10.9	15.5	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	23.8	49.2	24.3	34.3	17.2		15.6	19.0		10.9	15.5	2.5
LOS	C	D	C	C	B		B	B		B	B	A
Approach Delay		36.3			24.7			18.7			10.8	
Approach LOS		D			C			B			B	
Queue Length 50th (ft)	6	70	68	92	31		5	25		16	38	0
Queue Length 95th (ft)	m15	105	92	141	61		20	56		46	62	10
Internal Link Dist (ft)		373			335			424			335	
Turn Bay Length (ft)				165			230			165		60
Base Capacity (vph)	298	760	493	368	948		769	1766		811	1785	1092
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.04	0.26	0.40	0.49	0.25		0.02	0.08		0.08	0.12	0.11

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 62 (62%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 23.4	Intersection LOS: C
Intersection Capacity Utilization 45.9%	ICU Level of Service A
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 7: Hall of Fame Drive & Summit Hill Drive



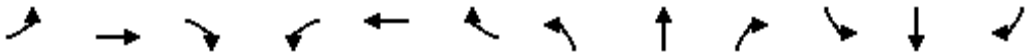
Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	30	239	350	16	37	41
Future Vol, veh/h	30	239	350	16	37	41
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	34	269	393	18	42	46

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	411	0	-	0	605	207
Stage 1	-	-	-	-	402	-
Stage 2	-	-	-	-	203	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1144	-	-	-	429	799
Stage 1	-	-	-	-	644	-
Stage 2	-	-	-	-	811	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1144	-	-	-	416	798
Mov Cap-2 Maneuver	-	-	-	-	416	-
Stage 1	-	-	-	-	625	-
Stage 2	-	-	-	-	811	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	9.6
HCM LOS			A

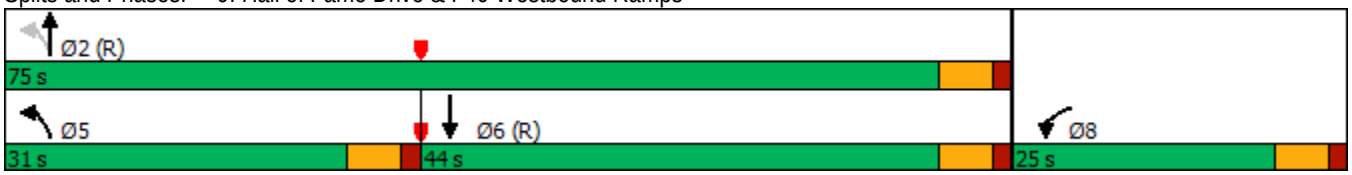
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1144	-	-	-	877
HCM Lane V/C Ratio	0.029	-	-	-	0.1
HCM Control Delay (s)	8.2	-	-	-	9.6
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	194	0	104	238	294	0	0	362	434
Future Volume (vph)	0	0	0	194	0	104	238	294	0	0	362	434
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt						0.850					0.918	
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	0	0	3433	0	1583	1770	3539	0	0	3249	0
Flt Permitted				0.950			0.259					
Satd. Flow (perm)	0	0	0	3433	0	1583	482	3539	0	0	3249	0
Satd. Flow (RTOR)						147					353	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	216	0	116	264	327	0	0	884	0
Turn Type				Prot		Free	pm+pt	NA			NA	
Protected Phases				8			5	2			6	
Permitted Phases						Free	2					
Detector Phase				8			5	2			6	
Switch Phase												
Minimum Initial (s)				5.0			5.0	10.0			10.0	
Minimum Split (s)				10.5			10.5	15.5			15.5	
Total Split (s)				25.0			31.0	75.0			44.0	
Total Split (%)				25.0%			31.0%	75.0%			44.0%	
Maximum Green (s)				19.5			25.5	69.5			38.5	
Yellow Time (s)				4.0			4.0	4.0			4.0	
All-Red Time (s)				1.5			1.5	1.5			1.5	
Lost Time Adjust (s)				0.0			0.0	0.0			0.0	
Total Lost Time (s)				5.5			5.5	5.5			5.5	
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)				3.0			2.0	2.0			2.0	
Recall Mode				None			None	C-Max			C-Max	
Act Effct Green (s)				11.6		100.0	77.4	77.4			62.4	
Actuated g/C Ratio				0.12		1.00	0.77	0.77			0.62	
v/c Ratio				0.54		0.07	0.53	0.12			0.41	
Control Delay				46.5		0.1	10.7	2.7			6.5	
Queue Delay				0.0		0.0	0.0	0.0			0.0	
Total Delay				46.5		0.1	10.7	2.7			6.5	
LOS				D		A	B	A			A	
Approach Delay					30.3			6.3			6.5	
Approach LOS					C			A			A	
Queue Length 50th (ft)				68		0	39	24			70	
Queue Length 95th (ft)				102		0	72	38			144	
Internal Link Dist (ft)		440			577			562			692	
Turn Bay Length (ft)				475		200	155					
Base Capacity (vph)				669		1583	701	2739			2161	
Starvation Cap Reductn				0		0	0	0			0	
Spillback Cap Reductn				0		0	0	0			0	
Storage Cap Reductn				0		0	0	0			0	
Reduced v/c Ratio				0.32		0.07	0.38	0.12			0.41	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 42 (42%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.54	
Intersection Signal Delay: 10.8	Intersection LOS: B
Intersection Capacity Utilization 56.4%	ICU Level of Service B
Analysis Period (min) 15	

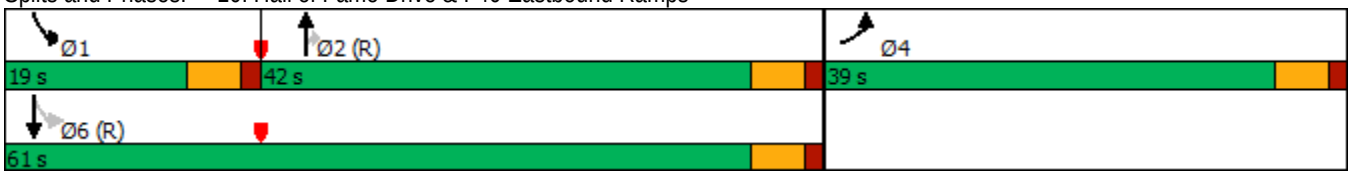
Splits and Phases: 9: Hall of Fame Drive & I-40 Westbound Ramps



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	146	0	354	0	0	0	0	377	86	80	479	0
Future Volume (vph)	146	0	354	0	0	0	0	377	86	80	479	0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850						0.850			
Flt Protected	0.950									0.950		
Satd. Flow (prot)	3433	0	1583	0	0	0	0	3539	1583	1770	3539	0
Flt Permitted	0.950									0.456		
Satd. Flow (perm)	3433	0	1583	0	0	0	0	3539	1583	849	3539	0
Satd. Flow (RTOR)			421						102			
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Shared Lane Traffic (%)												
Lane Group Flow (vph)	174	0	421	0	0	0	0	449	102	95	570	0
Turn Type	Prot		Free					NA	Perm	pm+pt	NA	
Protected Phases	4							2		1	6	
Permitted Phases			Free						2	6		
Detector Phase	4							2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0							10.0	10.0	5.0	10.0	
Minimum Split (s)	22.5							22.5	22.5	10.5	22.5	
Total Split (s)	39.0							42.0	42.0	19.0	61.0	
Total Split (%)	39.0%							42.0%	42.0%	19.0%	61.0%	
Maximum Green (s)	33.5							36.5	36.5	13.5	55.5	
Yellow Time (s)	4.0							4.0	4.0	4.0	4.0	
All-Red Time (s)	1.5							1.5	1.5	1.5	1.5	
Lost Time Adjust (s)	0.0							0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5							5.5	5.5	5.5	5.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	2.0							2.0	2.0	2.0	2.0	
Recall Mode	None							C-Max	C-Max	None	C-Max	
Act Effct Green (s)	10.6		100.0					69.2	69.2	78.4	78.4	
Actuated g/C Ratio	0.11		1.00					0.69	0.69	0.78	0.78	
v/c Ratio	0.48		0.27					0.18	0.09	0.13	0.21	
Control Delay	46.5		0.4					4.8	0.9	3.4	3.0	
Queue Delay	0.0		0.0					0.0	0.0	0.0	0.0	
Total Delay	46.5		0.4					4.8	0.9	3.4	3.0	
LOS	D		A					A	A	A	A	
Approach Delay		13.9						4.0			3.0	
Approach LOS		B						A			A	
Queue Length 50th (ft)	55		0					38	0	8	26	
Queue Length 95th (ft)	80		0					54	0	24	54	
Internal Link Dist (ft)		686			892			546			562	
Turn Bay Length (ft)	200		210						290	190		
Base Capacity (vph)	1150		1583					2448	1126	789	2773	
Starvation Cap Reductn	0		0					0	0	0	0	
Spillback Cap Reductn	0		0					0	0	0	0	
Storage Cap Reductn	0		0					0	0	0	0	
Reduced v/c Ratio	0.15		0.27					0.18	0.09	0.12	0.21	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 64 (64%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.48	
Intersection Signal Delay: 6.9	Intersection LOS: A
Intersection Capacity Utilization 56.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 10: Hall of Fame Drive & I-40 Eastbound Ramps

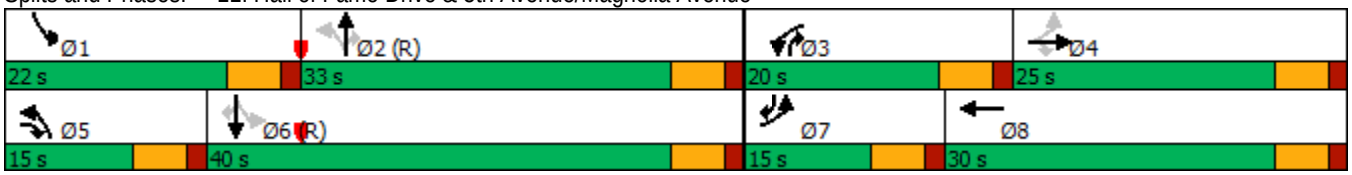


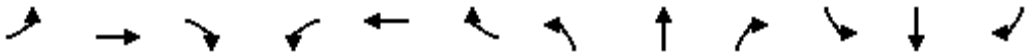
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	102	23	49	151	127	30	170	23	143	296	62
Future Volume (vph)	48	102	23	49	151	127	30	170	23	143	296	62
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.99	1.00			1.00		0.99	1.00		0.99
Frt			0.850		0.931				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3295	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.333			0.950			0.538			0.574		
Satd. Flow (perm)	620	3539	1563	3423	3295	0	1002	3539	1563	1069	3539	1563
Satd. Flow (RTOR)			147		153				147			87
Confl. Peds. (#/hr)			1	1			1		1	1		1
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)												
Lane Group Flow (vph)	58	123	28	59	335	0	36	205	28	172	357	75
Turn Type	pm+pt	NA	pm+ov	Prot	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4				2		2	6		6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0	5.0	5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5	10.5	10.5	15.5	10.5
Total Split (s)	15.0	25.0	15.0	20.0	30.0		15.0	33.0	20.0	22.0	40.0	15.0
Total Split (%)	15.0%	25.0%	15.0%	20.0%	30.0%		15.0%	33.0%	20.0%	22.0%	40.0%	15.0%
Maximum Green (s)	9.5	19.5	9.5	14.5	24.5		9.5	27.5	14.5	16.5	34.5	9.5
Yellow Time (s)	4.0	4.0	4.0	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	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	None	None	C-Max	None
Act Effct Green (s)	18.7	11.9	18.2	7.1	11.2		58.1	51.7	58.8	65.3	57.0	64.9
Actuated g/C Ratio	0.19	0.12	0.18	0.07	0.11		0.58	0.52	0.59	0.65	0.57	0.65
v/c Ratio	0.28	0.29	0.07	0.24	0.67		0.06	0.11	0.03	0.23	0.18	0.07
Control Delay	31.1	40.9	0.3	45.8	29.2		6.4	10.7	0.3	7.0	11.0	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.1	40.9	0.3	45.8	29.2		6.4	10.7	0.3	7.0	11.0	1.1
LOS	C	D	A	D	C		A	B	A	A	B	A
Approach Delay		32.8			31.7			9.0			8.7	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)	29	38	0	18	58		5	24	0	31	55	0
Queue Length 95th (ft)	52	57	0	35	86		14	48	0	57	82	2
Internal Link Dist (ft)		674			634			359			1142	
Turn Bay Length (ft)	245		35	295			230		245	175		175
Base Capacity (vph)	233	690	451	497	922		686	1830	1087	828	2018	1071
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.18	0.06	0.12	0.36		0.05	0.11	0.03	0.21	0.18	0.07

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 62 (62%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 18.3	Intersection LOS: B
Intersection Capacity Utilization 47.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 11: Hall of Fame Drive & 5th Avenue/Magnolia Avenue



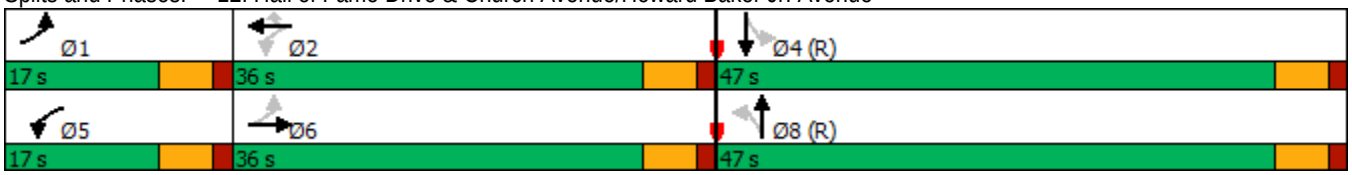


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	44	7	12	47	62	8	56	10	113	140	34
Future Volume (vph)	43	44	7	12	47	62	8	56	10	113	140	34
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor	0.97	1.00		1.00		0.95		1.00			1.00	
Frt		0.978				0.850		0.979			0.982	
Flt Protected	0.950			0.950				0.994			0.981	
Satd. Flow (prot)	1770	1817	0	1770	1863	1583	0	3438	0	0	3401	0
Flt Permitted	0.520			0.721				0.922			0.803	
Satd. Flow (perm)	944	1817	0	1337	1863	1506	0	3189	0	0	2783	0
Satd. Flow (RTOR)		8				87		11			18	
Confl. Peds. (#/hr)	38		7	7		38	1		1	1		1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	46	55	0	13	51	67	0	80	0	0	310	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6			2		2	8			4		
Detector Phase	1	6		5	2	2	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0	7.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	10.5	22.5		10.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	17.0	36.0		17.0	36.0	36.0	47.0	47.0		47.0	47.0	
Total Split (%)	17.0%	36.0%		17.0%	36.0%	36.0%	47.0%	47.0%		47.0%	47.0%	
Maximum Green (s)	11.5	30.5		11.5	30.5	30.5	41.5	41.5		41.5	41.5	
Yellow Time (s)	4.0	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	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5	5.5		5.5			5.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)	14.9	13.5		10.8	7.9	7.9		76.8			76.8	
Actuated g/C Ratio	0.15	0.14		0.11	0.08	0.08		0.77			0.77	
v/c Ratio	0.23	0.22		0.08	0.35	0.34		0.03			0.14	
Control Delay	35.6	34.7		31.9	49.9	10.6		4.6			3.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Delay	35.6	34.7		31.9	49.9	10.6		4.6			3.4	
LOS	D	C		C	D	B		A			A	
Approach Delay		35.1			28.0			4.6			3.4	
Approach LOS		D			C			A			A	
Queue Length 50th (ft)	25	25		7	32	0		6			0	
Queue Length 95th (ft)	52	64		22	67	28		15			15	
Internal Link Dist (ft)		488			887			548			1120	
Turn Bay Length (ft)	60			130								
Base Capacity (vph)	261	559		271	568	519		2450			2140	
Starvation Cap Reductn	0	0		0	0	0		0			0	
Spillback Cap Reductn	0	0		0	0	0		0			0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0	0		0			0	
Reduced v/c Ratio	0.18	0.10		0.05	0.09	0.13		0.03			0.14	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 17 (17%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.35	
Intersection Signal Delay: 13.9	Intersection LOS: B
Intersection Capacity Utilization 33.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 12: Hall of Fame Drive & Church Avenue/Howard Baker Jr. Avenue



Intersection	
Int Delay, s/veh	2.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	52	32	10	60	40	13
Future Vol, veh/h	52	32	10	60	40	13
Conflicting Peds, #/hr	0	1	1	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	55	34	11	63	42	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	90	0	159	73
Stage 1	-	-	-	-	73	-
Stage 2	-	-	-	-	86	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1505	-	832	989
Stage 1	-	-	-	-	950	-
Stage 2	-	-	-	-	937	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1504	-	824	988
Mov Cap-2 Maneuver	-	-	-	-	824	-
Stage 1	-	-	-	-	941	-
Stage 2	-	-	-	-	936	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	859	-	-	1504	-
HCM Lane V/C Ratio	0.065	-	-	0.007	-
HCM Control Delay (s)	9.5	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	41	20	0	48	5	12	7	2	6	8	17
Future Vol, veh/h	10	41	20	0	48	5	12	7	2	6	8	17
Conflicting Peds, #/hr	0	0	1	1	0	0	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	47	23	0	55	6	14	8	2	7	9	19

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	61	0	0	71	0	0	155	143	60	144	151	59
Stage 1	-	-	-	-	-	-	82	82	-	58	58	-
Stage 2	-	-	-	-	-	-	73	61	-	86	93	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1542	-	-	1529	-	-	812	748	1005	825	741	1007
Stage 1	-	-	-	-	-	-	926	827	-	954	847	-
Stage 2	-	-	-	-	-	-	937	844	-	922	818	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1542	-	-	1528	-	-	784	742	1004	812	735	1006
Mov Cap-2 Maneuver	-	-	-	-	-	-	784	742	-	812	735	-
Stage 1	-	-	-	-	-	-	919	820	-	947	847	-
Stage 2	-	-	-	-	-	-	908	844	-	905	811	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0	9.7	9.3
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	786	1542	-	-	1528	-	-	881
HCM Lane V/C Ratio	0.03	0.007	-	-	-	-	-	0.04
HCM Control Delay (s)	9.7	7.4	0	-	0	-	-	9.3
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	5.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	22	64	20	43	22	1	10	32	23	7	30	8
Future Vol, veh/h	22	64	20	43	22	1	10	32	23	7	30	8
Conflicting Peds, #/hr	5	0	0	0	0	5	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	72	22	48	25	1	11	36	26	8	34	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	31	0	0	94	0	0	277	260	83	291	271	32
Stage 1	-	-	-	-	-	-	133	133	-	127	127	-
Stage 2	-	-	-	-	-	-	144	127	-	164	144	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1582	-	-	1500	-	-	675	645	976	661	636	1042
Stage 1	-	-	-	-	-	-	870	786	-	877	791	-
Stage 2	-	-	-	-	-	-	859	791	-	838	778	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1574	-	-	1500	-	-	616	611	976	589	602	1036
Mov Cap-2 Maneuver	-	-	-	-	-	-	616	611	-	589	602	-
Stage 1	-	-	-	-	-	-	855	773	-	858	762	-
Stage 2	-	-	-	-	-	-	787	762	-	765	765	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.5	4.9	10.7	11
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	705	1574	-	-	1500	-	-	648
HCM Lane V/C Ratio	0.104	0.016	-	-	0.032	-	-	0.078
HCM Control Delay (s)	10.7	7.3	0	-	7.5	0	-	11
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0.1	-	-	0.3

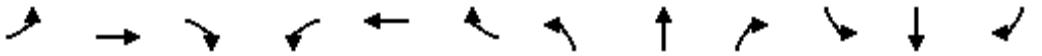
Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	19	102	83	6	8	20
Future Vol, veh/h	19	102	83	6	8	20
Conflicting Peds, #/hr	1	0	0	1	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	120	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	116	94	7	9	23

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	102	0	-	0	259	99
Stage 1	-	-	-	-	99	-
Stage 2	-	-	-	-	160	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1490	-	-	-	730	957
Stage 1	-	-	-	-	925	-
Stage 2	-	-	-	-	869	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1489	-	-	-	717	956
Mov Cap-2 Maneuver	-	-	-	-	717	-
Stage 1	-	-	-	-	909	-
Stage 2	-	-	-	-	868	-

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1489	-	-	-	717	956
HCM Lane V/C Ratio	0.015	-	-	-	0.013	0.024
HCM Control Delay (s)	7.5	0	-	-	10.1	8.9
HCM Lane LOS	A	A	-	-	B	A
HCM 95th %tile Q(veh)	0	-	-	-	0	0.1



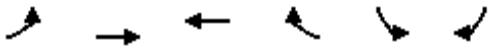
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	94	151	8	76	277	144	0	0	0	64	48	126
Future Volume (vph)	94	151	8	76	277	144	0	0	0	64	48	126
Lane Util. Factor	1.00	0.95	0.95	0.97	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		0.98	0.99						1.00	0.97
Frt		0.992			0.949							0.850
Flt Protected	0.950			0.950							0.972	
Satd. Flow (prot)	1770	3507	0	3433	3331	0	0	0	0	0	1811	1583
Flt Permitted	0.493			0.950							0.972	
Satd. Flow (perm)	917	3507	0	3373	3331	0	0	0	0	0	1805	1537
Satd. Flow (RTOR)		7			122							134
Confl. Peds. (#/hr)	3		9	9		3	14		4	4		14
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	100	170	0	81	448	0	0	0	0	0	119	134
Turn Type	pm+pt	NA		Prot	NA					Split	NA	Perm
Protected Phases	1	2		1	2					4	4	
Permitted Phases	2											4
Detector Phase	1	2		1	2					4	4	4
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0					7.0	7.0	7.0
Minimum Split (s)	9.0	15.5		9.0	15.5					12.0	12.0	12.0
Total Split (s)	23.0	40.0		23.0	40.0					26.0	26.0	26.0
Total Split (%)	25.8%	44.9%		25.8%	44.9%					29.2%	29.2%	29.2%
Maximum Green (s)	18.0	34.5		18.0	34.5					21.0	21.0	21.0
Yellow Time (s)	4.0	4.0		4.0	4.0					4.0	4.0	4.0
All-Red Time (s)	1.0	1.5		1.0	1.5					1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0						0.0	0.0
Total Lost Time (s)	5.0	5.5		5.0	5.5						5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	2.0	2.0		2.0	2.0					2.0	2.0	2.0
Recall Mode	None	C-Max		None	C-Max					None	None	None
Act Effct Green (s)	64.5	58.5		6.5	58.5						10.5	10.5
Actuated g/C Ratio	0.72	0.66		0.07	0.66						0.12	0.12
v/c Ratio	0.14	0.07		0.32	0.20						0.56	0.45
Control Delay	3.5	6.7		42.1	5.4						46.7	11.5
Queue Delay	0.0	0.0		0.0	0.4						0.0	0.0
Total Delay	3.5	6.7		42.1	5.9						46.7	11.5
LOS	A	A		D	A						D	B
Approach Delay		5.5			11.4						28.1	
Approach LOS		A			B						C	
Queue Length 50th (ft)	10	16		22	34						64	0
Queue Length 95th (ft)	27	34		44	66						113	49
Internal Link Dist (ft)		516			188			218			576	
Turn Bay Length (ft)	50											65
Base Capacity (vph)	878	2305		694	2229						427	465
Starvation Cap Reductn	0	0		0	1259						0	0
Spillback Cap Reductn	0	0		0	0						0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0						0	0
Reduced v/c Ratio	0.11	0.07		0.12	0.46						0.28	0.29

Intersection Summary	
Cycle Length: 89	
Actuated Cycle Length: 89	
Offset: 0 (0%), Referenced to phase 2:EBWB, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 13.9	Intersection LOS: B
Intersection Capacity Utilization 43.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: Central Street & Summit Hill Drive

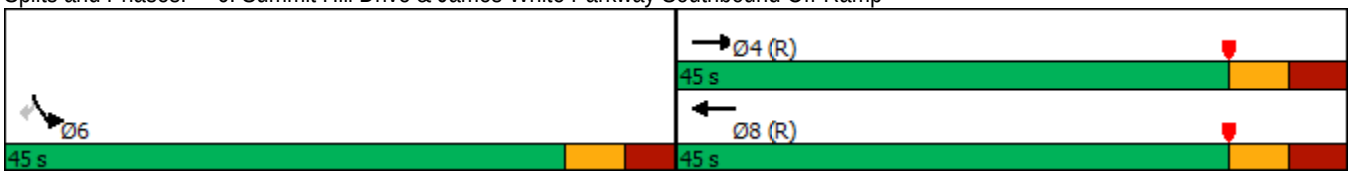


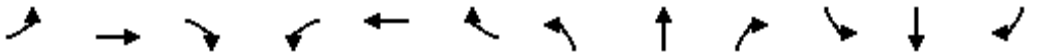


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	216	240	0	148	257
Future Volume (vph)	0	216	240	0	148	257
Lane Util. Factor	1.00	0.91	0.95	1.00	1.00	0.88
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	5085	3539	0	1770	2787
Flt Permitted					0.950	
Satd. Flow (perm)	0	5085	3539	0	1770	2787
Satd. Flow (RTOR)						273
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	230	255	0	157	273
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		10.0	10.0		7.0	7.0
Minimum Split (s)		18.0	18.0		14.5	14.5
Total Split (s)		45.0	45.0		45.0	45.0
Total Split (%)		50.0%	50.0%		50.0%	50.0%
Maximum Green (s)		37.0	37.0		37.5	37.5
Yellow Time (s)		4.0	4.0		4.0	4.0
All-Red Time (s)		4.0	4.0		3.5	3.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0
Total Lost Time (s)		8.0	8.0		7.5	7.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		5.0	2.0		5.0	5.0
Recall Mode		C-Max	C-Max		None	None
Act Effct Green (s)		58.8	58.8		15.7	15.7
Actuated g/C Ratio		0.65	0.65		0.17	0.17
v/c Ratio		0.07	0.11		0.51	0.38
Control Delay		6.4	6.7		38.5	5.4
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		6.4	6.7		38.5	5.4
LOS		A	A		D	A
Approach Delay		6.4	6.7		17.5	
Approach LOS		A	A		B	
Queue Length 50th (ft)		15	24		82	0
Queue Length 95th (ft)		30	48		130	32
Internal Link Dist (ft)		188	373		516	
Turn Bay Length (ft)						250
Base Capacity (vph)		3319	2310		737	1320
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.07	0.11		0.21	0.21

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 52 (58%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay: 11.7	Intersection LOS: B
Intersection Capacity Utilization 30.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Summit Hill Drive & James White Parkway Southbound Off-Ramp



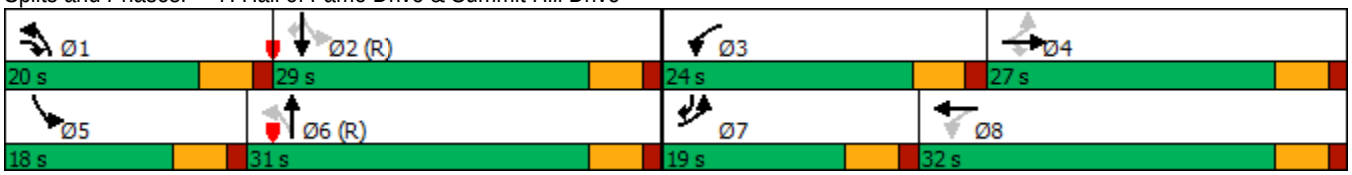


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	194	121	162	125	120	24	112	43	72	128	89
Future Volume (vph)	52	194	121	162	125	120	24	112	43	72	128	89
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00				0.99			1.00		1.00		
Frt			0.850		0.926			0.958				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3247	0	1770	3378	0	1770	3539	1583
Flt Permitted	0.594			0.416			0.668			0.648		
Satd. Flow (perm)	1102	3539	1583	775	3247	0	1244	3378	0	1206	3539	1583
Satd. Flow (RTOR)			126		125			45				93
Confl. Peds. (#/hr)	6					6			1	1		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	202	126	169	255	0	25	162	0	75	133	93
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	7	4	1	3	8		1	6		5	2	7
Permitted Phases	4		4	8			6			2		2
Detector Phase	7	4	1	3	8		1	6		5	2	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0		5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5		10.5	15.5	10.5
Total Split (s)	19.0	27.0	20.0	24.0	32.0		20.0	31.0		18.0	29.0	19.0
Total Split (%)	19.0%	27.0%	20.0%	24.0%	32.0%		20.0%	31.0%		18.0%	29.0%	19.0%
Maximum Green (s)	13.5	21.5	14.5	18.5	26.5		14.5	25.5		12.5	23.5	13.5
Yellow Time (s)	4.0	4.0	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	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		2.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	None
Act Effct Green (s)	16.9	10.1	20.9	27.7	17.7		55.6	51.3		56.7	50.3	62.6
Actuated g/C Ratio	0.17	0.10	0.21	0.28	0.18		0.56	0.51		0.57	0.50	0.63
v/c Ratio	0.23	0.57	0.29	0.50	0.38		0.03	0.09		0.10	0.07	0.09
Control Delay	27.8	48.9	7.5	32.9	19.7		15.2	18.8		8.7	13.2	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	27.8	48.9	7.5	32.9	19.7		15.2	18.8		8.7	13.2	2.1
LOS	C	D	A	C	B		B	B		A	B	A
Approach Delay		32.3			25.0			18.3			8.6	
Approach LOS		C			C			B			A	
Queue Length 50th (ft)	26	65	0	86	38		9	30		15	24	0
Queue Length 95th (ft)	50	99	44	128	71		28	58		33	44	5
Internal Link Dist (ft)		373			335			424			335	
Turn Bay Length (ft)				165			230			165		60
Base Capacity (vph)	349	760	564	400	952		836	1755		807	1780	1125
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.15	0.27	0.22	0.42	0.27		0.03	0.09		0.09	0.07	0.08

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 50 (50%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 22.4	Intersection LOS: C
Intersection Capacity Utilization 45.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: Hall of Fame Drive & Summit Hill Drive



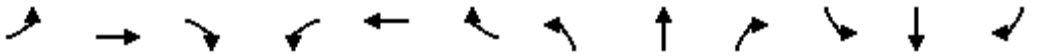
Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	72	239	329	30	41	55
Future Vol, veh/h	72	239	329	30	41	55
Conflicting Peds, #/hr	6	0	0	6	5	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	74	246	339	31	42	57

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	376	0	-	0	637	192
Stage 1	-	-	-	-	361	-
Stage 2	-	-	-	-	276	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1179	-	-	-	410	817
Stage 1	-	-	-	-	676	-
Stage 2	-	-	-	-	746	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1172	-	-	-	380	812
Mov Cap-2 Maneuver	-	-	-	-	380	-
Stage 1	-	-	-	-	629	-
Stage 2	-	-	-	-	742	-

Approach	EB	WB	SB
HCM Control Delay, s	1.9	0	9.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1172	-	-	-	890
HCM Lane V/C Ratio	0.063	-	-	-	0.111
HCM Control Delay (s)	8.3	-	-	-	9.6
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.2	-	-	-	0.4

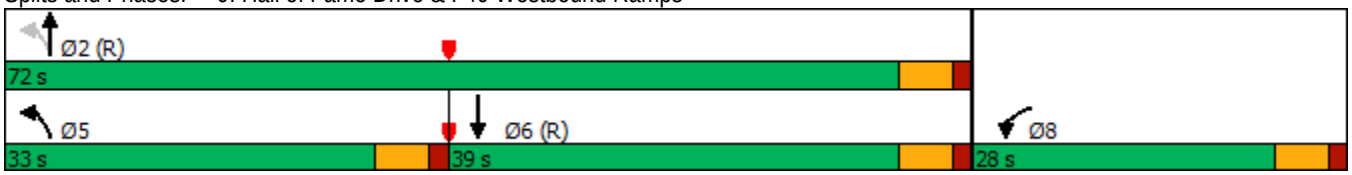


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	97	0	71	241	427	0	0	244	263
Future Volume (vph)	0	0	0	97	0	71	241	427	0	0	244	263
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor							1.00				0.99	
Frt						0.850					0.922	
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	0	0	3433	0	1583	1770	3539	0	0	3227	0
Flt Permitted				0.950			0.426					
Satd. Flow (perm)	0	0	0	3433	0	1583	793	3539	0	0	3227	0
Satd. Flow (RTOR)						147					268	
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	99	0	72	246	436	0	0	517	0
Turn Type				Prot		Free	pm+pt	NA			NA	
Protected Phases				8			5	2			6	
Permitted Phases						Free	2					
Detector Phase				8			5	2			6	
Switch Phase												
Minimum Initial (s)				5.0			5.0	10.0			10.0	
Minimum Split (s)				10.5			10.5	15.5			15.5	
Total Split (s)				28.0			33.0	72.0			39.0	
Total Split (%)				28.0%			33.0%	72.0%			39.0%	
Maximum Green (s)				22.5			27.5	66.5			33.5	
Yellow Time (s)				4.0			4.0	4.0			4.0	
All-Red Time (s)				1.5			1.5	1.5			1.5	
Lost Time Adjust (s)				0.0			0.0	0.0			0.0	
Total Lost Time (s)				5.5			5.5	5.5			5.5	
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)				3.0			2.0	2.0			2.0	
Recall Mode				None			None	C-Max			C-Max	
Act Effct Green (s)				8.3		100.0	83.0	84.1			69.9	
Actuated g/C Ratio				0.08		1.00	0.83	0.84			0.70	
v/c Ratio				0.35		0.05	0.34	0.15			0.22	
Control Delay				46.3		0.1	3.5	1.4			3.3	
Queue Delay				0.0		0.0	0.0	0.0			0.0	
Total Delay				46.3		0.1	3.5	1.4			3.3	
LOS				D		A	A	A			A	
Approach Delay					26.8			2.1			3.3	
Approach LOS					C			A			A	
Queue Length 50th (ft)				31		0	34	31			26	
Queue Length 95th (ft)				55		0	11	7			51	
Internal Link Dist (ft)		440			577			562			692	
Turn Bay Length (ft)				475		200	155					
Base Capacity (vph)				772		1583	927	2977			2337	
Starvation Cap Reductn				0		0	0	0			0	
Spillback Cap Reductn				0		0	0	0			0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn				0		0	0	0			0	
Reduced v/c Ratio				0.13		0.05	0.27	0.15			0.22	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 30 (30%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.35	
Intersection Signal Delay: 5.6	Intersection LOS: A
Intersection Capacity Utilization 46.5%	ICU Level of Service A
Analysis Period (min) 15	

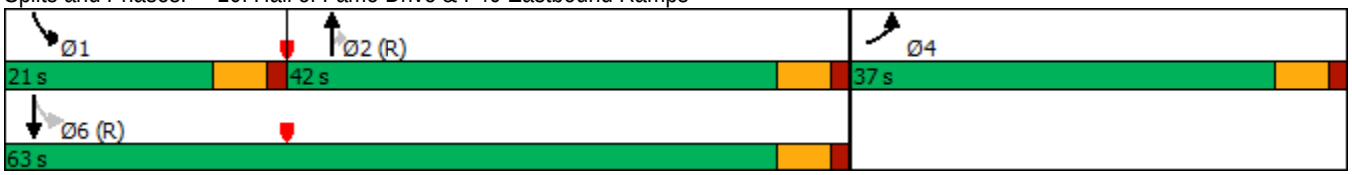
Splits and Phases: 9: Hall of Fame Drive & I-40 Westbound Ramps

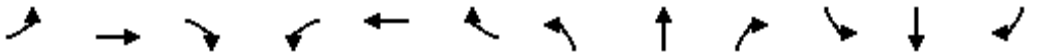


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	211	0	268	0	0	0	0	458	124	41	300	0
Future Volume (vph)	211	0	268	0	0	0	0	458	124	41	300	0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850						0.850			
Flt Protected	0.950									0.950		
Satd. Flow (prot)	3433	0	1583	0	0	0	0	3539	1583	1770	3539	0
Flt Permitted	0.950									0.446		
Satd. Flow (perm)	3433	0	1583	0	0	0	0	3539	1583	831	3539	0
Satd. Flow (RTOR)			276						128			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	218	0	276	0	0	0	0	472	128	42	309	0
Turn Type	Prot		Free					NA	Perm	pm+pt	NA	
Protected Phases	4							2		1	6	
Permitted Phases			Free						2	6		
Detector Phase	4							2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0							10.0	10.0	5.0	10.0	
Minimum Split (s)	22.5							22.5	22.5	10.5	22.5	
Total Split (s)	37.0							42.0	42.0	21.0	63.0	
Total Split (%)	37.0%							42.0%	42.0%	21.0%	63.0%	
Maximum Green (s)	31.5							36.5	36.5	15.5	57.5	
Yellow Time (s)	4.0							4.0	4.0	4.0	4.0	
All-Red Time (s)	1.5							1.5	1.5	1.5	1.5	
Lost Time Adjust (s)	0.0							0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5							5.5	5.5	5.5	5.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	2.0							2.0	2.0	2.0	2.0	
Recall Mode	None							C-Max	C-Max	None	C-Max	
Act Effct Green (s)	11.4		100.0					71.1	71.1	77.6	77.6	
Actuated g/C Ratio	0.11		1.00					0.71	0.71	0.78	0.78	
v/c Ratio	0.56		0.17					0.19	0.11	0.06	0.11	
Control Delay	47.4		0.2					4.3	1.0	1.3	1.5	
Queue Delay	0.0		0.0					0.0	0.0	0.0	0.0	
Total Delay	47.4		0.2					4.3	1.0	1.3	1.5	
LOS	D		A					A	A	A	A	
Approach Delay		21.0						3.6			1.4	
Approach LOS		C						A			A	
Queue Length 50th (ft)	69		0					38	0	2	7	
Queue Length 95th (ft)	103		0					67	0	4	10	
Internal Link Dist (ft)		686			892			546			562	
Turn Bay Length (ft)	200		210						290	190		
Base Capacity (vph)	1081		1583					2515	1162	790	2746	
Starvation Cap Reductn	0		0					0	0	0	0	
Spillback Cap Reductn	0		0					0	0	0	0	
Storage Cap Reductn	0		0					0	0	0	0	
Reduced v/c Ratio	0.20		0.17					0.19	0.11	0.05	0.11	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 50 (50%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 9.0	Intersection LOS: A
Intersection Capacity Utilization 46.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 10: Hall of Fame Drive & I-40 Eastbound Ramps



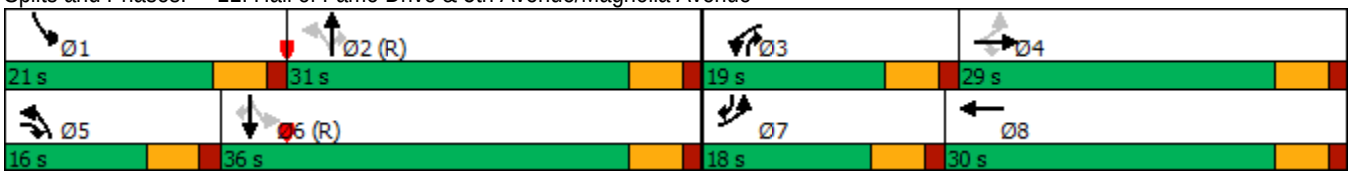


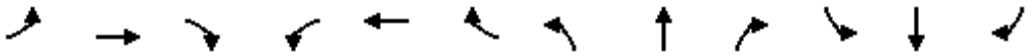
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	168	17	64	166	148	24	230	70	170	223	50
Future Volume (vph)	59	168	17	64	166	148	24	230	70	170	223	50
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor							1.00		0.99	1.00		0.99
Frt			0.850		0.929				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3288	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.331			0.950			0.603			0.539		
Satd. Flow (perm)	617	3539	1583	3433	3288	0	1123	3539	1563	1004	3539	1563
Satd. Flow (RTOR)			87		159				87			87
Confl. Peds. (#/hr)							1		1	1		1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	63	181	18	69	337	0	26	247	75	183	240	54
Turn Type	pm+pt	NA	pm+ov	Prot	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4				2		2	6		6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0	5.0	5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5	10.5	10.5	15.5	10.5
Total Split (s)	18.0	29.0	16.0	19.0	30.0		16.0	31.0	19.0	21.0	36.0	18.0
Total Split (%)	18.0%	29.0%	16.0%	19.0%	30.0%		16.0%	31.0%	19.0%	21.0%	36.0%	18.0%
Maximum Green (s)	12.5	23.5	10.5	13.5	24.5		10.5	25.5	13.5	15.5	30.5	12.5
Yellow Time (s)	4.0	4.0	4.0	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	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	None	None	C-Max	None
Act Effct Green (s)	19.3	12.1	23.7	7.4	11.2		57.0	50.9	58.3	65.7	59.0	67.3
Actuated g/C Ratio	0.19	0.12	0.24	0.07	0.11		0.57	0.51	0.58	0.66	0.59	0.67
v/c Ratio	0.29	0.42	0.04	0.27	0.66		0.04	0.14	0.08	0.25	0.11	0.05
Control Delay	30.9	42.9	0.2	46.0	28.3		5.3	10.4	1.8	7.9	11.3	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.9	42.9	0.2	46.0	28.3		5.3	10.4	1.8	7.9	11.3	1.3
LOS	C	D	A	D	C		A	B	A	A	B	A
Approach Delay		37.1			31.3			8.2			8.9	
Approach LOS		D			C			A			A	
Queue Length 50th (ft)	31	57	0	21	57		3	33	0	35	44	0
Queue Length 95th (ft)	59	86	0	42	98		9	78	6	98	72	6
Internal Link Dist (ft)		674			634			359			1142	
Turn Bay Length (ft)	245		35	295			230		245	175		175
Base Capacity (vph)	286	831	507	463	925		757	1801	1040	783	2088	1145
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.22	0.04	0.15	0.36		0.03	0.14	0.07	0.23	0.11	0.05

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 50 (50%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 19.8	Intersection LOS: B
Intersection Capacity Utilization 49.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 11: Hall of Fame Drive & 5th Avenue/Magnolia Avenue



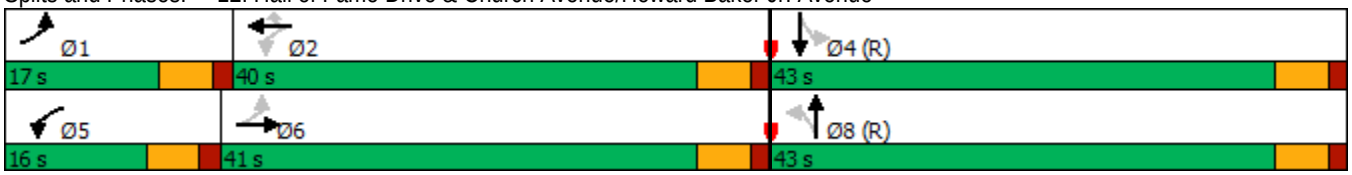


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	36	12	6	26	42	12	90	17	32	101	24
Future Volume (vph)	61	36	12	6	26	42	12	90	17	32	101	24
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor	0.99	1.00		1.00		0.98						
Frt		0.963				0.850		0.978			0.977	
Flt Protected	0.950			0.950				0.995			0.990	
Satd. Flow (prot)	1770	1787	0	1770	1863	1583	0	3444	0	0	3423	0
Flt Permitted	0.461			0.725				0.931			0.888	
Satd. Flow (perm)	851	1787	0	1348	1863	1545	0	3223	0	0	3071	0
Satd. Flow (RTOR)		12				87		18			24	
Confl. Peds. (#/hr)	14		3	3		14						
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	63	49	0	6	27	43	0	123	0	0	162	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6			2		2	8			4		
Detector Phase	1	6		5	2	2	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0	7.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	10.5	22.5		10.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	17.0	41.0		16.0	40.0	40.0	43.0	43.0		43.0	43.0	
Total Split (%)	17.0%	41.0%		16.0%	40.0%	40.0%	43.0%	43.0%		43.0%	43.0%	
Maximum Green (s)	11.5	35.5		10.5	34.5	34.5	37.5	37.5		37.5	37.5	
Yellow Time (s)	4.0	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	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5	5.5		5.5			5.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)	17.7	16.0		10.9	7.2	7.2		74.4			74.4	
Actuated g/C Ratio	0.18	0.16		0.11	0.07	0.07		0.74			0.74	
v/c Ratio	0.29	0.17		0.04	0.20	0.22		0.05			0.07	
Control Delay	35.6	30.1		31.2	47.3	3.8		4.6			3.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Delay	35.6	30.1		31.2	47.3	3.8		4.6			3.3	
LOS	D	C		C	D	A		A			A	
Approach Delay		33.2			21.4			4.6			3.3	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)	34	19		3	17	0		10			12	
Queue Length 95th (ft)	67	56		13	43	6		21			22	
Internal Link Dist (ft)		488			887			548			1120	
Turn Bay Length (ft)	60			130								
Base Capacity (vph)	268	642		264	642	590		2401			2290	
Starvation Cap Reductn	0	0		0	0	0		0			0	
Spillback Cap Reductn	0	0		0	0	0		0			0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0	0		0			0	
Reduced v/c Ratio	0.24	0.08		0.02	0.04	0.07		0.05			0.07	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 4 (4%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.29	
Intersection Signal Delay: 13.6	Intersection LOS: B
Intersection Capacity Utilization 32.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 12: Hall of Fame Drive & Church Avenue/Howard Baker Jr. Avenue



Intersection	
Int Delay, s/veh	2.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	68	42	11	65	37	19
Future Vol, veh/h	68	42	11	65	37	19
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	75	46	12	71	41	21

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	122	0	194	99
Stage 1	-	-	-	-	99	-
Stage 2	-	-	-	-	95	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1465	-	795	957
Stage 1	-	-	-	-	925	-
Stage 2	-	-	-	-	929	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1464	-	787	956
Mov Cap-2 Maneuver	-	-	-	-	787	-
Stage 1	-	-	-	-	916	-
Stage 2	-	-	-	-	929	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	837	-	-	1464	-
HCM Lane V/C Ratio	0.074	-	-	0.008	-
HCM Control Delay (s)	9.6	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	14	43	28	5	46	7	7	13	0	1	1	2
Future Vol, veh/h	14	43	28	5	46	7	7	13	0	1	1	2
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	53	35	6	57	9	9	16	0	1	1	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	66	0	0	89	0	0	181	184	72	187	197	62
Stage 1	-	-	-	-	-	-	106	106	-	74	74	-
Stage 2	-	-	-	-	-	-	75	78	-	113	123	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1536	-	-	1506	-	-	781	710	990	774	699	1003
Stage 1	-	-	-	-	-	-	900	807	-	935	833	-
Stage 2	-	-	-	-	-	-	934	830	-	892	794	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1536	-	-	1505	-	-	768	698	989	752	687	1003
Mov Cap-2 Maneuver	-	-	-	-	-	-	768	698	-	752	687	-
Stage 1	-	-	-	-	-	-	888	797	-	924	830	-
Stage 2	-	-	-	-	-	-	927	827	-	864	784	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.2	0.6	10.2	9.3
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	721	1536	-	-	1505	-	-	837
HCM Lane V/C Ratio	0.034	0.011	-	-	0.004	-	-	0.006
HCM Control Delay (s)	10.2	7.4	0	-	7.4	0	-	9.3
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	6.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	11	70	30	77	41	4	17	41	29	1	48	10
Future Vol, veh/h	11	70	30	77	41	4	17	41	29	1	48	10
Conflicting Peds, #/hr	0	0	0	0	0	0	2	0	0	0	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	85	37	94	50	5	21	50	35	1	59	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	55	0	0	122	0	0	408	373	104	413	389	55
Stage 1	-	-	-	-	-	-	130	130	-	241	241	-
Stage 2	-	-	-	-	-	-	278	243	-	172	148	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1550	-	-	1465	-	-	554	557	951	549	546	1012
Stage 1	-	-	-	-	-	-	874	789	-	762	706	-
Stage 2	-	-	-	-	-	-	728	705	-	830	775	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1550	-	-	1465	-	-	470	516	951	462	506	1010
Mov Cap-2 Maneuver	-	-	-	-	-	-	470	516	-	462	506	-
Stage 1	-	-	-	-	-	-	866	782	-	755	659	-
Stage 2	-	-	-	-	-	-	611	658	-	741	768	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	4.8	12.4	12.5
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	595	1550	-	-	1465	-	-	552
HCM Lane V/C Ratio	0.178	0.009	-	-	0.064	-	-	0.13
HCM Control Delay (s)	12.4	7.3	0	-	7.6	0	-	12.5
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.6	0	-	-	0.2	-	-	0.4

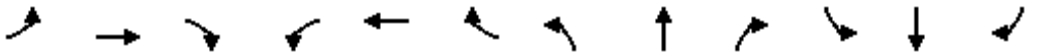
Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	85	92	7	2	34
Future Vol, veh/h	12	85	92	7	2	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	120	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	94	102	8	2	38

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	110	0	-	0	226	106
Stage 1	-	-	-	-	106	-
Stage 2	-	-	-	-	120	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1480	-	-	-	762	948
Stage 1	-	-	-	-	918	-
Stage 2	-	-	-	-	905	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1480	-	-	-	755	948
Mov Cap-2 Maneuver	-	-	-	-	755	-
Stage 1	-	-	-	-	910	-
Stage 2	-	-	-	-	905	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1480	-	-	-	755	948
HCM Lane V/C Ratio	0.009	-	-	-	0.003	0.04
HCM Control Delay (s)	7.5	0	-	-	9.8	9
HCM Lane LOS	A	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	0	0.1



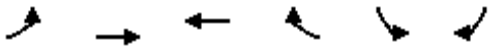
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	322	14	103	287	130	0	0	0	70	44	98
Future Volume (vph)	100	322	14	103	287	130	0	0	0	70	44	98
Lane Util. Factor	1.00	0.95	0.95	0.97	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		0.97	0.99						1.00	0.97
Frt		0.994			0.953							0.850
Flt Protected	0.950			0.950							0.970	
Satd. Flow (prot)	1770	3516	0	3433	3342	0	0	0	0	0	1807	1583
Flt Permitted	0.495			0.950							0.970	
Satd. Flow (perm)	918	3516	0	3340	3342	0	0	0	0	0	1802	1535
Satd. Flow (RTOR)		6			106							104
Confl. Peds. (#/hr)	10		8	8		10				4		16
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	106	358	0	110	443	0	0	0	0	0	121	104
Turn Type	pm+pt	NA		Prot	NA					Split	NA	Perm
Protected Phases	1	2		1	2					4	4	
Permitted Phases	2											4
Detector Phase	1	2		1	2					4	4	4
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0					7.0	7.0	7.0
Minimum Split (s)	9.0	15.5		9.0	15.5					12.0	12.0	12.0
Total Split (s)	14.0	56.0		14.0	56.0					30.0	30.0	30.0
Total Split (%)	14.0%	56.0%		14.0%	56.0%					30.0%	30.0%	30.0%
Maximum Green (s)	9.0	50.5		9.0	50.5					25.0	25.0	25.0
Yellow Time (s)	4.0	4.0		4.0	4.0					4.0	4.0	4.0
All-Red Time (s)	1.0	1.5		1.0	1.5					1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0						0.0	0.0
Total Lost Time (s)	5.0	5.5		5.0	5.5						5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	2.0	2.0		2.0	2.0					2.0	2.0	2.0
Recall Mode	None	C-Max		None	C-Max					None	None	None
Act Effct Green (s)	73.8	65.7		7.6	65.7						11.2	11.2
Actuated g/C Ratio	0.74	0.66		0.08	0.66						0.11	0.11
v/c Ratio	0.14	0.15		0.42	0.20						0.60	0.39
Control Delay	3.4	7.3		49.7	4.7						53.9	12.4
Queue Delay	0.0	0.0		0.0	0.3						0.0	0.0
Total Delay	3.4	7.3		49.7	4.9						53.9	12.4
LOS	A	A		D	A						D	B
Approach Delay		6.4			13.8						34.7	
Approach LOS		A			B						C	
Queue Length 50th (ft)	12	40		35	37						75	0
Queue Length 95th (ft)	29	72		63	44						127	46
Internal Link Dist (ft)		516			188			218			576	
Turn Bay Length (ft)	50											65
Base Capacity (vph)	769	2311		314	2231						451	461
Starvation Cap Reductn	0	0		0	1145						0	0
Spillback Cap Reductn	0	0		0	0						0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0						0	0
Reduced v/c Ratio	0.14	0.15		0.35	0.41						0.27	0.23

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 17 (17%), Referenced to phase 2:EBWB, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 14.8	Intersection LOS: B
Intersection Capacity Utilization 37.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: Central Street & Summit Hill Drive

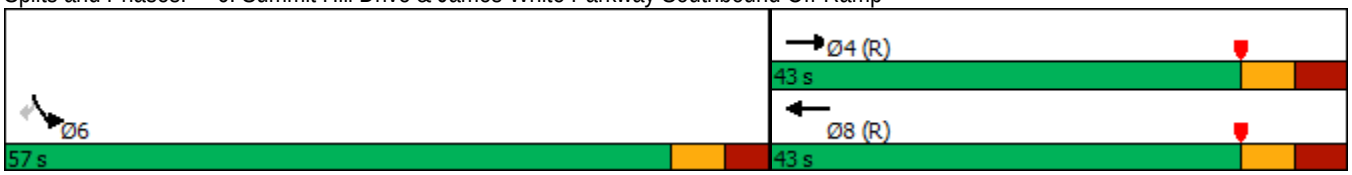




Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	389	173	0	229	356
Future Volume (vph)	0	389	173	0	229	356
Lane Util. Factor	1.00	0.91	0.95	1.00	1.00	0.88
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	5085	3539	0	1770	2787
Flt Permitted					0.950	
Satd. Flow (perm)	0	5085	3539	0	1770	2787
Satd. Flow (RTOR)						387
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	423	188	0	249	387
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		10.0	10.0		7.0	7.0
Minimum Split (s)		18.0	18.0		14.5	14.5
Total Split (s)		43.0	43.0		57.0	57.0
Total Split (%)		43.0%	43.0%		57.0%	57.0%
Maximum Green (s)		35.0	35.0		49.5	49.5
Yellow Time (s)		4.0	4.0		4.0	4.0
All-Red Time (s)		4.0	4.0		3.5	3.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0
Total Lost Time (s)		8.0	8.0		7.5	7.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		5.0	2.0		5.0	5.0
Recall Mode		C-Max	C-Max		None	None
Act Effct Green (s)		61.3	61.3		23.2	23.2
Actuated g/C Ratio		0.61	0.61		0.23	0.23
v/c Ratio		0.14	0.09		0.61	0.41
Control Delay		12.9	9.0		39.7	4.1
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		12.9	9.0		39.7	4.1
LOS		B	A		D	A
Approach Delay		12.9	9.0		18.0	
Approach LOS		B	A		B	
Queue Length 50th (ft)		54	18		142	0
Queue Length 95th (ft)		84	45		199	35
Internal Link Dist (ft)		188	373		516	
Turn Bay Length (ft)						250
Base Capacity (vph)		3116	2168		876	1575
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.14	0.09		0.28	0.25

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 47 (47%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 14.9	Intersection LOS: B
Intersection Capacity Utilization 33.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Summit Hill Drive & James White Parkway Southbound Off-Ramp

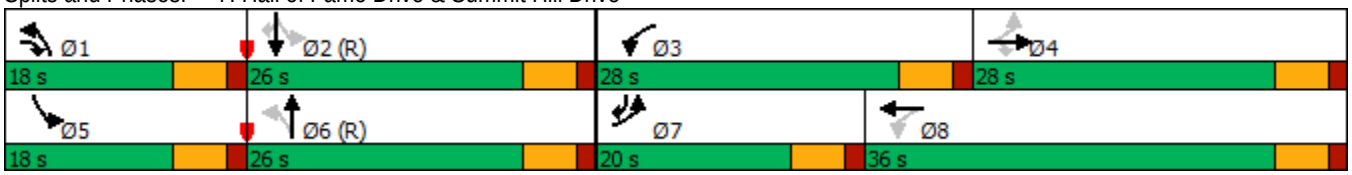


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	83	234	296	233	110	168	23	181	61	152	145	66
Future Volume (vph)	83	234	296	233	110	168	23	181	61	152	145	66
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor							1.00					0.99
Frt			0.850		0.909			0.962				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3217	0	1770	3405	0	1770	3539	1583
Flt Permitted	0.567			0.366			0.652			0.535		
Satd. Flow (perm)	1056	3539	1583	682	3217	0	1213	3405	0	997	3539	1562
Satd. Flow (RTOR)			322		183			42				147
Confl. Peds. (#/hr)							2					2
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
Shared Lane Traffic (%)												
Lane Group Flow (vph)	90	254	322	253	303	0	25	263	0	165	158	72
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	7	4	1	3	8		1	6		5	2	7
Permitted Phases	4		4	8			6			2		2
Detector Phase	7	4	1	3	8		1	6		5	2	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0		5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5		10.5	15.5	10.5
Total Split (s)	20.0	28.0	18.0	28.0	36.0		18.0	26.0		18.0	26.0	20.0
Total Split (%)	20.0%	28.0%	18.0%	28.0%	36.0%		18.0%	26.0%		18.0%	26.0%	20.0%
Maximum Green (s)	14.5	22.5	12.5	22.5	30.5		12.5	20.5		12.5	20.5	14.5
Yellow Time (s)	4.0	4.0	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	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		2.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	None
Act Effct Green (s)	19.5	11.6	22.5	33.3	22.0		46.3	40.9		53.8	44.8	52.7
Actuated g/C Ratio	0.20	0.12	0.22	0.33	0.22		0.46	0.41		0.54	0.45	0.53
v/c Ratio	0.34	0.62	0.53	0.63	0.36		0.04	0.19		0.27	0.10	0.08
Control Delay	19.3	37.9	11.6	32.2	14.0		10.2	15.5		9.1	10.3	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	19.3	37.9	11.6	32.2	14.0		10.2	15.5		9.1	10.3	0.2
LOS	B	D	B	C	B		B	B		A	B	A
Approach Delay		22.7			22.3			15.0			8.0	
Approach LOS		C			C			B			A	
Queue Length 50th (ft)	34	87	84	124	33		5	47		24	12	0
Queue Length 95th (ft)	51	127	153	169	66		21	86		40	21	0
Internal Link Dist (ft)		373			335			424			335	
Turn Bay Length (ft)				165			230			165		60
Base Capacity (vph)	379	796	695	471	1108		714	1416		654	1586	989
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.24	0.32	0.46	0.54	0.27		0.04	0.19		0.25	0.10	0.07

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 56 (56%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 18.4	Intersection LOS: B
Intersection Capacity Utilization 54.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: Hall of Fame Drive & Summit Hill Drive



Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	72	379	446	23	74	100
Future Vol, veh/h	72	379	446	23	74	100
Conflicting Peds, #/hr	2	0	0	2	0	6
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	77	403	474	24	79	106

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	500	0	-	0	844	257
Stage 1	-	-	-	-	488	-
Stage 2	-	-	-	-	356	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1060	-	-	-	302	742
Stage 1	-	-	-	-	583	-
Stage 2	-	-	-	-	680	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1058	-	-	-	279	736
Mov Cap-2 Maneuver	-	-	-	-	279	-
Stage 1	-	-	-	-	539	-
Stage 2	-	-	-	-	679	-

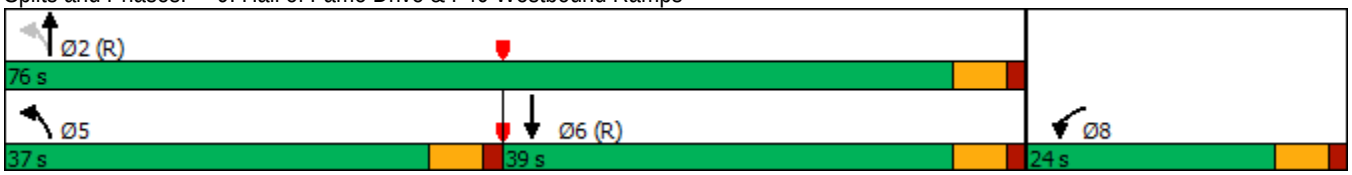
Approach	EB	WB	SB
HCM Control Delay, s	1.4	0	12.6
HCM LOS			B

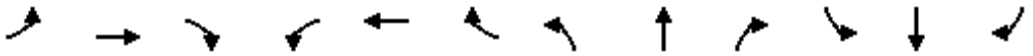
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1058	-	-	-	656
HCM Lane V/C Ratio	0.072	-	-	-	0.282
HCM Control Delay (s)	8.7	-	-	-	12.6
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	1.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	73	0	130	364	709	0	0	318	353
Future Volume (vph)	0	0	0	73	0	130	364	709	0	0	318	353
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt						0.850					0.921	
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	0	0	3433	0	1583	1770	3539	0	0	3260	0
Flt Permitted				0.950			0.310					
Satd. Flow (perm)	0	0	0	3433	0	1583	577	3539	0	0	3260	0
Satd. Flow (RTOR)						147					303	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	82	0	146	409	797	0	0	754	0
Turn Type				Prot		Free	pm+pt	NA			NA	
Protected Phases				8			5	2			6	
Permitted Phases						Free	2					
Detector Phase				8			5	2			6	
Switch Phase												
Minimum Initial (s)				5.0			5.0	10.0			10.0	
Minimum Split (s)				10.5			10.5	15.5			15.5	
Total Split (s)				24.0			37.0	76.0			39.0	
Total Split (%)				24.0%			37.0%	76.0%			39.0%	
Maximum Green (s)				18.5			31.5	70.5			33.5	
Yellow Time (s)				4.0			4.0	4.0			4.0	
All-Red Time (s)				1.5			1.5	1.5			1.5	
Lost Time Adjust (s)				0.0			0.0	0.0			0.0	
Total Lost Time (s)				5.5			5.5	5.5			5.5	
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)				3.0			2.0	2.0			2.0	
Recall Mode				None			None	C-Max			C-Max	
Act Effct Green (s)				7.8		100.0	83.5	84.6			64.1	
Actuated g/C Ratio				0.08		1.00	0.84	0.85			0.64	
v/c Ratio				0.31		0.09	0.63	0.27			0.34	
Control Delay				46.1		0.1	10.8	2.3			6.6	
Queue Delay				0.0		0.0	0.0	0.0			0.0	
Total Delay				46.1		0.1	10.8	2.3			6.6	
LOS				D		A	B	A			A	
Approach Delay					16.6			5.2			6.6	
Approach LOS					B			A			A	
Queue Length 50th (ft)				25		0	70	34			60	
Queue Length 95th (ft)				47		0	107	65			130	
Internal Link Dist (ft)		440			577			562			692	
Turn Bay Length (ft)				475		200	155					
Base Capacity (vph)				635		1583	857	2992			2198	
Starvation Cap Reductn				0		0	0	0			0	
Spillback Cap Reductn				0		0	0	0			0	
Storage Cap Reductn				0		0	0	0			0	
Reduced v/c Ratio				0.13		0.09	0.48	0.27			0.34	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 48 (48%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 6.9	Intersection LOS: A
Intersection Capacity Utilization 58.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 9: Hall of Fame Drive & I-40 Westbound Ramps

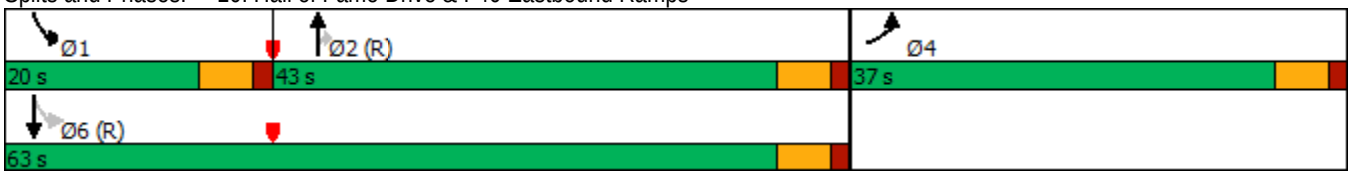




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	400	0	296	0	0	0	0	674	206	82	313	0
Future Volume (vph)	400	0	296	0	0	0	0	674	206	82	313	0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850						0.850			
Flt Protected	0.950									0.950		
Satd. Flow (prot)	3433	0	1583	0	0	0	0	3539	1583	1770	3539	0
Flt Permitted	0.950									0.307		
Satd. Flow (perm)	3433	0	1583	0	0	0	0	3539	1583	572	3539	0
Satd. Flow (RTOR)			329						229			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	444	0	329	0	0	0	0	749	229	91	348	0
Turn Type	Prot		Free					NA	Perm	pm+pt	NA	
Protected Phases	4							2		1	6	
Permitted Phases			Free						2	6		
Detector Phase	4							2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0							10.0	10.0	5.0	10.0	
Minimum Split (s)	22.5							22.5	22.5	10.5	22.5	
Total Split (s)	37.0							43.0	43.0	20.0	63.0	
Total Split (%)	37.0%							43.0%	43.0%	20.0%	63.0%	
Maximum Green (s)	31.5							37.5	37.5	14.5	57.5	
Yellow Time (s)	4.0							4.0	4.0	4.0	4.0	
All-Red Time (s)	1.5							1.5	1.5	1.5	1.5	
Lost Time Adjust (s)	0.0							0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5							5.5	5.5	5.5	5.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	2.0							2.0	2.0	2.0	2.0	
Recall Mode	None							C-Max	C-Max	None	C-Max	
Act Effct Green (s)	17.4		100.0					62.0	62.0	71.6	71.6	
Actuated g/C Ratio	0.17		1.00					0.62	0.62	0.72	0.72	
v/c Ratio	0.74		0.21					0.34	0.21	0.19	0.14	
Control Delay	46.8		0.3					9.1	1.5	4.9	4.0	
Queue Delay	0.0		0.0					0.0	0.0	0.0	0.0	
Total Delay	46.8		0.3					9.1	1.5	4.9	4.0	
LOS	D		A					A	A	A	A	
Approach Delay		27.0						7.3			4.2	
Approach LOS		C						A			A	
Queue Length 50th (ft)	139		0					102	1	12	25	
Queue Length 95th (ft)	181		0					157	5	28	43	
Internal Link Dist (ft)		686			892			546			562	
Turn Bay Length (ft)	200		210						290	190		
Base Capacity (vph)	1081		1583					2193	1068	583	2532	
Starvation Cap Reductn	0		0					0	0	0	0	
Spillback Cap Reductn	0		0					0	0	0	0	
Storage Cap Reductn	0		0					0	0	0	0	
Reduced v/c Ratio	0.41		0.21					0.34	0.21	0.16	0.14	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 20 (20%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 13.6	Intersection LOS: B
Intersection Capacity Utilization 58.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 10: Hall of Fame Drive & I-40 Eastbound Ramps

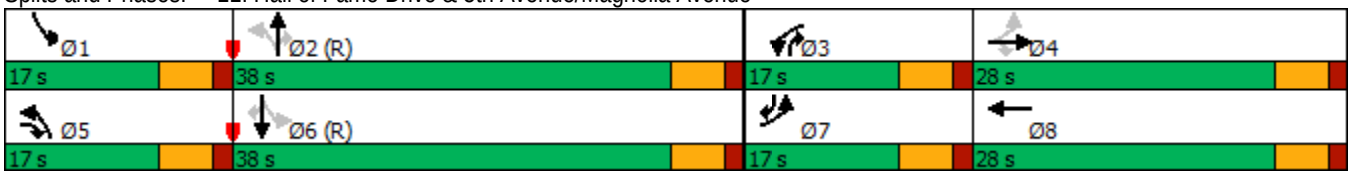


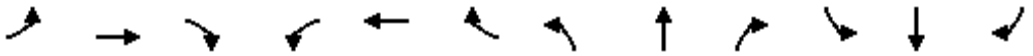
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	247	31	56	180	196	37	326	86	113	280	64
Future Volume (vph)	89	247	31	56	180	196	37	326	86	113	280	64
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.99	0.99			1.00					0.99
Frt			0.850		0.922				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3263	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.240			0.950			0.559			0.487		
Satd. Flow (perm)	447	3539	1562	3413	3263	0	1040	3539	1583	907	3539	1561
Satd. Flow (RTOR)			87		223				98			87
Confl. Peds. (#/hr)			2	2			3					3
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Lane Group Flow (vph)	101	281	35	64	428	0	42	370	98	128	318	73
Turn Type	pm+pt	NA	pm+ov	Prot	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4				2		2	6		6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0	5.0	5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5	10.5	10.5	15.5	10.5
Total Split (s)	17.0	28.0	17.0	17.0	28.0		17.0	38.0	17.0	17.0	38.0	17.0
Total Split (%)	17.0%	28.0%	17.0%	17.0%	28.0%		17.0%	38.0%	17.0%	17.0%	38.0%	17.0%
Maximum Green (s)	11.5	22.5	11.5	11.5	22.5		11.5	32.5	11.5	11.5	32.5	11.5
Yellow Time (s)	4.0	4.0	4.0	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	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	None	None	C-Max	None
Act Effct Green (s)	25.0	16.7	23.3	7.3	12.2		54.0	47.5	60.2	59.3	51.8	61.4
Actuated g/C Ratio	0.25	0.17	0.23	0.07	0.12		0.54	0.48	0.60	0.59	0.52	0.61
v/c Ratio	0.42	0.47	0.08	0.26	0.72		0.07	0.22	0.10	0.21	0.17	0.07
Control Delay	31.8	40.4	0.4	45.9	26.6		7.9	15.9	4.5	8.4	13.3	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.8	40.4	0.4	45.9	26.6		7.9	15.9	4.5	8.4	13.3	2.5
LOS	C	D	A	D	C		A	B	A	A	B	A
Approach Delay		35.0			29.1			13.1			10.6	
Approach LOS		C			C			B			B	
Queue Length 50th (ft)	49	88	0	20	65		10	66	0	32	56	0
Queue Length 95th (ft)	80	118	0	39	105		18	115	18	60	87	13
Internal Link Dist (ft)		674			634			359			1142	
Turn Bay Length (ft)	245		35	295			230		245	175		175
Base Capacity (vph)	268	796	506	394	907		697	1679	1055	653	1834	1022
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.35	0.07	0.16	0.47		0.06	0.22	0.09	0.20	0.17	0.07

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 12 (12%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 21.2	Intersection LOS: C
Intersection Capacity Utilization 49.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 11: Hall of Fame Drive & 5th Avenue/Magnolia Avenue



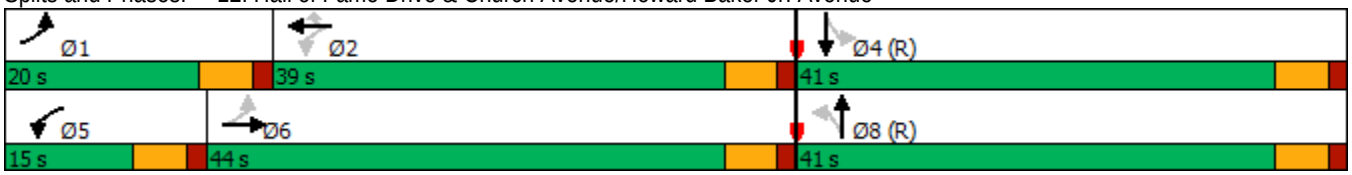


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	102	80	35	13	44	126	11	143	17	62	104	30
Future Volume (vph)	102	80	35	13	44	126	11	143	17	62	104	30
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor	0.97	0.99		0.99		0.93		1.00			1.00	
Frt		0.954				0.850		0.985			0.977	
Flt Protected	0.950			0.950				0.997			0.984	
Satd. Flow (prot)	1770	1767	0	1770	1863	1583	0	3476	0	0	3391	0
Flt Permitted	0.502			0.675				0.936			0.809	
Satd. Flow (perm)	906	1767	0	1251	1863	1478	0	3263	0	0	2788	0
Satd. Flow (RTOR)		26				140		13			22	
Confl. Peds. (#/hr)	62		9	9		62	2					2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	113	128	0	14	49	140	0	190	0	0	218	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6			2		2	8			4		
Detector Phase	1	6		5	2	2	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0	7.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	10.5	22.5		10.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	20.0	44.0		15.0	39.0	39.0	41.0	41.0		41.0	41.0	
Total Split (%)	20.0%	44.0%		15.0%	39.0%	39.0%	41.0%	41.0%		41.0%	41.0%	
Maximum Green (s)	14.5	38.5		9.5	33.5	33.5	35.5	35.5		35.5	35.5	
Yellow Time (s)	4.0	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	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5	5.5		5.5			5.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)	23.4	21.1		13.5	8.1	8.1		65.6			65.6	
Actuated g/C Ratio	0.23	0.21		0.14	0.08	0.08		0.66			0.66	
v/c Ratio	0.38	0.33		0.07	0.33	0.57		0.09			0.12	
Control Delay	33.9	28.9		28.4	48.8	16.8		6.7			2.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Delay	33.9	28.9		28.4	48.8	16.8		6.7			2.7	
LOS	C	C		C	D	B		A			A	
Approach Delay		31.3			25.4			6.7			2.7	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)	60	54		7	30	0		18			7	
Queue Length 95th (ft)	97	112		21	65	56		39			21	
Internal Link Dist (ft)		488			887			548			1120	
Turn Bay Length (ft)	60			130								
Base Capacity (vph)	337	696		269	624	588		2143			1835	
Starvation Cap Reductn	0	0		0	0	0		0			0	
Spillback Cap Reductn	0	0		0	0	0		0			0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0	0		0			0	
Reduced v/c Ratio	0.34	0.18		0.05	0.08	0.24		0.09			0.12	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 42 (42%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 17.1	Intersection LOS: B
Intersection Capacity Utilization 42.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 12: Hall of Fame Drive & Church Avenue/Howard Baker Jr. Avenue



Intersection	
Int Delay, s/veh	2.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	41	26	7	48	31	11
Future Vol, veh/h	41	26	7	48	31	11
Conflicting Peds, #/hr	0	1	1	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	43	27	7	51	33	12

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	71	0	124	58
Stage 1	-	-	-	-	58	-
Stage 2	-	-	-	-	66	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1529	-	871	1008
Stage 1	-	-	-	-	965	-
Stage 2	-	-	-	-	957	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1528	-	865	1007
Mov Cap-2 Maneuver	-	-	-	-	865	-
Stage 1	-	-	-	-	959	-
Stage 2	-	-	-	-	956	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	898	-	-	1528	-
HCM Lane V/C Ratio	0.049	-	-	0.005	-
HCM Control Delay (s)	9.2	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	32	17	0	38	4	10	6	2	5	7	13
Future Vol, veh/h	7	32	17	0	38	4	10	6	2	5	7	13
Conflicting Peds, #/hr	0	0	1	1	0	0	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	36	19	0	43	5	11	7	2	6	8	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	48	0	0	56	0	0	121	111	47	112	118	47
Stage 1	-	-	-	-	-	-	63	63	-	46	46	-
Stage 2	-	-	-	-	-	-	58	48	-	66	72	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1559	-	-	1549	-	-	854	779	1022	866	772	1022
Stage 1	-	-	-	-	-	-	948	842	-	968	857	-
Stage 2	-	-	-	-	-	-	954	855	-	945	835	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1559	-	-	1548	-	-	830	774	1021	855	767	1021
Mov Cap-2 Maneuver	-	-	-	-	-	-	830	774	-	855	767	-
Stage 1	-	-	-	-	-	-	942	837	-	963	857	-
Stage 2	-	-	-	-	-	-	931	855	-	931	830	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0	9.5	9.1
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	827	1559	-	-	1548	-	-	902
HCM Lane V/C Ratio	0.025	0.005	-	-	-	-	-	0.031
HCM Control Delay (s)	9.5	7.3	0	-	0	-	-	9.1
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	5.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	18	54	17	37	18	1	8	28	19	6	25	7
Future Vol, veh/h	18	54	17	37	18	1	8	28	19	6	25	7
Conflicting Peds, #/hr	4	0	0	0	0	4	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	61	19	42	20	1	9	31	21	7	28	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	25	0	0	80	0	0	235	220	71	246	229	26
Stage 1	-	-	-	-	-	-	111	111	-	109	109	-
Stage 2	-	-	-	-	-	-	124	109	-	137	120	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1589	-	-	1518	-	-	720	678	991	708	671	1050
Stage 1	-	-	-	-	-	-	894	804	-	896	805	-
Stage 2	-	-	-	-	-	-	880	805	-	866	796	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1583	-	-	1518	-	-	669	648	991	644	641	1045
Mov Cap-2 Maneuver	-	-	-	-	-	-	669	648	-	644	641	-
Stage 1	-	-	-	-	-	-	882	794	-	881	779	-
Stage 2	-	-	-	-	-	-	818	779	-	803	786	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.5	4.9	10.3	10.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	740	1583	-	-	1518	-	-	691
HCM Lane V/C Ratio	0.084	0.013	-	-	0.027	-	-	0.062
HCM Control Delay (s)	10.3	7.3	0	-	7.4	0	-	10.6
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0.1	-	-	0.2

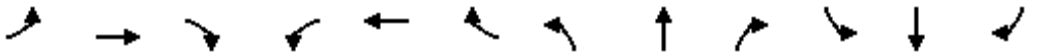
Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	17	86	71	5	7	17
Future Vol, veh/h	17	86	71	5	7	17
Conflicting Peds, #/hr	1	0	0	1	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	120	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	19	98	81	6	8	19

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	88	0	-	0	221	85
Stage 1	-	-	-	-	85	-
Stage 2	-	-	-	-	136	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1508	-	-	-	767	974
Stage 1	-	-	-	-	938	-
Stage 2	-	-	-	-	890	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1507	-	-	-	755	973
Mov Cap-2 Maneuver	-	-	-	-	755	-
Stage 1	-	-	-	-	925	-
Stage 2	-	-	-	-	889	-

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1507	-	-	-	755	973
HCM Lane V/C Ratio	0.013	-	-	-	0.011	0.02
HCM Control Delay (s)	7.4	0	-	-	9.8	8.8
HCM Lane LOS	A	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	0	0.1



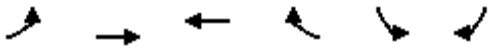
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	179	10	89	328	170	0	0	0	76	56	149
Future Volume (vph)	110	179	10	89	328	170	0	0	0	76	56	149
Lane Util. Factor	1.00	0.95	0.95	0.97	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		0.98	0.99						1.00	0.97
Frt		0.992			0.949							0.850
Flt Protected	0.950			0.950							0.972	
Satd. Flow (prot)	1770	3507	0	3433	3330	0	0	0	0	0	1811	1583
Flt Permitted	0.449			0.950							0.972	
Satd. Flow (perm)	835	3507	0	3362	3330	0	0	0	0	0	1804	1531
Satd. Flow (RTOR)		8			122							159
Confl. Peds. (#/hr)	4		11	11		4	17		5	5		17
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	117	201	0	95	530	0	0	0	0	0	141	159
Turn Type	pm+pt	NA		Prot	NA					Split	NA	Perm
Protected Phases	1	2		1	2					4	4	
Permitted Phases	2											4
Detector Phase	1	2		1	2					4	4	4
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0					7.0	7.0	7.0
Minimum Split (s)	9.0	15.5		9.0	15.5					12.0	12.0	12.0
Total Split (s)	23.0	40.0		23.0	40.0					26.0	26.0	26.0
Total Split (%)	25.8%	44.9%		25.8%	44.9%					29.2%	29.2%	29.2%
Maximum Green (s)	18.0	34.5		18.0	34.5					21.0	21.0	21.0
Yellow Time (s)	4.0	4.0		4.0	4.0					4.0	4.0	4.0
All-Red Time (s)	1.0	1.5		1.0	1.5					1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0						0.0	0.0
Total Lost Time (s)	5.0	5.5		5.0	5.5						5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	2.0	2.0		2.0	2.0					2.0	2.0	2.0
Recall Mode	None	C-Max		None	C-Max					None	None	None
Act Effct Green (s)	62.6	55.3		6.9	55.3						11.4	11.4
Actuated g/C Ratio	0.70	0.62		0.08	0.62						0.13	0.13
v/c Ratio	0.18	0.09		0.36	0.25						0.61	0.48
Control Delay	4.1	7.5		42.3	6.7						47.5	10.8
Queue Delay	0.0	0.0		0.0	0.6						0.0	0.0
Total Delay	4.1	7.5		42.3	7.3						47.5	10.8
LOS	A	A		D	A						D	B
Approach Delay		6.2			12.6						28.0	
Approach LOS		A			B						C	
Queue Length 50th (ft)	13	20		26	47						76	0
Queue Length 95th (ft)	33	42		49	87						128	51
Internal Link Dist (ft)		516			188			218			576	
Turn Bay Length (ft)	50											65
Base Capacity (vph)	823	2180		694	2113						427	482
Starvation Cap Reductn	0	0		0	1171						0	0
Spillback Cap Reductn	0	0		0	0						0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0						0	0
Reduced v/c Ratio	0.14	0.09		0.14	0.56						0.33	0.33

Intersection Summary	
Cycle Length: 89	
Actuated Cycle Length: 89	
Offset: 0 (0%), Referenced to phase 2:EBWB, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 14.7	Intersection LOS: B
Intersection Capacity Utilization 47.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: Central Street & Summit Hill Drive

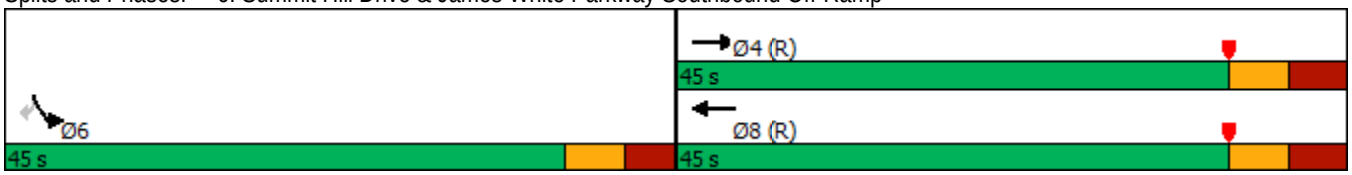




Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	254	283	0	174	304
Future Volume (vph)	0	254	283	0	174	304
Lane Util. Factor	1.00	0.91	0.95	1.00	1.00	0.88
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	5085	3539	0	1770	2787
Flt Permitted					0.950	
Satd. Flow (perm)	0	5085	3539	0	1770	2787
Satd. Flow (RTOR)						323
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	270	301	0	185	323
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		10.0	10.0		7.0	7.0
Minimum Split (s)		18.0	18.0		14.5	14.5
Total Split (s)		45.0	45.0		45.0	45.0
Total Split (%)		50.0%	50.0%		50.0%	50.0%
Maximum Green (s)		37.0	37.0		37.5	37.5
Yellow Time (s)		4.0	4.0		4.0	4.0
All-Red Time (s)		4.0	4.0		3.5	3.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0
Total Lost Time (s)		8.0	8.0		7.5	7.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		5.0	2.0		5.0	5.0
Recall Mode		C-Max	C-Max		None	None
Act Effct Green (s)		56.9	56.9		17.6	17.6
Actuated g/C Ratio		0.63	0.63		0.20	0.20
v/c Ratio		0.08	0.13		0.53	0.40
Control Delay		7.3	7.7		37.2	4.8
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		7.3	7.7		37.2	4.8
LOS		A	A		D	A
Approach Delay		7.3	7.7		16.6	
Approach LOS		A	A		B	
Queue Length 50th (ft)		19	32		95	0
Queue Length 95th (ft)		37	62		145	33
Internal Link Dist (ft)		188	373		516	
Turn Bay Length (ft)						250
Base Capacity (vph)		3212	2236		737	1349
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.08	0.13		0.25	0.24

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 52 (58%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.53	
Intersection Signal Delay: 11.8	Intersection LOS: B
Intersection Capacity Utilization 31.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Summit Hill Drive & James White Parkway Southbound Off-Ramp

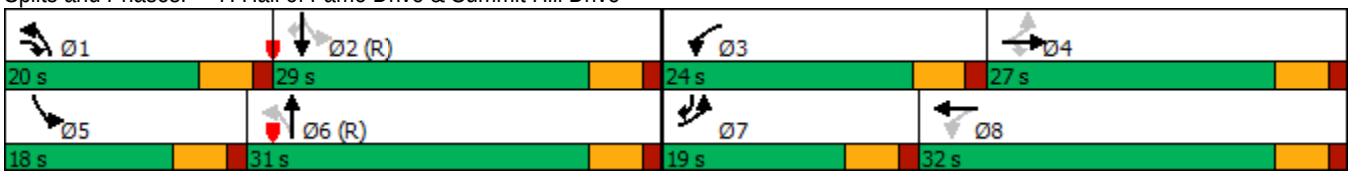


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	229	143	191	148	142	29	132	50	85	151	104
Future Volume (vph)	61	229	143	191	148	142	29	132	50	85	151	104
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00				0.99			1.00		1.00		
Frt			0.850		0.926			0.959				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3246	0	1770	3382	0	1770	3539	1583
Flt Permitted	0.568			0.360			0.652			0.627		
Satd. Flow (perm)	1054	3539	1583	671	3246	0	1215	3382	0	1167	3539	1583
Satd. Flow (RTOR)			149		148			52				108
Confl. Peds. (#/hr)	7					7			1	1		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)												
Lane Group Flow (vph)	64	239	149	199	302	0	30	190	0	89	157	108
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	7	4	1	3	8		1	6		5	2	7
Permitted Phases	4		4	8			6			2		2
Detector Phase	7	4	1	3	8		1	6		5	2	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0		5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5		10.5	15.5	10.5
Total Split (s)	19.0	27.0	20.0	24.0	32.0		20.0	31.0		18.0	29.0	19.0
Total Split (%)	19.0%	27.0%	20.0%	24.0%	32.0%		20.0%	31.0%		18.0%	29.0%	19.0%
Maximum Green (s)	13.5	21.5	14.5	18.5	26.5		14.5	25.5		12.5	23.5	13.5
Yellow Time (s)	4.0	4.0	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	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		2.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	None
Act Effct Green (s)	18.2	11.1	22.1	29.8	17.6		53.0	48.5		54.7	47.8	60.4
Actuated g/C Ratio	0.18	0.11	0.22	0.30	0.18		0.53	0.48		0.55	0.48	0.60
v/c Ratio	0.26	0.61	0.32	0.57	0.44		0.04	0.11		0.13	0.09	0.11
Control Delay	26.7	48.7	7.0	33.0	19.5		16.8	20.5		14.8	19.8	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	26.7	48.7	7.0	33.0	19.5		16.8	20.5		14.8	19.8	3.0
LOS	C	D	A	C	B		B	C		B	B	A
Approach Delay		31.9			24.8			20.0			13.4	
Approach LOS		C			C			C			B	
Queue Length 50th (ft)	29	77	0	99	45		12	36		19	30	0
Queue Length 95th (ft)	54	113	46	143	78		34	70		90	74	11
Internal Link Dist (ft)		373			335			424			335	
Turn Bay Length (ft)				165			230			165		60
Base Capacity (vph)	356	760	595	405	968		793	1667		761	1692	1093
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.18	0.31	0.25	0.49	0.31		0.04	0.11		0.12	0.09	0.10

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 50 (50%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 23.6	Intersection LOS: C
Intersection Capacity Utilization 48.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: Hall of Fame Drive & Summit Hill Drive



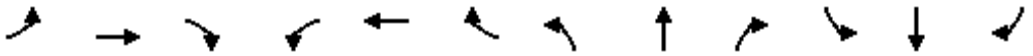
Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	85	282	388	36	48	65
Future Vol, veh/h	85	282	388	36	48	65
Conflicting Peds, #/hr	7	0	0	7	6	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	88	291	400	37	49	67

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	444	0	-	0	754	227
Stage 1	-	-	-	-	426	-
Stage 2	-	-	-	-	328	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1112	-	-	-	345	776
Stage 1	-	-	-	-	627	-
Stage 2	-	-	-	-	702	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1105	-	-	-	313	770
Mov Cap-2 Maneuver	-	-	-	-	313	-
Stage 1	-	-	-	-	573	-
Stage 2	-	-	-	-	697	-

Approach	EB	WB	SB
HCM Control Delay, s	2	0	10.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1105	-	-	-	737
HCM Lane V/C Ratio	0.079	-	-	-	0.158
HCM Control Delay (s)	8.5	-	-	-	10.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.6

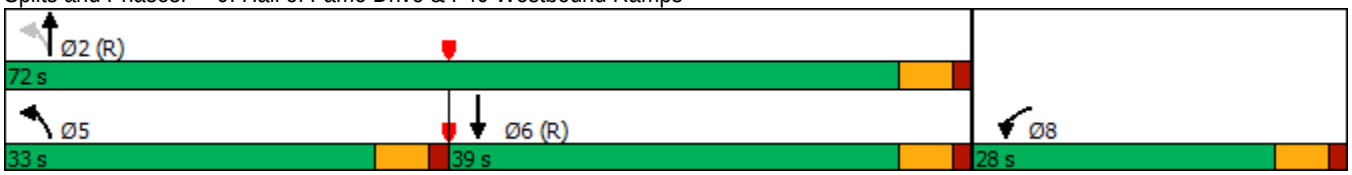


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	116	0	85	289	512	0	0	293	316
Future Volume (vph)	0	0	0	116	0	85	289	512	0	0	293	316
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor							1.00				0.99	
Frt						0.850					0.922	
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	0	0	3433	0	1583	1770	3539	0	0	3227	0
Flt Permitted				0.950			0.373					
Satd. Flow (perm)	0	0	0	3433	0	1583	695	3539	0	0	3227	0
Satd. Flow (RTOR)						147					295	
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	118	0	87	295	522	0	0	621	0
Turn Type				Prot		Free	pm+pt	NA			NA	
Protected Phases				8			5	2			6	
Permitted Phases						Free	2					
Detector Phase				8			5	2			6	
Switch Phase												
Minimum Initial (s)				5.0			5.0	10.0			10.0	
Minimum Split (s)				10.5			10.5	15.5			15.5	
Total Split (s)				28.0			33.0	72.0			39.0	
Total Split (%)				28.0%			33.0%	72.0%			39.0%	
Maximum Green (s)				22.5			27.5	66.5			33.5	
Yellow Time (s)				4.0			4.0	4.0			4.0	
All-Red Time (s)				1.5			1.5	1.5			1.5	
Lost Time Adjust (s)				0.0			0.0	0.0			0.0	
Total Lost Time (s)				5.5			5.5	5.5			5.5	
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)				3.0			2.0	2.0			2.0	
Recall Mode				None			None	C-Max			C-Max	
Act Effct Green (s)				8.8		100.0	80.2	80.2			66.1	
Actuated g/C Ratio				0.09		1.00	0.80	0.80			0.66	
v/c Ratio				0.39		0.05	0.45	0.18			0.28	
Control Delay				46.4		0.1	5.7	1.5			4.1	
Queue Delay				0.0		0.0	0.0	0.0			0.0	
Total Delay				46.4		0.1	5.7	1.5			4.1	
LOS				D		A	A	A			A	
Approach Delay					26.8			3.0			4.1	
Approach LOS					C			A			A	
Queue Length 50th (ft)				37		0	36	30			36	
Queue Length 95th (ft)				63		0	22	8			69	
Internal Link Dist (ft)		440			577			562			692	
Turn Bay Length (ft)				475		200	155					
Base Capacity (vph)				772		1583	853	2838			2232	
Starvation Cap Reductn				0		0	0	0			0	
Spillback Cap Reductn				0		0	0	0			0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn				0		0	0	0			0	
Reduced v/c Ratio				0.15		0.05	0.35	0.18			0.28	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 30 (30%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 45	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 6.4	Intersection LOS: A
Intersection Capacity Utilization 52.2%	ICU Level of Service A
Analysis Period (min) 15	

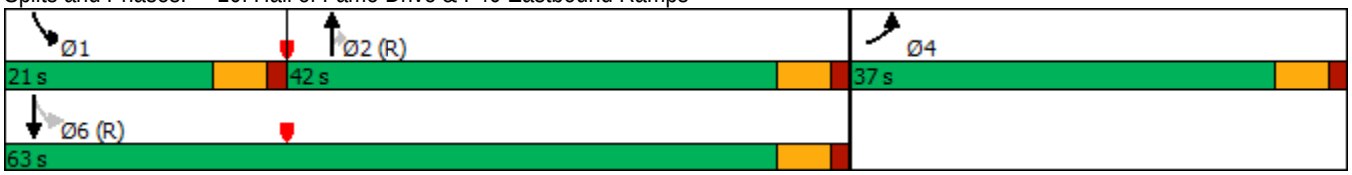
Splits and Phases: 9: Hall of Fame Drive & I-40 Westbound Ramps

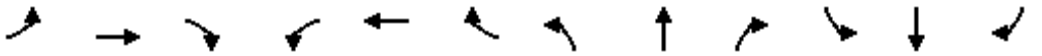


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	253	0	322	0	0	0	0	550	149	52	360	0
Future Volume (vph)	253	0	322	0	0	0	0	550	149	52	360	0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850						0.850			
Flt Protected	0.950									0.950		
Satd. Flow (prot)	3433	0	1583	0	0	0	0	3539	1583	1770	3539	0
Flt Permitted	0.950									0.399		
Satd. Flow (perm)	3433	0	1583	0	0	0	0	3539	1583	743	3539	0
Satd. Flow (RTOR)			332						154			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	261	0	332	0	0	0	0	567	154	54	371	0
Turn Type	Prot		Free					NA	Perm	pm+pt	NA	
Protected Phases	4							2		1	6	
Permitted Phases			Free						2	6		
Detector Phase	4							2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0							10.0	10.0	5.0	10.0	
Minimum Split (s)	22.5							22.5	22.5	10.5	22.5	
Total Split (s)	37.0							42.0	42.0	21.0	63.0	
Total Split (%)	37.0%							42.0%	42.0%	21.0%	63.0%	
Maximum Green (s)	31.5							36.5	36.5	15.5	57.5	
Yellow Time (s)	4.0							4.0	4.0	4.0	4.0	
All-Red Time (s)	1.5							1.5	1.5	1.5	1.5	
Lost Time Adjust (s)	0.0							0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5							5.5	5.5	5.5	5.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	2.0							2.0	2.0	2.0	2.0	
Recall Mode	None							C-Max	C-Max	None	C-Max	
Act Effct Green (s)	12.3		100.0					67.9	67.9	76.7	76.7	
Actuated g/C Ratio	0.12		1.00					0.68	0.68	0.77	0.77	
v/c Ratio	0.62		0.21					0.24	0.14	0.09	0.14	
Control Delay	47.9		0.3					6.4	2.0	1.5	1.5	
Queue Delay	0.0		0.0					0.0	0.0	0.0	0.0	
Total Delay	47.9		0.3					6.4	2.0	1.5	1.5	
LOS	D		A					A	A	A	A	
Approach Delay		21.3						5.5			1.5	
Approach LOS		C						A			A	
Queue Length 50th (ft)	82		0					48	0	2	8	
Queue Length 95th (ft)	119		0					105	0	5	12	
Internal Link Dist (ft)		686			892			546			562	
Turn Bay Length (ft)	200		210						290	190		
Base Capacity (vph)	1081		1583					2401	1123	728	2713	
Starvation Cap Reductn	0		0					0	0	0	0	
Spillback Cap Reductn	0		0					0	0	0	0	
Storage Cap Reductn	0		0					0	0	0	0	
Reduced v/c Ratio	0.24		0.21					0.24	0.14	0.07	0.14	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 50 (50%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 9.9	Intersection LOS: A
Intersection Capacity Utilization 52.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 10: Hall of Fame Drive & I-40 Eastbound Ramps



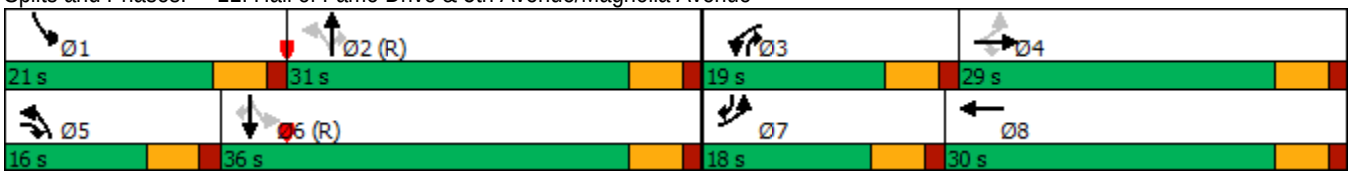


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	200	20	76	197	175	29	274	83	203	265	60
Future Volume (vph)	70	200	20	76	197	175	29	274	83	203	265	60
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor							1.00		0.99	1.00		0.99
Frt			0.850		0.929				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3288	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.319			0.950			0.577			0.509		
Satd. Flow (perm)	594	3539	1583	3433	3288	0	1074	3539	1563	948	3539	1563
Satd. Flow (RTOR)			87		188				89			87
Confl. Peds. (#/hr)							1		1	1		1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	75	215	22	82	400	0	31	295	89	218	285	65
Turn Type	pm+pt	NA	pm+ov	Prot	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4				2		2	6		6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0	5.0	5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5	10.5	10.5	15.5	10.5
Total Split (s)	18.0	29.0	16.0	19.0	30.0		16.0	31.0	19.0	21.0	36.0	18.0
Total Split (%)	18.0%	29.0%	16.0%	19.0%	30.0%		16.0%	31.0%	19.0%	21.0%	36.0%	18.0%
Maximum Green (s)	12.5	23.5	10.5	13.5	24.5		10.5	25.5	13.5	15.5	30.5	12.5
Yellow Time (s)	4.0	4.0	4.0	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	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	None	None	C-Max	None
Act Effct Green (s)	22.2	13.5	25.3	7.8	14.8		51.8	45.5	53.3	62.0	54.9	63.6
Actuated g/C Ratio	0.22	0.14	0.25	0.08	0.15		0.52	0.46	0.53	0.62	0.55	0.64
v/c Ratio	0.32	0.45	0.05	0.31	0.62		0.05	0.18	0.10	0.32	0.15	0.06
Control Delay	29.7	41.9	0.2	46.1	25.4		9.7	16.2	2.9	9.7	12.7	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.7	41.9	0.2	46.1	25.4		9.7	16.2	2.9	9.7	12.7	1.8
LOS	C	D	A	D	C		A	B	A	A	B	A
Approach Delay		36.1			28.9			12.9			10.3	
Approach LOS		D			C			B			B	
Queue Length 50th (ft)	37	67	0	25	67		4	41	0	46	54	0
Queue Length 95th (ft)	64	96	0	48	111		21	124	32	121	85	7
Internal Link Dist (ft)		674			634			359			1142	
Turn Bay Length (ft)	245		35	295			230		245	175		175
Base Capacity (vph)	300	831	528	463	947		674	1610	961	718	1941	1083
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.26	0.04	0.18	0.42		0.05	0.18	0.09	0.30	0.15	0.06

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 50 (50%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 20.5	Intersection LOS: C
Intersection Capacity Utilization 53.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 11: Hall of Fame Drive & 5th Avenue/Magnolia Avenue

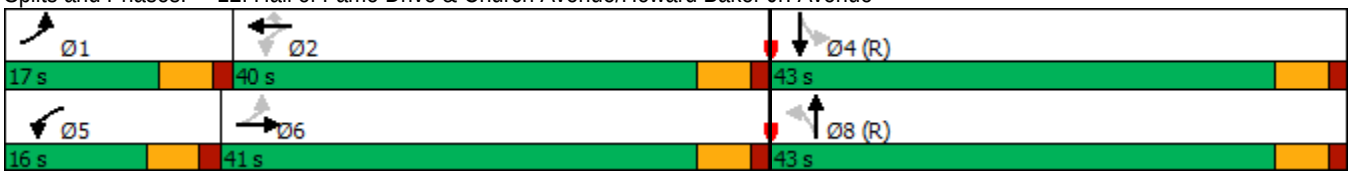


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	43	14	7	31	50	14	107	20	38	120	29
Future Volume (vph)	73	43	14	7	31	50	14	107	20	38	120	29
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor	0.99	1.00		1.00		0.97						
Frt		0.964				0.850		0.978			0.977	
Flt Protected	0.950			0.950				0.995			0.990	
Satd. Flow (prot)	1770	1789	0	1770	1863	1583	0	3444	0	0	3423	0
Flt Permitted	0.461			0.719				0.927			0.880	
Satd. Flow (perm)	850	1789	0	1336	1863	1541	0	3209	0	0	3043	0
Satd. Flow (RTOR)		14				87		21			24	
Confl. Peds. (#/hr)	17		4	4		17						
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	75	58	0	7	32	52	0	145	0	0	193	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6			2		2	8			4		
Detector Phase	1	6		5	2	2	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0	7.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	10.5	22.5		10.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	17.0	41.0		16.0	40.0	40.0	43.0	43.0		43.0	43.0	
Total Split (%)	17.0%	41.0%		16.0%	40.0%	40.0%	43.0%	43.0%		43.0%	43.0%	
Maximum Green (s)	11.5	35.5		10.5	34.5	34.5	37.5	37.5		37.5	37.5	
Yellow Time (s)	4.0	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	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5	5.5		5.5			5.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)	18.4	16.6		11.1	7.3	7.3		73.8			73.8	
Actuated g/C Ratio	0.18	0.17		0.11	0.07	0.07		0.74			0.74	
v/c Ratio	0.33	0.19		0.04	0.24	0.27		0.06			0.09	
Control Delay	35.9	29.8		30.6	47.9	6.6		4.9			3.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Delay	35.9	29.8		30.6	47.9	6.6		4.9			3.6	
LOS	D	C		C	D	A		A			A	
Approach Delay		33.2			23.0			4.9			3.6	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)	40	23		4	20	0		12			15	
Queue Length 95th (ft)	75	63		15	49	15		25			37	
Internal Link Dist (ft)		488			887			548			1120	
Turn Bay Length (ft)	60			130								
Base Capacity (vph)	273	644		264	642	588		2374			2252	
Starvation Cap Reductn	0	0		0	0	0		0			0	
Spillback Cap Reductn	0	0		0	0	0		0			0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0	0		0			0	
Reduced v/c Ratio	0.27	0.09		0.03	0.05	0.09		0.06			0.09	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 4 (4%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.33	
Intersection Signal Delay: 14.1	Intersection LOS: B
Intersection Capacity Utilization 41.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 12: Hall of Fame Drive & Church Avenue/Howard Baker Jr. Avenue



Intersection	
Int Delay, s/veh	2.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	47	16	16	42	21	10
Future Vol, veh/h	47	16	16	42	21	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	54	18	18	48	24	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	72	0	147	63
Stage 1	-	-	-	-	63	-
Stage 2	-	-	-	-	84	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1528	-	845	1002
Stage 1	-	-	-	-	960	-
Stage 2	-	-	-	-	939	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1528	-	835	1002
Mov Cap-2 Maneuver	-	-	-	-	835	-
Stage 1	-	-	-	-	948	-
Stage 2	-	-	-	-	939	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	882	-	-	1528	-
HCM Lane V/C Ratio	0.04	-	-	0.012	-
HCM Control Delay (s)	9.3	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	45	14	5	50	13	13	8	0	6	6	0
Future Vol, veh/h	0	45	14	5	50	13	13	8	0	6	6	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	54	17	6	60	16	16	10	0	7	7	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	76	0	0	71	0	0	147	151	63	148	151	68
Stage 1	-	-	-	-	-	-	63	63	-	80	80	-
Stage 2	-	-	-	-	-	-	84	88	-	68	71	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1523	-	-	1529	-	-	821	741	1002	820	741	995
Stage 1	-	-	-	-	-	-	948	842	-	929	828	-
Stage 2	-	-	-	-	-	-	924	822	-	942	836	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1523	-	-	1529	-	-	813	738	1002	809	738	995
Mov Cap-2 Maneuver	-	-	-	-	-	-	813	738	-	809	738	-
Stage 1	-	-	-	-	-	-	948	842	-	929	825	-
Stage 2	-	-	-	-	-	-	912	819	-	931	836	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.5	9.8	9.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	783	1523	-	-	1529	-	-	772
HCM Lane V/C Ratio	0.032	-	-	-	0.004	-	-	0.019
HCM Control Delay (s)	9.8	0	-	-	7.4	0	-	9.8
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	8	91	7	63	41	0	12	31	20	2	19	4
Future Vol, veh/h	8	91	7	63	41	0	12	31	20	2	19	4
Conflicting Peds, #/hr	1	0	0	0	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	101	8	70	46	0	13	34	22	2	21	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	47	0	0	109	0	0	322	310	105	338	314	47
Stage 1	-	-	-	-	-	-	123	123	-	187	187	-
Stage 2	-	-	-	-	-	-	199	187	-	151	127	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1560	-	-	1481	-	-	631	605	949	616	601	1022
Stage 1	-	-	-	-	-	-	881	794	-	815	745	-
Stage 2	-	-	-	-	-	-	803	745	-	851	791	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1559	-	-	1481	-	-	586	572	949	550	568	1021
Mov Cap-2 Maneuver	-	-	-	-	-	-	586	572	-	550	568	-
Stage 1	-	-	-	-	-	-	876	789	-	809	708	-
Stage 2	-	-	-	-	-	-	738	708	-	790	786	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	4.6	11.1	11.2
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	658	1559	-	-	1481	-	-	610
HCM Lane V/C Ratio	0.106	0.006	-	-	0.047	-	-	0.046
HCM Control Delay (s)	11.1	7.3	0	-	7.6	0	-	11.2
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.4	0	-	-	0.1	-	-	0.1

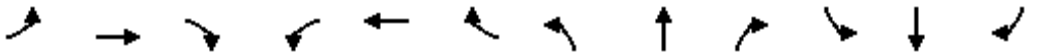
Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	20	92	76	5	8	24
Future Vol, veh/h	20	92	76	5	8	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	120	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	97	80	5	8	25

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	85	0	-	0	222	83
Stage 1	-	-	-	-	83	-
Stage 2	-	-	-	-	139	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1512	-	-	-	766	976
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	888	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1512	-	-	-	755	976
Mov Cap-2 Maneuver	-	-	-	-	755	-
Stage 1	-	-	-	-	926	-
Stage 2	-	-	-	-	888	-

Approach	EB	WB	SB
HCM Control Delay, s	1.3	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1512	-	-	-	755	976
HCM Lane V/C Ratio	0.014	-	-	-	0.011	0.026
HCM Control Delay (s)	7.4	0	-	-	9.8	8.8
HCM Lane LOS	A	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	0	0.1



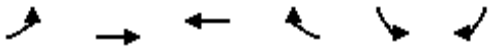
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	93	4	284	299	163	0	0	0	38	62	70
Future Volume (vph)	35	93	4	284	299	163	0	0	0	38	62	70
Lane Util. Factor	1.00	0.95	0.95	0.97	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		1.00	0.99							0.98
Frt		0.994			0.947							0.850
Flt Protected	0.950			0.950							0.981	
Satd. Flow (prot)	1770	3516	0	3433	3315	0	0	0	0	0	1827	1583
Flt Permitted	0.465			0.950							0.981	
Satd. Flow (perm)	864	3516	0	3428	3315	0	0	0	0	0	1827	1546
Satd. Flow (RTOR)		4			105							82
Confl. Peds. (#/hr)	7		1	1		7						10
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	37	103	0	302	491	0	0	0	0	0	106	74
Turn Type	pm+pt	NA		Prot	NA					Split	NA	Perm
Protected Phases	1	2		1	2					4	4	
Permitted Phases	2											4
Detector Phase	1	2		1	2					4	4	4
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0					7.0	7.0	7.0
Minimum Split (s)	9.0	15.5		9.0	15.5					12.0	12.0	12.0
Total Split (s)	34.0	36.0		34.0	36.0					30.0	30.0	30.0
Total Split (%)	34.0%	36.0%		34.0%	36.0%					30.0%	30.0%	30.0%
Maximum Green (s)	29.0	30.5		29.0	30.5					25.0	25.0	25.0
Yellow Time (s)	4.0	4.0		4.0	4.0					4.0	4.0	4.0
All-Red Time (s)	1.0	1.5		1.0	1.5					1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0						0.0	0.0
Total Lost Time (s)	5.0	5.5		5.0	5.5						5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	2.0	2.0		2.0	2.0					2.0	2.0	2.0
Recall Mode	None	C-Max		None	C-Max					None	None	None
Act Effct Green (s)	74.6	60.9		13.2	60.9						10.4	10.4
Actuated g/C Ratio	0.75	0.61		0.13	0.61						0.10	0.10
v/c Ratio	0.05	0.05		0.67	0.24						0.56	0.32
Control Delay	2.9	9.0		46.6	8.3						53.3	11.5
Queue Delay	0.0	0.0		0.0	0.3						0.0	0.0
Total Delay	2.9	9.0		46.6	8.6						53.3	11.5
LOS	A	A		D	A						D	B
Approach Delay		7.4			23.1						36.1	
Approach LOS		A			C						D	
Queue Length 50th (ft)	4	12		96	61						65	0
Queue Length 95th (ft)	12	28		140	79						115	35
Internal Link Dist (ft)		516			188			218			576	
Turn Bay Length (ft)	50											65
Base Capacity (vph)	950	2141		995	2058						456	448
Starvation Cap Reductn	0	0		24	933						0	0
Spillback Cap Reductn	0	0		0	0						0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0						0	0
Reduced v/c Ratio	0.04	0.05		0.31	0.44						0.23	0.17

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 8 (8%), Referenced to phase 2:EBWB, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 23.2	Intersection LOS: C
Intersection Capacity Utilization 35.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: Central Street & Summit Hill Drive

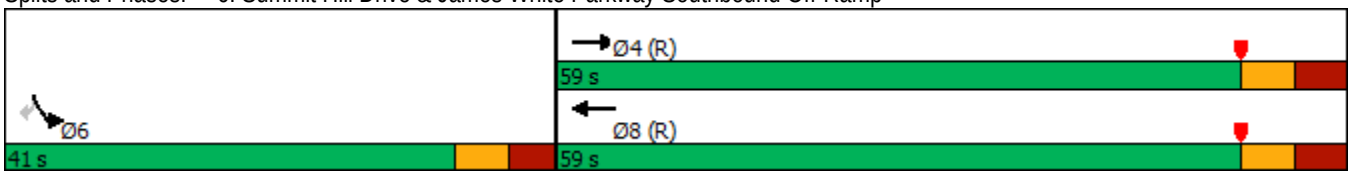




Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	132	224	0	249	519
Future Volume (vph)	0	132	224	0	249	519
Lane Util. Factor	1.00	0.91	0.95	1.00	1.00	0.88
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	5085	3539	0	1770	2787
Flt Permitted					0.950	
Satd. Flow (perm)	0	5085	3539	0	1770	2787
Satd. Flow (RTOR)						583
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	148	252	0	280	583
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		10.0	10.0		7.0	7.0
Minimum Split (s)		18.0	18.0		14.5	14.5
Total Split (s)		59.0	59.0		41.0	41.0
Total Split (%)		59.0%	59.0%		41.0%	41.0%
Maximum Green (s)		51.0	51.0		33.5	33.5
Yellow Time (s)		4.0	4.0		4.0	4.0
All-Red Time (s)		4.0	4.0		3.5	3.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0
Total Lost Time (s)		8.0	8.0		7.5	7.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		5.0	2.0		5.0	5.0
Recall Mode		C-Max	C-Max		None	None
Act Effct Green (s)		59.0	59.0		25.5	25.5
Actuated g/C Ratio		0.59	0.59		0.26	0.26
v/c Ratio		0.05	0.12		0.62	0.51
Control Delay		13.8	6.5		38.3	3.8
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		13.8	6.5		38.3	3.8
LOS		B	A		D	A
Approach Delay		13.8	6.5		15.0	
Approach LOS		B	A		B	
Queue Length 50th (ft)		17	16		157	0
Queue Length 95th (ft)		33	37		214	37
Internal Link Dist (ft)		188	373		516	
Turn Bay Length (ft)						250
Base Capacity (vph)		3001	2088		592	1321
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.05	0.12		0.47	0.44

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 46 (46%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 13.2	Intersection LOS: B
Intersection Capacity Utilization 39.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Summit Hill Drive & James White Parkway Southbound Off-Ramp

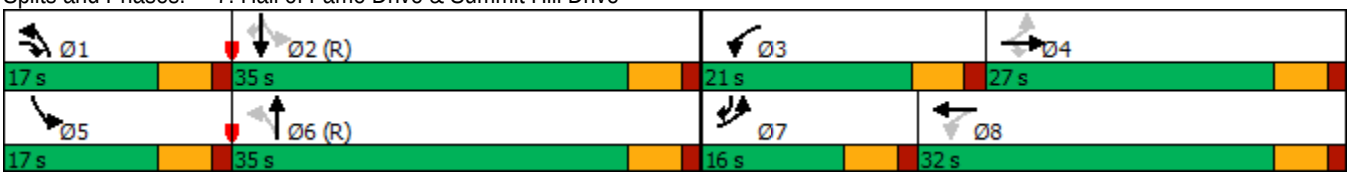


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	183	186	171	100	118	12	101	32	60	198	112
Future Volume (vph)	10	183	186	171	100	118	12	101	32	60	198	112
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00		0.99	1.00	0.99			1.00		1.00		
Frt			0.850		0.919			0.964				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3227	0	1770	3399	0	1770	3539	1583
Flt Permitted	0.603			0.400			0.615			0.658		
Satd. Flow (perm)	1122	3539	1563	745	3227	0	1146	3399	0	1223	3539	1583
Satd. Flow (RTOR)			204		130			35				123
Confl. Peds. (#/hr)	2		1	1		2			4	4		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	11	201	204	188	240	0	13	146	0	66	218	123
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	7	4	1	3	8		1	6		5	2	7
Permitted Phases	4		4	8			6			2		2
Detector Phase	7	4	1	3	8		1	6		5	2	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0		5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5		10.5	15.5	10.5
Total Split (s)	16.0	27.0	17.0	21.0	32.0		17.0	35.0		17.0	35.0	16.0
Total Split (%)	16.0%	27.0%	17.0%	21.0%	32.0%		17.0%	35.0%		17.0%	35.0%	16.0%
Maximum Green (s)	10.5	21.5	11.5	15.5	26.5		11.5	29.5		11.5	29.5	10.5
Yellow Time (s)	4.0	4.0	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	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		2.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	None
Act Effct Green (s)	15.3	10.1	15.2	27.8	17.5		55.2	51.1		56.4	50.1	60.9
Actuated g/C Ratio	0.15	0.10	0.15	0.28	0.18		0.55	0.51		0.56	0.50	0.61
v/c Ratio	0.05	0.57	0.50	0.56	0.36		0.02	0.08		0.09	0.12	0.12
Control Delay	23.7	49.2	24.1	34.4	17.0		15.9	19.2		10.7	15.5	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	23.7	49.2	24.1	34.4	17.0		15.9	19.2		10.7	15.5	2.3
LOS	C	D	C	C	B		B	B		B	B	A
Approach Delay		36.2			24.6			18.9			10.7	
Approach LOS		D			C			B			B	
Queue Length 50th (ft)	6	72	69	95	31		5	26		16	39	0
Queue Length 95th (ft)	m14	107	94	145	62		20	57		45	62	8
Internal Link Dist (ft)		373			335			424			335	
Turn Bay Length (ft)				165			230			165		60
Base Capacity (vph)	298	760	499	369	950		761	1754		805	1774	1088
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.04	0.26	0.41	0.51	0.25		0.02	0.08		0.08	0.12	0.11

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 62 (62%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 23.4	Intersection LOS: C
Intersection Capacity Utilization 46.1%	ICU Level of Service A
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 7: Hall of Fame Drive & Summit Hill Drive



Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	31	246	361	16	38	42
Future Vol, veh/h	31	246	361	16	38	42
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	35	276	406	18	43	47

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	424	0	-	0	623	213
Stage 1	-	-	-	-	415	-
Stage 2	-	-	-	-	208	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1132	-	-	-	418	792
Stage 1	-	-	-	-	635	-
Stage 2	-	-	-	-	807	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1132	-	-	-	405	791
Mov Cap-2 Maneuver	-	-	-	-	405	-
Stage 1	-	-	-	-	615	-
Stage 2	-	-	-	-	807	-

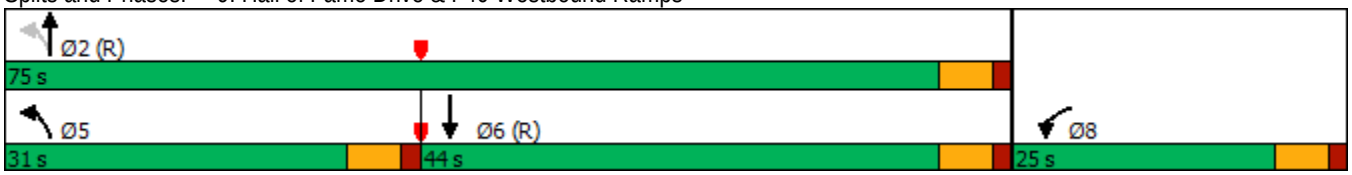
Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1132	-	-	-	853
HCM Lane V/C Ratio	0.031	-	-	-	0.105
HCM Control Delay (s)	8.3	-	-	-	9.7
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	200	0	107	245	303	0	0	373	447
Future Volume (vph)	0	0	0	200	0	107	245	303	0	0	373	447
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt						0.850					0.918	
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	0	0	3433	0	1583	1770	3539	0	0	3249	0
Flt Permitted				0.950			0.248					
Satd. Flow (perm)	0	0	0	3433	0	1583	462	3539	0	0	3249	0
Satd. Flow (RTOR)						147					355	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	222	0	119	272	337	0	0	911	0
Turn Type				Prot		Free	pm+pt	NA			NA	
Protected Phases				8			5	2			6	
Permitted Phases						Free	2					
Detector Phase				8			5	2			6	
Switch Phase												
Minimum Initial (s)				5.0			5.0	10.0			10.0	
Minimum Split (s)				10.5			10.5	15.5			15.5	
Total Split (s)				25.0			31.0	75.0			44.0	
Total Split (%)				25.0%			31.0%	75.0%			44.0%	
Maximum Green (s)				19.5			25.5	69.5			38.5	
Yellow Time (s)				4.0			4.0	4.0			4.0	
All-Red Time (s)				1.5			1.5	1.5			1.5	
Lost Time Adjust (s)				0.0			0.0	0.0			0.0	
Total Lost Time (s)				5.5			5.5	5.5			5.5	
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)				3.0			2.0	2.0			2.0	
Recall Mode				None			None	C-Max			C-Max	
Act Effct Green (s)				11.8		100.0	77.2	77.2			61.6	
Actuated g/C Ratio				0.12		1.00	0.77	0.77			0.62	
v/c Ratio				0.55		0.08	0.56	0.12			0.43	
Control Delay				46.5		0.1	11.6	2.7			7.1	
Queue Delay				0.0		0.0	0.0	0.0			0.0	
Total Delay				46.5		0.1	11.6	2.7			7.1	
LOS				D		A	B	A			A	
Approach Delay					30.3			6.7			7.1	
Approach LOS					C			A			A	
Queue Length 50th (ft)				70		0	40	25			76	
Queue Length 95th (ft)				104		0	84	40			159	
Internal Link Dist (ft)		440			577			562			692	
Turn Bay Length (ft)				475		200	155					
Base Capacity (vph)				669		1583	690	2733			2136	
Starvation Cap Reductn				0		0	0	0			0	
Spillback Cap Reductn				0		0	0	0			0	
Storage Cap Reductn				0		0	0	0			0	
Reduced v/c Ratio				0.33		0.08	0.39	0.12			0.43	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 42 (42%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 11.2	Intersection LOS: B
Intersection Capacity Utilization 57.7%	ICU Level of Service B
Analysis Period (min) 15	

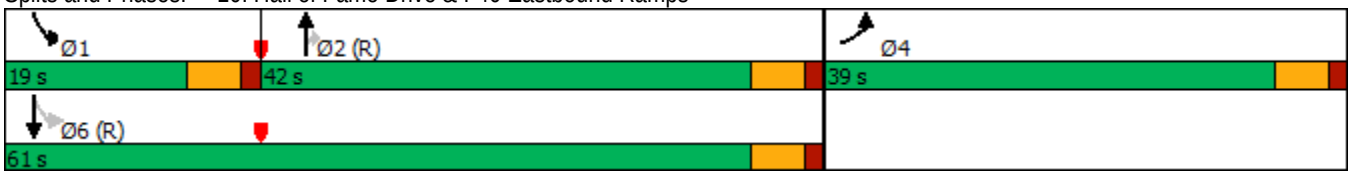
Splits and Phases: 9: Hall of Fame Drive & I-40 Westbound Ramps



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	0	365	0	0	0	0	388	89	82	494	0
Future Volume (vph)	150	0	365	0	0	0	0	388	89	82	494	0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850						0.850			
Flt Protected	0.950									0.950		
Satd. Flow (prot)	3433	0	1583	0	0	0	0	3539	1583	1770	3539	0
Flt Permitted	0.950									0.450		
Satd. Flow (perm)	3433	0	1583	0	0	0	0	3539	1583	838	3539	0
Satd. Flow (RTOR)			435						106			
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Shared Lane Traffic (%)												
Lane Group Flow (vph)	179	0	435	0	0	0	0	462	106	98	588	0
Turn Type	Prot		Free					NA	Perm	pm+pt	NA	
Protected Phases	4							2		1	6	
Permitted Phases			Free						2	6		
Detector Phase	4							2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0							10.0	10.0	5.0	10.0	
Minimum Split (s)	22.5							22.5	22.5	10.5	22.5	
Total Split (s)	39.0							42.0	42.0	19.0	61.0	
Total Split (%)	39.0%							42.0%	42.0%	19.0%	61.0%	
Maximum Green (s)	33.5							36.5	36.5	13.5	55.5	
Yellow Time (s)	4.0							4.0	4.0	4.0	4.0	
All-Red Time (s)	1.5							1.5	1.5	1.5	1.5	
Lost Time Adjust (s)	0.0							0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5							5.5	5.5	5.5	5.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	2.0							2.0	2.0	2.0	2.0	
Recall Mode	None							C-Max	C-Max	None	C-Max	
Act Effct Green (s)	10.7		100.0					69.1	69.1	78.3	78.3	
Actuated g/C Ratio	0.11		1.00					0.69	0.69	0.78	0.78	
v/c Ratio	0.49		0.27					0.19	0.09	0.14	0.21	
Control Delay	46.7		0.4					4.8	0.9	3.5	3.1	
Queue Delay	0.0		0.0					0.0	0.0	0.0	0.0	
Total Delay	46.7		0.4					4.8	0.9	3.5	3.1	
LOS	D		A					A	A	A	A	
Approach Delay		13.9						4.1			3.1	
Approach LOS		B						A			A	
Queue Length 50th (ft)	56		0					40	0	9	28	
Queue Length 95th (ft)	81		0					55	0	25	56	
Internal Link Dist (ft)		686			892			546			562	
Turn Bay Length (ft)	200		210						290	190		
Base Capacity (vph)	1150		1583					2443	1126	781	2770	
Starvation Cap Reductn	0		0					0	0	0	0	
Spillback Cap Reductn	0		0					0	0	0	0	
Storage Cap Reductn	0		0					0	0	0	0	
Reduced v/c Ratio	0.16		0.27					0.19	0.09	0.13	0.21	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 64 (64%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.49	
Intersection Signal Delay: 7.0	Intersection LOS: A
Intersection Capacity Utilization 57.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 10: Hall of Fame Drive & I-40 Eastbound Ramps

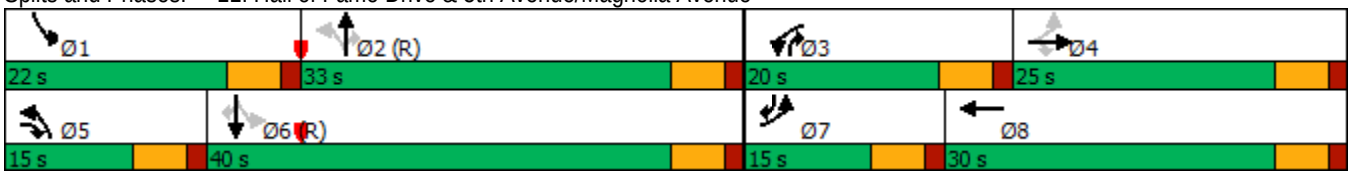


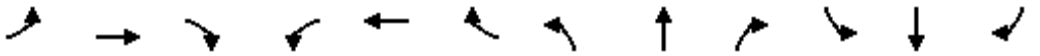
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	105	24	50	156	131	31	175	24	147	305	64
Future Volume (vph)	49	105	24	50	156	131	31	175	24	147	305	64
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.99	1.00			1.00		0.99	1.00		0.99
Frt			0.850		0.932				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3299	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.331			0.950			0.533			0.570		
Satd. Flow (perm)	617	3539	1563	3423	3299	0	992	3539	1563	1061	3539	1563
Satd. Flow (RTOR)			147		158				147			87
Confl. Peds. (#/hr)			1	1			1		1	1		1
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)												
Lane Group Flow (vph)	59	127	29	60	346	0	37	211	29	177	367	77
Turn Type	pm+pt	NA	pm+ov	Prot	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4				2		2	6		6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0	5.0	5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5	10.5	10.5	15.5	10.5
Total Split (s)	15.0	25.0	15.0	20.0	30.0		15.0	33.0	20.0	22.0	40.0	15.0
Total Split (%)	15.0%	25.0%	15.0%	20.0%	30.0%		15.0%	33.0%	20.0%	22.0%	40.0%	15.0%
Maximum Green (s)	9.5	19.5	9.5	14.5	24.5		9.5	27.5	14.5	16.5	34.5	9.5
Yellow Time (s)	4.0	4.0	4.0	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	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	None	None	C-Max	None
Act Effct Green (s)	18.9	12.1	18.4	7.2	11.4		57.7	51.3	58.5	65.1	56.8	64.7
Actuated g/C Ratio	0.19	0.12	0.18	0.07	0.11		0.58	0.51	0.58	0.65	0.57	0.65
v/c Ratio	0.29	0.30	0.07	0.24	0.67		0.06	0.12	0.03	0.23	0.18	0.07
Control Delay	31.0	40.7	0.3	45.8	29.2		7.0	11.3	0.3	7.5	11.6	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.0	40.7	0.3	45.8	29.2		7.0	11.3	0.3	7.5	11.6	1.2
LOS	C	D	A	D	C		A	B	A	A	B	A
Approach Delay		32.6			31.6			9.6			9.1	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)	29	39	0	19	60		5	25	0	33	60	0
Queue Length 95th (ft)	52	59	0	35	88		15	58	0	63	87	3
Internal Link Dist (ft)		674			634			359			1142	
Turn Bay Length (ft)	245		35	295			230		245	175		175
Base Capacity (vph)	234	690	454	497	927		677	1816	1082	822	2009	1067
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.18	0.06	0.12	0.37		0.05	0.12	0.03	0.22	0.18	0.07

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 62 (62%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 18.5	Intersection LOS: B
Intersection Capacity Utilization 47.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 11: Hall of Fame Drive & 5th Avenue/Magnolia Avenue



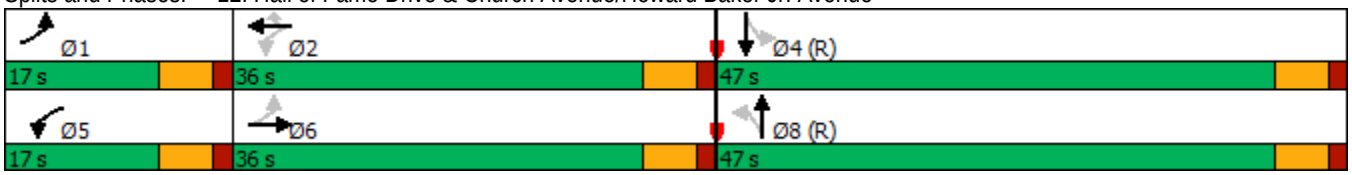


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	45	7	12	48	64	8	58	10	116	144	35
Future Volume (vph)	44	45	7	12	48	64	8	58	10	116	144	35
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor	0.97	1.00		1.00		0.95		1.00			1.00	
Frt		0.979				0.850		0.980			0.982	
Flt Protected	0.950			0.950				0.995			0.981	
Satd. Flow (prot)	1770	1819	0	1770	1863	1583	0	3445	0	0	3401	0
Flt Permitted	0.516			0.720				0.923			0.801	
Satd. Flow (perm)	936	1819	0	1335	1863	1505	0	3196	0	0	2776	0
Satd. Flow (RTOR)		8				87		11			18	
Confl. Peds. (#/hr)	39		7	7		39	1		1	1		1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	47	56	0	13	52	69	0	82	0	0	318	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6			2		2	8			4		
Detector Phase	1	6		5	2	2	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0	7.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	10.5	22.5		10.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	17.0	36.0		17.0	36.0	36.0	47.0	47.0		47.0	47.0	
Total Split (%)	17.0%	36.0%		17.0%	36.0%	36.0%	47.0%	47.0%		47.0%	47.0%	
Maximum Green (s)	11.5	30.5		11.5	30.5	30.5	41.5	41.5		41.5	41.5	
Yellow Time (s)	4.0	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	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5	5.5		5.5			5.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)	15.0	13.6		10.9	8.0	8.0		76.6			76.6	
Actuated g/C Ratio	0.15	0.14		0.11	0.08	0.08		0.77			0.77	
v/c Ratio	0.24	0.22		0.08	0.35	0.34		0.03			0.15	
Control Delay	35.5	34.6		31.8	49.9	11.2		4.6			3.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Delay	35.5	34.6		31.8	49.9	11.2		4.6			3.4	
LOS	D	C		C	D	B		A			A	
Approach Delay		35.0			28.2			4.6			3.4	
Approach LOS		D			C			A			A	
Queue Length 50th (ft)	25	26		7	32	0		6			0	
Queue Length 95th (ft)	53	65		22	69	30		16			16	
Internal Link Dist (ft)		488			887			548			1120	
Turn Bay Length (ft)	60			130								
Base Capacity (vph)	261	560		272	568	519		2451			2131	
Starvation Cap Reductn	0	0		0	0	0		0			0	
Spillback Cap Reductn	0	0		0	0	0		0			0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0	0		0			0	
Reduced v/c Ratio	0.18	0.10		0.05	0.09	0.13		0.03			0.15	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 17 (17%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.35	
Intersection Signal Delay: 13.9	Intersection LOS: B
Intersection Capacity Utilization 33.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 12: Hall of Fame Drive & Church Avenue/Howard Baker Jr. Avenue



Intersection	
Int Delay, s/veh	2.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	54	33	10	62	41	13
Future Vol, veh/h	54	33	10	62	41	13
Conflicting Peds, #/hr	0	1	1	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	57	35	11	65	43	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	93	0	164	76
Stage 1	-	-	-	-	76	-
Stage 2	-	-	-	-	88	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1501	-	827	985
Stage 1	-	-	-	-	947	-
Stage 2	-	-	-	-	935	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1500	-	819	984
Mov Cap-2 Maneuver	-	-	-	-	819	-
Stage 1	-	-	-	-	938	-
Stage 2	-	-	-	-	934	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	853	-	-	1500	-
HCM Lane V/C Ratio	0.067	-	-	0.007	-
HCM Control Delay (s)	9.5	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	42	21	0	49	5	12	7	2	6	8	18
Future Vol, veh/h	10	42	21	0	49	5	12	7	2	6	8	18
Conflicting Peds, #/hr	0	0	1	1	0	0	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	48	24	0	56	6	14	8	2	7	9	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	62	0	0	73	0	0	158	145	61	146	154	60
Stage 1	-	-	-	-	-	-	83	83	-	59	59	-
Stage 2	-	-	-	-	-	-	75	62	-	87	95	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1541	-	-	1527	-	-	808	746	1004	823	738	1005
Stage 1	-	-	-	-	-	-	925	826	-	953	846	-
Stage 2	-	-	-	-	-	-	934	843	-	921	816	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1541	-	-	1526	-	-	778	740	1003	810	732	1004
Mov Cap-2 Maneuver	-	-	-	-	-	-	778	740	-	810	732	-
Stage 1	-	-	-	-	-	-	918	819	-	946	846	-
Stage 2	-	-	-	-	-	-	904	843	-	904	809	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0	9.8	9.3
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	781	1541	-	-	1526	-	-	882
HCM Lane V/C Ratio	0.031	0.007	-	-	-	-	-	0.041
HCM Control Delay (s)	9.8	7.4	0	-	0	-	-	9.3
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	5.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	23	66	21	44	23	1	10	33	24	7	31	8
Future Vol, veh/h	23	66	21	44	23	1	10	33	24	7	31	8
Conflicting Peds, #/hr	5	0	0	0	0	5	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	74	24	49	26	1	11	37	27	8	35	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	32	0	0	98	0	0	286	268	86	300	280	33
Stage 1	-	-	-	-	-	-	138	138	-	130	130	-
Stage 2	-	-	-	-	-	-	148	130	-	170	150	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1580	-	-	1495	-	-	666	638	973	652	628	1041
Stage 1	-	-	-	-	-	-	865	782	-	874	789	-
Stage 2	-	-	-	-	-	-	855	789	-	832	773	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1572	-	-	1495	-	-	606	603	973	578	593	1035
Mov Cap-2 Maneuver	-	-	-	-	-	-	606	603	-	578	593	-
Stage 1	-	-	-	-	-	-	849	768	-	854	759	-
Stage 2	-	-	-	-	-	-	781	759	-	756	759	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.5	4.8	10.8	11.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	699	1572	-	-	1495	-	-	638
HCM Lane V/C Ratio	0.108	0.016	-	-	0.033	-	-	0.081
HCM Control Delay (s)	10.8	7.3	0	-	7.5	0	-	11.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0.1	-	-	0.3

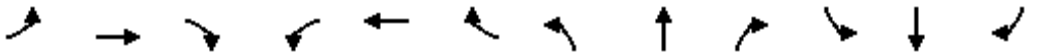
Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	20	105	86	6	8	21
Future Vol, veh/h	20	105	86	6	8	21
Conflicting Peds, #/hr	1	0	0	1	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	120	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	119	98	7	9	24

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	106	0	-	0	268	103
Stage 1	-	-	-	-	103	-
Stage 2	-	-	-	-	165	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1485	-	-	-	721	952
Stage 1	-	-	-	-	921	-
Stage 2	-	-	-	-	864	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1484	-	-	-	707	951
Mov Cap-2 Maneuver	-	-	-	-	707	-
Stage 1	-	-	-	-	904	-
Stage 2	-	-	-	-	863	-

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1484	-	-	-	707	951
HCM Lane V/C Ratio	0.015	-	-	-	0.013	0.025
HCM Control Delay (s)	7.5	0	-	-	10.2	8.9
HCM Lane LOS	A	A	-	-	B	A
HCM 95th %tile Q(veh)	0	-	-	-	0	0.1



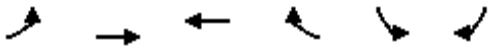
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	97	156	8	78	285	148	0	0	0	66	49	130
Future Volume (vph)	97	156	8	78	285	148	0	0	0	66	49	130
Lane Util. Factor	1.00	0.95	0.95	0.97	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		0.98	0.99						1.00	0.97
Frt		0.992			0.949							0.850
Flt Protected	0.950			0.950							0.972	
Satd. Flow (prot)	1770	3508	0	3433	3331	0	0	0	0	0	1811	1583
Flt Permitted	0.487			0.950							0.972	
Satd. Flow (perm)	906	3508	0	3373	3331	0	0	0	0	0	1805	1537
Satd. Flow (RTOR)		7			122							138
Confl. Peds. (#/hr)	3		9	9		3	14		4	4		14
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	103	175	0	83	460	0	0	0	0	0	122	138
Turn Type	pm+pt	NA		Prot	NA					Split	NA	Perm
Protected Phases	1	2		1	2					4	4	
Permitted Phases	2											4
Detector Phase	1	2		1	2					4	4	4
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0					7.0	7.0	7.0
Minimum Split (s)	9.0	15.5		9.0	15.5					12.0	12.0	12.0
Total Split (s)	23.0	40.0		23.0	40.0					26.0	26.0	26.0
Total Split (%)	25.8%	44.9%		25.8%	44.9%					29.2%	29.2%	29.2%
Maximum Green (s)	18.0	34.5		18.0	34.5					21.0	21.0	21.0
Yellow Time (s)	4.0	4.0		4.0	4.0					4.0	4.0	4.0
All-Red Time (s)	1.0	1.5		1.0	1.5					1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0						0.0	0.0
Total Lost Time (s)	5.0	5.5		5.0	5.5						5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	2.0	2.0		2.0	2.0					2.0	2.0	2.0
Recall Mode	None	C-Max		None	C-Max					None	None	None
Act Effct Green (s)	64.4	58.3		6.6	58.3						10.6	10.6
Actuated g/C Ratio	0.72	0.66		0.07	0.66						0.12	0.12
v/c Ratio	0.14	0.08		0.33	0.21						0.57	0.45
Control Delay	3.6	6.8		42.1	5.6						46.8	11.4
Queue Delay	0.0	0.0		0.0	0.4						0.0	0.0
Total Delay	3.6	6.8		42.1	6.0						46.8	11.4
LOS	A	A		D	A						D	B
Approach Delay		5.6			11.5						28.0	
Approach LOS		A			B						C	
Queue Length 50th (ft)	11	16		23	36						66	0
Queue Length 95th (ft)	27	35		44	69						115	49
Internal Link Dist (ft)		516			188			218			576	
Turn Bay Length (ft)	50											65
Base Capacity (vph)	871	2298		694	2222						427	468
Starvation Cap Reductn	0	0		0	1245						0	0
Spillback Cap Reductn	0	0		0	0						0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0						0	0
Reduced v/c Ratio	0.12	0.08		0.12	0.47						0.29	0.29

Intersection Summary	
Cycle Length: 89	
Actuated Cycle Length: 89	
Offset: 0 (0%), Referenced to phase 2:EBWB, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 14.0	Intersection LOS: B
Intersection Capacity Utilization 43.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: Central Street & Summit Hill Drive

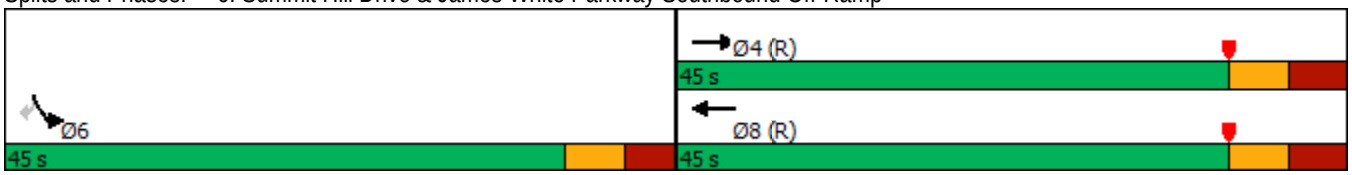




Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	223	247	0	152	265
Future Volume (vph)	0	223	247	0	152	265
Lane Util. Factor	1.00	0.91	0.95	1.00	1.00	0.88
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	5085	3539	0	1770	2787
Flt Permitted					0.950	
Satd. Flow (perm)	0	5085	3539	0	1770	2787
Satd. Flow (RTOR)						282
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	237	263	0	162	282
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		10.0	10.0		7.0	7.0
Minimum Split (s)		18.0	18.0		14.5	14.5
Total Split (s)		45.0	45.0		45.0	45.0
Total Split (%)		50.0%	50.0%		50.0%	50.0%
Maximum Green (s)		37.0	37.0		37.5	37.5
Yellow Time (s)		4.0	4.0		4.0	4.0
All-Red Time (s)		4.0	4.0		3.5	3.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0
Total Lost Time (s)		8.0	8.0		7.5	7.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		5.0	2.0		5.0	5.0
Recall Mode		C-Max	C-Max		None	None
Act Effct Green (s)		58.5	58.5		16.0	16.0
Actuated g/C Ratio		0.65	0.65		0.18	0.18
v/c Ratio		0.07	0.11		0.52	0.39
Control Delay		6.5	6.8		38.4	5.3
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		6.5	6.8		38.4	5.3
LOS		A	A		D	A
Approach Delay		6.5	6.8		17.4	
Approach LOS		A	A		B	
Queue Length 50th (ft)		15	25		85	0
Queue Length 95th (ft)		31	51		134	32
Internal Link Dist (ft)		188	373		516	
Turn Bay Length (ft)						250
Base Capacity (vph)		3305	2300		737	1325
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.07	0.11		0.22	0.21

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 52 (58%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.52	
Intersection Signal Delay: 11.7	Intersection LOS: B
Intersection Capacity Utilization 30.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Summit Hill Drive & James White Parkway Southbound Off-Ramp

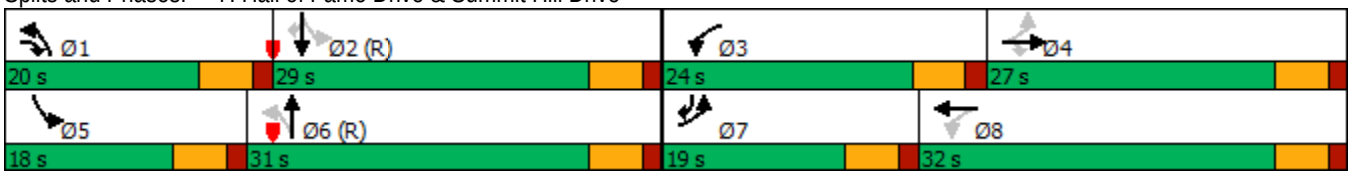


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	200	125	167	129	124	25	115	44	74	132	92
Future Volume (vph)	54	200	125	167	129	124	25	115	44	74	132	92
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00				0.99			1.00		1.00		
Frt			0.850		0.926			0.958				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3247	0	1770	3378	0	1770	3539	1583
Flt Permitted	0.589			0.409			0.664			0.644		
Satd. Flow (perm)	1093	3539	1583	762	3247	0	1237	3378	0	1199	3539	1583
Satd. Flow (RTOR)			130		129			46				96
Confl. Peds. (#/hr)	6					6			1	1		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)												
Lane Group Flow (vph)	56	208	130	174	263	0	26	166	0	77	138	96
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	7	4	1	3	8		1	6		5	2	7
Permitted Phases	4		4	8			6			2		2
Detector Phase	7	4	1	3	8		1	6		5	2	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0		5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5		10.5	15.5	10.5
Total Split (s)	19.0	27.0	20.0	24.0	32.0		20.0	31.0		18.0	29.0	19.0
Total Split (%)	19.0%	27.0%	20.0%	24.0%	32.0%		20.0%	31.0%		18.0%	29.0%	19.0%
Maximum Green (s)	13.5	21.5	14.5	18.5	26.5		14.5	25.5		12.5	23.5	13.5
Yellow Time (s)	4.0	4.0	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	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		2.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	None
Act Effct Green (s)	17.1	10.3	21.1	28.1	18.0		55.2	50.9		56.4	49.9	62.2
Actuated g/C Ratio	0.17	0.10	0.21	0.28	0.18		0.55	0.51		0.56	0.50	0.62
v/c Ratio	0.24	0.57	0.30	0.51	0.38		0.04	0.10		0.11	0.08	0.09
Control Delay	27.6	48.8	7.5	32.8	19.6		15.3	19.2		9.2	13.8	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	27.6	48.8	7.5	32.8	19.6		15.3	19.2		9.2	13.8	2.2
LOS	C	D	A	C	B		B	B		A	B	A
Approach Delay		32.2			24.9			18.6			9.1	
Approach LOS		C			C			B			A	
Queue Length 50th (ft)	26	67	0	88	40		10	31		16	26	0
Queue Length 95th (ft)	51	102	45	131	72		30	61		36	47	6
Internal Link Dist (ft)		373			335			424			335	
Turn Bay Length (ft)				165			230			165		60
Base Capacity (vph)	350	760	569	401	955		828	1740		799	1766	1120
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.16	0.27	0.23	0.43	0.28		0.03	0.10		0.10	0.08	0.09

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 50 (50%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 22.5	Intersection LOS: C
Intersection Capacity Utilization 45.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: Hall of Fame Drive & Summit Hill Drive



Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	74	246	339	31	42	57
Future Vol, veh/h	74	246	339	31	42	57
Conflicting Peds, #/hr	6	0	0	6	5	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	76	254	349	32	43	59

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	387	0	-	0	655	198
Stage 1	-	-	-	-	371	-
Stage 2	-	-	-	-	284	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1168	-	-	-	399	810
Stage 1	-	-	-	-	668	-
Stage 2	-	-	-	-	739	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1161	-	-	-	369	805
Mov Cap-2 Maneuver	-	-	-	-	369	-
Stage 1	-	-	-	-	621	-
Stage 2	-	-	-	-	735	-

Approach	EB	WB	SB
HCM Control Delay, s	1.9	0	9.7
HCM LOS			A

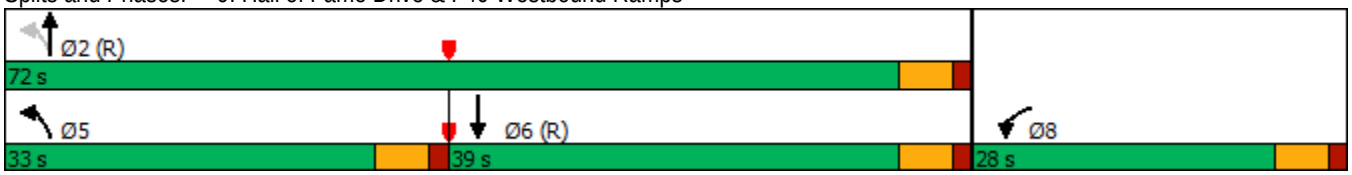
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1161	-	-	-	870
HCM Lane V/C Ratio	0.066	-	-	-	0.117
HCM Control Delay (s)	8.3	-	-	-	9.7
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.2	-	-	-	0.4

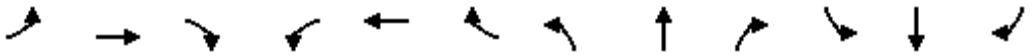
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	100	0	73	248	440	0	0	251	271
Future Volume (vph)	0	0	0	100	0	73	248	440	0	0	251	271
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor							1.00				0.99	
Frt						0.850					0.922	
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	0	0	3433	0	1583	1770	3539	0	0	3227	0
Flt Permitted				0.950			0.418					
Satd. Flow (perm)	0	0	0	3433	0	1583	778	3539	0	0	3227	0
Satd. Flow (RTOR)						147					277	
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	102	0	74	253	449	0	0	533	0
Turn Type				Prot		Free	pm+pt	NA			NA	
Protected Phases				8			5	2			6	
Permitted Phases						Free	2					
Detector Phase				8			5	2			6	
Switch Phase												
Minimum Initial (s)				5.0			5.0	10.0			10.0	
Minimum Split (s)				10.5			10.5	15.5			15.5	
Total Split (s)				28.0			33.0	72.0			39.0	
Total Split (%)				28.0%			33.0%	72.0%			39.0%	
Maximum Green (s)				22.5			27.5	66.5			33.5	
Yellow Time (s)				4.0			4.0	4.0			4.0	
All-Red Time (s)				1.5			1.5	1.5			1.5	
Lost Time Adjust (s)				0.0			0.0	0.0			0.0	
Total Lost Time (s)				5.5			5.5	5.5			5.5	
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)				3.0			2.0	2.0			2.0	
Recall Mode				None			None	C-Max			C-Max	
Act Effct Green (s)				8.3		100.0	83.0	84.1			69.8	
Actuated g/C Ratio				0.08		1.00	0.83	0.84			0.70	
v/c Ratio				0.36		0.05	0.35	0.15			0.23	
Control Delay				46.3		0.1	3.6	1.3			3.3	
Queue Delay				0.0		0.0	0.0	0.0			0.0	
Total Delay				46.3		0.1	3.6	1.3			3.3	
LOS				D		A	A	A			A	
Approach Delay					26.9			2.2			3.3	
Approach LOS					C			A			A	
Queue Length 50th (ft)				32		0	35	32			26	
Queue Length 95th (ft)				57		0	12	7			53	
Internal Link Dist (ft)		440			577			562			692	
Turn Bay Length (ft)				475		200	155					
Base Capacity (vph)				772		1583	918	2975			2336	
Starvation Cap Reductn				0		0	0	0			0	
Spillback Cap Reductn				0		0	0	0			0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn				0		0	0	0			0	
Reduced v/c Ratio				0.13		0.05	0.28	0.15			0.23	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 30 (30%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.36	
Intersection Signal Delay: 5.7	Intersection LOS: A
Intersection Capacity Utilization 47.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 9: Hall of Fame Drive & I-40 Westbound Ramps

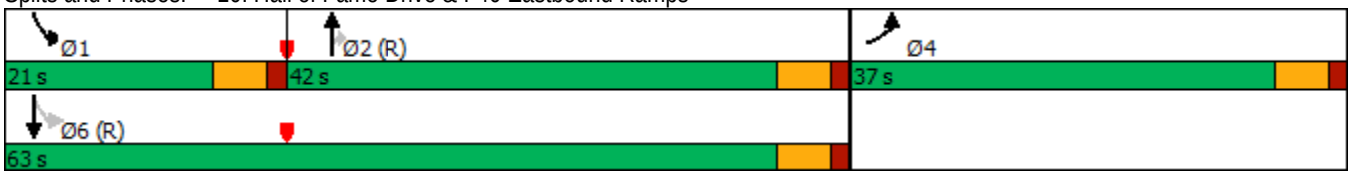




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	217	0	276	0	0	0	0	472	128	44	309	0
Future Volume (vph)	217	0	276	0	0	0	0	472	128	44	309	0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850						0.850			
Flt Protected	0.950									0.950		
Satd. Flow (prot)	3433	0	1583	0	0	0	0	3539	1583	1770	3539	0
Flt Permitted	0.950									0.439		
Satd. Flow (perm)	3433	0	1583	0	0	0	0	3539	1583	818	3539	0
Satd. Flow (RTOR)			285						132			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	224	0	285	0	0	0	0	487	132	45	319	0
Turn Type	Prot		Free					NA	Perm	pm+pt	NA	
Protected Phases	4							2		1	6	
Permitted Phases			Free						2	6		
Detector Phase	4							2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0							10.0	10.0	5.0	10.0	
Minimum Split (s)	22.5							22.5	22.5	10.5	22.5	
Total Split (s)	37.0							42.0	42.0	21.0	63.0	
Total Split (%)	37.0%							42.0%	42.0%	21.0%	63.0%	
Maximum Green (s)	31.5							36.5	36.5	15.5	57.5	
Yellow Time (s)	4.0							4.0	4.0	4.0	4.0	
All-Red Time (s)	1.5							1.5	1.5	1.5	1.5	
Lost Time Adjust (s)	0.0							0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5							5.5	5.5	5.5	5.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	2.0							2.0	2.0	2.0	2.0	
Recall Mode	None							C-Max	C-Max	None	C-Max	
Act Effct Green (s)	11.5		100.0					70.9	70.9	77.5	77.5	
Actuated g/C Ratio	0.12		1.00					0.71	0.71	0.78	0.78	
v/c Ratio	0.57		0.18					0.19	0.11	0.07	0.12	
Control Delay	47.5		0.2					4.4	1.0	1.4	1.5	
Queue Delay	0.0		0.0					0.0	0.0	0.0	0.0	
Total Delay	47.5		0.2					4.4	1.0	1.4	1.5	
LOS	D		A					A	A	A	A	
Approach Delay		21.1						3.6			1.5	
Approach LOS		C						A			A	
Queue Length 50th (ft)	71		0					40	0	2	7	
Queue Length 95th (ft)	106		0					69	0	5	11	
Internal Link Dist (ft)		686			892			546			562	
Turn Bay Length (ft)	200		210						290	190		
Base Capacity (vph)	1081		1583					2510	1161	781	2742	
Starvation Cap Reductn	0		0					0	0	0	0	
Spillback Cap Reductn	0		0					0	0	0	0	
Storage Cap Reductn	0		0					0	0	0	0	
Reduced v/c Ratio	0.21		0.18					0.19	0.11	0.06	0.12	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 50 (50%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 9.1	Intersection LOS: A
Intersection Capacity Utilization 47.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 10: Hall of Fame Drive & I-40 Eastbound Ramps

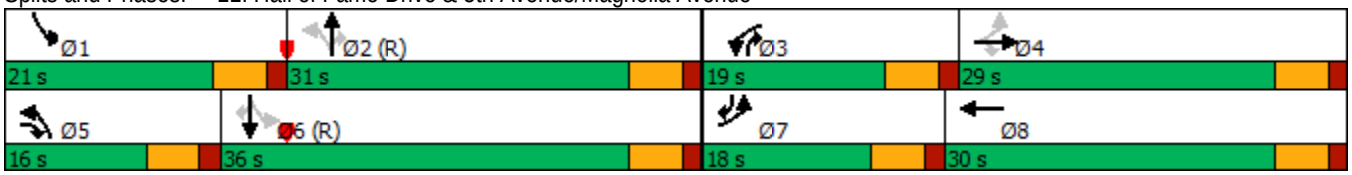


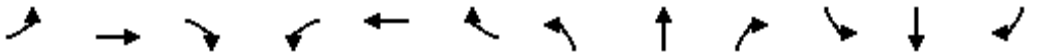
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	173	18	66	171	152	25	237	72	175	230	52
Future Volume (vph)	61	173	18	66	171	152	25	237	72	175	230	52
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor							1.00		0.99	1.00		0.99
Frt			0.850		0.930				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3291	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.323			0.950			0.599			0.534		
Satd. Flow (perm)	602	3539	1583	3433	3291	0	1115	3539	1563	994	3539	1563
Satd. Flow (RTOR)			87		163				87			87
Confl. Peds. (#/hr)							1		1	1		1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	66	186	19	71	347	0	27	255	77	188	247	56
Turn Type	pm+pt	NA	pm+ov	Prot	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4				2		2	6		6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0	5.0	5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5	10.5	10.5	15.5	10.5
Total Split (s)	18.0	29.0	16.0	19.0	30.0		16.0	31.0	19.0	21.0	36.0	18.0
Total Split (%)	18.0%	29.0%	16.0%	19.0%	30.0%		16.0%	31.0%	19.0%	21.0%	36.0%	18.0%
Maximum Green (s)	12.5	23.5	10.5	13.5	24.5		10.5	25.5	13.5	15.5	30.5	12.5
Yellow Time (s)	4.0	4.0	4.0	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	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	None	None	C-Max	None
Act Effct Green (s)	19.6	12.3	24.0	7.5	11.4		56.6	50.5	57.9	65.4	58.7	67.1
Actuated g/C Ratio	0.20	0.12	0.24	0.08	0.11		0.57	0.50	0.58	0.65	0.59	0.67
v/c Ratio	0.31	0.43	0.04	0.28	0.67		0.04	0.14	0.08	0.26	0.12	0.05
Control Delay	31.0	42.7	0.2	46.0	28.4		5.6	11.0	2.0	8.1	11.5	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.0	42.7	0.2	46.0	28.4		5.6	11.0	2.0	8.1	11.5	1.4
LOS	C	D	A	D	C		A	B	A	A	B	A
Approach Delay		36.9			31.4			8.6			9.1	
Approach LOS		D			C			A			A	
Queue Length 50th (ft)	33	58	0	22	58		3	34	0	37	46	0
Queue Length 95th (ft)	61	87	0	43	101		10	84	7	102	74	6
Internal Link Dist (ft)		674			634			359			1142	
Turn Bay Length (ft)	245		35	295			230		245	175		175
Base Capacity (vph)	285	831	510	463	929		748	1785	1033	775	2077	1140
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.22	0.04	0.15	0.37		0.04	0.14	0.07	0.24	0.12	0.05

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 50 (50%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 19.9	Intersection LOS: B
Intersection Capacity Utilization 50.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 11: Hall of Fame Drive & 5th Avenue/Magnolia Avenue



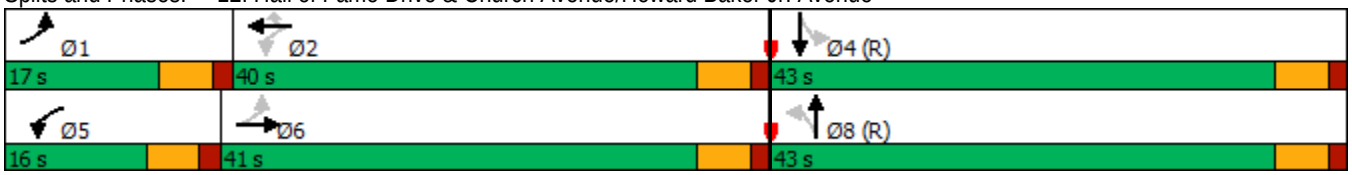


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	37	12	6	27	43	12	93	18	33	104	25
Future Volume (vph)	63	37	12	6	27	43	12	93	18	33	104	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor	0.99	1.00		1.00		0.98						
Frt		0.964				0.850		0.978			0.977	
Flt Protected	0.950			0.950				0.995			0.990	
Satd. Flow (prot)	1770	1789	0	1770	1863	1583	0	3444	0	0	3423	0
Flt Permitted	0.461			0.724				0.931			0.887	
Satd. Flow (perm)	851	1789	0	1346	1863	1545	0	3223	0	0	3067	0
Satd. Flow (RTOR)		12				87		19			24	
Confl. Peds. (#/hr)	14		3	3		14						
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	65	50	0	6	28	44	0	127	0	0	167	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6			2		2	8			4		
Detector Phase	1	6		5	2	2	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0	7.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	10.5	22.5		10.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	17.0	41.0		16.0	40.0	40.0	43.0	43.0		43.0	43.0	
Total Split (%)	17.0%	41.0%		16.0%	40.0%	40.0%	43.0%	43.0%		43.0%	43.0%	
Maximum Green (s)	11.5	35.5		10.5	34.5	34.5	37.5	37.5		37.5	37.5	
Yellow Time (s)	4.0	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	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5	5.5		5.5			5.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)	17.8	16.1		10.9	7.2	7.2		74.3			74.3	
Actuated g/C Ratio	0.18	0.16		0.11	0.07	0.07		0.74			0.74	
v/c Ratio	0.29	0.17		0.04	0.21	0.23		0.05			0.07	
Control Delay	35.6	30.1		31.0	47.5	4.3		4.7			3.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Delay	35.6	30.1		31.0	47.5	4.3		4.7			3.3	
LOS	D	C		C	D	A		A			A	
Approach Delay		33.2			21.8			4.7			3.3	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)	35	20		3	17	0		10			12	
Queue Length 95th (ft)	69	57		13	45	7		22			24	
Internal Link Dist (ft)		488			887			548			1120	
Turn Bay Length (ft)	60			130								
Base Capacity (vph)	269	642		264	642	590		2399			2284	
Starvation Cap Reductn	0	0		0	0	0		0			0	
Spillback Cap Reductn	0	0		0	0	0		0			0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0	0		0			0	
Reduced v/c Ratio	0.24	0.08		0.02	0.04	0.07		0.05			0.07	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 4 (4%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.29	
Intersection Signal Delay: 13.7	Intersection LOS: B
Intersection Capacity Utilization 32.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 12: Hall of Fame Drive & Church Avenue/Howard Baker Jr. Avenue



Intersection	
Int Delay, s/veh	2.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	70	43	11	67	38	20
Future Vol, veh/h	70	43	11	67	38	20
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	77	47	12	74	42	22

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	125	0	200	102
Stage 1	-	-	-	-	102	-
Stage 2	-	-	-	-	98	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1462	-	789	953
Stage 1	-	-	-	-	922	-
Stage 2	-	-	-	-	926	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1461	-	781	952
Mov Cap-2 Maneuver	-	-	-	-	781	-
Stage 1	-	-	-	-	913	-
Stage 2	-	-	-	-	926	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	9.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	833	-	-	1461	-
HCM Lane V/C Ratio	0.077	-	-	0.008	-
HCM Control Delay (s)	9.7	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	14	44	29	5	47	7	7	13	0	1	1	2
Future Vol, veh/h	14	44	29	5	47	7	7	13	0	1	1	2
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	54	36	6	58	9	9	16	0	1	1	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	67	0	0	91	0	0	183	186	73	189	200	63
Stage 1	-	-	-	-	-	-	107	107	-	75	75	-
Stage 2	-	-	-	-	-	-	76	79	-	114	125	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1535	-	-	1504	-	-	778	708	989	771	696	1002
Stage 1	-	-	-	-	-	-	898	807	-	934	833	-
Stage 2	-	-	-	-	-	-	933	829	-	891	792	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1535	-	-	1503	-	-	765	696	988	748	684	1002
Mov Cap-2 Maneuver	-	-	-	-	-	-	765	696	-	748	684	-
Stage 1	-	-	-	-	-	-	886	797	-	923	830	-
Stage 2	-	-	-	-	-	-	926	826	-	863	782	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.2	0.6	10.2	9.3
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	719	1535	-	-	1503	-	-	834
HCM Lane V/C Ratio	0.034	0.011	-	-	0.004	-	-	0.006
HCM Control Delay (s)	10.2	7.4	0	-	7.4	0	-	9.3
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	6.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	11	72	31	79	42	4	18	42	30	1	49	10
Future Vol, veh/h	11	72	31	79	42	4	18	42	30	1	49	10
Conflicting Peds, #/hr	0	0	0	0	0	0	2	0	0	0	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	88	38	96	51	5	22	51	37	1	60	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	56	0	0	126	0	0	417	381	107	423	398	56
Stage 1	-	-	-	-	-	-	133	133	-	246	246	-
Stage 2	-	-	-	-	-	-	284	248	-	177	152	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1549	-	-	1460	-	-	546	552	947	541	540	1011
Stage 1	-	-	-	-	-	-	870	786	-	758	703	-
Stage 2	-	-	-	-	-	-	723	701	-	825	772	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1549	-	-	1460	-	-	461	510	947	452	499	1009
Mov Cap-2 Maneuver	-	-	-	-	-	-	461	510	-	452	499	-
Stage 1	-	-	-	-	-	-	862	779	-	751	655	-
Stage 2	-	-	-	-	-	-	604	653	-	734	765	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	4.8	12.5	12.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	588	1549	-	-	1460	-	-	544
HCM Lane V/C Ratio	0.187	0.009	-	-	0.066	-	-	0.135
HCM Control Delay (s)	12.5	7.3	0	-	7.6	0	-	12.6
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.7	0	-	-	0.2	-	-	0.5

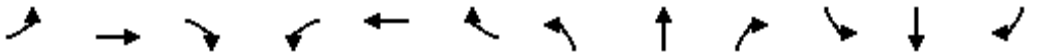
Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	88	95	7	2	35
Future Vol, veh/h	12	88	95	7	2	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	120	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	98	106	8	2	39

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	114	0	-	0	234	110
Stage 1	-	-	-	-	110	-
Stage 2	-	-	-	-	124	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1475	-	-	-	754	943
Stage 1	-	-	-	-	915	-
Stage 2	-	-	-	-	902	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1475	-	-	-	747	943
Mov Cap-2 Maneuver	-	-	-	-	747	-
Stage 1	-	-	-	-	907	-
Stage 2	-	-	-	-	902	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1475	-	-	-	747	943
HCM Lane V/C Ratio	0.009	-	-	-	0.003	0.041
HCM Control Delay (s)	7.5	0	-	-	9.8	9
HCM Lane LOS	A	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	0	0.1



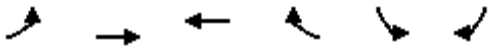
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	103	332	14	106	296	134	0	0	0	72	45	101
Future Volume (vph)	103	332	14	106	296	134	0	0	0	72	45	101
Lane Util. Factor	1.00	0.95	0.95	0.97	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		0.97	0.99						1.00	0.97
Frt		0.994			0.953							0.850
Flt Protected	0.950			0.950							0.970	
Satd. Flow (prot)	1770	3516	0	3433	3342	0	0	0	0	0	1807	1583
Flt Permitted	0.488			0.950							0.970	
Satd. Flow (perm)	905	3516	0	3342	3342	0	0	0	0	0	1802	1535
Satd. Flow (RTOR)		6			106							107
Confl. Peds. (#/hr)	10		8	8		10				4		16
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	110	368	0	113	458	0	0	0	0	0	125	107
Turn Type	pm+pt	NA		Prot	NA					Split	NA	Perm
Protected Phases	1	2		1	2					4	4	
Permitted Phases	2											4
Detector Phase	1	2		1	2					4	4	4
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0					7.0	7.0	7.0
Minimum Split (s)	9.0	15.5		9.0	15.5					12.0	12.0	12.0
Total Split (s)	14.0	56.0		14.0	56.0					30.0	30.0	30.0
Total Split (%)	14.0%	56.0%		14.0%	56.0%					30.0%	30.0%	30.0%
Maximum Green (s)	9.0	50.5		9.0	50.5					25.0	25.0	25.0
Yellow Time (s)	4.0	4.0		4.0	4.0					4.0	4.0	4.0
All-Red Time (s)	1.0	1.5		1.0	1.5					1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0						0.0	0.0
Total Lost Time (s)	5.0	5.5		5.0	5.5						5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	2.0	2.0		2.0	2.0					2.0	2.0	2.0
Recall Mode	None	C-Max		None	C-Max					None	None	None
Act Effct Green (s)	73.6	65.4		7.7	65.4						11.4	11.4
Actuated g/C Ratio	0.74	0.65		0.08	0.65						0.11	0.11
v/c Ratio	0.15	0.16		0.43	0.21						0.61	0.40
Control Delay	3.5	7.4		49.6	4.8						54.1	12.3
Queue Delay	0.0	0.0		0.0	0.3						0.0	0.0
Total Delay	3.5	7.4		49.6	5.1						54.1	12.3
LOS	A	A		D	A						D	B
Approach Delay		6.5			13.9						34.8	
Approach LOS		A			B						C	
Queue Length 50th (ft)	13	42		36	40						77	0
Queue Length 95th (ft)	30	74		64	47						130	46
Internal Link Dist (ft)		516			188			218			576	
Turn Bay Length (ft)	50											65
Base Capacity (vph)	759	2302		315	2223						451	464
Starvation Cap Reductn	0	0		0	1123						0	0
Spillback Cap Reductn	0	0		0	0						0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0						0	0
Reduced v/c Ratio	0.14	0.16		0.36	0.42						0.28	0.23

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 17 (17%), Referenced to phase 2:EBWB, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 15.0	Intersection LOS: B
Intersection Capacity Utilization 37.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: Central Street & Summit Hill Drive

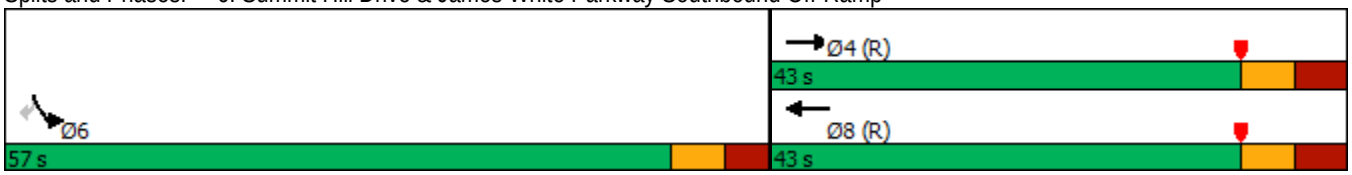




Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	401	178	0	236	367
Future Volume (vph)	0	401	178	0	236	367
Lane Util. Factor	1.00	0.91	0.95	1.00	1.00	0.88
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	5085	3539	0	1770	2787
Flt Permitted					0.950	
Satd. Flow (perm)	0	5085	3539	0	1770	2787
Satd. Flow (RTOR)						399
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	436	193	0	257	399
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		10.0	10.0		7.0	7.0
Minimum Split (s)		18.0	18.0		14.5	14.5
Total Split (s)		43.0	43.0		57.0	57.0
Total Split (%)		43.0%	43.0%		57.0%	57.0%
Maximum Green (s)		35.0	35.0		49.5	49.5
Yellow Time (s)		4.0	4.0		4.0	4.0
All-Red Time (s)		4.0	4.0		3.5	3.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0
Total Lost Time (s)		8.0	8.0		7.5	7.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		5.0	2.0		5.0	5.0
Recall Mode		C-Max	C-Max		None	None
Act Effct Green (s)		60.8	60.8		23.7	23.7
Actuated g/C Ratio		0.61	0.61		0.24	0.24
v/c Ratio		0.14	0.09		0.61	0.41
Control Delay		13.1	9.2		39.5	4.1
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		13.1	9.2		39.5	4.1
LOS		B	A		D	A
Approach Delay		13.1	9.2		17.9	
Approach LOS		B	A		B	
Queue Length 50th (ft)		56	19		147	0
Queue Length 95th (ft)		88	46		203	35
Internal Link Dist (ft)		188	373		516	
Turn Bay Length (ft)						250
Base Capacity (vph)		3092	2152		876	1581
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.14	0.09		0.29	0.25

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 47 (47%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 15.0	Intersection LOS: B
Intersection Capacity Utilization 34.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Summit Hill Drive & James White Parkway Southbound Off-Ramp

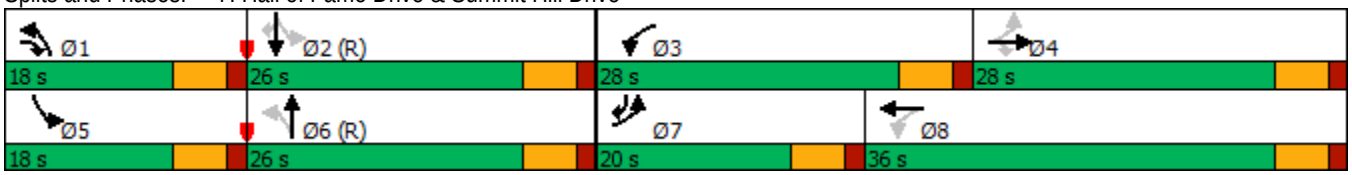


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	241	305	240	113	173	24	186	63	157	149	68
Future Volume (vph)	86	241	305	240	113	173	24	186	63	157	149	68
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor							1.00					0.99
Frt			0.850		0.909			0.962				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3217	0	1770	3405	0	1770	3539	1583
Flt Permitted	0.563			0.340			0.649			0.530		
Satd. Flow (perm)	1049	3539	1583	633	3217	0	1207	3405	0	987	3539	1562
Satd. Flow (RTOR)			332		188			42				147
Confl. Peds. (#/hr)							2					2
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
Shared Lane Traffic (%)												
Lane Group Flow (vph)	93	262	332	261	311	0	26	270	0	171	162	74
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	7	4	1	3	8		1	6		5	2	7
Permitted Phases	4		4	8			6			2		2
Detector Phase	7	4	1	3	8		1	6		5	2	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0		5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5		10.5	15.5	10.5
Total Split (s)	20.0	28.0	18.0	28.0	36.0		18.0	26.0		18.0	26.0	20.0
Total Split (%)	20.0%	28.0%	18.0%	28.0%	36.0%		18.0%	26.0%		18.0%	26.0%	20.0%
Maximum Green (s)	14.5	22.5	12.5	22.5	30.5		12.5	20.5		12.5	20.5	14.5
Yellow Time (s)	4.0	4.0	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	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		2.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	None
Act Effct Green (s)	19.8	11.8	22.7	33.8	20.3		45.5	40.0		53.4	44.2	52.2
Actuated g/C Ratio	0.20	0.12	0.23	0.34	0.20		0.46	0.40		0.53	0.44	0.52
v/c Ratio	0.35	0.63	0.54	0.65	0.39		0.04	0.19		0.28	0.10	0.08
Control Delay	19.2	37.9	11.6	32.6	14.0		10.5	16.1		9.5	10.9	0.2
Queue Delay	0.0	0.0	0.2	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	19.2	37.9	11.7	32.6	14.0		10.5	16.1		9.5	10.9	0.2
LOS	B	D	B	C	B		B	B		A	B	A
Approach Delay		22.7			22.5			15.6			8.4	
Approach LOS		C			C			B			A	
Queue Length 50th (ft)	35	90	85	128	34		5	50		25	13	0
Queue Length 95th (ft)	51	131	157	172	66		21	88		41	21	0
Internal Link Dist (ft)		373			335			424			335	
Turn Bay Length (ft)				165			230			165		60
Base Capacity (vph)	380	796	704	469	1111		701	1388		645	1565	981
Starvation Cap Reductn	0	0	52	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.24	0.33	0.51	0.56	0.28		0.04	0.19		0.27	0.10	0.08

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 56 (56%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 18.6	Intersection LOS: B
Intersection Capacity Utilization 55.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 7: Hall of Fame Drive & Summit Hill Drive



Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	74	390	460	24	76	103
Future Vol, veh/h	74	390	460	24	76	103
Conflicting Peds, #/hr	2	0	0	2	0	6
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	79	415	489	26	81	110

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	517	0	-	0	870	266
Stage 1	-	-	-	-	504	-
Stage 2	-	-	-	-	366	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1045	-	-	-	291	732
Stage 1	-	-	-	-	572	-
Stage 2	-	-	-	-	672	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1043	-	-	-	268	726
Mov Cap-2 Maneuver	-	-	-	-	268	-
Stage 1	-	-	-	-	527	-
Stage 2	-	-	-	-	671	-

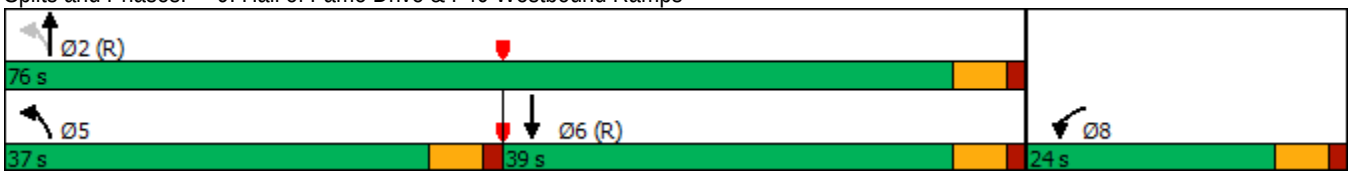
Approach	EB	WB	SB
HCM Control Delay, s	1.4	0	13.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1043	-	-	-	631
HCM Lane V/C Ratio	0.075	-	-	-	0.302
HCM Control Delay (s)	8.7	-	-	-	13.2
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	1.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	75	0	134	375	730	0	0	328	364
Future Volume (vph)	0	0	0	75	0	134	375	730	0	0	328	364
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt						0.850					0.921	
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	0	0	3433	0	1583	1770	3539	0	0	3260	0
Flt Permitted				0.950			0.297					
Satd. Flow (perm)	0	0	0	3433	0	1583	553	3539	0	0	3260	0
Satd. Flow (RTOR)						151					303	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	84	0	151	421	820	0	0	778	0
Turn Type				Prot		Free	pm+pt	NA			NA	
Protected Phases				8			5	2			6	
Permitted Phases						Free	2					
Detector Phase				8			5	2			6	
Switch Phase												
Minimum Initial (s)				5.0			5.0	10.0			10.0	
Minimum Split (s)				10.5			10.5	15.5			15.5	
Total Split (s)				24.0			37.0	76.0			39.0	
Total Split (%)				24.0%			37.0%	76.0%			39.0%	
Maximum Green (s)				18.5			31.5	70.5			33.5	
Yellow Time (s)				4.0			4.0	4.0			4.0	
All-Red Time (s)				1.5			1.5	1.5			1.5	
Lost Time Adjust (s)				0.0			0.0	0.0			0.0	
Total Lost Time (s)				5.5			5.5	5.5			5.5	
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)				3.0			2.0	2.0			2.0	
Recall Mode				None			None	C-Max			C-Max	
Act Effct Green (s)				7.8		100.0	83.4	84.5			62.7	
Actuated g/C Ratio				0.08		1.00	0.83	0.84			0.63	
v/c Ratio				0.31		0.10	0.65	0.27			0.36	
Control Delay				46.2		0.1	11.5	2.5			7.3	
Queue Delay				0.0		0.0	0.0	0.0			0.0	
Total Delay				46.2		0.1	11.5	2.5			7.3	
LOS				D		A	B	A			A	
Approach Delay					16.6			5.5			7.3	
Approach LOS					B			A			A	
Queue Length 50th (ft)				26		0	75	37			67	
Queue Length 95th (ft)				48		0	118	68			142	
Internal Link Dist (ft)		440			577			562			692	
Turn Bay Length (ft)				475		200	155					
Base Capacity (vph)				635		1583	844	2991			2157	
Starvation Cap Reductn				0		0	0	0			0	
Spillback Cap Reductn				0		0	0	0			0	
Storage Cap Reductn				0		0	0	0			0	
Reduced v/c Ratio				0.13		0.10	0.50	0.27			0.36	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 48 (48%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 7.3	Intersection LOS: A
Intersection Capacity Utilization 59.5%	ICU Level of Service B
Analysis Period (min) 15	

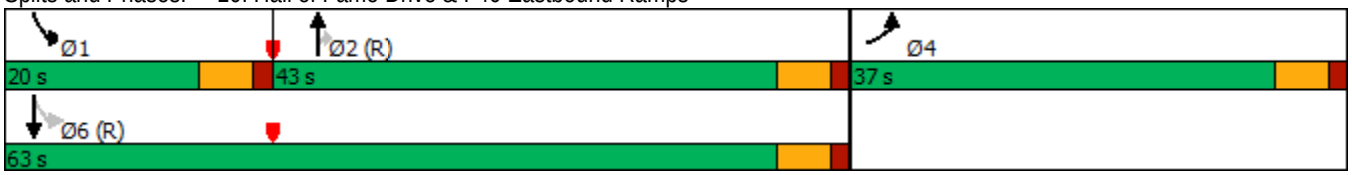
Splits and Phases: 9: Hall of Fame Drive & I-40 Westbound Ramps

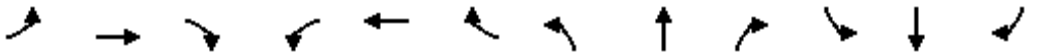


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	412	0	305	0	0	0	0	694	212	84	322	0
Future Volume (vph)	412	0	305	0	0	0	0	694	212	84	322	0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850						0.850			
Flt Protected	0.950									0.950		
Satd. Flow (prot)	3433	0	1583	0	0	0	0	3539	1583	1770	3539	0
Flt Permitted	0.950									0.296		
Satd. Flow (perm)	3433	0	1583	0	0	0	0	3539	1583	551	3539	0
Satd. Flow (RTOR)			339						236			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	458	0	339	0	0	0	0	771	236	93	358	0
Turn Type	Prot		Free					NA	Perm	pm+pt	NA	
Protected Phases	4							2		1	6	
Permitted Phases			Free						2	6		
Detector Phase	4							2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0							10.0	10.0	5.0	10.0	
Minimum Split (s)	22.5							22.5	22.5	10.5	22.5	
Total Split (s)	37.0							43.0	43.0	20.0	63.0	
Total Split (%)	37.0%							43.0%	43.0%	20.0%	63.0%	
Maximum Green (s)	31.5							37.5	37.5	14.5	57.5	
Yellow Time (s)	4.0							4.0	4.0	4.0	4.0	
All-Red Time (s)	1.5							1.5	1.5	1.5	1.5	
Lost Time Adjust (s)	0.0							0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5							5.5	5.5	5.5	5.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	2.0							2.0	2.0	2.0	2.0	
Recall Mode	None							C-Max	C-Max	None	C-Max	
Act Effct Green (s)	17.9		100.0					61.5	61.5	71.1	71.1	
Actuated g/C Ratio	0.18		1.00					0.62	0.62	0.71	0.71	
v/c Ratio	0.75		0.21					0.35	0.22	0.20	0.14	
Control Delay	46.6		0.3					9.4	1.5	5.6	4.6	
Queue Delay	0.0		0.0					0.0	0.0	0.0	0.0	
Total Delay	46.6		0.3					9.4	1.5	5.6	4.6	
LOS	D		A					A	A	A	A	
Approach Delay		26.9						7.5			4.8	
Approach LOS		C						A			A	
Queue Length 50th (ft)	143		0					107	1	13	26	
Queue Length 95th (ft)	186		0					171	6	34	54	
Internal Link Dist (ft)		686			892			546			562	
Turn Bay Length (ft)	200		210						290	190		
Base Capacity (vph)	1081		1583					2175	1064	568	2517	
Starvation Cap Reductn	0		0					0	0	0	0	
Spillback Cap Reductn	0		0					0	0	0	0	
Storage Cap Reductn	0		0					0	0	0	0	
Reduced v/c Ratio	0.42		0.21					0.35	0.22	0.16	0.14	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 20 (20%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 13.8	Intersection LOS: B
Intersection Capacity Utilization 59.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 10: Hall of Fame Drive & I-40 Eastbound Ramps



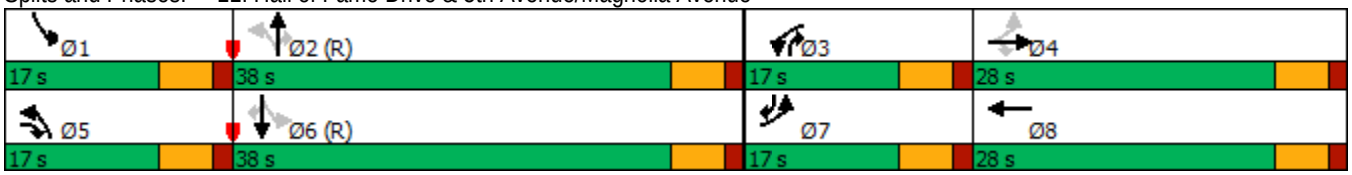


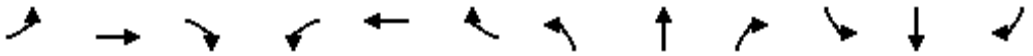
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	254	32	58	185	202	38	336	89	116	288	66
Future Volume (vph)	92	254	32	58	185	202	38	336	89	116	288	66
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.99	0.99			1.00					0.99
Frt			0.850		0.922				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3263	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.263			0.950			0.554			0.477		
Satd. Flow (perm)	490	3539	1562	3413	3263	0	1031	3539	1583	889	3539	1561
Satd. Flow (RTOR)			87		230				101			87
Confl. Peds. (#/hr)			2	2			3					3
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Lane Group Flow (vph)	105	289	36	66	440	0	43	382	101	132	327	75
Turn Type	pm+pt	NA	pm+ov	Prot	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4				2		2	6		6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0	5.0	5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5	10.5	10.5	15.5	10.5
Total Split (s)	17.0	28.0	17.0	17.0	28.0		17.0	38.0	17.0	17.0	38.0	17.0
Total Split (%)	17.0%	28.0%	17.0%	17.0%	28.0%		17.0%	38.0%	17.0%	17.0%	38.0%	17.0%
Maximum Green (s)	11.5	22.5	11.5	11.5	22.5		11.5	32.5	11.5	11.5	32.5	11.5
Yellow Time (s)	4.0	4.0	4.0	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	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	None	None	C-Max	None
Act Effct Green (s)	24.8	15.1	21.7	7.3	12.8		53.3	46.7	59.5	58.8	51.2	60.9
Actuated g/C Ratio	0.25	0.15	0.22	0.07	0.13		0.53	0.47	0.60	0.59	0.51	0.61
v/c Ratio	0.43	0.54	0.09	0.26	0.71		0.07	0.23	0.10	0.22	0.18	0.08
Control Delay	31.6	42.4	0.4	45.9	26.0		7.9	16.3	4.4	8.4	13.3	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.6	42.4	0.4	45.9	26.0		7.9	16.3	4.4	8.4	13.3	2.3
LOS	C	D	A	D	C		A	B	A	A	B	A
Approach Delay		36.2			28.6			13.4			10.5	
Approach LOS		D			C			B			B	
Queue Length 50th (ft)	51	91	0	21	67		10	68	0	33	58	1
Queue Length 95th (ft)	82	121	0	40	107		16	119	19	58	86	11
Internal Link Dist (ft)		674			634			359			1142	
Turn Bay Length (ft)	245		35	295			230		245	175		175
Base Capacity (vph)	277	796	481	394	912		685	1652	1045	639	1812	1013
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.36	0.07	0.17	0.48		0.06	0.23	0.10	0.21	0.18	0.07

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 12 (12%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 21.4	Intersection LOS: C
Intersection Capacity Utilization 50.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 11: Hall of Fame Drive & 5th Avenue/Magnolia Avenue



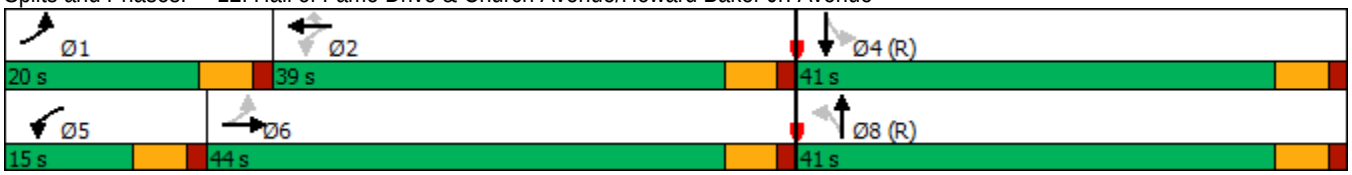


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	82	36	13	45	130	11	147	18	64	107	31
Future Volume (vph)	105	82	36	13	45	130	11	147	18	64	107	31
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor	0.97	0.99		0.99		0.93		1.00			1.00	
Frt		0.954				0.850		0.985			0.977	
Flt Protected	0.950			0.950				0.997			0.984	
Satd. Flow (prot)	1770	1767	0	1770	1863	1583	0	3476	0	0	3391	0
Flt Permitted	0.503			0.673				0.936			0.806	
Satd. Flow (perm)	907	1767	0	1247	1863	1475	0	3263	0	0	2777	0
Satd. Flow (RTOR)		26				144		13			23	
Confl. Peds. (#/hr)	64		9	9		64	2					2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	117	131	0	14	50	144	0	195	0	0	224	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6			2		2	8			4		
Detector Phase	1	6		5	2	2	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0	7.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	10.5	22.5		10.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	20.0	44.0		15.0	39.0	39.0	41.0	41.0		41.0	41.0	
Total Split (%)	20.0%	44.0%		15.0%	39.0%	39.0%	41.0%	41.0%		41.0%	41.0%	
Maximum Green (s)	14.5	38.5		9.5	33.5	33.5	35.5	35.5		35.5	35.5	
Yellow Time (s)	4.0	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	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5	5.5		5.5			5.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)	23.7	21.4		13.5	8.1	8.1		65.3			65.3	
Actuated g/C Ratio	0.24	0.21		0.14	0.08	0.08		0.65			0.65	
v/c Ratio	0.39	0.33		0.07	0.33	0.57		0.09			0.12	
Control Delay	33.8	28.9		28.2	48.8	16.8		6.8			3.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Delay	33.8	28.9		28.2	48.8	16.8		6.8			3.1	
LOS	C	C		C	D	B		A			A	
Approach Delay		31.2			25.2			6.8			3.1	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)	62	55		7	31	0		19			7	
Queue Length 95th (ft)	100	114		21	66	56		41			26	
Internal Link Dist (ft)		488			887			548			1120	
Turn Bay Length (ft)	60			130								
Base Capacity (vph)	340	696		269	624	589		2135			1821	
Starvation Cap Reductn	0	0		0	0	0		0			0	
Spillback Cap Reductn	0	0		0	0	0		0			0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0	0		0			0	
Reduced v/c Ratio	0.34	0.19		0.05	0.08	0.24		0.09			0.12	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 42 (42%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 17.1	Intersection LOS: B
Intersection Capacity Utilization 42.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 12: Hall of Fame Drive & Church Avenue/Howard Baker Jr. Avenue



Intersection	
Int Delay, s/veh	2.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	42	27	7	49	32	11
Future Vol, veh/h	42	27	7	49	32	11
Conflicting Peds, #/hr	0	1	1	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	44	28	7	52	34	12

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	73	0	126	59
Stage 1	-	-	-	-	59	-
Stage 2	-	-	-	-	67	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1527	-	869	1007
Stage 1	-	-	-	-	964	-
Stage 2	-	-	-	-	956	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1526	-	863	1006
Mov Cap-2 Maneuver	-	-	-	-	863	-
Stage 1	-	-	-	-	958	-
Stage 2	-	-	-	-	955	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	896	-	-	1526	-
HCM Lane V/C Ratio	0.051	-	-	0.005	-
HCM Control Delay (s)	9.2	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	33	18	0	39	4	10	6	2	5	7	13
Future Vol, veh/h	7	33	18	0	39	4	10	6	2	5	7	13
Conflicting Peds, #/hr	0	0	1	1	0	0	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	38	20	0	44	5	11	7	2	6	8	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	49	0	0	59	0	0	124	114	49	116	122	48
Stage 1	-	-	-	-	-	-	65	65	-	47	47	-
Stage 2	-	-	-	-	-	-	59	49	-	69	75	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1558	-	-	1545	-	-	850	776	1020	861	768	1021
Stage 1	-	-	-	-	-	-	946	841	-	967	856	-
Stage 2	-	-	-	-	-	-	953	854	-	941	833	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1558	-	-	1544	-	-	826	771	1019	850	763	1020
Mov Cap-2 Maneuver	-	-	-	-	-	-	826	771	-	850	763	-
Stage 1	-	-	-	-	-	-	940	836	-	962	856	-
Stage 2	-	-	-	-	-	-	930	854	-	927	828	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0	9.5	9.1
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	824	1558	-	-	1544	-	-	899
HCM Lane V/C Ratio	0.025	0.005	-	-	-	-	-	0.032
HCM Control Delay (s)	9.5	7.3	0	-	0	-	-	9.1
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	5.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	19	56	18	38	19	1	8	29	20	6	26	7
Future Vol, veh/h	19	56	18	38	19	1	8	29	20	6	26	7
Conflicting Peds, #/hr	4	0	0	0	0	4	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	63	20	43	21	1	9	33	22	7	29	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	26	0	0	83	0	0	242	227	73	255	237	27
Stage 1	-	-	-	-	-	-	115	115	-	112	112	-
Stage 2	-	-	-	-	-	-	127	112	-	143	125	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1588	-	-	1514	-	-	712	672	989	698	664	1048
Stage 1	-	-	-	-	-	-	890	800	-	893	803	-
Stage 2	-	-	-	-	-	-	877	803	-	860	792	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1582	-	-	1514	-	-	659	641	989	632	633	1043
Mov Cap-2 Maneuver	-	-	-	-	-	-	659	641	-	632	633	-
Stage 1	-	-	-	-	-	-	878	789	-	877	777	-
Stage 2	-	-	-	-	-	-	813	777	-	794	781	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.5	4.9	10.4	10.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	734	1582	-	-	1514	-	-	681
HCM Lane V/C Ratio	0.087	0.013	-	-	0.028	-	-	0.064
HCM Control Delay (s)	10.4	7.3	0	-	7.4	0	-	10.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0.1	-	-	0.2

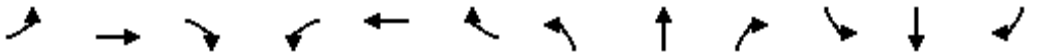
Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	18	89	73	5	7	18
Future Vol, veh/h	18	89	73	5	7	18
Conflicting Peds, #/hr	1	0	0	1	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	120	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	101	83	6	8	20

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	90	0	-	0	228	87
Stage 1	-	-	-	-	87	-
Stage 2	-	-	-	-	141	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1505	-	-	-	760	971
Stage 1	-	-	-	-	936	-
Stage 2	-	-	-	-	886	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1504	-	-	-	748	970
Mov Cap-2 Maneuver	-	-	-	-	748	-
Stage 1	-	-	-	-	922	-
Stage 2	-	-	-	-	885	-

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1504	-	-	-	748	970
HCM Lane V/C Ratio	0.014	-	-	-	0.011	0.021
HCM Control Delay (s)	7.4	0	-	-	9.9	8.8
HCM Lane LOS	A	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	0	0.1



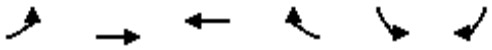
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	113	184	10	92	338	175	0	0	0	78	58	154
Future Volume (vph)	113	184	10	92	338	175	0	0	0	78	58	154
Lane Util. Factor	1.00	0.95	0.95	0.97	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		0.98	0.99						1.00	0.97
Frt		0.992			0.949							0.850
Flt Protected	0.950			0.950							0.972	
Satd. Flow (prot)	1770	3507	0	3433	3330	0	0	0	0	0	1811	1583
Flt Permitted	0.440			0.950							0.972	
Satd. Flow (perm)	818	3507	0	3363	3330	0	0	0	0	0	1804	1531
Satd. Flow (RTOR)		7			122							164
Confl. Peds. (#/hr)	4		11	11		4	17		5	5		17
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	207	0	98	546	0	0	0	0	0	145	164
Turn Type	pm+pt	NA		Prot	NA					Split	NA	Perm
Protected Phases	1	2		1	2					4	4	
Permitted Phases	2											4
Detector Phase	1	2		1	2					4	4	4
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0					7.0	7.0	7.0
Minimum Split (s)	9.0	15.5		9.0	15.5					12.0	12.0	12.0
Total Split (s)	23.0	40.0		23.0	40.0					26.0	26.0	26.0
Total Split (%)	25.8%	44.9%		25.8%	44.9%					29.2%	29.2%	29.2%
Maximum Green (s)	18.0	34.5		18.0	34.5					21.0	21.0	21.0
Yellow Time (s)	4.0	4.0		4.0	4.0					4.0	4.0	4.0
All-Red Time (s)	1.0	1.5		1.0	1.5					1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0						0.0	0.0
Total Lost Time (s)	5.0	5.5		5.0	5.5						5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	2.0	2.0		2.0	2.0					2.0	2.0	2.0
Recall Mode	None	C-Max		None	C-Max					None	None	None
Act Effct Green (s)	62.5	55.0		6.9	55.0						11.5	11.5
Actuated g/C Ratio	0.70	0.62		0.08	0.62						0.13	0.13
v/c Ratio	0.19	0.10		0.37	0.26						0.62	0.48
Control Delay	4.2	7.7		42.4	6.8						47.7	10.6
Queue Delay	0.0	0.0		0.0	0.7						0.0	0.0
Total Delay	4.2	7.7		42.4	7.5						47.7	10.6
LOS	A	A		D	A						D	B
Approach Delay		6.4			12.8						28.0	
Approach LOS		A			B						C	
Queue Length 50th (ft)	14	21		27	49						78	0
Queue Length 95th (ft)	34	43		51	91						131	52
Internal Link Dist (ft)		516			188			218			576	
Turn Bay Length (ft)	50											65
Base Capacity (vph)	812	2171		694	2106						427	486
Starvation Cap Reductn	0	0		0	1157						0	0
Spillback Cap Reductn	0	0		0	0						0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0						0	0
Reduced v/c Ratio	0.15	0.10		0.14	0.58						0.34	0.34

Intersection Summary	
Cycle Length: 89	
Actuated Cycle Length: 89	
Offset: 0 (0%), Referenced to phase 2:EBWB, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 14.8	Intersection LOS: B
Intersection Capacity Utilization 48.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: Central Street & Summit Hill Drive

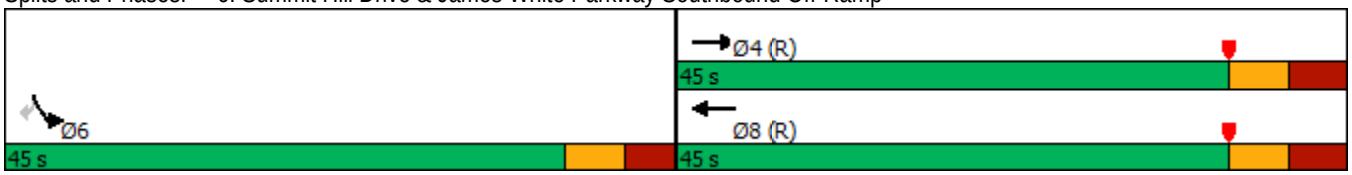


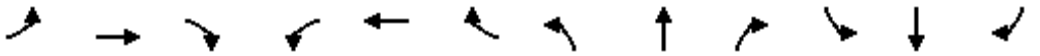


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	262	292	0	179	313
Future Volume (vph)	0	262	292	0	179	313
Lane Util. Factor	1.00	0.91	0.95	1.00	1.00	0.88
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	5085	3539	0	1770	2787
Flt Permitted					0.950	
Satd. Flow (perm)	0	5085	3539	0	1770	2787
Satd. Flow (RTOR)						333
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	279	311	0	190	333
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		10.0	10.0		7.0	7.0
Minimum Split (s)		18.0	18.0		14.5	14.5
Total Split (s)		45.0	45.0		45.0	45.0
Total Split (%)		50.0%	50.0%		50.0%	50.0%
Maximum Green (s)		37.0	37.0		37.5	37.5
Yellow Time (s)		4.0	4.0		4.0	4.0
All-Red Time (s)		4.0	4.0		3.5	3.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0
Total Lost Time (s)		8.0	8.0		7.5	7.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		5.0	2.0		5.0	5.0
Recall Mode		C-Max	C-Max		None	None
Act Effct Green (s)		56.6	56.6		17.9	17.9
Actuated g/C Ratio		0.63	0.63		0.20	0.20
v/c Ratio		0.09	0.14		0.54	0.41
Control Delay		7.4	7.8		37.1	4.7
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		7.4	7.8		37.1	4.7
LOS		A	A		D	A
Approach Delay		7.4	7.8		16.5	
Approach LOS		A	A		B	
Queue Length 50th (ft)		20	34		98	0
Queue Length 95th (ft)		38	64		148	34
Internal Link Dist (ft)		188	373		516	
Turn Bay Length (ft)						250
Base Capacity (vph)		3196	2224		737	1355
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.09	0.14		0.26	0.25

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 52 (58%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.54	
Intersection Signal Delay: 11.8	Intersection LOS: B
Intersection Capacity Utilization 32.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Summit Hill Drive & James White Parkway Southbound Off-Ramp



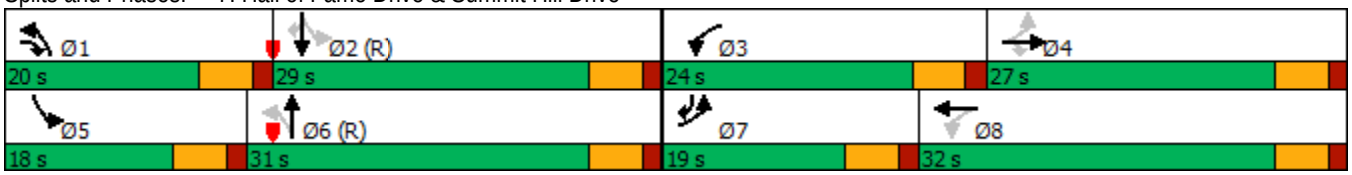


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	236	147	197	152	146	30	136	52	88	156	107
Future Volume (vph)	63	236	147	197	152	146	30	136	52	88	156	107
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00				0.99			1.00		1.00		
Frt			0.850		0.926			0.959				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3246	0	1770	3382	0	1770	3539	1583
Flt Permitted	0.563			0.354			0.649			0.622		
Satd. Flow (perm)	1045	3539	1583	659	3246	0	1209	3382	0	1158	3539	1583
Satd. Flow (RTOR)			153		152			53				111
Confl. Peds. (#/hr)	7					7			1	1		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)												
Lane Group Flow (vph)	66	246	153	205	310	0	31	196	0	92	163	111
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	7	4	1	3	8		1	6		5	2	7
Permitted Phases	4		4	8			6			2		2
Detector Phase	7	4	1	3	8		1	6		5	2	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0		5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5		10.5	15.5	10.5
Total Split (s)	19.0	27.0	20.0	24.0	32.0		20.0	31.0		18.0	29.0	19.0
Total Split (%)	19.0%	27.0%	20.0%	24.0%	32.0%		20.0%	31.0%		18.0%	29.0%	19.0%
Maximum Green (s)	13.5	21.5	14.5	18.5	26.5		14.5	25.5		12.5	23.5	13.5
Yellow Time (s)	4.0	4.0	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	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		2.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	None
Act Effct Green (s)	18.4	11.3	22.3	30.3	18.0		52.5	48.0		54.4	47.4	60.0
Actuated g/C Ratio	0.18	0.11	0.22	0.30	0.18		0.52	0.48		0.54	0.47	0.60
v/c Ratio	0.27	0.62	0.32	0.58	0.44		0.05	0.12		0.14	0.10	0.11
Control Delay	26.6	48.8	6.9	33.0	19.3		17.2	20.9		15.5	20.6	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	26.6	48.8	6.9	33.0	19.3		17.2	20.9		15.5	20.6	3.2
LOS	C	D	A	C	B		B	C		B	C	A
Approach Delay		31.9			24.7			20.4			14.1	
Approach LOS		C			C			C			B	
Queue Length 50th (ft)	30	80	0	102	46		12	37		20	31	0
Queue Length 95th (ft)	54	116	47	145	80		35	73		96	78	12
Internal Link Dist (ft)		373			335			424			335	
Turn Bay Length (ft)				165			230			165		60
Base Capacity (vph)	357	760	600	407	971		786	1651		752	1677	1088
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.18	0.32	0.26	0.50	0.32		0.04	0.12		0.12	0.10	0.10

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 50 (50%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 23.7	Intersection LOS: C
Intersection Capacity Utilization 49.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: Hall of Fame Drive & Summit Hill Drive



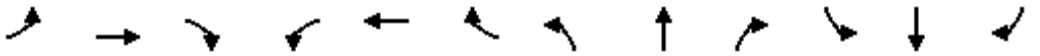
Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	88	291	400	37	49	67
Future Vol, veh/h	88	291	400	37	49	67
Conflicting Peds, #/hr	7	0	0	7	6	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	91	300	412	38	51	69

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	457	0	-	0	776	233
Stage 1	-	-	-	-	438	-
Stage 2	-	-	-	-	338	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1100	-	-	-	334	769
Stage 1	-	-	-	-	618	-
Stage 2	-	-	-	-	694	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1093	-	-	-	302	763
Mov Cap-2 Maneuver	-	-	-	-	302	-
Stage 1	-	-	-	-	563	-
Stage 2	-	-	-	-	689	-

Approach	EB	WB	SB
HCM Control Delay, s	2	0	11
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1093	-	-	-	715
HCM Lane V/C Ratio	0.083	-	-	-	0.167
HCM Control Delay (s)	8.6	-	-	-	11
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.6

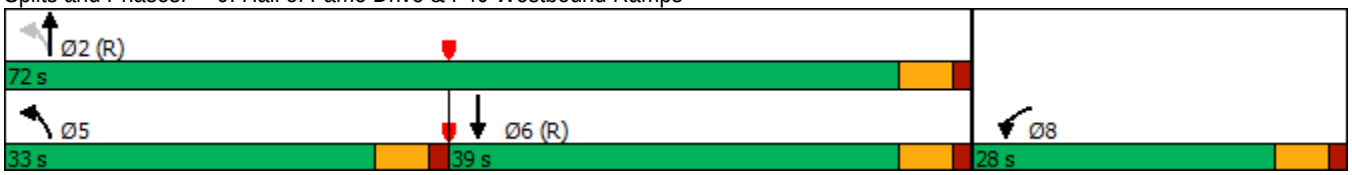


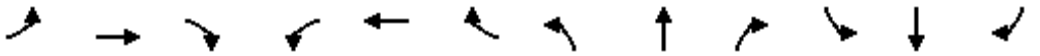
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	120	0	88	298	528	0	0	302	326
Future Volume (vph)	0	0	0	120	0	88	298	528	0	0	302	326
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor							1.00				0.99	
Frt						0.850					0.922	
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	0	0	3433	0	1583	1770	3539	0	0	3227	0
Flt Permitted				0.950			0.363					
Satd. Flow (perm)	0	0	0	3433	0	1583	676	3539	0	0	3227	0
Satd. Flow (RTOR)						147					296	
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	122	0	90	304	539	0	0	641	0
Turn Type				Prot		Free	pm+pt	NA			NA	
Protected Phases				8			5	2			6	
Permitted Phases						Free	2					
Detector Phase				8			5	2			6	
Switch Phase												
Minimum Initial (s)				5.0			5.0	10.0			10.0	
Minimum Split (s)				10.5			10.5	15.5			15.5	
Total Split (s)				28.0			33.0	72.0			39.0	
Total Split (%)				28.0%			33.0%	72.0%			39.0%	
Maximum Green (s)				22.5			27.5	66.5			33.5	
Yellow Time (s)				4.0			4.0	4.0			4.0	
All-Red Time (s)				1.5			1.5	1.5			1.5	
Lost Time Adjust (s)				0.0			0.0	0.0			0.0	
Total Lost Time (s)				5.5			5.5	5.5			5.5	
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)				3.0			2.0	2.0			2.0	
Recall Mode				None			None	C-Max			C-Max	
Act Effct Green (s)				8.9		100.0	80.1	80.1			65.8	
Actuated g/C Ratio				0.09		1.00	0.80	0.80			0.66	
v/c Ratio				0.40		0.06	0.48	0.19			0.29	
Control Delay				46.5		0.1	6.7	1.6			4.3	
Queue Delay				0.0		0.0	0.0	0.0			0.0	
Total Delay				46.5		0.1	6.7	1.6			4.3	
LOS				D		A	A	A			A	
Approach Delay					26.8			3.4			4.3	
Approach LOS					C			A			A	
Queue Length 50th (ft)				38		0	33	25			39	
Queue Length 95th (ft)				65		0	32	9			74	
Internal Link Dist (ft)		440			577			562			692	
Turn Bay Length (ft)				475		200	155					
Base Capacity (vph)				772		1583	842	2834			2224	
Starvation Cap Reductn				0		0	0	0			0	
Spillback Cap Reductn				0		0	0	0			0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn				0		0	0	0			0	
Reduced v/c Ratio				0.16		0.06	0.36	0.19			0.29	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 30 (30%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 45	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.48	
Intersection Signal Delay: 6.7	Intersection LOS: A
Intersection Capacity Utilization 53.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 9: Hall of Fame Drive & I-40 Westbound Ramps

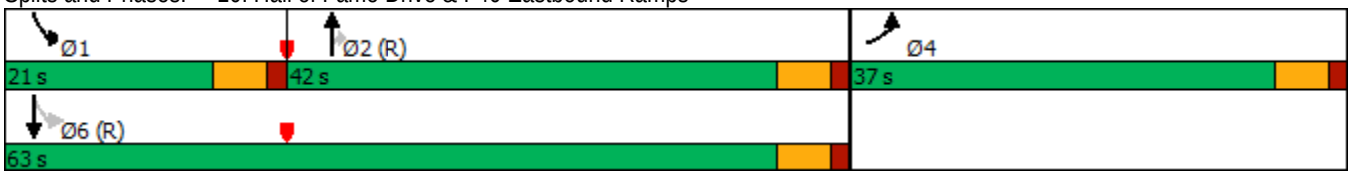




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	261	0	332	0	0	0	0	567	154	54	371	0
Future Volume (vph)	261	0	332	0	0	0	0	567	154	54	371	0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850						0.850			
Flt Protected	0.950									0.950		
Satd. Flow (prot)	3433	0	1583	0	0	0	0	3539	1583	1770	3539	0
Flt Permitted	0.950									0.390		
Satd. Flow (perm)	3433	0	1583	0	0	0	0	3539	1583	726	3539	0
Satd. Flow (RTOR)			342						159			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	269	0	342	0	0	0	0	585	159	56	382	0
Turn Type	Prot		Free					NA	Perm	pm+pt	NA	
Protected Phases	4							2		1	6	
Permitted Phases			Free						2	6		
Detector Phase	4							2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0							10.0	10.0	5.0	10.0	
Minimum Split (s)	22.5							22.5	22.5	10.5	22.5	
Total Split (s)	37.0							42.0	42.0	21.0	63.0	
Total Split (%)	37.0%							42.0%	42.0%	21.0%	63.0%	
Maximum Green (s)	31.5							36.5	36.5	15.5	57.5	
Yellow Time (s)	4.0							4.0	4.0	4.0	4.0	
All-Red Time (s)	1.5							1.5	1.5	1.5	1.5	
Lost Time Adjust (s)	0.0							0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5							5.5	5.5	5.5	5.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	2.0							2.0	2.0	2.0	2.0	
Recall Mode	None							C-Max	C-Max	None	C-Max	
Act Effct Green (s)	12.6		100.0					67.6	67.6	76.4	76.4	
Actuated g/C Ratio	0.13		1.00					0.68	0.68	0.76	0.76	
v/c Ratio	0.62		0.22					0.24	0.14	0.09	0.14	
Control Delay	47.9		0.3					6.9	2.5	1.5	1.5	
Queue Delay	0.0		0.0					0.0	0.0	0.0	0.0	
Total Delay	47.9		0.3					6.9	2.5	1.5	1.5	
LOS	D		A					A	A	A	A	
Approach Delay		21.2						6.0			1.5	
Approach LOS		C						A			A	
Queue Length 50th (ft)	85		0					53	0	2	8	
Queue Length 95th (ft)	122		0					118	0	5	13	
Internal Link Dist (ft)		686			892			546			562	
Turn Bay Length (ft)	200		210						290	190		
Base Capacity (vph)	1081		1583					2392	1121	716	2705	
Starvation Cap Reductn	0		0					0	0	0	0	
Spillback Cap Reductn	0		0					0	0	0	0	
Storage Cap Reductn	0		0					0	0	0	0	
Reduced v/c Ratio	0.25		0.22					0.24	0.14	0.08	0.14	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 50 (50%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 10.1	Intersection LOS: B
Intersection Capacity Utilization 53.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 10: Hall of Fame Drive & I-40 Eastbound Ramps

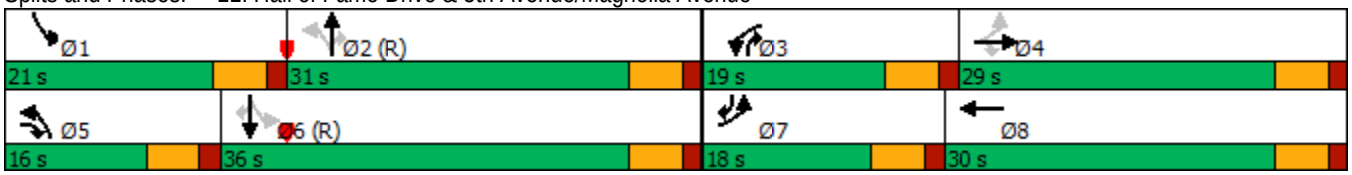


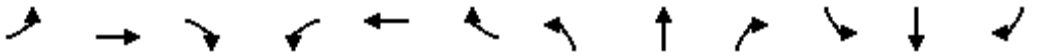
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	206	21	78	203	180	30	282	86	209	273	62
Future Volume (vph)	72	206	21	78	203	180	30	282	86	209	273	62
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor							1.00		0.99	1.00		0.99
Frt			0.850		0.929				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3288	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.303			0.950			0.572			0.504		
Satd. Flow (perm)	564	3539	1583	3433	3288	0	1065	3539	1563	938	3539	1563
Satd. Flow (RTOR)			87		194				92			87
Confl. Peds. (#/hr)							1		1	1		1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	77	222	23	84	412	0	32	303	92	225	294	67
Turn Type	pm+pt	NA	pm+ov	Prot	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4				2		2	6		6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0	5.0	5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5	10.5	10.5	15.5	10.5
Total Split (s)	18.0	29.0	16.0	19.0	30.0		16.0	31.0	19.0	21.0	36.0	18.0
Total Split (%)	18.0%	29.0%	16.0%	19.0%	30.0%		16.0%	31.0%	19.0%	21.0%	36.0%	18.0%
Maximum Green (s)	12.5	23.5	10.5	13.5	24.5		10.5	25.5	13.5	15.5	30.5	12.5
Yellow Time (s)	4.0	4.0	4.0	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	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	None	None	C-Max	None
Act Effct Green (s)	22.6	13.8	25.5	7.8	15.0		51.3	45.0	52.8	61.8	54.6	63.4
Actuated g/C Ratio	0.23	0.14	0.26	0.08	0.15		0.51	0.45	0.53	0.62	0.55	0.63
v/c Ratio	0.33	0.46	0.05	0.31	0.63		0.05	0.19	0.11	0.33	0.15	0.07
Control Delay	29.7	41.8	0.2	46.2	25.4		10.5	17.1	3.0	9.9	12.9	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.7	41.8	0.2	46.2	25.4		10.5	17.1	3.0	9.9	12.9	1.9
LOS	C	D	A	D	C		B	B	A	A	B	A
Approach Delay		35.9			28.9			13.6			10.5	
Approach LOS		D			C			B			B	
Queue Length 50th (ft)	38	69	0	26	69		4	42	0	47	56	0
Queue Length 95th (ft)	66	98	0	49	113		24	132	33	125	88	7
Internal Link Dist (ft)		674			634			359			1142	
Turn Bay Length (ft)	245		35	295			230		245	175		175
Base Capacity (vph)	297	831	532	463	952		665	1592	955	711	1932	1079
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.27	0.04	0.18	0.43		0.05	0.19	0.10	0.32	0.15	0.06

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 50 (50%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 20.7	Intersection LOS: C
Intersection Capacity Utilization 53.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 11: Hall of Fame Drive & 5th Avenue/Magnolia Avenue



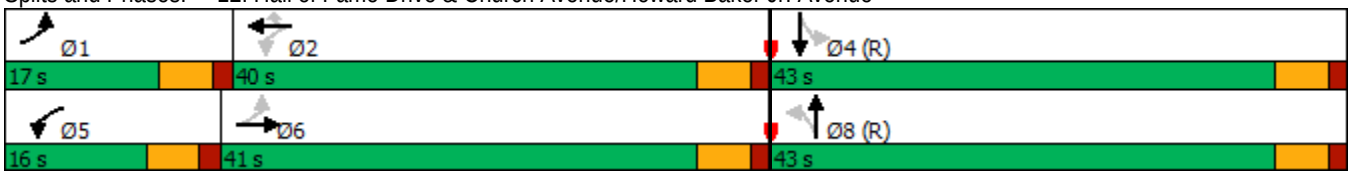


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	44	14	7	32	52	14	110	21	39	124	30
Future Volume (vph)	75	44	14	7	32	52	14	110	21	39	124	30
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor	0.99	1.00		1.00		0.97						
Frt		0.964				0.850		0.978			0.977	
Flt Protected	0.950			0.950				0.995			0.990	
Satd. Flow (prot)	1770	1789	0	1770	1863	1583	0	3444	0	0	3423	0
Flt Permitted	0.460			0.719				0.927			0.878	
Satd. Flow (perm)	848	1789	0	1336	1863	1541	0	3209	0	0	3036	0
Satd. Flow (RTOR)		14				87		22			24	
Confl. Peds. (#/hr)	17		4	4		17						
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	77	59	0	7	33	54	0	149	0	0	199	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6			2		2	8			4		
Detector Phase	1	6		5	2	2	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0	7.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	10.5	22.5		10.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	17.0	41.0		16.0	40.0	40.0	43.0	43.0		43.0	43.0	
Total Split (%)	17.0%	41.0%		16.0%	40.0%	40.0%	43.0%	43.0%		43.0%	43.0%	
Maximum Green (s)	11.5	35.5		10.5	34.5	34.5	37.5	37.5		37.5	37.5	
Yellow Time (s)	4.0	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	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5	5.5		5.5			5.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)	18.5	16.7		11.1	7.3	7.3		73.7			73.7	
Actuated g/C Ratio	0.18	0.17		0.11	0.07	0.07		0.74			0.74	
v/c Ratio	0.33	0.19		0.04	0.24	0.28		0.06			0.09	
Control Delay	35.9	29.7		30.4	48.0	7.3		4.9			3.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Delay	35.9	29.7		30.4	48.0	7.3		4.9			3.6	
LOS	D	C		C	D	A		A			A	
Approach Delay		33.2			23.3			4.9			3.6	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)	41	24		4	20	0		12			16	
Queue Length 95th (ft)	77	64		15	50	16		26			40	
Internal Link Dist (ft)		488			887			548			1120	
Turn Bay Length (ft)	60			130								
Base Capacity (vph)	273	644		265	642	588		2370			2244	
Starvation Cap Reductn	0	0		0	0	0		0			0	
Spillback Cap Reductn	0	0		0	0	0		0			0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0	0		0			0	
Reduced v/c Ratio	0.28	0.09		0.03	0.05	0.09		0.06			0.09	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 4 (4%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.33	
Intersection Signal Delay: 14.1	Intersection LOS: B
Intersection Capacity Utilization 41.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 12: Hall of Fame Drive & Church Avenue/Howard Baker Jr. Avenue



APPENDIX C | TRIP GENERATION & INFORMATION

TRIP GENERATION

Downtown Multi-Use Stadium (00269-0020)

Knoxville MPC
APARTMENT

466 Dwelling Units

WEEKDAY

T = 15.193(X)^0.899
T = 3806

50%	ENTERING =	1903	trips
50%	EXITING =	1903	trips
		3806	trips

AM PEAK

T = 0.758(X)^0.924
T = 221

22%	ENTERING =	48.62	trips
78%	EXITING =	172.38	trips
		221	trips

PM PEAK

T = 0.669(X) + 10.069
T = 322

55%	ENTERING =	177.1	trips
45%	EXITING =	144.9	trips
		322	trips

Multifamily Housing (Low-Rise)
(220)

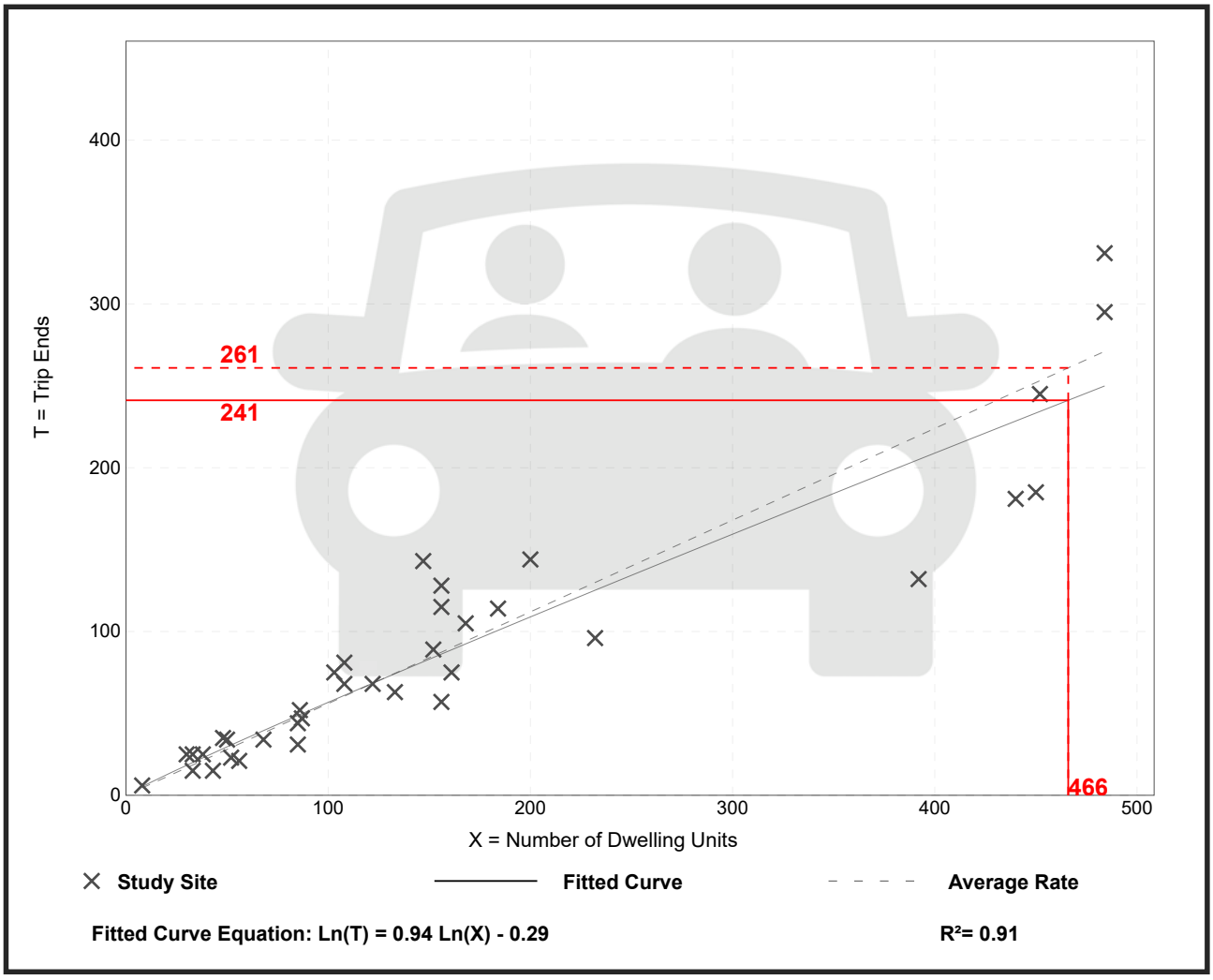
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
AM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 36
Avg. Num. of Dwelling Units: 161
Directional Distribution: 28% entering, 72% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.56	0.34 - 0.97	0.15

Data Plot and Equation



Multifamily Housing (Low-Rise)
(220)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Saturday, Peak Hour of Generator**

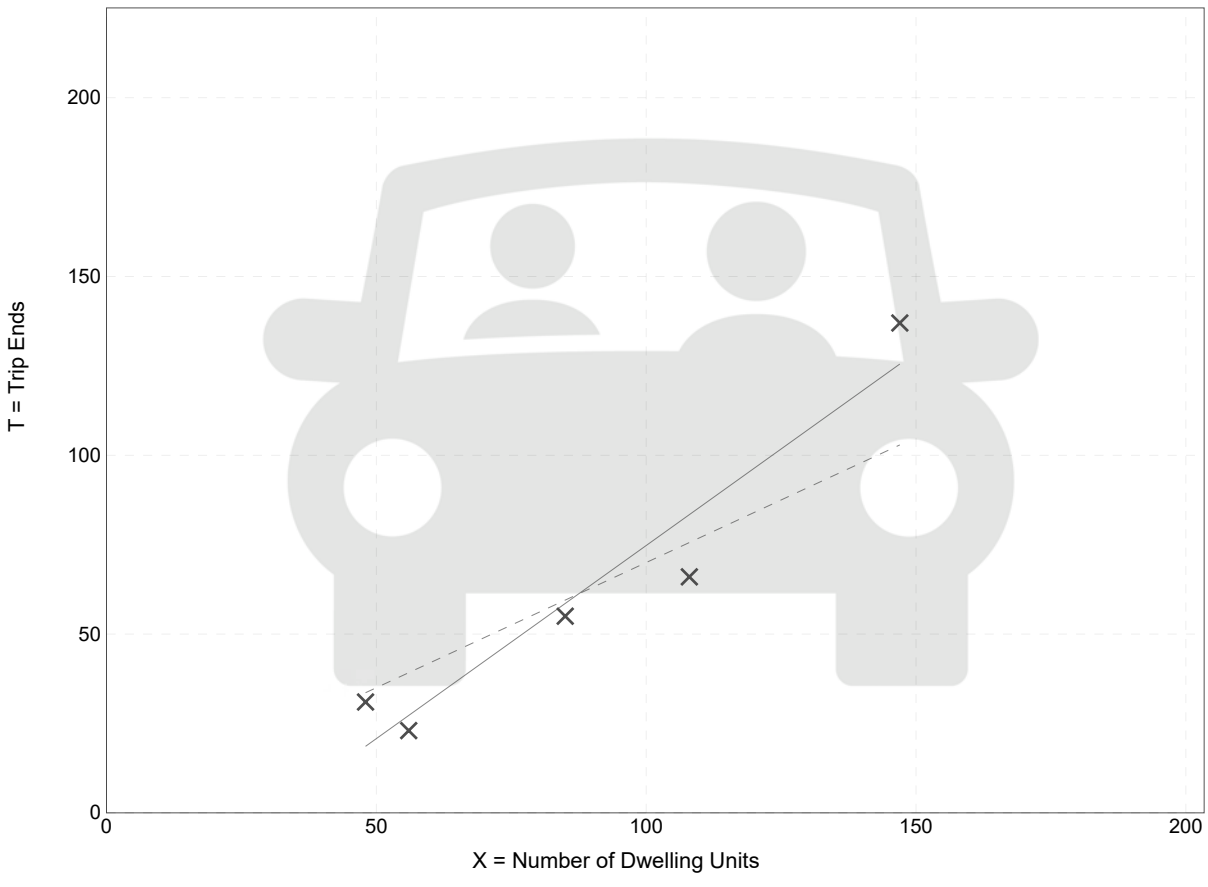
Setting/Location: **General Urban/Suburban**
Number of Studies: 5
Avg. Num. of Dwelling Units: 89
Directional Distribution: Not Available

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.70	0.41 - 0.93	0.20

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: T = 1.08(X) - 33.24

R^2= 0.92

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General Office Building
(710)

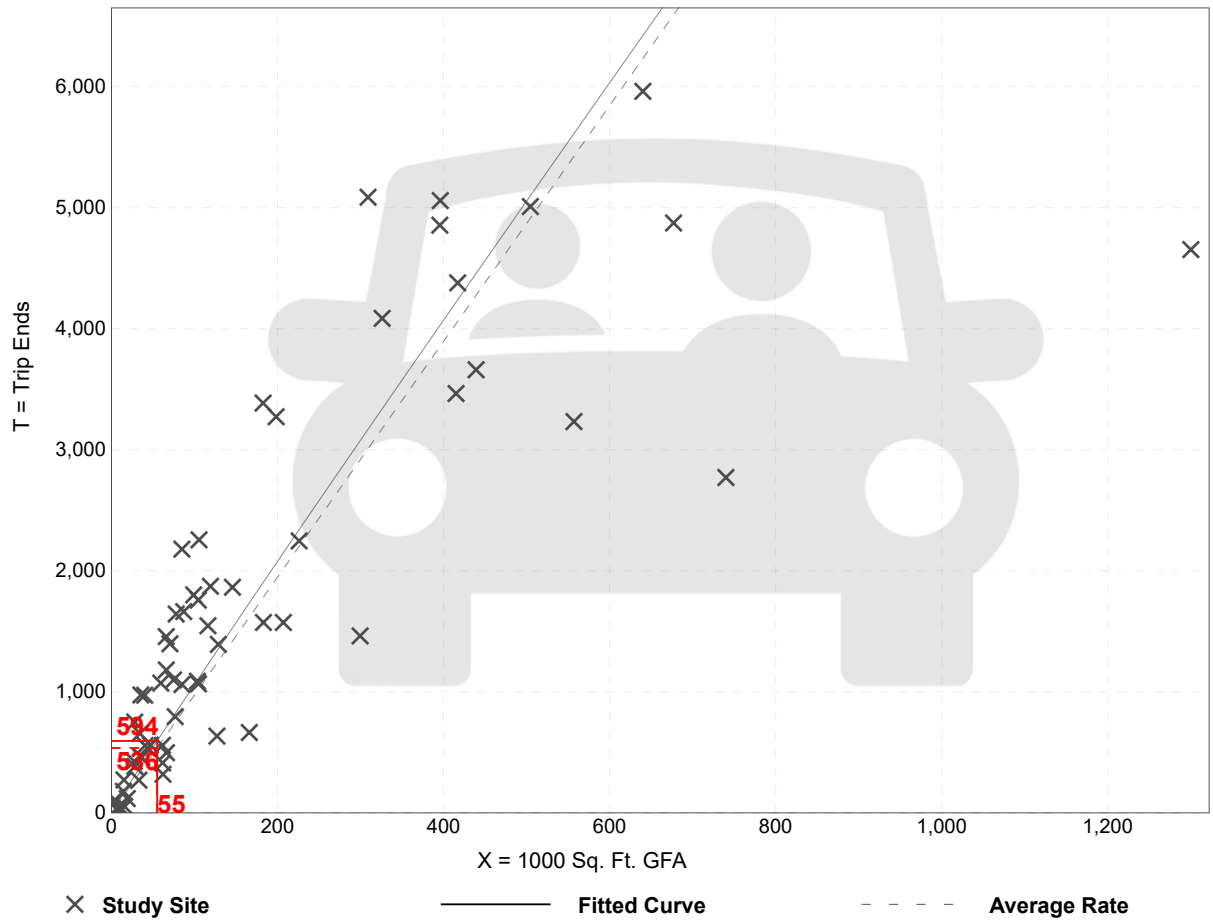
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 66
Avg. 1000 Sq. Ft. GFA: 171
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
9.74	2.71 - 27.56	5.15

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.97 Ln(X) + 2.50

R^2= 0.83

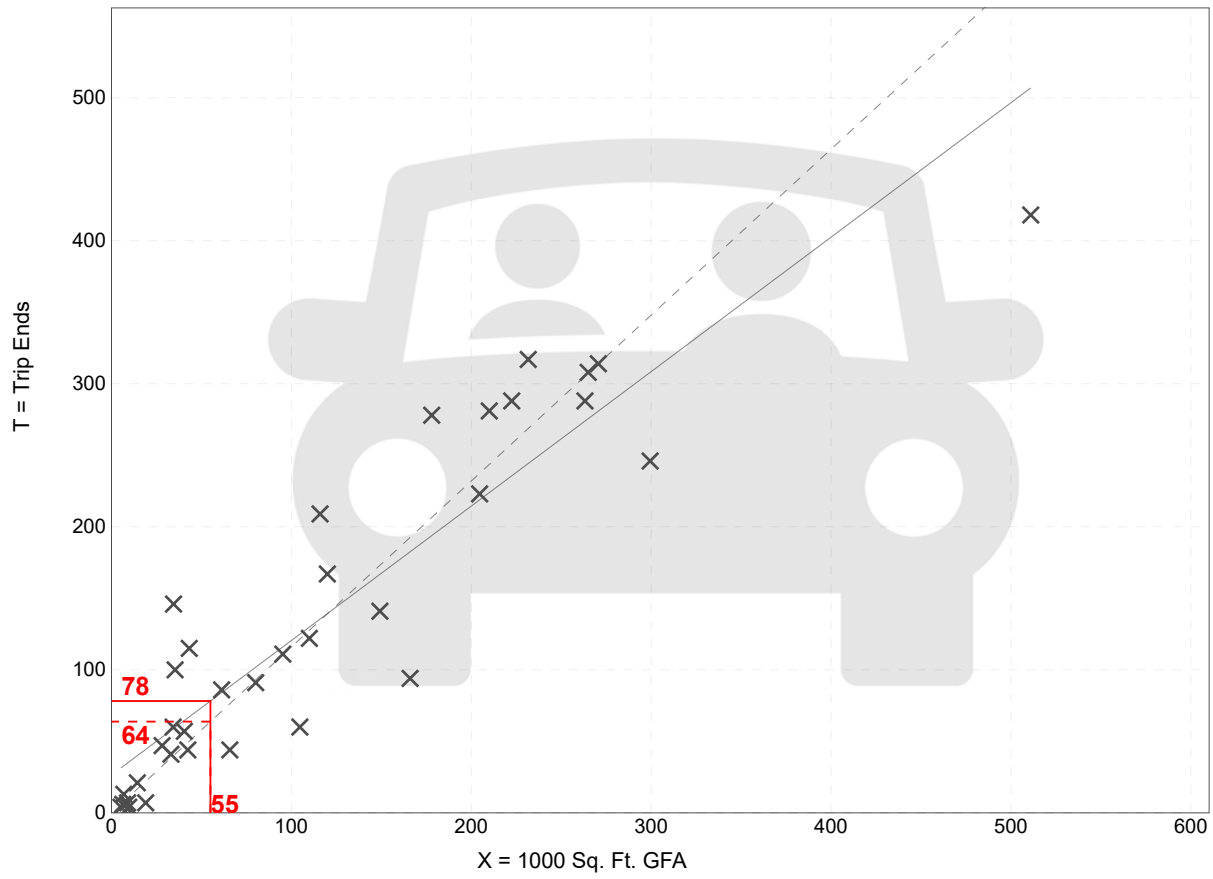
General Office Building
(710)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 35
Avg. 1000 Sq. Ft. GFA: 117
Directional Distribution: 86% entering, 14% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.16	0.37 - 4.23	0.47

Data Plot and Equation



Fitted Curve Equation: T = 0.94(X) + 26.49

R^2= 0.85

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(710)

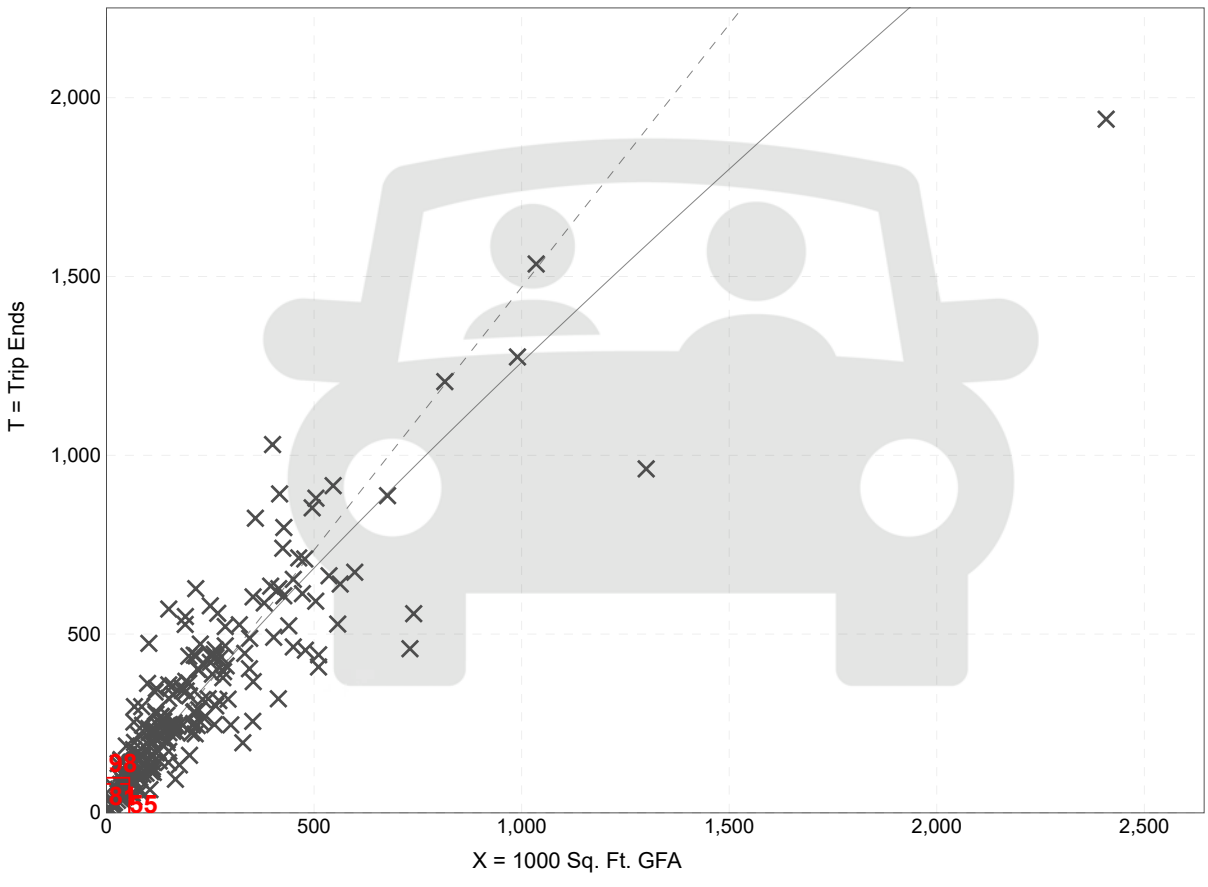
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
AM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 228
Avg. 1000 Sq. Ft. GFA: 209
Directional Distribution: 88% entering, 12% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.47	0.57 - 4.93	0.60

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.88 Ln(X) + 1.06

R^2= 0.84

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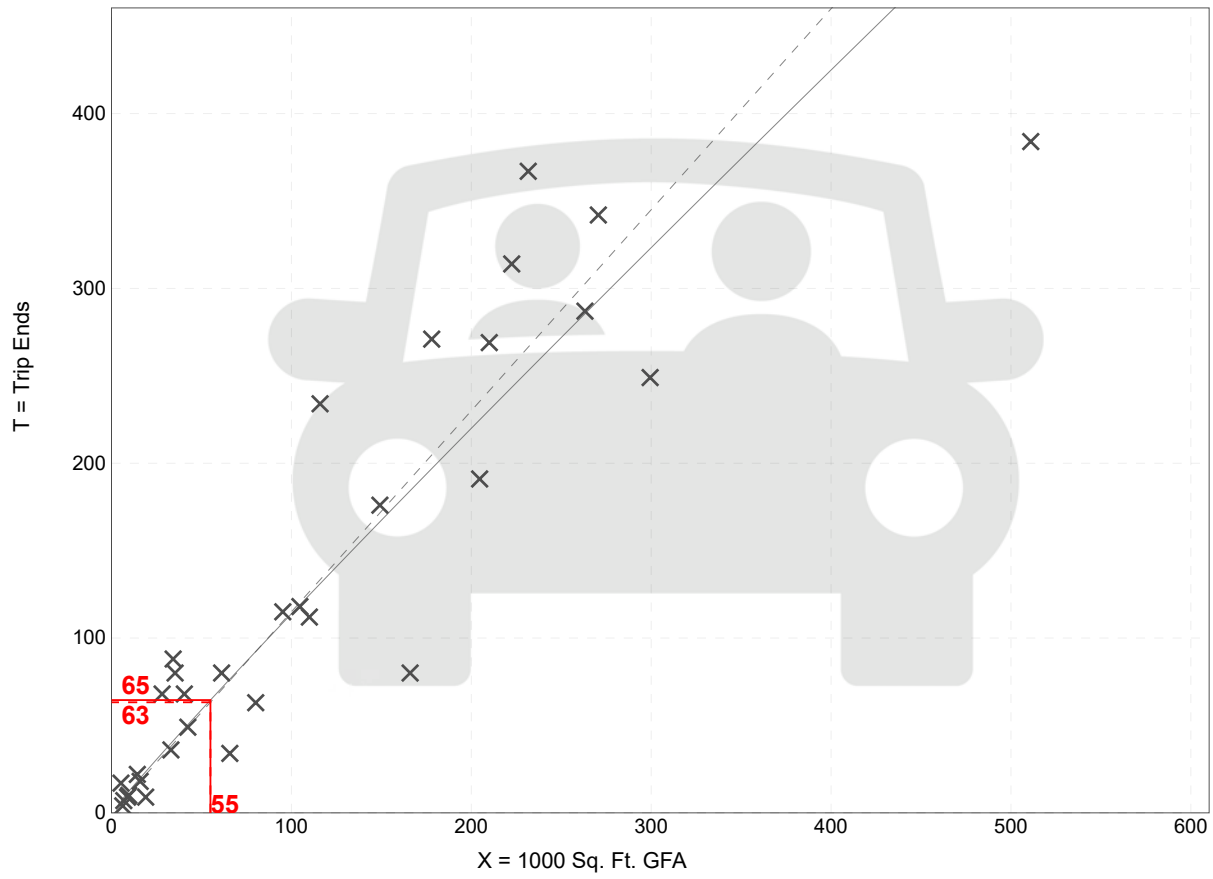
General Office Building
(710)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 32
Avg. 1000 Sq. Ft. GFA: 114
Directional Distribution: 16% entering, 84% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.15	0.47 - 3.23	0.42

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.95 Ln(X) + 0.36

R^2= 0.88

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General Office Building
(710)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Saturday, Peak Hour of Generator**

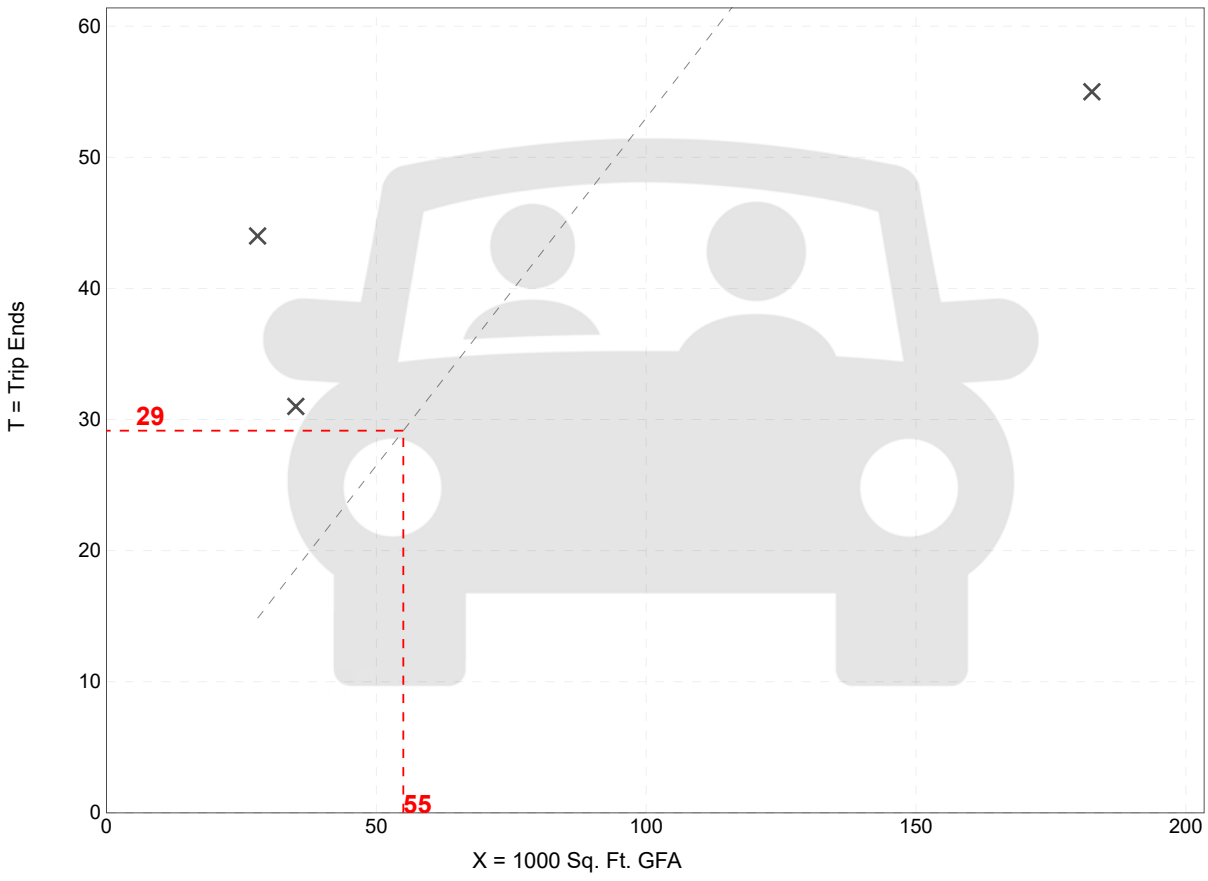
Setting/Location: **General Urban/Suburban**
Number of Studies: 3
Avg. 1000 Sq. Ft. GFA: 82
Directional Distribution: 54% entering, 46% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.53	0.30 - 1.57	0.52

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= **

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CANNON & CANNON INC

TRIP GENERATION

Downtown Multi-Use Stadium (00269-0020)

ITE TRIP GENERATION (826)
SPECIALTY RETAIL CENTER

83 1,000 Sq. Feet Gross Leasable Area

WEEKDAY

T = 44.32(X)
T = 3678

50%	ENTERING =	1839	trips
50%	EXITING =	1839	trips
		3678	trips

AM PEAK

MID-DAY PEAK
(AM Peak of the Generator)

T = 4.91*(X)+115.59
T = 523

48%	ENTERING =	251	trips
52%	EXITING =	272	trips
		523	trips

PM PEAK

T = 2.4*(X)+21.48
T = 221

44%	ENTERING =	97	trips
56%	EXITING =	124	trips
		221	trips

Allentown, PA study

Stadium seats	7500	
		Equivalent to 2.75
PM Peak Trip Rate	0.222	people per vehicle.
Entering Trips, Total	1665	
Non-Auto Trips, %	10%	
Non-Auto Trips	167	
Entering Trips, Net	1498	

Aberdeen, MD Ballpark

Stadium seats	7500	
		Equivalent to 3.72
PM Peak Trip Rate	0.164	people per vehicle.
Entering Trips, Total	1230	
Non-Auto Trips, %	10%	
Non-Auto Trips	123	
Entering Trips, Net	1107	

Coca-Cola Park (Allentown, PA)

Stadium seats	7500	
		Equivalent to 3.59
PM Peak Trip Rate	0.17	people per vehicle.
Entering Trips, Total	1275	
Non-Auto Trips, %	10%	
Non-Auto Trips	128	
Entering Trips, Net	1147	

Boyd Info

Stadium seats	7500
People per vehicle	3
Entering Trips, Total	2500
% Arriving 1 hr prior	61%
Peak Hour Entering Trips	1525
Non-Auto Trips, %	10%
Non-Auto Trips	153
Entering Trips, Net	1372

ITE 462 Professional Baseball Stadium
PM Peak of Street

Stadium seats	7500
PM Peak Trip Rate	0.15
Entering Trips, Total	1125
Non-Auto Trips, %	10%
Non-Auto Trips	113
Entering Trips, Net	1012

ITE 462 Professional Baseball Stadium
PM Peak of Generator

Stadium seats	7500
PM Peak Trip Rate	0.23
Entering Trips, Total	1725
Non-Auto Trips, %	10%
Non-Auto Trips	173
Entering Trips, Net	1552

ITE 462 is based on two studies from two professional spring training stadiums in Arizona. Average number of attendees was 11,122.

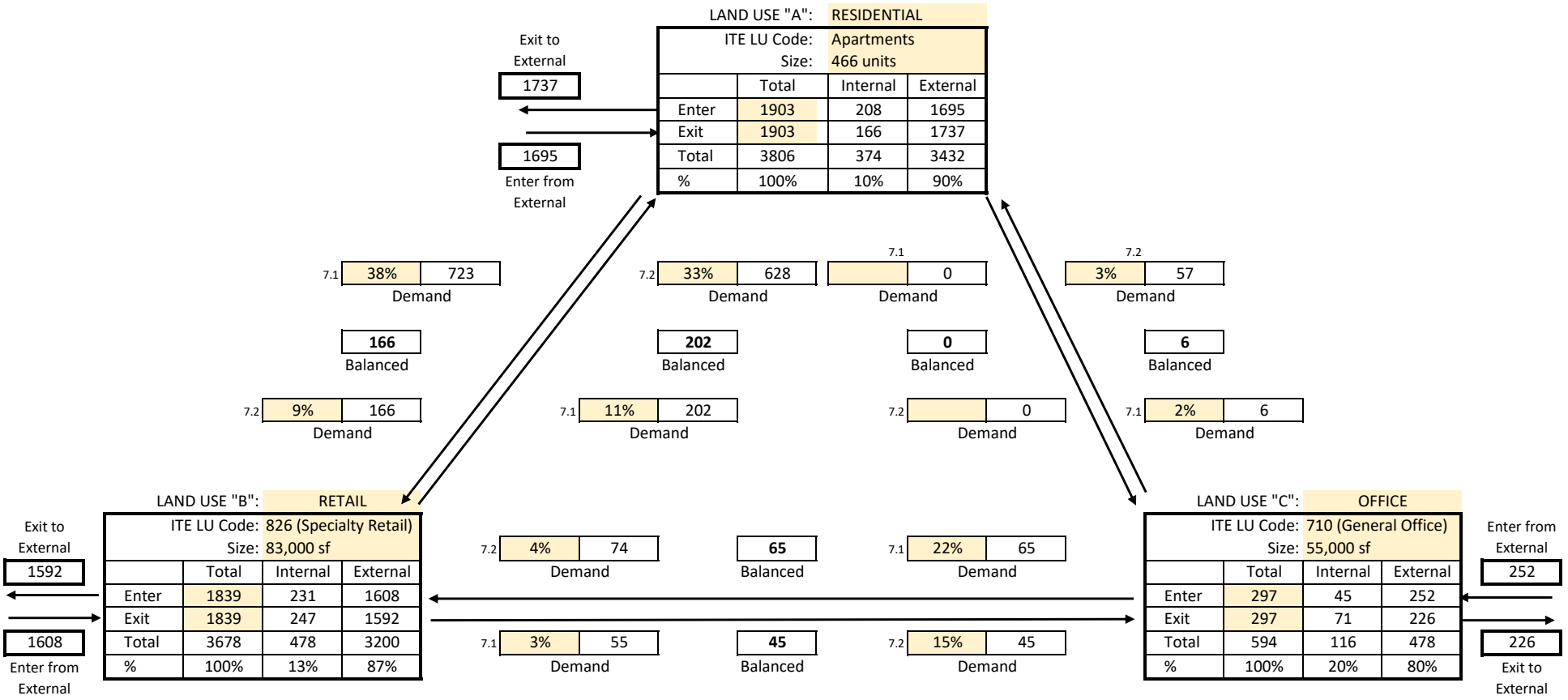
Minor League Baseball Stadiums
Trip Generation Research

Source	Attendees per vehicle	Peak Hour Trip Generation Rate Trips per attendee	Comment
Boyd Sports (Traditional rule of thumb)	3	0.200	Minor League stadium to located adjacent to downtown.
Allentown Arena Study	2.75	0.222	Pre-development traffic study. Trip rate based on data from Ripken Stadium in Aberdeen, MD and Coca-Cola Park in Allentown, PA.
Ripken Stadium Aberdeen, MD	3.72	0.164	Minor League stadium not located adjacent to downtown.
Coca-Cola Park Allentown, PA	3.59	0.170	Minor League stadium not located adjacent to downtown.
ITE 462 Professional Baseball Stadium	2.65	0.23	Based on two studies of Major League Baseball Spring Training in Arizona.

Analyst: BJH
Date: 1/20/2022

MULTI-USE DEVELOPMENT
TRIP GENERATION AND INTERNAL CAPTURE SUMMARY

Name of Dvlpt: Downtown Mixed Use Stadium
Project No.: 00269-0020
Time Period: Daily

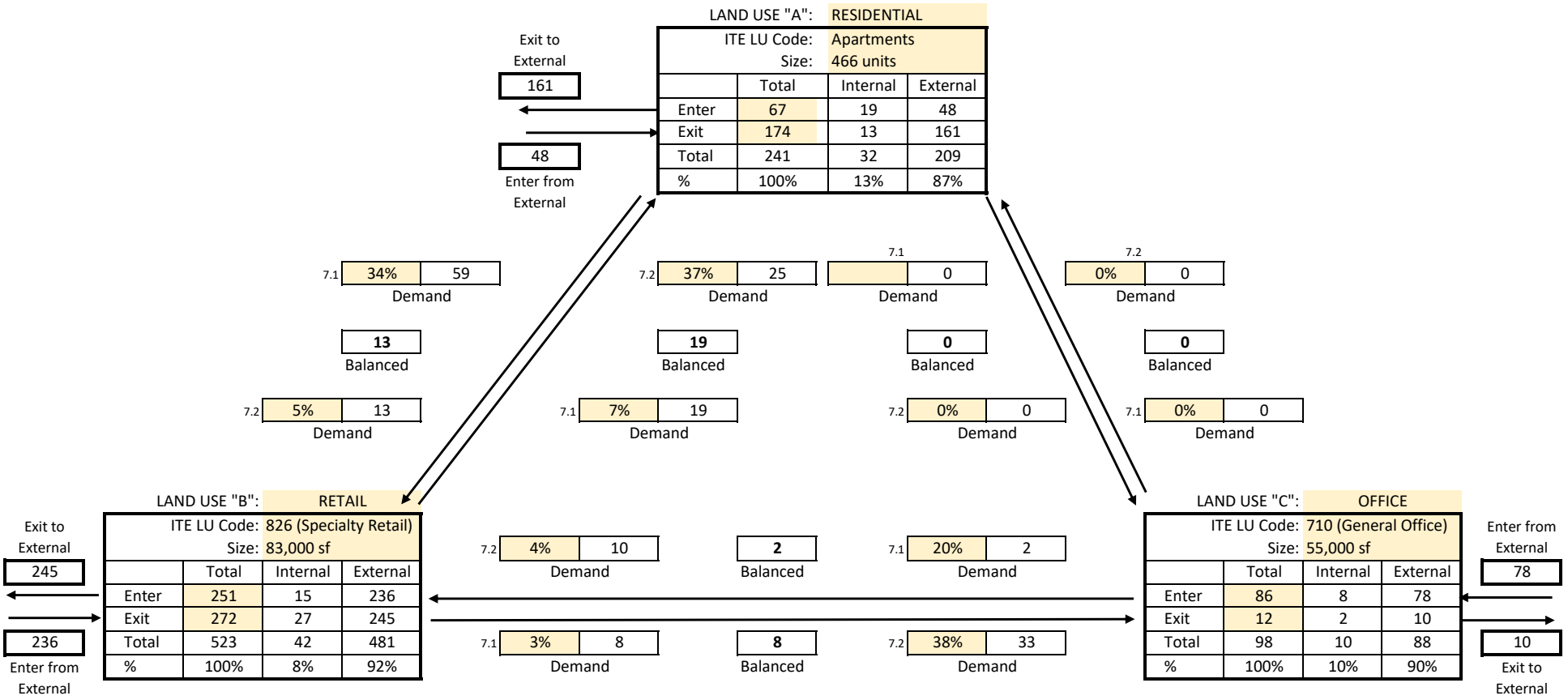


Net External Trips for Multi-Use Development					
	LAND USE A	LAND USE B	LAND USE C	TOTAL	
Enter	1695	1608	252	3555	
Exit	1737	1592	226	3555	
Total	3432	3200	478	7110	INTERNAL CAPTURE
Single-Use Trip Gen. Est.	3806	3678	594	8078	12%

Analyst: BJH
Date: 1/20/2022

MULTI-USE DEVELOPMENT
TRIP GENERATION AND INTERNAL CAPTURE SUMMARY

Name of Dvlpt: Downtown Mixed Use Stadium
Project No.: 00269-0020
Time Period: Mid-day

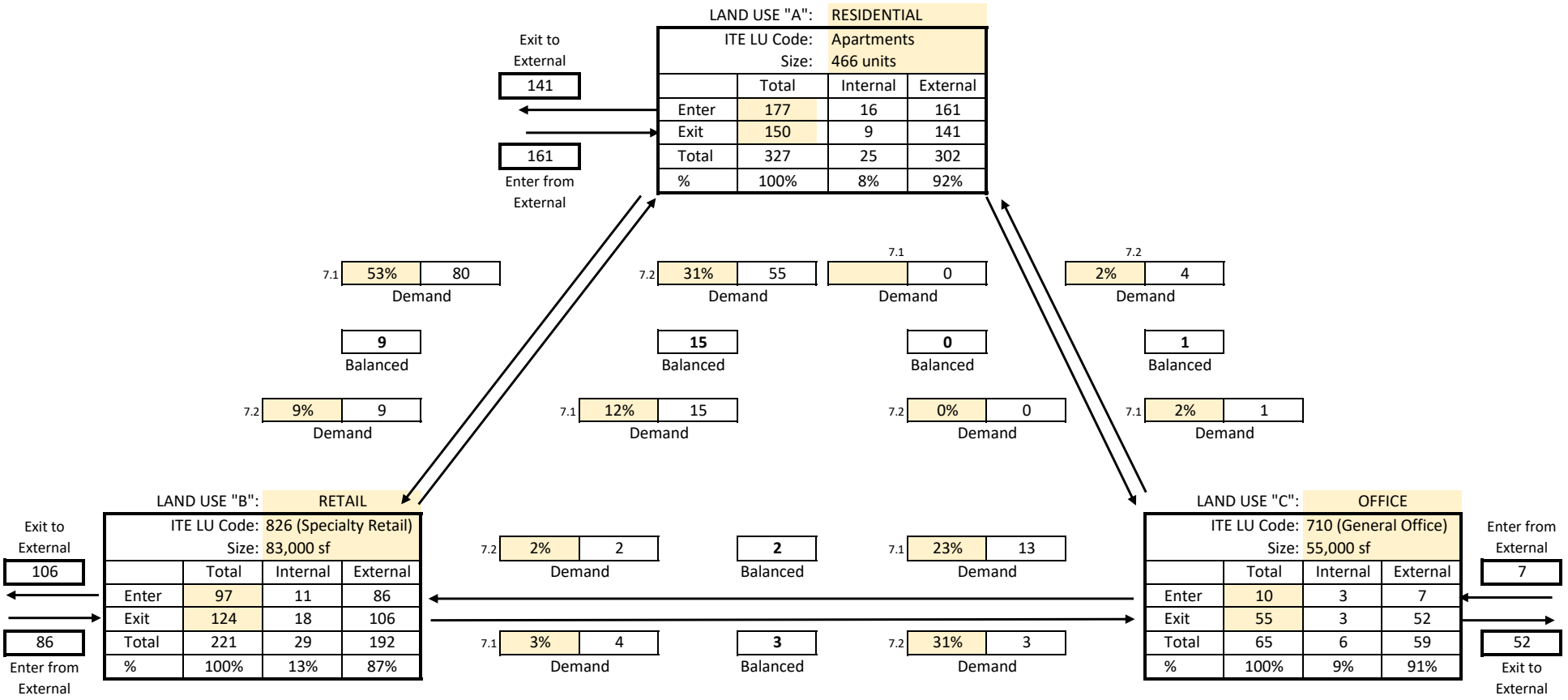


Net External Trips for Multi-Use Development					
	LAND USE A	LAND USE B	LAND USE C	TOTAL	
Enter	48	236	78	362	
Exit	161	245	10	416	
Total	209	481	88	778	INTERNAL CAPTURE
Single-Use Trip Gen. Est.	241	523	98	862	10%

Analyst: BJH
Date: 1/20/2022

MULTI-USE DEVELOPMENT
TRIP GENERATION AND INTERNAL CAPTURE SUMMARY

Name of Dvlpt: Downtown Mixed Use Stadium
Project No.: 00269-0020
Time Period: PM

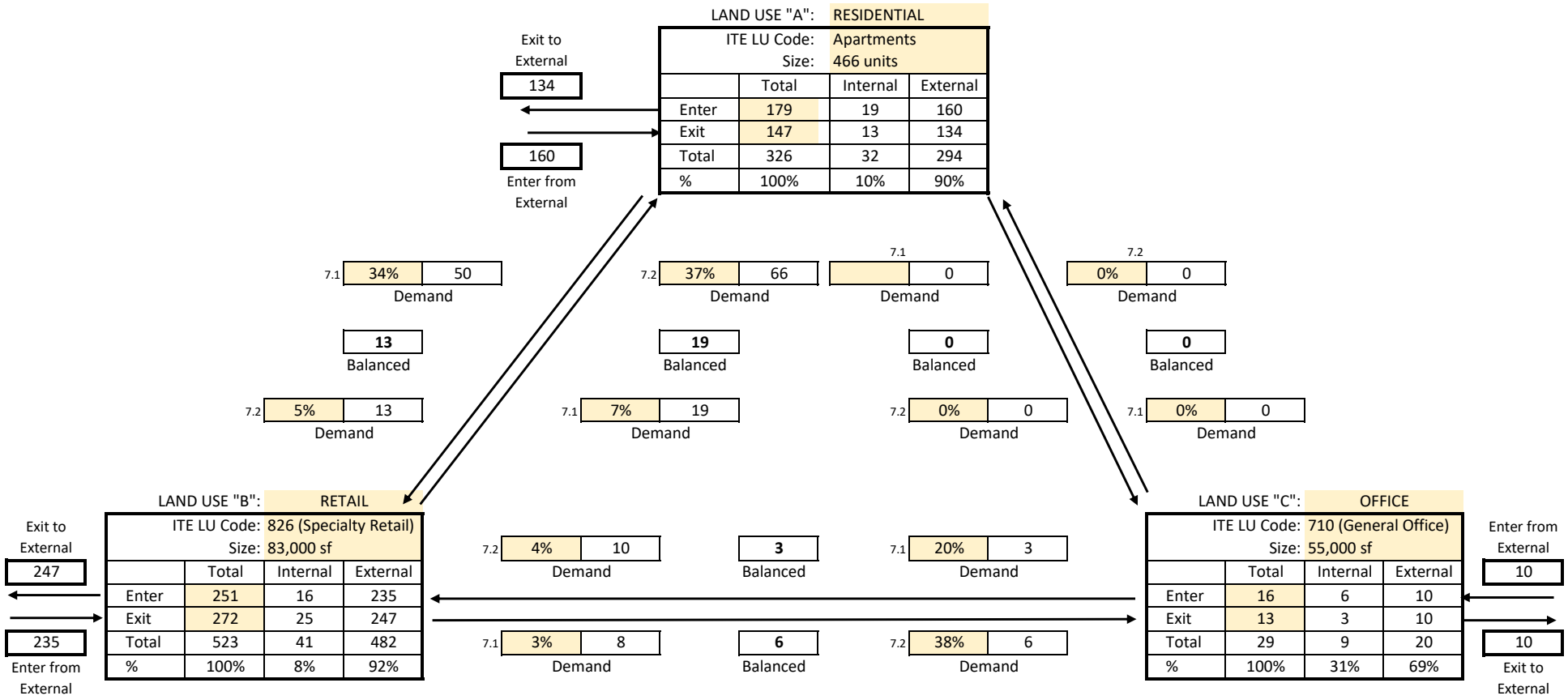


Net External Trips for Multi-Use Development					
	LAND USE A	LAND USE B	LAND USE C	TOTAL	
Enter	161	86	7	254	
Exit	141	106	52	299	
Total	302	192	59	553	INTERNAL CAPTURE
Single-Use Trip Gen. Est.	327	221	65	613	10%

Analyst: BJH
Date: 1/20/2020

MULTI-USE DEVELOPMENT
TRIP GENERATION AND INTERNAL CAPTURE SUMMARY

Name of Dvlpt: Downtown Mixed Use Stadium
Project No.: 00269-0020
Time Period: SATURDAY Mid-day



Net External Trips for Multi-Use Development					
	LAND USE A	LAND USE B	LAND USE C	TOTAL	
Enter	160	235	10	405	
Exit	134	247	10	391	
Total	294	482	20	796	INTERNAL CAPTURE
Single-Use Trip Gen. Est.	326	523	29	878	9%

Trip Generation Summary

Downtown Multi-Use Stadium Development
(00269-0020)

	Land Use	ITE Code	Size	Weekday (Trips / Day)	AM Peak Hour (Trips/HR)	MD Peak Hour (Trips/HR)	PM Peak Hour (Trips/HR)	Weekend Peak Hour (Trips/HR)
Apartments	Total Trips	Local	466 units	3,806	221	241	327	326
	Entering Trips			1,903	49	67	177	179
	Exiting Trips			1,903	172	174	150	147
	Internal Trips			374		32	25	32
	Entering Trips			208		19	16	19
	Exiting Trips			166		13	9	13
	External Trips			3,432	221	209	302	294
	Entering Trips			1,695	49	48	161	160
	Exiting Trips			1,737	172	161	141	134
	Non-Auto Trips			343	22	21	30	29
	Entering Trips			170	5	5	16	16
	Exiting Trips			174	17	16	14	13
	Net Trips			3,089	199	188	272	265
	Entering Trips			1,525	44	43	145	144
	Exiting Trips			1,563	155	145	127	121
General Office	Total Trips	710	55,000 sf	594	78	98	65	29
	Entering Trips			297	67	86	10	16
	Exiting Trips			297	11	12	55	13
	Internal Trips			116		10	6	9
	Entering Trips			45		8	3	6
	Exiting Trips			71		2	3	3
	External Trips			478	78	88	59	20
	Entering Trips			252	67	78	7	10
	Exiting Trips			226	11	10	52	10
	Non-Auto Trips			48	8	9	6	2
	Entering Trips			25	7	8	1	1
	Exiting Trips			23	1	1	5	1
	Net Trips			430	70	79	53	18
	Entering Trips			227	60	70	6	9
	Exiting Trips			203	10	9	47	9
Specialty Retail	Total Trips	826	83,000 sf	3,678		523	221	523
	Entering Trips			1,839		251	97	251
	Exiting Trips			1,839		272	124	272
	Internal Trips			478		42	29	41
	Entering Trips			231		15	11	16
	Exiting Trips			247		27	18	25
	External Trips			3,200		481	192	482
	Entering Trips			1,608		236	86	235
	Exiting Trips			1,592		245	106	247
	Non-Auto Trips			320		48	19	48
	Entering Trips			161		24	9	24
	Exiting Trips			159		25	11	25
	Net Trips			2,880		433	173	434
	Entering Trips			1,447		212	77	211
	Exiting Trips			1,433		220	95	222
Minor League Ballpark			7500 seats	5,000			1,525	1,525
	Entering Trips			2,500			1,525	1,525
	Exiting Trips			2,500			0	0
	Internal Trips							
	Entering Trips							
	Exiting Trips							
	External Trips			5,000			1,525	1,525
	Entering Trips			2,500			1,525	1,525
	Exiting Trips			2,500			0	0
	Non-Auto Trips			500			153	153
	Entering Trips			250			153	153
	Exiting Trips			250			0	0
	Net Trips			4,500			1,372	1,372
	Entering Trips			2,250			1,372	1,372
	Exiting Trips			2,250			0	0
TOTAL	**NET TRIPS**			**10,899**	**269**	**700**	**1,870**	**2,089**
	Entering Trips			**5,449**	**104**	**325**	**1,600**	**1,736**
	Exiting Trips			**5,449**	**165**	**374**	**269**	**352**

Trip Generation Notes:

Apartments: The local trip generation data did not inlcude peak hour trip generation rates for the weekday mid-day or weekend peak hours. ITE Trip Generation Manual (10th Edition) land use code 220 (Mulit-Family Housing (Low-Rise)) was used to supplement these two peak hours. Weekday Mid-day trips were generated using the Weekday AM Peak of the Generator rate.

General Office: ITE Trip generation data did not include peak hour trip generation rates for weekday mid-day peak hour. Weekday Mid-day trips were generated using the Weekday AM Peak of the Generator rate.

Specialty Retail: ITE Trip generation data did not include peak hour trip generation rates for the weekday AM, mid-day, or weekend peak hours. Weekday AM trips were not estimated. Weekday Mid-day and Weekend peak hour trips were generated using the Weekday AM Peak of the Generator rate.

Minor League Ballpark: Trip generation rates were developed based on typical vehicle occupancy rates and traffic studies of minor league stadiums.

OnTheMap

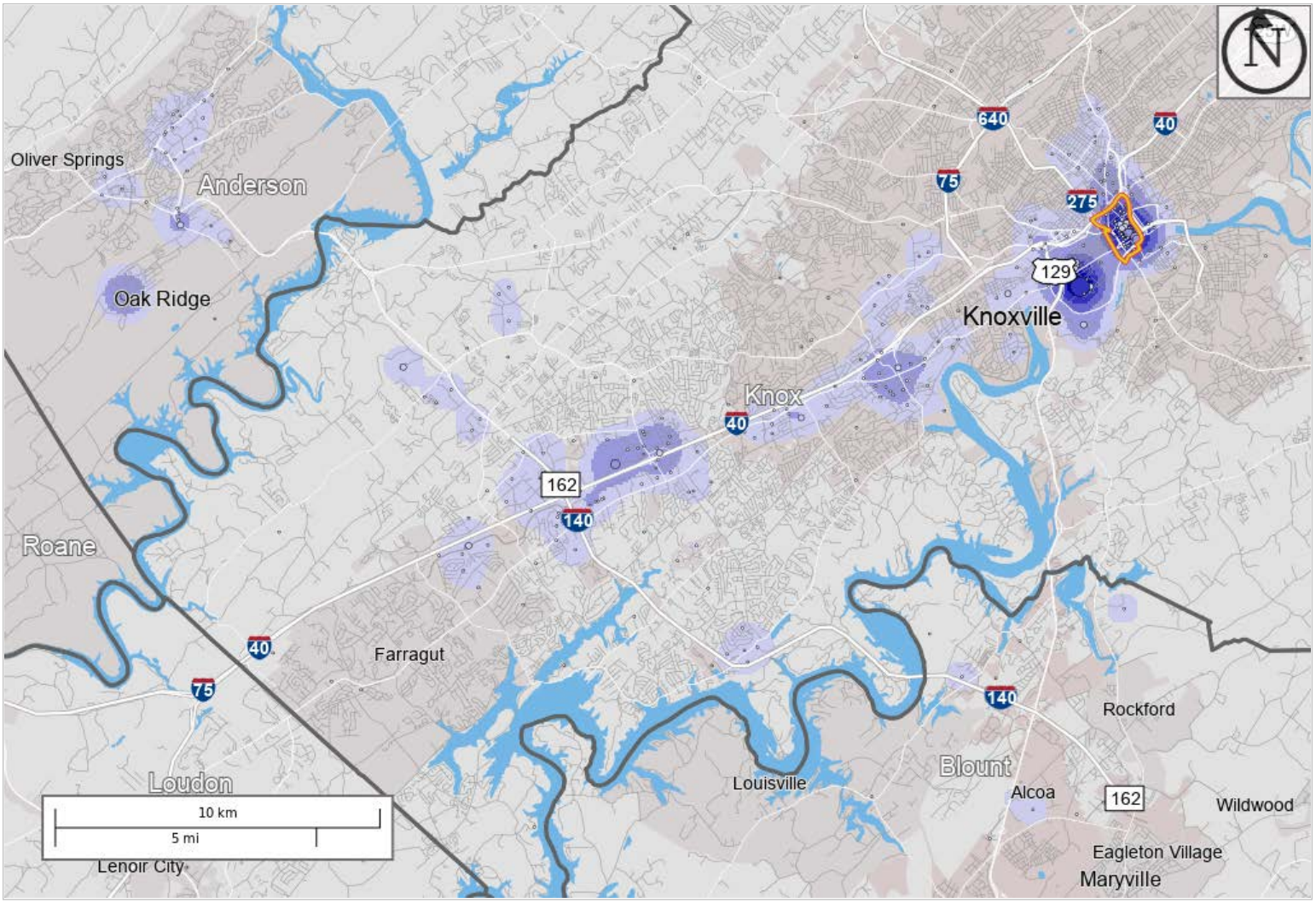
Distance/Direction Report - Home to Work

All Jobs for All Workers in 2018

Created by the U.S. Census Bureau's OnTheMap https://onthemap.ces.census.gov on 03/05/2021

Counts and Density of Work Locations for All Jobs in Home Selection Area in 2018

All Workers



Map Legend

Job Density [Jobs/Sq. Mile]

- 5 - 18
- 19 - 60
- 61 - 129
- 130 - 226
- 227 - 351

Job Count [Jobs/Census Block]

- 1 - 5
- 6 - 20
- 21 - 44
- 45 - 79
- 80 - 123

Selection Areas

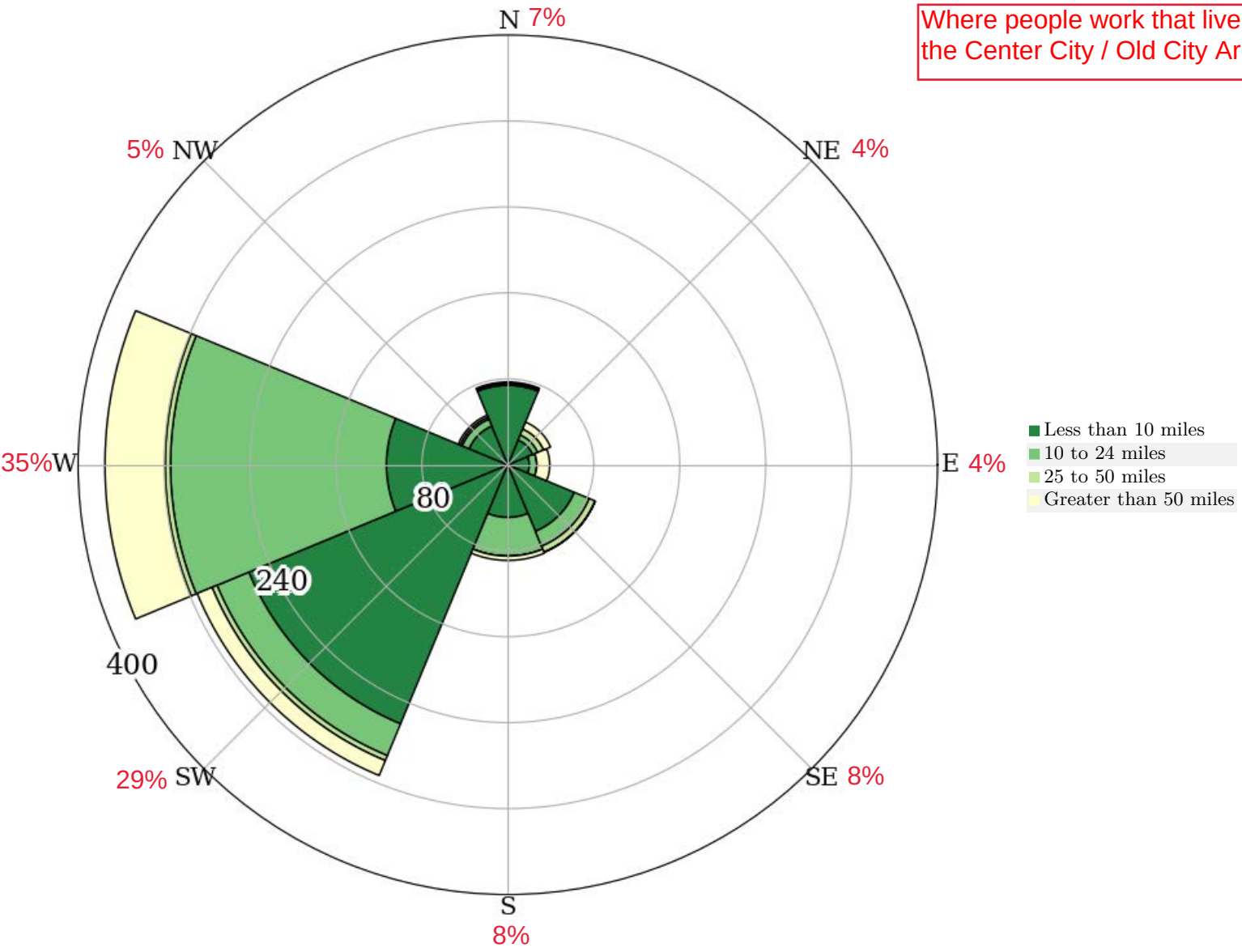
- Analysis Selection



All Jobs for All Workers in 2018

Distance and Direction from Home Census Block to Work Census Block, Living in Selection Area

Where people work that live in the Center City / Old City Area.



All Jobs for All Workers in 2018

Distance from Home Census Block to Work Census Block, Living in Selection Area

Distance	2018 Count	2018 Share
Total All Jobs	1,074	100.0
Less than 10 miles	648	60.3
10 to 24 miles	304	28.3
25 to 50 miles	25	2.3
Greater than 50 miles	97	9.0

Additional Information

Analysis Settings

Analysis Type	Distance/Direction
Selection area as	Home
Year(s)	2018
Job Type	All Jobs
Selection Area	1 (Tract 1, Knox, TN) from Census Block Groups
Selected Census Blocks	120
Analysis Generation Date	03/05/2021 13:49 - OnTheMap 6.8
Code Revision	5dc8e60ec2609d78ebfa7d4b188db13aacbb1ba6
LODES Data Version	20201117_1559

Data Sources

Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2002-2018).

Notes

1. Race, Ethnicity, Educational Attainment, and Sex statistics are beta release results and are not available before 2009.
2. Educational Attainment is only produced for workers aged 30 and over.
3. Firm Age and Firm Size statistics are beta release results for All Private jobs and are not available before 2011 and in 2018.

United States Census Bureau OnTheMap

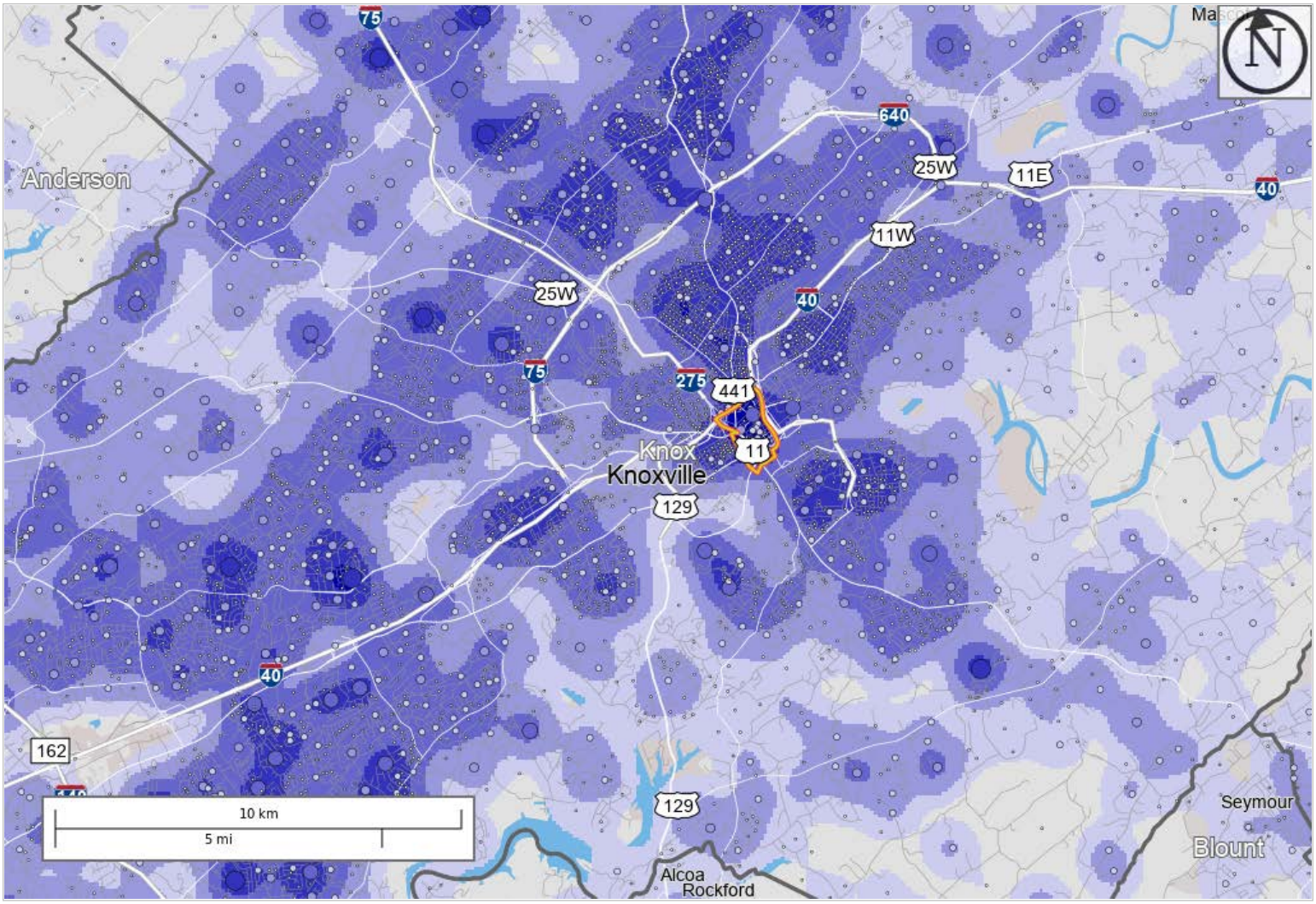
Distance/Direction Report - Work to Home

All Jobs for All Workers in 2018

Created by the U.S. Census Bureau's OnTheMap `https://onthemap.ces.census.gov` on 03/05/2021

Counts and Density of Home Locations for All Jobs in Work Selection Area in 2018

All Workers



Map Legend

Job Density [Jobs/Sq. Mile]

- 5 - 18
- 19 - 57
- 58 - 122
- 123 - 213
- 214 - 330

Job Count [Jobs/Census Block]

- 1 - 4
- 5 - 13
- 14 - 30
- 31 - 52
- 53 - 82

Selection Areas

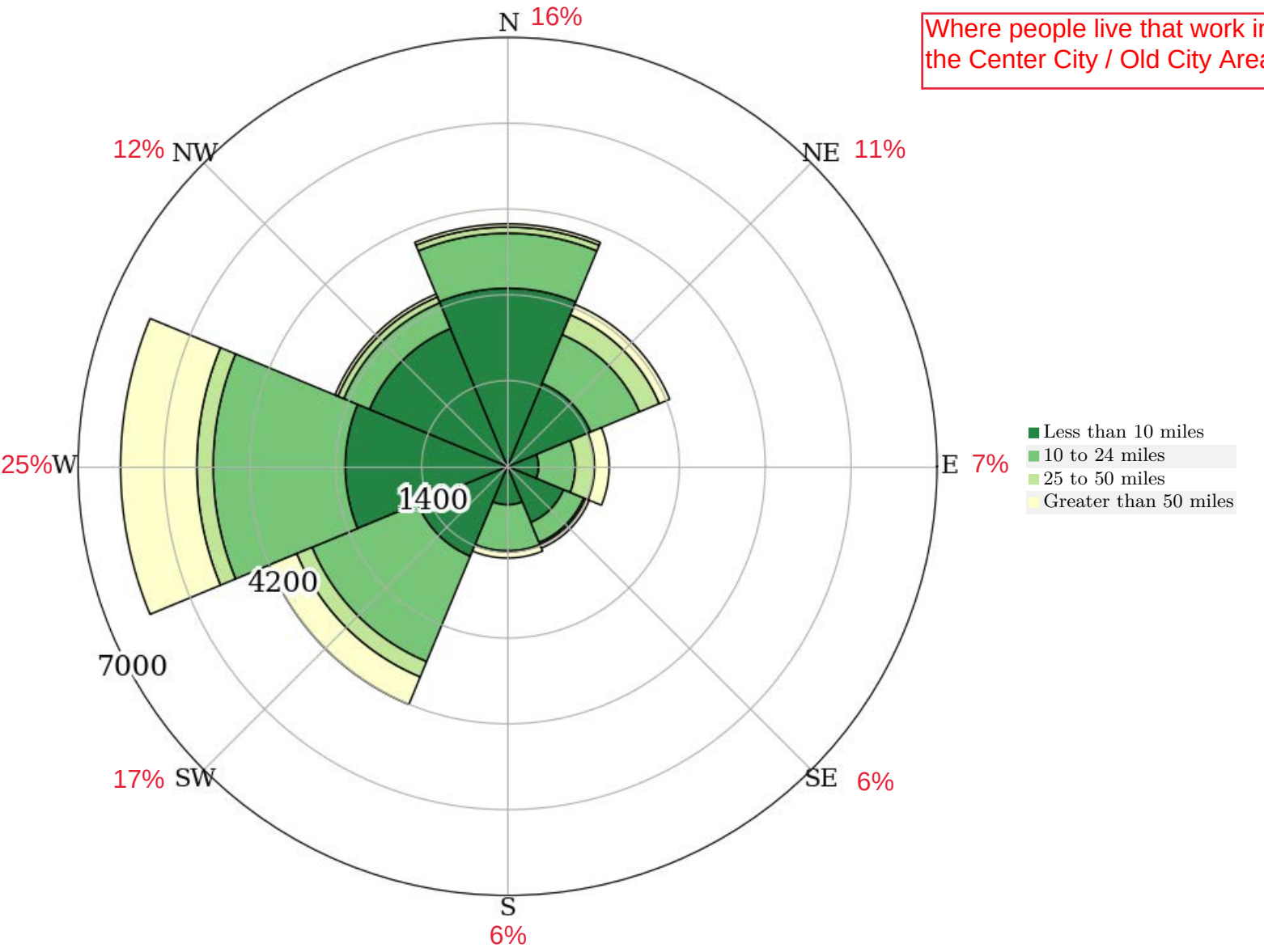
- Analysis Selection



United States Census Bureau

All Jobs for All Workers in 2018

Distance and Direction from Work Census Block to Home Census Block, Employed in Selection Area



All Jobs for All Workers in 2018

Distance from Work Census Block to Home Census Block, Employed in Selection Area

Distance	2018 Count	2018 Share
Total All Jobs	24,963	100.0
Less than 10 miles	13,166	52.7
10 to 24 miles	7,929	31.8
25 to 50 miles	1,452	5.8
Greater than 50 miles	2,416	9.7

Additional Information

Analysis Settings

Analysis Type	Distance/Direction
Selection area as	Work
Year(s)	2018
Job Type	All Jobs
Selection Area	1 (Tract 1, Knox, TN) from Census Block Groups
Selected Census Blocks	120
Analysis Generation Date	03/05/2021 13:40 - OnTheMap 6.8
Code Revision	5dc8e60ec2609d78ebfa7d4b188db13aacbb1ba6
LODES Data Version	20201117_1559

Data Sources

Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2002-2018).

Notes

1. Race, Ethnicity, Educational Attainment, and Sex statistics are beta release results and are not available before 2009.
2. Educational Attainment is only produced for workers aged 30 and over.
3. Firm Age and Firm Size statistics are beta release results for All Private jobs and are not available before 2011 and in 2018.

APPENDIX D | TRIP DISTRIBUTION AND ASSIGNMENT FIGURES

- FIGURES D-1A - D-1H – Trip Distribution and Assignment for Residential
- FIGURES D-2A - D-2H – Trip Distribution and Assignment for Office/Retail
- FIGURES D-3A – D3G – Trip Distribution and Assignment for Stadium

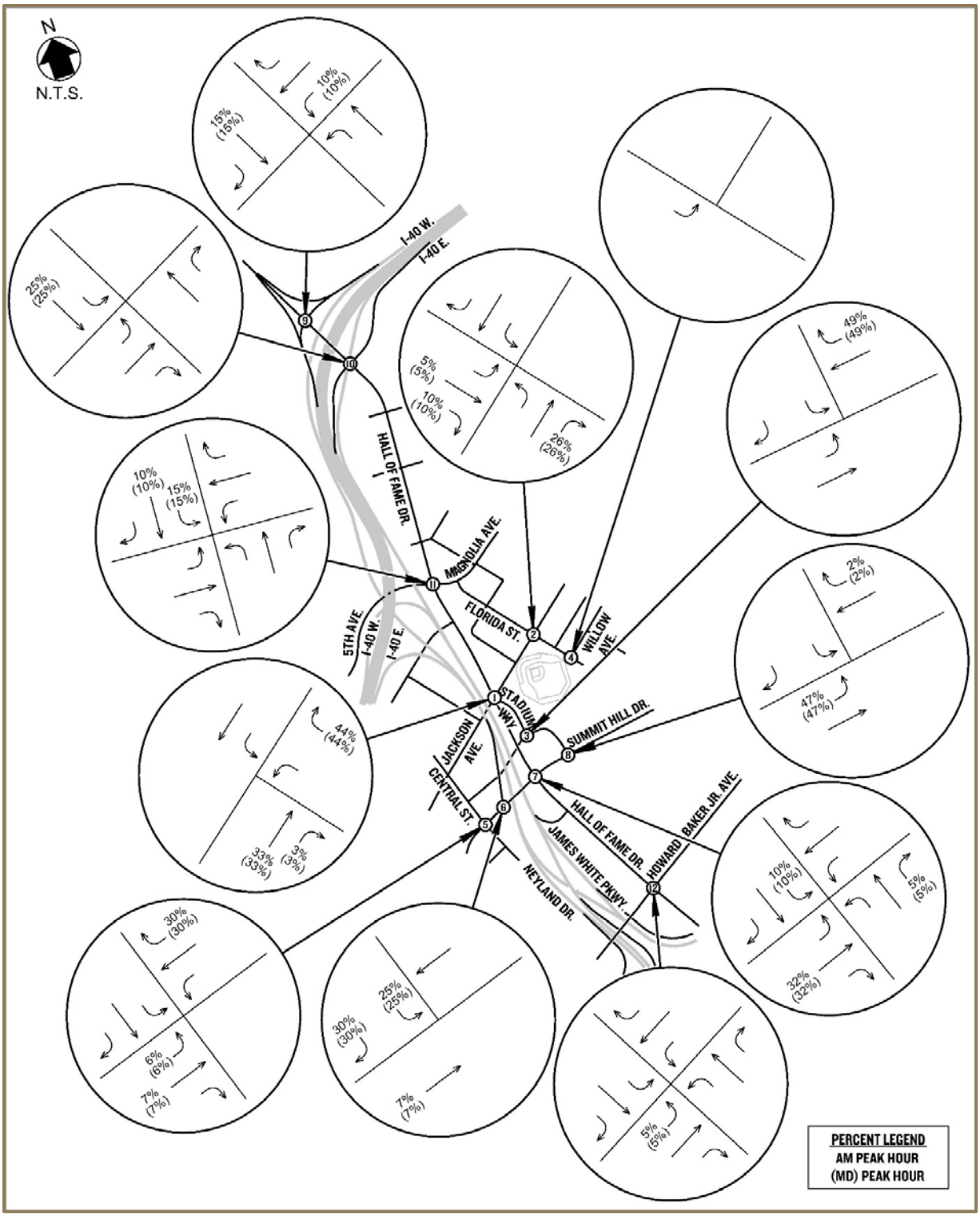


FIGURE D-1A
RESIDENTIAL ENTERING TRIP DISTRIBUTION (AM & MD)

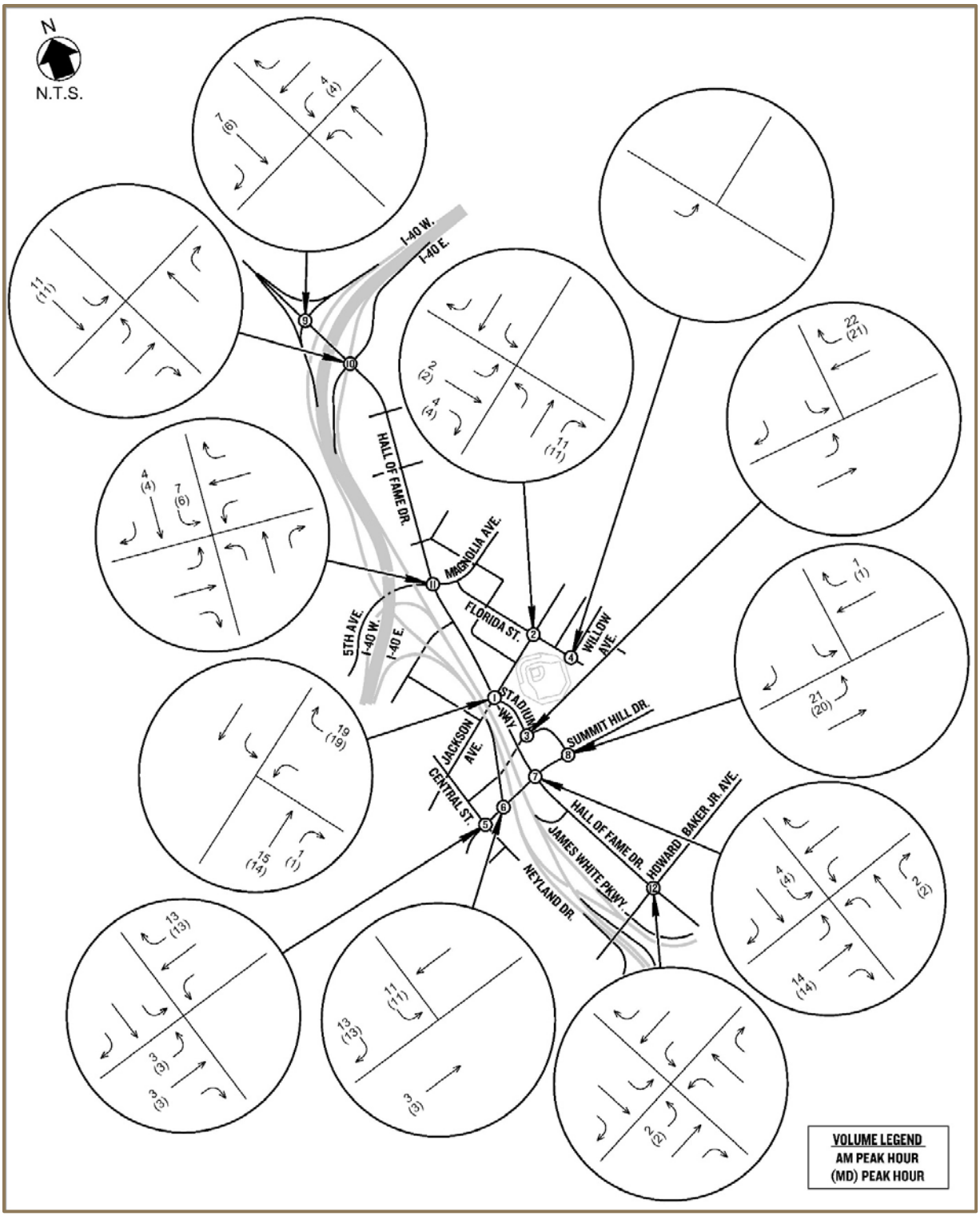


FIGURE D-1B
RESIDENTIAL ENTERING TRIP ASSIGNMENT (AM & MD)

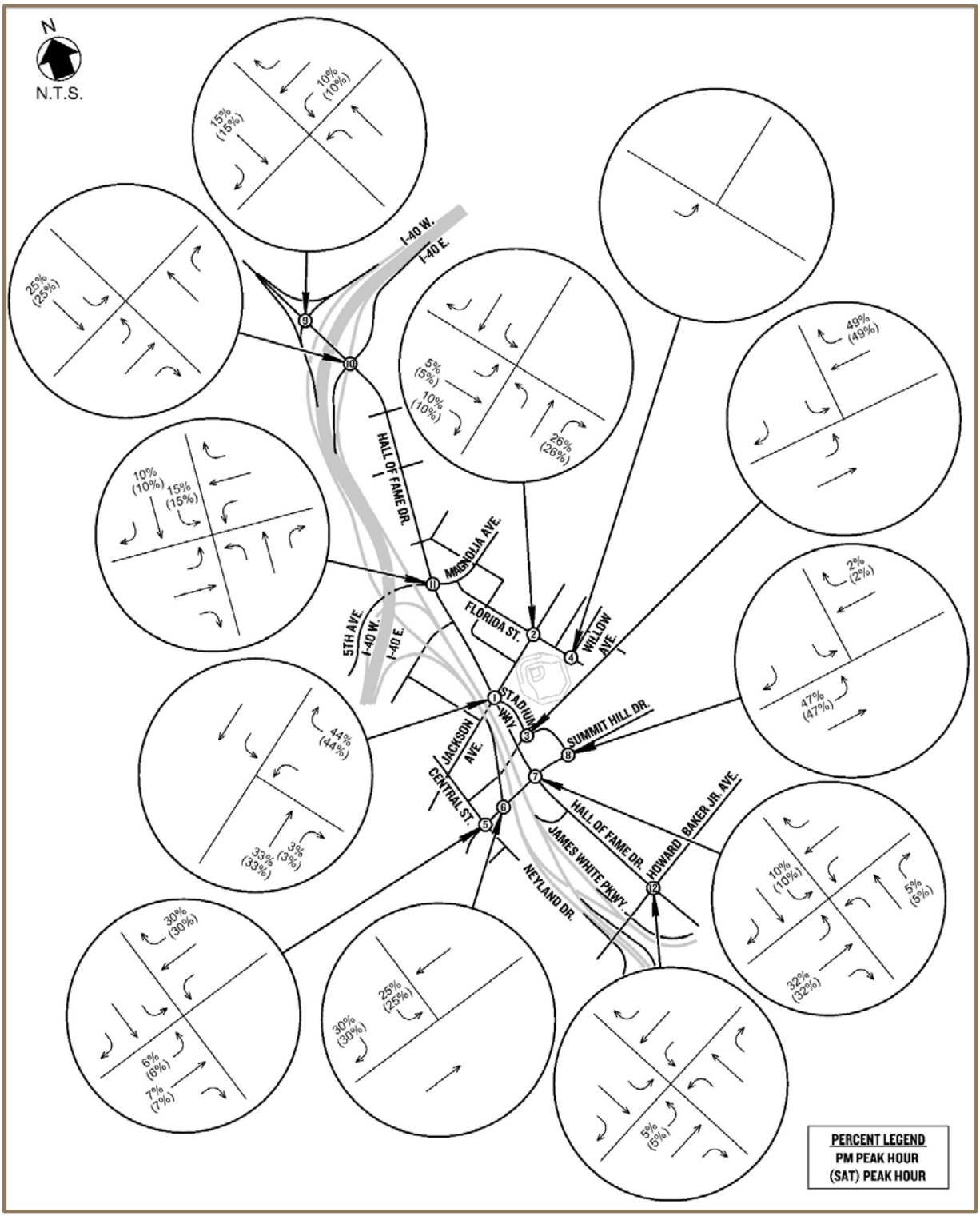


FIGURE D-1C
RESIDENTIAL ENTERING TRIP DISTRIBUTION (PM & SAT)

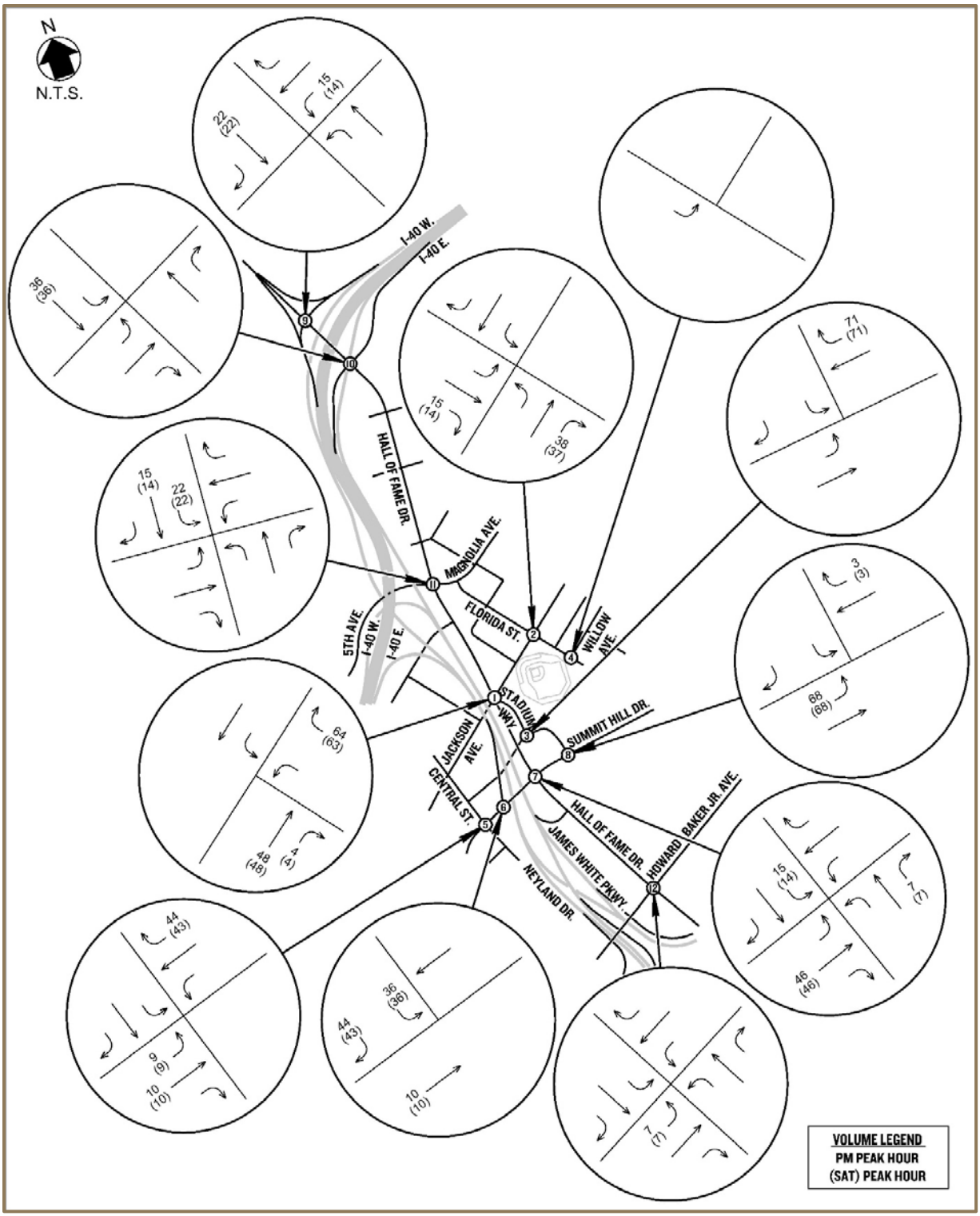


FIGURE D-1D
RESIDENTIAL ENTERING TRIP ASSIGNMENT (PM & SAT)

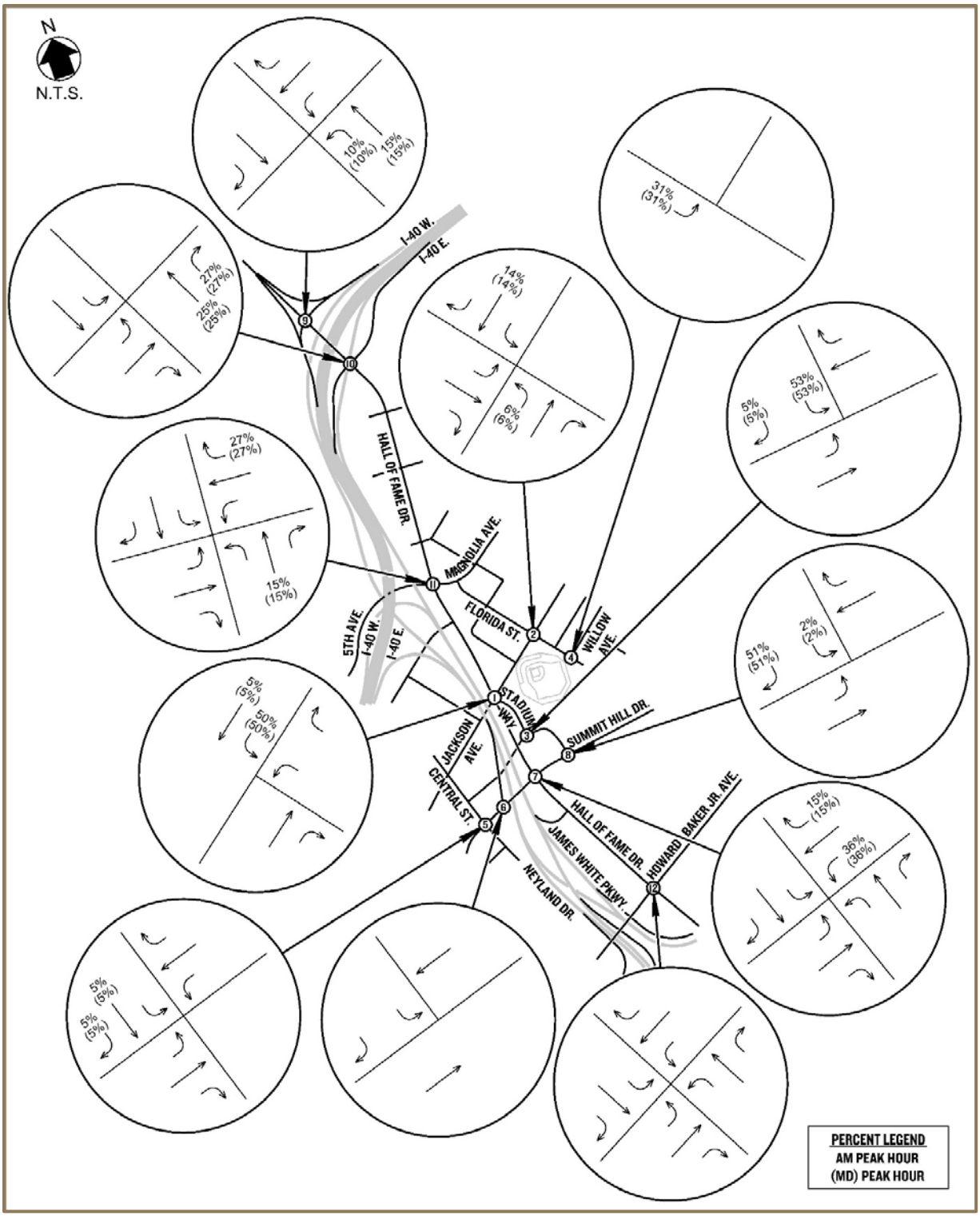


FIGURE D-1E
RESIDENTIAL EXITING TRIP DISTRIBUTION (AM & MD)

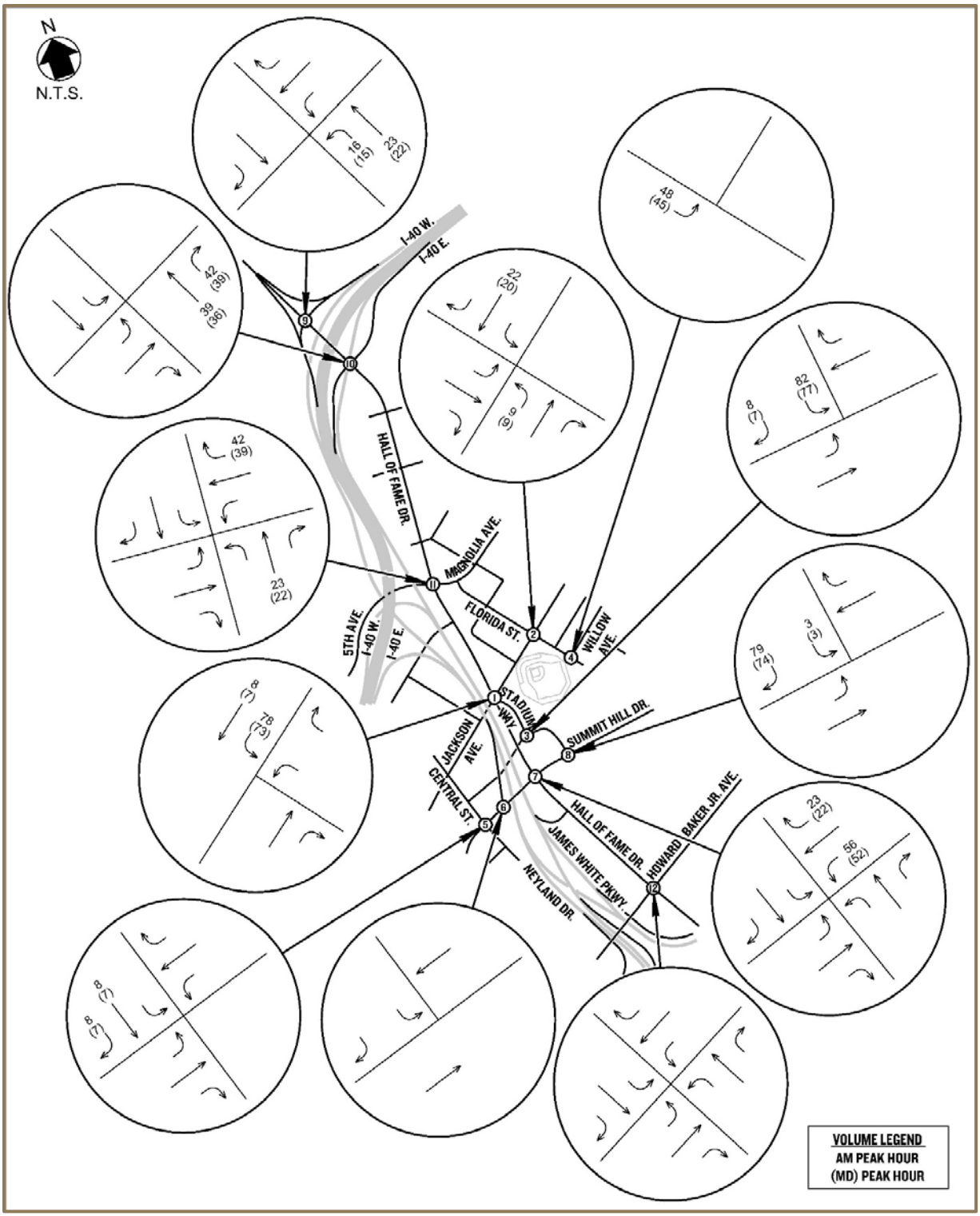


FIGURE D-1F
RESIDENTIAL EXITING TRIP ASSIGNMENT (AM & MD)

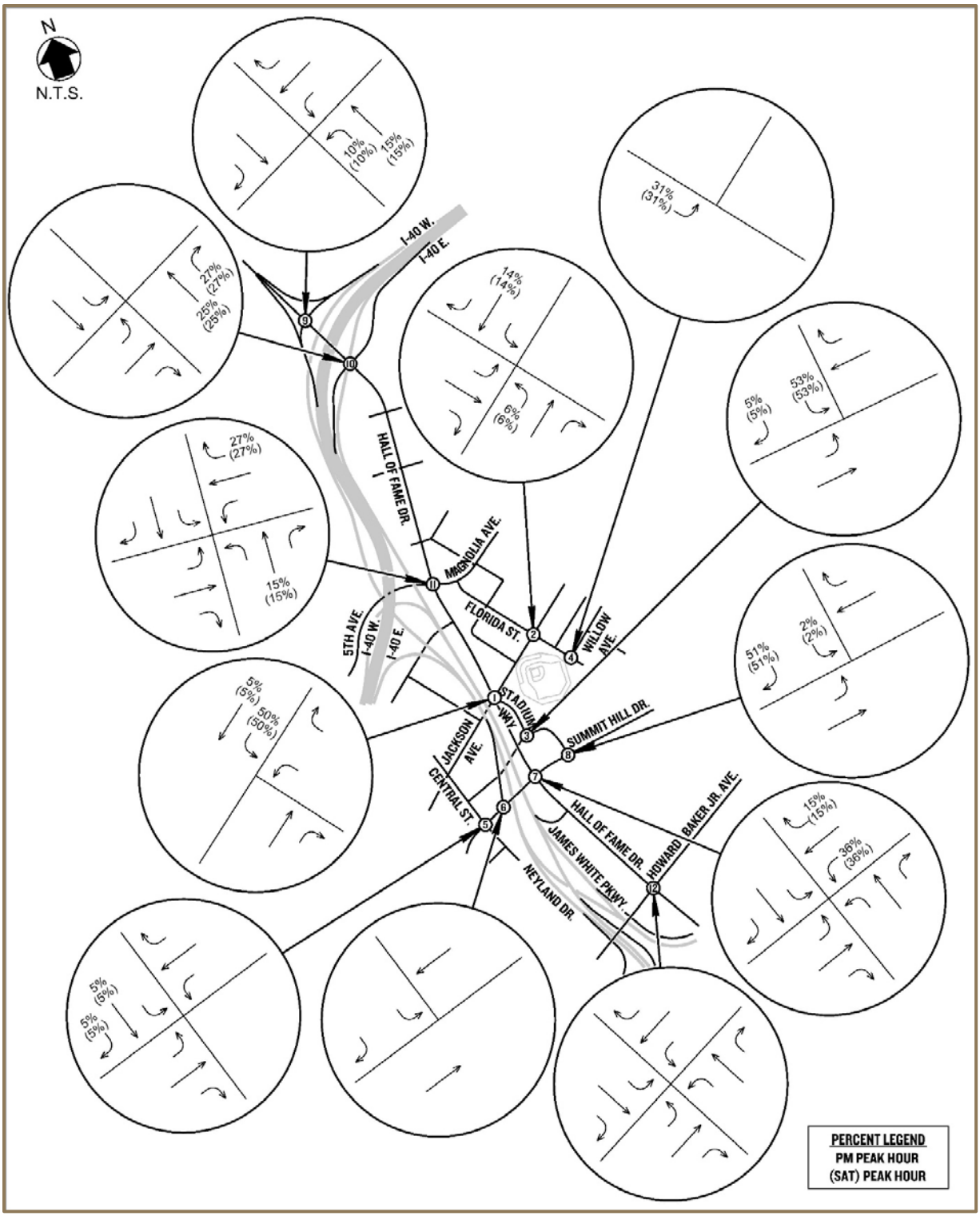


FIGURE D-1G
RESIDENTIAL EXITING TRIP DISTRIBUTION (PM & SAT)

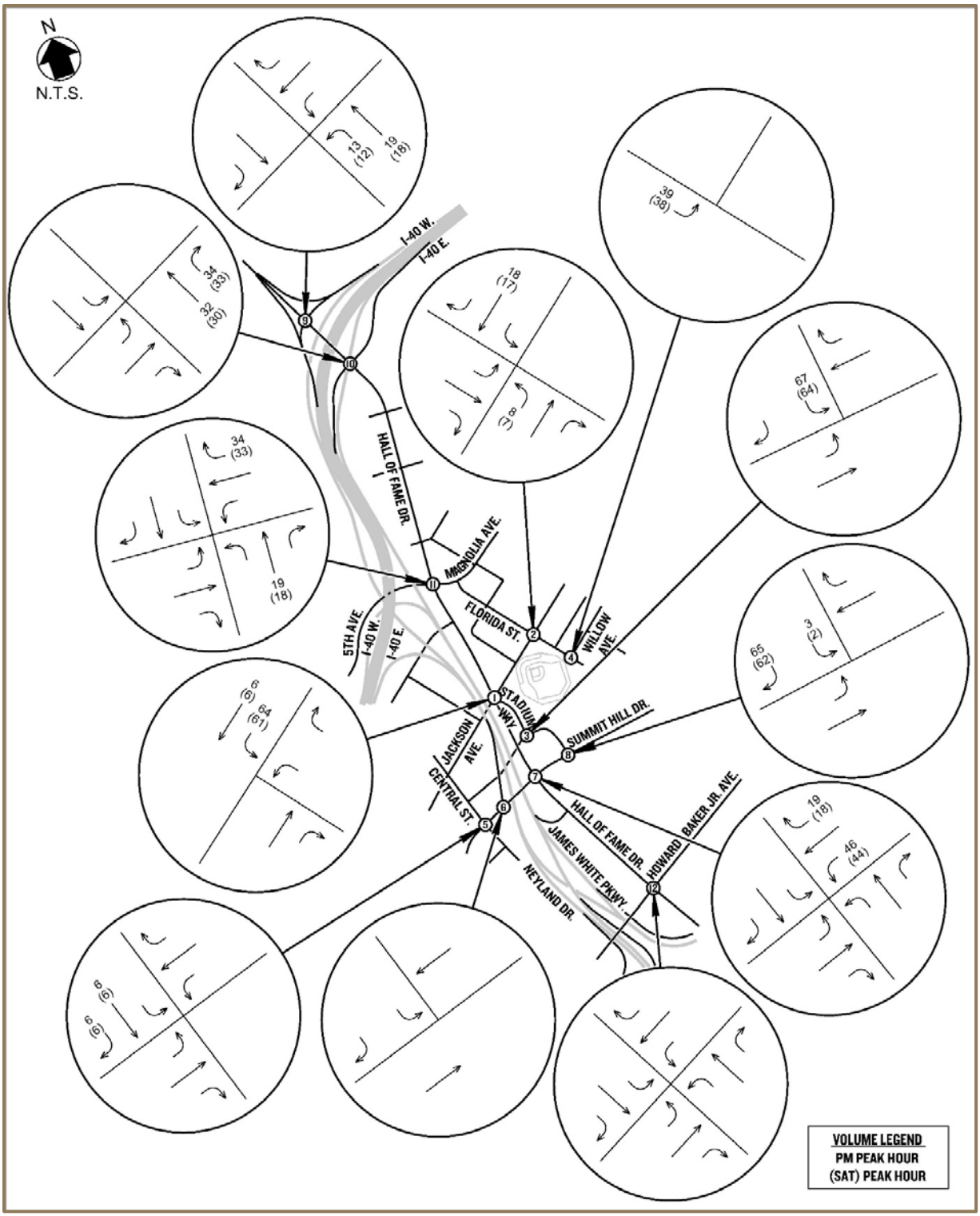


FIGURE D-1H
RESIDENTIAL EXITING TRIP ASSIGMENT (PM & SAT)

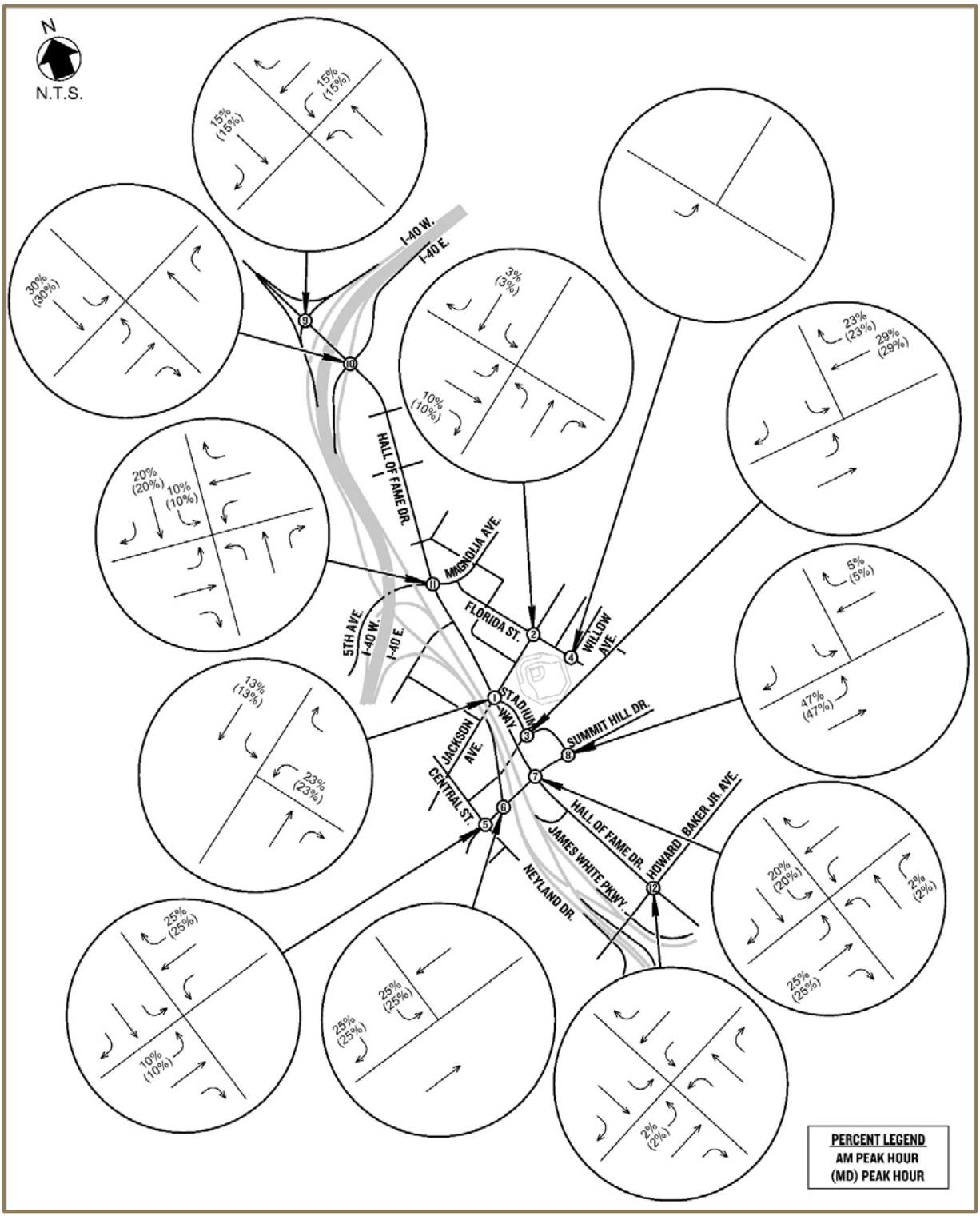


FIGURE D-2A
OFFICE/RETAIL ENTERING TRIP DISTRIBUTION (AM & MD)

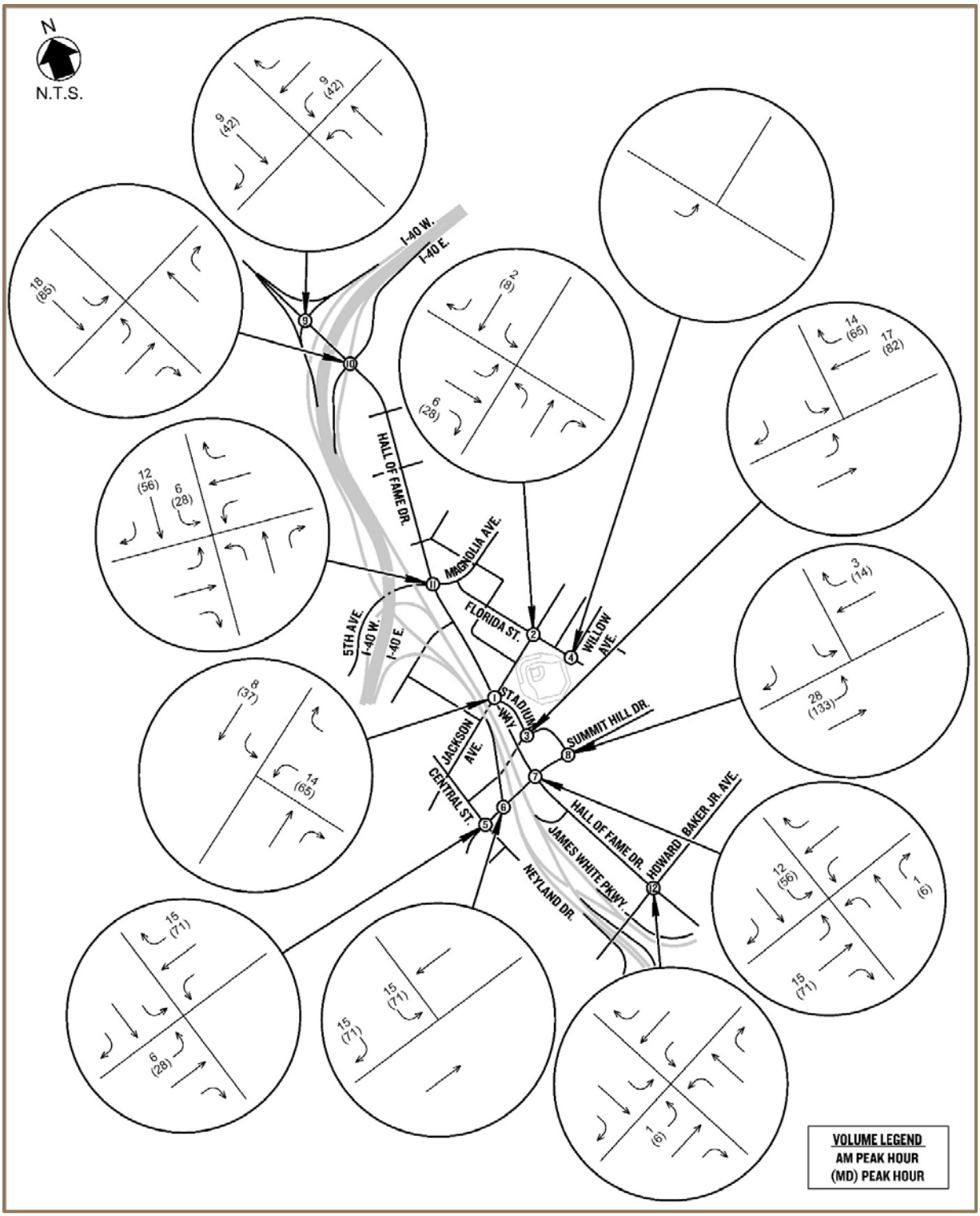


FIGURE D-2B
OFFICE/RETAIL ENTERING TRIP ASSIGNMENT (AM & MD)

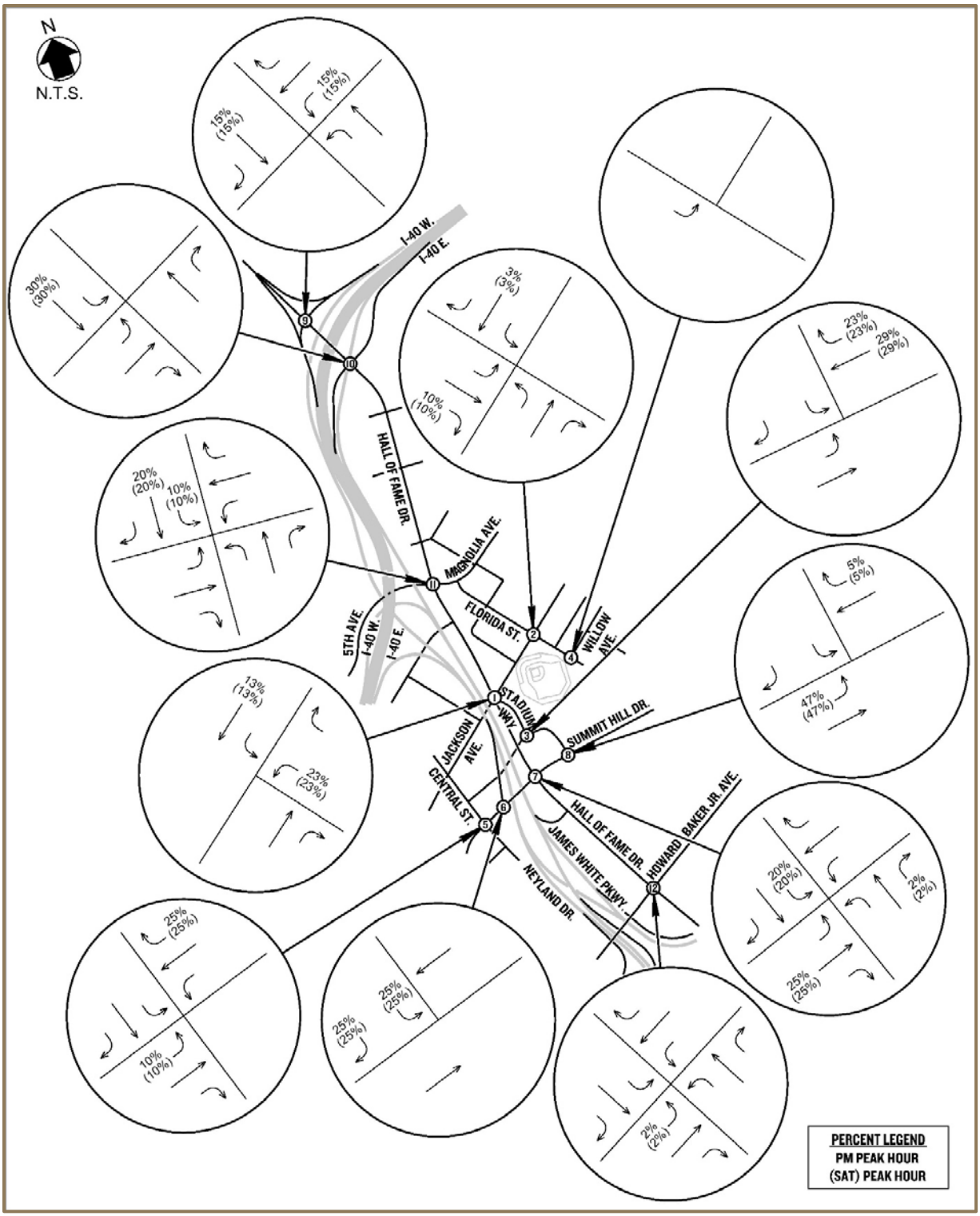


FIGURE D-2C
OFFICE/RETAIL ENTERING TRIP DISTRIBUTION (PM & SAT)

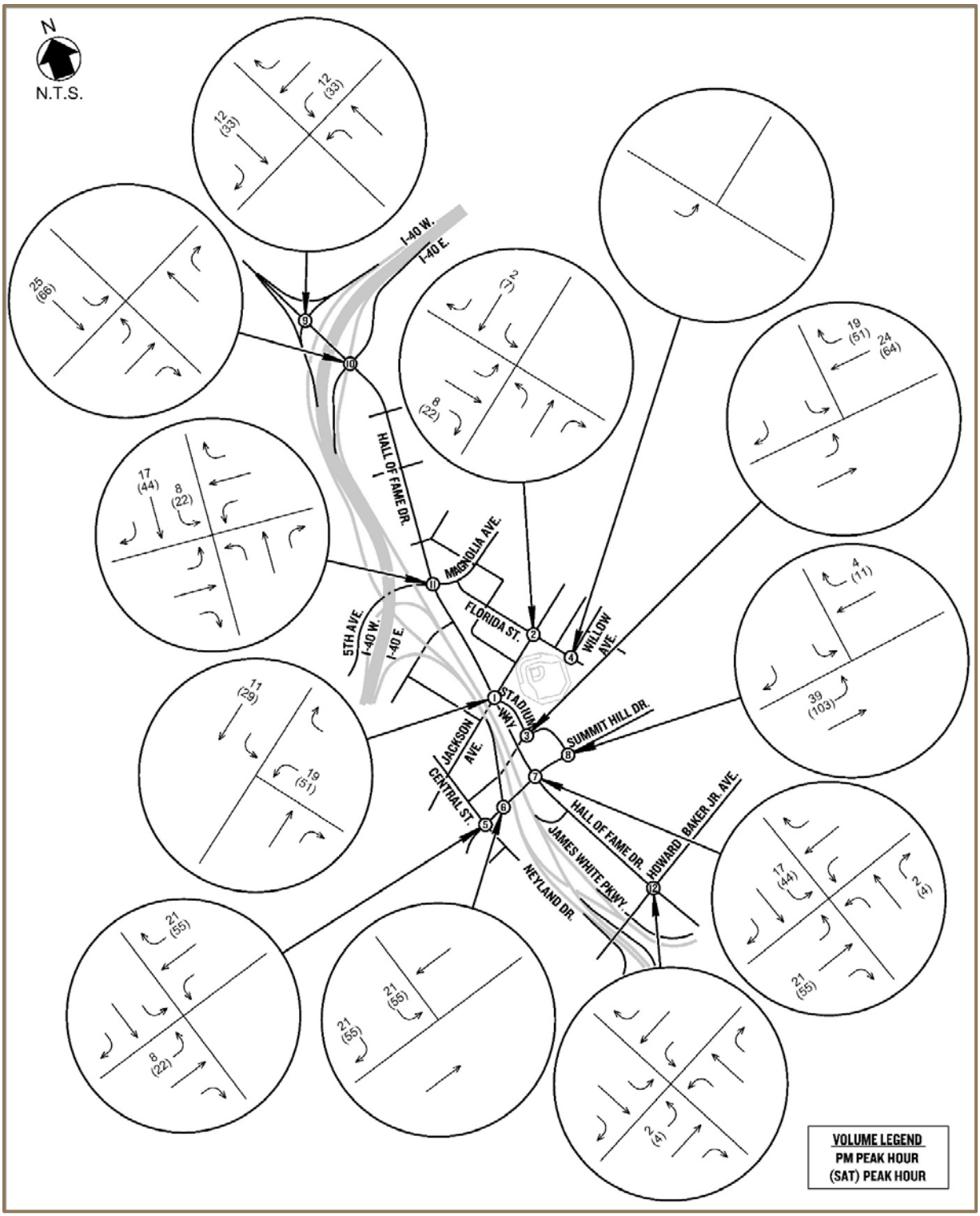


FIGURE D-2D
OFFICE/RETAIL ENTERING TRIP ASSIGNMENT (PM & SAT)

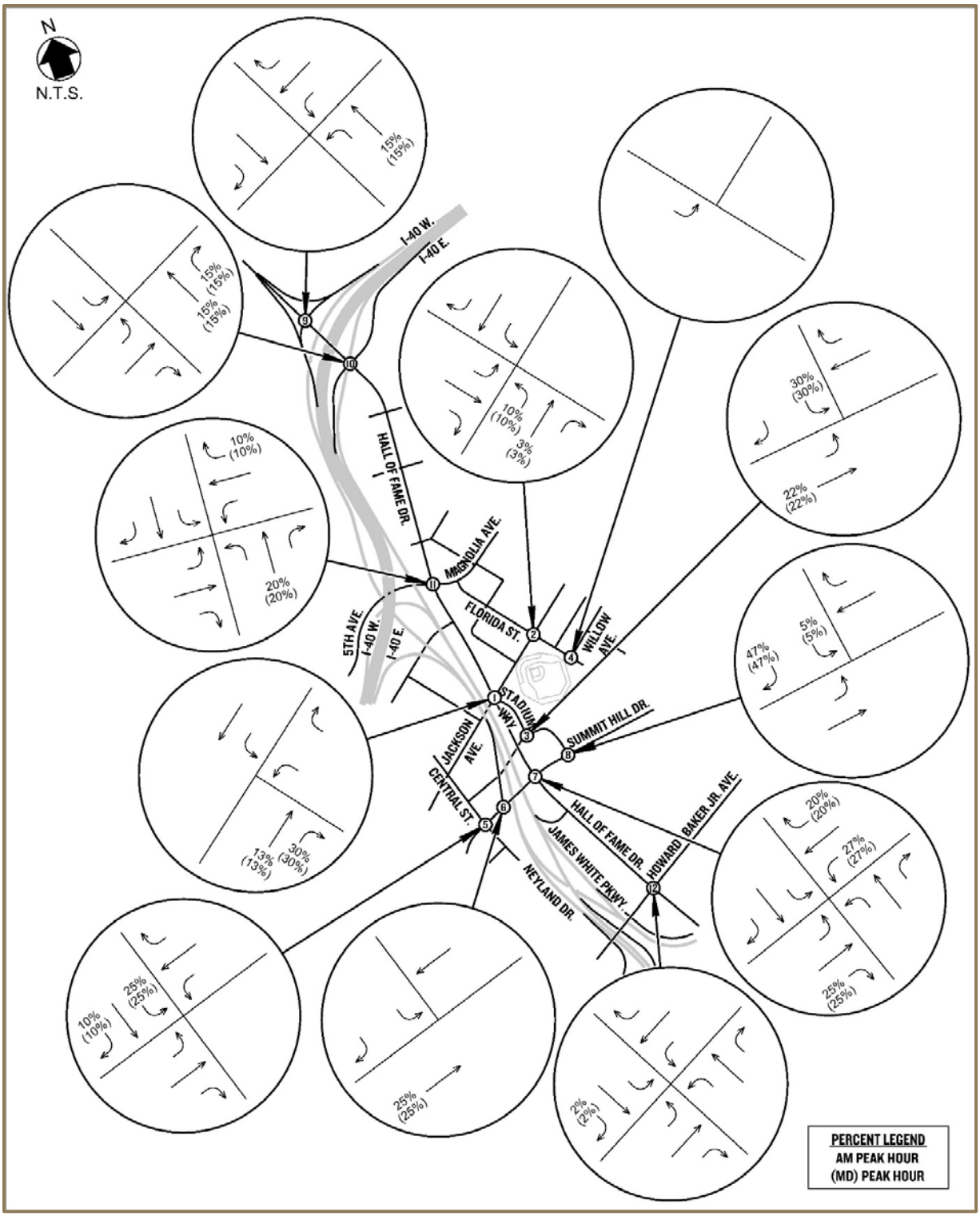


FIGURE D-2E
OFFICE/RETAIL EXITING TRIP DISTRIBUTION (AM & MD)

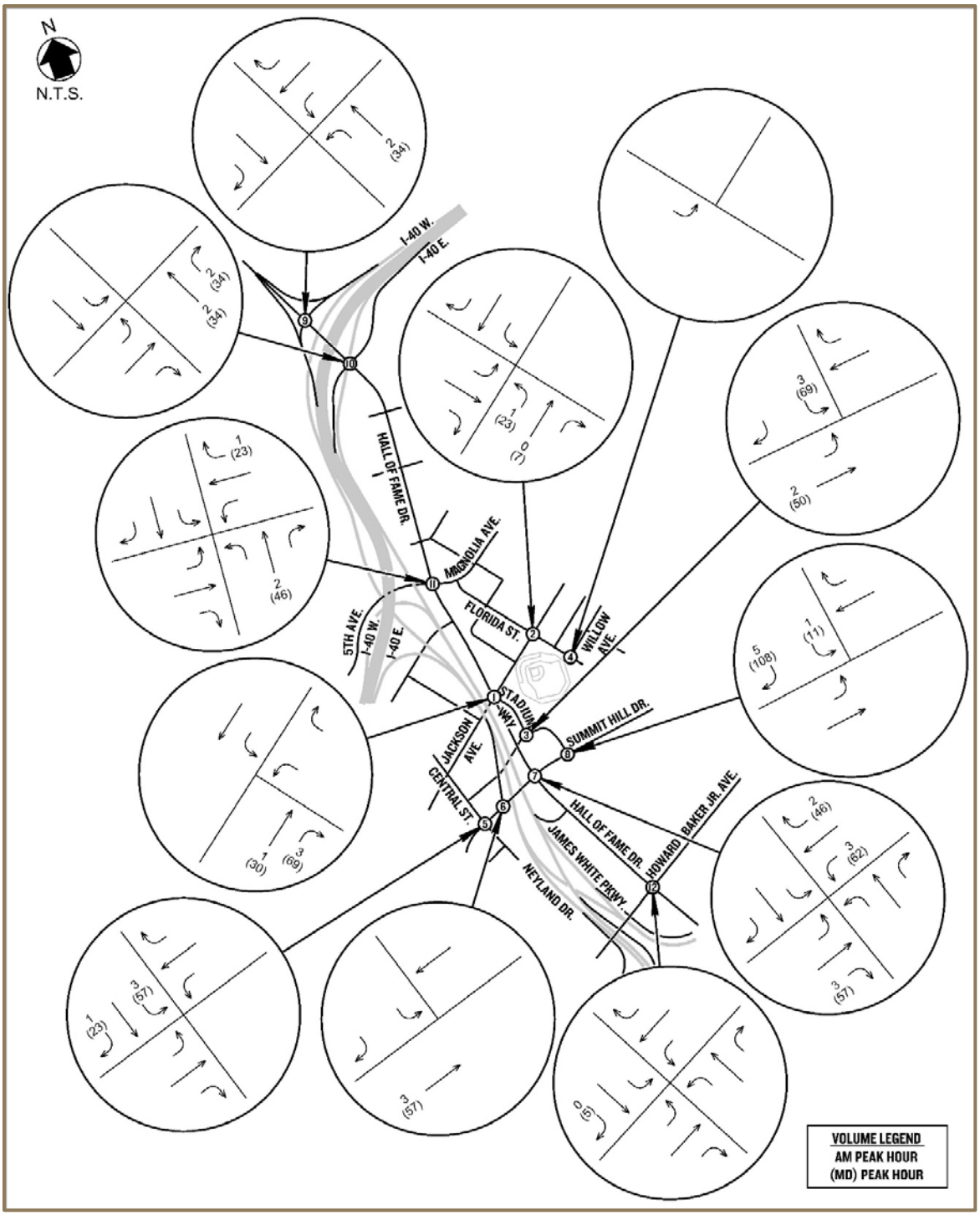


FIGURE D-2F
OFFICE/RETAIL EXITING TRIP ASSIGNMENT (AM & MD)

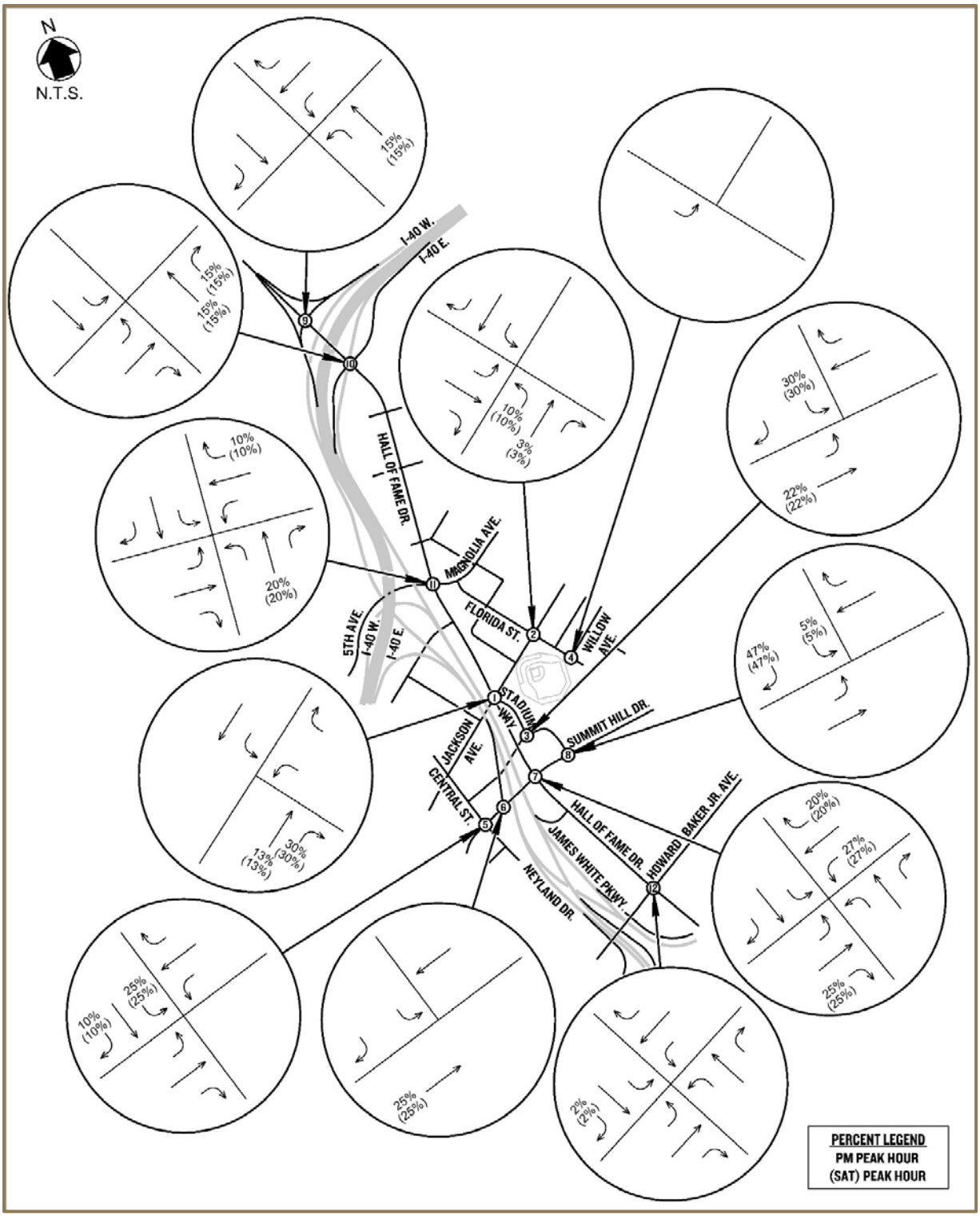


FIGURE D-2G
OFFICE/RETAIL EXITING TRIP DISTRIBUTION (PM & SAT)

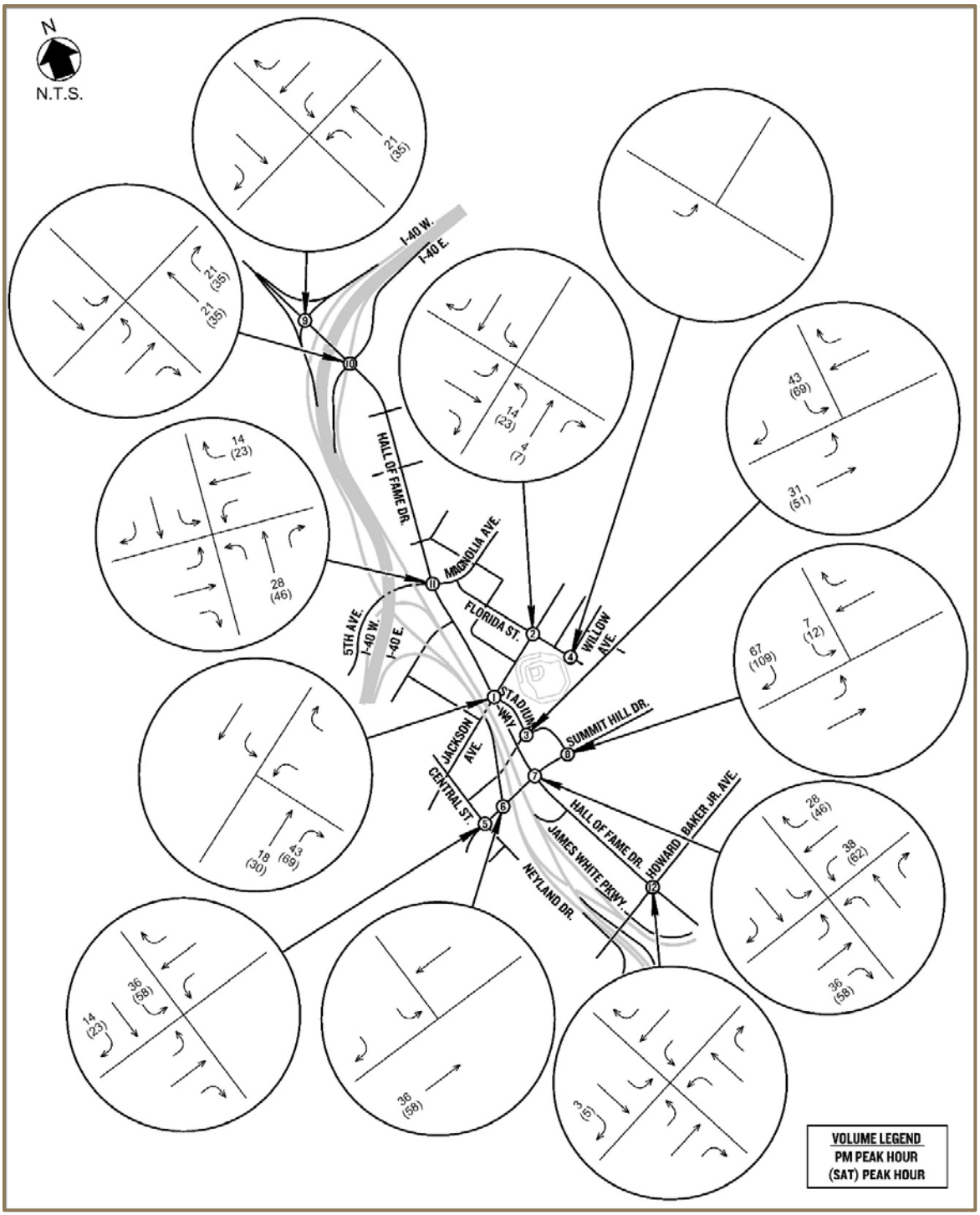


FIGURE D-2H
OFFICE/RETAIL EXITING TRIP ASSIGNMENT (PM & SAT)

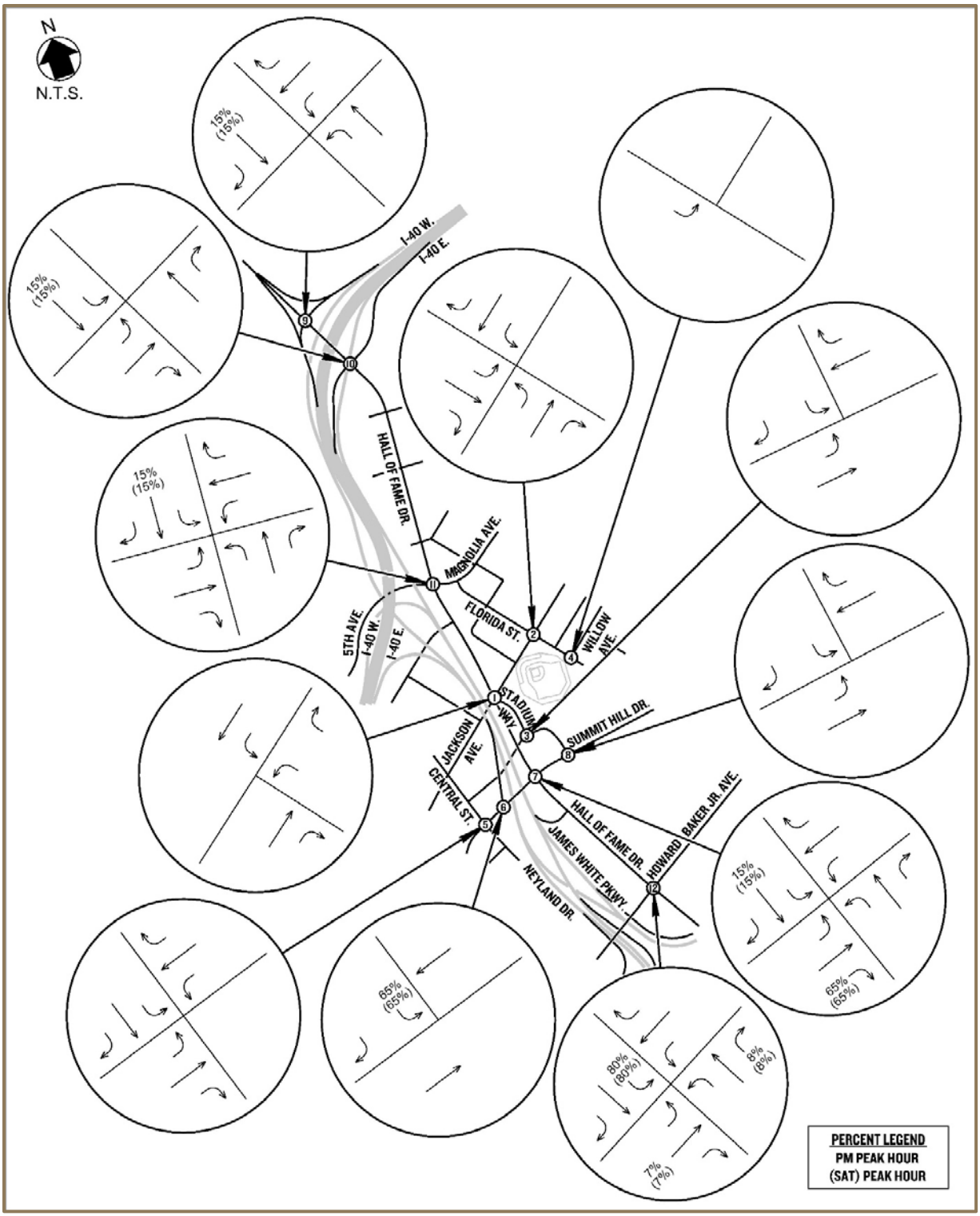


FIGURE D-3A
STADIUM COLISUEM PARKING ENTERING TRIP DISTRIBUTION (PM & SAT)

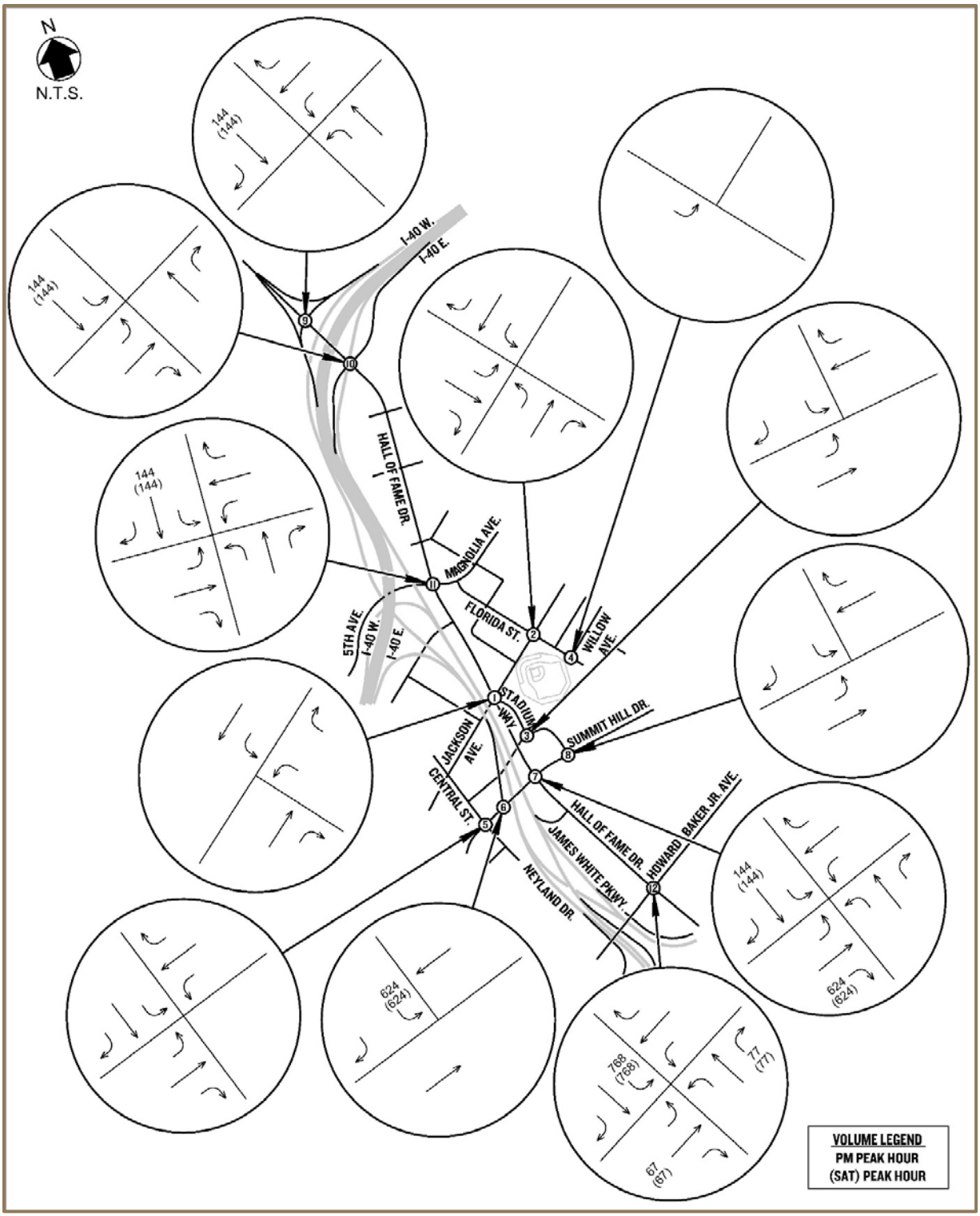


FIGURE D-3B
STADIUM COLISUEM PARKING ENTERING TRIP ASSIGNMENT (PM & SAT)

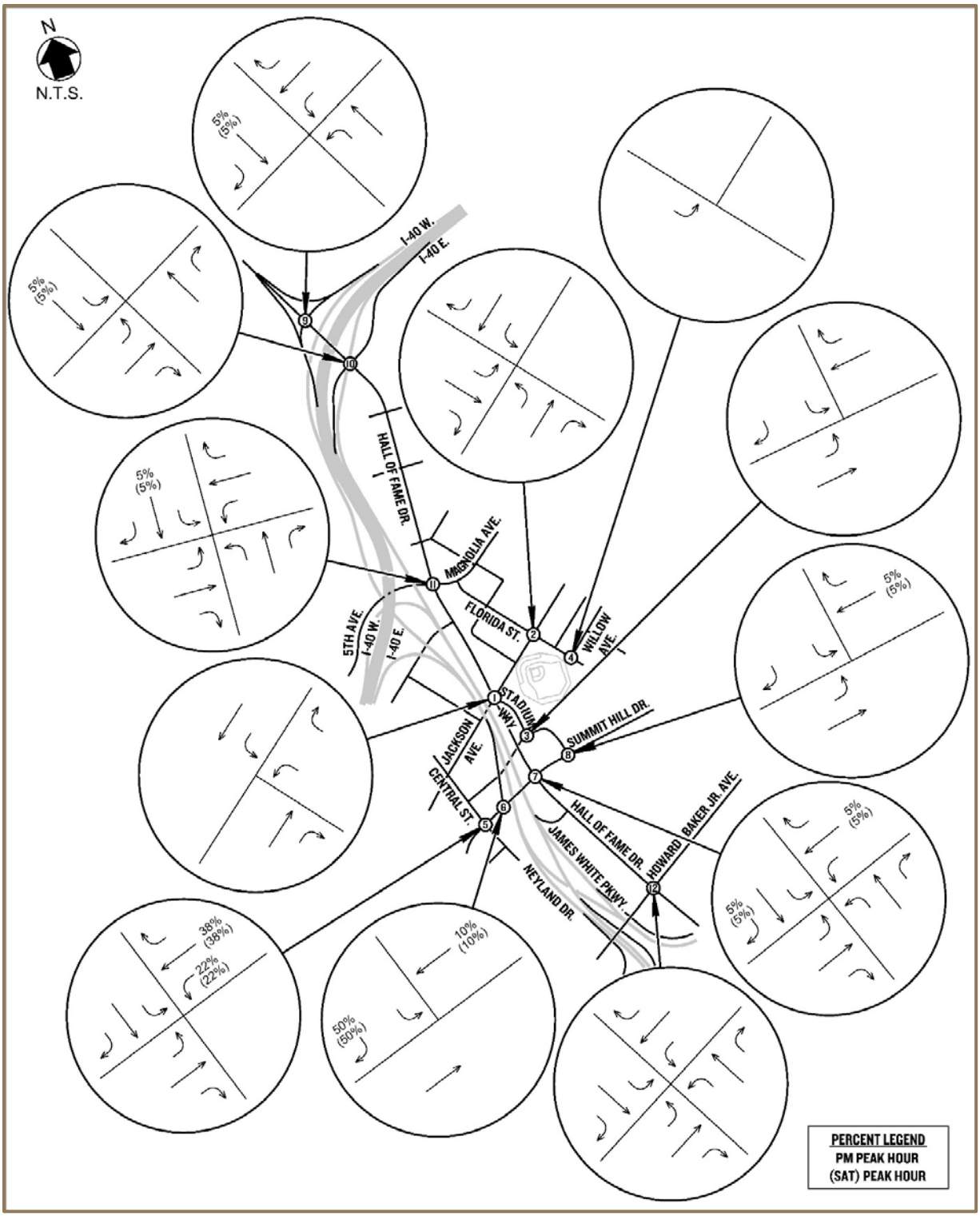


FIGURE D-3C
STADIUM DOWNTOWN PARKING ENTERING TRIP DISTRIBUTION (PM & SAT)

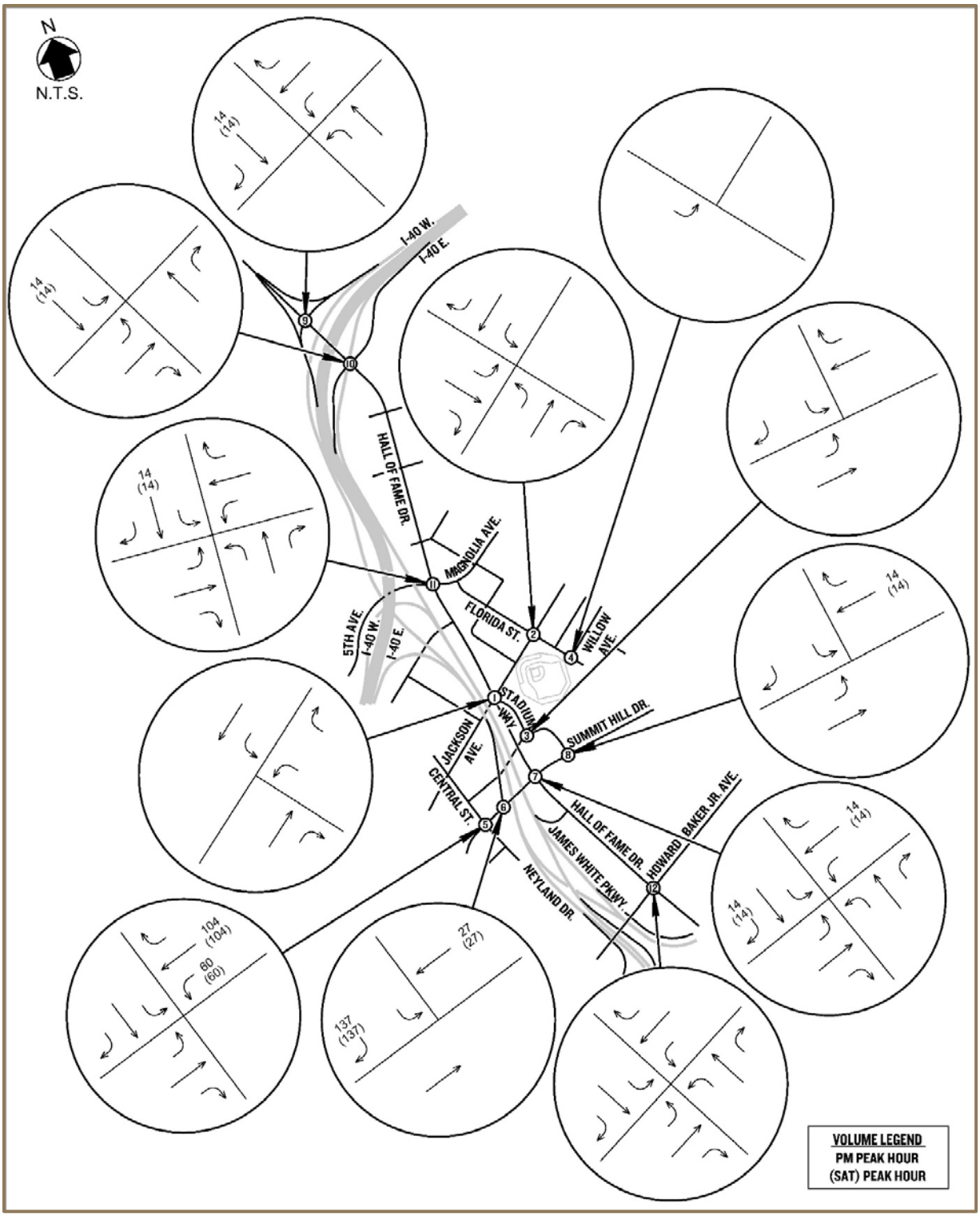


FIGURE D-3D
STADIUM DOWNTOWN PARKING ENTERING TRIP ASSIGNMENT (PM & SAT)

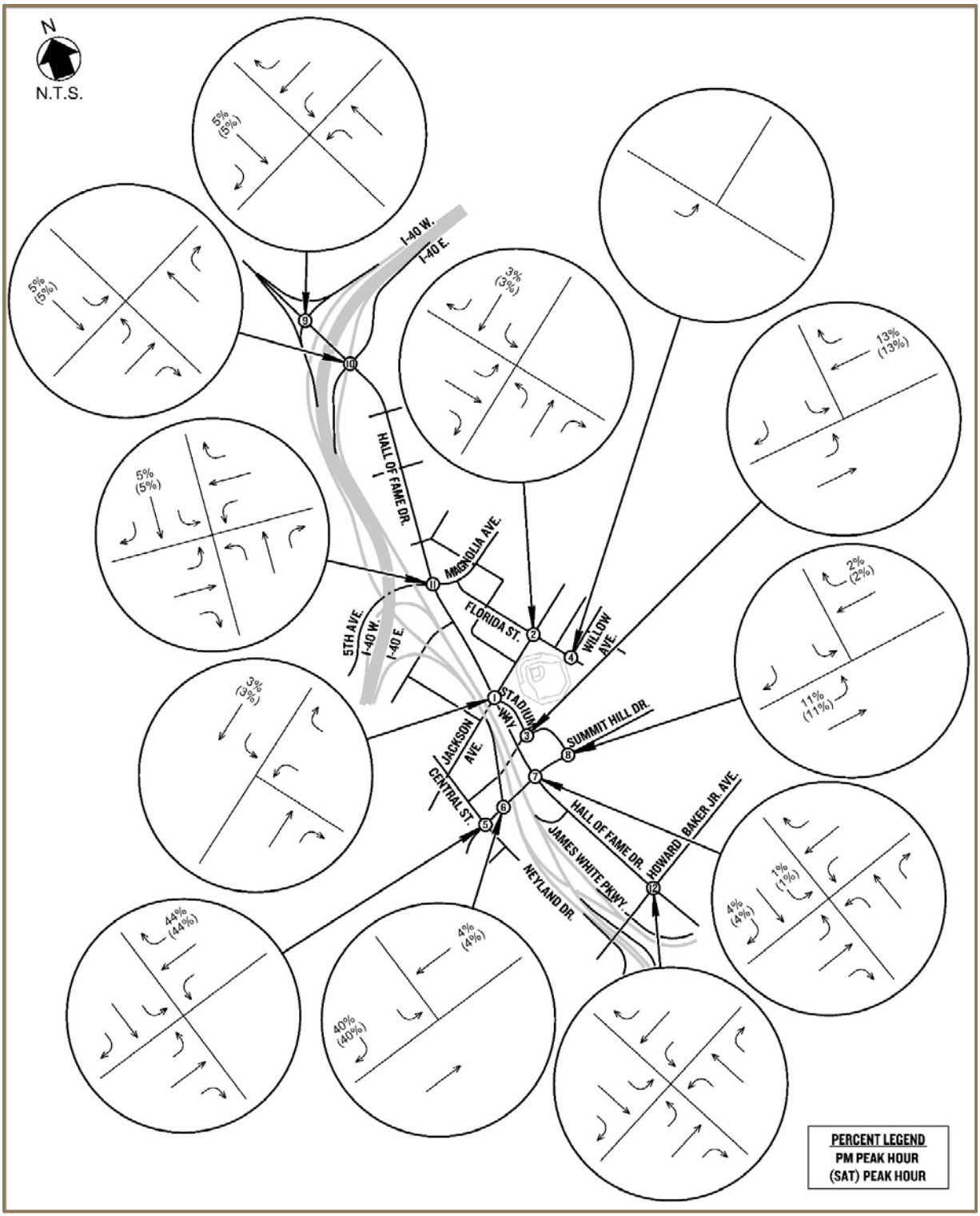


FIGURE D-3E
STADIUM OLD CITY PARKING ENTERING TRIP DISTRIBUTION (PM & SAT)

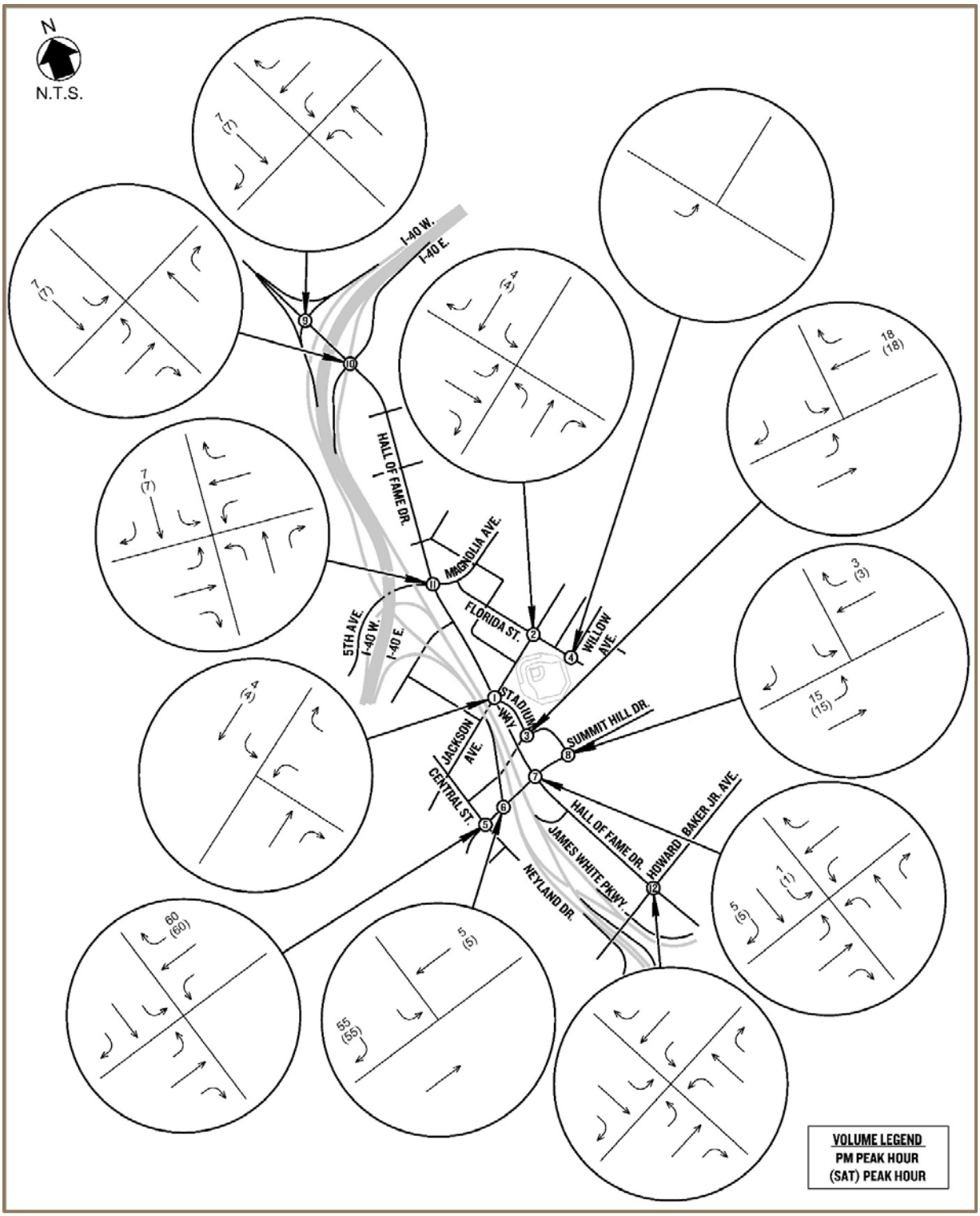


FIGURE D-3F
STADIUM OLD CITY PARKING ENTERING TRIP ASSIGNMENT (PM & SAT)

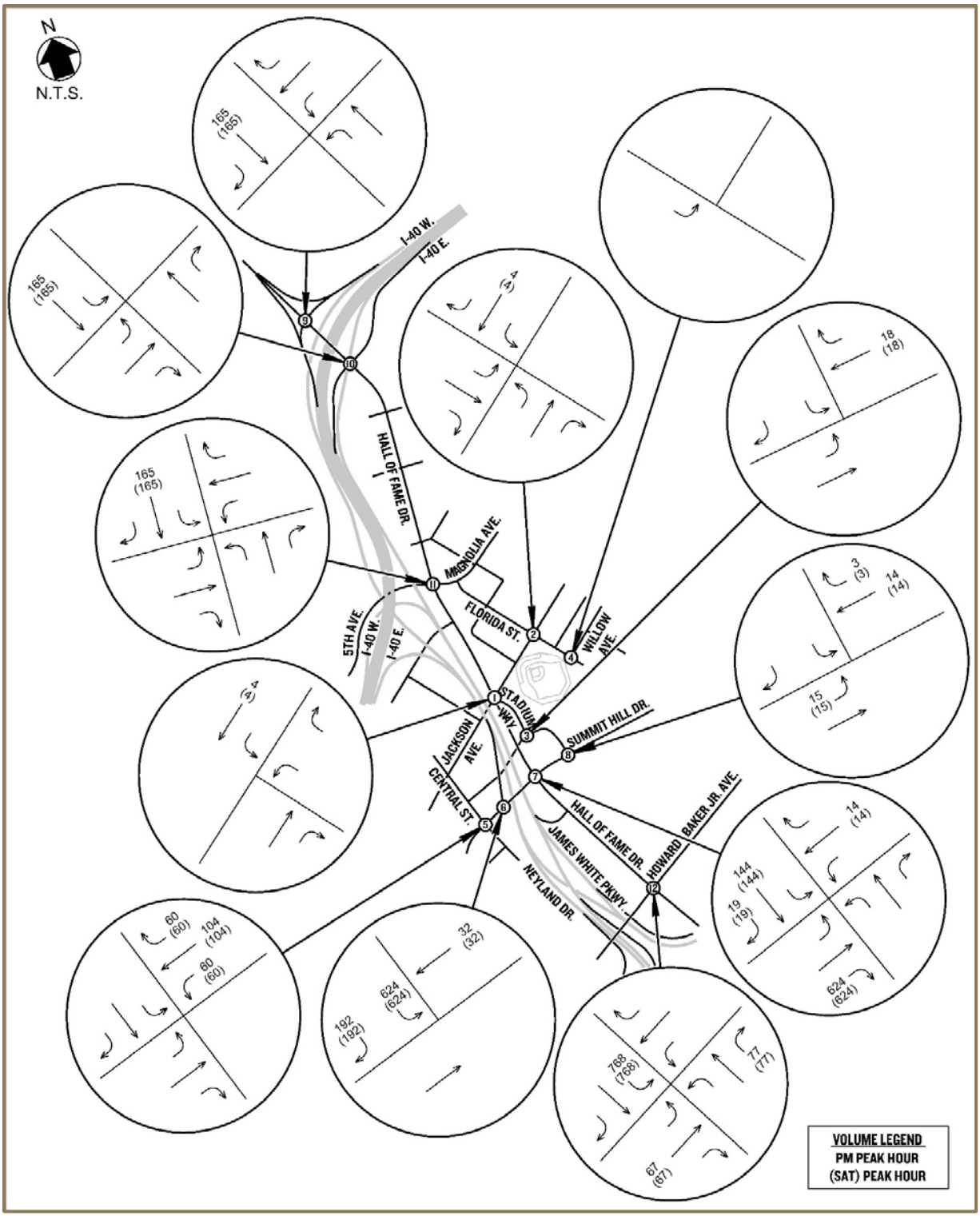


FIGURE D-3G
STADIUM TOTAL ENTERING TRIP ASSIGNMENT (PM & SAT)

APPENDIX E | ANALYSES FOR COMBINED TRAFFIC

Intersection	
Int Delay, s/veh	7.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	63	20	194	58	35	143
Future Vol, veh/h	63	20	194	58	35	143
Conflicting Peds, #/hr	0	35	35	0	0	35
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	72	23	223	67	40	164

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	130	0	632	154
Stage 1	-	-	-	-	119	-
Stage 2	-	-	-	-	513	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1455	-	444	892
Stage 1	-	-	-	-	906	-
Stage 2	-	-	-	-	601	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1407	-	358	834
Mov Cap-2 Maneuver	-	-	-	-	358	-
Stage 1	-	-	-	-	731	-
Stage 2	-	-	-	-	601	-

Approach	EB	WB	NB
HCM Control Delay, s	0	6.2	12.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	661	-	-	1407	-
HCM Lane V/C Ratio	0.31	-	-	0.158	-
HCM Control Delay (s)	12.9	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	1.3	-	-	0.6	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕						↕	
Traffic Vol, veh/h	10	107	78	5	165	23	0	0	0	6	8	10
Future Vol, veh/h	10	107	78	5	165	23	0	0	0	6	8	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	129	94	6	199	28	0	0	0	7	10	12

Major/Minor	Major1			Major2					Minor2		
Conflicting Flow All	227	0	0	223	0	0			425	472	213
Stage 1	-	-	-	-	-	-			225	225	-
Stage 2	-	-	-	-	-	-			200	247	-
Critical Hdwy	4.12	-	-	4.12	-	-			6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-			5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-			5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-			3.518	4.018	3.318
Pot Cap-1 Maneuver	1341	-	-	1346	-	-			586	490	827
Stage 1	-	-	-	-	-	-			812	718	-
Stage 2	-	-	-	-	-	-			834	702	-
Platoon blocked, %		-	-		-	-					
Mov Cap-1 Maneuver	1341	-	-	1346	-	-			577	0	827
Mov Cap-2 Maneuver	-	-	-	-	-	-			577	0	-
Stage 1	-	-	-	-	-	-			800	0	-
Stage 2	-	-	-	-	-	-			834	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0.2	10.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1341	-	-	1346	-	-	711
HCM Lane V/C Ratio	0.009	-	-	0.004	-	-	0.041
HCM Control Delay (s)	7.7	0	-	7.7	0	-	10.3
HCM Lane LOS	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	8.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	99	9	29	86	166	52
Future Vol, veh/h	99	9	29	86	166	52
Conflicting Peds, #/hr	1	0	0	1	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	110	10	32	96	184	58

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	129	0	-	0	311	81
Stage 1	-	-	-	-	81	-
Stage 2	-	-	-	-	230	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1457	-	-	-	681	979
Stage 1	-	-	-	-	942	-
Stage 2	-	-	-	-	808	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1456	-	-	-	628	978
Mov Cap-2 Maneuver	-	-	-	-	628	-
Stage 1	-	-	-	-	869	-
Stage 2	-	-	-	-	807	-

Approach	EB	WB	SB
HCM Control Delay, s	7	0	13.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1456	-	-	-	687
HCM Lane V/C Ratio	0.076	-	-	-	0.353
HCM Control Delay (s)	7.7	0	-	-	13.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	1.6

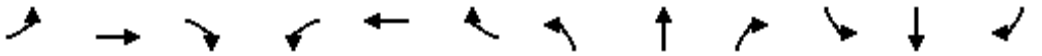
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	109	0
Future Vol, veh/h	0	0	0	0	109	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	-	-
Veh in Median Storage, #	0	-	16974	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	115	0

Major/Minor	Minor1		Major2	
Conflicting Flow All	230	-	0	0
Stage 1	0	-	-	-
Stage 2	230	-	-	-
Critical Hdwy	6.42	-	4.12	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-
Follow-up Hdwy	3.518	-	2.218	-
Pot Cap-1 Maneuver	758	0	-	-
Stage 1	-	0	-	-
Stage 2	808	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	758	-	-	-
Mov Cap-2 Maneuver	758	-	-	-
Stage 1	-	-	-	-
Stage 2	808	-	-	-

Approach	WB	SB
HCM Control Delay, s	0	
HCM LOS	A	

Minor Lane/Major Mvmt	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	0	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	-	-	-



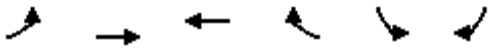
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	96	4	284	299	191	0	0	0	41	70	79
Future Volume (vph)	44	96	4	284	299	191	0	0	0	41	70	79
Lane Util. Factor	1.00	0.95	0.95	0.97	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		1.00	0.99							0.98
Frt		0.994			0.942							0.850
Flt Protected	0.950			0.950							0.982	
Satd. Flow (prot)	1770	3516	0	3433	3293	0	0	0	0	0	1829	1583
Flt Permitted	0.447			0.950							0.982	
Satd. Flow (perm)	830	3516	0	3428	3293	0	0	0	0	0	1829	1546
Satd. Flow (RTOR)		4			148							84
Confl. Peds. (#/hr)	7		1	1		7						10
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	47	106	0	302	521	0	0	0	0	0	118	84
Turn Type	pm+pt	NA		Prot	NA					Split	NA	Perm
Protected Phases	1	2		1	2					4	4	
Permitted Phases	2											4
Detector Phase	1	2		1	2					4	4	4
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0					7.0	7.0	7.0
Minimum Split (s)	9.0	15.5		9.0	15.5					12.0	12.0	12.0
Total Split (s)	34.0	36.0		34.0	36.0					30.0	30.0	30.0
Total Split (%)	34.0%	36.0%		34.0%	36.0%					30.0%	30.0%	30.0%
Maximum Green (s)	29.0	30.5		29.0	30.5					25.0	25.0	25.0
Yellow Time (s)	4.0	4.0		4.0	4.0					4.0	4.0	4.0
All-Red Time (s)	1.0	1.5		1.0	1.5					1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0						0.0	0.0
Total Lost Time (s)	5.0	5.5		5.0	5.5						5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	2.0	2.0		2.0	2.0					2.0	2.0	2.0
Recall Mode	None	C-Max		None	C-Max					None	None	None
Act Effct Green (s)	74.0	60.3		13.2	60.3						11.0	11.0
Actuated g/C Ratio	0.74	0.60		0.13	0.60						0.11	0.11
v/c Ratio	0.06	0.05		0.67	0.25						0.59	0.34
Control Delay	3.1	9.3		46.6	7.7						53.8	12.8
Queue Delay	0.0	0.0		0.0	0.3						0.0	0.0
Total Delay	3.1	9.3		46.6	8.0						53.8	12.8
LOS	A	A		D	A						D	B
Approach Delay		7.4			22.2						36.7	
Approach LOS		A			C						D	
Queue Length 50th (ft)	5	12		96	57						73	0
Queue Length 95th (ft)	15	30		139	75						125	42
Internal Link Dist (ft)		516			188			218			576	
Turn Bay Length (ft)	50											65
Base Capacity (vph)	928	2121		995	2044						457	449
Starvation Cap Reductn	0	0		24	882						0	0
Spillback Cap Reductn	0	0		0	0						0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0						0	0
Reduced v/c Ratio	0.05	0.05		0.31	0.45						0.26	0.19

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 8 (8%), Referenced to phase 2:EBWB, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 22.8	Intersection LOS: C
Intersection Capacity Utilization 36.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: Central Street & Summit Hill Drive

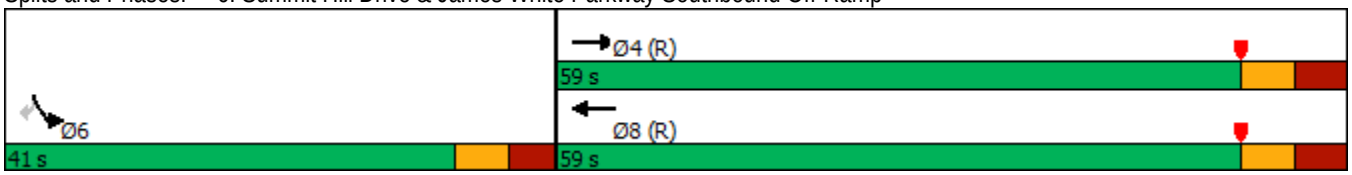


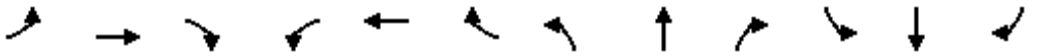


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	138	224	0	275	547
Future Volume (vph)	0	138	224	0	275	547
Lane Util. Factor	1.00	0.91	0.95	1.00	1.00	0.88
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	5085	3539	0	1770	2787
Flt Permitted					0.950	
Satd. Flow (perm)	0	5085	3539	0	1770	2787
Satd. Flow (RTOR)						615
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	155	252	0	309	615
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		10.0	10.0		7.0	7.0
Minimum Split (s)		18.0	18.0		14.5	14.5
Total Split (s)		59.0	59.0		41.0	41.0
Total Split (%)		59.0%	59.0%		41.0%	41.0%
Maximum Green (s)		51.0	51.0		33.5	33.5
Yellow Time (s)		4.0	4.0		4.0	4.0
All-Red Time (s)		4.0	4.0		3.5	3.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0
Total Lost Time (s)		8.0	8.0		7.5	7.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		5.0	2.0		5.0	5.0
Recall Mode		C-Max	C-Max		None	None
Act Effct Green (s)		57.5	57.5		27.0	27.0
Actuated g/C Ratio		0.58	0.58		0.27	0.27
v/c Ratio		0.05	0.12		0.65	0.51
Control Delay		14.0	7.2		38.1	3.7
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		14.0	7.2		38.1	3.7
LOS		B	A		D	A
Approach Delay		14.0	7.2		15.2	
Approach LOS		B	A		B	
Queue Length 50th (ft)		19	24		173	0
Queue Length 95th (ft)		33	31		238	38
Internal Link Dist (ft)		188	373		516	
Turn Bay Length (ft)						250
Base Capacity (vph)		2925	2036		592	1342
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.05	0.12		0.52	0.46

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 46 (46%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 13.5	Intersection LOS: B
Intersection Capacity Utilization 40.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Summit Hill Drive & James White Parkway Southbound Off-Ramp



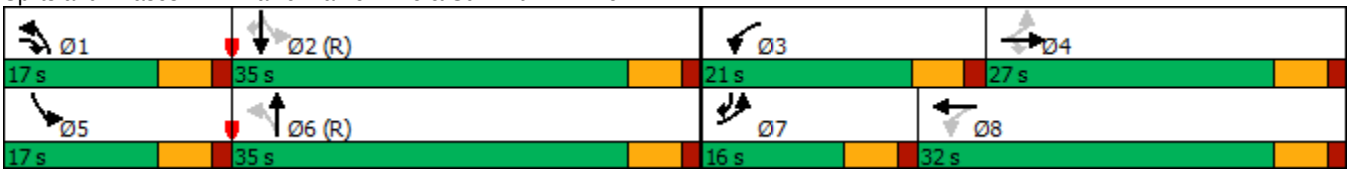


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	212	189	230	100	143	12	101	35	76	196	112
Future Volume (vph)	10	212	189	230	100	143	12	101	35	76	196	112
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00		0.99	1.00	0.99			1.00		1.00		
Frt			0.850		0.912			0.962				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3201	0	1770	3391	0	1770	3539	1583
Flt Permitted	0.587			0.367			0.617			0.649		
Satd. Flow (perm)	1092	3539	1563	683	3201	0	1149	3391	0	1206	3539	1583
Satd. Flow (RTOR)			208		157			38				123
Confl. Peds. (#/hr)	2		1	1		2			4	4		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	11	233	208	253	267	0	13	149	0	84	215	123
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	7	4	1	3	8		1	6		5	2	7
Permitted Phases	4		4	8			6			2		2
Detector Phase	7	4	1	3	8		1	6		5	2	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0		5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5		10.5	15.5	10.5
Total Split (s)	16.0	27.0	17.0	21.0	32.0		17.0	35.0		17.0	35.0	16.0
Total Split (%)	16.0%	27.0%	17.0%	21.0%	32.0%		17.0%	35.0%		17.0%	35.0%	16.0%
Maximum Green (s)	10.5	21.5	11.5	15.5	26.5		11.5	29.5		11.5	29.5	10.5
Yellow Time (s)	4.0	4.0	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	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		2.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	None
Act Effct Green (s)	16.2	11.0	16.1	30.7	20.0		52.3	48.2		54.4	47.7	58.4
Actuated g/C Ratio	0.16	0.11	0.16	0.31	0.20		0.52	0.48		0.54	0.48	0.58
v/c Ratio	0.05	0.60	0.49	0.70	0.35		0.02	0.09		0.12	0.13	0.13
Control Delay	23.3	49.7	23.6	38.1	14.7		17.5	20.7		11.8	16.5	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	23.3	49.7	23.6	38.1	14.7		17.5	20.7		11.8	16.5	2.2
LOS	C	D	C	D	B		B	C		B	B	A
Approach Delay		37.0			26.1			20.4			11.4	
Approach LOS		D			C			C			B	
Queue Length 50th (ft)	6	82	68	127	30		5	27		22	39	2
Queue Length 95th (ft)	m13	120	97	191	63		20	58		54	59	5
Internal Link Dist (ft)		373			335			424			335	
Turn Bay Length (ft)				165			230			165		60
Base Capacity (vph)	305	760	514	378	963		729	1652		767	1687	1052
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.04	0.31	0.40	0.67	0.28		0.02	0.09		0.11	0.13	0.12

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 62 (62%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 24.7	Intersection LOS: C
Intersection Capacity Utilization 49.5%	ICU Level of Service A
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 7: Hall of Fame Drive & Summit Hill Drive



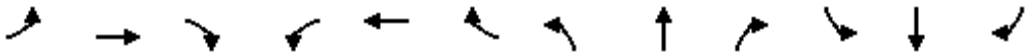
Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	80	246	361	20	42	126
Future Vol, veh/h	80	246	361	20	42	126
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	90	276	406	22	47	142

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	428	0	-	0	735	215
Stage 1	-	-	-	-	417	-
Stage 2	-	-	-	-	318	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1128	-	-	-	355	790
Stage 1	-	-	-	-	633	-
Stage 2	-	-	-	-	710	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1128	-	-	-	327	789
Mov Cap-2 Maneuver	-	-	-	-	327	-
Stage 1	-	-	-	-	582	-
Stage 2	-	-	-	-	710	-

Approach	EB	WB	SB
HCM Control Delay, s	2.1	0	9.2
HCM LOS			A

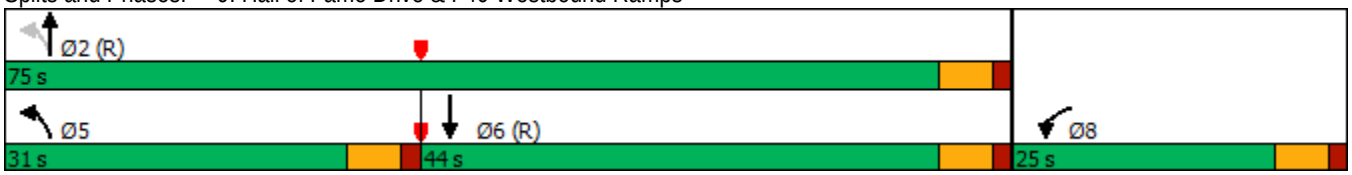
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1128	-	-	-	1052
HCM Lane V/C Ratio	0.08	-	-	-	0.179
HCM Control Delay (s)	8.5	-	-	-	9.2
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.3	-	-	-	0.7

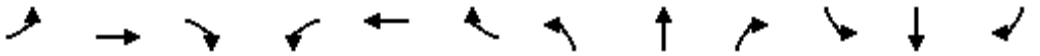


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	213	0	107	261	328	0	0	389	447
Future Volume (vph)	0	0	0	213	0	107	261	328	0	0	389	447
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt						0.850					0.920	
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	0	0	3433	0	1583	1770	3539	0	0	3256	0
Flt Permitted				0.950			0.237					
Satd. Flow (perm)	0	0	0	3433	0	1583	441	3539	0	0	3256	0
Satd. Flow (RTOR)						147					338	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	237	0	119	290	364	0	0	929	0
Turn Type				Prot		Free	pm+pt	NA			NA	
Protected Phases				8			5	2			6	
Permitted Phases						Free	2					
Detector Phase				8			5	2			6	
Switch Phase												
Minimum Initial (s)				5.0			5.0	10.0			10.0	
Minimum Split (s)				10.5			10.5	15.5			15.5	
Total Split (s)				25.0			31.0	75.0			44.0	
Total Split (%)				25.0%			31.0%	75.0%			44.0%	
Maximum Green (s)				19.5			25.5	69.5			38.5	
Yellow Time (s)				4.0			4.0	4.0			4.0	
All-Red Time (s)				1.5			1.5	1.5			1.5	
Lost Time Adjust (s)				0.0			0.0	0.0			0.0	
Total Lost Time (s)				5.5			5.5	5.5			5.5	
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)				3.0			2.0	2.0			2.0	
Recall Mode				None			None	C-Max			C-Max	
Act Effct Green (s)				12.2		100.0	76.8	76.8			60.0	
Actuated g/C Ratio				0.12		1.00	0.77	0.77			0.60	
v/c Ratio				0.57		0.08	0.59	0.13			0.44	
Control Delay				46.5		0.1	12.9	2.8			8.2	
Queue Delay				0.0		0.0	0.0	0.0			0.0	
Total Delay				46.5		0.1	12.9	2.8			8.2	
LOS				D		A	B	A			A	
Approach Delay					31.0			7.3			8.2	
Approach LOS					C			A			A	
Queue Length 50th (ft)				74		0	45	28			87	
Queue Length 95th (ft)				109		0	107	30			180	
Internal Link Dist (ft)		440			577			562			692	
Turn Bay Length (ft)				475		200	155					
Base Capacity (vph)				669		1583	677	2718			2088	
Starvation Cap Reductn				0		0	0	0			0	
Spillback Cap Reductn				0		0	0	0			0	
Storage Cap Reductn				0		0	0	0			0	
Reduced v/c Ratio				0.35		0.08	0.43	0.13			0.44	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 42 (42%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 12.1	Intersection LOS: B
Intersection Capacity Utilization 59.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 9: Hall of Fame Drive & I-40 Westbound Ramps

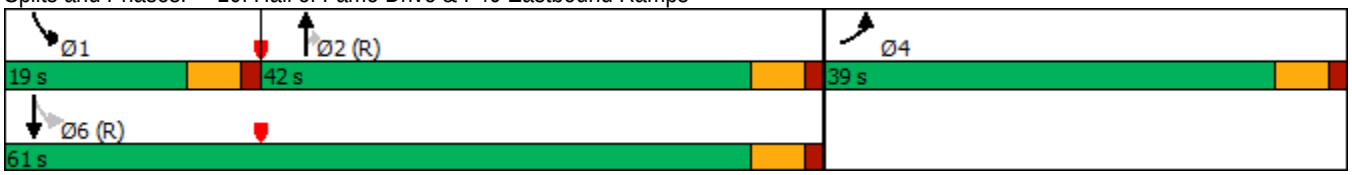




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	0	365	0	0	0	0	429	133	82	523	0
Future Volume (vph)	150	0	365	0	0	0	0	429	133	82	523	0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850						0.850			
Flt Protected	0.950									0.950		
Satd. Flow (prot)	3433	0	1583	0	0	0	0	3539	1583	1770	3539	0
Flt Permitted	0.950									0.428		
Satd. Flow (perm)	3433	0	1583	0	0	0	0	3539	1583	797	3539	0
Satd. Flow (RTOR)			435						158			
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Shared Lane Traffic (%)												
Lane Group Flow (vph)	179	0	435	0	0	0	0	511	158	98	623	0
Turn Type	Prot		Free					NA	Perm	pm+pt	NA	
Protected Phases	4							2		1	6	
Permitted Phases			Free						2	6		
Detector Phase	4							2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0							10.0	10.0	5.0	10.0	
Minimum Split (s)	22.5							22.5	22.5	10.5	22.5	
Total Split (s)	39.0							42.0	42.0	19.0	61.0	
Total Split (%)	39.0%							42.0%	42.0%	19.0%	61.0%	
Maximum Green (s)	33.5							36.5	36.5	13.5	55.5	
Yellow Time (s)	4.0							4.0	4.0	4.0	4.0	
All-Red Time (s)	1.5							1.5	1.5	1.5	1.5	
Lost Time Adjust (s)	0.0							0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5							5.5	5.5	5.5	5.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	2.0							2.0	2.0	2.0	2.0	
Recall Mode	None							C-Max	C-Max	None	C-Max	
Act Effct Green (s)	10.7		100.0					69.1	69.1	78.3	78.3	
Actuated g/C Ratio	0.11		1.00					0.69	0.69	0.78	0.78	
v/c Ratio	0.49		0.27					0.21	0.14	0.14	0.22	
Control Delay	46.7		0.4					4.6	0.6	3.8	3.3	
Queue Delay	0.0		0.0					0.0	0.0	0.0	0.0	
Total Delay	46.7		0.4					4.6	0.6	3.8	3.3	
LOS	D		A					A	A	A	A	
Approach Delay		13.9						3.7			3.4	
Approach LOS		B						A			A	
Queue Length 50th (ft)	56		0					46	0	10	34	
Queue Length 95th (ft)	81		0					48	0	26	61	
Internal Link Dist (ft)		686			892			546			562	
Turn Bay Length (ft)	200		210						290	190		
Base Capacity (vph)	1150		1583					2443	1142	755	2770	
Starvation Cap Reductn	0		0					0	0	0	0	
Spillback Cap Reductn	0		0					0	0	0	0	
Storage Cap Reductn	0		0					0	0	0	0	
Reduced v/c Ratio	0.16		0.27					0.21	0.14	0.13	0.22	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 64 (64%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.49	
Intersection Signal Delay: 6.7	Intersection LOS: A
Intersection Capacity Utilization 59.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 10: Hall of Fame Drive & I-40 Eastbound Ramps

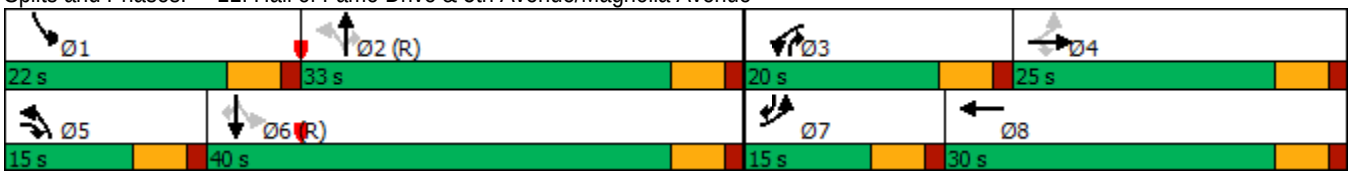


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	105	24	50	156	174	31	200	24	160	321	64
Future Volume (vph)	49	105	24	50	156	174	31	200	24	160	321	64
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.99	1.00			1.00		0.99	1.00		0.99
Frt			0.850		0.921				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3260	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.320			0.950			0.523			0.549		
Satd. Flow (perm)	596	3539	1563	3423	3260	0	974	3539	1563	1022	3539	1563
Satd. Flow (RTOR)			147		210				147			87
Confl. Peds. (#/hr)			1	1			1		1	1		1
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)												
Lane Group Flow (vph)	59	127	29	60	398	0	37	241	29	193	387	77
Turn Type	pm+pt	NA	pm+ov	Prot	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4				2		2	6		6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0	5.0	5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5	10.5	10.5	15.5	10.5
Total Split (s)	15.0	25.0	15.0	20.0	30.0		15.0	33.0	20.0	22.0	40.0	15.0
Total Split (%)	15.0%	25.0%	15.0%	20.0%	30.0%		15.0%	33.0%	20.0%	22.0%	40.0%	15.0%
Maximum Green (s)	9.5	19.5	9.5	14.5	24.5		9.5	27.5	14.5	16.5	34.5	9.5
Yellow Time (s)	4.0	4.0	4.0	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	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	None	None	C-Max	None
Act Effct Green (s)	19.3	12.5	18.9	7.2	11.8		56.8	50.4	57.6	65.0	56.4	64.3
Actuated g/C Ratio	0.19	0.12	0.19	0.07	0.12		0.57	0.50	0.58	0.65	0.56	0.64
v/c Ratio	0.29	0.29	0.07	0.24	0.70		0.06	0.14	0.03	0.26	0.19	0.07
Control Delay	30.4	40.1	0.3	45.8	26.2		9.4	14.2	0.6	8.2	12.2	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.4	40.1	0.3	45.8	26.2		9.4	14.2	0.6	8.2	12.2	1.3
LOS	C	D	A	D	C		A	B	A	A	B	A
Approach Delay		32.1			28.7			12.3			9.8	
Approach LOS		C			C			B			A	
Queue Length 50th (ft)	29	38	0	19	60		5	29	0	36	65	0
Queue Length 95th (ft)	51	58	0	35	88		21	90	0	75	96	3
Internal Link Dist (ft)		674			634			359			1142	
Turn Bay Length (ft)	245		35	295			230		245	175		175
Base Capacity (vph)	234	690	460	497	957		659	1784	1069	798	1995	1061
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.18	0.06	0.12	0.42		0.06	0.14	0.03	0.24	0.19	0.07

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 62 (62%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 18.5	Intersection LOS: B
Intersection Capacity Utilization 49.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 11: Hall of Fame Drive & 5th Avenue/Magnolia Avenue

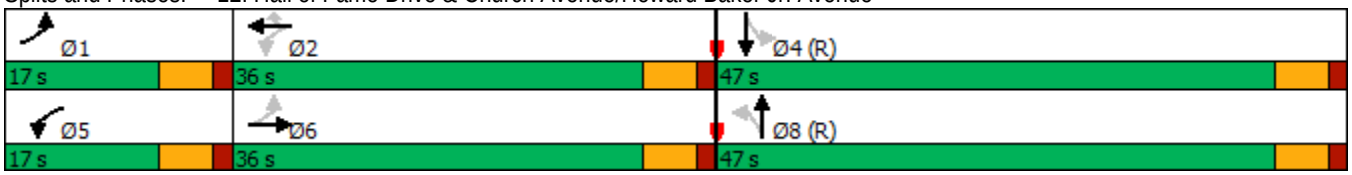


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	45	7	12	48	64	8	58	10	116	144	35
Future Volume (vph)	47	45	7	12	48	64	8	58	10	116	144	35
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor	0.97	1.00		1.00		0.95		1.00			1.00	
Frt		0.979				0.850		0.980			0.982	
Flt Protected	0.950			0.950				0.995			0.981	
Satd. Flow (prot)	1770	1819	0	1770	1863	1583	0	3445	0	0	3401	0
Flt Permitted	0.485			0.720				0.922			0.801	
Satd. Flow (perm)	880	1819	0	1335	1863	1505	0	3192	0	0	2776	0
Satd. Flow (RTOR)		8				87		11			18	
Confl. Peds. (#/hr)	39		7	7		39	1		1	1		1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	51	56	0	13	52	69	0	82	0	0	318	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6			2		2	8			4		
Detector Phase	1	6		5	2	2	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0	7.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	10.5	22.5		10.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	17.0	36.0		17.0	36.0	36.0	47.0	47.0		47.0	47.0	
Total Split (%)	17.0%	36.0%		17.0%	36.0%	36.0%	47.0%	47.0%		47.0%	47.0%	
Maximum Green (s)	11.5	30.5		11.5	30.5	30.5	41.5	41.5		41.5	41.5	
Yellow Time (s)	4.0	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	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5	5.5		5.5			5.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)	17.5	16.0		11.9	8.0	8.0		74.2			74.2	
Actuated g/C Ratio	0.18	0.16		0.12	0.08	0.08		0.74			0.74	
v/c Ratio	0.24	0.19		0.07	0.35	0.34		0.03			0.15	
Control Delay	34.1	33.0		31.2	49.9	11.2		5.0			3.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Delay	34.1	33.0		31.2	49.9	11.2		5.0			3.3	
LOS	C	C		C	D	B		A			A	
Approach Delay		33.5			28.2			5.0			3.3	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)	27	25		7	32	0		6			2	
Queue Length 95th (ft)	56	65		22	69	30		16			15	
Internal Link Dist (ft)		488			887			548			1120	
Turn Bay Length (ft)	60			130								
Base Capacity (vph)	271	560		290	568	519		2372			2065	
Starvation Cap Reductn	0	0		0	0	0		0			0	
Spillback Cap Reductn	0	0		0	0	0		0			0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0	0		0			0	
Reduced v/c Ratio	0.19	0.10		0.04	0.09	0.13		0.03			0.15	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 17 (17%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.35	
Intersection Signal Delay: 13.8	Intersection LOS: B
Intersection Capacity Utilization 33.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 12: Hall of Fame Drive & Church Avenue/Howard Baker Jr. Avenue



Intersection	
Int Delay, s/veh	51.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	98	103	189	106	106	118
Future Vol, veh/h	98	103	189	106	106	118
Conflicting Peds, #/hr	0	257	257	0	1	258
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	103	108	199	112	112	124

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	468	0	925	672
Stage 1	-	-	-	-	414	-
Stage 2	-	-	-	-	511	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1094	-	299	456
Stage 1	-	-	-	-	667	-
Stage 2	-	-	-	-	602	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	826	-	167	260
Mov Cap-2 Maneuver	-	-	-	-	167	-
Stage 1	-	-	-	-	374	-
Stage 2	-	-	-	-	601	-

Approach	EB	WB	NB
HCM Control Delay, s	0	6.9	155.3
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	206	-	-	826	-
HCM Lane V/C Ratio	1.145	-	-	0.241	-
HCM Control Delay (s)	155.3	-	-	10.7	0
HCM Lane LOS	F	-	-	B	A
HCM 95th %tile Q(veh)	11.4	-	-	0.9	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕						⇕	
Traffic Vol, veh/h	42	96	71	0	175	12	0	0	0	6	10	50
Future Vol, veh/h	42	96	71	0	175	12	0	0	0	6	10	50
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	48	109	81	0	199	14	0	0	0	7	11	57

Major/Minor	Major1			Major2					Minor2		
Conflicting Flow All	213	0	0	191	0	0			452	493	207
Stage 1	-	-	-	-	-	-			206	206	-
Stage 2	-	-	-	-	-	-			246	287	-
Critical Hdwy	4.12	-	-	4.12	-	-			6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-			5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-			5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-			3.518	4.018	3.318
Pot Cap-1 Maneuver	1357	-	-	1383	-	-			565	477	833
Stage 1	-	-	-	-	-	-			829	731	-
Stage 2	-	-	-	-	-	-			795	674	-
Platoon blocked, %		-	-		-	-					
Mov Cap-1 Maneuver	1357	-	-	1383	-	-			542	0	832
Mov Cap-2 Maneuver	-	-	-	-	-	-			542	0	-
Stage 1	-	-	-	-	-	-			796	0	-
Stage 2	-	-	-	-	-	-			795	0	-

Approach	EB	WB	SB
HCM Control Delay, s	1.6	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1357	-	-	1383	-	-	787
HCM Lane V/C Ratio	0.035	-	-	-	-	-	0.095
HCM Control Delay (s)	7.8	0	-	0	-	-	10.1
HCM Lane LOS	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	8.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	88	71	92	143	221	38
Future Vol, veh/h	88	71	92	143	221	38
Conflicting Peds, #/hr	5	0	0	5	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	99	80	103	161	248	43

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	269	0	-	0	467	190
Stage 1	-	-	-	-	189	-
Stage 2	-	-	-	-	278	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1295	-	-	-	554	852
Stage 1	-	-	-	-	843	-
Stage 2	-	-	-	-	769	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1289	-	-	-	505	847
Mov Cap-2 Maneuver	-	-	-	-	505	-
Stage 1	-	-	-	-	771	-
Stage 2	-	-	-	-	765	-

Approach	EB	WB	SB
HCM Control Delay, s	4.4	0	19.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1289	-	-	-	537
HCM Lane V/C Ratio	0.077	-	-	-	0.542
HCM Control Delay (s)	8	0	-	-	19.4
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	3.2

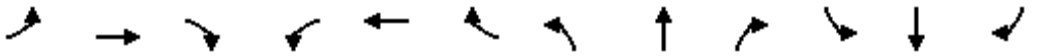
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	92	0
Future Vol, veh/h	0	0	0	0	92	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	-	-
Veh in Median Storage, #	0	-	16974	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	105	0

Major/Minor	Minor1		Major2	
Conflicting Flow All	210	-	0	0
Stage 1	0	-	-	-
Stage 2	210	-	-	-
Critical Hdwy	6.42	-	4.12	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-
Follow-up Hdwy	3.518	-	2.218	-
Pot Cap-1 Maneuver	778	0	-	-
Stage 1	-	0	-	-
Stage 2	825	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	778	-	-	-
Mov Cap-2 Maneuver	778	-	-	-
Stage 1	-	-	-	-
Stage 2	825	-	-	-

Approach	WB	SB
HCM Control Delay, s	0	
HCM LOS	A	

Minor Lane/Major Mvmt	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	0	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	-	-	-



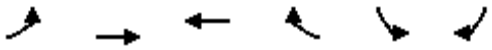
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	128	159	8	78	285	232	0	0	0	123	56	160
Future Volume (vph)	128	159	8	78	285	232	0	0	0	123	56	160
Lane Util. Factor	1.00	0.95	0.95	0.97	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		0.98	0.99						1.00	0.97
Frt		0.992			0.933							0.850
Flt Protected	0.950			0.950							0.967	
Satd. Flow (prot)	1770	3508	0	3433	3267	0	0	0	0	0	1801	1583
Flt Permitted	0.434			0.950							0.967	
Satd. Flow (perm)	808	3508	0	3373	3267	0	0	0	0	0	1795	1537
Satd. Flow (RTOR)		7			247							170
Confl. Peds. (#/hr)	3		9	9		3				4		14
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	136	178	0	83	550	0	0	0	0	0	191	170
Turn Type	pm+pt	NA		Prot	NA					Split	NA	Perm
Protected Phases	1	2		1	2					4	4	
Permitted Phases	2											4
Detector Phase	1	2		1	2					4	4	4
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0					7.0	7.0	7.0
Minimum Split (s)	9.0	15.5		9.0	15.5					12.0	12.0	12.0
Total Split (s)	23.0	40.0		23.0	40.0					26.0	26.0	26.0
Total Split (%)	25.8%	44.9%		25.8%	44.9%					29.2%	29.2%	29.2%
Maximum Green (s)	18.0	34.5		18.0	34.5					21.0	21.0	21.0
Yellow Time (s)	4.0	4.0		4.0	4.0					4.0	4.0	4.0
All-Red Time (s)	1.0	1.5		1.0	1.5					1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0						0.0	0.0
Total Lost Time (s)	5.0	5.5		5.0	5.5						5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	2.0	2.0		2.0	2.0					2.0	2.0	2.0
Recall Mode	None	C-Max		None	C-Max					None	None	None
Act Effct Green (s)	60.1	52.9		6.7	52.9						13.9	13.9
Actuated g/C Ratio	0.68	0.59		0.08	0.59						0.16	0.16
v/c Ratio	0.22	0.09		0.32	0.27						0.68	0.44
Control Delay	5.2	8.7		41.8	5.7						47.2	8.9
Queue Delay	0.0	0.0		0.0	0.6						0.0	0.0
Total Delay	5.2	8.7		41.8	6.2						47.2	8.9
LOS	A	A		D	A						D	A
Approach Delay		7.2			10.9						29.2	
Approach LOS		A			B						C	
Queue Length 50th (ft)	18	19		23	36						103	0
Queue Length 95th (ft)	45	42		44	77						159	49
Internal Link Dist (ft)		516			188			218			576	
Turn Bay Length (ft)	50											65
Base Capacity (vph)	785	2086		694	2041						424	492
Starvation Cap Reductn	0	0		0	1042						0	0
Spillback Cap Reductn	0	0		0	0						0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0						0	0
Reduced v/c Ratio	0.17	0.09		0.12	0.55						0.45	0.35

Intersection Summary	
Cycle Length: 89	
Actuated Cycle Length: 89	
Offset: 0 (0%), Referenced to phase 2:EBWB, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 15.1	Intersection LOS: B
Intersection Capacity Utilization 45.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: Central Street & Summit Hill Drive

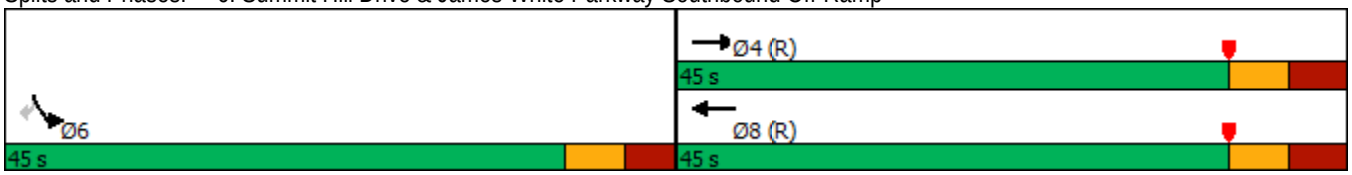




Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	283	247	0	234	349
Future Volume (vph)	0	283	247	0	234	349
Lane Util. Factor	1.00	0.91	0.95	1.00	1.00	0.88
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	5085	3539	0	1770	2787
Flt Permitted					0.950	
Satd. Flow (perm)	0	5085	3539	0	1770	2787
Satd. Flow (RTOR)						371
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	301	263	0	249	371
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		10.0	10.0		7.0	7.0
Minimum Split (s)		18.0	18.0		14.5	14.5
Total Split (s)		45.0	45.0		45.0	45.0
Total Split (%)		50.0%	50.0%		50.0%	50.0%
Maximum Green (s)		37.0	37.0		37.5	37.5
Yellow Time (s)		4.0	4.0		4.0	4.0
All-Red Time (s)		4.0	4.0		3.5	3.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0
Total Lost Time (s)		8.0	8.0		7.5	7.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		5.0	2.0		5.0	5.0
Recall Mode		C-Max	C-Max		None	None
Act Effct Green (s)		53.2	53.2		21.3	21.3
Actuated g/C Ratio		0.59	0.59		0.24	0.24
v/c Ratio		0.10	0.13		0.59	0.39
Control Delay		9.1	9.4		35.5	3.9
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		9.1	9.4		35.5	3.9
LOS		A	A		D	A
Approach Delay		9.1	9.4		16.6	
Approach LOS		A	A		B	
Queue Length 50th (ft)		25	32		125	0
Queue Length 95th (ft)		46	62		179	32
Internal Link Dist (ft)		188	373		516	
Turn Bay Length (ft)						250
Base Capacity (vph)		3003	2090		737	1377
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.10	0.13		0.34	0.27

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 52 (58%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 13.1	Intersection LOS: B
Intersection Capacity Utilization 34.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Summit Hill Drive & James White Parkway Southbound Off-Ramp

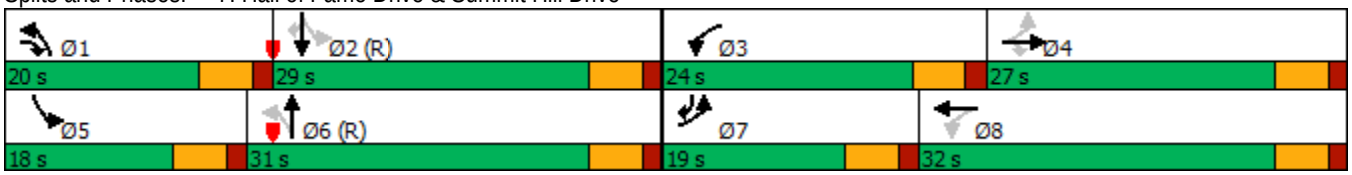


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	285	182	281	129	192	25	115	52	134	132	92
Future Volume (vph)	54	285	182	281	129	192	25	115	52	134	132	92
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00				0.99			1.00		1.00		
Frt			0.850		0.910			0.953				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3185	0	1770	3359	0	1770	3539	1583
Flt Permitted	0.550			0.328			0.664			0.593		
Satd. Flow (perm)	1021	3539	1583	611	3185	0	1237	3359	0	1104	3539	1583
Satd. Flow (RTOR)			190		200			54				96
Confl. Peds. (#/hr)	6					6			1	1		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)												
Lane Group Flow (vph)	56	297	190	293	334	0	26	174	0	140	138	96
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	7	4	1	3	8		1	6		5	2	7
Permitted Phases	4		4	8			6			2		2
Detector Phase	7	4	1	3	8		1	6		5	2	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0		5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5		10.5	15.5	10.5
Total Split (s)	19.0	27.0	20.0	24.0	32.0		20.0	31.0		18.0	29.0	19.0
Total Split (%)	19.0%	27.0%	20.0%	24.0%	32.0%		20.0%	31.0%		18.0%	29.0%	19.0%
Maximum Green (s)	13.5	21.5	14.5	18.5	26.5		14.5	25.5		12.5	23.5	13.5
Yellow Time (s)	4.0	4.0	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	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		2.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	None
Act Effct Green (s)	19.4	12.7	23.7	34.7	24.7		45.6	40.1		51.9	43.3	55.5
Actuated g/C Ratio	0.19	0.13	0.24	0.35	0.25		0.46	0.40		0.52	0.43	0.56
v/c Ratio	0.23	0.66	0.37	0.73	0.36		0.04	0.13		0.22	0.09	0.10
Control Delay	23.7	48.5	6.4	35.8	13.3		20.3	24.8		17.7	21.2	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	23.7	48.5	6.4	35.8	13.3		20.3	24.8		17.7	21.2	3.4
LOS	C	D	A	D	B		C	C		B	C	A
Approach Delay		31.2			23.8			24.2			15.3	
Approach LOS		C			C			C			B	
Queue Length 50th (ft)	23	96	0	141	35		11	34		32	26	0
Queue Length 95th (ft)	47	135	50	202	71		32	66		126	61	12
Internal Link Dist (ft)		373			335			424			335	
Turn Bay Length (ft)				165			230			165		60
Base Capacity (vph)	368	760	645	426	992		738	1380		682	1533	1023
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.15	0.39	0.29	0.69	0.34		0.04	0.13		0.21	0.09	0.09

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 50 (50%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 24.3	Intersection LOS: C
Intersection Capacity Utilization 57.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 7: Hall of Fame Drive & Summit Hill Drive



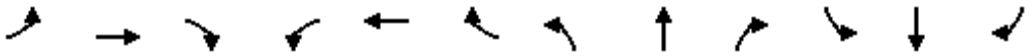
Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	227	246	339	46	56	239
Future Vol, veh/h	227	246	339	46	56	239
Conflicting Peds, #/hr	6	0	0	6	5	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	234	254	349	47	58	246

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	402	0	-	0	979	205
Stage 1	-	-	-	-	379	-
Stage 2	-	-	-	-	600	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1153	-	-	-	247	802
Stage 1	-	-	-	-	662	-
Stage 2	-	-	-	-	511	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1146	-	-	-	194	797
Mov Cap-2 Maneuver	-	-	-	-	194	-
Stage 1	-	-	-	-	524	-
Stage 2	-	-	-	-	508	-

Approach	EB	WB	SB
HCM Control Delay, s	4.3	0	10.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1146	-	-	-	984
HCM Lane V/C Ratio	0.204	-	-	-	0.309
HCM Control Delay (s)	8.9	-	-	-	10.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.8	-	-	-	1.3

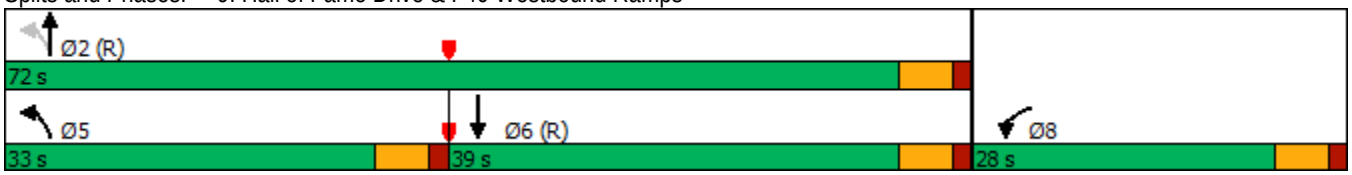


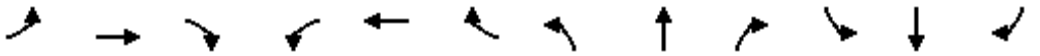
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	146	0	73	263	495	0	0	299	271
Future Volume (vph)	0	0	0	146	0	73	263	495	0	0	299	271
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor							1.00				0.99	
Frt						0.850					0.929	
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	0	0	3433	0	1583	1770	3539	0	0	3254	0
Flt Permitted				0.950			0.389					
Satd. Flow (perm)	0	0	0	3433	0	1583	724	3539	0	0	3254	0
Satd. Flow (RTOR)						147					246	
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	149	0	74	268	505	0	0	582	0
Turn Type				Prot		Free	pm+pt	NA			NA	
Protected Phases				8			5	2			6	
Permitted Phases						Free	2					
Detector Phase				8			5	2			6	
Switch Phase												
Minimum Initial (s)				5.0			5.0	10.0			10.0	
Minimum Split (s)				10.5			10.5	15.5			15.5	
Total Split (s)				28.0			33.0	72.0			39.0	
Total Split (%)				28.0%			33.0%	72.0%			39.0%	
Maximum Green (s)				22.5			27.5	66.5			33.5	
Yellow Time (s)				4.0			4.0	4.0			4.0	
All-Red Time (s)				1.5			1.5	1.5			1.5	
Lost Time Adjust (s)				0.0			0.0	0.0			0.0	
Total Lost Time (s)				5.5			5.5	5.5			5.5	
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)				3.0			2.0	2.0			2.0	
Recall Mode				None			None	C-Max			C-Max	
Act Effct Green (s)				9.7		100.0	79.3	79.3			65.4	
Actuated g/C Ratio				0.10		1.00	0.79	0.79			0.65	
v/c Ratio				0.45		0.05	0.41	0.18			0.26	
Control Delay				46.5		0.1	4.7	1.7			4.6	
Queue Delay				0.0		0.0	0.0	0.0			0.0	
Total Delay				46.5		0.1	4.7	1.7			4.6	
LOS				D		A	A	A			A	
Approach Delay					31.1			2.7			4.6	
Approach LOS					C			A			A	
Queue Length 50th (ft)				46		0	41	40			38	
Queue Length 95th (ft)				76		0	14	9			72	
Internal Link Dist (ft)		440			577			562			692	
Turn Bay Length (ft)				475		200	155					
Base Capacity (vph)				772		1583	861	2806			2214	
Starvation Cap Reductn				0		0	0	0			0	
Spillback Cap Reductn				0		0	0	0			0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn				0		0	0	0			0	
Reduced v/c Ratio				0.19		0.05	0.31	0.18			0.26	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 30 (30%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 7.4	Intersection LOS: A
Intersection Capacity Utilization 49.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 9: Hall of Fame Drive & I-40 Westbound Ramps

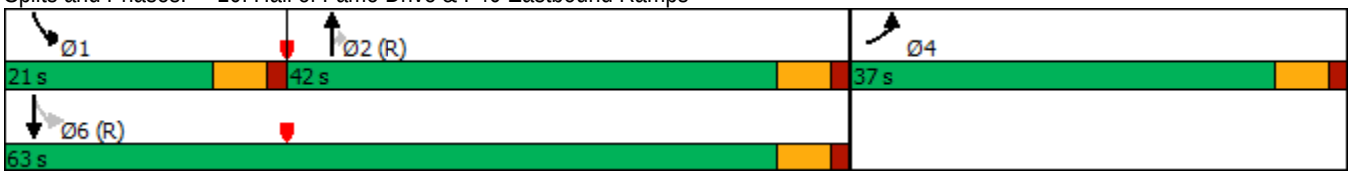


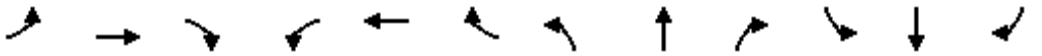


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	217	0	276	0	0	0	0	542	201	44	405	0
Future Volume (vph)	217	0	276	0	0	0	0	542	201	44	405	0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850						0.850			
Flt Protected	0.950									0.950		
Satd. Flow (prot)	3433	0	1583	0	0	0	0	3539	1583	1770	3539	0
Flt Permitted	0.950									0.406		
Satd. Flow (perm)	3433	0	1583	0	0	0	0	3539	1583	756	3539	0
Satd. Flow (RTOR)			285						207			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	224	0	285	0	0	0	0	559	207	45	418	0
Turn Type	Prot		Free					NA	Perm	pm+pt	NA	
Protected Phases	4							2		1	6	
Permitted Phases			Free						2	6		
Detector Phase	4							2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0							10.0	10.0	5.0	10.0	
Minimum Split (s)	22.5							22.5	22.5	10.5	22.5	
Total Split (s)	37.0							42.0	42.0	21.0	63.0	
Total Split (%)	37.0%							42.0%	42.0%	21.0%	63.0%	
Maximum Green (s)	31.5							36.5	36.5	15.5	57.5	
Yellow Time (s)	4.0							4.0	4.0	4.0	4.0	
All-Red Time (s)	1.5							1.5	1.5	1.5	1.5	
Lost Time Adjust (s)	0.0							0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5							5.5	5.5	5.5	5.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	2.0							2.0	2.0	2.0	2.0	
Recall Mode	None							C-Max	C-Max	None	C-Max	
Act Effct Green (s)	11.5		100.0					70.9	70.9	77.5	77.5	
Actuated g/C Ratio	0.12		1.00					0.71	0.71	0.78	0.78	
v/c Ratio	0.57		0.18					0.22	0.17	0.07	0.15	
Control Delay	47.5		0.2					5.3	1.7	1.2	1.2	
Queue Delay	0.0		0.0					0.0	0.0	0.0	0.0	
Total Delay	47.5		0.2					5.3	1.7	1.2	1.2	
LOS	D		A					A	A	A	A	
Approach Delay		21.1						4.3			1.2	
Approach LOS		C						A			A	
Queue Length 50th (ft)	71		0					47	0	2	8	
Queue Length 95th (ft)	106		0					96	0	4	12	
Internal Link Dist (ft)		686			892			546			562	
Turn Bay Length (ft)	200		210						290	190		
Base Capacity (vph)	1081		1583					2510	1183	743	2742	
Starvation Cap Reductn	0		0					0	0	0	0	
Spillback Cap Reductn	0		0					0	0	0	0	
Storage Cap Reductn	0		0					0	0	0	0	
Reduced v/c Ratio	0.21		0.18					0.22	0.17	0.06	0.15	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 50 (50%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 8.4	Intersection LOS: A
Intersection Capacity Utilization 49.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 10: Hall of Fame Drive & I-40 Eastbound Ramps



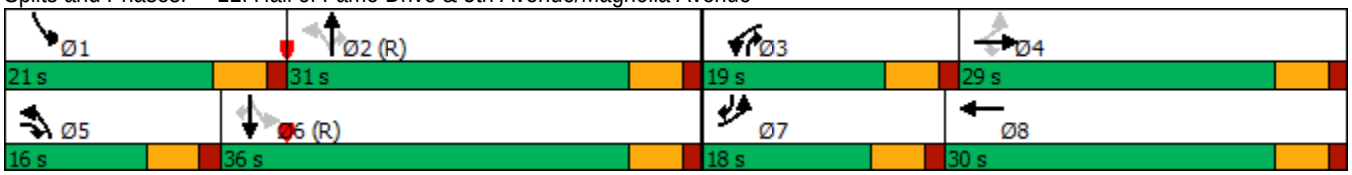


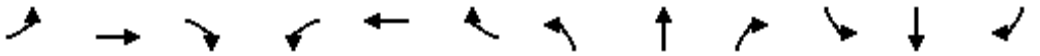
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	173	18	66	171	214	25	305	72	209	290	52
Future Volume (vph)	61	173	18	66	171	214	25	305	72	209	290	52
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor							1.00		0.99	1.00		0.99
Frt			0.850		0.917				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3245	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.310			0.950			0.562			0.496		
Satd. Flow (perm)	577	3539	1583	3433	3245	0	1046	3539	1563	924	3539	1563
Satd. Flow (RTOR)			87		230				87			87
Confl. Peds. (#/hr)							1		1	1		1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	66	186	19	71	414	0	27	328	77	225	312	56
Turn Type	pm+pt	NA	pm+ov	Prot	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4				2		2	6		6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0	5.0	5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5	10.5	10.5	15.5	10.5
Total Split (s)	18.0	29.0	16.0	19.0	30.0		16.0	31.0	19.0	21.0	36.0	18.0
Total Split (%)	18.0%	29.0%	16.0%	19.0%	30.0%		16.0%	31.0%	19.0%	21.0%	36.0%	18.0%
Maximum Green (s)	12.5	23.5	10.5	13.5	24.5		10.5	25.5	13.5	15.5	30.5	12.5
Yellow Time (s)	4.0	4.0	4.0	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	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	None	None	C-Max	None
Act Effct Green (s)	20.0	12.8	24.4	7.5	11.9		55.1	48.9	56.4	65.3	58.3	66.7
Actuated g/C Ratio	0.20	0.13	0.24	0.08	0.12		0.55	0.49	0.56	0.65	0.58	0.67
v/c Ratio	0.31	0.41	0.04	0.28	0.71		0.04	0.19	0.08	0.32	0.15	0.05
Control Delay	30.4	41.8	0.2	46.0	24.9		11.3	17.8	2.3	8.6	11.6	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.4	41.8	0.2	46.0	24.9		11.3	17.8	2.3	8.6	11.6	1.6
LOS	C	D	A	D	C		B	B	A	A	B	A
Approach Delay		36.1			28.0			14.6			9.5	
Approach LOS		D			C			B			A	
Queue Length 50th (ft)	33	58	0	22	58		3	45	0	43	61	0
Queue Length 95th (ft)	59	85	0	43	103		19	143	27	126	92	2
Internal Link Dist (ft)		674			634			359			1142	
Turn Bay Length (ft)	245		35	295			230		245	175		175
Base Capacity (vph)	285	831	517	463	968		697	1731	1010	737	2061	1133
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.22	0.04	0.15	0.43		0.04	0.19	0.08	0.31	0.15	0.05

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 50 (50%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 19.8	Intersection LOS: B
Intersection Capacity Utilization 54.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 11: Hall of Fame Drive & 5th Avenue/Magnolia Avenue



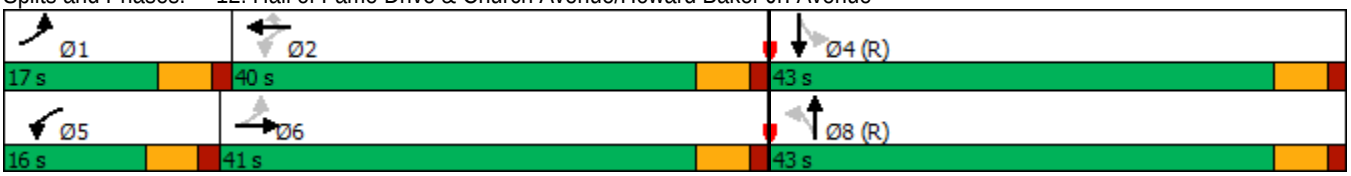


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	37	12	6	27	43	12	93	18	33	104	30
Future Volume (vph)	71	37	12	6	27	43	12	93	18	33	104	30
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor	0.99	1.00		1.00		0.98						
Frt		0.964				0.850		0.978			0.973	
Flt Protected	0.950			0.950				0.995			0.990	
Satd. Flow (prot)	1770	1789	0	1770	1863	1583	0	3444	0	0	3409	0
Flt Permitted	0.462			0.724				0.931			0.888	
Satd. Flow (perm)	853	1789	0	1346	1863	1545	0	3223	0	0	3058	0
Satd. Flow (RTOR)		12				87		19			30	
Confl. Peds. (#/hr)	14		3	3		14						
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	73	50	0	6	28	44	0	127	0	0	172	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6			2		2	8			4		
Detector Phase	1	6		5	2	2	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0	7.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	10.5	22.5		10.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	17.0	41.0		16.0	40.0	40.0	43.0	43.0		43.0	43.0	
Total Split (%)	17.0%	41.0%		16.0%	40.0%	40.0%	43.0%	43.0%		43.0%	43.0%	
Maximum Green (s)	11.5	35.5		10.5	34.5	34.5	37.5	37.5		37.5	37.5	
Yellow Time (s)	4.0	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	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5	5.5		5.5			5.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)	18.3	16.5		10.9	7.2	7.2		73.9			73.9	
Actuated g/C Ratio	0.18	0.16		0.11	0.07	0.07		0.74			0.74	
v/c Ratio	0.32	0.16		0.04	0.21	0.23		0.05			0.08	
Control Delay	35.9	29.8		30.7	47.5	4.3		4.8			2.9	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Delay	35.9	29.8		30.7	47.5	4.3		4.8			2.9	
LOS	D	C		C	D	A		A			A	
Approach Delay		33.4			21.8			4.8			2.9	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)	39	20		3	17	0		10			11	
Queue Length 95th (ft)	74	57		13	45	7		22			m21	
Internal Link Dist (ft)		488			887			548			1120	
Turn Bay Length (ft)	60			130								
Base Capacity (vph)	272	642		264	642	590		2387			2268	
Starvation Cap Reductn	0	0		0	0	0		0			0	
Spillback Cap Reductn	0	0		0	0	0		0			0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0	0		0			0	
Reduced v/c Ratio	0.27	0.08		0.02	0.04	0.07		0.05			0.08	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 4 (4%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.32	
Intersection Signal Delay: 13.8	Intersection LOS: B
Intersection Capacity Utilization 32.5%	ICU Level of Service A
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 12: Hall of Fame Drive & Church Avenue/Howard Baker Jr. Avenue



Intersection	
Int Delay, s/veh	12.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	136	90	205	84	57	186
Future Vol, veh/h	136	90	205	84	57	186
Conflicting Peds, #/hr	0	113	113	0	0	114
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	149	99	225	92	63	204

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	361	0	854	426
Stage 1	-	-	-	-	312	-
Stage 2	-	-	-	-	542	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1198	-	329	628
Stage 1	-	-	-	-	742	-
Stage 2	-	-	-	-	583	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1069	-	228	500
Mov Cap-2 Maneuver	-	-	-	-	228	-
Stage 1	-	-	-	-	515	-
Stage 2	-	-	-	-	583	-

Approach	EB	WB	NB
HCM Control Delay, s	0	6.6	31.9
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	391	-	-	1069	-
HCM Lane V/C Ratio	0.683	-	-	0.211	-
HCM Control Delay (s)	31.9	-	-	9.3	0
HCM Lane LOS	D	-	-	A	A
HCM 95th %tile Q(veh)	4.9	-	-	0.8	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕						⇕	
Traffic Vol, veh/h	36	104	112	5	169	21	0	0	0	1	8	25
Future Vol, veh/h	36	104	112	5	169	21	0	0	0	1	8	25
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	44	128	138	6	209	26	0	0	0	1	10	31

Major/Minor	Major1			Major2					Minor2		
Conflicting Flow All	235	0	0	267	0	0			519	589	222
Stage 1	-	-	-	-	-	-			234	234	-
Stage 2	-	-	-	-	-	-			285	355	-
Critical Hdwy	4.12	-	-	4.12	-	-			6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-			5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-			5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-			3.518	4.018	3.318
Pot Cap-1 Maneuver	1332	-	-	1297	-	-			517	421	818
Stage 1	-	-	-	-	-	-			805	711	-
Stage 2	-	-	-	-	-	-			763	630	-
Platoon blocked, %		-	-		-	-					
Mov Cap-1 Maneuver	1332	-	-	1297	-	-			494	0	818
Mov Cap-2 Maneuver	-	-	-	-	-	-			494	0	-
Stage 1	-	-	-	-	-	-			770	0	-
Stage 2	-	-	-	-	-	-			763	0	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0.2	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1332	-	-	1297	-	-	798
HCM Lane V/C Ratio	0.033	-	-	0.005	-	-	0.053
HCM Control Delay (s)	7.8	0	-	7.8	0	-	9.8
HCM Lane LOS	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	10.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	82	62	42	162	239	58
Future Vol, veh/h	82	62	42	162	239	58
Conflicting Peds, #/hr	0	0	0	0	0	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	100	76	51	198	291	71

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	249	0	-	0	426	152
Stage 1	-	-	-	-	150	-
Stage 2	-	-	-	-	276	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1317	-	-	-	585	894
Stage 1	-	-	-	-	878	-
Stage 2	-	-	-	-	771	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1317	-	-	-	539	892
Mov Cap-2 Maneuver	-	-	-	-	539	-
Stage 1	-	-	-	-	809	-
Stage 2	-	-	-	-	771	-

Approach	EB	WB	SB
HCM Control Delay, s	4.5	0	20.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1317	-	-	-	584
HCM Lane V/C Ratio	0.076	-	-	-	0.62
HCM Control Delay (s)	8	0	-	-	20.7
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	4.2

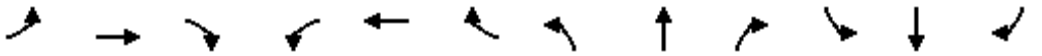
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	87	0
Future Vol, veh/h	0	0	0	0	87	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	-	-
Veh in Median Storage, #	0	-	16974	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	97	0

Major/Minor	Minor1		Major2	
Conflicting Flow All	194	-	0	0
Stage 1	0	-	-	-
Stage 2	194	-	-	-
Critical Hdwy	6.42	-	4.12	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-
Follow-up Hdwy	3.518	-	2.218	-
Pot Cap-1 Maneuver	795	0	-	-
Stage 1	-	0	-	-
Stage 2	839	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	795	-	-	-
Mov Cap-2 Maneuver	795	-	-	-
Stage 1	-	-	-	-
Stage 2	839	-	-	-

Approach	WB	SB
HCM Control Delay, s	0	
HCM LOS	A	

Minor Lane/Major Mvmt	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	0	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	-	-	-



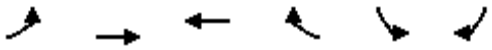
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	342	14	106	296	199	0	0	0	108	51	121
Future Volume (vph)	120	342	14	106	296	199	0	0	0	108	51	121
Lane Util. Factor	1.00	0.95	0.95	0.97	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		0.97	0.99						1.00	0.97
Frt		0.994			0.940							0.850
Flt Protected	0.950			0.950							0.967	
Satd. Flow (prot)	1770	3516	0	3433	3287	0	0	0	0	0	1801	1583
Flt Permitted	0.448			0.950							0.967	
Satd. Flow (perm)	831	3516	0	3343	3287	0	0	0	0	0	1795	1535
Satd. Flow (RTOR)		6			212							129
Confl. Peds. (#/hr)	10		8	8		10				4		16
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	128	379	0	113	527	0	0	0	0	0	169	129
Turn Type	pm+pt	NA		Prot	NA					Split	NA	Perm
Protected Phases	1	2		1	2					4	4	
Permitted Phases	2											4
Detector Phase	1	2		1	2					4	4	4
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0					7.0	7.0	7.0
Minimum Split (s)	9.0	15.5		9.0	15.5					12.0	12.0	12.0
Total Split (s)	14.0	56.0		14.0	56.0					30.0	30.0	30.0
Total Split (%)	14.0%	56.0%		14.0%	56.0%					30.0%	30.0%	30.0%
Maximum Green (s)	9.0	50.5		9.0	50.5					25.0	25.0	25.0
Yellow Time (s)	4.0	4.0		4.0	4.0					4.0	4.0	4.0
All-Red Time (s)	1.0	1.5		1.0	1.5					1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0						0.0	0.0
Total Lost Time (s)	5.0	5.5		5.0	5.5						5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	2.0	2.0		2.0	2.0					2.0	2.0	2.0
Recall Mode	None	C-Max		None	C-Max					None	None	None
Act Effct Green (s)	71.2	63.1		7.7	63.1						13.8	13.8
Actuated g/C Ratio	0.71	0.63		0.08	0.63						0.14	0.14
v/c Ratio	0.19	0.17		0.43	0.25						0.68	0.40
Control Delay	4.5	8.6		49.2	4.2						54.5	10.4
Queue Delay	0.0	0.0		0.0	0.3						0.0	0.0
Total Delay	4.5	8.6		49.2	4.5						54.5	10.4
LOS	A	A		D	A						D	B
Approach Delay		7.5			12.4						35.4	
Approach LOS		A			B						D	
Queue Length 50th (ft)	17	47		35	35						104	0
Queue Length 95th (ft)	40	84		64	43						163	48
Internal Link Dist (ft)		516			188			218			576	
Turn Bay Length (ft)	50											65
Base Capacity (vph)	691	2220		315	2151						450	480
Starvation Cap Reductn	0	0		0	966						0	0
Spillback Cap Reductn	0	0		0	0						0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0						0	0
Reduced v/c Ratio	0.19	0.17		0.36	0.44						0.38	0.27

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 17 (17%), Referenced to phase 2:EBWB, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 15.4	Intersection LOS: B
Intersection Capacity Utilization 43.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: Central Street & Summit Hill Drive

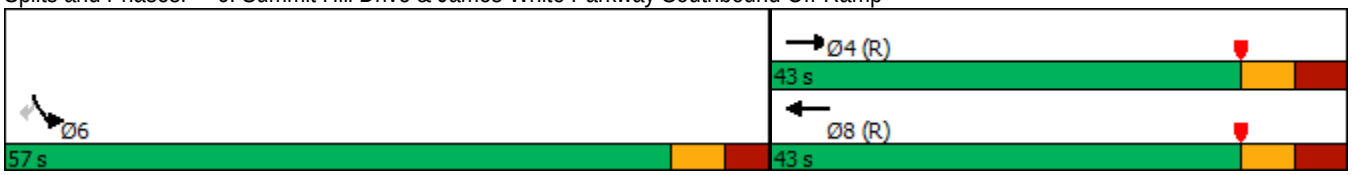




Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	447	178	0	293	432
Future Volume (vph)	0	447	178	0	293	432
Lane Util. Factor	1.00	0.91	0.95	1.00	1.00	0.88
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	5085	3539	0	1770	2787
Flt Permitted					0.950	
Satd. Flow (perm)	0	5085	3539	0	1770	2787
Satd. Flow (RTOR)						470
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	486	193	0	318	470
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		10.0	10.0		7.0	7.0
Minimum Split (s)		18.0	18.0		14.5	14.5
Total Split (s)		43.0	43.0		57.0	57.0
Total Split (%)		43.0%	43.0%		57.0%	57.0%
Maximum Green (s)		35.0	35.0		49.5	49.5
Yellow Time (s)		4.0	4.0		4.0	4.0
All-Red Time (s)		4.0	4.0		3.5	3.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0
Total Lost Time (s)		8.0	8.0		7.5	7.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		5.0	2.0		5.0	5.0
Recall Mode		C-Max	C-Max		None	None
Act Effct Green (s)		56.4	56.4		28.1	28.1
Actuated g/C Ratio		0.56	0.56		0.28	0.28
v/c Ratio		0.17	0.10		0.64	0.42
Control Delay		13.9	12.4		36.6	3.3
Queue Delay		0.2	0.0		0.0	0.0
Total Delay		14.2	12.4		36.6	3.3
LOS		B	B		D	A
Approach Delay		14.2	12.4		16.7	
Approach LOS		B	B		B	
Queue Length 50th (ft)		62	28		177	0
Queue Length 95th (ft)		97	54		232	34
Internal Link Dist (ft)		188	373		516	
Turn Bay Length (ft)						250
Base Capacity (vph)		2866	1995		876	1616
Starvation Cap Reductn		1605	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.39	0.10		0.36	0.29

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 47 (47%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 15.3	Intersection LOS: B
Intersection Capacity Utilization 37.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Summit Hill Drive & James White Parkway Southbound Off-Ramp

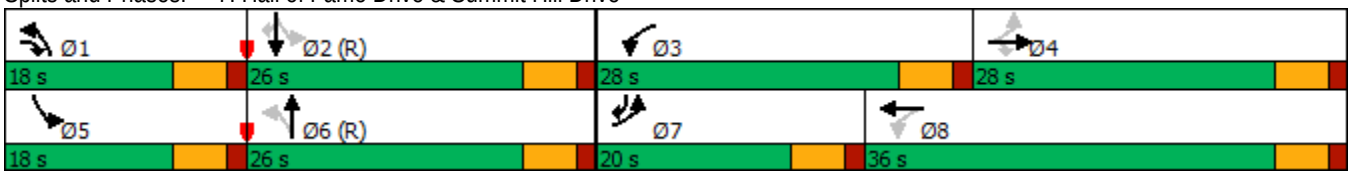


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	308	341	324	113	220	24	186	72	189	149	68
Future Volume (vph)	86	308	341	324	113	220	24	186	72	189	149	68
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor							1.00					0.99
Frt			0.850		0.901			0.958				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3189	0	1770	3391	0	1770	3539	1583
Flt Permitted	0.536			0.283			0.649			0.491		
Satd. Flow (perm)	998	3539	1583	527	3189	0	1207	3391	0	915	3539	1562
Satd. Flow (RTOR)			321		239			51				147
Confl. Peds. (#/hr)							2					2
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
Shared Lane Traffic (%)												
Lane Group Flow (vph)	93	335	371	352	362	0	26	280	0	205	162	74
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	7	4	1	3	8		1	6		5	2	7
Permitted Phases	4		4	8			6			2		2
Detector Phase	7	4	1	3	8		1	6		5	2	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0		5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5		10.5	15.5	10.5
Total Split (s)	20.0	28.0	18.0	28.0	36.0		18.0	26.0		18.0	26.0	20.0
Total Split (%)	20.0%	28.0%	18.0%	28.0%	36.0%		18.0%	26.0%		18.0%	26.0%	20.0%
Maximum Green (s)	14.5	22.5	12.5	22.5	30.5		12.5	20.5		12.5	20.5	14.5
Yellow Time (s)	4.0	4.0	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	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		2.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	None
Act Effct Green (s)	21.6	13.8	24.9	39.0	25.7		38.6	33.1		49.0	39.0	46.7
Actuated g/C Ratio	0.22	0.14	0.25	0.39	0.26		0.39	0.33		0.49	0.39	0.47
v/c Ratio	0.34	0.69	0.59	0.78	0.36		0.05	0.24		0.38	0.12	0.09
Control Delay	17.1	39.6	13.0	35.4	10.6		12.9	20.2		10.5	12.9	1.2
Queue Delay	0.0	0.0	0.2	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	17.1	39.6	13.2	35.4	10.6		12.9	20.2		10.5	12.9	1.2
LOS	B	D	B	D	B		B	C		B	B	A
Approach Delay		24.7			22.8			19.6			9.8	
Approach LOS		C			C			B			A	
Queue Length 50th (ft)	34	116	101	165	31		10	54		29	22	0
Queue Length 95th (ft)	48	140	179	223	65		23	117		45	20	0
Internal Link Dist (ft)		373			335			424			335	
Turn Bay Length (ft)				165			230			165		60
Base Capacity (vph)	394	796	722	484	1138		620	1157		573	1380	907
Starvation Cap Reductn	0	0	49	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.24	0.42	0.55	0.73	0.32		0.04	0.24		0.36	0.12	0.08

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 56 (56%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 20.5	Intersection LOS: C
Intersection Capacity Utilization 63.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 7: Hall of Fame Drive & Summit Hill Drive



Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	181	390	460	31	86	235
Future Vol, veh/h	181	390	460	31	86	235
Conflicting Peds, #/hr	2	0	0	2	0	6
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	193	415	489	33	91	250

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	524	0	-	0	1102	269
Stage 1	-	-	-	-	508	-
Stage 2	-	-	-	-	594	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1039	-	-	-	206	729
Stage 1	-	-	-	-	569	-
Stage 2	-	-	-	-	514	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1037	-	-	-	167	723
Mov Cap-2 Maneuver	-	-	-	-	167	-
Stage 1	-	-	-	-	462	-
Stage 2	-	-	-	-	513	-

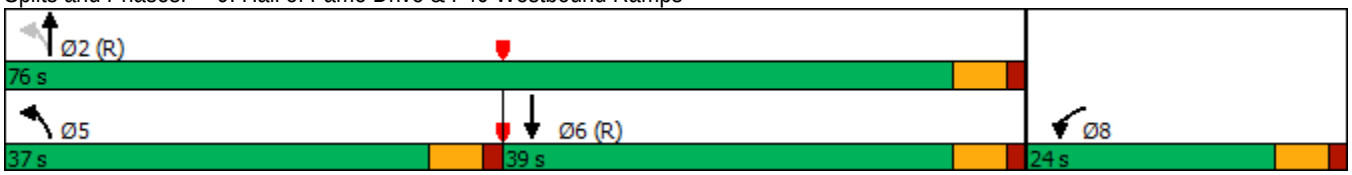
Approach	EB	WB	SB
HCM Control Delay, s	2.9	0	17.6
HCM LOS			C

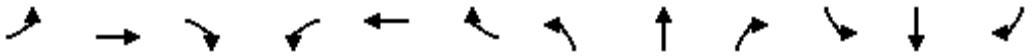
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1037	-	-	-	623
HCM Lane V/C Ratio	0.186	-	-	-	0.548
HCM Control Delay (s)	9.3	-	-	-	17.6
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.7	-	-	-	3.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	102	0	134	388	770	0	0	362	364
Future Volume (vph)	0	0	0	102	0	134	388	770	0	0	362	364
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt						0.850					0.925	
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	0	0	3433	0	1583	1770	3539	0	0	3274	0
Flt Permitted				0.950			0.269					
Satd. Flow (perm)	0	0	0	3433	0	1583	501	3539	0	0	3274	0
Satd. Flow (RTOR)						151					273	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	115	0	151	436	865	0	0	816	0
Turn Type				Prot		Free	pm+pt	NA			NA	
Protected Phases				8			5	2			6	
Permitted Phases						Free	2					
Detector Phase				8			5	2			6	
Switch Phase												
Minimum Initial (s)				5.0			5.0	10.0			10.0	
Minimum Split (s)				10.5			10.5	15.5			15.5	
Total Split (s)				24.0			37.0	76.0			39.0	
Total Split (%)				24.0%			37.0%	76.0%			39.0%	
Maximum Green (s)				18.5			31.5	70.5			33.5	
Yellow Time (s)				4.0			4.0	4.0			4.0	
All-Red Time (s)				1.5			1.5	1.5			1.5	
Lost Time Adjust (s)				0.0			0.0	0.0			0.0	
Total Lost Time (s)				5.5			5.5	5.5			5.5	
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)				3.0			2.0	2.0			2.0	
Recall Mode				None			None	C-Max			C-Max	
Act Effct Green (s)				8.7		100.0	80.3	80.3			56.8	
Actuated g/C Ratio				0.09		1.00	0.80	0.80			0.57	
v/c Ratio				0.39		0.10	0.69	0.30			0.41	
Control Delay				46.5		0.1	13.5	2.7			9.8	
Queue Delay				0.0		0.0	0.0	0.0			0.0	
Total Delay				46.5		0.1	13.5	2.7			9.8	
LOS				D		A	B	A			A	
Approach Delay					20.2			6.3			9.8	
Approach LOS					C			A			A	
Queue Length 50th (ft)				36		0	77	38			89	
Queue Length 95th (ft)				61		0	125	68			176	
Internal Link Dist (ft)		440			577			562			692	
Turn Bay Length (ft)				475		200	155					
Base Capacity (vph)				635		1583	802	2841			1976	
Starvation Cap Reductn				0		0	0	0			0	
Spillback Cap Reductn				0		0	0	0			0	
Storage Cap Reductn				0		0	0	0			0	
Reduced v/c Ratio				0.18		0.10	0.54	0.30			0.41	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 48 (48%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 9.1	Intersection LOS: A
Intersection Capacity Utilization 61.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 9: Hall of Fame Drive & I-40 Westbound Ramps

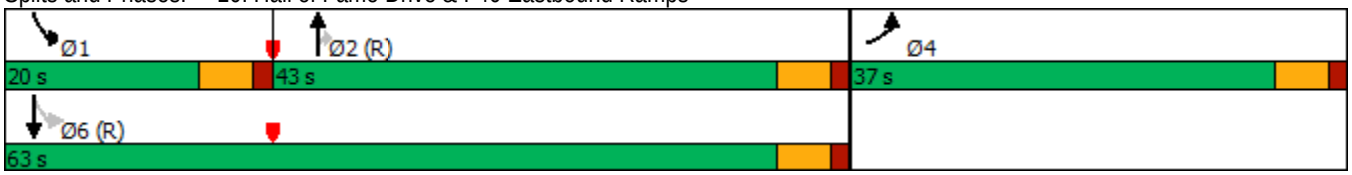


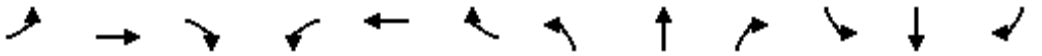


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	412	0	305	0	0	0	0	747	267	84	383	0
Future Volume (vph)	412	0	305	0	0	0	0	747	267	84	383	0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850						0.850			
Flt Protected	0.950									0.950		
Satd. Flow (prot)	3433	0	1583	0	0	0	0	3539	1583	1770	3539	0
Flt Permitted	0.950									0.274		
Satd. Flow (perm)	3433	0	1583	0	0	0	0	3539	1583	510	3539	0
Satd. Flow (RTOR)			339						297			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	458	0	339	0	0	0	0	830	297	93	426	0
Turn Type	Prot		Free					NA	Perm	pm+pt	NA	
Protected Phases	4							2		1	6	
Permitted Phases			Free						2	6		
Detector Phase	4							2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0							10.0	10.0	5.0	10.0	
Minimum Split (s)	22.5							22.5	22.5	10.5	22.5	
Total Split (s)	37.0							43.0	43.0	20.0	63.0	
Total Split (%)	37.0%							43.0%	43.0%	20.0%	63.0%	
Maximum Green (s)	31.5							37.5	37.5	14.5	57.5	
Yellow Time (s)	4.0							4.0	4.0	4.0	4.0	
All-Red Time (s)	1.5							1.5	1.5	1.5	1.5	
Lost Time Adjust (s)	0.0							0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5							5.5	5.5	5.5	5.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	2.0							2.0	2.0	2.0	2.0	
Recall Mode	None							C-Max	C-Max	None	C-Max	
Act Effct Green (s)	17.9		100.0					61.5	61.5	71.1	71.1	
Actuated g/C Ratio	0.18		1.00					0.62	0.62	0.71	0.71	
v/c Ratio	0.75		0.21					0.38	0.27	0.21	0.17	
Control Delay	46.6		0.3					10.1	2.0	6.9	5.6	
Queue Delay	0.0		0.0					0.0	0.0	0.0	0.0	
Total Delay	46.6		0.3					10.1	2.0	6.9	5.6	
LOS	D		A					B	A	A	A	
Approach Delay		26.9						8.0			5.8	
Approach LOS		C						A			A	
Queue Length 50th (ft)	143		0					106	0	12	31	
Queue Length 95th (ft)	186		0					218	10	48	87	
Internal Link Dist (ft)		686			892			546			562	
Turn Bay Length (ft)	200		210						290	190		
Base Capacity (vph)	1081		1583					2175	1087	545	2517	
Starvation Cap Reductn	0		0					0	0	0	0	
Spillback Cap Reductn	0		0					0	0	0	0	
Storage Cap Reductn	0		0					0	0	0	0	
Reduced v/c Ratio	0.42		0.21					0.38	0.27	0.17	0.17	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 20 (20%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 13.7	Intersection LOS: B
Intersection Capacity Utilization 61.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 10: Hall of Fame Drive & I-40 Eastbound Ramps



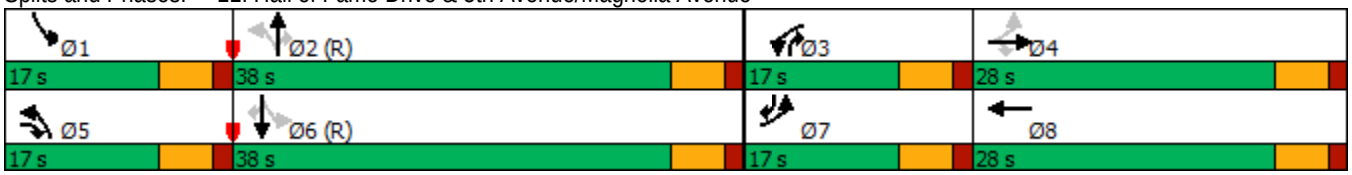


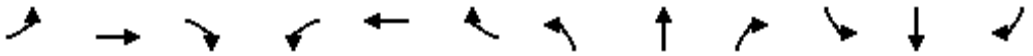
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	254	32	58	185	250	38	383	89	146	320	66
Future Volume (vph)	92	254	32	58	185	250	38	383	89	146	320	66
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.99	0.99			1.00					0.99
Frt			0.850		0.914				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3235	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.256			0.950			0.535			0.431		
Satd. Flow (perm)	477	3539	1562	3413	3235	0	995	3539	1583	803	3539	1561
Satd. Flow (RTOR)			87		284				101			87
Confl. Peds. (#/hr)			2	2			3					3
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Lane Group Flow (vph)	105	289	36	66	494	0	43	435	101	166	364	75
Turn Type	pm+pt	NA	pm+ov	Prot	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4				2		2	6		6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0	5.0	5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5	10.5	10.5	15.5	10.5
Total Split (s)	17.0	28.0	17.0	17.0	28.0		17.0	38.0	17.0	17.0	38.0	17.0
Total Split (%)	17.0%	28.0%	17.0%	17.0%	28.0%		17.0%	38.0%	17.0%	17.0%	38.0%	17.0%
Maximum Green (s)	11.5	22.5	11.5	11.5	22.5		11.5	32.5	11.5	11.5	32.5	11.5
Yellow Time (s)	4.0	4.0	4.0	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	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	None	None	C-Max	None
Act Effct Green (s)	25.2	15.5	22.1	7.3	13.2		51.9	45.3	58.2	59.2	50.8	60.4
Actuated g/C Ratio	0.25	0.16	0.22	0.07	0.13		0.52	0.45	0.58	0.59	0.51	0.60
v/c Ratio	0.43	0.53	0.09	0.26	0.74		0.08	0.27	0.10	0.29	0.20	0.08
Control Delay	31.1	41.6	0.4	45.9	23.9		8.3	17.3	3.4	8.3	12.2	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.1	41.6	0.4	45.9	23.9		8.3	17.3	3.4	8.3	12.2	1.9
LOS	C	D	A	D	C		A	B	A	A	B	A
Approach Delay		35.6			26.5			14.2			9.8	
Approach LOS		D			C			B			A	
Queue Length 50th (ft)	51	90	0	21	66		7	91	0	42	64	2
Queue Length 95th (ft)	81	120	0	40	108		16	134	18	57	80	5
Internal Link Dist (ft)		674			634			359			1142	
Turn Bay Length (ft)	245		35	295			230		245	175		175
Base Capacity (vph)	277	796	487	394	947		654	1603	1024	600	1796	1007
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.36	0.07	0.17	0.52		0.07	0.27	0.10	0.28	0.20	0.07

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 12 (12%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 20.4	Intersection LOS: C
Intersection Capacity Utilization 55.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 11: Hall of Fame Drive & 5th Avenue/Magnolia Avenue



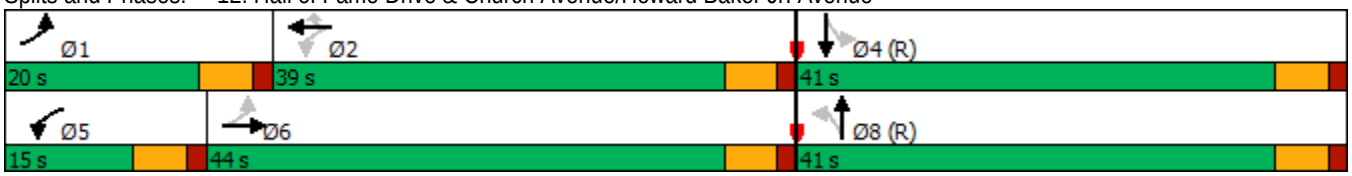


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	114	82	36	13	45	130	11	147	18	64	107	34
Future Volume (vph)	114	82	36	13	45	130	11	147	18	64	107	34
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor	0.97	0.99		0.99		0.93		1.00			1.00	
Frt		0.954				0.850		0.985			0.975	
Flt Protected	0.950			0.950				0.997			0.985	
Satd. Flow (prot)	1770	1767	0	1770	1863	1583	0	3476	0	0	3386	0
Flt Permitted	0.503			0.673				0.936			0.808	
Satd. Flow (perm)	907	1767	0	1247	1863	1475	0	3263	0	0	2778	0
Satd. Flow (RTOR)		26				144		13			26	
Confl. Peds. (#/hr)	64		9	9		64	2					2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	127	131	0	14	50	144	0	195	0	0	228	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6			2		2	8			4		
Detector Phase	1	6		5	2	2	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0	7.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	10.5	22.5		10.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	20.0	44.0		15.0	39.0	39.0	41.0	41.0		41.0	41.0	
Total Split (%)	20.0%	44.0%		15.0%	39.0%	39.0%	41.0%	41.0%		41.0%	41.0%	
Maximum Green (s)	14.5	38.5		9.5	33.5	33.5	35.5	35.5		35.5	35.5	
Yellow Time (s)	4.0	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	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5	5.5		5.5			5.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)	24.2	21.8		13.5	8.1	8.1		64.8			64.8	
Actuated g/C Ratio	0.24	0.22		0.14	0.08	0.08		0.65			0.65	
v/c Ratio	0.41	0.32		0.07	0.33	0.57		0.09			0.13	
Control Delay	33.9	28.5		27.8	48.8	16.8		7.0			4.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Delay	33.9	28.5		27.8	48.8	16.8		7.0			4.1	
LOS	C	C		C	D	B		A			A	
Approach Delay		31.2			25.2			7.0			4.1	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)	67	55		7	31	0		20			8	
Queue Length 95th (ft)	106	113		21	66	56		41			m32	
Internal Link Dist (ft)		488			887			548			1120	
Turn Bay Length (ft)	60			130								
Base Capacity (vph)	344	696		269	624	589		2120			1810	
Starvation Cap Reductn	0	0		0	0	0		0			0	
Spillback Cap Reductn	0	0		0	0	0		0			0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0	0		0			0	
Reduced v/c Ratio	0.37	0.19		0.05	0.08	0.24		0.09			0.13	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 42 (42%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 17.5	Intersection LOS: B
Intersection Capacity Utilization 43.4%	ICU Level of Service A
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 12: Hall of Fame Drive & Church Avenue/Howard Baker Jr. Avenue



Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	312	0	0	266	0	0
Future Vol, veh/h	312	0	0	266	0	0
Conflicting Peds, #/hr	0	319	319	0	0	320
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	343	0	0	292	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	662	0	954	982
Stage 1	-	-	-	-	662	-
Stage 2	-	-	-	-	292	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	927	-	287	302
Stage 1	-	-	-	-	513	-
Stage 2	-	-	-	-	758	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	645	-	200	146
Mov Cap-2 Maneuver	-	-	-	-	200	-
Stage 1	-	-	-	-	357	-
Stage 2	-	-	-	-	758	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	645	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕						↕	
Traffic Vol, veh/h	80	104	104	5	155	21	0	0	0	1	1	25
Future Vol, veh/h	80	104	104	5	155	21	0	0	0	1	1	25
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	99	128	128	6	191	26	0	0	0	1	1	31

Major/Minor	Major1			Major2					Minor2		
Conflicting Flow All	217	0	0	257	0	0			606	671	204
Stage 1	-	-	-	-	-	-			216	216	-
Stage 2	-	-	-	-	-	-			390	455	-
Critical Hdwy	4.12	-	-	4.12	-	-			6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-			5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-			5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-			3.518	4.018	3.318
Pot Cap-1 Maneuver	1353	-	-	1308	-	-			460	378	837
Stage 1	-	-	-	-	-	-			820	724	-
Stage 2	-	-	-	-	-	-			684	569	-
Platoon blocked, %		-	-		-	-					
Mov Cap-1 Maneuver	1353	-	-	1308	-	-			418	0	837
Mov Cap-2 Maneuver	-	-	-	-	-	-			418	0	-
Stage 1	-	-	-	-	-	-			745	0	-
Stage 2	-	-	-	-	-	-			684	0	-

Approach	EB	WB	SB
HCM Control Delay, s	2.2	0.2	9.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1353	-	-	1308	-	-	806
HCM Lane V/C Ratio	0.073	-	-	0.005	-	-	0.041
HCM Control Delay (s)	7.9	0	-	7.8	0	-	9.7
HCM Lane LOS	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	10.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	105	96	6	10	0
Future Vol, veh/h	6	105	96	6	10	0
Conflicting Peds, #/hr	412	0	0	412	1235	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	128	117	7	12	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	536	0	-	0	1910	535
Stage 1	-	-	-	-	533	-
Stage 2	-	-	-	-	1377	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1032	-	-	-	75	545
Stage 1	-	-	-	-	588	-
Stage 2	-	-	-	-	234	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	627	-	-	-	27	331
Mov Cap-2 Maneuver	-	-	-	-	27	-
Stage 1	-	-	-	-	353	-
Stage 2	-	-	-	-	142	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	220.7
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	627	-	-	-	27
HCM Lane V/C Ratio	0.012	-	-	-	0.452
HCM Control Delay (s)	10.8	0	-	-	220.7
HCM Lane LOS	B	A	-	-	F
HCM 95th %tile Q(veh)	0	-	-	-	1.4

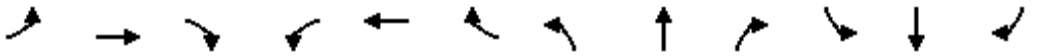
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	87	0
Future Vol, veh/h	0	0	0	0	87	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	-	-
Veh in Median Storage, #	0	-	16974	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	97	0

Major/Minor	Minor1		Major2	
Conflicting Flow All	194	-	0	0
Stage 1	0	-	-	-
Stage 2	194	-	-	-
Critical Hdwy	6.42	-	4.12	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-
Follow-up Hdwy	3.518	-	2.218	-
Pot Cap-1 Maneuver	795	0	-	-
Stage 1	-	0	-	-
Stage 2	839	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	795	-	-	-
Mov Cap-2 Maneuver	795	-	-	-
Stage 1	-	-	-	-
Stage 2	839	-	-	-

Approach	WB	SB
HCM Control Delay, s	0	
HCM LOS	A	

Minor Lane/Major Mvmt	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	0	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	-	-	-



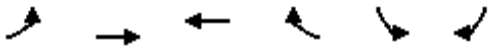
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	155	307	14	166	401	326	0	0	0	229	51	198
Future Volume (vph)	155	307	14	166	401	326	0	0	0	229	51	198
Lane Util. Factor	1.00	0.95	0.95	0.97	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.89	1.00		0.97	0.81						0.68	0.97
Frt		0.993			0.933							0.850
Flt Protected	0.950			0.950							0.961	
Satd. Flow (prot)	1770	3512	0	3433	2666	0	0	0	0	0	1790	1583
Flt Permitted	0.310			0.950							0.961	
Satd. Flow (perm)	513	3512	0	3338	2666	0	0	0	0	0	1220	1535
Satd. Flow (RTOR)		7			297							122
Confl. Peds. (#/hr)	422		8	8		422				621		16
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	165	342	0	177	774	0	0	0	0	0	298	211
Turn Type	pm+pt	NA		Prot	NA					Split	NA	Perm
Protected Phases	1	2		1	2					4	4	
Permitted Phases	2											4
Detector Phase	1	2		1	2					4	4	4
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0					7.0	7.0	7.0
Minimum Split (s)	9.0	15.5		9.0	15.5					12.0	12.0	12.0
Total Split (s)	14.0	56.0		14.0	56.0					30.0	30.0	30.0
Total Split (%)	14.0%	56.0%		14.0%	56.0%					30.0%	30.0%	30.0%
Maximum Green (s)	9.0	50.5		9.0	50.5					25.0	25.0	25.0
Yellow Time (s)	4.0	4.0		4.0	4.0					4.0	4.0	4.0
All-Red Time (s)	1.0	1.5		1.0	1.5					1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0						0.0	0.0
Total Lost Time (s)	5.0	5.5		5.0	5.5						5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	2.0	2.0		2.0	2.0					2.0	2.0	2.0
Recall Mode	None	C-Max		None	C-Max					None	None	None
Act Effct Green (s)	64.6	55.5		8.6	55.5						20.4	20.4
Actuated g/C Ratio	0.65	0.56		0.09	0.56						0.20	0.20
v/c Ratio	0.38	0.18		0.60	0.48						0.82	0.51
Control Delay	8.6	11.9		53.1	17.1						55.4	19.0
Queue Delay	0.0	0.0		0.0	0.4						0.0	0.0
Total Delay	8.6	11.9		53.1	17.5						55.4	19.0
LOS	A	B		D	B						E	B
Approach Delay		10.8			24.1						40.4	
Approach LOS		B			C						D	
Queue Length 50th (ft)	31	54		58	140						181	48
Queue Length 95th (ft)	62	85		93	207						264	113
Internal Link Dist (ft)		516			188			218			576	
Turn Bay Length (ft)	50											65
Base Capacity (vph)	449	1953		314	1612						447	475
Starvation Cap Reductn	0	0		0	370						0	0
Spillback Cap Reductn	0	0		0	0						0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0						0	0
Reduced v/c Ratio	0.37	0.18		0.56	0.62						0.67	0.44

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 17 (17%), Referenced to phase 2:EBWB, Start of Yellow	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 24.9	Intersection LOS: C
Intersection Capacity Utilization 62.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 5: Central Street & Summit Hill Drive





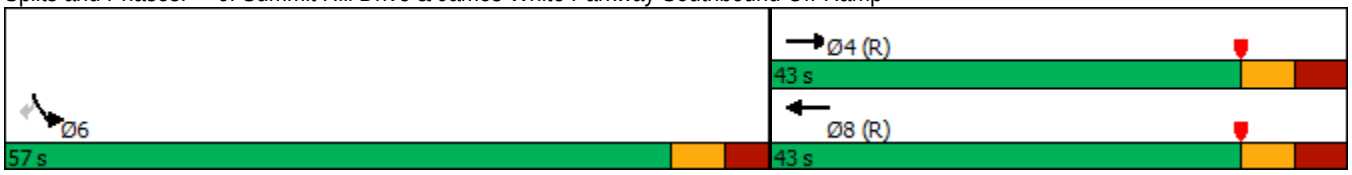
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	412	233	0	871	670
Future Volume (vph)	0	412	233	0	871	670
Lane Util. Factor	1.00	0.91	0.95	1.00	1.00	0.88
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	5085	3539	0	1770	2787
Flt Permitted					0.950	
Satd. Flow (perm)	0	5085	3539	0	1770	2787
Satd. Flow (RTOR)						603
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	448	253	0	947	728
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		10.0	10.0		7.0	7.0
Minimum Split (s)		18.0	18.0		14.5	14.5
Total Split (s)		43.0	43.0		57.0	57.0
Total Split (%)		43.0%	43.0%		57.0%	57.0%
Maximum Green (s)		35.0	35.0		49.5	49.5
Yellow Time (s)		4.0	4.0		4.0	4.0
All-Red Time (s)		4.0	4.0		3.5	3.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0
Total Lost Time (s)		8.0	8.0		7.5	7.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		5.0	2.0		5.0	5.0
Recall Mode		C-Max	C-Max		None	None
Act Effct Green (s)		35.0	35.0		49.5	49.5
Actuated g/C Ratio		0.35	0.35		0.50	0.50
v/c Ratio		0.25	0.20		1.08	0.43
Control Delay		19.8	22.6		81.1	3.6
Queue Delay		0.0	0.0		7.9	0.0
Total Delay		19.9	22.6		89.0	3.6
LOS		B	C		F	A
Approach Delay		19.9	22.6		51.9	
Approach LOS		B	C		D	
Queue Length 50th (ft)		58	68		~679	23
Queue Length 95th (ft)		90	77		#918	57
Internal Link Dist (ft)		188	373		516	
Turn Bay Length (ft)						250
Base Capacity (vph)		1779	1238		876	1684
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		212	0		49	76
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.29	0.20		1.15	0.45

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 47 (47%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay: 42.8	Intersection LOS: D
Intersection Capacity Utilization 69.5%	ICU Level of Service C
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Summit Hill Drive & James White Parkway Southbound Off-Ramp

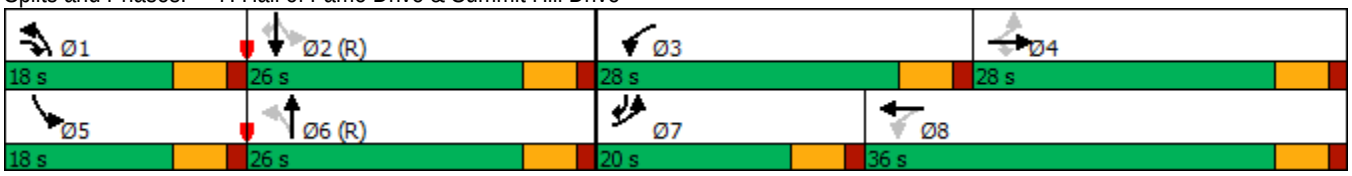


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	143	239	1016	238	139	162	36	193	51	182	293	87
Future Volume (vph)	143	239	1016	238	139	162	36	193	51	182	293	87
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor							1.00	0.90		0.74		0.99
Frt			0.850		0.919			0.969				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3253	0	1770	3086	0	1770	3539	1583
Flt Permitted	0.554			0.341			0.384			0.588		
Satd. Flow (perm)	1032	3539	1583	635	3253	0	714	3086	0	805	3539	1562
Satd. Flow (RTOR)			252		176			30				147
Confl. Peds. (#/hr)							2		823	823		2
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
Shared Lane Traffic (%)												
Lane Group Flow (vph)	155	260	1104	259	327	0	39	265	0	198	318	95
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	7	4	1	3	8		1	6		5	2	7
Permitted Phases	4		4	8			6			2		2
Detector Phase	7	4	1	3	8		1	6		5	2	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0		5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5		10.5	15.5	10.5
Total Split (s)	20.0	28.0	18.0	28.0	36.0		18.0	26.0		18.0	26.0	20.0
Total Split (%)	20.0%	28.0%	18.0%	28.0%	36.0%		18.0%	26.0%		18.0%	26.0%	20.0%
Maximum Green (s)	14.5	22.5	12.5	22.5	30.5		12.5	20.5		12.5	20.5	14.5
Yellow Time (s)	4.0	4.0	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	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		2.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	None
Act Effct Green (s)	22.4	11.7	46.6	33.2	17.4		55.3	39.4		31.0	20.5	31.2
Actuated g/C Ratio	0.22	0.12	0.47	0.33	0.17		0.55	0.39		0.31	0.20	0.31
v/c Ratio	0.50	0.63	1.27	0.65	0.46		0.06	0.21		0.56	0.44	0.16
Control Delay	23.9	42.1	148.9	32.9	18.1		9.3	18.2		27.1	24.6	4.2
Queue Delay	0.0	0.0	0.1	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	23.9	42.1	149.0	32.9	18.1		9.3	18.2		27.1	24.6	4.2
LOS	C	D	F	C	B		A	B		C	C	A
Approach Delay		117.9			24.6			17.1			22.3	
Approach LOS		F			C			B			C	
Queue Length 50th (ft)	61	83	~573	127	44		7	56		70	77	8
Queue Length 95th (ft)	m60	m92	m#924	171	80		30	96		70	105	18
Internal Link Dist (ft)		373			335			424			335	
Turn Bay Length (ft)				165			230			165		60
Base Capacity (vph)	377	796	872	468	1114		705	1233		397	725	645
Starvation Cap Reductn	0	0	12	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.41	0.33	1.28	0.55	0.29		0.06	0.21		0.50	0.44	0.15

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 56 (56%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.27	
Intersection Signal Delay: 70.3	Intersection LOS: E
Intersection Capacity Utilization 98.2%	ICU Level of Service F
Analysis Period (min) 15	
~ Volume exceeds capacity, queue is theoretically infinite.	
Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 7: Hall of Fame Drive & Summit Hill Drive



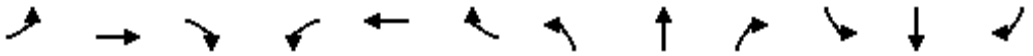
Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	81	410	484	23	24	91
Future Vol, veh/h	81	410	484	23	24	91
Conflicting Peds, #/hr	2	0	0	2	0	6
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	86	436	515	24	26	97

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	541	0	-	0	919	278
Stage 1	-	-	-	-	529	-
Stage 2	-	-	-	-	390	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1024	-	-	-	270	719
Stage 1	-	-	-	-	555	-
Stage 2	-	-	-	-	653	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1022	-	-	-	246	714
Mov Cap-2 Maneuver	-	-	-	-	246	-
Stage 1	-	-	-	-	507	-
Stage 2	-	-	-	-	652	-

Approach	EB	WB	SB
HCM Control Delay, s	1.5	0	9.6
HCM LOS			A

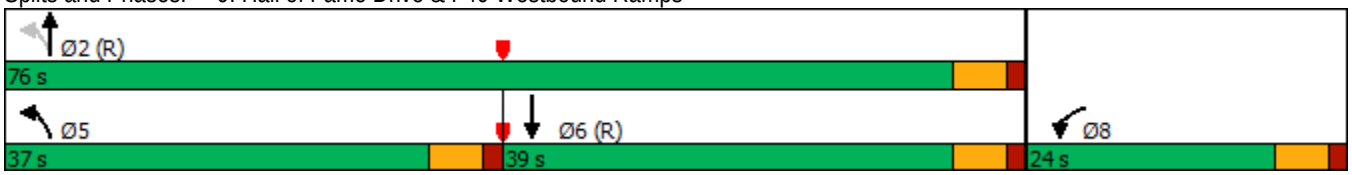
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1022	-	-	-	902
HCM Lane V/C Ratio	0.084	-	-	-	0.136
HCM Control Delay (s)	8.8	-	-	-	9.6
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.3	-	-	-	0.5



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	102	0	134	424	770	0	0	527	364
Future Volume (vph)	0	0	0	102	0	134	424	770	0	0	527	364
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt						0.850					0.939	
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	0	0	3433	0	1583	1770	3539	0	0	3323	0
Flt Permitted				0.950			0.180					
Satd. Flow (perm)	0	0	0	3433	0	1583	335	3539	0	0	3323	0
Satd. Flow (RTOR)						151					188	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	115	0	151	476	865	0	0	1001	0
Turn Type				Prot		Free	pm+pt	NA			NA	
Protected Phases				8			5	2			6	
Permitted Phases						Free	2					
Detector Phase				8			5	2			6	
Switch Phase												
Minimum Initial (s)				5.0			5.0	10.0			10.0	
Minimum Split (s)				10.5			10.5	15.5			15.5	
Total Split (s)				24.0			37.0	76.0			39.0	
Total Split (%)				24.0%			37.0%	76.0%			39.0%	
Maximum Green (s)				18.5			31.5	70.5			33.5	
Yellow Time (s)				4.0			4.0	4.0			4.0	
All-Red Time (s)				1.5			1.5	1.5			1.5	
Lost Time Adjust (s)				0.0			0.0	0.0			0.0	
Total Lost Time (s)				5.5			5.5	5.5			5.5	
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)				3.0			2.0	2.0			2.0	
Recall Mode				None			None	C-Max			C-Max	
Act Effct Green (s)				8.7		100.0	80.3	80.3			50.1	
Actuated g/C Ratio				0.09		1.00	0.80	0.80			0.50	
v/c Ratio				0.39		0.10	0.76	0.30			0.57	
Control Delay				46.5		0.1	18.6	2.7			17.0	
Queue Delay				0.0		0.0	0.0	0.0			0.0	
Total Delay				46.5		0.1	18.6	2.7			17.0	
LOS				D		A	B	A			B	
Approach Delay					20.2			8.3			17.0	
Approach LOS					C			A			B	
Queue Length 50th (ft)				36		0	102	36			182	
Queue Length 95th (ft)				61		0	157	66			304	
Internal Link Dist (ft)		440			577			562			692	
Turn Bay Length (ft)				475		200	155					
Base Capacity (vph)				635		1583	730	2841			1757	
Starvation Cap Reductn				0		0	0	0			0	
Spillback Cap Reductn				0		0	0	0			0	
Storage Cap Reductn				0		0	0	0			0	
Reduced v/c Ratio				0.18		0.10	0.65	0.30			0.57	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 48 (48%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 12.9	Intersection LOS: B
Intersection Capacity Utilization 67.6%	ICU Level of Service C
Analysis Period (min) 15	

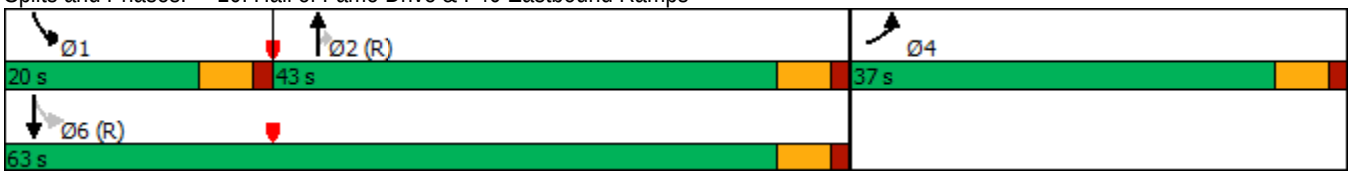
Splits and Phases: 9: Hall of Fame Drive & I-40 Westbound Ramps

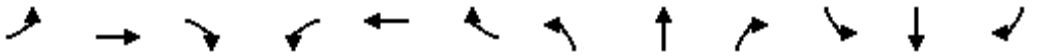


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	412	0	305	0	0	0	0	785	250	84	548	0
Future Volume (vph)	412	0	305	0	0	0	0	785	250	84	548	0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850						0.850			
Flt Protected	0.950									0.950		
Satd. Flow (prot)	3433	0	1583	0	0	0	0	3539	1583	1770	3539	0
Flt Permitted	0.950									0.258		
Satd. Flow (perm)	3433	0	1583	0	0	0	0	3539	1583	481	3539	0
Satd. Flow (RTOR)			339						278			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	458	0	339	0	0	0	0	872	278	93	609	0
Turn Type	Prot		Free					NA	Perm	pm+pt	NA	
Protected Phases	4							2		1	6	
Permitted Phases			Free						2	6		
Detector Phase	4							2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0							10.0	10.0	5.0	10.0	
Minimum Split (s)	22.5							22.5	22.5	10.5	22.5	
Total Split (s)	37.0							43.0	43.0	20.0	63.0	
Total Split (%)	37.0%							43.0%	43.0%	20.0%	63.0%	
Maximum Green (s)	31.5							37.5	37.5	14.5	57.5	
Yellow Time (s)	4.0							4.0	4.0	4.0	4.0	
All-Red Time (s)	1.5							1.5	1.5	1.5	1.5	
Lost Time Adjust (s)	0.0							0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5							5.5	5.5	5.5	5.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	2.0							2.0	2.0	2.0	2.0	
Recall Mode	None							C-Max	C-Max	None	C-Max	
Act Effct Green (s)	17.9		100.0					61.5	61.5	71.1	71.1	
Actuated g/C Ratio	0.18		1.00					0.62	0.62	0.71	0.71	
v/c Ratio	0.75		0.21					0.40	0.26	0.22	0.24	
Control Delay	46.6		0.3					11.8	2.4	10.3	9.8	
Queue Delay	0.0		0.0					0.0	0.0	0.0	0.0	
Total Delay	46.6		0.3					11.8	2.4	10.3	9.8	
LOS	D		A					B	A	B	A	
Approach Delay		26.9						9.5			9.8	
Approach LOS		C						A			A	
Queue Length 50th (ft)	143		0					130	2	15	57	
Queue Length 95th (ft)	186		0					246	12	m76	235	
Internal Link Dist (ft)		686			892			546			562	
Turn Bay Length (ft)	200		210						290	190		
Base Capacity (vph)	1081		1583					2175	1080	528	2517	
Starvation Cap Reductn	0		0					0	0	0	0	
Spillback Cap Reductn	0		0					0	0	0	0	
Storage Cap Reductn	0		0					0	0	0	0	
Reduced v/c Ratio	0.42		0.21					0.40	0.26	0.18	0.24	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 20 (20%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 14.8	Intersection LOS: B
Intersection Capacity Utilization 67.6%	ICU Level of Service C
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 10: Hall of Fame Drive & I-40 Eastbound Ramps



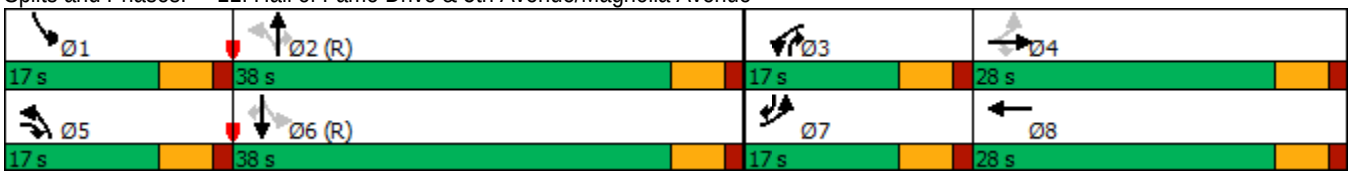


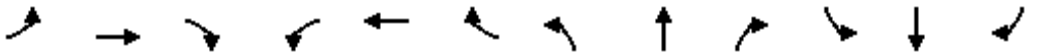
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	254	32	58	185	290	38	376	104	153	477	66
Future Volume (vph)	92	254	32	58	185	290	38	376	104	153	477	66
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.99	0.99			1.00					0.99
Frt			0.850		0.908				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3214	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.248			0.950			0.450			0.432		
Satd. Flow (perm)	462	3539	1562	3413	3214	0	837	3539	1583	805	3539	1561
Satd. Flow (RTOR)			87		330				118			87
Confl. Peds. (#/hr)			2	2			3					3
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Lane Group Flow (vph)	105	289	36	66	540	0	43	427	118	174	542	75
Turn Type	pm+pt	NA	pm+ov	Prot	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4				2		2	6		6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0	5.0	5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5	10.5	10.5	15.5	10.5
Total Split (s)	17.0	28.0	17.0	17.0	28.0		17.0	38.0	17.0	17.0	38.0	17.0
Total Split (%)	17.0%	28.0%	17.0%	17.0%	28.0%		17.0%	38.0%	17.0%	17.0%	38.0%	17.0%
Maximum Green (s)	11.5	22.5	11.5	11.5	22.5		11.5	32.5	11.5	11.5	32.5	11.5
Yellow Time (s)	4.0	4.0	4.0	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	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	None	None	C-Max	None
Act Effct Green (s)	25.7	16.1	22.7	7.3	13.7		51.2	44.6	57.4	58.9	50.2	59.9
Actuated g/C Ratio	0.26	0.16	0.23	0.07	0.14		0.51	0.45	0.57	0.59	0.50	0.60
v/c Ratio	0.43	0.51	0.09	0.26	0.74		0.09	0.27	0.12	0.31	0.31	0.08
Control Delay	30.6	40.6	0.4	45.9	22.0		8.0	16.5	4.4	8.5	11.6	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.6	40.6	0.4	45.9	22.0		8.0	16.5	4.4	8.5	11.6	1.3
LOS	C	D	A	D	C		A	B	A	A	B	A
Approach Delay		34.8			24.6			13.5			9.9	
Approach LOS		C			C			B			A	
Queue Length 50th (ft)	50	89	0	21	66		10	73	0	24	102	5
Queue Length 95th (ft)	79	118	0	40	109		18	126	23	65	101	0
Internal Link Dist (ft)		674			634			359			1142	
Turn Bay Length (ft)	245		35	295			230		245	175		175
Base Capacity (vph)	277	797	495	394	978		576	1577	1019	596	1776	998
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.36	0.07	0.17	0.55		0.07	0.27	0.12	0.29	0.31	0.08

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 12 (12%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 18.9	Intersection LOS: B
Intersection Capacity Utilization 56.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 11: Hall of Fame Drive & 5th Avenue/Magnolia Avenue





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	114	149	36	13	45	130	11	147	95	832	107	34
Future Volume (vph)	114	149	36	13	45	130	11	147	95	832	107	34
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor	0.97	1.00		1.00		0.93		0.93			0.90	
Frt		0.971				0.850		0.943			0.995	
Flt Protected	0.950			0.950				0.998			0.959	
Satd. Flow (prot)	1770	1802	0	1770	1863	1583	0	3101	0	0	3374	0
Flt Permitted	0.508			0.629				0.903			0.623	
Satd. Flow (perm)	916	1802	0	1166	1863	1475	0	2806	0	0	1972	0
Satd. Flow (RTOR)		14				144		106			4	
Confl. Peds. (#/hr)	64		9	9		64	2		206	206		2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	127	206	0	14	50	144	0	281	0	0	1081	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6			2		2	8			4		
Detector Phase	1	6		5	2	2	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0	7.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	10.5	22.5		10.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	20.0	44.0		15.0	39.0	39.0	41.0	41.0		41.0	41.0	
Total Split (%)	20.0%	44.0%		15.0%	39.0%	39.0%	41.0%	41.0%		41.0%	41.0%	
Maximum Green (s)	14.5	38.5		9.5	33.5	33.5	35.5	35.5		35.5	35.5	
Yellow Time (s)	4.0	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	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5	5.5		5.5			5.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)	24.6	22.2		14.0	8.6	8.6		64.4			64.4	
Actuated g/C Ratio	0.25	0.22		0.14	0.09	0.09		0.64			0.64	
v/c Ratio	0.40	0.50		0.07	0.31	0.56		0.15			1.48dl	
Control Delay	33.2	36.1		27.2	47.2	15.8		5.2			16.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Delay	33.2	36.1		27.2	47.2	15.8		5.2			16.0	
LOS	C	D		C	D	B		A			B	
Approach Delay		35.0			24.1			5.2			16.0	
Approach LOS		C			C			A			B	
Queue Length 50th (ft)	67	106		7	31	0		19			191	
Queue Length 95th (ft)	102	181		20	64	55		46			m188	
Internal Link Dist (ft)		488			887			548			1120	
Turn Bay Length (ft)	60			130								
Base Capacity (vph)	348	702		268	624	589		1845			1271	
Starvation Cap Reductn	0	0		0	0	0		0			0	
Spillback Cap Reductn	0	0		0	0	0		0			0	

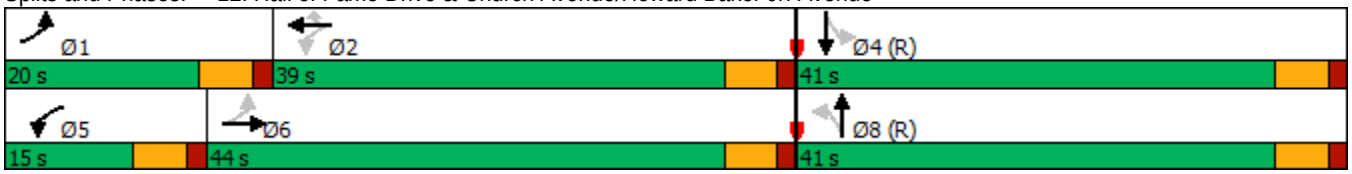
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0	0		0			0	
Reduced v/c Ratio	0.36	0.29		0.05	0.08	0.24		0.15			0.85	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 42 (42%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 18.6	Intersection LOS: B
Intersection Capacity Utilization 83.2%	ICU Level of Service E
Analysis Period (min) 15	

m Volume for 95th percentile queue is metered by upstream signal.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 12: Hall of Fame Drive & Church Avenue/Howard Baker Jr. Avenue



Intersection	
Int Delay, s/veh	43.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	120	100	159	84	83	147
Future Vol, veh/h	120	100	159	84	83	147
Conflicting Peds, #/hr	0	257	257	0	1	257
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	126	105	167	88	87	155

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	488	0	859	693
Stage 1	-	-	-	-	436	-
Stage 2	-	-	-	-	423	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1075	-	327	443
Stage 1	-	-	-	-	652	-
Stage 2	-	-	-	-	661	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	812	-	193	253
Mov Cap-2 Maneuver	-	-	-	-	193	-
Stage 1	-	-	-	-	386	-
Stage 2	-	-	-	-	660	-

Approach	EB	WB	NB
HCM Control Delay, s	0	6.9	124.4
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	227	-	-	812	-
HCM Lane V/C Ratio	1.067	-	-	0.206	-
HCM Control Delay (s)	124.4	-	-	10.6	0
HCM Lane LOS	F	-	-	B	A
HCM 95th %tile Q(veh)	10.5	-	-	0.8	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕						↕	
Traffic Vol, veh/h	37	81	86	0	147	10	0	0	0	5	14	49
Future Vol, veh/h	37	81	86	0	147	10	0	0	0	5	14	49
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	42	92	98	0	167	11	0	0	0	6	16	56

Major/Minor	Major1			Major2					Minor2		
Conflicting Flow All	178	0	0	191	0	0			398	448	174
Stage 1	-	-	-	-	-	-			173	173	-
Stage 2	-	-	-	-	-	-			225	275	-
Critical Hdwy	4.12	-	-	4.12	-	-			6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-			5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-			5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-			3.518	4.018	3.318
Pot Cap-1 Maneuver	1398	-	-	1383	-	-			607	506	869
Stage 1	-	-	-	-	-	-			857	756	-
Stage 2	-	-	-	-	-	-			812	683	-
Platoon blocked, %		-	-		-	-					
Mov Cap-1 Maneuver	1398	-	-	1383	-	-			586	0	868
Mov Cap-2 Maneuver	-	-	-	-	-	-			586	0	-
Stage 1	-	-	-	-	-	-			828	0	-
Stage 2	-	-	-	-	-	-			812	0	-

Approach	EB	WB	SB
HCM Control Delay, s	1.4	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1398	-	-	1383	-	-	831
HCM Lane V/C Ratio	0.03	-	-	-	-	-	0.093
HCM Control Delay (s)	7.7	0	-	0	-	-	9.8
HCM Lane LOS	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	7.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	74	69	72	170	197	32
Future Vol, veh/h	74	69	72	170	197	32
Conflicting Peds, #/hr	4	0	0	4	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	83	78	81	191	221	36

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	276	0	-	0	425	182
Stage 1	-	-	-	-	181	-
Stage 2	-	-	-	-	244	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1287	-	-	-	586	861
Stage 1	-	-	-	-	850	-
Stage 2	-	-	-	-	797	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1282	-	-	-	542	857
Mov Cap-2 Maneuver	-	-	-	-	542	-
Stage 1	-	-	-	-	789	-
Stage 2	-	-	-	-	794	-

Approach	EB	WB	SB
HCM Control Delay, s	4.1	0	16.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1282	-	-	-	571
HCM Lane V/C Ratio	0.065	-	-	-	0.451
HCM Control Delay (s)	8	0	-	-	16.4
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	2.3

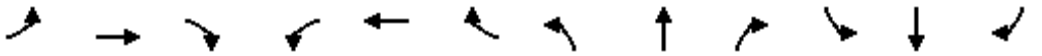
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	77	0
Future Vol, veh/h	0	0	0	0	77	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	-	-
Veh in Median Storage, #	0	-	16974	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	88	0

Major/Minor	Minor1		Major2	
Conflicting Flow All	176	-	0	0
Stage 1	0	-	-	-
Stage 2	176	-	-	-
Critical Hdwy	6.42	-	4.12	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-
Follow-up Hdwy	3.518	-	2.218	-
Pot Cap-1 Maneuver	814	0	-	-
Stage 1	-	0	-	-
Stage 2	855	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	814	-	-	-
Mov Cap-2 Maneuver	814	-	-	-
Stage 1	-	-	-	-
Stage 2	855	-	-	-

Approach	WB	SB
HCM Control Delay, s	0	
HCM LOS	A	

Minor Lane/Major Mvmt	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	0	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	-	-	-



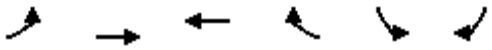
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	144	194	10	92	338	273	0	0	0	136	64	183
Future Volume (vph)	144	194	10	92	338	273	0	0	0	136	64	183
Lane Util. Factor	1.00	0.95	0.95	0.97	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		0.98	0.99						1.00	0.97
Frt		0.992			0.933							0.850
Flt Protected	0.950			0.950							0.967	
Satd. Flow (prot)	1770	3507	0	3433	3265	0	0	0	0	0	1801	1583
Flt Permitted	0.379			0.950							0.967	
Satd. Flow (perm)	705	3507	0	3364	3265	0	0	0	0	0	1793	1531
Satd. Flow (RTOR)		7			266							174
Confl. Peds. (#/hr)	4		11	11		4				5		17
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	153	217	0	98	650	0	0	0	0	0	213	195
Turn Type	pm+pt	NA		Prot	NA					Split	NA	Perm
Protected Phases	1	2		1	2					4	4	
Permitted Phases	2											4
Detector Phase	1	2		1	2					4	4	4
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0					7.0	7.0	7.0
Minimum Split (s)	9.0	15.5		9.0	15.5					12.0	12.0	12.0
Total Split (s)	23.0	40.0		23.0	40.0					26.0	26.0	26.0
Total Split (%)	25.8%	44.9%		25.8%	44.9%					29.2%	29.2%	29.2%
Maximum Green (s)	18.0	34.5		18.0	34.5					21.0	21.0	21.0
Yellow Time (s)	4.0	4.0		4.0	4.0					4.0	4.0	4.0
All-Red Time (s)	1.0	1.5		1.0	1.5					1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0						0.0	0.0
Total Lost Time (s)	5.0	5.5		5.0	5.5						5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	2.0	2.0		2.0	2.0					2.0	2.0	2.0
Recall Mode	None	C-Max		None	C-Max					None	None	None
Act Effct Green (s)	59.1	51.5		7.1	51.5						14.9	14.9
Actuated g/C Ratio	0.66	0.58		0.08	0.58						0.17	0.17
v/c Ratio	0.28	0.11		0.36	0.32						0.71	0.49
Control Delay	6.0	9.5		42.0	6.7						47.3	11.0
Queue Delay	0.0	0.0		0.0	0.7						0.0	0.0
Total Delay	6.0	9.5		42.0	7.4						47.3	11.0
LOS	A	A		D	A						D	B
Approach Delay		8.1			12.0						29.9	
Approach LOS		A			B						C	
Queue Length 50th (ft)	22	25		27	50						114	10
Queue Length 95th (ft)	51	53		50	102						173	63
Internal Link Dist (ft)		516			188			218			576	
Turn Bay Length (ft)	50											65
Base Capacity (vph)	722	2032		694	2001						424	494
Starvation Cap Reductn	0	0		0	959						0	0
Spillback Cap Reductn	0	0		0	0						0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0						0	0
Reduced v/c Ratio	0.21	0.11		0.14	0.62						0.50	0.39

Intersection Summary	
Cycle Length: 89	
Actuated Cycle Length: 89	
Offset: 0 (0%), Referenced to phase 2:EBWB, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 15.8	Intersection LOS: B
Intersection Capacity Utilization 50.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: Central Street & Summit Hill Drive

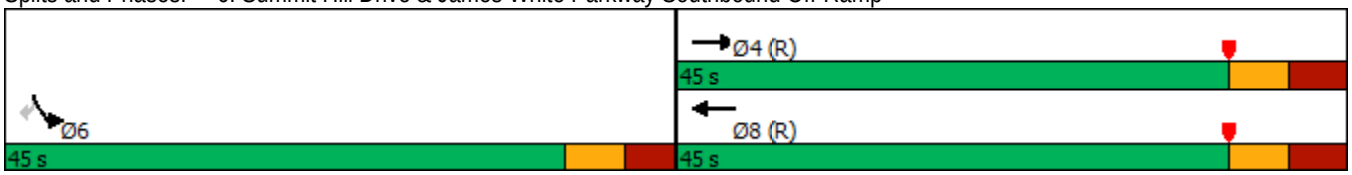




Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	330	292	0	270	411
Future Volume (vph)	0	330	292	0	270	411
Lane Util. Factor	1.00	0.91	0.95	1.00	1.00	0.88
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	5085	3539	0	1770	2787
Flt Permitted					0.950	
Satd. Flow (perm)	0	5085	3539	0	1770	2787
Satd. Flow (RTOR)						437
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	351	311	0	287	437
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		10.0	10.0		7.0	7.0
Minimum Split (s)		18.0	18.0		14.5	14.5
Total Split (s)		45.0	45.0		45.0	45.0
Total Split (%)		50.0%	50.0%		50.0%	50.0%
Maximum Green (s)		37.0	37.0		37.5	37.5
Yellow Time (s)		4.0	4.0		4.0	4.0
All-Red Time (s)		4.0	4.0		3.5	3.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0
Total Lost Time (s)		8.0	8.0		7.5	7.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		5.0	2.0		5.0	5.0
Recall Mode		C-Max	C-Max		None	None
Act Effct Green (s)		51.0	51.0		23.5	23.5
Actuated g/C Ratio		0.57	0.57		0.26	0.26
v/c Ratio		0.12	0.16		0.62	0.42
Control Delay		10.3	10.7		34.4	3.5
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		10.3	10.7		34.4	3.5
LOS		B	B		C	A
Approach Delay		10.3	10.7		15.7	
Approach LOS		B	B		B	
Queue Length 50th (ft)		31	41		144	0
Queue Length 95th (ft)		57	77		196	32
Internal Link Dist (ft)		188	373		516	
Turn Bay Length (ft)						250
Base Capacity (vph)		2882	2006		737	1416
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.12	0.16		0.39	0.31

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 52 (58%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 13.2	Intersection LOS: B
Intersection Capacity Utilization 36.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Summit Hill Drive & James White Parkway Southbound Off-Ramp

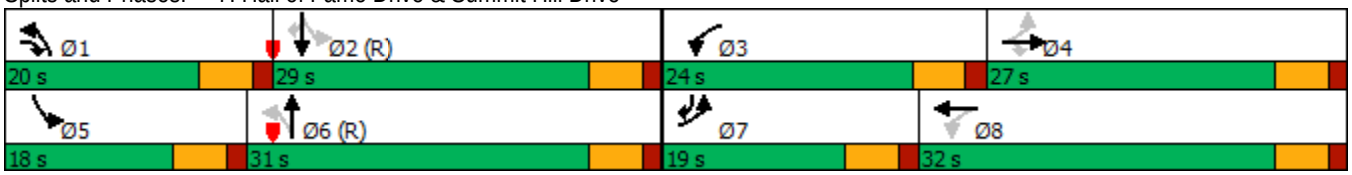


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	337	205	303	152	210	30	136	63	146	156	107
Future Volume (vph)	63	337	205	303	152	210	30	136	63	146	156	107
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00				0.99			1.00		1.00		
Frt			0.850		0.913			0.952				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3194	0	1770	3355	0	1770	3539	1583
Flt Permitted	0.528			0.273			0.649			0.567		
Satd. Flow (perm)	980	3539	1583	509	3194	0	1209	3355	0	1056	3539	1583
Satd. Flow (RTOR)			214		219			66				111
Confl. Peds. (#/hr)	7					7			1	1		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)												
Lane Group Flow (vph)	66	351	214	316	377	0	31	208	0	152	163	111
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	7	4	1	3	8		1	6		5	2	7
Permitted Phases	4		4	8			6			2		2
Detector Phase	7	4	1	3	8		1	6		5	2	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0		5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5		10.5	15.5	10.5
Total Split (s)	19.0	27.0	20.0	24.0	32.0		20.0	31.0		18.0	29.0	19.0
Total Split (%)	19.0%	27.0%	20.0%	24.0%	32.0%		20.0%	31.0%		18.0%	29.0%	19.0%
Maximum Green (s)	13.5	21.5	14.5	18.5	26.5		14.5	25.5		12.5	23.5	13.5
Yellow Time (s)	4.0	4.0	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	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		2.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	None
Act Effct Green (s)	21.1	14.3	25.4	36.7	24.3		43.2	37.6		50.3	41.2	53.6
Actuated g/C Ratio	0.21	0.14	0.25	0.37	0.24		0.43	0.38		0.50	0.41	0.54
v/c Ratio	0.25	0.70	0.38	0.79	0.40		0.06	0.16		0.26	0.11	0.12
Control Delay	22.9	48.1	5.9	38.7	13.5		21.5	26.4		21.8	25.6	3.9
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	22.9	48.1	5.9	38.7	13.5		21.5	26.4		21.8	25.6	3.9
LOS	C	D	A	D	B		C	C		C	C	A
Approach Delay		31.2			25.0			25.8			18.6	
Approach LOS		C			C			C			B	
Queue Length 50th (ft)	27	113	0	149	41		14	42		54	31	0
Queue Length 95th (ft)	51	154	51	212	78		37	78		157	85	16
Internal Link Dist (ft)		373			335			424			335	
Turn Bay Length (ft)				165			230			165		60
Base Capacity (vph)	378	760	683	420	1017		699	1302		642	1458	997
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.17	0.46	0.31	0.75	0.37		0.04	0.16		0.24	0.11	0.11

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 50 (50%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 25.7	Intersection LOS: C
Intersection Capacity Utilization 60.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 7: Hall of Fame Drive & Summit Hill Drive



Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	259	291	400	51	63	238
Future Vol, veh/h	259	291	400	51	63	238
Conflicting Peds, #/hr	7	0	0	7	6	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	267	300	412	53	65	245

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	472	0	-	0	1136	241
Stage 1	-	-	-	-	446	-
Stage 2	-	-	-	-	690	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1086	-	-	-	196	760
Stage 1	-	-	-	-	612	-
Stage 2	-	-	-	-	459	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1079	-	-	-	145	754
Mov Cap-2 Maneuver	-	-	-	-	145	-
Stage 1	-	-	-	-	458	-
Stage 2	-	-	-	-	456	-

Approach	EB	WB	SB
HCM Control Delay, s	4.4	0	14.3
HCM LOS			B

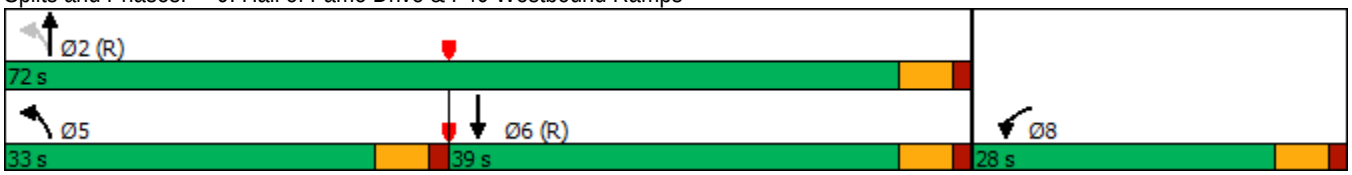
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1079	-	-	-	693
HCM Lane V/C Ratio	0.247	-	-	-	0.448
HCM Control Delay (s)	9.4	-	-	-	14.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	1	-	-	-	2.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	167	0	88	310	581	0	0	357	326
Future Volume (vph)	0	0	0	167	0	88	310	581	0	0	357	326
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor							1.00				0.99	
Frt						0.850					0.928	
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	0	0	3433	0	1583	1770	3539	0	0	3251	0
Flt Permitted				0.950			0.334					
Satd. Flow (perm)	0	0	0	3433	0	1583	622	3539	0	0	3251	0
Satd. Flow (RTOR)						147					250	
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	170	0	90	316	593	0	0	697	0
Turn Type				Prot		Free	pm+pt	NA			NA	
Protected Phases				8			5	2			6	
Permitted Phases						Free	2					
Detector Phase				8			5	2			6	
Switch Phase												
Minimum Initial (s)				5.0			5.0	10.0			10.0	
Minimum Split (s)				10.5			10.5	15.5			15.5	
Total Split (s)				28.0			33.0	72.0			39.0	
Total Split (%)				28.0%			33.0%	72.0%			39.0%	
Maximum Green (s)				22.5			27.5	66.5			33.5	
Yellow Time (s)				4.0			4.0	4.0			4.0	
All-Red Time (s)				1.5			1.5	1.5			1.5	
Lost Time Adjust (s)				0.0			0.0	0.0			0.0	
Total Lost Time (s)				5.5			5.5	5.5			5.5	
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)				3.0			2.0	2.0			2.0	
Recall Mode				None			None	C-Max			C-Max	
Act Effct Green (s)				10.3		100.0	78.7	78.7			63.4	
Actuated g/C Ratio				0.10		1.00	0.79	0.79			0.63	
v/c Ratio				0.48		0.06	0.53	0.21			0.32	
Control Delay				46.6		0.1	9.2	1.7			6.1	
Queue Delay				0.0		0.0	0.0	0.0			0.0	
Total Delay				46.6		0.1	9.2	1.7			6.1	
LOS				D		A	A	A			A	
Approach Delay					30.5			4.3			6.1	
Approach LOS					C			A			A	
Queue Length 50th (ft)				53		0	27	24			56	
Queue Length 95th (ft)				84		0	84	12			110	
Internal Link Dist (ft)		440			577			562			692	
Turn Bay Length (ft)				475		200	155					
Base Capacity (vph)				772		1583	805	2785			2153	
Starvation Cap Reductn				0		0	0	0			0	
Spillback Cap Reductn				0		0	0	0			0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn				0		0	0	0			0	
Reduced v/c Ratio				0.22		0.06	0.39	0.21			0.32	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 30 (30%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 45	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.53	
Intersection Signal Delay: 8.6	Intersection LOS: A
Intersection Capacity Utilization 56.1%	ICU Level of Service B
Analysis Period (min) 15	

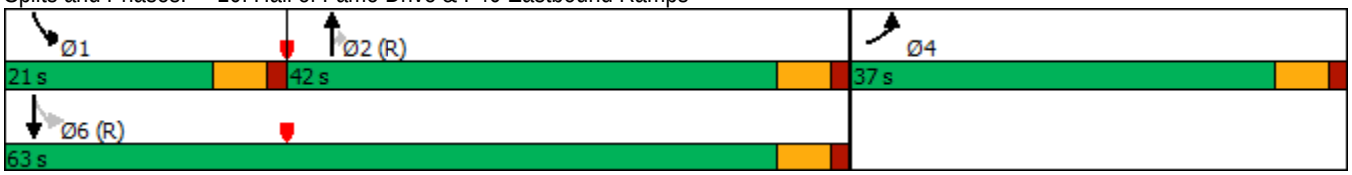
Splits and Phases: 9: Hall of Fame Drive & I-40 Westbound Ramps



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	261	0	332	0	0	0	0	632	222	54	473	0
Future Volume (vph)	261	0	332	0	0	0	0	632	222	54	473	0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850						0.850			
Flt Protected	0.950									0.950		
Satd. Flow (prot)	3433	0	1583	0	0	0	0	3539	1583	1770	3539	0
Flt Permitted	0.950									0.360		
Satd. Flow (perm)	3433	0	1583	0	0	0	0	3539	1583	671	3539	0
Satd. Flow (RTOR)			342						229			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	269	0	342	0	0	0	0	652	229	56	488	0
Turn Type	Prot		Free					NA	Perm	pm+pt	NA	
Protected Phases	4							2		1	6	
Permitted Phases			Free						2	6		
Detector Phase	4							2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0							10.0	10.0	5.0	10.0	
Minimum Split (s)	22.5							22.5	22.5	10.5	22.5	
Total Split (s)	37.0							42.0	42.0	21.0	63.0	
Total Split (%)	37.0%							42.0%	42.0%	21.0%	63.0%	
Maximum Green (s)	31.5							36.5	36.5	15.5	57.5	
Yellow Time (s)	4.0							4.0	4.0	4.0	4.0	
All-Red Time (s)	1.5							1.5	1.5	1.5	1.5	
Lost Time Adjust (s)	0.0							0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5							5.5	5.5	5.5	5.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	2.0							2.0	2.0	2.0	2.0	
Recall Mode	None							C-Max	C-Max	None	C-Max	
Act Effct Green (s)	12.6		100.0					67.6	67.6	76.4	76.4	
Actuated g/C Ratio	0.13		1.00					0.68	0.68	0.76	0.76	
v/c Ratio	0.62		0.22					0.27	0.20	0.10	0.18	
Control Delay	47.9		0.3					8.2	3.6	1.4	1.2	
Queue Delay	0.0		0.0					0.0	0.0	0.0	0.0	
Total Delay	47.9		0.3					8.2	3.6	1.4	1.2	
LOS	D		A					A	A	A	A	
Approach Delay		21.2						7.0			1.3	
Approach LOS		C						A			A	
Queue Length 50th (ft)	85		0					53	0	2	10	
Queue Length 95th (ft)	122		0					171	71	5	14	
Internal Link Dist (ft)		686			892			546			562	
Turn Bay Length (ft)	200		210						290	190		
Base Capacity (vph)	1081		1583					2392	1144	683	2705	
Starvation Cap Reductn	0		0					0	0	0	0	
Spillback Cap Reductn	0		0					0	0	0	0	
Storage Cap Reductn	0		0					0	0	0	0	
Reduced v/c Ratio	0.25		0.22					0.27	0.20	0.08	0.18	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 50 (50%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 9.7	Intersection LOS: A
Intersection Capacity Utilization 56.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 10: Hall of Fame Drive & I-40 Eastbound Ramps

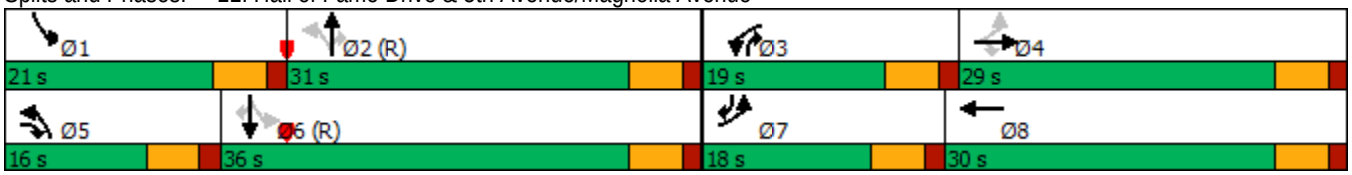


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	206	21	78	203	236	30	346	86	253	331	62
Future Volume (vph)	72	206	21	78	203	236	30	346	86	253	331	62
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor							1.00		0.99	1.00		0.99
Frt			0.850		0.919				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3253	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.261			0.950			0.539			0.451		
Satd. Flow (perm)	486	3539	1583	3433	3253	0	1004	3539	1563	840	3539	1563
Satd. Flow (RTOR)			87		254				92			87
Confl. Peds. (#/hr)							1		1	1		1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	77	222	23	84	472	0	32	372	92	272	356	67
Turn Type	pm+pt	NA	pm+ov	Prot	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4				2		2	6		6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0	5.0	5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5	10.5	10.5	15.5	10.5
Total Split (s)	18.0	29.0	16.0	19.0	30.0		16.0	31.0	19.0	21.0	36.0	18.0
Total Split (%)	18.0%	29.0%	16.0%	19.0%	30.0%		16.0%	31.0%	19.0%	21.0%	36.0%	18.0%
Maximum Green (s)	12.5	23.5	10.5	13.5	24.5		10.5	25.5	13.5	15.5	30.5	12.5
Yellow Time (s)	4.0	4.0	4.0	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	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	None	None	C-Max	None
Act Effct Green (s)	23.0	14.2	26.0	7.8	15.4		49.3	43.0	50.8	61.5	54.1	63.0
Actuated g/C Ratio	0.23	0.14	0.26	0.08	0.15		0.49	0.43	0.51	0.62	0.54	0.63
v/c Ratio	0.34	0.44	0.05	0.31	0.66		0.06	0.24	0.11	0.43	0.19	0.07
Control Delay	29.6	41.0	0.2	46.2	22.8		13.7	22.7	3.3	10.9	13.1	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.6	41.0	0.2	46.2	22.8		13.7	22.7	3.3	10.9	13.1	2.1
LOS	C	D	A	D	C		B	C	A	B	B	A
Approach Delay		35.4			26.4			18.5			11.2	
Approach LOS		D			C			B			B	
Queue Length 50th (ft)	37	69	0	26	69		6	84	0	56	71	0
Queue Length 95th (ft)	65	97	0	49	116		25	167	34	150	105	6
Internal Link Dist (ft)		674			634			359			1142	
Turn Bay Length (ft)	245		35	295			230		245	175		175
Base Capacity (vph)	289	831	538	463	988		617	1522	926	667	1915	1072
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.27	0.04	0.18	0.48		0.05	0.24	0.10	0.41	0.19	0.06

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 50 (50%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 20.8	Intersection LOS: C
Intersection Capacity Utilization 59.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 11: Hall of Fame Drive & 5th Avenue/Magnolia Avenue

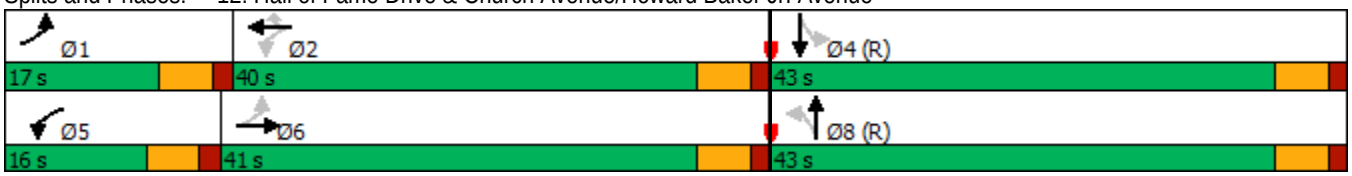


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	44	14	7	32	52	14	110	21	39	124	35
Future Volume (vph)	86	44	14	7	32	52	14	110	21	39	124	35
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor	0.99	1.00		1.00		0.97						
Frt		0.964				0.850		0.978			0.974	
Flt Protected	0.950			0.950				0.995			0.990	
Satd. Flow (prot)	1770	1789	0	1770	1863	1583	0	3444	0	0	3413	0
Flt Permitted	0.462			0.719				0.927			0.880	
Satd. Flow (perm)	852	1789	0	1336	1863	1541	0	3209	0	0	3034	0
Satd. Flow (RTOR)		14				87		22			29	
Confl. Peds. (#/hr)	17		4	4		17						
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	89	59	0	7	33	54	0	149	0	0	204	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6			2		2	8			4		
Detector Phase	1	6		5	2	2	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0	7.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	10.5	22.5		10.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	17.0	41.0		16.0	40.0	40.0	43.0	43.0		43.0	43.0	
Total Split (%)	17.0%	41.0%		16.0%	40.0%	40.0%	43.0%	43.0%		43.0%	43.0%	
Maximum Green (s)	11.5	35.5		10.5	34.5	34.5	37.5	37.5		37.5	37.5	
Yellow Time (s)	4.0	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	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5	5.5		5.5			5.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)	18.9	17.1		11.1	7.3	7.3		73.3			73.3	
Actuated g/C Ratio	0.19	0.17		0.11	0.07	0.07		0.73			0.73	
v/c Ratio	0.37	0.19		0.04	0.24	0.28		0.06			0.09	
Control Delay	36.6	29.4		30.1	48.0	7.3		5.0			3.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Delay	36.6	29.4		30.1	48.0	7.3		5.0			3.4	
LOS	D	C		C	D	A		A			A	
Approach Delay		33.7			23.3			5.0			3.4	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)	47	23		4	20	0		12			15	
Queue Length 95th (ft)	86	64		14	50	16		26			m21	
Internal Link Dist (ft)		488			887			548			1120	
Turn Bay Length (ft)	60			130								
Base Capacity (vph)	277	644		265	642	588		2358			2232	
Starvation Cap Reductn	0	0		0	0	0		0			0	
Spillback Cap Reductn	0	0		0	0	0		0			0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0	0		0			0	
Reduced v/c Ratio	0.32	0.09		0.03	0.05	0.09		0.06			0.09	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 4 (4%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.37	
Intersection Signal Delay: 14.5	Intersection LOS: B
Intersection Capacity Utilization 41.8%	ICU Level of Service A
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 12: Hall of Fame Drive & Church Avenue/Howard Baker Jr. Avenue



Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	311	0	0	221	0	0
Future Vol, veh/h	311	0	0	221	0	0
Conflicting Peds, #/hr	0	463	463	0	1	463
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	327	0	0	233	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	790	0	1024	1253
Stage 1	-	-	-	-	790	-
Stage 2	-	-	-	-	234	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	830	-	261	210
Stage 1	-	-	-	-	447	-
Stage 2	-	-	-	-	805	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	464	-	146	66
Mov Cap-2 Maneuver	-	-	-	-	146	-
Stage 1	-	-	-	-	250	-
Stage 2	-	-	-	-	804	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	464	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕						↕	
Traffic Vol, veh/h	80	81	79	0	134	10	0	0	0	5	7	49
Future Vol, veh/h	80	81	79	0	134	10	0	0	0	5	7	49
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	91	92	90	0	152	11	0	0	0	6	8	56

Major/Minor	Major1			Major2					Minor2		
Conflicting Flow All	163	0	0	183	0	0			477	523	159
Stage 1	-	-	-	-	-	-			158	158	-
Stage 2	-	-	-	-	-	-			319	365	-
Critical Hdwy	4.12	-	-	4.12	-	-			6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-			5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-			5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-			3.518	4.018	3.318
Pot Cap-1 Maneuver	1416	-	-	1392	-	-			547	459	886
Stage 1	-	-	-	-	-	-			871	767	-
Stage 2	-	-	-	-	-	-			737	623	-
Platoon blocked, %		-	-		-	-					
Mov Cap-1 Maneuver	1416	-	-	1392	-	-			508	0	885
Mov Cap-2 Maneuver	-	-	-	-	-	-			508	0	-
Stage 1	-	-	-	-	-	-			808	0	-
Stage 2	-	-	-	-	-	-			737	0	-

Approach	EB	WB	SB
HCM Control Delay, s	2.6	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1416	-	-	1392	-	-	828
HCM Lane V/C Ratio	0.064	-	-	-	-	-	0.084
HCM Control Delay (s)	7.7	0	-	0	-	-	9.7
HCM Lane LOS	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	8.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	138	157	6	10	0
Future Vol, veh/h	6	138	157	6	10	0
Conflicting Peds, #/hr	416	0	0	416	1235	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	155	176	7	11	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	599	0	-	0	2000	597
Stage 1	-	-	-	-	596	-
Stage 2	-	-	-	-	1404	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	978	-	-	-	66	503
Stage 1	-	-	-	-	550	-
Stage 2	-	-	-	-	227	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	591	-	-	-	24	303
Mov Cap-2 Maneuver	-	-	-	-	24	-
Stage 1	-	-	-	-	328	-
Stage 2	-	-	-	-	137	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	249.6
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	591	-	-	-	24
HCM Lane V/C Ratio	0.011	-	-	-	0.468
HCM Control Delay (s)	11.2	0	-	-	249.6
HCM Lane LOS	B	A	-	-	F
HCM 95th %tile Q(veh)	0	-	-	-	1.4

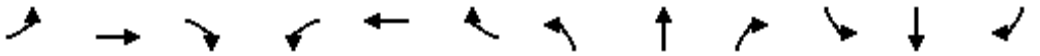
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	77	0
Future Vol, veh/h	0	0	0	0	77	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	-	-
Veh in Median Storage, #	0	-	16974	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	88	0

Major/Minor	Minor1		Major2	
Conflicting Flow All	176	-	0	0
Stage 1	0	-	-	-
Stage 2	176	-	-	-
Critical Hdwy	6.42	-	4.12	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-
Follow-up Hdwy	3.518	-	2.218	-
Pot Cap-1 Maneuver	814	0	-	-
Stage 1	-	0	-	-
Stage 2	855	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	814	-	-	-
Mov Cap-2 Maneuver	814	-	-	-
Stage 1	-	-	-	-
Stage 2	855	-	-	-

Approach	WB	SB
HCM Control Delay, s	0	
HCM LOS	A	

Minor Lane/Major Mvmt	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	0	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	-	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	179	160	10	152	443	420	0	0	0	218	64	238
Future Volume (vph)	179	160	10	152	443	420	0	0	0	218	64	238
Lane Util. Factor	1.00	0.95	0.95	0.97	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.92	1.00		0.98	0.75						0.69	0.97
Frt		0.991			0.927							0.850
Flt Protected	0.950			0.950							0.963	
Satd. Flow (prot)	1770	3503	0	3433	2455	0	0	0	0	0	1794	1583
Flt Permitted	0.243			0.950							0.963	
Satd. Flow (perm)	414	3503	0	3360	2455	0	0	0	0	0	1241	1531
Satd. Flow (RTOR)		9			314							161
Confl. Peds. (#/hr)	416		11	11		416				622		17
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	190	181	0	162	918	0	0	0	0	0	300	253
Turn Type	pm+pt	NA		Prot	NA					Split	NA	Perm
Protected Phases	1	2		1	2					4	4	
Permitted Phases	2											4
Detector Phase	1	2		1	2					4	4	4
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0					7.0	7.0	7.0
Minimum Split (s)	9.0	15.5		9.0	15.5					12.0	12.0	12.0
Total Split (s)	23.0	40.0		23.0	40.0					26.0	26.0	26.0
Total Split (%)	25.8%	44.9%		25.8%	44.9%					29.2%	29.2%	29.2%
Maximum Green (s)	18.0	34.5		18.0	34.5					21.0	21.0	21.0
Yellow Time (s)	4.0	4.0		4.0	4.0					4.0	4.0	4.0
All-Red Time (s)	1.0	1.5		1.0	1.5					1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0						0.0	0.0
Total Lost Time (s)	5.0	5.5		5.0	5.5						5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	2.0	2.0		2.0	2.0					2.0	2.0	2.0
Recall Mode	None	C-Max		None	C-Max					None	None	None
Act Effct Green (s)	55.9	46.3		9.1	46.3						18.1	18.1
Actuated g/C Ratio	0.63	0.52		0.10	0.52						0.20	0.20
v/c Ratio	0.48	0.10		0.46	0.64						0.82	0.58
Control Delay	10.0	11.8		41.3	13.1						52.8	17.3
Queue Delay	0.0	0.0		0.0	2.7						0.0	0.0
Total Delay	10.0	11.8		41.3	15.8						52.8	17.3
LOS	A	B		D	B						D	B
Approach Delay		10.9			19.6						36.5	
Approach LOS		B			B						D	
Queue Length 50th (ft)	35	24		45	121						159	43
Queue Length 95th (ft)	63	48		71	221						#253	115
Internal Link Dist (ft)		516			188			218			576	
Turn Bay Length (ft)	50											65
Base Capacity (vph)	557	1828		694	1428						423	484
Starvation Cap Reductn	0	0		0	378						0	0
Spillback Cap Reductn	0	0		0	0						0	0

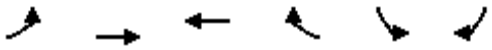
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0						0	0
Reduced v/c Ratio	0.34	0.10		0.23	0.87						0.71	0.52

Intersection Summary	
Cycle Length: 89	
Actuated Cycle Length: 89	
Offset: 0 (0%), Referenced to phase 2:EBWB, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 22.7	Intersection LOS: C
Intersection Capacity Utilization 68.6%	ICU Level of Service C
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Central Street & Summit Hill Drive





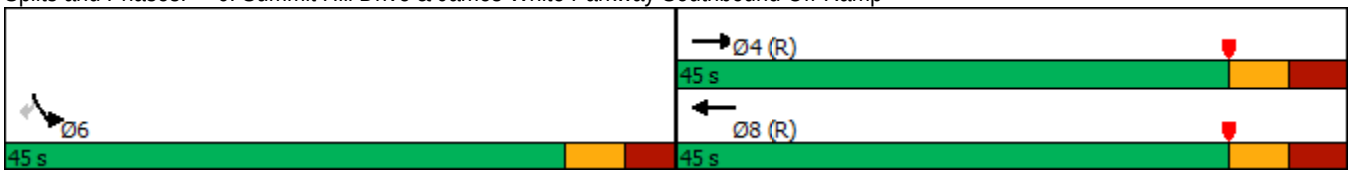
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	295	365	0	848	650
Future Volume (vph)	0	295	365	0	848	650
Lane Util. Factor	1.00	0.91	0.95	1.00	1.00	0.88
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	5085	3539	0	1770	2787
Flt Permitted					0.950	
Satd. Flow (perm)	0	5085	3539	0	1770	2787
Satd. Flow (RTOR)						565
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	314	388	0	902	691
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		10.0	10.0		7.0	7.0
Minimum Split (s)		18.0	18.0		14.5	14.5
Total Split (s)		45.0	45.0		45.0	45.0
Total Split (%)		50.0%	50.0%		50.0%	50.0%
Maximum Green (s)		37.0	37.0		37.5	37.5
Yellow Time (s)		4.0	4.0		4.0	4.0
All-Red Time (s)		4.0	4.0		3.5	3.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0
Total Lost Time (s)		8.0	8.0		7.5	7.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		5.0	2.0		5.0	5.0
Recall Mode		C-Max	C-Max		None	None
Act Effct Green (s)		37.0	37.0		37.5	37.5
Actuated g/C Ratio		0.41	0.41		0.42	0.42
v/c Ratio		0.15	0.27		1.22	0.46
Control Delay		16.9	18.2		139.4	4.6
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		16.9	18.2		139.4	4.6
LOS		B	B		F	A
Approach Delay		16.9	18.2		80.9	
Approach LOS		B	B		F	
Queue Length 50th (ft)		39	74		~637	24
Queue Length 95th (ft)		58	107		#866	62
Internal Link Dist (ft)		188	373		516	
Turn Bay Length (ft)						250
Base Capacity (vph)		2090	1454		737	1490
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.15	0.27		1.22	0.46

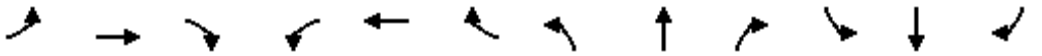
Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 52 (58%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.22	
Intersection Signal Delay: 61.6	Intersection LOS: E
Intersection Capacity Utilization 70.0%	ICU Level of Service C
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Summit Hill Drive & James White Parkway Southbound Off-Ramp





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	262	875	232	182	166	55	143	31	140	300	126
Future Volume (vph)	105	262	875	232	182	166	55	143	31	140	300	126
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00				0.99			0.92		0.71		
Frt			0.850		0.929			0.973				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3257	0	1770	3177	0	1770	3539	1583
Flt Permitted	0.535			0.331			0.412			0.638		
Satd. Flow (perm)	993	3539	1583	617	3257	0	767	3177	0	840	3539	1583
Satd. Flow (RTOR)			249		173			25				131
Confl. Peds. (#/hr)	7					7			824	824		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)												
Lane Group Flow (vph)	109	273	911	242	363	0	57	181	0	146	313	131
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	7	4	1	3	8		1	6		5	2	7
Permitted Phases	4		4	8			6			2		2
Detector Phase	7	4	1	3	8		1	6		5	2	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0		5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5		10.5	15.5	10.5
Total Split (s)	19.0	27.0	20.0	24.0	32.0		20.0	31.0		18.0	29.0	19.0
Total Split (%)	19.0%	27.0%	20.0%	24.0%	32.0%		20.0%	31.0%		18.0%	29.0%	19.0%
Maximum Green (s)	13.5	21.5	14.5	18.5	26.5		14.5	25.5		12.5	23.5	13.5
Yellow Time (s)	4.0	4.0	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	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		2.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	None
Act Effct Green (s)	20.8	12.1	44.9	32.4	18.4		56.4	42.2		32.2	23.5	37.8
Actuated g/C Ratio	0.21	0.12	0.45	0.32	0.18		0.56	0.42		0.32	0.24	0.38
v/c Ratio	0.40	0.64	1.07	0.65	0.49		0.08	0.13		0.42	0.38	0.19
Control Delay	27.8	48.7	74.8	33.8	20.4		19.6	27.8		25.1	40.8	4.7
Queue Delay	0.0	0.0	10.7	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	27.8	48.7	85.5	33.8	20.4		19.6	27.8		25.1	40.8	4.7
LOS	C	D	F	C	C		B	C		C	D	A
Approach Delay		72.9			25.8			25.8			28.9	
Approach LOS		E			C			C			C	
Queue Length 50th (ft)	49	88	~560	118	55		24	42		39	61	5
Queue Length 95th (ft)	81	126	#823	168	95		57	77		158	152	9
Internal Link Dist (ft)		373			335			424			335	
Turn Bay Length (ft)				165			230			165		60
Base Capacity (vph)	358	760	848	414	990		706	1355		418	831	748
Starvation Cap Reductn	0	0	70	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0

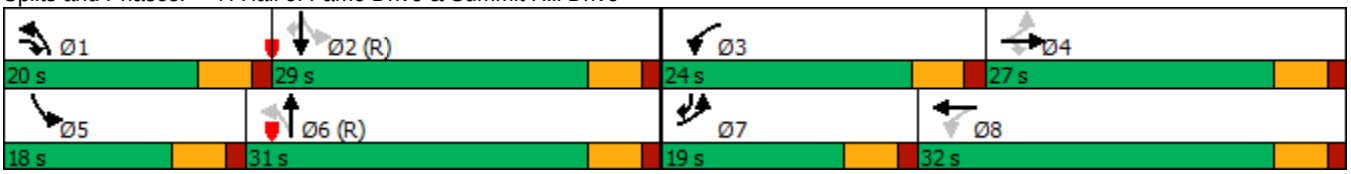
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.30	0.36	1.17	0.58	0.37		0.08	0.13		0.35	0.38	0.18

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 50 (50%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.07	
Intersection Signal Delay: 48.8	Intersection LOS: D
Intersection Capacity Utilization 89.1%	ICU Level of Service E
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Hall of Fame Drive & Summit Hill Drive



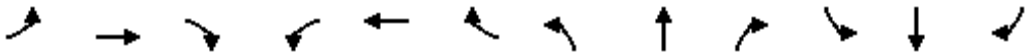
Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	145	304	428	40	22	124
Future Vol, veh/h	145	304	428	40	22	124
Conflicting Peds, #/hr	7	0	0	7	6	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	149	313	441	41	23	128

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	489	0	-	0	930	249
Stage 1	-	-	-	-	469	-
Stage 2	-	-	-	-	461	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1070	-	-	-	266	751
Stage 1	-	-	-	-	596	-
Stage 2	-	-	-	-	601	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1063	-	-	-	226	745
Mov Cap-2 Maneuver	-	-	-	-	226	-
Stage 1	-	-	-	-	509	-
Stage 2	-	-	-	-	597	-

Approach	EB	WB	SB
HCM Control Delay, s	2.9	0	10
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1063	-	-	-	877
HCM Lane V/C Ratio	0.141	-	-	-	0.172
HCM Control Delay (s)	8.9	-	-	-	10
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.5	-	-	-	0.6

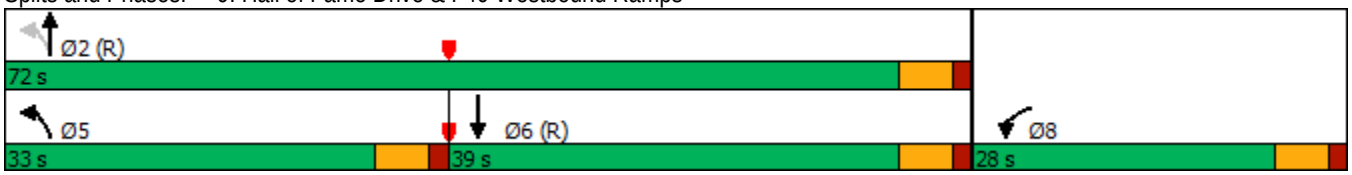


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	167	0	88	345	581	0	0	522	326
Future Volume (vph)	0	0	0	167	0	88	345	581	0	0	522	326
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor							1.00				0.99	
Frt						0.850					0.942	
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	0	0	3433	0	1583	1770	3539	0	0	3306	0
Flt Permitted				0.950			0.255					
Satd. Flow (perm)	0	0	0	3433	0	1583	475	3539	0	0	3306	0
Satd. Flow (RTOR)						147					147	
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	170	0	90	352	593	0	0	866	0
Turn Type				Prot		Free	pm+pt	NA			NA	
Protected Phases				8			5	2			6	
Permitted Phases						Free	2					
Detector Phase				8			5	2			6	
Switch Phase												
Minimum Initial (s)				5.0			5.0	10.0			10.0	
Minimum Split (s)				10.5			10.5	15.5			15.5	
Total Split (s)				28.0			33.0	72.0			39.0	
Total Split (%)				28.0%			33.0%	72.0%			39.0%	
Maximum Green (s)				22.5			27.5	66.5			33.5	
Yellow Time (s)				4.0			4.0	4.0			4.0	
All-Red Time (s)				1.5			1.5	1.5			1.5	
Lost Time Adjust (s)				0.0			0.0	0.0			0.0	
Total Lost Time (s)				5.5			5.5	5.5			5.5	
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)				3.0			2.0	2.0			2.0	
Recall Mode				None			None	C-Max			C-Max	
Act Effct Green (s)				10.3		100.0	78.7	78.7			58.4	
Actuated g/C Ratio				0.10		1.00	0.79	0.79			0.58	
v/c Ratio				0.48		0.06	0.62	0.21			0.43	
Control Delay				46.6		0.1	14.4	1.7			11.5	
Queue Delay				0.0		0.0	0.0	0.0			0.0	
Total Delay				46.6		0.1	14.4	1.7			11.5	
LOS				D		A	B	A			B	
Approach Delay					30.5			6.4			11.5	
Approach LOS					C			A			B	
Queue Length 50th (ft)				53		0	15	9			121	
Queue Length 95th (ft)				84		0	138	12			223	
Internal Link Dist (ft)		440			577			562			692	
Turn Bay Length (ft)				475		200	155					
Base Capacity (vph)				772		1583	729	2785			1992	
Starvation Cap Reductn				0		0	0	0			0	
Spillback Cap Reductn				0		0	0	0			0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn				0		0	0	0			0	
Reduced v/c Ratio				0.22		0.06	0.48	0.21			0.43	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 30 (30%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 11.6	Intersection LOS: B
Intersection Capacity Utilization 62.5%	ICU Level of Service B
Analysis Period (min) 15	

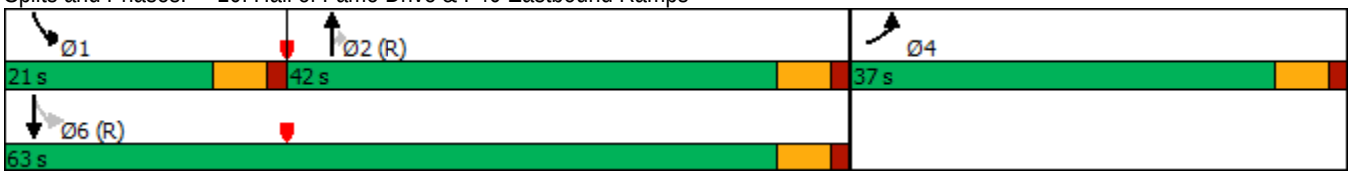
Splits and Phases: 9: Hall of Fame Drive & I-40 Westbound Ramps



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	261	0	332	0	0	0	0	666	203	54	638	0
Future Volume (vph)	261	0	332	0	0	0	0	666	203	54	638	0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850						0.850			
Flt Protected	0.950									0.950		
Satd. Flow (prot)	3433	0	1583	0	0	0	0	3539	1583	1770	3539	0
Flt Permitted	0.950									0.345		
Satd. Flow (perm)	3433	0	1583	0	0	0	0	3539	1583	643	3539	0
Satd. Flow (RTOR)			342						209			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	269	0	342	0	0	0	0	687	209	56	658	0
Turn Type	Prot		Free					NA	Perm	pm+pt	NA	
Protected Phases	4							2		1	6	
Permitted Phases			Free						2	6		
Detector Phase	4							2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0							10.0	10.0	5.0	10.0	
Minimum Split (s)	22.5							22.5	22.5	10.5	22.5	
Total Split (s)	37.0							42.0	42.0	21.0	63.0	
Total Split (%)	37.0%							42.0%	42.0%	21.0%	63.0%	
Maximum Green (s)	31.5							36.5	36.5	15.5	57.5	
Yellow Time (s)	4.0							4.0	4.0	4.0	4.0	
All-Red Time (s)	1.5							1.5	1.5	1.5	1.5	
Lost Time Adjust (s)	0.0							0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5							5.5	5.5	5.5	5.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	2.0							2.0	2.0	2.0	2.0	
Recall Mode	None							C-Max	C-Max	None	C-Max	
Act Effct Green (s)	12.6		100.0					67.6	67.6	76.4	76.4	
Actuated g/C Ratio	0.13		1.00					0.68	0.68	0.76	0.76	
v/c Ratio	0.62		0.22					0.29	0.18	0.10	0.24	
Control Delay	47.9		0.3					8.7	3.9	1.0	0.9	
Queue Delay	0.0		0.0					0.0	0.0	0.0	0.0	
Total Delay	47.9		0.3					8.7	3.9	1.0	0.9	
LOS	D		A					A	A	A	A	
Approach Delay		21.2						7.6			0.9	
Approach LOS		C						A			A	
Queue Length 50th (ft)	85		0					71	0	1	7	
Queue Length 95th (ft)	122		0					184	70	3	11	
Internal Link Dist (ft)		686			892			546			562	
Turn Bay Length (ft)	200		210						290	190		
Base Capacity (vph)	1081		1583					2392	1137	666	2705	
Starvation Cap Reductn	0		0					0	0	0	0	
Spillback Cap Reductn	0		0					0	0	0	0	
Storage Cap Reductn	0		0					0	0	0	0	
Reduced v/c Ratio	0.25		0.22					0.29	0.18	0.08	0.24	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 50 (50%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 9.2	Intersection LOS: A
Intersection Capacity Utilization 62.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 10: Hall of Fame Drive & I-40 Eastbound Ramps

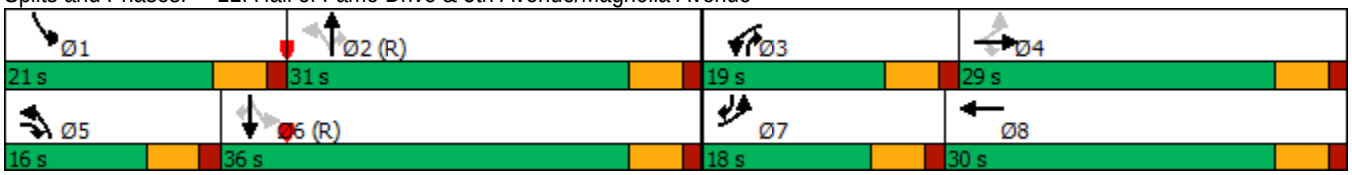


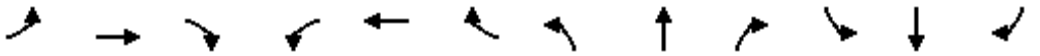
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	206	21	78	203	273	30	336	100	260	489	62
Future Volume (vph)	72	206	21	78	203	273	30	336	100	260	489	62
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor							1.00		0.99	1.00		0.99
Frt			0.850		0.914				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3235	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.255			0.950			0.457			0.457		
Satd. Flow (perm)	475	3539	1583	3433	3235	0	851	3539	1563	851	3539	1563
Satd. Flow (RTOR)			87		294				108			87
Confl. Peds. (#/hr)							1		1	1		1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	77	222	23	84	512	0	32	361	108	280	526	67
Turn Type	pm+pt	NA	pm+ov	Prot	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4				2		2	6		6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0	5.0	5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5	10.5	10.5	15.5	10.5
Total Split (s)	18.0	29.0	16.0	19.0	30.0		16.0	31.0	19.0	21.0	36.0	18.0
Total Split (%)	18.0%	29.0%	16.0%	19.0%	30.0%		16.0%	31.0%	19.0%	21.0%	36.0%	18.0%
Maximum Green (s)	12.5	23.5	10.5	13.5	24.5		10.5	25.5	13.5	15.5	30.5	12.5
Yellow Time (s)	4.0	4.0	4.0	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	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	None	None	C-Max	None
Act Effct Green (s)	23.4	14.6	26.4	7.8	15.8		48.6	42.3	50.1	61.1	53.7	62.6
Actuated g/C Ratio	0.23	0.15	0.26	0.08	0.16		0.49	0.42	0.50	0.61	0.54	0.63
v/c Ratio	0.34	0.43	0.05	0.31	0.68		0.07	0.24	0.13	0.44	0.28	0.07
Control Delay	29.2	40.4	0.2	46.2	21.4		12.7	21.2	4.0	13.0	15.6	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.2	40.4	0.2	46.2	21.4		12.7	21.2	4.0	13.0	15.6	1.7
LOS	C	D	A	D	C		B	C	A	B	B	A
Approach Delay		34.9			24.9			16.9			13.7	
Approach LOS		C			C			B			B	
Queue Length 50th (ft)	37	68	0	26	68		4	62	0	60	100	0
Queue Length 95th (ft)	64	97	0	49	118		26	170	43	179	168	3
Internal Link Dist (ft)		674			634			359			1142	
Turn Bay Length (ft)	245		35	295			230		245	175		175
Base Capacity (vph)	289	831	544	463	1014		545	1497	922	670	1901	1067
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.27	0.04	0.18	0.50		0.06	0.24	0.12	0.42	0.28	0.06

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 50 (50%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 20.3	Intersection LOS: C
Intersection Capacity Utilization 60.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 11: Hall of Fame Drive & 5th Avenue/Magnolia Avenue





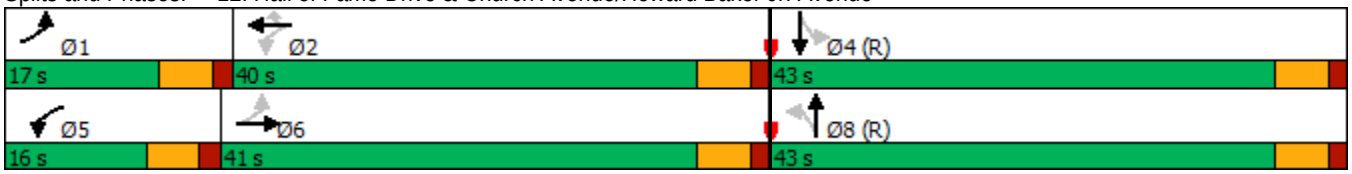
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	111	14	7	32	52	14	110	98	807	124	35
Future Volume (vph)	86	111	14	7	32	52	14	110	98	807	124	35
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor	0.99	1.00		1.00		0.97		0.92			0.90	
Frt		0.984				0.850		0.934			0.995	
Flt Protected	0.950			0.950				0.997			0.960	
Satd. Flow (prot)	1770	1830	0	1770	1863	1583	0	3042	0	0	3381	0
Flt Permitted	0.490			0.675				0.889			0.643	
Satd. Flow (perm)	903	1830	0	1255	1863	1541	0	2713	0	0	2037	0
Satd. Flow (RTOR)		7				87		101			4	
Confl. Peds. (#/hr)	17		4	4		17			206	206		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	89	128	0	7	33	54	0	228	0	0	996	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6			2		2	8			4		
Detector Phase	1	6		5	2	2	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0	7.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	10.5	22.5		10.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	17.0	41.0		16.0	40.0	40.0	43.0	43.0		43.0	43.0	
Total Split (%)	17.0%	41.0%		16.0%	40.0%	40.0%	43.0%	43.0%		43.0%	43.0%	
Maximum Green (s)	11.5	35.5		10.5	34.5	34.5	37.5	37.5		37.5	37.5	
Yellow Time (s)	4.0	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	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5	5.5		5.5			5.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)	19.6	17.4		11.8	7.6	7.6		69.4			69.4	
Actuated g/C Ratio	0.20	0.17		0.12	0.08	0.08		0.69			0.69	
v/c Ratio	0.35	0.40		0.04	0.23	0.27		0.12			1.17dl	
Control Delay	35.6	37.7		29.6	47.0	7.0		3.7			16.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Delay	35.6	37.7		29.6	47.0	7.0		3.7			16.3	
LOS	D	D		C	D	A		A			B	
Approach Delay		36.8			22.7			3.7			16.3	
Approach LOS		D			C			A			B	
Queue Length 50th (ft)	47	66		4	20	0		12			214	
Queue Length 95th (ft)	84	128		14	49	16		30			m275	
Internal Link Dist (ft)		488			887			548			1120	
Turn Bay Length (ft)	60			130								
Base Capacity (vph)	284	654		263	642	588		1914			1415	
Starvation Cap Reductn	0	0		0	0	0		0			0	
Spillback Cap Reductn	0	0		0	0	0		0			0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0	0		0			0	
Reduced v/c Ratio	0.31	0.20		0.03	0.05	0.09		0.12			0.70	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 4 (4%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 17.7	Intersection LOS: B
Intersection Capacity Utilization 79.9%	ICU Level of Service D
Analysis Period (min) 15	

m Volume for 95th percentile queue is metered by upstream signal.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 12: Hall of Fame Drive & Church Avenue/Howard Baker Jr. Avenue



APPENDIX F | ANALYSES FOR COMBINED TRAFFIC WITH MITIGATION

Intersection	
Intersection Delay, s/veh	9.6
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	63	20	194	58	35	143
Future Vol, veh/h	63	20	194	58	35	143
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	72	23	223	67	40	164
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.3	10.5	8.9
HCM LOS	A	B	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	20%	0%	77%
Vol Thru, %	0%	76%	23%
Vol Right, %	80%	24%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	178	83	252
LT Vol	35	0	194
Through Vol	0	63	58
RT Vol	143	20	0
Lane Flow Rate	205	95	290
Geometry Grp	1	1	1
Degree of Util (X)	0.25	0.122	0.375
Departure Headway (Hd)	4.397	4.592	4.661
Convergence, Y/N	Yes	Yes	Yes
Cap	816	778	770
Service Time	2.428	2.634	2.697
HCM Lane V/C Ratio	0.251	0.122	0.377
HCM Control Delay	8.9	8.3	10.5
HCM Lane LOS	A	A	B
HCM 95th-tile Q	1	0.4	1.7

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕						↕	
Traffic Vol, veh/h	10	107	78	5	165	23	0	0	0	6	8	10
Future Vol, veh/h	10	107	78	5	165	23	0	0	0	6	8	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	129	94	6	199	28	0	0	0	7	10	12

Major/Minor	Major1			Major2					Minor2		
Conflicting Flow All	227	0	0	223	0	0			425	472	213
Stage 1	-	-	-	-	-	-			225	225	-
Stage 2	-	-	-	-	-	-			200	247	-
Critical Hdwy	4.12	-	-	4.12	-	-			6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-			5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-			5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-			3.518	4.018	3.318
Pot Cap-1 Maneuver	1341	-	-	1346	-	-			586	490	827
Stage 1	-	-	-	-	-	-			812	718	-
Stage 2	-	-	-	-	-	-			834	702	-
Platoon blocked, %		-	-		-	-					
Mov Cap-1 Maneuver	1341	-	-	1346	-	-			577	0	827
Mov Cap-2 Maneuver	-	-	-	-	-	-			577	0	-
Stage 1	-	-	-	-	-	-			800	0	-
Stage 2	-	-	-	-	-	-			834	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0.2	10.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1341	-	-	1346	-	-	711
HCM Lane V/C Ratio	0.009	-	-	0.004	-	-	0.041
HCM Control Delay (s)	7.7	0	-	7.7	0	-	10.3
HCM Lane LOS	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	-	-	0	-	-	0.1

Intersection	
Intersection Delay, s/veh	8.9
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	99	9	29	86	166	52
Future Vol, veh/h	99	9	29	86	166	52
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	110	10	32	96	184	58
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	8.8	8	9.5
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	92%	0%	76%
Vol Thru, %	8%	25%	0%
Vol Right, %	0%	75%	24%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	108	115	218
LT Vol	99	0	166
Through Vol	9	29	0
RT Vol	0	86	52
Lane Flow Rate	120	128	242
Geometry Grp	1	1	1
Degree of Util (X)	0.161	0.149	0.303
Departure Headway (Hd)	4.835	4.211	4.508
Convergence, Y/N	Yes	Yes	Yes
Cap	743	852	797
Service Time	2.86	2.235	2.532
HCM Lane V/C Ratio	0.162	0.15	0.304
HCM Control Delay	8.8	8	9.5
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.6	0.5	1.3

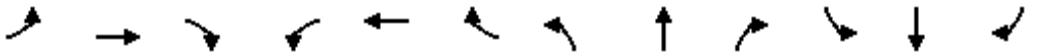
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	109	0
Future Vol, veh/h	0	0	0	0	109	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	-	-
Veh in Median Storage, #	0	-	16974	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	115	0

Major/Minor	Minor1		Major2	
Conflicting Flow All	230	-	0	0
Stage 1	0	-	-	-
Stage 2	230	-	-	-
Critical Hdwy	6.42	-	4.12	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-
Follow-up Hdwy	3.518	-	2.218	-
Pot Cap-1 Maneuver	758	0	-	-
Stage 1	-	0	-	-
Stage 2	808	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	758	-	-	-
Mov Cap-2 Maneuver	758	-	-	-
Stage 1	-	-	-	-
Stage 2	808	-	-	-

Approach	WB	SB
HCM Control Delay, s	0	
HCM LOS	A	

Minor Lane/Major Mvmt	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	0	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	-	-	-



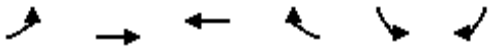
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	96	4	284	299	191	0	0	0	41	70	79
Future Volume (vph)	44	96	4	284	299	191	0	0	0	41	70	79
Lane Util. Factor	1.00	0.95	0.95	0.97	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		1.00	0.99							0.97
Frt		0.994			0.942							0.850
Flt Protected	0.950			0.950							0.982	
Satd. Flow (prot)	1770	3516	0	3433	3296	0	0	0	0	0	1829	1583
Flt Permitted	0.452			0.950							0.982	
Satd. Flow (perm)	840	3516	0	3426	3296	0	0	0	0	0	1829	1541
Satd. Flow (RTOR)		4			203							117
Confl. Peds. (#/hr)	7		1	1		7						10
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	47	106	0	302	521	0	0	0	0	0	118	84
Turn Type	pm+pt	NA		Prot	NA					Split	NA	Perm
Protected Phases	1	2		1	2					4	4	
Permitted Phases	2											4
Detector Phase	1	2		1	2					4	4	4
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0					7.0	7.0	7.0
Minimum Split (s)	9.0	15.5		9.0	15.5					12.0	12.0	12.0
Total Split (s)	20.0	31.0		20.0	31.0					19.0	19.0	19.0
Total Split (%)	28.6%	44.3%		28.6%	44.3%					27.1%	27.1%	27.1%
Maximum Green (s)	15.0	25.5		15.0	25.5					14.0	14.0	14.0
Yellow Time (s)	4.0	4.0		4.0	4.0					4.0	4.0	4.0
All-Red Time (s)	1.0	1.5		1.0	1.5					1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0						0.0	0.0
Total Lost Time (s)	5.0	5.5		5.0	5.5						5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	2.0	2.0		2.0	2.0					2.0	2.0	2.0
Recall Mode	None	C-Max		None	C-Max					None	None	None
Act Effct Green (s)	48.2	37.2		10.5	37.2						9.2	9.2
Actuated g/C Ratio	0.69	0.53		0.15	0.53						0.13	0.13
v/c Ratio	0.07	0.06		0.59	0.28						0.49	0.28
Control Delay	3.6	10.4		31.2	5.6						34.7	5.3
Queue Delay	0.0	0.0		0.0	0.2						0.0	0.0
Total Delay	3.6	10.4		31.2	5.8						34.7	5.3
LOS	A	B		C	A						C	A
Approach Delay		8.3			15.1						22.5	
Approach LOS		A			B						C	
Queue Length 50th (ft)	4	11		65	30						48	0
Queue Length 95th (ft)	14	27		88	66						90	21
Internal Link Dist (ft)		516			188			218			576	
Turn Bay Length (ft)	50											65
Base Capacity (vph)	822	1869		735	1845						365	401
Starvation Cap Reductn	0	0		0	638						0	0
Spillback Cap Reductn	0	0		0	0						0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0						0	0
Reduced v/c Ratio	0.06	0.06		0.41	0.43						0.32	0.21

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 52 (74%), Referenced to phase 2:EBWB, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 15.5	Intersection LOS: B
Intersection Capacity Utilization 36.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: Central Street & Summit Hill Drive

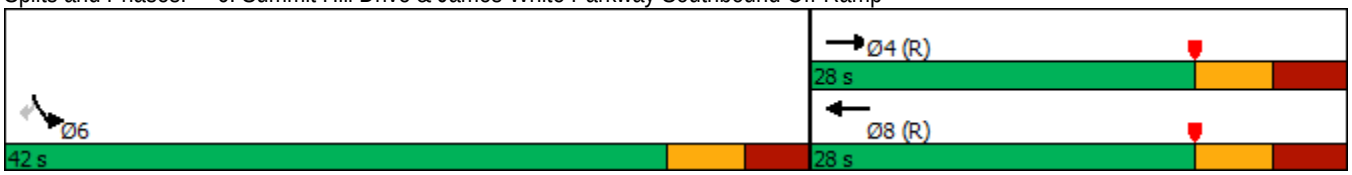




Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	138	224	0	275	547
Future Volume (vph)	0	138	224	0	275	547
Lane Util. Factor	1.00	0.91	0.95	1.00	0.97	0.88
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	5085	3539	0	3433	2787
Flt Permitted					0.950	
Satd. Flow (perm)	0	5085	3539	0	3433	2787
Satd. Flow (RTOR)						613
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	155	252	0	309	615
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		10.0	10.0		7.0	7.0
Minimum Split (s)		18.0	18.0		14.5	14.5
Total Split (s)		28.0	28.0		42.0	42.0
Total Split (%)		40.0%	40.0%		60.0%	60.0%
Maximum Green (s)		20.0	20.0		34.5	34.5
Yellow Time (s)		4.0	4.0		4.0	4.0
All-Red Time (s)		4.0	4.0		3.5	3.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0
Total Lost Time (s)		8.0	8.0		7.5	7.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		5.0	2.0		5.0	5.0
Recall Mode		C-Max	C-Max		None	None
Act Effct Green (s)		36.9	36.9		17.6	17.6
Actuated g/C Ratio		0.53	0.53		0.25	0.25
v/c Ratio		0.06	0.13		0.36	0.53
Control Delay		5.6	10.7		21.7	3.6
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		5.6	10.7		21.7	3.6
LOS		A	B		C	A
Approach Delay		5.6	10.7		9.7	
Approach LOS		A	B		A	
Queue Length 50th (ft)		10	31		57	0
Queue Length 95th (ft)		24	63		75	32
Internal Link Dist (ft)		188	373		516	
Turn Bay Length (ft)					250	250
Base Capacity (vph)		2683	1867		1691	1684
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.06	0.13		0.18	0.37

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.53	
Intersection Signal Delay: 9.4	Intersection LOS: A
Intersection Capacity Utilization 40.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Summit Hill Drive & James White Parkway Southbound Off-Ramp

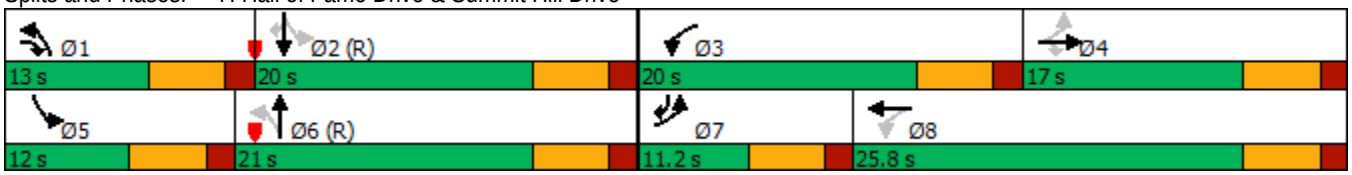


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	212	189	230	100	143	12	101	35	76	196	112
Future Volume (vph)	10	212	189	230	100	143	12	101	35	76	196	112
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00	1.00	0.99	1.00	0.99			1.00		1.00		
Frt		0.964	0.850		0.912			0.962				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3257	1441	1770	3201	0	1770	3390	0	1770	3539	1583
Flt Permitted	0.587			0.349			0.617			0.624		
Satd. Flow (perm)	1092	3257	1422	650	3201	0	1149	3390	0	1159	3539	1583
Satd. Flow (RTOR)		47	210		157			38				210
Confl. Peds. (#/hr)	2		1	1		2			4	4		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)			35%									
Lane Group Flow (vph)	11	306	135	253	267	0	13	149	0	84	215	123
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	7	4	1	3	8		1	6		5	2	7
Permitted Phases	4		4	8			6			2		2
Detector Phase	7	4	1	3	8		1	6		5	2	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0		5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5		10.5	15.5	10.5
Total Split (s)	11.2	17.0	13.0	20.0	25.8		13.0	21.0		12.0	20.0	11.2
Total Split (%)	16.0%	24.3%	18.6%	28.6%	36.9%		18.6%	30.0%		17.1%	28.6%	16.0%
Maximum Green (s)	5.7	11.5	7.5	14.5	20.3		7.5	15.5		6.5	14.5	5.7
Yellow Time (s)	4.0	4.0	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	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		2.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	None
Act Effct Green (s)	14.8	9.7	14.8	26.6	18.2		26.9	22.8		29.0	23.8	34.4
Actuated g/C Ratio	0.21	0.14	0.21	0.38	0.26		0.38	0.33		0.41	0.34	0.49
v/c Ratio	0.04	0.62	0.29	0.59	0.28		0.03	0.13		0.16	0.18	0.14
Control Delay	9.1	19.8	2.6	20.7	9.5		12.9	15.8		13.4	19.4	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	9.1	19.8	2.6	20.7	9.5		12.9	15.8		13.4	19.4	0.7
LOS	A	B	A	C	A		B	B		B	B	A
Approach Delay		14.4			15.0			15.5			12.7	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)	2	18	0	75	19		3	18		20	35	0
Queue Length 95th (ft)	8	36	0	116	44		13	43		49	67	5
Internal Link Dist (ft)		373			335			424			335	
Turn Bay Length (ft)				165			230			165		60
Base Capacity (vph)	295	574	509	479	1042		538	1128		541	1203	896
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.04	0.53	0.27	0.53	0.26		0.02	0.13		0.16	0.18	0.14

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 48 (69%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 14.2	Intersection LOS: B
Intersection Capacity Utilization 51.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: Hall of Fame Drive & Summit Hill Drive



Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	80	246	361	20	42	126
Future Vol, veh/h	80	246	361	20	42	126
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	90	276	406	22	47	142

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	428	0	-	0	735	215
Stage 1	-	-	-	-	417	-
Stage 2	-	-	-	-	318	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1128	-	-	-	355	790
Stage 1	-	-	-	-	633	-
Stage 2	-	-	-	-	710	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1128	-	-	-	327	789
Mov Cap-2 Maneuver	-	-	-	-	327	-
Stage 1	-	-	-	-	582	-
Stage 2	-	-	-	-	710	-

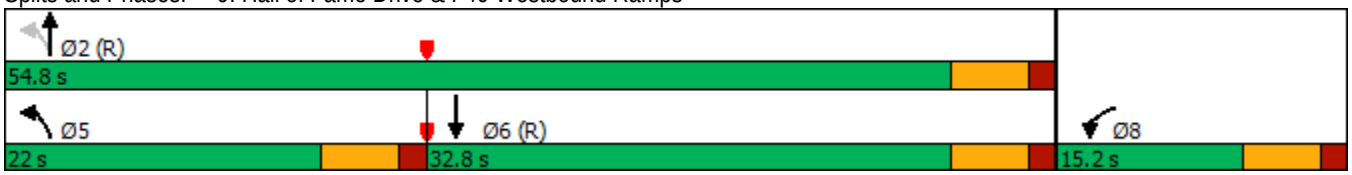
Approach	EB	WB	SB
HCM Control Delay, s	2.1	0	9.2
HCM LOS			A

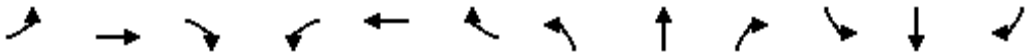
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1128	-	-	-	1052
HCM Lane V/C Ratio	0.08	-	-	-	0.179
HCM Control Delay (s)	8.5	-	-	-	9.2
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.3	-	-	-	0.7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	213	0	107	261	328	0	0	389	447
Future Volume (vph)	0	0	0	213	0	107	261	328	0	0	389	447
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt						0.850					0.920	
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	0	0	3433	0	1583	1770	3539	0	0	3256	0
Flt Permitted				0.950			0.207					
Satd. Flow (perm)	0	0	0	3433	0	1583	386	3539	0	0	3256	0
Satd. Flow (RTOR)						210					487	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	237	0	119	290	364	0	0	929	0
Turn Type				Prot		Free	pm+pt	NA			NA	
Protected Phases				8			5	2			6	
Permitted Phases						Free	2					
Detector Phase				8			5	2			6	
Switch Phase												
Minimum Initial (s)				5.0			5.0	10.0			10.0	
Minimum Split (s)				10.5			10.5	15.5			15.5	
Total Split (s)				15.2			22.0	54.8			32.8	
Total Split (%)				21.7%			31.4%	78.3%			46.9%	
Maximum Green (s)				9.7			16.5	49.3			27.3	
Yellow Time (s)				4.0			4.0	4.0			4.0	
All-Red Time (s)				1.5			1.5	1.5			1.5	
Lost Time Adjust (s)				0.0			0.0	0.0			0.0	
Total Lost Time (s)				5.5			5.5	5.5			5.5	
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)				3.0			2.0	2.0			2.0	
Recall Mode				None			None	C-Max			C-Max	
Act Effct Green (s)				9.1		70.0	49.9	49.9			34.7	
Actuated g/C Ratio				0.13		1.00	0.71	0.71			0.50	
v/c Ratio				0.53		0.08	0.62	0.14			0.50	
Control Delay				33.1		0.1	10.4	0.7			6.9	
Queue Delay				0.0		0.0	0.0	0.0			0.0	
Total Delay				33.1		0.1	10.4	0.7			6.9	
LOS				C		A	B	A			A	
Approach Delay					22.0			5.0			6.9	
Approach LOS					C			A			A	
Queue Length 50th (ft)				49		0	22	1			53	
Queue Length 95th (ft)				82		0	41	3			120	
Internal Link Dist (ft)		440			577			562			692	
Turn Bay Length (ft)				475		200	155					
Base Capacity (vph)				475		1583	601	2524			1859	
Starvation Cap Reductn				0		0	0	0			0	
Spillback Cap Reductn				0		0	0	0			0	
Storage Cap Reductn				0		0	0	0			0	
Reduced v/c Ratio				0.50		0.08	0.48	0.14			0.50	

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 18 (26%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 9.0	Intersection LOS: A
Intersection Capacity Utilization 59.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 9: Hall of Fame Drive & I-40 Westbound Ramps

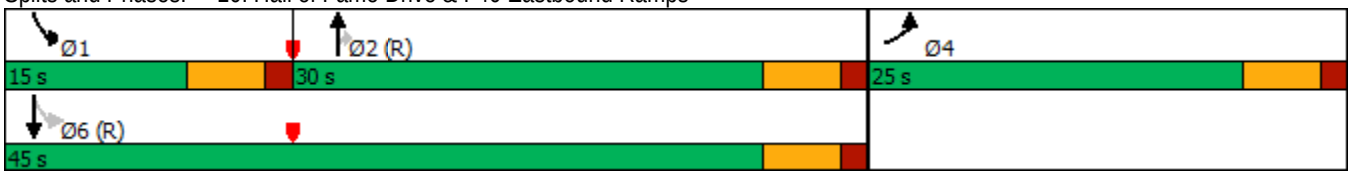


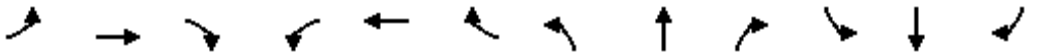


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	0	365	0	0	0	0	429	133	82	523	0
Future Volume (vph)	150	0	365	0	0	0	0	429	133	82	523	0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850						0.850			
Flt Protected	0.950									0.950		
Satd. Flow (prot)	3433	0	1583	0	0	0	0	3539	1583	1770	3539	0
Flt Permitted	0.950									0.406		
Satd. Flow (perm)	3433	0	1583	0	0	0	0	3539	1583	756	3539	0
Satd. Flow (RTOR)			435						158			
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Shared Lane Traffic (%)												
Lane Group Flow (vph)	179	0	435	0	0	0	0	511	158	98	623	0
Turn Type	Prot		Free					NA	Perm	pm+pt	NA	
Protected Phases	4							2		1	6	
Permitted Phases			Free						2	6		
Detector Phase	4							2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0							10.0	10.0	5.0	10.0	
Minimum Split (s)	22.5							22.5	22.5	10.5	22.5	
Total Split (s)	25.0							30.0	30.0	15.0	45.0	
Total Split (%)	35.7%							42.9%	42.9%	21.4%	64.3%	
Maximum Green (s)	19.5							24.5	24.5	9.5	39.5	
Yellow Time (s)	4.0							4.0	4.0	4.0	4.0	
All-Red Time (s)	1.5							1.5	1.5	1.5	1.5	
Lost Time Adjust (s)	0.0							0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5							5.5	5.5	5.5	5.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	2.0							2.0	2.0	2.0	2.0	
Recall Mode	None							C-Max	C-Max	None	C-Max	
Act Effct Green (s)	10.1		70.0					39.7	39.7	48.9	48.9	
Actuated g/C Ratio	0.14		1.00					0.57	0.57	0.70	0.70	
v/c Ratio	0.36		0.27					0.25	0.16	0.16	0.25	
Control Delay	29.3		0.4					8.9	2.2	4.7	4.5	
Queue Delay	0.0		0.0					0.0	0.0	0.0	0.0	
Total Delay	29.3		0.4					8.9	2.2	4.7	4.5	
LOS	C		A					A	A	A	A	
Approach Delay		8.9						7.3			4.5	
Approach LOS		A						A			A	
Queue Length 50th (ft)	36		0					57	0	9	32	
Queue Length 95th (ft)	59		0					82	21	33	81	
Internal Link Dist (ft)		686			892			546			562	
Turn Bay Length (ft)	200		210						290	190		
Base Capacity (vph)	956		1583					2006	965	665	2472	
Starvation Cap Reductn	0		0					0	0	0	0	
Spillback Cap Reductn	0		0					0	0	0	0	
Storage Cap Reductn	0		0					0	0	0	0	
Reduced v/c Ratio	0.19		0.27					0.25	0.16	0.15	0.25	

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.36	
Intersection Signal Delay: 6.8	Intersection LOS: A
Intersection Capacity Utilization 59.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 10: Hall of Fame Drive & I-40 Eastbound Ramps



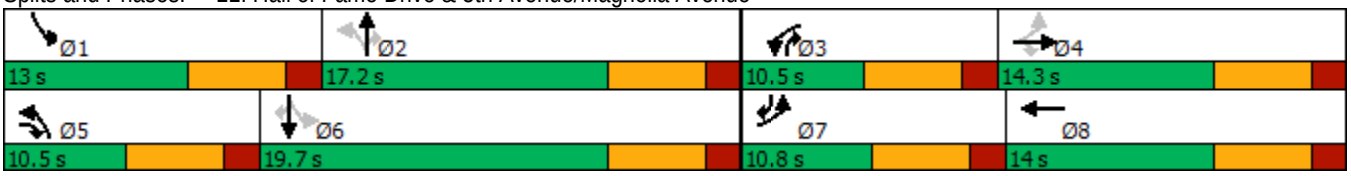


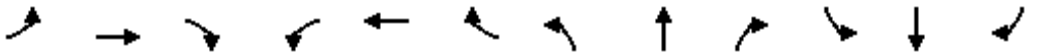
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	105	24	50	156	174	31	200	24	160	321	64
Future Volume (vph)	49	105	24	50	156	174	31	200	24	160	321	64
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.99	1.00			1.00		0.99	1.00		0.99
Frt			0.850		0.921				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3260	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.434			0.950			0.523			0.502		
Satd. Flow (perm)	808	3539	1562	3417	3260	0	974	3539	1563	935	3539	1563
Satd. Flow (RTOR)			159		210				159			159
Confl. Peds. (#/hr)			1	1			1		1	1		1
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)												
Lane Group Flow (vph)	59	127	29	60	398	0	37	241	29	193	387	77
Turn Type	pm+pt	NA	pm+ov	Prot	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4				2		2	6		6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0	5.0	5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5	10.5	10.5	15.5	10.5
Total Split (s)	10.8	14.3	10.5	10.5	14.0		10.5	17.2	10.5	13.0	19.7	10.8
Total Split (%)	19.6%	26.0%	19.1%	19.1%	25.5%		19.1%	31.3%	19.1%	23.6%	35.8%	19.6%
Maximum Green (s)	5.3	8.8	5.0	5.0	8.5		5.0	11.7	5.0	7.5	14.2	5.3
Yellow Time (s)	4.0	4.0	4.0	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	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Max	None	None	Max	None
Act Effct Green (s)	13.3	10.4	15.6	5.2	8.2		16.7	13.0	18.3	20.9	16.8	22.4
Actuated g/C Ratio	0.26	0.21	0.31	0.10	0.16		0.33	0.26	0.36	0.42	0.33	0.45
v/c Ratio	0.18	0.17	0.05	0.17	0.56		0.09	0.26	0.04	0.38	0.33	0.10
Control Delay	13.8	20.0	0.2	24.4	13.9		9.7	18.7	0.1	11.8	15.9	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.8	20.0	0.2	24.4	13.9		9.7	18.7	0.1	11.8	15.9	0.4
LOS	B	B	A	C	B		A	B	A	B	B	A
Approach Delay		15.6			15.3			15.8			12.9	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)	13	19	0	9	29		6	35	0	37	55	0
Queue Length 95th (ft)	30	36	0	22	56		18	56	0	64	81	0
Internal Link Dist (ft)		674			634			359			1142	
Turn Bay Length (ft)	245		35	295			230		245	175		175
Base Capacity (vph)	319	770	596	358	750		407	917	671	520	1185	786
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.16	0.05	0.17	0.53		0.09	0.26	0.04	0.37	0.33	0.10

Intersection Summary	
Cycle Length: 55	
Actuated Cycle Length: 50.2	
Natural Cycle: 55	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 14.5	Intersection LOS: B
Intersection Capacity Utilization 49.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 11: Hall of Fame Drive & 5th Avenue/Magnolia Avenue



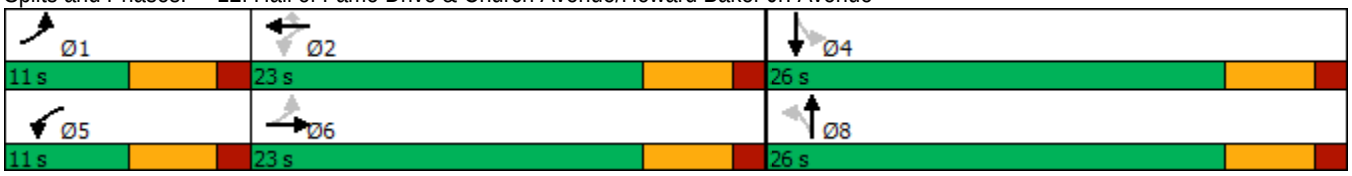


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	45	7	12	48	64	8	58	10	116	144	35
Future Volume (vph)	47	45	7	12	48	64	8	58	10	116	144	35
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor	0.97	1.00		0.99		0.95		1.00			1.00	
Frt		0.979				0.850		0.980			0.982	
Flt Protected	0.950			0.950				0.995			0.981	
Satd. Flow (prot)	1770	1819	0	1770	1863	1583	0	3445	0	0	3401	0
Flt Permitted	0.690			0.816				0.921			0.813	
Satd. Flow (perm)	1249	1819	0	1512	1863	1502	0	3189	0	0	2817	0
Satd. Flow (RTOR)		8				145		11			27	
Confl. Peds. (#/hr)	39		7	7		39	1		1	1		1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	51	56	0	13	52	69	0	82	0	0	318	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6			2		2	8			4		
Detector Phase	1	6		5	2	2	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0	7.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	10.5	22.5		10.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	11.0	23.0		11.0	23.0	23.0	26.0	26.0		26.0	26.0	
Total Split (%)	18.3%	38.3%		18.3%	38.3%	38.3%	43.3%	43.3%		43.3%	43.3%	
Maximum Green (s)	5.5	17.5		5.5	17.5	17.5	20.5	20.5		20.5	20.5	
Yellow Time (s)	4.0	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	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5	5.5		5.5			5.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	Max	Max		Max	Max	
Act Effct Green (s)	9.2	9.3		8.2	7.4	7.4		27.8			27.8	
Actuated g/C Ratio	0.22	0.22		0.20	0.18	0.18		0.67			0.67	
v/c Ratio	0.15	0.13		0.04	0.16	0.18		0.04			0.17	
Control Delay	12.0	14.1		11.1	18.5	1.7		6.8			6.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Delay	12.0	14.1		11.1	18.5	1.7		6.8			6.7	
LOS	B	B		B	B	A		A			A	
Approach Delay		13.1			9.1			6.8			6.7	
Approach LOS		B			A			A			A	
Queue Length 50th (ft)	9	9		2	10	0		3			14	
Queue Length 95th (ft)	26	37		10	37	6		16			50	
Internal Link Dist (ft)		488			887			548			1120	
Turn Bay Length (ft)	60			130								
Base Capacity (vph)	358	813		347	824	745		2143			1899	
Starvation Cap Reductn	0	0		0	0	0		0			0	
Spillback Cap Reductn	0	0		0	0	0		0			0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0	0		0			0	
Reduced v/c Ratio	0.14	0.07		0.04	0.06	0.09		0.04			0.17	

Intersection Summary			
Cycle Length: 60			
Actuated Cycle Length: 41.4			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.18			
Intersection Signal Delay: 8.3		Intersection LOS: A	
Intersection Capacity Utilization 33.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 12: Hall of Fame Drive & Church Avenue/Howard Baker Jr. Avenue



Intersection	
Intersection Delay, s/veh	10.5
Intersection LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	98	103	189	106	106	118
Future Vol, veh/h	98	103	189	106	106	118
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	103	108	199	112	112	124
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	9.4	11.5	10.3
HCM LOS	A	B	B

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	47%	0%	64%
Vol Thru, %	0%	49%	36%
Vol Right, %	53%	51%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	224	201	295
LT Vol	106	0	189
Through Vol	0	98	106
RT Vol	118	103	0
Lane Flow Rate	236	212	311
Geometry Grp	1	1	1
Degree of Util (X)	0.322	0.27	0.422
Departure Headway (Hd)	4.917	4.601	4.897
Convergence, Y/N	Yes	Yes	Yes
Cap	726	774	730
Service Time	2.984	2.668	2.961
HCM Lane V/C Ratio	0.325	0.274	0.426
HCM Control Delay	10.3	9.4	11.5
HCM Lane LOS	B	A	B
HCM 95th-tile Q	1.4	1.1	2.1

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕						↕	
Traffic Vol, veh/h	42	96	71	0	175	12	0	0	0	6	10	50
Future Vol, veh/h	42	96	71	0	175	12	0	0	0	6	10	50
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	48	109	81	0	199	14	0	0	0	7	11	57

Major/Minor	Major1			Major2					Minor2		
Conflicting Flow All	213	0	0	191	0	0			452	493	207
Stage 1	-	-	-	-	-	-			206	206	-
Stage 2	-	-	-	-	-	-			246	287	-
Critical Hdwy	4.12	-	-	4.12	-	-			6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-			5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-			5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-			3.518	4.018	3.318
Pot Cap-1 Maneuver	1357	-	-	1383	-	-			565	477	833
Stage 1	-	-	-	-	-	-			829	731	-
Stage 2	-	-	-	-	-	-			795	674	-
Platoon blocked, %		-	-		-	-					
Mov Cap-1 Maneuver	1357	-	-	1383	-	-			542	0	832
Mov Cap-2 Maneuver	-	-	-	-	-	-			542	0	-
Stage 1	-	-	-	-	-	-			796	0	-
Stage 2	-	-	-	-	-	-			795	0	-

Approach	EB	WB	SB
HCM Control Delay, s	1.6	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1357	-	-	1383	-	-	787
HCM Lane V/C Ratio	0.035	-	-	-	-	-	0.095
HCM Control Delay (s)	7.8	0	-	0	-	-	10.1
HCM Lane LOS	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	0	-	-	0.3

Intersection	
Intersection Delay, s/veh	10.6
Intersection LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	88	71	92	143	221	38
Future Vol, veh/h	88	71	92	143	221	38
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	99	80	103	161	248	43
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	9.9	9.9	11.6
HCM LOS	A	A	B

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	55%	0%	85%
Vol Thru, %	45%	39%	0%
Vol Right, %	0%	61%	15%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	159	235	259
LT Vol	88	0	221
Through Vol	71	92	0
RT Vol	0	143	38
Lane Flow Rate	179	264	291
Geometry Grp	1	1	1
Degree of Util (X)	0.254	0.335	0.407
Departure Headway (Hd)	5.115	4.561	5.036
Convergence, Y/N	Yes	Yes	Yes
Cap	697	782	710
Service Time	3.186	2.624	3.11
HCM Lane V/C Ratio	0.257	0.338	0.41
HCM Control Delay	9.9	9.9	11.6
HCM Lane LOS	A	A	B
HCM 95th-tile Q	1	1.5	2

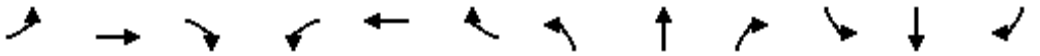
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	92	0
Future Vol, veh/h	0	0	0	0	92	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	-	-
Veh in Median Storage, #	0	-	16974	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	105	0

Major/Minor	Minor1		Major2	
Conflicting Flow All	210	-	0	0
Stage 1	0	-	-	-
Stage 2	210	-	-	-
Critical Hdwy	6.42	-	4.12	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-
Follow-up Hdwy	3.518	-	2.218	-
Pot Cap-1 Maneuver	778	0	-	-
Stage 1	-	0	-	-
Stage 2	825	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	778	-	-	-
Mov Cap-2 Maneuver	778	-	-	-
Stage 1	-	-	-	-
Stage 2	825	-	-	-

Approach	WB	SB
HCM Control Delay, s	0	
HCM LOS	A	

Minor Lane/Major Mvmt	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	0	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	-	-	-



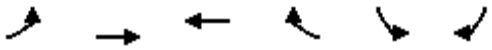
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	128	159	8	78	285	232	0	0	0	123	56	160
Future Volume (vph)	128	159	8	78	285	232	0	0	0	123	56	160
Lane Util. Factor	1.00	0.95	0.95	0.97	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		0.97	0.99						1.00	0.97
Frt		0.992			0.933							0.850
Flt Protected	0.950			0.950							0.967	
Satd. Flow (prot)	1770	3507	0	3433	3266	0	0	0	0	0	1801	1583
Flt Permitted	0.436			0.950							0.967	
Satd. Flow (perm)	811	3507	0	3339	3266	0	0	0	0	0	1796	1542
Satd. Flow (RTOR)		9			247							170
Confl. Peds. (#/hr)	3		9	9		3				4		14
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	136	178	0	83	550	0	0	0	0	0	191	170
Turn Type	pm+pt	NA		Prot	NA					Split	NA	Perm
Protected Phases	1	2		1	2					4	4	
Permitted Phases	2											4
Detector Phase	1	2		1	2					4	4	4
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0					7.0	7.0	7.0
Minimum Split (s)	9.0	15.5		9.0	15.5					12.0	12.0	12.0
Total Split (s)	14.0	31.0		14.0	31.0					25.0	25.0	25.0
Total Split (%)	20.0%	44.3%		20.0%	44.3%					35.7%	35.7%	35.7%
Maximum Green (s)	9.0	25.5		9.0	25.5					20.0	20.0	20.0
Yellow Time (s)	4.0	4.0		4.0	4.0					4.0	4.0	4.0
All-Red Time (s)	1.0	1.5		1.0	1.5					1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0						0.0	0.0
Total Lost Time (s)	5.0	5.5		5.0	5.5						5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	2.0	2.0		2.0	2.0					2.0	2.0	2.0
Recall Mode	None	C-Max		None	C-Max					None	None	None
Act Effct Green (s)	44.0	38.0		6.5	38.0						12.0	12.0
Actuated g/C Ratio	0.63	0.54		0.09	0.54						0.17	0.17
v/c Ratio	0.23	0.09		0.26	0.29						0.62	0.42
Control Delay	5.7	9.7		27.4	6.0						35.2	7.6
Queue Delay	0.0	0.0		0.0	0.2						0.0	0.0
Total Delay	5.7	9.7		27.4	6.2						35.2	7.6
LOS	A	A		C	A						D	A
Approach Delay		8.0			9.0						22.2	
Approach LOS		A			A						C	
Queue Length 50th (ft)	16	17		13	45						78	0
Queue Length 95th (ft)	43	41		32	78						126	43
Internal Link Dist (ft)		516			188			218			576	
Turn Bay Length (ft)	50											65
Base Capacity (vph)	652	1907		441	1885						514	562
Starvation Cap Reductn	0	0		0	620						0	0
Spillback Cap Reductn	0	0		0	0						0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0						0	0
Reduced v/c Ratio	0.21	0.09		0.19	0.43						0.37	0.30

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 18 (26%), Referenced to phase 2:EBWB, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 12.4	Intersection LOS: B
Intersection Capacity Utilization 45.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: Central Street & Summit Hill Drive

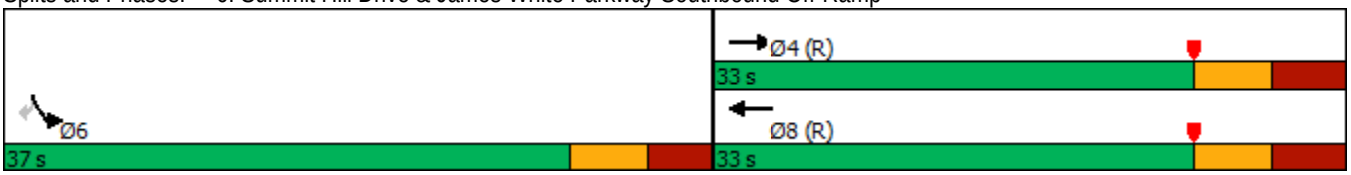




Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	283	247	0	234	349
Future Volume (vph)	0	283	247	0	234	349
Lane Util. Factor	1.00	0.91	0.95	1.00	0.97	0.88
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	5085	3539	0	3433	2787
Flt Permitted					0.950	
Satd. Flow (perm)	0	5085	3539	0	3433	2787
Satd. Flow (RTOR)						371
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	301	263	0	249	371
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		10.0	10.0		7.0	7.0
Minimum Split (s)		18.0	18.0		14.5	14.5
Total Split (s)		33.0	33.0		37.0	37.0
Total Split (%)		47.1%	47.1%		52.9%	52.9%
Maximum Green (s)		25.0	25.0		29.5	29.5
Yellow Time (s)		4.0	4.0		4.0	4.0
All-Red Time (s)		4.0	4.0		3.5	3.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0
Total Lost Time (s)		8.0	8.0		7.5	7.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		5.0	2.0		5.0	5.0
Recall Mode		C-Max	C-Max		None	None
Act Effct Green (s)		40.4	40.4		14.1	14.1
Actuated g/C Ratio		0.58	0.58		0.20	0.20
v/c Ratio		0.10	0.13		0.36	0.43
Control Delay		4.4	5.7		24.8	4.4
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		4.4	5.7		24.8	4.4
LOS		A	A		C	A
Approach Delay		4.4	5.7		12.6	
Approach LOS		A	A		B	
Queue Length 50th (ft)		9	18		47	0
Queue Length 95th (ft)		20	30		72	31
Internal Link Dist (ft)		188	373		516	
Turn Bay Length (ft)					250	250
Base Capacity (vph)		2937	2044		1446	1389
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.10	0.13		0.17	0.27

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 1 (1%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.43	
Intersection Signal Delay: 9.0	Intersection LOS: A
Intersection Capacity Utilization 33.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Summit Hill Drive & James White Parkway Southbound Off-Ramp

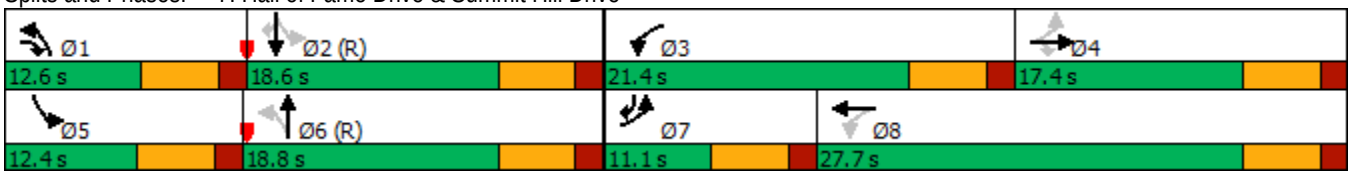


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	285	182	281	129	192	25	115	52	134	132	92
Future Volume (vph)	54	285	182	281	129	192	25	115	52	134	132	92
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00				0.99			1.00		1.00		
Frt		0.981	0.850		0.910			0.953				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3326	1441	1770	3187	0	1770	3359	0	1770	3539	1583
Flt Permitted	0.550			0.329			0.664			0.592		
Satd. Flow (perm)	1020	3326	1441	613	3187	0	1237	3359	0	1102	3539	1583
Satd. Flow (RTOR)		18	210		200			54				210
Confl. Peds. (#/hr)	6					6			1	1		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)			22%									
Lane Group Flow (vph)	56	339	148	293	334	0	26	174	0	140	138	96
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	7	4	1	3	8		1	6		5	2	7
Permitted Phases	4		4	8			6			2		2
Detector Phase	7	4	1	3	8		1	6		5	2	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0		5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5		10.5	15.5	10.5
Total Split (s)	11.1	17.4	12.6	21.4	27.7		12.6	18.8		12.4	18.6	11.1
Total Split (%)	15.9%	24.9%	18.0%	30.6%	39.6%		18.0%	26.9%		17.7%	26.6%	15.9%
Maximum Green (s)	5.6	11.9	7.1	15.9	22.2		7.1	13.3		6.9	13.1	5.6
Yellow Time (s)	4.0	4.0	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	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		2.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	None
Act Effct Green (s)	16.0	10.6	21.5	28.6	19.8		24.6	20.1		27.5	21.6	32.5
Actuated g/C Ratio	0.23	0.15	0.31	0.41	0.28		0.35	0.29		0.39	0.31	0.46
v/c Ratio	0.19	0.66	0.25	0.64	0.32		0.05	0.17		0.28	0.13	0.11
Control Delay	7.7	22.4	5.9	20.8	8.8		14.2	16.3		15.6	21.2	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	7.7	22.4	5.9	20.8	8.8		14.2	16.3		15.6	21.2	0.3
LOS	A	C	A	C	A		B	B		B	C	A
Approach Delay		16.4			14.4			16.1			13.7	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)	6	56	0	85	23		6	21		36	23	0
Queue Length 95th (ft)	15	87	14	127	49		21	48		78	48	0
Internal Link Dist (ft)		373			335			424			335	
Turn Bay Length (ft)				165			230			165		60
Base Capacity (vph)	295	586	617	512	1147		510	1004		504	1092	851
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.19	0.58	0.24	0.57	0.29		0.05	0.17		0.28	0.13	0.11

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 67 (96%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 15.1	Intersection LOS: B
Intersection Capacity Utilization 59.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 7: Hall of Fame Drive & Summit Hill Drive



Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	227	246	339	46	56	239
Future Vol, veh/h	227	246	339	46	56	239
Conflicting Peds, #/hr	6	0	0	6	5	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	234	254	349	47	58	246

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	402	0	-	0	979	205
Stage 1	-	-	-	-	379	-
Stage 2	-	-	-	-	600	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1153	-	-	-	247	802
Stage 1	-	-	-	-	662	-
Stage 2	-	-	-	-	511	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1146	-	-	-	194	797
Mov Cap-2 Maneuver	-	-	-	-	194	-
Stage 1	-	-	-	-	524	-
Stage 2	-	-	-	-	508	-

Approach	EB	WB	SB
HCM Control Delay, s	4.3	0	10.3
HCM LOS			B

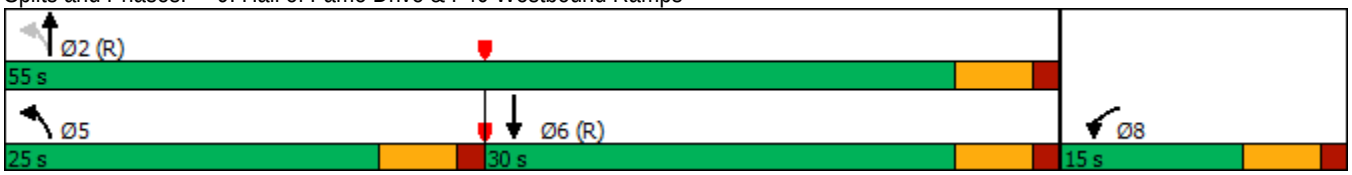
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1146	-	-	-	984
HCM Lane V/C Ratio	0.204	-	-	-	0.309
HCM Control Delay (s)	8.9	-	-	-	10.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.8	-	-	-	1.3

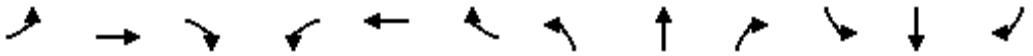
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	146	0	73	263	495	0	0	299	271
Future Volume (vph)	0	0	0	146	0	73	263	495	0	0	299	271
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor							1.00				0.99	
Frt						0.850					0.929	
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	0	0	3433	0	1583	1770	3539	0	0	3254	0
Flt Permitted				0.950			0.370					
Satd. Flow (perm)	0	0	0	3433	0	1583	689	3539	0	0	3254	0
Satd. Flow (RTOR)						210					277	
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	149	0	74	268	505	0	0	582	0
Turn Type				Prot		Free	pm+pt	NA			NA	
Protected Phases				8			5	2			6	
Permitted Phases						Free	2					
Detector Phase				8			5	2			6	
Switch Phase												
Minimum Initial (s)				5.0			5.0	10.0			10.0	
Minimum Split (s)				10.5			10.5	15.5			15.5	
Total Split (s)				15.0			25.0	55.0			30.0	
Total Split (%)				21.4%			35.7%	78.6%			42.9%	
Maximum Green (s)				9.5			19.5	49.5			24.5	
Yellow Time (s)				4.0			4.0	4.0			4.0	
All-Red Time (s)				1.5			1.5	1.5			1.5	
Lost Time Adjust (s)				0.0			0.0	0.0			0.0	
Total Lost Time (s)				5.5			5.5	5.5			5.5	
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)				3.0			2.0	2.0			2.0	
Recall Mode				None			None	C-Max			C-Max	
Act Effct Green (s)				8.2		70.0	53.2	54.3			39.7	
Actuated g/C Ratio				0.12		1.00	0.76	0.78			0.57	
v/c Ratio				0.37		0.05	0.41	0.18			0.30	
Control Delay				30.9		0.1	4.3	0.9			5.4	
Queue Delay				0.0		0.0	0.0	0.0			0.0	
Total Delay				30.9		0.1	4.3	0.9			5.4	
LOS				C		A	A	A			A	
Approach Delay					20.7			2.0			5.4	
Approach LOS					C			A			A	
Queue Length 50th (ft)				30		0	5	1			33	
Queue Length 95th (ft)				55		0	25	3			66	
Internal Link Dist (ft)		440			577			562			692	
Turn Bay Length (ft)				475		200	155					
Base Capacity (vph)				465		1583	824	2743			1966	
Starvation Cap Reductn				0		0	0	0			0	
Spillback Cap Reductn				0		0	0	0			0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn				0		0	0	0			0	
Reduced v/c Ratio				0.32		0.05	0.33	0.18			0.30	

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 23 (33%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.41	
Intersection Signal Delay: 5.9	Intersection LOS: A
Intersection Capacity Utilization 49.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 9: Hall of Fame Drive & I-40 Westbound Ramps

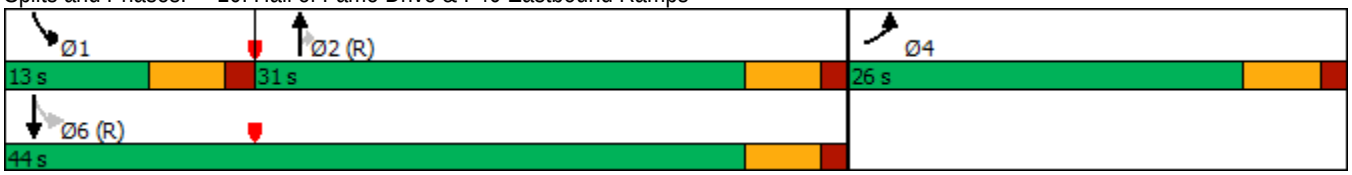




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	217	0	276	0	0	0	0	542	201	44	405	0
Future Volume (vph)	217	0	276	0	0	0	0	542	201	44	405	0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850						0.850			
Flt Protected	0.950									0.950		
Satd. Flow (prot)	3433	0	1583	0	0	0	0	3539	1583	1770	3539	0
Flt Permitted	0.950									0.385		
Satd. Flow (perm)	3433	0	1583	0	0	0	0	3539	1583	717	3539	0
Satd. Flow (RTOR)			285						207			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	224	0	285	0	0	0	0	559	207	45	418	0
Turn Type	Prot		Free					NA	Perm	pm+pt	NA	
Protected Phases	4							2		1	6	
Permitted Phases			Free						2	6		
Detector Phase	4							2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0							10.0	10.0	5.0	10.0	
Minimum Split (s)	22.5							22.5	22.5	10.5	22.5	
Total Split (s)	26.0							31.0	31.0	13.0	44.0	
Total Split (%)	37.1%							44.3%	44.3%	18.6%	62.9%	
Maximum Green (s)	20.5							25.5	25.5	7.5	38.5	
Yellow Time (s)	4.0							4.0	4.0	4.0	4.0	
All-Red Time (s)	1.5							1.5	1.5	1.5	1.5	
Lost Time Adjust (s)	0.0							0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5							5.5	5.5	5.5	5.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	2.0							2.0	2.0	2.0	2.0	
Recall Mode	None							C-Max	C-Max	None	C-Max	
Act Effct Green (s)	10.3		70.0					42.1	42.1	48.7	48.7	
Actuated g/C Ratio	0.15		1.00					0.60	0.60	0.70	0.70	
v/c Ratio	0.44		0.18					0.26	0.20	0.08	0.17	
Control Delay	30.1		0.2					8.0	2.0	4.8	4.3	
Queue Delay	0.0		0.0					0.0	0.0	0.0	0.0	
Total Delay	30.1		0.2					8.0	2.0	4.8	4.3	
LOS	C		A					A	A	A	A	
Approach Delay		13.4						6.4			4.3	
Approach LOS		B						A			A	
Queue Length 50th (ft)	46		0					62	0	3	16	
Queue Length 95th (ft)	75		0					98	28	20	59	
Internal Link Dist (ft)		686			892			546			562	
Turn Bay Length (ft)	200		210						290	190		
Base Capacity (vph)	1005		1583					2129	1034	611	2460	
Starvation Cap Reductn	0		0					0	0	0	0	
Spillback Cap Reductn	0		0					0	0	0	0	
Storage Cap Reductn	0		0					0	0	0	0	
Reduced v/c Ratio	0.22		0.18					0.26	0.20	0.07	0.17	

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.44	
Intersection Signal Delay: 7.9	Intersection LOS: A
Intersection Capacity Utilization 49.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 10: Hall of Fame Drive & I-40 Eastbound Ramps

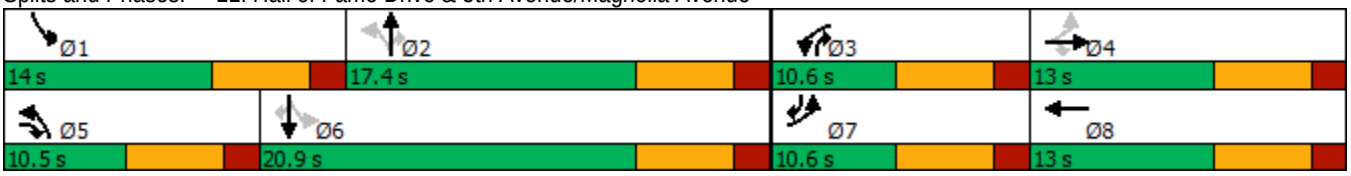


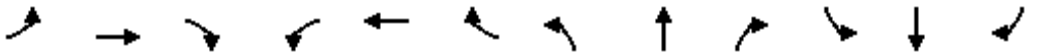
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	173	18	66	171	214	25	305	72	209	290	52
Future Volume (vph)	61	173	18	66	171	214	25	305	72	209	290	52
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor							1.00		0.99	1.00		0.99
Frt			0.850		0.917				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3245	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.526			0.950			0.562			0.431		
Satd. Flow (perm)	980	3539	1583	3433	3245	0	1046	3539	1563	803	3539	1563
Satd. Flow (RTOR)			159		230				159			159
Confl. Peds. (#/hr)							1		1	1		1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	66	186	19	71	414	0	27	328	77	225	312	56
Turn Type	pm+pt	NA	pm+ov	Prot	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4				2		2	6		6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0	5.0	5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5	10.5	10.5	15.5	10.5
Total Split (s)	10.6	13.0	10.5	10.6	13.0		10.5	17.4	10.6	14.0	20.9	10.6
Total Split (%)	19.3%	23.6%	19.1%	19.3%	23.6%		19.1%	31.6%	19.3%	25.5%	38.0%	19.3%
Maximum Green (s)	5.1	7.5	5.0	5.1	7.5		5.0	11.9	5.1	8.5	15.4	5.1
Yellow Time (s)	4.0	4.0	4.0	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	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Max	None	None	Max	None
Act Effct Green (s)	11.4	7.6	18.5	5.3	7.6		17.1	13.4	18.7	23.0	19.9	25.2
Actuated g/C Ratio	0.23	0.15	0.37	0.10	0.15		0.34	0.26	0.37	0.45	0.39	0.50
v/c Ratio	0.22	0.35	0.03	0.20	0.61		0.06	0.35	0.11	0.43	0.22	0.07
Control Delay	15.1	23.6	0.1	24.6	14.5		9.0	19.1	0.6	11.7	13.1	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.1	23.6	0.1	24.6	14.5		9.0	19.1	0.6	11.7	13.1	0.2
LOS	B	C	A	C	B		A	B	A	B	B	A
Approach Delay		19.9			16.0			15.2			11.3	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)	15	30	0	11	29		4	48	0	41	28	0
Queue Length 95th (ft)	37	55	0	27	66		15	81	3	79	70	0
Internal Link Dist (ft)		674			634			359			1142	
Turn Bay Length (ft)	245		35	295			230		245	175		175
Base Capacity (vph)	303	545	681	360	695		428	939	681	533	1388	859
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.34	0.03	0.20	0.60		0.06	0.35	0.11	0.42	0.22	0.07

Intersection Summary	
Cycle Length: 55	
Actuated Cycle Length: 50.6	
Natural Cycle: 55	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 14.8	Intersection LOS: B
Intersection Capacity Utilization 54.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 11: Hall of Fame Drive & 5th Avenue/Magnolia Avenue



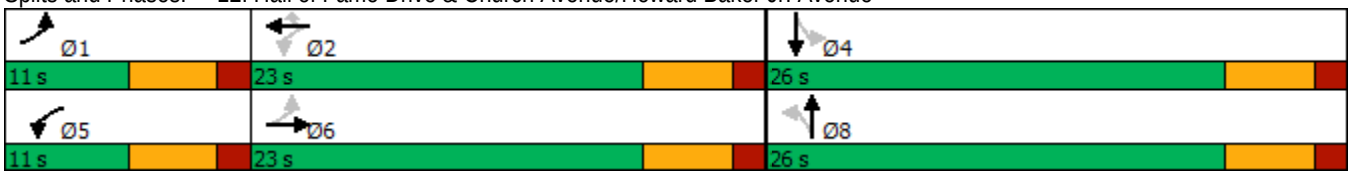


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	37	12	6	27	43	12	93	18	33	104	30
Future Volume (vph)	71	37	12	6	27	43	12	93	18	33	104	30
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor	0.99	1.00		1.00		0.97						
Frt		0.964				0.850		0.978			0.973	
Flt Protected	0.950			0.950				0.995			0.990	
Satd. Flow (prot)	1770	1789	0	1770	1863	1583	0	3444	0	0	3409	0
Flt Permitted	0.543			0.724				0.931			0.895	
Satd. Flow (perm)	1001	1789	0	1346	1863	1542	0	3223	0	0	3082	0
Satd. Flow (RTOR)		12				145		19			31	
Confl. Peds. (#/hr)	14		3	3		14						
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	73	50	0	6	28	44	0	127	0	0	172	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6			2		2	8			4		
Detector Phase	1	6		5	2	2	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0	7.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	10.5	22.5		10.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	11.0	23.0		11.0	23.0	23.0	26.0	26.0		26.0	26.0	
Total Split (%)	18.3%	38.3%		18.3%	38.3%	38.3%	43.3%	43.3%		43.3%	43.3%	
Maximum Green (s)	5.5	17.5		5.5	17.5	17.5	20.5	20.5		20.5	20.5	
Yellow Time (s)	4.0	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	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5	5.5		5.5			5.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	Max	Max		Max	Max	
Act Effct Green (s)	11.3	11.2		8.9	7.1	7.1		29.1			29.1	
Actuated g/C Ratio	0.25	0.25		0.20	0.16	0.16		0.65			0.65	
v/c Ratio	0.21	0.11		0.02	0.09	0.12		0.06			0.09	
Control Delay	12.5	12.7		10.7	19.4	0.7		7.2			6.9	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Delay	12.5	12.7		10.7	19.4	0.7		7.2			6.9	
LOS	B	B		B	B	A		A			A	
Approach Delay		12.6			8.2			7.2			6.9	
Approach LOS		B			A			A			A	
Queue Length 50th (ft)	14	7		1	7	0		9			12	
Queue Length 95th (ft)	34	33		7	25	0		21			26	
Internal Link Dist (ft)		488			887			548			1120	
Turn Bay Length (ft)	60			130								
Base Capacity (vph)	352	726		335	741	700		2096			2009	
Starvation Cap Reductn	0	0		0	0	0		0			0	
Spillback Cap Reductn	0	0		0	0	0		0			0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0	0		0			0	
Reduced v/c Ratio	0.21	0.07		0.02	0.04	0.06		0.06			0.09	

Intersection Summary		
Cycle Length: 60		
Actuated Cycle Length: 44.9		
Natural Cycle: 60		
Control Type: Semi Act-Uncoord		
Maximum v/c Ratio: 0.21		
Intersection Signal Delay: 8.6	Intersection LOS: A	
Intersection Capacity Utilization 32.5%	ICU Level of Service A	
Analysis Period (min) 15		

Splits and Phases: 12: Hall of Fame Drive & Church Avenue/Howard Baker Jr. Avenue



Intersection	
Intersection Delay, s/veh	11.1
Intersection LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	136	90	205	84	57	186
Future Vol, veh/h	136	90	205	84	57	186
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	149	99	225	92	63	204
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	10.2	12.1	10.7
HCM LOS	B	B	B

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	23%	0%	71%
Vol Thru, %	0%	60%	29%
Vol Right, %	77%	40%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	243	226	289
LT Vol	57	0	205
Through Vol	0	136	84
RT Vol	186	90	0
Lane Flow Rate	267	248	318
Geometry Grp	1	1	1
Degree of Util (X)	0.359	0.328	0.443
Departure Headway (Hd)	4.844	4.754	5.027
Convergence, Y/N	Yes	Yes	Yes
Cap	734	748	708
Service Time	2.924	2.837	3.109
HCM Lane V/C Ratio	0.364	0.332	0.449
HCM Control Delay	10.7	10.2	12.1
HCM Lane LOS	B	B	B
HCM 95th-tile Q	1.6	1.4	2.3

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕						↕	
Traffic Vol, veh/h	36	104	112	5	169	21	0	0	0	1	8	25
Future Vol, veh/h	36	104	112	5	169	21	0	0	0	1	8	25
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	44	128	138	6	209	26	0	0	0	1	10	31

Major/Minor	Major1			Major2					Minor2		
Conflicting Flow All	235	0	0	267	0	0			519	589	222
Stage 1	-	-	-	-	-	-			234	234	-
Stage 2	-	-	-	-	-	-			285	355	-
Critical Hdwy	4.12	-	-	4.12	-	-			6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-			5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-			5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-			3.518	4.018	3.318
Pot Cap-1 Maneuver	1332	-	-	1297	-	-			517	421	818
Stage 1	-	-	-	-	-	-			805	711	-
Stage 2	-	-	-	-	-	-			763	630	-
Platoon blocked, %		-	-		-	-					
Mov Cap-1 Maneuver	1332	-	-	1297	-	-			494	0	818
Mov Cap-2 Maneuver	-	-	-	-	-	-			494	0	-
Stage 1	-	-	-	-	-	-			770	0	-
Stage 2	-	-	-	-	-	-			763	0	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0.2	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1332	-	-	1297	-	-	798
HCM Lane V/C Ratio	0.033	-	-	0.005	-	-	0.053
HCM Control Delay (s)	7.8	0	-	7.8	0	-	9.8
HCM Lane LOS	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-	-	0.2

Intersection	
Intersection Delay, s/veh	11.4
Intersection LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	82	62	42	162	239	58
Future Vol, veh/h	82	62	42	162	239	58
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	100	76	51	198	291	71
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	10.2	9.9	13
HCM LOS	B	A	B

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	57%	0%	80%
Vol Thru, %	43%	21%	0%
Vol Right, %	0%	79%	20%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	144	204	297
LT Vol	82	0	239
Through Vol	62	42	0
RT Vol	0	162	58
Lane Flow Rate	176	249	362
Geometry Grp	1	1	1
Degree of Util (X)	0.258	0.32	0.5
Departure Headway (Hd)	5.284	4.63	4.97
Convergence, Y/N	Yes	Yes	Yes
Cap	673	769	717
Service Time	3.371	2.708	3.051
HCM Lane V/C Ratio	0.262	0.324	0.505
HCM Control Delay	10.2	9.9	13
HCM Lane LOS	B	A	B
HCM 95th-tile Q	1	1.4	2.8

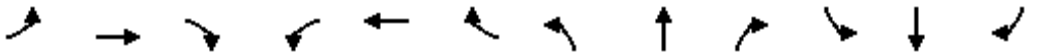
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	87	0
Future Vol, veh/h	0	0	0	0	87	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	-	-
Veh in Median Storage, #	0	-	16974	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	97	0

Major/Minor	Minor1		Major2	
Conflicting Flow All	194	-	0	0
Stage 1	0	-	-	-
Stage 2	194	-	-	-
Critical Hdwy	6.42	-	4.12	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-
Follow-up Hdwy	3.518	-	2.218	-
Pot Cap-1 Maneuver	795	0	-	-
Stage 1	-	0	-	-
Stage 2	839	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	795	-	-	-
Mov Cap-2 Maneuver	795	-	-	-
Stage 1	-	-	-	-
Stage 2	839	-	-	-

Approach	WB	SB
HCM Control Delay, s	0	
HCM LOS	A	

Minor Lane/Major Mvmt	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	0	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	-	-	-



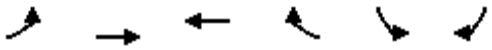
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	342	14	106	296	199	0	0	0	108	51	121
Future Volume (vph)	120	342	14	106	296	199	0	0	0	108	51	121
Lane Util. Factor	1.00	0.95	0.95	0.97	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		0.98	0.99						1.00	0.97
Frt		0.994			0.940							0.850
Flt Protected	0.950			0.950							0.967	
Satd. Flow (prot)	1770	3515	0	3433	3282	0	0	0	0	0	1801	1583
Flt Permitted	0.450			0.950							0.967	
Satd. Flow (perm)	834	3515	0	3376	3282	0	0	0	0	0	1796	1537
Satd. Flow (RTOR)		7			212							129
Confl. Peds. (#/hr)	10		8	8		10				4		16
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	128	379	0	113	527	0	0	0	0	0	169	129
Turn Type	pm+pt	NA		Prot	NA					Split	NA	Perm
Protected Phases	1	2		1	2					4	4	
Permitted Phases	2											4
Detector Phase	1	2		1	2					4	4	4
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0					7.0	7.0	7.0
Minimum Split (s)	9.0	15.5		9.0	15.5					12.0	12.0	12.0
Total Split (s)	15.0	31.0		15.0	31.0					24.0	24.0	24.0
Total Split (%)	21.4%	44.3%		21.4%	44.3%					34.3%	34.3%	34.3%
Maximum Green (s)	10.0	25.5		10.0	25.5					19.0	19.0	19.0
Yellow Time (s)	4.0	4.0		4.0	4.0					4.0	4.0	4.0
All-Red Time (s)	1.0	1.5		1.0	1.5					1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0						0.0	0.0
Total Lost Time (s)	5.0	5.5		5.0	5.5						5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	2.0	2.0		2.0	2.0					2.0	2.0	2.0
Recall Mode	None	C-Max		None	C-Max					None	None	None
Act Effct Green (s)	44.0	36.8		6.7	36.8						11.0	11.0
Actuated g/C Ratio	0.63	0.53		0.10	0.53						0.16	0.16
v/c Ratio	0.21	0.20		0.35	0.29						0.60	0.37
Control Delay	5.1	10.0		33.3	5.4						35.6	8.3
Queue Delay	0.0	0.0		0.0	0.3						0.0	0.0
Total Delay	5.1	10.0		33.3	5.7						35.6	8.3
LOS	A	A		C	A						D	A
Approach Delay		8.8			10.6						23.8	
Approach LOS		A			B						C	
Queue Length 50th (ft)	14	41		25	24						69	0
Queue Length 95th (ft)	37	78		47	64						117	39
Internal Link Dist (ft)		516			188			218			576	
Turn Bay Length (ft)	50											65
Base Capacity (vph)	696	1850		490	1825						488	511
Starvation Cap Reductn	0	0		0	659						0	0
Spillback Cap Reductn	0	0		0	0						0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0						0	0
Reduced v/c Ratio	0.18	0.20		0.23	0.45						0.35	0.25

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 32 (46%), Referenced to phase 2:EBWB, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 12.7	Intersection LOS: B
Intersection Capacity Utilization 43.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: Central Street & Summit Hill Drive

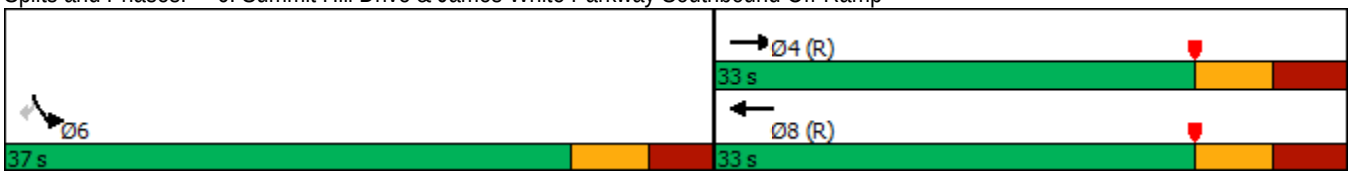




Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	447	178	0	293	432
Future Volume (vph)	0	447	178	0	293	432
Lane Util. Factor	1.00	0.91	0.95	1.00	0.97	0.88
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	5085	3539	0	3433	2787
Flt Permitted					0.950	
Satd. Flow (perm)	0	5085	3539	0	3433	2787
Satd. Flow (RTOR)						470
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	486	193	0	318	470
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		10.0	10.0		7.0	7.0
Minimum Split (s)		18.0	18.0		14.5	14.5
Total Split (s)		33.0	33.0		37.0	37.0
Total Split (%)		47.1%	47.1%		52.9%	52.9%
Maximum Green (s)		25.0	25.0		29.5	29.5
Yellow Time (s)		4.0	4.0		4.0	4.0
All-Red Time (s)		4.0	4.0		3.5	3.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0
Total Lost Time (s)		8.0	8.0		7.5	7.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		5.0	2.0		5.0	5.0
Recall Mode		C-Max	C-Max		None	None
Act Effct Green (s)		38.1	38.1		16.4	16.4
Actuated g/C Ratio		0.54	0.54		0.23	0.23
v/c Ratio		0.18	0.10		0.39	0.46
Control Delay		6.6	10.2		23.1	3.7
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		6.6	10.2		23.1	3.7
LOS		A	B		C	A
Approach Delay		6.6	10.2		11.5	
Approach LOS		A	B		B	
Queue Length 50th (ft)		21	21		59	0
Queue Length 95th (ft)		29	42		81	31
Internal Link Dist (ft)		188	373		516	
Turn Bay Length (ft)					250	250
Base Capacity (vph)		2764	1924		1446	1446
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.18	0.10		0.22	0.33

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 38 (54%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.46	
Intersection Signal Delay: 9.7	Intersection LOS: A
Intersection Capacity Utilization 36.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Summit Hill Drive & James White Parkway Southbound Off-Ramp



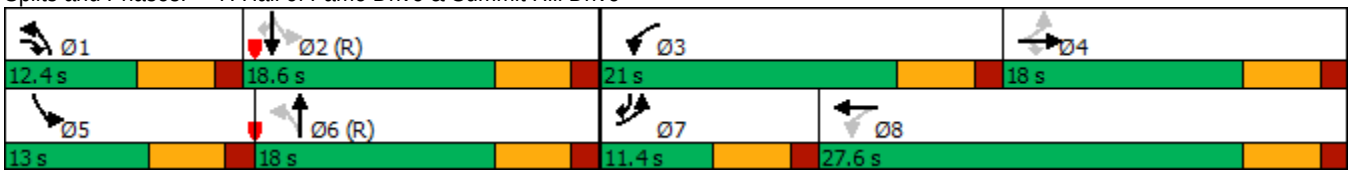
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	308	341	324	113	220	24	186	72	189	149	68
Future Volume (vph)	86	308	341	324	113	220	24	186	72	189	149	68
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor							1.00					0.99
Frt		0.953	0.850		0.901			0.958				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3231	1441	1770	3189	0	1770	3391	0	1770	3539	1583
Flt Permitted	0.536			0.217			0.649			0.505		
Satd. Flow (perm)	998	3231	1441	404	3189	0	1207	3391	0	941	3539	1561
Satd. Flow (RTOR)		82	219		239			71				210
Confl. Peds. (#/hr)							2					2
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
Shared Lane Traffic (%)			41%									
Lane Group Flow (vph)	93	487	219	352	362	0	26	280	0	205	162	74
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	7	4	1	3	8		1	6		5	2	7
Permitted Phases	4		4	8			6			2		2
Detector Phase	7	4	1	3	8		1	6		5	2	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0		5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5		10.5	15.5	10.5
Total Split (s)	11.4	18.0	12.4	21.0	27.6		12.4	18.0		13.0	18.6	11.4
Total Split (%)	16.3%	25.7%	17.7%	30.0%	39.4%		17.7%	25.7%		18.6%	26.6%	16.3%
Maximum Green (s)	5.9	12.5	6.9	15.5	22.1		6.9	12.5		7.5	13.1	5.9
Yellow Time (s)	4.0	4.0	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	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		2.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	None
Act Effct Green (s)	17.5	11.8	22.8	30.8	21.7		20.6	15.2		24.7	17.2	22.9
Actuated g/C Ratio	0.25	0.17	0.33	0.44	0.31		0.29	0.22		0.35	0.25	0.33
v/c Ratio	0.30	0.79	0.36	0.80	0.31		0.07	0.35		0.49	0.19	0.11
Control Delay	8.1	24.6	5.8	29.0	7.3		15.1	19.8		12.3	14.1	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	8.1	24.6	5.8	29.0	7.3		15.1	19.8		12.3	14.1	2.6
LOS	A	C	A	C	A		B	B		B	B	A
Approach Delay		17.5			18.0			19.4			11.3	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)	7	56	0	95	20		7	42		19	31	0
Queue Length 95th (ft)	15	#91	23	#196	48		22	75		31	48	15
Internal Link Dist (ft)		373			335			424			335	
Turn Bay Length (ft)				165			230			165		60
Base Capacity (vph)	317	652	642	480	1191		436	791		428	871	658
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.29	0.75	0.34	0.73	0.30		0.06	0.35		0.48	0.19	0.11

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 41 (59%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 16.7	Intersection LOS: B
Intersection Capacity Utilization 67.2%	ICU Level of Service C
Analysis Period (min) 15	

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Hall of Fame Drive & Summit Hill Drive



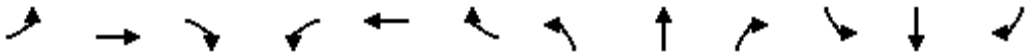
Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	181	390	460	31	86	235
Future Vol, veh/h	181	390	460	31	86	235
Conflicting Peds, #/hr	2	0	0	2	0	6
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	193	415	489	33	91	250

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	524	0	-	0	1102	269
Stage 1	-	-	-	-	508	-
Stage 2	-	-	-	-	594	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1039	-	-	-	206	729
Stage 1	-	-	-	-	569	-
Stage 2	-	-	-	-	514	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1037	-	-	-	167	723
Mov Cap-2 Maneuver	-	-	-	-	167	-
Stage 1	-	-	-	-	462	-
Stage 2	-	-	-	-	513	-

Approach	EB	WB	SB
HCM Control Delay, s	2.9	0	17.6
HCM LOS			C

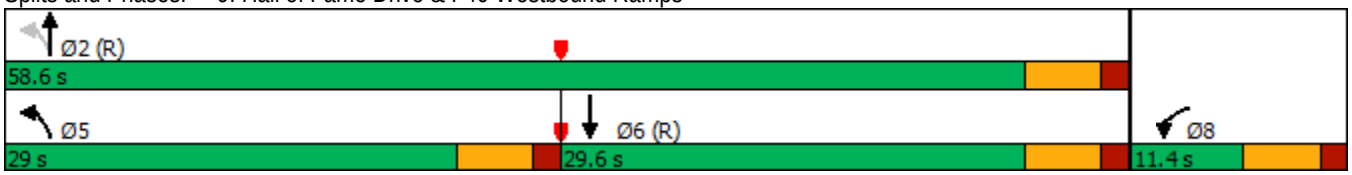
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1037	-	-	-	623
HCM Lane V/C Ratio	0.186	-	-	-	0.548
HCM Control Delay (s)	9.3	-	-	-	17.6
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.7	-	-	-	3.3

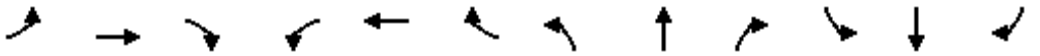


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	102	0	134	388	770	0	0	362	364
Future Volume (vph)	0	0	0	102	0	134	388	770	0	0	362	364
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt						0.850					0.925	
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	0	0	3433	0	1583	1770	3539	0	0	3274	0
Flt Permitted				0.950			0.252					
Satd. Flow (perm)	0	0	0	3433	0	1583	469	3539	0	0	3274	0
Satd. Flow (RTOR)						210					396	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	115	0	151	436	865	0	0	816	0
Turn Type				Prot		Free	pm+pt	NA			NA	
Protected Phases				8			5	2			6	
Permitted Phases						Free	2					
Detector Phase				8			5	2			6	
Switch Phase												
Minimum Initial (s)				5.0			5.0	10.0			10.0	
Minimum Split (s)				10.5			10.5	15.5			15.5	
Total Split (s)				11.4			29.0	58.6			29.6	
Total Split (%)				16.3%			41.4%	83.7%			42.3%	
Maximum Green (s)				5.9			23.5	53.1			24.1	
Yellow Time (s)				4.0			4.0	4.0			4.0	
All-Red Time (s)				1.5			1.5	1.5			1.5	
Lost Time Adjust (s)				0.0			0.0	0.0			0.0	
Total Lost Time (s)				5.5			5.5	5.5			5.5	
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)				3.0			2.0	2.0			2.0	
Recall Mode				None			None	C-Max			C-Max	
Act Effct Green (s)				5.9		70.0	55.4	56.5			36.3	
Actuated g/C Ratio				0.08		1.00	0.79	0.81			0.52	
v/c Ratio				0.40		0.10	0.70	0.30			0.43	
Control Delay				34.8		0.1	10.8	0.6			7.5	
Queue Delay				0.0		0.0	0.0	0.0			0.0	
Total Delay				34.8		0.1	10.8	0.6			7.5	
LOS				C		A	B	A			A	
Approach Delay					15.1			4.0			7.5	
Approach LOS					B			A			A	
Queue Length 50th (ft)				24		0	21	0			52	
Queue Length 95th (ft)				47		0	52	2			117	
Internal Link Dist (ft)		440			577			562			692	
Turn Bay Length (ft)				475		200	155					
Base Capacity (vph)				289		1583	807	2855			1890	
Starvation Cap Reductn				0		0	0	0			0	
Spillback Cap Reductn				0		0	0	0			0	
Storage Cap Reductn				0		0	0	0			0	
Reduced v/c Ratio				0.40		0.10	0.54	0.30			0.43	

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 6.4	Intersection LOS: A
Intersection Capacity Utilization 61.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 9: Hall of Fame Drive & I-40 Westbound Ramps

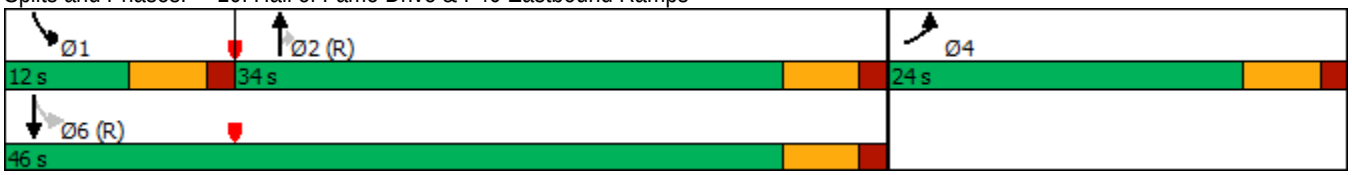


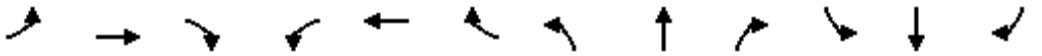


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	412	0	305	0	0	0	0	747	267	84	383	0
Future Volume (vph)	412	0	305	0	0	0	0	747	267	84	383	0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850						0.850			
Flt Protected	0.950									0.950		
Satd. Flow (prot)	3433	0	1583	0	0	0	0	3539	1583	1770	3539	0
Flt Permitted	0.950									0.244		
Satd. Flow (perm)	3433	0	1583	0	0	0	0	3539	1583	455	3539	0
Satd. Flow (RTOR)			339						297			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	458	0	339	0	0	0	0	830	297	93	426	0
Turn Type	Prot		Free					NA	Perm	pm+pt	NA	
Protected Phases	4							2		1	6	
Permitted Phases			Free						2	6		
Detector Phase	4							2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0							10.0	10.0	5.0	10.0	
Minimum Split (s)	22.5							22.5	22.5	10.5	22.5	
Total Split (s)	24.0							34.0	34.0	12.0	46.0	
Total Split (%)	34.3%							48.6%	48.6%	17.1%	65.7%	
Maximum Green (s)	18.5							28.5	28.5	6.5	40.5	
Yellow Time (s)	4.0							4.0	4.0	4.0	4.0	
All-Red Time (s)	1.5							1.5	1.5	1.5	1.5	
Lost Time Adjust (s)	0.0							0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5							5.5	5.5	5.5	5.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	2.0							2.0	2.0	2.0	2.0	
Recall Mode	None							C-Max	C-Max	None	C-Max	
Act Effct Green (s)	13.7		70.0					35.9	35.9	45.3	45.3	
Actuated g/C Ratio	0.20		1.00					0.51	0.51	0.65	0.65	
v/c Ratio	0.68		0.21					0.46	0.31	0.23	0.19	
Control Delay	31.3		0.3					10.3	2.0	6.8	5.9	
Queue Delay	0.0		0.0					0.0	0.0	0.0	0.0	
Total Delay	31.3		0.3					10.3	2.0	6.8	5.9	
LOS	C		A					B	A	A	A	
Approach Delay		18.1						8.1			6.1	
Approach LOS		B						A			A	
Queue Length 50th (ft)	95		0					73	0	18	44	
Queue Length 95th (ft)	130		0					155	12	34	72	
Internal Link Dist (ft)		686			892			546			562	
Turn Bay Length (ft)	200		210						290	190		
Base Capacity (vph)	907		1583					1815	956	420	2291	
Starvation Cap Reductn	0		0					0	0	0	0	
Spillback Cap Reductn	0		0					0	0	0	0	
Storage Cap Reductn	0		0					0	0	0	0	
Reduced v/c Ratio	0.50		0.21					0.46	0.31	0.22	0.19	

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 34 (49%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 11.0	Intersection LOS: B
Intersection Capacity Utilization 61.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 10: Hall of Fame Drive & I-40 Eastbound Ramps



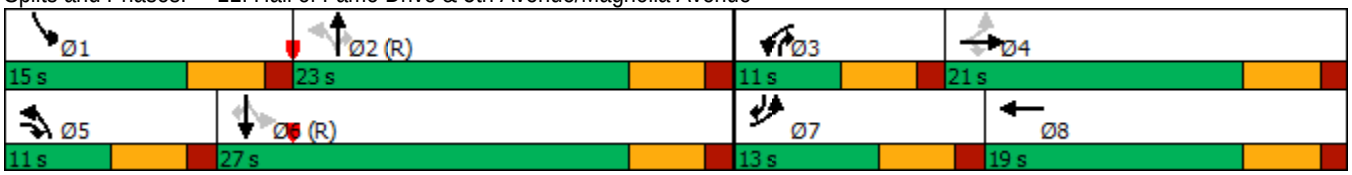


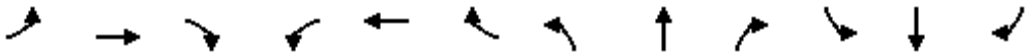
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	254	32	58	185	250	38	383	89	146	320	66
Future Volume (vph)	92	254	32	58	185	250	38	383	89	146	320	66
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.99	0.99			1.00					0.99
Frt			0.850		0.914				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3235	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.328			0.950			0.535			0.389		
Satd. Flow (perm)	611	3539	1561	3404	3235	0	995	3539	1583	725	3539	1561
Satd. Flow (RTOR)			125		284				125			125
Confl. Peds. (#/hr)			2	2			3					3
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Lane Group Flow (vph)	105	289	36	66	494	0	43	435	101	166	364	75
Turn Type	pm+pt	NA	pm+ov	Prot	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4				2		2	6		6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0	5.0	5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5	10.5	10.5	15.5	10.5
Total Split (s)	13.0	21.0	11.0	11.0	19.0		11.0	23.0	11.0	15.0	27.0	13.0
Total Split (%)	18.6%	30.0%	15.7%	15.7%	27.1%		15.7%	32.9%	15.7%	21.4%	38.6%	18.6%
Maximum Green (s)	7.5	15.5	5.5	5.5	13.5		5.5	17.5	5.5	9.5	21.5	7.5
Yellow Time (s)	4.0	4.0	4.0	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	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	None	None	C-Max	None
Act Effct Green (s)	18.2	12.2	18.0	5.5	10.6		29.9	24.1	35.1	36.9	31.2	38.3
Actuated g/C Ratio	0.26	0.17	0.26	0.08	0.15		0.43	0.34	0.50	0.53	0.45	0.55
v/c Ratio	0.38	0.47	0.07	0.25	0.68		0.09	0.36	0.12	0.33	0.23	0.08
Control Delay	20.1	27.9	0.3	32.8	16.3		9.5	18.3	3.1	7.1	10.5	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.1	27.9	0.3	32.8	16.3		9.5	18.3	3.1	7.1	10.5	1.4
LOS	C	C	A	C	B		A	B	A	A	B	A
Approach Delay		23.7			18.3			15.0			8.4	
Approach LOS		C			B			B			A	
Queue Length 50th (ft)	32	59	0	13	44		8	68	0	18	56	0
Queue Length 95th (ft)	58	86	0	31	80		24	100	7	34	90	4
Internal Link Dist (ft)		674			634			359			1142	
Turn Bay Length (ft)	245		35	295			230		245	175		175
Base Capacity (vph)	282	783	496	269	853		489	1217	855	526	1575	920
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.37	0.07	0.25	0.58		0.09	0.36	0.12	0.32	0.23	0.08

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 69 (99%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 15.8	Intersection LOS: B
Intersection Capacity Utilization 55.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 11: Hall of Fame Drive & 5th Avenue/Magnolia Avenue



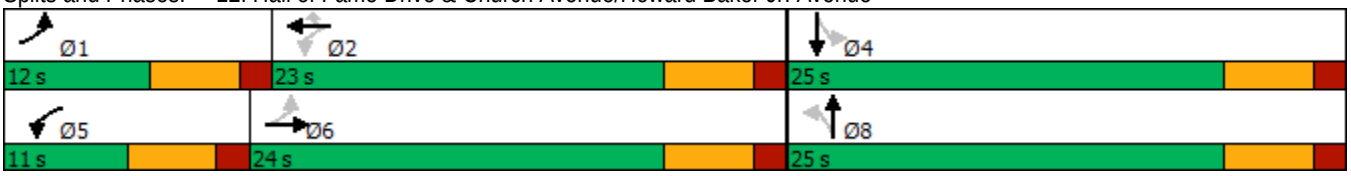


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	114	82	36	13	45	130	11	147	18	64	107	34
Future Volume (vph)	114	82	36	13	45	130	11	147	18	64	107	34
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor	0.96	0.99		0.99		0.92		1.00			1.00	
Frt		0.954				0.850		0.985			0.975	
Flt Protected	0.950			0.950				0.997			0.985	
Satd. Flow (prot)	1770	1766	0	1770	1863	1583	0	3476	0	0	3386	0
Flt Permitted	0.505			0.673				0.935			0.818	
Satd. Flow (perm)	901	1766	0	1246	1863	1462	0	3259	0	0	2812	0
Satd. Flow (RTOR)		38				145		20			38	
Confl. Peds. (#/hr)	64		9	9		64	2					2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	127	131	0	14	50	144	0	195	0	0	228	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6			2		2	8			4		
Detector Phase	1	6		5	2	2	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0	7.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	10.5	22.5		10.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	12.0	24.0		11.0	23.0	23.0	25.0	25.0		25.0	25.0	
Total Split (%)	20.0%	40.0%		18.3%	38.3%	38.3%	41.7%	41.7%		41.7%	41.7%	
Maximum Green (s)	6.5	18.5		5.5	17.5	17.5	19.5	19.5		19.5	19.5	
Yellow Time (s)	4.0	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	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5	5.5		5.5			5.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	Max	Max		Max	Max	
Act Effct Green (s)	15.3	14.6		10.9	7.5	7.5		24.6			24.6	
Actuated g/C Ratio	0.32	0.30		0.23	0.16	0.16		0.51			0.51	
v/c Ratio	0.32	0.23		0.04	0.17	0.41		0.12			0.16	
Control Delay	12.5	11.6		10.1	20.0	8.4		9.2			8.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Delay	12.5	11.6		10.1	20.0	8.4		9.2			8.8	
LOS	B	B		B	C	A		A			A	
Approach Delay		12.0			11.3			9.2			8.8	
Approach LOS		B			B			A			A	
Queue Length 50th (ft)	23	17		2	13	0		16			17	
Queue Length 95th (ft)	51	62		10	36	37		35			38	
Internal Link Dist (ft)		488			887			548			1120	
Turn Bay Length (ft)	60			130								
Base Capacity (vph)	412	717		355	685	629		1680			1460	
Starvation Cap Reductn	0	0		0	0	0		0			0	
Spillback Cap Reductn	0	0		0	0	0		0			0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0	0		0			0	
Reduced v/c Ratio	0.31	0.18		0.04	0.07	0.23		0.12			0.16	

Intersection Summary		
Cycle Length: 60		
Actuated Cycle Length: 47.9		
Natural Cycle: 60		
Control Type: Semi Act-Uncoord		
Maximum v/c Ratio: 0.41		
Intersection Signal Delay: 10.4	Intersection LOS: B	
Intersection Capacity Utilization 43.4%	ICU Level of Service A	
Analysis Period (min) 15		

Splits and Phases: 12: Hall of Fame Drive & Church Avenue/Howard Baker Jr. Avenue



Intersection	
Intersection Delay, s/veh	9.7
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	312	0	0	266	0	0
Future Vol, veh/h	312	0	0	266	0	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	343	0	0	292	0	0
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	9.9	9.4	0
HCM LOS	A	A	-

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	0%	0%	0%
Vol Thru, %	100%	100%	100%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	312	266
LT Vol	0	0	0
Through Vol	0	312	266
RT Vol	0	0	0
Lane Flow Rate	0	343	292
Geometry Grp	1	1	1
Degree of Util (X)	0	0.395	0.34
Departure Headway (Hd)	5.278	4.15	4.188
Convergence, Y/N	Yes	Yes	Yes
Cap	0	857	848
Service Time	3.278	2.217	2.263
HCM Lane V/C Ratio	0	0.4	0.344
HCM Control Delay	8.3	9.9	9.4
HCM Lane LOS	N	A	A
HCM 95th-tile Q	0	1.9	1.5

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕						↕	
Traffic Vol, veh/h	80	104	104	5	155	21	0	0	0	1	1	25
Future Vol, veh/h	80	104	104	5	155	21	0	0	0	1	1	25
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	99	128	128	6	191	26	0	0	0	1	1	31

Major/Minor	Major1			Major2					Minor2		
Conflicting Flow All	217	0	0	257	0	0			606	671	204
Stage 1	-	-	-	-	-	-			216	216	-
Stage 2	-	-	-	-	-	-			390	455	-
Critical Hdwy	4.12	-	-	4.12	-	-			6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-			5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-			5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-			3.518	4.018	3.318
Pot Cap-1 Maneuver	1353	-	-	1308	-	-			460	378	837
Stage 1	-	-	-	-	-	-			820	724	-
Stage 2	-	-	-	-	-	-			684	569	-
Platoon blocked, %		-	-		-	-					
Mov Cap-1 Maneuver	1353	-	-	1308	-	-			418	0	837
Mov Cap-2 Maneuver	-	-	-	-	-	-			418	0	-
Stage 1	-	-	-	-	-	-			745	0	-
Stage 2	-	-	-	-	-	-			684	0	-

Approach	EB	WB	SB
HCM Control Delay, s	2.2	0.2	9.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1353	-	-	1308	-	-	806
HCM Lane V/C Ratio	0.073	-	-	0.005	-	-	0.041
HCM Control Delay (s)	7.9	0	-	7.8	0	-	9.7
HCM Lane LOS	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-	-	0.1

Intersection	
Intersection Delay, s/veh	7.8
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	105	96	6	10	0
Future Vol, veh/h	6	105	96	6	10	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	128	117	7	12	0
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	7.8	7.7	7.8
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	0%	100%
Vol Thru, %	95%	94%	0%
Vol Right, %	0%	6%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	111	102	10
LT Vol	6	0	10
Through Vol	105	96	0
RT Vol	0	6	0
Lane Flow Rate	135	124	12
Geometry Grp	1	1	1
Degree of Util (X)	0.153	0.139	0.016
Departure Headway (Hd)	4.059	4.021	4.691
Convergence, Y/N	Yes	Yes	Yes
Cap	881	889	768
Service Time	2.093	2.059	2.691
HCM Lane V/C Ratio	0.153	0.139	0.016
HCM Control Delay	7.8	7.7	7.8
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	0.5	0

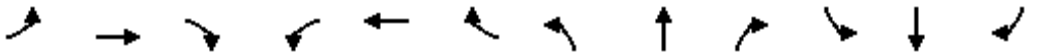
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	87	0
Future Vol, veh/h	0	0	0	0	87	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	-	-
Veh in Median Storage, #	0	-	16974	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	97	0

Major/Minor	Minor1		Major2	
Conflicting Flow All	194	-	0	0
Stage 1	0	-	-	-
Stage 2	194	-	-	-
Critical Hdwy	6.42	-	4.12	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-
Follow-up Hdwy	3.518	-	2.218	-
Pot Cap-1 Maneuver	795	0	-	-
Stage 1	-	0	-	-
Stage 2	839	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	795	-	-	-
Mov Cap-2 Maneuver	795	-	-	-
Stage 1	-	-	-	-
Stage 2	839	-	-	-

Approach	WB	SB
HCM Control Delay, s	0	
HCM LOS	A	

Minor Lane/Major Mvmt	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	0	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	-	-	-



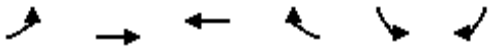
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	155	307	14	166	401	326	0	0	0	229	51	198
Future Volume (vph)	155	307	14	166	401	326	0	0	0	229	51	198
Lane Util. Factor	1.00	0.95	0.95	0.97	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.87	1.00		0.98	0.77						0.69	0.97
Frt		0.993			0.933							0.850
Flt Protected	0.950			0.950							0.961	
Satd. Flow (prot)	1770	3512	0	3433	2537	0	0	0	0	0	1790	1583
Flt Permitted	0.295			0.950							0.961	
Satd. Flow (perm)	480	3512	0	3362	2537	0	0	0	0	0	1243	1538
Satd. Flow (RTOR)		7			323							170
Confl. Peds. (#/hr)	422		8	8		422				621		16
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	165	342	0	177	774	0	0	0	0	0	298	211
Turn Type	pm+pt	NA		Prot	NA					Split	NA	Perm
Protected Phases	1	2		1	2					4	4	
Permitted Phases	2											4
Detector Phase	1	2		1	2					4	4	4
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0					7.0	7.0	7.0
Minimum Split (s)	9.0	15.5		9.0	15.5					12.0	12.0	12.0
Total Split (s)	14.0	35.0		14.0	35.0					26.0	26.0	26.0
Total Split (%)	18.7%	46.7%		18.7%	46.7%					34.7%	34.7%	34.7%
Maximum Green (s)	9.0	29.5		9.0	29.5					21.0	21.0	21.0
Yellow Time (s)	4.0	4.0		4.0	4.0					4.0	4.0	4.0
All-Red Time (s)	1.0	1.5		1.0	1.5					1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0						0.0	0.0
Total Lost Time (s)	5.0	5.5		5.0	5.5						5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	2.0	2.0		2.0	2.0					2.0	2.0	2.0
Recall Mode	None	C-Max		None	C-Max					None	None	None
Act Effct Green (s)	43.5	35.1		7.9	35.1						16.5	16.5
Actuated g/C Ratio	0.58	0.47		0.11	0.47						0.22	0.22
v/c Ratio	0.40	0.21		0.49	0.57						0.76	0.45
Control Delay	9.3	13.1		40.8	9.0						39.5	9.5
Queue Delay	0.0	0.0		0.0	0.7						0.0	0.0
Total Delay	9.3	13.1		40.8	9.7						39.5	9.5
LOS	A	B		D	A						D	A
Approach Delay		11.9			15.5						27.1	
Approach LOS		B			B						C	
Queue Length 50th (ft)	26	46		42	35						130	15
Queue Length 95th (ft)	58	82		73	148						198	63
Internal Link Dist (ft)		516			188			218			576	
Turn Bay Length (ft)	50											65
Base Capacity (vph)	441	1648		413	1359						501	553
Starvation Cap Reductn	0	0		0	266						0	0
Spillback Cap Reductn	0	0		0	0						0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0						0	0
Reduced v/c Ratio	0.37	0.21		0.43	0.71						0.59	0.38

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 13 (17%), Referenced to phase 2:EBWB, Start of Yellow	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 17.6	Intersection LOS: B
Intersection Capacity Utilization 62.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 5: Central Street & Summit Hill Drive

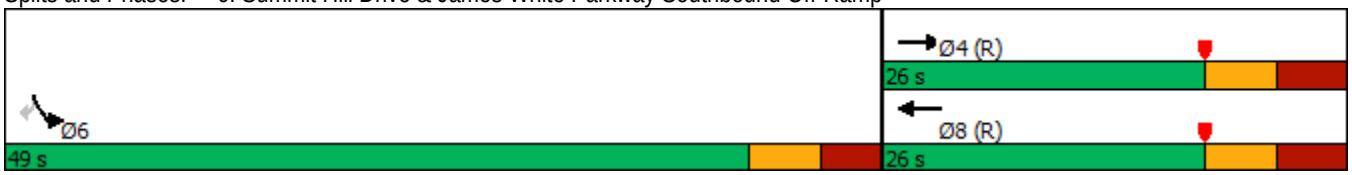




Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	412	233	0	871	670
Future Volume (vph)	0	412	233	0	871	670
Lane Util. Factor	1.00	0.91	0.95	1.00	0.97	0.88
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	5085	3539	0	3433	2787
Flt Permitted					0.950	
Satd. Flow (perm)	0	5085	3539	0	3433	2787
Satd. Flow (RTOR)						487
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	448	253	0	947	728
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		10.0	10.0		7.0	7.0
Minimum Split (s)		18.0	18.0		14.5	14.5
Total Split (s)		26.0	26.0		49.0	49.0
Total Split (%)		34.7%	34.7%		65.3%	65.3%
Maximum Green (s)		18.0	18.0		41.5	41.5
Yellow Time (s)		4.0	4.0		4.0	4.0
All-Red Time (s)		4.0	4.0		3.5	3.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0
Total Lost Time (s)		8.0	8.0		7.5	7.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		5.0	2.0		5.0	5.0
Recall Mode		C-Max	C-Max		None	None
Act Effct Green (s)		22.3	22.3		37.2	37.2
Actuated g/C Ratio		0.30	0.30		0.50	0.50
v/c Ratio		0.30	0.24		0.56	0.45
Control Delay		17.6	17.9		14.1	4.0
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		17.6	17.9		14.1	4.0
LOS		B	B		B	A
Approach Delay		17.6	17.9		9.7	
Approach LOS		B	B		A	
Queue Length 50th (ft)		51	43		135	30
Queue Length 95th (ft)		72	70		174	57
Internal Link Dist (ft)		188	373		516	
Turn Bay Length (ft)					250	250
Base Capacity (vph)		1514	1054		1899	1759
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	1		0	2
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.30	0.24		0.50	0.41

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 71 (95%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 12.1	Intersection LOS: B
Intersection Capacity Utilization 46.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Summit Hill Drive & James White Parkway Southbound Off-Ramp

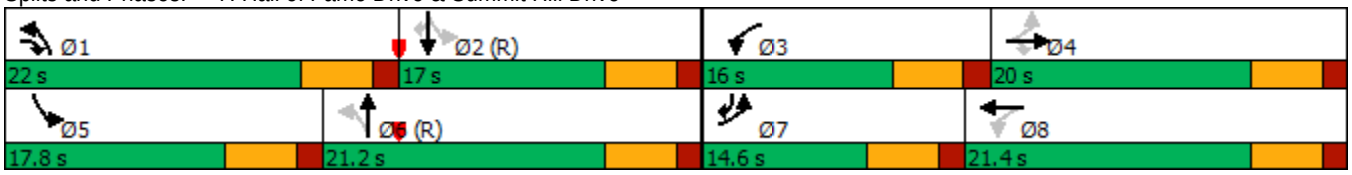


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	143	239	1016	238	139	162	36	193	51	182	293	87
Future Volume (vph)	143	239	1016	238	139	162	36	193	51	182	293	87
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor							1.00	0.90		0.73		0.99
Frt		0.898	0.850		0.919			0.969				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3044	1441	1770	3253	0	1770	3089	0	1770	3539	1583
Flt Permitted	0.554			0.270			0.418			0.588		
Satd. Flow (perm)	1032	3044	1441	503	3253	0	778	3089	0	795	3539	1561
Satd. Flow (RTOR)		486	125		176			40				116
Confl. Peds. (#/hr)							2		823	823		2
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
Shared Lane Traffic (%)			50%									
Lane Group Flow (vph)	155	812	552	259	327	0	39	265	0	198	318	95
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	7	4	1	3	8		1	6		5	2	7
Permitted Phases	4		4	8			6			2		2
Detector Phase	7	4	1	3	8		1	6		5	2	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0		5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5		10.5	15.5	10.5
Total Split (s)	14.6	20.0	22.0	16.0	21.4		22.0	21.2		17.8	17.0	14.6
Total Split (%)	19.5%	26.7%	29.3%	21.3%	28.5%		29.3%	28.3%		23.7%	22.7%	19.5%
Maximum Green (s)	9.1	14.5	16.5	10.5	15.9		16.5	15.7		12.3	11.5	9.1
Yellow Time (s)	4.0	4.0	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	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		2.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	None
Act Effct Green (s)	20.7	12.6	32.2	24.9	14.8		34.9	20.8		25.5	16.1	24.1
Actuated g/C Ratio	0.28	0.17	0.43	0.33	0.20		0.47	0.28		0.34	0.21	0.32
v/c Ratio	0.43	0.89	0.80	0.76	0.42		0.07	0.30		0.50	0.42	0.16
Control Delay	16.8	20.7	19.8	33.6	13.4		9.1	17.5		7.8	19.0	10.0
Queue Delay	0.0	0.0	0.2	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	16.8	20.7	20.1	33.6	13.4		9.1	17.5		7.8	19.0	10.0
LOS	B	C	C	C	B		A	B		A	B	A
Approach Delay		20.1			22.3			16.5			14.0	
Approach LOS		C			C			B			B	
Queue Length 50th (ft)	37	7	90	81	30		7	45		5	68	13
Queue Length 95th (ft)	74	#106	87	#162	65		m17	84		16	114	54
Internal Link Dist (ft)		373			335			424			335	
Turn Bay Length (ft)				165			230			165		60
Base Capacity (vph)	388	980	732	346	831		585	884		460	758	603
Starvation Cap Reductn	0	0	15	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.40	0.83	0.77	0.75	0.39		0.07	0.30		0.43	0.42	0.16

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 54 (72%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 18.9	Intersection LOS: B
Intersection Capacity Utilization 77.2%	ICU Level of Service D
Analysis Period (min) 15	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 7: Hall of Fame Drive & Summit Hill Drive



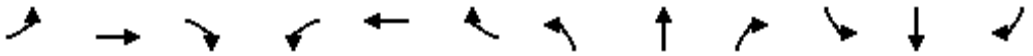
Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	81	410	484	23	24	91
Future Vol, veh/h	81	410	484	23	24	91
Conflicting Peds, #/hr	2	0	0	2	0	6
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	86	436	515	24	26	97

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	541	0	-	0	919	278
Stage 1	-	-	-	-	529	-
Stage 2	-	-	-	-	390	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1024	-	-	-	270	719
Stage 1	-	-	-	-	555	-
Stage 2	-	-	-	-	653	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1022	-	-	-	246	714
Mov Cap-2 Maneuver	-	-	-	-	246	-
Stage 1	-	-	-	-	507	-
Stage 2	-	-	-	-	652	-

Approach	EB	WB	SB
HCM Control Delay, s	1.5	0	9.6
HCM LOS			A

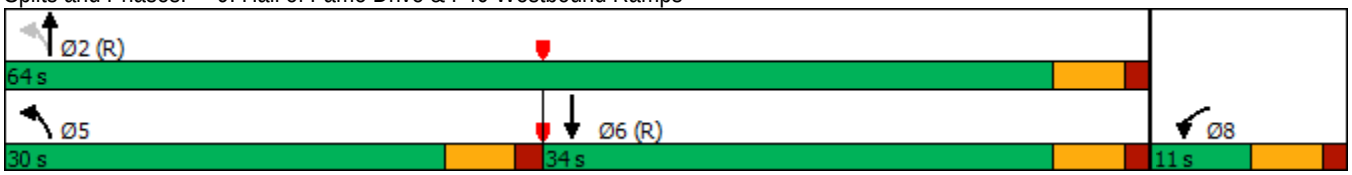
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1022	-	-	-	902
HCM Lane V/C Ratio	0.084	-	-	-	0.136
HCM Control Delay (s)	8.8	-	-	-	9.6
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.3	-	-	-	0.5

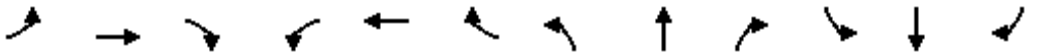


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	102	0	134	424	770	0	0	527	364
Future Volume (vph)	0	0	0	102	0	134	424	770	0	0	527	364
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt						0.850					0.939	
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	0	0	3433	0	1583	1770	3539	0	0	3323	0
Flt Permitted				0.950			0.178					
Satd. Flow (perm)	0	0	0	3433	0	1583	332	3539	0	0	3323	0
Satd. Flow (RTOR)						196					268	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	115	0	151	476	865	0	0	1001	0
Turn Type				Prot		Free	pm+pt	NA			NA	
Protected Phases				8			5	2			6	
Permitted Phases						Free	2					
Detector Phase				8			5	2			6	
Switch Phase												
Minimum Initial (s)				5.0			5.0	10.0			10.0	
Minimum Split (s)				10.5			10.5	15.5			15.5	
Total Split (s)				11.0			30.0	64.0			34.0	
Total Split (%)				14.7%			40.0%	85.3%			45.3%	
Maximum Green (s)				5.5			24.5	58.5			28.5	
Yellow Time (s)				4.0			4.0	4.0			4.0	
All-Red Time (s)				1.5			1.5	1.5			1.5	
Lost Time Adjust (s)				0.0			0.0	0.0			0.0	
Total Lost Time (s)				5.5			5.5	5.5			5.5	
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)				3.0			2.0	2.0			2.0	
Recall Mode				None			None	C-Max			C-Max	
Act Effct Green (s)				5.5		75.0	60.7	61.8			37.7	
Actuated g/C Ratio				0.07		1.00	0.81	0.82			0.50	
v/c Ratio				0.46		0.10	0.79	0.30			0.56	
Control Delay				39.6		0.1	16.7	0.5			12.5	
Queue Delay				0.0		0.0	0.0	0.0			0.0	
Total Delay				39.6		0.1	16.7	0.5			12.5	
LOS				D		A	B	A			B	
Approach Delay					17.2			6.3			12.5	
Approach LOS					B			A			B	
Queue Length 50th (ft)				27		0	47	0			125	
Queue Length 95th (ft)				51		0	78	2			210	
Internal Link Dist (ft)		440			577			562			692	
Turn Bay Length (ft)				475		200	155					
Base Capacity (vph)				251		1583	738	2916			1801	
Starvation Cap Reductn				0		0	0	0			0	
Spillback Cap Reductn				0		0	0	0			0	
Storage Cap Reductn				0		0	0	0			0	
Reduced v/c Ratio				0.46		0.10	0.64	0.30			0.56	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 9 (12%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 9.8	Intersection LOS: A
Intersection Capacity Utilization 67.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 9: Hall of Fame Drive & I-40 Westbound Ramps

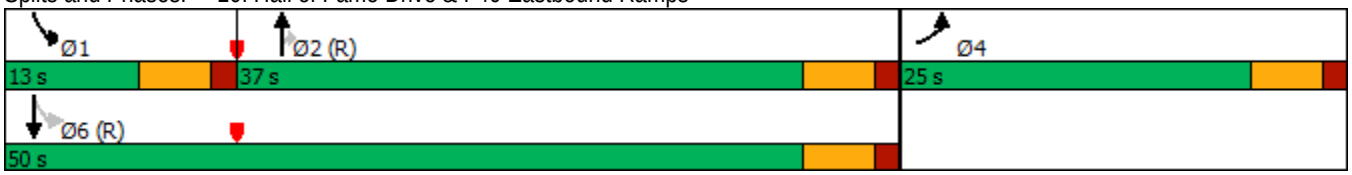




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	412	0	305	0	0	0	0	785	250	84	548	0
Future Volume (vph)	412	0	305	0	0	0	0	785	250	84	548	0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850						0.850			
Flt Protected	0.950									0.950		
Satd. Flow (prot)	3433	0	1583	0	0	0	0	3539	1583	1770	3539	0
Flt Permitted	0.950									0.236		
Satd. Flow (perm)	3433	0	1583	0	0	0	0	3539	1583	440	3539	0
Satd. Flow (RTOR)			339						278			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	458	0	339	0	0	0	0	872	278	93	609	0
Turn Type	Prot		Free					NA	Perm	pm+pt	NA	
Protected Phases	4							2		1	6	
Permitted Phases			Free						2	6		
Detector Phase	4							2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0							10.0	10.0	5.0	10.0	
Minimum Split (s)	22.5							22.5	22.5	10.5	22.5	
Total Split (s)	25.0							37.0	37.0	13.0	50.0	
Total Split (%)	33.3%							49.3%	49.3%	17.3%	66.7%	
Maximum Green (s)	19.5							31.5	31.5	7.5	44.5	
Yellow Time (s)	4.0							4.0	4.0	4.0	4.0	
All-Red Time (s)	1.5							1.5	1.5	1.5	1.5	
Lost Time Adjust (s)	0.0							0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5							5.5	5.5	5.5	5.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	2.0							2.0	2.0	2.0	2.0	
Recall Mode	None							C-Max	C-Max	None	C-Max	
Act Effct Green (s)	14.3		75.0					40.2	40.2	49.7	49.7	
Actuated g/C Ratio	0.19		1.00					0.54	0.54	0.66	0.66	
v/c Ratio	0.70		0.21					0.46	0.28	0.23	0.26	
Control Delay	34.1		0.3					11.4	2.6	7.2	7.7	
Queue Delay	0.0		0.0					0.0	0.0	0.0	0.0	
Total Delay	34.1		0.3					11.4	2.6	7.2	7.7	
LOS	C		A					B	A	A	A	
Approach Delay		19.8						9.3			7.7	
Approach LOS		B						A			A	
Queue Length 50th (ft)	103		0					117	0	25	95	
Queue Length 95th (ft)	140		0					218	31	m36	140	
Internal Link Dist (ft)		686			892			546			562	
Turn Bay Length (ft)	200		210						290	190		
Base Capacity (vph)	892		1583					1898	978	425	2346	
Starvation Cap Reductn	0		0					0	0	0	0	
Spillback Cap Reductn	0		0					0	0	0	0	
Storage Cap Reductn	0		0					0	0	0	0	
Reduced v/c Ratio	0.51		0.21					0.46	0.28	0.22	0.26	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 49 (65%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 12.0	Intersection LOS: B
Intersection Capacity Utilization 67.6%	ICU Level of Service C
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 10: Hall of Fame Drive & I-40 Eastbound Ramps

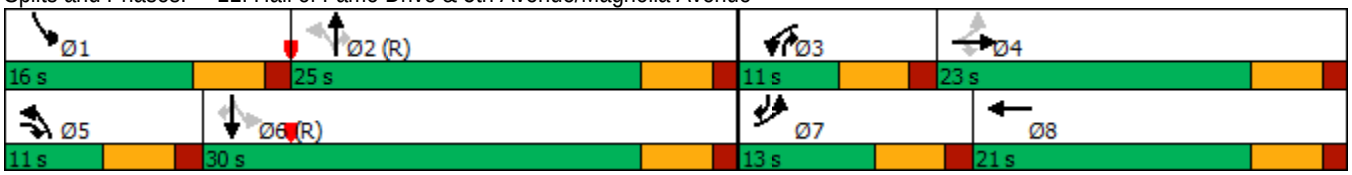


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	254	32	58	185	290	38	376	104	153	477	66
Future Volume (vph)	92	254	32	58	185	290	38	376	104	153	477	66
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.99	0.99			1.00					0.99
Frt			0.850		0.908				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3214	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.305			0.950			0.450			0.399		
Satd. Flow (perm)	568	3539	1561	3402	3214	0	837	3539	1583	743	3539	1561
Satd. Flow (RTOR)			116		330				118			116
Confl. Peds. (#/hr)			2	2			3					3
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Lane Group Flow (vph)	105	289	36	66	540	0	43	427	118	174	542	75
Turn Type	pm+pt	NA	pm+ov	Prot	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4				2		2	6		6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0	5.0	5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5	10.5	10.5	15.5	10.5
Total Split (s)	13.0	23.0	11.0	11.0	21.0		11.0	25.0	11.0	16.0	30.0	13.0
Total Split (%)	17.3%	30.7%	14.7%	14.7%	28.0%		14.7%	33.3%	14.7%	21.3%	40.0%	17.3%
Maximum Green (s)	7.5	17.5	5.5	5.5	15.5		5.5	19.5	5.5	10.5	24.5	7.5
Yellow Time (s)	4.0	4.0	4.0	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	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	None	None	C-Max	None
Act Effct Green (s)	19.1	13.1	19.1	5.5	11.5		33.6	27.6	38.6	41.2	35.0	42.2
Actuated g/C Ratio	0.25	0.17	0.25	0.07	0.15		0.45	0.37	0.51	0.55	0.47	0.56
v/c Ratio	0.40	0.47	0.07	0.26	0.70		0.10	0.33	0.14	0.33	0.33	0.08
Control Delay	22.3	29.5	0.3	35.7	16.2		9.4	18.5	6.2	6.5	7.5	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.3	29.5	0.3	35.7	16.2		9.4	18.5	6.2	6.5	7.5	0.2
LOS	C	C	A	D	B		A	B	A	A	A	A
Approach Delay		25.3			18.3			15.4			6.6	
Approach LOS		C			B			B			A	
Queue Length 50th (ft)	34	63	0	15	47		9	72	7	17	38	0
Queue Length 95th (ft)	62	91	0	32	85		28	105	34	31	52	0
Internal Link Dist (ft)		674			634			359			1142	
Turn Bay Length (ft)	245		35	295			230		245	175		175
Base Capacity (vph)	265	825	486	251	926		449	1303	872	554	1652	937
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.35	0.07	0.26	0.58		0.10	0.33	0.14	0.31	0.33	0.08

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 15.0	Intersection LOS: B
Intersection Capacity Utilization 56.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 11: Hall of Fame Drive & 5th Avenue/Magnolia Avenue



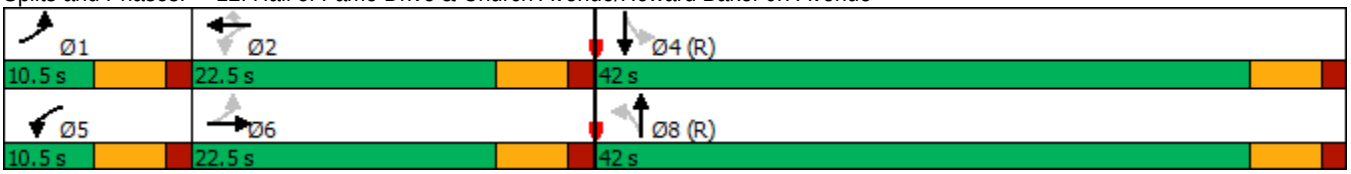
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	114	149	36	13	45	130	11	147	95	832	107	34
Future Volume (vph)	114	149	36	13	45	130	11	147	95	832	107	34
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor	0.94	1.00		0.99		0.90		0.95			0.93	
Frt		0.971				0.850		0.943			0.995	
Flt Protected	0.950			0.950				0.998			0.959	
Satd. Flow (prot)	1770	1800	0	1770	1863	1583	0	3159	0	0	3375	0
Flt Permitted	0.583			0.629				0.906			0.626	
Satd. Flow (perm)	1020	1800	0	1164	1863	1433	0	2868	0	0	2041	0
Satd. Flow (RTOR)		15				144		106			7	
Confl. Peds. (#/hr)	64		9	9		64	2		206	206		2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	127	206	0	14	50	144	0	281	0	0	1081	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6			2		2	8			4		
Detector Phase	1	6		5	2	2	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0	7.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	10.5	22.5		10.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	10.5	22.5		10.5	22.5	22.5	42.0	42.0		42.0	42.0	
Total Split (%)	14.0%	30.0%		14.0%	30.0%	30.0%	56.0%	56.0%		56.0%	56.0%	
Maximum Green (s)	5.0	17.0		5.0	17.0	17.0	36.5	36.5		36.5	36.5	
Yellow Time (s)	4.0	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	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5	5.5		5.5			5.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)	16.4	15.4		13.1	9.1	9.1		46.5			46.5	
Actuated g/C Ratio	0.22	0.21		0.17	0.12	0.12		0.62			0.62	
v/c Ratio	0.47	0.54		0.06	0.22	0.48		0.15			1.49dl	
Control Delay	28.0	29.5		19.2	30.5	11.0		5.0			17.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Delay	28.0	29.5		19.2	30.5	11.0		5.0			17.0	
LOS	C	C		B	C	B		A			B	
Approach Delay		28.9			16.2			5.0			17.0	
Approach LOS		C			B			A			B	
Queue Length 50th (ft)	49	76		5	22	0		15			102	
Queue Length 95th (ft)	76	140		15	46	43		42			m#429	
Internal Link Dist (ft)		488			887			548			1120	
Turn Bay Length (ft)	60			130								
Base Capacity (vph)	273	428		243	422	436		1818			1268	
Starvation Cap Reductn	0	0		0	0	0		0			0	
Spillback Cap Reductn	0	0		0	0	0		0			0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0	0		0			0	
Reduced v/c Ratio	0.47	0.48		0.06	0.12	0.33		0.15			0.85	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 30 (40%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 17.2	Intersection LOS: B
Intersection Capacity Utilization 83.2%	ICU Level of Service E
Analysis Period (min) 15	

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 12: Hall of Fame Drive & Church Avenue/Howard Baker Jr. Avenue



Intersection	
Intersection Delay, s/veh	10.1
Intersection LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	120	100	159	84	83	147
Future Vol, veh/h	120	100	159	84	83	147
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	126	105	167	88	87	155
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	9.5	10.6	10
HCM LOS	A	B	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	36%	0%	65%
Vol Thru, %	0%	55%	35%
Vol Right, %	64%	45%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	230	220	243
LT Vol	83	0	159
Through Vol	0	120	84
RT Vol	147	100	0
Lane Flow Rate	242	232	256
Geometry Grp	1	1	1
Degree of Util (X)	0.319	0.294	0.35
Departure Headway (Hd)	4.747	4.566	4.919
Convergence, Y/N	Yes	Yes	Yes
Cap	753	780	726
Service Time	2.807	2.627	2.98
HCM Lane V/C Ratio	0.321	0.297	0.353
HCM Control Delay	10	9.5	10.6
HCM Lane LOS	A	A	B
HCM 95th-tile Q	1.4	1.2	1.6

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕						↕	
Traffic Vol, veh/h	37	81	86	0	147	10	0	0	0	5	14	49
Future Vol, veh/h	37	81	86	0	147	10	0	0	0	5	14	49
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	42	92	98	0	167	11	0	0	0	6	16	56

Major/Minor	Major1			Major2					Minor2		
Conflicting Flow All	178	0	0	191	0	0			398	448	174
Stage 1	-	-	-	-	-	-			173	173	-
Stage 2	-	-	-	-	-	-			225	275	-
Critical Hdwy	4.12	-	-	4.12	-	-			6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-			5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-			5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-			3.518	4.018	3.318
Pot Cap-1 Maneuver	1398	-	-	1383	-	-			607	506	869
Stage 1	-	-	-	-	-	-			857	756	-
Stage 2	-	-	-	-	-	-			812	683	-
Platoon blocked, %		-	-		-	-					
Mov Cap-1 Maneuver	1398	-	-	1383	-	-			586	0	868
Mov Cap-2 Maneuver	-	-	-	-	-	-			586	0	-
Stage 1	-	-	-	-	-	-			828	0	-
Stage 2	-	-	-	-	-	-			812	0	-

Approach	EB	WB	SB
HCM Control Delay, s	1.4	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1398	-	-	1383	-	-	831
HCM Lane V/C Ratio	0.03	-	-	-	-	-	0.093
HCM Control Delay (s)	7.7	0	-	0	-	-	9.8
HCM Lane LOS	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-	-	0.3

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	74	69	72	170	197	32
Future Vol, veh/h	74	69	72	170	197	32
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	83	78	81	191	221	36
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	9.5	9.6	10.8
HCM LOS	A	A	B

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	52%	0%	86%
Vol Thru, %	48%	30%	0%
Vol Right, %	0%	70%	14%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	143	242	229
LT Vol	74	0	197
Through Vol	69	72	0
RT Vol	0	170	32
Lane Flow Rate	161	272	257
Geometry Grp	1	1	1
Degree of Util (X)	0.224	0.331	0.357
Departure Headway (Hd)	5.011	4.385	4.993
Convergence, Y/N	Yes	Yes	Yes
Cap	713	816	715
Service Time	3.069	2.434	3.057
HCM Lane V/C Ratio	0.226	0.333	0.359
HCM Control Delay	9.5	9.6	10.8
HCM Lane LOS	A	A	B
HCM 95th-tile Q	0.9	1.5	1.6

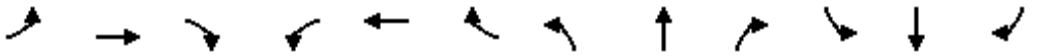
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	77	0
Future Vol, veh/h	0	0	0	0	77	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	-	-
Veh in Median Storage, #	0	-	16974	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	88	0

Major/Minor	Minor1		Major2	
Conflicting Flow All	176	-	0	0
Stage 1	0	-	-	-
Stage 2	176	-	-	-
Critical Hdwy	6.42	-	4.12	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-
Follow-up Hdwy	3.518	-	2.218	-
Pot Cap-1 Maneuver	814	0	-	-
Stage 1	-	0	-	-
Stage 2	855	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	814	-	-	-
Mov Cap-2 Maneuver	814	-	-	-
Stage 1	-	-	-	-
Stage 2	855	-	-	-

Approach	WB	SB
HCM Control Delay, s	0	
HCM LOS	A	

Minor Lane/Major Mvmt	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	0	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	-	-	-



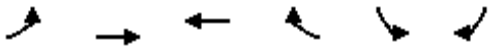
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	144	194	10	92	338	273	0	0	0	136	64	183
Future Volume (vph)	144	194	10	92	338	273	0	0	0	136	64	183
Lane Util. Factor	1.00	0.95	0.95	0.97	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		0.97	0.99						1.00	0.97
Frt		0.992			0.933							0.850
Flt Protected	0.950			0.950							0.967	
Satd. Flow (prot)	1770	3507	0	3433	3264	0	0	0	0	0	1801	1583
Flt Permitted	0.373			0.950							0.967	
Satd. Flow (perm)	694	3507	0	3344	3264	0	0	0	0	0	1794	1535
Satd. Flow (RTOR)		8			290							195
Confl. Peds. (#/hr)	4		11	11		4				5		17
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	153	217	0	98	650	0	0	0	0	0	213	195
Turn Type	pm+pt	NA		Prot	NA					Split	NA	Perm
Protected Phases	1	2		1	2					4	4	
Permitted Phases	2											4
Detector Phase	1	2		1	2					4	4	4
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0					7.0	7.0	7.0
Minimum Split (s)	9.0	15.5		9.0	15.5					12.0	12.0	12.0
Total Split (s)	16.0	30.0		16.0	30.0					24.0	24.0	24.0
Total Split (%)	22.9%	42.9%		22.9%	42.9%					34.3%	34.3%	34.3%
Maximum Green (s)	11.0	24.5		11.0	24.5					19.0	19.0	19.0
Yellow Time (s)	4.0	4.0		4.0	4.0					4.0	4.0	4.0
All-Red Time (s)	1.0	1.5		1.0	1.5					1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0						0.0	0.0
Total Lost Time (s)	5.0	5.5		5.0	5.5						5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	2.0	2.0		2.0	2.0					2.0	2.0	2.0
Recall Mode	None	C-Max		None	C-Max					None	None	None
Act Effct Green (s)	42.3	34.9		6.9	34.9						12.7	12.7
Actuated g/C Ratio	0.60	0.50		0.10	0.50						0.18	0.18
v/c Ratio	0.29	0.12		0.29	0.37						0.65	0.44
Control Delay	6.7	10.8		29.8	5.5						35.4	7.2
Queue Delay	0.0	0.0		0.0	0.3						0.0	0.0
Total Delay	6.7	10.8		29.8	5.8						35.4	7.2
LOS	A	B		C	A						D	A
Approach Delay		9.1			8.9						21.9	
Approach LOS		A			A						C	
Queue Length 50th (ft)	19	23		21	34						86	0
Queue Length 95th (ft)	49	52		38	67						136	45
Internal Link Dist (ft)		516			188			218			576	
Turn Bay Length (ft)	50											65
Base Capacity (vph)	626	1752		539	1772						488	558
Starvation Cap Reductn	0	0		0	513						0	0
Spillback Cap Reductn	0	0		0	0						0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0						0	0
Reduced v/c Ratio	0.24	0.12		0.18	0.52						0.44	0.35

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 29 (41%), Referenced to phase 2:EBWB, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 12.4	Intersection LOS: B
Intersection Capacity Utilization 50.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: Central Street & Summit Hill Drive

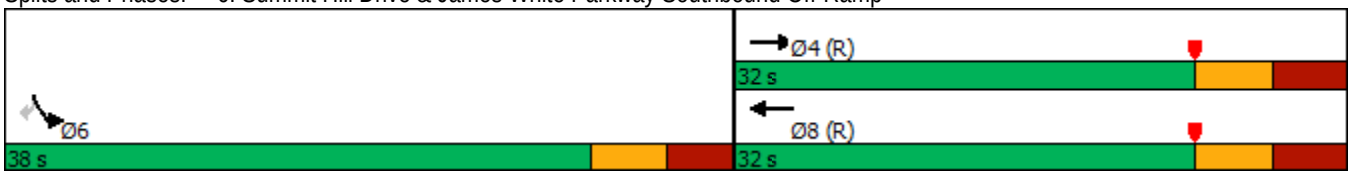


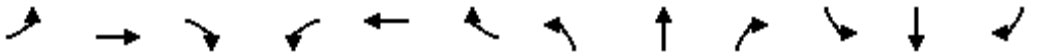


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	330	292	0	270	411
Future Volume (vph)	0	330	292	0	270	411
Lane Util. Factor	1.00	0.91	0.95	1.00	0.97	0.88
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	5085	3539	0	3433	2787
Flt Permitted					0.950	
Satd. Flow (perm)	0	5085	3539	0	3433	2787
Satd. Flow (RTOR)						437
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	351	311	0	287	437
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		10.0	10.0		7.0	7.0
Minimum Split (s)		18.0	18.0		14.5	14.5
Total Split (s)		32.0	32.0		38.0	38.0
Total Split (%)		45.7%	45.7%		54.3%	54.3%
Maximum Green (s)		24.0	24.0		30.5	30.5
Yellow Time (s)		4.0	4.0		4.0	4.0
All-Red Time (s)		4.0	4.0		3.5	3.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0
Total Lost Time (s)		8.0	8.0		7.5	7.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		5.0	2.0		5.0	5.0
Recall Mode		C-Max	C-Max		None	None
Act Effct Green (s)		39.1	39.1		15.4	15.4
Actuated g/C Ratio		0.56	0.56		0.22	0.22
v/c Ratio		0.12	0.16		0.38	0.46
Control Delay		6.3	9.3		23.8	3.9
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		6.3	9.3		23.8	3.9
LOS		A	A		C	A
Approach Delay		6.3	9.3		11.8	
Approach LOS		A	A		B	
Queue Length 50th (ft)		23	29		55	0
Queue Length 95th (ft)		49	51		76	32
Internal Link Dist (ft)		188	373		516	
Turn Bay Length (ft)					250	250
Base Capacity (vph)		2843	1978		1495	1460
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.12	0.16		0.19	0.30

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 47 (67%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.46	
Intersection Signal Delay: 9.8	Intersection LOS: A
Intersection Capacity Utilization 35.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Summit Hill Drive & James White Parkway Southbound Off-Ramp



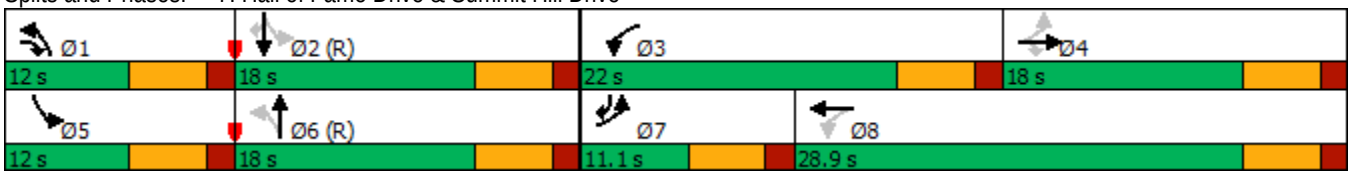


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	337	205	303	152	210	30	136	63	146	156	107
Future Volume (vph)	63	337	205	303	152	210	30	136	63	146	156	107
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00				0.99			1.00		1.00		
Frt		0.984	0.850		0.913			0.952				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3336	1441	1770	3197	0	1770	3355	0	1770	3539	1583
Flt Permitted	0.528			0.289			0.649			0.570		
Satd. Flow (perm)	979	3336	1441	538	3197	0	1209	3355	0	1061	3539	1583
Satd. Flow (RTOR)		16	210		219			66				210
Confl. Peds. (#/hr)	7					7			1	1		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)			20%									
Lane Group Flow (vph)	66	394	171	316	377	0	31	208	0	152	163	111
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	7	4	1	3	8		1	6		5	2	7
Permitted Phases	4		4	8			6			2		2
Detector Phase	7	4	1	3	8		1	6		5	2	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0		5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5		10.5	15.5	10.5
Total Split (s)	11.1	18.0	12.0	22.0	28.9		12.0	18.0		12.0	18.0	11.1
Total Split (%)	15.9%	25.7%	17.1%	31.4%	41.3%		17.1%	25.7%		17.1%	25.7%	15.9%
Maximum Green (s)	5.6	12.5	6.5	16.5	23.4		6.5	12.5		6.5	12.5	5.6
Yellow Time (s)	4.0	4.0	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	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		2.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	None
Act Effct Green (s)	16.9	11.5	22.5	30.0	21.2		22.2	16.7		24.9	18.0	28.9
Actuated g/C Ratio	0.24	0.16	0.32	0.43	0.30		0.32	0.24		0.36	0.26	0.41
v/c Ratio	0.22	0.70	0.28	0.69	0.34		0.07	0.25		0.34	0.18	0.14
Control Delay	7.7	24.4	5.5	21.6	8.6		15.2	17.1		7.2	11.9	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	7.7	24.4	5.5	21.6	8.6		15.2	17.1		7.2	11.9	5.3
LOS	A	C	A	C	A		B	B		A	B	A
Approach Delay		17.5			14.5			16.9			8.5	
Approach LOS		B			B			B			A	
Queue Length 50th (ft)	10	75	1	88	26		8	26		3	24	0
Queue Length 95th (ft)	14	93	17	132	53		25	56		54	47	35
Internal Link Dist (ft)		373			335			424			335	
Turn Bay Length (ft)				165			230			165		60
Base Capacity (vph)	302	619	623	520	1214		452	848		453	910	781
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.22	0.64	0.27	0.61	0.31		0.07	0.25		0.34	0.18	0.14

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 45 (64%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 14.5	Intersection LOS: B
Intersection Capacity Utilization 63.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 7: Hall of Fame Drive & Summit Hill Drive



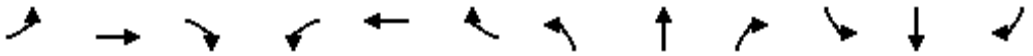
Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	259	291	400	51	63	238
Future Vol, veh/h	259	291	400	51	63	238
Conflicting Peds, #/hr	7	0	0	7	6	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	267	300	412	53	65	245

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	472	0	-	0	1136	241
Stage 1	-	-	-	-	446	-
Stage 2	-	-	-	-	690	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1086	-	-	-	196	760
Stage 1	-	-	-	-	612	-
Stage 2	-	-	-	-	459	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1079	-	-	-	145	754
Mov Cap-2 Maneuver	-	-	-	-	145	-
Stage 1	-	-	-	-	458	-
Stage 2	-	-	-	-	456	-

Approach	EB	WB	SB
HCM Control Delay, s	4.4	0	14.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1079	-	-	-	693
HCM Lane V/C Ratio	0.247	-	-	-	0.448
HCM Control Delay (s)	9.4	-	-	-	14.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	1	-	-	-	2.3

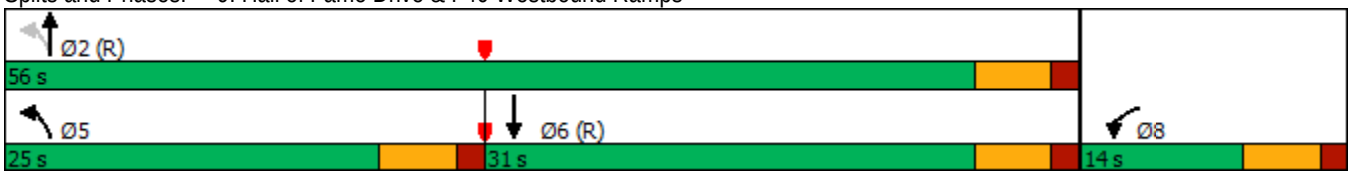


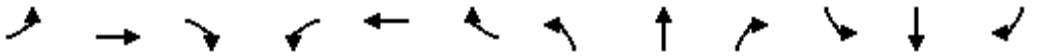
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	167	0	88	310	581	0	0	357	326
Future Volume (vph)	0	0	0	167	0	88	310	581	0	0	357	326
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor							1.00				0.99	
Frt						0.850					0.928	
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	0	0	3433	0	1583	1770	3539	0	0	3251	0
Flt Permitted				0.950			0.309					
Satd. Flow (perm)	0	0	0	3433	0	1583	575	3539	0	0	3251	0
Satd. Flow (RTOR)						210					333	
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	170	0	90	316	593	0	0	697	0
Turn Type				Prot		Free	pm+pt	NA			NA	
Protected Phases				8			5	2			6	
Permitted Phases						Free	2					
Detector Phase				8			5	2			6	
Switch Phase												
Minimum Initial (s)				5.0			5.0	10.0			10.0	
Minimum Split (s)				10.5			10.5	15.5			15.5	
Total Split (s)				14.0			25.0	56.0			31.0	
Total Split (%)				20.0%			35.7%	80.0%			44.3%	
Maximum Green (s)				8.5			19.5	50.5			25.5	
Yellow Time (s)				4.0			4.0	4.0			4.0	
All-Red Time (s)				1.5			1.5	1.5			1.5	
Lost Time Adjust (s)				0.0			0.0	0.0			0.0	
Total Lost Time (s)				5.5			5.5	5.5			5.5	
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)				3.0			2.0	2.0			2.0	
Recall Mode				None			None	C-Max			C-Max	
Act Effct Green (s)				7.9		70.0	51.1	51.1			36.7	
Actuated g/C Ratio				0.11		1.00	0.73	0.73			0.52	
v/c Ratio				0.44		0.06	0.55	0.23			0.37	
Control Delay				32.5		0.1	7.7	1.5			5.9	
Queue Delay				0.0		0.0	0.0	0.0			0.0	
Total Delay				32.5		0.1	7.7	1.5			5.9	
LOS				C		A	A	A			A	
Approach Delay					21.3			3.7			5.9	
Approach LOS					C			A			A	
Queue Length 50th (ft)				35		0	18	2			41	
Queue Length 95th (ft)				63		0	40	12			81	
Internal Link Dist (ft)		440			577			562			692	
Turn Bay Length (ft)				475		200	155					
Base Capacity (vph)				416		1583	752	2581			1861	
Starvation Cap Reductn				0		0	0	0			0	
Spillback Cap Reductn				0		0	0	0			0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn				0		0	0	0			0	
Reduced v/c Ratio				0.41		0.06	0.42	0.23			0.37	

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 69 (99%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 45	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 7.0	Intersection LOS: A
Intersection Capacity Utilization 56.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 9: Hall of Fame Drive & I-40 Westbound Ramps

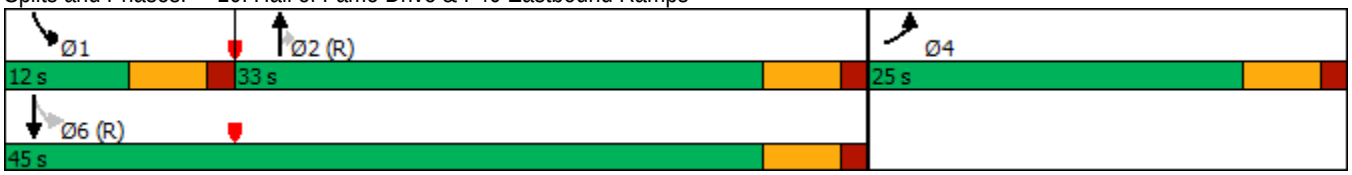




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	261	0	332	0	0	0	0	632	222	54	473	0
Future Volume (vph)	261	0	332	0	0	0	0	632	222	54	473	0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850						0.850			
Flt Protected	0.950									0.950		
Satd. Flow (prot)	3433	0	1583	0	0	0	0	3539	1583	1770	3539	0
Flt Permitted	0.950									0.339		
Satd. Flow (perm)	3433	0	1583	0	0	0	0	3539	1583	631	3539	0
Satd. Flow (RTOR)			342						229			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	269	0	342	0	0	0	0	652	229	56	488	0
Turn Type	Prot		Free					NA	Perm	pm+pt	NA	
Protected Phases	4							2		1	6	
Permitted Phases			Free						2	6		
Detector Phase	4							2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0							10.0	10.0	5.0	10.0	
Minimum Split (s)	22.5							22.5	22.5	10.5	22.5	
Total Split (s)	25.0							33.0	33.0	12.0	45.0	
Total Split (%)	35.7%							47.1%	47.1%	17.1%	64.3%	
Maximum Green (s)	19.5							27.5	27.5	6.5	39.5	
Yellow Time (s)	4.0							4.0	4.0	4.0	4.0	
All-Red Time (s)	1.5							1.5	1.5	1.5	1.5	
Lost Time Adjust (s)	0.0							0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5							5.5	5.5	5.5	5.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	2.0							2.0	2.0	2.0	2.0	
Recall Mode	None							C-Max	C-Max	None	C-Max	
Act Effct Green (s)	10.8		70.0					41.5	41.5	48.2	48.2	
Actuated g/C Ratio	0.15		1.00					0.59	0.59	0.69	0.69	
v/c Ratio	0.51		0.22					0.31	0.22	0.11	0.20	
Control Delay	30.6		0.3					6.2	1.1	5.5	4.9	
Queue Delay	0.0		0.0					0.0	0.0	0.0	0.0	
Total Delay	30.6		0.3					6.2	1.1	5.5	4.9	
LOS	C		A					A	A	A	A	
Approach Delay		13.6						4.9			4.9	
Approach LOS		B						A			A	
Queue Length 50th (ft)	56		0					26	0	4	21	
Queue Length 95th (ft)	86		0					98	0	26	76	
Internal Link Dist (ft)		686			892			546			562	
Turn Bay Length (ft)	200		210						290	190		
Base Capacity (vph)	956		1583					2098	1031	540	2436	
Starvation Cap Reductn	0		0					0	0	0	0	
Spillback Cap Reductn	0		0					0	0	0	0	
Storage Cap Reductn	0		0					0	0	0	0	
Reduced v/c Ratio	0.28		0.22					0.31	0.22	0.10	0.20	

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 45 (64%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay: 7.5	Intersection LOS: A
Intersection Capacity Utilization 56.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 10: Hall of Fame Drive & I-40 Eastbound Ramps



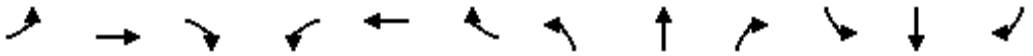
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	206	21	78	203	236	30	346	86	253	331	62
Future Volume (vph)	72	206	21	78	203	236	30	346	86	253	331	62
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor							1.00		0.99	1.00		0.99
Frt			0.850		0.919				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3253	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.357			0.950			0.539			0.414		
Satd. Flow (perm)	665	3539	1583	3433	3253	0	1003	3539	1563	771	3539	1563
Satd. Flow (RTOR)			210		254				210			125
Confl. Peds. (#/hr)							1		1	1		1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	77	222	23	84	472	0	32	372	92	272	356	67
Turn Type	pm+pt	NA	pm+ov	Prot	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4				2		2	6		6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0	5.0	5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5	10.5	10.5	15.5	10.5
Total Split (s)	12.0	19.5	10.6	11.0	18.5		10.6	20.5	11.0	19.0	28.9	12.0
Total Split (%)	17.1%	27.9%	15.1%	15.7%	26.4%		15.1%	29.3%	15.7%	27.1%	41.3%	17.1%
Maximum Green (s)	6.5	14.0	5.1	5.5	13.0		5.1	15.0	5.5	13.5	23.4	6.5
Yellow Time (s)	4.0	4.0	4.0	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	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	None	None	C-Max	None
Act Effct Green (s)	16.4	11.2	22.2	5.5	10.4		28.0	22.5	28.0	39.0	32.5	38.8
Actuated g/C Ratio	0.23	0.16	0.32	0.08	0.15		0.40	0.32	0.40	0.56	0.46	0.55
v/c Ratio	0.30	0.39	0.04	0.31	0.68		0.07	0.33	0.12	0.46	0.22	0.07
Control Delay	19.4	27.8	0.1	33.8	17.6		11.8	23.1	1.6	11.4	9.4	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.4	27.8	0.1	33.8	17.6		11.8	23.1	1.6	11.4	9.4	0.2
LOS	B	C	A	C	B		B	C	A	B	A	A
Approach Delay		23.8			20.1			18.4			9.3	
Approach LOS		C			C			B			A	
Queue Length 50th (ft)	23	45	0	18	45		5	66	1	50	40	1
Queue Length 95th (ft)	49	72	0	38	86		23	120	0	83	45	1
Internal Link Dist (ft)		674			634			359			1142	
Turn Bay Length (ft)	245		35	295			230		245	175		175
Base Capacity (vph)	258	707	644	269	810		461	1138	753	622	1641	927
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.31	0.04	0.31	0.58		0.07	0.33	0.12	0.44	0.22	0.07

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 68 (97%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 16.6	Intersection LOS: B
Intersection Capacity Utilization 59.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 11: Hall of Fame Drive & 5th Avenue/Magnolia Avenue



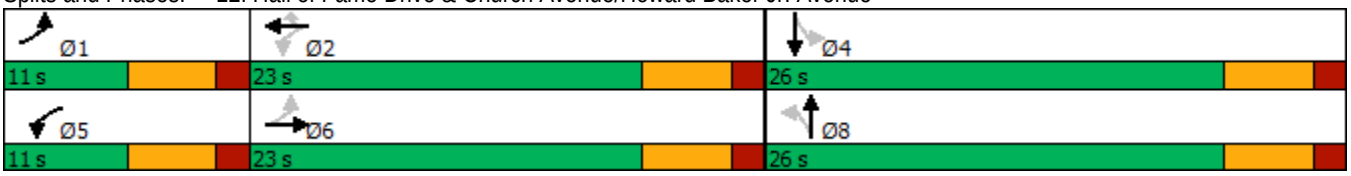


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	44	14	7	32	52	14	110	21	39	124	35
Future Volume (vph)	86	44	14	7	32	52	14	110	21	39	124	35
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor	0.99	1.00		1.00		0.97						
Frt		0.964				0.850		0.978			0.974	
Flt Protected	0.950			0.950				0.995			0.990	
Satd. Flow (prot)	1770	1789	0	1770	1863	1583	0	3444	0	0	3413	0
Flt Permitted	0.542			0.719				0.927			0.888	
Satd. Flow (perm)	997	1789	0	1335	1863	1537	0	3209	0	0	3061	0
Satd. Flow (RTOR)		14				145		22			36	
Confl. Peds. (#/hr)	17		4	4		17						
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	89	59	0	7	33	54	0	149	0	0	204	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6			2		2	8			4		
Detector Phase	1	6		5	2	2	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0	7.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	10.5	22.5		10.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	11.0	23.0		11.0	23.0	23.0	26.0	26.0		26.0	26.0	
Total Split (%)	18.3%	38.3%		18.3%	38.3%	38.3%	43.3%	43.3%		43.3%	43.3%	
Maximum Green (s)	5.5	17.5		5.5	17.5	17.5	20.5	20.5		20.5	20.5	
Yellow Time (s)	4.0	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	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5	5.5		5.5			5.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	Max	Max		Max	Max	
Act Effct Green (s)	11.4	11.4		9.0	7.5	7.5		28.1			28.1	
Actuated g/C Ratio	0.26	0.26		0.21	0.17	0.17		0.65			0.65	
v/c Ratio	0.24	0.12		0.02	0.10	0.14		0.07			0.10	
Control Delay	12.4	12.6		10.6	19.3	0.8		7.2			6.9	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Delay	12.4	12.6		10.6	19.3	0.8		7.2			6.9	
LOS	B	B		B	B	A		A			A	
Approach Delay		12.5			8.0			7.2			6.9	
Approach LOS		B			A			A			A	
Queue Length 50th (ft)	17	8		1	9	0		11			14	
Queue Length 95th (ft)	40	37		7	27	0		24			31	
Internal Link Dist (ft)		488			887			548			1120	
Turn Bay Length (ft)	60			130								
Base Capacity (vph)	370	782		353	799	742		2087			1996	
Starvation Cap Reductn	0	0		0	0	0		0			0	
Spillback Cap Reductn	0	0		0	0	0		0			0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0	0		0			0	
Reduced v/c Ratio	0.24	0.08		0.02	0.04	0.07		0.07			0.10	

Intersection Summary			
Cycle Length: 60			
Actuated Cycle Length: 43.3			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.24			
Intersection Signal Delay: 8.5		Intersection LOS: A	
Intersection Capacity Utilization 41.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 12: Hall of Fame Drive & Church Avenue/Howard Baker Jr. Avenue



Intersection	
Intersection Delay, s/veh	9.3
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	311	0	0	221	0	0
Future Vol, veh/h	311	0	0	221	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	327	0	0	233	0	0
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	9.6	8.8	0
HCM LOS	A	A	-

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	0%	0%	0%
Vol Thru, %	100%	100%	100%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	311	221
LT Vol	0	0	0
Through Vol	0	311	221
RT Vol	0	0	0
Lane Flow Rate	0	327	233
Geometry Grp	1	1	1
Degree of Util (X)	0	0.373	0.27
Departure Headway (Hd)	5.121	4.106	4.176
Convergence, Y/N	Yes	Yes	Yes
Cap	0	871	851
Service Time	3.121	2.159	2.245
HCM Lane V/C Ratio	0	0.375	0.274
HCM Control Delay	8.1	9.6	8.8
HCM Lane LOS	N	A	A
HCM 95th-tile Q	0	1.7	1.1

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕						↕	
Traffic Vol, veh/h	80	81	79	0	134	10	0	0	0	5	7	49
Future Vol, veh/h	80	81	79	0	134	10	0	0	0	5	7	49
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	91	92	90	0	152	11	0	0	0	6	8	56

Major/Minor	Major1			Major2					Minor2		
Conflicting Flow All	163	0	0	183	0	0			477	523	159
Stage 1	-	-	-	-	-	-			158	158	-
Stage 2	-	-	-	-	-	-			319	365	-
Critical Hdwy	4.12	-	-	4.12	-	-			6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-			5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-			5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-			3.518	4.018	3.318
Pot Cap-1 Maneuver	1416	-	-	1392	-	-			547	459	886
Stage 1	-	-	-	-	-	-			871	767	-
Stage 2	-	-	-	-	-	-			737	623	-
Platoon blocked, %		-	-		-	-					
Mov Cap-1 Maneuver	1416	-	-	1392	-	-			508	0	885
Mov Cap-2 Maneuver	-	-	-	-	-	-			508	0	-
Stage 1	-	-	-	-	-	-			808	0	-
Stage 2	-	-	-	-	-	-			737	0	-

Approach	EB	WB	SB
HCM Control Delay, s	2.6	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1416	-	-	1392	-	-	828
HCM Lane V/C Ratio	0.064	-	-	-	-	-	0.084
HCM Control Delay (s)	7.7	0	-	0	-	-	9.7
HCM Lane LOS	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-	-	0.3

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	138	157	6	10	0
Future Vol, veh/h	6	138	157	6	10	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	155	176	7	11	0
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	8.1	8.2	7.9
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	0%	100%
Vol Thru, %	96%	96%	0%
Vol Right, %	0%	4%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	144	163	10
LT Vol	6	0	10
Through Vol	138	157	0
RT Vol	0	6	0
Lane Flow Rate	162	183	11
Geometry Grp	1	1	1
Degree of Util (X)	0.184	0.206	0.015
Departure Headway (Hd)	4.098	4.052	4.871
Convergence, Y/N	Yes	Yes	Yes
Cap	870	881	739
Service Time	2.145	2.096	2.871
HCM Lane V/C Ratio	0.186	0.208	0.015
HCM Control Delay	8.1	8.2	7.9
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.7	0.8	0

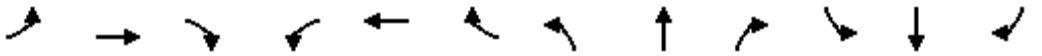
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	77	0
Future Vol, veh/h	0	0	0	0	77	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	-	-
Veh in Median Storage, #	0	-	16974	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	88	0

Major/Minor	Minor1		Major2	
Conflicting Flow All	176	-	0	0
Stage 1	0	-	-	-
Stage 2	176	-	-	-
Critical Hdwy	6.42	-	4.12	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-
Follow-up Hdwy	3.518	-	2.218	-
Pot Cap-1 Maneuver	814	0	-	-
Stage 1	-	0	-	-
Stage 2	855	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	814	-	-	-
Mov Cap-2 Maneuver	814	-	-	-
Stage 1	-	-	-	-
Stage 2	855	-	-	-

Approach	WB	SB
HCM Control Delay, s	0	
HCM LOS	A	

Minor Lane/Major Mvmt	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	0	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	-	-	-



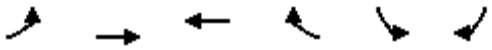
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	179	160	10	152	443	420	0	0	0	218	64	238
Future Volume (vph)	179	160	10	152	443	420	0	0	0	218	64	238
Lane Util. Factor	1.00	0.95	0.95	0.97	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.91	1.00		0.96	0.76						0.70	0.97
Frt		0.991			0.927							0.850
Flt Protected	0.950			0.950							0.963	
Satd. Flow (prot)	1770	3503	0	3433	2497	0	0	0	0	0	1794	1583
Flt Permitted	0.236			0.950							0.963	
Satd. Flow (perm)	398	3503	0	3295	2497	0	0	0	0	0	1257	1533
Satd. Flow (RTOR)		11			403							195
Confl. Peds. (#/hr)	416		11	11		416				622		17
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	190	181	0	162	918	0	0	0	0	0	300	253
Turn Type	pm+pt	NA		Prot	NA					Split	NA	Perm
Protected Phases	1	2		1	2					4	4	
Permitted Phases	2											4
Detector Phase	1	2		1	2					4	4	4
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0					7.0	7.0	7.0
Minimum Split (s)	9.0	15.5		9.0	15.5					12.0	12.0	12.0
Total Split (s)	13.0	38.0		13.0	38.0					24.0	24.0	24.0
Total Split (%)	17.3%	50.7%		17.3%	50.7%					32.0%	32.0%	32.0%
Maximum Green (s)	8.0	32.5		8.0	32.5					19.0	19.0	19.0
Yellow Time (s)	4.0	4.0		4.0	4.0					4.0	4.0	4.0
All-Red Time (s)	1.0	1.5		1.0	1.5					1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0						0.0	0.0
Total Lost Time (s)	5.0	5.5		5.0	5.5						5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	2.0	2.0		2.0	2.0					2.0	2.0	2.0
Recall Mode	None	C-Max		None	C-Max					None	None	None
Act Effct Green (s)	44.1	36.3		7.3	36.3						15.9	15.9
Actuated g/C Ratio	0.59	0.48		0.10	0.48						0.21	0.21
v/c Ratio	0.52	0.11		0.49	0.65						0.79	0.53
Control Delay	11.4	11.2		39.8	7.2						43.0	11.2
Queue Delay	0.0	0.0		0.0	0.4						0.0	0.0
Total Delay	11.4	11.2		39.8	7.6						43.0	11.2
LOS	B	B		D	A						D	B
Approach Delay		11.3			12.5						28.4	
Approach LOS		B			B						C	
Queue Length 50th (ft)	31	22		38	77						131	22
Queue Length 95th (ft)	61	42		64	118						207	81
Internal Link Dist (ft)		516			188			218			576	
Turn Bay Length (ft)	50											65
Base Capacity (vph)	384	1703		366	1417						454	533
Starvation Cap Reductn	0	0		0	146						0	0
Spillback Cap Reductn	0	0		0	0						0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0						0	0
Reduced v/c Ratio	0.49	0.11		0.44	0.72						0.66	0.47

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 1 (1%), Referenced to phase 2:EBWB, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 16.7	Intersection LOS: B
Intersection Capacity Utilization 68.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 5: Central Street & Summit Hill Drive

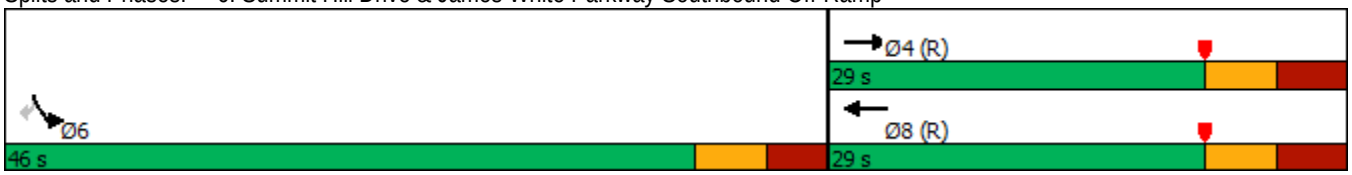


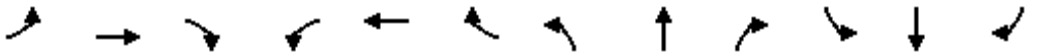


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	295	365	0	848	650
Future Volume (vph)	0	295	365	0	848	650
Lane Util. Factor	1.00	0.91	0.95	1.00	0.97	0.88
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	5085	3539	0	3433	2787
Flt Permitted					0.950	
Satd. Flow (perm)	0	5085	3539	0	3433	2787
Satd. Flow (RTOR)						311
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	314	388	0	902	691
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		10.0	10.0		7.0	7.0
Minimum Split (s)		18.0	18.0		14.5	14.5
Total Split (s)		29.0	29.0		46.0	46.0
Total Split (%)		38.7%	38.7%		61.3%	61.3%
Maximum Green (s)		21.0	21.0		38.5	38.5
Yellow Time (s)		4.0	4.0		4.0	4.0
All-Red Time (s)		4.0	4.0		3.5	3.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0
Total Lost Time (s)		8.0	8.0		7.5	7.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		5.0	2.0		5.0	5.0
Recall Mode		C-Max	C-Max		None	None
Act Effct Green (s)		24.8	24.8		34.7	34.7
Actuated g/C Ratio		0.33	0.33		0.46	0.46
v/c Ratio		0.19	0.33		0.57	0.47
Control Delay		15.4	17.4		15.8	7.7
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		15.4	17.4		15.8	7.7
LOS		B	B		B	A
Approach Delay		15.4	17.4		12.3	
Approach LOS		B	B		B	
Queue Length 50th (ft)		44	66		136	53
Queue Length 95th (ft)		71	104		181	92
Internal Link Dist (ft)		188	373		516	
Turn Bay Length (ft)					250	250
Base Capacity (vph)		1681	1169		1762	1582
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.19	0.33		0.51	0.44

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 51 (68%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 13.6	Intersection LOS: B
Intersection Capacity Utilization 47.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Summit Hill Drive & James White Parkway Southbound Off-Ramp





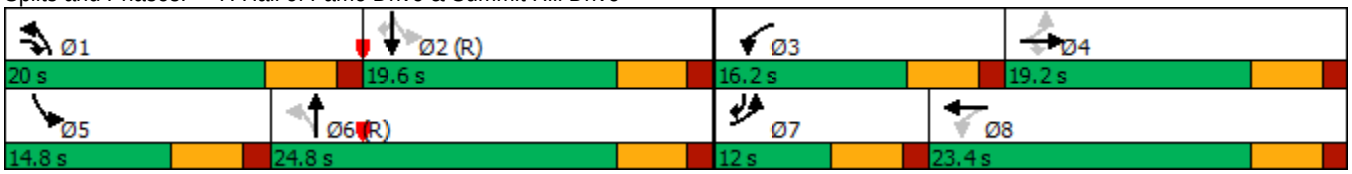
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	262	875	232	182	166	55	143	31	140	300	126
Future Volume (vph)	105	262	875	232	182	166	55	143	31	140	300	126
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00				0.99			0.92		0.69		
Frt		0.906	0.850		0.929			0.973				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3072	1441	1770	3256	0	1770	3179	0	1770	3539	1583
Flt Permitted	0.535			0.256			0.514			0.638		
Satd. Flow (perm)	992	3072	1441	477	3256	0	957	3179	0	820	3539	1583
Satd. Flow (RTOR)		448	157		173			32				131
Confl. Peds. (#/hr)	7					7			824	824		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)			50%									
Lane Group Flow (vph)	109	729	455	242	363	0	57	181	0	146	313	131
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	7	4	1	3	8		1	6		5	2	7
Permitted Phases	4		4	8			6			2		2
Detector Phase	7	4	1	3	8		1	6		5	2	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0		5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5		10.5	15.5	10.5
Total Split (s)	12.0	19.2	20.0	16.2	23.4		20.0	24.8		14.8	19.6	12.0
Total Split (%)	16.0%	25.6%	26.7%	21.6%	31.2%		26.7%	33.1%		19.7%	26.1%	16.0%
Maximum Green (s)	6.5	13.7	14.5	10.7	17.9		14.5	19.3		9.3	14.1	6.5
Yellow Time (s)	4.0	4.0	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	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		2.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	None
Act Effct Green (s)	17.8	11.6	26.8	25.8	15.6		33.2	23.5		29.3	21.5	33.2
Actuated g/C Ratio	0.24	0.15	0.36	0.34	0.21		0.44	0.31		0.39	0.29	0.44
v/c Ratio	0.36	0.85	0.74	0.71	0.45		0.11	0.18		0.35	0.31	0.17
Control Delay	15.5	15.8	15.6	29.9	14.5		9.0	14.9		4.8	13.8	8.3
Queue Delay	0.0	0.0	0.2	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	15.5	15.8	15.8	29.9	14.5		9.0	14.9		4.8	13.8	8.3
LOS	B	B	B	C	B		A	B		A	B	A
Approach Delay		15.8			20.7			13.5			10.4	
Approach LOS		B			C			B			B	
Queue Length 50th (ft)	23	6	84	76	37		12	29		2	56	10
Queue Length 95th (ft)	48	#24	253	#136	73		27	51		13	104	72
Internal Link Dist (ft)		373			335			424			335	
Turn Bay Length (ft)				165			230			165		60
Base Capacity (vph)	306	927	697	351	908		624	1017		455	1016	780
Starvation Cap Reductn	0	0	24	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.36	0.79	0.68	0.69	0.40		0.09	0.18		0.32	0.31	0.17

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 36 (48%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 15.5	Intersection LOS: B
Intersection Capacity Utilization 71.1%	ICU Level of Service C
Analysis Period (min) 15	

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Hall of Fame Drive & Summit Hill Drive



Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	145	304	428	40	22	124
Future Vol, veh/h	145	304	428	40	22	124
Conflicting Peds, #/hr	7	0	0	7	6	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	149	313	441	41	23	128

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	489	0	-	0	930	249
Stage 1	-	-	-	-	469	-
Stage 2	-	-	-	-	461	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1070	-	-	-	266	751
Stage 1	-	-	-	-	596	-
Stage 2	-	-	-	-	601	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1063	-	-	-	226	745
Mov Cap-2 Maneuver	-	-	-	-	226	-
Stage 1	-	-	-	-	509	-
Stage 2	-	-	-	-	597	-

Approach	EB	WB	SB
HCM Control Delay, s	2.9	0	10
HCM LOS			B

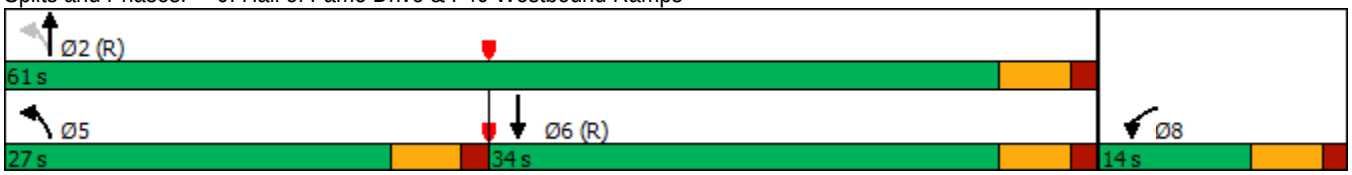
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1063	-	-	-	877
HCM Lane V/C Ratio	0.141	-	-	-	0.172
HCM Control Delay (s)	8.9	-	-	-	10
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.5	-	-	-	0.6

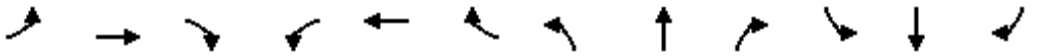
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	167	0	88	345	581	0	0	522	326
Future Volume (vph)	0	0	0	167	0	88	345	581	0	0	522	326
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor							1.00				0.99	
Frt						0.850					0.942	
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	0	0	3433	0	1583	1770	3539	0	0	3307	0
Flt Permitted				0.950			0.238					
Satd. Flow (perm)	0	0	0	3433	0	1583	443	3539	0	0	3307	0
Satd. Flow (RTOR)						196					210	
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	170	0	90	352	593	0	0	866	0
Turn Type				Prot		Free	pm+pt	NA			NA	
Protected Phases				8			5	2			6	
Permitted Phases						Free	2					
Detector Phase				8			5	2			6	
Switch Phase												
Minimum Initial (s)				5.0			5.0	10.0			10.0	
Minimum Split (s)				10.5			10.5	15.5			15.5	
Total Split (s)				14.0			27.0	61.0			34.0	
Total Split (%)				18.7%			36.0%	81.3%			45.3%	
Maximum Green (s)				8.5			21.5	55.5			28.5	
Yellow Time (s)				4.0			4.0	4.0			4.0	
All-Red Time (s)				1.5			1.5	1.5			1.5	
Lost Time Adjust (s)				0.0			0.0	0.0			0.0	
Total Lost Time (s)				5.5			5.5	5.5			5.5	
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)				3.0			2.0	2.0			2.0	
Recall Mode				None			None	C-Max			C-Max	
Act Effct Green (s)				8.0		75.0	56.0	56.0			39.1	
Actuated g/C Ratio				0.11		1.00	0.75	0.75			0.52	
v/c Ratio				0.46		0.06	0.66	0.22			0.47	
Control Delay				35.7		0.1	12.5	2.9			10.3	
Queue Delay				0.0		0.0	0.0	0.0			0.0	
Total Delay				35.7		0.1	12.5	2.9			10.3	
LOS				D		A	B	A			B	
Approach Delay					23.4			6.5			10.3	
Approach LOS					C			A			B	
Queue Length 50th (ft)				38		0	59	23			88	
Queue Length 95th (ft)				68		0	22	0			171	
Internal Link Dist (ft)		440			577			562			692	
Turn Bay Length (ft)				475		200	155					
Base Capacity (vph)				389		1583	711	2641			1824	
Starvation Cap Reductn				0		0	0	0			0	
Spillback Cap Reductn				0		0	0	0			0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn				0		0	0	0			0	
Reduced v/c Ratio				0.44		0.06	0.50	0.22			0.47	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 67 (89%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 10.2	Intersection LOS: B
Intersection Capacity Utilization 62.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 9: Hall of Fame Drive & I-40 Westbound Ramps

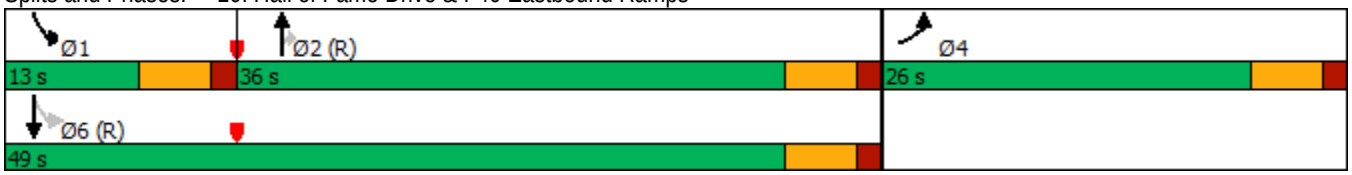


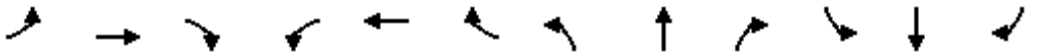


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	261	0	332	0	0	0	0	666	203	54	638	0
Future Volume (vph)	261	0	332	0	0	0	0	666	203	54	638	0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850						0.850			
Flt Protected	0.950									0.950		
Satd. Flow (prot)	3433	0	1583	0	0	0	0	3539	1583	1770	3539	0
Flt Permitted	0.950									0.329		
Satd. Flow (perm)	3433	0	1583	0	0	0	0	3539	1583	613	3539	0
Satd. Flow (RTOR)			342						209			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	269	0	342	0	0	0	0	687	209	56	658	0
Turn Type	Prot		Free					NA	Perm	pm+pt	NA	
Protected Phases	4							2		1	6	
Permitted Phases			Free						2	6		
Detector Phase	4							2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0							10.0	10.0	5.0	10.0	
Minimum Split (s)	22.5							22.5	22.5	10.5	22.5	
Total Split (s)	26.0							36.0	36.0	13.0	49.0	
Total Split (%)	34.7%							48.0%	48.0%	17.3%	65.3%	
Maximum Green (s)	20.5							30.5	30.5	7.5	43.5	
Yellow Time (s)	4.0							4.0	4.0	4.0	4.0	
All-Red Time (s)	1.5							1.5	1.5	1.5	1.5	
Lost Time Adjust (s)	0.0							0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5							5.5	5.5	5.5	5.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	2.0							2.0	2.0	2.0	2.0	
Recall Mode	None							C-Max	C-Max	None	C-Max	
Act Effct Green (s)	11.0		75.0					46.3	46.3	53.0	53.0	
Actuated g/C Ratio	0.15		1.00					0.62	0.62	0.71	0.71	
v/c Ratio	0.53		0.22					0.31	0.20	0.11	0.26	
Control Delay	33.5		0.3					5.8	0.9	6.4	7.2	
Queue Delay	0.0		0.0					0.0	0.0	0.0	0.0	
Total Delay	33.5		0.3					5.8	0.9	6.4	7.2	
LOS	C		A					A	A	A	A	
Approach Delay		14.9						4.7			7.1	
Approach LOS		B						A			A	
Queue Length 50th (ft)	61		0					36	0	12	81	
Queue Length 95th (ft)	92		0					86	0	m25	138	
Internal Link Dist (ft)		686			892			546			562	
Turn Bay Length (ft)	200		210						290	190		
Base Capacity (vph)	938		1583					2182	1056	548	2499	
Starvation Cap Reductn	0		0					0	0	0	0	
Spillback Cap Reductn	0		0					0	0	0	0	
Storage Cap Reductn	0		0					0	0	0	0	
Reduced v/c Ratio	0.29		0.22					0.31	0.20	0.10	0.26	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 36 (48%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.53	
Intersection Signal Delay: 8.3	Intersection LOS: A
Intersection Capacity Utilization 62.5%	ICU Level of Service B
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 10: Hall of Fame Drive & I-40 Eastbound Ramps





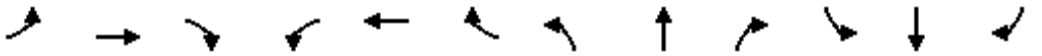
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	206	21	78	203	273	30	336	100	260	489	62
Future Volume (vph)	72	206	21	78	203	273	30	336	100	260	489	62
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor							1.00		0.99	1.00		0.99
Frt			0.850		0.914				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3235	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.333			0.950			0.457			0.433		
Satd. Flow (perm)	620	3539	1583	3433	3235	0	851	3539	1563	806	3539	1563
Satd. Flow (RTOR)			196		294				196			116
Confl. Peds. (#/hr)							1		1	1		1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	77	222	23	84	512	0	32	361	108	280	526	67
Turn Type	pm+pt	NA	pm+ov	Prot	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4				2		2	6		6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	7.0	5.0	5.0	7.0		5.0	10.0	5.0	5.0	10.0	5.0
Minimum Split (s)	10.5	12.5	10.5	10.5	12.5		10.5	15.5	10.5	10.5	15.5	10.5
Total Split (s)	12.0	21.0	11.0	11.0	20.0		11.0	22.7	11.0	20.3	32.0	12.0
Total Split (%)	16.0%	28.0%	14.7%	14.7%	26.7%		14.7%	30.3%	14.7%	27.1%	42.7%	16.0%
Maximum Green (s)	6.5	15.5	5.5	5.5	14.5		5.5	17.2	5.5	14.8	26.5	6.5
Yellow Time (s)	4.0	4.0	4.0	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	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	None	None	C-Max	None
Act Effct Green (s)	17.2	12.0	23.3	5.5	11.2		31.9	26.1	31.6	43.2	36.3	42.6
Actuated g/C Ratio	0.23	0.16	0.31	0.07	0.15		0.43	0.35	0.42	0.58	0.48	0.57
v/c Ratio	0.32	0.39	0.04	0.33	0.70		0.07	0.29	0.14	0.46	0.31	0.07
Control Delay	21.5	29.5	0.1	36.9	17.7		9.1	20.6	2.8	7.3	7.5	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.5	29.5	0.1	36.9	17.7		9.1	20.6	2.8	7.3	7.5	0.2
LOS	C	C	A	D	B		A	C	A	A	A	A
Approach Delay		25.5			20.4			16.0			6.9	
Approach LOS		C			C			B			A	
Queue Length 50th (ft)	25	48	0	19	48		7	64	0	31	38	0
Queue Length 95th (ft)	52	76	0	40	93		m23	98	19	46	47	0
Internal Link Dist (ft)		674			634			359			1142	
Turn Bay Length (ft)	245		35	295			230		245	175		175
Base Capacity (vph)	241	731	627	251	862		433	1233	774	654	1713	943
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.30	0.04	0.33	0.59		0.07	0.29	0.14	0.43	0.31	0.07

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 63 (84%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 15.0	Intersection LOS: B
Intersection Capacity Utilization 60.6%	ICU Level of Service B
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 11: Hall of Fame Drive & 5th Avenue/Magnolia Avenue



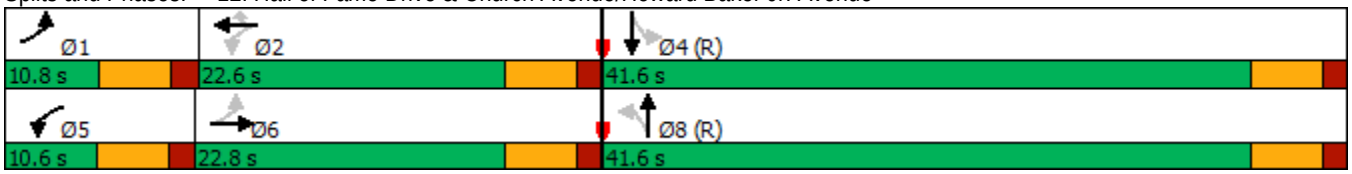


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	111	14	7	32	52	14	110	98	807	124	35
Future Volume (vph)	86	111	14	7	32	52	14	110	98	807	124	35
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor	0.98	1.00		1.00		0.97		0.94			0.92	
Frt		0.984				0.850		0.934			0.995	
Flt Protected	0.950			0.950				0.997			0.960	
Satd. Flow (prot)	1770	1830	0	1770	1863	1583	0	3094	0	0	3381	0
Flt Permitted	0.559			0.675				0.893			0.646	
Satd. Flow (perm)	1025	1830	0	1253	1863	1530	0	2772	0	0	2097	0
Satd. Flow (RTOR)		8				116		101			7	
Confl. Peds. (#/hr)	17		4	4		17			206	206		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	89	128	0	7	33	54	0	228	0	0	996	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6			2		2	8			4		
Detector Phase	1	6		5	2	2	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0	7.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	10.5	22.5		10.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	10.8	22.8		10.6	22.6	22.6	41.6	41.6		41.6	41.6	
Total Split (%)	14.4%	30.4%		14.1%	30.1%	30.1%	55.5%	55.5%		55.5%	55.5%	
Maximum Green (s)	5.3	17.3		5.1	17.1	17.1	36.1	36.1		36.1	36.1	
Yellow Time (s)	4.0	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	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5	5.5		5.5			5.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)	15.4	14.7		11.8	8.2	8.2		50.7			50.7	
Actuated g/C Ratio	0.21	0.20		0.16	0.11	0.11		0.68			0.68	
v/c Ratio	0.34	0.35		0.03	0.16	0.20		0.12			1.17dl	
Control Delay	25.4	26.7		20.0	31.0	1.9		4.1			10.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Delay	25.4	26.7		20.0	31.0	1.9		4.1			10.7	
LOS	C	C		B	C	A		A			B	
Approach Delay		26.2			13.5			4.1			10.7	
Approach LOS		C			B			A			B	
Queue Length 50th (ft)	33	46		3	15	0		11			100	
Queue Length 95th (ft)	62	98		11	36	3		30			#340	
Internal Link Dist (ft)		488			887			548			1120	
Turn Bay Length (ft)	60			130								
Base Capacity (vph)	263	435		234	424	438		1908			1421	
Starvation Cap Reductn	0	0		0	0	0		0			0	
Spillback Cap Reductn	0	0		0	0	0		0			0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0	0		0			0	
Reduced v/c Ratio	0.34	0.29		0.03	0.08	0.12		0.12			0.70	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 10 (13%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 12.1	Intersection LOS: B
Intersection Capacity Utilization 79.9%	ICU Level of Service D
Analysis Period (min) 15	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	
dl Defacto Left Lane. Recode with 1 though lane as a left lane.	

Splits and Phases: 12: Hall of Fame Drive & Church Avenue/Howard Baker Jr. Avenue



APPENDIX G | COMMENT RESPONSE LETTER

Date: February 28, 2022

Project Name: Multi-use Stadium Planned Development

To: City of Knoxville, Knoxville-Knox County Planning, and TDOT Region 1 Traffic

Subject: TIS Comment Response Document for Multi-Use Stadium Planned Development
Review Comments Dated: October 19, 2021

Dear City of Knoxville, Knoxville-Knox County Planning, and TDOT Region 1 Traffic staff,

The following comment response document is submitted to address comments dated October 19, 2021:

City of Knoxville Engineering Comments

1. **Reviewer Comment: TIS must be finalized and stamped by an engineer.**

   Response: This final version of the TIS is stamped.

2. **Reviewer Comment: Page 2 (recommendation #5) states to ensure the sidewalks along the roadways adjacent to the development and along pedestrian paths from offsite parking are sufficient width to accommodate anticipated pedestrian demand. Please clarify the required widths and identify any pedestrian paths that require improvements.**

   Response: This recommendation has been removed from the TIS. Narrative has been added in a new subsection under FUTURE CONDITIONS called Site Characteristics that addresses proposed sidewalks.

3. **Reviewer Comment: Page 8 Table 1 lists City of Knoxville as the owner of Hall of Fame Drive, but TDOT is the owner.**

   Response: This has been corrected in Table 1.

4. **Reviewer Comment: Please address the stadium's capacity for non-sporting events (e.g., concerts) and the trips generated by these events.**

   Response: A narrative has been added to the new Site Characteristics subsection that states that the Operations and Logistics Plan will provide guidance on handling those events which exceed the capacity of the permanent seating.

5. **Reviewer Comment: Address stadium departures.**

   Response: Narrative has been added to the Trip Generation subsection that states that stadium departures will be covered in the Operations and Logistics Plan.

6. **Reviewer Comment: Page 21, Figure 6: The northbound thru and right turns at Patton and Willow (Intersection #3) are flipped for AM and midday according to page A-10 in the appendix. Verify that factored existing volumes, factored Saturday volumes, and analyses agree with the data.**

   Response: This error carried over into subsequent figures and capacity analyses. Figures and analyses have been corrected. The Saturday northbound through volumes are correct, but the northbound right turn volumes reflect the AM peak volume factored instead of the MD peak volume factored. The Saturday northbound right turn volume has also been corrected in the figures and capacity analyses.

7. **Reviewer Comment: Page 22, Figure 7: The southbound thru volume at Hall of Fame and I-40W ramp (Intersection #9) for the PM peak shows the midday volume rather than the PM volume of 265 on A-28 in the appendix. Verify that factored existing volumes, factored Saturday volumes, and analyses agree with the data.**

   Response: This error carried over into subsequent figures and capacity analyses. Figures and analyses have been corrected. The Saturday volume figures and analyses are correct.

8. **Reviewer Comment: Page 32: Should the fitted curve equation be used for the multifamily housing LUC 220 for the Saturday peak trips because the R^2 is over 0.75? This would result in 470 trips rather than 326 trips. Was the average rate used because of the small sample size?**

   Response: Yes, the average rate was used because of the small sample size. Trip generation rates utilizing the ITE Trip Generation Manual were calculated with ITE's Trip Generation software. When number of units were input for Saturday Peak Hour of the Generator, the software provided only trips using the average rate due to the low sample size of data. When there is a sufficient sample size, the software provides trips for both the average rate and the fitted curve equation.

9. **Reviewer Comment: Page 34 specifies the use of "Specialty Retail, code 826", the demand required by Specialty Retail appears to be light for this area, please justify its use. It may be more appropriate to estimate the square footage of shopping, restaurants, and entertainment.**

   Response: Based on reviewer feedback, the TIS has continued to utilize the original ITE Code 826 for retail trips. The revised study has incorporated an increase of retail space from 70,000 square feet to 83,000 square feet. Trip generation estimates based on potential individual LUC's were developed for comparison, and the estimates were similar in value to Specialty Retail.

10. **Reviewer Comment: Page 37, clarify on distributions in Tables 8-8B were determined.**

    Response: Additional clarity has been added to how the U.S. Census Block data was used to develop trip origins. Additionally, the data has been included in APPENDIX C.

11. **Reviewer Comment: Page 51 specifies Jackson at Patton to be all way stop controlled, plans indicate it will be signalized. Please address the discrepancy.**

    Response: Signalized control was from an older recommendation prior to modification of the development. The recommended control at this intersection is all-way stop.

12. **Reviewer Comment: Submitted plans specify to remove bike lanes from Jackson Ave, please address the effects of this change.**

    Response: Narrative has been added to the new Site Characteristics subsection that states that sharrow pavement markings will be installed on Jackson Avenue.

13. **Reviewer Comment: Please address bus traffic between Coliseum garages and proposed stadium.**

    Response: Narrative has been added to the new Site Characteristics subsection indicating that this will be addressed in the Operations and Logistics Plan.

14. **Reviewer Comment: It is suggested to use a higher demand use for the proposed office space. If office space is change to a higher demand use at a later time the TIS may need to be revised.**

    Response: Per discussions with the development team, the amount of proposed office space will not increase. Therefore, the final TIS has kept the office space size as is.

15. **Reviewer Comment: Page 56 identifies queuing issues in two turn lanes at the intersection of Summit Hill and Central, please address the queuing issue.**

    Response: Additional narrative has been added under this intersection's subsection in the EVALUATIONS section to describe mitigation strategies for the queuing issues.

16. **Reviewer Comment: Page 71 specifies to restripe James White Parkway off ramp at Summit Hill to have four 10-11 ft wide lanes, this must be approved by TDOT.**

    Response: Per TDOT comments, they will approve 11' lanes. A lane width specification of 11' has been added to the recommendations, and the recommendations indicate a minimum storage length of 250'.

17. **Reviewer Comment: In a memo completed by S&ME on August 26, 2021 with an attachment "Draft Recommended Improvements" dated April 8, 2021, the document mentions installing a traffic signal at Jackson Avenue @ Patton Street (Intersection #1) and to "install traffic signal or have police control intersection during events" at Willow Avenue @ Patton Street (Intersection #3). Were the intersections found to operate efficiently with all-way stop configurations rather than traffic signals? Were pedestrian volumes and safety looked at as part of this recommendation? There is potential for heavy vehicular delay and impacts to pedestrian safety.**

    Response: Signalized control was from an older recommendation prior to modification of the development. The recommended control at this intersection is all-way stop. The updated analyses show that traffic does operate efficiently with all-way stop control. Pedestrian volumes and safety were considered. The closure of Stadium Way during events will provide significant benefits to pedestrian safety and to mitigating the intersection capacity impacts of high pedestrian volumes.

18. **Reviewer Comment: Some mention about the need to ensure adequate sight distance at intersections needs to be included in the TIS.**

    Response: A general recommendation has been added to the TIS to provide sufficient sight distance at site access points and public intersections surrounding the site.

19. **Reviewer Comment: Some discussion, even if at a very preliminary level, should be included about recommendations for regional wayfinding considerations, i.e. where signs should go on I-40 and which exits are preferred. While both JWP and Hall of Fame Drive are viable alternatives, the TIS could note if one should be preferred over the other. Perhaps signing the official exit as HOF Dr, which appears to have excess capacity, would ameliorate traffic and resulting queues projected for the JWP off ramp and EB Summit Hill approach at HOF Dr.**

    Response: An additional recommendation has been added to develop wayfinding signage. This recommendation notes that strategic placement of signage may alleviate congestion at the Summit Hill Drive / James White Parkway Southbound Off-Ramp area.

TDOT Region 1 Traffic

1. **Reviewer Comment: James White Parkway Southbound Ramp Restriping to 4 Lanes:**
    a. **TDOT will allow restriping the JWP Off Ramp to 4 11' lanes.**
    b. **Similar to projects on asphalt, the roadway must be overlaid before new striping is installed.**
    c. **As this is a concrete ramp and bridge, they will likely need to do a high friction overlay in order to accommodate the new striping pattern.**

    Response: The recommendations have been modified to specify 11'-wide lanes and that a high friction overlay will be required.

2. **Reviewer Comment: Potential Interstate Signage:**
    a. **TDOT policy for interstate signs for stadiums require a minimum annual attendance of 300,000 and needs to be within 5 miles from the interchange that it is signed.**
    b. **Based on the existing signage along I-40, there is limited space for any potential new signage. In the last few years, there was a change in policy and TDOT allowed blue logo signs to be installed in urban areas. These signs have not been installed on this section of I-40, likely due to the limited space available for new signs.**

    Response: A new recommendation in the TIS notes that wayfinding signing should be developed in conjunction with COK, TDOT, Knoxville-Knox County Planning, and KAT. Annual attendance in excess of 300,000 is expected.

Additional Comments

1. **Reviewer Comment: Revise any instance of "Metropolitan Planning Commission" to "Knoxville-Knox County Planning".**

    Response: This has been corrected in the final TIS.

2. **Reviewer Comment: If the realigned Patton Street is officially going to be called "Stadium Way" as indicated on the site plans then should change it in the TIS for clarity.**

   Response: References to the portion of Patton Street adjacent to the development have been changed to "Stadium Way".

3. **Reviewer Comment: There is a short discussion and inventory map of existing multimodal facilities (sidewalks, bike lanes and transit stops) on pages 16 and 17, but there were no recommendations made for future needs. It would be beneficial for either the TIS or other parts of the Planned Development package to further elaborate on where locations for bus drop-offs and high pedestrian crossings will be and demonstrate that they are adequately accommodated. It also appears that the existing bike lanes on Jackson Ave will be removed when it is reconstructed in front of the stadium, but it is not entirely clear from the site plans I've seen. This needs to be more clearly documented and determined whether everyone supports this removal.**

   Response: Narrative has been added to the new Site Characteristics subsection that states that sharrow pavement markings will be installed on Jackson Avenue. The narrative also states that these items will be addressed in the Operations and Logistics plan.

4. **Reviewer Comment: It seems that there is a need for a regular vehicular (non-transit) drop-off area to be incorporated on the site or close proximity where families can drop off one parent and small kids or disabled persons close to the stadium entrance given the lack of dedicated parking. This would be similar to the portion of W. 3rd Street that dead-ends into the Chattanooga baseball stadium as an access road signed for "Handicap Parking and Passenger Drop-Off Only". This would also work for Uber/Lyft drop-offs too.**

   Response: Narrative has been added to the new Site Characteristics subsection that states that this will be addressed in the Operations and Logistics plan.

5. **Reviewer Comment: It would also be good for the TIS to clearly denote which streets are being reconstructed around the site and include detailed typical sections with proposed lane widths, sidewalk widths, etc… This may also be more of a site plan comment than the TIS, but would be good to more clearly demonstrate that the two have been integrated.**

   Response: The new Site Characteristics subsection generally describes which streets will be reconstructed. Detailed typical sections with proposed lane widths, sidewalk widths, etc., are included in the site plan.

Sincerely,

Brian J. Haas, P.E., PTOE

