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TRANSPORTATION ENGINEERS

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June 7, 2016

Stephanie M. Kutz
City of Jacksonville – Transportation Planning
815 New Bridge Street
Jacksonville, NC 28541
E: skutz@ci.jacksonville.nc.us
P: 910.938.6453

Subject: **Traffic Assessment**
Burton Commerce Park – Onslow County, NC

Dear Ms. Kutz:

This letter provides the findings of a Traffic Assessment (TA) prepared by Ramey Kemp & Associates, Inc. (RKA) for the build-out of the 735-acre Burton Commerce Park, located in the northeast quadrant of the intersection of US 258 and Pony Farm Road / NW Corridor Boulevard in Jacksonville, North Carolina. The purpose of this study is to analyze existing and future traffic conditions in the study area to determine if any improvements are necessary to accommodate the anticipated site trips. It should also be noted that a planning level traffic and access analysis was completed for an interim (2020) and build-out (2030) analysis year scenarios.

It is our understanding that the property for the industrial park is currently zoned to hold commercial, industrial, and office developments. Currently, only five lots (of the total 34 lots) in the industrial park are occupied. The following scenarios were analyzed as part of this study:

- Existing (2016) Traffic Conditions
- Background (2020) Traffic Conditions
- Combined Interim (2020) Traffic Conditions
- Background (2030) Traffic Conditions
- Combined Build-Out (2030) Traffic Conditions (planning level)

Study Area

Through coordination with the Jacksonville Urban Area Metropolitan Planning Organization (MPO) and NCDOT, the following intersections are included in this study:

Detailed Analysis

- US 258 and Pony Farm Road / NW Corridor Boulevard
- US 258 and Hines Farm Road

Planning Level Traffic and Access Analysis

- Hines Farm Road and Burton Park Boulevard
- Burton Park Boulevard and Mildred Thomas Court
- NW Corridor Boulevard and WC Jarman Drive
- Burton Park Boulevard and WC Jarman Drive
- NW Corridor Boulevard between US 258 and WC Jarman Drive

The above intersections were analyzed during both the weekday AM peak hour and PM peak hour. See Figure 1, attached, for a map with the location of the proposed development and study intersections. Refer to Figure 2 for the existing lane configurations.

Site Access

Access to the industrial park is provided via the intersection of US 258 and Pony Farm Road / NW Corridor Boulevard and the intersection of Hines Farm Road and Burton Park Boulevard. Burton Park Boulevard and NW Corridor Boulevard lead to other internal roadways that further provide access to various lots. See the attached preliminary site plan. It should be noted that although an updated site plan was provided, it was determined through coordination with the MPO that the trip generation based on the original site plan would effectively project anticipated site trips.

Existing and Future Traffic Volumes

Existing peak hour traffic volumes were determined based on traffic counts provided by the MPO at the study intersections listed below, in February of 2016 during the typical weekday AM (7:00 AM – 9:00 AM) and weekday PM (4:00 PM – 6:00 PM) peak periods:

- US 258 and Pony Farm Road / NW Corridor Boulevard
- US 258 and Hines Farm Road

Refer to Figure 3 for the existing peak hour traffic volumes. A copy of the traffic count data is included, attached to this letter. Signal data was provided by the MPO and can be found attached to this letter.

The existing traffic volumes were projected using an annual growth rate of 0.5% to the interim analysis year of 2020 and the build-out analysis year of 2030. No additional adjacent development trips were considered in background conditions.

Trip Generation

The existing development consists of approximately 54 acres of general light industrial development, 90,000 sq. ft. of general office development, and a 14,400 sq. ft. day care center. Roughly 490 acres of the industrial park are currently undeveloped. Through coordination with the MPO, it was determined that 4 additional lots would be fully built for the interim scenario analysis. It was assumed that each lot was roughly 16 acres in size, so 64 acres of industrial park were assumed to be developed for the interim (2020) analysis. For the build-out scenario analysis, the remaining 29 lots were assumed to consist of industrial park and retail land uses. Through

coordination with the MPO, it was determined that approximately 80,000 sq. ft. of retail would be developed across 4 lots. The remaining lots provide approximately 370 acres of land to be developed as an industrial park. It should be noted that a reduction was taken to account for the swamp located across the property. Refer to the attached site plan that has been marked up to show the anticipated lot development.

Weekday daily, AM, and PM peak hour trips for the industrial park were estimated using methodology contained within the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 9th Edition. Table 1 provides a summary of the trip generation potential for the site in the interim (2020) analysis scenario. Table 2 provides a summary of the trip generation potential for the site in the build-out (2030) analysis scenario. Both of the future scenarios are in additional to the existing traffic generated by the current land uses on the site.

Table 1
Trip Generation – Interim (2020) Analysis

Land Use	Size	24 Hour Volume	Weekday AM Peak Hour Trips		Weekday PM Peak Hour Trips	
			Enter	Exit	Enter	Exit
Industrial Park (130)	4 Lots (64 Acres)	3,600	357	73	89	337

It is estimated that 64 acres of industrial park will generate 3,600 total site trips on the roadway network during a typical 24-hour weekday period. Of the daily traffic volume, it is anticipated that 430 (357 entering and 73 exiting) will occur during the AM peak hour and 426 (89 entering and 337 exiting) will occur during the PM peak hour.

Table 2
Trip Generation – Build-Out (2030) Analysis

Land Use	Size	24 Hour Volume	Weekday AM Peak Hour Trips		Weekday PM Peak Hour Trips	
			Enter	Exit	Enter	Exit
Industrial Park (130)	370 Acres	18,200	1,403	287	316	1,191
Shopping Center (820)	80,000 sq. ft.	5,900	84	52	248	268
Total Site Trips		**24,100**	**1,487**	**339**	**564**	**1,459**

It is estimated that full build-out of the remaining portion of the development will generate 24,100 total site trips on the roadway network during a typical 24-hour weekday period. Of the daily traffic volume, it is anticipated that 1,826 (1,487 entering and 339 exiting) will occur during the AM peak hour and 2,023 (564 entering and 1,459 exiting) will occur during the PM peak hour.

Trip distribution percentages used in assigning site traffic for this development were estimated based on a combination of existing traffic patterns, population centers adjacent to the study area, and engineering judgment. It is estimated that trips will be distributed as follows:

- 45% to/from the north via US 258
- 45% to/from the south via US 258
- 10% to/from the west via Pony Farm Road

Refer to Figure 4 for an illustration of the interim (2020) site trips and Figure 5 for an illustration of the build-out (2030) site trips. Site trips were added to the background traffic to produce the combined traffic conditions in the future analysis years. See Figure 6, attached, for the combined interim (2020) peak hour traffic conditions and Figure 7 for the combined build-out (2030) peak hour traffic conditions.

Capacity Analysis

The study intersections were analyzed under existing (2016), background (2020), combined interim (2020), background (2030), and combined build-out (2030) conditions. Analysis was performed using the Synchro (Version 9) software. Synchro operates using the methodology outlined in the 2010 *Highway Capacity Manual* to calculate capacity and level of service of the study area intersections. Note that the unsignalized capacity analysis, used in this study, does not provide an overall level of service for an intersection; only delay for an approach with a conflicting movement.

An additional scenario with combined build-out (2030) traffic conditions was analyzed for the purpose of this study. Through coordination with the MPO, it was determined that NW Corridor Boulevard would be extended to US 258 and would provide an additional access to Burton Commerce Park. For the purpose of this study, it was assumed that the intersection of NW Corridor Boulevard Extension and US 258 would be a left-over access for westbound vehicles on NW Corridor Boulevard Extension. Site trips were diverted, so approximately 20% of the site trips enter through this access and 50% of the site trips exit through this access.

The results of the capacity analysis can be found in the tables on the following pages.

US 258 and Pony Farm Road / NW Corridor Boulevard

The existing signalized intersection of US 258 and Pony Farm Road / NW Corridor Boulevard was analyzed under existing (2016), background (2020), combined interim (2020), background (2030), and combined build-out (2030) traffic conditions with existing lane configurations and traffic control. Refer to Table 3 for a summary of the analysis results. Refer to the Synchro capacity analysis reports, attached to this letter.

Table 3
Capacity Analysis Summary – US 258 and Pony Farm Road / NW Corridor Boulevard

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (sec)	Approach	Overall (sec)
Existing (2016) Conditions	EB WB NB SB	1 LT-TH, 1 RT 1 LT-TH-RT 1 LT, 2 TH, 1 RT 1 LT, 1 TH, 1 TH-RT	D E A B	**B (14)**	D E B B	**B (19)**
Background (2020) Conditions	EB WB NB SB	1 LT-TH, 1 RT 1 LT-TH-RT 1 LT, 2 TH, 1 RT 1 LT, 1 TH, 1 TH-RT	D E A B	**B (15)**	D E B B	**B (19)**
Combined Interim (2020) Conditions	EB WB NB SB	1 LT-TH, 1 RT 1 LT-TH-RT 1 LT, 2 TH, 1 RT 1 LT, 1 TH, 1 TH-RT	D E B B	**C (20)**	D F C B	**E (64)**
Combined Interim (2020) Conditions **with Improvements**	EB WB NB SB	1 LT-TH, 1 RT **1 LT, 1 TH-RT** 1 LT, 2 TH, 1 RT 1 LT, 1 TH, 1 TH-RT	C D A B	**B (16)**	C E C B	**C (29)**
Background (2030) Conditions	EB WB NB SB	1 LT-TH, 1 RT 1 LT-TH-RT 1 LT, 2 TH, 1 RT 1 LT, 1 TH, 1 TH-RT	D E A B	**B (16)**	D E B B	**C (20)**
Combined Build-Out (2030) Conditions	EB WB NB SB	1 LT-TH, 1 RT 1 LT-TH-RT 1 LT, 2 TH, 1 RT 1 LT, 1 TH, 1 TH-RT	E F C D	**F (89)**	D F D C	**F (713)**
Combined Build-Out (2030) Conditions **with Improvements**	EB WB NB SB	**1 LT, 1 TH**, 1 RT **2 LT, 1 TH, 2 RT** 1 LT, 2 TH, 1 RT **2 LT, 2 TH, 1 RT**	D C C D	**D (36)**	D E D D	**E (56)**
Combined Build-Out (2030) Conditions **with Additional Access**	EB WB NB SB	**1 LT, 1 TH**, 1 RT **1 LT, 1 TH, 1 RT** 1 LT, 2 TH, 1 RT **2 LT, 2 TH, 1 RT**	D C C C	**C (32)**	D F D D	**D (50)**

Improvements to lane configuration are shown in bold.

Capacity analysis of existing (2016) and background (2020) traffic conditions indicates the intersection of US 258 and Pony Farm Road / NW Corridor Boulevard currently operates at an overall LOS B during the weekday AM and PM peak hours. Under combined interim (2020) traffic conditions, the intersection is expected to operate at an overall LOS C during the weekday AM peak hour and LOS E during the PM peak hour. In order to mitigate the impacts of site traffic, an exclusive westbound left-turn lane on NW Corridor Boulevard was included as part of the analysis, along with signal timing modifications. With these improvements, the intersection is expected to operate at an overall LOS B during the weekday AM peak hour and LOS C during the PM peak hour.

Under background (2030) traffic conditions, the intersection is expected to operate at an overall LOS B during the weekday AM peak hour and LOS C during the PM peak hour. Under combined build-out (2030) traffic conditions, the intersection is expected to operate at an overall LOS F during both weekday peak hours. In order to mitigate the impacts of site traffic, multiple exclusive turn lanes were considered for the approaches at this intersection, along with signal timing modifications. With these improvements, the intersection is expected to operate at LOS D during the AM peak hour and LOS E during the PM peak hour. It should be noted that the intersection operations are not anticipated to improve without widening the existing corridors.

While the previously listed improvements do not allow the intersection to operate at an overall LOS D under combined build-out (2030) conditions during the weekday PM peak hour, no additional improvements are recommended at this intersection. An additional access location is recommended to alleviate some of the traffic expected to use the intersection of US 258 and Pony Farm Road / NW Corridor Boulevard. This additional site access was discussed with the MPO staff and was provided in the analysis. The additional site entrance is the full extension of NW Corridor Boulevard, which would intersect with US 258 roughly 1,000 feet north of the intersection of US 258 and Pony Farm Road. With an additional site access, the intersection of US 258 and Pony Farm Road / NW Corridor Boulevard is expected to operate at LOS C during the AM peak hour and LOS D during the PM peak hour.

US 258 and Hines Farm Road

The existing unsignalized intersection of US 258 and Hines Farm Road was analyzed under existing (2016), background (2020), combined interim (2020), background (2030), and combined build-out (2030) traffic conditions with existing lane configurations and traffic control. Refer to Table 4 for a summary of the analysis results. Refer to the Synchro capacity analysis reports, attached to this letter.

Table 4
Capacity Analysis Summary - US 258 and Hines Farm Road

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (sec)	Approach	Overall (sec)
Existing (2016) Conditions	WB NB SB	1 LT-RT 1 TH, 1 TH-RT 1 LT, 2 TH	C[2] -- A[1]	**N/A**	E[2] -- C[1]	**N/A**
Background (2020) Conditions	WB NB SB	1 LT-RT 1 TH, 1 TH-RT 1 LT, 2 TH	C[2] -- A[1]	**N/A**	E[2] -- C[1]	**N/A**
Combined Interim (2020) Conditions	WB NB SB	1 LT-RT 1 TH, 1 TH-RT 1 LT, 2 TH	C[2] -- A[1]	**N/A**	F[2] -- C[1]	**N/A**
Combined Interim (2020) Conditions **with Improvements**	WB NB SB	**1 LT, 1 RT** 1 TH, 1 TH-RT 1 LT, 2 TH	C[2] -- A[1]	**N/A**	F[2] -- C[1]	**N/A**
Background (2030) Conditions	WB NB SB	1 LT-RT 1 TH, 1 TH-RT 1 LT, 2 TH	C[2] -- A[1]	**N/A**	E[2] -- C[1]	**N/A**
Combined Build-Out (2030) Conditions	WB NB SB	1 LT-RT 1 TH, 1 TH-RT 1 LT, 2 TH	F[2] -- B[1]	**N/A**	F[2] -- E[1]	**N/A**
Combined Build-Out (2030) Conditions **with Improvements**	WB NB SB	**1 LT, 1 RT** 1 TH, 1 TH-RT 1 LT, 2 TH	F[2] -- A[1]	**N/A**	F[2] -- E[1]	**N/A**
Combined Build-Out (2030) Conditions **with Additional Access**	WB NB SB	**1 LT, 1 RT** 1 TH, 1 TH-RT 1 LT, 2 TH	E[2] -- A[1]	**N/A**	F[2] -- E[1]	**N/A**

1. Level of service for left turn movement on major approach
2. Level of service for minor approach

Improvements to lane configuration are shown in bold.

Capacity analysis of existing (2016) and background (2020) traffic conditions indicates the intersection of US 258 and Hines Farm Road currently operates with the westbound approach operating at LOS C during the weekday AM peak hour and LOS E during the PM peak hour. Under combined interim (2020) traffic conditions, the intersection is expected to operate with the westbound approach operating at LOS C during the weekday AM peak hour and LOS F during the PM peak hour. In order to mitigate the impacts of site traffic, an exclusive westbound right-turn lane on Hines Farm Road was included as part of the intersection. The exclusive right-turn lane is warranted utilizing methods contained in the NCDOT Policy on Street and Driveway Access manual. Additionally, it was recommended to alleviate the anticipated minor street queuing caused by the heavy volumes on the major street approach. With this improvement, the intersection is to operate with the same levels of service. Although the level of service does not improve, the queuing and delay at the intersection improves. It should be noted that long queues and delays can be expected on minor streets of unsignalized intersections with heavy through volumes. Under combined interim (2020) traffic conditions, a signal is not warranted during weekday peak hours and is not anticipated to meet the 4- and 8-hour warrants.

It was mentioned by the MPO that it is preferred if only a small portion of site traffic travels on Hines Farm Road because the road mostly consists of residential developments. In an attempt to deter site traffic to access the site via Hines Farm Road, it is recommended that the intersection stay unsignalized.

Under background (2030) traffic conditions, the intersection is expected to operate with the westbound approach operating at LOS C during the weekday AM peak hour and LOS E during the PM peak hour. Under combined build-out (2030) traffic conditions, the intersection is expected to operate with the westbound approach operating at LOS F during both the weekday peak hours. In order to mitigate the impacts of site traffic, an exclusive westbound right-turn lane on Hines Farm Road was included as part of the intersection. With this improvement, the intersection is expected to operate with the same levels of service. Although improvements were made at the intersection, it should be noted that the site traffic could potentially warrant a signal at the intersection due to the heavy through volumes on the major street. It should be noted that a signal is warranted in the weekday PM peak hour, but it is not anticipated to meet the requirements for a 4- or 8- hour signal warrant. Even though the signal is warranted during the weekday PM peak hour, the MPO is attempting to deter site trips from using Hines Farm Road, so the intersection of US 258 and Hines Farm Road was not considered for signalization for the purpose of this study.

In order to further improve the roadway network operation, an additional site entrance was considered. The additional site entrance is the full extension of NW Corridor Boulevard, which would intersect with US 258 roughly 1,000 feet north of the intersection of US 258 and Pony Farm Road. With an additional site entrance, the intersection of US 258 and Hines Farm Road is expected to operate with a westbound approach at LOS E during the AM peak hour and LOS F during the PM peak hour.

US 258 and NW Corridor Boulevard Extension

The proposed signalized intersection of US 258 and NW Corridor Boulevard Extension was analyzed under combined build-out (2030) traffic conditions with proposed lane configurations and traffic control. Refer to Table 5 for a summary of the analysis results. Refer to the Synchro capacity analysis reports, attached to this letter.

Table 5
Capacity Analysis Summary - US 258 and NW Corridor Boulevard Extension

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (sec)	Approach	Overall (sec)
Combined Build-Out (2030) Conditions **with Additional Access**	WB NB SB	**1 LT, 1 RT** 2 TH, **1 RT** 2 TH	C A B	**B (13)**	E C A	**C (33)**

Through coordination with the MPO, it was determined that NW Corridor Boulevard would be extended to US 258 and would provide an additional access to Burton Commerce Park. For the purpose of this study, it was assumed that the intersection of NW Corridor Boulevard Extension and US 258 would be a left-over access for westbound vehicles on NW Corridor Boulevard Extension. Site trips were diverted, so approximately 20% of the site trips enter through this access and 50% of the site trips exit through this access.

Under combined build-out (2030) traffic conditions, the intersection of US 258 and NW Corridor Boulevard Extension is expected to overall at an overall LOS B during the weekday AM peak hour and LOS C during the PM peak hour.

Hines Farm Road and Burton Park Boulevard

The existing unsignalized intersection of Hines Farm Road and Burton Park Boulevard currently operates at acceptable levels of service. Under build-out analysis of the proposed development, the intersection can be expected to experience delays, especially during the PM peak hour, due to queuing at the intersection of US 258 and Hines Farm Road. It is preferred by the MPO that fewer site trips access the site via Hines Farm Road due to the residential development located on Hines Farm Road. In an attempt to deter potential site trips occurring on Hines Farm Road, it is recommended that the intersection of US 258 and Hines Farm Road remains unsigalized. If the intersection remains unsignalized, it makes it difficult to make westbound left-turns due to the heavy through volumes on US 258. If fewer site trips utilize the site access on Hines Farm Road, it is anticipated that the intersection of Hines Farm Road and Burton Park Boulevard would operate at an acceptable level as an unsiganlized intersection without any roadway improvements.

Burton Park Boulevard and Mildred Thomas Court

The existing unsiganlized intersection of Burton Park Boulevard and Mildred Thomas Court provides access to two different lots via Mildred Thomas Court. Both of these lots are currently occupied. It is anticipated that very few site trips will travel on Mildred Thomas Court, so the intersection was analyzed under build-out traffic conditions with only through volumes and no turning volumes. It has been discussed with the MPO that it is preferred that very few site trips will access the site via Hines Farm Road, which is just north of the intersection of Burton Park Boulevard and Mildred Thomas Court. Fewer trips accessing the site via Hines Farm Road would lead to fewer trips at the intersection of Burton Park Boulevard and Mildred Thomas Court. Even with higher than anticipated, and desired, traffic volumes approaching the intersection of Burton Park Boulevard and Mildred Thomas Court, the intersection is anticipated to operate an at acceptable level as an unsignalized intersection without any roadway improvements.

NW Corridor Boulevard and WC Jarman Drive

The existing unsignalized intersection of NW Corridor Boulevard and WC Jarman Drive is anticipated to experience high volumes of traffic once build-out of the site is established. The eastbound approach on NW Corridor Boulevard is anticipated to experience the highest volumes as vehicles enter the site via US 258. Site trips are anticipated to be experienced only on certain movements as it is anticipated there will be minimal interaction between the businesses located in the park. An exclusive southbound right-turn lane on WC Jarman Drive is anticipated to be required, especially during the PM peak hour when vehicles are leaving the site. Additionally, a northbound left-turn lane on WC Jarman Drive is anticipated to be required. It is not anticipated that signalization will be necessary, but the intersection should be monitored in the future. Without the provisions of a signal, the intersection is anticipated to operate at an acceptable level with stop-sign control on the northbound and southbound approaches of WC Jarman Drive.

Burton Park Boulevard and WC Jarman Drive

The intersection of Burton Park Boulevard and WC Jarman Drive is not anticipated to experience high volumes of traffic once build-out of the site is established. Certain movements will experience higher volumes as it is anticipated there will be minimal interaction between the businesses located in the park, so a majority of the traffic flow is expected to be traveling to and from the site entrances. An exclusive westbound left-turn lane on Burton Park Boulevard is anticipated to be required once build-out of the site is established. Also, a northbound right-turn lane on WC Jarman Drive is anticipated to be warranted at build-out. It is not anticipated that signalization of the intersection will be necessary in the future.

NW Corridor Boulevard between US 258 and WC Jarman Drive

The corridor of NW Corridor Boulevard between US 258 and WC Jarman Drive is anticipated to experience high volumes of traffic as the main site entrance is located on NW Corridor Boulevard at US 258. It is anticipated that the future land use of the lots along this corridor will be primarily retail business and will attract high volumes of traffic. It is anticipated that the corridor will need to be a four-lane roadway, with exclusive turn lanes to provide any direct access to retail lots along NW Corridor Boulevard.

Conclusions

The proposed business park is anticipated to generate high volumes of traffic at build-out. If only two site access locations are provided, the intersection of US 258 and Pony Farm Road / NW Corridor Boulevard will need additional turn lanes to provide access to the site. The intersection of US 258 and Hines Farm Road are expected to experience heavy delays if the intersection remains unsignalized. It is desired by the MPO that fewer site trips travel on Hines Farm Road in order to access the site, so it is suggested that the intersection remain unsigalized in an attempt to deter traffic from using the Hines Farm Road site access.

It should be noted that an additional site entrance would greatly improve traffic conditions on US 258. Through coordination with the MPO, it was determined that an additional extension of NW Corridor Boulevard will likely be constructed roughly 1,000 feet north of the intersection of US 258 and Pony Farm Road. With the inclusion of this additional entrance, traffic conditions are anticipated to improve on US 258 and along the existing NW Corridor Boulevard. The NW Corridor Boulevard Extension was analyzed with a left-over, allowing site traffic to make a westbound left-turn on NW Corridor Boulevard Extension.

The roadways internal to the site are not anticipated to require major roadway improvements. Exclusive turn lanes may be warranted once full build-out is established. Additionally, it is anticipated that NW Corridor Boulevard will need to be widened to a four-lane roadway and include exclusive turn lanes to any developments adjacent to the roadway.

Recommendations

The following geometric improvements are identified in this study to accommodate future traffic volumes:

Interim (2020) Traffic Conditions

US 258 and Pony Farm Road / NW Corridor Boulevard

- Provide an exclusive westbound left-turn lane on NW Corridor Boulevard with 150 feet of storage and appropriate taper.
- Modify signal timings.

US 258 and Hines Farm Road

- Provide an exclusive westbound right-turn lane on Hines Farm Road with 250 feet of storage and appropriate taper.

Build-Out (2030) Traffic Conditions

US 258 and Pony Farm Road / NW Corridor Boulevard

- Provide exclusive dual westbound left-turn lanes on NW Corridor Boulevard, one with full storage and another with 300 feet of storage and appropriate taper.
- Provide exclusive dual westbound right-turn lanes on NW Corridor Boulevard with 300 feet of storage each and appropriate taper.
- Provide an exclusive eastbound left-turn lane on Pony Farm Road with 300 feet of storage and appropriate taper.
- Extend the eastbound right-turn lane on Pony Farm Road to provide 300 feet of storage and appropriate taper.
- Provide southbound dual left-turn lanes on US 258 with 300 feet of storage each and appropriate taper.
- Provide an exclusive southbound right-turn lane on US 258 with 200 feet of storage and appropriate taper.
- Modify signal timings.

US 258 and Hines Farm Road

- Provide an exclusive westbound right-turn lane on Hines Farm Road with 400 feet of storage and appropriate taper.
- Provide an exclusive northbound right-turn lane on US 258 with 200 feet of storage and appropriate taper.

Build-Out (2030) Traffic Conditions ***with Additional Entrance***

US 258 and Pony Farm Road / NW Corridor Boulevard

- Provide exclusive dual westbound left-turn lanes on NW Corridor Boulevard with full storage.
- Provide an exclusive westbound right-turn lane on NW Corridor Boulevard with 300 feet of storage and appropriate taper.
- Provide an exclusive eastbound left-turn lane on Pony Farm Road with 300 feet of storage and appropriate taper.
- Extend the eastbound right-turn lane on Pony Farm Road to provide 300 feet of storage and appropriate taper.
- Provide southbound dual left-turn lanes on US 258 with 300 feet of storage each and appropriate taper.
- Provide an exclusive southbound right-turn lane on US 258 with 200 feet of storage and appropriate taper.
- Modify signal timings.

US 258 and Hines Farm Road

- Provide an exclusive westbound right-turn lane on Hines Farm Road with 400 feet of storage and appropriate taper.
- Provide an exclusive northbound right-turn lane on US 258 with 200 feet of storage and appropriate taper.

Refer to Figure 8, attached, for an illustration of the recommended interim (2020) lane configurations, Figure 9 for the recommended build-out (2030) lane configurations, and Figure 10 for the recommended build-out (2030) lane configurations with the added entrance.

If you should have any questions, please feel free to contact me at (919) 872-5115.

Sincerely,
Ramey Kemp & Associates, Inc.

Joshua Reinke, P.E.
Transportation Manager

NORTH CAROLINA PROFESSIONAL SEAL 039251 ENGINEER JOSHUA T. REINKE
6-7-16

NC Corporate License # C-0910

Cc: Robert Vause, P.E., NCDOT

Attachments: Preliminary Site Plan
Figures
Existing Count Data
Signal Information
Marked Site Plan
Synchro Capacity Analysis Reports

ATTACHMENTS

PRELIMINARY SITE PLAN


SITE MAP
Albert J. Ellis Airport
8 miles (Hwy 111)
Hines Farm Road
258
Richlands Highway
24
To Jacksonville
Burton Park Dr
Mildred Thomas Ct
W.C. Jarman Dr
Ormond Barbee Ct
K.B. Herst Ct
Northwest Corridor Blvd
To Western Blvd (planned)
New River
Open Space
Open Space
Open Space
SOLD
RESERVED
SOLD
Lot 1 26.6 ac
Lot 2 19.6 ac
Lot 3 14.4 ac
Lot 4 11.8 ac
Lot 7 19.6 ac
Lot 8 16.5 ac
Lot 9 12.5 ac
Lot 10 12.2 ac
Lot 12 13.4 ac
Lot 13 16.8 ac
Lot 14 11.5 ac
Lot 15 13.5 ac
Lot 16 21 ac
Lot 17 19.8 ac
Lot 18 21.2 ac
Lot 19 33.6 ac
Lot 20 17.7 ac
Lot 21 13.8 ac
Lot 22 17.7 ac
Lot 23 5.9 ac
Lot 24 18.4 ac
Lot 25 9.8 ac
Lot 26 25.7 ac
Lot 27 14.7 ac
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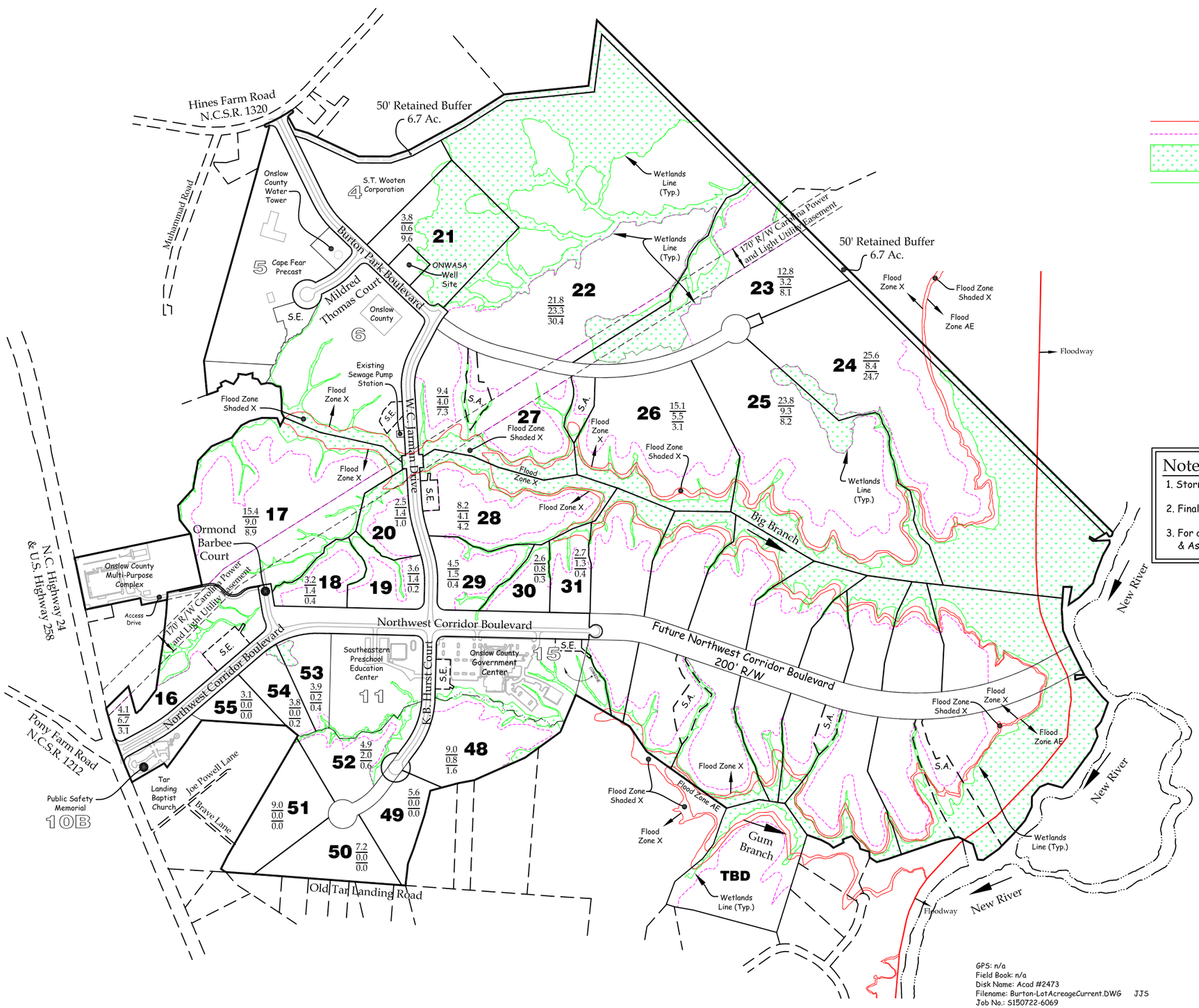
Lot 29 65.1 ac
Lot 30 18.7 ac
Lot 31 20 ac



Legend

S.A. - Stormwater Area
S.E. - Stormwater Easement

6 - Existing Lot
23 - Proposed Lot
TBD - To Be Determined

- Flood Line
- Useable Area Line
- Wetlands
- Wetlands Line

8.2 - Useable Area
4.8 - Transitional Area
3.4 - Area Witinh Wetlands & Powerline R/W

Notes:

1. Stormwater parcel acreages are not included in the lot acreages.
2. Final lot lines are subject to approval by Onslow County.
3. For additional information, see the Master Plans prepared by Parker & Associates, Inc. dated 10/29/14 and other planning documents.

Lot Acreage Map - Current Lots

BURTON PARK

Jacksonville Twp., Onslow Co., North Carolina

Owner:
County of Onslow
4024 Richlands Highway
Jacksonville, North Carolina 28540
(910) 347-4717

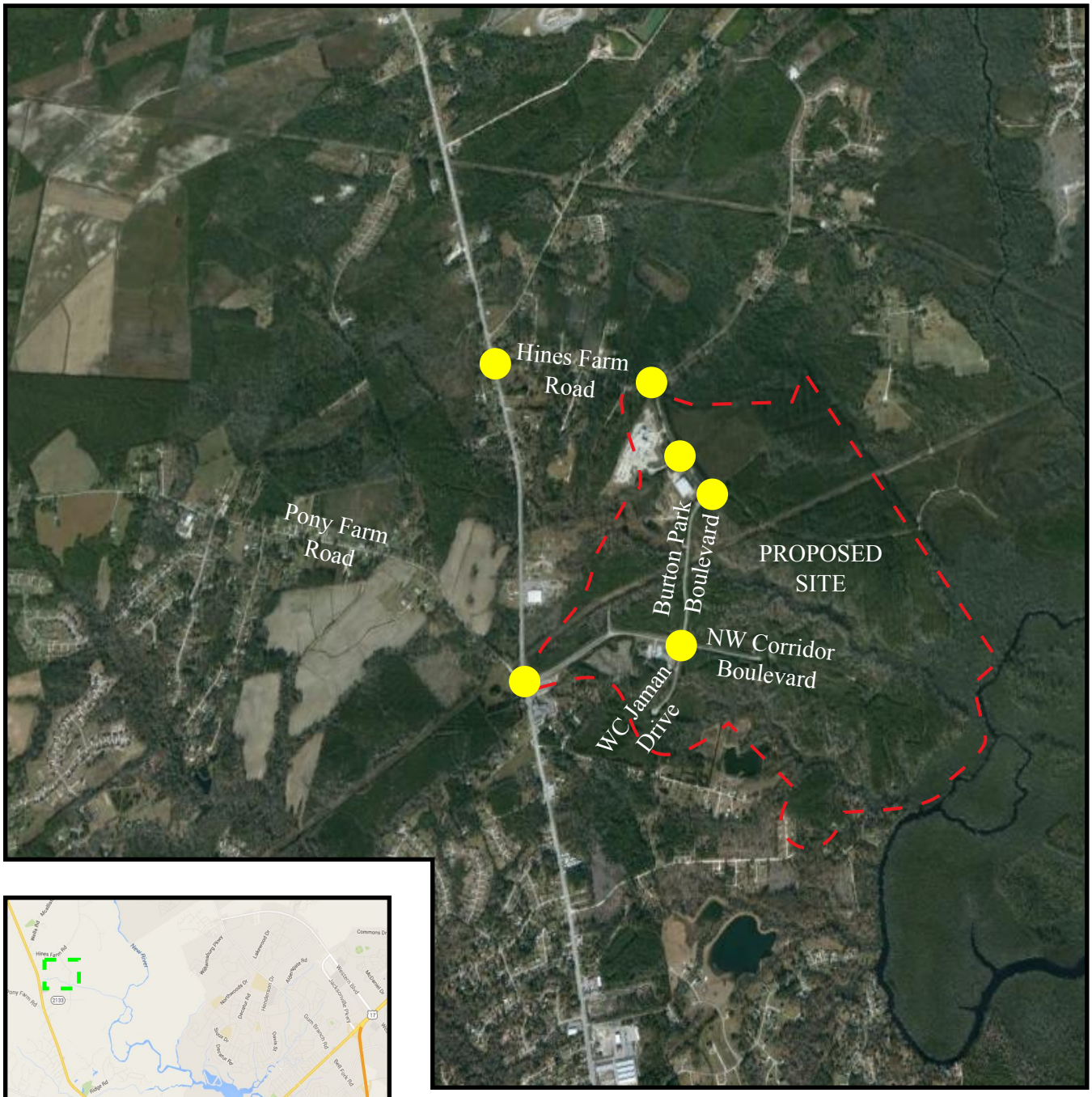
DATE: 01/11/16

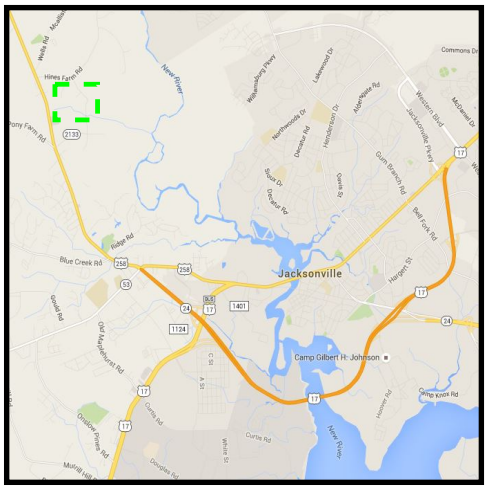
SCALE:Not To Scale

Parker & Associates, Inc.
Consulting Engineers - Land Surveyors - Land Planners
P.O. Box 976 - 28541-0976
306 New Bridge Street - 28540
Jacksonville, North Carolina
Phone (910) 455-2414 - Fax (910) 455-3441
Firm License Number: F-0108

GPS: n/a
Field Book: n/a
Disk Name: Acad #2473
Filename: Burton-LotAcreageCurrent.DWG JJS
Job No.: S150722-6069

FIGURES



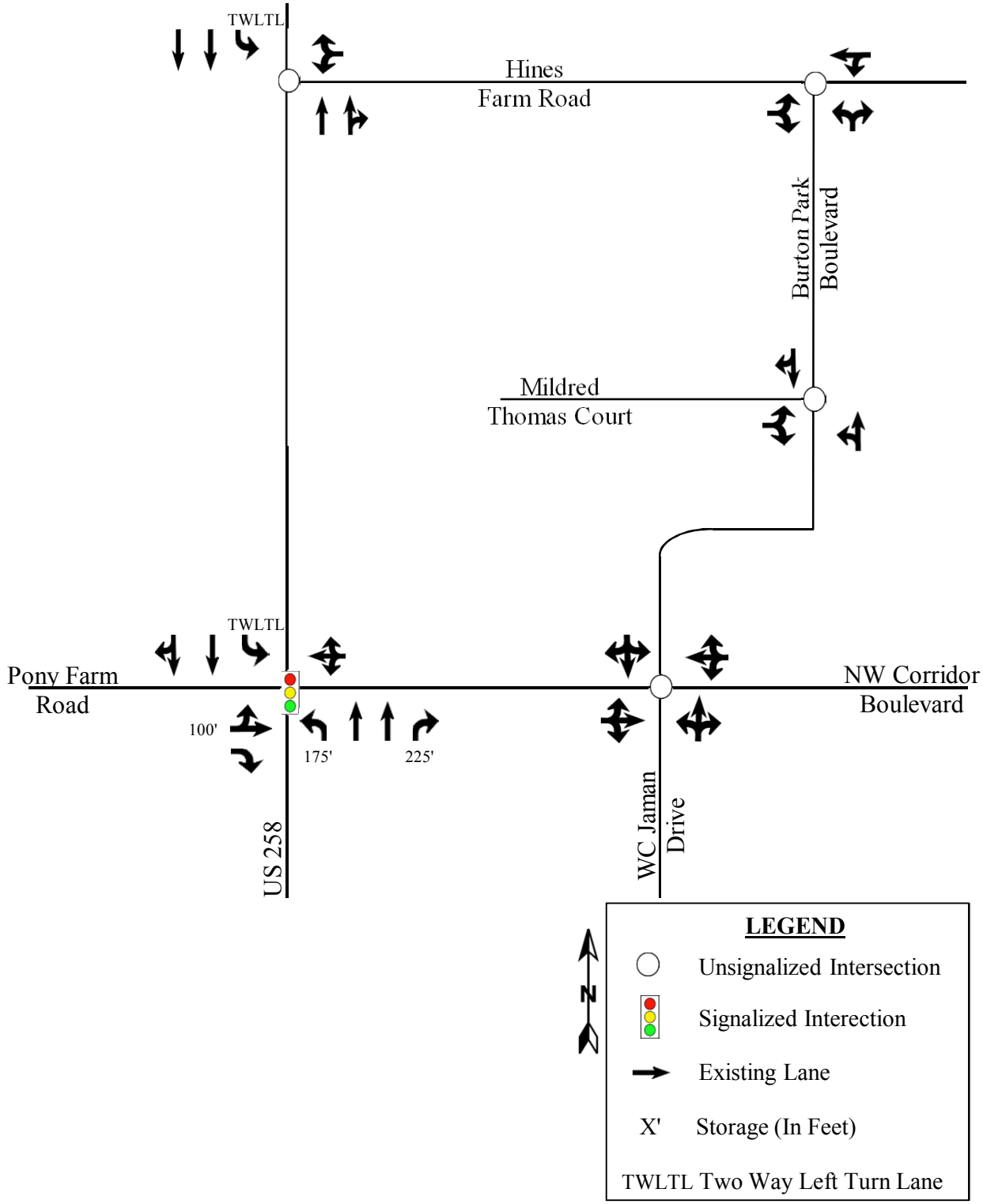


N

LEGEND

- Proposed Site Location
- Study Intersection
- Study Area

RAMEY KEMP & ASSOCIATES TRANSPORTATION ENGINEERS	Burton Commerce Park Onslow County, NC	Site Location Map Scale: Not to Scale — Figure 1



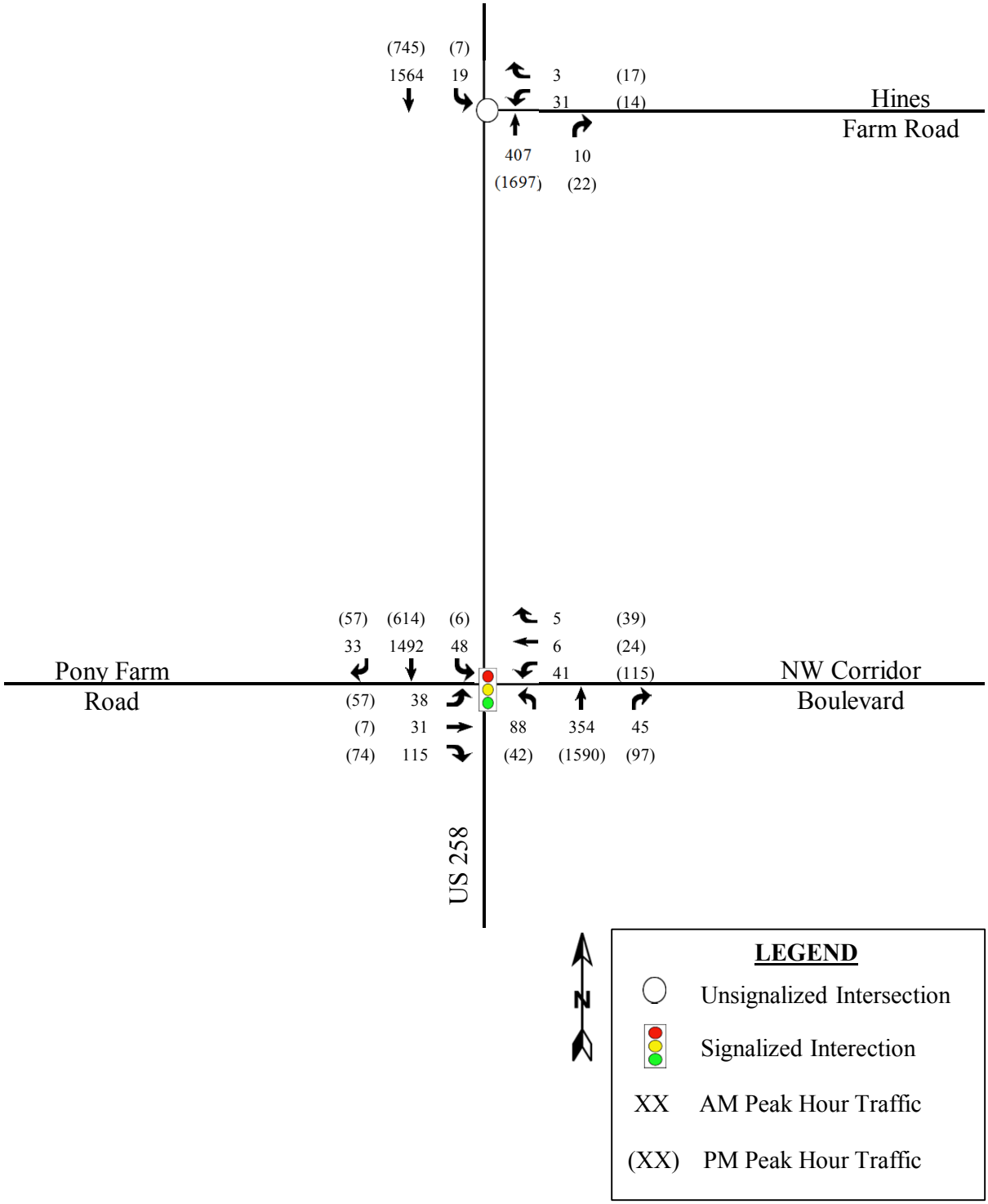
RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Burton Commerce Park
Onslow County, NC

Existing (2016)
Lane Configurations

Scale: Not to Scale

Figure 2



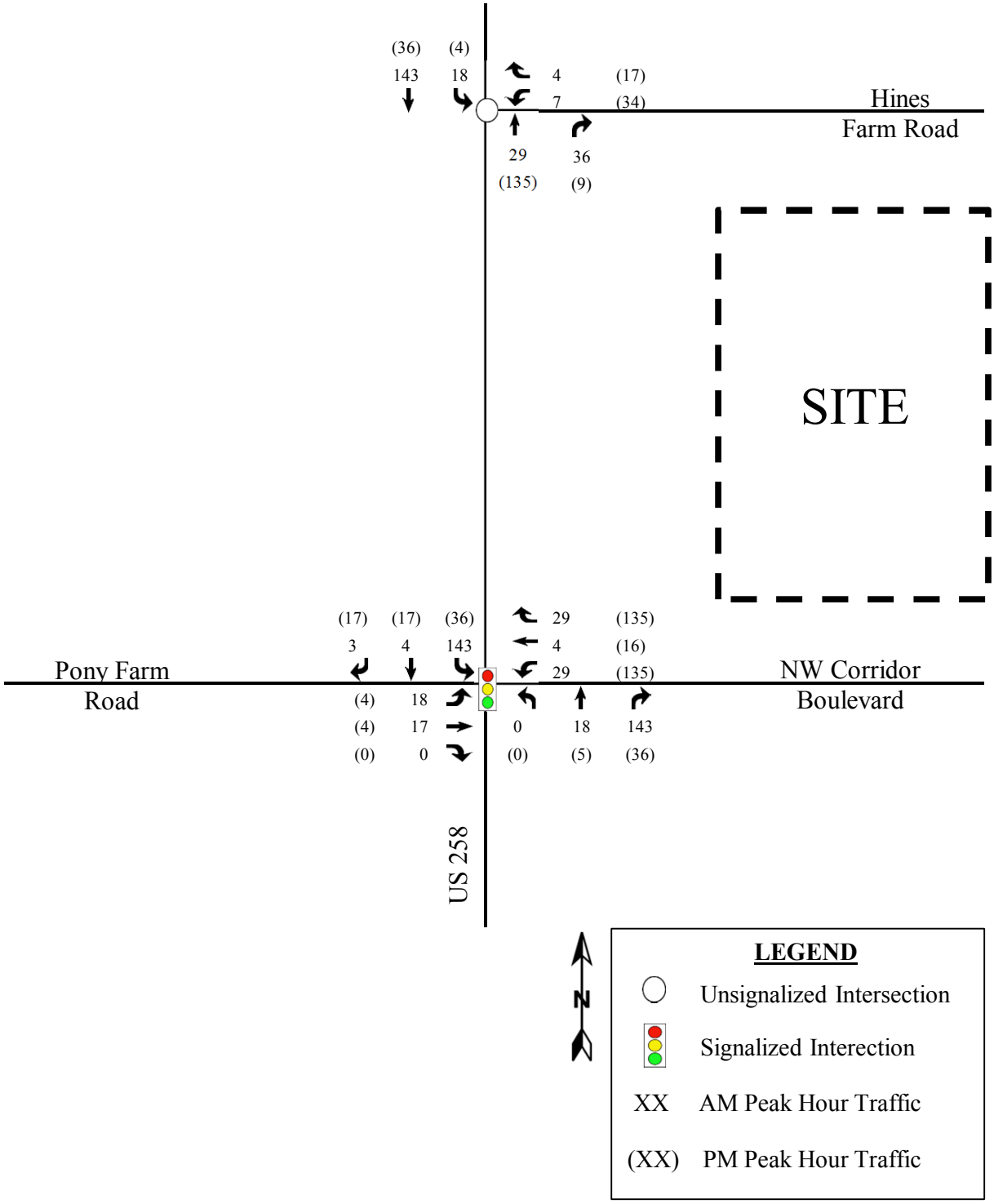
RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Burton Commerce Park
Onslow County, NC

Existing (2016)
Peak Hour Traffic

Scale: Not to Scale

Figure 3



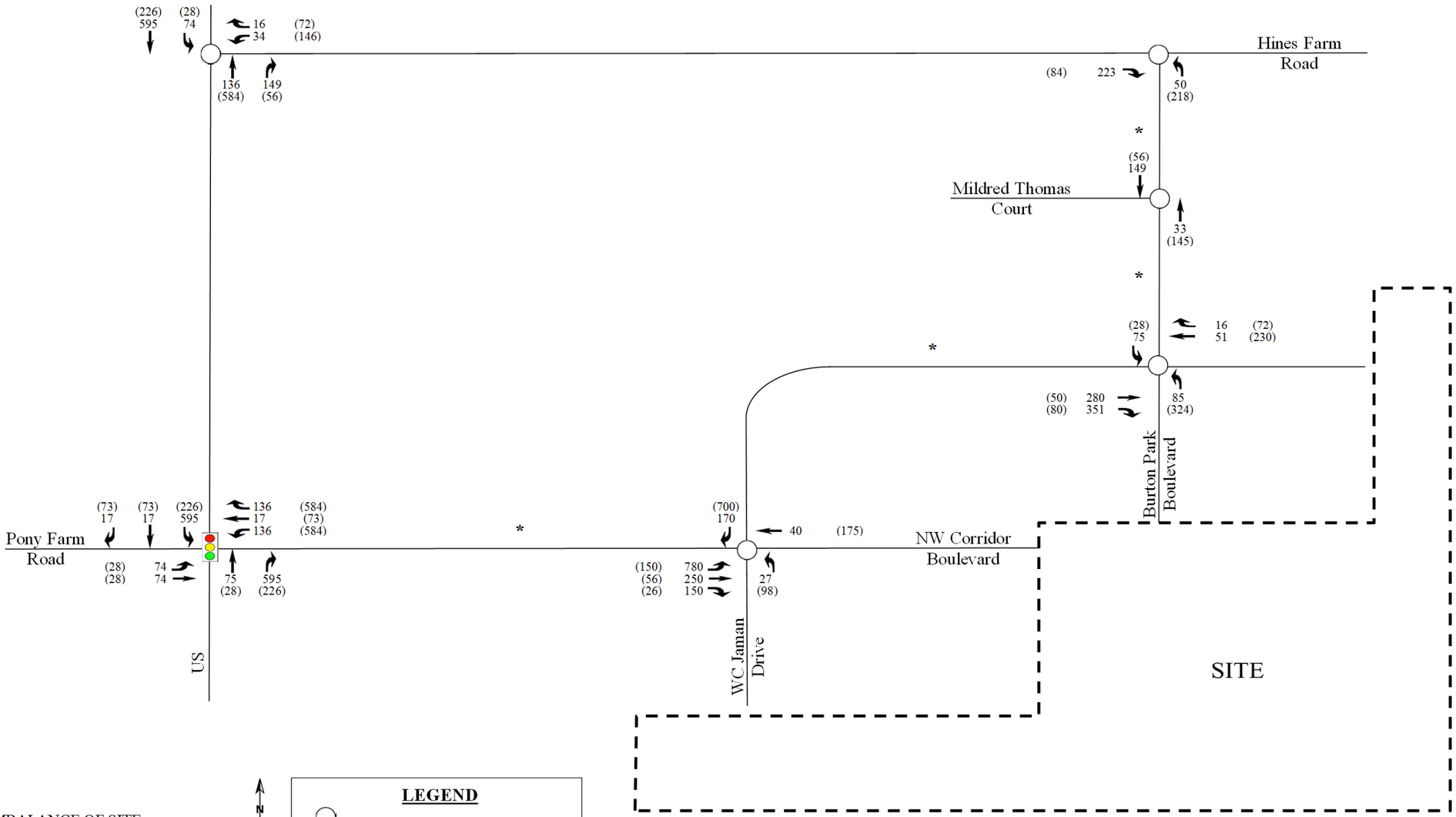
RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Burton Commerce Park
Onslow County, NC

Interim (2020) Site Trips

Scale: Not to Scale

Figure 4



* NOTE: IMBALANCE OF SITE TRIPS DUE TO MINOR SITE DRIVEWAYS THAT WERE NOT ANALYZED

LEGEND

- Unsignalized Intersection
- Signalized Interection
- XX AM Peak Hour Trips
- (XX) PM Peak Hour Trips

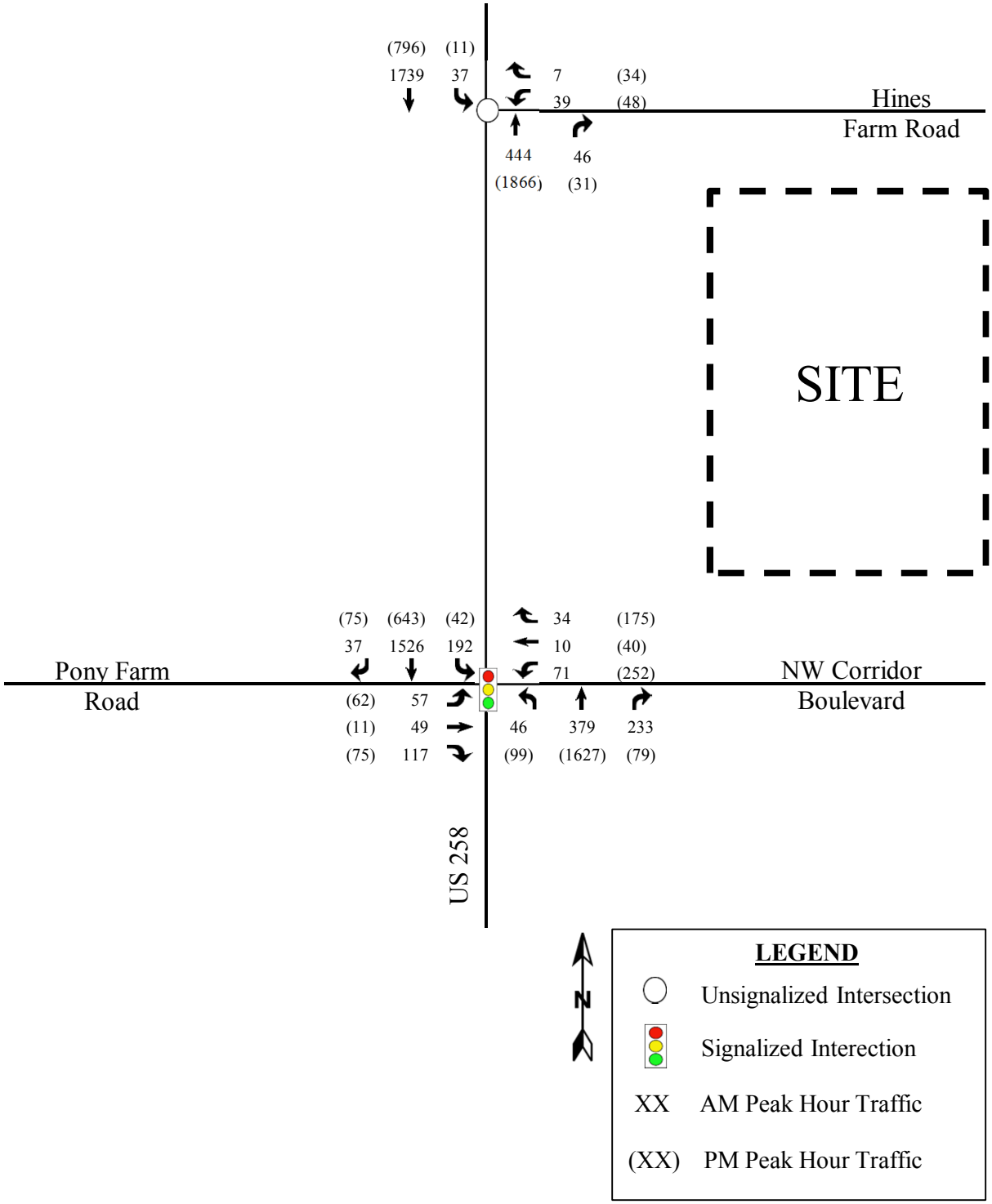
RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Burton Commerce Park
Onslow County, NC

Build-Out (2030) Site Trips

Scale: Not to Scale

Figure 5



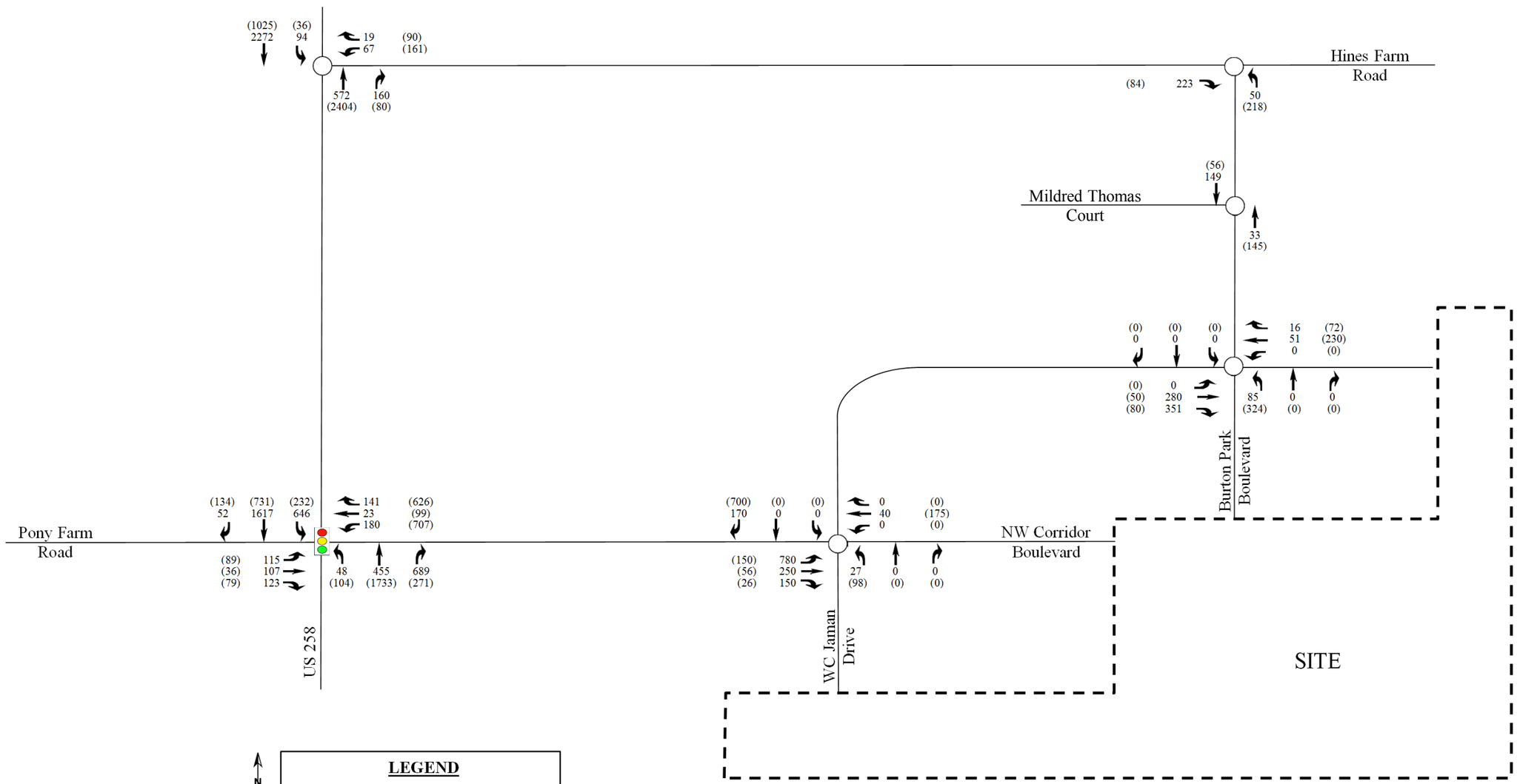
RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Burton Commerce Park
Onslow County, NC

Combined Interim (2020) Peak Hour Traffic

Scale: Not to Scale

Figure 6



LEGEND

- Unsignalized Intersection
- Signalized Interection
- XX AM Peak Hour Trips
- (XX) PM Peak Hour Trips

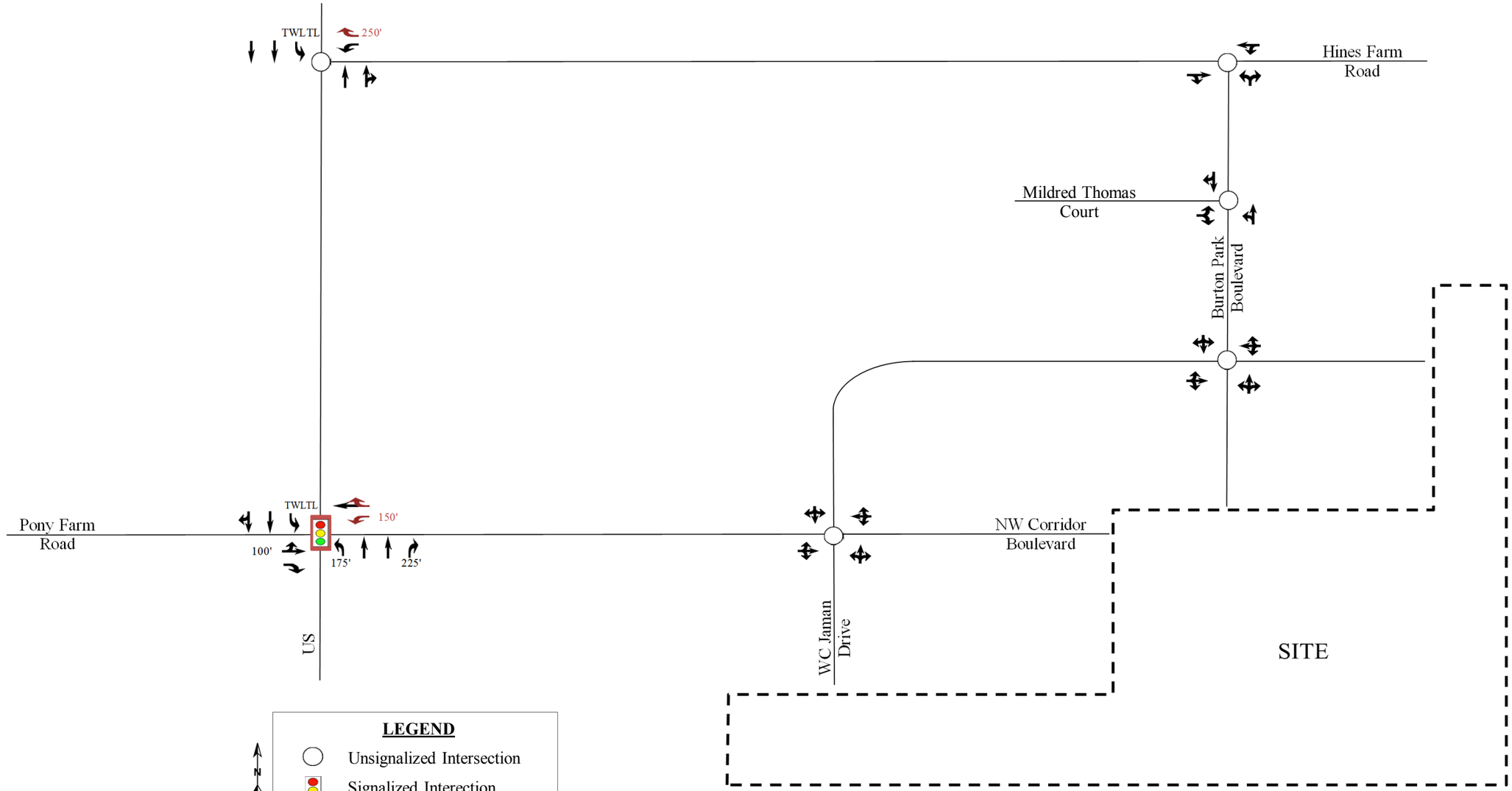
RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Burton Commerce Park
Onslow County, NC

Combined Build-Out (2030) Peak Hour Volumes

Scale: Not to Scale

Figure 7



LEGEND

- Unsignalized Intersection
- Signalized Interection
- Existing Lane
- X' Storage (In Feet)
- TWLTL Two Way Left Turn Lane
- Recommended Lane

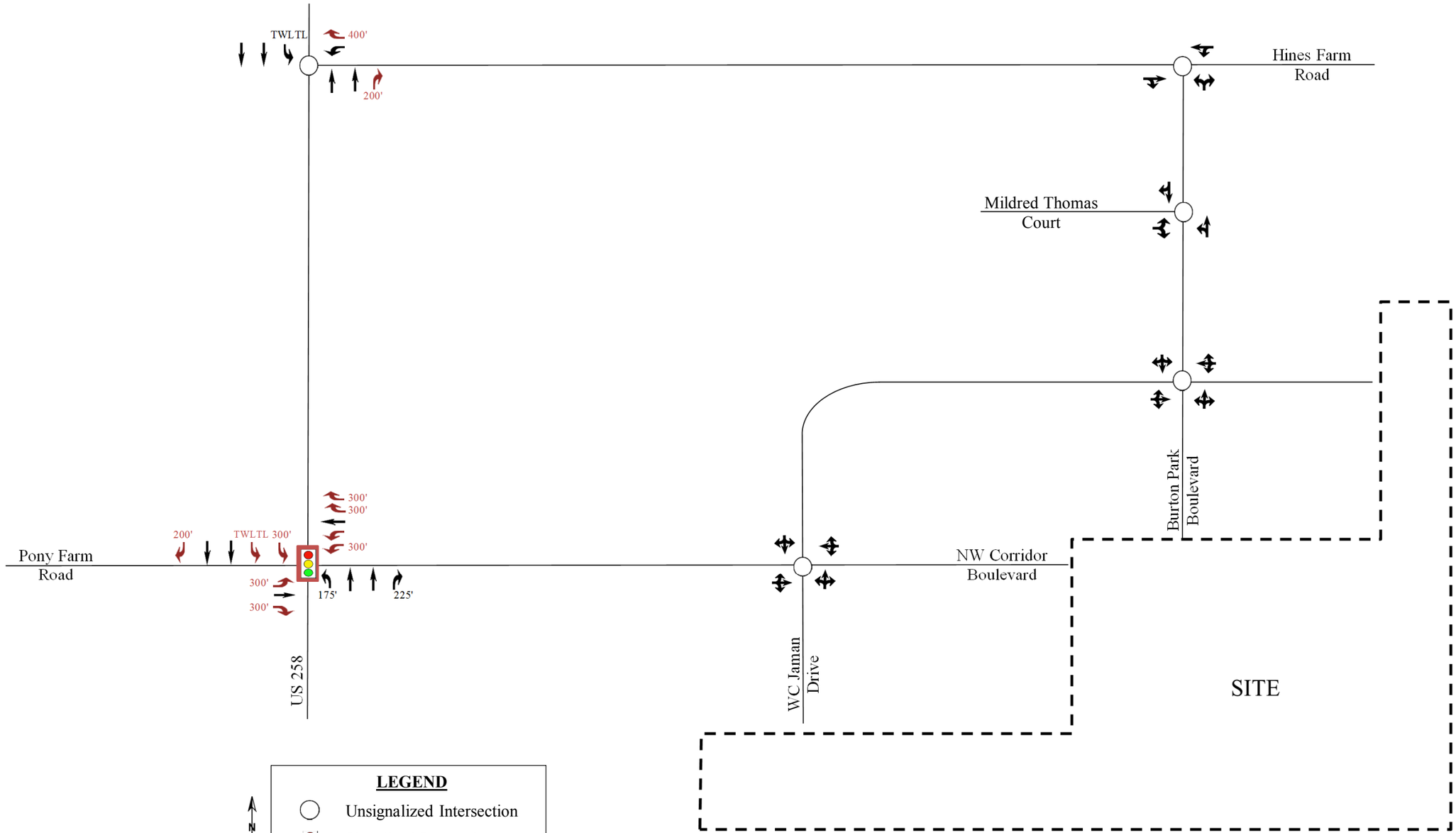
RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Burton Commerce Park
Onslow County, NC

Recommended Interim (2020) Lane Configurations

Scale: Not to Scale

Figure 8



LEGEND

- Unsignalized Intersection
- Signalized Interection
- Existing Lane
- X' Storage (In Feet)
- TWLTL Two Way Left Turn Lane
- Recommended Lane

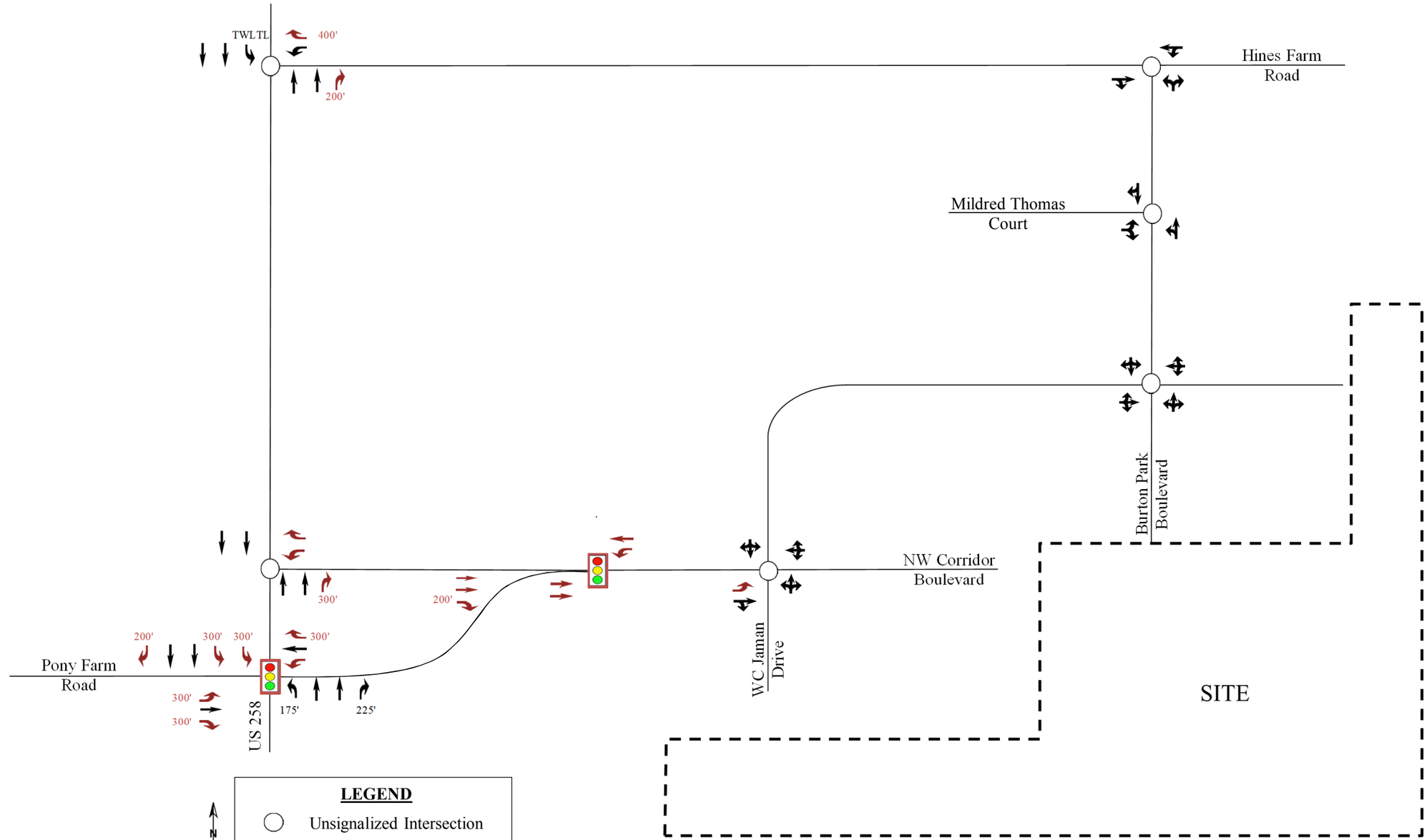
RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Burton Commerce Park
Onslow County, NC

Recommended Build-Out (2030) Lane Configurations

Scale: Not to Scale

Figure 9



LEGEND

- Unsignalized Intersection
- Signalized Interection
- Existing Lane
- X' Storage (In Feet)
- TWLTL Two Way Left Turn Lane
- Recommended Lane

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Burton Commerce Park
Onslow County, NC

Recommended Build-Out (2030)
Lane Configurations
with Additional Entrance

Scale: Not to Scale

Figure 10

EXISTING COUNT DATA

	258 RICHLANDS HWY From North				HINES FARM From East				258 RICHLANDS HWY From South				HINES FARM From West			
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
06:30 AM	0	367	0	0	0	0	2	0	1	62	0	0	1	0	0	0
06:45 AM	0	358	8	0	1	0	6	0	2	83	0	0	0	0	0	0
07:00 AM	0	359	5	0	0	0	8	0	3	90	0	0	0	0	0	0
07:15 AM	0	462	3	0	1	0	5	0	5	93	0	0	0	0	0	0
07:30 AM	0	398	4	0	2	0	8	0	1	114	0	0	0	0	0	0
07:45 AM	0	345	7	0	0	0	10	0	1	110	0	0	0	0	0	0
08:00 AM	0	235	3	0	2	0	4	0	3	108	0	0	0	0	0	0
08:15 AM	0	269	0	0	1	0	6	0	4	101	0	0	0	0	0	0

Start Date: 2/10/2016
Start Time: 3:30:00 PM
Site Code: 00000000
Comment 3: Weather: Clear
Comment 4: Counted by: Aaron Vega

	US258 From North				HINES FARM RD From East				US258 From South				HINES FARM RD From West			
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
03:30 PM	0	157	1	0	1	0	3	0	5	287	0	0	0	0	0	0
03:45 PM	0	183	2	0	3	0	1	0	12	347	0	0	0	0	0	0
04:00 PM	0	153	2	0	1	0	5	0	8	352	0	0	0	0	0	0
04:15 PM	0	152	0	0	4	0	2	0	8	422	0	0	0	0	0	0
04:30 PM	0	172	2	0	6	0	2	0	9	378	0	0	0	0	0	0
04:45 PM	0	186	4	0	5	0	6	0	4	445	0	0	0	0	0	0
05:00 PM	0	215	1	0	2	0	2	0	3	445	0	0	0	0	0	0
05:15 PM	0	172	0	0	4	0	4	0	6	429	0	0	0	0	0	0

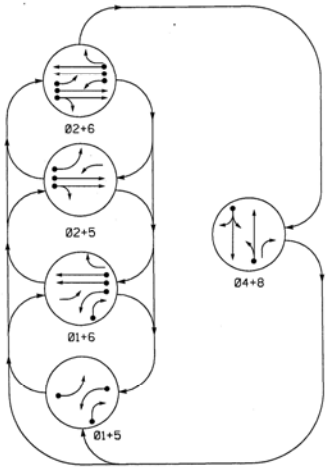
	258 RICHLANDS H From North				PONYFARM From East				258 RICHLANDS H From South				PONYFARM From West			
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
07:45 AM	6	388	2	0	0	0	6	0	7	55	4	0	16	4	10	0
08:00 AM	10	382	5	0	1	2	8	0	14	53	2	0	28	1	11	0
08:15 AM	7	380	5	0	1	2	11	0	8	70	7	0	29	3	6	0
08:30 AM	8	392	8	0	1	0	12	0	15	103	9	0	34	5	6	0
08:45 AM	8	430	9	0	1	3	8	0	20	84	14	0	29	5	9	0
09:00 AM	10	290	26	0	2	1	10	0	45	97	15	0	23	18	17	0

	US258 From North				PONY FARM RD From East				US258 From South				PONY FARM RD From West			
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
03:30 PM	12	145	2	0	6	23	7	0	17	278	26	0	16	17	9	0
03:45 PM	10	158	1	0	6	5	14	0	17	319	22	0	22	4	23	0
04:00 PM	3	162	1	0	9	4	22	0	18	325	24	0	9	1	9	0
04:15 PM	9	141	4	0	7	1	17	0	19	350	33	0	19	1	14	0
04:30 PM	12	146	2	0	7	8	14	0	16	379	21	0	19	1	12	0
04:45 PM	17	149	1	0	6	4	14	0	8	402	26	0	21	1	10	0
05:00 PM	16	170	1	0	17	9	55	0	7	408	28	0	19	3	16	0
05:15 PM	12	149	2	0	9	3	32	0	11	401	22	0	15	2	19	0

SIGNAL INFORMATION

PROJECT REFERENCE NO.	SHEET NO.
36249.3013	SIG-1

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE Ø1+5	Ø1+6	Ø2+5	Ø2+6	Ø4+8	FLASH
11	←-	←-	↰Y	↰Y	↱R	↰Y
21,22	R	R	G	G	R	Y
41,42	R	R	R	R	G	R
51	←-	↰Y	←-	↰Y	↱R	↰Y
61,62	R	G	R	G	R	Y
81	R	R	R	R	G	R
82	R/↱	R/↱	R	R	G	R

STANDARD SIGNAL FACE CLEARANCES FOR FLASHING LEFT TURN SIGNAL

FROM \ TO	←-		↰Y		↱R	
	1	2	1	2	1	2
←-	←-	←-	↰Y	↱R	↰Y	↱R
↰Y	↰Y	↰Y	↰Y	↰Y	↰Y	↱R
↱R	↱R	↱R	↱R	↱R	↱R	↱R

↰Y - FLASHING YELLOW ARROW

2070L LOOP & DETECTOR INSTALLATION

INDUCTIVE LOOPS					DETECTOR PROGRAMMING						
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
1A	6X40	0	2-4-2	Y	1	Y	Y	-	-	15	-	Y
					6	Y	Y	Y	-	3	-	Y
1B	6X40	0	2-4-2	Y	1	Y	Y	-	-	15	-	Y
2A	6X6	420	5	Y	2	Y	Y	-	-	-	-	Y
2B	6X6	420	5	Y	2	Y	Y	-	-	-	-	Y
4A	6X40	0	2-4-2	Y	4	Y	Y	-	-	-	-	Y
4B	6X6	0	5	Y	4	Y	Y	-	-	10	-	Y
5A	6X40	0	2-4-2	Y	5	Y	Y	-	-	15	-	Y
					2	Y	Y	Y	-	3	-	Y
6A	6X6	420	5	Y	6	Y	Y	-	-	-	-	Y
6B	6X6	420	5	Y	6	Y	Y	-	-	-	-	Y
8A	6X40	0	2-4-2	Y	8	Y	Y	-	-	3	-	Y

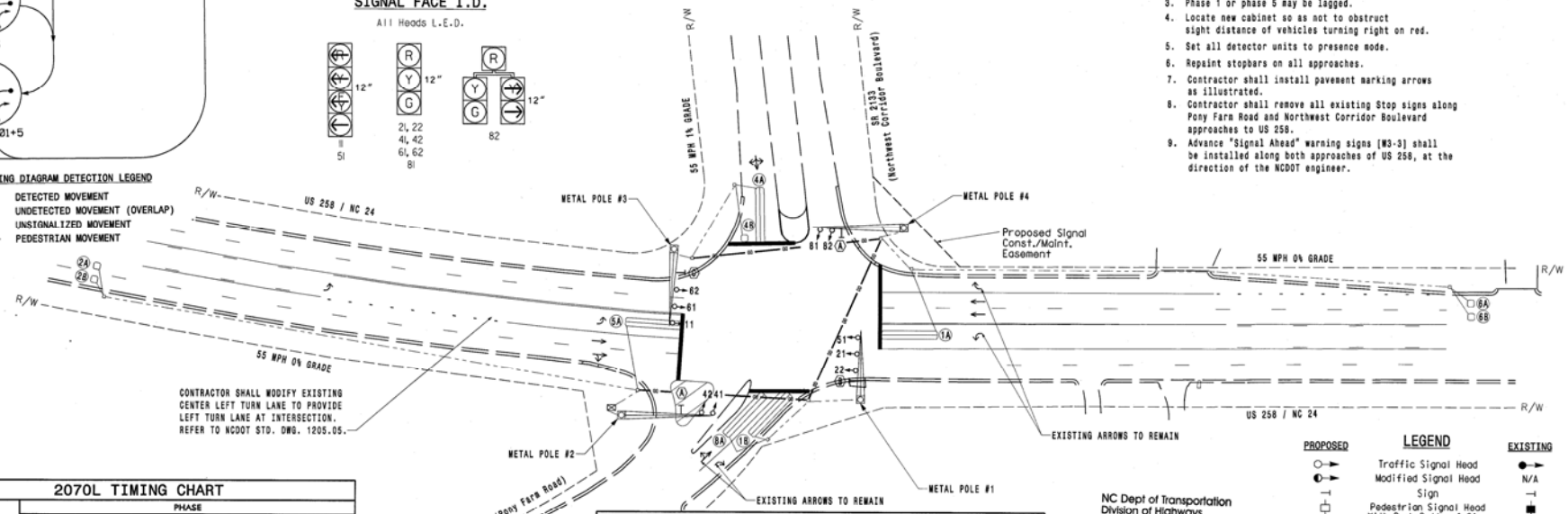
SIGNAL FACE I.D.

All Heads L.E.D.

5 Phase
Fully Actuated
(Future Jacksonville Signal System)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated July 2006, "Standard Specifications for Roads and Structures" dated July 2006 and all applicable sections of the latest version of the generic Project Special Provisions. The PSP can be accessed at the following website: "http://www.ncdot.org/doh/preconstruct/traffic/itss/"
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 1 or phase 5 may be lagged.
4. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
5. Set all detector units to presence mode.
6. Repaint stopbars on all approaches.
7. Contractor shall install pavement marking arrows as illustrated.
8. Contractor shall remove all existing Stop signs along Pony Farm Road and Northwest Corridor Boulevard approaches to US 258.
9. Advance "Signal Ahead" warning signs [W3-3] shall be installed along both approaches of US 258, at the direction of the NCDOT engineer.

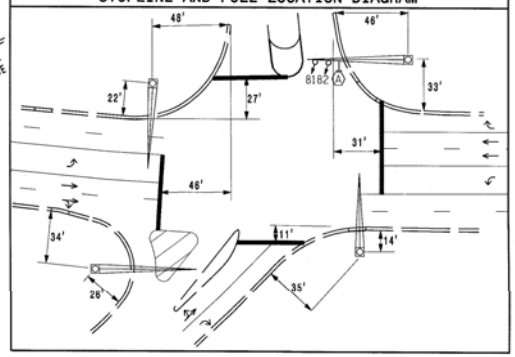


2070L TIMING CHART

FEATURE	PHASE 1	2	4	5	6	8
Min Green 1 *	7	14	7	7	14	7
Extension 1 *	2.0	6.0	2.0	2.0	6.0	2.0
Max Green 1 *	15	90	25	15	90	30
Yellow Clearance	3.2	5.2	5.1	3.2	5.2	5.2
Red Clearance	3.0	1.5	1.2	3.0	1.5	1.3
Walk 1 *	-	-	-	-	-	-
Don't Walk 1	-	-	-	-	-	-
Seconds Per Actuation *	-	1.8	-	-	1.8	-
Max Variable Initial *	-	46	-	-	46	-
Time Before Reduction *	-	15	-	-	15	-
Time To Reduce *	-	45	-	-	45	-
Minimum Gap	-	3.4	-	-	3.4	-
Recall Mode	-	MIN RECALL	-	-	MIN RECALL	-
Vehicle Call Memory	-	YELLOW	-	-	YELLOW	-
Dual Entry	-	-	ON	-	-	ON
Simultaneous Gap	ON	ON	ON	ON	ON	ON

* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

STOPLINE AND POLE LOCATION DIAGRAM



LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head With Push Button & Sign	
	Metal Pole with Mastarm	
	Signal Pedestal	
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
	Directional Drill	N/A
N/A	Right of Way	
	Directional Arrow	
	Pavement Marking Arrow	
	"US 258"	
	"Pony Farm Rd"	
	"NW Corridor Blvd"	

NC Dept of Transportation
Division of Highways
Final Drawing Date 3/10/2011
Traffic Engineering Branch

New Installation

Prepared in the offices of:
RAMEY KEMP ASSOCIATES, INC.
Transportation Engineers
5808 Faringdon Place, Suite 100
Raleigh, North Carolina 27609
919-872-5115 Tel. 919-878-5416 Fax.
www.rameykemp.com, NC License No. C-0910

Prepared in the Offices of:
Transportation Mobility and Safety Division
750 N.Greenfield Pkwy,Garner,NC 27529

US 258 / NC 24 at SR 1212 (Pony Farm Road)

Division 3 Onslow County Jacksonville

PLAN DATE: January 2011 REVIEWED BY: WJ Hamilton
PREPARED BY: BB Palis RKA PROJ. NO: 10141 (040)

SCALE 0 40 1" = 40'

REVISIONS | INIT. | DATE

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 21396 WILLIAM J. HAMILTON
3-10-11
SIGNATURE DATE
SIG. INVENTORY NO. 03-0304

Devyn Lozzi

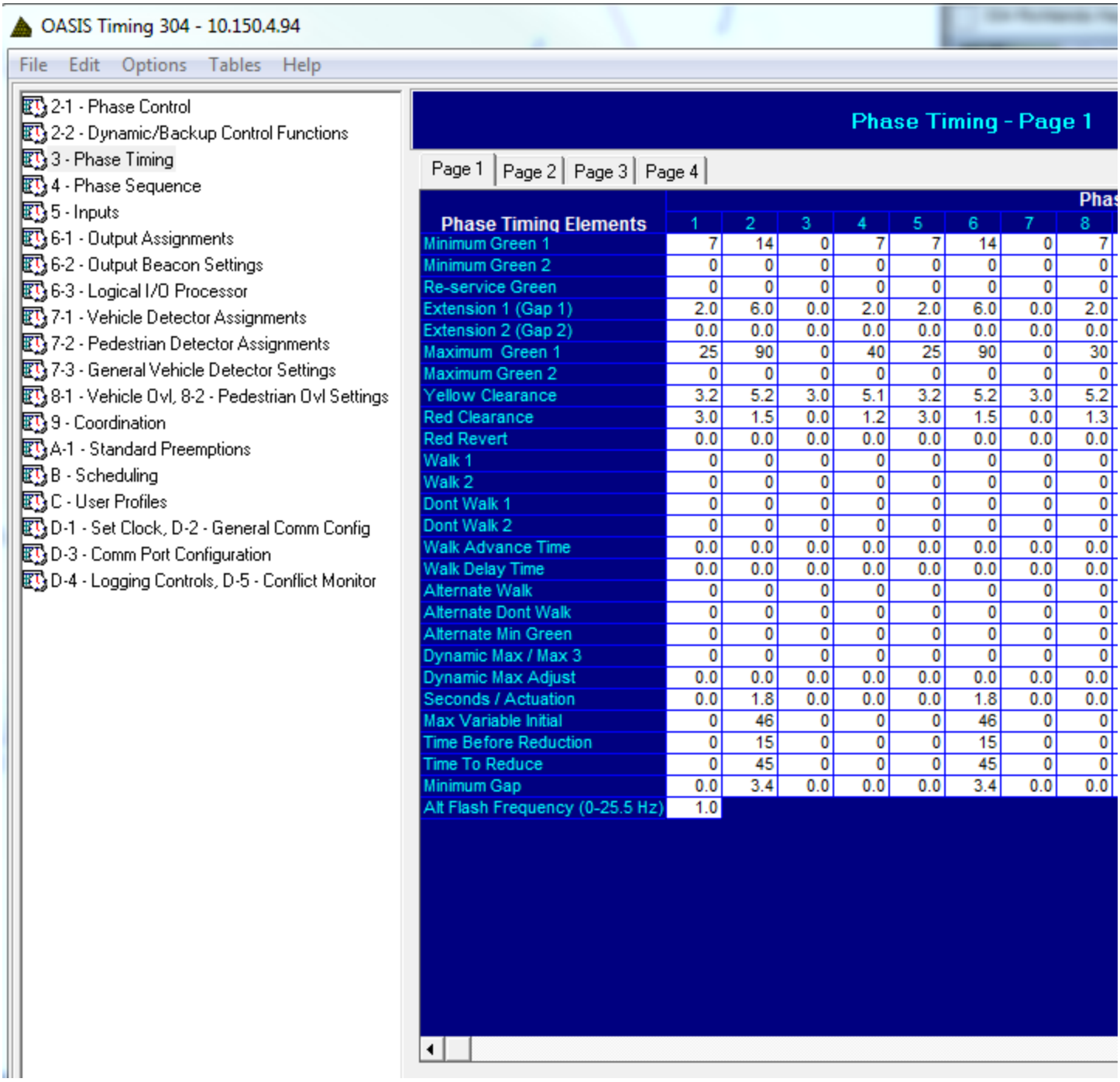
From: Robert Myers <rmyers@ci.jacksonville.nc.us>
Sent: Wednesday, February 24, 2016 4:47 PM
To: Devyn Lozzi
Subject: RE: Jacksonville Signal Timings
Attachments: 030304-20110310g.tif

Devyn,

Good afternoon. Please see the timings below for the subject intersection. Currently the intersection runs in a free operation with a max recall on phases 2 and 6 during the AM and PM peak with the timings as listed below. I also attached the current signal plan for a reference. Let me know if you have any additional questions.

Thank you,

Rob H. Myers Jr.
Traffic Signal System Engineer
City of Jacksonville
Center for Public Safety
200 South Marine Blvd
PO Box 128
Jacksonville, NC 28541
(910) 938-5070



Phase Timing Elements	1	2	3	4	5	6	7	8
Minimum Green 1	7	14	0	7	7	14	0	7
Minimum Green 2	0	0	0	0	0	0	0	0
Re-service Green	0	0	0	0	0	0	0	0
Extension 1 (Gap 1)	2.0	6.0	0.0	2.0	2.0	6.0	0.0	2.0
Extension 2 (Gap 2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum Green 1	25	90	0	40	25	90	0	30
Maximum Green 2	0	0	0	0	0	0	0	0
Yellow Clearance	3.2	5.2	3.0	5.1	3.2	5.2	3.0	5.2
Red Clearance	3.0	1.5	0.0	1.2	3.0	1.5	0.0	1.3
Red Revert	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Walk 1	0	0	0	0	0	0	0	0
Walk 2	0	0	0	0	0	0	0	0
Dont Walk 1	0	0	0	0	0	0	0	0
Dont Walk 2	0	0	0	0	0	0	0	0
Walk Advance Time	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Walk Delay Time	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Dont Walk	0	0	0	0	0	0	0	0
Alternate Min Green	0	0	0	0	0	0	0	0
Dynamic Max / Max 3	0	0	0	0	0	0	0	0
Dynamic Max Adjust	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Seconds / Actuation	0.0	1.8	0.0	0.0	0.0	1.8	0.0	0.0
Max Variable Initial	0	46	0	0	0	46	0	0
Time Before Reduction	0	15	0	0	0	15	0	0
Time To Reduce	0	45	0	0	0	45	0	0
Minimum Gap	0.0	3.4	0.0	0.0	0.0	3.4	0.0	0.0
Alt Flash Frequency (0-25.5 Hz)	1.0							

From: Devyn Lozzi [mailto:dlozzi@rameykemp.com]
Sent: Wednesday, February 24, 2016 1:53 PM
To: Robert Myers
Subject: Jacksonville Signal Timings

Robert,

I spoke with someone at the City office who mentioned you could provide signal timings for an intersection in Jacksonville. I am looking for the timings at the intersection of US 258 and Pony Farm Road (03-0304). We are looking for the timings from 7:00 – 9:00 AM and 4:00 – 6:00 PM.

Please let me know if you have any questions.

Thanks,

Devyn Lozzi, E.I.T.
Transportation Associate

5808 Faringdon Place, Suite 100
Raleigh, NC 27609
Ph: 919-872-5115 Fax: 919-878-5416

Proudly serving the Southeast since 1992.

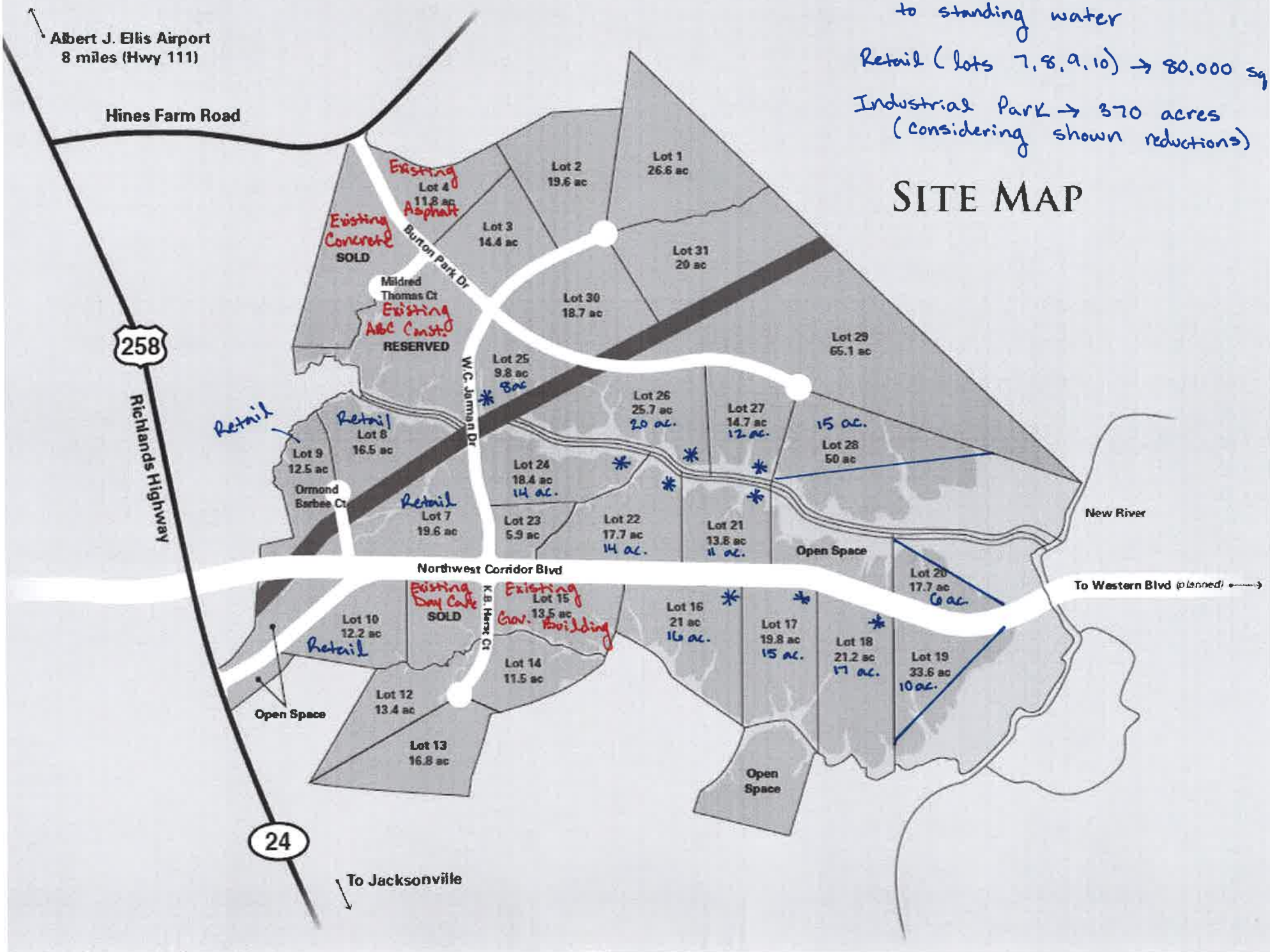
MARKED SITE PLAN

* ~20% loss of usable land due to standing water

Retail (lots 7, 8, 9, 10) → 80,000 sq.ft.

Industrial Park → 370 acres (considering shown reductions)

SITE MAP



CAPACITY CALCULATIONS

US 258

&

PONY FARM ROAD / NW CORRIDOR BOULEVARD

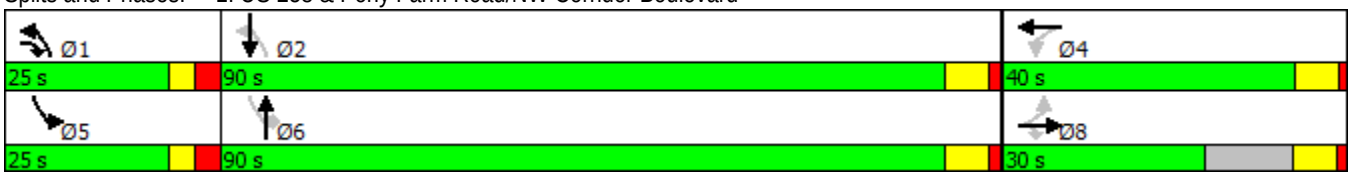
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	31	115	41	6	5	45	354	88	48	1492	33
Future Volume (vph)	38	31	115	41	6	5	45	354	88	48	1492	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	175		225	175		0
Storage Lanes	1		1	0		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850		0.986				0.850		0.997	
Flt Protected		0.973			0.962		0.950			0.950		
Satd. Flow (prot)	0	1812	1583	0	1767	0	1770	3539	1583	1770	3529	0
Flt Permitted		0.833			0.723		0.096			0.520		
Satd. Flow (perm)	0	1552	1583	0	1328	0	179	3539	1583	969	3529	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			35			55			55	
Link Distance (ft)		1818			1669			1168			5042	
Travel Time (s)		27.5			32.5			14.5			62.5	
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
Adj. Flow (vph)	42	34	128	46	7	6	50	393	98	53	1658	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	76	128	0	59	0	50	393	98	53	1695	0
Turn Type	Perm	NA	pm+ov	Perm	NA		D.P+P	NA	Perm	D.P+P	NA	
Protected Phases		8	1		4		1	6		5	2	
Permitted Phases	8		8	4			2		6	6		
Detector Phase	8	8	1	4	4		1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	14.0	14.0	7.0	14.0	
Minimum Split (s)	13.5	13.5	13.2	13.3	13.3		13.2	20.7	20.7	13.2	20.7	
Total Split (s)	30.0	30.0	25.0	40.0	40.0		25.0	90.0	90.0	25.0	90.0	
Total Split (%)	19.4%	19.4%	16.1%	25.8%	25.8%		16.1%	58.1%	58.1%	16.1%	58.1%	
Maximum Green (s)	23.5	23.5	18.8	33.7	33.7		18.8	83.3	83.3	18.8	83.3	
Yellow Time (s)	5.2	5.2	3.2	5.1	5.1		3.2	5.2	5.2	3.2	5.2	
All-Red Time (s)	1.3	1.3	3.0	1.2	1.2		3.0	1.5	1.5	3.0	1.5	
Lost Time Adjust (s)		-1.5	-1.2		-1.3		-1.2	-1.7	-1.7	-1.2	-1.7	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag			Lead				Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0	6.0	2.0	6.0	
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.4	3.4	2.0	3.4	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	15.0	15.0	0.0	15.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	45.0	45.0	0.0	45.0	
Recall Mode	None	None	None	None	None		None	Max	Max	None	Max	
Act Effct Green (s)		12.0	22.1		11.9		93.6	89.6	89.6	94.8	85.4	
Actuated g/C Ratio		0.10	0.19		0.10		0.80	0.76	0.76	0.81	0.73	
v/c Ratio		0.48	0.43		0.44		0.20	0.15	0.08	0.06	0.66	
Control Delay		61.4	45.9		61.3		4.4	5.6	5.9	2.7	11.1	
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		61.4	45.9		61.3		4.4	5.6	5.9	2.7	11.1	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		E	D		E		A	A	A	A	B	
Approach Delay		51.7			61.3			5.6			10.9	
Approach LOS		D			E			A			B	
Queue Length 50th (ft)		57	86		44		6	46	21	6	345	
Queue Length 95th (ft)		108	146		89		15	73	44	16	478	
Internal Link Dist (ft)		1738			1589			1088			4962	
Turn Bay Length (ft)							175		225	175		
Base Capacity (vph)		463	457		397		421	2694	1205	949	2562	
Starvation Cap Reductn		0	0		0		0	0	0	0	0	
Spillback Cap Reductn		0	0		0		0	0	0	0	0	
Storage Cap Reductn		0	0		0		0	0	0	0	0	
Reduced v/c Ratio		0.16	0.28		0.15		0.12	0.15	0.08	0.06	0.66	

Intersection Summary

Area Type: Other
Cycle Length: 155
Actuated Cycle Length: 117.6
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 14.2 — Intersection LOS: B
Intersection Capacity Utilization 67.7% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: US 258 & Pony Farm Road/NW Corridor Boulevard



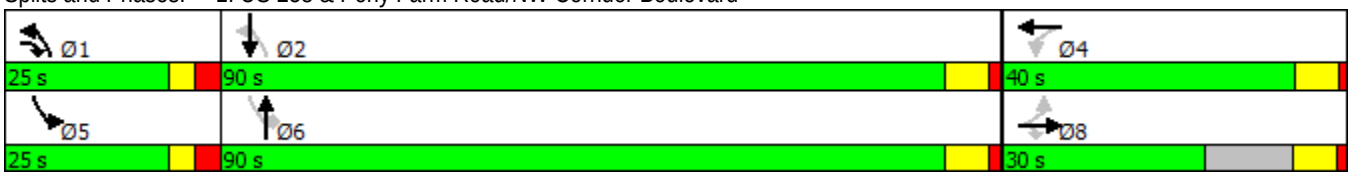
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	7	74	115	24	39	97	1590	42	6	614	57
Future Volume (vph)	57	7	74	115	24	39	97	1590	42	6	614	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	175		225	175		0
Storage Lanes	1		1	0		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850		0.971				0.850		0.987	
Flt Protected		0.958			0.969		0.950			0.950		
Satd. Flow (prot)	0	1785	1583	0	1753	0	1770	3539	1583	1770	3493	0
Flt Permitted		0.652			0.762		0.334			0.077		
Satd. Flow (perm)	0	1215	1583	0	1378	0	622	3539	1583	143	3493	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			35			55			55	
Link Distance (ft)		1818			1669			1168			5042	
Travel Time (s)		27.5			32.5			14.5			62.5	
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
Adj. Flow (vph)	63	8	82	128	27	43	108	1767	47	7	682	63
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	71	82	0	198	0	108	1767	47	7	745	0
Turn Type	Perm	NA	pm+ov	Perm	NA		D.P+P	NA	Perm	D.P+P	NA	
Protected Phases		8	1		4		1	6		5	2	
Permitted Phases	8		8	4			2		6	6		
Detector Phase	8	8	1	4	4		1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	14.0	14.0	7.0	14.0	
Minimum Split (s)	13.5	13.5	13.2	13.3	13.3		13.2	20.7	20.7	13.2	20.7	
Total Split (s)	30.0	30.0	25.0	40.0	40.0		25.0	90.0	90.0	25.0	90.0	
Total Split (%)	19.4%	19.4%	16.1%	25.8%	25.8%		16.1%	58.1%	58.1%	16.1%	58.1%	
Maximum Green (s)	23.5	23.5	18.8	33.7	33.7		18.8	83.3	83.3	18.8	83.3	
Yellow Time (s)	5.2	5.2	3.2	5.1	5.1		3.2	5.2	5.2	3.2	5.2	
All-Red Time (s)	1.3	1.3	3.0	1.2	1.2		3.0	1.5	1.5	3.0	1.5	
Lost Time Adjust (s)		-1.5	-1.2		-1.3		-1.2	-1.7	-1.7	-1.2	-1.7	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag			Lead				Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0	6.0	2.0	6.0	
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.4	3.4	2.0	3.4	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	15.0	15.0	0.0	15.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	45.0	45.0	0.0	45.0	
Recall Mode	None	None	None	None	None		None	Max	Max	None	Max	
Act Effct Green (s)		24.7	38.5		24.7		94.1	96.7	96.7	98.2	85.3	
Actuated g/C Ratio		0.18	0.29		0.18		0.70	0.72	0.72	0.73	0.64	
v/c Ratio		0.32	0.18		0.78		0.21	0.69	0.04	0.03	0.33	
Control Delay		50.5	36.0		72.8		6.8	14.2	7.9	6.5	12.5	
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		50.5	36.0		72.8		6.8	14.2	7.9	6.5	12.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		D	D		E		A	B	A	A	B	
Approach Delay		42.7			72.8			13.7			12.4	
Approach LOS		D			E			B			B	
Queue Length 50th (ft)		54	53		164		23	370	10	1	144	
Queue Length 95th (ft)		102	95		257		52	783	36	7	231	
Internal Link Dist (ft)		1738			1589			1088			4962	
Turn Bay Length (ft)							175		225	175		
Base Capacity (vph)		318	588		361		632	2556	1143	349	2226	
Starvation Cap Reductn		0	0		0		0	0	0	0	0	
Spillback Cap Reductn		0	0		0		0	0	0	0	0	
Storage Cap Reductn		0	0		0		0	0	0	0	0	
Reduced v/c Ratio		0.22	0.14		0.55		0.17	0.69	0.04	0.02	0.33	

Intersection Summary

Area Type: Other
Cycle Length: 155
Actuated Cycle Length: 133.8
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 18.7 — Intersection LOS: B
Intersection Capacity Utilization 79.0% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 1: US 258 & Pony Farm Road/NW Corridor Boulevard



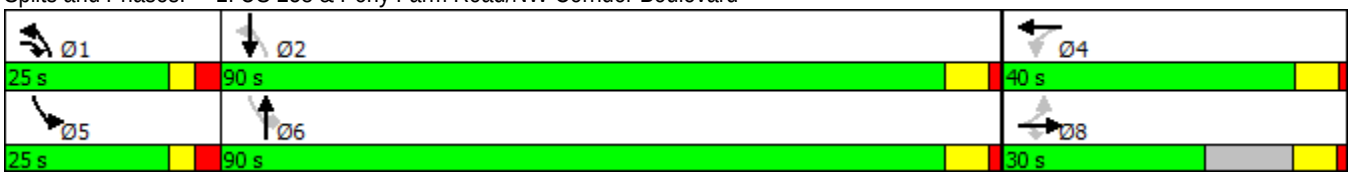
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	32	117	42	6	5	46	361	90	49	1522	34
Future Volume (vph)	39	32	117	42	6	5	46	361	90	49	1522	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	175		225	175		0
Storage Lanes	1		1	0		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850		0.986				0.850		0.997	
Flt Protected		0.974			0.962		0.950			0.950		
Satd. Flow (prot)	0	1814	1583	0	1767	0	1770	3539	1583	1770	3529	0
Flt Permitted		0.830			0.718		0.087			0.516		
Satd. Flow (perm)	0	1546	1583	0	1319	0	162	3539	1583	961	3529	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			35			55			55	
Link Distance (ft)		1818			1669			1168			5042	
Travel Time (s)		27.5			32.5			14.5			62.5	
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
Adj. Flow (vph)	43	36	130	47	7	6	51	401	100	54	1691	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	79	130	0	60	0	51	401	100	54	1729	0
Turn Type	Perm	NA	pm+ov	Perm	NA		D.P+P	NA	Perm	D.P+P	NA	
Protected Phases		8	1		4		1	6		5	2	
Permitted Phases	8		8	4			2		6	6		
Detector Phase	8	8	1	4	4		1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	14.0	14.0	7.0	14.0	
Minimum Split (s)	13.5	13.5	13.2	13.3	13.3		13.2	20.7	20.7	13.2	20.7	
Total Split (s)	30.0	30.0	25.0	40.0	40.0		25.0	90.0	90.0	25.0	90.0	
Total Split (%)	19.4%	19.4%	16.1%	25.8%	25.8%		16.1%	58.1%	58.1%	16.1%	58.1%	
Maximum Green (s)	23.5	23.5	18.8	33.7	33.7		18.8	83.3	83.3	18.8	83.3	
Yellow Time (s)	5.2	5.2	3.2	5.1	5.1		3.2	5.2	5.2	3.2	5.2	
All-Red Time (s)	1.3	1.3	3.0	1.2	1.2		3.0	1.5	1.5	3.0	1.5	
Lost Time Adjust (s)		-1.5	-1.2		-1.3		-1.2	-1.7	-1.7	-1.2	-1.7	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag			Lead				Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0	6.0	2.0	6.0	
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.4	3.4	2.0	3.4	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	15.0	15.0	0.0	15.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	45.0	45.0	0.0	45.0	
Recall Mode	None	None	None	None	None		None	Max	Max	None	Max	
Act Effct Green (s)		12.2	25.4		12.2		93.3	87.8	87.8	94.3	85.0	
Actuated g/C Ratio		0.10	0.21		0.10		0.77	0.73	0.73	0.78	0.71	
v/c Ratio		0.51	0.39		0.45		0.22	0.16	0.09	0.07	0.69	
Control Delay		62.5	44.4		61.6		4.8	5.9	6.1	2.8	12.5	
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		62.5	44.4		61.6		4.8	5.9	6.1	2.8	12.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		E	D		E		A	A	A	A	B	
Approach Delay		51.3			61.6			5.8			12.2	
Approach LOS		D			E			A			B	
Queue Length 50th (ft)		59	88		45		6	48	22	6	362	
Queue Length 95th (ft)		110	148		89		16	75	45	17	503	
Internal Link Dist (ft)		1738			1589			1088			4962	
Turn Bay Length (ft)							175		225	175		
Base Capacity (vph)		449	489		383		398	2577	1153	917	2490	
Starvation Cap Reductn		0	0		0		0	0	0	0	0	
Spillback Cap Reductn		0	0		0		0	0	0	0	0	
Storage Cap Reductn		0	0		0		0	0	0	0	0	
Reduced v/c Ratio		0.18	0.27		0.16		0.13	0.16	0.09	0.06	0.69	

Intersection Summary

Area Type: Other
Cycle Length: 155
Actuated Cycle Length: 120.5
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 15.1 — Intersection LOS: B
Intersection Capacity Utilization 68.7% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: US 258 & Pony Farm Road/NW Corridor Boulevard



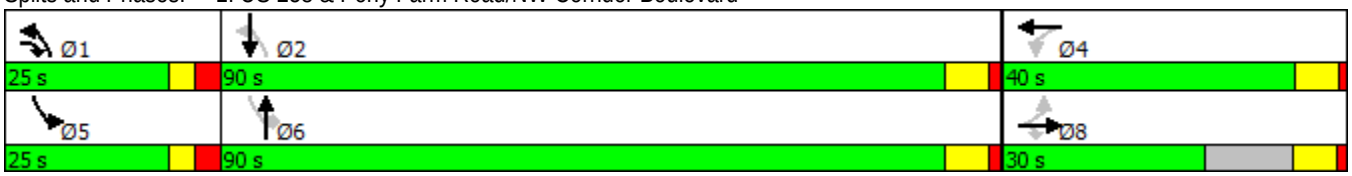
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	7	75	117	24	40	99	1622	43	6	626	58
Future Volume (vph)	58	7	75	117	24	40	99	1622	43	6	626	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	175		225	175		0
Storage Lanes	1		1	0		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850		0.970				0.850		0.987	
Flt Protected		0.957			0.969		0.950			0.950		
Satd. Flow (prot)	0	1783	1583	0	1751	0	1770	3539	1583	1770	3493	0
Flt Permitted		0.650			0.761		0.327			0.071		
Satd. Flow (perm)	0	1211	1583	0	1375	0	609	3539	1583	132	3493	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			35			55			55	
Link Distance (ft)		1818			1669			1168			5042	
Travel Time (s)		27.5			32.5			14.5			62.5	
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
Adj. Flow (vph)	64	8	83	130	27	44	110	1802	48	7	696	64
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	72	83	0	201	0	110	1802	48	7	760	0
Turn Type	Perm	NA	pm+ov	Perm	NA		D.P+P	NA	Perm	D.P+P	NA	
Protected Phases		8	1		4		1	6		5	2	
Permitted Phases	8		8	4			2		6	6		
Detector Phase	8	8	1	4	4		1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	14.0	14.0	7.0	14.0	
Minimum Split (s)	13.5	13.5	13.2	13.3	13.3		13.2	20.7	20.7	13.2	20.7	
Total Split (s)	30.0	30.0	25.0	40.0	40.0		25.0	90.0	90.0	25.0	90.0	
Total Split (%)	19.4%	19.4%	16.1%	25.8%	25.8%		16.1%	58.1%	58.1%	16.1%	58.1%	
Maximum Green (s)	23.5	23.5	18.8	33.7	33.7		18.8	83.3	83.3	18.8	83.3	
Yellow Time (s)	5.2	5.2	3.2	5.1	5.1		3.2	5.2	5.2	3.2	5.2	
All-Red Time (s)	1.3	1.3	3.0	1.2	1.2		3.0	1.5	1.5	3.0	1.5	
Lost Time Adjust (s)		-1.5	-1.2		-1.3		-1.2	-1.7	-1.7	-1.2	-1.7	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag			Lead				Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0	6.0	2.0	6.0	
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.4	3.4	2.0	3.4	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	15.0	15.0	0.0	15.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	45.0	45.0	0.0	45.0	
Recall Mode	None	None	None	None	None		None	Max	Max	None	Max	
Act Effct Green (s)		24.9	38.8		24.9		94.1	96.7	96.7	98.2	85.3	
Actuated g/C Ratio		0.19	0.29		0.19		0.70	0.72	0.72	0.73	0.64	
v/c Ratio		0.32	0.18		0.79		0.22	0.71	0.04	0.04	0.34	
Control Delay		50.6	35.9		73.4		6.9	14.7	8.0	6.7	12.7	
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		50.6	35.9		73.4		6.9	14.7	8.0	6.7	12.7	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		D	D		E		A	B	A	A	B	
Approach Delay		42.7			73.4			14.1			12.6	
Approach LOS		D			E			B			B	
Queue Length 50th (ft)		54	54		167		24	389	10	1	150	
Queue Length 95th (ft)		103	96		261		53	814	37	7	237	
Internal Link Dist (ft)		1738			1589			1088			4962	
Turn Bay Length (ft)							175		225	175		
Base Capacity (vph)		317	590		360		623	2552	1141	342	2221	
Starvation Cap Reductn		0	0		0		0	0	0	0	0	
Spillback Cap Reductn		0	0		0		0	0	0	0	0	
Storage Cap Reductn		0	0		0		0	0	0	0	0	
Reduced v/c Ratio		0.23	0.14		0.56		0.18	0.71	0.04	0.02	0.34	

Intersection Summary

Area Type: Other
Cycle Length: 155
Actuated Cycle Length: 134.1
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 19.1 — Intersection LOS: B
Intersection Capacity Utilization 80.0% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 1: US 258 & Pony Farm Road/NW Corridor Boulevard



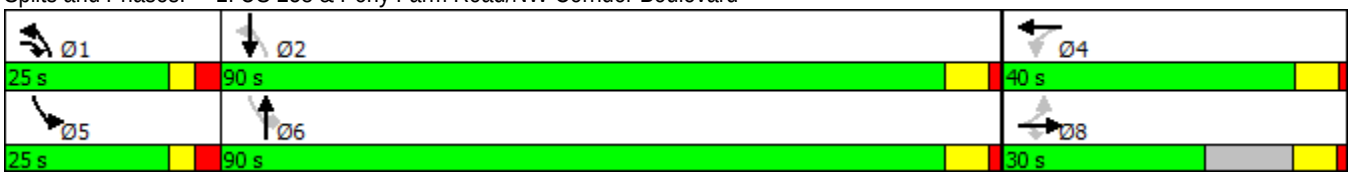
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	49	117	71	10	34	46	379	233	192	1526	37
Future Volume (vph)	57	49	117	71	10	34	46	379	233	192	1526	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	175		225	175		0
Storage Lanes	1		1	0		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850		0.960				0.850		0.996	
Flt Protected		0.974			0.970		0.950			0.950		
Satd. Flow (prot)	0	1814	1583	0	1735	0	1770	3539	1583	1770	3525	0
Flt Permitted		0.761			0.641		0.075			0.498		
Satd. Flow (perm)	0	1418	1583	0	1146	0	140	3539	1583	928	3525	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			35			55			55	
Link Distance (ft)		1818			1669			1168			5042	
Travel Time (s)		27.5			32.5			14.5			62.5	
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
Adj. Flow (vph)	63	54	130	79	11	38	51	421	259	213	1696	41
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	117	130	0	128	0	51	421	259	213	1737	0
Turn Type	Perm	NA	pm+ov	Perm	NA		D.P+P	NA	Perm	D.P+P	NA	
Protected Phases		8	1		4		1	6		5	2	
Permitted Phases	8		8	4			2		6	6		
Detector Phase	8	8	1	4	4		1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	14.0	14.0	7.0	14.0	
Minimum Split (s)	13.5	13.5	13.2	13.3	13.3		13.2	20.7	20.7	13.2	20.7	
Total Split (s)	30.0	30.0	25.0	40.0	40.0		25.0	90.0	90.0	25.0	90.0	
Total Split (%)	19.4%	19.4%	16.1%	25.8%	25.8%		16.1%	58.1%	58.1%	16.1%	58.1%	
Maximum Green (s)	23.5	23.5	18.8	33.7	33.7		18.8	83.3	83.3	18.8	83.3	
Yellow Time (s)	5.2	5.2	3.2	5.1	5.1		3.2	5.2	5.2	3.2	5.2	
All-Red Time (s)	1.3	1.3	3.0	1.2	1.2		3.0	1.5	1.5	3.0	1.5	
Lost Time Adjust (s)		-1.5	-1.2		-1.3		-1.2	-1.7	-1.7	-1.2	-1.7	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag			Lead				Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0	6.0	2.0	6.0	
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.4	3.4	2.0	3.4	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	15.0	15.0	0.0	15.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	45.0	45.0	0.0	45.0	
Recall Mode	None	None	None	None	None		None	Max	Max	None	Max	
Act Effct Green (s)		19.4	32.8		19.4		95.6	85.3	85.3	95.6	87.3	
Actuated g/C Ratio		0.15	0.25		0.15		0.73	0.66	0.66	0.73	0.67	
v/c Ratio		0.55	0.33		0.75		0.25	0.18	0.25	0.28	0.73	
Control Delay		61.4	41.8		79.0		7.4	9.9	11.1	5.5	17.2	
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		61.4	41.8		79.0		7.4	9.9	11.1	5.5	17.2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		E	D		E		A	A	B	A	B	
Approach Delay		51.1			79.0			10.2			15.9	
Approach LOS		D			E			B			B	
Queue Length 50th (ft)		92	89		104		9	66	82	39	457	
Queue Length 95th (ft)		159	151		181		24	118	163	83	681	
Internal Link Dist (ft)		1738			1589			1088			4962	
Turn Bay Length (ft)							175		225	175		
Base Capacity (vph)		382	541		309		359	2321	1038	847	2364	
Starvation Cap Reductn		0	0		0		0	0	0	0	0	
Spillback Cap Reductn		0	0		0		0	0	0	0	0	
Storage Cap Reductn		0	0		0		0	0	0	0	0	
Reduced v/c Ratio		0.31	0.24		0.41		0.14	0.18	0.25	0.25	0.73	

Intersection Summary

Area Type: Other
Cycle Length: 155
Actuated Cycle Length: 130.1
Natural Cycle: 75
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 20.0 — Intersection LOS: C
Intersection Capacity Utilization 74.9% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 1: US 258 & Pony Farm Road/NW Corridor Boulevard



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	11	75	252	40	175	99	1627	79	42	643	75
Future Volume (vph)	62	11	75	252	40	175	99	1627	79	42	643	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	175		225	175		0
Storage Lanes	1		1	0		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850		0.949				0.850		0.984	
Flt Protected		0.959			0.974		0.950			0.950		
Satd. Flow (prot)	0	1786	1583	0	1722	0	1770	3539	1583	1770	3483	0
Flt Permitted		0.590			0.783		0.298			0.046		
Satd. Flow (perm)	0	1099	1583	0	1384	0	555	3539	1583	86	3483	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			35			55			55	
Link Distance (ft)		1818			1669			1168			5042	
Travel Time (s)		27.5			32.5			14.5			62.5	
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
Adj. Flow (vph)	69	12	83	280	44	194	110	1808	88	47	714	83
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	81	83	0	518	0	110	1808	88	47	797	0
Turn Type	Perm	NA	pm+ov	Perm	NA		D.P+P	NA	Perm	D.P+P	NA	
Protected Phases		8	1		4		1	6		5	2	
Permitted Phases	8		8	4			2		6	6		
Detector Phase	8	8	1	4	4		1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	14.0	14.0	7.0	14.0	
Minimum Split (s)	13.5	13.5	13.2	13.3	13.3		13.2	20.7	20.7	13.2	20.7	
Total Split (s)	30.0	30.0	25.0	40.0	40.0		25.0	90.0	90.0	25.0	90.0	
Total Split (%)	19.4%	19.4%	16.1%	25.8%	25.8%		16.1%	58.1%	58.1%	16.1%	58.1%	
Maximum Green (s)	23.5	23.5	18.8	33.7	33.7		18.8	83.3	83.3	18.8	83.3	
Yellow Time (s)	5.2	5.2	3.2	5.1	5.1		3.2	5.2	5.2	3.2	5.2	
All-Red Time (s)	1.3	1.3	3.0	1.2	1.2		3.0	1.5	1.5	3.0	1.5	
Lost Time Adjust (s)		-1.5	-1.2		-1.3		-1.2	-1.7	-1.7	-1.2	-1.7	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag			Lead				Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0	6.0	2.0	6.0	
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.4	3.4	2.0	3.4	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	15.0	15.0	0.0	15.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	45.0	45.0	0.0	45.0	
Recall Mode	None	None	None	None	None		None	Max	Max	None	Max	
Act Effct Green (s)		35.0	49.0		35.0		94.0	88.4	88.4	95.0	85.0	
Actuated g/C Ratio		0.24	0.34		0.24		0.65	0.61	0.61	0.66	0.59	
v/c Ratio		0.30	0.15		1.54		0.25	0.83	0.09	0.31	0.39	
Control Delay		48.6	34.0		294.7		9.1	27.1	12.5	15.5	16.4	
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		48.6	34.0		294.7		9.1	27.1	12.5	15.5	16.4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		D	C		F		A	C	B	B	B	
Approach Delay		41.2			294.7			25.5			16.4	
Approach LOS		D			F			C			B	
Queue Length 50th (ft)		62	54		~678		32	705	34	13	198	
Queue Length 95th (ft)		117	96		#920		53	824	60	34	251	
Internal Link Dist (ft)		1738			1589			1088			4962	
Turn Bay Length (ft)							175		225	175		
Base Capacity (vph)		267	659		336		550	2172	971	293	2056	
Starvation Cap Reductn		0	0		0		0	0	0	0	0	
Spillback Cap Reductn		0	0		0		0	0	0	0	0	
Storage Cap Reductn		0	0		0		0	0	0	0	0	
Reduced v/c Ratio		0.30	0.13		1.54		0.20	0.83	0.09	0.16	0.39	

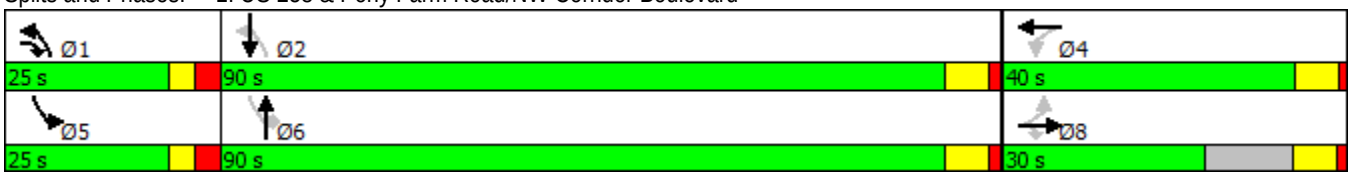
Intersection Summary

Area Type: Other
Cycle Length: 155
Actuated Cycle Length: 144
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.54
Intersection Signal Delay: 63.5 — Intersection LOS: E
Intersection Capacity Utilization 96.7% — 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.

Splits and Phases: 1: US 258 & Pony Farm Road/NW Corridor Boulevard



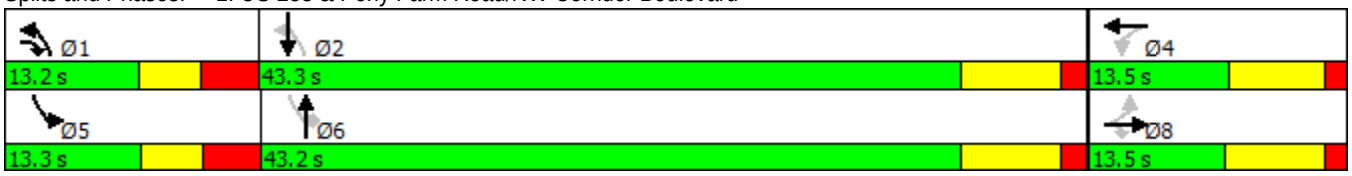
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	49	117	71	10	34	46	379	233	192	1526	37
Future Volume (vph)	57	49	117	71	10	34	46	379	233	192	1526	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	175		225	175		0
Storage Lanes	1		1	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850		0.884				0.850		0.996	
Flt Protected		0.974		0.950			0.950			0.950		
Satd. Flow (prot)	0	1814	1583	1770	1647	0	1770	3539	1583	1770	3525	0
Flt Permitted		0.805		0.714			0.097			0.506		
Satd. Flow (perm)	0	1500	1583	1330	1647	0	181	3539	1583	943	3525	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			35			55			55	
Link Distance (ft)		1818			1639			1168			5053	
Travel Time (s)		27.5			31.9			14.5			62.6	
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
Adj. Flow (vph)	63	54	130	79	11	38	51	421	259	213	1696	41
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	117	130	79	49	0	51	421	259	213	1737	0
Turn Type	Perm	NA	pm+ov	Perm	NA		D.P+P	NA	Perm	D.P+P	NA	
Protected Phases		8	1		4		1	6		5	2	
Permitted Phases	8		8	4			2		6	6		
Detector Phase	8	8	1	4	4		1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	14.0	14.0	7.0	14.0	
Minimum Split (s)	13.5	13.5	13.2	13.3	13.3		13.2	20.7	20.7	13.2	20.7	
Total Split (s)	13.5	13.5	13.2	13.5	13.5		13.2	43.2	43.2	13.3	43.3	
Total Split (%)	19.3%	19.3%	18.9%	19.3%	19.3%		18.9%	61.7%	61.7%	19.0%	61.9%	
Maximum Green (s)	7.0	7.0	7.0	7.2	7.2		7.0	36.5	36.5	7.1	36.6	
Yellow Time (s)	5.2	5.2	3.2	5.1	5.1		3.2	5.2	5.2	3.2	5.2	
All-Red Time (s)	1.3	1.3	3.0	1.2	1.2		3.0	1.5	1.5	3.0	1.5	
Lost Time Adjust (s)		-1.5	-1.2	0.0	-1.3		-1.2	-1.7	-1.7	-1.2	-1.7	
Total Lost Time (s)		5.0	5.0	6.3	5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag			Lead				Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0	6.0	2.0	6.0	
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.4	3.4	2.0	3.4	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	15.0	15.0	0.0	15.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	45.0	45.0	0.0	45.0	
Recall Mode	None	None	None	None	None		None	Max	Max	None	Max	
Act Effct Green (s)		8.6	18.6	7.2	8.5		48.0	38.5	38.5	46.8	42.9	
Actuated g/C Ratio		0.13	0.28	0.11	0.13		0.71	0.57	0.57	0.70	0.64	
v/c Ratio		0.61	0.30	0.56	0.24		0.16	0.21	0.29	0.28	0.77	
Control Delay		45.5	20.5	47.3	31.1		4.0	8.1	9.4	3.9	16.1	
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		45.5	20.5	47.3	31.1		4.0	8.1	9.4	3.9	16.1	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		D	C	D	C		A	A	A	A	B	
Approach Delay		32.3			41.1			8.2			14.8	
Approach LOS		C			D			A			B	
Queue Length 50th (ft)		49	42	33	19		5	44	55	21	321	
Queue Length 95th (ft)		#119	83	#90	49		11	67	97	38	#503	
Internal Link Dist (ft)		1738			1559			1088			4973	
Turn Bay Length (ft)							175		225	175		
Base Capacity (vph)		191	438	143	209		324	2026	906	759	2247	
Starvation Cap Reductn		0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn		0	0	0	0		0	0	0	0	0	
Storage Cap Reductn		0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio		0.61	0.30	0.55	0.23		0.16	0.21	0.29	0.28	0.77	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 67.3
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 15.8 Intersection LOS: B
Intersection Capacity Utilization 74.1% 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.

Splits and Phases: 1: US 258 & Pony Farm Road/NW Corridor Boulevard



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	11	75	252	40	175	99	1627	79	42	643	75
Future Volume (vph)	62	11	75	252	40	175	99	1627	79	42	643	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	150		0	175		225	175		0
Storage Lanes	1		1	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850		0.878				0.850		0.984	
Flt Protected		0.959		0.950			0.950			0.950		
Satd. Flow (prot)	0	1786	1583	1770	1635	0	1770	3539	1583	1770	3483	0
Flt Permitted		0.452		0.704			0.291			0.078		
Satd. Flow (perm)	0	842	1583	1311	1635	0	542	3539	1583	145	3483	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			35			55			55	
Link Distance (ft)		1818			1669			1168			5042	
Travel Time (s)		27.5			32.5			14.5			62.5	
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
Adj. Flow (vph)	69	12	83	280	44	194	110	1808	88	47	714	83
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	81	83	280	238	0	110	1808	88	47	797	0
Turn Type	Perm	NA	pm+ov	Perm	NA		D.P+P	NA	Perm	D.P+P	NA	
Protected Phases		8	1		4		1	6		5	2	
Permitted Phases	8		8	4			2		6	6		
Detector Phase	8	8	1	4	4		1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	14.0	14.0	7.0	14.0	
Minimum Split (s)	13.5	13.5	13.2	13.3	13.3		13.2	20.7	20.7	13.2	20.7	
Total Split (s)	25.4	25.4	13.2	25.4	25.4		13.2	51.4	51.4	13.2	51.4	
Total Split (%)	28.2%	28.2%	14.7%	28.2%	28.2%		14.7%	57.1%	57.1%	14.7%	57.1%	
Maximum Green (s)	18.9	18.9	7.0	19.1	19.1		7.0	44.7	44.7	7.0	44.7	
Yellow Time (s)	5.2	5.2	3.2	5.1	5.1		3.2	5.2	5.2	3.2	5.2	
All-Red Time (s)	1.3	1.3	3.0	1.2	1.2		3.0	1.5	1.5	3.0	1.5	
Lost Time Adjust (s)		-1.5	-1.2	0.0	-1.3		-1.2	-1.7	-1.7	-1.2	-1.7	
Total Lost Time (s)		5.0	5.0	6.3	5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag			Lead				Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0	6.0	2.0	6.0	
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.4	3.4	2.0	3.4	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	15.0	15.0	0.0	15.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	45.0	45.0	0.0	45.0	
Recall Mode	None	None	None	None	None		None	Max	Max	None	Max	
Act Effct Green (s)		20.4	33.6	19.1	20.4		54.6	51.7	51.7	56.6	46.4	
Actuated g/C Ratio		0.23	0.37	0.21	0.23		0.61	0.57	0.57	0.63	0.52	
v/c Ratio		0.43	0.14	1.01	0.64		0.25	0.89	0.10	0.20	0.44	
Control Delay		37.9	19.5	93.7	40.6		7.1	25.7	10.7	7.5	14.7	
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		37.9	19.5	93.7	40.6		7.1	25.7	10.7	7.5	14.7	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		D	B	F	D		A	C	B	A	B	
Approach Delay		28.6			69.3			24.0			14.3	
Approach LOS		C			E			C			B	
Queue Length 50th (ft)		40	31	~162	123		20	508	24	8	142	
Queue Length 95th (ft)		86	62	#323	203		38	#700	49	19	188	
Internal Link Dist (ft)		1738			1589			1088			4962	
Turn Bay Length (ft)				150			175		225	175		
Base Capacity (vph)		190	590	278	370		440	2032	909	239	1795	
Starvation Cap Reductn		0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn		0	0	0	0		0	0	0	0	0	
Storage Cap Reductn		0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio		0.43	0.14	1.01	0.64		0.25	0.89	0.10	0.20	0.44	

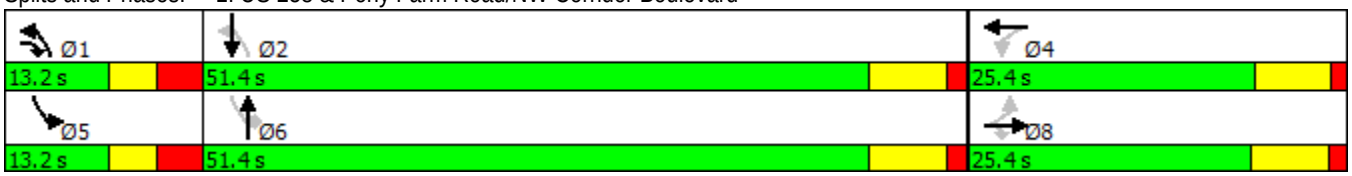
Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.01
Intersection Signal Delay: 28.5 Intersection LOS: C
Intersection Capacity Utilization 87.3% 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: 1: US 258 & Pony Farm Road/NW Corridor Boulevard



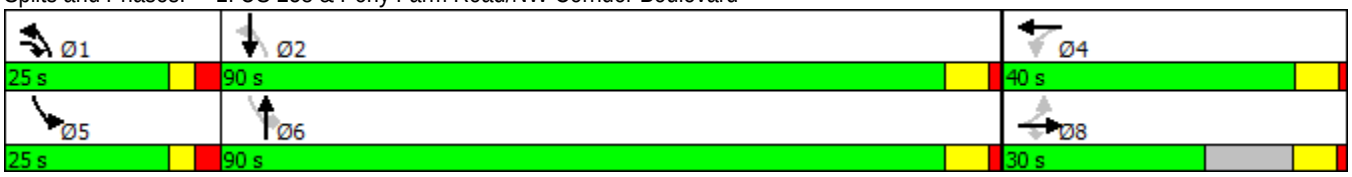
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	33	123	44	6	5	48	380	94	51	1600	35
Future Volume (vph)	41	33	123	44	6	5	48	380	94	51	1600	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	175		225	175		0
Storage Lanes	1		1	0		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850		0.987				0.850		0.997	
Flt Protected		0.973			0.962		0.950			0.950		
Satd. Flow (prot)	0	1812	1583	0	1769	0	1770	3539	1583	1770	3529	0
Flt Permitted		0.825			0.699		0.073			0.506		
Satd. Flow (perm)	0	1537	1583	0	1285	0	136	3539	1583	943	3529	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			35			55			55	
Link Distance (ft)		1818			1669			1168			5042	
Travel Time (s)		27.5			32.5			14.5			62.5	
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
Adj. Flow (vph)	46	37	137	49	7	6	53	422	104	57	1778	39
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	83	137	0	62	0	53	422	104	57	1817	0
Turn Type	Perm	NA	pm+ov	Perm	NA		D.P+P	NA	Perm	D.P+P	NA	
Protected Phases		8	1		4		1	6		5	2	
Permitted Phases	8		8	4			2		6	6		
Detector Phase	8	8	1	4	4		1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	14.0	14.0	7.0	14.0	
Minimum Split (s)	13.5	13.5	13.2	13.3	13.3		13.2	20.7	20.7	13.2	20.7	
Total Split (s)	30.0	30.0	25.0	40.0	40.0		25.0	90.0	90.0	25.0	90.0	
Total Split (%)	19.4%	19.4%	16.1%	25.8%	25.8%		16.1%	58.1%	58.1%	16.1%	58.1%	
Maximum Green (s)	23.5	23.5	18.8	33.7	33.7		18.8	83.3	83.3	18.8	83.3	
Yellow Time (s)	5.2	5.2	3.2	5.1	5.1		3.2	5.2	5.2	3.2	5.2	
All-Red Time (s)	1.3	1.3	3.0	1.2	1.2		3.0	1.5	1.5	3.0	1.5	
Lost Time Adjust (s)		-1.5	-1.2		-1.3		-1.2	-1.7	-1.7	-1.2	-1.7	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag			Lead				Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0	6.0	2.0	6.0	
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.4	3.4	2.0	3.4	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	15.0	15.0	0.0	15.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	45.0	45.0	0.0	45.0	
Recall Mode	None	None	None	None	None		None	Max	Max	None	Max	
Act Effct Green (s)		12.6	25.8		12.6		93.3	87.8	87.8	94.3	85.1	
Actuated g/C Ratio		0.10	0.21		0.10		0.77	0.73	0.73	0.78	0.70	
v/c Ratio		0.52	0.41		0.47		0.25	0.16	0.09	0.07	0.73	
Control Delay		62.9	44.7		62.3		5.6	6.1	6.2	2.9	13.7	
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		62.9	44.7		62.3		5.6	6.1	6.2	2.9	13.7	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		E	D		E		A	A	A	A	B	
Approach Delay		51.6			62.3			6.0			13.3	
Approach LOS		D			E			A			B	
Queue Length 50th (ft)		62	93		46		6	52	23	7	405	
Queue Length 95th (ft)		116	155		92		17	81	47	18	570	
Internal Link Dist (ft)		1738			1589			1088			4962	
Turn Bay Length (ft)							175		225	175		
Base Capacity (vph)		445	492		372		381	2570	1150	903	2482	
Starvation Cap Reductn		0	0		0		0	0	0	0	0	
Spillback Cap Reductn		0	0		0		0	0	0	0	0	
Storage Cap Reductn		0	0		0		0	0	0	0	0	
Reduced v/c Ratio		0.19	0.28		0.17		0.14	0.16	0.09	0.06	0.73	

Intersection Summary

Area Type: Other
Cycle Length: 155
Actuated Cycle Length: 120.9
Natural Cycle: 75
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 16.0 — Intersection LOS: B
Intersection Capacity Utilization 71.3% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: US 258 & Pony Farm Road/NW Corridor Boulevard



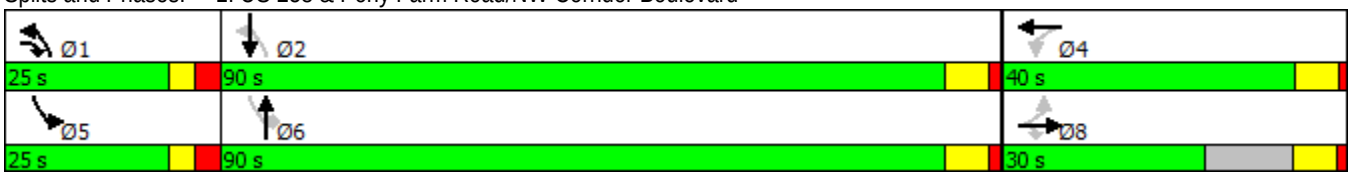
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	8	79	123	26	42	104	1705	45	6	658	61
Future Volume (vph)	61	8	79	123	26	42	104	1705	45	6	658	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	175		225	175		0
Storage Lanes	1		1	0		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850		0.970				0.850		0.987	
Flt Protected		0.958			0.969		0.950			0.950		
Satd. Flow (prot)	0	1785	1583	0	1751	0	1770	3539	1583	1770	3493	0
Flt Permitted		0.646			0.756		0.310			0.057		
Satd. Flow (perm)	0	1203	1583	0	1366	0	577	3539	1583	106	3493	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			35			55			55	
Link Distance (ft)		1818			1669			1168			5042	
Travel Time (s)		27.5			32.5			14.5			62.5	
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
Adj. Flow (vph)	68	9	88	137	29	47	116	1894	50	7	731	68
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	77	88	0	213	0	116	1894	50	7	799	0
Turn Type	Perm	NA	pm+ov	Perm	NA		D.P+P	NA	Perm	D.P+P	NA	
Protected Phases		8	1		4		1	6		5	2	
Permitted Phases	8		8	4			2		6	6		
Detector Phase	8	8	1	4	4		1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	14.0	14.0	7.0	14.0	
Minimum Split (s)	13.5	13.5	13.2	13.3	13.3		13.2	20.7	20.7	13.2	20.7	
Total Split (s)	30.0	30.0	25.0	40.0	40.0		25.0	90.0	90.0	25.0	90.0	
Total Split (%)	19.4%	19.4%	16.1%	25.8%	25.8%		16.1%	58.1%	58.1%	16.1%	58.1%	
Maximum Green (s)	23.5	23.5	18.8	33.7	33.7		18.8	83.3	83.3	18.8	83.3	
Yellow Time (s)	5.2	5.2	3.2	5.1	5.1		3.2	5.2	5.2	3.2	5.2	
All-Red Time (s)	1.3	1.3	3.0	1.2	1.2		3.0	1.5	1.5	3.0	1.5	
Lost Time Adjust (s)		-1.5	-1.2		-1.3		-1.2	-1.7	-1.7	-1.2	-1.7	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag			Lead				Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0	6.0	2.0	6.0	
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.4	3.4	2.0	3.4	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	15.0	15.0	0.0	15.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	45.0	45.0	0.0	45.0	
Recall Mode	None	None	None	None	None		None	Max	Max	None	Max	
Act Effct Green (s)		26.2	40.2		26.2		94.2	96.8	96.8	98.3	85.2	
Actuated g/C Ratio		0.19	0.30		0.19		0.70	0.71	0.71	0.73	0.63	
v/c Ratio		0.33	0.19		0.81		0.24	0.75	0.04	0.04	0.36	
Control Delay		50.6	35.7		75.1		7.4	16.5	8.2	7.0	13.5	
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		50.6	35.7		75.1		7.4	16.5	8.2	7.0	13.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		D	D		E		A	B	A	A	B	
Approach Delay		42.7			75.1			15.8			13.4	
Approach LOS		D			E			B			B	
Queue Length 50th (ft)		59	58		180		27	457	11	2	166	
Queue Length 95th (ft)		110	102		279		56	903	37	7	253	
Internal Link Dist (ft)		1738			1589			1088			4962	
Turn Bay Length (ft)							175		225	175		
Base Capacity (vph)		311	599		353		599	2528	1130	324	2197	
Starvation Cap Reductn		0	0		0		0	0	0	0	0	
Spillback Cap Reductn		0	0		0		0	0	0	0	0	
Storage Cap Reductn		0	0		0		0	0	0	0	0	
Reduced v/c Ratio		0.25	0.15		0.60		0.19	0.75	0.04	0.02	0.36	

Intersection Summary

Area Type: Other
Cycle Length: 155
Actuated Cycle Length: 135.5
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 20.4 — Intersection LOS: C
Intersection Capacity Utilization 82.9% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 1: US 258 & Pony Farm Road/NW Corridor Boulevard



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	115	107	123	180	23	141	48	455	689	646	1617	52
Future Volume (vph)	115	107	123	180	23	141	48	455	689	646	1617	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	175		225	175		0
Storage Lanes	1		1	0		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850		0.945				0.850		0.995	
Flt Protected		0.975			0.975		0.950			0.950		
Satd. Flow (prot)	0	1816	1583	0	1716	0	1770	3539	1583	1770	3522	0
Flt Permitted		0.671			0.424		0.042			0.426		
Satd. Flow (perm)	0	1250	1583	0	746	0	78	3539	1583	794	3522	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			35			55			55	
Link Distance (ft)		1818			1669			1168			5042	
Travel Time (s)		27.5			32.5			14.5			62.5	
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
Adj. Flow (vph)	128	119	137	200	26	157	53	506	766	718	1797	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	247	137	0	383	0	53	506	766	718	1855	0
Turn Type	Perm	NA	pm+ov	Perm	NA		D.P+P	NA	Perm	D.P+P	NA	
Protected Phases		8	1		4		1	6		5	2	
Permitted Phases	8		8	4			2		6	6		
Detector Phase	8	8	1	4	4		1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	14.0	14.0	7.0	14.0	
Minimum Split (s)	13.5	13.5	13.2	13.3	13.3		13.2	20.7	20.7	13.2	20.7	
Total Split (s)	30.0	30.0	25.0	40.0	40.0		25.0	90.0	90.0	25.0	90.0	
Total Split (%)	19.4%	19.4%	16.1%	25.8%	25.8%		16.1%	58.1%	58.1%	16.1%	58.1%	
Maximum Green (s)	23.5	23.5	18.8	33.7	33.7		18.8	83.3	83.3	18.8	83.3	
Yellow Time (s)	5.2	5.2	3.2	5.1	5.1		3.2	5.2	5.2	3.2	5.2	
All-Red Time (s)	1.3	1.3	3.0	1.2	1.2		3.0	1.5	1.5	3.0	1.5	
Lost Time Adjust (s)		-1.5	-1.2		-1.3		-1.2	-1.7	-1.7	-1.2	-1.7	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag			Lead				Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0	6.0	2.0	6.0	
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.4	3.4	2.0	3.4	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	15.0	15.0	0.0	15.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	45.0	45.0	0.0	45.0	
Recall Mode	None	None	None	None	None		None	Max	Max	None	Max	
Act Effct Green (s)		35.0	48.4		35.0		105.0	85.0	85.0	105.0	96.6	
Actuated g/C Ratio		0.23	0.31		0.23		0.68	0.55	0.55	0.68	0.62	
v/c Ratio		0.88	0.28		2.28		0.37	0.26	0.88	1.08	0.85	
Control Delay		87.4	41.9		620.7		20.4	18.9	44.1	77.2	28.1	
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		87.4	41.9		620.7		20.4	18.9	44.1	77.2	28.1	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		F	D		F		C	B	D	E	C	
Approach Delay		71.2			620.7			33.5			41.8	
Approach LOS		E			F			C			D	
Queue Length 50th (ft)		244	105		~627		15	137	660	~412	748	
Queue Length 95th (ft)		#407	165		#839		48	174	#950	#738	879	
Internal Link Dist (ft)		1738			1589			1088			4962	
Turn Bay Length (ft)							175		225	175		
Base Capacity (vph)		282	612		168		273	1940	868	663	2194	
Starvation Cap Reductn		0	0		0		0	0	0	0	0	
Spillback Cap Reductn		0	0		0		0	0	0	0	0	
Storage Cap Reductn		0	0		0		0	0	0	0	0	
Reduced v/c Ratio		0.88	0.22		2.28		0.19	0.26	0.88	1.08	0.85	

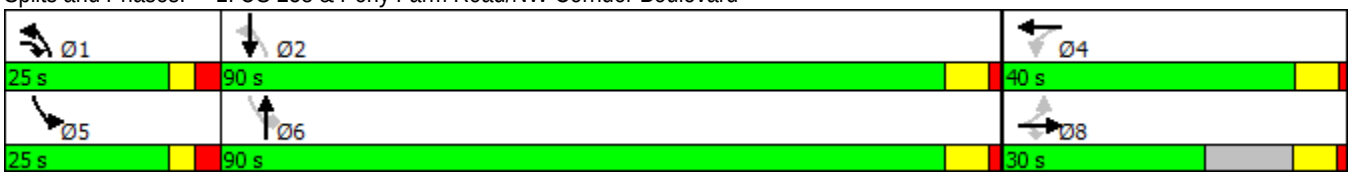
Intersection Summary

Area Type: Other
Cycle Length: 155
Actuated Cycle Length: 155
Natural Cycle: 140
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 2.28
Intersection Signal Delay: 89.4 — Intersection LOS: F
Intersection Capacity Utilization 102.9% — ICU Level of Service G
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: 1: US 258 & Pony Farm Road/NW Corridor Boulevard



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	36	79	707	99	626	104	1733	271	232	731	134
Future Volume (vph)	89	36	79	707	99	626	104	1733	271	232	731	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	175		225	175		0
Storage Lanes	1		1	0		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850		0.941				0.850		0.977	
Flt Protected		0.966			0.976		0.950			0.950		
Satd. Flow (prot)	0	1799	1583	0	1711	0	1770	3539	1583	1770	3458	0
Flt Permitted		0.578			0.662		0.241			0.047		
Satd. Flow (perm)	0	1077	1583	0	1160	0	449	3539	1583	88	3458	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			35			55			55	
Link Distance (ft)		1818			1669			1168			5042	
Travel Time (s)		27.5			32.5			14.5			62.5	
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
Adj. Flow (vph)	99	40	88	786	110	696	116	1926	301	258	812	149
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	139	88	0	1592	0	116	1926	301	258	961	0
Turn Type	Perm	NA	pm+ov	Perm	NA		D.P+P	NA	Perm	D.P+P	NA	
Protected Phases		8	1		4		1	6		5	2	
Permitted Phases	8		8	4			2		6	6		
Detector Phase	8	8	1	4	4		1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	14.0	14.0	7.0	14.0	
Minimum Split (s)	13.5	13.5	13.2	13.3	13.3		13.2	20.7	20.7	13.2	20.7	
Total Split (s)	30.0	30.0	25.0	40.0	40.0		25.0	90.0	90.0	25.0	90.0	
Total Split (%)	19.4%	19.4%	16.1%	25.8%	25.8%		16.1%	58.1%	58.1%	16.1%	58.1%	
Maximum Green (s)	23.5	23.5	18.8	33.7	33.7		18.8	83.3	83.3	18.8	83.3	
Yellow Time (s)	5.2	5.2	3.2	5.1	5.1		3.2	5.2	5.2	3.2	5.2	
All-Red Time (s)	1.3	1.3	3.0	1.2	1.2		3.0	1.5	1.5	3.0	1.5	
Lost Time Adjust (s)		-1.5	-1.2		-1.3		-1.2	-1.7	-1.7	-1.2	-1.7	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag			Lead				Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0	6.0	2.0	6.0	
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.4	3.4	2.0	3.4	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	15.0	15.0	0.0	15.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	45.0	45.0	0.0	45.0	
Recall Mode	None	None	None	None	None		None	Max	Max	None	Max	
Act Effct Green (s)		35.0	49.1		35.0		104.8	85.0	85.0	104.8	95.7	
Actuated g/C Ratio		0.23	0.32		0.23		0.68	0.55	0.55	0.68	0.62	
v/c Ratio		0.57	0.18		6.10		0.30	0.99	0.35	0.94	0.45	
Control Delay		63.8	39.2		2308.7		9.2	52.8	20.9	89.3	16.6	
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		63.8	39.2		2308.7		9.2	52.8	20.9	89.3	16.6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		E	D		F		A	D	C	F	B	
Approach Delay		54.3			2308.7			46.5			32.0	
Approach LOS		D			F			D			C	
Queue Length 50th (ft)		126	65		~3065		34	988	165	210	256	
Queue Length 95th (ft)		205	110		#3327		55	#1188	234	#388	317	
Internal Link Dist (ft)		1738			1589			1088			4962	
Turn Bay Length (ft)							175		225	175		
Base Capacity (vph)		243	613		261		489	1943	869	276	2137	
Starvation Cap Reductn		0	0		0		0	0	0	0	0	
Spillback Cap Reductn		0	0		0		0	0	0	0	0	
Storage Cap Reductn		0	0		0		0	0	0	0	0	
Reduced v/c Ratio		0.57	0.14		6.10		0.24	0.99	0.35	0.93	0.45	

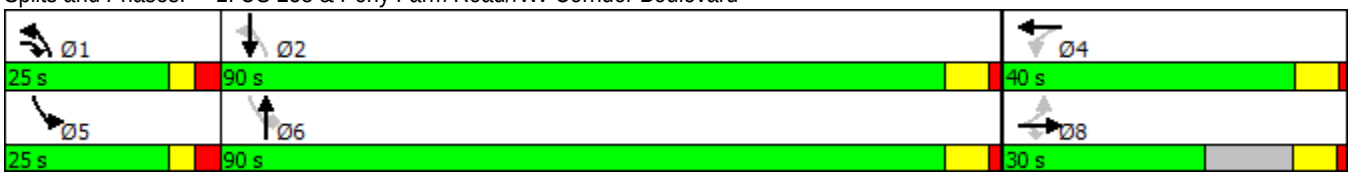
Intersection Summary

Area Type: Other
Cycle Length: 155
Actuated Cycle Length: 154.8
Natural Cycle: 140
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 6.10
Intersection Signal Delay: 712.8 Intersection LOS: F
Intersection Capacity Utilization 162.6% ICU Level of Service H
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: 1: US 258 & Pony Farm Road/NW Corridor Boulevard



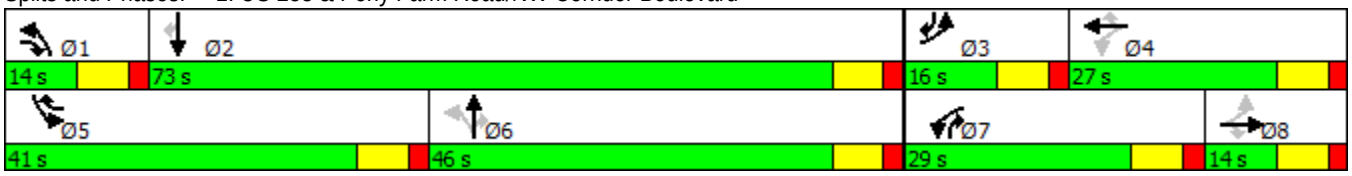
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	115	107	123	180	23	141	48	455	689	646	1617	52
Future Volume (vph)	115	107	123	180	23	141	48	455	689	646	1617	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		300	300		300	175		225	300		200
Storage Lanes	1		1	1		2	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	0.88	1.00	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	3433	1863	2787	1770	3539	1583	3433	3539	1583
Flt Permitted	0.740			0.503			0.087			0.950		
Satd. Flow (perm)	1378	1863	1583	1818	1863	2787	162	3539	1583	3433	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			210			157			151			151
Link Speed (mph)		45			35			55			55	
Link Distance (ft)		1818			1669			1168			5042	
Travel Time (s)		27.5			32.5			14.5			62.5	
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
Adj. Flow (vph)	128	119	137	200	26	157	53	506	766	718	1797	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	128	119	137	200	26	157	53	506	766	718	1797	58
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	3	8	1	7	4	5	1	6	7	5	2	3
Permitted Phases	8		8	4		4	6		6			2
Detector Phase	3	8	1	7	4	5	1	6	7	5	2	3
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	14.0	7.0	7.0	14.0	7.0
Minimum Split (s)	14.0	14.0	14.0	14.0	14.0	14.0	14.0	21.0	14.0	14.0	21.0	14.0
Total Split (s)	16.0	14.0	14.0	29.0	27.0	41.0	14.0	46.0	29.0	41.0	73.0	16.0
Total Split (%)	12.3%	10.8%	10.8%	22.3%	20.8%	31.5%	10.8%	35.4%	22.3%	31.5%	56.2%	12.3%
Maximum Green (s)	9.0	7.0	7.0	22.0	20.0	34.0	7.0	39.0	22.0	34.0	66.0	9.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	7.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	2.0	2.0	3.0	2.0	2.0	2.0	6.0	3.0	2.0	6.0	3.0
Minimum Gap (s)	3.0	2.0	2.0	3.0	2.0	2.0	2.0	3.4	3.0	2.0	3.4	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.0	0.0	0.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45.0	0.0	0.0	45.0	0.0
Recall Mode	None	None	None	None	None	None	None	Max	None	None	Max	None
Act Effct Green (s)	22.7	9.0	23.1	25.3	14.8	45.2	54.9	45.9	68.2	31.3	68.2	88.6
Actuated g/C Ratio	0.18	0.07	0.19	0.20	0.12	0.37	0.44	0.37	0.55	0.25	0.55	0.72
v/c Ratio	0.42	0.88	0.29	0.33	0.12	0.14	0.28	0.39	0.81	0.83	0.92	0.05
Control Delay	42.2	108.2	2.0	40.8	48.1	3.0	20.6	31.4	26.9	52.5	35.1	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.2	108.2	2.0	40.8	48.1	3.0	20.6	31.4	26.9	52.5	35.1	0.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D	F	A	D	D	A	C	C	C	D	D	A
Approach Delay		48.3			25.8			28.3			39.2	
Approach LOS		D			C			C			D	
Queue Length 50th (ft)	82	94	0	65	19	0	13	152	407	267	626	0
Queue Length 95th (ft)	137	#223	3	97	46	20	38	233	646	358	#942	0
Internal Link Dist (ft)		1738			1589			1088			4962	
Turn Bay Length (ft)	300		300	300		300	175		225	300		200
Base Capacity (vph)	308	135	465	761	332	1221	189	1313	1019	1002	1951	1177
Starvation Cap Reductn	0	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	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.88	0.29	0.26	0.08	0.13	0.28	0.39	0.75	0.72	0.92	0.05

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 123.6
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 35.7 — Intersection LOS: D
Intersection Capacity Utilization 79.4% — 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.

Splits and Phases: 1: US 258 & Pony Farm Road/NW Corridor Boulevard



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	36	79	707	99	626	104	1733	271	232	731	134
Future Volume (vph)	89	36	79	707	99	626	104	1733	271	232	731	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		300	300		300	175		225	300		200
Storage Lanes	1		1	1		2	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	0.88	1.00	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	3433	1863	2787	1770	3539	1583	3433	3539	1583
Flt Permitted	0.686			0.950			0.282			0.950		
Satd. Flow (perm)	1278	1863	1583	3433	1863	2787	525	3539	1583	3433	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			131			89			234			149
Link Speed (mph)		45			35			55			55	
Link Distance (ft)		1818			1669			1168			5042	
Travel Time (s)		27.5			32.5			14.5			62.5	
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
Adj. Flow (vph)	99	40	88	786	110	696	116	1926	301	258	812	149
Shared Lane Traffic (%)												
Lane Group Flow (vph)	99	40	88	786	110	696	116	1926	301	258	812	149
Turn Type	pm+pt	NA	pm+ov	Prot	NA	pm+ov	pm+pt	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	3	8	1	7	4	5	1	6	7	5	2	3
Permitted Phases	8		8			4	6		6			2
Detector Phase	3	8	1	7	4	5	1	6	7	5	2	3
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	14.0	7.0	7.0	14.0	7.0
Minimum Split (s)	14.0	14.0	14.0	14.0	14.0	14.0	14.0	21.0	14.0	14.0	21.0	14.0
Total Split (s)	17.0	14.0	14.0	37.0	34.0	16.0	14.0	83.0	37.0	16.0	85.0	17.0
Total Split (%)	11.3%	9.3%	9.3%	24.7%	22.7%	10.7%	9.3%	55.3%	24.7%	10.7%	56.7%	11.3%
Maximum Green (s)	10.0	7.0	7.0	30.0	27.0	9.0	7.0	76.0	30.0	9.0	78.0	10.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	2.0	2.0	3.0	2.0	2.0	2.0	6.0	3.0	2.0	6.0	3.0
Minimum Gap (s)	3.0	2.0	2.0	3.0	2.0	2.0	2.0	3.4	3.0	2.0	3.4	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.0	0.0	0.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45.0	0.0	0.0	45.0	0.0
Recall Mode	None	None	None	None	None	None	None	Max	None	None	Max	None
Act Effct Green (s)	18.7	9.0	20.0	32.0	26.4	42.4	87.1	78.1	115.2	11.0	80.1	96.7
Actuated g/C Ratio	0.13	0.06	0.14	0.22	0.18	0.29	0.59	0.53	0.78	0.07	0.54	0.66
v/c Ratio	0.49	0.35	0.27	1.05	0.33	0.80	0.30	1.03	0.23	1.01	0.42	0.14
Control Delay	50.7	76.8	4.0	102.0	55.3	50.0	13.2	62.0	1.6	124.6	21.1	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	0.0
Total Delay	50.7	76.8	4.0	102.0	55.3	50.0	13.2	62.0	1.6	124.6	21.1	1.7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D	E	A	F	E	D	B	E	A	F	C	A
Approach Delay		37.2			76.0			51.8			40.7	
Approach LOS		D			E			D			D	
Queue Length 50th (ft)	71	38	0	~439	93	313	43	~1073	14	~138	246	0
Queue Length 95th (ft)	121	80	14	#569	155	400	71	#1208	37	#232	298	25
Internal Link Dist (ft)		1738			1589			1088			4962	
Turn Bay Length (ft)	300		300	300		300	175		225	300		200
Base Capacity (vph)	206	113	328	747	368	867	387	1878	1289	256	1926	1095
Starvation Cap Reductn	0	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	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.35	0.27	1.05	0.30	0.80	0.30	1.03	0.23	1.01	0.42	0.14

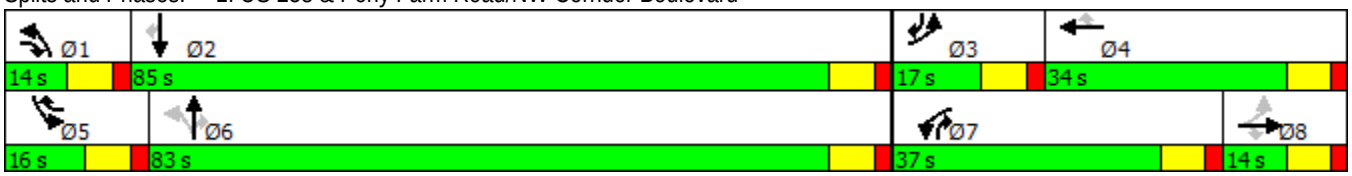
Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 147.2
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.05
Intersection Signal Delay: 55.8 — Intersection LOS: E
Intersection Capacity Utilization 93.9% — 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.

Splits and Phases: 1: US 258 & Pony Farm Road/NW Corridor Boulevard



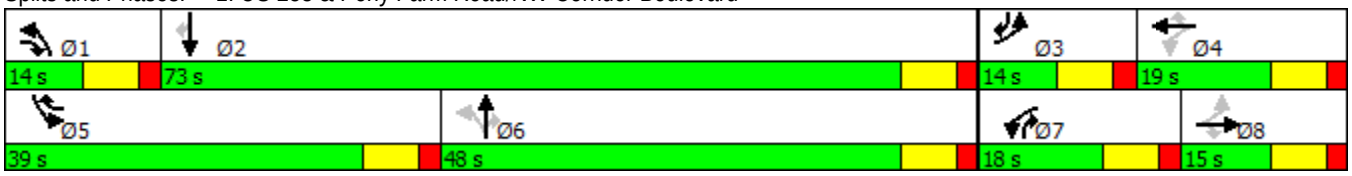
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	115	107	123	90	23	71	48	455	489	646	1617	52
Future Volume (vph)	115	107	123	90	23	71	48	455	489	646	1617	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		300	0		300	175		225	300		200
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	3433	3539	1583
Flt Permitted	0.530			0.681			0.086			0.950		
Satd. Flow (perm)	987	1863	1583	1269	1863	1583	160	3539	1583	3433	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			164			100			164			100
Link Speed (mph)		45			35			55			55	
Link Distance (ft)		1818			1669			1168			1062	
Travel Time (s)		27.5			32.5			14.5			13.2	
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
Adj. Flow (vph)	128	119	137	100	26	79	53	506	543	718	1797	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	128	119	137	100	26	79	53	506	543	718	1797	58
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	3	8	1	7	4	5	1	6	7	5	2	3
Permitted Phases	8		8	4		4	6		6			2
Detector Phase	3	8	1	7	4	5	1	6	7	5	2	3
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	14.0	7.0	7.0	14.0	7.0
Minimum Split (s)	14.0	14.0	14.0	14.0	14.0	14.0	14.0	21.0	14.0	14.0	21.0	14.0
Total Split (s)	14.0	15.0	14.0	18.0	19.0	39.0	14.0	48.0	18.0	39.0	73.0	14.0
Total Split (%)	11.7%	12.5%	11.7%	15.0%	15.8%	32.5%	11.7%	40.0%	15.0%	32.5%	60.8%	11.7%
Maximum Green (s)	7.0	8.0	7.0	11.0	12.0	32.0	7.0	41.0	11.0	32.0	66.0	7.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	2.0	2.0	3.0	2.0	2.0	2.0	6.0	3.0	2.0	6.0	3.0
Minimum Gap (s)	3.0	2.0	2.0	3.0	2.0	2.0	2.0	3.4	3.0	2.0	3.4	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.0	0.0	0.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45.0	0.0	0.0	45.0	0.0
Recall Mode	None	None	None	None	None	None	None	Max	None	None	Max	None
Act Effct Green (s)	21.7	10.0	24.0	20.4	12.0	41.6	55.7	46.7	63.8	30.3	68.0	88.8
Actuated g/C Ratio	0.18	0.08	0.20	0.17	0.10	0.35	0.47	0.39	0.54	0.25	0.57	0.75
v/c Ratio	0.45	0.76	0.31	0.37	0.14	0.13	0.27	0.36	0.59	0.82	0.89	0.05
Control Delay	45.1	83.7	5.4	44.6	49.8	2.7	17.8	27.5	16.1	50.3	29.3	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.1	83.7	5.4	44.6	49.8	2.7	17.8	27.5	16.1	50.3	29.3	0.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D	F	A	D	D	A	B	C	B	D	C	A
Approach Delay		42.9			29.1			21.4			34.5	
Approach LOS		D			C			C			C	
Queue Length 50th (ft)	82	92	0	63	18	0	12	147	191	268	613	0
Queue Length 95th (ft)	140	#189	35	113	47	19	31	202	319	329	740	3
Internal Link Dist (ft)		1738			1589			1088			982	
Turn Bay Length (ft)	300		300			300	175		225	300		200
Base Capacity (vph)	283	156	449	282	219	664	196	1388	935	980	2021	1205
Starvation Cap Reductn	0	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	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.76	0.31	0.35	0.12	0.12	0.27	0.36	0.58	0.73	0.89	0.05

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 119.1
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 31.6 — Intersection LOS: C
Intersection Capacity Utilization 76.1% — 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.

Splits and Phases: 1: US 258 & Pony Farm Road/NW Corridor Boulevard



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	36	79	407	99	313	104	1733	200	232	731	134
Future Volume (vph)	89	36	79	407	99	313	104	1733	200	232	731	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		300	0		300	175		225	300		200
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	3433	3539	1583
Flt Permitted	0.686			0.439			0.290			0.950		
Satd. Flow (perm)	1278	1863	1583	818	1863	1583	540	3539	1583	3433	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			131			80			222			149
Link Speed (mph)		45			35			55			55	
Link Distance (ft)		1818			1669			1168			1062	
Travel Time (s)		27.5			32.5			14.5			13.2	
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
Adj. Flow (vph)	99	40	88	452	110	348	116	1926	222	258	812	149
Shared Lane Traffic (%)												
Lane Group Flow (vph)	99	40	88	452	110	348	116	1926	222	258	812	149
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	3	8	1	7	4	5	1	6	7	5	2	3
Permitted Phases	8		8	4		4	6		6			2
Detector Phase	3	8	1	7	4	5	1	6	7	5	2	3
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	14.0	7.0	7.0	14.0	7.0
Minimum Split (s)	14.0	14.0	14.0	14.0	14.0	14.0	14.0	21.0	14.0	14.0	21.0	14.0
Total Split (s)	15.0	14.0	14.0	33.0	32.0	16.0	14.0	87.0	33.0	16.0	89.0	15.0
Total Split (%)	10.0%	9.3%	9.3%	22.0%	21.3%	10.7%	9.3%	58.0%	22.0%	10.7%	59.3%	10.0%
Maximum Green (s)	8.0	7.0	7.0	26.0	25.0	9.0	7.0	80.0	26.0	9.0	82.0	8.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	2.0	2.0	3.0	2.0	2.0	2.0	6.0	3.0	2.0	6.0	3.0
Minimum Gap (s)	3.0	2.0	2.0	3.0	2.0	2.0	2.0	3.4	3.0	2.0	3.4	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.0	0.0	0.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45.0	0.0	0.0	45.0	0.0
Recall Mode	None	None	None	None	None	None	None	Max	None	None	Max	None
Act Effct Green (s)	17.1	9.0	20.0	39.0	24.0	40.0	91.1	82.1	115.2	11.0	84.1	99.2
Actuated g/C Ratio	0.12	0.06	0.14	0.26	0.16	0.27	0.62	0.56	0.78	0.07	0.57	0.67
v/c Ratio	0.55	0.35	0.27	1.14	0.36	0.71	0.28	0.98	0.17	1.01	0.40	0.13
Control Delay	56.6	76.8	4.0	133.9	57.9	45.5	11.4	47.4	0.8	124.6	18.7	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	0.0
Total Delay	56.6	76.8	4.0	133.9	57.9	45.5	11.4	47.4	0.8	124.6	18.7	1.6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	E	E	A	F	E	D	B	D	A	F	B	A
Approach Delay		39.8			90.9			41.0			39.0	
Approach LOS		D			F			D			D	
Queue Length 50th (ft)	74	38	0	~426	95	237	40	957	0	~138	231	0
Queue Length 95th (ft)	126	80	14	#646	158	355	65	#1157	18	#232	280	24
Internal Link Dist (ft)		1738			1589			1088			982	
Turn Bay Length (ft)	300		300			300	175		225	300		200
Base Capacity (vph)	181	113	328	398	342	488	409	1974	1286	256	2022	1114
Starvation Cap Reductn	0	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	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.35	0.27	1.14	0.32	0.71	0.28	0.98	0.17	1.01	0.40	0.13

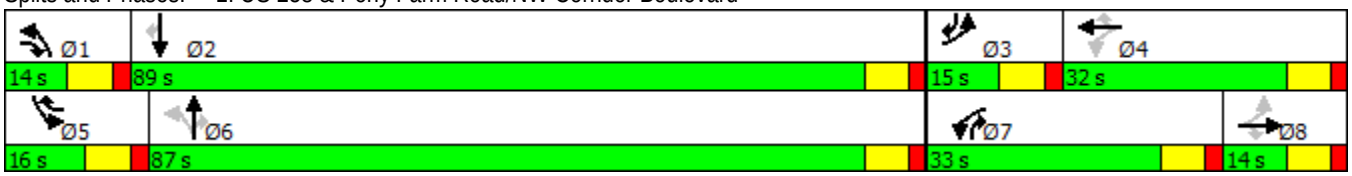
Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 147.2
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.14
Intersection Signal Delay: 50.3 Intersection LOS: D
Intersection Capacity Utilization 96.2% 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.

Splits and Phases: 1: US 258 & Pony Farm Road/NW Corridor Boulevard



CAPACITY CALCULATIONS

US 258

&

HINES FARM ROAD

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	31	3	407	10	19	1564
Future Vol, veh/h	31	3	407	10	19	1564
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	-	-	-	200	-
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	34	3	452	11	21	1738

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1369	232	0	0	463	0
Stage 1	458	-	-	-	-	-
Stage 2	911	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	138	770	-	-	1095	-
Stage 1	604	-	-	-	-	-
Stage 2	352	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	135	770	-	-	1095	-
Mov Cap-2 Maneuver	256	-	-	-	-	-
Stage 1	604	-	-	-	-	-
Stage 2	345	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.4	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	272	1095	-
HCM Lane V/C Ratio	-	-	0.139	0.019	-
HCM Control Delay (s)	-	-	20.4	8.4	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.5	0.1	-

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	14	17	1697	22	7	745
Future Vol, veh/h	14	17	1697	22	7	745
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	-	-	-	200	-
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	16	19	1886	24	8	828

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2327	955	0	0	1910	0
Stage 1	1898	-	-	-	-	-
Stage 2	429	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	31	259	-	-	307	-
Stage 1	103	-	-	-	-	-
Stage 2	624	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	30	259	-	-	307	-
Mov Cap-2 Maneuver	87	-	-	-	-	-
Stage 1	103	-	-	-	-	-
Stage 2	608	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	39.9	0	0.2
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	137	307	-
HCM Lane V/C Ratio	-	-	0.251	0.025	-
HCM Control Delay (s)	-	-	39.9	17	-
HCM Lane LOS	-	-	E	C	-
HCM 95th %tile Q(veh)	-	-	0.9	0.1	-

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	32	3	415	10	19	1596
Future Vol, veh/h	32	3	415	10	19	1596
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	-	-	-	200	-
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	36	3	461	11	21	1773

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1396	236	0	0	472	0
Stage 1	467	-	-	-	-	-
Stage 2	929	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	132	766	-	-	1086	-
Stage 1	597	-	-	-	-	-
Stage 2	345	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	129	766	-	-	1086	-
Mov Cap-2 Maneuver	250	-	-	-	-	-
Stage 1	597	-	-	-	-	-
Stage 2	338	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.9	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	265	1086	-
HCM Lane V/C Ratio	-	-	0.147	0.019	-
HCM Control Delay (s)	-	-	20.9	8.4	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.5	0.1	-

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	14	17	1731	22	7	760
Future Vol, veh/h	14	17	1731	22	7	760
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	-	-	-	200	-
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	16	19	1923	24	8	844

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2374	974	0	0	1948	0
Stage 1	1936	-	-	-	-	-
Stage 2	438	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	29	251	-	-	297	-
Stage 1	99	-	-	-	-	-
Stage 2	618	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	28	251	-	-	297	-
Mov Cap-2 Maneuver	83	-	-	-	-	-
Stage 1	99	-	-	-	-	-
Stage 2	601	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	42	0	0.2
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	131	297	-
HCM Lane V/C Ratio	-	-	0.263	0.026	-
HCM Control Delay (s)	-	-	42	17.4	-
HCM Lane LOS	-	-	E	C	-
HCM 95th %tile Q(veh)	-	-	1	0.1	-

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	39	7	444	46	37	1739
Future Vol, veh/h	39	7	444	46	37	1739
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	-	-	-	200	-
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	43	8	493	51	41	1932

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1567	272	0	0	544	0
Stage 1	519	-	-	-	-	-
Stage 2	1048	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	102	726	-	-	1021	-
Stage 1	562	-	-	-	-	-
Stage 2	299	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	98	726	-	-	1021	-
Mov Cap-2 Maneuver	212	-	-	-	-	-
Stage 1	562	-	-	-	-	-
Stage 2	287	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24.2	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	238	1021	-
HCM Lane V/C Ratio	-	-	0.215	0.04	-
HCM Control Delay (s)	-	-	24.2	8.7	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.8	0.1	-

Intersection	
Int Delay, s/veh	4.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	48	34	1866	31	11	796
Future Vol, veh/h	48	34	1866	31	11	796
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	-	-	-	200	-
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	53	38	2073	34	12	884

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2558	1054	0	0	2108	0
Stage 1	2091	-	-	-	-	-
Stage 2	467	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	~ 22	222	-	-	257	-
Stage 1	81	-	-	-	-	-
Stage 2	597	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 21	222	-	-	257	-
Mov Cap-2 Maneuver	69	-	-	-	-	-
Stage 1	81	-	-	-	-	-
Stage 2	569	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	154.4	0	0.3
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	97	257	-
HCM Lane V/C Ratio	-	-	0.939	0.048	-
HCM Control Delay (s)	-	-	154.4	19.7	-
HCM Lane LOS	-	-	F	C	-
HCM 95th %tile Q(veh)	-	-	5.5	0.1	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	39	7	444	46	37	1739
Future Vol, veh/h	39	7	444	46	37	1739
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	250	-	-	200	-
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	43	8	493	51	41	1932

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1567	272	0	0	544	0
Stage 1	519	-	-	-	-	-
Stage 2	1048	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	102	726	-	-	1021	-
Stage 1	562	-	-	-	-	-
Stage 2	299	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	98	726	-	-	1021	-
Mov Cap-2 Maneuver	212	-	-	-	-	-
Stage 1	562	-	-	-	-	-
Stage 2	287	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23.8	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	212	726	1021	-
HCM Lane V/C Ratio	-	-	0.204	0.011	0.04	-
HCM Control Delay (s)	-	-	26.3	10	8.7	-
HCM Lane LOS	-	-	D	B	A	-
HCM 95th %tile Q(veh)	-	-	0.7	0	0.1	-

Intersection	
Int Delay, s/veh	3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	48	34	1866	31	11	796
Future Vol, veh/h	48	34	1866	31	11	796
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	250	-	-	200	-
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	53	38	2073	34	12	884

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2558	1054	0	0	2108	0
Stage 1	2091	-	-	-	-	-
Stage 2	467	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	~ 22	222	-	-	257	-
Stage 1	81	-	-	-	-	-
Stage 2	597	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 21	222	-	-	257	-
Mov Cap-2 Maneuver	69	-	-	-	-	-
Stage 1	81	-	-	-	-	-
Stage 2	569	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	98.1	0	0.3
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	69	222	257	-
HCM Lane V/C Ratio	-	-	0.773	0.17	0.048	-
HCM Control Delay (s)	-	-	150.2	24.5	19.7	-
HCM Lane LOS	-	-	F	C	C	-
HCM 95th %tile Q(veh)	-	-	3.6	0.6	0.1	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	33	3	436	11	20	1677
Future Vol, veh/h	33	3	436	11	20	1677
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	-	-	-	200	-
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	37	3	484	12	22	1863

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1467	248	0	0	497	0
Stage 1	491	-	-	-	-	-
Stage 2	976	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	119	752	-	-	1063	-
Stage 1	581	-	-	-	-	-
Stage 2	326	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	117	752	-	-	1063	-
Mov Cap-2 Maneuver	235	-	-	-	-	-
Stage 1	581	-	-	-	-	-
Stage 2	319	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.2	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	249	1063	-
HCM Lane V/C Ratio	-	-	0.161	0.021	-
HCM Control Delay (s)	-	-	22.2	8.5	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.6	0.1	-

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	15	18	1820	24	8	799
Future Vol, veh/h	15	18	1820	24	8	799
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	-	-	-	200	-
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	17	20	2022	27	9	888

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2498	1024	0	0	2049	0
Stage 1	2036	-	-	-	-	-
Stage 2	462	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	24	233	-	-	271	-
Stage 1	87	-	-	-	-	-
Stage 2	601	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	23	233	-	-	271	-
Mov Cap-2 Maneuver	73	-	-	-	-	-
Stage 1	87	-	-	-	-	-
Stage 2	581	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	49.2	0	0.2
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	117	271	-
HCM Lane V/C Ratio	-	-	0.313	0.033	-
HCM Control Delay (s)	-	-	49.2	18.7	-
HCM Lane LOS	-	-	E	C	-
HCM 95th %tile Q(veh)	-	-	1.2	0.1	-

Intersection	
Int Delay, s/veh	2.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	67	19	572	160	94	2272
Future Vol, veh/h	67	19	572	160	94	2272
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	-	-	-	200	-
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	74	21	636	178	104	2524

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2195	407	0	0	813	0
Stage 1	724	-	-	-	-	-
Stage 2	1471	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	~ 38	593	-	-	810	-
Stage 1	441	-	-	-	-	-
Stage 2	177	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 33	593	-	-	810	-
Mov Cap-2 Maneuver	115	-	-	-	-	-
Stage 1	441	-	-	-	-	-
Stage 2	154	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	73.3	0	0.4
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	140	810	-
HCM Lane V/C Ratio	-	-	0.683	0.129	-
HCM Control Delay (s)	-	-	73.3	10.1	-
HCM Lane LOS	-	-	F	B	-
HCM 95th %tile Q(veh)	-	-	3.8	0.4	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection

Int Delay, s/veh 180.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	161	90	2404	80	36	1025
Future Vol, veh/h	161	90	2404	80	36	1025
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	-	-	-	200	-
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	179	100	2671	89	40	1139

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	3365	1380	0	0	2760	0
Stage 1	2716	-	-	-	-	-
Stage 2	649	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	~ 6	134	-	-	141	-
Stage 1	~ 36	-	-	-	-	-
Stage 2	482	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 4	134	-	-	141	-
Mov Cap-2 Maneuver	~ 30	-	-	-	-	-
Stage 1	~ 36	-	-	-	-	-
Stage 2	345	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 2726	0	1.4
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	42	141	-
HCM Lane V/C Ratio	-	-	6.64	0.284	-
HCM Control Delay (s)	-	-	$ 2726	40.3	-
HCM Lane LOS	-	-	F	E	-
HCM 95th %tile Q(veh)	-	-	32.8	1.1	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	67	19	572	160	94	2272
Future Vol, veh/h	67	19	572	160	94	2272
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	400	-	200	200	-
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	74	21	636	178	104	2524

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2107	318	0	0	636	0
Stage 1	636	-	-	-	-	-
Stage 2	1471	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	~ 44	678	-	-	943	-
Stage 1	489	-	-	-	-	-
Stage 2	177	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 39	678	-	-	943	-
Mov Cap-2 Maneuver	121	-	-	-	-	-
Stage 1	489	-	-	-	-	-
Stage 2	157	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	59.7	0	0.4
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	121	678	943	-
HCM Lane V/C Ratio	-	-	0.615	0.031	0.111	-
HCM Control Delay (s)	-	-	73.6	10.5	9.3	-
HCM Lane LOS	-	-	F	B	A	-
HCM 95th %tile Q(veh)	-	-	3.1	0.1	0.4	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection

Int Delay, s/veh 100.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	161	90	2404	80	36	1025
Future Vol, veh/h	161	90	2404	80	36	1025
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	400	-	200	200	-
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	179	100	2671	89	40	1139

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	3320	1336	0	0	2671	0
Stage 1	2671	-	-	-	-	-
Stage 2	649	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	~ 6	144	-	-	153	-
Stage 1	~ 38	-	-	-	-	-
Stage 2	482	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 4	144	-	-	153	-
Mov Cap-2 Maneuver	~ 32	-	-	-	-	-
Stage 1	~ 38	-	-	-	-	-
Stage 2	356	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 1509.3	0	1.2
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	32	144	153	-
HCM Lane V/C Ratio	-	-	5.59	0.694	0.261	-
HCM Control Delay (s)	-	$ 2312.1	73.2	36.7	-	
HCM Lane LOS	-	-	F	F	E	-
HCM 95th %tile Q(veh)	-	-	21.5	4	1	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	1.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	50	10	572	80	94	2272
Future Vol, veh/h	50	10	572	80	94	2272
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	400	-	200	200	-
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	56	11	636	89	104	2524

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2107	318	0	0	636	0
Stage 1	636	-	-	-	-	-
Stage 2	1471	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	~ 44	678	-	-	943	-
Stage 1	489	-	-	-	-	-
Stage 2	177	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 39	678	-	-	943	-
Mov Cap-2 Maneuver	121	-	-	-	-	-
Stage 1	489	-	-	-	-	-
Stage 2	157	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	49.9	0	0.4
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	121	678	943	-
HCM Lane V/C Ratio	-	-	0.459	0.016	0.111	-
HCM Control Delay (s)	-	-	57.8	10.4	9.3	-
HCM Lane LOS	-	-	F	B	A	-
HCM 95th %tile Q(veh)	-	-	2	0.1	0.4	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	25

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	81	45	2404	40	36	1025
Future Vol, veh/h	81	45	2404	40	36	1025
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	400	-	200	200	-
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	90	50	2671	44	40	1139

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	3320	1336	0	0	2671	0
Stage 1	2671	-	-	-	-	-
Stage 2	649	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	~ 6	144	-	-	153	-
Stage 1	~ 38	-	-	-	-	-
Stage 2	482	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 4	144	-	-	153	-
Mov Cap-2 Maneuver	~ 32	-	-	-	-	-
Stage 1	~ 38	-	-	-	-	-
Stage 2	356	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 710.1	0	1.2
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	32	144	153	-
HCM Lane V/C Ratio	-	-	2.813	0.347	0.261	-
HCM Control Delay (s)	-		$ 1080.9	42.7	36.7	-
HCM Lane LOS	-	-	F	E	E	-
HCM 95th %tile Q(veh)	-	-	10.5	1.4	1	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

CAPACITY CALCULATIONS

US 258

&

NW CORRIDOR BOULEVARD EXTENSION

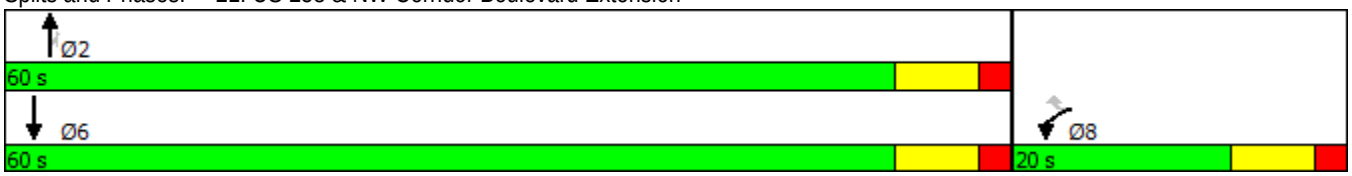
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	107	79	361	280	0	2208
Future Volume (vph)	107	79	361	280	0	2208
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		300	300	
Storage Lanes	1	1		1	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.850		0.850		
Flt Protected	0.950					
Satd. Flow (prot)	1770	1583	3539	1583	0	3539
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1583	3539	1583	0	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		86		304		
Link Speed (mph)	30		55			55
Link Distance (ft)	1607		1062			3965
Travel Time (s)	36.5		13.2			49.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	116	86	392	304	0	2400
Shared Lane Traffic (%)						
Lane Group Flow (vph)	116	86	392	304	0	2400
Turn Type	Prot	Perm	NA	Perm		NA
Protected Phases	8		2			6
Permitted Phases		8		2		
Detector Phase	8	8	2	2		6
Switch Phase						
Minimum Initial (s)	7.0	7.0	14.0	14.0		14.0
Minimum Split (s)	20.0	20.0	21.0	21.0		21.0
Total Split (s)	20.0	20.0	60.0	60.0		60.0
Total Split (%)	25.0%	25.0%	75.0%	75.0%		75.0%
Maximum Green (s)	13.0	13.0	53.0	53.0		53.0
Yellow Time (s)	5.0	5.0	5.0	5.0		5.0
All-Red Time (s)	2.0	2.0	2.0	2.0		2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0		-2.0
Total Lost Time (s)	5.0	5.0	5.0	5.0		5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0
Recall Mode	None	None	Max	Max		Max
Act Effct Green (s)	12.2	12.2	59.1	59.1		59.1
Actuated g/C Ratio	0.16	0.16	0.76	0.76		0.76
v/c Ratio	0.42	0.27	0.14	0.24		0.89
Control Delay	34.0	9.4	3.7	1.0		15.7
Queue Delay	0.0	0.0	0.0	0.0		0.0
Total Delay	34.0	9.4	3.7	1.0		15.7
LOS	C	A	A	A		B
Approach Delay	23.5		2.5			15.7
Approach LOS	C		A			B

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Queue Length 50th (ft)	51	0	26	0		445
Queue Length 95th (ft)	99	36	45	21		#795
Internal Link Dist (ft)	1527		982			3885
Turn Bay Length (ft)				300		
Base Capacity (vph)	343	376	2704	1281		2704
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	0.34	0.23	0.14	0.24		0.89

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 77.4
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 13.4 Intersection LOS: B
Intersection Capacity Utilization 75.3% 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.

Splits and Phases: 21: US 258 & NW Corridor Boulevard Extension



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	380	358	2024	111	0	717
Future Volume (vph)	380	358	2024	111	0	717
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		300	300	
Storage Lanes	1	1		1	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.850		0.850		
Flt Protected	0.950					
Satd. Flow (prot)	1770	1583	3539	1583	0	3539
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1583	3539	1583	0	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		10				
Link Speed (mph)	30		55			55
Link Distance (ft)	1607		1062			3965
Travel Time (s)	36.5		13.2			49.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	413	389	2200	121	0	779
Shared Lane Traffic (%)						
Lane Group Flow (vph)	413	389	2200	121	0	779
Turn Type	Prot	Perm	NA	pm+ov		NA
Protected Phases	8		2	8		6
Permitted Phases		8		2		
Detector Phase	8	8	2	8		6
Switch Phase						
Minimum Initial (s)	7.0	7.0	14.0	7.0		14.0
Minimum Split (s)	20.0	20.0	21.0	20.0		21.0
Total Split (s)	27.0	27.0	63.0	27.0		63.0
Total Split (%)	30.0%	30.0%	70.0%	30.0%		70.0%
Maximum Green (s)	20.0	20.0	56.0	20.0		56.0
Yellow Time (s)	5.0	5.0	5.0	5.0		5.0
All-Red Time (s)	2.0	2.0	2.0	2.0		2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0		-2.0
Total Lost Time (s)	5.0	5.0	5.0	5.0		5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0
Recall Mode	None	None	Max	None		Max
Act Effct Green (s)	22.0	22.0	58.0	90.0		58.0
Actuated g/C Ratio	0.24	0.24	0.64	1.00		0.64
v/c Ratio	0.96	0.99	0.96	0.08		0.34
Control Delay	69.1	77.5	28.3	0.1		7.8
Queue Delay	0.0	0.0	0.0	0.0		0.0
Total Delay	69.1	77.5	28.3	0.1		7.8
LOS	E	E	C	A		A
Approach Delay	73.1		26.9			7.8
Approach LOS	E		C			A

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Queue Length 50th (ft)	232	216	552	0		94
Queue Length 95th (ft)	#413	#403	#804	0		125
Internal Link Dist (ft)	1527		982			3885
Turn Bay Length (ft)				300		
Base Capacity (vph)	432	394	2280	1583		2280
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	0.96	0.99	0.96	0.08		0.34

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 32.6 Intersection LOS: C
Intersection Capacity Utilization 86.4% 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.

Splits and Phases: 21: US 258 & NW Corridor Boulevard Extension