

September 15, 2004

Mr. Mitch Barron Newland Communities 31 Hillsboro Street Pittsboro, NC 27312 P.O. Box 33068 Raleigh, North Carolina 27636-3068

Re:

BRIAR CHAPEL TIA

PEER REVIEW RESPONSE

Dear Mr. Barron,

Kimley-Horn and Associates has reviewed the Peer Review of our Briar Chapel Development Transportation Impact Assessment and offer the following comments in response. We also anticipate issuing a formal addendum to the report once NCDOT has issued their review of the study. The addendum will incorporate changes and clarifications engendered by both sets of comments and any changes or comments arising out of the on-going public discussion.

The Peer Review Report is composed of two sections – The report itself and an Appendix detailing technical comments. We will divide our responses correspondingly.

#### PEER REVIEW REPORT

Sections I, II, and III summarize the basic information contained in the Transportation Impact Assessment (TIA) report and appear to be reasonable summaries of the information.

Section IV details the peer review comments and we offer the following subsection by sub-section comments:

#### IV. Peer Review Comments and Recommendations

As stated the TIA used a traditional approach in preparing the study. We conferred with County Staff and NCDOT prior to, and during the preparation of the study to discuss format and assumptions. Chatham County does not



have adopted procedures or guidelines on how to conduct Transportation Impact Assessments and County staff directed us to follow NCDOT procedures and guidelines, which we did. The standard approach is to analyze critical intersections in the roadway network since the intersections basically control the capacity of the roadway sections. Roadway segments are not typically analyzed since this seldom provides significant additional information. In general, roadway segments operate at a better level of service than the intersections they connect. There will be further discussion of this later.

All classes of users were considered in developing the plans for Briar Chapel. The project is planned to have an extensive system of pedestrian and bicycle ways to provide access internally. Current levels of pedestrian activity do not indicate the need for off-site facilities. Briar Chapel is committed to providing for transit access when transit service is extended to the area.

# IV.A Trip Generation and Distribution

The trip reductions taken in the report are consistent with nationally used methodology recommended by the Institute of Transportation Engineers. There is no readily available local data to further refine the ITE methodology. The internal capture assumed is entirely consistent with the patterns in a mixed-use development designed to encourage internal trip-making and use of alternate modes. While the non-residential uses appear on the plan to occupy a relatively low percentage of the land area they represent nearly half (48%) of the project's trip-making potential. Since the non-residential components are sized to serve local demand rather than serving as a regional draw, and the Briar Chapel development will contain a sizable proportion of the area's residences at build-out, the internal capture should be high. The study assumes only 400 (10.6%) of the 3,756 gross trips generated in the PM peak hour will be internal to Briar Chapel.

Likewise, the pass-by trips are trips that are already on US 15-501 and stop at the commercial development. ITE methodology indicates 32% of the commercial trips should be pass-by. The study assumes 20% will be pass-by. The study therefore assumes that 84 of the approximately 2500 non-project cars on US 15-501 in the peak hour will stop at the Briar Chapel commercial area.



All of the assumptions and basis of trip generation, internal capture, and passby calculations were discussed with and approved by County and NCDOT staff prior to report finalization.

The Triangle Regional Model was considered in developing the distribution along with current development patterns and travel patterns. The distribution used in the TIA is based principally on current travel patterns and was approved by both NCDOT and Chatham County staffs.

#### IV. B Intersection Analysis

The Highway Capacity Manual (HCM) methodology was developed primarily to analyze isolated signalized intersections. While it incorporates some methodology for analyzing signals in an interconnected coordinated system, it is not as sophisticated as the Synchro analysis which accounts for interaction between adjacent signals, the effects of coordination and other components of control delay not fully accounted for in the HCM methodology. Synchro is therefore preferred to analyze coordinated systems such as the closed-loop system being installed on US 15-501 as a part of the on-going NCDOT widening project.

The use of Synchro LOS was supported by NCDOT staff specifically for use in this TIA. Chatham County staff deferred to NCDOT on the issue. NCDOT Congestion Management has requested use of Synchro software and Synchro output reports for projects sent to them for review. In addition, many municipalities in North Carolina including the City of Raleigh, the Town of Apex, the Town of Wake Forest, and Wake County accept Synchro reports for traffic impact studies.

The pedestrian phases were included at intersections expected to have high volumes of pedestrian traffic, specifically U.S. 15-501 & East Access Road, U.S. 15-501 & Jack Bennett Road, U.S. 15-501 & Taylor Road, and U.S. 15-501 & Andrews Store Road. Signal phases and timings at other intersections were set to accommodate pedestrians though specific pedestrian phases were not used.



#### IV. C Roadways

As discussed earlier, we followed standard methodology in analyzing the key intersections in the road network since the intersections generally control the capacity of a roadway. In our experience, the roadway segments, when analyzed in conjunction with intersection analyses, nearly always operate at a better level of service than the intersections themselves. We therefore did not analyze road segments as a part of the initial report. The intersection analyses showed that, with the exception of U.S. 15-501, none of the roadways in the study area indicated the need for more than one through lane; therefore, wholesale roadway widening was deemed unnecessary. Turn lanes are proposed at all new driveways on Andrews Store Road. The addition of a third lane between driveways adds little capacity and increases impervious surfaces.

However, in response to the peer review comments we have run segment analyses using both Synchro and HCM methodology for Andrews Store Road and Mann's Chapel Road. These are the existing roads that Briar Chapel directly accesses and will most significantly impact. These analyses (attached) show that both Andrews Store Road and Mann's Chapel Road operate at acceptable levels of service in the AM and PM peak hours. The arterial levels of service are summarized in the table below:

	Arterial Level-of-Serv	ace
Condition	AM Peak-Hour LOS (Avg. Speed)	PM Peak-Hour LOS (Avg. Speed)
E	astbound Andrews Store	e Road
Synchro	A (42.5)	A (44.2)
HCS	A (41.0)	A (43.7)
Ea	stbound Mann's Chape	l Road
Synchro	A (41.5)	B (41.2)
HCS	A (35.9)	A (35.4)

The analysis does not indicate the need for widening of Andrews Store Road or Manns Chapel Road. Manns Chapel Road is designated a thoroughfare on the DCHC Thoroughfare Plan and as such may warrant additional right-of-



way in the future. Additional right-of-way is not needed to implement the improvements recommended in the TIA.

In regard to additional limited-movement driveways on US 15-501, the TIA assumes that all of the traffic is assigned to the full-movement driveways. Secondary driveways are shown and will likely have to be right-in/right-out only to meet NCDOT access standards. This has been discussed with NCDOT. Any secondary driveways will tend to reduce the traffic volumes, and therefore improve the level of service, at the main driveways. The final number, location, and function of secondary driveways will be discussed with, and approved by, NCDOT when applying for driveway permits. Since the secondary driveways are likely to change as site planning is refined and as right-in/right-out driveways will have minimal impact on capacity, it was felt that analysis and discussion of these driveways in detail would do little to inform the review process.

#### IV. D Street Connections

The developer has been in discussions with the surrounding neighborhoods on this issue. The plan reflects the desires of these neighborhoods. Analysis indicated that such connections are not needed from a capacity standpoint to serve the development. They may be deemed appropriate by the county to meet county policy.

#### IV. E-G Pedestrian and Bicycle Facilities, Traffic Calming, & Transit

The TIA notes that pedestrian and bike facilities, traffic calming, and transit will be taken into consideration later in the planning process. The greenway plan includes much of the pedestrian/bike circulation, but plans are not sufficiently detailed to provide final locations for most of these items and they will need to be developed with more specificity as the site construction plans are developed. The appropriate location for traffic calming features will be driven by final roadway configuration and development patterns. Transit service locations will need to be coordinated with transit service providers when the service is initiated. To attempt to be too specific at this point in the development process would be overly restrictive and based on very incomplete information. The commitment is that these items will be properly incorporated into the development. There is little hard analysis required in incorporating these features; it is more a matter of properly locating them



geometrically. The plan provides ample opportunity to incorporate these features.

# IV. H Traffic Signal Upgrades

The TIA did not go into detail on the mechanism for revising or installing signals. The purpose was to assess the impacts and recommend the general mitigation measures. At this point in the process, the final details have not been worked out, but NCDOT practice is to have the developer update the timing plans when system revisions are made.

Before signals can be installed there must be a study showing they are truly warranted and design plans will have to be approved by NCDOT. All signals, as they are installed or revised, will have to be incorporated into the closed loop system. Modifications will include the work necessary to incorporate new signals into the closed loop system including new interconnect cable where necessary and updated timing plans.

## IV. I Traffic Safety and Circulation near Schools

The design of the schools is not advanced enough to provide meaningful analysis of circulation. NCDOT has a specific group for dealing with traffic safety and circulation around schools. All plans for the traffic network immediately surrounding the school will be subject to detailed design and county and state review. This will occur later in the planning/development process as more detailed plans are prepared.

#### IV. J Phasing of Improvements

The TIA includes a phasing plan. We believe this plan conforms with this recommendation.

#### APPENDIX A

The second portion of the report, Appendix A, addresses specific technical comments and for the most part simply reiterates data and findings from the



TIA. We will offer responses only where there are questions or differences between the Peer Review Report and the TIA.

## **Trip Generation**

#### School Trips

While there are alternative ways to generate school trips, most notably the NCDOT spreadsheet, in discussions with County and NCDOT staff prior to beginning the study it was agreed that ITE trip generation rates would be used. While there are differences, ITE rates are considered to be accurate and appropriate.

An analysis was performed where the MTSA School Traffic Calculator was used instead of ITE rates to estimate the number of trips for the K-8 school and school trips were assigned to the network discretely. Although the Briar Chapel development is anticipated to generate 956 new students, which is approximately 75% of the 1,300 students for the 2 proposed schools, to be conservative, only half of the K-8 School trips were assigned within the Briar Chapel development. The rest were assigned outside of the network. It was determined that while the MTSA calculator results in a larger number of overall school trips, when discretely assigned to the network the number of external school related trips is lower than in the Briar Chapel TIA by 202 in the AM peak hour and 118 in the PM peak hour.

#### Internal Capture

Briar Chapel is being designed as a community, with the mix of uses normally found in a community. The trip reductions taken in the report are consistent with nationally used methodology recommended by the Institute of Transportation Engineers. There is no readily available local data to further refine the ITE methodology. The internal capture is entirely consistent with the patterns in a mixed-use development designed to encourage internal trip-making and use of alternate modes. While the non-residential uses appear on the plan to occupy a relatively low percentage of the land area, they represent nearly half (48%) of the project's trip-making potential. Since the non-residential components are sized to serve local demand rather than serving as a regional draw, and the Briar Chapel development will contain a sizable proportion of the area's residences at build-out, the internal capture should be high. The study assumes only 400 (10.6%) of the 3,756 gross trips generated



in the PM peak hour will be internal to Briar Chapel consistent with ITE methodology. We believe this to be a low estimate of the probable internal capture.

## Pass-by Trips

Likewise the pass-by trips are trips that are already on US 15-501 and stop at the commercial development. ITE methodology indicates 32% of the commercial trips should be pass-by. The study assumes 20% will be pass-by. The study therefore assumes that 84 of the approximately 2500 non-project vehicles on US 15-501 in the peak hour will stop at the Briar Chapel commercial area.

All of the assumptions and basis of trip generation, internal capture, and passby calculations were discussed with and approved by County and NCDOT staff prior to report finalization

# **Traffic Impact Analysis**

Appendix A then discusses individual intersection analyses. Most are recitation of the TIA findings. We offer the following responses to individual intersection comments:

## US Highway 15-501/SR 1532 (Mann's Chapel Road)

The comments note that the widening proposed should provide adequate length and continuity to truly function as a through lane and be adequately utilized. This is inherent in the recommendation. The exact extent of the widening will need to be evaluated at the time it is designed and the design will have to be reviewed and approved by NCDOT. Driveway interactions will be one of several considerations, and are very important. However, since there is a median being constructed now, the driveways are likely to interact with the new outside lane essentially as they will interact with the outside lane currently being built. Due to the traffic volumes on US 15-501, we expect a properly designed additional though lane to be fully utilized.



# <u>US 15-501 / SR 1529 (Taylor Road) & US 15-501/SR 1528 (Andrews Store Road)</u>

The Peer Review recommends northbound exclusive right turn lanes at both of these intersections. The capacity analyses do not indicate the need for these lanes to provide adequate capacity. The right turn volumes at both locations are marginal relative to criteria used by NCDOT to determine when turn lanes are needed. The provision of turn lanes to allow turning traffic to get out of the though traffic stream may have some safety benefits. These may be offset where there is significant pedestrian traffic by the additional crossing distance for pedestrians and additional potential conflicts with pedestrians. The developer has agreed to construct these two right turn lanes.

#### US 15-501/Mt Gilead Church Road

The Peer Review basically repeats the findings of the TIA. The primary difference is that the TIA indicates that improvements at this intersection are needed primarily due to existing and background traffic, not the impacts of Briar Chapel. We reviewed the traffic volumes at this intersection and it does not appear likely that this intersection will warrant a traffic signal at project build-out. The analysis indicates that left turns off of Mt. Gilead Church Road will experience long delays under stop sign control. However, no physical improvements other than a signal will significantly reduce this delay. The installation of a signal will reduce the delay for the 30 vehicles making a left turn from Mt. Gilead Church Road but introduce delay to many of the 1300 vehicles on US 15-501. The total delay experienced by motorists, and the air and noise impacts would be much greater.

#### Hamletts Chapel Road/SR 1532 (Mann's Chapel Road/River Forest Road)

The projected volumes indicate that the warrants for a four-way stop will be met. Analysis indicates a better level of service will be afforded by a four-way stop and alleviate the safety concerns of long delays. Before a four-way stop is installed the intersection should be monitored to ascertain that the warrants are met and four-way stop control is appropriate.



# SR 1532 (Mann's Chapel Road)/ North Access Road & SR 1532(Mann's Chapel Road)/ South Access Road

The laneage has been evaluated and that recommended in the TIA is the configuration that provides the best level of service. These intersections do not project to meet the warrants for a traffic signal but are recommended to be monitored to make sure. If there are other, specific, improvements identified that we have not evaluated, we will evaluate them.

## **Technical Comments**

- 1. Dallas phasing has not been proposed or analyzed for US 15-501 intersections. The traffic signal plans that are a part of the current NCDOT 15-501 widening project use protected-permitted phasing, and the phasing was therefore used in the TIA. Pedestrian timing was considered in setting up the timing plans for all signals. There are some inconsistencies in phasing between AM and PM scenarios. These have been corrected (listed below with analyses attached) and do not change any of the levels-of-service at the affected intersections.
  - o U.S. 15-501 & Old Lystra Road
    - Converted phasing to include right-turn overlaps for the westbound approach in the No-Build AM and PM scenarios
    - Converted phasing to include right-turn overlaps for the northbound approach in the No-Build AM scenario
  - o U.S. 15-501 & Mann's Chapel Road
    - Converted phasing to include right-turn overlaps for the northbound approach in the No-Build AM and PM scenarios
    - Converted the phasing for the east-west direction to split phase

Protected-only phasing may be required at the intersection of U.S. 15-501 & Mann's Chapel Road due to the addition of the recommended north- and southbound through lanes. Changing the phasing for the north- and southbound lefts to protected-only will result in the delay increase as shown:



Level-of-Service Change U.S. 15-501 & Mann's Chapel Road											
Condition	AM Peak-Hour LOS (Delay)	PM Peak-Hour LOS (Delay)									
Buildout w/ Permitted + Protected Phasing	C (31.1)	C (23.7)									
Buildout w/ Protected Only Phasing	C (32.5)	C (27.6)									

2. There are some inconsistencies in storage lengths between the No-Build and Build-Out scenarios. Storage lengths are correct in the build-out scenario. Correcting the No-Build analysis to match the build-out does not change either the LOS or delay at any intersection. At no point were recommendations made due to queue lengths in the No-Build scenario.

Incorrect lane widths were used at the following locations with the noted corrections:

- o U.S. 15-501 & Old Lystra Road
  - Changed westbound lane widths from 9 to 12 feet for the No-Build AM and PM scenarios
- o U.S. 15-501 & Andrews Store Road
  - Changed eastbound lane widths from 10 to 12 feet for the buildout AM scenario
- Lystra Road & Farrington Road
  - Changed northbound, southbound, and eastbound lane widths from 12 to 11 feet for the buildout PM scenario
  - Changed westbound lane widths from 11 to 12 feet for the buildout PM scenario
- 3. Lane geometry was incorrect in the Synchro files at the following locations with the noted corrections:
  - o U.S. 15-501 & Taylor Road
    - Removed northbound right-turn lane in the buildout AM scenario
  - o U.S. 15-501 & Andrews Store Road



- Removed northbound right-turn lane in the buildout AM and PM scenarios
- Removed westbound right-turn lane in the buildout PM scenario
- o Hamletts Chapel Road & Mann's Chapel Road
  - Removed southbound right-turn lane in the buildout AM scenario
- o Andrews Store Road & South Access Road
  - Changed geometry to a left-turn lane and a shared through-right lane for both buildout AM and PM scenarios

Please feel free to call me with any questions or comments at (919) 677-2113.

Sincerely,

Al Williford, P.E. Senior Vice President

ALW:jtf

Attachments: LOS Table, Revised Synchro Reports, Arterial Analyses

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Table 1 Level-of-Service Changes from Technical Comments											
Condition	AM Peak-Hour LOS (Delay)	PM Peak-Hour LOS (Delay)									
U.S.	15-501 & Old Lystra Ro	ad									
No-Build Reported	A (7.7)	B (11.1)									
No-Build Corrected	A (7.9)	B (10.7)									
U.S. 1:	5-501 & Mann's Chapel I	Road									
No-Build Reported	C (26.3)	C (28.9)									
No-Build Corrected	C (26.0)	C (28.6)									
Ü.	S. 15-501 & Taylor Road										
Buildout Reported	A (7.7)	NA									
Buildout Corrected	A (8.5)	NA									
U.S. 1	5-501 & Andrews Store R	load									
Buildout Reported	C (23.9)	C (20.1)									
Buildout Corrected	C (25.8)	C (21.2)									
Hamletts Cl	napel Road & Mann's Ch	apel Road									
Buildout Reported	B (13.4)	NA									
Buildout Corrected	B (14.9)	NA									
Lyst	ra Road & Farrington Ro	ad									
Buildout Reported	NA	B (16.3)									
Buildout Corrected	NA	B (18.6)									
Andrews !	Store Road & South Acce	ss Road									
Buildout Reported	F (76.1)	C (20.2)									
Buildout Corrected	F (62.3)	C (20.2)									

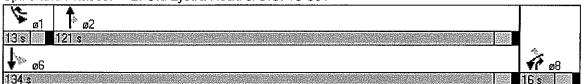
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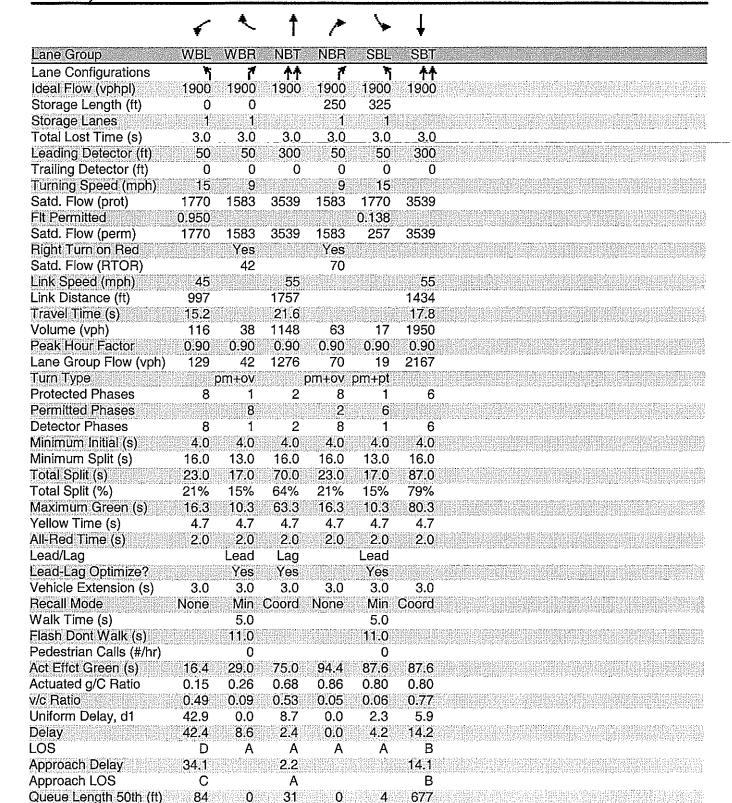
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Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	)
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Trailing Detector (ft)	0	0	0	0	0	) 0
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Right Turn on Red		Yes		Yes		
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Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	
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Minimum Split (s)	24.0	13.0	24.0	24.0	13.0	24.0
Total Split (s)	16.0	13.0	121.0	16.0	13.0	
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All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
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Splits and Phases: 2: Old Lystra Road & U.S. 15-501





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m5

26

36

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917

Queue Length 95th (ft)

50th Up Block Time (%)

Internal Link Dist (ft)



Lane Group WBL	WBR NBT NBR	SBL SBT		
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Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 100 (91%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 60

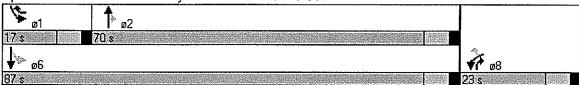
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0:77

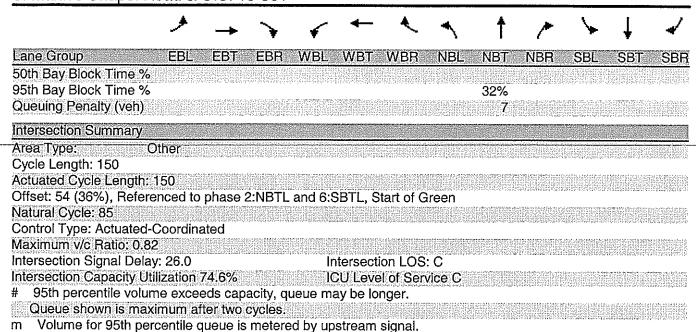
Intersection Signal Delay: 10.7 Intersection LOS: B
Intersection Capacity Utilization 73:7% ICU Level of Service C

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Old Lystra Road & U.S. 15-501



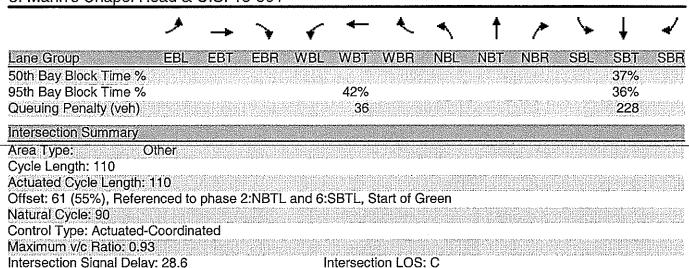
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900		1900	1900	1900	1900
Lane Width (ft)	12	11	11	12	10	10	11	12		11	12	11
Storage Length (ft)	300		100	150		0	450		300	450		300
Storage Lanes	2		1	2	And the property of the second se	0	1	N mg on trg or 2 consister with gr	1	1	Anda order 1811 - 208 - 20	1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	Adams of the second	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50	50	50	50		50		50	50	50	50
Trailing Detector (ft)	0	0	0	Ō	0		0	1. 新聞 1. 10 11 11 11 11 11 11 11 11 11 11 11 11	0	0	0	0
Turning Speed (mph)	15	500 W 287 Tento 1000	9	15	aganting the state of the state	9	15		9	15	ngen a term, or moneyer - post	9
Satd. Flow (prot)	3433	1801	1531	3433	1533	0	1711	3539	1531	1711	3539	1531
Flt Permitted	0.950	a ang ang ang ang ang ang ang ang ang an	ebet e es <u>atéma, e si</u> en satual.	0.950	molite en gon <u>ne en frij en end</u> reste	istorikan	0.277	physicapha y th <u>a airdin and it tamba thin</u> airg	rongerigene interne	0.062	draw of <u>1884. Your or come</u>	na service e e e e e e e e e e e e e e e e e e
Satd. Flow (perm)	3433	1801	1531	3433	1533	0	, 499	3539	1531	112	3539	1531
Right Turn on Red	Eński Jyskie tarowa	227423 <b>31731</b> 451 <b>2</b> 514.	Yes	5702500588805002	100 300 (CANO)	Yes	265247676777676660	10/05/2016/10/09/2016/1	Yes		egéhopenyegéngel	Yes
Satd. Flow (RTOR)			106		62				61			57
Link Speed (mph) Link Distance (ft)	atmonitanti	45			45	eden erroso		55 - 0505	**************************************		55 705	ilikas karayana
Travel Time (s)		4538 68.8			1000 27.3			2585 74.3			795 12.1	
Volume (vph)	403	67	95	46	27.3 15	56	40	74.3 1580	70	50	12.1 618	51
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
Lane Group Flow (vph)	448	74	106	51	79	0.90	44	1756	78	56	687	57
Turn Type	Split	Palance See See Secretaries	pm+ov	Split		निवर्ते क्रिकेट के विक्रिकेट वर्षी विक्रेय	pm+pt	.છોલ્લમ મેકા મળક સામાનું ખેતા <b>નુ</b> કાનું	ો કે લે ને ટેડ ટ્રેક છે. કિં <del>ય</del> લેલે હતા કોને	pm+pt	રાજી નહેલમાં પ્રોકેમિંગ મેન્સ્કુલ અઠકું કરો છે. કે	om+ov
Protected Phases	4	4	5	. 8	8	22102565656674564 66584555666666	55	2	P111101		6.	4
Permitted Phases		uning (Filip	4	(1810/49/46 <b>)</b>	MININE MAN	laveryler (1964)76	2	evishet.	2	6		6
Detector Phases	4	4	5	8	8		5	2	- 8	overe i	6	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	rioteria Cescipio il special	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	24.0	24.0	13.0	24.0	24.0		13.0	24.0	24.0	13.0	24.0	24.0
Total Split (s)	46.0	46.0	13.0	24.0	24.0	0.0	13.0	67.0	24.0	13.0	67.0	46.0
Total Split (%)	31%	31%	9%	16%	16%	0%	9%	45%	16%	9%	45%	31%
Maximum Green (s)	38.8	38.8	5.8	16.8	16.8	short or the transfer of c 1777	5.8	59.8	16.8	5.8	59.8	38.8
Yellow Time (s)	4.7	4.7	4.7	4.7	4.7		4.7	4.7	4.7	4.7	4.7	4.7
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.5	2.5	2.5	2.5	2.5	2.5
Lead/Lag			Lead				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?		des to the Wildelphia Constitution	Yes	ur an established for the last of			Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	to a consequence of a constant	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	- 10.25 M. 4.25 477 457 474 485	None	Coord	None	None	Coord	None
Act Effct Green (s)	27.2	27.2	37.1	12.5	12.5		98.8	90.8	104.0	98.3	88.3	118.5
Actuated g/C Ratio	0.18	0.18	0.25	0.08	0.08	enniosessasternis	0.66	0.61	0.69	0.66	0.59	0.79
v/c Ratio	0.72	0.23	0.23	0.18	0.43		0.11	0.82	0.07	0.31	0.33	0.05
Uniform Delay, d1	57.8	52.4	0.0	63.9	13.7	- - 120003254-10014-1	8.1	24.2	1.0	8.3	15.7	0.0
Delay	57.3	51.1	4.6	63.0	20.8		7.0	24.9	1.2	13.2	14.2	1.6
LOS Approach Delay	E www.eesa	D 47.7	A	E	C 37.3		Α	C 23.5	Α	В	B 13.2	Α
Approach LOS		47.7 D			اد. تان D	enterprise Gede Following		23.3 C	di shakiri i di shakiri	Car le trade commerce professional car a construction of the construction	13.2 В	tantager militar the
Queue Length 50th (ft)	216	63	0	24	16	teriesieneesien Agantityaksissä	13	461	4	12	182	0
Queue Length 95th (ft)	262	106	36	45	69		wining and preside esperant	#1050	m9	43	262	24
Internal Link Dist (ft)		4458			920		hdalaisin	2505			715	enusioni
50th Up Block Time (%)		a na sa atradición.	444. \$ \$\$\$\$THOS\$	a ar sendêriyê dir.	ie in winne val dak witch ().	un e num de hên top de	me is ion invitable.	magent of plants 1955	r y sum de grezh Beljaden e	ugargan (parketa)	aren over hendeld	, make metapat
95th Up Block Time (%)	SCREEN BRIDGESTAND				defelber.	<b>BALLER</b>						
Turn Bay Length (ft)	300		100	150			450		300	450		300



Splits and Phases: 3: Mann's Chapel Road & U.S. 15-501



	۶		*	€		•	*	†	<i>&gt;</i>	7	<b></b>	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻሻ	<b></b>	7	<b>ች</b> ች	<b>}</b>		)PC	<b>^</b>	7	ሻ	<b>ት</b> ተ	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	11	12	10	10	11	12	11	11	12	11
Storage Length (ft)	300		100	150		0	450		300	450		300
Storage Lanes	2		1	2		0_	1		1	1_		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	. 4 3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50	50	50	50		50	50	50	50	50	50
Trailing Detector (ft)	. 0	0	0	0	0		0	0	0	0	0	0
Turning Speed (mph)	15	912-1-12-12-14-1	9	15	. 17.53 C 10.337 <u>L 1772</u> 1772 1772 1773 1773 1773 1773 1773 1773	9	15		9	15	gaganya <u>n sasaran a</u> berasanya	9
Satd: Flow (prot)	3433	1801	1531	3433	1634	0	1711	3539	1531	1711	3539	1531
Fit Permitted	0.950		abstrace and	0.950	es es aux montes es	enes arrentes acciones	0.067		erope o <u>rganis kie</u> roja sta	0.175		mercocanostos
Satd. Flow (perm)	3433	1801	1531	3433	1634	0.	121	3539	1531	315	3539	1531
Right Turn on Red Satd: Flow (RTOR)	08650505050565050	25000000000000000000000000000000000000	Yes 42	ESES PER EN PER PORTE PER	25	Yes			Yes	982990000000000000	000000000000000000000000000000000000000	Yes
Link Speed (mph)		A = 4	46		week the week to be the state of the state o		Hillerië (dië)		38			274
Link Speed (mpn) Link Distance (ft)		45 4538		Soffat George	45 1000	i Paragrafia		55 2585			55 795	27 <b>312</b> 255115510
Travel Time (s)		68.8			27.3			74.3			12.1	
Volume (vph)	155	75	69	159	27.3 110	73	145	975	34	140	1629	247
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
Lane Group Flow (vph)	172	83	0.30 F 77	177	203	0.50	161	1083	38	156	1810	274
Turn Type	Split	રેલ્ડ્રિક્સ લેવો મેટલેનો એક છે છે કરાવેલ છે.	om+ov	Split	all safault	CANNEL MARKET	pm+pt	belgi til i nedig alike e bokerika	pm+ov	in which is not the property	4.8.8.4.4.8.2.1.6.1.5.4.5.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4	pm+ov
Protected Phases	- 2 A	4	55		8	la l	- 6 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5	2	8		6	4
Permitted Phases			4				2		2	6		6
Detector Phases	4	4	5	8	8		_ 5	2	- 8	1	6	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	2021,929991,072393356	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	16.0	16.0	13.0	16.0	16.0		13.0	16.0	16.0	13.0	16.0	16.0
Total Split (s)	16.0	16.0	13.0	18.0	18.0	0.0	13.0	63.0	18.0	13.0	63.0	16.0
Total Split (%)	15%	15%	12%	16%	16%	. 0%	12%	57%	.16%	12%	57%	15%
Maximum Green (s)	8.8	8.8	5.8	10.8	10.8	2015 K (1895) (3/0240) (1/15-9	5.8	55.8	10.8	5.8	55.8	8.8
Yellow Time (s)	4.7	4.7	4.7	4.7	4.7		4.7	4.7	4.7	4.7	4.7	4.7
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	2.5	2.5	2.5	2.5	2.5	2.5
Lead/Lag		anrigij.	Lead	ujugugu			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	haan in til aban samba sa		Yes	n in one other at tames as			Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	A STORY OF SHARE A SERVICE OF	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	ionale sunctinal e e e e e e e	None	Coord	None	None	Coord	None
Act Effct Green (s)	12.8	12.8	22.8	15.0	15.0		70.2	60.2	75.2	70.2	60.2	76.0
Actuated g/C Ratio	0.12	0.12	0.21	0.14	0.14	Nace estimates (Site	0.64	0.55	0.68	0.64	0.55	0.69
v/c Ratio	0.43	0.40	0.22	0.38	0.83		0.73	0.56	0.04	0.48	0.93	0.24
Uniform Delay, d1	45.2	45.0	10.2	43.2	40.4	green to be provided a green that the committee	19.3	16.2	0.0	6.8	23.1	0.0
Delay	45,5	45.5	12.1	43.6	54.4		37.8	12.7	0.9	10.9	37.3	2.9
LOS	D	D	В	D	D	MEKPAÈNA FARASIPI	D	B	A	B	D	A Sections of the
Approach Delay Approach LOS		37.8 D		* 1791   1987   1997	49.4 D			15.5 B			31.2 C	
Queue Length 50th (ft)	59	55	15	59	125		36	308	4	60	648	29
Queue Length 95th (ft)	93	105	46	94	#251		#165	167	m0	m70	#785	m46
Internal Link Dist (ft)		4458			920			2505			715	149-1739(113) 114-1739(113)
50th Up Block Time (%)												
95th Up Block Time (%)	tion of during district		waller:								19%	
Turn Bay Length (ft)	300		100	150			450		300	450		300



ICU Level of Service D

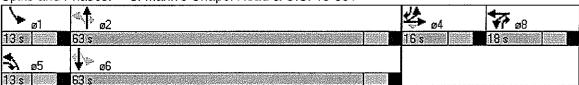
# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

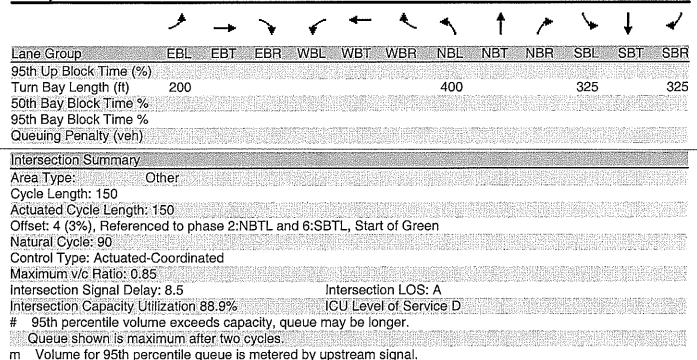
Intersection Capacity Utilization 88.6%

m Volume for 95th percentile queue is metered by upstream signal.

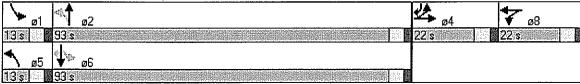
Splits and Phases: 3: Mann's Chapel Road & U.S. 15-501



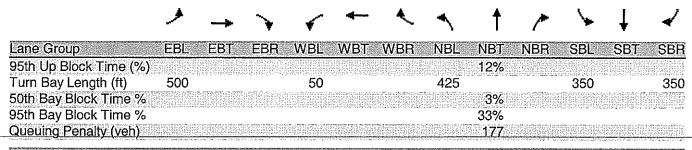
	*	<b>-</b>	>	•	4	*	•	<b>†</b>	<i>&gt;</i>	1	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ችች	<b>₽</b>		**	<u>^</u>		*	<b>ት</b> ጉ		ሻ	<b>*</b> *	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	0		0	400	na a tantana na sa	0	325	and the state of t	325
Storage Lanes	2	encalmenta Services lein	0	1	(5 14 54 65 55 54 54 54 54 54 54 54 54 54 54 54 54	0	1		0			1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50		50	50		50-	300		50	300-	<del></del> 50-
Trailing Detector (ft)	<b>0</b>	<b>0</b> 24 m/minute 2 m	eel statestereen ce	0	0	i an entre proprieta	0	0	hannaninkhi zasi	0 1144	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		4500
Satd. Flow (prot)	3433	1583	0	1770	1583	0	1770	3525	0	1770	3539	1583
FIt Permitted	0.950			0.950	1500		0.175	OFOE		0.044 82	2520	1500
Satd. Flow (perm)	3433	1583	0	1770	1583	0	326	3525	0 	8∠	3539	1583 Yes
Right Turn on Red		284	Yes		134	Yes		3	Yes	CHARLICK		121
Satd. Flow (RTOR) Link Speed (mph)	enscente com	20 <del>4</del> 35	ersynynyn	97749));7774 <b>9</b> 7	25			45			45	
Link Distance (ft)		1000		ekibbandên	292			488			1197	esiisent
Travel Time (s)		19.5			8.0	7388174 <b>3</b> 343		20.1		siikaaniis	14.0	
Volume (vph)	87	0	105	8	0	17	71	1946	58	124	1024	109
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
Lane Group Flow (vph)	97	117	0.00	9	19	0.00	79	2226	0	138	1138	121
Turn Type	Split	gg (15b) (8d) 5.5d)		Split		Amilia tila eta a certa de ka-	om+pt		Land to the total and another and	om+pt	ochowiene (+845) by te	m+ov
Protected Phases	4	4	promeoriemen	8 8 mg	8	indigit ettievideetini.€	5	2	/sing gre-21/99/ste∭	nastan da Nasta 7:	6	4
Permitted Phases	grankari				and very		2			6	a a des	6
Detector Phases	4	4	930), 1 n 340 ( Pu 61 61	8	8	i e fi fare e an san san de san	5	2	je navista (1951) jede izgojeni se se se	1	6	4
Minimum Initial (s)	4.0	4.0	gerrenegun. Pariotikansa	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	con man so k is smeet be	22.0	22.0	452049000 000000	13.0	22.0	Ant (	13.0	22.0	22.0
Total Split (s)	22.0	22.0	0.0	22.0	22.0	0.0	13.0	93.0	0.0	13.0	93.0	22.0
Total Split (%)	15%	15%	0%	15%	15%	0%	9%	62%	0%	9%	62%	15%
Maximum Green (s)	16.0	16.0		16.0	16.0		7.0	87.0	gusepe	7.0	87.0	16.0
Yellow Time (s)	4.0	4.0	omedná zmetň šitovi	4.0	4.0	on the triangle of triangle of the triangle of triangl	4.0	4.0	research sem lid by Libb	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	An élemba	2.0	2.0	2.0
Lead/Lag	num numerim menterim et elemente et en en	and the state of t	Principal description of the period for	E121688-64993 (E88E)24416	TERROR STEELING TO STATE OF THE	nhaanetenaal	Lead	Lag	dens varantes ma	Lead	Lag	weeks some
Lead-Lag Optimize?			en e	ning objectiv Maria			Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	a contra accessor	3.0	3.0	atan (ispalika)	3.0	3.0	3.0
Recall Mode	None	None		None	None		None			None		None
Walk Time (s)	5.0	5.0	eruer Your	5.0	5.0	one property of the second	er Message and the state of the	5.0	(\$1500) (\$250)   \$1500   \$1500	pupa celeptoreo.	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	enillar	11.0	11.0	Salanni	) ( ( 16 m) ( 16 m)	11.0	kildaləridi	vjereni.	11.0	11.0
Pedestrian Calls (#/hr)	0 ************************************	0 40 E		0 	0	769430189946	1000	0	SENSAGIA	101 E	0 111.5	0 127.0
Act Effet Green (s)	12.5	12.5		9.3	9.3		120.2 0.80	110.8 0.74		121.5 0.81	0.74	0.85
Actuated g/C Ratio v/c Ratio	0.08 0.34	0.08 0.30	autrija k	0.06 0.08	0.06 0.08		0.23	0.74	a - a esas gazas Santan calino	0.78	0.74	0.09
Uniform Delay, d1	64.8	0.0		68.4	0.0	M. 198 951013	2.9	15.6	WARRENCE.	31.0	8.2	0.0
Delay	64.5	0.0		66.0	0.0	525570505	2.1	8.0	(\$63.44)\$\nmai#\d	52.9	1.3	0.2
LOS	 Е	A		E	A:Y:Y	RANGE BETTER	A	A	Empressi.	nysaya D	A	A
Approach Delay		29.2		<b>L</b> Nakanan	21.2	inconi.		7.8	Miller Holes		6.3	
Approach LOS		C	etaki etak	3445 (MA)	CC		ontensass?	 A	ururk ding	1000,475,7847	Α	HTSZQ29818
Queue Length 50th (ft)	46	0	oy stanisti Kasalanaka	. 8			9	216	otto teeten etti oo	81	48	0
Queue Length 95th (ft)	76	0		28	0	elanenikinik	m11	250	osidaji.	#195	21	0
Internal Link Dist (ft)		920			212		Chargoster	408		184102F8	1117	
50th Up Block Time (%)	un qui si ngay an AVPP (SA	armanista (1939)	an energia partir (18)	an e gand brooklije plebil St	e-destructing the large safe.	เพาะสังสาขาขาง เพียงใหม่ใช้เรื่อ	o a magaintaid (1915)	university in American Section 19		ar gegasalgegetitik i	rama sarahitka di Spiri Pa	ra magnatatiriki
	<del> </del>											



Splits and Phases: 6: Taylor Road & U.S. 15-501



	<b>≯</b>	<b>→</b>	*	€	<del>-</del>	4	4	†	<i>&gt;</i>	1	<del> </del>	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	<b>)</b>	<b>∱</b> ∍		ሻ	1→		¥	<b>†</b> \$		¥	ተተ	7
Ideal Flow (vphpl)	. 1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500	and a single through the who were to a	0	50	disconnection of the desired section of	0	425	no. 4 ° 0. 40° 40° 40° 40° 40° 40° 40° 40° 40° 40°	0	350	er o mercenti (1500 ano 1 <b>00</b> coltro).	350
Storage Lanes	1		0			0	1		0			
Total Lost Time (s)	3.0_	3.0_	3.0_	3.0	3.0_	3.0	3.0	3.0_	3.0	3.0_	3.0_	3.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	50
Trailing Detector (ft)	0	0	nakanggalangg <u>u</u> nas	0	0	etanomen olaser⊥metki	0	O	ning physicals with the contact	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Satd. Flow (prot)	1770	1595	0	1770	1609	0	1770	3525	0	1770	3539	1583
Fit Permitted	0.604	1505		0.561	1000	والكائل والراوا والمراور والمراورة والمراورة والمراورة	0.235	OFOF.		0.053	2520	1500
Satd. Flow (perm)	1125	1595	0 Yes	1045	1609	0 Yes	438	3525	0 Yes	99	3539	1583 Yes
Right Turn on Red Satd. Flow (RTOR)		208	i i es		19	Tes		3	I es		decilorestas.	298
Link Speed (mph)	12:010(4:01:0)(0:02)	45		4.15124.16 P. 101016	25	en e	Karamanan	45	ogenage en paraceste	seaschia nesse)	45	230
Link Distance (ft)		2102			343		in Galbin	696			1096	
Travel Time (s)	uzajnejnej	31.8			9.4			10.5			20.1	iði skististi
Volume (vph)	327	13	284	6	2	17	198	1707	46	124	753	268
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
Lane Group Flow (vph)	363	330	0 0	7	21	0	220	1948	0	138	837	298
Turn Type	pm+pt			Perm			m+pt		and the second second second	pm+pt	Miles and the second of the second	m+ov
Protected Phases	,	4	emental services in the service	egos A Sircie princio i no articita i	8	@\$4\$@##≠H#*&&©#\ <b>#</b> A	5	2	aray varangaray	1	6	7
Permitted Phases	4			8			2			/i 4 6 /		6
Detector Phases	7	4	2-4 7	8	8	and 164 km; 169 at 90 at 900; 115 and	5	2	3022244 - <b>40</b> 7 <b>2</b> 1447-2.7	1	6	7
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	22.0	22.0		22.0	22.0		13.0	22.0		13.0	22.0	22.0
Total Split (s)	36.0	52.0	0.0	16.0	16.0	0.0	19.0	85.0	0.0	13.0	79.0	36.0
Total Split (%)	24%	35%	0%	11%	11%	0%	13%	57%	0%	9%	53%	24%
Maximum Green (s)	30.0	46.0		10.0	10.0		13.0	79.0		7.0	73.0	30.0
Yellow Time (s)	4.0	4.0	tagamaagansanissa	4.0	4.0	ener a trocontae coes e t	4.0	4.0	no abrobrolitica ni bolico	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lead/Lag	Lead	nicenyaszerki	erofossor (sile), rem Goldinas (sile), rem	Lag	Lag	Signited (1887)	Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	20	listigermingsty Stasifik/Sydfy	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	elestatore leser	3.0	3.0 Coord	3.0
Recall Mode Walk Time (s)	None 5.0	None 5.0		None	None		INOLIG	Coord 5.0	vir ili aria (11)	None	5.0	None 5.0
Flash Dont Walk (s)	11.0	11.0		4500gy/gggg	70577711111111	GMANAGAMA		11.0			11.0	11.0
Pedestrian Calls (#/hr)	0	0				Copy of Party Control of the Control		0		AN CHILANNE NE	0	0
Act Effct Green (s)	40.1	40.1		9.8	9.8		103.3	90.9		97.2	87.3	122.3
Actuated g/C Ratio	0.27	0.27		0.07	0.07		0.69	0.61		0.65	0.58	0.82
v/c Ratio	0.83	0.57		0.10	0.17		0.52	0.91		0.78	0.41	0.22
Uniform Delay, d1	48.4	15.6		68.1	6.4	(*25(12513255)	8.9	28.1		30.2	18.5	0.0
Delay	49.9	15.5		65.5	27.1		9.4	28.5		50.7	21.6	1.8
LOS	D	В	ayaringa Pribatiy	E	C	eren kananakan kebebaha	Α	C	e se kytoro Beru Tober	D	C	A
Approach Delay		33.5			36.7			26.6			20.1	
Approach LOS	v - = = 5 / = = 5 / E / E /	С			D	- 1 - enem elements obegin il di	and group of the transfer of	С	Control of the second s	Control of the State of the Sta	С	Jan 11 17 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Queue Length 50th (ft)	312	94	avassa magasak Kalanga kanga	7	2		62	311		106	217	0
Queue Length 95th (ft)	421	189	2 - 21 - 11 - 150	24	31		m103	#1158		#203	323	81
Internal Link Dist (ft)		2022	1666 jage		263			616			1016	
50th Up Block Time (%)								2%				



Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 134 (89%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 25.8

Intersection LOS: C

Intersection Capacity Utilization 98.5%

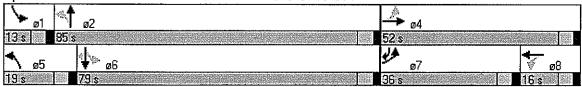
ICU Level of Service E

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Andrews Store Road & U.S. 15-501



	۶		*	*	4	N.	*	†	<i>/</i> *	<b>\</b>	Ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	4		ሻ	Ъ		ሻ	<b>ት</b> ጉ	· · · · · · · · · · · · · · · · · · ·	ች	<b>ት</b> ት	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	500		0	50		0	425		0	350		350
Storage Lanes	1		0	1		0	1		0	1		
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50	granda a	50	50		50	50		50	50	50
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Satd. Flow (prot)	1770	1585	0	1770	1609	0	1770	3536	0	1770	3539	1583
Flt Permitted	0.499			0.646			0.080			0.112		
Satd. Flow (perm)	930	1585	0	1203	1609	0	149	3536	0	209	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)	encentos socialismo	176	969 (20.886/266)	e eesteeds to the contraction	101	1904/00/05/09/05/00/06/0		rana na ngapitanaga <u>way</u> a k	mangamiyang yang s	ene transporte marticle steel	distribuente in production	308
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		2102		1982 NASSESTED 1886	343	200 Pro Name de la 1820 de 1820.		696		94 VERST 145 I FEBRU	1096	::::::::::::::::::::::::::::::::::::::
Travel Time (s)	100	31.8	450	40	9.4		000	10.5			20.1	077
Volume (vph)	183	<b>1</b> ***************	158	43	9	91	236	1029	4	12	1717	277
Confl. Peds. (#/hr) Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	2,0 0	2,3 0	_ ,o 0	0	0	0	2,0 0	2,70 0	2,0 0	270 0	0	0
Parking (#/hr)										uvelistovec		y Statistics of the
Mid-Block Traffic (%)		0%			0%		0,318).2311743.55	0%			0%	(65/68/68/09/68)
Lane Group Flow (vph)	203	177	0	48	111	0	262	1147	0	13	1908	308
Turn Type	pm+pt	dalet langut beredelek	and dispete till filmer sette	Perm	891.843517.2,44.4,14.92.	dilahan silah belah dari	pm+pt	Ser (	indrafika indry flyddio y beig	pm+pt	Carrier and Arthur Carrier and Carrier	om+ov
Protected Phases		4			8		5	2		1	6	7
Permitted Phases	4		. 19 10 10 10 10 10 10 10 10 10 10 10 10 10	8	92,0022019200		2			6		6
Detector Phases	7	4		8	8		5	2		1	6	7
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	13.0	22.0		22.0	22.0	917651643166	22.0	22.0		22.0	22.0	13.0
Total Split (s)	13.0	35.0	0.0	22.0	22.0	0.0	22.0	53.0	0.0	22.0	53.0	13.0
Total Split (%)	12%	32%	0%	20%	20%	0%	20%	48%	0%	20%	48%	12%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lead/Lag	Lead	150 1500 500 500 500 500 500		Lag	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	stasonaena Asurés	None	None	5522481±34587788		Coord	2004-900-9 190-8800A	None	Coord	None
Act Effct Green (s)	25.7	25.7		12.7	12.7		78.3	73.6		67.7	59.0	72.1
Actuated g/C Ratio v/c Ratio	0.23	0.23	94:513:53:55 54:513:53:55	0.12	0.12		0.71	0.67		0.62	0.54	0.66
Uniform Delay, d1	0.69 36.5	0.35 0.2		0.35 44.8	0.40 3.9		0.76 22.5	0.48 10.8		0.05	1.00 25.5	0.27
Delay	ან.5 36.5	0.2 4.9	digitalistikasi	44.8	ა.ყ 10.5	en ny faritr'i 194	33.3	2.0		5.5 4.2	25.5 34.5	0.0
LOS	ან.ნ D	4.9 A		43.0 D	10.5 B	at Habbarla	- 33.3 C	∠.∪ A	and recording	4.2 A	34.5 C	C11 1 C 51C 11 CC1
Approach Delay		21.8			20.6			7.9	15000000000		29.6	A Markana
Approach LOS		21.0 C			20.0 C		BERTE BLANCE	7.5 A			29.0 C	
- Approach ECO								Л				

	<i>**</i>			*	4	*	4	<b>†</b>		-	<b>↓</b>	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	124	0		32	6		78	18		1.	~756	0
Queue Length 95th (ft)	m186	m51		67	56		185	37		m2 r	n#836	m0
Internal Link Dist (ft)		2022			263			616	e was de bestelster. Talves de bestelster		1016	
50th Up Block Time (%)	**************************************	*************				***************			******************			/
95th Up Block Time (%)												
Turn Bay Length (ft)	500			50			425	t accessors processes as	****** *******************************	350	- 11 12 12 14 14 14 15 1 1 1 1 4 1 4 1 1 1	350
50th Bay Block Time %					alemanen arrag Gebooringsinse	Alekanori perdend O 7-februari 541 ang P	eta habeeta are Sisusi 1980-eta				9%	
95th Bay Block Time %	1324 (122-144-157-151-151-1	The souli de la servició de de-	21 21 12 12 12 12 12 12 12 12 12 12 12 1	26%	14%		t war in heart of the same and a first			erige op dags en of the dags.	20%	
Queuing Penalty (veh)				14	3						2	
Intersection Summary												

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 35 (32%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.00

Intersection Signal Delay: 21.2

Intersection LOS: C

Intersection Capacity Utilization 95.2%

ICU Level of Service E

Volume exceeds capacity, queue is theoretically infinite.

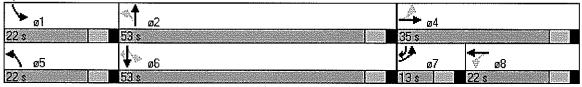
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

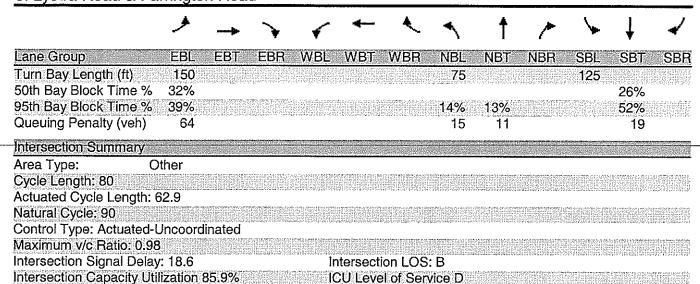
Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Andrews Store Road & U.S. 15-501



	*	-	7	•	◄	•	*	<b>†</b>	1	-	ļ	1
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*1	1→		*	<b>†</b>			€}			44	
Sign Control		Stop			Stop			Stop	4.\$\m/ <u>1</u> 8		Stop	
Volume (veh/h)	210	195	20	47	173	62	23	97	34	59	76	187
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
Hourly flow rate (veh/h)	233	217	22	52	192	69	26	108	38	66	84	208
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1				9 8 6 6		
Volume Total (vph)	233	239	52	261	171	358						_
Volume Left (vph)	233	0	52	∴ 60	26	66	2017 PRODUCE Selection (SE) 1554		ranen/branca Nezetezak	wasuwata Makataka	o do voja 1900. Po 50 250 1605	chinaratur Generaliar
Volume Right (vph)	0	22	0	69	38	208						
Hadj (s)	0.2	0.0	0.2	-0.1	-0.1	-0.3						
Departure Headway (s)	6.9	6.6	7.1	6.7	6.7	6.1						
Degree Utilization, x	0.45	0.44	0.10	0.49	0.32	0.60						(Backy)
Capacity (veh/h)	502	522	477	498	485	564						
Control Delay (s)	14.1	13.5	9.7	14.8	12.8	18.0			en en majeres. Grund fikiliju		e terrene di Destassione	54 5 (M) 1418 55 5 5 5 5 5 7
Approach Delay (s)	13.8		14.0		12.8	18.0		. D. P. W		ana la delenare		
Approach LOS	В		∥ B		В	• • C						
Intersection Summary												
Delay		is the reperture	14.9									
HCM Level of Service	Azin in selection of the segment (1)	and the second section of the second	В	ana yang seri kenangan penjanja pelak	es sector a payora religion.	extined transfer for all to gripping.	-d - e restrandre trifigaye	eren i men transleren a tieretet.	S. A. P. S. C. C. S.	an in the state of the State of the	merce door and recogni	came continues t #625
Intersection Capacity Uti	lization	PP 1967	70.8%	i le	U Leve	l of Sen	vice 🤚		er# C			

	۶	<b>→</b>	>	*	+	*	*	†	<b>/</b>	<b>/</b>	Į.	-√
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ኝ	Ъ			€}	***************************************	ነ	֏	200	ነ	*	*
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	12	12	11	11	∾,	**************************************	11	11
Grade (%)		2%			1%			0%			0%	(5)/12/01/EC(0)
Storage Length (ft)	150	rajaki palu pipakirajajab	0	0	en e	0	<u>75</u>	(\$14.00) (1.00) (1.00) (1.00)	0	125	6500604) (Fg371,F292)	0
Storage Lanes	1		0.	0		48 de <b>0</b> 14				ering vita		\$4.55.5 <b>1</b> .
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50		50	50		50	300	otisti ilgilizzo Susti ilgilizzo	50	300	50
Trailing Detector (ft)	0	0	ing Kineman agang baga bag	0	0	nee et vertrament et et it it it it en e	0	0	ELEN KONGO PER KATANTAN PE	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Satd. Flow (prot)	1694	1533	0	0	1789	0	1711	1801	0	1711	1801	1531
Flt Permitted	0.733				0.979		0.125			0.623		MA GRASSIA
Satd. Flow (perm)	1307	1533	0	0	1756	0	225	1801	0	1122	1801	1531
Right Turn on Red			Yes			Yes			Yes		0246644 1550 1944 27454 1236 1360	Yes
Satd. Flow (RTOR)		170			4			a a con an diameter conse		and a second of the first of the first property of the first prope		662
Link Speed (mph)		55			55		ikiğuüiq	55			55	
Link Distance (ft)	nd bester whom ever more an average	5189			1008			1000			1066	,
Travel Time (s)		64.3			22.9			12.4		Spanici s	13.2	1647-3534-443 1510-584-581
Volume (vph)	430	11	153	1	11	4	153	194	0	44	570	698
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
Lane Group Flow (vph)	478	182	0	0	17	0	170	216	0	49	633	776
Turn Type	pm+pt			Perm		Pigetiya <b>F</b>	om+pt 🏻			Perm	indian E	vo+m¢
Protected Phases	7	4	en steman in this ist of eith i	-0-27-mail:00-2779-5-20	8	n við í Sir Sira en afhrænni í ræm d	5	2	en 11-25 <b>.</b> 1 1 4 1		6	7
Permitted Phases	4			8	en e		2			6	organistics Buth Garage	6
Detector Phases	7	4	laries et al openacion	8	8	e da hidadhad <b>a</b> s cane	5	2	t ta timbrani til med	6	6	7
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	13.0	16.0	e e de e en Live de Li verdene	16.0	16.0	eluseri uskriurki sas	13.0	16.0	n was well as the second on the state of	16.0	16.0	13.0
Total Split (s)	19.0	35.0	0.0	16.0	16.0	0.0	13.0	45.0	0.0	32.0	32.0	19.0
Total Split (%)	24%	44%	0%	20%	20%	0%	16%	56%	0%	40%	40%	24%
Maximum Green (s)	12.5	28.4		9.4	9.4		9.0	38.4		25.4	25.4	12.5
Yellow Time (s)	4.0	5.1	e e de spirition de spirite de spirite	5.1	5.1	riinkestot Kreidegede	3.5	5.1	e Material Personal A	5.1	5.1	4.0
All-Red Time (s)	2.5	1.5		1.5	,1.5		0.5	1.5		1.5	1.5	2.5
Lead/Lag	Lead	SAARAAA MAGGAARAA (S	eusgapilaggan sega	Lag	Lag	19797-7960594112512	Lead	io markologico de la comp	ADVECULAÇÃO PO PO	Lag	Lag	Lead
Lead-Lag Optimize?	Yes			Yes	yes		Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	106534256565	3.0	3.0	25151011V92.F530	3.0	3.0	3.0
Recall Mode Act Effct Green (s)	None 18.6	None 18.6		None	None		None	Min	karpari (4912)	Min		None
Actuated g/C Ratio	0.30	0.30	9189599991000331		9.9 0.14	1845 - 1845 - 1845 - 1845 - 1845 - 1845 - 1845 - 1845 - 1845 - 1845 - 1845 - 1845 - 1845 - 1845 - 1845 - 1845	38.0 0.59	38.0		28.3	28.3	48.6
v/c Ratio	0.98	0.32	21 (		0.14	Castona-teathar Tiles-tra-fraction Tiles-tra-fraction	0.59	0.60		0.45	0.45	0.77
Uniform Delay, d1	20.5	1.0	talkalkalii läisi		23.0	#197111#191#1	7.2	0.20 7.4	gararanah	0.10	0.78 18.6	0.58 0.6
Delay	54.2	10.12.14.Ya 4.1	Ministralia.		25.5	fortions.	8.1	6.4		12.6 13.1	24.6	such Walk end Address A
LOS	04.2 D	4.1 A	ingradiane.	SE S	20.0		0.1			13.1 B	24.0 C	1.2
Approach Delay	· · · · · · ·	40.4			25.5			7.1			11.7	Α
Approach LOS		40.4 D		495020	20.0 C	Property of the second		/.  A		ASSENSA KA	11.7 B	
Queue Length 50th (ft)	~222	4	energijneerdest		4	PREPROTERRICAL	21	27	rachirata (Caran)	10	197	9
Queue Length 95th (ft)	#369	42	delysistement		23	nervice C	87	- 88	97770.03449	38	#504	72
Internal Link Dist (ft)	A (MOYOTA VICEA (I)	5109	TORA SERVE	ko (dayalka)	928	pasylans.		920	(avinde Sairtis)		986	wiide <del>f</del>
50th Up Block Time (%)			27532474						NAMES (CAS)			-0000 M
95th Up Block Time (%)		en propinski legit V	n sauddiffili	.asvakuusi		53453114513131	motelfablist	ketsiipiP-(41)44				
, ====== ,,,,,, (70)												

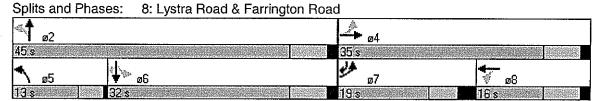


Queue shown is maximum after two cycles.

Queue shown is maximum after two cycles.

Volume exceeds capacity, queue is theoretically infinite.

95th percentile volume exceeds capacity, queue may be longer.



	۶	-	*	*	4-	4	4	†	<i>/</i> **	<b>\</b>	1	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	75	4			सी	7		4		ኝ	4	
Sign Control		Free			Free			Stop			Stop	
Grade		0%	odstaterretrætter		0%		vander'ad	0%			0%	785757 <b>7-</b>
Volume (veh/h) Peak Hour Factor	39 0.90	370 0.90	0.90	0.90	284 0.90	188 0.90	0.90	0.90	0.90	238 0.90	0.90	57 0.90
Hourly flow rate (veh/h)	43	- 411	0.90	0.90	316	—209—	0.50	0.50	0.50	264	0.30	63-
Pedestrians						MY EYYM					3000 <b>7</b> 2	
Lane Width (ft)							G8851 (61)		tere believede 17122112			
Walking Speed (ft/s)		-1	Weller of the State Co. Co.	Lancati vastuvist de ve		0.000000000000000000000000000000000000	er characteristics was	d a simo eltra división	es un est vas a fre sen stere	Bookstanbrown ch	eatr tearanear in	eravera roser.
Percent Blockage	under gestelt fil Se har lær se			kelegalar Mandona			garanaventa Sarana <u>kan</u> e					
Right turn flare (veh) Median type	icio destregació	Elian (Elaka)		anidana saa			uskahi teri	None	Rightstan Rightstan		None	(Sirikline):
Median storage veh)							angles election	indite:	Charam, vie	75/60/2/1997/19	HNOHER	Kaninari.
Upstream signal (ft)									rren ocastero a s Santa Carta			thompsclast Procession
pX, platoon unblocked	aprila miturproprieta	gayar trainger ta 000 cc.	Segura villa w - 2 / y w made consequ	Contract Call of Mar	F29 T - 5 NATH F4 1 E4 1 F4 1 F4	and the second s	1621707021124477824	ar viisto, esanteeni	20 - E11900 Jin E90 9 C. 4 se	111.202.201891		Can apply of the Canada Sanaga Can
vC, conflicting volume	524			411			879	1024	411	816	816	316
vC1, stage 1 conf vol		onicalement	indreasemen	ekisterra sekol	SHWENGWAS	Son maticals		agentales (1990)	Manweta an	esta antitata	Maring Velocity (	SMSESSO:
vC2, stage 2 conf vol vCu, unblocked vol	524			411			879	1024	41 <b>1</b>	816	816	316
tC, single (s)	4.1	aredolaria	1771-9818 TEV	4.1	janga diring	Maria Sasarana Maria Sasarana	7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)					ros (povided raids)	Vanasanaetai	odern Fedillistin.	511160 <del>7</del> .27631		egileri Terrizionio	ANGLANDARAN	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96	and the second	a engla aten mentapatan indak	100	94.25020000000000000000000000000000000000	stratistica acceptante comente	100	100	100	8 **** <u>****</u> ****	100	91
cM capacity (veh/h)	1042	r in an		1148		Angustus	237	225	641	286	298	725
Direction, Lane #	EB 1	21.01	ALCOHOLOGICA CONTRACTOR	WB 2	NB 1	SB1	SB 2					
Volume Total	43	411	317	209	0	264	63					
Volume Left	43	0	1	0	0 0	264 0	0		Zingarayaa	Saleroroa e Arcini	neren er	Salidera)
Volume Right cSH	0 1042	1700	1148	209 1700	1700	286	63 725			neventeri		
Volume to Capacity	0.04	0.24	0.00	0.12	0.00	0.92	0.09					
Queue Length (ft)	3	0	0	0	0	217	7	State State Confedence in the	tion and Defected states	transferrance and control of con-	had title and a feet of	riscoppieru (perv
Control Delay (s)	8.6	0.0	0.0	0.0	0.0	74.7	10.4					Victoria de la composição
Lane LOS	A		A Benedicteren	owstaggeseasyer	A Haranananan	F	B	15:20:21:25:5:5:5:	en Nathaga Silado	n paragagniscos	ringspienger.	0.000.00000
Approach Delay (s) Approach LOS	0.8		0.0	A FORM	0.0 A	62.3 F		ynde Grazii	iadio escual	seichile.		grander.
					<b>A</b>	Г	on the season to the second		n de la companya de	Caractanic Lateractus		
Intersection Summary			4									
Average Delay	rotor	enatorio del estado de la cesta	15.9		111 202	156652	a Mariena a sa s	UNNERS OF F	orense <b>k</b> oral			587585
Intersection Capacity Util	ızallon	SPANIE	43.0%		n reve	of Serv	nçe, <sub>iza</sub>					

	۶	······	*	*	<b>←</b>	*	4	†	<i>&gt;</i>	1	ţ	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	<b>β</b>	**		र्स	7		₽		ሻ	<b>†</b>	
Sign Control		Free	û sabit		Free			Stop			Stop	
Grade	s tetrahelin <b>i H</b> iber	0%	aro) (yokubor si <b>a</b> nag	ud satsagas 🔥 ese	0%	anting Makes	inginale <b>A</b> cc	0%	associatio <mark>a</mark> nsa	issali <b>a i Arie</b> sto	0%	lesestitudo.
Volume (veh/h)  Peak Hour Factor	48 0.90	203 0.90	0.90	2 0.90	316 0.90	182 0.90	2 0.90-	0 0. <del>9</del> 0	3 0.90	125 0.90	0.90-	30 — <del>0.</del> 90
Hourly flow rate (veh/h)	53	226	0.50 1044610	2	351	202	2	0.50	3	139	0.50-	33
Pedestrians	i de la compania del compania del compania de la compania del la compania de la compania del la compania del la compania de la compania del la compania d	Hillian (1976)	est varantas (me		Santi (1917) (1918)	in di masor (consentà	and the state.			vii (1.144.2).		ANNE MA
Lane Width (ft)	. Paris mine											
Walking Speed (ft/s)		41027774; 4 mm/s										40.000000000000000000000000000000000000
Percent Blockage				TE ENGLASSIANS TO PERSONAL SERVICE								
Right turn flare (veh)		Con Civality						a <b>a sum</b> muse		60/5450/650/6666	an <b>k</b> on ezerteka e	3 6045 ( 4506 255 44)
Median type  Median storage veh)	2010 1378 1355 200 							None	1111161514151431431 123777 (1347) (157		None	
Upstream signal (ft)				adalesia s						10/2001/53/14/2		
pX, platoon unblocked		04400044444		1164522015140495	FRIENDASFFAGESTY		16303913154558171	MINIENG GARAIKA		agera menasera	AETAKHIYA A	CONSTRUCTION OF THE PARTY OF TH
vC, conflicting volume	553			227			722	891	226	691	689	351
vC1, stage 1 conf vol	of tames a velocity of a reveal to be bus.	7 1 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	. * * * * * * * * * * * * * * * * * * *		Constitution of Section 1	2-18 17:18 415 45 1297 5 27 8	Tall record to dimensions	ender op over the over	-se-viewwww.	Manker's mooting	-34%	130200452010120-41
vC2, stage 2 conf vol	nia de p		ij dang			wakaka						
vCu, unblocked vol	553	erverdeerdesser.		227	:01:02:25:25:25:25:25	98848484848640545	722	891	226	691	689	351
tC, single (s) tC, 2 stage (s)	4.1			4.1	ANTEREST TO SERVICE COMP.		7.1	6.5	6.2	7.1	6.5	6.2
tF(s)	2.2	wennya.		2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			100	ANEO (625) 1159) K	A (	99	100	100	59	100	95
cM capacity (veh/h)	1017			1342			312	267	813	343	349	692
Direction, Lane #	EB1	EB 2	WB1	WB2	NB 1	SB 1	SB2					
Volume Total	53	227	353	202	6	139	33					
Volume Left	53	0	2	0	2	139	0	ega Propins egent en en egen	ini: / Miniskhinghedek	iden in in de la company d	imick-PREprinter	APPERE BOSK BOSK
Volume Right	0 ::			202	- in <b>3</b>	0	33					
csh	1017	1700	1342	1700	495	343	692	raj postenijo provos tempa z k	e i ma nomen e je me dije prograda	nosan e seriete de estado	i nen korus over nene general	
Volume to Capacity	0.05	0.13	0.00	0.12	0.01	0.41	0.05			Visio Carlos		
Queue Length (ft) Control Delay (s)	4 8.7	0 0.0	0 0.1	0.0	1 12.3	48 22.5	4 ≟10.5	To version by Colored Colored by Colored	Terrorista	NG BURNING P		
Lane LOS	O./ A	<b>U.U</b>	ν.ι Α	0.0	اد.ی B	حد.ن C	10.3 B					
Approach Delay (s)	1.7		0.0		12.3	20.2						
Approach LOS	mbaly diejen allen fr	Agrana V. (Eğir (Eğiriği)	200 (AD) (ES) (ES)	and all the property of the	В	C	iyardidiki (CERK)	ar ozprástky spiská deligi	gasayang padalikali T	garge of the photograph of F	os privirgija	stroppingsstraft"
Intersection Summary												
Average Delay			4.0				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			11 cm 14 m 15		
Intersection Capacity Uti	lization		40.2%	il i	U Leve	l of Sen	/ice		Α			
	avergon.porty.i					- Abramia Sheed Crisis				- september of the ways of	, is the to DSD end had	Annual Service and Control of Control

URBAN STREET WORKSHEET #1										
General Information			Site Inf	ormatio	n			· · · · · · · · · · · · · · · · · · ·		
Analyst <i>JTF</i> Agency/Co. <i>KHA</i> Date Performed <i>8/31/2004</i> Time Period <i>AM</i>			Urban St	reet of Travel on		Store Road ad	l			
Project Description: Briar Chap	el									
Input Parameters										
Analysis Period(h) T = 0.25				Segment	S			· · · · · · · · · · · · · · · · · · ·		
Analysis Feriod(II) 1 = 0.25	1	2	3	4	5	6	7	8		
Cycle length, C (s)	150.0									
Eff. green to cycle ratio, g/C	0.270									
v/c ratio for lane group, X	0.570									
Cap of lane group, c (veh/h)	330									
Pct Veh on Grn., PVG										
Arrival type, AT	4									
Unit Extension, UE (sec)	0.0									
Length of segment, L (mi)	2.00									
Initial Queue, Qb (veh)	0									
Urban street class, SC	2									
Free-flow speed, FSS (mi/h)	45									
Running Time, TR (s)	160.0									
Other delay, (s)	0.0									
Delay Computation										
Uniform delay, d1 (s)	47.2	5.4	5.4	5.4	5.4	5.4	5.4	5.4		
Incremental delay adj, k	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50		
Upstream filtering adj factor, I	1.000				1					
Incremental delay, d2 (s)	7.0	3.5	3.4	3.4	3.4	3.4	3.4	3.4		
Initial queue delay, d3 (s)	0					1				
Progression adj factor, PF	1.008	0.256	0.256	0.256	0.256	0.256	0.256	0.256		
Control delay, d (s)	15.5	0.200	0.200	10.200	0.200	10.200	0.200	0.200		
Segment LOS Determinat										
Travel time, ST (s)	175.5			1			1	I		
Travel speed, SA (mi/h)	41.0				-					
Segment LOS	A A									
Urban Street LOS Determ				<u> </u>	1					
Total travel time (s)	175.5									
Total length (mi)	2.00									
Total travel speed, SA (mi/h)	41.0									
Total urban street LOS	Α			*****						

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	URB	AN STRI	EET WO	RKSHEE	T #1			
General Information			Site In	ormatio				
Analyst <i>JTF</i> Agency/Co. <i>KHA</i> Date Performed <i>8/31/2004</i> Time Period <i>PM</i>			Urban St	reet of Travel on	Andrews 3	Store Road ad	1	
Project Description: Briar Chap	el							
Input Parameters								
Analysis Deriod/h) T 0.05				Segments	3			
Analysis Period(h) $T = 0.25$	1	2	3	4	5	6	7	8
Cycle length, C (s)	110.0							
Eff. green to cycle ratio, g/C	0.210							
v/c ratio for lane group, X	0.370					1		
Cap of lane group, c (veh/h)	177	1						
Pct Veh on Grn., PVG								
Arrival type, AT	4						<b>1</b>	
Unit Extension, UE (sec)	0.0							
Length of segment, L (mi)	2.00							
Initial Queue, Qb (veh)	0							
Jrban street class, SC	2							
Free-flow speed, FSS (mi/h)	45							
Running Time, TR (s)	160.0							
Other delay, (s)	0.0							
Delay Computation								
Uniform delay, d1 (s)	37.2	5.4	5.4	5.4	5.4	5.4	5.4	5.4
Incremental delay adj, k	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Upstream filtering adj factor, I	1.000							
ncremental delay, d2 (s)	5.9	4.1	3.4	3.4	3.4	3.4	3.4	3.4
Initial queue delay, d3 (s)	0							
Progression adj factor, PF	1.048	0.256	0.256	0.256	0.256	0.256	0.256	0.256
Control delay, d (s)	4.9		- 0.200	10.200	10.200	10,200	0.200	0.200
Segment LOS Determinat					<u> </u>	<b>.</b>	<u> </u>	
Travel time, ST (s)	164.9					<u> </u>		
Travel speed, SA (mi/h)	43.7							+
Segment LOS	A A	1		+	<u> </u>			
Urban Street LOS Determ				. <u>L</u>	1		1	
Total travel time (s)	164.9							
• •								
Total length (mi)	2.00							
Total travel speed, SA (mi/h)	43.7							
Total urban street LOS	Α							

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	URB	AN STR	EET WO	RKSHEE	T #1			
General Information			Site In	formatio	n			<u>.</u>
Analyst <i>JTF</i> Agency/Co. <i>KHA</i> Date Performed <i>8/31/2004</i> Time Period <i>AM</i>			Urban S	reet of Travel on	Mann's C	hapel Road nd	1	
Project Description: Briar Chap	el						111111	
Input Parameters								
				Segments	S			
Analysis Period(h) T = 0.25	1	2	3	4	5	6	7	8
Cycle length, C (s)	150.0							
Eff. green to cycle ratio, g/C	0.280		1		···			
v/c ratio for lane group, X	0.140							
Cap of lane group, c (veh/h)	74							
Pct Veh on Grn., PVG								
Arrival type, AT	4							
Unit Extension, UE (sec)	0.0							
Length of segment, L (mi)	2.00						1	
Initial Queue, Qb (veh)	0							
Urban street class, SC	2							
Free-flow speed, FSS (mi/h)	45							
Running Time, TR (s)	160.0		7 17 18 18 18 18 18 18 18 18 18 18 18 18 18					
Other delay, (s)	0.0							
Delay Computation								
Uniform delay, d1 (s)	40.5	5.4	5.4	5.4	5.4	5.4	5.4	5.4
Incremental delay adj, k	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Upstream filtering adj factor, I	1.000							
Incremental delay, d2 (s)	3.9	4.4	3.4	3.4	3.4	3.4	3.4	3.4
Initial queue delay, d3 (s)	0							
Progression adj factor, PF	1.001	0.256	0.256	0.256	0.256	0.256	0.256	0.256
Control delay, d (s)	40.3			0.200	1	1 3.23	10,200	10.200
Segment LOS Determinat			<u> </u>			<u> </u>		1
Travel time, ST (s)	200.3							1
Travel speed, SA (mi/h)	35.9				<del>                                     </del>			
Segment LOS	A	<del>-</del>		+	<del>                                     </del>		-	
Urban Street LOS Determ							L	<u> </u>
Total travel time (s)	200.3							
Total length (mi)	2.00							
Total travel speed, SA (mi/h)	35.9							
Total urban street LOS	35.9 A							
Total diball street LOS								

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	URB	AN STR	EET WO	RKSHEE	T #1			
General Information			Site In	formatio				
Analyst <i>JTF</i> Agency/Co. <i>KHA</i> Date Performed <i>8/31/2004</i> Time Period <i>PM</i>			Urban S	treet of Travel on	Mann's C	hapel Road ad	1	
Project Description: Briar Chap	pel							
Input Parameters								
Analysis Period(h) T = 0.25				Segment	3			
Analysis Feriod(ii) 1 = 0.25	1	2	3	4	5	6	7	8
Cycle length, C (s)	110.0							
Eff. green to cycle ratio, g/C	0.140							
v/c ratio for lane group, X	0.330							
Cap of lane group, c (veh/h)	83							
Pct Veh on Grn., PVG								
Arrival type, AT	4							
Unit Extension, UE (sec)	0.0							
Length of segment, L (mi)	2.00							
Initial Queue, Qb (veh)	0							
Urban street class, SC	2							
Free-flow speed, FSS (mi/h)	45							
Running Time, TR (s)	160.0							
Other delay, (s)	0.0							
Delay Computation								
Uniform delay, d1 (s)	42.6	5.4	5.4	5.4	5.4	5.4	5.4	5.4
Incremental delay adj, k	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Upstream filtering adj factor, I	1.000							
Incremental delay, d2 (s)	10.3	4.2	3.4	3.4	3.4	3.4	3.4	3.4
Initial queue delay, d3 (s)	0							
Progression adj factor, PF	1.088	0.256	0.256	0.256	0.256	0.256	0.256	0.256
Control delay, d (s)	43.6						1	0,200
Segment LOS Determinat						. <b> </b>		
Travel time, ST (s)	203.6			i				1
Travel speed, SA (mi/h)	35.4			<u> </u>				
Segment LOS	A						_	
Urban Street LOS Determ								
Total travel time (s)	203.6							
Total length (mi)	2.00							
Total travel speed, SA (mi/h)	35.4							
Total urban street LOS	оз. <del>-</del> А							
· · · · · · · · · · · · · · · · · · ·								

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# Arterial Level of Service: EB Andrews Store Road

i e	Arterial	Flow Running	Signal	Travel	Dist	Arterial	Arterial
Cross Street	Class	Speed Time	Delay	Time (s)	(mi)	Speed	LOS
U.S. 15-501	$\Pi$	45 265.7	15.5	281.2	3.3	42.5	A
Total		265.7	15.5	281.2	3.3	42.5	A

# Arterial Level of Service: EB Mann's Chapel Road

0	Arterial	Flow Running	Signal	Travel	Dist	Arterial	Arterial
Cross Street U.S. 15-501	i Class	Speed Time 45 413.5	Delay 40.3	Time (s) 453.8	(mi) 5.2	Speed 41.5	LOS B
Total	l	413.5	40.3	453.8	5.2	41.5	В

# Arterial Level of Service: EB Andrews Store Road

	Arterial	Flow Running	Signal	Travel	Dist	Arterial	Arterial
Cross Stre	et Class	Speed Time	Delay	Time (s)	(mi)	Speed	LOS
U.S. 15-50		45 265.7	4.9	270.6	3.3	44.2	A Court
Total		265.7	4.9	270.6	3.3	44.2	A

# Arterial Level of Service: EB Mann's Chapel Road

	Arterial	Flow Running	Signal	Travel	Dist	Arterial	Arterial
Cross Street	Class	Speed Time	Delay	Time (s)	(mi)	Speed	LOS
U.S. 15-501		45 413.5	43.6	457.1	5.2	41.2	В
Total	I	413.5	43.6	457.1	5.2	41.2	В