TOWN OF BLACK MOUNTAIN

Town Hall, 160 Midland Avenue, Black Mountain, NC 28711

Date: **August 13, 2018** Time: **6:00 p.m.** **Regular Session Minutes**

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Conserve resources; print only when necessary.

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(828) 419-9300 / TDD (800) 735-2962

1. CALL TO ORDER

Mayor Don Collins called the meeting to order at 6:00 p.m. with the following members present:

Mayor Don Collins
Vice Mayor Maggie Tuttle
Alderman Larry B. Harris
Alderman Ryan Stone
Alderman Carlos Showers
Alderman Tim Raines

The following staff members were present:
Ron Moore, Interim Town Manager
Dean Luebbe, Assistant Town Manager/Finance Director
Angela Reece, Town Clerk
Ron Sneed, Town Attorney
Shawn Freeman, Police Chief
Steve Jones, Fire Chief
Jessica Trotman, Planning Director
Jamey Matthews, Public Services Director

Mayor Don Collins welcomed everyone and led the Pledge of Allegiance. Interim Parish Associate Bob Tuttle of Black Mountain Presbyterian Church gave the invocation.
Mayor Collins thanked everyone in attendance and expressed appreciation to all those who were attending for the first time and also the viewing audience. The re-broadcast of each regular meeting is shown throughout the month on Charter Cable's Buncombe County Channel 192 at 8:00 p.m. on Sundays. Meetings initially air the same week in which they occur and are shown weekly until the next regularly scheduled meeting. Citizens may also go to the Town website www.townofblackmountain.org at any time and view the most recent regular meeting of the Board.

In his announcements Mayor Collins welcomed Alderman Tim Rains to the Board. Mayor Collins stated the Town has been ranked North Carolina's 13th safest city in 2018 and thanked the Black Mountain Police Department for their efforts in achieving this recognition. Mayor Collins reminded the public that MSD will be working on rehabilitating sewer lines on Midland Avenue over the next several weeks and said an announcement will be posted on the Town's website.

2. PROCLAMATION AND AWARD RECOGNITION

A. Certificate of Achievement for Excellence in Financial Reporting.

Mayor Collins presented the certificate of achievement for excellence in financial reporting to Finance Director, Dean Luebbe stating this is the highest form of recognition in government accounting and represents a significant accomplishment of government and its management.

B. Municipal and County Administration Certification and North Carolina Certified Municipal Clerk Designation.

Mayor Collins recognized Town Clerk, Angela Reece and congratulated her on receiving her certification as a North Carolina Municipal Clerk. Mayor Collins also recognized Ms. Reece for attaining a certificate in North Carolina City and County Management from UNC School of Government, Chapel Hill stating she was 1 of 96 individuals accepted into the 2017-18 course and is now 1 of 3,200 graduates since the course began in 1954.

3. CITIZEN COMMENTS

Individuals wishing to address the Board are asked to sign in at the entrance to the board room, indicating the topic(s) or agenda item(s) you wish to discuss, so that the chair may group speakers according to topic. The chair will recognize individuals requesting to address the Board. ***Comments by any one speaker shall be limited to three (3) minutes****. If the topic you wish to discuss pertains to a* ***public hearing*** *scheduled for this meeting, please reserve your comment for the applicable public hearing.*

Michael Ogus *of Riding Trail, Black Mountain* addressed the Board of Aldermen and citizens encouraging participation in the Black Mountain Veterans Day Parade to recognize and honor local Veterans. The parade will be held on November 11, 2018 around 1:00 p.m.

Sherry Williams *of Church Street, Black Mountain* addressed the Board of Aldermen expressing her concerns regarding staffing in recent weeks.

James Full *of Gold Leaf Walk Way, Black Mountain* addressed the Board of Aldermen expressing his concerns and support of the Cherry Street One-Way plan. Mr. Full stated he is disabled and fully supports the one way idea but would ask for consideration of making traffic flow heading south bound and additional research on diagonal parking.

Faila Allen *of West College Street, Black Mountain* addressed the Board of Aldermen expressing her concerns regarding Alderman Carlos Showers comments on social media regarding volunteers.

Michael Raines *of Blue Ridge Road, Black Mountain* addressed the Board of Aldermen regarding storm water and stated he is a member of the Planning Board and is asking more citizens to attend planning board meetings to discuss a solution.

Charlie Sparks *of N. Dougherty Street, Black Mountain* addressed the Board of Aldermen stating he is a builder with Black Mountain Bungalow. Mr. Sparks stated his company is doing due diligence to comply with storm water issues and he appreciates citizen involvement in reporting issues.

Pat Ward *of Laurel Circle Drive, Black Mountain* addressed the Board of Aldermen with her concern of lack of communication between the Board of Aldermen and citizens referring to an email she sent to the Board regarding a storm water complaint.

Marilyn Sobanski *of Rainbow Recycling, Black Mountain* addressed the Board of Aldermen and citizens encouraging them to attend the Hard-2-Recycle event Saturday September 15, 2018 at Madden's Ace Hardware Swannanoa beginning at 10:00 a.m. and concluding at 2:00 p.m. Ms. Sobanski stated there are a few prohibitions which will be listed on the flier and posted at the Black Mountain Library and on the Town's Facebook page.

4. COMMUNICATIONS FROM BOARDS, COMMISSIONS & AGENCIES

At home viewers can view the video presentations by clicking here.

A. Black Mountain Primary School Playground Update, *Shane Lunsford, President PTO*

Shane Lunsford addressed the Board of Aldermen stating Black Mountain Primary received a grant from KABOOM to replace 25 year old playground equipment. Mr. Lunsford asked for community participation to volunteer in various ways to construct the new playground on October 6, 2018. Mr. Lunsford stated the playground will be a community asset and is open to the community after school hours to enjoy. Mr. Lunsford invited citizens to visit the Black Mountain Primary PTO's Facebook page for more information.

A. Building Planning Zoning Annual Report, *Jessica Trotman, Planning Director*

Planning Director Jessica Trotman presented the Annual Building, Planning, Zoning report to the Board of Aldermen. Director Trotman thanked the Board for the opportunity to be a part of Black Mountain and stated this moth is her one year anniversary with the Town. Director Trotman stated the Planning Board has had a quiet year but are gearing up for some big projects. Director Trotman stated the Planning Board has accomplished the below referenced items this past fiscal year:

The preliminary plat for the following major subdivision was approved by the Planning Board:

- Chapman's Cove – 10 units on Blue Ridge Assembly Drive

The following street closure was recommended to the Board of Aldermen:

- A right-of-way off of Carver Avenue
- Honeycutt Street

The Planning Board held a work session with Planning Director Jessica Trotman to talk about goals and strategies for the board and the town. The Planning Board also watched some training videos from the North Carolina School of Government regarding rezonings. The Planning Board adopted a new format for their agenda to make business run smoother, keep clearer records and to make it more specific to the business of the board. The Planning Board had a presentation from NCDOT about the I-40 interchange project. The presentation spoke about meeting dates that would be held for the public and possible timeframes of when a plan would be ready to look at. Members of the Planning Board attended a regional workshop at the NC Arboretum hosted by the North Carolina School of Government.

Director Trotman will begin working with the Planning Board in the fall/winter to start on a small area plan for the Blue Ridge Road area to gauge current conditions and look at what future conditions might look like with the incorporation of the interchange. Director Trotman acknowledged stormwater challenges in the community and emphasized concerns of having a weak stormwater ordinance. She explained rewriting the ordinance and flood prevention efforts are a priority for the department. Director Trotman also said planning staff are working many text amendments to improve the land use code ordinances as well as ordinances for street and sidewalks and lighting. Director Trotman discussed future projects such as updating the Greenways master plan and beginning the 2019 mandated update of the comprehensive plan.

Alderman Larry B. Harris inquired as to the River Walk Phase II Greenway Project recalling the original funding request approved was $2,250,000 ($1,800,000 federal / $450,000 local match and the second request made through the same funding source was $750,000 ($600,000 federal, $150,000 local match). Mayor Collins added that Buncombe County allocated grant funding to the Town of Black Mountain in the amount of $400,000 over a period of 3 years which can be used toward the match. The Board allocated $80,000 per year in the CIP to fund the Town's match for this project.

5. CONSENT AGENDA

All items on the consent agenda are considered routine, to be enacted by one motion without discussion. If a member of the governing body requests discussion of an item, the item will be removed from the consent agenda and considered separately.

Interim Town Manager Moore presented the consent agenda to the Board of Aldermen.

A. Adoption of Minutes

> ***Motion:*** *To adopt the minutes of July 9, 2018 (Agenda Session), July 9, 2018 (Regular Session), July 12, 2018 (Special Called), July 12, 2018 (Closed Session), July 19, 2018 (Special Called), July 19, 2018 (Closed Session), July 26, 2018 (Special Called), July 26, 2018 (Close Session), August 2, 2018 (Special Called), and August 2, 2018) (Closed Session).*

B. Budget Amendment for Additional Full Time Employee in Water Department #FY2019-1

Manager Moore stated the Town has elected to return to having two full time positions on the water customer service desk, in anticipation of the takeover of 600 Asheville water accounts and the fact that the Public Services Senior Admin Assistant will be moving down to the new building at 304 Black Mountain Avenue shortly. This position provided necessary backup on the water customer desk, when the part time employees were not working.

Motion: *To approve as presented.*

Alderman Ryan Stone moved to approve Consent Items A-B as submitted.

The motion was approved by a vote of 5-0.

6. CITIZEN COMMENTS

The chair will recognize individuals requesting to address the Board regarding the specific New Business or Unfinished Business items below. Comments by any one ***speaker shall be limited to three (3) minutes****.*
If the topic you wish to discuss pertains to a ***public hearing*** *scheduled for this meeting, please reserve your comment for the applicable public hearing.*

There were no citizen comments.

7. UNFINISHED BUSINESS

A. Agreement for Wholesale Purchase of Water from City of Asheville

Manager Moore announced Civil Design Concepts, PA has been awarded the RFQ (request for qualifications) and will be the design firm responsible for overseeing construction of the new water pumping station to be located at 2992 US Highway 70W. This pumping station is grant funded through the Golden Leaf Foundation and the Economic Development Administration and will facilitate water service to the Black Mountain Commerce Park as well as allow the Town of Black Mountain to accept 600 additional residential water customers who are currently served by the City of Asheville. This pumping station will have the capability to pump 750,000 gallons of water per minute and will solve flow issues in that area of Black Mountain. Jesse Gardner, Project Engineer with Civil Design Concepts indicated that his firm will be ready to award bids to begin construction in October. Alderman Larry B. Harris reminded the public that the tentative move in date for Avadim into the commerce park would be at the end of 2019.

8. NEW BUSINESS

A. Planning and Development Services Fee Schedule

Manager Moore stated recent changes to the North Carolina Fire Code require vacation rental properties to receive a fire inspection. Manager Moore conferred with the Fire Inspector, Spencer Elliot regarding an appropriate fee comparable to other municipalities to cover the time of Fire Department staff to perform the inspections and determined $25 is appropriate and is in

align with other municipalities in the region. Manager Moore stated the fee for "change out" inspections, which include things like water heaters and heat pumps has been reduced to $75 which is required by statute.

Alderman Larry B. Harris moved to adopt the amended planning and development services fee schedule as presented.

The motion was approved by a vote of 5-0.

B. Appointment to fill vacancies on Town Boards and Commissions

1. **Urban Forestry Commission**– (1) vacancy/ 3-yr term ending June 30, 2021

Alderman Ryan Stone moved to appoint Matthew Putnam to fill a 3 year term ending June 30, 2021 on the Urban Forestry Commission.

The motion was approved by a vote of 5-0.

Mayor Collins reminded the public that one vacant seat remains on the Historic Preservation Commission and encouraged citizens to apply.

C. Cherry Street One Way Resolution ***#R-18-16***

Planning Director Jessica Trotman addressed the Board of Aldermen stating Cherry Street is currently a through street with two-way traffic. She said this resolution will change Cherry Street to one-way travel from Sutton Avenue to State Street. Director Trotman stated this traffic pattern is recommended based on the findings of a traffic analysis made by J.M. Teague Engineering. She said the request was originally made by the majority of business owners on Cherry Street requesting the Town make this change and said the recommended pattern is supported by Planning, Fire, and Police Departments. Director Trotman stated she held a meeting with the business owners at Town Hall on August 3 to primarily to discuss the parking and loading zone needs for the business on Cherry Street and through surveys conducted she stated the top three requests were pedestrian safety, improving traffic flow and the number of parking spaces on Cherry Street. Director Trotman stated the one-way traffic pattern is widely supported to our knowledge and said only two business owners has requested to leave the existing traffic pattern. Jason Fulton, Traffic Engineer with J.M. Teague was present to give a brief synopsis of the findings to the Board which are made part of and attached to these minutes. Alderman Larry B. Harris inquired of the current traffic volume and patterns in the area and expressed concerns of increasing the flow of traffic headed north by 60% and the effect on the traffic light on State Street. Alderman Ryan Stone also expressed concerns pedestrian safety and reminded the public that a traffic and circulation study has been funded and planned later this fall and recommended delaying the decision on this until the entire area is studied to avoid a peace mill approach. Alderman Larry B. Harris agreed.

Alderman Larry B. Harris moved to table the Cherry Street One-Way Resolution until the traffic and circulation study is completed in the downtown area.

The motion was approved by a vote of 5-0.

9. PUBLIC HEARING

The chair will recognize individuals requesting to address the Board regarding the specific topic of the public hearing. Public hearing comments by any on speaker shall be limited to ten (10) minutes. The Mayor reserves the right to alter time limits and other rules of procedure at the beginning of each Public Hearing.

A. Public Hearing to Close an Unopened, Platted Street near Carver Avenue **#R-18-13**

Vice Mayor Maggie Tuttle moved to open the public hearing on Resolution #R-18-13

The motion was approved by a vote of 5-0.

Attorney Ron Sneed stated the property owners are requesting to close a portion of the unopened, platted street that runs through their property to clean up the plat and property lines. Attorney Sneed stated the unopened street is not currently used except as the driveway to two different homes owned by the petitioner's and does not provide ingress or egress for any other properties on Carver Avenue. The Town has the authority to close dedicated but unopened streets within its jurisdiction on its own motion.

There were no public comments.

Alderman Carlos Showers moved to close the public hearing.

The motion was approved by a vote of 5-0.

Alderman Larry B. Harris moved to approve Resolution #R-18-13 to close the Unopened, Platted Street near Carver Avenue.

The motion was approved by a vote of 5-0.

10. COMMUNICATION FROM STAFF

A. Town Attorney – None at this time.

B. Interim Town Manager – Ron Moore recalled issuing a CodeRed notification for an expected power outage in Town stating the initial notification from Duke Energy advised 500 customers would be without power including Town Hall and after further inquiry staff found that only 130 customers near Vance Avenue were to be affected for the installation of underground utilities. Manager Moore gave an update regarding staffing to the Board of Aldermen and citizens stating interviews will be underway in the coming week for the town manager position. Manager Moore also stated Laurel Mabery was transferred to the Water Department due to her prior experience. Manager Moore stated with regard to the Parks and Recreation Department, the new Senior Center Program Supervisor, Melinda Polites will begin in the next few weeks and comes to the Town with a wealth of experience and knowledge in that area. Manager Moore stated he plans to involve Ms. Polites in recruiting and selection of a part-time assistant to assist with the senior programs when she comes on board. Manager Moore stated he has posted a position for

Recreation Activity Coordinator to assist with outdoor sports and activities. Manager Moore stated he has changed the job descriptions in order to facilitate better work flow in the Recreation Department allowing for more flexibility so employees are not bound by a job description and can perform functions as needed depending on the season. Manager Moore also stated he will be posting an Assistant position in the Recreation Department to assist the staff with scheduling and other necessary tasks. Manager Moore stated the application process for the Recreation Director position has closed and he expects to begin interviews in the next week. Manager Moore also stated the new HR Coordinator, Rhonda Freeman is in place and he is very impressed with the knowledge, skills, and abilities she brings with her and said she is doing an excellent job.
Manager Moore gave a brief update on the 304 Black Mountain Avenue location (new Public Works and Recreation Department location). He stated a fence has been installed staff has been painting and setting up office spaces getting ready for the move. Manager Moore stated the phones and internet will be in place in the next week and he hopes staff can be moved in by the end of the month.

11. COMMUNICATION FROM MAYOR AND BOARD OF ALDERMEN

Mayor Don Collins stated he understands that there seems to be a lot of turnover in the town and stated this reminded him of when his friend Gary Bartlett was appointed as the Public Safety Director. Mayor Collins stated that year 11 police and fire employees left employment in the span of two months. Mayor Collins stated this is not unusual when administration changes and said we will keep moving forward in the right direction.

Alderman Ryan Stone stated on behalf of the Board of Aldermen he is grateful for the contributions Mr. Jeremie Konegni made during his time with the Board and he said he wished Mr. Konegni the best going forward. Alderman Stone addressed some confusion over yard waste removal policies and asked that the website be updated to reflect the brochure information.

Alderman Ryan Stone moved to enter into closed session to discuss personnel matters, as permitted in NCGS § 143.318.11(a)(6) at 7:32 p.m.

The motion was approved by a vote of 5-0

Alderman Ryan Stone moved to return to open session at 7:53 p.m.
The motion was approved by a vote of 5-0.

12. ADJOURNMENT

There being no further business, on a motion made by Vice Mayor Maggie Tuttle and with a vote of 5-0, Mayor Don Collins adjourned the meeting at 7:55 p.m.

ATTEST:

Angela L. Reece, Town Clerk

Don Collins, Mayor

PLANNING DEPARTMENT ANNUAL REPORT

July 2017 – June 2018

By: Jessica Trotman, Director

Overview

- Basic Demographic and Economic Data
- Permitting Activity
- Inspection Activity
- Grants
- Summary of Boards
- Regional Partners
- Ordinances Currently Begin Updated
- Ongoing and Upcoming Projects

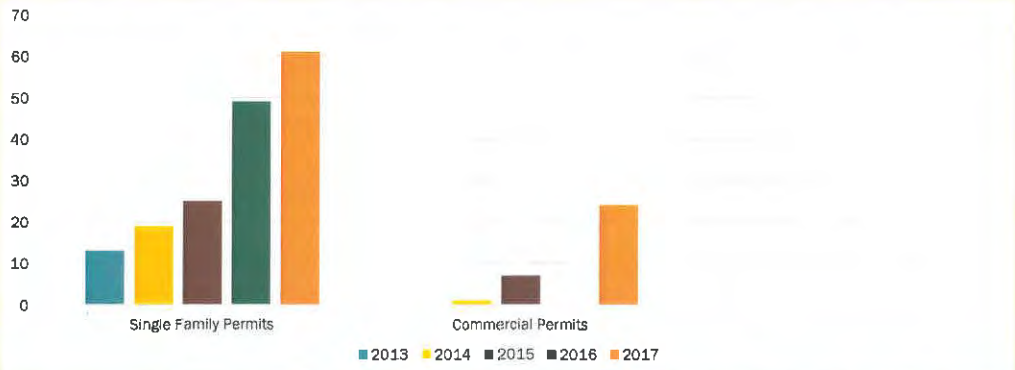
Basic Demographic Data

	Black Mountain	Buncombe County	North Carolina
Population	8,168	257,607	10,273,419
Number of Households	3,648	102,118	4,622,575
Median Age	50.8 years	42.6	38.7 years
Male	46%	48%	48.7%
Female	54%	52%	51.3%

Basic Economic Data

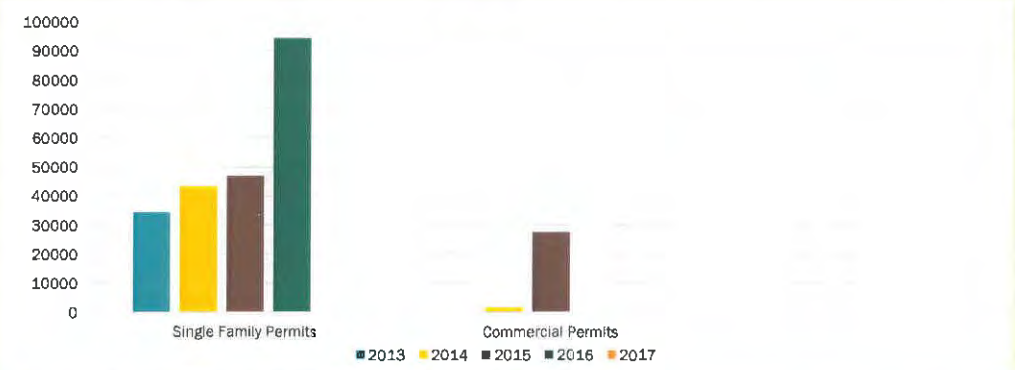
	Black Mountain	Buncombe County	North Carolina
Median Household Income	$41,807	$46,902	$48,205
Poverty Rate	12.1%	13.5%	15.4%
Median Property Value (owner occupied)	$209,900	$198,100	$157,100
Owner Occupied	59.7%	64.2%	64.8%
Rent	40.3%	35.8%	35.2%

Building Permits



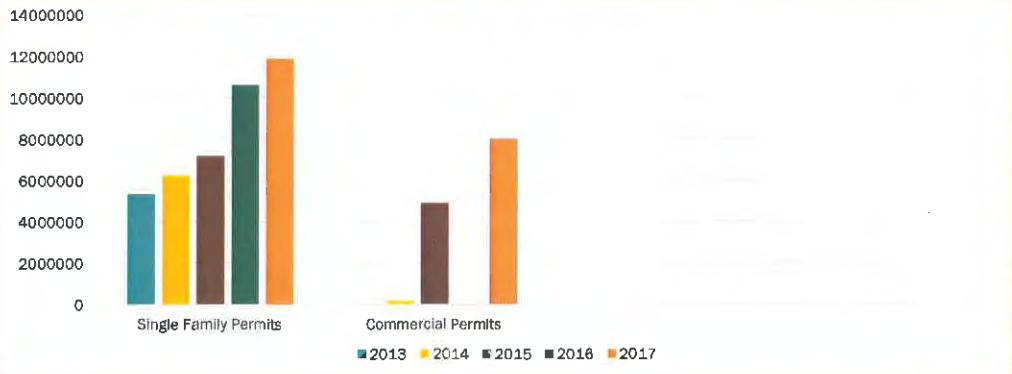
	2013	2014	2015	2016	2017
Single Family Permits	13	19	25	49	61
Commercial Permits	0	1	7	0	24

Building Permit Fees



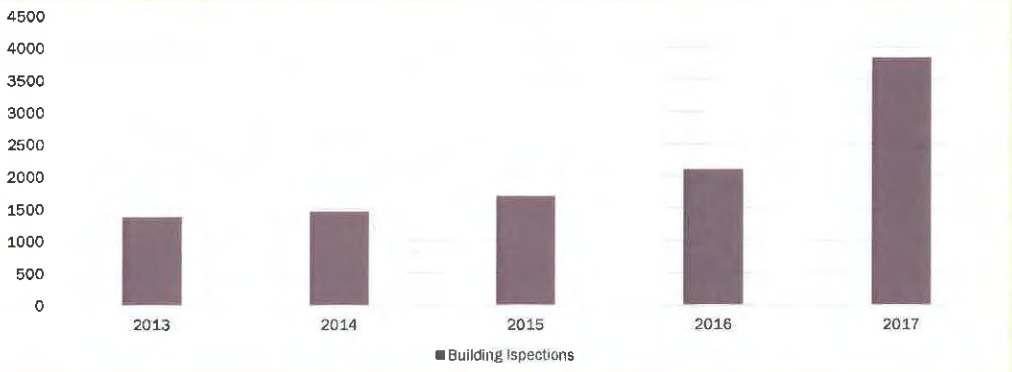
	2013	2014	2015	2016
Single Family Permits	$34,400.24	$43,357.24	$46,885.28	$94,376.02
Commercial Permits	$ -	$1,659.00	$27,538.48	$ -

Building Permit Valuations



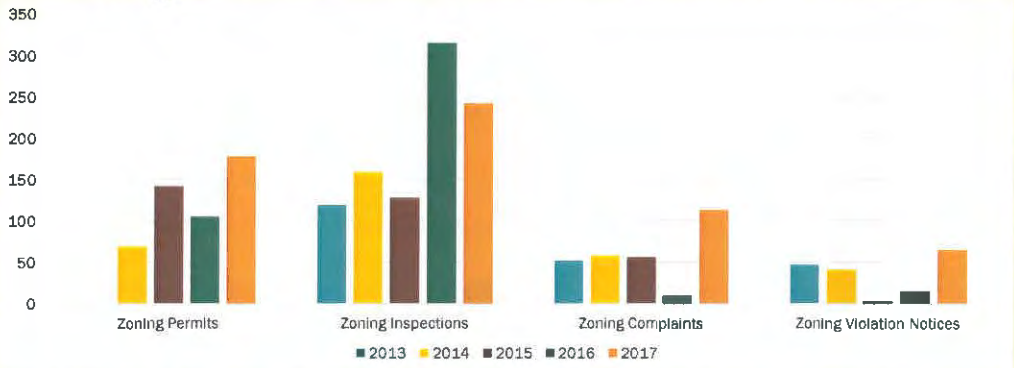
	2013	2014	2015	2016	2017
Single Family	$5,642,562.00	$6,267,924.00	$7,182,000.00	$10,611,646.00	$11,878,580
Commercial	$ -	$188,800.00	$4,894,932.00	$ -	$7,992,482

Building Inspections



	2013	2014	2015	2016	2017
Inspection	1371	1452	1691	2104	3,838

Zoning

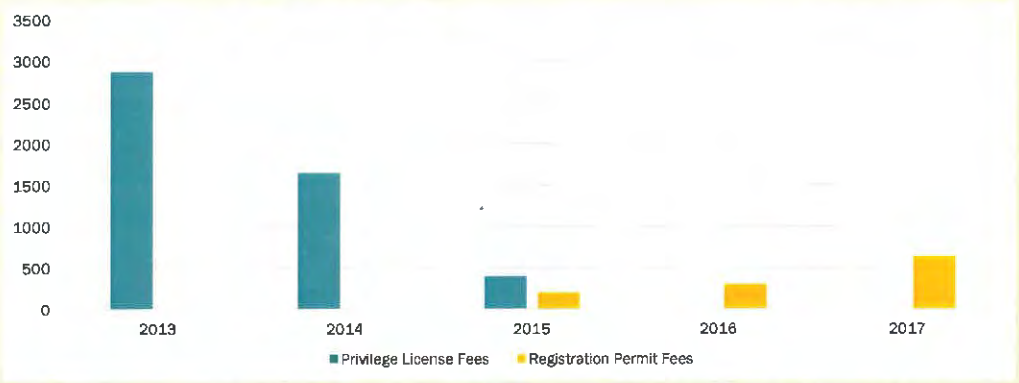


	2013	2014	2015	2016	2017
Zoning Permits	0	69	142	105	178
Zoning Inspections	119	159	158	315	242
Zoning Complaints	52	58	56	10	113
Zoning Violation Notices	47	41	3	15	65

Registration Permits

	2013	2014	2015	2016	2017
Privilege Licenses	105	72	26	0	0
Registration Permits	0	0	10	15	29

Registration Fees



	2013	2014	2015	2016	2017
Privilege Licenses	$2,873.50	$1,648.75	$397.50	0	0
Registration Permits	0	0	$200	$300	$640

Grants

20% Match from Town

Agency	Project Name	Amount
French Broad MPO (FHWA)	Riverwalk Greenway Phase II	$3,000,000
NCDWR 50% Match	Tomahawk Branch Stream Restoration – Phase II	$74,000
French Broad MPO	Parking & Circulation Study	$35,000
Pigeon River Fund	Swannanoa River Engineering Study	$30,000

County have awarded us 400,000 to be used toward Towns Match.

Planning Board Summary

- Approved preliminary plan for Chapman's Cove subdivision (10 single family homes)
- Had a presentation from NCDOT re: I-40 interchange
- Recommended road closure requests for Honeycutt Street and platted right-of-way near Carver Avenue
- Work session to discuss tasks and goals of the board
- Attended training workshop from UNC School of Government at the NC Arboretum

Zoning Board of Adjustment Summary

- Granted 6 variances
- Denied 1 variance
- Issued 1 special use permit (Sweet Birch)
- Overturned Historic Preservations decision regarding the Trestle project
- Upheld staff decision on crematory

Historic Commission Summary

- Approved accessibility additions for 116 Cherry Street
- Approved addition to 208 W. State Street
- Approved landing for Grace Jewelers
- Approved signs for: Mountain Nest and DANG!
- Denied certificate of appropriateness for project at 120 and 128 Broadway Avenue

Partnering Agencies and Community Engagement

- FBRMPO Prioritization Subcommittee
- FBRMPO TCC
- Asheville Regional Housing Commission
- Support DOT's Public Outreach Effort
- Asheville Area Arts Council Grant Committee

Ordinances Currently Being Updated

- Business Registration
- Nuisances
- Signs
- Home Occupations
- Lighting
- Stormwater
- Obstructions

Ongoing and Upcoming Projects

- Blue Ridge Road Small Area Plan
- Downtown Parking and Circulation Study
- Crosswalk Improvements to Downtown (in partnership with NC DOT)
- Cherry Street parking improvement and traffic pattern change
- Tomahawk Branch Phase II stream restoration
- Swannanoa River restoration planning at Veteran's Park
- Flat Creek Greenway repairs
- Riverwalk Greenway, Design and Construction
- On-site stormwater treatment infrastructure
- Updating Greenway master plan
- Preparing up to update the Comprehensive Plan in 2019

QUESTIONS?

J.M. TEAGUE
Engineering & Planning

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REPORT OF FINDINGS
FOR CHERRY STREET
ONE-WAY STUDY

Prepared For:

Jessica Trotman, MSEH

Director of Planning and Development Services

Town of Black Mountain

160 Midland Avenue

Black Mountain, NC 28711

Prepared By:

J.M. Teague Engineering & Planning

525 North Main Street

Waynesville, North Carolina 28786

August 2018

WAYN #0839

INTRODUCTION AND BACKGROUND

The Town of Black Mountain asked J.M. Teague Engineering and Planning to address the traffic flow options from US 70 to Sutton Avenue with the consideration of converting Cherry Street into a One-Way configuration, plus how to improve the business environment and create a safe and comfortable pedestrian environment. This report summarizes the findings of this study. *Figure 1*.

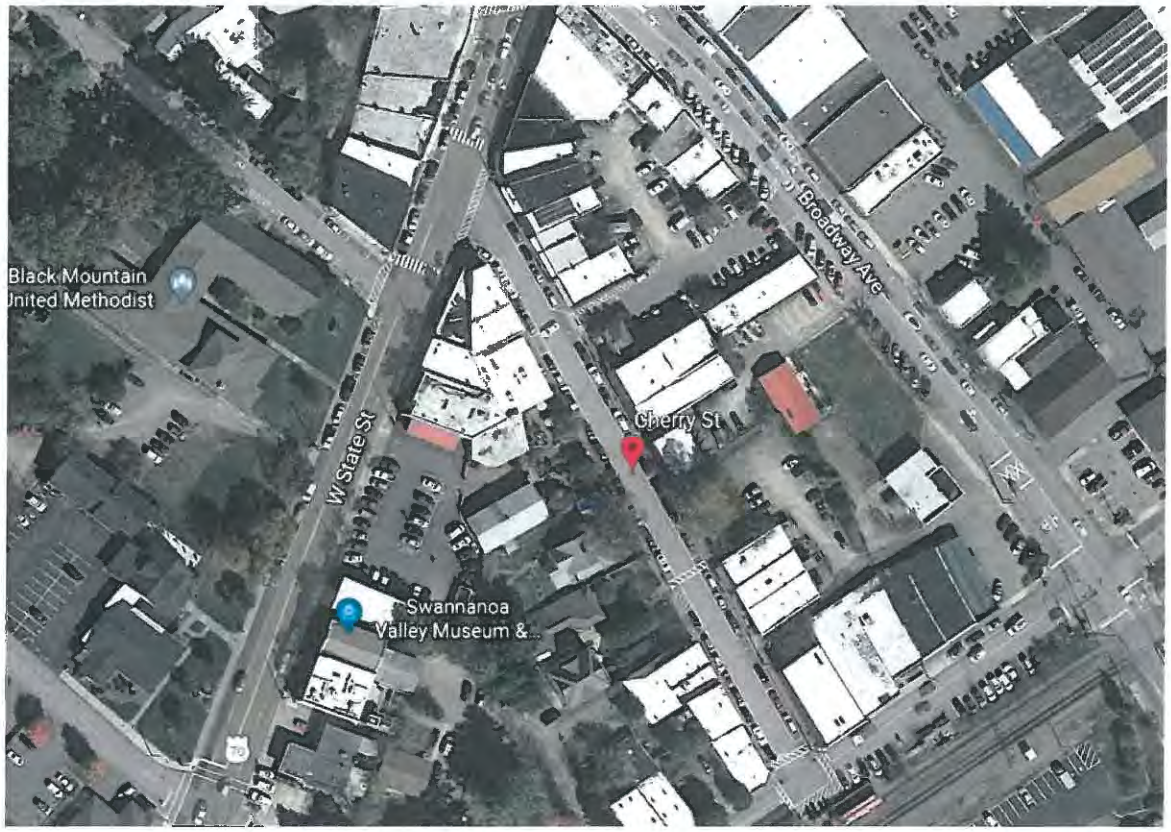

Figure 1 – Site Location

As of now, Cherry Street operates as a two-way street with parallel parking on both sides. Traffic can travel northbound from Sutton Avenue and southbound from US 70. There are three pedestrian crosswalks. Local business owners along with residents have expressed an interest in changing the traffic flow and parking on Cherry Street. Traffic flow, parking, truck loading/unloading, and vehicle/pedestrian interaction are areas that should be addressed in consideration of changing the current configuration.

DATA COLLECTION

In preparation for the one-way analysis, several key data sets were collected. Turning movement counts at two intersections were collected for 13 hours at both ends of Cherry Street. Cameras were installed at the intersection of Cherry Street and Sutton Avenue and at the intersection of Cherry Street and US 70. The camera's collected current traffic flow patterns and pedestrian movements for this study. Several site visits were conducted to observe traffic and pedestrian movements on a common weekday.

As seen from the data collection traffic figures in Appendix A, approximately two-thirds of the traffic enters from US 70 onto Cherry Street traveling southbound. During the 13-hour count, 804 vehicles traveled onto Cherry Street. 270 vehicles entered Cherry Street traveling northbound from Sutton Avenue. Of the 270 vehicles, 124 vehicles made left turns and 146 vehicles made right turns entering from Sutton Avenue. 534 vehicles entered Cherry Street traveling southbound from US 70. Of the 534 vehicles, 265 vehicles made left turns and 269 vehicles made right turns entering from US 70. Peak hours were counted from 7:00 AM – 9:00 AM and 4:00 PM – 6:00 PM. According to the data, there's a slight increase in vehicle movements in the PM peak compared to the AM peak on Cherry Street. During AM peak hours, 19 vehicles entered Cherry Street from Sutton Avenue and 27 vehicles entered Cherry Street from US 70. During PM peak hours, 20 vehicles entered Cherry Street from Sutton Avenue and 46 vehicles entered Cherry Street from US 70. The peak hour data reflects the same pattern as the 13-hour count data, revealing that two-thirds of the traffic enters from US 70 onto Cherry Street and one-third of the traffic enters from Sutton Avenue. This data also demonstrates that two-thirds of the traffic exiting Cherry Street travels southbound onto Sutton Avenue, and one-third of the traffic exiting Cherry Street travels northbound onto US 70. Inclusively, the data shows that within the 13-hour count a total of 804 vehicles entered Cherry Street from the Sutton Avenue and US 70 intersections, and 625 vehicles exited Cherry Street into Sutton Avenue and US 70 intersections. 115 vehicles exited Cherry Street through an eastbound one-way mid-block parking lot near US 70. And 3 vehicles exited through an eastbound one-way parking lot near Sutton Avenue.

The pedestrian data shows that within the 13-hour count a total of 165 pedestrians cross onto Cherry Street from US 70 and Sutton Avenue. 77 pedestrians entered northbound, from Sutton Avenue, while 88 pedestrians entered southbound, from US 70. Within the 13-hour count, 181 pedestrians crossed Cherry Street at US 70, while 206 pedestrians crossed Cherry Street, along Sutton Avenue.

Field Observations and Measurements

Field observations were collected of the current traffic conditions on Cherry Street as a two-way. Currently, traffic is able to park and travel bidirectional northbound and southbound on Cherry Street. There are two one-way roads that exit off from Cherry Street onto Route 9. When vehicles travel northbound and southbound concurrently, the

vehicles come into close proximity to one another due to the 9-foot-wide parallel parking on each side of Cherry Street. Each parking space is on average 9-foot wide by 21 feet long. There are approximately 42 parallel parking spaces that align the street. Cherry Street is approximately 556 feet long. There are three pedestrian crosswalks. One is at each end of Cherry Street and the third is just south of midblock.

As previously mentioned, there are heavy left turns off US 70 onto Cherry Street. Due to this heavy traffic pattern, traffic ques were observed from the intersection of Cherry Street and US 70 to the traffic signal at the intersection of Route 9 and US 70. The left-hand turns onto Cherry Street are delaying the flow of traffic on US 70 and also creating a less efficient green phase for the traffic signal at Route 9 and US 70. The other 269 vehicles that are entering Cherry Street traveling southbound are making right-hand turns onto Cherry Street from US 70. These right-hand turns are also slowing traffic approaching the signal which also decreases the signal efficiency in moving traffic through the intersection.

Several safety issues were observed concerning pedestrians, deliveries, and parking along Cherry Street. A Fed Express truck was seen parked on US 70 westbound across from Cherry Street. The driver had to cross US 70 to deliver items to Cherry Street. Similarly, a delivery truck was parked in the middle of Cherry Street while traffic had to go around it to continue traveling. There are pavement markings and space available for delivery trucks to park and unload on the one-way that is closer to US 70. This is the only space observed that was designated for unloading zones along Cherry Street.

Other observations made included a pedestrian crossing US 70 within the crosswalk from Cherry Street had difficulty avoiding on-coming traffic. The one-ways off Cherry Street are being used to make U-turns. Vehicles also made mid-street U-turns or traveled in reversed to enter available parallel parking space, causing traffic delays. Large trucks parked partially on the sidewalks to make deliveries.

ASSESSMENT AND RECOMMENDATIONS

This study was conducted to determine the most appropriate traffic flow pattern for Cherry Street. There were three potential traffic patterns in consideration during this study. The current two-way lane configuration, one-way southbound traffic flow, and one-way northbound traffic flow. The local business owners have expressed a desire to improve parking and travel on Cherry Street and a one-way configuration may provide an answer.

The current two-way parallel parking traffic pattern is convenient for bidirectional use, but the traffic pattern is hazardous to vehicles and pedestrians. It also reduces traffic signal efficiency, increases confusion and delays at the traffic signal and adjacent roadways. The behavior of the pedestrians and vehicles discussed earlier creates safety concerns for drivers as well as pedestrians crossing the road. The lack of loading zones for delivery trucks puts vehicles and pedestrians at risk and also delays traffic. The parallel parking also interrupts traffic flow and harms the safety of vehicles and pedestrians.

Converting Cherry Street into a one-way southbound configuration is a consideration. The data demonstrate that two-thirds of the traffic enters onto Cherry Street from this direction. The one-third that would normally enter from Sutton Avenue would be rerouted US 70. The increase in traffic would further congest the signalized intersection at Cherry Street and US 70.

If Cherry Street were turned into a one-way northbound configuration, traffic would continue to exit onto US 70 with right turns only. The traffic delay on US 70 would cease from the US 70 westbound left-hand turns. A consideration to this option is that if traffic on Cherry Street were to only exit northbound, vehicles queuing down Cherry Street could create a problem for vehicles that park within the first 130 feet of the intersection. Having loading zones in those spaces would be a beneficial solution, considering unloading zones are needed on Cherry Street. If Cherry Street is turned into a one-way configuration, trucks will block traffic if they are using the street to unload. The traffic phasing from the Dougherty Street and US 70 traffic signal should allow breaks for right-hand turns to be made onto US 70 eastbound from Cherry Street, leaving little queue on Cherry Street. Also, changing Cherry Street to one-way would increase traffic on the one-way exits from Cherry Street. This would add traffic onto Route 9 and redirect traffic onto other adjacent roads. This increased traffic on the one-way cut through streets is not desirable but is preferable to traffic interference with the signal at US 70.

Other incentives of having Cherry Street as a one-way, it would allow for diagonal parking spaces on one side of the street. Also, with consideration of adding loading zones and pedestrian crosswalks, there would be more parking spaces than there is currently.

From a traffic engineering perspective, converting Cherry Street into a one-way northbound configuration is the best way to manage the ongoing traffic on Cherry Street and US 70. As stated earlier, the behavior of the pedestrians and vehicles on Cherry Street as a two-way configuration is dangerous. Converting Cherry Street into a one-way would eliminate mid-street U-turns and reverse travel. Pedestrians would only have to watch for traffic traveling one-way, making it safer through less pedestrian and vehicle interaction. The queuing on US 70 westbound would cease without left turning from Cherry Street, creating a safer traffic pattern at the Cherry Street and US 70 intersection with one-way configuration. There could be diagonal parking and loading zones that would make it a safer driver and pedestrian environment.

Overall, Cherry Street operating as a one-way northbound street would best promote safety when considering the three current possibilities. In the future, it is recommended that the Town consider options for a pedestrian mall on Cherry Street. This option would need to be a part of a larger study or overall vision strategy for the Town where parking, traffic flow, and pedestrian management are considered simultaneously.

Appendix A

Traffic Diagram Counts

General Notes

EXISTING TRAFFIC

J.M. TEAGUE
Engineering & Planning

Waynesville, NC
525 North Main Street
Waynesville, NC 28786
(P) 828.456.3363
(F) 828.456.8797

Knoxville, TN
234 Morrell Road
Box 322
Knoxville, TN 37919
(P) 865.661.2810

Patience Stopp	05-24-18
Drawing By	Date
Jason Fulton, EI	08-02-18
Reviewed By	Date
Revised	Date

Prepared For:

Town of Black Mountain
160 Midland Avenue
Black Mountain, NC 28711

Project Name and Address

Cherry Street One-Way Study
Black Mountain, NC

Project: WAYN 0839	Sheet: 1
Date: 08/02/2018	
Scale: Not to Scale	

Appendix B

Turn Movement Count Reports

J.M. Teague Engineering & Planning

525 N. Main Street, Waynesville, NC 28786
828-456-8383

File Name : Cherry St @ US 70 - Existing
Site Code : 051718
Start Date : 5/17/2018
Page No : 1

Groups Printed- PV - Duals - TTST - Twins

	Southbound					West State Street Westbound					Cherry Street Northbound					West State Street Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	0	0	0	0	1	49	0	0	50	0	0	0	0	0	0	18	0	0	18	68
06:15 AM	0	0	0	0	0	1	55	0	0	56	0	0	0	0	0	0	12	0	0	12	68
06:30 AM	0	0	0	0	0	1	69	0	0	70	0	0	0	0	0	0	24	0	0	24	94
06:45 AM	0	0	0	0	0	1	82	0	0	83	0	0	0	1	1	0	21	1	0	22	106
Total	0	0	0	0	0	4	255	0	0	259	0	0	0	1	1	0	75	1	0	76	336
07:00 AM	0	0	0	0	0	2	70	0	0	72	0	0	0	1	1	0	28	0	0	28	101
07:15 AM	0	0	0	0	0	2	106	0	0	108	0	0	0	0	0	0	67	1	0	68	176
07:30 AM	0	0	0	0	0	6	129	0	0	135	0	0	1	0	1	0	111	4	0	115	251
07:45 AM	0	0	0	0	0	3	124	0	1	128	0	0	0	0	0	0	82	6	0	88	216
Total	0	0	0	0	0	13	429	0	1	443	0	0	1	1	2	0	288	11	0	299	744
08:00 AM	0	0	0	0	0	3	97	0	0	100	0	0	3	0	3	0	60	2	0	62	165
08:15 AM	0	0	0	0	0	4	84	0	0	88	0	0	3	0	3	0	57	2	0	59	150
08:30 AM	0	0	0	0	0	3	84	0	0	87	1	0	3	0	4	0	55	2	0	57	148
08:45 AM	0	0	0	0	0	5	83	0	0	88	0	0	2	0	2	0	62	7	0	69	159
Total	0	0	0	0	0	15	348	0	0	363	1	0	11	0	12	0	234	13	0	247	622
09:00 AM	0	0	0	0	0	5	87	0	0	92	1	0	0	0	1	0	54	1	0	55	148
09:15 AM	0	0	0	0	0	7	84	0	0	91	2	0	4	2	8	0	54	2	0	56	155
09:30 AM	0	0	0	0	0	1	75	0	0	76	0	0	3	0	3	0	58	1	0	59	138
09:45 AM	0	0	0	0	0	3	79	0	0	82	0	0	2	4	6	0	71	7	0	78	166
Total	0	0	0	0	0	16	325	0	0	341	3	0	9	6	18	0	237	11	0	248	607
10:00 AM	0	0	0	0	0	3	66	0	0	69	0	0	2	2	4	0	60	2	0	62	135
10:15 AM	0	0	0	0	0	4	79	0	0	83	0	0	3	2	5	0	60	4	0	64	152
10:30 AM	0	0	0	0	0	2	68	0	0	70	0	0	4	6	10	0	69	4	0	73	153
10:45 AM	0	0	0	0	0	4	92	0	0	96	0	0	2	4	6	0	55	6	0	61	163
Total	0	0	0	0	0	13	305	0	0	318	0	0	11	14	25	0	244	16	0	260	603
11:00 AM	0	0	0	0	0	4	77	0	0	81	0	0	5	3	8	0	76	4	0	80	169
11:15 AM	0	0	0	0	0	13	80	0	0	93	2	0	2	8	12	0	83	7	0	90	195
11:30 AM	0	0	0	0	0	4	103	0	0	107	0	0	5	6	11	0	77	12	0	89	207
11:45 AM	0	0	0	0	0	10	78	0	0	88	0	0	8	4	12	0	78	9	2	89	189
Total	0	0	0	0	0	31	338	0	0	369	2	0	20	21	43	0	314	32	2	348	760
12:00 PM	0	0	0	0	0	15	96	0	0	111	2	0	7	2	11	0	101	6	4	111	233
12:15 PM	0	0	0	0	0	8	99	0	0	107	1	0	2	4	7	0	111	11	0	122	236
12:30 PM	0	0	0	0	0	4	115	0	0	119	2	0	8	5	15	0	74	7	0	81	215
12:45 PM	0	0	0	0	0	8	72	0	2	82	0	0	2	12	14	0	64	8	3	75	171
Total	0	0	0	0	0	35	382	0	2	419	5	0	19	23	47	0	350	32	7	389	855
01:00 PM	0	0	0	0	0	5	85	0	5	95	1	0	5	5	11	0	82	13	12	107	213
01:15 PM	0	0	0	0	0	7	111	0	1	119	0	0	7	13	20	0	95	7	0	102	241
01:30 PM	0	0	0	0	0	9	97	0	0	106	0	0	5	5	10	0	106	6	1	113	229
01:45 PM	0	0	0	0	0	5	100	0	0	105	2	0	6	3	11	0	92	4	3	99	215
Total	0	0	0	0	0	26	393	0	6	425	3	0	23	26	52	0	375	30	16	421	898
02:00 PM	0	0	0	0	0	2	102	0	0	104	0	0	3	5	8	0	92	5	6	103	215
02:15 PM	0	0	0	0	0	3	109	0	2	114	0	0	9	11	20	0	110	4	2	116	250
02:30 PM	0	0	0	0	0	4	107	0	0	111	0	0	4	7	11	0	107	10	0	117	239
02:45 PM	0	0	0	0	0	12	111	0	1	124	0	0	4	10	14	0	101	8	6	115	253
Total	0	0	0	0	0	21	429	0	3	453	0	0	20	33	53	0	410	27	14	451	957

J.M. Teague Engineering & Planning

525 N. Main Street, Waynesville, NC 28786
828-456-8383

File Name : Cherry St @ US 70 - Existing
Site Code : 051718
Start Date : 5/17/2018
Page No : 2

Groups Printed- PV - Duals - TTST - Twins

	Southbound					West State Street Westbound					Cherry Street Northbound					West State Street Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	0	0	0	0	0	11	115	0	2	128	1	0	1	1	3	0	119	5	4	128	259
03:15 PM	0	0	0	0	0	4	89	0	0	93	0	0	4	8	12	0	148	5	2	155	260
03:30 PM	0	0	0	0	0	4	94	0	0	98	0	0	4	8	12	0	123	4	0	127	237
03:45 PM	0	0	0	0	0	7	110	0	0	117	0	0	7	3	10	0	128	8	2	138	265
Total	0	0	0	0	0	26	408	0	2	436	1	0	16	20	37	0	518	22	8	548	1021
04:00 PM	0	0	0	0	0	7	93	0	0	100	0	0	3	3	6	0	103	5	0	108	214
04:15 PM	0	0	0	0	0	2	93	0	4	99	0	0	7	2	9	0	108	7	6	121	229
04:30 PM	0	0	0	0	0	4	79	0	0	83	0	0	2	8	10	0	139	7	0	146	239
04:45 PM	0	0	0	0	0	7	102	0	0	109	0	0	1	0	1	0	121	7	0	128	238
Total	0	0	0	0	0	20	367	0	4	391	0	0	13	13	26	0	471	26	6	503	920
05:00 PM	0	0	0	0	0	5	85	0	0	90	0	0	3	2	5	0	109	8	0	117	212
05:15 PM	0	0	0	0	0	6	97	0	0	103	1	0	5	4	10	0	100	4	5	109	222
05:30 PM	0	0	0	0	0	8	87	0	0	95	0	0	4	9	13	0	107	3	2	112	220
05:45 PM	0	0	0	0	0	6	93	0	0	99	1	0	2	1	4	0	83	12	2	97	200
Total	0	0	0	0	0	25	362	0	0	387	2	0	14	16	32	0	399	27	9	435	854
06:00 PM	0	0	0	0	0	8	75	0	0	83	0	0	7	2	9	0	96	8	1	105	197
06:15 PM	0	0	0	0	0	3	88	0	1	92	0	0	4	0	4	0	77	5	1	83	179
06:30 PM	0	0	0	0	0	2	80	0	0	82	1	0	1	1	3	0	74	5	1	80	165
06:45 PM	0	0	0	0	0	7	59	0	2	68	0	0	2	4	6	0	73	3	2	78	152
Total	0	0	0	0	0	20	302	0	3	325	1	0	14	7	22	0	320	21	5	346	693
Grand Total	0	0	0	0	0	265	4643	0	21	4929	18	0	171	181	370	0	4235	269	67	4571	9870
Apprch %	0	0	0	0		5.4	94.2	0	0.4		4.9	0	46.2	48.9		0	92.6	5.9	1.5		
Total %	0	0	0	0	0	2.7	47	0	0.2	49.9	0.2	0	1.7	1.8	3.7	0	42.9	2.7	0.7	46.3	
PV	0	0	0	0	0	257	4456	0	21	4734	17	0	164	181	362	0	4046	265	67	4378	9474
% PV	0	0	0	0	0	97	96	0	100	96	94.4	0	95.9	100	97.8	0	95.5	98.5	100	95.8	96
Duals	0	0	0	0	0	7	119	0	0	126	1	0	7	0	8	0	112	4	0	116	250
% Duals	0	0	0	0	0	2.6	2.6	0	0	2.6	5.6	0	4.1	0	2.2	0	2.6	1.5	0	2.5	2.5
TTST	0	0	0	0	0	1	68	0	0	69	0	0	0	0	0	0	77	0	0	77	146
% TTST	0	0	0	0	0	0.4	1.5	0	0	1.4	0	0	0	0	0	0	1.8	0	0	1.7	1.5
Twins	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Twins	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

J.M. Teague Engineering & Planning

525 N. Main Street, Waynesville, NC 28786
828-456-8383

File Name : Cherry St @ US 70 - Existing
Site Code : 051718
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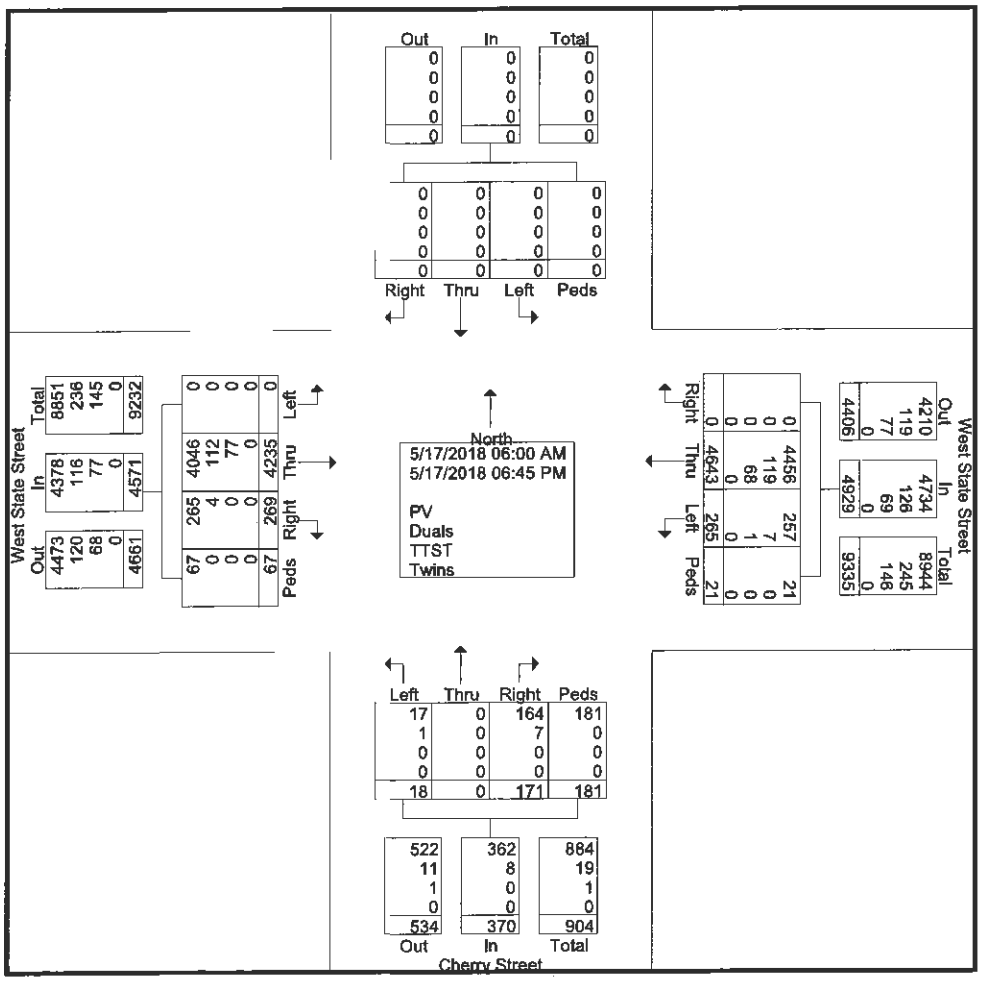
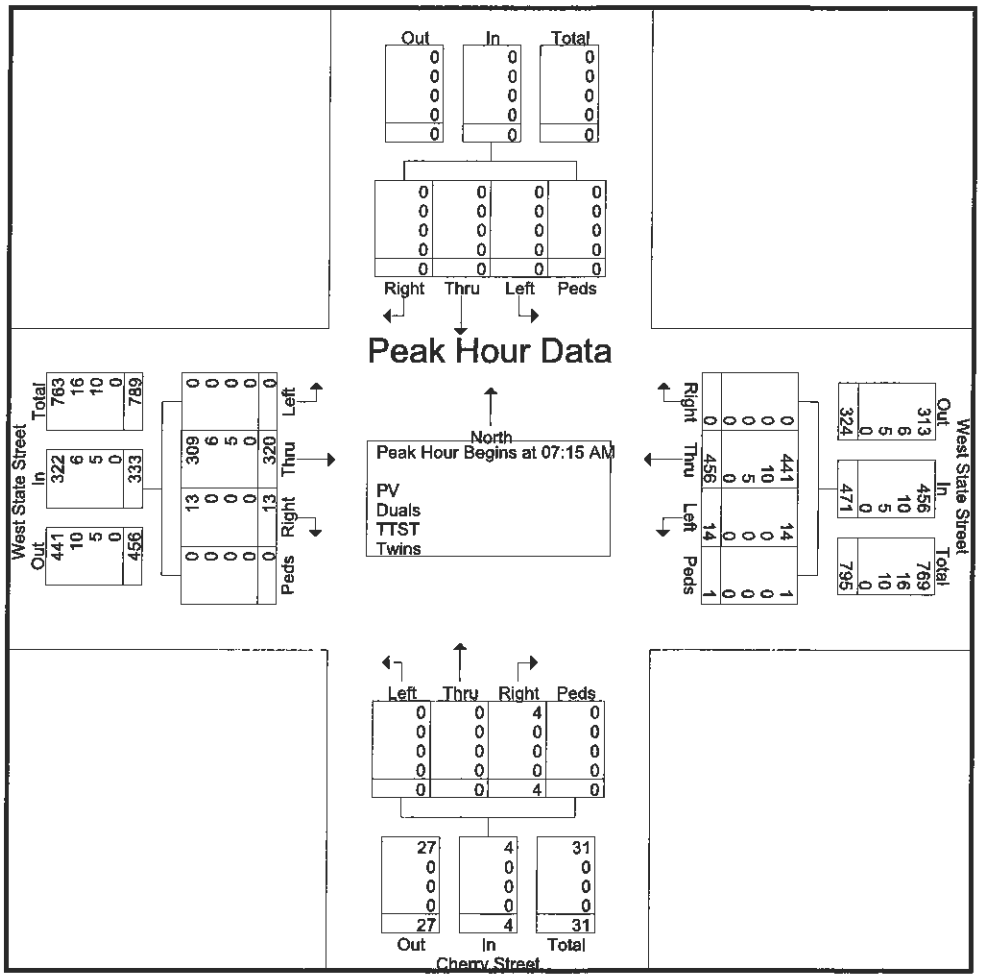


J.M. Teague Engineering & Planning
525 N. Main Street, Waynesville, NC 28786
828-456-8383

File Name : Cherry St @ US 70 - Existing
Site Code : 051718
Start Date : 5/17/2018
Page No : 4

	Southbound					West State Street Westbound					Cherry Street Northbound					West State Street Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	0	0	0	0	0	2	106	0	0	108	0	0	0	0	0	0	67	1	0	68	176
07:30 AM	0	0	0	0	0	6	129	0	0	135	0	0	1	0	1	0	111	4	0	115	251
07:45 AM	0	0	0	0	0	3	124	0	1	128	0	0	0	0	0	0	82	6	0	88	216
08:00 AM	0	0	0	0	0	3	97	0	0	100	0	0	3	0	3	0	60	2	0	62	165
Total Volume	0	0	0	0	0	14	456	0	1	471	0	0	4	0	4	0	320	13	0	333	808
% App. Total	0	0	0	0		3	96.8	0	0.2		0	0	100	0		0	96.1	3.9	0		
PHF	.000	.000	.000	.000	.000	.583	.884	.000	.250	.872	.000	.000	.333	.000	.333	.000	.721	.542	.000	.724	.805
PV	0	0	0	0	0	14	441	0	1	456	0	0	4	0	4	0	309	13	0	322	782
% PV	0	0	0	0	0	100	96.7	0	100	96.8	0	0	100	0	100	0	96.6	100	0	96.7	96.8
Duals	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	6	0	0	6	16
% Duals	0	0	0	0	0	0	2.2	0	0	2.1	0	0	0	0	0	0	1.9	0	0	1.8	2.0
TTST	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	5	0	0	5	10
% TTST	0	0	0	0	0	0	1.1	0	0	1.1	0	0	0	0	0	0	1.6	0	0	1.5	1.2
Twins	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Twins	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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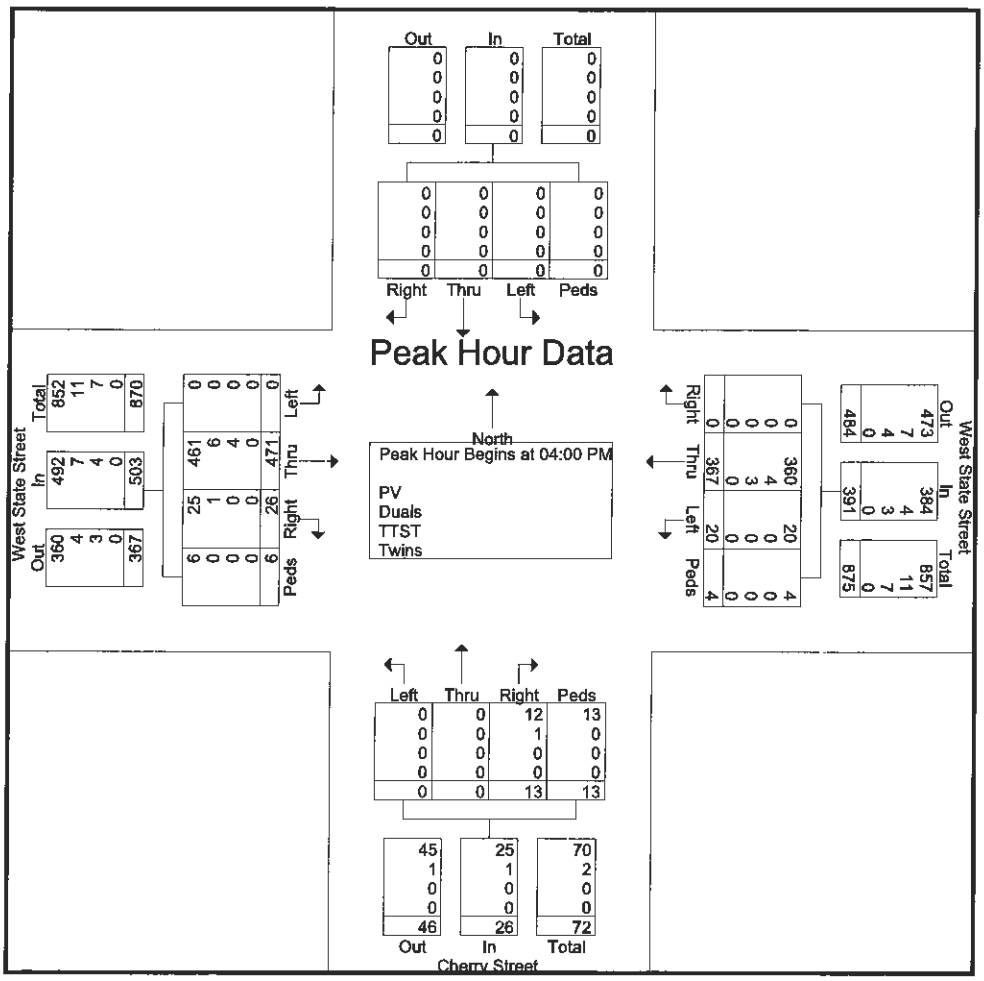
525 N. Main Street, Waynesville, NC 28786
828-456-8383

File Name : Cherry St @ US 70 - Existing
Site Code : 051718
Start Date : 5/17/2018
Page No : 5

	Southbound					West State Street Westbound					Cherry Street Northbound					West State Street Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	0	0	0	0	7	93	0	0	100	0	0	3	3	6	0	103	5	0	108	214
04:15 PM	0	0	0	0	0	2	93	0	4	99	0	0	7	2	9	0	108	7	6	121	229
04:30 PM	0	0	0	0	0	4	79	0	0	83	0	0	2	8	10	0	139	7	0	146	239
04:45 PM	0	0	0	0	0	7	102	0	0	109	0	0	1	0	1	0	121	7	0	128	238
Total Volume	0	0	0	0	0	20	367	0	4	391	0	0	13	13	26	0	471	26	6	503	920
% App. Total	0	0	0	0		5.1	93.9	0	1		0	0	50	50		0	93.6	5.2	1.2		
PHF	.000	.000	.000	.000	.000	.714	.900	.000	.250	.897	.000	.000	.464	.406	.650	.000	.847	.929	.250	.861	.962
PV	0	0	0	0	0	20	360	0	4	384	0	0	12	13	25	0	461	25	6	492	901
% PV	0	0	0	0	0	100	98.1	0	100	98.2	0	0	92.3	100	96.2	0	97.9	96.2	100	97.8	97.9
Duals	0	0	0	0	0	0	4	0	0	4	0	0	1	0	1	0	6	1	0	7	12
% Duals	0	0	0	0	0	0	1.1	0	0	1.0	0	0	7.7	0	3.8	0	1.3	3.8	0	1.4	1.3
TTST	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	4	0	0	4	7
% TTST	0	0	0	0	0	0	0.8	0	0	0.8	0	0	0	0	0	0	0.8	0	0	0.8	0.8
Twins	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Twins	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



J.M. Teague Engineering & Planning

525 N. Main Street, Waynesville, NC 28786
828-456-8383

File Name : Cherry St @ Sutton Ave - Existing
Site Code : 051718
Start Date : 5/17/2018
Page No : 1

Groups Printed- PV - Duals - TTST - Twins

	Cherry Street Southbound					Sutton Avenue Westbound					Northbound					Sutton Avenue Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	3
06:15 AM	0	0	1	0	1	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	6
06:30 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
06:45 AM	2	0	0	0	2	0	2	1	0	3	0	0	0	0	0	0	0	0	0	0	5
Total	4	0	1	0	5	0	8	1	0	9	0	0	0	0	0	0	1	0	0	1	15
07:00 AM	0	0	2	0	2	0	5	0	0	5	0	0	0	0	0	0	1	0	0	1	8
07:15 AM	0	0	4	0	4	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	10
07:30 AM	6	0	3	0	9	0	7	0	0	7	0	0	0	0	0	1	2	0	0	3	19
07:45 AM	4	0	2	1	7	0	7	0	0	7	0	0	0	0	0	0	4	0	0	4	18
Total	10	0	11	1	22	0	22	0	0	22	0	0	0	0	0	1	10	0	0	11	55
08:00 AM	1	0	0	0	1	0	6	1	0	7	0	0	0	0	0	4	6	0	1	11	19
08:15 AM	2	0	3	1	6	0	14	0	1	15	0	0	0	0	0	3	9	0	1	13	34
08:30 AM	2	0	1	0	3	0	9	1	1	11	0	0	0	0	0	4	7	0	0	11	25
08:45 AM	5	0	2	0	7	0	10	5	0	15	0	0	0	0	0	1	7	0	0	8	30
Total	10	0	6	1	17	0	39	7	2	48	0	0	0	0	0	12	29	0	2	43	108
09:00 AM	1	0	7	2	10	0	12	1	0	13	0	0	0	0	0	1	8	0	0	9	32
09:15 AM	3	0	0	2	5	0	7	4	0	11	0	0	0	0	0	4	9	0	0	13	29
09:30 AM	3	0	1	1	5	0	14	2	2	18	0	0	0	0	0	3	14	0	0	17	40
09:45 AM	2	0	3	0	5	0	12	1	0	13	0	0	0	0	0	1	9	0	0	10	28
Total	9	0	11	5	25	0	45	8	2	55	0	0	0	0	0	9	40	0	0	49	129
10:00 AM	1	0	3	3	7	0	12	2	0	14	0	0	0	0	0	1	11	0	0	12	33
10:15 AM	2	0	3	3	8	0	6	3	0	9	0	0	0	0	0	2	8	0	0	10	27
10:30 AM	4	0	1	4	9	0	19	1	0	20	0	0	0	0	0	2	10	0	2	14	43
10:45 AM	3	0	3	0	6	0	10	0	0	10	0	0	0	0	0	4	7	0	0	11	27
Total	10	0	10	10	30	0	47	6	0	53	0	0	0	0	0	9	36	0	2	47	130
11:00 AM	4	0	1	7	12	0	11	5	1	17	0	0	0	0	0	3	13	0	5	21	50
11:15 AM	9	0	5	5	19	0	20	2	0	22	0	0	0	0	0	2	15	0	2	19	60
11:30 AM	7	0	5	11	23	0	19	5	0	24	0	0	0	0	0	3	9	0	0	12	59
11:45 AM	9	0	6	14	29	0	15	3	0	18	0	0	0	0	0	6	9	0	1	16	63
Total	29	0	17	37	83	0	65	15	1	81	0	0	0	0	0	14	46	0	8	68	232
12:00 PM	10	0	8	2	20	0	11	4	2	17	0	0	0	0	0	8	12	0	3	23	60
12:15 PM	8	0	6	7	21	0	24	7	0	31	0	0	0	0	0	1	9	0	1	11	63
12:30 PM	7	0	3	10	20	0	22	6	0	28	0	0	0	0	0	4	14	0	0	18	66
12:45 PM	6	0	10	4	20	0	25	1	0	26	0	0	0	0	0	4	13	0	4	21	67
Total	31	0	27	23	81	0	82	18	2	102	0	0	0	0	0	17	48	0	8	73	256
01:00 PM	11	0	4	8	23	0	19	4	0	23	0	0	0	0	0	5	13	0	1	19	65
01:15 PM	6	0	6	4	16	0	16	6	0	22	0	0	0	0	0	3	9	0	6	18	56
01:30 PM	12	0	3	7	22	0	22	5	0	27	0	0	0	0	0	1	18	0	0	19	68
01:45 PM	7	0	1	11	19	0	23	4	0	27	0	0	0	0	0	4	11	0	5	20	66
Total	36	0	14	30	80	0	80	19	0	99	0	0	0	0	0	13	51	0	12	76	255
02:00 PM	3	0	4	13	20	0	18	2	0	20	0	0	0	0	0	3	4	0	3	10	50
02:15 PM	3	0	2	10	15	0	13	8	0	21	0	0	0	0	0	0	13	0	1	14	50
02:30 PM	10	0	2	1	13	0	18	4	0	22	0	0	0	0	0	3	5	0	2	10	45
02:45 PM	10	0	6	4	20	0	18	6	0	24	0	0	0	0	0	1	11	0	1	13	57
Total	26	0	14	28	68	0	67	20	0	87	0	0	0	0	0	7	33	0	7	47	202

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Groups Printed- PV - Duals - TTST - Twins

	Cherry Street Southbound					Sutton Avenue Westbound					Northbound					Sutton Avenue Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	8	0	4	8	20	0	15	2	0	17	0	0	0	0	0	1	11	0	2	14	51
03:15 PM	6	0	2	5	13	0	18	2	0	20	0	0	0	0	0	1	18	0	10	29	62
03:30 PM	10	0	4	7	21	0	17	5	1	23	0	0	0	0	0	2	20	0	3	25	69
03:45 PM	6	0	8	2	16	0	19	3	0	22	0	0	0	0	0	4	18	0	0	22	60
Total	30	0	18	22	70	0	69	12	1	82	0	0	0	0	0	8	67	0	15	90	242
04:00 PM	3	0	4	12	19	0	18	2	0	20	0	0	0	0	0	3	4	0	3	10	49
04:15 PM	3	0	5	3	11	0	9	4	0	13	0	0	0	0	0	5	11	0	0	16	40
04:30 PM	7	0	5	3	15	0	19	2	0	21	0	0	0	0	0	2	17	0	0	19	55
04:45 PM	7	0	2	5	14	0	21	2	0	23	0	0	0	0	0	1	15	0	3	19	56
Total	20	0	16	23	59	0	67	10	0	77	0	0	0	0	0	11	47	0	6	64	200
05:00 PM	6	0	3	6	15	0	16	4	0	20	0	0	0	0	0	2	10	0	4	16	51
05:15 PM	5	0	3	8	16	0	15	3	0	18	0	0	0	0	0	4	4	0	1	9	43
05:30 PM	2	0	3	2	7	0	17	5	0	22	0	0	0	0	0	4	8	0	0	12	41
05:45 PM	5	0	9	0	14	0	11	7	0	18	0	0	0	0	0	5	5	0	1	11	43
Total	18	0	18	16	52	0	59	19	0	78	0	0	0	0	0	15	27	0	6	48	178
06:00 PM	10	0	6	0	16	0	14	5	1	20	0	0	0	0	0	3	9	0	1	13	49
06:15 PM	6	0	2	1	9	0	8	3	0	11	0	0	0	0	0	4	8	0	1	13	33
06:30 PM	10	0	1	9	20	0	14	1	0	15	0	0	0	0	0	0	6	0	0	6	41
06:45 PM	4	0	1	0	5	0	12	2	0	14	0	0	0	0	0	1	6	0	0	7	26
Total	30	0	10	10	50	0	48	11	1	60	0	0	0	0	0	8	29	0	2	39	149
Grand Total	263	0	173	206	642	0	698	146	9	853	0	0	0	0	0	124	464	0	68	656	2151
Apprch %	41	0	26.9	32.1		0	81.8	17.1	1.1		0	0	0	0		18.9	70.7	0	10.4		
Total %	12.2	0	8	9.6	29.8	0	32.5	6.8	0.4	39.7	0	0	0	0	0	5.8	21.6	0	3.2	30.5	
PV	257	0	167	206	630	0	683	141	9	833	0	0	0	0	0	121	449	0	68	638	2101
% PV	97.7	0	96.5	100	98.1	0	97.9	96.6	100	97.7	0	0	0	0	0	97.6	96.8	0	100	97.3	97.7
Duals	6	0	5	0	11	0	12	5	0	17	0	0	0	0	0	3	13	0	0	16	44
% Duals	2.3	0	2.9	0	1.7	0	1.7	3.4	0	2	0	0	0	0	0	2.4	2.8	0	0	2.4	2
TTST	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	6
% TTST	0	0	0.6	0	0.2	0	0.4	0	0	0.4	0	0	0	0	0	0	0.4	0	0	0.3	0.3
Twins	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Twins	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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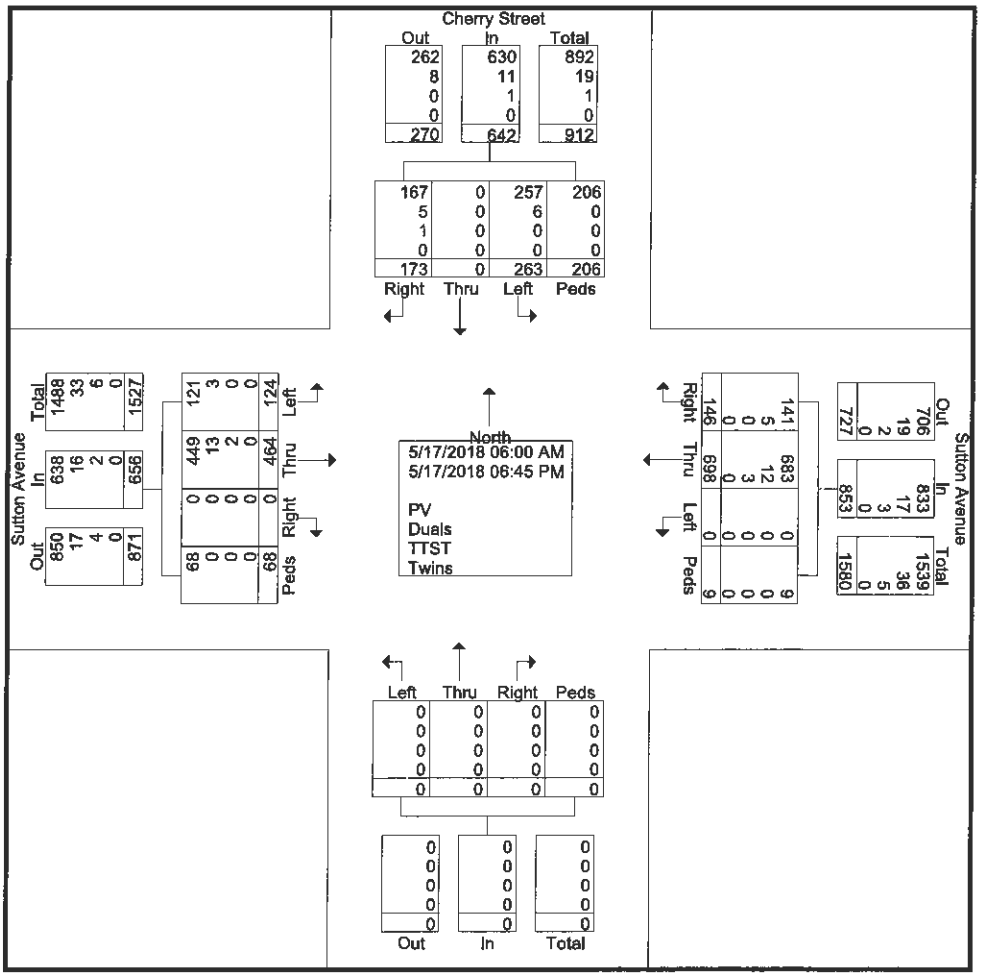

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File Name : Cherry St @ Sutton Ave - Existing
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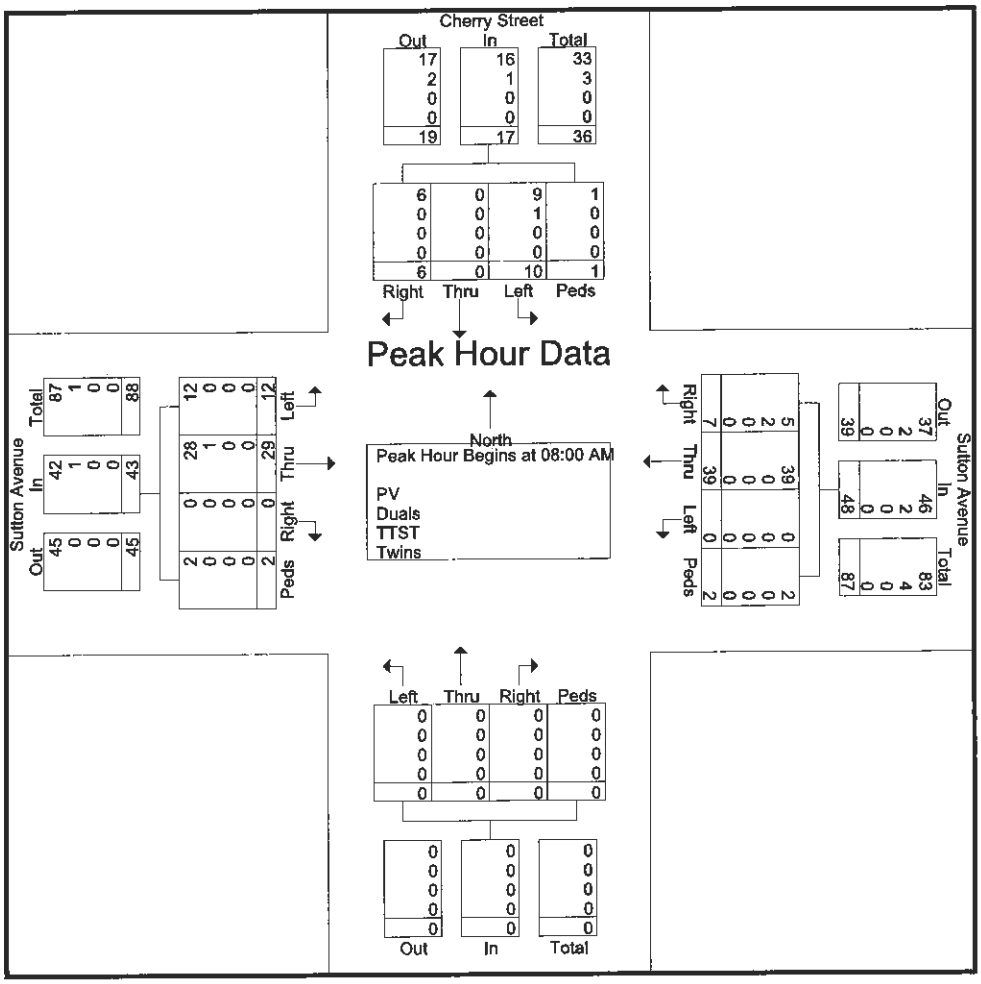
	Cherry Street Southbound					Sutton Avenue Westbound					Northbound					Sutton Avenue Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	1	0	0	0	1	0	6	1	0	7	0	0	0	0	0	4	6	0	1	11	19
08:15 AM	2	0	3	1	6	0	14	0	1	15	0	0	0	0	0	3	9	0	1	13	34
08:30 AM	2	0	1	0	3	0	9	1	1	11	0	0	0	0	0	4	7	0	0	11	25
08:45 AM	5	0	2	0	7	0	10	5	0	15	0	0	0	0	0	1	7	0	0	8	30
Total Volume	10	0	6	1	17	0	39	7	2	48	0	0	0	0	0	12	29	0	2	43	108
% App. Total	58.8	0	35.3	5.9		0	81.2	14.6	4.2		0	0	0	0		27.9	67.4	0	4.7		
PHF	.500	.000	.500	.250	.607	.000	.696	.350	.500	.800	.000	.000	.000	.000	.000	.750	.806	.000	.500	.827	.794
PV	9	0	6	1	16	0	39	5	2	46	0	0	0	0	0	12	28	0	2	42	104
% PV	90.0	0	100	100	94.1	0	100	71.4	100	95.8	0	0	0	0	0	100	96.6	0	100	97.7	96.3
Duals	1	0	0	0	1	0	0	2	0	2	0	0	0	0	0	0	1	0	0	1	4
% Duals	10.0	0	0	0	5.9	0	0	28.6	0	4.2	0	0	0	0	0	0	3.4	0	0	2.3	3.7
TTST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% TTST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Twins	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Twins	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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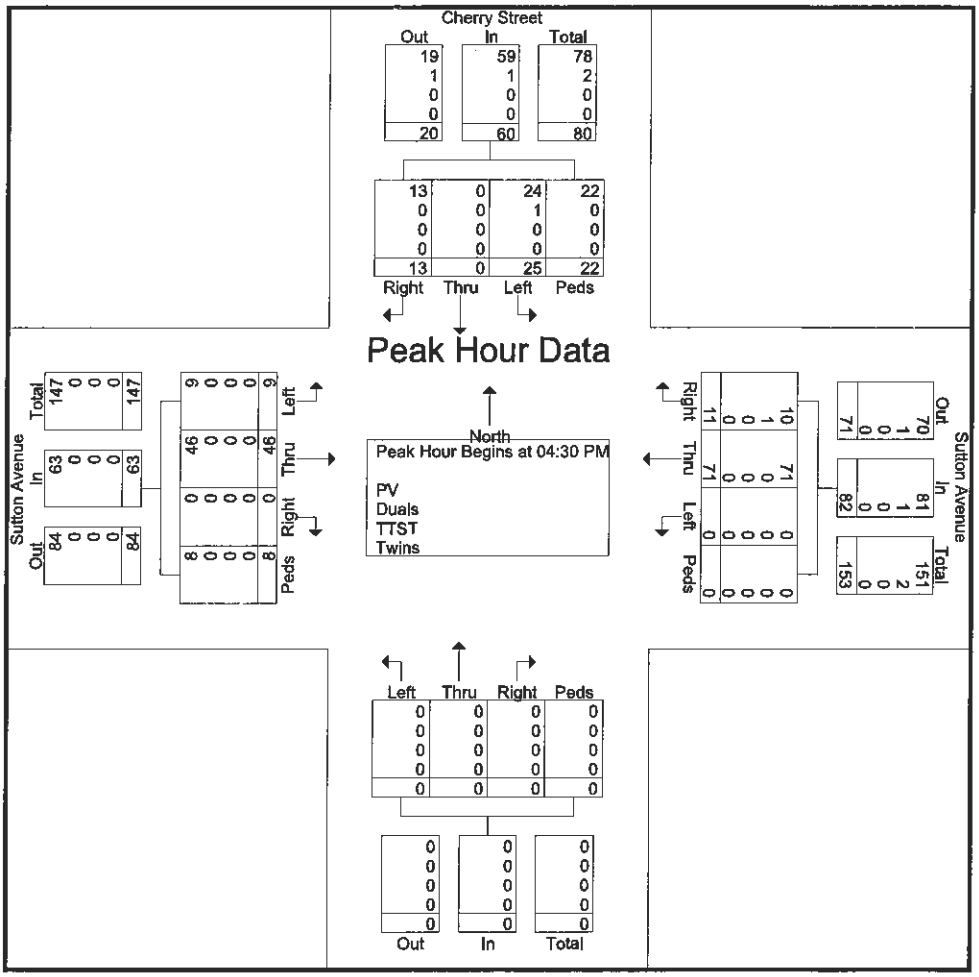
	Cherry Street Southbound					Sutton Avenue Westbound					Northbound					Sutton Avenue Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	7	0	5	3	15	0	19	2	0	21	0	0	0	0	0	2	17	0	0	19	55
04:45 PM	7	0	2	5	14	0	21	2	0	23	0	0	0	0	0	1	15	0	3	19	56
05:00 PM	6	0	3	6	15	0	16	4	0	20	0	0	0	0	0	2	10	0	4	16	51
05:15 PM	5	0	3	8	16	0	15	3	0	18	0	0	0	0	0	4	4	0	1	9	43
Total Volume	25	0	13	22	60	0	71	11	0	82	0	0	0	0	0	9	46	0	8	63	205
% App. Total	41.7	0	21.7	36.7		0	86.6	13.4	0		0	0	0	0		14.3	73	0	12.7		
PHF	.893	.000	.650	.688	.938	.000	.845	.688	.000	.891	.000	.000	.000	.000	.000	.563	.676	.000	.500	.829	.915
PV	24	0	13	22	59	0	71	10	0	81	0	0	0	0	0	9	46	0	8	63	203
% PV	96.0	0	100	100	98.3	0	100	90.9	0	98.8	0	0	0	0	0	100	100	0	100	100	99.0
Duals	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
% Duals	4.0	0	0	0	1.7	0	0	9.1	0	1.2	0	0	0	0	0	0	0	0	0	0	1.0
TTST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% TTST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Twins	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Twins	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0