

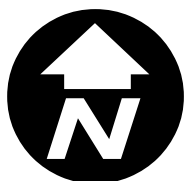
Z2017-040 - LADERA ROCKWALL
ZONING - LOCATION MAP =



City of Rockwall

Planning & Zoning Department
385 S. Goliad Street
Rockwall, Texas 75032
(P): (972) 771-7745
(W): www.rockwall.com

The City of Rockwall GIS maps are continually under development and therefore subject to change without notice. While we endeavor to provide timely and accurate information, we make no guarantees. The City of Rockwall makes no warranty, express or implied, including warranties of merchantability and fitness for a particular purpose. Use of the information is the sole responsibility of the user.

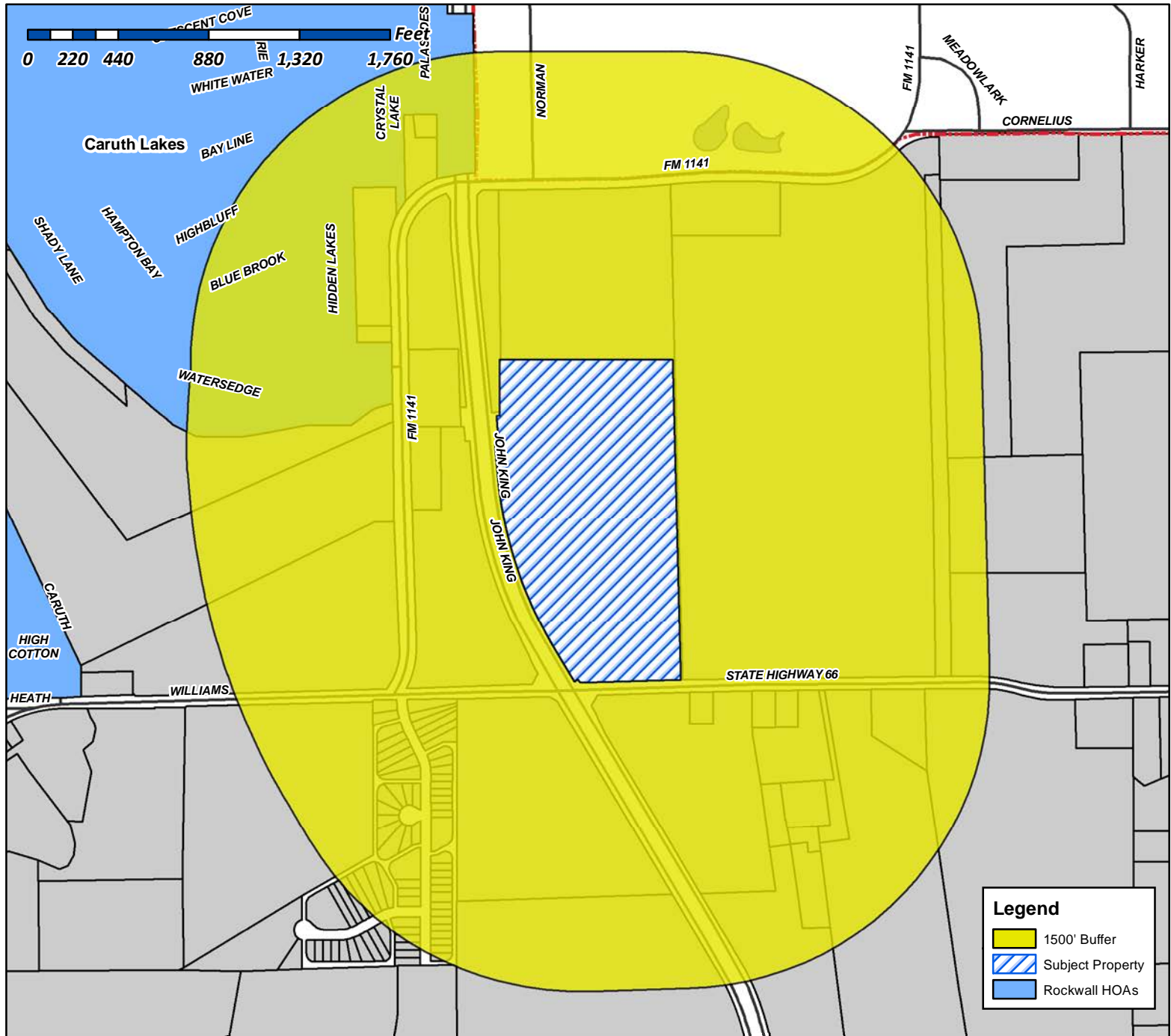




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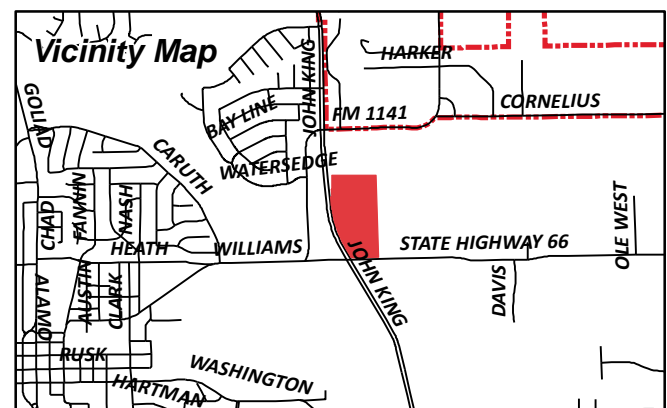
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Case Number: Z2017-040
Case Name: Ladera Rockwall (AG to PD)
Case Type: Zoning
Zoning: AG
Case Address: NEC of John King Blvd. and SH-66

Date Created: 08/21/2017

For Questions on this Case Call (972) 771-7745

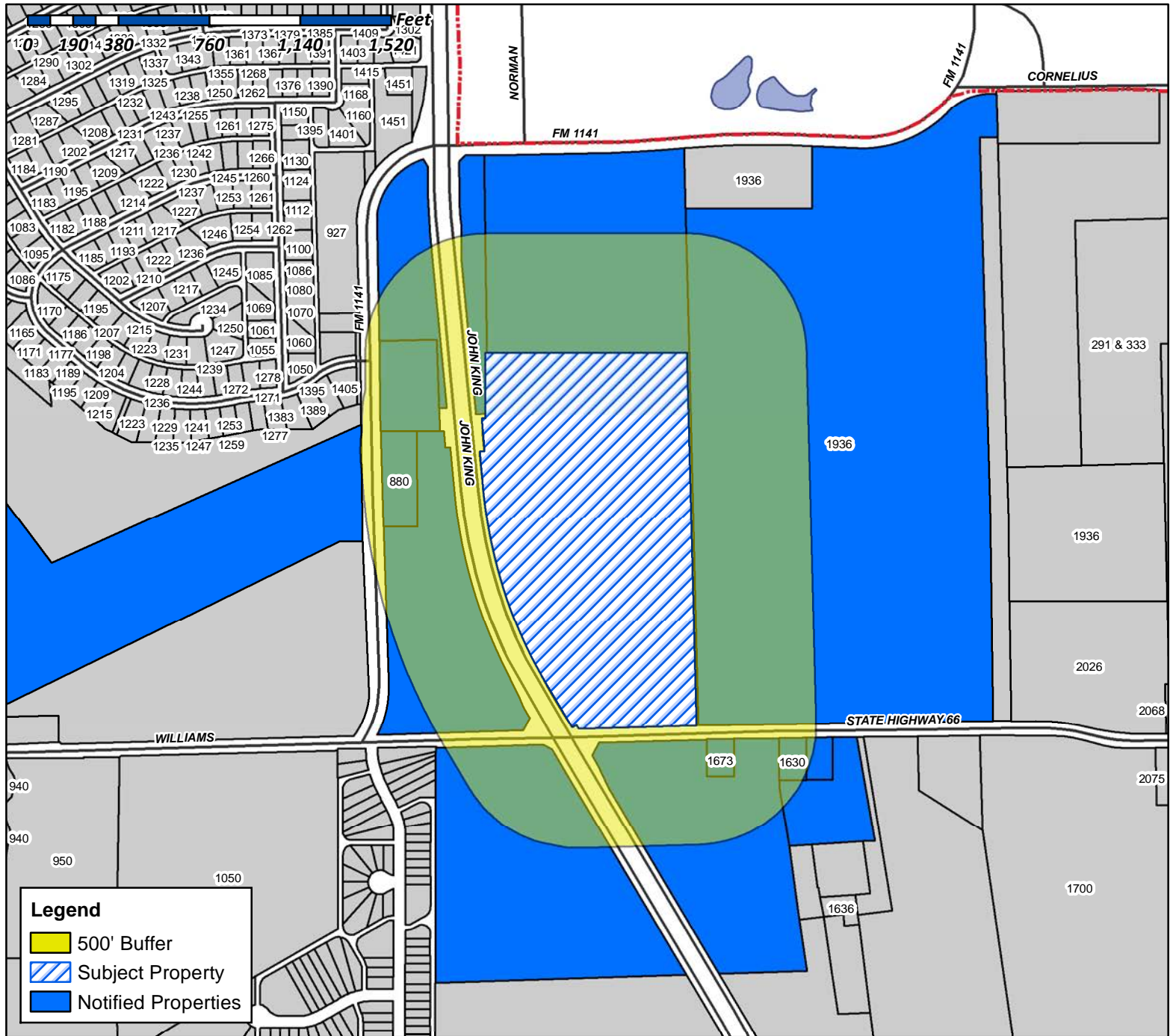




City of Rockwall

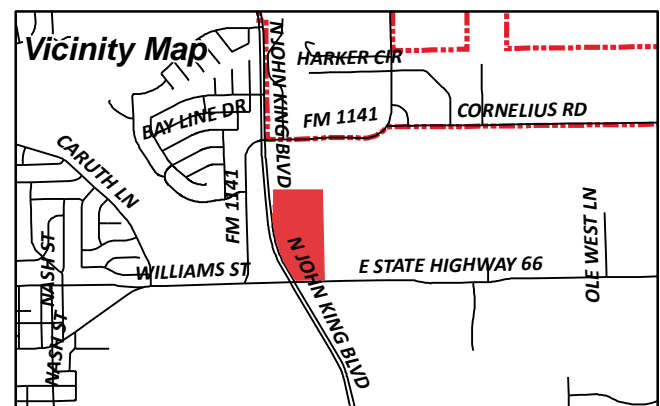
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SITE PLANNING CIVIL ENGINEERING PLATTING
CONSULTANTS, LLC
LAND SURVEYING LANDSCAPE ARCHITECTURE

TBPE Firm No. 1798

TBPLS Firm No. 10047700

August 18, 2017

Mr. Ryan Miller
Director of Planning
City of Rockwall
385 S. Goliad Street
Rockwall, Texas 75087

RE: Ladera Rockwall – Zoning PD Application Letter of Intent
G&A Job Number: 17191

Mr. Miller,

Please accept this letter, on behalf of Integrity Group, as an explanation of the proposed application. We are submitting a Zoning Change Request application for review and approval on approximately 28 acres on the eastern edge Rockwall. The property is generally located along John King Blvd, directly north of Highway 66 and east of 1141. The proposed zoning designation is a Planned Development for an active adult, age-restricted, private, condominium-style residential development.

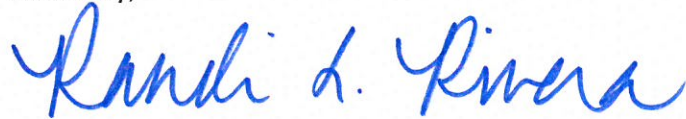
Ladera Rockwall is a gated, privately maintained development containing a maximum of 3.2 dwelling units per gross acre of land and it will include amenity features such as fitness trails about 3,500 linear feet in length; an activity center with exercise pool, kitchen and gathering space; 12.8 acres of open space that consists of greenbelts, parks, gathering spaces, floodplain areas, and buffers; and a 50' landscape buffer along the John King Blvd. A wrought iron fence of at least 6-feet in height is located along the perimeter of the community. The gated entrance is located at the median opening on John King and it includes a divided entry with a landscaped median and enhanced entry features such as a fountain and enhanced landscaping. The secondary gated ingress/egress location is along SH 66. Both gated access points will provide for entry for emergency personnel with a Knox Box system.

The unique aspects about Ladera Rockwall are that it is a low-maintenance active adult community and that the development will be maintained and managed by the HOA – including all green space and home exteriors. The homes are smaller to attract empty nesters and those adults looking to down-size and still have high-end kitchens and large open living areas. There are several customization options for the size and the amenities within the homes. In addition, each home will have a private courtyard. The homes will not be on individually platted lots, as is typical for a traditional subdivision. Instead, the homeowners will own their house and a portion of the common grounds, which is similar to a condominium-style development. The fees they pay to the HOA will allow Ladera Rockwall to be privately maintained.

The proposed Planned Development includes development regulations that outline how the property will be developed. They include requirements for building separation, maximum density, minimum open space area, private street sections, and other types of regulations. Each home will be access via a mutual access easement and the private streets will be maintained by the HOA.

The Ladera communities have experienced immense success throughout the DFW area. We are excited to bring this unique living option to Rockwall. Thank you for your consideration of the presented request. Please feel free to contact us to discuss any comments or questions you have during the review of this request.

Sincerely,

A handwritten signature in blue ink that reads "Randi L. Rivera". The signature is fluid and cursive, with the first letters of each word being capitalized and prominent.

Randi L. Rivera, AICP

cc. Mr. John Delin, Integrity Group, LLC
Mr. Robert J. Dollak, Jr., P.E., G&A Consultants, LLC

LEGAL DESCRIPTION

Tract 1 28.011 acres M. B. Jones Survey, Abstract No. 122 B. Jones Survey, Abstract No. 122 City of Rockwall Rockwall County, Texas

BEING all that certain lot, tract or parcel of land situated in the M. B. Jones Survey, Abstract No. 122, City of Rockwall, Rockwall County, Texas, and being a portion of a called 41.921 acre tract of land described as Tract 3, in deed to John H. Cullins, recorded in Instrument No. 2008-00396743, Deed Records, Rockwall County, Texas, and being more particularly described as follows:

BEGINNING at a 1/2 inch rebar found at the southeast corner of said 41.921 acre tract, and being the southwest corner of a called 73.2744 acre tract of land described in deed to Mike L. People, recorded in Volume 850, Page 15, Deed Records, Rockwall County, Texas, and being in the north line of U. S. Highway 66;

THENCE S 88°18'19"W, with the north line of U. S. Highway 66, a distance of 490.46 feet to a 1/2 inch W, with the north line of U. S. Highway 66, a distance of 490.46 feet to a 1/2 inch rebar set with cap stamped "G&A CONSULTANTS", being the most southeasterly corner of a called 3.989 G&A CONSULTANTS", being the most southeasterly corner of a called 3.989 , being the most southeasterly corner of a called 3.989 acre tract of land being titled as "Highway 205 Bypass R.O.W." in City of Rockwall vs. John Cullins and Highway 205 Bypass R.O.W." in City of Rockwall vs. John Cullins and in City of Rockwall vs. John Cullins and Burks T. Payne, Jr., Cause No. 180-633, recorded in Instrument No. 2009-00410863, Deed Records, Rockwall County, Texas, also known as John King Boulevard;

THENCE Northwesterly with the east line of said 3.989 acre tract and John King Boulevard, the following seven (7) calls:

N 30°39'57" W, a distance of 19.43 feet to a 1/2 inch rebar set with cap stamped "G&A W, a distance of 19.43 feet to a 1/2 inch rebar set with cap stamped "G&A G&A CONSULTANTS"; ;

S 59°20'03" W, a distance of 21.30 feet to a 1/2 inch rebar set with cap stamped "G&A W, a distance of 21.30 feet to a 1/2 inch rebar set with cap stamped "G&A G&A CONSULTANTS"; ;

N 30°39'57" W, a distance of 211.63 feet to a 1/2 inch rebar set with cap stamped "G&A W, a distance of 211.63 feet to a 1/2 inch rebar set with cap stamped "G&A G&A CONSULTANTS"; ;

Northwesterly with a curve to the right having a radius of 1940.00 feet, a central angle of 25°25'15" , , and an arc length of 860.73 feet, whose chord bears N 17°57'20" W, a distance of 853.69 feet to a W, a distance of 853.69 feet to a 1/2 inch rebar set with cap stamped "G&A CONSULTANTS"; G&A CONSULTANTS"; ;

N 05°14'42" W, a distance of 158.73 feet to a 1/2 inch rebar set with cap stamped "G&A W, a distance of 158.73 feet to a 1/2 inch rebar set with cap stamped "G&A G&A CONSULTANTS"; ;

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of land described in deed to City of Rockwall, recorded in Instrument No. 2007-00389123, Deed Records, Rockwall County, Texas;

THENCE N 89°26'01" E, with the south line of said 10.942 acre tract, a distance of 15.52 feet to a 1/2 E, with the south line of said 10.942 acre tract, a distance of 15.52 feet to a 1/2 inch rebar set with cap stamped "G&A CONSULTANTS", being the southeast corner thereof; G&A CONSULTANTS", being the southeast corner thereof; , being the southeast corner thereof;

THENCE N 00°10'47" W, with the east line of said 10.942 acre tract, a distance of 271.63 feet to a 1/2 W, with the east line of said 10.942 acre tract, a distance of 271.63 feet to a 1/2 inch rebar set with cap stamped "G&A CONSULTANTS", being the southwest corner of a 16.000 acre G&A CONSULTANTS", being the southwest corner of a 16.000 acre , being the southwest corner of a 16.000 acre tract of land described as Tract 2 in deed to Betty Bogard, recorded in Instrument No. 2008-00396742, Deed Records, Rockwall County, Texas;

THENCE N 89°54'11" E, with the south line of said 16.000 acres, a distance of 842.07 feet to a 1/2 E, with the south line of said 16.000 acres, a distance of 842.07 feet to a 1/2 inch rebar set with cap stamped "G&A CONSULTANTS", being the southeast corner thereof and being in G&A CONSULTANTS", being the southeast corner thereof and being in , being the southeast corner thereof and being in the west line of said 73.2744 acre tract;

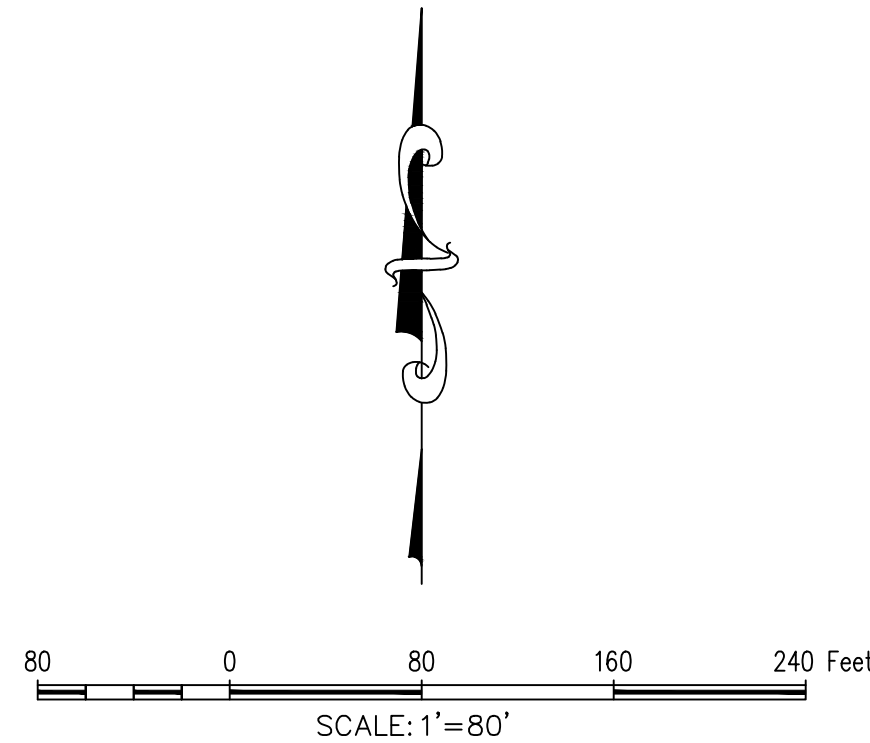
THENCE S 01°28'09" W, with the west line of said 73.2744 acre tract of land, a distance of 1555.42 W, with the west line of said 73.2744 acre tract of land, a distance of 1555.42 feet to the POINT OF BEGINNING and containing approximately 28.011 acres of land.

PRELIMINARY PLANS
THIS DOCUMENT IS FOR
INTERIM REVIEW AND IS
NOT INTENDED FOR
CONSTRUCTION, BIDDING,
OR PERMIT PURPOSES.
G&A CONSULTANTS, F-1798
ROBERT JOHN DOLLAH, JR.
P.E. #86898
DATE 8/18/2017

Drawn By: PF
Date: 8/18/2017
Scale: 1" = 80'
Revisions:

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CP



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M.B. Jones Survey, Abstract No. 122 B. Jones Survey, Abstract No. 122
City of Rockwall
Rockwall County, Texas

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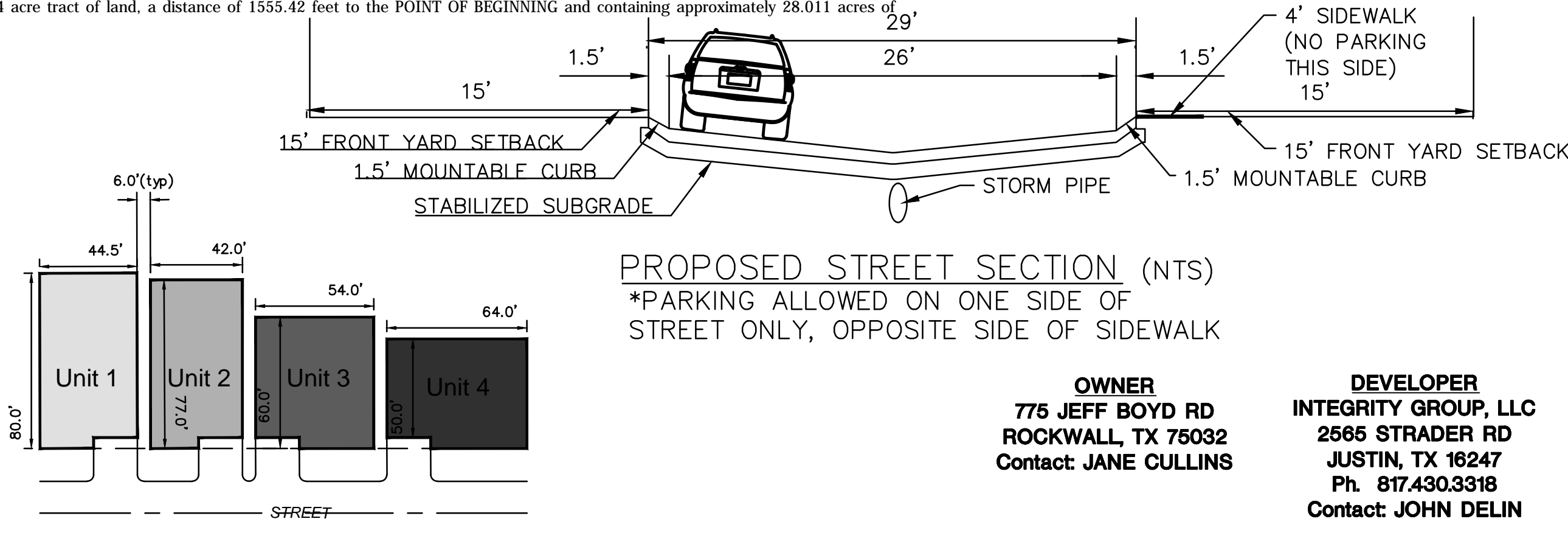


Exhibit “C”:
PD Development Standards

1. Permitted Uses. Unless specifically provided by this Planned Development (PD) ordinance, only those uses permitted within the _____ (SF-?) District, as stipulated by the Permissible Use Charts contained in Article IV, Permissible Uses, of the Unified Development Code (UDC), are allowed on Tract 1 as shown on Exhibit “B”, the Concept Plan, in addition to the following uses:
 - a. Activity Center
 - b. Community Pool
 - c. Gazebos/Pavilions
 - d. Sport Courts
2. Unit Composition. The unit composition shall generally conform to Exhibit “B”, the Concept Plan and as follows:

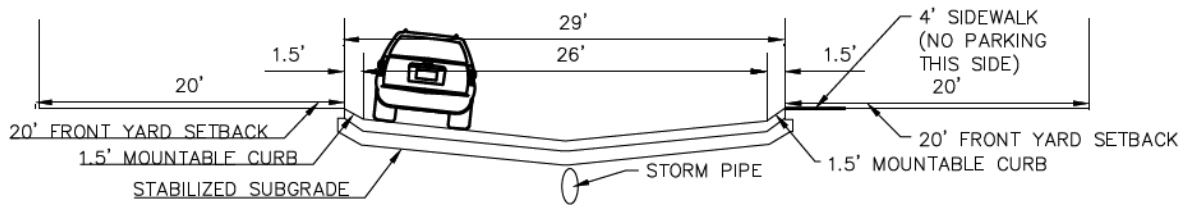
Unit Number	Minimum Unit Area (SF)
1	1,600
2	1,600
3	1,650
4	2,100

3. Density and Dimensional Requirements. Unless specifically provided by this PD ordinance, the development standards stipulated by _____ (SF-?) District and the SH-205 By-Pass Overlay (SH205- BY-OV) District, as specified by Article V, District Development Standards of the UDC are applicable to all development on Tract 1.
 - a. The maximum possible density on Tract 1 shall not exceed 3.2 dwelling units per gross acre of land of Tract 1.
 - b. Dimensional Requirements:

Minimum Lot Width	N/A
Minimum Lot Depth	N/A
Minimum Lot Area per Unit	N/A
Minimum Front Yard Setback from Access Easement/Back of Curb	15'
Minimum Side Yard Between Units	6'
Minimum Side Yard Adjacent to Access Easement/Back of Curb	15'
Minimum Rear Yard Between Units	20'
Maximum Height	35'
Maximum Lot Coverage	N/A
Minimum Landscape	N/A

4. Deed Restrictions Requirement. Prior to the recording of a plat for Tract 1, the owner shall establish a restrictive covenant on the property to limit residential uses by people fifty-five (55) years of age or older consistent with the Fair Housing Act and other applicable law.
5. Condominium Requirement. The property may be platted as a single lot provided that the property is established as a condominium development pursuant to Chapter 82 of the Texas Property Code, as amended.
6. Homeowner's Association Requirement. There shall be established a Homeowner's Association (HOA) that shall own and maintain the common areas and all common improvements located thereon and including landscaping, trees, shrubs, entrance features, fences/walls, and foundation plantings for each unit.
7. Building Standards. The development of Tract 1 shall comply with single family residential architectural requirement and building materials contained within the UDC.
 - a. Chimneys shall not be required. Homes may include a direct-vent fireplace.
 - b. The Developer shall offer a minimum of fourteen (14) different home floorplans with an average of four (4) different elevations per floorplan. The Developer shall monitor floorplan locations and brick and stone selections to comply with the anti-monotony standards contained in Article X, Planned Development Regulations, of the UDC.
8. Open Space Requirement. The development of Tract 1 shall consist of 38 % open space (or 10.6 acres). Open space shall consist of all front yards, rear yards, common areas, buffers, and floodplain, except that only 50% of the floodplain shall be counted towards the overall open space area. Side yards are excluded from the open space area. All open space shall be maintained by the HOA.
9. Access. Access to the development shall be private and gated. Access to residential units shall be provided by establishing a mutual access easement that shall grant all owners the right to ingress, egress, and passage both within the property and to and from John King Road and SH 66.
 - a. The mutual access easement shall also grant the right to all federal, state, county, or municipal government entities, any special districts, and their respective departments or agencies, to enter onto said mutual access easement to perform law enforcement services, firefighting, emergency medical services, solid waste collection services, public utility repairs and maintenance, and other activities necessary for the enforcement of laws and regulations, provided as such the easement shall give authorization to enter individually owned dwelling units.
 - b. The entrances shall be equipped with Knox Box for use by emergency personnel.

- c. The mutual access easement shall be a minimum width of 21 feet for a one-way street and a minimum width of 29 feet for a two-way street. The two-way street shall be constructed based on the following street section:



PROPOSED STREET SECTION (NTS)

*PARKING ALLOWED ON ONE SIDE OF STREET ONLY, OPPOSITE SIDE OF SIDEWALK

Kelly & Associates

785 Sleepy Creek Drive, Frisco, Texas, 75034 (214) 697-1328 (972) 668-7867 fax


TECHNICAL MEMORANDUM

To: Robert Dollak, P.E.
G & A Consultants, Inc.

From: Rod Kelly, P.E.
Kelly & Associates

Date: June 19, 2015

RE: Traffic Impact Analysis – Senior Adult Residential Development on Debbie Lane, in Mansfield, Texas



PURPOSE

The purpose of this memorandum is to document the results of a traffic impact analysis (TIA) for a proposed senior adult residential development, to be located on Debbie Lane, between Matlock Road and South Collins Street, in Mansfield, Texas (See **Figure 1**). The proposed development site plan is shown in **Figure 2**. This analysis was conducted to determine the possible impacts of the proposed development change on traffic operations in the vicinity of the proposed development access street intersection of Debbie Lane and Summer Glen Drive. The analysis also examined the impact on a future street, currently shown in the City's Thoroughfare Plan to connect the residential neighborhood to the southeast with Debbie Lane, bisecting the proposed development tract, and the impact of vehicles queuing at the proposed single gated entry to the proposed development. This analysis is in response to a request from the City of Mansfield.

ANALYSIS APPROACH

The approach applied to the analysis was as follows:

- Consulted with the traffic engineer for the City of Mansfield to verify the scope of the TIA
- Conducted new traffic counts to establish existing traffic volumes at the development access street
- Estimated the vehicle trips in and out of proposed development
- Determined the directions of approach and departure for traffic coming to and leaving from the proposed development
- Entered the above traffic information as input data into the traffic analysis software package to determine the expected traffic conditions
- Analyzed Impact on neighborhood traffic
- Conducted queuing analysis at proposed development entry
- Provided comments and conclusions associated with the analysis findings

Traffic Counts

The first step in the analysis process was to conduct new traffic counts to establish existing traffic volumes at the development access street intersection with Debbie Lane and Summer Glen Drive. The counts were conducted for the morning and afternoon peak traffic conditions. Turning movement traffic counts were conducted on Wednesday, June 3, 2015, at the intersection of Debbie Lane and Summer Glen Drive, directly across from the proposed development access street on the north side of Debbie Lane. Intersection traffic counts were also made at the five main access streets serving the existing residential neighborhood directly southeast of the proposed development. These counts were made to determine the vehicular traffic directions of approach to and departure from this neighborhood. The intersection of Country Club Drive and South Collins Street was also counted to extend the directional distribution of neighborhood traffic. These traffic volume counts are provided in **Appendix A** and summarized in **Figure 3**

Proposed Development Access Analysis

The next step was to estimate the vehicle trips in and out of proposed development. By comparing the AM and PM Peak Hour traffic generation rates (0.22 vs.0.27) trips per dwelling unit and the 2015 traffic counts on Debbie Lane, adjacent to the site (1504 vs. 1283), it was determined that the PM Peak Hour should be analyzed. Using the 9th Edition of the ITE Trip Generation Manual, it was determined that, at a weekday trip generation rate of 3.68 trips per dwelling unit, the proposed one hundred and eighty-five (185) single-family housing units will generate a total of 50 vehicle trips during the PM Peak Hour. The PM Peak Hour trips generated by the senior adult housing land use proposed for the development are presented below in **Table 1**.

Figure 1 – Site Location Map



Figure 2 – Site Plan

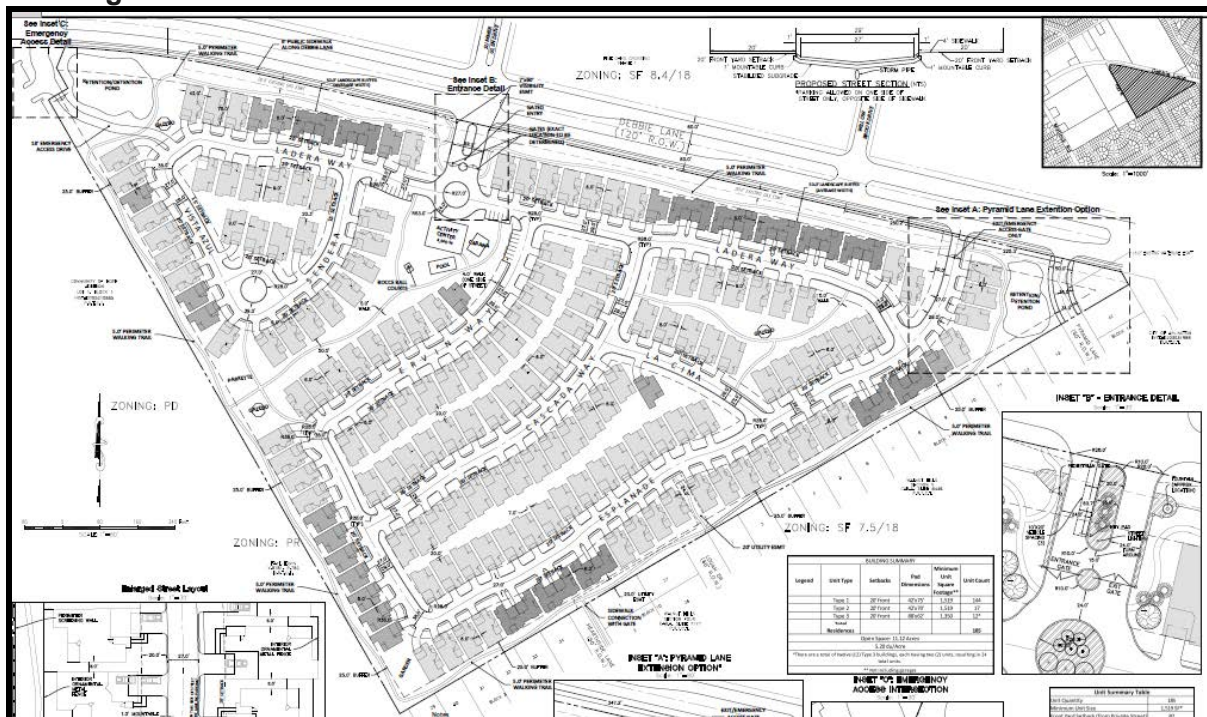


Figure 3 – Existing PM Peak Hour Traffic

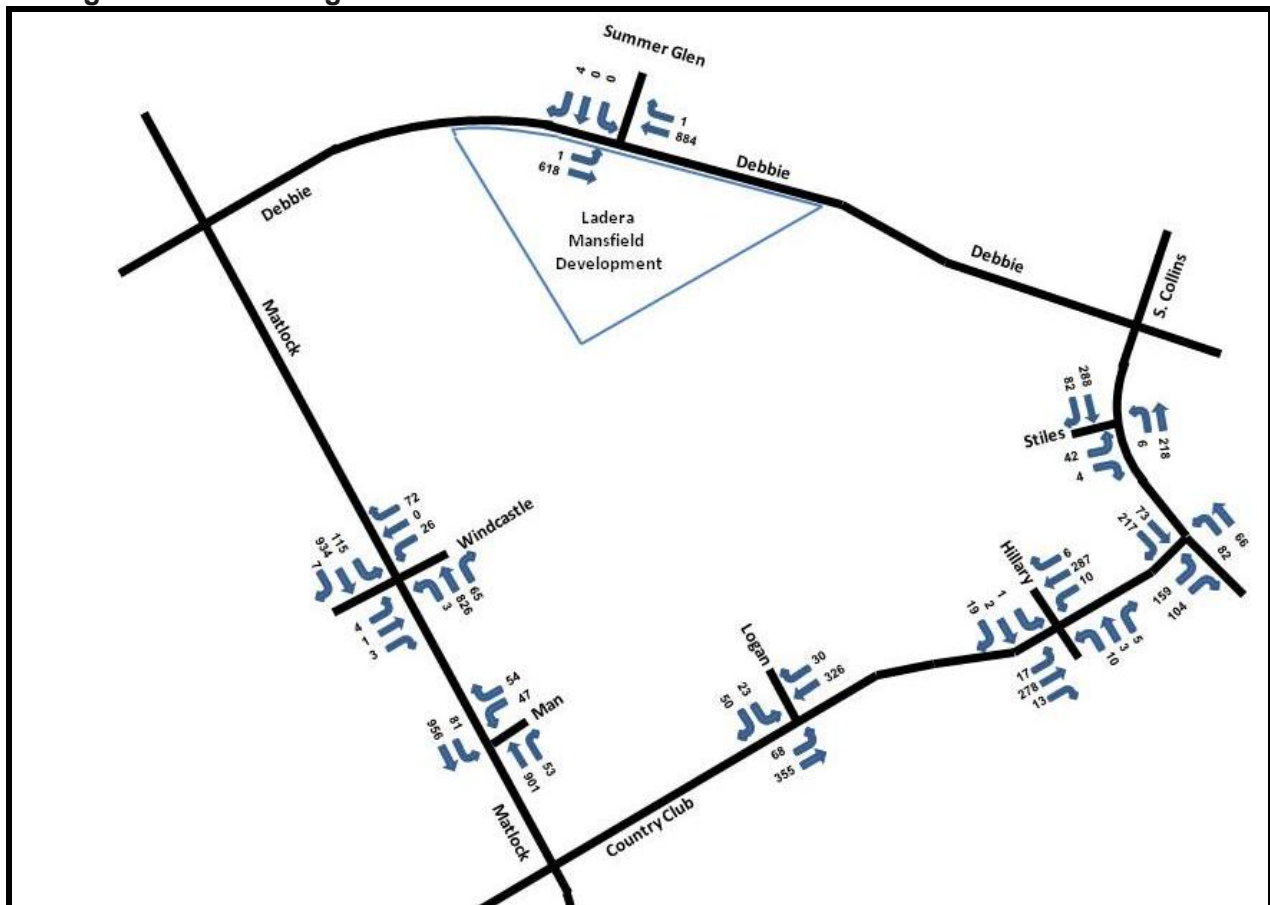


Table 1 – Development Trip Generation

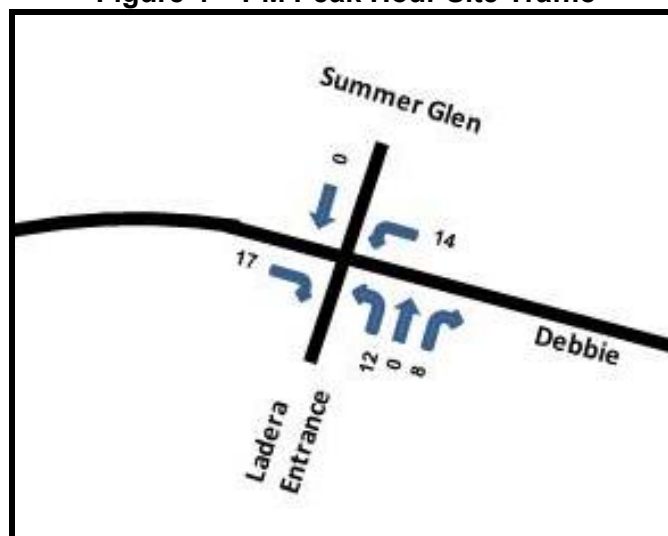
Use	Dwelling Units	ITE Code	AM Peak Hour		PM Peak Hour	
			In	Out	In	Out
Senior Adult Housing - Detached	185	251	14	27	31	20

The next step was to determine the directions of approach and departure for traffic coming to and leaving from the proposed development. The directions of approach and departure for traffic coming to and leaving from the development were derived from the distribution shown in the traffic counts conducted at the existing neighborhood access intersections on Matlock Road, Country Club Drive, and South Collins Street., which indicated that the average PM peak hour approach/departure patterns for the subject site would be as follows:

- 45% coming from the east
- 55% coming from the west
- 38% going to the east
- 62% going to the west

Trips generated by the development were then assigned to the appropriate approaches of the proposed development entry intersection to be analyzed. These volumes are shown in **Figure 4**.

Figure 4 – PM Peak Hour Site Traffic



The above traffic information was entered as input data into the Trafficware "SYNCHRO" computerized traffic analysis software package for determine the impact of the traffic conditions. The analysis of impacts is measured in terms of traffic operating level of service (LOS). According to the Highway Capacity Manual, capacity is defined as the maximum number of vehicles that can be expected to travel on a given section of roadway or a specific lane during a given period under prevailing traffic conditions. The operational conditions of roadways are measured in terms of "Level of Service" (LOS). Level of Service refers to the operational conditions within a traffic stream and their perception by motorists in terms of delay, freedom to maneuver, traffic interruptions, comfort, convenience and safety. There are six levels of service (LOS) or capacity conditions for each roadway facility and they are designated from "A" to "F", with "A" representing an optimal, free-flow condition, and "F" representing a congested, forced flow condition. These Delay/LOS relationships are shown in **Table 2** for intersections with stop sign control.

Table 2 Relationship between Delay and LOS

Vehicle Delay per Vehicle for Signalized Intersections	LOS (Vol./Cap. Ratio < or = to 1	Vehicle Delay per Vehicle for Stop Controlled Intersections	LOS (Vol./Cap. Ratio < or = to 1
< or = to 10	A	< or = to 10	A
>10 & < or = 20	B	>10 & < or = 15	B
>20 & < or = 35	C	>15 & < or = 25	C
>35 & < or = 55	D	>25 & < or = 35	D
>55 & < or = 80	E	>35 & < or = 50	E
>80	F	>50	F

The existing non-site base traffic volumes and those that will be generated by the proposed development at the intersection of Debbie Lane and Summer Glen Drive were then combined, as shown in **Figure 5**. The intersection lane configurations and traffic control are displayed in **Figure 6**. The result were then tabulated and conclusions developed to determine the impact of the added traffic.

Figure 5 – PM Peak Hour Base + Site Traffic Volumes

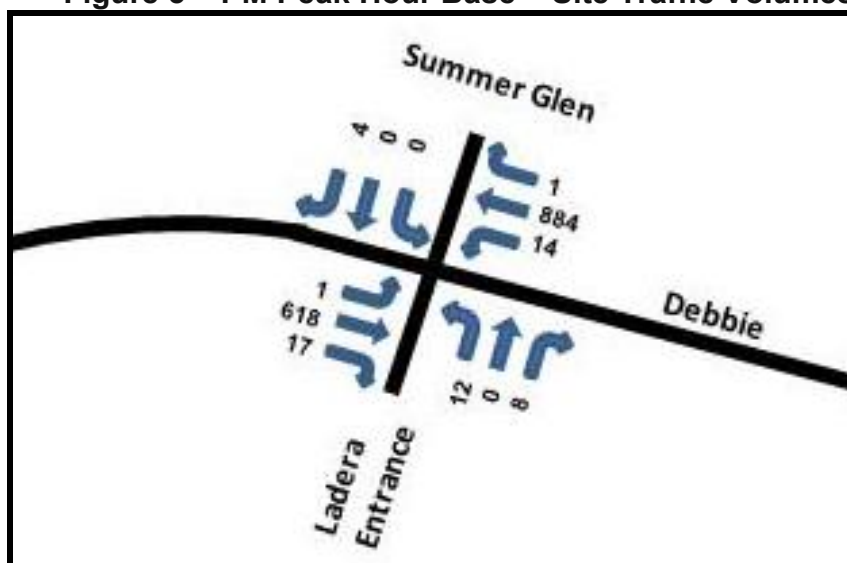
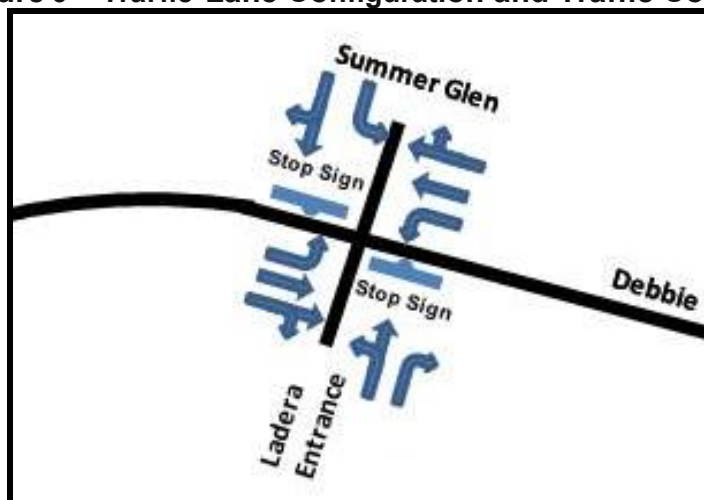


Figure 6 – Traffic Lane Configuration and Traffic Control



A summary of the existing base + site analysis results are shown in **Table 2**. The capacity analysis worksheets for the intersection analyzed are contained in **Appendix B**.

Table 2 –Existing PM Peak Hour Traffic Analysis Results

Intersection	Approach	Approach Delay (Seconds)	Approach LOS	Intersection Delay (Secs.)	Intersection LOS
Ladera Entry @ Debbie & Summer Glen	NB	24.5	C	0.4	A
	SB	11.8	B		
	EB	0.0	A		
	WB	0.1	A		

As can be seen from the results in **Table 2**, the existing + Site traffic operations in 2015 for the proposed development access intersection analyzed are at an LOS A, with no approach at less than LOS C for the PM peak traffic hour.

Analysis of Neighborhood Traffic Patterns

The next step was to analyze the impact on neighborhood traffic, by determining the current traffic patterns and assessing the impacts of several options for providing additional street connections shown in the Mansfield Master Thoroughfare Plan.

At the present time, access to the 1086 single-family residential homes to the southeast of the proposed development is by 4 local street intersections with Matlock Road, 5 local street intersections with Country Club Drive, 1 local street intersection with South Collins Street, and 1 local street intersection with Debbie Lane, as shown in **Figure 7**. Traffic counts were made at the neighborhood access streets shown in blue. These counts are displayed above in **Figure 3**. Capacity analyses were conducted at these intersections and those results are shown in **Table 3**. The capacity analysis worksheets for the intersections analyzed are contained in **Appendix B**.

Figure 7 – Residential Neighborhood Access

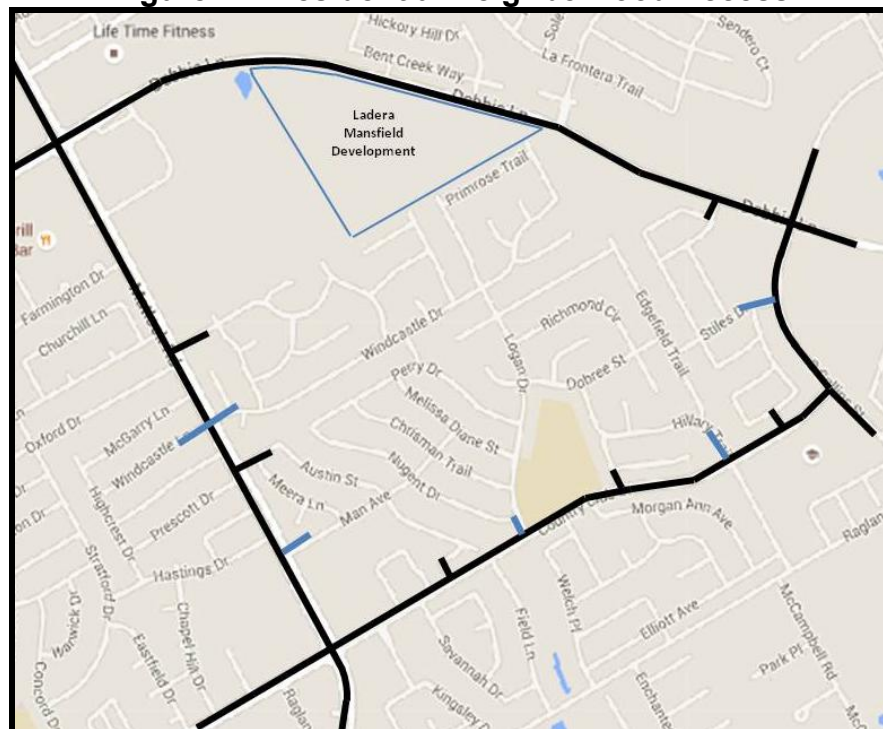


Table 3 –Existing PM Peak Hour Traffic Analysis Results

Intersection	Intersection Delay (Secs.)	Intersection LOS
Windcastle & Matlock	2.9	A
Man & Matlock	3.8	A
Logan & Country Club	1.7	A
Hillary & Country Club	0.9	A
S. Collins & Country Club	5.8	A
S. Collins & Stiles	1.0	A

As can be seen from the results in **Table 3**, the existing traffic operations in 2015 for the intersection analyzed are at a LOS A for the PM peak traffic hour. However, on an approach basis, although Windcastle Drive and Man Avenue, the minor street approaches of the intersections with Matlock Road are currently operating at LOS E and F, respectively. In order to reduce the delay they may be experiencing at the Matlock Road intersections, motorists have the opportunity to re-direct their access to the other neighborhood intersections on Matlock Road and Country Club Drive that operating at better LOSs.

The directions of approach and volumes to and departure from the neighborhood are shown in **Figures 8 and 9**. **Table 4** shows a summary of the general directions.

Figure 8 – AM Peak Hour Approach and Departure Volumes and Directions

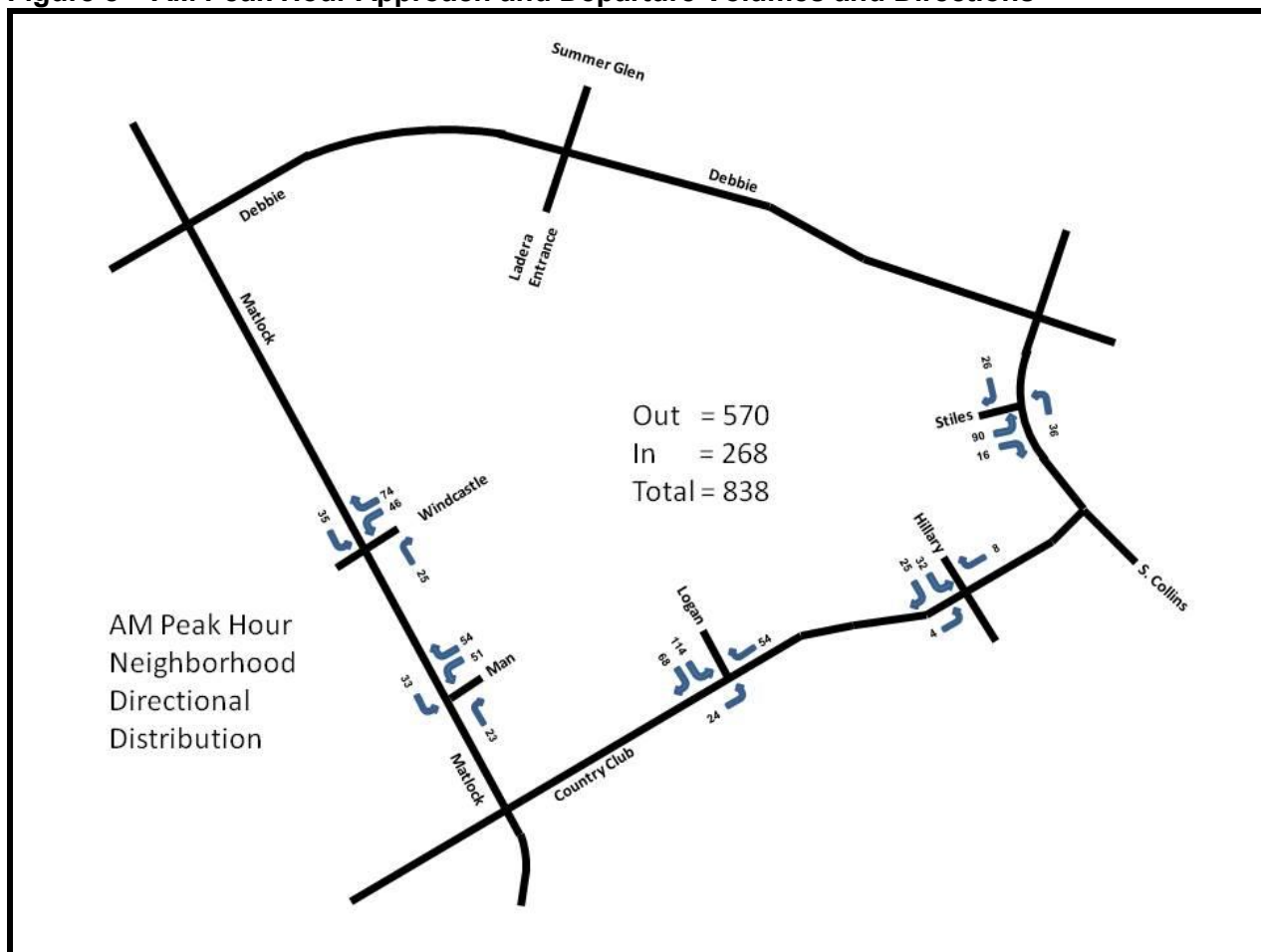


Figure 9 – PM Peak Hour Approach and Departure Volumes and Directions

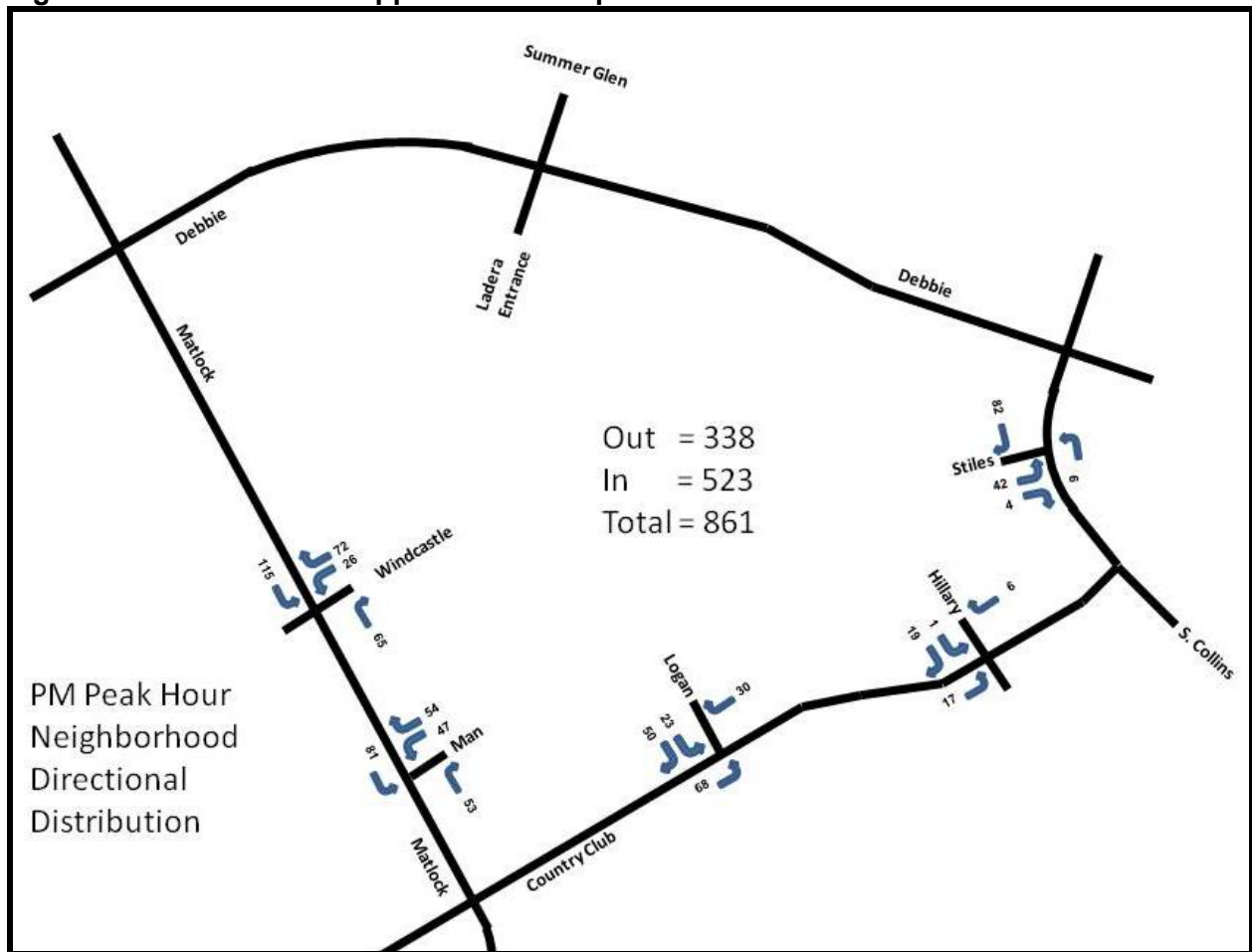


Table 4 – AM and PM Peak Hour Traffic Approach and Departure Summary

AM Peak Hour 232 In		AM Peak Hour 570 Out		PM Peak Hour 523 In		PM Peak Hour 368 Out	
96 EB	136 WB	237 WB	333 EB	287 EB	236 WB	229 WB	139 EB
41%	59%	42%	58%	55%	45%	62%	38%

The magnitude and distribution of neighborhood traffic shown in the figure and table above indicate that there is adequate access to and from the neighborhood and that the traffic is generally equally dispersed. With 11 points of access into this fully-developed residential neighborhood and access intersection levels of service well below capacity, it appears that traffic generated by the proposed development, with 1 access street on Debbie Lane, which has only 1 existing neighborhood access street intersections, will have little impact on the existing neighborhood traffic.

Another consideration is that the City's Master Thoroughfare Plan (MTP), shown in **Figure 10**, contains a future Minor Collector (circled in red) connecting the north end of Logan Drive, in the adjacent neighborhood, with Debbie Lane. However, this connection would bisect the proposed development and prevent the gating of this enclosed community. To minimize the impact on the planned development, it has been proposed that, if this Logan Drive collector is constructed, it be paired with Hearthside Lane, as shown in **Figure 11**, to create an access street couplet that would connect with the Logan Drive extension, with no residential frontage.

Figure 10 –Master Thoroughfare Plan Connector - Logan Drive Extension

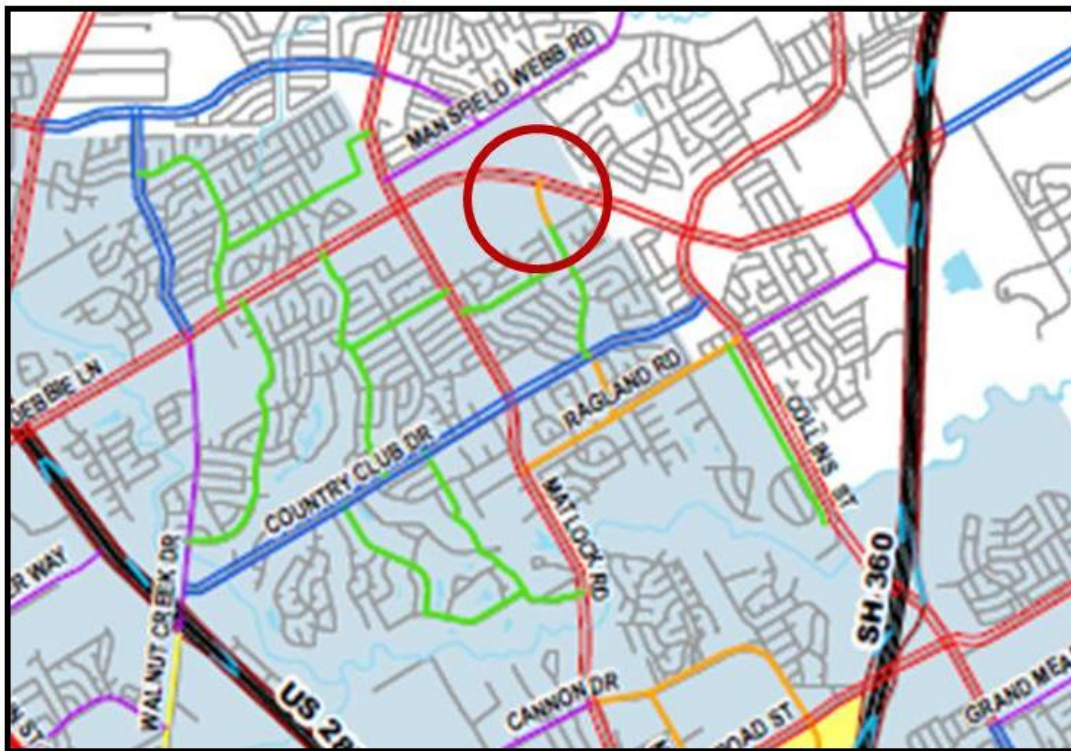


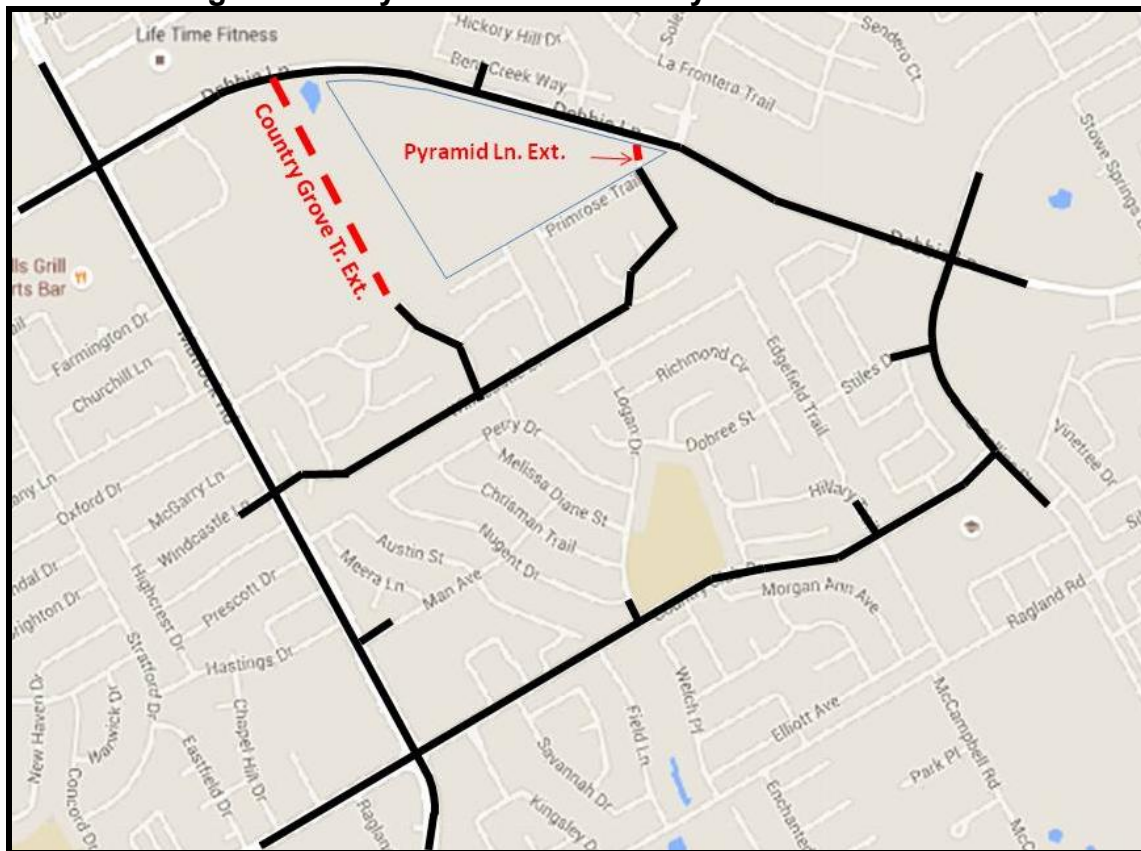
Figure 11 – Logan Drive / Hearthside Connector Alternative



An option to the proposed connection in the MTP that has been suggested is to provide additional access to and from the neighborhood to Debbie Lane by extending Pyramid Lane northward to

Debbie Lane and/or extending Country Grove Trail northward, adjacent to and west of western boundary of the proposed development, as shown in **Figure 12**. This option would allow for the proposed development to be screened and secured as a gated community, as planned, but would provide another access street for the existing residential neighborhood to Debbie Lane.

Figure 12 – Pyramid Lane/ Country Grove Connector



Queuing Analysis of Proposed Development Entrance

Even though the proposed development will not generate a large amount of traffic at the access intersection, the City has asked for an analysis of this single entry and exit point to verify that there is adequate storage capacity for resident and visitor vehicles as they enter the development. The entry point is proposed to be configured as shown in **Figure 13**. Since the development is proposed to be gated, there will be a security stop required for residents and visitors alike. Entering residents will only have to swipe the key pad to open the gate, while visitors will need to need to notify the resident to gain access, which will take only a short time longer. There is queuing space between the property line and the entry key pad store 3 vehicles, with space for 1 more vehicle between the key pad and the gate, for a total of space for 4 vehicles. With an estimated average of 1 vehicle every 2 minutes (31 vehicles in the PM peak hour), this should be more than enough queuing space. If a problem develops, the entry can accommodate 2 lanes of traffic, with queuing space for a total of 8 vehicles. With a garage door-type gate opener, residents would use the right lane and visitors would use the left lane to notify residents and gain entry.

Based upon the analysis findings described above, the following conclusions can be drawn.

Neighborhood Traffic Patterns - The magnitude and distribution of the adjacent neighborhood traffic indicate that there is adequate access to and from the neighborhood and that the traffic is generally equally dispersed. Traffic generated by the proposed development will not have its access on any existing neighborhood access street intersections and will have little impact on the existing neighborhood traffic. A short, separate future connector to Debbie Lane from the adjacent neighborhood, as an option to the City's Master Thoroughfare Plan, will allow for the proposed development to be screened and secured as a gated community, as planned, but will provide another access street for the existing residential neighborhood.

Vehicle Queuing at Proposed Development Entrance - There two possible options that will assure that there is adequate off-street, resident and visitor vehicle queuing space for entry into the proposed secure development.

Appendices

Appendix A

Traffic Volume Counts

METROCOUNT

9128 Couples Dr.-Plano, TX-75025
Phone/Fax (972) 359-6310

Mansfield
Matlock Rd. & Windcastle Dr.
6-3-15

File Name : RK631
Site Code : 00000631
Start Date : 6/3/2015
Page No : 1

Groups Printed- Unshifted

Start Time	Matlock Southbound				Windcastle Westbound				Matlock Northbound				Windcastle Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
06:30 AM	1	102	5	108	28	0	5	33	2	77	0	79	1	0	5	6	226
06:45 AM	0	167	9	176	22	0	14	36	2	115	0	117	2	0	3	5	334
Total	1	269	14	284	50	0	19	69	4	192	0	196	3	0	8	11	560
07:00 AM	1	208	8	217	15	0	10	25	1	160	0	161	1	1	2	4	407
07:15 AM	0	139	8	147	20	0	9	29	5	207	2	214	1	0	2	3	393
07:30 AM	0	156	10	166	21	1	12	34	3	179	0	182	3	0	5	8	390
07:45 AM	0	212	8	220	14	0	11	25	9	173	1	183	4	0	0	4	432
Total	1	715	34	750	70	1	42	113	18	719	3	740	9	1	9	19	1622
08:00 AM	1	145	9	155	19	0	14	33	8	153	0	161	2	0	1	3	352
08:15 AM	2	139	6	147	12	0	16	28	3	136	1	140	1	0	3	4	319
*** BREAK ***																	
Total	3	284	15	302	31	0	30	61	11	289	1	301	3	0	4	7	671
*** BREAK ***																	
04:30 PM	4	206	25	235	14	0	4	18	8	193	0	201	1	0	3	4	458
04:45 PM	2	205	27	234	17	0	4	21	4	193	0	197	2	0	1	3	455
Total	6	411	52	469	31	0	8	39	12	386	0	398	3	0	4	7	913
05:00 PM	1	227	28	256	17	0	4	21	9	215	1	225	0	0	1	1	503
05:15 PM	4	234	34	272	19	0	9	28	36	214	1	251	0	0	1	1	552
05:30 PM	0	236	31	267	14	0	8	22	13	190	1	204	2	1	1	4	497
05:45 PM	2	237	22	261	22	0	5	27	7	207	0	214	1	0	1	2	504
Total	7	934	115	1056	72	0	26	98	65	826	3	894	3	1	4	8	2056
06:00 PM	3	198	15	216	19	0	5	24	10	191	3	204	1	0	3	4	448
06:15 PM	1	248	24	273	18	0	3	21	6	194	1	201	2	0	3	5	500
Grand Total	22	3059	269	3350	291	1	133	425	126	2797	11	2934	24	2	35	61	6770
Apprch %	0.7	91.3	8		68.5	0.2	31.3		4.3	95.3	0.4		39.3	3.3	57.4		
Total %	0.3	45.2	4	49.5	4.3	0	2	6.3	1.9	41.3	0.2	43.3	0.4	0	0.5	0.9	

Start Time	Matlock Southbound				Windcastle Westbound				Matlock Northbound				Windcastle Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 06:30 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	1	208	8	217	15	0	10	25	1	160	0	161	1	1	2	4	407
07:15 AM	0	139	8	147	20	0	9	29	5	207	2	214	1	0	2	3	393
07:30 AM	0	156	10	166	21	1	12	34	3	179	0	182	3	0	5	8	390
07:45 AM	0	212	8	220	14	0	11	25	9	173	1	183	4	0	0	4	432
Total Volume	1	715	34	750	70	1	42	113	18	719	3	740	9	1	9	19	1622
% App. Total	0.1	95.3	4.5		61.9	0.9	37.2		2.4	97.2	0.4		47.4	5.3	47.4		
PHF	.250	.843	.850	.852	.833	.250	.875	.831	.500	.868	.375	.864	.563	.250	.450	.594	.939

METROCOUNT9128 Couples Dr.-Plano, TX-75025
Phone/Fax (972) 359-6310Mansfield
Matlock Rd. & Windcastle Dr.
6-3-15File Name : RK631
Site Code : 00000631
Start Date : 6/3/2015
Page No : 2

	Matlock Southbound				Windcastle Westbound				Matlock Northbound				Windcastle Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				06:45 AM				07:00 AM				06:45 AM				
+0 mins.	1	208	8	217	22	0	14	36	1	160	0	161	2	0	3	5	
+15 mins.	0	139	8	147	15	0	10	25	5	207	2	214	1	1	2	4	
+30 mins.	0	156	10	166	20	0	9	29	3	179	0	182	1	0	2	3	
+45 mins.	0	212	8	220	21	1	12	34	9	173	1	183	3	0	5	8	
Total Volume	1	715	34	750	78	1	45	124	18	719	3	740	7	1	12	20	
% App. Total	0.1	95.3	4.5		62.9	0.8	36.3		2.4	97.2	0.4		35	5	60		
PHF	.250	.843	.850	.852	.886	.250	.804	.861	.500	.868	.375	.864	.583	.250	.600	.625	
Peak Hour Analysis From 12:00 PM to 06:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	1	227	28	256	17	0	4	21	9	215	1	225	0	0	1	1	503
05:15 PM	4	234	34	272	19	0	9	28	36	214	1	251	0	0	1	1	552
05:30 PM	0	236	31	267	14	0	8	22	13	190	1	204	2	1	1	4	497
05:45 PM	2	237	22	261	22	0	5	27	7	207	0	214	1	0	1	2	504
Total Volume	7	934	115	1056	72	0	26	98	65	826	3	894	3	1	4	8	2056
% App. Total	0.7	88.4	10.9		73.5	0	26.5		7.3	92.4	0.3		37.5	12.5	50		
PHF	.438	.985	.846	.971	.818	.000	.722	.875	.451	.960	.750	.890	.375	.250	1.00	.500	.931
Peak Hour Analysis From 12:00 PM to 06:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	05:00 PM				05:15 PM				05:00 PM				05:30 PM				
+0 mins.	1	227	28	256	19	0	9	28	9	215	1	225	2	1	1	4	
+15 mins.	4	234	34	272	14	0	8	22	36	214	1	251	1	0	1	2	
+30 mins.	0	236	31	267	22	0	5	27	13	190	1	204	1	0	3	4	
+45 mins.	2	237	22	261	19	0	5	24	7	207	0	214	2	0	3	5	
Total Volume	7	934	115	1056	74	0	27	101	65	826	3	894	6	1	8	15	
% App. Total	0.7	88.4	10.9		73.3	0	26.7		7.3	92.4	0.3		40	6.7	53.3		
PHF	.438	.985	.846	.971	.841	.000	.750	.902	.451	.960	.750	.890	.750	.250	.667	.750	

METROCOUNT

9128 Couples Dr.-Plano, TX-75025
Phone/Fax (972) 359-6310

Mansfield
Man Ave. & Matlock Rd.
6-3-15

File Name : RK632
Site Code : 00000632
Start Date : 6/3/2015
Page No : 1

Groups Printed- Unshifted

Start Time	Matlock Southbound				Man Westbound				Matlock Northbound				From Church Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
06:30 AM	1	103	6	110	6	0	7	13	8	56	0	64	0	0	0	0	187
06:45 AM	0	188	13	201	18	0	9	27	3	101	0	104	0	0	0	0	332
Total	1	291	19	311	24	0	16	40	11	157	0	168	0	0	0	0	519
07:00 AM	0	237	6	243	18	0	16	34	8	139	0	147	0	0	0	0	424
07:15 AM	0	146	6	152	16	0	12	28	5	190	1	196	0	0	0	0	376
07:30 AM	0	170	12	182	13	0	15	28	4	166	0	170	0	0	0	0	380
07:45 AM	0	235	6	241	15	0	14	29	9	169	0	178	0	0	0	0	448
Total	0	788	30	818	62	0	57	119	26	664	1	691	0	0	0	0	1628
08:00 AM	0	187	9	196	10	0	10	20	5	144	0	149	0	0	0	0	365
08:15 AM	0	155	7	162	10	0	11	21	8	142	0	150	0	0	0	0	333
*** BREAK ***																	
Total	0	342	16	358	20	0	21	41	13	286	0	299	0	0	0	0	698
*** BREAK ***																	
04:30 PM	1	209	15	225	6	0	8	14	16	191	0	207	0	0	5	5	451
04:45 PM	0	192	8	200	12	0	9	21	8	199	1	208	0	0	0	0	429
Total	1	401	23	425	18	0	17	35	24	390	1	415	0	0	5	5	880
05:00 PM	2	218	24	244	9	0	6	15	11	216	2	229	1	0	0	1	489
05:15 PM	0	225	20	245	18	0	10	28	16	222	0	238	0	0	1	1	512
05:30 PM	0	270	18	288	13	0	11	24	15	215	1	231	0	0	1	1	544
05:45 PM	3	243	19	265	14	0	20	34	11	248	0	259	3	0	0	3	561
Total	5	956	81	1042	54	0	47	101	53	901	3	957	4	0	2	6	2106
06:00 PM	2	194	15	211	25	0	12	37	17	210	1	228	0	0	1	1	477
06:15 PM	7	243	11	261	22	3	16	41	10	180	5	195	0	0	0	0	497
Grand Total	16	3215	195	3426	225	3	186	414	154	2788	11	2953	4	0	8	12	6805
Apprch %	0.5	93.8	5.7		54.3	0.7	44.9		5.2	94.4	0.4		33.3	0	66.7		
Total %	0.2	47.2	2.9	50.3	3.3	0	2.7	6.1	2.3	41	0.2	43.4	0.1	0	0.1	0.2	

Start Time	Matlock Southbound				Man Westbound				Matlock Northbound				From Church Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 06:30 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	237	6	243	18	0	16	34	8	139	0	147	0	0	0	0	424
07:15 AM	0	146	6	152	16	0	12	28	5	190	1	196	0	0	0	0	376
07:30 AM	0	170	12	182	13	0	15	28	4	166	0	170	0	0	0	0	380
07:45 AM	0	235	6	241	15	0	14	29	9	169	0	178	0	0	0	0	448
Total Volume	0	788	30	818	62	0	57	119	26	664	1	691	0	0	0	0	1628
% App. Total	0	96.3	3.7		52.1	0	47.9		3.8	96.1	0.1		0	0	0		
PHF	.000	.831	.625	.842	.861	.000	.891	.875	.722	.874	.250	.881	.000	.000	.000	.000	.908

METROCOUNT

9128 Couples Dr.-Plano, TX-75025
Phone/Fax (972) 359-6310

Mansfield
Man Ave. & Matlock Rd.
6-3-15

File Name : RK632
Site Code : 00000632
Start Date : 6/3/2015
Page No : 2

	Matlock Southbound				Man Westbound				Matlock Northbound				From Church Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:15 AM				06:30 AM				
+0 mins.	0	237	6	243	18	0	16	34	5	190	1	196	0	0	0	0	0
+15 mins.	0	146	6	152	16	0	12	28	4	166	0	170	0	0	0	0	0
+30 mins.	0	170	12	182	13	0	15	28	9	169	0	178	0	0	0	0	0
+45 mins.	0	235	6	241	15	0	14	29	5	144	0	149	0	0	0	0	0
Total Volume	0	788	30	818	62	0	57	119	23	669	1	693	0	0	0	0	0
% App. Total	0	96.3	3.7		52.1	0	47.9		3.3	96.5	0.1		0	0	0		
PHF	.000	.831	.625	.842	.861	.000	.891	.875	.639	.880	.250	.884	.000	.000	.000	.000	
Peak Hour Analysis From 12:00 PM to 06:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	2	218	24	244	9	0	6	15	11	216	2	229	1	0	0	1	489
05:15 PM	0	225	20	245	18	0	10	28	16	222	0	238	0	0	1	1	512
05:30 PM	0	270	18	288	13	0	11	24	15	215	1	231	0	0	1	1	544
05:45 PM	3	243	19	265	14	0	20	34	11	248	0	259	3	0	0	3	561
Total Volume	5	956	81	1042	54	0	47	101	53	901	3	957	4	0	2	6	2106
% App. Total	0.5	91.7	7.8		53.5	0	46.5		5.5	94.1	0.3		66.7	0	33.3		
PHF	.417	.885	.844	.905	.750	.000	.588	.743	.828	.908	.375	.924	.333	.000	.500	.500	.939
Peak Hour Analysis From 12:00 PM to 06:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	05:00 PM				05:30 PM				05:00 PM				04:30 PM				
+0 mins.	2	218	24	244	13	0	11	24	11	216	2	229	0	0	5	5	5
+15 mins.	0	225	20	245	14	0	20	34	16	222	0	238	0	0	0	0	0
+30 mins.	0	270	18	288	25	0	12	37	15	215	1	231	1	0	0	1	1
+45 mins.	3	243	19	265	22	3	16	41	11	248	0	259	0	0	1	1	1
Total Volume	5	956	81	1042	74	3	59	136	53	901	3	957	1	0	6	7	7
% App. Total	0.5	91.7	7.8		54.4	2.2	43.4		5.5	94.1	0.3		14.3	0	85.7		
PHF	.417	.885	.844	.905	.740	.250	.738	.829	.828	.908	.375	.924	.250	.000	.300	.350	

METROCOUNT

9128 Couples Dr.-Plano, TX-75025
Phone/Fax (972) 359-6310

Mansfield
Country Club Dr. & Logan Dr.
6-3-15

File Name : RK633
Site Code : 00000633
Start Date : 6/3/2015
Page No : 1

Groups Printed- Unshifted

Start Time	Logan Southbound				Country Club Westbound				Na Northbound				Country Club Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
06:30 AM	12	0	7	19	3	53	0	56	0	0	0	0	0	27	2	29	104
06:45 AM	23	0	6	29	2	51	0	53	0	0	0	0	0	34	6	40	122
Total	35	0	13	48	5	104	0	109	0	0	0	0	0	61	8	69	226
07:00 AM	30	0	4	34	1	55	0	56	0	0	0	0	0	64	6	70	160
07:15 AM	16	0	13	29	2	53	0	55	0	0	0	0	0	68	5	73	157
07:30 AM	15	0	39	54	13	81	0	94	0	0	0	0	0	75	6	81	229
07:45 AM	17	0	52	69	26	106	0	132	0	0	0	0	0	79	4	83	284
Total	78	0	108	186	42	295	0	337	0	0	0	0	0	286	21	307	830
08:00 AM	20	0	10	30	13	88	0	101	0	0	0	0	0	41	9	50	181
08:15 AM	19	0	5	24	1	67	0	68	0	0	0	0	0	51	10	61	153
*** BREAK ***																	
Total	39	0	15	54	14	155	0	169	0	0	0	0	0	92	19	111	334
*** BREAK ***																	
04:30 PM	19	0	6	25	6	78	0	84	0	0	0	0	0	86	24	110	219
04:45 PM	13	0	5	18	6	73	0	79	0	0	0	0	0	67	12	79	176
Total	32	0	11	43	12	151	0	163	0	0	0	0	0	153	36	189	395
05:00 PM	8	0	8	16	12	81	0	93	0	0	0	0	0	83	21	104	213
05:15 PM	9	0	9	18	8	83	0	91	0	0	0	0	0	88	12	100	209
05:30 PM	19	0	5	24	6	73	0	79	0	0	0	0	0	99	18	117	220
05:45 PM	14	0	1	15	4	89	0	93	0	0	0	0	0	85	17	102	210
Total	50	0	23	73	30	326	0	356	0	0	0	0	0	355	68	423	852
06:00 PM	17	0	4	21	7	63	0	70	0	0	0	0	0	66	21	87	178
06:15 PM	16	0	2	18	9	68	0	77	0	0	0	0	0	78	16	94	189
Grand Total	267	0	176	443	119	1162	0	1281	0	0	0	0	0	1091	189	1280	3004
Apprch %	60.3	0	39.7		9.3	90.7	0		0	0	0	0	0	85.2	14.8		
Total %	8.9	0	5.9	14.7	4	38.7	0	42.6	0	0	0	0	0	36.3	6.3	42.6	

Start Time	Logan Southbound				Country Club Westbound				Na Northbound				Country Club Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 06:30 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	16	0	13	29	2	53	0	55	0	0	0	0	0	68	5	73	157
07:30 AM	15	0	39	54	13	81	0	94	0	0	0	0	0	75	6	81	229
07:45 AM	17	0	52	69	26	106	0	132	0	0	0	0	0	79	4	83	284
08:00 AM	20	0	10	30	13	88	0	101	0	0	0	0	0	41	9	50	181
Total Volume	68	0	114	182	54	328	0	382	0	0	0	0	0	263	24	287	851
% App. Total	37.4	0	62.6		14.1	85.9	0		0	0	0	0	0	91.6	8.4		
PHF	.850	.000	.548	.659	.519	.774	.000	.723	.000	.000	.000	.000	.000	.832	.667	.864	.749

METROCOUNT

9128 Couples Dr.-Plano, TX-75025
Phone/Fax (972) 359-6310

Mansfield
Country Club Dr. & Logan Dr.
6-3-15

File Name : RK633
Site Code : 00000633
Start Date : 6/3/2015
Page No : 2

	Logan Southbound				Country Club Westbound				Na Northbound				Country Club Eastbound								
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total				
Peak Hour Analysis From 06:30 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
+0 mins.	07:00 AM	30	0	4	34	07:30 AM	13	81	0	94	06:30 AM	0	0	0	0	07:00 AM	64	6	70		
+15 mins.		16	0	13	29		26	106	0	132		0	0	0	0		0	68	5	73	
+30 mins.		15	0	39	54		13	88	0	101		0	0	0	0		0	75	6	81	
+45 mins.		17	0	52	69		1	67	0	68		0	0	0	0		0	79	4	83	
Total Volume		78	0	108	186		53	342	0	395		0	0	0	0		0	286	21	307	
% App. Total		41.9	0	58.1			13.4	86.6	0			0	0	0			0	93.2	6.8		
PHF		.650	.000	.519	.674		.510	.807	.000	.748		.000	.000	.000	.000		.000	.905	.875	.925	
Peak Hour Analysis From 12:00 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM		8	0	8	16		12	81	0	93		0	0	0	0		0	83	21	104	213
05:15 PM		9	0	9	18		8	83	0	91		0	0	0	0		0	88	12	100	209
05:30 PM		19	0	5	24		6	73	0	79		0	0	0	0		0	99	18	117	220
05:45 PM		14	0	1	15		4	89	0	93		0	0	0	0		0	85	17	102	210
Total Volume		50	0	23	73		30	326	0	356		0	0	0	0		0	355	68	423	852
% App. Total		68.5	0	31.5			8.4	91.6	0			0	0	0			0	83.9	16.1		
PHF		.658	.000	.639	.760		.625	.916	.000	.957		.000	.000	.000	.000		.000	.896	.810	.904	.968
Peak Hour Analysis From 12:00 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
+0 mins.	05:15 PM	9	0	9	18	05:00 PM	12	81	0	93	12:00 PM	0	0	0	0	05:00 PM	0	83	21	104	
+15 mins.		19	0	5	24		8	83	0	91		0	0	0	0		0	88	12	100	
+30 mins.		14	0	1	15		6	73	0	79		0	0	0	0		0	99	18	117	
+45 mins.		17	0	4	21		4	89	0	93		0	0	0	0		0	85	17	102	
Total Volume		59	0	19	78		30	326	0	356		0	0	0	0		0	355	68	423	
% App. Total		75.6	0	24.4			8.4	91.6	0			0	0	0			0	83.9	16.1		
PHF		.776	.000	.528	.813		.625	.916	.000	.957		.000	.000	.000	.000		.000	.896	.810	.904	

METROCOUNT

9128 Couples Dr.-Plano, TX-75025
Phone/Fax (972) 359-6310

Mansfield
Country Club Dr. & Hillary Tr.
6-3-15

File Name : RK634
Site Code : 00000634
Start Date : 6/3/2015
Page No : 1

Groups Printed- Unshifted

Start Time	Hillary Southbound				Country Club Westbound				Hillary Northbound				Country Club Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
06:30 AM	1	0	1	2	4	35	0	39	1	0	1	2	1	32	1	34	77
06:45 AM	3	1	0	4	0	35	0	35	1	0	7	8	3	38	1	42	89
Total	4	1	1	6	4	70	0	74	2	0	8	10	4	70	2	76	166
07:00 AM	5	3	0	8	0	37	2	39	0	0	3	3	0	69	2	71	121
07:15 AM	6	1	2	9	0	29	1	30	2	0	3	5	1	76	0	77	121
07:30 AM	7	0	15	22	4	69	3	76	15	0	7	22	1	103	1	105	225
07:45 AM	6	0	11	17	3	113	3	119	25	0	6	31	3	142	2	147	314
Total	24	4	28	56	7	248	9	264	42	0	19	61	5	390	5	400	781
08:00 AM	6	1	4	11	1	68	2	71	5	0	2	7	2	46	1	49	138
08:15 AM	5	1	1	7	1	48	0	49	3	0	4	7	1	45	6	52	115
*** BREAK ***																	
Total	11	2	5	18	2	116	2	120	8	0	6	14	3	91	7	101	253
*** BREAK ***																	
04:30 PM	5	1	0	6	0	57	0	57	0	1	1	2	3	64	4	71	136
04:45 PM	1	1	0	2	1	63	1	65	0	0	2	2	2	55	4	61	130
Total	6	2	0	8	1	120	1	122	0	1	3	4	5	119	8	132	266
05:00 PM	8	0	0	8	2	75	0	77	1	2	2	5	5	68	6	79	169
05:15 PM	4	0	0	4	1	67	3	71	2	0	3	5	1	69	5	75	155
05:30 PM	3	1	1	5	1	70	1	72	1	1	3	5	4	86	2	92	174
05:45 PM	4	1	0	5	2	75	6	83	1	0	2	3	3	55	4	62	153
Total	19	2	1	22	6	287	10	303	5	3	10	18	13	278	17	308	651
06:00 PM	3	1	0	4	0	47	1	48	1	1	6	8	7	57	2	66	126
06:15 PM	4	0	0	4	3	57	2	62	2	1	2	5	5	47	3	55	126
Grand Total	71	12	35	118	23	945	25	993	60	6	54	120	42	1052	44	1138	2369
Apprch %	60.2	10.2	29.7		2.3	95.2	2.5		50	5	45		3.7	92.4	3.9		
Total %	3	0.5	1.5	5	1	39.9	1.1	41.9	2.5	0.3	2.3	5.1	1.8	44.4	1.9	48	

Start Time	Hillary Southbound				Country Club Westbound				Hillary Northbound				Country Club Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 06:30 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	6	1	2	9	0	29	1	30	2	0	3	5	1	76	0	77	121
07:30 AM	7	0	15	22	4	69	3	76	15	0	7	22	1	103	1	105	225
07:45 AM	6	0	11	17	3	113	3	119	25	0	6	31	3	142	2	147	314
08:00 AM	6	1	4	11	1	68	2	71	5	0	2	7	2	46	1	49	138
Total Volume	25	2	32	59	8	279	9	296	47	0	18	65	7	367	4	378	798
% App. Total	42.4	3.4	54.2		2.7	94.3	3		72.3	0	27.7		1.9	97.1	1.1		
PHF	.893	.500	.533	.670	.500	.617	.750	.622	.470	.000	.643	.524	.583	.646	.500	.643	.635

METROCOUNT

9128 Couples Dr.-Plano, TX-75025
Phone/Fax (972) 359-6310

Mansfield
Country Club Dr. & Hillary Tr.
6-3-15

File Name : RK634
Site Code : 00000634
Start Date : 6/3/2015
Page No : 2

	Hillary Southbound				Country Club Westbound				Hillary Northbound				Country Club Eastbound							
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total			
Peak Hour Analysis From 06:30 AM to 11:45 AM - Peak 1 of 1																				
Peak Hour for Each Approach Begins at:																				
+0 mins.	07:15 AM	6	1	2	9	07:30 AM	4	69	3	76	07:30 AM	15	0	7	22	07:00 AM	0	69	2	71
+15 mins.		7	0	15	22		3	113	3	119		25	0	6	31		1	76	0	77
+30 mins.		6	0	11	17		1	68	2	71		5	0	2	7		1	103	1	105
+45 mins.		6	1	4	11		1	48	0	49		3	0	4	7		3	142	2	147
Total Volume		25	2	32	59		9	298	8	315		48	0	19	67		5	390	5	400
% App. Total		42.4	3.4	54.2			2.9	94.6	2.5			71.6	0	28.4			1.2	97.5	1.2	
PHF		.893	.500	.533	.670		.563	.659	.667	.662		.480	.000	.679	.540		.417	.687	.625	.680
Peak Hour Analysis From 12:00 PM to 06:15 PM - Peak 1 of 1																				
Peak Hour for Entire Intersection Begins at 05:00 PM																				
05:00 PM		8	0	0	8		2	75	0	77		1	2	2	5		5	68	6	79
05:15 PM		4	0	0	4		1	67	3	71		2	0	3	5		1	69	5	75
05:30 PM		3	1	1	5		1	70	1	72		1	1	3	5		4	86	2	92
05:45 PM		4	1	0	5		2	75	6	83		1	0	2	3		3	55	4	62
Total Volume		19	2	1	22		6	287	10	303		5	3	10	18		13	278	17	308
% App. Total		86.4	9.1	4.5			2	94.7	3.3			27.8	16.7	55.6			4.2	90.3	5.5	
PHF		.594	.500	.250	.688		.750	.957	.417	.913		.625	.375	.833	.900		.650	.808	.708	.837
Peak Hour Analysis From 12:00 PM to 06:15 PM - Peak 1 of 1																				
Peak Hour for Each Approach Begins at:																				
+0 mins.	05:00 PM	8	0	0	8	05:00 PM	2	75	0	77	05:15 PM	2	0	3	5	05:00 PM	5	68	6	79
+15 mins.		4	0	0	4		1	67	3	71		1	1	3	5		1	69	5	75
+30 mins.		3	1	1	5		1	70	1	72		1	0	2	3		4	86	2	92
+45 mins.		4	1	0	5		2	75	6	83		1	1	6	8		3	55	4	62
Total Volume		19	2	1	22		6	287	10	303		5	2	14	21		13	278	17	308
% App. Total		86.4	9.1	4.5			2	94.7	3.3			23.8	9.5	66.7			4.2	90.3	5.5	
PHF		.594	.500	.250	.688		.750	.957	.417	.913		.625	.500	.583	.656		.650	.808	.708	.837

METROCOUNT

9128 Couples Dr.-Plano, TX-75025
Phone/Fax (972) 359-6310

Mansfield
Collins St. & Country Club Dr.
6-3-15

File Name : RK635
Site Code : 00000635
Start Date : 6/3/2015
Page No : 1

Groups Printed- Unshifted

	Collins Southbound				Country Club Westbound				Collins Northbound				Country Club Eastbound				Int. Total
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
06:30 AM	18	6	0	24	0	0	0	0	0	27	18	45	4	0	28	32	101
06:45 AM	13	7	0	20	0	0	0	0	0	29	20	49	5	0	35	40	109
Total	31	13	0	44	0	0	0	0	0	56	38	94	9	0	63	72	210
07:00 AM	20	15	0	35	0	0	0	0	0	20	16	36	9	0	52	61	132
07:15 AM	16	18	0	34	0	0	0	0	0	30	14	44	9	0	33	42	120
07:30 AM	31	19	0	50	0	0	0	0	0	54	38	92	23	0	49	72	214
07:45 AM	29	18	0	47	0	0	0	0	0	53	54	107	28	0	44	72	226
Total	96	70	0	166	0	0	0	0	0	157	122	279	69	0	178	247	692
08:00 AM	29	12	0	41	0	0	0	0	0	23	28	51	19	0	38	57	149
08:15 AM	21	9	0	30	0	0	0	0	0	12	21	33	14	0	27	41	104
*** BREAK ***																	
Total	50	21	0	71	0	0	0	0	0	35	49	84	33	0	65	98	253
*** BREAK ***																	
04:30 PM	45	25	0	70	0	0	0	0	0	18	12	30	28	0	31	59	159
04:45 PM	42	18	0	60	0	0	0	0	0	20	16	36	24	0	28	52	148
Total	87	43	0	130	0	0	0	0	0	38	28	66	52	0	59	111	307
05:00 PM	49	17	0	66	0	0	0	0	0	14	28	42	22	0	40	62	170
05:15 PM	52	13	0	65	0	0	0	0	0	15	18	33	27	0	44	71	169
05:30 PM	56	17	0	73	0	0	0	0	0	16	17	33	30	0	48	78	184
05:45 PM	60	26	0	86	0	0	0	0	0	21	19	40	25	0	27	52	178
Total	217	73	0	290	0	0	0	0	0	66	82	148	104	0	159	263	701
06:00 PM	28	19	0	47	0	0	0	0	0	25	22	47	22	0	30	52	146
06:15 PM	37	29	0	66	0	0	0	0	0	16	21	37	20	0	24	44	147
Grand Total	546	268	0	814	0	0	0	0	0	393	362	755	309	0	578	887	2456
Apprch %	67.1	32.9	0		0	0	0		0	52.1	47.9		34.8	0	65.2		
Total %	22.2	10.9	0	33.1	0	0	0	0	0	16	14.7	30.7	12.6	0	23.5	36.1	

	Collins Southbound				Country Club Westbound				Collins Northbound				Country Club Eastbound				Int. Total
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 06:30 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	16	18	0	34	0	0	0	0	0	30	14	44	9	0	33	42	120
07:30 AM	31	19	0	50	0	0	0	0	0	54	38	92	23	0	49	72	214
07:45 AM	29	18	0	47	0	0	0	0	0	53	54	107	28	0	44	72	226
08:00 AM	29	12	0	41	0	0	0	0	0	23	28	51	19	0	38	57	149
Total Volume	105	67	0	172	0	0	0	0	0	160	134	294	79	0	164	243	709
% App. Total	61	39	0		0	0	0		0	54.4	45.6		32.5	0	67.5		
PHF	.847	.882	.000	.860	.000	.000	.000	.000	.000	.741	.620	.687	.705	.000	.837	.844	.784

METROCOUNT

9128 Couples Dr.-Plano, TX-75025
Phone/Fax (972) 359-6310

Mansfield
Collins St. & Country Club Dr.
6-3-15

File Name : RK635
Site Code : 00000635
Start Date : 6/3/2015
Page No : 2

	Collins Southbound				Country Club Westbound				Collins Northbound				Country Club Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				06:30 AM				07:15 AM				07:00 AM				
+0 mins.	16	18	0	34	0	0	0	0	0	30	14	44	9	0	52	61	
+15 mins.	31	19	0	50	0	0	0	0	0	54	38	92	9	0	33	42	
+30 mins.	29	18	0	47	0	0	0	0	0	53	54	107	23	0	49	72	
+45 mins.	29	12	0	41	0	0	0	0	0	23	28	51	28	0	44	72	
Total Volume	105	67	0	172	0	0	0	0	0	160	134	294	69	0	178	247	
% App. Total	61	39	0		0	0	0		0	54.4	45.6		27.9	0	72.1		
PHF	.847	.882	.000	.860	.000	.000	.000	.000	.000	.741	.620	.687	.616	.000	.856	.858	
Peak Hour Analysis From 12:00 PM to 06:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	49	17	0	66	0	0	0	0	0	14	28	42	22	0	40	62	170
05:15 PM	52	13	0	65	0	0	0	0	0	15	18	33	27	0	44	71	169
05:30 PM	56	17	0	73	0	0	0	0	0	16	17	33	30	0	48	78	184
05:45 PM	60	26	0	86	0	0	0	0	0	21	19	40	25	0	27	52	178
Total Volume	217	73	0	290	0	0	0	0	0	66	82	148	104	0	159	263	701
% App. Total	74.8	25.2	0		0	0	0		0	44.6	55.4		39.5	0	60.5		
PHF	.904	.702	.000	.843	.000	.000	.000	.000	.000	.786	.732	.881	.867	.000	.828	.843	.952
Peak Hour Analysis From 12:00 PM to 06:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	05:00 PM				12:00 PM				05:30 PM				04:45 PM				
+0 mins.	49	17	0	66	0	0	0	0	0	16	17	33	24	0	28	52	
+15 mins.	52	13	0	65	0	0	0	0	0	21	19	40	22	0	40	62	
+30 mins.	56	17	0	73	0	0	0	0	0	25	22	47	27	0	44	71	
+45 mins.	60	26	0	86	0	0	0	0	0	16	21	37	30	0	48	78	
Total Volume	217	73	0	290	0	0	0	0	0	78	79	157	103	0	160	263	
% App. Total	74.8	25.2	0		0	0	0		0	49.7	50.3		39.2	0	60.8		
PHF	.904	.702	.000	.843	.000	.000	.000	.000	.000	.780	.898	.835	.858	.000	.833	.843	

METROCOUNT

9128 Couples Dr.-Plano, TX-75025
Phone/Fax (972) 359-6310

Mansfield
Collins Dr. & Stiles Dr.
6-3-15

File Name : RK636
Site Code : 00000636
Start Date : 6/3/2015
Page No : 1

Groups Printed- Unshifted

Start Time	Collins Southbound				NA Westbound				Collins Northbound				Stiles Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
06:30 AM	7	23	0	30	0	0	0	0	0	54	2	56	1	0	27	28	114
06:45 AM	2	19	0	21	0	0	0	0	0	60	1	61	2	0	18	20	102
Total	9	42	0	51	0	0	0	0	0	114	3	117	3	0	45	48	216
07:00 AM	7	33	0	40	0	0	0	0	0	72	1	73	3	0	38	41	154
07:15 AM	6	35	0	41	0	0	0	0	0	61	1	62	2	0	28	30	133
07:30 AM	6	45	0	51	0	0	0	0	0	91	15	106	3	0	20	23	180
07:45 AM	6	39	0	45	0	0	0	0	0	91	12	103	8	0	22	30	178
Total	25	152	0	177	0	0	0	0	0	315	29	344	16	0	108	124	645
08:00 AM	8	38	0	46	0	0	0	0	0	58	8	66	3	0	20	23	135
08:15 AM	7	32	0	39	0	0	0	0	0	35	1	36	4	0	13	17	92
*** BREAK ***																	
Total	15	70	0	85	0	0	0	0	0	93	9	102	7	0	33	40	227
*** BREAK ***																	
04:30 PM	26	68	0	94	0	0	0	0	0	46	5	51	1	0	10	11	156
04:45 PM	25	60	0	85	0	0	0	0	0	49	0	49	1	0	12	13	147
Total	51	128	0	179	0	0	0	0	0	95	5	100	2	0	22	24	303
05:00 PM	20	68	0	88	0	0	0	0	0	50	2	52	0	0	8	8	148
05:15 PM	17	65	0	82	0	0	0	0	0	58	1	59	1	0	7	8	149
05:30 PM	28	71	0	99	0	0	0	0	0	61	2	63	1	0	5	6	168
05:45 PM	17	84	0	101	0	0	0	0	0	49	1	50	2	0	22	24	175
Total	82	288	0	370	0	0	0	0	0	218	6	224	4	0	42	46	640
06:00 PM	32	48	0	80	0	0	0	0	0	51	5	56	2	0	10	12	148
06:15 PM	28	66	0	94	0	0	0	0	0	40	1	41	0	0	20	20	155
Grand Total	242	794	0	1036	0	0	0	0	0	926	58	984	34	0	280	314	2334
Apprch %	23.4	76.6	0		0	0	0		0	94.1	5.9		10.8	0	89.2		
Total %	10.4	34	0	44.4	0	0	0	0	0	39.7	2.5	42.2	1.5	0	12	13.5	

Start Time	Collins Southbound				NA Westbound				Collins Northbound				Stiles Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 06:30 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	7	33	0	40	0	0	0	0	0	72	1	73	3	0	38	41	154
07:15 AM	6	35	0	41	0	0	0	0	0	61	1	62	2	0	28	30	133
07:30 AM	6	45	0	51	0	0	0	0	0	91	15	106	3	0	20	23	180
07:45 AM	6	39	0	45	0	0	0	0	0	91	12	103	8	0	22	30	178
Total Volume	25	152	0	177	0	0	0	0	0	315	29	344	16	0	108	124	645
% App. Total	14.1	85.9	0		0	0	0		0	91.6	8.4		12.9	0	87.1		
PHF	.893	.844	.000	.868	.000	.000	.000	.000	.000	.865	.483	.811	.500	.000	.711	.756	.896

METROCOUNT

9128 Couples Dr.-Plano, TX-75025
Phone/Fax (972) 359-6310

Mansfield
Collins Dr. & Stiles Dr.
6-3-15

File Name : RK636
Site Code : 00000636
Start Date : 6/3/2015
Page No : 2

	Collins Southbound				NA Westbound				Collins Northbound				Stiles Eastbound							
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total			
Peak Hour Analysis From 06:30 AM to 11:45 AM - Peak 1 of 1																				
Peak Hour for Each Approach Begins at:																				
+0 mins.	07:15 AM	6	35	0	41	06:30 AM	0	0	0	0	07:00 AM	0	72	1	73	07:00 AM	3	0	38	41
+15 mins.	6	45	0	51	0	0	0	0	0	0	61	1	62	2	0	28	30			
+30 mins.	6	39	0	45	0	0	0	0	0	0	91	15	106	3	0	20	23			
+45 mins.	8	38	0	46	0	0	0	0	0	0	91	12	103	8	0	22	30			
Total Volume	26	157	0	183	0	0	0	0	0	0	315	29	344	16	0	108	124			
% App. Total	14.2	85.8	0		0	0	0		0	0	91.6	8.4		12.9	0	87.1				
PHF	.813	.872	.000	.897	.000	.000	.000	.000	.000	.865	.483	.811	.500	.000	.711	.756				
Peak Hour Analysis From 12:00 PM to 06:15 PM - Peak 1 of 1																				
Peak Hour for Entire Intersection Begins at 05:30 PM																				
05:30 PM	28	71	0	99	0	0	0	0	0	0	61	2	63	1	0	5	6	168		
05:45 PM	17	84	0	101	0	0	0	0	0	0	49	1	50	2	0	22	24	175		
06:00 PM	32	48	0	80	0	0	0	0	0	0	51	5	56	2	0	10	12	148		
06:15 PM	28	66	0	94	0	0	0	0	0	0	40	1	41	0	0	20	20	155		
Total Volume	105	269	0	374	0	0	0	0	0	0	201	9	210	5	0	57	62	646		
% App. Total	28.1	71.9	0		0	0	0		0	0	95.7	4.3		8.1	0	91.9				
PHF	.820	.801	.000	.926	.000	.000	.000	.000	.000	.824	.450	.833	.625	.000	.648	.646	.923			
Peak Hour Analysis From 12:00 PM to 06:15 PM - Peak 1 of 1																				
Peak Hour for Each Approach Begins at:																				
+0 mins.	05:30 PM	28	71	0	99	12:00 PM	0	0	0	0	05:15 PM	0	58	1	59	05:30 PM	1	0	5	6
+15 mins.	17	84	0	101	0	0	0	0	0	0	61	2	63	2	0	22	24			
+30 mins.	32	48	0	80	0	0	0	0	0	0	49	1	50	2	0	10	12			
+45 mins.	28	66	0	94	0	0	0	0	0	0	51	5	56	0	0	20	20			
Total Volume	105	269	0	374	0	0	0	0	0	0	219	9	228	5	0	57	62			
% App. Total	28.1	71.9	0		0	0	0		0	0	96.1	3.9		8.1	0	91.9				
PHF	.820	.801	.000	.926	.000	.000	.000	.000	.000	.898	.450	.905	.625	.000	.648	.646				

METROCOUNT

9128 Couples Dr.-Plano,TX-75025
Phone/Fax (972) 359-6310

Mansfield
Debbie Ln. & Summervlen Dr.
6-3-15

File Name : RK637
Site Code : 00000637
Start Date : 6/3/2015
Page No : 1

Groups Printed- Unshifted

	Summervlen Southbound				Debbie Westbound				NA Northbound				Debbie Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
06:30 AM	1	0	0	1	1	140	0	141	0	0	0	0	0	121	0	121	263
06:45 AM	1	0	0	1	0	143	0	143	0	0	0	0	0	123	0	123	267
Total	2	0	0	2	1	283	0	284	0	0	0	0	0	244	0	244	530
07:00 AM	0	0	0	0	0	144	0	144	0	0	0	0	0	153	1	154	298
07:15 AM	0	0	1	1	0	168	0	168	0	0	0	0	0	151	1	152	321
07:30 AM	0	0	1	1	1	191	0	192	0	0	0	0	0	146	1	147	340
07:45 AM	0	0	0	0	0	193	0	193	0	0	0	0	0	110	0	110	303
Total	0	0	2	2	1	696	0	697	0	0	0	0	0	560	3	563	1262
08:00 AM	0	0	0	0	0	189	0	189	0	0	0	0	0	130	2	132	321
08:15 AM	1	0	0	1	0	125	0	125	0	0	0	0	0	116	2	118	244
*** BREAK ***																	
Total	1	0	0	1	0	314	0	314	0	0	0	0	0	246	4	250	565
*** BREAK ***																	
04:30 PM	3	0	2	5	0	228	0	228	0	0	0	0	0	150	5	155	388
04:45 PM	0	0	0	0	0	221	0	221	0	0	0	0	0	126	2	128	349
Total	3	0	2	5	0	449	0	449	0	0	0	0	0	276	7	283	737
05:00 PM	0	0	0	0	0	213	0	213	0	0	0	0	0	143	0	143	356
05:15 PM	0	0	0	0	0	208	0	208	0	0	0	0	0	156	0	156	364
05:30 PM	2	0	0	2	1	247	0	248	0	0	0	0	0	172	0	172	422
05:45 PM	2	0	0	2	0	216	0	216	0	0	0	0	0	147	1	148	366
Total	4	0	0	4	1	884	0	885	0	0	0	0	0	618	1	619	1508
06:00 PM	0	0	0	0	0	229	0	229	0	0	0	0	0	172	0	172	401
06:15 PM	0	0	0	0	1	216	0	217	0	0	0	0	0	145	1	146	363
Grand Total	10	0	4	14	4	3071	0	3075	0	0	0	0	0	2261	16	2277	5366
Apprch %	71.4	0	28.6		0.1	99.9	0		0	0	0		0	99.3	0.7		
Total %	0.2	0	0.1	0.3	0.1	57.2	0	57.3	0	0	0	0	0	42.1	0.3	42.4	

	Summervlen Southbound				Debbie Westbound				NA Northbound				Debbie Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	1	1	0	168	0	168	0	0	0	0	0	151	1	152	321
07:30 AM	0	0	1	1	1	191	0	192	0	0	0	0	0	146	1	147	340
07:45 AM	0	0	0	0	0	193	0	193	0	0	0	0	0	110	0	110	303
08:00 AM	0	0	0	0	0	189	0	189	0	0	0	0	0	130	2	132	321
Total Volume	0	0	2	2	1	741	0	742	0	0	0	0	0	537	4	541	1285
% App. Total	0	0	100		0.1	99.9	0		0	0	0		0	99.3	0.7		
PHF	.000	.000	.500	.500	.250	.960	.000	.961	.000	.000	.000	.000	.000	.889	.500	.890	.945

METROCOUNT

9128 Couples Dr.-Plano, TX-75025
Phone/Fax (972) 359-6310

Mansfield
Debbie Ln. & Summerglan Dr.
6-3-15

File Name : RK637
Site Code : 00000637
Start Date : 6/3/2015
Page No : 2

	Summerglan Southbound				Debbie Westbound				NA Northbound				Debbie Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	06:30 AM				07:15 AM				06:30 AM				06:45 AM				
+0 mins.	1	0	0	1	0	168	0	168	0	0	0	0	0	123	0	123	
+15 mins.	1	0	0	1	1	191	0	192	0	0	0	0	0	153	1	154	
+30 mins.	0	0	0	0	0	193	0	193	0	0	0	0	0	151	1	152	
+45 mins.	0	0	1	1	0	189	0	189	0	0	0	0	0	146	1	147	
Total Volume	2	0	1	3	1	741	0	742	0	0	0	0	0	573	3	576	
% App. Total	66.7	0	33.3		0.1	99.9	0		0	0	0		0	99.5	0.5		
PHF	.500	.000	.250	.750	.250	.960	.000	.961	.000	.000	.000	.000	.000	.936	.750	.935	
Peak Hour Analysis From 12:00 PM to 06:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:15 PM																	
05:15 PM	0	0	0	0	0	208	0	208	0	0	0	0	0	156	0	156	364
05:30 PM	2	0	0	2	1	247	0	248	0	0	0	0	0	172	0	172	422
05:45 PM	2	0	0	2	0	216	0	216	0	0	0	0	0	147	1	148	366
06:00 PM	0	0	0	0	0	229	0	229	0	0	0	0	0	172	0	172	401
Total Volume	4	0	0	4	1	900	0	901	0	0	0	0	0	647	1	648	1553
% App. Total	100	0	0		0.1	99.9	0		0	0	0		0	99.8	0.2		
PHF	.500	.000	.000	.500	.250	.911	.000	.908	.000	.000	.000	.000	.000	.940	.250	.942	.920
Peak Hour Analysis From 12:00 PM to 06:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	03:45 PM				05:30 PM				12:00 PM				05:15 PM				
+0 mins.	0	0	0	0	1	247	0	248	0	0	0	0	0	156	0	156	
+15 mins.	0	0	0	0	0	216	0	216	0	0	0	0	0	172	0	172	
+30 mins.	0	0	0	0	0	229	0	229	0	0	0	0	0	147	1	148	
+45 mins.	3	0	2	5	1	216	0	217	0	0	0	0	0	172	0	172	
Total Volume	3	0	2	5	2	908	0	910	0	0	0	0	0	647	1	648	
% App. Total	60	0	40		0.2	99.8	0		0	0	0		0	99.8	0.2		
PHF	.250	.000	.250	.250	.500	.919	.000	.917	.000	.000	.000	.000	.000	.940	.250	.942	

APPENDIX B

Capacity Analysis Worksheets

HCM 2010 TWSC

AM Peak

22: Ladera Entrance/Summer Glen & Debbie

6/19/2015

Intersection

Intersection Delay, s/veh 0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	4	537	0	0	741	1	0	0	0	2	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	0	-	-	-	-	100	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	584	0	0	805	1	0	0	0	2	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	807	0	0	584	0	0	995	1399	292	1107	1398	403
Stage 1	-	-	-	-	-	-	592	592	-	806	806	-
Stage 2	-	-	-	-	-	-	403	807	-	301	592	-
Follow-up Headway	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Capacity-1 Maneuver	814	-	-	987	-	-	199	139	704	165	140	597
Stage 1	-	-	-	-	-	-	460	492	-	342	393	-
Stage 2	-	-	-	-	-	-	595	392	-	683	492	-
Time blocked-Platoon, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Capacity-1 Maneuver	814	-	-	987	-	-	198	138	704	164	139	597
Mov Capacity-2 Maneuver	-	-	-	-	-	-	198	138	-	164	139	-
Stage 1	-	-	-	-	-	-	458	490	-	340	393	-
Stage 2	-	-	-	-	-	-	595	392	-	680	490	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	0	27.1
HCM LOS			A	D

Minor Lane / Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	0	0	814	-	-	987	-	-	164	164
HCM Lane V/C Ratio	+	+	0.005	-	-	-	-	-	0.009	0.004
HCM Control Delay (s)	0	0	9.446	-	-	0	-	-	27.1	27
HCM Lane LOS	A	A	A	-	-	A	-	-	D	D
HCM 95th %tile Q(veh)	+	+	0.016	-	-	0	-	-	0.027	0.013

Notes

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

HCM 2010 TWSC

PM Peak

22: Ladera Entrance/Summer Glen & Debbie

6/19/2015

Intersection

Intersection Delay, s/veh 0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	1	618	17	14	884	1	12	0	8	0	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	0	-	-	-	-	100	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	672	18	15	961	1	13	0	9	0	0	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	962	0	0	690	0	0	1194	1675	345	1330	1684	481
Stage 1	-	-	-	-	-	-	683	683	-	992	992	-
Stage 2	-	-	-	-	-	-	511	992	-	338	692	-
Follow-up Headway	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Capacity-1 Maneuver	711	-	-	900	-	-	142	94	651	113	93	531
Stage 1	-	-	-	-	-	-	405	447	-	264	322	-
Stage 2	-	-	-	-	-	-	514	322	-	650	443	-
Time blocked-Platoon, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Capacity-1 Maneuver	711	-	-	900	-	-	139	92	651	110	91	531
Mov Capacity-2 Maneuver	-	-	-	-	-	-	139	92	-	110	91	-
Stage 1	-	-	-	-	-	-	404	446	-	264	317	-
Stage 2	-	-	-	-	-	-	501	317	-	640	442	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	24.5	11.8
HCM LOS			C	B

Minor Lane / Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	162	651	711	-	-	900	-	-	0	531
HCM Lane V/C Ratio	0.098	0.009	0.002	-	-	0.017	-	-	+	0.008
HCM Control Delay (s)	29.6	10.6	10.071	-	-	9.069	-	-	0	11.8
HCM Lane LOS	D	B	B	-	-	A	-	-	A	B
HCM 95th %tile Q(veh)	0.322	0.027	0.005	-	-	0.052	-	-	+	0.025

Notes

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

HCM 2010 TWSC
3: Matlock & Windcastle

AM Peak
6/14/2015

Intersection

Intersection Delay, s/veh 3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	8	0	10	46	1	74	3	712	25	35	652	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	1	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	0	11	50	1	80	3	774	27	38	709	1

Major/Minor	Minor2		Minor1		Major1		Major2	
Conflicting Flow All	1179	1593	355	1224	1580	401	710	0
Stage 1	785	785	-	794	794	-	-	-
Stage 2	394	808	-	430	786	-	-	-
Follow-up Headway	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-
Pot Capacity-1 Maneuver	146	106	641	135	108	599	885	-
Stage 1	352	402	-	348	398	-	-	-
Stage 2	602	392	-	574	401	-	-	-
Time blocked-Platoon, %	-	-	-	-	-	-	-	-
Mov Capacity-1 Maneuver	121	101	641	128	103	599	885	-
Mov Capacity-2 Maneuver	121	101	-	128	103	-	-	-
Stage 1	351	383	-	347	397	-	-	-
Stage 2	518	391	-	538	382	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	23	35.3	0	0.5
HCM LOS	C	E		

Minor Lane / Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	885	-	-	220	246	818	-	-
HCM Lane V/C Ratio	0.004	-	-	0.089	0.535	0.047	-	-
HCM Control Delay (s)	9.083	-	-	23	35.3	9.616	-	-
HCM Lane LOS	A	-	-	C	E	A	-	-
HCM 95th %tile Q(veh)	0.011	-	-	0.289	2.871	0.146	-	-

Notes

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

HCM 2010 TWSC
 9: Matlock & Main

AM Peak
 6/14/2015

Intersection

Intersection Delay, s/veh 2.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	51	54	669	23	33	738
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	55	59	727	25	36	802

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1213	376	0
Stage 1	740	-	-
Stage 2	473	-	-
Follow-up Headway	3.52	3.32	2.22
Pot Capacity-1 Maneuver	174	622	853
Stage 1	433	-	-
Stage 2	593	-	-
Time blocked-Platoon, %	-	-	-
Mov Capacity-1 Maneuver	167	622	853
Mov Capacity-2 Maneuver	167	-	-
Stage 1	433	-	-
Stage 2	568	-	-

Approach	WB	NB	SB
HCM Control Delay, s	28	0	0.4
HCM LOS	D		

Minor Lane / Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	268	853	-
HCM Lane V/C Ratio	-	-	0.426	0.042	-
HCM Control Delay (s)	-	-	28	9.406	-
HCM Lane LOS	-	-	D	A	-
HCM 95th %tile Q(veh)	-	-	2.014	0.132	-

Notes

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

HCM 2010 TWSC
 12: S. Collins & Country Club

AM Peak
 6/14/2015

Intersection

Intersection Delay, s/veh 7.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	164	79	134	160	67	105
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	178	86	146	174	73	114

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	595	130	187	0	0
Stage 1	130	-	-	-	-
Stage 2	465	-	-	-	-
Follow-up Headway	3.518	3.318	2.218	-	-
Pot Capacity-1 Maneuver	467	920	1387	-	-
Stage 1	896	-	-	-	-
Stage 2	632	-	-	-	-
Time blocked-Platoon, %				-	-
Mov Capacity-1 Maneuver	412	920	1387	-	-
Mov Capacity-2 Maneuver	412	-	-	-	-
Stage 1	896	-	-	-	-
Stage 2	558	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.7	3.6	0
HCM LOS	C		

Minor Lane / Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1387	-	412	920	-	-
HCM Lane V/C Ratio	0.105	-	0.433	0.093	-	-
HCM Control Delay (s)	7.9	0	20.2	9.3	-	-
HCM Lane LOS	A	A	C	A		
HCM 95th %tile Q(veh)	0.351	-	2.132	0.308	-	-

Notes

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

HCM 2010 TWSC
 13: Country Club & Logan

AM Peak
 6/14/2015

Intersection

Intersection Delay, s/veh 3.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	24	263	328	54	114	68
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	286	357	59	124	74

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	415	0	581
Stage 1	-	-	386
Stage 2	-	-	195
Follow-up Headway	2.22	-	3.52
Pot Capacity-1 Maneuver	1140	-	445
Stage 1	-	-	656
Stage 2	-	-	819
Time blocked-Platoon, %	-	-	-
Mov Capacity-1 Maneuver	1140	-	435
Mov Capacity-2 Maneuver	-	-	435
Stage 1	-	-	656
Stage 2	-	-	800

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	14.1
HCM LOS			B

Minor Lane / Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1140	-	-	-	435	798
HCM Lane V/C Ratio	0.023	-	-	-	0.285	0.093
HCM Control Delay (s)	8.232	-	-	-	16.5	10
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %ile Q(veh)	0.07	-	-	-	1.16	0.305

Notes

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

HCM 2010 TWSC
15: Hillary & Country Club

AM Peak
6/14/2015

Intersection

Intersection Delay, s/veh 2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	4	367	7	9	279	8	18	0	47	32	2	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	399	8	10	303	9	20	0	51	35	2	27

Major/Minor	Major1		Major2		Minor1		Minor2	
Conflicting Flow All	312	0	0	407	0	0	583	743
Stage 1	-	-	-	-	-	-	411	411
Stage 2	-	-	-	-	-	-	172	332
Follow-up Headway	2.22	-	-	2.22	-	-	3.52	4.02
Pot Capacity-1 Maneuver	1245	-	-	1148	-	-	396	342
Stage 1	-	-	-	-	-	-	589	593
Stage 2	-	-	-	-	-	-	813	643
Time blocked-Platoon, %	-	-	-	-	-	-	-	-
Mov Capacity-1 Maneuver	1245	-	-	1148	-	-	378	338
Mov Capacity-2 Maneuver	-	-	-	-	-	-	378	338
Stage 1	-	-	-	-	-	-	587	591
Stage 2	-	-	-	-	-	-	778	637

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.2	11.6	13.1
HCM LOS			B	B

Minor Lane / Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	613	1245	-	-	1148	-	-	511
HCM Lane V/C Ratio	0.115	0.003	-	-	0.009	-	-	0.125
HCM Control Delay (s)	11.6	7.902	-	-	8.163	-	-	13.1
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %ile Q(veh)	0.389	0.011	-	-	0.026	-	-	0.427

Notes

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

HCM 2010 TWSC

AM Peak

22: Ladera Entrance/Summer Glen & Debbie

6/14/2015

Intersection

Intersection Delay, s/veh 0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	4	537	6	8	741	1	16	0	0	2	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	0	-	-	-	-	100	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	584	7	9	805	1	17	0	0	2	0	0

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	807	0	0	590	0	0	1016	1420	295	1124	1422	403
Stage 1	-	-	-	-	-	-	596	596	-	823	823	-
Stage 2	-	-	-	-	-	-	420	824	-	301	599	-
Follow-up Headway	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Capacity-1 Maneuver	814	-	-	982	-	-	192	135	701	160	135	597
Stage 1	-	-	-	-	-	-	457	490	-	334	386	-
Stage 2	-	-	-	-	-	-	581	385	-	683	489	-
Time blocked-Platoon, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Capacity-1 Maneuver	814	-	-	982	-	-	190	133	701	158	133	597
Mov Capacity-2 Maneuver	-	-	-	-	-	-	190	133	-	158	133	-
Stage 1	-	-	-	-	-	-	455	488	-	332	382	-
Stage 2	-	-	-	-	-	-	576	381	-	680	487	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	25.8	28
HCM LOS			D	D

Minor Lane / Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	190	0	814	-	-	982	-	-	158	158
HCM Lane V/C Ratio	0.092	+	0.005	-	-	0.009	-	-	0.009	0.005
HCM Control Delay (s)	25.8	0	9.446	-	-	8.699	-	-	28	27.9
HCM Lane LOS	D	A	A	-	-	A	-	-	D	D
HCM 95th %ile Q(veh)	0.298	+	0.016	-	-	0.027	-	-	0.028	0.014

Notes

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

HCM 2010 TWSC
 9: Matlock & Main

AM Peak - Mitigation
 6/14/2015

Intersection						
Intersection Delay, s/veh	1.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	51	54	669	23	33	738
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	55	59	727	25	36	802
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1213	376	0	0	752	0
Stage 1	740	-	-	-	-	-
Stage 2	473	-	-	-	-	-
Follow-up Headway	3.52	3.32	-	-	2.22	-
Pot Capacity-1 Maneuver	174	622	-	-	853	-
Stage 1	433	-	-	-	-	-
Stage 2	593	-	-	-	-	-
Time blocked-Platoon, %	-	-	-	-	-	-
Mov Capacity-1 Maneuver	167	622	-	-	853	-
Mov Capacity-2 Maneuver	167	-	-	-	-	-
Stage 1	433	-	-	-	-	-
Stage 2	568	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	23.8	0		0.4		
HCM LOS	C					
Minor Lane / Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	167	622	853	-
HCM Lane V/C Ratio	-	-	0.332	0.094	0.042	-
HCM Control Delay (s)	-	-	36.9	11.4	9.406	-
HCM Lane LOS	-	-	E	B	A	-
HCM 95th %tile Q(veh)	-	-	1.358	0.311	0.132	-
Notes						
~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined						

HCM 2010 TWSC
3: Matlock & Windcastle
PM Peak
6/14/2015
Intersection

Intersection Delay, s/veh 4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	4	1	3	26	0	72	3	826	65	115	934	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	1	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	1	3	28	0	78	3	898	71	125	1015	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1724	2244	511	1698	2213	484	1023	0	0	968	0	0
Stage 1	1269	1269	-	940	940	-	-	-	-	-	-	-
Stage 2	455	975	-	758	1273	-	-	-	-	-	-	-
Follow-up Headway	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Capacity-1 Maneuver	57	41	508	60	43	529	674	-	-	707	-	-
Stage 1	178	238	-	283	340	-	-	-	-	-	-	-
Stage 2	554	328	-	365	237	-	-	-	-	-	-	-
Time blocked-Platoon, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Capacity-1 Maneuver	42	34	508	50	35	529	674	-	-	707	-	-
Mov Capacity-2 Maneuver	42	34	-	50	35	-	-	-	-	-	-	-
Stage 1	177	196	-	282	338	-	-	-	-	-	-	-
Stage 2	470	327	-	297	195	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	73.6	74	0	1.2
HCM LOS	F	F		

Minor Lane / Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	674	-	-	61	149	707	-	-
HCM Lane V/C Ratio	0.005	-	-	0.143	0.715	0.177	-	-
HCM Control Delay (s)	10.367	-	-	73.6	74	11.182	-	-
HCM Lane LOS	B	-	-	F	F	B	-	-
HCM 95th %ile Q(veh)	0.015	-	-	0.466	4.2	0.639	-	-

Notes

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

HCM 2010 TWSC
9: Matlock & Main
PM Peak
6/14/2015
Intersection

Intersection Delay, s/veh 5.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	47	54	901	53	81	956
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	51	59	979	58	88	1039

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1704	518	0
Stage 1	1008	-	-
Stage 2	696	-	-
Follow-up Headway	3.52	3.32	2.22
Pot Capacity-1 Maneuver	82	502	666
Stage 1	313	-	-
Stage 2	456	-	-
Time blocked-Platoon, %	-	-	-
Mov Capacity-1 Maneuver	71	502	666
Mov Capacity-2 Maneuver	71	-	-
Stage 1	313	-	-
Stage 2	396	-	-

Approach	WB	NB	SB
HCM Control Delay, s	104.2	0	0.9
HCM LOS	F		

Minor Lane / Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	131	666	-
HCM Lane V/C Ratio	-	-	0.838	0.132	-
HCM Control Delay (s)	-	-	104.2	11.227	-
HCM Lane LOS	-	-	F	B	-
HCM 95th %ile Q(veh)	-	-	5.226	0.454	-

Notes

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

HCM 2010 TWSC
12: S. Collins & Country Club

PM Peak
6/14/2015

Intersection

Intersection Delay, s/veh 5.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	159	104	82	66	73	217
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	173	113	89	72	79	236

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	447	197	315	0	0
Stage 1	197	-	-	-	-
Stage 2	250	-	-	-	-
Follow-up Headway	3.518	3.318	2.218	-	-
Pot Capacity-1 Maneuver	569	844	1245	-	-
Stage 1	836	-	-	-	-
Stage 2	792	-	-	-	-
Time blocked-Platoon, %	-	-	-	-	-
Mov Capacity-1 Maneuver	527	844	1245	-	-
Mov Capacity-2 Maneuver	527	-	-	-	-
Stage 1	836	-	-	-	-
Stage 2	733	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13	4.5	0
HCM LOS	B		

Minor Lane / Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1245	-	527	844	-	-
HCM Lane V/C Ratio	0.072	-	0.328	0.134	-	-
HCM Control Delay (s)	8.114	0	15.1	9.9	-	-
HCM Lane LOS	A	A	C	A	-	-
HCM 95th %tile Q(veh)	0.231	-	1.418	0.462	-	-

Notes

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

HCM 2010 TWSC
 13: Country Club & Logan

PM Peak
 6/14/2015

Intersection

Intersection Delay, s/veh 1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	68	355	326	30	23	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	74	386	354	33	25	54

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	387	0	712
Stage 1	-	-	371
Stage 2	-	-	341
Follow-up Headway	2.22	-	3.52
Pot Capacity-1 Maneuver	1168	-	816
Stage 1	-	-	668
Stage 2	-	-	692
Time blocked-Platoon, %	-	-	-
Mov Capacity-1 Maneuver	1168	-	816
Mov Capacity-2 Maneuver	-	-	344
Stage 1	-	-	668
Stage 2	-	-	648

Approach	EB	WB	SB
HCM Control Delay, s	1.3	0	11.8
HCM LOS			B

Minor Lane / Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1168	-	-	-	344	816
HCM Lane V/C Ratio	0.063	-	-	-	0.073	0.067
HCM Control Delay (s)	8.29	-	-	-	16.3	9.7
HCM Lane LOS	A	-	-	-	C	A
HCM 95th %ile Q(veh)	0.202	-	-	-	0.234	0.214

Notes

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

HCM 2010 TWSC
15: Hillary & Country Club

PM Peak
6/14/2015

Intersection

Intersection Delay, s/veh 0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	17	278	13	1	287	6	10	3	5	1	2	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	302	14	1	312	7	11	3	5	1	2	21

Major/Minor	Major1		Major2		Minor1		Minor2	
Conflicting Flow All	318	0	0	316	0	0	505	667
Stage 1	-	-	-	-	-	-	346	346
Stage 2	-	-	-	-	-	-	159	321
Follow-up Headway	2.22	-	-	2.22	-	-	3.52	4.02
Pot Capacity-1 Maneuver	1239	-	-	1241	-	-	450	378
Stage 1	-	-	-	-	-	-	643	634
Stage 2	-	-	-	-	-	-	827	650
Time blocked-Platoon, %	-	-	-	-	-	-	-	-
Mov Capacity-1 Maneuver	1239	-	-	1241	-	-	432	372
Mov Capacity-2 Maneuver	-	-	-	-	-	-	432	372
Stage 1	-	-	-	-	-	-	634	625
Stage 2	-	-	-	-	-	-	804	649

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0	12.7	10
HCM LOS			B	B

Minor Lane / Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	486	1239	-	-	1241	-	-	738
HCM Lane V/C Ratio	0.04	0.015	-	-	0.001	-	-	0.032
HCM Control Delay (s)	12.7	7.95	-	-	7.903	-	-	10
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.126	0.045	-	-	0.003	-	-	0.1

Notes

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

HCM 2010 TWSC

22: Ladera Entrance/Summer Glen & Debbie

PM Peak

6/14/2015

Intersection

Intersection Delay, s/veh 0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	1	618	6	0	884	1	0	0	0	0	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	0	-	-	-	-	100	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	672	7	0	961	1	0	0	0	0	0	4

Major/Minor	Major 1			Major 2			Minor 1			Minor 2		
Conflicting Flow All	962	0	0	678	0	0	1157	1639	339	1299	1641	481
Stage 1	-	-	-	-	-	-	677	677	-	961	961	-
Stage 2	-	-	-	-	-	-	480	962	-	338	680	-
Follow-up Headway	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Capacity-1 Maneuver	711	-	-	910	-	-	151	99	657	119	99	531
Stage 1	-	-	-	-	-	-	409	450	-	275	333	-
Stage 2	-	-	-	-	-	-	536	332	-	650	449	-
Time blocked-Platoon, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Capacity-1 Maneuver	711	-	-	910	-	-	150	99	657	119	99	531
Mov Capacity-2 Maneuver	-	-	-	-	-	-	150	99	-	119	99	-
Stage 1	-	-	-	-	-	-	408	449	-	275	333	-
Stage 2	-	-	-	-	-	-	532	332	-	649	448	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	11.8
HCM LOS			A	B

Minor Lane / Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	0	0	711	-	-	910	-	-	0	531
HCM Lane V/C Ratio	+	+	0.002	-	-	-	-	-	+	0.008
HCM Control Delay (s)	0	0	10.071	-	-	0	-	-	0	11.8
HCM Lane LOS	A	A	B			A			A	B
HCM 95th %tile Q(veh)	+	+	0.005	-	-	0	-	-	+	0.025

Notes

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

HCM 2010 TWSC
25: S. Collins & Stiles

PM Peak
6/14/2015

Intersection

Intersection Delay, s/veh 1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	42	4	6	218	288	82
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	46	4	7	237	313	89

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	608	358	402	0	0
Stage 1	358	-	-	-	-
Stage 2	250	-	-	-	-
Follow-up Headway	3.518	3.318	2.218	-	-
Pot Capacity-1 Maneuver	459	686	1157	-	-
Stage 1	707	-	-	-	-
Stage 2	792	-	-	-	-
Time blocked-Platoon, %	-	-	-	-	-
Mov Capacity-1 Maneuver	456	686	1157	-	-
Mov Capacity-2 Maneuver	456	-	-	-	-
Stage 1	707	-	-	-	-
Stage 2	786	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.6	0.2	0
HCM LOS	B		

Minor Lane / Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1157	-	470	-	-
HCM Lane V/C Ratio	0.006	-	0.106	-	-
HCM Control Delay (s)	8.129	0	13.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %ile Q(veh)	0.017	-	0.355	-	-

Notes

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

HCM 2010 TWSC
3: Matlock & Windcastle
AM Peak - Mitigation
 6/14/2015
Intersection

Intersection Delay, s/veh 2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	8	0	10	46	1	74	3	712	25	35	652	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	100	-	-	1	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	0	11	50	1	80	3	774	27	38	709	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1179	1593	355	1224	1580	401	710	0	0	801	0	0
Stage 1	785	785	-	794	794	-	-	-	-	-	-	-
Stage 2	394	808	-	430	786	-	-	-	-	-	-	-
Follow-up Headway	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Capacity-1 Maneuver	146	106	641	135	108	599	885	-	-	818	-	-
Stage 1	352	402	-	348	398	-	-	-	-	-	-	-
Stage 2	602	392	-	574	401	-	-	-	-	-	-	-
Time blocked-Platoon, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Capacity-1 Maneuver	121	101	641	128	103	599	885	-	-	818	-	-
Mov Capacity-2 Maneuver	121	101	-	128	103	-	-	-	-	-	-	-
Stage 1	351	383	-	347	397	-	-	-	-	-	-	-
Stage 2	518	391	-	538	382	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	22.1	25	0	0.5
HCM LOS	C	D		

Minor Lane / Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	885	-	-	121	337	128	357	818	-	-
HCM Lane V/C Ratio	0.004	-	-	0.048	0.041	0.26	0.275	0.047	-	-
HCM Control Delay (s)	9.083	-	-	36.2	16.1	42.8	18.9	9.616	-	-
HCM Lane LOS	A	-	-	E	C	E	C	A	-	-
HCM 95th %ile Q(veh)	0.011	-	-	0.149	0.127	0.976	1.101	0.146	-	-

Notes

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

HCM 2010 TWSC
 9: Matlock & Main

AM Peak - Mitigation
 6/14/2015

Intersection						
Intersection Delay, s/veh	1.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	51	54	669	23	33	738
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	55	59	727	25	36	802
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1213	376	0	0	752	0
Stage 1	740	-	-	-	-	-
Stage 2	473	-	-	-	-	-
Follow-up Headway	3.52	3.32	-	-	2.22	-
Pot Capacity-1 Maneuver	174	622	-	-	853	-
Stage 1	433	-	-	-	-	-
Stage 2	593	-	-	-	-	-
Time blocked-Platoon, %	-	-	-	-	-	-
Mov Capacity-1 Maneuver	167	622	-	-	853	-
Mov Capacity-2 Maneuver	167	-	-	-	-	-
Stage 1	433	-	-	-	-	-
Stage 2	568	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	23.8	0		0.4		
HCM LOS	C					
Minor Lane / Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	167	622	853	-
HCM Lane V/C Ratio	-	-	0.332	0.094	0.042	-
HCM Control Delay (s)	-	-	36.9	11.4	9.406	-
HCM Lane LOS	-	-	E	B	A	-
HCM 95th %tile Q(veh)	-	-	1.358	0.311	0.132	-
Notes						
~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined						

HCM 2010 TWSC
3: Matlock & Windcastle

PM Peak - Mitigation
6/14/2015

Intersection

Intersection Delay, s/veh 2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	4	1	3	26	0	72	3	826	65	115	934	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	100	-	-	1	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	1	3	28	0	78	3	898	71	125	1015	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1724	2244	511	1698	2213	484	1023	0	0	968	0	0
Stage 1	1269	1269	-	940	940	-	-	-	-	-	-	-
Stage 2	455	975	-	758	1273	-	-	-	-	-	-	-
Follow-up Headway	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Capacity-1 Maneuver	57	41	508	60	43	529	674	-	-	707	-	-
Stage 1	178	238	-	283	340	-	-	-	-	-	-	-
Stage 2	554	328	-	365	237	-	-	-	-	-	-	-
Time blocked-Platoon, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Capacity-1 Maneuver	42	34	508	50	35	529	674	-	-	707	-	-
Mov Capacity-2 Maneuver	42	34	-	50	35	-	-	-	-	-	-	-
Stage 1	177	196	-	282	338	-	-	-	-	-	-	-
Stage 2	470	327	-	297	195	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	68	41.5	0	1.2
HCM LOS	F	E		

Minor Lane / Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	674	-	-	42	80	50	261	707	-	-
HCM Lane V/C Ratio	0.005	-	-	0.069	0.072	0.377	0.336	0.177	-	-
HCM Control Delay (s)	10.367	-	-	97	53.5	115.3	25.6	11.182	-	-
HCM Lane LOS	B	-	-	F	F	F	D	B	-	-
HCM 95th %ile Q(veh)	0.015	-	-	0.213	0.229	1.348	1.424	0.639	-	-

Notes

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

HCM 2010 TWSC
9: Matlock & Main
PM Peak - Mitigation
 6/14/2015
Intersection

Intersection Delay, s/veh 3.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	47	54	901	53	81	956
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	51	59	979	58	88	1039

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1704	518	0
Stage 1	1008	-	-
Stage 2	696	-	-
Follow-up Headway	3.52	3.32	2.22
Pot Capacity-1 Maneuver	82	502	666
Stage 1	313	-	-
Stage 2	456	-	-
Time blocked-Platoon, %	-	-	-
Mov Capacity-1 Maneuver	71	502	666
Mov Capacity-2 Maneuver	71	-	-
Stage 1	313	-	-
Stage 2	396	-	-

Approach	WB	NB	SB
HCM Control Delay, s	70	0	0.9
HCM LOS	F		

Minor Lane / Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	71	502	666	-
HCM Lane V/C Ratio	-	-	0.72	0.117	0.132	-
HCM Control Delay (s)	-	-	135.4	13.1	11.227	-
HCM Lane LOS	-	-	F	B	B	-
HCM 95th %tile Q(veh)	-	-	3.306	0.394	0.454	-

Notes

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