



Man O' War Small Area Study Report *Lexington, KY*

Prepared for:
Kentucky
Transportation Cabinet
and Lexington-Fayette
Urban County
Government



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Executive Summary

URS, now a wholly owned subsidiary of AECOM Technical Services, was tasked by the Kentucky Transportation Cabinet and Lexington-Fayette Urban County Government to develop short-term and long-term improvement projects for the Man O' War Small Area in the vicinity of I-75 on the east side of Lexington, KY. The study area stretches from Sir Barton Way to the west, Polo Club Boulevard to the east, US 60 to the north and Man O' War Boulevard to the south. The vicinity map shown in **Figure 2** gives a more detailed depiction of the area included in the study limits.

In addition to reduction in congestion, the goal was to improve safety and mobility for all modes of transportation in the area and improve route reliability. I-75 is one of the major north-south interstate routes in the country, carrying approximately 70,000 vehicles per day in the project area. Lexington does not have a north-south expressway, so I-75 is also used by local traffic as an expressway for the east side of greater Lexington. The project area is also growing rapidly, adding several new developments in the last few years. The land use in the area is a mix of commercial retail, food service, entertainment, office and residential. This mix of different traffic generators makes the area congested throughout the weekday and on weekends.

A wide variety of data was collected including traffic volume data, crash data, traffic signal timing, planned future developments, etc. Traffic queues were measured in several locations and an inventory of pedestrian, bicycle and transit facilities was performed. This data defined the existing situation and indicated which areas suffered the most severe traffic congestion, as well as other areas identified for improvement.

Once alternatives were developed, preliminary cost estimates for these alternatives were formulated, and the alternatives were grouped in order of their recommended implementation. Alternatives range from short term, relatively low cost "quick fix" types to long term, and more costly options.

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Introduction

URS Corporation (URS), now a wholly owned subsidiary of AECOM Technical Services, was tasked by the KYTC District Seven (D-7) Office and Lexington-Fayette Urban County Government (LFUCG) to study the small area on the east side of Lexington along I-75 between the US 60 (Winchester Road) and KY 1425 (Man O' War (MOW)) interchanges, and the nearby areas around the two interchange crossroads.

The URS project team is responsible for the following items:

- Traffic Data Collection
 - Intersection Turning Movement Counts
 - Queue Studies
 - Crash History
 - GIS Information
- Traffic Model Development
- Various Study Components
 - Segment Analysis on I-75 southbound between interchanges
 - Operational Analysis of all intersections using Synchro
 - Crash Analysis
 - Multimodal Assessment
- Identification of Areas for Improvement
 - Short-term Improvements
 - Long-term Improvements



Figure 1 - Study Area Sample Traffic

Existing Conditions

Figure 2 shows the project area. I-75 is a six lane facility, three lanes in each direction. According to the KYTC, the current Average Daily Traffic (ADT) on the I-75 corridor between the two interchanges is approximately 70,000 vehicles; the ADT on MOW is approximately 38,000 vehicles; the ADT on US 60 is approximately 41,500 vehicles west of I-75, and approximately 9,400 vehicles east of I-75; the ADT on Sir Barton is approximately 17,000 vehicles. Polo Club Blvd. has an ADT of approximately 13,000 vehicles by our estimate.

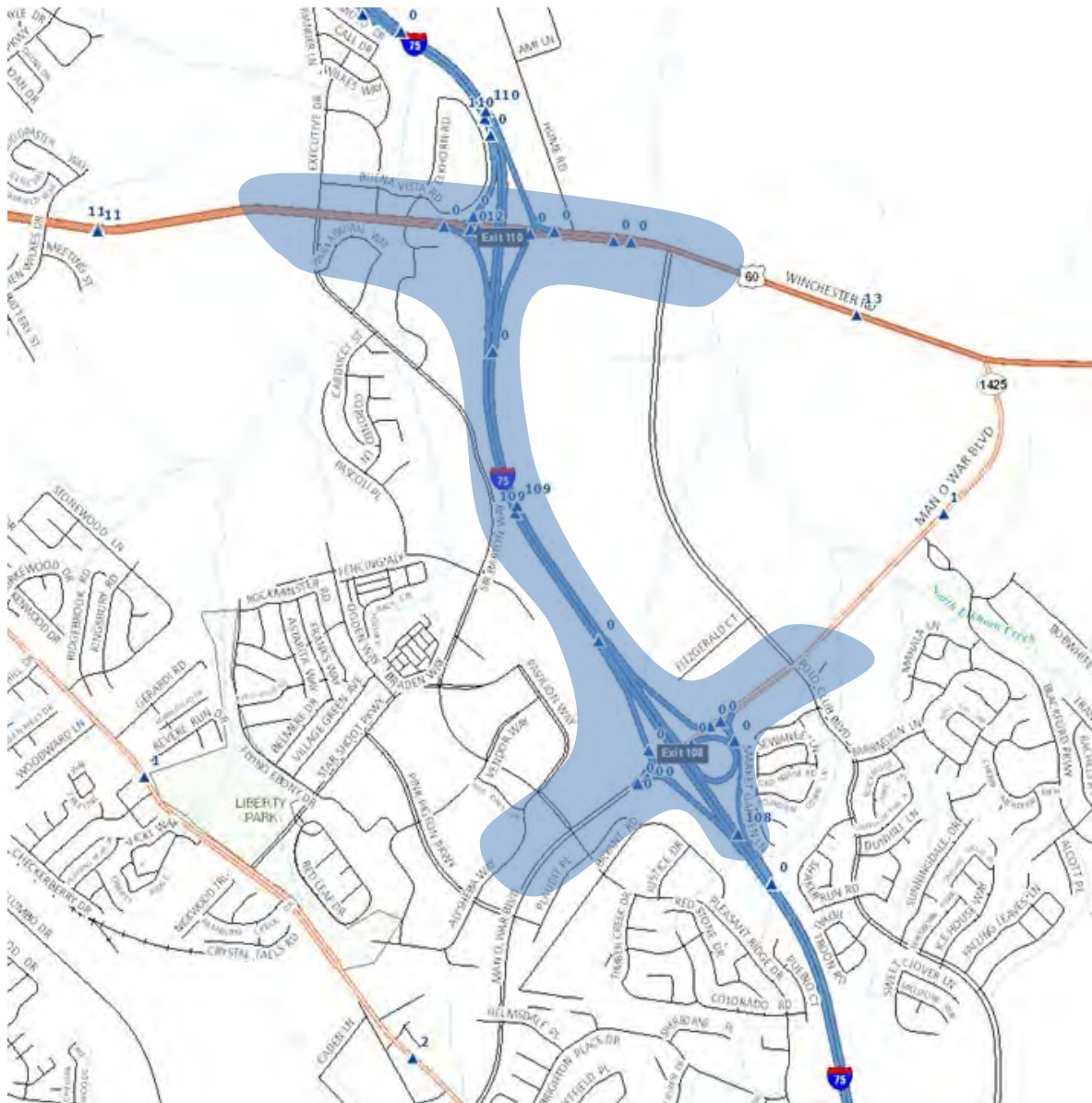


Figure 2 - MOW Small Area

Below in **Table 1** are the intersections included in the study and the data collection times. Turning movement counts are provided in **Appendix A**.

Table 1 - Turning Movement Data Collection Times

Intersection	Data Collection Times
US 60 @ Sir Barton Way*	Weekdays: 6:30 AM – 9:30 AM 4:00 PM – 7:00 PM Saturday: 2:00 PM – 8:00 PM
US 60 @ I-75 SB Ramps*	
US 60 @ I-75 NB Ramps*	
US 60 @ Polo Club Blvd.	
MOW Blvd. @ Sir Barton Way*	
MOW Blvd. @ I-75 SB Ramps	
MOW Blvd. @ I-75 NB Ramps	
MOW Blvd. @ Polo Club Blvd.	

*Indicates adaptive control originally

Existing Signal Timing

The project area is served by two different signal systems, one for the US 60 corridor and one for the MOW corridor. The signal controllers at some of these intersections were running adaptive hardware and software when the study was started, meaning that they continuously distribute the green time equitably for all traffic movements. LFUCG provided URS with timing plans in order to compare proposed improvements. Since our initial field review, the adaptive controllers have been disconnected and are no longer in use. The count and delay data was collected in October of 2015. After reviewing the count data provided by the adaptive control software, a decision was made to recount these intersections using the previously recorded Miovision video data. The adaptive signal control software system “Insync” was turned off on November 9, 2015 on the signals where it had been installed. The signal controllers were put into detector mode, responding to traffic at the local intersections. See **Table 1**.

Six Synchro models were provided by LFUCG and updated with current traffic volumes to obtain the performance data of the existing timing and geometry – Weekday AM, Weekday PM, and Saturday peaks for the MOW system, and Weekday AM, Weekday PM, and Saturday peaks for the US 60 system.

Field Observations

The MOW/Sir Barton intersection was identified by both clients at the kick-off meeting as being a primary source of congestion in this area. The unserved demand during the PM peak for both the eastbound MOW left turn movement to Sir Barton in addition to the westbound through MOW movement at this intersection were measured on Thursday Oct. 29, 2015. Unserved demand is defined as the number of vehicles that were in a particular queue at the beginning of green phase, but were not served during that same cycle. A traffic count just measures the number of vehicles that were able to get through an intersection during a given time period; it was important to also measure the traffic demand on the intersections. Data was collected until there was no longer unserved demand; this was 7:00 pm for westbound MOW at Sir Barton through and 6:15 pm for the eastbound MOW at Sir Barton left-turn movement. **Table 2** shows the unserved demand data. Also see **Figure 3**.



Figure 3 - MOW Blvd. Traffic

Table 2 - Unserved Demand Data

Westbound Man O' War at Sir Barton Through Movement													
Cycle Number	Number of Unserved Vehicles per Cycle during PM Peak												
	4:00	4:15	4:30	4:45	5:00	5:15	5:30	5:45	6:00	6:15	6:30	6:45	7:00
1	0	0	0	5	0	2	15	5	5	0	0	12	3
2	0	4	0	6	5	4	14	8	4	2	0	9	0
3	0	13	3	2	0	4	15	4	5	14	9	8	2
4	0	15	11	0	1	14	11	4	2	10	8	0	N/A
5	0	13	6	N/A	N/A	12	9	N/A	3	2	8	3	N/A
6	0	5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	N/A

Eastbound Man O' War at Sir Barton Left Turn Movement											
Cycle Number	Number of Unserved Vehicles per Cycle during PM Peak										
	4:00	4:15	4:30	4:45	5:00	5:15	5:30	5:45	6:00	6:15	
1	0	0	0	3	0	0	1	3	2	0	
2	0	0	3	12	0	4	1	1	3	3	
3	0	0	3	8	2	0	1	4	3	0	
4	0	2	2	3	1	1	30	4	2	0	
5	2	3	0	20	0	1	28	5	0	0	

When the traffic signal turned green for the approach being observed, the last vehicle in the queue at that time was noted. Then the queue was observed as it progressed to see if it cleared to the last car noted when the signal first turned green. The number of vehicles that did not clear the intersection for that cycle was recorded.

It was important to determine if and when the eastbound MOW left-turn queue encroached on the through lanes. The dual eastbound MOW left-turn lanes into Sir Barton Way are approximately 450' long each. Assuming 23' for each vehicle including vehicle length and headway spacing, approximately 19 vehicles can be stored in each left-turn lane, or 38 vehicles total, before the left-turn lanes overflow into the eastbound MOW through lane. This happens between about 5:40 and 5:45 pm on weekdays. The counts above does not show when the through lane encroachments occur. The measure of total cars queued at a red light is what was counted to determine when the left lanes spilled into the through lanes.

URS also collected queue data using Miovision video data collection units. The video from these units were reviewed in the office to determine when and where traffic is not being adequately served. All of these unserved demands were considered when alternatives were formulated. We developed alternatives that would decrease the traffic demand at these locations, and in some cases, increase the capacity.

I-75 Southbound between US 60 and MOW

Safety on mainline I-75 is of paramount concern, therefore a weave analysis was completed for I-75 southbound between the US 60 and MOW interchanges. Mainline southbound I-75 count data for a Thursday in October of 2015 was obtained from a Miovision count. This count data was corroborated by KYTC hourly count data. What was called a weave analysis in the scope actually consisted of 3 separate freeway segment analyses using PM peak data; the on ramp section south of US 60, the full segment between the ramps, and the exit ramp at MOW were each separately analyzed using HCS.

Highway Capacity Software (HCS) 2010 was used to determine the current level of Level of Service (LOS). LOS is used to translate performance measures of a facility to a simple A thru F system.

I-75 southbound between US 60 and MOW generally operates at a LOS B/C during a typical 2015 weekday PM peak according to HCS 2010. The merge analysis from US 60 to southbound I-75 shows the freeway area of influence operates at LOS B. The basic freeway section of I-75 southbound operates at LOS C. The exit ramp from southbound I-75 to MOW Blvd. section also operates at LOS C. However, based on the I-75 southbound queue observations, the freeway LOS is actually a D or worse for short periods. I-75 southbound queue data for Friday and Saturday evenings was also collected in order to have a comprehensive understanding of the I-75 southbound queueing issue. LOS D for a freeway is defined by the Highway Capacity Manual 2010 as “turbulence levels in the influence area become intrusive, and virtually all vehicles slow to accommodate merging or diverging maneuvers. Some ramp queues may form . . . but freeway operations remain stable.”

The above describes what was observed during the peak period around 5:35 PM on Friday, October 23rd, 2015. The mainline of I-75 southbound was affected for several minutes during the very peak of the PM peak hour. When the southbound I-75 off ramp queue to MOW is longer than about 1800' it physically blocks I-75 mainline through lanes. This typically happens on Fridays. Of course, freeway operations are affected before the ramp queue reaches this length, because exiting traffic has to slow on mainline I-75 to safely exit. See [Table 3](#).

The University of Kentucky football team played away on this particular weekend. Saturday, October 24th was the last day of the Keeneland fall meet. Horse races were held at Keeneland from Wednesday, October 21st to Saturday, October 24th that week. The Thursday, Friday, and Saturday queues that were observed provided a snapshot of a typical Lexington fall weekend in 2015.

Table 3 - Southbound I-75 off Ramp at MOW Queue

Southbound I-75 Off Ramp at MOW on Friday								
Evening Peak Time	Number of Vehicles in Queue	Average Queue Length in Feet	Evening Peak Time	Number of Vehicles in Queue	Average Queue Length in Feet	Evening Peak Time	Number of Vehicles in Queue	Average Queue Length in Feet
4:00	25	625	5:00	0	0	6:00	0	0
4:05	26	650	5:05	0	0	6:05	0	0
4:10	10	250	5:10	5	125	6:10	0	0
4:15	40	1000	5:15	5	125	6:15	0	0
4:20	0	0	5:20	0	0	6:20	0	0
4:25	14	350	5:25	0	0	6:25	0	0
4:30	0	0	5:30	10	250	6:30	0	0
4:35	0	0	5:35	72	1800	6:35	0	0
4:40	0	0	5:40	80	2000	6:40	8	200
4:45	0	0	5:45	20	500	6:45	0	0
4:50	0	0	5:50	0	0	6:50	0	0
4:55	2	50	5:55	3	75	6:55	3	75

Southbound I-75 Off Ramp at MOW on Thursday								
Evening Peak Time	Number of Vehicles in Queue	Average Queue Length in Feet	Evening Peak Time	Number of Vehicles in Queue	Average Queue Length in Feet	Evening Peak Time	Number of Vehicles in Queue	Average Queue Length in Feet
4:00	0	0	5:00	2	50	6:00	0	0
4:05	0	0	5:05	2	50	6:05	2	50
4:10	0	0	5:10	1	25	6:10	0	0
4:15	2	50	5:15	3	75	6:15	0	0
4:20	2	50	5:20	5	125	6:20	0	0
4:25	2	50	5:25	2	50	6:25	2	50
4:30	2	50	5:30	6	150	6:30	0	0
4:35	0	0	5:35	2	50	6:35	0	0
4:40	0	0	5:40	40	1000	6:40	0	0
4:45	2	50	5:45	0	0	6:45	0	0
4:50	0	0	5:50	6	150	6:50	5	125
4:55	0	0	5:55	0	0	6:55	0	0

SB I-75 Off Ramp at MOW on Saturday								
Evening Peak Time	Number of Vehicles in Queue	Average Queue Length in Feet	Evening Peak Time	Number of Vehicles in Queue	Average Queue Length in Feet	Evening Peak Time	Number of Vehicles in Queue	Average Queue Length in Feet
2:00	0	0	4:00	25	625	6:00	0	0
2:05	2	50	4:05	4	100	6:05	0	0
2:10	2	50	4:10	0	0	6:10	0	0
2:15	0	0	4:15	3	75	6:15	0	0
2:20	10	250	4:20	5	125	6:20	0	0
2:25	0	0	4:25	0	0	6:25	0	0
2:30	0	0	4:30	6	150	6:30	0	0
2:35	0	0	4:35	0	0	6:35	3	75
2:40	0	0	4:40	8	200	6:40	0	0
2:45	0	0	4:45	0	0	6:45	2	50
2:50	2	50	4:50	6	150	6:50	3	75
2:55	15	375	4:55	7	175	6:55	0	0
3:00	8	200	5:00	0	0	7:00	0	0
3:05	0	0	5:05	12	300	7:05	0	0
3:10	0	0	5:10	14	350	7:10	0	0
3:15	0	0	5:15	0	0	7:15	6	150
3:20	0	0	5:20	8	200	7:20	0	0
3:25	0	0	5:25	6	150	7:25	0	0
3:30	16	400	5:30	0	0	7:30	0	0
3:35	0	0	5:35	0	0	7:35	0	0
3:40	6	150	5:40	0	0	7:40	0	0
3:45	0	0	5:45	0	0	7:45	0	0
3:50	5	125	5:50	5	125	7:50	0	0
3:55	0	0	5:55	18	450	7:55	0	0

Crash History

Crash location information and other details were provided by KYTC. Crash diagrams for each of the project intersections were prepared. Analysis of the crash data did not provide any surprising insights into the needs of the project area. Most of the crash locations and types (almost all rear-ends) are typical of signalized intersections in general. The crash diagrams are provided in [Appendix B](#).

The MOW Blvd. corridor within the small area study does have one intersection that has been included by KYTC Central Office Highway Safety Improvement Program (HSIP) personnel in the upcoming planning study for crash countermeasure implementation: MOW Blvd. at Sir Barton/Pleasant Ridge. Details as to the countermeasures planned were not available at the time of this report.

Several other intersections within the project area are included in the HSIP statewide intersection survey. See [Appendix B](#). The data shows that the potential for fatal and serious (KAB type crashes) crash reduction along either the US 60 or MOW corridor is minimal. Some intersections have the potential to reduce all types of crashes; these will be discussed in the Recommended Improvements section as these intersections are addressed.

The US 60 corridor west of the I-75 interchange has been re-surfaced, restriped, and the signal heads reconfigured within the last few years. Most of the crashes along this corridor are property-damage only rear-end type.

Again, this crash data was considered when future countermeasures were formulated. Alternatives were formulated that decreased traffic demand or increased highway capacity. Both of these countermeasures should reduce the crash frequency, which, in turn, is expected to increase safety.

GIS Data

GIS data was provided by LFUCG Planning and Zoning Services. This data was used when the improvement alternates and cost estimates were formulated. Property lines and utility information included in the GIS data was useful in estimating right of way and utility costs to give accurate estimates for each alternative. This data was also used to estimate cut and fill volumes for new or widened roadways.

Multimodal Issues

Not everyone who needs transportation owns a private automobile, or has a driver's license. Recent research suggests that the number of driver's licenses, car registrations, and miles driven per capita are falling, especially for the millennial generation and in urban areas. Future transportation projects need to consider transportation modes other than just the privately owned automobile. Walking, cycling and transit are becoming more common choices for a myriad of reasons including cost, health benefits and environmental impacts.



Pedestrian

I-75 bisects the study area. While it is an important transportation corridor for the country, it also prevents pedestrians from safely traveling between the west side businesses and the east side residential areas. See **Figure 4**. Both Polo Club Blvd. and Sir Barton Way have sidewalks on both sides along their entire length between US 60 and MOW Blvd. MOW Blvd. has sidewalks, but they do not extend through the I-75 interchange. US 60 does not have sidewalks.

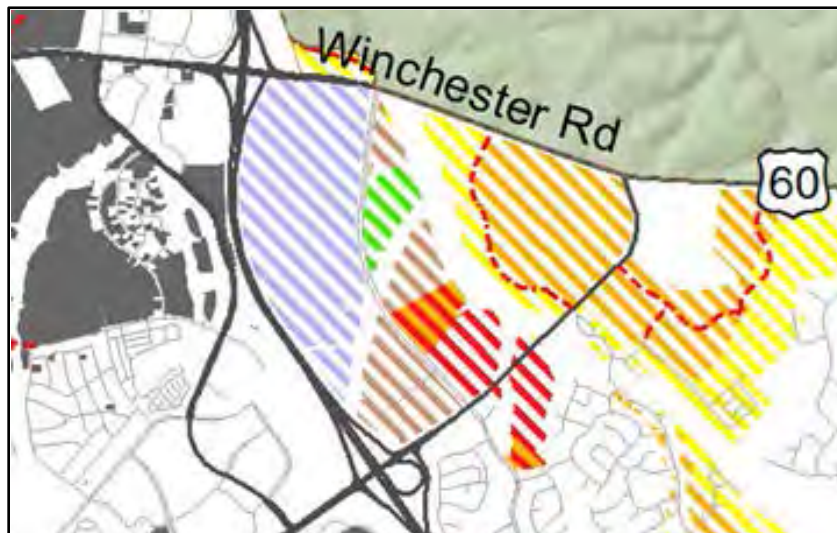


Figure 4 - Small Area Study Zoning

According to the 2013 Lexington Comprehensive Study, the purple striped area in **Figure 4** is zoned as Economic Development. The brown striped area is Expansion Area Residential 3, the red striped area is Community Center, the green striped area is Conservation, and the red stripes over solid gold is zoned Transition Area. The yellow striped area is Expansion Area Residential 1, and the gold striped area is Expansion Area Residential 2. The mix of zoning results in many different sources and destinations for pedestrians, producing demand for pedestrian facilities.

The development in the small study area west of I-75 is also a mix of commercial, residential, and office space. Most of the developable area in the small study area west of I-75 has already been built out, but there are opportunities for improving the pedestrian network in this area.

Transit

A review of Lextran bus schedules and service area maps shows that all parts of the project area are regularly served and are well connected to other bus routes and popular destinations.

Bicycle

Polo Club Blvd. does have bike lanes on both sides of the road within the project area. It is part of a larger system of bike lanes on all of Polo Club Blvd. About 3/4 miles south of the Polo Club Blvd./MOW intersection on Polo Club Blvd., the Gleneagles Trail crosses Polo Club Blvd. The Gleneagles Trail connects to the Brighton East Rail Trail (BERT). The BERT runs under I-75, and connects to Pleasant Ridge Drive, which is a wide residential street. It is two (2) miles



between the MOW /Polo Club Blvd. intersection and the MOW/Sir Barton intersection via the highlighted roads, bike lanes and bike trails. The direct distance between these two intersections is about 3/4 of a mile, so about 1.25 miles of adverse travel is involved to get from one end of the project area to the other and avoid riding through the usually congested MOW/I-75 interchange. See the highlighted area in **Figure 5**.

Figure 5 - Alternate MOW Bike Route

Because of the high volume of traffic and the lack of bicycle lanes on Sir Barton Way, cycling on this road is more challenging. The Sir Barton Trail is a stand-alone piece of multi-use trail on the north end of the Sir Barton Way corridor that is the genesis of a trail system in this area.

Future Plans

The Senate version of the 2016 Biennial Highway Construction Plan (Six Year Plan) includes two I-75 widening projects in Fayette County and one of them is in our study area: widening I-75 to eight (8) lanes from the bridge over the BERT north to the Bryan Station Road overpass. This Senate version of the Six Year Plan contains only design funds. This section is also the second section of the recommended widening; the first section is to the north of the study area.

Given the absence of programmed right-of-way, utility, and construction funds; the fact that this version of the Six Year Plan has not yet been enacted; and that the I-75 section in our project limits is the second section proposed to be built, it is not expected that the widening will be completed before the end of the study design year of 2025.

Future Traffic

The Scope of Work specified that future (2025) design year traffic would be obtained from the Lexington Area Metropolitan Planning Organization (LAMPO) long-range planning traffic model. Based on the field collected traffic volume data obtained in 2015 and engineering judgement, it was decided that the traffic volumes forecasted by the LAMPO model and adjusted to hourly turning movement counts by the consultant were too low. Therefore, it was decided to apply a simple growth rate of two percent (2%) per year to the 2015 volume data with the exception of Polo Club Blvd. Given a ten (10) year horizon, this resulted in a growth factor of 1.2 for all intersections except those involving Polo Club Blvd.

A simple growth rate of ten percent (10%) per year was applied to the 2015 Polo Club Blvd. volume data. A simple growth rate was used as opposed to a compound growth rate. When the historical count data was reviewed, a linear simple growth rate fit the data better than a compound rate. Given a ten (10) year horizon this resulted in a growth factor of 2.0 for Polo Club Blvd. traffic. These growth rates were based on historical growth rates in the area and engineering judgement. Polo Club Blvd. was assigned a higher growth rate due to the potential planned development. See [Appendix D](#).

Recommended Improvements

Several improvement alternatives were formulated to address the traffic congestion. The study area as a whole was considered as well as individual intersections. Two strategies were employed: reduce the demand at individual intersections and increase the supply at individual intersections. Alternatives were created that would encourage traffic to use other less utilized intersections. Other alternatives were created that would increase the capacity of individual intersections. All of the developed alternates can be used individually or combined in various ways to enhance their overall effectiveness.

Traffic is forecasted to grow for all intersections within the study area when the current and future developments are considered. The alternatives are described in detail in the following sections. At the end, recommendations and prioritization guidance as well as cost information will be provided.

Transit

A Hamburg area circulator route for busses may be needed in the future to circulate around the Sir Barton Way - MOW Blvd. - Polo Club Blvd. - US 60 loop as these areas are further developed. A circulator route during peak shopping days and times would reduce traffic congestion, since riders could park at one store and use the bus to access the other shopping areas on the loop.

A transit hub/park and ride lot also needs to be considered for the Hamburg area in the future. A transit hub would be the end of an express bus route that would take riders between the Hamburg area to the existing downtown hub, and vice versa. A park and ride lot would use existing parking lots. Most of the parking lots in the Hamburg area have excess parking capacity during the weekday commuter peaks. This would allow commuters on I-75 and I-64 south and east of Lexington to commute or carpool to the park and ride lot, and then take transit to the downtown college campuses and central business district. More bus riders in the small project area would mean fewer drivers on routes that are already congested, increasing capacity.

Bicycle

The existing Hamburg trail is recommended to be extended across Sir Barton Way to Carducci Street and a new multi-use path constructed to connect to the back entrance of the new high school. It is also recommended that the proposed Tuscany multi-use trail outlined in the LFUCG Bike Plan be completed. This proposed trail is just to the west of Hamburg Place, between it and the Tuscany residential subdivision. The completion of this trail would further enhance bicycle/ pedestrian connectivity within the project area. See [Figure 6](#).



Figure 6 - Existing and Proposed Hamburg Area Multi-use Trails

Todds Road Interchange with I-75

The first system improvement studied involved adding a full or partial interchange at Todd's Road. This alternative is to the south of the small study area. However, this option was considered because we believe that a significant portion of existing traffic now using the MOW/I-75 interchange is accessing the Andover Hills, Walnut Ridge, Autumn Ridge, Brighton East, and Banbury Hunt neighborhoods. See [Figure 7](#). This belief is based on the high volume of left-turning traffic during the evening peak onto Pleasant Ridge Drive from MOW, the volume of side street traffic on Pleasant Ridge during the morning peak, and conversations with KYTC D7 staff. If at least a partial interchange (southbound off and northbound on) was constructed at Todds Road, this traffic could access these neighborhoods via the proposed interchange. See [Figure 8](#).

Partial interchanges can cause confusion for motorists who exit and then cannot re-enter the interstate in the same direction that they were traveling. Therefore, a full interchange option was also considered. See [Figure 9](#). The problems associated with a partial interchange could be avoided with supplemental exit signing, such as LOCAL TRAFFIC ONLY, NO RE-ENTRY ONTO I-75, etc. If funding is an issue, the partial interchange could be built first, and then the full interchange completed later.

For the reasons cited above this alternate was assumed to have the following impacts on MOW Blvd. traffic: the new Todds Road interchange would reduce the westbound left turn from MOW Blvd. to Pleasant Ridge by 30% at all times and MOW Blvd. through traffic for the intersections west of I-75 would be reduced by 10%.

The analysis provided from the Synchro model shows that this improvement keeps the MOW/Sir Barton Way intersection working at or near 2015 levels of service in the 2025 design year during the AM and PM weekday peaks. The 2025 weekend peak is somewhat worse than existing, but still provides a LOS E and less delay than No Build 2025. This improvement is shown in all three peaks in the design year. See [Appendix D](#).

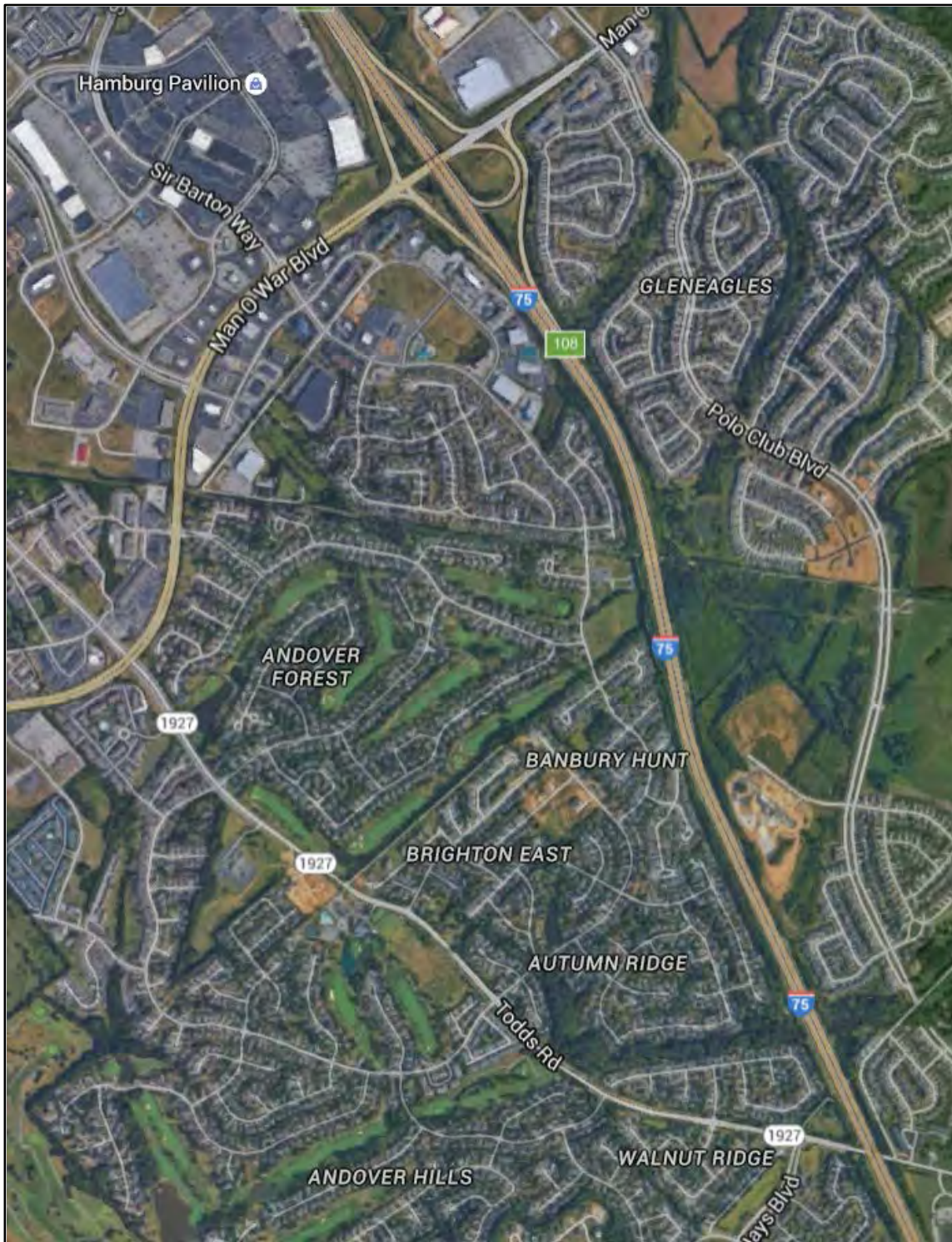


Figure 7 - Southeast Lexington Neighborhood Locations



Figure 8 - Partial Todds Road Interchange



Figure 9 - Full Todds Road Interchange

Dual Left from MOW Blvd. onto Pleasant Ridge / Widen Pleasant Ridge Drive

More left-turn capacity at the MOW Blvd/Pleasant Ridge intersection can be created by providing an additional left turn lane, and lengthening the existing single left-turn lane. Southbound Pleasant Ridge Drive has to be widened to two (2) lanes to accommodate the dual left-turn. These two southbound lanes are carried on Pleasant Ridge Drive past the existing commercial development to Timber Creek Drive, which is the first residential street intersection on Pleasant Ridge Drive. The southbound curb lane becomes a right-turn only drop lane onto Timber Creek Drive.

It is also worth noting that the forecasted 2025 westbound left-turn volume from westbound MOW to southbound Pleasant Ridge is 400 vehicles during the PM peak, which generally is the upper limit of the threshold volume that a dual left-turn lane is considered.

The Synchro model shows that this improvement allows this intersection operate at the same LOS in 2025 at it is today during the AM and PM peaks. The 2025 weekend peak is slightly worse; from LOS D to LOS E. See [Figures 10 & 11](#) and [Appendix D](#).

A new planning tool for junction design created by the Federal Highway Administration (FHWA) Office of Operations Research and Development called Capacity Analysis for Planning of Junctions (Cap-X) was also utilized. The existing at-grade intersection design was evaluated against other innovative intersection, interchange, and roundabout designs. Due to the volume of traffic and right-of-way restrictions, we believe the existing intersection design is the most appropriate at this time. See [Appendix F](#).

This alternate is mutually exclusive to the Todds Road Interchange / Closing Pleasant Ridge alternate. If the proposed interchange and road closing is done, then this alternate will not be needed. If the interchange is not built, this alternate will be needed. Or, the dual left-turn lane project could be seen as a short-term measure to address traffic issues on MOW until the longer term Todds Road interchange project is built.

Providing more left turn storage on MOW for Pleasant Ridge will make it less likely that the end of the left turn queue will intrude on the westbound MOW through lanes, thus potentially reducing rear-end crashes at this location.



Figure 10 - Westbound MOW Dual Left onto Pleasant Ridge Drive

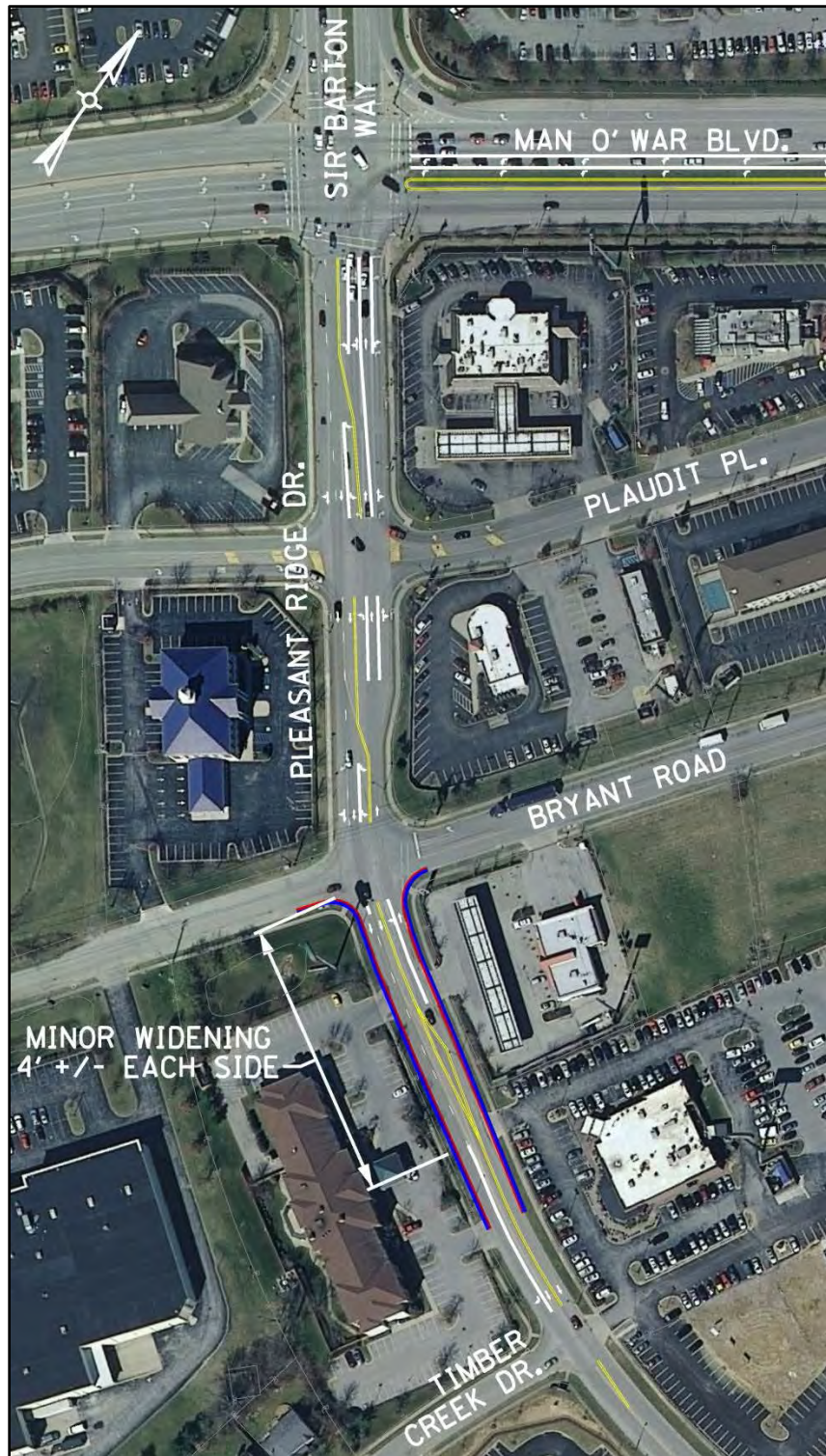


Figure 11 - Restriping and Widening on Pleasant Ridge Drive

Sir Barton Way/Polo Club Boulevard Connector

This alternative constructs a new roadway from Sir Barton Way underneath I-75 to Polo Club Boulevard. The purpose of this alternate is to relieve congestion from the two existing east-west corridors in the project area. A third east-west connection between the two main conventional north-south corridors will allow traffic to flow between Sir Barton and Polo Club Blvd. without adding to the congestion on US 60 and MOW Blvd. This connector will also allow east-west pedestrian and bicycle traffic to safely cross the I-75 corridor without having to negotiate either of the I-75 interchanges. A prefabricated modular bridge system could be built relatively quickly when compared to a conventional bridge, lessening the maintenance of traffic impact on I-75. See **Figures 12, 13 & 14**.

This connector will become more important over time as the Polo Club Blvd. area develops. It was assumed that ten percent (10%) of the US 60 and MOW Blvd. traffic is diverted to this connector during the weekday PM peak, and 15% during the weekend peak. It was assumed the AM weekday peak was not significantly affected.

According to the Synchro model, the LOS at all of the other project intersections improved except for the I-75 northbound off ramp to US 60. This alternate is the only one that improves both of the project corridors. See **Appendix D**.



Figure 12 - Sir Barton Way/Polo Club Blvd. Connector Plan View

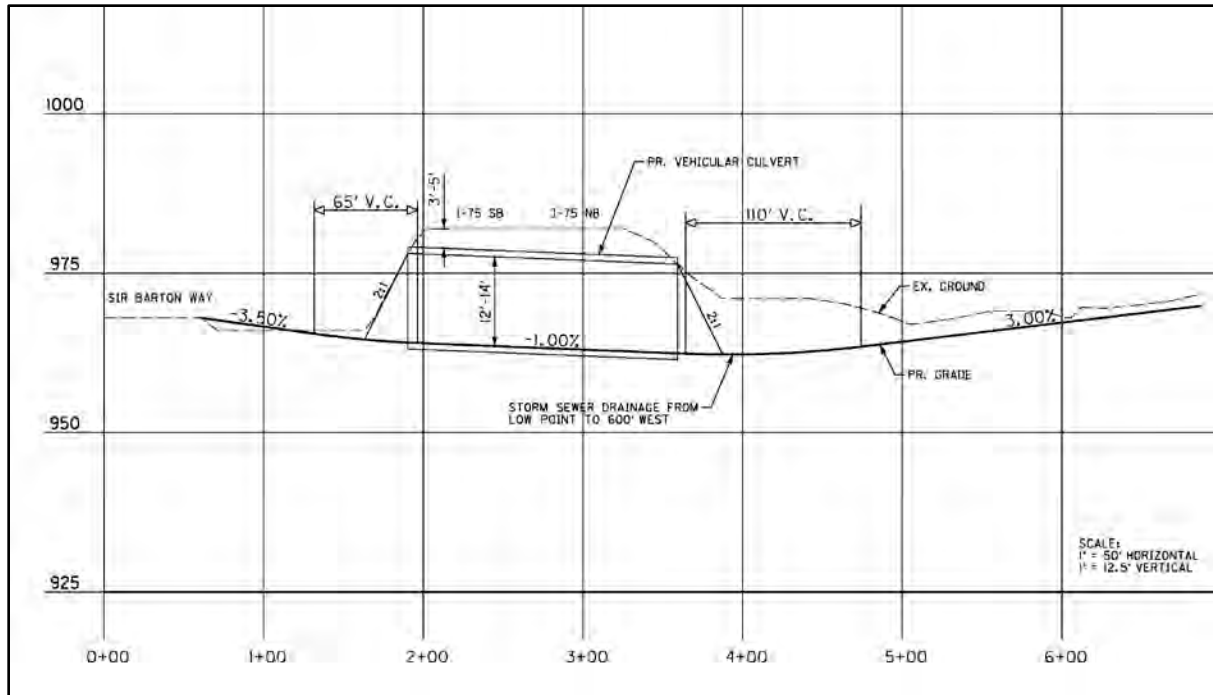


Figure 13 - Connector Profile View

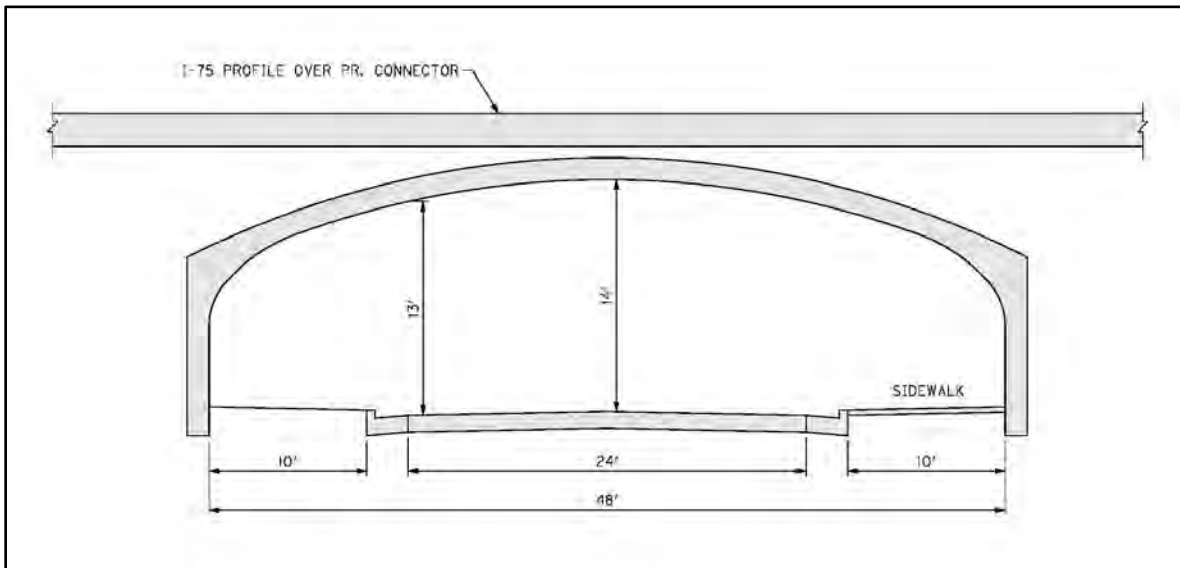


Figure 14 - Connector Typical Section

Add a Weave Lane on SB I-75 between the US 60 and MOW Interchanges

Traffic in the design year of 2025 further strains the capacity of southbound I-75 between these two interchanges. The results of the ramp and segment analysis for the ramps and freeway section were discussed earlier. In order to develop solutions, 2025 traffic was also analyzed in HCS in order to determine the impact of adding a weave lane. I-75 southbound between US 60 and MOW is expected to operate at a LOS C/D during a typical 2025 weekday PM peak according to HCS 2010. The merge analysis from US 60 to southbound I-75 shows the freeway area of influence operates at LOS C. The basic freeway section of I-75 southbound also operates at LOS C. The exit ramp from southbound I-75 to MOW Blvd. section operates at LOS D. Based on the observations of existing traffic, it can be assumed that the freeway LOS is actually will actually be an E or worse for short periods.

Because these two interchanges are so near each other, a weave analysis was performed to determine the desirability of adding a weaving lane between the southbound US 60 on ramp to I-75 and the southbound MOW Blvd. off ramp from I-75. The addition of a weave lane upgrades the operation to a LOS B. See [Figure 15](#). See also [Appendix E](#).

The addition of the auxiliary lane also increases safety on I-75 because the southbound off ramp to MOW queue will not be backing onto I-75 as often, due to the additional storage.



Figure 15 - Weave Lane for I-75 Southbound

Dual Right-Turn Lane and Traffic Signal at I-75 SB off Ramp to MOW Blvd.

The intent of this alternate is to add capacity to the I-75 southbound off ramp to MOW Blvd. by adding another right-turn lane. Because of the dual right-turn move and the volume of traffic at this intersection, a traffic signal is also proposed for this alternate. Left turning traffic off of this ramp will also increase as development on Polo Club Blvd. increases, intensifying the need for a traffic signal. See [Figure 16](#).

The Synchro model indicates this alternate is less than desirable during the Weekday PM peak. The high volume of traffic exiting I-75 southbound overwhelms the proposed traffic signal, even with an additional right-turn lane. See [Table 4](#). The dual right-turn lane with traffic signal is not recommended due to the poor LOS in the weekday afternoon on the southbound approach. Although this alternate is not recommended, we want to consider all options.

Table 4 - SB I-75 Ramp to MOW Dual RT LOS

AM	Dual RT from SB I-75 Off to MOW			
	EB	NB	WB	SB
Approach Delay (sec/veh)/LOS	15/B	N/A	9/A	2/A
Intersection Delay/LOS	10/A			

PM				
	EB	NB	WB	SB
Approach Delay (sec/veh)/LOS	293/F	N/A	7/A	277/F
Intersection Delay/LOS	224/F			

Weekend				
	EB	NB	WB	SB
Approach Delay (sec/veh)/LOS	96/F	N/A	5/D	59/E
Intersection Delay/LOS	61/E			

However, if a signal is installed at this intersection to accommodate the southbound I-75 left turns onto MOW and the westbound MOW left turns onto I-75 south, we recommend widening the southbound off ramp to two lanes for its entire length. This would retain the existing uncontrolled right turn onto westbound MOW while allowing left-turning traffic to queue in the new lane. No additional ROW is needed to accomplish this improvement. Overhead signing designating the lane assignment would also lessen potential motorist confusion.

This alternate prompted an examination of the entire I-75/MOW interchange configuration. The previously referenced FHWA Cap-X tool was used to check the existing partial cloverleaf design against other grade-separated junction designs. Of particular interest was whether or not a Single Point Urban Interchange (SPUI) would be more efficient. Significant widening in the westbound direction on MOW to add lanes would have to take place to construct the SPUI. Due to the cost of these additional lanes, the existing interchange configuration is the considered the most effective at this time. A SPUI may be a viable option in the future as relative turning movement volumes change, but only with the widening on MOW. See [Appendix F](#).

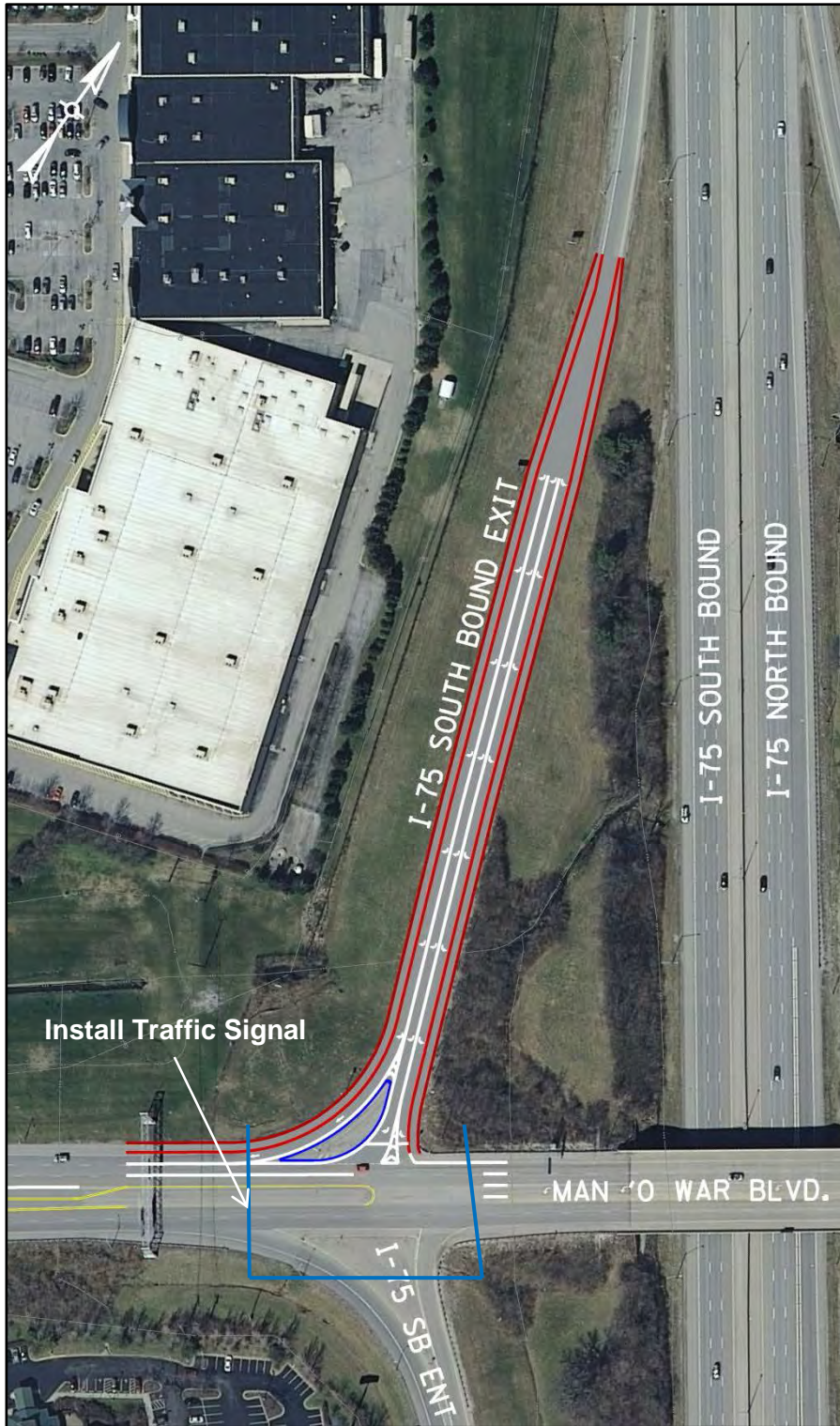


Figure 16 - Southbound I-75 Off Ramp Dual Right Turn Lanes and Traffic Signal

Dual Left-Turn Lane EB MOW to Polo Club Boulevard

This alternate adds capacity to the MOW/Polo Club Blvd. intersection by adding another left-turn lane in the eastbound direction. See **Figure 17**. The Synchro Model shows that this improvement has little effect during the weekday peaks when traffic is lighter, but it has a significant effect on weekend traffic, taking the overall intersection delay from 166 seconds in the future No Build scenario to 104 seconds for this alternate. See **Appendix D**.

This improvement will decrease congestion, which will improve the safety of this intersection by smoothing the traffic flow and decreasing queue lengths.



Figure 17 - Additional EB MOW Blvd. Left-turn Lane onto Polo Club Blvd.

Traffic Signal at US 60/Polo Club Blvd. Intersection

A traffic signal will be warranted at the US 60/Polo Club Blvd. intersection within the next ten (10) years based on forecasted traffic and engineering judgement. Also, the existing additional Polo Club Blvd. left-turn lane that is now striped out will have to be put into operation when the traffic signal is installed. A high volume of northbound to westbound left-turns from Polo Club Blvd. onto US 60 will create the need for a traffic signal. See **Figure 18**. The Synchro model shows an unacceptable LOS if a traffic signal is not installed. See **Appendix D**.

According to the Highway Safety Manual, up to one third (0.33) of right angle crashes can be eliminated at an intersection by changing from stop to signal control.



Figure 18 - Traffic Signal at US 60/Polo Club Blvd.

Construct Sidewalk on South Side, West End of US 60

This alternate involves constructing a new sidewalk on the south side of US 60 on the west end of the project area. This is to provide pedestrian connectivity between the new high school and the apartments around the high school to the commercial and residential developments in Hamburg area. This improvement will also help to complete the existing pedestrian network in the study area. See **Figures 19, 20, and 21**.



Figure 19 - West Section US 60 Sidewalk Extension and Additional Lanes

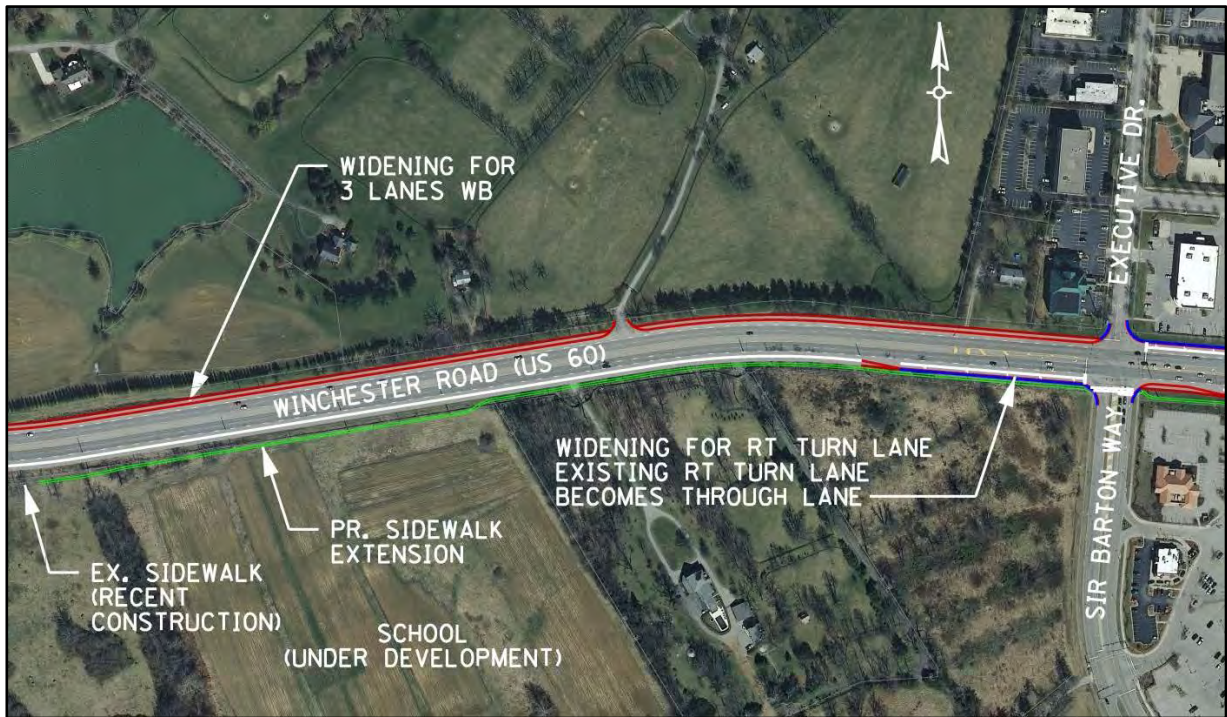


Figure 20 - Middle Section US 60 Sidewalk Extension and Additional Lanes

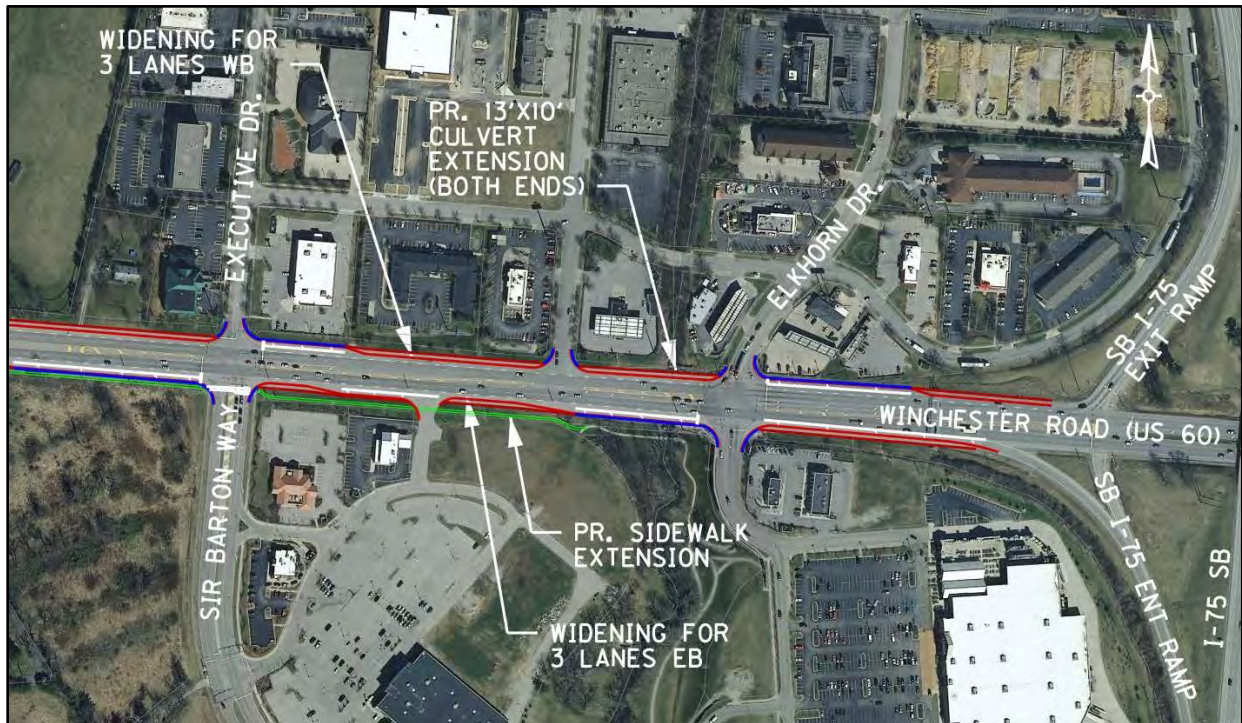


Figure 21 - East Section US 60 Sidewalk Extension and Additional Lanes

Additional Through Lane for Westbound and Eastbound US 60

When traveling eastbound on US 60 from downtown Lexington approaching the study area, the three through lanes on US 60 become two through lanes east of Sir Barton Way. When traveling westbound through the project area, there are currently two through lanes.

This alternate adds a third lane on US 60 between Sir Barton Way and the I-75 interchange eastbound, and between the I-75 interchange and just west of Patchen Wilkes Drive westbound. This would allow US 60 to have three through lanes in both directions from Industry Road, through the New Circle Road interchange and through the I-75 interchange, a distance of over two miles. The existing underutilized dual left-turn lanes into Elkhorn Road could be reduced to one left-turn lane, thereby simplifying the widening in this area for the two additional through lanes. This also allows the proposed third eastbound lane to become the northbound left-turn lane to I-75 by just doing some re-striping through the interchange. This would change the existing westbound US 60 dual left lanes into Sir Barton Way to a single left turn lane. The forecasted volume for this movement in 2025 during the weekday peak is 290 vehicles, which is less than the 300 vehicle minimum threshold for considering dual left-turn lanes. The forecasted 2025 weekend peak of 360 vehicles is also less than the upper dual left-turn range of 400 vehicles. In other words, we believe a single westbound US 60 left-turn lane into Sir Barton Way will function adequately in the design year of 2025. See [Figures 19, 20, and 21](#).

According to the Synchro model results, this improvement increases LOS for both the AM and PM peaks on weekdays for the intersections west of I-75, where the additional lanes would be constructed. Changing the dual left into Elkhorn Road into a single left-turn lane does slightly degrade the LOS on this approach, changing it from a D to an E on weekday afternoons. See [Appendix D](#).

Recommended Project Priorities and Estimated Costs

All of the recommended projects presented in [Table 5](#) provide a benefit to the area in some way. However, the reality of budgetary constraints and other statewide (and citywide) priorities create the need to rank the above formulated projects. A logical procedure was created that considered the estimated project cost, the traffic operational impact of the project, amount of required right-of-way, and safety benefits. While the cheapest projects that do not require ROW may be the easiest and quickest to build, they are not necessarily the places within the small study area that will provide the most return on the investment. During the decision making process we gave the highest weight to the impact the proposed project would have to traffic operations, which is related to safety. Estimated project costs and ROW were then considered at lesser importance.

The recommended projects sorted into four groups when the criterion outlined above was applied. See **Table 5** and **Appendix G**. The projects are listed in order of recommended priority groups; with green the first priority, yellow second, pink third, and orange fourth. The first project that came out of this process was the I-75 southbound weave lane.

Table 5 - Estimated Project Costs and Priority Groups

Project	Estimated Cost
I-75 SB Auxiliary Lane US 60 to Man 'O War	\$ 1,387,000
US 60 3rd Lane EB	\$ 928,000
US 60 3rd Lane WB	\$ 2,235,000
Man 'O War Double Left Turn to Pleasant Ridge	\$ 488,000
Future Transit Improvements as Needed	Lextran Budget
Partial I-75 Interchange at Todds Road	\$ 2,469,000
Sir Barton / Polo Club Connector	\$ 4,372,000
Man 'O War Double Left Turn to Polo Club Blvd.	\$ 268,000
Traffic Signal Winchester Road at Polo Club	\$ 100,000
Sidewalk South Side of US 60	\$ 128,000
Tuscany Trail and Hamburg Trail Extension	\$ 841,000
Full I-75 Interchange at Todds Road	\$ 5,850,000

Some of the above projects may be built together to save the cost of duplicate mobilization, maintenance of traffic, and to achieve other economies of scale. For example, the US 60 sidewalk would probably be built in conjunction with the eastbound US 60 third through lane construction. The cost estimates shown are a reflection of each project being built as a standalone effort. We considered each project as if it were to be independently constructed in order to provide the most conservative cost estimate information.

Conclusion

First Tier Priorities

The I-75 SB Auxiliary Lane does not need additional right-of-way to be built, provides additional storage, and increases capacity. When it is compared to other projects in the small study area, it is more expensive than most, but still is not nearly as expensive as four of the other projects. When all of these factors were considered, this project came out to be the one with the most benefits to costs.

The US 60 Eastbound third through lane project is a close second in priority. Since less traffic is impacted when compared to the I-75 option, this was listed as a slightly lower priority. This project also has little, if any, right-of-way impact, provides adequate LOS, and is relatively inexpensive.

Second Tier Priorities

The westbound US 60 third lane project provides improvements similar to that of the eastbound US 60 lane project, but since it is twice as expensive, it was placed in the second tier group of priorities. Adding the MOW dual left turn lanes to Pleasant Ridge Drive provides some positive impact to the intersection LOS and is relatively inexpensive, but has a minor impact on right-of-way. The transit improvements do not impact right-of-way and have a minor relative cost, but also have a minor impact on LOS.

Third Tier Priorities

Both the partial interchange at Todds Road and the Sir Barton/Polo Club Blvd. connector projects provide a significant positive impact to LOS, but are expensive to build and have serious right-of-way impacts. The other three third tier projects create little to no positive impact to LOS, but are important for safety and connectivity reasons.

Fourth Tier Priorities

The Tuscany/Hamburg Trail projects do not positively impact vehicular LOS at all, but are important for improving the pedestrian network. The full Todds Road interchange is also an important project that positively impacts LOS, but has a significant cost and a large right-of-way impact, which put it in the fourth tier of priorities.

Statement of Limitations

URS has prepared this report in accordance with the usual care and thoroughness of the consulting profession for the use of the Kentucky Transportation Cabinet and Lexington-Fayette Urban County Government. It is based on generally accepted practices and standards at the time it was prepared. No other warranty, expressed or implied, is made as to the professional advice included in this Report.

It is prepared in accordance with the scope of work and for the purpose outlined in the contract dated September 4, 2015.

This Report was based on field conditions and observations made in October 2015 and on the conditions encountered at the time of preparation. URS disclaims responsibility for any changes that may have occurred after this time.

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Appendix A: Turning Movement Counts

AECOM
Cincinnati, OH
45202
Traffic Department

File Name : MOW_@_NB_I-75_10-08-2015
Site Code : MOW @ NB I-75
Start Date : 10/8/2015
Page No : 1

Groups Printed- Lights - Buses - Trucks

Start Time	MOW WB From East				NB I-75 Off Ramp From South			MOW EB From West				Int. Total
	Thru	Bear Right	U-Turn	App. Total	Left	Right	App. Total	Thru	Hard Right	U-Turn	App. Total	
06:30	137	44	0	181	18	20	38	74	129	0	203	422
06:45	148	34	0	182	23	26	49	84	142	0	226	457
Total	285	78	0	363	41	46	87	158	271	0	429	879
07:00	197	64	0	261	24	15	39	85	186	0	271	571
07:15	281	91	0	372	35	8	43	69	203	0	272	687
07:30	296	99	0	395	42	12	54	107	252	0	359	808
07:45	279	71	0	350	75	13	88	113	226	0	339	777
Total	1053	325	0	1378	176	48	224	374	867	0	1241	2843
08:00	191	43	0	234	40	7	47	106	198	0	304	585
08:15	184	44	0	228	54	8	62	98	214	0	312	602
08:30	195	46	0	241	43	7	50	88	170	0	258	549
08:45	187	32	0	219	36	14	50	91	134	0	225	494
Total	757	165	0	922	173	36	209	383	716	0	1099	2230
09:00	144	28	0	172	29	9	38	92	130	0	222	432
09:15	160	24	0	184	25	8	33	89	124	0	213	430
Total	304	52	0	356	54	17	71	181	254	0	435	862
16:00	211	36	0	247	42	16	58	214	241	0	455	760
16:15	212	33	0	245	49	15	64	220	231	0	451	760
16:30	207	29	0	236	35	16	51	214	241	0	455	742
16:45	227	34	0	261	55	18	73	211	237	0	448	782
Total	857	132	0	989	181	65	246	859	950	0	1809	3044
17:00	221	28	0	249	35	17	52	233	246	0	479	780
17:15	231	43	0	274	47	19	66	223	232	0	455	795
17:30	193	26	0	219	54	25	79	226	220	0	446	744
17:45	230	26	0	256	51	17	68	239	184	0	423	747
Total	875	123	0	998	187	78	265	921	882	0	1803	3066
18:00	186	25	0	211	55	11	66	238	184	0	422	699
18:15	231	18	0	249	51	13	64	187	161	0	348	661

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File Name : MOW_@_NB_I-75_10-08-2015
Site Code : MOW @ NB I-75
Start Date : 10/8/2015
Page No : 2

Groups Printed- Lights - Buses - Trucks

Start Time	MOW WB From East				NB I-75 Off Ramp From South			MOW EB From West				Int. Total
	Thru	Bear Right	U-Turn	App. Total	Left	Right	App. Total	Thru	Hard Right	U-Turn	App. Total	
18:30	181	21	0	202	50	10	60	229	177	0	406	668
18:45	208	18	0	226	31	2	33	223	173	0	396	655
Total	806	82	0	888	187	36	223	877	695	0	1572	2683
16:00	228	46	0	274	50	13	63	221	238	0	459	796
16:15	240	38	0	278	54	17	71	228	220	0	448	797
16:30	279	40	0	319	46	15	61	216	257	0	473	853
16:45	218	38	0	256	51	20	71	217	219	0	436	763
Total	965	162	0	1127	201	65	266	882	934	0	1816	3209
17:00	225	32	0	257	61	15	76	235	201	0	436	769
17:15	253	40	0	293	59	17	76	241	220	0	461	830
17:30	242	27	0	269	65	24	89	238	185	0	423	781
17:45	233	35	0	268	54	18	72	246	192	0	438	778
Total	953	134	0	1087	239	74	313	960	798	0	1758	3158
18:00	241	32	0	273	47	18	65	201	213	0	414	752
18:15	232	30	0	262	55	12	67	223	160	0	383	712
18:30	186	23	0	209	60	14	74	218	163	1	382	665
18:45	166	18	0	184	52	9	61	202	153	0	355	600
Total	825	103	0	928	214	53	267	844	689	1	1534	2729
14:00	212	37	0	249	59	11	70	195	171	0	366	685
14:15	221	40	0	261	52	8	60	201	170	0	371	692
14:30	235	39	0	274	54	14	68	222	179	0	401	743
14:45	198	29	0	227	57	15	72	186	152	2	340	639
Total	866	145	0	1011	222	48	270	804	672	2	1478	2759
15:00	249	39	0	288	52	12	64	199	178	0	377	729
15:15	260	39	0	299	51	16	67	223	152	0	375	741
15:30	222	33	0	255	57	12	69	209	144	0	353	677
15:45	217	30	0	247	57	9	66	200	156	0	356	669
Total	948	141	0	1089	217	49	266	831	630	0	1461	2816

AECOM
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45202
Traffic Department

File Name : MOW_@_NB_I-75_10-08-2015
Site Code : MOW @ NB I-75
Start Date : 10/8/2015
Page No : 3

Groups Printed- Lights - Buses - Trucks

Start Time	MOW WB From East				NB I-75 Off Ramp From South			MOW EB From West				Int. Total
	Thru	Bear Right	U-Turn	App. Total	Left	Right	App. Total	Thru	Hard Right	U-Turn	App. Total	
16:00	206	24	0	230	47	19	66	196	155	0	351	647
16:15	189	32	0	221	67	10	77	206	151	0	357	655
16:30	218	42	0	260	46	9	55	219	158	0	377	692
16:45	230	36	0	266	63	16	79	210	161	0	371	716
Total	843	134	0	977	223	54	277	831	625	0	1456	2710
17:00	203	24	0	227	59	12	71	175	139	0	314	612
17:15	224	29	0	253	59	15	74	197	157	0	354	681
17:30	234	27	0	261	54	13	67	214	191	0	405	733
17:45	230	28	0	258	53	16	69	185	139	0	324	651
Total	891	108	0	999	225	56	281	771	626	0	1397	2677
18:00	215	22	0	237	39	6	45	189	159	1	349	631
18:15	207	22	0	229	48	3	51	174	141	0	315	595
18:30	194	20	0	214	28	2	30	187	152	0	339	583
18:45	154	14	0	168	42	6	48	167	149	0	316	532
Total	770	78	0	848	157	17	174	717	601	1	1319	2341
19:00	133	11	0	144	42	6	48	155	149	0	304	496
19:15	151	16	0	167	48	5	53	147	171	0	318	538
19:30	139	13	0	152	34	3	37	162	145	0	307	496
19:45	130	17	0	147	47	10	57	170	156	0	326	530
Total	553	57	0	610	171	24	195	634	621	0	1255	2060
Grand Total	12551	2019	0	14570	2868	766	3634	11027	10831	4	21862	40066
Apprch %	86.1	13.9	0		78.9	21.1		50.4	49.5	0		
Total %	31.3	5	0	36.4	7.2	1.9	9.1	27.5	27	0	54.6	
Lights	12388	1968	0	14356	2828	749	3577	10912	10659	4	21575	39508
% Lights	98.7	97.5	0	98.5	98.6	97.8	98.4	99	98.4	100	98.7	98.6
Buses	62	10	0	72	11	0	11	35	10	0	45	128
% Buses	0.5	0.5	0	0.5	0.4	0	0.3	0.3	0.1	0	0.2	0.3
Trucks	101	41	0	142	29	17	46	80	162	0	242	430
% Trucks	0.8	2	0	1	1	2.2	1.3	0.7	1.5	0	1.1	1.1

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Cincinnati, OH
45202
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File Name : MOW_@_SB_I-75_10-08-2015
Site Code : MOW @ SB I-75
Start Date : 10/8/2015
Page No : 1

Groups Printed- Lights - Buses - Trucks

Start Time	I-75 SB off ramp From North					MOW WB From East					I-75 SB on ramp From South					MOW EB From West					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
06:30	10	0	91	0	101	1	100	0	0	101	0	0	0	0	0	0	192	20	0	212	414
06:45	10	0	127	0	137	0	137	0	0	137	0	0	0	0	0	0	218	15	0	233	507
Total	20	0	218	0	238	1	237	0	0	238	0	0	0	0	0	0	410	35	0	445	921
07:00	16	0	121	0	137	0	136	0	0	136	0	0	0	0	0	0	252	19	0	271	544
07:15	4	0	147	0	151	0	195	0	0	195	0	0	0	0	0	0	273	29	0	302	648
07:30	8	0	220	0	228	11	222	0	1	234	0	0	0	0	0	0	340	20	0	360	822
07:45	10	38	265	0	313	16	213	2	0	231	0	0	0	0	0	0	323	23	0	346	890
Total	38	38	753	0	829	27	766	2	1	796	0	0	0	0	0	0	1188	91	0	1279	2904
08:00	11	0	190	0	201	10	172	0	1	183	0	0	0	0	0	0	292	30	0	322	706
08:15	9	0	166	0	175	9	194	0	0	203	0	0	0	0	0	0	307	28	0	335	713
08:30	11	0	205	0	216	9	193	0	1	203	0	0	0	0	0	0	243	23	0	266	685
08:45	14	0	195	0	209	5	188	0	0	193	0	0	0	0	0	0	211	26	0	237	639
Total	45	0	756	0	801	33	747	0	2	782	0	0	0	0	0	0	1053	107	0	1160	2743
09:00	5	0	157	0	162	6	153	0	0	159	0	0	0	0	0	0	219	34	0	253	574
09:15	9	0	139	0	148	13	153	0	0	166	0	0	0	0	0	0	193	22	0	215	529
Total	14	0	296	0	310	19	306	0	0	325	0	0	0	0	0	0	412	56	0	468	1103
16:00	14	0	262	0	276	14	208	0	0	222	0	0	0	0	0	0	437	73	0	510	1008
16:15	17	0	319	0	336	13	201	0	0	214	0	0	0	0	0	0	430	83	0	513	1063
16:30	20	0	267	0	287	0	189	0	0	189	0	0	0	0	0	0	437	67	1	505	981
16:45	14	1	305	0	320	15	239	0	0	254	0	0	0	0	0	0	429	71	0	500	1074
Total	65	1	1153	0	1219	42	837	0	0	879	0	0	0	0	0	0	1733	294	1	2028	4126
17:00	13	0	325	0	338	25	206	0	0	231	0	0	0	0	0	0	459	66	0	525	1094
17:15	27	0	325	0	352	17	220	0	0	237	0	0	0	0	0	0	424	59	0	483	1072
17:30	22	0	342	0	364	18	205	0	0	223	0	0	0	0	0	0	432	57	1	490	1077
17:45	26	0	298	0	324	5	238	0	0	243	0	0	0	0	0	0	378	75	0	453	1020
Total	88	0	1290	0	1378	65	869	0	0	934	0	0	0	0	0	0	1693	257	1	1951	4263
18:00	12	0	260	0	272	20	202	0	0	222	0	0	0	0	0	0	422	74	0	496	990
18:15	14	0	266	0	280	12	240	0	0	252	0	0	0	0	0	0	336	66	0	402	934
18:30	16	0	227	0	243	18	194	0	0	212	0	0	0	0	0	0	373	69	0	442	897

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Groups Printed- Lights - Buses - Trucks

Start Time	I-75 SB off ramp From North					MOW WB From East					I-75 SB on ramp From South					MOW EB From West					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
18:45	21	0	182	0	203	14	201	0	0	215	0	0	0	0	0	0	354	60	1	415	833
Total	63	0	935	0	998	64	837	0	0	901	0	0	0	0	0	0	1485	269	1	1755	3654
16:00	24	0	263	0	287	18	202	0	0	220	0	0	0	0	0	0	429	57	0	486	993
16:15	22	0	293	0	315	23	253	0	0	276	0	0	0	0	0	0	423	67	0	490	1081
16:30	21	0	311	0	332	30	250	0	0	280	0	0	0	0	0	0	426	77	0	503	1115
16:45	19	0	326	0	345	22	221	0	0	243	0	0	0	0	0	0	398	67	0	465	1053
Total	86	0	1193	0	1279	93	926	0	0	1019	0	0	0	0	0	0	1676	268	0	1944	4242
17:00	21	0	325	0	346	19	224	0	0	243	0	0	0	0	0	0	400	58	0	458	1047
17:15	26	0	341	0	367	22	252	0	0	274	0	0	0	0	0	0	446	60	0	506	1147
17:30	20	0	341	0	361	22	252	0	0	274	0	0	0	0	0	0	394	70	0	464	1099
17:45	18	0	306	0	324	10	257	0	0	267	0	0	0	0	0	0	435	73	0	508	1099
Total	85	0	1313	0	1398	73	985	0	0	1058	0	0	0	0	0	0	1675	261	0	1936	4392
18:00	17	0	320	0	337	14	229	0	0	243	0	0	0	0	0	0	409	64	0	473	1053
18:15	14	0	302	0	316	15	239	0	0	254	0	0	0	0	0	0	348	56	0	404	974
18:30	21	0	249	0	270	11	220	0	0	231	0	0	0	0	0	0	357	51	0	408	909
18:45	16	0	230	0	246	16	192	0	1	209	0	0	0	0	0	0	333	51	0	384	839
Total	68	0	1101	0	1169	56	880	0	1	937	0	0	0	0	0	0	1447	222	0	1669	3775
14:00	10	0	194	0	204	20	207	0	0	227	0	0	0	0	0	0	352	48	1	401	832
14:15	15	0	171	0	186	10	225	0	0	235	0	0	0	0	0	0	357	66	2	425	846
14:30	13	0	179	0	192	14	235	0	0	249	0	0	0	0	0	0	372	52	2	426	867
14:45	11	0	201	0	212	16	215	0	0	231	0	0	0	0	0	0	334	60	0	394	837
Total	49	0	745	0	794	60	882	0	0	942	0	0	0	0	0	0	1415	226	5	1646	3382
15:00	14	0	155	0	169	15	228	0	0	243	0	0	0	0	0	0	369	46	1	416	828
15:15	14	0	167	0	181	13	249	0	1	263	0	0	0	0	0	0	358	53	0	411	855
15:30	12	0	193	0	205	14	241	0	0	255	0	0	0	0	0	0	347	50	0	397	857
15:45	13	0	186	0	199	10	226	0	0	236	0	0	0	0	0	0	338	55	0	393	828
Total	53	0	701	0	754	52	944	0	1	997	0	0	0	0	0	0	1412	204	1	1617	3368
16:00	20	0	181	0	201	19	201	0	0	220	0	0	0	0	0	0	333	61	1	395	816

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Groups Printed- Lights - Buses - Trucks

Start Time	I-75 SB off ramp From North					MOW WB From East					I-75 SB on ramp From South					MOW EB From West					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
16:15	17	0	179	0	196	10	220	0	0	230	0	0	0	0	0	0	341	49	0	390	816
16:30	22	0	181	0	203	16	196	0	0	212	0	0	0	0	0	0	347	57	0	404	819
16:45	16	0	187	0	203	13	224	0	1	238	0	0	0	0	0	0	359	54	0	413	854
Total	75	0	728	0	803	58	841	0	1	900	0	0	0	0	0	0	1380	221	1	1602	3305
17:00	16	0	194	0	210	19	225	0	0	244	0	0	0	0	0	0	301	60	0	361	815
17:15	12	0	222	0	234	13	245	0	0	258	0	0	0	0	0	0	339	60	0	399	891
17:30	19	0	190	0	209	13	231	0	0	244	0	0	0	0	0	0	379	44	0	423	876
17:45	16	0	191	0	207	18	228	0	1	247	0	0	0	0	0	0	310	48	0	358	812
Total	63	0	797	0	860	63	929	0	1	993	0	0	0	0	0	0	1329	212	0	1541	3394
18:00	12	0	211	0	223	8	236	0	0	244	0	0	0	0	0	0	329	66	2	397	864
18:15	10	0	201	0	211	11	213	0	0	224	0	0	0	0	0	0	305	53	1	359	794
18:30	7	0	207	0	214	8	192	0	0	200	0	0	0	0	0	0	333	62	0	395	809
18:45	10	0	179	0	189	1	181	0	0	182	0	0	0	0	0	0	312	54	1	367	738
Total	39	0	798	0	837	28	822	0	0	850	0	0	0	0	0	0	1279	235	4	1518	3205
19:00	5	0	184	0	189	7	150	0	0	157	0	0	0	0	0	0	287	56	1	344	690
19:15	7	0	158	0	165	6	184	0	0	190	0	0	0	0	0	0	317	45	0	362	717
19:30	9	0	146	0	155	1	148	0	0	149	0	0	0	0	0	0	286	62	0	348	652
19:45	10	0	172	0	182	2	164	0	0	166	0	0	0	0	0	0	321	49	0	370	718
Total	31	0	660	0	691	16	646	0	0	662	0	0	0	0	0	0	1211	212	1	1424	2777
Grand Total	882	39	13437	0	14358	750	12454	2	7	13213	0	0	0	0	0	0	20798	3170	15	23983	51554
Apprch %	6.1	0.3	93.6	0		5.7	94.3	0	0.1		0	0	0	0	0	0	86.7	13.2	0.1		
Total %	1.7	0.1	26.1	0	27.9	1.5	24.2	0	0	25.6	0	0	0	0	0	0	40.3	6.1	0	46.5	
Lights	871	39	13276	0	14186	737	12317	2	7	13063	0	0	0	0	0	0	20525	3137	15	23677	50926
% Lights	98.8	100	98.8	0	98.8	98.3	98.9	100	100	98.9	0	0	0	0	0	0	98.7	99	100	98.7	98.8
Buses	3	0	33	0	36	0	52	0	0	52	0	0	0	0	0	0	52	1	0	53	141
% Buses	0.3	0	0.2	0	0.3	0	0.4	0	0	0.4	0	0	0	0	0	0	0.3	0	0	0.2	0.3
Trucks	8	0	128	0	136	13	85	0	0	98	0	0	0	0	0	0	221	32	0	253	487
% Trucks	0.9	0	1	0	0.9	1.7	0.7	0	0	0.7	0	0	0	0	0	0	1.1	1	0	1.1	0.9

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Groups Printed- Lights - Buses - Trucks

Start Time	MOW WB From East				NB I-75 Off Ramp From South			MOW EB From West				Int. Total
	Thru	Bear Right	U-Turn	App. Total	Left	Right	App. Total	Thru	Hard Right	U-Turn	App. Total	
06:30	137	44	0	181	18	20	38	74	129	0	203	422
06:45	148	34	0	182	23	26	49	84	142	0	226	457
Total	285	78	0	363	41	46	87	158	271	0	429	879
07:00	197	64	0	261	24	15	39	85	186	0	271	571
07:15	281	91	0	372	35	8	43	69	203	0	272	687
07:30	296	99	0	395	42	12	54	107	252	0	359	808
07:45	279	71	0	350	75	13	88	113	226	0	339	777
Total	1053	325	0	1378	176	48	224	374	867	0	1241	2843
08:00	191	43	0	234	40	7	47	106	198	0	304	585
08:15	184	44	0	228	54	8	62	98	214	0	312	602
08:30	195	46	0	241	43	7	50	88	170	0	258	549
08:45	187	32	0	219	36	14	50	91	134	0	225	494
Total	757	165	0	922	173	36	209	383	716	0	1099	2230
09:00	144	28	0	172	29	9	38	92	130	0	222	432
09:15	160	24	0	184	25	8	33	89	124	0	213	430
Total	304	52	0	356	54	17	71	181	254	0	435	862
16:00	211	36	0	247	42	16	58	214	241	0	455	760
16:15	212	33	0	245	49	15	64	220	231	0	451	760
16:30	207	29	0	236	35	16	51	214	241	0	455	742
16:45	227	34	0	261	55	18	73	211	237	0	448	782
Total	857	132	0	989	181	65	246	859	950	0	1809	3044
17:00	221	28	0	249	35	17	52	233	246	0	479	780
17:15	231	43	0	274	47	19	66	223	232	0	455	795
17:30	193	26	0	219	54	25	79	226	220	0	446	744
17:45	230	26	0	256	51	17	68	239	184	0	423	747
Total	875	123	0	998	187	78	265	921	882	0	1803	3066
18:00	186	25	0	211	55	11	66	238	184	0	422	699
18:15	231	18	0	249	51	13	64	187	161	0	348	661

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Groups Printed- Lights - Buses - Trucks

Start Time	MOW WB From East				NB I-75 Off Ramp From South			MOW EB From West				Int. Total
	Thru	Bear Right	U-Turn	App. Total	Left	Right	App. Total	Thru	Hard Right	U-Turn	App. Total	
18:30	181	21	0	202	50	10	60	229	177	0	406	668
18:45	208	18	0	226	31	2	33	223	173	0	396	655
Total	806	82	0	888	187	36	223	877	695	0	1572	2683
16:00	228	46	0	274	50	13	63	221	238	0	459	796
16:15	240	38	0	278	54	17	71	228	220	0	448	797
16:30	279	40	0	319	46	15	61	216	257	0	473	853
16:45	218	38	0	256	51	20	71	217	219	0	436	763
Total	965	162	0	1127	201	65	266	882	934	0	1816	3209
17:00	225	32	0	257	61	15	76	235	201	0	436	769
17:15	253	40	0	293	59	17	76	241	220	0	461	830
17:30	242	27	0	269	65	24	89	238	185	0	423	781
17:45	233	35	0	268	54	18	72	246	192	0	438	778
Total	953	134	0	1087	239	74	313	960	798	0	1758	3158
18:00	241	32	0	273	47	18	65	201	213	0	414	752
18:15	232	30	0	262	55	12	67	223	160	0	383	712
18:30	186	23	0	209	60	14	74	218	163	1	382	665
18:45	166	18	0	184	52	9	61	202	153	0	355	600
Total	825	103	0	928	214	53	267	844	689	1	1534	2729
14:00	212	37	0	249	59	11	70	195	171	0	366	685
14:15	221	40	0	261	52	8	60	201	170	0	371	692
14:30	235	39	0	274	54	14	68	222	179	0	401	743
14:45	198	29	0	227	57	15	72	186	152	2	340	639
Total	866	145	0	1011	222	48	270	804	672	2	1478	2759
15:00	249	39	0	288	52	12	64	199	178	0	377	729
15:15	260	39	0	299	51	16	67	223	152	0	375	741
15:30	222	33	0	255	57	12	69	209	144	0	353	677
15:45	217	30	0	247	57	9	66	200	156	0	356	669
Total	948	141	0	1089	217	49	266	831	630	0	1461	2816

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Start Time	MOW WB From East				NB I-75 Off Ramp From South			MOW EB From West				Int. Total
	Thru	Bear Right	U-Turn	App. Total	Left	Right	App. Total	Thru	Hard Right	U-Turn	App. Total	
16:00	206	24	0	230	47	19	66	196	155	0	351	647
16:15	189	32	0	221	67	10	77	206	151	0	357	655
16:30	218	42	0	260	46	9	55	219	158	0	377	692
16:45	230	36	0	266	63	16	79	210	161	0	371	716
Total	843	134	0	977	223	54	277	831	625	0	1456	2710
17:00	203	24	0	227	59	12	71	175	139	0	314	612
17:15	224	29	0	253	59	15	74	197	157	0	354	681
17:30	234	27	0	261	54	13	67	214	191	0	405	733
17:45	230	28	0	258	53	16	69	185	139	0	324	651
Total	891	108	0	999	225	56	281	771	626	0	1397	2677
18:00	215	22	0	237	39	6	45	189	159	1	349	631
18:15	207	22	0	229	48	3	51	174	141	0	315	595
18:30	194	20	0	214	28	2	30	187	152	0	339	583
18:45	154	14	0	168	42	6	48	167	149	0	316	532
Total	770	78	0	848	157	17	174	717	601	1	1319	2341
19:00	133	11	0	144	42	6	48	155	149	0	304	496
19:15	151	16	0	167	48	5	53	147	171	0	318	538
19:30	139	13	0	152	34	3	37	162	145	0	307	496
19:45	130	17	0	147	47	10	57	170	156	0	326	530
Total	553	57	0	610	171	24	195	634	621	0	1255	2060
Grand Total	12551	2019	0	14570	2868	766	3634	11027	10831	4	21862	40066
Apprch %	86.1	13.9	0		78.9	21.1		50.4	49.5	0		
Total %	31.3	5	0	36.4	7.2	1.9	9.1	27.5	27	0	54.6	
Lights	12388	1968	0	14356	2828	749	3577	10912	10659	4	21575	39508
% Lights	98.7	97.5	0	98.5	98.6	97.8	98.4	99	98.4	100	98.7	98.6
Buses	62	10	0	72	11	0	11	35	10	0	45	128
% Buses	0.5	0.5	0	0.5	0.4	0	0.3	0.3	0.1	0	0.2	0.3
Trucks	101	41	0	142	29	17	46	80	162	0	242	430
% Trucks	0.8	2	0	1	1	2.2	1.3	0.7	1.5	0	1.1	1.1

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Start Time	MOW WB From East				NB I-75 Off Ramp From South			MOW EB From West				Int. Total
	Thru	Bear Right	U-Turn	App. Total	Left	Right	App. Total	Thru	Hard Right	U-Turn	App. Total	
Peak Hour Analysis From 07:15 to 08:00 - Peak 1 of 1												
Peak Hour for Entire Intersection Begins at 07:15												
07:15	281	91	0	372	35	8	43	69	203	0	272	687
07:30	296	99	0	395	42	12	54	107	252	0	359	808
07:45	279	71	0	350	75	13	88	113	226	0	339	777
08:00	191	43	0	234	40	7	47	106	198	0	304	585
Total Volume	1047	304	0	1351	192	40	232	395	879	0	1274	2857
% App. Total	77.5	22.5	0		82.8	17.2		31	69	0		
PHF	.884	.768	.000	.855	.640	.769	.659	.874	.872	.000	.887	.884
Lights	1026	295	0	1321	189	37	226	379	859	0	1238	2785
% Lights	98.0	97.0	0	97.8	98.4	92.5	97.4	95.9	97.7	0	97.2	97.5
Buses	8	3	0	11	0	0	0	5	0	0	5	16
% Buses	0.8	1.0	0	0.8	0	0	0	1.3	0	0	0.4	0.6
Trucks	13	6	0	19	3	3	6	11	20	0	31	56
% Trucks	1.2	2.0	0	1.4	1.6	7.5	2.6	2.8	2.3	0	2.4	2.0
Peak Hour Analysis From 16:45 to 17:30 - Peak 1 of 1												
Peak Hour for Entire Intersection Begins at 16:45												
16:45	227	34	0	261	55	18	73	211	237	0	448	782
17:00	221	28	0	249	35	17	52	233	246	0	479	780
17:15	231	43	0	274	47	19	66	223	232	0	455	795
17:30	193	26	0	219	54	25	79	226	220	0	446	744
Total Volume	872	131	0	1003	191	79	270	893	935	0	1828	3101
% App. Total	86.9	13.1	0		70.7	29.3		48.9	51.1	0		
PHF	.944	.762	.000	.915	.868	.790	.854	.958	.950	.000	.954	.975
Lights	859	121	0	980	185	78	263	885	907	0	1792	3035
% Lights	98.5	92.4	0	97.7	96.9	98.7	97.4	99.1	97.0	0	98.0	97.9
Buses	5	1	0	6	2	0	2	1	1	0	2	10
% Buses	0.6	0.8	0	0.6	1.0	0	0.7	0.1	0.1	0	0.1	0.3
Trucks	8	9	0	17	4	1	5	7	27	0	34	56
% Trucks	0.9	6.9	0	1.7	2.1	1.3	1.9	0.8	2.9	0	1.9	1.8

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Groups Printed- Lights - Buses - Trucks

Start Time	I-75 SB off ramp From North					MOW WB From East					I-75 SB on ramp From South					MOW EB From West					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
06:30	10	0	91	0	101	1	100	0	0	101	0	0	0	0	0	0	192	20	0	212	414
06:45	10	0	127	0	137	0	137	0	0	137	0	0	0	0	0	0	218	15	0	233	507
Total	20	0	218	0	238	1	237	0	0	238	0	0	0	0	0	0	410	35	0	445	921
07:00	16	0	121	0	137	0	136	0	0	136	0	0	0	0	0	0	252	19	0	271	544
07:15	4	0	147	0	151	0	195	0	0	195	0	0	0	0	0	0	273	29	0	302	648
07:30	8	0	220	0	228	11	222	0	1	234	0	0	0	0	0	0	340	20	0	360	822
07:45	10	38	265	0	313	16	213	2	0	231	0	0	0	0	0	0	323	23	0	346	890
Total	38	38	753	0	829	27	766	2	1	796	0	0	0	0	0	0	1188	91	0	1279	2904
08:00	11	0	190	0	201	10	172	0	1	183	0	0	0	0	0	0	292	30	0	322	706
08:15	9	0	166	0	175	9	194	0	0	203	0	0	0	0	0	0	307	28	0	335	713
08:30	11	0	205	0	216	9	193	0	1	203	0	0	0	0	0	0	243	23	0	266	685
08:45	14	0	195	0	209	5	188	0	0	193	0	0	0	0	0	0	211	26	0	237	639
Total	45	0	756	0	801	33	747	0	2	782	0	0	0	0	0	0	1053	107	0	1160	2743
09:00	5	0	157	0	162	6	153	0	0	159	0	0	0	0	0	0	219	34	0	253	574
09:15	9	0	139	0	148	13	153	0	0	166	0	0	0	0	0	0	193	22	0	215	529
Total	14	0	296	0	310	19	306	0	0	325	0	0	0	0	0	0	412	56	0	468	1103
16:00	14	0	262	0	276	14	208	0	0	222	0	0	0	0	0	0	437	73	0	510	1008
16:15	17	0	319	0	336	13	201	0	0	214	0	0	0	0	0	0	430	83	0	513	1063
16:30	20	0	267	0	287	0	189	0	0	189	0	0	0	0	0	0	437	67	1	505	981
16:45	14	1	305	0	320	15	239	0	0	254	0	0	0	0	0	0	429	71	0	500	1074
Total	65	1	1153	0	1219	42	837	0	0	879	0	0	0	0	0	0	1733	294	1	2028	4126
17:00	13	0	325	0	338	25	206	0	0	231	0	0	0	0	0	0	459	66	0	525	1094
17:15	27	0	325	0	352	17	220	0	0	237	0	0	0	0	0	0	424	59	0	483	1072
17:30	22	0	342	0	364	18	205	0	0	223	0	0	0	0	0	0	432	57	1	490	1077
17:45	26	0	298	0	324	5	238	0	0	243	0	0	0	0	0	0	378	75	0	453	1020
Total	88	0	1290	0	1378	65	869	0	0	934	0	0	0	0	0	0	1693	257	1	1951	4263
18:00	12	0	260	0	272	20	202	0	0	222	0	0	0	0	0	0	422	74	0	496	990
18:15	14	0	266	0	280	12	240	0	0	252	0	0	0	0	0	0	336	66	0	402	934
18:30	16	0	227	0	243	18	194	0	0	212	0	0	0	0	0	0	373	69	0	442	897

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Groups Printed- Lights - Buses - Trucks

Start Time	I-75 SB off ramp From North					MOW WB From East					I-75 SB on ramp From South					MOW EB From West					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
18:45	21	0	182	0	203	14	201	0	0	215	0	0	0	0	0	0	354	60	1	415	833
Total	63	0	935	0	998	64	837	0	0	901	0	0	0	0	0	0	1485	269	1	1755	3654
16:00	24	0	263	0	287	18	202	0	0	220	0	0	0	0	0	0	429	57	0	486	993
16:15	22	0	293	0	315	23	253	0	0	276	0	0	0	0	0	0	423	67	0	490	1081
16:30	21	0	311	0	332	30	250	0	0	280	0	0	0	0	0	0	426	77	0	503	1115
16:45	19	0	326	0	345	22	221	0	0	243	0	0	0	0	0	0	398	67	0	465	1053
Total	86	0	1193	0	1279	93	926	0	0	1019	0	0	0	0	0	0	1676	268	0	1944	4242
17:00	21	0	325	0	346	19	224	0	0	243	0	0	0	0	0	0	400	58	0	458	1047
17:15	26	0	341	0	367	22	252	0	0	274	0	0	0	0	0	0	446	60	0	506	1147
17:30	20	0	341	0	361	22	252	0	0	274	0	0	0	0	0	0	394	70	0	464	1099
17:45	18	0	306	0	324	10	257	0	0	267	0	0	0	0	0	0	435	73	0	508	1099
Total	85	0	1313	0	1398	73	985	0	0	1058	0	0	0	0	0	0	1675	261	0	1936	4392
18:00	17	0	320	0	337	14	229	0	0	243	0	0	0	0	0	0	409	64	0	473	1053
18:15	14	0	302	0	316	15	239	0	0	254	0	0	0	0	0	0	348	56	0	404	974
18:30	21	0	249	0	270	11	220	0	0	231	0	0	0	0	0	0	357	51	0	408	909
18:45	16	0	230	0	246	16	192	0	1	209	0	0	0	0	0	0	333	51	0	384	839
Total	68	0	1101	0	1169	56	880	0	1	937	0	0	0	0	0	0	1447	222	0	1669	3775
14:00	10	0	194	0	204	20	207	0	0	227	0	0	0	0	0	0	352	48	1	401	832
14:15	15	0	171	0	186	10	225	0	0	235	0	0	0	0	0	0	357	66	2	425	846
14:30	13	0	179	0	192	14	235	0	0	249	0	0	0	0	0	0	372	52	2	426	867
14:45	11	0	201	0	212	16	215	0	0	231	0	0	0	0	0	0	334	60	0	394	837
Total	49	0	745	0	794	60	882	0	0	942	0	0	0	0	0	0	1415	226	5	1646	3382
15:00	14	0	155	0	169	15	228	0	0	243	0	0	0	0	0	0	369	46	1	416	828
15:15	14	0	167	0	181	13	249	0	1	263	0	0	0	0	0	0	358	53	0	411	855
15:30	12	0	193	0	205	14	241	0	0	255	0	0	0	0	0	0	347	50	0	397	857
15:45	13	0	186	0	199	10	226	0	0	236	0	0	0	0	0	0	338	55	0	393	828
Total	53	0	701	0	754	52	944	0	1	997	0	0	0	0	0	0	1412	204	1	1617	3368
16:00	20	0	181	0	201	19	201	0	0	220	0	0	0	0	0	0	333	61	1	395	816

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Groups Printed- Lights - Buses - Trucks

Start Time	I-75 SB off ramp From North					MOW WB From East					I-75 SB on ramp From South					MOW EB From West					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
16:15	17	0	179	0	196	10	220	0	0	230	0	0	0	0	0	0	341	49	0	390	816
16:30	22	0	181	0	203	16	196	0	0	212	0	0	0	0	0	0	347	57	0	404	819
16:45	16	0	187	0	203	13	224	0	1	238	0	0	0	0	0	0	359	54	0	413	854
Total	75	0	728	0	803	58	841	0	1	900	0	0	0	0	0	0	1380	221	1	1602	3305
17:00	16	0	194	0	210	19	225	0	0	244	0	0	0	0	0	0	301	60	0	361	815
17:15	12	0	222	0	234	13	245	0	0	258	0	0	0	0	0	0	339	60	0	399	891
17:30	19	0	190	0	209	13	231	0	0	244	0	0	0	0	0	0	379	44	0	423	876
17:45	16	0	191	0	207	18	228	0	1	247	0	0	0	0	0	0	310	48	0	358	812
Total	63	0	797	0	860	63	929	0	1	993	0	0	0	0	0	0	1329	212	0	1541	3394
18:00	12	0	211	0	223	8	236	0	0	244	0	0	0	0	0	0	329	66	2	397	864
18:15	10	0	201	0	211	11	213	0	0	224	0	0	0	0	0	0	305	53	1	359	794
18:30	7	0	207	0	214	8	192	0	0	200	0	0	0	0	0	0	333	62	0	395	809
18:45	10	0	179	0	189	1	181	0	0	182	0	0	0	0	0	0	312	54	1	367	738
Total	39	0	798	0	837	28	822	0	0	850	0	0	0	0	0	0	1279	235	4	1518	3205
19:00	5	0	184	0	189	7	150	0	0	157	0	0	0	0	0	0	287	56	1	344	690
19:15	7	0	158	0	165	6	184	0	0	190	0	0	0	0	0	0	317	45	0	362	717
19:30	9	0	146	0	155	1	148	0	0	149	0	0	0	0	0	0	286	62	0	348	652
19:45	10	0	172	0	182	2	164	0	0	166	0	0	0	0	0	0	321	49	0	370	718
Total	31	0	660	0	691	16	646	0	0	662	0	0	0	0	0	0	1211	212	1	1424	2777
Grand Total	882	39	13437	0	14358	750	12454	2	7	13213	0	0	0	0	0	0	20798	3170	15	23983	51554
Apprch %	6.1	0.3	93.6	0		5.7	94.3	0	0.1		0	0	0	0	0	0	86.7	13.2	0.1		
Total %	1.7	0.1	26.1	0	27.9	1.5	24.2	0	0	25.6	0	0	0	0	0	0	40.3	6.1	0	46.5	
Lights	871	39	13276	0	14186	737	12317	2	7	13063	0	0	0	0	0	0	20525	3137	15	23677	50926
% Lights	98.8	100	98.8	0	98.8	98.3	98.9	100	100	98.9	0	0	0	0	0	0	98.7	99	100	98.7	98.8
Buses	3	0	33	0	36	0	52	0	0	52	0	0	0	0	0	0	52	1	0	53	141
% Buses	0.3	0	0.2	0	0.3	0	0.4	0	0	0.4	0	0	0	0	0	0	0.3	0	0	0.2	0.3
Trucks	8	0	128	0	136	13	85	0	0	98	0	0	0	0	0	0	221	32	0	253	487
% Trucks	0.9	0	1	0	0.9	1.7	0.7	0	0	0.7	0	0	0	0	0	0	1.1	1	0	1.1	0.9

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Start Time	I-75 SB off ramp From North					MOW WB From East					I-75 SB on ramp From South					MOW EB From West					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
Peak Hour Analysis From 07:15 to 08:00 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	4	0	147	0	151	0	195	0	0	195	0	0	0	0	0	0	273	29	0	302	648
07:30	8	0	220	0	228	11	222	0	1	234	0	0	0	0	0	0	340	20	0	360	822
07:45	10	38	265	0	313	16	213	2	0	231	0	0	0	0	0	0	323	23	0	346	890
08:00	11	0	190	0	201	10	172	0	1	183	0	0	0	0	0	0	292	30	0	322	706
Total Volume	33	38	822	0	893	37	802	2	2	843	0	0	0	0	0	0	1228	102	0	1330	3066
% App. Total	3.7	4.3	92	0		4.4	95.1	0.2	0.2		0	0	0	0	0	0	92.3	7.7	0		
PHF	.750	.250	.775	.000	.713	.578	.903	.250	.500	.901	.000	.000	.000	.000	.000	.000	.903	.850	.000	.924	.861
Lights	33	38	804	0	875	35	791	2	2	830	0	0	0	0	0	0	1193	99	0	1292	2997
% Lights	100	100	97.8	0	98.0	94.6	98.6	100	100	98.5	0	0	0	0	0	0	97.1	97.1	0	97.1	97.7
Buses	0	0	3	0	3	0	4	0	0	4	0	0	0	0	0	0	5	1	0	6	13
% Buses	0	0	0.4	0	0.3	0	0.5	0	0	0.5	0	0	0	0	0	0	0.4	1.0	0	0.5	0.4
Trucks	0	0	15	0	15	2	7	0	0	9	0	0	0	0	0	0	30	2	0	32	56
% Trucks	0	0	1.8	0	1.7	5.4	0.9	0	0	1.1	0	0	0	0	0	0	2.4	2.0	0	2.4	1.8
Peak Hour Analysis From 16:45 to 17:30 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:45																					
16:45	14	1	305	0	320	15	239	0	0	254	0	0	0	0	0	0	429	71	0	500	1074
17:00	13	0	325	0	338	25	206	0	0	231	0	0	0	0	0	0	459	66	0	525	1094
17:15	27	0	325	0	352	17	220	0	0	237	0	0	0	0	0	0	424	59	0	483	1072
17:30	22	0	342	0	364	18	205	0	0	223	0	0	0	0	0	0	432	57	1	490	1077
Total Volume	76	1	1297	0	1374	75	870	0	0	945	0	0	0	0	0	0	1744	253	1	1998	4317
% App. Total	5.5	0.1	94.4	0		7.9	92.1	0	0		0	0	0	0	0	0	87.3	12.7	0.1		
PHF	.704	.250	.948	.000	.944	.750	.910	.000	.000	.930	.000	.000	.000	.000	.000	.000	.950	.891	.250	.951	.987
Lights	76	1	1288	0	1365	75	857	0	0	932	0	0	0	0	0	0	1709	252	1	1962	4259
% Lights	100	100	99.3	0	99.3	100	98.5	0	0	98.6	0	0	0	0	0	0	98.0	99.6	100	98.2	98.7
Buses	0	0	4	0	4	0	7	0	0	7	0	0	0	0	0	0	5	0	0	5	16
% Buses	0	0	0.3	0	0.3	0	0.8	0	0	0.7	0	0	0	0	0	0	0.3	0	0	0.3	0.4
Trucks	0	0	5	0	5	0	6	0	0	6	0	0	0	0	0	0	30	1	0	31	42
% Trucks	0	0	0.4	0	0.4	0	0.7	0	0	0.6	0	0	0	0	0	0	1.7	0.4	0	1.6	1.0

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Groups Printed- Lights - Buses - Trucks

Start Time	Polo Club SB From North					Man O War WB From East					Polo Club NB From South					Man O War EB From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
07:15	2	18	10	0	30	2	90	8	0	100	164	77	7	0	248	5	59	18	0	82	460
07:30	1	19	26	0	46	2	94	4	0	100	190	57	10	0	257	10	52	26	0	88	491
07:45	2	30	22	0	54	5	96	1	0	102	154	53	10	0	217	14	76	40	0	130	503
Total	5	67	58	0	130	9	280	13	0	302	508	187	27	0	722	29	187	84	0	300	1454
08:00	6	19	12	0	37	2	82	1	0	85	99	33	11	0	143	12	68	25	0	105	370
08:15	1	16	20	0	37	4	84	2	0	90	84	30	4	0	118	9	67	31	0	107	352
08:30	2	13	15	0	30	4	75	2	0	81	110	32	6	0	148	16	50	34	0	100	359
08:45	2	10	26	0	38	1	86	3	0	90	73	27	8	0	108	11	61	28	0	100	336
Total	11	58	73	0	142	11	327	8	0	346	366	122	29	0	517	48	246	118	0	412	1417
09:00	3	23	18	0	44	6	56	5	0	67	90	30	7	0	127	17	45	30	0	92	330
09:15	4	13	16	0	33	6	72	1	0	79	73	15	4	0	92	15	47	37	0	99	303
Total	7	36	34	0	77	12	128	6	0	146	163	45	11	0	219	32	92	67	0	191	633
16:00	6	39	51	0	96	9	72	2	0	83	77	24	4	0	105	53	93	72	0	218	502
16:15	6	56	54	0	116	13	81	1	0	95	66	16	12	0	94	31	108	80	0	219	524
16:30	18	47	52	0	117	5	98	0	0	103	56	25	15	0	96	45	100	91	0	236	552
16:45	5	69	47	0	121	9	90	2	0	101	88	20	15	0	123	29	93	80	0	202	547
Total	35	211	204	0	450	36	341	5	0	382	287	85	46	0	418	158	394	323	0	875	2125
17:00	7	70	47	0	124	9	87	7	0	103	69	19	4	0	92	36	110	73	0	219	538
17:15	10	62	63	0	135	15	70	4	0	89	79	19	9	0	107	44	102	86	0	232	563
17:30	12	61	52	0	125	12	55	4	0	71	74	26	11	0	111	44	106	93	0	243	550
17:45	13	55	32	0	100	10	95	3	0	108	70	30	12	0	112	43	96	98	0	237	557
Total	42	248	194	0	484	46	307	18	0	371	292	94	36	0	422	167	414	350	0	931	2208
18:00	6	64	34	0	104	3	76	10	0	89	79	18	3	0	100	52	111	111	0	274	567
18:15	12	51	65	0	128	8	79	4	0	91	69	25	7	0	101	31	79	84	0	194	514
18:30	15	35	52	0	102	4	64	3	0	71	70	26	10	0	106	51	103	76	0	230	509
18:45	6	38	49	0	93	3	91	2	0	96	66	21	11	0	98	44	93	94	0	231	518
Total	39	188	200	0	427	18	310	19	0	347	284	90	31	0	405	178	386	365	0	929	2108

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Groups Printed- Lights - Buses - Trucks

Start Time	Polo Club SB From North					Man O War WB From East					Polo Club NB From South					Man O War EB From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
16:00	11	36	65	0	112	12	83	4	0	99	84	19	18	0	121	58	91	79	0	228	560
16:15	10	65	74	0	149	6	101	10	0	117	77	19	8	0	104	52	124	81	0	257	627
16:30	5	51	75	0	131	6	122	8	0	136	80	24	14	0	118	56	81	90	0	227	612
16:45	13	67	60	0	140	5	81	3	0	89	75	13	14	0	102	61	96	80	0	237	568
Total	39	219	274	0	532	29	387	25	0	441	316	75	54	0	445	227	392	330	0	949	2367
17:00	8	79	56	0	143	7	95	6	0	108	61	25	9	0	95	43	99	109	0	251	597
17:15	11	76	65	0	152	8	67	10	0	85	96	30	13	0	139	47	103	90	0	240	616
17:30	12	46	65	0	123	11	81	5	0	97	85	29	9	0	123	47	113	106	0	266	609
17:45	15	51	59	0	125	8	87	5	0	100	79	43	12	0	134	42	126	108	0	276	635
Total	46	252	245	0	543	34	330	26	0	390	321	127	43	0	491	179	441	413	0	1033	2457
18:00	8	52	67	0	127	3	99	4	0	106	86	22	9	0	117	47	95	83	0	225	575
18:15	6	49	59	0	114	8	91	3	0	102	79	27	11	0	117	47	88	87	0	222	555
18:30	8	44	44	0	96	9	93	4	0	106	54	28	7	0	89	50	88	86	0	224	515
18:45	7	37	29	0	73	6	78	2	0	86	63	23	8	0	94	50	88	76	0	214	467
Total	29	182	199	0	410	26	361	13	0	400	282	100	35	0	417	194	359	332	0	885	2112
14:00	10	35	90	0	135	5	67	5	0	77	56	24	8	0	88	70	77	56	0	203	503
14:15	9	30	81	0	120	5	77	3	0	85	68	29	4	0	101	60	80	70	0	210	516
14:30	6	35	85	0	126	10	75	10	0	95	71	7	12	0	90	77	66	77	0	220	531
14:45	16	28	71	0	115	3	65	13	0	81	62	20	6	0	88	73	79	62	0	214	498
Total	41	128	327	0	496	23	284	31	0	338	257	80	30	0	367	280	302	265	0	847	2048
15:00	9	30	95	0	134	2	67	2	0	71	66	21	11	0	98	86	76	46	0	208	511
15:15	13	29	92	0	134	4	92	4	0	100	77	27	10	0	114	81	79	56	0	216	564
15:30	13	16	84	0	113	9	75	13	0	97	61	23	10	0	94	82	83	62	0	227	531
15:45	10	37	91	0	138	1	65	6	0	72	59	20	15	0	94	63	90	53	0	206	510
Total	45	112	362	0	519	16	299	25	0	340	263	91	46	0	400	312	328	217	0	857	2116
16:00	11	41	87	0	139	7	66	7	0	80	58	13	7	0	78	67	97	58	0	222	519
16:15	16	34	70	0	120	4	58	5	0	67	62	23	9	0	94	67	86	58	0	211	492
16:30	10	38	78	0	126	6	72	6	0	84	63	34	12	0	109	65	86	82	0	233	552
16:45	6	34	90	0	130	4	82	6	0	92	57	25	8	0	90	58	93	65	0	216	528
Total	43	147	325	0	515	21	278	24	0	323	240	95	36	0	371	257	362	263	0	882	2091

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Groups Printed- Lights - Buses - Trucks

Start Time	Polo Club SB From North					Man O War WB From East					Polo Club NB From South					Man O War EB From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
17:00	5	32	70	0	107	3	59	5	0	67	65	19	10	0	94	59	77	54	0	190	458
17:15	5	30	81	0	116	3	80	4	0	87	59	22	16	0	97	61	84	75	0	220	520
17:30	13	29	82	0	124	7	75	4	0	86	62	22	5	0	89	60	93	75	0	228	527
17:45	5	33	89	0	127	9	73	4	0	86	71	20	11	0	102	44	90	76	0	210	525
Total	28	124	322	0	474	22	287	17	0	326	257	83	42	0	382	224	344	280	0	848	2030
18:00	13	36	92	0	141	3	72	5	0	80	55	13	13	0	81	31	81	66	0	178	480
18:15	15	23	69	0	107	2	67	4	0	73	64	14	11	0	89	25	88	63	0	176	445
18:30	6	29	56	0	91	4	79	4	0	87	57	22	5	0	84	21	90	61	0	172	434
18:45	7	22	32	0	61	6	55	7	0	68	64	22	13	0	99	36	84	63	0	183	411
Total	41	110	249	0	400	15	273	20	0	308	240	71	42	0	353	113	343	253	0	709	1770
19:00	2	25	25	0	52	4	67	0	0	71	40	17	6	0	63	19	68	60	0	147	333
19:15	3	20	24	0	47	1	72	0	0	73	51	14	11	0	76	19	70	69	0	158	354
19:30	3	16	16	0	35	5	61	1	0	67	55	11	11	0	77	17	85	42	0	144	323
19:45	1	18	8	0	27	4	65	0	0	69	58	8	3	0	69	12	85	91	0	188	353
Total	9	79	73	0	161	14	265	1	0	280	204	50	31	0	285	67	308	262	0	637	1363
Grand Total	460	2161	3139	0	5760	332	4457	251	0	5040	4280	1395	539	0	6214	2465	4898	3922	0	11285	28299
Apprch %	8	37.5	54.5	0		6.6	88.4	5	0		68.9	22.4	8.7	0		21.8	43.4	34.8	0		
Total %	1.6	7.6	11.1	0	20.4	1.2	15.7	0.9	0	17.8	15.1	4.9	1.9	0	22	8.7	17.3	13.9	0	39.9	
Lights	456	2143	3098	0	5697	327	4401	244	0	4972	4233	1376	537	0	6146	2450	4843	3876	0	11169	27984
% Lights	99.1	99.2	98.7	0	98.9	98.5	98.7	97.2	0	98.7	98.9	98.6	99.6	0	98.9	99.4	98.9	98.8	0	99	98.9
Buses	0	12	15	0	27	1	15	0	0	16	21	14	0	0	35	2	4	24	0	30	108
% Buses	0	0.6	0.5	0	0.5	0.3	0.3	0	0	0.3	0.5	1	0	0	0.6	0.1	0.1	0.6	0	0.3	0.4
Trucks	4	6	26	0	36	4	41	7	0	52	26	5	2	0	33	13	51	22	0	86	207
% Trucks	0.9	0.3	0.8	0	0.6	1.2	0.9	2.8	0	1	0.6	0.4	0.4	0	0.5	0.5	1	0.6	0	0.8	0.7

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Start Time	Polo Club SB From North					Man O War WB From East					Polo Club NB From South					Man O War EB From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 07:15 to 08:30 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	2	18	10	0	30	2	90	8	0	100	164	77	7	0	248	5	59	18	0	82	460
07:30	1	19	26	0	46	2	94	4	0	100	190	57	10	0	257	10	52	26	0	88	491
07:45	2	30	22	0	54	5	96	1	0	102	154	53	10	0	217	14	76	40	0	130	503
08:00	6	19	12	0	37	2	82	1	0	85	99	33	11	0	143	12	68	25	0	105	370
Total Volume	11	86	70	0	167	11	362	14	0	387	607	220	38	0	865	41	255	109	0	405	1824
% App. Total	6.6	51.5	41.9	0		2.8	93.5	3.6	0		70.2	25.4	4.4	0		10.1	63	26.9	0		
PHF	.458	.717	.673	.000	.773	.550	.943	.438	.000	.949	.799	.714	.864	.000	.841	.732	.839	.681	.000	.779	.907
Lights	9	83	63	0	155	10	353	13	0	376	601	217	37	0	855	36	244	103	0	383	1769
% Lights	81.8	96.5	90.0	0	92.8	90.9	97.5	92.9	0	97.2	99.0	98.6	97.4	0	98.8	87.8	95.7	94.5	0	94.6	97.0
Buses	0	2	1	0	3	0	2	0	0	2	4	2	0	0	6	2	2	2	0	6	17
% Buses	0	2.3	1.4	0	1.8	0	0.6	0	0	0.5	0.7	0.9	0	0	0.7	4.9	0.8	1.8	0	1.5	0.9
Trucks	2	1	6	0	9	1	7	1	0	9	2	1	1	0	4	3	9	4	0	16	38
% Trucks	18.2	1.2	8.6	0	5.4	9.1	1.9	7.1	0	2.3	0.3	0.5	2.6	0	0.5	7.3	3.5	3.7	0	4.0	2.1
Peak Hour Analysis From 16:45 to 17:30 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:45																					
16:45	5	69	47	0	121	9	90	2	0	101	88	20	15	0	123	29	93	80	0	202	547
17:00	7	70	47	0	124	9	87	7	0	103	69	19	4	0	92	36	110	73	0	219	538
17:15	10	62	63	0	135	15	70	4	0	89	79	19	9	0	107	44	102	86	0	232	563
17:30	12	61	52	0	125	12	55	4	0	71	74	26	11	0	111	44	106	93	0	243	550
Total Volume	34	262	209	0	505	45	302	17	0	364	310	84	39	0	433	153	411	332	0	896	2198
% App. Total	6.7	51.9	41.4	0		12.4	83	4.7	0		71.6	19.4	9	0		17.1	45.9	37.1	0		
PHF	.708	.936	.829	.000	.935	.750	.839	.607	.000	.883	.881	.808	.650	.000	.880	.869	.934	.892	.000	.922	.976
Lights	34	261	206	0	501	45	298	17	0	360	302	82	39	0	423	153	409	328	0	890	2174
% Lights	100	99.6	98.6	0	99.2	100	98.7	100	0	98.9	97.4	97.6	100	0	97.7	100	99.5	98.8	0	99.3	98.9
Buses	0	0	1	0	1	0	2	0	0	2	2	2	0	0	4	0	0	2	0	2	9
% Buses	0	0	0.5	0	0.2	0	0.7	0	0	0.5	0.6	2.4	0	0	0.9	0	0	0.6	0	0.2	0.4
Trucks	0	1	2	0	3	0	2	0	0	2	6	0	0	0	6	0	2	2	0	4	15
% Trucks	0	0.4	1.0	0	0.6	0	0.7	0	0	0.5	1.9	0	0	0	1.4	0	0.5	0.6	0	0.4	0.7

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Groups Printed- Lights - Buses - Trucks

Start Time	Polo Club SB From North					Man O War WB From East					Polo Club NB From South					Man O War EB From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
06:30	0	5	3	0	8	0	55	3	0	58	74	26	10	0	110	17	59	16	0	92	268
06:45	1	16	6	0	23	0	77	4	0	81	70	38	13	0	121	23	64	22	0	109	334
Total	1	21	9	0	31	0	132	7	0	139	144	64	23	0	231	40	123	38	0	201	602
07:00	2	6	9	0	17	3	64	4	0	71	123	59	15	0	197	22	51	20	0	93	378
07:15	2	18	10	0	30	2	90	8	0	100	164	77	7	0	248	5	59	18	0	82	460
07:30	1	19	26	0	46	2	94	4	0	100	190	57	10	0	257	10	52	26	0	88	491
07:45	2	30	22	0	54	5	96	1	0	102	154	53	10	0	217	14	76	40	0	130	503
Total	7	73	67	0	147	12	344	17	0	373	631	246	42	0	919	51	238	104	0	393	1832
08:00	6	19	12	0	37	2	82	1	0	85	99	33	11	0	143	12	68	25	0	105	370
08:15	1	16	20	0	37	4	84	2	0	90	84	30	4	0	118	9	67	31	0	107	352
08:30	2	13	15	0	30	4	75	2	0	81	110	32	6	0	148	16	50	34	0	100	359
08:45	2	10	26	0	38	1	86	3	0	90	73	27	8	0	108	11	61	28	0	100	336
Total	11	58	73	0	142	11	327	8	0	346	366	122	29	0	517	48	246	118	0	412	1417
09:00	3	23	18	0	44	6	56	5	0	67	90	30	7	0	127	17	45	30	0	92	330
09:15	4	13	16	0	33	6	72	1	0	79	73	15	4	0	92	15	47	37	0	99	303
Total	7	36	34	0	77	12	128	6	0	146	163	45	11	0	219	32	92	67	0	191	633
16:00	6	39	51	0	96	9	72	2	0	83	77	24	4	0	105	53	93	72	0	218	502
16:15	6	56	54	0	116	13	81	1	0	95	66	16	12	0	94	31	108	80	0	219	524
16:30	18	47	52	0	117	5	98	0	0	103	56	25	15	0	96	45	100	91	0	236	552
16:45	5	69	47	0	121	9	90	2	0	101	88	20	15	0	123	29	93	80	0	202	547
Total	35	211	204	0	450	36	341	5	0	382	287	85	46	0	418	158	394	323	0	875	2125
17:00	7	70	47	0	124	9	87	7	0	103	69	19	4	0	92	36	110	73	0	219	538
17:15	10	62	63	0	135	15	70	4	0	89	79	19	9	0	107	44	102	86	0	232	563
17:30	12	61	52	0	125	12	55	4	0	71	74	26	11	0	111	44	106	93	0	243	550
17:45	13	55	32	0	100	10	95	3	0	108	70	30	12	0	112	43	96	98	0	237	557
Total	42	248	194	0	484	46	307	18	0	371	292	94	36	0	422	167	414	350	0	931	2208
18:00	6	64	34	0	104	3	76	10	0	89	79	18	3	0	100	52	111	111	0	274	567
18:15	12	51	65	0	128	8	79	4	0	91	69	25	7	0	101	31	79	84	0	194	514
18:30	15	35	52	0	102	4	64	3	0	71	70	26	10	0	106	51	103	76	0	230	509

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Start Time	Polo Club SB From North					Man O War WB From East					Polo Club NB From South					Man O War EB From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
18:45	6	38	49	0	93	3	91	2	0	96	66	21	11	0	98	44	93	94	0	231	518
Total	39	188	200	0	427	18	310	19	0	347	284	90	31	0	405	178	386	365	0	929	2108
16:00	11	36	65	0	112	12	83	4	0	99	84	19	18	0	121	58	91	79	0	228	560
16:15	10	65	74	0	149	6	101	10	0	117	77	19	8	0	104	52	124	81	0	257	627
16:30	5	51	75	0	131	6	122	8	0	136	80	24	14	0	118	56	81	90	0	227	612
16:45	13	67	60	0	140	5	81	3	0	89	75	13	14	0	102	61	96	80	0	237	568
Total	39	219	274	0	532	29	387	25	0	441	316	75	54	0	445	227	392	330	0	949	2367
17:00	8	79	56	0	143	7	95	6	0	108	61	25	9	0	95	43	99	109	0	251	597
17:15	11	76	65	0	152	8	67	10	0	85	96	30	13	0	139	47	103	90	0	240	616
17:30	12	46	65	0	123	11	81	5	0	97	85	29	9	0	123	47	113	106	0	266	609
17:45	15	51	59	0	125	8	87	5	0	100	79	43	12	0	134	42	126	108	0	276	635
Total	46	252	245	0	543	34	330	26	0	390	321	127	43	0	491	179	441	413	0	1033	2457
18:00	8	52	67	0	127	3	99	4	0	106	86	22	9	0	117	47	95	83	0	225	575
18:15	6	49	59	0	114	8	91	3	0	102	79	27	11	0	117	47	88	87	0	222	555
18:30	8	44	44	0	96	9	93	4	0	106	54	28	7	0	89	50	88	86	0	224	515
18:45	7	37	29	0	73	6	78	2	0	86	63	23	8	0	94	50	88	76	0	214	467
Total	29	182	199	0	410	26	361	13	0	400	282	100	35	0	417	194	359	332	0	885	2112
14:00	10	35	90	0	135	5	67	5	0	77	56	24	8	0	88	70	77	56	0	203	503
14:15	9	30	81	0	120	5	77	3	0	85	68	29	4	0	101	60	80	70	0	210	516
14:30	6	35	85	0	126	10	75	10	0	95	71	7	12	0	90	77	66	77	0	220	531
14:45	16	28	71	0	115	3	65	13	0	81	62	20	6	0	88	73	79	62	0	214	498
Total	41	128	327	0	496	23	284	31	0	338	257	80	30	0	367	280	302	265	0	847	2048
15:00	9	30	95	0	134	2	67	2	0	71	66	21	11	0	98	86	76	46	0	208	511
15:15	13	29	92	0	134	4	92	4	0	100	77	27	10	0	114	81	79	56	0	216	564
15:30	13	16	84	0	113	9	75	13	0	97	61	23	10	0	94	82	83	62	0	227	531
15:45	10	37	91	0	138	1	65	6	0	72	59	20	15	0	94	63	90	53	0	206	510
Total	45	112	362	0	519	16	299	25	0	340	263	91	46	0	400	312	328	217	0	857	2116
16:00	11	41	87	0	139	7	66	7	0	80	58	13	7	0	78	67	97	58	0	222	519

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Start Time	Polo Club SB From North					Man O War WB From East					Polo Club NB From South					Man O War EB From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
16:15	16	34	70	0	120	4	58	5	0	67	62	23	9	0	94	67	86	58	0	211	492
16:30	10	38	78	0	126	6	72	6	0	84	63	34	12	0	109	65	86	82	0	233	552
16:45	6	34	90	0	130	4	82	6	0	92	57	25	8	0	90	58	93	65	0	216	528
Total	43	147	325	0	515	21	278	24	0	323	240	95	36	0	371	257	362	263	0	882	2091
17:00	5	32	70	0	107	3	59	5	0	67	65	19	10	0	94	59	77	54	0	190	458
17:15	5	30	81	0	116	3	80	4	0	87	59	22	16	0	97	61	84	75	0	220	520
17:30	13	29	82	0	124	7	75	4	0	86	62	22	5	0	89	60	93	75	0	228	527
17:45	5	33	89	0	127	9	73	4	0	86	71	20	11	0	102	44	90	76	0	210	525
Total	28	124	322	0	474	22	287	17	0	326	257	83	42	0	382	224	344	280	0	848	2030
18:00	13	36	92	0	141	3	72	5	0	80	55	13	13	0	81	31	81	66	0	178	480
18:15	15	23	69	0	107	2	67	4	0	73	64	14	11	0	89	25	88	63	0	176	445
18:30	6	29	56	0	91	4	79	4	0	87	57	22	5	0	84	21	90	61	0	172	434
18:45	7	22	32	0	61	6	55	7	0	68	64	22	13	0	99	36	84	63	0	183	411
Total	41	110	249	0	400	15	273	20	0	308	240	71	42	0	353	113	343	253	0	709	1770
19:00	2	25	25	0	52	4	67	0	0	71	40	17	6	0	63	19	68	60	0	147	333
19:15	3	20	24	0	47	1	72	0	0	73	51	14	11	0	76	19	70	69	0	158	354
19:30	3	16	16	0	35	5	61	1	0	67	55	11	11	0	77	17	85	42	0	144	323
19:45	1	18	8	0	27	4	65	0	0	69	58	8	3	0	69	12	85	91	0	188	353
Total	9	79	73	0	161	14	265	1	0	280	204	50	31	0	285	67	308	262	0	637	1363
Grand Total	463	2188	3157	0	5808	335	4653	262	0	5250	4547	1518	577	0	6642	2527	5072	3980	0	11579	29279
Apprch %	8	37.7	54.4	0		6.4	88.6	5	0		68.5	22.9	8.7	0		21.8	43.8	34.4	0		
Total %	1.6	7.5	10.8	0	19.8	1.1	15.9	0.9	0	17.9	15.5	5.2	2	0	22.7	8.6	17.3	13.6	0	39.5	
Lights	459	2166	3113	0	5738	330	4593	255	0	5178	4494	1496	573	0	6563	2508	5016	3926	0	11450	28929
% Lights	99.1	99	98.6	0	98.8	98.5	98.7	97.3	0	98.6	98.8	98.6	99.3	0	98.8	99.2	98.9	98.6	0	98.9	98.8
Buses	0	13	16	0	29	1	15	0	0	16	25	17	1	0	43	2	5	27	0	34	122
% Buses	0	0.6	0.5	0	0.5	0.3	0.3	0	0	0.3	0.5	1.1	0.2	0	0.6	0.1	0.1	0.7	0	0.3	0.4
Trucks	4	9	28	0	41	4	45	7	0	56	28	5	3	0	36	17	51	27	0	95	228
% Trucks	0.9	0.4	0.9	0	0.7	1.2	1	2.7	0	1.1	0.6	0.3	0.5	0	0.5	0.7	1	0.7	0	0.8	0.8

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Groups Printed- Lights - Buses - Trucks

Start Time	Sir Barton From North					MOW WB From East					Pleasant Ridge From South					MOW EB From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
07:15	29	23	11	0	63	34	291	47	0	372	39	41	90	0	170	25	224	37	0	286	891
07:30	26	19	13	0	58	63	388	69	0	520	55	51	104	0	210	35	255	36	0	326	1114
07:45	29	34	13	0	76	68	386	88	0	542	52	49	104	0	205	55	250	29	0	334	1157
Total	84	76	37	0	197	165	1065	204	0	1434	146	141	298	0	585	115	729	102	0	946	3162
08:00	28	24	15	0	67	55	326	52	0	433	51	33	90	0	174	44	222	43	0	309	983
Grand Total	112	100	52	0	264	220	1391	256	0	1867	197	174	388	0	759	159	951	145	0	1255	4145
Apprch %	42.4	37.9	19.7	0		11.8	74.5	13.7	0		26	22.9	51.1	0		12.7	75.8	11.6	0		
Total %	2.7	2.4	1.3	0	6.4	5.3	33.6	6.2	0	45	4.8	4.2	9.4	0	18.3	3.8	22.9	3.5	0	30.3	
Lights	109	97	48	0	254	212	1370	253	0	1835	194	173	376	0	743	157	934	143	0	1234	4066
% Lights	97.3	97	92.3	0	96.2	96.4	98.5	98.8	0	98.3	98.5	99.4	96.9	0	97.9	98.7	98.2	98.6	0	98.3	98.1
Buses	0	2	2	0	4	1	5	2	0	8	2	0	3	0	5	0	1	2	0	3	20
% Buses	0	2	3.8	0	1.5	0.5	0.4	0.8	0	0.4	1	0	0.8	0	0.7	0	0.1	1.4	0	0.2	0.5
Trucks	3	1	2	0	6	7	16	1	0	24	1	1	9	0	11	2	16	0	0	18	59
% Trucks	2.7	1	3.8	0	2.3	3.2	1.2	0.4	0	1.3	0.5	0.6	2.3	0	1.4	1.3	1.7	0	0	1.4	1.4

Start Time	Sir Barton From North					MOW WB From East					Pleasant Ridge From South					MOW EB From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 07:15 to 08:00 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	29	23	11	0	63	34	291	47	0	372	39	41	90	0	170	25	224	37	0	286	891
07:30	26	19	13	0	58	63	388	69	0	520	55	51	104	0	210	35	255	36	0	326	1114
07:45	29	34	13	0	76	68	386	88	0	542	52	49	104	0	205	55	250	29	0	334	1157
08:00	28	24	15	0	67	55	326	52	0	433	51	33	90	0	174	44	222	43	0	309	983
Total Volume	112	100	52	0	264	220	1391	256	0	1867	197	174	388	0	759	159	951	145	0	1255	4145
% App. Total	42.4	37.9	19.7	0		11.8	74.5	13.7	0		26	22.9	51.1	0		12.7	75.8	11.6	0		
PHF	.966	.735	.867	.000	.868	.809	.896	.727	.000	.861	.895	.853	.933	.000	.904	.723	.932	.843	.000	.939	.896
Lights	109	97	48	0	254	212	1370	253	0	1835	194	173	376	0	743	157	934	143	0	1234	4066
% Lights	97.3	97.0	92.3	0	96.2	96.4	98.5	98.8	0	98.3	98.5	99.4	96.9	0	97.9	98.7	98.2	98.6	0	98.3	98.1
Buses	0	2	2	0	4	1	5	2	0	8	2	0	3	0	5	0	1	2	0	3	20
% Buses	0	2.0	3.8	0	1.5	0.5	0.4	0.8	0	0.4	1.0	0	0.8	0	0.7	0	0.1	1.4	0	0.2	0.5
Trucks	3	1	2	0	6	7	16	1	0	24	1	1	9	0	11	2	16	0	0	18	59
% Trucks	2.7	1.0	3.8	0	2.3	3.2	1.2	0.4	0	1.3	0.5	0.6	2.3	0	1.4	1.3	1.7	0	0	1.4	1.4

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Start Time	Sir Barton From North					MOW WB From East					Pleasant Ridge From South					MOW EB From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 16:45 to 17:30 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:45																					
16:45	119	92	87	0	298	85	360	153	0	598	34	42	82	0	158	85	309	30	0	424	1478
17:00	111	85	72	0	268	77	319	158	0	554	42	62	75	0	179	90	327	39	0	456	1457
17:15	131	77	78	0	286	88	337	146	0	571	33	38	66	0	137	62	325	21	0	408	1402
17:30	127	94	64	0	285	82	328	146	0	556	30	47	59	0	136	67	331	28	0	426	1403
Total Volume	488	348	301	0	1137	332	1344	603	0	2279	139	189	282	0	610	304	1292	118	0	1714	5740
% App. Total	42.9	30.6	26.5	0		14.6	59	26.5	0		22.8	31	46.2	0		17.7	75.4	6.9	0		
PHF	.931	.926	.865	.000	.954	.943	.933	.954	.000	.953	.827	.762	.860	.000	.852	.844	.976	.756	.000	.940	.971
Lights	488	345	301	0	1134	329	1316	597	0	2242	137	189	276	0	602	304	1269	117	0	1690	5668
% Lights	100	99.1	100	0	99.7	99.1	97.9	99.0	0	98.4	98.6	100	97.9	0	98.7	100	98.2	99.2	0	98.6	98.7
Buses	0	3	0	0	3	0	15	4	0	19	2	0	1	0	3	0	3	0	0	3	28
% Buses	0	0.9	0	0	0.3	0	1.1	0.7	0	0.8	1.4	0	0.4	0	0.5	0	0.2	0	0	0.2	0.5
Trucks	0	0	0	0	0	3	13	2	0	18	0	0	5	0	5	0	20	1	0	21	44
% Trucks	0	0	0	0	0	0.9	1.0	0.3	0	0.8	0	0	1.8	0	0.8	0	1.5	0.8	0	1.2	0.8

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Groups Printed- Lights - Buses - Trucks

Start Time	Sir Barton From North					MOW WB From East					Pleasant Ridge From South					MOW EB From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
06:30	19	7	1	0	27	35	172	24	0	231	19	17	54	0	90	8	143	20	0	171	519
06:45	14	19	3	0	36	32	222	40	0	294	34	19	67	0	120	19	175	20	0	214	664
Total	33	26	4	0	63	67	394	64	0	525	53	36	121	0	210	27	318	40	0	385	1183
07:00	15	21	8	0	44	39	208	42	0	289	31	34	77	0	142	15	214	19	0	248	723
07:15	29	23	11	0	63	34	291	47	0	372	39	41	90	0	170	25	224	37	0	286	891
07:30	26	19	13	0	58	63	388	69	0	520	55	51	104	0	210	35	255	36	0	326	1114
07:45	29	34	13	0	76	68	386	88	0	542	52	49	104	0	205	55	250	29	0	334	1157
Total	99	97	45	0	241	204	1273	246	0	1723	177	175	375	0	727	130	943	121	0	1194	3885
08:00	28	24	15	0	67	55	326	52	0	433	51	33	90	0	174	44	222	43	0	309	983
08:15	24	24	20	0	68	56	257	54	0	367	55	28	88	0	171	54	197	25	0	276	882
08:30	17	23	14	0	54	48	297	64	0	409	42	32	69	0	143	24	181	33	0	238	844
08:45	29	37	11	0	77	50	272	85	0	407	42	40	68	0	150	51	145	42	0	238	872
Total	98	108	60	0	266	209	1152	255	0	1616	190	133	315	0	638	173	745	143	0	1061	3581
09:00	22	32	28	0	82	61	185	70	0	316	35	39	64	0	138	46	146	39	0	231	767
09:15	21	40	22	0	83	58	199	72	0	329	32	47	56	0	135	54	136	34	0	224	771
Total	43	72	50	0	165	119	384	142	0	645	67	86	120	0	273	100	282	73	0	455	1538
16:00	125	85	70	0	280	85	285	80	0	450	33	49	71	0	153	76	252	32	0	360	1243
16:15	117	60	67	0	244	72	286	147	0	505	53	67	98	0	218	79	314	41	0	434	1401
16:30	122	77	70	0	269	85	285	168	0	538	48	42	72	0	162	68	308	30	0	406	1375
16:45	119	92	87	0	298	85	360	153	0	598	34	42	82	0	158	85	309	30	0	424	1478
Total	483	314	294	0	1091	327	1216	548	0	2091	168	200	323	0	691	308	1183	133	0	1624	5497
17:00	111	85	72	0	268	77	319	158	0	554	42	62	75	0	179	90	327	39	0	456	1457
17:15	131	77	78	0	286	88	337	146	0	571	33	38	66	0	137	62	325	21	0	408	1402
17:30	127	94	64	0	285	82	328	146	0	556	30	47	59	0	136	67	331	28	0	426	1403
17:45	110	93	70	0	273	84	317	185	0	586	37	64	72	0	173	90	294	45	0	429	1461
Total	479	349	284	0	1112	331	1301	635	0	2267	142	211	272	0	625	309	1277	133	0	1719	5723
18:00	105	90	64	0	259	73	291	129	0	493	62	60	86	0	208	92	258	48	0	398	1358
18:15	108	98	58	0	264	81	265	139	0	485	42	61	69	0	172	85	207	45	0	337	1258
18:30	133	86	77	0	296	88	217	136	0	441	46	46	69	0	161	75	182	48	0	305	1203

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Groups Printed- Lights - Buses - Trucks

Start Time	Sir Barton From North					MOW WB From East					Pleasant Ridge From South					MOW EB From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
18:45	125	76	70	0	271	67	175	114	0	356	43	55	75	0	173	84	194	42	0	320	1120
Total	471	350	269	0	1090	309	948	518	0	1775	193	222	299	0	714	336	841	183	0	1360	4939
14:00	142	76	108	0	326	68	218	188	0	474	57	74	94	0	225	149	201	27	0	377	1402
14:15	126	73	96	0	295	54	204	190	0	448	46	91	78	0	215	110	204	43	0	357	1315
14:30	137	104	99	0	340	66	229	178	0	473	54	73	80	0	207	113	204	47	0	364	1384
14:45	138	91	100	0	329	75	233	185	0	493	52	75	83	0	210	110	178	50	0	338	1370
Total	543	344	403	0	1290	263	884	741	0	1888	209	313	335	0	857	482	787	167	0	1436	5471
15:00	149	93	107	0	349	73	211	153	0	437	52	58	78	0	188	132	202	44	0	378	1352
15:15	132	94	101	0	327	62	177	184	0	423	48	80	74	0	202	127	185	39	0	351	1303
15:30	144	108	92	0	344	69	204	203	0	476	42	56	94	0	192	116	217	51	0	384	1396
15:45	119	73	99	0	291	67	215	181	0	463	46	53	90	0	189	124	168	45	0	337	1280
Total	544	368	399	0	1311	271	807	721	0	1799	188	247	336	0	771	499	772	179	0	1450	5331
16:00	142	80	92	0	314	58	226	153	0	437	52	67	91	0	210	127	178	39	0	344	1305
16:15	129	99	102	0	330	61	207	179	0	447	55	56	78	0	189	122	208	41	0	371	1337
16:30	136	79	98	0	313	53	226	171	0	450	59	79	69	0	207	104	202	30	0	336	1306
16:45	139	77	105	0	321	49	206	181	0	436	44	48	75	0	167	102	200	41	0	343	1267
Total	546	335	397	0	1278	221	865	684	0	1770	210	250	313	0	773	455	788	151	0	1394	5215
17:00	121	72	79	0	272	72	227	172	0	471	58	64	73	0	195	114	186	41	0	341	1279
17:15	114	83	85	0	282	74	191	182	0	447	50	52	64	0	166	110	185	43	0	338	1233
17:30	142	98	99	0	339	63	204	163	0	430	52	63	76	0	191	104	181	40	0	325	1285
17:45	127	75	81	0	283	55	212	155	0	422	41	59	85	0	185	104	160	30	0	294	1184
Total	504	328	344	0	1176	264	834	672	0	1770	201	238	298	0	737	432	712	154	0	1298	4981
18:00	133	88	102	0	323	65	191	150	0	406	60	64	73	0	197	94	149	48	0	291	1217
18:15	108	83	94	0	285	73	225	117	0	415	44	57	72	0	173	97	153	51	0	301	1174
18:30	118	78	90	0	286	43	178	130	0	351	46	61	83	0	190	116	135	55	0	306	1133
18:45	99	83	94	0	276	63	160	129	0	352	49	60	53	0	162	101	127	37	0	265	1055
Total	458	332	380	0	1170	244	754	526	0	1524	199	242	281	0	722	408	564	191	0	1163	4579
19:00	147	106	105	0	358	46	122	109	0	277	41	58	68	0	167	90	149	36	0	275	1077
19:15	108	85	83	0	276	46	114	105	0	265	32	62	40	0	134	76	149	28	0	253	928
19:30	119	75	83	0	277	41	105	64	0	210	49	46	56	0	151	91	123	19	0	233	871
19:45	137	59	78	0	274	49	89	70	0	208	28	41	63	0	132	67	119	45	0	231	845
Total	511	325	349	0	1185	182	430	348	0	960	150	207	227	0	584	324	540	128	0	992	3721

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Groups Printed- Lights - Buses - Trucks

Start Time	US 60 WB From East				NB Off Ramp From South				US 60 EB From West				Int. Total
	Thru	Right	U-Turn	App. Total	Left	Thru	Right	App. Total	Left	Thru	U-Turn	App. Total	
06:30	92	20	0	112	81	0	4	85	102	45	0	147	344
06:45	99	20	0	119	79	0	3	82	94	65	0	159	360
Total	191	40	0	231	160	0	7	167	196	110	0	306	704
07:00	160	17	0	177	88	0	2	90	104	73	0	177	444
07:15	257	30	0	287	112	0	4	116	127	65	0	192	595
07:30	225	36	0	261	150	0	7	157	116	122	0	238	656
07:45	167	28	0	195	128	0	12	140	112	137	0	249	584
Total	809	111	0	920	478	0	25	503	459	397	0	856	2279
08:00	129	29	0	158	99	0	11	110	158	99	0	257	525
08:15	174	37	0	211	102	0	5	107	105	89	0	194	512
08:30	117	16	0	133	102	0	3	105	118	109	1	228	466
08:45	164	20	0	184	55	0	1	56	118	87	0	205	445
Total	584	102	0	686	358	0	20	378	499	384	1	884	1948
09:00	103	12	0	115	49	0	3	52	106	77	0	183	350
09:15	118	12	0	130	46	0	2	48	114	78	0	192	370
Total	221	24	0	245	95	0	5	100	220	155	0	375	720
16:00	107	19	0	126	25	0	6	31	196	204	0	400	557
16:15	103	24	0	127	47	0	9	56	252	231	0	483	666
16:30	113	21	0	134	51	0	11	62	224	204	0	428	624
16:45	96	28	0	124	33	0	3	36	244	275	0	519	679
Total	419	92	0	511	156	0	29	185	916	914	0	1830	2526
17:00	94	25	0	119	55	0	8	63	230	249	0	479	661
17:15	121	13	0	134	41	0	11	52	266	257	0	523	709
17:30	140	24	0	164	48	3	7	58	252	254	0	506	728
17:45	141	20	0	161	40	0	7	47	250	262	0	512	720
Total	496	82	0	578	184	3	33	220	998	1022	0	2020	2818
18:00	115	16	0	131	48	0	7	55	218	212	0	430	616
18:15	107	6	0	113	33	0	2	35	180	190	0	370	518

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Groups Printed- Lights - Buses - Trucks

Start Time	US 60 WB From East				NB Off Ramp From South				US 60 EB From West				Int. Total
	Thru	Right	U-Turn	App. Total	Left	Thru	Right	App. Total	Left	Thru	U-Turn	App. Total	
18:30	96	5	0	101	32	0	3	35	132	149	0	281	417
18:45	65	4	0	69	20	0	3	23	128	157	0	285	377
Total	383	31	0	414	133	0	15	148	658	708	0	1366	1928
14:00	119	12	0	131	45	0	4	49	178	144	0	322	502
14:15	114	12	0	126	41	0	5	46	174	192	0	366	538
14:30	109	8	0	117	43	0	8	51	192	153	0	345	513
14:45	113	18	0	131	37	0	1	38	195	175	0	370	539
Total	455	50	0	505	166	0	18	184	739	664	0	1403	2092
15:00	82	10	0	92	42	1	7	50	203	162	0	365	507
15:15	104	19	0	123	39	0	2	41	215	155	0	370	534
15:30	94	12	1	107	31	0	7	38	207	170	0	377	522
15:45	106	14	0	120	53	1	4	58	164	140	0	304	482
Total	386	55	1	442	165	2	20	187	789	627	0	1416	2045
16:00	111	15	0	126	38	1	2	41	179	158	0	337	504
16:15	128	14	0	142	39	0	4	43	154	165	0	319	504
16:30	92	13	0	105	40	0	5	45	171	148	0	319	469
16:45	91	14	0	105	33	0	2	35	171	126	0	297	437
Total	422	56	0	478	150	1	13	164	675	597	0	1272	1914
17:00	82	12	0	94	46	0	5	51	178	128	0	306	451
17:15	101	10	0	111	40	0	6	46	147	146	0	293	450
17:30	82	12	0	94	37	0	3	40	169	137	0	306	440
17:45	75	10	0	85	39	0	8	47	158	111	0	269	401
Total	340	44	0	384	162	0	22	184	652	522	0	1174	1742
18:00	89	7	0	96	46	0	8	54	162	89	0	251	401
18:15	81	17	0	98	41	0	4	45	160	93	0	253	396
18:30	60	8	0	68	21	1	3	25	148	98	0	246	339
18:45	62	4	0	66	28	2	7	37	149	84	0	233	336
Total	292	36	0	328	136	3	22	161	619	364	0	983	1472
19:00	66	11	0	77	25	0	5	30	148	78	0	226	333

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Groups Printed- Lights - Buses - Trucks

Start Time	SB I-75 Off Ramp From North				US 60 WB From East				US 60 EB From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	
06:30	9	0	175	184	5	167	0	172	142	33	0	175	531
06:45	11	0	175	186	1	180	0	181	143	26	0	169	536
Total	20	0	350	370	6	347	0	353	285	59	0	344	1067
07:00	8	0	204	212	1	236	0	237	179	35	0	214	663
07:15	10	0	219	229	9	324	0	333	205	35	0	240	802
07:30	17	0	236	253	2	358	0	360	229	44	0	273	886
07:45	13	1	263	277	1	267	0	268	265	61	0	326	871
Total	48	1	922	971	13	1185	0	1198	878	175	0	1053	3222
08:00	15	0	199	214	2	205	0	207	222	50	0	272	693
08:15	14	0	199	213	6	249	0	255	204	50	1	255	723
08:30	12	0	177	189	4	208	0	212	216	49	0	265	666
08:45	14	0	211	225	2	213	0	215	175	46	0	221	661
Total	55	0	786	841	14	875	0	889	817	195	1	1013	2743
09:00	8	1	178	187	1	145	0	146	173	43	0	216	549
09:15	12	0	130	142	3	157	0	160	189	43	0	232	534
Total	20	1	308	329	4	302	0	306	362	86	0	448	1083
16:00	29	0	232	261	7	128	0	135	402	111	0	513	909
16:15	46	0	197	243	3	145	0	148	435	117	0	552	943
16:30	19	1	222	242	11	153	0	164	450	114	0	564	970
16:45	61	0	248	309	4	132	0	136	441	118	0	559	1004
Total	155	1	899	1055	25	558	0	583	1728	460	0	2188	3826
17:00	39	0	187	226	2	152	0	154	476	111	0	587	967
17:15	42	0	214	256	2	153	0	155	506	121	0	627	1038
17:30	57	0	224	281	4	175	0	179	455	139	0	594	1054
17:45	71	1	185	257	10	168	0	178	441	89	0	530	965
Total	209	1	810	1020	18	648	0	666	1878	460	0	2338	4024
18:00	27	1	161	189	7	149	0	156	389	81	0	470	815
18:15	30	0	145	175	5	142	0	147	375	88	0	463	785

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Groups Printed- Lights - Buses - Trucks

Start Time	SB I-75 Off Ramp From North				US 60 WB From East				US 60 EB From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	
18:30	27	0	139	166	3	123	0	126	242	59	0	301	593
18:45	27	0	100	127	2	84	0	86	253	47	0	300	513
Total	111	1	545	657	17	498	0	515	1259	275	0	1534	2706
14:00	12	0	174	186	6	147	0	153	323	75	0	398	737
14:15	21	0	163	184	7	141	0	148	323	74	0	397	729
14:30	15	0	157	172	1	161	0	162	326	72	0	398	732
14:45	28	0	178	206	3	157	0	160	356	71	0	427	793
Total	76	0	672	748	17	606	0	623	1328	292	0	1620	2991
15:00	17	3	174	194	2	117	0	119	352	62	1	415	728
15:15	19	1	196	216	1	132	0	133	369	58	0	427	776
15:30	20	1	173	194	4	109	0	113	334	54	0	388	695
15:45	21	1	196	218	4	152	0	156	283	61	0	344	718
Total	77	6	739	822	11	510	0	521	1338	235	1	1574	2917
16:00	16	0	148	164	5	142	0	147	343	72	0	415	726
16:15	17	0	167	184	4	158	0	162	313	66	0	379	725
16:30	24	0	159	183	4	125	0	129	294	66	0	360	672
16:45	20	0	149	169	6	132	0	138	266	51	0	317	624
Total	77	0	623	700	19	557	0	576	1216	255	0	1471	2747
17:00	31	0	166	197	3	121	0	124	297	58	0	355	676
17:15	15	0	153	168	4	130	0	134	302	48	0	350	652
17:30	16	2	169	187	2	115	0	117	278	53	0	331	635
17:45	16	1	179	196	2	114	0	116	244	34	0	278	590
Total	78	3	667	748	11	480	0	491	1121	193	0	1314	2553
18:00	11	1	155	167	4	128	0	132	264	45	0	309	608
18:15	18	0	147	165	5	111	0	116	238	43	0	281	562
18:30	11	0	114	125	0	84	0	84	239	38	0	277	486
18:45	9	0	117	126	2	83	0	85	231	27	1	259	470
Total	49	1	533	583	11	406	0	417	972	153	1	1126	2126
19:00	4	1	117	122	5	85	0	90	232	45	0	277	489

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Groups Printed- Lights - Buses - Trucks

Start Time	SB I-75 Off Ramp From North				US 60 WB From East				US 60 EB From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	
19:15	7	0	112	119	5	63	0	68	237	45	0	282	469
19:30	11	0	94	105	2	56	0	58	172	36	0	208	371
19:45	7	0	62	69	3	56	0	59	208	40	0	248	376
Total	29	1	385	415	15	260	0	275	849	166	0	1015	1705
Grand Total	1004	16	8239	9259	181	7232	0	7413	14031	3004	3	17038	33710
Apprch %	10.8	0.2	89		2.4	97.6	0		82.4	17.6	0		
Total %	3	0	24.4	27.5	0.5	21.5	0	22	41.6	8.9	0	50.5	
Lights	976	15	8032	9023	181	7109	0	7290	13756	2944	3	16703	33016
% Lights	97.2	93.8	97.5	97.5	100	98.3	0	98.3	98	98	100	98	97.9
Buses	1	0	21	22	0	19	0	19	29	1	0	30	71
% Buses	0.1	0	0.3	0.2	0	0.3	0	0.3	0.2	0	0	0.2	0.2
Trucks	27	1	186	214	0	104	0	104	246	59	0	305	623
% Trucks	2.7	6.2	2.3	2.3	0	1.4	0	1.4	1.8	2	0	1.8	1.8

Start Time	SB I-75 Off Ramp From North				US 60 WB From East				US 60 EB From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	
Peak Hour Analysis From 06:30 to 11:45 - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15													
07:15	10	0	219	229	9	324	0	333	205	35	0	240	802
07:30	17	0	236	253	2	358	0	360	229	44	0	273	886
07:45	13	1	263	277	1	267	0	268	265	61	0	326	871
08:00	15	0	199	214	2	205	0	207	222	50	0	272	693
Total Volume	55	1	917	973	14	1154	0	1168	921	190	0	1111	3252
% App. Total	5.7	0.1	94.2		1.2	98.8	0		82.9	17.1	0		
PHF	.809	.250	.872	.878	.389	.806	.000	.811	.869	.779	.000	.852	.918

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Start Time	SB I-75 Off Ramp From North				US 60 WB From East				US 60 EB From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	
Peak Hour Analysis From 12:00 to 19:45 - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 16:45													
16:45	61	0	248	309	4	132	0	136	441	118	0	559	1004
17:00	39	0	187	226	2	152	0	154	476	111	0	587	967
17:15	42	0	214	256	2	153	0	155	506	121	0	627	1038
17:30	57	0	224	281	4	175	0	179	455	139	0	594	1054
Total Volume	199	0	873	1072	12	612	0	624	1878	489	0	2367	4063
% App. Total	18.6	0	81.4		1.9	98.1	0		79.3	20.7	0		
PHF	.816	.000	.880	.867	.750	.874	.000	.872	.928	.879	.000	.944	.964

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Groups Printed- Lights - Buses - Trucks

Start Time	SB I-75 Off Ramp From North				US 60 WB From East				US 60 EB From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	
14:00	12	0	174	186	6	147	0	153	323	75	0	398	737
14:15	21	0	163	184	7	141	0	148	323	74	0	397	729
14:30	15	0	157	172	1	161	0	162	326	72	0	398	732
14:45	28	0	178	206	3	157	0	160	356	71	0	427	793
Total	76	0	672	748	17	606	0	623	1328	292	0	1620	2991
15:00	17	3	174	194	2	117	0	119	352	62	1	415	728
15:15	19	1	196	216	1	132	0	133	369	58	0	427	776
15:30	20	1	173	194	4	109	0	113	334	54	0	388	695
15:45	21	1	196	218	4	152	0	156	283	61	0	344	718
Total	77	6	739	822	11	510	0	521	1338	235	1	1574	2917
16:00	16	0	148	164	5	142	0	147	343	72	0	415	726
16:15	17	0	167	184	4	158	0	162	313	66	0	379	725
16:30	24	0	159	183	4	125	0	129	294	66	0	360	672
16:45	20	0	149	169	6	132	0	138	266	51	0	317	624
Total	77	0	623	700	19	557	0	576	1216	255	0	1471	2747
17:00	31	0	166	197	3	121	0	124	297	58	0	355	676
17:15	15	0	153	168	4	130	0	134	302	48	0	350	652
17:30	16	2	169	187	2	115	0	117	278	53	0	331	635
17:45	16	1	179	196	2	114	0	116	244	34	0	278	590
Total	78	3	667	748	11	480	0	491	1121	193	0	1314	2553
18:00	11	1	155	167	4	128	0	132	264	45	0	309	608
18:15	18	0	147	165	5	111	0	116	238	43	0	281	562
18:30	11	0	114	125	0	84	0	84	239	38	0	277	486
18:45	9	0	117	126	2	83	0	85	231	27	1	259	470
Total	49	1	533	583	11	406	0	417	972	153	1	1126	2126
19:00	4	1	117	122	5	85	0	90	232	45	0	277	489
19:15	7	0	112	119	5	63	0	68	237	45	0	282	469
19:30	11	0	94	105	2	56	0	58	172	36	0	208	371
19:45	7	0	62	69	3	56	0	59	208	40	0	248	376
Total	29	1	385	415	15	260	0	275	849	166	0	1015	1705
Grand Total	386	11	3619	4016	84	2819	0	2903	6824	1294	2	8120	15039
Apprch %	9.6	0.3	90.1		2.9	97.1	0		84	15.9	0		
Total %	2.6	0.1	24.1	26.7	0.6	18.7	0	19.3	45.4	8.6	0	54	
Lights	382	10	3575	3967	84	2793	0	2877	6774	1286	2	8062	14906
% Lights	99	90.9	98.8	98.8	100	99.1	0	99.1	99.3	99.4	100	99.3	99.1

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Groups Printed- Lights - Buses - Trucks

Start Time	US 60 WB From East				NB Off Ramp From South				US 60 EB From West				Int. Total
	Thru	Right	U-Turn	App. Total	Left	Thru	Right	App. Total	Left	Thru	U-Turn	App. Total	
06:30	92	20	0	112	81	0	4	85	102	45	0	147	344
06:45	99	20	0	119	79	0	3	82	94	65	0	159	360
Total	191	40	0	231	160	0	7	167	196	110	0	306	704
07:00	160	17	0	177	88	0	2	90	104	73	0	177	444
07:15	257	30	0	287	112	0	4	116	127	65	0	192	595
07:30	225	36	0	261	150	0	7	157	116	122	0	238	656
07:45	167	28	0	195	128	0	12	140	112	137	0	249	584
Total	809	111	0	920	478	0	25	503	459	397	0	856	2279
08:00	129	29	0	158	99	0	11	110	158	99	0	257	525
08:15	174	37	0	211	102	0	5	107	105	89	0	194	512
08:30	117	16	0	133	102	0	3	105	118	109	1	228	466
08:45	164	20	0	184	55	0	1	56	118	87	0	205	445
Total	584	102	0	686	358	0	20	378	499	384	1	884	1948
09:00	103	12	0	115	49	0	3	52	106	77	0	183	350
09:15	118	12	0	130	46	0	2	48	114	78	0	192	370
Total	221	24	0	245	95	0	5	100	220	155	0	375	720
16:00	107	19	0	126	25	0	6	31	196	204	0	400	557
16:15	103	24	0	127	47	0	9	56	252	231	0	483	666
16:30	113	21	0	134	51	0	11	62	224	204	0	428	624
16:45	96	28	0	124	33	0	3	36	244	275	0	519	679
Total	419	92	0	511	156	0	29	185	916	914	0	1830	2526
17:00	94	25	0	119	55	0	8	63	230	249	0	479	661
17:15	121	13	0	134	41	0	11	52	266	257	0	523	709
17:30	140	24	0	164	48	3	7	58	252	254	0	506	728
17:45	141	20	0	161	40	0	7	47	250	262	0	512	720
Total	496	82	0	578	184	3	33	220	998	1022	0	2020	2818
18:00	115	16	0	131	48	0	7	55	218	212	0	430	616
18:15	107	6	0	113	33	0	2	35	180	190	0	370	518

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Groups Printed- Lights - Buses - Trucks

Start Time	US 60 WB From East				NB Off Ramp From South				US 60 EB From West				Int. Total
	Thru	Right	U-Turn	App. Total	Left	Thru	Right	App. Total	Left	Thru	U-Turn	App. Total	
18:30	96	5	0	101	32	0	3	35	132	149	0	281	417
18:45	65	4	0	69	20	0	3	23	128	157	0	285	377
Total	383	31	0	414	133	0	15	148	658	708	0	1366	1928
14:00	119	12	0	131	45	0	4	49	178	144	0	322	502
14:15	114	12	0	126	41	0	5	46	174	192	0	366	538
14:30	109	8	0	117	43	0	8	51	192	153	0	345	513
14:45	113	18	0	131	37	0	1	38	195	175	0	370	539
Total	455	50	0	505	166	0	18	184	739	664	0	1403	2092
15:00	82	10	0	92	42	1	7	50	203	162	0	365	507
15:15	104	19	0	123	39	0	2	41	215	155	0	370	534
15:30	94	12	1	107	31	0	7	38	207	170	0	377	522
15:45	106	14	0	120	53	1	4	58	164	140	0	304	482
Total	386	55	1	442	165	2	20	187	789	627	0	1416	2045
16:00	111	15	0	126	38	1	2	41	179	158	0	337	504
16:15	128	14	0	142	39	0	4	43	154	165	0	319	504
16:30	92	13	0	105	40	0	5	45	171	148	0	319	469
16:45	91	14	0	105	33	0	2	35	171	126	0	297	437
Total	422	56	0	478	150	1	13	164	675	597	0	1272	1914
17:00	82	12	0	94	46	0	5	51	178	128	0	306	451
17:15	101	10	0	111	40	0	6	46	147	146	0	293	450
17:30	82	12	0	94	37	0	3	40	169	137	0	306	440
17:45	75	10	0	85	39	0	8	47	158	111	0	269	401
Total	340	44	0	384	162	0	22	184	652	522	0	1174	1742
18:00	89	7	0	96	46	0	8	54	162	89	0	251	401
18:15	81	17	0	98	41	0	4	45	160	93	0	253	396
18:30	60	8	0	68	21	1	3	25	148	98	0	246	339
18:45	62	4	0	66	28	2	7	37	149	84	0	233	336
Total	292	36	0	328	136	3	22	161	619	364	0	983	1472
19:00	66	11	0	77	25	0	5	30	148	78	0	226	333

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File Name : US 60@ NB I-75_11-19-2015
Site Code : US 60@ NB I-75
Start Date : 11/19/2015
Page No : 3

Groups Printed- Lights - Buses - Trucks

Start Time	US 60 WB From East				NB Off Ramp From South				US 60 EB From West				Int. Total
	Thru	Right	U-Turn	App. Total	Left	Thru	Right	App. Total	Left	Thru	U-Turn	App. Total	
19:15	56	7	0	63	27	0	5	32	148	87	0	235	330
19:30	36	4	0	40	22	0	3	25	129	66	0	195	260
19:45	40	4	0	44	19	0	2	21	143	68	0	211	276
Total	198	26	0	224	93	0	15	108	568	299	0	867	1199
Grand Total	5196	749	1	5946	2436	9	244	2689	7988	6763	1	14752	23387
Apprch %	87.4	12.6	0		90.6	0.3	9.1		54.1	45.8	0		
Total %	22.2	3.2	0	25.4	10.4	0	1	11.5	34.2	28.9	0	63.1	
Lights	5128	743	1	5872	2362	8	241	2611	7771	6662	1	14434	22917
% Lights	98.7	99.2	100	98.8	97	88.9	98.8	97.1	97.3	98.5	100	97.8	98
Buses	10	0	0	10	8	0	0	8	14	15	0	29	47
% Buses	0.2	0	0	0.2	0.3	0	0	0.3	0.2	0.2	0	0.2	0.2
Trucks	58	6	0	64	66	1	3	70	203	86	0	289	423
% Trucks	1.1	0.8	0	1.1	2.7	11.1	1.2	2.6	2.5	1.3	0	2	1.8

Start Time	US 60 WB From East				NB Off Ramp From South				US 60 EB From West				Int. Total
	Thru	Right	U-Turn	App. Total	Left	Thru	Right	App. Total	Left	Thru	U-Turn	App. Total	
Peak Hour Analysis From 07:15 to 08:30 - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15													
07:15	257	30	0	287	112	0	4	116	127	65	0	192	595
07:30	225	36	0	261	150	0	7	157	116	122	0	238	656
07:45	167	28	0	195	128	0	12	140	112	137	0	249	584
08:00	129	29	0	158	99	0	11	110	158	99	0	257	525
Total Volume	778	123	0	901	489	0	34	523	513	423	0	936	2360
% App. Total	86.3	13.7	0		93.5	0	6.5		54.8	45.2	0		
PHF	.757	.854	.000	.785	.815	.000	.708	.833	.812	.772	.000	.911	.899

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File Name : US 60@ NB I-75_11-19-2015
 Site Code : US 60@ NB I-75
 Start Date : 11/19/2015
 Page No : 4

Start Time	US 60 WB From East				NB Off Ramp From South				US 60 EB From West				Int. Total
	Thru	Right	U-Turn	App. Total	Left	Thru	Right	App. Total	Left	Thru	U-Turn	App. Total	
Peak Hour Analysis From 16:45 to 17:30 - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 16:45													
16:45	96	28	0	124	33	0	3	36	244	275	0	519	679
17:00	94	25	0	119	55	0	8	63	230	249	0	479	661
17:15	121	13	0	134	41	0	11	52	266	257	0	523	709
17:30	140	24	0	164	48	3	7	58	252	254	0	506	728
Total Volume	451	90	0	541	177	3	29	209	992	1035	0	2027	2777
% App. Total	83.4	16.6	0		84.7	1.4	13.9		48.9	51.1	0		
PHF	.805	.804	.000	.825	.805	.250	.659	.829	.932	.941	.000	.969	.954

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File Name : US_60_@_Polo_Club_Weekday_10-08-2015
Site Code : US 60 @ Polo Club
Start Date : 10/8/2015
Page No : 1

Groups Printed- Lights - Buses - Trucks

Start Time	US 60 WB From East				Polo Club From South				US 60 EB From West					Int. Total
	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
06:30	1	84	0	85	27	0	0	27	0	42	13	0	55	167
06:45	0	87	0	87	39	0	0	39	0	55	23	0	78	204
Total	1	171	0	172	66	0	0	66	0	97	36	0	133	371
07:00	0	127	0	127	53	3	0	56	0	38	12	0	50	233
07:15	0	180	0	180	82	0	0	82	0	53	20	0	73	335
07:30	0	176	0	176	59	1	0	60	0	74	33	0	107	343
07:45	1	144	0	145	50	1	0	51	0	104	40	0	144	340
Total	1	627	0	628	244	5	0	249	0	269	105	0	374	1251
08:00	0	125	0	125	44	1	0	45	0	69	32	0	101	271
08:15	1	113	0	114	37	1	0	38	0	73	29	0	102	254
08:30	1	123	0	124	35	1	0	36	0	86	26	0	112	272
08:45	3	96	0	99	33	3	0	36	0	79	27	0	106	241
Total	5	457	0	462	149	6	0	155	0	307	114	0	421	1038
09:00	0	91	0	91	28	2	0	30	0	66	26	0	92	213
09:15	1	93	0	94	20	2	0	22	0	71	23	0	94	210
Total	1	184	0	185	48	4	0	52	0	137	49	0	186	423
16:00	2	83	0	85	38	1	0	39	0	125	63	0	188	312
16:15	2	81	0	83	34	0	0	34	0	173	71	0	244	361
16:30	2	87	0	89	33	2	0	35	0	212	74	0	286	410
16:45	7	78	0	85	39	6	0	45	0	158	82	0	240	370
Total	13	329	0	342	144	9	0	153	0	668	290	0	958	1453
17:00	4	68	0	72	29	4	0	33	1	169	86	0	256	361
17:15	1	67	0	68	39	3	0	42	0	161	87	0	248	358
17:30	1	94	0	95	40	0	0	40	0	148	100	0	248	383
17:45	1	68	0	69	49	1	0	50	0	152	74	0	226	345
Total	7	297	0	304	157	8	0	165	1	630	347	0	978	1447
18:00	2	80	0	82	26	1	0	27	0	143	75	0	218	327
18:15	3	86	0	89	46	2	0	48	0	116	59	0	175	312

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File Name : US_60_@_Polo_Club_Weekday_10-08-2015
Site Code : US 60 @ Polo Club
Start Date : 10/8/2015
Page No : 2

Groups Printed- Lights - Buses - Trucks

Start Time	US 60 WB From East				Polo Club From South				US 60 EB From West					Int. Total
	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
18:30	0	65	0	65	30	0	0	30	0	118	49	0	167	262
18:45	2	54	0	56	30	0	0	30	0	100	49	0	149	235
Total	7	285	0	292	132	3	0	135	0	477	232	0	709	1136
Grand Total	35	2350	0	2385	940	35	0	975	1	2585	1173	0	3759	7119
Apprch %	1.5	98.5	0		96.4	3.6	0		0	68.8	31.2	0		
Total %	0.5	33	0	33.5	13.2	0.5	0	13.7	0	36.3	16.5	0	52.8	
Lights	34	2308	0	2342	925	35	0	960	1	2519	1151	0	3671	6973
% Lights	97.1	98.2	0	98.2	98.4	100	0	98.5	100	97.4	98.1	0	97.7	97.9
Buses	0	0	0	0	2	0	0	2	0	5	9	0	14	16
% Buses	0	0	0	0	0.2	0	0	0.2	0	0.2	0.8	0	0.4	0.2
Trucks	1	42	0	43	13	0	0	13	0	61	13	0	74	130
% Trucks	2.9	1.8	0	1.8	1.4	0	0	1.3	0	2.4	1.1	0	2	1.8

Start Time	US 60 WB From East				Polo Club From South				US 60 EB From West					Int. Total
	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 07:15 to 08:30 - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 07:15														
07:15	0	180	0	180	82	0	0	82	0	53	20	0	73	335
07:30	0	176	0	176	59	1	0	60	0	74	33	0	107	343
07:45	1	144	0	145	50	1	0	51	0	104	40	0	144	340
08:00	0	125	0	125	44	1	0	45	0	69	32	0	101	271
Total Volume	1	625	0	626	235	3	0	238	0	300	125	0	425	1289
% App. Total	0.2	99.8	0		98.7	1.3	0		0	70.6	29.4	0		
PHF	.250	.868	.000	.869	.716	.750	.000	.726	.000	.721	.781	.000	.738	.940

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File Name : US_60_@_Polo_Club_Weekday_10-08-2015
 Site Code : US 60 @ Polo Club
 Start Date : 10/8/2015
 Page No : 3

Start Time	US 60 WB From East				Polo Club From South				US 60 EB From West					Int. Total
	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 16:45 to 17:30 - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 16:45														
16:45	7	78	0	85	39	6	0	45	0	158	82	0	240	370
17:00	4	68	0	72	29	4	0	33	1	169	86	0	256	361
17:15	1	67	0	68	39	3	0	42	0	161	87	0	248	358
17:30	1	94	0	95	40	0	0	40	0	148	100	0	248	383
Total Volume	13	307	0	320	147	13	0	160	1	636	355	0	992	1472
% App. Total	4.1	95.9	0		91.9	8.1	0		0.1	64.1	35.8	0		
PHF	.464	.816	.000	.842	.919	.542	.000	.889	.250	.941	.888	.000	.969	.961

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File Name : US_60_@_Polo_Club_Sat_10-10-2015
Site Code : Us 60 @ Polo Club
Start Date : 10/10/2015
Page No : 1

Groups Printed- Lights - Buses - Trucks

Start Time	US 60 WB From East				Polo Club From South				US 60 EB From West				Int. Total
	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	
14:00	5	65	0	70	50	3	0	53	82	60	0	142	265
14:15	0	70	0	70	42	1	0	43	101	55	0	156	269
14:30	3	75	0	78	27	2	0	29	105	52	0	157	264
14:45	1	68	0	69	31	2	0	33	96	55	0	151	253
Total	9	278	0	287	150	8	0	158	384	222	0	606	1051
15:00	4	56	0	60	32	0	0	32	88	61	0	149	241
15:15	1	84	0	85	44	1	0	45	107	53	0	160	290
15:30	1	65	0	66	42	1	0	43	99	40	0	139	248
15:45	2	64	0	66	37	0	0	37	93	66	0	159	262
Total	8	269	0	277	155	2	0	157	387	220	0	607	1041
16:00	2	58	0	60	30	0	0	30	120	59	0	179	269
16:15	1	63	0	64	31	4	0	35	96	64	0	160	259
16:30	2	100	0	102	45	4	0	49	93	47	0	140	291
16:45	5	64	0	69	37	3	0	40	107	62	0	169	278
Total	10	285	0	295	143	11	0	154	416	232	0	648	1097
17:00	2	53	0	55	37	3	0	40	112	47	0	159	254
17:15	1	63	0	64	44	3	0	47	83	46	0	129	240
17:30	1	70	0	71	32	0	0	32	100	46	0	146	249
17:45	1	69	0	70	28	1	0	29	80	56	0	136	235
Total	5	255	0	260	141	7	0	148	375	195	0	570	978
18:00	3	61	0	64	29	3	0	32	80	38	0	118	214
18:15	0	73	0	73	36	2	0	38	76	39	0	115	226
18:30	3	62	0	65	38	2	0	40	91	31	0	122	227
18:45	1	62	0	63	40	2	0	42	69	29	0	98	203
Total	7	258	0	265	143	9	0	152	316	137	0	453	870
19:00	0	48	0	48	29	0	0	29	80	25	0	105	182
19:15	2	50	0	52	16	0	0	16	104	27	0	131	199
19:30	0	48	0	48	21	2	0	23	74	22	0	96	167
19:45	0	42	0	42	20	0	0	20	87	25	0	112	174
Total	2	188	0	190	86	2	0	88	345	99	0	444	722
Grand Total	41	1533	0	1574	818	39	0	857	2223	1105	0	3328	5759
Apprch %	2.6	97.4	0		95.4	4.6	0		66.8	33.2	0		
Total %	0.7	26.6	0	27.3	14.2	0.7	0	14.9	38.6	19.2	0	57.8	

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File Name : US_60_@_Polo_Club_Sat_10-10-2015
Site Code : Us 60 @ Polo Club
Start Date : 10/10/2015
Page No : 2

Groups Printed- Lights - Buses - Trucks

	US 60 WB From East				Polo Club From South				US 60 EB From West				Int. Total
	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	
Lights	41	1527	0	1568	816	39	0	855	2212	1101	0	3313	5736
% Lights	100	99.6	0	99.6	99.8	100	0	99.8	99.5	99.6	0	99.5	99.6
Buses	0	0	0	0	0	0	0	0	1	0	0	1	1
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	0	6	0	6	2	0	0	2	10	4	0	14	22
% Trucks	0	0.4	0	0.4	0.2	0	0	0.2	0.4	0.4	0	0.4	0.4

Start Time	US 60 WB From East				Polo Club From South				US 60 EB From West				Int. Total
	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 14:30 to 15:15 - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 14:30													
14:30	3	75	0	78	27	2	0	29	105	52	0	157	264
14:45	1	68	0	69	31	2	0	33	96	55	0	151	253
15:00	4	56	0	60	32	0	0	32	88	61	0	149	241
15:15	1	84	0	85	44	1	0	45	107	53	0	160	290
Total Volume	9	283	0	292	134	5	0	139	396	221	0	617	1048
% App. Total	3.1	96.9	0		96.4	3.6	0		64.2	35.8	0		
PHF	.563	.842	.000	.859	.761	.625	.000	.772	.925	.906	.000	.964	.903
Lights	9	282	0	291	133	5	0	138	395	221	0	616	1045
% Lights	100	99.6	0	99.7	99.3	100	0	99.3	99.7	100	0	99.8	99.7
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	0	1	0	1	1	0	0	1	1	0	0	1	3
% Trucks	0	0.4	0	0.3	0.7	0	0	0.7	0.3	0	0	0.2	0.3

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525 Vine Street
Cincinnati, OH 45202
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File Name : US 60 @ Sir Barton_11-19-2015
Site Code : US 60 @ Sir Barton
Start Date : 11/19/2015
Page No : 1

Groups Printed- Lights - Buses - Trucks

Start Time	Executive Dr From North					US 60 WB From East					Sir Barton From South					US 60 EB From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
06:30	6	5	9	0	20	13	276	1	0	290	24	1	11	0	36	6	141	21	0	168	514
06:45	2	2	19	0	23	24	286	0	0	310	32	7	21	0	60	18	141	40	0	199	592
Total	8	7	28	0	43	37	562	1	0	600	56	8	32	0	96	24	282	61	0	367	1106
07:00	2	4	24	0	30	23	351	5	0	379	41	4	29	0	74	20	157	36	0	213	696
07:15	8	2	27	0	37	25	458	4	0	487	69	9	30	0	108	23	204	44	0	271	903
07:30	8	6	24	0	38	42	485	8	0	535	68	13	19	0	100	31	219	74	0	324	997
07:45	3	10	35	0	48	24	418	2	0	444	65	11	30	0	106	40	278	111	0	429	1027
Total	21	22	110	0	153	114	1712	19	0	1845	243	37	108	0	388	114	858	265	0	1237	3623
08:00	12	7	28	0	47	40	309	5	0	354	51	10	17	0	78	43	214	75	0	332	811
08:15	3	7	26	0	36	48	350	10	0	408	41	13	15	0	69	42	211	60	0	313	826
08:30	13	7	26	0	46	30	295	4	0	329	56	8	23	0	87	33	196	78	0	307	769
08:45	4	7	22	0	33	33	305	8	0	346	42	8	19	0	69	25	174	91	0	290	738
Total	32	28	102	0	162	151	1259	27	0	1437	190	39	74	0	303	143	795	304	0	1242	3144
09:00	7	4	19	0	30	31	232	6	0	269	75	8	32	0	115	27	171	54	0	252	666
09:15	2	5	25	0	32	38	228	3	0	269	58	16	26	0	100	34	188	89	0	311	712
Total	9	9	44	0	62	69	460	9	0	538	133	24	58	0	215	61	359	143	0	563	1378
16:00	10	13	29	0	52	61	248	3	0	312	119	9	65	0	193	27	401	173	0	601	1158
16:15	15	12	19	0	46	71	217	4	0	292	121	17	89	0	227	26	401	188	0	615	1180
16:30	19	15	16	0	50	56	264	5	0	325	89	12	74	0	175	30	448	184	0	662	1212
16:45	15	21	20	0	56	67	250	3	0	320	102	16	72	0	190	25	408	204	0	637	1203
Total	59	61	84	0	204	255	979	15	0	1249	431	54	300	0	785	108	1658	749	0	2515	4753
17:00	35	23	15	0	73	53	241	6	0	300	97	6	94	0	197	43	406	200	0	649	1219
17:15	9	14	23	0	46	57	288	2	0	347	100	20	103	0	223	32	403	237	0	672	1288
17:30	14	15	30	0	59	64	288	6	0	358	94	10	80	0	184	23	438	203	0	664	1265
17:45	14	13	16	0	43	73	242	4	0	319	113	10	88	0	211	45	381	193	0	619	1192
Total	72	65	84	0	221	247	1059	18	0	1324	404	46	365	0	815	143	1628	833	0	2604	4964
18:00	14	14	22	0	50	54	244	4	0	302	113	10	88	0	211	30	320	155	0	505	1068
18:15	14	11	21	0	46	41	199	11	0	251	82	10	66	0	158	28	301	154	0	483	938
18:30	5	13	13	0	31	60	191	5	0	256	77	8	64	0	149	23	193	96	0	312	748

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525 Vine Street
Cincinnati, OH 45202
Traffic Department

File Name : US 60 @ Sir Barton_11-19-2015
Site Code : US 60 @ Sir Barton
Start Date : 11/19/2015
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Groups Printed- Lights - Buses - Trucks

Start Time	Executive Dr From North					US 60 WB From East					Sir Barton From South					US 60 EB From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
18:45	5	6	4	0	15	43	149	4	0	196	99	12	60	0	171	15	228	110	0	353	735
Total	38	44	60	0	142	198	783	24	0	1005	371	40	278	0	689	96	1042	515	0	1653	3489
14:00	3	7	13	0	23	81	241	3	0	325	142	10	90	0	242	25	205	191	0	421	1011
14:15	3	8	22	0	33	90	228	4	0	322	157	16	115	0	288	20	218	167	0	405	1048
14:30	5	3	21	0	29	68	230	3	0	301	157	15	128	0	300	23	207	174	0	404	1034
14:45	6	6	25	0	37	74	222	0	0	296	174	14	102	0	290	22	246	170	0	438	1061
Total	17	24	81	0	122	313	921	10	0	1244	630	55	435	0	1120	90	876	702	0	1668	4154
15:00	6	8	21	0	35	74	225	5	0	304	161	12	123	0	296	21	266	196	0	483	1118
15:15	12	8	33	0	53	82	244	7	0	333	147	15	120	0	282	26	230	165	0	421	1089
15:30	6	6	16	0	28	68	205	2	0	275	171	13	124	0	308	25	197	172	0	394	1005
15:45	4	7	15	0	26	75	255	1	0	331	156	10	109	0	275	28	217	168	0	413	1045
Total	28	29	85	0	142	299	929	15	0	1243	635	50	476	0	1161	100	910	701	0	1711	4257
16:00	6	10	23	0	39	68	229	2	0	299	155	16	113	0	284	25	221	152	0	398	1020
16:15	4	9	16	0	29	71	222	2	0	295	156	8	105	0	269	23	215	152	0	390	983
16:30	5	4	18	0	27	101	215	4	0	320	124	7	101	0	232	24	206	153	0	383	962
16:45	4	6	20	0	30	74	185	10	0	269	159	17	106	0	282	19	177	120	0	316	897
Total	19	29	77	0	125	314	851	18	0	1183	594	48	425	0	1067	91	819	577	0	1487	3862
17:00	8	8	15	0	31	53	196	5	0	254	133	11	113	0	257	18	214	121	0	353	895
17:15	3	8	18	0	29	63	265	4	0	332	124	14	96	0	234	14	181	117	0	312	907
17:30	5	9	17	0	31	68	208	4	0	280	148	12	94	0	254	10	205	116	0	331	896
17:45	4	8	16	0	28	67	219	4	0	290	129	8	119	0	256	20	171	104	0	295	869
Total	20	33	66	0	119	251	888	17	0	1156	534	45	422	0	1001	62	771	458	0	1291	3567
18:00	6	3	19	0	28	57	208	4	0	269	130	14	92	0	236	9	177	116	0	302	835
18:15	4	5	17	0	26	59	206	7	0	272	104	12	91	0	207	19	152	112	0	283	788
18:30	4	12	11	0	27	45	151	4	0	200	126	12	91	0	229	20	166	112	0	298	754
18:45	4	9	16	0	29	49	138	4	0	191	100	11	92	0	203	21	140	107	0	268	691
Total	18	29	63	0	110	210	703	19	0	932	460	49	366	0	875	69	635	447	0	1151	3068
19:00	2	5	13	0	20	59	147	4	0	210	91	2	84	0	177	13	168	103	0	284	691
19:15	4	4	4	0	12	54	147	7	0	208	99	13	88	0	200	10	150	87	0	247	667
19:30	6	3	14	0	23	42	111	6	0	159	94	11	70	0	175	10	130	93	0	233	590
19:45	2	8	11	0	21	23	103	0	0	126	79	13	69	0	161	13	154	77	0	244	552
Total	14	20	42	0	76	178	508	17	0	703	363	39	311	0	713	46	602	360	0	1008	2500

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File Name : US 60 @ Sir Barton_11-19-2015
 Site Code : US 60 @ Sir Barton
 Start Date : 11/19/2015
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Groups Printed- Lights - Buses - Trucks

	Executive Dr From North					US 60 WB From East					Sir Barton From South					US 60 EB From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Grand Total	355	400	926	0	1681	2636	11614	209	0	14459	5044	534	3650	0	9228	1147	11235	6115	0	18497	43865
Apprch %	21.1	23.8	55.1	0		18.2	80.3	1.4	0		54.7	5.8	39.6	0		6.2	60.7	33.1	0		
Total %	0.8	0.9	2.1	0	3.8	6	26.5	0.5	0	33	11.5	1.2	8.3	0	21	2.6	25.6	13.9	0	42.2	
Lights	353	399	901	0	1653	2614	11324	206	0	14144	5003	530	3618	0	9151	1119	10886	6068	0	18073	43021
% Lights	99.4	99.8	97.3	0	98.3	99.2	97.5	98.6	0	97.8	99.2	99.3	99.1	0	99.2	97.6	96.9	99.2	0	97.7	98.1
Buses	0	1	15	0	16	0	34	0	0	34	7	1	3	0	11	17	24	8	0	49	110
% Buses	0	0.2	1.6	0	1	0	0.3	0	0	0.2	0.1	0.2	0.1	0	0.1	1.5	0.2	0.1	0	0.3	0.3
Trucks	2	0	10	0	12	22	256	3	0	281	34	3	29	0	66	11	325	39	0	375	734
% Trucks	0.6	0	1.1	0	0.7	0.8	2.2	1.4	0	1.9	0.7	0.6	0.8	0	0.7	1	2.9	0.6	0	2	1.7

Start Time	Executive Dr From North					US 60 WB From East					Sir Barton From South					US 60 EB From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 06:30 to 11:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	8	2	27	0	37	25	458	4	0	487	69	9	30	0	108	23	204	44	0	271	903
07:30	8	6	24	0	38	42	485	8	0	535	68	13	19	0	100	31	219	74	0	324	997
07:45	3	10	35	0	48	24	418	2	0	444	65	11	30	0	106	40	278	111	0	429	1027
08:00	12	7	28	0	47	40	309	5	0	354	51	10	17	0	78	43	214	75	0	332	811
Total Volume	31	25	114	0	170	131	1670	19	0	1820	253	43	96	0	392	137	915	304	0	1356	3738
% App. Total	18.2	14.7	67.1	0		7.2	91.8	1	0		64.5	11	24.5	0		10.1	67.5	22.4	0		
PHF	.646	.625	.814	.000	.885	.780	.861	.594	.000	.850	.917	.827	.800	.000	.907	.797	.823	.685	.000	.790	.910

Peak Hour Analysis From 12:00 to 19:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:45																					
16:45	15	21	20	0	56	67	250	3	0	320	102	16	72	0	190	25	408	204	0	637	1203
17:00	35	23	15	0	73	53	241	6	0	300	97	6	94	0	197	43	406	200	0	649	1219
17:15	9	14	23	0	46	57	288	2	0	347	100	20	103	0	223	32	403	237	0	672	1288
17:30	14	15	30	0	59	64	288	6	0	358	94	10	80	0	184	23	438	203	0	664	1265
Total Volume	73	73	88	0	234	241	1067	17	0	1325	393	52	349	0	794	123	1655	844	0	2522	4975
% App. Total	31.2	31.2	37.6	0		18.2	80.5	1.3	0		49.5	6.5	44	0		4.7	63.1	32.2	0		
PHF	.521	.793	.733	.000	.801	.899	.926	.708	.000	.925	.963	.650	.847	.000	.890	.715	.945	.890	.000	.975	.966

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45202
Traffic Department

File Name : US 60 @ Sir Barton_11-19-2015
Site Code : US 60 @ Sir Barton
Start Date : 11/19/2015
Page No : 1

Groups Printed- Lights - Buses - Trucks

Start Time	Executive Dr From North					US 60 WB From East					Sir Barton From South					US 60 EB From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
14:00	3	7	13	0	23	81	241	3	0	325	142	10	90	0	242	25	205	191	0	421	1011
14:15	3	8	22	0	33	90	228	4	0	322	157	16	115	0	288	20	218	167	0	405	1048
14:30	5	3	21	0	29	68	230	3	0	301	157	15	128	0	300	23	207	174	0	404	1034
14:45	6	6	25	0	37	74	222	0	0	296	174	14	102	0	290	22	246	170	0	438	1061
Total	17	24	81	0	122	313	921	10	0	1244	630	55	435	0	1120	90	876	702	0	1668	4154
15:00	6	8	21	0	35	74	225	5	0	304	161	12	123	0	296	21	266	196	0	483	1118
15:15	12	8	33	0	53	82	244	7	0	333	147	15	120	0	282	26	230	165	0	421	1089
15:30	6	6	16	0	28	68	205	2	0	275	171	13	124	0	308	25	197	172	0	394	1005
15:45	4	7	15	0	26	75	255	1	0	331	156	10	109	0	275	28	217	168	0	413	1045
Total	28	29	85	0	142	299	929	15	0	1243	635	50	476	0	1161	100	910	701	0	1711	4257
16:00	6	10	23	0	39	68	229	2	0	299	155	16	113	0	284	25	221	152	0	398	1020
16:15	4	9	16	0	29	71	222	2	0	295	156	8	105	0	269	23	215	152	0	390	983
16:30	5	4	18	0	27	101	215	4	0	320	124	7	101	0	232	24	206	153	0	383	962
16:45	4	6	20	0	30	74	185	10	0	269	159	17	106	0	282	19	177	120	0	316	897
Total	19	29	77	0	125	314	851	18	0	1183	594	48	425	0	1067	91	819	577	0	1487	3862
17:00	8	8	15	0	31	53	196	5	0	254	133	11	113	0	257	18	214	121	0	353	895
17:15	3	8	18	0	29	63	265	4	0	332	124	14	96	0	234	14	181	117	0	312	907
17:30	5	9	17	0	31	68	208	4	0	280	148	12	94	0	254	10	205	116	0	331	896
17:45	4	8	16	0	28	67	219	4	0	290	129	8	119	0	256	20	171	104	0	295	869
Total	20	33	66	0	119	251	888	17	0	1156	534	45	422	0	1001	62	771	458	0	1291	3567
18:00	6	3	19	0	28	57	208	4	0	269	130	14	92	0	236	9	177	116	0	302	835
18:15	4	5	17	0	26	59	206	7	0	272	104	12	91	0	207	19	152	112	0	283	788
18:30	4	12	11	0	27	45	151	4	0	200	126	12	91	0	229	20	166	112	0	298	754
18:45	4	9	16	0	29	49	138	4	0	191	100	11	92	0	203	21	140	107	0	268	691
Total	18	29	63	0	110	210	703	19	0	932	460	49	366	0	875	69	635	447	0	1151	3068
19:00	2	5	13	0	20	59	147	4	0	210	91	2	84	0	177	13	168	103	0	284	691
19:15	4	4	4	0	12	54	147	7	0	208	99	13	88	0	200	10	150	87	0	247	667
19:30	6	3	14	0	23	42	111	6	0	159	94	11	70	0	175	10	130	93	0	233	590
19:45	2	8	11	0	21	23	103	0	0	126	79	13	69	0	161	13	154	77	0	244	552
Total	14	20	42	0	76	178	508	17	0	703	363	39	311	0	713	46	602	360	0	1008	2500
Grand Total	116	164	414	0	694	1565	4800	96	0	6461	3216	286	2435	0	5937	458	4613	3245	0	8316	21408
Apprch %	16.7	23.6	59.7	0		24.2	74.3	1.5	0		54.2	4.8	41	0		5.5	55.5	39	0		
Total %	0.5	0.8	1.9	0	3.2	7.3	22.4	0.4	0	30.2	15	1.3	11.4	0	27.7	2.1	21.5	15.2	0	38.8	
Lights	116	164	409	0	689	1558	4748	96	0	6402	3208	285	2426	0	5919	454	4554	3235	0	8243	21253
% Lights	100	100	98.8	0	99.3	99.6	98.9	100	0	99.1	99.8	99.7	99.6	0	99.7	99.1	98.7	99.7	0	99.1	99.3

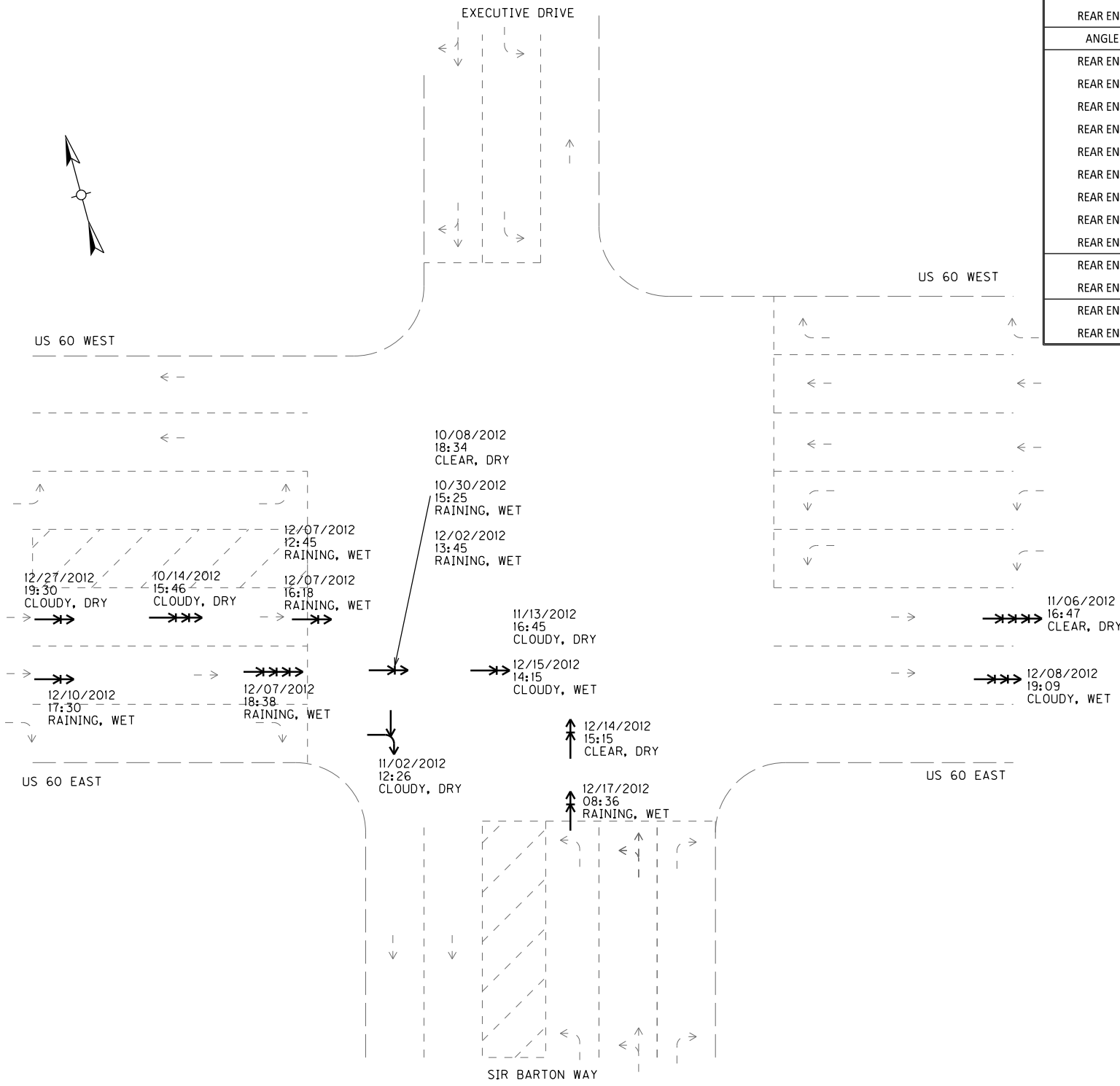
Appendix B: Crash Diagrams

Intersection	All_Crashes	KAB_Crashes	Crashes_Per_Year	KAB_Crashes_Per_Year	Expected_Crashes	PCR	Expected_KAB_Crashes	PCR_KAB
US 60 @ Elkhorn	66	1	13.2	0.2	38.0463	26.6783	2.9664	-1.2254
US 60 @ Sir Barton	75	5	15	1	64.1102	10.5894	4.7206	0.2024
US 60 @ Thunderstick	12	0	2.4	0	5.5394	5.7601	0.6298	-0.3244
US 60 @ Hume Road	10	2	2	0.4	6.0617	3.5443	0.4807	0.6801
US 60 @ I-75 NB Ramps	14	1	2.8	0.2	12.6531	1.1776	1.1332	-0.0516
MOW @ Polo Club	22	2	4.4	0.4	27.7283	-5.3757	2.2987	-0.1678
US 60 @ I-75 SB Ramps	11	1	2.2	0.2	38.0463	-25.8123	2.9664	-1.2254

KAB_Crashes are fatal and serious injury crashes

PCR = Potential for Crash Reduction

MANNER OF COLLISION	ROADWAY NAME	COLLISION DATE	COLLISION TIME	UNITS INVOLVED	INJURED	WEATHER	ROADWAY CONDITION	DIRECTIONAL ANALYSIS
REAR END	SIR BARTON WAY	12/14/2012	1515	2	0	CLEAR	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	SIR BARTON WAY	12/17/2012	836	2	0	RAINING	WET	OTHER ROADWAY OR MID-BLOCK COLLISION
ANGLE	WINCHESTER RD	11/2/2012	1226	2	0	CLOUDY	DRY	ANGLE COLLISION - ONE VEHICLE TURNING RIGHT
REAR END	WINCHESTER RD	10/8/2012	1834	2	0	CLEAR	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	WINCHESTER RD	12/15/2012	1415	2	0	CLOUDY	WET	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER RD	11/13/2012	1645	2	0	CLOUDY	DRY	REAR END - OTHER
REAR END	WINCHESTER RD	12/27/2012	1930	2	0	CLOUDY	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER RD	12/7/2012	1245	2	0	RAINING	WET	REAR END - ONE VEHICLE STOPPED
REAR END	WINCHESTER RD	12/2/2012	1345	2	0	RAINING	WET	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER RD	10/30/2012	1525	2	0	RAINING	WET	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	WINCHESTER RD	12/7/2012	1618	2	0	RAINING	WET	REAR END - OTHER
REAR END	WINCHESTER RD	12/10/2012	1730	2	0	RAINING	WET	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER RD	10/14/2012	1546	3	0	CLOUDY	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER RD	12/8/2012	1909	3	0	CLOUDY	WET	REAR END IN TRAFFIC ONE VEHICLE STOPPED
REAR END	WINCHESTER RD	11/6/2012	1647	4	3	CLEAR	DRY	REAR END IN TRAFFIC ONE VEHICLE STOPPED
REAR END	WINCHESTER RD	12/7/2012	1838	4	0	RAINING	WET	REAR END IN TRAFFIC ONE VEHICLE STOPPED

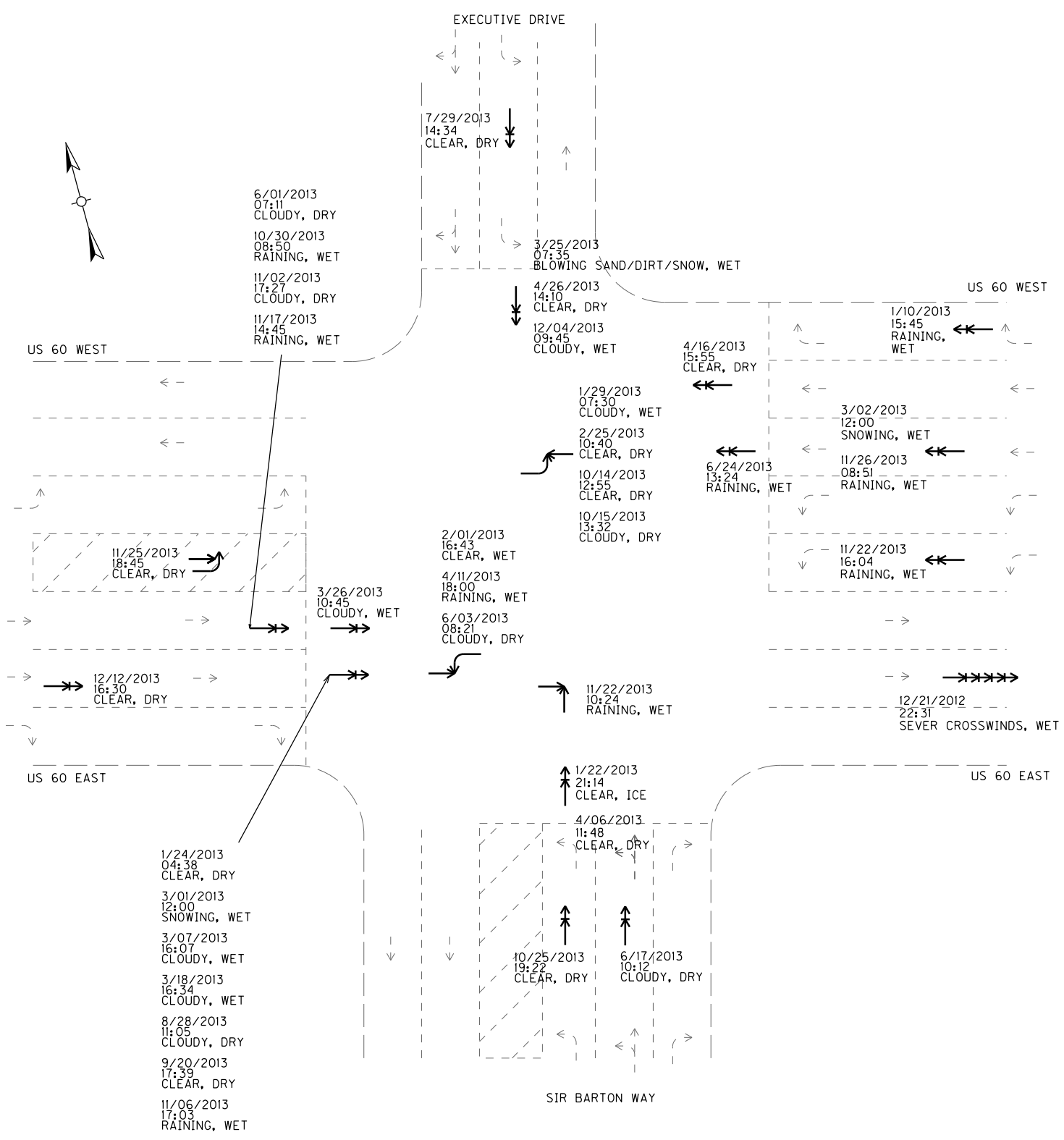


LEGEND	
	REAR END, 2 VEHICLES
	REAR END, 3 VEHICLES
	REAR END COLLISION, 4 VEHICLES
	ANGLE, 2 VEHICLES

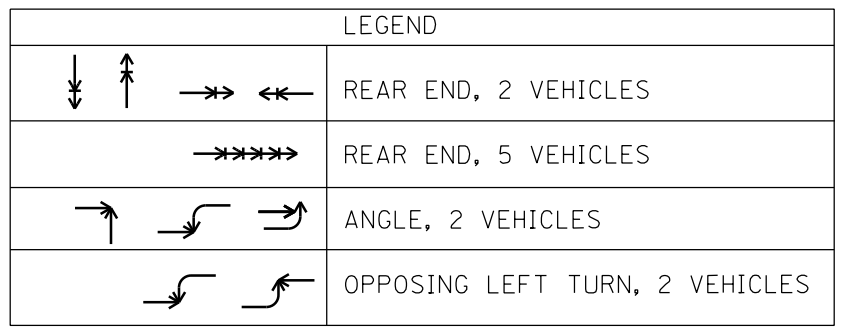
CRASH DIAGRAM_2012
US 60 & SIR BARTON WAY/EXECUTIVE DR
NOT TO SCALE

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 USER: vanessa.nghtem
 DATE PLOTTED: June 14, 2016
 E-SHEET NAME:
 MicroStation v8.11.9.397

FILE NAME: J:\PROJECT\KNTC\500596 KYTC DISTRICT 7 TRAFFIC 2015 LETTER AGREEMENT 2 MOW DATA-TECH\CRASHES\US60 + SIR-BARTON-EXEC.DR.US60
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 DATE PLOTTED: June 14, 2016
 E-SHEET NAME:
 MicroStation v8.11.9.397

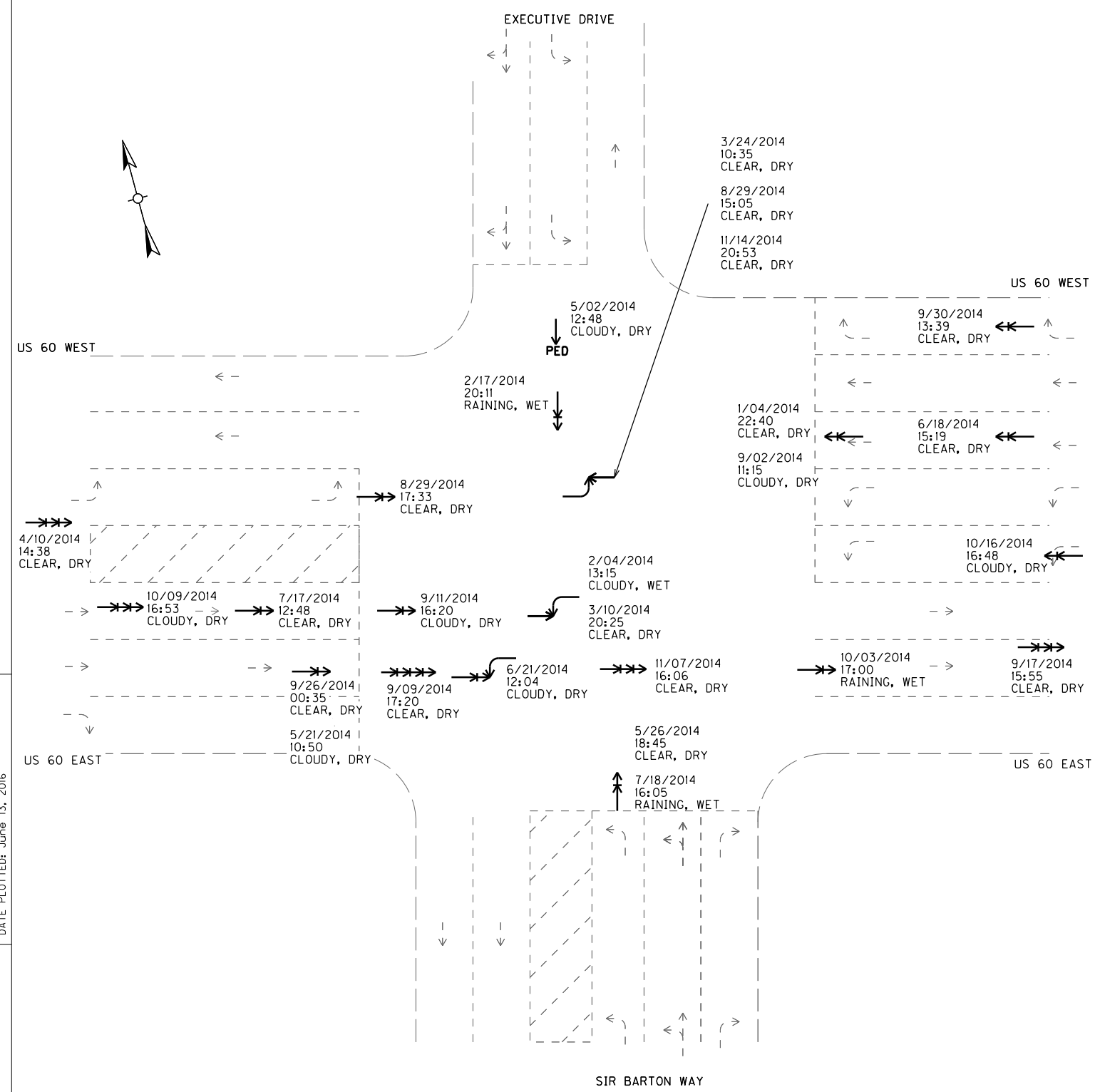


MANNER OF COLLISION	ROADWAY NAME	COLLISION DATE	COLLISION TIME	UNITS INVOLVED	INJURED	WEATHER	ROADWAY CONDITION	DIRECTIONAL ANALYSIS
REAR END	EXECUTIVE DR	3/25/2013	07:35	2	0	BLOWING SAND/SOIL/DIRT/SNOW	WET	REAR END IN TRAFFIC ONE VEHICLE STOPPED
REAR END	EXECUTIVE DR	4/26/2013	14:10	2	0	CLEAR	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	EXECUTIVE DR	7/29/2013	14:34	2	1	CLEAR	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	EXECUTIVE DR	12/4/2013	9:45	2	1	CLOUDY	WET	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
ANGLE	SIR BARTON WAY	11/22/2013	10:24	2	0	RAINING	WET	1 VEHICLE ENTERING/LEAVING ENTRANCE
REAR END	SIR BARTON WAY	4/6/2013	11:48	2	0	CLEAR	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	SIR BARTON WAY	10/25/2013	19:22	2	0	CLEAR	DRY	REAR END IN TRAFFIC ONE VEHICLE STOPPED
REAR END	SIR BARTON WAY	1/22/2013	2:14	2	0	CLEAR	ICE	REAR END IN TRAFFIC ONE VEHICLE STOPPED
REAR END	SIR BARTON WAY	6/17/2013	10:12	2	1	CLOUDY	DRY	REAR END IN TRAFFIC ONE VEHICLE STOPPED
ANGLE	WINCHESTER RD	2/1/2013	16:43	2	0	CLEAR	WET	ANGLE COLLISION - ONE VEHICLE TURNING LEFT
ANGLE	WINCHESTER RD	11/25/2013	18:45	2	0	CLEAR	DRY	ANGLE COLLISION - ONE VEHICLE TURNING LEFT
ANGLE	WINCHESTER RD	4/11/2013	18:00	2	0	RAINING	WET	ANGLE COLLISION - ONE VEHICLE TURNING LEFT
OPPOSING LEFT TURN	WINCHESTER RD	2/25/2013	10:40	2	1	CLEAR	DRY	OPPOSING LEFT TURN
OPPOSING LEFT TURN	WINCHESTER RD	10/14/2013	12:55	2	0	CLEAR	DRY	OPPOSING LEFT TURN
OPPOSING LEFT TURN	WINCHESTER RD	1/29/2013	7:30	2	0	CLOUDY	WET	OPPOSING LEFT TURN
OPPOSING LEFT TURN	WINCHESTER RD	6/3/2013	8:21	2	3	CLOUDY	DRY	OPPOSING LEFT TURN
OPPOSING LEFT TURN	WINCHESTER RD	10/15/2013	13:32	2	1	CLOUDY	DRY	OPPOSING LEFT TURN
REAR END	WINCHESTER RD	1/24/2013	4:38	2	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER RD	4/16/2013	15:55	2	0	CLEAR	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	WINCHESTER RD	12/12/2013	16:30	2	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER RD	9/20/2013	17:39	2	2	CLEAR	DRY	REAR END - OTHER
REAR END	WINCHESTER RD	6/1/2013	7:11	2	0	CLOUDY	DRY	REAR END IN TRAFFIC ONE VEHICLE STOPPED
REAR END	WINCHESTER RD	3/26/2013	10:45	2	0	CLOUDY	WET	REAR END IN TRAFFIC ONE VEHICLE STOPPED
REAR END	WINCHESTER RD	8/28/2013	11:05	2	0	CLOUDY	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER RD	3/7/2013	16:07	2	2	CLOUDY	WET	REAR END - BOTH VEHICLES GOING STRAIGHT
REAR END	WINCHESTER RD	3/18/2013	16:34	2	0	CLOUDY	WET	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	WINCHESTER RD	11/2/2013	17:27	2	0	CLOUDY	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER RD	10/30/2013	8:50	2	1	RAINING	WET	REAR END IN TRAFFIC ONE VEHICLE STOPPED
REAR END	WINCHESTER RD	11/26/2013	8:51	2	0	RAINING	WET	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER RD	6/24/2013	13:24	2	0	RAINING	WET	REAR END - OTHER
REAR END	WINCHESTER RD	11/17/2013	14:45	2	0	RAINING	WET	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER RD	1/10/2013	15:45	2	0	RAINING	WET	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER RD	11/22/2013	16:04	2	0	RAINING	WET	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING COLLISION WITH FIXED OBJECT NON - INTERSECTION - FIRST EVENT COLLISION 09 - 32 EXCLUDING 16
REAR END	WINCHESTER RD	11/6/2013	17:03	2	0	RAINING	WET	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	WINCHESTER RD	3/1/2013	12:00	2	0	SNOWING	WET	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	WINCHESTER RD	3/2/2013	12:00	2	0	SNOWING	WET	REAR END IN TRAFFIC ONE VEHICLE STOPPED
REAR END	WINCHESTER RD	12/21/2012	22:31	5	1	SEVERE CROSSWINDS	WET	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING



CRASH DIAGRAM_2013
 US 60 & SIR BARTON WAY/EXECUTIVE DR
 NOT TO SCALE

FILE NAME: J:\PROJECT\KNTC\500596 KYTC DISTRICT 7 TRAFFIC 2015\LETTER AGREEMENT 2 MOW DATA-TECH\CRASHES\US60 + SIR-BARTON-EXEC.DR.US60
 USER: vanessa.nghtem
 DATE PLOTTED: June 13, 2016
 E-SHEET NAME:
 MicroStation v8.11.9.397

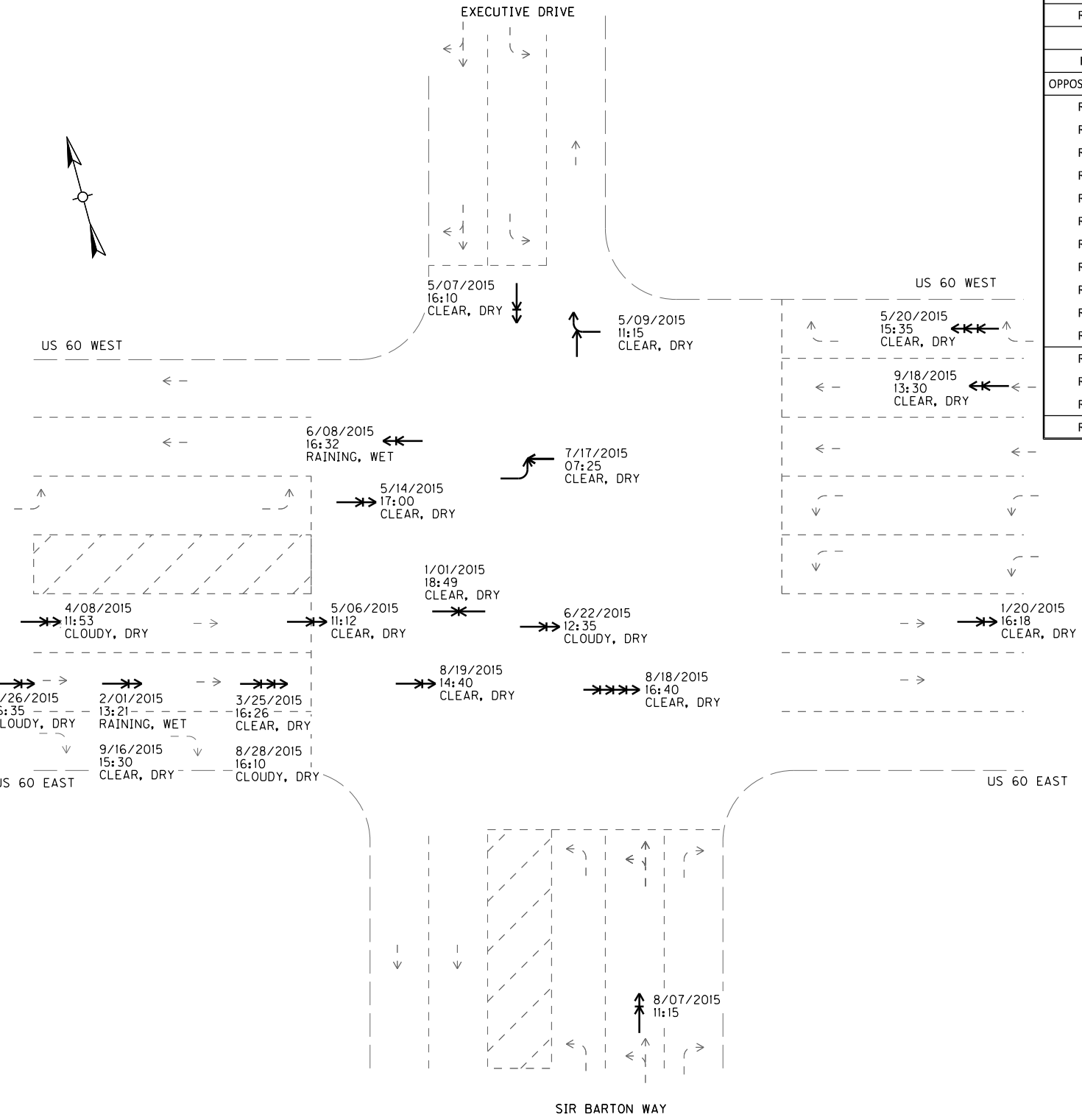


MANNER OF COLLISION	ROADWAY NAME	COLLISION DATE	COLLISION TIME	UNITS INVOLVED	INJURED	WEATHER	ROADWAY CONDITION	DIRECTIONAL ANALYSIS
REAR END	EXECUTIVE DR	2/17/2014	2011	2	0	RAINING	WET	REAR END - OTHER
SINGLE VEHICLE	EXECUTIVE DR	5/2/2014	1248	2	1	CLOUDY	DRY	COLLISION WITH BICYCLE
REAR END	SIR BARTON WAY	5/26/2014	1845	2	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	SIR BARTON WAY	7/18/2014	1605	2	0	RAINING	WET	REAR END - OTHER
ANGLE	WINCHESTER RD	8/29/2014	1505	2	0	CLEAR	DRY	ANGLE COLLISION - ONE VEHICLE TURNING LEFT
ANGLE	WINCHESTER RD	2/4/2014	1315	2	0	CLOUDY	WET	ANGLE COLLISION - ONE VEHICLE TURNING RIGHT
ANGLE	WINCHESTER RD	6/21/2014	1204	3	6	CLOUDY	DRY	ANGLE COLLISION - ONE VEHICLE TURNING LEFT
OPPOSING LEFT TURN	WINCHESTER RD	3/24/2014	1035	2	0	CLEAR	DRY	OPPOSING LEFT TURN
OPPOSING LEFT TURN	WINCHESTER RD	3/10/2014	2025	2	0	CLEAR	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
OPPOSING LEFT TURN	WINCHESTER RD	11/14/2014	2053	2	1	CLEAR	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	WINCHESTER RD	9/26/2014	35	2	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER RD	12/12/2014	1016	2	0	CLEAR	DRY	REAR END IN TRAFFIC ONE VEHICLE STOPPED
REAR END	WINCHESTER RD	7/17/2014	1248	2	0	CLEAR	DRY	REAR END IN TRAFFIC ONE VEHICLE STOPPED
REAR END	WINCHESTER RD	9/30/2014	1339	2	0	CLEAR	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	WINCHESTER RD	6/18/2014	1519	2	0	CLEAR	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	WINCHESTER RD	8/29/2014	1733	2	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER RD	1/4/2014	2240	2	1	CLEAR	DRY	REAR END IN TRAFFIC ONE VEHICLE STOPPED
REAR END	WINCHESTER RD	5/21/2014	1050	2	1	CLOUDY	DRY	REAR END - ONE VEHICLE STOPPED
REAR END	WINCHESTER RD	9/2/2014	1115	2	0	CLOUDY	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER RD	9/11/2014	1620	2	0	CLOUDY	DRY	REAR END - OTHER
REAR END	WINCHESTER RD	10/16/2014	1648	2	0	CLOUDY	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER RD	6/28/2014	1832	2	0	CLOUDY	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER RD	10/3/2014	1700	2	0	RAINING	WET	REAR END IN TRAFFIC ONE VEHICLE STOPPED
REAR END	WINCHESTER RD	1/13/2014	1709	2	0	RAINING	WET	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER RD	4/10/2014	1438	3	2	CLEAR	DRY	REAR END - BOTH VEHICLES GOING STRAIGHT
REAR END	WINCHESTER RD	9/17/2014	1555	3	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER RD	11/7/2014	1606	3	0	CLEAR	DRY	REAR END - OTHER
REAR END	WINCHESTER RD	10/9/2014	1653	3	3	CLOUDY	DRY	REAR END IN TRAFFIC ONE VEHICLE STOPPED
REAR END	WINCHESTER RD	9/9/2014	1720	4	1	CLEAR	DRY	REAR END - OTHER

LEGEND	
↓ PED	SINGLE VEHICLE STRIKING PEDESTRIAN / CYCLIST
↔ ↔	REAR END, 2 VEHICLES
↔ ↔ ↔	REAR END, 3 VEHICLES
↔ ↔ ↔ ↔	REAR END, 4 VEHICLES
↘ ↙	ANGLE, 2 VEHICLES
↘ ↙ ↘	ANGLE, 3 VEHICLES
↘ ↙ ↘ ↙	OPPOSING LEFT TURN, 2 VEHICLES

CRASH DIAGRAM_2014
 US 60 & SIR BARTON WAY/EXECUTIVE DR
 NOT TO SCALE

MANNER OF COLLISION	ROADWAY NAME	MILEPOINT DERIVED	COLLISION DATE	COLLISION TIME	UNITS INVOLVED	INJURED	WEATHER	ROADWAY CONDITION	DIRECTIONAL ANALYSIS
REAR END	EXECUTIVE DR	0.008	5/7/2015	1610	2	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	SIR BARTON WAY	0.026	8/7/2015	1115	2	0			OTHER ROADWAY OR MID-BLOCK COLLISION
ANGLE	WINCHESTER RD	11.591	5/9/2015	2134	2	1	CLEAR	DRY	1 VEHICLE ENTERING/LEAVING ENTRANCE
HEAD ON	WINCHESTER RD	11.588	1/1/2015	1849	2	1	CLEAR	DRY	OPPOSITE DIRECTION - BOTH VEHICLES GOING STRAIGHT AHEAD
OPPOSING LEFT TURN	WINCHESTER RD	11.579	7/17/2015	725	2	1	CLEAR	DRY	OPPOSING LEFT TURN
REAR END	WINCHESTER RD	11.561	5/6/2015	1112	2	0	CLEAR	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	WINCHESTER RD	11.614	9/18/2015	1330	2	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER RD	11.569	8/19/2015	1440	2	0	CLEAR	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	WINCHESTER RD	11.537	9/16/2015	1530	2	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER RD	11.611	1/20/2015	1618	2	0	CLEAR	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	WINCHESTER RD	11.589	5/14/2015	1700	2	0	CLEAR	DRY	REAR END - OTHER
REAR END	WINCHESTER RD	11.521	4/8/2015	1153	2	0	CLOUDY	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	WINCHESTER RD	11.58	6/22/2015	1235	2	0	CLOUDY	DRY	REAR END - OTHER
REAR END	WINCHESTER RD	11.512	5/26/2015	1635	2	0	CLOUDY	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER RD	11.535	2/1/2015	1321	2	0	RAINING	WET	REAR END IN TRAFFIC ONE VEHICLE STOPPED
REAR END	WINCHESTER RD	11.586	6/8/2015	1632	2	1	RAINING	WET	REAR END - ONE VEHICLE STOPPED
REAR END	WINCHESTER RD	11.626	5/20/2015	1535	3	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER RD	11.552	3/25/2015	1626	3	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER RD	11.545	8/28/2015	1610	3	0	CLOUDY	DRY	REAR END IN TRAFFIC ONE VEHICLE STOPPED
REAR END	WINCHESTER RD	11.579	8/18/2015	1640	4	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING



LEGEND	
	REAR END, 2 VEHICLES
	REAR END, 3 VEHICLES
	REAR END, 4 VEHICLES
	ANGLE, 2 VEHICLES
	OPPOSING LEFT TURN, 2 VEHICLES
	HEAD ON, 2 VEHICLES

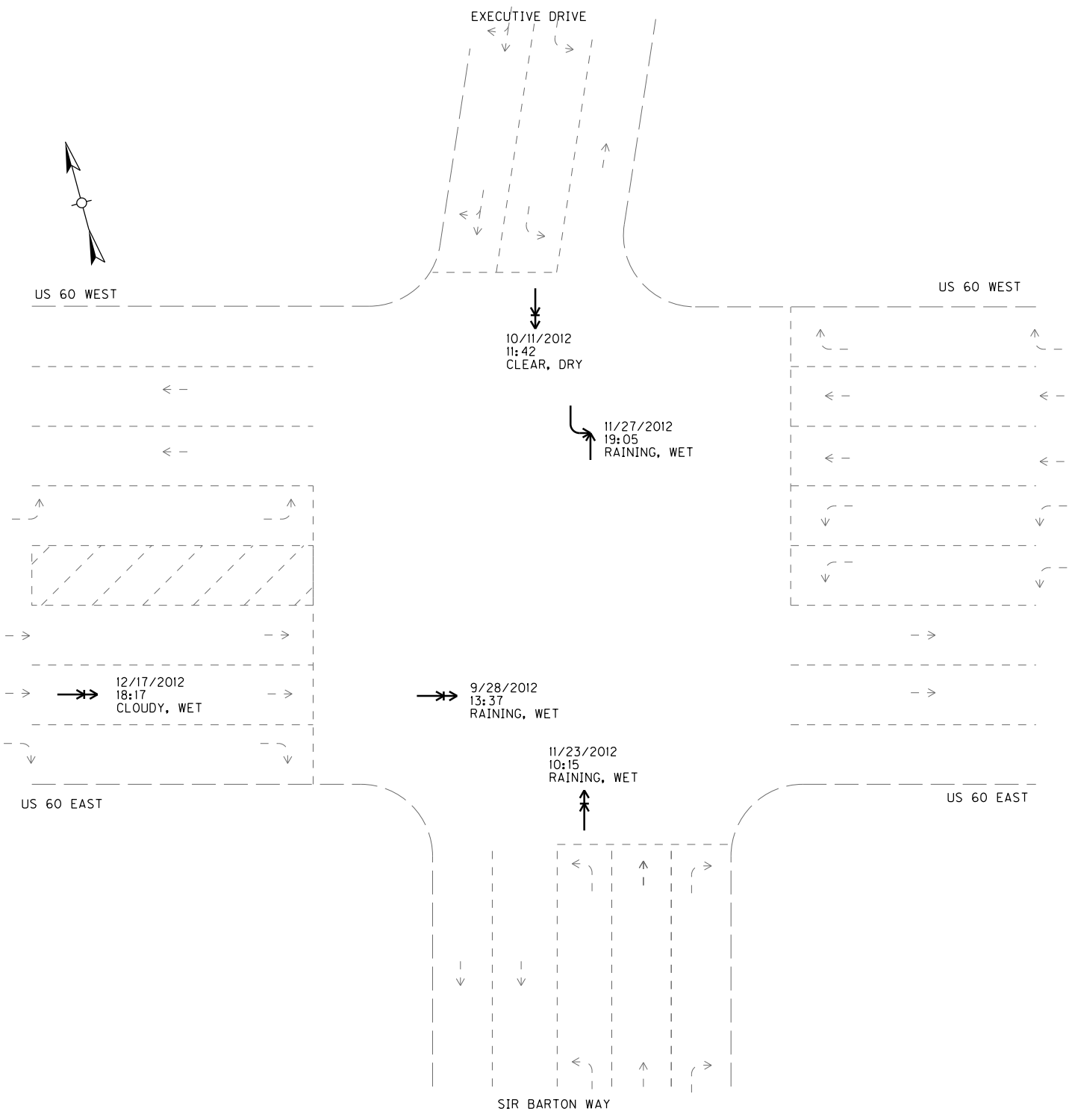
FILE NAME: J:\PROJECT\KNTC\5005916 KYTC DISTRICT 7 TRAFFIC 2015\LETTER AGREEMENT 2 MOW DATA-TECH\CRASHES\US60 + SIR-BARTON-EXEC-DR.US60
 USER: vanessa.nghtem
 DATE PLOTTED: June 14, 2016
 E-SHEET NAME:
 MicroStation v8.11.9.397

FILE NAME: J:\PROJECT\KNTC\5005516 KYTC DISTRICT 7 TRAFFIC 2015\LETTER AGREEMENT 2 MOW DATA-TECH\CRASHES\US60 + ELKHORN_RD\US60-ELKHORN
 USER: vanessa.nghtem
 DATE PLOTTED: June 14, 2016
 E-SHEET NAME:
 MicroStation v8.11.9.397

COUNTY OF	ITEM NO.	SHEET NO.
FAYETTE		FIGURE 2A

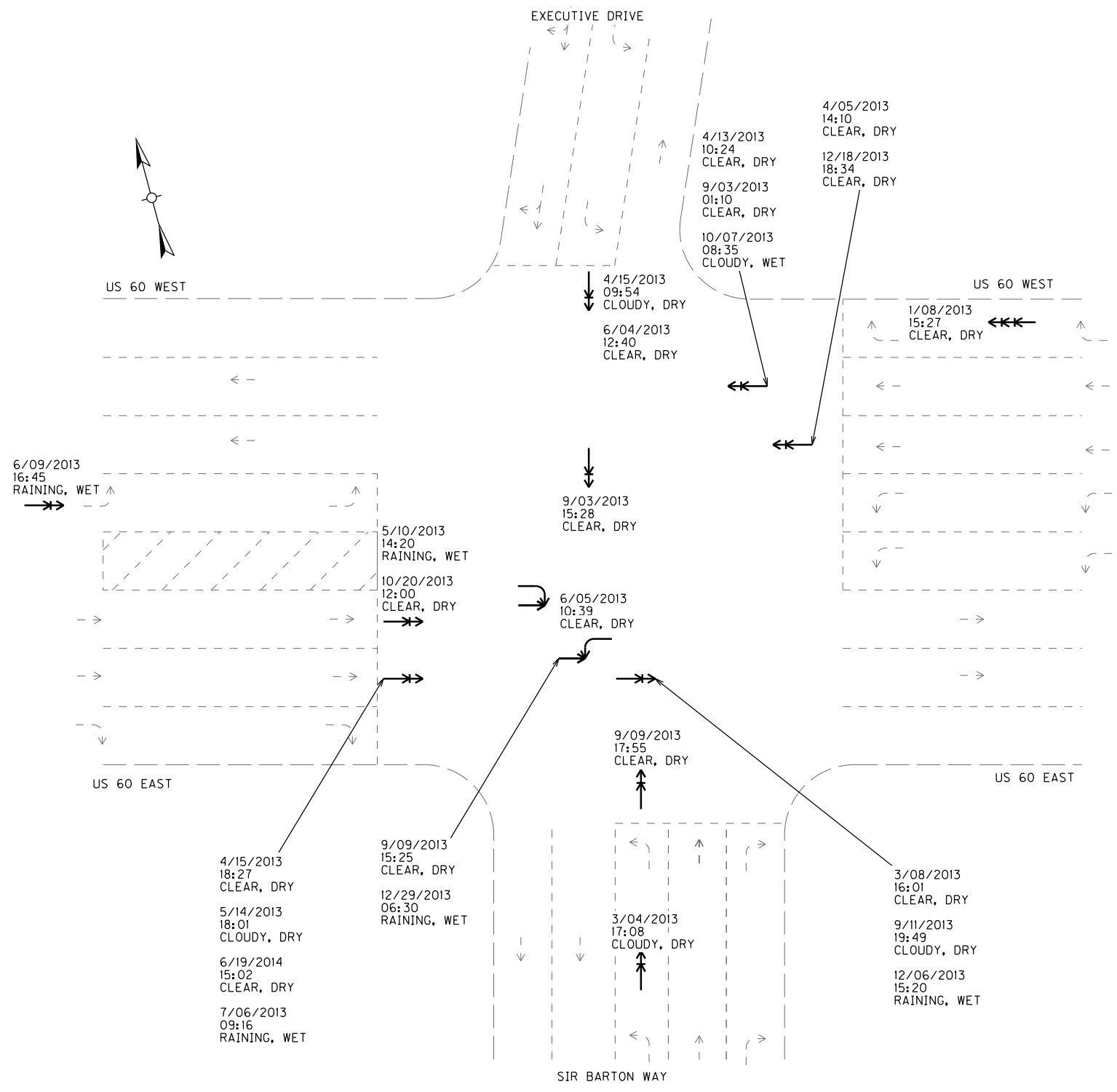
MANNER OF COLLISION	ROADWAY NAME	COLLISION DATE	COLLISION TIME	UNITS INVOLVED	INJURED	WEATHER	ROADWAY CONDITION	DIRECTIONAL ANALYSIS
REAR END	ELKHORN	10/11/2012	1142	2	0	CLEAR	DRY	REAR END IN TRAFFIC ONE VEHICLE STOPPED
REAR END	ELKHORN	11/23/2012	1015	2	0	RAINING	WET	REAR END IN TRAFFIC ONE VEHICLE STOPPED
ANGLE	WINCHESTER	11/27/2012	1905	2	0	RAINING	WET	ANGLE COLLISION - ONE VEHICLE TURNING LEFT
REAR END	WINCHESTER	12/17/2012	1817	2	0	CLOUDY	WET	REAR END IN TRAFFIC ONE VEHICLE STOPPED
REAR END	WINCHESTER	9/28/2012	1337	2	0	RAINING	WET	REAR END IN TRAFFIC ONE VEHICLE STOPPED

LEGEND	
	REAR END, 2 VEHICLES
	ANGLE, 2 VEHICLES



CRASH DIAGRAM_2012
 US 60 & ELKHORN RD
 NOT TO SCALE

FILE NAME: J:\PROJECT\KNTC\500516 KYTC DISTRICT 7 TRAFFIC 2015 LETTER AGREEMENT 2 MOW DATA-TECH\CRASHES\US60 + ELKHORN_RD\US60-ELKHORN
 USER: vanessa.nghtem
 DATE PLOTTED: June 14, 2016
 E-SHEET NAME:
 MicroStation v8.11.9.397

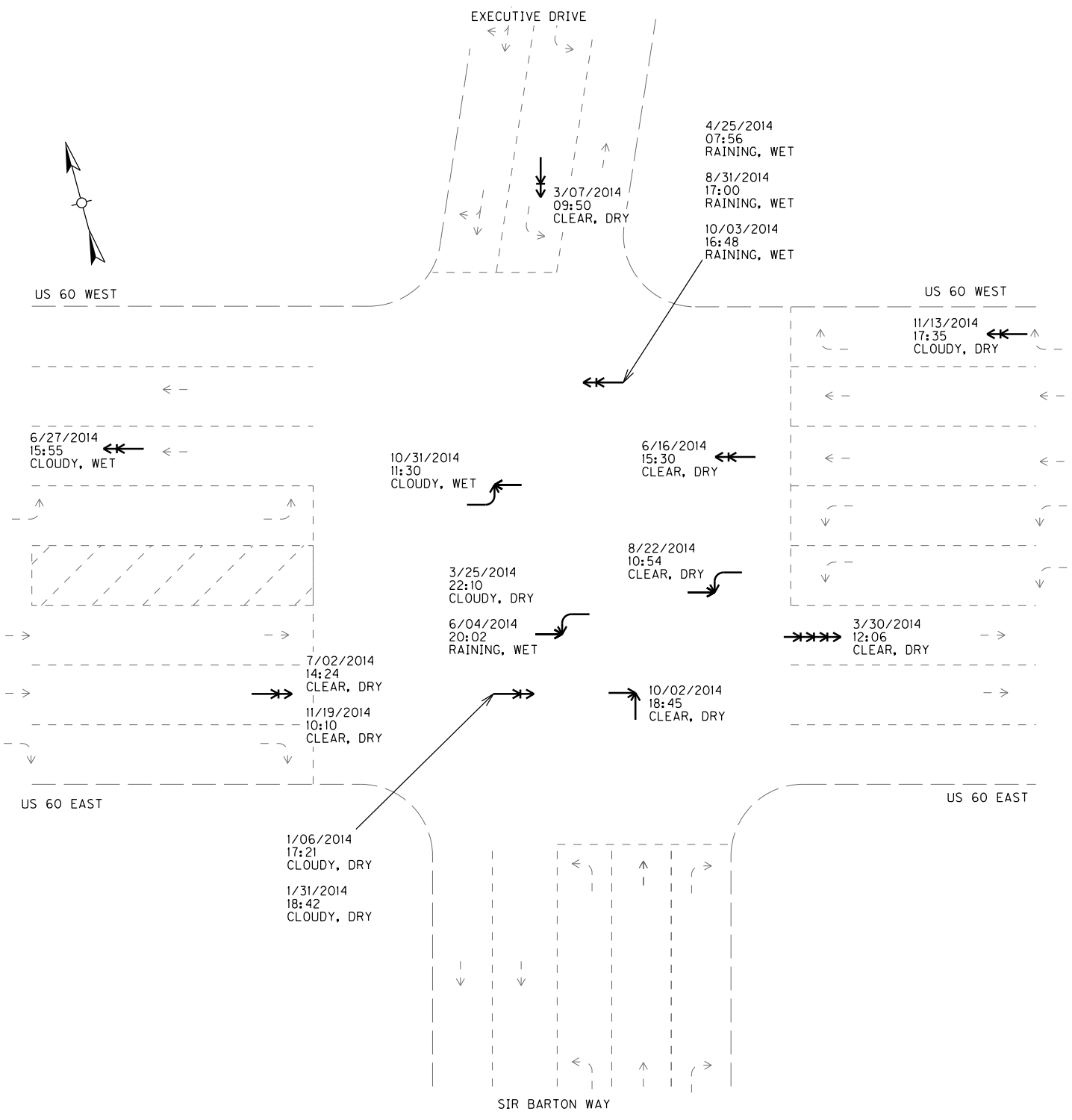


MANNER OF COLLISION	ROADWAY NAME	COLLISION DATE	COLLISION TIME	UNITS INVOLVED	INJURED	WEATHER	ROADWAY CONDITION	DIRECTIONAL ANALYSIS
REAR END	ELKHORN	6/4/2013	1240	2	0	CLEAR	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	ELKHORN	9/3/2013	1528	2	1	CLEAR	DRY	REAR END - ONE VEHICLE TURNING LEFT
REAR END	ELKHORN	9/9/2013	1755	2	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	ELKHORN	3/4/2013	1708	2	0	CLOUDY	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	ELKHORN	4/15/2013	954	2	0	CLOUDY	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
ANGLE	WINCHESTER	6/5/2013	1039	2	0	CLEAR	DRY	ANGLE COLLISION - ONE VEHICLE TURNING RIGHT
ANGLE	WINCHESTER	9/9/2013	1525	2	0	CLEAR	DRY	ANGLE COLLISION - OTHER
OPPOSING LEFT TURN	WINCHESTER	12/29/2013	630	2	0	RAINING	WET	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	WINCHESTER	3/8/2013	1601	2	0	CLEAR	DRY	REAR END - OTHER
REAR END	WINCHESTER	4/5/2013	1410	2	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER	4/13/2013	1024	2	0	CLEAR	DRY	REAR END - OTHER
REAR END	WINCHESTER	4/15/2013	1827	2	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER	6/19/2013	1502	2	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER	9/3/2013	110	2	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER	10/20/2013	1200	2	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER	12/18/2013	1834	2	1	CLEAR	DRY	REAR END - OTHER
REAR END	WINCHESTER	5/14/2013	1801	2	0	CLOUDY	DRY	REAR END IN TRAFFIC ONE VEHICLE STOPPED
REAR END	WINCHESTER	9/11/2013	1949	2	0	CLOUDY	DRY	REAR END - OTHER
REAR END	WINCHESTER	10/7/2013	835	2	0	CLOUDY	WET	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER	5/10/2013	1420	2	0	RAINING	WET	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER	6/9/2013	1645	2	2	RAINING	WET	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER	7/6/2013	916	2	1	RAINING	WET	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER	12/6/2013	1520	2	0	RAINING	WET	REAR END - OTHER
REAR END	WINCHESTER	1/8/2013	1527	3	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING

LEGEND	
	REAR END, 2 VEHICLES
	REAR END, 3 VEHICLES
	ANGLE, 2 VEHICLES
	OPPOSING LEFT TURN, 2 VEHICLES

CRASH DIAGRAM_2013
 US 60 & ELKHORN RD
 NOT TO SCALE

MANNER OF COLLISION	ROADWAY NAME	COLLISION DATE	COLLISION TIME	UNITS INVOLVED	INJURED	WEATHER	ROADWAY CONDITION	DIRECTIONAL ANALYSIS
REAR END	ELKHORN	3/7/2014	950	2	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
ANGLE	WINCHESTER	8/22/2014	1054	2	0	CLEAR	DRY	ANGLE COLLISION - ONE VEHICLE TURNING LEFT
ANGLE	WINCHESTER	10/2/2014	1845	2	0	CLEAR	DRY	ANGLE COLLISION - BOTH VEHICLES GOING STRAIGHT
ANGLE	WINCHESTER	3/25/2014	2210	2	1	CLOUDY	DRY	ANGLE COLLISION - ONE VEHICLE TURNING LEFT
ANGLE	WINCHESTER	10/31/2014	1130	2	0	CLOUDY	WET	ANGLE COLLISION - OTHER
OPPOSING LEFT TURN	WINCHESTER	6/4/2014	2002	2	0	RAINING	WET	OPPOSING LEFT TURN
REAR END	WINCHESTER	6/16/2014	1530	2	0	CLEAR	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	WINCHESTER	7/2/2014	1424	2	0	CLEAR	DRY	REAR END IN TRAFFIC ONE VEHICLE STOPPED
REAR END	WINCHESTER	11/19/2014	1010	2	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER	1/6/2014	1721	2	0	CLOUDY	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	WINCHESTER	1/31/2014	1842	2	0	CLOUDY	DRY	REAR END - OTHER
REAR END	WINCHESTER	6/27/2014	1555	2	0	CLOUDY	WET	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER	11/13/2014	1735	2	0	CLOUDY	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	WINCHESTER	4/25/2014	756	2	0	RAINING	WET	REAR END - ONE VEHICLE STOPPED
REAR END	WINCHESTER	8/31/2014	1700	2	0	RAINING	WET	REAR END - OTHER
REAR END	WINCHESTER	10/3/2014	1648	2	0	RAINING	WET	REAR END - ONE VEHICLE TURNING RIGHT
REAR END	WINCHESTER	3/30/2014	1206	4	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING



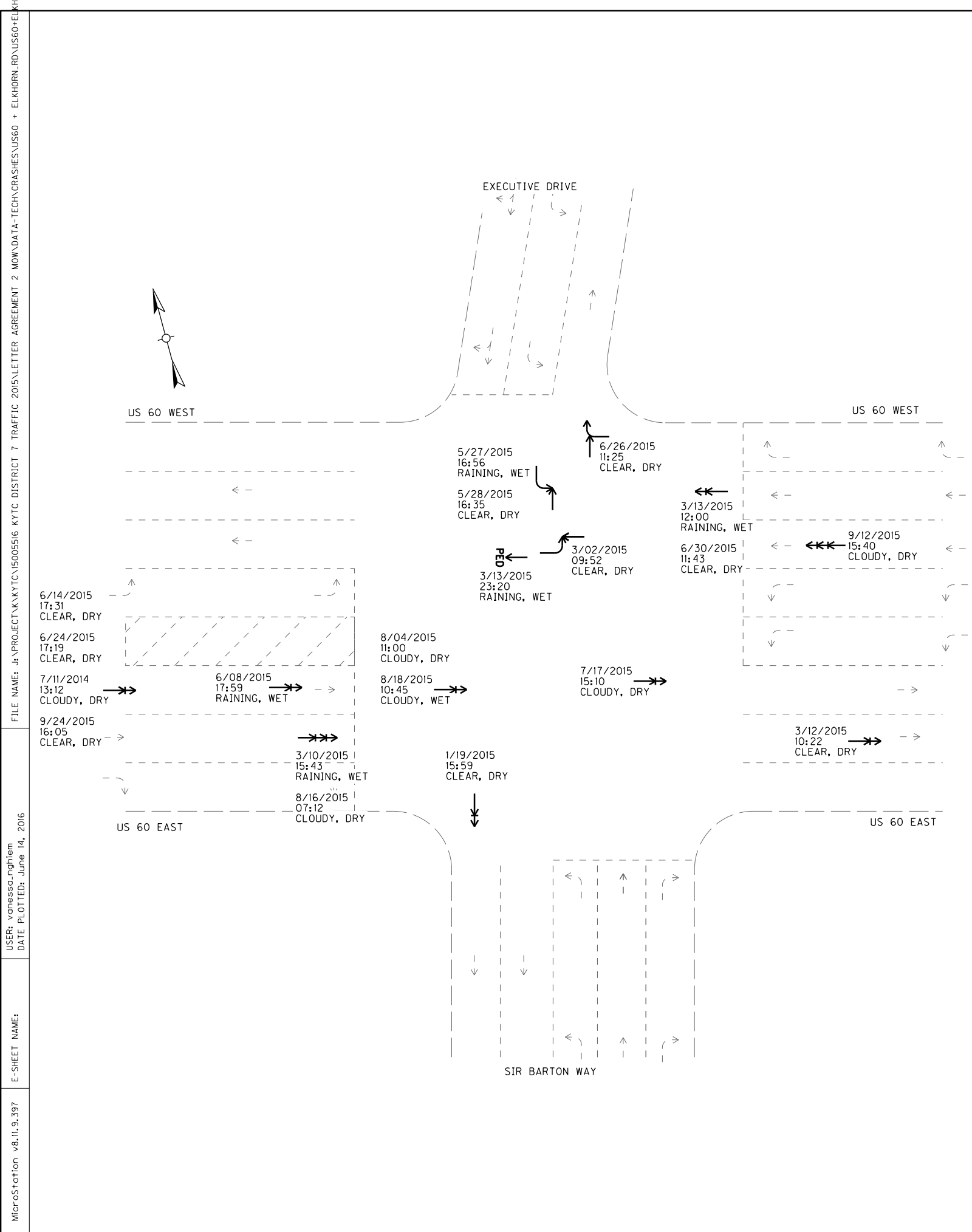
LEGEND	
	REAR END, 2 VEHICLES
	REAR END, 4 VEHICLES
	ANGLE, 2 VEHICLES
	OPPOSING LEFT TURN, 2 VEHICLES

CRASH DIAGRAM_2014
US 60 & ELKHORN RD
NOT TO SCALE

FILE NAME: J:\PROJECT\KNTC\500556 KYTC DISTRICT 7 TRAFFIC 2015\LETTER AGREEMENT 2 MOW DATA-TECH\CRASHES\US60 + ELKHORN_RD\US60-ELKHORN
 USER: vanessa.nghtem
 DATE PLOTTED: June 14, 2016
 E-SHEET NAME:
 MicroStation v8.11.9.397

MANNER OF COLLISION	ROADWAY NAME	COLLISION DATE	COLLISION TIME	UNITS INVOLVED	INJURED	WEATHER	ROADWAY CONDITION	DIRECTIONAL ANALYSIS
ANGLE	ELKHORN	5/28/2015	1635	2	0	CLEAR	DRY	1 VEHICLE ENTERING/LEAVING ENTRANCE
ANGLE	ELKHORN	6/26/2015	1125	2	0	CLEAR	DRY	ANGLE COLLISION - ONE VEHICLE TURNING RIGHT
ANGLE	ELKHORN	5/27/2015	1656	2	0	RAINING	WET	1 VEHICLE ENTERING/LEAVING ENTRANCE
REAR END	ELKHORN	1/19/2015	1559	2	0	CLEAR	DRY	REAR END - OTHER
ANGLE	WINCHESTER	3/2/2015	952	2	0	CLEAR	DRY	ANGLE COLLISION - ONE VEHICLE TURNING LEFT
REAR END	WINCHESTER	3/12/2015	1022	2	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER	6/14/2015	1731	2	1	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER	6/24/2015	1719	2	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER	6/30/2015	1143	2	0	CLEAR	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	WINCHESTER	9/24/2015	1605	2	0	CLEAR	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	WINCHESTER	7/11/2015	1312	2	0	CLOUDY	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER	7/17/2015	1510	2	0	CLOUDY	DRY	REAR END - ONE VEHICLE STOPPED
REAR END	WINCHESTER	8/4/2015	1100	2	0	CLOUDY	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER	8/18/2015	1045	2	0	CLOUDY	WET	REAR END - OTHER
REAR END	WINCHESTER	3/13/2015	1200	2	0	RAINING	WET	REAR END IN TRAFFIC ONE VEHICLE STOPPED
REAR END	WINCHESTER	6/8/2015	1759	2	0	RAINING	WET	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	WINCHESTER	8/16/2015	712	3	1	CLOUDY	DRY	REAR END IN TRAFFIC ONE VEHICLE STOPPED
REAR END	WINCHESTER	9/12/2015	1540	3	0	CLOUDY	DRY	REAR END IN TRAFFIC ONE VEHICLE STOPPED
REAR END	WINCHESTER	3/10/2015	1543	3	0	RAINING	WET	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
SINGLE VEHICLE	WINCHESTER	3/13/2015	2320	2	1	RAINING	WET	COLLISION WITH BICYCLE

LEGEND	
	SINGLE VEHICLE STRIKING PEDESTRIAN / CYCLIST
	REAR END, 2 VEHICLES
	REAR END, 3 VEHICLES
	ANGLE, 2 VEHICLES
	OPPOSING LEFT TURN, 2 VEHICLES



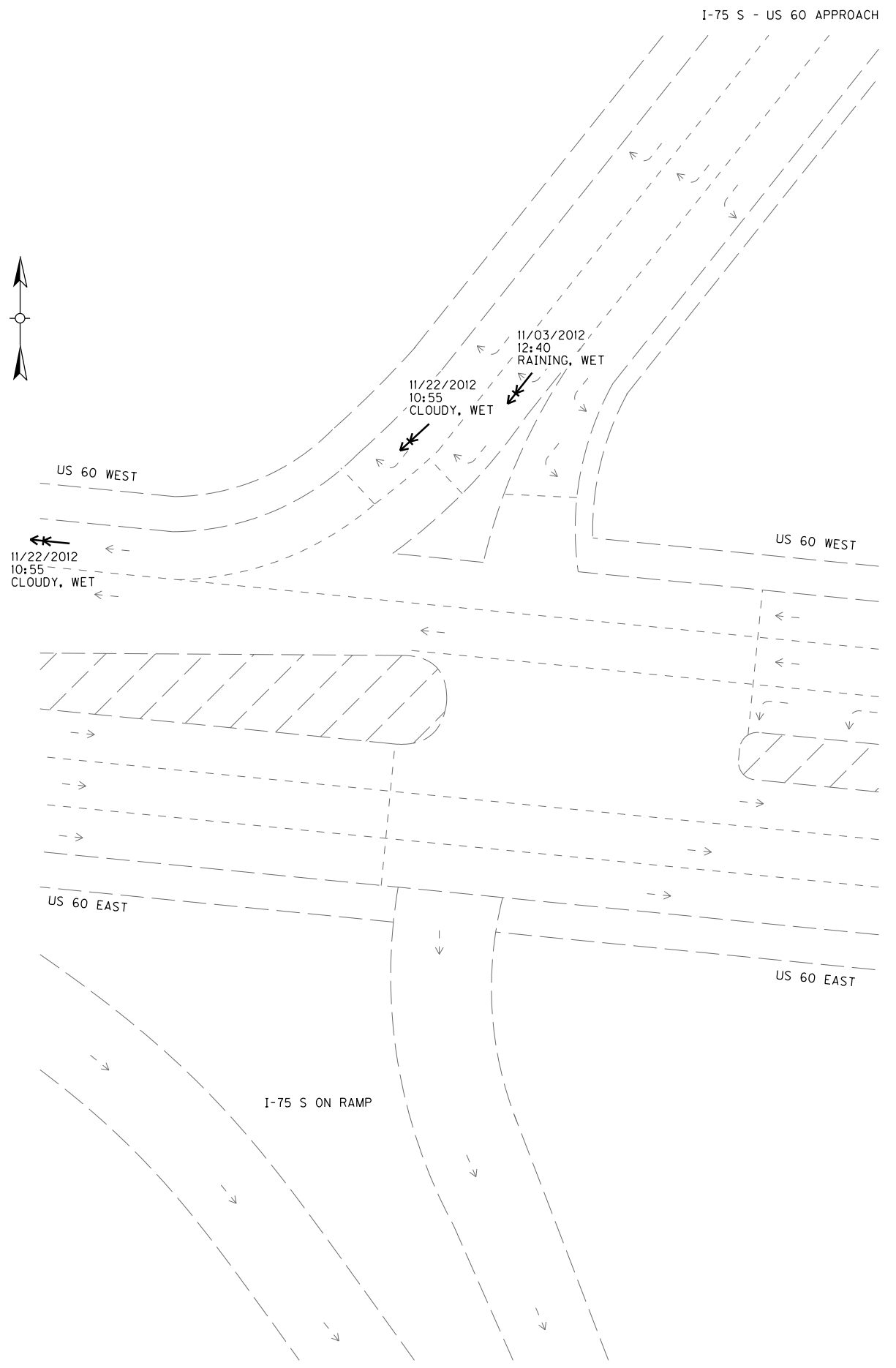
FILE NAME: J:\PROJECT\KX\KXTC\500516 KYTC DISTRICT 7 TRAFFIC 2015\LETTER AGREEMENT 2 MOW DATA-TECH\CRASHES\US60 + ELKHORN_RD\US60-ELKHORN
 USER: vanessa.nghtem
 DATE PLOTTED: June 14, 2016
 E-SHEET NAME:
 MicroStation v8.11.9.397

CRASH DIAGRAM_2015
 US 60 & ELKHORN RD
 NOT TO SCALE

MicroStation v8.11.9.397 E-SHEET NAME: USER: vanessa.nghtem DATE PLOTTED: June 14, 2016 FILE NAME: J:\PROJECT\K\KYTC\5005516 KYTC DISTRICT 7 TRAFFIC 2015\LETTER AGREEMENT 2 MOW DATA-TECH\CRASHES\US 60 + I-75 S\US 60 + I-75 S.DWG

COUNTY OF	ITEM NO.	SHEET NO.
FAYETTE		FIGURE 3A

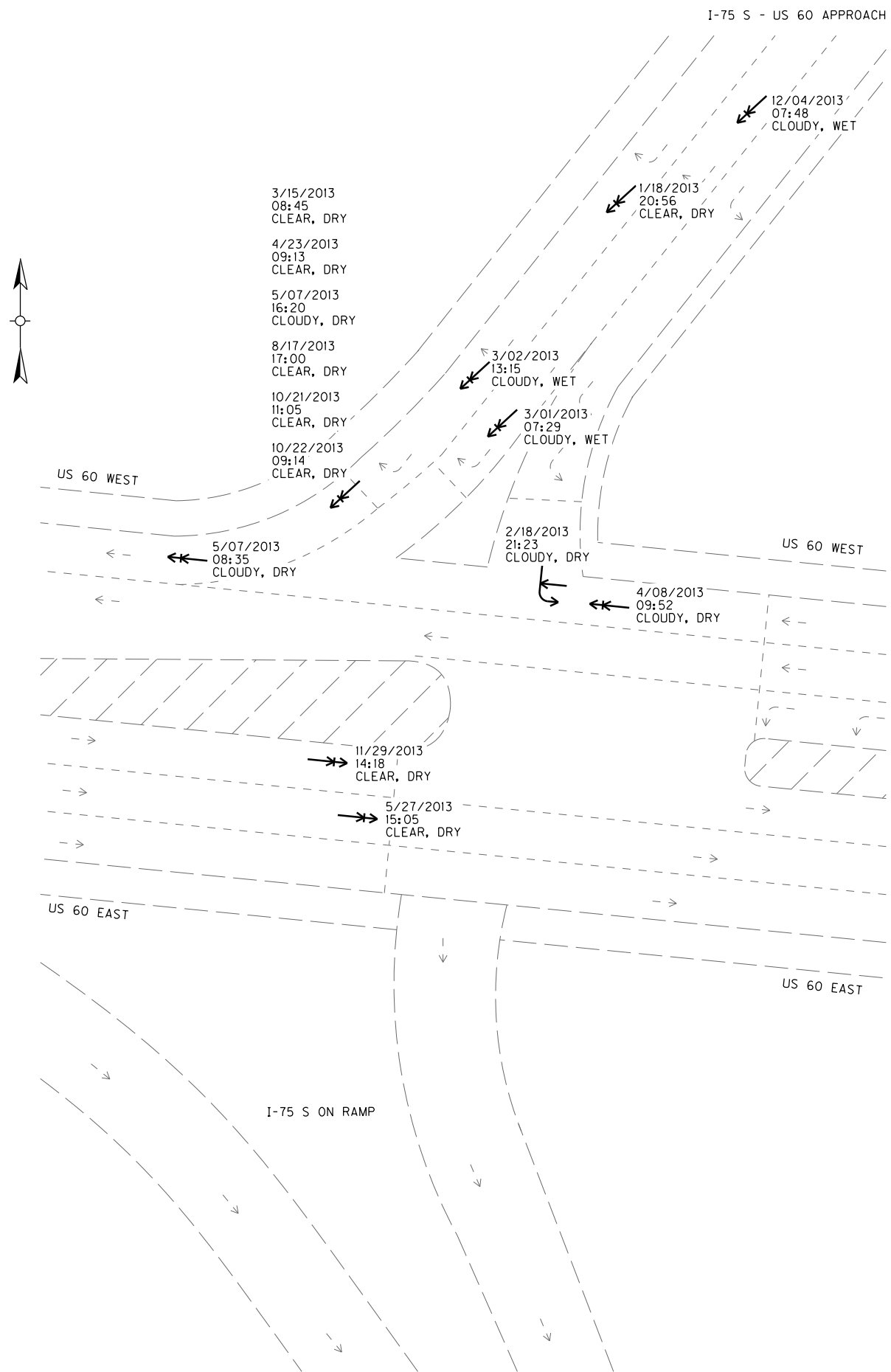
MANNER OF COLLISION	RAMP TO	COLLISION DATE	COLLISION TIME	UNITS INVOLVED	WEATHER	ROADWAY CONDITION	DIRECTIONAL ANALYSIS	LIGHT CONDITION
REAR END	US 60	11/3/2012	1240	2	RAINING	WET	REAR END - ON RAMP	DAYLIGHT
REAR END	US 60	11/22/2012	1055	2	CLOUDY	WET	REAR END - ON RAMP	DAYLIGHT
REAR END	US 60	12/30/2012	1836	2	CLEAR	DRY	REAR END - ON RAMP	DARK-HWY LIGHTED/ON



CRASH DIAGRAM_2012
US 60 & I-75 S RAMP
NOT TO SCALE

FILE NAME: J:\PROJECT\KNTC\500516 KYTC DISTRICT 7 TRAFFIC 2015\LETTER AGREEMENT 2 MOW DATA-TECH\CRASHES\US 60 + I-75 S\US 60 + I-75 S.15
 USER: vanessa.nghtem
 DATE PLOTTED: June 14, 2016
 E-SHEET NAME:
 MicroStation v8.11.9.397

COUNTY OF	ITEM NO.	SHEET NO.
FAYETTE		FIGURE 3B



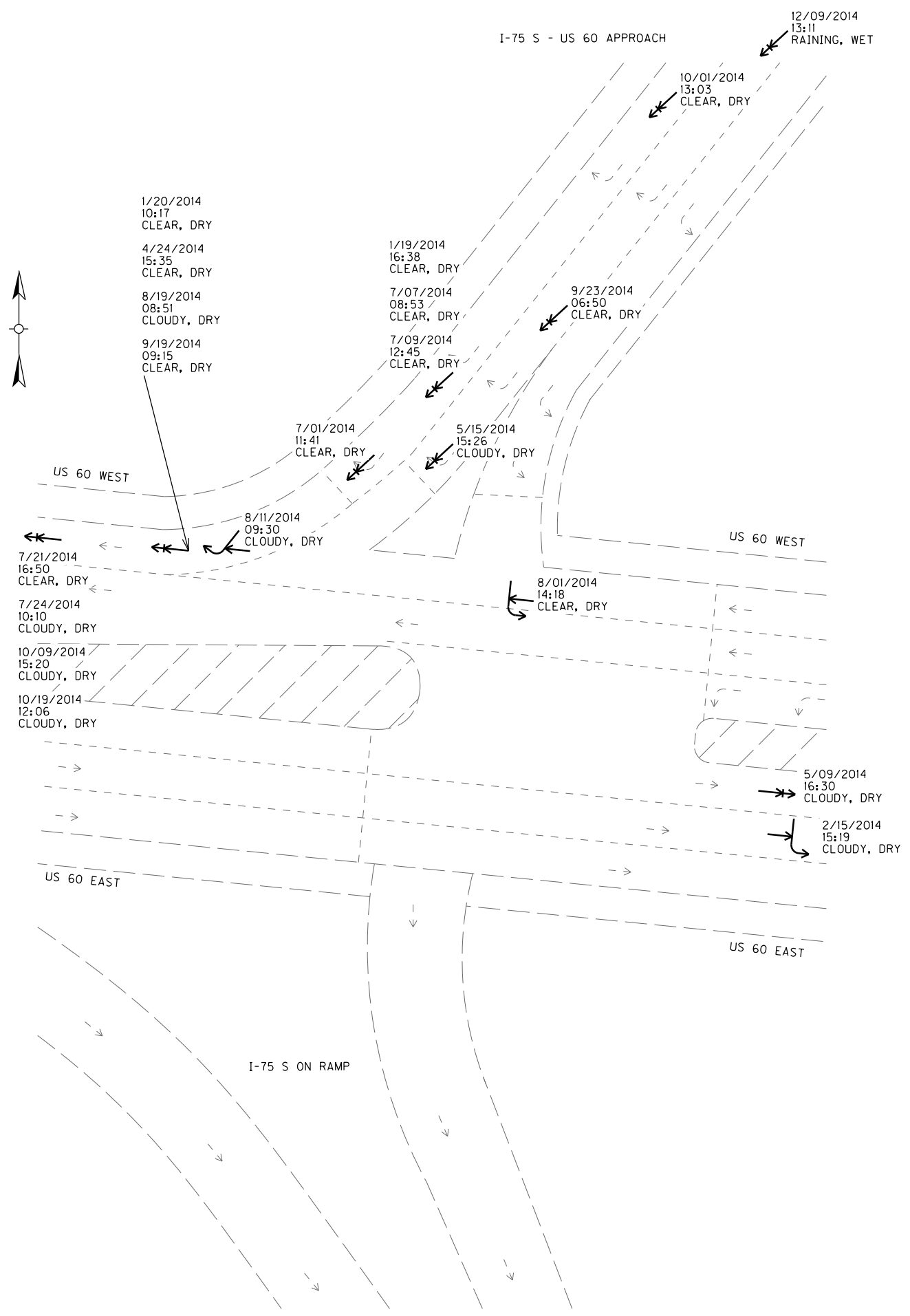
MANNER OF COLLISION	RAMP TO	COLLISION DATE	COLLISION TIME	UNITS INVOLVED	WEATHER	ROADWAY CONDITION	DIRECTIONAL ANALYSIS	LIGHT CONDITION
ANGLE	I 0075	2/18/2013	2123	2	CLOUDY	DRY	1 VEHICLE ENTERING/LEAVING ENTRANCE	DARK-HWY LIGHTED/ON
REAR END	US 60	1/18/2013	2056	2	CLEAR	DRY	REAR END - ON RAMP	DARK-HWY LIGHTED/ON
REAR END	I 0075	5/27/2013	1505	2	CLEAR	DRY	REAR END - ONE VEHICLE STOPPED	DAYLIGHT
REAR END	I 0075	11/29/2013	1418	2	CLEAR	DRY	REAR END - OTHER	DAYLIGHT
REAR END	US 60	12/4/2013	748	2	CLOUDY	WET	REAR END - ON RAMP	DAYLIGHT
REAR END	US 60	3/1/2013	729	2	CLOUDY	WET	REAR END - ON RAMP	DAYLIGHT
REAR END	US 60	3/2/2013	1315	2	CLOUDY	WET	OTHER ROADWAY OR MID-BLOCK COLLISION	DAYLIGHT
REAR END	US 60	3/15/2013	845	2	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING	DAYLIGHT
REAR END	US 60	4/8/2013	952	2	CLOUDY	DRY	REAR END - ONE VEHICLE TURNING RIGHT	DAYLIGHT
REAR END	US 60	4/23/2013	913	2	CLEAR	DRY	REAR END - ON RAMP	DAYLIGHT
REAR END	US 60	5/7/2013	835	2	CLOUDY	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING	DAYLIGHT
REAR END	US 60	5/7/2013	1620	2	CLOUDY	DRY	REAR END - OTHER	DAYLIGHT
REAR END	US 60	8/17/2013	1700	2	CLEAR	DRY	REAR END - OTHER	DAYLIGHT
REAR END	US 60	10/21/2013	1105	2	CLEAR	DRY	REAR END - OTHER	DAYLIGHT
REAR END	US 60	10/22/2013	914	2	CLEAR	DRY	REAR END - ON RAMP	DAYLIGHT

LEGEND	
	REAR END, 2 VEHICLES
	OPPOSING LEFT TURN, 2 VEHICLES

CRASH DIAGRAM_2013
 US 60 & I-75 S RAMP
 NOT TO SCALE

MicroStation v8.11.9.397 E-SHEET NAME: USER: vanessa.nghtem DATE PLOTTED: June 14, 2016 FILE NAME: J:\PROJECT\KNTC\500596 KYTC DISTRICT 7 TRAFFIC 2015\LETTER AGREEMENT 2 MOW DATA-TECH\CRASHES\US 60 + I-75 S\US 60 + I-75 S

COUNTY OF	ITEM NO.	SHEET NO.
FAYETTE		FIGURE 3C



MANNER OF COLLISION	RAMP TO	COLLISION DATE	COLLISION TIME	UNITS INVOLVED	WEATHER	ROADWAY CONDITION	DIRECTIONAL ANALYSIS	LIGHT CONDITION
ANGLE	I 0075	2/15/2014	1519	2	CLOUDY	DRY	1 VEHICLE ENTERING/LEAVING ENTRANCE	DAYLIGHT
ANGLE	US 60	8/11/2014	930	2	CLOUDY	DRY	ANGLE COLLISION - OTHER	DAYLIGHT
OPPOSING LEFT TURN	I 0075	8/1/2014	1418	2	CLEAR	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION	DAYLIGHT
REAR END	US 60	10/1/2014	1303	2	CLEAR	DRY	REAR END - ON RAMP	DAYLIGHT
REAR END	US 60	12/9/2014	1311	2	RAINING	WET	REAR END - ON RAMP	DAYLIGHT
REAR END	US 60	1/19/2014	1638	2	CLEAR	DRY	REAR END - ON RAMP	DAYLIGHT
REAR END	US 60	1/20/2014	1017	2	CLEAR	DRY	REAR END - ON RAMP	DAYLIGHT
REAR END	US 60	4/24/2014	1535	2	CLEAR	DRY	REAR END - ON RAMP	DAYLIGHT
REAR END	I 0075	5/9/2014	1630	2	CLOUDY	DRY	REAR END - OTHER	DAYLIGHT
REAR END	US 60	5/15/2014	1526	2	CLOUDY	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION	DAYLIGHT
REAR END	US 60	7/1/2014	1141	2	CLEAR	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION	DAYLIGHT
REAR END	US 60	7/7/2014	853	2	CLEAR	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION	DAYLIGHT
REAR END	US 60	7/9/2014	1245	2	CLEAR	DRY	REAR END - ON RAMP	DAYLIGHT
REAR END	US 60	7/21/2014	1650	2	CLEAR	DRY	REAR END - OTHER	DAYLIGHT
REAR END	US 60	7/24/2014	1010	2	CLOUDY	DRY	REAR END - OTHER	DAYLIGHT
REAR END	US 60	8/19/2014	851	2	CLOUDY	DRY	REAR END - ON RAMP	DAYLIGHT
REAR END	US 60	9/19/2014	915	2	CLEAR	DRY	REAR END - ON RAMP	DAYLIGHT
REAR END	US 60	9/23/2014	650	3	CLEAR	DRY	REAR END - ON RAMP	DARK-HWY LIGHTED/ON
REAR END	US 60	10/9/2014	1520	2	CLOUDY	DRY	REAR END - OTHER	DAYLIGHT
REAR END	US 60	10/19/2014	1206	2	CLOUDY	DRY	REAR END - ONE VEHICLE STOPPED	DAYLIGHT

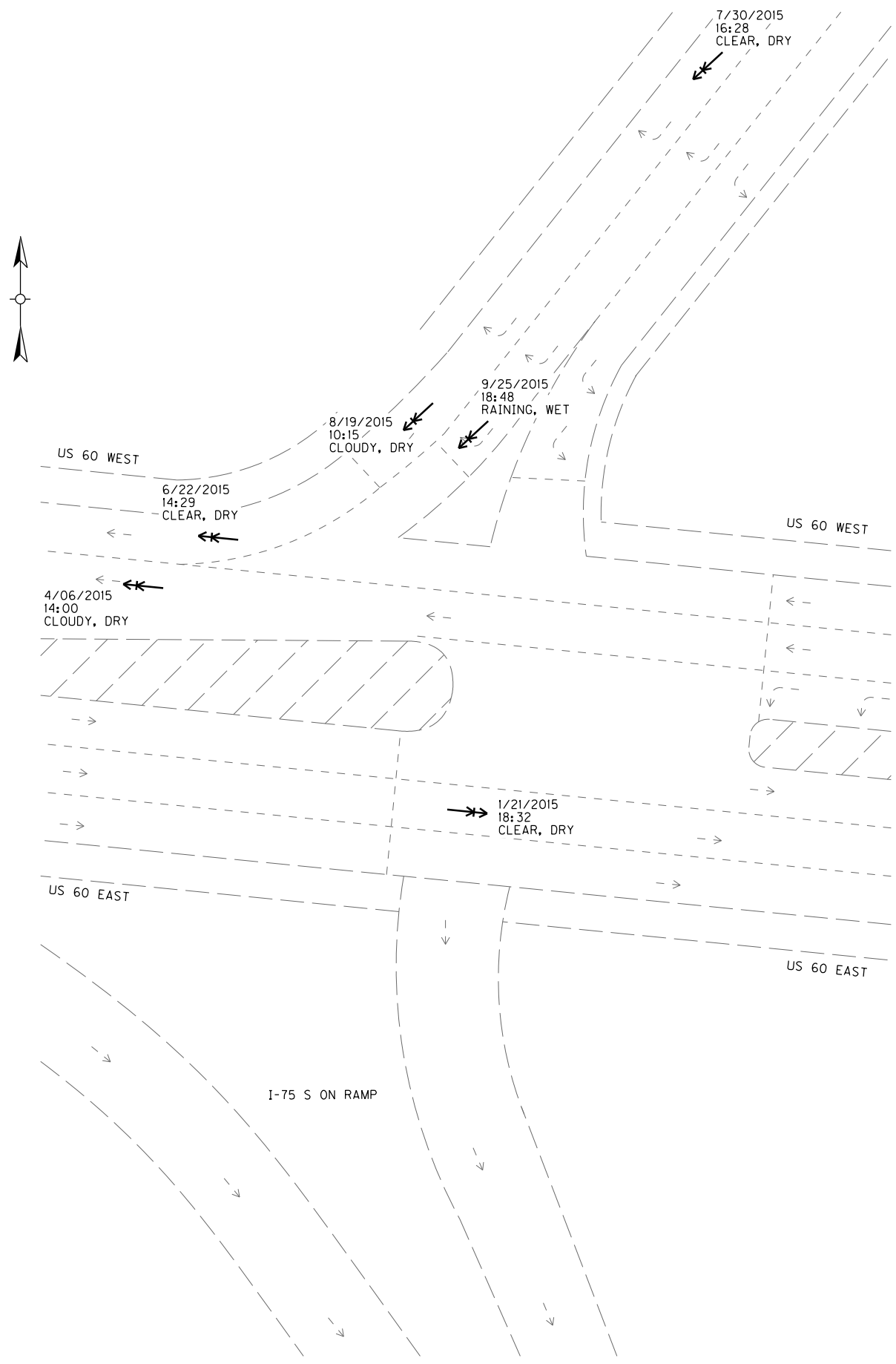
LEGEND	
	REAR END, 2 VEHICLES
	ANGLE, 2 VEHICLES
	OPPOSING LEFT TURN, 2 VEHICLES

CRASH DIAGRAM_2014
US 60 & I-75 S RAMP
NOT TO SCALE

MicroStation v8.11.9.397 E-SHEET NAME: USER: vanessa.nghtem DATE PLOTTED: June 14, 2016 FILE NAME: J:\PROJECT\KNTC\5005516 KYTC DISTRICT 7 TRAFFIC 2015\LETTER AGREEMENT 2 MOW DATA-TECH\CRASHES\US 60 + I-75 S\US 60 + I-75 S

COUNTY OF	ITEM NO.	SHEET NO.
FAYETTE		FIGURE 3D

I-75 S - US 60 APPROACH



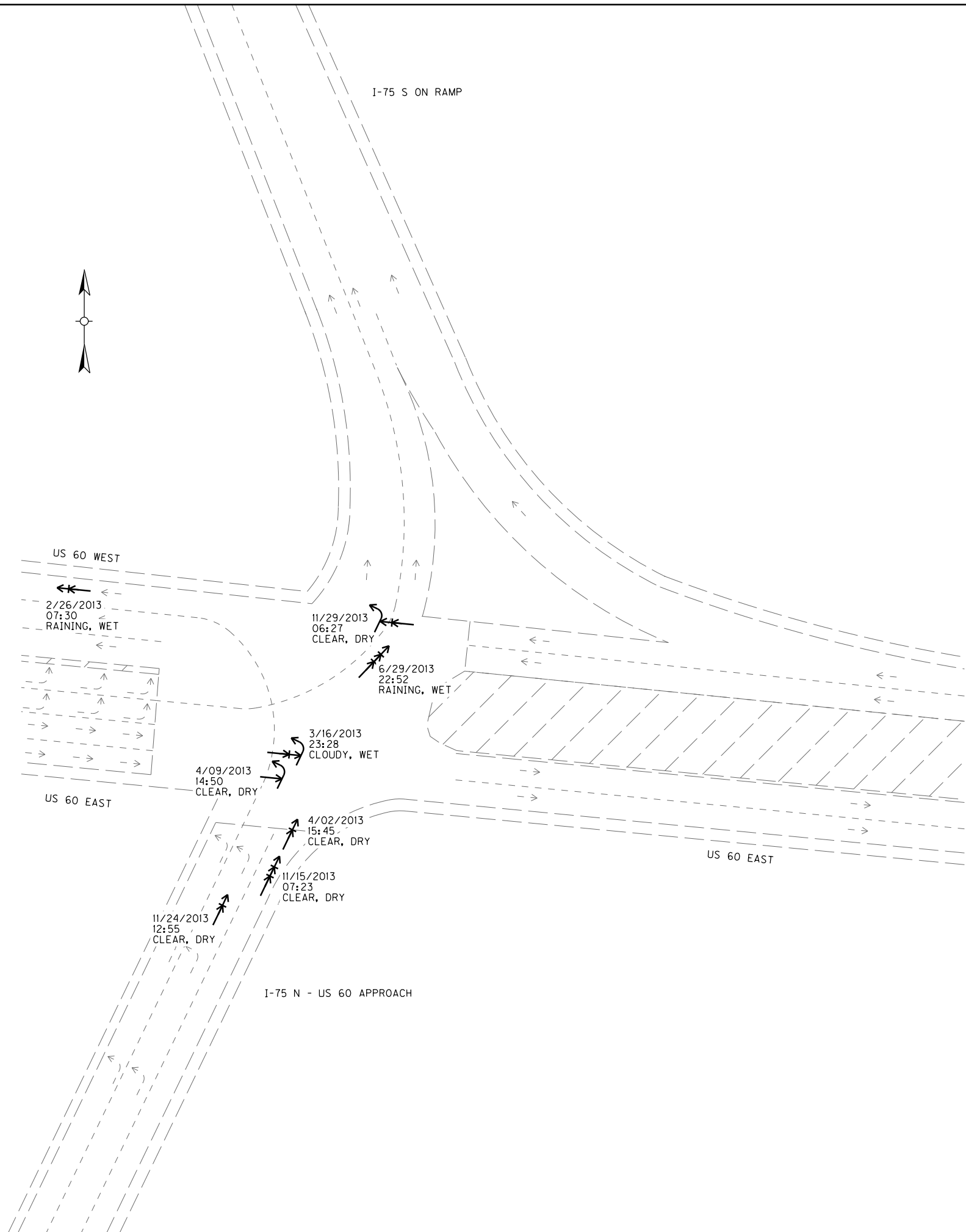
MANNER OF COLLISION	RAMP TO	COLLISION DATE	COLLISION TIME	UNITS INVOLVED	WEATHER	ROADWAY CONDITION	DIRECTIONAL ANALYSIS	LIGHT CONDITION
REAR END	I 0075	1/21/2015	1832	2	CLEAR	DRY	REAR END - ONE VEHICLE STOPPED	DARK-HWY LIGHTED/ON
REAR END	US 60	4/6/2015	1400	2	CLOUDY	DRY	REAR END - ON RAMP	DAYLIGHT
REAR END	US 60	6/22/2015	1429	2	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING	DAYLIGHT
REAR END	US 60	7/30/2015	1628	2	CLEAR	DRY	REAR END - ON RAMP	DAYLIGHT
REAR END	US 60	8/19/2015	1015	2	CLOUDY	DRY	REAR END IN TRAFFIC ONE VEHICLE STOPPED	DAYLIGHT
REAR END	US 60	9/25/2015	1848	2	RAINING	WET	REAR END - ON RAMP	DAYLIGHT



CRASH DIAGRAM_2015
US 60 & I-75 S RAMP
NOT TO SCALE

FILE NAME: J:\PROJECT\KNTC\500556 KYTC DISTRICT 7 TRAFFIC 2015\LETTER AGREEMENT 2 MOW DATA-TECH\CRASHES\US 60 + I-75 N\US 60 + I-75 N
 USER: vanessa.nghtem
 DATE PLOTTED: June 14, 2016
 E-SHEET NAME:
 MicroStation v8.11.9.397

COUNTY OF	ITEM NO.	SHEET NO.
FAYETTE		FIGURE 4A



MANNER OF COLLISION	COLLISION DATE	COLLISION TIME	UNITS INVOLVED	INJURED	WEATHER	ROADWAY CONDITION	DIRECTIONAL ANALYSIS	LIGHT CONDITION
ANGLE	4/9/2013	1450	2	0	CLEAR	DRY	ANGLE COLLISION - ONE VEHICLE TURNING LEFT	DAYLIGHT
ANGLE	3/16/2013	2328	3	1	CLOUDY	WET	ANGLE COLLISION - ONE VEHICLE TURNING LEFT	DARK-HWY LIGHTED/ON
OPPOSING LEFT TURN	11/29/2013	627	3	3	CLEAR	DRY	OPPOSING LEFT TURN	DARK-HWY NOT LIGHTED
REAR END	2/26/2013	730	2	0	RAINING	WET	OTHER ROADWAY OR MID-BLOCK COLLISION	DAWN
REAR END	4/2/2013	1545	2	0	CLEAR	DRY	REAR END - ON RAMP	DAYLIGHT
REAR END	11/24/2013	1255	2	0	CLEAR	DRY	REAR END - ON RAMP	DAYLIGHT
REAR END	6/29/2013	2252	3	0	RAINING	WET	REAR END - OTHER	DARK-HWY LIGHTED/ON
REAR END	11/15/2013	723	3	0	CLEAR	DRY	REAR END - ON RAMP	DAYLIGHT

LEGEND	
	ANGLE, 2 VEHICLES
	ANGLE, 3 VEHICLES
	OPPOSING LEFT TURN, 3 VEHICLES
	REAR END, 2 VEHICLES
	REAR END, 3 VEHICLES

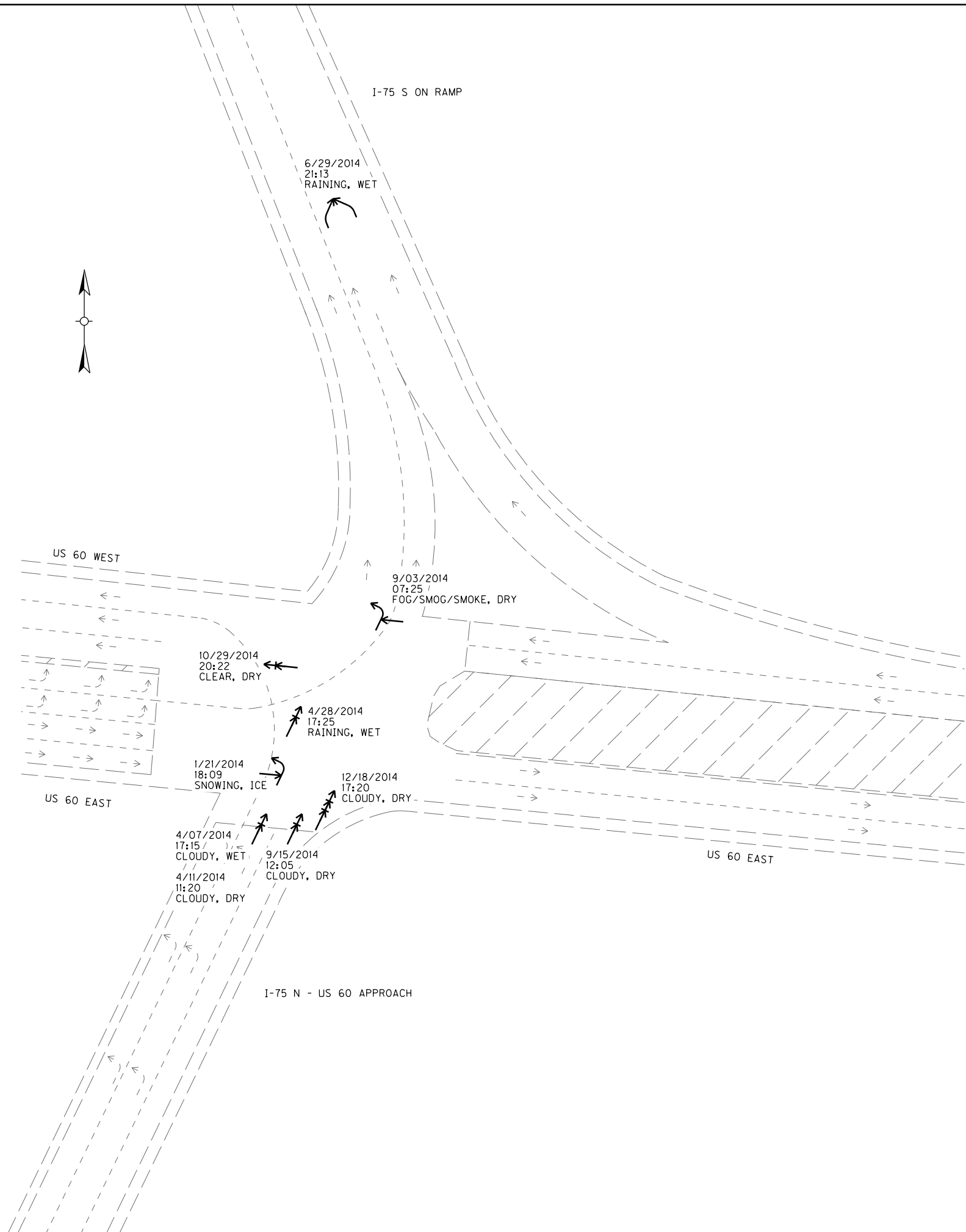
CRASH DIAGRAM_2013
 US 60 & I-75 N
 NOT TO SCALE

FILE NAME: J:\PROJECT\KNTC\5005516 KYTC DISTRICT 7 TRAFFIC 2015\LETTER AGREEMENT 2 MOW DATA-TECH\CRASHES\US 60 + I-75 N\US 60 + I-75
 USER: vanessa.nghtem DATE PLOTTED: June 14, 2016
 E-SHEET NAME: MicroStation v8.11.9.397

COUNTY OF	ITEM NO.	SHEET NO.
FAYETTE		FIGURE 4B

MANNER OF COLLISION	COLLISION DATE	COLLISION TIME	UNITS INVOLVED	INJURED	WEATHER	ROADWAY CONDITION	DIRECTIONAL ANALYSIS	LIGHT CONDITION
ANGLE	1/21/2014	1809	2	0	SNOWING	ICE	ANGLE COLLISION - ONE VEHICLE TURNING LEFT	DAYLIGHT
ANGLE	6/29/2014	2113	2	1	RAINING	WET	MULTIPLE VEHICLE COLLISION ON RAMP	DARK-HWY LIGHTED/ON
OPPOSING LEFT TURN	9/3/2014	725	2	0	FOG/SMOG/SMOKE	DRY	OPPOSING LEFT TURN	DAYLIGHT
REAR END	4/7/2014	1715	2	0	CLOUDY	WET	REAR END - ONE VEHICLE TURNING RIGHT	DAYLIGHT
REAR END	4/11/2014	1120	2	0	CLOUDY	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION	DAYLIGHT
REAR END	4/28/2014	1725	2	3	RAINING	WET	REAR END - OTHER	DAYLIGHT
REAR END	9/15/2014	1205	2	0	CLOUDY	DRY	REAR END - ON RAMP	DAYLIGHT
REAR END	10/29/2014	2022	2	0	CLEAR	DRY	REAR END - ONE VEHICLE STOPPED	DARK-HWY LIGHTED/ON
REAR END	12/18/2014	1720	3	0	CLOUDY	DRY	REAR END - OTHER	DUSK

LEGEND	
	ANGLE, 2 VEHICLES
	OPPOSING LEFT TURN, 2 VEHICLES
	REAR END, 2 VEHICLES
	REAR END, 3 VEHICLES



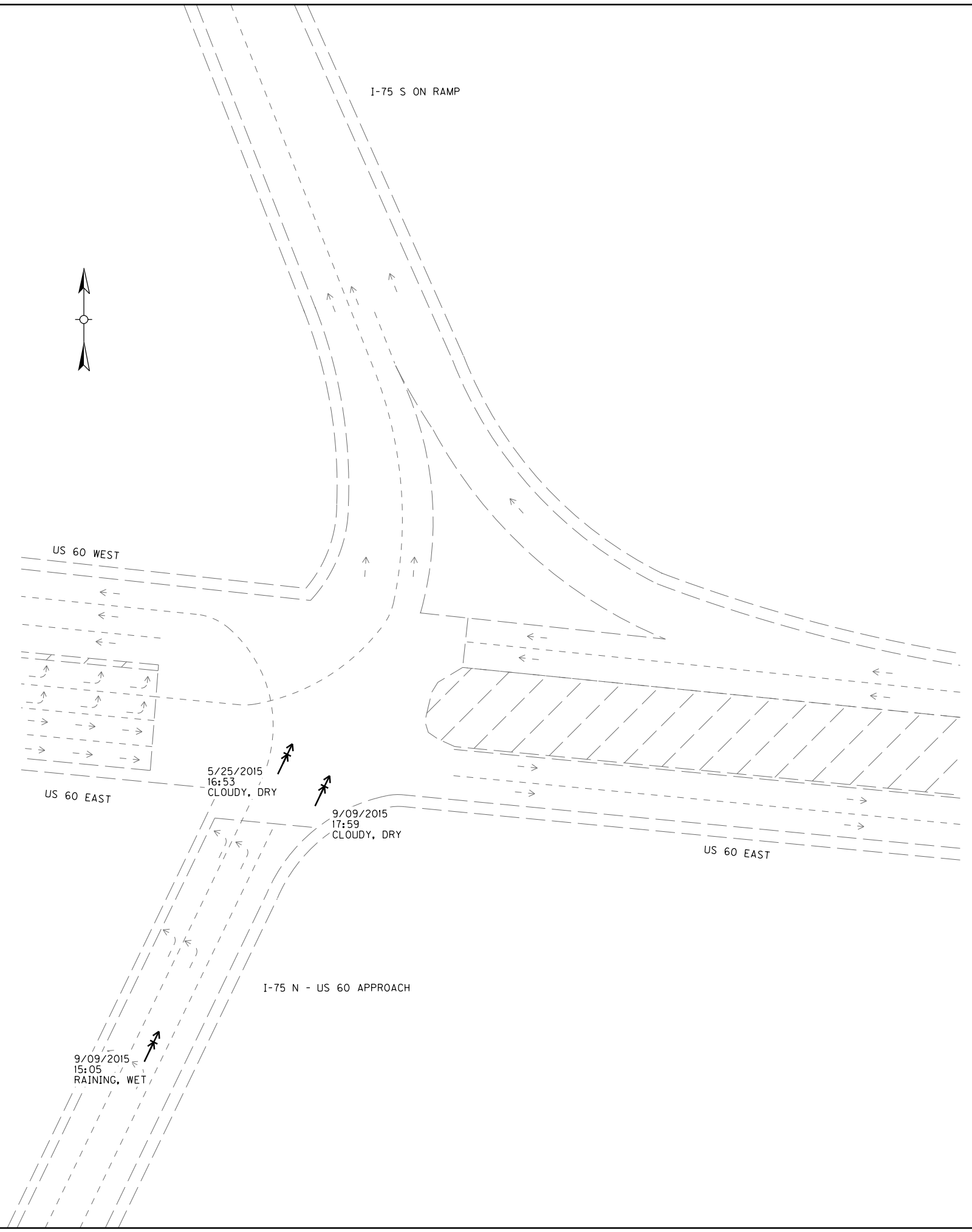
CRASH DIAGRAM_2014
 US 60 & I-75 N
 NOT TO SCALE

FILE NAME: J:\PROJECT\KNTC\500556 KYTC DISTRICT 7 TRAFFIC 2015\LETTER AGREEMENT 2 MOW DATA-TECH\CRASHES\US 60 + I-75 N\US 60 + I-75
 USER: vanessa.nghtem
 DATE PLOTTED: June 14, 2016
 E-SHEET NAME:
 MicroStation v8.1i.9.397

COUNTY OF	ITEM NO.	SHEET NO.
FAYETTE		FIGURE 4C

MANNER OF COLLISION	COLLISION DATE	COLLISION TIME	UNITS INVOLVED	INJURED	WEATHER	ROADWAY CONDITION	DIRECTIONAL ANALYSIS	LIGHT CONDITION
ANGLE	9/9/2015	1505	2	1	RAINING	WET	REAR END - ON RAMP	DAYLIGHT
REAR END	5/25/2015	1653	2	0	CLOUDY	DRY	REAR END - ONE VEHICLE STOPPED	DAYLIGHT
REAR END	9/9/2015	1759	2	0	CLOUDY	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING	DAYLIGHT

LEGEND	
	REAR END, 2 VEHICLES



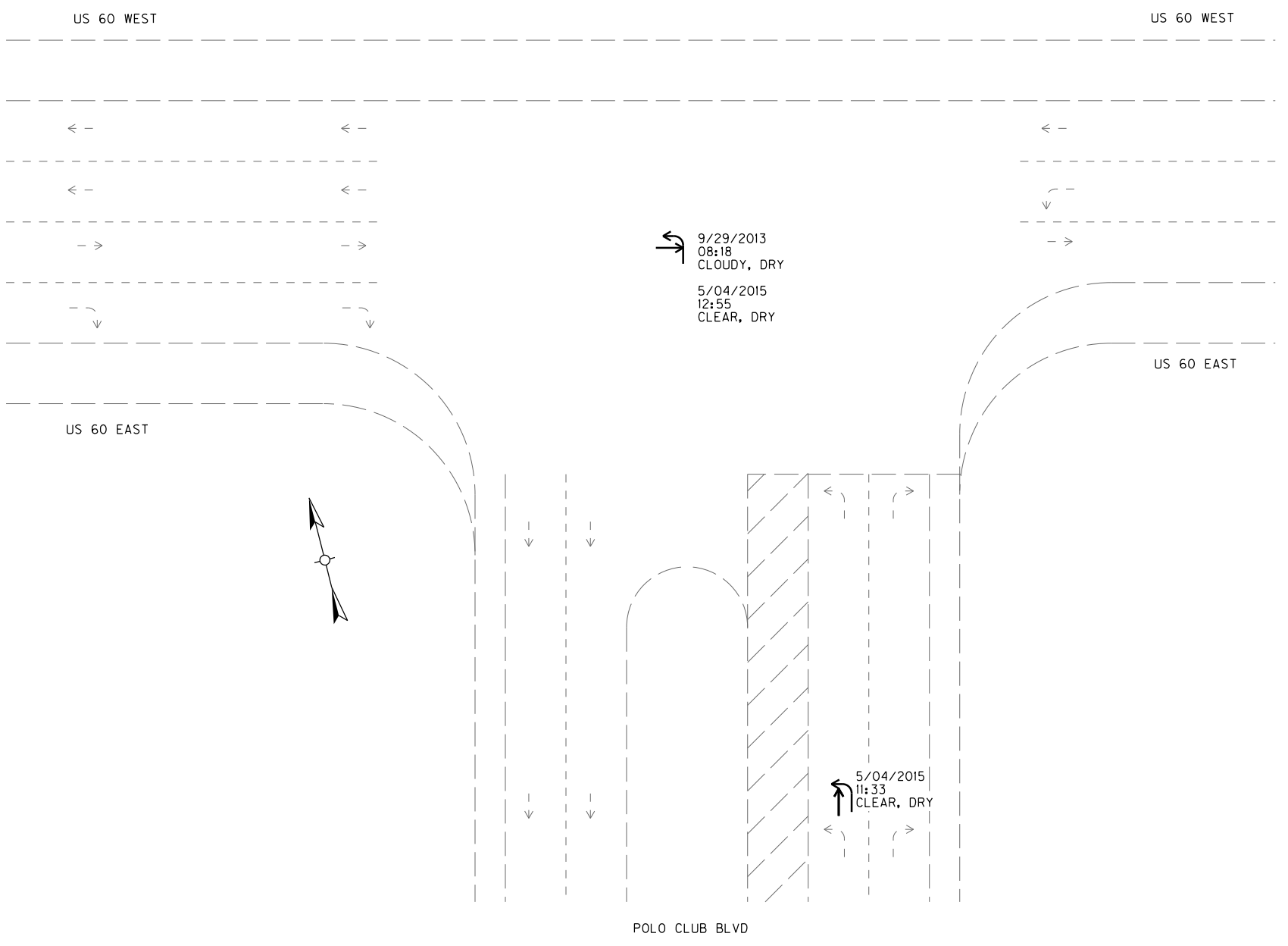
CRASH DIAGRAM_2015
 US 60 & I-75 N
 NOT TO SCALE

MicroStation v8.11.9.397 E-SHEET NAME: USER: vanessa.nghtem DATE PLOTTED: June 14, 2016 FILE NAME: J:\PROJECT\K\KYTC\5005516 KYTC DISTRICT 7 TRAFFIC 2015\LETTER AGREEMENT 2 MOW DATA-TECH\CRASHES\US60 + POLO CLUB BLVD\US60 +

COUNTY OF	ITEM NO.	SHEET NO.
FAYETTE		FIGURE 5

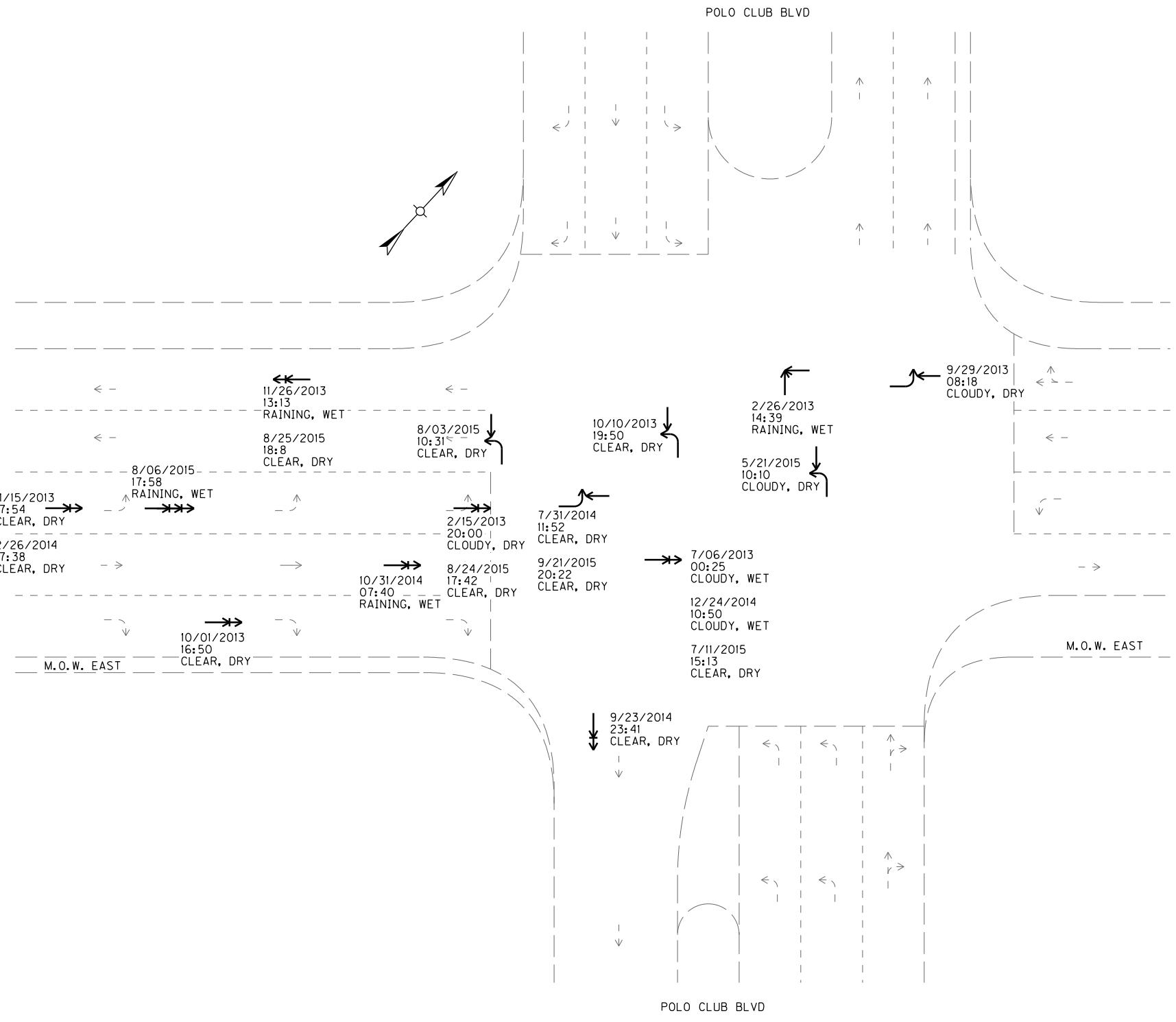
MANNER OF COLLISION	ROADWAY NAME	COLLISION DATE	COLLISION TIME	UNITS INVOLVED	INJURED	WEATHER	ROADWAY CONDITION	DIRECTIONAL ANALYSIS
ANGLE	US 60	9/29/2013	818	2	0	CLOUDY	DRY	ANGLE COLLISION - ONE VEHICLE TURNING LEFT
ANGLE	POLO CLUB BLVD	5/4/2015	1133	2	0	CLEAR	DRY	ANGLE COLLISION - OTHER
ANGLE	POLO CLUB BLVD	8/22/2014	1255	2	0	CLEAR	DRY	1 VEHICLE ENTERING/LEAVING ENTRANCE

LEGEND	
	ANGLE, 2 VEHICLES



CRASH DIAGRAM_2013-2015
US 60 & US POLO CLUB BLVD
NOT TO SCALE

MANNER OF COLLISION	COLLISION DATE	COLLISION TIME	UNITS INVOLVED	INJURED	WEATHER	ROADWAY CONDITION	DIRECTIONAL ANALYSIS
ANGLE	2/26/2013	1439	2	0	RAINING	WET	ANGLE COLLISION - BOTH VEHICLES GOING STRAIGHT
ANGLE	9/2/2013	1600	2	2	CLEAR	DRY	ANGLE COLLISION - ONE VEHICLE TURNING LEFT
ANGLE	10/10/2013	1950	3	2	CLEAR	DRY	ANGLE COLLISION - ONE VEHICLE TURNING LEFT
REAR END	2/15/2013	2000	2	0	CLOUDY	DRY	REAR END - OTHER
REAR END	7/6/2013	25	2	0	CLOUDY	WET	COLLISION WITH FIXED OBJECT NON - INTERSECTION - FIRST EVENT COLLISION 09 - 32 EXCLUDING 16
REAR END	8/15/2013	845	2	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	10/1/2013	1650	2	0	CLEAR	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	11/15/2013	1754	2	0	CLOUDY	WET	REAR END IN TRAFFIC ONE VEHICLE STOPPED
REAR END	11/26/2013	1313	2	1	RAINING	WET	REAR END IN TRAFFIC ONE VEHICLE STOPPED
ANGLE	7/31/2014	1152	2	1	CLEAR	DRY	ANGLE COLLISION - ONE VEHICLE TURNING LEFT
REAR END	2/26/2014	1738	2	0	CLEAR	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	9/23/2014	2341	2	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	10/31/2014	740	2	0	RAINING	WET	REAR END IN TRAFFIC ONE VEHICLE STOPPED
REAR END	12/24/2014	1050	2	0	CLOUDY	WET	REAR END - OTHER
ANGLE	8/3/2015	1031	2	0	CLEAR	DRY	1 VEHICLE ENTERING/LEAVING ENTRANCE
ANGLE	9/21/2015	2022	2	0	CLEAR	DRY	ANGLE COLLISION - OTHER
OPPOSING LEFT TURN	5/21/2015	1010	2	0	CLOUDY	DRY	OPPOSING LEFT TURN
REAR END	7/11/2015	1513	2	0	CLEAR	DRY	REAR END - OTHER
REAR END	8/6/2015	1758	3	0	RAINING	WET	REAR END IN TRAFFIC ONE VEHICLE STOPPED
REAR END	8/24/2015	1742	2	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	8/25/2015	1808	2	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING



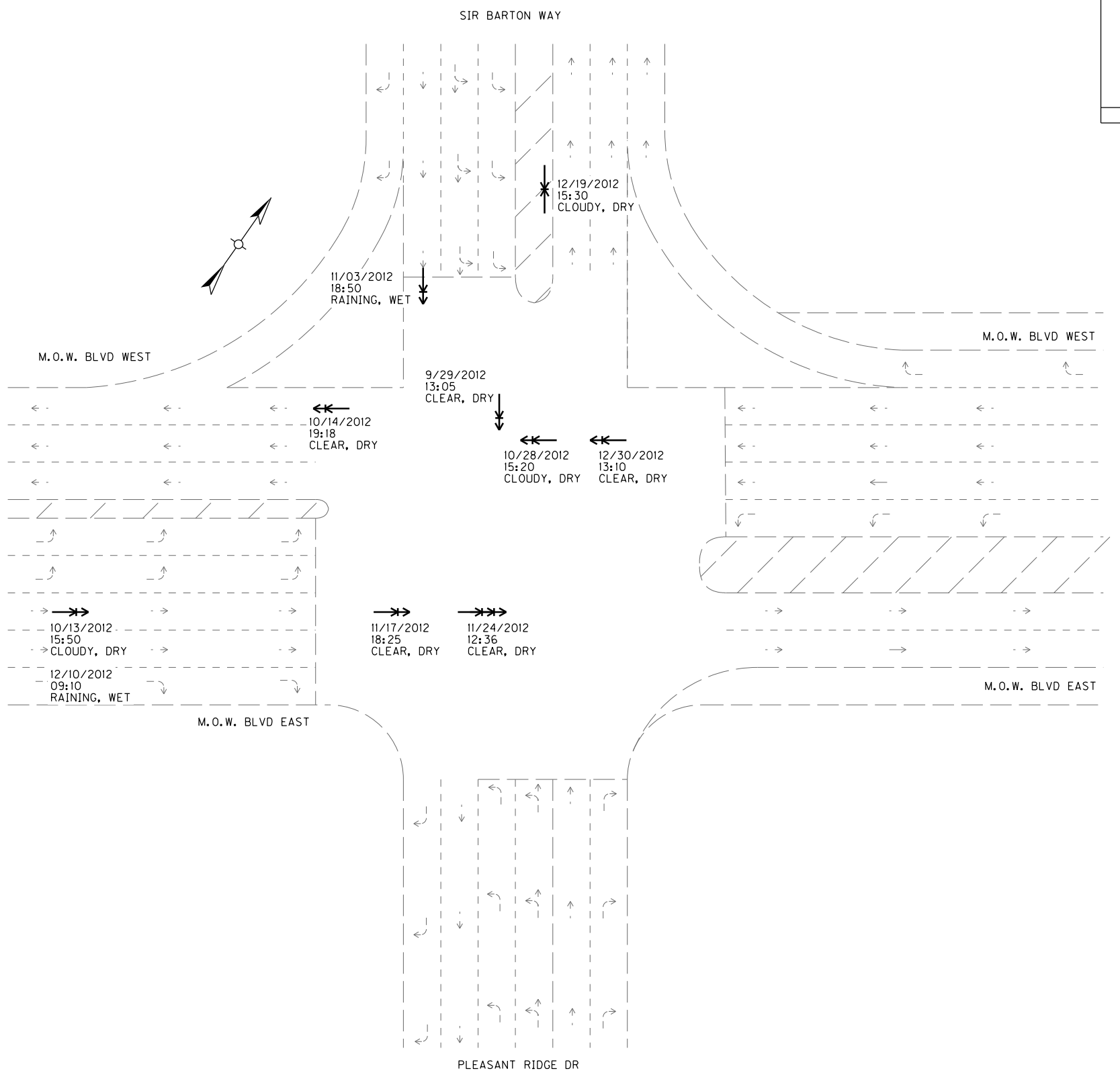
LEGEND	
	ANGLE, 2 VEHICLES
	ANGLE, 3 VEHICLES
	OPPOSING LEFT TURN, 2 VEHICLES
	REAR END, 2 VEHICLES
	REAR END, 3 VEHICLES

FILE NAME: J:\PROJECT\KNTC\5005916 KYTC DISTRICT 7 TRAFFIC 2015\LETTER AGREEMENT 2 MOW DATA-TECH\CRASHES\MOW + POLO.CLUB.BLVD\MOW + P
 USER: vanessa.nghtem
 DATE PLOTTED: June 14, 2016
 E-SHEET NAME:
 MicroStation v8.1i.9.397

CRASH DIAGRAM_2012
 MOW & POLO CLUB BLVD
 NOT TO SCALE

MANNER OF COLLISION	COLLISION DATE	COLLISION TIME	UNITS INVOLVED	INJURED	WEATHER	ROADWAY CONDITION	DIRECTIONAL ANALYSIS
HEAD ON	12/19/2012	1530	2	0	CLOUDY	DRY	HEAD-ON COLLISION
REAR END	9/29/2012	1305	2	1	CLEAR	DRY	REAR END - ONE VEHICLE TURNING RIGHT
REAR END	10/13/2012	1550	2	0	CLOUDY	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	10/14/2012	1918	2	0	CLEAR	DRY	REAR END - ONE VEHICLE STOPPED
REAR END	10/28/2012	1520	2	0	CLOUDY	DRY	REAR END - ONE VEHICLE TURNING RIGHT
REAR END	11/3/2012	1850	2	0	RAINING	WET	REAR END - OTHER
REAR END	11/17/2012	1825	2	0	CLEAR	DRY	REAR END - BOTH VEHICLES GOING STRAIGHT
REAR END	12/10/2012	910	2	2	RAINING	WET	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	12/30/2012	1310	2	0	CLEAR	DRY	REAR END - ONE VEHICLE TURNING RIGHT
REAR END	11/24/2012	1236	3	0	CLEAR	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION

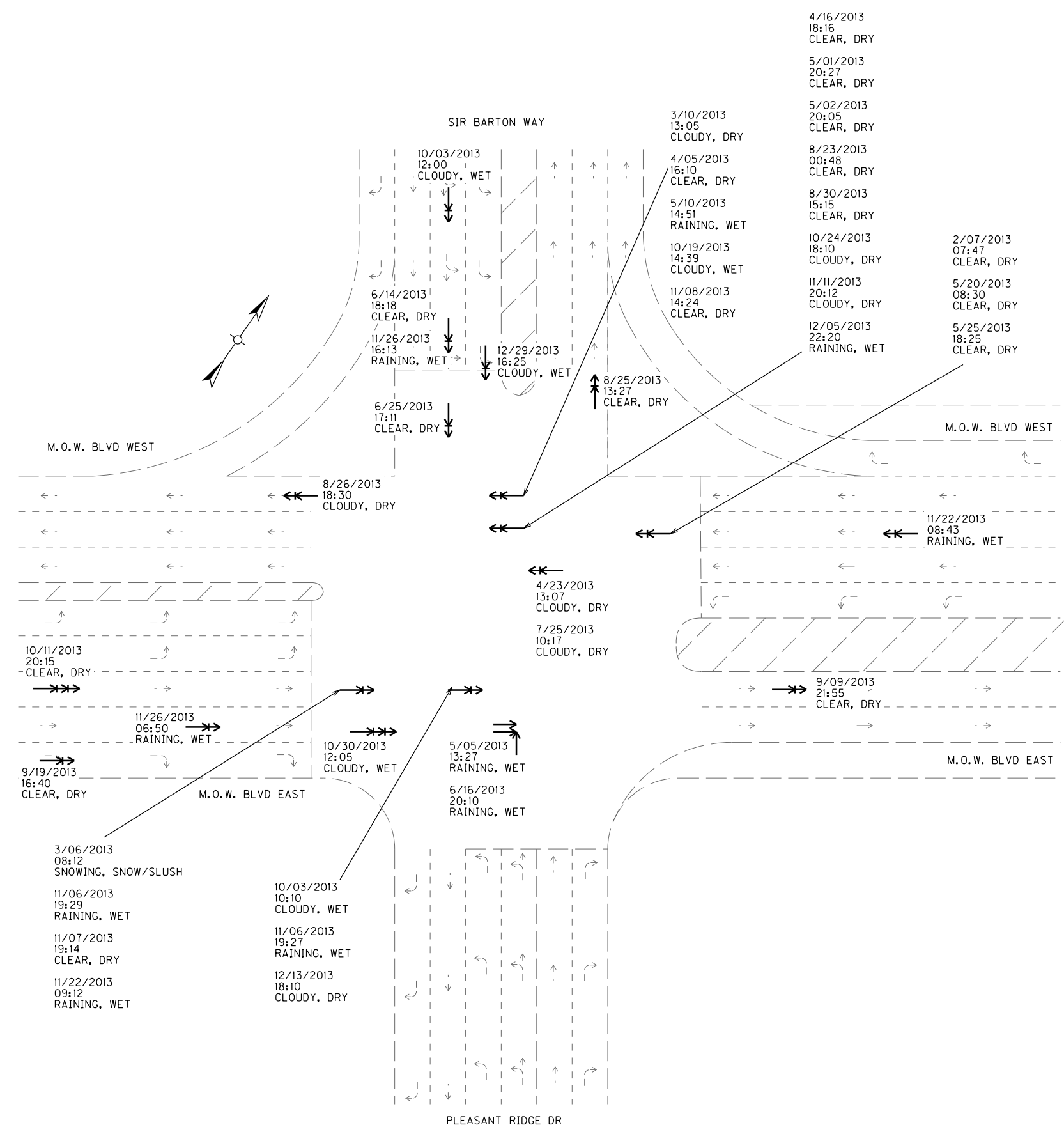
LEGEND	
↔	HEAD ON, 2 VEHICLES
↔ ↓ ↔	ANGLE, 2 VEHICLES
↔ ↓ ↓ ↔	ANGLE, 3 VEHICLES



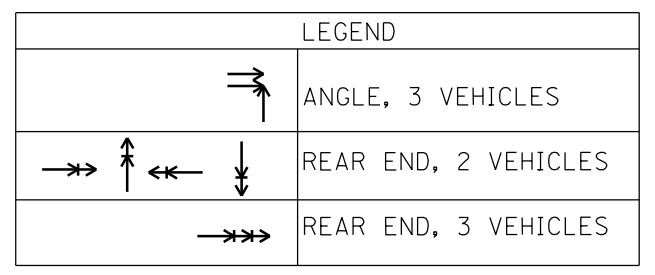
CRASH DIAGRAM_2012
MOW & SIR BARTON/PLEASANT RIDGE RD
NOT TO SCALE

FILE NAME: J:\PROJECT\KNTC\5005516 KYTC DISTRICT 7 TRAFFIC 2015\LETTER AGREEMENT 2 MOW DATA-TECH\CRASHES\MOW + SIR_BARTON-PLEASANT RIDGE
 USER: vanessa.nghtem
 DATE PLOTTED: June 14, 2016
 E-SHEET NAME:
 MicroStation v8.11.9.397

FILE NAME: J:\PROJECT\KNTC\500596 KYTC DISTRICT 7 TRAFFIC 2015 LETTER AGREEMENT 2 MOW DATA-TECH\CRASHES\MOW + SIR_BARTON-PLEAS-RIDGE
 USER: vanezzo.nghiem
 DATE PLOTTED: June 14, 2016
 E-SHEET NAME:
 MicroStation v8.11.9.397

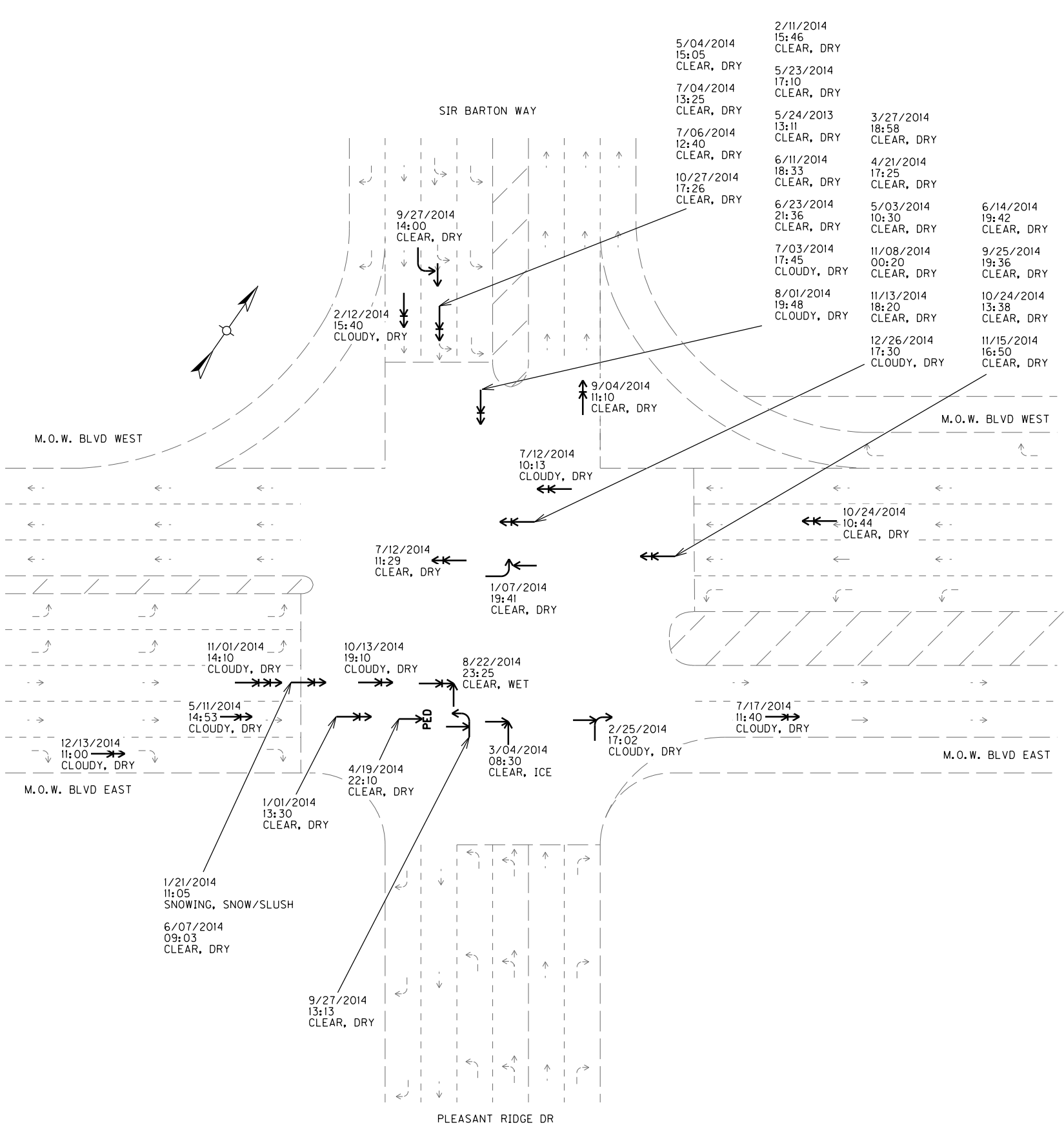


MANNER OF COLLISION	COLLISION DATE	COLLISION TIME	UNITS INVOLVED	INJURED	WEATHER	ROADWAY CONDITION	DIRECTIONAL ANALYSIS
ANGLE	5/5/2013	1327	3	2	RAINING	WET	ANGLE COLLISION - BOTH VEHICLES GOING STRAIGHT
ANGLE	6/16/2013	2010	3	2	RAINING	WET	ANGLE COLLISION - BOTH VEHICLES GOING STRAIGHT
REAR END	2/7/2013	747	2	0	CLEAR	DRY	REAR END IN TRAFFIC ONE VEHICLE STOPPED
REAR END	3/6/2013	812	2	0	SNOWING	SNOW/SLUSH	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	3/10/2013	1305	2	0	CLOUDY	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	4/5/2013	1610	2	0	CLEAR	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	4/16/2013	1816	2	0	CLEAR	DRY	REAR END - ONE VEHICLE TURNING RIGHT
REAR END	4/23/2013	1307	2	0	CLOUDY	DRY	REAR END - ONE VEHICLE TURNING RIGHT
REAR END	5/1/2013	2027	2	0	CLEAR	DRY	REAR END - OTHER
REAR END	5/2/2013	2005	2	0	CLEAR	DRY	REAR END - OTHER
REAR END	5/10/2013	1451	2	0	RAINING	WET	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	5/20/2013	830	2	1	CLEAR	DRY	REAR END - ONE VEHICLE TURNING RIGHT
REAR END	5/25/2013	1825	2	0	CLEAR	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	6/14/2013	1818	2	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	6/25/2013	1711	2	0	CLEAR	DRY	REAR END - OTHER
REAR END	7/25/2013	1017	2	1	CLOUDY	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	8/23/2013	48	2	0	CLEAR	DRY	REAR END IN TRAFFIC ONE VEHICLE STOPPED
REAR END	8/25/2013	1327	2	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	8/26/2013	1830	2	0	CLOUDY	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	8/30/2013	1515	2	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	9/9/2013	2155	2	3	CLEAR	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	9/19/2013	1640	2	0	CLEAR	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	10/3/2013	1010	2	0	CLOUDY	WET	REAR END IN TRAFFIC ONE VEHICLE STOPPED
REAR END	10/3/2013	1200	2	0	CLOUDY	WET	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	10/19/2013	1439	2	0	CLOUDY	WET	REAR END - OTHER
REAR END	10/24/2013	1810	2	0	CLOUDY	DRY	REAR END - OTHER
REAR END	11/6/2013	1929	2	0	RAINING	WET	REAR END - OTHER
REAR END	11/6/2013	1927	2	0	RAINING	WET	REAR END - OTHER
REAR END	11/7/2013	1914	2	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	11/8/2013	1424	2	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	11/11/2013	2012	2	0	CLOUDY	DRY	REAR END - OTHER
REAR END	11/22/2013	912	2	0	RAINING	WET	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	11/22/2013	843	2	1	RAINING	WET	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	11/26/2013	650	2	1	RAINING	WET	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	11/26/2013	1613	2	0	RAINING	WET	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	12/5/2013	2220	2	0	RAINING	WET	REAR END - BOTH VEHICLES GOING STRAIGHT
REAR END	12/13/2013	1810	2	0	CLOUDY	DRY	REAR END - OTHER
REAR END	12/29/2013	1625	2	0	CLOUDY	WET	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	10/11/2013	2015	3	0	CLEAR	DRY	REAR END - OTHER
REAR END	10/30/2013	1205	3	2	CLOUDY	WET	REAR END IN TRAFFIC ONE VEHICLE STOPPED



CRASH DIAGRAM_2013
MOW & SIR BARTON/PLEASANT RIDGE RD
NOT TO SCALE

MicroStation v8.11.9.397 E-SHEET NAME: USER: vanessa.nghtem DATE PLOTTED: June 14, 2016 FILE NAME: J:\PROJECT\KNTC\50056 KYTC DISTRICT 7 TRAFFIC 2015 LETTER AGREEMENT 2 MOW DATA-TECH\CRASHES\MOW + SIR_BARTON-PEAS-RIDGE

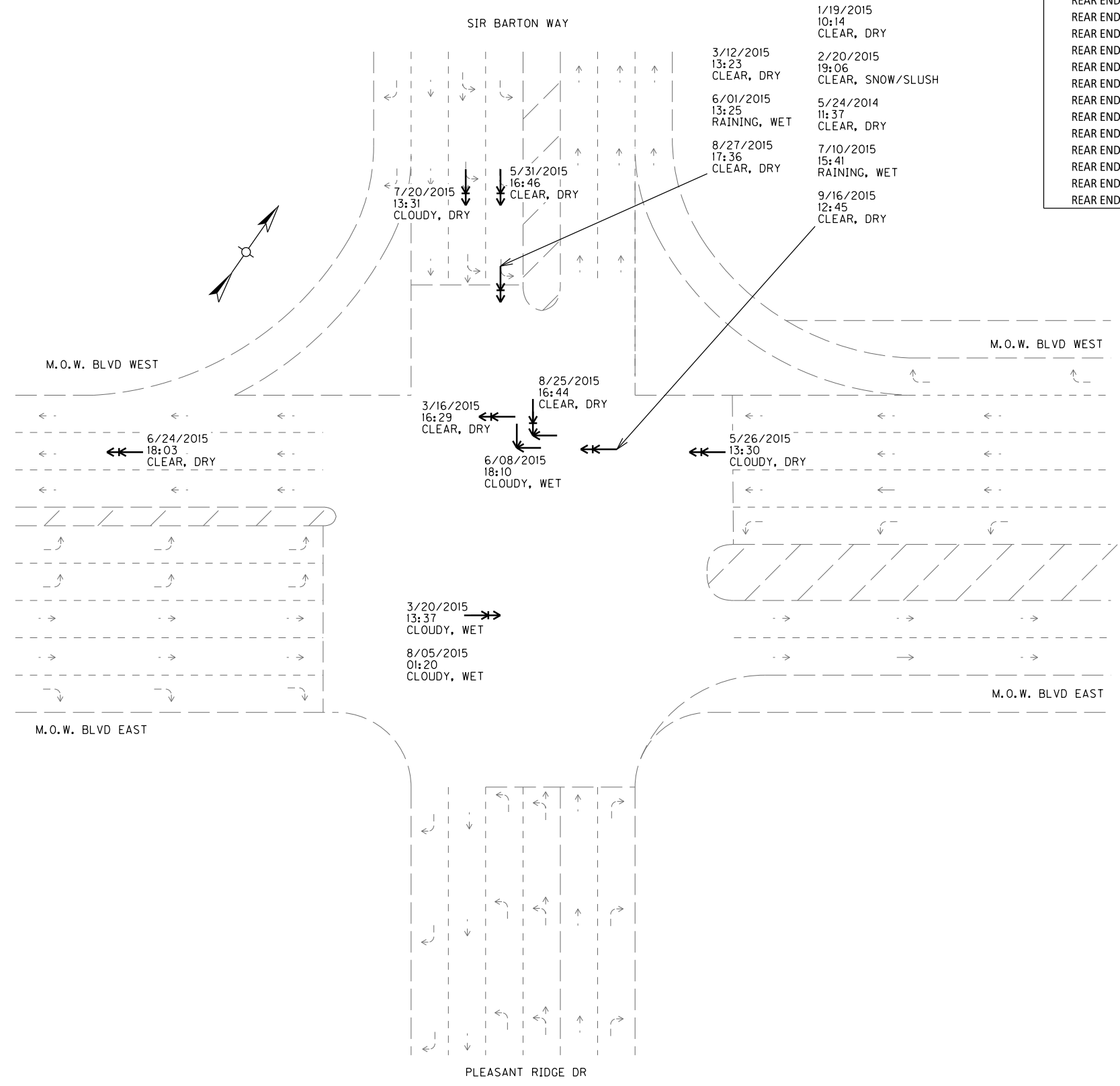


MANNER OF COLLISION	COLLISION DATE	COLLISION TIME	UNITS INVOLVED	INJURED	WEATHER	ROADWAY CONDITION	DIRECTIONAL ANALYSIS
ANGLE	2/25/2014	1702	2	0	CLOUDY	DRY	ANGLE COLLISION - ONE VEHICLE TURNING RIGHT
ANGLE	3/4/2014	830	2	0	CLEAR	ICE	ANGLE COLLISION - OTHER
ANGLE	9/27/2014	1313	2	0	CLEAR	DRY	ANGLE COLLISION - ONE VEHICLE TURNING LEFT
ANGLE	9/27/2014	1400	2	0	CLEAR	DRY	1 VEHICLE ENTERING/LEAVING ENTRANCE
ANGLE	8/22/2014	2325	3	1	CLEAR	WET	ANGLE COLLISION - BOTH VEHICLES GOING STRAIGHT
OPPOSING LEFT TURN	1/7/2014	1941	2	0	CLEAR	DRY	OPPOSING LEFT TURN
REAR END	1/1/2014	1330	2	0	CLEAR	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	1/21/2014	1105	2	0	SNOWING	SNOW/SLUSH	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	2/11/2014	1546	2	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	2/12/2014	1540	2	0	CLOUDY	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	3/27/2014	1858	2	0	CLEAR	DRY	REAR END - ONE VEHICLE TURNING RIGHT
REAR END	4/21/2014	1725	2	0	CLEAR	DRY	REAR END - OTHER
REAR END	5/3/2014	1030	2	0	CLEAR	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	5/4/2014	1505	2	1	CLEAR	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	5/11/2014	1453	2	0	CLOUDY	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	5/16/2014	1629	2	0	CLOUDY	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	5/23/2014	1710	2	0	CLEAR	DRY	REAR END - OTHER
REAR END	5/24/2014	1311	2	0	CLEAR	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	6/7/2014	903	2	0	CLEAR	DRY	REAR END IN TRAFFIC ONE VEHICLE STOPPED
REAR END	6/11/2014	1833	2	0	CLEAR	DRY	REAR END - ONE VEHICLE TURNING RIGHT
REAR END	6/14/2014	1942	2	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	6/23/2014	2136	2	0	CLEAR	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	7/3/2014	1745	2	0	CLOUDY	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	7/4/2014	1325	2	0	CLEAR	DRY	REAR END IN TRAFFIC ONE VEHICLE STOPPED
REAR END	7/6/2014	1240	2	0	CLEAR	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	7/12/2014	1013	2	1	CLOUDY	DRY	REAR END IN TRAFFIC ONE VEHICLE STOPPED
REAR END	7/12/2014	1129	2	0	CLEAR	DRY	REAR END - OTHER
REAR END	7/17/2014	1140	2	0	CLOUDY	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	8/1/2014	1948	2	0	CLOUDY	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	9/4/2014	1110	2	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	9/25/2014	1936	2	0	CLEAR	DRY	REAR END - ONE VEHICLE TURNING RIGHT
REAR END	10/13/2014	1910	2	1	CLOUDY	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	10/24/2014	1338	2	0	CLEAR	DRY	REAR END - OTHER
REAR END	10/24/2014	1045	2	0	CLEAR	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	10/27/2014	1726	2	0	CLEAR	DRY	REAR END - ONE VEHICLE STOPPED
REAR END	11/8/2014	20	2	0	CLEAR	DRY	REAR END - ONE VEHICLE TURNING RIGHT
REAR END	11/13/2014	1820	2	0	CLEAR	DRY	REAR END - ONE VEHICLE TURNING RIGHT
REAR END	11/15/2014	1650	2	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	12/13/2014	1100	2	0	CLOUDY	DRY	REAR END IN TRAFFIC ONE VEHICLE STOPPED
REAR END	12/26/2014	1730	2	0	CLOUDY	DRY	REAR END - OTHER
REAR END	11/1/2014	1410	3	0	CLOUDY	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
SINGLE VEHICLE	4/19/2014	2210	2	1	CLEAR	DRY	COLLISION WITH PEDESTRIAN NON - INTERSECTION

LEGEND	
	ANGLE, 2 VEHICLES
	ANGLE, 3 VEHICLES
	OPPOSING LEFT TURN, 2 VEHICLES
	REAR END, 2 VEHICLES
	REAR END, 3 VEHICLES
	SINGLE VEHICLE COLLISION W/ PEDESTRIAN

CRASH DIAGRAM_2014
MOW & SIR_BARTON/PLEASANT RIDGE RD
NOT TO SCALE

MANNER OF COLLISION	COLLISION DATE	COLLISION TIME	UNITS INVOLVED	INJURED	WEATHER	ROADWAY CONDITION	DIRECTIONAL ANALYSIS
ANGLE	6/8/2015	1810	2	0	CLOUDY	WET	ANGLE COLLISION - BOTH VEHICLES GOING STRAIGHT
ANGLE	8/25/2015	1644	3	0	CLEAR	DRY	ANGLE COLLISION - BOTH VEHICLES GOING STRAIGHT
REAR END	1/19/2015	1014	2	0	CLEAR	DRY	REAR END - ONE VEHICLE TURNING RIGHT
REAR END	2/20/2015	1906	2	0	CLEAR	SNOW/SLUSH	REAR END - ONE VEHICLE TURNING RIGHT
REAR END	3/12/2015	1323	2	1	CLEAR	DRY	REAR END IN TRAFFIC ONE VEHICLE STOPPED
REAR END	3/16/2015	1629	2	0	CLEAR	DRY	REAR END - ONE VEHICLE TURNING RIGHT
REAR END	3/20/2015	1337	2	0	CLOUDY	WET	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	5/24/2015	1137	2	0	CLEAR	DRY	REAR END - OTHER
REAR END	5/26/2015	1330	2	0	CLOUDY	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	5/31/2015	1646	2	0	CLEAR	DRY	REAR END - ONE VEHICLE TURNING RIGHT
REAR END	6/1/2015	1325	2	0	RAINING	WET	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	6/24/2015	1803	2	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	7/10/2015	1541	2	0	RAINING	WET	REAR END - OTHER
REAR END	7/20/2015	1331	2	0	CLOUDY	DRY	REAR END IN TRAFFIC ONE VEHICLE STOPPED
REAR END	8/5/2015	120	2	0	CLOUDY	WET	REAR END - OTHER
REAR END	8/27/2015	1736	2	0	CLEAR	DRY	REAR END - OTHER
REAR END	9/16/2015	1245	2	0	CLEAR	DRY	REAR END - ONE VEHICLE TURNING RIGHT



LEGEND	
	ANGLE, 2 VEHICLES
	ANGLE, 3 VEHICLES
	REAR END, 2 VEHICLES

CRASH DIAGRAM_2015
MOW & SIR BARTON/PLEASANT RIDGE RD
NOT TO SCALE

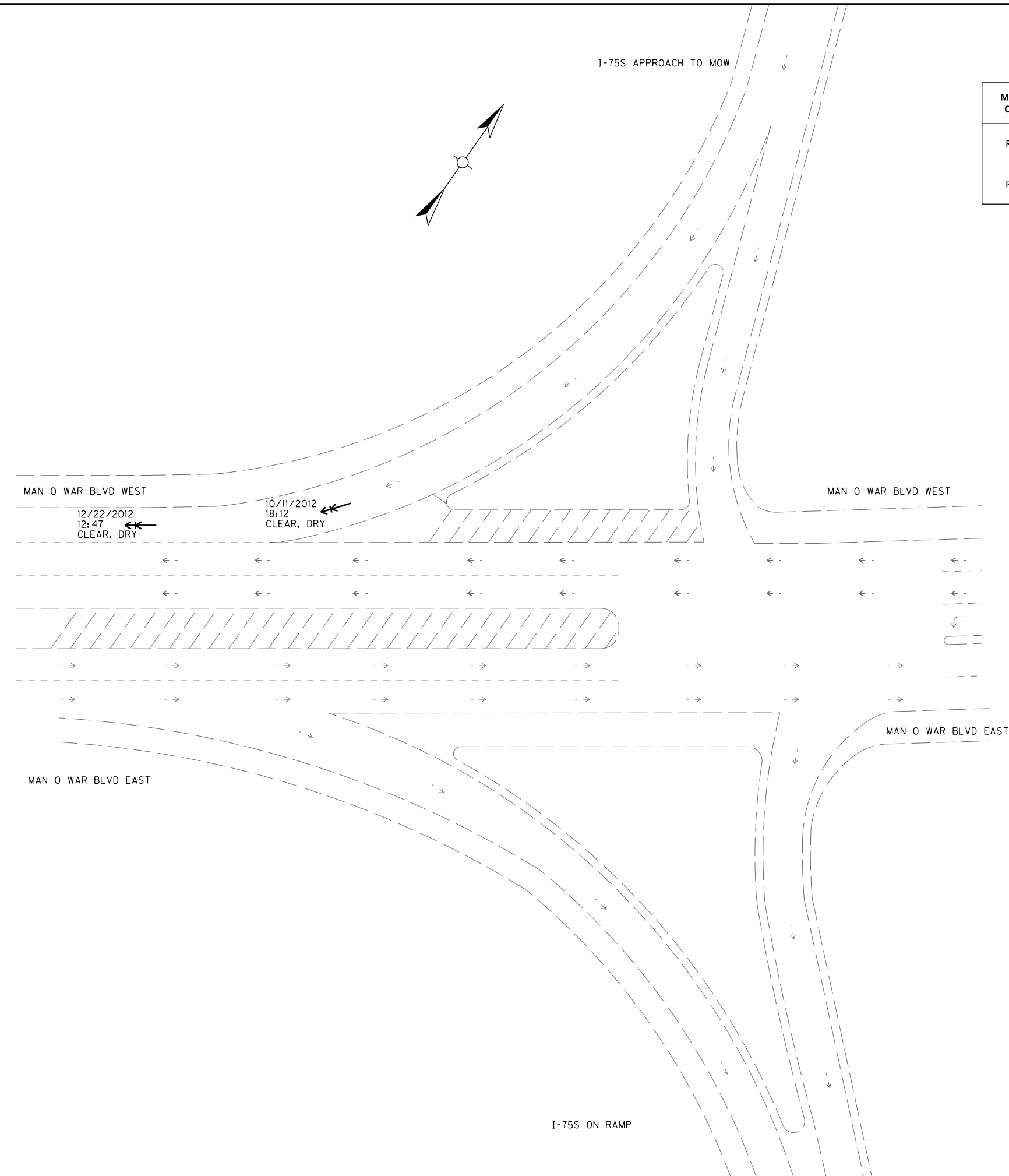
FILE NAME: J:\PROJECT\KNTC\50056 KYTC DISTRICT 7 TRAFFIC 2015\LETTER AGREEMENT 2 MOW DATA-TECH\CRASHES\MOW + SIR_BARTON-PEAS.RIDGE
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 DATE PLOTTED: June 14, 2016
 E-SHEET NAME:
 MicroStation v8.1i.9.397

MicroStation v8.1i.9.397 E-SHEET NAME: USER: vanessa.nghtem DATE PLOTTED: June 14, 2016 FILE NAME: J:\PROJECT\KNTC\5005516 KYTC DISTRICT 7 TRAFFIC 2015\LETTER AGREEMENT 2 MOW DATA-TECH\CRASHES\MOW + I-75 S\MOW + I-75 S.2012

COUNTY OF	ITEM NO.	SHEET NO.
FAYETTE		FIGURE 8A

MANNER OF COLLISION	RAMP TO	COLLISION DATE	COLLISION TIME	UNITS INVOLVED	WEATHER	ROADWAY CONDITION	DIRECTIONAL ANALYSIS
REAR END	MAN O WAR BLVD	10/11/2012	1812	2	CLEAR	DRY	REAR END - ON RAMP
REAR END	MAN O WAR BLVD	12/22/2012	1247	2	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING

LEGEND	
	REAR END, 2 VEHICLES



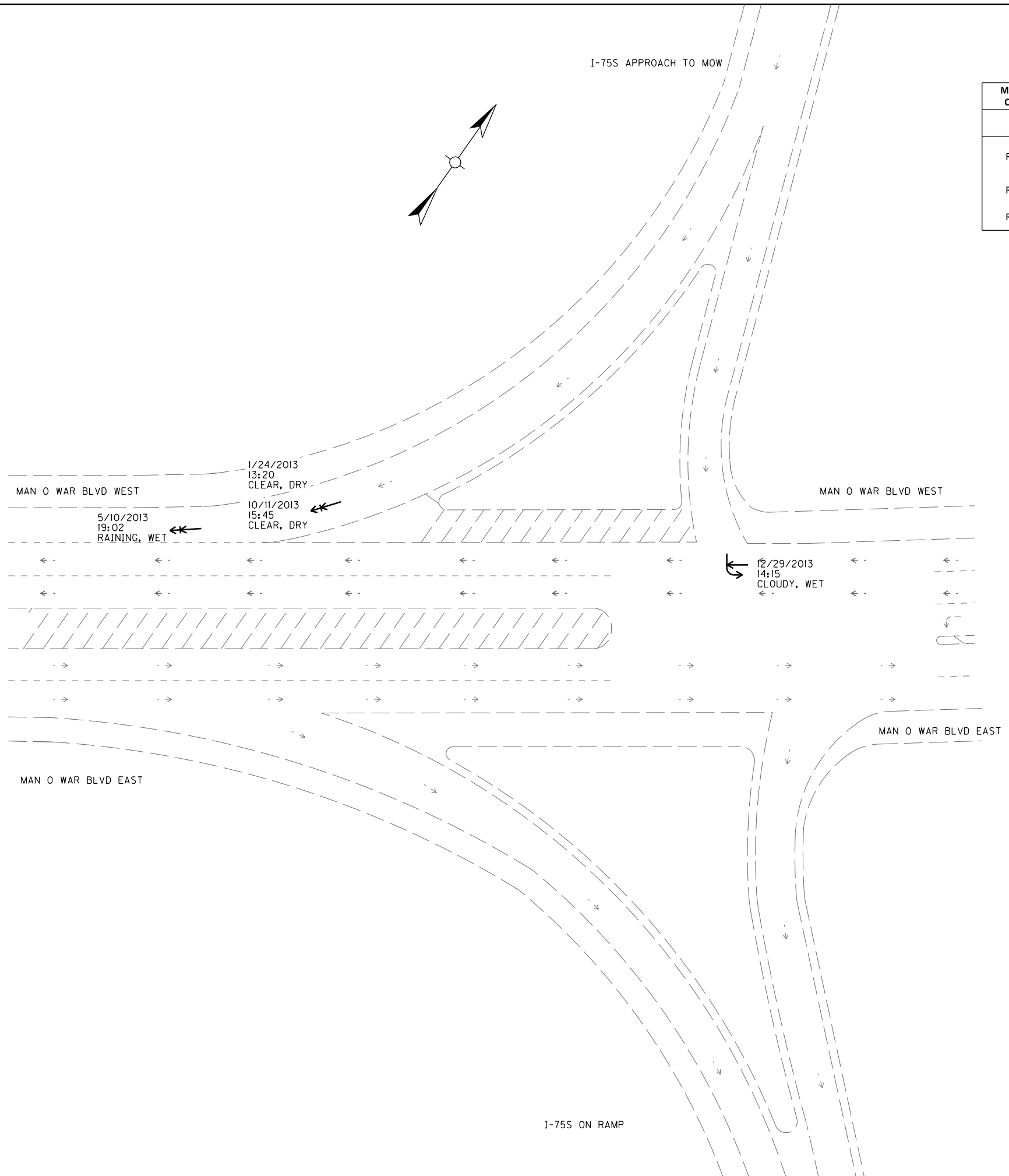
CRASH DIAGRAM_2012
MOW & I-75 S
NOT TO SCALE

FILE NAME: J:\PROJECT\K\KYTC\500556 KYTC DISTRICT 7 TRAFFIC 2015\LETTER AGREEMENT 2 MOW DATA-TECH\CRASHES\MOW + I-75 S\MOW + I-75 S.2013
 USER: vanessa.nghtem
 DATE PLOTTED: June 14, 2016
 E-SHEET NAME:
 MicroStation v8.11.9.397

COUNTY OF	ITEM NO.	SHEET NO.
FAYETTE		FIGURE 8B

MANNER OF COLLISION	RAMP TO	COLLISION DATE	COLLISION TIME	UNITS INVOLVED	WEATHER	ROADWAY CONDITION	DIRECTIONAL ANALYSIS
ANGLE	MAN O WAR BLVD	12/29/2013	1415	2	CLOUDY	WET	ANGLE COLLISION - ONE VEHICLE TURNING LEFT
REAR END	MAN O WAR BLVD	1/24/2013	1320	2	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	MAN O WAR BLVD	5/10/2013	1902	2	RAINING	WET	REAR END - OTHER
REAR END	MAN O WAR BLVD	10/11/2013	1545	2	CLEAR	DRY	REAR END - ON RAMP

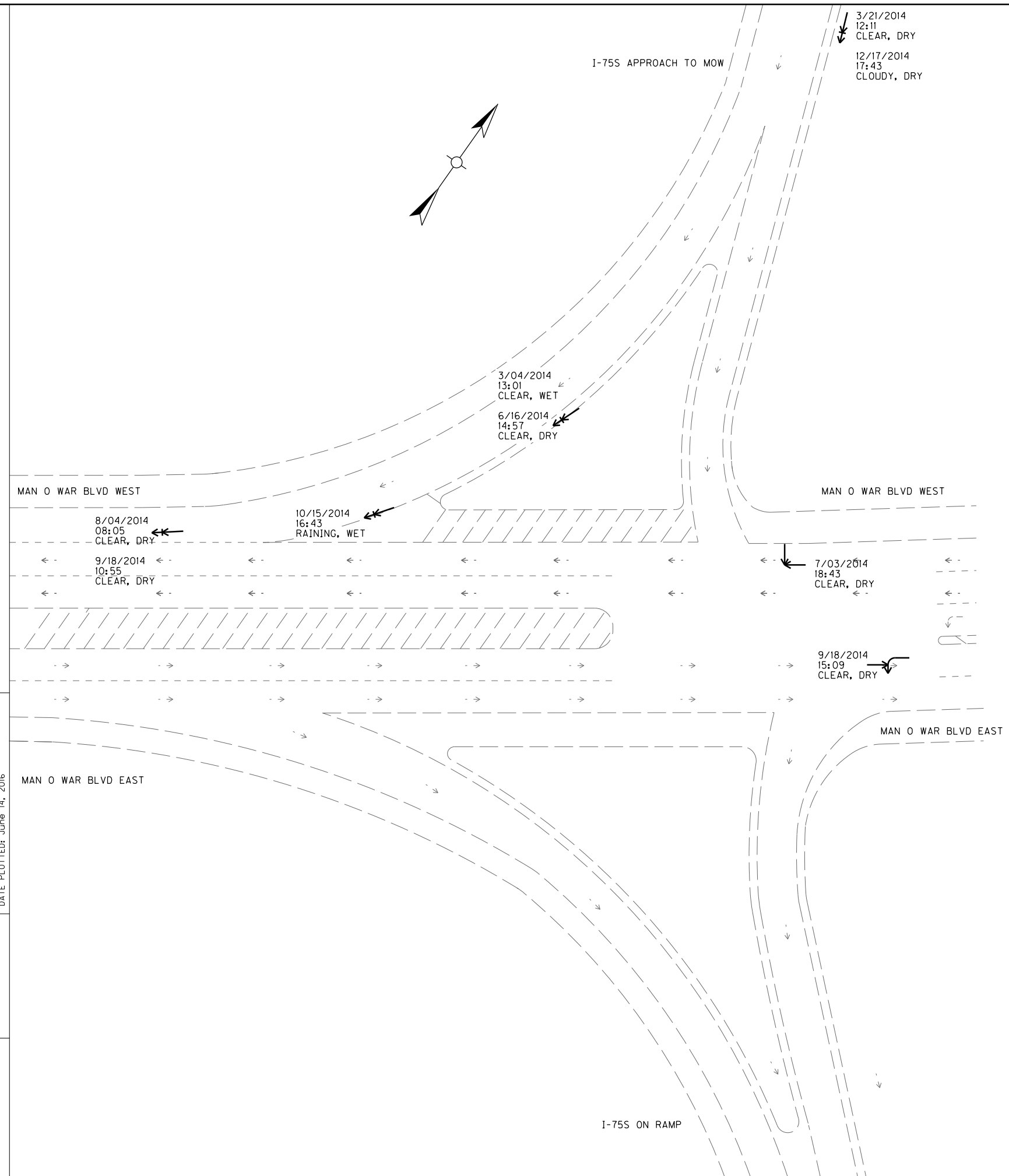
LEGEND	
	ANGLE, 2 VEHICLES
	REAR END, 2 VEHICLES



CRASH DIAGRAM_2013
 MOW & I-75 S
 NOT TO SCALE

FILE NAME: J:\PROJECT\K\KYTC\500556 KYTC DISTRICT 7 TRAFFIC 2015\LETTER AGREEMENT 2 MOW DATA-TECH\CRASHES\MOW + I-75 S\MOW + I-75 S-2014
 USER: vanessa.nghtem
 DATE PLOTTED: June 14, 2016
 E-SHEET NAME:
 MicroStation v8.11.9.397

COUNTY OF	ITEM NO.	SHEET NO.
FAYETTE		FIGURE 8C



MANNER OF COLLISION	RAMP TO	COLLISION DATE	COLLISION TIME	UNITS INVOLVED	WEATHER	ROADWAY CONDITION	DIRECTIONAL ANALYSIS
ANGLE	I75 S EXIT108 OFF RAMP TO MAN O WAR BLVD	7/3/2014	1843	2	CLEAR	DRY	ANGLE COLLISION - BOTH VEHICLES GOING STRAIGHT
ANGLE	I75 S EXIT108 ON RAMP FROM MAN O WAR BLV	9/18/2014	1509	2	CLEAR	DRY	ANGLE COLLISION - ONE VEHICLE TURNING LEFT
REAR END	MAN O WAR BLVD	3/4/2014	1301	2	CLEAR	WET	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	MAN O WAR BLVD	3/21/2014	1211	2	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	MAN O WAR BLVD	6/16/2014	1457	2	CLEAR	DRY	REAR END - OTHER
REAR END	MAN O WAR BLVD	8/4/2014	805	2	CLEAR	DRY	REAR END - ON RAMP
REAR END	MAN O WAR BLVD	9/18/2014	1055	2	CLEAR	DRY	REAR END - OTHER
REAR END	MAN O WAR BLVD	10/15/2014	1643	2	RAINING	WET	REAR END - ON RAMP
REAR END	MAN O WAR BLVD	12/17/2014	1743	2	CLOUDY	DRY	REAR END - ON RAMP

LEGEND	
	ANGLE, 2 VEHICLES
	REAR END, 2 VEHICLES

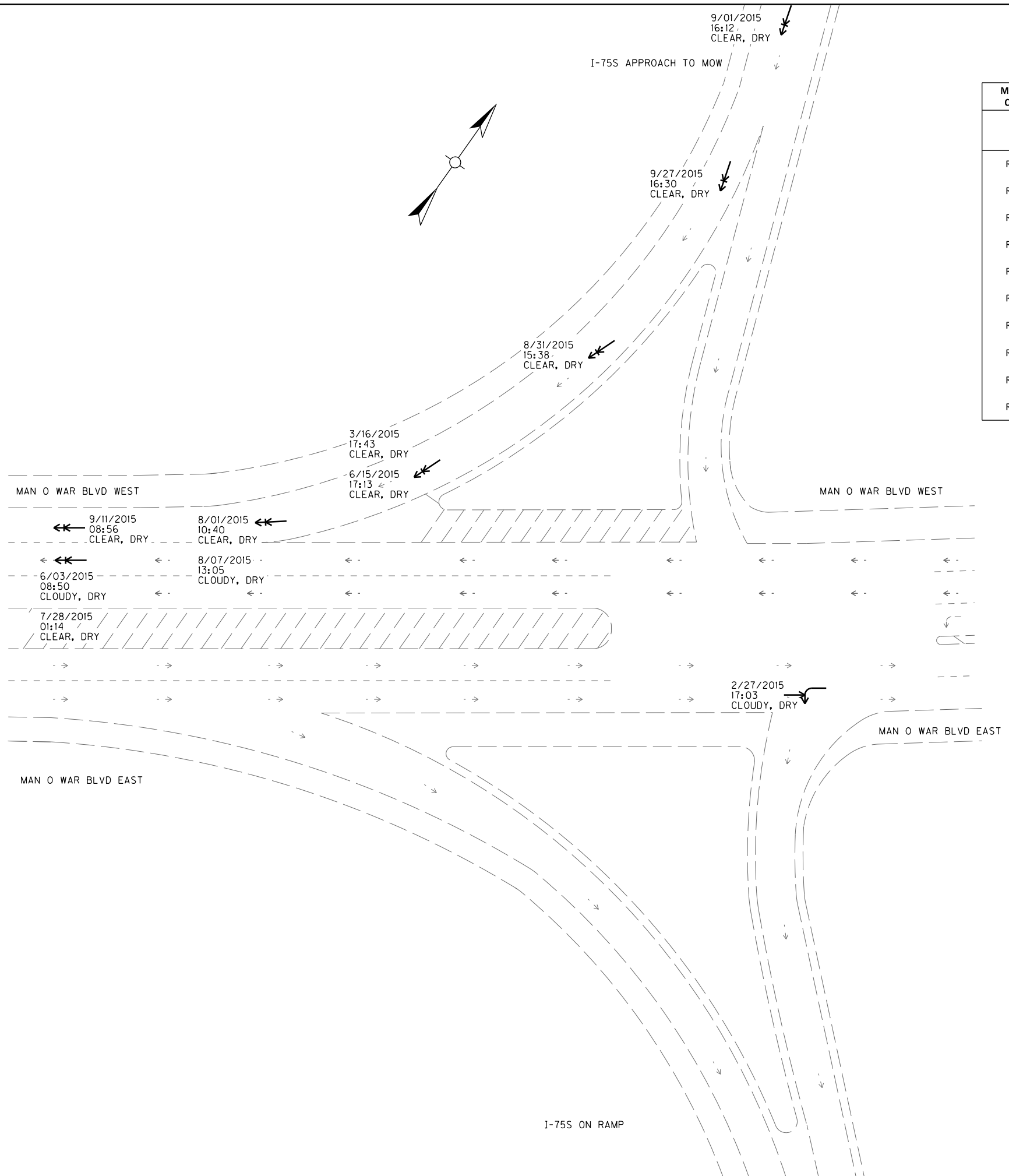
CRASH DIAGRAM_2014
 MOW & I-75 S
 NOT TO SCALE

FILE NAME: J:\PROJECT\KNTC\500556 KYTC DISTRICT 7 TRAFFIC 2015\LETTER AGREEMENT 2 MOW DATA-TECH\CRASHES\MOW + I-75 S\MOW + I-75 S-2015
 USER: vanessa.nghtem
 DATE PLOTTED: June 14, 2016
 E-SHEET NAME:
 MicroStation v8.11.9.397

COUNTY OF	ITEM NO.	SHEET NO.
FAYETTE		FIGURE 8D

MANNER OF COLLISION	RAMP TO	COLLISION DATE	COLLISION TIME	UNITS INVOLVED	WEATHER	ROADWAY CONDITION	DIRECTIONAL ANALYSIS
ANGLE	I75 S EXIT108 ON RAMP FROM MAN O WAR BLV	2/27/2015	1703	2	CLOUDY	DRY	ANGLE COLLISION - OTHER
REAR END	MAN O WAR BLVD	3/16/2015	1743	2	CLEAR	DRY	REAR END - ONE VEHICLE TURNING RIGHT
REAR END	MAN O WAR BLVD	6/3/2015	850	2	CLOUDY	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	MAN O WAR BLVD	6/15/2015	1713	2	CLEAR	DRY	REAR END - ON RAMP
REAR END	MAN O WAR BLVD	7/28/2015	114	2	CLEAR	DRY	REAR END - ON RAMP
REAR END	MAN O WAR BLVD	8/1/2015	1040	2	CLEAR	DRY	REAR END - ON RAMP
REAR END	MAN O WAR BLVD	8/7/2015	1305	2	CLOUDY	DRY	REAR END - ON RAMP
REAR END	MAN O WAR BLVD	8/31/2015	1538	2	CLEAR	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	MAN O WAR BLVD	9/1/2015	1612	2	CLEAR	DRY	REAR END - ON RAMP
REAR END	MAN O WAR BLVD	9/11/2015	856	2	CLEAR	DRY	REAR END - ON RAMP
REAR END	MAN O WAR BLVD	9/27/2015	1630	2	CLEAR	DRY	REAR END - ON RAMP

LEGEND	
	ANGLE, 2 VEHICLES
	REAR END, 2 VEHICLES

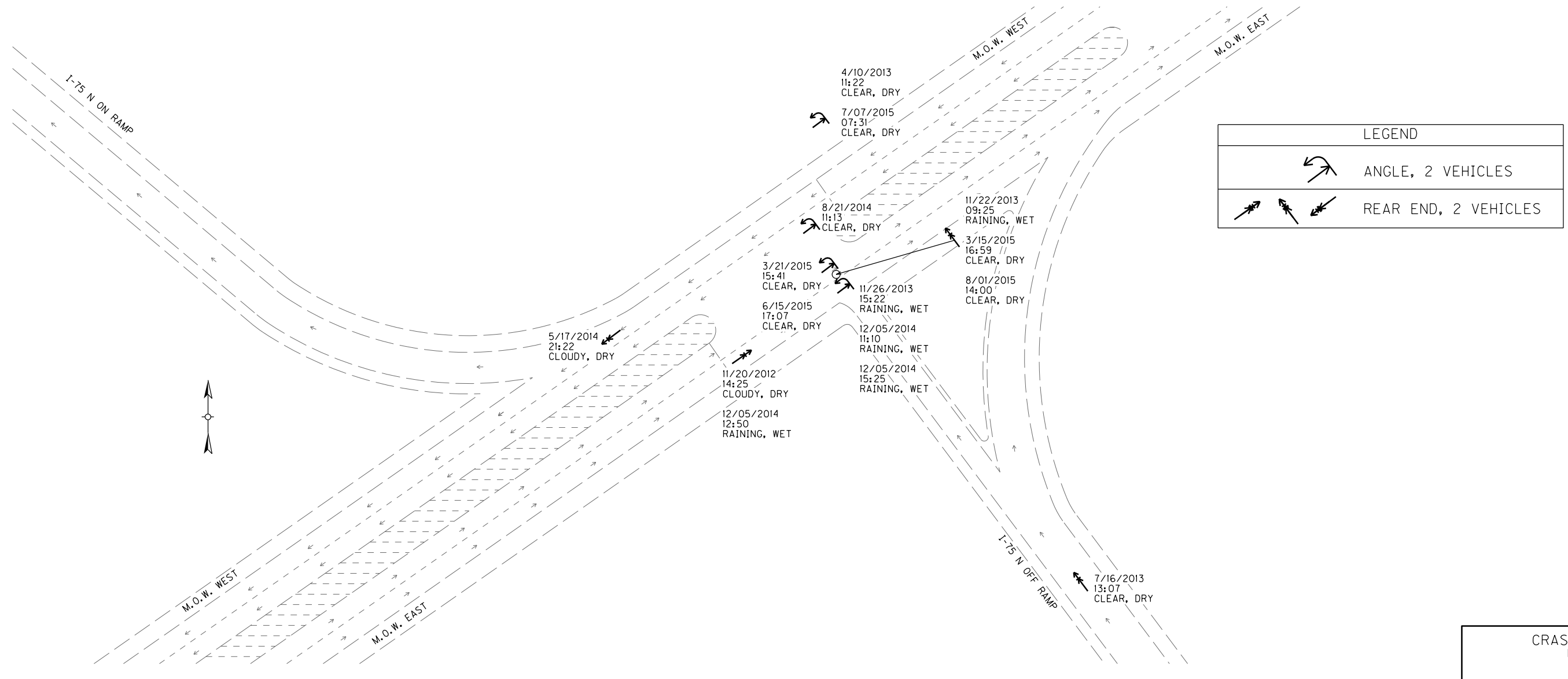


CRASH DIAGRAM_2015
 MOW & I-75 S
 NOT TO SCALE

FILE NAME: J:\PROJECT\KNTC\500596 KYTC DISTRICT 7 TRAFFIC 2015\LETTER AGREEMENT 2 MOW DATA-TECH\CRASHES\MOW + I-75 N\MOW + I-75 N-2015
 USER: vanessa.nghtem
 DATE PLOTTED: June 14, 2016
 E-SHEET NAME:
 MicroStation v8.11.9.397

COUNTY OF	ITEM NO.	SHEET NO.
FAYETTE		FIGURE 9

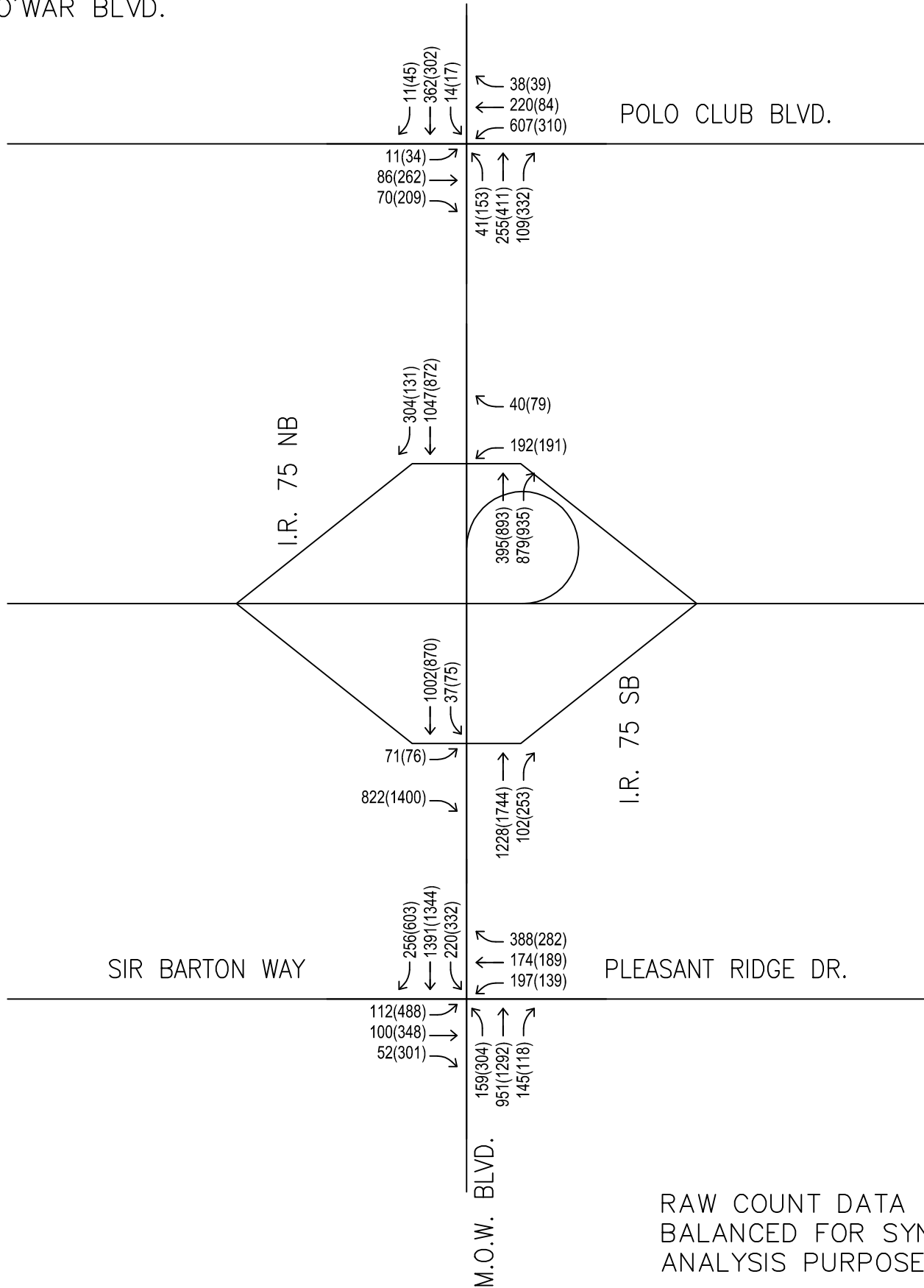
MANNER OF COLLISION	RAMP TO	LATITUDE	LONGITUDE	COLLISION DATE	COLLISION TIME	UNITS INVOLVED	WEATHER	ROADWAY CONDITION	DIRECTIONAL ANALYSIS
ANGLE	I75 N EXIT108 OFF RAMP TO MAN O WAR BLVD	38.0233459	-84.4097863	4/10/2013	1122	2	CLEAR	DRY	ANGLE COLLISION - OTHER
ANGLE	I75 N EXIT108 OFF RAMP TO MAN O WAR BLVD	38.02296	-84.4099524	11/26/2013	1522	2	RAINING	WET	ANGLE COLLISION - ONE VEHICLE TURNING LEFT
ANGLE	I75 N EXIT108 OFF RAMP TO MAN O WAR BLVD	38.0231991	-84.4098009	8/21/2014	1113	2	CLEAR	DRY	ANGLE COLLISION - ONE VEHICLE TURNING LEFT
ANGLE	I75 N EXIT108 OFF RAMP TO MAN O WAR BLVD	38.0230962	-84.4097774	12/5/2014	1110	2	RAINING	WET	ANGLE COLLISION - ONE VEHICLE TURNING LEFT
ANGLE	MAN O WAR BLVD	38.0230829	-84.4097878	12/5/2014	1525	2	RAINING	WET	ANGLE COLLISION - ONE VEHICLE TURNING LEFT
ANGLE	I75 N EXIT108 OFF RAMP TO MAN O WAR BLVD	38.0231071	-84.4098109	3/21/2015	1541	2	CLEAR	DRY	ANGLE COLLISION - ONE VEHICLE TURNING LEFT
ANGLE	I75 N EXIT108 OFF RAMP TO MAN O WAR BLVD	38.0231075	-84.4097822	6/15/2015	1707	2	CLEAR	DRY	ANGLE COLLISION - ONE VEHICLE TURNING LEFT
ANGLE	I75 N EXIT108 OFF RAMP TO MAN O WAR BLVD	38.0233353	-84.4098445	7/7/2015	731	2	CLEAR	DRY	ANGLE COLLISION - ONE VEHICLE TURNING LEFT
REAR END	MAN O WAR BLVD	38.0230606	-84.4098514	11/20/2012	1425	2	CLOUDY	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	MAN O WAR BLVD	38.0223529	-84.4091164	7/16/2013	1307	2	CLEAR	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	MAN O WAR BLVD	38.0230851	-84.4097913	11/22/2013	925	2	RAINING	WET	OTHER ROADWAY OR MID-BLOCK COLLISION
REAR END	MAN O WAR BLVD	38.0230332	-84.4098694	12/5/2014	1250	2	RAINING	WET	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING
REAR END	I75 N EXIT108 OFF RAMP TO MAN O WAR BLVD	38.023074	-84.4097617	3/15/2015	1659	2	CLEAR	DRY	REAR END - ONE VEHICLE STOPPED
REAR END	MAN O WAR BLVD	38.0230914	-84.4097713	8/1/2015	1400	2	CLEAR	DRY	REAR END - ONE VEHICLE TURNING LEFT
REAR END	I75 N EXIT108 ON RAMP FROM MAN O WAR BLVD	38.0229407	-84.4103461	5/17/2015	2122	2	CLOUDY	DRY	REAR END - ONE VEHICLE STOPPED



CRASH DIAGRAM_2013-2015
 US 60 & I-75 N
 NOT TO SCALE

Appendix C: Traffic Volume Diagrams

FIGURE 1 – EXISTING
WEEKDAY AM(PM) VOLUMES
MAN O'WAR BLVD.



RAW COUNT DATA
BALANCED FOR SYNCHRO
ANALYSIS PURPOSES.

FIGURE 2 – PROPOSED 2025
WEEKDAY AM(PM) VOLUMES
MAN O'WAR BLVD.

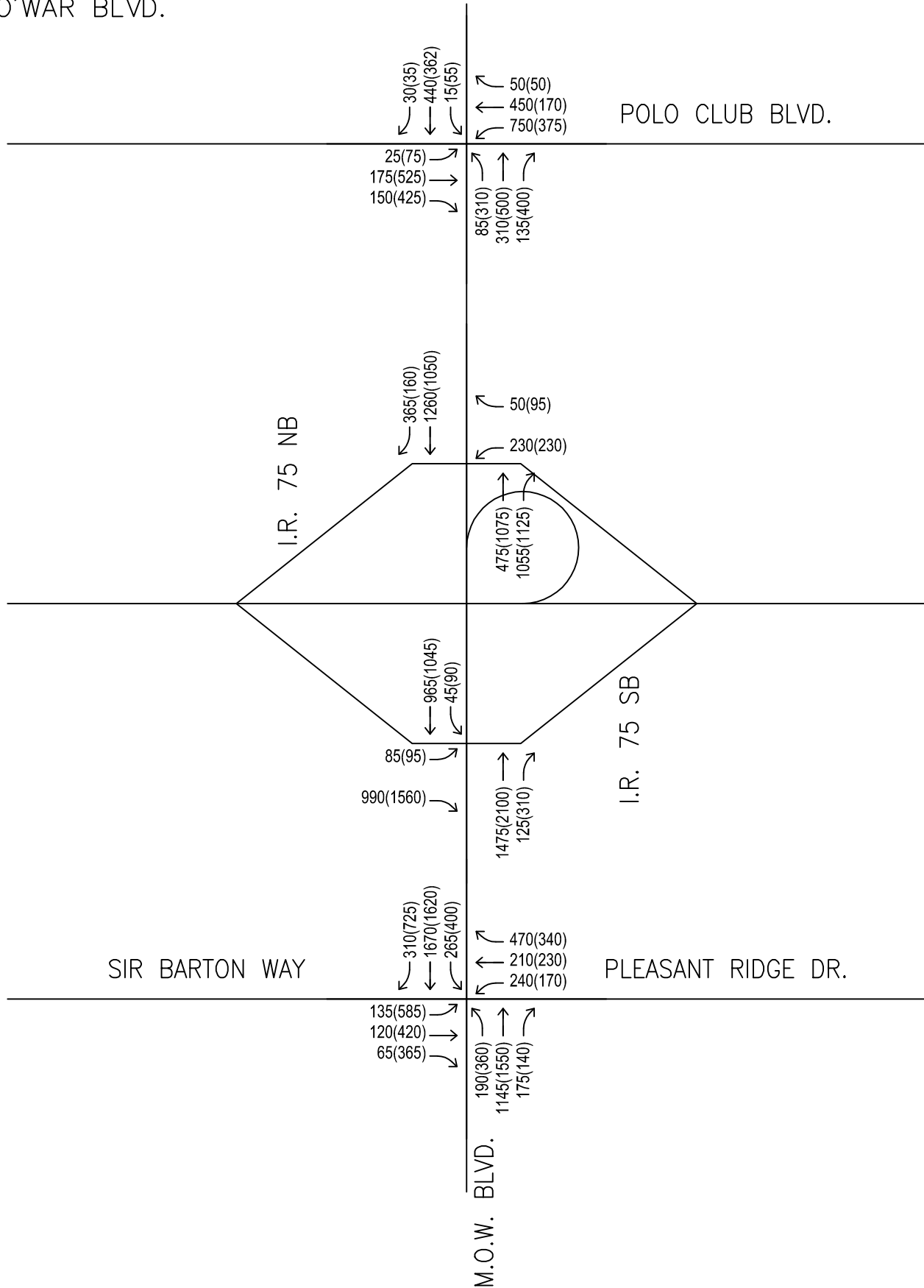
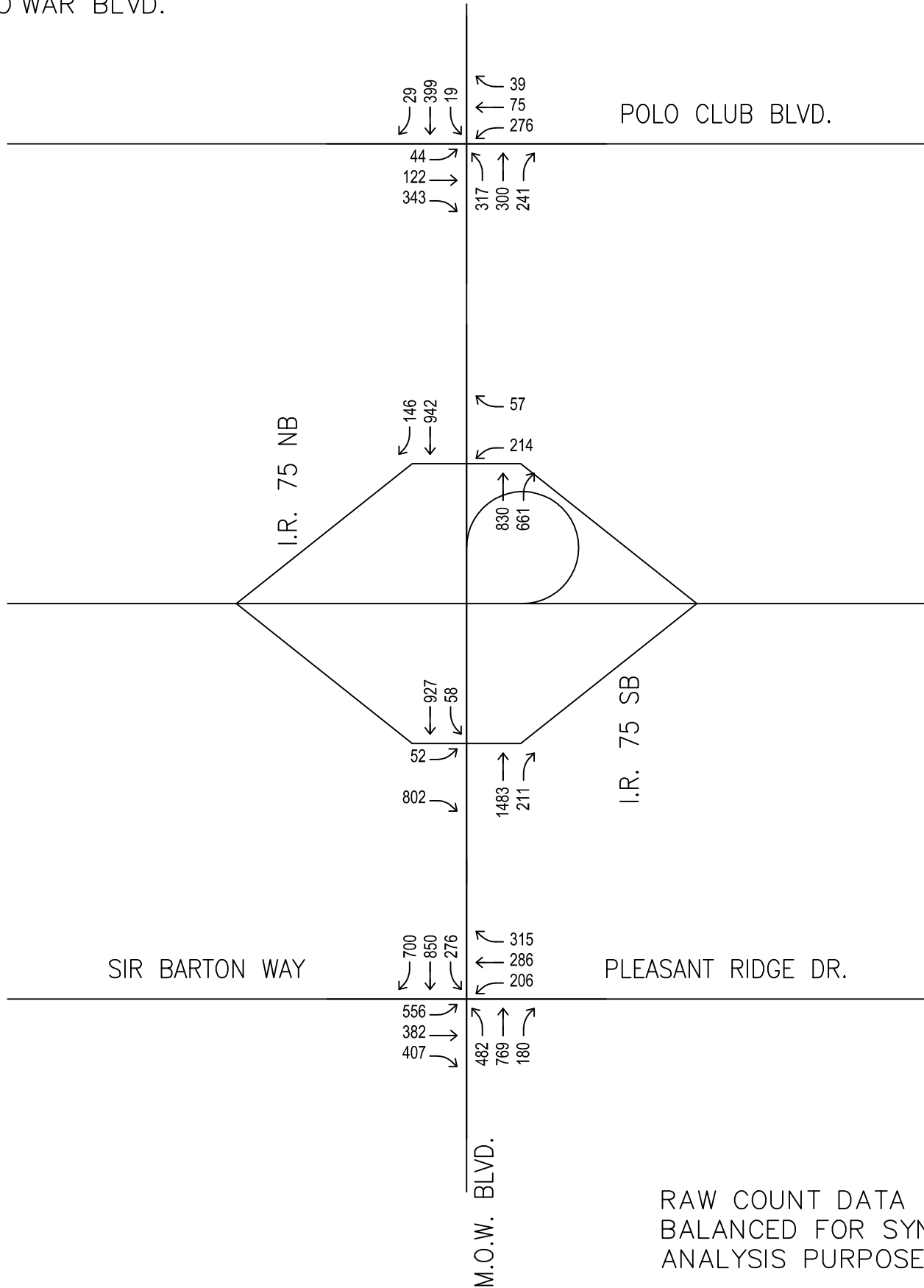


FIGURE 3 – EXISTING
WEEKEND VOLUMES
MAN O'WAR BLVD.



RAW COUNT DATA
BALANCED FOR SYNCHRO
ANALYSIS PURPOSES.



FIGURE 4 – PROPOSED 2025
WEEKEND VOLUMES
MAN O'WAR BLVD.

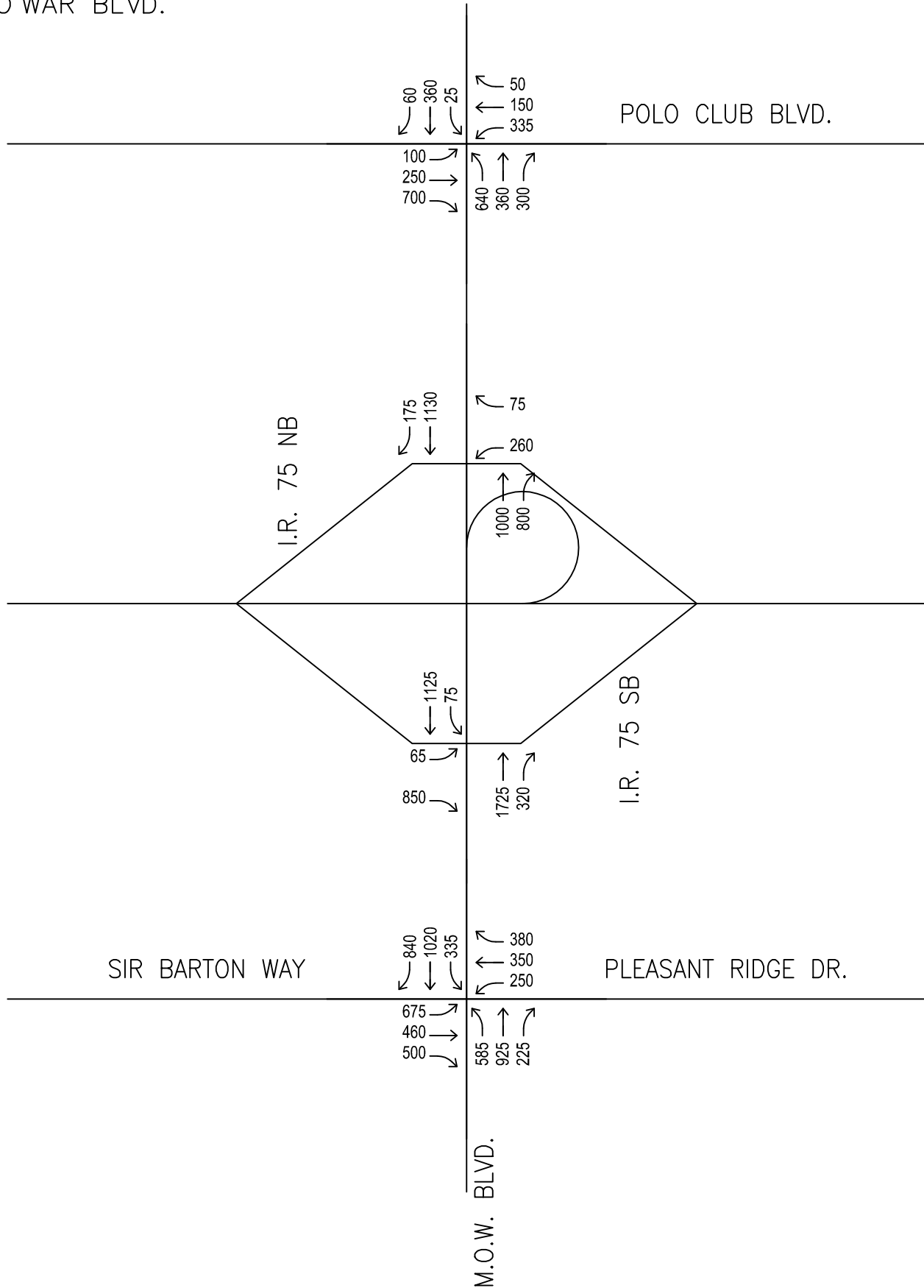
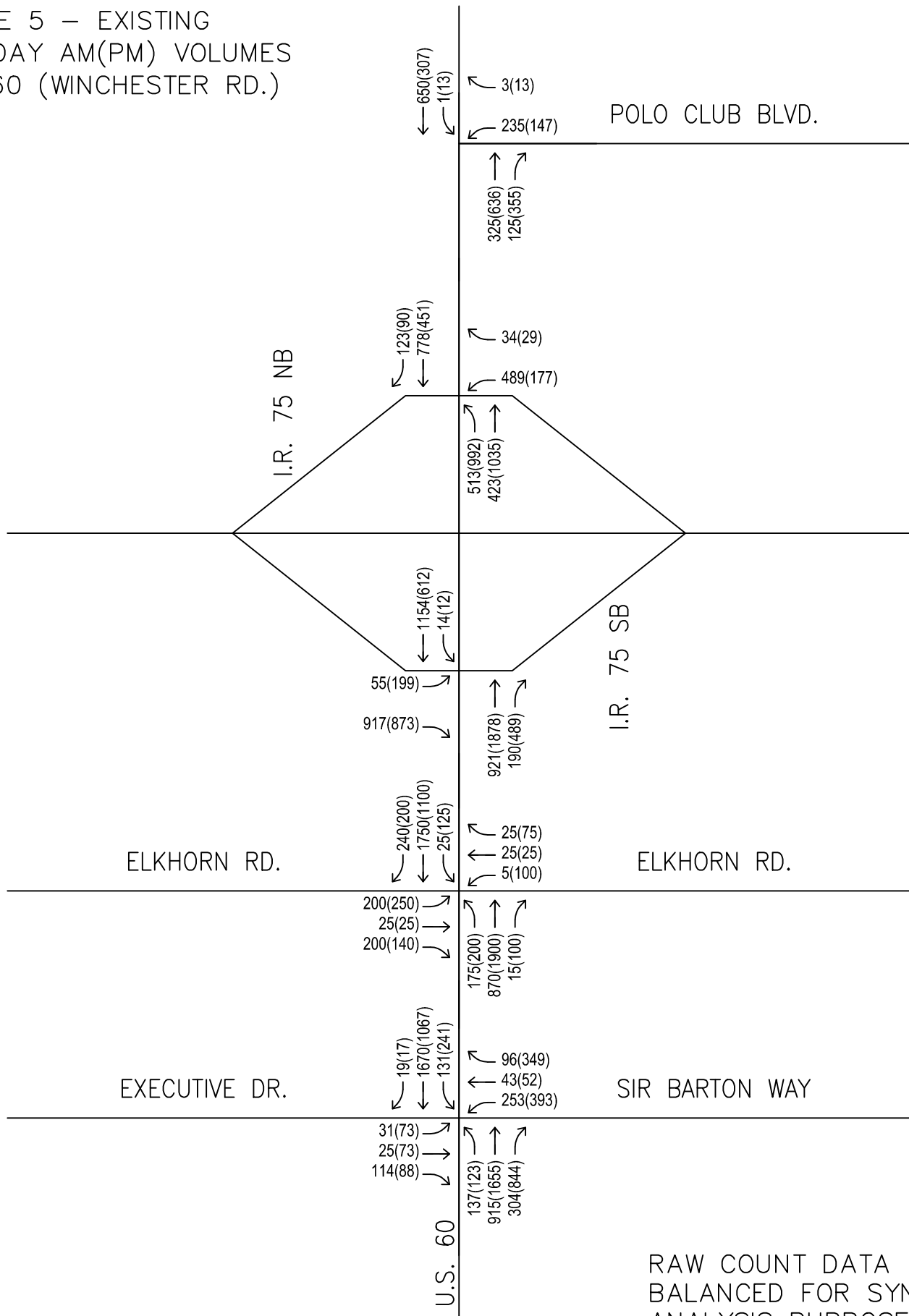


FIGURE 5 – EXISTING
WEEKDAY AM(PM) VOLUMES
U.S. 60 (WINCHESTER RD.)



RAW COUNT DATA
BALANCED FOR SYNCHRO
ANALYSIS PURPOSES.

FIGURE 6 – PROPOSED 2025
WEEKDAY AM(PM) VOLUMES
U.S. 60 (WINCHESTER RD.)

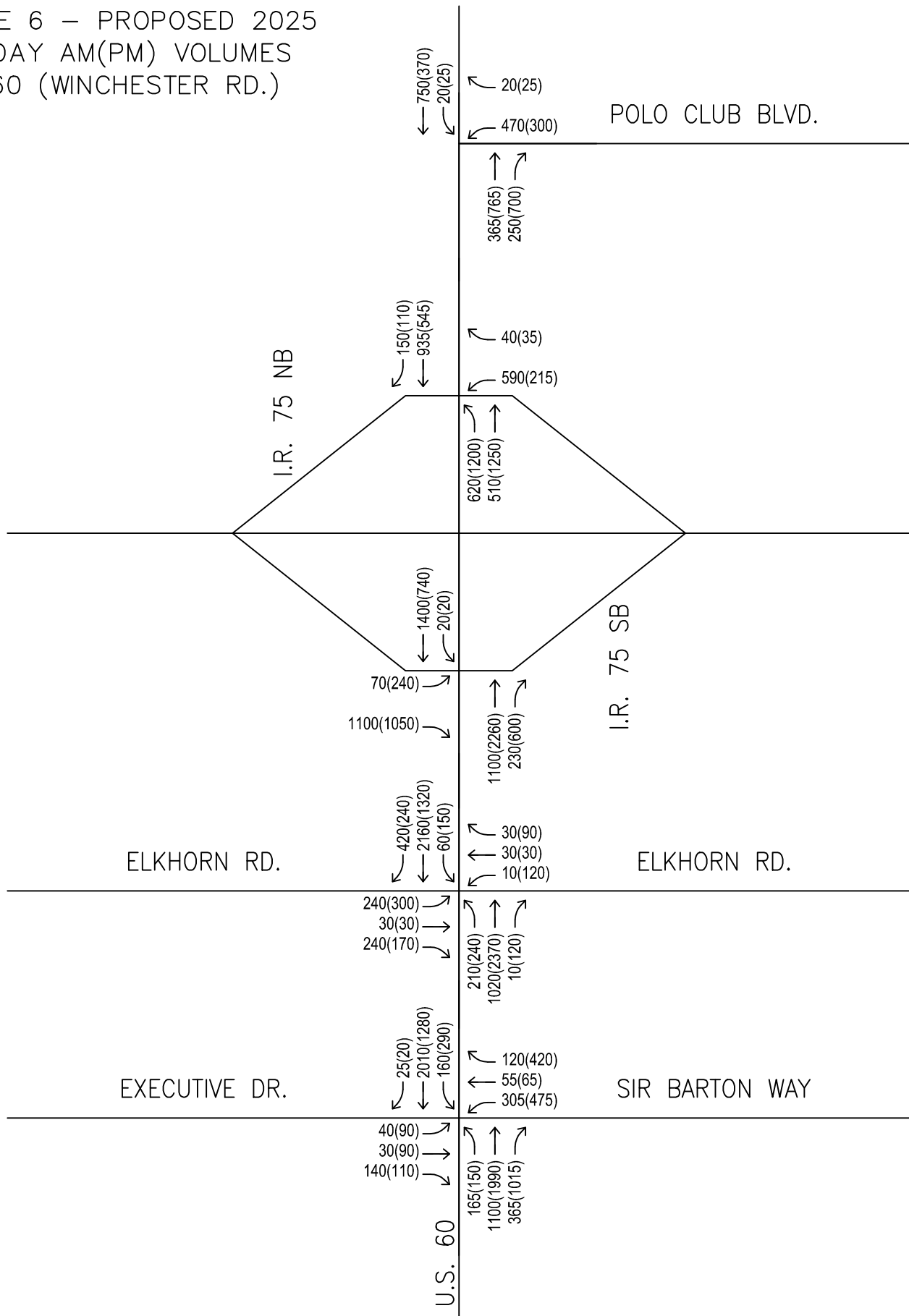
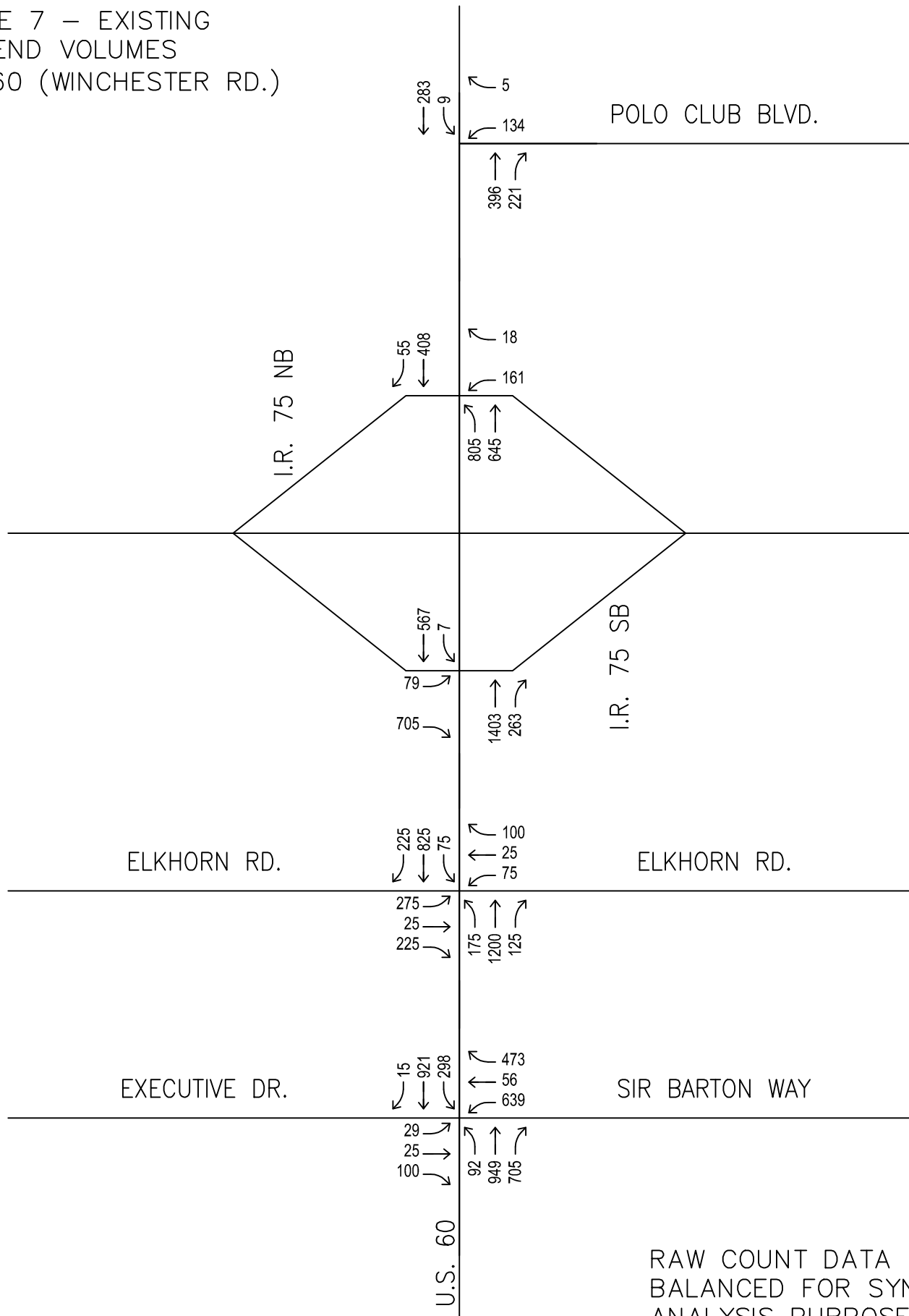
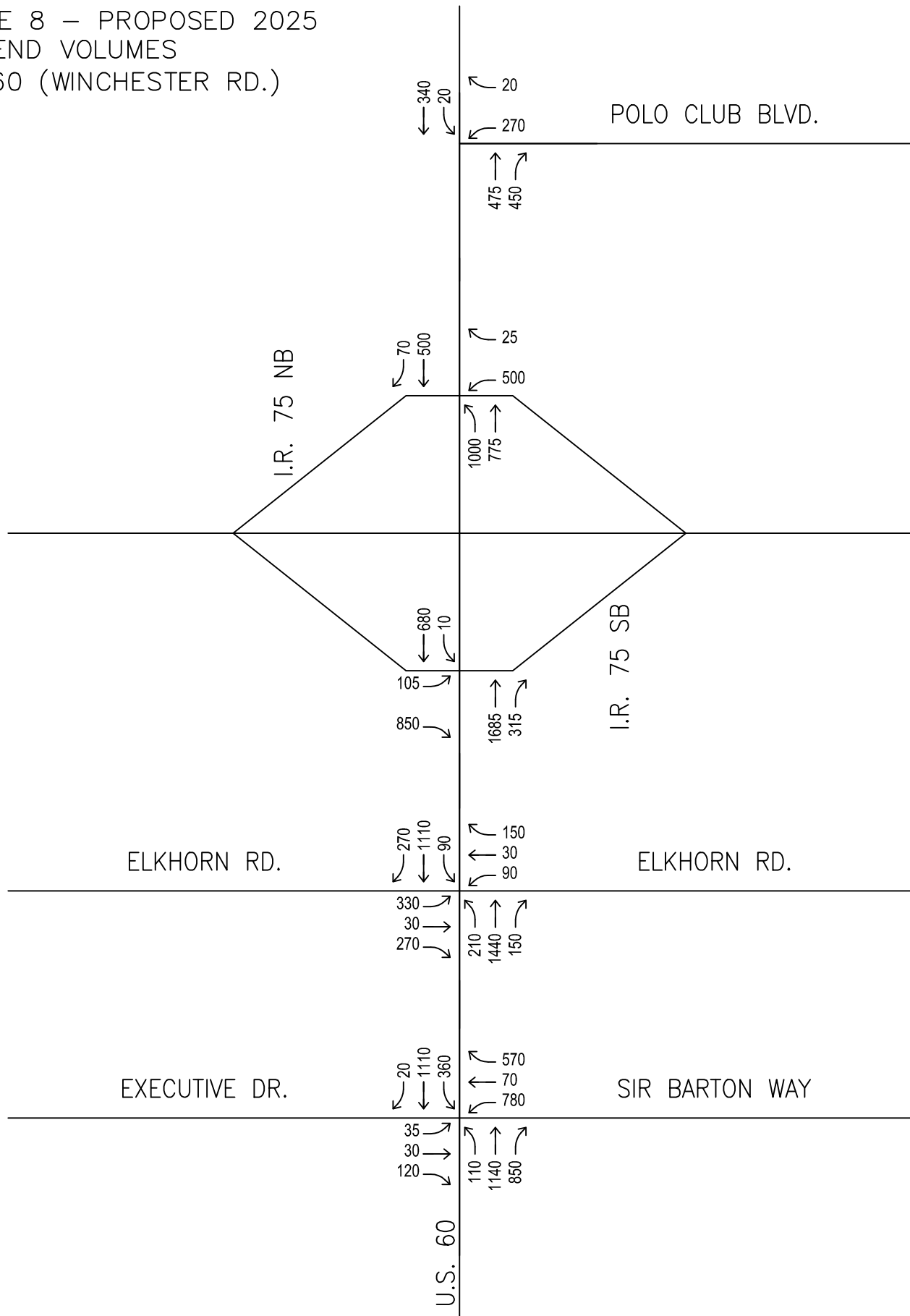


FIGURE 7 – EXISTING
WEEKEND VOLUMES
U.S. 60 (WINCHESTER RD.)



RAW COUNT DATA
BALANCED FOR SYNCHRO
ANALYSIS PURPOSES.

FIGURE 8 – PROPOSED 2025
WEEKEND VOLUMES
U.S. 60 (WINCHESTER RD.)





Appendix D: Level of Service

Alternative Measures of Effectiveness MOW at Polo Club																								
AM	2015 Existing				2025 No Build				Todds Road Interchange				Dual Left WB MOW to SB Pleasant				Culvert Connector				Dual LT EB MOW to Polo Club			
	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB
Approach Delay (sec/veh)/LOS	104/F	10/B	68/E	17/B	77/E	17/B	65/E	27/C	N/A				N/A				ASSUME LITTLE EFFECT				76/E	17/B	65/E	27/C
Intersection Delay/LOS	44/D				40/D																39/D			

PM	2015 Existing				2025 No Build				Todds Road Interchange				Dual Left WB MOW to SB Pleasant				Culvert Connector				Dual LT EB MOW to Polo Club			
	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB
Approach Delay (sec/veh)/LOS	45/D	68/E	23/C	38/D	18/B	133/F	23/C	156/F	N/A				N/A				19/B	97/F	22/C	120/F	17/B	133/F	23/C	156/F
Intersection Delay/LOS	43/D				82/F												65/E				82/F			

Weekend	2015 Existing				2025 No Build				Todds Road Interchange				Dual Left WB MOW to SB Pleasant				Culvert Connector				Dual LT EB MOW to Polo Club			
	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB
Approach Delay (sec/veh)/LOS	28/C	54/D	24/C	36/D	179/F	93/F	24/C	249/F	N/A				N/A				98/F	62/E	23/C	116/F	17/B	93/F	24/C	249/F
Intersection Delay/LOS	33/C				166/F												87/F				104/F			

Alternative Measures of Effectiveness MOW at I-75 NB																								
AM	2015 Existing				2025 No Build				Todds Road Interchange				Dual Left WB MOW to SB Pleasant				Culvert Connector				Dual LT EB MOW to Polo Club			
	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB
Approach Delay (sec/veh)/LOS	31/C	25/C	15/B		26/C	30/C	15/B		N/A				N/A				ASSUME LITTLE EFFECT				N/A			
Intersection Delay/LOS	23/C				21/C																			

PM	2015 Existing				2025 No Build				Todds Road Interchange				Dual Left WB MOW to SB Pleasant				Culvert Connector				Dual LT EB MOW to Polo Club			
	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB
Approach Delay (sec/veh)/LOS	70/E	38/D	8/A		74/E	38/D	9/A		N/A				N/A				36/D	38/D	8/A		N/A			
Intersection Delay/LOS	47/D				50/D												27/C							

Weekend	2015 Existing				2025 No Build				Todds Road Interchange				Dual Left WB MOW to SB Pleasant				Culvert Connector				Dual LT EB MOW to Polo Club			
	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB
Approach Delay (sec/veh)/LOS	7/A	39/D	8/A		19/B	40/D	8/A		N/A				N/A				12/B	39/D	7/A		N/A			
Intersection Delay/LOS	10/B				17/B												13/B							

Alternative Measures of Effectiveness MOW at Sir Barton Way/Pleasant Ridge																								
AM	2015 Existing				2025 No Build				Todds Road Interchange				Dual Left WB MOW to SB Pleasant				Culvert Connector				Dual LT EB MOW to Polo Club			
	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB
Approach Delay (sec/veh)/LOS	21/C	71/E	41/D	74/E	22/C	101/F	57/E	74/E	29/C	74/E	25/C	75/E	22/C	101/F	33/C	74/E	ASSUME LITTLE EFFECT				N/A			
Intersection Delay/LOS	42/D				56/E				39/D				45/D											

PM	2015 Existing				2025 No Build				Todds Road Interchange				Dual Left WB MOW to SB Pleasant				Culvert Connector				Dual LT EB MOW to Polo Club			
	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB
Approach Delay (sec/veh)/LOS	71/E	69/E	36/D	89/F	130/F	75/E	49/D	133/F	93/F	75/E	38/D	133/F	99/F	72/E	58/E	62/E	91/F	71/E	41/D	104/F	N/A			
Intersection Delay/LOS	61/E				92/F				79/E				72/E				72/E							

Weekend	2015 Existing				2025 No Build				Todds Road Interchange				Dual Left WB MOW to SB Pleasant				Culvert Connector				Dual LT EB MOW to Polo Club			
	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB
Approach Delay (sec/veh)/LOS	42/D	54/D	36/D	41/D	57/E	56/E	50/D	95/F	58/E	57/E	58/E	52/D	55/D	57/E	33/C	95/F	47/D	55/D	38/D	59/E	N/A			
Intersection Delay/LOS	42/D				64/E				56/E				58/E				48/D							

AM	Dual RT from SB I-75 Off to MOW			
	EB	NB	WB	SB
Approach Delay (sec/veh)/LOS	15/B	N/A	9/A	2/A
Intersection Delay/LOS	10/A			

PM	Dual RT from SB I-75 Off to MOW			
	EB	NB	WB	SB
Approach Delay (sec/veh)/LOS	293/F	N/A	7/A	277/F
Intersection Delay/LOS	224/F			

Weekend	Dual RT from SB I-75 Off to MOW			
	EB	NB	WB	SB
Approach Delay (sec/veh)/LOS	96/F	N/A	5/D	59/E
Intersection Delay/LOS	61/E			

Green highlighted area means Improvement

Alternative Measures of Effectiveness US 60 at Elkhorn

AM	2015 Existing				2025 No Build				Culvert Connector				Third US 60 WB Lane				US 60 Three Lanes Both Directions (West of I-75)			
	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB
Approach Delay (sec/veh)/LOS	20/C	64/E	23/C	75/E	22/C	66/E	98/F	104/F	ASSUME LITTLE EFFECT				22/C	66/E	20/C	104/F	22/C	66/E	20/C	104/F
Intersection Delay/LOS	29/C				77/E								31/C				31/C			
PM	2015 Existing				2025 No Build				Culvert Connector				Third US 60 WB Lane				US 60 Three Lanes Both Directions (West of I-75)			
	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB
Approach Delay (sec/veh)/LOS	22/C	61/E	17/B	79/E	121/F	61/E	20/B	113/F	64/E	61/E	15/B	92/F	121/F	61/E	16/B	113/F	19/F	61/E	16/B	133/F
Intersection Delay/LOS	28/C				84/F				50/D				83/F				29/C			
Weekend	2015 Existing				2025 No Build				Culvert Connector				Third US 60 WB Lane				US 60 Three Lanes Both Directions (West of I-75)			
	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB
Approach Delay (sec/veh)/LOS	14/B	58/E	16/B	76/E	17/B	59/E	19/B	110/F	14/B	59/E	15/B	79/E	17/B	59/E	15/B	110/F	15/B	59/E	15/B	110/F
Intersection Delay/LOS	27/C				35/C				27/C				33/C				32/C			

Alternative Measures of Effectiveness US 60 at I-75 NB Off Ramp

AM	2015 Existing				2025 No Build				Culvert Connector				Third US 60 WB Lane				US 60 Three Lanes Both Directions (West of I-75)			
	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB
Approach Delay (sec/veh)/LOS	17/B	61/E	35/C		17/B	64/E	35/C		ASSUME LITTLE EFFECT				17/B	64/E	33/C		ASSUME LITTLE EFFECT			
Intersection Delay/LOS	32/C				34/C								33/C							
PM	2015 Existing				2025 No Build				Culvert Connector				Third US 60 WB Lane				US 60 Three Lanes Both Directions (West of I-75)			
	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB
Approach Delay (sec/veh)/LOS	7/A	64/E	49/D		8/A	64/E	54/D		7/A	64/E	54/D		8/A	64/E	55/E		ASSUME LITTLE EFFECT			
Intersection Delay/LOS	19/B				20/C				19/B				21/C							
Weekend	2015 Existing				2025 No Build				Culvert Connector				Third US 60 WB Lane				US 60 Three Lanes Both Directions (West of I-75)			
	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB
Approach Delay (sec/veh)/LOS	7/A	60/E	35/D		6/A	59/E	38/D		6/A	59/E	48/D		6/A	59/E	48/D		ASSUME LITTLE EFFECT			
Intersection Delay/LOS	18/B				18/B				19/B				19/B							

Alternative Measures of Effectiveness US 60 at I-75 SB Off Ramp

AM	2015 Existing				2025 No Build				Culvert Connector				Third US 60 WB Lane				US 60 Three Lanes Both Directions (West of I-75)			
	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB
Approach Delay (sec/veh)/LOS	19/B		20/B	73/E	21/C		18/B	159/F	ASSUME LITTLE EFFECT				21/C		22/C	159/F	ASSUME LITTLE EFFECT			
Intersection Delay/LOS	35/D				61/D								63/E							
PM	2015 Existing				2025 No Build				Culvert Connector				Third US 60 WB Lane				US 60 Three Lanes Both Directions (West of I-75)			
	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB
Approach Delay (sec/veh)/LOS	42/D		2/A	85/F	143/F		3/A	300/F	84/F		3/A	159/F	143/F		3/A	300/F	18/B		3/A	300/F
Intersection Delay/LOS	47/D				163/F				91/F				163/F				90/F			
Weekend	2015 Existing				2025 No Build				Culvert Connector				Third US 60 WB Lane				US 60 Three Lanes Both Directions (West of I-75)			
	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB
Approach Delay (sec/veh)/LOS	7/A		3/A	60/E	28/C		6/A	63/E	11/B		5/A	60/E	28/C		6/A	63/E	13/B		6/A	63/E
Intersection Delay/LOS	20/B				33/C				24/C				33/C				25/C			

Alternative Measures of Effectiveness US 60 at Sir Barton Way

AM	2015 Existing				2025 No Build				Culvert Connector				Third US 60 WB Lane				US 60 Three Lanes Both Directions (West of I-75)			
	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB
Approach Delay (sec/veh)/LOS	20/B	69/E	11/B	68/E	24/C	75/E	51/D	73/E	ASSUME LITTLE EFFECT				23/C	75/E	10/B	73/E	20/C	75/E	10/B	73/E
Intersection Delay/LOS	23/C				45/D								25/C				24/C			
PM	2015 Existing				2025 No Build				Culvert Connector				Third US 60 WB Lane				US 60 Three Lanes Both Directions (West of I-75)			
	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB
Approach Delay (sec/veh)/LOS	47/D	74/E	26/C	100/F	104/F	111/F	29/C	159/F	66/E	80/F	27/C	127/F	104/F	111/F	29/C	159/F	47/D	111/F	29/C	159/F
Intersection Delay/LOS	48/D				88/F				61/E				87/F				57/E			
Weekend	2015 Existing				2025 No Build				Culvert Connector				Third US 60 WB Lane				US 60 Three Lanes Both Directions (West of I-75)			
	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB
Approach Delay (sec/veh)/LOS	27/C	59/E	71/E	62/E	33/C	105/F	102/F	63/E	27/C	61/E	75/E	62/E	33/C	105/F	101/F	63/E	27/C	105/F	101/F	63/E
Intersection Delay/LOS	49/D				74/E				51/D				73/E				71/E			

Alternative Measures of Effectiveness US 60 at Polo Club

AM	2015 Existing				2025 No Build				Culvert Connector				Third US 60 WB Lane				US 60 Three Lanes Both Directions (West of I-75)			
	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB
Approach Delay (sec/veh)/LOS	0/A	113/F	0/A		0/A	831/F	9/A		19/B	26/C	20/B		18/B	24/C	28/C		15/B	24/C	28/C	
Intersection Delay/LOS	20				217				22/C				24/C				23/C			
PM	2015 Existing				2025 No Build				Culvert Connector				Third US 60 WB Lane				US 60 Three Lanes Both Directions (West of I-75)			
	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB
Approach Delay (sec/veh)/LOS	0/A	42/E	0/A		0/A	462/F	15/B		21/C	19/B	11/B		21/C	23/C	10/A		22/C	23/C	10/A	
Intersection Delay/LOS	5				69				19/B				19/B				20/C			
Weekend	2015 Existing				2025 No Build				Culvert Connector				Third US 60 WB Lane				US 60 Three Lanes Both Directions (West of I-75)			
	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB	EB	NB	WB	SB
Approach Delay (sec/veh)/LOS	0/A	21/C	0/A		0/A	96/F	11/B		35/C	10/A	19/B		37/D	12/B	17/B		47/D	12/B	17/B	
Intersection Delay/LOS	3				18				26/C				28/C				33/C			

Green highlighted area means Improvement

Appendix E: I-75 Highway Capacity

RAMPS AND RAMP JUNCTIONS WORKSHEET										
General Information					Site Information					
Analyst	WFM		Freeway/Dir of Travel	I-75 Southbound						
Agency or Company	AECOM		Junction	US 60						
Date Performed	12/15/2015		Jurisdiction	KYTC						
Analysis Time Period	PM Peak		Analysis Year	2015						
Project Description MOW Small Area Study										
Inputs										
Upstream Adj Ramp		Number of Lanes, N			3			Downstream Adj Ramp		
<input type="checkbox"/> Yes <input type="checkbox"/> On		Acceleration Lane Length, L _A			1250			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> On		
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off		Deceleration Lane Length L _D						<input type="checkbox"/> No <input checked="" type="checkbox"/> Off		
L _{up} = ft		Freeway Volume, V _F			3093			L _{down} = 4550 ft		
V _u = veh/h		Ramp Volume, V _R			501			V _D = 1374 veh/h		
		Freeway Free-Flow Speed, S _{FF}			70.0					
		Ramp Free-Flow Speed, S _{FR}			35.0					
Conversion to pc/h Under Base Conditions										
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p		
Freeway	3093	0.97	Level	12	0	0.943	0.98	3449		
Ramp	501	0.95	Grade	1	0	0.995	1.00	530		
UpStream										
DownStream	1374	0.95	Grade	1	0	0.995	1.00	1454		
Merge Areas					Diverge Areas					
Estimation of v ₁₂					Estimation of v ₁₂					
$V_{12} = V_F (P_{FM})$ L _{EQ} = 5974.93 (Equation 13-6 or 13-7) P _{FM} = 0.633 using Equation (Exhibit 13-6) V ₁₂ = 2182 pc/h V ₃ or V _{av34} = 1267 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ L _{EQ} = (Equation 13-12 or 13-13) P _{FD} = using Equation (Exhibit 13-7) V ₁₂ = pc/h V ₃ or V _{av34} = pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					
Capacity Checks					Capacity Checks					
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?	
V _{FO}	3979	Exhibit 13-8		No	V _F		Exhibit 13-8			
					V _{FO} = V _F - V _R		Exhibit 13-8			
					V _R		Exhibit 13-10			
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area					
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?	
V _{R12}	2712	Exhibit 13-8		No	V ₁₂		Exhibit 13-8			
Level of Service Determination (if not F)					Level of Service Determination (if not F)					
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = 18.5 (pc/mi/ln) LOS = B (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)					
Speed Determination					Speed Determination					
M _S = 0.292 (Exhibit 13-11)					D _S = (Exhibit 13-12)					
S _R = 61.8 mph (Exhibit 13-11)					S _R = mph (Exhibit 13-12)					
S ₀ = 67.2 mph (Exhibit 13-11)					S ₀ = mph (Exhibit 13-12)					
S = 63.4 mph (Exhibit 13-13)					S = mph (Exhibit 13-13)					

BASIC FREEWAY SEGMENTS WORKSHEET			
General Information		Site Information	
Analyst	WFM	Highway/Direction of Travel <i>I-75 Southbound</i>	
Agency or Company	AECOM	From/To	<i>US 60 to MOW</i>
Date Performed	12/15/2015	Jurisdiction	KYTC
Analysis Time Period	PM Peak	Analysis Year	2015
Project Description <i>MOW Small Area Study</i>			
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)	
<input type="checkbox"/> Planning Data			
Flow Inputs			
Volume, V	3594	veh/h	Peak-Hour Factor, PHF
AADT		veh/day	0.97
Peak-Hr Prop. of AADT, K			%Trucks and Buses, P _T
Peak-Hr Direction Prop, D			12
DDHV = AADT x K x D		veh/h	%RVs, P _R
			0
			General Terrain:
			<i>Grade</i>
			Grade 1.00% Length <i>0.00mi</i>
			Up/Down % <i>1.00</i>
Calculate Flow Adjustments			
f _p	1.00	E _R	1.2
E _T	1.5	f _{HV} = 1/[1+P _T (E _T - 1) + P _R (E _R - 1)] <i>0.943</i>	
Speed Inputs		Calc Speed Adj and FFS	
Lane Width	ft		
Rt-Side Lat. Clearance	ft	f _{LW}	mph
Number of Lanes, N	3	f _{LC}	mph
Total Ramp Density, TRD	ramps/mi	TRD Adjustment	mph
FFS (measured)	70.0	FFS	70.0
Base free-flow Speed, BFFS	mph		mph
LOS and Performance Measures		Design (N)	
<u>Operational (LOS)</u>		<u>Design (N)</u>	
v _p = (V or DDHV) / (PHF x N x f _{HV})		Design LOS	
1309	pc/h/ln	v _p = (V or DDHV) / (PHF x N x f _{HV})	
x f _p)		pc/h/ln	
S	69.9	x f _p)	
S	mph	S	mph
D = v _p / S	18.7	D = v _p / S	pc/mi/ln
18.7	pc/mi/ln	Required Number of Lanes, N	
LOS	C		
Glossary		Factor Location	
N - Number of lanes	S - Speed	E _R - Exhibits 11-10, 11-12	f _{LW} - Exhibit 11-8
V - Hourly volume	D - Density	E _T - Exhibits 11-10, 11-11, 11-13	f _{LC} - Exhibit 11-9
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 11-18	TRD - Page 11-11
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 11-2, 11-3	
DDHV - Directional design hour volume			

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst		WFM			Freeway/Dir of Travel		I-75 Southbound		
Agency or Company		AECOM			Junction		MOW		
Date Performed		12/15/2015			Jurisdiction		KYTC		
Analysis Time Period		PM Peak			Analysis Year		2015		
Project Description MOW Small Area Study									
Inputs									
Upstream Adj Ramp		Number of Lanes, N			3			Downstream Adj Ramp	
<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> On		Acceleration Lane Length, L _A						<input type="checkbox"/> Yes <input type="checkbox"/> On	
<input type="checkbox"/> No <input type="checkbox"/> Off		Deceleration Lane Length L _D			450			<input checked="" type="checkbox"/> No <input type="checkbox"/> Off	
L _{up} = 4650 ft		Freeway Volume, V _F			3594			L _{down} = ft	
V _u = 501 veh/h		Ramp Volume, V _R			1374			V _D = veh/h	
		Freeway Free-Flow Speed, S _{FF}			70.0				
		Ramp Free-Flow Speed, S _{FR}			35.0				
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	3594	0.97	Level	12	0	0.943	1.00	3927	
Ramp	1374	0.95	Grade	1	0	0.995	1.00	1454	
UpStream	501	0.95	Grade	1	0	0.995	1.00	530	
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ L _{EQ} = (Equation 13-6 or 13-7) P _{FM} = using Equation (Exhibit 13-6) V ₁₂ = pc/h V ₃ or V _{av34} pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ L _{EQ} = 10429.58 (Equation 13-12 or 13-13) P _{FD} = 0.633 using Equation (Exhibit 13-7) V ₁₂ = 3019 pc/h V ₃ or V _{av34} 908 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}		Exhibit 13-8			V _F	3927	Exhibit 13-8	7200	No
					V _{FO} = V _F - V _R	2473	Exhibit 13-8	7200	No
					V _R	1454	Exhibit 13-10	2000	No
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}		Exhibit 13-8			V ₁₂	3019	Exhibit 13-8	4400:All	No
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = 26.2 (pc/mi/ln) LOS = C (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = (Exhibit 13-11)					D _S = 0.559 (Exhibit 13-12)				
S _R = mph (Exhibit 13-11)					S _R = 54.4 mph (Exhibit 13-12)				
S ₀ = mph (Exhibit 13-11)					S ₀ = 76.8 mph (Exhibit 13-12)				
S = mph (Exhibit 13-13)					S = 58.3 mph (Exhibit 13-13)				

RAMPS AND RAMP JUNCTIONS WORKSHEET										
General Information					Site Information					
Analyst	WFM		Freeway/Dir of Travel	I-75 Southbound						
Agency or Company	AECOM		Junction	US 60						
Date Performed	12/15/2015		Jurisdiction	KYTC						
Analysis Time Period	PM Peak		Analysis Year	2025						
Project Description MOW Small Area Study										
Inputs										
Upstream Adj Ramp		Number of Lanes, N			3			Downstream Adj Ramp		
<input type="checkbox"/> Yes <input type="checkbox"/> On		Acceleration Lane Length, L _A			1250			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> On		
<input checked="" type="checkbox"/> No <input type="checkbox"/> Off		Deceleration Lane Length L _D						<input type="checkbox"/> No <input checked="" type="checkbox"/> Off		
L _{up} = ft		Freeway Volume, V _F			3712			L _{down} = 4550 ft		
V _u = veh/h		Ramp Volume, V _R			601			V _D = 1374 veh/h		
		Freeway Free-Flow Speed, S _{FF}			70.0					
		Ramp Free-Flow Speed, S _{FR}			35.0					
Conversion to pc/h Under Base Conditions										
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p		
Freeway	3712	0.97	Level	12	0	0.943	0.98	4139		
Ramp	601	0.95	Level	1	0	0.995	1.00	636		
UpStream										
DownStream	1374	0.95	Level	1	0	0.995	1.00	1454		
Merge Areas					Diverge Areas					
Estimation of v ₁₂					Estimation of v ₁₂					
$V_{12} = V_F (P_{FM})$ L _{EQ} = 5974.93 (Equation 13-6 or 13-7) P _{FM} = 0.633 using Equation (Exhibit 13-6) V ₁₂ = 2619 pc/h V ₃ or V _{av34} = 1520 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ L _{EQ} = (Equation 13-12 or 13-13) P _{FD} = using Equation (Exhibit 13-7) V ₁₂ = pc/h V ₃ or V _{av34} = pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					
Capacity Checks					Capacity Checks					
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?	
V _{FO}	4775	Exhibit 13-8		No	V _F		Exhibit 13-8			
					V _{FO} = V _F - V _R		Exhibit 13-8			
					V _R		Exhibit 13-10			
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area					
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?	
V _{R12}	3255	Exhibit 13-8		No	V ₁₂		Exhibit 13-8			
Level of Service Determination (if not F)					Level of Service Determination (if not F)					
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = 22.7 (pc/mi/ln) LOS = C (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)					
Speed Determination					Speed Determination					
M _S = 0.335 (Exhibit 13-11)					D _S = (Exhibit 13-12)					
S _R = 60.6 mph (Exhibit 13-11)					S _R = mph (Exhibit 13-12)					
S ₀ = 66.3 mph (Exhibit 13-11)					S ₀ = mph (Exhibit 13-12)					
S = 62.3 mph (Exhibit 13-13)					S = mph (Exhibit 13-13)					

BASIC FREEWAY SEGMENTS WORKSHEET			
General Information		Site Information	
Analyst	WFM	Highway/Direction of Travel <i>I-75 Southbound</i>	
Agency or Company	AECOM	From/To	<i>US 60 to MOW</i>
Date Performed	12/15/2015	Jurisdiction	KYTC
Analysis Time Period	PM Peak	Analysis Year	2025
Project Description <i>MOW Small Area Study</i>			
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)	
<input type="checkbox"/> Planning Data			
Flow Inputs			
Volume, V	4313	veh/h	Peak-Hour Factor, PHF
AADT		veh/day	0.97
Peak-Hr Prop. of AADT, K			%Trucks and Buses, P _T
Peak-Hr Direction Prop, D			12
DDHV = AADT x K x D		veh/h	%RVs, P _R
			0
			General Terrain:
			<i>Level</i>
			Grade % Length
			<i>mi</i>
			Up/Down %
Calculate Flow Adjustments			
f _p	1.00	E _R	1.2
E _T	1.5	f _{HV} = 1/[1+P _T (E _T - 1) + P _R (E _R - 1)]	
			0.943
Speed Inputs		Calc Speed Adj and FFS	
Lane Width	ft		
Rt-Side Lat. Clearance	ft	f _{LW}	mph
Number of Lanes, N	3	f _{LC}	mph
Total Ramp Density, TRD	ramps/mi	TRD Adjustment	mph
FFS (measured)	70.0	FFS	70.0
Base free-flow Speed, BFFS	mph		mph
LOS and Performance Measures		Design (N)	
<u>Operational (LOS)</u>		<u>Design (N)</u>	
v _p = (V or DDHV) / (PHF x N x f _{HV})		Design LOS	
1571	pc/h/ln	v _p = (V or DDHV) / (PHF x N x f _{HV})	
x f _p)		pc/h/ln	
S	68.4	x f _p)	
S	mph	S	mph
D = v _p / S	23.0	D = v _p / S	pc/mi/ln
23.0	pc/mi/ln	Required Number of Lanes, N	
LOS	C		
Glossary		Factor Location	
N - Number of lanes	S - Speed	E _R - Exhibits 11-10, 11-12	f _{LW} - Exhibit 11-8
V - Hourly volume	D - Density	E _T - Exhibits 11-10, 11-11, 11-13	f _{LC} - Exhibit 11-9
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 11-18	TRD - Page 11-11
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 11-2, 11-3	
DDHV - Directional design hour volume			

RAMPS AND RAMP JUNCTIONS WORKSHEET									
General Information					Site Information				
Analyst		WFM			Freeway/Dir of Travel		I-75 Southbound		
Agency or Company		AECOM			Junction		MOW		
Date Performed		12/15/2015			Jurisdiction		KYTC		
Analysis Time Period		PM Peak			Analysis Year		2025		
Project Description MOW Small Area Study									
Inputs									
Upstream Adj Ramp		Number of Lanes, N			3			Downstream Adj Ramp	
<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> On		Acceleration Lane Length, L _A						<input type="checkbox"/> Yes <input type="checkbox"/> On	
<input type="checkbox"/> No <input type="checkbox"/> Off		Deceleration Lane Length L _D			450			<input checked="" type="checkbox"/> No <input type="checkbox"/> Off	
L _{up} = 4650 ft		Freeway Volume, V _F			4313			L _{down} = ft	
V _u = 601 veh/h		Ramp Volume, V _R			1649			V _D = veh/h	
		Freeway Free-Flow Speed, S _{FF}			70.0				
		Ramp Free-Flow Speed, S _{FR}			35.0				
Conversion to pc/h Under Base Conditions									
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PHF x f _{HV} x f _p	
Freeway	4313	0.97	Level	12	0	0.943	1.00	4713	
Ramp	1649	0.95	Level	1	0	0.995	1.00	1744	
UpStream	601	0.95	Level	1	0	0.995	1.00	636	
DownStream									
Merge Areas					Diverge Areas				
Estimation of v ₁₂					Estimation of v ₁₂				
$V_{12} = V_F (P_{FM})$ L _{EQ} = (Equation 13-6 or 13-7) P _{FM} = using Equation (Exhibit 13-6) V ₁₂ = pc/h V ₃ or V _{av34} pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					$V_{12} = V_R + (V_F - V_R)P_{FD}$ L _{EQ} = 13573.79 (Equation 13-12 or 13-13) P _{FD} = 0.616 using Equation (Exhibit 13-7) V ₁₂ = 3572 pc/h V ₃ or V _{av34} 1141 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)				
Capacity Checks					Capacity Checks				
	Actual	Capacity		LOS F?		Actual	Capacity		LOS F?
V _{FO}		Exhibit 13-8			V _F	4713	Exhibit 13-8	7200	No
			V _{FO} = V _F - V _R	2969	Exhibit 13-8	7200	No		
			V _R	1744	Exhibit 13-10	2000	No		
Flow Entering Merge Influence Area					Flow Entering Diverge Influence Area				
	Actual	Max Desirable		Violation?		Actual	Max Desirable		Violation?
V _{R12}		Exhibit 13-8			V ₁₂	3572	Exhibit 13-8	4400:All	No
Level of Service Determination (if not F)					Level of Service Determination (if not F)				
$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$ D _R = (pc/mi/ln) LOS = (Exhibit 13-2)					$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$ D _R = 30.9 (pc/mi/ln) LOS = D (Exhibit 13-2)				
Speed Determination					Speed Determination				
M _S = (Exhibit 13-11) S _R = mph (Exhibit 13-11) S ₀ = mph (Exhibit 13-11) S = mph (Exhibit 13-13)					D _S = 0.585 (Exhibit 13-12) S _R = 53.6 mph (Exhibit 13-12) S ₀ = 76.2 mph (Exhibit 13-12) S = 57.8 mph (Exhibit 13-13)				

MOW Small Area Study

FREEWAY WEAVING WORKSHEET									
General Information					Site Information				
Analyst	WFM				Freeway/Dir of Travel	I-75 Southbound			
Agency/Company	AECOM				Weaving Segment Location	Between US 60 & MOW			
Date Performed	5/4/2016				Analysis Year	2025			
Analysis Time Period	2025 Weekday PM Peak								
Project Description <i>MOW Small Area Study</i>									
Inputs									
Weaving configuration	One-Sided				Segment type	Freeway			
Weaving number of lanes, N	4				Freeway minimum speed, S _{MIN}	15			
Weaving segment length, L _S	4560ft				Freeway maximum capacity, C _{IFL}	2400			
Freeway free-flow speed, FFS	70 mph				Terrain type	Level			
Conversions to pc/h Under Base Conditions									
	V (veh/h)	PHF	Truck (%)	RV (%)	E _T	E _R	f _{HV}	f _p	v (pc/h)
V _{FF}	2183	0.97	12	0	1.5	1.2	0.943	0.95	2511
V _{RF}	1530	0.95	1	0	1.5	1.2	0.995	1.00	1619
V _{FR}	480	0.95	1	0	1.5	1.2	0.995	1.00	508
V _{RR}	120	0.97	12	0	1.5	1.2	0.943	0.95	2511
V _{NW}	2638							V =	4765
V _W	2127								
VR	0.446								
Configuration Characteristics									
Minimum maneuver lanes, N _{WL}	2 lc				Minimum weaving lane changes, LC _{MIN}	0 lc/h			
Interchange density, ID	1.00 int/mi				Weaving lane changes, LC _W	709 lc/h			
Minimum RF lane changes, LC _{RF}	0 lc/pc				Non-weaving lane changes, LC _{NW}	2245 lc/h			
Minimum FR lane changes, LC _{FR}	0 lc/pc				Total lane changes, LC _{ALL}	2954 lc/h			
Minimum RR lane changes, LC _{RR}	lc/pc				Non-weaving vehicle index, I _{NW}	0.160			
Weaving Segment Speed, Density, Level of Service, and Capacity									
Weaving segment flow rate, v	4765 pc/h				Weaving intensity factor, W	0.160			
Weaving segment capacity, c _w	4819 veh/h				Weaving segment speed, S	63.4 mph			
Weaving segment v/c ratio	0.886				Average weaving speed, S _W	62.4 mph			
Weaving segment density, D	18.8 pc/mi/ln				Average non-weaving speed, S _{NW}	64.3 mph			
Level of Service, LOS	B				Maximum weaving length, L _{MAX}	7206 ft			
Notes									
a. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments".									
b. For volumes that exceed the weaving segment capacity, the level of service is "F".									







Appendix F: CAP-X Worksheets

Capacity Analysis for Planning of Junctions





Input Worksheet

Project Name:	MOW Small Area Study - MOW at Sir Barton
Project Number:	60447047
Location:	Lexington, KY
Date:	June 15, 2016

Traffic Volume Demand

	Volume (Veh/hr)				Percent (%)	
	U-Turn 	Left 	Thru 	Right 	Truck	Volume Growth
Eastbound	0	360	1550	140	5.00%	0.00%
Westbound	0	400	1620	725	5.00%	0.00%
Southbound	0	585	420	365	2.00%	0.00%
Northbound	0	170	230	340	2.00%	0.00%
Adjustment Factor	0.80	0.95		0.85		
Suggested	0.80	0.95		0.85		
Truck to PCE Factor				Suggested = 2.00	2.00	
Critical Lane Volume				1600		

Equivalent Passenger Car Volume

	Volume (Veh/hr)			
	U-Turn 	Left 	Thru 	Right 
Eastbound	0	378	1628	147
Westbound	0	420	1701	761
Southbound	0	597	428	372
Northbound	0	173	235	347

Notes:

Left-Turn Adjustment Factor	Conversion of left-turning vehicles to equivalent through vehicles
Right-turn Adjustment Factor	Conversion of right-turning vehicles to equivalent through vehicles
U-turn Adjustment Factor	Conversion of U-turning vehicles to equivalent through vehicles
Truck to PCE Factor	1 truck = X Passenger Car Equivalents
Critical Lane Volume Sum Limit	Saturation Value for Critical Lane Volume Sum at an intersection

Capacity Analysis for Planning of Junctions

Input Worksheet

Project Name:	MOW Small Area Study - MOW at Sir Barton	Critical Lane Volume Sum			
Project Number:	60447047	Acceptable Configurations			
Location:	Lexington, KY	< 1200	1200 - 1399	1400 - 1599	≥ 1600
Date:	June 15, 2016	5	4	3	20

Results for Intersections

#	TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Overall v/c Ratio	Ranking
			CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C		
1	Conventional	FULL									2995	1.87	1.87	13
2	Conventional Shared RT LN	CSRL									3879	2.42	2.42	14
3.1	Quadrant Roadway	S-W			971	0.61			1516	0.95	1625	1.02	1.02	5
3.2		N-E	1458	0.91			2603	1.63			1441	0.90	1.63	12
3.3		S-E			1241	0.78	1241	0.78			1516	0.95	0.95	4
3.4		N-W	896	0.56					1877	1.17	1485	0.93	1.17	7
4.1	Partial Displaced Left Turn	N-S	935	0.58	606	0.38					1394	0.87	0.87	3
4.2		E-W					963	0.60	824	0.51	1382	0.86	0.86	2
5	Displaced Left Turn	FULL	935	0.58	606	0.38	963	0.60	824	0.51	1195	0.75	0.75	1
6.1	Restricted Crossing U-Turn	N-S	2024	1.27	1631	1.02	4019	2.51	3705	2.32			2.51	15
6.2		E-W	1759	1.10	1557	0.97	1696	1.06	1717	1.07			1.10	6
7.1	Median U-Turn	N-S	1069	0.67	987	0.62					2500	1.56	1.56	11
7.2		E-W					1785	1.12	1712	1.07	2480	1.55	1.55	10
8.1	Partial Median U-Turn	N-S	915	0.57	1124	0.70					2097	1.31	1.31	8
8.2		E-W					1677	1.05	1339	0.84	2097	1.31	1.31	8

Capacity Analysis for Planning of Junctions

Input Worksheet

Results for Roundabouts

#	TYPE OF ROUNDABOUT	Zone 1 (North)			Zone 3 (East)			Zone 2 (South)			Zone 4 (West)			Overall v/c Ratio	Ranking
		Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3		
9.1	50 ICD	<u>-1.10</u>			<u>-4.82</u>			<u>-0.48</u>			<u>12.59</u>			12.59	7
9.2	75 ICD	<u>-1.29</u>			<u>-6.44</u>			<u>-0.56</u>			<u>9.33</u>			9.33	5
9.3	1 X 1	<u>12.26</u>			<u>8.08</u>			<u>9.02</u>			<u>5.60</u>			12.26	6
9.4	1 X 2	<u>6.16</u>			<u>4.47</u>	<u>3.61</u>		<u>4.13</u>			<u>2.47</u>	<u>3.13</u>		6.16	3
9.5	2 X 1	<u>7.12</u>	<u>5.14</u>		<u>5.24</u>			<u>3.47</u>	<u>5.55</u>		<u>4.42</u>			7.12	4
9.6	2 X 2	<u>4.01</u>	<u>2.58</u>		<u>2.03</u>	<u>2.47</u>		<u>1.81</u>	<u>2.54</u>		<u>3.12</u>	<u>2.34</u>		4.01	1
9.7	3 X 3	<u>2.78</u>	<u>4.31</u>	<u>3.67</u>	<u>0.78</u>	<u>3.35</u>	<u>2.54</u>	<u>1.15</u>	<u>2.26</u>	<u>3.39</u>	<u>0.42</u>	<u>1.89</u>	<u>2.38</u>	4.31	2

Results for Interchanges





#	TYPE OF INTERCHANGE	Sheet	Zone 1 (Rt Mrg)		Zone 2 (Lt Mrg)		Zone 3 (Ctr. 1)		Zone 4 (Ctr. 2)		Zone 5 (Lt Mrg)		Zone 6 (Rt Mrg)		Overall v/c Ratio	Ranking
			CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C		
10.1	Diamond	N-S					966	<u>0.60</u>	<u>1309</u>	<u>0.82</u>					0.82	5
10.2		E-W					<u>1351</u>	<u>0.84</u>	<u>1472</u>	<u>0.92</u>					0.92	7
11.1	Partial Cloverleaf	N-S					524	<u>0.33</u>	764	<u>0.48</u>					0.48	1
11.2		E-W					<u>1363</u>	<u>0.91</u>	1105	<u>0.69</u>					0.85	6
13.1	Displaced Left Turn	N-S	1108	<u>0.69</u>			1048	<u>0.66</u>	802	<u>0.50</u>			606	<u>0.38</u>	0.69	3
13.2		E-W	<u>1335</u>	<u>0.83</u>			<u>1565</u>	<u>0.98</u>	<u>1295</u>	<u>0.81</u>			<u>1555</u>	<u>0.97</u>	0.98	8
14.1	Double Crossover Diamond	N-S	1108	<u>0.69</u>	955	<u>0.60</u>	819	<u>0.51</u>	628	<u>0.39</u>	602	<u>0.38</u>	579	<u>0.36</u>	0.69	3
14.2		E-W	<u>1375</u>	<u>0.86</u>	<u>1940</u>	<u>1.21</u>	<u>1631</u>	<u>1.02</u>	<u>1243</u>	<u>0.78</u>	<u>2173</u>	<u>1.36</u>	<u>1521</u>	<u>0.95</u>	1.36	10
15.1	Single Point	N-S	1100	<u>0.69</u>			992	<u>0.62</u>					456	<u>0.28</u>	0.69	2
15.2		E-W	<u>1375</u>	<u>0.86</u>			<u>1921</u>	<u>1.20</u>					1150	<u>0.72</u>	1.20	9

Capacity Analysis for Planning of Junctions





Input Worksheet

Project Name:	MOW Small Area Study - MOW at I-75
Project Number:	60447047
Location:	Lexington, KY
Date:	May 18, 2016

Traffic Volume Demand

	Volume (Veh/hr)				Percent (%)	
	U-Turn 	Left 	Thru 	Right 	Truck	Volume Growth
Eastbound	0	1125	1075	310	3.00%	0.00%
Westbound	0	90	1045	160	3.00%	0.00%
Southbound	0	95	3500	1560	5.00%	0.00%
Northbound	0	230	2500	95	5.00%	0.00%
Adjustment Factor	0.80	0.95		0.85		
Suggested	0.80	0.95		0.85		
Truck to PCE Factor				Suggested = 2.00	2.00	
Critical Lane Volume				1600		

Equivalent Passenger Car Volume

	Volume (Veh/hr)			
	U-Turn 	Left 	Thru 	Right 
Eastbound	0	1159	1107	319
Westbound	0	93	1076	165
Southbound	0	100	3675	1638
Northbound	0	242	2625	100

Notes:

Left-Turn Adjustment Factor	Conversion of left-turning vehicles to equivalent through vehicles
Right-turn Adjustment Factor	Conversion of right-turning vehicles to equivalent through vehicles
U-turn Adjustment Factor	Conversion of U-turning vehicles to equivalent through vehicles
Truck to PCE Factor	1 truck = X Passenger Car Equivalents
Critical Lane Volume Sum Limit	Saturation Value for Critical Lane Volume Sum at an intersection

Capacity Analysis for Planning of Junctions

Input Worksheet

Project Name:	MOW Small Area Study - MOW at I-75	Critical Lane Volume Sum			
Project Number:	60447047	Acceptable Configurations			
Location:	Lexington, KY	< 1200	1200 - 1399	1400 - 1599	≥ 1600
Date:	May 18, 2016	2	0	3	27

Results for Intersections

#	TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Overall v/c Ratio	Ranking
			CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C		
1	Conventional	FULL	/	/	/	/	/	/	/	/	6239	<u>3.90</u>	3.90	14
2	Conventional Shared RT LN	CSRL	/	/	/	/	/	/	/	/	5484	<u>3.43</u>	3.43	13
3.1	Quadrant Roadway	S-W	/	/	3312	<u>2.07</u>	/	/	1837	<u>1.15</u>	2531	<u>1.58</u>	2.07	5
3.2		N-E	4109	<u>2.57</u>	/	/	1863	<u>1.16</u>	/	/	3060	<u>1.91</u>	2.57	11
3.3		S-E	/	/	3255	<u>2.03</u>	3255	<u>2.03</u>	/	/	3060	<u>1.91</u>	2.03	4
3.4		N-W	3312	<u>2.07</u>	/	/	/	/	2750	<u>1.72</u>	2469	<u>1.54</u>	2.07	5
4.1	Partial Displaced Left Turn	N-S	1997	<u>1.25</u>	2139	<u>1.34</u>	/	/	/	/	2806	<u>1.75</u>	1.75	3
4.2		E-W	/	/	/	/	451	<u>0.28</u>	1049	<u>0.66</u>	2702	<u>1.69</u>	1.69	2
5	Displaced Left Turn	FULL	1997	<u>1.25</u>	2139	<u>1.34</u>	451	<u>0.28</u>	1049	<u>0.66</u>	2448	<u>1.53</u>	1.53	1
6.1	Restricted Crossing U-Turn	N-S	3437	<u>2.15</u>	2900	<u>1.81</u>	2677	<u>1.67</u>	4714	<u>2.95</u>	/	/	2.95	12
6.2		E-W	7883	<u>4.93</u>	6444	<u>4.03</u>	2459	<u>1.54</u>	3652	<u>2.28</u>	/	/	4.93	15
7.1	Median U-Turn	N-S	2916	<u>1.82</u>	2270	<u>1.42</u>	/	/	/	/	3951	<u>2.47</u>	2.47	10
7.2		E-W	/	/	/	/	1543	<u>0.96</u>	1413	<u>0.88</u>	3602	<u>2.25</u>	2.25	7
8.1	Partial Median U-Turn	N-S	3009	<u>1.88</u>	1609	<u>1.01</u>	/	/	/	/	3634	<u>2.27</u>	2.27	8
8.2		E-W	/	/	/	/	1391	<u>0.87</u>	1351	<u>0.84</u>	3634	<u>2.27</u>	2.27	8

Capacity Analysis for Planning of Junctions

Input Worksheet

Results for Roundabouts

#	TYPE OF ROUNDABOUT	Zone 1 (North)			Zone 3 (East)			Zone 2 (South)			Zone 4 (West)			Overall v/c Ratio	Ranking
		Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3		
9.1	50 ICD	-13.05			-0.91			-2.12			-0.44			-0.44	2
9.2	75 ICD	-18.45			-1.02			-2.48			-0.49			-0.49	1
9.3	1 X 1	19.64			109.45			27.98			66.15			109.45	7
9.4	1 X 2	12.86			72.51	36.94		13.76			31.29	34.86		72.51	5
9.5	2 X 1	7.03	12.61		34.30			14.66	13.32		19.77			34.30	3
9.6	2 X 2	4.94	8.26		11.44	10.42		8.11	6.55		27.57	11.58		27.57	3
9.7	3 X 3	0.18	6.58	9.75	25.41	50.45	28.50	1.31	12.02	8.65	2.76	26.67	20.15	50.45	4

Results for Interchanges

#	TYPE OF INTERCHANGE	Sheet	Zone 1 (Rt Mrg)		Zone 2 (Lt Mrg)		Zone 3 (Ctr. 1)		Zone 4 (Ctr. 2)		Zone 5 (Lt Mrg)		Zone 6 (Rt Mrg)		Overall v/c Ratio	Ranking
			CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C		
10.1	Diamond	N-S					1614	1.01	2581	1.61					1.61	7
10.2		E-W					1449	0.91	958	0.60					0.91	2
11.1	Partial Cloverleaf	N-S					1513	0.95	1061	0.66					0.95	3
11.2		E-W					1626	2.57	1610	1.01					1.02	4
13.1	Displaced Left Turn	N-S	2066	1.29			1985	1.24	3043	1.90			2220	1.39	1.90	9
13.2		E-W	2383	1.49			1325	0.83	858	0.54			709	0.44	1.49	6
14.1	Double Crossover Diamond	N-S	2066	1.29	1985	1.24	3780	2.36	3318	2.07	2654	1.66	2220	1.39	2.36	10
14.2		E-W	2586	1.62	1792	1.12	1238	0.77	839	0.52	1188	0.74	721	0.45	1.62	8
15.1	Single Point	N-S	1455	0.91			2090	1.31					1631	1.02	1.31	5
15.2		E-W	1403	0.88			1418	0.89					520	0.32	0.89	1



Appendix G: Cost Estimates

Man 'O War Traffic Study
Tuscany Trail

ITEM	QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	ESTIMATED COST
	2,800	FT	TRAIL	\$ 100.00	\$ 280,000
				Subtotal	\$ 280,000.00
				Contingency	30% \$ 84,000.00
				Rounded Subtotal + Contingency	\$ 364,000.00
INCIDENTALS					
2650	1	LS	Maintain and ControlTraffic (3% of Construction Cost)		
2726	1	LS	Staking (1% of Construction Cost)		\$ 4,000.00
2569	1	LS	Demobilization (1.5% of Construction Cost or \$1000 min)		\$ 6,000.00
				Total Estimated Cost	\$ 374,000.00

Man 'O War Traffic Study
Hamburg Trail Extension

ITEM	QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	ESTIMATED COST
	2,100	FT	TRAIL	\$ 100.00	\$ 210,000
	700	SF	TRAIL BRIDGE	\$ 200.00	\$ 140,000
				Subtotal	\$ 350,000.00
				Contingency	30% \$ 105,000.00
				Rounded Subtotal + Contingency	\$ 455,000.00
INCIDENTALS					
2650	1	LS	Maintain and Control Traffic (3% of Construction Cost)		
2726	1	LS	Staking (1% of Construction Cost)		\$ 5,000.00
2569	1	LS	Demobilization (1.5% of Construction Cost or \$1000 min)		\$ 7,000.00
				Total Estimated Cost	\$ 467,000.00

Man 'O War Traffic Study
 Partial Interchange at Todds Road

ITEM	QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	ESTIMATED COST
2200	8,800	CU YD	ROADWAY EXCAVATION	\$ 15.15	\$ 133,320
1	4090	TON	DGA BASE	\$ 24.00	\$ 98,160
214	4031	TON	CL 3 ASPH BASE 1.00D PG64-22	\$ 72.00	\$ 290,232
22906ES403	1727	TON	CL 3 ASPH SURF 0.38A PG 64-22	\$ 85.00	\$ 146,795
2351	700.0	LF	GUARDRAIL-STEEL W BEAM-S FACE	\$ 17.00	\$ 11,900
2391	1	EACH	GUARDRAIL END TREATMENT-TYPE 4A	\$ 2,050.00	\$ 2,050
1810	120	LF	STANDARD CURB AND GUTTER	\$ 41.00	\$ 4,920
522	270	LF	STORM SEWER PIPE-18 IN	\$ 70.00	\$ 18,900
1490	2	EACH	DROP BOX INLET-TYPE 1	\$ 3,200.00	\$ 6,400
3026	30	LF	PRECAST CONC BOX SECT 10 X 5	\$ 1,000.00	\$ 30,000
8018	7840	SQ FT	RETAINING WALL	\$ 60.00	\$ 470,400
21590EN	2550	SQ FT	SOUND BARRIER WALL	\$ 30.00	\$ 76,500
24695ED	2	EACH	BOX CULVERT HEADWALL	\$ 7,000.00	\$ 14,000
			PARTIAL INTERCHANGE LIGHTING SYSTEM		\$ 300,000

Subtotal		\$ 1,603,577.00
Contingency	30%	\$ 481,073.10
Rounded Subtotal + Contingency		\$ 2,085,000.00

INCIDENTALS

2650	1	LS	Maintain and ControlTraffic (3% of Construction Cost)		\$ 63,000.00
2726	1	LS	Staking (1% of Construction Cost)		\$ 21,000.00
2569	1	LS	Demobilization (1.5% of Construction Cost or \$1000 min)		\$ 33,000.00
				Subtotal	\$ 117,000.00

ACQUISITION

					Deed Acreage	Prop. Value
	0.49	Acre	PN 24399700: Boll Kenneth R & Karen E		\$ 225,000	2.1558 180000
	0.02	Acre	PN 19347510: Sanders Agelia H	\$ 300,000.00	\$ 6,000.00	0.2593 178000
			Filing, Appraisal, Legal, Etc. (\$6000/parcel + 10%)		\$ 36,000.00	2
				Subtotal	\$ 267,000.00	
				Total Estimated Cost	\$ 2,469,000.00	

Man 'O War Traffic Study
Full Interchange at Todds Road

ITEM	QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	ESTIMATED COST
2200	17,600	CU YD	ROADWAY EXCAVATION	\$ 13.00	\$ 228,800
1	7616	TON	DGA BASE	\$ 23.00	\$ 175,168
214	7596	TON	CL 3 ASPH BASE 1.00D PG64-22	\$ 67.00	\$ 508,932
22906ES403	3235	TON	CL 3 ASPH SURF 0.38A PG 64-22	\$ 78.00	\$ 252,330
2351	700.0	LF	GUARDRAIL-STEEL W BEAM-S FACE	\$ 17.00	\$ 11,900
2391	1	EACH	GUARDRAIL END TREATMENT-TYPE 4A	\$ 2,050.00	\$ 2,050
1810	120	LF	STANDARD CURB AND GUTTER	\$ 41.00	\$ 4,920
522	330	LF	STORM SEWER PIPE-18 IN	\$ 67.00	\$ 22,110
1490	2	EACH	DROP BOX INLET-TYPE 1	\$ 3,200.00	\$ 6,400
3026	30	LF	PRECAST CONC BOX SECT 10 X 5	\$ 1,000.00	\$ 30,000
8018	7840	SQ FT	RETAINING WALL	\$ 55.00	\$ 431,200
21590EN	2550	SQ FT	SOUND BARRIER WALL	\$ 30.00	\$ 76,500
24695ED	2	EACH	BOX CULVERT HEADWALL	\$ 7,000.00	\$ 14,000
			FULL INTERCHANGE LIGHTING SYSTEM		\$ 500,000
Subtotal					\$ 2,264,310.00
Contingency					30% \$ 679,293.00
Rounded Subtotal + Contingency					\$ 2,944,000.00

INCIDENTALS

2650	1	LS	Maintain and Control Traffic (3% of Construction Cost)	\$	89,000.00
2726	1	LS	Staking (1% of Construction Cost)	\$	30,000.00
2569	1	LS	Demobilization (1.5% of Construction Cost or \$1000 min)	\$	46,000.00
Subtotal					\$ 165,000.00

ACQUISITION

					Deed Acreage	Prop. Value
0.49	Acre	PN 24399700: Boll Kenneth R & Karen E	\$	270,000	2.1558	180000
0.02	Acre	PN 19347510: Sanders Agelia H	\$ 300,000.00	\$ 6,000.00	0.2593	178000
Total	Acre	PN 38082020: Ball Homes Inc.	\$	50,000.00	0.3	0
Total	Acre	PN 38082000: Ensminger Heather D & Jamie V	\$	242,500.00	0.2936	194000
Total	Acre	PN 38081980: Artique Investments LLC	\$	217,250.00	0.2679	173800
Total	Acre	PN 38082440: Lexington BG Rentals LLC	\$	221,250.00	0.416	177000
Total	Acre	PN 38082430: Aubrey Jimmy W	\$	280,375.00	0.2887	224300
Total	Acre	PN 38082420: Atwell Robert E & Heidi	\$	271,375.00	0.1865	217100
Total	Acre	PN 38082400: Stephens Jacob & Walker Amanda	\$	235,000.00	0.1788	188000
0.01	Acre	PN 38082390: Chumley David Lee & Kelly Renee	\$ 300,000.00	\$ 3,000.00	0.176	205000
0.38	Acre	PN 22964100: Crossroads Christian Church of Lexington Inc	\$ 300,000.00	\$ 114,000.00	34.0248	7853400
Filing, Appraisal, Legal, Etc. (\$6000/parcel + 40%)					\$	831,000.00
Subtotal					\$ 2,741,750.00	11

Total Estimated Cost \$ 5,850,750.00

Increased legal fees to 40% because of total takes

Vacant Land Estimates			
\$	31,000.00	10.9	335000 Farm east side
\$	8,000.00	315.83	2557600 Farm east side
\$	262,000.00	0.1525	40000 Undeveloped residential lot west side
\$	510,000.00	0.102	52000

Man 'O War Traffic Study
I-75 SB Auxiliary Lane Winchester to Man 'O War

ITEM	QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	ESTIMATED COST
2200	23,500	CU YD	ROADWAY EXCAVATION	\$ 11.78	\$ 276,830
2381	1,015	LF	REMOVE GUARDRAIL	\$ 2.17	\$ 2,203
1	3,154	TON	DGA BASE	\$ 24.60	\$ 77,588
18	3,387	TON	DRAINAGE BLANKET-TYPE II-ASPH	\$ 55.36	\$ 187,504
205	1,600	TON	CL3 ASPH BASE 1.50 D PG64-22	\$ 60.00	\$ 96,000
208	2,880	TON	CL4 ASPH BASE 1.50D PG64-22	\$ 60.00	\$ 172,800
339	571	TON	CL3 ASPH SURF 0.38D PG64-22	\$ 100.78	\$ 57,545
342	686	TON	CL4 ASPH SURF 0.38A PG76-22	\$ 93.19	\$ 63,928
2351	1,000	LF	GUARDRAIL-STEEL W BEAM-S FACE	\$ 16.58	\$ 16,580
2391	2	EACH	GUARDRAIL END TREATMENT-TYPE 4A	\$ 1,975.78	\$ 3,952
466	20	LF	CULVERT PIPE-30 IN	\$ 144.25	\$ 2,885
521	15	LF	STORM SEWER PIPE-15 IN	\$ 65.25	\$ 979
522	10	LF	STORM SEWER PIPE-18 IN	\$ 110.00	\$ 1,100
1001	3,740	LF	PERFORATED PIPE-6 IN	\$ 8.10	\$ 30,294
1210	2	EACH	PIPE CULVERT HEADWALL-30 IN	\$ 1,851.90	\$ 3,704
1432	1	EACH	SLOPED BOX OUTLET TYPE 1-15 IN	\$ 1,658.90	\$ 1,659
1490	1	EACH	DROP BOX INLET-TYPE 1	\$ 3,634.70	\$ 3,635
24705EC	2	EACH	REMOVE AND RESET LIGHT POLE	\$ 5,000.00	\$ 10,000
					\$ -
				Subtotal	\$ 1,009,186.00
				Contingency	30% \$ 302,755.80
				Rounded Subtotal + Contingency	\$ 1,312,000.00
INCIDENTALS					
2650	1	LS	Maintain and ControlTraffic (3% of Construction Cost)		\$ 40,000.00
2726	1	LS	Staking (1% of Construction Cost)		\$ 14,000.00
2569	1	LS	Demobilization (1.5% of Construction Cost or \$1000 min)		\$ 21,000.00
				Total Estimated Cost	\$ 1,387,000.00

Man 'O War Traffic Study

Man 'O War Double Left Turn to Pleasant Ridge

ITEM	QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	ESTIMATED COST
1705	3	EACH	REMOVE CURB AND GUTTER BOX INLET	\$ 540.00	\$ 1,620
1812	2,980	LF	REMOVE CURB AND GUTTER	\$ 4.90	\$ 14,602
2200	2,377	CU YD	ROADWAY EXCAVATION	\$ 22.00	\$ 52,294
23623EC	30	SQ YD	REMOVE MOUNTABLE MEDIAN	\$ 42.00	\$ 1,260
1	969	TON	DGA BASE	\$ 28.00	\$ 27,132
214	1368	TON	CL 3 ASPH BASE 1.00D PG64-22	\$ 80.00	\$ 109,440
22906ES403	352	TON	CL 3 ASPH SURF 0.38A PG 64-22	\$ 105.00	\$ 36,960
1946	778	SQ YD	MOUNTABLE MEDIAN, TYPE 2A	\$ 73.00	\$ 56,794
2101	78	SQ YD	CEM CONC ENT PAVEMENT-8 IN	\$ 81.00	\$ 6,318
1810	780	LF	STANDARD CURB AND GUTTER	\$ 28.00	\$ 21,840
520	10	LF	STORM SEWER PIPE-12 IN	\$ 81.00	\$ 810
1456	3	EACH	CURB BOX INLET TYPE A	\$ 4,600.00	\$ 13,800
4912	1	EACH	SIGNAL-3 SECTION-12 IN (PLUS ASSOCIATED COSTS)	\$ 5,000.00	\$ 5,000
24705EC	2	EACH	REMOVE AND RESET LIGHT POLE	\$ 3,000.00	\$ 6,000
				Subtotal	\$ 353,870.00
				Contingency	30% \$ 106,161.00
				Rounded Subtotal + Contingency	\$ 461,000.00
INCIDENTALS					
2650	1	LS	Maintain and ControlTraffic (3% of Construction Cost)		\$ 14,000.00
2726	1	LS	Staking (1% of Construction Cost)		\$ 5,000.00
2569	1	LS	Demobilization (1.5% of Construction Cost or \$1000 min)		\$ 8,000.00
				Total Estimated Cost	\$ 488,000.00

Man 'O War Traffic Study
 Sir Barton / Polo Club Connector

ITEM	QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	ESTIMATED COST
2200	22,000	CU YD	ROADWAY EXCAVATION	\$ 12.00	\$ 264,000
1	5268	TON	DGA BASE	\$ 23.40	\$ 123,271
212	948	TON	CL2 ASPH BASE 1.00D PG64-22	\$ 85.00	\$ 80,580
307	379	TON	CL2 ASPH SURF 0.38B PG64-22	\$ 90.00	\$ 34,110
2720	1436	SQ YD	SIDEWALK-4 IN CONCRETE	\$ 60.00	\$ 86,160
1810	5170	LF	STANDARD CURB AND GUTTER	\$ 19.10	\$ 98,747
464	100	LF	CULVERT PIPE-24 IN	\$ 95.70	\$ 9,570
520	1000	LF	STORM SEWER PIPE-12 IN	\$ 50.00	\$ 50,000
522	600	LF	STORM SEWER PIPE-18 IN	\$ 62.00	\$ 37,200
530	630	LF	STORM SEWER PIPE-48 IN	\$ 150.00	\$ 94,500
1208	2	EACH	PIPE CULVERT HEADWALL-24 IN	\$ 1,500.00	\$ 3,000
1216	1	EACH	PIPE CULVERT HEADWALL-48 IN	\$ 2,700.00	\$ 2,700
1456	18	EACH	CURB BOX INLET TYPE A	\$ 4,500.00	\$ 81,000
1490	2	EACH	DROP BOX INLET-TYPE 1	\$ 3,200.00	\$ 6,400
1538	2	EACH	DROP BOX INLET-TYPE 7	\$ 5,600.00	\$ 11,200
8003	1	LS	FOUNDATION PREPARATION	\$ 200,000.00	\$ 200,000
8018	3,470	SQ FT	RETAINING WALL	\$ 100.00	\$ 347,000
21804EN	170	LF	3-SIDED CULVERT	\$ 6,000.00	\$ 1,020,000

Subtotal		\$ 2,549,438.00
Contingency	30%	\$ 764,831.40
Rounded Subtotal + Contingency		\$ 3,315,000.00

INCIDENTALS

2650	1	LS	Maintain and Control Traffic (6% of Construction Cost)	\$	199,000.00
2726	1	LS	Staking (1% of Construction Cost)	\$	34,000.00
2569	1	LS	Demobilization (1.5% of Construction Cost or \$1000 min)	\$	54,000.00
Subtotal				\$	287,000.00

ACQUISITION

					Deed Acreage	Prop. Value
3.0	Acre	PN 38190710: Baptist Healthcare System Inc.	\$ 225,000.00	\$ 675,000	129	\$ 29,000,000.00
1.35	Acre	PN 38239330: Madden John et al Estate	\$ 10,000.00	\$ 14,000	1.35	\$ 500.00
		Filing, Appraisal, Legal, Etc. (\$6000/parcel + 10%)		\$ 81,000.00		
Subtotal				\$	770,000.00	
Total Estimated Cost				\$	4,372,000.00	

Increase MOT Cost to 6% because of uncertainty of effect on I-75 Traffic to construction culvert
 Assume 60' R/W

Man 'O War Traffic Study
I-75 SB Exit Ramp Widening at Man 'O War

ITEM	QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	ESTIMATED COST
1812	310	LF	REMOVE CURB AND GUTTER	\$ 9.60	\$ 2,976
2230	2,000	CU YD	EMBANKMENT IN PLACE	\$ 23.25	\$ 46,500
2381	625	LF	REMOVE GUARDRAIL	\$ 2.50	\$ 1,563
1	1545	TON	DGA BASE	\$ 26.40	\$ 40,788
214	1100	TON	CL 3 ASPH BASE 1.00D PG64-22	\$ 80.50	\$ 88,550
22906ES403	844	TON	CL 3 ASPH SURF 0.38A PG 64-22	\$ 92.15	\$ 77,775
2351	587.5	LF	GUARDRAIL-STEEL W BEAM-S FACE	\$ 17.10	\$ 10,046
2391	1	EACH	GUARDRAIL END TREATMENT-TYPE 4A	\$ 2,050.00	\$ 2,050
1820	101	LF	LIP CURB AND GUTTER	\$ 38.00	\$ 3,838
24705EC	7	EACH	REMOVE AND RESET LIGHT POLE	\$ 3,000.00	\$ 21,000
				Subtotal	\$ 295,086.00
				Contingency	30% \$ 88,525.80
				Rounded Subtotal + Contingency	\$ 384,000.00
INCIDENTALS					
2650	1	LS	Maintain and ControlTraffic (3% of Construction Cost)		\$ 12,000.00
2726	1	LS	Staking (1% of Construction Cost)		\$ 4,000.00
2569	1	LS	Demobilization (1.5% of Construction Cost or \$1000 min)		\$ 6,000.00
				Total Estimated Cost	\$ 406,000.00

Assume all widening to the west to avoid filling on 2:1 slope toward I-75
 Assume overlay of entire ramp within work area

Man 'O War Traffic Study
 Man 'O War Double Left Turn to Polo Club Blvd.

ITEM	QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	ESTIMATED COST
2200	1,700	CU YD	ROADWAY EXCAVATION	\$ 23.00	\$ 39,100
1	897	TON	DGA BASE	\$ 28.00	\$ 25,116
214	732	TON	CL 3 ASPH BASE 1.00D PG64-22	\$ 84.00	\$ 61,488
22906ES403	345	TON	CL 3 ASPH SURF 0.38A PG 64-22	\$ 103.00	\$ 35,535
4912	1	EACH	SIGNAL-3 SECTION-12 IN	\$ 5,000.00	\$ 5,000
20093NS835	2	EACH	INSTALL PEDESTRIAN HEAD-LED	\$ 307.00	\$ 614
23222EC	2	EACH	INSTALL SIGNAL PEDESTAL	\$ 1,100.00	\$ 2,200

Subtotal	\$ 169,053.00
Contingency 30%	\$ 50,715.90
Rounded Subtotal + Contingency	\$ 220,000.00

INCIDENTALS

2650	1	LS	Maintain and ControlTraffic (3% of Construction Cost)	\$ 7,000.00
2726	1	LS	Staking (1% of Construction Cost)	\$ 3,000.00
2569	1	LS	Demobilization (1.5% of Construction Cost or \$1000 min)	\$ 4,000.00
Subtotal				\$ 14,000.00

ACQUISITION

					Deed Acreage	Prop. Value
0.062	Acre	PN 38250800: A & M Hamburg LLC	\$ 400,000.00	\$ 25,000	1.678	\$ 671,200.00
				Filing, Appraisal, Legal, Etc. (\$6000/parcel + 10%)	\$ 9,000.00	
Subtotal				\$ 34,000.00		

Total Estimated Cost \$ 268,000.00

Man 'O War Traffic Study
Sidewalk South Side of Winchester

ITEM	QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	ESTIMATED COST
2720	1,636	SQ YD	SIDEWALK-4 IN CONCRETE	\$ 56.00	\$ 91,616
				Subtotal	\$ 91,616.00
				Contingency	30% \$ 27,484.80
				Rounded Subtotal + Contingency	\$ 120,000.00
INCIDENTALS					
2650	1	LS	Maintain and ControlTraffic (3% of Construction Cost)	\$	4,000.00
2726	1	LS	Staking (1% of Construction Cost)	\$	2,000.00
2569	1	LS	Demobilization (1.5% of Construction Cost or \$1000 min)	\$	2,000.00
				Total Estimated Cost	\$ 128,000.00

Man 'O War Traffic Study
Winchester Road 3rd Lane WB

ITEM	QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	ESTIMATED COST
1705	1	EACH	REMOVE CURB AND GUTTER BOX INLET	\$ 540.00	\$ 540
2091	7,674	SQ YD	REMOVE PAVEMENT	\$ 6.30	\$ 48,346
2381	2,900	LF	REMOVE GUARDRAIL	\$ 1.75	\$ 5,075
2200	6,395	CU YD	ROADWAY EXCAVATION	\$ 16.50	\$ 105,518
1	5100	TON	DGA BASE	\$ 24.00	\$ 122,400
214	4828	TON	CL 3 ASPH BASE 1.00D PG64-22	\$ 70.00	\$ 337,960
22906ES403	2112	TON	CL 3 ASPH SURF 0.38A PG 64-22	\$ 82.00	\$ 173,184
2351	2900	LF	GUARDRAIL-STEEL W BEAM-S FACE	\$ 16.00	\$ 46,400
2391	3	EACH	GUARDRAIL END TREATMENT-TYPE 4A	\$ 2,000.00	\$ 6,000
1810	1200	LF	STANDARD CURB AND GUTTER	\$ 26.00	\$ 31,200
464	20	LF	CULVERT PIPE-24 IN	\$ 120.00	\$ 2,400
	20	LF	15' x 10' BOX CULVERT EXTENSION	\$ 5,000.00	\$ 100,000
4912	3	EACH	SIGNAL-3 SECTION-12 IN (PLUS ASSOCIATED COSTS)	\$ 5,000.00	\$ 15,000
23409EC	3	EACH	TRAFFIC SIGNAL POLE	\$ 10,000.00	\$ 30,000
20093NS835	2	EACH	INSTALL PEDESTRIAN HEAD-LED	\$ 307.00	\$ 614
23222EC	2	EACH	INSTALL SIGNAL PEDESTAL	\$ 1,100.00	\$ 2,200
	6,000	LF	REMOVE & RECONSTRUCT HIGHWAY LIGHTING	\$ 100.00	\$ 600,000
				Subtotal	\$ 1,626,837.00
				Contingency	30% \$ 488,051.10
				Rounded Subtotal + Contingency	\$ 2,115,000.00
INCIDENTALS					
2650	1	LS	Maintain and ControlTraffic (3% of Construction Cost)		\$ 64,000.00
2726	1	LS	Staking (1% of Construction Cost)		\$ 22,000.00
2569	1	LS	Demobilization (1.5% of Construction Cost or \$1000 min)		\$ 34,000.00
				Total Estimated Cost	\$ 2,235,000.00

Man 'O War Traffic Study
 Winchester Road 3rd Lane EB

ITEM	QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	ESTIMATED COST
2091	2,899	SQ YD	REMOVE PAVEMENT	\$ 6.90	\$ 20,003
2381	925	LF	REMOVE GUARDRAIL	\$ 2.25	\$ 2,081
2200	2,416	CU YD	ROADWAY EXCAVATION	\$ 21.00	\$ 50,736
1	1345	TON	DGA BASE	\$ 26.80	\$ 36,046
214	1395	TON	CL 3 ASPH BASE 1.00D PG64-22	\$ 79.00	\$ 110,205
22906ES403	583	TON	CL 3 ASPH SURF 0.38A PG 64-22	\$ 97.00	\$ 56,551
2351	925	LF	GUARDRAIL-STEEL W BEAM-S FACE	\$ 16.70	\$ 15,448
2391	1	EACH	GUARDRAIL END TREATMENT-TYPE 4A	\$ 2,100.00	\$ 2,100
1810	890	LF	STANDARD CURB AND GUTTER	\$ 27.30	\$ 24,297
464	135	LF	CULVERT PIPE-24 IN	\$ 92.00	\$ 12,420
522	400	LF	STORM SEWER PIPE-18 IN	\$ 65.00	\$ 26,000
1208	4	EACH	PIPE CULVERT HEADWALL-24 IN	\$ 1,330.00	\$ 5,320
1456	3	EACH	CURB BOX INLET TYPE A	\$ 4,600.00	\$ 13,800
	20	LF	15' x 10' BOX CULVERT EXTENSION	\$ 5,000.00	\$ 100,000
4912	2	EACH	SIGNAL-3 SECTION-12 IN (PLUS ASSOCIATED COSTS)	\$ 5,000.00	\$ 10,000
23409EC	3	EACH	TRAFFIC SIGNAL POLE	\$ 10,000.00	\$ 30,000
	1,600	LF	REMOVE & RECONSTRUCT HIGHWAY LIGHTING	\$ 100.00	\$ 160,000
				Subtotal	\$ 675,007.00
				Contingency	30% \$ 202,502.10
				Rounded Subtotal + Contingency	\$ 878,000.00
INCIDENTALS					
2650	1	LS	Maintain and ControlTraffic (3% of Construction Cost)	\$	27,000.00
2726	1	LS	Staking (1% of Construction Cost)	\$	9,000.00
2569	1	LS	Demobilization (1.5% of Construction Cost or \$1000 min)	\$	14,000.00
				Total Estimated Cost	\$ 928,000.00