CAMP RAINBOW GOLD

Traffic Impact Study

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1.0 INTRODUCTION

This study evaluates the potential traffic impacts associated with the proposed Camp Rainbow Gold near Triumph, Idaho. The proposed camp is located approximately 1.5 miles east of Triumph along East Fork Road just east of Hyndman Creek Road. East Fork Road divides the property with about half to the north and half to the south, as shown in Figure 1.

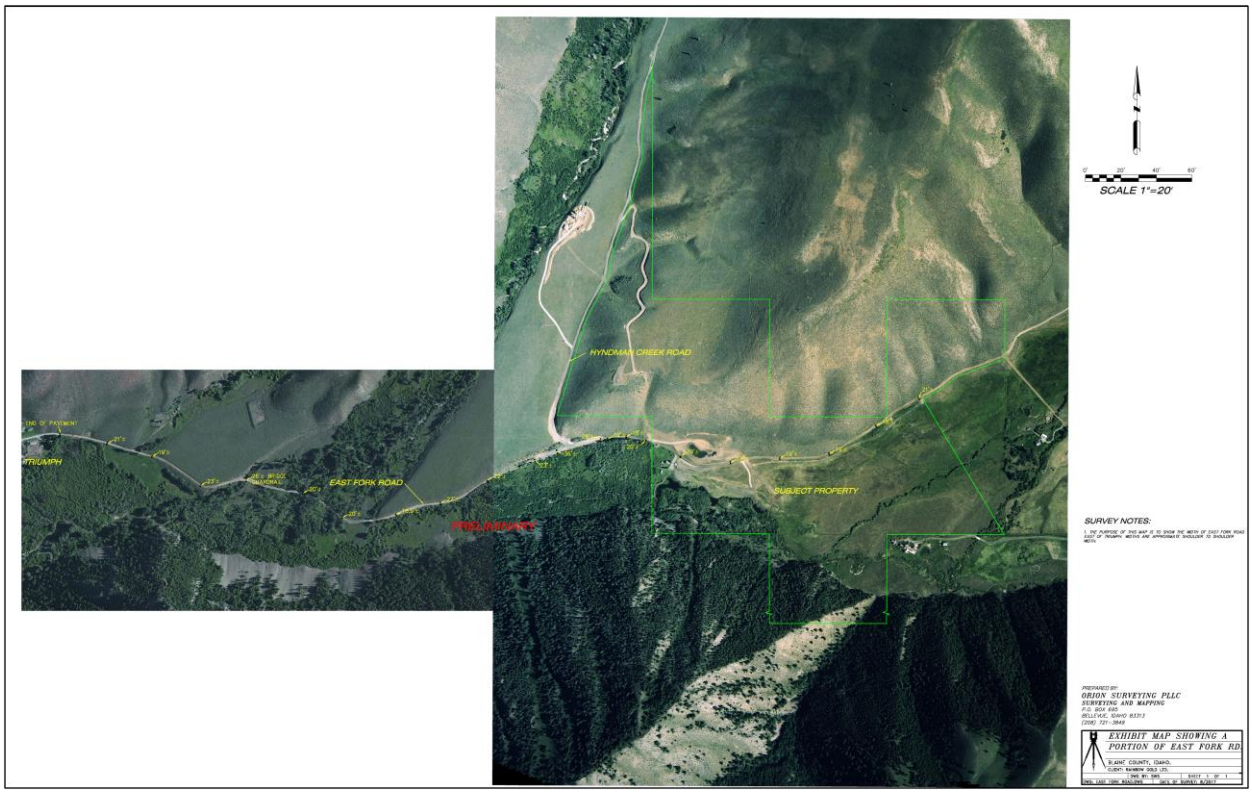
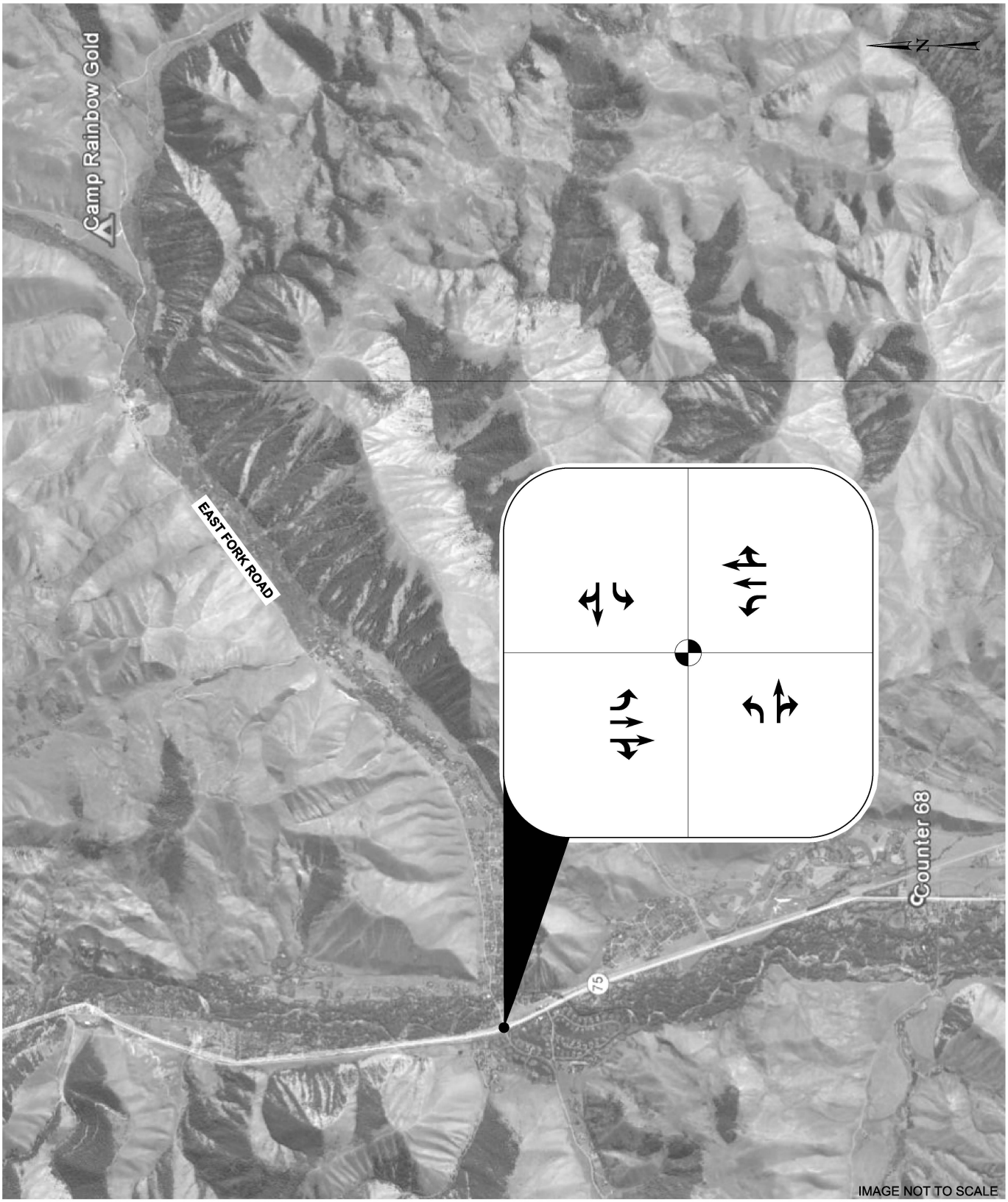


Figure 1: Project Location

Camp Rainbow Gold is a medical youth camp. The camp provides youth with medical conditions the opportunity to attend a camp where medical services are available on site. Existing turning movement counts were completed at the study intersection, East Fork Road and Highway 75, during the AM and PM peak hours to evaluate current traffic conditions in the area. The camp currently operates at another location and expects traffic at the proposed location to follow a similar pattern. Project related traffic was forecasted using counts from the existing camp and projected use of the proposed facility. These forecasts were distributed to the surrounding street system. Existing and existing plus project traffic conditions were analyzed to determine what, if any, traffic impacts may occur as a result of the proposed camp. This analysis was used to determine if any improvements will be necessary at the study intersection.



KEY

SIGNALIZED INTERSECTION

STUDY AREA MAP

FIGURE 2

2.0 EXISTING CONDITIONS

The major existing road in the project vicinity is Highway 75, which runs north-south. Highway 75 is a mountainous road that provides a connection between US-20 and US-93 and serves the communities of Bellevue, Hailey, Sun Valley and Ketchum. The majority of traffic on Highway 75 is south of Ketchum. The Idaho Transportation Department (ITD) has an automatic traffic recorder (Counter 68) on Highway 75 located approximately three miles south of East Fork Road with few major accesses between. See Figure 2 for the approximate location of Counter 68. The 2015 AADT at Counter 68 is 12520 with seasonal variations up to 15198 in July.

Access to the site is provided by East Fork Road. The existing traffic on East Fork Road consists primarily of residential property owner access, property maintenance and construction vehicles for residential properties, vehicular access to designated recreation areas by car for biking, hiking, and running. In the fall season, the road supports significant hunting traffic. The road also supports some recreational activities such as biking and running on the road itself. There are no automatic traffic recorders on East Fork Road, but the ITD website shows an estimated AADT of 1600 at Highway 75. Blain County counted approximately 1200 vehicles just west of Triumph, near Karst Drive, in July 2015.

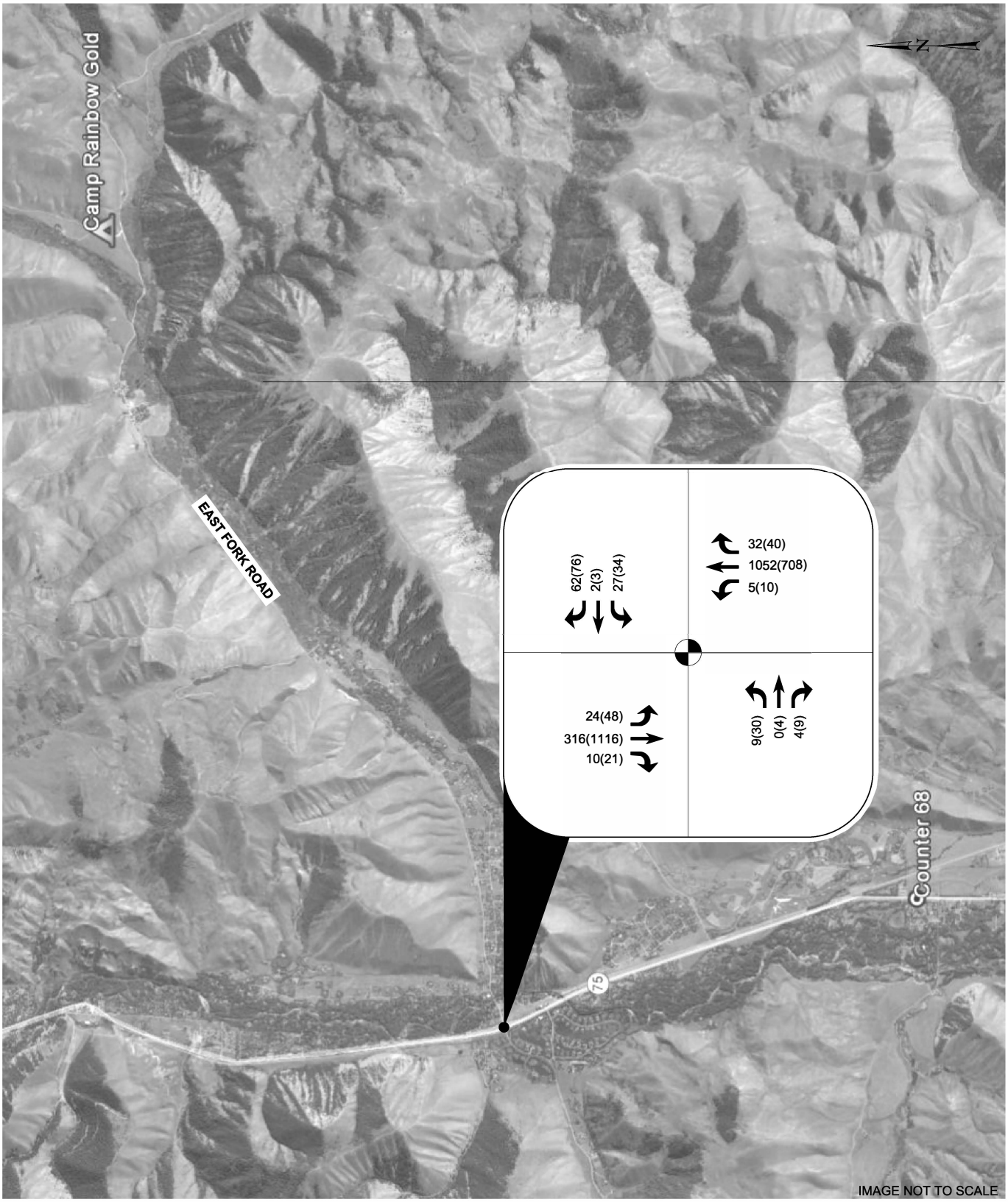
The East Fork Road/Highway 75 intersection is currently signalized. The eastbound and westbound approaches have a left turn lane and a through-right lane. The northbound and southbound approaches each have a left turn lane, one through lane, and a through-right turn lane (see Figure 2).

Peak hour turning movement counts were completed at the East Fork Road/Highway 75 intersection on August 18, 2016 during the AM and PM peak periods. The counts show the AM peak hour occurring 7:45 am-8:45 am and the PM peak hour 4:30 pm-5:30 pm. The AM and PM peak hour traffic volumes observed during these counts are presented in Figure 3.

2.1 Roadway Geometry, Safety and Emergency Access

East Fork Road is paved through Triumph, but quickly turns to gravel beyond Triumph. Road surface widths in the paved portion range from 23.5’ near the Big Wood River Bridge to 18 ft at the end of the paved portion. The dirt portion is typically 18-19 ft with a couple 16 ft segments. The shoulders appear to be traversable with a few official and unofficial pull-outs between Triumph and the proposed camp. The narrowest pull-out measures approximately 10 ft. The maximum distance between pull-outs is approximately a quarter mile in the segment between the Hyndman Creek Bridge and Hyndman Creek Road.

Blaine County completed the Blaine County Transportation Plan in August 2012. One section of that document addresses safety along East Fork Road in the vicinity of the proposed project. That study shows that 2 of 133 crashes reported on Blaine County roads during the study period occurred in the project vicinity. One was property damage only crash and the other resulted in minor injury. Neither of those crashes occurred along the roadway segment between Triumph and Hyndman Creek Road. Therefore, it is expected that the existing pull-outs will provide sufficient opportunities for large vehicles to pass each other and for timely emergency access to the site.



KEY

SIGNALIZED INTERSECTION

AM(PM) PEAK HOUR TRAFFIC VOLUMES

EXISTING 2016 PEAK HOUR TRAFFIC VOLUMES

FIGURE 3

3.0 PROJECT DESCRIPTION

Camp Rainbow Gold is a medical youth camp. The camp program and camp use will take place May thru October as a typical camp season. Summer camp is typically an 8 week schedule. During the week long camps the capacity is approximately 80 campers, 3 trained staff, 75 volunteers and 8 support staff including a year-round caretaker (trip generation is based on these numbers). During the family retreats the capacity is approximately 140 campers/family members, 2 trained staff, 35 volunteers and 8 support staff including a year-round caretaker. Buildings will consist of 10 to 12 specific use and multi-use structures (Dining Hall, Health Center, Reflection Center, Welcome Center, Staff cabins, Maintenance/Shop, Storage) and 14 cabins for participants. Motor vehicle access is planned for buses and some personal vehicles. A 40 car parking lot is anticipated on site. Some staff are expected to use off site park and ride facilities to reduce vehicle trips.

At the existing camp the vast majority of trips occur outside the peak hours. Volunteers and staff typically arrive on Saturday by 1:00 pm. Campers arrive on Sunday by 1:00 pm. The majority of campers arrive by bus, but approximately 10 percent are dropped-off by parents. Campers and volunteers are expected to be off site by 3:00 pm on Fridays with staff off site by 5:00 pm. The proposed arrival and departure schedule is expected to be close to the schedule at the existing camp.

4.0 PROJECT TRAFFIC FORECAST

Traffic forecasting completed for the proposed camp project consisted of two major parts; 1) trip generation and 2) trip distribution. A trip generation forecast was completed for the proposed Camp Rainbow Gold facility based on camp operations information for a hypothetical camp operating at capacity. The camp is only expected to operate at capacity a few weeks per year. The trip generation was verified by comparing counts and usage data from the existing camp. Counts at the existing camp were completed during the Youth Camp week (Saturday, July 23 to Friday, July 29). Existing camp count data are included in the Appendix.

The existing counts were not applied directly for the trip generation forecast because of some key operational differences between the existing and proposed locations. For example, at the existing camp support staff is Cathedral Pines staff that makes additional trips to neighboring areas during the day whereas support staff at the proposed camp is expected to make limited day trips. The existing counts also include recreational trips and trips to private cabins near the camp. Furthermore, traffic at Camp Rainbow Gold is more dependent upon camp program including the number and type of vendors than the number of campers, volunteers, and/or staff. The camp program is basically the same regardless of the camp week and vendor traffic at the proposed camp is expected to be very similar to vendor traffic at the existing camp. Directional split data was only available for daily trips so AM and PM peak hour directional splits were assumed based on the operations at the existing camp which includes deliveries and drop-offs in the morning and day trips and pick-ups in the afternoon. The forecast is shown in Table 1.

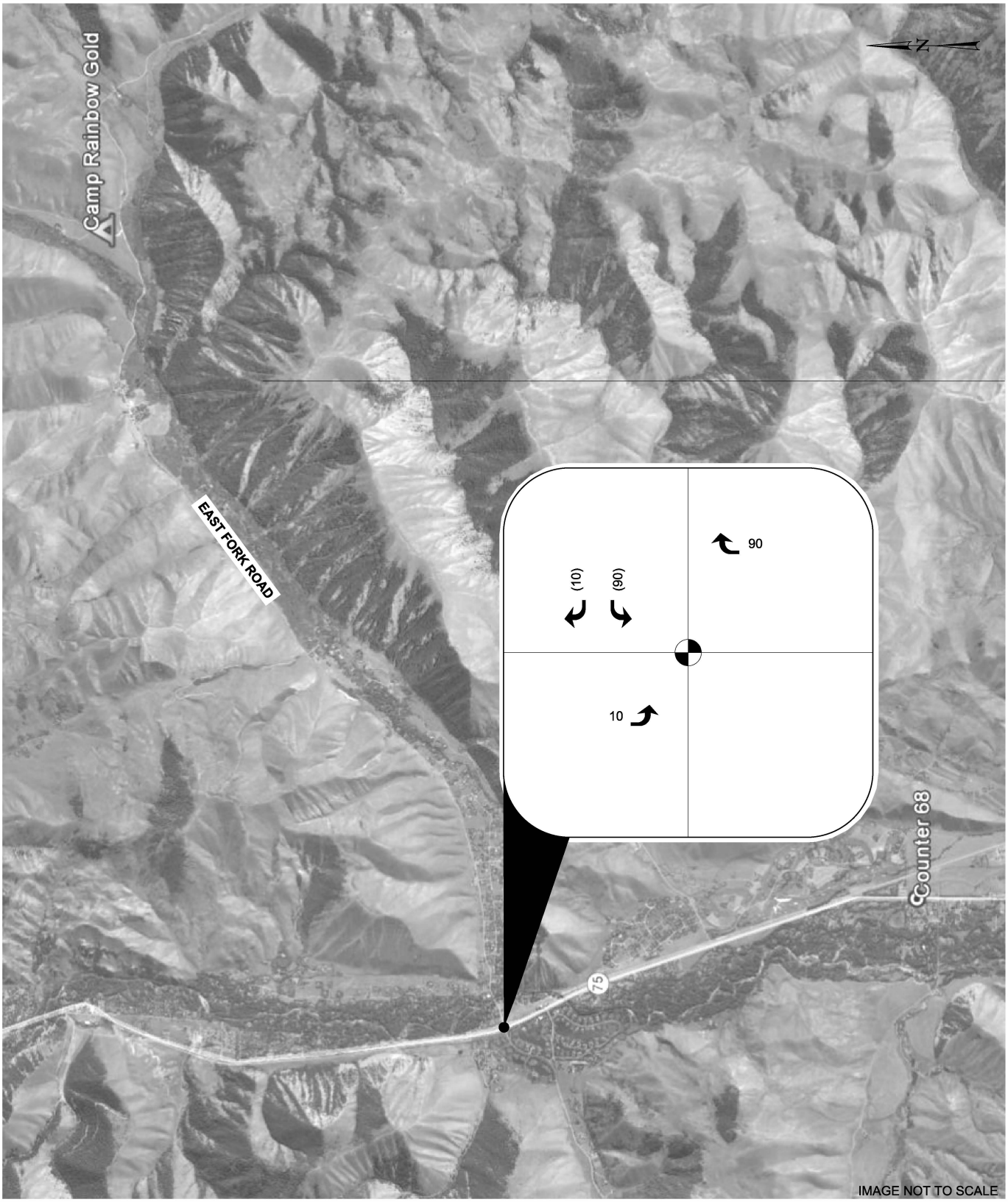
Table 1: Trip Generation Forecast

	Proposed Traffic								
	Daily Trips								
	Sat	Sun	Mon	Tues	Wed	Thurs	Fri	Weekend Avg Daily	Weekday Avg Daily
Total	**36**	**6**	**16**	**32**	**46**	**16**	**46**	**21**	**31**
AM Peak Hour	**4**	**1**	**2**	**3**	**5**	**2**	**5**	**3**	**3**
AM Inbound	2	1	1	2	3	1	3	2	2
AM Outbound	2	0	1	1	2	1	2	1	1
PM Peak Hour	**4**	**1**	**2**	**3**	**6**	**2**	**6**	**3**	**3**
PM Inbound	1	0	1	1	2	1	2	1	1
PM Outbound	3	1	1	2	4	1	4	2	2

On a typical weekday, the proposed camp is expected to generate 31 daily trips (half inbound and half outbound), with 3 trips during the AM peak hour (2 inbound and 1 outbound) and 3 trips during the PM peak hour (1 inbound and 2 outbound). The highest traffic is expected on Wednesday and Friday with 46 daily trips (half inbound and half outbound), with 5 trips during the AM peak hour (3 inbound and 2 outbound) and 6 trips during the PM peak hour (2 inbound and 4 outbound). These maximum days were used for the calculation of the level of service at the study intersection. A detailed traffic generation forecast is included in the Appendix

It should be noted that Idaho Transportation Department (ITD) *Requirements for Transportation Impact Studies* (Idaho Transportation Department, 1998) states “A TIS shall not be required for developments that will generate less than 25 added (new) trips during the highway's peak hour, or the total added volume will be less than 250 vehicles per day.” Per ITD requirements this development does not require a Transportation Impact Study.

The forecasted AM and PM peak hour traffic volumes for the proposed camp were distributed to the study intersection at East Fork Road and Highway 75 based on the distribution shown in Figure 4. This distribution was based on existing travel patterns in the area. The peak hour project traffic volumes projected to use the study intersection based on this distribution are presented in Figure 5. These volumes were then added to the existing traffic volumes observed at the study intersection to determine existing plus project traffic volumes as presented in Figure 6.



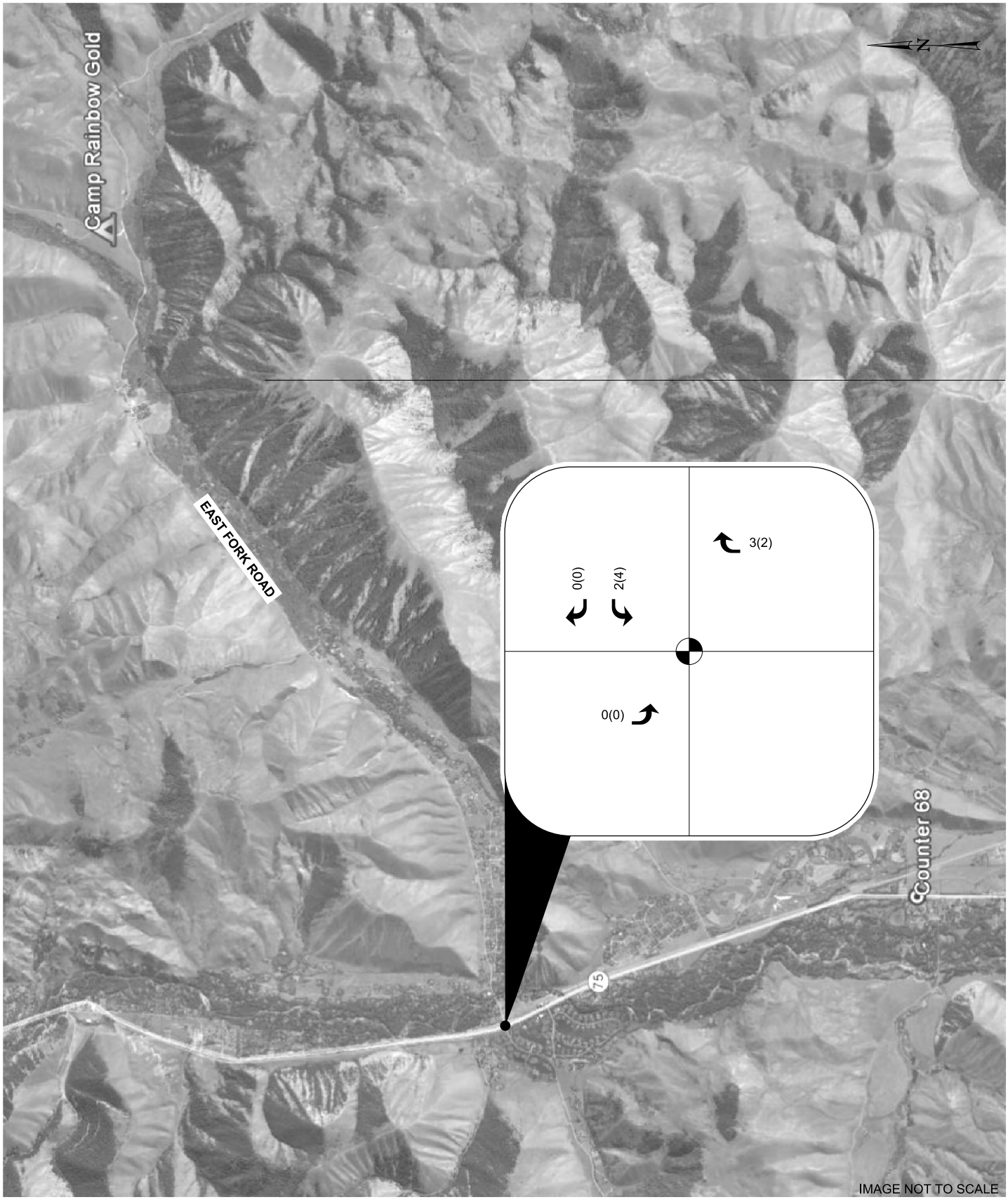
KEY

SIGNALIZED INTERSECTION

AM(PM) INBOUND (% OUTBOUND)

PROJECT PEAK HOUR TRIP DISTRIBUTION

FIGURE 4



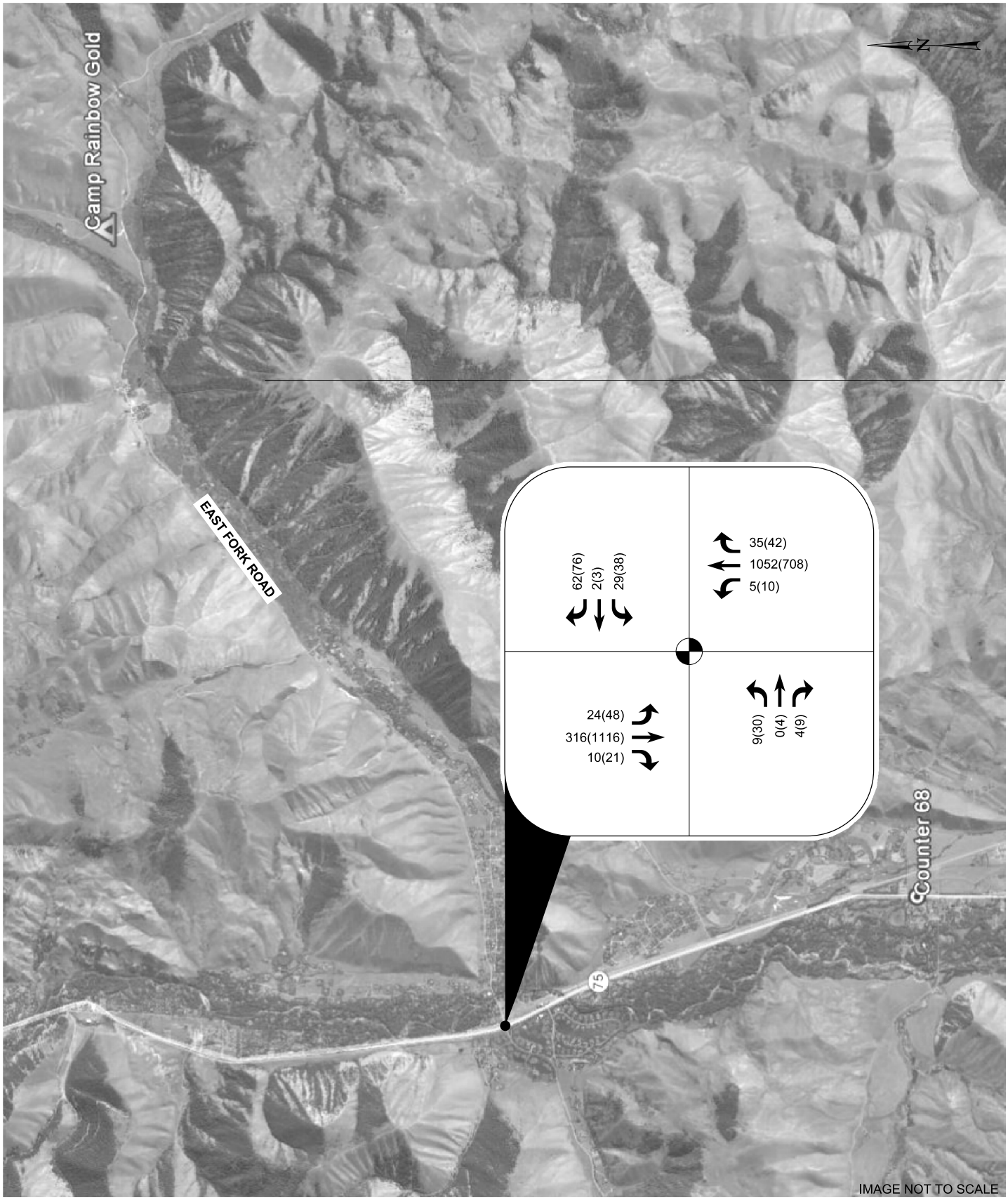
KEY

SIGNALIZED INTERSECTION

AM(PM) PEAK HOUR TRAFFIC VOLUMES

PROJECT PEAK HOUR TRAFFIC VOLUMES

FIGURE 5



KEY

SIGNALIZED INTERSECTION

AM(PM) PEAK HOUR TRAFFIC VOLUMES

EXISTING 2016 PLUS PEAK HOUR TRAFFIC VOLUMES

FIGURE 6

5.0 TRAFFIC ANALYSIS

The existing traffic volumes observed during the count were analyzed along with the existing plus project traffic volumes. The results of the analysis for each scenario were compared to determine whether or not significant traffic impacts would be expected as a result of the camp development.

5.1 Level of Service Definition

A Level of Service (LOS) analysis is the standardized method for comparing traffic scenarios. LOS is a term used to describe and quantify traffic conditions and their perception by motorists. LOS generally describes traffic conditions in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, and most commonly in delay. There are six levels of service describing these conditions, ranging from A to F, which have been standardized by the Transportation Research Board. LOS A represents a free-flowing traffic condition where motorists are affected very little by other motorists, and the level of comfort and convenience to the motorist is excellent. LOS F is characterized by congested conditions. In these conditions, motorists have little if any freedom to choose speeds or lanes of travel, and experience discomfort, inconvenience, and long delays. Table 2 shows the LOS criteria for movements at signalized intersections. These criteria are based on an average level delay per vehicle experienced at the intersection.

Table 2: LOS Criteria for Signalized Intersections

Level of Service	Control Delay per Vehicle (in seconds)
A	< 10
B	> 10 and < 20
C	> 20 and < 35
D	> 35 and < 55
E	> 55 and < 80
F	> 80

5.2 Results of LOS Analysis

Synchro Software was used to analyze the LOS at the study intersection. Video detection was noted at the intersection and the analysis assumed the traffic signal operates semi-actuated. The signal was optimized for the analysis because no current signal timing was available. Table 3 summarizes the LOS analysis at the intersection for current conditions and conditions with the proposed camp. Note that this analysis reflects the conditions when the camp is in session. Camp traffic is seasonal and the intersection is expected to operate as existing outside camp operations. Detailed LOS worksheets are included in the Appendix.

Table 3: Peak Hour LOS Summary
(East Fork Road/Highway 75 Intersection)

Time Period	Existing 2016		Existing + Project	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
AM Peak	9.3	A	9.4	A
PM Peak	10.8	B	10.8	B

The East Fork Road/Highway 75 intersection currently operates at LOS A and LOS B during the AM and PM peak hours, respectively. The intersection delay is expected to increase very slightly with the addition of the project but the intersection is expected to continue operating at the existing level of service for both peak hours. Therefore no improvements to the intersection are expected to be necessary to accommodate the additional traffic generated by the project.

6.0 PROPOSED MITIGATIONS

The traffic impact of the proposed camp development is minimal and results in essentially no impact during the peak hours at the East Fork Road/Highway 75 intersection. However, Camp Rainbow Gold recognizes that this area is sensitive to vehicular traffic. Therefore, Camp Rainbow Gold will continue to bus campers and will now require that volunteers carpool to minimize traffic on East Fork Road. It is reasonable to expect volunteers to carpool because of limited parking on-site. Camp Rainbow Gold is committed to these mitigations and they are reflected in the trip generation forecast and LOS analysis.

7.0 SUMMARY AND CONCLUSIONS

Camp Rainbow Gold is a medical youth camp. The camp program and camp use will take place May thru October as a typical camp season.

On a typical weekday, the proposed camp is expected to generate 31 daily trips (half inbound and half outbound), with 3 trips during the AM peak hour (2 inbound and 1 outbound) and 3 trips during the PM peak hour (1 inbound and 2 outbound). The trip generation reflects the mitigations Camp Rainbow Gold proposes including busing campers and requiring volunteers to carpool. The majority of the daily trips are expected to occur outside the peak hours observed at the East Fork Road/Highway 75 intersection.

Access to the site is provided by East Fork Road via the East Fork Road/Highway 75 intersection, which is currently signalized. East Fork Road surface widths in the paved portion range from 23.5’ near the Big Wood River Bridge to 18 ft at the end of the paved portion. The dirt portion is typically 18 ft with a couple 16 ft segments. The shoulders appear to be traversable with a few official and unofficial pull-outs between Triumph and the proposed camp. The existing pull-outs are expected to be sufficient to accommodate buses and emergency vehicles passing each other.

The East Fork Road/Highway 75 intersection currently operates at LOS A and LOS B during the AM and PM peak hours, respectively. The intersection delay is expected to increase very slightly with the addition of the project but the intersection is expected to continue operating at the same level of service. Therefore no improvements to the intersection are expected to be necessary to accommodate the additional traffic generated by the project.

APPENDIX A: TRAFFIC COUNTS

8/9/2016 www.itd.idaho.gov/highways/roadwaydata/counters/068/index.html

Counter #68 - Hailey
Automatic traffic recorder

- Average Daily Traffic
- Published reports
- Combine Sites
- Your Cart

YEAR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual 24-hr Avg.
1990	7297	7880	8250	7594	8635	10146	11445	11403	9780	9186	7866	7582	8931
1991	7506	7754	7698	7435	8271	9434	11071	11161	9323	9027	7419	7877	8675
1992	7645	8025	8374	8011	8666	9733	11388	11502	8983	8290	7324	7637	8830
1993	6589	6918	7553	7164	7299	8407	9195	8818	7990	7613	6699	6967	7607
1994	7992	8392	8665	7662	7806	8991	11244	11365	10449	9729	7848	8162	9034
1995	9149	9752	9706	9439	10283	12044	13752	12983	12165	11405	10057	10195	10911
1996	9516	10276	10548	9920	10695	12567	14041	14094	12417	11736	9942	10008	11313
1997	9874	10667	10669	10122	10804	12553	14485	14473	12494	11908	10328	10877	11605
1998	10090	10606	10858	10471	11239	13071	14957	14723	13412	11671	10543	11085	11894
1999	10539	10554	11261	10578	11479	13395	15467	15119	13876	12910	11253	11595	12336
2000	10726	11395	11769	11190	12109	14187	15753	15371	13678	13072	11122	11869	12687
2001	10999	11776	12245	11319	12343	14140	15880	15484	13450	12964	11476	11000	12756
2002	11458	11989	11794	12372	12663	14249	16067	15328	13228	13473	11448	12025	13008
2003	11973	12169	11887	12170	12857	14644	16545	16157	14203	14014	11582	12655	13405
2004	11608	12317	12657	12595	13147	15367	16732	16137	14708		11501	12711	
2005	11271	12269	12738	12260	13182	14993	16317	15842	14588	13389	12118	12521	13457
2006	11158	11694	12164	11828	13050	14755	15628	15493	13966	13412	11507	12435	13091
2007	11895	12192	12250	11979	12975	14543	16084	15692	13509	13667	11994	12319	13258
2008	10818	11876	11793	11636	12260	13750	15296	14898	13218	12765	10705	11152	12514
2009	10759	11195	10505	10723	11172	12957	14811	13672	12856		10291	11466	
2010	10224	10770	10539	10330	10487	12535	14571	14124	12497	11473	9877	11736	11597
2011	10456	10539	9974	9844	10128	12119	14347	13699	12091			9883	
2012	9684	10537	10023	9944	10371	12379	14441	13162	11984	11474	10005	11177	11264
2013	10411	10836	10556	10318	10873	12829	14561	13385	12334	11771	10055	11227	11596
2014	10514	10730	10490	10454	11017	12947	14887	14132	12538	12161	10378	11730	11831
2015	11157	11663	11290	11248	11806	13987	15198	14787	13389	12838	10864	12011	12520
2016	11682	12163	11581	11666	12302	14560							

This Data is also available in the following forms: Comma Delimited , Tab Delimited and Space Delimited.
Right-Click and 'Save Target As' to download a copy.
For a graph of June average daily traffic from year to year -- click here.

Blaine County Road & Bridge

Vehicle Counts

VehicleCount-74 -- English (ENU)

Datasets:

Site: **[Cathedral Pines] <25mph>**

Attribute: <25mph>

Direction: 2 - East bound, A trigger first. **Lane:** 0

Survey Duration: 13:39 Monday, July 18, 2016 => 12:29 Tuesday, August 02, 2016,

Zone:

File: Cathedral Pines 0 2016-08-02 1230.EC0 (Plus)

Identifier: W0236NJT MC56-L5 [MC55] (c)Microcom 19Oct04

Algorithm: Factory default axle (v4.06)

Data type: Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time: **13:40 Monday, July 18, 2016 => 12:29 Tuesday, August 02, 2016 (14.9513)**

Included classes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13

Speed range: 5 - 100 mph.

Direction: North, East, South, West (bound), P = East

Separation: Headway > 0 sec, Span 0 - 300 ft

Name: Default Profile

Scheme: Vehicle classification (Scheme F3)

Units: Non metric (ft, mi, ft/s, mph, lb, ton)

In profile: Vehicles = 1342 / 1350 (99.41%)

FIRST AND LAST DAYS ARE INCOMPLETE BECAUSE COUNTER HAD NOT RUN 24 HRS.

ON JULY 19 TUBES WERE PULLED.

INCOMPLETE

*** Monday, July 18, 2016 - Total=28 (Incomplete) , 60 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	3	7	8	6	4	0	0	0	0

TUBES PULLED

*** Tuesday, July 19, 2016 - Total=0, 60 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AM Peak 0000 - 0100 (0), AM PHF=1.00 PM Peak 1200 - 1300 (0), PM PHF=1.00

*** Wednesday, July 20, 2016 - Total=104, 60 minute drops – increase level due to "spa day and horses" 35 volunteers stayed for a couple of hours.**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
0	0	0	0	0	0	0	0	0	0	4	5	8	16	6	8	14	19	8	6	4	1	5	0

AM Peak 1100 - 1200 (5), AM PHF=1.00 PM Peak 1700 - 1800 (19), PM PHF=1.00

*** Thursday, July 21, 2016 - Total=104, 60 minute drops – we are unsure of high number. We went to Easley for weekly pool party. Many walked. One bus. Not sure why the numbers are so high. It does not match our activity schedule. Went to Easley for afternoon pool party. High volume in afternoon could be due to it being food delivery, Clear Creek and other vendors day to come by.**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300

0	0	0	0	0	0	0	4	3	1	7	6	6	6	1	19	7	10	18	3	6	2	1	4

AM Peak 1000 - 1100 (7), AM PHF=1.00 PM Peak 1500 - 1600 (19), PM PHF=1.00

*** Friday, July 22, 2016 - Total=120, 60 minute drops. First peak is parents picking up campers. Additional numbers are volunteers leaving. Our activity done by 3pm. After that is Cathedral Pines and public traffic.**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
2	0	0	0	0	1	1	1	4	7	12	9	3	25	4	7	3	9	7	8	7	3	6	1

AM Peak 1000 - 1100 (12), AM PHF=1.00 PM Peak 1300 - 1400 (25), PM PHF=1.00

*** Saturday, July 23, 2016 - Total=107, 60 minute drops. High traffic is our volunteers arriving. We expect them by 1pm after that it is Cathedral Pines and public traffic on this day due to the local race and outdoor activities.**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
2	0	0	0	0	0	0	3	3	0	13	7	16	16	7	9	8	5	4	3	4	2	5	0

AM Peak 1000 - 1100 (13), AM PHF=1.00 PM Peak 1200 - 1300 (16), PM PHF=1.00

*** Sunday, July 24, 2016 - Total=91, 60 minute drops 2pm is parent drop off. We do not have any activities associated with the 7pm traffic.**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
0	0	0	0	0	0	0	1	2	6	3	3	4	8	18	8	7	7	4	10	4	2	3	1

AM Peak 0900 - 1000 (6), AM PHF=1.00 PM Peak 1400 - 1500 (18), PM PHF=1.00

*** Monday, July 25, 2016 - Total=93, 60 minute drops 9am – noon is therapy dogs, and clayworks arriving for activities.**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
0	0	0	0	0	0	1	7	3	9	10	12	6	7	8	7	3	4	5	6	0	2	3	0

AM Peak 1100 - 1200 (12), AM PHF=1.00 PM Peak 1400 - 1500 (8), PM PHF=1.00

*** Tuesday, July 26, 2016 - Total=81, 60 minute drops – Camp was offsite from 9am until 2pm. Not our traffic.**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
0	0	0	0	0	0	3	2	4	2	3	6	5	5	8	3	8	9	8	7	2	1	4	1

AM Peak 1100 - 1200 (6), AM PHF=1.00 PM Peak 1700 - 1800 (9), PM PHF=1.00

*** Wednesday, July 27, 2016 - Total=135, 60 minute drops – Swiftsure, Grumpy's, high volume of visitors. Almost all offsite by 3pm.**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
0	0	0	0	0	0	1	7	12	5	14	9	10	12	7	22	7	9	5	7	5	2	1	0

AM Peak 1000 - 1100 (14), AM PHF=1.00 PM Peak 1500 - 1600 (22), PM PHF=1.00

*** Thursday, July 28, 2016 - Total=128, 60 minute drops – Camp offsite from 8:30am until 12:00 pm. Went to Easley for afternoon pool party. High volume in afternoon could be due to it being food delivery, Clear Creek and other vendors day to come by.**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	0	0	0	0	0	1	6	9	8	3	7	9	4	11	12	11	9	16	5	9	4	3	0

AM Peak 0800 - 0900 (9), AM PHF=1.00 PM Peak 1800 - 1900 (16), PM PHF=1.00

*** Friday, July 29, 2016 - Total=113, 60 minute drops – End of camp. Parent pick up in the am all volunteers off site by 3pm. Staff gone by 5pm.**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
0	0	0	0	0	0	1	4	4	16	7	3	7	1	4	34	7	7	2	6	5	2	2	1

AM Peak 0900 - 1000 (16), AM PHF=1.00 PM Peak 1500 - 1600 (34), PM PHF=1.00

*** Saturday, July 30, 2016 - Total=66, 60 minute drops Camp over. Not on site.**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
0	0	0	0	0	0	2	3	3	2	8	3	9	7	3	0	4	7	0	2	4	4	3	2

AM Peak 1000 - 1100 (8), AM PHF=1.00 PM Peak 1200 - 1300 (9), PM PHF=1.00

*** Sunday, July 31, 2016 - Total=93, 60 minute drops Camp over. Not on site.**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
0	0	0	0	0	0	0	2	1	4	3	5	15	12	20	9	8	3	5	0	3	0	1	2

AM Peak 1100 - 1200 (5), AM PHF=1.00 PM Peak 1400 - 1500 (20), PM PHF=1.00

*** Monday, August 01, 2016 - Total=73, 60 minute drops Camp over. Not on site.**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	0	0	0	0	1	1	3	4	3	4	15	3	7	6	3	4	8	3	2	0	1	4	0

AM Peak 1100 - 1200 (15), AM PHF=1.00 PM Peak 1700 - 1800 (8), PM PHF=1.00

INCOMPLETE

*** Tuesday, August 02, 2016 - Total=6 (Incomplete) , 60 minute drops Camp over. Not on site.**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
0	0	0	0	0	0	1	3	0	2	0	0	-	-	-	-	-	-	-	-	-	-	-	-

AM Peak 0700 - 0800 (3), AM PHF=1.00

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: AECO0005
Intersection: Hwy 75 / East Fork Road
City: Hailey, Idaho
Control: Signalized

File Name : Hwy 75 & East Fork
Site Code : 00000000
Start Date : 8/18/2016
Page No : 1

Groups Printed- General Traffic

	SH-75 From North					East Fork Road From East					SH-75 From South					Greenhorn Road From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	1	32	2	0	35	9	0	1	0	10	5	180	2	0	187	0	0	1	0	1	233
07:15 AM	1	58	4	0	63	10	0	1	0	11	5	236	1	0	242	1	0	0	0	1	317
07:30 AM	0	75	3	0	78	12	0	11	0	23	3	285	3	0	291	0	0	3	0	3	395
07:45 AM	5	90	5	0	100	21	0	6	0	27	9	299	1	0	309	2	0	4	0	6	442
Total	7	255	14	0	276	52	0	19	0	71	22	1000	7	0	1029	3	0	8	0	11	1387
08:00 AM	1	46	6	0	53	8	1	2	0	11	6	225	2	0	233	0	0	1	0	1	298
08:15 AM	4	97	8	0	109	8	0	8	0	16	6	248	0	0	254	1	0	2	0	3	382
08:30 AM	0	83	5	0	88	25	1	11	0	37	11	280	2	0	293	1	0	2	0	3	421
08:45 AM	2	95	3	0	100	18	0	10	0	28	12	257	3	0	272	1	0	4	0	5	405
Total	7	321	22	0	350	59	2	31	0	92	35	1010	7	0	1052	3	0	9	0	12	1506

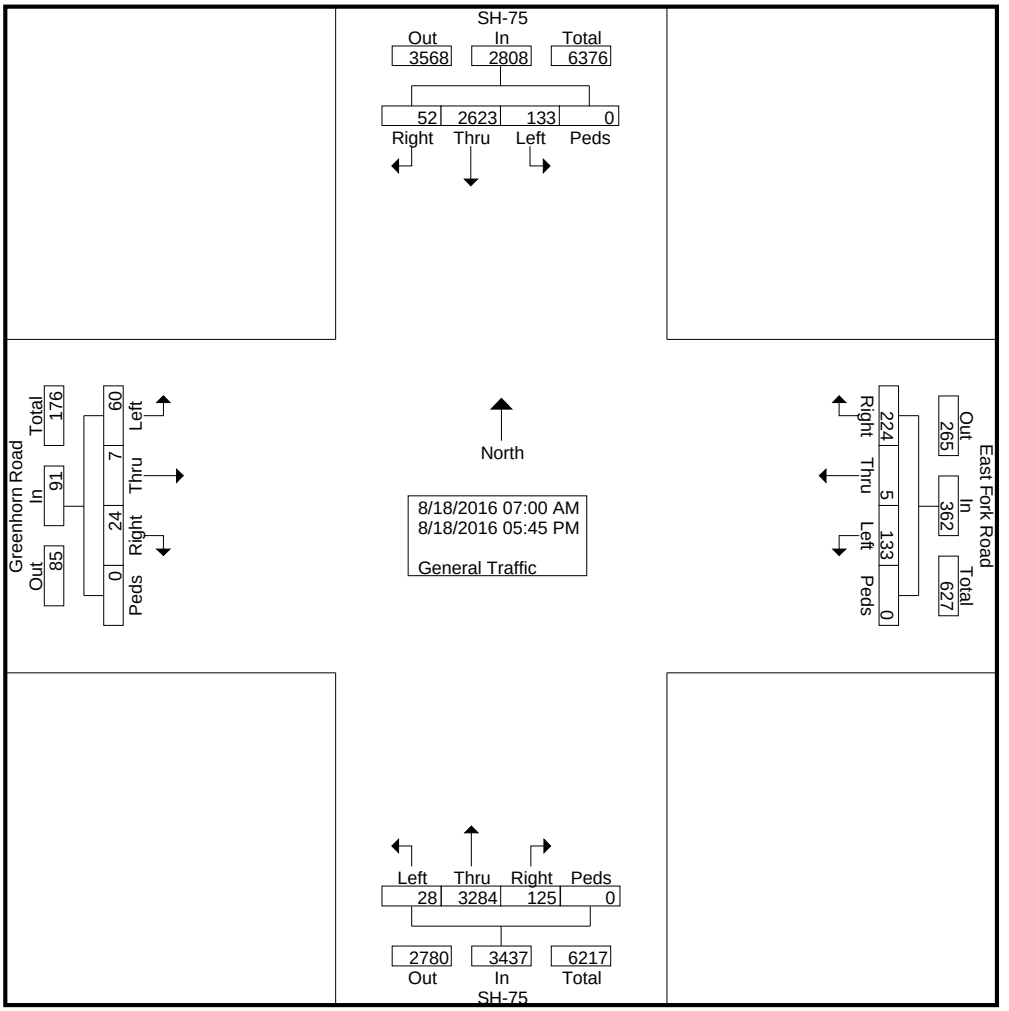
04:00 PM	6	241	13	0	260	8	0	15	0	23	5	148	1	0	154	4	0	4	0	8	445
04:15 PM	0	288	15	0	303	12	0	18	0	30	13	159	1	0	173	4	1	4	0	9	515
04:30 PM	4	286	16	0	306	8	1	12	0	21	7	159	3	0	169	6	0	7	0	13	509
04:45 PM	5	287	6	0	298	18	1	7	0	26	14	198	2	0	214	0	1	9	0	10	548
Total	15	1102	50	0	1167	46	2	52	0	100	39	664	7	0	710	14	2	24	0	40	2017
05:00 PM	7	274	13	0	294	24	0	8	0	32	11	178	2	0	191	0	2	7	0	9	526
05:15 PM	5	269	13	0	287	26	1	7	0	34	8	173	3	0	184	3	1	7	0	11	516
05:30 PM	6	225	5	0	236	10	0	3	0	13	5	147	0	0	152	1	2	2	0	5	406
05:45 PM	5	177	16	0	198	7	0	13	0	20	5	112	2	0	119	0	0	3	0	3	340
Total	23	945	47	0	1015	67	1	31	0	99	29	610	7	0	646	4	5	19	0	28	1788
Grand Total	52	2623	133	0	2808	224	5	133	0	362	125	3284	28	0	3437	24	7	60	0	91	6698
Apprch %	1.9	93.4	4.7	0		61.9	1.4	36.7	0		3.6	95.5	0.8	0		26.4	7.7	65.9	0		
Total %	0.8	39.2	2	0	41.9	3.3	0.1	2	0	5.4	1.9	49	0.4	0	51.3	0.4	0.1	0.9	0	1.4	

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: AECO0005
Intersection: Hwy 75 / East Fork Road
City: Hailey, Idaho
Control: Signalized

File Name : Hwy 75 & East Fork
Site Code : 00000000
Start Date : 8/18/2016
Page No : 2



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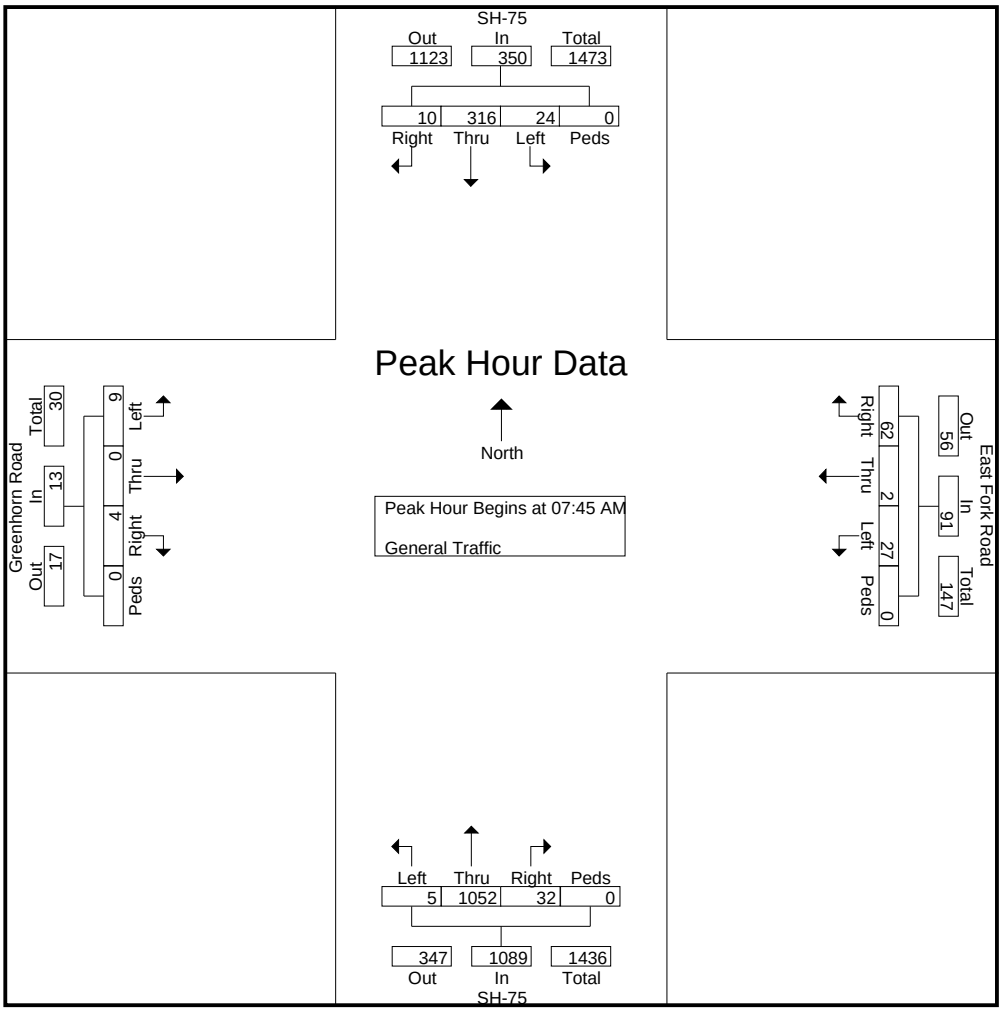
Page No : 3

	SH-75 From North					East Fork Road From East					SH-75 From South					Greenhorn Road From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	**5**	90	5	0	100	21	0	6	0	27	9	**299**	1	0	**309**	**2**	0	**4**	0	**6**	**442**
08:00 AM	1	46	6	0	53	8	**1**	2	0	11	6	225	**2**	0	233	0	0	1	0	1	298
08:15 AM	4	**97**	**8**	0	**109**	8	0	8	0	16	6	248	0	0	254	1	0	2	0	3	382
08:30 AM	0	83	5	0	88	**25**	1	**11**	0	**37**	**11**	280	2	0	293	1	0	2	0	3	421
Total Volume	10	316	24	0	350	62	2	27	0	91	32	1052	5	0	1089	4	0	9	0	13	1543
% App. Total	2.9	90.3	6.9	0		68.1	2.2	29.7	0		2.9	96.6	0.5	0		30.8	0	69.2	0		
PHF	.500	.814	.750	.000	.803	.620	.500	.614	.000	.615	.727	.880	.625	.000	.881	.500	.000	.563	.000	.542	.873



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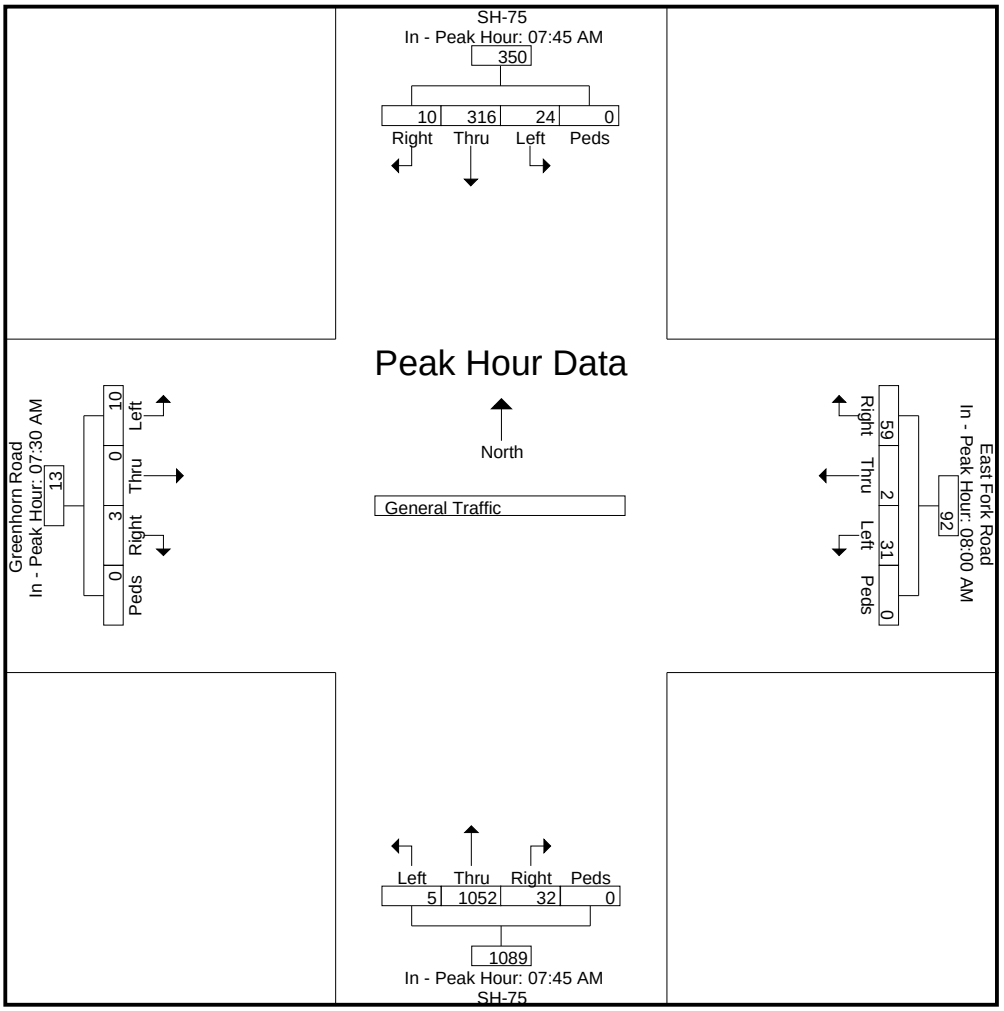
Study: AECO0005
Intersection: Hwy 75 / East Fork Road
City: Hailey, Idaho
Control: Signalized

File Name : Hwy 75 & East Fork
Site Code : 00000000
Start Date : 8/18/2016
Page No : 4

	SH-75 From North					East Fork Road From East					SH-75 From South					Greenhorn Road From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	07:45 AM					08:00 AM					07:45 AM					07:30 AM					
+0 mins.	**5**	90	5	0	100	8	**1**	2	0	11	9	**299**	1	0	**309**	0	0	3	0	3	
+15 mins.	1	46	6	0	53	8	0	8	0	16	6	225	**2**	0	233	**2**	0	**4**	0	**6**	
+30 mins.	4	**97**	**8**	0	**109**	**25**	1	**11**	0	**37**	6	248	0	0	254	0	0	1	0	1	
+45 mins.	0	83	5	0	88	18	0	10	0	28	**11**	280	2	0	293	1	0	2	0	3	
Total Volume	10	316	24	0	350	59	2	31	0	92	32	1052	5	0	1089	3	0	10	0	13	
% App. Total	2.9	90.3	6.9	0		64.1	2.2	33.7	0		2.9	96.6	0.5	0		23.1	0	76.9	0		
PHF	.500	.814	.750	.000	.803	.590	.500	.705	.000	.622	.727	.880	.625	.000	.881	.375	.000	.625	.000	.542	



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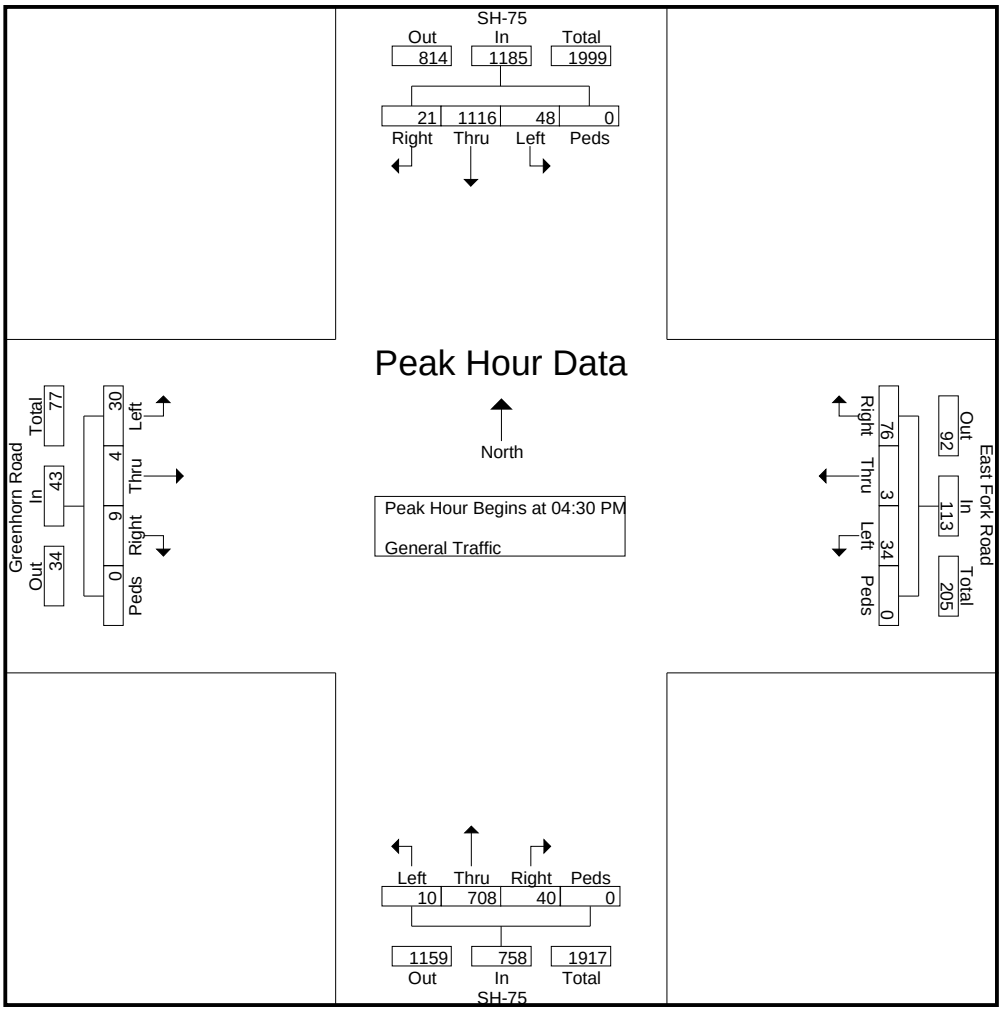
Start Date : 8/18/2016
Page No : 5

	SH-75 From North					East Fork Road From East					SH-75 From South					Greenhorn Road From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	4	286	**16**	0	**306**	8	**1**	**12**	0	21	7	159	**3**	0	169	**6**	0	7	0	**13**	509
04:45 PM	5	**287**	6	0	298	18	1	7	0	26	**14**	**198**	2	0	**214**	0	1	**9**	0	10	**548**
05:00 PM	**7**	274	13	0	294	24	0	8	0	32	11	178	2	0	191	0	**2**	7	0	9	526
05:15 PM	5	269	13	0	287	**26**	1	7	0	**34**	8	173	3	0	184	3	1	7	0	11	516
Total Volume	21	1116	48	0	1185	76	3	34	0	113	40	708	10	0	758	9	4	30	0	43	2099
% App. Total	1.8	94.2	4.1	0		67.3	2.7	30.1	0		5.3	93.4	1.3	0		20.9	9.3	69.8	0		
PHF	.750	.972	.750	.000	.968	.731	.750	.708	.000	.831	.714	.894	.833	.000	.886	.375	.500	.833	.000	.827	.958



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Intersection: Hwy 75 / East Fork Road
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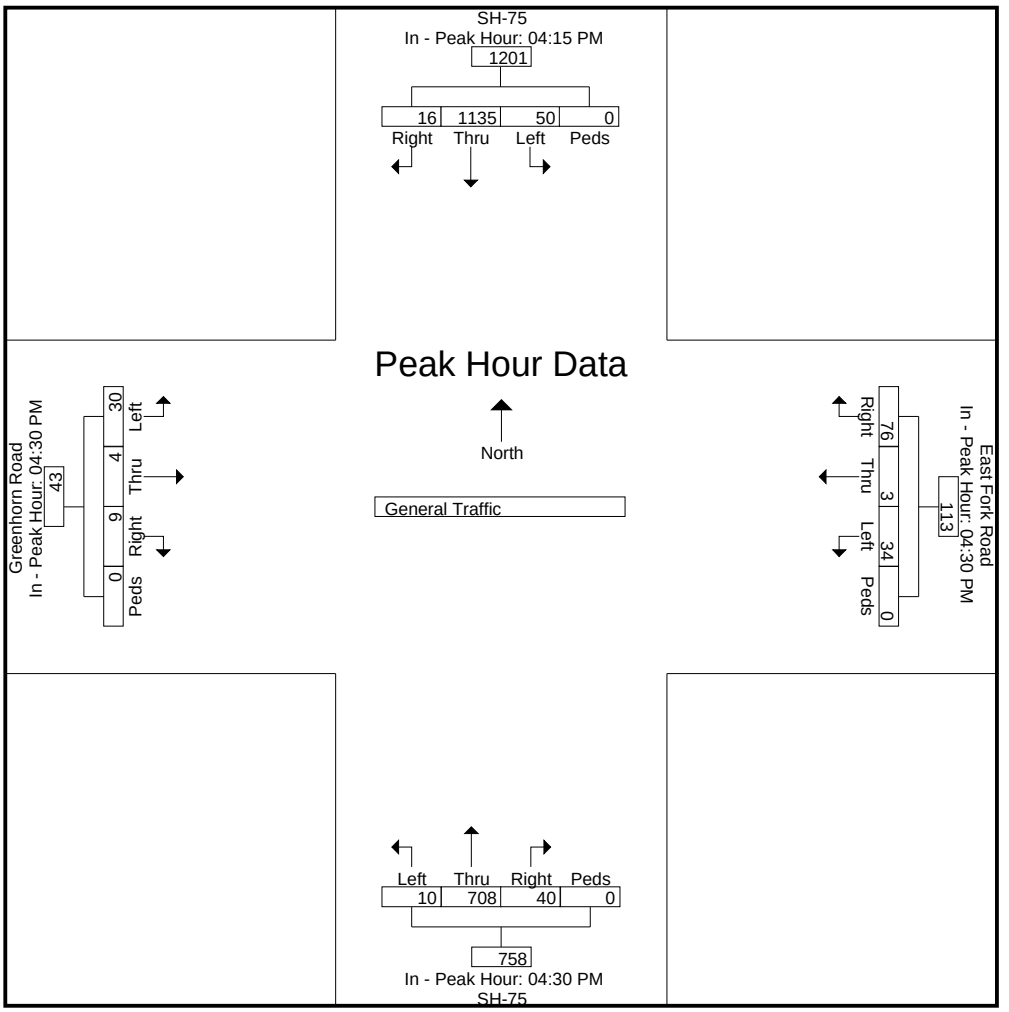
Page No : 6

	SH-75 From North					East Fork Road From East					SH-75 From South					Greenhorn Road From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	04:15 PM					04:30 PM					04:30 PM					04:30 PM					
+0 mins.	0	**288**	15	0	303	8	**1**	**12**	0	21	7	159	**3**	0	169	**6**	0	7	0	**13**	
+15 mins.	4	286	**16**	0	**306**	18	1	7	0	26	**14**	**198**	2	0	**214**	0	1	**9**	0	10	
+30 mins.	5	287	6	0	298	24	0	8	0	32	11	178	2	0	191	0	**2**	7	0	9	
+45 mins.	**7**	274	13	0	294	**26**	1	7	0	**34**	8	173	3	0	184	3	1	7	0	11	
Total Volume	16	1135	50	0	1201	76	3	34	0	113	40	708	10	0	758	9	4	30	0	43	
% App. Total	1.3	94.5	4.2	0		67.3	2.7	30.1	0		5.3	93.4	1.3	0		20.9	9.3	69.8	0		
PHF	.571	.985	.781	.000	.981	.731	.750	.708	.000	.831	.714	.894	.833	.000	.886	.375	.500	.833	.000	.827	



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Study: AECO0005
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Control: Signalized

File Name : Hwy 75 & East Fork
Site Code : 00000000
Start Date : 8/18/2016
Page No : 7

Image 1

APPENDIX B: TRIP GENERATION

	Existing Traffic at Cathedral Pines										
		Daily Trips									
	Number	Sat	Sun	Mon	Tues	Wed	Thurs	Fri	Weekend Avg Daily	Weekday Avg Daily	Comments
Campers	80		20					20	20	20	2 buses, 10% parent drop-off
Staff	3	3						3	3	3	
Volunteers	75	75						75	75	75	
Support Staff	0	0						0	0	0	Non-CRG traffic
Swiftsure	1					30			0	30	15 vehicles
Therapy Dogs	1				16				0	16	8 vehicles
Other Service Providers	4			4	4	4	4		0	4	avg 2 service providers per day Mon-Thurs
Vendors	1			4	4	4	4	4	0	4	avg 2 vendors per weekday
Visitors	2			4	4	4	4		0	4	avg 2 visitors per day Mon-Thurs
Total		**78**	**20**	**12**	**28**	**42**	**12**	**102**	**49**	**39**	
AM		**8**	**2**	**2**	**3**	**4**	**2**	**10**	**5**	**4**	**9% of daily based on existing counts**
AM Inbound		5	1	1	2	2	1	6			60% IN, rounded to nearest 1
AM Outbound		3	1	1	1	2	1	4			40% OUT, rounded to nearest 1
PM		**8**	**2**	**2**	**3**	**4**	**2**	**10**	**5**	**4**	**9% of daily based on existing counts**
PM Inbound		2	1	1	1	1	1	3			30% IN, rounded to nearest 1
PM Outbound		6	1	1	2	3	1	7			70% OUT, rounded to nearest 1

	Proposed Traffic										
		Daily Trips									
	Number	Sat	Sun	Mon	Tues	Wed	Thurs	Fri	Weekend Avg Daily	Weekday Avg Daily	Comments
Campers	80		6					6	6	6	2 buses, 1 van
Staff	3	3						3	3	3	
Volunteers	75	25						25	25	25	3 per vehicle, parking limited
Support Staff	8	8		4	4	4	4	8	5	4.8	4 trips Mon-Thurs
Swiftsure	1					30			30	30	15 vehicles
Therapy Dogs	1				16				16	16	8 vehicles
Other Service Providers	4			4	4	4	4		4	4	avg 2 service providers per day Mon-Thurs
Vendors	1			4	4	4	4	4	4	4	avg 2 vendors per weekday
Visitors	2			4	4	4	4		4	4	avg 2 visitors per day Mon-Thurs
Total		**36**	**6**	**16**	**32**	**46**	**16**	**46**	**21**	**31**	
AM		**4**	**1**	**2**	**3**	**5**	**2**	**5**	**3**	**3**	**9% of daily based on existing counts**
AM Inbound		2	1	1	2	3	1	3			60% IN, rounded to nearest 1
AM Outbound		2	0	1	1	2	1	2			40% OUT, rounded to nearest 1
PM		**4**	**1**	**2**	**3**	**6**	**2**	**6**	**3**	**4**	**9% of daily based on existing counts**
PM Inbound		1	0	1	1	2	1	2			30% IN, rounded to nearest 1
PM Outbound		3	1	1	2	4	1	4			70% OUT, rounded to nearest 1

APPENDIX C: SYNCHRO ANALYSIS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	0	4	27	2	62	5	1052	32	24	316	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	190.0	186.3	186.3	190.0	186.3	186.3	190.0	186.3	186.3	190.0
Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Cap, veh/h	176	0	124	235	4	121	714	2110	65	357	2173	70
Arrive On Green	0.08	0.00	0.08	0.08	0.08	0.08	0.01	0.59	0.59	0.02	0.61	0.61
Sat Flow, veh/h	1326	0	1583	1407	46	1544	1774	3596	110	1774	3590	115
Grp Volume(v), veh/h	10	0	4	29	0	69	5	592	586	26	178	176
Grp Sat Flow(s),veh/h/ln	1326	0	1583	1407	0	1590	1774	1863	1843	1774	1863	1842
Q Serve(g_s), s	0.4	0.0	0.1	1.1	0.0	2.4	0.1	10.8	10.8	0.3	2.3	2.4
Cycle Q Clear(g_c), s	2.8	0.0	0.1	1.2	0.0	2.4	0.1	10.8	10.8	0.3	2.3	2.4
Prop In Lane	1.00		1.00	1.00		0.97	1.00		0.06	1.00		0.06
Lane Grp Cap(c), veh/h	176	0	124	235	0	125	714	1093	1082	357	1127	1115
V/C Ratio(X)	0.06	0.00	0.03	0.12	0.00	0.55	0.01	0.54	0.54	0.07	0.16	0.16
Avail Cap(c_a), veh/h	1063	0	1182	1175	0	1188	830	1093	1082	441	1127	1115
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.3	0.0	23.9	24.5	0.0	25.0	4.7	7.0	7.0	5.3	4.8	4.8
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.2	0.0	3.8	0.0	1.9	1.9	0.1	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.1	0.0	0.1	0.4	0.0	1.0	0.0	3.7	3.7	0.1	0.7	0.7
Lane Grp Delay (d), s/veh	26.4	0.0	24.1	24.7	0.0	28.8	4.7	9.0	9.0	5.3	5.1	5.2
Lane Grp LOS	C		C	C		C	A	A	A	A	A	A
Approach Vol, veh/h		14			98			1183			380	
Approach Delay, s/veh		25.8			27.6			9.0			5.2	
Approach LOS		C			C			A			A	

Timer												
Assigned Phs		4			8		5	2		1	6	
Phs Duration (G+Y+Rc), s		10.4			10.4		6.3	38.5		7.3	39.5	
Change Period (Y+Rc), s		6.0			6.0		6.0	5.5		6.0	5.5	
Max Green Setting (Gmax), s		42.0			42.0		4.0	33.0		4.0	31.5	
Max Q Clear Time (g_c+I1), s		4.8			4.4		2.1	12.8		2.3	4.4	
Green Ext Time (p_c), s		0.6			0.6		0.0	9.0		0.0	10.2	

Intersection Summary	
HCM 2010 Ctrl Delay	9.3
HCM 2010 LOS	A

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	4	9	34	3	76	10	708	40	48	1116	21
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	190.0	186.3	186.3	190.0	186.3	186.3	190.0	186.3	186.3	190.0
Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Cap, veh/h	208	55	137	274	6	178	305	1910	107	472	2093	40
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.01	0.55	0.55	0.04	0.57	0.57
Sat Flow, veh/h	1306	473	1182	1394	56	1536	1774	3496	195	1774	3644	69
Grp Volume(v), veh/h	33	0	14	37	0	86	11	410	403	52	620	616
Grp Sat Flow(s),veh/h/ln	1306	0	1654	1394	0	1592	1774	1863	1828	1774	1863	1851
Q Serve(g_s), s	1.4	0.0	0.4	1.4	0.0	3.0	0.2	7.5	7.5	0.7	12.4	12.4
Cycle Q Clear(g_c), s	4.4	0.0	0.4	1.9	0.0	3.0	0.2	7.5	7.5	0.7	12.4	12.4
Prop In Lane	1.00		0.71	1.00		0.97	1.00		0.11	1.00		0.04
Lane Grp Cap(c), veh/h	208	0	191	274	0	184	305	1018	999	472	1070	1063
V/C Ratio(X)	0.16	0.00	0.07	0.14	0.00	0.47	0.04	0.40	0.40	0.11	0.58	0.58
Avail Cap(c_a), veh/h	994	0	1186	1112	0	1142	406	1018	999	554	1070	1063
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.2	0.0	23.1	23.9	0.0	24.2	6.8	7.7	7.7	5.3	8.0	8.0
Incr Delay (d2), s/veh	0.4	0.0	0.2	0.2	0.0	1.8	0.0	1.2	1.2	0.1	2.3	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.5	0.0	0.2	0.5	0.0	1.2	0.0	2.6	2.6	0.2	4.1	4.1
Lane Grp Delay (d), s/veh	26.6	0.0	23.3	24.1	0.0	26.0	6.8	8.9	8.9	5.4	10.2	10.3
Lane Grp LOS	C		C	C		C	A	A	A	A	B	B
Approach Vol, veh/h		47			123			824			1288	
Approach Delay, s/veh		25.6			25.5			8.9			10.1	
Approach LOS		C			C			A			B	

Timer												
Assigned Phs		4			8		5	2		1	6	
Phs Duration (G+Y+Rc), s		12.8			12.8		6.7	37.5		8.3	39.1	
Change Period (Y+Rc), s		6.0			6.0		6.0	5.5		6.0	5.5	
Max Green Setting (Gmax), s		42.0			42.0		4.0	32.0		5.0	31.5	
Max Q Clear Time (g_c+I1), s		6.4			5.0		2.2	9.5		2.7	14.4	
Green Ext Time (p_c), s		0.9			0.9		0.0	13.0		0.0	10.9	

Intersection Summary		
HCM 2010 Ctrl Delay		10.8
HCM 2010 LOS		B

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	0	4	29	2	62	5	1052	35	24	316	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	190.0	186.3	186.3	190.0	186.3	186.3	190.0	186.3	186.3	190.0
Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Cap, veh/h	178	0	125	236	4	122	713	2102	70	356	2171	69
Arrive On Green	0.08	0.00	0.08	0.08	0.08	0.08	0.01	0.59	0.59	0.02	0.60	0.60
Sat Flow, veh/h	1326	0	1583	1407	46	1544	1774	3585	119	1774	3590	115
Grp Volume(v), veh/h	10	0	4	32	0	69	5	594	587	26	178	176
Grp Sat Flow(s),veh/h/ln	1326	0	1583	1407	0	1590	1774	1863	1842	1774	1863	1842
Q Serve(g_s), s	0.4	0.0	0.1	1.2	0.0	2.4	0.1	10.9	10.9	0.3	2.3	2.4
Cycle Q Clear(g_c), s	2.8	0.0	0.1	1.3	0.0	2.4	0.1	10.9	10.9	0.3	2.3	2.4
Prop In Lane	1.00		1.00	1.00		0.97	1.00		0.06	1.00		0.06
Lane Grp Cap(c), veh/h	178	0	125	236	0	126	713	1092	1080	356	1126	1114
V/C Ratio(X)	0.06	0.00	0.03	0.14	0.00	0.55	0.01	0.54	0.54	0.07	0.16	0.16
Avail Cap(c_a), veh/h	1062	0	1181	1174	0	1186	830	1092	1080	439	1126	1114
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.3	0.0	23.9	24.5	0.0	24.9	4.7	7.1	7.1	5.3	4.9	4.9
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.3	0.0	3.7	0.0	1.9	2.0	0.1	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.1	0.0	0.1	0.4	0.0	1.0	0.0	3.7	3.7	0.1	0.7	0.7
Lane Grp Delay (d), s/veh	26.4	0.0	24.0	24.8	0.0	28.6	4.7	9.0	9.0	5.4	5.2	5.2
Lane Grp LOS	C		C	C		C	A	A	A	A	A	A
Approach Vol, veh/h		14			101			1186			380	
Approach Delay, s/veh		25.7			27.4			9.0			5.2	
Approach LOS		C			C			A			A	

Timer												
Assigned Phs		4			8		5	2		1	6	
Phs Duration (G+Y+Rc), s		10.5			10.5		6.3	38.5		7.3	39.5	
Change Period (Y+Rc), s		6.0			6.0		6.0	5.5		6.0	5.5	
Max Green Setting (Gmax), s		42.0			42.0		4.0	33.0		4.0	31.5	
Max Q Clear Time (g_c+I1), s		4.8			4.4		2.1	12.9		2.3	4.4	
Green Ext Time (p_c), s		0.6			0.6		0.0	9.0		0.0	10.2	

Intersection Summary		
HCM 2010 Ctrl Delay		9.4
HCM 2010 LOS		A

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	4	9	38	3	76	10	708	42	48	1116	21
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	190.0	186.3	186.3	190.0	186.3	186.3	190.0	186.3	186.3	190.0
Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Cap, veh/h	209	55	137	274	6	179	305	1901	114	470	2091	40
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.01	0.55	0.55	0.04	0.57	0.57
Sat Flow, veh/h	1306	473	1182	1394	56	1536	1774	3481	208	1774	3644	69
Grp Volume(v), veh/h	33	0	14	41	0	86	11	412	404	52	620	616
Grp Sat Flow(s),veh/h/ln	1306	0	1654	1394	0	1592	1774	1863	1826	1774	1863	1851
Q Serve(g_s), s	1.4	0.0	0.4	1.6	0.0	3.0	0.2	7.6	7.6	0.7	12.5	12.5
Cycle Q Clear(g_c), s	4.4	0.0	0.4	2.0	0.0	3.0	0.2	7.6	7.6	0.7	12.5	12.5
Prop In Lane	1.00		0.71	1.00		0.97	1.00		0.11	1.00		0.04
Lane Grp Cap(c), veh/h	209	0	192	274	0	185	305	1017	997	470	1069	1062
V/C Ratio(X)	0.16	0.00	0.07	0.15	0.00	0.46	0.04	0.40	0.41	0.11	0.58	0.58
Avail Cap(c_a), veh/h	993	0	1186	1111	0	1141	406	1017	997	552	1069	1062
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.2	0.0	23.1	24.0	0.0	24.2	6.8	7.8	7.8	5.3	8.0	8.0
Incr Delay (d2), s/veh	0.3	0.0	0.2	0.2	0.0	1.8	0.0	1.2	1.2	0.1	2.3	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.5	0.0	0.2	0.6	0.0	1.2	0.0	2.6	2.6	0.2	4.1	4.1
Lane Grp Delay (d), s/veh	26.6	0.0	23.2	24.2	0.0	26.0	6.9	9.0	9.0	5.4	10.3	10.3
Lane Grp LOS	C		C	C		C	A	A	A	A	B	B
Approach Vol, veh/h		47			127			827			1288	
Approach Delay, s/veh		25.6			25.4			8.9			10.1	
Approach LOS		C			C			A			B	

Timer												
Assigned Phs		4			8		5	2		1	6	
Phs Duration (G+Y+Rc), s		12.8			12.8		6.7	37.5		8.3	39.1	
Change Period (Y+Rc), s		6.0			6.0		6.0	5.5		6.0	5.5	
Max Green Setting (Gmax), s		42.0			42.0		4.0	32.0		5.0	31.5	
Max Q Clear Time (g_c+I1), s		6.4			5.0		2.2	9.6		2.7	14.5	
Green Ext Time (p_c), s		0.9			0.9		0.0	13.0		0.0	10.9	

Intersection Summary		
HCM 2010 Ctrl Delay		10.8
HCM 2010 LOS		B

Notes