

Harwick Transportation Group, Inc.

Memorandum of Transmittal

1440 Camino Cerrito SE Albuquerque, NM 87123

505.323.5060 • fax: 505.294.8534

PROJECT NO.: P-TIS-08-18

TO: Tony Loyd

DATE: December 15, 2008

City of Albuquerque

RE: Burger King Trip Comparison

☐ Mail ☒ Hand Deliver ☐ Overnight ☐ Weekend Overnight ☐ Saturday Delivery

WE ARE FORWARDING TO YOU

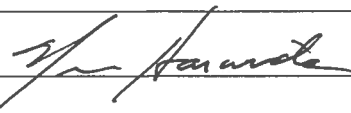
# of Copies	Dated	Description
2	12/12/2008	Burger King Trip Comparison Letter Report

THESE ARE TRANSMITTED

☒ For Approval ☐ As Requested ☐ To Return
☐ For Your Use ☐ For Review and Comment ☐ Other

PLEASE NOTE: Tony,

Attached are 2 copies of the trip generation comparison for the proposed Burger King restaurant in the southwest quadrant of the McMahon Blvd-Golf Course Rd intersection. Please review the study and let me know if you have any questions. Thanks. Happy holidays. Take care.

CC: BY: 

☒ Receipt Not Requested ☐ Please Call Upon Receipt ☒ Please Return Signed and Dated Copy

RECEIVED BY:

DATE:



Harwick Transportation Group, Inc.

December 12, 2008

Mr. Tony Loyd
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87102

Re: Burger King at McMahon Blvd-Golf Course Rd – Trip Generation Comparison

Dear Mr. Loyd:

This trip generation comparison has been prepared for the proposed Burger King development to be located in the southwest quadrant of the McMahon Blvd-Golf Course Rd intersection in Albuquerque, NM. The site was originally included in a traffic impact study for the Smith's Grocery Store in a project titled the "Golf Course Marketplace" (see the attached original site plan). That site plan had intended for a 7,000 SF retail building to be constructed in the northeast corner of the site, and the current development desires to amend that land use from the retail building to a 2,248 SF fast food restaurant with a drive-through window. This trip generation comparison has been prepared to assess the trip differences between the two land uses.

TRIP GENERATION

Project trips were generated using the Institute of Transportation Engineers (ITE) *Trip Generation*, 7th Edition. Data was not obtained from the original traffic study for the approved land use (retail). The approved land use was evaluated using land use #820 – Shopping Center for comparison with the fast food restaurant land use, #934. The trip generation data for each land use are summarized in Table 1.

Table 1
Trip Generation - Proposed Land Use

Code	Development	GFA (SF)	Daily	AM In	AM Out	PM In	PM Out
820	Shopping Center	7,000	1206	20	12	52	56
934	Fast Food Restaurant with Drive-Thru	2,248	1115	61	58	41	37
	<i>Trip Difference</i>		<i>-91</i>	<i>+41</i>	<i>+46</i>	<i>-9</i>	<i>-19</i>

The change in land use from a retail building to a fast food restaurant should reduce the overall trip demand for the site. On a daily basis, the site is forecast to generate 8% less trips. The AM peak hour will generate a higher number of trips as a fast food restaurant; however, the PM peak hour will generate less trips. Given that the PM peak hour has higher volumes on the adjacent roadways (25% higher), the fast food restaurant should result in less traffic impacts than a retail store.

A second consideration is that each of these facilities generates a mix of primary and pass-by trips. The average pass-by trip percentage for a general retail development, per the *ITE Trip Generation Handbook*, results in 0% AM peak hour pass-by trips and 34% PM peak hour pass-by trips. Similarly, a fast food restaurant results in an average trip reduction of 49% during the AM peak and 50% during the PM peak hour. The daily trips will also be reduced, however, pass-by rates for daily trips are not provided by ITE. Applying the trip reduction rates, given above data in Table 1, yields the peak hour trip reduction rates found in Table 2.

Table 2
Trip Generation – Pass-by Trip Reduction

Code	Development	GFA (SF)	Daily	AM In	AM Out	PM In	PM Out
820	Shopping Center	7,000		-0	-0	-18	-19
934	Fast Food Restaurant with Drive-Thru	2,248		-30	-29	-20	-19
	<i>Pass-by Trip Change</i>			<i>-30</i>	<i>-29</i>	<i>-2</i>	<i>-0</i>
	<i>Peak Hour Trip Difference (with pass-by)</i>			<i>+11</i>	<i>+17</i>	<i>-11</i>	<i>-19</i>

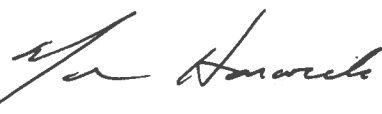
It is assumed, based upon the higher pass-by trip rates during the peak hours, that the fast food restaurant will result in a higher percentage reduction of daily trips. Table 2, in the last row, indicates that the peak hour trips will be increased by 28 trips during the AM peak hour and reduced by 30 trips during the PM peak hour when the two land uses are compared. This indicates an overall benefit to the roadway network if a fast food restaurant is constructed rather than a retail building.

FINDINGS AND RECOMMENDATIONS

The trip generation results indicate that a fast food restaurant will generate 91 less daily trips than a retail building on the site, a reduction of 8%. The PM Peak hour will experience an overall reduction of 30 trips (after removing pass-by trips) while the AM peak is forecast to increase primary trips by 28 trips. Given that the PM Peak hour has substantially higher traffic volumes (25% based upon a 2001 turning movement count), the land use change should benefit the roadway network.

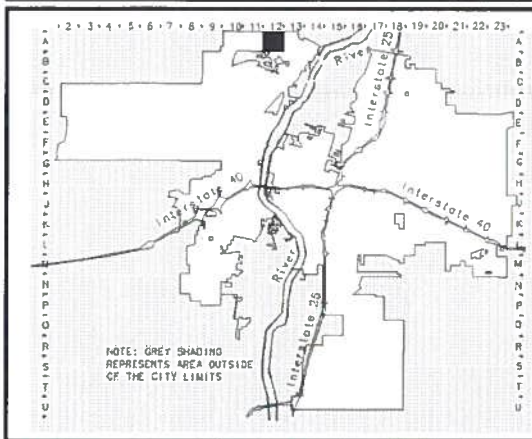
Should you have any questions or require additional information, please contact me at (505) 323-5060 or at nevin@harwicktg.com.

Sincerely,
HARWICK TRANSPORTATION GROUP, INC



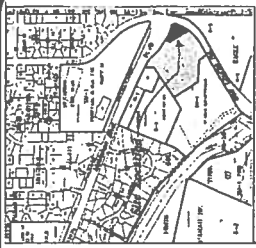
Nevin Harwick, PE, PTOE
Principal

Attachments: Appended Materials



A-1 2-Z

Map Amended through November 01, 2003



VICINITY MAP
1" = 150'

BURGER KING CORPORATION
10000 1st Avenue NW
Albuquerque, NM 87112
505.263.4000
www.burgerking.com



SIMONS ARCHITECTURE
10000 1st Avenue NW
Albuquerque, NM 87112
505.263.4000
www.simonsarchitecture.com



ROC 40
Tract 1B-5, SWC Golf Course & McMahon
Albuquerque, New Mexico
LANDSCAPE PLAN FOR BUILDING PERMIT

C-2

LEGAL DESCRIPTION

TRACT 1B-5
PARADISE NORTH SUBDIVISION
ALBUQUERQUE, NEW MEXICO
BERNALILLO COUNTY

SITE DATA

TRACT: C2
ZONING: A1
COMETAS:
SITE SIZE: 28,107 SQ. FT. (0.65 AC.)
BUILDING SIZE / % OF SITE: 2,248 SQ. FT. / 7.7%

DRB DATA

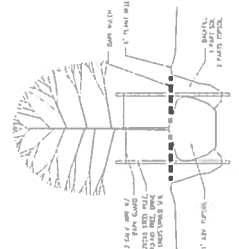
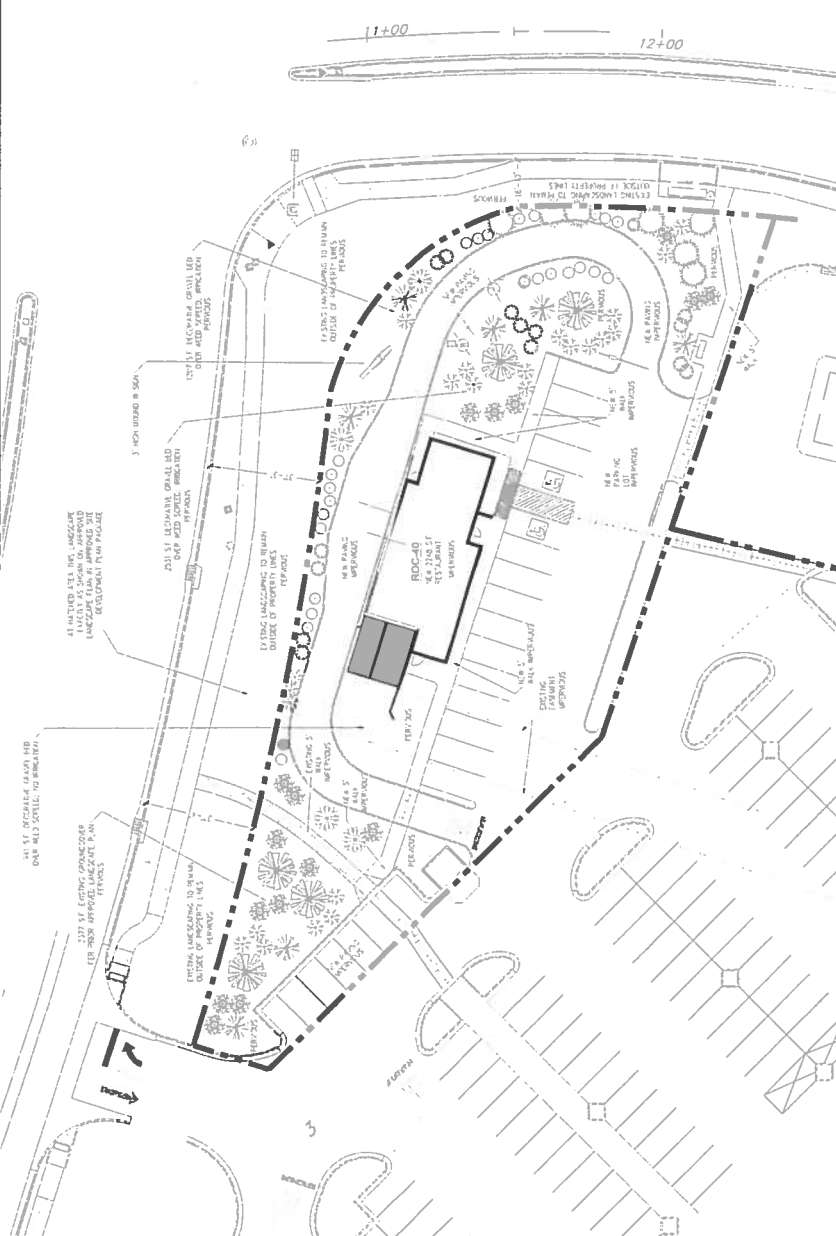
CONTRACT LANDSCAPE
EPC #000001000 PROJECT #1001885
EPC #000001000 PROJECT #1001885
APPROVED 10.19.2008

LANDSCAPE CALCULATIONS

TOTAL LOT AREA: 28,107 S.F.
TOTAL BUILDING AREA: 2,248 S.F.
NET LOT AREA: 25,859 S.F.
TOTAL LANDSCAPE REQUIREMENT: 4028 S.F.
TOTAL LANDSCAPE PROVIDED: 4028 S.F.
TOTAL IRIG PROVIDED: 8839 S.F.
GROUND COVER REQUIRED: 8704 S.F.
TOTAL GROUND COVER PROVIDED: 7115 S.F.
TOTAL LANDSCAPE PROVIDED: 7115 S.F.

GENERAL NOTES

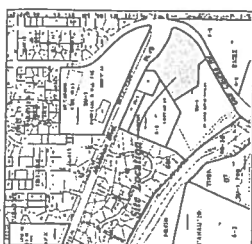
1. IRRIGATION SYSTEM TO BE LOW-WATER USE DRIP. THERE SHALL BE NO SPRINKLER SYSTEMS IN THE COURTYARD OR WITH IRRIGATION NOTES ON APPROVED LANDSCAPE PLAN OF THE APPROVED SITE DEVELOPMENT PACKAGE.
2. SOLE RESPONSIBILITY OF MAINTENANCE FOR ALL LANDSCAPE AND PLANTING SHALL BE THE LANDSCAPE ARCHITECT.
3. PROVIDE STATEMENT OF COMPLIANCE WITH WATER CONSERVATION PER CITY ORDINANCE 8.1.11 OF THE WATER CONSERVATION ORDINANCE.
4. PER APPROVED LANDSCAPE PLAN IN APPROVED SITE DEVELOPMENT PACKAGE FOR TREE WELL DETAIL.
5. PER APPROVED LANDSCAPE PLAN IN APPROVED SITE DEVELOPMENT PACKAGE FOR STREET TREE DETAIL.
6. THE PLANT LIST IS TAKEN FROM THE APPROVED LANDSCAPE PLAN IN THE APPROVED SITE DEVELOPMENT PACKAGE.
7. EAST EDGE, TREES ARE 20' O.C. MAX THERE.



TREE PLANTING DETAIL

TREES	COMMON NAME	SIZE	MATURE HEIGHT	SPREAD	WATER USE	QUANTITY
	CELTIS OCCIDENTALIS	7' CALIPER	40' HEIGHT	40' SPREAD	MEDIUM	5
	FRAXINUS VELUTINA	7' CALIPER	40' HEIGHT	40' SPREAD	LOW	7
	PNUS ELIOTICA	8' x 8'	40' HEIGHT	18' SPREAD	LOW	7
	LIQUIDAMBAR STYRACIA	8' x 8'	30' HEIGHT	30' SPREAD	MEDIUM	4
SHRUBS	COMMON NAME	SIZE	MATURE HEIGHT	SPREAD	WATER USE	QUANTITY
	THREE LEAF BURNING	8' OAL	8'	8'	LOW	21
	SCOTCH BROOM	8' OAL	8'	8'	LOW	18
	RED TIP POTYNA	8' OAL	8'	8'	MEDIUM	13
	DESERT BROOM	8' OAL	8'	8'	LOW	28

Golf Course Marketplace
SWC Golf Course Rd. & McHahn Blvd.
Albuquerque, New Mexico



Site Data Table:	
Existing Zone = SU-1 w/ IP uses	
Proposed Zone = C-2 (BC)	
Site Area = 344,532 s.f. (7.91 acres)	
Building Area:	
Smith's	= 57,228 s.f.
Renli's	= 1,000 s.f.
Renli B	= 8,700 s.f.
Pav. Center	
Total	= 72,928 s.f.
Parking Required:	
1,200 - 15,000 s.f. = 75 stalls	
1,200 - 45,000 s.f. = 180 stalls	
1,500 - 15,928 s.f. = 43 stalls	
Net Shelter 10% Reduction 29 Stalls	
Total Required = 269 stalls	
Parking Provided = 323 Stalls	
(44 stalls / 100K)	
Handicap Parking Required = 8 stalls	
Handicap Parking Provided = 10 stalls	
Bicycle Parking Required = 18 stalls	
Bicycle Parking Provided = 21 stalls	

PROJECT #1001885 PROJECT #1001886

CPC Application #: 04175-01349
 CPC Application #: 04175-01350

This plan is consistent with the specific life development action approved by the Environmental Planning Commission (EPC) on June 10, 2012 and that the findings and conclusions in the Official Action: Notification of Decision have been complied

SITE DEVELOPMENT PLAN

John A. J.
Traffic Editor, Transportation Division

Christine Bandora
Arts and Education Department

Under World
Winter Learning Division

Bradley D. Duffin
City Engineer, Engineering Division / AMEA

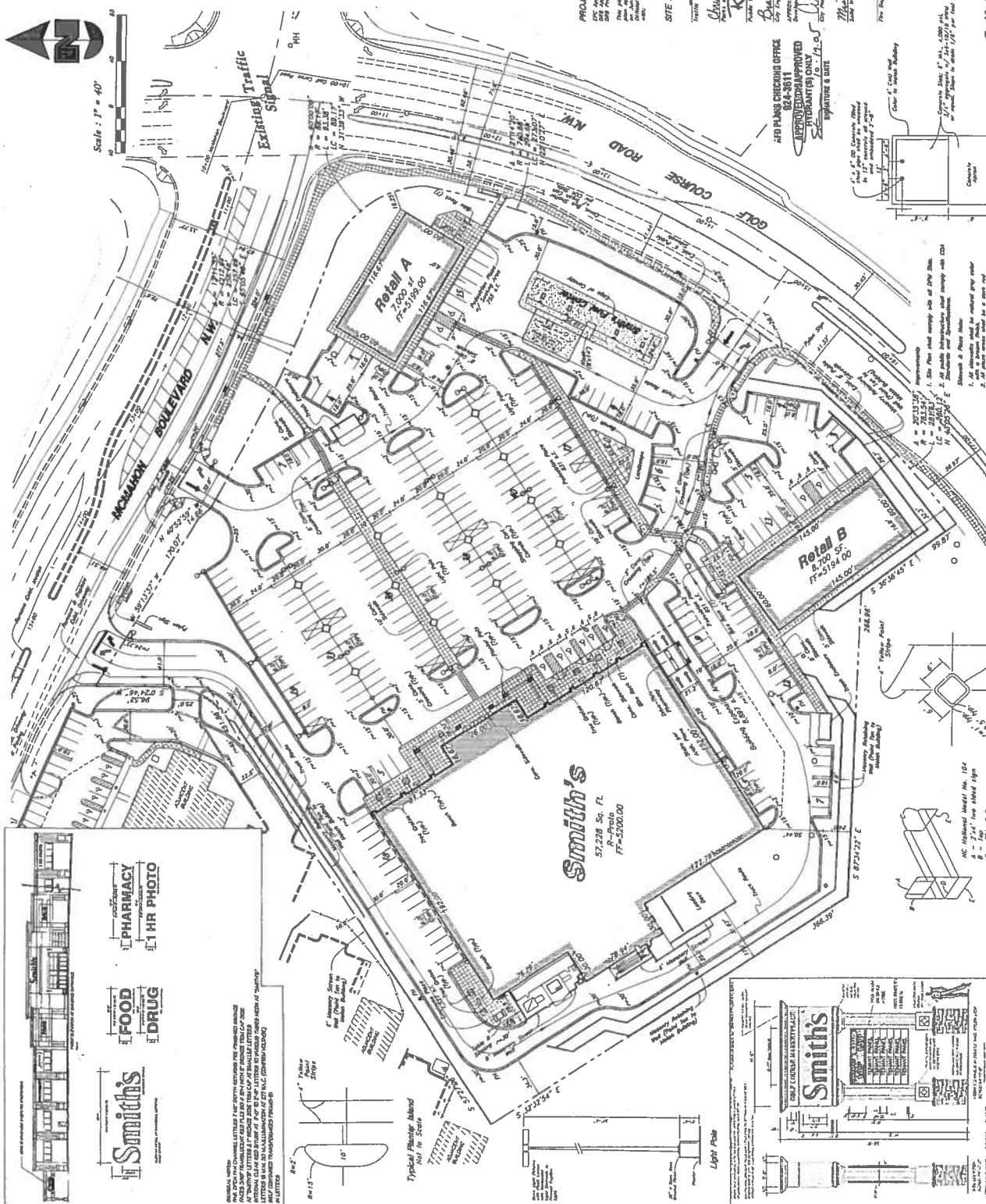
Page 1 of 1

City Manager, Albuquerque Planning District

44144

Smith's
FOOD & DRUG STORES
#463

**Golf Course Road & McMahon Road
Albuquerque, New Mexico**



Typical Dumpster Enclosure

All relating with shall be built & designed per Section 14-18-3-18 of the zoning Code as it applies.

Typical Diamond Planter

Medical Care Control

[illegible]

Trip Generation Worksheet

Land Use: **Shopping Center** **820**

Trip Generation Units: 1000 SF GLA

Project Units: 7

Trip Generation Equations:

Average Vehicle Trip End on a Weekday

$$\ln(T) = 0.65 \ln(X) + 5.83$$

Enter 50%

Exit	50%
------	-----

Average Vehicle Trip End on a Weekday, AM Peak Hour of Adj. Street Traffic

One Hour Between 7 and 9 AM

$$\ln(T) = 0.60 \ln(X) + 2.29$$

Enter 61%

Exit	39%
------	-----

Average Vehicle Trip End on a Weekday, PM Peak Hour of Adj. Street Traffic

One Hour Between 4 and 6 PM

$$\ln(T) = 0.66 \ln(X) + 3.40$$

Enter 48%

Exit	52%
------	-----

Daily Trips 1206

Enter 603

Exit 603

AM Peak Trips **32**

Enter 20

Exit 12

PM Peak Trips	108
---------------	-----

Enter 52

Exit 56

Trip Generation Worksheet

Land Use: **Fast Food Restaurant with Drive-Through Window** **934**

Trip Generation Units: 1000 SF GFA

Project Units: 2.248

Trip Generation Equations:

Average Vehicle Trip End on a Weekday

$T = 496.12 (X)$

Enter 50%

Exit 50%

Average Vehicle Trip End on a Weekday, AM Peak Hour of Adj. Street Traffic

One Hour Between 7 and 9 AM

$T = 53.11 (X)$

Enter 51%

Exit 49%

Average Vehicle Trip End on a Weekday, PM Peak Hour of Adj. Street Traffic

One Hour Between 4 and 6 PM

$T = 34.64 (X)$

Enter 52%

Exit 48%

Daily Trips **1115**

Enter 558

Exit 557

AM Peak Trips **119**

Enter 61

Exit 58

PM Peak Trips **78**

Enter 41

Exit 37

GolfCourse-Ellison

Turning Movement Count Data

Date: 5/11/2001
E-W Street: Ellison-McMahon

Day:
N-S-Street: Golf Course Rd

AM Peak Period

Time	Eastbound				Westbound				Northbound				Southbound				
	LT	TH	RT	RR	Sum	LT	TH	RT	RR	Sum	LT	TH	RT	RR	Sum	Sum	
6:30-6:45					0					0					0	0	
6:45-7:00	3	51	2	56	112	19	37	7	3	66	13	44	0	64	121	29	428
7:00-7:15	12	81	4	61	158	43	24	8	4	79	17	60	3	169	249	21	644
7:15-7:30	9	176	1	61	247	37	19	2	1	59	7	25	6	247	285	43	797
7:30-7:45	10	120	0	70	200	51	47	11	2	111	32	86	0	150	268	30	734
7:45-8:00	12	84	0	51	147	32	34	5	1	72	22	89	0	80	191	26	562
8:00-8:15	14	52	0	43	109	45	47	3	4	99	16	73	0	75	164	14	458
8:15-8:30	13	50	0	25	88	44	42	6	2	94	17	58	1	82	158	21	472
8:30-8:45					0					0					0		0
8:45-9:00					0					0					0		0
Peak Hour	43	461	5	243	752	163	124	26	8	321	78	260	9	646	993	120	2737
PHF	0.90	0.65	0.31	0.87	0.76	0.80	0.66	0.59	0.50	0.72	0.61	0.73	0.38	0.65	0.87	0.70	0.86
																	0.81

PM Peak Period

Time	Eastbound				Westbound				Northbound				Southbound				Sum	Sum
	LT	TH	RT	RR	Sum	LT	TH	RT	RR	Sum	LT	TH	RT	RR	Sum	Sum		
4:00-4:15					0					0					0		0	
4:15-4:30	13	64	4	20	101	92	117	30	0	239	28	88	8	80	204	27	131	
4:30-4:45	11	65	0	24	100	118	142	24	2	286	26	96	0	61	183	29	109	
4:45-5:00	20	60	1	53	134	144	130	27	3	304	36	104	1	92	233	28	120	
5:00-5:15	17	59	2	33	111	109	131	21	4	265	70	148	4	100	322	32	135	
5:15-5:30	16	67	1	41	125	165	136	37	10	348	75	139	2	75	291	22	153	
5:30-5:45	13	86	0	24	123	112	176	37	0	325	66	130	23	96	315	12	108	
5:45-6:00	8	52	0	21	81	100	123	36	4	263	67	121	3	69	260	29	112	
6:00-6:15					0					0					0		0	
6:15-6:30					0					0					0		0	
Peak Hour	66	272	4	151	493	530	573	122	17	1242	247	521	30	363	1161	94	516	
PHF	0.83	0.79	0.50	0.71	0.92	0.80	0.81	0.82	0.43	0.89	0.82	0.88	0.33	0.91	0.90	0.73	0.84	
																	0.93	