

TRAFFIC ENGINEERING & PLANNING 480 Herald Drive • Ambler, Pennsylvania 19002 215-793-4177 • FAX 215-793-4179

MEMORANDUM

TO:

Len Carey, Vice President - Property

Philadelphia Park Racetrack

FROM: Andreas Heinrich, P.E., P.T.O.E.

DATE: September 1, 2006

RE:

Traffic Access Study

Temporary License for 2050-Slots Electronic Gaming Facility

Bensalem Township, Bucks County, PA

In accordance with your request, please accept the results of this Traffic Access Study for the proposed 2050-Slots Electronic Gaming Facility to be constructed within the existing Grandstand at the Philadelphia Park Racetrack located along Street Road (PA Route 132) in Bensalem Township, Bucks County, Pennsylvania. The grandstand is being renovated to accommodate 2050 electronic gaming devices (slot machines). It is proposed to maintain access to the site via the main signalized driveway that intersects Street Road (PA Route 132) at a point directly opposite Tillman Drive South, and secondary driveways that intersect Mechanicsville Road opposite Byberry Road (signalized), and two driveways that intersect Richlieu Road (unsignalized). It is also proposed to extend the adjacent Applebee's Restaurant driveway into the Philadelphia Park site to provide a second signalized access driveway along Street Road (PA Route 132).

The purpose of this Traffic Access Study is to evaluate proposed improvements along Street Road (PA Route 132) to provide additional right turn and left turn entry lanes at the main driveway; and, to evaluate signal timing adjustments at both signalized access locations along Street Road (PA Route 132). This Traffic Access Study relies on the data and assumptions provided in the Traffic Impact Study prepared for Bensalem Township, funded by Philadelphia Park Racetrack, and prepared by Pennoni Associates, Inc. dated October 2004. The Traffic Impact Study presents a detailed analysis of the potential traffic impact for construction of a new 3,000-Slots Electronic Gaming Facility which will include restaurants, bars and nightclubs.

It is anticipated that the new 3,000-Slots Electronic Gaming Facility will be constructed over the next two years or so. The 2050-Slots Electronic Gaming Facility being retro-fitted into the existing grandstand will operate on a temporary basis until the new facility can be completed. The proposed improvements to provide additional turning lanes

and signal timing adjustments along Street Road (PA Route 132) are intended to better accommodate short-term traffic increases associated with the 2050-Slots Electronic Gaming Facility until such time that the new 3,000-Slots Electronic Gaming Facility becomes operational.

It is proposed to widen and re-stripe Street Road (PA Route 132) to provide dual left turn entry lanes, and a channelized free-flow right turn entry lane. Street Road (PA Route 132) currently provides two-through lanes in both directions. At the intersection with the Philadelphia Park driveway opposite Tillman Drive South, Street Road (PA Route 132) also provides a separate left turn lane in both directions and a separate southbound right turn lane to Tillman Drive South. At the intersection with the Applebee's Restaurant driveway, Street Road (PA Route 132) also provides a separate left turn lane in the southbound direction and a separate northbound channelized right turn lane. The posted speed limit along Street Road (PA Route 132) is 45 miles per hour.

The Philadelphia Park driveway currently provides two inbound lanes and two outbound lanes within a cartway width of 48 feet. The outbound lanes are designated as a shared left turn/through lane and a separate right turn lane. It is proposed to widen the driveway to provide a third inbound lane for the free-flow operation of the right turn lane to be constructed along northbound Street Road (PA Route 132).

While no physical improvements are proposed at the intersection of Street Road (PA Route 132) and the Applebee's Restaurant driveway, it is proposed to extend the Applebee's Restaurant driveway approximately 600 feet to provide two additional inbound lanes and two additional outbound lanes to serve Philadelphia Park. The outbound lanes as they intersect Street Road (PA Route 132) are designated as a separate left turn lane and a channelized right turn lane.

Tillman Drive South provides two travel lanes in both directions with a landscaped median separating the two directions of travel. The outbound lanes are designated as a shared left turn/through lane and a separate right turn lane. The posted speed limit along Tillman Drive South is 15 miles per hour.

Traffic traveling through the intersection of Street Road (PA Route 132) and the Philadelphia Park driveway/Tillman Drive South is regulated by a multi-phased, traffic actuated traffic control signal, with lead left turn phases provided for both approaches of Street Road (PA Route 132). Traffic traveling through the intersection of Street Road (PA Route 132) and the Applebee's Restaurant driveway is regulated by a three-phased, traffic actuated traffic control signal, with a lead left turn phase provided for the southbound approach of Street Road (PA Route 132). Both controllers are interconnected with adjacent signalized intersections along Street Road (PA Route 132) and are programmed to operate on a 120-second cycle during weekday peak periods and a 100-second cycle during off-peak periods.

Existing highway travel demand and traffic patterns at the intersections of Street Road (PA Route 132) and the Philadelphia Park driveway/Tillman Drive South and Street Road (PA Route 132) and the Applebee's Restaurant driveway were determined from

review of Turning Movement Traffic Counts completed in 2004 and presented in the Traffic Impact Study prepared by Pennoni Associates, Inc. The two peak hours evaluated in the Traffic Impact Study include the weekday PM peak hour (4:30 PM to 5:30 PM) and the Saturday PM peak hour (5:00 PM to 6:00 PM). Existing peak hour traffic volumes are summarized in Figure 1.

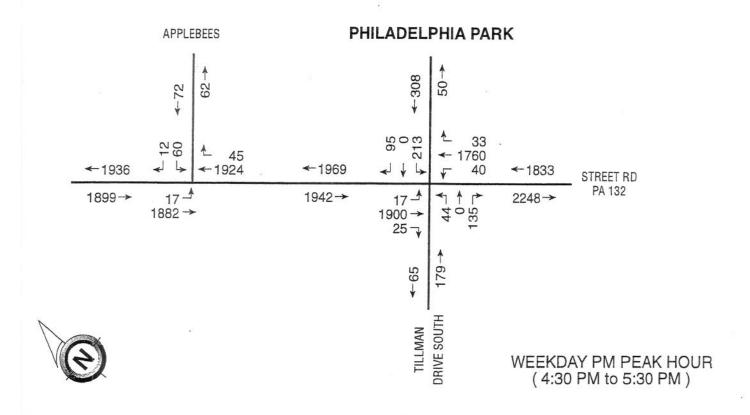
While traffic volumes provide a measure of activity on the area road system, it is also important to calculate the ability of the road system to adequately accommodate the traffic demand. This involves a comparison of peak hour traffic demand with available roadway or intersection capacity. Intersections are usually the critical points in any road network. At intersections, conflicts occur between through, crossing and turning traffic. It is at intersections where congestion is most likely to occur.

A volume/capacity analysis was completed for existing peak hour traffic conditions at the signalized intersections of Street Road (PA Route 132) and the Philadelphia Park driveway/Tillman Drive South and Street Road (PA Route 132) and the Applebee's Restaurant driveway based upon the peak hour traffic volumes summarized in Figure 1. The volume/capacity analysis was completed in accordance with the standard procedures contained in the "Highway Capacity Manual" (1). By definition, vehicle capacity represents "the maximum number of vehicles that can pass a given point during a specified period under prevailing roadway, traffic and control conditions". The level of functioning of an intersection or a uniform section of lane or roadway can be expressed in terms of levels of service. A level of service is a qualitative measure describing operational conditions within a traffic stream and their perception by motorists and/or passengers. Such measures include speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience.

At signalized intersections the factors that affect the various approach capacities include width of approach, number of lanes, signal green time, turning percentages, truck volumes, etc. The relative functioning of an intersection is, therefore, based on the average control delay per vehicle for the various movements within the intersection. While volume/capacity relationships affect the capacity, there are other parameters that affect delay and must also be considered. It is possible under certain conditions to have excessive delays without exceeding roadway capacity. Conversely, a saturated approach may have relatively low vehicular delay under certain conditions. Thus, both capacity and control delay must be considered to evaluate the overall operation of a signalized intersection.

Since operation at capacity is usually unsatisfactory to most drivers, a descriptive mechanism has been developed which relates capacity with the expected traffic delay. This is known as Level of Service (LOS). Level of service for a signalized intersection is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel

^{(1) &}quot;Highway Capacity Manual", Transportation Research Board, National Research Council, Washington, D.C., 2000.



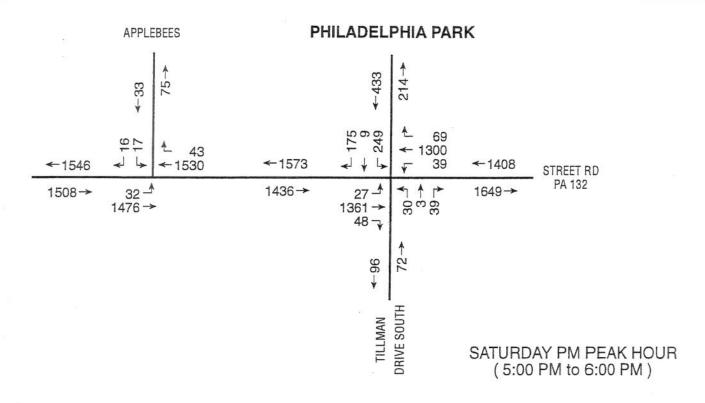


FIGURE 1 EXISTING (2004) PEAK HOUR TRAFFIC



consumption, and lost travel time. The correlation between levels of service and the stopped delay per vehicle at signalized intersections is provided in Table 1.

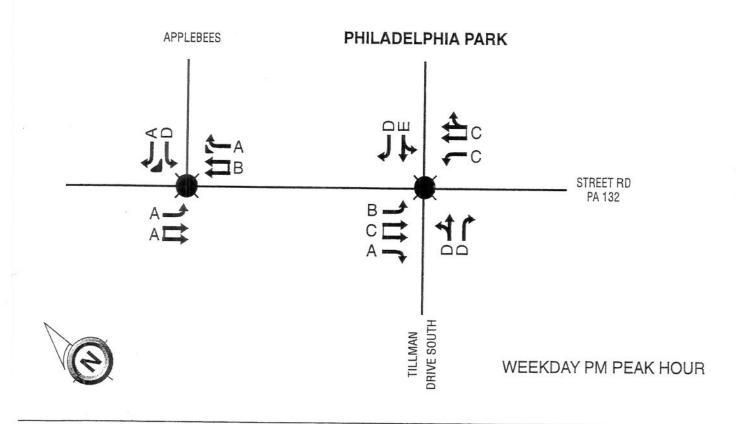
The resultant levels of service calculated from the volume/capacity analysis of existing traffic conditions are summarized in Figure 2. The results of the analysis reveal that peak hour traffic volume at the intersection Street Road (PA Route 132) and the Philadelphia Park driveway/Tillman Drive South and at the intersection Street Road (PA Route 132) and the Applebee's Restaurant driveway is generally operating at acceptable levels of service, although left turn exiting traffic from the Philadelphia Park driveway is operating at LOS E during both the weekday and Saturday PM peak hours. It should be noted that the results of the analysis have been revised somewhat from the results of the analysis presented in the Traffic Impact Study report in that the left turn factors for traffic exiting from the Philadelphia Park driveway and from Tillman Drive South are adjusted to reflect the fact that there is little or no opposing through traffic on either approach; and, there are two departure lanes along Street Road (PA Route 132) so that left-turning vehicles turn simultaneously with right turning vehicles on the opposing approach. A copy of the volume/capacity analysis worksheets is attached.

As indicated previously, the Philadelphia Park grandstand is being renovated to accommodate 2050 electronic gaming devices (slot machines) temporary to a new 3,000-Slots Electronic Gaming Facility will be constructed over the next two years or so. The temporary facility is expected to be operational before the end of the year, and it is anticipated that the temporary facility will operate at least to the year 2008 when the permanent facility is expected to be completed.

Based on the assumptions for trip generation described in the Traffic Impact Study report, the new 3,000-Slots Electronic Gaming Facility, with associated restaurants, bars and nightclubs, is projected to generate 1,074 trips (558 entering and 516 exiting) during the weekday PM peak hour and 1,431 trips (758 entering and 673 exiting) during the Saturday PM peak hour. For the purpose of this Traffic Access Study, the trip generation for the permanent facility was simply adjusted by factor of 0.683 to reflect the ratio of 2,050 machines in the temporary facility versus 3,000 machines in the future permanent facility. This will result in a projected trip generation for the temporary facility of 734 trips (381 entering and 353 exiting) during the weekday PM peak hour and 978 trips (518 entering and 460 exiting) during the Saturday PM peak hour.

Based on the assumptions for distribution of new trip generation described in the Traffic Impact Study report, the trip generation was assigned to the driveways that serve Philadelphia Park. It is anticipated that approximately 64% of the trip generation will enter and exit via the Street Road (PA Route 132) driveway, approximately 23% of the trip generation will enter and exit via the Richlieu Road driveways, and approximately 13% of the trip generation will enter and exit via the Mechanicsville Road driveway.

The assignment of the projected new trip generation to the intersection of Street Road (PA Route 132) and the Philadelphia Park driveway/Tillman Drive South and to the intersection of Street Road (PA Route 132) and the Applebee's Restaurant driveway is illustrated in Figure 3. As shown, it is anticipated that the main Street Road (PA Route



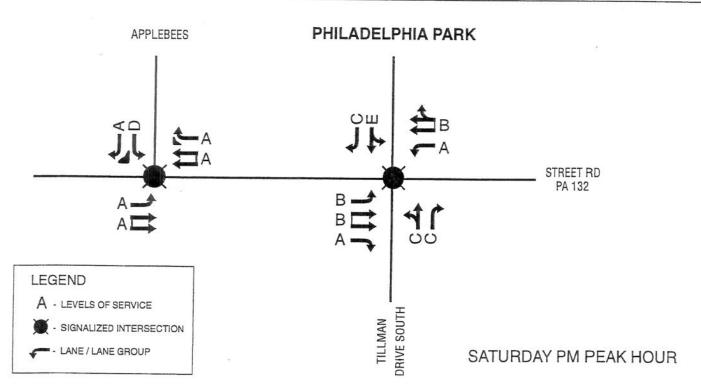
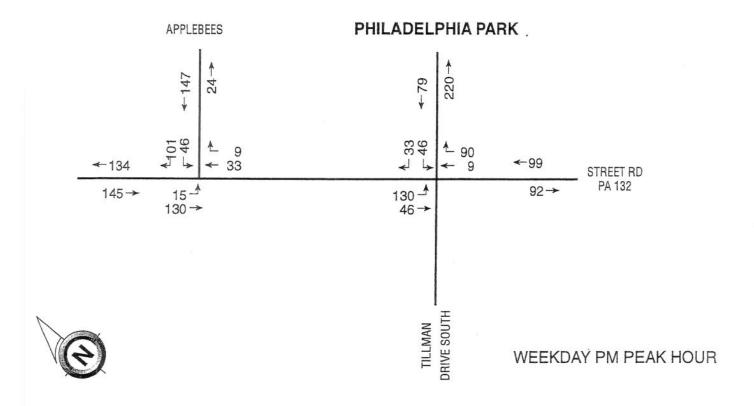


FIGURE 2 EXISTING (2004) PEAK HOUR LEVELS OF SERVICE







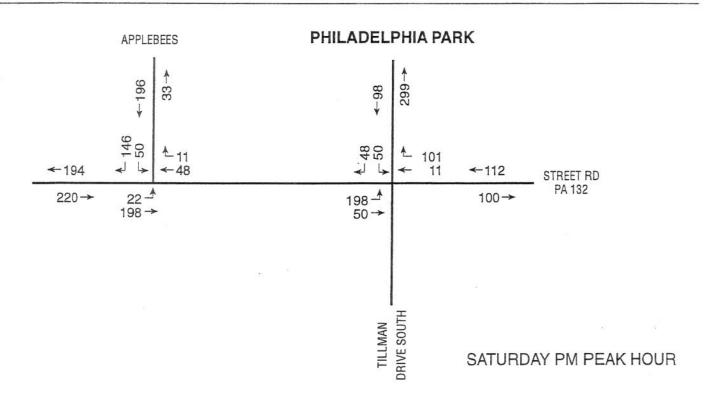


FIGURE 3 NEW DEVELOPMENT GENERATED TRAFFIC (2050 SLOT MACHINES)

PHILADELPHIA PARK RACETRACK AND CASINO BENSALEM TOWNSHIP, PA



132) driveway will accommodate 299 new trips (220 entering and 79 exiting) during the weekday PM peak hour and 397 new trips (299 entering and 98 exiting) during the Saturday PM peak hour. It is anticipated that the Applebee's Restaurant driveway will accommodate 171 new trips (24 entering and 147 exiting) during the weekday PM peak hour and 229 new trips (33 entering and 196 exiting) during the Saturday PM peak hour.

As a final step in projecting traffic at the intersection of Street Road (PA Route 132) and the Philadelphia Park driveway/Tillman Drive South and at the intersection of Street Road (PA Route 132) and at the Applebee's Restaurant driveway existing through traffic along Street Road (PA Route 132) was increased by a factor of 6.0% (1.5% per year for the four year period from 2004 to 2008). Again, the assumption for background traffic growth is consistent with the assumptions described in the Traffic Impact Study report. Future (2008) peak hour traffic volumes are summarized in Figure 4.

As described previously, it is proposed to provide additional right turn and left turn entry lanes along Street Road (PA Route 132) for access to Philadelphia Park. Specifically, through a combination of widening and re-striping, it is proposed to provide a second left turn entry lane 12 feet wide and 200 feet long on the southbound approach of Street Road (PA Route 132); while, realigning the existing left turn lane that is 12 feet wide and 550 feet long. The Philadelphia Park entry lanes will be widened to provide a flared departure area with two entry lanes each 15 feet wide before tapering to 12 foot wide lanes.

It is also proposed to widen northbound Street Road (PA Route 132) to construct a channelized free-flow right turn lane with a deceleration lane 14 feet wide and 200 feet long plus taper. The Philadelphia Park driveway will be further widened to provide a third inbound lane for the free-flow operation of the right turn lane. Finally, these improvements will require modification of the traffic signal operation for the intersection of Street Road (PA Route 132) and the Philadelphia Park driveway/Tillman Drive South.

Finally, it is proposed to construct an approximate 600 foot long, four-lane extension of the Applebee's Restaurant driveway into the Philadelphia Park parking field.

Based on the improvements described above, a second volume/capacity analysis was completed for the intersection of Street Road (PA Route 132) and the Philadelphia Park driveway/Tillman Drive South and for the intersection of Street Road (PA Route 132) and the Applebee's Restaurant driveway. This analysis was based on the projected peak hour traffic volumes summarized in Figure 4. The results of the volume/capacity analysis, expressed in terms of levels of service, are summarized in Figure 5. As shown, the results of the analysis reveal that all movements at the intersection Street Road (PA Route 132) and the Philadelphia Park driveway/Tillman Drive South, and all movements at the intersection Street Road (PA Route 132) and the Applebee's Restaurant driveway will operate at an acceptable LOS D or better during both the weekday and Saturday PM peak hours. It should be noted that Peak Hour Factors (PHF's) for traffic exiting the Philadelphia Park driveway have been adjusted to reflect the higher volume and more consistent traffic flow expected from future casino patrons versus the current racetrack patrons. A copy of the volume/capacity analysis worksheets is attached.

TABLE 1

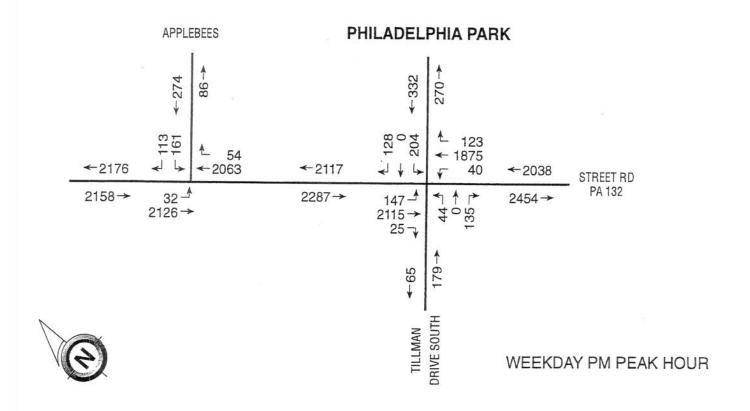
LEVEL OF SERVICE

UNSIGNALIZED INTERSECTIONS

At unsignalized intersections the criteria used to evaluate the quality of flow is the measure of the adequacy of the number of acceptable gaps in the through traffic stream for drivers facing a STOP or YIELD condition. Variables affecting the gaps are the distribution or arrival of vehicles in the through traffic stream, percentage of trucks, grades, and the amount of time it requires to enter the traffic stream from a stop position (critical gap size). The control delay of a critical movement includes the initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

As a result, the following criteria has been established:

Level of <u>Service</u>	Delay Range (sec./veh/)
A	less than 10
В	10 to 15
С	15 to 25
D	25 to 35
Е	35 to 50
F	more than 50



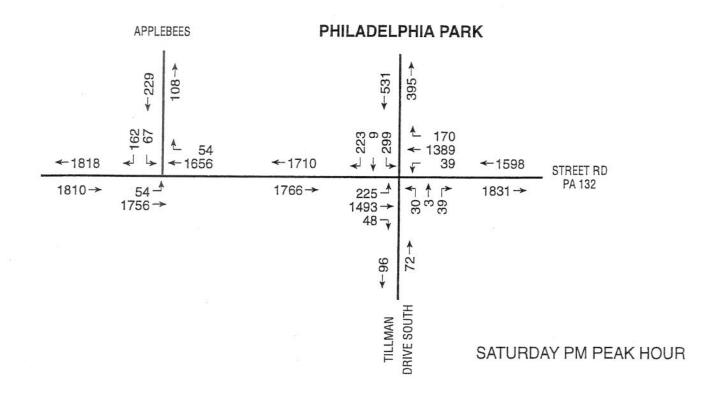
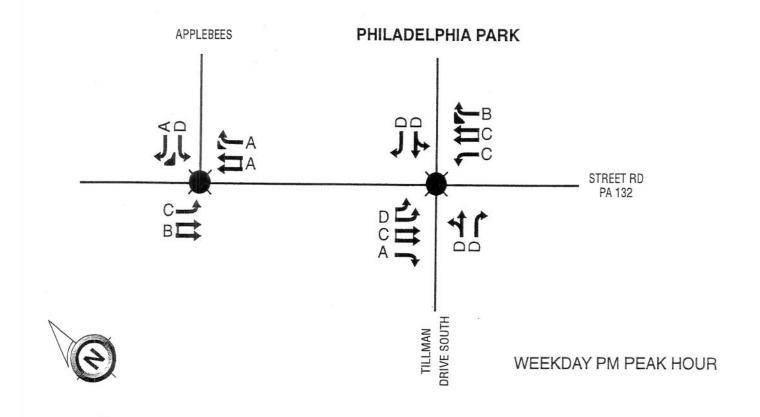


FIGURE 4
PROJECTED (2008) PEAK HOUR TRAFFIC
AFTER DEVELOPMENT

PHILADELPHIA PARK RACETRACK AND CASINO BENSALEM TOWNSHIP, PA





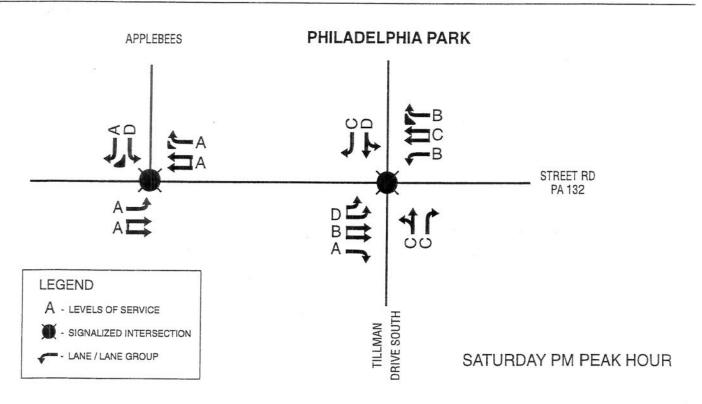


FIGURE 5 PROJECTED (2008) PEAK HOUR LEVELS OF SERVICE AFTER DEVELOPMENT

PHILADELPHIA PARK RACETRACK AND CASINO BENSALEM TOWNSHIP, PA



Conclusions

The foregoing Traffic Access Study for the proposed 2050-Slots Electronic Gaming Facility to be developed at Philadelphia Park Racetrack demonstrates that the proposed site access improvements will be adequate to accommodate future peak hour traffic in a safe and efficient manner.

Andreas Heinrich, P.E., P.T.O.E.

Principal

AH:rh

Lr tion: Bucks County, PA Inc. section: Street / Race Track Date: Tuesday, June 10, 2003 Counter: ET / JT

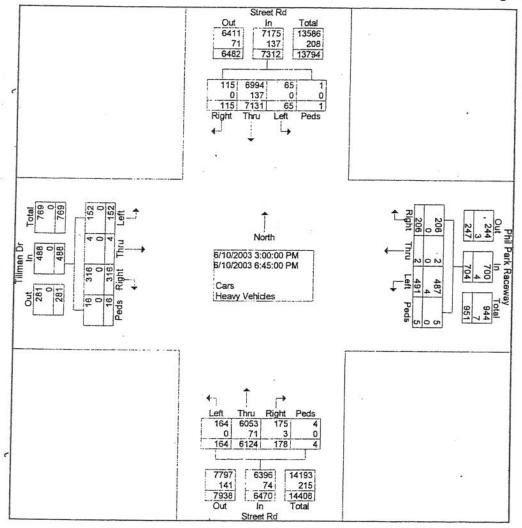
File Name: AF0610-3 Site Code : 00000000

Start Date : 06/10/200:

	T			Street	Rd				0	Sroups	Prin	ted- Ca	ırs - H	leavy '	Vehic	les			18	h	ag	e N	0	: 1	
	i	100-001	S	outhbo	ound			F	IIII Lai	K Race	eway		T		S	treet F	Rd				-				
Start Tim	0 1	eft	Thr	Rig	Ped	d Ap	D -	77	Thr i F	Rig F			4		No	orthbou	und				1 H	lman stbou	Dr		
			u	ht	1000000	s Tot		eft j	u '	ht r	Ped	App		eft	Thr	Rig	Ped	App		TT	hr	Rig	Ped	^	+
Facto		.0	1.0	1.0	1.0)	1.	0		-	1.0	Tota	-		u	ht	S	Tota	Left	1	u	ht	S	App Tota	
03:00 PA		4	354	2	(36				12	0	33			1.0	1.0	1.0		1.0	1	.0	1.0	1.0	Tota	Tota
03:15 PN		6	375	5	0	38	6 2	7		12	1	40			23	9	0	33	6		0	5	0	. 11	720
03:30 PN 03:45 PN		2	372	2	1	0,	7 3	1		22	2	55	1		63	17	0	386	_		0	5	O	7	739 819
		5	436	9	0	45	0 2	5 .		13	0	38			81	14	0	400	-		0	11	4	21	A 0.00000000000000000000000000000000000
Tota	1 1	7	153	18	1	157	3 10	4					+		13	13	1	440	6		0	7	1	14	853 942
			1		•	157	3 10	+	0 5	59	3	166	2	7 1	48	53	1	1561	20		0	20	-		942
04:00 PM	E 1	6	454										1		0			.001	1 20		U	28	5	53	3353
04:15 PM			451 434	4	0	461	-		0 2	3	0	79	1 1	1 35	0	10									1
04:30 PM			434 483	6	0	440	- T		1 1	4	1	37	,	0.0	11000	12 12	0	381	8	100	1	17	1	27	948
04:45 PM			444	5	0	494	1 00		0 5	2	0	141	16		_	7	0	404	6)	10	0	16	897
		-	181	5_	0	452	47		0 1	2	0	59	9		1000	13	0	471	10			26	1	37	1143
Total	15	5	2	20	0	1847	213		1 10	1	1			16				471	12	()	30	0	42	1024
			2					9	1 10	1	1	316	43	(c) (c) (d)	0	44	0	1727	36	1		83	2	122	
05:00 PM	1		515	6	0	522	1 50					16							l				~	122	4012
05:15 PM	7		158	9	0	474	56	(0	80	8	42	1	7	0	436	11	0		40	. 21		
·05:30 PM	6	5	34	9	0	549	21	(55	2	0	28	7	442	2	6	1	456	11	0		42	1	54	1092
05:45 PM	4		44 6	40	0	461	11	(1	48	15	364	1	11	1	391	18	0		37	3	51	1009
Total	18	4	95) () (0	11	11	400	2000	6	0	417	6	0		18 21	3	39	1027
Total	10		1	37	0	2006	128	0	38		1	167	41	162	2	30	_					21	0	27	916
							i.					.01	71	7		30	2	1700	46 -	0	11	8	7	171	4044
UC JO PM	3	4	72	7	0	482	21	0					190200											1	
· PM	. 5	50	9	11	0	525	8	0	3 2			24	21	369		12	0	402	19	0	2	2	0	44 1	
00.30 PM	3	44		14	0	458	11	1	2	. 0		10	10	337		8	0	355	6	1		5	1	41	949
06:45 PM	4	40	and the same of th	8	0	421	6	ó	1	0		14	12	318		4	1	345	8	2	1		1	24	933
Total	15	18	33	40	0					0		7	10	353	1	7	0	380	17	0	1		0	34	841
			1	40	U	1886	46	1	8	0		55	53	137	5	1	1	1482	50					-	842
0			_									1		7		•	•	1402	50	3	8	7	2	142	3565
Grand	65	71	3 1	15	. 1	7312	404	_	222			î		040				20		-				1	
Total	0.0	07				1312	491	2	206	5	100	704	164	612	17	8	4 E	470	152	4	241		40	!	1497
Apprch % Total %	0.9	97.	33		0.0		69.7	0.3	29.3	0.7			2.5	4				1		4	316	0	16	488	4
i Utal 70	0.4	47.	0 0	.8 (0.0	48.8	3.3	0.0	1.4	0.0		4.7		94.7 40.9	2.					8.0	64.8		.3		
									30000A(10)			(4.1	4U.9	1.3	2 0.	.0	43.2	1.0	0.0	2.1	0	.1	3.3	

Lr rtion: Bucks County, PA Inc. section: Street / Race Track Date: Tuesday, June 10, 2003 Counter: ET / JT

File Name: AF0610-3 Site Code : 00000000 Start Date : 06/10/2003

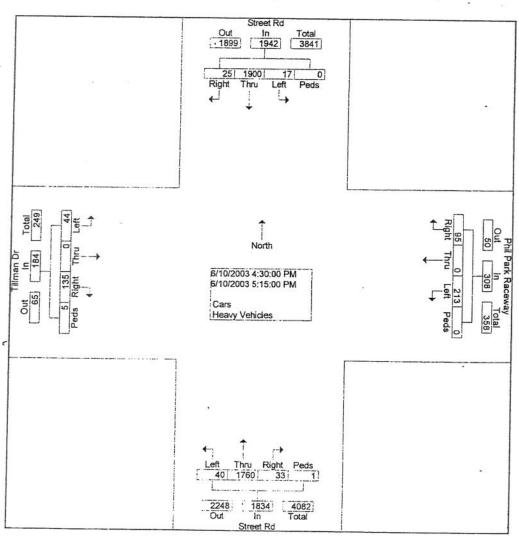


London: Bucks County, PA Inc., section: Street / Race Track Date: Tuesday, June 10, 2003

Counter: ET/JT

File Name : AF0610-3 Site Code : 00000000 Start Date : 06/10/2003

		S	Street outhbo	und				Park Ra Vestbou		***************************************			Street F					Tillman astbou			
Start Time	Left	u	Rig ht	s	Total	Left	Thr	Rig ht		App. Total	Left	Thr	Rig ht	Ped	App. Total	Left	Thr	Rig ht	Ped	App.	Int.
Peak Hour F	rom 0	3:00 PI	VI to 06	:45 PI	M - Peal	(1 of 1									TOTAL		u	111	S	Total	Total
Intersectio n	04:30	PM																			
Volume	17	190 0	25	0	1942	213	0	95	0	308	40	176	33	1	1834	44	0	135	5	184	4268
Percent	0.9	97.8	1.3	0.0		69.2	0.0	30.8	0.0		2.2	96.0	1.8	0.1		23.9	0.0	73.4	2.7		8
04:30 Volume Peak	6	483	5	0	494	89	0	52	0	141	16	448	7	0	471	10	0	26	1	37	1143
Factor										!			50								0.934
High Int.	05:00	PM				04:30	PM			i	04:30	PM				05:00	DМ			i	
Volume Peak	1	515	6	0	522	89	0	52	0	141	16	448	7	0	471	11	0	42	1	54	
Factor			•		0.930					0.546					0.973					0.852	



Lo ation: Bensalem Twp., Bucks Co. In...section: Street Rd / Phil Race Trac

Date: Saturday, July 19, 2003 Date: Saturday, July 19, 2003

Weather: Id

Groups Printed- Cars - Heavy Vehicles

File Name: MS0719-3 Site Code : 00000000 Start Date : 07/19/2003

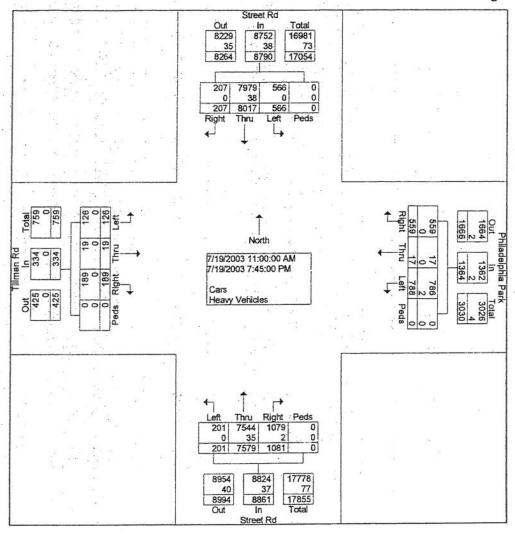
	11								Gro	ups Prin	ted- Ca	rs - He	eavy Ve	ehicles		N %			5			
	1		Stree				1	Ph	iladelph	ia Park		1		Stree	t Rd		1		Tillman	Rd		7
	-	TH	South				-	-	Westbo					Northb					Eastbou			-
Start Time	-		u t	nt	ed	App. Total	Left	Th	1		App Tota		ft TI	nr Rig		App Tota		Thr		Ped	App.	Int.
Factor	1.0				1.0	-12	1.0	1.0	1.0	1.0	4 9 1	1.		-	_		1.0	1.0	1.0	1.0	Total	Total
11:00 AM	23			3	0	374	24	2	2 28		54	-	5 27			351		2	2	0		705
11:15 AM	46			2	0	386	21	(19	0	40		4 29		_	356		1	4		6	785
11:30 AM	37	36	7 :	3.	0	407	29	(48	1	5 33			426		2	9	0	7	789
11:45 AM	73	348	3 1	1	0	422	22	C		7.	42	1	5 34		0.00	471	3	0	6	0	13	894
Total	179	140		9	0	1589	96	2		0	184	1.	12			1604	1	. 5	21	0	9 35	944 3412
		.90			1							1	- 8	5	89		1			Ü	00	0412
12:00 PM	55	352	2 7	,	0	414	28	1	13	0	42	1	24					0	10			
12:15 PM	.46				0	400	45	i		0	42	4	34			478	S 1 0 2023	3	5	. 0	12	946
12:30 PM	37	368			0	411	23	. 0		25000	62		364		100	454	8	1	. 4	. 0	13	929
12:45 PM	34	363			0	402	21			0	46	1 . 5				417	0	1	8	0	9	883
		143		-	1 1		21	1	17	0	39	1 5			0	403	3	1_	9	0	13	857
Total	172	3			0	1627	117	3	69	0	189	27	, 138	344	0	1752	15	6	26	0	47	3615
01:00 PM	33	365	4		0	402	. 22		-		14		: 10	5	500						71	
01:15 PM	33	342			0	377	33	1	20	0.	54	6		21000	.0	386	6	0	11	0	17	859
01:30 PM	32	357			0	398	25	0	24	0	49	12			0	391	3	1	6	0	10	827
01:45 PM	32	343	7				33	0	19	0	52	5			0	394	4	1	6	0	11	855
01.43 141	-	140			0	382	24	0	18	0	42	7		40	. 0	383	2	0	6	0	8	815
Total	130	7	22	,	0	1559	115	1	81	.0	197	30	131 8	206	0	1554	15	2	29	0	46	3356
*** ~ PEAK **	*	2							+17												,	
		224		a,			***															
05.00 PM	.7	361	. 11		0	379	95	3	59	0	157	9	321	18	0	348	4	0	4	0	8 !	892
05:15 PM	4	328	13		0	345	52	6	28	0	86	11	304	27	0	342	8	1	11	0	20	793
05:30 PM	8.	317	10		0	335	56	0	49	0	105	9	308	6	0	323	8	0	11	Ō	19	782
05:45 PM	8	355	14	.(0	377	46	0	39	0	85	10	367	18	. 0	395	10	2	13	Ō	25	882
Total	27	136	48	(0 -	1436	249	9	175	0	433	39	130	60		1400	20		-			
		1		- ,	•	1400	243	3	173	U	433	39	0	69	0 .	1408	30	3	39	0	72	3349
06:00 PM	10	311	10	()) : .	331	69	2	51	0	122	3	316	13	Ö	332	7			0	40	
06:15 PM	6	352	9	(367	30	0	33	0	63	9	311	15	0		7	1	4	0	12	797
06:30 PM	6	324	16		300	346	33	0	17	0	50	12	282		0.555	335	7	0	11	0	18	783
06:45 PM	7	297	11	C		315	22	0	17	0	39			15	0	309	5	0	13	0	18	723
		128						- 0	17		39	16	311	26	0	353	4	_1_	10	0	15	722
Total	29	4	46	C) 1	1359	154	2	118	0	274	40	122	69	0	1329	23	2	38	0	63	3025
07:00 PM	10	294	11	0)	315	24	0	15	0	39	16	268	17	0	301	8	0	5	0	13 i	666
07:15 PM	6	291	12	0)	309	7	0	3	0	10	7	295	16	0	318	6	0	15	0.00		668
07:30 PM	3	273	20	0)	296	14	0	6	0	20	10	293	14	0	317	14	1	8	0	21	658
07:45 PM	10	273	17	0)	300	12	0	6	0	18	13	256	9	0	2007 200 300		1000	67	0	23	656
Total	29	113											111			278	6	0	8	0	14	610
Total	29	1	60	0	1	220	57	0	30	0	87	46	2	56	0	1214	34	1	36	0	71	2592
Grand	566	801	207	_		705	700			10	1		757	109		1						4004
Total	300	801 7	207	0	8	790	788	17	559	0	1364	201	757 9	108 1	0	8861	126	19	189	0	334	1934
Apprch %	6.4		2.4	0.0		5	7.8	1.2	410	0.0		22				1						9
Total %	2.9		1.1	0.0		15.4		0.1	29	0.0	7.0	1.0	85.5		0.0			5.7 5		0.0	4 -	
			v cvc/AT		11.00				2.0	5.0	1.0	1.0	33.2	5.6	0.0	45.8	U.7	0.1	1.0	0.0	1.7	

Lc tion: Bensalem Twp., Bucks Co. In., section: Street Rd / Phil Race Trac

Date: Saturday, July 19, 2003

Weather: Id

File Name : MS0719-3 Site Code : 00000000 Start Date : 07/19/2003



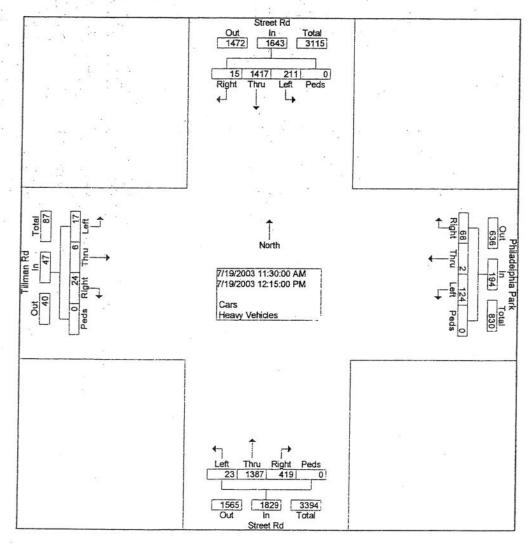
Lr tion: Bensalem Twp., Bucks Co. Inc., section: Street Rd / Phil Race Trac

Date: Saturday, July 19, 2003

Weather: Id

File Name: MS0719-3 Site Code: 00000000 Start Date: 07/19/2003

			Street Fouthbo	und				adelphia Vestbou					Street F					Fillman Eastbou			
Start Time	Left	Thr	Rig ht	s	App. Total	Left	Thr	Rig	Ped s	App. Total	Left	Thr u	Rig ht	Ped	App. Total	Left	Thr	Rig	Ped	App. Total	Int. Total
Peak Hour F	rom 11	:00 AN	1 to 03	:30 PA	1 - Peak	(1 of 1		,						:						Total	100
Intersectio n	11:30	MA											\$0 \$2								i
Volume	211	141	15	0	1643	124	2	68	0	194	23	138	419	0	1829	17	6	24	0	47	3713
Percent	12.8	86.2	0.9	0.0	. 6	63.9	1.0	35.1	0.0		1.3	75.8	22:9	0.0		36.2	12.8	51.1	0.0		
Volume	55	352	7	0	414	28	1	13	0	42	. 8	344	126	0	478	4	3	5	0	12	946
Peak Factor								XI U							-						0.981
High Int.	11:45	AM	10			12:15	PM	2.0		- 1	12:00	PM				11:30	AM				
Volume Peak	73	348	1	0	422	45	. 1	16	O	62	. 8	344	126	0	478	. 2	2	9	0	13	
Factor				61	0.973					0.782					0.957					0.904	



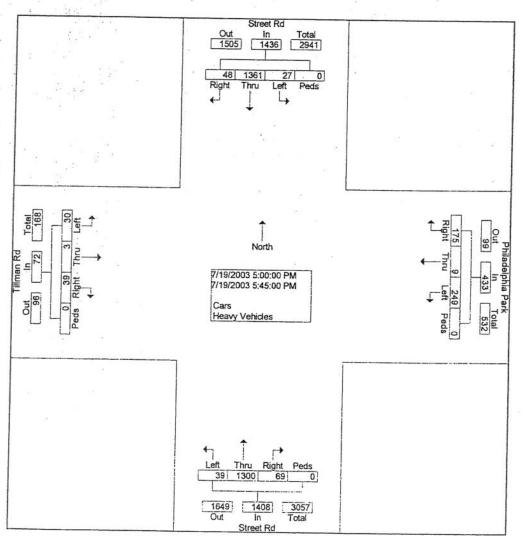
Lantion: Bensalem Twp., Bucks Co. Ir., section: Street Rd / Phil Race Trac

Date: Saturday, July 19, 2003

Weather: Id

File Name : MS0719-3 Site Code : 00000000 Start Date : 07/19/2003

	11	S	Street outhbo	und				adelphi Vestbo			Γ		Street F			Ī		Tillman Eastboo			
Start Time	Left	u	Rig	· s	App. Total	Left	Thr	Rig	-	App. Total	Left	The	Rig	Ped	App. Total	Left	Thr	Rig	Ped	App.	_Int.
Peak Hour F	rom 03	3:45 PN	1 to 07	:45 PN	1 - Peak	1 of 1				1000	-		iic	5	Total	11	u	ht	S	Total	Total
Intersectio	05:00	PM		- 1		1			85		1 .										İ
Volume	27	136	48	0	1436	249	9	175	0	433	39	130	69	0	1408	30	3	39	0	72	3349
Percent	1.9	94.8	3.3	0.0		57.5	2.1	40.4	0.0		2.8	92.3	4.9	0.0		41.7	4.2	54.2	0.0		0043
05:00 Volume	7	361	11	0	379	95	3	59	0	157	9	321	18	0	348	4	0	4	0.0	8	892
Peak Factor				- 1								80									0.939
	05:00	PM.	8			05:00	PM	4	14		05:45	PM				05:45	D&4				
Volume Peak	7	361	11	0	379	95	3	59	0	157	10	367	18	0	395	10	2	13	0	25	
Factor					0.947			÷		0.689					0.891					0.720	



Location: Bucks County, PA
Ir section: Street Rd / Applebees
Date: Tuesday, June 10, 2003

Counter: RZ

File Name: AF0610-4 Site Code : 00000000

Start Date : 06/10/2003

r							Groups	Printed-	Cars - He	eavy Vehi	des			Pag	ge No	: 1	
ļ.				Street R Southbou					Applebee Westbou	es	0.00			Street Ro		· ·	1
	Start Time	Left		Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left		Right	Peds	Арр.	Int.
L	Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	Total	4.0	10			Total	Total
	03:00 PM	4	. 377	0	0	381	7	0.0	4	0.01	11	1.0	1.0	1.0	1.0		
	03:15 PM	3	362	0	0	365	4	0	6	1	25000	0	359	4	0	363	755
	03:30 PM	4	387	0	0	391	2	Ö	3	Ó	11	0	396	2	0	398	774
	03:45 PM	8	421	0	Ö	429	3	0	3	1	5	0	419	6	0	425	821
	Total	19	1547	0	0	1566	16	0	16		7	0	436	- 5	0	441	877
						1500	10	U	10	2	34	0	1610	17	0	1627	3227
	04:00 PM	1	448	0	0	. 449	13	0	2	- 1	4 10 1		200000				
	04:15 PM	2	447	0	ő	449	6	0	3	1	17	0	396	8	0	404	870
	04:30 PM	5	475	0	0	480	11	0	5	1	12	0	410	8	0	418	879
	04:45 PM	5	452	0	0	457		0	3	0	14	0	527	13	0	540	1034
	Total	13	1822	0	0		<u>11</u>	0	0	0	11	0	480	11	0	491	959
			1022	. 0	U	1835	41	0	11	2	54	0	1813	40	0	1853	3742
	05:00 PM	2	504	0	0	FOC !	00	_									
	05:15 PM	5	451	0	0	506	22	0	3	0	25	0	453	11	0	464	995
	05:30 PM	6	523	0	0.70	456	16	0	6	0	22	0	464	10	0	474	952
	05:45 PM	7	457	-	0	529	. 19	0	8	1	28	0	405	5	0	410	967
	Total	20	1935	0	0	464	9	0	1	0	10	0	416	7	0	423	897
	rotar	20	1933	U	0	1955	66	0	18	1	85	0	1738	33	0	1771	3811
	06:00 PM	9	471	0	•	400	12	100	988								
	06:15 PM	3	514	0	0	480	13	0	8	0	21	0	377	15	0	392	893
	06:30 PM	2	465	0	0	517	10	0	5	0	15	0	350	10	0	360	892
	06:45 PM	5		-	0	467	4	0	5	0	9	0	341	5	0	346	822
	Total	19	435 1885	0	0	440	4	0	1_	0	5	0	386	4	0	390	835
	IOIAI	19	1000	0	0	1904	31	0	19	0	50	0	1454	34	0	1488	3442
	Grand Total	71	7400				2500000								- 5		0112
			7189	0	0	7260	154	0	64	5	223	0	6615	124	0	6739	14222
	Approh %	1.0	99.0	0.0	0.0		69.1	0.0	28.7	2.2		0.0	98.2	1.8	0.0	5.00	.7666
	Total %	0.5	50.5	0.0	0.0	51.0	1.1 .	0.0	0.5	0.0	1.6	0.0	46.5	0.9	0.0	47.4	
														0.0	0.0	71.7	

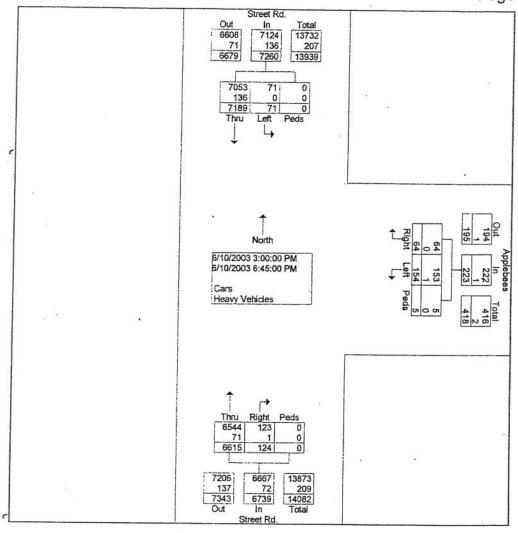
Lr tion: Bucks County, PA

Inc. section: Street Rd / Applebees

Date: Tuesday, June 10, 2003

Counter: RZ

File Name : AF0610-4 Site Code : 00000000 Start Date : 06/10/2003



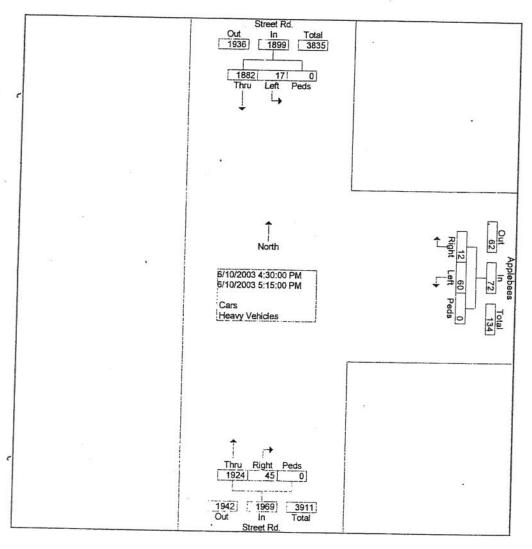
L' rtion: Bucks County, PA

Inc. section: Street Rd / Applebees Date: Tuesday, June 10, 2003 Counter: RZ

File Name: AF0610-4 · Site Code : 00000000

Start Date : 06/10/2003

	ļ		Street Ro Southbou	750				Applebe					Street Ro			
Start Time		Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App.	Int
Peak Hour From	03:00 P	M to 06:4	45 PM -	Peak 1 c	f 1					Total					Total	Total
Intersection						İ					ı					
Volume	17	1882	0	0	1899	60	0	12	0	72	0	1924	45	0	1000	
Percent	0.9	99.1	0.0	0.0		83.3	0.0	16.7	0.0		0.0	97.7	2.3	0 0	1969	3940
04:30 Volume Peak Factor	5	475	0	0	480	11	0	3	0	14	0.0	527	13	0.0	540	1034
High Int.	05:00 PI	CONTROL OF THE PARTY OF THE PAR				05:00 PM					04:30 PI	M				0.953
Volume Peak Factor	2	504	0	0	506 0.938	22	0	3	0	25 0.720	0	527	13	0	540 0.912	



Lontion: Bensalem Twp., Bucks Co.
In., section: Street Rd @ Applebees Drvw
Date: Saturday, July 19, 2003
Weather: wc

•

File Name: MS0719-4 Site Code : 00000000

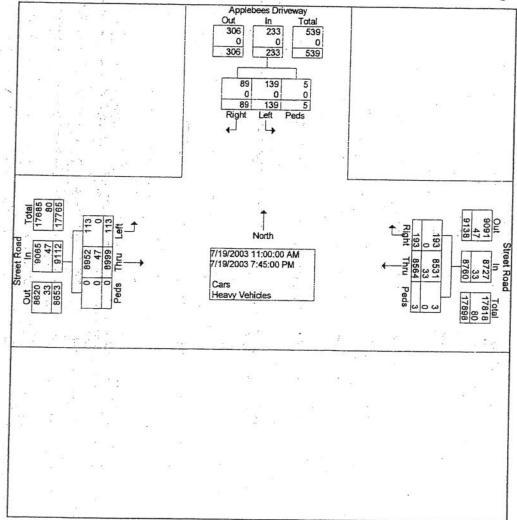
Start Date : 07/19/2003

						Group	s Printed	- Cars - F	leavy Vel	hicles			i a	ge No	. 1	
		Ap	Southboo	ind ind	17			Street R	oad		T		Street Ro			7
Start Time				Peds	App. Total	Lef	t . Thru		1.	App.		t Thru	Right	Peds	Арр.	Int
Factor				1.0		1.0	1.0	1.0	1.0	Total	1.0	10			Total	Tota
11:00 AM	+400000 TOTAL			0	. 2	0			0	304	1 3		1.0	1.0		
11:15 AM				. 1	5	. 0			0	313	0	C.C. 1967 (170.07)	0	0	364	670
11:30 AM		.0		0	9	0		4	. 0	367	6		0	0	389	707
11:45 AM	3			0	. 6	0		. 9	0	382	1		.0	0	414	790
Total	14	. 0	7	. 1	22	0		24	0.	1366	14	The second second second	0	0	419	807
12:00 PM	47									1300	1 14	15/2	0	0	1586	2974
	17	. 0	5		23	- 0	390	5	Ö	395	. 5	424	0	0		
12:15 PM	5	. 0	3	0	. 8	- 0	394	3	. 0	397	. 2		0	0	429	847
12:30 PM	1.		2	. 0	3	0	392	5	0	397	4		0	0.	427	832
12:45 PM	7.	0	3	0	10	0	369	10	.0	379	2	100	0	0	437	837
Total	30	.0	13	. 1	44	. 0	1545	23	0	1568	-13		0	0	395	784
01:00 PM	5	103								1000	1 13	1075	U	0	1688	3300
		.0	2	0	7 j	-0	328	3	0	331	2	416	0	_		
01:15 PM	.1	0	.3	. 0	4	0	383	. 3	. 0	386	2	392	0	0	418	756
01:30 PM	6	. 0	.0	. 1	7	.0	384	5	. 1	390	. 5	400	0	0	394	784
01:45 PM	7	. 0	2	. 0	9	.0	360	. 7	. 0	367	- 3	387	0	0	405	802
Total	19	0	7.	• 1	27	0	1455	. 18	1	1474	12	1595	0	0	390	766
*** BREAK ***		$\Xi_{\mathbf{e}}$	•	-	84							1000		U	1607	3108
05:00 PM	5			2						1.45						
15:15 PM		0	2	0	. 7	0	401	10	. 0	411	7	384	0	0	201 i	000
5:30 PM	3	0	4	1	8	0	347	8	1	356	10	367	0	0	391	809
05:45 PM	- 4 - 5	.0	6	0	10	0	371	8	0	379	7	334	0	0	0.00 (0.000.000 (0.000)	741
Total	17	0	4	0	9	0	411	17	0	428	8	391	0	0	341	730
1 Olai	17	0	16	1	34	0	1530	43	1	1574	32	1476	0	0	1508	836 3116
06:00 PM	11	0	1	0	40.1	-							•	0	1500	3116
06:15 PM	6	. 0	5	0	12	0	395	- 12	0	407	3	334	0	0	337	756
06:30 PM	4	0	3	1	11	0	363	: 12	0	375	4	384	0	0	388	774
06:45 PM	8	.0	10	Ó	8	0	333	. 7	1	341	10	355	0	0	365	714
Total	29	0	19	. 1	18	0	353	20	0	373	. 1	322	0	0	323	714
			13		49	0	1444	51	1	1496	18	1395	0	0	1413	2958
07:00 PM	8	.0	- 3	0	44!			-							1	2000
07:15 PM	8	0	12	0	11	0	308	6	0	314	2	319	0	0	321	646
07:30 PM	4	Ö	6	0	20	0	342	8	0	350	6	331	0	0	337	707
07:45 PM	10	0	6	0	10 16	0	322	13	0	335	12	328	0	0	340	685
Total	30	0	27	0	57	0	276	7	0	283	4	308	0	0	312	611
			21	U	5/	U	1248	34	0	1282	24	1286	0	0	1310	2649
Grand Total	139	0	89	5	233	0	8564	193	3	8760	113	9000	•			
	59.7	0.0	38.2	2.1		0.0	97.8	2.2	0.0	0700		8999	0	0	9112	18105
Total %	0.8	0.0	0.5	0.0	1.3	0.0	47.3	1.1	0.0	48.4	1.2	98.8	0.0	0.0		
						2.0	.7.0	1.1	0.0	40.4	0.6	49.7	0.0	0.0	50.3	

L' tion: Bensalem Twp., Bucks Co.

Inc. section: Street Rd @ Applebees Drvw Date: Saturday, July 19, 2003
Weather: wc

File Name: MS0719-4 Site Code : 00000000 Start Date : 07/19/2003



Lr 'tion: Bensalem Twp., Bucks Co.

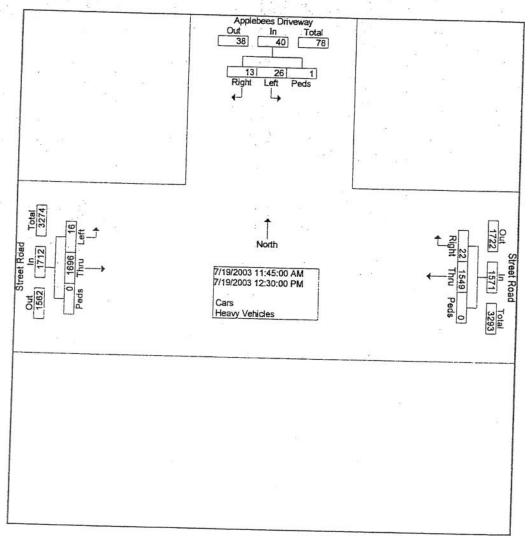
In. .. section: Street Rd @ Applebees Drvw

Date: Saturday, July 19, 2003

Weather: wc

File Name : MS0719-2 Site Code : 00000000 Start Date : 07/19/200

			ebees Dr Southbou					Street Ro Westbour			T		Street Ro]
Start Time	Left	Thru	Right	Peds	App.	Left	Thru	Right	Peds	App.	1.0		Eastboun	1	Ann	
eak Hour From	11:00 AM	to 03:	30 PM -	Peak 1 o	Total f 1	<u>i </u>		rugin	reus	Total		Thru	Right	Peds	App. Total	Int Tota
Intersection	11:45 AN	1	1		8 10	3							55			
Volume Percent	26 65.0	0.0	13 32.5	1	40		1549	22	0	1571	16	1696	0	n	1740	
12:00 Volume	17	0.0	52.5	2.5	23	0.0	98.6 390	1.4	0.0	205	0.9	99.1	0.0	0.0	1712	332
Peak Factor			- 1					5	U	395	5	424	0	0	429	847
High Int.	12:00 PM					12:15 PM	8 22 7	1	4				74			0.981
Volume	17	0	5	. 1	23	0	394		`^	207	12:30 PI	2000000000	7.		1	0.001
Peak Factor				V 5.4	0.435	·	004		.0.	397 0.989	4	433	0	0	437 0.979	



Lr rtion: Bensalem Twp., Bucks Co.

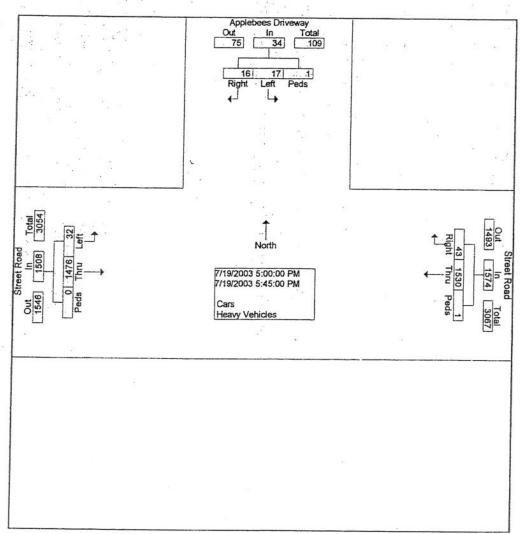
In. section: Street Rd @ Applebees Drvw Date: Saturday, July 19, 2003

Weather: wc

File Name: MS0719-4 Site Code : 00000000

Start Date : 07/19/2003

			ebees Dr Southbou					Street Ro Westbou					Street Ro]
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From	03:45 PM	to 07:	45 PM -	Peak 1 o	f 1						1				Total	Total
			1			I		1.			1					r .
Volume	17	.0	16	-1	34	0	1530	43	1	1574	32	1476	0	0	1508	3116
Percent	50.0	0.0	47.1	2.9		0.0	97.2	2.7	0.1		2.1	97.9	0.0	0.0	1300	3116
05:45 Volume	5	. 0	4	0	9	0	411	17	0	428	8	391	0.0	0.0	399	836
Peak Factor	. 9		50.7						W				٠.	Ü	000	10000000-0000
High Int.	05:30 PM		7.	×		05:45 PM	Λ	120			05:45 PI	M.				0.932
Volume	4	.0	- 6	0	10	. 0	411	- 17	. 0	428	8	391	0	0	399	
Peak Factor	-51 30	197			0.850					0.919		001	-	·	0.945	

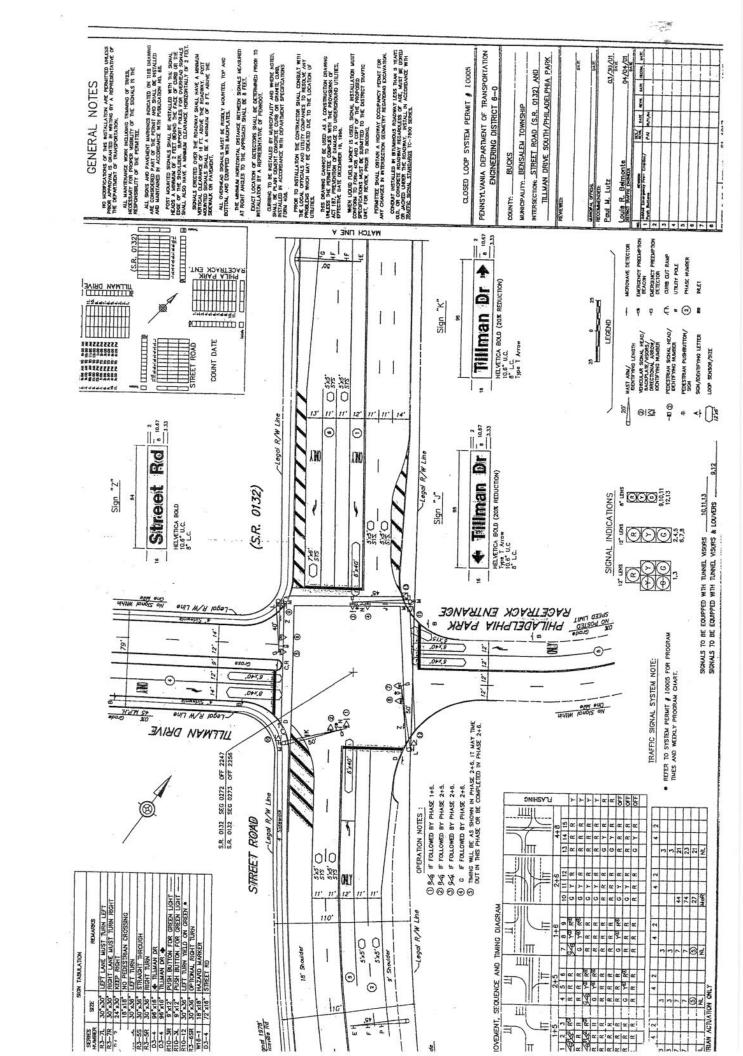


L tion: Bensalem Twp., Bucks Co. Increetion: Street Rd @ Applebees Drvw Date: Saturday, July 19, 2003 Weather: wc

File Name: MS0719-4 Site Code : 00000000

Start Date : 07/19/2003

1		T	A 1				G	roups Print	ed- Hear	vy Vehicle	s				,		
1			App	lebees D	riveway				Street R	oad				Street Ro			
1	- 133	+		Southbou	und				Westboo					Eastbou			
- 1	Start Time	Left	Thru	Right	Peds	App.	Lef	t Thru	Diaht	[D-4-]	Арр.		1		1		
1	Factor	1.0	1.0	- 34.		Total			Right	Peds	Total	Left	Thru	Right	Peds	App.	Int.
L	11:00 AM	0	0.0	1.0	1.0		1.0		1.0	1.0		1.0	1.0	1.0	1.0	Total	Total
	11:15 AM	. 0		0	. 0	. 0			. 0	. 0	2	0	4	0	0		
	11:30 AM	. 0	.0	0	0	0			. 0	0	3	O	6	0	0	4	6
	11:45 AM	. 0		0	0	0	1		0	. 0	1	0	3	0	0	6	9
77	Total	0	0	.0	. 0	0	0		0	. 0	2	Ö	3	0	0	3	4
			0	0	0	0	0	8	. 0	. 0	8	0	16	0	0	3 16	<u>5</u> 24
	12:00 PM	. 0	0	.0.	0	0	0	4									
	12:15 PM	0	. 0	0	0	0	0		. 0	. 0	4	0	3	0	0	3	7
	12:30 PM	0	0	0	O	0	0		100	0	0	0	.2	0	0	2	2
	12:45 PM	0	0	0	. 0	0	0		0	0.	3	0	3	. 0	0	3	6
	Total	0	0	0	0	0	0		0	. 0	3	0	1	. 0	0	1	4
	1.4	(2)	9 (N		Ü	0 ;	0	10	0	0	10	0	9	. 0	0	9	19
	01:00 PM	0	. 0	0.	0		•			\$						9	10
	01:15 PM	0	Ö	0	0	0	0	2	. 0	. 0	2	0	2	0	0	2	4
	01:30 PM	0	.0	0	0	0	0	4	. 0	0	4	0	2	0	0	2	6
	01:45 PM	0	0	. 0	. 0	0	0	1	. 0	0	1	0	0	0	0	ō	1
_	Total	0	0	0	.0	0	. 0	3	0	0	3	0	. 1	0	0	1	4
			V	U	.0	0	0	10	. 0	0	10	0	5	0	0	5	15
***	BREAK ***							@	•							- 1	10
	05:15 PM	0	. 0	•	2.												
20	⁻5:30 PM	0		0	0	0	0	0	0	0	0	0	2	0	0	2	0
	5:45 PM	0	0	.0	0	0	0	1	0	0	1	0	3	0	0	3	2
-	Total	0	0	0	. 0	0	. 0	0	0	0	.0	0	3	0	Ö	3	4
	40.7	2,50		0	. 0	0 !	0	1	0	0	1	0	8	0	0	8	9
	06:00 PM	0 -	0	0	0	0;	0	2	. 0	0	. 21	•	•				
	06:15 PM	0	0	0	. 0	0	Ö	ō	0	0	0	0	3	0	0	3	5 1
	_ 1,7 3 1 1						Ü	U	U	. 0	U	U	1	0	0	1	1
BR	EAK ***			**					59							***	
-	06:45 PM	0	0	0	0	0	0	1	0	0	4.1	•					
	Total	0	0	0	0	. 0	0	3	0	0	3	0	<u>1</u>	0	0	5	2 8
	07:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	000 I	
BR	EAK ***									1 	0 1	U		U	U	1	1
	07:30 PM	0	0	0	0	0.1											
	07:45 PM	0	Ö	0		0	0	1	0	0	1	0	1	0	0	1	2
-	Total	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
			U	U	0	0	0	1	0	0	1	0	4	0	0	4	5
	Grand Total	0	0	0	0	o i	0	33	0	0	20.1					New York Control of the Control of t	
	Apprch %	0.0	0.0	0.0	0.0			100.0	0.0	0.0	33	0	47	0	0	47	80
	Total %	0.0	0.0	0.0	0.0	0.0	0.0	41.2	0.0	0.0			0.00	0.0	0.0		
						[0.0	11.2	0.0	0.0	41.2	0.0	58.8	0.0	0.0	58.8	



Ш EMERGENCY PRE-EMPTION PHASING MOVEMENT, SEQUENCE AND TIMING DIAGRAM \exists Ш

IF PRE-EMPTION EQUIPMENT HAS ENCORNG CAPABILITES FOR VEHICLE DENTIFICATION, IT IS RECOMMENDED TO HAVE THE ZERO '00" FEATURE ON TO GYE UNCOCOLD EMITTERS THE ABILITY TO ACTIVATE THE EMERGENCY PRE-EMPTION.

SIGNAL TO INDICATE G WHEN RETURNING TO NORMAL DPERATION. SIGNAL TO INDICATE G/F WHEN RETURNING TO NORMAL OPERATION.

MELLER TO BE (SKRIPPED WITH DAGRECHCY PRE-EMPTON FOR THE BOUND AND WESTBOUND APPROACHES OF STREET ROOM (S.R. 0.12) AND NORTHBEQUING APPROACHES OF STREET ROOM (S.R. 0.12) AND STREET ROOM OF PREPACACHES OF STREET ROOM OF APPROACHES AND SCRUPPED AND STREET ROOM OF OPERATION. RGENCY PRE-EMPTION NOTES

GENCY TEACHY SHALL CONSIST OF A FLASHING WHITE FLOOD LIGHT, SHALL FLASH WIEW THE ELEGENCY VEHICLE HAS CONTROL OF THE SECTION FOR THE APPROPERATE APPROACH.

SGNALS, WHEN ACTIVATED BY AN ENERGENCY VEHICLE, SHALL TERMINATE SEEN INCHANDEN IMPEDATELY, FOLLOWED BY THE COMPLETE YELLOW AND CLEMANCE INTERVALS ACCORDINGLY, FOLLOWED BY THE GREEN INTERVAL THE PRE-CHIPTED PHASE.

E SIGNALS ARE IN EITHER YELLOW OR RED CLEARANCE, THE CLEARANCE IS SAULT BE COMPLETED BEFORE THE GREEN INTERVAL OF THE PRE-EMPTION ET COCKING.

E SIGNALS ARE PLASHING WHEN ACTIVATED BY AN EMERGENCY VEHICLE ALL U.S. SHALL REMAIN PLASHING.

OTIONAL PRE-EMPTION PHASES ARE ACTIVATED WHILE IN PRE-EMPTION, THE EMPTION PHASE, SHALL THE OUT BEFORE PROCEEDING TO THE NEXT COMPLETION OF PRE-EMPTION PHASE 2, 4, 6 OR 8, IN RETURNING TO IAL OPERATION PHASE 2+6 INTERVAL 10 SHALL FOLLOW,

IERGENCY PRE-EMPTION, NO PRIORITY SHALL BE ESTABUSHED, EMPTION SHALL BE A "FIRST COME, FIRST SERVED" OPERATION

THE LOCATIONS OF THE PRE-EMPTION DETECTORS MAY DIFFER FROM THE TRIVES EMPLOYING NATIONAL AS THE DETECTORS MAY NEED IN ELECANDE AND/ON ADJUSTED TO PROPAGE ACCEPTABLE OPERATION AS TO APPROPITALE BY DEPARTMENT PERSONNEL.

E SIGNAL, INAS IEEN ACTUATED BY A PEDESTRAN PUSH BUTTON, AND THE LL ST PRE-LED PED. IN SPECIAL BY SELVE PED PED SELVEN PED. SELVE PER PED SELVEN PED GEAR (HAND). THIS INTERVAL, SHALL THE OUT FOLLOWED IE APPOPRARIE SELVETIVE CIECARNICES, BEFORE COING INTO EMERGENCY BAILD.

CLegal R/W Line 45 M.P.H.	Verloble Shoulder		The state of the s		ONLY COLY	The state of the s
		1				

CLOSED LOOP SYSTEM PERMIT # 10005

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION ENGINEERING DISTRICT 6-0

BUCKS COUNTY

TILLMAN DRIVE SOUTH/PHILADELPHIA PARK INTERSECTION: STREET ROAD (S.R. 0132) AND MUNICIPALITY, BENSALEM TOWNSHIP

DAR

03/30/01 SINCT TAVIC DISMONT Poul M. Lutz RECOMMENDED:

04/04/01 MEVR. DATE

> EMÉRGENCY PREEMPTION BEAGON EMERGENCY PREDAPTION DETECTOR

MICROWAVE DETECTOR

CURB CUT RAMP UTILITY POLE PHASE NUMBER

PEDESTRIAN SIGNAL HEAD/ IDENTIFYING MUMBER PEDESTRUM PUSHBUTTON, SIGN SIGN/NOENTRY THIS LETTER LOOP SENSOR/SIZE

8

The state of the s	ر	•	F 4	· •	-	*	•	t			ī	6/6/200
Movemen	. Ei	L PR	I EB	R AVB	LiseWest	WEE	N STOR				*	*
Lane Configurations		ሻ 💠	•	7	7 † \$			NE	NBR	SBI	SEA	SB
Ideal Flow (vphpl)	190	0 1900		0 190	1900	1900	4000	4	"		4	
Lane Width	1	2 1	1 1		The second state of the contract of the contra	14	1991 - 6 11 8 49 6 6			1900	1900	190
Grade (%)		1%			1%	14	12			12	12	
Total Lost time (s)	3.		3.0	3.0			*	0%			0%	
Lane Util. Factor	1.00	0.95			the same of the sa		out in the	3.0			3.0	3.
Frt	1.00	1.00				alak di t		1.00	1.00		1.00	
Flt Protected	0.95	1.00		·//		araki wal	didhir ak	1.00	0.85		1.00	0.8
Satd. Flow (prot)	1796	3404		The second second second	· 100 年 日本 日本 日本 日本 日本 日本 日本 日本 日本 日本 日本 日本 日本	V. P. 18		0.95	1.00	- 1-18KE	0.95	1.0
Flt Permitted	0.05	1.00	1.00			alle tantos	86 garanta (14. 174. s.)	1805	1723		1805	161
Satd. Flow (perm)	100	3404	1660	6 THE CONTRACTOR AS TO SERVICE AS THE PARTY OF THE PARTY	3427			0.95	1.00	125710	0.95	1.00
Volume (vph)	17	1900	25	-		2017	South Littles in To	1805	1723		1805	1615
Peak-hour factor, PHF	0.93		0.93	0.97	1760	33	44	0	135	213	-0	95
Adj. Flow (vph)	18	2043	27	41	0.97	0.97	0.85	0.85	0.85	0.55	0.55	0.55
RTOR Reduction (vph)	0	0	9		1814	34	52	0	159	387	0	173
Lane Group Flow (vph)	18		18	0	1	0	0	0	42	0	0	48
Heavy Vehicles (%)	0%	2%	0%	41	1847	∘0	0	52	117	o .	387	125
Turn Type	pm+pt	270		0%	1%	3%	0%	0%	0%	0%	0%	0%
Protected Phases	5 5	2	Perm	pm+pt			Perm	W. 13		Perm	0 70	
Permitted Phases	2	470 0	is the same	1	6			8	or was the sp			Perm
Actuated Green, G (s)	73.8	72.6	2	6			8		8	4	4 2010/2010	davata kara
ffective Green, g (s)	79.8	75.6	72.6	77.8	74.6		11. 11. 10.42	26.2	26.2		26.2	4
Actuated g/C Ratio	0.66	1. March 11 - 10 - 1	75.6	83.8	77.6			29.2	29.2	DESMERALE	20.2 29.2	26.2
Clearance Time (s)	6.0	0.63	0.63	0.70	0.65		A TORRES	0.24	0.24		CONTRACTOR OF THE PARTY OF	29.2
/ehicle Extension (s)	3.0	6.0	6.0	6.0	6.0		i Bala	6.0	6.0	Harana ya	0.24 6.0	0.24
ane Grp Cap (vph)	126	3.0	3.0	3.0	3.0			3.0	3.0		3.0	6.0
/s Ratio Prot	0.01	2145	1046	156	2216			439	419	No Winds		3.0
/s Ratio Perm		c0.60	Ada and a	c0.01	0.54	and and a College	Acres Co. militarile				439	393
/c Ratio	0.09	200	0.02	0.17		Mestile.	, i (14)	0.03	0.09	- College	0.04	10 M
niform Delay, d1	0.14	0.95	0.02	0.26	0.83		2.01414.2	0.12	0.28	P. 18		0.11
rogression Factor	15.8	20.5	8.3	24.4	16.2	and Market		35.4	36.9		0.88	0.32
cremental Delay, d2	1.00	1.00	1.00	1.00	1.00	- Cur - Care - Cur + Ca	a sin a ren niñ dié	1.00	1.00	A		37.2
elay (s)	0.5	11.1	0.0	0.9	3.9					official actions	1.00	1.00
evel of Service	16.4	31.6	8.3	25.3	20.1			35.5	0.4 37.2	37 Jan 199	18.3	
pproach Delay (s)	В		Α	C	∴c	March Ch	10 marks 14 16 16 16	D) Sevenatives	S. Mr. Rep. A. P. Inc. S. American	37.7
oproach LOS	on a part	31.2			20.2			36.8	. 	A Surfee		D
2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2		С			⊕ C			D	Parator de a	endere teres	4.5	Aranonie
iersedion Summary		100								articionic	D	
CM Average Control De	ay		29.8	HO	M Level	of C						
CM Volume to Capacity	ratio		0.92	THE TOTAL	in revel	oi selvi	ce		C		対が海洋	1
tuated Cycle Length (s)			20.0	Sim	n of loof	lime ver	gt ofpi.	State of the		2.500	1.000	
ersection Capacity Utiliz	ation		.7%	ICI	n of lost Level of	ume (s)	AS EASY		12.0	MASS.		
alysis Period (min)	turi e e		15	100			9 		E		THE PERSON NAMED IN	0.30.035

	•	→	*	1	—	•	1	†	1	1	+	1
Lane Group	EBL	(i i Bij	EBR	WBL	AVET	WBR	NIN.	Nens	en bir	188 E	Maria Ta	SER
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	a de la comp	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min	C-Min	None	C-Min	h	None		None	None		None
Walk Time (s)							1940 2 700 1	SEAPER LAND			Notice	ANOHE
Flash Dont Walk (s)	S			Lighting	ing", Tilly	X II isa	(9) (G. 18)	5.15.16	t Ar Line (· · · · · · · · · · · · · · · · · · ·	risaria.	Bishing March
Pedestrian Calls (#/hr)	W. C. S. 181	1.00	110000000000000000000000000000000000000	the state of the state of	and or are	nes estelá			(5) 6 F. F. F. F. F. F. F. F. F. F. F. F. F.			
Act Effct Green (s)	81.7	76.9	76.9	84.0	81.2	M	জ্বা নান্ত্ৰালয় বিশ্বা নান্ত্ৰালয়	29.2	29.2	e a distribution	29.2	29.2
Actuated g/C Ratio	0.68	0.64	0.64	0.70	0.68		IV Sizine	0.24	0.24	12.00	0.24	0.24
v/c Ratio	0.11	0.94	0.03	0.24	0.80	J. 150 SA	gg (PTT Sign	0.12	0.35	-1105	0.88	0.24
Uniform Delay, d1	5.3	20.5	0.9	5.3	16.2		L'11 - 1 / / /	35.3	24.0		43.7	ALCOHOLD SALES
Control Delay	7.0	30.3	3.8	8.8	18.1		1857 - 34	35.8	26.1	. () er () en	62.9	23.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	arta a particip	TANK YAR IN	0.0	0.0	THE PROPERTY	0.0	26.0
Total Delay	7.0	30.3	3.8	8.8	18.1	MOTE NO	988 - 18 8	35.8	26.1	1862 NOSAS	62.9	0.0
LOS	Α	С	Α	A	В	, vlastický		00.0	20.1 C		Commander.	26.0
Approach Delay		29.8	Liv days	11,137,0	17.9	A. 4.04E	A 3 1 23 4	28.5	eric (Dreist	yang sa kesate.	E	LIANTEN POR
Approach LOS	10101017	C	1. 5.45	1747.194	B		4.7	20.5		1000	51.5	
Queue Length 50th (ft)	4	747	1	9	439	(a) (a).	37 - 158	31	65	- ARGMORA	D Soot	
Queue Length 95th (ft)	11	#980	12	20	694		H. Maria and	61	117	1.26	287 218	68
nternal Link Dist (ft)	.517 A	1670	the liter		1670		54. (4.78)	1070	117	- Folkster		60
Turn Bay Length (ft)	800		275	200			W. C - 777	1010			1020	
Base Capacity (vph)	161	2180	1072	173	2320	A1 156	e to see the	451	472	Television sec	a E a	4c0
Starvation Cap Reductn	0	0	0	0	0	Katalan Akit		401	412		451	452
Spillback Cap Reductn	0	0	ŏ	0	0	igisti. ungi	64.00.000	n	a n	- Comment	0	0
Storage Cap Reductn	0	0	72	0	0	The Will	14	0	0	A CAN	0	0
Reduced v/c Ratio	0.11	0.94	0.03	0.24	0.80	N 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Morro M.	ິດ 12	0.34	les Water Feet	0.00	∪
Action of the second section section of the second section secti		VOMPTHEE :	THE ACTION	15-15-12	4 424		M. A. A.	V. 14	U.34		0.86	0.38

Area Type:

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 13 (11%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.94

Intersection Signal Delay: 27.5

Intersection Capacity Utilization 82.7%

Intersection LOS: C ICU Level of Service E

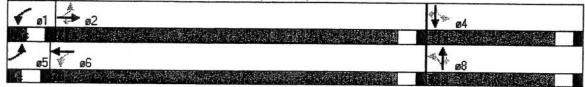
Analysis Period (min) 15

* User Entered Value

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 12: STREET ROAD (PA 132) & PHILA PARK



	۶	-	•	•	-	*	4	†	<i>p</i>	. 1	1	1
Movement .	EBL	1531		WEI	investi.	WER				agaitand (laur	*	
Lane Configurations	*	44	1		ነ ቀው	A STATE		NEI	NBF	(Sile	- SB)	BEB
Ideal Flow (vphpl)	1900			1900	1900	1900	1000	4		New Joseph	4	ין י
Lane Width	12	The second second second second	13	E	※公司を持ち、「金庫(内)」からておい。	1900	1900	1900	THE RESERVE OF THE PARTY OF THE	the way of the	1900	1900
Grade (%)	1157.9	1%			1%	14	12	12		12	12	
Total Lost time (s)	3.0	3.0	3.0	3.0				0%		42.50	0%	
Lane Util. Factor	1.00	0.95	1.00	- recommend to the state of			cost on	3.0	3.0		3.0	3.0
Frt	1.00	1.00	0.85	7.7	The second secon			1.00	1.00	The state of the s	1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95		30×1 19	JETES A WE	1.00	0.85		1.00	0.85
Satd. Flow (prot)	1796	3472	1660	1796	THE RESERVE OF THE PARTY OF THE	APP LATER TO		0.96	1.00		0.95	1.00
Fit Permitted	0.09	1.00	1.00	0.11	1.00	- Se	oran mentalan sa	1817	1723		1813	1615
Satd. Flow (perm)	179	3472	1660	206	3446		Military.	-0.90	1.00		0.90	1.00
Volume (vph)	27	1361	48			uma talagen.	North and	1710	1723		1710	1615
Peak-hour factor, PHF	0.94	0.94	0.94	39	1300	69	30	. 3	-39	249	. 9	175
Adj. Flow (vph)	29	1448	51	0.89	0.89	0.89	0.72	0.72	0.72	0.69	0.69	0.69
RTOR Reduction (vph)	0	0	19	44	1461	78	42	4	54	361	13	254
Lane Group Flow (vph)	29	1448	32	0	4	0	0	0	41	0	0	62
Heavy Vehicles (%)	0%	0%	0%	44 0%	1535	0	0	46	13	0	374	192
Turn Type	pm+pt	ShataMada			0%	0%	0%	0%	0%	0%	0%	0%
Protected Phases	5	2	Penn	pm+pt			Perm		Perm	Perm	外管型 有数	Perm
Permitted Phases	2		. No. and	1 	6	ne concessor.		8		1 10 10 10 10 10 10 10	4	CARROLL MINES
Actuated Green, G (s)	60.4	59.2	50.2	6			8		8	4	The second	4
Effective Green, g (s)	66.4	62.2	59.2	61.6	59.8	F 7 - 1581		21.0	21.0	20 4 4 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	21.0	21.0
Actuated g/C Ratio	0.66	0.62	62.2	67.6	62.8			24.0	24.0	TX WY	24.0	24.0
Clearance Time (s)	6.0	6.0	0.62 6.0	0.68	0.63	October States		0.24	0.24		0.24	0.24
Vehicle Extension (s)	3.0	3.0	10 10 10 10 10 10 10 10 10 10 10 10 10 1	6.0	6.0			6.0	6.0		6.0	6.0
Lane Grp Cap (vph)	187	2160	3.0	3.0	3.0	of the County Sec.		3.0	3.0		3.0	3.0
v/s Ratio Prot	0.01	0.42	1033	216	2164	$2_{\rm in}$		410	414		410	388
v/s Ratio Perm	0.10	0.42	0.00	c0.01	c0.45						and the state of the second of	READ PARTY.
v/c Ratio	0.16	0.67	0.03	0.13				0.03	0.03		c0.22	0.16
Uniform Delay, d1	9.7	0.67	0.03	0.20	0.71			0.11	0.03		0.91	0.50
Progression Factor	1.00	12.3 1.00	7.3	9.1	12.5			29.7	29.1		37.0	32.8
Incremental Delay, d2	0.4		1.00	1.00	1.00			1.00	1.00	80000000000000000000000000000000000000	1.00	1.00
Delay (s)	10.1	1.7	0.1	0.5	2.0			0.1	0.0		24.2	1.0
Level of Service	-1	13.9	7.3	9.5	14.5			29.8	29.1	The second second	61.2	33.8
Approach Delay (s)	В	B	A	Α	В	sük at		C	C		actions and the	c
Approach LOS	ation siste	13.6	rest volta	Dation of the State	14.3			29.4			50.1	9.78.48/1 <u>.4</u>
intersection Summary		В			В	AME STA		C			, D	\$3%
HCM Average Control De												
HCM Volume to Capacity	elay		20.3	H	CM Leve	l of Ser	vice		С		Maria di	48.75
Actuated Cycle Length (-	/ ratio	ili Antonia ana ma	0.74					,	5 75 P. W. J. L. L.	- A ROYAL BURNEY	Section of the sectio	
Actuated Cycle Length (s	V	11.7.	0.00	Sı	ım of los	t time (s	s)		9.0	and the same	NEWS L	500
Intersection Capacity Util	ization	6	5.7%	IC	U Level	of Servi	ce		С	A STATE OF THE STA	PRINCIPLE OF THE	200 PM 20
Analysis Period (min)	31.2		15			YOUNG.	The Talantie	2-14-1	te secondaria de la companya de la c	Maria Marius Tim Milys	CANCELL CO.	た着門
Critical Lane Group									record in Parish		Live PAPET (And Provi	1,118, 23

		→	•	•	•	•	4	1	-	1	1	1
Este foroup	EBL	, ASSET	EBR	W.B.	A WEST	anvieve e					*	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0			NBT	NBR	Sal	USBI	SBR
Time To Reduce (s)	0.0	0.0	the state of the s	0.0	PARTY AND THE MESSES	7511.473 0 0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	C May		0.0	0.0	0.0	0.0	0.0	0.0
Walk Time (s)	3.012.004 (3.9)		ax	HOLLE	U-IVIAX		Min	Min	Min	Min	Min	Min
Flash Dont Walk (s)	41.4.50	445.Z, 1		1 - 1 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 -	E.W	Visito Pravia	The section				The same of the same of the same	CHARLESTE
Pedestrian Calls (#/hr)		di Marine di Ja	- W. T. N			la de la companya de				A Walter	e in the	W. Sales
Act Effct Green (s)	67.6	64.6	64.6	68.8	AF.0	C. The Com-					er setting grung	em. 1389, 1776
Actuated g/C Ratio	0.68	0.65	0.65	0.69	65.2		7 748	100	24.0		24.0	24.0
V/c Ratio	0.14	0.65	0.05	0.09	0.65	Constant of the constant of		0.24	0.24		0.24	0.24
Uniform Delay, d1	4.6	12.2	0.03	4.6	0.68			0.11	0.12		0.91	0.57
Control Delay	6.3	13.1	2.4		12.4	Janes Brillian		29.7	0.0		36.9	22.2
Queue Delay	0.0	0.0	0.0	6.5	13.5			30.7	9.2		65.4	28.0
Total Delay	6.3	13.1	2.4	0.0	0.0			0.0	0.0	The State of	0.0	0.0
LOS	A	В		6.5	13.5		1.00	30.7	9.2		65.4	28.0
Approach Delay	Here Page	12.6	Table of Market	Α	В	The same same of		С	Α	14540-197	F	C
Approach LOS	11 11-11	12.0 B	105		13.3		" NUMB	19.1	4030%	California	50.3	#C+2.04.03
Queue Length 50th (ft)	5	300	T 25 30 10	ic. mos a nn	В			В	75.00		D	6. 2
Queue Length 95th (ft)	13	375	- 1	- 8	323	3		23	. 0		233	96
Internal Link Dist (ft)	13	1670	14	17	396			41	18	1.51.32.40.54.53	246	116
Turn Bay Length (ft)	800	10/0	076	100,000	1670			070		TAMA	1020	YOU CHA
Base Capacity (vph)	200	2243	275	200	***************************************							GAT TENED
Starvation Cap Reductn	200		1090	232	2249			410	455		410	449
Spillback Cap Reductn	0	0	0	0	0			0	0	. Barribalisa		0
Storage Cap Reductn	0	0	- 0	0	- 0			0 -	. 0	CHE THE	0	്ര
Production of the second secon	0.14	0 00	0	0	0		CONTRACT PA	0	0	HAT AND THE LAND	0	0
	U. 14	0.65	0.05	0.19	0.68		().11	0.12		0.91	0.57
MICISCRION Symmany	以来自用。 因	20 E 20 E 10 E 20	Manager 1	eliment as an	And the second of the second of the second				and a second second	A COURT	Charles A.	Sec. 9. 19-25.

Area Type:

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 13 (13%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Other

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 19.2

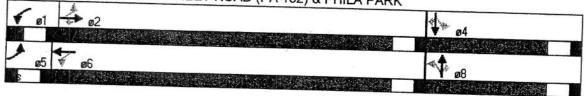
Intersection Capacity Utilization 65.7%

Analysis Period (min) 15

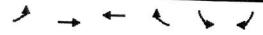
* User Entered Value

Intersection LOS: B ICU Level of Service C

Splits and Phases: 12: STREET ROAD (PA 132) & PHILA PARK



Movement	EE	L E	II W.	I WAS	D an		
Lane Configurations		The same of the sa	Service Servic			SBR	
Ideal Flow (vphpl)	190					i /	
Lane Width	1				A A A	The second second second	
Grade (%)							
Total Lost time (s)	3.0			100	0%		
Lane Util. Factor	1.00						
Frt	1.00		10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1000	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		A STATE OF THE STA
Flt Protected	0.95						
Satd. Flow (prot)	1814	·	The state of the s	2. 0. 10 2. 7. 10	1.00	1.00	
Flt Permitted				100		1830	
Satd. Flow (perm)	0.05	100000000000000000000000000000000000000	A CARTANAGE OF	1.00	0.95	1.00	The Court of the property of the court of th
Volume (vph)	102			1714	1986	1830	
Peak hour facts pure	17	1.0	1924	45	60	12	Rem females in manager - 1
Peak-hour factor, PHF	0.94			0.91	0.72	0.72	
Adj. Flow (vph)	18	2002	2114	49	83	17	
RTOR Reduction (vph)	0	0	0	0	0		1924
Lane Group Flow (vph)	18	2002	2114	49	83	0	The state of the s
Heavy Vehicles (%)	0%	2%	1%	0%	0%	17	
Turn Type	pm+pt		250 TO 18	Free	0 %	0%	v.
Protected Phases	1	6	2	1166		Free	
Permitted Phases	. 6	- Fillian	rawa		8		
Actuated Green, G (s)	100.1	100.1	91.7	Free	41.44(1)	Free	
Effective Green, q (s)	103.1	103.1	94.7	120.0	8.9	120.0	
Actuated g/C Ratio	0.86	0.86	the state of the s	120.0	10.9	120.0	
Clearance Time (s)	6.0	6.0	0.79	1.00	0.09	1.00	
Vehicle Extension (s)	3.0	The state of the s	6.0		5.0		The second secon
ane Grp Cap (vph)		3.0	3.0		3.0		
//s Ratio Prot	165	2954	2713	1714	180	1830	
//s Ratio Perm	0.00	c0.58	c0.61		c0.04		
/c Ratio	0.09	STATE OF		0.03	487253	0.01	Charles the Constitution of the Constitution o
Iniform Delay, d1	0.11	0.68	0.78	0.03	0.46	0.01	
Progression Fact	9.0	2.8	6.9	0.0	51.8	0.0	C. Sur and the artists of the contract of the
Progression Factor	1.00	1.00	1.33	1.00	1.00	1.00	
ncremental Delay, d2	0.3	1.3	1.6	0.0	1.9	0.0	A VENEZI DI COMPA LI PRANI.
elay (s)	9.3	4.1	10.8	0.0	53.6	0.0	
evel of Service	Α	Α	В	************	-::-D	O.0	The state of the desiration of the state of
pproach Delay (s)		4.2	10.6	A CONTRACTOR	44.5	, A	
pproach LOS		Α	В	a de des		ni a ni 175 a a	Edit itus en a a a a a
leisection Summary		SELECTION OF	Internation of the second	aster	and H. 1972	Mark 1975	
CM Average Control De				956.95			
CM Volume to Capacity	lay		8.3	HC	M Leve	of Servi	Ce A
Tuated Ovolo 1 and 1	ratio		0.75	- AN COMPAGE	A STATE OF THE STA	estero displaces y	∨ ⊊ А
ctuated Cycle Length (s)			20.0	Sui	m of lost	time (s)	Control (1998) The Control of the Co
tersection Capacity Utiliz	ation	6	3.2%	ICL	J Level	of Service	
nalysis Period (min) Critical Lane Group		HERE PERMIT	15	DELENISOTHY SINN	a contact of the	. OCI VICE	* B



pane Group	EBL	ALE RO	WE	AND D	a de la constante de la consta	SBR
Time Before Reduce (s)	0.0	0.0	0.0		0.0	
Time To Reduce (s)	0.0	0.0	272.7	DE ST. ST.	0.0	생기는 사람들이 가장 마음을 하는 것들은 사람들이 되었다. 그는 것은 사람들이 가장 그렇게 되었다면 하는데 되었다. 사용이 없다면 없다.
Recall Mode	None		C-Min		None	
Walk Time (s)					140116	
Flash Dont Walk (s)					Care N.v.	VICE TO LIKE STATE OF SHORES AND AND AND AND AND AND AND AND AND AND
Pedestrian Calls (#/hr)						
Act Effct Green (s)	104.1	104.7	99.9	120.0	12.1	s 120.0
Actuated g/C Ratio	0.87	0.87	0.83	Name of the last o	0.10	
v/c Ratio	0.09	0.67	0.74		0.41	
Uniform Delay, d1	1.2	2.8	6.9	0.0	51.7	가는 성투하는 선 시간에 하면 가지 않는 사람들이 되었다. 그 그 사람들은 사람들이 살아가면 살아가면 살아가면 되었다.
Control Delay	2.5	4.7	11.3	0.0	52.5	0.0
Queue Delay	0.0	0.1	1.2	0.0	0.0	보이 하는 사고, 주면 주었다. 그는 하는 사람들이 되었다. 하는 사람들이 되었다. 그는 사람들이 되는 것이 하는 것이 없는 것이 없는 것이 없는 것이 없는 것이다. 그는 사람들이 없는 것이다. 그는 사람들이 없는 것이다.
Total Delay	2.5	4.8	12.4	0.0	52.5	0.0
LOS	Α	Α	В	Α	D	A
Approach Delay		4.8	12.2		43.6	15-33
Approach LOS		Α	В	1013	.o.o	
Queue Length 50th (ft)	2	214	638	0	61	3 - 10 - 10 - 10 - 10 - 10 - 10 - 10 - 1
Queue Length 95th (ft)	6	343	968	m0	86	0
nternal Link Dist (ft)		1740	740		1020	Colonia recognition and the colonia and the co
Turn Bay Length (ft)	200			300	A 18 BY T	
Base Capacity (vph)	220	2999	2863	1714	281	1830
Starvation Cap Reductn	0	0	476	0	0	0
Spillback Cap Reductn	0	200	0	0.	0	The O and the second se
Storage Cap Reductn	2	0	0	0	0	0
Reduced v/c Ratio	0.08	0.72	0.89	0.03	0.30	0.01
	8-105-bit	2000年15日10	energe and a	D/S/ADENDOSANO	en e Louis de la companie	

Area Type: Cycle Length: 120

Actuated Cycle Length: 120

Offset: 44 (37%), Referenced to phase 2:WBT and 6:EBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

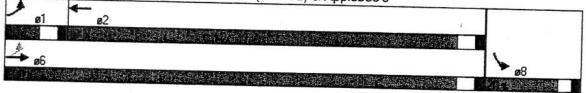
Maximum v/c Ratio: 0.74 Intersection Signal Delay: 9.4 Intersection Capacity Utilization 63.2%

Intersection LOS: A ICU Level of Service B

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 15: STREET ROAD (PA 132) & Applebee's



1900	1 + B		STATE OF THE PARTY	N SE	E SBR	
1900		1 44	STATE OF THE PARTY	1	E S DIA	
1900						
A	1900	1900	1900		ין ר מממי	
12	man in which are a	the second section of	The state of the s	1 10 10 48 (5.1)	the second second	
11.5	-1%					
3.0	THE RESERVE OF THE PARTY OF	1 1 m may me 1	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	0%	Printer St. Co. Co.	
					Maria Cara Cara Cara Cara Cara Cara Cara	An A County Day of the County
	7 - 2 - 4 - 1 - 1	- The state of the	THE RESERVE THE PARTY.	1000	· 中央 图 · 中央人工 · 中央 · 中央 ·	
						The state of the s
* F - ST - ST - ST - ST - ST - ST - ST -	the state of the s	1 The Course Law .	ARTERIOR SECTION	1827 · 在中的一个	AND DUBLING THE TAIL	
	_					
100	24.75		Control of the second	THE RESERVE LABOR THE PARTY.	1.00	
				1986	1830	
1277 304 30	The second secon	· · · · · · · · · · · · · · · · · · ·	43	17	16	
			0.92	0.85		
2446	1554	1663	47	20		
	0	0	0	0	0	
40.00	and the second of the second	1663	47	20	19	STEEL CONTROL OF THE
	1%	0%	0%	14 14 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
pm+pt			Free			
1	6	2	e for the seek Board	8	DENIES N	
		i a Composi Compositio	Free	ALPERIN	Free	Mari Angelia in Consequence of the Consequence of t
	86.0	76.5		3.0		
89.0	89.0	79.5				N. Servico P. E. C. Control of the service of the s
0.89	0.89		March Contract of the English Contract	A PROPERTY OF STREET		
6.0	6.0		365 E C. 26		1.00	Control Contro
3.0	3.0	THE RESERVE WAS A SECOND SAME	A STATE	all a service of the service of the service of		
294	3090		1714		04000	Service programs a recommendation of the commendation of the comme
0.01	At Mark Mark Commercial		make a second transfer to the second	THE RESERVE TO SECTION ASSESSMENT	1830	
	Times Asse	00.40 04.400		CU.U1	a in the second	3 44 7 10 5 4 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
STATE OF THE PARTY	0.50	0.60	THE RESIDENCE OF	0.00	Special and the part of the	
A 14 M 1 7 A 1 A 1 A 1 A 1 A 1 A 1 A 1 A 1 A 1	The state of the state of the	the state of the s	there is a second	THE RESERVE AND THE PARTY.	Committee of the same of the same of the	
The second secon		The state of the s		A CONTRACTOR OF THE PARTY OF TH	The state of the s	
				Market and the	0.0	A STATE OF THE PROPERTY OF THE
12000			Contract Contract	_ D	Α	The translation of the second second second
417. 22	1./ 3/3/3/A		C1 NAMES OF STATE	Park and and and		
	PERM OF	A		C 7	i serie	A CONTRACTOR OF THE CONTRACTOR
ay		2.3	HC	MIeve	of Soci	ioo
atio		A Land Company of the Party of	STATE AND ASSESSED.	SCHOOL C	UI SEIV	ICC A
BALLER	and the second second second		Sin	m of loc	t time /-	(250 m 14,000 50 m 180, 180, 180, 180 m 180 m
ation	The second secon	2.3%	101	11 01 108	Lume (s)	9.0
Trans.		576 15		Level	of Servic	e A
	1.00 1.00 0.95 1814 0.11 214 32 0.95 34 0% 0m+pt 1 6 86.0 89.0 0.89 6.0 3.0 294 0.01 0.10 0.12 2.8 1.00 0.2 2.9 A	1.00 0.95 1.00 1.00 0.95 1.00 1814 3472 0.11 1.00 214 3472 32 1476 0.95 0.95 34 1554 0 0 34 1554 0% 1% 0m+pt 1 6 86.0 86.0 89.0 89.0 0.89 0.89 6.0 6.0 3.0 3.0 294 3090 0.01 c0.45 0.10 0.12 0.50 2.8 1.1 1.00 1.00 0.2 0.6 2.9 1.7 A A 1.7 A ay atio	1.00 0.95 0.95 1.00 1.00 1.00 0.95 1.00 1.00 1814 3472 3472 0.11 1.00 1.00 214 3472 3472 32 1476 1530 0.95 0.95 0.92 34 1554 1663 0 0 0 0 34 1554 1663 0% 1% 0% 0m+pt 1 6 2 6 86.0 86.0 76.5 89.0 89.0 79.5 0.89 0.89 0.80 6.0 6.0 6.0 3.0 3.0 3.0 294 3090 2760 0.01 c0.45 c0.48 0.10 0.12 0.50 0.60 2.8 1.1 4.0 1.00 1.00 0.42 0.2 0.6 0.7 2.9 1.7 2.4 A A A A 1.7 2.4 A A A A ay atio 0.58 100.0	1.00	1.00	1.00

PACE PARTY AND AND ADDRESS OF THE PACE PARTY.						•	
Lane (Group	ERL		WW.EDE	Wer	STORE		Secretary and the secretary secretar
Time Before Reduce (s	0.0	0.0	0.0		- OPL	SBR	
Time To Reduce (s)	0.0	0.0	0.0	(4) 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0.0	《《新聞》	
Recall Mode	None			ir atu itt vituda	0.0	The state of the s	
Walk Time (s)	1.0.10	O ayını	O-IVIII1		None		STATE OF THE STATE
Flash Dont Walk (s)	Full 48 542	1 Jan - 11 Jan	r	Make the make	ata na esena		
Pedestrian Calls (#/hr)	u coperation.						
Act Effct Green (s)	92.0	020	004	2000	BACCAL FEE		2000年1月1日 1日
Actuated g/C Ratio	0.92	0.94	86.1		All the state of t	100.0	
v/c Ratio	0.13	0.48	0.86	1.00	0.08	1.00	
Uniform Delay, d1	0.13	FOR STREET, ST. ST. ST. ST. ST. ST. ST. ST. ST. ST.	0.56	0.03	AT THE PERSON AND THE	0.01	
Control Delay		1.1	4.0	0.0	45.5	0.0	
Queue Delay	1.6	1.6	2.3	0.0	42.3	0.0	THE FOREST STATES
Total Delay	0.0	0.0	0.0	0.0	0.0	0.0	
LOS	1.6	1.6	2.3	0.0	42.3	0.0	
Approach Delay	Α	Α	Α	Α	D	Α	
Approach LOS		1.6	2.3		21.7	CIA AND	
Queue Length 50th (ft)	11	Α	Α		C	777 T. S.	
Queue Length 95th (ft)	1	0	71	0	12	0	No. of the control of
nternal Link Dist (ft)	6	129	100	m0	32	0	
Turn Boy Longth (ft)		2230	740		1020	就然是1.99 68	P. C. S. S. C. C. S. C.
Furn Bay Length (ft)	200			300	10. 10.00 20. 54	enantalent -tealing	
Base Capacity (vph)		3257	2989	1714	357	830	
Starvation Cap Reductn	0	0	0	0	0	0	25.0
Spillback Cap Reductn	0	. 0	0	0	∞ 0	0	
Storage Cap Reductn Reduced v/c Ratio	1	0	0	0	0	0	
reduced v/c Ralio	0.11	0.48	0.56	0.03	0.06	0.01	
de seeden Summany							
rea Type: Oth	ner						
ycle Length: 100	* 50 m 2 3		F-1475		Y Fare W		ETTER THE STATE OF
ctuated Cycle Length: 10	00	terrativa	S. C. D.L. Sales	og to the charge of	danis James Space	Lat Vitaga et al	
ffset: 28 (28%), Reference	ced to r	hace 2	WDT an	46.50			
atural Cycle: 70	artage	// lase 2.	vvoi ai	IU O.EB	IL, Star	of Green	
ontrol Type: Actuated-Co	ordinat	ed					
aximum v/c Ratio: 0.56	, or a may	eu Martin	The Subtreet	1888 G-V	Mins I Sciences - co		
and the second s	2.2						
tersection Signal Delay:				inte	rsection	LOS: A	
tersection Signal Delay: 1 tersection Capacity Utiliz	ation 53	20/					
tersection Capacity Utilization	ation 52			C. H. A. S. Welk-S. 1923	Level	Service A	
tersection Capacity Utilization	ation 52			C. H. A. S. Welk-S. 1923	Level o	Service A	
tersection Capacity Utilization	ation 52			C. H. A. S. Welk-S. 1923	ream sig	Service A	
tersection Capacity Utiliz nalysis Period (min) 15 Volume for 95th perce	ation 52 entile qu	eue is n	netered	by upst	ream sig	Service A	
tersection Capacity Utiliz nalysis Period (min) 15 Volume for 95th perce	ation 52 entile qu	eue is n	netered	by upst	ream sig	Service A	
tersection Signal Delay: 2 tersection Capacity Utilizatersection Capacity Utilizatersection Capacity Utilizatersection Capacity Utilizatersection (min) 15 Volume for 95th perceodits and Phases: 15: S	ation 52 entile qu	eue is n	netered	by upst	ream sig	Service A	
tersection Capacity Utilizationallysis Period (min) 15 Volume for 95th perceolits and Phases: 15: S	ation 52 entile qu	eue is n	netered	by upst	ream sig	Service A	
tersection Capacity Utilizationallysis Period (min) 15 Volume for 95th perceodits and Phases: 15: S	ation 52 entile qu	eue is n	netered	by upst	ream sig	Service A	
tersection Capacity Utilizationallysis Period (min) 15 Volume for 95th perceolits and Phases: 15: S	ation 52 entile qu	eue is n	netered	by upst	ream sig	Service A	∞ 88

	٠	-	•	•	-	- 4		Ť	,	-		7
Jovement - Programme	E31	EET		a winen	a salvisti	& WAYER	e statem		<i>(</i>	and of the same of	₩.	•
Lane Configurations	1/4	1 41		,	i † 4		i i i i i i i i i i i i i i i i i i i	NET	SINIBIR	SBL	33	LE SEL
Ideal Flow (vphpl)	1900		1900		1900		1900	4000			4	
Lane Width	12	12		the last the same of the same	the table of the State State	the state of		1900	The state of the state of	10 10 to 10	204 40100	to be to the action of the second second
Grade (%)		1%	070.77	Januaria Januaria	1%		12	12	14	12		_
Total Lost time (s)	3.0	The state of the state of		3.0		0.00		0%			0%	
Lane Util. Factor	0.97		1.00	1.00				3.0	3.0		3.0	3.0
Frt	1.00	at the second second second second	0.85	1.00	1.00		: () () () ()	1.00	1.00		1.00	1.00
Flt Protected	0.95	100700000	1.00	0.95			45 21 1	1.00	0.85		1.00	
Satd. Flow (prot)	3484	3522	1660	1796	1.00	1.00		0.95	1.00		0.95	
Flt Permitted	0.95	1.00	1.00		3556	1664	one e	1805	1723		1805	1615
Satd. Flow (perm)	3484	3522	1660	0.06	1.00	1.00		0.95	1.00	1-143	0.95	1.00
Volume (vph)	147	2115		104	3556	1664		1805	1723		1805	1615
Peak-hour factor, PHF	0.93	0.93	25	40	1875	123	44	. 0	135	204	0	128
Adj. Flow (vph)	158	2274	0.93	0.97	0.97	0.97	0.85	0.85	0.85	0.70	0.70	0.70
RTOR Reduction (vph)	0		27	41	1933	127	52	. 0	159	291	0	183
Lane Group Flow (vph)	158	0 2274	7	0	0	50	0	0	77	0	0	80
Heavy Vehicles (%)	0%	2%	20	41	1933	77	0	52	82	0	291	103
Turn Type		270	0%	0%	1%	3%	0%	0%	0%	0%	0%	0%
Protected Phases	Prot		Perm	pm+pt		Perm	Perm		Perm:		4 78 SACK	Perm
Permitted Phases	5	2	State Comme	1	6		11 / 12 / 12 / 12 / 14 / 14 / 14 / 14 /	8	के स्थान संदर्भ है।	812 Bu(((5)	A 14 M	
Actuated Green, G (s)	W31111		2	6		6	8		8	4		4
Effective Green, g (s)	10.4	75.0	75.0	74.2	69.4	69.4		22.2	22.2	tanding Buch	22.2	22.2
Actuated g/C Ratio	13.4	78.0	78.0	80.2	72.4	72.4	11-10	25.2	25.2	o 2014 3 034	25.2	25.2
Clearance Time (s)	0.11	0.65	0.65	0.67	0.60	0.60		0.21	0.21	and Militiga	0.21	0.21
Vehicle Extension (s)	6.0	6.0	6.0	.6.0	6.0	6.0		6.0	6.0	TO MANAGE	6:0	6.0
Verticle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	TE MENT OF THE BUILDING	3.0	3.0	Manage (3.0	are more than the second
Lane Grp Cap (vph) v/s Ratio Prot	389	2289	1079	179	2145	1004		379	362	Ne spiritens.		3.0
	c0.05	c0.65		0.01	0.54	THE PERSON OF TH			PROPERTY.		379	339
v/s Ratio Perm v/c Ratio	1.4		0.02	0.14		0.08		0.03	0.09	57,124,75	0.16	200.44
	0.41	0.99	0.02	0.23	0.90	0.08		0.14	0.23	u = 16.7	0.16	0.11
Uniform Delay, d1	49.6	20.7	7.4	28.6	20.7	9.9	ia nika	38.6	39.3	Sale Sales	0.77 44.6	0.30
Progression Factor	1.05	0.77	0.96	1.00	1.00	1.00		1.00	1.00		And the same of the same	40.0
Incremental Delay, d2	0.4	12.5	0.0	0.7	6.7	0.1		0.2	0.3	Nardericka)	1.00	1.00
Delay (s)	52.5	28.5	7.2	29.3	27.3	10.0	end of the	38.7	39.6	Residence.	9.0	0.5
Level of Service	. D	···C	A	C	⇒ °C	В	daz FA	D	33.0 Ta	St. 5 AN HANGA	53.7	40.5
Approach Delay (s)		29.8			26.3	and the second		39.4	····U	COLUMN	40.0	at SP
Approach LOS		C	Higher-	Sandy.	С	g (Molgo-c	ar Landa	D	1 40KU# 5	Ledwer (Bris)	48.6	40.000
Diensection Summary					S782740						u	
HCM Average Control De	elav		30.5	ЦC	MALOUS	I of C						
HCM Volume to Capacity	/ ratio	in the set the	0.90	Was Call	ivi Leve	l of Sen	vice		С			
Actuated Cycle Length (s)		20.0	omilei.	m of le-	de al Maior Mary III	N. STORES	Say Office on a	:Mat.6:			
Intersection Capacity Util	ization		3.1%	JCI	I I cuci	t time (s)	Adviv	9.0			i de
Analysis Period (min)	(46.1. C. 11.	1.1-2	15		J Level	of Servi	ce		E			
Critical Lane Group	out press	and the second	10		E SECTION							THE.

sace Group			7	1	-	•	1	1	1	1	1	1
Time Before Reduce (s) EB	The same of the last	EBR 0.0	WBL	WBT	WBR	NEL	a NBT	NBR	A SIBLE	SET	SBR
Time To Reduce (s)	0.0			0.0	- H	4 17 4 V V V	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None		C-Min	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Walk Time (s)		o o iviiii	O-IVIII I	None	C-IVIIN	C-Min	None	None	None	None	None	
Flash Dont Walk (s)		A	th expension	s a. 1-11-41	as 1977 () 14	a state					· · · · Nelson	
Pedestrian Calls (#/hr)		- 127					No.				e Alexandra	
Act Effct Green (s)	13.4	79.2	79.2	015		40						2296 J. C. R. C. (1984)
Actuated g/C Ratio	0.11	37 40 50 70 70	0.66	81.3 0.68	72.4	72.4		25.2	25.2	A. 11-67)	25.2	25.2
v/c Ratio	0.41		0.02		0.60	0.60		0.21	0.21		0.21	0.21
Uniform Delay, d1	49.6	Charles William Control	1.6	0.20	0.90	0.12		0.14	0.36	4.74	0.77	0.44
Control Delay	53.2		4.2		20.7	0.0		38.6	14.9		44.6	17.7
Queue Delay	0.0	4.5	0.0	8.0	28.9	2.3		37.9	17.9	A least	53.5	20.7
Total Delay	53.2		4.2	0.0	0.0	0.0		0.0	0.0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0.0	0.0
LOS	D	 D	Marine Sales	8.0	28.9	2.3		37.9	17.9		53.5	20.7
Approach Delay		54.0	Α	Α	С	Α		D	В		D	С
Approach LOS		U-1-0		AT CHA	26.9			22.8			40.8	MARK!
Queue Length 50th (ft)	62	~1004	ivino s a an		C			С	200		D	Tekserik entopo
Queue Length 95th (ft)	m77	#1140	3	8	680	. 0	M : . W	32	38		209	-52
Internal Link Dist (ft)	Harris .	740	m3	18	#923	27		63	88		225	73
Turn Bay Length (ft)	500	740	275	200	1670			1070			720	
Base Capacity (vph)	436	2323	1102	200	a de como co	600				10. Teg 30	er men men er findelig	CMG (FE) YOU
Starvation Cap Reductn	0	192		203	2144	1054	SCHIME	421	477	CONTRACT	421	454
Spillback Cap Reductn	0	0	0	0	0	0		0	0	are a service one	0	0
Storage Cap Reductn	0		0	0	. 0	, 0		0	0	- ALAM	-0	0
Reduced v/c Ratio	0.36	1.07	0.02	0	0	8		0	0		0	0
	0.00	1.07	0.02	0.20	0.90	0.12	Land All	0.12	0.33		0.69	0.40
presection Summary	7.	100			CARTER STATE		DESCRIPTION OF THE PARTY OF THE	on Williamson Stewart				W 5507

Area Type: Cycle Length: 120

Actuated Cycle Length: 120

Offset: 86 (72%), Referenced to phase 2:EBT and 6:WBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.98 Intersection Signal Delay: 40.7 Intersection Capacity Utilization 88.1%

Intersection LOS: D ICU Level of Service E

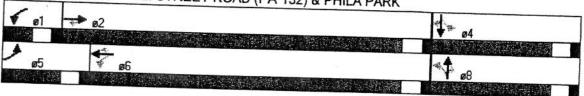
Analysis Period (min) 15 * User Entered Value

Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.

Other

95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

Splits and Phases: 12: STREET ROAD (PA 132) & PHILA PARK



	-	-	•	•	· *	•	
Slovemen		E E	Many Sq.	W. WEIF		A NEIDS	A STATE OF THE STA
Lane Configurations	þ	^	* *	7			
Ideal Flow (vphpl)	1900				1900	1000	
Lane Width	12		11	1300	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	H . W	
Grade (%)	1.1	-1%				V. (1.07)	
Total Lost time (s)	3.0	100	111 - 111 - 111 - 111 -	3.0			
Lane Util. Factor	1.00			1.00	100	1.00	Terror and the second of the s
Frt	1.00	1.00	1.00	0.85	1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	0.85	
Fit Protected	0.95	1.00	1.00	1.00		1.00	Secretal Secretary and Secretary
Satd. Flow (prot)	1814	3438	3438	1714	1,000		
Flt Permitted	0.05	1.00	1.00	1.00		1830	Mr. Charles
Satd. Flow (perm)	87	3438	3438	1714	1986	1.00	
Volume (vph)	32	2126	2063	54		1830	
Peak-hour factor, PHF	0.94	0.94	0.91		161	113	
Adj. Flow (vph)	34	2262	2267	0.91	0.72	0.72	The second secon
RTOR Reduction (vph)	0	e in recipies in		59	224	157	
Lane Group Flow (vph)		2262	0	0	0	0	11. 11. 11. 11. 11. 11. 11. 11. 11. 11.
Heavy Vehicles (%)	0%	200 - 100	2267	59	224	157	
Tum Type		2%	1%	0%	0%	0%	The second secon
Protected Phases	pm+pt	_		Free		Free	
Permitted Phases	1	6	2		8		
Actuated Green, G (s)	6	1.20		Free	ALLEN	Free	
Effective Green (s)	91.7	91.7	81.9	120.0	17.3	120.0	
Effective Green, g (s)	94.7	94.7	84.9	120.0		120.0	
Actuated g/C Ratio	0.79	0.79	0.71	1.00	0.16	1.00	
Clearance Time (s)	6.0	6.0	6.0		5.0		
Vehicle Extension (s)	3.0	3.0	3.0		3.0		
Lane Grp Cap (vph)	167	2713	2432	1714	319	1830	
v/s Ratio Prot	0.01	c0.66	c0.66		c0.11	e for companion and companion (, e.e.,	
v/s Ratio Perm	0.15			0.03		0.09	
v/c Ratio	0.20	0.83	0.93	0.03	0.70	0.09	
Uniform Delay, d1	24.4	7.8	15.1	0.0	47.6	0.0	Profesional States and September 1
Progression Factor	1.00	1.00	0.25	1.00	1.00	1.00	
Incremental Delay, d2	.0.6	3.2	5.2	0.0	6.8	0.1	The Control of the State of the
Delay (s)	25.0	11.0	8.9	0.0	54.5	0.1	
Level of Service	С	В	A	A	D	Α	
Approach Delay (s)		11.2	8.6		32.1	Secretary and Secretary	
Approach LOS		В	A		С	8 4 Jan. 14	TERROREN CONTRACTOR STREET
ntersection Summary					705 7025 77		
HCM Average Control De	elav	GENERAL CONTROL	11.6	L	CMION	A of Co-	
HCM Volume to Capacity	ratio	sindaj e oldiško jed	0.89	77-15-17 8 .4	CIVI LEVE	a or sen	vice B
Actuated Cycle Length (s)		120.0	· · · · · · · · · · · · · · · · · · ·	, no a E I a	oranco on ac	CV days to the Artist Control of the
Intersection Capacity Util	ization		4.4%	31	111 01 10	st time (s	s) 9.0
Analysis Period (min)				10		of Servi	1886 - 1881 - 1881 - 1881 - 1881 - 1881 - 1881 - 1881 - 1881 - 1881 - 1881 - 1881 - 1881 - 1881 - 1881 - 1881
c Critical Lane Group	30 W 6 8		15		13.500		
- Lanc Stoap							



sane Grõup	EBIL		CTEVV28	William)			Y State of the last		STANCE OF THE ST				
Time Before Reduce (s)	0.0	0.0	0.0		0.0	(OD)							
Time To Reduce (s)	0.0	4.4	100	The state of	0.0	1		The days of a				4.50%	Who.
Recall Mode	None	C-Min	C-Min		None		44.54 To 105.	. to ex	- 145,00				
Walk Time (s)				West State	Home	Carlotta.			talkay.				AVIG.
Flash Dont Walk (s)	6.			ēmi - Z	Mr A. M	Modes i	i i see	w. 45	2,850, 600, 0				
Pedestrian Calls (#/hr)								, ,			***		
Act Effct Green (s)	94.7	94.7	87.3	120.0	19.3	120.0	ations and	g k et en et	1.60				
Actuated g/C Ratio	0.79	0.79		1.00	0.16	1.00	Y'sial						* **
v/c Ratio	0.17	0.83		0.03	0.70	0.09	engari -	Variation.	. Independ	4 12 22			
Uniform Delay, d1	2.7	7.8	15.1	0.0	47.6	0.0	e stylen sty	ans.					
Control Delay	4.8	12.1	9.5	0.0	55.0	0.1	(Marie III)	Wille.	L. gwyd.		Stan Shak	NS 12.5 - 2.5 - 2.	
Queue Delay	0.0	0.0	1.7	0.0	0.0	0.0	New York Const			Sala Taranta	5714718		
Total Delay	4.8	12.1	11.3	0.0	55.0	0.1	5 - 5	nio ×.	Faktor.	Tegani	Cental LAVOTE	in all Minder	Larent Course
LOS	Α	В	В	Α	D	Α		The species		. 12 (7 1)			
Approach Delay	417	12.0	11.0	10.328	32.4	111114	and i	er the de	1290		al district	Davi bersa	Septiment.
Approach LOS	v 100 1000222	В	В		С	*				11411	2.545.0F		
Queue Length 50th (ft)	5	495	61	0	164	0		4421. Fiy		Simbelii	5.1015pasc	. Transpare	evas vi
Queue Length 95th (ft)	12		#1110	m0	190	0	4 7 1 1 1 - 10			es Series			
Internal Link Dist (ft) Turn Bay Length (ft)		2150	740		1027		161577		2450-22	Maria.	Selikin	Englaser:	STATE
Base Capacity (vph)	200		620 to 100 to 100 to	200			Sec. 1 1.504		4.4	CTW - 2	A WATE		
Starvation Cap Reductn	218	2713	2500	1714	364	1830	94. S	DAME.	West Ass	+ Mina	ALEANAN	STATES THE R	Tischol
Spillback Cap Reductn	0	0	116	0	0	0			- 34/1- 354/11	17 10 10 10 10 10 10 10 10 10 10 10 10 10			
Storage Cap Reductn	0	Ŏ	0	0	0	. 0			Barrie.	AITD	a de la compansión de l		2000
The state of the s	0.16	0 00	0	0	0	0		455	and Ferting	· Same		HELPHONE CONTRACT	\$1700P
Mersey of Same	0.16	0.83	0.95	0.03	0.62	0.09	¥ V		fø:		A SEE		(\$75c)

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 93 (78%), Referenced to phase 2:WBT and 6:EBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.91 Intersection Signal Delay: 13.1

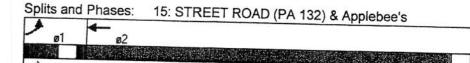
Intersection Capacity Utilization 74.4%

Intersection LOS: B ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



	۶	-	7	•	-	•	4	t	<i>></i>	1	1	1
MOVERNERING / Dec 174	EBL		EBR	AVE L	e (Vilen	OF WHERE	E SANER	ANTEN:	Ner	a sa a a sa	Y Market	576 L
Lane Configurations	10/10	*	7	*	†	7		ન	SOUTH PROPERTY.		S SBI	SER
Ideal Flow (vphpl)	1900	1900	1900			1900	1900	1900			4000	*
Lane Width	12	12	13	12		14	12	12	the state of the s	1900	1900	ALT BURNETASHING THE
Grade (%)		1%			1%	e e eleganis	Tarretti.	0%	1 4 811, 11,271	12	12	77
Total Lost time (s)	4.0	4.0	4.0	4.0	The Part of the Pa	4.0		4.0	4.0	รางสร้างเลื่	0%	(NE -11) PA #1 (NE SEE) (1)
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1	1.00	1.00	"NA AND WORLD	4.0	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	1.00
Fit Protected	0.95	1.00	1.00	0.95	1.00	1.00	William	0.96	1.00	1.1.1.1.1.1.1.1.1	1.00	0.85
Satd. Flow (prot)	3484	3592	1660	1796	3592	1714		1817	1723		0.95	1.00
Flt Permitted	0.95	1.00	1.00	0.08	1.00	1.00		0.90	1.00	1000	1812	1615
Satd. Flow (perm)	3484	3592	1660	148	3592	1714		1710	the second of the second		0.90	1.00
Volume (vph)	225	1493	48	39	1389	170	30		1723		1710	1615
Peak-hour factor, PHF	0.94	0.94	0.94	0.89	0.89	0.89	0.72	3	39	299	9	223
Adj. Flow (vph)	239	1588	51	44	1561	191	42	0.72	0.72	0.80	0.80	0.80
RTOR Reduction (vph)	0	0	23	0	0	93		4	54	374	11	279
Lane Group Flow (vph)	239	1588	28	44	1561	98	0	0	40	0	0	112
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	46	14	0	385	167
Turn Type	Prot	91,404, He		pm+pt	Service of			0%	0%	0%	0%	0%
Protected Phases	5	2	, 6111	P.III - P.I. 1	6	Perm	Perm		Perm	Perm		Perm
Permitted Phases		Gallage (State	2	6	Hatelan Ale	•	20. C. S.	8	okon roz <u>a</u> n	etaneto aterre	4	
Actuated Green, G (s)	8.5	53.7	53.7	53.2	49.2	6 49.2	. 0		8	4		4
Effective Green, g (s)	10.5	55.7	55.7	57.2	51.2	51.2	an and artis	24.3	24.3	and a bright hide gard	24.3	24.3
Actuated g/C Ratio	0.10	0.56	0.56	0.57	0.51	0.51		26.3	26.3		26.3	26.3
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	Discourage)	0.26	0.26	10% "FRALENDERGOTE	0.26	0.26
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		6.0	6.0		6.0	6.0
Lane Grp Cap (vph)	366	2001	925	184	1839	878	Selection and a	3.0	3.0	P. Conductors salistic Print	3.0	3.0
v/s Ratio Prot	c0.07	0.44	AFINED AT	0.01	c0.43	010		450	453		450	425
v/s Ratio Perm	and Divi		0.03	0.12	60.43	0.44	- 1.7x 4.1	0.00		4061	ha e and a conservation	
v/c Ratio	0.65	0.79	0.03	0.12	0.85	0.11		0.03	0.03		c0.23	0.17
Uniform Delay, d1	43.0	17.6	10.0	14.5	21.1	0.11	kalenda z czna.	0.10	0.03		0.86	0.39
Progression Factor	0.96	0.85	0.98	1.00	1.00	12.6		27.9	27.4		35.0	30.3
Incremental Delay, d2	3.3	2.7	0.0	0.7	5.1	1.00	1797 111974	1.00	1.00		1.00	1.00
Delay (s)	44.7	17.6	9.8	15.2	26.2	0.3	4/3/2004	0.1	0.0		14.7	0.6
Level of Service	D		3.0 A	To a Reservoir or		12.9	4 - 0 24 - 04.4	28.0	27.4	2002	49.7	30.9
Approach Delay (s)		20.9		В	C 24.5	В	the High	\mathbf{C}	C		₩ . D	С
Approach LOS	1. FALKQ 5.0	C	45045945A	long palata	24.5 C	National and	Artesta dell'es	27.7	. week vacous	V2.045.0000.0000.000	41.8	W. W.
FIGHSERIOR SURFACIONS								C			D .	
HCM Average Control D	elav	ALL COLOR	25.6	L/	TM LOVE	1 of C		建筑是美沙 港				
HCM Volume to Capacity	v ratio	No. Office of Party	0.83	共產黨	CM Leve	el of Ser	vice		·····C			
Actuated Cycle Length (s	; .aao	19	0.00	944035 0 6	And the second	Service and the service of the servi	Ten Property work to	a was a second				
Intersection Capacity Util	lization		8.5%	ે (111 01 109	of C	s) .		12.0			
Analysis Period (min) c Critical Lane Group			o.5% ∴15 ;		U Level	or Serv	ice		D			

sane/Grøge	<i></i>	→	•	1	• 4	•	1	†	~	1	1	1
Time Before Reduce (s	0.0	0.0	0.0	0.0	EBW	MBR	E NEL	NBVE	NER	SBE	SBT	SER
Time To Reduce (s)	0.0	economic transfer	4 4 4 4 4 4 4 4 4 4 4	0.0	79.78	man grant	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode		0.0	C-Max	None	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Walk Time (s)		O MICA	U-IVIAX	None	C-IVIAX	C-Max	Min	Min	Min	Min	Min	Min
Flash Dont Walk (s)					Long to the						F-6 / 10 546 F-55	Section 11 Supply
Pedestrian Calls (#/hr)	100	1,53, 19 35	11 11 42 4	Albert North				2				A RELIGIO
Act Effct Green (s)	10.5	58.1	58.1	59.5	51.2	- F4 0	ria e e				177.53.3461	en er men zin.
Actuated g/C Ratio	0.11	0.58	0.58	0.60		51.2		26.3	26.3		26.3	26.3
v/c Ratio	0.65	0.76	0.05	0.00	0.51	0.51		0.26	0.26		0.26	0.26
Uniform Delay, d1	43.0	17.6	0.03	6.5	0.85	0.20		0.10	0.11	42	0.86	0.52
Control Delay	49.0	17.6	3.6	8.7	21.1	0.0		27.9	0.0		35.0	13.5
Queue Delay	0.0	0.0	0.0	0.0	27.1	2.5		27.6	8.2		48.9	16.8
Total Delay	49.0	17.6	3.6	8.7	0.0 27.1	0.0		0.0	0.0		0.0	0.0
LOS	D	В	0.0 A	Α.	errearie, 2550	2.5		27.6	8.2	Mary A	48.9	16.8
Approach Delay		21.2		A Januari	C	Α		С	Α		D	В
Approach LOS		C		without the	24.1			17.1	No.		35.4	
Queue Length 50th (ft)	78	331	0	9	444		215 45 4	В			D	
Queue Length 95th (ft)	#120	351	m9	21	540	20	1	22	0		228	63
Internal Link Dist (ft)	it for the	740) : 100% (g/3:	Alfabeta	1670	32		39	17		291	111
Turn Bay Length (ft)	500	11, 1 TA,	275	200	1010	600	100	1070			720	110
Base Capacity (vph)	366	2086	986	239	1839	971	4 5 T. 6 S	470		on the second		
Starvation Cap Reductn	0	0	0	0	0	ə <i>r</i> 1 ∩		479	521		479	562
Spillback Cap Reductn	0	0	0	. 0	o		137 - 1359.	U	0		0	. 0
Storage Cap Reductn	0	0	6	n	n	15		0	0		. 0	. 0
Reduced v/c Ratio	0.65	0.76	0.05	0.18	0.85	0.20		0 10	0	Say 1 de la company	0	0
			HE LIFERING	Carrier Man		U.2U		0.10	0.10		0.80	0.50

Area Type:

Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 76 (76%), Referenced to phase 2:EBT and 6:WBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86 Intersection Signal Delay: 24.4

Intersection Capacity Utilization 78.5%

Intersection LOS: C ICU Level of Service D

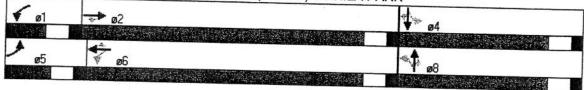
Analysis Period (min) 15

* User Entered Value

95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 12: STREET ROAD (PA 132) & PHILA PARK



				- Y	- 4	
		jo 4 svivje s	FAR IVE	D 40 - 2 - 1		
1	5 A				SBR	
1900	1900				ז ז	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	* ** ** ** ** ** ** ** ** ** ** ** ** *		No. of the Co.	1000000	AND THE PARTY OF THE PARTY.	Planting and the second second second second
41 1 1 1 1 1 A		luur suusiisii				
3.0			100000000000000000000000000000000000000	50.90		The state of the s
The second secon	10 10 10 20	447.27.10	0.1	The Street Street	4 10 10 10 10 10 10 10 10 10 10 10 10 10	The state of the s
14 - 475 L	1000000	12 2 2 3 3 4 3 7 4	T		1.00	A STATE OF THE PARTY OF THE PAR
					1830	
6.3F			1.00	0.95	1.00	S. C. Schaller and Assessment Common
		3472	1714	1986		
10 10 10 10 10 10 10 10 10 10 10 10 10 1	100000000000000000000000000000000000000	1656	54	67		
		0.92	0.92	The state of the s	THE RESERVE OF THE PERSON OF T	
57	1848	1800	59			the degree of the same
0	0	0				ka Kija da Karana di Karja Kiru
57	1848	1800	the state of the s	1000	•	The state of the s
0%	1%	The state of the s		2 Table 1	1000	
pm+pt		provided		0 70		
1	6	2	1100	HARLING.	Free	
6	1.00	Sufferior	C	8	eta <u>an</u> ee co	
	81 N	70 O				
				Street Street and Street		
ALC: 12 TO 1	ARE MAN THE PRINTS	the second of all his age of		and the same of th		TO THE STATE OF TH
					1.00	
	4-7-1	THE PERSON NAMED IN		The second second second second	you teller t	
Contract Way 1	A. O'CL W. See L	Colores Total	arenas assert			
1 10 1861 1815 1 118 118	The second section of the second		Contract of the Contract of th	Apr. 14 - 14 2 4 4 5 9 4 7 1 1 2 2 2 2 2	1830	The state of the s
	00.53	CU.52		c0.04		
the second second second	0.00				0.10	The state of the s
	the second second				0.10	ALL 120 (1994)
The second secon	200	Control of the state of the state of	and the second second	42.2	0.0	CONTRACTOR OF THE SECOND
				1.00	1.00	
200 100 100 100 100 100 100 100 100 100	The second secon	THE RESERVE OF THE PARTY OF THE	0.0	1.3	0.1	
		4.4	0.0	43.5	2004	
A	A	Α.	Α	- D	Α	A STATE OF THE PROPERTY OF THE
		4.2		12.8	THE CONFESSION CONT	
	Α	A		В		The state of the s
		SUPPOSE	Catalog Control	MARA MINERA		
lav	Investor State	17				
ratio	er a a jar erig	and the second second	HC	M Leve	of Servi	ce A
Minister (1)			160 m - 164 m	والمناوعات والمناوية والمناوية	r v torus	
ration		to seem of the last of the	Su	m of lost	time (s)	9.0
-41011	28	.970	ICL	I AVAL	of Consin	[10] - 10 - 10 - 10 - 10 - 10 - 10 - 10 -
	Land Contract	15	The Property	LEVEL	JI SEI VICE	В
	3.0 1.00 1.00 0.95 1814 0.08 147 54 0.95 57 0 57 0% pm+pt 1 6 81.0 84.0 0.84 6.0 3.0	1900 1900 12 11 -1% 3.0 3.0 1.00 0.95 1.00 1.00 0.95 1.00 1814 3472 0.08 1.00 147 3472 54 1756 0.95 0.95 57 1848 0 0 57 1848 0 0 57 1848 0 0 1% pm+pt 1 6 6 81.0 81.0 84.0 84.0 0.84 0.84 6.0 6.0 3.0 3.0 257 2916 0.02 c0.53 0.17 0.22 0.63 7.2 2.7 1.00 1.00 0.4 1.1 7.6 3.8 A A 3.9 A	1900 1900 1900 12 11 11 -1% 1900 3.0 3.0 3.0 1.00 0.95 0.95 1.00 1.00 1.00 0.95 1.00 1.00 1814 3472 3472 0.08 1.00 1.00 147 3472 3472 54 1756 1656 0.95 0.95 0.92 57 1848 1800 0 0 0 57 1848 1800 0 0 0 57 1848 1800 0 0 0 57 1848 1800 0 0 0 57 1848 0.00 0 0 57 1848 0.00 0 0 0 0 57 1848 0.00 0 0 0 0 57 1848 0.00 0 0 57 1848 1800 0 0 0 57 1848 1800 0 0 0 57 1848 1800 0 0 0 57 1848 1800 0 0 0 57 1848 1800 0 0 0 57 1848 1800 0 0 0 57 1848 1800 0 0 0 57 1848 1800 0 0 0 57 1848 1800 0 0 0 57 1848 1800 0 0 0 57 1848 1800 0 0 0 57 1848 1800 0 0 0 57 1848 1800 0 0 0 0 57 1848 1800	1900 1900 1900 1900 12 11 11 11 1 1 1 1 1 1 1 1 1 1 1 1 1	1900 1900 1900 1900 1900 1900 12 11 11 14 15 -1% 1% 0% 3.0 3.0 3.0 3.0 3.0 1.00 0.95 0.95 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	1900 1900 1900 1900 1900 1900 1900 12 11 11 11 14 15 16



Sine Should be a section	SERIE	AGE: ST	A TAVEN	WHEE	A COLOR	(a) D(e)			Cantago Carro		7876hUWWWW.		
Time Before Reduce (s)	0.0	0.0	0.0		0.0	S SON							を計
Time To Reduce (s)	0.0	0.0	0.0		0.0	**		4.					No.
Recall Mode	None		C-Min	(g). (d. e)	None		Charles Charles	and the state of the state of					
Walk Time (s)		4	, - <u> </u>	à - 196	None		X-1	V. A. O.		1			
Flash Dont Walk (s)	1		1. 1.36	847 (1319)	(armosti	with the	2 2 - 22 - 2	2 20	2.9				
Pedestrian Calls (#/hr)			ALL PROPERTY			AM CONTRA		40.00		Ne			1000
Act Effct Green (s)	85.0	85.6	75.8	100.0	11.2	100.0	15.1 NASA	With the American					
Actuated g/C Ratio	0.85	0.86	0.76	1.00	0.11	1.00							
v/c Ratio	0.23	0.62	0.68	0.03	0.36	0.10	95 - 1 34 97	Central Marie	71 m				
Uniform Delay, d1	1.3	2.7	7.6	0.0	42.2	0.0		(Market)			trobustics.		
Control Delay	4.0	4.3	4.8		42.3		di Para	in a refu	4.7.1.	100	alestate or	AND COLUMN	
Queue Delay	0.0	0.0	0.7	0.0	0.0	0.0							
Total Delay	4.0	4.3	5.5	0.0	42.3	0.1				a Kazari As	arting the server		
LOS	Α	Α	Α	Α	D	Α	E. 1. P.C.			nds/see.s			
Approach Delay		4.3	5.3		12.5		1.03	1.1.25	1	en egis e	- 14 50 - 14 A	Left of Lines Agrica	
Approach LOS	199	Α	Α		В			714 - X 1 (*)				7.用槽(作)	
Queue Length 50th (ft)	5	162	20	0	47.	0	4.744.67			National	15040000	Participation of the second	
Queue Length 95th (ft)	16	264	645	m0	84	0	and the second	17-1	11		433 HH.	With ARRIVE	
Internal Link Dist (ft)		2150	740		1027			and the second	27.	, trivel	71.02000		
Turn Bay Length (ft)	200			200						345		502112 N.Y	
Base Capacity (vph)	266	2971	2632	1714	318	1830	Mark.	norskih		N 1784		(akirkati	
Starvation Cap Reductn	0	0	441	0	0	0	7 1.7 PT 525421 934	e de deservir au		ALTERNATION OF THE	\$ 945 diffe	MARKET STEAM	
Spillback Cap Reductn Storage Cap Reductn	Ŏ	0	0	0	0	0				i diya	Mark 184		
Reduced v/c Ratio	3	0	0	0	0	0	***			o some	** *\$1408**	95885755Vat	
AND THE RESPONDED TO SERVICE OF THE PARTY OF	0.22	0.62	0.82	0.03	0.25	0.10	in Black			Constitution.			
Intersection Street execution			DESCRIPTION OF THE PARTY OF	Action for white states	STREET, VINCENCE	·				10 THE R. P. LEWIS CO., LANSING	ROME GRANDS SE	The same stop of the	

Area Type:

Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 96 (96%), Referenced to phase 2:WBT and 6:EBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.68 Intersection Signal Delay: 5.3

Intersection Capacity Utilization 58.9%

Analysis Period (min) 15

Intersection LOS: A ICU Level of Service B

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 15: STREET ROAD (PA 132) & Applebee's mentioned previously. The Saturday midday peak hour rate was obtained using Table 2 from the Box and Bunte article which provides an hourly breakdown of the daily traffic percentages.

The combination of literature research and field observations resulted in the following trip generation rate estimates:

- 0.358 trips per gaming position during the weekday evening peak hour (52% entering and
- 0.477 trips per gaming position during the Saturday evening peak hour (53% entering and
- 0.252 trips per gaming position during the Saturday midday peak hour (52% entering and

Additional information on the trip generation research, data from the local observations, and the ITE article are provided in APPENDIX F.

Based on the above stated rates, the proposed Philadelphia Park development is anticipated to generate the following peak hour trips:

- 1,074 trips during the weekday evening peak hour (558 entering and 516 exiting);
- 1,431 trips during the Saturday evening peak hour (758 entering and 673 exiting); and
- 756 trips during the Saturday midday peak hour (476 entering and 280 exiting).

In order to determine the total daily traffic expected to be developed by the site, peak hour/daily traffic ratios were applied to the entering and exiting traffic for both the proposed electronic gaming facility traffic, and the existing horse track traffic. For the proposed facility, the ratios were taken from the Box and Bunte ITE article, while the daily traffic rates for the existing traffic were estimated using ITE Trip Generation. The results of the daily traffic estimates are as

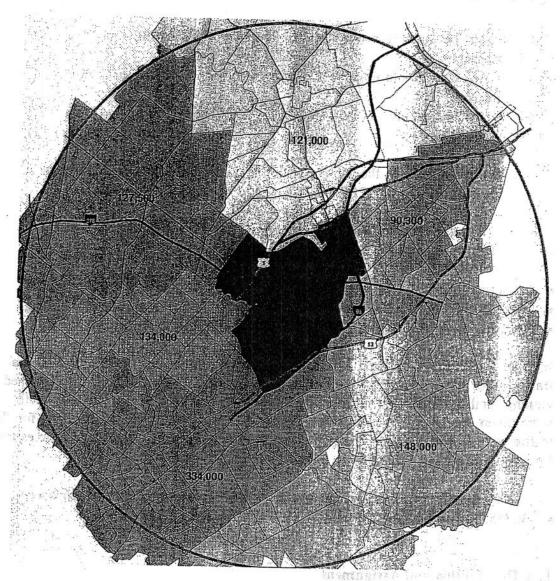
- 19,000 daily trips for an average weekday (4,450 existing and 14,550 proposed)
- 30,000 daily trips for a Saturday (10,150 existing and 19,850 proposed)

Trip Distribution and Assignment

With the proposed facility's close proximity to several major highways, a separation of local trips and regional trips was established to accurately estimate the distribution of the proposed traffic. The results of the analysis indicate that approximately 85% of the new trips generated by the site will be regional trips that will access the site and the surrounding local roadway network via a major highway or arterial. The distribution of the regional and local traffic is outlined

1. Regional Distribution

In order to estimate the regional distribution of new trips to and from the proposed gaming facility, a gravity model, with an exponentially distributed impedance function was developed. Total population, adjusted for potential casino trip-makers within a 10-mile radius of the project site was used to represent weighted trip attraction. The population is allocated to seven major zones, composed out of individual census tracts based on the proximity to a regional expressway (I-95, US-1, US-13, PA Turnpike, and Street Road). Specific zones and casino populations are shown in the image below.



Traffic analysis zones in 10-mile radius

Adjustment of Total Population to Casino Trip Makers

The total population was adjusted to potential casino trip-makers based on a survey performed by American Gaming Association about a profile of a typical American gambler [1]. Distribution by casino visitor's age was taken as an adjustment factor.

Gravity Model Set-Up

The gravity model $T_{ij} = P_i \frac{A_j F_{ij} K_{ij}}{\sum_j A_j F_{ij} K_{ij}}$ produces T number of trips between any zone i and

Philadelphia park (zone j), adjusted by the following factors:

• F_{ij} is a friction coefficient, which accounts for an impedance (travel time, distance). The impedance function was used where distance is the least responsive, yet still decreases the number of trips to Philadelphia Park with increasing distance.

• K_{ij} is a socioeconomic coefficient expressing a non-gravity relationship between zones i and j. Trips are adjusted by K_{ij} for three zones: local traffic, US-1 N traffic and PA Turnpike traffic. This adjustment factor takes into account the expectation of traffic from areas which are outside of the 10-mile radius and therefore non-reflected in the unadjusted gravity model. It also provides impedance to local traffic to prevent an overestimation of how much traffic will be generated locally.

Final regional distribution is shown in Tables 3 and 4.

PHILADELPHIA PARK

LOCAL	PULATION DEMO	21-35			GE
	75,479		36-50	51-65	66 >
RT. 13 NORTH	90,331	21,314	12,092	12,438	8,008
I-95 SOUTH	333,782	23,018	14,767	12,557	
RT. 1 NORTH		87,815	47,354	46,649	12,084
RT. 1 SOUTH	121,016	27,590	23,318		55,316
PA TURNPIKE/	134,660	29,846	19,769	20,183	12,409
TREET ROAD	220000000000		12,709	23,067	29,711
NEW JERSEY	127,543	29,376	20,245	21 (22	
vzidici	148,693	36,359		21,630	20,785
TDC		,559	23,872	24,411	19,528
UM:	1,031,504		23,072	24,411	19,5

TABLE 2 PHILADELPHIA PARK GRAVITY MODEL

LOCAL	Estimated Casino Population:	Approx. Distance To Site [km]:	TTY MO				
The state of the s	14,245	2.4		K _{ii}	A _i K _{ii} F _{ii}	Tii	Distrib.
RT. 13 NORTH	16,476		0.3817	0.55	2,990.85	310	British Comment of the Comment of th
I-95 SOUTH	62,722	9.5	0.0840	1.00	1,384.70		一种企业的
RT. 1 NORTH	22,132	12	0.0650	1.00	4,076.83	423	The state of the s
RT. 1 SOUTH		11.1	0.0708	1.90	2,978.01	7	the section of the se
PA TURNPIKE/	27,346	7.8	0.1044	1.00	2,854.87	309	Action of the second
STREET ROAD	24,506			2.00	2,034.87	296	5.15%
NEW JERSEY		10	0.0794	1.70	3,309.21		
- I I DI WILL	27,654	12.7	0.0611	1.00		343	17%
Total			5.0011	1.00	1,688.76	175	三量量9%
Total	195,081						
= 1.1	, ,				19,283.23	2000	
					$\Sigma_{i}[A_{i}K_{ii}F_{ii}]$	$\Sigma_{i}[T_{ii}]$	

2. Local Distribution

The local distribution was based on existing traffic volumes, reduced by regional traffic along Street Rd. The reduction applies to both I-95 and US-1 traffic. The traffic to and from I-95 and US-1 was reduced proportionately to the approach volumes, as it enters or exits Street Rd. This reduction allows for the local traffic to be distributed along local roadways.

Sources:

1. "Profile of an American Gambler." Harrah's Survey. American Gaming Association, Washington, D.C., 2003.

It was estimated that the traffic generated by the Philadelphia Park gaming device facility will be 85% regional and 15% local. Local traffic was distributed to the local roadway network utilizing existing traffic patterns, while regional traffic was allocated with the use of a gravity model which yielded the following distribution:

Total Regional Tra	85%		
	Street Road (SR 0132)	6%	+
To/From West:	Interstate 276	11%	
To/From East:	Interstate 276	9%	
To/From South:	Interstate 95 Lincoln Highway (Route 1)	22% 15%	
To/From North:	Lincoln Highway (Route 1) Bristol Pike (Route 13)	15% 7%	

FIGURES 14, 15, 16, 17, 18 & 19 provide illustrations of the distribution of project traffic and the assignment of project trips to the study intersections and site accesses.

As previously noted, the distribution of the regional traffic will take into account the completion of the Rockhill Drive extension/connector road that is currently in construction as part of the YDC redevelopment project. The connector road will provide an optional route to Route 1. The roadway is estimated to attract approximately 8% of the regional Route 1 traffic.

PHILADELPHIA PARK TRAFFIC IMPACT STUDY

APPENDIX F

TRIP GENERATION AND DISTRIBUTION DATA

Gaming Casino Traffic

THE AUTHORS

SUMMARIZE RESULTS

FROM TRAFFIC VOLUME

STUDIES OF TWO

GAMING CASINOS—

THE CASINO ST. CHARLES

AND THE CASINO QUEEN.

GAMING CASINOS GENERATE significant volumes of traffic—especially during the evening peak hour. Two studies of existing operations were made in the St. Louis, Mo., USA, metropolitan area, including hourly vehicular volumes and daily variations. Also, the projections from an economic report for a proposed casino were utilized to provide multiplication factors for traffic counted in any given month, to that expected during the peak summer months.

Gaming casinos have three general types of positions—individual, such as slots and video poker; table, such as blackjack and poker; and audience, such as Keno or racing. For riverboat type facilities, a land-side staging area is used. Other customary services include bar and restaurant.

The Casino St. Charles is located in the metropolitan area, west of the Missouri River. It is reported to have about 2,500 gaming positions, about 80 per cent of which are slots or video poker machines.

In January 1995, counts of entering and leaving traffic were taken across weekdays, Saturday and Sunday. For the peak hours, the counts were converted into rates of flow in and out of the facility per gaming position and were expanded to the summer peak conditions (see Table 1). The highest weekday traffic occurs on Friday, while the absolute peak hour occurs on Saturday evening.

From the counts, it also was possible to calculate the hourly variation by the days of the week during which counts

Paper L. Chestin Six stigites peak from the divergence in the recomming design.

Doy Hour Rate

0.48

0.54

changes and changes as a second se

BY PAUL C. BOX AND WILLIAM BUNTE

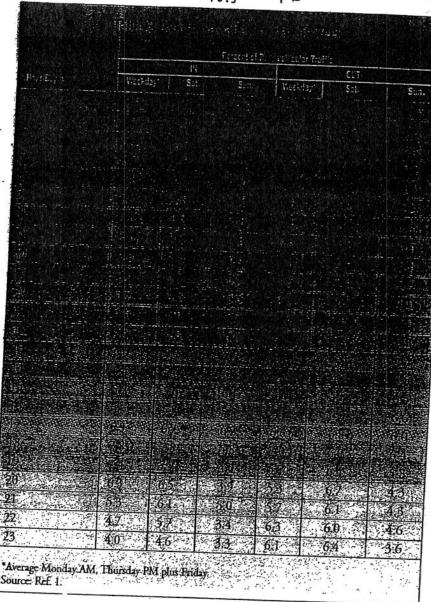
13.5 7-6

were taken. These data are given in Table 2. It should be noted that the facility is quite busy from 09:00 through 22:00 hours. Unlike residential, office or industrial developments, gaming casinos have no significant AM peak hour loading.

A second study was taken at the Casino Queen, a land-based facility on the north side of the Mississippi River in East St. Louis, Ill., USA. Table 3 gives the rates of flow in the PM peak hour per gaming position for customer traffic and separately for employee/service vehicles. The counts have been expanded to peak summer month activity. Only one truck entered or left the casino during the PM peak, which was from 16:30 to 17:30. This is a much smaller facility than the Casino St. Charles, with only 1,200 gaming positions. About 80 percent are slots or video poker. Furthermore, this casino is only open 22 hours per day (09:00 through 07:00). Pickup/dropoff traffic also was observed at the Casino Queen, and amounted to about 10 vehicles during the PM peak. Data on various characteristics of the casinos, such as floor area and employees, are given in Table 4.

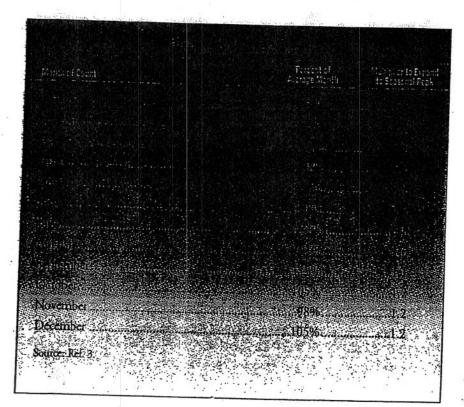
The peak gaming months are reported as May, July and August. These may be considered as the "design" condition. The percent of average months and the monthly variation in expected casino traffic, provided in the form of a multiplier for counts taken in a given month to those projected during the peak months, is given in Table 5. For example, a February count would be expanded by 30 percent (1.3 times the count) to reach peak month volumes. The data are taken from an economic study, prepared in connection with a gaming facility zoning application to St. Louis County.

Additional studies of casino traffic are warranted because of widely varying characteristics. For example, the St. Louis casinos had similar rates of peak flow per gaming position. However, the St. Charles facility continued to experience significant flow and had a weekday peak just after the PM peak, while the Casino Queen traffic dropped abruptly at the end of the rush hour. The count was discontinued at this point, because



Tree of Toutie	Rate per G	aming Position*
Type of Traffic Contrasting	IN .	OUT
ENPOYED HER STATES OF		
		1 7 4 16

		d No steered		
			St. Charles	Casino Queen
	94 74 anyer	1. 497H. 1 1 2 1		
TO STATE OF STATE OF				
		Carried and the same		生物,不是描述 于
abab solomi				



the scope of study was intended to analyze only the PM street peak hour generation.

The two sites studied have provided useful information on hourly and monthly variation. These data should guide studies of other sites. Separate counts of customer and employee vehicular traffic, plus trucks, should be taken on busy weekdays and perhaps on a Saturday evening, if a street capacity problem is likely. At some locations, large numbers of patrons may arrive by bus, which relates to geometric design of driveways.

Other studies of gaming facilities needed include parking generation, which represents a major factor. The development of gaming on Native American tribal lands is often away from or at the fringe of metropolitan areas. Traffic and parking characteristics of these facilities may differ from those

within a metropolitan area. Busing may represent a more significant factor—especially relative to parking layout.

References

- Traffic Impact Study for the Ultimate Development of St. Charles Riverfront Station, Final Report. Crawford, Bunte, Brammeier, August 1995, unpublished.
- Study of Casino Queen. Paul C. Box and Associates Inc., November 1996, unpublished.
- 3. Honeshoe Gaming, St. Louis County Project. Economics Research Associates, as presented to County Plan Commission about September 1996, unpublished.



PAUL C. BOX,

P.E., has about 17 years of experience working for cities and some 33 years of experience as a traffic consultant. He has more than 100 publications in the traffic engineering

field, has lectured extensively and has chaired a number of ITE Standard Practice technical committees. He is a Fellow and Life Member of ITE



WILLIAM F. BUNTE,

P.E., received his bachelor's and master's degrees in civil engineering from the University of Illinois. During the past 32

years he has provided straffic and transportation engineering consulting services for a variety of private and public clients. He currently is a partner in the firm of Crawford, Bunte, Brammeier. He is a Fellow of ITE.

Pennoni Associates, Inc. 950 Clifton Ave. Clifton, NJ, 07013 973-365-0510

Counter: 2779 Counted By: AW Weather: COLD

Other: Trip Generation

Total %

100.0

51.5

File Name: South Entrance Site Code : 00000022

Start Date : 01/11/2003

48.5

100.0

48.5

1370

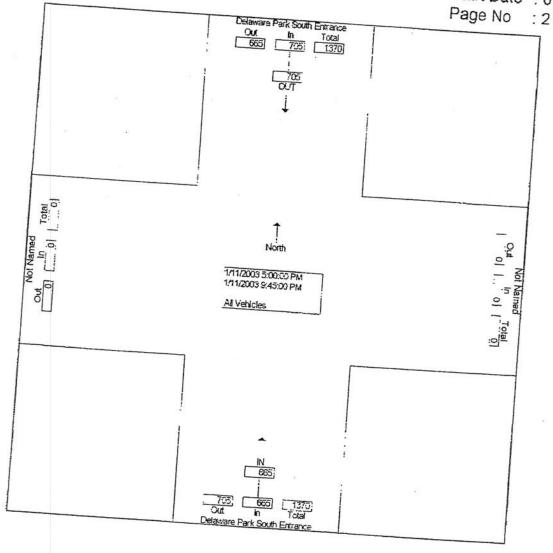
	G	roups Printed- All Veh	lala a	Page No : 1	
i i	Delaware Park Sou	uth Entrance	Delaware Park Sou	ith Entrance	
Char	From No	rth	From Sou		
Start Time	OUT	App. Total	IN		
Factor	1.0		1.0	App. Total	Int. Total
05:00 PM	48	48	49		
05:15 PM	63	63		49	97
05:30 PM	33	33	28	28	91
05:45 PM	45	45	53	53	86
Total	189		42	42	87
	100	189	172	172.	361
06:00 PM	43				001
06:15 PM		43	45	45 :	88
06:30 PM	54	54	49	49	
06:45 PM	39	39	34	34	103
Total	52	52	31	31	73
10(2)	188	188	159	159	83
07:00 PM				103	347
07:00 PM	38	38	31	31	
	45	45 ;	41	41	69
07:30 PM	36	36	40	50750000 M	86
07:45 PM	34	34	27	40	76
Total	153	153	139	27	61
20.00				139	292
08:00 PM	29	29	32		
08:15 PM	14	14	24	32	61
08:30 PM	28	28		24	38
08:45 PM	18	18	15	15 j	43
Total	89	89	34	34	52
		03	105	105	194
09:00 PM	24	241	~~	Patrone #	
09:15 PM	12	24	27	27	51
09:30 PM	29	12	18	18 .	30
09:45 PM	21	29	24	24	53
Total	86	21	21	21 :	42
	00	86	90	90	176
Grand Total	705	705		2000 I	
Appreh %	100.0	705 [‡]	665	665	1370

51.5

Pennoni Associates, Inc. 950 Clifton Ave. Clifton, NJ, 07013 973-365-0510

File Name: South Entrance

Site Code : 00000022 Start Date : 01/11/2003



Pennoni Associates, Inc. 950 Clifton Ave.

Clifton, NJ, 07013 973-365-0510

File Name: North Entrance

Site Code : 00000001 Start Date : 01/11/2003

Page No : 1

counter: 2778 Counted By: SF Weather: COLD

Other: Trip Generation

Groups Printed- All Vehicles

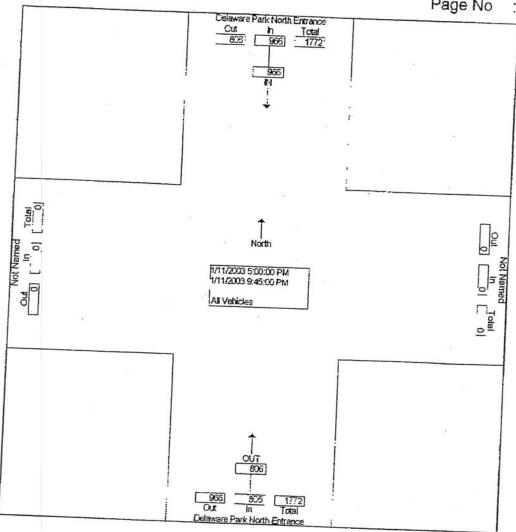
	HENN THE PROPERTY OF STREET	Delaware Park Nort		Delaware Park Nor	
		From Sou		From Nor	
Int Tot	App. Total	OUT	App. Total	IN .	Start Time
		1.0		1.0	Factor !
11	40	40	78	78	05:00 PM
11	46	46	69	69	05 :15 PM
9	46	46	52	52	05:30 PM
12	49	49	71	71	05:45 PM
45	181	. 181	270	270	Total
10-	50	50	54	54	. 06:00 PM
10:	43	43	59	59	06:15 PM
8:	42 :	42	40	40	06:30 PM
72	36 .	36	36	36	06:45 PM
360	171	171	189	189	Total
92	47	47	45	45	07:00 PM
84	42	42	42	42	07:15 PM
64	31	31	33	33	07:30 PM
84	43	43	41 :	41	07:45 PM
324	163	163	161	161	Total
66	31	31	35	35	08:00 PM
83	38 i	38	45	45	08:15 PM
85	42	42	43	43	08:30 PM
81	38	38	43	43	08:45 PM
315	149	149	166	166	Total
67	36	36	31 '	31	09:00 PM
95	45	45	50	50	09:15 PM
- 83	28	28	55 į	55	09:30 PM
77	33	33	44	44	09:45 PM
322	142	142	180	180	Total
1772	806 ·	806	966	966	Grand total
		100.0		100.0	Apprch %
	45.5 ;	45.5	54.5	54.5	Total %

Pennoni Associates, Inc. 950 Clifton Ave. Clifton, NJ, 07013 973-365-0510

File Name: North Entrance

Site Code : 00000001 Start Date : 01/11/2003

Page No : 2



Pennoni Associates, Inc. 950 Clifton Ave.

Counter: 05 Counted By: CRA Weather: COLd

Other: Trip Generation

Clifton, NJ, 07013 973-365-0510

File Name: East Entrance

Site Code : 00000055 Start Date : 01/11/2003

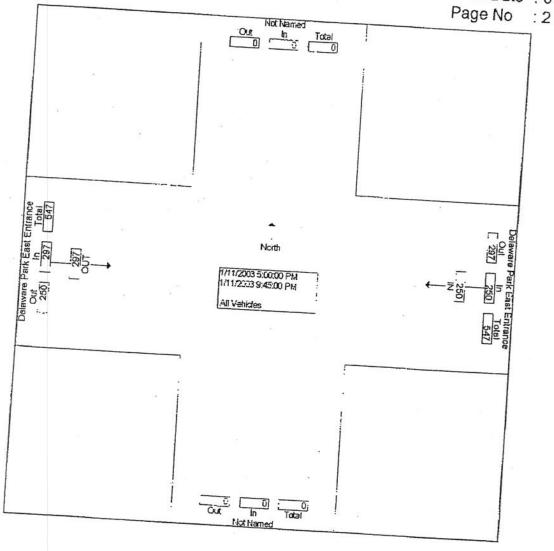
Page No : 1

Delaware Park Eas From Wes OUT; 1.0 . 6 22 23 23 74	6 22 23 23 74 !	Int. Total 7 33 37 54
OUT; 1.0. 6 22 23 23 74 21 20	App. Total 6 22 23 23 74	7 33 37
1.0 . 6 22 23 23 74 21 20	6 22 23 23 74	7 33 37
6 22 23 23 74 21 20	22 23 23 74	7 33 37
22 23 23 74 21 20	22 23 23 74	33 37
23 23 74 21 20	22 23 23 74	33 37
23 74 21 20	23 23 74	37
74 21 20	23 74	
21 20	74 !	54
20		121
20	24.1	131
20		2.7
	20	34
11		41
28	11	24
80	28 '	46
00	80 :	145
22		
		33
		23
		19
12		23
92	52	23 98
_		
	8	16
	6,	17
	26	32
		30
50		<u>30</u> 95
	•	35
7	7	17
12		21
		18
12		10
41		22
	**;	78
297	207.	F 45
	251	547
	1	
	12 10 12	23 23 11 11 6 6 12 12 52 52 52 52 52 52 52 52 52 50 50 50 50 50 50 50 50 50 50 50 50 50

Pennoni Associates, Inc. 950 Clifton Ave. Clifton, NJ, 07013 973-365-0510

File Name: East Entrance

Site Code : 00000055 Start Date : 01/11/2003



HOURLY

TOTAL

Z

Ш

S

START TIME

HOURLY

TOTAL

Z

ш

S

START TIME

ENTERING

EXITING

444 450 440

439

117

43

238 39 38 34 45 29 14 14 18

19:00 19:15 19:30 19:45 20:00 20:15 20:30 20:45 21:00 21:15 21:30

∞ -

20:15 20:45 21:00 21:15

309 329 329 307

9 2 0 0 0 0 0 0 0

504

28 28 29 21 20 21

(17/45)

483 472 413

18,00

18:15

18:30 18:45

387 353 352 346 335 320 298 316

1327 18 13

18:30

18:00

18:45

19:15 19:30 19:45

17:30

		•						יים	., (94	ח נ	Ω			954
200	414	305	360	328	288	311	288	287	208	269	269	202			464
	92	116	108	86	73	89	89	58	96	99	67	69	67	99	MAX
	42	36	47	42	31	43	31	38	42	38	36	45	28	33	
	11	28	23	11	9	12	8	9	26	10	7	12	10	12	

Entering = 504 Exiting = 450

53% 47%

G:\PROJECTS\BENS\2003\0306001 Philadelphia Park\Counts\Delaware Park\Count Analysis-delaware park.xls

PHILADELPHIA PARK TRIP GENERATION AND DISTRIBUTION

Trip Generation

The standard reference generally utilized to estimate traffic generated by new developments is a publication entitled <u>Trip Generation</u> by the Institute of Transportation Engineers. However, <u>Trip Generation</u> does not include a significant amount of data for gaming uses. The data it does include, does not match up well with the proposed Philadelphia Park development. Therefore, additional research was conducted to identify other sources of trip data.

An article titled "Gaming Casino Traffic", published in the <u>ITE Journal</u>, March 1998, by Paul C. Box and William Bunte, provides trip generation rates and an analysis of the daily fluctuation in generated traffic for two gaming casino facilities. While the article establishes trip generation rates per gaming position for the study sites, the rates could not be reasonably applied to the Philadelphia Park site, because the sites included in the article contain table an audience type gaming positions (blackjack, poker, Keno).

In order to develop an estimate of the future traffic for the proposed gaming device facility, driveway count information from similar facilities was utilized. Traffic counts from the following facilities were analyzed:

- Freehold National, New Jersey
- · Delaware Park, Delaware
- · Dover Downs, Delaware

Out of the three sites, the trip generation rates regressed from Delaware Park Saturday evening driveway vehicle counts appear to be most suitable to be applied to Philadelphia Park. This is primarily because the driveway traffic counts at this facility were conducted when the live horse racing facility was closed and therefore the trips attracted by the gaming device facility were singled out. Additionally, the Delaware Park site is compatible with the proposed Philadelphia Park development, in that it includes a similar number and type of supporting patron services within the gaming device facility.

In order to develop trip generation rates for the weekday evening peak hour, the regressed Saturday evening rate was adjusted based on ratios provided in the Box and Bunte article mentioned previously. The Saturday midday peak hour rate was obtained using Table 2 from the Box and Bunte article which provides an hourly breakdown of the daily traffic percentages.

The combination of literature research and field observations resulted in the following trip generation rate estimates:

- 0.358 trips per gaming position during the weekday evening peak hour (52% entering and 48% exiting); and
- 0.477 trips per gaming position during the Saturday evening peak hour (53% entering and 47% exiting)
- 0.252 trips per gaming position during the Saturday midday peak hour (52% entering and 48% exiting)

Based on the above stated rates, the proposed Philadelphia Park development is anticipated to generate of the following peak hour trips:

- 1,074 trips during the weekday evening peak hour (558 entering and 516 exiting);
- 1,431 trips during the Saturday evening peak hour (758 entering and 673 exiting); and
- 756 trips during the Saturday midday peak hour (476 entering and 280 exiting).

In order to determine the total daily traffic expected to be developed by the site, peak hour/daily traffic ratios were applied to the entering and exiting traffic for both the proposed electronic gaming facility traffic, and the existing horse track traffic. For the proposed facility, the ratios were taken from the Box and Bunte ITE article, while the daily traffic rates for the existing traffic were estimated using ITE Trip Generation. The results of the daily traffic estimates are as follows:

- 19,000 daily trips for an average weekday (4,450 existing and 14,550 proposed)
- 30,000 daily trips for a Saturday (10,150 existing and 19,850 proposed)

Trip Distribution and Assignment

With the proposed facilities close proximity to several major highways, a separation of local trips versus regional was established to accurately estimate the distribution of the proposed traffic. The results of the analysis indicate that approximately 85% of the new trips generated by the site will be regional trips that will access the site and the surrounding local roadway network via a major highway or arterial. The distribution of the regional and local traffic is outlined below:

1. Regional Distribution

In order to estimate the regional distribution of new trips to and from the proposed gaming facility, a gravity model, with an exponentially distributed impedance function was developed. Total population, adjusted for potential casino trip-makers within a 10-mile radius of the project site was used to represent weighted trip attraction. The population is allocated to seven major zones, composed out of individual census tracts based on the proximity to a regional expressway (I-95, US-1, US-13, PA Turnpike, and Street Road). The study assumes an all-or-nothing trip assignment of Philadelphia park trips to major regional roadways from these zones. Specific zones and casino populations are shown in the image below.



Traffic analysis zones in 10-mile radius

Adjustment of Total Population to Casino Trip Makers

The total population was adjusted to potential casino trip-makers based on a survey performed by American Gaming Association about a profile of a typical American gambler [1]. Distribution by casino visitor's age was taken as an adjustment factor.

Gravity Model Set-Up

The gravity model $T_{ij} = P_i \frac{A_j F_{ij} K_{ij}}{\sum_i A_j F_{ij} K_{ij}}$ produces T number of trips between any zone i

and Philadelphia park (zone j), adjusted by the following factors:

- F_{ij} is a friction coefficient, which accounts for an impedance (travel time, distance). The impedance function was used where distance is the least responsive, yet still decreases the number of trips to Philadelphia Park with increasing distance.
- K_{ij} is a socioeconomic coefficient expressing a non-gravity relationship between zones i and j. Trips are adjusted by K_{ij} for three zones: local traffic, US-1 N traffic and PA Turnpike traffic. This adjustment factor takes into account the expectation of traffic from areas which are outside of the 10-mile radius and therefore non-reflected in the unadjusted gravity model. It also provides impedance to local traffic to prevent an overestimation of how much traffic will be generated locally.

Final regional distribution is shown in Tables 1 and 2.

TABLE 1
PHILADELPHIA PARK
POPULATION DEMOGRAPHICS- POPULATION BY AGE

	Total 2000 Population	21-35	36-50	51-65	66>
LOCAL	75,479	21,314	12,092	12,438	8,008
RT. 13 NORTH	90,331	23,018	14,767	12,557	12,084
I-95 SOUTH	333,782	87,815	47,354	46,649	55,316
RT. 1 NORTH	121,016	27,590	23,318	20,183	12,409
RT. 1 SOUTH	134,660	29,846	19,769	23,067	29,711
PA TURNPIKE/ STREET ROAD	127,543	29,376	20,245	21,630	20,785
NEW JERSEY	148,693	36,359	23,872	24,411	19,528
GVD 6					
SUM:	1,031,504				

TABLE 2 PHILADELPHIA PARK GRAVITY MODEL

	Estimated Casino Population:	Approx. Distance To Site [km]:	$\mathbf{F_{ii}}$	K _{ii}	A _i K _{ii} F _{ii}	Tii	Daidhe
LOCAL	14,245	2.4	0.3817	0.55	2,990.85	310	5.574
RT. 13 NORTH	16,476	9.5	0.0840	1.00	1,384.70	144	-50%
I-95 SOUTH	62,722	12	0.0650	1.00	4,076.83	423	Sings.
RT. 1 NORTH	22,132	11.1	0.0708	1.90	2,978.01	309	176
RT. 1 SOUTH	27,346	7.8	0.1044	1.00	2,854.87	296	25E
PA TURNPIKE/ STREET ROAD	24,506	10	0.0794	1.70	3,309.21	343	187%
NEW JERSEY	27,654	12.7	0.0611	1.00	1,688.76	175	97,5
Total	195,081				19,283.23	2000	
c = 1.1					$\Sigma_{i}[A_{i}K_{ij}F_{ij}]$	$\Sigma_{i}[T_{ii}]$	

2. Local Distribution

The local distribution was based on existing traffic volumes, reduced by regional traffic along Street Rd. The reduction applies to both I-95 and US-1 traffic. The traffic to and from I-95 and US-1 was reduced proportionately to the approach volumes, as it enters or exits Street Rd. This reduction allows for the local traffic to be distributed along local roadways.

Sources:

1. "Profile of an American Gambler." Harrah's Survey. American Gaming Association, Washington, D.C., 2003.

It was estimated that the traffic generated by the Philadelphia Park gaming device facility will be 85% regional and 15% local. Local traffic was distributed to the local roadway network utilizing existing traffic patterns, while regional traffic was allocated with the use of a gravity model which yielded the following distribution:

To/From North:	Lincoln Highway (Route 1) Bristol Pike (Route 13)	15% 7%	
To/From South:	Interstate 95 Lincoln Highway (Route 1)	22% 15%	
To/From East:	Interstate 276	9%	
To/From West:	Interstate 276 Street Road (SR 0132)	11% 6%	+

Total Regional Traffic

85%

SUMMARY AND CONCLUSIONS

Philadelphia Park proposes to construct an electronic gaming device facility at their existing mixed venue entertainment complex which includes a horse racing facility (consisting of grandstands and box seating); restaurants, sports bars, lounges and simulcasting theaters. The proposed gaming device facility will be comprised of restaurants, bars, nightclubs, and 3000 electronic gaming units.

Based on literature research and data from existing gambling facilities, the proposed addition of 3000 gaming units to the existing Philadelphia Park site is anticipated to generate a total of:

- 1,074 trips during the weekday evening peak hour (558 entering and 516 exiting);
- 1,431 trips during the Saturday evening peak hour (758 entering and 673 exiting); and
- 756 trips during the Saturday evening peak hour (476 entering and 280 exiting).

Utilizing peak/daily traffic rates for the proposed gaming facility traffic and the existing racetrack traffic yields the following daily traffic estimates for the entire site:

- 19,000 daily trips for an average weekday (4,450 existing and 14,550 proposed)
- 30,000 daily trips for a Saturday (10,150 existing and 19,850 proposed)

It was estimated that the traffic generated by the Philadelphia Park gaming device facility will be 85% regional and 15% local. The local traffic was distributed to the roadway network utilizing existing traffic patterns while the regional traffic was allocated to the roadway network through the use of a gravity model which yielded the following distribution:

Total Regional Traffic		85%	
	Street Road (SR 0132)	6%	+
To/From West:	Interstate 276	11%	
To/From East:	Interstate 276	9%	
	Lincoln Highway (Route 1)	15%	
To/From South:	Interstate 95	22%	
To/From North:	Lincoln Highway (Route 1) Bristol Pike (Route 13)	15% 7%	

The projected development traffic was added to traffic from other planned area developments and analyzed under build year 2005 and design year 2015 conditions. For both the build year and design year, area roadway improvements that are either in construction or planned for future construction were included in the analysis period

which corresponds to their anticipated completion date. Based on the analysis, the following roadway and traffic signal improvements are recommended as part of this project to mitigate the impact of the development traffic:

- An additional through lane should be provided for both the eastbound and westbound directions of Street Road from east of Mechanicsville Road to west of Richlieu Road.
- At the Street Road Philadelphia Park Access, dual southbound left turn lanes out of the site should be provided. With this modification, the northbound (Tillman Drive) and southbound (Philadelphia Park) approaches must operate under split phasing.
- A right turn lane should be provided for the southbound approach of Richlieu Road at Street Road.
- One public access should be provided to Richlieu Road. This access point should be signalized with auxiliary turn lanes into and out of the site, and should be interconnected with fiber optic cable to the adjacent intersections along Richlieu Road at Street Road and Rockhill Drive.
- Left turn lanes should be provided for all approaches at the Mechanicsville site access location.
- Timing modifications should be provided for all signalized intersections within the study area. Event timing plans for the Street Road corridor must be developed and implemented with the corridor's traffic responsive operation.
- Data collection should be completed after the development is open to determine the
 effectiveness of the recommended improvements and to optimize the area signal
 timings based on the actual distribution of the project traffic.

With the implementation of the above referenced improvements, and with close coordination with planned area roadway improvements, the traffic to be generated by the proposed Philadelphia Park electronic gaming device facility can be successfully accommodated within the local roadway network.