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July 24, 2013

Andrea M. Troutman, P.E.
President
PTC Transportation Consultants
2005 Vista Parkway, Suite 111
West Palm Beach, Florida 33411-6700

Re: **Equestrian Village**
PBIEC Trip Generation Study

Dear Mrs. Troutman:

Per your request, we have evaluated trip generation characteristics at the existing Palm Beach International Equestrian Center (PBIEC) to support the trip generation estimated on traffic studies prepared for the proposed Equestrian Village.

Traffic counts were collected during the week of January 16 through 22, 2012. These counts were collected at the following locations:

- Equestrian Club Road, south of Pierson Road,
- Equestrian Club Road, north of Equestrian Club Estates, and
- Gene Mische Way, south of Pierson Road.

Figure 1 shows the approximate location of these counts. 24-hour directional counts were collected at these locations and are included in **Appendix A**.

Turning movements counts were collected on March 14 through 17, 2013 (Thursday through Sunday) at the following intersections:

- Equestrian Club Road and Pierson Road, and
- Gene Mische Way and Pierson Road.

24-hour directional counts were also collected during this time period on Equestrian Club Road, north of Equestrian Club Estates. The 2013 counts are included in **Appendix B**.

PBIEC can be accessed through two roads along Pierson Road: Equestrian Club Road (to the east) and Gene Mische Way (to the west). Equestrian Club Road also provides access to Equestrian Club Estates, as presented in **Figure 1**. In order to determine PBIEC trip generation, traffic to/from Equestrian Club Estates was subtracted from traffic along Equestrian Club Road. In addition, traffic accessing the site on golf carts and mopeds were added at all three locations (they were not subtracted on Equestrian Club Road) as there is no way of identifying through or

pass-by golf cart traffic. This makes the analysis conservative as there will be some double counting.

Information about PBIEC operations was obtained from the owner and is presented in **Exhibit 1**. Data on number of occupied stalls which were rented during the day: permanent, temporary and ship-ins (brought in during the day of the event) are included in the exhibit. In addition, data on number of riders, entries, staff, spectators (during the Saturday night special event), and hours of operations are also included in Exhibit 1. For purposes of the trip generation study, the number of rented/occupied stalls (including permanent, temporary and ship-ins) will be used as the independent variable to estimate trip generation rates during the weekdays. The number of spectators will be used as the independent variable to estimate trip generation rates during a special event.

Weekday Average Daily Traffic

The 2012 traffic counts were analyzed to determine daily trip generation at PBIEC. The summary of traffic volumes per day is included in **Appendix C**. The following table summarizes trip generation for the week of January 16-22, 2012:

PBIEC Daily Trip Generation – January 16-22, 2012

Date	Equestrian Club Trips	Gene Mische Trips	Total
1/16/2012	421	1087	1508
1/17/2012	769	604	1373
1/18/2012	1423	734	2157
1/19/2012	2099	647	2746
1/20/2012	2435	1417	3852
1/21/2012	3997	3738	7735
1/22/2012	2129	3305	5434

As presented in the table above, trip generation increases through the week with a Saturday peak. This is the day of special events with a significant number of spectators.

The 2013 traffic counts were also analyzed to determine daily trip generation. The summary is included in **Appendix D**. The following table summarizes trip generation for March 14-17, 2013:

PBIEC Daily Trip Generation – March 14-17, 2013

Date	Equestrian Club Trips	Gene Mische Trips	Total
3/14/2013	2052	5556	7608
3/15/2013	2336	6285	8621
3/16/2013	4165	6895	11060
3/17/2013	2311	4711	7022

Trip generation rates were calculated based on traffic included in the tables above as well as number of rented/occupied stalls (including permanent, temporary and ship-ins). The following table presents determination of trip generation rates during a weekday:

Weekday Daily Trip Generation Rate

Day	Date	Daily Traffic	Occupied Stalls *	Trip Generation Rate **
Thursday	1/19/2012	2746	2010	1.37
Friday	1/20/2012	3852	1995	1.93
Thursday	3/14/2013	7608	2106	3.61
Friday	3/15/2013	8621	2108	4.09
Average Daily Trip Generation Rate				2.75

* Includes permanent, temporary and ship-ins

** Daily Trips per Occupied Stalls

It must be noted that trip generation rates presented above only include Thursday and Friday counts when traffic volumes were the highest during the week. Therefore, the rates are not intended to represent an average weekday. They are probably higher than those of an average weekday. These have been calculated to support trip generation estimated at Equestrian Village.

The proposed 325 stalls at Equestrian Village generate 894 daily trips using the average trip generation rate of 2.75. This is significantly lower than the 1,415 daily trips included in the traffic study. Considering a worst case scenario and using the highest trip generation rate of 4.09 results in 1,329 daily trips which is still lower than those included in the traffic study.

Weekday Peak Hour of Adjacent Street Traffic

In order to determine traffic generated during peak hours of the adjacent street, traffic counts were analyzed for Friday, January 20th, 2013. This represents a worst case scenario as Friday has the highest traffic volume during the weekday. Traffic volumes were analyzed from 7:00 to 9:00 a.m. and from 4:00 to 6:00 p.m. to determine the highest four fifteen-minute traffic volume. The a.m. peak hour started at 7:45 a.m. while the p.m. peak hour started at 4:15 p.m. This analysis is included in **Appendix E** and it is summarized as follows:

- During the a.m. peak hour of the adjacent street, there are a total of 179 trips generated by the site with 122 vehicles entering and 57 vehicles exiting the site.
- During the p.m. peak hour of the adjacent street, there are a total of 367 trips generated by the site with 148 vehicles entering and 219 vehicles exiting the site.

Friday, March 15, 2013 was also analyzed to determine traffic generated during peak hours of the adjacent street. The a.m. peak hour started at 7:00 a.m. while the p.m. peak hour started at 4:00 p.m. This analysis is included in **Appendix F** and it is summarized as follows:

- During the a.m. peak hour of the adjacent street, there are a total of 624 trips generated by the site with 501 vehicles entering and 123 vehicles exiting the site.
- During the p.m. peak hour of the adjacent street, there are a total of 777 trips generated by the site with 224 vehicles entering and 553 vehicles exiting the site.

Trip generation rates were calculated based on peak hour traffic generated by PBIEC and the number of rented/occupied stalls (including permanent, temporary and ship-ins) included in Exhibit 1. The following table presents determination of weekday trip generation rates during peak hours of the adjacent street:

AM Peak Hour of the Adjacent Street Trip Generation Rate

Day	Date	AM Peak Hour Traffic	Occupied Stalls *	Trip Generation Rate **
Friday	1/20/2012	179	1995	0.09
Friday	3/15/2013	624	2108	0.30
Average Daily Trip Generation Rate				0.19

* Includes permanent, temporary and ship-ins

** Peak Hour Trips per Occupied Stalls

PM Peak Hour of the Adjacent Street Trip Generation Rate

Day	Date	PM Peak Hour Traffic	Occupied Stalls *	Trip Generation Rate **
Friday	1/20/2012	367	1995	0.18
Friday	3/15/2013	777	2108	0.37
Average Daily Trip Generation Rate				0.28

* Includes permanent, temporary and ship-ins

** Peak Hour Trips per Occupied Stalls

It must be noted that trip generation rates presented above only include Friday counts, which represents the weekday with the highest traffic. Therefore, the rates are not intended to represent an average weekday. They are probably higher than those of an average weekday. These have been calculated to support trip generation estimated at Equestrian Village.

The proposed 325 stalls at Equestrian Village generate 62 a.m. and 91 p.m. peak hour trips using the average trip generation rates presented in the tables above. This is significantly lower than the 210 a.m. and 199 peak hour trips included in the traffic study. Considering a worst case scenario and using the highest trip generation rates (0.30 a.m. and 0.37 p.m.), the proposed 325

stalls at Equestrian Village generate 98 a.m. and 120 p.m. peak hour trips which is still lower than those included in the traffic study.

Special Events Traffic

Special events are usually scheduled on Saturdays at PBIEC. Traffic was analyzed on Saturday, January 21, 2012 to estimate trip generation rates based on spectators attending the event. The analysis is included in **Appendix G** and is summarized as follows:

- The peak hour when the majority of the traffic enters the site to attend the event starts at 5:45 p.m. During this time there are a total of 649 trips generated by the site with 477 vehicles entering and 172 vehicles exiting the site.
- The peak hour when the majority of the traffic exits the site starts at 10:00 p.m. During this time there are a total of 853 trips generated by the site with 258 vehicles entering and 595 vehicles exiting the site.

Trip generation rates were calculated based on peak hour traffic generated by PBIEC and the number spectators included in Exhibit 1. The following table presents determination of trip generation rates during special events:

Peak Hour of Special Events Trip Generation Rates

Start Time	Date	Peak Hour Traffic	Spectators	Trip Generation Rate *
17:45	1/21/2012	649	2659	0.24
22:00	1/21/2012	853	2659	0.32

* Peak Hour Trips per Spectator

The proposed 3,000 spectators at Equestrian Village generate 720 and 960 peak hour trips using the trip generation rates presented in the table above. This is significantly lower than the 1,288 and 1,277 peak hour trips included in the traffic study. The Equestrian Village traffic study includes a directional split where 1,270 vehicles enter the site prior to the event and 1,271 exit the site after the event. Once again, it has been shown that using trip generation rates developed from PBIEC, the trip generation of the proposed Equestrian Village is lower than that estimated in the traffic studies.

Traffic counts were also available for Saturday, March 16, 2013 when a special event was scheduled at PBIEC. Total traffic on this day was 11,060 and there were 3,950 spectators. While total traffic for Saturday, January 21, 2012 was 7,735 and there were 2,659 spectators. Since the rate of spectators to daily traffic was similar (2.91 in 2012 and 2.80 in 2013) between 2012 and 2013, the 2013 traffic for a special event was not evaluated.

This analysis has demonstrated that trip generation used in the Equestrian Village traffic studies is overestimated based on trip generation rates developed from traffic counts collected at PBIEC.

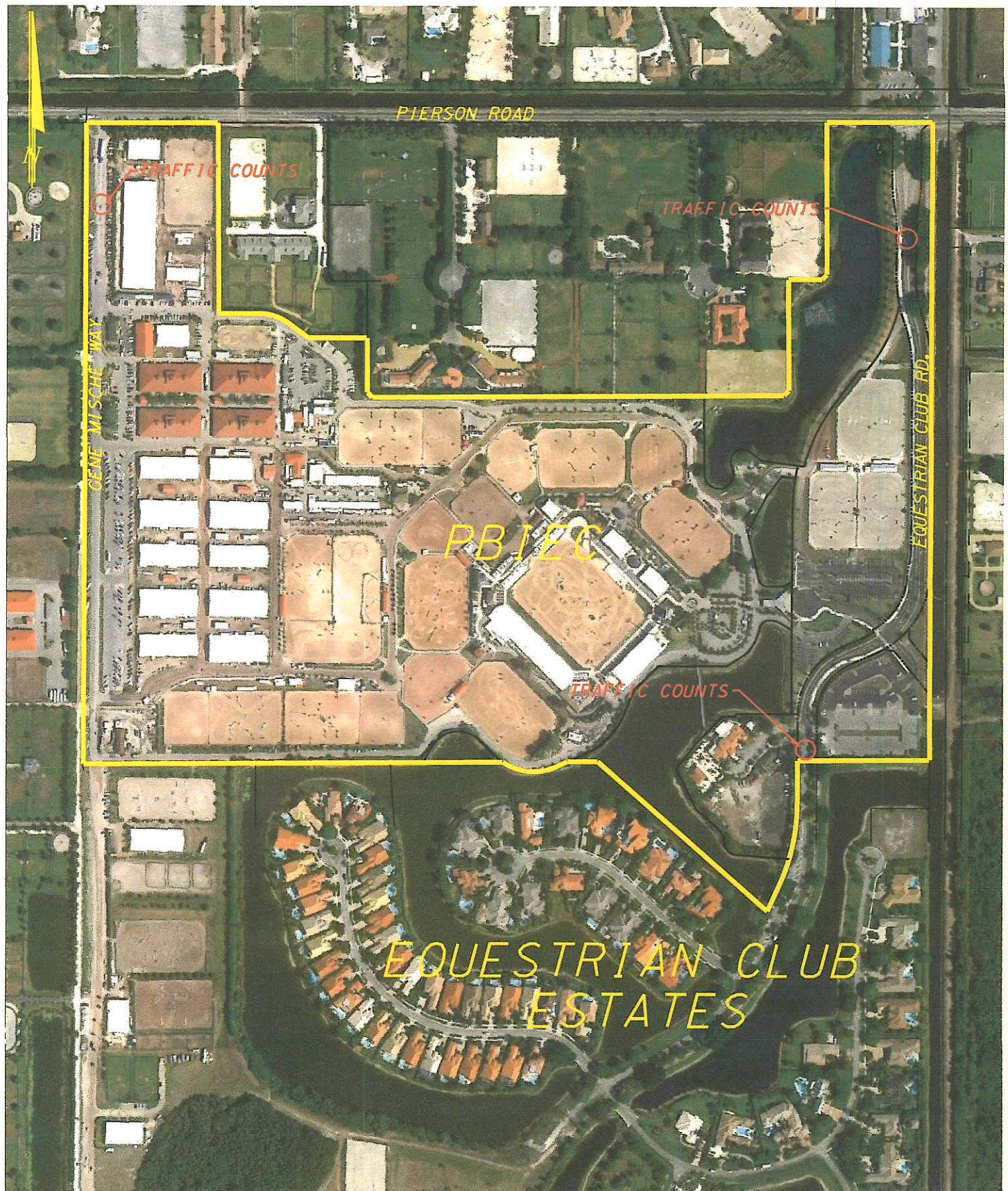
Please, do not hesitate to contact me at your earliest convenience at (561) 795-0678 should you have any questions.

Sincerely,

MTP Group, Inc.
MARIA M. TEJERA
LICENSE
No. 44095
STATE OF FLORIDA
PROFESSIONAL ENGINEER
7/24/13
Maria M. Tejera, P.E.
President

Florida Registration Number 44095
Certificate of Authorization Number 6585

Attachments: Figure 1 and Exhibit 1
Appendices A through G



**PALM BEACH INTERNATIONAL
EQUESTRIAN CENTER
WELLINGTON, FLORIDA**

SEA

SEXTON ENGINEERING ASSOCIATES, INC.

CONSULTING ENGINEERS AND SURVEYORS

110 PONCE DE LEON STREET, SUITE 100
ROYAL PALM BEACH, FLORIDA 33411
PHONE 561-792-3122 FAX 561-792-3168
FL. REGISTRATIONS: LB0006837, EB 0007864

FIGURE 1

TRAFFIC COUNT LOCATIONS

PROJ. NO. 1374138
SCALE 1"=400'

DATE 07/24/2013
SHEET 1 OF 1

EXHIBIT 1

	Permanent Stalls	Temporary Stalls	Ship ins	Entries	Riders	Staff Day	Staff Night	Spectators Night	Open	Finish
14-Mar-13	371	1696	39	1069	356	315			8am	4.30pm
15-Mar-13	371	1696	41	1255	502	315			8am	6pm
16-Mar-13	371	1696	40	1163	650	315	256*	3950 estimate	8am	11pm
17-Mar-13	286	1423	42	1168	700	315			8am	5.30pm
				4655						
							* this is total not additional			
19-Jan-12	256	1696	58	1082	365	306			8am	4.30pm
20-Jan-12	256	1696	43	1259	501	306			8am	6pm
21-Jan-12	256	1696	59	1278	639	306	246*	2659 estimate	8am	11pm
22-Jan-12	256	1512	51	1266	706	306			8am	5.30pm
				4885						



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August 5, 2013

Andrea M. Troutman, P.E.
President
PTC Transportation Consultants
2005 Vista Parkway, Suite 111
West Palm Beach, Florida 33411-6700

Re: **Equestrian Village**
PBIEC Trip Generation Study

Dear Mrs. Troutman:

Per your request, we have evaluated trip generation characteristics at the existing Palm Beach International Equestrian Center (PBIEC) to support the trip generation estimated on traffic studies prepared for the proposed Equestrian Village. This evaluation pertains to trip generation rate for special events occurring Saturday, March 16, 2013.

Turning movements counts were collected on March 14 through 17, 2013 (Thursday through Sunday) at the following intersections:

- Equestrian Club Road and Pierson Road, and
- Gene Mische Way and Pierson Road.

24-hour directional counts were also collected during this time period on Equestrian Club Road, north of Equestrian Club Estates. The 2013 counts are included in **Appendix B** of the previously submitted **PBIEC Trip Generation Study** dated **July 24, 2013**.

PBIEC can be accessed through two roads along Pierson Road: Equestrian Club Road (to the east) and Gene Mische Way (to the west). Equestrian Club Road also provides access to Equestrian Club Estates, as presented in **Figure 1**. In order to determine PBIEC trip generation, traffic to/from Equestrian Club Estates was subtracted from traffic along Equestrian Club Road. In addition, traffic accessing the site on golf carts and mopeds were added at all three locations (they were not subtracted on Equestrian Club Road) as there is no way of identifying through or pass-by golf cart traffic. The analysis is, therefore, conservative as it includes double counting.

PBIEC operations information was obtained from the owner and is presented in **Exhibit 1**. Data on number of occupied stalls which were rented during the day: permanent, temporary and ship-ins (brought in during the day of the event) are included in the exhibit. In addition, data on number of riders, entries, staff, spectators (during the Saturday night special event), and hours of operations are also included in Exhibit 1. For purposes of the trip generation study, the number of spectators will be used as the independent variable to estimate trip generation rates during a special event.

Special Events Traffic

Special events are usually scheduled on Saturdays at PBIEC. Traffic was analyzed on Saturday, March 16, 2013 to estimate trip generation rates based on spectators attending the event. The analysis is included in the **Appendix** and is summarized as follows:

- The peak hour when the majority of the traffic enters the site to attend the event starts at 6:15 p.m. During this time there are a total of 865 trips generated by the site with 734 vehicles entering and 131 vehicles exiting the site.
- The peak hour when the majority of the traffic exits the site starts at 9:30 p.m. During this time there are a total of 1,039 trips generated by the site with 107 vehicles entering and 932 vehicles exiting the site.

Trip generation rates were calculated based on peak hour traffic generated by PBIEC and the number spectators included in Exhibit 1. The following table presents determination of trip generation rates during special events:

Peak Hour of Special Events Trip Generation Rates

Start Time	Date	Peak Hour Traffic	Spectators	Trip Generation Rate *
18:15	3/16/2013	865	3950	0.22
21:30	3/16/2013	1039	3950	0.26

* Peak Hour Trips per Spectator

The table below was included in the analysis dated July 24, 2013. This table summarizes trip generation rates during a special event on January 21, 2012.

Peak Hour of Special Events Trip Generation Rates

Start Time	Date	Peak Hour Traffic	Spectators	Trip Generation Rate *
17:45	1/21/2012	649	2659	0.24
22:00	1/21/2012	853	2659	0.32

* Peak Hour Trips per Spectator

Based on the information presented above, the average trip generation rate during a special event has been calculated as:

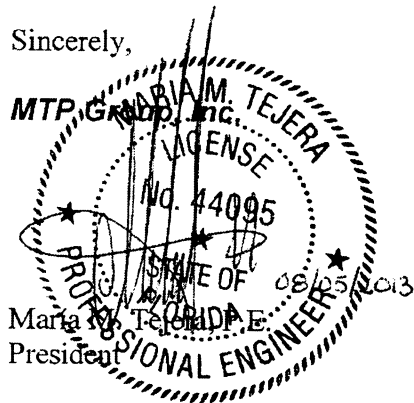
- 0.23 trips per spectator – majority of the traffic entering
- 0.29 trips per spectator – majority of the traffic exiting

The proposed 3,000 spectators at Equestrian Village are expected to generate 690 and 870 peak hour trips using the average trip generation rates presented above. This is significantly lower than the 1,288 and 1,277 peak hour trips included in the traffic study. Considering a worst case scenario and using the highest trip generation rates (0.24 and 0.32), the proposed 3,000 spectators at Equestrian Village are expected to generate 720 and 960 peak hour trips. The Equestrian Village traffic study includes a directional split where 1,270 vehicles enter the site prior to the event and 1,271 exit the site after the event. Once again, it has been shown that using trip generation rates developed from PBIEC, the trip generation of the proposed Equestrian Village is lower than that estimated in the traffic studies.

This analysis has demonstrated, once again, that trip generation used in the Equestrian Village traffic studies is overestimated based on trip generation rates developed from traffic counts collected at PBIEC.

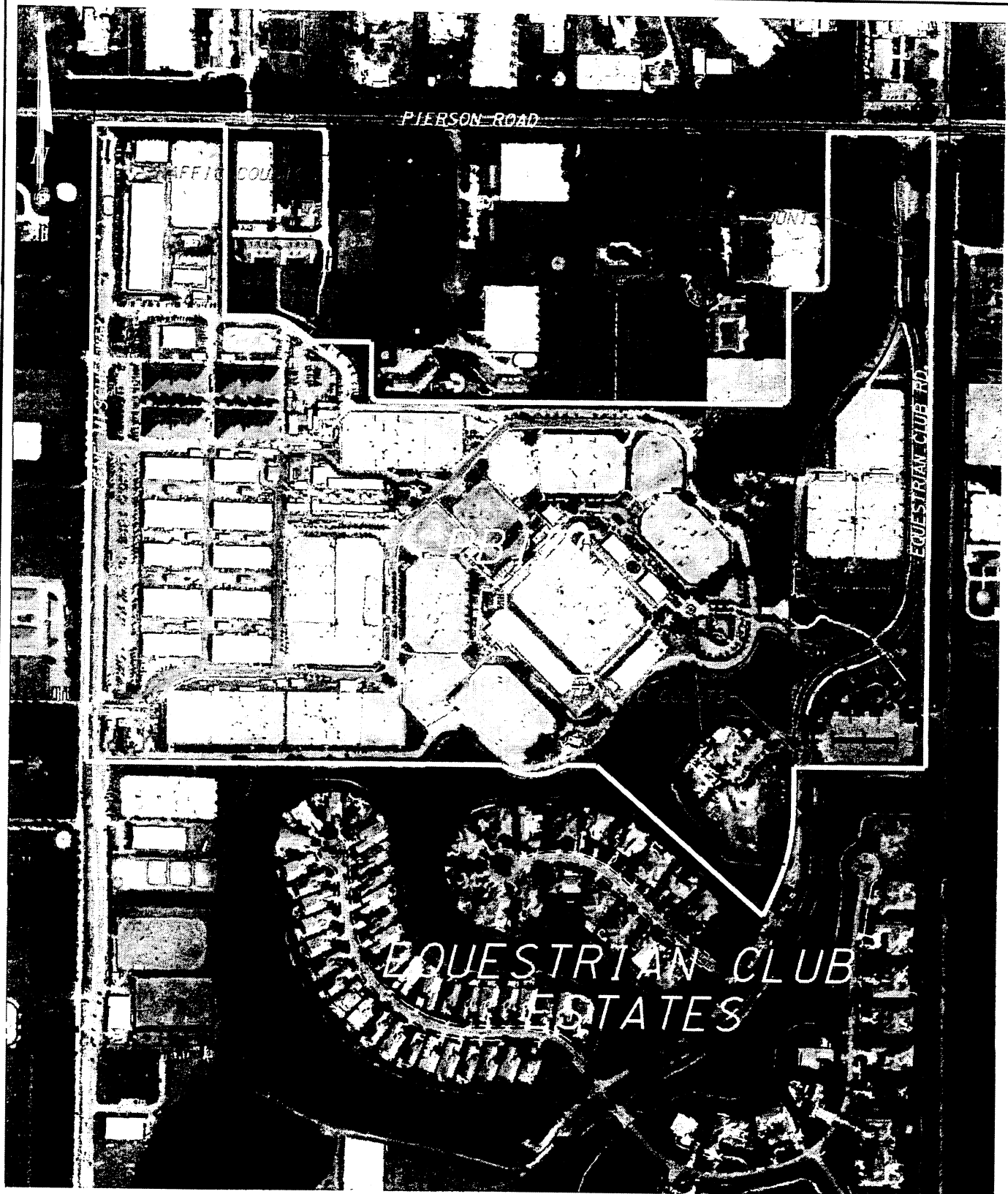
Please, do not hesitate to contact me at your earliest convenience at (561) 795-0678 should you have any questions.

Sincerely,



Florida Registration Number 44095
Certificate of Authorization Number 6585

**Attachments: Figure 1
Exhibit 1
Appendix**



PALM BEACH INTERNATIONAL
EQUESTRIAN CENTER
WELLINGTON, FLORIDA

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E
S

SEXTON ENGINEERING ASSOCIATES, INC.

CONSULTING ENGINEERS AND SURVEYORS

10 PONCE DE LEON STREET, SUITE 100

ROYAL PALM BEACH, FLORIDA 33411

PHONE 561-792-3122 FAX 561-792-3168

FL. REGISTRATIONS: LB0006837, EB 0007864

FIGURE 1

TRAFFIC COUNT LOCATIONS

ROLL NO. 1374738

DATE 07/24/2013

SCALE 1"=400'

SHEET 1 OF 1

EXHIBIT 1

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