TRAFFIC ANALYSIS

PALMER TRINITY PRIVATE SCHOOL, INC.

VPB-14-001

To: Darby Delsalle
Director of Planning and Zoning

Date: June 25, 2014

From: Corrice E. Patterson, Public Works Director

Re: Palmer Trinity
Site Plan Review

The proposed site plan for Palmer Trinity School Inc. 7900 SW 176th Street – Folio #33-5034-000-0580 and 8001 SW 184th Street – Folio #33-5034-000-0620 has been submitted to the Village's Public Works Department for review.

The following comments are being provided as a condition of site plan approval.

1. Correct typo on page A0.02 Roadway Access – Project fronts SW 18th ST should read SW 184th ST
2. All traffic improvements on SW 184th ST shall meet LOS requirements for section line roadways and be approved by Miami-Dade County Public Works Waste Management Division of Traffic Engineering.
3. Solar panel crosswalks; school zone beacon lights should be incorporated into signing and pavement marking plan detail sheet.
4. Sidewalk connectivity is required and public sidewalks are required to extend across all school driveways around the site. To include pedestrian (ADA) ramps where applicable. All pedestrian crosswalks around the school must have zebra pavement markings.
5. Safe sight distance clearance is required at all driveways; therefore, no trees shall remain or be planted in any clear zones. All tree placements in sight triangles shall meet or exceed FDOT Index 546. Any proposed planting, relocation or removal of trees and other foliage including any installation of irrigation systems in the public right-of-way must be approved by the R.A.A.M. Any relocation or removal of trees must also be approved by DERM.
6. A "Covenant for Maintenance" agreement, recorded in the public record, must be provided for all improvements planned for installation within the public right-of-way.
7. The Public Works Department reserves the right to add or modify requirements based upon any additional information that may be received during this review process.

Cc: Travis Kendall, Planning and Zoning Administrator
Morelia Rodriguez, Zoning Technician
Danny Casals, Field Operations Supervisor

PALMER TRINITY SCHOOL

Jose Chao <jchao@palmertrinity.org>

Fwd: FW: Palmer Trinity School, 7900 SW 176th Street, Palmetto Bay Master Plan Review

1 message

Jose Chao <jchao@palmertrinity.org> Tue, Mar 18, 2014 at 4:34 PM
To: Tom Reid <treid@palmertrinity.org>

---------- Forwarded message ----------
From: **Timothy J. Plummer** <tim.plummer@dplummer.com>
Date: Mon, Mar 17, 2014 at 4:50 PM
Subject: FW: Palmer Trinity School, 7900 SW 176th Street, Palmetto Bay Master Plan Review
To: Jose Chao <jchao@palmertrinity.org>, Suzanne Calleja <scalleja@palmertrinity.org>
Cc: Eileen Ball Mehta Bilzin <emehta@bilzin.com>, Lourdes Solera <lsolera@mcharry.com>

See attached conceptual approval from MDC.

Timothy J. Plummer, PE

President

DAVID PLUMMER & ASSOCIATES

Transportation • Civil • Structural • Environmental

1750 Ponce de Leon Boulevard

Coral Gables, Florida 33134

Phone: 305-447-0900 Fax: 305-444-4986

www.dplummer.com

From: Gavilan, Ricardo (PWWM) [mailto:rlg@miamidade.gov]
Sent: Monday, March 17, 2014 4:41 PM
To: Victor Lee
Cc: Timothy J. Plummer; Shen, Joan (PWWM); Cohen, Jeff (PWWM); Soto, Annie (PWWM); Hays, David (PWWM)
Subject: Palmer Trinity School, 7900 SW 176th Street, Palmetto Bay Master Plan Review

Dear Mr. Lee,

Miami-Dade County Public Works and Waste Management Department Traffic Engineering Division (TED) has reviewed the attached master site plan, dated 02/21/14, for the subject school and has no objection provided the following comment is incorporated into the site plan and the project requirements are met.

- Comment

The southwestern-most parking lot, with the "dead-end" northbound parking aisle, should allow for continuous vehicle circulation by providing a one-way westbound drive aisle that connects to the adjacent parking lot drive aisle.

- Project Requirements

1) All off-site improvements shall be constructed prior to the school's expansion

2) A School Speed Zone (composed of signs, pavement markings, and flashing beacons) is required to be installed along the school's frontage roads (SW 184 Street and SW 176 Street).

3) A School Traffic Operations Plan must be submitted to TED for review and approval, in conjunction with or prior to a permit application for required improvements within the SW 184 Street right-of-way shown on plans.4) A "Declaration of Restrictions" in favor of the Miami-Dade County Public Works Department must be recorded in the Official Records of Miami-Dade County, Florida prior to the date of the school opening or expansion. The "Declaration of Restrictions" shall include a TOP narrative and plan that has been found acceptable by TED.

Please contact me if you have any questions regarding this message.

Sincerely,

Ricardo Gavilan, P.E., PTOE, LEED A.P., Professional Engineer

Public Works and Waste Management Department,

Traffic Engineering Division

111 NW 1st Street, Suite 1510, Miami, Florida 33120-1900
305-375-2030 Phone 305-372-6064 Fax
www.miamidade.gov/gsa
"Delivering Excellence Every Day"
Please consider the environment before printing this email.

x_PTS_Masterplan- 2-28-14_24' roadway.pdf
345K

THE CORRADINO GROUP

Memorandum

To: Mr. Ron Williams, Village Manager, The Village of Palmetto Bay

From: Joseph M. Corradino, AICP, The Corradino Group

Date: April 16, 2010

Copy: Eve Boutsis, Julian Perez

Subject: Palmer Trinity School Traffic Study dated April 2010

The Corradino Group (Corradino) has completed its review of the subject Palmer Trinity School Traffic Study.

In summary, the recommendation to the Village is to **Approve, with conditions** and the satisfactory response to minor questions about the analysis. This opinion is based on several factors.

1. The applicant's study has adequately addressed the methodology.
2. While the livability of 176th Street as a residential local roadway was and continues to be a major concern to the Village, the applicant has not only mitigated future impact, but decreased the volume of vehicles on this street by guaranteeing lower school related traffic volumes from the existing condition through build out. Yet this needs to be refined and have methods put in place by which the Village can enforce the guarantee.
3. Mitigation of traffic impacts related to the school as it relates to the remainder of the evaluated network have been offered, yet is insufficient relative to mitigating the schools incremental impact to the transportation system.

Without adequately mitigating the impacts through the agreement to certain conditions, the recommendation of this application would be denial.

The applicant has done an adequate job in measuring the traffic in the existing conditions, the future year (2015) without the project and the future year with the project. They have addressed neighborhood impacts and been responsive to the concerns of the community not only in offering to mitigate the schools impacts to the transportation network in and surrounding the neighborhood, specifically along 176th Street where traffic volumes have impacted the quality of life and livability of the street. From a transportation standpoint this project makes great strides as it tries to be responsive and respectful to the surrounding community, yet it is believed that these mitigation efforts must be enhanced to begin to off set the incremental impacts to the transportation system. Therefore several conditions may be appropriate to assure neighborhood interests are continually addressed, and the true impacts to the system are mitigated by the school. Recommended conditions are enumerated herein.

While the placement of a school in a residential neighborhood is often be perceived as disruptive to the community, schools are appropriate uses with residential neighborhoods. If done consistent with the character of the neighborhood they can seamlessly fit into a suburban fabric and be a significant benefit to the immediately surrounding neighborhood and the community at large. It is imperative for those schools to be sensitive and accommodating to the surrounding residential neighbors. If not then they should not be allowed. Quality of life in our cities is largely built on the provision of neighborhood or family oriented services, such as parks and schools. Palmetto Bay has been an exemplary leader in providing these amenities in the appropriate scale and spacing to increase the quality of life and the value of the community.

Palmer Trinity has existed in this location for nearly two decades. As such it is an integral part of the community. It has property rights just as all the neighbors have. It has responsibilities to its neighbors just they do to each other. From a growth management perspective, understanding the rights that they have, it is incumbent on Palmetto Bay to assure the surrounding community that the further development of this school will have its impacts mitigated so as not to negatively impact the community as a whole. This means that while there may be more traffic on the road, the flow of that road should not be degraded, as a result of the traffic that the school is generating. Essentially the impacts should be neutral. A driver should see no difference in the time it takes to get from point A to point B before or after the school is built. Yet the impacts of over 1,000 additional trips have wide ranging and incremental toll on the transportation system. It is from this perspective that the Village has worked with Palmer Trinity relative to mitigating traffic impacts.

The applicant's analysis details the impacts of the school on the immediately adjacent transportation network. It offers that school traffic using 176th Street will decrease by 35% and that overall traffic on 176th Street will decrease by about 25% during the peak hours. They propose to open a new entrance at 184th Street and they intend to limit access to the 176th Street entrance to 460 students for a reduction in school traffic at that entrance of 23%. This will be a net benefit to the neighborhood, particularly along 176th Street. It will keep the primary impacts on 184th Street, (a section line road) and out of the residential area.

The following is proposed by the school to mitigate traffic impacts and accommodate neighborhood concerns relative to traffic:

- Constructing a new main entrance at 184th Street. (open immediately)
    - All parking vehicles will be required to use this entrance
- Limit the use of the 176th Street entrance to 460 Students
- Old Cutler Road / 184th Street intersection; add southbound right turn lane; signal phasing adjustments
- 184th Street at PTS Driveway; construct an eastbound left turn lane; construct a westbound right turn lane
- 176th PTS Driveway / 184th St PTS Main entrance: provide one off- duty officer at each for both morning drop off and afternoon pickup periods

These are excellent and welcome recommendations but do not go far enough in mitigating the incremental impacts to the system at large, or guaranteeing the impacts stay mitigated. It is believed that mitigation of level of service deficiencies in and of themselves does not completely address the impacts of the school on the roadway network. Simply because a roadway has not passed a level of service threshold does not mean there are no impacts. The school currently generates 1,253 trips. Once built out the school will generate 2,400 trips. This is an additional 1147 trips represent a 91% increase in traffic. Each additional trip incrementally impacts the transportation system, and each needs to be mitigated.

Conditions

1 General Traffic Issues

If this school is built there inevitably will be some perception of negative traffic issues after opening because of the changes. Most likely some adjustments to the operations will be necessary. It is suggested that regular meetings between the School and Village officials occur to address issues that arise during and after construction.

2 176th Street Entrance

It will be a significant benefit to the neighborhood to have 24% less traffic on 176th Street than there is currently. In the existing condition 600 students utilize the 176th Street entrance. Palmer Trinity proposes that no more than 460 Students per day will be allowed to use that entrance in perpetuity. This is acceptable in concept, but needs to be made measurable and enforceable.

It is suggested that 460 students be converted to trips. At this time 600 students equates to daily 1,253 trips (641 in and 612 out). Using the same methodology, 460 students would equate to a total of 960 daily trips. The Village would find limiting the number of trips at the 176th Street entrance to 960 per day (a +-24% reduction) acceptable under the condition that no more than 300 trips use that driveway in any given peak period, (AM, Midday, and PM, all as defined in this analysis). This seems attainable due to the fact that all vehicles parking would be mandated to use the 184th Street entrance. Currently of the 399 trips that enter in the AM peak, only 196 exit in the AM peak, leading the analyst to believe that 203 trips or nearly 50% park on site. Eliminating these parkers from the entrance would in the future mean that only 150 trips would enter in the AM peak hour. That being said, management of this should be initially left to the School.

This must be enforceable. To do so the Village requests that Palmer Trinity fund a set of peak hour intersection turning movement counts, and 72 hour link counts to be taken by the Village along 176th Street and at the School driveway entrance on that street. These are to occur on a random basis each semester of school operations in perpetuity at the discretion of the Village.

If either the 960 trip daily volume or 300 trip peak hour volume are violated, the School will be notified and be required to enact measures to bring the traffic volumes into compliance. To do so the Village would like the School to propose at least three mitigative measures that would be enacted should the situation arise. These should be agreed upon as a condition of approval. These could consist of a color coded decal system; limiting access to/from 176 to the east only; license plate numbers entrance assignment; lottery assignment, controls/prohibitions/signing; closing internal roads so driveway entered must be exited, etc.

If the volume conditions are violated, and the corrective action is not implemented within 3 weeks of the school being noticed of the violation, the Village will require the entrance be closed until corrective action is implemented. The Village will then verify the actions to be working through additional Village traffic counts paid for by the School. Upon the fourth violation of the volume standards, and upon every violation thereafter the Village will have the right to close the 176th Street entrance until the beginning of the next semester or three months, which ever is longer.

The Village requests that this entrance be closed to vehicular traffic on weekends and holidays.

The Village requests that this entrance not be used for the delivery of goods or services to the school.

The Village requests that no commercial vehicles use that entrance.

3 Alternative Modes

Palmer Trinity will be required actively encourage students to carpool, or use public or private mass transit to get to and from school. The Village requests that the school develop an alternative mode feasibility program. This should seek to provide incentives for the use of alternative modes. This must identify the existing mode split of the student travel patterns and set reasonable and measurable goals for how to achieve a more balanced split.

4 Mitigating School Related Operational Deficiencies

The Village should accept the three mitigation efforts relative to traffic operations as enumerated below:

- Old Cutler Road / 184th Street intersection; add southbound right turn lane; signal phasing adjustments
- 184th Street at PTS Driveway; construct an eastbound left turn lane; construct a westbound right turn lane
- 176th PTS Driveway / 184th St PTS Main entrance: provide one off- duty officer at each for both morning drop off and afternoon pickup periods

5 Additional Mitigation

The mitigation above only remedies situations where school traffic has caused a facility to operate worse than the acceptable level of service. Yet there are undisputedly incremental impacts of every trip on the network, not just those trips that surpass the Level of Service threshold. As noted in the applicants report, the Miami Dade County Transportation Improvement Program has no programmed capacity improvements projects in the area. Palmetto Bay through its Comprehensive Plan and Transportation Master Plan has over fifty multi-modal projects which it is planning, designing and implementing to address congestion and traffic in the Village. The Village is constantly addressing issues related to the ambient growth of traffic largely from outside the community. It is understood that many trips taken in the area are long, and that cut through traffic is prevalent. To this end the Village has sought to focus in providing a casual flow of traffic on the main arterial network though operational improvements. They have in turn sought to ameliorate cut through traffic by the use of traffic calming, based on the County's residential street livability standards, and have attempted to provide alternatives for commuters through their circulator. All of this is funded by the Village.

To that end, in order for Palmer Trinity to pay their fair share of the incremental impact to the transportation system, the Village proposes a mitigation fee of $1,000 for each new trip placed on the transportation network as generated by Palmer Trinity. The Village will place this into its transportation fund and use it to implement local transportation improvements.

In total the impact of this development is significant. It increases the student population from 600 to 1,150, a 92% increase. In the existing condition the school generates 1,150 trips. In the future it will generate a staggering 2,400 trips (92% increase). Not to mention trips associated with the management and operations of a facility of this scale. With this facility doubling its size there is perhaps no greater generator of traffic in the entire Village. Undoubtedly these additional 1,147 trips will have an incremental impact on the entire network. For perspective the additional 1,147 trips generated by Palmer Trinity equate to nearly 4% of the daily trips on Old Cutler Road, or 11% of daily trips on 184th Street.

Questions For Applicant Based On Analysis

The study was completed in an acceptable manner per the methodology and to traffic engineering standards. However the impacts to the community were underestimated.

Page 1
Please explain how the SW 176 Street driveway will be limited to 460 Students at project build out within the Traffic Study. Please include/clarify/expand in body of report. If any necessary engineering controls relative to this issue are warranted they should be developed prior to build out or shortly thereafter if delays and problems arise upon opening.

Was safety at existing driveway or other study intersections a problem?

Explain in detail how school traffic on 176th Street will decrease by 35% during the peak hours.

Explain in detail how 176th Street will decrease by 25% during the peak hours.

Page 7 Section 1.3 How was the 55% of the school population leaving at discharge time determined? Include reference/data if available.

Page 9 Section 2.1.1
The applicant suggests that the LOS standard of 176th Street is LOS E. And that the LOS standard on 184th Street is LOS D. This seems counterintuitive. Please explain how this was arrived at.

Intimating that the actual LOS on 176th Street is acceptable is disputed by the Village. It is suggested that LOS standards and performance relative to 176th Street be removed.

Page 10
What time does the AM peak hour and PM peak hour occur?

Page 10 and Exhibit 4
What percentage of project trips was used for the PM peak hour?

Page 20
How was the existing trip distribution survey performed?

How was the existing and future trip distributions modified/adjusted?

Pages 23-24
Add Future to exhibit tiles for 14 and 15 for clarity.

Page 26 Exhibit 17
The service volume column for old cutler road shows "NA". Please Explain. Does Old Cutler Road have a service volume at LOS D for its north bound and south bound directions? If so what are they? If so does the projected traffic with the school exceed those service volumes?

On this table it appears that Old Cutler Road was evaluated for LOS through a travel time and delay study. Were the other links evaluated in the same manner?

If not please produce a table that evaluates all links with the same method, either through travel time and delay study or through comparison of service volumes to projected volumes.
Page 27
Delays at the main driveway exiting in the discharge hour may encourage use of the 176th driveway as an alternate. Enforcement of driveway use may become an issue and will need to be monitored after build out.

Was a signal analyzed/warranted for the intersection for the184 Street/ PTS Driveway considered to mitigate delays for exiting movements during the AM, discharge, and PM peak hours?

Was pedestrian and bike traffic circulation considered at either driveway location? Other intersections? How would it impact the operations?

Were special events tennis matches, football games etc…considered as part of the analysis. Similar mitigating controls should be considered during these times as peak hours. How are non daily patrons (visitors) directed to the appropriate driveways?

Page 27 Exhibit 18
Old Cutler Roads intersections had their movements evaluated as overall, while other intersections were evaluated directionally. Please explain why.

For the Old Cutler Road intersections AM and PM Peak Hour LOS, please show what the LOS was without the addition of a southbound right turn land and the adjusted signal timing

For 184th Street and 82nd Ave it is show that the NB movement is LOS F, but that field observations show that the delay is overestimated by the software, and that if the delay reach that point, motorists would tend to use an alternative route.