Final Report

NUEVA HIGH SCHOOL TRANSPORTATION MANAGEMENT PLAN

26 November 2012

Prepared for: The Nueva School

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

EXECUTIVE SUMMARY

Nueva High School is a private high school with a compact, multi-story design, and a strong cultural commitment to reducing drive-alone trips. It is proposed that the school be constructed to accommodate up to 450 students and 60 (full time and part time) faculty and staff and be located within block MU-1 in the Bay Meadows Phase II Specific Plan area. Bay Meadows is supported by a robust transportation system that includes opportunities for carpooling and using transit, biking and walking to reduce drive-alone trips.

Trip generation for the site based on a mode share analysis indicates up to 91 trips are expected to be generated during the PM peak hour. Because the school will take approximately 7 years to reach its initial target enrollment of 400 students (with a maximum future capacity of 450), opening day trip generation (and parking demand) for Nueva High School will be significantly lower.

The school site will have two vehicle entries and one exit. The principal vehicular entry to the site is from 28th Avenue and will be for parents dropping off or picking up students, Nueva buses, and emergency, delivery and service vehicles. The exit from the site is on Delaware Street but will also allow secondary access for staff, faculty, and visitors to reach the school's on-site parking.

The 28th Avenue driveway will be right in/out only and the Delaware Street access will be right in/out and left turns in. The right in/out operation of the main entrance and separation of entry traffic disperses traffic loads and eliminates conflicts with other vehicles at intersections and driveways. Therefore, this configuration has negligible effects on levels of service or queuing for other traffic. Signing, striping and other measures will be implemented at the project driveways to reinforce the right in and out operation and restrict prohibited left turns.

Some students will be dropped off and picked up by parents or others. The on-site circulation has been designed to provide drop-off and pick-up queuing on site for more than 500 feet. The curb area for students is 90 feet long to allow up to 4 vehicles to unload and load students at a time. An analysis of the car line confirmed that all queuing can be contained on site without spillback into 28th Avenue.

The school proposes to provide 125 parking space, two loading areas for delivery vehicles (that can also be used for parking small buses), and a bus loading (and parking) area that can accommodate two large school buses.

The San Mateo Municipal Code does not specifically apply to the project per the SPA and Rail Corridor TOD Plan Policy 7.22; however, the project comes close to meeting the Code requirement for non-TOD school projects in San Mateo.

Parking generation estimates based on a mode share analysis indicates demand will require 86 spaces. Estimated demand is well below the number of spaces proposed by Nueva High School.

On-site spaces will be dedicated for the use of faculty, staff, and visitors. Although no regular student parking will be provided, 33 spaces will be available to students on an exception basis. Students with a special need such as having to drive because of an after school project, a parent that is unable to pick up for the day, medical/dental appointment, etc. can obtain from the administration office a daily permit that allows them to park in a designated space in the garage. Excess daily parking will generally be reserved for visitors rather than made available to additional students.

Occasional large special events, including performing arts or cultural productions, graduation, and educational conferences, may require additional off-site parking. Nueva is finalizing a special event parking arrangement with a neighboring facility for up to 400 additional parking spaces subject to coordination of specific date availability. Special events will be conducted in coordination with the availability of these, and / or comparable, parking spaces.

The combination of 125 on-site parking spaces and offsite spaces will accommodate all contemplated special events. Special events will be scheduled, staffed, sized, and parked under the direction of school administration in conjunction with the commute, transportation, and parking coordinator and school safety and security personnel to ensure compliance with on-site and off-site parking availability and traffic requirements at Bay Meadows, and will be rescheduled, downsized, relocated, or cancelled, as required.

Parking for service vehicles, shipping and delivery vans and trucks, and school buses from visiting schools is also provided on site without interference to the circulating drive that wraps around the school.

Maintaining trip generation below the maximum block trip budget and limiting parking demand below the 125 on-site spaces are reinforced by a strong TDM program proposed by Nueva High School.

The TDM plan is comprised of four major elements:

- Policies and Procedures –The school's trustees, parent/student representatives, and select faculty and staff, will draft, refine, and adopt the school's policies related to student, staff and faculty transportation to the Bay Meadows site and on-site / off-site daily and event parking. They will also develop and adopt "Rules of Access" for student access, parent drop-off and pick-up, event management, and staff and faculty access; develop communication material for each user of the school's facilities, as well as determine penalties for violation of the rules, and, develop, evaluate and prioritize a menu of services, subsidies, incentives, and/or costs that may be offered to parents/students, and faculty and staff.

- Education – The school will prepare and distribute detailed transportation and parking information, as well as conduct commute awareness programs for students, parents, faculty and staff. A commute, transportation, and parking coordinator will oversee all programs and practices including staffing, communications, and enforcement, and will work with designated faculty, staff, students, and contractors. The scope of ongoing monitoring and enforcement will include shared transportation programs, promotion, and actual usage; pick-up and drop-off; specifically assigned faculty and staff parking permits; single-day, exception-based, student-use permits; visitor traffic; management of tandem and alternative-energy parking spaces; and the annual commute, transportation, and parking survey to ensure achievement and maintenance of our school and city commute, traffic, and parking commitments and goals.

- Incentives – Nueva will offer several incentives to encourage students, parents, faculty and staff to avoid driving alone to the school. Incentives will include a combination of the already successful Nueva bus program, continuation of the school's carpool match practices (for faculty), Caltrain Go Passes for students, guaranteed ride home, secure bike parking and changing areas, and drive alone disincentives.

- Monitoring and Enforcement – To ensure compliance with trip budget and parking limits, as well as being a good neighbor, the school will regularly monitor commute patterns, staff and supervise daily drop off and pick-up activities, enforce parking violations, and make adjustments to the TDM program to maximize and optimize performance against traffic and parking metrics.

1.0 PURPOSE OF THE NUEVA HIGH SCHOOL TRANSPORTATION MANGEMENT PLAN

As a development project within The Bay Meadows Phase II Specific Plan Amendment area, Nueva School is subject to the conditions of approval related to traffic and parking. This Transportation Management Plan (TMP) complies with the requirements established in the following documents:

a) Conditions of Approval Draft PA 02-105 Bay Meadows Phase II Specific Plan Amendment Revised as of October 21, 2005 (City Council Resolution No. 111-2005)

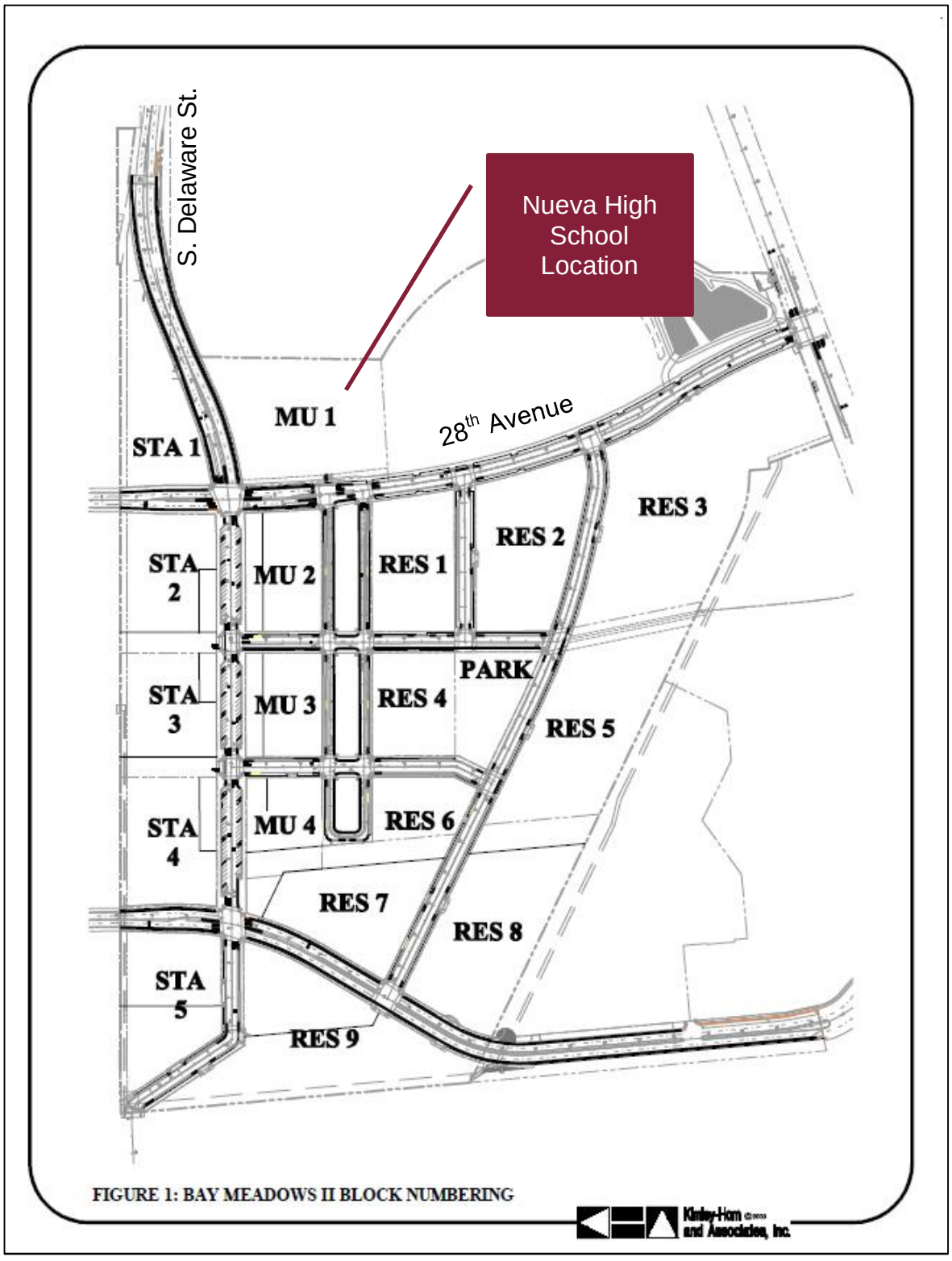
The relevant sections of the above conditions of approval are located in the **Appendix**. The conditions of approval specifically require development in Bay Meadows Phase II to submit to the City of San Mateo the following:

- TDM measures proposed to be utilized for each scenario that demonstrates that the Occupancy Projection meets the applicable trip budget and the Build-Out Projection would not cause project traffic to exceed 2,569 PM peak hour trips.

A Parking Operations Plan is required for non-residential buildings in Bay Meadows defined as any building on the Station Blocks, the retail/office buildings on Mixed Use Blocks 2, 3 and 4, and the mixed-use building on Block Residential 7. This requirement does not explicitly refer to Mixed-Use Block MU-1 (in which the project is located), but since Nueva School is a permitted land use in the Specific Plan, the City requires, at a minimum, that the project operate below the trip budget and implement methods to ensure adequate on-site project parking that will not use on-street spaces in the residential blocks or other blocks. This report provides that information and demonstrates that the Nueva High School can is a compatible use for the site.

Figure 1 shows Block MU-1 in relation to the other blocks of Bay Meadows.

Figure 1 - Bay Meadows



1.1 The Use of This Plan

This TMP ("Plan") is a living document, a tool to be used by the administrators of Nueva School to help them comply with the conditions of approval. The TMP, in of itself, cannot ensure successful implementation of the Plan's trip reduction measures, nor can it guarantee compliance with the City's trip reduction requirements even if all of the measures contained within are successfully implemented. The Plan will evolve as Nueva High School becomes established in Bay Meadows and as the school's administrators learn which measures work best for their employees, their students, and their student's families. Any changes to the "living" document must be reviewed and approved by the Planning Division, TMA, and Public Works Department.

What this TMP can do is outlined below:

- Establish a framework for school policies, and procedures, related to traffic and parking.
- Recommend the support services needed to implement, monitor, and update the TMP, and assist the school's users to make changes in their travel behavior.
- Quantify the shift in mode of access from automobile to alternate forms of transportation required to comply with the conditions of approval.
- Provide a procedural starting point and a menu of best practices in reducing trips tailored to Nueva High School.
- Recommend procedures for monitoring, refining and updating this Plan and addressing issues of concern to the City of San Mateo (e.g., special events, residential neighborhood parking impacts, etc.).

Successful compliance with the trip reduction requirements will require ongoing diligence on the part of the school; frequent communication with staff, faculty and students to maintain awareness of the requirements and travel options available; close involvement in the development and refinement of the Transportation Management Association's programs and services; frequent monitoring of travel behavior and updating of the TMP when appropriate; and, integration of the TMP practices into the school's culture and philosophy.

2.0 BAY MEADOWS SPECIFIC PLAN

2.1 Traffic and Parking Requirements of the Bay Meadows Specific Plan

In 2005, the City of San Mateo adopted the San Mateo Rail Corridor Transit Oriented Development Plan (Corridor Plan). The stated goal of the Corridor Plan was to allow, encourage and provide guidance for the creation of world class transit-oriented development (TOD) within a half-mile radius of the Hillsdale and Hayward Park Caltrain stations, while maintaining and improving the quality of life for those who already live and work in the area. The Corridor Plan included policies and a framework for implementing a corridor Transportation Demand Management program with a goal of achieving an overall reduction in new vehicle trips of at least 25 percent corridor-wide (Corridor Plan Policy 7.17).

The Corridor Plan called for the amendment of the Bay Meadows Phase II Specific Plan to achieve the TOD and other policies of the Corridor Plan. The City implemented these policies through its approval of the Bay Meadows Specific Plan Amendment (the "Specific Plan Amendment") and Conditions of Approval adopted on November 7, 2005, and the Bay Meadows Development Agreement between the City of San Mateo and Bay Meadows Land Company, dated as of November 21, 2005 (the "Development Agreement").

Bay Meadows Phase II Specific Plan Amendment's conditions of approval implement the Transportation Demand Management policies and goals of the Corridor Plan by establishing overall project trip budget for each of four phases. The phases are defined by the commencement and completion of a grade separation at 28th and/or 31st Avenues, and varying levels of development within Bay Meadows. The conditions further describe the monitoring methods to be used by the City to track individual trip budgets for each block. The conditions require participation in a Transportation Management Association (TMA) and implementation of a Transportation Demand Management (TDM) plan. Finally, the conditions specify the method for monitoring and enforcing the TDM goals for the entire development.

2.2 Bay Meadows and Block MU-1 Trip Budgets

The conditions of approval require establishing a trip budget for the entire project as well as for each block in order to measure the project's success in meeting the applicable trip reduction goals. The trip reduction goals are set at a 10% (short-term), 16% (mid-term) and 25% (long-term) reduction. Trip reduction is measured against trips calculated using standard Institute of Transportation Engineers' (ITE) trip generation rates applied to the actual commercial/retail square footage of development or dwelling units. The result is the "unadjusted" trip generation for each block and the Specific Plan area as a whole.

Trip budgets are established for conditions prior to, and after construction of, the planned grade-separations at either 28th or 31st Avenues. The Bay Meadows transit-oriented-development will require time to mature and balance its housing with commercial retail and restaurants in order to achieve internal trip capture. Therefore, in addition to phasing the goals with and without the grade-separations, the goals are also phased by short, mid, and long-term development conditions reflecting time to achieve a mix of uses.

Block MU-1 was not anticipated to develop prior to completion of the grade-separations at the time the Bay Meadows II Traffic Management Plan was initially prepared in 2008.

This study helps identify the appropriate trip budget for the project site and based on the results of this report, the trip budget for the high school on MU-1 is set at 95 PM trips for all phases of Bay Meadows II.[1] **Table 3** of this document shows a PM peak hour trip generation of 91 trips between 5-6 PM. The maximum trip budget for the high school is set at 95 trips which includes a roughly 5% contingency for a buffer factor. The Bay Meadows II Traffic Management Plan has been updated to reflect this new trip budget of 95 trips and has been submitted for review and approval concurrently with this document as part of the planning application for the Nueva High School.

It is noted that re-recording of Bay Meadows Covenants, Conditions and Restrictions (i.e. CC&Rs) is in progress to reallocate trips budgeted in Schedule 1 of the CC&Rs to Block MU-1.

2.3 Site Description as Approved in Specific Plan

Block MU-1 is adjacent to the Community Park, located on the north side of 28th Avenue, and across Delaware Street from Station Block 1 (STA-1). Block MU-1, the Community Park and Station Block 1 comprise the northern boundary of the Specific Plan area. The San Mateo County Event Center is located north of the Specific Plan area. South of 28th Avenue is Block MU-2 and the northern residential blocks.

Nueva High School will be located in Block Mixed-Use (MU-1) of the Bay Meadows Phase II Specific Plan area. Block MU-1 differs from the other mixed-use blocks in that, despite its designation, it was originally evaluated in the Bay Meadows Traffic Management Plan as 187 residential units (including 50 Below Market Rate (BMR)) units to be developed by the City on a one acre parcel of MU-1 fronting Delaware Street. Because of its mixed-use designation the site could also be developed as a variety of other permitted uses including a school.

Table 1 shows the unadjusted PM Peak hour trip generation for residential if developed on Block MU-1.

[1] Final Bay Meadows II Traffic Management Plan, prepared by Kimley-Horn and Associates, Inc. for Wilson Meany, Updated October 8, 2012.

Table 1 - PM Trip Generation if Block MU-1 Developed as Residential

Residential PM Peak							
ITE Code	**Land Use Description**	**Independent Variable**	**No. of Units**	**Average PM Rate[(1)]**	**PM Trips**	**PM Trips In**	**PM Trips Out**
220	Apartment	Units	187	0.62	116	75	41

Notes:
(1) ITE Trip Generation, Land Use 220, PM Peak Hour of Adjacent Street Traffic.

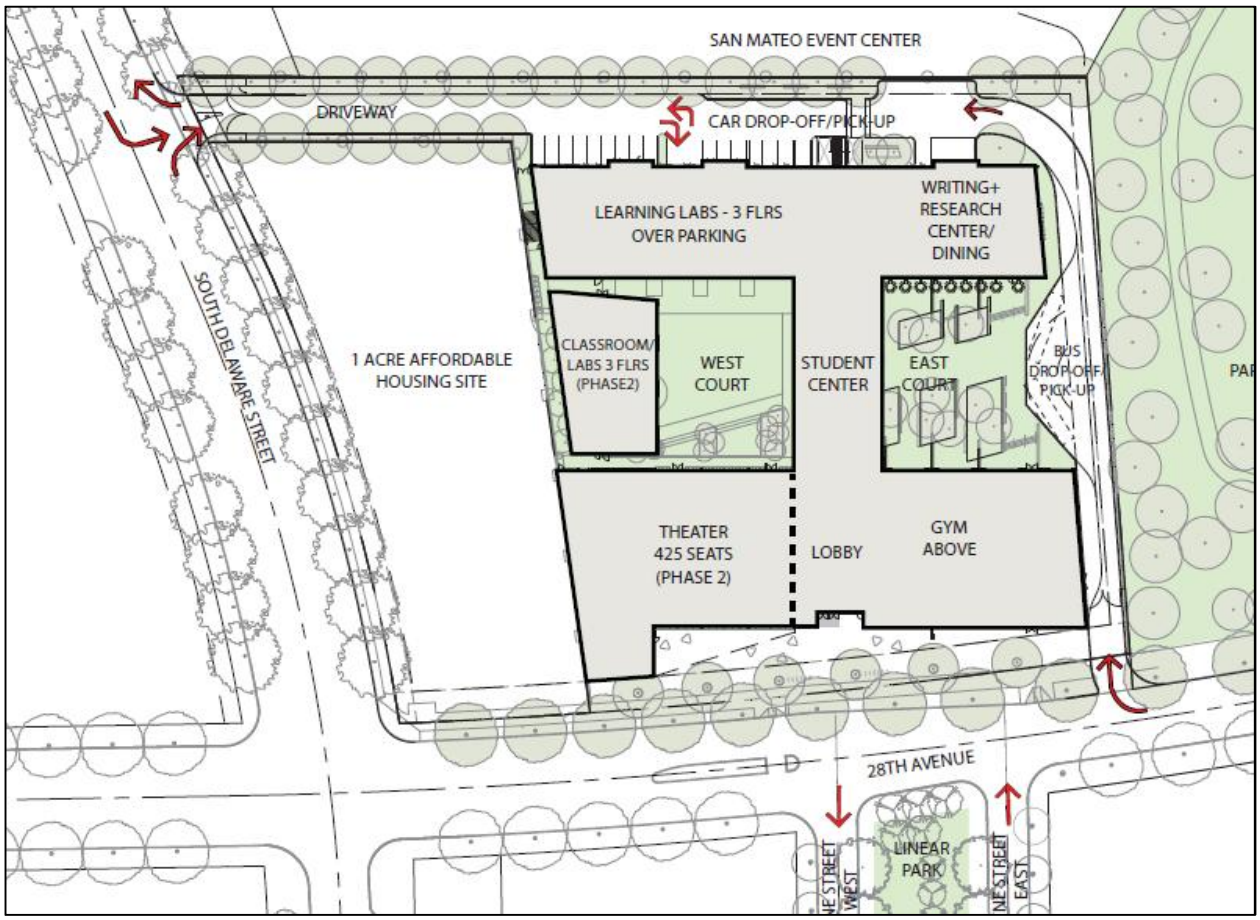
As noted in **Table 1**, Block MU-1 could generate 116 PM peak trips if developed as apartments. (Note that these trips are unadjusted for transit, TDM, and mixed-use internal capture.)

3.0 OVERVIEW OF THE PROJECT

Bay Meadows is a multi-use development supported by a robust transportation system that includes opportunities for carpooling and using transit, biking and walking to reduce drive-alone trips.

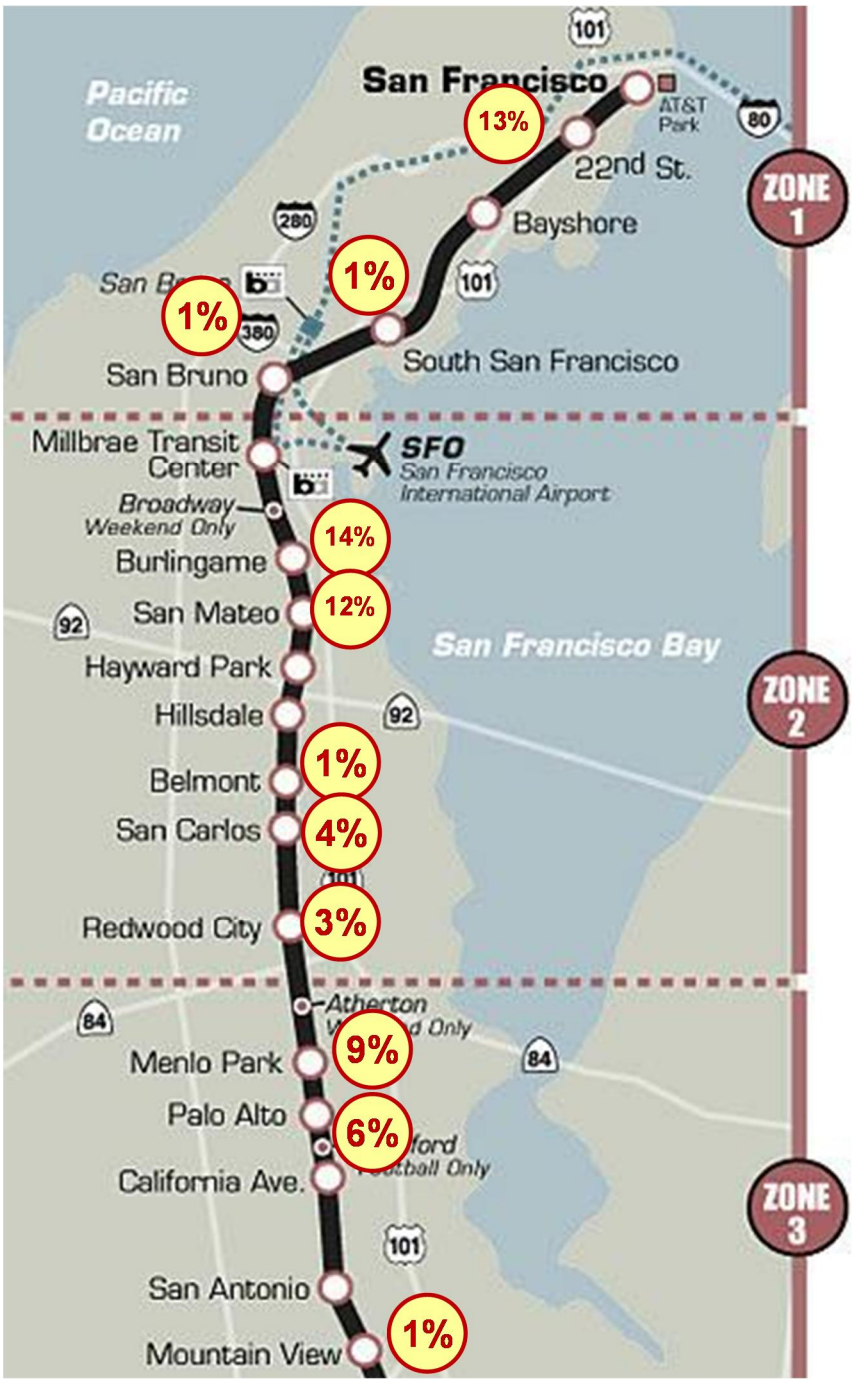
Nueva is a private high school with a compact, multi-story design, and a strong cultural commitment to reducing drive-alone trips. The site layout has an open campus design with several buildings surrounding central landscaped courtyards. The buildings range from one to three stories and contain academic space, library, kitchen / servery, student center with dining facilities, a theater with seating for 425 people, a gym, and administrative offices. A parking garage is located under the building wing to the rear of the property and under the west courtyard (see Section 3.6 for more on parking). **Figure 2** shows the Nueva High School site on Block MU-1.

Figure 2 - Nueva High School



Source: Leddy Matum Stacy Architects

Figure 3 - Percent of Existing Nueva Students within Close Access to Caltrain



It is proposed that the school be constructed to accommodate up to 450 students and 60 (full and part time) faculty and staff. Some of these staff will be primarily based from the\ Hillsborough campus and will only periodically come to the high school.

Currently 66% of Nueva students live within close access to a Caltrain station as shown in **Figure 3**. Furthermore, 77% of faculty and staff live within close access to Caltrain.

Many of the students at Nueva High School will be matriculating students from the Nueva School in Hillsborough.

The prekindergarten through 8th grade Nueva School in Hillsborough primarily draws students from the San Francisco Peninsula; about one third from San Francisco, and nearly seventy percent from the Coast, Central, South Central and Southern Peninsula (Half Moon Bay, Pacifica, Pescadero, Burlingame, Hillsborough, Millbrae, San Bruno, San Mateo, Belmont, Foster City, Redwood City, Redwood Shores, San Carlos, Atherton, Los Altos, Menlo Park, Palo Alto, Stanford, Woodside, and Portola Valley). A very small number of students are drawn from the North Bay, South Bay, and the East Bay.

It is estimated that the student catchment area for the Nueva High School will have roughly the same population distribution of the Nueva School campus in Hillsborough. However, because of the high school's proximity to Caltrain, the student population may eventually become more oriented towards communities with convenient access to Caltrain stations. For purposes of this document, it is conservatively assumed that the population distribution for the high school will be the same as the existing Nueva School.

3.1 Proposed Site Plan, Access and Circulation

The site plan for the proposed Nueva High School is shown in **Figure 4**. While the site plan in the figure only shows the ground floor of the buildings, the site will have buildings up to three stories high. Principal vehicular access to the site is from 28th Avenue near the Kyne Street intersection. This driveway provides access for:

- Parents dropping off or picking up students;
- Nueva's buses;
- Emergency vehicles; and
- Occasional delivery and service vehicles.

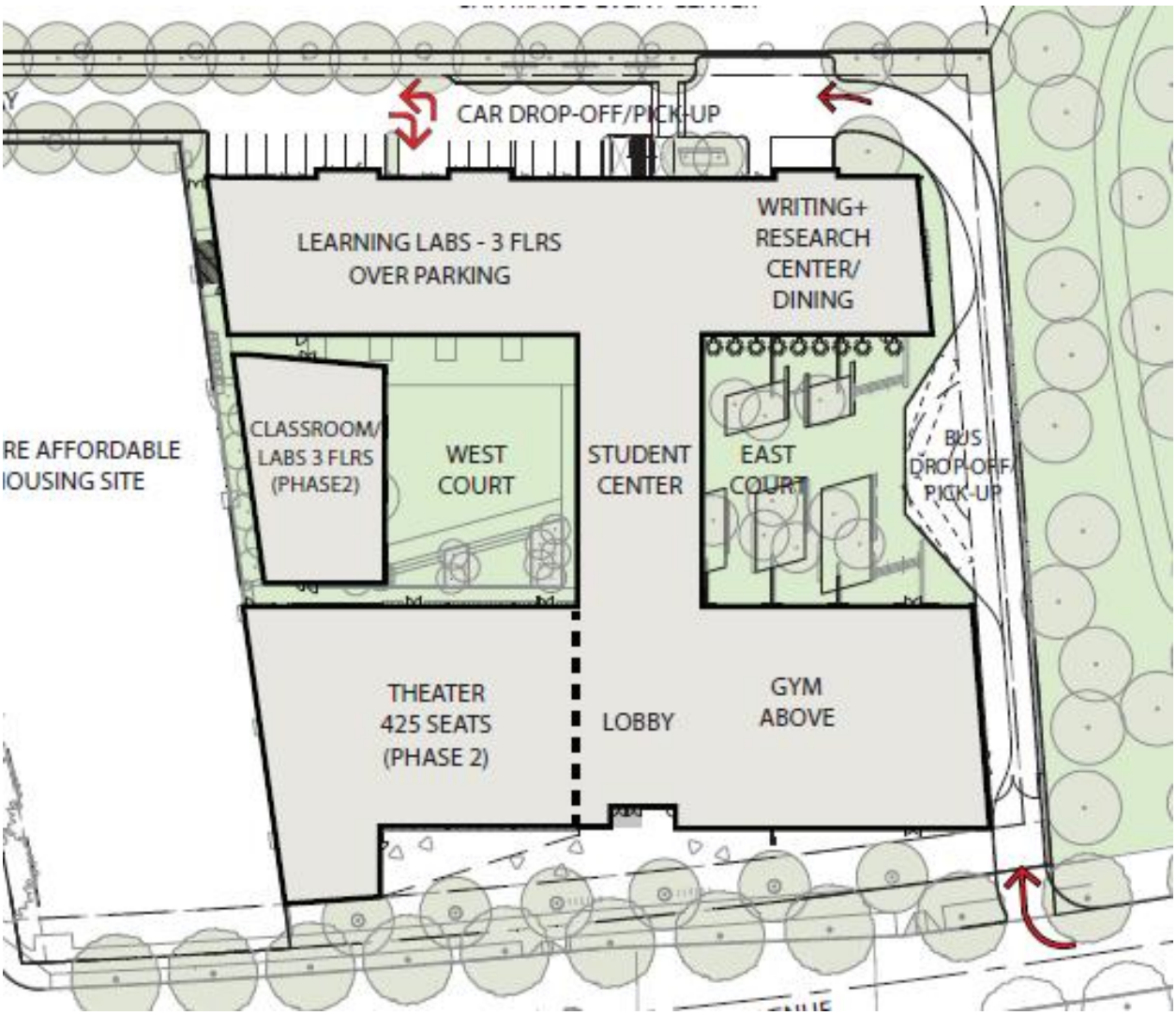
Egress from the site is on Delaware Street via a driveway located approximately 360 feet north of the 28th Avenue intersection. This driveway also serves as a secondary access for staff, faculty, and visitors using the school's on-site parking.

3.2 Proposed Parking Supply

Nueva High School will provide approximately 125 parking spaces, two bus stalls, and two loading zones on site. The majority of parking is located in a garage under the north classroom building and the west courtyard. Total on-site parking stalls (including outside spaces) comprise 94 full-size spaces, 26 compact spaces, and 5 accessible spaces for faculty, staff, visitors and a small number of students. Twenty-one of the spaces are constrained tandem spaces reserved for faculty (i.e. 21 pairs of spaces for a total of 42 stalls). A roll down overhead door will allow the parking garage to be secured after hours.

All accessible spaces are located for convenient access to the garage elevator.

Figure 4 - Nueva High School Site Plan



Source: Leddy Matum Stacy Architects

San Mateo Municipal Code requires 12 long-term stalls and 34 short-term stalls for bicycle parking.

Bicycle parking will be provided as follows:

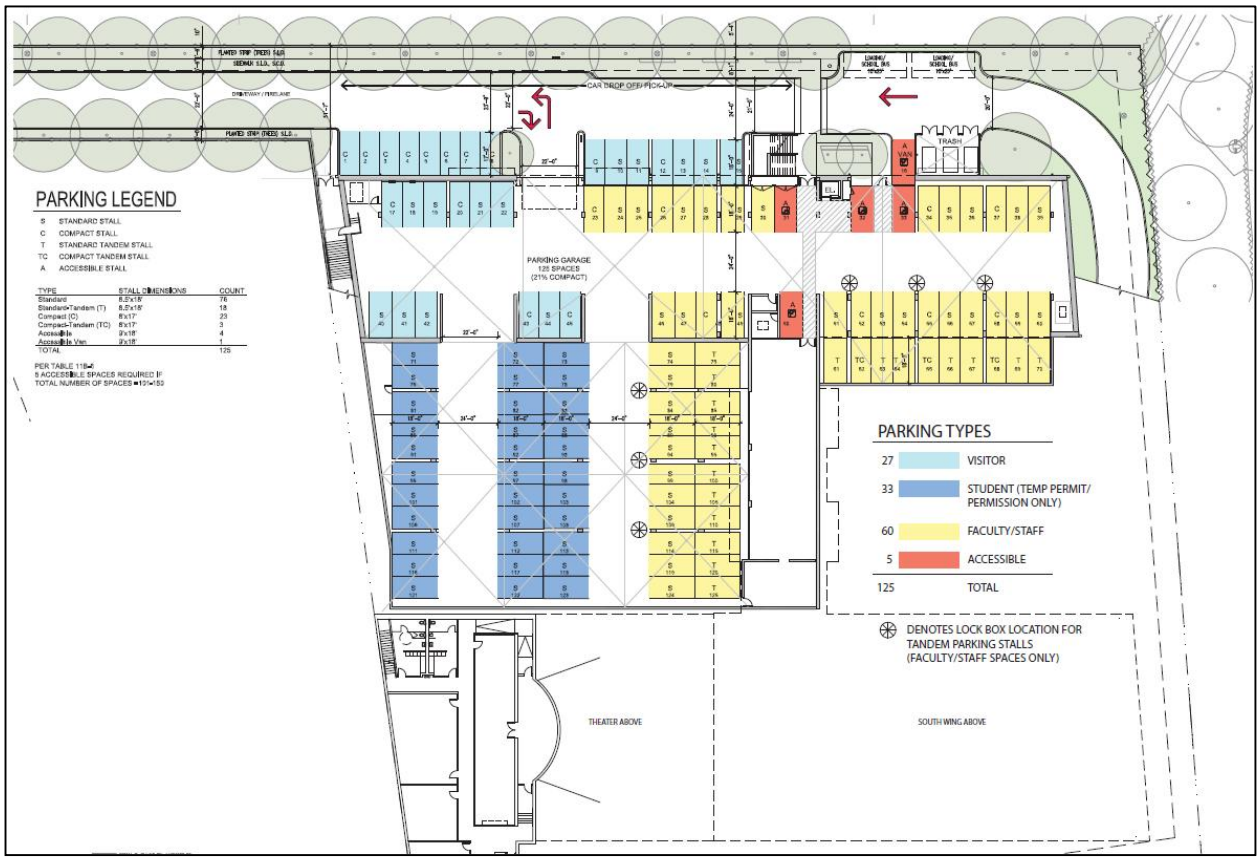
- 26 long-term spaces in a secured room located at the SE corner of the building on the first floor. These spaces will have a direct access connector to the bike path/sidewalk fronting the school.
- 24 short-term bike stalls provided in front of the main lobby within 50 feet of the entry door and 12 bike stalls in front of the theater within 50 feet of the theater

lobby doors. These spaces will also have a direct access connector to the bike path/sidewalk fronting the school.

Bicycle parking exceeds spaces required by code.

Figure 5 illustrates the proposed vehicular parking layout at the school.

Figure 5 – Parking Layout



Source: Leddy Matum Stacy Architects

3.3 School Traffic Generation

Although many students and some faculty and staff will use the Nueva buses, Caltrain, and other public transit (with nominal walking or cycling), the school will generate some vehicle trips to and from the site. These will principally comprise faculty and staff who will park at the school, and parents who drop off and pick up students in private vehicles.

Students will generally not be permitted to bring vehicles to campus; however, students with a special need such as having to drive because of an after school project, a parent that is unable to pick up for the day, medical/dental appointments, etc. can obtain from the administration office a permit that allows them to bring a car and park in a designated space in the garage. All other students will be expected to use other means to travel to school rather than driving their own vehicle.

For this site, the maximum number of PM peak hour trips allowed is 95 per the 2012 Bay Meadows II Traffic Management Plan. (No trip budget is set for the AM peak or the afternoon peak of the site.[2])

Trip generation for the proposed Nueva High School was calculated based on the mode share trip generation of students, faculty and staff

3.3.1 Mode Share Trip Generation

The mode share is a method to estimate site generated trips based on the number of students, faculty and staff present at the site during various times of the day as well as vehicle trips generated by the site population based on the various travel modes available.

The calculations are based on the following assumptions:

- Students – Calculations are based on the maximum enrollment even though it will take approximately 7 years to reach the initial target of 400 students (with a maximum future enrollment of 450 students).
- Faculty – A combination of 60 faculty and staff are anticipated for Nueva High School. Although some of these individuals will be primarily located at the Hillsborough campus (and occasionally come to the Bay Meadows campus) and some are part-time employees, calculations conservatively assume all 60 faculty/staff will be full time at the high school.
- Absentee rate – According to the Nueva School, up to 10% of students are typically away from campus due to illness, field trips, projects, internships, etc. and 5% of faculty and staff are away due to similar factors. To be conservative, it

[2] Declaration of Covenants, Covenants and Restrictions and Reservation of Easements for Bay Meadows Phase II. Bay Meadows Main Track Investors, LLC, June 21, 2010.

was assumed that the absentee rate for students, is only 5% and all staff are on campus daily.

- Departure times – Staggered bell times are planned for around 8:30 AM and 3:30 PM. It is estimated that 70% of the students will typically leave campus at the afternoon bell and the remaining students will depart during the PM peak hour or later. Faculty and staff leave later with a higher percentage in the PM peak hour.[3] Included in the 70% are students leaving for off-campus after school activities that may include sports not readily accommodated on campus (e.g. soccer, cross country, golf, and crew), sport competitions, internships and work study jobs, and performing arts at other schools or venues. The remaining 30% stay on campus for sports (including basketball, volleyball, fencing, etc.), robotics and engineering clubs (working in the innovation / design labs), visual and performing arts, student projects and collaborations (with one another and faculty). Departure times and afterschool activities are based on information provided by Nueva School administrators of their operational plan for the new high school.
- Nueva bus mode share – According to school administration[4] and count data collected by Fehr & Peers Associates, Inc., 25% of the existing Nueva School (Hillsborough campus) student population uses the school provided bus. It is planned that Nueva High School will be served by the same bus service and that ridership will be the same or more for the high school student population. Although it is expected that 25% or more of Nueva students will use the Nueva bus, mode share calculations in this report conservatively use 15%.
- Caltrain mode share – Currently 66% of Nueva students live within close access to a Caltrain station and the Nueva School is located within about a third mile of the Hillsdale Caltrain station. According to Bellarmine High School in San Jose (also located near a Caltrain station) 15% to 20% of their students regularly ride Caltrain to school.[5] Crystal Springs Upland School in Hillsborough reported that 21% of their students ride Caltrain.[6] For purposes of this study it was conservatively assumed that 15% of Nueva High School students would use Caltrain. Faculty and staff Caltrain use was assumed to be 12.7% is based on the Bay Meadows II Traffic Management Plan's transit reduction for work trips.
- Carpool mode share – Student drivers were conservatively not assumed to carpool to school because state law prohibits most young drivers from taking passengers. Faculty and staff carpool was assumed to be 15.2% based on a combination of carpool data for San Francisco and San Mateo.
- Walk/Bike mode share – Walking and bicycling by students will be low because of the regional nature of the school but may increase because of the close proximity to Bay Meadows residential uses and a good network of sidewalks and

[3] Based on conversations with Mr. Terry Lee, Associate Head of School, The Nueva School, Hillsborough, CA
[4] Conversations with Mr. Terry Lee, Associate Head of School, The Nueva School, Hillsborough, CA
[5] Conversation 9/19/2012 with Mr. Tom Gorndt, Bellarmine High School CFO.
[6] Transportation Impact Analysis, Crystal Springs Uplands School, Hexagon Transportation Consultants, Inc., April 9, 2012.

bikeways. For calculations in this report, walking and bicycling were conservatively assumed to be 0%.

- Student drive alone mode share – The student drive alone mode share assumes a maximum of 10% of students with licenses (i.e. seniors and juniors) may drive and 0% of the sophomore and freshman may drive. Therefore the average rate for the student population is 5%.
- Parent drive mode share – Students not using alternative modes or driving alone are assumed to be transported by a parent. The vehicle trip ends for this mode were adjusted by 10% for siblings and non-siblings departing in the same vehicle.

Table 2 summarizes the departure breakdown of students, faculty and staff on campus from 3-4 PM, 4-5 PM, 5-6 PM, and 6-7 PM. The table assumes that all 60 faculty and staff are at the campus each day but only 95% of the student population (i.e. 428 of the 450 students) are present.

Table 2 - Person Trip Estimate for Trip Generation Calculation

	Departure Percentages per Person Type				
	Daily	3-4 PM	4-5 PM	5-6 PM	6-7 PM
Percent of Student	100%	70%	5%	15%	10%
Percent of Faculty/Staff	100%	50%	15%	20%	15%
Students	428	300	21	64	43
Faculty	42	21	6	8	6
Staff	18	9	3	4	3
Total	488	330	30	76	52

Notes: Totals may differ slightly due to rounding.

As seen in the table, 64 students and 12 faculty and staff are estimated to arrive or depart Nueva High School during the PM peak of 5-6 PM. Individuals may use Nueva buses, Caltrain, carpool, bike, walk, drive, or be picked up by others.

Table 3 summarizes the trip generation based on mode share calculations from **Table 2**.

Table 3 – Project Trip Generation Based on Mode Share

Person Trips by Mode in 5-6 PM Peak Hour						Vehicle Trips Ends [a]		
Mode of Travel	Mode Share		Students	Faculty/Staff	Total	Students	Staff	Total
	% Students	% Faculty/Staff	64	12	76			
Nueva Bus [e]	15.0%	0.0%	10	0	10	4	0	4
Caltrain/Public Transit [d]	15.0%	12.7%	10	2	11	0	0	0
Carpool Drivers [b]	0.0%	15.2%	0	1	1	0	1	1
Carpool Passengers	0.0%	0.0%	0	1	1	0	0	0
Walk/Bike	0.0%	0.0%	0	0	0	0	0	0
Drive Alone [c]	5.0%	72.1%	3	9	12	3	9	12
Parent Drives [a]	65.0%	0.0%	42	0	42	75	0	75
Total	**100.0%**	**100.0%**	**64**	**12**	**76**	82	9	91

Notes: Totals may differ slightly due to rounding.
[a] Vehicle trip ends for parents equal person trips multiplied by two (2), representing the inbound and outbound trip ends. All other vehicle trip ends are outbound only (except Nueva Bus). The vehicle trip end calculation assumes 10% of the departing students are siblings or non-siblings and depart in the same vehicle. Bus trips are multiplied by two (2) because buses arrive and depart during the peak hour.
[b] Source of work based carpool mode share: average mode share of workers residing in San Francisco (13.4%) and San Mateo (16.9%) from the Metropolitan Transportation Commission's 2000 Household Travel Survey. Staff carpool mode share is assumed at 2 persons / vehicle including the driver.
[c] The student drive alone mode share assumes a maximum of 10% of students with licenses (seniors and juniors) may drive and 0% of the sophomore and freshman may drive. Therefore the average rate for the student population is 5%.
[d] Student Caltrain/Transit mode share based on Bellarmine High School which also has 15% of students using Caltrain. Staff mode share of 12.7% is based on the Bay Meadows II Traffic Management Plan's transit reduction for work trips.
[e] Current Nueva bus use at Hillsborough campus is 25% of the school population based on Fehr & Peers Associates, Inc. data. Nueva bus use conservatively assumed to be 15% for this study.

As noted in the table, the estimated number of vehicle trips during the 5-6 PM period is 91.[7] To be conservative it is assumed that the Nueva evening buses will leave during the PM peak even though the schedule in the Appendix shows them leaving after 6 PM.

Although no trip budget is set for the AM peak period in the Bay Meadows II Traffic Management Plan, an AM trip estimate is included in the Appendix.

It is noted that *Trip Generation,* published by the Institute of Transportation Engineer's is a standard reference typically used by jurisdictions throughout the country for the estimation of trip generation potential of proposed developments.[8] However, *Trip Generation* does not have a category that directly applies to this type of school. Therefore, for reference purposes only, ITE trip data is included in the Appendix.

[7] It is noted that the estimate is conservative by assuming that only 10% of the departing students are siblings and will leave in the same vehicle. According to existing school information, 25% of the students have a sibling at the existing school and the ratio is assumed to remain relatively the same for the high school. Actual number of trips may be lower.
[8] *Trip Generation 8th Edition*, Institute of Transportation Engineers, 2008.

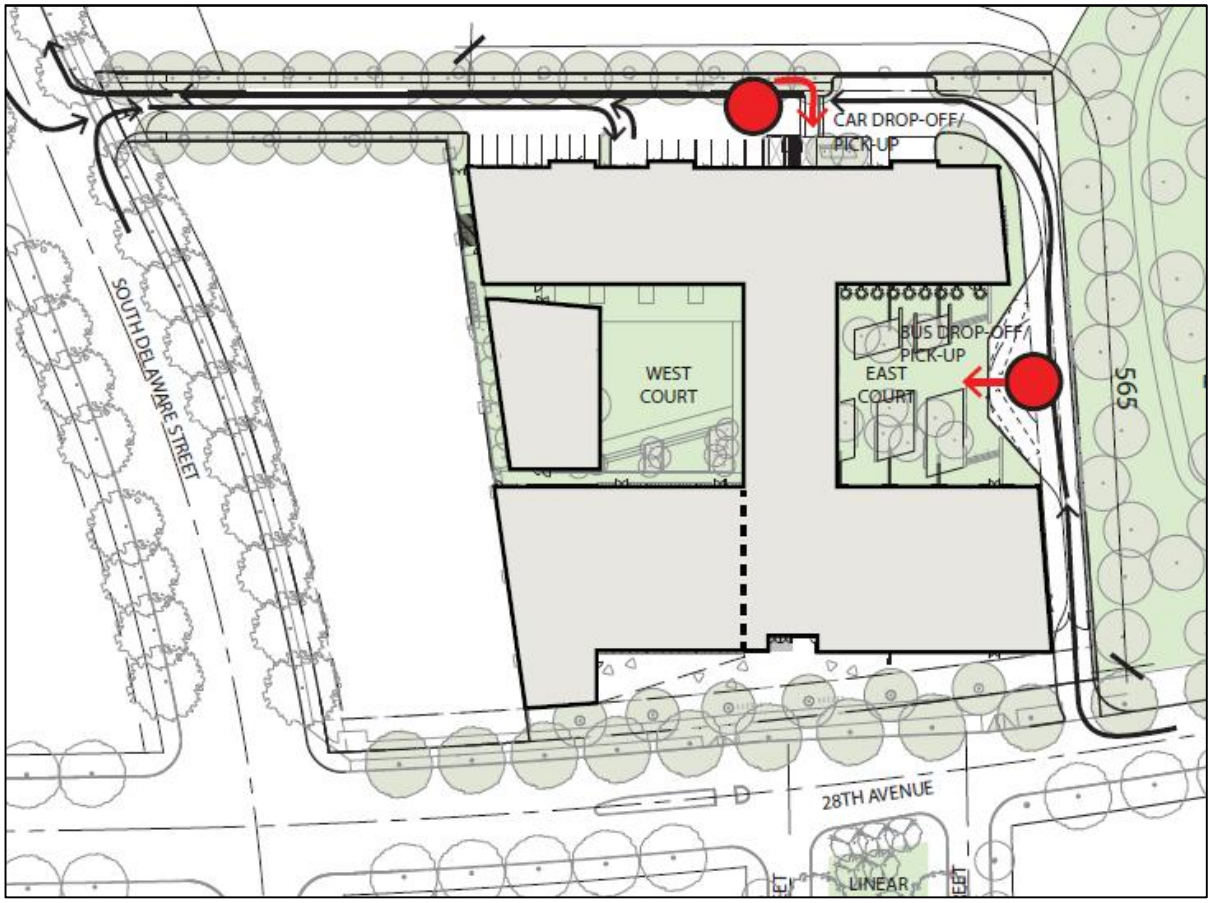
3.4 Queuing

As part of the Bay Meadows project, Nueva High School is required to determine if on-site traffic circulation can be managed without backups onto the local roadways. Although many students are planned to take a school bus or transit option, some students will be dropped off and picked up by parents or others. The on-site circulation has been designed to include a specified drop-off and pick-up area as well as provide queuing on-site for more than 500 feet for drop-off and pick-up. The curb area for students is 90 feet long to allow 4 vehicles to load students at a time.

Peak student arrivals will be supervised beginning at least 30 minutes before morning bell and peak student departures will be supervised until at least 30 minutes after afternoon bell to ensure orderly and compliant pick up / drop off via public transit, private bus, carpools, and other preferred transit options.

Figure 6 illustrates the circulation for the car line and location for drop off and pick up.

Figure 6 - Car Line Circulation and Drop Off/Pick Up



Source: Leddy Matum Stacy Architects

The AM peak and afternoon peak are when the greatest number of vehicles will arrive or depart from the school. Therefore, vehicle queuing will also be greatest during this same period and was evaluated as described below. (During the PM peak, traffic for the school is low so on-site queuing was not evaluated for that period.)

3.4.1 AM Peak Drop Off Queuing

The drop-off activities for vehicles during the AM peak period were evaluated to determine if queuing could be retained on-site. Although the drop off schedule will be staggered, a conservative evaluation was conducted assuming the AM peak hour traffic all arrived within 20 minutes rather than over a total 60 minute period. This approach is consistent with school drop-off periods where the concentrated peak usually lasts 15-30 minutes in duration. The evaluation also assumed that the drop off area can accommodate 4 vehicles at a time and that students will take an average of 15 seconds to exit the vehicle to the curb. Therefore, the drop off line capacity will be 16 vehicles per minute which exceeds the trips typically arriving at the site each minute. The result of the evaluation was that the vehicular drop-off queue is projected to be contained within the total 500 feet queuing distance available on-site.

3.4.2 Afternoon Peak Pick Up Queuing

The pick-up activities for vehicles during the afternoon peak period were evaluated to determine if queuing could be retained on-site. The afternoon pick up schedule will also be staggered. Nevertheless, a conservative evaluation was conducted assuming the afternoon school peak hour traffic all arrived within 25 minutes rather than over a total 60 minute period. This approach is consistent with school pick-up periods where the concentrated peak usually lasts 15-30 minutes in duration. The evaluation also assumed that the pick-up area can accommodate 8 vehicles at a time and that students will take an average of 30 seconds to enter the vehicle from the curb. Therefore, the pick-up line capacity will be 8 vehicles per minute. The result of the evaluation was that the vehicular drop-off queue is projected to be contained within the total 500 feet queuing distance available on-site.

It is recognized that some parents may wish to arrive ahead of the dismissal bell. Parents will be directed as part of the school's TDM plan, to not arrive early and queue in the car line. They will be directed to arrive at the 3:30 PM bell or later. However, if a parent happens to inadvertently arrive early, the car line has sufficient storage capacity (within the 500 feet) to accommodate 20-23 cars. Even under this scenario, queuing out onto 28th Avenue is not expected.

3.4.3 Bus Queuing

The school and its service provider CYO plan to operate eleven buses daily (five in the morning, four in the afternoon and two in the early evening) that will be used by students to travel to and from school. Routes are designed to promote safety, convenience and total transit times of approximately an hour or less.

In the morning, buses will be staged to arrive no more than two at a time in approximately ten minute increments, unloading in approximately five minutes, departing thereafter, and freeing the drop off zone for the next buses thereafter. All morning buses are scheduled to arrive by 8:20 AM before the 8:30 AM bell.

In the afternoon, buses will be staged no more than two at a time and depart in ten minute increments, loading in approximately five minutes, departing thereafter, and freeing the pickup zone for the next buses to arrive, stage, load and depart in a timely manner. Afternoon buses will depart beginning at 3:40 PM after the 3:30 PM bell dismissal with the last bus departing by 3:50 PM. Early evening buses serving students in after school activities arrive about 6 PM, stage and depart at 6:15 PM.

Unloading and loading times are based on 41 foot buses with a 56 student capacity. If 25 foot buses are used, unloading and loading times are approximately three minutes based on observations at the existing Nueva School.[9]

Buses will enter from 28th Avenue, unload / stage / load in one of two angled bus bays on the east side of the school, and depart via the South Delaware exit. Bus unload / stage / load areas are outside of the circulating lane which wraps around the school so that bus activities will not interfere with the car line or on-site circulation.

The vehicle circulating lane near the bus drop off area will be designed to direct vehicles drive to the far right of the roadway. This will be communicated through the use of signing, pavement striping and/or alternative paving materials. The additional separation of the buses and autos and will keep moving traffic away from the rear of the buses and allow for more space when buses back out of the stalls. All back out operations will be assisted by an on-site attendant to ensure parent autos do not conflict with the bus.

Based on the planned bus operation, queuing out onto 28th Avenue or interference of vehicle circulation is not expected.

3.5 Driveway and Intersection Operations

The school site will have two entries and one exit. The principal vehicular entry to the site from 28th Avenue will be right turn in only. This driveway is for parents dropping off or picking up students, Nueva's buses, and emergency, delivery and service vehicles. The exit from the site on Delaware Street will be right out only but will also allow right in and left in traffic for staff, faculty, and visitors accessing the school's on-site parking. The right in/out operation of the main entrance and separation of entry traffic disperses traffic loads and eliminates conflicts with other vehicles at intersections and driveways. Therefore, this configuration will have negligible effects on levels of service or queuing

[9] Observations conducted June 2012.

for other traffic. The right in driveway from 28th Avenue also provides excellent sight visibility to cyclists or pedestrians who may be using the bike/pedestrian path along 28th Avenue. Additional signing, striping, and other measures will be implemented at the project driveways to reinforce the allowed movements and restrict prohibited left turns.

3.6 Parking Supply and Demand

3.6.1 Parking Supply

According to the City's Municipal Code, senior high schools must provide one parking space for every employee and 1 space per 6 students based on school capacity.

Nueva High School is unique compared to other high schools in San Mateo and does not necessarily fit the suburban model assumed in the Municipal Code. Nueva is a compact, multi-story design with limited parking for students and is located in Bay Meadows which offers high levels of access to Caltrain and other public transit.

As noted previously, the school will be constructed to accommodate up to 450 students and 60 faculty and staff. Typically a high school of this size would be expected to provide 135 on-site parking spaces per the Municipal Code. However the Code does not have a parking rate that applies for high schools within the specific plan area. Therefore, the typically required number of spaces was adjusted downward to reflect the Bay Meadows setting and multimodal access available to students, faculty and staff. The adjustment was assumed to be 15% for students and 12.7% for faculty/staff access to Caltrain and public transportation. **Table 4** summarizes the adjusted number of parking spaces that are assumed to be required at the school.

Table 4 - Required Parking Spaces at Nueva High School (adjusted for transit use)

	Units	Code Req'd Rate	Parking Required
Students	450	1 per 6 Students	75
Reduction for Caltrain/Public Transit [a]	15.0%		-11
Total Spaces Needed Based on Students			64
	Units	Code Req'd Rate	Parking Required
Faculty and Staff	60	1 per 1 Faculty/Staff	60
Reduction for Caltrain/Public Transit [b]	12.7%		-8
Total Spaces Needed based on Faculty/Staff			52
Total Spaces Nueva High School			116

Notes:
[a] Based on similar Caltrain use for Bellarmine High School, San Jose, CA.
[b] Calculated from Bay Meadows II Traffic Management Plan work trip transit mode share.

3.6.2 Daily Demand

Similar to trip generation, mode share can also be used to estimate site parking demand based on the number of students, faculty, staff, and visitors present at the site during peak times of the day.

Mode share parking generation is based on multiple factors including the number of persons on campus, time of day demand, use of alternate modes, and other factors. **Table 5** summarizes the demand based on mode share methodology. According to the table, 86 parking spaces are needed assuming that limited numbers (approximately 10%) of seniors and juniors are allowed to drive to school.

It should be noted that although approximately 21 students per day are expected to park on campus, this number is flexible. The site will provide 125 spaces with 60 dedicated for full and part time faculty and staff. Thus, the remaining 65 stalls will be available for visitors and students. While 33 parking spaces have been set aside for student use on a daily basis as approved exceptions to the No Student Driving Policy, if these spaces are not all used, the excess will remain open for visitors.

Table 5 – Parking Demand Based on Mode Share

						Comparison of Parking Generation Rates,		
	Number of Persons	Typ. Daily Attendance	Peak Parking Demand	Parking Spaces Provided	Time of Peak Demand	Ratio of Req'd Parking Per Student	Ratio of Proposed Supply Per Student	San Mateo Code Equivalent[d]
Students [a,b]	450	428	21	33	9:00 a.m. 3:00 p.m.	**0.19**	**0.28**	**0.30**
Faculty/Staff [b]	60	60	48	60	9:00 a.m. 3:00 p.m.			
Visitor Parking [c]	-	-	17	32	mid-morning			
Total	**510**	**488**	**86**	**125**		**Spaces / Total Student Capacity**		

Notes:
[a] This scenario reflects the school's proposed policy to restrict student parking.
[b] Refer to Table 3 in report and Mode Share Trip Generation for AM Peak in Appendix.
[c] Visitor parking demand estimated at 4% of students on campus.
[d] The City of San Mateo zoning code trequires high school's to provide 1 space for every 6 students (based on capacity) and 1 space for every employee. The ratio of 0.30 spaces per student is the equivalent of the City's code for a 450 student high school with 60 employees.

It is noted that *Parking Generation,* published by the Institute of Transportation Engineer's is a standard reference typically used by jurisdictions throughout the country for the estimation of parking demand potential of proposed developments.[10] However, *Parking Generation* does not have a category that directly applies to this type of school. Therefore, for reference purposes only, ITE parking data is included in the Appendix.

Because enrollment will ramp up over approximately 7 years, actual parking demand when the school initially opens will be lower than estimated.

On-site spaces will be dedicated for the use of faculty, staff, and visitors. Although no regular student parking will be provided, a maximum of 33 spaces will be available for students on a daily permit basis. Students with a special need such as having to drive because of an after school project, a parent that is unable to pick up for the day, medical/dental appointments, etc. can obtain from the administration office a permit that allows them to park in a designated space in the garage. All other students will still be expected to use other means to travel to school rather than driving their own vehicle.

An approximate breakdown of the parking assignments is as follows:

- Faculty and Staff – 60 spaces in garage.
- Students – 33 spaces in garage. This allocation provides parking for 10% of the senior class and junior class who are of age to drive.[11] Also includes flex spaces that can be used if additional students need to park.
- Visitors – 27 spaces outside and inside garage.
- Accessible – 4 spaces inside garage and 1 outside garage.

[10] *Parking Generation 4th Edition*, Institute of Transportation Engineers, 2010.
[11] Assumed students of driving age include all senior class and junior class.

Faculty and staff will be assigned to tandem spaces and other stalls nearest the garage elevator and stairs. Students will be assigned low-turnover spaces located in the south portion of the garage. Visitors will be allowed to park in easy to reach garage spaces and spaces outside the garage to minimize back out conditions for visitors. There will also be a Coordinator on site who will coordinate special events.

The school will develop detailed policies and procedures for the use of tandem spaces for faculty and staff. Faculty and staff will be paired and assigned to tandem spaces in the garage. Parking stall assignments will be based on work schedules and keys will be placed in lock boxes at each tandem space in case a vehicle needs to be moved by one of the stall partners. This arrangement will consolidate the spaces used by faculty/staff and maximize the number of other available spaces.

Although Nueva High School will provide sufficient on-site parking, there may be some students who attempt to drive and park on the street or in lots owned by others. See the TDM section of this report regarding policies, procedures, and enforcement strategies proposed by Nueva to eliminate the potential for unauthorized parking by students. In addition, nearby on-street parking spaces will be time restricted and enforced by the City which will also discourage unauthorized off-site student parking.

3.6.3 Special Event Parking

Occasional large special events, including performing arts or cultural productions, graduation, and educational conferences, may require additional off-site parking. Nueva is finalizing long-term lease arrangements with adjacent premises.

A list of the anticipated events follows in order from largest to smallest number of attendees:

Common Ground Speaker Presentation

Performing Arts Presentation
Location — courtyard, amphitheater, gymnasium, and/or theater
Time of Year — spring
Day / Time — 1 production presented up to 3 weekday / weekend days in a row, afternoon / evening
Attendees — up to 450 comprised of 200 students, 200 parents, 25 faculty / staff, and 25 guests

Graduation
Location — courtyard, amphitheater, gymnasium, and/or theater
Time of Year — June
Day / Time — weekend after the last day of school, afternoon / evening
Attendees — up to 450 comprised of 200 parents, 150 students, 50 faculty / staff, and 50 guests

Back-to-School Night
Location — courtyard, amphitheater, gymnasium, classrooms, student center, and/or theater
Time of Year — as much as once in the fall and spring
Day / Time — weekday, afternoon / evening
Attendees — up to 400 comprised of 350 parents and 50 faculty / staff

Culmination Presentations
Location — throughout the school facilities and grounds, theater
Time of Year — spring Day / Time — up to 4 weekday or weekend days, 1 per grade level, afternoon and evening
Attendees — up to 300 comprised of 125 students, 125 parents, 25 faculty / staff, and 25 guests

Parking demand for the above special events was calculated and summarized in **Table 6**.

Table 6 – Special Event Parking Demand

Special Event	Time of Day	Attending Event [d]				Total Persons	Vehicles				Total Vehicles	Parking Demand Above On-Site Capacity [h]
		Students	Parents	Facutly/ Staff	Guest/ Visitors		Students	Parents [e]	Facutly/ Staff [f]	Guest/ Visitors [g]		
Performing Arts Presentation [b]	Afternoon/ Evening	200	200	25	25	450	50	154	21	25	250	125
Graduation [c]	Afternoon/ Evening	150	200	50	50	450	150	154	41	50	395	270
Back-to-School Night	Afternoon/ Evening	0	350	50	0	400	0	270	41	0	311	186
Culmination Presentations [a]	Afternoon/ Evening	125	125	25	25	300	13	97	21	25	156	31

Notes:
[a] Assumes that student parking will be limited to 10% for this event
[b] Assumes that 25% of students may need to arrive early and will drive separately
[c] Assumed that all students may need to arrive early and will drive separately
[d] During special events listed, no other students, faculty/staff, or visitors are on site
[e] Assumes a typical vehicle occupancy of 1.3 in parent vehicles
[f] Faculty/staff parking demand adjusted to acount for use of alternative modes
[g] Assumes a typical vehicle occupancy of 1.0 for guest/visitor vehicles
[h] On-site parking capacity up to 125 spaces.

As shown in the table, none of the five large events can be completely parked in the available 125 spaces at the high school campus. Therefore, Nueva is finalizing a special event parking arrangement with a neighboring facility for up to 400 additional parking spaces subject to coordination of specific date availability. Special events will be conducted in coordination with the availability of these, and / or comparable, parking spaces.

The combination of 125 on-site parking spaces and offsite spaces will accommodate all contemplated special events. Special events will be scheduled, staffed, sized, and parked under the direction of school administration in conjunction with the commute, transportation, and parking coordinator and school safety and security personnel to

ensure compliance with on-site and off-site parking availability and traffic requirements at Bay Meadows, and will be rescheduled, downsized, relocated, or cancelled, as required.

These are approximations and may need to be adjusted based upon observations once the school is open.

3.6.4 Other Parking Demand

Other parking demands will occur from time to time. These include for recycling and trash vehicles, shipping and delivery vans, and visiting buses from other schools.

Recycling and trash bins will be kept in enclosed corrals at the back of the school. Near the bins is an area where trucks can pull to the side of the circulating drive and load the bins for dumping. The trucks are only at the school a few minutes and then leave via the Delaware Street exit. The school will coordinate arrivals by trash vehicles to occur outside of the morning and afternoon bell schedule.

Shipping and delivery vans have two loading spaces at the rear of the school near the trash bins. Delivery vans and trucks can park in the spaces outside of the circulating drive and leave via the Delaware Street exit.

Visiting school buses such as for sporting events are accommodated on site and will use the loading area designated for the large Nueva buses. Arrivals for visiting buses will be coordinated to occur outside of the time when they are needed for Nueva buses. If more bus parking is needed for a large event, arrangements will be made to park vehicles at a nearby off-site lot.

3.7 Transportation Demand Management

Maintaining trip generation below the maximum block trip budget and limiting parking demand below the 125 on-site spaces are reinforced by a strong TDM program proposed by Nueva High School.

The plan is comprised of four major elements:

1. Policies and Procedures
2. Education
3. Incentives
4. Monitoring and Enforcement

3.7.1 Policies and Procedures

The school's trustees, parent/student representatives, and select faculty and staff, will draft, refine, and adopt the school's policies related to student, staff and faculty transportation to the Bay Meadows site and on-site / off-site daily and event parking. They will also develop and adopt "Rules of Access" for student access, parent drop-off and pick-up, event management, and staff and faculty access; develop communication material for each user of the school's facilities, as well as determine penalties for violation of the rules, and, develop, evaluate and prioritize a menu of services, subsidies, incentives, and/or costs that may be offered to parents/students, and faculty and staff. The school will also develop procedures for the use of the tandem spaces in the parking garage.

The school will also confirm their commitment to the San Mateo Rail Corridor Transportation Management Association (TMA) as mandated in the Bay Meadow's approval conditions. The TMA will manage a series of demand management services and program available to all members.

3.7.2 Education

Education focuses on awareness and communications to reduce drive-alone trips to the school by parents and faculty. This includes implementing the following TDM measures:

- **Transportation and Parking Policy** Materials – Prepare materials for students, parents, faculty and staff. Materials would include:
    - "Transportation and Parking Policy Fact Sheet" for new and returning students and their parents.
    - General overview of the school's requirements (and internal policies) as a member of the Bay Meadows Transit-Oriented-Development (TOD) community.

- Brief description of the benefits of being located within a TOD, linking the benefits to the school's sustainability and environmental stewardship policies.
- Summary of school transportation options available to students, faculty and staff.
- Outline the various internal transportation assistance and incentive programs the school offers.
- Reference other important policies and sources of information.
- Provide rules of access for dropping off and picking up students on-site by automobile.
- Link to the school's Commute Options website.
- A map of "How to Access Nueva School by Public Transportation" from each region of the Bay Area, including where to park or drop-off/pick-up, schedule of service, transfers, and approximate travel times. This includes educating drivers about the right-in / right-out only conditions at the site.
- Link to the local Transportation Management Association's website and programs offered to members.
- Prepare a comprehensive version of the above information and provide in "booklet" format or include in the school's customary student information package.
- Require student and parent "agreement" that they understand, and will abide by, the requirements and programs presented in the school's Transportation and Parking Policies.

- **Student and Parent Awareness and Communication Program** – Information will be provided to parents on commute options, pick-up and drop-off procedures, on-site circulation, and visitor parking. Students are advised that they are not permitted to bring a vehicle to school unless they have an assigned on-site parking space (i.e. daily permit). Students and parents will be required to sign a pledge (i.e. agreement) that they will not bring vehicles to school campus and park on the street or nearby locations (without authorization).
- **Faculty and Staff Awareness and Communication Program** – Information will be provided to faculty and staff on commute options, on-site circulation, and employee parking. Faculty and staff are advised that they are not permitted to bring a vehicle to school unless they have an assigned parking space. Spaces will be on-site. Faculty willing to carpool will be given greater priority for available spaces. Faculty and staff may be asked to sign a pledge that they will not bring vehicles to campus and park on the street or nearby locations (without authorization).
- **On-Site Commute Coordinator** – The school will have a Commute Options Assistance Office staffed by a commute, transportation, and parking coordinator who will oversee all programs and practices including staffing, communications, and enforcement, and will work with designated faculty, staff, students, and contractors. The scope of ongoing monitoring and enforcement will include shared transportation programs, promotion, and actual usage; pick-up and drop-off; specifically assigned faculty and staff parking permits; single-day, exception-

based, student-use permits; visitor traffic; management of tandem and alternative-energy parking spaces; and the annual commute, transportation, and parking survey to ensure achievement and maintenance of our school and city commute, traffic, and parking commitments and goals.

3.7.3 Incentives

Nueva will offer a combination of incentives to encourage students, parents, faculty and staff to avoid driving alone to the school. Incentives include the following:

- **Continuation of Nueva Buses** – Continue to operate the program to achieve at least 25% of the students using the system. Users of the bus program pay costs for operation. (See Appendix D for additional information on Nueva Bus routes.)
- **Caltrain Go Pass for Students, Faculty and Staff** – Provide an annual transit "Go Pass" for teachers and students, the cost of which is included in the tuition or as part of compensation (the school may negotiate a substantial discount on passes and pass the savings onto the students). The Go Pass allows unlimited use of Caltrain. This program may be substituted with various levels of subsidy rather than including the cost of the pass in tuition or compensation. The substitution would be made if it offered a better value but with the same levels of effectiveness. Similar passes for SamTrans are not planned since only limited numbers of Nueva students are expected to utilize the service.
- **Ride Matching Services** – Develop and promote the current carpool practices into a formal transportation "ride-match" program that identifies students residing nearby and how they can carpool or take transit as a group, or bike and walk together if residing locally. The school will work to match experienced transit and bike commuters with new alternative transportation commuters. Experienced commuters will be encouraged to assist new commuters in planning their transit and bicycle routes, how to make connections, tips on parking, gear, reading transit schedules, etc.
- **Guaranteed Ride Home** – Joint the Transportation Alliance Guaranteed Ride Home program for students and faculty. In the event of an emergency, a free taxi or rental car can be provided to get home for those who used transit to get to work. (This service may be included with membership in the Bay Meadows Transportation Management Association (TMA).)
- **Secure Bicycle Parking** – Sixty-two secure bicycle parking spaces will be provided for students, faculty and visitors. More than half will be long-term spaces in a room located at the SE corner of the building and the remaining will be near the main lobby and the theater lobby doors along 28th Avenue.
- **Showers and Changing Areas** – Showers and changing areas will be provided for faculty, staff, and students who walk or bicycle.
- **No On-Site Student Parking without Permit** – Limit on-site parking to faculty, staff and visitors. Students with a special need such as having to drive because of an after school project, a parent that is unable to pick up for the day, medical/dental appointments, etc. can obtain from the administration office a

permit that allows them to park in a designated space in the garage. All other students will still be expected to use other means to travel to school rather than driving their own vehicle.

3.7.4 Monitoring and Enforcement

To ensure compliance with trip budget and parking limits, as well as being a good neighbor, the school will regularly monitor commute patterns, enforce violations, and make adjustments to the TDM program if failing to meet the traffic and parking metrics. Nueva High School is committed to the following:

- **Annual Survey of Commute Patterns** – The school will survey incoming students/parents (all grades) on planned travel mode, to gauge the need for necessary measures to accommodate the upcoming school year.
- **Annual Survey of Nueva's Trip Generation and Parking Demand** – Traffic counts will be conducted annually at the project driveways and near the school to quantify school trip generation and verify the school is operating below the Trip Budget. Parking demand will be counted on-site, at leased off-site school lots (used for special events), and in the general school vicinity to determine total parking demand by students, faculty, staff, and visitors, and whether adjustments are needed to the school's parking supply. Traffic and parking counts will be annually collected in May when the driving demand is typically at it greatest for the school. The Coordinator will also monitor parking demand for major school events to confirm that adequate parking is available off-site. The Coordinator will make adjustments to TDM program prior to the start of the next school year if needed to reduce trips to the site.
- **Daily Monitoring of Drop Off and Pick-Up Process** – At the start of the school year and following winter break (for about 2 weeks), the Coordinator and designated faculty/staff will daily monitor the drop off and pick up process at the school to confirm that it is carried out in an orderly fashion, that queuing is contained on-site, and that arriving and departing traffic is following the recommend rules of access. Periodic monitoring will continue thereafter to maintain compliance.
- **License Plate Database for Enforcement** – The school during the annual enrollment process will obtain the license plate numbers of all vehicles owned by the student's family. The information will be kept in a database for use by the Coordinator during enforcement activities.
- **Daily Monitoring for Parking Violators** – At the start of the school year and following winter break (for about 2 weeks), the Commute coordinator will daily monitor nearby streets and lots to check if students are parking off-site in unauthorized locations. Periodic monitoring will continue thereafter to maintain compliance. The Coordinator will have license plate data to verify if unauthorized parking by students is occurring. The Coordinator will meet with students and parents to resolve problems.

- **Collaboration With Nearby Businesses** – The Coordinator will collaborate with nearby businesses to confirm that students are not parking in nearby business lots. The businesses will be given the phone number and email of the Coordinator and will be asked to call if they suspect unauthorized parking by students.
- **Annual Adjustments to Policies, Procedures, and TDM program** (as needed) – The Coordinator will work with school administrators to make adjustments to the policies, procedures and TDM program to keep trip generation below 95 trips and parking contained in authorized parking lots. Adjustments will be completed and communicated prior to the start of the next school year if needed to reduce trips to the site. It is assumed that the TMP will evolve as Nueva High School becomes established in Bay Meadows and as the school's administrators learn which measures work best for their employees, their students, and their student's families.

APPENDIX

Appendix A - Relevant Conditions of Approval Draft PA 02-105 Bay Meadows Phase II Specific Plan Amendment Revised as of October 21, 2005 (City Council Resolution No. 111-2005)

40. TRANSPORTATION DEMAND MANAGEMENT (TDM) PROGRAM. A Transportation Demand Management Program shall be implemented using a selection of programs from the Corridor Plan and the City/County Association of Governments· (C/CAG). These programs, once implemented, must be on-going for the occupied life of the development, unless they are altered, exchanged or discontinued in consultation with the City. The trip budget and monitoring plan shall be determined or each Block at the SPAR phase for development on the Block.

The project shall have the following trip thresholds, applicable as specified below, to meet TDM trip reduction goals and EIR mitigation measures (note that references to an "amount of development" in this condition refers to the amount of development as calculated by square footage for commercial uses and housing units for residential use:

A. *Pre-Grade Separations: No building permit shall be issued which would individually or cumulatively permit an amount of development that would generate traffic in excess of 1,562 trips unless and until the Peninsula Corridor Joint Powers Board has commenced construction of grade separated crossings at either or both of 8th and 31st Avenues. **Mitigation Measure Traffic-BM18*

B. Short-term trip reduction: Until the later to occur of (i) completion and occupancy of at least 50% of the collective amount of development approved for the first three Blocks to be developed, and (ii) the completion of grade separated crossings either or both of 28th and 31st Avenues; in addition to the overall project trip limits specified in paragraph A of this condition (if applicable), the project shall have a trip reduction goal of 10% off the total PM peak hour trip generation calculated using the methodology in the FEIR (excluding reductions for mixed-use internalization or transit-oriented development), as determined during the SPAR approval process for each Block.

C. Mid-term trip reduction: From and after (i) completion and occupancy of at least 50% of the collective amount of development approved for the first three Blocks to be developed, and (ii) the completion of grade separated crossings at either or both of 28th and 31st Avenues, the project (including Blocks previously approved with a 10% goal) shall have a trip reduction goal of 16% off the total PM peak hour trip generation calculated using the methodology in the FEIR (excluding reductions for mixed-use internalization or transit-oriented development), as determined during the SPAR approval process for each Block. The total mid-term project trip generation cannot exceed 2,878 trips (84% of 3,426).

D. Long-term trip reduction: From and after the later to occur of (i) the approval of a SPAR for each Block in the project, (ii) completion and occupancy of 75% of the collective amount of development approved for each Block in the Station/Mixed Use Parcel (as shown in the Specific Plan Amendment), (iii) completion and occupancy of 75% of the collective amount of development approved for each Block in the Residential Parcel (as shown in the Specific Plan Amendment), and (iv) the completion of grade separated crossings at either or both of 28th and 31st Avenues, the project (including Blocks previously approved with a 10% or 16% goal) shall have a trip reduction goal of 25%. Therefore, when fully built out; the project shall generate no more than 2,569 PM peak hour trips (75% of 3,426 (the total number of trips assumed in the FEIR excluding reductions for mixed-use internalization or transit-oriented development), was 3,426 trips)). Even if an individual Block generates trips in excess of its TDM reduction goals, so long as the project does not generate more than 2,569 PM peak hour trips, then the project will be in compliance with the trip reduction requirements of these conditions of approval. The aggregate project trips shall in all events be determined by excluding any trips attributable to the parking structure to be constructed by the Peninsula Corridor Joint Powers Board at the new Hillsdale Caltrain station. (PUBLIC WORKS, PLANNING)

41. *TRIP BUDGETDETERMINATION- The City will keep a running tabulation of the trips projected to be generated by the project, and individual Blocks, and no development beyond the applicable trip budget for their project shall be permitted. To ensure that the project does not exceed the applicable trip budgets in effect at any particular time, any SPAR application must include a traffic study projecting the number of trips to be generated by the proposed development (a) at the time of Certificate of Occupancy will be issued for the development covered by the SPAR ("Occupancy Projection"), and (b) at the time of full build out of the Specific Plan Amendment ("Build Out Projection."), and the TDM measures proposed to be utilized for each scenario. Such traffic study must demonstrate that the Occupancy Projection meets the applicable trip budget and the Build-Out Projection would not cause project traffic to exceed 2,569 PM peak hour trips. If the owner demonstrates that the actual trips generated by the project are fewer than those projected through the traffic studies submitted with any SPAR application, then the running tabulation of trips shall be reduced accordingly to reflect the actual trip generation for the project, and additional development (up to the relevant threshold limit) shall be permitted. This condition shall be implemented prior to each SPAR approval. The analysis shall be submitted with each SPAR application and monitored by the Public Works Department. (PUBLIC WORKS) *Mitigation Measure Traffic and Circulation- BM18.

42. TRANSPORTATION MANAGEMENT ASSOCIATION (TMA). A TMA has been established for projects in the Corridor Plan area. All development within the Specific Plan Amendment area is required to participate in the TMA and fund their fair share of the cost of the TMA. The TMA will develop TDM measures and make them available to both existing

and future development within the Corridor Plan area, including Bay Meadows. (PUBLIC WORKS).

43. *TDM MONITORING. The short-term, mid-term, and long-term trip reduction goals shall be monitored and verified by the City or TMA and shall comply with the following:

A. Commencing from the time that the City's running tabulation of trips shows that Bay Meadows. is generating more than 1,100 trips, the City will monitor the trips generated by Bay Meadows annually to determine whether the project is meeting its trip reduction requirements. The TDM requirements shall be included in the CC&Rs recorded against the project site. The City may require employee, resident, parking or other surveys to gain a better understanding of travel behavior for residents and workers within the Specific Plan area.

B. Prior to monitoring, the City or TMA shall agree with the owner as to a scope of work for the review. The applicant or property owner shall be notified of the fees and a deposit shall be collected with 30 days of notification.

Appendix B – Mode Share AM Peak Trip Generation

Person Trips by Mode in AM Peak Hour						Vehicle Trips Ends [a]		
Mode of Travel	Mode Share		Students	Faculty/Staff	Total	Students	Staff	Total
	% Students	% Faculty/Staff	428	60	488			
Nueva Bus [e]	15.0%	0.0%	64	0	64	8	0	8
Caltrain/Public Transit [d]	15.0%	12.7%	64	8	72	0	0	0
Carpool Drivers [b]	0.0%	15.2%	0	5	5	0	5	5
Carpool Passengers	0.0%	0.0%	0	5	5	0	0	0
Walk/Bike	0.0%	0.0%	0	0	0	0	0	0
Drive Alone [c]	5.0%	72.1%	21	43	65	21	43	65
Parent Drives [a]	65.0%	0.0%	278	0	278	501	0	501
Total	**100.0%**	**100.0%**	**428**	**60**	**488**	**530**	**48**	578

Notes: Totals may differ slightly due to rounding.

[a] Vehicle trip ends for parents equal person trips multiplied by two (2), representing the inbound and outbound trip ends. All other vehicle trip ends are inbound only (except Nueva Bus). The vehicle trip end calculation assumes 10% of the departing students are siblings or non-siblings and depart in the same vehicle. Bus trips are multiplied by two (2) because buses arrive and depart during the peak hour.

[b] Source of work based carpool mode share: average mode share of workers residing in San Francisco (13.4%) and San Mateo (16.9%) from the Metropolitan Transportation Commission's 2000 Household Travel Survey. Staff carpool mode share is assumed at 2 persons / vehicle including the driver.

[c] The student drive alone mode share assumes a maximum of 10% of students with licenses (seniors and juniors) may drive and 0% of the sophomore and freshman may drive. Therefore the average rate for the student population is 5%.

[d] Student Caltrain/Transit mode share based on Bellarmine High School which also has 15% of students using Caltrain. Staff mode share of 12.7% is based on the Bay Meadows II Traffic Management Plan's transit reduction for work trips.

[e] Current Nueva bus use at Hillsborough campus is 25% of the school population based on Fehr & Peers Associates, Inc. data. Nueva bus use conservatively assumed to be 15% for this study.

Appendix C - ITE Trip Generation

A trip is defined in *Trip Generation* as a single or one-directional vehicle movement with either the origin or destination at the project site. In other words, a trip can be either "to" or "from" the site. Specifically, a single visit to a site is counted as two trips (i.e., one to and one from the site).

According to ITE, the high school will generate three traffic peaks during the course of a typical school day. They are:

1. AM Peak (8-9 AM) – Includes faculty and staff arriving to park on site and parents dropping off students. Anticipated morning bell is approximately 8:30 AM.
2. Afternoon Peak (3-4 PM) – Includes parents picking up students and faculty and staff leaving. Anticipated afternoon bell is approximately 3:30 PM.
3. Evening Peak (4-6 PM) – Includes a relatively small number of students who have stayed later for afterschool sports or other activities and are being picked up by a parent. Also includes the remaining faculty and staff. Only this period is subject to the trip maximum when school traffic and the peak of "adjacent street traffic" contribute to the greatest amount of congestion for Bay Meadows. Some of these trips could occur after the 6 PM peak but for purposes of the calculation are all assumed to occur be between 4 PM and 6 PM.

As described in *Trip Generation*, "high schools serve students who have completed middle or junior high school. Both public and private high schools are included in this land use." It should be noted that ITE *Trip Generation* data is primarily comprised of field surveys at suburban locations that have limited access to transit and other non-auto modes of transportation. At these suburban locations, most students drive to school. Some may walk or bicycle.

Table C1 summarizes ITE trip generation for high schools during the AM, afternoon, and PM peak periods of the day.

According to ITE, a typical suburban high school with 450 students is expected to generate 189 AM trips, 131 afternoon trips, and 59 PM trips.

PM peak trips for Nueva High School are also significantly less than if the site were developed as 187 residential units (see **Table 1**).

Table C1 – Project Trip Generation Based in ITE Rates

AM During Commute Peak							
ITE Code	**Land Use Description**	**Independent Variable**	**No. of Units**	**Average AM Rate[1]**	**AM Trips**	**AM Trips In**	**AM Trips Out**
530	High School	Students	450	0.42	189	129	60
Afternoon Off-Peak							
ITE Code	**Land Use Description**	**Independent Variable**	**No. of Units**	**Average Afternoon Rate[2]**	**Afternoon Trips**	**Afternoon In**	**Afternoon Out**
530	High School	Students	450	0.29	131	62	69
PM During Commute Peak							
ITE Code	**Land Use Description**	**Independent Variable**	**No. of Units**	**Average PM Rate[3]**	**PM Trips**	**PM Trips In**	**PM Trips Out**
530	High School	Students	450	0.13	59	19	40

Notes:
(1) ITE Trip Generation, Land Use 530, AM Peak Hour of Adjacent Street Traffic and Generator.
(2) ITE Trip Generation, Land Use 530, PM Peak Hour of Generator.
(3) ITE Trip Generation, Land Use 530, PM Peak Hour of Adjacent Street Traffic.

Appendix D - ITE Parking Generation

Parking demand was calculated using suburban high school rates from ITE *Parking Generation.* [12] Unlike Nueva High School, the suburban locations surveyed in *Parking Generation* have limited access to transit and other non-auto modes of transportation. The suburban ITE rate was therefore adjusted to account for the expected reduction associated with Caltrain/public transit and the schools robust transportation demand management measures to arrive at an expected parking demand. Demand is calculated based on the number of enrolled students. **Table D1** summarizes the expected parking demand based on an adjusted suburban parking rate.

Table D1- Parking Demand Based on Suburban High School

Daily Parking Demand Based on Suburban High School								
ITE Code	Land Use Description	Independent Variable	No. of Units	Day of Week	Average Rate	85th Percentile	Average Demand	85th Percentile Demand
530	High School (urban)	Student(s)	450	Weekday	0.23	0.25	104	113
Reduction for Caltrain/Transit at 15% [(a)]							-16	-17
Reduction for Nueva Bus at 15% [(b)]							-16	-17
Net Expected Parking Demand							72	79

Notes:
(a) Reduction consistent with percentage of students using Caltrain at Bellarmine High School
(b) Conservatively assumed at 15%. Current actual at Nueva is 25%.

As seen in the table, parking demand ranges from 72 to 79 spaces which well below the number of spaces proposed by Nueva High School.

[12] Suburban parking demand rates are based from studies in California, Oregon, and Illinois. California locations included Campbell, Seaside, Watsonville, and Goleta. The average parking spaces provided at the all schools surveyed was 0.5 spaces per student; however, the observed 85th percentile demand was only half the number of spaces provided.

Appendix E - Nueva Bus Routes

North - San Francisco Routes

Morning East Route

Location	Time
William de Avila School (Waller & Masonic)	7:25 AM
James Lick Middle School (1220 Noe Street)	7:40 AM
Flynn Elementary School (3125 Cesar Chavez)	7:55 AM
Nueva School	8:20 AM

Morning West Route

Location	Time
Presidio & Sacramento (near Muni stop next to Jewish Community Center)	7:20 AM
Lake & Funston	7:30 AM
Ocean & Junipero Serra (little Junipero Serra between Stonecrest and Winston)	7:50 AM
Nueva School	8:20 AM

Afternoon East Route

Location	Time
Nueva School	3:40 PM
Flynn Elementary School (3125 Cesar Chavez)	4:05 PM
James Lick Middle School (1220 Noe Street, in front of school building)	4:20 PM
William de Avila School (Waller & Masonic)	4:35 PM

Afternoon West Route

Location	Time
Nueva School	3:40 PM
Ocean & Junipero Serra (little Junipero Serra between Stonecrest and Winston)	4:10 PM
Lake & Funston	4:30 PM
Presidio & Sacramento (near Muni stop next to Jewish Community Center)	4:40 PM

Evening

Location	Time
Nueva School	6:15 PM
Ocean & Junipero Serra (little Junipero Serra between Stonecrest and Winston)	6:50 PM
James Lick Middle School (1220 Noe Street)	7:05 PM
William de Avila School (Waller & Masonic	7:20 PM
O'Farrell Street and Masonic (stops on O'Farrell Street)	7:25 PM

South - Peninsula Routes

Morning Route 1

Location	Time
611 S. El Monte, Los Altos (St. Williams Church)	7:20 AM
Whiskey Hill Rd. & Woodside Rd. (Town Hall Center, behind Pioneer)	7:40 AM
280 & Edgewood (corner of Canada and Edgewood Rds.)	7:50 AM
The Nueva School	8:10 AM

Morning Route 2

Location	Time
Jerry Bowden Park (N. California St. at Alma)	7:25 AM
Safeway parking lot in Sharon Heights Shopping Center	7:45 AM
Nueva School	8:10 AM

Morning Route 3

Location	Time
El Camino Real at Quarry Road (Stanford Shopping Center)	7:30 AM
Lawler Ranch Road (west of I-280 at Sand Hill Rd. and Lawler Ranch Rd., parking strip)	7:50 AM
Nueva School	8:15 AM

Afternoon Route 1

Location	Time
Nueva School	3:50 PM
280 & Edgewood (corner of Canada and Edgewood Rds.)	4:10 PM
Whiskey Hill Rd. & Woodside Rd. (Town Hall Center, behind Pioneer)	4:20 PM
Lawler Ranch Road (west of I-280 at Sand Hill Rd. and Lawler Ranch Rd., parking strip)	4:30 PM
611 S. El Monte, Los Altos (St. Williams Church)	4:50 PM

Afternoon Route 2

Location	Time
Nueva School	3:50 PM
Safeway parking lot in Sharon Heights Shopping Center	4:15 PM
El Camino Real at Quarry Road (Stanford Shopping Center)	4:30 PM
Jerry Bowden Park (N. California St. at Alma)	4:45 PM

Evening

Location	Time
Nueva School	6:15 PM
280 & Edgewood (southeast corner of Canada and Edgewood Rds.)	6:40 PM
Lawler Ranch Road (west of I-280 at Sand Hill Rd. and Lawler Ranch Rd., parking strip)	6:50 PM
Safeway parking lot in Sharon Heights Shopping Center	6:55 PM
Jerry Bowden Park (N. California St. at Alma)	7:15 PM

Appendix F – Drop Off and Pick Up Calculations

Assumptions:

Drop-Off
- 15 sec dwell
- 16 veh / min Capacity

Demand

AM -
- 258 veh

Assumes that parents and buses use the 28th driveway. Others use Delaware.

Total Arrival Time
- 20 min

Arrival Rate
- 12.90 veh / min

Unserved Rate (Arrival - Departure)
- -3.10 veh / min

Queue:
- 0 veh
- 0 feet

Pick-Up
- 30 sec dwell
- 8 veh / min Capacity

PM -
- 184 veh

Assumes that parents and buses use the 28th driveway. Others use Delaware.

Total Arrival Time
- 25 min

Arrival Rate
- 7.36 veh / min

Unserved Rate (Arrival - Departure)
- -0.64 veh / min

Queue:
- 0 veh
- 0 feet

Queue Storage:
- 500 feet
- 25 feet / veh