BLPC #3 & PFRC #1 SUMMARY
Can we have images that get us a sense of how the different options would look?

How can we expand the parking garage?

Can we have more information on the shadows and sustainability options?

What are the decisions we need to be making?
FRISBEE FIELD
CURRENT SITE PLAN WITH PROPOSED PENZANCE DEVELOPMENT

21,840 sf
COMPETITION ULTIMATE FRISBEE FIELD ON SITE

Competition Frisbee Field Conflicts with Penzance office tower.
Rotating the Penzance tower allows the Field to fit behind.
Stratford and the Clinic require 27,000 gross square feet of area... this would mean H-B would have a very limited ground floor presence.
Major issue is that building footprint is extremely difficult to work with... 12,000sf of the space would not have access to daylight.
PROPERTY LINE REORGANIZATION

FRISBEE FIELD
ANTICIPATED FIELD SIZES

39,000 sf

300'-0"

130'-0"
EXISTING FIELD SIZE
ANTICIPATED FIELD SIZES

FRISBEE FIELD

300'-0"

39,000 sf

240'-0"

130'-0"
MAJOR DECISIONS OF CONCEPT DESIGN
TRANSPORTATION
SITE ORGANIZATION
BUILDING ORGANIZATION
TRANSPORTATION
SITE ORGANIZATION
BUILDING ORGANIZATION

We want to leave BLPC #4 with a clear direction on site organization.
TRANSPORTATION
SITE ORGANIZATION

BUILDING ORGANIZATION
TRANSPORTATION
Study is ongoing to determine number of parking spaces required in garage. Update at next BLPC.

PARKING UPDATE
VEHICULAR CIRCULATION
PREVIOUSLY PRESENTED VEHICULAR CIRCULATION
This would rely on the stub street off of Wilson. This is ongoing, as this is a good option for the parking entrance.
EXISTING 7-ELEVEN DROP OFF

Reuses drop off area of existing school
EXISTING 7-ELEVEN DROP OFF

- **Uses valuable site area for drive aisles when it could be used for green space or building.**
- **Does not accommodate the potential for 7-eleven acquisition well.**
- **Creates potential traffic congestion along Wilson.**
REVISED VEHICULAR CIRCULATION

With staggered bus times, you can share 1 bus drop off zone.

PARENT DROP-OFF

PARKING

SHARED BUSES
PROGRAMMATIC ORGANIZATION
STRATFORD PROGRAM

The Stratford Program is approximately 27,500 and needs to be on one level accessible from grade.
H-B WOODLAWN LOBBY

At a minimum the H-B Woodlawn Program would require a lobby and significant circulation space on the ground level.
AUDITORIUM

Ideally, the large auditorium would be located on ground level to make access and existing efficient for the large audiences it would accommodate.
GYMNASIUM

The H-B Woodlawn gymnasium would ideally be located on the ground level because of its desired connection to the field. It will also be used by the community during non-school hours so easy access to the gym would also be ideal.
CAFETERIA

The cafeteria would ideally be located close to the ground level and between the H-B Woodlawn and Stratford schools. It is the largest of their shared spaces and needs to be accessed daily by the Stratford students.
H-8 WOODLAWN CLASSROOMS

H-8 Woodlawn classrooms need to be contiguous so that travel between classes is efficient. The classrooms do not need to be on the ground level.
LIBRARY

The library is ideally located within the bulk of the H-B Woodlawn classrooms. If Stratford students are to use a portion of the H-B Woodlawn library they would not need frequent access and this could be located centrally in H-B Woodlawn.
BASELINE ORGANIZATION

The baseline organization of the building results in a large ground floor with stacked classrooms above.
LAGGER GROUND FLOOR

If the cafeteria was moved to the ground floor, it could also serve as the H-B Woodlawn lobby and main circulation space.
GROUND FLOOR ORGANIZATION

MINIMAL GROUND FLOOR

If the smallest ground floor was desired, the auditorium and gymnasium could be moved to the 2nd floor, or the basement.
SITE ORGANIZATION
**18th Street**

- H-B Woodlawn would work best with 2 entrances one main entrance along 18th street and a field entrance facing Wilson.
- Stratford Program Entrance along 18th towards Quinn.
- With this orientation the best spot for buses would be along 18th street. Parent drop-off would be along Quinn.

**Wilson Boulevard**

- H-B Woodlawn would work best with 2 entrances one main entrance along Wilson Blvd and a field entrance facing 18th Street.
- Stratford Program Entrance along Quinn.
- With this orientation the best spot for buses would be along Quinn street. Parent drop-off would be along 18th along with the parking entrance.
COMPARISON - FIELD LAYOUT

18th Street

- With the field along Wilson Blvd, the 7-Eleven property shortens the length of the field. The total area could be made up but it will not be as continuous of a rectangle.
- The garage is most efficient under the field and in this layout the entrance would be more difficult to accommodate.

Wilson Boulevard

- With the field along 18th street, the field can take up the full width of the site.
- The garage is most efficient beneath the field and in this layout the entrance would be more easy to accommodate at the low point of the site (18th & Quinn)
**18th Street**
- **Massing along 18th Street.** Massing of the building would be along residential street. This would make the building relate more to the Queens Court Apartments.
- **Field adjacent to Wilson Blvd.** With the Field located along Wilson, enclosure becomes a larger issue. County Staff has expressed concerns with having a gap along Wilson Blvd for safety reasons. This issue is solvable.
- **No continuous green space between County Park and Field.**

**Wilson Boulevard**
- **Massing along Wilson Blvd.** Massing of the building would be along the higher density street of Wilson Blvd.
- **Field along 18th St.** Field is protected from busier Wilson Blvd by the building.
- **Continuous green space between County Park and Field.** County Staff has expressed this as a desire through PFRC and WRAPS meetings.
IMPACTS ON SUSTAINABILITY
SHADOW ANALYSIS

Summer Solstice: June 21

9 am

11 am

1 pm

3 pm

North
SHADOW ANALYSIS

Equinox: March 21

9 am  11 am  1pm  3pm
ENERGY CONSUMPTION - WILSON ORIENTED BUILDING

Annual Profile

- Room Electricity: 16%
- Lighting: 6%
- System Fans: 5%
- Heating: 48%
- Cooling: 13%
- DHW: 11%

TOTAL EUI= 33.5

Monthly Profile

Fuel (Btu/ft²)


0, 1000, 2000, 3000, 4000, 5000, 6000, 7000

Room Electricity, Lighting, System Fans, Heating (Gas), Cooling (Electricity), DHW (Electricity)
ENERGY CONSUMPTION - 18TH STREET ORIENTED BUILDING

Annual Profile

- Room Electricity: 17%
- Lighting: 7%
- System Fans: 6%
- Heating: 44%
- Cooling: 15%
- DHW: 12%

Annual Energy Consumption (MMbtu)

Bar- North

TOTAL EUI = 30.9

Compared to South Orientation

- Less Heating
- Higher Cooling

Monthly Profile

Fuel (Btu/ft²)

- Room Electricity
- Cooling (Electricity)
- DHW (Electricity)
- Heating (Gas)
- System Fans

2002: 6000
Feb: 0
Mar: 0
Apr: 0
May: 0
Jun: 0
Jul: 0
Aug: 0
Sep: 0
Oct: 0
Nov: 0
Dec: 0
ENERGY CONSUMPTION - QUINN STREET ORIENTED BUILDING

Annual Profile

- Room Electricity: 15%
- Lighting: 6%
- System Fans: 5%
- Heating: 48%
- Cooling: 15%
- DHW: 11%

WWRs:
- West: 60%
- East: 90%
- South and North: 20%

TOTAL EUI = 33.7

Monthly Profile

- More Heating
- More Cooling

Compared to South Orientation
SHADOW COMPARISON ON BUILDING

Dec 21, 9 am

Shading Condition in Winter

11 am

SOUTH

1 pm

3 pm

NORTH

WEST

SITE ORGANIZATION
IMPACTS ON SUSTAINABILITY

WILSON SCHOOL  ·  BLPC #4  ·  MAY 27, 2015
- More sunlight on the southern facade. This creates more solar gain which is helpful to heat the building in the wintertime, but creates issues during the warmer months.
- Lower baseline EUI by ~10%. Lower EUI means less energy consumption.
- Opportunities for Solar Panels on the Roof & South Facade
- Geothermal located underneath the field.
- Other Energy Conservation Measures will be required to achieve Net-Zero

- Higher baseline EUI by ~10%. Higher EUI means less energy consumption. The difference is not enough to have significant impact on achieving Net-Zero
- Opportunities for Solar Panels on the Roof & Field Enclosure to North. The roof is still in direct sunlight for most of the year even when located along Wilson Blvd.
- Geothermal located underneath the field.
- Other Energy Conservation Measures will be required to achieve Net-Zero
BUILDING ORGANIZATION STRATEGIES

How can architecture improve this baseline organizational diagram.
SENSE OF COMMUNITY

VARIETY OF OUTDOOR SPACES
VARIETY OF INDOOR SPACES
WONDER
SENSE OF COMMUNITY

VARIETY OF OUTDOOR SPACES

VARIETY OF INDOOR SPACES

WONDER
SENSE OF COMMUNITY

VARIETY OF OUTDOOR SPACES

VARIETY OF INDOOR SPACES

WONDER
SENSE OF COMMUNITY
VARIETY OF OUTDOOR SPACES
VARIETY OF INDOOR SPACES
WONDER
PRESENTED CONCEPTS

FANNING BARS

TERRACED COURTYARDS

ZIGGURAT

JENGA

SHIFTING ATRIUM
MOST PROMISING CONCEPTS

FANNING BARS

TERRACE COURTYARDS

ZIGGURAT

JENGA

SHIFTING ATRIUM
JENGA
**PROGRAM BARS**

Program for both schools are organized and grouped with like programs in a simple bars. The bars are one or two story high to accommodate the specificity of space.
H-B GYM

The gym is larger than what would ideally fit into a bar so it goes underground.
GROUND FLOOR PROGRAMS

The entire Stratford Program along with H-B Administration and Lobby functions are located in the lowest of the bars.
H-B WOODLAWN LOBBY AND DINING ROOM

The central atrium space at the ground floor would be the dining room when needed and also serve as the main building lobby.
AUDITORIUM, LIBRARY AND CLASSROOMS

The remaining program bars are stacked together according to their adjacency requirements.
CIRCULATION STRATEGY

The central atrium is the main circulation space for the building. Circulation within each bar could be located within the bars, but the circulation between bars would be within the main atrium.
WILSON ORIENTATION

The Jenga scheme is flexible in its orientation. Along Wilson it relates well to the surrounding tall buildings.
VARIETY OF OUTDOOR TERRACES

By extending the terraces you are able to create a more dynamic building with differentiated outdoor spaces based on the adjacent program and location within the building.
WILSON BOULEVARD ORIENTATION
18TH STREET ORIENTATION
PLANS - BASEMENT
ZIGGURAT
BASELINE PROGRAM
PROGRAM STRIPS

For Ziggurat the program is organized in a linear fashion according to access from lobby and adjacency requirements.
SEQUENCE OF PROGRAM AND LEARNING SPACES

That linear organization is then spiraled up the building culminating in the library at the top of the building.
INTERIOR CIRCULATION STRATEGY

The programs wrap around a central atrium. This is also where the interior circulation of the building takes place.
VARIETY OF OUTDOOR TERRACES

By making the atrium off center, the terraces and depths of spaces accommodate different uses.
WILSON BOULEVARD ORIENTATION

This scheme works well along Wilson Boulevard because of its height and adjacency to the Penzance Tower. The field in the back is 39,000sf.
18TH STREET ORIENTATION

It also works along 18th Street because it can be largest in the corner where there is the most daylight. The field in this instance becomes a bit smaller, because of the 7-Eleven.
FANNING BARS
CLASSROOM BARS

The Fanning Bars scheme starts with a very simple stack of classrooms.
CLASSROOMS

The bars then rotate out to create coverage for high ceiling spaces on the lower levels.
GROUND FLOOR FOR THE COMMUNITY

The classroom fanning creates a large “flexible ground floor that can contain all of the public and active functions of the school.
**DINING AND H-B LOBBY**

The exact order and layout of these spaces is yet to be determined but would include the Lobby/Dining, the Stratford Multi-Purpose Room, the auditorium & the gymnasium.
STRATFORD MULTI-PURPOSE ROOM

The exact order and layout of these spaces is yet to be determined but would include the Lobby/Dining, the Stratford Multi-Purpose Room, the auditorium & the gymnasium.
H-B AUDITORIUM

The exact order and layout of these spaces is yet to be determined but would include the Lobby/Dining, the Stratford Multi-Purpose Room, the auditorium & the gymnasium.
H-B GYM

The exact order and layout of these spaces is yet to be determined but would include the Lobby/Dining, the Stratford Multi-Purpose Room, the auditorium & the gymnasium.
FANNING BARS

The exact order and layout of these spaces is yet to be determined but would include the Lobby/Dining, the Stratford Multi-Purpose Room, the auditorium & the gymnasium.
VARIETY OF OUTDOOR TERRACES

On each terrace that is created by the fan, there could be a different theme. Some possible terrace themes could include: athletics, gardening, lounging, gardening, science (solar farm) & beekeeping.
CIRCULATION STRATEGY

The hinge point of the fan creates the main verticle circulation core with bars accessed directly off of it.
CIRCULATION STRATEGY

There is also a communicating stair located in the center of each bar so that travel time is less inefficient.
WILSON BOULEVARD ORIENTATION

The Wilson Blvd orientation provides a lot of solar generation opportunities. The field is a large rectangle in the back of the site (39,000sf). The building builds from that field towards the Penzance office tower.
18TH STREET ORIENTATION

The building can also be oriented so the terraces face south.
FAN MODEL SOUTH
Fuel Consumption

Total roof area =

TOTAL EUI = 35.6

PV panel Area = 17,600 sf (40% of roof)
PV System = 245 kW (980 * 250W)
PV Annual Generation = 408,663 kBtu
2.72 kBtu/sf/yr

*please note that the PV generation is a result of a preliminary analysis and it is subject to change.
FAN MODEL NORTH
Fuel Consumption

**TOTAL EUI=34.1**
PV panel Area= same
PV System= same
PV Annual Generation= 405,194 kBtu
2.70 kBtu/sf/yr
INTERIOR RENDERING
PLANS - 2ND FLOOR

BUILDING ORGANIZATION STRATEGIES
FANNING BARS