Baldwin School Expansion
Evaluation Matrix - Architect's Narrative
11/19/18

Evaluation Matrix Comments Executive Summary:

All options being contemplated are new construction and, in each case, afford the designer the freedom to explore the greatest efficiency and appropriateness to the educational program possible. Therefore, the variations between these options can be subtle.

All options will perform similarly in terms of:

- Future maintenance;
- Separate community access while maintaining security for academic areas;
- Appropriate accommodation of the academic program;
- Traffic;
- Construction impact on neighbors;
- Risk factors.

There are minor differences in costs. However, these likely are within the margin of error for this level of conceptual estimation; though option B, with its significant connection to the outdoors and daylighting, is intuitively slightly more expensive because it has more window walls.

There is a gradation regarding the clarity of interior circulation for "wayfinding" purposes; with option B and its "main street" offering the clearest circulation, option A with its 'doughnut,' the next clearest, and option C being somewhat "mazelike."

The key differentiators between the schemes typically concern the advantages offered by option B which include:

- Better access for construction and more convenient laydown areas.

- A more sensitive building massing which reduces the impact of the building volume on the adjacent properties to the east.

- The ability to offer flexibility in the organization of cohorts whether vertically according to building wings or horizontally according to building floors.

- Optimization for the collection of natural light to improve student performance, reduce long-term operating costs and increase the building's overall sustainability.

- Because of the geometry of its courtyards with their open ends option B offer some flexibility for future classroom additions.

Evaluation Matrix Architect's Narrative:

In sum, the three options, all consisting of new construction which has been designed, to the extent possible, for optimization, are equivalent in desirability across a number of criteria. These include:

- Traffic
- Risk
- Construction Impact on Neighbors
- Community Use
- Educational Program Accommodation (and related criteria)
- Core Space Location
- Annual Maintenance Costs

A brief discussion, from the Architect's perspective, by individual criteria, follows for use in interpreting the Evaluation Matrix:

Project Viability Issues

While there are differences indicated in total project cost among the three options, these differences are primarily within the margin of error for estimating at this conceptual stage of the project. It is intuitively recognizable that, with its more extensive relationship to the outdoors and lengthier envelope perimeter, option B will tend to be incrementally more costly per square foot. The other criteria that offer some differences include schedule impact - again with option B offering some variation because the distribution of open-space and ease of access to that open-space, as opposed to an enclosed courtyard, potentially allows for greater "lay down" area and therefore ease of construction.

Site

The main differentiator in this category is the ability of option B to present a more contextual massing to the adjacent properties to the east due to the three wings and the

resulting two courtyards, offering more open space and views to the roughly aligned residences nearby. This is as opposed to the continuous east wall elevations of either option A or C. All options were designed for favorable separation of community use areas versus secured academic areas. Construction impact on neighbors is assumed to be similar among all options.

Teaching and Learning

Among the various criteria accommodating the educational program, including flexibility and facilitation of the District's advanced teaching approaches, option B once again is somewhat different from the others. The separate wings of this option allow the possibility of organizing cohorts either vertically within the wings or horizontally by floor, depending on the preferred pedagogical objectives and desired adjacencies.

Building Environment

All three new construction options are similar in that new construction accommodates future changes in use including structure and technical building systems. There are some differences regarding what architects call 'wayfinding' or the clarity of circulation and how easily comprehensible the organization would be, say, to a first-time visitor. Here there are gradations between the schemes. Option B has the clearest organization because of its "main street" circulation spine running north-south, connecting all elements of the building. Option A is the second clearest because of its simple 'doughnut' type arrangement. With option C running, perhaps, a distant third, because of what some might consider a maze-like corridor arrangement. The same argument about the logic of circulation relates closely to the question of security.

The categories of sustainability, natural light, and connections to the outdoors are all closely related. As stated above, Option B was designed to facilitate the harvesting of daylight and connections to the out of doors with two south facing courtyards. It, therefore, is more advantageous from this perspective as well as the corresponding reduction in energy use.

Because of the geometry of its courtyards with their open ends, Option B also offers some flexibility for future classroom additions.

Long-Term Costs

Similar to the observation about sustainability, as all of the options are new, annual maintenance costs will be the same. However, energy costs because of maximization of daylight and optimization of solar orientation for simplification of mechanical systems, are more advantageous with Option B.

Appendix – Narrative Review of Concept Design Options:

Shared Features

The three current concept designs for the Baldwin school expansion share some similar features. All of the projects contemplate a clockwise parent drop-off circulation loop entering at the northeast corner of the site and proceeding down a ramp to a basement level where there will be limited visitor parking. The drop-off queuing then emerges from the building at the southwest corner of the site, then proceeding up Oak Street with a dedicated drop-off lane to exit at the corner of Oak and Heath. All also share the concept that service access will be from the northeast corner down the same ramp but to a level 1 landing with access to a service bay under the building. This service bay is located for adjacency to the kitchen/ cafeteria and is contiguous with the main custodial, storage, and receiving/loading zones.

All three schemes also allow the concept of providing additional green space at the rooftop level to supplement the existing Baldwin school playground. The building massing of the various concepts is limited to four stories in height. Because of existing topography, three stories will be visible at Heath Street; then, as the site drops off to the south, the full four stories emerge above grade. In all schemes, the main cafeteria/learning commons is located at level 1 which is coplanar roughly with the Baldwin school playground. The front door is located on Oaks Street, facing to the west and the parent drop-off lane. Bus drop-off will occur at Heath Street in a dedicated pullout Lane.

Because the gymnasium in multipurpose rooms require limited daylight, these are either fully or partially below grade. Each option has a basement level for parking. For cost purposes, either 10 or 40 parking spaces are considered, although, the final number of parking spaces will depend on other considerations such as the availability of on-street parking for teachers and visitors. Each option can be flexibly adapted to a variety of parking quantities and assumes a stair and elevator connection up to the west-facing main lobby.

1
Option A -‘Quadrangle’

This option is the most direct solution to the constraints of the available building site by building fully to the perimeter, leaving the interior of the site as an open-space void providing both daylighting views to the surrounding classrooms. The cafeteria is located at the southern wall. It is two stories in height and opens two grand views of the Baldwin school playground and its rolling landscape. The cafeteria is adjacent to the centrally located media center also on level I. As described above gymnasium and multipurpose spaces are submerged below grade the front of the building

On the second level, the landscape courtyard supplies light the upper story of the cafeteria and is also the venue for a series of project collaboration spaces on each of the upper three floors - each floor ostensibly associated with a given cohort - primary, elementary and middle. The cohorts in the case of this option would need to be formed horizontally.

The upper floors reveal the primary generator of the plan dimensions with a double-loaded corridor element at both North and South with a single loaded corridor element framing the East and West. Therefore, the north and south boundaries of the courtyard are lined by active programs space and the East and West boundaries of the courtyard are circumscribed by corridors. In the building section, we can see how the open courtyard level is elevated above the central media Center which is lit primarily by skylight elements from above.

2
Option B -‘Solar Harvesting’

In an attempt to loosen the boundaries of the building envelope and in order to more fully engage the outdoors, the solar harvesting option breaks the building mass down to three peninsula-like wings branching from the western facing front of the building. It is intended that each of these wings would afford the district the opportunity to organize cohorts vertically with each cohort occupying a separate wing or horizontally by floor. The frontal portion of the building is lined by a multistory linear atrium which connects all parts of the school. This linear atrium is also the location of the cohort-centering project collaboration zone, which also looks out onto the shared courtyards. These courtyards provide a high degree of interaction between interior and exterior, academic spaces as well as applying abundant life and views to each classroom - each of which is oriented directly south in order to harvest the maximum amount of natural light.

At level 1, the media center is at the center of the complex with potentially extensive combine-ability with the multipurpose room, gymnasium, and cafeteria. It fronts directly on the south courtyard, as well as gaining light from skylights in the floor of the landscaped north courtyard. In the cross section we can see how the two courtyards are placed one story in height from one another; with the broad cafeteria, this time spanning fully from west to east, fronting both south towards the Baldwin school playground and north towards the courtyard shared with the media center.

3
Option C-‘Twin Court’

In this final approach, the double loaded in single loaded portions of the building are mixed in a way which produces two interior voids - one a small open courtyard and the other a skylit four-story atrium which houses the media center at its lowest level. As in

the quadrangle approach above scheme is best suited to a horizontal organization of cohorts with primary, elementary and middle school schools within a school each located on its level. A project collaboration space for each level forms a kind of nucleus to the plan overlooking both the open and media Center skylit shared open spaces.