Application	General Data	
Project Name:	DRB Date:	July 21, 2016
Carlyle Plaza Two – South Residential Tower	Site Area:	~ 2 acres
Location: 340 & 350 Hooff's Run Drive (ultimately will have a Bartholomew Street address)	Zone:	CDD#11
Applicant:	Proposed Use:	Residential
Alder Branch Realty Limited Partnership, LLLP; represented by JM Zell Partners	Dwelling Units:	366 units
Architect: Arquitectonica	Gross Floor Area:	~ 505,625 sf (400,795 sf res + 104,830 sf parking)

Purpose of Application:

Final design review of the first phase of the Carlyle Plaza Two development (south residential tower).

Staff Reviewers: Thomas H. Canfield, AIA tom.canfield@alexandriava.gov

Gary Wagner, RLA, gary.wagner@alexandriava.gov

Emily Oaksford, AICP, LEED AP emily.oaksford@alexandriava.gov

DRB WORK SESSION, JULY 21, 2016: On a motion by Mr. Lewis, and seconded by Councilman Chapman, the DRB voted to <u>approve</u> the massing, form, scale, and general architectural character of the tower and low-rise residential liner for Phase 1 of the Carlyle Plaza Two development, subject to the conditions below to be addressed prior to final site plan submission. The motion passed 5-0.

- 1. Applicant will provide a Roof Plan identifying mechanical equipment and amenity areas, if any, and detail Terrace Levels on Floors 16 and 26.
- 2. Applicant will provide more setback depth between front and back planes for low-rise units (between 12-16" total difference).
- 3. Applicant will work to minimize visibility of the mullions to reduce contract between metal and glass.

DRB WORK SESSION, JUNE 23, 2016: The DRB continued to review the concept for the tower, tower top, and liner units. The Board directed the applicant to submit a final package for review and approval of the tower massing, liner units, parking and landscape deck at the next DRB meeting. The DRB stated that materials and other details would most likely need to be fleshed out in subsequent DRB meetings.

DRB WORK SESSION, APRIL 21, 2016: The DRB continued to review the concept for the tower and liners units. The DRB will continue to review the plans for this development at future work sessions, requesting that the applicant to provide alternative designs for review.

DRB ACTION, MARCH 17, 2016: The DRB reviewed the initial concept for Phase 1 and provided feedback on the tower massing and liner units. The DRB will continue to review the plans for this development at future work sessions and official meetings.

I. SUMMARY

A. Recommendation

Staff recommends **approval** of the South Residential Tower's general massing, form, scale, and architectural character of the proposed building for Phase 1 of the Carlyle Plaza Two development. Staff believes that although the building design now meets many of the key design guidelines that were approved as part of the original Development Special Use Permit (DSUP) for the site, some building details and elements still need to be provided with future submissions. Therefore, staff recommends approval, with conditions, followed by future DRB meetings or work sessions to approve other features of the detail design.

B. General Project Description & Summary of Issues

Alder Branch Realty Limited Partnership LLLP, represented by JM Zell Partners, is requesting Design Review Board (DRB) review for the revised Phase 1 of the Carlyle Plaza Two development in South Carlyle (Block 32). The phase includes the southern residential tower and liner units along Bartholomew Street, a portion of the parking garage to support this building, the related open space on top of the garage, and the terraced deck between the garage and the Alexandria Renew tank/field. Although this phase was previously approved by the DRB for a different building design in April 2013, the applicant now wishes to modify this plan, proposing changes in the size, style, and footprint of the residential tower, the residential unit and parking count, and the limits of the terraced deck and open space.

Staff recommends approval of the building design, including massing, form, and scale. Outstanding issues, to be discussed at future DRB meetings and at Final Site Plan Review are the following:

- Roof Plan and Rooftop Amenity Area
- Tower Entrance Details and Streetscape Plans

- Low-Rise Residential Units: Articulation and Setback Depths
- Materials Selection/Details for Building Base, Low-Rise Residential, and Tower
- Final Landscape Design
- Interim Conditions

II. BACKGROUND

A. Project Evolution

In June 2012, the City Council approved the Carlyle Plaza Two development, which is identified as Block 32 in the Eisenhower East Small Area Plan and is part of the South Carlyle CDD (CDD #11). The approved plan calls for four office and residential towers around several acres of high quality open space. The development was approved for 755,114 square feet of office floor area in two towers at the northwest portion of the property, and 632,056 square feet of residential floor area in two towers: one at the southeast corner of Eisenhower Avenue and Holland Lane, and one to the south, just east of the existing residential development on Block 27, the Alexan Carlyle.

With the Carlyle Plaza Two approval, the City Council approved the general site configuration, design guidelines, and infrastructure, and allowed the Design Review Board (DRB) to review and approve the final design of each of the buildings. In April of 2013, the Carlyle DRB approved the original design by FxFowle for the South Residential Tower. Prior to approval, the DRB reviewed the design several times at meetings in November 2012, December 2012, and February 2013.

B. Site Context

The entire Carlyle Plaza Two site includes about 6 acres of land located south of Eisenhower Avenue, between Holland Lane to the east and John Carlyle Street and Bartholomew Street to the west. The Alexan Carlyle, an existing five-story residential building is west of the southern portion of the site, and the future Carlyle Plaza One office building will be west of the northern portion of the site. The Alexandria Renew expansion site is immediately south of this property and is an integral piece of the overall development.

Phase 1, where the south residential tower will be located, is on the southwestern portion of the overall Carlyle Plaza Two site. It is bounded by Holland Lane to the east and Bartholomew Street to the west. The future extension of Savoy Street marks the northern boundary of the phase. The future extension of Limerick Street is the southern boundary of the applicant's property, and this phase will include a connection to a portion of the terraced deck on the northeast portion of the Alexandria Renew site. Today, the Alexandria Renew building and multipurpose field construction is nearing completion.

C. Overall Project Description

The south residential building has been designed as a 34-story high-rise tower with a 4-story low-rise residential building along the west side to provide an active-use buffer between the garage and Alexan Carlyle on the west side of Bartholomew St. The tower is

oriented so the long facades face east and west. The tower and the liner units together provide a total of 483,310 gross square feet and 366 units (tower: 354 units; low-rise component: 12 units) with 105,590 square feet of parking garage space. The proposed building would reach a height of approximately 355' above average finished grade.

As noted above, Phase 1 also includes a portion of the garage to support the building, the terraced deck connection to the AlexRenew tank/field, and the associated open space. These elements were already reviewed and approved by the Board and Council during the overall DSUP approval, but the modified components of the design such as the massing and architectural style of the residential tower, the scope and extents of the landscape deck, the relocated loading areas, amount of parking provided, and the interim conditions are still subject to DRB review at this time. The applicant will also need to show developed site plans at the Final Site Plan stage that indicate the landscape deck features and details, the proposed landscape design along Bartholomew Street, and additional information about the revised parking scheme, and how it fits into the full build out of the Carlyle Plaza Two.

III. STAFF ANALYSIS

As part of the original Development Special Use Permit (DSUP) approval, the Design Review Board (DRB) worked with the applicant to develop a set of design guidelines that are specific to the Carlyle Plaza Two development. This document provides guidance on the architectural intent for the buildings, the overall building massing, parking/service/loading areas, and interim conditions.

The main focus of the DRB meetings and work sessions in 2016 has been on the significantly modified architectural style of the new proposal for the South Residential Tower, and reconciling that design with guidelines that were written for a markedly different concept. Over the last several months, the applicant has continued to refine the proposal to address comments from both staff and the DRB.

Overall, staff believes that the building design now meets many of the key design guidelines. However, some detail elements that the DRB asked for (i.e., clarification of the roof plan and/or rooftop amenity area, details of the tower entry feature, liner unit depths, and streetscape specifics) have not been provided, and certain components of the building will need to be clarified and/or resolved in subsequent submissions. Therefore, for the DRB meeting in July, staff recommends that the vote be confined to massing, form, scale and general architectural character. Any outstanding items may then be addressed in future DRB work sessions and meetings.

The submission package does not include required specifics on the landscape or other exterior amenity areas, key architectural details, and material selections for the building (such as metal, glass, precast, wood or other critical selections). Due to these unknowns, the building should be approved with specific conditions and the unresolved detail elements may be discussed and approved at future DRB meetings. It should also be noted that other aspects of the building and site – such as the parking garage, the modified scope of the landscape deck, and screening materials – which are outside of the DRB's purview, will be reviewed and addressed by city staff during final site plan review.

A. Building Design: Architecture & Compliance with Design Guidelines

The proposed design has evolved through the review process from a simple but strong form, consisting of three rectangular solids of approximately equal height, with the middle volume slipped approximately 25 feet to the south. This initial concept created a dramatic cantilever to the south at the 16th floor and another to the north at the 26th floor, with resultant large outdoor terraces at the same levels on opposite building faces. This geometry of stacked blocks is constrained to the north-south direction, resulting in flat sides facing east and west. The building rises from the sidewalk along Bartholomew Street to its highest point, which is a uniformly flat top, where the building skin has been extended up to conceal a 13 foot high mechanical space.

Through early reviews and work sessions, both staff and the DRB felt that the tower, because of the horizontal proportions of its subunits, felt constrained vertically, and asked the applicant to find a stronger vertical expression. This has now been achieved by

further dividing the building mass into what reads as six rectangular solids, through the means of splitting each of the previous three forms in half by the addition of a vertical slot of glass.

The building skin expression along the east and west facades is dominated by a large-scale grid of dark, metal or precast concrete frames in one- and two-story heights, on 12-foot wide modules. These frames are infilled with slightly recessed clear glazing, metallic mullions and slab edge covers in a single window module that is unvaried throughout the building. This rhythm is broken by a central slot which runs down the center of the tower and is offset in the middle volume, reflecting the dramatic shift of the cantilevered center volumes. This slot, as currently shown, is composed of a darker or differentiated glass color with lighter metal mullion and slab edge covers. The slot runs vertically down the building and then horizontally along the fifth (amenity) floor of the tower, which is the dividing line between the building base and high-rise portions. The slot appears intended to present itself as flush glass, appearing similar to a curtain wall. This glassy ribbon connects to a smaller dividing line between the low-rise liner units and the rest of the tower's building base.

The table below provides a summary of how this project complies with the intent and key elements of the Carlyle Plaza Two Design Guidelines.

Guideline Category	Design Guideline Requirement	Proposed Plan	Meets intent?
Concept Plan	Residential tower with publicly accessible open space above a garage structure	Residential tower with publicly accessible open space above a garage structure	Yes
Sustainability	Comply with City's Green Building Policy – LEED Certified for residential buildings	Registered with LEED and designing to achieve certification	Yes
Architectural Intent Massing	Creation of a compelling skyline	The proposed building is a unique and compelling design, although this is achieved more through manipulation of its basic form than through the building top alone.	Yes
Architectural Intent Massing	Variation in building heights organized as a spiral progression	The height of the proposed building would allow for the type of progression described in this guideline.	Yes

Guideline Category	Design Guideline Requirement	Proposed Plan	Meets intent?
Architectural Intent Massing	Subdivision of building volumes with formal articulation and setback.	Tower's main concept of the "shift" provides large setbacks and creates open terraces for multiple amenity spaces within the building. The proposed center 'slot' design on the east and west facades helps to create a strongly vertical expression in the massing by breaking down the offset forms into six perceived volumes. The varied glass setbacks of the single- and double-bay windows help to provide variation, create shadows, and add further detail to the pattern of those facades.	Yes
Architectural Intent Massing	Respect the scale of Bartholomew Street with streetwall location, heights, and setbacks that enhance the pedestrian experience and complete Bartholomew Street.	Details in the low-rise residential component create the sense of a traditional townhome streetscape, yet in a compatible, contemporary idiom, and the individual unit entrances also help to break up the block.	Yes
Architectural Intent Context Specific Zones	 Transitional façade along Bartholomew Street. Contemporary façade at the deck and tower level. 	 Liner units along Bartholomew are more traditionally designed with terracotta-colored precast facades, patterned to resemble a contemporary vertical 'brick pattern'. The tower presents a contemporary design that uses predominantly glass and metal in the façade. 	Yes
Architectural Intent Building Base	Clear transition in building volumes from low to high rise.	The proposed center 'slot' design on the east and west facades runs flush with the amenity floor (5 th floor) of the building, which clearly defines the tower portion as separate from the building base. This slot also runs along the amenity floor and then vertically down to grade, dividing the high-rise portion of the building from the liner units.	Yes

Guideline Category	Design Guideline Requirement	Proposed Plan	Meets intent?
Architectural Intent Tower (unified design)	Consider large-scale articulations to unify tower from base to top. Provide visible volume articulation to differentiate building features.	- The design provides a clear pattern in the tower portion, at the primary scale through the large offsets, and at the secondary scale through the cascade pattern. The windows are inset at varying depths depending on their location in the tower and their bay height. However, the repetitive mullion pattern on the east/west facades does not reinforce the cascade pattern.	Yes
		Recommendation: Study alternative mullion patterns for east/west elevations, including a variation in sizes comparable to that proposed for the liner units.	See Note 1
		- The introduction of the slot alternative and the expression of six volumes has created a strong verticality and reinterpreted the cascade pattern into a more upright and vertical element, both of which are positive changes. In looking at details presented thus far for the 'slot', the expression in this area seems cluttered with mullions and slab edge covers, which detract from the effect. **Recommendation: Study alternative**	Yes
		Recommendation: Study alternative methods for a flush vertical slot, whether through the use of curtainwall, a two-sided flush system, or other technique.	See Note 2

Guideline Category	Design Guideline Requirement	Proposed Plan	Meets intent?
Architectural Intent Tower (top and corners)	 Distinct corners and tower tops. Mechanical penthouses should be integrated into the design of the tower top to add to the overall expression of the tower. Corners should consider distinct massing articulations to provide distinctive visual definition to the building, while responding to particular views and/or orientation. 	 The tower 'top' is distinctive in that it is entirely incorporated within the overall building massing; as noted above, basic tower massing, in this case, takes precedence over the importance of an additive 'top'. With variation between the east/west and north/south facades, the corners of the building appear special and unique. The building could do better in responding to particular views: the terraces should be celebrated with the addition of landscaping and trees. Recommendation: Provide a Roof Plan identifying mechanical equipment and amenity areas 	Yes Not yet See Note 3
Architectural Intent Residential Architecture High Rise	Incorporate balconies, loggias, shading, and other architectural elements to articulate the building façade.	 The functional balconies are useful in adding a strong vertical articulation element to the north and south elevations. The expressed slot in the exposed soffit further adds verticality to the tower. Loggias are used at the amenity floor area that opens up to the landscape deck and pool patio. 	Yes Yes
Architectural Intent Residential Architecture Low Rise	Create visual interest in the street wall through reveals, bays and recessed areas.	- The design of the liner units proposes setback elements; however they currently do not appear to be expressed at a significant depth. The recessed entries, projecting bays, and balconies do provide rich detail and character to the street wall. Recommendation: Provide more setback depth (2-4') between front and back planes for low-rise units.	Not yet See Note 4
	- Establish a planting/ transition zone between the building and sidewalk.	Planting areas are provided in between building recesses to create a successful transition zone.	Yes

Guideline Category	Design Guideline Requirement	Proposed Plan	Meets intent?
Architectural Intent Materials Palette	Buildings should be composed of masonry, glass, or highlight materials	Materials proposed include glass and metal or precast for the majority of the tower, as well as some granite or stone at the base. Additionally, terra cotta-colored precast concrete and wood are proposed at the low-rise (liner) units.	Yes
Architectural Intent Building Envelope and Fenestration	Provide variation in the building envelope and fenestration and avoid mirrored glass and thin applied grid patterns.	As noted above, the use of a single glazing module for the extent of the east and west facades is repetitive, and gives more the sense of office than residential. Recommendation: Study the use of more varied window modules for the east and west façades, perhaps similar to those proposed for the low-rise units.	Yes
Architectural Intent Entrance Conditions	 Entrances should be welcoming and distinct but unified with the overall design. Distinct massing articulations and variations at corners and building entrances. Provide building entrances that contribute to the pedestrian experience. 	More information is needed for the tower entrance and streetscape dimensions and plantings. Recommendation: Provide more detail (large-scale plan, section, elevation, details and materials) for tower entrance with streetscape dimensions and plantings.	Not yet See Note 5
Building Massing Bulk	 50' streetwall requirement along Bartholomew Street. 20' setback required at 50-60 feet height. Tower height between 175-375 feet. 	 4 story liner units along Bartholomew Street. 20' setback from property line provided above the liner units (at 56' above street level). Maximum tower height proposed is 355 feet. 	Yes

Note 1-Tower (Unified Design): Alternative Mullion Patterns

North and south facades show a rich pattern of multiple rhythms in vertical mullions. Staff believes this variety should be explored for the east and west façades as well, as the overall cascade pattern of window bay heights seems at odds with the unvaried mullion pattern currently shown for the east and west façades. Alternative mullion patterns for east/west elevations, comparable to that proposed for the liner units, would reinforce the

directionality of the cascade pattern itself and provide a tertiary scale of interest and articulation.

Note 2-Tower (Unified Design): Vertical Slot

Glass in vertical and horizontal slots appears flush and seamless, but in more detailed sheets shows disruption by projecting horizontals and vertical "columns" – at this point it is not clear whether these narrow verticals are spandrel glass or some other treatment. The depths were held at 4"/8"/12" to allow a flush, seamless expression, but that does not appear to be achieved. The treatment of glazing where it runs just in front of structural columns, currently shown appearing the same as adjacent vision panels, may prove difficult to achieve. It is not clear, in both the vertical slots and the 5th floor gap, if these narrow sections are intended to be spandrel glass, or some other treatment. Regardless, the specific details and glass selection in these areas will be critical to the building's appearance. For the vertical slots, at least, this problem could be resolved (and the slot made all the more transparent) by going to two approximately 24 foot spans where the two slots appear; this is not possible at the 5th floor, however, without exposing the structural columns. Staff points out, though, that rendering these columns invisible may prove difficult, due to the proximity of the glass to the outboard column faces.

Note 3-Tower (Top and corners: Roof Plan

The north and south elevations show full, consistent glass on the "Roof/Mechanical" floor that looks the same as in residential units below. However, there is no roof plan provided nor section through this area, so it is not clear if this is interior or exterior space, mechanical or roof terrace, or what is behind this glass. Furthermore, there has been discussion about the provision of a roof-level terrace or other amenity space recently, but there is nothing shown in plan or section to explain whether or not this is being proposed now.

With the elimination of the previously proposed common outdoor space/sky garden at the lower cantilevers, exploration of a similar use at the roof level would be appropriate. The treatment of the rooftop areas not devoted to double-height residential space will affect how the glass in these areas appears, and hence the read of the tower overall. Staff and the DRB need additional clarification of plan, section and elevation conditions at the roof/mechanical floor level to render an opinion on this critical area of the tower design

Note 4-Low-rise Residential Units

The amount of relief between the front and back planes in the liner units appears to be minimal, but it is not specified or dimensioned in the set. In some views, the shadows seem to indicate a substantial setback between the front (cascade form) and rear planes; in others, it appears to be only six inches. Staff feels that substantial depth is required in this portion of the project to convey a tectonic and quality expression and requests that the applicant study ways in which to achieve greater richness in depth and expression (up to 2-3 feet differentiation). Staff requests plan/section/elevation studies to clarify this item.

Note 5-Entrance Condition: Pedestrian Experience

The tower entrance is a prominent and important piece of the street and user experience. Although there are detailed sections provided for the low-rise residential units, no details have been provided for the tower lobby entrance. Furthermore, little is known about the materials or architecture for the canopy. The applicant should elaborate on the materials and landscape and provide large-scale plan/section/elevation studies of this aspect of the project. If the applicant plans to create larger planting areas or detailed paving patterns or install specialty street furniture, it is important to have dimensions in both plan and section views (with dimensions) for these components.

B. Parking

This site is located within the Eisenhower East Small Area Plan, which established a limitation on the amount of parking to encourage the use of transit and limit the number of single occupancy vehicles on the street. The Plan imposes a maximum parking ratio by land use type. Per the original Carlyle Plaza Two DSUP, a maximum of 1.3 spaces/1,000 gross square feet of residential floor area was approved.

The current proposal for the south residential tower and liner units provide 377,720 sf, which would allow a maximum of 378 spaces. The proposed plan for this phase provides a total of 366 units with 263 parking spaces within the garage. An additional 95 surface lot parking spaces will be provided and maintained until future phases of the development are built, resulting in a total of 358 spaces built for the first phase. It should be noted that 45-60 on-street spaces will be added to Bartholomew and John Carlyle Streets during this phase as well

Thirty-eight of the parking spaces on the surface lot east of the garage will be reserved for field users, in order to maintain compliance with Condition #54 of the DSUP. These spaces will be relocated to within the garage with future phases. The remaining 320 off-street parking spaces results in a parking space to dwelling unit ratio of 0.84.

The ultimate design for the garage for the entire development will provide around 1,820 parking spaces (overall ratio of 1.3 spaces/1000 ZSF). Given the nature of the office, hotel, and residential uses, there is great potential for shared parking within the garage to maximize efficiency. The provision of the 95 surface spaces in the interim should accommodate the parking demand for this building until the rest of the garage is constructed. The applicant has agreed to monitor parking demand in the building and will address additional parking needs on their site should the demand be higher than the amount of parking that is provided with this phase.

C. Proposed Landscape Deck

According to the conditions set forth in the approved DSUP, the terraced deck and amphitheater connecting the green space on the parking structure and the athletic field above the Alexandria Renew tanks shall be included in the final site plan for the southern residential building or as a separate final site plan. This proposal will have a modified scope and size of the landscape deck, however as long as the connection to the athletic

field and the playground are incorporated, then the deck size as presented is acceptable to staff.

D. Temporary Screening

The current proposal provides an abrupt end to the parking deck facing Holland Lane. The applicant provides a plan for interim conditions to screen portions of the exposed garage structure with decorative scrim. A temporary design graphic with contemporary trees and birds on a canvas-like material is proposed along the north-half of the east elevation (Holland Lane-facing elevation) and along the east half of the north elevation (Savoy Street-facing elevation). Once the north residential tower and larger parking garage and landscape deck are built, these unfinished edges will be connected. Therefore, it is thought that the scrim will only need to be in place for a maximum of five years.

E. Streetscapes and Other Items under Final Site Plan Review

The following items have been highlighted in the DSUP approval as items that must be constructed when the first phase or first residential tower is built.

John Carlyle Street

Prior to the issuance of a certificate of occupancy for the first building, John Carlyle Street – from Eisenhower Avenue to Savoy Street – must be constructed. The road is to be a minimum roadway with curb of 22 feet wide. Modifications to the traffic signal at Eisenhower shall be required, and pedestrian countdown signals must be provided and installed, as well as a concrete median, approximately 75 feet long, to create a right-in, right-out only condition on Hooffs Run Drive. The street must also include street parking on both sides in addition to a stormwater management plan with BMPs.

Bartholomew Street

The applicant is well aware that the construction of Bartholomew Street – (from Savoy to Limerick) and Limerick Street (from Bartholomew Street to Holland Lane) is required to obtain a certificate of occupancy for the south residential building. The submission plans show the completion of these roads; however parking is required on both sides of the street for Bartholomew, as well as the provision of bulb-outs and crosswalks at each corner and at both sides of the street.

The Eisenhower East Small Area Plan states that all typical streets within the area should measure 66-feet in public right-of-way, consisting of two 11-foot travel lanes and an eight-foot-wide parking lane on each side. The six-foot-wide well or strip for trees and eight-foot-wide sidewalk zone can be adjusted for increased planted areas per location.

Public Art

Public Art will also be reviewed with the final site plan and shall be installed prior to the first certificate of occupancy. Public art elements may be integrated into functional elements of the streetscape or can serve as stand-alone pieces. Conditions in the approved DSUP state that the art proposal shall be reviewed by the DRB prior to the release of the final site plan and must be constructed to the satisfaction of staff and the Directors of P&Z and RP&CA.

IV. CONCLUSION

Staff recommends that the DRB approve (with conditions) the massing, form, scale, and general architectural character of the tower and low-rise residential liner. Further design refinements and additional details on materials and other design elements specified within the staff report should then be reviewed by the DRB in a future meeting. Design aspects to be reviewed and refined include: the rooftop and amenity area plan, detailed drawings showing the tower entrance and streetscape, studies of alternate fenestration rhythms for the east/west façades, further depth studies of inset tower glazing, detailed treatment of the glass slots, treatment of glazing at exterior columns, final details and selections for materials, including glass, metal, precast concrete, wood and stone, and depth variations and other details related to the low-rise liner building.

Staff Recommendations / Conditions of Approval

- 1. Provide a Roof Plan identifying mechanical equipment and amenity areas.
- 2. Provide more setback depth between front and back planes for low-rise units.
- 3. Provide more detail (large-scale plan, section, elevation, details and materials) for tower entrance and streetscape dimensions and plantings.
- 4. Provide alternative mullion patterns for east and west elevations, including a variation in sizes comparable to that proposed for the liner units, which would also reinforce the directionality of the cascade pattern itself, and provide a tertiary scale of interest and articulation.
- 5. Provide illustrations of alternative methods for a flush vertical 'slot', whether through the use of curtain-wall, a two-sided flush system, or other technique.

