

MEMORANDUM

Date: 2 April 2015 (Revised April 13, 2015)

To: Emilie Cademartori, Town Planner
Town of Wenham

From: Timothy Smith, Senior Architect

Re: Maple Woods Housing, Wenham
Site and Building Design Review

0. BACKGROUND AND GENERAL OBSERVATIONS

This review is undertaken for the Town of Wenham ("Town") and is based on documents that have been submitted to the Town by the Developer, Harborlight Community Partners ("Developer") for the purposes of approval for a friendly 40B development. The Architect for the project is Siemasko + Verbridge ("Architect"), which has augmented the Town's official documents with a supplemental design narrative and sketches to describe the features of the project. The drawings are preliminary in nature. The information and comments in this review has also relied on answers from the development team to questions from the review team during the preparation of this document. On March 30, the Town, Harborlight, and the Architect met with The Narrow Gate to walk the site, review existing physical conditions, and demonstrate the boundary of the building and site improvements. John Ryther, a Landscape Architect with Icon Parks Design, was also present at the site visit and is part of The Narrow Gate review team; his review and comments pertain to the site design and landscape architecture.

The program for this building is sixty (60) 1BR units in a "supportive" housing model, that is, social and supportive services are provided on-site to residents who may need them. The target demographic for this housing is men and women over 55 years of age who earn no more than 60% of area median income (AMI). This type of housing is common among senior residents. An objective of the Developer is to allow residents to "age-in-place", by physically remaining in their apartments for as long as their ability permits them. As described below, various features support this objective. Also, typical of "supportive" housing models, common areas also facilitate day services and activities at the property itself.

As informed by the Developer, the project will be constructed in two phases, each phase comprising one of the legs or wings of the building. All common and program areas will be part of Phase I.

Overall and for the most part, we find the Maple Woods project to be conceptually well-considered and thoughtfully designed. The extent to which the Developer has responded to various demands, preferences, and requests by abutters, Town departments, and environmental groups could be a model for other 40B projects. Our concerns and comments are typical for a set of design documents that are not complete, have ambiguities, or require clarifications. We believe the noted deficiencies are fairly easily remedied.

I. SITE DESIGN

These notes were prepared by John Ryther of ICON parks design and augmented in part by The Narrow Gate (TNG).

A. SITE: Grading

In general, the grading of the site appears to be fairly well conceived, with a few minor exceptions. The grading of the parking lot and access driveway should have additional spot grades to assist in the setting of the curbing and grading of the areas to be paved.

The opening in the curb at the parking island nearest to the driveway, although satisfying drainage issues created by eliminating a drainage structure, is aesthetically undesirable and potentially problematic during the winter. By cutting through the island this drainage swale detracts from the aesthetics of the landscaped island planting and may cause erosion in the plant bed even if it is paved. During periods of heavy snow, as witnessed this year, the clearing of snow from this swale will be needed to prevent the formation of ice in the two corner parking spaces. We recommend that the design team consider warping the pavement surface to direct water around the end of the island or adding a drainage structure to collect it rather than using the swale.

The grading at the edge of the building is incomplete. Additional spot grades will be needed at all jogs in the structure's footprint, especially at the paved patios and entrances. It appears from the plans that only the units adjacent to the parking lot and four units at the back, south end of the building, are to receive patios. From discussions with the designer during our site visit we understand that all ground floor units will have patios. The grading indicated by the preliminary grading plan does not reflect this unless the remainder of the patios are actually raised decks. With the exception of the accessible units, it is assumed from the design that these patios or decks will have a step down from the finish floor. Currently the drop at the rear of the building is 1.5' to 2.5', causing one to think that the retaining wall needs to be extended or that these units will receive a raised deck with railings.

The spot grade of 67.5 at the back south corner of the building appears to be too high for the finish floor of 67.5, though it appears to be required due to the grading of the extension of the dead end vehicular access drive.

B. SITE: Fire Access Drive

The emergency overflow has been located within the travel way of the fire access. Will this withstand the loads of fire and emergency vehicles? We assume, based on the symbol and its location, that it will be designed like a drainage structure with a frame and grate that fills and

overflows in an upwelling fashion, rather than an outlet pipe with an end wall and dispersal apron. If so, will it not be subject to freezing during winter months? If not, what is the design of the structure?

C. Fire Lane Design and Proximity to Fence and Building:

The requirements for the fire access lane, most likely, have already been discussed and approved by the Wenham Fire Department. I would assume that the fire lane will need to be kept clear of heavy accumulations of snow to satisfy the safety requirement of the project. Although this has been an unusual year for snow, the current changes in climate indicate that it will not be our last unusual winter. From a snow removal standpoint, the close proximity of the 6' high CLF will be problematic during heavy accumulations of snow. In the proposed location, damage to the fence will likely occur during snow removal operations.

D. SITE: Fencing

We understand the need for fencing to delineate property lines and to provide screening. Yet, at the rear of the building, which faces the wood lot, it appears extreme to include a 6' high CLF. This fence will detract from the otherwise wonderful view of those occupying the ground floor units. Is there a security reason for this fence being so high? In addition, the close proximity of the fire access eliminates any possibility of screening the fence from the occupants' view. Even though the land beyond the fence will not be part of this project, the borrowed landscape that is beyond the fence is what makes this project so special. Consider reducing the height the fence or even eliminating it.

From our review of the site drawings and details the project, as designed, is in accordance with paragraph 5.2.7.2 *Boundary Fences, Walls, or Hedges*.

D. SITE: Proximity of Access Loop Road to the Building

The loop road at the end of the parking lot pushes the sidewalk too close to the middle unit's walk out patio, leaving no room for plantings or grading transition between walk and patio. Although the smooth arc of the road is beautiful, possibly a slightly different configuration might provide more space for buffer planting and a better outdoor experience for the occupants.

TNG: The impact of the headlights of incoming cars should also be taken into account when reviewing this condition. Allowing space for the addition of a planting buffer would mitigate this condition.

E. SITE: Building Orientation and Views

If not for the new driveway access and associated fencing, signage, and plantings, it would be unlikely that anyone driving along Maple Street will even know the new housing even exists after it is constructed. In some ways, it might be too secluded for some of the older residents that tend to thrive on viewing the simple comings and goings of the community. Clearly the orientation was chosen to have the minimum impact on the neighbors' views of it.

The building's orientation within the site provides both positive and negative opportunities/benefits for each dwelling unit. Those with south facing units will take advantage of the heat gain in winter, but will want good curtains to block the sun during the summer. The views from the units facing east and south overlook a sea of parking, which, though considered by me to be negative, could be a blessing to someone that wants to keep an eye on his or her car, or watch the comings and goings on the property. Those with units on the north and west will be in the shade most of the year, but the views will be of the woodland and seasonal stream that lie beyond. Again, this view would be desirable to me, but some others may prefer an active view. Those with the east and west facing units will have either morning sun or setting sun, but the views from these units will not be spectacular. Every unit will be a compromise, but will be satisfying to someone.

From the abutters' properties, very little of the new building will be seen, with the possible exception of the Berthiaume and Pirrotta properties that are closest to south end of the building. Although a wood stockade fence is proposed along with vegetative screening, a portion of the building will always be visible, especially during the winter months. This being said, the building facade is pleasant and well thought out and should not need to be hidden from sight.

Very little if any of the parking lot will be visible from abutting properties after the stockade fence and initial plantings are installed. It should be noted that due to a 20' wide gas line easement, a small gap in the vegetative screening will exist behind the Pirrotta property. If the abutter agrees, additional plantings could be added on his/her property to improve the screening of the new building.

TNG: We understand that there have been concerns expressed by Wenham citizens about the visual impact of the development. In part these concerns likely pertain to the difference in scale of the proposed building within the existing context. Based on our reconnaissance of the neighborhood and analysis of views from concerned parties, we find the appearance of the new development to be almost completely without detrimental visual impact even in the defoliated seasons. In the winter, the building will be partially visible from abutting properties but far less so than other existing buildings in the immediate area.

Based upon the review of the site plans the project appears to be designed in accordance with the buffer and visual relief requirements of *Section 8.0 Landscaping Requirements of the Zoning By-Laws of the Town of Wenham*.

F. SITE: Integration of Building and Site

It is difficult to discuss the new building and the associated parking and access without taking into account the larger parcel from which this site has been carved from. If you were to limit the review to only the "pork chop" site that has been carved out of the larger one, you might say the vast majority of the site will go under the blade of the bulldozer resulting in a significant restructuring of the landscape. In reality, the central portion of the site current exhibits the remains of earthwork activity. Long since excavated and exported from the site as ordinary borrow or gravel, this cratered portion of the site will become the parking lot and subsurface drainage area of the new project. The trees within the entire site are primarily second growth, and although attractive, are not old growth or significantly mature. To accommodate the proposed improvements, all but the trees and understory found at the sites edges will be eliminated. The proposed grades within the core of the site will redefine the parcel and will make it possible for the building and parking to be constructed. The handicapped and elderly

will be able to traverse the site and feel at home here. At the new parcel's edges and beyond, the land forms and plant material will remain, sheltering the new development from view. Fortunately, to the northeast through the northwest, and to a lesser amount to the south, the larger site from which this one was carved will continue in its glory with wetlands and woodlands that will, most likely, remain as is for the foreseeable future. In the end, it is this larger site that governs how the building will meet the site.

The landscaping that is proposed will blend the more manicured human-made environment with rustic surroundings. The transition will go from manicured lawn and shrub beds to a less refined wild flower meadow, with scattered trees, that will seamlessly blend with the existing woodland beyond. Though still at the schematic design level, the intent of the landscape design is clear through the design narrative. The site planting plans still need to be completed at the design development level to fully understand how closely the intent of the narrative will be followed.

G. SITE: Landscaping Plan

As previously indicated, we believe that the intent of the landscaping is well documented in the design narrative. Unfortunately the schematic level drawings do not go into enough detail to fully paint the picture of what will be installed. The locations of all of the plants will need to be indicated on the drawings, along with a quantified list, before the plan can truly be evaluated. The planting plan will need to be at 1" = 20' scale with enlargements of key areas at 1" = 10'-0" scale.

H. SITE: Plant List

The long list of plants is impressive and the vast majority are native to the Northeast, but this list is somewhat misleading. Approximately one half of the plants in the Ornamental Plantings list are perennials, most of which will be relatively insignificant when evaluating the overall massings that will redefine the space. The planting plan needs to be fleshed out and detailed, showing the locations all of the plantings, before it truly can be evaluated.

It should be noted that three of the four evergreen trees listed on the planting plan do not conform to the height requirements (8' minimum) as indicated in *Paragraph 8.4 Planted Area Requirements of the Wenham Zoning By-Laws*. Some shrubs listed will be difficult or impossible to obtain at the 2.5' ht x 18" spread required by *paragraph 8.4.1 of the Planted Area Requirements*, but for those that can be obtained at that size should be. Modify the plant list to reflect the minimum sizes required by the Zoning By-Laws.

The initial planting height and spread for plants within the buffer / screening zones of the proposed parking lot and building will be of the greatest concern when specifying and selecting plants. Presently the plants are only represented by symbols and are not tied to the plants within the plant list. This must be rectified prior to final approval of the planting plan.

I. Parking Lot Landscaping

The parking lot appears to follow the requirements of *paragraph 6.3.6 Landscaping in Parking Areas with Five Spaces or More*. The exact plant size and types are not provided, but the

intent of the planting is shown. It is imperative that the shrubs and ground covers with the parking lot islands be selected to withstand the stockpiling of snow.

J. Existing trees to be Preserved

Due to the extensive regrading and site coverage of the site there will be little opportunity to preserve existing trees within the proposed property line. With the exception of the existing hedge along the south side of the property, no plantings are indicated to be preserved. Where possible, especially along the edges of the property, the developer should protect trees and native vegetation and incorporate this material into the overall planting scheme. Due to the scale of the building footprint and the need for parking and circulation, attempts to preserve existing trees within the confines of the site, as requested in *Paragraph 8.4.2 Planted Area Requirements of the Zoning By-Laws*, will be very limited. As previously indicated, the larger site, from which the project site is cut, will provide a borrowed landscape, filled with trees that will enhance the experience of those that will live here. The additional trees and shrubs that are proposed in the landscape plan will, in time, blend the developed site with the woodland, wetlands and meadow that lie outside of the proposed development.

K. Dumpsters/Trash Storage

No on-site storage for trash has been indicated on the site plans. Will there be a need for trash or recycling storage outside of the building? If so, please indicate where and how it will be screened to meet *Paragraph 8.3.2 General Landscaping Requirements of Wenham's Zoning By-Laws*.

L. Sight Distance:

To achieve sight distances required at the proposed entrance to the property on Maple Street some minor modifications may be required to the evergreen hedge located on the west side of the entrance driveway.

M. SITE: Conclusion

The design is well thought out, but will benefit from minor refinement as the design progresses. With the possible exception of not having a completed planting plan for review, most of the issues pointed out are minor, or are simply one person's opinion and should not negatively reflect on the project. In general, the project reflects well on both the developer and the Town.

II. BUILDING DESIGN

A brief description of reviewed conditions are followed by comments, which are indicated by a bulleted note (•).

A. BUILDING: General Arrangement And Configuration

The building is configured in roughly a “L” shape with the concave portion of the “L” facing a 66-space parking lot. The entry to the building is marked by a standing seam metal roof that is located at the intersection of the two legs of the “L”. This elevation, used as the front of the building, is south and east facing. Each of the legs has three floors housing 60 dwelling units in addition to common spaces providing supportive and management spaces to residents. Apartments are accessed by a double-loaded corridor. The building is approximately 34'-9” tall which complies zoning restrictions for this district.

1. Entry Sequence

- The “L” shaped building is appropriate for the site and creates a defined edge for residents and visitors entering the site.
- The location of the entry is easily distinguishable and logical.

2. Egress Stairs

- The final building will contain an extra egress stair (a total of three) which apparently provides the second means of egress for Phase I. Since the corridors are long with egress stair at the end of the building legs, the extra stair will be well-used by able-bodied residents needing direct access to common areas of each floor.
- The egress stair does not appear to have enough risers in a single run to reach floor to floor: this should be reviewed.
- The two egress stairs at each end of the building occupy building corners which would be better used for resident apartments: we suggest moving the egress stairs inboard to maximize daylight opportunities.

3. Corridor

- The corridors which access resident apartments are very long (approximately 180LF and 130LF respectively). We strongly recommend that due to wayfinding difficulties experienced by a number of aging seniors, that the Developer and Architect devote significant design attention to mitigating this condition through lighting, recessed apartment entries, changes in wall and floor colors/patterns, art work, etc.

4. Common Areas

- The common areas are generally located in the “knuckle” or center of the building near the circulation core: this is well-considered.
- There are trash (and hopefully recycling) rooms at the end of each building leg each of which appears to have a trash chute. Only one chute deposits trash near a compactor: what is the plan for the other chute? Does maintenance staff have to transport trash to the compactor room?
- Where and how are recyclables managed?

- There are four (4)-appliance laundry rooms on the second and third floor but none on the ground floor; this is not acceptable.

5. Other Issues

- The disposition of apartments is accomplished in an efficient and logical way; plumbing cores are arranged as efficiently as possible. Care should be taken to separate apartments acoustically and in terms of preventing odor migration.

B. BUILDING: Floor Plan Review

Though preliminary in nature, the drawings clearly define the basic scope and arrangement and relationship of interior spaces. The building floor plan drawings were submitted at 1"=20' scale.

1. Basement

A partial basement of approximately 2,200SF is proposed at the end of the southern end of the building. This space is noted as a maintenance office, a mechanical room, and a room for the fire protection (sprinkler) system.

- If there is to be an "office" at this level, two means of egress should be provided, or condition should be thoroughly reviewed by the building department.

2. Floor 1

This floor contains the main entry area to the building, large common area, program offices and meeting rooms, management offices, two common toilet, trash compactor room, and 18-1BR apartments, etc.

- a. Main Entry: covered entry is provided over the 30' walking approach to the building
 - Benches at covered entry may create uncomfortable "gauntlet" for incoming residents to pass "nosy" seated residents, or opportunities for interaction depending on one's temperament.
 - Entry vestibule (air lock) with multiple doors could be simplified with sliding power doors activated by key fob (exterior) or by motion sensor (interior) for hands free operation.
- b. Mail Room
 - Is the access to the Mail Room by the postal service?; check available space for this area and regulations.
- c. Lobby: includes waiting area for management offices with direct access to large common room.
 - This area is very important to the success of the building; the Developer should carefully consider this space at larger scale and in three-dimensions.
 - Visual sight lines to Common Room very important to allow residents to "pre-view" activities and occupants before entering room.
 - Elevator access is assumed to be from the Lobby and not from the hallway.
 - Sight lines to and from common accessible toilet is not a preferable condition; this toilet should be relocated.
 - Is the entry lobby the best place for the janitor closet?
 - Back wall cluttered by too many doors: this should be either a blank wall, a place for artwork?
- d. Management Offices
 - Good location, verify furnishing and access requirements. Is meeting room large enough? Suggest providing glazing for view to Lobby.

- e. Common Room: Prelim plan shows tables and chair for 48 people; this room is approximately 1,300 SF and is large enough to accommodate the entire projected resident group. A common kitchen appears to be at one end: projected scope for this room is unknown.
 - Storage will be necessary to permit various seating arrangements
 - Due to odors associated with food preparation, the Developer may want to consider enclosing this space with a serving window, or ensuring that the venting is adequate.
 - Is a projection screen planned for this room; due to the oblique west wall, a recessed ceiling unit would be appropriate.
 - “Previewing” extremely important from all possible vantage points.
 - A project narrative provided by the Architect indicates a “computer room”; no such room is called out on the drawings.
 - Is there a program benefit to having exterior doors to this room?
- f. Laundry Room
 - Appears to me missing from this floor.

3. Floor 2

This floor contains the large common/game area, laundry room and 21 residential apartments.

- a. Game Room
 - Configuration offers some distinction with regard to separate areas.
 - “Previewing” opportunities very important from all possible vantage points.
 - Location of adjacent Laundry is well-considered.
 - Consider importance of storage for this space, which is not indicated, or connect to hall storage.
- b. Laundry Room
 - It’s possible to make this a little larger and a little more inviting to accommodate residents who do not want to leave their laundry unattended.
Laundry is a basic ADL and rooms should be usable.
 - Consider visual connection from laundry to Game Room.
- c. Trash Rooms
 - See previous comments on trash rooms.

4. Floor 3

This floor contains the large common/library area, laundry room and 21 residential apartments.

- a. Library
 - See “Game Room” comments above
 - Unclear what built-in apparatus is shown on drawings.
- b. Laundry Room
 - See Laundry Comments above
- c. Trash Rooms
 - See previous comments on trash rooms.

5. Roof Plan

No roof plan was submitted for review; however, the mechanical narrative indicates that the HVAC systems are roof-mounted. It was not possible to evaluate this condition and how mechanical equipment will be screened.

C. BUILDING: Dwelling Unit Plan Review

As mentioned above the residential program for the building is 60-1BR units, each of which is approximately 650SF. To meet requirements of the Massachusetts Architectural Access Board (MAAB), 5% of the units, or three units shall be Group 2 (fully accessible or capable of being fully accessible with no structural modifications). The remainder of the units shall be Group 1 units as defined by the MAAB. Per the proposed plan, one Group 2 unit is located on each of the floors. Although not all units are Group 2 accessible, nor are they required to be, the Developer has committed to making Group 1 units more usable so that residents will be physically able to remain in their apartments despite minor disabilities. Group 1 and 2 apartments are identical in size.

1. By definition per MAAB

- a. Group 1 Units: applies to dwelling units that have features that can be modified without structural change to meet the specific functional needs of an occupant with a disability.
- b. Group 2A Units: applies to dwelling units that have features similar to Group 1, but have the additional feature of greater floor space to accommodate the needs of occupants who need such space due to their disability.
- c. Group 2B Units: applies to dwelling units that contain features that provide, at the time of initial construction, full accessibility without need for further modifications.

Each of the apartments on the first and second floor have access to outdoor private space either to a patio (first floor) or balcony (second floor). None of the third floor units have outdoor space due to roof configuration. However, they do have full height sliding doors protected by a "Juliet" shallow balcony to enhance solar access. Third floor units are slightly smaller due to the roof configuration.

2. Group 1 Unit Plans

This dwelling unit plan were provided by the Architect at ¼"=1'-0"

- a. Entry:
 - See comments on corridors above; recessed entries should be considered to enhance the corridors and support wayfinding.
- b. Kitchen
 - appears to be generous in size; it is assumed that wall cabinets will be provided.
- c. Bathroom
 - larger than minimal bathrooms with clear access to bathtub.
 - Door opens into bathroom which creates obstruction at sink for the user. Suggest that bathroom doors open out: they can be left open for a single resident and facilitates the use of the sink, it makes the bathroom more usable for someone with a disability, and removes the possibility that someone in distress could fall against the door and make it impossible for emergency personnel to gain access.
- d. Living Area works well.
- e. Bedroom
 - Suggest consideration of high-quality bi-fold doors such as "Magi-glide" doors by Landquist & Sons to save space and clearances in Bedroom and provide full height access to closet shelving.
 - Is it possible to furnish this room with a dresser and maintain healthy clearances around the bed?
- f. Patio/Balcony
 - Suggest considering some separation between users of a shared balcony (as currently drawn); "good fences make good neighbors" in these conditions.
- g. Closets/Storage

- In favor of larger open spaces, there is very little closet space. Where one would expect a coat closet near the entrance, the 6'-0" wide closet is noted as pantry for food storage; the 5'-0" bedroom closet is the minimum size acceptable for one person. What is the provision if two people were to live in this apartment? There is a large storage closet near the front door but this may be occupied by the water heater? There is no linen closet. We recommend a closer look at the storage capacity of these apartments especially since there is no provision for resident storage elsewhere in the building.
- h. Other
- It has not been indicated where hot water tank will be located.
 - It has not been indicated where the fan coil will be located and how this may impact floor plans
3. Group 2 Unit Plans: (We have assumed that these are Group 2A units)
This dwelling unit plan was provided by the Architect at ¼"=1'-0"
- a. General
- It is not clear why the accessible units are the same size as the Group 1 units. The MAAB regulations suggest that additional space is necessary. Also, there is a broad range of assistive devices that require ample clearances. Suggestion: build out outside corner of building to enclose corridor and enlarge Group 2 units. We find that these units need to be larger for the reasons that follow.
- b. Entry:
- See comments on corridors above
- c. Kitchen
- appears adequate in size; it is assumed that wall cabinets will be provided.
- d. Bathroom
- similar comments to Group 1 above.
 - If vanity is not provided, the turning radius is not obstructed. Is a vanity to be installed at construction and removed if requested by tenant?
- e. Living Area
- Concern about size and clearances around furniture by someone in wheelchair.
- f. Bedroom
- Can this bedroom accommodate bed and dresser and provide required paths and clearances?
 - See comment above about closet doors.
- g. Patio/Balcony: access must be considered carefully for required access.
- h. Closets/Storage
- In favor of larger open spaces, there is very little closet space, even less than the Group 1 units. Where one would expect a coat closet near the entrance, the 6'-0" wide closet is noted as pantry for food storage; the 5'-0" bedroom closet is the minimum size acceptable for one person. What is the provision if two people were to live in this apartment? There is a large storage closet near the front door but this may be occupied by the water heater? There is no linen closet. There is no storage closet as found in Group 1 units. We recommend a closer look at the storage capacity of these Group 2 apartments especially since there is no provision for resident storage elsewhere in the building.
- j. Other: see comments above for Group 1 units.

D. BUILDING: Exterior Elevations

The appearance of the building is a more subjective process; although another architect may have approached the façade differently we are careful not to object to a given style if that is the subjective preference of the Owner. We can say that the gambrel roof system is not uncommon in this area but is not the predominant style. This neither approves of or disapproves of its use as a cultural reference. It was explained to us that the combination of brick and clapboard siding was a reference to local municipal and some historic buildings few of which appear to be directly in this neighborhood. Also, the use of the roof form is a creative way of reducing the apparent height of the building, much in the way of a mansard roof. We find that whatever architectural style is selected will have minimal impact on passersby since the building will be largely obscured from the public way; the view will be enjoyed mostly by residents. In any event, our comments do not focus on style selection but on the execution of the style that was selected. We also acknowledge that the drawings are not complete and will benefit from further detailing and design study as the project moves forward.

1. Front (Main) Elevation

The Architect has utilized a combination of brick and clapboard siding to help “humanize” or break down the scale and length of the wings of this elevation.

Projecting bays are brick masonry and exhibit the gambrel profile; recessed portions of the building are painted cementitious clapboard. Balconies stretch between the gambrel projections on the second floor. Third floor dormers extend beyond the sloping roof and align with the face of the building.

- The use of the gambrel form, usually seen in singular form, is unusual in this application; the front elevations have a total of six large projecting bays in brick with a gambrel treatment. This lends a coherence to the overall building but is somewhat relentless. See windows below for possible enhancements. The Architect is opting for a familiar rural-suburban form to not only achieve an acceptable building height but also to create architectural interest. To comply with the height restriction, another alternative would be to provide a flat-roofed building perhaps more familiar in urban centers.
- The decision to comply with the building height in a 40B project is curious since the building is well obscured to most passersby and a reasonable height variance request is not typically difficult to achieve. If the building roof ridge line were to be raised five to six feet and if this was achievable as a variance, one wonders of other building forms would be preferable or help to simplify construction and reduce cost associated with the current approach, etc. Keeping within the height restriction of this zoning district is a priority of the Developer.
- We would expect to see corner boards used at the clapboard siding but believe this may be a drawing omission.
- We recommend careful detailing of the clapboard siding so that it performs to its full potential: critical areas include window heads, water table trim, flashing at fascia, etc. Cementitious board should be kept away from standing water.

2. Windows and Doors

Windows are primarily paired in the development; they appear to be about 30”x 54” and are single-hung, meaning the top sash is not operable. On the brick facades, the windows receive a brick soldier course header on a steel lintel and what appears to be a precast sill; the windows in the clapboard siding have a continuous trim and are framed with shutters that appear to be about 15” wide. The typical windows are fiberglass, single-hung, and have a simulated divided light pattern (muntins). Third floor bedrooms have a sliding glass door to a Juliet balcony.

- The windows appear to be too small for the elevation; if the windows are 54", locating the head to align with interior door heights (80") would likely put the interior stool height at approx. 32" which is high for residential windows. We suggest that the development team review this condition more carefully.
- We also suggest that the mass of the brick projecting bays can be made more inviting if window sizes and treatments vary: e.g. if the design is recalling a historic pattern, one would expect to see taller windows on the first floor.
- We suggest that in lieu of the brick header over the window, the development team consider a light colored pre-cast header and sill to help accent the large expanses of brick on the bay projections.
- Shutters are a decorative element, and if used, are most suited to the front elevation. They are a historic reference, the function of which has been long forgotten in American suburban architecture. We are not certain why the rear of the building needs decorative shutters.
- The sliding doors at the third floor are incongruent with the rest of the elevation and appear to come from another building. One might expect to see French doors with simulated divided lites. Sliding doors also can permit water and air infiltration and can be difficult to open for seniors. Similarly the steel guard rail (Juliet balcony) is not consistent with the clapboard insets and would be more appropriate on the brick facade

3. Roof

The roof is asphalt shingle everywhere on the main roof with a metal standing seam roof over the entry canopy. It is not clear whether the gambrel ends are parapets that extend above the roof or are flush with the roof surface. We were informed that the Developer does not like to use gutters/downspouts.

- If gutters and downspouts are not used, one would expect to see deeper eaves so the building shed water away from the siding; eaves appear to minimal.
- Give the location of the building in a deciduous forest, water from leaves could cause significant staining on the building exterior.
- It is not clear how the roof cavity is vented.
- The mechanical narrative mentions roof-mounted equipment: if this is the location for major equipment, this is not shown on the elevations and appears to be a glaring omission. How will it be screened and tie into the elevations?
- The configuration of the roof guarantees that balconies will be buried in snow and that water will drain directly on to the balconies (with no gutters) causing potential problems.
- Nothing in the elevations indicates elevator venting or a shaft that may need to penetrate the roof.

4. Balconies

Wood-framed balconies extend between the brick gambrel projections.

- Having access to private exterior space is a great amenity.
- Construction of the railings will have to assume heavy snow loading.
- Suggest that balconies are divided to designate separate use space for each resident.

E. BUILDING: Materials And Specifications

The Architect provided an outline specification for the project.

- In general the materials specified are fully consistent with the fixtures and finishes one would expect to see in subsidized supportive housing. The Developer must walk a fine line between competing features of cost, durability, and what might be considered visually and materially desirable. If anything the Developer's materials exceed what would be considered standard.

F. BUILDING: Systems: Mechanical, Plumbing, Fire Protection, Electrical

The information pertaining to building systems was conveyed in the form of a design narrative.

1. Mechanical/HVAC

Heating and cooling achieved through electric heat pumps (SEER? Efficiency?) and fan coils located in each unit. Residents will have thermostatic control...(each room?) bathrooms vented on continuous fan to the exterior and kitchen range hoods ducted to the exterior. Some cabinet heaters will be added in a few areas not serviced by main heating systems. The HVAC system will be able to heat/cool simultaneously. According to the narrative the major mechanical units are to be located on the roof. Bathrooms and kitchens shall vent to the exterior.

- Providing simultaneous heating and cooling is an amenity not often found in subsidized housing since it requires additional cost associated with extra piping. It does provide residents with maximum environmental control and will be most valuable in the spring/autumn shoulder seasons when solar gains on southern exposures will heat apartments much more quickly than other exposures.
- Given the extent to which the Developer has gone to make the building environmentally sensitive with regard to water retainage, sewage treatment, and run-off, it would be interesting to see what might be possible in terms of renewable or reclaimable energy: heat recovery, heat exchange.
- No details or drawings were available to analyze the impacts of the fan coils on apartment layouts since no chases were identified.
- There is nothing in the drawings that suggest the rooftop equipment or that any form of architectural screening has been considered or planned for.
- If kitchen exhaust is combined, care should be taken to prevent migration of odors (sealing) and ducts will likely accumulate grease: there may be ways to facilitate duct cleaning.
- Mechanical narrative refers to gas fuel source; this appears to be in error.

2. Plumbing

Low flow plumbing fixtures are planned for this building. Hot water is provided with a hot water tank in each unit. Water sub-metering is dedicated to each tenant. The narrative mentions a potential for gray-water re-use for toilet flushing.

- Low-flow fixtures are required by code.
- It is unclear where the dedicated hot water tanks are to be located.
- It appears the gray-water re-use option is only being considered at this point and not part of the base bid documents.
- If less well-off tenants are being charged for their water use, is there a chance that tenants will be less likely to bathe or clean the units?

- The plumbing narrative mentions gutters/downspouts; see D.3 above for possible omission of gutters.
- Plumbing narrative may have inconsistencies regarding flow rates of fixtures.

3. Fire Protection

The building will comply with NFPA13 for sprinkler coverage; the engineer has proposed providing extra coverage that may exceed minimum requirements. No flow test has yet been performed to determine available water pressure to service the sprinklers and whether a fire pump would be required. The Developer has indicated that a fire pump would be added to the scope if required.

- Will a 2HR dedicated corridor be required to the sprinkler room; verify with the Wenham Fire Department.
- Given the rural location of this development, sprinkler coverage exceeding the minimum requirements is well considered.

4. Electrical

Lighting will be provided with energy-saving LED fixtures; an emergency generator with an acoustic buffering enclosure will be included in the project; two options for generator coverage are indicated. The entire project systems: heating, water heating, power, and lighting will be electric. Electric service enters the building to the “main electrical room” in the partial basement.

- The generator has not yet been located on the site plan; the acoustic buffering will mitigate most audible noise from the weekly self-test, which can run about 20 minutes. [location???]
- Given that the energy plan is 100% electric, one might expect the project to be able to negotiate rebates from the utility.
- Electrical room is not called out in basement.
- It is not clear which generator option is likely to be accepted; one option (100kW) powers only emergency lighting, elevator, common and kitchen ducting and unit bathroom kitchens and bathrooms. The second option 600kW powers the entire building. If the first option is chosen, and since the power source for heating is electric, any generator option should include heat.
- Unclear if low-voltage system included security system or if this is required/preferred.
- No motion-activated lighting appears to be included in the scope.

III. ENERGY EFFICIENCY and SUSTAINABILITY

The Developer has indicated his intention to develop the project as a “heavy green” project in terms of energy efficiency and use of materials. No specifics are yet available.

- Although this project is not required to be LEED certified, the LEED checklists (e.g. LEED Homes) and other checklists provided by other rating agencies (e.g. Green Communities, etc) are useful guides to demonstrate the extent to which the project is achieving it’s sustainable goals in terms of renewable and sustainable materials, energy sources, and building systems. Not only can this be a good marketing strategy but some rating protocol may be required or preferred by funding agencies. Building modeling, window and envelope testing, and system commissioning are

also steps taken during design and construction to verify that the building is achieving sustainable goals.

- It is understood that some “green” design choices are a matter of budget decisions and constraints.
- We encourage the Developer–team to carefully consider choices of finish materials; e.g. vinyl plank flooring is specified for appearance, cost, and durability. We encourage the installation of non-vinyl products to the greatest extent possible given the detrimental effects of the manufacturing processes.
- The Developer has indicated that this is a non-smoking building and that smoking is allowed only in areas further than 15’ from the building. This would permit smoking in the covered entryway which is not a desirable condition. While this is a management issue, it may have design implications if a designated smoking area was located further from the building with the use of a gazebo or some other shelter.
- We encourage creativity in the selection and configuration of the building systems; additional money spent on high-efficient systems and building envelope can realize significant operational savings for the life of the building.

IV. CODE REVIEW

The building and zoning code summaries were provided in narrative form by the Architect.

- A. Building Code
 Building Use: R2, Multi-family
 Construction Type: 5A Wood frame, with sprinkler system

- B. Zoning Code
 Zone: Residential

	Required	Proposed
Lot Size, minimum	40,000SF (0.92A)	3.47A
Setbacks		
Front	20’-0”	Complies
Side	15’-0”	Complies
Rear	15’-0”	Complies
Building Height	35’-0”	34’-9”
Parking (senior housing)	1 sp/2 units	1 sp/unit + 5 spaces
Maximum Lot Coverage	50%	12%

- C. Access Code
- It is assumed that the entire building will be designed to be accessible according to the Massachusetts Architectural Access Board (MAAB) regulatory requirements. If interior spaces are open and/or used by the public, the team should review whether the common areas must be made accessible per the MAAB and the provisions of the American with Disabilities Act. As a new building, the development must also also be designed per the requirements of the Fair Housing Act.
 - See separate Site and Floor Plan comments regarding accessibility questions.

D. Other Codes

System narratives indicate that all mechanical, plumbing, fire protection, and electric systems will meet or exceed the requirements of all applicable codes and regulations. Wenham is a Stretch Code Community.