Westport High School Adaptive Reuse Analysis

Westport, MA

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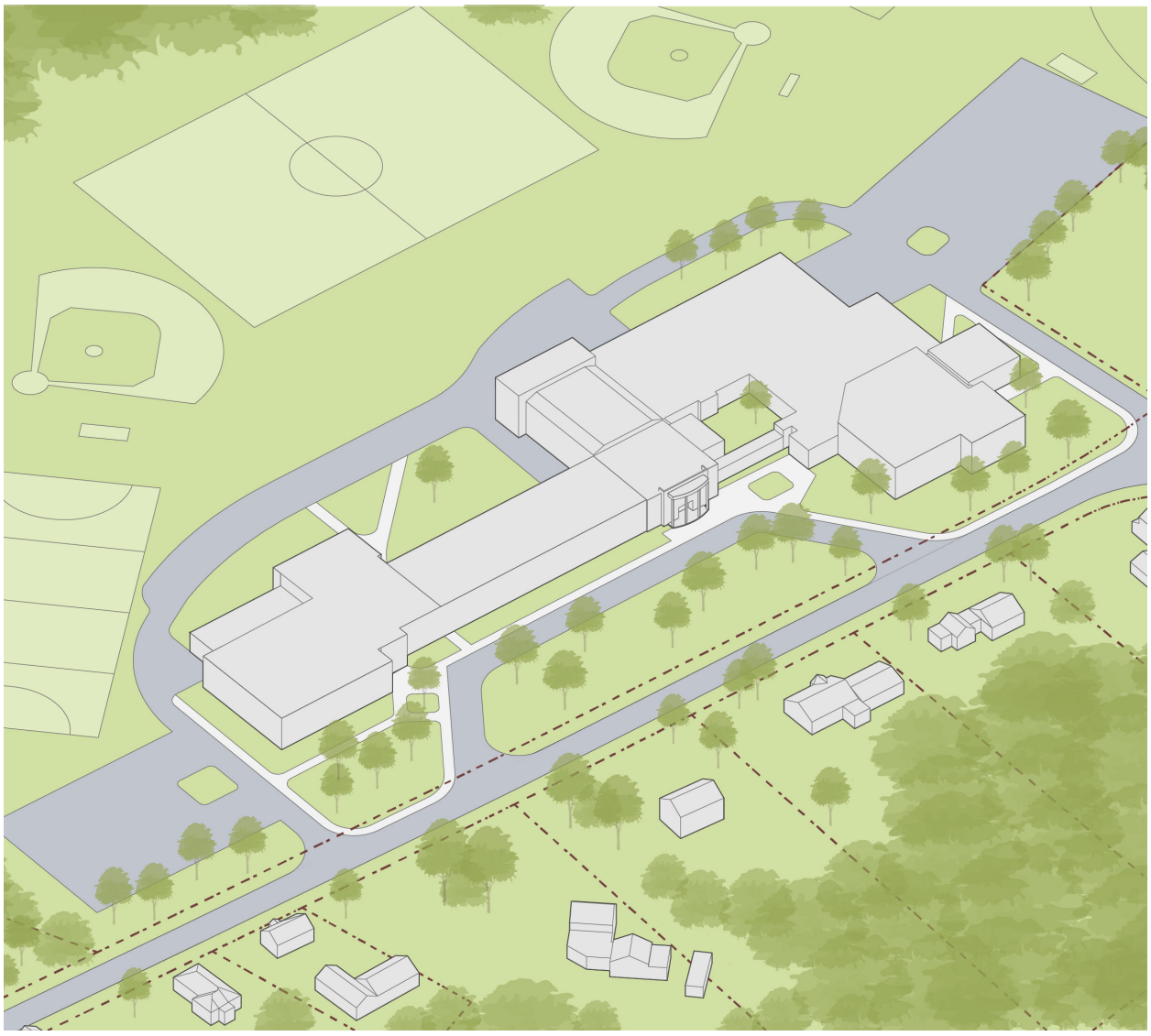

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Introduction

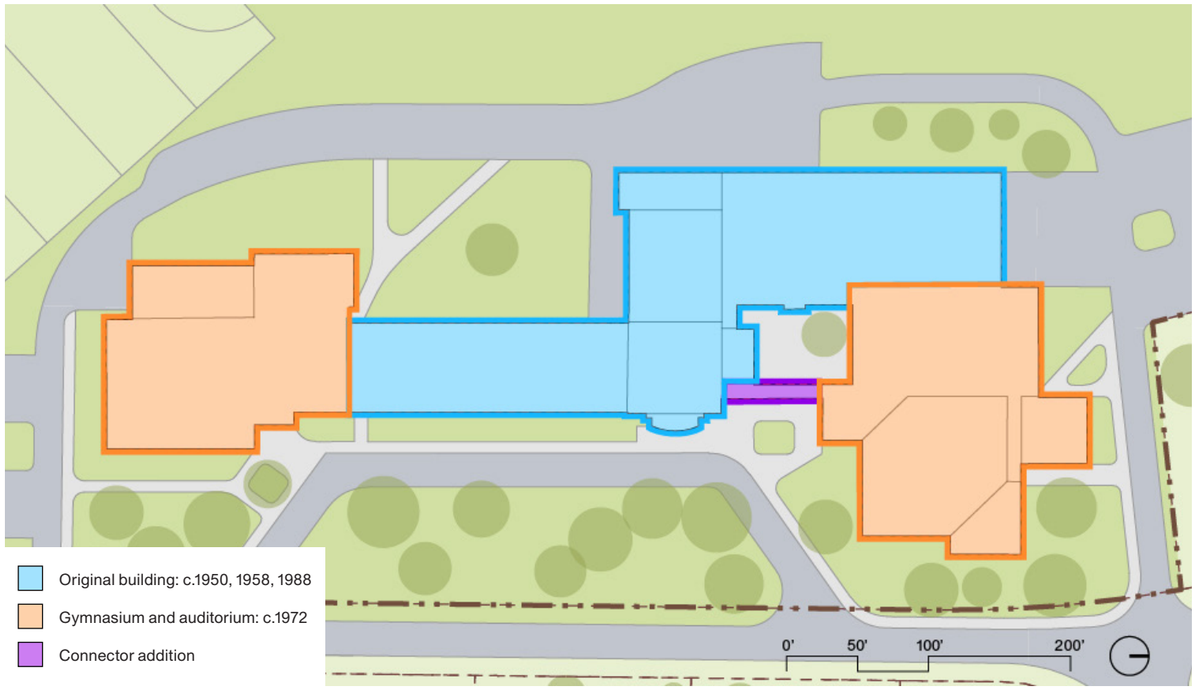
The Westport High School Adaptive Reuse Study explores potential new uses and possibilities for the Westport High School building and site.

The purpose of this plan is to illustrate potential program and layout scenarios that can take advantage of the Westport High School site and best meet the needs and desired future uses of the Town and community after the high school relocates. The layout scenarios in this study explore the adaptive reuse of the existing High School building for municipal, community, and housing uses as well as scenarios redeveloping the site for new housing construction. The test fits included are informed by existing conditions reports conducted by the Town, a site visit to the High School, and public meetings with Town representatives. Additional market analysis will be necessary to test the feasibility of each scenario, but the included layouts test the spatial limitations of the site based on current zoning, precedents, and existing conditions analysis.

This study is designed to serve as a resource for the Town to engage with the community and future developers in determining the best program development for the site. With the range of possible reuses, the large scale and accessible location of the site, and interest in preventing the building from becoming vacant for too long, the Westport High School site can be developed into an asset for the Town .

Existing Conditions

The Westport High School parcel is a 29 acre site on Main Road in the "residence and agriculture" zoning district. Originally built in 1950 Westport High School is a two-story structure with one-story wings and a partially below grade basement situated in a moderately sloped site. The above grade levels of the building are occupied by classrooms, administrative offices, a double height media center, a cafeteria, and an auditorium and a gym at either end of the building. The partially below grade basement floor contains storage rooms, utilities, offices, and some classrooms. The building has undergone several expansions and renovations and the structure can be divided into three areas: the original building built circa 1950 and added to circa 1958, the cafeteria, auditorium, and gym addition built circa 1972, and the connector addition that runs between the cafeteria and original building. Each area has distinct framing systems that would require additional investigation in the case of an adaptive reuse scenario.



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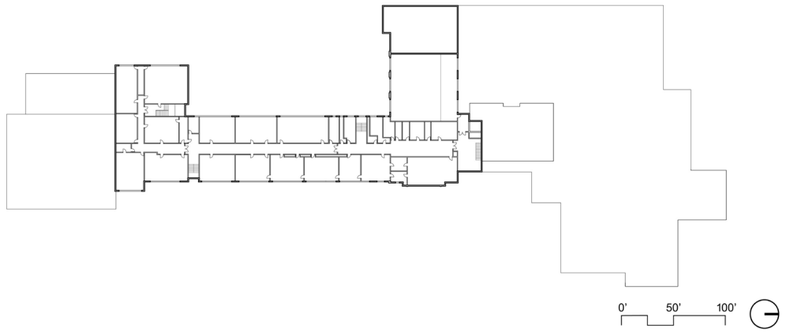
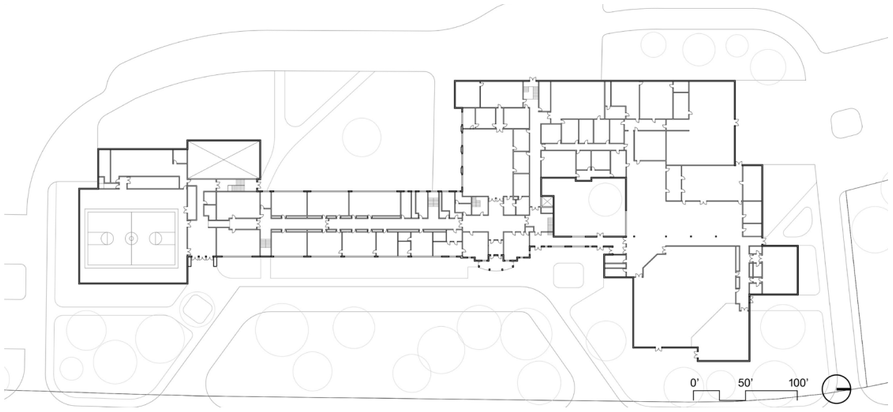
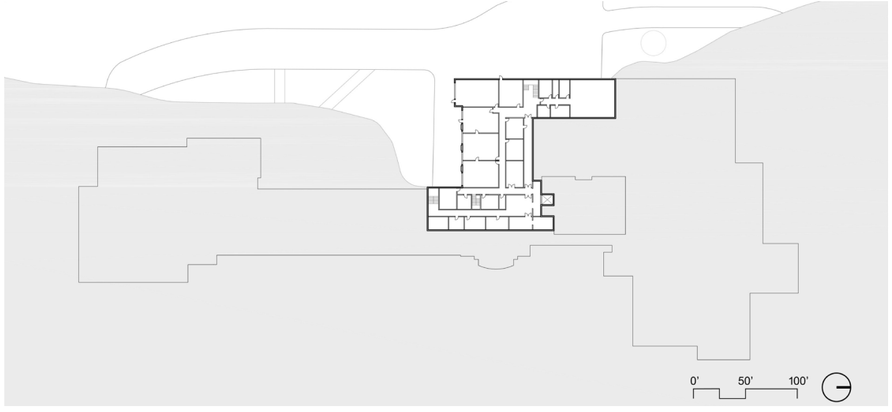


Second Floor



Ground Floor



Basement


0’ 50’ 100’ 200’ 400’ 600’

Past Studies

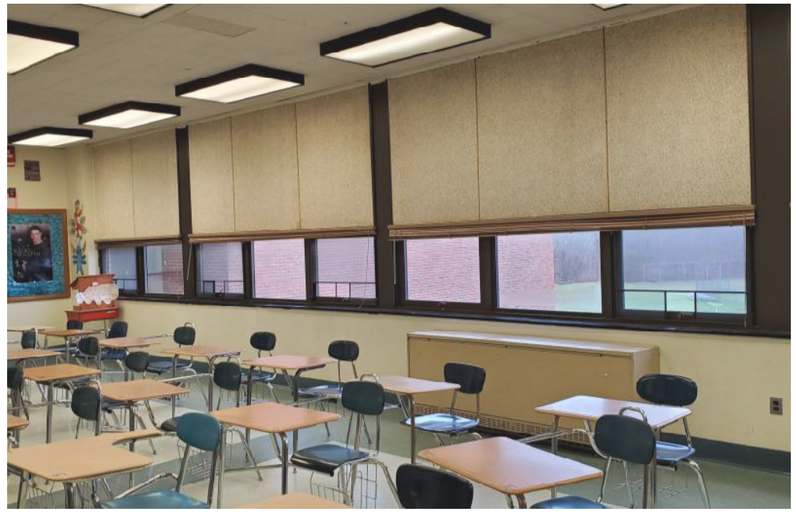
Several studies have been conducted analyzing the existing conditions of the site, building structure, and its mechanical systems.

- *Structural Existing Conditions Report*: assessed the structural condition of the building to resist gravity and lateral loads specified by the Massachusetts State Building Code and provides recommendations for repairs
  May 16, 2016
- *Electrical, Fire Protection, Plumbing, HVAC Existing Conditions Reports*: evaluated the condition of existing mechanical systems that are largely past life expectancy, in poor condition, and/or do not meet current building code.
  May 16, 2016
- *Traffic Impact Analysis*
  June 2016
- *Hazardous Materials Identification Study*: conducted a preliminary visual and physical inspection of the building for hazardous materials such as asbestos, PCB's, lead based paint, and airborn mold and provided a rough cost estimate for the removal and disposal of hazardous materials.
  July 1, 2016
- *Environmental Assessment Report*: assessed the site for potential hazardous Recognized Environmental Conditions finding no evidence of hazardous conditions but flagged some locations for additional examination.
  July 6, 2016
- *Assessment of Existing Conditions*: evaluated site conditions and identified site water supply, sanitary sewage disposal, and soil issues that would significantly constrain development and/or have potentially significant cost implications.
  July 7, 2016

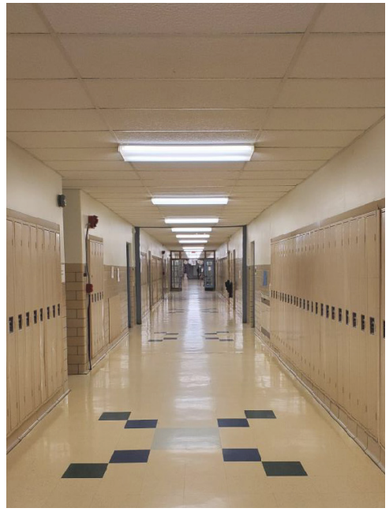
Site Walk-through

A walk-through of the building and site was conducted in December 2019 to visually assess the building and its interior spaces.

Exterior facade: The brick building envelop appears to be in fair condition with minor deterioration. The lack of central air is made obvious by the numerous air conditioner units on the facade.

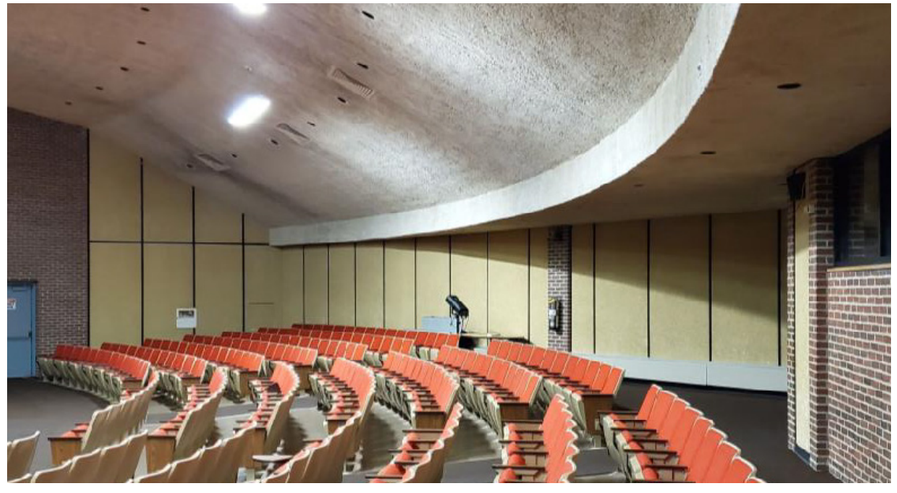


Classrooms are deep with low windows that limit light. Some rooms have been subdivided to create additional classrooms and offices.



Classroom hallways are wide and lined with lockers that are sometimes built into the wall.

Mechanical, boiler, and HVAC rooms are located in the basement and will need to be updated.



The gym with its locker rooms and large entry lobby can potentially be reused for future public use.

The auditorium is located on the opposite end of the building from the gymnasium and must be entered through the cafeteria.

Redevelopment Scenarios

This study explores two types of potential reuse strategies for the site: scenarios that adaptively reuse the existing high school building and scenarios that replace the high school with new development.

Several key considerations for the site emerged from meetings with Town representatives.

- *Building significance and value:* While there is interest in retaining some of the high school building, the building does not have a significant symbolic or landmark value in the community to warrant strict preservation. Demolishing the structure might also be a preferable option if the alternative is having a vacant building for an extended period of time. There are recent precedents for removing dated structures entirely and replacing them with new construction, such as the nearby police station and middle school.
- *Public Use:* The gymnasium and auditorium are potential assets for the community if the building can be reused. The gymnasium especially could fulfill a significant role as a community recreation space. Preserving the spaces for public use however will require a funding and management strategy that balances public and private uses on the site. Requiring the public use of portions of the building might also deter private developers from reuses other portions of the building for private uses such as senior housing.
- *Sports Fields:* The sports fields must be preserved for school use until a new location can be found. The new high school does not have playing fields and will depend on the existing fields until they can be relocated.

Adaptive Reuse of the High School Scenarios:

Municipal Office:
Consolidates existing municipal spaces into one location at the high school with additional room to grow.

Senior Living:
Adapts the building into a senior living facility for assisted living, independent living, or memory care.

Public Uses:
Preserves the existing gym and auditorium as public uses in combination with either reuse scenario.

Site Redevelopment and New Construction Scenarios:

Single Family As-of-Right:
Divides the site into as-of-right 1.37ac. single-family parcels.

Single Family High Density:
Divides the site into a denser housing development with 0.45ac. parcels.

Multifamily Mid-rise:
Tests a mid-rise multifamily bar scheme on the site.

Multifamily Garden/Townhouse:
Tests a cluster of garden unit and townhouse multifamily buildings on the site.

Senior Living:
Explores two senior living models on the site: an assisted living facility and a combination assisted living and memory care center.

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ADAPTIVE REUSE OF THE HIGH SCHOOL

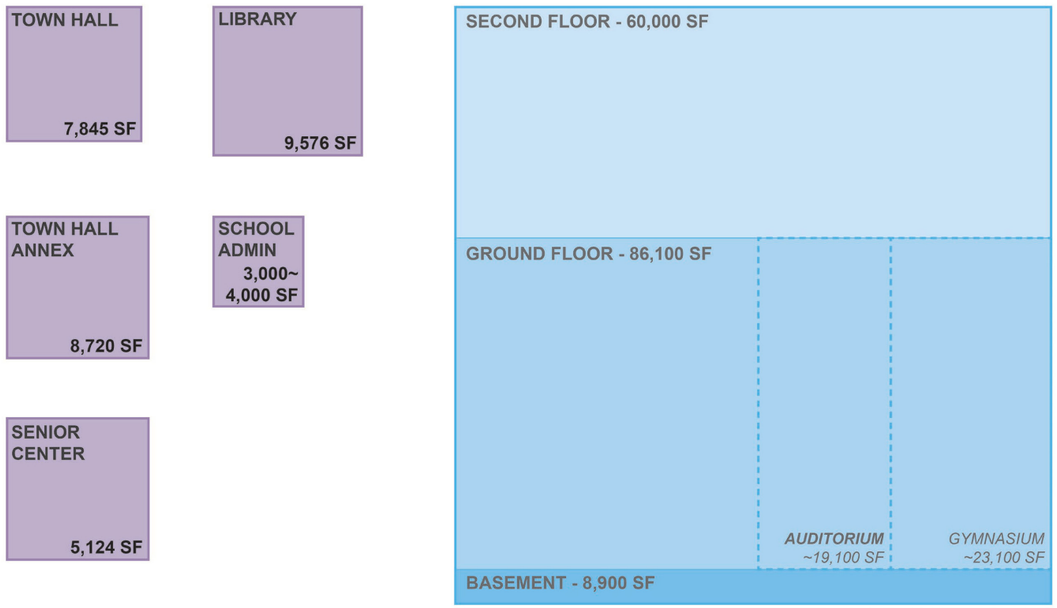
SITE REDEVELOPMENT & NEW CONSTRUCTION

Adaptive Reuse Scenarios
Municipal Offices

This scenario roughly allocates municipal programs into the existing spaces of the high school. The space analysis does not alter the existing layout of the building. Programming is clustered into different wings of the high school while preserving common circulation and egress routes. Municipal offices can share the main entrance while separate entrances can be created in the rear for a senior center and in the basement for school administration offices.
The gym and auditorium can remain as stand-alone public spaces with their own entrances and lobbies.
There is a substantial area left over ("remainder spaces) that is unprogrammed or suitable only for storage or mechanical equipment that would need to be programmed.

Existing Municipal Offices	
Town Hall	7,845 SF
Town Hall Annex	8,720 SF
Senior Center	5,124 SF
School Administration	3-4,000 SF
Library	9,576 SF
Total Municipal Spaces	34,765 SF

Existing High School	
Basement	8,900 SF
Ground floor	86,100 SF
Auditorium (incl. partial cafeteria)	(20,000 SF)
Gymnasium (incl. locker rooms and entry)	(24,000 SF)
Second floor	60,000 SF
Total High School Area	155,000 SF



Space Allocation

Program	% of building	SF
Public Gymnasium	*16%*	24,000
Public Auditorium	*13%*	20,000
Storage/Mechanical	*7%*	10,000
Circulation (corridors/egress)	*11%*	17,000
Municipal space (needed)	*23%*	34,765
Municipal space (surplus)	*16%*	23,635
Unused space	*14%*	20,600
Total building area	*100%*	155,000
Total excess space	*30%*	*44,235*

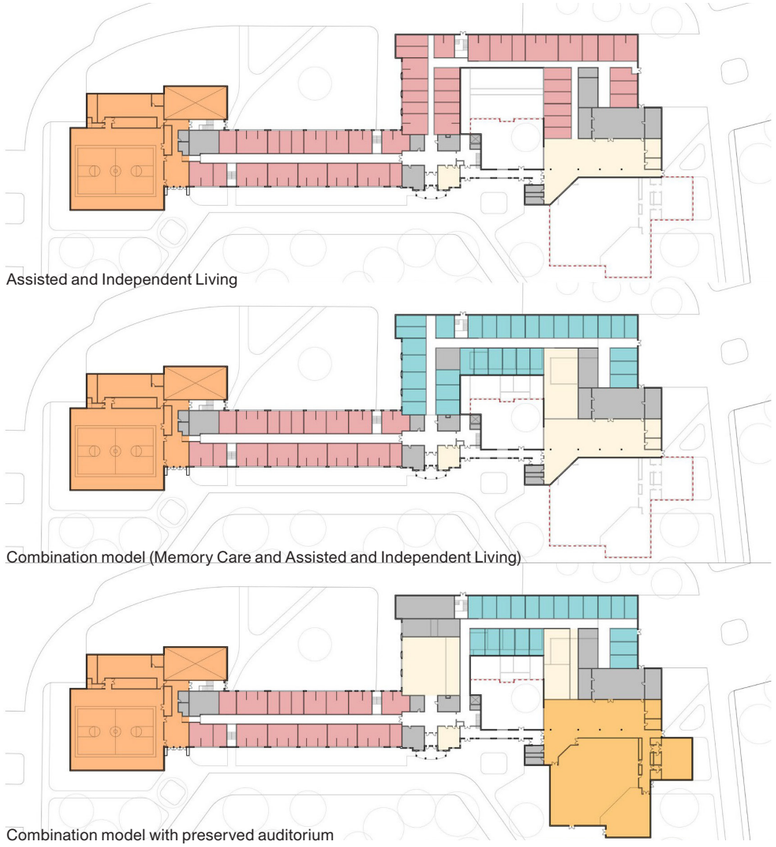
Conclusions

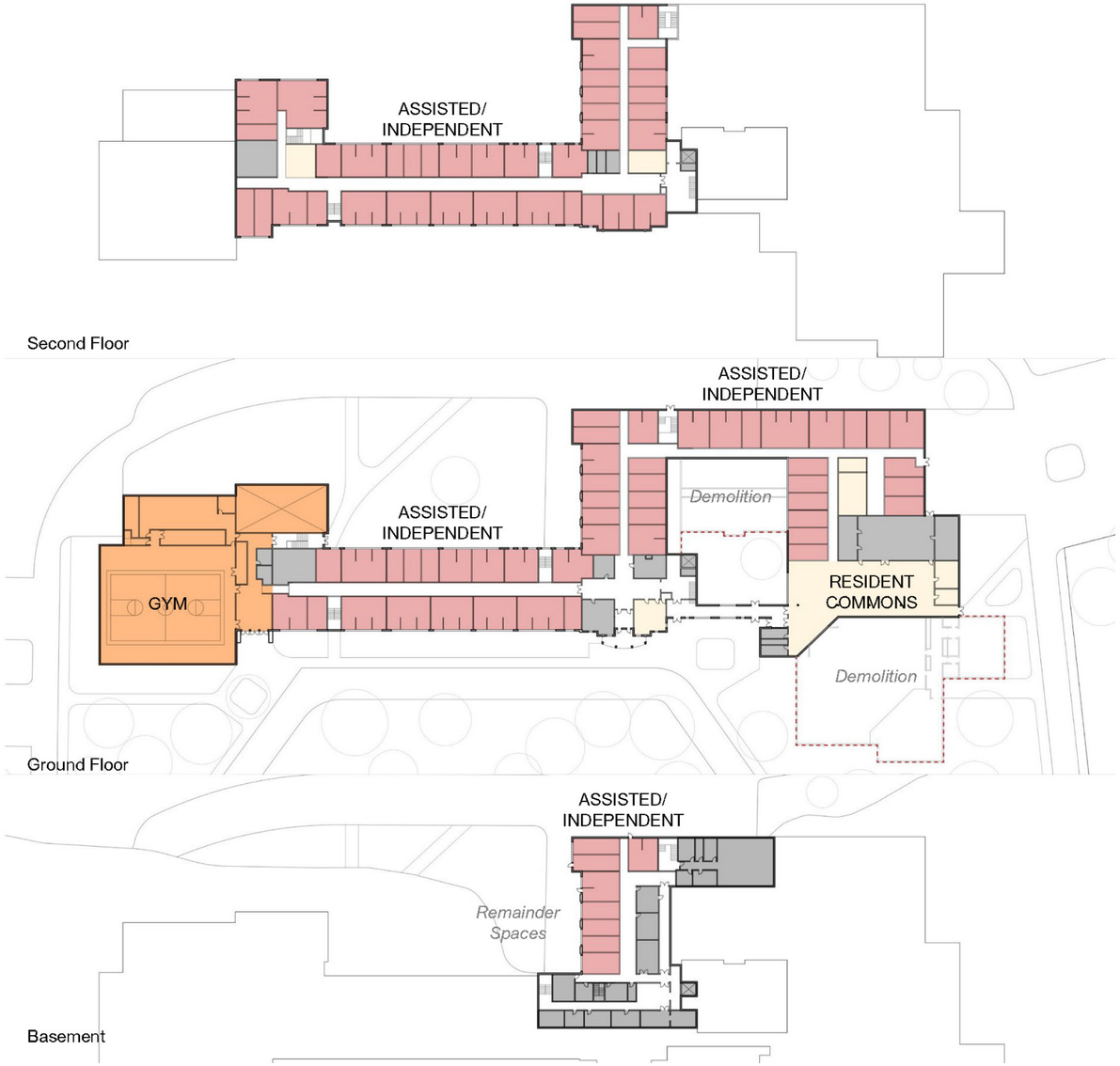
Municipal offices can fit into the existing high school and the gym and auditorium preserved as public amenities, but there will be a significant amount of excess space that will need additional programming. Relocating municipal functions to the high school also leaves the future of existing town buildings in question. The long-term financial impact that would result from using the high-school for municipal use and vacating existing town buildings makes this option currently not viable.

Adaptive Reuse Scenarios
Senior Living

There is precedent for adapting academic buildings like Westport High School into senior housing. The configuration of senior living scheme depends on the type of care model that is applied (assisted living, memory care, etc.) as each model has their own building requirements.

Two senior living models were tested: (1) Assisted and Independent Living and (2 & 3) a combination of Memory Care, Assisted and Independent Living. All scenarios keep the gymnasium as a shared public program.





Assisted Living and Independent Living

Assisted and independent living can be combined in one facility. The two models require different levels of supportive service, but can share the same amenity and dining spaces. Assisted living units are typically smaller but usually have more shared common spaces.

Program breakdown	Test-fit	Mid-level*	Affordable*
Residential Units	70% (93 units)	*80% (100 units)*	*82% (48 units)*
Resident Commons	14%	*13%*	*11%*
Administration	2%	*1%*	*3%*
Service/Support	14%	*6%*	*4%*

**The test fit is compared to a generic mid-level sized and generic affordable sized senior living development*

Memory Care Combination

Memory care can be combined with assisted and independent living facilities. Memory care studios must be in a separate wing of a building and have their own dining, common, and support areas that allow for 24-hour supervised care.

Program breakdown	Test-fit	Mid-level*	Affordable*
Residential Units	69% (95 units)	*80% (100 units)*	*80% (36 units)*
Resident Commons	16%	*16%*	*15%*
Administration	2%	*1%*	*3%*
Service/Support	13%	*3%*	*2%*

**The test fit is compared to a generic mid-level sized and generic affordable sized senior living development*

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Auditorium Preservation

The scheme preserves the auditorium as a separate public program in combination with the memory care scenario. While the auditorium, like the gym, can be kept as a separate space it will require its own management strategy.

Conclusions

The high school has the physical capacity to be fitted with residential units and different models of senior living, but the building is too large to be an affordable or subsidized sized development. The large size of the building and the renovation required will pose a challenge to senior living or housing developers.

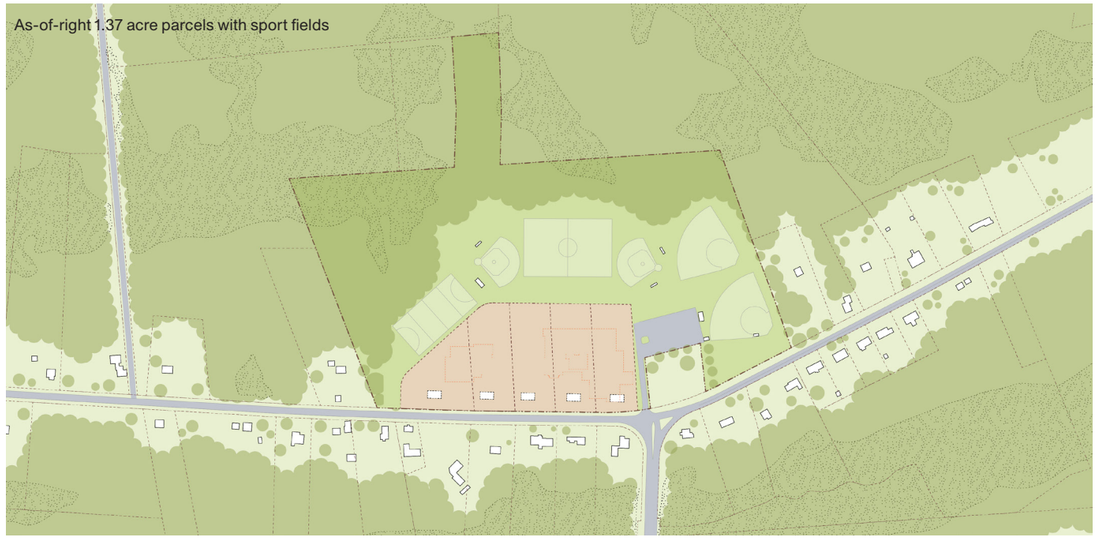
Site Redevelopment and New Construction:
Single Family Parcels

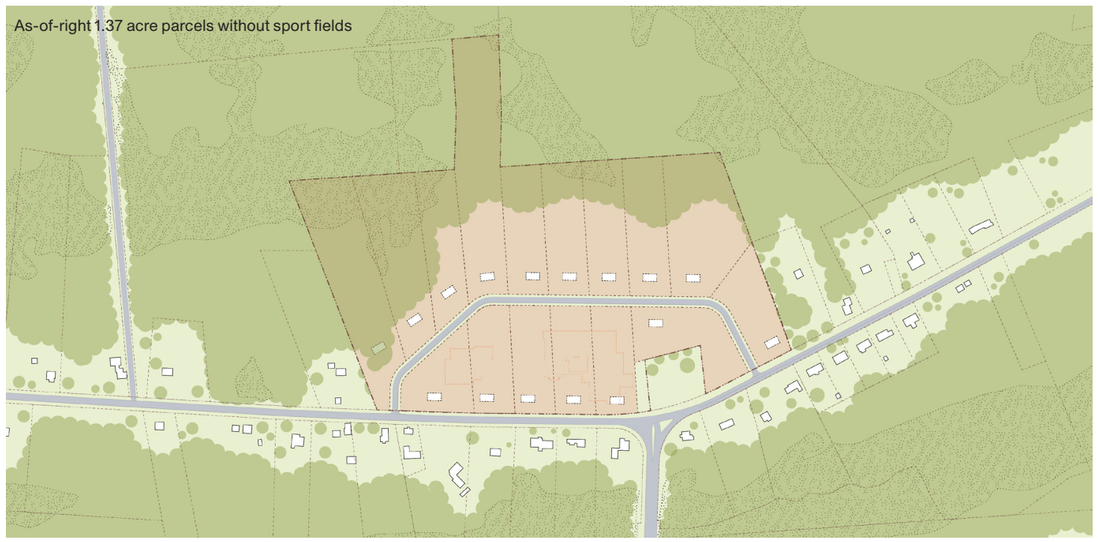
Four single-family development scenarios were tested for the site. Low density schemes with larger as-of-right 1.37 acre parcels and higher density schemes with smaller 0.45 acre parcels. All schemes depict the potential for phased development once the playing fields are relocated.

Existing Zoning	
District	Residential/ Agriculture
Residential allowed by right	1- or 2-family dwelling
Lot size min.	**60,000 SF (1.37AC)**
Frontage min.	150 FT
Upland (non-marsh) min.	30,000 SF

1.37 AC parcels	with sports fields	without sports fields
Number of lots	5	16
Average lot size	61,800 SF (1.37 AC)	84,875 SF (1.9 AC)
Total development area	309,000 SF (7.1 AC)	1,358,000 SF (31.2 AC)

0.45 AC parcels	with sports fields	without sports fields
Number of lots	10	47
Average lot size	20,900 SF (0.47 AC)	22,700 SF (0.52) AC
Total development area	209,000 SF (4.8 AC)	1,069,900 SF (24.6 AC)





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Site Redevelopment and New Construction:
Multifamily Housing

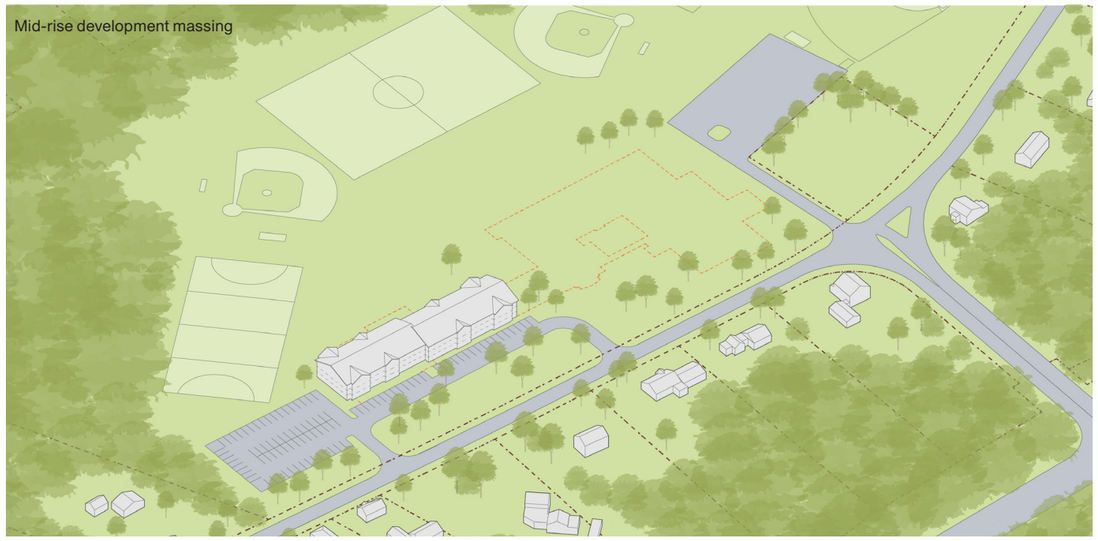
Two multifamily scenarios were explored on the site: a mid-rise three-story bar scheme and a garden and townhouse apartment scheme. Both schemes do not interfere with the existing sports fields and are sized to be mixed income or affordable developments which are typically 45-55 units.

The mid-rise scheme is set back from the Main Rd. and utilizes the area of the existing school parking lot to meet parking requirements. The bar configuration could concentrate initial development on one side of the site and leave area for new development, especially if the playing fields are relocated.

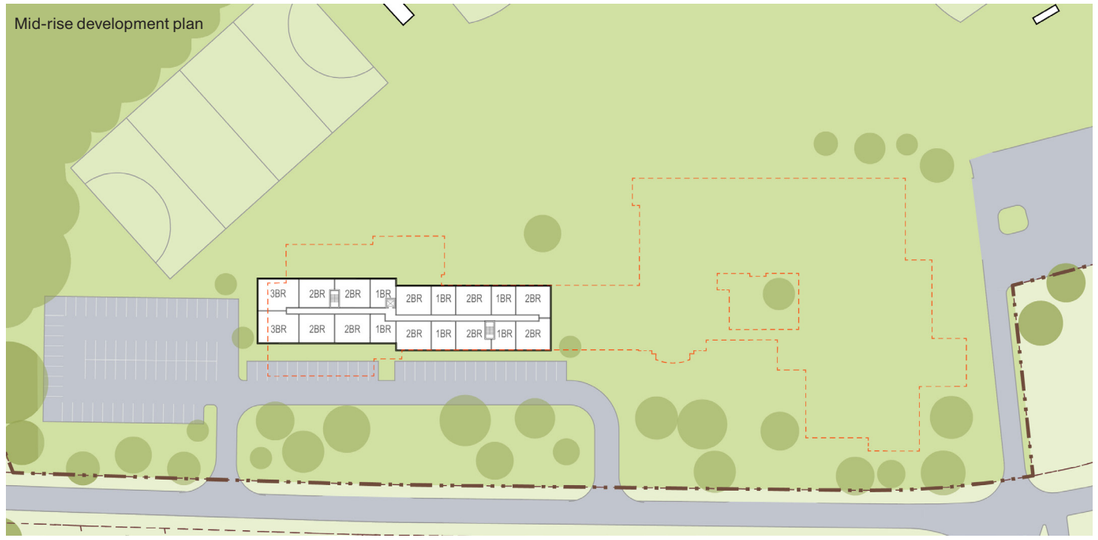
Mid-rise	
1-bedroom	16 (31%)
2-bedroom	30 (58%)
3-bedroom	6 (12%)
Total units	**52**
Floors	3
Total area	56,800 GSF
*Parking	92 spaces (78 req.)

**1.5 spaces/unit required*

Mid-rise development massing



Mid-rise development plan



The garden and townhouse scheme depicts a cluster of smaller single and one story buildings that front parking areas on one side and semi enclosed community open spaces on the other.

Garden/Townhouse	
1-bedroom	15 (31%)
2-bedroom	30 (61%)
3-bedroom	4 (8%)
Total units	**49**
Floors	1-2
Total area	54,000 GSF
*Parking	110 spaces (74 req.)

**1.5 spaces/unit required*

Garden/townhouse development massing

Garden/townhouse development plan

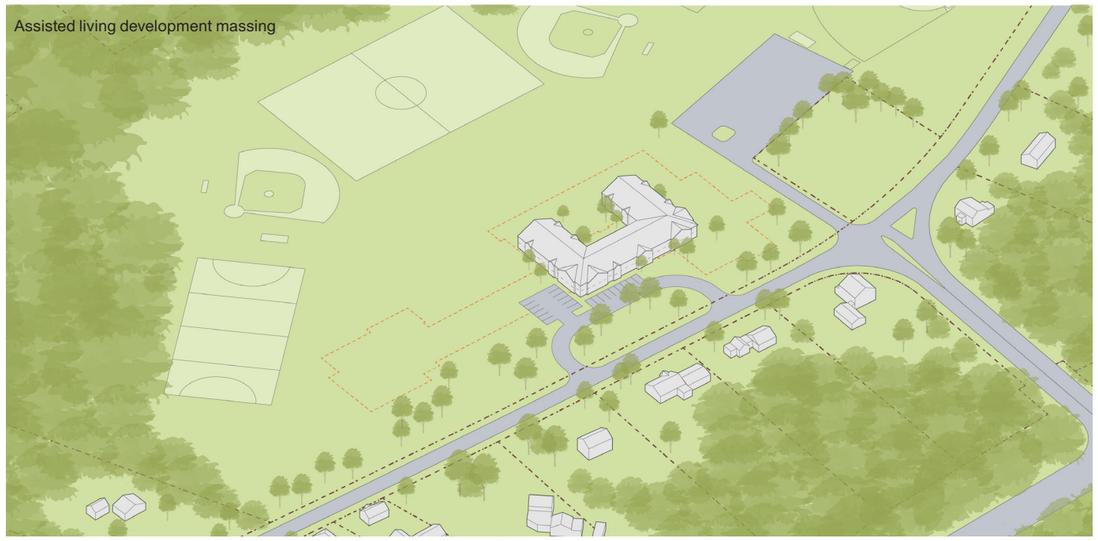
Site Redevelopment and New Construction:
Senior Living

Two senior living models were tested on the site: an assisted living facility and a combination assisted living and memory care center. Both models are the typical size of affordable senior living developments and do not interfere with the existing playing fields. The schemes are set back from Main Rd. to the footprint of the existing high school and have a drop off area and small side parking lot for visitors and staff. In both schemes, the building is configured in a U-layout to create a semi-enclosed private courtyard for the development.

Assisted Living	
Studio	27 (55%)
1-bedroom	16 (33%)
2-bedroom	6 (12%)
Total units	**49**
Floors	2
Total area	40,500 GSF
*Parking	21 spaces (18 req.)

**0.3 spaces/unit + 1 space/3 employees*

Assisted living development massing



Assisted living development plan

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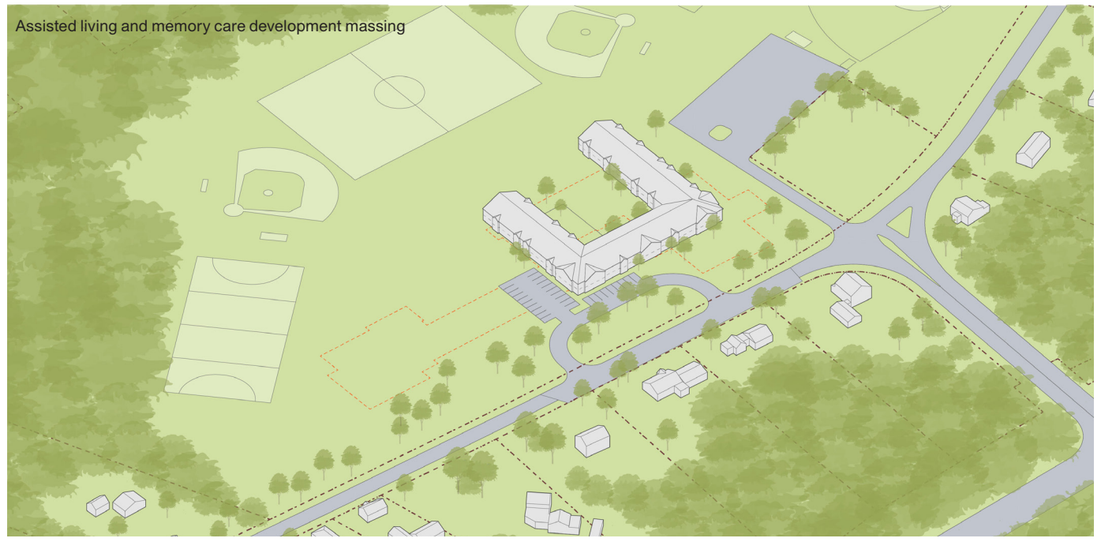
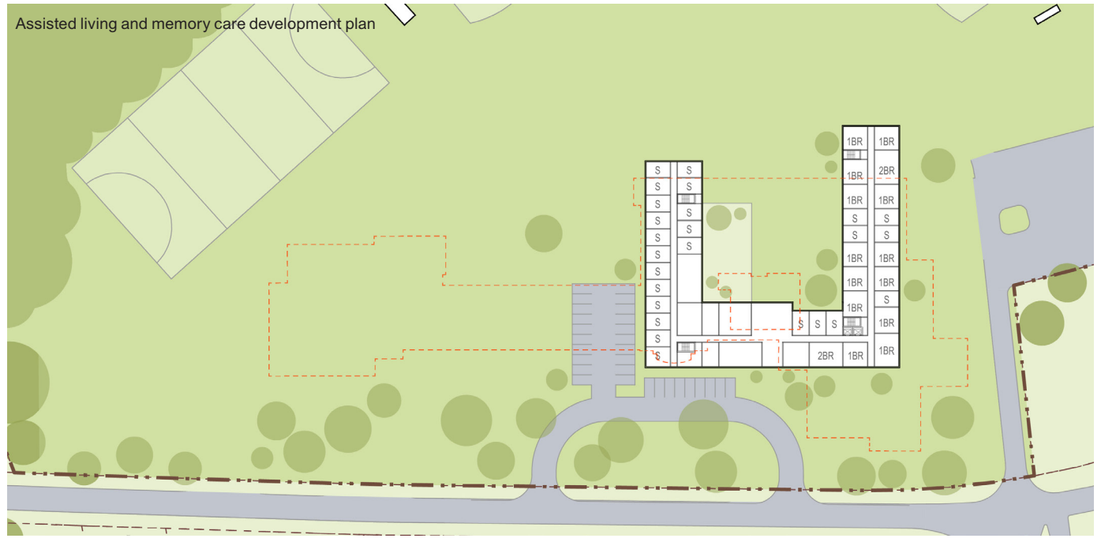
Combination with Memory Care	
Studio	18 (22%)
1-bedroom	39 (48%)
2-bedroom	9 (10%)
Memory Care	16 (20%)
Total units	**82**
Floors	2
Total area	102,294 GSF
*Parking	29 spaces (25 req.)

**0.3 spaces/unit + 1 space/3 employees*

Assisted living and memory care development massing



Assisted living and memory care development plan



Report Summary

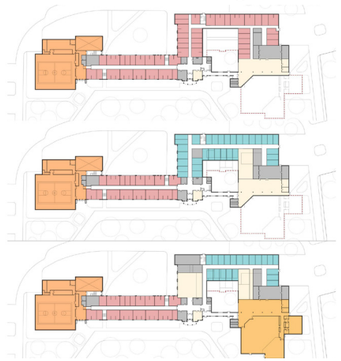
The Westport High School site can accommodate several different reuse and development scenarios depending on the goals of the Town and the community. An adaptive reuse approach can potentially utilize portions of the existing building for both public and private use. Eliminating the high school building can open the site to a flexible variety of private development opportunities. Both strategies have their own challenges dealing with either required repairs to the high school or the demolition of the building and the updates needed for the site. As the Town and community begin to refine potential uses for the site, additional analysis will be needed to test the economic feasibility of future reuse or redevelopment scenarios.

Adaptive Reuse of the High School

The existing high school building can be fitted with municipal offices or housing and potentially keep the gym and auditorium for public use. The large size of the building however is a challenge for both reuse scenarios. Municipal offices would leave a substantial amount of unprogrammed surplus space and create the new challenge of finding uses for vacated town buildings. Housing is a more viable scenario but an affordable sized development would be difficult given the large size of the building. Both reuse scenarios will require significant upgrades to meet the needs of the new programs including but not limited to: upgrades to HVAC, electrical, and fire protection systems, plumbing, well water supply, the sanitary disposal system, and possibly structural modifications and reenforcement.

Municipal Offices

Senior Living



Public Use

Reuse scenarios can preserve the gym and auditorium as physically separate areas, but they will require their own funding plan to make necessary upgrades and a management strategy to balance public and private uses in the building. Requiring the public use of the existing gym and/or auditorium might be a deterrent to private developers looking to reuse the high school a private housing development.

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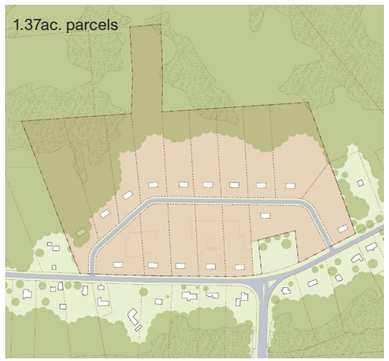
Site Redevelopment and New Construction

The site can more than accommodate new single family, multifamily, or senior living developments that fit in with the scale of the surrounding context and are of a similar size to developments nearby. Given the size of the site, when the sport fields relocate the developments can expand in phases over time. Additional financial analysis is necessary however to determine if the scale of new development can offset the upfront costs of removing the existing building and making the necessary upgrades to the sites water supply and sanitary disposal systems.

Single Family



Multifamily

Senior Living