



**Proposed Mill Plaza Redevelopment  
Durham, New Hampshire**

**June 14, 2017**



# Content

1. **Changes Since December 14, 2016**
2. **Context**
3. **Site Conditions**
4. **Building Conditions**
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## Changes Since December 14, 2016

### **Proposed move of Rite Aid**

#### **Implications:**

- Move buildings closer to the Main Street boundary
- Move buildings away from Chesley Drive and the College Brook boundary
- Corner entry reinforces importance of internal street; anchor point at center for pedestrians

## Changes Since December 14, 2016

### **Reorganization of parking**

- Break single parking field into two groups
  - Alignment 1: focus on Hannaford
  - Alignment 2: focus on Rite Aid

### **Implications:**

- Reduces “sea of asphalt”
- Allows for clear routes for trucks, cars, pedestrians
- Increases ability for targeted lighting and stormwater treatments



## Changes Since December 14, 2016

### **Shift in Layout of Building D**

- Change from “C’ building to “I” building

### **Implications:**

- Moves residential units away from southern boundary and College Brook
- Reconfigures green roof above retail and parking to a smaller area



## Changes Since December 14, 2016

### **Proposed drive-throughs**

- Bank at former location of Rite Aid (relocation of existing drive-through)
- New drive-through for Rite Aid at new location

### **Implications:**

- Integrated into overall circulation for pedestrians, cars, trucks, and bicyclists



# Site and Context

**Location within Durham**

**Existing**

**Proposed**

**Adjacent Uses**

**Existing Utilities**

# Context: Area



# Context: Existing



# Context: Proposed




# Adjacent Uses



# Existing Utility Lines





# **Site Conditions**

**Existing**

**Proposed**

**Access**

**Loading**

**Parking**

**Lighting**

**College Brook and Stormwater**

# Site: Existing

Durham Mill Plaza

## Existing Conditions

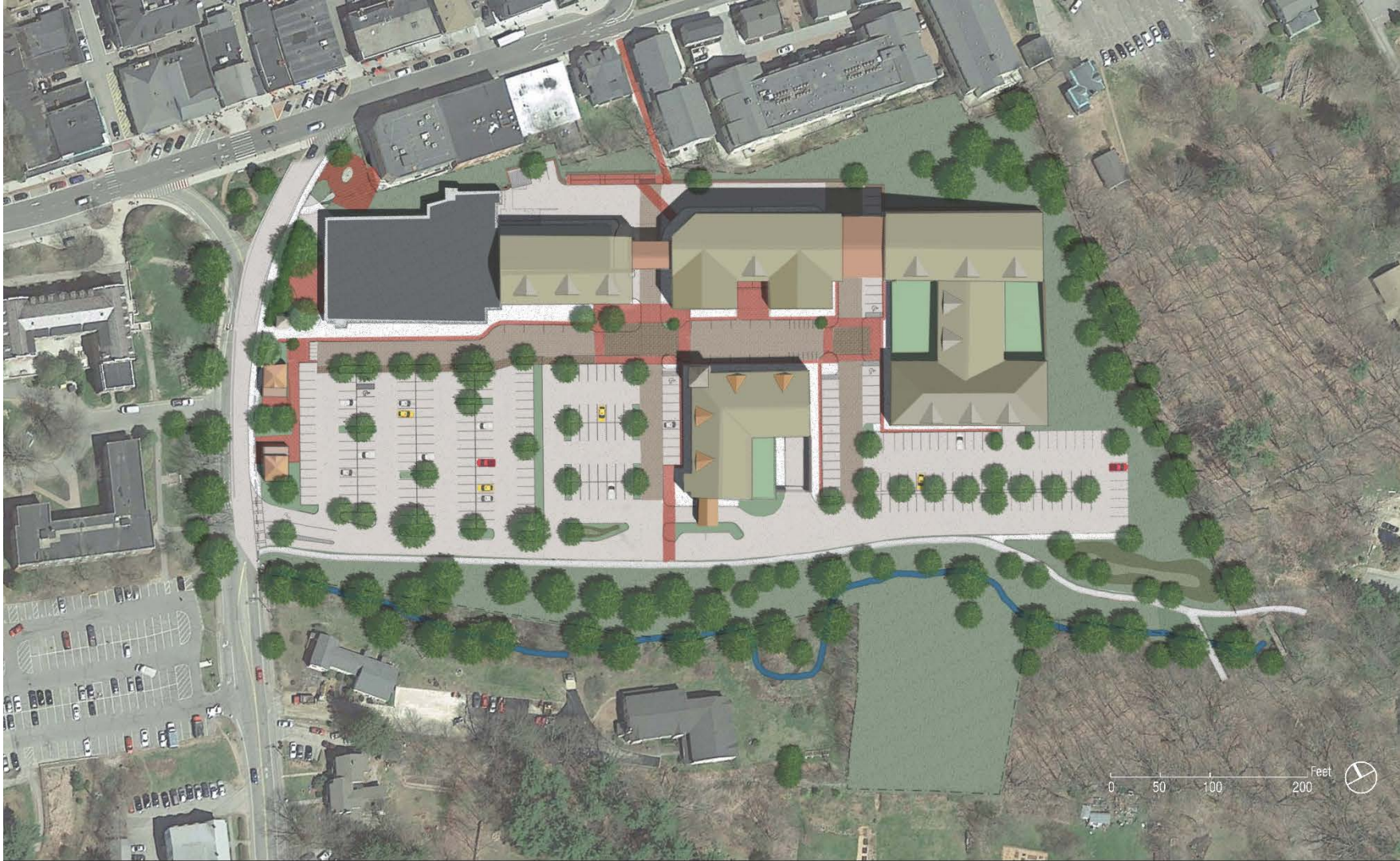


Harriman

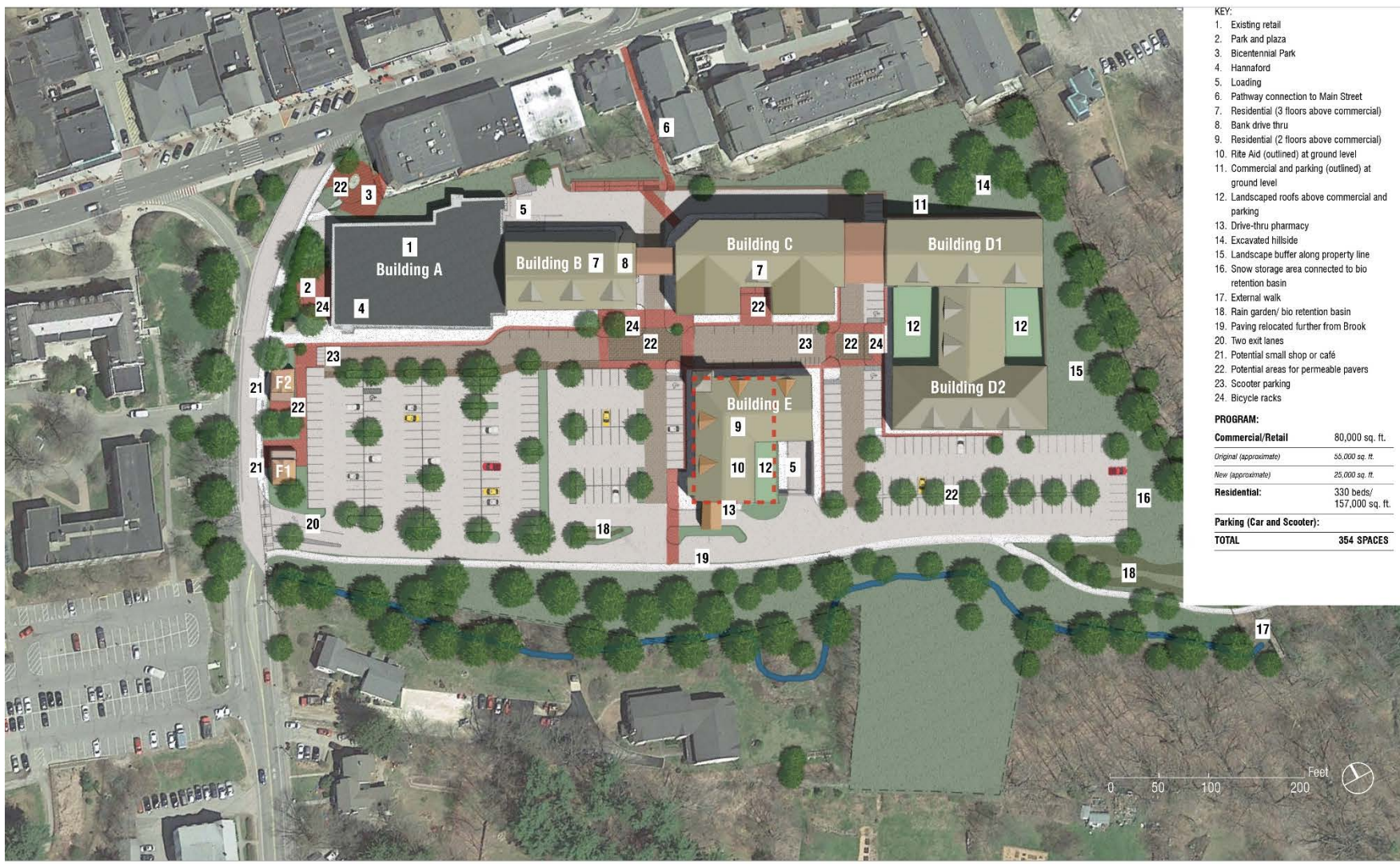
Prepared for Colonial Durham, Associates, LP

June 2017

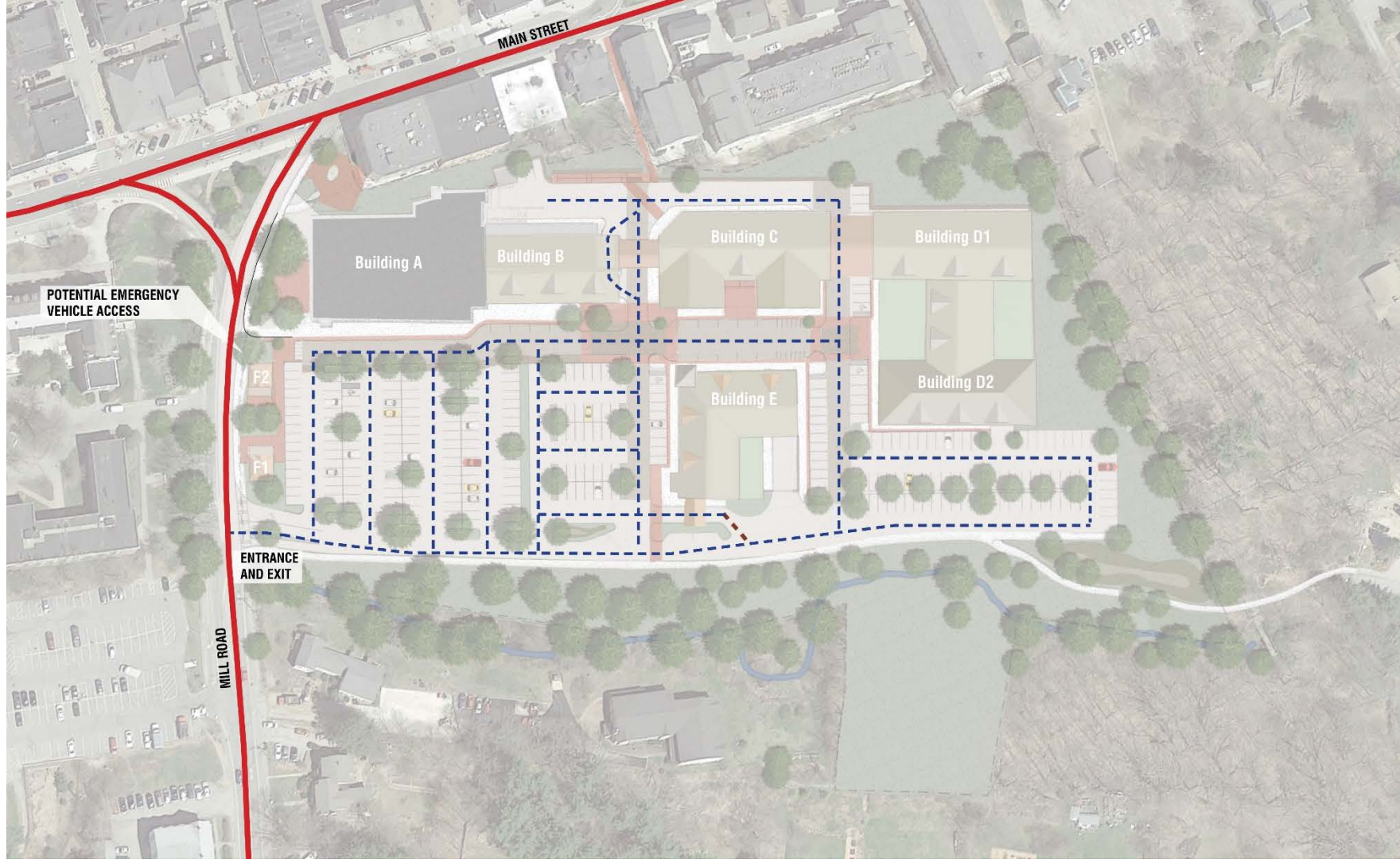
# Site: Proposed

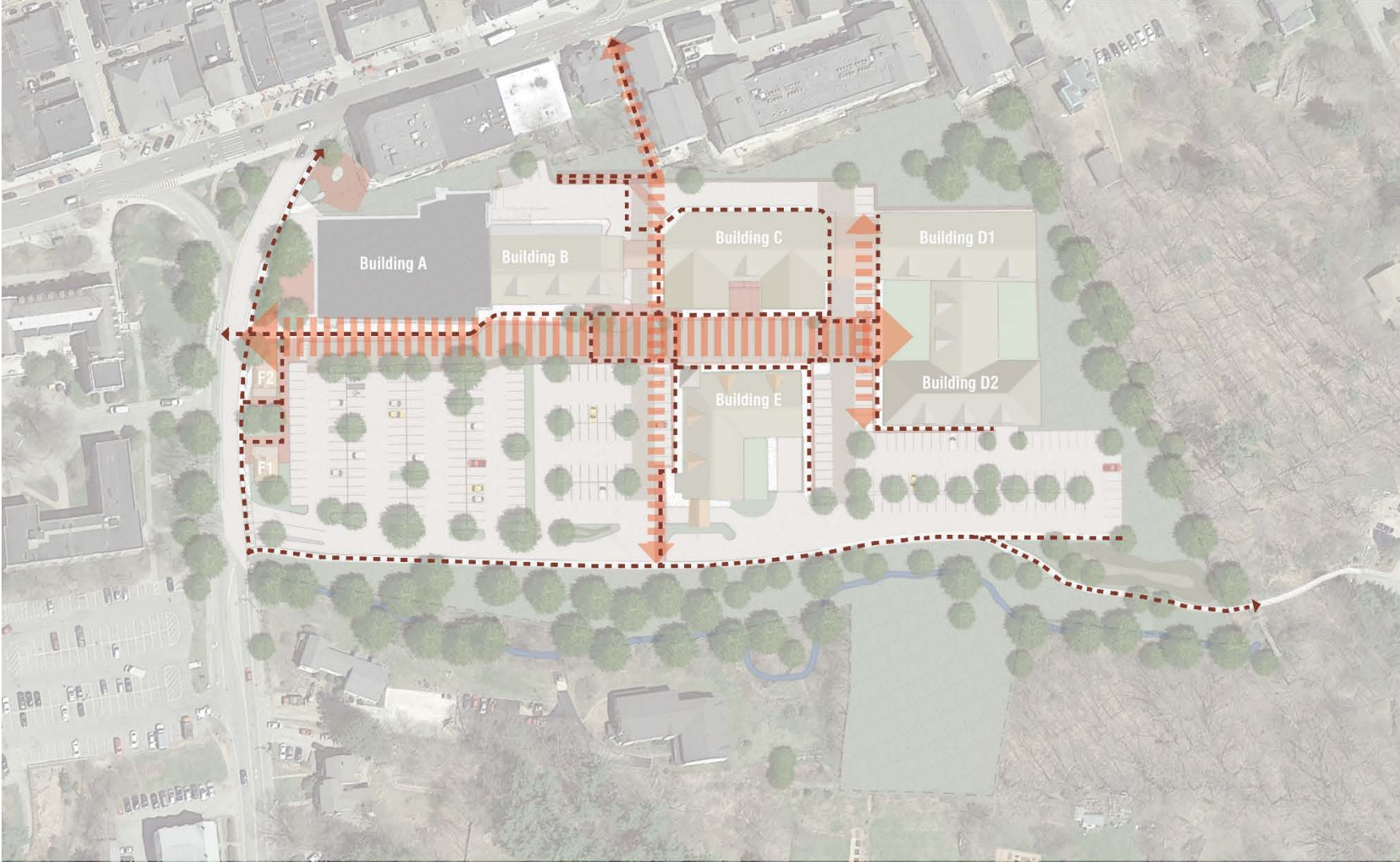


# Site Plan: Details

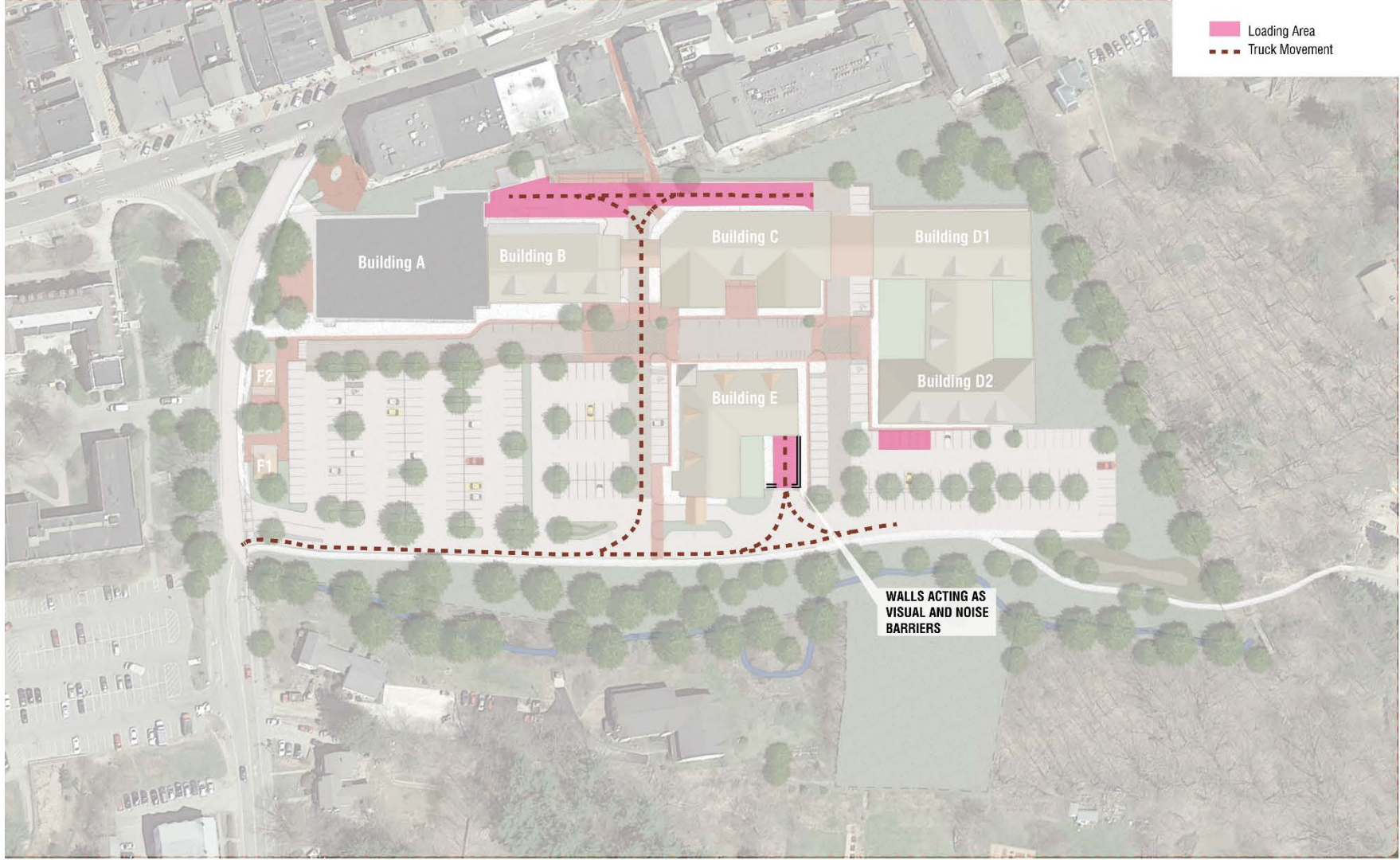


# Vehicular Access

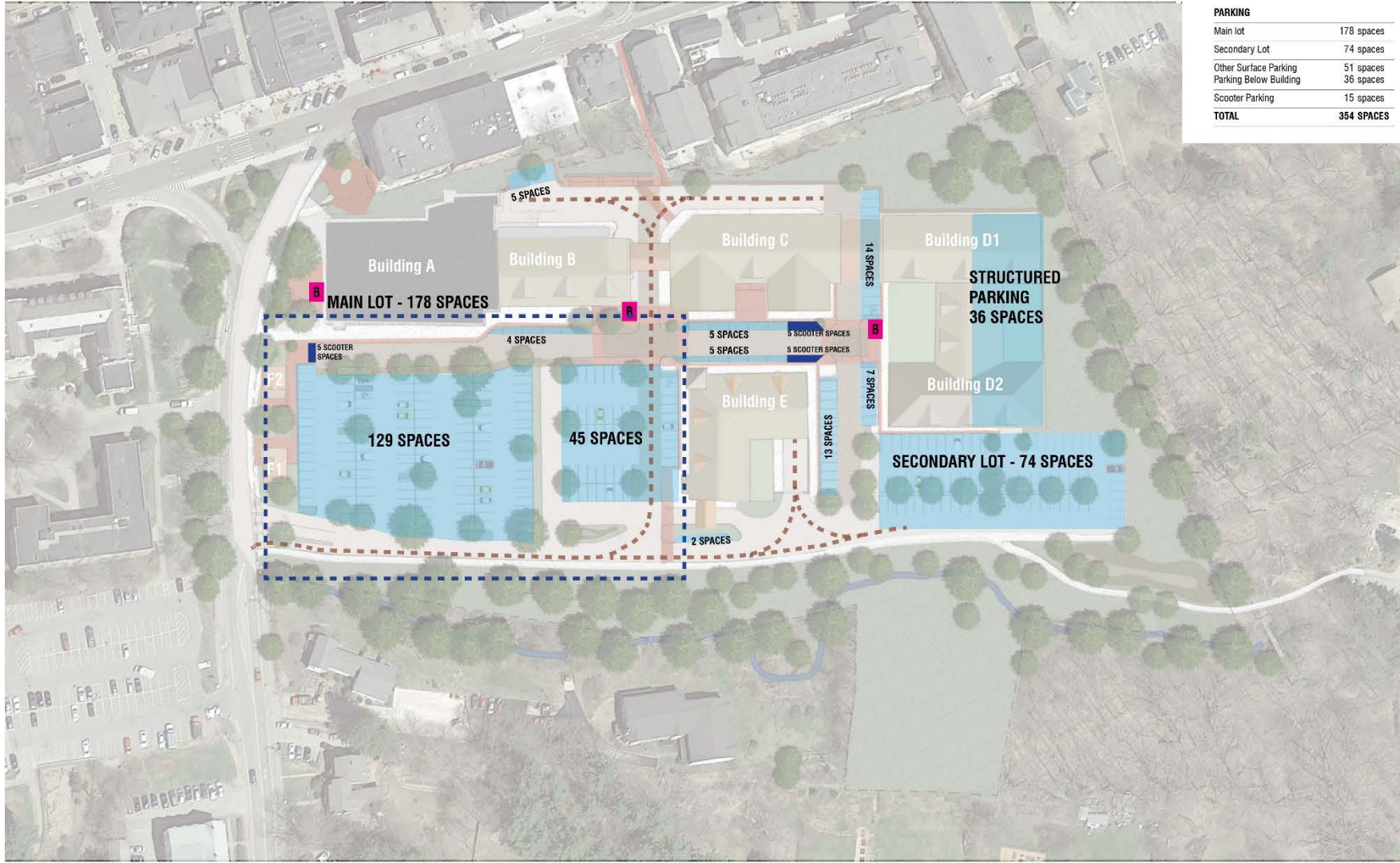




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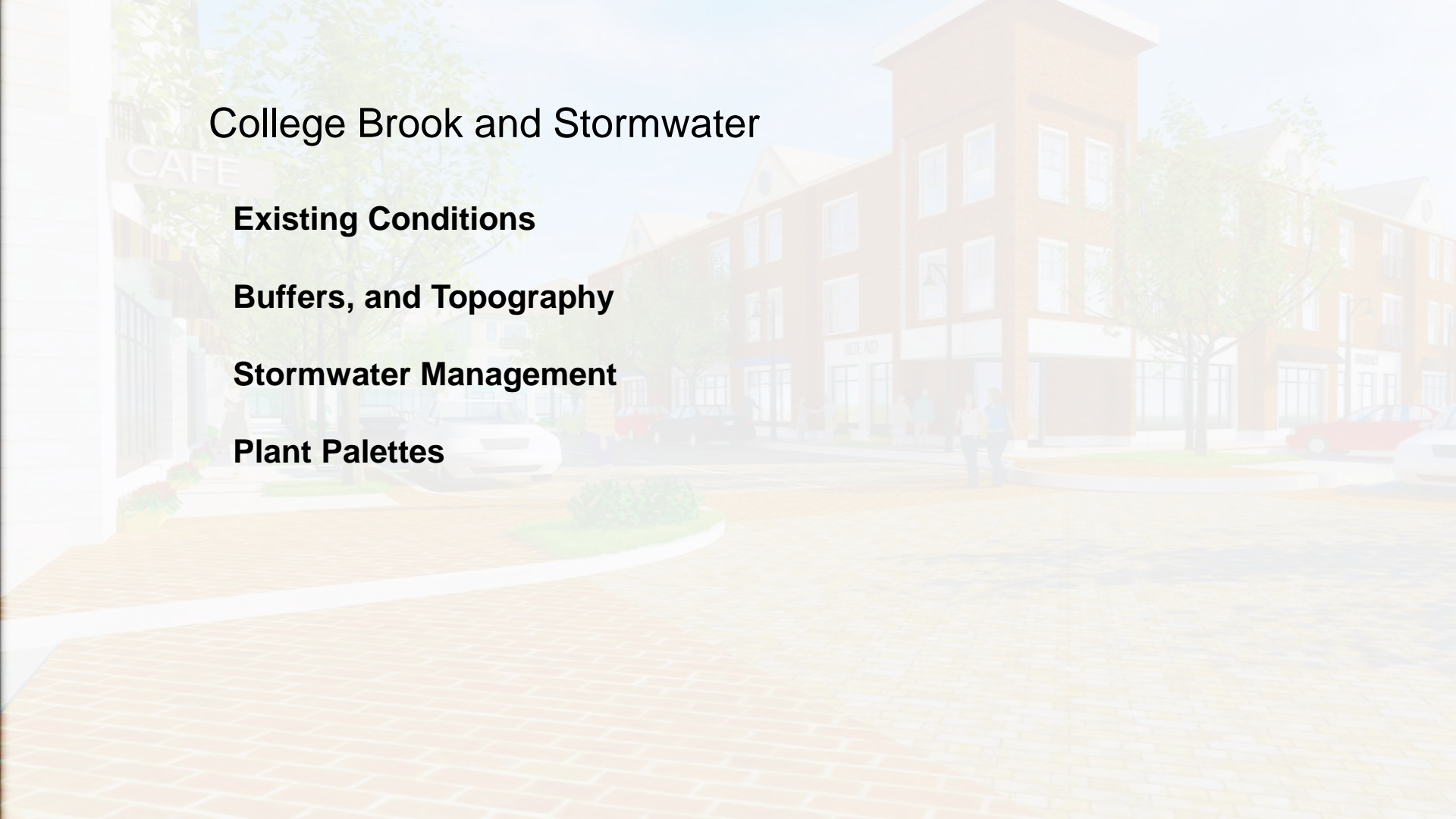


# Parking



# Lighting





# College Brook and Stormwater

**Existing Conditions**

**Buffers, and Topography**

**Stormwater Management**

**Plant Palettes**

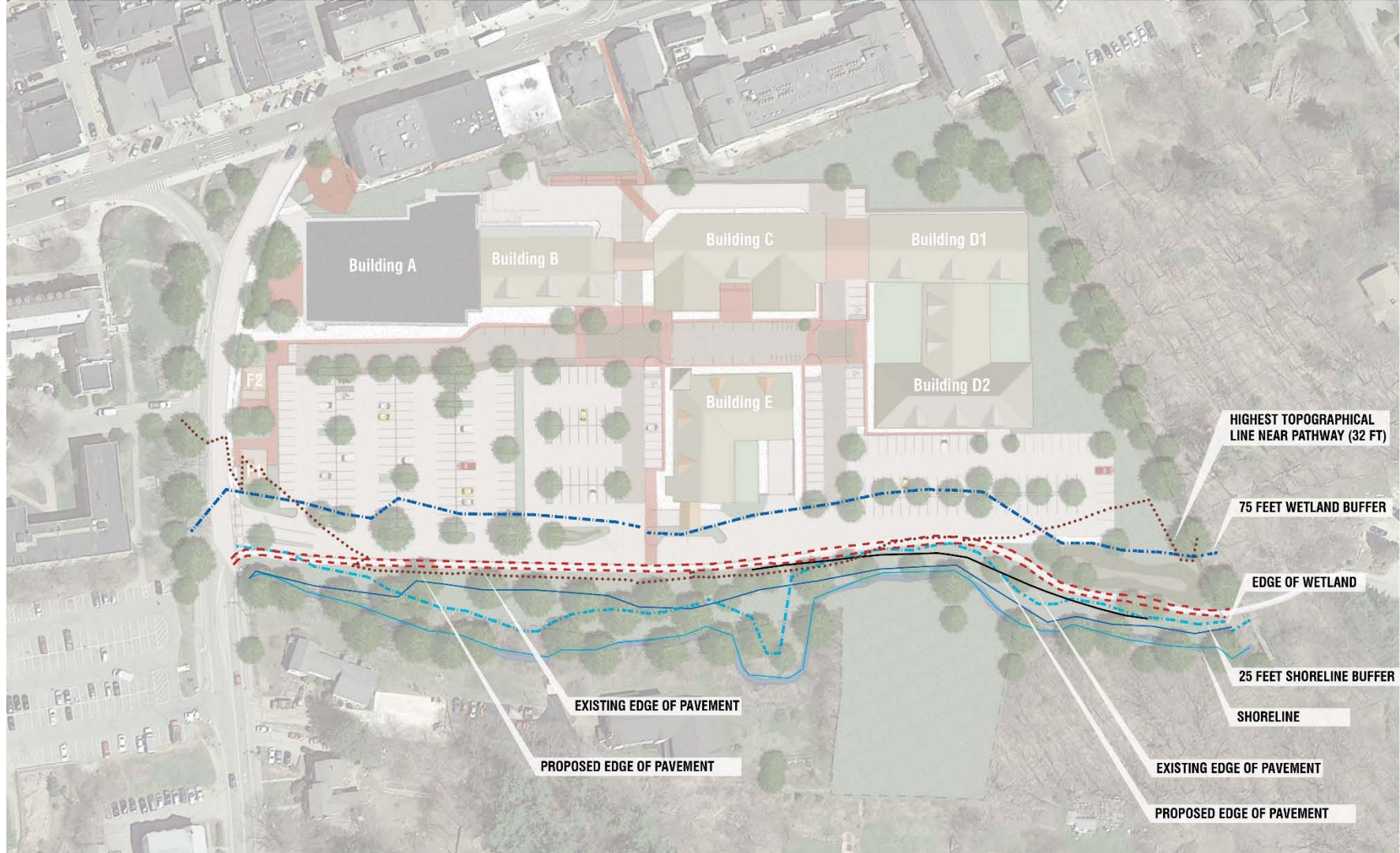
# Existing Conditions



# Existing Conditions



# Buffers and Topography



# Stormwater



**KEY:**

- Existing retail
- Park and plaza
- Bicentennial Park
- Hannaford
- Loading
- Pathway connection to Main Street
- Residential (3 floors above commercial)
- Bank drive thru
- Residential (2 floors above commercial)
- Rite Aid (outlined) at ground level
- Commercial and parking (outlined) at ground level
- Landscaped roofs above commercial and parking
- Drive-thru pharmacy
- Excavated hillside
- Landscape buffer along property line
- Snow storage area connected to bio retention basin
- External walk
- Rain garden/ bio retention basin
- Paving relocated further from Brook
- Two exit lanes
- Potential small shop or café
- Potential areas for permeable pavers
- Scoter parking
- Bicycle racks

**PROGRAM:**

<b>Commercial/Retail</b>	80,000 sq. ft.
Original (approximate)	55,000 sq. ft.
New (approximate)	25,000 sq. ft.
<b>Residential:</b>	330 beds/ 157,000 sq. ft.

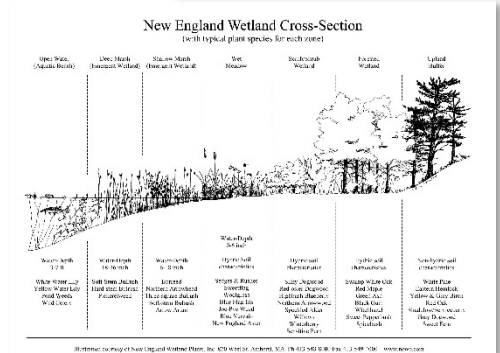
**Parking (Car and Scooter):**

<b>TOTAL</b>	<b>354 SPACES</b>
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# Wetland

**Land area that is saturated with water, either permanently or seasonally, such that it takes on the characteristics of a distinct ecosystem**

- Has three primary layers – Upland, Transitional (seasonally flooded), Shallow (Seasonally or permanently flooded)
- Requires functional relationship of water (Hydrology) and soils (Hydric types)
- Provides wildlife habitat
- Acts as stormwater storage



# Rain Gardens

**Planted depressions designed to accept stormwater from impervious areas for purposes of:**

- Reducing velocity of stormwater runoff
- Providing point source treatment and filtration of stormwater
- Providing an opportunity for water absorption into the soil
- Creating wildlife habitat

**Rain gardens are not wetlands.**



# College Brook

## Habitat restoration

- Beyond removal of invasive species
- Restore, create, enhance and protect resilient native landscape
- Use with non-turf seed mixes for slope stabilization and to reduce maintenance demands
- Outreach opportunity with UNH as living laboratory and for monitoring
- Reconnect public to natural and scenic resource



# PROPOSED PLANT MATERIAL PALETTE - CHARACTER IMAGES

## Deciduous Tree - Shade



**Acer rubrum**  
Common Name: Red Maple  
Zone: 3  
Height: 40' - 70'  
Spread: 30' - 50'  
Sun: Full sun to part shade  
Attractions: Good Fall color  
Tolerates: Wet spring soil



**Carpinus caroliniana**  
Common Name: American Hornbeam  
Zone: 3  
Height: 20' - 35'  
Spread: 20' - 35'  
Sun: Part shade to full shade  
Attractions: Good Fall color  
Tolerates: Flooding



**Populus tremuloides**  
Common Name: American Aspen  
Zone: 1  
Height: 20' - 50'  
Spread: 10' - 30'  
Sun: Full sun  
Attractions: Good Fall color, Birds  
Tolerates: Well drained soils

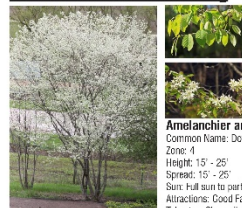


**Nyssa sylvatica**  
Common Name: Tupelo  
Zone: 4  
Height: 30' - 50'  
Spread: 20' - 30'  
Sun: Full sun to part shade  
Attractions: Good Fall color  
Tolerates: Clay Soil, Wet Soil



**Larix laricina**  
Common Name: Tamarack, Eastern Larch  
Zone: 2  
Height: 40' - 60'  
Spread: 15' - 30'  
Sun: Full sun  
Attractions: Good Fall color, rain garden  
Tolerates: Wet Soil

## Deciduous Tree - Flowering



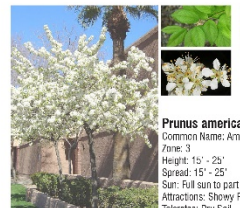
**Amelanchier arborea**  
Common Name: Downey Serviceberry  
Zone: 4  
Height: 15' - 25'  
Spread: 15' - 25'  
Sun: Full sun to part shade  
Attractions: Good Fall color, Birds  
Tolerates: Clay soils



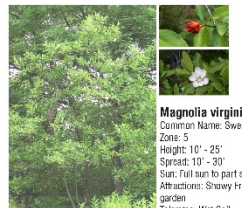
**Cercis canadensis**  
Common Name: Eastern Redbud  
Zone: 4  
Height: 20' - 30'  
Spread: 25' - 35'  
Sun: Part shade to full shade  
Attractions: Good Fall color, Butterflies  
Tolerates: Clay soils



**Cornus alternifolia**  
Common Name: Pagoda Dogwood  
Zone: 3  
Height: 15' - 25'  
Spread: 20' - 32'  
Sun: Full sun to part shade  
Attractions: Good Fall color, Birds  
Tolerates: Moist soils



**Prunus americana**  
Common Name: American Plum  
Zone: 3  
Height: 15' - 25'  
Spread: 15' - 25'  
Sun: Full sun to part shade  
Attractions: Showy Fruit and Flower  
Tolerates: Dry Soil



**Magnolia virginiana**  
Common Name: Sweet Bay  
Zone: 5  
Height: 10' - 25'  
Spread: 10' - 30'  
Sun: Full sun to part shade  
Attractions: Showy Fruit and Flower, Rain garden  
Tolerates: Wet Soil

## Deciduous Tree - Ornamental



**Betula nigra**  
Common Name: River Birch  
Zone: 4  
Height: 40' - 70'  
Spread: 30' - 40'  
Sun: Full sun to part shade  
Attractions: Winter Interest  
Tolerates: Drought, Clay Soil, Wet Soil, Air pollution



**Cotinus obovatus**  
Common Name: American Smoketree  
Zone: 4  
Height: 20' - 30'  
Spread: 20' - 30'  
Sun: Full sun  
Attractions: Good Fall color  
Tolerates: Clay Soil, Drought



**Desfya virginiana**  
Common Name: Hop Hornbeam  
Zone: 4  
Height: 25' - 40'  
Spread: 20' - 30'  
Sun: Full sun to part shade  
Tolerates: Clay Soil



**Oxydendrum arboreum**  
Common Name: Sourwood  
Zone: 5  
Height: 60' - 80'  
Spread: 40' - 60'  
Sun: Full sun  
Attractions: Good Fall color, Fragrant  
Tolerates: Clay Soil



**Stewartia ovata**  
Common Name: Mountain Stewartia  
Zone: 5  
Height: 20' - 30'  
Spread: 20' - 30'  
Sun: Part shade  
Attractions: Good Fall color  
Tolerates: Moist soils

## Conifer Tree



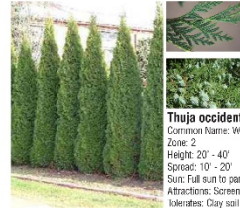
**Abies balsamea**  
Common Name: Balsam Fir  
Zone: 2  
Height: 45' - 65'  
Spread: 20' - 30'  
Sun: Full sun  
Attractions: Wildlife habitat, Winter interest  
Tolerates: Moist, acidic soils



**Juniperus virginiana**  
Common Name: Eastern Red Cedar  
Zone: 3  
Height: 35' - 55'  
Spread: 20' - 30'  
Sun: Full sun  
Attractions: Wildlife habitat  
Tolerates: Drought, erosion, dry soils



**Picea mariana**  
Common Name: Black Spruce  
Zone: 2  
Height: 30' - 40'  
Spread: 10' - 15'  
Sun: Full sun to part shade  
Attractions: Wildlife habitat  
Tolerates: Wet Soil



**Thuja occidentalis**  
Common Name: White Cedar  
Zone: 2  
Height: 20' - 40'  
Spread: 10' - 20'  
Sun: Full sun to part shade  
Attractions: Screening, Winter interest  
Tolerates: Clay soil



**Tsuga canadensis**  
Common Name: Eastern Hemlock  
Zone: 3  
Height: 40' - 70'  
Spread: 25' - 35'  
Sun: Partial shade to full shade  
Attractions: Wildlife, Winter interest  
Tolerates: Shade

NOTE: NOT ALL PROPOSED PLANT MATERIAL SHOWN WILL BE USED. FINAL PLANT MATERIAL SELECTION DEPENDENT ON ANALYSIS OF SITE CONDITIONS, CONFORMANCE TO AND APPROVAL BY LOCAL AND STATE REGULATIONS AND AGENCIES.

# PROPOSED PLANT MATERIAL PALETTE - CHARACTER IMAGES

## Shrubs



**Aronia melanocarpa**  
Common Name: Black chokeberry  
Zone: 3  
Height: 3' - 6'  
Spread: 3' - 6'  
Sun: Part shade to full shade  
Attractions: Attracts birds, Showy Fruit  
Tolerates: Moist to wet soils



**Cephalanthus occidentalis**  
Common Name: Buttonbush  
Zone: 3  
Height: 5' - 12'  
Spread: 4' - 8'  
Sun: Full sun to partial shade  
Attractions: Flower, showy fruit  
Tolerates: Erosion, medium to wet soil



**Comptonia peregrina**  
Common Name: Sweet Fern  
Zone: 2  
Height: 2' - 5'  
Spread: 4' - 8'  
Sun: Full sun to part shade  
Attractions: Fragrant  
Tolerates: Drought



**Cornus sericea**  
Common Name: Redosier Dogwood  
Zone: 3  
Height: 6' - 9'  
Spread: 6' - 12'  
Sun: Full sun to partial shade  
Attractions: Wildlife, Winter color  
Tolerates: Erosion, wet soil



**Clethra alnifolia**  
Common Name: Sweet Pepperbush  
Zone: 3  
Height: 3' - 8'  
Spread: 4' - 6'  
Sun: Full sun to part shade  
Attractions: Good Fall color, Fragrant, Butterflies  
Tolerates: Clay Soil, Wet Soil, Erosion



**Dasiphora fruticosa**  
Common Name: Shubby Cinquefoil  
Zone: 7  
Height: 3' - 6'  
Spread: 3' - 6'  
Sun: Full sun  
Attractions: Butterflies



**Dirca palustris**  
Common Name: Leatherwood  
Zone: 6  
Height: 4' - 6'  
Spread: 6' - 8'  
Sun: Full sun  
Attractions: Flowers, Fall color  
Tolerates: Heavy shade



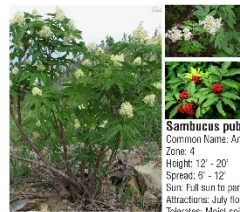
**Ilex verticillata**  
Common Name: Winterberry  
Zone: 3  
Height: 3' - 12'  
Spread: 4' - 12'  
Sun: Full sun to partial shade  
Attractions: Winter fruit, Rain garden  
Tolerates: Erosion, wet soil



**Juniperus communis**  
Common Name: Common Juniper  
Zone: 2  
Height: 0.75' - 1.5'  
Spread: 4' - 6'  
Sun: Full sun to part shade  
Attractions: Evergreen, Winter Interest  
Tolerates: Drought, Erosion, Dry Soil, Shallow-Rocky Soil, Air Pollution



**Ledum groenlandicum**  
Common Name: Labrador Tea  
Zone: 2  
Height: 3' - 4'  
Spread: 3' - 4'  
Sun: Full sun to partial shade  
Attractions: Flower  
Tolerates: Acidic soils



**Sambucus pubens**  
Common Name: American Red Elder  
Zone: 4  
Height: 12' - 20'  
Spread: 6' - 12'  
Sun: Full sun to partial shade  
Attractions: July flowers, red fruit  
Tolerates: Moist soils



**Viburnum acerifolium**  
Common Name: Mapleleaf Viburnum  
Zone: 3  
Height: 3' - 6'  
Spread: 2' - 4'  
Sun: Full sun to partial shade  
Attractions: Wildlife, Good Fall color  
Tolerates: Drought



**Viburnum lentago**  
Common Name: Nannyberry  
Zone: 2  
Height: 14' - 16'  
Spread: 6' - 12'  
Sun: Full sun to partial shade  
Attractions: Wildlife habitat, fruit  
Tolerates: Pollution

## Groundcovers



**Arctostaphylos Uva-Ursi**  
Common Name: Bearberry  
Zone: 2  
Height: 0.5' - 1'  
Spread: 3' - 6'  
Sun: Full sun to part shade  
Attractions: Showy flower, Birds  
Tolerates: Erosion, acidic soils, drought



**Coreopsis**  
Common Name: Tickseed  
Zone: 3  
Height: 1.5' - 2'  
Spread: 1.5' - 2'  
Sun: Full sun  
Attractions: Showy flower, Butterflies  
Tolerates: Dry soils, drought



**Cornus canadensis**  
Common Name: Blunberry  
Zone: 2  
Height: 0.25' - 0.75'  
Spread: 0.5' - 1'  
Sun: Part shade  
Attractions: Wildlife, Fall color, fruit  
Tolerates: Acidic soils



**Vaccinium angustifolium**  
Common Name: Low Sweet Blueberry  
Zone: 3  
Height: 3' - 4'  
Spread: 3' - 4'  
Sun: Full sun to part shade  
Attractions: Wildlife, Good Fall Color  
Tolerates: Wet and acidic soils

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# PROPOSED PLANT MATERIAL PALETTE - CHARACTER IMAGES

## Perennials / Wildflowers



**Aquilegia canadensis**  
Common Name: Wild columbine  
Zone: 3  
Height: 2' - 3'  
Spread: 1' - 1.5'  
Sun: Full sun to part shade  
Attractions: Showy flower, hummingbirds  
Tolerates: Drought, Dry Soil



**Asarum canadense**  
Common Name: Wild Ginger  
Zone: 3  
Height: 0.5' - 1'  
Spread: 1' - 1.5'  
Sun: Part shade to full shade  
Tolerates: Erosion, Wet Soil



**Aster novae-angliae**  
Common Name: New England Aster  
Zone: 3  
Height: 3' - 6'  
Spread: 2' - 3'  
Sun: Full sun  
Attractions: Butterflies  
Tolerates: Clay Soil



**Echinacea purpurea**  
Common Name: Purple Coneflower  
Zone: 3  
Height: 2' - 5'  
Spread: 1.5' - 2'  
Sun: Full sun to part shade  
Tolerates: Drought, Clay Soil, Dry Soil, Shallow-Rocky Soil



**Lupinus perennis**  
Common Name: Lupine  
Zone: 3  
Height: 3' - 4'  
Spread: 1' - 1.5'  
Sun: Full sun  
Attractions: Showy flower, butterflies  
Tolerates: Moist soils



**Penstemon digitalis**  
Common Name: Beardtongue  
Zone: 3  
Height: 3' - 5'  
Spread: 1.5' - 2'  
Sun: Full sun  
Attractions: Birds, Butterflies  
Tolerates: Drought, Clay Soil, Dry Soil



**Potentilla tridentata**  
Common Name: Three-lobed Potentilla  
Zone: 2  
Height: 2' - 4'  
Spread: 3' - 5'  
Sun: Full sun to part shade  
Attractions: Showy flower, butterflies  
Tolerates: Drought, Erosion, Clay Soil, Air Pollution



**Rudbeckia hirta**  
Common Name: Black-eyed Susan  
Zone: 3  
Height: 2' - 3'  
Spread: 1' - 2'  
Sun: Full sun  
Attractions: Butterflies, Showy flower  
Tolerates: Drought, Clay Soil



**Sanguinaria canadensis**  
Common Name: Bloodroot  
Zone: 3  
Height: 6" - 1'  
Spread: 6" - 8"  
Sun: Partial shade to shade  
Attractions: Showy white flowers  
Tolerates: Drought, dry soils

## Herbaceous



**Osmunda cinnamomeum**  
Common Name: Cinnamon fern  
Zone: 3  
Height: 2' - 3'  
Spread: 2' - 3'  
Sun: Partial shade to full shade  
Attractions: Fall color  
Tolerates: Heavy shade, wet soil



**Symlocarpus foetidus**  
Common Name: Skunk cabbage  
Zone: 3  
Height: 2' - 3'  
Spread: 2' - 3'  
Sun: Full sun to partial shade  
Attractions: Showy flower  
Tolerates: Heavy shade



**Thelypteris palustris**  
Common Name: Marsh fern  
Zone: 3  
Height: 1.5' - 3'  
Spread: 2' - 3'  
Sun: Partial shade to full shade  
Attractions: Naturalization, rain gardens  
Tolerates: Heavy shade, wet soils



**Callith leptosepala**  
Common Name: Marsh Marigold  
Zone: 3  
Height: 6"  
Spread: 6" - 8"  
Sun: Partial shade  
Attractions: Flower  
Tolerates: Moist to wet soil



**Loebelia cardinalis**  
Common Name: Cardinal Flower  
Zone: 3  
Height: 2' - 4'  
Spread: 1' - 2'  
Sun: Full sun to partial shade  
Attractions: Wildlife, flower, rain garden  
Tolerates: Wet soil



**Acorus calamus**  
Common Name: Sweet flag  
Zone: 4  
Height: 2' - 2.5'  
Spread: 1.5' - 2'  
Sun: Full sun to partial shade  
Attractions: Soil stabilization  
Tolerates: Heavy shade, wet soil



**Sparganium eurycarpum**  
Common Name: Broadfruit bur-reed  
Zone: 5  
Height: 2' - 4'  
Spread: 1' - 1.5'  
Sun: Full sun to partial shade  
Attractions: Flower, seed pod  
Tolerates: Wet soil



**Scirpus fluviatilis**  
Common Name: River Bulrush  
Zone: 4  
Height: 4'  
Spread: 1.5' - 2'  
Sun: Partial shade  
Attractions: Foliage, bio-remediation  
Tolerates: Wet soil



**Pontederia cordata**  
Common Name: Pickerel Weed  
Zone: 3  
Height: 2' - 4'  
Spread: 1.5' - 2'  
Sun: Full sun  
Attractions: Flower, fruit  
Tolerates: Wet soil

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# **Building Conditions**

**Location relative to existing buildings**

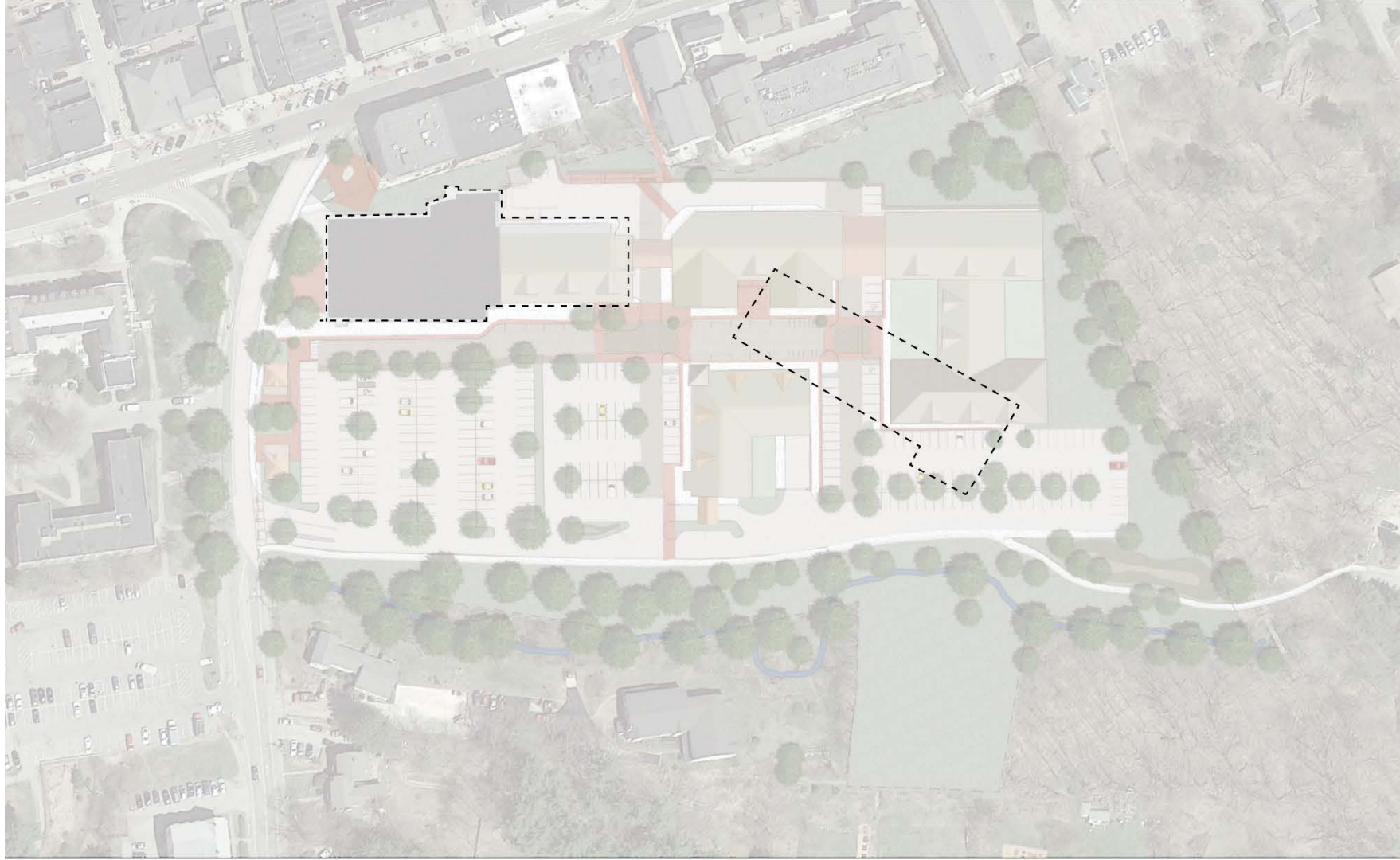
**Height**

**Program and Uses**

**Setbacks**

**Character**

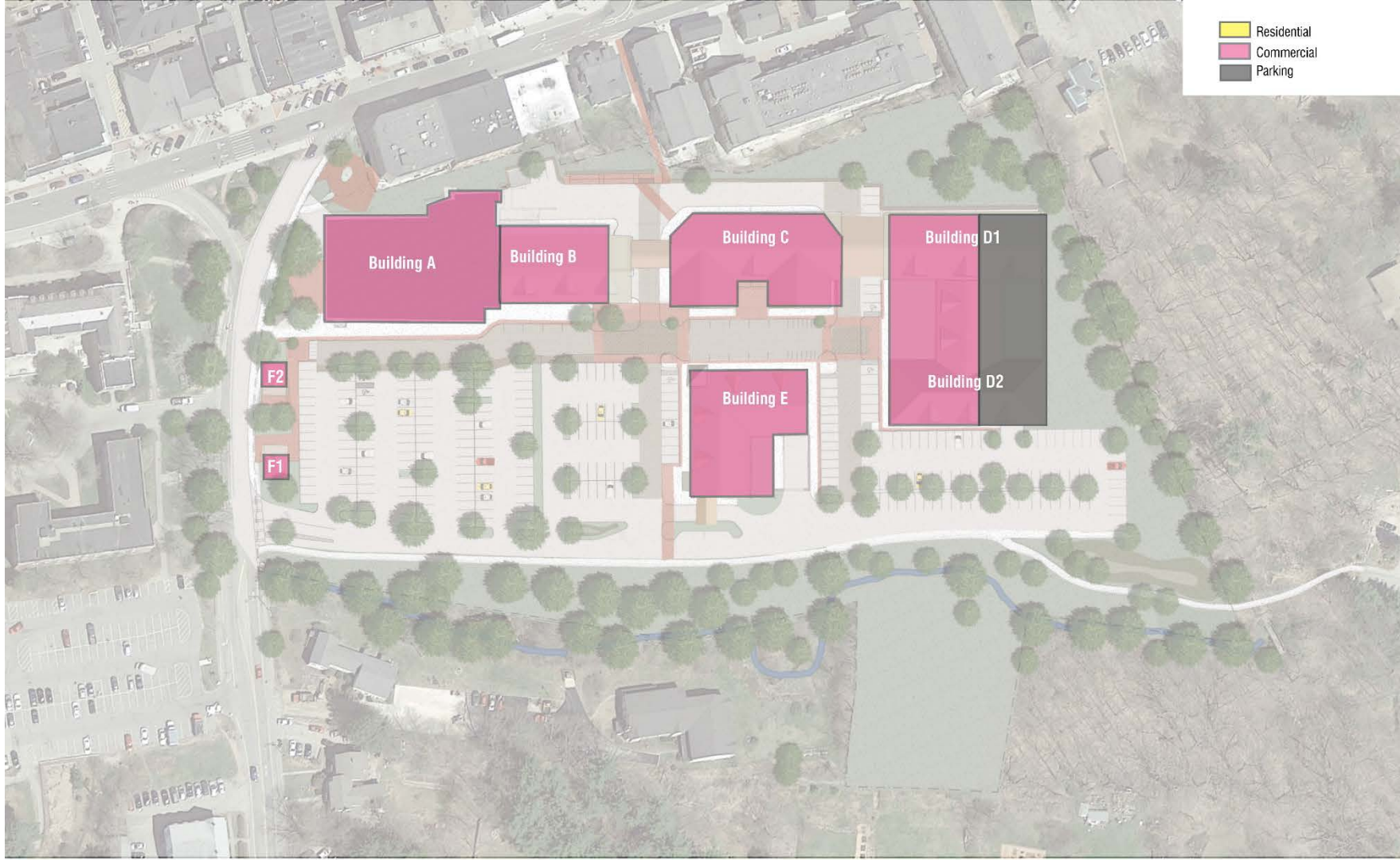
# Building Location



## Program

Use	Amount	
Commercial <i>(Retail/Office)</i>	<i>Existing:</i>	<i>55,000 sq. ft.</i>
	<i>New:</i>	<i>25,000 sq. ft.</i>
	Total:	80,000 sq. ft.
Residential	330 beds	
Parking	355 spaces (cars and scooters)	

# Uses: Ground Floor



# Uses: Second Floor



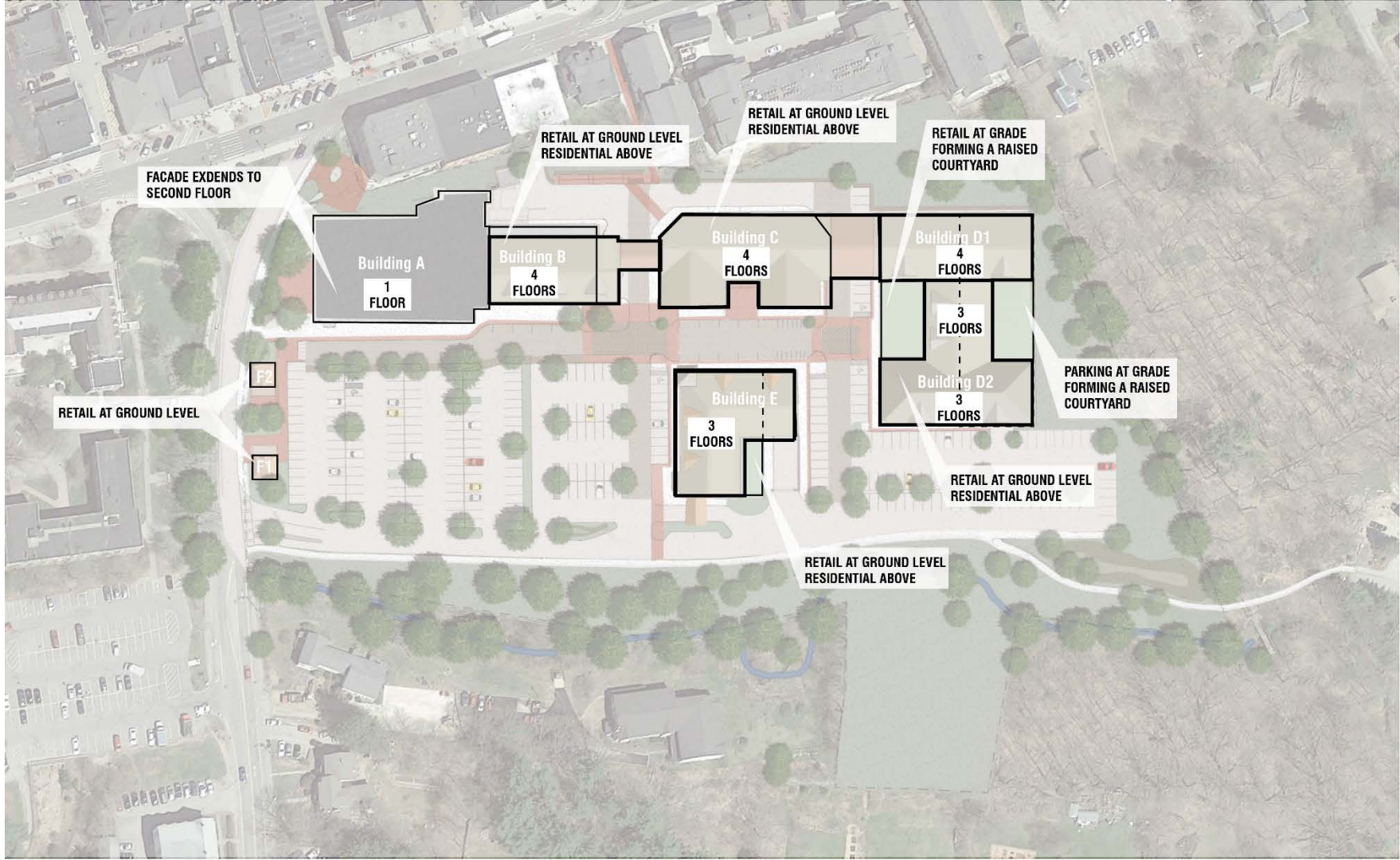
# Uses: Third Floor



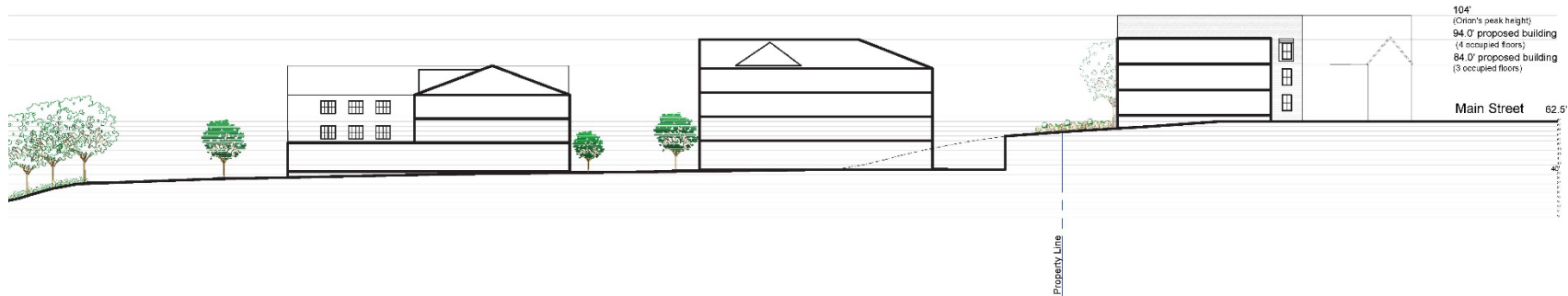
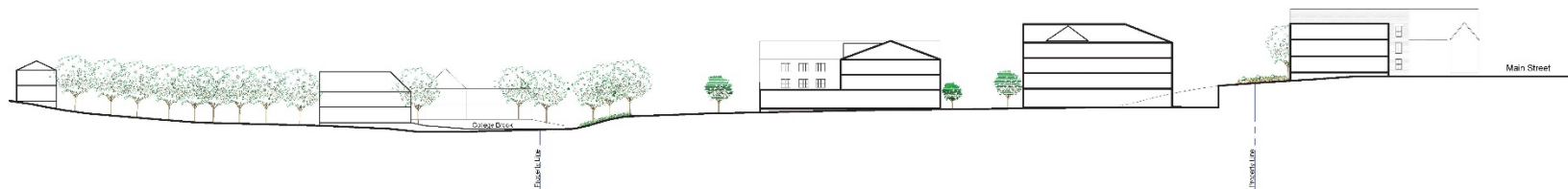
# Uses: Fourth Floor



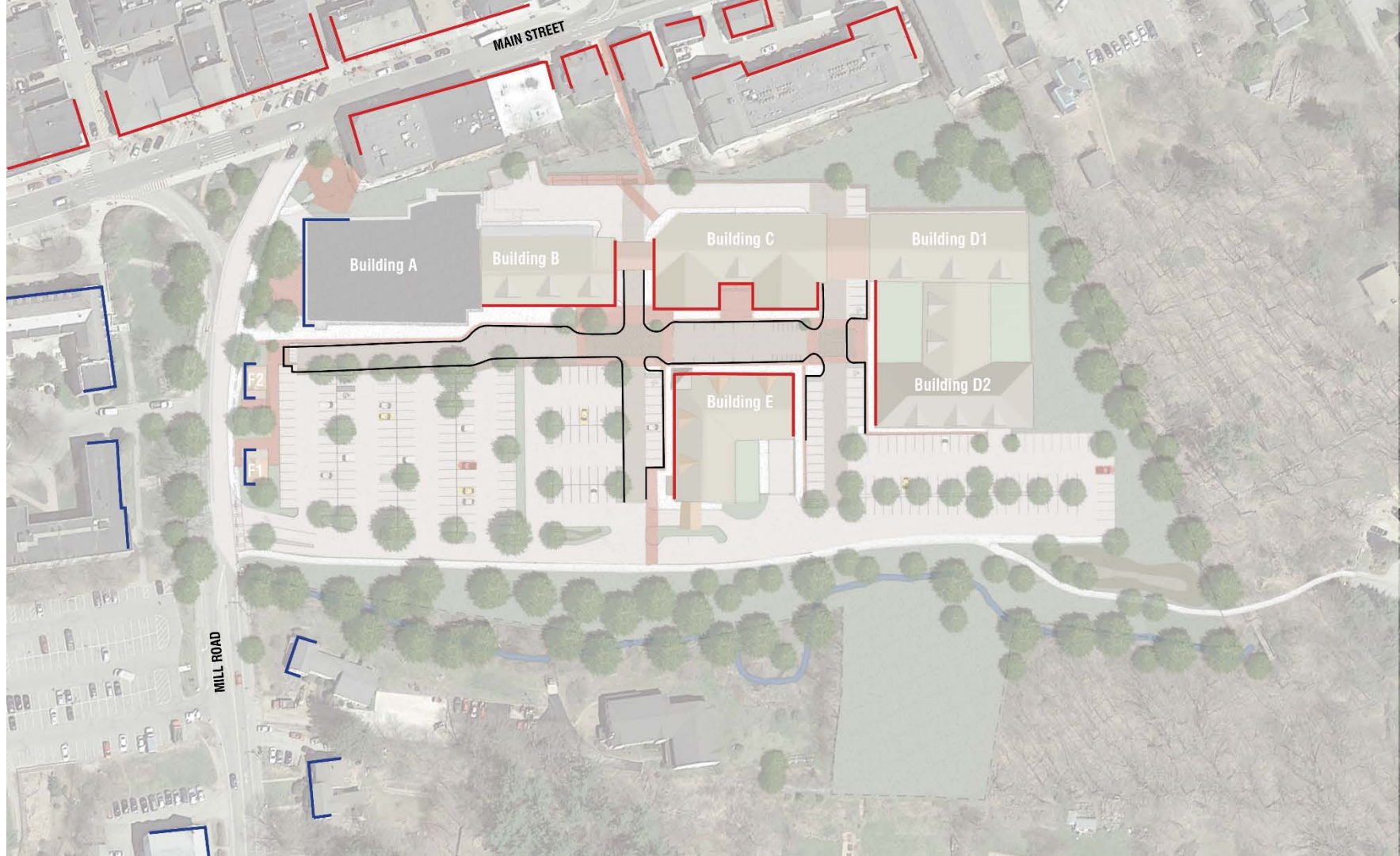
# Building Heights



# Site Section



# Setbacks



# Distances



# Existing Site



# Existing Retail/Restaurant



# Existing Mixed-Use



# Existing Mixed-Use



Existing



Proposed



Existing



Proposed



Existing



Proposed



Existing



Proposed



Existing



Proposed



# Existing



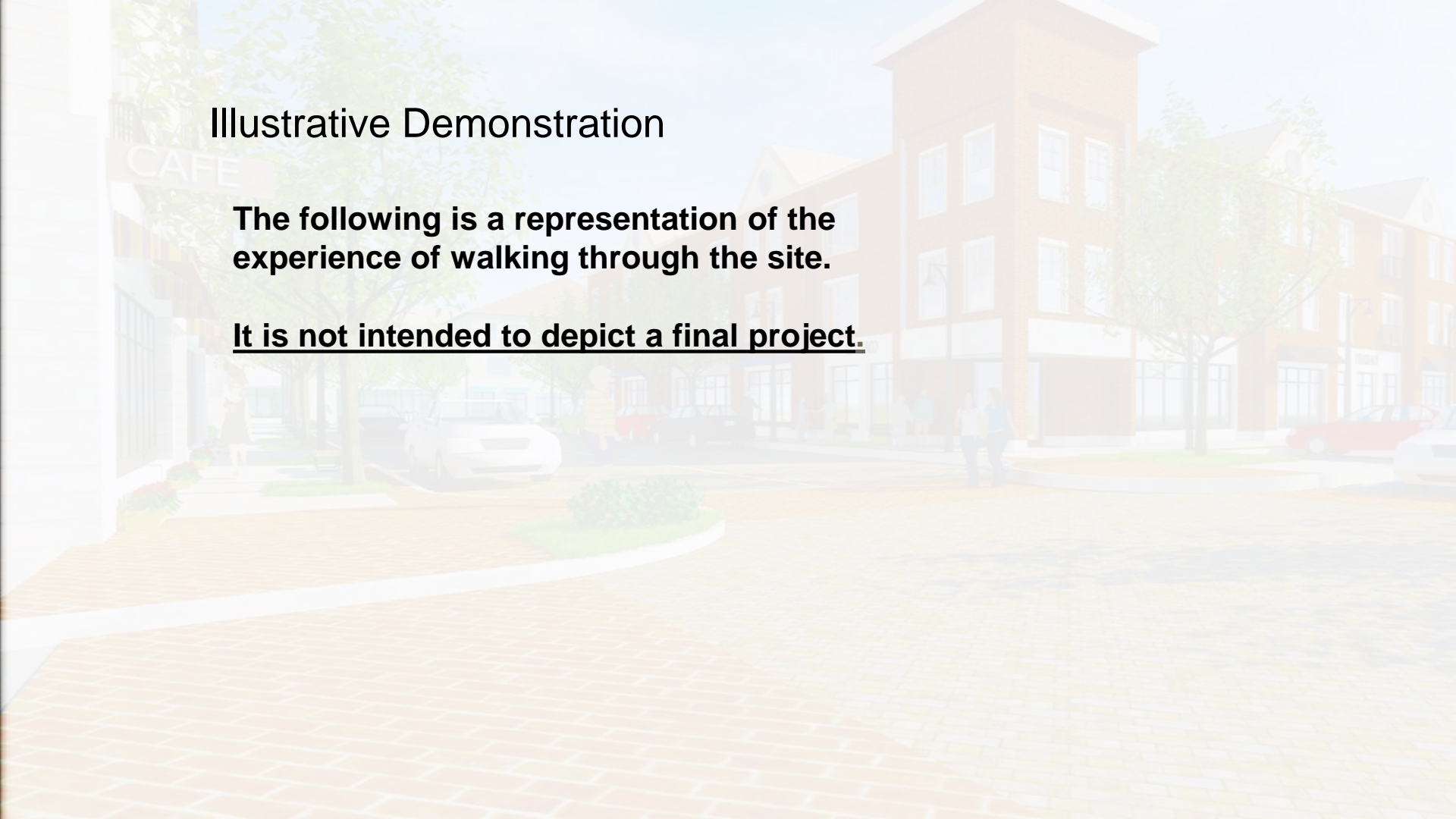
Proposed



## Illustrative Demonstration

**The following is a representation of the experience of walking through the site.**

**It is not intended to depict a final project.**





# Questions and Answers

