

Waltham Experiment Station

Study of Existing Conditions, Development Potential, and Alternative Future Development Options



Prepared for:
University of Massachusetts Amherst Extension
Nancy Garrabrants, Director

College of Natural Sciences
Steve Goodwin, Dean

January 2010

Prepared by:

Jack Ahern, Professor; and Kevin Hartzell, Graduate Assistant
Department of Landscape Architecture and Regional Planning
109 Hills North , University of Massachusetts, Amherst, MA 01003

Steering Committee:

Sharon Fross, Vice Provost for Outreach; Nancy Garrabrants, Director UMass Extension;
Robert Schrader, UMass Extension; John R. Mullin, Dean, Graduate School; Marty Smith
and James Morrissey, Facilities and Campus Planning.

Waltham Experiment Station: Study of Existing Conditions, Development Potential, and Alternative Future Development Options

Table of Contents:

1. INTRODUCTION	4
A. Purpose	4
B. Sponsor and Participants	4
C. Study Organization and Schedule	5
2. WALTHAM EXPERIMENT STATION	6
A. City of Waltham	6
B. City of Waltham Community Development Plan	8
C. Waltham Experiment Station Property Description	11
D. Waltham Experiment Station History	13
3. WALTHAM EXPERIMENT STATION: Existing Conditions and Development Potential	13
A. Parcel 1 “The Main/South Parcel”	13
A.1. Site Conditions	13
A.2. Building and Infrastructure Conditions	14
Administration Building	14
Gray Building	14
Boiler Building	15
Greenhouses 1-4	15
Corn Lab and Greenhouses 5A/5B	16
Greenhouses 6,7,8,9 (Hoop Houses)	16
Fly Ash Plot	16
Petroleum Plume	16
B. Parcel 2 – “The North Parcel”	18
B.1. Environmental and Site Conditions	18
B.2. Building and Infrastructure Conditions	19
Farm House	19
Detached Garage	19
Main Barn	19
Cow Barn	19
Sheds 1 & 2	20
C. Building and Land tenants	22
Building Tenants	22
Existing Tenants of Land	22

D. Development Issues and Potential	25
D.1. City of Waltham Zoning & Development Regulations	25
Deed Restrictions	25
Zoning	25
Strategic Zoning Considerations	25
Parking Requirements	26
Parking and Potential Zoning Change	26
Parking and Driveway Dimensions	27
D.2. Environmental Regulations	27
D.3. Utilities and Infrastructure	27
4. ALTERNATIVE FUTURE DEVELOPMENT OPTIONS	28
Market Study	28
Market Summary	30
Extension Beginning Farmer Center (Option A)	30 A
Extension Beginning Farmer Center with Conference Center (Option B)	30 B
Extension Beginning Farmer Center with Conference Center and UMass System or partner development (Option C)	30 C
North Parcel	30 D
Comparative Statistics: Alternative Development Options	31
Preliminary Development Proforma	32
5. APPENDIX	33
A. References	33
B. Documents	
1. Waltham Experiment Station Property Deed	34
2. Memorandum: Office of the General Council	36
3. A Short History of Waltham Field Station, R.E. Young	41
Map B.1. Significant Trees	48
Map B.2. Soils	49
Map B.3. City of Waltham Land Use	50
Map B.4. City of Waltham Zoning	51
Tables B.1-B.3. Zoning Use Tables	52-53

List of Figures and Tables

1. WALTHAM EXPERIMENT STATION	
Map 1: Metro- Boston Map	6
Map 2: City of Waltham	7
Map 3: The Western Greenway	10
Map 4: Waltham Experiment Station parcel map and abutting land uses	12
Photo 1: Market Garden Building	13
2. WALTHAM EXPERIMENT STATION: Existing Conditions and Development Potential	
Photo 2: Dawn Redwood Tree	14
Photo 3: Administration Building from Beaver Street	14
Photo 4: Gray Workshop Building Beaver Street Facade	14
Photo 5: Boiler Building and Smoke Stack	15
Photo 6: East Facade of Greenhouse 3	15
Photo 7: Corn Laboratory and Greenhouse 5A	16
Photo 8: East Facade of Hoop House	16
Photo 9: Farm house	19
Photo 10: Detached Garage	19
Photo 11: Main Barn	19
Photo 12: Cow Barn	19
Photo 13: Shed	20
Map 5: Parcel 1 “Main/South Parcel”, Waltham Experiment Station	17
Map 6: Parcel 2 “North Parcel”, Waltham Experiment Station	21
Figure 1 : Administration Building floor plans	23
Table 1: Zoning Dimension Table	24
3. ALTERNATIVE FUTURE DEVELOPMENT OPTIONS	28
Table 2: Comparative Statistics: Alternative Development Options	29
Table 3: Preliminary Development Proforma	30
Map 7: Suburban Boston Sub-Markets	31
Table 4: Suburban Boston Sub-Markets	31
Development Plan A: Extension First-time Farmer Center	32A
Development Plan B: Extension First-time Farmer Center with Conference Center	32B
Development Plan C: Extension First-time Farmer Center with Conference Center and UMass System or partner development	32C
Development Plan D: North Parcel	32D
	31
	31

Waltham Experiment Station: Study of Existing Conditions, Development Potential, and Alternative Future Development Options

1. INTRODUCTION

A. Purpose

The Waltham Experiment Station located in Waltham, Massachusetts is a property of the University of Massachusetts Amherst. The Station's future is under review by the University of Massachusetts Amherst Office of Outreach, the unit with administrative responsibility for the Waltham Experiment Station. The purpose of this study is to first organize and analyze information on existing building and land use and conditions, and state and local development regulations. The study then applies this information to develop alternative future development or expansion options for the Station. This study is being conducted to inform discussions about possible futures for the Station - it is not advocating, or related to, any specific plans for development or redevelopment of the Waltham Experiment Station at this time.

The Waltham Experiment Station was established in 1923 to conduct agricultural research and offer outreach programs and resources to citizens, professionals, and commodity groups in the Boston metropolitan area. For several decades the Station was very active with field and greenhouse research and outreach programs. More recently most of the University uses have ceased and the Station is now significantly underused. The lack of use by the University is related to a serious decline in the condition of most of the buildings at the Station.

The UMass Office of Outreach is exploring the existing uses, and potential of the Waltham Experiment Station to be redeveloped into a Beginning Farmer Center or as an Agricultural Innovation Center. This report includes 3 alternative future development plans to assist the University of Massachusetts Office of Outreach, and other administrators, to make strategic decisions about future use(s) for the Station.

B. Sponsor and Participants

This study has been prepared under the direction of Sharon Fross, Vice Provost for Outreach. The study worked with a steering committee to review and comment on draft materials and to offer suggestions. The steering committee included: Sharon Fross, Vice Provost for Outreach; Nancy Garrabrants, Director UMass Extension, Kathleen Carroll, Program Director, UMass Extension, Landscape and Nursery Program, and Robert Schrader, Maria Morera and Frank Mangan of UMass Extension; John Mullin, Dean of the Graduate School; and Marty Smith and James Morrissey of the UMass Amherst Office of Facilities and Campus Planning.

The study materials were prepared by Jack Ahern, Professor of Landscape Architecture and Kevin Hartzell, Graduate Research Assistant, Department of Landscape Architecture and Regional Planning, University of Massachusetts Amherst.

C. Study Organization and Schedule

The study has been organized to gather and organize information from: University of Massachusetts Offices (UMass Extension, UMass Facilities and Campus Planning, Environmental Compliance Services), the City of Waltham, Metropolitan Area Planning Council and various internet sources (see references). Project information was reviewed by the Steering Committee, UMass Extension staff, and Facilities Planning for accuracy and completeness. Suggested future use concepts were solicited from UMass Extension staff and the steering committee and were used to develop the three alternative future development plans. After receiving comments, these plans were revised and presented to the project steering committee. This report is designed to support discussions with the University of Massachusetts administrative leadership concerning future use(s) and (re)development of the Waltham Experiment Station.

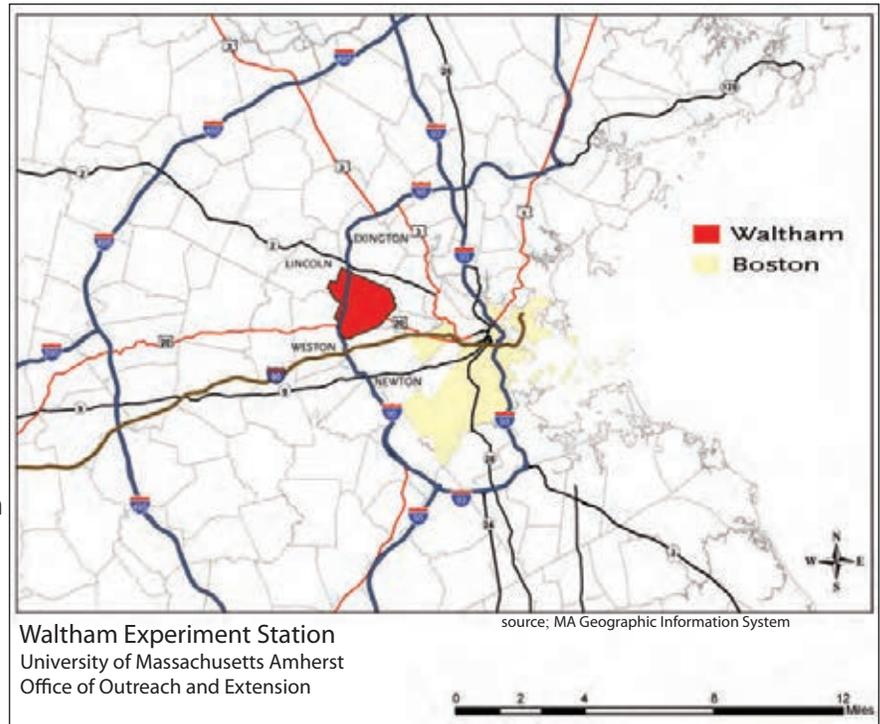
Project Schedule:

Project Initiated	September 2008
Initial Site Visits and Project Research	September - December 2008
Preliminary Meetings with Extension and Facilities Plng.	October-November 2008
Draft Presentation to Steering Committee	November 13, 2008
Meeting with Facilities Planning on Hazardous Materials	December 2008
Second Draft Presentation to Steering Committee	April 2, 2009
Presentation to UMA leadership	May 20, 2009
Report Completed	October 2009

2. WALTHAM EXPERIMENT STATION

A. City of Waltham

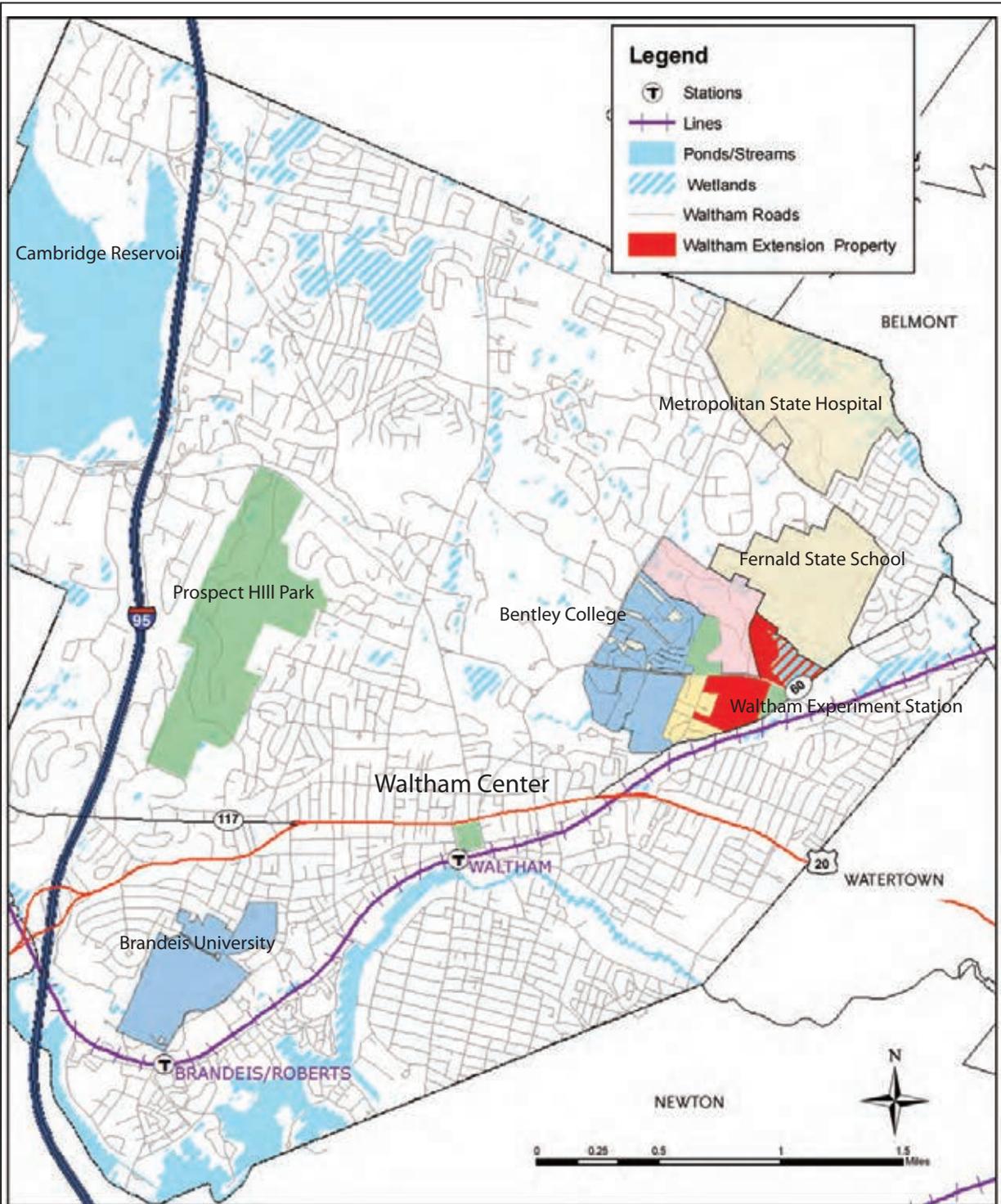
The Waltham Experiment Station is located at 240 Beaver Street, Waltham Massachusetts. The City of Waltham is bordered by Lexington to the north, Belmont and Watertown to the east, Lincoln and Weston to the west, and Newton to the South. The major transportation connections in Waltham are Interstate 95/Route 128 and state highway Route 20 which intersect in western Waltham. The Massachusetts



Turnpike and state Route 2 are easily accessible to the south and north, respectively. The City of Waltham is also serviced by the MBTA Fitchburg commuter rail line that connects to Boston's North Station, with a station in Waltham Center.

Waltham currently has approximately 60,000 residents in an area of 13.6 square miles, with a density of approximately 4,400 people per square mile/ 6.8 people/acre. Waltham is approximately 75 miles east of UMass Amherst, 33 miles east of Worcester, and 10 miles west of Boston. The Charles River is located along the southern city limit. The route 128/Interstate 95 corridor is the main economic and technological/business center of Waltham. Due to the many major transportation links, Waltham is business and commercial-supportive, having the second largest office market in Massachusetts, second only to Boston. Waltham has experienced a dramatic increase in land value over the last 5 years finding itself within the wave of Boston metropolitan development. The city center is currently experiencing town center redevelopment with an aggressive revitalization program in progress.

The Experiment Station is bordered by several major institutions including: Bently College to the west on Beaver Street, the Fernald School and the Girl Scouts of Massachusetts to the north. Downtown Waltham is located about 1.5 miles to the southwest.



Waltham Experiment Station
 University of Massachusetts Amherst
 Office of Outreach and Extension

Prepared by; University of Massachusetts Amherst
 Department of Landscape Architecture and Regional Planning

Map 2: City of Waltham

B. City of Waltham Community Development Plan

The City of Waltham Community Development Plan was adopted by City Council in June 2007. It analyzes the city's natural resources and open space, housing, economic development, transportation, and land use within the context of the Boston Metropolitan area. The Community Development Plan outlines a series of goals and a "to- do list" for each topic that provides thorough insight to potential growth and development in Waltham.

The Waltham Community Development Plan identified the city of Waltham as the third largest employment center in the eastern Massachusetts region and is third in property tax values behind Boston and Cambridge. Commercial property values in Waltham have experienced the greatest value increase over all Commercial, Industrial, and Personal Property (CIP) in the last two decades. Current tax valuation of commercial property is 1,895 million dollars. According to the Community Development Plan, commercial property value and commercial land is forecasted to continue growing. Waltham has the potential to see an additional 1.6 million square feet of commercial office space and an increase of 4,700 new jobs by 2020 (Waltham Community Development Plan p. 141).

The Waltham Experiment Station was explicitly identified in the Community Development Plan in conjunction with the city's goals for natural resources and open space protection. The City of Waltham Community Development report identified a few tasks and objectives for the Waltham Experiment Station site at the regional and city wide level as an important parcel of land that could be part of a system of hiking/biking trails, part of the Waltham Western Greenway, and potential conservation land. Selected Community Development Plan goals and tasks that relate specifically to the Experiment Station include;

- Explore creating a series of attractive corridors/trails/paths linking parks, open space, residential neighborhoods, downtown Waltham, and gateways to the city. This can be started by acquiring or securing permanent public access to several key open space parcels, including the Lincoln Woods property, the Stigmatine Espousal Center, the University of Massachusetts Field Station, and the Berry Farm site amongst others. (The City Of Waltham Community Development Plan pg. 6)
- The need for conservation is another major concern in the community. Robert Treat Paine Estate is the City's only official conservation area. With the changing landscape character of Waltham and the pressures of traffic and development, there has been an increased interest in preservation of land as conservation areas. The City should seek opportunities to acquire conservation land including wetland areas adjacent to Prospect Hill Park, near Metropolitan State Hospital Site, and the University of Massachusetts Agricultural Station. (The City Of Waltham Community Development Plan pg. 50)
- Other than the holdings cited above, the City of Waltham does not have much vacant land that could be used for recreation or conservation purposes in the future. The only exceptions are two parcels off Beaver Street and Forest Street. These two holdings, called the "Forest Street Park" (15 acres) and "Waltham Woods" (12 acres) are not protected and are under the jurisdiction of the Parks and Recreation Department. However, the City plans to keep them as open space available for the public. (The City Of Waltham Community Development Plan pg. 38)
- The proposed Central Massachusetts Bike Trail (Wayside Rail Trail) would be approximately a 23-mile trail on the abandoned railroad right-of-way running from Belmont through Waltham to Hudson and beyond

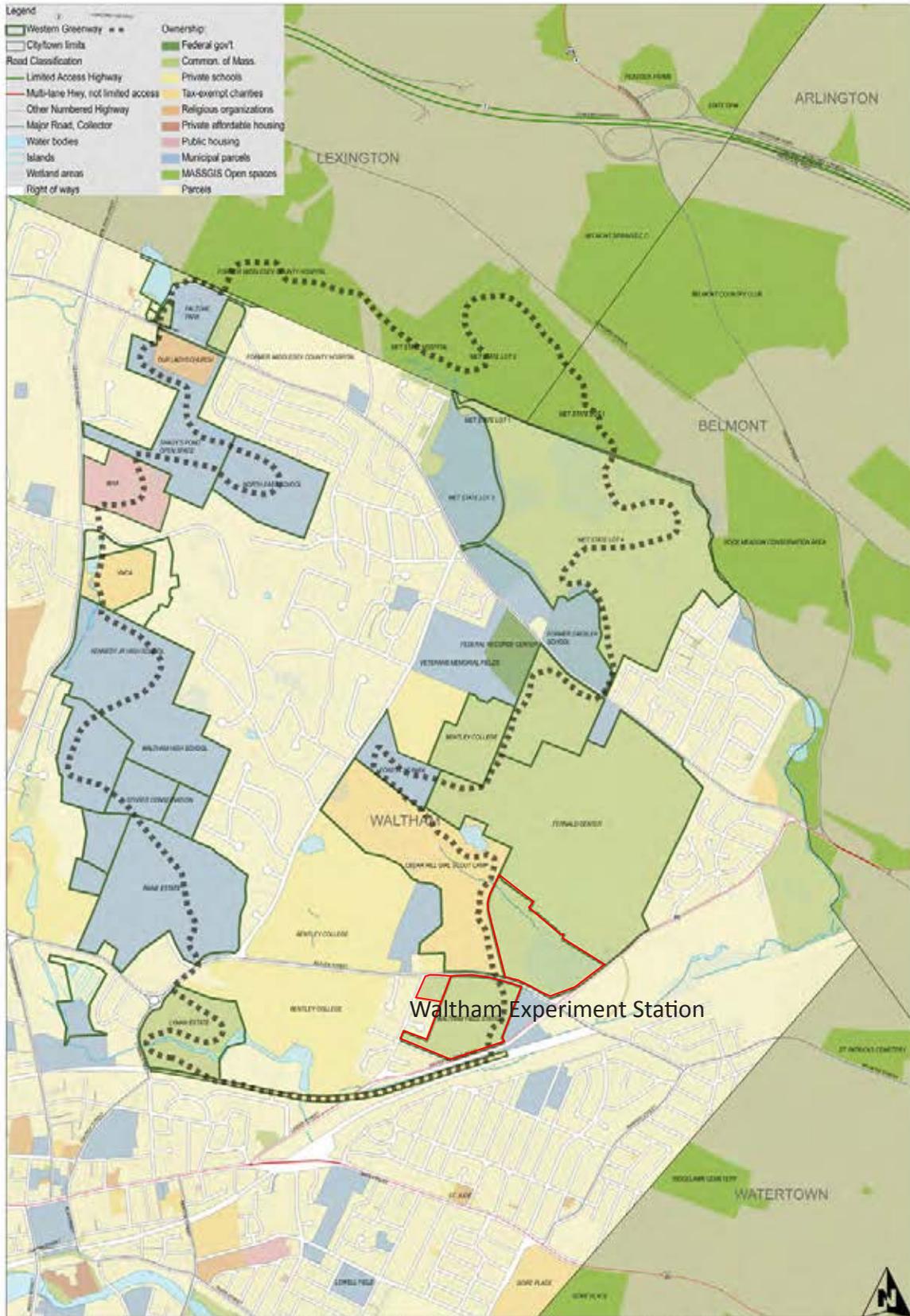
to Clinton, roughly paralleling Route 20. It could connect with the Carlisle-Sudbury trail and would be the major east-west route in a regional bikeway system. The Metropolitan Area Planning Council has prepared and officially adopted the Regional Bikeway Plan (1997) that provides a regional context for all bicycle planning efforts in the 101 cities and towns of the MAPC region. The Central Massachusetts Branch is listed as a regional bikeway project that needs further analysis and support from all the communities that would be involved in its implementation. The MAPC Plan has not been officially adopted, but it contains information that will be incorporated into a more comprehensive plan during the coming year. (The City Of Waltham Community Development Plan pg. 52)

According to Waltham's Community Development Plan, the city is interested in the potential to use the Waltham Experiment Station land for recreation and conservation as part of an open space system called the Western Greenway (map 3).

The Western Greenway is a proposed, six mile corridor of land that begins in Belmont and Lexington and terminates in Waltham at the extension office location. The Western Greenway will be a network of protected land that connects an 87 acre Massachusetts Audubon Society Sanctuary, Rock Meadow (Belmont Conservation Land), Beaver Brook Conservation Area, 240 acres of the former Massachusetts State Hospital land, a proposed link through the Fernald School, Waltham Woods, and a proposed link through the Waltham Experiment Station property. The Greenway trail will then follow Beaver Brook west along the active and inactive rail lines, then turn north creating a hiking loop through historic estates and conservation land through Waltham, Belmont, and Lexington.

The inactive rail line through Waltham is another opportunity for trail and greenway networks. The proposed Mass Central/ Wayside Rail Trail is a proposed 23 mile bike trail that would follow an abandoned rail line that passes through Waltham. This path would be adjacent to the Waltham Experiment Station and would also be a part of the Western Greenway trail to the south of the extension property.

In summary, the City of Waltham has an ambitious vision for its future that includes conservation and development. The Waltham Experiment Station property is situated to complement, or directly support the conservation goals by providing trail and bicycle access in support of the Western Greenway and other conservation plans. (Note: all alternative development plans contained in this report provide for public access to support the Western Greenway Plan)



WALTHAM, MA: THE WESTERN GREENWAY

Map 3: The Western Greenway. source: The City of Waltham Community Development Plan. pg. 62

C. Waltham Experiment Station Property Description

The Waltham Experiment Station includes 58 acres of land (Map 4). The site is divided into two parcels by Beaver Street. Parcel 2, the north Parcel, contains approximately 30 acres of land on the north side of Beaver Street. This parcel is bordered by the Fernald State School to the north, Girl Scouts of Massachusetts to the west, Beaver Street to the south, and Waverly Oaks Road to the east. Parcel 2 contains a wetland, meadow and succession forest vegetation that slopes uphill to a cluster of existing structures, including: a farmhouse, a 3 car garage, two barns, and a fertilizer shed. Access to Parcel 2 is via a gravel drive from Beaver Street that follows the western property border, rising approximately 17 feet to the farmhouse cluster.

Parcel 1, the Main Parcel, includes approximately 28 acres south of Beaver Street and bordered by the Cornelia Warren Ball Fields to the east, Waverly Oaks Road- Route 60 to the south and a residential neighborhood to the west. Access to Parcel 1 is via three gravel driveways that enter the site from Beaver Street. Two driveways provide access and parking along the east, west, and south side of the administration building and the other provides access along the eastern side of the Gray Workshop Building with parking on the south side of the building.

The existing structures on Parcel 1 include; Administration Building, Gray Workshop Building with 4 attached greenhouses, a Boiler Building that serves as the heat source, the Corn Laboratory with 2 attached greenhouses, and hoop-style greenhouses. The Administration Building, Gray Workshop Building and the Boiler house are the main structures currently in use.

The Administration Building was built in 1948 and has approximately 12,400 gross square feet. It includes a mix of office space, conference rooms, a lecture hall for approximately 160 people, and laboratory rooms. It was used in the past as a voting location for Waltham residents, but has been discontinued for such use since the 2008 election year.

The Gray Workshop Building is approximately 3,200 square feet that has limited office space on the upper floors and is primarily used as a workshop by the superintendent. The building is two stories and has a basement which functions as the workshop.

Currently, a community supported farm and a community garden organization use approximately 9 acres of land. Other land tenants include Mclean Hospital which is experimenting with horticulture rehabilitation therapy and a global warming study by UMASS Boston, among others. There are 4 tenants leasing space in the administration building including the UMASS 4-H Program.

A full report of existing property and land tenants can be found in section 3C.



Waltham Experiment Station

University of Massachusetts Amherst
Office of Outreach and Extension

Source: Massachusetts GIS

Prepared by; University of Massachusetts
Department of Landscape Architecture and Regional Planning



Map 4: Waltham Experiment Station parcel map and abutting land uses

research. The College and the Boston Market Gardeners Association proposed the sale of an existing Market Garden Field Station in Lexington to the State Legislature. The proceeds of the sale were used to finance the buildings and greenhouses then known as the Waltham Market Garden Field Station (deed, see appendix).

In 1930 the Eastern Extension Center's name was changed to the Waltham Field Station by action of the University of Massachusetts trustees. In 1946 the main administration building and auditorium were constructed due to the expansion of service and extension work. In 1961 the Waltham Field Station became a department in the College of Agriculture and became known as the Waltham Experiment Station. This report uses this as the official name of the property. A complete history of the site authored by Robert E. Young can be found in Appendix B.



Photo 1: South view of North Facade of Market Garden Building around the time of university acquisition

3. WALTHAM EXPERIMENT STATION: EXISTING CONDITIONS AND DEVELOPMENT POTENTIAL

The Waltham Experiment Station includes 20 structures, 14 on Parcel 1 and 6 on Parcel 2. This portion of the report is summarized from the following documents, which are fully referenced in the Appendix:

- Structural Integrity Assessment Report (SIAR) by Facilities and Campus Planning, UMASS Amherst
- The Environmental Compliance Service (ECS) Regulated Building Materials Survey (RBMS)
- ECS Phase 1 Environmental Site Assessment Report
- Environmental Analysis Update 2/13/09, by Facilities and Campus Planning .

A. Parcel 1 "The South Parcel"

A.1. Site Conditions

Parcel 1, the "South Parcel" is largely a flat, agricultural field with minimal grade change except at the south-eastern edge of the property. Approximately 80% of parcel 1 is open field/turfgrass/former agricultural fields and the remaining 20% of the land is tree-covered. The tree cover is a mix of deciduous oak and maple trees that follow the east, south, and west property borders providing a buffer with the adjacent residential properties. A large stand of evergreen hemlock trees is present south of the Corn Laboratory along the east property border. Parcel 1 also has several significant planted specimen trees near the Administration and Gray

Workshop buildings. The most significant specimen planting is a 60' tall Dawn Redwood tree (*Metasequoia glyptostroboides*), a unique deciduous conifer.



Photo 2: Dawn Redwood towering above Grey Building

Soils on Parcel 1 range from very sandy loam, silty loam, urban land. The soil types best suited for agriculture use on the site are (106C and 106D) Narragansett- Hollis, (223B) Scio very fine sandy loam, and (251A and 251B) Haven Silt Loam. These soil types are designated as prime farmland soil and are also suitable for building sites. Most of Parcel 1 is suitable for agriculture uses and building construction according to the Middlesex County Soil Survey soil descriptions.

A.2. Building and Infrastructure Conditions

Administration Building

The administration building is a 7,474 square foot three story building with approximately 20 offices and an attached auditorium of approximately 5000 square feet . It is currently used for office space and is known as the main building of the Waltham Experiment Station. The Regulated Building Materials Survey (RBMS) reported that asbestos containing materials (ACM) were found in countertops and panels in the Administration Building. Although this building was not assessed by the Structural Integrity Report, there is general agreement by Facilities Planning staff and Extension Staff that the building is suffering from years of deferred maintenance and is likely to be recommended for demolition. All alternative development options in this report therefore assume that this building will eventually be demolished, however the Administration Building could remain temporarily in Option A, Extension Development.



Photo 3: Administration Building from Beaver Street

Gray Building

A second administration building (Gray Building and workshop) is a 3,156 square foot two story building with a walk-out basement. The building is mostly used for laboratory space and has an equipment maintenance area in the basement. This building was also found to have asbestos containing materials found in the laboratory and sink countertops and panels. The SIAR reported that the basement of the building was abated of asbestos, but recommended that a full hazmat assessment be completed. The building was recommended for demolition in the February 13, 2009 Environmental Analysis Update by Facilities and Campus Planning. All alternative development options in this report assume that this building will be demolished.



Photo 4: Gray Building, Beaver Street facade

Boiler Building

The boiler building is a one story, 806 square foot concrete building with brick veneer. Its two gas fired boilers are the heat source for all the buildings on Parcel 1. The boiler steamheat is conducted through an underground main steam line that connects directly to the Gray Building. The main line is tunneled from the Gray building to the greenhouses via branch lines and terminates at the Corn lab. The main administration building is serviced via a second steam pipe system from the boiler building.



Photo 5: Boiler Building and Smoke Stack

This building is reported to be structurally sound, but some asbestos containing materials were found in the boiler smoke stack. The February 13, 2009 Env. Analysis Update by Facilities and Campus Planning recommends an investigation of the Boiler Building and site.

The Alternative Future Development Plans offered in this report assume that the Boiler Building will remain in Options 1 and 2, and will be removed in Option 3.

Greenhouses 1-4

Greenhouses 1-4 include approximately 13,000 square feet located on, and attached to the south side of the Gray building. Though the construction date is unknown, the structures were present at the time the University gained control of the property. The greenhouses are typical construction with steel supports and glass roof panels. The structures sit on concrete foundation walls that rise roughly 18" above the floor. The floors are either compacted soil or wood planks. The four greenhouses are connected by a joining structure of similar construction that also houses the steam tunnel service entrance.



Photo 6: East Facade of Greenhouse 3

According to the Structural Integrity Assessment Report (SIAR), greenhouses 1-4 and the adjoining structure are severely deteriorated and beyond repair. The structural integrity is compromised because the support members are rusting and sagging and over 50% of the glass glazing pieces are missing or broken. The greenhouses have not been maintained for some time and plants are growing up from the floor. Also, portions of attached wood storage sheds have collapsed.

The February 13, 2009 Environmental Analysis Update by Facilities and Campus Planning recommends demolition of the Gray Building greenhouses. The Alternative Future Development Plans offered in this report assume that all the Greenhouses will be demolished.

Corn Laboratory and Greenhouses 5A/ 5B

The Corn Laboratory Building is located to the east of the Gray building. It consists of a main brick building (1,700 square feet) that was used as office and laboratory space and two connected greenhouses (5A and 5B). The main brick building is one story with a basement that connects to greenhouse 5B. The main building is built on a concrete slab with signs of wear and deterioration (cracked and loose joints, decayed windows, and evidence of roof leaks).



Photo 7: Corn Laboratory, and Greenhouse 5A (right)

Greenhouse 5A is connected to the Corn Lab Building at the first floor and is constructed from a wood purlin framing system. The frame for this structure shows signs of failure that include cracked and sagging wood and rusted and sagging metal supports.

Greenhouse 5B is connected to the Corn Lab Building at the basement level with the structure below grade. The roof is a modified glazing system with some wood showing signs of deterioration. The floor and walls appear to be sound and lack cracking or signs of movement.

The February 13, 2009 Environmental Analysis Update by Facilities and Campus Planning recommends demolition of the Corn Lab and greenhouses 5A and 5B. The Alternative Future Development Plans offered in this report assume that the Corn Lab and Greenhouses 5A and 5B will be demolished.

Greenhouses 6,7,8,9 (the Hoop Greenhouses)

The Hoop greenhouses located on Parcel 1 were not assessed in the Structural Integrity Assessment Report (SIAR). The greenhouses are in poor condition and are assumed to be demolished in all of the Alternative Future Development Plans. The area within and around these hoop houses is the current location the UMASS Boston Climate Change Study in cooperation with Colorado State University and the National Science Foundation.



Photo 8: East Facade of Hoop Houses west of Administration Building

Fly Ash Plot

Parcel 1 includes a small fly ash plot (approximately 200 cubic yards) located south of the Corn lab. Removal of the fly ash has been recommended. A Release Tracking Number has been filed for this plot and removal is expected prior to 10/6/09.

Petroleum Plume

A plume of petroleum was identified in the basement of the Boiler Building. A Release Tracking Number has been issued and a subsurface investigation and recommendation is planned in the near future.



Map 5: Parcel 1 "Main/South Parcel" of Waltham Experiment Station

B. Parcel 2 "The North Parcel"

B1. Environmental and Site Conditions

Parcel 2 has a gently sloped terrain that rises approximately 17 feet from Beaver Street along the western half of the site. Parcel 2 includes a mix of evergreen and deciduous trees and shrubs along the west property line and entrance drive and an open field on the eastern side of the drive. This vegetation on the west creates a physical and visual buffer between the Girl Scouts of Massachusetts property and the Waltham Experiment Station. The open field begins at Beaver Street along the drive and continues north to the front of the farmhouse separating the wetland and mixed vegetation on the eastern half of the site. The eastern portion of Parcel 2 is mostly flat and is predominantly a wetland with wetland vegetation. Some fruit trees exist near the wetland.

The soil types on Parcel 2 range from very sandy loam, silty loam, urban land and muck wetland soils. Parcel 2 has a 16 acre wetland - more than half of the total acreage. The wetland is identified in map 6. The soil types best suited for agriculture use on Parcel 2 are (106C and 106D) Narragansett- Hollis, (223B) Scio very fine sandy loam, and (251A and 251B) Haven Silt Loam. These soil types are designated as prime farmland soil and are also suitable for building sites.

The most unsuitable types of soils for building and agriculture are (51A) Swansea muck, (53A) Freetown muck, (603) Urban land wet substratum, and (655) Urthodents wet substratum. The soil type (603) Urban land can be used for building sites but on site investigation is necessary, and pilings are usually required. This land can also be used for agriculture, however, on-site investigation and soil testing is also advised.

The Parcel 2 wetland was formerly used for agriculture, however, because this farmland has been inactive for more than 5 years, the wetlands agriculture exemption has expired, according to the Massachusetts Wetland Protection Act. Therefore the land is not available for any agricultural or development uses.

More significantly, the Parcel 2 wetland contains a large area/amount of contaminated fly ash material from a plant and soil research experiment conducted in the 1970's known as the Phoenix Project (a joint USEPA, Mass DEP and City of Waltham DPW project). The University's consultant, ECS, has recommended two options for the Phoenix fly ash site. Option A would leave the fly ash material in place avoiding the need for additional permitting and disturbance of the wetland. In this option, a fence and signage would need to be erected to keep people out of the site. A permanent use restriction would be filed on the property deed. Option B would remove the fly ash from the site and reconstruct the wetland. UMass Facilities and Campus Planning recommend Option A. The next step will be to negotiate a solution with the Waltham DPW, Conservation Commission, Mass DEP, and US EPA. Under either option the wetland/flyash area would not be available for development due to wetland and or contaminated materials restrictions.

B.2. Building and Infrastructure Conditions

Parcel 2 currently has 6 structures:

Farm House

The main building on Parcel 2 is a 2 story 2,832 square foot farmhouse with 2 residential units. The Structural Integrity Assessment Report (SIAR) did not assess this building. The ECS report did assess the building materials and found Asbestos Containing materials in the linoleum floor. Because of the overall poor condition of the house, the Environmental Analysis Update recommends demolition of the farmhouse.



Photo 9: Farmhouse
source; SIAR

Detached Garage

The Garage, located on the north side of the farmhouse, is a one story wood structure built on a concrete slab. It is constructed as a 3 bay automobile structure. The structure is deteriorating, but at the time of the report, the caretaker was taking some measures to reinforce the structural elements of the garage.



Photo 10: Detached Garage
source; SIAR

Main Barn

The Main Barn on parcel 2 is a 3,000 square foot wood timber structure constructed in a New England vernacular style. The structure is one main story with a hay loft and walkout basement on grade. Some deterioration has occurred from water damage due to openings in the roof and missing windows and doors. A cupola located at the center of the roof is also of wood construction but has deteriorated beyond repair. The ECS RBMS report assessed that ACM was found in building materials used in the main barn. The asphalt roof shingles and transite panels are two examples of ACM. The Environmental Analysis Update recommends demolition of the Main Barn. The Alternative Development Options show the barn renovated to support agricultural uses on the North Parcel. Additional study of the feasibility of restoring the Main Barn is recommended.



Photo 11: Main Barn
source; SIAR

Cow Barn

The Cow Barn is a one story wood structure with a loft. At the time of the report it was assessed as a failed structure and a safety risk with sections of collapsed roof and should be demolished. The ECS RBMS report also found ACM in the building materials. The Environmental Analysis Update recommends demolition of the farmhouse.



Photo 12: Cow Barn
source; SIAR

Shed 1 & 2

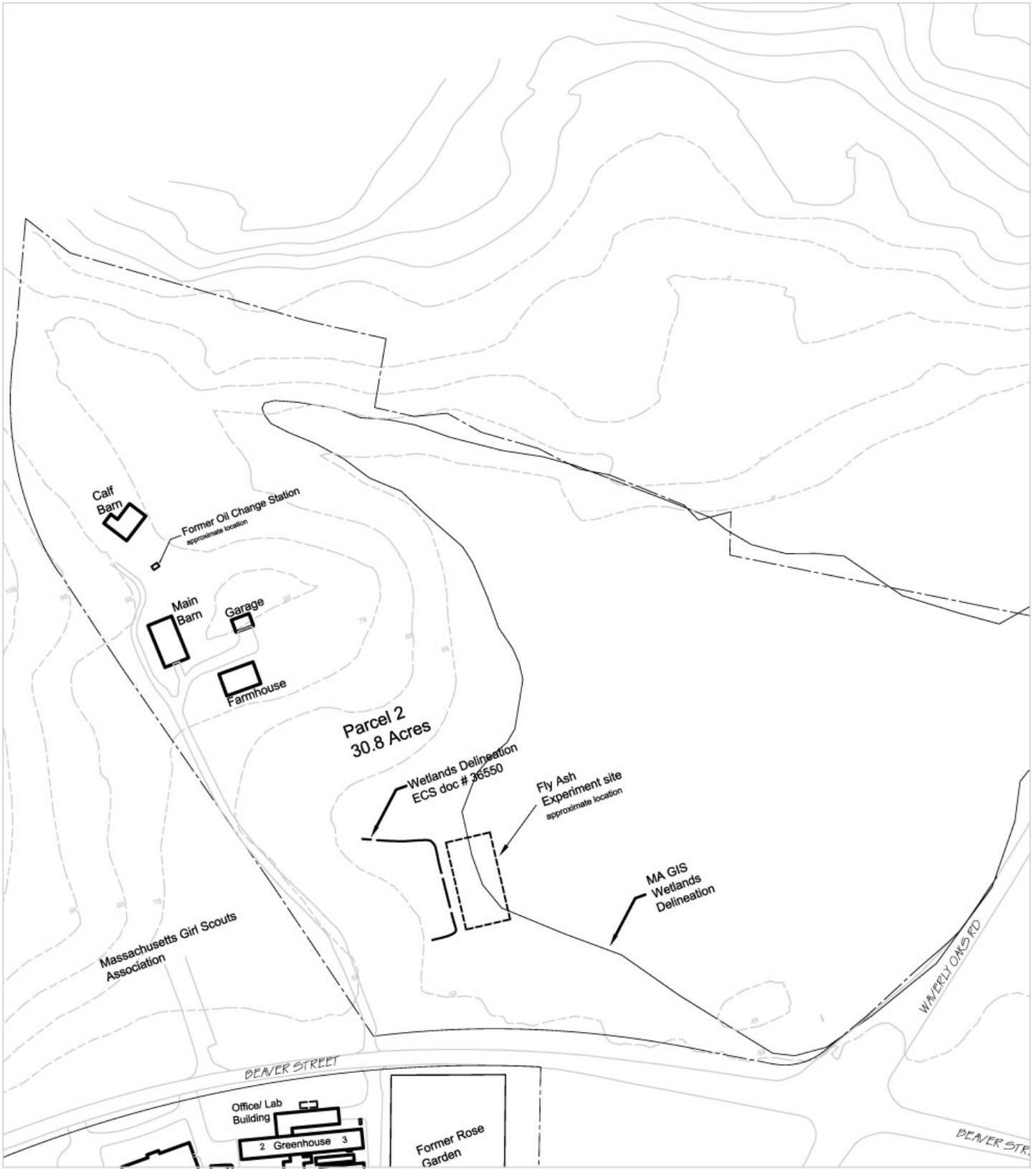
Shed 1 is reported to be abandoned, boarded up and inaccessible due to plant growth. It is not structurally sound and should be demolished. The ECS RBMS report documented mishandling of fertilizers and ACM in building materials. The Environmental Analysis Update recommends demolition of the farmhouse.

Shed 2 has completely failed and is now a pile of rubble.

The ECS RBMS report found ACM in the building materials and shingles of the shed. The Environmental Analysis Update recommends demolition of the farmhouse.



Photo 13: Shed
source; SIAR Umass Amherst



Waltham Experiment Station
UMASS Office of Outreach and Extension

Prepared by; University of Massachusetts Amherst
 Department of Landscape Architecture
 and Regional Planning



Map 6: Parcel 2 "North Parcel" of Waltham Experiment Station

C. Building and Land Tenants

According to the UMASS Office of Outreach, the Waltham Experiment Station was, until recently, leased by 11 tenants. Seven of these tenants were renting office and laboratory space in the Administration Building totaling 3,372 square feet through June 31, 2008.

The last record of tenants of land according to UMASS Office of Outreach expire on December 31, 2009. According to these data, 3 tenants leased land at the Waltham Experiment Station, however the acreage used by the tenants was not available. A list of building and land tenants is provided. Figure 1 shows the Administration Building floor plan with occupied office space highlighted.

Building Tenants

(organized by floor plan) (Leases expire annually on June 30)

<u>Name</u>	<u>Square Feet/Use</u>	<u>Annual Rent</u>
Community Farms Outreach- (CFO)	500/Office space	\$4,200
Grow Tech	432 /Laboratory space	\$4,200
Farmers Market Federation of Massachusetts (FMFM)	384/Office space	\$4,200
Waltham Land Trust (WLT)	312/Office space	\$4,200
UMASS 4- H Program	1400/Office space	N/A
Total Leased Office Space	3,028 square feet	\$16,800

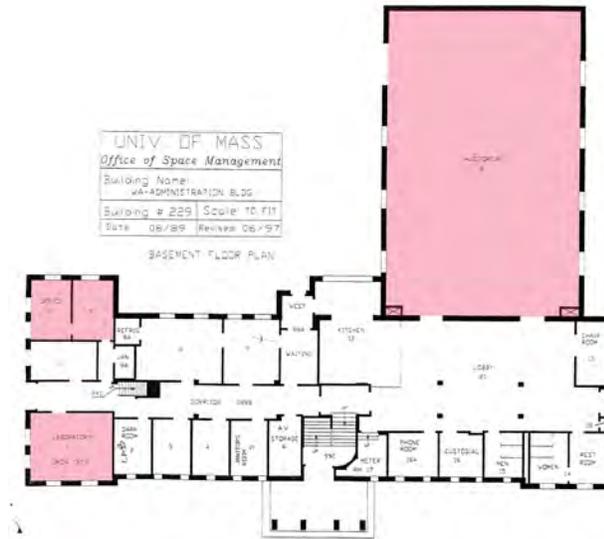
Existing Tenants of Land

(Leases expire annually on December 31)

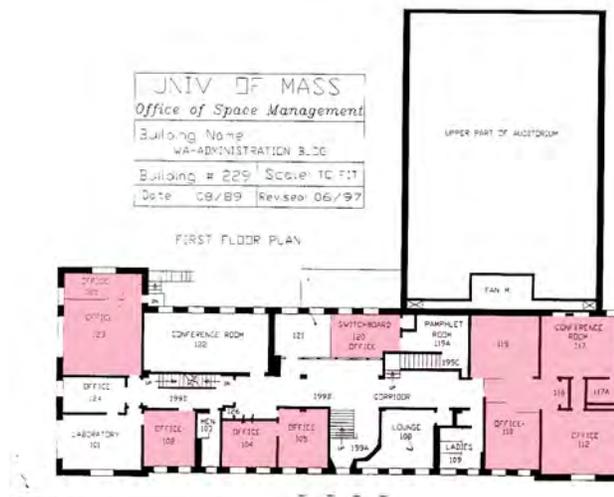
<u>Name</u>	<u>Annual Rent</u>
Green Rows of Waltham (G.R.O.W.)	\$1,062
Community Farms Outreach (C.F.O.)	\$4,834
McLean Hospital	\$1,600

Figure 1: Administration Building floor plan

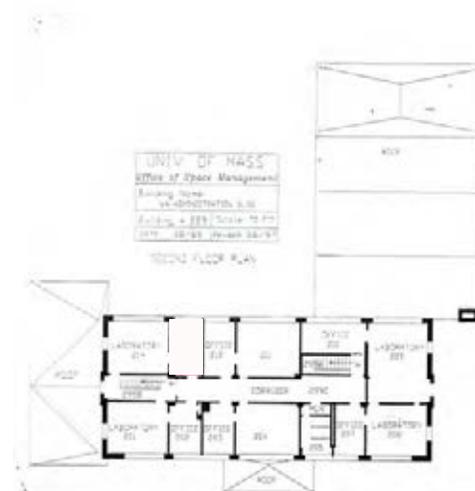
■ Occupied Office Space



Administration Building: First Floor Building Plan



Second Floor Building Plan



Third Floor Floor Building Plan

CITY OF WALTHAM

Sec. 4.11. Table of Dimensional Regulations
 City of Waltham
 (See Section 4.12 for footnotes)
 (Amended 8-4-1997 by Ord. No. 28403; 3-1-1999 by Ord. No. 28735; 6-26-2000 by Ord. No. 29025; 5-28-2002 by Ord. No. 29513)

District	Minimum Building Setbacks (23)			Maximum Building Height (18) (21) (23) (feet)	Maximum Stories (23)	FAR by Right (17)	FAR by Special Permit (17) (22) (23)	Maximum Lot Coverage (percent) (2) (23)	Minimum Open Space (percent) (9), (17)	Lot Area (square feet)	Maximum Dwelling Units per acre (12)	Lot Frontage (feet) (10)	Maximum Lot Area Per Dwelling Unit (square feet)	Minimum Open Space per Dwelling Unit (square feet)	Minimum Lot Width (feet)
	Front (feet)	Side (feet)	Rear (feet)												
HR2	10	10	20	74	6	1.0	1.25	75	--	10,000	40	50	--	--	--
Except as to multifamily and assisted living															
Multifamily	10	10	20	74	6	0.01	1.25	75	--	10,000	3	50	--	--	--
Assisted living	40	40	40	74	6	0.5	1.25	--	--	40,000	--	100	1,000	50	100
HBL & HR2															
Single-family detached	25	15	30	35(11)	2.5	--	--	25	--	9,600	--	70	--	--	--
BA	10	0	15	36	3	.50(16)	1.0	0	--	0	--	50	--	--	--
Res users	10	10	20	36	3	.20	.80	30	15	6,000	6	50	--	--	--
Assisted living facilities	40	40	40	35	3	--	--	--	--	40,000	--	100	1,000	500	100
BB	0	0	25	48	4	.50(16)	2.5	0	--	0	--	50	--	--	--
Res users	10	10	20	40	4	.25	1.0	35	15	6,000	10	50	--	--	--
Assisted living facilities	40	40	40	35	3	--	--	--	--	40,000	--	100	1,000	500	100
BC	0	0(13)	25	65	5	1.0	2.5	90	--	--	30	40	--	--	--
LC	150(5)	100(5)	100(5)	40	3.0	.25	.60	30	25(6)	5 acres	--	400	--	--	--
C	10(7)	15(7)	25(7)	80	8	4(16)	2.0	--	--	10,000	--	50	--	--	--
I	10(8)	15(8)	25(8)	80	8	4(16)	2.0	--	--	0	--	50	--	--	--

Table 1; Zoning Dimension Table
 source; City of Waltham Zoning Regulations

D. Development Issues and Potential

D.1. City of Waltham Zoning and Development Regulations

Deed Restriction

According to the Off Campus Property Report of July 20, 2002 the Waltham Experiment Station has a covenant placed on the deed. The covenant states that if the University discontinues the use of the land for teaching and research, the property will be granted to the City of Waltham. According to the 2002 Report, the property does not need to be solely used for agricultural purposes, but does need to remain in educational use by the University.

The three proposed development options included in this report do not violate the deed covenant because University Research and Extension uses are included in all options.

Zoning

As a state institution, Massachusetts Building Authority, is exempt from local zoning regulations. However, in the larger context of negotiations with the City of Waltham, it may be important to know how proposed development differs from local zoning regulations. Additionally, should the University partner with a non-state development partner, the zoning exemption may not apply. The following review of Waltham Zoning regulations is offered in this context.

The City of Waltham zoning regulations were amended October 2007 which divide the city into 16 districts (Zoning Map, Appendix A). The Waltham Experiment Station is zoned as Conservation and Recreation which allows the current community supported agriculture and non profit research and education uses. Educational use in the Conservation and Recreation Zoning District is defined in section 3.125 of the City of Waltham Zoning Ordinance as;

Educational uses: Uses of land, buildings or structures for providing learning in a general range of subjects on land owned or leased by the commonwealth or any of its agencies, subdivisions or bodies politic, and including use of land, buildings or structures for providing facilities for research, public education and public display which are owned and operated by the Commonwealth or any of its agencies, subdivisions or bodies politic. Further, educational uses shall be construed to include any use of land, buildings or structures for providing learning in a general range of subjects on privately owned land by any educational entity accredited by the appropriate regulating authority.

The Conservation Recreation District does not allow for office, commercial, or retail development. Tables 1-5 in appendix A highlight the allowable uses under the current zoning.

Strategic Zoning Considerations

Under the current zoning, the site could be redeveloped consistent with the Extension Development Option (A) which allows for low density development and accessory buildings. However, the Expanded Extension Development Option (B) and the Extension Plus Development Option (C) propose an increase in leasable office space and development intensity.

Should the University decide to follow Waltham Zoning, or design a development plan to be consistent with an existing zoning district, the most appropriate zone would be the Commercial Zone (C) (Regulations on page Z- 157 of the Waltham Zoning regulations). This zone will allow buildings up to 8 stories high which is suitable for the development intensities of the Expanded Extension Option (B) and Extension Plus Option (C) proposals. The Commercial zone also allows agricultural and education uses. See use table in Appendix A.

Although the city's zoning legally does not apply to the University, it may be useful to be familiar with the zoning ordinance to demonstrate that proposed development is consistent with an existing zoning district in Waltham.

Parking Requirements

The parking requirements for the City of Waltham are addressed in Article V of the City of Waltham Zoning Codes page Z- 69. The Off-street parking requirements are explicitly described according to building use in section 5.2. The use descriptions provided by the zoning code that are applicable to the development proposals in Section 4 of this report and consistent with the proposed zoning change are Auditorium uses, Offices, and Conservation/ Nature Activities. The required parking space for each use type vary as shown below.

Offices-	1 space per 300 square feet of gross floor area
Auditorium-	1 space / 3 fixed seats and 1 for each 36 square feet of unseated public floor area
Conservation/ Nature Activities-	1 space/ 3 participants

Due to the distinguishable uses of the building for office space and conservation and nature activities, the parking requirements may fall under section 5.22 of the Waltham Zoning Code. This section determines a parking credit schedule based on time of use for the different uses, therefore potentially reducing the amount of parking square footage. Section 5.43 requires that 1 tree, minimum of 3.5 inches in diameter measured 6 inches from the ground, must be planted for every 10 parking spaces.

Parking and Potential Zoning Change

If a structure, new or existing with additions exceeds 20,000 square feet shall be subject to a parking standard of 1 space per 500 gross square feet for all building area in excess of the

20,000 square foot threshold. Any structure below 20,000 square foot is not subject to the parking requirements.

Parking and Driveway Dimensions

A standard parking space set forth by Section 5.4 of the Waltham Zoning Code is 18'x 9' with 20' aisle. However, Section 5.47 allows 25 % of the required spaces to be 16'x8' and designated as such for compact cars. A special permit may be granted to allow up to 50% compact spaces if the parking lot is in excess of 25 spaces.

Entrance and exit drives may not exceed 25' wide; special permit may allow for wider if public safety benefit is apparent. An area equal to 40 square feet per space shall be provided to allow space for storage of cleared snow

D.2. Environmental Regulations

Parcel 1 contains several hazardous materials sites and buildings as discussed earlier. The removal and remediation of these sites will be completed by the University in a Massachusetts Compliance Plan (MCP) which includes specific Release Tracking Numbers (RTN) for specific locations and contaminants found on the property. These RTNs are planned to be completed by October 9, 2009. Further Investigation of the Boiler House Petroleum Plume is currently in progress, but a continued dialogue between UMASS Physical Facilities is recommended.

Parcel 2 includes a 16 acre wetland subject to regulation by the Conservation Commission of Waltham. Parcel 2 also includes a large flyash site that is remnant from the Phoenix Project described in Section B.1.

D.3. Utilities and Infrastructure

The Waltham Experiment Station South Parcel is served by public water, sewer, and electricity. Heating is provided by the boiler building that was recently converted to natural gas. The North parcel is serviced by public utilities including water, sewer, and electricity

4. ALTERNATIVE FUTURE DEVELOPMENT OPTIONS

Oversize pages of the development options follow on pages: 32A, 32B, 32C, and 32D (Parcel 2).

Three alternative development options were developed to explore a broad range of feasible, possible future uses for the Waltham Experiment Station. These options were informed by the analysis of existing conditions and University reports on hazardous materials. The options were developed in coordination with UMass Amherst Extension and Facilities Planning Personnel. Featured in all options is "The Center for Beginning Farmers" - the focus for future UMass Extension Activities at Waltham to provide support services and learning opportunities for new commercial farmers with support expected from the USDA Farm Bill Program. The Waltham Experiment Station is also expected to continue as the primary outreach center for UMass Amherst in the urban Boston Metropolitan region of Massachusetts, and to support outreach activities to the metropolitan region by UMass Amherst, and UMass system faculty and staff.

Under all alternative future development options, the Waltham Experiment Station will continue to provide community garden plots and extensive farm plots for UMass or UMass-partner research, thereby maintaining a strong agricultural presence. All options accommodate and integrate the proposed "Waltham Western Greenway" connection - linking the station with the Waltham network to the north and south. All options are designed to showcase innovative "green" landscape treatments to demonstrate and support research on innovative sustainable landscape and pavement construction materials and techniques.

The three options show an increasing intensity of use, including Option C which includes a 6 story office building that would likely be shared with, or leased to, a partner organization or institution. These options are intended to illustrate several alternative building and parking configurations to support an informed discussion by UMass, the city of Waltham, and potential partners.

Market Study

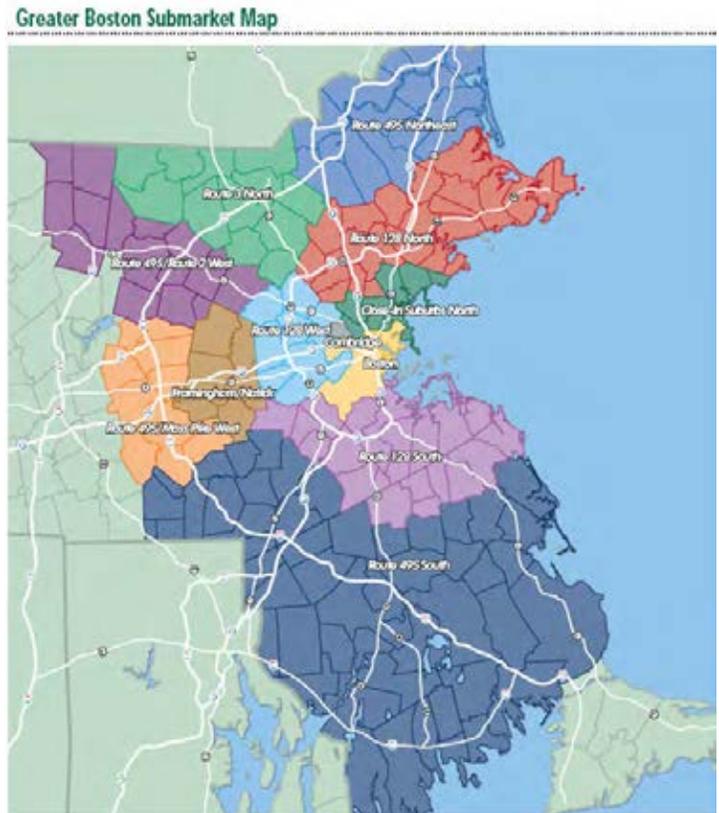
A basic market study was performed to determine the market-ability of the proposed office development options and the potential return for leased office space. A more thorough market study may be performed to thoroughly understand the unique mixed use opportunity between a beginning farmer facility and leasable commercial office space. The commercial office space information provided below is focused on the market trends of the Route 128 Metro West Market provided by C.B. Richard Ellis - an international, full service real-estate firm. They also perform quarterly market study research for commercial land values and real-estate market trends across the globe. They categorize Waltham Massachusetts within the Route 128 West sub-market of Boston.

According to C.B. Richard Ellis research conducted during the first quarter of 2009, a net negative absorption of 682,318 sq.ft. of leasable office space occurred. A net negative

absorption means that a surplus of commercial office space is available in the Route 128 West submarket (there is a difference in real- estate between vacant and available).

The C.B. Richard Ellis report identified the Route 128 West submarket as the leader in market contraction during the quarter. The Suburban Boston office market recorded 798,000 sq. ft. of negative absorption in the first quarter of 2009 of which 682,000 was in the Route 128 West submarket. Also, this submarket experienced a \$.41 decline in asking rent since the beginning if the year. According to the report, and shown in Table 2, the average asking rent for the Route 128 West submarket is \$26.50.

The negative net absorption for Q1 09, at 798,000 sq.ft. is significantly higher than the previous year Q1 08at 437,000 sq. ft. However, the report did acknowledge that significant transactions are still occurring in the further western submarkets.



Map 7; Suburban Boston Sub- markets source; C.B. Richard Ellis, 2009.

Market Statistics

Market	Rentable Area	Availability %	Vacancy %	Sublease %	Q1 Net Absorption	Avg. Asking Rent (\$/SF/YR)
Close-In Suburbs North	3,661,831 SF	13.2%	12.8%	1.5%	17,317 SF	\$22.33
Route 128 - North	17,512,389 SF	25.0%	21.7%	2.2%	(34,059) SF	\$24.02
Route 495 - Northeast	4,716,365 SF	34.0%	28.3%	2.1%	(241,160) SF	\$14.95
Route 3 - North	13,992,516 SF	21.9%	14.7%	3.4%	199,775 SF	\$16.54
Metro North	39,883,101 SF	23.9%	19.2%	2.5%	(58,127) SF	\$20.04
Route 128 - West	25,615,091 SF	19.9%	13.1%	4.9%	(682,318) SF	\$26.50
Framingham - Natick	6,822,468 SF	10.8%	9.2%	0.9%	64,716 SF	\$21.75
Route 495 - Route 2 West	4,585,886 SF	20.9%	16.4%	5.4%	(60,443) SF	\$15.84
Route 495 - Mass Pike West	11,531,261 SF	25.2%	19.4%	3.4%	3,813 SF	\$18.45
Metro West	48,554,706 SF	20.0%	14.4%	4.0%	(674,232) SF	\$23.30
Route 128 - South	14,592,429 SF	18.2%	16.0%	3.4%	(60,141) SF	\$20.56
Route 495 - South	2,042,430 SF	30.4%	27.2%	4.7%	(5,872) SF	\$18.06
Metro South	16,634,859 SF	19.7%	17.4%	3.6%	(66,013) SF	\$20.26
Overall Suburban Office	105,072,666 SF	21.4%	16.7%	3.4%	(798,372) SF	\$21.29

Table 4; Suburban Boston Sub- markets source; C.B. Richard Ellis

Market Summary

This report indicates, that with the current economy, average asking rents may continue to decrease and negative net absorption may continue to increase. However, the Route 128 West Submarket has the highest asking rents than all of the suburban markets. This report is a basic snapshot of the current market for commercial office space and is only intended to provide general background information on market conditions . This report does not consider the potential for leasable land consistent with the active Community Supported Agriculture Activities on site. Also, it does not get into the specifics of the market status for mixed use office space, as included in Development Option C.



Extension Development Option A

The Extension Development Option A is designed for primary use as a Beginning Farmer Center on the Main Parcel, #1 as shown to the left. In this option, all buildings have been demolished except for the boiler building which could be retained as the heat source for the proposed development. The North Parcel, as in all options, could return to active agriculture production providing nearly 7 acres of farmland while preserving the 16 acre wetland.

Main Building

2 story structure, 20,000 gross square feet

- Commercial kitchen- 1,000 square feet
- Classrooms/ breakout rooms 3,000 square feet (750 square feet each)
- Laboratory (2@1500 square feet) 3,000 square feet
- Auditorium (100 people) 3,000 square feet (fixed seating)
- Office Space 10,000 square feet

Greenhouses

• Three 2,500 square foot greenhouses are provided. Space is reserved for 2 additional 2,500 square foot greenhouses. The area could also be used for a harvest and rinsing station during crop harvest. The greenhouses can also be used for education, training and demonstration plots and may be open to the public during events in the courtyard.

Outdoor Courtyard/ Kitchen Gardens

• Two outdoor activity/ courtyard spaces have been provided for farmstand space or flexible multi-purpose social/ public gathering spaces for events. Also, two adjacent areas are provided for kitchen gardens or demonstration plots.

Parking

• A total of 120 "green" parking spaces are provided, with porous paving materials used in the parking stall areas. The runoff from the impervious asphalt would drain into the porous parking stall area or into the planted bio-drainage swales located between the rows of stalls. The parking lot will be extensively planted with native trees.

Community Garden Plots

• The Community garden plots are relocated to the east side of the property and have parking integrated into the garden plot grid. A total of 130, 15'x 17' garden plots are provided for community use.

Farm Fields

• A total of 21.3 acres of farmland is provided in this Option. In this development scenario, the City of Waltham Community Gardens and the Waltham Fields Community Supported Agriculture activities remain on site.

Western Greenway

Expanded Extension Development Option B

The Expanded Extension Development Option B is designed for multi use development that combines UMass Extension, leasable office space and the Beginning Farmer Initiative space. Leasable land is available for community supported agriculture activities. The Western Greenway is integrated into the proposed redevelopment alternatives, as with all options.



Main Building

4 story building, 40,000 gross square feet

- Auditorium (fixed seating 250 people) 5,000 square feet
- Classrooms/ breakout rooms (9@ 750 square feet each) 6,750 square feet
- Commercial kitchen 750 square feet
- Conference rooms (2 @ 300 square feet - 15 people) 600 square feet
- Laboratory (2@ 1500 square feet) 3,000 square feet
- Office Space 22,000 square feet

Parking

- A total of 234 "green" parking spaces are provided. The "green" parking would be designed as asphalt paved aisles with porous paving materials used in the parking stall areas. The runoff from the impervious asphalt would drain into the porous parking stall area or into the bio-drainage swales located between the rows of stalls. The parking lot will be extensively planted with native trees.

Outdoor Courtyard/ Kitchen Gardens

Greenhouses

- Three 2,500 square foot greenhouses are provided. Space is reserved for 2 additional 2,500 square foot greenhouses. The greenhouses could be used for a harvest and rinsing station during crop harvest. The greenhouses can also be used for education, training and demonstration plots and may be open to the public for special events.

Community Garden Plots

- The Community garden plots are relocated to the east side of the property and have parking integrated into the garden plot grid. A total of 130, 15'x 17' garden plots are provided for the community.

Western Greenway

Farm Fields

- A total of 20.6 acres of farmland is provided. In this development scenario, the City of Waltham Community Gardens and the Waltham Fields Community Supported Agriculture activities may be jeopardized if the Beginning Farmer Initiative requires more land. However, ample space is provided for all activities.



Extension Development Plus Option C

The Extension Development Plus Option C has a significant increase in development intensity. The development combines office space and the Beginning Farmer Initiative but in two separate "campuses." This scenario features an outreach and extension building with similar amenities as the development options A and B. The "office campus" is designed as 1 building with wings separated by an auditorium and conference center. The east and west wings of the building are 6 stories each and the conference center is 3 stories. In this scenario, the Waltham Community Garden Plots are relocated to the north parcel or removed from the University property.

Farm Fields

- A total of 16 acres of farmland is provided between the two parcels.

Extension and Outreach Campus

Main building

- 10,000 gross square feet
- Commercial kitchen- 750 square feet
- Classrooms/ breakout rooms 3,000 square feet (750 square feet each)
- Laboratory (4@ 1500 square feet.) 6,000 square feet
- Office Space 2,000 square feet

- Greenhouses (3 @ 2500sq.ft.) 7,500 square feet
- \Workshop 2,800 square feet
- Parking 480 spaces

Outdoor Courtyard/ Kitchen Gardens

Western Greenway

Office Complex 108,000 gross square feet

East and West Wing

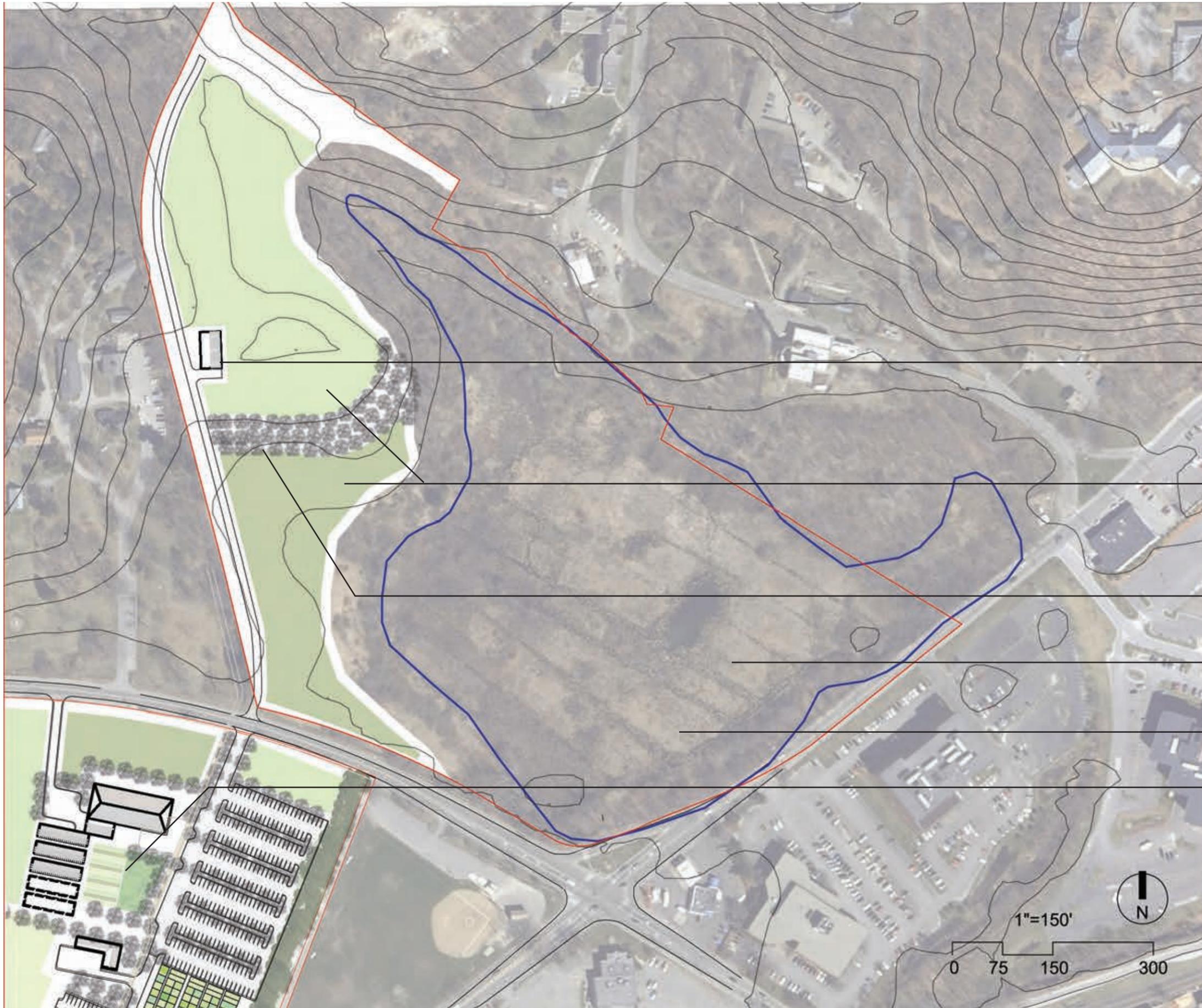
- 46,200 gross square feet each
- 6 stories
- dedicated leasable office space
- green roof accessible above conference center

Conference Center

- Auditorium 8,000 square feet (fixed seating 500 people)
- Classrooms/ breakout rooms 9,000 square feet (12- 15 flexible rooms)
- Conference rooms (4) 1,200 square feet

Parking

- A total of 480 parking spaces are provided with 160 of those "green" surface parking and 320 parking spaces located in the parking deck.



North Parcel; shown with Expanded Extension Development Option B

The North Parcel, shown here with Expanded Extension Development Option B, remains the same for all development options. All structures on the The North Parcel will all be removed except the Main Barn, which could be renovated and used for a cooling and wash station if the underused fields return to production. The 16 acre wetland will remain undisturbed and contamination areas will be remediated or closed off dependent upon the decisions made by UMass Facilities Planning Office with Mass DEP. Due to the rolling topography and sloping terrain it is estimated that 7 acres can be used for agricultural production.

Renovated Main Barn

- Because City utilities exist on the North Parcel, the Main Barn, could be renovated to support agricultural activity.

Farm Fields

- 6.6 acres total in the two fields

Erosion Control

- A triple row of trees and groundcover may be necessary to reduce erosion on steep slopes and may also function as a windbreak.

Wetland

- the 16 acre wetland on site will remain undisturbed

Flyash Contamination Area

Note: North Parcel Development Plan is the same for all Development Options, here shown with Expanded Development Option B. Community Gardens may be located on the North Parcel under Option C.

Waltham Experiment Station

Comparative Statistics: Alternative Development Options

	Existing Conditions	Extension Development Option A		Expanded Extension Development Option B		Extension Development Plus Option C	
BUILDING* (total)(gross sq.ft.)	26,211 s.f.	22,820 s.f.		42,820 s.f.		133,680 s.f.	
Admin, Grey Building,	18,000 s.f.	Main Building	20,000 s.f.	Main Building	40,000 s.f.	Office Campus	108,000 sf
corn lab, boiler	1,437 s.f.	workshop	2,820 s.f	workshop	2,820 s.f.	Extension Campus	10,000 s.f.
Farmhouse, Garage, Barns	6,774 s.f.					workshop	2,820 s.f.
GREENHOUSES	18,172 s.f.	7,500 s.f. (+ 5,000 as needed)		7,500 s.f. (+ 5,000 as needed)		7,500 s.f.	
FARM FIELDS (acre)	10.7 a	21.3 a		20.6 a		16.03 a	
Community Gardens	1.9 a						
Waltham Fields CSA	7.7 a						
Lily Research (inactive)	.13 a						
Rose Garden (inactive)	0.87 a						
IMPERVIOUS SURFACE includes building roofs	2.19 acres	1.47 acres		1.82 acres		3.35 acres	
PARKING SPACES	approx. 40	176		234		480 (structure and surface)	

* estimated gross square footage

Table 2: Comparative Statistics: Alternative Development Options Development Score Card

Alternative Development Options Preliminary Development Proforma

Item	Unit cost	Extension Development Option A	Expanded Extension Development Option B	Extension Development Plus Option C	North Parcel (with all Options A,B,C)
Demolition	lump sum	\$1,000,000	\$1,000,000	\$1,250,000	\$150,000
Office Building	\$250/sf*	\$5,705,000	\$10,705,000	\$33,420,000	
Parking Deck	\$25,000/space			\$8,000,000	
Greenhouses	\$140/sf	\$1,050,000	\$1,050,000	\$1,050,000	
Barn Renovation					\$150,000
Parking/Roads	\$20/sf	\$1,497,260	\$2,322,780	\$4,880,560	\$250,000
Plantings	\$400/tree	\$4,800	\$9,200	\$21,600	
Site work	lump sum est	\$250,000	\$500,000	\$1,000,000	\$150,000
Utilities	lump sum est	\$500,000	\$1,000,000	\$2,000,000	\$50,000
Subtotal Bldgs and Site		\$10,007,060	\$16,586,980	\$51,622,160	\$750,000
Overhead, Contingency 20%		\$2,001,412.0	\$3,317,396.0	\$10,324,432.0	\$150,000.0
Estimated Development Cost		\$12,008,472	\$19,904,376	\$61,946,592	\$900,000
Annual Lease Reveal \$26.50/sf		\$132,500	\$662,500	\$1,961,000	\$0
Annual Meeting Room Rentals		\$5,000 - \$10,000	\$10,000 - \$25,000	\$25,000 - \$100,000	

Notes:

* Building Estimate of \$250/sf, could be significantly higher depending on building type and use
 Extension Development Option A: 22,820 s.f. Building, 7,500 s.f. Greenhouses
 Extension Development Option B: 42,820 s.f. Building, 7,500 s.f. Greenhouses
 Expanded Development Option C: 133,680 s.f. Building, 7,500 s.f. Greenhouses
 North Parcel (with all Options): Main Barn Renovated, 6.6 acres restored farm fields
 The costs of toxic materials removal or remediation is not included in these estimates.

Sources:

UMass Amherst Facilities Planning Office
 Means Cost Estimating 2008

5. APPENDIX

A. References

University of Massachusetts Reports:

A Short History of the Waltham Field Station (through December 1963). Robert E. Young.

An Inventory and Analysis of the Off Campus Property of the University of Massachusetts at Amherst. July 2002. Gloria Mcpherson. Pg 64-68.

Memorandum. University of Massachusetts Office of the General Counsel. Tom Dorer. April 19, 2002

Structural Integrity Assessment Report (Eastern Extension Center). October 2006. James Morrissey

Environmental Compliance Service:

Phase I Environmental Site Assessment. Document Number 33125. April 2007. Environmental Compliance Service

Regulated Building Materials Survey. Document Number 33135. April 2007. Environmental Compliance Service

Subsurface Investigations Report. Document Number 36550. October 21, 2008. Environmental Compliance Service

City of Waltham:

Waltham Community Development Plan. June 2007. Metropolitan Area Planning Council, Central Transportation Planning Staff, Waltham Planning Department.

<http://www.city.waltham.ma.us/PLANNING/Web%20Pages/Planning%20Home.htm>

Accessed September- December 2008

State of Massachusetts:

Massachusetts Geographic Information System. <http://www.mass.gov/mgis/>. Accessed September 2008-

Other:

Market View. CB Richard Ellis Suburban Boston Office.

<http://www.cbre.com/USA/Research/Local+Reports+Worldwide/globalresearch.htm>.

accessed April 2009.

KNOW ALL MEN BY THESE PRESENTS that we, Henry Herrick Bond and
al Trs. Arthur A. Shurtleff, in our capacity as trustees under Article Eighth of
the will of Cornelia Warren, late of Waltham, Massachusetts, deceased,
OF MASS. called in said will the Cedar Hill Trustees, by virtue and in execution
of the power conferred upon us as such trustees by clause 7 of said
Article Eighth, and every other power us hereto enabling, for considera-
tion less than ten (10) dollars paid, grant to the Commonwealth of Massa-
chusetts the following described parcels of land with the buildings there-
on situated in said WALTHAM in the County of Middlesex, to wit: First: A
parcel of land bounded Northerly by Beaver Street, Easterly by a parcel
of land conveyed by us by deed of even date herewith to the City of Wal-
tham, by a line the ends of which are marked by stakes and are to be mark-
ed by stone bounds to be set by the grantors, Southeasterly by Waverley
Oaks Road, Southerly by a strip of land called Marion Road, Westerly by
Linden Street, Northerly by land now or late of Lavina W. Smith and
others, Westerly again by said land now or late of Lavina W. Smith and
others and by land conveyed by us by deed of even date herewith to Charles
Cahill and Lois Cahill by a stone wall. Together with any and all rights
in said Marion Road appurtenant to said parcel. Second: A parcel of land
with the buildings thereon bounded: (Southeasterly by Waverley Oaks Road,
Southerly by Beaver Street, Westerly by land conveyed by us by deed of
even date herewith to Massachusetts Girl Scouts Incorporated by a line
following the Westerly side of the service driveway leading to the farm
buildings and thence on a curved line to land of the Massachusetts School
for the Feeble Minded at a point marked by a stake, Northeasterly by said
land of the Massachusetts School for the Feeble Minded, Southeasterly
again by said last named land, Northeasterly again by said last named
land, Southeasterly again by said last named land, Northeasterly again
by said last named land. Said Westerly boundary is marked by stakes
which are to be replaced by grantors by stone bounds. The premises are
conveyed subject to the restriction which shall remain in force for fif-
ty years that no building shall be erected on the granted premises with-
in one hundred (100) feet of Beaver Street or within fifty (50) feet of
any boundary line of the premises. If and whenever the premises cease
to be used for other purposes the title thereto shall vest in the City
of Waltham for use for public park purposes, except that the grantee may
convey any part of the premises adjoining the premises of the Massachu-
setts School for the Feeble Minded deemed desirable, in order to straight-
en the boundary. The premises are conveyed subject to the rights granted

cluded in a lease from the grantors dated May 29, 1922 which has been extended till October 1, 1923. For evidence of authority of the grantors to make this conveyance see decree of the Supreme Judicial Court in Equity for Suffolk County in the suit of Bond et al vs. Warren et al, a copy of which is recorded with Middlesex South District Deeds., IN WITNESS WHEREOF, we, the said Henry Herrick Bond and Arthur A. Shurtleff, as trustees as aforesaid, have hereunto set our hands and common seal which each of us hereby adopts this 29th day of March, A.D. 1923. - - - - -

Henry Herrick Bond (seal)

Arthur A. Shurtleff

WASHINGTON, D.C., March 29, 1923. Then personally appeared the above named Henry Herrick Bond and acknowledged the foregoing instrument to be his free act and deed, before me, Grace Hess, Notary Public (Notarial seal) My Commission expires May 13, 1927. - COMMONWEALTH OF MASSACHUSETTS Suffolk, ss: March 30, 1923. Then personally appeared the above named Arthur A. Shurtleff and acknowledged the foregoing instrument to be his free act and deed, before me, Bertha A. Patten, Notary Public (Notarial seal) My Commission expires Dec. 15, 1927. - - - - -

Middlesex ss. March 31, 1923. 11h. 53m. A.M. Rec'd & Recorded.

KNOW ALL MEN BY THESE PRESENTS that we, Henry Herrick Bond and Arthur A. Shurtleff, in our capacity as trustees under Article Eighth of the will of Cornelia Warren late of Waltham, Massachusetts, deceased, called in said will the Cedar Hill Trustees, by virtue and in execution of the power conferred upon us as such trustees by clause 7 of said Article Eighth, and every other power us hereto enabling, for consideration less than ten (10) dollars paid, grant to Massachusetts Girl Scouts Incorporated, a corporation organized under the laws of the Commonwealth of Massachusetts, the following parcel of land situated in said WALTHAM and bounded and described as follows: Southerly by Beaver Street, Westerly by the parcels of land described in a deed of William H. Dunbar and Charles Francis Adams, trustees under the will, of said Cornelia Warren

BOND et
to
MASS. G
SCOUTS :

State Grant
13882
142

A SHORT HISTORY OF THE WALTHAM FIELD STATION*

By Robert E. Young**

- - - -

In 1915, the Massachusetts Agricultural College and the Boston Market Gardeners' Association made an agreement whereby an Extension Agent (H. F. Tompson) would spend a part of each week in the Boston area helping vegetable growers. They were to share the expense. This effort was successful, and the growers soon wanted full-time local help with their problems.

In January, 1916, the Boston Market Gardeners' Association petitioned the Legislature for a local Experiment Station, and in May a bill was passed authorizing the Trustees of the Massachusetts Agricultural College to make experiments within 20 miles of Boston on rented or leased land, with the sum of \$8,000 appropriated. With more effort on the part of the Association, this bill was changed in June authorizing the purchase of land.

The Trustees of the College and the Advisory Committee of the Boston Market Gardeners' Association agreed on a 12 acre site on Reed Street in Lexington for the Market Garden Field Station. This land was purchased in December, 1916, and H. F. Tompson was placed in charge.

In January 1917, House Bill 158, sponsored by the Boston Market Gardeners' Association, sought \$35,000 for buildings and maintenance but received only \$10,000.

* Through December, 1963

** Some of this information taken from writings of E. F. Guba

A foreman was hired in July (Paul W. Dempsey) and buildings were started and work on the land continued. The Market Garden Field Station, with H. F. Tompson in charge, was governed by a Committee in the Agricultural College. Mr. Tompson continued his Extension work and gave only part time to the Station.

In 1922 the office and laboratory building and greenhouse had been completed, and the staff was Tompson in charge; Dempsey, foreman; and Webster Kraut, Pathologist, assigned from the Department of Botany and Plant Pathology of the College.

That same year the estate of Miss Cornelia Warren (S. D. Warren Paper Company) offered the College land in Waltham for educational purposes. The College, backed by the Boston Market Gardeners Association, went to the Legislature for authorization to sell the Lexington land and use \$25,000 for buildings and greenhouse in Waltham, and this was granted in 1924.

In 1923 the Vegetable Gardening Department at the College assigned V. A. Tiedjens to the Market Garden Field Station.

In 1924 H. F. Tompson resigned and he was replaced by Ray M. Koon; the arrangement of part time Extension continued.

In 1925 the office building and greenhouse at the present site in Waltham were completed. In that same year, the Department of Entomology of the College assigned W. D. Whitcomb to the Station.

In 1929, legislation was introduced to conduct floricultural research at the Station. This legislation was backed by local florists. The Bill passed, and the office and laboratory building was enlarged, and

a second greenhouse built. Harold White was employed to do research in Floriculture.

In 1930, through the action of the Trustees, the name of the Station was changed to the Waltham Field Station, and Ray Koon was made full-time Head of the Station. The Station became a department in the Experiment Station even though a considerable portion of the work was of a service or Extension nature.

This service and extension work continued to expand, the home horticulturists having found a place to have their questions answered. In 1934, in order to relieve the research men of some of this work, Paul Dempsey was named Professor of Horticulture. Harold Wilson took his place as Foreman.

In 1935, Nurseryculture work was established by special legislation backed by the Massachusetts Nurserymen's Association. An appropriation of \$9,000 for a building and greenhouse was made.

By 1945 the work at the Station had increased to such an extent that the old building was outgrown. It had been enlarged twice.

In 1946, an appropriation for a new building was obtained, largely through the efforts of the Boston Market Gardeners Association and other interested organizations. The appropriation was for \$125,000. This was at a period of greatly rising costs, and by the time the building was designed this figure was inadequate. In 1947 a new bill was entered to increase the appropriation to \$275,000. At that time the Poultry Associations were asking for a Diagnostic Laboratory in this end of the State, so the Legislature combined it with the Waltham Field Station when it granted the appropriation.

By 1948, many new homes had been built around the Station and pilfering of experimental fruits, vegetables, and flowers became a serious problem. A special appropriation was asked of the Legislature and they granted \$15,000 for a fence around the property.

The Floriculture staff was increased in 1949 by legislative action. Professor White was moved to Amherst. N. W. Butterfield took White's place for floriculture research, and an assistant was employed (F. J. Campbell).

Also, in 1949 a special act of the Legislature provided for pathological work in floriculture, and Ralph Ames was employed.

In 1950 the new building was occupied, and the Poultry Diagnostic Laboratory started (Dr. G. P. Faddoul and Gordon Fellows).

The arborists and tree wardens wanted work done at the Waltham Field Station on shade trees, and through a special act of legislature the work was started in 1951 with an entomologist and pathologist (W. E. Tomlinson and F. L. Rusden).

In 1952 there was a further change in floriculture. The position of Extension Floriculturist was established by the University and N. W. Butterfield was moved to the Extension position.

In May, 1954, Ray M. Koon retired and moved to Nova Scotia where he planned to continue his writing and enjoy some fishing and hunting, but it was not to be. He died in July of the same year. It was largely through his efforts that the Waltham Field Station expanded from a professional staff of five in 1925 to one of over seventeen when he retired. At his retirement banquet there were twenty-five organizations to present him gifts and citations. The auditorium at the Waltham Field Station was named in his honor.

John Havis became Head of the Waltham Field Station in July, 1954. In September of 1961 he asked to be transferred to Amherst and allowed to return to research work.

In October of 1961, William D. Tunis was appointed Head, and a change was made in the organization of the Waltham Field Station. Previously the research staff were members of their respective departments at the University in Amherst and were responsible to the Head of their Department for subject matter and responsible to the Head of the Waltham Field Station for time and effort. With the appointment of Dr. Tunis the staff of the Waltham Field Station were directly responsible to him, and the Station became a Department in the College of Agriculture.

In November, 1963, Dr. Tunis resigned to become Dean of Admissions of the University, and Dr. John A. Naegele was appointed Head of the Station December 1, 1963.

* * * * *

IN CHARGE

H. F. Tompson	1913 - 1924
Ray M. Koon	July 1924 - Retired May 1954
John R. Havis	July 1954 - Sept. 1961
William D. Tunis	Oct. 1961 - Nov. 1963
John A. Naegele	Dec. 1963 - _____

PLANT PATHOLOGIST

Webster S. Krout	1917 - Apr. 1923
Wm. E. Doran	June 1923 - Apr. 1925
E. F. Guba	Apr. 1925 - Retired June 1962
Robert E. Inman	Sept. 1962 - _____

ASSISTANT in PATHOLOGY

C. J. Gilgut	1936 - 1942
--------------	-------------

VEGETABLE GARDENING - Olericulture - Vegetable Crops

V. A. Tiedjens Sept. 1923 - June 1930
Robert E. Young June 1931 - _____

ENTOMOLOGIST

W. D. Whitecomb July 1925 - _____

ASSISTANT in ENTOMOLOGY

Harold Wilson 1928 - 1934
William J. Garland 1934 - 1963 - 25%
William Tomlinson 1938 - 1945
Charles S. Hood 1946 - 1950

FLORICULTURE

Harold E. White Jan. 1930 - 1949
N. W. Butterfield Feb. 1949 - July 1952
John Mastalerz Sept. 1952 - July 1956
Paul Eck July 1957 - Sept. 1960
William Rosenau Dec. 1960 - _____

ASSISTANT in FLORICULTURE

Frank Campbell Sept. 1948 - _____

FLORICULTURE - EXTENSION

N. W. Butterfield July 1952 - _____

FLORICULTURE PATHOLOGIST

Ralph Ames July 1950 - 1951
E. C. Gasiorkiewicz 1952 - Apr. 1960
John McRitchie July 1961 - _____

NURSERYCULTURE

Richard Mueller 1935 - 1935
George Graves 1935 - 1938
H. S. Tiffany 1938 - 1942
C. J. Gilgut 1942 - 1952
Richard J. Stadtherr 1952 - 1953
Robert Ticknor Dec. 1954 - Mar. 1959
Dale Sweet July 1960 - Died July 11, 1961

ASSISTANT in NURSERYCULTURE

H. S. Tiffany 1936 - 1936
Paul Bobula Sept. 1942 - _____ 25%

HORTICULTURIST

Paul W. Dempsey 1934 - Retired 1952
Richard Pride 1952 - Died June 1957
Roger Morse July 1, 1957 - Oct. 1958
Herbert C. Fordham Feb. 1958 - _____
William Garland 1963 75% - _____
Paul Bobula 1963 75% - _____

SHADE TREE

Pathology

Phillip Rusden 1951 - May 1954
Henry Gilbertson July 1954 - Nov. 1960
Robert E. Inman May 1961 - Sept. 1962
Jean Snow June 1963 - _____

Entomology

William Tomlinson 1951 - 1953
Clifford Chater May 1953 - _____

POULTRY DIAGNOSTIC LABORATORY

George P. Faddoul Oct. 1950 - _____
Gordon Fellows Oct. 1950 - _____

FARM FOREMAN

Paul Dempsey July 1917 - 1934
Harold Wilson 1934 - _____

OFFICE MANAGER

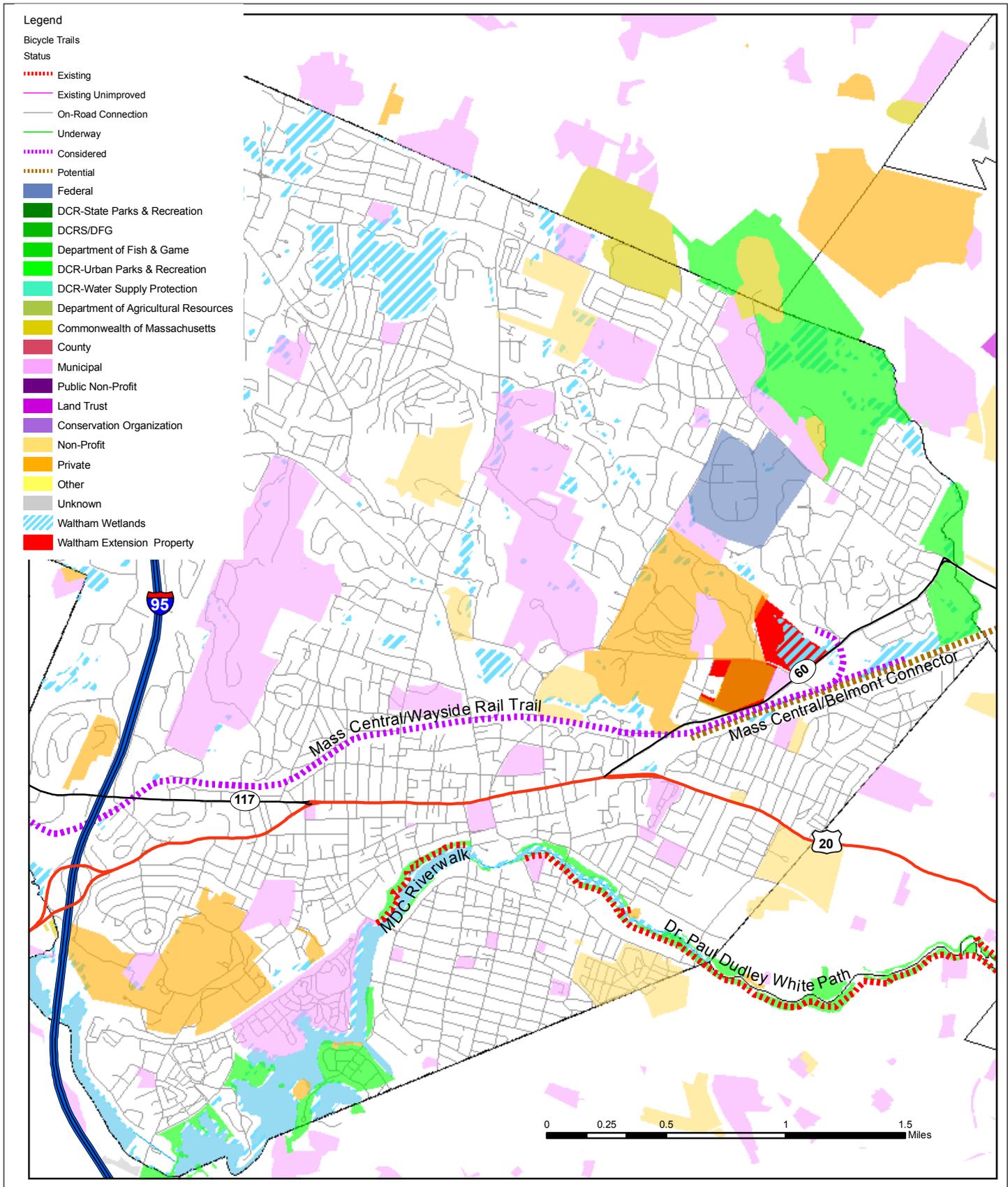
Mary F. Lally 1928 - _____



Map B. 2; Soils source; MA GIS, Middlesex County Soil Survey

	Soil Description	Depth to Seasonal High Water Table	Drainage Class	Capability Class
	106C Narragansett- Hollis	> 80 inches	well drained	*
	106D Narragansett- Hollis	> 80 inches	well drained	*
	223B Scio; very fine sandy loam	1.5-2ft	moderate	II*
	251A Haven Silt Loam	> 6 ft	moderate	I*
	251B Haven Silt Loam	> 6 ft	moderate	II*
	253D Hinckley loamy sand	> 6 ft	rapid	VII
	51A Swansea Muck	0-1 ft.	moderate	V
	53A Freetown Muck	0 - 3 ft. above surface	moderate	VII
	624B Haven; urban land			
	71B Ridgebury; fine sandy loam	0- 1.5 ft	slow/ moderate	VIIIs
	Urban land			N/A
	602 covered with impervious surface; on site investigations necessary excavated and filled land			N/A
	603 Urban Land; wet substratum excavated and filled land over alluvium/ marine deposits pilings typically required for building sites; soil tests recommended for gardens/ food production			N/A
	655 Udorthents; wet substratum soil properties vary greatly, can be suitable for building sites			N/A
	* Represents prime farmland			





Waltham Experiment Station
 University of Massachusetts Amherst
 Office of Outreach and Extension

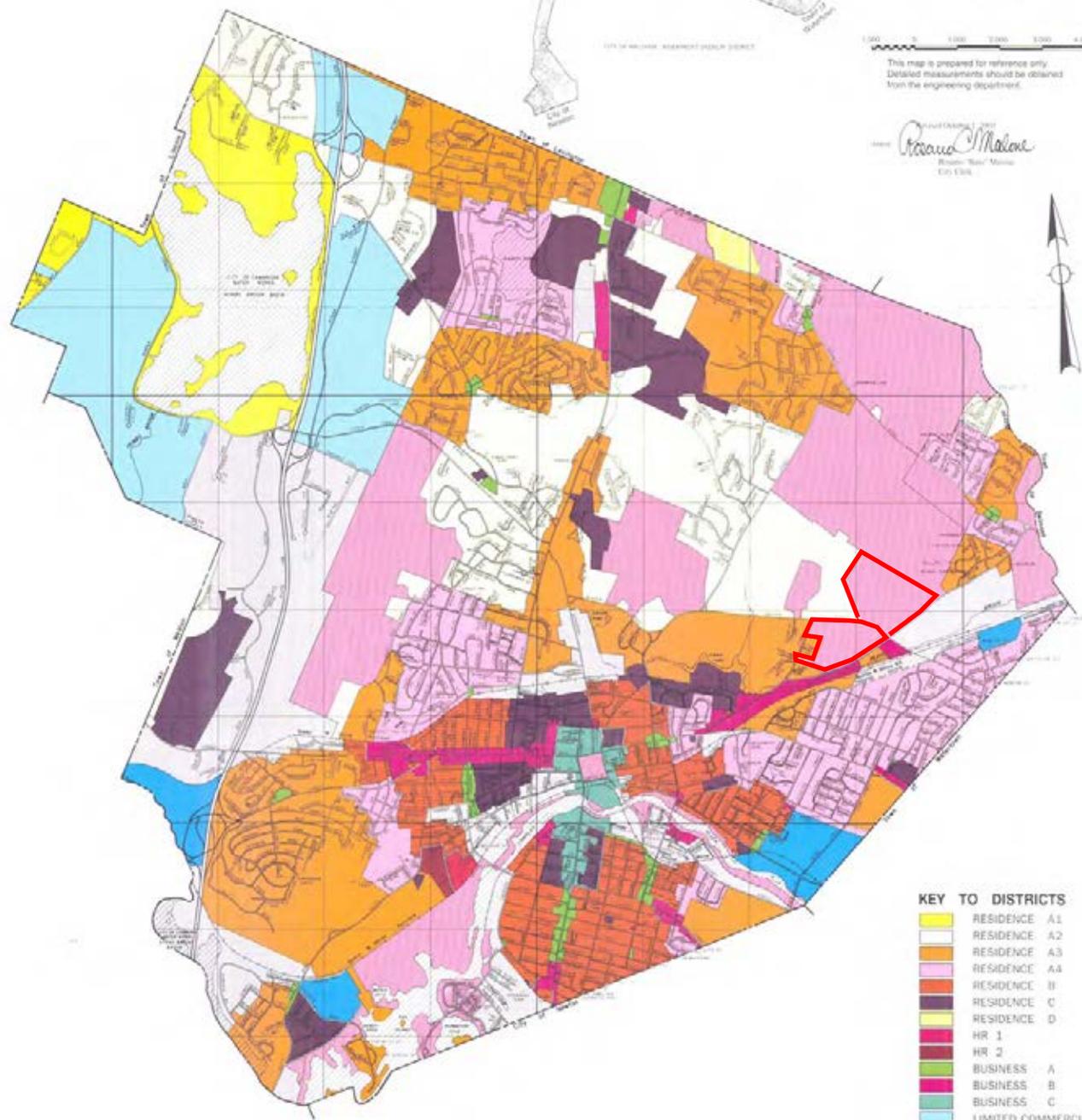
Prepared by; University of Massachusetts Amherst
 Department of Landscape Architecture and Regional Planning



1,000 2,000 3,000 4,000 FEET

This map is prepared for reference only. Detailed measurements should be obtained from the engineering department.

Revised October 1, 2007
Robert Malone
Planning "Real" Matters
City of Waltham



KEY TO DISTRICTS	
[Yellow]	RESIDENCE A1
[Light Orange]	RESIDENCE A2
[Orange]	RESIDENCE A3
[Light Pink]	RESIDENCE A4
[Pink]	RESIDENCE B
[Light Purple]	RESIDENCE C
[Purple]	RESIDENCE D
[Dark Purple]	HR 1
[Red]	HR 2
[Green]	BUSINESS A
[Light Green]	BUSINESS B
[Light Blue]	BUSINESS C
[Light Blue]	LIMITED COMMERCIAL
[White]	COMMERCIAL
[Blue]	INDUSTRIAL
[Light Blue]	CONS./REC.

Map B.4; City of Waltham Zoning source; City of Waltham Planning Department

ZONING CODE

Sec. 3.4. Table of Uses.
City of Waltham
(Part 1)

[Amended 6-10-1991 by Ord. No. 27154; 6-10-1991 by Ord. No. 27156; 12-12-1991 by Ord. No. 27265; 12-23-1991 by Ord. No. 27265; 3-8-1993 by Ord. No. 27503; 5-9-1994 by Ord. No. 27715; 5-23-1994 by Ord. No. 27732; 1-11-1995 by Ord. No. 27853-A; 3-28-1995 by Ord. No. 27884; 5-22-1995 by Ord. No. 27909; 5-13-1996 by Ord. No. 28125; 5-28-1996 by Ord. No. 28135; 8-4-1997 by Ord. No. 28403; 2-26-2001 by Ord. No. 29197; 5-28-2002 by Ord. No. 29513; 12-23-2002 by Ord. No. 29628; 3-1-2005 by Ord. No. 30012]

Use With Special Permit Reference	RA-1	RA-2	RA-3	RA-4	RB	RC	RD	HR1	HR2	BA	BB	BC(1)	LC	C	I	C/R	Use Reference
Residential																	
Single-family detached (Sec. 3.606)	Y	Y	Y	Y	Y	Y	Y	Y	Y	S1	S1	N	N	N	N	N	3.21
Two-family detached (Sec. 3.607)	N	N	N	N	Y	Y	Y	N	N	S1	S1	N	N	N	N	N	3.22
Accessory dwelling units (Sec. 3.616)	S2	S2	S2	S2	N	N	N	N	N	N	N	N	N	N	N	N	3.23
Multifamily dwellings (Sec. 3.618)	N	N	N	N	N	Y1	Y1	Y	Y1	Y1	Y1	Y1	N	N	N	N	3.24
Rooming houses	Y	Y	Y	Y	Y	Y1	Y1	Y	N	Y1	Y1	Y1	N	N	N	N	3.25
Lodging houses (Sec. 3.639)	N	N	N	N	N	S1	N	N	N	S1	S1	S1	N	N	N	N	3.26
Hotels/motels (Sec. 3.617)	N	N	N	N	S1	S1	N	N	N	S1	S1	S1	S1	S1	N	N	3.27
Family day-care homes (Sec. 3.609)	Y	Y	Y	Y	Y	Y	Y	Y	Y	S1	S1	S1	N	N	N	N	3.28
Medical offices in residences	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	3.29
Customary home occupations (Sec. 3.611)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	3.210
Accessory uses/residential (Sec. 4.22)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	3.211
Garage, private	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	3.212
Trailer/mobile home	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	3.213
Institutional																	
Churches	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	3.214
Educational uses	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	3.215
Municipal buildings	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	3.216
Cemeteries	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	3.217
Hospitals, sanitariums, nursing homes, philanthropic institutions (Sec. 3.610)	S1	S1	S1	S1	S1	S1	S1	Y (3.811)	Y (3.811)	S1	S1	S1	N	N	N	N	3.218

KEY:

- Y = Permitted use as of right
- N = Not permitted
- Y1 = Permitted by right and additional intensity of use permitted by special permit from the City Council

- S1 = Use permitted only by special permit by City Council
- S2 = Use permitted only by special permit by Board of Appeals

Table B.1; City of Waltham Use Tables
source; City of Waltham Zoning Regulations pg Z- 147

ZONING CODE

Sec. 3.4. Table of Uses.
City of Waltham
(Part 2)

Use With Special Permit Reference	RA-1	RA-2	RA-3	RA-4	RB	RC	RD	HR1	HR2	BA	BB	BC(1)	LC	C	I	C/R	Use Reference
Assisted living facilities	N	N	S1	S1	S1	S1	S1	Y1	Y1	S1	S1	N	N	N	N	N	3.218A
Public service corporations (Sec. 3.614)	S2	S2	S2	S2	S2	S2	S2	S2	S2	S2	S2	S2	N	S2	S2	N	3.219
Membership clubs (Sec. 3.608)	S1	S1	S1	S1	S1	S1	S1	S1	S1	S1	Y1	Y1	N	Y1	Y1	S1	3.220
Garages, public	N	N	N	N	N	N	N	Y (3.811)	Y (3.811)	Y1	Y1	Y1	Y1	Y1	Y1	N	3.221
Commercial																	
Retail stores (Sec. 3.634)	N	N	N	N	N	N	N	N	N	Y1	Y1	Y1	N	Y1	Y1	N	3.222, 3.27
Body art establishments (Sec. 3.222A)	N	N	N	N	N	N	N	N	N	N	S1	S1	N	S1	S1	N	2.347
Laundromats	N	N	N	N	N	N	N	N	N	N	Y1	Y1	N	Y1	Y1	N	3.223
Business and professional offices and banks	N	N	N	N	N	N	N	Y (3.811)	S1 (3.811)	Y1	Y1	Y1	Y1	Y1	Y1	N	3.224
Drive-in customer service (Sec. 3.635)	N	N	N	N	N	N	N	N	N	S1	S1	S1	S1	S1	S1	N	3.225
Arcades	N	N	N	N	N	N	N	N	N	N	N	N	Y1	Y1	Y1	N	3.226
Retail gasoline stations (Sec. 3.634)	N	N	N	N	N	N	N	N	N	Y1	Y1	N	N	Y1	Y1	N	3.227
Restaurants	N	N	N	N	N	N	N	N	N	Y1	Y1	Y1	N	Y1	Y1	N	3.228
Fast-food establishments (Sec. 3.620)	N	N	N	N	N	N	N	N	N	S1	S1	N	N	S1	S1	N	3.229
Taverns	N	N	N	N	N	N	N	N	N	N	Y1	N	N	Y1	Y1	N	3.230
Micro-brewery restaurant	N	N	N	N	N	N	N	N	N	N	N	S1	S1	N	N	N	3.228A
Catering establishments	N	N	N	N	N	N	N	N	N	N	Y1	N	N	Y1	Y1	N	3.231
Funeral homes	N	N	N	N	N	N	N	N	N	Y1	Y1	Y1	N	Y1	Y1	N	3.232
Private schools	N	N	N	N	N	N	N	N	N	Y1	Y1	Y1	N	Y1	Y1	N	3.233
Radio and television broadcasting studios	N	N	N	N	N	N	N	N	N	N	Y1	Y1	Y1	Y1	Y1	N	3.234

KEY:

- Y = Permitted use as of right
- N = Not permitted
- Y1 = Permitted by right and additional intensity of use permitted by special permit from the City Council

- S1 = Use permitted only by special permit by City Council
- S2 = Use permitted only by special permit by Board of Appeals

Table B.2; City of Waltham Use Tables
source; City of Waltham Zoning Regulations pg Z- 149

ZONING CODE

Sec. 3.4. Table of Uses.
City of Waltham
(Part 4)

Use With Special Permit Reference	RA-1	RA-2	RA-3	RA-4	RB	RC	RD	HR1	HR2	BA	BB	BC(1)	LC	C	I	C/R	Use Reference
Autobody shop (Sec. 3.626)	N	N	N	N	N	N	N	N	N	N	N	N	N	S1	S1	N	3.253
Plastics manufacturing (Sec. 3.629)	N	N	N	N	N	N	N	N	N	N	N	N	N	N	S1	N	3.254
Steam laundry	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Y1	N	3.255
Heliports-airports (Sec. 3.627)	N	N	N	N	N	N	N	S1	S1	N	N	N	S1	S1	N	N	3.256
Junkyards (Sec. 3.633)	N	N	N	N	N	N	N	N	N	N	N	N	N	N	S1	N	3.257
Garbage dumps and sanitary landfills	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	3.258
Composting facility (3.640)	N	N	N	N	N	N	N	N	N	N	N	N	N	S1	S1	N	3.2581
Yard waste transfer station (3.641)	N	N	N	N	N	N	N	N	N	N	N	N	N	S1	S1	N	3.2582
Organic products storage (3.642)	N	N	N	N	N	N	N	N	N	N	N	N	N	S1	S1	N	3.2583
Automobile recycling center	N	N	N	N	N	N	N	N	N	N	N	N	N	N	S1	N	3.259
Accessory uses/manufacturing	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	3.260
Adult entertainment enterprises (Sec. 2.303A)	N	N	N	N	N	N	N	N	N	N	N	N	N	N	S1	N	3.2421
Agriculture																	
Farms	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	3.261
Livestock farms under 5 acres (Sec. 3.612)	S2	S2	S2	S2	S2	S2	S2	S2	S2	S2	S2	S2	S2	S2	S2	N	3.262
Livestock farms over 5 acres	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	3.262
Farm stands	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	3.263
Conservation/Recreation																	
Conservation, water and water supply area	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	3.264
Public outdoor recreation facility	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	3.265
Semipublic outdoor recreation facility (Sec. 3.630)	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	S1	3.266

KEY:

- Y = Permitted use as of right
- N = Not permitted
- Y1 = Permitted by right and additional intensity of use permitted by special permit from the City Council

- S1 = Use permitted only by special permit by City Council
- S2 = Use permitted only by special permit by Board of Appeals

Table B.3; City of Waltham Use Tables
source; City of Waltham Zoning Regulations pg Z- 153