# NARRATIVE APPRAISAL REPORT

# &

# VALUATION ANALYSIS

## PROPERTY

*Mainstone Farm*
228.65 Acres of Land with 3 Existing Dwellings
Old Connecticut Path, Rice Road
Wayland, Massachusetts

## DATE OF VALUATION

September 16, 2015

## PREPARED FOR

Gretchen Schuler, Chair
Wayland Community Preservation Committee
Town Building
41 Cochituate Road
Wayland, MA 01778

## PREPARED BY

Avery Associates
282 Central Street
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# Avery Associates

**Real Estate Appraisers – Counselors**

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September 18, 2015

Gretchen Schuler, Chair
Wayland Community Preservation Committee
Town Building
41 Cochituate Road
Wayland, MA 01778

RE: *Mainstone Farm*
228.65 Acres of Land with 3 Existing Dwellings
Old Connecticut Path, Rice Road
Wayland, Massachusetts

Dear Ms. Schuler:

In response to your request, as outlined in the letter of engagement dated July 23, 2015, we are pleased to transmit the appraisal report detailing our estimate of the market value of the subject property, both on an "as is" basis, and assuming encumbrance with a permanent conservation restriction. This report sets forth the value conclusion, together with supporting data and reasoning which forms the basis for our conclusions.

The subject of this report is 228.65 acres of residentially zoned land located at the corner of Old Connecticut Path and Rice Road in Wayland, Massachusetts. The property is known locally as *Mainstone Farm* and features rolling pasture, treed uplands, two ponds, and 3 older residential dwellings and outbuildings. At present the property is an active farm used to raise cattle and grow crops. A seasonal farm stand operates on site along the westernmost Old Connecticut Path frontage.

We have been asked to estimate the value of the property "as is". In addition, we have been asked to estimate the value of the property assuming encumbrance with a permanent conservation restriction on all but 18.9+/- acres surrounding the dwellings on site.

As a result of our analysis, it is our opinion that the market value(s) of the subject property as of September 16, 2015, subject to the definitions, limiting conditions, extraordinary assumptions, hypothetical condition, and certifications set forth in the attached report are as follows:

| | |
|---|---|
| **Estimated Value of the Property Without Restriction** | **$23,700,000** |
| **Estimated Value of the Property After Restriction** | **$ 6,700,000** |
| **INDICATED DIMINUTION IN VALUE BECAUSE OF CR** | **$17,000,000** |

(*It should be noted that as of the date of valuation, a permanent Conservation Restriction does not yet affect the subject property or portions thereof. The latter two values listed above are based upon the* ***hypothetical condition*** *that the Conservation Restriction described herein affects the property as of the date of valuation*).

This letter must remain attached to the report, which contains 36 pages plus related exhibits, in order for the value opinion set forth to be considered valid.

Respectfully submitted,

Christopher H. Bowler, MAI, SRA
Massachusetts Certified General
Real Estate Appraiser #495

Jonathan H. Avery, MAI, CRE
Massachusetts Certified General
Real Estate Appraiser #26

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## SUMMARY OF IMPORTANT FACTS AND CONCLUSIONS

**PROPERTY ADDRESS**: 83-87 Old Connecticut Path
Wayland, Massachusetts

**OWNER OF RECORD**: DHH Realty Trust Map 35 Parcel 31
Mainstone Farm Land Trust Map 35 Parcel 31A
Devens & Margery Hamlen Map 35 Parcel 31B
DHH Realty Trust Map 35 Parcel 31C

(*Devens H., or Margery L. Hamlen is a principal in all trusts listed above*)

**DATE OF VALUE ESTIMATE**: September 16, 2015

**TOTAL LAND AREA**:

| | |
|---|---|
| Map 35 Parcel 31 | 5.00 acres |
| Map 35 Parcel 31A | 218.77 acres |
| Map 35 Parcel 31B | 3.01 acres |
| Map 35 Parcel 31C | 1.87 acres |
| Total | 228.65 acres |

**EXISTING IMPROVEMENTS**: Three older wood frame dwellings, constructed between 1795 and 1936; several barns, detached garages; an in-ground pool; tennis court; sheds; and a newer greenhouse.

**ZONING**: Residential 60,000 sf/210' frontage

**HIGHEST AND BEST USE (before restriction)**
Begin the approval process with local planning boards with the eventual goal of gaining approvals for a cluster development on site of 128 additional lots in addition to the 3 parcels that contain the residential dwellings on site.

**HIGHEST AND BEST USE (after restriction)**
Non-motorized recreation, agriculture, forestry, on 209.47 restricted acres; unrestricted use of the three existing dwellings on their lots of 5.0, 2.71, and 1.87 acres, plus the development as demand warrants of the 3 unrestricted lots shown on the restriction plan.

## SUMMARY OF IMPORTANT FACTS AND CONCLUSIONS (continued)

**FEE SIMPLE MARKET VALUE ESTIMATES:**

| | |
|---|---|
| **Estimated Value of the Property Without Restriction** | **$23,700,000** |
| **Estimated Value of the Property After Restriction** | **$ 6,700,000** |
| **INDICATED DIMINUTION IN VALUE BECAUSE OF CR** | **$17,000,000** |

**APPRAISED BY**:

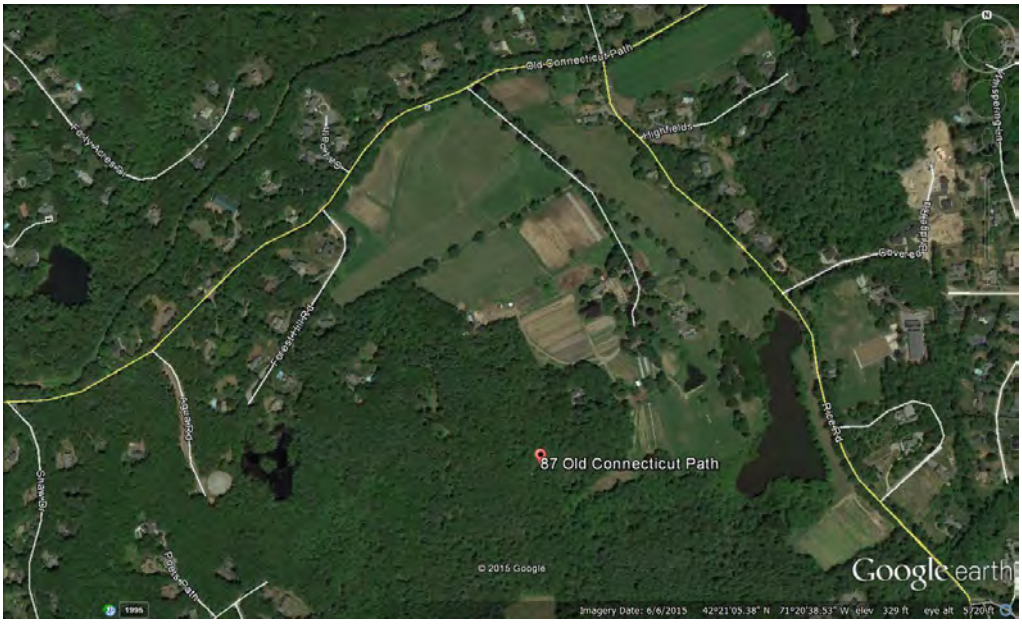
Christopher H. Bowler, MAI, SRA
Jonathan H. Avery, MAI, CRE
Avery Associates
Post Office Box 834
282 Central Street
Acton, MA 01720

**SUBJECT PROPERTY PHOTOGRAPHS**

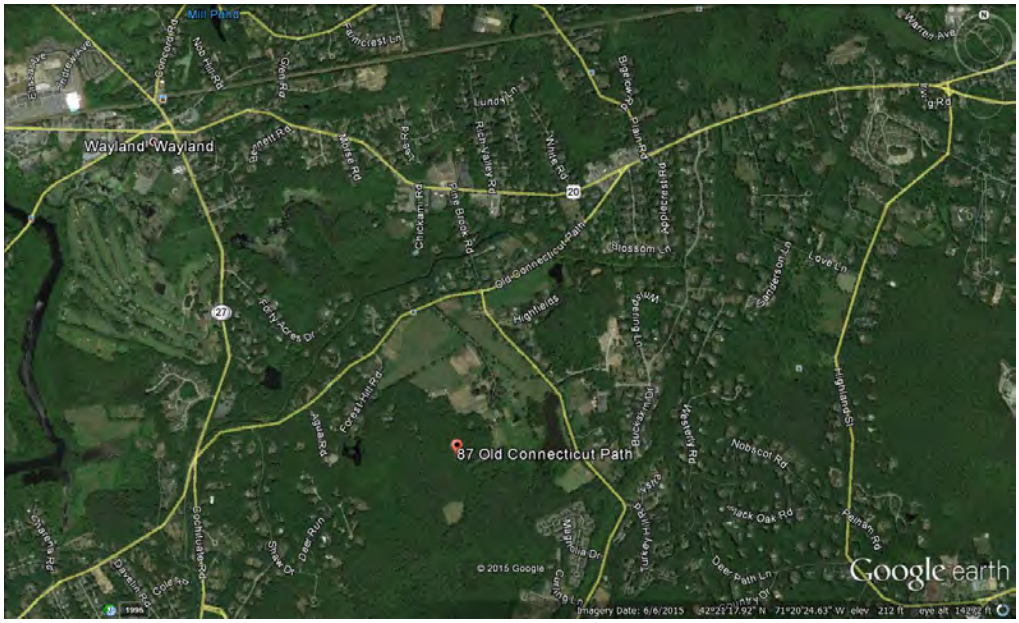
*Mainstone Farm*

Old Connecticut Path, Rice Road

Wayland, Massachusetts




**Aerial View Provided by Mass GIS/Google Earth. Photo Taken in June of 2015. Subject is East of Forest Hill; South of Old Conn Path; and West of Rice Road. White 'Roadway' Extending into the Land from OCP is the Private "Way".**




**Additional Aerial View Taken from a Higher Vantage Point.**

**SUBJECT PROPERTY PHOTOGRAPHS**

*Mainstone Farm*
Old Connecticut Path, Rice Road
Wayland, Massachusetts
Taken by C.H. Bowler (8/19/2015)

**View of the Eastern Portion of the Subject Land Looking SW. Photo Taken from Rice Road Frontage.**

**View of the Larger Pond on Site Looking SW. Photo Taken from Rice Road Frontage.**

**SUBJECT PROPERTY PHOTOGRAPHS**

*Mainstone Farm*

Old Connecticut Path, Rice Road

Wayland, Massachusetts

Taken by C.H. Bowler (8/19/2015)

**View Looking NE at the Hilltop Area East of the 3 Dwellings on Site.**

**View Looking SE at the Dwelling on Parcel 35/31C.**

**SUBJECT PROPERTY PHOTOGRAPHS**

*Mainstone Farm*

Old Connecticut Path, Rice Road

Wayland, Massachusetts

Taken by C.H. Bowler (8/19/2015)

**View Looking Easterly at the Dwelling on Parcel 35/31.**

**Street Scene Looking Westerly Along Old Connecticut Path.**

# NARRATIVE APPRAISAL REPORT

**PURPOSE OF THE APPRAISAL**: The purpose of this appraisal is to estimate the value of the property "as is", and the value assuming encumbrance with a permanent conservation restriction, as of September 16, 2015. In estimating these values, it has been necessary to make a careful physical inspection of the property, a review of land planning, examination, and analysis of the property. The results are reported in this study.

The definition of market value and fee simple can be found in the Addenda section to this report.

**INTENDED USERS OF REPORT**: The Town of Wayland Community Preservation Committee and the Sudbury Valley Trustees.

**INTENDED USE OF REPORT**: The function of this appraisal is to estimate the market value of the property, based upon two distinct scenarios, for the possible acquisition of the property, or its development rights.

**INTEREST VALUE**: Fee Simple.

**CONSERVATION RESTRICTION IS DEFINED AS**: According to Section 31 of Chapter 184 of the general laws of the Commonwealth of Massachusetts, a **Conservation Restriction**, also known as a conservation easement, means:

"A right, either in perpetuity or for a specified number of years, whether or not stated in the form of a restriction, easement, covenant or condition, in any deed, will or other instrument executed by or on behalf of the owner of the land or in any order of taking, appropriate to retaining land or water areas predominantly in their natural, scenic or open condition or in agricultural, farming or forest use, to permit public recreational use, or to forbid or limit any or all *(a)* construction or placing of buildings, roads, signs, billboards or other advertising, utilities or other structures on or above the ground, *(b)* dumping or placing of soil or other offensive materials, *(c)* removal or destruction of trees, shrubs or other vegetation, *(d)* excavation, dredging or removal of loam, peat, gravel, soil, rock or other mineral substance in such a manner as to affect the surface, *(e)* surface use except for agricultural, farming, forest or outdoor recreational purposes or purposes permitting the land or water area to remain predominantly in its natural condition, *(f)* activities detrimental to drainage, flood control, water conservation, erosion control or soil conservation, or *(g)* other acts or uses detrimental to such retention of land or water areas.

**DATE OF VALUATION**: The effective date of valuation of this appraisal is September 16, 2015. All data, analysis, and conclusions are based upon facts in existence as of the date of valuation.

**DATE OF REPORT**: September 18, 2015.

**SCOPE OF THE APPRAISAL**: Christopher H. Bowler, MAI, SRA and Jonathan H. Avery, MAI, CRE inspected the subject property on several occasions, most recently September 16, 2015. On August 19, 2015, the appraisers met with property owner Devens Hamlen at the property. Photographs were taken at this time. In addition to the inspections, Mr. Bowler:

- Reviewed a November 2011 appraisal of the subject property, and all file memorandum, completed by the undersigned of Avery Associates.
- Reviewed land planning, road cost estimates, wetlands, a zoning analysis and soil surveys of the property completed by Beals & Thomas, Inc.
- Obtained additional information regarding the property from the Wayland Assessors Department, Building Department, and the Middlesex South Registry of Deeds.
- Gathered information on comparable acreage and lot sales, antique home sales, and residential development activity in the Wayland area.
- Confirmed and analyzed the data and utilized a Cost of Development Approach and Sales Comparison techniques in order to estimate the market value of the property both on a 'before' and 'after' basis.

The valuation process and estimates of value were reviewed and concurred with by Mr. Avery.

**HYPOTHETICAL CONDITION & EXTRAORDINARY ASSUMPTIONS**: The value estimates contained herein are based upon the *hypothetical condition* that the proposed conservation restriction is recorded and in place as of the date of valuation.

The value estimates contained herein are based upon the *extraordinary assumptions* that the land has the development potential as stated herein and within the Beal & Thomas conceptual plans.

Should these conditions change, or be proven false with additional engineering, then the value estimates contained herein may also change.

## DESCRIPTION OF REAL ESTATE APPRAISED

**LEGAL DESCRIPTION -** The subject of this report is 228.65 acres of residentially zoned land located at the corner of Old Connecticut Path and Rice Road in Wayland, Massachusetts. The property is known locally as *Mainstone Farm* and features rolling pasture, treed uplands, two ponds, and 3 older residential dwellings and outbuildings. At present the property is an active farm used to raise cattle and grow crops. A seasonal farm stand operates on site along the westernmost Old Connecticut Path frontage.

The following is the address, assessors and legal reference for the property:

| Address | Parcel Size (ac) | Assessors Map/Lot | Current Owner | Legal Reference (Bk/Pg) |
|---|---|---|---|---|
| 83 Old Connecticut Path | 5.00 | 35/31 | DHH Realty Trust | 20651/555 |
| 87 Old Connecticut Path | 218.77 | 35/31A | Mainstone Farm Land Trust | 21128/94 |
| 87 Old Connecticut Path | 3.01 | 35/31B | Devens H. & Margery L. Hamlen | 20530/308 |
| 87 Old Connecticut Path | 1.87 | 35/31C | DHH Realty Trust | 20651/555 |
| **Total** | **228.65** | | | |

The property has been under the ownership of Hamlen Family for over 100 years. There have been no arm's length sales or listings of the property for sale in the previous 60 months.

A copy of the deeds listed above can be found in the Addenda to this report.

**Proposed Conservation Restriction**: At present no Conservation Restriction affects the subject acreage. A 30 year restriction on portions of the acreage expired in 2007.

The proposed Conservation Restriction exists in draft form, a copy of which can be found in the Addenda to this report.

The restriction will affect 209.47 of the 228.65 acres, leaving 18.9 acres unrestricted. The 18.9 acres includes the 3 existing dwellings on parcels of 5.0, 2.71, and 1.87 acres, plus 3 vacant building lots of 3.7, 1.5, and 4.1 acres.

The restriction will prevent any development of residential dwellings on the 209.47 acres and will limit future uses to agriculture, passive recreation, forestry, and open space. The restriction will allow for the farmstand operation on Old Connecticut Path to continue.

**TAXES AND ASSESSMENT -** The following is the current assessment and tax burden for the subject:

| Address | Parcel Size (ac) | Assessors Map/Lot | Current Assessment | FY 2015 Tax Rate | FY 2015 Taxes | |
|---|---|---|---|---|---|---|
| 83 Old Connecticut Path | 5.00 | 35/31 | $ 1,464,300 | $ 18.39 | $26,928.48 | |
| 87 Old Connecticut Path | 218.77 | 35/31A | $ 23,300 | $ 18.39 | $ 428.49 | ** |
| 87 Old Connecticut Path | 3.01 | 35/31B | $ 1,248,900 | $ 18.39 | $22,967.27 | |
| 87 Old Connecticut Path | 1.87 | 35/31C | $ 956,700 | $ 18.39 | $17,593.71 | |
| **Totals** | **228.65** | | **$ 3,693,200** | | **$ 67,917.95** | |

** This assessment includes $1,000 allocated to Parcel 35/31E. This 6.24 acre portion of the 218.77 acre 35/31A is not yet legally subdivided but is recognized by Wayland Assessors.

**Chapter 61 Classification**: The largest of the 4 parcels that comprise the subject is presently under the restrictions of Massachusetts General Laws Chapter 61. This is an agricultural land classification act which allows for the owners of larger parcels of land to receive significant real estate tax reduction/deferment, so long as a prescribed current use management plan is followed and the designated parcel is not developed.

The restrictions on development may be lifted if a property owner pays the amount of the deferred taxes, or rollback tax, dating back through the period in which the property has been under Chapter 61. The amount is calculated by taking the difference in the assessed value as if not participating in the program, and then multiplying this figure in each year by the tax rate for that year. Interest may also be due.

It should be noted that the property has been appraised free and clear of all municipal liens and/or encumbrances. The rollback tax amount due has therefore not been included in the calculation of the market value of the property. The amount owed is not considered part of the real property, but rather a personal debt owed by the current owner of the property, much the same way a mortgage debt is owed on most homes sold in the local market. While the amount of the roll back tax or mortgage on a property might reduce the 'net' amount due to the seller, it does not affect the market value of the property as defined herein.

**LOCATION DESCRIPTION** - *Town* - The subject property is located in the Middlesex County community of Wayland. Surrounding communities are Sudbury and Framingham on the west, Natick on the south, Concord and Lincoln on the north, and Weston on the east. Its population according to the 2010 U.S. Census was 12,994, essentially unchanged since the 2000 census. Boston is 17 miles east or a 30-minute car drive.

Wayland is a semi rural, affluent bedroom community located in the 'Metro-West' region of Greater Boston. Approximately 20% of the land area in town is under conservation. Part of the Great Meadows National Wildlife Refuge is in the northern part of town. There are two public golf courses.

The town has an excellent, nationally recognized public school system that features 3 elementary schools, one middle and one high school. It is consistently ranked in the top 5 of all school systems in the Commonwealth using a variety of measures. The Claypit Hill Elementary School was recognized in the 1980's as one of the top public elementary schools in the nation.

Wayland is part of a small cluster of similar, affluent bedroom communities that includes Weston, Lincoln, Concord, and Sudbury. The town and region is a desirable and highly sought after place to live.

**Economic Conditions**: When completing an appraisal of real property, it is necessary to have a proper perspective of economic conditions as of the date of valuation. Economic conditions play a significant role in the price paid for real estate at any given time.

As the third quarter of 2015 nears an end, the economy continues to slowly improve from the depths of the last recession in 2009. General economic conditions suggest slow economic growth, moderate job creation, healthy real estate markets, both residential and commercial, a volatile and now negative for the year stock market, and consumer confidence levels that suggest the American consumer is gaining confidence in the country's economic health.

We look at several key economic indicators to measure the current health of the economy:

## ECONOMIC GROWTH (growth in the U.S. GDP)

| | Annualized Growth Rate |
|---|---|
| 2015 Q2 | 3.7% |
| 2015 Q1 | 0.6% |
| 2014 Annual | 2.4% |
| 2013 Annual | 2.2% |
| 2012 Annual | 2.0% |
| 2011 Annual | 1.8% |
| 2010 Annual | 3.0% |
| 2009 Annual | -2.4% |

(Gross Domestic Product is the total market value of the goods and services produced by a nation's economy during a specific period of time).

## EMPLOYMENT/UNEMPLOYMENT

| | Town of Wayland | Middlesex County | Massachusetts | U.S. |
|---|---|---|---|---|
| Most Recent Month | 3.8% | 4.1% | 4.7% | 5.1% |

| United States | New Jobs Created | Unempl. Rate |
|---|---|---|
| Last Mos.; Aug 2015 | 173,000 | 5.1% |
| Average Last 12 Mos. | 247,833 | 5.5% |

## STOCK MKT, COMMODITY & INTEREST RATE TRENDS

| | Beginning Price 1-Jan-15 | Closing Price 16-Sep-15 | *Change Since 1/1/2015* |
|---|---|---|---|
| Dow Jones Industrial | 17,823 | 16,740 | *-6.08%* |
| S&P 500 | 2,059 | 1,995 | *-3.10%* |
| London Gold $ fix/oz | 1,184 | 1,118 | *-5.58%* |
| Crude Oil $ per barrel | 53.27 | 47.14 | *-11.51%* |
| 10 Year Treasury | 2.17% | 2.30% | *5.94%* |

| S & P 500 Annual Returns | |
|---|---|
| 2014 | +11.4% |
| 2013 | +29.6% |
| 2012 | +13.4% |
| 2011 | -.003% |
| 2010 | +12.8% |
| 2009 | +23.5% |

## CONSUMER CONFIDENCE

Source: Conference Board

| | | |
|---|---|---|
| **2015** | August | 101.5 |
| **2014** | August | 93.4 |
| **2013** | August | 81.8 |
| **2012** | August | 61.3 |
| **2011** | August | 45.2 |
| **2010** | August | 48.5 |
| **2009** | August | 46.6 |
| **2008** | August | 51.9 |

(1985=100)

## CASE-SHILLER HOME PRICE INDEX

| | | Greater Boston | *1 Year Change* | *Change Since Low/Peak* |
|---|---|---|---|---|
| **Current** | Jun-15 | 182.0 | 3.2% | ------- |
| **1 Year Earlier** | Jun-14 | 176.3 | ------- | ------- |
| **Low this Cycle** | Mar-09 | 145.8 | ------- | 24.83% |
| **Peak this Cycle** | Sep-05 | 182.5 | ------- | -0.22% |

In terms of the **GDP**, the most recent figure released for the U.S. economy shows the economy expanded at a 3.7% annualized rate as measured by the Gross Domestic Product in the 2nd quarter of 2015. This figure was revised upward from the first released figure of 2.3%. This is a strong improvement from the first quarter of 2015, which showed just a 0.6% annualized growth rate. While a good sign, several quarters of 3.5%+ growth is generally needed for growth in employment. In Massachusetts economic growth was a much better 5.4% in the 2nd quarter of this year, up from 2.1% in the 1st quarter of 2015. While positive, the rates of growth are not strong enough to increase the number of well-paying, full-time jobs that will increase the historically low labor participation rate.

The **employment figures** are showing a recent pickup following several years of lackluster performance. The last 13 months have included 10 months in which new jobs created were north of the 200,000 mark; and three months exceeded 300,000. The average over the past 12 months is 247,833 per month. But, while employment gains are positive, many point to the fact that the jobs being created are largely part-time, and that the labor participation rate remains at historically low levels.

The **stock market** in 2014 posted a gain of 11.4% in terms of the S&P 500 index. This followed a 2013 gain of 29.6%. Indeed, the stock market, aided by low interest rates and the Federal Reserve's Bond Buyback Program has been a strong positive to the economy. In 2015, the market has been volatile to say the least. Once up 2.5% for the year in May, the S&P is now down 3.1% for the year. The crash in China's stock market, the downturn in China's economy and the devaluation of Chinese currency are being blamed for the U.S. stock market downturn of late. The week of August 17th saw a three day decline in the Dow Jones Industrial Average that set a record, only to be followed the week of August 24th with a two day rise in the Dow that set a record. More volatility is expected throughout the remainder of 2015.

The **consumer confidence** data shown above portrays the ups and downs of the economy over the past 7+ years. The index data is shown for August of each of the past 8 years. The most recent figure of 101.5 is a sharp increase after posting a decline in July. It should be noted that the recent increase is based upon a survey prior to the stock market decline of the week of August 17th. Per the Conference Board, a reading above 90 translates into an economy on solid footing while a reading above 100 reflects stronger economic growth.

The **housing market** in Massachusetts has been quite strong over the past three years, gaining back nearly all of the price/value lost during the downturn period that began in the 3rd quarter of 2005 and extended through 2008-09. During the downturn period, by several measures, prices dropped approximately 15-25% in Greater Boston. Since the 2nd quarter of 2009, the market stabilized, and in many communities has surged back to price levels exceeding the peak index year of 2005. An index considered reliable by most is the Case-Shiller Home Price Index. This data includes only repeat sales of homes. The most recent data from the Case-Shiller Home Price Index listed on the previous page indicates that we are up 3.2% in terms of pricing from one year ago, nearly back to the peak level reached in September of 2005.

The housing market strength in Greater Boston has varied greatly. Generally, for communities along and inside the Route 128 Beltway of Greater Boston, the housing market has been surging for the past 3+ years and is at pricing levels that exceed the peaks reached in 2005. But for communities closer to the I-495 Beltway and into Southeastern and Central Massachusetts, conditions have been far less robust; positive but still well below the mid 2000's in terms of pricing and sales volume.

**Wayland Area Residential Market Snapshot**: To get a more defined look at current market conditions and where they may be headed, we looked at MLS statistics for current listings, pending sales, and total sold relating to single family homes in Wayland, within a slightly larger market area of Wayland-Sudbury-Lincoln, and the State as a whole. The following is a breakdown of this data:

| | VOLUME OF SALES/LISTINGS TRENDS | | | | PRICE TRENDS | | |
|---|---|---|---|---|---|---|---|
| **ACTIVE LISTINGS-Single Family Homes** | | # | | % Change | Average Price | | % Change |
| Current Supply of SF Homes (9/16/2015) | Wayland | 62 | Up | 21.57% | $ 1,287,891 | Up | 6.45% |
| Supply of SF Homes (9/16/2014) | Wayland | 51 | ----- | ----- | $ 1,209,845 | ----- | ----- |
| Current Supply of SF Homes (9/16/2015) | Wayland, Sudbury, Lincoln | 172 | Up | 8.18% | $ 1,270,728 | Up | 4.32% |
| Supply of SF Homes (9/16/2014) | Wayland, Sudbury, Lincoln | 159 | ----- | ----- | $ 1,218,115 | ----- | ----- |
| Current Supply of SF Homes (9/16/2015) | Massachusetts | 18,524 | Down | -6.63% | $ 600,733 | Up | 2.45% |
| Supply of SF Homes (9/16/2014) | Massachusetts | 19,839 | ----- | ----- | $ 586,392 | ----- | ----- |
| **PENDING SALES-Single Family Homes** | | | | | | | |
| # of SF Homes; Went Under Agrmnt; Past Year | Wayland | 196 | Up | 20.99% | $ 951,401 | Down | -3.05% |
| # of SF Homes; Went Under Agrmnt; Previous 12 mos. | Wayland | 162 | ----- | ----- | $ 981,365 | ----- | ----- |
| # of SF Homes; Went Under Agrmnt; Past Year | Wayland, Sudbury, Lincoln | 515 | Up | 10.52% | $ 968,903 | Up | 0.10% |
| # of SF Homes; Went Under Agrmnt; Previous 12 mos. | Wayland, Sudbury, Lincoln | 466 | ----- | ----- | $ 967,969 | ----- | ----- |
| # of SF Homes; Went Under Agrmnt; Past Year | Massachusetts | 55,684 | Up | 8.59% | $ 502,542 | Up | 2.77% |
| # of SF Homes; Went Under Agrmnt; Previous 12 mos. | Massachusetts | 51,277 | ----- | ----- | $ 489,015 | ----- | ----- |
| **CLOSED SALES-Single Family Homes** | | | | | | | |
| Total Closed Sales of SF Homes; Past Year | Wayland | 171 | Up | 24.82% | $ 827,228 | Up | 14.99% |
| Total Closed Sales of SF Homes; Previous 12 mos. | Wayland | 137 | ----- | ----- | $ 719,418 | ----- | ----- |
| Total Closed Sales of SF Homes; Past Year | Wayland, Sudbury, Lincoln | 463 | Up | 10.50% | $ 831,954 | Up | 5.30% |
| Total Closed Sales of SF Homes; Previous 12 mos. | Wayland, Sudbury, Lincoln | 419 | ----- | ----- | $ 790,069 | ----- | ----- |
| Total Closed Sales of SF Homes; Past Year | Massachusetts | 47,355 | Up | 4.61% | $ 440,005 | Up | 3.53% |
| Total Closed Sales of SF Homes; Previous 12 mos. | Massachusetts | 45,270 | ----- | ----- | $ 425,015 | ----- | ----- |
| *SOURCE: MLS Statistics* | | | | | | | |

From a developer's/seller's standpoint, the ideal results from these statistics would be: *decreasing* inventory, *increasing* sales activity, both pending and closed, and rising prices.

The statistics above suggest a healthy residential market overall. Pending and closed sales activity is up in all 3 areas analyzed. Prices are up as well except for a small decline in pending prices in Wayland itself, which based upon a review of other data, appears to be a statistical aberration.

There is an increase in the number of properties listed for sale in Wayland today versus one year ago, and also within the 3 town market of Wayland-Sudbury-Lincoln. This increase in supply does not appear to be a result of declining demand, as the average time of market is less today than a year ago and list prices are up. This suggests that owners are simply trying to take advantage of perceived strong market conditions favoring sellers.

In terms of the market for building lots/vacant land in Wayland, conditions have been positive. The price for land in Wayland peaked in the 2004-2006 period. Exacerbated by the economic recession of 2008 and 2009, prices fell substantially; but, since 2010 have been on the rise. The price for land has rebounded, and based upon a review of sales/repeat sales, levels are back to the peaks seen nearly 10 years ago. And example of the recovery in the land market is Lot Sale #2 presented later in this analysis. The lot sold for $675,000 in December of 2009 but was never developed. Put back on the market in 2013, it closed for $800,000 in March of that year. The resulting 18.52% increase in price translates into a 4.36% annual appreciation rate.

Other 'repeat sales' activity in the Wayland area, whether single family homes or land, have shown annualized price increases of between 2.9% and 5% between 2012 and the present. This data supports the findings of the Case/Shiller Index figures cited above.

**CONCLUSIONS**: We draw the following conclusions from a review of the data presented above and a review of market activity:

- Today, the economy is in a state of recovery, but one that lacks strength. GDP growth has been less than robust over the past six months. Job growth has been positive and, in fact, has been increasing over the past few months. But, the jobs that are being produced are predominantly part-time, and at lower wages. The labor participation rate is at an all-time low. This is part of the reason for the drop in the unemployment rate.
- Consumer confidence has been rising and is now at a point that suggests the U.S. Consumer is confident about economic growth going forward.
- The Stock Market, beginning the week of August 17th, entered into a correction and is now down over 3% for the year as measured by the S&P 500 Index. It remains to be seen if this is the beginning of a 'bear' market or simply a late Summer correction. If there is a continued decline in the market, the residential housing market will likely feel 'pain' by the end of 2015
- In terms of the local residential real estate market, the past 3 years have been quite strong, characterized by rising prices and strong demand. Sales volume peaked for both single family homes and condominium units in 2013, but declined slightly in 2014 due to lower inventory. Recent data suggests a pickup once again in sales volume and a continued increase in pricing that slightly exceeds the rate of general inflation.
- Barring a major economic downturn, market conditions are expected to be strong through 2015 and 2016, favoring developers, in the subject market and Massachusetts

Each of these factors has been taken into consideration with the valuation of the subject property.

***Neighborhood*** - The subject property is located on the southerly side of Old Connecticut Path, west of Rice Road in the eastern portion of the town of Wayland. Wayland Center is 1.4 miles to the northwest. The Weston town line is 0.8 miles to the east. Access to I-95 is 4.2 miles east via Route 20. Route 20 is .3 miles to the north.

The immediate area is perhaps Wayland's least developed and is rural in nature. In addition to the subject 230+/- acre farm there is nearly 145 acres of conservation land abutting to the south and east.

The residential development in the immediate area includes antique farmhouses, newer mansions, and 1960's era contemporaries and split levels. Prices over the past 4-5 years for homes in the immediate area range from $750,000 to $2.5 million. Prices for single lots have ranged from $400,000 to $850,000.

Across Rice Road from the subject is a 30+/- acre development know as "Covered Bridge Lane" which features 12 homes on smaller, cluster lots; was approved in 2012. Recently in 2014-2015 six finished lots were sold to developer Trask, Inc., for $3.4 million. Trask is building homes from 4,000 sq ft, priced in the $1.4 million to $1.8 million range.

To the south of the subject is the Town of Wayland and Sudbury Valley Trustees conservation land totaling over 100 acres. Further south, off of Rice Road, are several luxury condominium developments constructed between 1986 and 2010. Also south of the subject is the Woodbridge neighborhood of Wayland.

The location of the subject is a strong positive factor affecting its value. It features scenic vistas, a location convenient to major highways, and newer construction priced at the upper end of the price range for Wayland.

**PROPERTY DESCRIPTION**: The subject of this report is 228.65 acres of residentially zoned land located at the corner of Old Connecticut Path and Rice Road in Wayland, Massachusetts. The property is known locally as *Mainstone Farm* and features rolling pasture, treed uplands, two ponds, and 3 older residential dwellings and outbuildings. At present the property is an active farm used to raise cattle and grow crops. A seasonal farm stand operates on site along the westernmost Old Connecticut Path frontage.

The following are additional details regarding the subject property:

## Site

| | |
|---|---|
| **Land Area** | 228.65 acres |
| **Frontage** | Rice Road - 2,700' +/-<br>Old Connecticut Path - 1,600' +/-<br>Forest Hill - 660' +/- |
| **Private Lane** | A 2,280' long private lane, titled "The Way" on several recorded plans of land, extends from Old Connecticut Path southerly into the subject land and provides access to the 4 subject parcels plus a fifth parcel owned by "Landry". |
| **Shape** | Irregular. |
| **Topography** | The topography of the land is characterized by moderate to steep slopes throughout land that is a combination of open pasture, treed uplands, and wetlands. Elevations on site range from 236' above sea level along the OCP frontage, to a peak of 383' in the west-central portion of the land; to 235-246' along the Rice Road frontage; to 246-314' along the Forest Hill Road frontage; to 255' at the very rear' of the land abutting the Sudbury Valley Trustees and Town of Wayland owned land. |
| **Flood Zone** | Only a very small portion of the land, to the rear near the SVT owned land is within the boundaries of the 100 year flood hazard area per FEMA Panels #250 17C 526E and 527E. Base plan in Addenda shows dimensions of the small flood plain area. |
| **Wetlands** | There are 3 distinct clusters of wetlands on site. One is a small pond, approximatley 19,000 sq ft in the western portion of the site near Forest Hill Road; the second is a large 7.5+/- acre pond near Rice Road; and the third is a small cluster in the west-central portion of the site as shown on the base plan in the Addenda. |
| **Utilities** | Municipal water, electric, natural gas, and all telecommunication lines are readily available to the site. There is no municipal sewer the area. Any development would require private septic systems. |
| **Easements/ Rights of Way** | There are no known or recorded easements affecting the subject land. |

## Improvements

| Parcel ID | Address | Improvement | Year Built | Room Count Tot/BR/Bths | Gross Building Area(sf) | Living Area(sf) |
|---|---|---|---|---|---|---|
| **35/31** | 83 Old Conn Path | Three Fam Res. | 1795 | 17/8/4f-2h | 10,048 | 6,752 |
| | | Attatched Garage | u.k. | | 1,664 | |
| | | Barn | u.k. | | 1,485 | |
| | | Barn | u.k. | | 640 | |
| | | Detached Garage | u.k. | | 1,485 | |
| | | Detached Garage | u.k. | | 1,296 | |
| | | Tennis Court | u.k. | | 5,000sf | |
| **35/31B** | 87 Old Conn Path | Single Fam Res. | 1903 | 15/7/5f-1h | 10,065 | 7,526 |
| | | Wood Shed | u.k. | | 84 | |
| **35/31C** | 87 Old Conn Path | Single Fam Res. | 1936 | 9/6/2f-1h | 4,900 | 4,760 |
| | | Wood Shed | u.k. | | 192 | |
| | | Wood Shed | u.k. | | 228 | |

**Comments/Conclusions**: This report has been completed in conjunction with an engineering and land planning report prepared by Beals & Thomas, Inc. (B&T). Within the B&T report there are details regarding soils, wetlands, zoning and possible development constraints. Excerpts from the B&T work can be found in the Addenda to this report.

The property is generally bound by Old Connecticut Path to the north; Rice Road to the east; conservation land to the south; and Forest Hill Road to the west. While the subject has extensive frontage on three roadways, access to the dwellings on site is via a private lane, 2,280+/- linear feet in length, shown as "The Way" on several recorded plans of land. Current ownership owns all parcels off of "The Way" except a 5+/- acre property owned by the Landry family.

Approximately 2/3 of the land is open, rolling pasture. Almost none of the acreage is level. Approximately 1/3 of the property is treed. The property is an active farm where crops are grown and cattle graze. Both crops and beef grown on site are sold at a temporary farmstand area along the Old Connecticut Path frontage.

## Consideration of Hazardous Substances in the Appraisal Process

Although no specific geotechnical engineering data has been provided, it is our assumption that the property is free and clear of any hazardous wastes or contaminating substances, as specified in applicable municipal, state and federal regulations or laws. In the event that this is not the case, the value as estimated herein may vary to the extent of contamination and the cost of cleanup.

As of September 16, 2015 the subject property is not included as either a contaminated site or a location to be investigated by the Bureau of Waste Site Cleanup of the Department of Environmental Protection, Commonwealth of Massachusetts. It is our assumption in this report, therefore, that the subject site is not a contaminated site. However, if the subject site is found to be contaminated, the value estimate contained herein will change.

## Zoning

The subject property is located in the Residential 60,000 zoning district of the Town of Wayland. Permitted uses include single family residence, municipal, educational, religious, non-profit uses, forestry or agriculture.

Dimensional requirements include a minimum lot size of 60,000 square feet and a minimum frontage of 210 feet. Minimum front, side, and rear setback requirements are 30 feet each. The maximum building height is 35 feet or 2.5 stories. The maximum lot coverage is 20%.

Additional details on zoning, from B&T, can be found in the Addenda to this report.

## Inclusion of Affordable Housing

Article 22 of the Wayland Zoning Bylaw requires that 16.67% (1 of every 6) of the units within a new development be sold or rented at predetermined below market prices or rents to individuals or families making no more than 80% of the median housing income for the area.

The bylaw does allow for up to 4 units on a single lot within a development so that one, 60,000 sq ft lot is not limited to just one affordable unit. So in the case of a 128 home cluster development, which is the highest and best use conclusion for the subject, the 22 units of affordable housing can be built using 6 of the lots rather than 22.

## HIGHEST AND BEST USE

The Dictionary of Real Estate Appraisal, Fifth Edition defines highest and best use as "the reasonable, probable, and legal use of vacant land or an improved property, which is physically possible, appropriately supported, financially feasible, and that results in the highest value. The four criteria the highest and best use must meet are legal permissibility, physical possibility, financial feasibility, and maximum profitability." The highest and best use is often referred to as the optimum use.

Since we are estimating two values, based upon two scenarios, one "before" restriction and one "after", a highest and best use analysis involving both is presented.

**Before Restriction**: Based upon a review of all of the legally permissible uses per zoning, and given the price of vacant lots and new construction in Wayland, some form of residential development is the likely highest and best use of the land.

Fortunately, there has been extensive land planning completed for the property by Beals and Thomas, Inc. Taking into consideration zoning, soils, wetlands, and the topography of the land, B&T has prepared 5 different conceptual subdivision plans. A copy of each can be found in the Addenda to this report. The following is a brief breakdown of the different plans:

| # of Lots | Roadway Required (linear feet) |
|---|---|
| 59 | 8,680 |
| 64 | 9,380 |
| 25 | 5,100 |
| 28 | 5,880 |
| 128 | 10,550 |

For each scenario, the 2,280 linear feet of "The Way" is included. But, as this lane is simply a driveway at present, it would need to be upgraded to current Town of Wayland roadway standards.

Also, for each scenario, in addition to the vacant lots listed above, there are the 3 parcels, each with a substantial dwelling, identified as Parcels 35/31, 35/31B, and 35/31C, that would be included in a development/selloff of the entire property.

The 5 conceptual plans would all require a developer to go through the definitive approval process. None of the 5 plans call for waivers or zone changes. Each is drawn, per B&T, subject to the rules and regulations governing the subdivision of land in Wayland.

Each or the plans are *legally permissible* and *physically possible*.

We then completed cash flow analyses on each of the 5 scenarios to determine which one had the highest value. Of the 5, the 64 lot and the 128 lot scenario had the highest values, with the latter having an indication of nearly $2 million more.

The 128-lot scenario has 110 cluster lots and 18 conventional sizes lots. The 18 conventional lots average 2.97 acres in size. The 110 cluster lots average 0.71 acres or 30,722 sq ft. This development, per Wayland regulations, calls for 22 affordable units. These units can be built in clusters of up to 4 attached units. Therefore, a total of 6 lots would be required for these 22 units. Based upon the prices allowed for affordable units ($175,000+/- for 2 bedrooms; $205,000+/- for 3 bedrooms), and construction costs, the affordable component of such a development is typically considered an offset of costs (breakeven). Therefore, on the cash flow that follows, the reader will notice us only projecting retail prices for 104 cluster lots instead of 110, as 6 lots are considered an 'offset' with no measurable retail value.

From a *financially feasible* standpoint, the cash flow model found later in this report is, in itself, a test of financial feasibility. Using inputs derived from actual sales and costs found in the subject marketplace, we derived a value of $23.7 million for the property "as is".

Based upon the analysis displayed above, and with consideration to market timing, it is our opinion that the highest and best use of the 228.65 acres "before" restriction is to proceed through the approval process towards a residential development similar in size and scope as the 128-lot Beals and Thomas Conceptual Subdivision Plan contained in the Addenda to this report and detailed above.

**After Restriction**: After the proposed/discussed Conservation Restriction is imposed, the development potential of the property is severely limited. Of the 228.65 acres, only 18.9 are left unrestricted. Uses allowed within the 18.9 acres include continued residential use of the 3 existing dwellings/lots identified as Parcels 35/31, 35/31B, and 35/31C, plus development of 3 additional new homes on Lots 105, 119, and 120 on the conservation restriction plan. For the 209.47 restricted acres, uses allowed are limited to agriculture, forestry, open space, and passive recreation.

After restriction it is our opinion that the highest and best use of the property is for passive/non-motorized recreation, agriculture, forestry, on 209.47 restricted acres; unrestricted use of the three existing dwellings on their lots of 5.0, 2.71,and 1.87 acres, plus the development as demand warrants of the 3 unrestricted lots shown on the restriction plan.

## EXPOSURE TIME

The Dictionary of Real Estate, 5th Edition, defines ***Exposure Time*** as:

> *"The estimated length of time the property interest being appraised would have been offered on the market prior to the hypothetical consummation of a sale at market value on the effective date of appraisal. Exposure time is always presumed to occur prior to the effective date of appraisal" (p 105)*

In other words, how long do we estimate it would have taken to sell the subject property at the estimated "as is" value of $23,700,000? Based upon discussions with developers/brokers who are active in selling substantial, high value properties such as the subject, it is our opinion that a reasonable exposure time is 12 months.

## ANALYSIS AND VALUATION

In order to estimate the change-diminution in the market value that will result from encumbrance with a permanent conservation restriction on a 209.47 acre portion of the property, we have utilized a "before and after" technique which measures the effect on value of the property as a result of placing this restriction on the land. For the "before" valuation a Cost of Development Approach has been utilized. For the "after" valuation, a similar valuation technique has been used.

**BEFORE RESTRICTION VALUATION**: In order to estimate the value of the subject property "as is" to a single purchaser, a Cost of Development Approach has been utilized. This is a valuation tool available to the appraiser when subdivision and development represent the highest and best use of a property. In this case, after determining the number and type of lots that can be created from the appraised parcel, physically, legally, and economically, a sales comparison analysis of finished lots is then undertaken. In the subject case we also review sales of antique/older homes in the area to project values for the three existing dwellings component of the development. After adjusting the comparable sales for differences, the appraiser estimates the most likely retail sale prices of these lots and the existing dwelling, the probable development period and the absorption rate.

All costs associated with constructing and selling the lots are then deducted from their projected retail sale prices. The periodic net sale proceeds are then discounted to present value at an appropriate yield rate over the estimated period required for the project development and market absorption. The result is an indication of the value of the property 'as-is'.

### *RETAIL LOT PRICE PROJECTIONS- Vacant Lots*

We have researched the area for sales/listings of single family building lots in order to project retail prices for our valuation model. Of the 15-20 lot sales initially researched, 11 sales were considered most similar to the subject lots. The following is a summary of these comparable lot sales:

**WAYLAND AREA LOT SALES SUMMARY**

**Date of Valuation:** **16-Sep-15**

**Annual Time Adjustment** **4.0%**

| | ADDRESS | SALE PRICE/ DATE | TIME ADJUSTED SALE PRICE | LOT SIZE (AC/SF) | LEGAL REF(Bk/Pg) | WATER/ SEWER | GRANTOR/ GRANTEE |
|---|---|---|---|---|---|---|---|
| **#1.** | 87 Lincoln Road<br>Wayland | $920,000<br>18-May-15 | **$932,202** | 5.10<br>222,155 | 65379/266 | public/<br>private | Hazelbrook RT/<br>Jonathan Entis |
| | Comments: | *Estate lot in north Wayland near the Lincoln line. Long, private, common driveway leads to this lot. Septic design for 6 br home in hand. Apprxoximately 60% of lot is cleared and level. Abuts conservation land.* | | | | | |
| **#2.** | 150 Wayside Inn Rd<br>Sudbury | $800,000<br>29-Mar-13 | **$879,009** | 9.53<br>415,051 | 62443/295 | public/<br>private | First Colony Dev./<br>Buddy Dog Humane |
| | Comments: | *Estate lot near the historic Wayside Inn in Sudbury. Septic design for 6 br home in hand. This lot had sold for $675,000 on 12-21-09 but was never developed. The 18.52% increase in price over 51 months translates to an annualized 4.36% appreciation.* | | | | | |
| **#3.** | Lot 2 Appleton Lane<br>Wayland | $700,000<br>17-Oct-14 | **$725,628** | 1.39<br>60,436 | 64382/580 | public/<br>private | Boulder Appletree LLC/<br>A.D. Cooper |
| | Comments: | *Part of a 5 lot cul de sac in north Wayland on the Lincoln line. Level, open lot surrounded by meadows and conservation land. Next to agricultural estate.* | | | | | |
| **#4.** | Lot 8 Hidden Springs Ln<br>Wayland | $625,000<br>29-Mar-13 | **$686,726** | 0.70<br>30,506 | 61506/4 | public/<br>private | Terra Holdings, LLC/<br>David G. Robinson |
| | Comments: | *One of 8 lots in the Hidden Springs Farm subdivision located at the intersection of Plain Road & Claypit Hill Rd near the elementary school campus. 4 of 8 lots built, 1 is under construction. Homes have sold from $1.5 to over $2 million. This lot at entrance.* | | | | | |
| **#5.** | 10 Fiddlehead Ln<br>Wayland | $611,500<br>16-Jun-15 | **$617,667** | 1.71<br>74,331 | 65543/267 | public/<br>private | 10 Fiddlehead Lane LLC/<br>Fiddlehead Lane Development |
| | Comments: | *One of two new lots off of Claypit Hill Road in the desirable Claypit Hill School district. Sold with septic design in hand.* | | | | | |
| **#6.** | 29 Plympton Road<br>Sudbury | $590,000<br>5-Feb-15 | **$604,422** | 1.45<br>63,162 | 1466/140 | private/<br>private | Deborah McKinstry/<br>LAS Properties LLC |
| | Comments: | *Wooded, moderately sloping lot in estate area of Sudbury. Lot only allows for 3 bedroom septic system.* | | | | | |
| **#7.** | Lot 1 Appleton Lane<br>Wayland | $555,000<br>22-Oct-14 | **$575,015** | 1.38<br>60,000 | 64397/181 | public/<br>private | Boulder Appletree LLC/<br>The Charles Company LLC |
| | Comments: | *Part of a 5 lot cul de sac in north Wayland on the Lincoln line. Level, open lot surrounded by meadows and conservation land. Lot at corner of Waltham Road.* | | | | | |
| **#8.** | 9 Reservoir Road<br>Wayland | $500,000<br>31-May-12 | **$565,932** | 3.68<br>160,301 | 59196/245 | public/<br>private | Elizabeth Moon/<br>Joseph Hicklin |
| | Comments: | *Tear down lot sale off of common drive in Woodbridge area. Hilltop lot that overlooks conservation land and pond. Older dwelling needed to be razed. Pond frontage.* | | | | | |
| **#9.** | 12 Pheasant Run<br>Wayland | $475,000<br>17-Jan-13 | **$525,608** | 1.07<br>46,489 | LC 1429/118 | public/<br>private | Sacra Nominee Trust/<br>Steven Sundberg |
| | Comments: | *Tear down lot sale along established cul de sac in Claypit Hill school district. Level, wooded lot at end of cul de sac. Older dwelling razed post sale.* | | | | | |
| **#10.** | 58 Old Connecticut Pth<br>Wayland | $465,000<br>1-Mar-12 | **$530,955** | 1.39<br>60,591 | 58596/112 | public/<br>private | Yet Ming Chiang/<br>Kaushal B. Mehta |
| | Comments: | *Vacant, pasture lot near Rice Road and Route 20. Busy portion of Old Conn Path. Partial views of Mainstone Farm to SW.* | | | | | |
| **#11.** | 1 Pheasant Run<br>Wayland | $420,000<br>25-Jan-12 | **$481,230** | 1.03<br>45,000 | LC 1411/20 | public/<br>private | Maple Hill Architects/<br>Lingley Lane LLP |
| | Comments: | *Tear down lot sale along established cul de sac in Claypit Hill school district. Level, wooded lot at entrance to subdivision. Older dwelling razed post sale.* | | | | | |

## Lot Sales Analysis

The sales range in price from $420,000 to $920,000. Of the 11 sales, 9 are in Wayland and 2 are in neighboring Sudbury. Five of the sales are very recent, having occurred within 11 months of the date of valuation. All remaining sales closed within a 36+/- month period.

The sales have been adjusted up for market conditions at a 4% annualized rate. We chose this rate after a review of the Case/Shiller Index referenced earlier, along with a review of the 'repeat sales' examples presented earlier in this analysis.

Sale #1 is an estate lot in north Wayland on the Lincoln Town Line. Good size and good views are the reason for this lot being at the top of the price range from building lots in the subject marketplace.

Sale #2 is an estate lot in the Wayside Inn area of Sudbury north of Route 20. Not as good a location as the subject property. But the lot size is quite large for a single lot in this market and a premium was paid for this size.

Sales #3 and #7 are two new lots off of cul de sac in north Wayland on the Lincoln line. Excellent location, but smaller, less private lots. #3 sold at a higher price because it was located further in from the main street than #7.

Sale #4 is a 'cluster' sized lot in a newer development in the Claypit Hill School area. Excellent location, but average views.

Sale #5 is in the Claypit Hill School area as well. It is one of two new lots. Good location. Average views.

Sale #6 is located in an estate area of Sudbury. Excellent location. Marginal soils only allow for a 3 bedroom septic, which in turn kept the price down for this lot.

Sales #8 through #11 represent 'average' lots for the subject marketplace. The subject is superior in location and views to each.

Based upon a review of these sales, we make the following retail price projections for the 122 potential, vacant, *market rate* subject lots:

| VACANT LOT PRICE PROJECTIONS | # of Lots | Per Lot Type Projected Retail Price | Aggregate Retail Per Lot Type |
|---|---|---|---|
| Conventional Lots; 2.97 acre average | 18 | $ 800,000 | $ 14,400,000 |
| Cluster Lots: 0.71 acre average | 104 | $ 625,000 | $ 65,000,000 |
| **Total Number of Lots** | **122** | | |
| **Average Retail Price Projection** | | | **$ 650,820** |

Up to date of valuation we adjusted the lot prices up at a 4% annualized rate. Going forward, we have projected an annual price increase slightly lower, at 3%. All indications from the data analyzed suggest that while positive conditions will continue, we may be nearing a plateau in pricing.

### *RETAIL PRICE PROJECTIONS-Existing Dwellings*

The following sales were reviewed and analyzed in order to project the retail price potential for the existing dwellings on Parcels 35/31, 35/31B, and 35/31C:

## RESIDENTIAL HOME SALES SUMMARY

**Date of Valuation:** 16-Sep-15
**Time Adjustment:** 4%

| | Address | Sale Price/ Date | Size of Lot (ac) | Room Count (tot-br-baths) | Year Built/Reno. | Living Area (sf) | Price Per Sq Ft of Living Area | Time Adjusted Price Per Sq Ft | Water/Sewer | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 . | 104 Plain Road Wayland | $ 1,400,000 5-May-15 | 4.70 | 13-5-4 | 1870 | 3,701 | $ 378 | **$ 384** | public/private | Antique colonial with a contemporary wing. Detached barn, garage. Close to Route 20 and Weston line. |
| 2 . | 10 Old Sudbury Rd Wayland | $ 940,000 29-Oct-14 | 2.04 | 9-4-2.5 | 1770 | 3,348 | $ 281 | **$ 291** | public/private | Antique colonial near center of town. "Zechariah Bryant" house. New kitchen and barn. |
| 3 . | 12 Sherman Bridge Rd Wayland | $ 920,000 30-Apr-14 | 1.38 | 12-4-3.5 | 1895 | 3,740 | $ 246 | **$ 260** | public/private | Victorian farmhouse off of Route 126 south of town center. Near conservation land and ball fields. |
| 4 . | 194 Cochituate Rd Wayland | $ 795,000 2-Jul-14 | 1.85 | 10-4-3.5 | 1915 | 3,338 | $ 238 | **$ 250** | public/private | Nantucket style colonial on 1.85 acres in southern portion of town of Route 27. Less private location. |
| 5 . | 107 Plympton Road Sudbury | $ 1,200,000 11-Jul-14 | 2.02 | 14-4-4 | 1920 | 5,755 | $ 209 | **$ 218** | public/private | Colonial-Farmhouse located in estate area near Great Meadows conservation area. Home expanded 20 years ago. |
| 6 . | 391 Concord Road Sudbury | $ 960,100 28-Jan-15 | 3.18 | 15-4-3.5 | 1850 | 3,873 | $ 248 | **$ 254** | public/private | Red antique farmhouse in north Sudbury between Route 27 and 117. Broker indicates extensive updates prior to sale. |
| 7 . | 125 Pelham Island Rd Sudbury | $ 782,000 28-Jul-15 | 1.77 | 17-7-4 | 1800 | 4,656 | $ 168 | **$ 169** | public/private | Three story, Mansard roof Colonial in south Sudbury. Required extensive updating at time of sale per broker. |
| 8 . | 253 Concord Rd Sudbury | $ 755,000 5-Aug-15 | 2.28 | 8-4-3 | 1800 | 2,976 | $ 254 | **$ 255** | public/private | Sudbury Historic District antique colonial. Good condition at time of sale. |

**Home Sales Analysis**

We have compared these sales to the subject dwellings on a price per sq ft of living area basis. This is an all inclusive indicator that takes into consideration the location, condition, and quality of the property. These sales have also been adjustment for time/market conditions at the 4% annualized rate leading up to the date of valuation.

Based upon a review and analysis of each of the sales it is our opinion that the retail value of the three existing dwellings on their respective parcels of land as of the date of valuation are as follows:

**Parcel 35/31**

| Living Area | | Price Per Sq Ft | | Indicated Price |
|---|---|---|---|---|
| 6,752 | x | $ 245 | = | $1,654,240 |
| | | **ROUNDED** | | **$1,650,000** |

**Parcel 35/31B**

| Living Area | | Price Per Sq Ft | | Indicated Price |
|---|---|---|---|---|
| 7,526 | x | $ 200 | = | $1,505,200 |
| | | **ROUNDED** | | **$1,510,000** |

**Parcel 35/31C**

| Living Area | | Price Per Sq Ft | | Indicated Price |
|---|---|---|---|---|
| 4,760 | x | $ 205 | = | $ 975,800 |
| | | **ROUNDED** | | **$ 980,000** |

***ABSORPTION*** - Retail price projections for the components have been made. The next step in the Cost of Development Analysis is to project a development and sellout period. This period would include the time it takes to construct, market, sell and close on each of the components.

Based upon discussions with town officials, and the scope of the 128 lot development, it is our opinion that despite the fact that no waivers or zone changes are requested, it would take 12-18 months to gain all approvals for development.

11 of the lots from this plan are 'ANR' or approval not required, meaning they have enough frontage on existing roadways and significant land area, to be considered building lots now, without requiring formal approvals.

In the cash flow model that follows, we project that in Year 1, 5 of the ANR lots are sold along with the 3 dwellings. The approval process continues. In Year 2, we expect all approvals in hand and road construction to occur. During this year, we project 9 more lot sales; some ANR and the initial lots from the approved subdivision. In Years 3 and beyond, we project a sales pace of 1 lot per month until sellout. The total approval, development, and sellout period in projected at 11 years.

***DEVELOPMENTAL EXPENSE ANALYSIS***

An estimate of the retail potential and a sellout period for the lots has been made. It is now necessary to deduct expenses related to the construction and marketing of the lots to individual buyers.

The following is an estimate and summary of the necessary expenses.

**Engineering & Approval Costs** - In order to gain approvals for the 128-lot subdivision, we have projected engineering and approval costs at $3,000 per lot based upon discussions with two greater Boston based engineering firms specializing in residential developments. This expense is expected to cover engineering, soil testing, representation at numerous planning board meetings, definitive plans and Orders of Conditions from the local conservation commission.

**Cost to Install the New Roadways/Infrastructure** - We have projected a cost of $650 per linear foot to install the 10,550 linear feet of roadway required based upon a review of the estimates by B&T presented in the Addenda to this report, and a review of the following actual road costs at developments in the area:

| Town | Project | Road(lf) | Road Cost | Price/LF | Date | Comments |
|---|---|---|---|---|---|---|
| Hanover | Stable Ridge | 1,384 | $827,630 | $598.00 | 2015 | 14 lot cul de sac roadw ay required. 28' w ide pavement; granite curbing; municipal w ater, individual septic. Level land. |
| Boylston | Barnard Hill | 6,773 | $3,787,000 | $559.10 | 2014 | 46 lot development. Not yet constructed. High costs due to required bridge over w etlands and extensive grading. Public w ater, private septic. Not yet started. |
| Hudson | Olde North Estates | 1,480 | $580,000 | $391.89 | 2014 | 19 lots. public w ater/sew er. |
| Middleton | East Meadow Farm | 2,615 | $1,176,750 | $450.00 | 2013 | 17 lots. public w ater/private sew er. asphalt curbing, sidew alk 1 side. |
| Marshfield | Cranberry Cove | 1,400 | $670,543 | $478.96 | 2013 | 13 lots. public w ater/private sew er. |
| Holden | Stanhope Estates | 506 | $300,770 | $594.41 | 2011 | 6 lots. Hilly location; public w ater/sew er. |
| Leominster | Sheldon Hill | 1,705 | $573,472 | $336.35 | 2010 | 23 lot development; 22' w ide pavement. Asphalt curbing; septic, muni w ater. ground, 24' w ide pavement, steep slps. below grnd utils, asphalt curbs, septic. |

**Real Estate Taxes During Sellout** – The property currently enjoys a tax deferment due to its enrollment in the Chapter 61 program. If the property were to be developed, however, the new owner would be paying taxes based upon the non Chapter 61 assessment. The tax burden assuming no Chapter 61 is $189,705.72.

During the first two years of the development, we project a real estate tax burden similar to this amount, adjusted for inflation in Year 2.

In Year 3 and beyond, based upon a review of the assessments for vacant, but unconstructed lots in town, we project a per lot assessment of 50% of retail value. This translates into a time adjusted, per lot annual tax of $5,984. Thus the taxes in Years 3 and beyond is calculated as the total burden for all lots remaining unsold at the end of each year, plus the burden for ½ of the lots sold during the year, assuming a straight line sellout.

**Legal/Conveyance** – The stamp tax alone on the sale of real estate in the Commonwealth of Massachusetts is $4.56 per thousand dollars of sale price. We have taken a closing cost expense of $4.56/$1000, plus $1,000 per sale to pay for the representation of an attorney at closings.

**Marketing Expense** - A marketing expense has been estimated for the purpose of allocating resources to the marketing and sale of the individual units. An allowance of 5% of the sale price has been used and is the norm for commissions in the Wayland area.

**Discount Rate** - The discount rate in this analysis includes a rate that recognizes the time value of money and compensation for the illiquidity of funds; it includes a factor for the risk associated with installing roadways, carrying costs and selling the various components of the development; <u>and, it includes overhead and entrepreneurial profit</u>.

In order to project a rate commensurate with the subject property we have reviewed two sets of investor/developer surveys, excerpts of which can be found in the Addenda section to this report. The range of discount rates from the most recent survey ranges from 15.6% to 32.72% with an average of 23.68%.

The subject's excellent location and physical attributes argue for a rate at the lower end of the range. But the large scale of this development and the fact that it is not yet approved, argue for a rate at the upper end of the range. Taking all into consideration we have used a rate of 24%, at the average for this survey.

**SUMMARY** - After making expense deductions, the net cash flows are derived and the present worth of the investment can be calculated. After applying an appropriate discount rate, it is our opinion that the market value of the 228.65 acre subject property, 'as is', or "before restriction", as of September 16, 2015, is **$23,700,000.** The following is our Cost of Development model:

## SUBDIVISION DEVELOPMENT ANALYSIS

**Subject Property**

**Mainstone Farm Property**
**Wayland, Massachusetts**
**228.65 Acres**

**Cluster Plan**
**128 Vacant Lots; 122 Market Rate/6 Affordable**
**3 Additional Lots with Dwellings & Outbuildings**
**10,550+/- l.f. of Total Roadway Required**
**Of 122 Market Rate Lots; 18 Coventional; 104 Cluster**

**Development Presumptions/Expenses**

| | | |
|---|---|---|
| **Date of Valuation** | 16-Sep-15 | |
| **Average Lot Price** | $ 650,820 | |
| **Annual Price Change** | 3.0% | |
| **Annual Cost Change** | 3.0% | |
| **Real Estate Taxes (during sellout)** | $3,309,538 | |
| **Legal - Closing Cost per lot** | $4.56/$1000+$1000 per lot | |
| **Assumed Tax per lot** | $5,984 | (Begin Y3) |
| **Advertising, brokerage** | 5% | |
| **Discount Rate** | 24% | |

(includes overhead and developers profit, time cost of money, risk)

**(See Next Page for Years 8 through 11).**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Number of VACANT lots to be sold** | 122 | **Sales During Period** | 5 | 9 | 12 | 12 | 12 | 12 | 12 |
| | | **Lots Remaining** | 117 | 108 | 96 | 84 | 72 | 60 | 48 |
| **INCOME** | | | **YEAR 1** | **YEAR 2** | **YEAR 3** | **YEAR 4** | **YEAR 5** | **YEAR 6** | **YEAR 7** |
| **Proceeds from Lot Sales** | | | $ 3,254,098 | $ 6,033,098 | $ 8,285,455 | $ 8,534,019 | $ 8,790,039 | $ 9,053,740 | $ 9,325,353 |
| **Proceeds from Sale of Parcel 35/31** | | | $ 1,650,000 | $ - | $ - | $ - | $ - | $ - | $ - |
| **Proceeds from Sale of Parcel 35/31B** | | | $ 1,510,000 | $ - | $ - | $ - | $ - | $ - | $ - |
| **Proceeds from Sale of Parcel 35/31C** | | | $ 980,000 | $ - | $ - | $ - | $ - | $ - | $ - |
| | | **Total Proceeds** | $ 7,394,098 | $ 6,033,098 | $ 8,285,455 | $ 8,534,019 | $ 8,790,039 | $ 9,053,740 | $ 9,325,353 |
| **EXPENSES** | | | | | | | | | |
| **Engineering/Permitting/Approvals** | @ $3,000 | **per lot** | $ 200,000 | $ 184,000 | $ - | $ - | $ - | $ - | $ - |
| **Road Installation (10,550 lf)** | @ $650 | **per ft** | $ - | $ 2,825,290 | $ 1,455,024 | $ 1,498,675 | $ 1,543,635 | $ - | $ - |
| **Legal Expense/Closing Costs** | $4.56/$1000+$1000 | | $ 41,717 | $ 36,511 | $ 49,782 | $ 50,915 | $ 52,083 | $ 53,285 | $ 54,524 |
| **Real Estate Taxes During Sellout** | | | $ 189,706 | $ 195,397 | $ 610,379 | $ 554,727 | $ 466,761 | $ 394,951 | $ 323,142 |
| **Advertising, brokerage** | @ 5% | **of sales proceeds** | $ 369,705 | $ 301,655 | $ 414,273 | $ 426,701 | $ 439,502 | $ 452,687 | $ 466,268 |
| **Total Expenses** | | | $ 801,128 | $ 3,542,853 | $ 2,529,458 | $ 2,531,018 | $ 2,501,980 | $ 900,923 | $ 843,933 |
| **Net Development Proceeds** | | | $ 6,592,970 | $ 2,490,245 | $ 5,755,997 | $ 6,003,001 | $ 6,288,059 | $ 8,152,817 | $ 8,481,420 |
| **PRESENT WORTH OF NET PROCEEDS** | $23,696,838 | **Rounded to** | **$23,700,000** | | | | | | |

| | | | | |
|---|---|---|---|---|
| 12 | 12 | 12 | 12 | |
| 36 | 24 | 12 | 0 | |
| **YEAR 8** | **YEAR 9** | **YEAR 10** | **YEAR 11** | **TOTALS** |
| $ 9,605,113 | $ 9,893,267 | $10,190,065 | $10,495,767 | $93,460,014 |
| $ - | $ - | $ - | $ - | $ 1,650,000 |
| $ - | $ - | $ - | $ - | $ 1,510,000 |
| $ - | $ - | $ - | $ - | $ 980,000 |
| $ 9,605,113 | $ 9,893,267 | $10,190,065 | $10,495,767 | $97,600,014 |
| $ - | $ - | $ - | $ - | $ 384,000 |
| $ - | $ - | $ - | $ - | $ 7,322,625 |
| $ 55,799 | $ 57,113 | $ 58,467 | $ 59,861 | $ 570,056 |
| $ 251,333 | $ 179,523 | $ 107,714 | $ 35,905 | $ 3,309,538 |
| $ 480,256 | $ 494,663 | $ 509,503 | $ 524,788 | $ 4,880,001 |
| $ 787,388 | $ 731,300 | $ 675,684 | $ 620,554 | $16,466,219 |
| $ 8,817,726 | $ 9,161,967 | $ 9,514,381 | $ 9,875,213 | $81,133,795 |

**AFTER RESTRICTION VALUATION**: After the restriction is imposed, the property consists of 3 vacant building lots, the 3 existing dwellings on lots of 5.0, 2.71, and 1.87 acres, and 209.47 acres of restricted land. Data presented previously in this report can be used to project the retail value of the vacant lots and the 3 dwellings. But for the 209.47 acres of restricted land, we will need additional sales data.

In order to estimate the value of this portion of the subject property, a Sales Comparison Analysis of similar land has been conducted in the subject market area. The question arises then, *"What is similar to the 209.47 acres of restricted land"?*

There is no doubt that this portion of the subject is 'non buildable' due to the proposed perpetual conservation restriction. Our search for comparable data thus included sales of land that was either *legally* or *physically* 'non buildable', similar to the subject.

Sales of this type of land are far less frequent than sales of building lots and 'buildable' acreage. Therefore, the search area and search period for comparable sales was extended beyond typical guidelines.

The following is a brief summary of the 6 restricted and/or non-buildable land sales, similar to the subject 209.47 acres.

## RESTRICTED/NON BUILDABLE COMPARABLE LAND SALES SUMMARY

**Date of Valuation** 16-Sep-15
**Annual Time Adjustment** 4.00%

| # | ADDRESS/ TOWN | GRANTOR/ GRANTEE | SALE PRICE/ DATE/$ per AC | LAND AREA(ac) | LEGAL REF. BOOK/PAGE | TIME ADJUSTED PRICE/ ACRE | COMMENTS - REASON(S) FOR NON-BUILDABLE STATUS |
|---|---|---|---|---|---|---|---|
| 1 . | Lot G Adams Lane<br>Dover | Stephen Fogg/<br>Stephen Karlson | $660,800<br>6-Mar-14<br>$24,657 | 26.80 | 32106/23 | **$26,168** | Land is non buildable due to lack of road frontage. Abuts Hale Reservation. Very rocky land, with steep slopes. Land may be developable with acquistion of a couple abutting parcels but highly unlikely. Purchased by an abutter to enhance his home at 7 Adams Lane. Was on market through MLS at $1 million for 1 week before P&S signed at a price that is the same as the assessment of the land by the town. Grantor, Stephen Fogg had bought the parcel for $325,000 in September of 2008. |
| 2 . | Bond Road, High Street<br>Holden and Rutland | Estate of Sandstrom<br>Lilac Hedge Realty | $550,000<br>19-Aug-15<br>$1,571 | 350.00 | 54181/237,241 | **$1,576** | Purchase of the Sandstrom farm. Land includes 120 cleared pasture acres and remainder wooded uplands and wetlands. All affected by APR/CR. Cannot be developed. Land contains a barn and metal quonset hut. Purchased by local farmers who will use it for grazing cattle and sheep. Former dairy farm. |
| 3 . | Lot 5 Haynes Road<br>Sudbury | Rocklage/<br>Siena Farms LLC | $1,000,000<br>18-Jul-13<br>$38,212 | 26.17 | 62267/528 | **$41,521** | Land sold subject to an agricultural preservation restriction (APR). It cannot be developed and has been used in the past both for cropland and pasture for horses and sheep. Purchased by neighbors who own a single family home 1/4 mile north and who plan to continue farming the land. Grantor in this transaction purchased the land in April 2006 for $495,000. |
| 4 . | Map R13 Lots 70&72<br>Bailey's Lane<br>West Newbury, MA | Tyler Kimball/<br>Bailey's Lane LLC | $675,000<br>23-Feb-12<br>$4,891 | 138.00 | 31108/487 | **$5,589** | 138 acres of restricted agricultural land sold at auction. Located on both sides of Bailey Lane. Includes 115 acres of open tillable farm land and 23 acres of wooded and wet support land. There is a 6,670 sf storage barn on property as well. Purchase by Peabody based fertilizer company. Well advertised auction attended by over a dozen active bidders. |
| 5 . | Parcel 126-5 Old Bedford<br>Lincoln | Nancy Forg/<br>Town of Lincoln CC | $146,400<br>18-Jun-14<br>$28,154 | 5.20 | 63774/41 | **$29,558** | Parcel of land with no legal road frontage, but does have rights of way via an old cart path off of Old Bedford Rd. Attempts to use this as legal frontage failed, and owners then negotiated a sale of this non buildable parcel to the town based upon its assessment. |
| 6 . | Map 22 Parcel 2<br>Map 39 Parcel 2<br>Ball Street<br>Northborough, MA | N.E. Forestry, Inc./<br>Ball Hill Realty, LLC | $115,000<br>24-Jul-12<br>$3,296 | 34.89 | 49329/232 | **$3,711** | Mostly cleared tract of farmland which straddles the Northborough-Boylston town line. Previously used by grantee,through a rental, for growing a variety of field crops. Plan of property in Worcester South Registry in Plan Bk 895 Plan 16. |

**Non Buildable Land Sales Analysis**

The motivations of buyers of non-buildable or restricted land are wide-ranging and vastly different from motivations involving the purchase of "usable" properties. Some of the more common motivations or reasons for purchase include:

Agricultural use or timber rights.

An abutter, who simply wants to increase the size of one's yard, create a larger buffer between a neighbor, or have extra room to walk their dog or for their children to play.

In the case of non-restricted land, that is non-buildable due to lack of access, a 'gambler' type developer who thinks that, through assemblage of other land, that access to the non-buildable parcel could be obtained, making it 'buildable'.

The local municipality may want to purchase the property for conservation, or perhaps prevent a higher authority such as the State or U.S. Government from acquiring the tract for other uses.

Nature conservancy. If a site was a natural nesting ground for a specific species, many government agencies, including the U.S. Fish & Wildlife Agency, would be interested in acquiring the parcel.

Recreational use.

The typical buyer of this type of property has been conservation groups acting for municipalities. These groups fear that even if a property is presently non-buildable due to physical or legal constraints, something may change years down the road that would allow for development. Better to buy now at a low price than risk development later is the logic used.

The 6 sales used in this analysis all generally have one of the above reasons as a motivator for purchase. The sales range in size from 5.2 to 350 acres. The gross sale prices range from $115,000 to $1,000,000. Prices per acre range from $1,571 to $38,212. It is worth noting here that none of the 6 sales are 'exactly' similar to the subject. As referenced above, sales of this type of land are quite rare. Our search for sales was exhaustive and was extended beyond normal guidelines, both in terms of area and time frame. While the 6 sales don't include a *duplicate* of the subject in terms of size and location, they do provide a solid range of indicators from which a reasonable estimate of the value of the subject can be derived.

We have made the same 4% annualized adjustment to these sales for the market conditions of the past few years.

Based upon this analysis it is our opinion that an appropriate indicator for the restricted portion of the subject is $10,000 per acre. Therefore, the estimated value of this component of the subject property, after restriction, as of November 4, 2011, is as follows:

| | | | | |
|---|---|---|---|---|
| **209.47 acres** | **x** | **$10,000 per acre** | **=** | **$2,094,700** |

**<u>"AFTER" VALUE SUMMARY</u>**: As with the much larger "before" development, we do think discounting is appropriate and required because all 6 components of the property "after" will take time to sell. We have therefore utilized the same cash flow model as the "before" scenario but adopted it for the "after" situation.

But, for the existing dwelling price projection, we have adjusted the "before" projections up 5% to take into consideration the enhancement that would result from being surrounded by conservation land versus 128 new homes.

We have discounted the net proceeds at 14%. This is much lower than the 24% used for the "before" analysis. However, "after" involves no development and limited risk and therefore a lower rate is justified.

By discounting the net proceeds at the 14% rate, the value of the subject property "after" restriction, as of September 16, 2015, is estimated at $6,700,000. The calculations can be seen below:

## SUBDIVISION DEVELOPMENT ANALYSIS

| Subject Property | Development Presumptions/Expenses | | |
|---|---|---|---|
| **Mainstone Farm Property** | **Date of Valuation** | 16-Sep-15 | |
| **Wayland, Massachusetts** | **Annual Price Change** | 3.0% | thru sellout |
| **228.65 Acres** | **Annual Cost Change** | 3.0% | |
| | **Real Estate Taxes (during sellout)** | $0 | |
| **After Restriction Scenario** | **Legal - Closing Cost per lot** | $4.56/$1000+$1000 per lot | |
| **3 Lots with Dwellings & Outbuildings** | **Advertising, brokerage** | 5% | |
| **3 Additional Vacant Lots** | **Discount Rate** | 14% | |
| **209.47 acres restricted via CR** | (includes overhead and developers profit, time cost of money, risk) | | |

| | | | | YEAR 1 | YEAR 2 |
|---|---|---|---|---|---|
| **INCOME** | | | | | |
| **Proceeds from Reserved Lot 105; 3.7 acres** | | | $ | - | $ 800,000 |
| **Proceeds from Reserved Lot 119; 1.5 acres** | | | $ | - | $ 685,000 |
| **Proceeds from Reserved Lot 120; 4.1 acres** | | | $ | - | $ 825,000 |
| **Proceeds from Sale of Parcel 35/31** | | | $ | 1,732,500 | $ - |
| **Proceeds from Sale of Parcel 35/31B** | | | $ | 1,585,500 | $ - |
| **Proceeds from Sale of Parcel 35/31C** | | | $ | 1,029,000 | $ - |
| **Proceed from Sale of 209.47 acres of CR Land @** | | **$10,000 per acre** | $ | - | $2,094,700 |
| | | **Total Proceeds** | $ | 4,347,000 | $4,404,700 |
| **EXPENSES** | | | | | |
| **Engineering/Permitting/Approvals** | | | $ | 15,000 | $ - |
| **Legal Expense/Closing Costs** | $4.56/$1000+$1000 | | $ | 22,822 | $ 24,085 |
| **Real Estate Taxes During Sellout** | | | $ | 67,918 | $ 69,956 |
| **Advertising, brokerage** | @ | 5% **of sales proceeds** | $ | 217,350 | $ 220,235 |
| **Total Expenses** | | | $ | 323,090 | $ 314,276 |
| **Net Development Proceeds** | | | $ | 4,023,910 | $4,090,424 |
| **PRESENT WORTH OF NET PROCEEDS** | $6,677,194 | **Rounded to** | | **$6,700,000** | |

## RECONCILIATION AND VALUE CONCLUSION

The final step in estimating the market value both “before” and “after” a proposed Conservation Restriction is a correlation of the value from each of the approaches utilized in the appraisal process.

In order to estimate the diminution in value, we utilized a "before and after" technique which measured effect on the value of the overall property as a result of placing the proposed restriction on a portion of the land.

To estimate the value of the property *before restriction*, a Cost of Development/Subdivision analysis technique, was used. Twelve building lot sales/listings, and six sales of antique, older style homes were reviewed and analyzed in order to market retail price projections for the components involved with a subdivision of the subject property in accordance with our opinion of the highest and best use of the land. Cost necessary to achieve these retail prices were projected based upon a review of actual costs of similar developments in the area, along with expected brokerage commissions and real estate tax costs. The net proceeds from this exercise were then discounted at a 24% rate to estimate a present value of the property “before” restriction at $23,700,000.

After the restriction is imposed, the acreage has the far less development potential. A combination of the Cost of Development Approach and a Sales Comparison Analysis of restricted/non buildable land were utilized in order to estimate the value of the property after restriction at $6,700,000.

Based upon the methods of valuation used, it is our opinion that the market value(s) of the subject property as of September 16, 2015 are as follows:

| | |
|---|---|
| **Estimated Value of the Property Without Restriction** | **$23,700,000** |
| **Estimated Value of the Property After Restriction** | **$ 6,700,000** |
| **INDICATED DIMINUTION IN VALUE BECAUSE OF CR** | **$17,000,000** |

## CERTIFICATION OF VALUE

We certify that, to the best of our knowledge and belief,...

- the statements of fact contained in this report are true and correct.
- the reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and are our personal unbiased professional analyses, opinions, and conclusions.
- we have no present or prospective interest in the property that is the subject of this report, and we have no personal interest or bias with respect to the parties involved.
- our compensation is not contingent on an action or event resulting from the analyses, opinions, or conclusions in, or the use of this report.
- our analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the requirements of the Code of Professional Ethics and the Standards of Professional Practice of the Appraisal Institute.
- the use of this report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives.
- Mr. Bowler and Mr. Avery are currently certified under the voluntary continuing education program of the Appraisal Institute.
- we have made a personal inspection of the property that is the subject of this report.
- no one provided significant professional assistance to the persons signing this report.
- the appraisal assignment was not based on a requested minimum valuation, a specific valuation, or the approval of a loan.

Based upon the data presented in this report, it is our opinion that the market value(s) of the subject property as of September 16, 2015, subject to the definitions, limiting conditions, extraordinary assumptions, hypothetical condition, and certifications set forth in the attached report are as follows:

| | |
|---|---|
| **Estimated Value of the Property Without Restriction** | **$23,700,000** |
| **Estimated Value of the Property After Restriction** | **$ 6,700,000** |
| **INDICATED DIMINUTION IN VALUE BECAUSE OF CR** | **$17,000,000** |

Christopher H. Bowler, MAI, SRA
Massachusetts Certified General
Real Estate Appraiser #495

Jonathan H. Avery, MAI, CRE
Massachusetts Certified General
Real Estate Appraiser #26

# ADDENDA

# SUBJECT PROPERTY DEEDS

MSD 04/30/91 03:02:45 902 25.00 Property Address: Old Connecticut Path, Wayland, MA
Grantee's Address: c/o Nutter, McClennen & Fish
One International Place, Boston, MA 02110

# QUITCLAIM DEED

3

I, DEVENS H. HAMLEN, of Wayland, Middlesex County, Massachusetts, for nominal, non-monetary consideration paid, grant to MARGERY M. HAMLEN and MICHAEL E. MOONEY, Trustees of Mainstone Farm Land Trust under Declaration of Trust dated April 1, 1991, to be recorded herewith, with Quitclaim Covenants,

All my right, title and interest, being an undivided one-half interest, in and to the land in Wayland, Middlesex County, Massachusetts, which is subject to a Conservation Restriction granted by Devens H. Hamlen and James M. Hamlen to Sudbury Valley Trustees, Inc., dated June 3, 1977, recorded with Middlesex South District Registry of Deeds, Book 13207, Page 501, which land comprises a certain parcel of land situated on the southeasterly side of Old Connecticut Path and the southwesterly side of Rice Road in said Wayland, as shown and outlined in red on a plan annexed to said Conservation Restriction as Exhibit B, and bounded and described as follows:

| | |
|---|---|
| NORTHWESTERLY | by Old Connecticut Path, about 1750 feet; |
| EASTERLY, NORTHERLY and NORTHWESTERLY | by other adjoining land of the grantors, by the lines of fences enclosing said adjoining land, by six lines measuring about 220 feet, 25 feet, 80 feet, 30 feet, 360 feet and 115 feet; |
| NORTHEASTERLY | by Rice Road, about 250 feet; |
| SOUTHEASTERLY, NORTHEASTERLY and NORTHWESTERLY | by other adjoining land of the grantors, in part by the lines of fences enclosing said adjoining land, by three lines measuring about 170 feet; 280 feet and 120 feet; |
| NORTHEASTERLY | again by Rice Road, about 2150 feet; |
| SOUTHEASTERLY | by other adjoining lands of the grantors, in part by a fence line, by two lines measuring about 170 feet and 460 feet; |
| SOUTHWESTERLY and SOUTHERLY | by the same, in part by a stone wall, by two lines measuring about 160 feet and 1670 feet; |

| | |
|---|---|
| WESTERLY and SOUTHWESTERLY | by the same, by four lines measuring about 1120 feet, 500 feet, 250 feet and 320 feet; and |
| SOUTHWESTERLY | by Forest Hill Road, about 170 feet; |

EXCEPTING and EXCLUDING therefrom the land designated on said Exhibit B as Reserved Residence Land, bounded and described as follows:

| | |
|---|---|
| NORTHWESTERLY | by Old Connecticut Path by a line crossing the main driveway entrance to said Reserved Residence Land, about 100 feet; |
| NORTHEASTERLY | by the hereby restricted land by a line parallel to and 50 feet northeasterly from the center line of said driveway, about 1110 feet, and by a fence and stone wall line, about 770 feet; |
| EASTERLY | by the same, about 320 feet; |
| NORTHEASTERLY | again by the same by a stone wall, about 520 feet; |
| SOUTHEASTERLY | by the same, about 1040 feet; |
| SOUTHWESTERLY, NORTHWESTERLY and SOUTHWESTERLY | again by the same by five lines measuring about 200 feet, 140 feet, 220 feet, 150 feet and 290 feet; |
| NORTHWESTERLY | again by the same, about 300 feet; |
| SOUTHWESTERLY | again by the same by a fence line, about 185 feet; |
| NORTHWESTERLY | again by the same by a fence line, about 85 feet; |
| SOUTHWESTERLY | again by the same by a fence line about 200 feet; |
| NORTHWESTERLY | again by the same by a fence line, about 400 feet; and |
| SOUTHWESTERLY | again by the same by a line parallel to and 50 feet southwesterly from the center line of said driveway, about 1280 feet; |

Containing in said so restricted land (exclusive of said Reserved Residence Land) about 91.3 acres; and Excepting and Excluding so much, if any, of (a) Lots A, B and C shown on a plan recorded with said Deeds as Plan No. 1045 of 1989, and (b) Lot 1 shown on a plan recorded with said Deeds as Plan No. 1044 of 1989, as is included in said restricted land and not included in said Reserved Residence Land.

For title reference is made to deed of Trustees of Mainstone Farm Trust, dated December 29, 1970, recorded with said Deeds, Book 11937, Page 566.

This conveyance is a voluntary gift by the grantor to the persons who own the beneficial interests in the grantee.

By acceptance hereof the grantee hereby covenants, agrees, declares and affirms that the premises hereby conveyed are used and shall continue to be used for agricultural and horticultural uses as defined in Massachusetts General Laws, Chapter 61A.

Witness the execution hereof under seal this 18th day of April, 1991.

Devens H. Hamlen

Devens H. Hamlen

COMMONWEALTH OF MASSACHUSETTS

Suffolk, ss.

April 18, 1991

Then personally appeared the above-named Devens H. Hamlen and acknowledged the foregoing instrument to be his free act and deed, before me,

Barbara Jean Smith

Notary Public
My commission expires: 9/9/94

32961

Property Address: Old Connecticut Path, Wayland, MA
Grantee's Address: c/o Nutter, McClennen & Fish
One International Place, Boston, MA 02110
MSD 04/30/91 03:02:46 903 25.00

# QUITCLAIM DEED

I, JAMES M. HAMLEN, of Wayland, Middlesex County, Massachusetts, for nominal, non-monetary consideration paid, grant to MARGERY M. HAMLEN and MICHAEL E. MOONEY, Trustees of Mainstone Farm Land Trust under Declaration of Trust dated April 1, 1991, to be recorded herewith, with Quitclaim Covenants,

All my right, title and interest, being an undivided one-half interest, in and to the land in Wayland, Middlesex County, Massachusetts, which is subject to a Conservation Restriction granted by Devens H. Hamlen and James M. Hamlen to Sudbury Valley Trustees, Inc., dated June 3, 1977, recorded with Middlesex South District Registry of Deeds, Book 13207, Page 501, which land comprises a certain parcel of land situated on the southeasterly side of Old Connecticut Path and the southwesterly side of Rice Road in said Wayland, as shown and outlined in red on a plan annexed to said Conservation Restriction as Exhibit B, and bounded and described as follows:

| | |
|---|---|
| NORTHWESTERLY | by Old Connecticut Path, about 1750 feet; |
| EASTERLY, NORTHERLY and NORTHWESTERLY | by other adjoining land of the grantors, by the lines of fences enclosing said adjoining land, by six lines measuring about 220 feet, 25 feet, 80 feet, 30 feet, 360 feet and 115 feet; |
| NORTHEASTERLY | by Rice Road, about 250 feet; |
| SOUTHEASTERLY, NORTHEASTERLY and NORTHWESTERLY | by other adjoining land of the grantors, in part by the lines of fences enclosing said adjoining land, by three lines measuring about 170 feet; 280 feet and 120 feet; |
| NORTHEASTERLY | again by Rice Road, about 2150 feet; |
| SOUTHEASTERLY | by other adjoining lands of the grantors, in part by a fence line, by two lines measuring about 170 feet and 460 feet; |
| SOUTHWESTERLY and SOUTHERLY | by the same, in part by a stone wall, by two lines measuring about 160 feet and 1670 feet; |

| | |
|---|---|
| WESTERLY and SOUTHWESTERLY | by the same, by four lines measuring about 1120 feet, 500 feet, 250 feet and 320 feet; and |
| SOUTHWESTERLY | by Forest Hill Road, about 170 feet; |

EXCEPTING and EXCLUDING therefrom the land designated on said Exhibit B as Reserved Residence Land, bounded and described as follows:

| | |
|---|---|
| NORTHWESTERLY | by Old Connecticut Path by a line crossing the main driveway entrance to said Reserved Residence Land, about 100 feet; |
| NORTHEASTERLY | by the hereby restricted land by a line parallel to and 50 feet northeasterly from the center line of said driveway, about 1110 feet, and by a fence and stone wall line, about 770 feet; |
| EASTERLY | by the same, about 320 feet; |
| NORTHEASTERLY | again by the same by a stone wall, about 520 feet; |
| SOUTHEASTERLY | by the same, about 1040 feet; |
| SOUTHWESTERLY, NORTHWESTERLY and SOUTHWESTERLY | again by the same by five lines measuring about 200 feet, 140 feet, 220 feet, 150 feet and 290 feet; |
| NORTHWESTERLY | again by the same, about 300 feet; |
| SOUTHWESTERLY | again by the same by a fence line, about 185 feet; |
| NORTHWESTERLY | again by the same by a fence line, about 85 feet; |
| SOUTHWESTERLY | again by the same by a fence line about 200 feet; |
| NORTHWESTERLY | again by the same by a fence line, about 400 feet; and |
| SOUTHWESTERLY | again by the same by a line parallel to and 50 feet southwesterly from the center line of said driveway, about 1280 feet; |

Containing in said so restricted land (exclusive of said Reserved Residence Land) about 91.3 acres; and Excepting and Excluding so much, if any, of (a) Lots A, B and C shown on a plan recorded with said Deeds as Plan No. 1045 of 1989, and (b) Lot 1 shown on a plan recorded with said Deeds as Plan No. 1044 of 1989, as is included in said restricted land and not included in said Reserved Residence Land.

For title reference is made to deed of Trustees of Mainstone Farm Trust, dated December 29, 1970, recorded with said Deeds, Book 11937, Page 566.

This conveyance is a voluntary gift by the grantor to the persons who own the beneficial interests in the grantee.

By acceptance hereof the grantee hereby covenants, agrees, declares and affirms that the premises hereby conveyed are used and shall continue to be used for agricultural and horticultural uses as defined in Massachusetts General Laws, Chapter 61A.

Witness the execution hereof under seal this 18th day of April, 1991.

James M. Hamlen

COMMONWEALTH OF MASSACHUSETTS

Suffolk, ss. April 18, 1991

Then personally appeared the above-named James M. Hamlen and acknowledged the foregoing instrument to be his free act and deed, before me,

Notary Public
My commission expires: 4/19/96

26431

32

QUITCLAIM DEED

MSD 05/08/90 03:34:09 650 25.00

WATTS REALTY CORPORATION, a Massachusetts corporation having an usual place of business at 18th Floor, One International Place, Boston, Suffolk County, Massachusetts, for nominal, non-monetary consideration paid, grants to DEVENS H. HAMLEN and MARGERY L. HAMLEN, husband and wife, as tenants by the entirety, of 87 Old Connecticut Path, Wayland, Massachusetts, with Quitclaim Covenants,

The land with the buildings thereon shown as lot B on a plan entitled "Plan of Land in Wayland, Massachusetts, Surveyed For James M. Hamlen, Devens H. Hamlen," dated February 8, 1989, by Para Land Surveying, Incorporated, recorded with Middlesex South District Registry of Deeds as Plan No. 1045 of 1989, and bounded and described as follows:

| | |
|---|---|
| NORTHWESTERLY | by The Way shown on said plan by six lines together measuring 251.28 feet; |
| NORTHERLY | by other land shown on said plan as of James M. Hamlen and Devens H. Hamlen, 252.27 feet; |
| EASTERLY | by the same by two lines together measuring 378.73 feet; |
| SOUTHEASTERLY | by the same, 19.49 feet; |
| SOUTHERLY | by the same and by lot C shown on said plan by two lines together measuring 302.38 feet; and |
| SOUTHWESTERLY | by said lot C, 218.26 feet; |

Containing 3.01 acres, according to said plan.

Said premises are hereby conveyed together with the rights and easements apputenant thereto, in common with others lawfully entitled thereto, to maintain, repair, improve, and use, for all purposes for which streets and ways are now or may hereafter customarily be used in said Wayland, all of the private way shown and designated on said plan as "The Way'.

Being Parcel 1 of the premises conveyed to the grantor by Devens H. Hamlen et al. by deed of even delivery and record herewith.

87 Old Connecticut Path. Wayland

Said premises are hereby conveyed subject to a mortgage of Devens H. Hamlen et al. to Merchants Cooperative Bank, dated December 29, 1977, recorded with Middlesex South District Registry of Deeds, Book 13363, Page 620.

Witness the execution hereof under seal, this 27th day of April, 1990.

WATTS REALTY CORPORATION

By Marthur B Bumgardner
Marthur B Bumgardner, it President
and Assistant Treasurer

COMMONWEALTH OF MASSACHUSETTS

Suffolk, ss. April 27, 1990

Then personally appeared the above-named Marthur B. Bumgardner and acknowledged the foregoing instrument to be the free act and deed of Watts Realty Corporation, before me,

Edward C. Mendler
Notary Public
My commission expires:

EDWARD C. MENDLER
NOTARY PUBLIC
MY COMMISSION EXPIRES
OCTOBER 7, 1994

5493v(2)

T-

DEED

We, Devens H. Hamlen and James M. Hamlen, both of Wayland, Middlesex County, Massachusetts, for nominal non-monetary consideration paid, grant to said Devens H. Hamlen and said James M. Hamlen, Trustees of DHH Realty Trust, under Declaration of Trust dated April 24, 1990, having an address c/o Devens H. Hamlen, 10 Liberty Square, Boston, Massachusetts, with quitclaim covenants,

Two certain parcels of land with the buildings thereon, situated in said Wayland, shown as Parcel A and Parcel C on a plan entitled "Plan of Land in Wayland, Massachusetts, Surveyed for James M. Hamlen, Devens H. Hamlen", dated February 8, 1989, by Para Land Surveying, Incorporated, recorded with Middlesex South District Registry of Deeds as Plan No. 1045 of 1989, and described as follows:

Said Parcel A is bounded and described as follows:

| | |
|---|---|
| EASTERLY | by The Way as shown on said plan, by eight lines together measuring 651.00 feet; |
| SOUTHWESTERLY | by other land of the Grantors, 201.85 feet; |
| SOUTHEASTERLY | by the same, 207.01 feet; |
| SOUTHWESTERLY | again, by the same, 376.71 feet; and |
| NORTHWESTERLY | by the same, 520.46 feet; |

Containing 5.00 acres, according to said plan.

Said Parcel C is bounded and described as follows:

| | |
|---|---|
| NORTHWESTERLY | by The Way as shown on said plan, by three lines together measuring 240.35 feet; |
| NORTHEASTERLY | by Parcel B as shown on said plan, 218.26 feet; |
| NORTHWESTERLY | by the same, 89.71 feet; |
| NORTHEASTERLY | by other land of the Grantors, 199.93 feet; |
| SOUTHEASTERLY | by the same, 183.28 feet; |
| SOUTHWESTERLY | by the same, 125.45 feet; |

Property Address: 83 Old Connecticut Path, Wayland

MSD 07/12/90 01:29:26 374 25.00

SOUTHEASTERLY again, by the same, 81.09 feet; and

SOUTHWESTERLY again, by the same, 222.38 feet;

Containing 1.87 acres, according to said plan.

For title reference is made to deed of Trustees of Mainstone Farm Trust to the Grantors dated December 20, 1970, recorded with said Deeds, Book 11937, Page 566; and said premises are hereby conveyed subject to a Conservation Restriction granted by the Grantors to Sudbury Valley Trustees, Inc., dated June 3, 1977 recorded with said Deeds, Book 13207, Page 507, affecting a portion of the premises hereby conveyed; rights of others lawfully entitled thereto in and with respect to The Way; and such taxes assessed thereon as are not yet due and payable.

Witness our hands and seals this 24th day of April, 1990.

Devens H. Hamlen

Devens H. Hamlen

James M. Hamlen

James M. Hamlen

COMMONWEALTH OF MASSACHUSETTS

Suffolk, ss. April 23 1990

Then personally appeared the above-named Devens H. Hamlen and acknowledged the foregoing instrument to be his free act and deed, before me,

Jean M Gleason

Notary Public
My commission expires: 4/19/96

COMMONWEALTH OF MASSACHUSETTS

Suffolk, ss. April 23 1990

Then personally appeared the above-named James M. Hamlen and acknowledged the foregoing instrument to be his free act and deed, before me,

Jean M Gleason

Notary Public
My commission expires: 4/19/96

52141

# CONSERVATION RESTRICTION DRAFT

# *Draft Conservation Restriction*

*7/29/11*

## Mainstone Farm Trust Conservation Restriction
## to
## The Town of Wayland [and Sudbury Valley Trustees]

### I. GRANTOR CLAUSE:

We, Marjorie M. Hamlen and Michael E. Mooney, Trustees of the Mainstone Farm Land Trust, u/d/t dated April 10, 1991 and recorded with the Middlesex South Registry of Deeds in Book 21128, Page 79 ("Grantors"), acting pursuant to Sections 31, 32 and 33 of Chapter 184 of the General Laws, grant with quitclaim covenants to the Town of Wayland, a Massachusetts municipality with a mailing address of 41 Cochituate Road, Wayland, MA 01778, under the care, custody, and control of its Conservation Commission pursuant to M.G.L. c. 40 § 8C and their successors and permitted assigns [and to the Sudbury Valley Trustees, Inc., a non-profit corporation with a mailing address of 18 Wolbach Road, Sudbury, MA 01776] (collectively, the "Grantee") in perpetuity and exclusively for conservation purposes, the following described Conservation Restriction on several parcels of land located on Rice Road and Old Connecticut Path in the Town of Wayland, Massachusetts, constituting approximately 220 acres, said parcels being the property described in two deeds recorded in the Middlesex South Registry of Deeds (the "Registry") in Book 21128 at Page 94 and Page 97 shown as [Plan Reference] which plans are attached hereto in reduced form as Exhibit A (hereinafter referred to as the "Premises").

### II. PURPOSES:

The Premises, defined above, contain unusual, unique or outstanding qualities the protection of which in their predominately natural, vegetated or open condition will be of benefit to the public (the "Purposes"). These qualities include:

(a) Upland meadows currently used for agriculture and animal husbandry, including some Prime Farmland and Farmland of Statewide Importance, the continuation of which will preserve uses that are integral to the history of the Premises and of the Town;

(b) Scenic views from Rice Road and Old Connecticut Path, identified as "Noteworthy" and "Distinctive" in the Massachusetts Landscape Inventory (MA Department of Environmental Management, 1981), the preservation of which is a primary purpose of this Conservation Restriction

(c) Approximately 220 acres of managed woodlands, meadows, wetlands, and agricultural fields, providing quality wildlife habitat, river and watershed

protection, flood prevention and pollution mitigation;

(d) General public access for the purposes of passive recreation, including but not limited to walking and cross-country skiing, and further described in Section VI of this conservation restriction;

(e) Direct adjacency to approximately 46 acres of land owned by Sudbury Valley Trustees, to approximately 55 acres of land owned by the Town of Wayland, and to approximately 42 acres of land held under a Conservation Restriction granted to the Town of Wayland. Furthermore, protection of the Premises will buffer these adjacent conservation areas as recommended in the Greenways Plan for the SuAsCo Watershed (Sudbury Valley Trustees, April 2000), and;

(f) Identification as a priority property for conservation in the Town of Wayland's 2001 Open Space and Recreation Plan and the 2004 Master Plan.

## III. PROHIBITED ACTS AND USES, EXCEPTIONS THERETO, AND PERMITTED USES

(A) Prohibited Acts and Uses. Subject to the exceptions set forth in Section III B below, the following acts and uses are prohibited above, on, or below the Premises:

1) Constructing or placing of any building, tennis court, landing strip, mobile home, swimming pool, fences, asphalt or concrete pavement, sign, billboard or other advertising display, antenna, utility pole, tower, conduit, line, wind turbines, or other temporary or permanent structure, utility, or facility on, under, or above the Premises;

2) Mining, excavating, dredging or removing from the Premises of soil, loam, peat, gravel, sand, rock or other mineral resource or natural deposit except as necessary for proper soil conservation and then only in a manner which does not impair the Purposes of this Conservation Restriction;

3) The demolition or removal of existing stone walls. However, notwithstanding the foregoing, subject to all state and local statutes, regulations and bylaws, including but not limited to local and state scenic road statutes, Grantors reserve the right to widen or to make new breaks in existing stone walls so long as the new or widened break does not exceed 20 (twenty) feet in width, as needed for agricultural and forestry activities as permitted in Section IV B herein. Grantors also reserve the right to construct, maintain, repair, and replace new stone walls on the Premises, provided such activity is consistent with the Purposes of this Conservation Restriction;

4) Placing, filling, storing or dumping on the Premises of soil, refuse, trash, vehicle bodies or parts, rubbish, debris, junk, waste or other substance or material whatsoever or the installation of underground storage tanks;

5) Cutting, removing or otherwise destroying trees, shrubs, grasses or other vegetation, including leaf litter;

6) The conveyance of a part or portion of the Premises alone, or the division or subdivision of the Premises is prohibited without notice to and the approval of the Grantee, as provided for in Section VI. However, the conveyance of the Premises in its entirety, or the conveyance of the additional legal lot reserved pursuant to Section IV in B.1) below shall be permitted, subject to the express prior written consent of Grantee, which consent shall not be unreasonably withheld;

7) Activities detrimental to wildlife habitat, drainage, flood control, water conservation, water quality, erosion control or soil conservation including without limitation the use of motorized recreational vehicles, except for emergency and handicapped access vehicles;

8) More than de minimis commercial recreational activities;

9) Any other activity on or use of the Premises that is inconsistent with the Purposes of this Conservation Restriction.

(B) Reserved Rights. Notwithstanding any provisions of Section IV A above, Grantors reserve to themselves and to their successors and assigns the right to conduct or permit the following activities on and uses of the Premises, but only if such uses and activities do not materially impair the Purposes of this Conservation Restriction:

1) Exclusively within the "Farmstead Area" as shown on a plan of land (entitled _____"; dated _____) filed with the Grantee and attached hereto in reduced form as Exhibit B (hereinafter referred to as the "Farmstead"):

a. Following written notice and approval to Grantee pursuant to Section VI A below, the use, maintenance, repair, renovation, replacement and alteration of the existing residences and appurtenant structures, and the construction, use, maintenance, repair, renovation, replacement and alteration of no more than three (3) additional single family residences and structures and improvements appurtenant to such residential use or any agricultural or equestrian uses being made of the Premises from time to time, including but not limited to accessory apartments, garages, tool sheds, barns, stables, animal sheds, outdoor riding arenas, tennis courts and swimming pools, together with the construction, use, maintenance, repair, renovation, replacement and alteration of paved or unpaved driveways, parking areas, septic systems, water supply well and utilities (above and/or below ground) to serve any of the foregoing uses, structures and improvements that are located within the Farmstead Area and other permitted uses, structures and improvements locate at, on, under, or adjacent to the Premises;

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b. Pruning, clearing, and planting of vegetation without limitation, including landscaping and gardening;

c. The excavation and removal from or the import, placement, and fill to the Farmstead of soil, gravel or other mineral resource or natural deposit shall be permitted only to the limited extent as may be required to construct authorized buildings, structures, improvements and landscaping; for the installation, maintenance, or removal of septic systems, utilities, and other underground structures; for the removal of underground tanks, if any; for the maintenance of good drainage or soil conservation practices; or for other permissible uses of the Farmstead.

## IV. ADDITIONAL RESERVED RIGHTS TO THE GRANTOR: THE FOLLOWING ITEMS IN THIS SECTION ARE APPLICABLE TO THE ENTIRE PREMISES:

1. The excavation and removal from the Premises of soil, gravel or other mineral resource or natural deposit as may be incidental to the maintenance or removal of existing underground tanks, septic systems, utilities, and other underground structures, or to the maintenance of good drainage, soil conservation practices or to other permissible use of the Premises, provided that (a) such activities follow generally accepted soil conservation practices, (b) that any topsoil so excavated must remain on the Premises, and (c) disturbed areas are re-vegetated with plant materials not considered invasive by the Commonwealth of Massachusetts.

2. The maintenance of piles of limbs, brush, manure, leaves, compost, and similar biodegradable material, but not stumps, provided such piles are not unduly conspicuous from any public way, public trail, or public land, are not placed in any wetlands, and do not otherwise interfere with the Purposes of this Conservation Restriction.

3. The placing of sight-pervious fences that do not interfere with public access, and, except for protection of crops, the passage of wildlife to, from, and through the Premises or with the Purposes of this Conservation Restriction.

4. With prior notice and approval of Grantee as outlined in Section VI, the digging or drilling of water wells, provided that such wells are for use of the extracted water principally on the Premises.

5. Agricultural, animal husbandry, and open meadow wildlife habitat management operations, including but not limited to:

   (a) clearing, semi-annual mowing, and prescribed burning of vegetation;

   (b) The grazing and pasturing of livestock consistent with the Farm Conservation Plan referred to below and sound agricultural practices as described therein;

(c) The planting, maintenance, and harvest of crops or fruit-bearing, or nut-bearing trees, including the plowing of agricultural fields and the spreading of livestock manure and compost;

(d) The use of manure, compost, other soil supplements, fertilizers, pesticides, herbicides, and fungicides, provided, however, that such agricultural chemicals are registered under Commonwealth of Massachusetts regulations and are used in accordance and consistent with all pertinent federal, state, and municipal laws, zoning, rules, and regulations.

(e) The use for the marketing of agricultural products of which 51% or more are grown on the Premises, maintenance, repair, renovation, demolition, replacement and alteration of one (1) retail farmstand, not to exceed XXXX square feet of floor area;

(f) Such operations and activities shall be in conformance with the current Farm Conservation Plan, prepared by the United States Department of Agriculture Natural Resources Conservation Service or successor agency, which shall be provided to Grantee.

(g) Hunting, with the consent of Grantor, and provided that no hunting shall be conducted without closure of public trails. All trail closings shall be posted by the at the trailhead/parking lot immediately. As per the Management Plan, no section of trail shall be closed for longer than three days, unless the landowner and the Town agree that a longer trail closing is necessary for safety, for wildlife protection, for crop protection, or for maintenance purposes.

6. Commercial woodland and forestry operations, including the right to commercially harvest forest products, process firewood, conduct maple-sugaring operations, and conduct related or similar forest product operations, in accordance with a forest management plan (hereinafter the "Forestry Plan"). The guidelines and plan elements for the Forestry Plan are attached hereto as Exhibit C. The Forestry Plan for the Premises shall be prepared by a professional forester licensed to practice forestry in the Commonwealth of Massachusetts or by other individual with written approval by Grantee. Said professional forester must certify, within the Forestry Plan, that the plan is consistent with the intent and purpose of this Conservation Restriction. The Forestry Plan also shall provide for management of the Premises in a manner consistent with generally accepted "Best Management Practices," as those practices may be identified from time to time by appropriate governmental or educational institutions, and in a manner not wasteful of soil resources or detrimental to water quality or conservation. The Forestry Plan shall be updated periodically, particularly if new information or new knowledge is obtained that promotes or enhances the conservation values and sound silvicultural management of the Premises. The Forestry Plan, and subsequent updates or amendments, shall be submitted to Grantee. A Forestry Plan for the Premises shall be completed within two (2) years from the date this Conservation Restriction is recorded at

the Middlesex South County Registry of Deeds, or before any harvest of forest products occurs on the Premises.

7. Hiking, horseback riding, cross-country skiing and other non-motorized passive outdoor recreational and educational activities.

8. Use of vehicles and other motorized equipment incident to farming and forestry activities contemplated herein, including but not limited to tractors, trucks, skidders, balers, spreaders and planters.

9. The installation, construction, and placement of permanent underground and temporary above-ground pumps, conduits, hoses, and other equipment associated with agricultural irrigation.

10. Limited and selective pruning and clearing for non-commercial purposes incidental to (a) forest fire prevention or management; (b) unpaved trail establishment, marking, and maintenance; (c) control or prevention of an imminent hazard to structure or life; (d) control or prevention of a grave or formidable disease; (e) control and removal of invasive or exotic species; (f) collection of firewood exclusively for the personal use by Grantors or their successor on the Premises; or (g) otherwise to preserve the present condition of the Premises. To the extent that pesticides, herbicides, and fungicides are used in conjunction with these activities, such use shall be in accordance with, and subject to, the provisions of Section 5 (d) above.

11. Erection of signs by Grantors or Grantee for the purposes of noticing allowed and prohibited uses such as, but not limited to, trespassing, hunting for pest control management, trails, and trail locations, sale of the Premises, and sale of horticultural and agricultural products, but only to the extent authorized by law.

12. Other Acts and Uses:

All acts and uses not explicitly permitted by Section IV B and Section VII are prohibited.

## V. NOTICE AND APPROVAL

(A) Notice of Intention to Undertake Certain Permitted Actions

Grantors agree to notify Grantee, in writing, before exercising any right described under Section IV and Section V as a permitted use that explicitly requires notice to Grantee. The purpose of requiring such notice is to afford Grantee an adequate opportunity to monitor the activities in question to ensure that they are designed and carried out in a manner that is consistent with the Purposes of this Conservation Restriction. Whenever notice is required, Grantors shall notify Grantee in writing as provided in Section XVII (H) below not less than forty-five (45) days prior to the date Grantors intend to commence the activity that is subject



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to the notice. The notice provided to Grantee shall describe the nature, scope, design, location, timetable, and any other material aspect of the proposed activity in sufficient detail to permit Grantee to make an informed judgment as to its consistency with the Purposes of this Conservation Restriction. Failure of the Grantor to notify Grantee as described and required constitutes a material breach of the Conservation Restriction.

(B) Grantee Approval

Where Grantee's approval is required, Grantee's approval shall not be unreasonably withheld. Grantee shall grant or withhold its approval in writing within forty-five (45) days of receipt of Grantor's written request therefor. Grantee's approval may be withheld upon a reasonable determination by Grantee that the action as proposed would be inconsistent with, or detrimental to, the Purposes of this Conservation Restriction. Failure of Grantee to respond in writing within such forty-five (45) days shall be deemed to constitute approval by Grantee of the request as submitted, so long as the request sets forth the provisions of this section relating to deemed approval after the passage of time.

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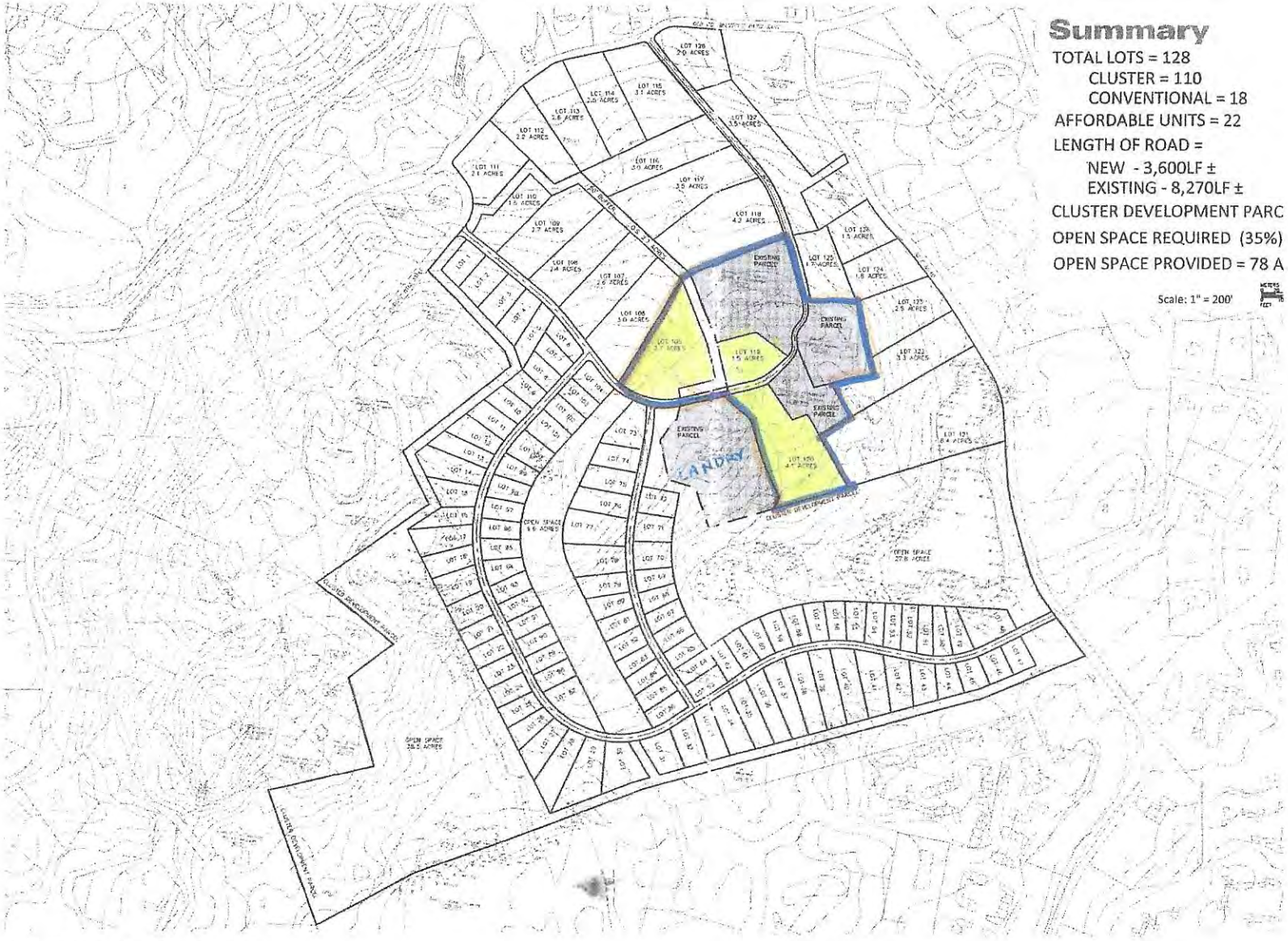
# Mainstone Farm

Wayland, Massachusetts




## Summary

TOTAL LOTS = 128
CLUSTER = 110
CONVENTIONAL = 18
AFFORDABLE UNITS = 22
LENGTH OF ROAD =
NEW - 3,600LF ±
EXISTING - 8,270LF ±
CLUSTER DEVELOPMENT PARC
OPEN SPACE REQUIRED (35%)
OPEN SPACE PROVIDED = 78 A

Scale: 1" = 200'

BEALS + THOMAS
Civil Engineers + Landscape Architects +
Land Surveyors + Planners +
Environmental Specialists

B+T Drawing No. 226000P006A-001 Date: In Progress 06/13/2011

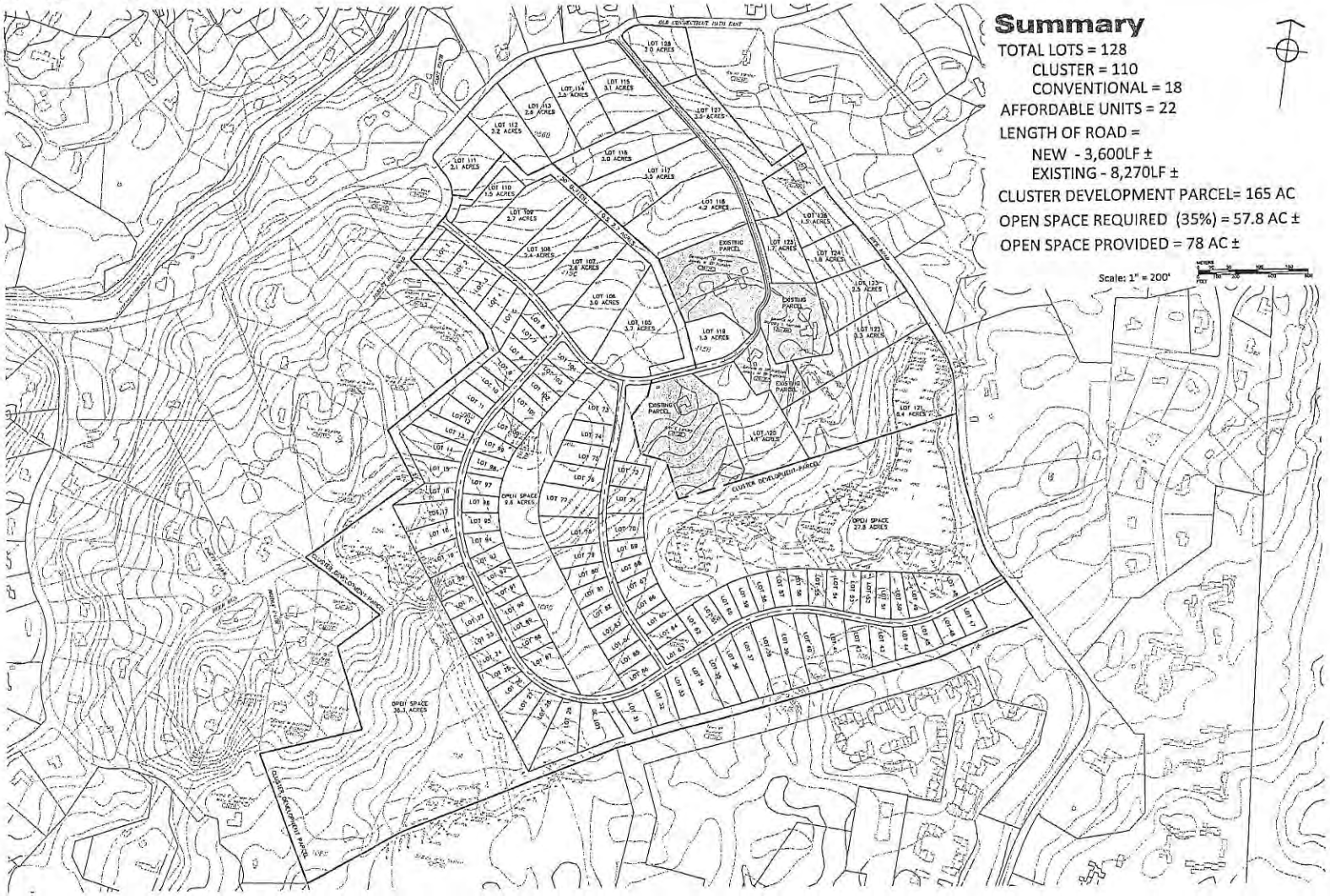
## Conceptual Cluster Developm

Cluster/Conv

# BEAL & THOMAS CONCEPTUAL LAND PLANS

# Mainstone Farm

Wayland, Massachusetts




## Summary

TOTAL LOTS = 128
- CLUSTER = 110
- CONVENTIONAL = 18

AFFORDABLE UNITS = 22

LENGTH OF ROAD =
- NEW - 3,600LF ±
- EXISTING - 8,270LF ±

CLUSTER DEVELOPMENT PARCEL= 165 AC

OPEN SPACE REQUIRED (35%) = 57.8 AC ±

OPEN SPACE PROVIDED = 78 AC ±

BEALS + THOMAS
Civil Engineers + Landscape Architects +
Land Surveyors + Planners +
Environmental Specialists

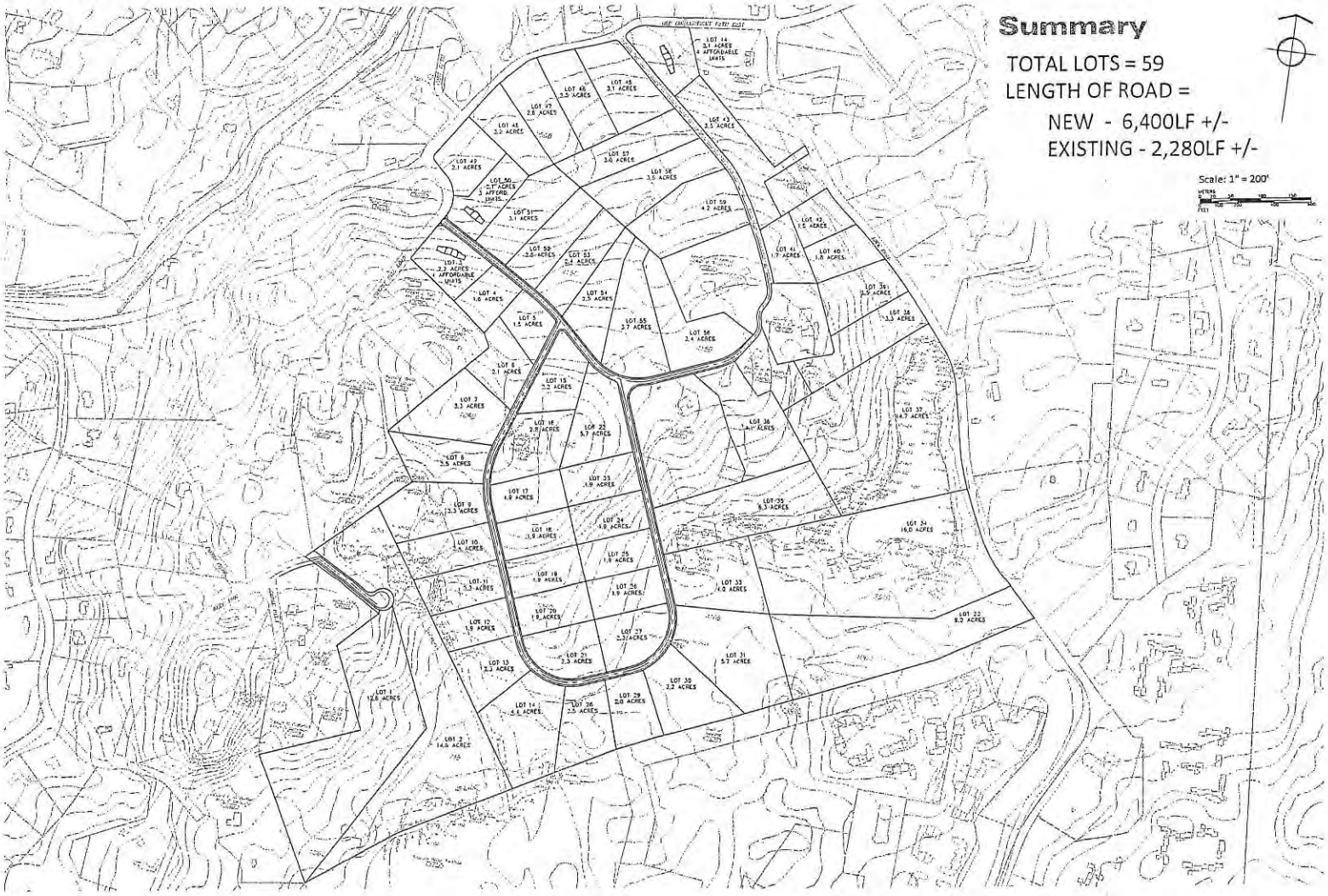
B+T Drawing No. 226000P006A-001 Date: In Progress 06/13/2011

# Conceptual Cluster Development Plan

Cluster/Conventional Lots

# Mainstone Farm

Wayland, Massachusetts




BEALS + THOMAS
Civil Engineers + Landscape Architects +
Land Surveyors + Planners +
Environmental Specialists

B+T Drawing No. 2260P003A-001 Date: In Progress 03/29/2011

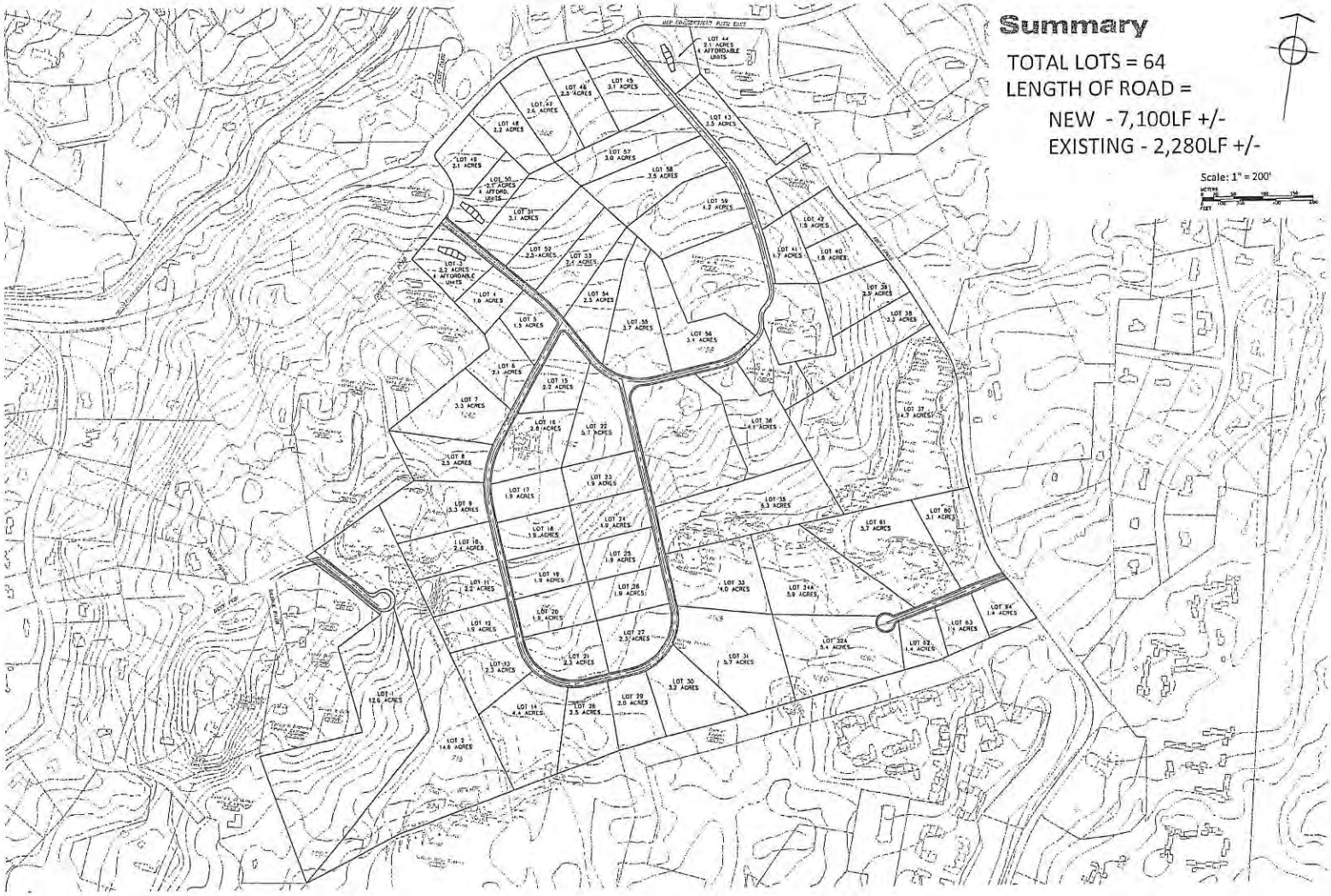
## Conceptual Subdivision Plan

60,000 SF Lots - Option 1

# Mainstone Farm

12

Wayland, Massachusetts




BEALS + THOMAS
Civil Engineers + Landscape Architects +
Land Surveyors + Planners +
Environmental Specialists

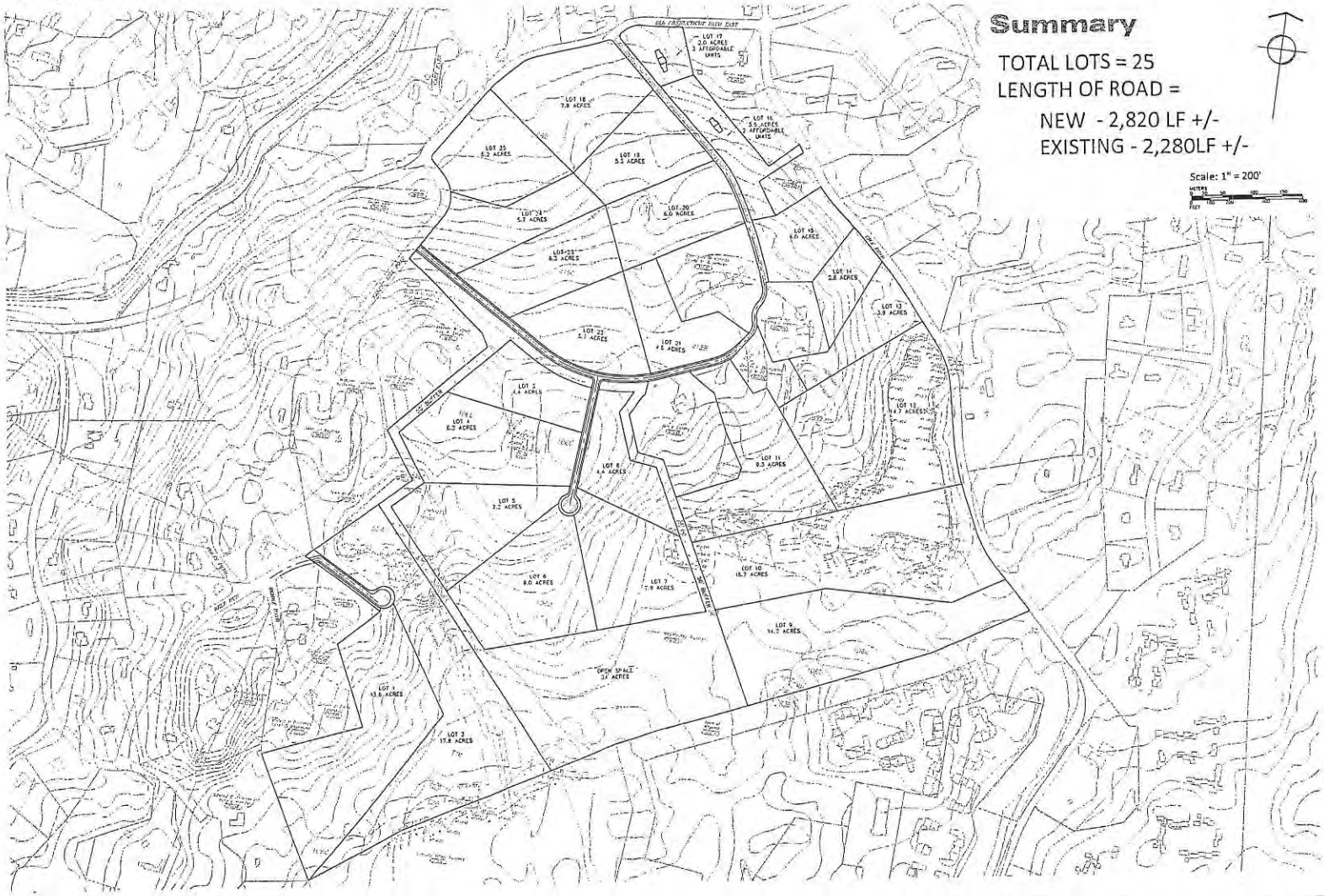
B+T Drawing No. 2260P003A-002 Date: In Progress 03/29/2011

## Conceptual Subdivision Plan

60,000 SF Lots - Option 1A

# Mainstone Farm

Wayland, Massachusetts




BEALS + THOMAS
Civil Engineers + Landscape Architects +
Land Surveyors + Planners +
Environmental Specialists

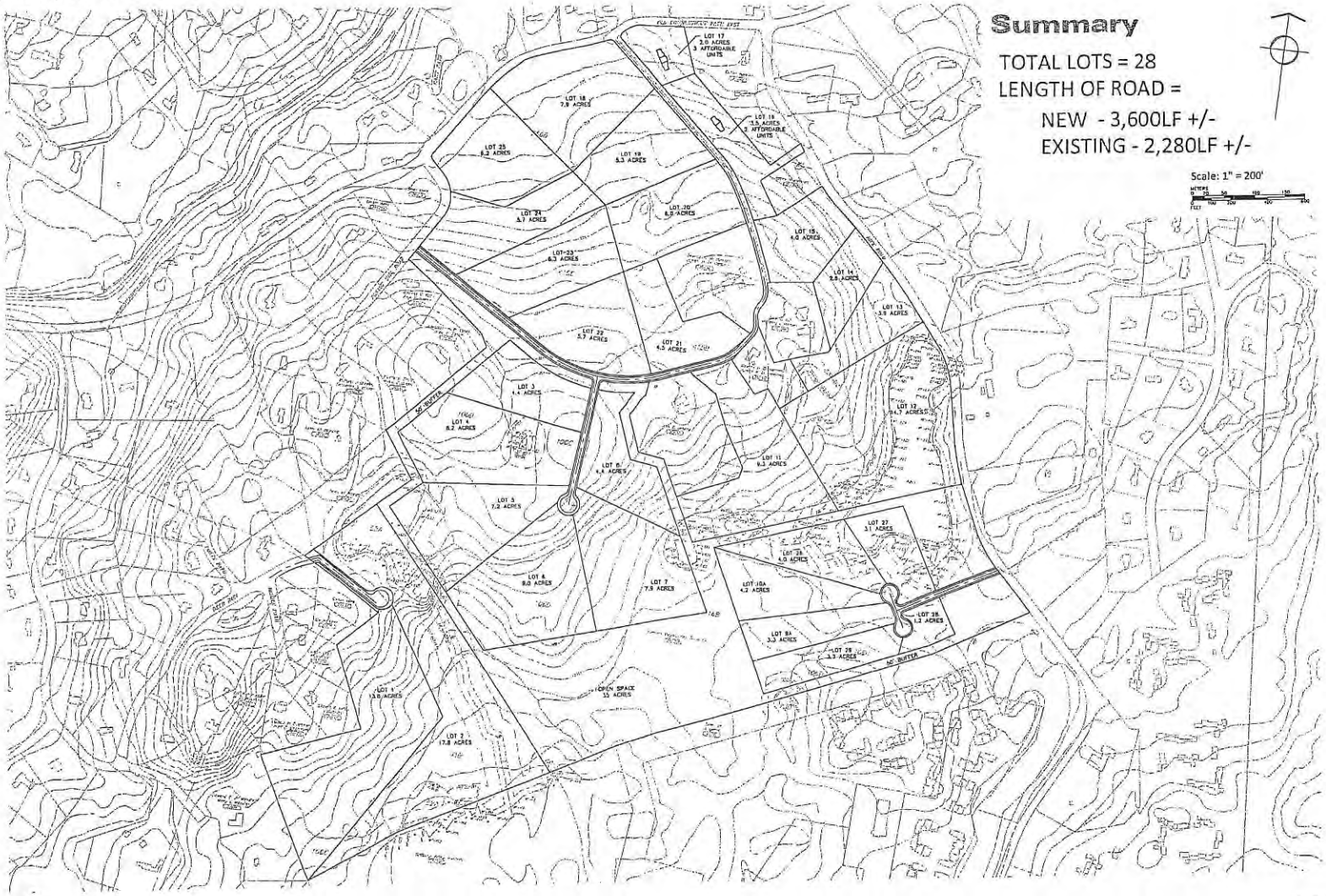
B+T Drawing No. 2260P004A-001 Date: In Progress 03/29/2011

## Conceptual Limited Development Plan

Estate/Cluster Lots - Option 1

# Mainstone Farm

Wayland, Massachusetts




BEALS + THOMAS
Civil Engineers + Landscape Architects +
Land Surveyors + Planners +
Environmental Specialists

B+T Drawing No. 2260P004A-002 Date: In Progress 03/29/2011

## Conceptual Limited Development Plan

Estate/Cluster Lots - Option 1A

# BEALS & THOMAS SOILS ANALYSIS

**BEALS + THOMAS**
BEALS AND THOMAS, INC.
Reservoir Corporate Center
144 Turnpike Road
Southborough, MA 01772-2104

MEMORANDUM

T 508.366.0560
F 508.366.4391
mail@btiweb.com I www.btiweb.com
Regional Office: Plymouth, MA

TO: Job File

FROM: JLD

DATE: March 8, 2011

REFERENCE: Soils/Septic/Utility Research
87 Old Connecticut Path
Wayland, Massachusetts
Project No. 2260.00

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**PURPOSE:**

The purpose of this memorandum it to provide a summary of soils, septic and other utility research performed on the Subject Property, located at 87 Old Connecticut Path, to advance cost estimates associated with land planning efforts for the project.

**SUMMARY:**

### Soils

According to the Town of Wayland Title 5 Map with Soil Survey Units, the soils within and adjacent to the Subject Property are classified as the following soils types:

- **52A Freetown Muck, 0-1 percent slopes** is a very deep, nearly level, poorly drained, organic soil located in depressional or flat areas on outwash plains and till plains. It consists of 51 inches or more of highly decomposed organic material. Permeability is moderate or moderately rapid.
- **71B Ridgebury fine sandy loam, 0 to 5 percent slopes, extremely stony** is a very deep, gently sloping, poorly drained soil located in low areas and within drainage-ways of glacial till uplands. Permeability is moderate or moderately rapid in the surface layer and subsoil and slow or very slow in the substratum.
- **73B Whitman fine sandy loam, 0 to 5 percent slopes, extremely stony** is a very deep, nearly level, very poorly drained soil located in long, narrow flat areas adjacent to sloping and strongly sloping areas and along drainage-ways. Stones are 2-5 feet apart. Permeability is moderate or moderately rapid in the surface layer and subsoil and sloe in the substratum.
- **106C&D Naragansett-Hollis-Rock outcrop complex** is a gently sloping to strongly sloping, very deep and shallow soils located on wetlands where the relief is affected by the surface of underlying bedrock. Permeability is rapid or moderately rapid.

- **251B Haven silt loam, 3 to 8 percent slopes** is a nearly level and gently rolling, deep (5 feet), well drained soils located on glacial outwash plains and terraces. Permeability is rapid.
- **253C Hinckley loamy sand, 8 to 15 percent slopes** is a very deep, strongly sloping, excessively drained soil and is located on eskers, karnes, and ridges of outwash plains. Permeability is rapid in the surface layer and subsoil and is very rapid in the substratum.
- **256B Deerfield loamy sand, 3 to 8 percent slopes** consists of nearly level gently sloping, deep (5+ feet), and moderately well drained soils on glacial outwash plains, terraces and deltas. Permeability is very rapid and seasonal high water table is at 18 to 36 inches.
- **415B & 415C Narragansett silt loam** consists of a nearly level to steep, deep (5+ feet), and well drained soils on glacial till plains and ground moraine. Permeability is moderately rapid or rapid permeability. Surface is very stony or extremely stony.

## Septic System Suitability

To support the conceptual siting and projected costs of on-site septic systems as part of the land planning studies, Beals + Thomas collected examples of septic systems from properties abutting the Subject Property from the Wayland Board of Health. A variety of examples were acquired from the developable soil types listed above. The following information was collected as part of our research.

**23 Forest Hill Road** (Narragansett silt loam)

- A plan showing "Test Hole A" indicates that a deep test hole was excavated to a depth of 12 feet. After excavation of 1'-10" of loam and subsoil, 10'-2" of gravel was encountered.
- A percolation test was also conducted 1' below subsoil with a percolation rate of 8 minutes per inch.
- The plan does not indicate that groundwater was encountered.

**Lot #8 Forest Hill Road**

- A plan entitled "Plan of Land in Wayland Mass.," prepared by Everett M. Brooks Co. indicates that 2 deep test holes and 4 shallow test holes for percolation were excavated.
- Deep Test Hole #1 was excavated to 5 feet. After excavation of 1'-8" of humus and clayey subsoil, 3'-4" of gravel was encountered. Ledge is present below gravel.
- Deep T Hole 2 was excavated to 7 feet. After excavation of 1'-2" of humus and clayey subsoil, 5'10" of gravel was encountered.
- Test Hole A was excavated 3 feet and has a percolation rate of 13 minutes per inch.
- Test Hole B was excavated 3 feet and has a percolation rate of 8 minutes per inch.
- Test Hole C was excavated 2'-10" and has a percolation rate of 5 minutes per inch.
- Test Hole D was excavated 3 feet and has a percolation rate of 5 minutes per inch.

**Lot #15 Forest Hill Road**

- A plan entitled "Renovation Sewage Disposal Design (9/20/1991)," prepared by J. Long, PE, indicates that 2 percolation tests were performed.
- Depth of area tested for both tests were 4.5 feet with glacial till soil. Final percolation rates were 8 minutes and 12 minutes per inch.

**227 Rice Road**

- A plan entitled "Renovation Sewage Disposal Design (9/20/1991)," prepared by J. Long, PE, indicates that 2 percolation tests were performed.

**252 Rice Road (Deerfield loamy sand)**

- An Installer's As Built & Certification was issued on 11/8/06 for 252 Rice Road
- A plan was received, however no soils information exists

**74 Old Connecticut Path (Hinkley loamy sand)**

- A plan entitled "Septic System Design Site Plan," prepared by Samioites Consultants, Inc. indicates that 3 deep test pits were excavated.
- Deep Hole #1 has an A-horizon of sandy loam to depths of 12 inches, a Bw-horizon of sandy loam to depths of 30 inches, and a C-horizon of sand to depths of 132 inches. Depth to bedrock is greater than 132 inches. Estimated seasonal high ground water is greater than 132 inches.
- Deep Hole #2 has an Ap-horizon of sandy loam to depths of 12 inches, a Bw-horizon of sandy loam to depths of 40 inches, and a C-horizon of sand to depths of 120 inches. No standing water was present. Depth to bedrock and estimated seasonal high ground water is greater than 120 inches. No standing water was present.
- Deep Hole #3 has an Ap-horizon of sandy loam to depths of 10 inches, a Bw-horizon of sandy loam to depths of 30 inches, and a C-horizon of sand to depths of 120 inches. Depth to bedrock and estimated seasonal high groundwater is greater than 120 inches. No standing water was present.
- The plan indicates a percolation of 1.33 minutes per inch.

**86 Old Connecticut Path (Hinkley loamy sand)**

- A plan entitled "Sewage Disposal Plan," prepared by Stamski and McNary, Inc. indicates that 2 deep test pits were excavated.
- TP-001 has an A-horizon of sandy loam to a depth of 1 foot-3 inches, a Bw-horizon of sandy loam to a depth of 2 foot-6 inches, and a C-horizon of sand/gravelly sand to a depth of 10 feet. No refusal was encountered. Estimated seasonal high water is greater than 10 feet. The percolation rate for TP-001 is less than 2 minutes per inch at a depth of 40 inches.
- TP-002 has an A-horizon of fine sandy loam to a depth of 1 foot-5 inches, a Bw-horizon of sandy loam to a depth of 5 foot-4 inches, and a C-horizon of sand/gravelly sand to a depth of 10 feet. No refusal was encountered. Estimated seasonal high water is greater

than 10 feet. The percolation rate for TP-002 is less than 2 minutes per inch at a depth of 53 inches.

**Lot #2 Rice Road** (Hamlen)

- A plan entitled "Proposed Sewage Disposal System, Lot 2, Rice Road," prepared by Metrowest Engineering, Inc. indicates that 4 test pits were excavated.
- Test Pit DTH-G has a top and sub layer of 36 inches, gray silty sand at 66 inches, and medium/coarse sand to 120 inches. The water elevation was recorded at 106 inches.
- Test Pit DTH-D has a top and sub layer to a depth of 42 inches, fine silty gray sand to 60 inches, medium/coarse sand to 120 inches. Water was observed at 102 inches.
- Test Pit DTH-E has a top and sub layer of 36 inches, fine/medium brown sand to 72 inches, fine silty gray sand to 108 inches. Water was observed at 52 inches.
- Test Pit DTH-F has a top and sub later to 36", fine gray silty sand to 48 inches, and medium/coarse sand to 120 inches. Water was observed at 98 inches.
- Two percolation test were taken (6-15-1992). The percolation rate for PT-C is less than 2 minutes per inch at 72 inches and PT-D is less than 2 minutes per inch at 81 inches.

**Lot #4 Rice Road** (Devens & James Hamlen)

- A plan entitled "Proposed Sewage Disposal System, Lot 4, Rice Road," prepared by Metrowest Engineering, Inc. indicates that 6 test pits were excavated.
- Test Pit K indicates layers of top and subsoil to a depth of 36 inches, gravel to 72 inches, and Till (tight) to 144 inches. No water was present at 144 inches.
- Test Pit N indicates a top and sub layer to a depth of 48 inches, tightly packed gray till w/ veins of gravel to 120 inches. No water was present at 120 inches.
- Test Pit O indicates top and sub layer to a depth of 36 inches, loose silty gray sand to 72 inches, and tight gray till to 120 inches. No water at 120 inches.
- Test Pit P indicates top and sub to a depth of 30 inches, tight gravel/some silt to 80 inches, tight gray sand with rocks to 114 inches. No water at 114 inches.
- Test Pit Q has a top and sub layer to 30 inches, gravel to78 inches, silty sand to 82 inches, gravel and sand to 96 inches, gray silty sandy till to 108 inches. No water at 108 inches.
- Test Pit T has a top and sub layer to 30 inches, gravel to 80 inches, silty layer to 84 inches, and gravel to 120 inches. No water at 120 inches.
- Two percolation test were taken (6-15-1992). The percolation rate for PT-G is 2 minutes per inch at 60 inches and PT-H is 2 minutes per inch at 68 inches.

## Other Utilities

Water

- A 10" water main is located in Old Connecticut Path and terminates at Rice Road.
- An 8" water line is located adjacent to the 10" water line in Old Connecticut Path. The 8" water line also services the private driveway to 87 Old Connecticut Path and Forest Hill Road.

- A 12" water main is located in Rice Road.
- One 2MG and one .5MG storage tank are located to the west of the Subject Property, adjacent to Forest Hill Road and Poet's Path.
- Reeve's Hill Booster Pump Station is located proximate to the storage tanks referenced above.
- JLD contacted the Town of Wayland DPW Director, Don Ouellette, regarding fire flow data. The Town has not performed fire flow tests in 20 years and relevant data is not available.
- B+T performed an analysis on water systems in Wayland relating to the Subject Property. B+T determined that a Booster Pump Station will be required to provide water pressure to the proposed subdivision.

Electric

- NSTAR Electric provides electric service to the Town of Wayland.

Gas

- National Grid provides Gas Service to the Town of Wayland.
- A 2" gas line (with 60lb pressure) runs through Old Connecticut Path

JLD//226000MR002

# BEALS & THOMAS ZONING ANALYSIS

**Mainstone Farm**
**87 Old Connecticut Path**
**Wayland, Massachusetts**
**Project No. 2260.00**

**PURPOSE**

This zoning and permit analysis is only to be used in the pre-design phase of the project. This analysis should be prepared after the client has authorized BTI to proceed to permitting approvals. The purpose of this analysis it to identify the detailed design requirements for a local municipality affecting a site prior to the commencement of design development, which will be used for local permitting approvals.

## SUMMARY

The subject property is approximately 220 acres and is located at the intersection of Old Connecticut Path and Rice Road in Wayland, Massachusetts. The project proposes to create two conceptual land planning studies, a conventional subdivision and a cluster development subdivision alternative, for valuation purposes.

## LOCAL PERMITS/PROVISIONS

### 1. Zoning

| | |
|---|---|
| Zoning District: | Residence Zone 60,000 square feet – 210' Frontage |
| Overlay Zones: | NA |
| Abutting Zoning Districts: | Planned Development District, Residence Zone 40,000 square feet – 180' Frontage |
| Amendment of Zoning Required? | No |
| Assessor's Lot and Parcel ID | Map 35, Block 31A |
| Chapter 61A/Conservation Parcel | Map 35, Block 31A |
| Name of Frontage Roadway | Old Connecticut Path East, Rice Road |
| Will Project Create New Roadway? | Yes |

**A. Proposed Use:** Single-Family Estate Lots

- Agriculture, cemetery, and conservation are permitted **BY RIGHT** (Chapter 198, Attachment 3:1)
- Recreation/Park is permitted **BY RIGHT** (Chapter 198, Attachment 3:1)
- Assisted/Independent Living and Nursing Home is permitted **BY SPECIAL PERMIT** (Chapter 198, Attachment 3:1)
- See Chapter 198, Attachment 3:2 for permitted Government, Institutional, and Public Service Uses that are permitted **BY SPECIAL PERMIT**
- Conservation Cluster Development is permitted **BY SPECIAL PERMIT by the Planning Board WITH SITE PLAN REVIEW** (Chapter 198, Attachment 3.3).
- A Multifamily dwelling is permitted **BY SPECIAL PERMIT** in accordance with Article 18 Conservation Cluster Development District (Chapter 198, Attachment 3.3).
- Accessory dwelling units are permitted **BY SPECIAL PERMIT** (Chapter 198, Attachment 5:1)
- Earth removal is permitted **BY SPECIAL PERMIT** (Chapter 198, Attachment 3:1)

## B. Dimensional Requirements (Chapter 198, Attachment: 1)

| Dimension | Required |
|---|---|
| Minimum Lot Area[1] (sf) : | 60,000[2] |
| Minimum Frontage (ft): | 210 |
| Minimum Yard Setback[4]- Front- From Lot Line (ft): | 30[3] |
| Minimum Yard Setback[4]- Front- From ROW Center Line (ft): | 55 |
| Minimum Yard Setback[4]- Side Yard (ft): | 30[5] |
| Minimum Yard Setback[4]- Rear Yard (ft): | 30 |
| Maximum Height[6] – The lesser of Feet : | 35 |
| Maximum Height[6] – The lesser of Stories: | 2 1/2 |
| Maximum Lot Coverage: | 20% |

NOTES:

- All buildings in any residence district shall comply with the setbacks in the Table Dimensional Requirements, listed above. Exempt from the setback requirements are appurtenant building structures and fences and walls up to six feet in height from the existing natural topography. See Chapter 198-702 for additional setback requirements and exemptions in relation to existing buildings and structures.
- In Single Residence Districts where there are two or more existing buildings on the same side of a street between two streets consecutively intersecting such street and

[1] Minimum lot area shall be calculated in accordance with the requirements of Section 198-705.5 of the Zoning Bylaw.
[2] Minimum front yard width shall be calculated in accordance with Section 198-705.1.8.
[3] If Section 198-702 shall require a greater setback or permit a lesser setback, the provisions of said 198-702 shall prevail over this table.
[4] Any greater setback required by Section 198-702.4 or Section 198-901.1.5.4 901.1.5.5 or 901.1.6 shall prevail.
[5] Side yards shall meet the requirement of Section 198-702.4 and 703.2 and the required minimum side yard may be reduced in accordance with the provisions of 198-703.2
[6] Maximum height limitations shall be subject to the exceptions set forth in Section 198-701.1.1 and 701.1.2.

NOTE: Chapter 198, Sections 701-705 and Section 901, Article 7 summarize exceptions to area, yard and bulk regulations. Relevant requirements from these sections are summarized in the NOTES listed in this section.

within 200 feet of the lot in questions, any building or structure on the lot may extend as near the line of such street as the average alignment of such then existing building with respect to said street lot line. A new building shall extend only as near such street lot line as the average alignment of the existing buildings (Chapter 198-702.3).

- On a corner lot, no planting, structure or part of a building shall extend within 20 feet of any corner street lot line intersection so as to interfere with the traffic visibility around the corner (Chapter 198-702.4).
- A back yard may contain accessory buildings that shall not be more than 1.5 stories high and that together shall cover not more than 30% of its area, and none of which shall extend within 10 feet of any lot line, except as authorized by special permit by ZBA. A garage (attached or detached) may be located aside a dwelling, provided that there is a side yard between the garage and the side lot line. See Chapter 198-703 for additional yard requirements in relation to existing buildings and structures.
- In a zone of 40,000 square feet or 60,000 square feet in a Single Residence District, no building lot shall be laid out and no dwelling shall be erected on a lot unless the center of a circle 100 feet in diameter can be passed along a continuous line from the side line of the street along which the frontage of the lot is measured to any point of the dwelling, or proposed dwelling, on the lot without the circumference intersecting any side lot lines. This shall not apply to an existing dwelling or to to a dwelling for which a building permit has been issued (Chapter 198-705.1.8).
- No dwelling shall be erected on a parcel or lot of land not fronting on a street, which parcel or lot of land shall contain less than 20,000 square feet or that shall have less than the minimum area and frontage on a right-of-way required for the zone in which it is located, unless such dwelling is accessory (Chapter 198-705.3).
- The area of any lot, for the purpose of ascertaining the minimum required shall not include any part of the street right of way upon which it abuts (Chapter 198-705-.5)
- A building lot that is located on more than one street must comply with the front setback requirement with respect to each street on which it is located, except by special permit from the ZBA, **and must meet the frontage requirement on one such street** (Chapter 198-706.1).
- See Chapter 198-805 for permitted accessory uses and requirements.

**Definitions:**

**Accessory Use-** a use of land or building(s) customarily incidental to, and located on the same premises with, the use to which it is accessory.

**Building height-** the distance, measured vertically from mean grade, to the highest roof element.

**Frontage-** the linear extent of the front of a lot measured along the street lot line of the right of way from the intersection of one side lot line to the intersection of the other lot

line of the same lot along the same right-of-way. Noncontiguous frontage shall not be considered with regard to meeting frontage requirements. A building lot that is located on one more than once street shall meet the frontage requirement on one such street.

**Lot-** an area of land in one ownership with definite external boundaries and without any other legal boundaries or lines that are internal to said external boundaries, except easements, and which area of land is used or set aside and available for use as the site of one or more buildings.

**Setback-** the shortest distance from the boundary line or street lot line to the wall of a building or structure facing thereon.

**Story-** that portion of a building included between the upper surface of a floor and upper surface of the floor or roof next above.

**Yard, Front-** the space extending across the full width of the lot and lying between the front lot line or lines and the nearest point of the building.

**Yard, Rear-** the space extending across the full width of a lot and lying between the front lot line or lines and the nearest point of the building.

**Yard, Side-** the space between a side lot line of a lot and the nearest point of the building and extending from the front yard to the rear yard.

**Conservation Clusters**

Any person seeking to divide a parcel of land having 5 or more acres and promotes the more efficient use of land in harmony with its natural features may apply to the Planning Board for a special permit to have the parcel designated as a Conservation Cluster (Chapter 198-1801 – 198-1808, Article 18).

- Any owner or owners of a tract of land within a Single Residence District, or an authorized agents of such owner or owners, may submit an application for a special permit exempting such land from the lot area and frontage, yard, setback, and width of lot requirements of Article 7 (Chapter 198-1801.1).
- The area of the tract is not less than 5 acres (Chapter 198-1803.1.2).
- The number of lots on which there is to be a single dwelling unit does not exceed the following:
    - The number of building lots that could be created in the tract shown on such plan without a special permit hereunder, plus one lot for each 10 of such building lots that could otherwise be created (Chapter 198-1803.1.3.1); or
    - The number of building lots obtained by dividing 90% of the total area of the tract, exclusive of land situated within the floodplain or designated as wetlands by the Conservation Commission, by the minimum lot size

permitted in the district within which the tract is located, plus one lot for each 10 lots so arrived at from such division (Chapter 198-1803.1.3.2).

- Within the residence districts, the Planning Board shall permit, *by special permit,* structures to be constructed containing more than one dwelling unit, but not more than four dwelling units per structure. The number of dwelling units for attached buildings shall not exceed the total that is required under Section 198-1805.1.1 (Chapter 198-1803.1.3.3).
- Each of the building lots **has adequate frontage, but no less than 50 feet,** on a public or private way (Chapter 198-1803.1.4).
- Each of the building lots is of a size and shape as shall provide a building site that shall be in harmony with the natural terrain and other features of the tract, but **no such lot shall have an area of less than 20,000 square feet** (Chapter 198-1803.1.5).
- The front, side and rear yards of each lot shall be shown on the plan as dashed lines indicating the area within which a building may be built, provided that all **dwelling and accessory buildings shall be set back at least 15 feet from the perimeter of the tract and 15 feet from any open land** (Chapter 198-1803.1.6).
- For Conservation Cluster Developments consisting of single-family detached dwellings, **at least 35% of the land area of the tract, exclusive of land set aside for road area, shall be open land**, and the open land shall include all land not dedicated to roads or building lots. For clusters consisting of attached single-family dwelling, at least 50% of the land area shall be open land, exclusive of land set aside for road area, shall be open land, and the open land shall include all land not dedicated to roads or building lots (Chapter 198-1803.1.7).
- See Chapter 198-1803.1.10 for requirements for cluster developments within two residence zones. This requirement does not apply to this project.

- See Chapter 198-103.1.8 for conveyance of open land
- Subject to the Board of Health, the Planning Board may permit the open land to be used for subsurface waste disposal where the Planning Board finds that such use will not be detrimental to the character or quality of the open land (Chapter 198-1803.1.9).
- See plan requirements listed within Chapter 198-1803.
- If a special permit is granted, the Planning Board shall impose as a condition that the common land shall be conveyed, free of any mortgage interest or security interest and subject to the perpetual restriction listed in Chapter 198, prior to the Planning Board's release of any lots from the subdivision restriction covenant, or if there is no such covenant, prior to the Building Commissioner's issuance of a building permit for any lot (Chapter 198-1806).

**Definitions:**

**Open Land** – a parcel or parcels of land, or an area of water, or a combination of land and water, not including roads or ways, whether public or private, to be used for open space, conservation, agriculture, outdoor recreation, park purposes or some combination of the foregoing (Chapter 1803.1.7).

Pursuant to the authority granted by Article 18 of the Zoning Bylaws, the following regulations govern special permits for conservation clusters in the Town of Wayland (Chapter 301-1).

- See Chapter 301-14 for Concept Plan requirements.
- See Chapter 301-15 for Site Plan requirements.
- Each building site shall have access by way of a relatively level drive which shall not have a grade in excess of 10% (Chapter 301-17.B).
- There shall be a buffer strip at least 50 feet wide around the perimeter of the tract when the abutting use is not a conservation cluster development or dedicated open space or dedicated to conservation purposes (Chapter 301-17.C).
- There shall be a buffer strip at least 30 feet side between the groupings of building lots within the conservation cluster development (Chapter 301-17.D).
- Each principal building shall have access from a street (Chapter 301-17.E, 1-2):
  - Contained within the conservation cluster development; and
  - Not in existence prior to the cluster.
- No building, structure or pavement shall be located within areas which are required to be maintained as open land (Chapter 301-17.F).
- Building shall be compatible with other buildings in the conservation cluster development (Chapter 301-17.G).
- Building, open spaces, driveways and other development features shall be located and designed in a manner which conforms to the existing natural terrain of the site (Chapter 301-17.H).
- All existing and proposed utilities shall be installed underground at the time of initial construction (Chapter 301-17.I).
- All elements of the development shall be installed in a sequence acceptable to the Planning Board. Phases shall include complete building lot groups (Chapter 301-19.B).

According to Article 22, Section 198-2203.1, the construction of six or more dwelling units, whether on one or more contiguous parcels, shall require a special permit from the Planning Board, including the construction of six or more dwelling units in a Conservation Cluster Development District pursuant to a special permit issued by the Planning Board under Article 18 of the Town's Zoning Bylaws.

- Developments shall not be segmented to avoid compliance with Article 22 (Section 2203.2).
- A minimum of 16.7% of the units in the development shall be affordable. More than the minimum required is also allowed (Section 2204.2).
- See Section 198-2205 for allowed types of affordable dwelling units.
- See Section 198-2206 for eligibility standard.
- See Section 198-2207 for affordability requirements.
- Location of affordable dwelling units shall be provided on-site unless the Planning Board allows an alternative method of compliance (Section 198-2208.1).
- Affordable dwellings units shall be externally indistinguishable from market-rate units in the same development (Section 198-2208.2).
- It is preferable that the unit contain at least two bedrooms (Section 198-2208.3).
- See Section 198-2209 for alternative methods of compliance. These include donation of land in fee and monetary donations to the Town to be used for the purposes of providing affordable housing.

## C. Parking/Loading Requirements (Chapter 198, Article 5)

In general, off street parking requirement pertain to retail, commercial, office, restaurants, schools and mixed uses. No parking requirements are listed in Chapter 198, Article 5 for residential zones.

## D. Signage and Lighting (Chapter 198, Article 501)

Only those signs and exterior lighting as pertain to buildings, structures or uses permitted in the bylaw and on the same premises are permitted. Yard requirements shall apply to signs and exterior lighting fixtures and structures, except freestanding lampposts at a residence in a residential district, which lampposts shall have a minimum front yard setback requirement of 15 feet, to be measured from the front property line. Signage in residential districts shall be limited to that which is permitted in other sections of the bylaw. See Chapter 198-502 for temporary signs.

## E. Special Permit Requirements

**Earth Movement**

No earth in excess of 500 cubic yards shall be moved on any parcel of land in and district less than 40,000 square feet in area and no earth in excess of 1,500 cubit cards on any parcel of land in any district 40,000 square feet or more unless a special permit from the ZBA is obtained (Chapter 198-504.1).

## F. Site Plan Approval/Review

In general, site plan review and approval shall apply to any improvement, alteration or change of use to, on or with respect to the erection or placement of any structure or parking area on said lot or lots or substantial alteration to any area of parking, loading or vehicular access (Chapter 302).

According to Chapter 198, Article 6, site plan approval shall not be required for any proposal for single-family residential structures or uses or structures or uses accessory thereto. Additionally, site plan approval shall not be required for any proposal subject to Article 18, Conservation Cluster Development District.

## 2. Changing Public Ways

Prior to accepting the final design of any roadway, where pavement is to be placed where none exists at the time or where the side lines of the town's ownership are to be alerted, a public hearing shall be held for the purpose of gathering public comments and input on said proposed design (Chapter 158, Article II).

See Chapter 158, Articles VI and VII for removal of utility poles and excavation of trenches in public ways.

## 3. Scenic Roads and Public Shade Trees

The Town of Wayland enforces a Scenic Roads Bylaw (Chapter 158, Article 5). Under the bylaw, Old Connecticut Path (East) and Rice Road have been designated as scenic roads. Trees and stone walls within the rights-of-way of all designated scenic roads will not be altered without public hearing required by, nor without following the other procedures set forth in Chapter 158, Article IV, Scenic Roads.

**Driveways**

- At a minimum, driveways shall be consistent with Wayland regulations for residential driveways and curb cuts shall comply with Article 5 (Chapter 158-11.A).
- Only one driveway cut per lot onto any designated scenic road shall be allowed. A new driveway onto a designated scenic road shall not exceed 12 feet in width (Chapter 158-11.B).
- Stone wall sections to be removed for a driveway shall not exceed the driveway width by more than two feet (Chapter 158-11.C)
- No tree with a trunk exceeding eight inches in diameter four feet above the ground or cluster of trees within six feet of one another with trunks six inches in diameter four feet above the ground shall be removed for a driveway unless the curb cut cannot be safely located elsewhere (Chapter 158-11.D).

See Chapter 171 for replacement of public shade trees.

## 4. Subdivision Rules and Regulations

The following is a summary of the *Town of Wayland Massachusetts Subdivision Rules and Regulations* (the Regulations) adopted on October 1, 1968 and revised through September 4, 2001. Note: this is a summary of the Regulations; the designer should review the complete set of Regulations before designing a project.

See Section III for the procedure for the submission and approval of plans.

**General**

- Only one residential dwelling may occupy each lot. Customary accessory structures are permitted (Section IV.A.4).
- All natural features, such as large trees, water courses, wetlands, scenic points, historic spots, and similar community assets shall be preserved (Section IV.A.5).
- Vehicular access to each lot in a subdivision shall be such as to provide actual or potential vehicular entry onto each lot from the street from which each lot calculates its frontage for zoning purposes. Lots shall be arranged so that there will be no foreseeable difficulties for reasons of topography, soils, bedrock, improper drainage or other conditions in securing a building permit or in providing practical, feasible driveway access to the building on such lots (Section IV.A.7).

**Streets**

- Streets shall be continuous, of uniform width, and in alignment with existing streets, as far as practicable (Section IV.B.1.a)
- A minimum 200-foot length tangent shall be provided between the point of tangency of one curve and the point of curvature of any following curves (Section IV.B.1.c).
- Dead-end streets shall be permitted on Residential and Limited Residential Streets only. Any dead-end street shall be provided with a circular turn-around at its dead-end terminus having a curb radius of forty-five (45) feet, and a right-of-way radius of sixty (60) feet. A dead end street is any street or way or combination of streets or way shaving only one terminus at a through street (Section IV.B.1.d).
- No dead-end street shall be more than six hundred ninety (690) feet in length, as measured along its center line from its intersection with the sideline of the right-of-way of the through street to the center point of the circular turn-around (making the overall length no more than seven hundred fifty (750) feet) (Section IV.B.1.d).
- Street lines at intersections shall be cut back so as to provide for curb radii of not less than twenty-five feet (25') (Section IV.B.2.e).

**Design Standards**

| Design Standards | Limited Residential |
|---|---|
| Right-of-Way Width (ft) : | 40 |
| Pavement Width (ft): | 22 |
| Radius of Curves+ (ft): | 290 |
| Maximum Gradient (%) | 8 |
| Minimum Gradient (%): | 1 |

- No more than a 6% grade on a northerly facing slope shall be permitted. There shall be no more than 1% grade for 50 feet from the intersection (Section IV.B.2).
- Adequate sight distance shall be provided in accordance with AASHTO standards (Section IV.B.3).
- Streets entering opposite sides of another street shall be laid out directly opposite each other or with a minimum off-set of 150 feet between their rights-of-way (Section IV.B.4). Streets entering from the same side that is existing, proposed, or approved shall be off set a minimum of 420 feet, as determined by the R60 district (Section IV.B.4).
- Rights-of-way shall be laid out so as to intersect as nearly as possible at right angles. No right-of-way shall intersect another right-of-way at less than 60 degrees. Where any intersecting street approaches the intersection at a grade greater than 3%, there shall be a grade of 1% for 100 feet from the center of the intersection along the center line of such street (Section IV.B.5).
- Property lines at right-of-way intersections shall be cut back to provide for a curb radius on the roadway of not less than twenty-five feet (Section IV.B.5.)
- All objects within these areas shall be no higher than 2.5 feet (Section IV.B.5).
- See Section IV.B.C for easements and restrictions.
- Driveway connections to streets shall slope from the street right-of-way line down to the edge of the pavement at a grade of ¼ inch per foot (Section IV.B.F).
- Five foot width walkways shall be installed wherever required. See Section V for additional roadway improvement specifications.
- The Planning Board will require that suitable hardwood shade trees be planted along roads, streets or ways where trees do not exist (Appendix, Subdivsion Regulations).

**Pedestrian Ways, Open Space, Parks and Playgrounds**

- Areas of open space, parks and/or playgrounds will normally be required to be set aside in accordance with the proposals and intents of the Master Plan and Chapter 41. Such areas shall be not less than 5% of the area of the subdivision depending on the location and the quality of the land. The minimum area acceptable for public acquisition is 1 acre (Section IV.B.E).
- No building may be erected or placed on such an area for a period of three years without the approval of the Board. (Section IV.B.E).
- An open space, park, or playground shall provide at least fifty feet of continuous frontage on a street and pedestrian ways will normally be required to provide access from each of the surrounding streets if the open space, park, or playground has no frontage (Section IV.B..E).
- Pedestrian ways or foot paths will normally be required to provide convenient circulation or access to surrounding Town uses. Such ways shall consist of an easement of at least 20 feet (Section IV.B.D).

5. **Stormwater and Land Disturbance**

The Town of Wayland enforces a stormwater and land disturbance bylaw which applies to all new development and redevelopment within the Town of Wayland, including, but not limited to, site plan, subdivision, grading, and land use conversion applications, as well as, any activity that is likely to alter the drainage characteristics of a parcel of land. A stormwater management permit shall be required for all new development and redevelopment, under the jurisdiction of the Conservation Commission (Chapter 193).

6. **Wetlands Bylaw**

The Town of Wayland enforces a Wetlands and Water Resources Protection bylaw that provides a greater degree of protection of wetlands, buffer zones and related water resources than the protection under the Massachusetts Wetlands Protection Act (Chapter194). The greater degree of protection shall be by pre-construction review and control of activities deemed by the Conservation Commission likely to alter, degrade or have adverse cumulative effect upon wetland values and functions.

The wetlands buffer zone, according to Chapter 194-2, is defined as any land which is greater distance of the following:

- One hundred feet horizontally lateral from the edge of a bog, marsh, wet meadow, swamp, pond, vernal pool, bank, streambed, lake, stream or any other resource area specified in this chapter;
- One hundred feet horizontally lateral from the water elevation of the one-hundred-year storm, or land subject to flooding or inundation.

For any work within the wetland buffer zone, either a request for determination or notice of intent shall be filed with the Conservation Commission.

The Town of Wayland Wetlands and Water Resources bylaw, under vegetated areas, enforces a 30 foot no touch vegetated buffer zone (with permanent demarcation) for new construction.

The Town of Wayland enforces a 200 foot riverfront area. The Conservation Commission may, after a public hearing, designate a riverfront area of less than 200 feet for a densely developed area (Chapter 194-2).

## PERMIT CHECKLIST

| Local Permits | Applicable to Project |
|---|---|
| **1. Subdivision of Land (Approval Not Required Plan, Preliminary Subdivision Plan and/or Definitive Subdivision Plan**<br>The proposed project will require the subdivision of land. | ☒ Yes<br>☐ No<br>☐ Potential |
| **2. Special Permits**<br>A special permit will be required if the proposed project includes a Conservation Cluster scenario. . | ☐ Yes<br>☐ No<br>☒ Potential |
| **7. Site Plan Approval/Site Plan Review**<br>Site Plan Review is not required for this project because it is a residential project. | ☐ Yes<br>☒ No<br>☐ Potential |
| **8. Variance**<br>It is not anticipated that a Variance will be required for the proposed project. | ☐ Yes<br>☒ No<br>☐ Potential |
| **9. Massachusetts Wetlands Protection Act**<br>If the project includes alteration within the 100' buffer zone and/or alteration of wetland resource areas, then a Notice of Intent will be submitted to the Wayland Conservation Commission. | ☐ Yes<br>☐ No<br>☒ Potential |
| **10. Local Wetlands By-Law**<br>The Town of Wayland does enforce a local wetlands bylaw, which has a more stringent review process than the Massachusetts Wetlands Protection Act. | ☐ Yes<br>☐ No<br>☒ Potential |
| **11. Scenic Road Review**<br>The Town of Wayland has Scenic Roads Regulations. Old Connecticut Path and Rice Road are Scenic Roads, therefore, if alteration is proposed regarding the removal or cutting of trees, or tearing down or destruction of stone walls, Scenic Road Review by the Planning Board will be required. | ☐ Yes<br>☐ No<br>☒ Potential |
| **12. Other Permits (e.g., curb cut, earth removal, utility connections, wells, etc.)**<br>It is not anticipated that an earth removal permit will be required. Curb cut permits or utility permits may be required. | ☐ Yes<br>☐ No<br>☒ Potential |
| **13. Fuel Storage Permit (for parking garage)**<br>It is not anticipated that a fuel storage permit is required. | ☐ Yes<br>☒ No |

## PERMIT CHECKLIST

| State Permits | Applicable to Project |
|---|---|
| **Is Property/Project located within an ACEC?**<br>If YES, ACEC Designation:<br>Reminder, ACEC Designation may trigger MEPA, CZM, or DEP regulations and permits | ☐ Yes<br>☐ No |
| **1. Massachusetts Historical Commission Notification**<br>The project site contains a historic building according to MACRIS, therefore a PNF to MHC will most likely not be required. The property is not located within the Wayland Historic District. | ☒ Yes<br>☐ No<br>☐ Potential |
| **2. Massachusetts Environmental Policy Act**<br>It is not anticipated that the proposed project will trip any of the MEPA thresholds. | ☐ Yes<br>☐ NPC Required?<br>☐ ENF Required?<br>☐ EIR Required?<br>☒ No<br>☐ Potential |
| **3. Massachusetts Endangered Species Act**<br>The project does not appear to be within an area subject to the Natural Heritage and Endangered Species Program. | ☐ Yes<br>☐ No<br>☐ Potential |
| **4. 401 Water Quality Certification**<br>It is not anticipated that the project will not involve the loss of more than 5000 sf cumulatively of bordering and isolated vegetated wetlands and land under water. | ☐ Yes<br>☒ No<br>☐ Potential |
| **5. Waterways Determination of Applicability**<br>Project site does not contain navigable water, therefore, a Waterways Determination of Applicability will not be required. | ☐ Yes<br>☒ No |
| **6. Waterways License/Permit (Ch. 91)**<br>Project site does not contain navigable water, therefore, a Ch 91 permit will not be required. | ☐ Yes<br>☒ No |
| **7. Ground Water Discharge Permit**<br>The project potentially may be served by public sewer. A Groundwater Discharge Permit may be required. | ☐ Yes<br>☐ No<br>☒ Potential |

8. **Sewer System Extension/Connection Permit**
The Project may generate 15,000 gpd and may require a sewer pump station.

☐ Yes
☐ No
☒ Potential

9. **Massachusetts Highway Access Permit**
Old Connecticut Path and Rice Road are not state highway layouts, therefore, MassHighway Access Permits will not be required.

☐ Yes
☒ No

10. **Massachusetts Contingency Plan**
The project site is not listed on DEP BWSC, therefore a Massachusetts Contingency Plan will not be required.

☐ Yes
☒ No

11. **Air Quality: Construction/Demolition Notification or Plan Approvals**
The project may require a Construction/Demolition Notification form because it may include more than 20 residential dwellings.

☐ Yes
☐ No
☒ Potential

## PERMIT CHECKLIST

| Federal Permit | Applicable to Project |
|---|---|
| 1. **National Pollutant Discharge Elimination System (NPDES) (EPA)**<br>Required for construction activities that disturb more than one (1) acre. The project site is approximately 220 acres and will alter more than 1 acre. | ☒ Yes<br>☐ No<br>☐ Potential |
| 2. **Programmatic General Permit (Army Corps of Engineers)**<br>It is not anticipated that the project site will involve the loss of more than 5000 sf cumulatively of bordering and isolated vegetated wetlands and land under water. | ☐ Yes<br>☒ No<br>☐ Potential |

## REGULATIONS/MAPS/PLANS SUMMARY

| | Dated | BTI Received |
|---|---|---|
| Town of Wayland Zoning Board of Appeals Regulations (Chapter 198 Zoning) | August 2010 | February 7, 2011 |
| Chapter 301 Conservation Cluster Development (Planning Board) | December 12, 1998 | February 7, 2011 |
| Chapter 194 Wetlands and Water Resources Protection (Town Bylaw) | September 5, 2001 | February 7, 2011 |
| Town of Wayland, Massachusetts, Subdivision Rules and Regulations | Adopted October 1, 1968<br>Revised September 4, 2001 | February 7, 2011 |
| Town of Wayland Zoning Map | December 5, 2003 | February 7, 2011 |
| Town of Wayland Zoning Overlay Districts | December 5, 2003 | February 7, 2011 |

## CONTACTS

| Name | Position | Phone Number |
|---|---|---|
| Sarkis Sarkisian | Town Planner | 508-358-3615 |
| Christa Collins | Sudbury Valley Trustees | 978-443-5588 x 815 |
| | | |
| | | |
| | | |

## ATTACHMENTS

PREPARED BY: JLD DATE: 1/19/11

CHECKED BY: JET DATE: 1/19/11

REVISED BY: JLD DATE: 2/9/11

DISCIPLINE SUPERVISOR: DATE:

PROJECT MANAGER: JLD DATE: 2/9/11

ISSUED TO: JET DATE: 2/9/11

***Permit Analyses must be checked by JET prior to issuance***
***Zoning analyses should be checked by the project/site designer prior to issuance***

JLD/jet/226000PA001

# BEALS & THOMAS WETLANDS ANALYSIS

**BEALS + THOMAS**
BEALS AND THOMAS, INC.
Reservoir Corporate Center
144 Turnpike Road
Southborough, MA 01772-2104

SITE VISIT REPORT

T 508.366.0560
F 508.366.4391
mail@btiweb.com I www.btiweb.com
Regional Office: Plymouth, MA

SITE VISIT DATE: January 13, 2011
March 21, 2011

ISSUE DATE: March 31, 2011

REFERENCE: Wetland Resource Area Delineation
Old Connecticut Path/Rice Road
Wayland, Massachusetts
Project No. 2260.00

PRESENT: JJ

PREPARED BY: JJ/JLD

COPIES TO: File

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**PURPOSE:** To field check the location of the delineated wetland resource areas associated with the subject property for a land planning study.

**SUMMARY:**
The wetland delineation was performed in January 2011 and is in accordance with the regulations pursuant to the Massachusetts Wetlands Protection Act, MGL, Chapter 131, Section 40 (the Act) and the Wayland Wetlands and Water Resources Protection Bylaw and Regulations (Chapter 194). The wetland resource areas were delineated with pink and black striped flagging and blue flagging was used to delineate the outermost jurisdictional bank resource area (Wayland, Chapter 194). The herbaceous layer was delineated on March 21, 2011 following snow thaw.

**STATE AND LOCAL REGULATED WETLANDS:**

**Small Pond**
The perimeter of the small pond was observed to contain minimal wetland vegetation and is located to the south of the Hamlen farmstead. The pond contains approximately 19,000 SF and is classified as a ponded Bordering Vegetated Wetland (BVW) under the WPA. An underground outlet control structure is located at the south-central portion of the pond. The outlet control structure outflow pipe was observed south of the pond.

**Large Pond/Wetland "A" (WF A-1 through A-63) (Bank 1 through Bank 17)**
Wetland-A delineates the unnamed pond and associated Bordering Vegetated Wetland proximate to Rice Road. The area is mapped as Haven silt loam, a non-hydric soil with Merrimac and Scio inclusions. Within Wetland-A, hydrophytic vegetation consists of red maple, tussock sedge, sphagnum moss, skunk cabbage, northern arrowwood, highbush blueberry, gray birch, red-osier

dogwood, speckled alder, coastal pepperbush, and soft rush. Vegetation observed upgradient of the Wetland-A consists of multiflora rose, white pine, crab apple and northern red oak.

Observations in March confirmed that Wetland A connects to Wetland D. Specifically, Flag A-63 connects to Flag D-10 and Flag A-62 connects to D-1. A modification has been made to the planning base map to reflect these observations.

**Perennial Stream (Bank 6 through Bank 11)**
A perennial stream flows northeasterly from the northeastern portion of Wetland-A. The stream was observed flowing under Rice Road through a culvert exiting off-site.

**Intermittent Stream (Wetland-B & C to Wetland-A)**
An intermittent stream flows northwesterly from Wetland-B and Wetland-C to the southwestern portion of Wetland-A. The un-vegetated intermittent stream bed was observed flowing to Wetland-A.

**Wetland "B" (WF B-1 through B-6)**
Wetland-B delineates a Bordering Vegetated Wetland up-gradient of Wetland-A. The area is mapped as Haven silt loam, a non-hydric soil with Merrimac and Scio inclusions. Within Wetland-B, hydrophytic vegetation consists of red maple, skunk cabbage, and sphagnum moss. Vegetation observed up-gradient of the Wetland-B consists of Japanese barberry, crab apple, black birch and northern red oak. Soils were identified as hydric and hydrological indicators were evident.

**Wetland "C" (WF C-1 through C-12)**
Wetland-C delineates a Bordering Vegetated Wetland up-gradient of Wetland-A. The area is mapped as Haven silt loam, a non-hydric soil with Merrimac and Scio inclusions. Within Wetland-C, hydrophytic vegetation consists of red maple, skunk cabbage, sphagnum moss, highbush blueberry, and coastal pepperbush. Vegetation observed up-gradient of the Wetland-C consists of Japanese barberry, white pine, crab apple, black birch, black cherry and northern red oak.

A herbaceous layer was observed at Wetland-C during a site visit conducted in March due to snow thaw. Modifications to the planning base map were made to reflect the following:

- Flag C-4 was re-located up-gradient 20 feet.
- Flag C-6 was re-located up-gradient 15 feet.

**Wetland "D" (WF D-1 through D-10)**
Wetland-D was delineated as an Isolated Vegetated Wetland, is located south of Wetland-A, and was confirmed to have a connection with Wetland-A in March, 2011. The area is mapped as Haven silt loam, a non-hydric soil with Merrimac and Scio inclusions. Within Wetland-D, hydrophytic vegetation consists of red maple, tussock sedge, sphagnum moss, northern

arrowwood, highbush blueberry, and soft rush. Vegetation observed up-gradient of the Wetland-D consists of black birch, white pine, crab apple and northern red oak.

**Wetland "E" (WF E-1 through E-26)**
Wetland-E delineates a Bordering Vegetated Wetland east of Deer Run Road. The area is mapped as Freetown muck. Within Wetland-E, hydrophytic vegetation consists of red maple, skunk cabbage, sphagnum moss, highbush blueberry, yellow birch and coastal pepperbush. Vegetation observed up-gradient of the Wetland-E consists of Japanese barberry, white pine, beech, black birch and northern red oak.

**Intermittent Stream (Wetland-E to Wetland-F)**
An intermittent stream flows southerly from the southern portion of Wetland-E to the central portion of Wetland-F. The un-vegetated intermittent stream bed was observed to have portions flooded and steady flow. The areas bordering the intermittent stream were investigated to determine whether wetland resource areas were present. Observations of the areas bordering the stream contains less than 50% of a wetland indicating plant community, and soils were determined to contain a mix of borderline hydric soils with hydrological indicators.

**Wetland "F" (WF F-1 through F-28)**
Wetland-F delineates a Bordering Vegetated Wetland located at the southwestern portion of the property. The area is mapped as Freetown muck and Ridgebury. Within Wetland-F, hydrophytic vegetation consists of red maple, skunk cabbage, sphagnum moss, highbush blueberry, yellow birch and coastal pepperbush. Vegetation observed upgradient of the Wetland-F consists of Japanese barberry, white pine, beech, black birch and northern red oak.

**PVP/Wetland "G" (WF G-1 through G-5)**
Wetland-G delineates an Isolated Vegetated Wetland located east of Wetland-E. Wetland-G was observed inundated and is identified by NHESP as a potential vernal pool. The area is mapped as Narragansett silt loam. Within Wetland-G, hydrophytic vegetation consists of coastal pepperbush. Vegetation observed upgradient of the Wetland-G consists of black birch, white pine, paper birch, beech and northern red oak.

**Wetland "H"**
Wetland-H was identified in March 2011 as being an Isolated Vegetated Wetland. The IVW is located east of Wetland-F and is mapped as Whitman fine sandy loam. Within Wetland-H, hydrophytic vegetation consists of red maple, skunk cabbage, sphagnum moss, highbush blueberry, yellow birch and coastal pepperbush. Vegetation observed up-gradient of the Wetland-H consists of white pine, beech, black birch and northern red oak.

**PERMITTING**
State-regulated wetland resource areas identified within the subject property include Land Under Water Bodies and Waterways (LUWW), Bank, Bordering Land Subject to Flooding (BLSF),

Bordering Vegetated Wetlands (BVW) and Riverfront Area (RFA). These resources are defined under the Wetlands Protection Act (310 CMR 10.00).

The Wayland regulated 100 ft buffer zones on-site include any land whichever is a greater distance from the following: any wetland, vernal pool, streambed, stream, bank, lake/pond, land subject to flooding or inundation, or the water elevation of the one-hundred year storm. The Town of Wayland also enforces a 30 ft no touch buffer zone.

The Army Corps of Engineers regulate waters under Section 404 of the Clean Water Act, including rivers, streams, lakes, ponds and wetlands, excluding Navigable Waters of the U.S. The jurisdictional limits are the ordinary high water (OHW) mark in the absence of adjacent wetlands, beyond the OHW mark to the limit of adjacent wetlands when adjacent wetlands are present, and the wetland limit when only wetlands are present. Depending on the specifics of the land planning study, if any proposed wetland fill is greater than or equal to 5000 SF, a Category 1 or 2 Permit will be required. Additionally, in the area of the depression edge of a NHESP certified and/or potential vernal pool, consideration and potential mitigation will be necessary for addressing impacts within the 750 foot Critical Terrestrial Habitat buffer zone.

These observations are accepted as accurate and complete unless corrections and/or additions are received within one week of issue.

JJ/jld/jet/jld226000SV002

# BEALS & THOMAS ROAD/INFRASTRUCTURE COST ESTIMATES

**BEALS + THOMAS**
BEALS AND THOMAS, INC.
Reservoir Corporate Center
144 Turnpike Road
Southborough, MA 01772-2104

# CALCULATION SUMMARY

T 508.366.0560
F 508.366.4391
mail@btiweb.com I www.btiweb.com
Regional Office: Plymouth, MA

*JOB NO./LOCATION:*

2260.00
Wayland, MA

*CLIENT/PROJECT:*

Community Preservation Committee, Town of Wayland
Mainstone Farm

*SUBJECT/TITLE:*

**Linear Foot Roadway Cost Estimate**
(Earthworks not included)

*OBJECTIVE OF CALCULATION:*

- To determine the approximate cost per linear foot of a typical Local Road as described by the Town of Wayland Subdivision Rules and Regulations.
- Include the installation costs of a water distribution system, a storm drainage system, and electric line.

*CALCULATION METHOD(S):*

- Quantities calculated based on the typical cross section of the road using the Subdivision Rules and Regulations of the town of Wayland, Massachusetts.
- Quantities calculated for 1000 ft stretch of road, cost per foot can then be applied to lengths of proposed road Concepts as necessary.
- Unit cost analysis based on Means Site Work and Landscape Data, 2011.

*ASSUMPTIONS:*

- 40' right of way (24' of pavement).
- 5' wide bituminous concrete sidewalk on one side of the road, 8" gravel base.
- Bituminous concrete Cape Cod berm assumed on one side of the road.
- Asphaltic bituminous concrete binder and wearing course (3" thick), 10" gravel base.
- Catch basins and drainage manholes are required for every 300 linear feet of roadway.
- One fire hydrant is required for every 1000 linear feet of roadway.
- Street trees spaced 80 feet apart on center on both sides of the road.
- No street lighting included.
- Costs do not include any earthwork.

*SOURCES OF DATA/EQUATIONS:*

- "Town of Wayland, Massachusetts Subdivision Rules and Regulations"
- R.S. Means Site Work and Landscape Cost Data, 2011.

| REV | CALC. BY | DATE | CHECKED BY | DATE | APPROVED BY | DATE |
|---|---|---|---|---|---|---|
| 0 | J. Murphy | 3/29/11 | J. Dwyer | 3/29/11 | D. Mitchell | 3/31/2011 |
| | | | | | | |
| | | | | | | |

JRM226000CS001

**BEALS + THOMAS**
BEALS AND THOMAS, INC.
Reservoir Corporate Center
144 Turnpike Road
Southborough, MA 01772-2104

CALCULATION SUMMARY

T 508.366.0560
F 508.366.4391
mail@btiweb.com I www.btiweb.com
Regional Office: Plymouth, MA

| | |
|---|---|
| **Approximate cost per linear foot = $ 270** | |

| REV | CALC. BY | DATE | CHECKED BY | DATE | APPROVED BY | DATE |
|---|---|---|---|---|---|---|
| 0 | J. Murphy | 3/29/11 | D.M. Feeney | 3/31/2011 | D.M. Feeney | 3/31/2011 |
| | | | | | | |
| | | | | | | |

JRM226000CS001

PROJECT CITY/TOWN: Wayland, Massachusetts
CITY COST INDEX USED: Worcester

| SECTION 2004 CSI | DESCRIPTION | QUANTITY | UNIT | UNIT COST | ADJUSTED UNIT COST | SUBTOTAL | SOURCE |
|---|---|---|---|---|---|---|---|
| 02230 | **SITE PREPARATION** | | | | | | |
| | 31.11 CLEARING & GRUBBING | | | | | | |
| | 31.11 Clear & grub, brush, including brush stumps | 0.92 | Acre | $6,100.00 | $6,045.10 | $5,561.49 | Means 2011, p285 |
| | 31.14 STRIPPING & STOCKPILING TOPSOIL/SUBSOIL | | | | | | |
| | 31.14 Stripping & stockpiling sandy loam, 300 HP dozer, average conditions | 1852 | CY | $1.19 | $1.18 | $2,184.05 | Means 2011, p287 |
| | 31.25 EROSION CONTROL, installed | | | | | | |
| | 31.25 Staked hay bales and silt fence, average conditions | 1000 | LF | $9.58 | $9.49 | $9,493.78 | BTI 2011 |
| | SUBTOTAL (SITE PREPARATION/TREE PROTECTION) | | | | | $17,239.32 | |
| 02300 | **31.23 EARTHWORK** | | | | | | |
| | 31.23 GRAVEL BORROW, includes: import material, place and compact (Item 151.) | | | | | | |
| | 31.23 **** CRUSHED ROCK FROM BEDROCK REMOVAL TO REPLACE THIS ITEM **** | 0 | CY | $22.71 | $22.71 | $0.00 | *MHD 2010 |
| | SUBTOTAL (EARTHWORK) | | | | | $0.00 | |
| 02511 | **HOT-MIX ASPHALT PAVING** | | | | | | |
| | 32.12 BINDER COURSE | | | | | | |
| | 32.12 Asphaltic conc pavement, hwys and lg paved areas, binder course, 2" thick | 2667 | SY | $8.85 | $10.42 | $27,780.67 | Means 2011, p358 |
| | 32.12 WEARING COURSE | | | | | | |
| | 32.12 Asphaltic conc pavement, hwys and lg paved areas, wearing course, 1" thick | 2667 | SY | $4.61 | $5.43 | $14,471.06 | Means 2011, p358 |
| | 32.06 SIDEWALKS, BITUMINOUS CONCRETE | | | | | | |
| | 32.06 Asphaltic concrete sidewalks, no base, 2.5" thick | 556 | SY | $13.70 | $16.12 | $8,965.44 | Means 2011, p355 |
| | 32.06 ADD for bank run gravel base, 8" thick (*** BLASTED MATERIAL***) | 0 | SF | $1.98 | $2.33 | $0.00 | Means 2011, p355 |
| | FOR SPECIAL PAVING SEE Means 2008, p329 | | | | | | |
| | 32.16 CURBING | | | | | | |
| | 32.16 Asphaltic berm, 12"w, 1-1/2" to 4" high, 60 l.f per ton, laid w/ pavement | 1000 | LF | $2.05 | $2.41 | $2,412.85 | Means 2011, p364 |
| | SUBTOTAL (PAVING) | | | | | $53,630.03 | |
| 02510 | **33.11 WATER DISTRIBUTION** | | | | | | |
| | 33.11 WATER PIPE (not including excavation, bedding, or backfill) | | | | | | |
| | 33.11 CLDI, tyton, push-on joint, 8" diameter | 1000 | LF | $39.50 | $39.14 | $39,144.50 | Means 2011, p456 |
| | TRENCHING (trenches over 4' deep must be 2:1 slope unless sheeted) | | | | | | |
| | Trenching, Common Earth, backhoe, no slope, 4' Wide, 1/2 CY bucket (6' deep) | 1000 | LF | $12.05 | $11.94 | $11,941.55 | Means 2011, p580A |
| | PIPE BEDDING (trenches over 4' deep must be 1:1 slope unless sheeted) | | | | | | |
| | Pipe Bedding, Side Slope 1 to 1, 2' Wide, Pipe Size 8" Diameter (over 4' deep) | 1000 | LF | $9.10 | $9.02 | $9,018.10 | Means 2011, p584A |
| | 33.12 HYDRANT | | | | | | |
| | 33.12 Hydrant, 5-1/4" Valve size, Three Way, 10' Offset, 6' Deep | 1 | EA | $8,350.00 | $8,274.85 | $8,274.85 | Means 2011, p626A |
| | SUBTOTAL (WATER DISTRIBUTION) | | | | | $68,379.00 | |
| 02630 | **STORM DRAINAGE** | | | | | | |
| | 33.41 RCP (not including excavation, bedding or backfill) | | | | | | |
| | 33.41 RCP, class 3, no gaskets, 12" dia | 1045 | LF | $32.50 | $32.21 | $33,656.84 | Means 2011, p475 |
| | TRENCHING (trenches over 4' deep must be 2:1 slope unless sheeted) | | | | | | |
| | Trenching, backhoe, 0 to 1 Slope, 2' Wide, 3/8 CY Bucket (6' deep) | 1045 | LF | $5.96 | $5.91 | $6,172.15 | Means 2011, p578A |
| | PIPE BEDDING (trenches over 4' deep must be 2:1 slope unless sheeted) | | | | | | |
| | Pipe Bedding, Side Slope 1 to 1, 2' Wide, Pipe Size 12" Diameter (over 4' deep) | 1045 | LF | $10.76 | $10.66 | $11,143.00 | Means 2011, p585A |
| | PRECAST STRUCTURES | | | | | | |
| | CATCH BASIN - 4' INSIDE DIAMETER | | | | | | |
| | Precast concrete Catch Basin, 4' ID Riser, 6' Deep | 6.66 | EA | $3,425.00 | $3,394.18 | $22,605.21 | Means 2011, p638A |
| | CATCH BASIN HOODS | | | | | | |
| | L219-12, 12" outlet | 6.66 | EA | $574.40 | $574.40 | $3,825.50 | *LeBaron 2011 |
| | DMH - 4' INSIDE DIAMETER | | | | | | |
| | Precast concrete Manhole, 4' ID Riser, 6' Deep | 3.33 | EA | $3,425.00 | $3,394.18 | $11,302.60 | Means 2011, p638A |
| | SUBTOTAL (STORM DRAINAGE) | | | | | $88,705.30 | |

| | |
|---|---|
| PROJECT CITY/TOWN: | Wayland, Massachusetts |
| CITY COST INDEX USED: | Worcester |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 02580 | **ELECTRIC/COMMUNICATION STRUCTURES** | | | | | | |
| 33.71 | PRECAST ELEC/TEL HANDHOLE, not incl. excavation, bedding, backfill | | | | | | |
| 33.71 | Elec & tel sitework, hand holes, precast concrete, w/ conc. cover, 4' x 4' x 4' D | 1 | EA | $2,475.00 | $2,913.08 | $2,913.08 | Means 2011, p493 |
| 33.71 | Elec & tel sitework, underground duct, PVC, 2 @ 5"diameter | 1000 | LF | $11.50 | $11.40 | $11,396.50 | Means 2011, p493 |
| | SUBTOTAL (ELECTRIC/COMMUNICATION STRUCTURES) | | | | | $14,309.58 | |
| 02900 | **LANDSCAPING** | | | | | | |
| 32.91 | TOPSOIL RESPREAD | | | | | | |
| 32.91 | Spread from pile to rough finish grade, front end loader, 1.5 CY | 204 | CY | $5.50 | $5.45 | $1,111.90 | Means 2011, p383 |
| 32.91 | SEEDING AND MULCHING | | | | | | |
| 32.91 | Fine grading and seeding, with equipment, including lime, fertilizer, and seed | 3667 | SY | $3.61 | $3.58 | $13,118.73 | Means 2011, p383 |
| | STREET TREES, 2-2.5" caliper | | | | | | |
| | Acer rubrum ("Red Sunset" Maple),brilliant orange-red in autumn, 2.5-3" caliper | 13 | EA | $360.00 | $360.00 | $4,680.00 | Weston 2011 |
| | Quercus rubra (Red Oak)-red fall foliage, 2.5-3" caliper | 6 | EA | $399.00 | $399.00 | $2,394.00 | Weston 2011 |
| | Tilia cordata ('Greenspire' Littleleaf Linden), tolerates urban cond., 2.5-3" caliper | 6 | EA | $390.00 | $390.00 | $2,340.00 | Weston 2011 |
| | TREE PITS | | | | | | |
| | 8' to 10' tree, deciduous, 3'x1-3/4' deep pit, sandy soil | 25 | EA | $165.50 | $164.01 | $4,100.26 | Means 2011, p617A |
| | SUBTOTAL (LANDSCAPING) | | | | | $27,744.89 | |

**SUMMARY OF SITEWORK COST ANALYSIS**

| | |
|---|---|
| PROJECT SUBTOTAL | $270,008.11 |
| **TOTAL PROJECT BUDGET** | $270,008.11 |

*SOURCES OF COST DATA:

Means 2011 - Means Sitework & Landscape Cost Data, 29th Edition, 2011
'A' after Means page# identifies an ASSEMBLY
Police 2011 - Police Detail - Boston
MA Tranportation 2011 - The Commonwealth of Massachuhsetts Executive Office of Transportation and Public Works, Road Flaggers & Police Detail Cost Report & Analysis, DRAFT September 2008.
MHD 2010- MHD Weighted Average Bid Prices January 2010 - January 2011
ADS 2011 - Advanced Drainage Systems 2011
East Jordan Iron Works (LeBaron) 2011- phone call to EJIW, Jan. 25, 2011
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StormTech Infiltration Chambers Generic Project - ADS 2011, Confirmed Mar. 2011
BTI 2011 - Beals and Thomas, Inc. 2011
Weston 2011 - Weston Nurseries Commercial Catalog 2011

ABBREVIATIONS:

| | |
|---|---|
| EA = Each | MSF = 1000 Square Feet |
| LS = Lump Sum | SY = Square Yard |
| LF = Linear Foot | CF = Cubic Feet Storage |
| SF = Square Foot | CY = Cubic Yard |

| CITY COST INDEXES | Worcester , MA |
|---|---|
| Contractor Equipment | 100.3% |
| Site Construction | 99.1% |
| Concrete | 117.7% |

| | | | | | |
|---|---|---|---|---|---|
| CLIENT | Community Preservation Committee, Town of Wayland | JOB NO. | 2260.00 | CHECKED BY | |
| PROJECT | Mainstone Farm | COMPUTED BY | JRM | DATE | |
| FILE | 226000CE001.XLS | DATE | 2/28/11 | PAGE NO. | |

**BEALS + THOMAS**
BEALS AND THOMAS, INC.
Reservoir Corporate Center
144 Turnpike Road
Southborough, MA 01772-2104

# CALCULATION SUMMARY

T 508.366.0560
F 508.366.4391
mail@btiweb.com I www.btiweb.com
Regional Office: Plymouth, MA

*JOB NO./LOCATION:*

2260.00
Wayland, MA

*CLIENT/PROJECT:*

Community Preservation Committee, Town of Wayland
Mainstone Farm

*SUBJECT/TITLE:*

**Concept 1 - Earthwork and Cost Estimate Analysis**

*OBJECTIVE OF CALCULATION:*

- To determine the approximate earthwork volumes and construction cost associated with construction of the proposed road (approximately 6,400 LF) in the Town of Wayland.

*CALCULATION METHOD(S):*

- Quantities calculated based on the typical local road cross-section using the grid method in Paydirt computer software.
- Unit cost analysis based on Means Site Work and Landscape Data, 2011 and BTI Contractor Bid Prices Collection.

*ASSUMPTIONS:*

- Average depth to bedrock assumed 12 feet below existing surface based on NRCS Soil Survey (Narragansett –Silt Loam), 2010.
- Average depth to bedrock assumed 5 feet below existing surface based on NRCS Soil Survey (Narragansett -Hollis-Rock Outcrop), 2010.
- Topsoil and subsoil assumed to be used as a fill material in deep fills.
- On-site bedrock assumed to be blasted, excavated, processed and reused as a roadway construction fill material.
- Leftover crushed rock to be used elsewhere on site for driveways, under foundations, etc. Cost credit shown in estimate spreadsheet.

*SOURCES OF DATA/EQUATIONS:*

- "Town of Wayland, Massachusetts Subdivision Rules and Regulations"
- R.S. Means Site Work and Landscape Cost Data, 2011.
- BTI Contractor Bid Prices Collection.
- NRCS Soil Survey, Middlesex County, Massachusetts, dated 2011.

| REV | CALC. BY | DATE | CHECKED BY | DATE | APPROVED BY | DATE |
|---|---|---|---|---|---|---|
| 0 | J. Murphy | 3/29/11 | J. DiNovo | 3/29/11 | D. M. Fenn | 3/31/2011 |
| | | | | | | |
| | | | | | | |

JRM/226000CS002

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mail@btiweb.com I www.btiweb.com
Regional Office: Plymouth, MA

*CONCLUSIONS:*

**Approximate roadway length = 6,400 LF**

**APPROX. EARTHWORK CONSTRUCTION COST = $ 2,570,000= $402/LF**

| REV | CALC. BY | DATE | CHECKED BY | DATE | APPROVED BY | DATE |
|---|---|---|---|---|---|---|
| 0 | J. Murphy | 3/29/11 | J. DiNuno | 3/29/11 | D. Mitchell | 3/29/2011 |
| | | | | | | |
| | | | | | | |

JRM/226000CS002

| | |
|---|---|
| PROJECT CITY/TOWN: | Wayland, Massachusetts |
| CITY COST INDEX USED: | Worcester |

| SECTION 2004 CSI | DESCRIPTION | QUANTITY | UNIT | UNIT COST | ADJUSTED UNIT COST | SUBTOTAL | |
|---|---|---|---|---|---|---|---|
| | **CONCEPT 1, 1A** | | | | | | |
| **02300** | **31.23 EARTHWORK** | | | | | | |
| | CUT TO FILL COMMON EARTH | | | | | | |
| | 10 CY elevating scraper & roller compact, 1500' haul 8" lifts 4 passes | 115900 | CY | $6.85 | $6.85 | $793,915.00 | Means 2011, p556A |
| | 31.23 ROCK EXCAVATION | | | | | | |
| | 31.23 Bulk Drilling & Blasting, can vary greatly, average | 20000 | CY | $12.00 | $12.00 | $240,000.00 | Means 2011, p294 |
| | Excavate out crushed bedrock | 20000 | CY | $6.57 | $6.57 | $131,400.00 | BTI 2011 |
| | Crush Rock On-Site (20000CY x 1.75tons/CY) | 35000 | Tons | $8.20 | $8.20 | $287,000.00 | BTI 2011 |
| | 31.23 Placing and Compacting crushed rock, 10 CY scraper, roller compactors, 1500' haul, 6" lift, | 5550 | CY | $8.38 | $8.38 | $46,509.00 | Means 2011, p552A |
| | 31.23 CUT TO EXPORT | | | | | | |
| | 31.23 2 1/2 CY excavator, 8-12 CY dump trucks, 3 mi. round trip | 136000 | CY | $8.94 | $8.94 | $1,215,840.00 | Means 2011, p557A |
| | SUBTOTAL (EARTHWORK) | | | | | $2,714,664.00 | |
| | **SUMMARY OF SITEWORK COST ANALYSIS** | | | | | | |
| | PROJECT SUBTOTAL | | | | | $2,714,664.00 | |
| | **Crushed Rock Credit** - Extra can be used for driveways, foundations, etc | 14450.00 | CY | $10.00 | $10.00 | $144,500.00 | BTI 2011 |
| | **TOTAL PROJECT BUDGET** | | | | | $2,570,164.00 | |

*SOURCES OF COST DATA:

Means 2011 - Means Sitework & Landscape Cost Data, 29th Edition, 2011
'A' after Means page# identifies an ASSEMBLY
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Weston 2011 - Weston Nurseries Commercial Catalog 2011

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| CITY COST INDEXES | Worcester , MA |
|---|---|
| Contractor Equipment | 100.0% |
| Site Construction | 100.0% |
| Concrete | 100.0% |

| | | | | | |
|---|---|---|---|---|---|
| CLIENT | Community Preservation Committee, Town of Wayland | JOB NO. | 2260.00 | CHECKED BY | DMF |
| PROJECT | Mainstone Farm | COMPUTED BY | JRM | DATE | 3/29/2011 |
| FILE | 226000CE001.XLS | DATE | 3/29/11 | PAGE NO. | |

**Beals and Thomas, Inc.**
144 Turnpike Road
Southborough, MA



**226700PD001: Existing vs. Proposed**

| Excavation Volumes | Bank Cut (cu yd) | Bank Fill (cu yd) | Cut Swell (%) | Fill Shrink (%) | Adjusted Cut (cu yd) | Adjusted Fill (cu yd) |
|---|---|---|---|---|---|---|
| Limit of Grading | 250563.55 | 115884.20 | 0.00 | 0.00 | 250563.55 | 115884.20 |

| Excavation Areas | Cut Area (sq ft) | Fill Area (sq ft) | Total Area (sq ft) |
|---|---|---|---|
| Limit of Grading | 923504.43 | 703088.07 | 1634616.00 |

| Removal Quantities | Boundary (ft) | Thickness (ft) | Area (sq ft) | Volume (cu yd) |
|---|---|---|---|---|
| Top and Subsoil | 11837.76 | 2.50 | 240819.76 | 22298.13 |
| **Total Removal:** | **11837.76** | | **240819.76** | **22298.13** |

**Project Totals**

| Excavation Volumes | Bank Cut (cu yd) | Bank Fill (cu yd) | Cut Swell (%) | Fill Shrink (%) | Adjusted Cut (cu yd) | Adjusted Fill (cu yd) |
|---|---|---|---|---|---|---|
| 226700PD001 : Limit of Grading | 250563.55 | 115884.20 | 0.00 | 0.00 | 250563.55 | 115884.20 |
| **Project Totals:** | **250563.55** | **115884.20** | **0.00** | **0.00** | **250563.55** | **115884.20** |
| **Export:** | **134679.35** | | | | **134679.35** | |

| Excavation Areas | Cut Area (sq ft) | Fill Area (sq ft) | Total Area (sq ft) |
|---|---|---|---|
| 226700PD001 : Limit of Grading | 923504.43 | 703088.07 | 1634616.00 |
| **Project Totals:** | **923504.43** | **703088.07** | **1634616.00** |

| Removal Quantities | Boundary (ft) | Area (sq ft) | Volume (cu yd) |
|---|---|---|---|
| 226700PD001 | 11837.76 | 240819.76 | 22298.13 |
| **Project Totals:** | **11837.76** | **240819.76** | **22298.13** |

*** Only Drawing Master AOI's or single selected Drawing AOI's are used for Project Excavation Totals.**

*** Removal Quantities are clipped to Drawing Master AOI or the individually selected AOI.**

**Beals and Thomas, Inc.**
144 Turnpike Road
Southborough, MA



| | Data Type | Elevation (ft) | Thickness (ft) | Boundary (ft) | Area (sq ft) | Volume (cu yd) |
|---|---|---|---|---|---|---|
| **Drawing: 226700PD001: Limit of Grading** | | | | | | |
| Area of Interest: Limit of Grading | AOI | | | 12236.68 | 1634727.95 | |
| **Surface: Existing** | | | | | | |
| NONE | | | | | | |
| Top and Subsoil | SGA | | 2.50 | 11837.76 | 240819.76 | 22298.13 |
| **TOTALS: NONE** | | | | **11837.76** | **240819.76** | **22298.13** |
| **Surface: Proposed** | | | | | | |
| NONE | | | | | | |
| Roadway | SGA | | 1.08 | 11886.91 | 139325.49 | 5573.02 |
| **TOTALS: NONE** | | | | **11886.91** | **139325.49** | **5573.02** |

**Project Totals for Material Groups**
**Drawing: 226700PD001: Limit of Grading**

| | | | | | | |
|---|---|---|---|---|---|---|
| NONE | | | | 23724.67 | 380145.25 | 27871.15 |

**BEALS + THOMAS**
BEALS AND THOMAS, INC.
Reservoir Corporate Center
144 Turnpike Road
Southborough, MA 01772-2104

# CALCULATION SUMMARY

T 508.366.0560
F 508.366.4391
mail@btiweb.com I www.btiweb.com
Regional Office: Plymouth, MA

*JOB NO./LOCATION:*

2260.00
Wayland, MA

*CLIENT/PROJECT:*

Community Preservation Committee, Town of Wayland
Mainstone Farm

*SUBJECT/TITLE:*

**Linear Foot Roadway Cost Estimate**
(Earthworks not included)

*OBJECTIVE OF CALCULATION:*

- To determine the approximate cost per linear foot of a typical Local Road as described by the Town of Wayland Subdivision Rules and Regulations.
- Include the installation costs of a water distribution system, a storm drainage system, and electric line.

*CALCULATION METHOD(S):*

- Quantities calculated based on the typical cross section of the road using the Subdivision Rules and Regulations of the town of Wayland, Massachusetts.
- Quantities calculated for 1000 ft stretch of road, cost per foot can then be applied to lengths of proposed road Concepts as necessary.
- Unit cost analysis based on Means Site Work and Landscape Data, 2011.

*ASSUMPTIONS:*

- 40' right of way (24' of pavement).
- 5' wide bituminous concrete sidewalk on one side of the road, 8" gravel base.
- Bituminous concrete Cape Cod berm assumed on one side of the road.
- Asphaltic bituminous concrete binder and wearing course (3" thick), 10" gravel base.
- Catch basins and drainage manholes are required for every 300 linear feet of roadway.
- One fire hydrant is required for every 1000 linear feet of roadway.
- Street trees spaced 80 feet apart on center on both sides of the road.
- No street lighting included.
- Costs do not include any earthwork.

*SOURCES OF DATA/EQUATIONS:*

- "Town of Wayland, Massachusetts Subdivision Rules and Regulations"
- R.S. Means Site Work and Landscape Cost Data, 2011.

| REV | CALC. BY | DATE | CHECKED BY | DATE | APPROVED BY | DATE |
|---|---|---|---|---|---|---|
| 0 | J. Murphy | 3/29/11 | J. Dwyer | 3/29/11 | D. Mitchell | 3/31/2011 |
| | | | | | | |
| | | | | | | |

JRM226000CS001

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Southborough, MA 01772-2104

CALCULATION SUMMARY

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mail@btiweb.com I www.btiweb.com
Regional Office: Plymouth, MA

| | |
|---|---|
| **Approximate cost per linear foot = $ 270** | |

| REV | CALC. BY | DATE | CHECKED BY | DATE | APPROVED BY | DATE |
|---|---|---|---|---|---|---|
| 0 | J. Murphy | 3/29/11 | D.M. Feeney | 3/31/2011 | D.M. Feeney | 3/31/2011 |
| | | | | | | |
| | | | | | | |

JRM226000CS001

| | |
|---|---|
| PROJECT CITY/TOWN: | Wayland, Massachusetts |
| CITY COST INDEX USED: | Worcester |

| SECTION 2004 CSI | DESCRIPTION | QUANTITY | UNIT | UNIT COST | ADJUSTED UNIT COST | SUBTOTAL | SOURCE |
|---|---|---|---|---|---|---|---|
| 02230 | **SITE PREPARATION** | | | | | | |
| | 31.11 CLEARING & GRUBBING | | | | | | |
| | 31.11 Clear & grub, brush, including brush stumps | 0.92 | Acre | $6,100.00 | $6,045.10 | $5,561.49 | Means 2011, p285 |
| | 31.14 STRIPPING & STOCKPILING TOPSOIL/SUBSOIL | | | | | | |
| | 31.14 Stripping & stockpiling sandy loam, 300 HP dozer, average conditions | 1852 | CY | $1.19 | $1.18 | $2,184.05 | Means 2011, p287 |
| | 31.25 EROSION CONTROL, installed | | | | | | |
| | 31.25 Staked hay bales and silt fence, average conditions | 1000 | LF | $9.58 | $9.49 | $9,493.78 | BTI 2011 |
| | SUBTOTAL (SITE PREPARATION/TREE PROTECTION) | | | | | $17,239.32 | |
| 02300 | **31.23 EARTHWORK** | | | | | | |
| | 31.23 GRAVEL BORROW, includes: import material, place and compact (Item 151.) | | | | | | |
| | 31.23 **** CRUSHED ROCK FROM BEDROCK REMOVAL TO REPLACE THIS ITEM **** | 0 | CY | $22.71 | $22.71 | $0.00 | *MHD 2010 |
| | SUBTOTAL (EARTHWORK) | | | | | $0.00 | |
| 02511 | **HOT-MIX ASPHALT PAVING** | | | | | | |
| | 32.12 BINDER COURSE | | | | | | |
| | 32.12 Asphaltic conc pavement, hwys and lg paved areas, binder course, 2" thick | 2667 | SY | $8.85 | $10.42 | $27,780.67 | Means 2011, p358 |
| | 32.12 WEARING COURSE | | | | | | |
| | 32.12 Asphaltic conc pavement, hwys and lg paved areas, wearing course, 1" thick | 2667 | SY | $4.61 | $5.43 | $14,471.06 | Means 2011, p358 |
| | 32.06 SIDEWALKS, BITUMINOUS CONCRETE | | | | | | |
| | 32.06 Asphaltic concrete sidewalks, no base, 2.5" thick | 556 | SY | $13.70 | $16.12 | $8,965.44 | Means 2011, p355 |
| | 32.06 ADD for bank run gravel base, 8" thick (*** BLASTED MATERIAL***) | 0 | SF | $1.98 | $2.33 | $0.00 | Means 2011, p355 |
| | FOR SPECIAL PAVING SEE Means 2008, p329 | | | | | | |
| | 32.16 CURBING | | | | | | |
| | 32.16 Asphaltic berm, 12"w, 1-1/2" to 4" high, 60 l.f per ton, laid w/ pavement | 1000 | LF | $2.05 | $2.41 | $2,412.85 | Means 2011, p364 |
| | SUBTOTAL (PAVING) | | | | | $53,630.03 | |
| 02510 | **33.11 WATER DISTRIBUTION** | | | | | | |
| | 33.11 WATER PIPE (not including excavation, bedding, or backfill) | | | | | | |
| | 33.11 CLDI, tyton, push-on joint, 8" diameter | 1000 | LF | $39.50 | $39.14 | $39,144.50 | Means 2011, p456 |
| | TRENCHING (trenches over 4' deep must be 2:1 slope unless sheeted) | | | | | | |
| | Trenching, Common Earth, backhoe, no slope, 4' Wide, 1/2 CY bucket (6' deep) | 1000 | LF | $12.05 | $11.94 | $11,941.55 | Means 2011, p580A |
| | PIPE BEDDING (trenches over 4' deep must be 1:1 slope unless sheeted) | | | | | | |
| | Pipe Bedding, Side Slope 1 to 1, 2' Wide, Pipe Size 8" Diameter (over 4' deep) | 1000 | LF | $9.10 | $9.02 | $9,018.10 | Means 2011, p584A |
| | 33.12 HYDRANT | | | | | | |
| | 33.12 Hydrant, 5-1/4" Valve size, Three Way, 10' Offset, 6' Deep | 1 | EA | $8,350.00 | $8,274.85 | $8,274.85 | Means 2011, p626A |
| | SUBTOTAL (WATER DISTRIBUTION) | | | | | $68,379.00 | |
| 02630 | **STORM DRAINAGE** | | | | | | |
| | 33.41 RCP (not including excavation, bedding or backfill) | | | | | | |
| | 33.41 RCP, class 3, no gaskets, 12" dia | 1045 | LF | $32.50 | $32.21 | $33,656.84 | Means 2011, p475 |
| | TRENCHING (trenches over 4' deep must be 2:1 slope unless sheeted) | | | | | | |
| | Trenching, backhoe, 0 to 1 Slope, 2' Wide, 3/8 CY Bucket (6' deep) | 1045 | LF | $5.96 | $5.91 | $6,172.15 | Means 2011, p578A |
| | PIPE BEDDING (trenches over 4' deep must be 2:1 slope unless sheeted) | | | | | | |
| | Pipe Bedding, Side Slope 1 to 1, 2' Wide, Pipe Size 12" Diameter (over 4' deep) | 1045 | LF | $10.76 | $10.66 | $11,143.00 | Means 2011, p585A |
| | PRECAST STRUCTURES | | | | | | |
| | CATCH BASIN - 4' INSIDE DIAMETER | | | | | | |
| | Precast concrete Catch Basin, 4' ID Riser, 6' Deep | 6.66 | EA | $3,425.00 | $3,394.18 | $22,605.21 | Means 2011, p638A |
| | CATCH BASIN HOODS | | | | | | |
| | L219-12, 12" outlet | 6.66 | EA | $574.40 | $574.40 | $3,825.50 | *LeBaron 2011 |
| | DMH - 4' INSIDE DIAMETER | | | | | | |
| | Precast concrete Manhole, 4' ID Riser, 6' Deep | 3.33 | EA | $3,425.00 | $3,394.18 | $11,302.60 | Means 2011, p638A |
| | SUBTOTAL (STORM DRAINAGE) | | | | | $88,705.30 | |

| | |
|---|---|
| PROJECT CITY/TOWN: | Wayland, Massachusetts |
| CITY COST INDEX USED: | Worcester |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 02580 | **ELECTRIC/COMMUNICATION STRUCTURES** | | | | | | |
| 33.71 | PRECAST ELEC/TEL HANDHOLE, not incl. excavation, bedding, backfill | | | | | | |
| 33.71 | Elec & tel sitework, hand holes, precast concrete, w/ conc. cover, 4' x 4' x 4' D | 1 | EA | $2,475.00 | $2,913.08 | $2,913.08 | Means 2011, p493 |
| 33.71 | Elec & tel sitework, underground duct, PVC, 2 @ 5"diameter | 1000 | LF | $11.50 | $11.40 | $11,396.50 | Means 2011, p493 |
| | SUBTOTAL (ELECTRIC/COMMUNICATION STRUCTURES) | | | | | $14,309.58 | |
| 02900 | **LANDSCAPING** | | | | | | |
| 32.91 | TOPSOIL RESPREAD | | | | | | |
| 32.91 | Spread from pile to rough finish grade, front end loader, 1.5 CY | 204 | CY | $5.50 | $5.45 | $1,111.90 | Means 2011, p383 |
| 32.91 | SEEDING AND MULCHING | | | | | | |
| 32.91 | Fine grading and seeding, with equipment, including lime, fertilizer, and seed | 3667 | SY | $3.61 | $3.58 | $13,118.73 | Means 2011, p383 |
| | STREET TREES, 2-2.5" caliper | | | | | | |
| | Acer rubrum ("Red Sunset" Maple),brilliant orange-red in autumn, 2.5-3" caliper | 13 | EA | $360.00 | $360.00 | $4,680.00 | Weston 2011 |
| | Quercus rubra (Red Oak)-red fall foliage, 2.5-3" caliper | 6 | EA | $399.00 | $399.00 | $2,394.00 | Weston 2011 |
| | Tilia cordata ('Greenspire' Littleleaf Linden), tolerates urban cond., 2.5-3" caliper | 6 | EA | $390.00 | $390.00 | $2,340.00 | Weston 2011 |
| | TREE PITS | | | | | | |
| | 8' to 10' tree, deciduous, 3'x1-3/4' deep pit, sandy soil | 25 | EA | $165.50 | $164.01 | $4,100.26 | Means 2011, p617A |
| | SUBTOTAL (LANDSCAPING) | | | | | $27,744.89 | |

| | |
|---|---|
| **SUMMARY OF SITEWORK COST ANALYSIS** | |
| PROJECT SUBTOTAL | $270,008.11 |
| **TOTAL PROJECT BUDGET** | $270,008.11 |

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|---|---|
| Contractor Equipment | 100.3% |
| Site Construction | 99.1% |
| Concrete | 117.7% |

| | | | | | |
|---|---|---|---|---|---|
| CLIENT | Community Preservation Committee, Town of Wayland | JOB NO. | 2260.00 | CHECKED BY | |
| PROJECT | Mainstone Farm | COMPUTED BY | JRM | DATE | |
| FILE | 226000CE001.XLS | DATE | 3/29/11 | PAGE NO. | |

**BEALS + THOMAS**
BEALS AND THOMAS, INC.
Reservoir Corporate Center
144 Turnpike Road
Southborough, MA 01772-2104

# CALCULATION SUMMARY

T 508.366.0560
F 508.366.4391
mail@btiweb.com I www.btiweb.com
Regional Office: Plymouth, MA

*JOB NO./LOCATION:*

2260.00
Wayland, MA

*CLIENT/PROJECT:*

Community Preservation Committee
Mainstone Farm

*SUBJECT/TITLE:*

**Concept 1 & 1A: Conventional Subdivision, Road Construction Cost Estimate**

*OBJECTIVE OF CALCULATION:*

- To determine the approximate costs associated with construction of the proposed roadway, earthwork, and utilities for development of Concept 1 & 1A, Conventional Subdivision layouts.

*CALCULATION METHOD(S):*

- Earthwork and construction material costs determined using an average linear foot cost for a typical roadway in the Town of Wayland, Massachusetts.
- Quantities calculated based on the typical local road cross-section and using AutoCAD.
- Unit cost analysis based on Means Site Work and Landscape Data, 2011, BTI Contractor Bid Prices Collection, and professional judgment of BTI.
- Premium costs were included for earthwork rock excavation and trenching, and granite curbing.

*ASSUMPTIONS:*

- Roadway material and construction costs are based on an average linear foot cost for a typical roadway in the Town of Wayland, Massachusetts. See calculations summaries *Linear Foot Roadway Cost Estimate* and *Concept 1 – Earthwork and Cost Estimate Analysis* prepared by Beals and Thomas, Inc. dated March 2011 for details.
- Premium costs based on R.S. Means Site Work and Landscape Cost Data, 2011, and professional judgment of BTI.
- Granite curbing ($40.00/LF – Means 2011 page 364), is required where proposed roadway intersects Forest Hill Rd.
- Utility trench blasting ($42.48/CY –BTI 2011).
    1. Drainage: 8' deep x 3' wide
    2. Water: 7'deep x 3'wide
    3. Electric: 3'deep x 2'wide

| REV | CALC. BY | DATE | CHECKED BY | DATE | APPROVED BY | DATE |
|---|---|---|---|---|---|---|
| 0 | J. Murphy | 3/31/11 | D.M. Fenn | 3/31/2011 | D.M. Fenn | 3/31/2011 |
| | | | | | | |
| | | | | | | |

JRM/226000CS003

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Southborough, MA 01772-2104

CALCULATION SUMMARY

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mail@btiweb.com I www.btiweb.com
Regional Office: Plymouth, MA

*SOURCES OF DATA/EQUATIONS:*

- Linear Foot Roadway Cost Estimate prepared by Beals and Thomas, Inc. dated March 2011.
- Concept 1 – Earthwork and Cost Estimate Analysis prepared by Beals and Thomas, Inc. dated March 2011.
- "Town of Wayland, Massachusetts Subdivision Rules and Regulations"
- R.S. Means Site Work and Landscape Cost Data, 2011.
- BTI Contractor Bid Prices Collection.

*CONCLUSIONS:*

**Concept 1 Total Construction Costs: $4,620,000 = $722/ LF**

**Concept 1A Total Construction Costs: $5,090,000 = $718/ LF**

| REV | CALC. BY | DATE | CHECKED BY | DATE | APPROVED BY | DATE |
|---|---|---|---|---|---|---|
| 0 | J. Murphy | 3/31/11 | J. DiNino | 3/31/11 | DMT | |
| | | | | | | |
| | | | | | | |

JRM/226000CS003

## Concept 1 Cost Estimate Summary

| Earthwork & Construction Material Costs | No. of Units | Unit | Cost Per Unit | Total Cost |
|---|---|---|---|---|
| Concept 1 Construction Material Cost | 6,400 | LF | $270 | $1,728,000 |
| Concept 1 Earthwork Construction Cost | 6,400 | LF | $402 | $2,572,800 |
| **Total Material Costs:** | | | | **$4,300,800** |
| **Premium Costs** | | | | |
| Granite Curbing | 400 | LF | $40 | $16,000 |
| Trench Blasting | 2,400 | CY | $42.48 | $101,952 |
| Booster Pump Station | 1 | EA | $200,000 | $200,000 |
| **Total Premium Costs:** | | | | **$317,952** |
| **APPROXIMATE CONCEPT 1 CONSTRUCTION COST:** | | | | **$4,620,000** |

## Concept 1A Cost Estimate Summary

| Earthwork & Construction Material Costs | No. of Units | Unit | Cost Per Unit | Total Cost | |
|---|---|---|---|---|---|
| Concept 1A Construction Material Cost | 7,088 | LF | $270 | $1,913,760 | |
| Concept 1A Earthwork Construction Cost | 7,088 | LF | $402 | $2,849,376 | |
| **Total Material Costs:** | | | | **$4,763,136** | |
| **Premium Costs** | | | | | |
| Granite Curbing | 500 | LF | $40 | $20,000 | Means 2011, p364 |
| Utility Trench Blasting | 2,400 | CY | $42.48 | $101,952 | See additional calc |
| Booster Pump Station | 1 | EA | $200,000 | $200,000 | |
| **Total Premium Costs:** | | | | **$321,952** | |
| **APPROXIMATE CONCEPT 1A CONSTRUCTION COST:** | | | | **$5,090,000** | |

CLIENT Community Pres. Comm. JOB NO. 2260.00 CHECKED BY
PROJECT Mainstone Farm COMPUTED BY JRM DATE

**BEALS + THOMAS**
BEALS AND THOMAS, INC.
Reservoir Corporate Center
144 Turnpike Road
Southborough, MA 01772-2104

# CALCULATION SUMMARY

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mail@btiweb.com I www.btiweb.com
Regional Office: Plymouth, MA

*JOB NO./LOCATION:*

2260.00
Wayland, MA

*CLIENT/PROJECT:*

Community Preservation Committee
Mainstone Farm

*SUBJECT/TITLE:*

**Concept 2 & 2A: Limited Development Subdivision, Road Construction Cost Estimate**

*OBJECTIVE OF CALCULATION:*

- To determine the approximate costs associated with construction of the proposed roadway, earthwork, and utilities for development of Concept 2 & 2A, Conventional Subdivision layouts.

*CALCULATION METHOD(S):*

- Earthwork and construction material costs determined using an average linear foot cost for a typical roadway in the Town of Wayland, Massachusetts.
- Quantities calculated based on the typical local road cross-section and using AutoCAD.
- Unit cost analysis based on Means Site Work and Landscape Data, 2011, BTI Contractor Bid Prices Collection, and professional judgment of BTI.
- Premium costs were included for earthwork rock excavation and trenching, and granite curbing.

*ASSUMPTIONS:*

- Roadway material and construction costs are based on an average linear foot cost for a typical roadway in the Town of Wayland, Massachusetts. See calculations summaries *Linear Foot Roadway Cost Estimate* and *Concept 2 – Earthwork and Cost Estimate Analysis* prepared by Beals and Thomas, Inc. dated March 2011 for details.
- Premium costs based on R.S. Means Site Work and Landscape Cost Data, 2011, and professional judgment of BTI.
- Granite curbing ($40.00/LF – Means 2011 page 364), is required where proposed roadway intersects Forest Hill Rd
- Utility trench blasting ($42.48/CY –BTI 2011).
    1. Drainage: 8' deep x 3' wide
    2. Water: 7'deep x 3'wide
    3. Electric: 3'deep x 2'wide

| REV | CALC. BY | DATE | CHECKED BY | DATE | APPROVED BY | DATE |
|---|---|---|---|---|---|---|
| 0 | J. Murphy | 3/31/11 | J. D'Amov | 3/31/11 | D. M. Fung | 3/31/2011 |
| | | | | | | |
| | | | | | | |

JRM/226000CS005

**BEALS + THOMAS**
BEALS AND THOMAS, INC.
Reservoir Corporate Center
144 Turnpike Road
Southborough, MA 01772-2104

CALCULATION SUMMARY

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F 508.366.4391
mail@btiweb.com I www.btiweb.com
Regional Office: Plymouth, MA

*SOURCES OF DATA/EQUATIONS:*

- Linear Foot Roadway Cost Estimate prepared by Beals and Thomas, Inc. dated March 2011.
- Concept 2 – Earthwork and Cost Estimate Analysis prepared by Beals and Thomas, Inc. dated March 2011.
- "Town of Wayland, Massachusetts Subdivision Rules and Regulations"
- R.S. Means Site Work and Landscape Cost Data, 2011.
- BTI Contractor Bid Prices Collection.

*CONCLUSIONS:*

**Concept 2 Total Construction Costs: $1,550,000 = $550/ LF**

**Concept 2A Total Construction Costs: $1,910,000 = $531/ LF**

| REV | CALC. BY | DATE | CHECKED BY | DATE | APPROVED BY | DATE |
|---|---|---|---|---|---|---|
| 0 | J. Murphy | 3/31/11 | J. Diwow | 3/31/11 | D. M Fenn | 3/31/2011 |
| | | | | | | |
| | | | | | | |

JRM/226000CS005

**Concept 2 Cost Estimate Summary**

| Earthwork & Construction Material Costs | No. of Units | Unit | Cost Per Unit | Total Cost | |
|---|---|---|---|---|---|
| Concept 2 Construction Material Cost | 2,820 | LF | $270 | $761,400 | |
| Concept 2 Earthwork Construction Cost | 2,820 | LF | $186 | $524,520 | |
| **Total Material Costs:** | | | | **$1,285,920** | |
| **Premium Costs** | | | | | |
| Granite Curbing | 200 | LF | $40 | $8,000 | Means 2011, p364 |
| Utility Trench Blasting | 1,300 | CY | $42.48 | $55,224 | See additional calc |
| Booster Pump Station | 1 | EA | $200,000 | $200,000 | |
| **Total Premium Costs:** | | | | **$263,224** | |
| **APPROXIMATE CONCEPT 2 CONSTRUCTION COST:** | | | | **$1,550,000** | |

**Concept 2 Cost Estimate Summary**

| Earthwork & Construction Material Costs | No. of Units | Unit | Cost Per Unit | Total Cost | |
|---|---|---|---|---|---|
| Concept 2 Construction Material Cost | 3,600 | LF | $270 | $972,000 | |
| Concept 2 Earthwork Construction Cost | 3,600 | LF | $186 | $669,600 | |
| **Total Material Costs:** | | | | **$1,641,600** | |
| **Premium Costs** | | | | | |
| Granite Curbing | 300 | LF | $40 | $12,000 | Means 2011, p364 |
| Utility Trench Blasting | 1,300 | CY | $42.48 | $55,224 | See additional calc |
| Booster Pump Station | 1 | EA | $200,000 | $200,000 | |
| **Total Premium Costs:** | | | | **$267,224** | |
| **APPROXIMATE CONCEPT 2 CONSTRUCTION COST:** | | | | **$1,910,000** | |

CLIENT Community Pres. Comm. JOB NO. 2260.00 CHECKED BY DMF
PROJECT Mainstone Farm COMPUTED BY JRM DATE 3/31/2011

**BEALS + THOMAS**
BEALS AND THOMAS, INC.
Reservoir Corporate Center
144 Turnpike Road
Southborough, MA 01772-2104

# CALCULATION SUMMARY

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mail@btiweb.com I www.btiweb.com
Regional Office: Plymouth, MA

*JOB NO./LOCATION:*

2260.00
Wayland, MA

*CLIENT/PROJECT:*

Community Preservation Committee, Town of Wayland
Mainstone Farm

*SUBJECT/TITLE:*

**Concept 2 - Earthwork and Cost Estimate Analysis**

*OBJECTIVE OF CALCULATION:*

- To determine the approximate earthwork volumes and construction cost associated with construction of the proposed road (approximately 2,820 LF) in the Town of Wayland.

*CALCULATION METHOD(S):*

- Quantities calculated based on the typical local road cross-section using the grid method in Paydirt computer software.
- Unit cost analysis based on Means Site Work and Landscape Data, 2011 and BTI Contractor Bid Prices Collection.

*ASSUMPTIONS:*

- Average depth to bedrock assumed 12 feet below existing surface based on NRCS Soil Survey (Narragansett –Silt Loam), 2010.
- Average depth to bedrock assumed 5 feet below existing surface based on NRCS Soil Survey (Narragansett -Hollis-Rock Outcrop), 2010.
- Topsoil and subsoil assumed to be used as a fill material in deep fills.
- On-site bedrock assumed to be blasted, excavated, processed and reused as a roadway construction fill material.
- Leftover crushed rock to be used elsewhere on site for driveways, under foundations, etc. Cost credit shown in estimate spreadsheet.

*SOURCES OF DATA/EQUATIONS:*

- "Town of Wayland, Massachusetts Subdivision Rules and Regulations"
- R.S. Means Site Work and Landscape Cost Data, 2011.
- BTI Contractor Bid Prices Collection.
- NRCS Soil Survey, Middlesex County, Massachusetts, dated 2011.

| REV | CALC. BY | DATE | CHECKED BY | DATE | APPROVED BY | DATE |
|---|---|---|---|---|---|---|
| 0 | J. Murphy | 3/29/11 | J DiNoto | 3/29/11 | D. M. Fenn | 3/31/2011 |
| | | | | | | |
| | | | | | | |

JRM/226000CS004

**BEALS + THOMAS**
BEALS AND THOMAS, INC.
Reservoir Corporate Center
144 Turnpike Road
Southborough, MA 01772-2104

CALCULATION SUMMARY

T 508.366.0560
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Regional Office: Plymouth, MA

*CONCLUSIONS:*

**Approximate roadway length = 2,820 LF**

**APPROX. EARTHWORK CONSTRUCTION COST = $ 523,500= $186/LF**

| REV | CALC. BY | DATE | CHECKED BY | DATE | APPROVED BY | DATE |
|---|---|---|---|---|---|---|
| 0 | J. Murphy | 3/29/11 | J. Dimow | 3/29/11 | D. M. Fenny | 3/31/2011 |
| | | | | | | |
| | | | | | | |

JRM/226000CS004

| | |
|---|---|
| PROJECT CITY/TOWN: | Wayland, Massachusetts |
| CITY COST INDEX USED: | Worcester |

| SECTION 2004 CSI | DESCRIPTION | QUANTITY | UNIT | UNIT COST | ADJUSTED UNIT COST | SUBTOTAL | |
|---|---|---|---|---|---|---|---|
| | **CONCEPT 2, 2A** | | | | | | |
| **02300** | **31.23 EARTHWORK** | | | | | | |
| | CUT TO FILL COMMON EARTH | | | | | | |
| | 10 CY elevating scraper & roller compacl, 1500' haul 8" lifts 4 passes | 10015 | CY | $6.85 | $6.85 | $68,602.75 | Means 2011, p556A |
| | 31.23 ROCK EXCAVATION | | | | | | |
| | 31.23 Bulk Drilling & Blasting, can vary greatly, average | 3750 | CY | $12.00 | $12.00 | $45,000.00 | Means 2011, p294 |
| | Excavate out crushed bedrock | 3750 | CY | $6.57 | $6.57 | $24,637.50 | BTI 2011 |
| | Crush Rock On-Site (3750CY x 1.75tons/CY) | 6563 | Tons | $8.20 | $8.20 | $53,816.60 | BTI 2011 |
| | 31.23 Placing and Compacting crushed rock, 10 CY scraper, roller compactors, 1500' haul, 6" lift, | 2440 | CY | $8.38 | $8.38 | $20,447.20 | Means 2011, p552A |
| | 31.23 CUT TO EXPORT | | | | | | |
| | 31.23 2 1/2 CY excavator, 8-12 CY dump trucks, 3 mi. round trip | 36250 | CY | $8.94 | $8.94 | $324,075.00 | Means 2011, p557A |
| | SUBTOTAL (EARTHWORK) | | | | | $536,579.05 | |
| | **SUMMARY OF SITEWORK COST ANALYSIS** | | | | | | |
| | PROJECT SUBTOTAL | | | | | $536,579.05 | |
| | **Crushed Rock Credit** - Extra can be used for driveways, foundations, etc | 1310.00 | CY | $10.00 | $10.00 | $13,100.00 | BTI 2011 |
| | **TOTAL PROJECT BUDGET** | | | | | $523,479.05 | |

*SOURCES OF COST DATA:

Means 2011 - Means Sitework & Landscape Cost Data, 29th Edition, 2011
'A' after Means page# Identifies an ASSEMBLY
Police 2011 - Police Detail - Boston
MA Tranportation 2011 - The Commonwealth of Massachuhsetts Executive Office of Transportation and Public Works, Road Flaggers & Police Detail Cost Report & Analysis, DRAFT September 2008.
MHD 2010- MHD Weighted Average Bid Prices January 2010 - January 2011
ADS 2011 - Advanced Drainage Systems 2011
East Jordan Iron Works (LeBaron) 2011- phone call to EJIW, Jan. 25, 2011
Rotondo 2011 - phone call to Rotondo Precast Jan. 25, 2011
StormTech Infiltration Chambers Generic Project - ADS 2011, Confirmed Mar. 2011
BTI 2011 - Beals and Thomas, Inc. 2011
Weston 2011 - Weston Nurseries Commercial Catalog 2011

ABBREVIATIONS:

| | |
|---|---|
| EA = Each | MSF = 1000 Square Feet |
| LS = Lump Sum | SY = Square Yard |
| LF = Linear Foot | CF = Cubic Feet Storage |
| SF = Square Foot | CY = Cubic Yard |

| CITY COST INDEXES | Worcester , MA |
|---|---|
| Contractor Equipment | 100.0% |
| Site Construction | 100.0% |
| Concrete | 100.0% |

CLIENT Community Preservation Committee, Town of Wayland
PROJECT Mainstone Farm
FILE

JOB NO. 2260.00
COMPUTED BY JRM

CHECKED BY DMF
DATE 3/28/2011

**Beals and Thomas, Inc.**
144 Turnpike Road
Southborough, MA

March 22, 2011
04:37 PM

**226000PD002: Existing vs. Proposed**

| Excavation Volumes | Bank Cut (cu yd) | Bank Fill (cu yd) | Cut Swell (%) | Fill Shrink (%) | Adjusted Cut (cu yd) | Adjusted Fill (cu yd) |
|---|---|---|---|---|---|---|
| Limit of Grading | 43875.11 | 10015.95 | 0.00 | 0.00 | 43875.11 | 10015.95 |

| Excavation Areas | Cut Area (sq ft) | Fill Area (sq ft) | Total Area (sq ft) |
|---|---|---|---|
| Limit of Grading | 292788.28 | 76814.72 | 371277.00 |

| Removal Quantities | Boundary (ft) | Thickness (ft) | Area (sq ft) | Volume (cu yd) |
|---|---|---|---|---|
| Top and Subsoil | 4277.90 | 2.50 | 65861.81 | 6098.32 |
| **Total Removal:** | **4277.90** | | **65861.81** | **6098.32** |

**Project Totals**

| Excavation Volumes | Bank Cut (cu yd) | Bank Fill (cu yd) | Cut Swell (%) | Fill Shrink (%) | Adjusted Cut (cu yd) | Adjusted Fill (cu yd) |
|---|---|---|---|---|---|---|
| 226000PD002 : Limit of Grading | 43875.11 | 10015.95 | 0.00 | 0.00 | 43875.11 | 10015.95 |
| **Project Totals:** | **43875.11** | **10015.95** | **0.00** | **0.00** | **43875.11** | **10015.95** |
| Export: | **33859.15** | | | | **33859.15** | |

| Excavation Areas | Cut Area (sq ft) | Fill Area (sq ft) | Total Area (sq ft) |
|---|---|---|---|
| 226000PD002 : Limit of Grading | 292788.28 | 76814.72 | 371277.00 |
| **Project Totals:** | **292788.28** | **76814.72** | **371277.00** |

| Removal Quantities | Boundary (ft) | Area (sq ft) | Volume (cu yd) |
|---|---|---|---|
| 226000PD002 | 4277.90 | 65861.81 | 6098.32 |
| **Project Totals:** | **4277.90** | **65861.81** | **6098.32** |

*** Only Drawing Master AOI's or single selected Drawing AOI's are used for Project Excavation Totals.**

*** Removal Quantities are clipped to Drawing Master AOI or the individually selected AOI.**

Beals and Thomas, Inc.
144 Turnpike Road
Southborough, MA

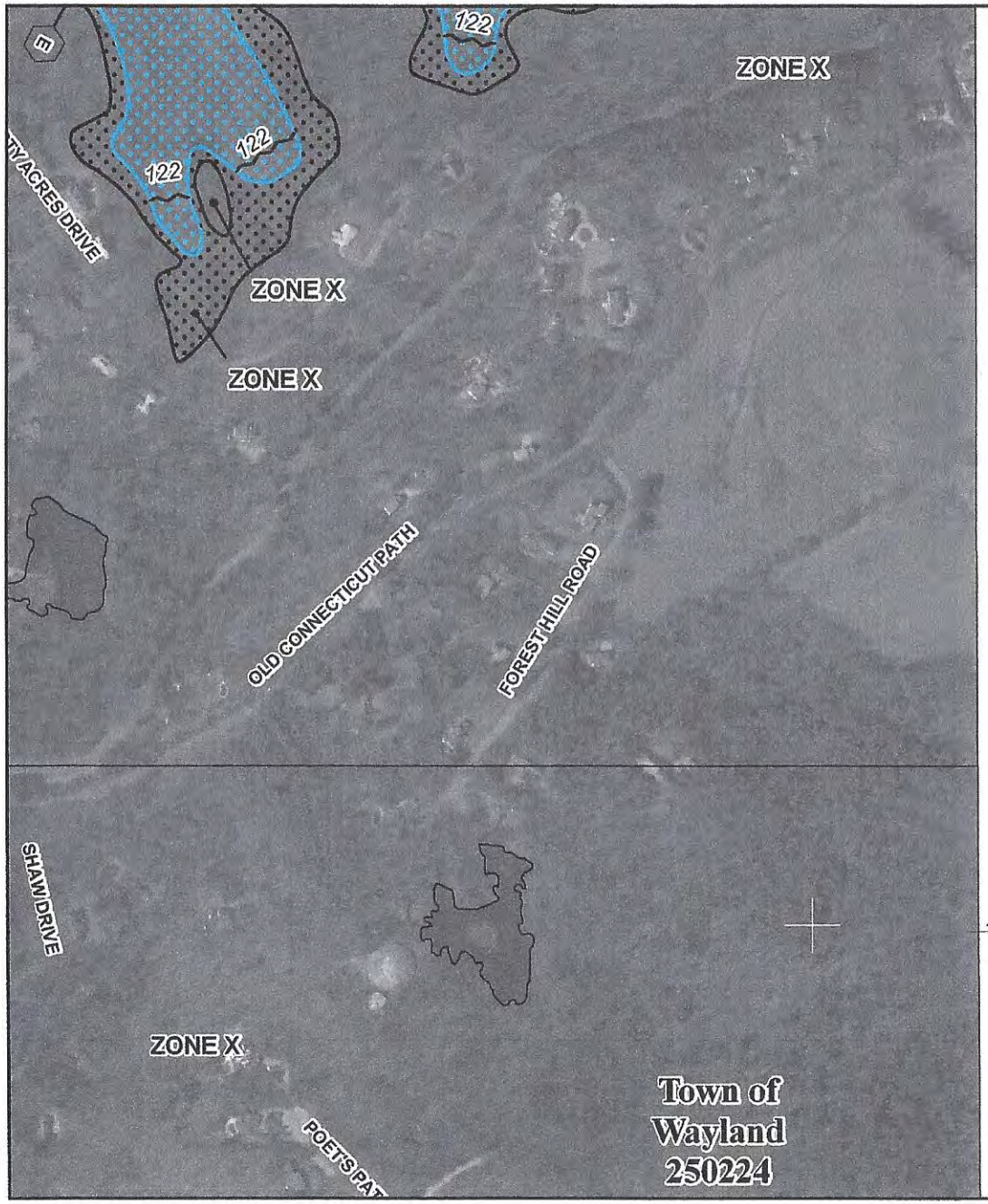
March 22, 2011
04:37 PM

| | Data Type | Elevation (ft) | Thickness (ft) | Boundary (ft) | Area (sq ft) | Volume (cu yd) |
|---|---|---|---|---|---|---|
| **Drawing: 226000PD002: Limit of Grading** | | | | | | |
| Area of Interest: Limit of Grading | AOI | | | 4802.21 | 371257.52 | |
| **Surface: Existing** | | | | | | |
| NONE | | | | | | |
| Top and Subsoil | SGA | | 2.50 | 4277.90 | 65861.81 | 6098.32 |
| **TOTALS: NONE** | | | | **4277.90** | **65861.81** | **6098.32** |
| **Surface: Proposed** | | | | | | |
| NONE | | | | | | |
| Roadway | SGA | | 1.08 | 4237.79 | 54069.73 | 2162.79 |
| **TOTALS: NONE** | | | | **4237.79** | **54069.73** | **2162.79** |

**Project Totals for Material Groups**
**Drawing: 226000PD002: Limit of Grading**

| | | | | | | |
|---|---|---|---|---|---|---|
| NONE | | | | 8515.69 | 119931.54 | 8261.11 |

# FLOOD MAPS




MAP SCALE 1" = 500'

250 0 500 1000 FEET

METER

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0526E

# FIRM

FLOOD INSURANCE RATE MAP

MIDDLESEX COUNTY, MASSACHUSETTS
(ALL JURISDICTIONS)

PANEL 526 OF 656

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

| COMMUNITY | NUMBER | PANEL | SUFFIX |
|---|---|---|---|
| WAYLAND, TOWN OF | 250224 | 0526 | E |

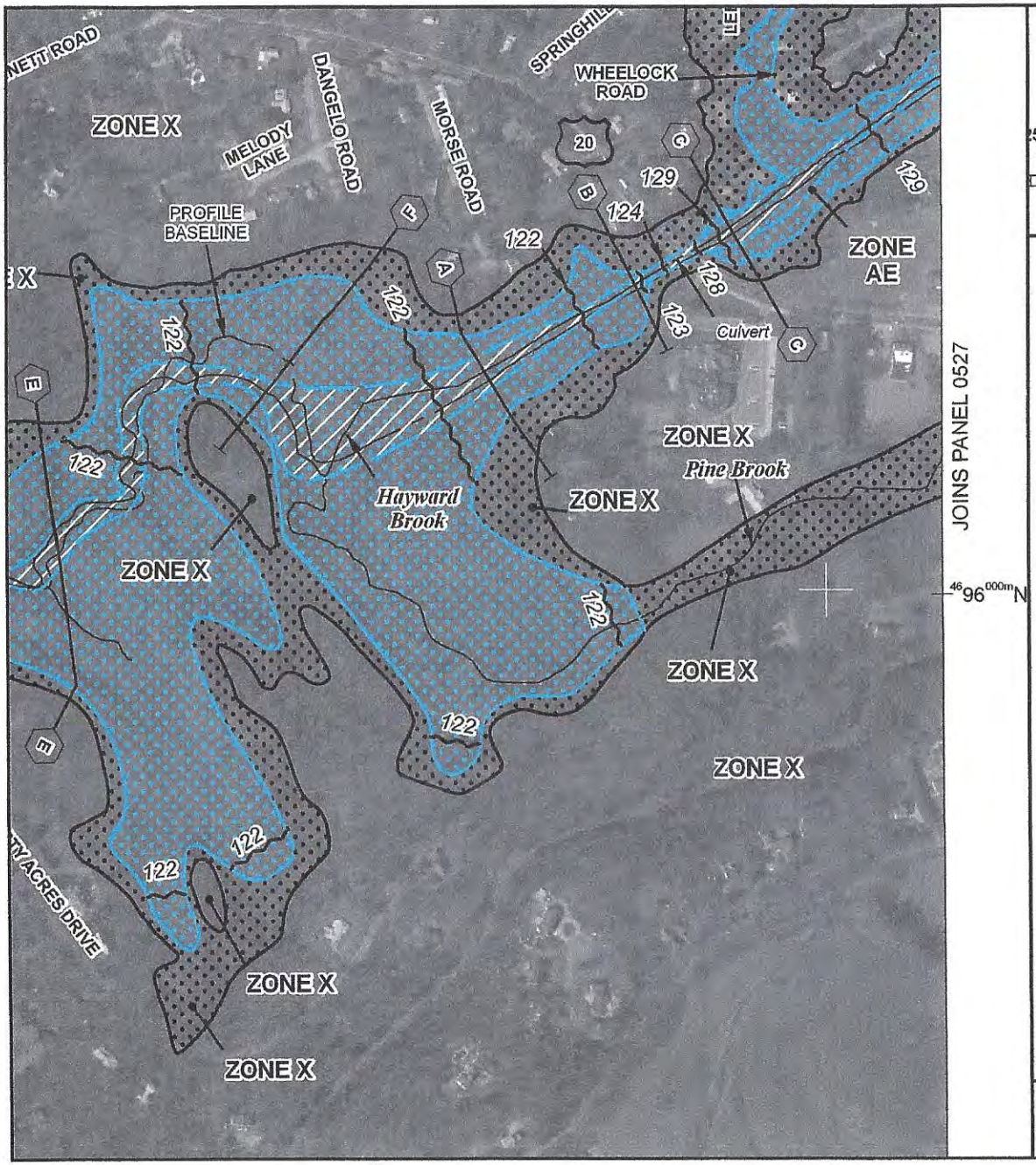
Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
25017C0526E

EFFECTIVE DATE
JUNE 4, 2010

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov




MAP SCALE 1" = 500'

250 0 500 1000 FEET

METER

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0526E

# FIRM

FLOOD INSURANCE RATE MAP

MIDDLESEX COUNTY, MASSACHUSETTS
(ALL JURISDICTIONS)

PANEL 526 OF 656

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

| COMMUNITY | NUMBER | PANEL | SUFFIX |
|---|---|---|---|
| WAYLAND, TOWN OF | 250224 | 0526 | E |

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
25017C0526E

EFFECTIVE DATE
JUNE 4, 2010

Federal Emergency Management Agency

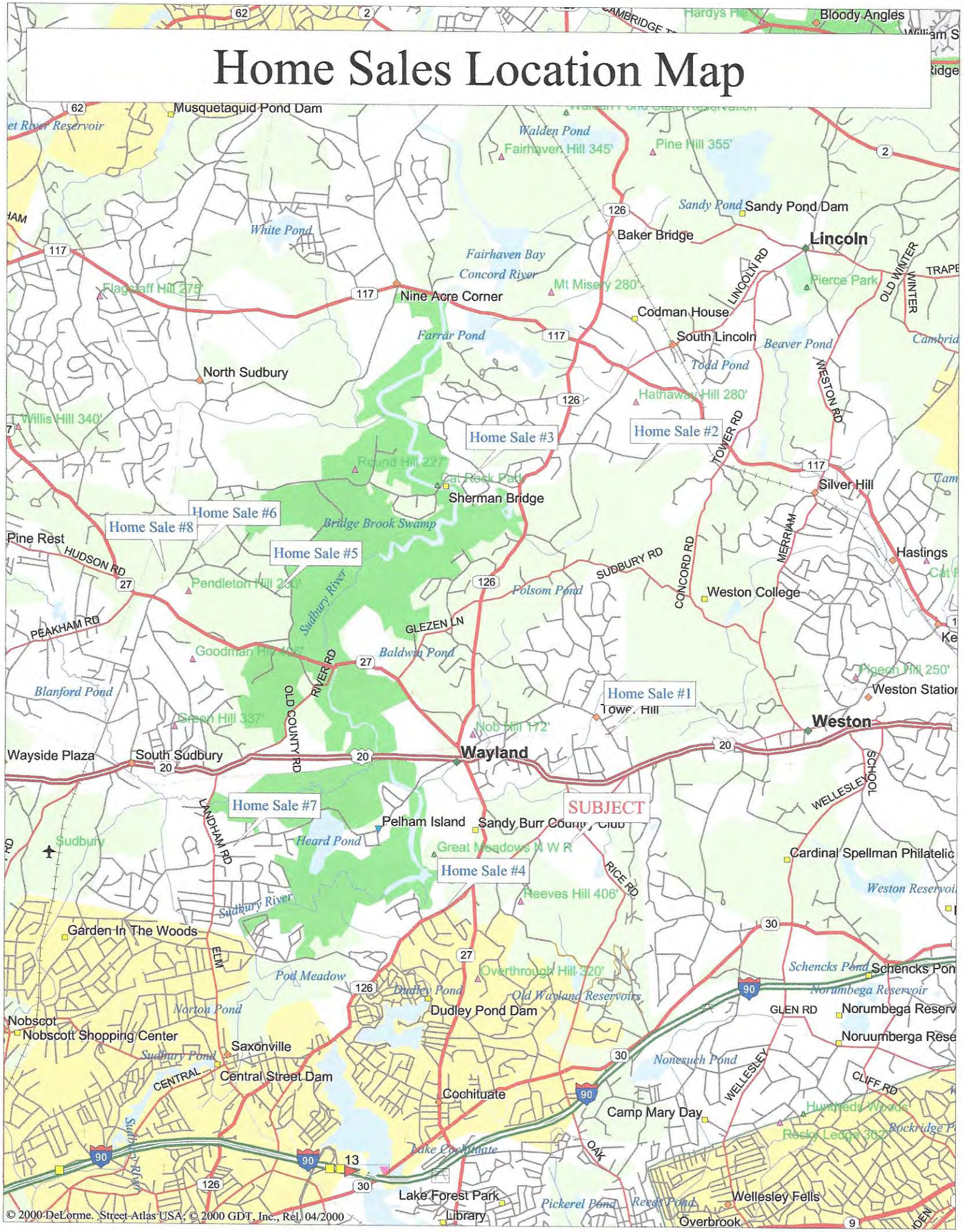
This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

# LOT SALES LOCATION MAP

# Lot Sales Location Map

# HOME SALES LOCATION MAP

# Home Sales Location Map



# NONBUILDABLE LAND SALES LOCATION MAP

# Restricted Land Sales

# REGIONAL AND NEIGHBORHOOD LOCATION MAPS

# Regional Location Map

# Neighborhood Location Map

# DEVELOPER SURVEYS EXCERPTS

RealtyRates.com

# Developer Survey

## 3rd Quarter 2015

# RealtyRates.com - Developer Survey ™

Welcome to the 3rd Quarter, 2015 edition (2nd Quarter 2015 data) of the RealtyRates.com™ *Developer Survey*.

The *Developer Survey* tracks actual and pro-forma discount rates on 22 sell-out property types including residential subdivisions and PUDs, business and industrial parks, and residential and commercial/industrial condominiums and co-ops. The data is presented on both a national and regional basis and covers all 50 states as well as Puerto Rico, Guam and the U.S. Virgin Islands.

The *Developer Survey* represents a polling of 366 commercial appraisers (8%), lenders (26%), and local, regional and national developers (66%). The bulk of the data is comprised of individual tables for each region that include surveyed actual (historical) and pro-forma (forward looking) minimum, maximum and average discount rates for each property type. In the case of subdivisions and PUDs, rates incorporate developer's profit, while condominium and co-op rates do not.

RealtyRates.com™ is the Trade Name and a Trademark of Robt. G. Watts (RGW). Founded in Honolulu, Hawaii as Pacific Research Company and now headquartered in Bradenton, Florida, RGW has provided professional analytical, advisory and development management services to investors, property owners, major corporations, lenders and government agencies worldwide since 1973.

We hope you find the *Developer Survey* useful and informative.

Robert Watts

ROBT G WATTS
RealtyRates.com™

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RealtyRates.com - Developer Survey ™

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# Market Commentary

## RealtyRates.com™ *Developer Survey* Reports Increased Discount Rates For All Sell-Out Property Types During 2nd Quarter 2015

Although prices continued their upward trend, existing home sales declined in April and pending home sales declined in June resulting in a modest increase in average discount rates for all sell-out property types during 2nd Quarter 2015.

Site-Built Residential Subdivision and PUD rates increased an average 19 basis points while Manufactured Housing rates climbed 26 basis points during the 2nd Quarter. Likewise. Business and Industrial Park rates increased an average 17 and 18 basis points respectively during the same period. Residential Condominium and Co-Op rates meanwhile increased 34 basis points as did Commercial/Industrial Condominiums during the same period.

Overall, pro-forma and actual discount rates increased at about the same rate, indicating a market consistent outlook by developers.

**RealtyRates.com DEVELOPER SURVEY - 3rd Quarter 2015***
**Average Comparative (Quarter-Over-Quarter) National Rates**

| Subdivisions & PUDs | Actual Rates | | | Pro-Forma Rates | | |
|---|---|---|---|---|---|---|
| | 2Q15 | 1Q15 | Basis Point Change | 2Q15 | 1Q15 | Basis Point Change |
| **Site-Built Residential** | 34.27% | 34.07% | 19 | 32.90% | 32.71% | 19 |
| -100 Units | 30.52% | 30.34% | 18 | 29.30% | 29.12% | 17 |
| 100-500 Units | 33.04% | 32.85% | 19 | 32.35% | 32.16% | 19 |
| 500+ Units | 34.39% | 34.19% | 20 | 34.32% | 34.13% | 20 |
| Mixed Use | 34.80% | 34.60% | 20 | 34.74% | 34.53% | 20 |
| **Manufactured Housing** | 36.32% | 36.06% | 26 | 34.19% | 33.94% | 25 |
| -100 Units | 32.54% | 32.30% | 24 | 30.63% | 30.40% | 23 |
| 100-500 Units | 35.25% | 34.99% | 26 | 33.84% | 33.59% | 25 |
| 500+ Units | 36.69% | 36.42% | 27 | 35.91% | 35.65% | 26 |
| **Business Parks** | 34.76% | 34.59% | 17 | 32.72% | 32.56% | 16 |
| -100 Acres | 31.18% | 31.02% | 16 | 29.35% | 29.20% | 15 |
| 100-500 Acres | 33.75% | 33.58% | 17 | 32.40% | 32.24% | 16 |
| 500+ Acres | 35.13% | 34.95% | 18 | 34.38% | 34.21% | 17 |
| **Industrial Parks** | 31.03% | 30.85% | 18 | 29.85% | 29.67% | 18 |
| -100 Acres | 27.95% | 27.78% | 17 | 26.36% | 26.20% | 16 |
| 100-500 Acres | 30.19% | 30.01% | 18 | 29.04% | 28.87% | 18 |
| 500+ Acres | 31.41% | 31.22% | 19 | 29.62% | 29.44% | 18 |

| Condominiums & Co-Ops | Actual Rates | | | Pro-Forma Rates | | |
|---|---|---|---|---|---|---|
| | 2Q15 | 1Q15 | Basis Point Change | 2Q15 | 1Q15 | Basis Point Change |
| **Primary Residential** | 19.78% | 19.43% | 35 | 19.02% | 18.69% | 33 |
| Hi-Rise/Urban Townhouse | 20.13% | 19.80% | 33 | 19.33% | 19.01% | 32 |
| Garden/Suburban Townhouse | 19.34% | 18.98% | 36 | 18.57% | 18.22% | 34 |
| Mixed Use | 20.39% | 20.05% | 34 | 19.37% | 19.05% | 32 |
| **Resort & Second Home** | 22.23% | 21.89% | 34 | 20.93% | 20.61% | 32 |
| Hi-Rise | 21.86% | 21.53% | 33 | 20.99% | 20.67% | 32 |
| Garden/Townhouse | 19.95% | 19.61% | 34 | 19.15% | 18.82% | 33 |
| **Commercial/Industrial** | 19.96% | 19.61% | 35 | 18.98% | 18.65% | 33 |
| Urban Office | 18.31% | 17.98% | 33 | 17.40% | 17.09% | 31 |
| Suburban Office | 18.01% | 17.67% | 34 | 17.12% | 16.80% | 33 |
| Retail | 20.34% | 20.00% | 34 | 19.34% | 19.01% | 33 |
| Industrial | 18.48% | 18.13% | 35 | 17.57% | 17.24% | 34 |

*3rd Quarter 2015*

# National Sell-Out Property Discount Rates

## Subdivisons and PUDs

The following summarizes discount rates for conventionally financed (interest-only interim or construction financing) subdivisions and planned unit developments (PUDs) nationwide. Actual Rates are historical rates achieved by survey respondents, while Pro-Forma Rates reflect forward-looking revenue and expenses. Developer's profit is not treated as a line item expense.

| RealtyRates.com DEVELOPER SURVEY - 3rd Quarter 2015* National - Subdivisions & PUDs | | | | | | |
|---|---|---|---|---|---|---|
| | Actual Rates | | | Pro-Forma Rates | | |
| | Min | Max | Avg | Min | Max | Avg |
| **Site-Built Residential** | 14.09% | 54.10% | 34.27% | 13.53% | 51.94% | 32.90% |
| -100 Units | 14.09% | 46.64% | 30.52% | 13.53% | 44.78% | 29.30% |
| 100-500 Units | 14.44% | 51.31% | 33.04% | 13.86% | 49.25% | 32.35% |
| 500+ Units | 14.79% | 53.64% | 34.39% | 14.20% | 51.49% | 34.32% |
| Mixed Use | 15.15% | 54.10% | 34.80% | 14.54% | 51.94% | 34.74% |
| **Manufactured Housing** | 14.33% | 56.54% | 36.32% | 13.76% | 54.28% | 34.19% |
| -100 Units | 14.33% | 49.16% | 32.54% | 13.76% | 47.20% | 30.63% |
| 100-500 Units | 14.69% | 54.08% | 35.25% | 14.10% | 51.92% | 33.84% |
| 500+ Units | 15.05% | 56.54% | 36.69% | 14.45% | 54.28% | 35.91% |
| **Business Parks** | 14.19% | 53.64% | 34.76% | 13.63% | 51.49% | 32.72% |
| -100 Acres | 14.19% | 46.64% | 31.18% | 13.63% | 44.78% | 29.35% |
| 100-500 Acres | 14.55% | 51.31% | 33.75% | 13.97% | 49.25% | 32.40% |
| 500+ Acres | 14.90% | 53.64% | 35.13% | 14.31% | 51.49% | 34.38% |
| **Industrial Parks** | 14.47% | 46.08% | 31.03% | 13.89% | 44.24% | 29.85% |
| -100 Acres | 14.47% | 40.07% | 27.95% | 13.89% | 38.47% | 26.36% |
| 100-500 Acres | 14.83% | 44.08% | 30.19% | 14.24% | 42.32% | 29.04% |
| 500+ Acres | 15.20% | 46.08% | 31.41% | 14.59% | 44.24% | 29.62% |

*2nd Quarter 2015 Data

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## Condominiums and Co-Ops

The following summarizes discount rates for conventionally financed condominium and co-op projects nationwide. Actual Rates are historical rates achieved by survey respondents, while Pro-Forma Rates reflect forward-looking revenue and expenses and developer's profit is treated as a line item expense.

| RealtyRates.com DEVELOPER SURVEY - 3rd Quarter 2015* National - Condominiums & Co-Ops | | | | | | |
|---|---|---|---|---|---|---|
| | Actual Rates | | | Pro-Forma Rates | | |
| | Min | Max | Avg | Min | Max | Avg |
| **Primary Residential** | 9.34% | 30.01% | 19.78% | 8.97% | 28.81% | 19.02% |
| Hi-Rise/Urban Townhouse | 10.05% | 30.01% | 20.13% | 9.65% | 28.81% | 19.33% |
| Garden/Suburban Townhouse | 9.34% | 28.39% | 19.34% | 8.97% | 27.26% | 18.57% |
| Mixed Use | 9.88% | 29.90% | 20.39% | 9.09% | 28.70% | 19.37% |
| **Resort & Second Home** | 10.74% | 32.64% | 22.23% | 10.31% | 31.34% | 20.93% |
| Hi-Rise | 10.87% | 32.64% | 21.86% | 10.43% | 31.34% | 20.99% |
| Garden/Townhouse | 10.74% | 28.19% | 19.95% | 10.31% | 27.06% | 19.15% |
| **Commercial/Industrial** | 7.85% | 30.72% | 19.96% | 7.53% | 29.49% | 18.98% |
| Urban Office | 8.74% | 27.33% | 18.31% | 8.39% | 26.24% | 17.40% |
| Suburban Office | 7.85% | 26.96% | 18.01% | 7.53% | 25.88% | 17.12% |
| Retail | 8.58% | 30.72% | 20.34% | 8.24% | 29.49% | 19.34% |
| Industrial | 7.96% | 27.76% | 18.48% | 7.64% | 26.65% | 17.57% |

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## Financial Indicators

Relevant financial indicators, many of which are utilized as indices for the pricing of various mortgage products, are summarized on the following table.

| RealtyRates.com™ - Investor & Developer Surveys<br>FINANCIAL INDICATORS | | | | | |
|---|---|---|---|---|---|
| | May-15 | Feb-15 | Quarterly Change (BP) | May-14 | Yearly Change (BP) |
| **Effective Fed Funds Rate** | | | | | |
| | 0.12% | 0.11% | 1 | 0.09% | 3 |
| **Prime Rate** | | | | | |
| | 3.25% | 3.25% | 0 | 3.25% | 0 |
| **Commercial Paper (Financial)** | | | | | |
| 1-Month | 0.09% | 0.10% | -1 | 0.07% | 2 |
| 2-Month | 0.12% | 0.12% | 0 | 0.08% | 4 |
| 3-Month | 0.15% | 0.15% | 0 | 0.11% | 4 |
| **LIBOR** | | | | | |
| 1-Month | 0.18% | 0.17% | 1 | 0.15% | 3 |
| 3-Month | 0.28% | 0.26% | 2 | 0.23% | 5 |
| 6-Month | 0.42% | 0.38% | 4 | 0.32% | 10 |
| 1-Year | 0.73% | 0.66% | 7 | 0.54% | 19 |
| **Treasury Bills (Secondary Market)** | | | | | |
| 4-Week | 0.01% | 0.02% | -1 | 0.03% | -2 |
| 3-Month | 0.02% | 0.02% | 0 | 0.03% | -1 |
| 6-Month | 0.08% | 0.07% | 1 | 0.05% | 3 |
| 1-Year | 0.22% | 0.21% | 1 | 0.09% | 13 |
| **Treasury Yields Constant Maturity** | | | | | |
| 1-Month | 0.01% | 0.02% | -1 | 0.03% | -2 |
| 3-Month | 0.02% | 0.02% | 0 | 0.03% | -1 |
| 6-Month | 0.08% | 0.07% | 1 | 0.05% | 3 |
| 1-Year | 0.24% | 0.22% | 2 | 0.10% | 14 |
| 2-Year | 0.61% | 0.62% | -1 | 0.39% | 22 |
| 3-Year | 0.98% | 0.99% | -1 | 0.83% | 15 |
| 5-Year | 1.54% | 1.47% | 7 | 1.59% | -5 |
| 7-Year | 1.93% | 1.79% | 14 | 2.12% | -19 |
| 10-Year | 2.20% | 1.98% | 22 | 2.56% | -36 |
| 20-Year | 2.69% | 2.34% | 35 | 3.12% | -43 |
| 30-Year | 2.96% | 2.57% | 39 | 3.39% | -43 |
| **Interest Rate Swaps (Mid-Market Fixed Rate For 3-Month LIBOR)** | | | | | |
| 1-Year | 0.48% | 0.47% | 1 | 0.26% | 22 |
| 2-Year | 0.86% | 0.87% | -1 | 0.52% | 34 |
| 3-Year | 1.20% | 1.20% | 0 | 0.93% | 27 |
| 4-Year | 1.46% | 1.45% | 1 | 1.33% | 13 |
| 5-Year | 1.68% | 1.63% | 5 | 1.67% | 1 |
| 7-Year | 1.99% | 1.87% | 12 | 2.18% | -19 |
| 10-Year | 2.26% | 2.10% | 16 | 2.65% | -39 |
| 30-Year | 2.70% | 2.47% | 23 | 3.36% | -66 |
| **Conventional Fixed Rate Home Mortgage** | | | | | |
| 30-Year | 3.84% | 3.71% | 13 | 4.19% | -35 |
| **Moody's Seasoned Corporate Bonds** | | | | | |
| Aaa | 3.98% | 3.61% | 37 | 4.16% | -18 |
| Baa | 4.89% | 4.51% | 38 | 4.76% | 13 |

*Sources: Federal Reserve; British Bankers' Assn; International Swaps & Derivatives Assn*

## Interim Financing

The following represent lender-quoted interim (construction) financing rates and terms for conventionally financed subdivisions and planned unit developments (PUDs) and residential and commercial/industrial condominiums and co-ops nationwide.

**RealtyRates.com DEVELOPER SURVEY - 3rd Quarter 2015***
**Interim (Construction) Financing**

| PROPERTY TYPE | SPREAD OVER BASE (Prime) | INTEREST RATE | LOAN FEES | LOAN-TO-VALUE RATIO | LOAN-TO-COST RATIO | LOAN TERM (Mos.) | AMORTIZATION |
|---|---|---|---|---|---|---|---|
| **Residential Subdivisions & PUDs** | | | | | | | |
| Minimum | 0.75% | 4.00% | 1.00% | 50% | 70% | 12 | Interest Only |
| Maximum | 6.45% | 9.70% | 4.00% | 100% | 100% | 60 | Interest Only |
| Average | 3.57% | 6.76% | 2.21% | 74% | 84% | 41 | Interest Only |
| **Commercial/Industrial Subdivisions & PUDs** | | | | | | | |
| Minimum | 0.85% | 4.10% | 2.00% | 60% | 70% | 12 | Interest Only |
| Maximum | 6.50% | 9.75% | 4.50% | 90% | 100% | 36 | Interest Only |
| Average | 3.65% | 6.87% | 2.97% | 75% | 85% | 26 | Interest Only |
| **Residential Condominiums & Co-Ops** | | | | | | | |
| Minimum | 0.75% | 4.00% | 2.00% | 65% | 70% | 12 | Interest Only |
| Maximum | 7.03% | 10.28% | 4.50% | 80% | 100% | 36 | Interest Only |
| Average | 3.84% | 7.07% | 2.96% | 72% | 84% | 26 | Interest Only |
| **Commercial/Industrial Condominiums** | | | | | | | |
| Minimum | 0.85% | 4.10% | 2.00% | 60% | 70% | 12 | Interest Only |
| Maximum | 6.50% | 9.75% | 4.50% | 80% | 100% | 24 | Interest Only |
| Average | 3.63% | 6.85% | 2.97% | 70% | 85% | 19 | Interest Only |

*2nd Quarter 2015 Data

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## Regional Discount Rates

The following tables summarize discount rates for, conventionally financed (interest-only interim or construction financing) subdivisions and planned unit developments (PUDs) and condominium and co-op projects. Actual Rates are historical rates achieved by survey respondents, while Pro-Forma Rates reflect forward-looking revenue and development costs. Subdivision and PUD rates do include provision for developer's profit, i.e., profit is not treated as a line item expense, while condominium and co-op rates do not, i.e., profit is treated as a line item expense.

Data presented in the *Developer Survey* are provided by 362 commercial appraisers (4%), lenders (52%), and local, regional and national developers (44%).

## New England - CT, MA, ME, NH, RI, VT

| RealtyRates.com DEVELOPER SURVEY - 3rd Quarter 2015* New England - Subdivisions & PUDs | | | | | | |
|---|---|---|---|---|---|---|
| | Actual Rates | | | Pro-Forma Rates | | |
| | Min | Max | Avg | Min | Max | Avg |
| **Site-Built Residential** | 18.34% | 43.68% | 28.72% | 15.60% | 36.06% | 24.04% |
| -100 Units | 18.34% | 37.65% | 27.44% | 15.60% | 32.72% | 23.68% |
| 100-500 Units | 18.80% | 41.42% | 28.90% | 15.65% | 35.24% | 24.43% |
| 500+ Units | 19.26% | 43.30% | 29.40% | 15.69% | 36.06% | 24.32% |
| Mixed Use | 19.71% | 43.68% | 29.16% | 16.06% | 35.58% | 23.75% |
| **Manufactured Housing** | 18.66% | 45.64% | 29.79% | 15.92% | 38.01% | 25.20% |
| -100 Units | 18.66% | 39.69% | 28.59% | 16.04% | 34.49% | 24.76% |
| 100-500 Units | 19.12% | 43.66% | 30.13% | 15.92% | 37.14% | 25.47% |
| 500+ Units | 19.59% | 45.64% | 30.66% | 15.96% | 38.01% | 25.36% |
| **Business Parks** | 18.48% | 43.30% | 28.65% | 15.72% | 36.06% | 24.20% |
| -100 Acres | 18.48% | 37.65% | 27.50% | 15.72% | 32.72% | 23.73% |
| 100-500 Acres | 18.94% | 41.42% | 28.97% | 15.77% | 35.24% | 24.48% |
| 500+ Acres | 19.40% | 43.30% | 29.47% | 15.80% | 36.06% | 24.37% |
| **Industrial Parks** | 18.84% | 37.20% | 26.07% | 16.03% | 30.98% | 22.00% |
| -100 Acres | 18.84% | 32.35% | 25.08% | 16.03% | 28.11% | 21.63% |
| 100-500 Acres | 19.31% | 35.58% | 26.35% | 16.08% | 30.28% | 22.25% |
| 500+ Acres | 19.78% | 37.20% | 26.78% | 16.11% | 30.98% | 22.13% |

*2nd Quarter 2015 Data

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| RealtyRates.com DEVELOPER SURVEY - 3rd Quarter 2015* New England - Condominiums & Co-Ops | | | | | | |
|---|---|---|---|---|---|---|
| | Actual Rates | | | Pro-Forma Rates | | |
| | Min | Max | Avg | Min | Max | Avg |
| **Primarg Residential** | 12.16% | 24.23% | 17.63% | 10.13% | 23.17% | 15.63% |
| Hi-Rise/Urban Townhouse | 13.08% | 24.23% | 18.28% | 10.89% | 21.05% | 15.65% |
| Garden/Suburban Townhouse | 12.16% | 22.92% | 16.84% | 10.13% | 19.92% | 14.42% |
| Mixed Use | 12.86% | 24.13% | 17.76% | 11.84% | 23.17% | 16.80% |
| **Resort & Second Home** | 13.98% | 26.35% | 18.74% | 11.64% | 22.90% | 16.03% |
| Hi-Rise | 14.14% | 26.35% | 19.84% | 11.78% | 22.90% | 16.99% |
| Garden/Townhouse | 13.98% | 22.75% | 17.63% | 11.64% | 19.77% | 15.08% |
| **Commercial/Industrial** | 10.21% | 24.80% | 16.18% | 8.51% | 21.55% | 13.87% |
| Urban Office | 11.37% | 22.06% | 16.38% | 9.47% | 19.17% | 14.04% |
| Suburban Office | 10.21% | 21.76% | 15.35% | 8.51% | 18.91% | 13.16% |
| Retail | 11.17% | 24.80% | 17.26% | 9.30% | 21.55% | 14.81% |
| Industrial | 10.35% | 22.41% | 15.73% | 8.62% | 19.47% | 13.49% |

*2nd Quarter 2015 Data

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# LEXICON, DEFINITIONS AND ASSUMPTIONS

# APPRAISAL LEXICON

## MARKET VALUE

"The most probable price, which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently, knowledgeably and assuming the price is not affect by undue stimulus. Implicit in this definition is consummation of a sale as of a specified date and passing of title from seller to buyer under conditions whereby:

1. Buyer and seller are motivated;
2. Both parties are well informed or well advised and each acting in what he considers his own best interest;
3. A reasonable time is allowed for exposure in the open market;
4. Payment is made in terms of cash in U.S. dollars, or in terms of financial arrangements comparable thereto; and
5. The price represents the normal consideration for the property sold unaffected by special or creative financing, or sales concessions granted by anyone associated with the sale." (1)

## FEE SIMPLE ESTATE

Absolute ownership unencumbered by any other interest or estate, subject only to the limitations imposed by the governmental powers of taxation, eminent domain, police power and escheat. (2)

## HIGHEST AND BEST USE

The reasonably probable and legal use of vacant land or an improved property, that is physically possible, appropriately supported, financially feasible, and that results in the highest value. The four criteria the highest and best use must meet are legal permissibility, physical possibility, financial feasibility and maximum productivity. Alternatively, the probable use of land or improved property – specific with respect to the user and timing of the use – that is adequately supported and results in the highest present value. (3)

## LEASED FEE INTEREST

A freehold (ownership interest) where the possessory interest has been granted to another party by creation of a contractual landlord-tenant relationship (i.e., a lease). (4)

## MARKETING TIME

An opinion of the amount of time it might take to sell a real or personal property interest at the concluded market value level during the period immediately after the effective date of an appraisal. Marketing time differs from exposure time, which is always presumed to precede the effective date of an appraisal. (5)

(1) FIRREA 12 CFR Part 323.2.
(2) The Dictionary of Real Estate Appraisal, Appraisal Institute, Chicago, IL, 2010, Fifth Edition - Page 78.
(3) Ibid. - 93.
(4) Ibid. – 111.
(5) Ibid. - 121.

## MARKET RENT

The most probable rent that a property should bring in a competitive and open market reflecting all conditions and restrictions of the lease agreement, including permitted uses, use restrictions, expense obligations, term, concessions, renewal and purchase options, and tenant improvements (TIs). (6)

## EXPOSURE TIME

1. The time a property remains on the market.
2. The estimated length of time the property interest being appraised would have been offered on the market prior to the hypothetical consummation of a sale at market value on the effective date of the appraisal; a retrospective estimate based on an analysis of past events assuming a competitive and open market. (7)

## PROSPECTIVE OPINION OF VALUE

A value opinion effective as of a specified future date. The term does not define a type of value. Instead, it identifies a value opinion as being effective at some specific future date. An opinion of value as of a prospective date is frequently sought in connection with projects that are proposed, under construction, or under conversion to a new use, or those that have not yet achieved sellout or a stabilized level of long-term occupancy. (8)

## RETROSPECTIVE OPINION OF VALUE

A value opinion effective as of a specified historical date. The term does not define a type of value. Instead, it identifies a value opinion as being effective at some specific prior date. Value as of a historical date is frequently sought in connection with property tax appeals, damage models, lease renegotiation, deficiency judgments, estate tax, and condemnation. Inclusion of the type of value with this term is appropriate, e.g., "retrospective market value opinion." (9)

(6) Ibid. - 121.
(7) Ibid. – 73.
(8) Ibid. – 153.
(9) Ibid. – 171.

# ASSUMPTIONS AND LIMITING CONDITIONS

This appraisal report has been made with the following general assumptions:

1. This is a narrative Appraisal Report which is intended to comply with the reporting requirements set forth under Standards Rule 2-2(a) of the Uniform Standards of Professional Appraisal Practice for an Appraisal Report. Supporting documentation concerning the data, reasoning, and analyses is retained in the appraiser's file. The information contained in this report is specific to the needs of the client and for the intended use stated in this report. The appraisers are not responsible for the unauthorized use of this report.

2. No responsibility is assumed for the legal description or for matters including legal or title considerations. Title to the property is assumed to be good and marketable unless otherwise stated.

3. The property is appraised free and clear of any or all liens or encumbrances unless otherwise stated.

4. Responsible ownership and competent property management are assumed.

5. The information furnished by others is believed to be reliable. However, no warranty is given for its accuracy.

6. All engineering is assumed to be correct. The plot plans and illustrative material in this report are included only to assist the reader in visualizing the property.

7. It is assumed that there are no hidden or unapparent conditions of the property, subsoil, or structures that render it more or less valuable. No responsibility is assumed for such conditions or for arranging for engineering studies that may be required to discover them.

8. It is assumed that there is full compliance with all applicable federal, state, and local environmental regulations and laws unless noncompliance is stated, defined, and considered in the appraisal report.

9. It is assumed that all applicable zoning and use regulations and restrictions have been complied with, unless a nonconformity has been stated, defined, and considered in the appraisal report.

10. It is assumed that all required licenses, certificates of occupancy, consents, or other legislative or administrative authority from any local, state, or national government or private entity or organization have been or can be obtained or renewed for any use on which the value estimate contained in this report is based.

11. It is assumed that the utilization of the land and improvements is within the boundaries or property lines of the property described and that there is no encroachment or trespass unless noted in the report.

This appraisal report has been made with the following general limiting conditions:

1. The distribution, if any, of the total valuation in this report between land and improvements applies only under the stated program of utilization. The separate allocation of land and building must not be used in conjunction with any other appraisal and are invalid if used.

2. Possession of this report, or a copy thereof, does not carry with it the right of publication.

3. The appraiser, by reason of this appraisal, is not required to give further consultation, testimony, or be attendance in court with reference to the property in question unless arrangements have been previously made.

4. Neither all nor any part of the contents of this report (especially any conclusions as to value, the identity of the appraiser, or the firm with which the appraiser is connected) shall be disseminated to the public through advertising, public relations, news, sales, or other media without the prior written consent and approval of the appraiser.

5. Any value estimates provided in the report apply to the entire property, and any proration or division of the total into fractional interests will invalidate the value estimate, unless such proration or division of interests has been set forth in the report.

6. The forecasts, projections, or operating estimates contained herein are based upon current market conditions, anticipated short-term supply and demand factors, and a continued stable economy. These forecasts are, therefore, subject to changes in future conditions.

# QUALIFICATIONS

**QUALIFICATIONS OF CHRISTOPHER H. BOWLER**
**REAL ESTATE APPRAISER**

## EDUCATION

- BA Economics, Union College, Schenectady, New York 1987

- Appraisal Institute

| | |
|---|---|
| Course SPP | Standards of Professional Practice |
| Course 1A-1 | Basic Appraisal Principles, Methods and Techniques |
| Course 1A-2 | Basic Valuation Theory and Techniques |
| Course 8-1 | Residential Valuation |
| Course 1B-A | Capitalization Theory & Techniques Part A |
| Course 1B-B | Capitalization Theory & Techniques Part B |
| Course 550 | Advanced Applications |
| Course 410 | Standards of Professional Practice Part A |
| Course 420 | Standards of Professional Practice Part B |
| Course 540 | Report Writing & Valuation Analysis |

- Argus Software
  Valuation DCF 2 Day Training; 11/09

## PROFESSIONAL AND TRADE AFFILIATIONS

- Appraisal Institute

| | | |
|---|---|---|
| 1992 | - | Senior Residential Appraiser - SRA Designation |
| 2000 | - | Member of Appraisal Institute - MAI Designation #11564 |
| 2002-4 | | Director, Massachusetts Chapter |
| 2005 | | Secretary, Massachusetts Chapter |
| 2006 | | Treasurer, Massachusetts Chapter |
| 2007 | | Vice President, Massachusetts Chapter |
| 2008 | | President, Massachusetts Chapter |

- Massachusetts Certified General Real Estate Appraiser License #495

## PROFESSIONAL EXPERIENCE

Qualified expert witness; Land Court of Massachusetts.

## BUSINESS EXPERIENCE

Presently an associate member of the firm of Avery Associates, Acton, Massachusetts. Avery Associates handles a wide variety of real estate appraisal and consulting assignments. Mr. Bowler has prepared appraisals on the following types of real property: apartment complexes, office buildings, industrial buildings, research and development facilities, hotels/motels, golf courses, restaurants, laboratory-life sciences buildings, medical office buildings, auto dealerships, truck terminals, warehouses, bank branches, shopping centers, commercial and industrial condominium units and buildings, lumber yards, service stations, industrial mill buildings, and cranberry bogs.

Mr. Bowler's experience also includes the appraisal of one to four family dwellings, condominium units, proposed residential subdivisions and condominium projects. Also, Mr. Bowler has prepared market studies and feasibility analyses for proposed developments of both residential and commercial projects. Prior to joining Avery Associates in 1992, Mr. Bowler was employed in the following manner:

| | |
|---|---|
| 1987-1992 | Real Estate Appraiser<br>Edward W. Bowler Associates<br>Waltham, Massachusetts |
| 1987 | Research Associate, New York State Department of Transportation<br>Albany, New York |

**BUSINESS ADDRESS**

Avery Associates
282 Central Street
Post Office Box 834
Acton, MA 01720-0834
Tel: 978-263-5002
Fax: 978-635-9435
chris@averyandassociates.com

**QUALIFICATIONS OF JONATHAN H. AVERY**
**REAL ESTATE APPRAISER AND CONSULTANT**

## EDUCATION

- BBA University of Massachusetts, Amherst, Massachusetts
- Graduate of Realtors Institute of Massachusetts - GRI
- American Institute of Real Estate Appraisers

| | |
|---|---|
| Course 1-A | Basic Appraisal Principles, Methods and Techniques |
| Course 1A-B | Capitalization Theory and Techniques |
| Course 2 | Basic Appraisal of Urban Properties |
| Course 6 | Real Estate Investment Analysis |
| Course 410/420 | Standards of Professional Practice |

## PROFESSIONAL AND TRADE AFFILIATIONS

- The Counselors of Real Estate

| | | |
|---|---|---|
| 1985 | - | CRE Designation #999 |
| 1993 | - | Chairman, New England Chapter |
| 1995 | - | National Vice President |
| 1999 | - | National President |

- Appraisal Institute

| | | |
|---|---|---|
| 1982 | - | Member Appraisal Institute - MAI Designation #6162 |
| 1975 | - | Residential Member - RM Designation #872 |
| 1977 | - | Senior Residential Appraiser - SRA Designation |
| 1981 | - | Senior Real Property Appraiser - SRPA Designation |
| 1986-1987 | - | President, Eastern Massachusetts Chapter |
| 1992 | - | President, Greater Boston Chapter |
| 1995 | - | Chair, Appraisal Standards Council |
| 1996-1998 | - | Vice Chair, Appraisal Standards Council |

- Massachusetts Board of Real Estate Appraisers

| | | |
|---|---|---|
| 1972 | - | MRA Designation |
| 1981 | - | President of the Board |

- Royal Institution of Chartered Surveyors

| | | |
|---|---|---|
| 2005 | - | FRICS Designation |

- Affiliate Member, Greater Boston Real Estate Board
- Licensed Real Estate Broker - Massachusetts 1969
- Massachusetts Certified General Real Estate Appraiser #26
- New Hampshire Certified General Real Estate Appraiser #NHGC-241

## BUSINESS EXPERIENCE

Mr. Avery is Principal of the firm of Avery Associates located in Acton, Massachusetts. Avery Associates is involved in a variety of real estate appraisal and consulting activities including: market value estimates, marketability studies, feasibility studies, and general advice and guidance on real estate matters to public, private and corporate clients. Mr. Avery has served as arbitrator and counselor in a variety of proceedings and negotiations involving real estate. During 1993, he served as an appraisal consultant for the Eastern European Real Property Foundation in Poland. He has been actively engaged in the real estate business since 1967 and established Avery Associates in 1979. Prior to his present affiliation, Mr. Avery served in the following capacities:

| | |
|---|---|
| 1978-1979 | Managing Partner, Avery and Tetreault,<br>Real Estate Appraisers and Consultants |
| 1975 -1978 | Chief Appraiser, Home Federal Savings and Loan Association<br>Worcester, Massachusetts |
| 1972-1975 | Staff Appraiser, Northeast Federal Saving and Loan Association<br>Watertown, Massachusetts |
| 1971-1972 | Real Estate Broker, A. H. Tetreault, Inc.<br>Lincoln, Massachusetts |

## TEACHING EXPERIENCE

- Instructor, Bentley College, Continuing Education Division, 1976-1982;
  Appraisal Methods and Techniques
  Computer Applications for Real Estate Appraisal
- Approved Instructor Appraisal Institute - since 1982
- Chapter Education Chairman 1986-1987
- Seminar Instructor; Massachusetts Board of Real Estate Appraisers since 1981
- Certified Appraisal Standards Instructor-Appraiser Qualifications Board

## PROFESSIONAL EXPERIENCE

Qualified expert witness; Middlesex County District Court and Superior Court, Essex County Superior Court, Norfolk County Superior Court, Plymouth Superior Court, Worcester County Probate Court, Federal Tax Court, Federal Bankruptcy Court, Appellate Tax Board of Massachusetts and Land Court of Massachusetts. Member, Panel of Arbitrators - American Arbitration Association, National Association of Securities Dealers Regulation.

**Property Assignments Include**:

Land (Single Lots and Subdivisions)
One to Four Family Dwellings
Apartments
Residential Condominiums
Office Buildings
Restaurants
Industrial Buildings
Racquet Club
Petroleum Fuel Storage Facility
Lumber Yard
School Buildings
Historic Renovations
Movie Theater
Conservation Easements
Hotels and Motels
Shopping Centers
Golf Courses
Churches
Gasoline Service Stations
Farms
Office Condominiums
Automobile Dealerships

## BUSINESS ADDRESS

Avery Associates
282 Central Street
Post Office Box 834
Acton, MA 01720-0834
Tel: 978-263-5002
Fax: 978-635-9435
jon@averyandassociates.com

**AVERY ASSOCIATES**
**REPRESENTATIVE LIST OF CLIENTS**

## FINANCIAL INSTITUTIONS

Avidia Bank
Bank of New England
Belmont Savings Bank
Berkshire Bank
Cambridge Savings Bank
East Boston Savings Bank
Enterprise Bank & Trust
First Pioneer Farm Credit
Marlborough Savings Bank
Middlesex Federal Savings
Middlesex Savings Bank
North Middlesex Savings Bank
North Shore Bank
Rollstone Bank & Trust
Salem Five Cent Savings Bank
Seneca Insurance Co.
TD Bank, N.A.
Webster Five Cents Savings Bank
Workers Credit Union

## CORPORATIONS

Avalon Bay Communities
Boston Medflight
Concord Lumber Corporation
Dow Chemical Company
Exxon Mobil Company
Fidelity Real Estate
Genzyme/Sanofi
John M. Corcoran & Co.
Marvin F. Poer and Company
McDonald's Corporation
Minuteman Airfield, Inc.
PriceWaterhouseCoopers
Sun Life Assurance Company
The Mathworks, Inc.
Toyota Financial Services
U.S. Postal Service
W. J. Graves Construction Co., Inc.
Zoll Medical Corp.

## PUBLIC SECTOR/NONPROFIT

American Arbitration Association
Church of Latter Day Saints
City of Marlborough
Emerson Hospital
Essex County Greenbelt Association
Internal Revenue Service
Mass Audubon
Mass. Dept. of Conservation/Recreation
Massachusetts Dept. of Agricultural Resources
MassDevelopment
MassHousing
Sudbury Valley Trustees
The Nature Conservancy
The Trust for Public Land
Town of Acton
Town of Concord
Town of Lexington
Trustees of Reservations
U. S. Department of Interior
U.S. Department of Justice
U.S. Forest Service
Walden Woods Project
Water Supply District of Acton

## LAW FIRMS & FIDUCIARIES

Anderson & Kreiger LLP
Choate, Hall & Stewart
DLA Piper, LLP
Edwards, Angel, Palmer & Dodge
Foley Hoag, LLP
Goodwin Procter
Hemenway & Barnes
Holland & Knight
Kates and Barlow
Kirkpatrick Lockhart Nicholson Graham
Kopelman & Paige, P.C.
Lee, Rivers & Corr, LLP
Lynch, Brewer, Hoffman & Fink, LLP
Nutter, McClennen & Fish, LLP
Office of Stephen Small
Peabody & Arnold, LLP
Prince, Lobel, Glovsky & Tye
Rackemann, Sawyer & Brewster
Riemer & Braunstein, LLP
Ropes & Gray
Sally & Fitch
Stern, Shapiro, Weissberg & Garin
WilmerHale