
Town of Andover
Department of Municipal Services Facility



July 2014

Project History

- Original facility constructed in 1965
- Lewis Street DPW Yard Master Plan Study completed in 2000
 - Lewis Street Site
 - West Fire Station Site
 - Route 125/Suncrest
 - Dale Street Ballardvale
- 2004 – Reviewed Spring Grove Cemetery
- Town Yard Feasibility Study initiated in 2008 (reviewed more than 40 sites)
- Update of Town Yard Feasibility Study 2013/2014



**Why does the Town need new
Department of Municipal Services
Facility for the DPW & Plant & Facilities
Operations.....**

Issues and Inadequacies

- Facilities are undersized to efficiently support current operations
 - Built in 1965 with a population of 20,000.
Town population is now 33,000
- Operations are scattered throughout Town resulting in operational inefficiencies
- Lack of storage for vehicles, equipment and materials
- Limited public accessibility
- Outdated and inefficient buildings
- Buildings have exceeded their useful life
- Poor/Unsafe working conditions
 - Poor or no ventilation
 - Inadequate lighting
 - Inadequate space
 - Building Code deficiencies



Current Conditions

- Personnel, equipment, and materials are stored all over Town



Lewis Street



Red Spring Road



Abbot Street



Spring Grove Cemetery



Town Offices



Old Treatment Plant

Current Conditions

TOWN YARD |

- Lack of office space
- Inadequate employee support spaces
- Overcrowded and inadequate vehicle maintenance space
- Building lacks proper ventilation system to meet current codes
- Facilities do not meet current Americans with Disabilities Act (ADA) accessibility requirements.
- Lack of interior vehicle storage



Current Conditions

TOWN YARD |

- 2011 Structural Report indicates that the buildings are reaching the end of their useful life.
- The report further states that the doors shall not be left open under extreme wind events due to the potential for increased wind loading on the structure.



A photograph of a yellow front loader parked in a large, dimly lit industrial space, likely a warehouse or maintenance facility. The loader is the central focus, with its large tires and front bucket visible. In the background, there are various pieces of equipment, including a blue ladder leaning against a wall, and some storage racks. The lighting is somewhat low, creating a slightly hazy atmosphere.

**What does the Department of
Municipal Services (DPW & Plant &
Facilities) do for the community.....**

Andover Department of Municipal Services

The Department of Municipal Services (Department of Public Works and Plant & Facilities) are responsible for all Town owned buildings, streets, parks and cemeteries, water, sewer, storm water, and engineering support. They are responsible for:

- All Town buildings
- Paved Town roads
- Catch basins
- Drainage pipe
- Sidewalks
- Sewer system
- Water system & treatment plant
- All green spaces
- Cemetery
- Public tree work
- Engineering support
- Maintenance of all vehicles
 - Large dump trucks
 - Pickup trucks
 - Utility trucks
 - Front end loaders
 - Street sweepers
 - Backhoes
 - And more.....
- Maintenance of all towed and small equipment

What does the Department do for the Town.....

Provide 24 hour services for the safety of the residents of the Town of Andover:

- The sanding/deicing, plowing, and removal of snow
- Removal of downed trees
- Emergency building repairs
- Maintenance of roads
- Maintenance of sidewalks
- Repairing sewer main breaks
- The support of other emergency departments



Programming Analysis

Programming Process

- Interview Staff
 - DPW Administration
 - Plant & Facilities Administration
 - Building Maintenance Division
 - Cemetery, Parks & Grounds Division
 - Electrical, HVAC & Plumbing Division
 - Materials Management Division
 - Vehicle Maintenance Division
 - Highway Division
 - Water & Sewer Division
- Inspect and Inventory Existing Facilities
- Develop Needs Assessment for two Work Groups

ANDOVER MUNICIPAL SERVICES FACILITY

EXISTING FACILITY|

Building

Office/Employee Facilities	1,950 SF
Shops/Material Storage	875 SF
Vehicle Maintenance	5,500 SF
Vehicle & Equipment Storage	<u>11,050 SF</u>
Subtotal:	19,375 SF

Exterior Storage of Vehicles and Equipment

Storage Containers/Exterior Yard Storage	
Subtotal:	18,400 SF



TOTAL: 37,775 SF

DEPARTMENT OF MUNICIPAL SERVICES (TOWN YARD) SPACE NEEDS ASSESSMENT

- Administration
- Engineering
- Highway
- Water & Sewer
- Vehicle Maintenance
- Forestry

ANDOVER MUNICIPAL SERVICES FACILITY

RESULTS OF TOWN YARD SPACE NEEDS ASSESSMENT |

	2008 Original Needs	2009 1st Round Revisions	2010 2nd Round Revisions	2012 3rd Round Revisions	2014 4th Round Revisions
Office Support Areas:	4,194 SF	3,242 SF	2,289 SF	3,115 SF	7, 445 SF
Employee Facilities:	5,618 SF	4,967 SF	4,437 SF	3,233 SF	3,233 SF
Workshops:	4,205 SF	3,535 SF	3,535 SF	3,302 SF	3,302 SF
Vehicle Maintenance:	11,655 SF	10,969 SF	10,969 SF	10,426 SF	10,426 SF
Veh./Equip. Storage:	46,200SF	41,141 SF	36,624 SF	35,637 SF	30,597 SF
Wash Bay:	<u>1,822 SF</u>	<u>1,577 SF</u>	<u>1,577 SF</u>	<u>2,113 SF</u>	<u>2,113 SF</u>
TOTAL:	73,695 SF	65,432 SF	59,432 SF	57,827 SF	57,116 SF

23% reduction as a result of four (4) rounds of program refinements

Alternatives

Town Yard Alternatives Considered.....

- Alternative 1 – Do nothing by continuing to operate out of the outdated and undersized facility while allocating funds for general repairs and emergency repairs
- Alternative 2 - Replace existing facilities in-kind at Lewis Street
(for comparison purposes)
- Alternative 3 - Construct a new facility on the existing Lewis Street lot to fit Town Yard programming needs to the maximum extent practicable (off site seasonal storage required)
- Alternative 4 - Construct a new facility on Lewis Street Site and purchase adjacent parcels to fit full Town Yard program needs (no off site seasonal storage required)
- Alternative 5 - Construct a new facility at the West Andover Fire Station site located on Greenwood Road / Chandler Road to fit full Town Yard program needs

Alternative 2 - Replace In-Kind Alternative

- Demolish existing structures
- Construct a new 21,475 SF pre-engineered metal building to replace existing building sizes in-kind

Demolish and replace with new structure to match existing square footages



ANDOVER MUNICIPAL SERVICES FACILITY

Alternative 2 - Replace In-Kind Alternative Project Cost Summary

• Building		\$4,390,000
	Office/Employee Facilities	1,950 SF
	Shops/Material Storage	875 SF
	Vehicle Maintenance	5,500 SF
	Wash Bay	2,100 SF
	Vehicle & Equipment Storage	<u>11,050 SF</u>
	TOTAL:	21,475 SF
• Industrial Support Equipment		\$750,000
• Site Development Costs		\$1,900,000
	• DEP mandated stormwater system, site clearing, excavation, gravel borrow	
	• Water supply, electrical, paving, curbing, fencing, gates, etc.	
• Demolition of 37/39 Pearson Street		\$70,000
• Salt Storage Structure		\$500,000
• Design Contingencies		\$745,000
• Escalation		<u>\$720,000</u>
	• 2014 – 2015 at 2.5%	
	• 2015 – 2016 at 3.0%	
	• 2016 – 2017 at 3.0%	
	Subtotal Construction Cost:	\$9,075,000
• Temporary Facilities During Construction		\$250,000
• Soft Costs & Const. Contingencies		<u>\$2,170,000</u>
	• Construction contingency, A&E costs, Permitting/testing	
	• Printing costs, Furnishings, Communications	
	Total Project Cost:	\$11,495,000

Alternative 2 - Replace In-Kind Alternative

Advantages

- Lower Construction Cost

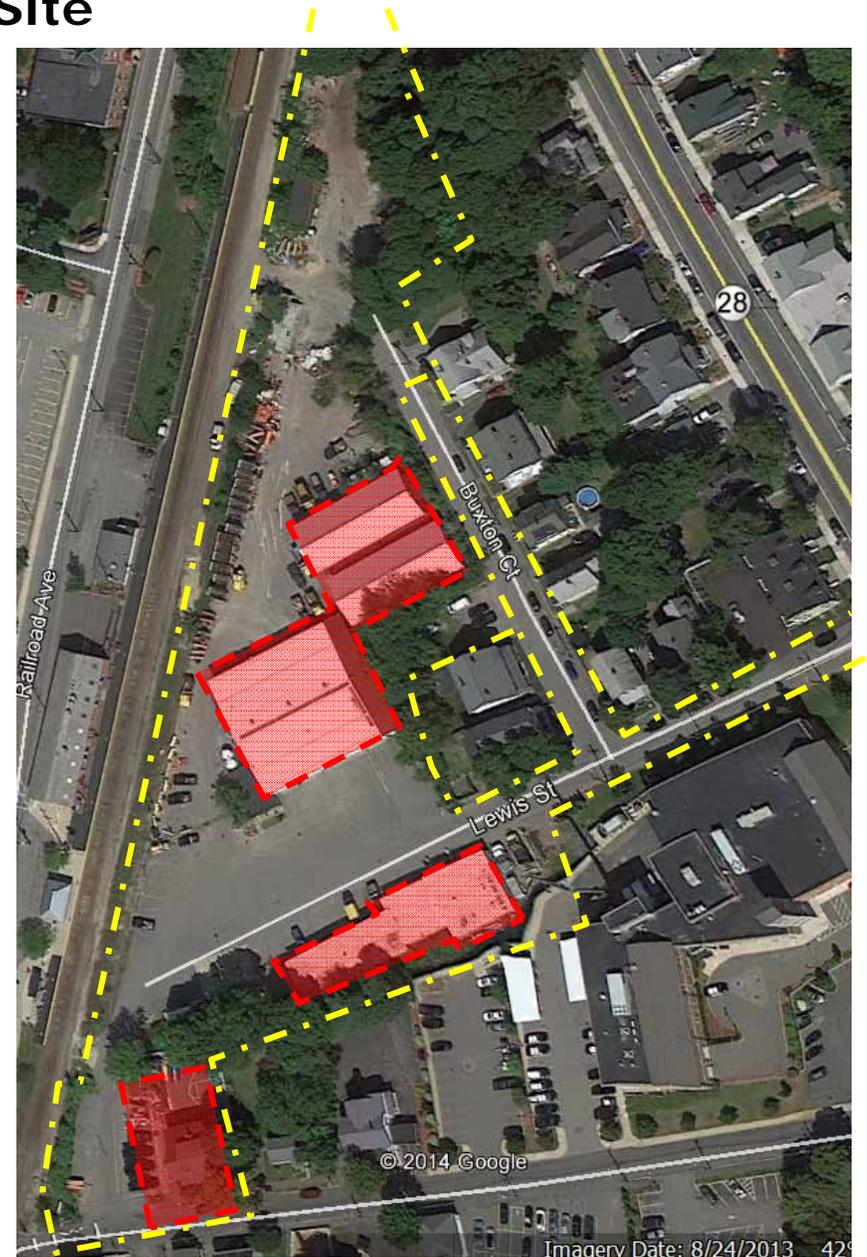


Disadvantages

- Space does not meet current or future needs (short 35,000 SF of needed space)
- Loss of potential revenue due to inability to promote transit oriented development of Lewis Street site
- Inefficient operations due to limited size of site
- Inefficient operations due to limited size of building
- Inefficient operations due to non-consolidated facilities

Alternative 3 – Existing Lewis Street Site (with offsite seasonal storage)

- Demolish existing structures
- Construct a new campus style facility consisting of 42,620 SF of new pre-engineered metal buildings on existing site
- Construct a new 14,480 SF off-site seasonal storage building



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Alternative 3 – Existing Lewis Street Site (with offsite seasonal storage)

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TOWN OF ANDOVER, MASSACHUSETTS

ANDOVER MUNICIPAL SERVICES FACILITY

Alternative 3 – Existing Lewis Street Site (with offsite seasonal storage)

Project Cost Summary

• Building		\$11,560,000
• 42,620 SF (at Lewis Street) :	\$9,360,000	
• 14,480 SF (off-site):	\$2,200,000	
• Industrial Support Equipment		\$960,000
• Site Development Costs		\$2,395,000
• Lewis Street:	\$2,020,000	
• Off-Site Seasonal Storage	\$375,000	
• Demolition of 37/39 Pearson Street		\$70,000
• Salt Storage Structure		\$335,000
• Design Contingencies		\$1,530,000
• Escalation		<u>\$1,480,000</u>
• 2014 – 2015 at 2.5%		
• 2015 – 2016 at 3.0%		
• 2016 – 2017 at 3.0%		
	Subtotal Construction Cost:	\$18,330,000
• Temporary Facilities During Construction		\$250,000
• Soft Costs & Const. Contingencies		<u>\$4,410,000</u>
• Construction contingency, A&E costs, Permitting/testing		
• Printing costs, Furnishings, Communications		
	Total Project Cost:	\$22,990,000

Alternative 3 – Existing Lewis Street Site (with offsite seasonal storage)

Advantages

- No land acquisition required
- Centrally located



Disadvantages

- Site does not support full program requiring construction of an off-site seasonal storage building
- Loss of potential revenue due to inability to promote transit oriented development of Lewis Street site
- Temporary facilities during construction required
- Site will not support future growth
- Inefficient operations due to shape of site and limited size of site
- Inefficient operations due to limited size of building
- Inefficient operations due to non-consolidated facilities

Alternative 4 – Existing Lewis Street Site (with purchase of adjacent parcels)

- Purchase two (2) adjacent residential parcels
- Demolish all existing structures (demo delay required)
- Construct a new 57,100 SF consolidated pre-engineered metal building on existing/expanded site



Alternative 4 – Existing Lewis Street Site (with purchase of adjacent parcels)

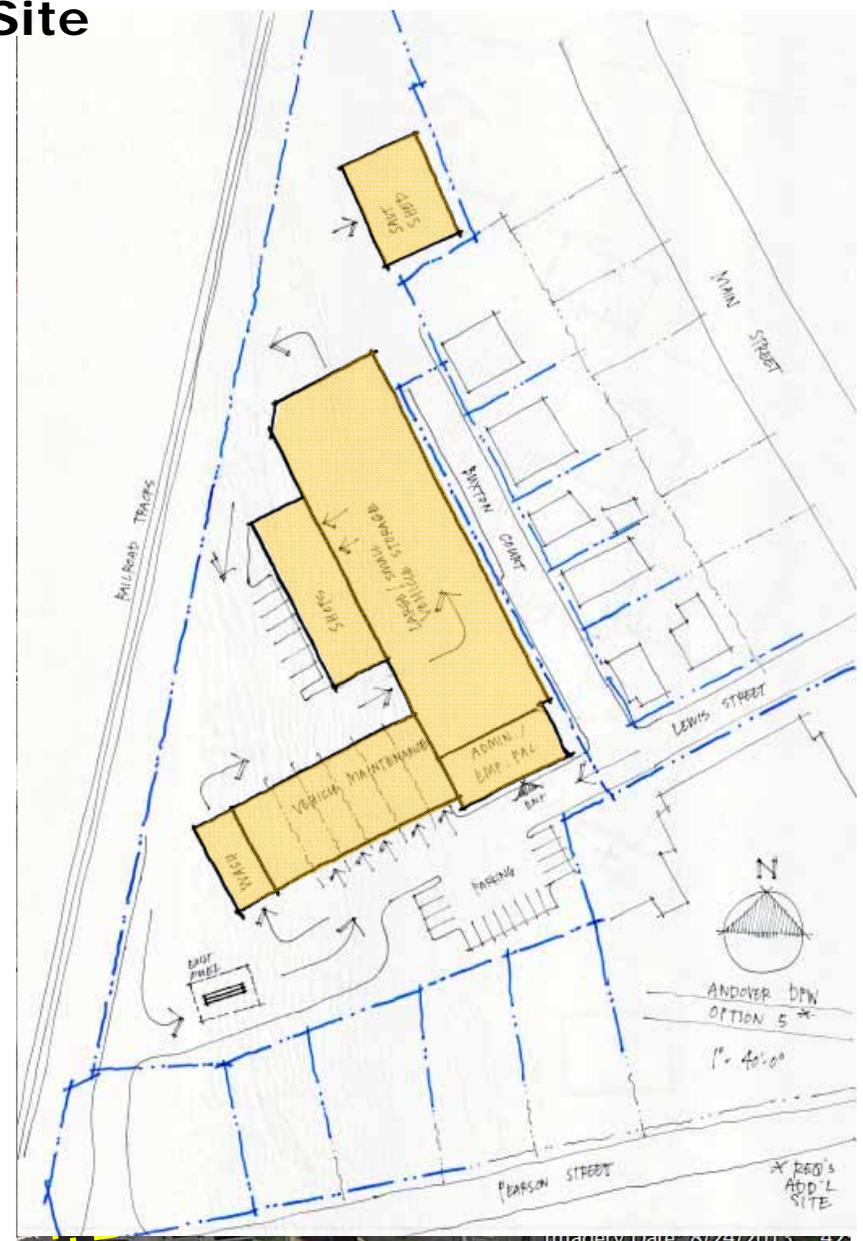
- Purchase two (2) adjacent residential parcels
- Demolish all existing structures (demo delay required)
- Construct a new 57,100 SF consolidated pre-engineered metal building on existing/expanded site



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Alternative 4 – Existing Lewis Street Site (with purchase of adjacent parcels)

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ANDOVER MUNICIPAL SERVICES FACILITY

Alternative 4 – Existing Lewis Street Site (with purchase of adjacent parcels)

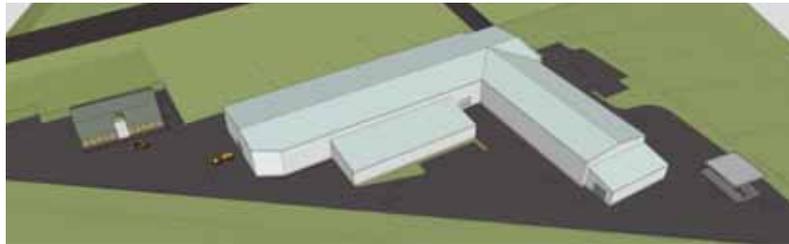
Project Cost Summary

• Building	\$11,610,000
• 57,100 SF	
• Industrial Support Equipment	\$960,000
• Site Development Costs	\$1,925,000
• DEP mandated stormwater system, site clearing, excavation, gravel borrow	
• Water supply, electrical, paving, curbing, fencing, gates, etc.	
• Demolition of 37/39 Pearson Street	\$70,000
• Salt Storage Structure	\$335,000
• Design Contingencies	\$1,480,000
• Escalation	<u>\$1,426,000</u>
• 2014 – 2015 at 2.5%	
• 2015 – 2016 at 3.0%	
• 2016 – 2017 at 3.0%	
Subtotal Construction Cost:	\$17,806,000
• Temporary Facilities During Construction	\$250,000
• Purchase of Adjacent Parcels	\$700,000
• Soft Costs & Const. Contingencies	<u>\$4,280,000</u>
• Construction contingency, A&E costs, Permitting/testing	
• Printing costs, Furnishings, Communications	
Total Project Cost:	\$23,036,000

Alternative 4 – Existing Lewis Street Site (with purchase of adjacent parcels)

Advantages

- Concept meets full program requirements
- Concept allows for consolidation of operations
- Centrally located
- Frees up space at treatment plant for potential expansion opportunities & allows the facility to become a secure facility (no public access)
- Frees up space in Town Offices for expansion opportunities
- More efficient services associated with consolidation of operations

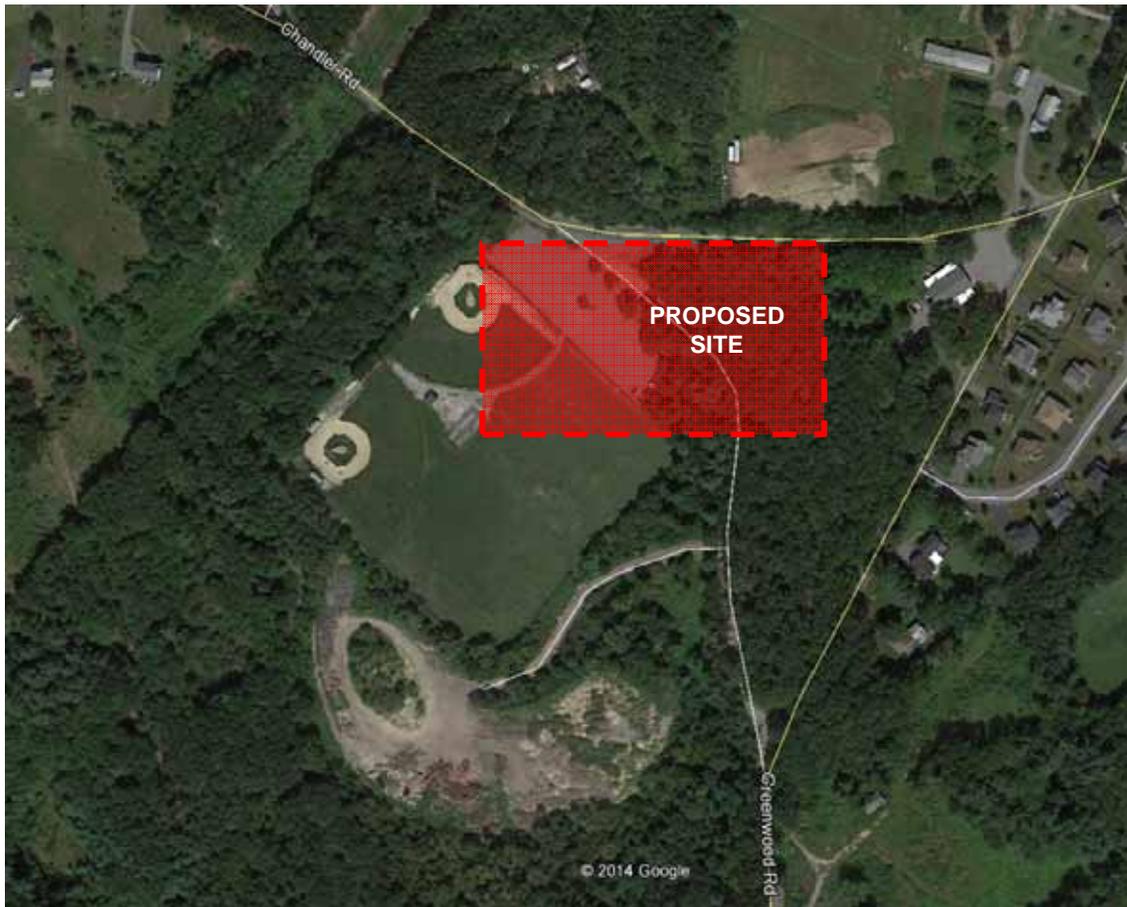


Disadvantages

- Land acquisition required
- Site will not support future growth
- Loss of potential revenue due to inability to promote transit oriented development of Lewis Street site
- Temporary facilities during construction required
- Inefficient operations due to limited size of site

Alternative 5 – Greenwood / Chandler Road Site (West Andover Fire Station Site)

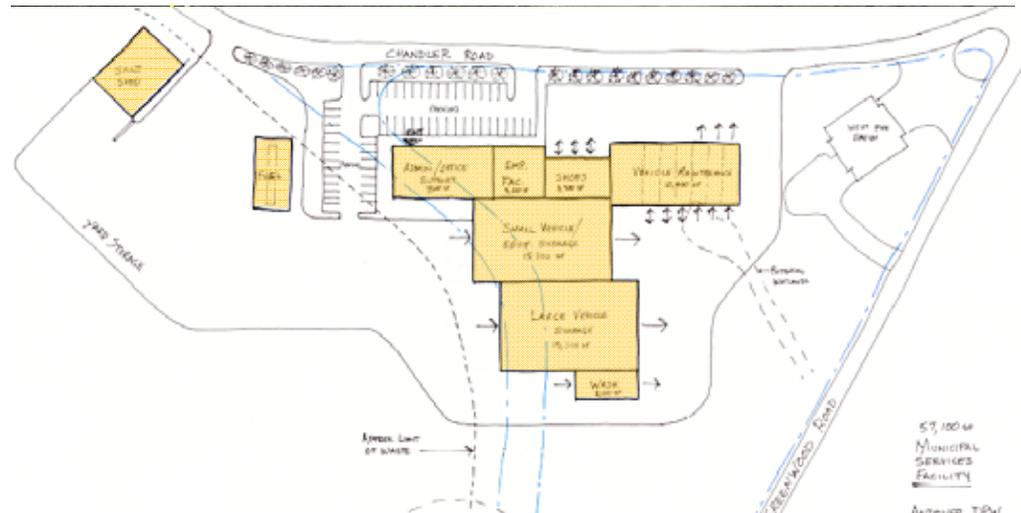
- Construct a new 57,100 SF consolidated pre-engineered metal building on existing vacant land behind West Fire Station



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Alternative 5 – Greenwood / Chandler Road Site (West Andover Fire Station Site)

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ANDOVER MUNICIPAL SERVICES FACILITY

Alternative 5 – Greenwood / Chandler Road Site (West Andover Fire Station Site)

Project Cost Summary

• Building	\$11,090,000
• 57,100 SF	
• Industrial Support Equipment	\$1,486,000
• Site Development Costs	\$2,945,000
• DEP mandated stormwater system, site clearing, excavation, gravel borrow	
• Water supply, electrical, paving, curbing, fencing, gates, etc.	
• Salt Storage Structure	\$335,000
• Design Contingencies	\$1,585,000
• Escalation	<u>\$1,525,000</u>
• 2014 – 2015 at 2.5%	
• 2015 – 2016 at 3.0%	
• 2016 – 2017 at 3.0%	
Subtotal Construction Cost:	\$18,966,000
• Temporary Facilities During Construction	\$0
• Soft Costs & Const. Contingencies	<u>\$4,560,000</u>
• Construction contingency, A&E costs, Permitting/testing	
• Printing costs, Furnishings, Communications	
Subtotal Project Cost:	\$23,526,000
Less Land Value of Lewis Street (2012 appraisal)	<u>-\$3,300,000</u>
Total Project Cost:	\$20,226,000

Alternative 5 - Greenwood / Chandler Road Site

Advantages

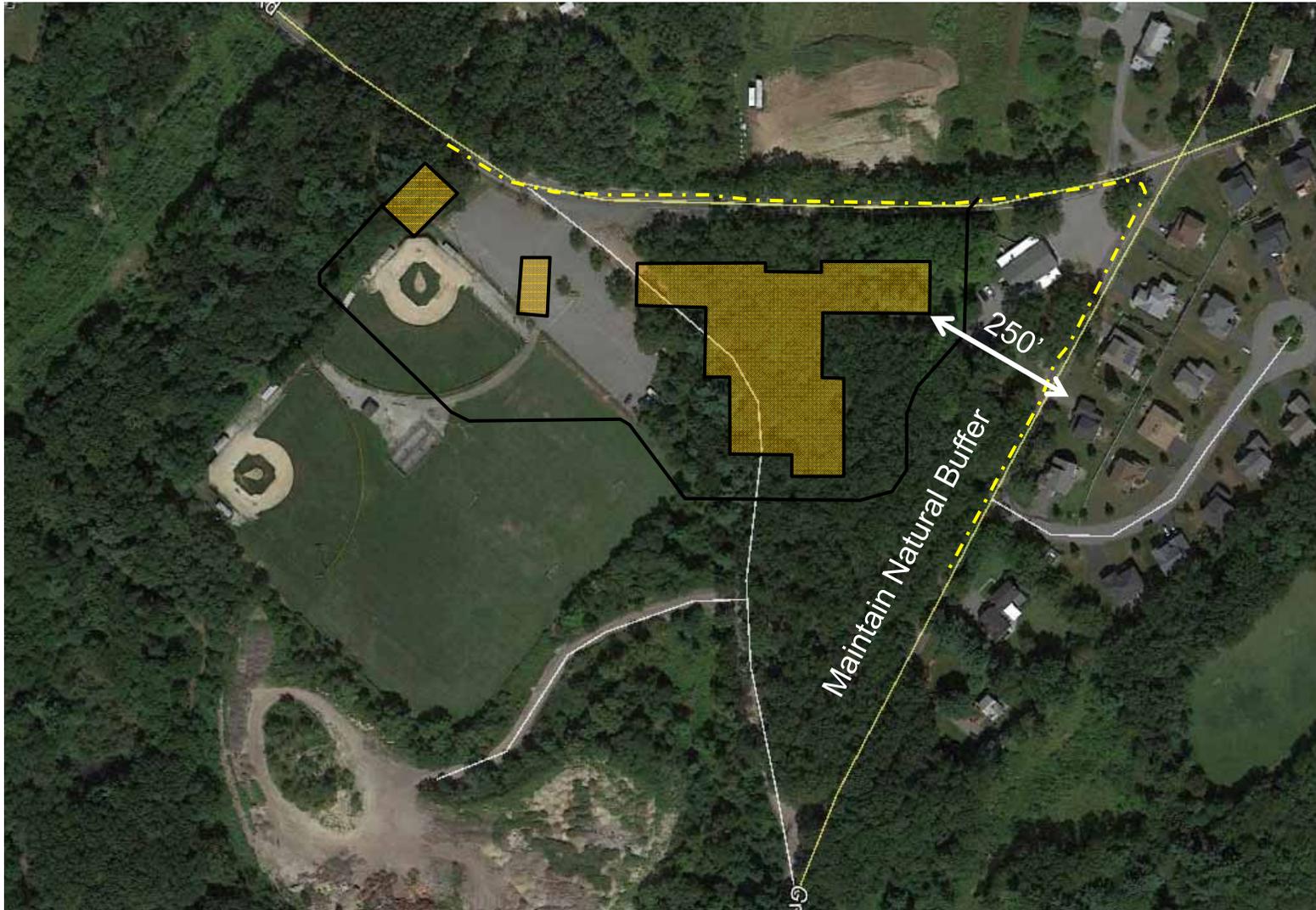
- Meets full Town Yard program needs
- Site can support future growth
- Frees up Lewis Street for transit oriented development
- Frees up space at treatment plant for potential expansion opportunities & allows the facility to become a secure facility (no public access)
- Frees up space in Town Offices for expansion opportunities
- More efficient services associated with consolidation of operations
- No costs needed for temporary operations during construction
- Site can support recycling



Disadvantages

- Higher site development costs
- Not centrally located
- New residential abutters

Alternative 5 – Greenwood / Chandler Road Site (West Andover Fire Station Site)



Town Yard Alternatives Summary

ANDOVER MUNICIPAL SERVICES FACILITY

Alternatives Summary

<u>Description</u>	<u>Size</u>	<u>Construction Cost</u>	<u>Total Project Cost</u>
Andover Alternative 1 (Do Nothing)	n/a	n/a	(maintenance costs & emergency repairs – value unknown)
Andover Alternative 2 (Lewis Street – Replace In-Kind)	21,475 SF	\$9,075,000	\$11,495,000
Andover Alternative 3 (Lewis Street with off-site)	57,100 SF	\$18,330,000	\$22,990,000
Andover Alternative 4 (Lewis Street with purchase of parcels)	57,100 SF	\$17,806,000	\$23,036,000
Andover Alternative 5 (Greenwood/Chandler Road)	57,100 SF	\$18,966,000	\$23,526,000 ((\$20,226,000 w/ sale)

Alternative 5 is the recommended alternative to meet the strategic growth of the Town and provide a facility that will meet the current and future needs of the Municipal Services Department

Alternative 5 – Greenwood / Chandler Road Site (West Andover Fire Station Site) - Phased Construction Consideration

- Construct a new 57,100 SF consolidated pre-engineered metal building on existing vacant land behind West Fire Station in two (2) Phases

PHASE I

14,500 SF

- Construct Vehicle Maintenance Area
- Construct Wash Bay
- Construct Employee Support Spaces
- Site Development (full program)

PHASE II (10 years)

42,600 SF

- Construct Offices/Office Support Area
- Construct Workshops
- Construct Vehicle Storage Area
- Construct Employee Facilities

Cost to construct full program now: \$23,526,000

Cost to Construct Phase I now: \$10,200,000

Cost to Construct Phase II in 10 Years: \$21,200,000

Total Cost of Phased Construction: \$31,400,000

Cost Comparison to Recent Bid Results

Construction Cost Comparison

<u>Description</u>	<u>Bid Date</u>	<u>Size</u>	<u>Avg Cost/SF</u>
• Medford DPW Facility	January 2014	45,000 SF	\$274
• Norwood DPW Facility	February 2014	53,870 SF	\$287
• Andover Alternative 3 (Lewis Street with off-site)	--	57,100 SF	\$321*
• Andover Alternative 4 (Lewis Street with purchase of parcels)	--	57,100 SF	\$312*
• Andover Alternative 5 (Greenwood/Chandler Road)	--	57,100 SF	\$332*

* Estimate escalated to 2017

What are the benefits of new facilities...

Benefits to the Department of Municipal Services and the Community

- Protection of Town's multi-million dollar fleet of vehicles and equipment
- Code compliant and clean work environment for Town employees
- More efficient work space improves response times and productivity
- More efficient centralized maintenance operation for all municipal vehicles
- Consolidation of the Departments will improve efficiency of DPW operations
- Energy efficient and sustainable building components and site features

