

# Ledyard Community Facilities Assessment

Ledyard, Connecticut

May 5, 2011



## SMMA

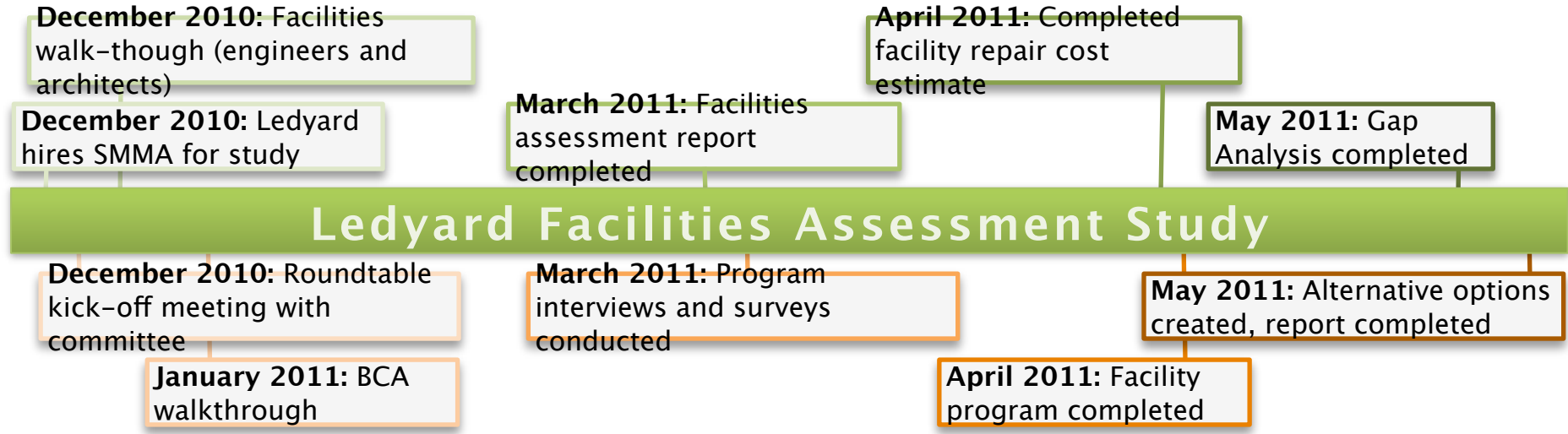
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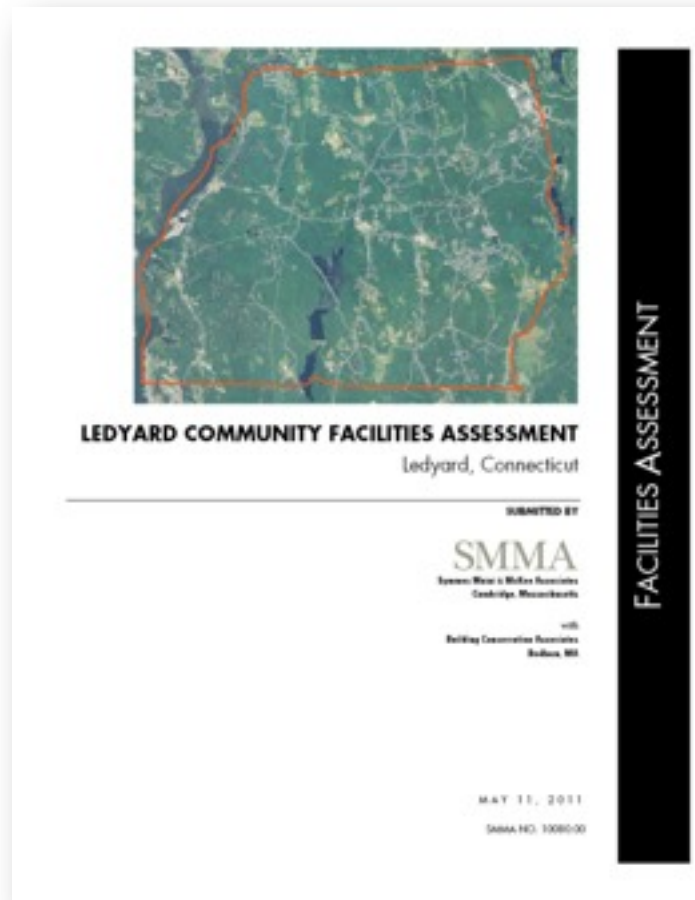


Thursday, July 14, 2011



Ledyard RFQ Scope	Location in SMMA
<b>Part I: Community Facilities Assessment Study</b>	
a. Full condition analysis and on-site inspections for all municipal facilities	Section 4
b. Production or updating of floor plans for buildings	Not included
c. Identifying fire and safety regulation compliance issues and possible solutions	Section 4
d. Written condition analysis of each inspected building	Sections 1,2 and 4
e. Condition analysis cost estimates for all facilities	Section 2
<b>Part II: Future Capital Needs Assessment Plan</b>	
a. Identify specific needs for each building/site in terms of facilities conditions, grade levels, size and location	Section 2
b. Recommend a comprehensive facility utilization plan, which evaluates options for meeting identified facility needs	Section 3
c. Identify issues that are foreseeable beyond the 10-year period covered by the plan	Not included
d. Identify project eligible for State reimbursement or other sources of funding	Not included
<b>Part III: Gap Analysis</b>	
a. Examine current facilities compared with projected needs based on future	Section 2
b. Detailed individual renovation/expansion concepts	Section 3
c. State Dept of Education Program building compliance analysis	Section 2
d. LEED silver recommendations for renovation/new construction	Not included





- 1** EXISTING CONDITIONS
  - 1.1 Community Overview
    - 1.1.1 Facilities Map
    - 1.1.2 Statistics/Demographics
  - 1.2 Facilities Overview
    - 1.2.1 Building Roster
    - 1.2.2 Building Program Interviews
    - 1.2.3 Historic Considerations
- 2** ANALYSIS AND ASSESSMENTS
  - 2.1 Facilities Needs/Issues/Concerns
    - 2.1.1 Repair/Asset Protection Needs
    - 2.1.2 Building Program, Capacity Issues and Gap Analysis
    - 2.1.3 Historic Preservation Concerns
- 3** ALTERNATIVES
  - 3.1 Options for Expansion and Consolidation
- 4** APPENDIX

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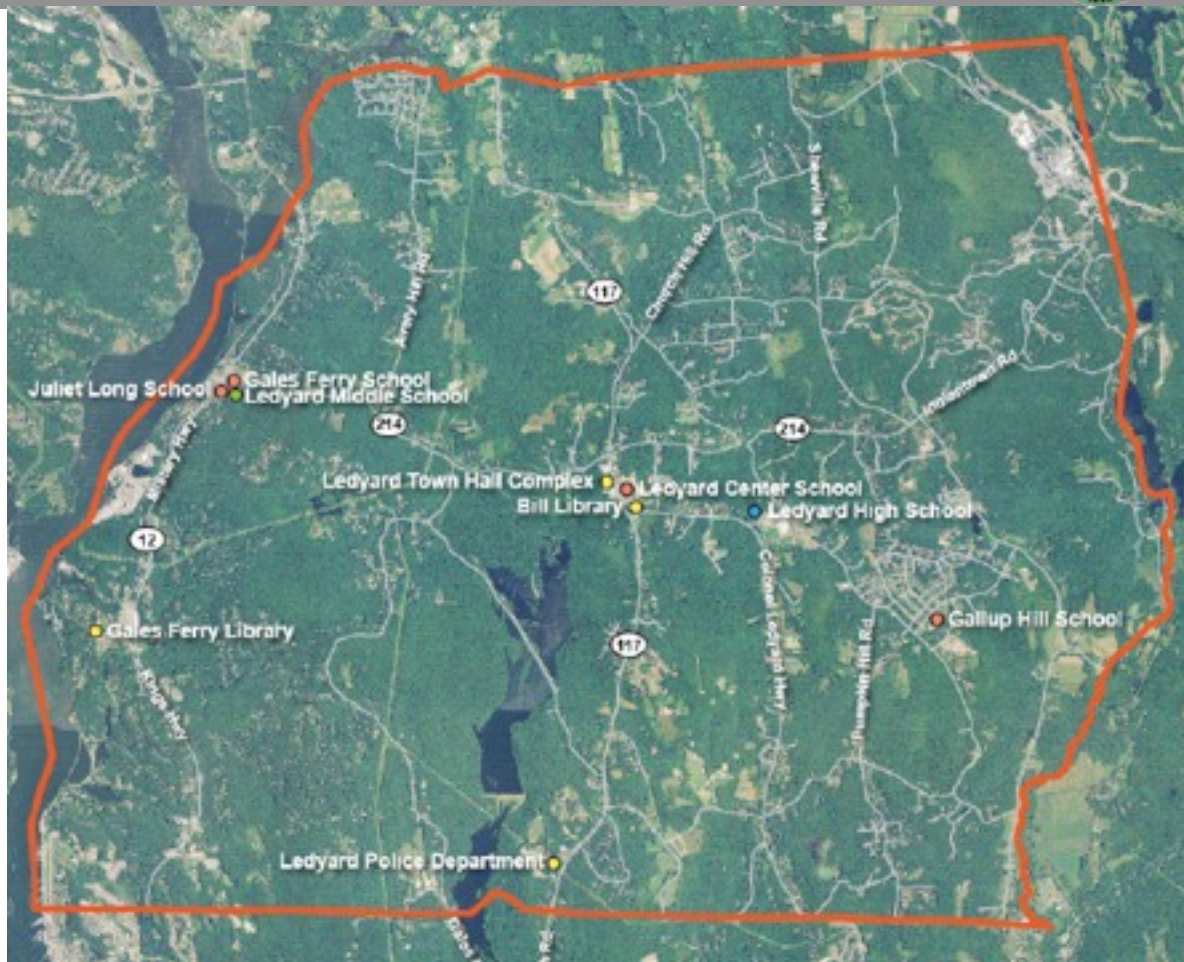
## **Section 1:** Existing Conditions

# Existing Conditions

## Community Overview – Facilities Map



- High School
- Middle School
- Elementary School
- Municipal Building



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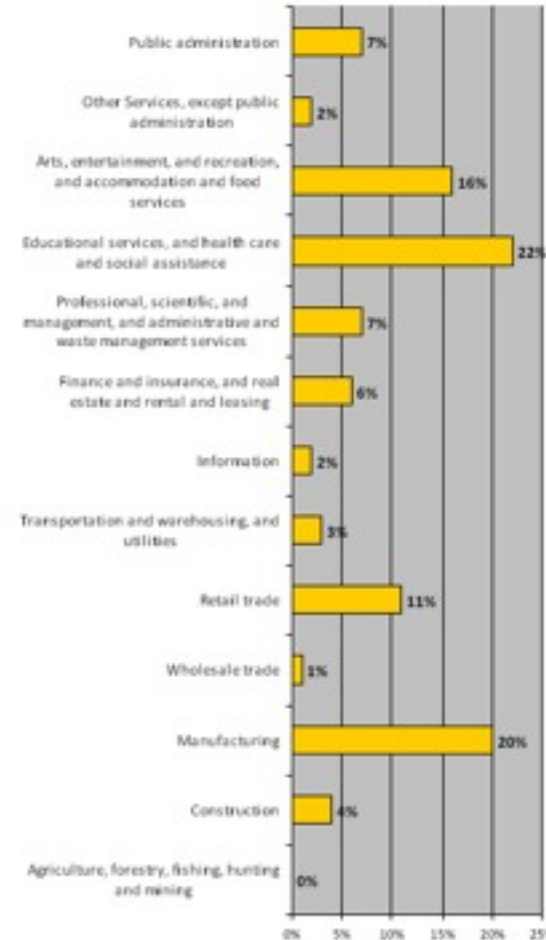
Thursday, July 14, 2011

# Existing Conditions

## Community Overview – Statistics/Demographics



- Estimated population: 15,159
- Leading industry: Educational services, health care and social assistance (22%)
- Most common occupation: Management, professional and related occupations (39%)
- Town population has held steady over last 10 years
- Public school enrollments have gradually declined
- Projected enrollment decrease of 19% over next 20 years



United States  
Census  
2010

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# Existing Conditions

## Community Overview – Statistics/Demographics

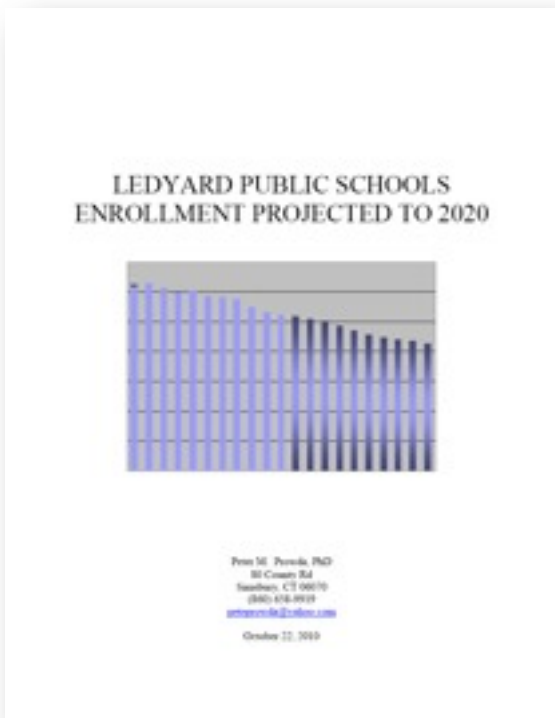
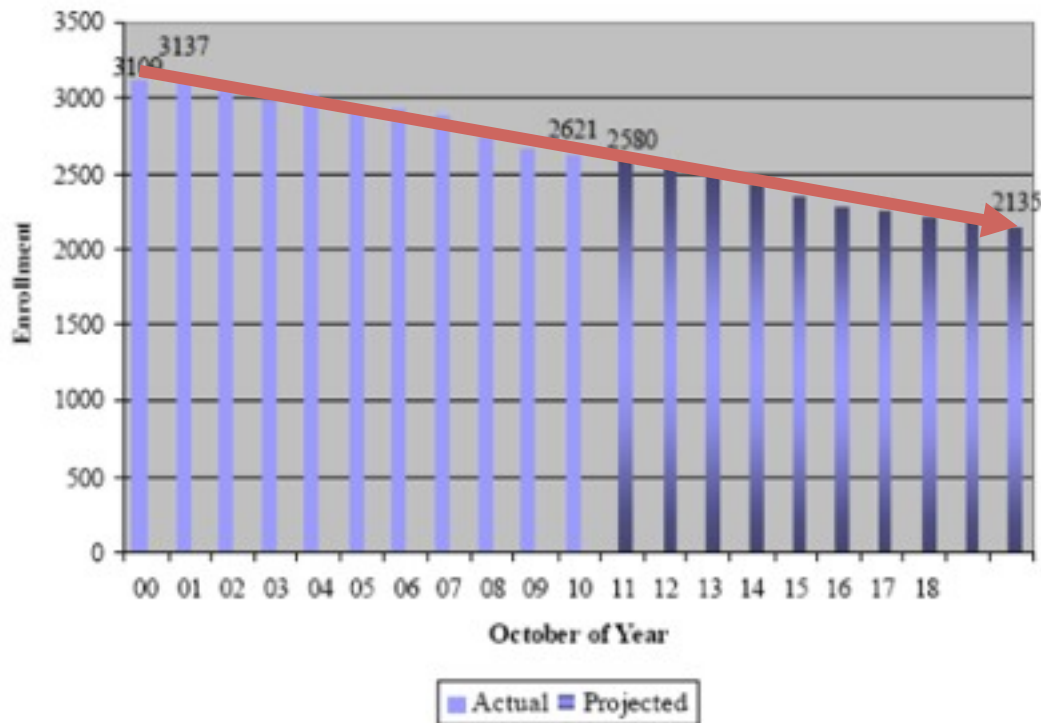


Figure 7. Total Enrollment



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# Existing Conditions

## Facilities Overview – Building Roster



<b>Building</b>	<b>Year Constructed</b>	<b>Gross Square Feet</b>
Gallup Hill School	1965	39,189 GSF
Ledyard High School	1963/2002	191,000 GSF
Ledyard Center School	1948–9	47,420 GSF
Gales Ferry School	2001	23,000 GSF
Juliet Long School	1965	37,600 GSF
Ledyard Middle School	1971	75,600 GSF
Town Hall complex including Annex Building & Former Fire House	1956	14,971 GSF
Police Department	1894 (?)	6,328 GSF
Bill Library	1893	10,858 GSF
Gales Ferry Library	1948	4,178 GSF

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# Existing Conditions

## Facilities Overview - Historic Considerations



Bill Library, 1893



Ledyard Center School, 1949



Ledyard Town Hall, 1956

## Section 2: Analysis and Assessments



- Physical condition
- Historic preservation
- Program accommodation





- Capital upgrades
- Code compliance/ ADA
- Energy efficiency
- ITT upgrades



# Analysis and Assessments

## Repair/Asset Protection Needs



Facility	GSF	Capital Upgrade	Code/ADA	Energy Efficiency	ITT Upgrade	Cost
Gallup Hill School	39,189	\$2,598,150	\$160,252	\$524,332	\$2,055	\$3,284,789
Ledyard High School	191,000	\$7,936,015	\$316,064	\$3,207,303	\$0	\$11,459,382
Ledyard Center School	47,420	\$3,375,280	\$368,125	\$388,772	\$17,541	\$4,149,718
Gales Ferry School	45,362	\$304,042	\$5,953	\$2,030	\$0	\$312,025
Juliet Long School	37,600	\$2,355,285	\$272,153	\$444,918	\$0	\$3,072,355
Ledyard Middle School	75,600	\$4,842,248	\$262,473	\$1,405,127	\$0	\$6,509,849
Town Hall Complex	11,600	\$476,112	\$8,951	\$339,429	\$0	\$824,492
Police Department	6,328	\$235,069	\$21,967	\$86,985	\$6,766	\$350,786
Bill Library	10,858	\$239,386	\$36,976	\$73,360	\$6,766	\$356,487
Gales Ferry Library	3,710	\$206,734	\$22,882	\$1,353	\$0	\$230,969
<b>Total</b>	<b>468,667</b>	<b>\$22,568,321</b>	<b>\$1,475,796</b>	<b>\$6,473,609</b>	<b>\$33,128</b>	<b>\$30,550,854</b>



### Bill Library Recommendations

- Repoint the foundation wall and excavating the earth adjacent to the north turret to allow for the installation of sub-surface waterproofing
- Install snow melting heat cables where the west office wing extension abuts the building wall to prevent damage to wall
- Prepare and paint metal elements (roof vents and stair rail) to prevent further deterioration





### Ledyard Center School Recommendations

- Rebuild area of displaced brick
- Remove, repair and clean cast stone
- Repoint mortar joints
- Remove and replace cracked brick
- Remove deteriorated patches of concrete and repatch
- Scrape, prime and paint steel window lintels
- Clean cast stone areas to remove biological growth
- Remove cracked wood panel below northwest kindergarten classroom window sill and replace with new matching panel
- Replace or scrape, prime and paint rusting vents and other metal elements



### Town Hall Recommendations

- Install a control joint at the cracked corners
- Grout and patch cracks in concrete
- Replaced cracked/spalled brick
- Repaint steel lintels and repoint brick above lintels
- Repair and repaint wood columns
- Replace or repair rusted vent covers
- Replace missing gooseneck



# Existing Conditions

## Facilities Overview – Building Program Interviews



- Hours of operation:
- Programs or curricula that you are unable to deliver?
- Class/department size? (# of students/staff)
- Building deficiencies impeding curriculum?
- Special programs/functions?
- Need for smaller or larger spaces
- Need for private meeting areas?
- Storage needs?

Ledyard Center School  
Mary Jane Payne  
2-14-11

Ledyard Facilities Plan Survey - BOE

Please respond to the questions below with regard to your particular school building.

1. What are the hours of operation for your school for the following:
  - a. Instructional day  
8:30 AM - 3 PM
  - b. Extracurricular Activities  
Wrestling, Soccer, Softball, Volleyball, Water polo, Basketball, Tennis, Golf, Chess, Club, Music, Art, Robotics, etc.  
Public events  
Piano, Rec. parent groups, etc. - after school  
PTO, PTA, etc. events, etc. - before school
2. Are there programs or curricula that you are unable to deliver because of building deficiencies? Please describe.  
Afternoon programs limited by uneven blacktop surface and ruts on track of field.  
Klein not working.
3. What are your typical class sizes? (number of students per class)  
range 17-22 average = 20
4. What about your school building is standing in the way of delivering your desired curriculum?  
fragile infrastructure <sup>always</sup> needs to be considered - heating, electrical, pipe service.



### Educational Facility Gap Analysis

- Lack of cafeteria/food service space at the elementary schools, inadequate at the middle school
- Open classroom layout at middle school
- ADA accessibility
- Inconsistent heating and
- Limited electrical capacity
- Overall lack of storage space

School	Projecte d Enrollme	Existin g GSF	Guideli ne GSF	Surplu s/ Deficit
Gales Ferry ES	182	23,000	22,568	432
Juliet Long ES	253	37,600	35,436	2,164
Gallup Hill ES	272	39,189	36,256	2,933
<b>Ledyard Center ES</b>	<b>416</b>	<b>47,420</b>	<b>53,856</b>	<b>(6,436)</b>
Ledyard MS (7+8 only)	356	75,600	62,656	12,944
<b>Ledyard MS (6-7+8)</b>	<b>523</b>	<b>75,600</b>	<b>88,040</b>	<b>(12,440)</b>
Ledyard HS	794	191,000	143,212	47,788



### Ledyard Police Facility Gap Analysis

- More space needed for lockers, offices, report writing room, training room and kitchen.
- Storage space lacking
- Ledyard Emergency Community Communications Center requires its own space and accessibility.

<b>Program</b>	<b>ASF</b>	<b>GSF</b>
<b>Existing Police Station</b>	4,868	6,328
<b>Guideline Police Station</b>	22,685	29,490
<b>Ledyard Recommendation</b>	6,210	8,073
<b>Space Need (deficit)</b>	<b>(1,342)</b>	<b>(1,745)</b>



### Bill Library Facility Gap Analysis

- Based on the 2006 study
- Adjusted to meet new 2010 standards and population count

Program	NSF	GSF
Existing Space	8,352	10,858
2000 Guideline	15,862	20,620
2010 Guideline	20,453	26,589
<b>Space Need (deficit)</b>	<b>(12,101)</b>	<b>(15,731)</b>



### Town Hall Facility Gap Analysis

- Storage space, including vault, is lacking
- Too many small offices, need larger open spaces
- New department groupings needed to create efficiencies
- More conference and meeting spaces needed
- Some offices insufficiently sized and lack breakout/work space

Program	NSF	GSF
Existing Space	9,107	14,971
Program Guideline	13,851	23,547
Space Need (deficit)	(4,744)	(8,576)

## Section 3: Alternatives



### 1. Ledyard Center School

- a. Renovate existing building with addition
- b. Demolish existing and build new building on site
- c1. Renovate as municipal center, relocate Town Hall and Police and redistrict with an addition at Gallup Hill School
- c2. Renovate as municipal center, relocate Town Hall and Police and build new school on different site

### 2. Town Hall

- a. Demolish Annex and renovate existing main Town Hall building with addition
- b. Build new building on site of former fire station
- c. Relocate to Ledyard Center School with Police (See Options 1c1 and 1c2)

### 3. Police Station

- a. Renovate existing building with addition
- b. Demolish existing and build new building on

### 4. Library

- a. Use plan previously approved by the Town, adjusted to meet 2010 state guidelines.

### 5. Ledyard Middle School

- a1. Renovate existing building with no open classrooms and addition
- a2. Renovate existing building with no open classrooms and 6<sup>th</sup> grade wing and science rooms
- b1. Demolish existing and build new building on site for 7<sup>th</sup> and 8<sup>th</sup> grades only
- b2. Demolish existing and build new building on site for 6<sup>th</sup>, 7<sup>th</sup>, and 8<sup>th</sup> grades

# Alternatives

## Options for Expansion and Consolidation



### Ledyard Center School

**Option 1a: Renovate existing building with addition**

	GSF	Cost
<b>Existing :</b>	47,420	
<b>Demolished :</b>	-	-
<b>Renovated:</b>	47,420	\$7,113,000
<b>New Construction:</b>	6,436	\$1,351,560
<b>Total:</b>	<b>53,856</b>	<b>\$8,464,560</b>



### Ledyard Center School

**Option 1b:** Demolish and build new building on same site

	GSF	Cost
<b>Existing :</b>	47,420	
<b>Demolished :</b>	47,420	\$758,720
<b>Renovated:</b>	–	–
<b>New Construction:</b>	53,856	\$11,309,760
<b>Total:</b>	<b>53,856</b>	<b>\$12,068,480</b>



### Ledyard Center School

**Option 1c1:** Renovate existing building as municipal center and redistrict with addition at Gallup Hill

	GSF	Cost
<b>Existing :</b>	47,420	
<b>Demolished :</b>	-	-
<b>Renovated:</b>	47,420	\$9,484,000
<b>New Construction:</b>	45,403	\$9,534,630
<b>Total:</b>	<b>92,823</b>	<b>\$19,018,630</b>



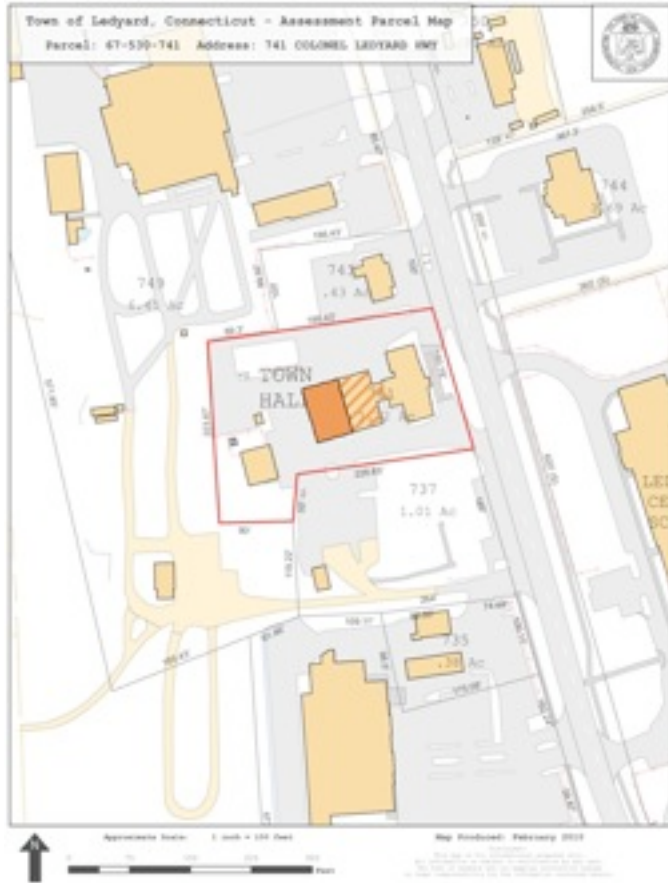
### Ledyard Center School

**Option 1c2:** Renovate as municipal center and build new school on different site

	GSF	Cost
<b>Existing :</b>	47,420	
<b>Demolished :</b>	-	-
<b>Renovated:</b>	47,420	\$9,484,000
<b>New Construction:</b>	53,856	\$11,309,760
<b>Total:</b>	<b>101,276</b>	<b>\$20,793,760</b>

# Alternatives

## Options for Expansion and Consolidation



### Town Hall

**Option 2a:** Renovate existing building with addition

	GSF	Cost
<b>Existing :</b>	14,971	
<b>Demolished :</b>	2,250	\$36,000
<b>Renovated:</b>	12,381	\$2,228,580
<b>New Construction:</b>	11,166	\$2,903,160
<b>Total:</b>	<b>23,547</b>	<b>\$5,167,740</b>

# Alternatives

## Options for Expansion and Consolidation



### Town Hall

**Option 2b:** Build new building on site of former fire station

	GSF	Cost
<b>Existing :</b>	14,971	
<b>Demolished :</b>	14,631	\$234,096
<b>Renovated:</b>	–	–
<b>New Construction:</b>	23,547	\$6,122,220
<b>Total:</b>	<b>23,547</b>	<b>\$6,356,316</b>

# Alternatives

## Options for Expansion and Consolidation



### Town Hall

**Option 2c: Relocate to Ledyard Center School  
(Options 1c1 and 1c2)**

# Alternatives

## Options for Expansion and Consolidation



### Police Station

**Option 3a:** Renovate existing building with addition

	GSF	Cost
<b>Existing:</b>	6,328	
<b>Demolished:</b>	–	–
<b>Renovated:</b>	6,328	\$1,645,280
<b>New Construction:</b>	1,745	\$366,450
<b>Total:</b>	8,073	\$2,011,730



### Police Station

**Option 3b:** Demolish and build new building on site

	GSF	Cost
<b>Existing:</b>	6,328	
<b>Demolished:</b>	6,328	\$101,248
<b>Renovated:</b>	–	–
<b>New Construction:</b>	8,073	\$2,421,900
<b>Total:</b>	<b>8,073</b>	<b>\$2,523,148</b>

# Alternatives

## Options for Expansion and Consolidation

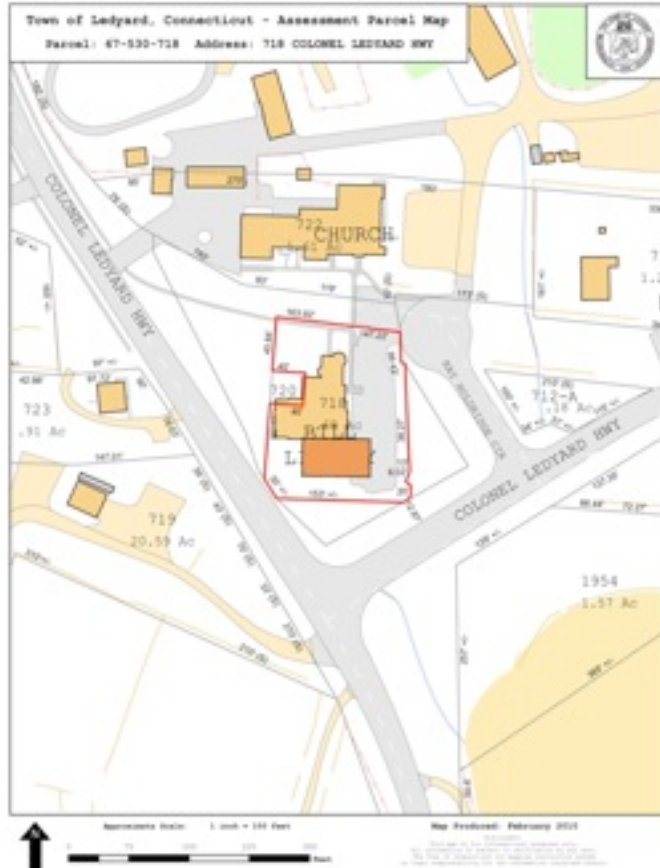


### Police Station

**Option 3c: Relocate to Ledyard Center School  
(Options 1c1 and 1c2)**

# Alternatives

## Options for Expansion and Consolidation



### Bill Library

**Option 4a:** Use plan previously approved by the town, adjusted to meet 2010 state guidelines

	GSF	Cost
<b>Existing:</b>	10,858	
<b>Demolished:</b>	-	-
<b>Renovated:</b>	10,858	\$1,628,700
<b>New Construction:</b>	15,731	\$4,719,300
<b>Total:</b>	<b>26,589</b>	<b>\$6,348,000</b>



### Ledyard Middle School

**Option 5a1:** Renovate existing building with no open classrooms and addition

	GSF	Cost
<b>Existing:</b>	75,600	
<b>Demolished:</b>	–	–
<b>Renovated:</b>	75,600	\$13,608,000
<b>New Construction:</b>	21,500	\$5,590,000
<b>Total:</b>	<b>97,100</b>	<b>\$19,198,000</b>



### Ledyard Middle School

**Option 5a2:** Renovate existing building with no open classrooms, add 6<sup>th</sup> grade wing and science rooms

	GSF	Cost
<b>Existing:</b>	75,600	
<b>Demolished:</b>	-	-
<b>Renovated:</b>	75,600	\$13,608,000
<b>New Construction:</b>	33,500	\$8,710,000
<b>Total:</b>	<b>109,100</b>	<b>\$22,318,000</b>

# Alternatives

## Options for Expansion and Consolidation



**Ledyard Middle School**  
**Option 5b1:** Build new building on site – 7<sup>th</sup> and 8<sup>th</sup> grades only

	GSF	Cost
<b>Existing:</b>	75,600	
<b>Demolished:</b>	75,600	\$1,209,600
<b>Renovated:</b>	–	–
<b>New Construction:</b>	75,600	\$19,656,000
<b>Total:</b>	<b>75,600</b>	<b>\$20,865,600</b>

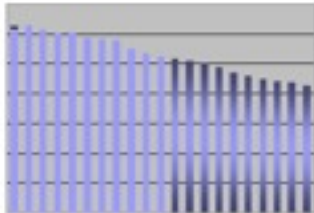
**Ledyard Middle School**  
**Option 5b2:** New building on site – 6<sup>th</sup>, 7<sup>th</sup> and 8<sup>th</sup> grades

	GSF	Cost
<b>Existing:</b>	75,600	
<b>Demolished:</b>	75,600	\$1,209,600
<b>Renovated:</b>	–	–
<b>New Construction:</b>	88,040	\$22,890,400
<b>Total:</b>	<b>88,040</b>	<b>\$24,100,000</b>

## Section 4: Appendix



## LEDYARD PUBLIC SCHOOLS ENROLLMENT PROJECTED TO 2020



Peter G. Brown, PhD  
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[pbrown@ledyard.k12.ct.us](mailto:pbrown@ledyard.k12.ct.us)

October 22, 2010

## NEDALUS Ledyard, CT Facilities Master Plan

April 27, 2011

Feasibility Study



Design Architect:  
SMDA  
400 Westchester Street  
Pomfret, VT 05061  
(802) 451-0447

Client/Estimatee:  
Dwight Project Incorporated  
111 South Street  
Barnes, MA 02111  
(617) 401-2717

## BUILDING EVALUATION REPORT

GENERAL INFORMATION  
Project Name: **GALOP HILL SCHOOL**  
Address: **100 Spring Hill Road  
Ledyard Center, Connecticut 06248**

Project #/Owner: **NA / Jenette Spivey**  
Grade Levels Served: **PK-4**  
Student Population: **200**  
Year in Service: **47**  
Year Constructed: **1964**      Designer:  
Additions:      Designer:  
Existing Structure:      Designer:  
Class Square Feet: **80,000**



DATE OF BUILDING SURVEY:  
04/20/11 10:00 AM



### State Standard Specifications

Proposed Circulation	Year 2000	1	2	3	4	5	6	7	8	9	10	11	12
1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000
5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000
6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000
7000	7000	7000	7000	7000	7000	7000	7000	7000	7000	7000	7000	7000	7000
8000	8000	8000	8000	8000	8000	8000	8000	8000	8000	8000	8000	8000	8000
9000	9000	9000	9000	9000	9000	9000	9000	9000	9000	9000	9000	9000	9000
10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000



### Library Space Planning Guide Worksheet

**Step 1. Establish Service Population**

a. 2010 local population:

b. Projected local population for 2030 from the CT Population Projection by Connecticut State Data Center at University of Connecticut:

c. Projected nonresident population to be served:  
 (nonresident circulation transactions) / (type 1 if not known) = total circulation transactions  
 X projected local population  =

d. Service population:

### Step 2A. Collection Size

a. Books:

Type in your service projected population (Steps 1) left of your population range	Population ranges	Core	Basic	Basic	Growing	Growing
Less than 7,000		2,000	3			7
7,001 - 8,499		4,000	3			3
8,500 - 9,999		6,000	1.75		2.75	
10,000 - 11,999		8,000	1.25		3.1	
12,000 - 14,999		10,000	0.8			
15,000 - 24,999		16,000	0.6	14,850		67,840
25,000 - 49,999		20,000	0.5			
50,000 - 74,999		100,000	0.3			
75,000 - 99,999		150,000	0.4			
Over 100,000		220,000	0.4			

1) Minimum volumes, as stated in the chart<sup>1</sup> above using the population served:  (type in either basic or growing number from chart on the next page)

2) (Average net additions  X 30 years =  + (existing collections  ) =

Description	Space Req'd	Existing SF	Deficit/ Surplus
<b>Executive Group</b>	<b>5,375</b>	<b>3,450</b>	<b>(1,925)</b>
Mayor	440	377	-72
Finance	384	347	-37
MG	344	341	-3
Tax Assessor	344	630	286
Tax Collector	344	432	88
Treasurer/Town Council	1,544	1323	-221
Shared/General Space	2,356		-2356
<b>Community Development Group</b>	<b>3,300</b>	<b>1,246</b>	<b>(1,854)</b>
Building & Zoning	688	612	-76
DPW	264	200	-64
Planning	428	319	-109
Wetlands	228	115	-109
Shared/General Space	1,500		-1500
<b>Service Group</b>	<b>5176</b>	<b>3299</b>	<b>-1877</b>
Administration		294	294
Human Resources	344	176	-168
Register of Voters	464	125	-339
Social Services	664	1,030	366
Town Clerk	1,340	342	-998
Visiting Nurses Assoc.	664	932	268
Shared/General Space	1,300		-1300
<b>Net Grand Total</b>			<b>13,851</b>
<b>Calculated GSF (at factor of 1.7)</b>			<b>23,547</b>
<b>Existing GSF<sup>2</sup></b>			<b>14,971</b>
<b>Needed Additional GSF (= Calculated - Existing)</b>			<b>8,576</b>
<b>New Building Recommended GSF</b>			<b>23,547</b>
<b>Building Addition Recommended GSF</b>			<b>11,165</b>
<b>Additional GSF (Storage)</b>			<b>4,300</b>
Fire House			4,300
DPW Garage			

<sup>2</sup>Includes main Town Hall Building (12,982 SF), Annex (2,250 SF) and DPW office in Garage (340 SF).

Preferred Program Detail

# Ledyard Community Facilities Assessment

Ledyard, Connecticut

May 5, 2011



## SMMA

SYMMES MAINI & MCKEE ASSOCIATES



Thursday, July 14, 2011

# Alternatives

## Options for Expansion and Consolidation



No.	Building	Description	Cost – “Bricks and Sticks”
1a	Ledyard Center	Renovate existing building with addition	\$8,464,560
1b	Ledyard Center	Demolish and build new school on site	\$12,068,480
1c1	Ledyard Center ES	Renovate as municipal center, redistrict and build addition at Gallup Hill	\$19,018,630
1c2	Ledyard Center	Renovate as municipal center, build new school on	\$20,793,760
2a	Town Hall	Renovate existing building with addition	\$5,167,740
2b	Town Hall	New building behind former fire station	\$6,356,316
2c	Town Hall	Relocated to Ledyard Center School with Police Dept.	
3a	Police Station	Addition to existing building	\$2,011,730
3b	Police Station	New building on site	\$2,523,148
3c	Police Station	Relocated to Ledyard Center School with Town Hall	
4a	Bill Library	Use previous Library plan, adjust for 2011 space	\$6,348,000
5a1	Ledyard MS	Renovate existing building and addition	\$19,198,000
5a2	Ledyard MS	Renovate existing building, add 6th grade wing and	\$22,318,000
5b1	Ledyard MS	New building on site – 7th and 8th grades only	\$20,865,600
5b2	Ledyard MS	New building on site – 6th, 7th and 8th grades	\$24,100,000