Town of Amherst Impact Fees

2020 Basis of Assessment and Fee Schedules

- Public Schools
- Police
- Fire-Rescue
- Recreation
- Town Roads

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A. Executive Summary

The Town of Amherst commissioned this study to develop a series of impact fee schedules for public capital facilities with supporting documentation that defines a proportionate basis for their assessment. The scope of this analysis comprises an update of a prior impact fee report for Amherst completed by BCM Planning in 2011. At that time, the Town did not elect to adopt the impact fee schedules supported in the original study.

The 2011 report relied principally on data compiled in 2010. The Town is now reconsidering the adoption of impact fees, and it was necessary to review and update the original fee calculations (now 10 years old) to reflect current conditions. Fees supportable under the models and assumptions of this 2020 analysis are summarized below:

SUMMARY OF AMHERST IMPACT FEE OPTIONS 2020

Structure Type or Land Use (1)	Town Facilities					School Facilities (3)		Total Town and School	
	Police	Fire (2)	Recreation	Town Roads	Total For Selected Town Facilities	School Facilities K-12 @ DOE Allowable Cost	School Facilities K-8 Only @ DOE Allowable Cost	With K-12 Schools	With K-8 Schools Only
Residential Per Unit (A)	***Proportionate to Avg Living Area***								
Single Detached	$444	$1,308	$631	$974	$3,357	$5,789	$4,005	$9,146	$7,362
Townhouse / Attached	$252	$744	$359	$599	$1,954	$3,146	$2,012	$5,100	$3,966
Two Family Structure	$264	$777	$375	$755	$2,171	$4,755	$2,684	$6,926	$4,855
Multifamily Structure	$214	$632	$305	$561	$1,712	$3,253	$2,312	$4,965	$4,024
Manufactured Housing	$197	$582	$280	$516	$1,575	$3,564	$2,437	$5,139	$4,012
Residential Per Unit (B)	***Proportionate to Household Size***								
Single Detached	$429	$1,292	$709	$974	$3,404	$5,789	$4,005	$9,193	$7,409
Townhouse / Attached	$317	$954	$523	$599	$2,393	$3,146	$2,012	$5,539	$4,405
Two Family Structure	$280	$843	$462	$755	$2,340	$4,755	$2,684	$7,095	$5,024
Multifamily Structure	$280	$843	$462	$561	$2,146	$3,253	$2,312	$5,399	$4,458
Manufactured Housing	$339	$1,019	$559	$516	$2,433	$3,564	$2,437	$5,997	$4,870
Residential Per Sq. Ft. of Living Area									
Single Detached	$0.19	$0.56	$0.27	$0.42	$1.44	$2.32	$1.54	$3.76	$2.98
Townhouse / Attached	$0.19	$0.56	$0.27	$0.45	$1.47	$2.20	$1.34	$3.67	$2.81
Two Family Structure	$0.19	$0.56	$0.27	$0.54	$1.56	$3.22	$1.73	$4.78	$3.29
Multifamily Structure	$0.19	$0.56	$0.27	$0.50	$1.52	$2.75	$1.92	$4.27	$3.44
Manufactured Housing	$0.19	$0.56	$0.27	$0.50	$1.52	$3.07	$2.09	$4.59	$3.61
Commercial Development Impact Fees Per Sq. Ft.									
Retail	$0.30	$0.59	---	$0.98	$1.87	---	---	$1.87	$1.87
Office	$0.17	$0.78	---	$0.50	$1.45	---	---	$1.45	$1.45
Industrial	$0.06	$0.20	---	$0.18	$0.44	---	---	$0.44	$0.44
Institutional & Other	$0.03	$0.20	---	$0.64	$0.87	---	---	$0.87	$0.87

(1) For accessory apartments, it is recommended that the fees be assessed using the single family rates per square foot applied to the net increase in living area at the site.

*(2) The Fire-Rescue impact fee for **age-restricted housing units** may be assessed at 1.5 times the standard residential rate per unit or per square foot.*

*(3) School impact fees are not applicable to qualified **age-restricted housing units** subject to covenants that restrict occupancy to seniors age 55+ or age 62+*

Upon review of the assumptions and conditions supporting the fee schedule, the Town may choose to adopt all or some of the impact fees. For police, fire, and recreation categories, standard residential fees per housing unit are shown as (A) proportionate to the average living area of housing units and (B) proportionate to average household size by structure type.

A fee schedule for residential uses is also shown that would be assessed per square foot of living area by structure type. Under this approach, the amount of the fee would vary according to the unit sizes proposed for the particular development. Impact fees for commercial uses are computed per square foot of finished floor area.

If the Town decides to assess its residential impact fees per square foot of living area, it is recommended that the maximum living area subject to assessment be capped at 3,000 square feet. This recommendation is based on our analysis of the principal residential impact fee component (schools), and the relationship of enrollment ratios to home size in Amherst.

Impact fees should be updated periodically to maintain proportionate assessments. Updates provide an opportunity to adjust assumptions relating to costs, demographics and growth assumptions that will maintain a proportionate basis of assessment.

B. Impact Fee Principles

1. Conditions for Impact Fee Assessment

In New Hampshire, impact fees may be assessed to pay for a portion of the cost of specific categories of public capital facilities. The amounts assessed must be proportionate to reasonable estimates of the demand placed on the capacity of those facilities by new development.

Where a municipality has already invested in capital facilities that have adequate capacity to serve the needs of new development, an impact fee may be assessed to recoup the cost of that capacity. If there is no surplus capacity available, impact fees may be based on the anticipated investment in capital facilities that will be needed to meet the demands of new development using facility standards that are defined in the assessment methodology.

The most important part of an impact fee assessment is the determination of a proportionate cost based on reasonable standards (demand per unit of development) for various capital facilities. Impact fees may not be used simply to repair existing facilities. The fee basis should reasonably reflect a level of capital investment that is commensurate with providing adequate facility capacity at a given service standard.

2. Impact Fee Assessment, Collection, and Retention

The *assessment* of an impact fee will normally take place at the subdivision or site plan approval stage of development. "Assessment" constitutes the assignment of a dollar amount to each unit or square foot of new development. The actual *collection* of the impact takes place at the time a certificate of occupancy is issued. This practice allows the developer to anticipate the amount of the fee, but to pay it at the time that the development is actually completed.

Once collected, impact fees can be held for a period of up to six years, at which point they must either be appropriated for the use for which they were initially assessed, or refunded. Under the Amherst zoning provisions, an impact fee refund will be made to the owner of the property. Impact fees may also be applied to debt service for related capital facilities, which reduces the capital cost impact on the tax rate.

The revenue received from impact fee assessment is a function of the pace of new construction. When the development pace is slow, impact fee generation will be minimal. But during stronger economic periods, the revenue stream will increase in proportion to activity in the issuance of certificates of occupancy. When more rapid periods of growth occur, the Town can capture those revenues when occupancy occurs and begins to place demand on public services and facilities.

3. Units of Assessment

Impact fee assessments are most commonly applied to residential development using a schedule of fees per housing unit by structure type, with fees for commercial development assessed per square foot.

However, a number of communities are now assessing residential fees based on living area, which allows residential assessments to vary with the size of the dwelling unit. Assessments per square foot of living area are also viewed as a preferred method with respect to effects on affordable housing development cost, allowing more modest size homes to pay lower fees.

C. Proportionate Demand Measures

Impact fee assessments for facilities such as libraries, recreation, and public schools are typically attributed solely to the needs of residential development. Impacts on other public facilities such as roads and public safety are generated by both residential and commercial uses. This section reviews a number of proportionate demand measures based on population, housing units, jobs within local industries, floor area of buildings, assessed valuation by land use, calls for public safety services by property type, and enrollment ratios by type of housing.

1. Residential Development Trend

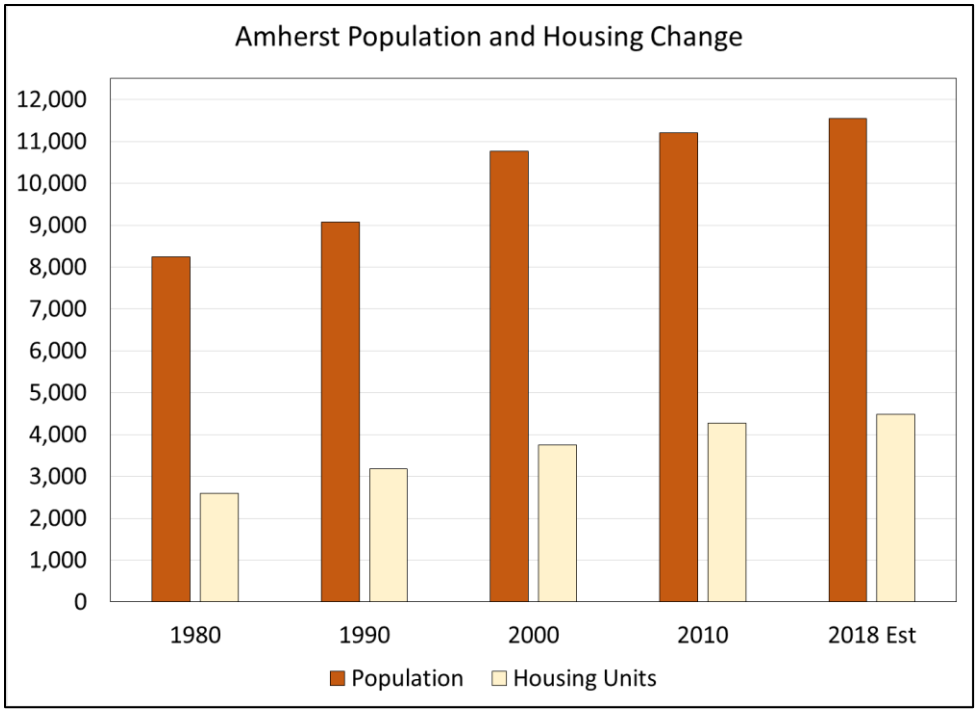
As of the most recent estimates (2018), Amherst had a population of 11,345 and 4,483 housing units. Average household size is estimated at 2.71 persons for occupied housing units. The school age population averages about 0.546 children age 5-17 per household, while actual enrollment estimated for 2018 is lower at about 0.44 pupils per household.

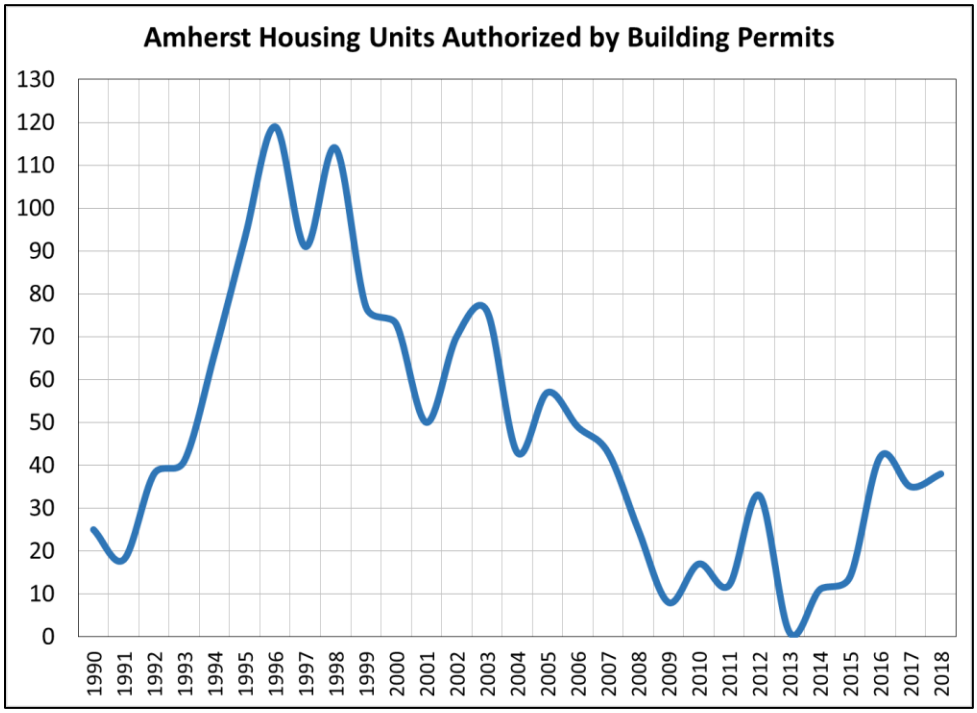
AMHERST, NEW HAMPSHIRE DEMOGRAPHIC HISTORY							
Demographic Factor	**1970**	**1980**	**1990**	**2000**	**2010**	***2018 ACS 5-Yr Sample***	***BCM Planning Est. 2018 ****
Population	4,605	8,243	9,068	10,769	11,201	*11,310*	*11,545*
In Group Quarters	0	0	0	0	0	*0*	*0*
In Households	4,605	8,243	9,068	10,769	11,201	*11,310*	*11,545*
Households	1,327	2,446	2,988	3,590	4,063	*4,012*	*4,256*
Average Household Size	3.47	3.37	3.03	3.00	2.76	*2.82*	*2.71*
Total Population Under 18	1,870	3,066	2,610	3,410	2,917	*2,810*	*2,868*
% of Total Population	40.6%	37.2%	28.8%	31.7%	26.0%	*24.8%*	*24.8%*
Per Household	1.409	1.253	0.873	0.950	0.718	*0.700*	*0.674*
School Age Population (5-17)	1,368	2,509	2,002	2,746	2,365	*2,267*	*2325*
% of Total Population	29.7%	30.4%	22.1%	25.5%	21.1%	*20.0%*	*20.1%*
Per Household	1.031	1.026	0.670	0.765	0.582	*0.565*	*0.546*
Per Householder < Age 55	n.c.	n.c.	0.912	1.103	1.053	*1.164*	*1.125*
Resident Public School Pupils (ADM)	n.a.	2,113	1,616	2,473	2,131	*1,891*	*1,874*
Per Household	n.a.	0.864	0.541	0.689	0.524	*0.471*	*0.440*
Per Householder < Age 55	n.a.	n.a.	0.736	0.993	0.949	*0.971*	*0.907*
Householders < Age 55	n.a.	n.a.	2,195	2490	2,246	*1,948*	*2,066*
Householders 55 or Older	n.a.	n.a.	793	1,100	1,817	*2,064*	*2,190*
Householders < Age 55 % of Total	n.a.	n.a.	73.5%	69.4%	55.3%	*48.6%*	*48.5%*
Householders Age 55+ % of Total	n.a.	n.a.	26.5%	30.6%	44.7%	*51.4%*	*51.5%*
Total Housing Units	1,635	2,594	3,179	3,752	4,280	*4,209*	*4,483*
Vacant and Seasonal Units	308	148	191	162	217	*197*	*210*
Vacant/Seasonal as % of Total	18.8%	5.7%	6.0%	4.3%	5.1%	*4.7%*	*4.7%*

Enrollment based on ADM (average daily membership) shown is based on data for Fall count for the applicable academic year

** Estimates based on proportionate adjustments of 2018 baseline from NHOSI population and total housing unit estimates.*

Average public school enrollment per housing unit was researched in detail by BCM Planning to document school enrollment ratios by age of unit, number of bedrooms, and living area. This detailed analysis is included in the school impact fee section of this report.


Amherst Population and Housing Change
12,000
11,000
10,000
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
1980
1990
2000
2010
2018 Est
Population
Housing Units


Amherst Housing Units Authorized by Building Permits
130
120
110
100
90
80
70
60
50
40
30
20
10
0
1990
1991
1992
1993
1994
1995
1996
1997
1998
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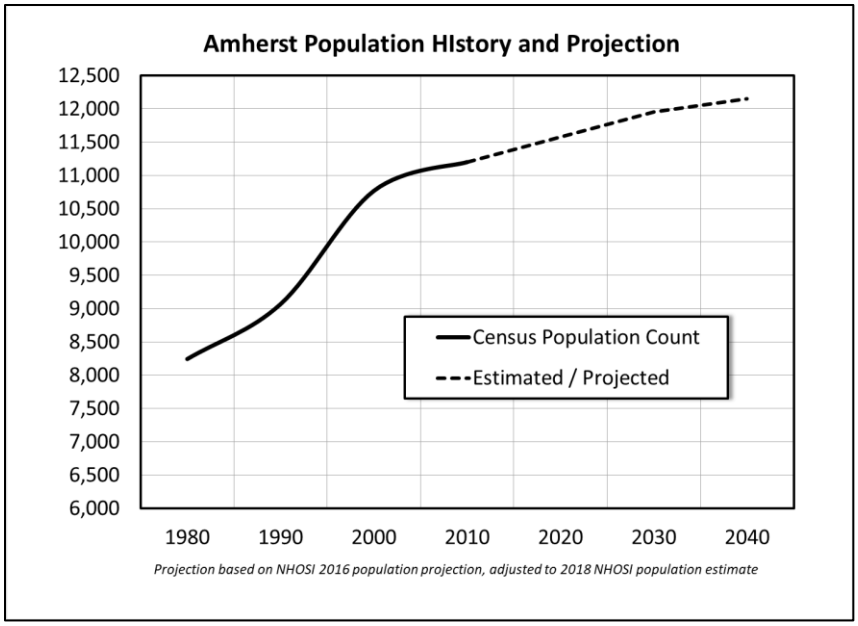


The most recent population projections issued by NH Office of Strategic Initiatives (NHOSI) were prepared in 2016. Interpolation of these projections compared to 2018 population estimates suggest that actual population may be 1.8% higher than the projection would indicate. The population projections shown here adjust the 2016 projections for Amherst upward by that percentage, indicating a 2040 projected population of 12,147.

The projection of housing shown below is based on net growth averaging 27 housing units per year from 2018 to 2040 when the number of housing units would reach buildout indicated by a 2005 estimate from the Nashua Regional Planning Commission. The number of households is derived by holding the ratio of households to total housing units constant. Population divided by households then indicates the forecast of future average household size.

Residential Development Assumptions for Impact Fees

Year	Households	Average Household Size (1)	Persons in Households (Total Population)	Total Housing Units
1970	1,327	3.47	4,605	1,635
1980	2,446	3.37	8,243	2,594
1990	2,988	3.03	9,068	3,179
2000	3,590	3.00	10,769	3,752
2010	4,063	2.76	11,201	4,280
2018 NHOSI*	4,256	2.71	***11,545***	***4,483***
2020	4,307	2.69	11,580	4,537
2030	4,563	2.62	11,956	4,807
2040	4,818	2.52	12,147	5,075

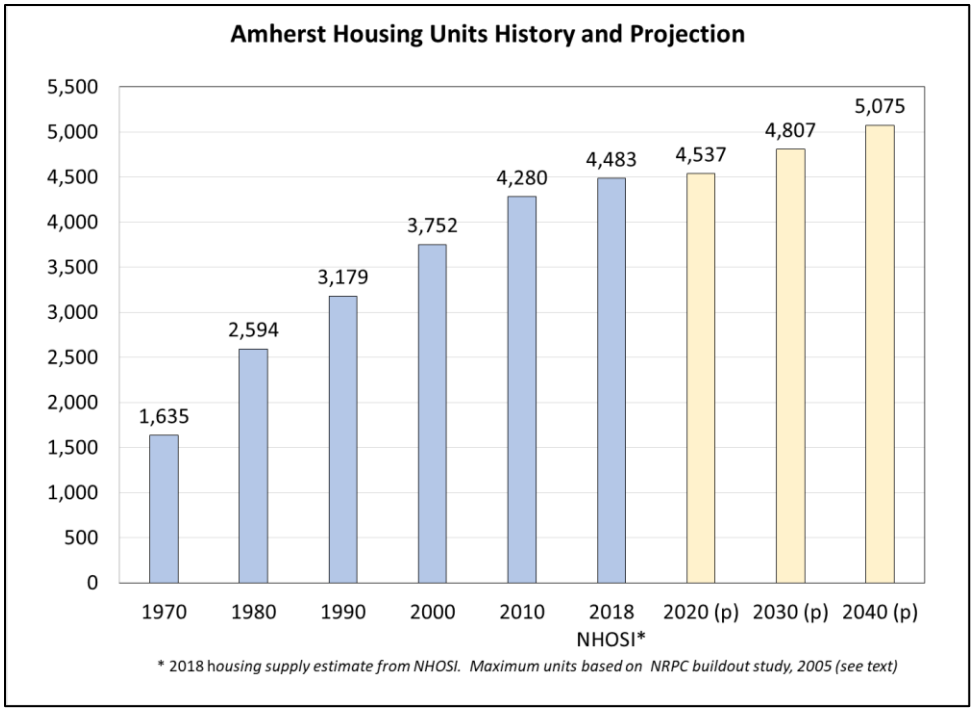
Housing assumed to increase at an average of 27 per year to reach projected buildout estimate by 2040.

Net Change in Housing Units

Period	Total	Avg Annual
1990-2000	573	57
2000-2010	528	53
2010-2018	203	20

Source: Derived from U.S. Census 1990-2010 and 2018 housing stock estimates by NHOSI

Buildout is difficult to predict, as changes in zoning and in the types and densities of future housing take place, or as mitigation is used to increase the supply of developable land.



Using this above estimates the 2040 projection is capped at 5,075 housing units, which is consistent with the number of units forecast by a 2005 buildout study by the Nashua Regional Planning Commission. [1]

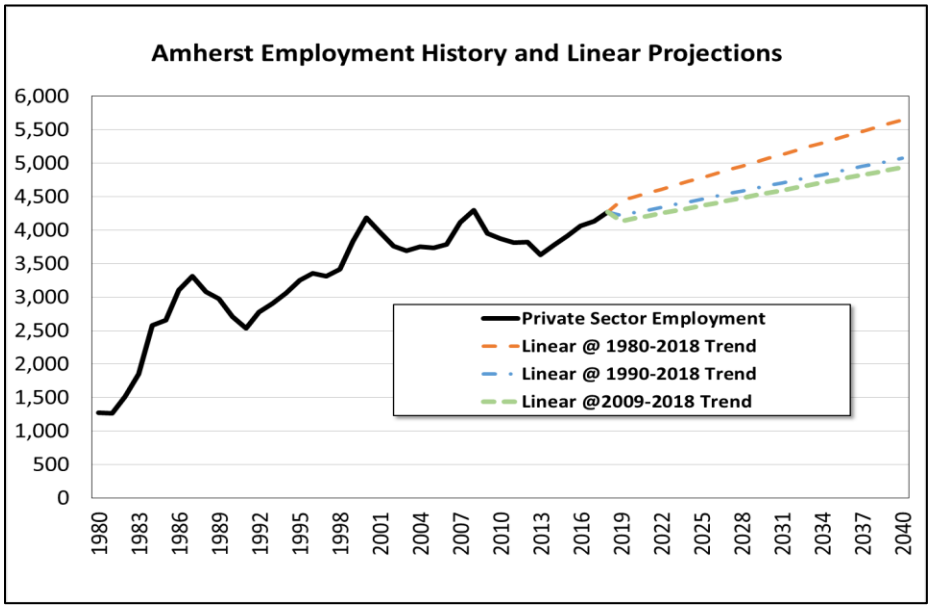
2. Employment and Commercial Development Trend

There are several proportionate measures that can be used to estimate residential vs. commercial demand on services and capital facilities: These include: resident population vs. number of jobs in the Town; floor area of residential and commercial buildings, and actual calls for service (Police and Fire-Rescue) by land use category.

a. Private Sector Employment

In 2018, annual private sector employment within Amherst totaled 4,269 jobs. Linear projections based on past trends would project a 2040 job base of up to 5,650 employed in the town based on the long term trend from 1980-2018. Based on slower average growth periods (1990-2018 and 2009-2018), the 2040 linear projections indicate a potential for 4,940 to 5,070 local jobs.

[1] In the NRPC buildout study, potential for an additional 1,054 housing units was forecast. The base year count of housing units (2003) was cited at 3,804 based on NH Office of State Planning estimates. This figure appears to have represented households rather than housing units, as the actual 2003 count by NHOSP was 4,021 housing units in Amherst in 2003. This number, plus 1,054 new units equals 5,075 dwelling units, which is used in this report as an estimate of the 2040 housing inventory.



b. Floor Area of Commercial Buildings

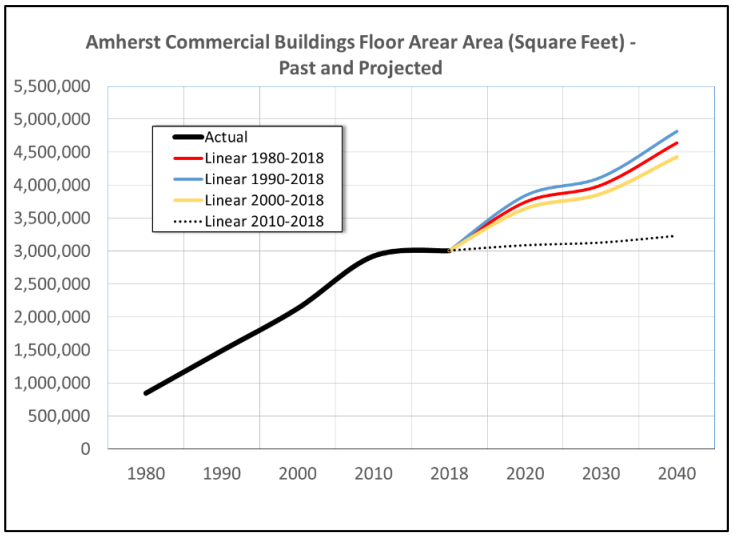
From Amherst tax assessment data we estimate that the floor area of commercial uses in Amherst totals just over 3 million square feet. (This excludes publicly owned buildings). Between 1990 and 2010, the Town gained about 1.44 million square feet of commercial space, or an average of 72,000 square feet per year over that 20 year period. From 2010 to 2018, the average annual change was only about 10,000 square feet per year.

Change in Commercial Floor Area

Period	Change During Period	Average Annual
1970-1980	588,092	58,809
1980-1990	643,457	64,346
1990-2000	640,919	64,092
2000-2010	793,794	79,379
2010-2018	81,753	10,219

Source: BCM Planning, LLC analysis of Amherst tax assessment data on floor area and "actual year built"

A continuation of long-term changes based on this history indicates that the year 2040 commercial base should comprise at least 4.4 to 4.8 million square feet of floor area provided that available land and zoning will accommodate such growth. Should the rate of growth remain slow (along the 2010-2018 curve), the 2040 total would reach only 3.23 million square feet.



As of 2018 total commercial floor area represented an average of 705 square feet per private sector job in Amherst.

Relationship Between Residential and Commercial Uses in Amherst 1990-2018

Year	Private Sector Employment	Commercial Floor Area in Millions of Sq. Ft.	Commercial Sq. Ft. Per Employee	Population	Housing Units	Local Jobs Per Capita	Local Jobs Per Housing Unit
1990	2,709	1.49	550	9,068	3,179	0.30	0.85
2000	4,188	2.13	509	10,769	3,752	0.39	1.12
2010	3,872	2.93	757	11,201	4,280	0.35	0.90
2018	4,269	3.01	705	11,545	4,483	0.37	0.95

The ratio of Local jobs per capita has been fairly consistent between 2000 and 2018 at between 0.35 and 0.37 jobs per capita and 0.90 to 0.95 jobs per housing unit.

With respect to the impact fee calculations in this report that rely on growth assumptions, it is preferable to err on the side of projections that are on the high side rather than estimates that are too low. If the assumptions about the service base are too low for the projection period, the impact fees assigned to new development may be too high.

For the purpose of impact fee modeling, year 2040 private sector employment is projected at the average of the upper two projections of employment at 5,220 local jobs. At the current average of 705 square feet per employee, 2040 commercial floor area would be about 3.7 million square feet (or average annual growth of 33,500 square feet per year).

3. Proportionate Demand on Public Safety Services

a. Public Safety Calls and Response Data

Public safety services center on the protection of persons and property. Because of the unique demands of each community, its geography, demographics and service base, there are no ready-made formulas or standards that predict the quantity of facilities or capital equipment needed to serve new development by sector. Analysis of Police and Fire-EMS responses provide one of several proportionate measures used in this study to apportion capital cost impacts.

(1) Calls By Address & Property Type. Using call for service (dispatch) data generated by the Amherst Police Department by address, BCM Planning associated the number of calls during the years 2017 through 2019 with the characteristics of property associated with that location. For this tabulation, only those calls that could be confidently associated with a developed land use category were used to estimate proportionate response rates.

Based on this measure, about **81%** of Police Department calls were oriented to residential locations and **19%** to commercial properties. For Fire and EMS calls, about **75%** were associated with a residential use and **25%** to commercial uses. (These ratios are based on totals that exclude public property such as town buildings and schools, and federal or state property.).

Police department calls per 1000 square feet of space were higher for retail and office uses than for industrial and private institutional uses. Fire and EMS calls were significantly higher for age-restricted housing than for other housing.

Tabulation of Amherst Public Safety Calls 2017-2019 Assignable to Specific Street Address								
Use Category	2017-2019 Calls Assignable		Housing Units	Floor Area Sq. Ft.	Calls Per Unit (3 yrs)		Calls/1000 Sq. Ft. (3 yrs)	
	Police Calls	Fire/EMS Calls			Police	Fire	Police	Fire
Residential Uses								
Single Family Detached	20,145	1,769	3,999	9,271,418	5.04	0.44	2.17	0.019
All Other Housing	1,721	378	497	614,897	3.46	0.76	2.80	0.061
Total Residential	21,866	2,147	4,496	9,886,315	4.86	0.48	2.21	0.022
Commercial & Private Inst. Uses								
Retail & Restaurant	3,319	329	--	982,264	--	--	3.38	0.033
Office	666	217	--	379,170	--	--	1.76	0.057
Industrial, Storage, Svcs	974	144	--	1,494,647	--	--	0.65	0.010
Institutional	42	13	--	150,883	--	--	0.28	0.009
Commercial Total	5,001	703	--	3,006,964	--	--	1.66	0.023
Public Property	4,824	163	--	443,822	--	--	10.87	0.037
Total Non-Public Indentified by Address								
Residential	21,866	2,147	4,496	9,886,315	4.86	0.48	2.21	0.022
Commercial	5,001	703		3,006,964			1.66	0.023
Total Non-Public	26,867	2,850		12,893,279			2.08	0.022
** excludes calls logged as safety building address*								
Residential Share	81.4%	75.3%		76.7%				
Non-Residenial Share	18.6%	24.7%		23.3%				

Public Safety Calls 2017-2019 to Residential Locations by Age Restricted Status								
Use Category	2017-2019 Calls		Housing Units	Floor Area Sq. Ft.	Calls Per Unit (3 yrs)		Calls/1000 Sq. Ft. (3 yrs)	
	Police Calls	Fire/EMS Calls			Police	Fire	Police	Fire
Age Restricted	565	170	149	225,487	3.79	1.14	2.5	0.8
Not Age Restricted	21,843	1,979	4,389	9,694,660	4.98	0.45	2.3	0.2
Total	22,408	2,149	4,538	9,920,147	4.94	0.47	2.3	0.2
Call Ratio Age Restricted to Average Housing Units					*0.77*	*2.41*	*1.11*	*3.48*

(2) Responses by Department Property Use Categories. The Police Department provided data on the *number of offenses* by property classification for the three year period 2017-2019. Offenses will in most cases involve crimes and arrests while the prior comparison of service demand reflected all service calls.

Based on our classification and tabulation of offenses for the years 2017 through 2019, we estimate that, for those offenses associated with private property uses, about **47%** were related to residential properties and **53%** with commercial uses.

Data for Fire-EMS responses were also provided by the Department based on property use codes applied in call reporting systems. Combined Fire and EMS responses based on this data indicate **66%** of demand from residential uses and **34%** from commercial uses.

Amherst Police Department - Offenses by Location 2017-2019		
Demand Assignment	**Offense Location Reported**	**Total Offenses 2017 to 2019**
Residential	Residence / Home / Apt. / Condo	544
Commercial	Convenience Store	7
Commercial	Department / Discount Store	377
Commercial	Grocery / Supermarket	1
Commercial	Restaurant / Cafeteria	38
Commercial	Service / Gas Station	19
Commercial	Shopping Mall	12
Commercial	Specialty Store	70
Commercial	Bank / Savings & Loan	17
Commercial	Commercial / Office	46
Commercial	Drug Store / Doctors Office / Hospital	5
Commercial	Construction Site	2
Commercial	Daycare Facility	5
Commercial	Parking Lot / Garage	13
Commercial	Rental Storage Facility	2
Commercial	Church / Place of Worship	4
	Total Offenses Assigned to Non-Public Property	
	Assigned to Residential Property	544
	Assigned to Commercial Property	618
	Total Assigned by Demand Sector	**1,162**
	Residential Share	**47%**
	Non-Residential Share	**53%**
	Public Property Locations	
Public Property	Park / Playground	2
Public Property	School - Elementary / Secondary	129
Public Property	Government / Public Building	49
	Total Public Property	**180**
	Not Assigned to Developed Property	
Unassigned	Cyberspace	123
Unassigned	Field / Woods	16
Unassigned	Highway / Road / Street	1,236
Unassigned	Lake / Waterway	11
Unassigned	Other / Unknown	68
	Unassigned Total	**1,454**
	All Offenses 2017-2019	**2,796**

Amherst Fire-Rescue Responses by Property Type 2017 to 2019			
Land Use Category	EMS Responses	Fire Responses	Total Department
Residential Uses	2,175	745	2,920
Commercial-Industrial-Services	713	813	1,526
Total Calls	2,888	1,558	4,446
Residential Share	75%	48%	**66%**
Commercial Share	25%	52%	**34%**
Source: Amherst Fire-Rescue NFIRS data by property use and TEMSIS data on EMS runs			

b. Other Proportionate Measures and Average of Indicators

Call volume is a direct measure of proportionate responses to public safety services. Other indirect measures recognize the deterrent and protective role of public safety services, which are scaled to enable access to services by all persons and property in Amherst.

These other factors include residential vs. commercial shares of property value, floor area of buildings, and the resident population relative to the number of jobs located in Amherst.

PROPORTIONATE SHARE FACTORS FOR PUBLIC SAFETY DEMAND: AMHERST NEW HAMPSHIRE									
Demand Sector	Protective Factors: Persons and Property			Proportionate Response Factors					
	2019 Assessed Valuation (in millions)	2018 Population (NH OSI) and 2018 Private Sector Employment	Square Feet Finished Building Area 2019 (Millions)	Police Department Dispatch Specific Addresses (2017-2019) *	Police Dept Offenses by Property Type (2017-2019) *	Fire / EMS Runs By Specific Addresses (2017-2019)	Fire and EMS Runs by Property Use Code (2017-2019)		
Residential Development	$1,479.31	11,545	9.92	21,866	544	2,147	2,920		
Commercial Development	$219.41	4,269	3.01	5,001	618	703	1,526	***Weighted Ratios***	
Private Development Total	$1,698.72	15,814	12.93	26,867	1,162	2,850	4,446	***Police***	***Fire Rescue***
Residential Share	*87%*	*73%*	*77%*	*81%*	*47%*	*75%*	*66%*	***71%***	***74%***
Commercial Share	*13%*	*27%*	*23%*	*19%*	*53%*	*25%*	*34%*	***29%***	***26%***
Weighting Factor	*1.0*	*1.0*	*1.0*	*2.0*	*2.0*	*2.0*	*2.0*		

** Dispatch data by address excludes calls not associated with a specific location and those registered at the Police Station. Offense data shown above excludes incidents at public property locations.*

The three "protective" factors are compared with the "response" measures in the chart above. A weighted average of residential vs. commercial demand is computed using the protective factors and the response factors for the individual departments. The response factors are doubly weighted to arrive at the composite averages for the departments.

For impact fee cost allocation purposes, this study assigns a 71% / 29% allocation of Police Department demand to residential / commercial sectors, and a 74% / 26% allocation of demand for the Fire-Recue Department.

D. Public Safety Impact Fees

1. Police Department

Impact fees for police stations are generally defined as a function of the resident population, number of sworn officers per thousand persons, and floor area required per officer. Each community places different service demands on law enforcement based on the mix of properties, socioeconomic conditions, and geography. There is no uniform standard space allocation for police departments, nor is there any official standard governing the number of officers needed for a particular population.

At the time of our prior study (2010-2011) the EMS department occupied space within the Police Department building. The original study indicated that if the EMS function moved to the Fire Department building on the Amherst Street site, the police headquarters would have above 10,000 square feet of space for its exclusive use and could accommodate a staff of 30 employees and up to 23 sworn personnel.

The EMS function has now been incorporated into the Fire Rescue building, and 2020 funds have been budgeted to make the necessary improvements to allow the Police Department to fully occupy and utilize its entire floor area. The estimated cost of improvements to the building, scheduled to take place in 2020, is about $700,000.

The total capital investment in the building has been estimated using fixed asset records for the two public safety buildings combined, plus the replacement cost of on-site capital equipment of each department (excluding vehicles.

We have estimated the total capital investment in the two Amherst Street safety buildings (including the anticipated work on the Police Department building) to average $191 per square foot. The value of on-site capital equipment of the Police Department averages about $35 per square foot of building area. The capital cost associated with the police station is therefore $226 per square foot in the impact fee assessment model.

2. Fire-Rescue Department

In 2017, the EMS function was been incorporated into the Central Station of the Fire-Rescue Department, following a series of improvements that finished the second floor of the building. While future improvements may eventually be made to the South Station if needed, the impact fee basis will assume that the current facilities at the Central and South station are now adequate to accommodate needs of new development through 2040.

On-site capital equipment of the Fire Department (excluding vehicles and apparatus) represents a replacement cost of about $70 per square foot of building space. Combined with the estimated average safety building investment of $191 per square foot average cost of the two

safety buildings, the capital cost associated with the Fire-Rescue stations averages $261 per square foot.

Estimated Replacement Cost: Safety Buildings at 177 Amherst St.	
Safety Buildings Past Investments Adj. to 2020	$3,218,150
2020 Improvements to Police Building	$700,000
Land Value of Site	$117,400
Total Capital Value	$4,035,550
Square Feet Finished (2 Bldgs)	21,126
Building Replacement Cost/Sq. Ft.	$191
Equipment at Building - PD - Per Sq. Ft.	$35
Equipment at Building - FD - Per Sq. Ft.	$70
Total Capital Cost Bldg & Equipment	
Police Department	**$226**
Fire-Rescue Dapartment	**$261**

Amherst Fire-Rescue - Major Vehicles and Apparatus - Estimated Replacement Cost			
Vehicle Year	Description	Designation	2020 Estimated Replacement Cost
2019	Chevy Tahoe	Command 1	$50,000
2017	Ford F-450 Type 1 Ambulance	Amb 1	$205,000
2017	Ford Explorer	Car 4 - EMT Shuttle	$50,000
2015	HME Pumper Model 1871	Engine 2	$600,000
2014	Ford Interceptor Sedan	Car 3 - Admin.	$50,000
2011	Ford Type I Ambulance	Amb 2	$205,000
2008	Ford F-350 Explorer - Command 2	Command 2	$50,000
2007	KME 3000 Gal Infinity Tanker & Acces.	Tanker 2	$500,000
2006	Ford F-350 Forestry/Brush Truck	Forestry 2	$50,000
2002	Pierce / Dash Pumper	Engine 3	$600,000
1997	Simon Duplex Ladder/Aerial Truck	LT1	$1,300,000
1994	Pierce / Saber Pumper	Engine 1	$600,000
1991	Pierce / Lance Pumper	Engine 5	$600,000
1983	International Tanker Model 1854 DT466	Forestry 1	$200,000
Total Vehicles and Apparatus			$5,060,000

In addition to the values attributed to the building and on-site equipment, the replacement cost of major apparatus and vehicles is also incorporated into the impact fee. The value of vehicles and apparatus is estimated at just over $5 million.

3. Impact Fee Calculations

Impact fees are calculated separately for the two public safety services. Each fee model assigns the total capital value of facilities proportionately to existing vs. new development using the spatial standards and proportionate costs allocated between base year demand and that of projected new development.

The capital value assigned to new development is then apportioned between residential and commercial uses. The cost allocated to new residential uses is assigned per housing unit and per square foot of living area to provide alternative fee schedules for housing. These include a uniform fee per square foot, or fees per housing unit that reflect either the average living area for each structure type, or the estimated average household size by structure type.

Costs allocated to commercial uses are assigned as an average amount per square foot of floor area. Because the demands on public safety services differ considerably by type of commercial use, the average fee per square foot is adjusted to reflect relative differences in demand within four categories of commercial use. The study of calls for service by property type indicates that service demands are higher per square foot for retail and office uses than for industrial and private institutional uses.

For Fire-Rescue fees, special adjustments (not shown in the models) may be justified in the case of age-restricted housing for seniors, which generate higher call rates per unit and per square foot of living area for EMS services than average units of the same structure type. The call data for Fire-Rescue indicates that an average age-restricted housing unit in Amherst (which includes detached condos and apartments) will generate about 1.5 times the number of calls per unit or per square foot as the average for those types of structures. For Fire-Rescue fees, a multiplier of 1.5 may be applied to the residential fees (per unit or per square foot) to compute a fee for age-restricted housing units.

POLICE DEPARTMENT IMPACT FEE - AMHERST NH 2020			
Service Demand Factor	Base Year	Year 2040 Assumption	Change from Base Year
RESIDENTIAL SECTOR			
Population (Residential Demand)			
Total Persons / Household Population	11,545	12,141	596
Households (Occupied Units)	4,256	4,818	562
Average Household Size	2.71	2.52	-0.19
Total Housing Units	4,483	5,075	592
COMMERCIAL SECTOR			
Employment (Private Sector)	4,269	5,220	951
Commercial Uses Floor Area	3,010,000	3,680,100	670,100
Commercial Foor Area Per Employee	705	705	
Police Department Staffing & Facility Size			
Full Time Sworn Personnel (Officers)	19	23	*Maximum staffing assumed at 30 with entire facility devoted to Police Department*
Full Time Officers Per 1000 Housing Units	4.24	4.24	
Full Time Officers Per 1000 Population	1.65	1.88	
Full Time Total Personnel	25	30	
Floor Area Per Full Time Office at Buildout	450	450	
Floor Area Per Full Time Employee at Buildout	342	342	
Total Floor Area Needed at Standard	8,545	10,254	
Surplus or (Deficiency) for Current Needs	1,709	sq. ft. available for future needs	
	Demand on Capital Facilities		
Building Costs for Police Department HQ	Attributed to Existing Demand	Total Facility Investment or Replacement Cost	Portion Allocated to New Development
Replacement Cost Per Sq. Ft. incl. Capital Equip.		**$226**	
Apportionment of Cost (Existing vs. New)	85%	Total	15%
Attributed Building Costs - Police Department	$1,969,793	$2,317,404	$347,611
Residential Share of Demand	71%	71%	71%
Non-Residential Share of Demand	29%	29%	29%
Capital Cost Attributed to Residential	$1,398,553	$1,645,357	**$246,804**
Capital Cost Attributed to Commercial	$571,240	$672,047	**$100,807**
Average Cost Per Housing Unit - Residential Development			**$417**
Average Cost Per Sq. Ft. Living Area - Residential Development			**$0.19**
Average Cost Per Square Foot - New Commercial Development			**$0.15**

PUBLIC SAFETY FACILTY COSTS PER UNIT OF NEW DEVELOPMENT - POLICE DEPARTMENT				
Residential Capital Cost Per Dwelling Unit	Average Living Area	Average Household Size	**Impact Fee By Living Area of Unit**	**Impact Fee by Household Size**
Average Housing Unit	2,222	2.71	**$417**	**$417**
Single Family Detached	2,335	2.79	**$444**	**$429**
Attached and Townhouse	1,328	2.06	**$252**	**$317**
Two Family Structures	1,388	1.82	**$264**	**$280**
Multifamily Structures 3+ Units	1,129	1.82	**$214**	**$280**
Manufactured Housing	1,039	2.20	**$197**	**$339**
Commercial Uses Capital Cost Per Square Foot		Non-Residential PD Call Multiplier	**Impact Fee Per Sq. Ft.**	
Average Non-Residential		1.00	**$0.15**	
Retail, Including Restaurants		2.00	**$0.30**	
Offices and Commercial Services		1.10	**$0.17**	
Industrial, Transportation, Whse, Communic.		0.40	**$0.06**	
Non-Govt Institutional Uses		0.20	**$0.03**	

FIRE - RESCUE FACILITIES IMPACT FEE - AMHERST, NH - 2020			
Service Demand Factor	Base Year	Buildout Assumption	Change from Base Year
RESIDENTIAL SECTOR			
Total Persons / Household Population	11,545	12,141	596
Households (Occupied Units)	4,256	4,818	562
Average Household Size	2.71	2.52	-0.19
Total Housing Units	4,483	5,075	592
COMMERCIAL SECTOR			
Employment (Private Sector)	4,269	5,220	951
Commercial Uses Floor Area	3,010,000	3,680,100	670,100
Commercial Foor Area Per Employee	705	705	
Floor Area of Facilities	Existing Space Demand at Buildout Standard	Facilities Serving Buildout	Attributable to New Development
Finished Floor Area Central Fire Station		10,872	
Finished Floor Area South Station		2,730	
Total Facility Space Fire/ & EMS		13,602	
Station Space Required Per Housing Unit (Implied Standard Based on Buildout)	2.68	2.68	
Station Space Allocation (Existing/Buildout)	12,015	13,602	1,587
Building Area Needs and Cost of Fire Stations	Demand on Capital Facilities		
	Apportioned to Existing Demands	Total Investment in Facilities - Replacement Cost	Portion Allocated to New Development
Replacement Cost Per Sq. Ft. incl. Capital Equip.		**$261**	
Apportionment Existing vs. New Development	85%	Total	15%
Attributed Building Costs - Fire Department	$3,132,623.00	$3,546,300	**$413,677**
Capital Investment Major Apparatus	$4,469,750.00	$5,060,000	**$590,250**
Total Capital Facility Investment - Fire Dept.	$7,602,373	$8,606,300	**$1,003,927**
Residential Share of Demand	74%	74%	74%
Non-Residential Share of Demand	26%	26%	26%
Capital Cost Attributed to Residential Sector	$5,625,756	$6,368,662	**$742,906**
Capital Cost Attributed to Commercial Sector	$1,976,617	$2,237,638	**$261,021**
Average Cost Per Housing Unit			**$1,255**
Average Cost Per Sq. Ft. Living Area - Residential Development			**$0.56**
Average Cost Per Square Foot - New Non-Residential Development			**$0.39**

PUBLIC SAFETY FACILTY COSTS PER UNIT OF NEW DEVELOPMENT - FIRE DEPARTMENT				
Residential Capital Cost Per Dwelling Unit	Average Living Area	Avg Household Size	**Impact Fee Based on Living Area**	**Impact Fee Based on Household Size**
Average Housing Unit	2,222	2.71	**$1,244**	**$1,255**
Single Family Detached	2,335	2.79	**$1,308**	**$1,292**
Attached and Townhouse	1,328	2.06	**$744**	**$954**
Two Family Structures	1,388	1.82	**$777**	**$843**
Multifamily Structures 3+ Units	1,129	1.82	**$632**	**$843**
Manufactured Housing	1,039	2.20	**$582**	**$1,019**
Commercial Uses Capital Cost Per Square Foot		Non-Residential FD Call Multiplier	**Impact Fee Per Sq. Ft.**	
Average Non-Residential		1.00	**$0.39**	
Retail, Including Restaurants		1.50	**$0.59**	
Offices and Commercial Services		2.00	**$0.78**	
Industrial, Transportation, Whse, Communic.		0.50	**$0.20**	
Non-Govt Institutional		0.50	**$0.20**	

E. Recreation Facilities

1. Authority and Limits to Assessment

New Hampshire RSA 674:21, V authorizes municipalities to assess impact fees to new development for the cost of "…public recreational facilities not including public open space". Impact fees may be used to recoup the costs of capital improvements made in anticipation of the demands of future growth or can be used to fund future improvements that support new residential development.

An important caveat of the New Hampshire authorizing legislation (RSA 674:21, V) is its prohibition on the use of impact fees to pay for *public open space* (which is undefined in the statute). Since parks and other recreation land may serve multiple functions including active recreation and sports as well as open space, it is necessary to interpret this term.

In this report, it is assumed that the level of active programs, recreational sports uses, and the degree of improvements to a particular parcel, and the presence of developed facilities on the property are reasonable means to distinguish between sites that comprise "recreational facilities" versus those serving principally as "open space" within the meaning of RSA 674:21, V.

The exception to this general distinction between open space and recreation facilities is the development of parking, trails and trailhead access, or other physical improvements that enable active recreation uses to occur within a parcel that otherwise functions as public open space.

2. Standard for Assessment

The computation of impact fees requires a standard that defines the proportionate value of capital improvements associated with new development. Sometimes these are based on a quantity of facilities, such as recommended ratios of ballfields and tennis courts per thousand population. But this approach to defining recreation has become less popular due to its rigidity and variations in the popularity of certain facilities between communities and over time.

In this recreation impact fee, the standard is defined by estimating the level of municipal capital investment in recreation facilities per housing that is reasonably consistent with the value of facilities supported by existing residents in Amherst.

Under this approach, we estimate the current replacement cost of existing municipal recreation facilities, then add the cost to complete certain recreation initiatives contained in the most recent Amherst Recreation Strategic Plan.

Total capital investment (existing plus planned) are then apportioned per dwelling unit and per capita to the residential buildout figure for the town (an approximate 20-year horizon to 2040)

to generate an impact fee per dwelling unit. Using this method, the capital costs assigned per unit of new development will be at reasonable parity with the capital investment supported by existing residents.

3. Replacement Cost of Existing Facilities

In the chart below, the 2020 estimated replacement cost of Town owned or operated recreation facilities is estimated, along with the value of supporting land. These estimates are based on data from the Town's fixed asset records of capital expenditures relating to recreation facilities. The records show the original cost and acquisition or placed-in-service date of recreation assets. For some other improvements that are not fully reflected in the municipal asset inventory, we have included the estimated replacement cost of buildings indicated by Amherst tax assessment records as an estimate of their capital value.

The original costs shown in the Town fixed asset records have been adjusted to estimate current replacement costs using the cost indexes shown in the chart. The Engineering News Record (ENR) construction cost index was used for land improvements (fields, courts, outdoor facilities) and an RS Means square foot cost index was used to adjust the costs of buildings. Land values shown for recreation sites reflect current (2020) valuations assigned in the Town's tax assessment files.

Existing Recreation Facilities and Improvements in Amherst				
Recration Asset or Facility	Source for Cost	Base Year for Cost Adjustment	Cost Index *	Estimated Replacement Cost 2020
Baboosic Lake Docks	Town Fixed Asset File	2015	ENR	$ 52,614
25 Broadway (Beach) Est. Repl. Cost Bldgs	Repl. Cost - Assessor	2020	n.a	$ 130,648
25 Broadway (Town Beach)	Town Fixed Asset File	1971	ENR	$ 56,147
Skating Rink	Town Fixed Asset File	2014	ENR	$ 17,204
Joshua's Park Playground 5/11/16	Town Fixed Asset File	2016	ENR	$ 18,358
Disc Golf Pro 28 (at Birch Park)	Town Fixed Asset File	2017	ENR	$ 15,317
Recreation Office - 4 Cross Road	Repl. Cost - Assessor	2020	n.a	$ 164,768
Duct System	Town Fixed Asset File	2016	RSM	$ 9,788
Garage Door Barn	Town Fixed Asset File	2016	RSM	$ 8,591
66 Brook Road (PMEC) Bldg	Town Fixed Asset File	1997	RSM	$ 152,037
PMEC Addition (Brook Road)	Town Fixed Asset File	2003	RSM	$ 140,049
PMEC Building Addition Pt 2&3	Town Fixed Asset File	2008	RSM	$ 516,533
Davis Lane Tennis Courts	Town Fixed Asset File	2015	ENR	$ 75,945
Davis Lane Fence	Town Fixed Asset File	2015	ENR	$ 5,976
Fence Davis Lane	Town Fixed Asset File	2003	ENR	$ 24,902
Bean Athletic Fields	Town Fixed Asset File	2008	ENR	$ 612,762
Renovation AMS Field	Town Fixed Asset File	2009	ENR	$ 77,604
Total Improvements				**$ 2,079,243**
Value of Public Land Supporting Recreation Facilities				
66 Brook Road (PMEC site)	Assessed land value	2020	n.a.	$ 108,800
65 Brook Road (PMEC site)	Assessed land value	2020	n.a.	$ 14,700
25 Broadway (Town Beach site)	Assessed land value	2020	n.a.	$ 76,800
5 Davis Lane (Tennis Courts site)	Assessed land value	2020	n.a.	$ 81,000
13 Middle Street (Buchanan Park - Skating Rink)	Assessed land value	2020	n.a.	$ 144,000
37 Courthouse Road - Joshua's Park site	Assessed land value	2020	n.a.	$ 148,200
Total Land				**$ 573,500**
Total Recreation Land and Improvements				**$ 2,652,743**

** ENR = Engineering News Record (ENR) Construction Cost Index (national data). This index was applied to land improvements such as field construction, tennis courts, outdoor equipment) adusted to Februaty 2020.*

** RSM = R S Means Square Foot Cost index through October 2019 for Nashua area, applied to buildings.*

In some cases, Town-funded improvements have been made on sites owned by a school district. In these cases, we have incorporated the cost of the facility, but not the value of the underlying land, in estimating the municipal investment in public recreation.

Under NH RSA 674:21, V, impact fees may be assessed for facilities that are "owned or operated by the municipality". Where the asset file indicates that the Town of Amherst has paid for the related improvements, that cost has been included as part of the recreation facility investment table.

The total municipal recreation facility investment is estimated at $2.65 million, equivalent to about $592 per housing unit or $230 per capita based on 2018 estimated housing stock and population estimates.

4. Total Recreation Capital Investment per Housing Unit

Recreation Impact Fee Cost Basis 2020	
Existing Facility Investment (Replacement Cost)	
Recreation Improvments Land Supporting Improvements	$2,079,243 $573,500
Subtotal Existing Facilities	**$2,652,743**
Recreation Strategic Plan - New Sites and Faciltiies	
New Recreation Field Space Indoor Recreation Facility Resurface AMS Tennis Courts	$310,000 (Reserved) $87,000
Expand/Upgrade Rec. Office	$15,000
Phase 1 Bike / Rec. Trails	$15,000
Total Planned Facilities	**$427,000**
Cumulative Capital Investment	**$3,079,743**
Estimated Buildout Housing Units (2040 or Later)	5,075
Estimated Population 2040	12,147
Average Recreation Investment Per Per Housing Unit	$607
Average Recreation Investment Per Per Capita	$254
Average Home Size - All Housing Units	2,222
Average Recreation Fee Per Sq. Ft. Living Area	$0.273
Public School Enrollment Per Housing Unit (2020)	0.42
Avg RecreationCost Assignment Per Resident School Pupil	$1,445

The next step is to add to the facility inventory the estimated cost of selected initiatives of the current Amherst Recreation Department Strategic Plan. Added facility costs include the creation of new recreation field space, resurfacing of the tennis courts at the Amherst Middle School, improvements to the Recreation Department building, and the first phase of a bike and walking trail system. These improvements are estimated to cost $427,000.

Cumulative facility investments (past and anticipated) would then total about $3.08 million. Based on the estimated buildout housing inventory of 5,075 units, the average capital cost is $607 per housing unit. This is very comparable to the existing investment of about $592 per unit.

Not included in the fee basis is the cost of an indoor recreation facility envisioned in the Strategic Plan that has an estimated cost of just over $5 million.

The Recreation Master Plan reviewed in our 2010-2011 impact fee study also called for a multimillion dollar indoor facility but the project did not materialize over the last 10 years. Although an indoor facility remains a desired improvement, its inclusion in the fee basis would push the investment standard per housing unit up from $607 to $1,594 per housing unit.

That level of expenditure would represent an average cost per housing unit that would be far in excess of what the Town has historically supported for recreation facility investment. If built, most of the cost of such a facility would be attributable to serving existing residents rather than new development. Inclusion of the indoor facility cost as part of the fee calculation would then involve a significant credit allowance adjustment which would tend offset the value of including it as part of the cost basis of the fee.

5. Recreation Impact Fee Options

Recreation Impact Fee Using Alternative Cost Allocation Factors		
Recreation Fee Using Uniform Cost Per Square Foot of Living Area	Average Living Area in Housing Units 2020	Impact Fee Per Unit @ Sq. Ft. Rate
Fee Per Sq. Ft. of Living Area:	**2,222**	**$0.27**
Average Housing Unit	2,222	$607
Single Family Detached	2,335	$638
Attached and Townhouse	1,328	$363
Two Family Structures	1,388	$379
Multifamily Structures	1,129	$308
Manufactured Housing	1,039	$284
Recreation Fee Based on Per Capita Cost and Estimated Household Size	Average Household Size Estimated for 2018	Impact Fee Per Unit @ Per Capita Cost
Average Household	2.71	$688
Single Family Detached	2.79	$709
Attached and Townhouse	2.06	$523
Two Family Structures	1.82	$462
Multifamily Structures	1.82	$462
Manufactured Housing	2.20	$559
Recreation Fee Using School Enrollment Ratios for Proportionate Allocation	Average Enrollment Per Unit 2020	Impact Fee Per Unit @ Cost Per School Pupil
Average Housing Unit	0.420	$607
Single Family Detached	0.440	$636
Attached and Townhouse	0.237	$343
Two Family Structures	0.328	$474
Multifamily Structures	0.238	$344
Manufactured Housing	0.238	$344

This table applies per unit, per square foot, and per capita recreation capital facility costs to typical housing units and estimated household sizes to generate alternative impact fee schedules.

The third method shown is used rarely. In this option the fees are proportionate to the number of school children per unit associated with various types of housing units.

The per capita cost method is most frequently used in assigning recreation facility costs, and results in higher fee amounts per housing unit than the other cost allocation methods.

The implementation of recreation impact fees will require the adoption of one of the alternative recreation fee schedules. As facility plans continue to evolve, the cost basis for the recreation impact fee may be amended periodically.

The adoption of recreation impact fees does not preclude the Planning Board from requiring (under the subdivision and site plan review process) that open space or park land be set aside for public use, as authorized under RSA 674:36.

F. Public Schools

1. Authority for Assessment

Under RSA 674:21, V impact fees may be assessed for public school facilities, including a proportionate share of school facilities owned or operated by a cooperative school district of which the Town is a member. Planning for school facility capacity is generally guided by long term projections of enrollment. Enrollment is influenced not only by new development as it introduces additional housing units to Amherst, but also influenced by demographic changes such as age shifts in the population that affect household size and enrollment generation by all housing units. RSA 674:21, V allows impact fees to be assessed for future expenditures for facilities that support new development, or to recoup the cost of facilities constructed in anticipation of the needs of new development.

2. General Approach to Fee Basis

This study supports several alternatives for school impact fee assessment reflect, all of which rely on an average "unit cost" approach to assign school facility capacity demands to new housing units. The components of that unit cost are: (1) average enrollment per dwelling or per square foot of living area; (2) the "level of service" reflected by a minimum amount of space required per pupil capacity; and (3) the cost or value of school facility space per square foot.

In computing local capital costs, adjustments are made to recognize the historic proportion of principal costs reimbursed by State Building Aid. Credit allowances are computed for property taxes that new development pays toward net debt service costs related to the needs of existing development.

This impact fee update includes a new detailed tabulation (2020) of the number of Amherst public school pupils per housing unit, and per square foot of living area. With the assistance of the Town of Amherst and SAU 39, data were compiled that enabled BCM Planning to make a detailed analysis of school enrollment counts by the type and size of housing units.

These tabulations provided detailed local information for Amherst that supports several methods of computing proportionate school impact fee assessments: (1) per housing unit by structure type; (2) per square foot by structure type (or a uniform rate per square foot for all types of housing); or (3) per unit by number of bedrooms for all housing types.

3. Existing Facilities and Maximum Capacity

The most recent formal capacity estimates of the K-8 schools serving Amherst were prepared in 2004 by New England School Development Council (NESDC). Alternative configurations for the K-8 schools and recommended space requirements were prepared as part of a School Master

Plan by Frank P. Marinace, Architect, P.A. in 2006. The capacity of the Souhegan Cooperative High School was estimated in 2010 by Gale Associates.

The Wilkins School has four portable classrooms in use which are not included in the capacity estimates below. An impact fee for K-8 facilities in Amherst would need to be based on a plan intended to eliminate portables, because the fee cost basis should reflect permanent facility space. Portables are generally viewed as a temporary solution to overcrowding and evidence of a substandard condition.

FACILITIES SERVING AMHERST PUBLIC SCHOOL PUPILS - FEBRUARY 2020							
Maximum Capacity, Enrollment and Standards For Impact Fee Assessment (Floor Area Per Pupil)							
School Facilities	Original Yr. Built & Expansion Dates	Grades Served	Buidling Area Sq. Ft. Excluding Portables (1)	Max. Capacity Estimate w/o Portables (2)	Square Feet Per Pupil Capacity	October 2019 Enrolled K-12	October 2019 Enrollment as % of Max Capacity
Elementary Schools (Amherst District)							
Clark Elementary	1937, 1953, 1963, 1978, 1995	K - 4 Plus Pre-School	27,100	260	104	647	85%
Wilkins Elementary	1967, 1969, 1996		55,242	501	110		
Total Elementary Excluding Pre-K Enrollment			82,342	**761**	**108**		
Middle School (Amherst District)							
Amherst Middle School (3)	1974, 2001	Gr. 5-8	112,000	828	**135**	624	75%
Total Grades K-8		Gr. K-8	194,342	1,589	**122**	1,271	80%
High School (Souhegan Co-op)							
Souhegan High School & Annex (4)	1992, 2003	9-12	168,556	1,007	**167**	750	74%
Total Facilities Available		K-12	362,898	2,596	**140**	2,021	78%

(1) Floor area estimates provided by SAU 39, January 2020

(2) Estimates for K-8 facilities by NESDC, 2004 report on K-8 facilities, cited as planned operating capacity for buildings excluding portable classrooms

(3) The Amherst Middle School also serves Mont Vernon pupils in grades 7-8 (tuition).

(4) The Souhegan High School is a cooperative facility that also serves Mont Vernon pupils in grades 9-12. Capacity estimates from Gale Associates, 2010

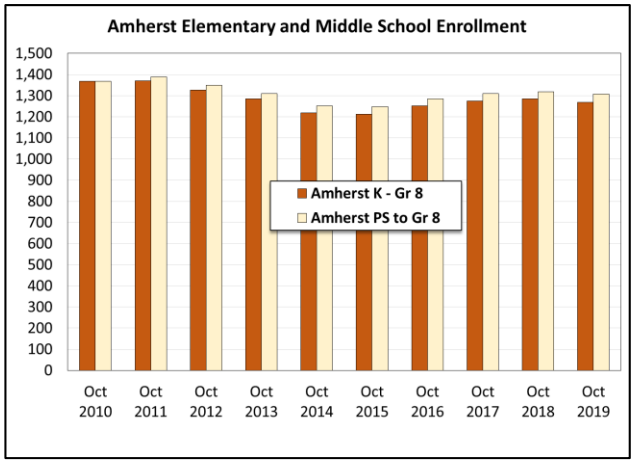
Based on the only capacity estimates available, the elementary schools are operating at about 85% of their classroom capacity using the 2004 capacity estimates. The Amherst Middle School is operating at about 75% of maximum capacity, and the overall K-8 facilities are at 80% of capacity. The high school enrollment represents about 74% of its estimated capacity.

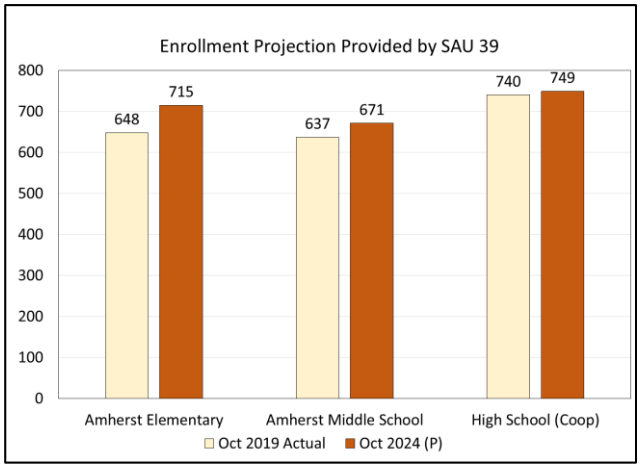
Estimates of capacity change over time as the educational curriculum, special needs, and the distribution of students changes by grade level. The 2006 Master Plan by Frank Marinace, Architect, P.A. contained a preferred alternative that called for the construction of a new grade 3 to 5 school, renovations to the existing elementary with Amherst Middle School serving grades 6 to 8 only.

School Floor Area per Estimated Pupil Capacity

Facilities by Grade	Existing Conditions	2006 Master Plan (After Construction & Renovation)
Elementary (Grade K-4)	108	146 (K-5 reconfigured)
Middle School (Grade 5-8)	135	140 (Grades 6-8)
High School (Grade 9-12)	167	167 (not in Plan)
All Facilities (K-12)	140	152

The Amherst School District views the K-8 schools as crowded relative to current needs, and anticipates growth in the student population based on a recent series of enrollment projections.





The District has budgeted for a comprehensive study to be made in 2020 that will inform a new plan for providing desired capacity within the K-8 system, and address existing and future space needs. Based on the Capital Improvement Program, the Amherst School District estimates that a construction and/or renovation program to accommodate K-8 needs may require an investment of about $35 million. The configuration of future improvements will depend on the outcome of a new capacity and needs assessment.

For the purpose of impact fee assessment, our calculations have used the minimum floor area per pupil capacity indicated by the 2004 NESDC estimates. When the new study and recommendations are completed, and construction or renovation plans are issued, the spatial standards and the cost basis of the fee may be amended accordingly.

4. Capital Investment in Existing Facilities

A significant investment has been made in the public schools serving Amherst since 1990. The construction of the Souhegan High School took place in 1991, and major improvements were undertaken in the K-8 school system in 2001, 2002, and 2008.

Major Construction & Renovation Projects in Amherst Schools Since 1990					
School Facility	Bond Year	Final Year Debt Service Payment	Construction Project Original Amount of Bond	Construction Costs Adjusted to October 2019 (RS Means Index)	District
Amherst Middle School	2001	2021	$ 3,799,000	$ 7,313,565	Amherst
Elementary Schools and AMS	2008	2028	$ 3,883,600	$ 5,366,037	Amherst
Total Amherst District			$ 7,682,600	$ 12,679,602	Amherst
High School (original constructior	1991	2011	$ 12,136,508	$ 30,436,512	Souhegan Coop.
High School (annex)	2002	2012	$ 5,800,000	$ 10,848,328	Souhegan Coop.
Total Cooperative			$ 17,936,508	$ 41,284,840	Souhegan Coop.
Total Construction Costs Financed			**$ 25,619,108**	**$ 53,964,442**	

The 2008 bond for the improvements to the K-8 schools centered on quality and energy efficiency upgrades. The other bonded projects involved additional floor area or capacity expansion.

The face value of all bonded debt incurred in this period was $25.6 million. If these capital costs are adjusted to 2020 values, the comparable 2020 value of the projects would be about $53 million. Historically State Building Aid was available to reimburse 30% of the principal due on bonds for elementary and middle school facilities, and 40% of the principal on bonds for the cooperative high school. [Currently, if State Building Aid were awarded, the cooperative would be eligible for only 30% reimbursement of principal.]

The property insurance schedule for the schools serving Amherst indicates a replacement cost of about $94 million serving 2,021 enrolled students (October 2019) or an average of $36,200 in total insured value per pupil capacity for all facilities.

Amherst Public Schools -Insured Value of Buildings and Contents 2020					
School Facilities	Original Yr. Built & Expansion Dates	Grades Served	Buidling Area Sq. Ft.	Insured Value 2020	Replacement Cost Per Sq. Ft.
Elementary Schools (Amherst District)					
Clark Elementary	1937, 1953, 1963, 1978, 1995	Gr. K-1	27,100	$4,754,100	$175
Wilkins Elementary	1967, 1969, 1996	Gr. 1-4	55,242	$9,922,100	$180
Total Grades K-4		Gr. K-4	82,342	$14,676,200	**$178**
Middle School (Amherst District)					
Amherst Middle School (1)	1974, 2001	Gr. 5-8	112,000	$33,662,800	**$301**
Total Grades K-8		Gr. K-8	194,342	$48,339,000	**$249**
High School (Souhegan Co-op)					
Souhegan High School & Annex	1992, 2003	9-12	168,556	$45,636,700	**$271**
All Schools Serving Amherst		K-12	362,898	$93,975,700	$259

If we apportion 85% of the insured value of Souhegan High School to Amherst, and add the value of the K-8 facilities of the Amherst School District, the insured value of the schools serving Amherst students is about $87.1 million.

5. Enrollment Ratios for Amherst Housing Units in 2020

The number of pupils per dwelling unit, or the number of pupils per 1,000 square feet of living area, is the basis for assigning proportionate demands on school facilities from housing development. The spatial requirements per pupil cited above times the enrollment ratio associated with average housing units defines the quantity of school space required to serve new development. Enrollment per unit is used as the proportionate measure of impact of an average dwelling unit. In the fee models, the assumption is that unit cost may be defined by the average consumption of school floor area associated with enrollment generated by a typical housing unit.

It is clear that the ratio has declined since the original study in 2010-2011. The enrollment ratios and other variables can be adjusted over time with respect to enrollment averages per unit, facility space per pupil capacity, and cost of school facilities per square foot.

In order to define accurate enrollment ratios for Amherst, BCM Planning matched enrollment counts by grade level and address to the property characteristics of that location using tax assessment data. Excluded from the enrollment ratios were housing units identified as "age restricted" (to age 55+ or age 62+). The tabulation of this data yielded local estimates of:

Average enrollment per unit and per 1000 square feet of living area by:

Structure type
Year built
Number of bedrooms

Average assessed valuation per unit and per square foot of living area

Average living area of housing units by structure type

Average enrollment data for manufactured housing units in Amherst was based on a small sample and the results showed enrollment averages that were much lower than that found in larger samples from other communities. For this reason, BCM Planning recommends the application of the multifamily housing ratios to compute the impact fees for manufactured housing as well. Average 2020 enrollment ratios used to compute the school impact fees are:

Structure Type	**Enrollment Per Housing Unit by Grade**				**Enrollment Per 1000 Sq. Ft. by Grade**			
	K-4	5-8	9-12	K-12	K-4	5-8	9-12	K-12
Single Family Detached	0.156	0.139	0.144	0.439	0.067	0.060	0.062	0.189
Attached & Townhouse	0.086	0.065	0.086	0.237	0.065	0.049	0.065	0.179
Two-Family	0.096	0.096	0.136	0.328	0.069	0.069	0.098	0.236
Three or More Family	0.108	0.058	0.067	0.233	0.096	0.052	0.059	0.207
Manufactured Housing	0.108	0.058	0.067	0.233	0.096	0.052	0.059	0.207

More detailed tabulations and illustrations of enrollment and housing characteristics are shown in the following pages.

Average Enrollment and Housing Characteristics by Structure Type for All Units Excluding Age-Restricted Housing

2020 TABULATION OF AMHERST PUBLIC SCHOOL ENROLLMENT RATIOS PER HOUSING UNIT AND PER 1000 SQUARE FEET (EXCLUDING AGE RESTRICTED UNITS)																				
Housing Type	Enrollment Distribution						Housing Characteristics (Excludes Age Restricted Units)						K-12 Enrollment Per Unit				K-12 Enrollment Per 1000 Sq. Ft.			
	Pre-K	Kind	1 to 4	5 to 8	9 to 12	K to 12	Housing Units	Living Area	Assessed Valuation	Avg Living Area	Avg Valuation Per Unit	Ave Valuation Per Sq. Ft.	K-4	5-8	9-12	K-12	K-4	5-8	9-12	K-12
Single Family Detached	38	94	515	541	561	1,711	3,892	9,088,781	$1,355,381,900	2,335	$348,248	$149	0.156	0.139	0.144	0.440	0.067	0.060	0.062	0.188
S. F. Attached (Townhouse)	0	0	8	6	8	22	93	123,514	$17,191,000	1,328	$184,849	$139	0.086	0.065	0.086	0.237	0.065	0.049	0.065	0.178
Two Unit Structure	0	2	15	17	24	58	177	245,588	$35,457,100	1,388	$200,323	$144	0.096	0.096	0.136	0.328	0.069	0.069	0.098	0.236
Multifamily Structure	0	3	10	7	8	28	120	135,428	$14,981,120	1,129	$124,843	$111	0.108	0.058	0.067	0.233	0.096	0.052	0.059	0.207
Manufactured Housing	0	0	1	2	4	7	65	67,517	$4,056,100	1,039	$62,402	$60	0.015	0.031	0.062	0.108	0.015	0.030	0.059	0.104
Total	38	99	549	573	605	1,826	4,347	9,660,828	$1,427,067,220	2,222	$328,288	$148	0.149	0.132	0.139	0.420	0.067	0.059	0.063	0.189
Alternative Groupings by Structure Type																				
Housing Type	Enrollment Distribution						Housing Characteristics (Excludes Age Restricted Units)						K-12 Enrollment Per Unit				K-12 Enrollment Per 1000 Sq. Ft.			
All Single Detached	38	94	515	541	561	1,711	3,892	9,088,781	$1,355,381,900	2,335	$348,248	$149	0.156	0.139	0.144	0.440	0.067	0.060	0.062	0.188
Attached and Townhouse	0	2	15	9	13	39	215	300,753	$17,191,000	1,399	$79,958	$57	0.079	0.042	0.060	0.181	0.057	0.030	0.043	0.130
Two or More Family & MH	0	3	19	23	31	76	240	271,294	$27,870,220	1,130	$116,126	$103	0.092	0.096	0.129	0.317	0.081	0.085	0.114	0.280
Total .	38	99	549	573	605	1,826	4,347	9,660,828	$1,400,443,120	2,222	$322,163	$145	0.149	0.132	0.139	0.420	0.067	0.059	0.063	0.189
Single Family Detached	38	93	502	513	538	1,646	3,507	8,416,764	$1,238,145,800	2,400	$353,050	$147	0.170	0.146	0.153	0.469	0.071	0.061	0.064	0.196
All Other Structure Types	0	6	47	60	67	180	840	1,244,064	$188,921,420	1,481	$224,906	$152	0.063	0.071	0.080	0.214	0.043	0.048	0.054	0.145
Total	38	99	549	573	605	1,826	4,347	9,660,828	$1,427,067,220	2,222	$328,288	$148	0.149	0.132	0.139	0.420	0.067	0.059	0.063	0.189

Averages by Year Built – All Units Except Age Restricted

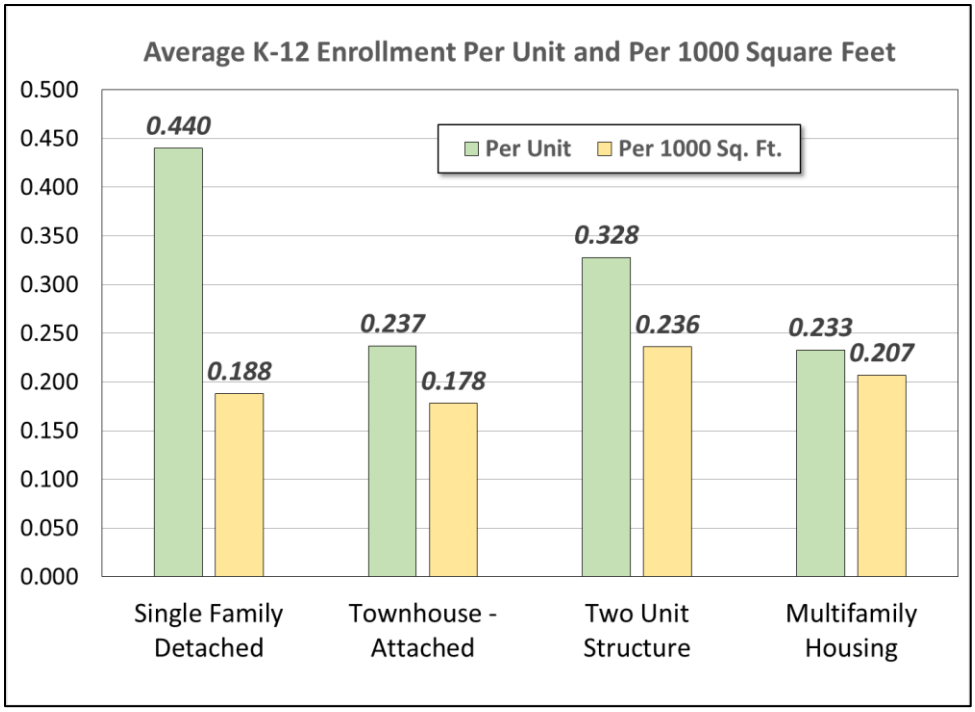
2020 TABULATION OF AMHERST PUBLIC SCHOOL ENROLLMENT RATIOS PER HOUSING UNIT AND PER 1000 SQUARE FEET - ALL UNIT TYPES BY YEAR BUILT (EXCLUDES AGE RESTRICTED UNITS)																				
Year Built	Enrollment Distribution						Housing Characteristics (Excludes Age Restricted Units)						K-12 Enrollment Per Unit				K-12 Enrollment Per 1000 Sq. Ft.			
	Pre-K	Kind	1 to 4	5 to 8	9 to 12	K to 12	Living Units	Living Area	Assessed Valuation	Avg Living Area	Avg Valuation	Ave Valuation Per Sq. Ft.	K-4	5-8	9-12	K-12	K-4	5-8	9-12	K-12
Before 1960	3	17	59	79	87	242	681	1,316,765	$198,880,500	1,934	$292,042	$151	0.112	0.116	0.128	0.355	0.058	0.060	0.066	0.184
1960 to 1969	5	10	86	70	84	250	641	1,203,015	$173,782,000	1,877	$271,111	$144	0.150	0.109	0.131	0.390	0.080	0.058	0.070	0.208
1970 to 1979	17	27	170	177	176	550	1,074	2,434,341	$336,809,000	2,267	$313,602	$138	0.183	0.165	0.164	0.512	0.081	0.073	0.072	0.226
1980 to 1989	6	18	84	74	72	248	649	1,471,369	$207,397,200	2,267	$319,564	$141	0.157	0.114	0.111	0.382	0.069	0.050	0.049	0.169
1990 to 1999	4	16	83	92	101	292	630	1,713,689	$262,981,500	2,720	$417,431	$153	0.157	0.146	0.160	0.463	0.058	0.054	0.059	0.170
2000 to 2009	2	6	44	65	66	181	472	1,113,809	$175,155,200	2,360	$371,092	$157	0.106	0.138	0.140	0.383	0.045	0.058	0.059	0.163
2010 to 2019	1	5	23	14	15	57	198	406,730	$71,755,620	2,054	$362,402	$176	0.141	0.071	0.076	0.288	0.069	0.034	0.037	0.140
Total	38	99	549	571	601	1,820	4,345	9,659,718	$1,426,761,020	2,223	$328,368	$148	0.149	0.131	0.138	0.419	0.067	0.059	0.062	0.188

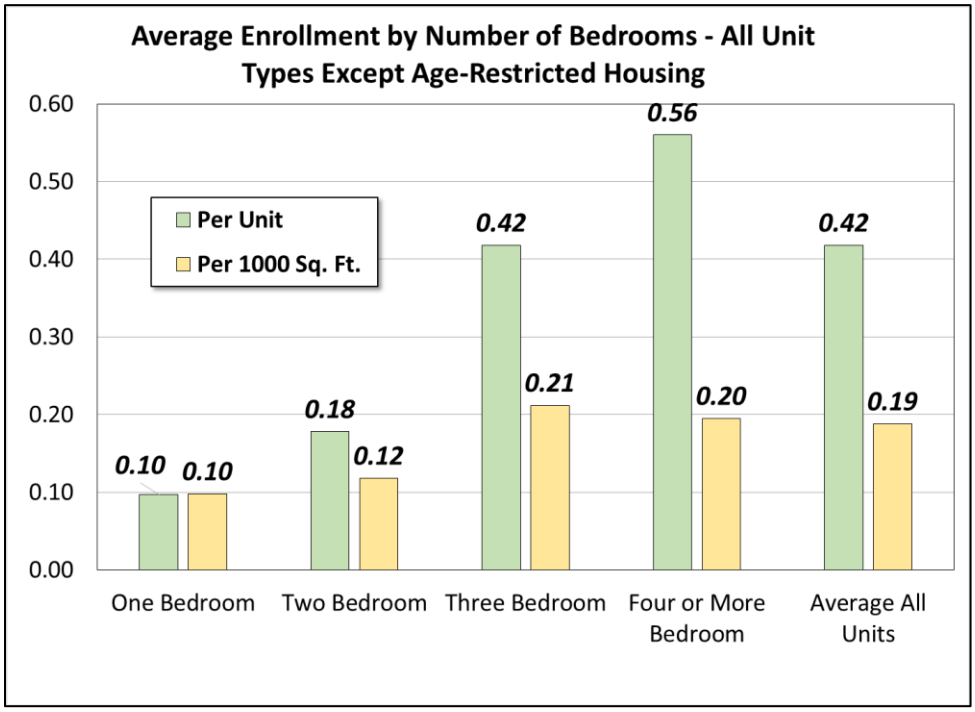
Averages by Year Built – Single Family Detached Units Except Age Restricted

2020 TABULATION OF AMHERST PUBLIC SCHOOL ENROLLMENT RATIOS FOR SINGLE FAMILY DETACHED STRUCTURES BY YEAR BUILT (EXCLUDES AGE RESTRICTED UNITS)																				
	Enrollment Distribution						Housing Characteristics (Excludes Age Restricted Units)						K-12 Enrollment Per Unit				K-12 Enrollment Per 1000 Sq. Ft.			
Year Built	Pre-K	Kind	1 to 4	5 to 8	9 to 12	K to 12	Living Units	Living Area	Assessed Valuation	Avg Living Area	Avg Valuation	Ave Valuation Per Sq. Ft.	K-4	5-8	9-12	K-12	K-4	5-8	9-12	K-12
Before 1960	3	16	53	59	63	191	554	1,145,989	$172,694,300	2,069	$311,723	$151	0.125	0.106	0.114	0.345	0.060	0.051	0.055	0.167
1960 to 1969	5	10	80	64	75	229	583	1,135,116	$163,974,200	1,947	$281,259	$144	0.154	0.110	0.129	0.393	0.079	0.056	0.066	0.202
1970 to 1979	17	27	168	174	170	539	1,023	2,360,274	$326,802,000	2,307	$319,455	$138	0.191	0.170	0.166	0.527	0.083	0.074	0.072	0.228
1980 to 1989	6	18	73	65	63	219	462	1,203,997	$171,680,500	2,606	$371,603	$143	0.197	0.141	0.136	0.474	0.076	0.054	0.052	0.182
1990 to 1999	4	15	83	86	101	285	572	1,636,540	$252,362,900	2,861	$441,194	$154	0.171	0.150	0.177	0.498	0.060	0.053	0.062	0.174
2000 to 2009	2	5	33	54	52	144	234	715,266	$110,917,900	3,057	$474,008	$155	0.162	0.231	0.222	0.615	0.053	0.075	0.073	0.201
2010 to 2019	1	2	12	9	10	33	78	219,582	$39,599,000	2,815	$507,679	$180	0.179	0.115	0.128	0.423	0.064	0.041	0.046	0.150
Total	38	93	502	513	538	1,646	3,507	8,416,764	$1,238,145,800	2,400	$353,050	$147	0.170	0.146	0.153	0.469	0.071	0.061	0.064	0.196
Built 2000 or Later	*3*	*7*	*45*	*63*	*62*	*177*	*312*	*934,848*	*150,516,900*	*2,996*	*$482,426*	$161	*0.167*	*0.202*	*0.199*	*0.567*	*0.056*	*0.067*	*0.066*	*0.189*

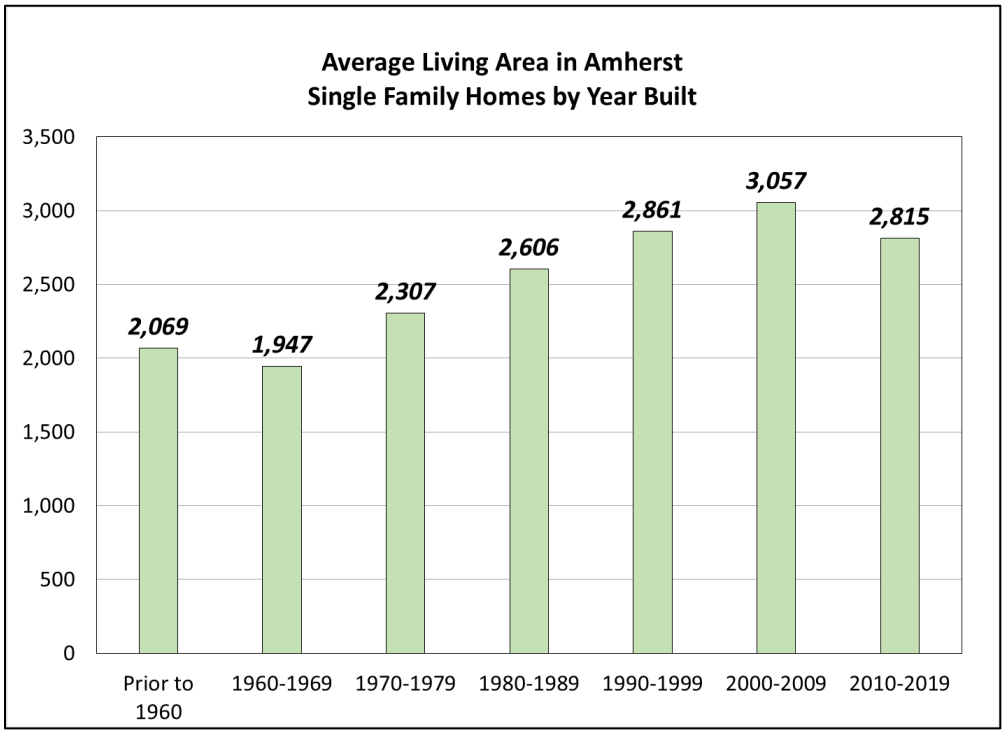
Averages by Bedrooms in Unit – All Structure Types Except Age Restricted

2020 TABULATION OF AMHERST PUBLIC SCHOOL ENROLLMENT RATIOS BY BEDROOMS - ALL UNITS EXCEPT AGE RESTRICTED																				
	Enrollment Distribution						Housing Characteristics (Excludes Age Restricted Units)						K-12 Enrollment Per Unit				K-12 Enrollment Per 1000 Sq. Ft.			
Bedrooms in Unit	Pre-K	Kind	1 to 4	5 to 8	9 to 12	K to 12	Living Units	Living Area	Assessed Valuation	Avg Living Area	Avg Valuation	Ave Valuation Per Sq. Ft.	K-4	5-8	9-12	K-12	K-4	5-8	9-12	K-12
One or None	0	0	4	4	3	11	113	112,690	$19,283,900	997	$170,654	$171	0.035	0.035	0.027	0.097	0.035	0.035	0.027	0.098
Two	3	8	50	52	51	161	905	1,358,690	$209,445,420	1,501	$231,431	$154	0.064	0.057	0.056	0.178	0.043	0.038	0.038	0.118
Three	14	39	184	205	210	638	1,527	3,007,525	$463,761,500	1,970	$303,708	$154	0.146	0.134	0.138	0.418	0.074	0.068	0.070	0.212
Four or More	21	51	309	310	337	1,007	1,797	5,175,549	$732,618,200	2,880	$407,690	$142	0.200	0.173	0.188	0.560	0.070	0.060	0.065	0.195
Total	38	98	547	571	601	1,817	4,342	9,654,454	$1,425,109,020	2,224	$328,215	$148	0.149	0.132	0.138	0.418	0.067	0.059	0.062	0.188


Average K-12 Enrollment Per Unit and Per 1000 Square Feet
0.500
0.450
0.400
0.350
0.300
0.250
0.200
0.150
0.100
0.050
0.000
Per Unit
Per 1000 Sq. Ft.
0.440
0.188
0.237
0.178
0.328
0.236
0.233
0.207
Single Family Detached
Townhouse - Attached
Two Unit Structure
Multifamily Housing


Average Enrollment by Number of Bedrooms - All Unit Types Except Age-Restricted Housing
0.60
0.50
0.40
0.30
0.20
0.10
0.00
Per Unit
Per 1000 Sq. Ft.
0.10
0.10
0.18
0.12
0.42
0.21
0.56
0.20
0.42
0.19
One Bedroom
Two Bedroom
Three Bedroom
Four or More Bedroom
Average All Units

Amherst Enrollment Characteristics for Single Family Detached Units by Year Built (Excludes Age-Restricted Housing)					
Year Built	Housing Units	Avg Living Area	K-12 Pupils	Pupils Per Unit	Pupils Per 1000 Sq. Ft.
Before 1960	554	2,069	191	0.345	0.167
1960 to 1969	583	1,947	229	0.393	0.202
1970 to 1979	1,023	2,307	539	0.527	0.228
1980 to 1989	462	2,606	219	0.474	0.182
1990 to 1999	572	2,861	285	0.498	0.174
2000 to 2009	234	3,057	144	0.615	0.201
2010 to 2019	78	2,815	33	0.423	0.150
Total / Average	3,507	2,400	1,646	0.469	0.196
Built 2000 or Later	*312*	2,996	*177*	*0.567*	0.189



6. Credit Allowances

While the school capital cost assigned to a new dwelling unit reflects is proportionate share of demand on facility space and related capital costs, new development may also pay taxes to fund debt service that is related to pre-existing space needs. For this reason, impact fees are often adjusted to recognize taxes paid by new development for those pre-existing space needs.

In the school impact fee calculations, we have included a series of credit allowances for past and future debt service costs related to existing facilities. In the past, vacant land on the site may have contributed to taxes for that bonded debt. In the future, taxes paid to support for bonded debt will be based on the valuation assigned to the completed home. In the credit calculations "past payments" are assumed to represent debt service through 2019 paid by vacant land and "future payments" are those scheduled for 2020 or later, paid by completed housing units.

Credit Allowance Per Unit Summary - Average Housing Units			
Type Unit	Amherst District (K-8 Schools)	Souhegan Cooperative High School	Total Credit Allowance
Single Family	$699	$1,044	$1,743
Townhouse	$371	$555	$926
Two Family	$401	$600	$1,001
Three or More Family	$251	$375	$626
Manufactured Housing	$126	$189	$315
Multifamily & Manufactured	$207	$308	$515
All Non-Single Family Housing	$317	$472	$789

Credit Allowance Per Unit Summary - Bedroom Method			
Bedrooms in Unit	Amherst District (K-8 Schools)	Souhegan Cooperative High School	Total Credit Allowance
One Bedroom	$334	$498	$832
Two Bedrooms	$463	$690	$1,153
Three Bedrooms	$609	$909	$1,518
Four or More Bedrooms	$818	$1,221	$2,039

Credit Allowance Per Square Foot Summary			
Type Unit	Amherst District (K-8 Schools)	Souhegan Cooperative High School	Total Credit Allowance
Single Family	$0.49	$0.44	$0.93
Townhouse	$0.46	$0.42	$0.88
Two Family	$0.49	$0.44	$0.93
Three or More Family	$0.37	$0.33	$0.70
Manufactured Housing	$0.20	$0.18	$0.38
Multifamily & Manufactured	$0.31	$0.27	$0.58
All Non-Single Family Housing	$0.43	$0.39	$0.82

The credit allowances also include a cost to replace the four portable classrooms now in use. The use of portables is generally recognized as a substandard situation and an existing deficiency in permanent facility space. The detailed derivation of the per unit credit allowances are detailed at the end of this section of the report.

7. Impact Fee Calculations

The impact fee models that follow assign the estimated local capital costs for schools at the 2020 NH Department of Education maximum cost allowances for Hillsborough County that govern the maximum amounts reimbursable by State Building Aid. The current cost allowances are based on more narrow definitions of reimbursable construction costs than were included in these cost standards ten years ago. These allowable costs are considerably lower than the average replacement cost per square foot for Amherst schools based on 2020 insurance schedules.

Consequently, the capital costs assigned in the impact fee models that follow are likely to be well below the actual comprehensive development costs for Amherst public schools.

The proportion of school construction cost reimbursable by State Building Aid has been applied in the impact fee models at the historical level applicable to the existing schools in Amherst. Substitution of the insured value per square foot for the State cost allowances would lead to impact fees that would probably be 30% to 40% higher than those shown in the models.

The spatial standards (square feet of school space per pupil) reflect the estimated maximum capacity of the K-8 schools as estimated in 2004 by NESDC, and of the high school as estimated by Gale Associates in 2010.

The basic formula for the impact fee assessment is:

Enrollment per dwelling unit (or per 1000 sq. ft.) by grade level
X School space per pupil capacity by grade
X Capital cost per square foot at Department of Education cost allowance standard
(-) State building aid portion of principal cost (historic)
= Net local capital cost per housing unit or per square foot of living area
(-) Credit allowances for debt service for existing needs
= School impact fee per unit or per square foot of living area

Three methods are shown for impact fee assessment: (1) average fees per dwelling unit by structure type; and (2) fees per square foot of living area by structure type; and (3) fees based on the number of bedrooms in the housing unit (all structure types).

As shown in the fee calculations, alternatives include simpler groupings of structure types, such as single family detached housing vs. all other structure types as a fee schedule.

The most commonly used method is the per unit assessment by structure type, followed by the fee per square foot method.

The bedroom based method is used less frequently as it can be more challenging to administer on a consistent basis.

The school impact fees are not intended to be assessed to housing units within a development that are subject to covenants that restrict occupancy by age-restriction (age 55+ or age 62+) covenants. In those cases where "no children" covenants are not applicable to all of the units in a development, however, the school fees may be assessed to the units that are not subject to an age limitation covenant.

In situations where a development is governed by minimum age-restrictions, at least eighty percent (80%) of the units must be limited to households in which at least one person is age 55 or older, with no age restrictions on the remaining 20% of the dwellings, the Town could assess the school impact fees to all units within the development by charging them at 20% of the standard school impact fee. (This policy is applied in nearby Bedford when assessing school impact fees.)

2020 SCHOOL IMPACT FEE SCHEDULE BY DWELLING UNIT TYPE - TOWN OF AMHERST

CAPITAL COST BASIS FOR SCHOOL FACILITIES AT NH DEPARTMENT OF EDUCATION MAXIMUM REIMBURSABLE COST

Type of Structure	Proportionate Demand Factors - Demand on School Facility Space								School Construction Cost Per Sq. Ft.			Average School Facility Cost Per Dwelling
	Enrollment Per Household				Average School Floor Area (Sq. Ft.) Per Pupil Capacity				**$185**	**$192**	**$196**	
									School Facility Development Cost Per Sq. Ft. Residential Living Area			
	Elementary School	Middle School	High School	Total Public Schools	Elementary School	Middle School	High School	Overall Average	Elementary School	Middle School	High School	
Single Family Detached	0.156	0.139	0.144	0.439	108	135	167	136	$3,117	$3,603	$4,713	$11,433
Attached & Townhouse	0.086	0.065	0.086	0.237	108	135	167	137	$1,718	$1,685	$2,815	$6,218
Two-Family	0.096	0.096	0.136	0.328	108	135	167	140	$1,918	$2,488	$4,452	$8,858
Three or More Family	0.108	0.058	0.067	0.233	108	135	167	132	$2,158	$1,503	$2,193	$5,854
Manufactured Housing	0.108	0.058	0.067	0.233	108	135	167	132	$2,158	$1,503	$2,193	$5,854
Multifamily & Manufactured	0.076	0.049	0.065	0.190	108	135	167	135	$1,518	$1,270	$2,128	$4,916
All Non-Single Family Det. Housing	0.086	0.070	0.097	0.253	108	135	167	138	$1,718	$1,814	$3,175	$6,707

Housing Structural Type	District Net Cost Per Dwelling Unit				Credit Allowances for Debt Service Cost of Capacity Needs of Existing Development				**Net Impact Fee Per Dwelling Unit Assessment Schedule**		
	Capital Cost Per Unit Net of Historic State Building Aid								(Capital Cost Less Credits)		
	Elementary @30% SBA	Middle @30% SBA	HS @40% SBA	Total Public Schools		K-8 Schools	High School	Total Credit	**Amherst School Impact Fee Per Unit** K-8 Schools	High School	**Total**
Single Family Detached	$2,182	$2,522	$2,828	$7,532		($699)	($1,044)	($1,743)	$4,005	$1,784	**$5,789**
Attached & Townhouse	$1,203	$1,180	$1,689	$4,072		($371)	($555)	($926)	$2,012	$1,134	**$3,146**
Two-Family	$1,343	$1,742	$2,671	$5,756		($401)	($600)	($1,001)	$2,684	$2,071	**$4,755**
Three or More Family	$1,511	$1,052	$1,316	$3,879		($251)	($375)	($626)	$2,312	$941	**$3,253**
Manufactured Housing	$1,511	$1,052	$1,316	$3,879		($126)	($189)	($315)	$2,437	$1,127	**$3,564**
Multifamily & Manufactured	$1,063	$889	$1,277	$3,229		($207)	($308)	($515)	$1,745	$969	**$2,714**
All Non-Single Family Det. Housing	$1,203	$1,270	$1,905	$4,378		($317)	($472)	($789)	$2,156	$1,433	**$3,589**

2020 SCHOOL IMPACT FEE ASSESSMENT BASED ON BEDROOMS (ALL HOUSING UNITS EXCEPT AGE RESTRICTED)

CAPITAL COST BASIS FOR SCHOOL FACILITIES AT NH DEPARTMENT OF EDUCATION MAXIMUM REIMBURSABLE COST

All Structural Types by Bedrooms	Proportionate Demand Factors - Demand on School Facility Space								School Construction Cost Per Sq. Ft.		
	Enrollment Per Household				Avg. Sq. Ft. School Space Per Pupil Capacity				**$185**	**$192**	**$196**
	Elementary School	Middle School	High School	Total Public Schools	Elementary School	Middle School	High School	Overall Average	Elementary School	Middle School	High School
1 Bedroom	0.033	0.033	0.024	0.090	108	135	167	134	$659	$855	$786
2 Bedrooms	0.063	0.056	0.055	0.174	108	135	167	135	$1,259	$1,452	$1,800
3 Bedrooms	0.145	0.134	0.137	0.416	108	135	167	136	$2,897	$3,473	$4,484
4 Bedrooms or More	0.200	0.172	0.187	0.559	108	135	167	136	$3,996	$4,458	$6,121

NET IMPACT FEE SCHEDULE BY BEDROOMS

All Structural Types by Bedrooms	District Net Cost Per Dwelling Unit				Credit Allowances for Debt Service Cost of Capacity Needs of Existing Development				**Net Impact Fee Per Dwelling Unit Assessment Schedule**		
	Capital Cost Per Unit Net of Historic State Building Aid								(Capital Cost Less Credits)		
	K-5 @30% SBA	6-8 @30% SBA	9-12 @40% SBA	Total Public Schools		K-8 Schools	High School	Total Credit	**Amherst School Impact Fee Per Unit** K-8 Schools	High School	**Total**
1 Bedroom	$461	$599	$472	**$1,532**		($334)	($498)	($832)	$726	($26)	**$700**
2 Bedrooms	$881	$1,016	$1,080	**$2,977**		($463)	($690)	($1,153)	$1,434	$390	**$1,824**
3 Bedrooms	$2,028	$2,431	$2,690	**$7,149**		($609)	($909)	($1,518)	$3,850	$1,781	**$5,631**
4 Bedrooms or More	$2,797	$3,121	$3,673	**$9,591**		($818)	($1,221)	($2,039)	$5,100	$2,452	**$7,552**

2020 AMHERST SCHOOL IMPACT FEES BASED ON SQUARE FEET OF LIVING AREA CAPITAL COST BASIS FOR SCHOOL FACILITIES AT NH DEPARTMENT OF EDUCATION MAXIMUM REIMBURSABLE COST											
	Proportionate Demand Factors - Demand on School Facility Space								School Construction Cost Per Sq. Ft.		
Type of Structure	Enrollment Per Thousand Square Feet				Avg. Sq. Ft. School Space Per Pupil Capacity				**$185**	**$192**	**$196**
	Elementary School	Middle School	High School	Total Public Schools	Elementary School	Middle School	High School	Overall Average	Elementary School	Middle School	High School
Single Family Det.	0.067	0.060	0.062	0.189	108	135	167	136	$1.34	$1.56	$2.03
Townhouse	0.065	0.049	0.065	0.179	108	135	167	137	$1.30	$1.27	$2.13
Two Family	0.069	0.069	0.098	0.236	108	135	167	140	$1.38	$1.79	$3.21
Three or More Family	0.096	0.052	0.059	0.207	108	135	167	132	$1.92	$1.35	$1.93
Manufactured Housing	0.096	0.052	0.059	0.207	108	135	167	132	$1.92	$1.35	$1.93
Multifamily & Manufactured	0.069	0.044	0.059	0.172	108	135	167	135	$1.38	$1.14	$1.93
All Non-Single Family Det. Housing	0.068	0.056	0.077	0.201	108	135	167	138	$1.36	$1.45	$2.52
Housing Structural Type	District Net Cost Per Square Foot				Credit Allowances for Debt Service Cost of Capacity Needs of Existing Development				**Net Impact Fee Per Sq. Ft. Living Area Assessment Schedule** (Capital Cost Less Credits) Per Sq. Ft. Living Area		
	Capital Cost Per Square Foot Net of Historic State Building Aid					K-8 Schools	High School	Total Credit	**Amherst School Impact Fee Per Unit**		
									K-8 Schools	**High School**	**Total**
Single Family Detached	$0.94	$1.09	$1.22	**$3.25**		($0.49)	($0.44)	($0.93)	$1.54	$0.78	**$2.32**
Attached & Townhouse	$0.91	$0.89	$1.28	**$3.08**		($0.46)	($0.42)	($0.88)	$1.34	$0.86	**$2.20**
Two-Family	$0.97	$1.25	$1.93	**$4.15**		($0.49)	($0.44)	($0.93)	$1.73	$1.49	**$3.22**
Three or More Family	$1.34	$0.95	$1.16	**$3.45**		($0.37)	($0.33)	($0.70)	$1.92	$0.83	**$2.75**
Manufactured Housing	$1.34	$0.95	$1.16	**$3.45**		($0.20)	($0.18)	($0.38)	$2.09	$0.98	**$3.07**
Multifamily & Manufactured	$0.97	$0.80	$1.16	**$2.93**		($0.31)	($0.27)	($0.58)	$1.46	$0.89	**$2.35**
All Non-Single Family Det. Housing	$0.95	$1.02	$1.51	**$3.48**		($0.43)	($0.39)	($0.82)	$1.54	$1.12	**$2.66**

Note: It is recommended that if the square foot method is adopted for school impact fees, that the maximum floor area per unit be limited to 3,000 square feet of living area. Above this size, the average ratio of pupils per 1,000 square feet of living area is not likely to be sustained.

School Impact Fee Credit Allowance Calculations

(Shown in this section for average housing units by structure type. Parallel calculations were prepared for the square foot and bedroom based models).

Notes:

Future debt service payments on completed homes are based on average assessed value of land and buildings for existing housing units.

Past debt service payments by a property (by vacant land prior to housing development) assume a raw land value of 15% of assessed valuation of an average housing unit.

CREDITS - Page 1

Amherst Middle School (Beginning 2001-2002)

Year	Original Principal Amount
2001-2002	$3,799,000
ASSUMPTIONS	
State Aid To District:	30.0%
Local Government Share:	100.0%
Discount Rate:	5.0%

Fiscal Year	Principal Payment	Interest Payment	Total Payment	Less State Aid	Net Debt Service Cost To District
Past Payments					
2001	$0	$92,997	$92,997	$0	$92,997
2002	$189,000	$168,556	$357,556	($56,700)	$300,856
2003	$190,000	$160,503	$350,503	($57,000)	$293,503
2004	$190,000	$152,428	$342,428	($57,000)	$285,428
2005	$190,000	$144,353	$334,353	($57,000)	$277,353
2006	$190,000	$136,278	$326,278	($57,000)	$269,278
2007	$190,000	$128,203	$318,203	($57,000)	$261,203
2008	$190,000	$120,128	$310,128	($57,000)	$253,128
2009	$190,000	$112,053	$302,053	($57,000)	$245,053
2010	$190,000	$103,978	$293,978	($57,000)	$236,978
2011	$190,000	$95,855	$285,855	($57,000)	$228,855
2012	$190,000	$87,495	$277,495	($57,000)	$220,495
2013	$190,000	$78,945	$268,945	($57,000)	$211,945
2014	$190,000	$70,300	$260,300	($57,000)	$203,300
2015	$190,000	$61,465	$251,465	($57,000)	$194,465
2016	$190,000	$52,250	$242,250	($57,000)	$185,250
2017	$190,000	$42,750	$232,750	($57,000)	$175,750
2018	$190,000	$33,250	$223,250	($57,000)	$166,250
2019	$190,000	$23,750	$213,750	($57,000)	$156,750
Future Payments					
2020	$190,000	$14,250	$204,250	($57,000)	$147,250
2021	$190,000	$4,750	$194,750	($57,000)	$137,750
Total Payments	$3,799,000	$1,884,537	$5,683,537	($1,139,700)	$4,543,837

Present Worth of Past Payments @ 5%	$7,392,984
2019 Enrollment as Percent of Middle School Capacity	75%
Credited Amount	$5,571,524
Amherst Net Local Assessed Valuation (Fall 2019)	$1,737,836,020
PW of Past Payments Per Thousand Assessed Value	$3.21
Present Value of Future Payments @ 5%	$285,000
2009 Enrollment as Percent of Middle School Capacity	75%
Credited Amount	$214,783
PW of Past Payments Per Thousand Assessed Value	$0.12

Type Unit	Avg Assessed Valuation Per Unit	Raw Land Portion of Value @ 15%	Credit for Past Payments	Credit for Future Payments	Total Credit Allowance
Single Family	$348,000	$52,200	$168	$42	$210
Townhouse	$185,000	$27,750	$89	$22	$111
Two Family	$200,000	$30,000	$96	$24	$120
Multifamily	$125,000	$18,750	$60	$15	$75
Manuf. Housing	$63,000	$9,450	$30	$8	$38
Multifam. & Manuf. Hsg.	$103,000	$15,450	$50	$12	$62
All Non-Single Family	$158,000	$23,700	$76	$19	$95

CREDITS - Page 2
Bond for Clark, Wilkins, AMS Improvements

	Year	Original Principal Amount	
	2008	$3,883,620	Net Interest Cost - 4.24%
	ASSUMPTIONS		
State Aid To District:		30.0%	Of Principal Due on Bonds
Local Government Share:		100.0%	
Discount Rate:		5.0%	

Year	Principal Payment	Interest Payment	Total Payment	Less State Aid	Net Debt Service Cost To District
Past Payments					
2009	$193,620	$195,200	$388,820	($58,086)	$330,734
2010	$195,000	$173,369	$368,369	($58,500)	$309,869
2011	$195,000	$165,569	$360,569	($58,500)	$302,069
2012	$195,000	$155,819	$350,819	($58,500)	$292,319
2013	$195,000	$146,069	$341,069	($58,500)	$282,569
2014	$195,000	$135,831	$330,831	($58,500)	$272,331
2015	$195,000	$125,594	$320,594	($58,500)	$262,094
2016	$195,000	$115,356	$310,356	($58,500)	$251,856
2017	$195,000	$105,119	$300,119	($58,500)	$241,619
2018	$195,000	$94,881	$289,881	($58,500)	$231,381
2019	$195,000	$84,644	$279,644	($58,500)	$221,144
Future Payments					
2020	$195,000	$74,894	$269,894	($58,500)	$211,394
2021	$195,000	$66,850	$261,850	($58,500)	$203,350
2022	$195,000	$58,806	$253,806	($58,500)	$195,306
2023	$195,000	$50,519	$245,519	($58,500)	$187,019
2024	$195,000	$42,231	$237,231	($58,500)	$178,731
2025	$195,000	$33,944	$228,944	($58,500)	$170,444
2026	$190,000	$25,413	$215,413	($57,000)	$158,413
2027	$190,000	$17,100	$207,100	($57,000)	$150,100
2028	$190,000	$8,550	$198,550	($57,000)	$141,550
Total Payments	$3,883,620	$1,875,757	$5,759,377	($1,165,086)	$4,594,291

Present Worth of Past Payments @ 5%	$4,141,102
2019 Enrollment as Percent of K-8 Capacity	80%
Credited Amount	$3,312,360
Amherst Net Local Assessed Valuation (Fall 2019)	$1,737,836,020
PW of Past Payments Per Thousand Assessed Value	$1.91
Present Value of Future Payments @ 5%	$1,280,993
2019 Enrollment as Percent of K-8 Capacity	80%
Credited Amount	$1,024,633
PW of Past Payments Per Thousand Assessed Value	$0.59

Type Unit	Avg Assessed Valuation Per Unit	Raw Land Portion of Value @ 15%	Credit for Past Payments	Credit for Future Payments	Total Credit Allowance
Single Family	$348,000	$52,200	$100	$205	$305
Townhouse	$185,000	$27,750	$53	$109	$162
Two Family	$200,000	$30,000	$57	$118	$175
Multifamily	$125,000	$18,750	$36	$74	$110
Manuf. Housing	$63,000	$9,450	$18	$37	$55
Multifam. & Manuf. Hsg.	$102,904	$15,436	$29	$61	$90
All Non-Single Family	$157,550	$23,633	$45	$93	$138

Credits - Page 3
Souhegan Cooperative High School
Original Construction

Year	Original Principal Amount
1991	$12,136,508
	6.00 to 7.45 %

ASSUMPTIONS

State Aid To Coop. District:	40.0%	Of Principal Due on Bonds
Amherst Share of Net District	85.0%	
Discount Rate:	5.0%	

Year	Principal Payment	Interest Payment	Total Payment	Less State Aid	Net Debt Service Cost To District	Amherst Share of Net Cost Est. @ 85%
1991	$45,000	$472,533	$517,533	($18,000)	$499,533	$424,603
1992	$955,000	$469,833	$1,424,833	($382,000)	$1,042,833	$886,408
1993	$1,165,000	$411,100	$1,576,100	($466,000)	$1,110,100	$943,585
1994	$1,200,000	$338,288	$1,538,288	($480,000)	$1,058,288	$899,544
1995	$1,265,000	$262,088	$1,527,088	($506,000)	$1,021,088	$867,924
1996	$1,335,000	$180,494	$1,515,494	($534,000)	$981,494	$834,270
1997	$1,420,000	$93,720	$1,513,720	($568,000)	$945,720	$803,862
1998	$860,962	$599,038	$1,460,000	($344,385)	$1,115,615	$948,273
1999	$631,854	$523,146	$1,155,000	($252,742)	$902,258	$766,919
2000	$549,585	$535,415	$1,085,000	($219,834)	$865,166	$735,391
2001	$475,122	$539,879	$1,015,001	($190,049)	$824,952	$701,209
2002	$410,366	$534,634	$945,000	($164,146)	$780,853	$663,725
2003	$354,165	$525,835	$880,000	($141,666)	$738,334	$627,584
2004	$305,565	$514,435	$820,000	($122,226)	$697,774	$593,108
2005	$261,964	$498,036	$760,000	($104,786)	$655,214	$556,932
2006	$222,978	$477,022	$700,000	($89,191)	$610,809	$519,187
2007	$189,682	$455,318	$645,000	($75,873)	$569,128	$483,758
2008	$160,032	$429,968	$590,000	($64,013)	$525,988	$447,089
2009	$133,718	$401,282	$535,000	($53,487)	$481,513	$409,286
2010	$112,670	$372,330	$485,000	($45,068)	$439,932	$373,942
2011	$92,846	$337,154	$430,000	($37,138)	$392,862	$333,933
Total Payments	$12,146,509	$8,971,546	$21,118,055	($4,858,604)	$16,259,451	$13,820,532

Present Worth of Past Payments by Town @ 5%	$38,734,844
2019 Enrollment as Percent of Capacity	74%
Credited Amount	$28,849,189
Amherst Net Local Assessed Valuation (Fall 2019)	$1,737,836,020
PW of Past Payments Per Thousand Assessed Value	$16.60

Type Unit	Avg Assessed Valuation Per Unit	Raw Land Portion of Value @ 15%	Credit for Past Payments	Credit for Future Payments	Total Credit Allowance
Single Family	$348,000	$52,200	$867	$0	$867
Townhouse	$185,000	$27,750	$461	$0	$461
Two Family	$200,000	$30,000	$498	$0	$498
Three or More Family	$125,000	$18,750	$311	$0	$311
Manufactured Housing	$63,000	$9,450	$157	$0	$157
Multifamily & Manufactured	$102,904	$15,436	$256	$0	$256
All Non-Single Family Det. Housing	$157,550	$23,633	$392	$0	$392

Credits - Page 4
Souhegan Cooperative High School
Annex Construction

Year	Original Principal Amount
2002	$5,800,000
	4.95%

ASSUMPTIONS		
State Aid To Coop. District:	40.0%	Of Principal Due on Bonds
Amherst Share of Net District Cost:	85.0%	
Discount Rate:	5.0%	

Year	Principal Payment	Interest Payment	Total Payment	Less State Aid	Net Debt Service Cost To District	Amherst Share of Net Cost Est. @ 85%
Past Payments						
2003	$580,000	$161,455	$741,455	($232,000)	$509,455	$433,037
2004	$580,000	$258,390	$838,390	($232,000)	$606,390	$515,432
2005	$580,000	$229,680	$809,680	($232,000)	$577,680	$491,028
2006	$580,000	$200,970	$780,970	($232,000)	$548,970	$466,625
2007	$580,000	$172,260	$752,260	($232,000)	$520,260	$442,221
2008	$580,000	$143,550	$723,550	($232,000)	$491,550	$417,818
2009	$580,000	$114,840	$694,840	($232,000)	$462,840	$393,414
2010	$580,000	$86,130	$666,130	($232,000)	$434,130	$369,011
2011	$580,000	$57,420	$637,420	($232,000)	$405,420	$344,607
2012	$580,000	$28,710	$608,710	($232,000)	$376,710	$320,204
Total Payments	$5,800,000	$1,453,405	$7,253,405	($2,320,000)	$4,933,405	$4,193,397

Present Worth of Past Payments @ 5%	$7,928,202
2019 Enrollment as Percent of Capacity	74%
Credited Amount	$5,904,818
Amherst Net Local Assessed Valuation (Fall 2019)	$1,737,836,020
PW of Past Payments Per Thousand Assessed Value	$3.40
Present Value of Future Payments @ 5%	$0
2010 Enrollment as Percent of Capacity	74%
Credited Amount	$0
PW of Past Payments Per Thousand Assessed Value	$0.00

Type Unit	Avg Assessed Valuation Per Unit	Raw Land Portion of Value @ 15%	Credit for Past Payments	Credit for Future Payments	Total Credit for Debt Service
Single Family	$348,000	$52,200	$177	$0	$177
Townhouse	$185,000	$27,750	$94	$0	$94
Two Family	$200,000	$30,000	$102	$0	$102
Three or More Family	$125,000	$18,750	$64	$0	$64
Manufactured Housing	$63,000	$9,450	$32	$0	$32
Multifamily & Manufactured	$102,904	$15,436	$52	$0	$52
All Non-Single Family Det. Housing	$157,550	$23,633	$80	$0	$80

Facility	Portables	Sq. Ft.	Cost per Sq. Ft. Permanent Facilities	Cost to Rectify
Wilkins Elementary	4 Classrooms	7,072	$185	$1,308,320
		Less State Building Aid @ 30%		($392,496)
		Amherst School District Cost		$915,824
	Amherst Net Local Assessed Valuation (Fall 2019)			$1,737,836,020
	Cost Per Thousand Assessed Valuation			$0.53

Type Unit	Avg Assessed Valuation Per Unit	Raw Land Portion of	Credit for Past	Credit for Future Payments	Total Credit Allowance
Single Family	$348,000	$52,200	$0	$184	$184
Townhouse	$185,000	$27,750	$0	$98	$98
Two Family	$200,000	$30,000	$0	$106	$106
Three or More Family	$125,000	$18,750	$0	$66	$66
Manufactured Housing	$63,000	$9,450	$0	$33	$33
Multifamily & Manufactured	$102,904	$15,436	$0	$55	$55
All Non-Single Family Det. Housing	$157,550	$23,633	$0	$84	$84

G. Road Impact Fee

1. Authority and Limitations

Under RSA 674:21, V impact fees may be assessed for construction or improvement of capital facilities owned or operated by the municipality, including "public road systems and rights of way". This means that road impact fees must be limited to Class V highways or Class IV urban compact roads that are maintained by the Town. In general, all types of impact fees must be proportionate to the needs generated by new development.

Minor streets that function primarily to provide access to neighborhoods and which have little through traffic are probably not appropriate as part of an impact fee assessment formula. Developers already are responsible for constructing new streets within subdivisions or to access developable land.

The portion of the local road system that comprises the network of arterial and feeder roads in Amherst represents a portion of the Town's paved road inventory that is of more common benefit to all development. This chapter provides for a road impact that is limited to the cost to provide capacity for these major Town roads.

2. Amherst Road Inventory and Reconstruction Program

During the initial planning for Amherst's road improvement program, a 2008 analysis conducted by the Amherst Road Funding Analysis Committee (RFAC) and the Department of Public Works (DPW) indicated that the original construction of the Town's roads took place many years prior to modern highway construction standards that reflect today's weight loads and traffic volume.

Amherst developed a detailed plan for improvements to its entire paved roadway system. Beginning in 2010 the Town initiated an aggressive reconstruction and road improvement program, supported by periodic bond funding, to support a pavement management system intended to extend the useful life of the road network, and to avoid the high expense of frequent rebuilding projects.

Town Maintained Paved Roads Locally Classified as Arterials and Feeders		
Road Name (Segment)	**Amherst DPW Functional Class**	**Paved Miles**
Amherst Street -1- (T/L to Border St)	Arterial	0.199
Amherst Street -2- (Border to Miles)	Arterial	0.817
Amherst Street -3- (Miles to Boston Post)	Arterial	0.748
Amherst Street -4- (Boston Post to Courthouse Rd)	Arterial	0.147
Baboosic Lake Road -1- (Spring to Pond Parish)	Arterial	1.801
Baboosic Lake Road -2- (Pond Parish to T/L)	Arterial	0.671
Boston Post Road - (#311-#315)	Arterial	0.117
Boston Post Road - (#315 to Hemlock Hill Road)	Arterial	0.416
Boston Post Road - (Cricket Corner Rd to Merrimack Rd)	Arterial	0.732
Boston Post Road - (Hemlock Hill Rd to Cricket Corner Rd)	Arterial	0.174
Boston Post Road -1- (Merrimack T/L to Merrimack Rd)	Arterial	2.558
Boston Post Road -2- (Northfield Rd to Corduroy Road)	Arterial	0.136
Boston Post Road -3- (Corduroy Road to Route 122)	Arterial	0.259
Boston Post Road -5- (Amherst St to New Boston Rd)	Arterial	0.577
Boston Post Road -6- (# to New Boston Rd)	Arterial	0.586
Boston Post Road -7- (# to Mont Vernon Road)	Arterial	0.355
Camp Road	Feeder	0.407
Chestnut Hill Road	Feeder	2.230
Christian Hill Rd -1- (Foundry St. to Eaton Rd.)	Feeder	1.000
Christian Hill Rd -2- (Eaton Rd. to Green Rd)	Feeder	0.632
Christian Hill Rd -3- (Green Rd. to Route 13)	Feeder	0.994
Corduroy Road	Arterial	0.937
County Road -2- (Upham to Cricket Corner Rd)	Feeder	0.107
County Road -3- (Cricket Corner Rd. to Merrimack T/L)	Feeder	1.239
Courthouse Road -2- (Amherst St. to Frog Hollow)	Feeder	0.218
Courthouse Road -3- (Frog Hollow to Boston Post Rd)	Feeder	0.109
Craftsman Lane	Feeder	0.237
Cricket Corner Rd -2- (Boston Post Rd. to County Rd)	Feeder	0.627
Cross Road	Feeder	0.713
Dodge Road -1- (Mack Hill Rd. to Oak Hill Rd.)	Feeder	0.122
Dodge Road -2- (Oak Hill Rd. to Oak Hill Rd.)	Feeder	0.106
Dodge Road -3- (Oak Hill Rd. to gravel)	Feeder	0.394
Foundry Street	Feeder	0.231
Horace Greeley Road	Arterial	2.536
Jones Road	Feeder	0.405
Lyndeborough Rd -1- (Amherst St. to Candlewood Dr.)	Feeder	1.428
Lyndeborough Rd -2- (Candlewood Dr. to Route 13)	Feeder	0.237
Mack Hill Road -1- (Manchester Rd. to Jones Rd.)	Arterial	0.289
Mack Hill Road -2- (Jones Road to Sprague Rd.)	Feeder	1.705
Main Street	Arterial	0.401
Manchester Road	Feeder	0.609
Merrimack Road -1- (Milford T/L to Ft. past Border St.)	Arterial	0.130
Merrimack Road -2- (Border St. 101 overpass)	Arterial	0.909
Merrimack Road -3- (101 overpass to Route 122)	Arterial	0.235
Merrimack Road -4- (Route 122 to Boston Post Road)	Arterial	1.265
Mont Vernon Rd -1- (Boston Post Rd. to foot of hill)	Feeder	0.408
Mont Vernon Rd -2- (Foot of hill past Green Rd, E of #18)	Feeder	0.284
Mont Vernon Rd -3- (Green Rd. to Mont Vernon T/L)	Feeder	0.305
New Boston Road	Feeder	1.282
North Hollis Road	Arterial	0.134
Old Manchester Road	Feeder	1.493
Old Mont Vernon Road	Feeder	0.536
Pond Parish Road	Feeder	1.383
Ponemah Hill Road	Feeder	0.825
Seaverns Bridge Rd -1- (Merrimack T/L to Arrow Lane)	Feeder	0.140
Seaverns Bridge Rd -2- (Arrow Lane to Woodbine Lane)	Feeder	0.613
Seaverns Bridge Rd -3- (Woodbine Ln. to Merrimack T/L)	Feeder	0.210
Spring Road	Feeder	2.254
Stearns Road	Arterial	1.318
Thornton Ferry Road II	Arterial	2.084
Veterans Road	Feeder	0.543
Walnut Hill Road -1- (Route 101 to Pinnacle Rd)	Feeder	0.273
Walnut Hill Road -2- (Pinnacle Rd to Broadway)	Feeder	1.271
Total Arterial & Feeder Roads		**46.102**

The DPW classifies locally-maintained paved roads as arterials, feeders, industrial, and local roads. The arterial and feeder roads comprise the central network within the Class V road inventory.

These roads (see list to left) are likely to carry higher traffic volume than the local access roads, and their improvement is of broad benefit to the community since they support travel throughout the Town.

A portion of the investment in the capacity of the arterial and feeder roads is attributable to accommodating traffic volume generated by new development.

About 41% of the 113 paved road miles maintained by the Town are locally designated as arterial or feeder roads.

Without major improvements to the central road system, the Town cannot provide desired levels of service to both existing and future development.

In its current (2020) road reconstruction program, the Amherst DPW has color-coded each road segment in Amherst relative to its condition and need for improvement. Road segments currently classified as "red" are those in need of full rebuilding. Segments coded as "yellow" are in better condition, and can be reconstructed using reclamation and a combination of treatments of somewhat lower cost. Sections that are rated "green" are in the best condition, needing improvements such as crack sealing and routine maintenance.

An impact fee is assessed only once in the lifetime of a particular unit of development. The fee should therefore represent the average cost associated with the creation of adequate roadway capacity in proportion to the development's trip generation. In the impact fee basis, the cost to create that capacity has been based on the average 2020 road rebuilding cost associated with road segments rated as "red" and requiring full rebuilding.

The average projected cost per mile for the rebuilding of "red" roads in the DPW 7-year road improvement plan (initial year 2019) is $664,000 per linear mile (equal to $332,000 per lane-mile for a two-lane road).

3. Impact Fee Model and Fee Schedule

Road impact fees can be computed in a number of ways, ranging from a generic "unit cost" approach to sophisticated computer traffic models that predict the need for highway improvements at specific locations based on new trip generation.

In the original impact fee study for Amherst, several alternatives were considered that yielded similar results. The simplest and more widely used model, a "lane mile" or unit cost method has been used to calculate a proportionate road impact fee.

This approach to road impact fees is based on the premise that trips generated by new development will encumber a certain amount of available highway capacity. The value of that capacity is measured by the cost to construct the number of lane-miles required to accommodate the number of vehicles associated with trips generated by various land uses. Average trip length and the number of trips generated by a particular land use define the amount of paved highway area (measured in lane miles) that are encumbered by a given use on an average daily basis.

In or near major cities of the U.S. where new lane-miles of highway are to be constructed to accommodate new development, fee systems based on this approach may represent the cost of adding actual new lanes of highway to meet growing traffic volume.

When the same method is applied in a reconstruction program, the concept of recoupment essentially allows the Town to recover a portion of its investment in major road improvements. The underlying assumption is that a roadway which is improved to modern day standards will have a longer useful life and the capacity to accommodate existing as well as new development at acceptable levels of service.

This approach requires a number of assumptions when applied to a local road system:

- Average daily trip generation by use
- Percent of trips "new" to the system

  (generally 100% for residential; variable for non-residential)
- Average trip length
- Estimated portion of trip length affecting Town-maintained *arterial and feeder roads*
- Road development costs per lane-mile

The model shown below provides a basis for computing a road impact fee using a modified lane-mile model to allocate a proportionate cost of Amherst arterial and feeder roads to a single family home and its associated trip generation.[2] The model computes the estimated number of lane-miles of road capacity that are encumbered by trip generation and vehicles per day associated with a single family home. The same model is then used to assign proportionate fees to other land uses based on average daily trip generation.

Lane-Mile Basis for Road Impact Fee

Road Reconstruction Cost Basis For Impact Fee - Town Arterial and Feeder Roads		
Estimated Travel Demand on Subject Roadways (Local Arterials and Feeders)		
Single Family Home Trip Ends Per Day	9.44	Average daily trips generated (ITE, Trip Generation, 2017)
Percent New Trips	100%	Adjustment factor - percent new trips for this use
Average Trip Length - Miles - All Purposes	10.5	National Household Travel Survey (NHTS), 2017
Estimated Portion of Avg. Trip Length Within Amherst	63%	Est. % of trips that are 6 miles or less (NHTS, 2017)
Percent of Amherst Paved Road Mileage Class V	86%	Class V paved roads as percent of total paved roads
Arterial/Feeder Roads Portion of Town Paved Roads	41%	Locally designated arterials or feeders as % of Class V paved
Estimated Miles Per Trip Class V Arterial/Feeder Roads	2.33	Average miles per trip affecting arterials & feeders
Allowance for Two-Way Travel (Trip End Distribution)	50%	Splits trip cost allocation between origin and destination
Vehicles Per Lane-Mile Per Day on Subject Roadways	11.00	Trip ends per day x miles per trip on subject roads x 50%
Proportionate Demand Roadway Capacity and Cost - Single Family Home		
Roadway Level of Service	LOS C	1998 Amherst Master Plan estimate for 2-lane Class V road
Max Daily Traffic Capacity (Class V, Two-Way)	7,500	Average annual daily traffic (total roadway)
One Lane @ 1/2 of capacity =	3,750	ADT Per Lane-Mile At Level of Service C
Portion of Lane Capacity Encumbered	0.00293	Vehicles per lane-mile per day as share of lane capacity
Average Reconstruction Cost Per Lane-Mile	$332,000	2020 estimated cost for reconstruction for roads rated as "red" condition by Amherst PWD 2020 (divided by two for two-lane roadway)
Road Impact Fee	$974	Road impact fee for single family home

[2] The model approach shown here is based adapted from the modeling approaches illustrated in A Practitioners Guide to Development Impact Fees, 1991, James C. Nicholas, et.al.

(a) Trip Length on Subject Road System

Average daily trip generation is based on Institute of Transportation Engineers (ITE) data from its 2017 Trip Generation manual. Trip generation rates for each use represent the number of trip ends (vehicles entering or leaving a site) per day. In this model, which is based on the average daily demand on road capacity, the appropriate trip rate multiplier is based on average daily trips rather than peak trip generation.

National Household Travel Survey (2017) data indicate that the average trip length in the U.S. is 10.5 miles. Nationally, many impact fee systems cover very large metropolitan area or county road systems across large geographic areas. In these cases, most trips might take place entirely within the jurisdiction that is assessing the fee.

Based on data from the 2017 National Household Travel Survey (interpolated) we estimate that about 63% of all trips are not more than 6 miles in length. This percentage is used as an estimate of the portion of the average trip length that would take place within the local road network.

Paved Class V mileage in Amherst represents about 86% of the total paved road mileage within the Town (the balance are State-maintained). Within the inventory of Town-maintained paved roads, 41% of the road mileage is classified as either a local arterial or feeder road.

These combined factors generate an estimate of 2.33 miles per trip on Amherst Class V arterial/feeder roads. (10.5 miles per average trip x .60 [portion of average trip distance within Amherst] x .86 [share of paved road miles in Amherst maintained by Town] x .41 [portion of Class V paved road miles designated as local feeders or arterials] = 2.33 miles per trip on locally designated arterial or feeder roads.

(b) Cost per Vehicle per Lane Mile

The Amherst Department of Public Works has estimated the full depth rebuilding cost of a typical 20-foot wide Class V road in Amherst to be $644,000 per mile (or about $322,000 per lane-mile). The average cost represents a combination of full-depth reconstruction, reclamation, and other levels of improvement that are projected for the affected road segments.

Roads of various functional classes are assumed to be capable of handling a maximum amount of average daily traffic volume at various levels of service (LOS) given assumptions about average travel speed, alignment, intervening intersections and driveways. In the Amherst Master Plan of 1998, the Nashua Regional Planning Commission estimated the capacity of a standard 2-lane Town road in Amherst at a maximum of 7,500 vehicles per day at Level of Service C (or average daily traffic of 3,750 per lane).

Each use is projected to generate a proportionate demand on the capacity of a lane-mile of roadway based on the average daily vehicles per lane that it generates. The proportionate

demand on the capacity (and cost) per lane mile is then a function of the percentage of lane capacity (3,750 per lane per day) encumbered by the development based on its estimated trip generation.

(d) Road Impact Fee Schedule

In the chart below, the lane-mile approach is extended to various types of residential structures, and to generic commercial use categories. Within this structure, BCM Planning has incorporated a 50% discount for the commercial uses. This is suggested for several reasons: (1) State highways in Amherst may absorb more of the average trip impact for travel to and from retail and commercial centers; and (2) literature on trip generation suggests that commercial trip generation rates may over-estimate net effects on trips by failing to account for intervening travel and multiple trip purposes.

Amherst Road Impact Fee Schedule Based on Lane-Mile Method

AMHERST ROAD IMPACT FEE SCHEDULE 2020					
Residential Structure Type	Average Daily Trips (ITE 2017 and ITE 2008 for Townhouse)	Attributed Arterial/Feeder Roads VPLM Per Day	**Road Impact Fee Per Dwelling Unit**	**Road Impact Fee Per Sq. Ft. Living Area**	
Single Family Detached	9.44	11.00	**$974**	**$0.42**	
Townhouse (Attached)	5.81	6.77	**$599**	**$0.45**	
Two Family	7.32	8.53	**$755**	**$0.54**	
Three or More Family	5.44	6.34	**$561**	**$0.50**	
Manufactured Home	5.00	5.83	**$516**	**$0.50**	
Commercial Development Category	Average Daily Trips Per 1000 Sq. Ft. (ITE, 2017)	% New Trips	Attributed VPLM Per Day Per 1000 Sq. Ft.	Attributable Cost Per Sq. Ft. Leasable Area	**Road Impact Fee Per Sq. Ft. @ 50% of Calculated Amount**
Retail (Shopping Center Basis)	37.75	50%	21.99	$1.95	**$0.98**
Office (General Office Basis)	9.74	100%	11.35	$1.00	**$0.50**
Industrial (Industrial Park Basis)	3.37	100%	3.93	$0.35	**$0.18**
Institutional & Other *	12.40	100%	14.45	$1.28	**$0.64**
** Median of ITE rates available per 1000 square feet for schools, church, hospital, nursing home*					

4. Exactions vs. Impact Fees for Roads

The use of impact fees for the reconstruction or rebuilding of arterial and feeder roads would not limit the Town's ability to require exactions for off-site improvements to road and drainage facilities necessitated by a particular development in its specific location.

NH RSA 674:21, V was amended in 2004 to distinguish exactions for off-site improvements from impact fees generally. Impact fees must demonstrate a reasonable relationship between capital

improvement costs and a proportionate benefit to new development generally. In contrast, exactions for off-site improvements are defined as those which are *necessitated by* a development but which are located outside the property subject to a site plan or subdivision approval by the planning board.

More specifically, exactions center on those off-site improvements that are limited to *"…any necessary highway, drainage and sewer and water upgrades pertinent to that development*." (See RSA 674:21, V (j)). Exactions will generally need to demonstrate a geographic nexus between collection and application of funds, because they are based on the specific upgrades necessary to support a particular development site.

The more generic nature of a road impact fee represents a broader relationship between the fee assessed and the benefit to new development that are provided by a *network or system* rather than the improvements of a specific intersection or location. Impact fees (rather than exactions) are used to capture these system-wide impacts.