

Litchfield Impact Fee Update 2014

Part 2:

Public Safety, Municipal Office, Recreation and Library

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Prepared for:

Town of Litchfield Planning Board

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Executive Summary

Impact fees may be assessed to new development to help offset its proportionate share of the cost of required capital facilities. The capital facility requirements associated with new development must be associated with a series of standards that apply equally to the existing as well as projected population. Where the standards indicate that there is a deficiency in the capital facilities provided in the base year, that deficiency must be rectified using funds other than impact fees. It is preferable to apply facility standards that are reasonably achievable rather than to apply high standards that less likely to be matched by actual construction.

The summary fee schedule below shows the calculations supported by the models contained in this report for Police, Fire, Town Office and Recreation facilities:

IMPACT FEE SCHEDULE FOR TOWN FACILITIES - 2014 UPDATE								
Use Category	Impact Fees Per Dwelling Unit or Average Per Square Foot							
Residential Uses Per Dwelling Unit	Police	Fire *	Town Office	Library	Recreation (1)	Recreation (2)	Recreation (3)	Recreation (4)
Single Detached	\$310	\$851	\$238	\$306	\$1,093	\$1,166	\$1,274	\$1,929
Townhouse	\$202	\$561	\$153	\$204	\$697	\$758	\$811	\$1,245
Two Family	\$275	\$788	\$203	\$291	\$910	\$1,031	\$1,059	\$1,667
Multifamily 3+ Units	\$267	\$822	\$185	\$311	\$798	\$997	\$925	\$1,557
Manufactured Housing	\$297	\$906	\$208	\$343	\$899	\$1,109	\$1,042	\$1,741
Alternative: Fee Per Square Foot	\$0.19	\$0.52	\$0.14	\$0.19	\$0.62	\$0.69	\$0.72	\$1.12
Commercial Uses - Per Square Foot	Commercial-Industrial Impact Fees Per Square Foot							
	Police	Fire	Town Office	Library	Recreation (1)	Recreation (2)	Recreation (3)	Recreation (4)
Retail, Including Restaurants, Clubs	\$0.43	\$1.14	\$0.15		No Fees for Commercial Uses			
Offices and Commercial Services	\$0.17	\$0.39	\$0.15					
Industrial, Transportation, Warehouse	\$0.09	\$0.23	\$0.16					
Other Institutional Uses	\$0.45	\$1.23	\$0.16					
Average Non-Residential	\$0.29	\$0.77	\$0.15					
*Fire impact fee includes apportioned value of existing capital equipment.								
Recreation (1) based on modified facility standards; facilities cost excludes bike path and new gym.								
Recreation (2) based on original fee standards from 2002 Master Plan (standards & facilities did not include a gym; includes bike trail)								
Recreation (3) based on modified recreation standards, bike path at current mileage, no new gym.								
Recreation (4) based on modified recreation standards, bike path at current mileage, and a new gym.								

A number of options are shown for the recreation impact fees that accommodate different assumptions as to facility standards and with respect to the inclusion of the costs of a bike path and development of a new gym. The full extent of future bike path mileage has yet to be defined in a recreation plan; therefore a range of standards has been explored based on bike path options under consideration.

In general, the Town continues to have significant building area deficiencies in space for Fire Department and Library services, and Police Department storage space is not integrated into the current facility. There are relatively minor overall space deficiencies relative to the fee standards with respect to the Town Office. Recreation however is one area where there has been a level of investment that has created field space in excess of the standards used to define Litchfield's recreation facility needs.

A new Capital Improvement Program is under development and is expected to be completed sometime in 2015. The CIP may define a new series of long term improvements and cost assumptions related to facility development needs. Upon completion of the CIP, the impact fee models should be reviewed and modified accordingly to best reflect the improvements likely to be funded by the Town.

The continuity of impact fee assessment is contingent on the actual provision of capital facilities that meet or exceed the standards used to calculate the amount of the fee. This will often require an advanced investment by the Town to create the facilities needed in advance of new development, with future impact fee revenues used to offset the portion of the capital investment that is attributable to new development.

A. Introduction and Impact Fee Principles

1. Purpose of Analysis

This study was prepared to update the basis for the schedules used by the Litchfield Planning Board for the assessment of impact fees to new development for public school facilities the municipal public road system. Options for proportionate impact fee assessment are presented for both of these facility categories. The process of impact fee assessment will be governed by the impact fee provisions of the Litchfield zoning ordinance; this report is solely focused on computing a fee that is proportionate to the demand exerted by new development on the capital facilities owned and operated by the Town and School District.

2. 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 capital facilities. The amounts assessed must be reasonably proportionate to the demands 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 to provide that capacity. If there is no surplus capacity available, the impact fee may be based on the anticipated investment in capital facilities required to accommodate development.

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 computed based on maintenance or repair expense. The cost to improve or expand facilities (quality or capacity) may be reflected in the impact fee in proportion to a measure of proportionate demand that associates the development with the quantity and cost of facilities that it consumes.

3. Impact Fee Assessment and Application

The assessment of an impact fee may take place at the subdivision approval and/or building permit stage of development. "Assessment" constitutes an assignment of a fee amount to a unit of development; the actual collection of the impact fee takes place as a condition to receiving a certificate of occupancy. This practice allows the development to anticipate the amount of the fee, but to pay it at the time that the development is 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 (generally to the current owner of record). Impact fees may also be applied to debt service for related capital facilities; this effectively reduces the debt service impact on the tax rate.

The revenue received from impact fee assessment is a function of the pace of new construction. When development is occurring at a slow pace, impact fee generation will be minimal. But during stronger economic periods, the revenue stream will increase in proportion to the scope of building permits issued for new development. When more rapid periods of growth occur, the impact fee assessment allows the Town to capture those revenues at the same pace that development is adding to the service base and contributing to a demand on facilities.

4. Options for Impact Fee Assessment

The impact fees computed for public safety and municipal offices would be assessed to both residential and commercial-industrial uses. For residential development, the Town could elect to assess a flat fee per square foot for all residential development, or assess the fees per dwelling unit using the five structural categories shown. Similarly, the non-residential fees may be assessed either as a flat fee per square foot for all uses, or be assessed at the different rates per square foot shown for the subcategories of the non-residential sector.

5. Guide to Non-Residential Use Categories

Table 1 below illustrates the typical uses found within the various non-residential sub-categories. This may be used as a rough guideline for assigning particular land uses within the non-residential sector.

Table 1: General Use Groupings for Non-Residential Development

Non-Residential Use Groupings for Public Safety Impact Fee Assessment	
Use Grouping	Examples
Retail, Including Restaurants, Clubs	Big box, specialty and convenience stores, malls, restaurants, grocery stores, gas stations, clubs, bars, car wash, lodging, theaters, auto sales and service, and amusement & entertainment uses
Offices and Commercial Services	Banks, insurance offices, office condo, medical condo, commercial condos, processing centers, automotive services other than sales, professional buildings, commercial recreation and health clubs, day care, business and personal services
Industrial, Transportation, Warehouse, Communications	Factories, manufacturing and processing, R & D facility, lumber yard, retail gas & oil storage, warehouse, storage and distribution facilities, truck terminals, telecommunications, energy production
Other Institutional Uses	Churches, hospitals, museums, libraries, educational facilities, dormitories, charitable and fraternal organizations, general government buildings, nursing homes and assisted living providing personal care assistance.
Average Non-Residential	Other non-residential uses that are not classifiable in the above categories; or use as single categories for uniform non-residential fee.

6. Conditions of Assessment

The impact fees are based on the assumption that new or expanded public safety facilities are developed by the Town to meet both existing and projected needs. The fee model may be refined as more specific or modified plans for the construction of public safety facilities are developed.

For the public safety impact fees to be valid, progress must be made in the actual development of the capital facilities on which the fee is based. Failure to appropriate the municipal share of facility development costs within six years of the collection of a particular impact fee may require that the Town refund the impact fee paid, plus accrued interest, as required by New Hampshire RSA 674:21, V and the Litchfield impact fee ordinance. Site preparation, facility planning and design costs, as well as construction costs are all components of the fee basis. However, the assessment of the fee presumes reasonable progress in facility development so that tangible benefits are created to serve new development paying the fee.

7. Impact Fee Updates

For each of the models, different growth assumptions, facility standards, and capital cost estimates can be substituted in future updates. These estimates may be amended as more complete or up to date information becomes available on proportionate demands on public safety services or from new facility designs or cost estimates.

The models should be updated or adjusted periodically so that it reasonably represents the estimated replacement cost of the capital facilities included in the fee basis. This helps maintain parity in assessments made at different times such that the fees are commensurate with capital costs at the time of the assessment.

At the time of this writing, the Town of Litchfield is beginning an update to its Capital Improvement Program, expected to be completed sometime in 2015. The CIP may be used to better define likely long term capital investments and facility specifications and cost estimates that may lead to facility standards and dollar amounts that differ from those assumed in this report. Upon completion of the CIP, the impact fee computations should be reviewed for consistency with the adopted long term plan for capital improvements.

B. New Development Assumptions

1. Residential Development

The NRPC has prepared (2014) a detailed projection of population and housing growth for Litchfield. For the purpose of the impact fee updates, the allocation of capital costs to new development has been based on the most recent NRPC projections for 2040, with a population of 9,764 persons living in 3,342 households and a total housing inventory of 3,343 units. This projection reflects a fairly constant average household size in Litchfield during period 2010 to 2040.

Table 2: Residential Growth History and Projections

POPULATION AND HOUSING PROJECTION 1					
Year	Population Projection1 (NRPC, 2014)	Households	Housing Units	Average Household Size*	Housing Occupancy Ratio
1980	4,150	1,283	1,319	3.23	97.3%
1990	5,516	1,725	1,845	3.20	93.5%
2000	7,360	2,357	2,389	3.12	98.7%
2010	8,271	2,828	2,912	2.92	97.1%
2020p	8,808	2,904	2,960	3.03	98.1%
2030p	9,312	3,260	3,335	2.86	97.8%
2040p	9,764	3,342	3,433	2.92	97.3%
POPULATION AND HOUSING PROJECTION 2					
2040 NHOEP Population-Driven; With Household Size Declining at Regional Rate	9,515	3,674	3,774	2.59	97.3%
POPULATION AND HOUSING PROJECTION 3					
NRPC Housing Buildout (2005) with population adjusted to occupancy rate and NRPC projection of Litchfield average household size	10,523	3,604	3,702	2.92	97.3%
*2005 NRPC buildout estimate was 3,702 units but buildout population was projected using constant household size at the 2000 Census average of 3.12 persons per household. Projections 1 and 3 use 2040 projected household size (NRPC-2014)					

Projection 2 uses the most recent NH OEP population projection for 2040 at 9,515, but assumes that average household size will decline in proportion to the projected regional trend. Under this assumption, at a 97% housing occupancy ratio, Litchfield could have 3,774 total units in 2040.

Projection 3 is based on a 2005 NRPC buildout estimate for Litchfield at 3,702 housing units. At a 97.3% occupancy rate this housing stock would support 3,604 households. Using the average household size for Litchfield from the 2014 NRPC projection, occupied housing could support a buildout population of 10,523.

2. Measures of Non-Residential Development

Certain public capital facilities are generally considered to serve *residential* demands, including public schools, recreation facilities, and libraries. However, public safety services must respond to needs generated by *both residential and commercial-industrial development*. Therefore, reasonable assumptions about the

proportionate demand on services and facilities are necessary to allocate costs between these demand sectors.

a. Employment. Total employment in Litchfield was 826 in 2010 and 903 as of 2013. These figures include both private sector and government employment within the town based on NH Employment Security data.

Figure 1

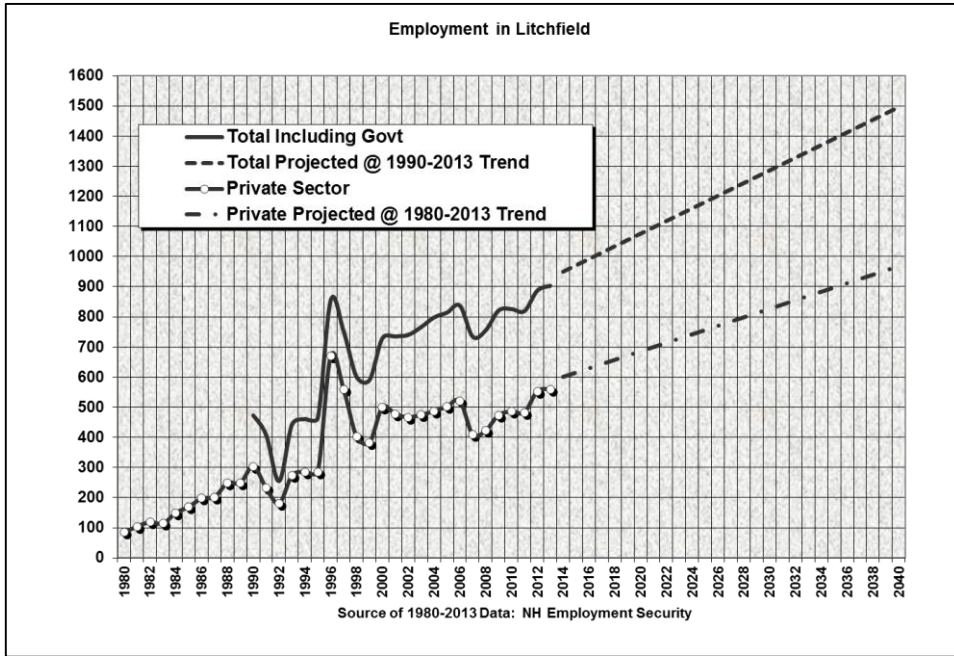


Figure 3 shows the trend in private sector and total employment within the Town based on available data and reporting periods. Linear projections are shown based on 1980-2013 and 1990-2013 trends.

Based on the linear projections, total employment (jobs) within the Town could grow to nearly 1,500 by the year 2040. The linear trend projection for private sector jobs indicates potential for about 950 in 2040.

b. Building Floor Area. Using the Litchfield property tax assessment data base, BCM Planning tabulated the floor area of non-residential buildings by use category and the growth in floor area based on year built data in the assessment file. (See Figure 2.) Over half of the existing non-residential development in the Town is in government and school buildings. Based on 2012 assessment data, the floor area in non-residential buildings is estimated at 540,550 square feet including public uses.

Using linear projections of floor area based on long term past trends, total floor area could reach 850,000 to 900,000 square feet in 2040. That would represent average annual growth of about 10,300 to 12,000 square feet per year.

During the three decades from 1980-2010, the average annual increment in floor area has been about 10,000 square feet. However, the period from 2000 to 2010 yielded only minimal growth in non-residential floor area.

Figure 2

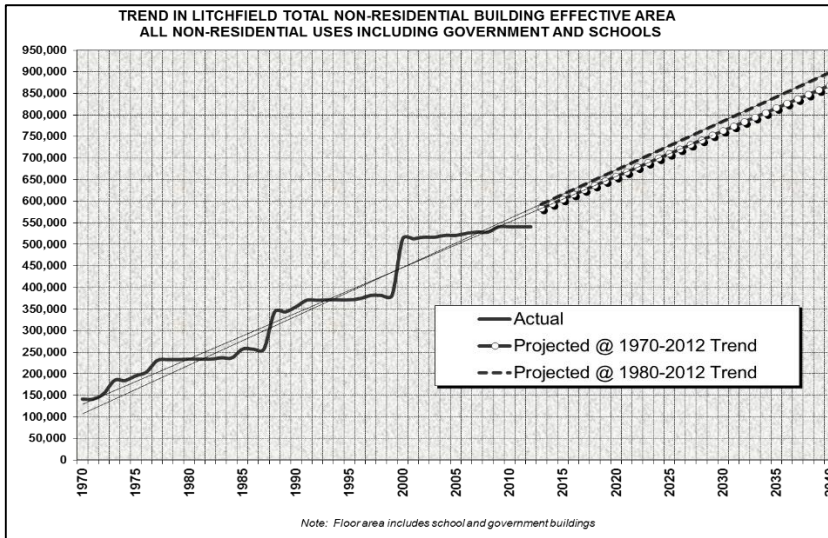


Table 3: Non Residential Floor Area Total by Year

Year	Effective Area - Cumulative Sq. Ft.	Change From Prior Period	Avg Annual Change
1960	124,289	--	--
1970	141,249	16,960	1,696
1980	233,677	92,428	9,243
1990	354,999	121,322	12,132
2000	512,952	157,953	15,795
2010	540,550	27,598	2,760

When government uses (including school facilities) are excluded from the totals, total non-residential floor area in Litchfield is about 261,000 square feet.

Based on linear projections, commercial-industrial floor area in the year 2040 would be between 400,000 and 425,000 square feet using the long term trends of 1970-2012.

Based on a shorter period between 1980-2012, the projected floor area would be between 375,000 and 400,000 square feet in 2040. These projections would represent average annual growth in private sector uses of 3,800 – 4,600 square feet per year.

Figure 3

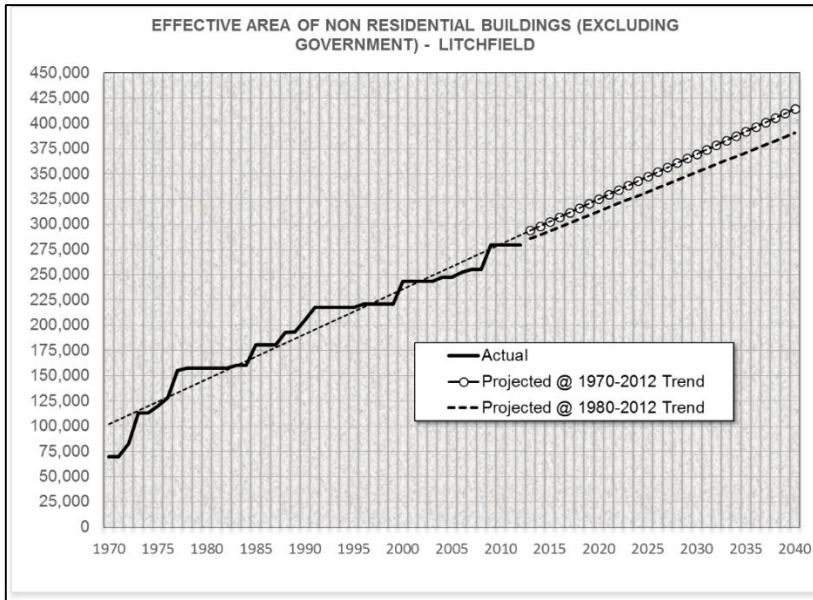


Table 4: Floor Area in Commercial-Industrial Buildings (Excludes Government)

Year	Effective Area - Cumulative Sq. Ft.	Change From Prior Period	Avg Annual Change
1960	57,943	--	--
1970	69,658	11,715	1,172
1980	157,226	87,568	8,757
1990	204,934	47,708	4,771
2000	243,570	38,636	3,864
2010	260,873	17,303	1,730

The average annual growth in floor area from 1980-2010 was about 3,500 square feet per year. For the 40-year period 1970-2010 the average was about 4,800 square feet per year.

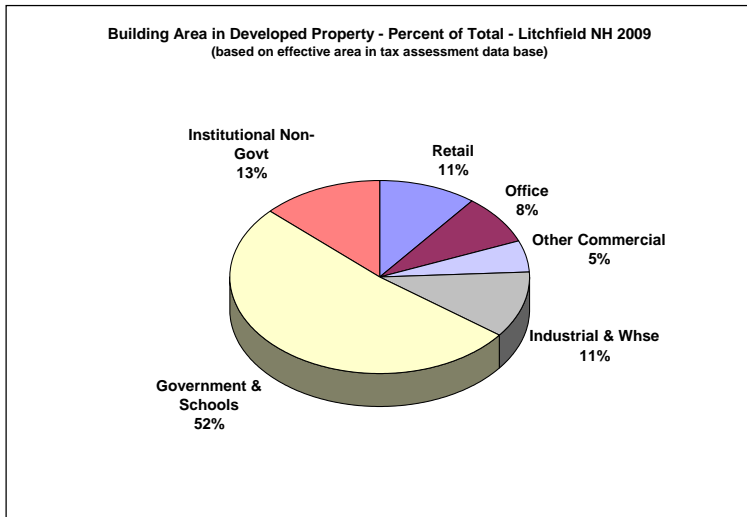
In Litchfield, a significant share of employment and non-residential floor area is in government employment and facilities (includes schools).

In a 2009 study which updated public safety impact fees, a breakdown of non-residential floor area was developed as shown in Figure 4. Government and school buildings accounted for over half of the total non-residential floor area in Litchfield.

Although impact fees will not be assessed to government uses, the growth in the entire non-residential service base (employees and buildings) has an effect on service demand, and must be considered as part of the proportionate demand on municipal and public safety services.

The overall average floor area (effective area) per employee (including government and school uses) as of 2012 averaged just over 600 square feet per employee in Litchfield. For the purpose of projecting future conditions, the same average of 600 square feet per employee has been applied.

Figure 4



For the purpose of the impact fee model, a year 2040 employment projection of 1,500 has been assigned. At an average of 600 square feet per employee in 2040, future non-residential floor area is estimated at 900,000 square feet. Using these estimates for a baseline year and a long-term horizon year, estimates may be made of the proportionate demands on services arising from the non-residential sector.

3. Proportionate Demand Measures

Several means of measuring proportionate demand on capital facilities were used to estimate public safety demand from residential and non-residential sectors in Litchfield. These include the following:

a. Calls for Service. For the last update of public safety impact fees, the Police Department provided a count of its calls for service compiled by street name (individual addresses not available) for the period 2007 through mid-October 2009. BCM Planning compiled assessment data to identify streets on which the majority of floor area was non-residential (includes public buildings). For these streets, the number of calls for services was assumed to be proportionately related to residential vs. non-residential floor area. Calls for service to all other streets were presumed to be residential in character. Calls shown at the Police Station headquarters address were excluded.

Based on this procedure, BCM Planning estimated the following:

About 82% residential vs. 18% other (non-residential calls)

For calls assigned to streets (other than to the PD headquarters):

0.54 residential calls per housing unit, or 0.26 per 1000 square feet

0.66 non-residential calls per 1000 square feet

The above ratios were used to project future proportions of calls for service between the residential and non-residential sector. This data could be improved in the future if calls for service could be tabulated by street name and number. These estimates were developed for Police Department

calls for service only. Similar information might be developed based on Fire Department records if detailed response data were available.

b. Assessed Valuation of Developed Property. Public safety provides for the protection of “persons and property”. Therefore, assessed valuation and building area are appropriate measures of the proportion demand on protective services. Using 2012 property assessment data (including values assigned to non-taxable property) 94% of the assessed valuation of developed property (excluding utilities and railroads) was estimated to be residential and 6% was in non-residential uses. The non-residential category includes public and institutional facilities, which carry an assessed value even though not such uses are tax-paying entities.

c. Building Floor Area. Proportionate service demands may also be measured by the amount of building floor area subject to police or fire department protection. Using the property tax assessment database, BCM Planning estimated the floor area of residential and non-residential floor area using effective area as the relative measure. As of 2012, about 92% of building floor area was estimated to be in residential use vs. 8% in non-residential development.

d. Population and Employment. The relationship between the resident population and total persons working in Litchfield provides a measure of the relative potential demand on services from the residential and non-residential sectors. As of 2010, total employment in Litchfield (including government) was 826 and the 2010 Census population was 8,271. If population and employment are summed (9,097) the ratio of resident population to the number of persons working in Litchfield is 91% population (residential) and 9% employment (non-residential).

Table 5 – Proportionate Service Demand Assumptions

Proportionate Measure	Base Year Estimates		2040 PROJECTION	
	Residential	Non-Residential	Residential	Non-Residential
Department Calls for Service (2008 sample)	82%	18%	76%	24%
Valuation of Developed Property (2012)	94%	6%	91%	9%
Building Floor Area (2012)	92%	8%	89%	11%
Population/Employment (2010)	91%	9%	87%	13%
Average of Factors	90%	10%	86%	14%
Average Excluding Calls	92%	8%	89%	11%

4. Proportionate Demand for Public Safety Services

Service demands on public safety are generated by both residential and non-residential property. Public safety services provide for emergency preparedness as well as response functions in the protection of persons and property. Therefore, an average of the above factors has been used to estimate the overall proportion of service demand of the residential vs. non-residential sectors. For the base year overall demand on public safety is estimated at 90% residential demand and 10% non-residential. Projecting the four factors of employment, population, valuation and floor area to the year 2040, the proportionate shares of demand in the horizon year would shift toward a higher non-residential share. When the factors are averaged, the ratio is about 86% residential and 14% non-residential.

Certain commercial and industrial use categories tend to generate a range of response rates per square foot, particularly for police department calls for service. Retail, lodging, restaurant and institutional uses tend to have higher levels of traffic and human activity per square foot than general commercial, office or industrial

uses. The public safety impact fees contain adjustment factors that adjust the average capital facility cost associated with non-residential development to a range of sub-categories (see Table 6.)

Table 6 – Safety Demand Factors – Non Residential

Commercial-Industrial Use Category	Non-Residential Call Multiplier
Average Non-Residential	1.00
Retail, Including Restaurants	1.40
Offices and Commercial Services	0.65
Industrial, Transportation, Whse, Communic.	0.35
Institutional Uses	1.40

These factors are based on BCM Planning estimates of relative call volume per 1000 square feet based on a 2008 study conducted for the City of Dover. As part of this study, detailed call for service data was compiled by address and the call volume per square foot was compared between use categories. The non-residential call multipliers used in the fee calculations are based on those findings.

5. Proportionate Demand for Municipal Administration

The proportionate measures applied to general municipal administration were based on averaging the ratios for factors other than public safety calls for service. This resulted in proportionate demand estimates of 92% residential and 8% non-residential for the base year 2010, and projected proportions of 89% and 11% for 2040.

6. Residential Costs by Type of Structure

Residential impact fees have been further proportioned based on average population per dwelling unit by structure type. The fees are computed for the average dwelling unit, then adjusted based on expected population per unit estimated in Table 7. The 2000 Census provided detailed information on average household size by type of structure. The 2010 Census does not have as detailed a breakdown. Average household size has been estimated by type of structure for 2010 using the average household size for Litchfield, and adjusted using the 2000 Census as a guide to relative household size by structure type.

Table 7 - Average Persons per Occupied Unit

PERSONS PER OCCUPIED UNIT (HOUSEHOLD POPULATION)		
Type of Structure	Litchfield Persons Per Occupied Unit (2000)	Litchfield Persons Per Occupied Unit (2010 Est)
Single Detached	3.25	3.04
Townhouse	2.06	1.93
Two Family Structure	2.67	2.50
Three or More Family Structures	2.29	2.14
Manufactured Housing	2.59	2.42
All Dwelling Units	3.12	2.92

C. Public Safety Impact Fees

1. Summary of Method

The basic structure of the public safety impact fee calculations centered on the following process:

- Estimate the capital value of a proposed new Police Station, two Fire Stations, and major fire/rescue apparatus that will serve the anticipated long-term facility needs of the Town projected to year 2040.
- Use an estimate of the total floor area (square feet) of police station space to be provided per officer, and a ratio of officers per 1,000 population to estimate base year vs. future year space requirements of the Police Department.
- Define a facility standard for the fire stations (a two-station configuration) based on facility space per dwelling unit serving the projected residential service base as a standard for computing base year vs. future year space needs.
- Using these standards, assign the total capital investment required for the base year (2010) and year 2040 needs; the net difference in cost is attributed to the proportionate capital cost to serve new development.
- Allocate the cost of new development (2010-2040) between residential and non-residential sectors. For residential uses, compute the average capital investment per new residential unit and its average cost per square foot of living area. For non-residential uses, estimate the capital cost per square foot of new non-residential construction. Estimates of non-residential development for the projection year are based on a projection of employment and an average floor area per employee.
- From the total capital cost allocated to each unit (or square foot) of new development, deduct a credit allowance where appropriate. The credit allowance represents the amount of capital investment needed to rectify existing deficiencies in public safety facilities indicated by applying the service and facility standards to the 2010 base year demand factors.
- Compute the net amount (impact fee) to be assessed to new development on a per unit or per square foot basis. Residential impact fee options are shown per square foot for all dwelling units, or per dwelling unit by structure type.
- Adjust non-residential safety fees relative to expected call volume per 1000 square feet in several subcategories. For example, public safety calls tend to be higher in retail and institutional uses, somewhat lower in offices and even lower in industrial and warehouse uses.¹ While it would also be possible to assess a flat fee per square foot to all categories of commercial, industrial, and institutional uses, there is evidence that some use categories have significantly higher calls per thousand square feet than others. Use of the multipliers helps enable a more proportionate fee assignment.

¹ In this model, BCM Planning has applied estimates of relative call volume per 1000 square feet based on a 2008 study for the City of Dover in which call data by address was compiled for non-residential uses and their floor area using call data for both the Police and Fire Departments

2. Credit Allowances

While credit allowances are not required by New Hampshire RSA 674:21, V, it is a common practice in impact fee assessment to make an adjustment for existing deficiencies in facility capacity where the cost to rectify the deficiency may be borne in part by new development.

The credit allowance is computed based on expressing the dollar amount of these deficiencies as a cost per thousand assessed valuation. The dollar amount of deficiencies is assigned to the existing service base at the same proportionate cost per square foot for facility space or average cost per unit of development. This assures that existing and new development are each treated equally in the proportionate capital cost assignments made in the model.

Average taxable values per housing unit or per square foot (non-residential) are based on Litchfield assessment data for 2013, assigned to the various use categories to compute the credit. The credit allowance is then deducted from the raw capital cost per unit or per square foot that was assigned to new development. The result is the net impact fee to be assessed.

As taxable value grows, and existing deficiencies are remedied, more of the total capital cost of new development will tend to be derived from the impact fee as the credit allowance declines and capital costs increase. These changes can be made to the fee model when it is updated.

3. Police Department Impact Fee

The 2009 impact fee update applied a staffing ratio of 1.5 sworn officers per thousand population and 425 square feet per full time officer as the planning standard for police station space. The resulting ratio is 0.64 square feet per capita, only slightly higher than the NRPC standard used in its 2000 update of the fee basis (0.60 square feet per capita). At the projected population, station size would be about 6,225 square feet to meet future population and number of officers per thousand persons.

The existing Police Station was incorporated within the development of the Town Hall in 1997. The Police Department portion of the municipal building is about 3,200 square feet gross area. The former police headquarters (1,200 square feet) remains in use, but only for storage purposes. While the off-site storage area has limited utility other than storage, it does serve a function that would need to be replicated within a new facility. For the purpose of impact fee assessment, it is assumed that the total floor area currently used by the Police Department includes the off-site storage area, indicating a total floor area of 4,500 square feet.

A new and expanded Police Station was envisioned by the Litchfield CIP 2009-2014, but was shown only as a placeholder, pending additional documentation of the space needs of the Department. An estimated cost of \$4 million for a new station (no floor area indicated) was included with the reference that it was based on costs for police stations in Milford and Londonderry.

BCM Planning, LLC reviewed facility costs in these and other locations in New Hampshire. The Londonderry facility (planned for 23,446 square feet) was built around 2002 at a cost of about \$6 million, and the Milford station (13,000 square feet) was completed in 2006 at a cost of \$3.2 million. Both stations appear to have been planned for populations considerably larger than the estimated buildout population of Litchfield. The Londonderry facility anticipated a future service population of about 33,000 persons and the Milford station was based on planning for a year 2020 design population of 18,000.

The Litchfield Master Plan estimates a reasonable service standard to be equivalent to about 425 square feet per uniformed officer, which is somewhat higher than the more generic standard of 350 square feet per officer sometimes used in more urban police departments for general planning purposes. For the purpose of the impact fee assessment, the proportionate space needs of the Police Department have been assigned using the Master Plan spatial standard. This can be amended once the Department has finalized a space plan and a design year staffing or population estimate.

These estimates are used as the basis for the impact fee assessment and in no way should be construed as suggesting either a minimum or a maximum floor area appropriate for the Litchfield Police Department. The Town should continue to study and plan for an appropriate size facility for the specific needs of the Litchfield based on its estimate of future service and personnel needs. As such specifics are developed, the standards and costs used in the impact fee basis should be modified to reflect plans or incorporated into the CIP.

BCM Planning, LLC reviewed the development costs of Police Department buildings in Londonderry and Milford and in Rochester (2003), Hampton (2002), and Laconia (2004). The size of these buildings ranges from 13,000 square feet in Milford to over 25,000 square feet in Hampton. Using time adjustment ratios based on RS Means Square Foot Costs for 2014, the comparable average development cost of these facilities would be about \$350 per square foot in 2014 for a free standing police station.

For the purpose of the impact fee assessment, a development cost of \$350 per square foot is assumed, at 425 square feet per uniformed officer. The number of uniformed officers needed in Litchfield is assumed to be proportionate to population.

A January 2008 report² on the Police Department recommended a reasonable staffing ratio goal for the Litchfield Police Department, based on comparable communities, would be to increase the number of officers to an average of 1.5 per 1,000 population (from a 2008 base year average of 1.2 per thousand). For the purpose of impact fee assessment, the ratio of 1.5 uniformed officers per 1,000 persons has been used to project space needs associated with the current and future population. The same study also noted that it appeared that the existing police department facility was designed to meet the needs of the department at the time it was constructed, with little space built in anticipation of future space requirement. The report, however, does not suggest any specific space recommendations for the Litchfield Police Department.

Application of the floor area and personnel standards indicate a need for at least 6,225 square feet of police station space to serve the 2040 horizon year population at 1.5 officers per thousand persons. At the same personnel and floor area standards, *existing* total space demand is estimated at 5,273 square feet. With total existing space including off-site storage at 4,500 square feet, the existing deficiency in floor area is estimated at 773 square feet (expansion in overall floor area attributable to existing needs). If a new police station of 6,225 square feet were to be developed to meet year 2040 space needs at the standard cited, attributable floor areas and cost shares would be approximately:

	<u>Sq. Ft.</u>	<u>% of New Facility</u>
Replace and consolidate existing space:	4,500	72 %
Rectify existing space deficiency:	773	12 %
<u>Accommodate new development:</u>	<u>952</u>	<u>16 % (from impact fees)</u>
Total	6,225	100 %

² Organizational Study of the Litchfield Police Department, January 2008, by Municipal Resources, Inc.

Table 8: Police Department Impact Fee

POLICE DEPARTMENT IMPACT FEE - LITCHFIELD NH 2014			
Service Demand Factor	Base Year	2040 Projection	Change from Base Year
RESIDENTIAL SECTOR			
Population (Residential Demand) - 2010 Census			
Total Persons	8,271	9,764	1,493
Group Quarters Population	0	0	0
Household Population	8,271	9,764	1,493
Households (Occupied Units)	2,828	3,342	514
Average Household Size	2.92	2.92	0.00
Total Housing Units	2,912	3,433	521
Average Living Area of Dwelling Units (2012)	1,700	1,700	
Total Residential Living Area (Estimate)	4,950,400	5,836,100	885,700
NON-RESIDENTIAL SECTOR			
Employment (Total Including Government) - 2010	903	1,500	597
Non-Residential Floor Area (2012)	540,550	900,000	359,450
Non-Residential Uses: Floor Area Per Employee	599	600	
Police Department Staffing & Facility Size			
Full Time Sworn (Officers)	10.00	14.65	A service standard of 1.5 sworn officers per 1000 population is assumed
Full Time Officers Per 1000 Population	1.21	1.50	
Service Standard - FT Officers Per 1000	1.50	1.50	
Full Time Officers Needed at Standard	12.41	14.65	
Department Building Needs - Sq. Ft. Per Officer	425	425	
Equivalent Ratio Per Capita	0.64	0.64	
Total Floor Area Needed Based on Standard	5,273	6,225	
Total Floor Area Used by Police Department	4,500	Existing floor area 3,300 square feet at HQ + 1,200 sq. ft. off-site storage	
Indicated Base Year Deficiency in Space	773	Additional area needed in base year	
Demand on Capital Facilities			
Building Costs for Police Department HQ	Attributed to Existing Demand	New Facility Total Cost	Portion Allocated to New Development
Capital Value Allocation	85%	\$350	15%
Attributed Building Costs - Police Department	\$1,845,550	\$2,178,750	\$333,200
Residential Share of Demand	90%	86%	64%
Non-Residential Share of Demand	10%	14%	36%
Capital Cost Attributed to Residential Sector	\$1,660,995	\$1,873,725	\$212,730
Capital Cost Attributed to Non-Residential Sector	\$184,555	\$305,025	\$120,470
Average Cost Per New Residential Unit			\$408
Average Cost Per Square Foot - New Non-Residential Development			\$0.34
PUBLIC SAFETY FACILITY COSTS PER UNIT OF NEW DEVELOPMENT - POLICE DEPARTMENT			
Residential Capital Cost Per Dwelling Unit	Average Household Size Est. 2010	Capital Cost Per Unit	
Average Unit	2.92	\$408	
Single Detached	3.04	\$425	
Townhouse Condo	1.93	\$270	
Two Family Structure	2.50	\$350	
Multifamily Structure 3+ Units	2.14	\$300	
Manufactured Housing	2.42	\$339	
Average Residential Per Square Foot		\$0.24	
Non-Residential Capital Cost Per Square Foot	Non-Residential Call Multiplier	Capital Cost Per Sq. Ft.	
Average Non-Residential	1.00	\$0.34	
Retail, Including Restaurants	1.40	\$0.48	
Offices and Commercial Services	0.65	\$0.22	
Industrial, Transportation, Whse, Communic.	0.35	\$0.12	
Institutional Uses	1.40	\$0.48	
Credit Allowances for Base Year Deficiency and Net Impact Fee Assessment	Avg Assessed Value	Credit Allowance Per \$1000 Valuation: \$0.33	Impact Fee Schedule
Residential Uses	Assessment Per New Dwelling Unit*	Credit Per Unit	Per Dwelling Unit
Average Unit	\$ 282,000	(\$93)	\$315
Single Detached	\$ 348,000	(\$115)	\$310
Townhouse Condo	\$ 206,000	(\$68)	\$202
Two Family Structure	\$ 227,000	(\$75)	\$275
Multifamily Structure 3+ Units	\$ 100,000	(\$33)	\$267
Manufactured Housing	\$ 128,000	(\$42)	\$297
Avg. Residential Cost Per Square Foot		(\$0.05)	\$0.19
Non-Residential Uses	Assessed Val Per Sq. Foot	Credit Per Sq. Foot	Fee Per Square Foot
Average Non-Residential	\$140	(\$0.05)	\$0.29
Retail, Including Restaurants	\$160	(\$0.05)	\$0.43
Office and General Commercial Svcs	\$160	(\$0.05)	\$0.17
Industrial, Transportation, Whse	\$80	(\$0.03)	\$0.09
Institutional Uses	\$100	(\$0.03)	\$0.45

<i>Credit Allowance - Police Department</i>	
Space Deficiency at Standard - Base Year	773
Cost to Rectify Space Deficiency	\$270,550
Local Assessed Valuation Taxable 2014 (NHRA)	\$823,685,848
Credit Per \$1000 Assessment	\$0.33

4. Fire Department

a. Fire Department Building(s) and Cost Assumptions. The existing Fire Station on Route 3A was originally constructed in 1957 at no cost to the taxpayer according to the history description on the Department's web site. Total space in the facility, according to the Litchfield Master Plan is about 5,080 square feet on two floors. When the Master Plan was written (2002), the upstairs of the building was unimproved and useable only for basic storage.

From 2004 to 2007, firefighters converted the second floor into usable space by constructing two administrative offices, an Emergency Operations Center, kitchen, bathroom/shower room, and a small living/day room. Most of the cost was offset using volunteer labor and donation of materials. A two-station configuration would allow for most development within Litchfield to be within 1.5 miles of a fire station, and for all development to be within 3 miles of a fire station. Interim phases of facility development may involve using the existing Route 3A in combination with one of the new proposed stations for a period until the second new station is completed.

A discussion with the Fire Chief in December 2009 indicated that the most recent plan anticipates a new Central Station (North) of 6,000 square feet and a sub-station (South) of about 4,000 square feet. The existing Fire Station on Route 3A would eventually be retired when the two new stations are in place. At this time a new CIP is under development and upon its completion in 2015 there may be new assumptions about the size and number of facilities that will be proposed for the Fire Department's long term needs.

The estimated development provided by the Fire Chief in 2009 were cited as guaranteed maximum prices provided in 2008. The total development cost for the Central Station was estimated at \$1.9 million and the cost of the smaller substation was estimated at \$1.2 million. The average combined development cost, with building areas totaling 10,000 square feet, was indicated at \$310 per square foot. Adjusted to 2014 using an R. S. Means Square Foot cost time adjustment factor would indicate a comparable 2014 comprehensive development cost of \$378 per square foot for comparable fire station development. When the 2015 CIP is released, updated cost estimates may be available for the proposed station configuration. Updated costs may then be substituted in the impact fee model.

These estimates are used as the basis for the impact fee assessment and in no way should be construed as suggesting either a minimum or a maximum floor area or construction budget appropriate for a the Litchfield Fire Department. The Town should continue to study and plan for an appropriate size facility for the specific needs of Litchfield based on its estimate of future service and personnel needs. As such specifics are developed, the standards and costs used in the impact fee basis should be modified to reflect the actual plan adopted or incorporated into the CIP.

When a total of 10,000 square feet of station space is apportioned across the projected number of dwelling units in 2040, fire station space would average 2.91 square feet per housing unit. When the same standard is applied to the 2010 Census count of housing units in Litchfield, a baseline space need of 8,482 square feet is indicated. Since existing space is 5,080 the existing base year deficiency in floor area is estimated at 3,402 square feet. Fire station space may include areas to accommodate personnel and training space, but its principal use is the housing and maintenance of large vehicles and supporting capital equipment essential to fire and rescue services.

If 10,000 square feet of new station space were constructed, it would: (1) replace and improve on the 5,080 square feet of existing floor area; (2) add 3,402 square feet already needed to rectify existing base year space deficiencies; and (3) provide another 1,518 square feet attributable to the demands of new development.

Because the construction of additional fire station space is long overdue according to the plans and standards developed by the Town in the past, the construction of 10,000 square feet of new fire station space (with retirement of the old station) would represent a total project cost allocation of:

	<u>Sq. Ft.</u>	<u>% of New Facility Space</u>
Replace/upgrade existing space:	5,080	51 %
Expand to meet base year deficiency:	3,402	34 %
<u>Accommodate needs of new development:</u>	<u>1,518</u>	<u>15 % (impact fees)</u>
Total New Building or Buildings	10,000	100 %

The value of facility space as well as a proportionate share of the cost of major apparatus and equipment has been incorporated into the fee basis. Should these capital equipment assumptions change in the future, the capital value of additional items may be added to the fee basis.

b. Apparatus and Major Capital Equipment. The replacement value of capital equipment in a fire department may exceed the cost of the buildings that house that inventory. The major apparatus and capital equipment comprise the principal tools of fire prevention, firefighting and rescue functions. Periodic reinvestment in these items is essential to meet the needs of the existing service base as well as new development. The impact fee model apportions a proportionate share of the replacement cost of existing capital equipment to new development.

Table 9: Fire Department Existing Capital Equipment Replacement Cost

Capital Equipment/Apparatus	Make	Year Existing Units	Original Cost	Est. Replacement Cost
Tanker 3	Mack	1991	\$187,499	\$375,000
Engine 2	Spartan	1995	\$215,790	\$430,000
Engine 4	KME	2001	\$287,000	\$482,000
Pickup 4x4	Ford F350	2003	\$34,929	\$50,000
Engine 1	E1	2004	\$261,854	\$512,500
Air Compressor	Mako	2002	\$47,000	\$61,100
Cascade System		2002	\$53,254	\$69,230
Tahoe	Chevrolet	2007	\$40,000	\$50,000
Mobile Generator	Magnum	2009	\$62,285	\$70,071
Boat	Connector	2010	\$16,635	\$18,299
Monitor/Defibrillator	Zoll	2013	\$33,632	\$40,000
Monitor/Defibrillator	Zoll	2013	\$33,632	\$40,000
Trailer	Aluminum	2009	\$11,630	\$13,084
SCBA (26 units)	Survivair	2002	\$67,542	\$195,000
OHRV	Kubota	2006	\$10,720	\$12,864
Explorer (assumes replac. w/used)	Ford	1999	\$27,289	\$25,000
Thermal Camera	Scott	2002	\$10,000	\$13,000
Rescue	Freightliner	1998	\$42,700	\$59,780
Total Existing Capital Equipment			\$1,443,391	\$2,516,927

The capital investment of Fire Departments in major apparatus is often of as significant as the estimated cost of the buildings housing the department and its fire-fighting equipment. As shown in Table 6 below, the estimated replacement cost of the existing major apparatus of the Fire Department is about \$2.5 million.³ If additional apparatus and equipment is added to the equipment inventory in the future, it may be incorporated into the fee basis.

³ Only the apparatus listed in the Town's 2014 asset inventory are included here. The replacement cost for existing equipment is estimated above from Town Administrator estimates of replacement costs where available and from BCM Planning estimates based on original acquisition costs of existing equipment, adjusted by 2.5% per year from the time of acquisition to the current year (2014).

Table 10: Fire Department Impact Fee

FIRE DEPARTMENT IMPACT FEE - LITCHFIELD, NH - 2014			
Service Demand Factor	Base Year (2010)	2040 Projection	Change from Base Year
RESIDENTIAL SECTOR (2010 Census)			
Total Persons	8,271	9,764	1,493
Group Quarters Population	0	0	0
Household Population	8,271	9,764	1,493
Households (Occupied Units)	2,828	3,342	514
Average Household Size	2.92	2.92	0.00
Total Housing Units	2,912	3,433	521
NON-RESIDENTIAL SECTOR			
Employment (Total Including Government) - 2012	903	1,500	597
Non-Residential Floor Area (2012)	540,550	900,000	359,450
Non-Residential Uses: Floor Area Per Employee	599	600	
Floor Area of Facilities			
	Existing Station	Retire Existing Central Station; New Central Station and/or Substation	Change from Base Year
Floor Area of Fire Stations	5,080	10,000	4,920
Station Space Required Per Dwelling Unit (Implied Standard For Projected Housing Units)	2.91	2.91	
Existing Station Space Needed at Indicated Standard	8,482		
Indicated Space Deficiency in Base Year	3,402		
Building Area Needs and Cost of Fire Stations			
	Demand on Capital Facilities		
	Existing Needs	Total Facility Investment	Portion Allocated to New Development
Fire Station Development Cost Per Square Foot	85%	\$378	15%
Allocation of Capital Value of Buildings	\$3,206,196	\$3,780,000	\$573,804
Capital Investment Major Apparatus	\$2,038,711	\$2,516,927	\$478,216
Total Capital Facility Investment - Fire Dept.	\$5,244,907	\$6,296,927	\$1,052,020
Residential Share of Demand	90%	86%	66%
Non-Residential Share of Demand	10%	14%	34%
Capital Cost Attributed to Residential Sector	\$4,720,416	\$5,415,357	\$694,941
Capital Cost Attributed to Non-Residential Sector	\$524,491	\$881,570	\$357,079
Average Cost Per New Residential Unit			\$1,334
Average Cost Per Square Foot - Residential			\$0.72
Average Cost Per Square Foot - New Non-Residential Development			\$0.99
PUBLIC SAFETY FACILITY COSTS PER UNIT OF NEW DEVELOPMENT - FIRE DEPARTMENT			
Residential Capital Cost Per Dwelling Unit		Average Household Size Est. 2010	Capital Cost Impact Per Unit
Average Housing Unit		2.92	\$1,334
Single Detached		3.04	\$1,389
Townhouse Condo		1.93	\$882
Two Family Structure		2.50	\$1,142
Multifamily Structure 3+ Units		2.14	\$978
Manufactured Housing		2.42	\$1,106
Avg. Residential Cost Per Square Foot			\$0.78
Non-Residential Capital Cost Per Square Foot		Non-Residential FD Call Multiplier	Capital Cost Per Sq. Ft.
Average Non-Residential		1.00	\$0.99
Retail, Including Restaurants		1.40	\$1.39
Offices and Commercial Services		0.65	\$0.64
Industrial, Transportation, Whse, Communic.		0.35	\$0.35
Institutional Uses		1.40	\$1.39
Credit Allowances for Base Year Deficiency and Net Impact Fee Assessment			
	Avg Assessed Value	Credit Allowance Per \$1000 Valuation:	Impact Fee Schedule
		\$1.56	
Residential Uses	Assessment Per New Dwelling Unit	Credit Per Unit	Per Unit
Average Housing Unit	\$ 282,000	(\$440)	\$894
Single Detached	\$ 345,000	(\$538)	\$851
Townhouse Condo	\$ 206,000	(\$321)	\$561
Two Family Structure	\$ 227,000	(\$354)	\$788
Multifamily Structure 3+ Units	\$ 100,000	(\$156)	\$822
Manufactured Housing	\$ 128,000	(\$200)	\$906
Avg. Residential Cost Per Square Foot		(\$0.26)	\$0.52
Non-Residential Uses	Assessed Val Per Sq. Foot	Credit Per Sq. Foot	Fee Per Square Foot
Average Non-Residential	\$ 140	(\$0.22)	\$0.77
Retail, Including Restaurants	\$ 160	(\$0.25)	\$1.14
Offices and Commercial Services	\$ 160	(\$0.25)	\$0.39
Industrial, Transportation, Whse, Communic.	\$ 80	(\$0.12)	\$0.23
Institutional Uses	\$ 100	(\$0.16)	\$1.23

Credit Allowance - Fire Department	
Space Deficiency at Standard - Base Year	3,402
Cost to Rectify Space Deficiency	\$1,285,956
Capital Equipment Deficiency Relative to Base Year	\$0
Total For Credit Allowance Basis	\$1,285,956
Local Assessed Valuation Taxable 2014 (NHDR)	\$823,685,848
Credit Per \$1000 Assessment	\$1.56

D. Municipal Office Impact Fee

1. Facility History and Estimated Replacement Cost

The impact fee for the Town Office was originally is based on the recoupment of a portion of the cost to construct the Liberty Way complex (built 1997) to accommodate municipal office portion of the building which also houses police department functions. The space standard used to compute the fee was 0.60 square feet per capita in the 2000 fee updates prepared by the NRPC. Under the standards applied in 2000, the space allocated to municipal office functions indicated a small deficiency in total town office space under the standard applied.

The cost to construct the facility according to Town asset records was \$903,100 in July 1997. The floor area of the Liberty Way complex (including police and municipal functions) is about 7,200 square feet of space according to tax assessment records. The average development cost for the building is indicated at \$125 per square foot. When adjusted to 2014 using a time adjustment factor from RS Means Square Foot Costs (2014), the comparable development cost today is about \$228 per square foot. This value has been used to estimate the replacement cost of the existing municipal office space.

2. Application of Standards for Facility Space

At the standard of 0.6 square feet per capita, the Town Office should have about 4,950 square feet based on the 2010 population, and 5,844 square feet to meet the demand of the projected 2040 population. The current space devoted to the municipal office, lobby and public meeting space is about 4,500 square feet. In the future, a larger floor area could be available within the existing footprint of the Police Station portion of the building if a new Police Station is constructed elsewhere.

Using the spatial standard, current space shows a deficiency of about 450 square feet of space relative to the 2010 population. When measured against staffing (full time employees) at the Town Office, a standard of 0.6 square feet per capita is equivalent to about 550 square feet of municipal office/storage space per administrative employee. (If a ratio of 500 square feet per full time employee were used, the existing space devoted to municipal office and meeting use would be considered sufficient for current needs.)

3. Use of Impact Fees

Since the municipal office, under the spatial standard applied, indicates that the space is roughly at or slightly over capacity needed for the base year (2010), impact fees collected would need to be used for facility construction or expansion, or for the cost to convert the police station portion of the building into general municipal administrative use, including office space, storage, or meeting functions.

At the standards applied, there is no reserve capacity and thus no support for an impact fee that is limited to recoupment of prior capital expenditures. The impact fees collected for municipal office space would need to be used to support expansion projects. If expansion takes place, it will most likely be an addition to the existing facility or an expansion within the footprint of adjacent Police Department space. Based on the impact fee calculations, and the small indicated deficiency in municipal building space, each \$1.00 dollar of impact fees applied to an expansion project should be matched by at least \$0.40 in general fund revenues.

Table 11: Municipal Office Impact Fee

MUNICIPAL OFFICE IMPACT FEE - LITCHFIELD NH 2014			
Service Demand Factor	Base Year	2040 Projection	Change from Base Year
RESIDENTIAL SECTOR			
Population (Residential Demand) - 2010 Census			
Total Persons	8,271	9,764	1,493
Group Quarters Population	0	0	0
Household Population	8,271	9,764	1,493
Households (Occupied Units)	2,828	3,344	516
Average Household Size	2.92	2.92	0.00
Total Housing Units	2,912	3,433	521
Average Living Area of Dwelling Units (2012)	1,700	1,700	
Total Residential Living Area (Estimated - 2012)	4,950,400	5,836,100	885,700
NON-RESIDENTIAL SECTOR			
Employment (Total Including Government) - 2013	903	1,500	597
Non-Residential Floor Area (2013)	540,550	900,000	359,450
Non-Residential Uses: Floor Area Per Employee	599	600	
Police Department Staffing & Facility Size			
Full Time Equiv. Administrative Personnel	9.00	10.62	<i>The current FTE per 1000 pop. is used as a personnel standard</i>
Full Time Staff Per 1000 Population	1.09	1.09	
Department Building Needs - Sq. Ft. Per FTE	550	550	
Total Floor Area Needed Based on Standard	4,950	5,844	
Equivalent Space Per Capita	0.60	0.60	
Total Floor Area Used by Town Offices	4,500	Includes public meeting room, lobby	
Indicated Base Year Deficiency in Space	450	Additional area needed in base year	
Demand on Capital Facilities			
Building Costs for Town Office Space	Attributed to Existing Demand	New Facility Total Cost	Portion Allocated to New Development
Capital Cost Allocation	85%	\$228	15%
Attributed Building Costs - Municipal Office	\$1,132,567	\$1,332,432	\$199,865
Residential Share of Demand	92%	89%	70%
Non-Residential Share of Demand	8%	11%	30%
Capital Cost Attributed to Residential Sector	\$1,045,737	\$1,185,864	\$140,127
Capital Cost Attributed to Non-Residential Sector	\$86,830	\$146,568	\$59,738
Average Cost Per New Residential Unit			\$269
Average Cost Per Square Foot - New Non-Residential Development			\$0.17
MUNICIPAL OFFICE COST PER UNIT OF NEW DEVELOPMENT			
Residential Capital Cost Per Dwelling Unit	Average Household Size Est. 2010	Capital Cost Per Unit	
Average Housing Unit	2.92	\$269	
Single Detached	3.04	\$280	
Townhouse Condo	1.93	\$178	
Two Family Structure	2.50	\$230	
Multifamily Structure 3+ Units	2.14	\$197	
Manufactured Housing	2.42	\$223	
Average Residential Per Square Foot	\$0.16		
Credit Allowances for Base Year Deficiency and Net Impact Fee Assessment	Avg Assessed Value	Credit Allowance Per \$1000 Valuation:	Impact Fee Schedule
		\$0.12	
Residential Uses	Assessment Per New Dwelling Unit*	Credit Per Unit	Per Dwelling Unit
Average Housing Unit	\$ 282,000	(\$34)	\$235
Single Detached	\$ 348,000	(\$42)	\$238
Townhouse Condo	\$ 206,000	(\$25)	\$153
Two Family Structure	\$ 227,000	(\$27)	\$203
Multifamily Structure 3+ Units	\$ 100,000	(\$12)	\$185
Manufactured Housing	\$ 128,000	(\$15)	\$208
Average Residential Per Square Foot	(\$0.02)		\$0.14
Non-Residential Uses	Assessed Val Per Sq. Foot	Credit Per Sq. Foot	Fee Per Square Foot
Average Non-Residential	\$140	(\$0.02)	\$0.15
Retail, Including Restaurants	\$160	(\$0.02)	\$0.15
Office and General Commercial Svcs	\$160	(\$0.02)	\$0.15
Industrial, Transportation, Whse	\$80	(\$0.01)	\$0.16
Institutional Uses	\$100	(\$0.01)	\$0.16

Credit Allowance - Town Office	
Space Deficiency at Standard - Base Year	450
Cost to Rectify Space Deficiency	\$102,600
Local Assessed Valuation Taxable 2014 (NHDRA)	\$823,685,848
Credit Per \$1000 Assessment	\$0.12

E. Library Impact Fee

1. Spatial Standard

The 2009-2014 Capital Improvement Program called for a more detailed study of public library space needs, and recommended consideration of a new facility located at the Town Center on Liberty Way.

The CIP indicates that due to the age of the existing Cutler Library and the limitations of its site, a new facility should be considered. An anticipated cost of \$3.12 million was estimated but with no specific floor area cited for the size of the facility. The CIP also noted that the existing library has, since the early 1990s, been deficient in space relative to standards applied at that time for impact fee assessment.

There remains no specific design plan for a future library. Therefore the impact fee calculation has been developed using the 2000 NRPC update standard of 0.6 square feet per capita. Even at this standard, which is quite low based on BCM Planning experience with library development plans in other communities, the existing space deficiency at the library is over 1,800 square feet. This deficiency in space is relatively high in relation to the amount of space that can be attributed to demand from new development based on population projections (about 895 square feet).

The standards and floor areas used in this report are solely for the computation of a reasonable impact fee based on achievable standards. This information should in no way should be construed as suggesting either a minimum or a maximum floor area or construction budget appropriate for a new or expanded library in Litchfield. When a specific design plan is developed, the standards used in the fee methodology should be modified to reflect the likely outcome of a construction project.

2. Cost Basis for Facility Construction

Based on a review of data published in the Library Journal in its 2014 compilation of data on new library construction in the U. S.⁴, the average construction cost per square foot was \$293 nationally, and about \$369 per square foot for projects in the Northeastern United States. For the purpose of impact fee assessment, we have assumed an average construction cost of \$350 per square foot.

3. Proportionate Allocation of Space and Related Cost

Under the spatial standards used in the impact fee assessment, the floor area within a new library built to accommodate the projected 2040 population would have the following components:

Replace existing space:	3,145	54 %
Rectify existing deficiency:	1,818	31 %
Accommodate new development:	895	15 %
Total for 2040 Population:	5,858	100 %

It is possible that eventual library construction could be larger than shown above, and capable of serving an even larger population, or that the standard of 0.60 square feet per capita should be changed. These factors, and the construction cost of the facility can be incorporated into the fee calculations once a more specific plan for library space has been developed.

The expansion of library space is long overdue according to past Master Plan and CIP information adopted by the Planning Board. About 15% of the cost to construct a new facility would be reimbursable with impact

⁴ The Library Journal compiled data for its Year in Architecture 2014 report which summarizes information submitted from public libraries nationwide that had undergone new builds and renovation/addition projects completed between July 1, 2013 and June 30, 2014. The data cited here reflect costs for newly built libraries, and costs reflect costs attributable to the construction component of total project costs, which are considerably higher per square foot for most new projects.

fees; there is currently no available excess capacity that would justify a fee based on recoupment of prior investments in library space.

Table 12: Library Impact Fee

LIBRARY IMPACT FEE - LITCHFIELD NH 2014			
Service Demand Factor	Base Year (2010)	2040 Projection	Change from Base Year
RESIDENTIAL SECTOR			
Population (Residential Demand)			
Total Persons	8,271	9,764	1,493
Group Quarters Population	0	0	0
Household Population	8,271	9,764	1,493
Households (Occupied Units)	2,828	3,342	514
Average Household Size	2.92	2.92	0.00
Total Housing Units	2,912	3,433	521
Average Living Area of Dwelling Units	1,700	1,700	
Total Residential Living Area (Estimate)	4,950,400	5,836,100	885,700
Library Facility Standard			
Building Requirement per Capita (finished floor area)	0.60	0.60	<i>Uses 2002 Master Plan ratio as standard</i>
Total Floor Area Needed Based on Standard	4,963	5,858	
Existing Library Finished Floor Area	3,145	finished floor area per assessment record	
Indicated Base Year Deficiency in Space	1,818	Additional area needed in base year	
Demand on Capital Facilities			
Building Costs for Town Office Space	Attributed to Existing Demand	New Facility Total Cost	Portion Allocated to New Development
Capital Value Allocation	85%	\$300	15%
Attributed Building Costs - Municipal Office	\$1,488,900	\$1,757,400	\$268,500
Residential Share of Demand	100%	100%	100%
Non-Residential Share of Demand	0%	0%	0%
Capital Cost Attributed to Residential Sector	\$1,488,900	\$1,757,400	\$268,500
Capital Cost Attributed to Non-Residential Sector	\$0	\$0	\$0
Average Cost Per New Residential Unit			\$515
Average Cost Per Square Foot - New Non-Residential Development			n.a.
LIBRARY COST PER UNIT OF NEW DEVELOPMENT			
Residential Capital Cost Per Dwelling Unit		Average Household Size Est. 2010	Capital Cost Per Unit
Average Housing Unit		2.92	\$515
Single Detached		3.04	\$536
Townhouse Condo		1.93	\$340
Two Family Structure		2.50	\$441
Multifamily Structure 3+ Units		2.14	\$377
Manufactured Housing		2.42	\$427
Average Residential Per Square Foot			\$0.30
Credit Allowances for Base Year Deficiency and Net Impact Fee Assessment	Avg Assessed Value	Credit Allowance Per \$1000	Impact Fee Schedule
		\$0.66	
Residential Uses	Assessment Per New Dwelling	Credit Per Unit	Per Dwelling Unit
Average Housing Unit	\$ 282,000	(\$186)	\$329
Single Detached	\$ 348,000	(\$230)	\$306
Townhouse Condo	\$ 206,000	(\$136)	\$204
Two Family Structure	\$ 227,000	(\$150)	\$291
Multifamily Structure 3+ Units	\$ 100,000	(\$66)	\$311
Manufactured Housing	\$ 128,000	(\$84)	\$343
Average Residential Per Square Foot		(\$0.11)	\$0.19

<i>Credit Allowance - Existing Library Expansion Need</i>	
Space Deficiency at Standard - Base Year	1,818
Cost to Rectify Space Deficiency	\$545,400
Local Assessed Valuation Taxable 2014 (NHDR)	\$823,685,848
Credit Per \$1000 Assessment	\$0.66

F. Recreation Facilities Impact Fee

1. Recreation Facility Inventory

Table 13 is a summary of the existing public recreation facilities available in Litchfield including those at its public school sites. The inventory was prepared in consultation with the Litchfield Recreation Commission in order to assure that dual-use fields and other facilities were not double-counted, and to assure that the inventory is up to date.

The last inventory was developed in 2002 and it is apparent from this update that recreation facility demand in Litchfield is strong, and that in some categories the number of facilities exceeds the number called for by some of the Town's recreation standards as expressed in the Master Plan. The recreation inventory also contains a land resource that could support additional fields or facilities, part of the capital value of that land may be recovered as part of the impact fee. The park at Sawmill Brook for example has sufficient land area to support additional facilities.

Where some fields are smaller practice fields, or are shared with other uses, the field may be shown as a fractional value (1/2) so that the capital value of these fields is not overstated. Some sites have limited or no off-street parking such as the Jeff Lane site. All of the Town's fields have irrigation (well on site) with the exception of Jeff Lane.

Field space in the inventory is grouped with baseball and softball fields combined, and rectangular fields used for soccer, football or multipurpose space shown as a second category. It is noted that the three softball fields at Roy Memorial Park may also be used as a single soccer field that overlays them. To avoid double-counting this acreage and related value, the inventory lists only the three softball fields for this site.

It is common for recreation inventories to include those at public school sites that serve the community when comparing the current ratios of facilities per capita to community standards. In the recreation fee computations, however, only the outdoor facilities located on School District sites are included as part of the estimated cost basis on which impact fees may be assessed. The reason for this is that an impact fee has already been developed for school buildings, and the building square footage and associated values already account for indoor space (gyms, basketball courts) within them.

2. Alternative Recreation Standards

The next step is to compare the number of facilities in Litchfield per thousand persons with selected standards that define an adequate supply for the resident population. Current recreation standards from the 2000 update by NRPC used the standards developed for the 2002 Master Plan. Those standards did not include consideration of indoor gym space.

BCM Planning has developed impact fee schedules based on that set of standards, as well as for alternative standards with and without the inclusion of bike paths and an additional indoor gym or recreation facility. The alternative standards have somewhat higher ratios for athletic fields, and lower ratios for tennis courts, and the recreation model was tested using alternative several bike path standards based on existing mileage and potential extension of the path length indicated by available reports.

Table 13: Inventory of Recreation Facilities in Litchfield

LITCHFIELD NH RECREATION FACILITY INVENTORY - 2014															
NAME OF AREA OR FACILITY	Ownership	Acres *	Primary Recreation Use/Other Uses on Site	Baseball Fields	Softball Fields	Soccer & Multipurpose Fields	Tennis Courts	Basketball (Outdoor)	Basketball (Indoor)	Playgrounds	Paved Bike Path (Miles)	Picnic Area	Swimming Beach	Gymnasium	Other
ACTIVE RECREATION AREAS/FACILITIES															
Albuquerque Avenue Bike and Footpath	Municipal	5.58	ADA accessible, 8' paved								5.750				
Albuquerque Avenue Tennis Courts	Municipal	2.76	Tennis courts				2								
Scott Innes Field	Municipal	4.70	Soccer			1.5									
Corning Fields	Municipal	5.30	Fields and some playground equipment	2						0.5					
Jeff Lane	Municipal	2.20	Practice baseball field unmarked; playground equipment; no parking	0.5						0.5					
Litchfield Park at Sawmill Brook	Municipal	17.00	Soccer/Lacrosse fields; potential for additional fields, dog park, playground			2									
Parker Park	Municipal	2.90	Fishing, nature trail walk to Merrimack River								Parking for trail access				
Roy Memorial Park (Darrah Pond)	Municipal	12.12	Primary recreation site with softball fields (can be used as one soccer field). Talent Hall recreation center. Basketball area.		3	**		2	1		Parking and access to trail	1	1	1	
Total Town		52.6		2.5	3.0	4	2	2	1	1	5.750	1	1	1	
* Recreation acreage at Sawmill Brook estimated at 16-18 acres by Recreation Commissions (03-01-2011 presentation of preliminary plans to Planning Board); acreage of paved bike paths at 5.75 miles x 8 foot paved width.															
** 3 softball fields may be used as one overlaid full size soccer or lacrosse field															
Campbell High School	School District	6.00	Fields, basketball courts, climbing wall, athletic track, gym	1.0	1.0	2.0			1					1	Running track
Griffin Memorial School	School District	5.25	Baseball, soccer, small gym	2.0		1.5		1	1	1				0.5	
Litchfield Middle School	School District	0.00	Gym						1					1	
Total School District		11.25		3.0	1.0	3.5	0	1	3	1	0.000	0	0	3	
Total Town and School		63.81		5.5	4.0	7.0	2	3	4	2	5.750	1	1	4	
Recreation land area for schools Estimated at an average of 1.5 acres per athletic field															

Litchfield has strong demand for field space, and has made significant progress in field development while hard court space and playgrounds are not as well developed. The higher alternatives for athletic fields are based on standards from the 2000 edition of NH Outdoors, and the reduced tennis court standard of 0.5 courts per thousand persons is based on National Recreation and Park Association (NRPA) standards from 1983.

The standards used in this report are solely for the computation of a reasonable impact fee at achievable standards. This information should in no way should be construed as suggesting either a minimum or a maximum number of recreation facilities in Litchfield. As more specific plans are developed, including a new CIP in 2015, the standards used in the fee methodology should be examined and adjusted as needed to best reflect current facility planning.

The Capital Improvement Program (2009) discussed a need for an additional town gymnasium multipurpose facility, but past impact fees have not included indoor facilities. In this report we have included a scenario which assumes two gymnasiums (Town) serving the 2040 population (one now in existence at Talent Hall). Under this assumption, the related standard for gymnasiums (Town) would be 0.20 per thousand persons. For other facilities, the standards reflect the Master Plan ratios.

Table 14: Recreation Facility Standards Applied in Models

Recreation Facility	Standards Per 1000 Population	
	Master Plan 2002	Alternative Standards
Baseball and Softball Fields	0.95	1.10
Soccer and Multipurpose	0.17	0.26
Basketball Courts (Indoor/Outdoor)	0.75	0.75
Tennis Courts	0.85	0.50
Playgrounds (w/equipment)	0.35	0.35
Community Parks, Fields & Playgrounds Land Area (acres)	5.50	5.50
Indoor Gym/ Rec Center (Town)	n.a.	0.20
Bike Paths (miles) *	1.5	0.589
		0.712
		0.781
<small>* Three alternative standards are shown for the bike path as miles per 1000 persons: (1) Existing mileage of the path / 2040 projected population (2) Existing plus Pinecrest Rd sidewalk connector / 2040 projected population (3) Existing plus Pinecrest Rd connector and new Albuquerque extension / 2040 population</small>		

The origin of the paved bike path standard of 1.5 miles per thousand persons in the 2000 impact fee update is unclear (the original standard prior to that update was even higher at 3.9 miles per thousand persons). BCM Planning could not identify any written description of plans that would anticipate a network of bike paths of this length. If the Master Plan standard of 1.5 miles per thousand persons is retained, it means that Litchfield has a current *deficiency* of about 6.7 miles of paved bike paths. The entire path length today is 5.75 miles.

Existing Bike Path Summary

2.20 miles existed as of 2002 inventory	(data on funding sources not available)
1.75 miles added between 2002 and 2009	(funding source not available; presumed local)
<u>1.80 miles constructed 2009</u>	(100% federal funds)
5.75 miles total	

Possible Bike Path Extensions Under Review

1.20 miles (sidewalk connector along Pinecrest from Albuquerque to McElwain)

0.68 miles (extension of Albuquerque, Cranberry to Fernwood)

If the extensions under consideration were added, total bike path length would be 6.95 miles with the Pinecrest connector, and 7.63 miles with that segment plus the other extensions that may be considered as future road projects are planned. If these mileages are divided by the 2040 population as a future service base, the resulting standards would be:

<u>Path Length Assumed</u>	<u>Ratio to 2040 Population</u>	<u>Base Year Need (2010 Pop)</u>
Existing path only	0.589 miles per 1000	0.88 mile surplus
Add Pinecrest sidewalk	0.721 miles per 1000	0.14 mile deficiency
Add Albuquerque Extension	0.781 miles per 1000	0.71 mile deficiency

The selection of the bike path standard becomes important in defining existing deficiencies, which must be paid for with funds other than impact fees. Choices among the above three bike path standards make relatively minor differences in the total recreation impact fee. But the difference between one of those standards and the 2002 standard of 1.5 miles per thousand persons is significant, because it represents a factor that is about twice amount of pathway per 1000 persons than is indicated by existing or potential facilities under consideration.

3. Facility Cost Assumptions

a. Athletic Fields. Two rectangular fields and a large parking area were constructed at the Sawmill Brook Park in 2011 at a cost of about \$300,000. Since the cost included a large parking area capable of serving additional fields and facilities at the site, the impact fee calculations have assumed an average development cost of \$125,000 per field for baseball, softball, and soccer fields. The Recreation Commission indicates that the contractor performing the original work did it at a discount to the Town. The Commission reviewed examples of field construction projects that cost \$250,000 per field or more.

b. Bike Path. As of the 2002 Master Plan inventory, there were 2.2 miles of bike path in place. The total length of the path is 5.75 miles. Therefore about 3.55 miles were added since 2002. About half of that mileage was created in 2009 (1.8 miles) at a cost of \$313,074 (about \$174,000 per mile) but this entire cost was funded by a grant from the federal “stimulus” program (American Recovery Act and Reinvestment Act, or ARRA). Using the Engineering News Record (ENR) construction cost index, the equivalent 2014 cost would be about \$200,000 per mile. Since 2002, about half the mileage created on the bike path was paid for with federal funds. Therefore, the cost per mile used to compute the impact fee has been set at 50% of the estimated cost or \$100,000 per mile in local funds.

3. Hard Courts and Playgrounds. Cost estimates for a range of prototype facilities were made by the State of Colorado in 2003⁵ for various outdoor recreation facilities. The average for tennis court construction was between \$25,000-\$55,000 per court, and from \$30,000-\$45,000 for outdoor basketball courts. Playgrounds with equipment were estimated to cost \$20,000-\$30,000. Adjusted to 2014 using the ENR construction cost

⁵ State of Colorado Small Community Park and Recreation Planning Standards, 2003, Section B – Parks Systems Budgeting

index, the average cost for these prototypes would be about \$58,000 per court for tennis, \$55,000 for basketball, and \$36,000 for playground equipment. For the purposes of impact fee assessment, the model assumes an average of \$60,000 per court for tennis, \$50,000 per court for outdoor basketball, and \$35,000 per playground with equipment.

d. Gymnasium/Community Center. Based on discussion with the Recreation Commission, a new town gymnasium (envisioned in the 2009 CIP) could range in cost from \$1.5 million to \$4.0 million depending on its size and function. Details have yet to be defined for a future facility, but demand on the existing Talent Hall is high and scheduling difficult. For impact fee purposes, the minimum cost of \$1.5 million has been assumed as the local cost of a new gym.

e. Value of Supporting Land. The costs of construction do not include the value of the raw land supporting public recreation facilities. An average value of \$24,000 per acre has been assumed, based on the average assessed value per acre for existing recreation sites in Litchfield (excluding bike paths).

4. Indicated Deficiencies

Each of the impact fee models shows the standards applied per thousand persons to define the number of facilities needed for the base year (2010) and the projection year (2040). Four models were developed, each of which can accommodate changes in assumptions related to costs and facility standards per 1000 persons.

a. Alternative Standards, Without Bike Path or Gym. In this scenario, the principal existing deficiencies are two tennis courts and one playground. The estimated cost to resolve deficiencies: \$159,550 from non-impact fee funds.

b. Original Master Plan Standards (Included Bike Path but no Gym). Under the original standards (2002 Master Plan), there is a deficiency of 5 tennis courts, one playground, and 6.7 miles of bike path. Estimated cost to resolve deficiencies: \$998,950 from non-impact fee funds.

c. Alternative Standards, Including Bike Path but no Gym. The standards and facilities in this model yield a deficiency of two tennis courts, a playground and between 0 and 0.71 miles of bike path depending on the standard selected. Estimated cost to resolve deficiencies: \$159,550 to \$230,550 from non-impact fee funds.

d. Alternative Standards, Including Both Bike Path and Gym. In this model, the existing deficiencies include two tennis courts, a playground, about 2/3 the cost of a new gym, and between 0 and 0.71 miles of bike path depending on the standard selected. The estimated cost of these deficiencies: \$1.13 to \$1.2 million required to meet existing needs from non-impact fee funds.

The above quantities represent the non-impact fee portion of funding that would be needed to fulfill *existing recreation facility needs* of the 2010 population based on the facility standards applied within each of the four models. As the recreation standards increase, so do the deficiency values relative to the needs attributable to existing residential uses.

Table 15: Recreation Facility Cost per Capita - (Alternative Standards with Gym and Paved Bike Path Excluded) - Option 1

RECREATION FACILITY NEEDS AND CAPITAL COST ALLOCATION BASED ON SELECTED FACILITY RATIOS											
RECREATION IMPACT FEE ASSESSMENT ASSUMPTIONS	Standard Used - Units Per 1000 Population	Source of Reference Standard	Existing Facilities (1)		Facility Need Per 1000 Household Population				Capital Cost Allocation		
			Existing Facilities *	Existing Avg Per Thousand Household Population	Existing Need @ 2010 Non-Institutional Population of 8,271	Additional Facilities Needed for Base Year	Total Facilities Needed For 2040 Household Pop. @ 9,764	Attributable to New Development	Estimated Local Capital Cost Per Unit	Cost To Meet Existing Deficiency	Cost Attributable to New Development
Baseball and Softball Fields	1.10	NH Outdoors Baseball (2000)	9.50	1.15	9.10	(0.40)	10.74	1.64	\$125,000	\$0	\$205,050
Soccer and Multipurpose	0.26	NH Outdoors (2000) Soccer & Football	7.00	0.85	2.15	(4.85)	2.54	0.39	\$125,000	\$0	\$48,580
Basketball Courts (Indoor/Outdoor)	0.75	Litchfield Master Plan	7.00	0.85	6.20	(0.80)	7.32	1.12	\$50,000	\$0	\$56,150
Tennis Courts	0.50	NRPA, 1983	2.00	0.24	4.14	2.14	4.88	0.74	\$60,000	\$128,400	\$44,520
Playgrounds (w/equipment)	0.35	Master Plan	2.00	0.24	2.89	0.89	3.42	0.53	\$35,000	\$31,150	\$18,459
Total Facilities Cost										\$159,550	\$372,759
Community Parks, Fields & Playgrounds Land Area (3)	5.50	2002 Master Plan	63.81	7.71	45.49	(18.32)	53.70	8.21	\$24,000	\$0	\$197,088
Total Recreation Capital Cost Attributed to New Development								Total Cost Attributable to New Development		\$569,847	
								Increase in Household Population:		1,493	
								Capital Cost Per Capita - Household Population		\$382	
<p>(1) See inventory of public recreation facilities in Litchfield (2) NRPC projected household population for 2040 is 9,764 (3) Land area includes school district outdoor field space assuming an average of 1.5 acres per field</p>											

Table 16: Credits and Recreation Impact Fee Schedule (Option 1) – at \$382 per Capita

CREDIT CALCULATION FOR FACILITY DEFICIENCY		
Cost to Cure Existing Deficiency in Facilities)		\$159,550
Taxable valuation (November 2014)		\$823,685,848
Credit Per \$1,000 Assessed Value		\$0.19
ASSIGNMENT OF CREDITS PER DWELLING UNIT		
Structure Type	Avg Assessed Val. Per Unit	Credit/Unit
Average Housing Unit	\$282,000	(\$55)
Single Detached	\$348,000	(\$67)
Townhouse Condo	\$206,000	(\$40)
Two Family Structure	\$227,000	(\$44)
Multifamily Structure 3+ Units	\$100,000	(\$19)
Manufactured Housing	\$128,000	(\$25)
Average Home per Sq. ft	\$165	(\$0.03)

RECREATION IMPACT FEE SUMMARY				
Type of Structure	Estimated Persons Per Unit 2010	Recreation Facility Cost Per Housing Unit	Credit Allowance	Recreation Facilities Impact Fee
Average Housing Unit	2.92	\$1,115	(\$55)	\$1,060
Single Detached	3.04	\$1,160	(\$67)	\$1,093
Townhouse Condo	1.93	\$737	(\$40)	\$697
Two Family Structure	2.50	\$954	(\$44)	\$910
Multifamily Structure 3+ Units	2.14	\$817	(\$19)	\$798
Manufactured Housing	2.42	\$924	(\$25)	\$899
Average Home per Sq. ft		\$0.65	(\$0.03)	\$0.62

Table 17: Recreation Facility Cost Per Capita Using 2002 Master Plan Standards (Excludes Gym) – (Option 2)

RECREATION FACILITY NEEDS AND CAPITAL COST ALLOCATION BASED ON SELECTED FACILITY RATIOS											
RECREATION IMPACT FEE ASSESSMENT ASSUMPTIONS	Standard Used - Units Per 1000 Population	Source of Reference Standard	Existing Facilities (1)		Facility Need Per 1000 Household Population				Capital Cost Allocation		
			Existing Facilities *	Existing Avg Per Thousand Household Population	Existing Need @ 2010 Non-Institutional Population of 8,271	Additional Facilities Needed for Base Year	Total Facilities Needed For 2040 Household Pop. @ 9,764	Attributable to New Development	Estimated Local Capital Cost Per Unit (4)	Cost To Meet Existing Deficiency	Cost Attributable to New Development
Baseball and Softball Fields	0.95	2002 Master Plan Stds for Baseball Fields	9.50	1.15	7.86	(1.64)	9.28	1.42	\$125,000	\$0	\$176,975
Soccer and Multipurpose	0.17	2002 Master Plan Standard for Soccer Plus Allowance for Football or Lacrosse	7.00	0.85	1.41	(5.59)	1.66	0.25	\$125,000	\$0	\$31,235
Basketball Courts	0.75	Litchfield Master Plan 2002	7.00	0.85	6.20	(0.80)	7.32	1.12	\$50,000	\$0	\$56,150
Tennis Courts	0.85	Litchfield Master Plan 2002	2.00	0.24	7.03	5.03	8.30	1.27	\$60,000	\$301,800	\$76,164
Playgrounds (w/equipment)	0.35	Litchfield Master Plan 2002	2.00	0.24	2.89	0.89	3.42	0.53	\$35,000	\$31,150	\$18,459
Paved Bike & Walking Trail (Miles)	1.500	Litchfield Master Plan 2002	5.750	0.695	12.41	6.66	14.65	2.24	\$100,000	\$666,000	\$223,600
Total Facilities Cost										\$998,950	\$582,583
Community Parks, Fields & Playgrounds Land Area (3)	5.50	2002 Master Plan	52.56	6.35	45.49	(7.07)	53.70	8.21	\$24,000	\$0	\$197,088
Total Recreation Capital Cost Attributed to New Development								Total Cost Attributable to New Development		\$779,671	
								Increase in Household Population:		1,493	
								Capital Cost Per Capita - Household Population		\$522	
<p>(1) See inventory of public recreation facilities in Litchfield (2) NRPC projected household population for 2040 is 9,764 (3) Land area includes school district outdoor field space assuming an average of 1.5 acres per field (4) Estimated total construction cost of bikepath in 2014 dollars is \$200,000 per mile; local share of path development cost since 2002 estimated at 50% or \$100,000 per mile</p>											

Table 18: Credits and Fee Schedule (Option 2) – at \$522 per Capita

CREDIT CALCULATION FOR FACILITY DEFICIENCY		
Cost to Cure Existing Deficiency in Facilities)		\$998,950
Taxable valuation (November 2014)		\$823,685,848
Credit Per \$1,000 Assessed Value		\$1.21
ASSIGNMENT OF CREDITS PER DWELLING UNIT		
Structure Type	Avg Assessed Val. Per Unit	Credit/Unit
Average Housing Unit	\$282,000	(\$342)
Single Detached	\$348,000	(\$422)
Townhouse Condo	\$206,000	(\$250)
Two Family Structure	\$227,000	(\$275)
Multifamily Structure 3+ Units	\$100,000	(\$121)
Manufactured Housing	\$128,000	(\$155)
Average Home per Sq. ft	\$165	(\$0.20)

RECREATION IMPACT FEE SUMMARY				
Type of Structure	Estimated Persons Per Unit 2010	Recreation Facility Cost Per Housing Unit	Credit Allowance	Recreation Facilities Impact Fee
Average Housing Unit	2.92	\$1,525	(\$342)	\$1,183
Single Detached	3.04	\$1,588	(\$422)	\$1,166
Townhouse Condo	1.93	\$1,008	(\$250)	\$758
Two Family Structure	2.50	\$1,306	(\$275)	\$1,031
Multifamily Structure 3+ Units	2.14	\$1,118	(\$121)	\$997
Manufactured Housing	2.42	\$1,264	(\$155)	\$1,109
Average Home per Sq. ft		\$0.89	(\$0.20)	\$0.69

Table 19: Recreation Facility Cost Per Capita (Alternative Standards Including Bike Path, No Gym) – (Option 3)

RECREATION FACILITY NEEDS AND CAPITAL COST ALLOCATION BASED ON SELECTED FACILITY RATIOS											
RECREATION IMPACT FEE ASSESSMENT ASSUMPTIONS	Standard Used - Units Per 1000 Population	Source of Reference Standard	Existing Facilities (1)		Facility Need Per 1000 Household Population				Capital Cost Allocation		
			Existing Facilities *	Existing Avg Per Thousand Household Population	Existing Need @ 2010 Non-Institutional Population of 8,271	Additional Facilities Needed for Base Year	Total Facilities Needed For 2040 Household Pop. @ 9,764	Attributable to New Development	Estimated Local Capital Cost Per Unit (4), (5)	Cost To Meet Existing Deficiency	Cost Attributable to New Development
Baseball and Softball Fields	1.10	NH Outdoors Baseball (2000)	9.50	1.15	9.10	(0.40)	10.74	1.64	\$125,000	\$0	\$205,000
Soccer, Football or Multipurpose	0.26	NH Outdoors (2000) Soccer & Football	7.00	0.85	2.15	(4.85)	2.54	0.39	\$125,000	\$0	\$48,750
Basketball Courts	0.75	Litchfield Master Plan	7.00	0.85	6.20	(0.80)	7.32	1.12	\$50,000	\$0	\$56,000
Tennis Courts	0.50	NRPA, 1983	2.00	0.24	4.14	2.14	4.88	0.74	\$60,000	\$128,400	\$44,400
Playgrounds (w/equipment)	0.35	Master Plan	2.00	0.24	2.89	0.89	3.42	0.53	\$35,000	\$31,150	\$18,550
Paved Bike & Walking Path (Miles) - Standard A	0.589	Existing path assumed as completed facility	5.750	0.695	4.870	(0.880)	5.750	0.880	\$100,000	\$0	\$88,000
Paved Bike & Walking Path (Miles) - Standard B	0.712	Adds 1.2 mile connector McElwain Street via Pinecrest	5.750	0.695	5.890	0.140	6.950	1.060	\$100,000	\$14,000	\$106,000
Paved Bike & Walking Path (Miles) - Standard C	0.781	Adds McElwain connector and 0.68 mile extension of Albuquerque Cranberry to Fernwood	5.750	0.695	6.460	0.710	7.630	1.170	\$100,000	\$71,000	\$117,000
									Total Facilities Cost A	\$159,550	\$460,700
									Total Facilities Cost B	\$173,550	\$478,700
									Total Facilities Cost C	\$230,550	\$489,700
Community Parks, Fields & Playgrounds Land Area (3)	5.50	2002 Master Plan	52.56	6.35	45.49	(7.07)	53.70	8.21	\$24,000	\$0	\$197,088
Total Recreation Capital Cost Attributed to New Development									Total Cost Attributable to New Development A	\$657,788	
									Total Cost Attributable to New Development B	\$675,788	
									Total Cost Attributable to New Development C	\$686,788	
									Increase in Household Population:	1,493	
									Capital Cost Per Capita (A) Household Population	\$441	
									Capital Cost Per Capita (B) Household Population	\$453	
									Capital Cost Per Capita (C) Household Population	\$460	
<p>(1) See inventory of public recreation facilities in Litchfield (2) NRPC projected household population for 2040 is 9,764 (3) Land area includes school district outdoor field space assuming an average of 1.5 acres per field (4) Estimated total construction cost of bikepath in 2014 dollars is \$200,000 per mile; local share of path development cost since 2002 estimated at 50% or \$100,000 per mile (5) New gym cost estimated at \$1.5 MM by Recreation Commission (up to \$4.0 MM depending on size)</p>											

Table 20: Credits and Fee Schedule (Option 3) Using a Capital Cost of \$441 per Capita)

CREDIT CALCULATION FOR FACILITY DEFICIENCY				
Cost to Cure Existing Deficiency in Facilities)		\$159,550		
Taxable valuation (November 2014)		\$823,685,848		
Credit Per \$1,000 Assessed Value		\$0.19		
ASSIGNMENT OF CREDITS PER DWELLING UNIT				
Structure Type	Avg Assessed Val. Per Unit	Credit/Unit		
Average Housing Unit	\$282,000	(\$55)		
Single Detached	\$348,000	(\$67)		
Townhouse Condo	\$206,000	(\$40)		
Two Family Structure	\$227,000	(\$44)		
Multifamily Structure 3+ Units	\$100,000	(\$19)		
Manufactured Housing	\$128,000	(\$25)		
Average Home per Sq. ft	\$165	(\$0.03)		
RECREATION IMPACT FEE SUMMARY A				
Type of Structure	Estimated Persons Per Unit 2010	Recreation Facility Cost Per Housing Unit	Credit Allowance	Recreation Facilities Impact Fee
Average Housing Unit	2.92	\$1,288	(\$55)	\$1,233
Single Detached	3.04	\$1,341	(\$67)	\$1,274
Townhouse Condo	1.93	\$851	(\$40)	\$811
Two Family Structure	2.50	\$1,103	(\$44)	\$1,059
Multifamily Structure 3+ Units	2.14	\$944	(\$19)	\$925
Manufactured Housing	2.42	\$1,067	(\$25)	\$1,042
Average Home per Sq. ft		\$0.75	(\$0.03)	\$0.72

Table 21: Recreation Facility Cost Per Capita (Alternative Standards with Bike Path and New Gym) – (Option 4)

RECREATION FACILITY NEEDS AND CAPITAL COST ALLOCATION BASED ON SELECTED FACILITY RATIOS											
RECREATION IMPACT FEE ASSESSMENT ASSUMPTIONS	Standard Used - Units Per 1000 Population	Source of Reference Standard	Existing Facilities (1)		Facility Need Per 1000 Household Population				Capital Cost Allocation		
			Existing Facilities *	Existing Avg Per Thousand Household Population	Existing Need @ 2010 Non-Institutional Population of 8,271	Additional Facilities Needed for Base Year	Total Facilities Needed For 2040 Household Pop. @ 9,764	Attributable to New Development	Estimated Local Capital Cost Per Unit (4), (5)	Cost To Meet Existing Deficiency	Cost Attributable to New Development
Baseball and Softball Fields	1.10	NH Outdoors Baseball (2000)	9.50	1.15	9.10	(0.40)	10.74	1.64	\$125,000	\$0	\$205,000
Soccer, Football or Multipurpose	0.26	NH Outdoors (2000) Soccer & Football	7.00	0.85	2.15	(4.85)	2.54	0.39	\$125,000	\$0	\$48,750
Basketball Courts	0.75	Litchfield Master Plan	7.00	0.85	6.20	(0.80)	7.32	1.12	\$50,000	\$0	\$56,000
Tennis Courts	0.50	NRPA, 1983	2.00	0.24	4.14	2.14	4.88	0.74	\$60,000	\$128,400	\$44,400
Playgrounds (w/equipment)	0.35	Master Plan	2.00	0.24	2.89	0.89	3.42	0.53	\$35,000	\$31,150	\$18,550
Town Gym or Multipurpose Indoor Rec Facility	0.20	Assumes Second Facility Added (Existing Gym = Talent Hall)	1.00	0.12	1.65	0.65	2.00	0.35	\$1,500,000	\$975,000	\$525,000
Paved Bike & Walking Path (Miles) - Standard A	0.589	Existing path assumed as completed facility	5.750	0.695	4.870	(0.880)	5.750	0.880	\$100,000	\$0	\$88,000
Paved Bike & Walking Path (Miles) - Standard B	0.712	Adds 1.2 mile connector McElwain Street via Pinecrest	5.750	0.695	5.890	0.140	6.950	1.060	\$100,000	\$14,000	\$106,000
Paved Bike & Walking Path (Miles) - Standard C	0.781	Adds McElwain connector and 0.68 mile extension of Albuquerque Cranberry to Fernwood	5.750	0.695	6.460	0.710	7.630	1.170	\$100,000	\$71,000	\$117,000
									Total Facilities Cost A	\$1,134,550	\$985,700
									Total Facilities Cost B	\$1,148,550	\$1,003,700
									Total Facilities Cost C	\$1,205,550	\$1,014,700
Community Parks, Fields & Playgrounds Land Area (3)	5.50	2002 Master Plan	52.56	6.35	45.49	(7.07)	53.70	8.21	\$24,000	\$0	\$197,088
Total Recreation Capital Cost Attributed to New Development									Total Cost Attributable to New Development A	\$1,182,788	
									Total Cost Attributable to New Development B	\$1,200,788	
									Total Cost Attributable to New Development C	\$1,211,788	
									Increase in Household Population:	1,493	
									Capital Cost Per Capita (A) Household Population	\$792	
									Capital Cost Per Capita (B) Household Population	\$804	
									Capital Cost Per Capita (C) Household Population	\$812	

Table 22: Credits and Fee Schedule (Option 3) Using a Capital Cost of \$792 per Capita)

CREDIT CALCULATION FOR FACILITY DEFICIENCY		
Cost to Cure Existing Deficiency in Facilities)		\$1,134,550
Taxable valuation (November 2014)		\$823,685,848
Credit Per \$1,000 Assessed Value		\$1.38
ASSIGNMENT OF CREDITS PER DWELLING UNIT		
Structure Type	Avg Assessed Val. Per Unit	Credit/Unit
Average Housing Unit	\$282,000	(\$388)
Single Detached	\$348,000	(\$479)
Townhouse Condo	\$206,000	(\$284)
Two Family Structure	\$227,000	(\$313)
Multifamily Structure 3+ Units	\$100,000	(\$138)
Manufactured Housing	\$128,000	(\$176)
Average Home per Sq. ft	\$165	(\$0.23)

RECREATION IMPACT FEE SUMMARY A				
Type of Structure	Estimated Persons Per Unit 2010	Recreation Facility Cost Per Housing Unit	Credit Allowance	Recreation Facilities Impact Fee
Average Housing Unit	2.92	\$2,313	(\$388)	\$1,925
Single Detached	3.04	\$2,408	(\$479)	\$1,929
Townhouse Condo	1.93	\$1,529	(\$284)	\$1,245
Two Family Structure	2.50	\$1,980	(\$313)	\$1,667
Multifamily Structure 3+ Units	2.14	\$1,695	(\$138)	\$1,557
Manufactured Housing	2.42	\$1,917	(\$176)	\$1,741
Average Home per Sq. ft		\$1.35	(\$0.23)	\$1.12

G. Notes on the Application of Facility Standards

Table 23 shows the capital facility needs of the existing and future population using various standards used in prior studies, and the quantities attributable to existing base year needs (measured by the 2010 Census) vs. those attributable to new development (2010-2040). The standards applied within each facility category for the impact fee calculations are discussed below.

Facility standards are needed to define the quantity and cost of capital facilities attributable to new development. Planning studies, particularly in the field of recreation, contain facility standards that are sometimes selected on the basis of desired or optimum levels of service that may greatly exceed the capital budgets that typical local governments are willing to support.

When facility standards are too high relative to practical implementation, application of the ratios to the existing population will generate large “deficiencies” which represent *existing need gaps that are not attributable to new development*. *Consequently, impact fees cannot be used to pay for these existing deficiencies.*

The goal of the process is to arrive at reasonable and realistic standards that are representative of likely levels of implementation. The models in this report will accommodate changes to these standards and to cost estimates as they are modified. Once the next Capital Improvements Program is completed, the Board will have further guidance as to appropriate facility ratios and likely improvement costs that can be used to update the impact fee calculations.

Table 23 on the next page summarizes various alternative facility standards and their application to the Litchfield population counts of 2000, 2010 and the 2040 projected population.

Table 23: Application of Facility Standards to 2010 Baseline vs. Projected Population

Application of Alternative Standards to Estimate Demand on Town Capital Facilities in Litchfield				Population or Housing-Based Facility Need			Existing Inventory		Needs Attributable to New Development
				Facility Need @ 2000 Census Population	Facility Need @ 2010 Census Population	2040 Projection	Actual Facilities in Service 2014	Existing Surplus (Deficiency) @ 2010 Pop/Housing	Net Change 2010 to 2040
Population Assumption				7,360	8,271	9,764	---	---	1,493
Total Dwelling Units (2040 NRPC Projections)				2,389	2,912	3,433	---	---	521
FACILITY CATEGORY	Unit:	Standard:	Per:						
TOWN OFFICE									
Town Office @ NRPC Std. 2000	Square Feet	0.6	person	4,416	4,963	5,858	4,500	(463)	895
Town Office @ 550 Sq. Ft./FTE	Square Feet	550	FTE Admin Employee @ 1.09 Per Thousand Pop	4,412	4,958	5,854	4,500	(458)	896
Town Office @ 500 Sq. Ft./FTE	Square Feet	500	FTE Admin Employee @ 1.09 Per Thousand Pop	4,011	4,508	5,321	4,500	(8)	813
FIRE STATION(S)									
Fire Station(s) @ NRPC Std 2000	Square Feet	0.74	person	5,446	6,121	7,225	5,080	(1,041)	1,104
BCM Planning Update 2014	Square Feet	2.91	dwelling unit	6,952	8,474	10,000	5,080	(3,394)	1,526
POLICE STATION									
Original Design Assumption	Square Feet	350	per sworn officer, @ 1.5 officers per 1000 persons	3,864	4,342	5,126	3,394	(948)	784
Police Station @ 0.462 Sq. Ft. Per Capita (NRPC 2000)	Square Feet	0.462	person	3,400	3,821	4,511	3,394	(427)	690
2002 Master Plan; MRI study staffing recommendation (BCM Update 2014)	Square Feet	425	per sworn officer & 1.5 officers/1000 pop	4,692	5,273	6,225	4,500	(773)	952
Existing floor area excluding offsite storage							3,300	(1,973)	
LIBRARY									
Library @ 0.60 Sq. Ft. Per Capita	Square Feet	0.6	person	4,416	4,963	5,858	3,145	(1,818)	896
RECREATION FACILITIES @ 2002 Master Plan Standards									
Baseball and Softball Fields	Fields	0.95	1000 persons	7.0	7.9	9.3	9.50	1.64	1.4
Soccer and Rectangular Fields	Fields	0.17	1000 persons	1.3	1.4	1.7	7.00	5.59	0.3
Basketball Court (Indoor/Outdoor)	Courts	0.75	1000 persons	5.5	6.2	7.3	7.00	0.80	1.1
Tennis Courts	Courts	0.85	1000 persons	6.3	7.0	8.3	2.00	(5.03)	1.3
Playgrounds (number)	Number	0.35	1000 persons	2.6	2.9	3.4	2.00	(0.89)	0.5
Paved Bike Trails	Miles	1.50	1000 persons	11.0	12.4	14.6	5.75	(6.66)	2.2
Community Park Land Area (acres)	Acres	5.50	1000 persons	40.5	45.5	53.7	63.81	18.32	8.2
Alternative Recreation Standards									
Baseball and Softball Fields	Fields	1.10	1000 persons	8.1	9.1	10.7	9.50	0.40	1.6
Soccer and Rectangular Fields	Fields	0.26	1000 persons	1.9	2.2	2.5	7.00	4.85	0.4
Tennis Courts	Courts	0.50	1000 persons	3.7	4.1	4.9	7.00	2.86	0.7
Paved Bike Trails Existing Mileage	Miles	0.589	1000 persons	4.3	4.9	5.8	5.75	0.88	0.9
Paved Bike Trails with Pinecrest Sdvwk	Miles	0.712	1000 persons	5.2	5.9	7.0	5.75	(0.14)	1.1
Paved Bike Trails w/Pinecrest + Albuquerque Ext.	Miles	0.781	1000 persons	5.7	6.5	7.6	5.75	(0.71)	1.2
Gyms (Town Only)	Gyms	0.20	1000 persons	1.5	1.7	2.0	1.00	(0.65)	0.3