Town of Chester
New Hampshire

Police and Fire
Impact Fees

Prepared for
Planning Board
Town of Chester, New Hampshire

Prepared by
Southern New Hampshire Planning Commission

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SNHPC

Town of Chester Police and Fire Impact Fees

A. Purpose of Report

This report provides a basis for the Town of Chester to establish impact fees for police and fire capital facilities (specifically police and fire vehicles and associated equipment) to be assessed to new development within the community. The procedures for impact fee assessment are provided for by the Town of Chester's zoning ordinance (Article 14 Fair Share Contribution) and the State of New Hampshire's planning statutes. The amount of the Police and Fire impact fees for vehicles and associated equipment are based on the methodology and impact fee schedule as set forth in this report documenting the proportional basis for the fees.

B. Authorization for Impact Fees

The establishment and assessment of impact fees are authorized by New Hampshire RSA 674:21 V. As set forth by RSA 674:21 V., an "impact fee" means a fee or assessment imposed upon development, including subdivision, building construction, or other land use change, in order to help meet the needs occasioned by that development for the construction or improvement of capital facilities owned or operated by the municipality. An impact fee is a one-time charge to new development to offset the proportional impact of new development on the costs borne by local government to provide public capital facilities. Under RSA 674:21 V., public safety, including police and fire vehicles and associated equipment are among the types of capital facilities eligible for impact fee assessment. In order for a municipality to adopt an impact fee, it must have enacted a capital improvements program pursuant to RSA 674:5-7. On December 5, 2007, the Chester Planning Board adopted and updated its FY 2008-2014 Capital Improvement Program (CIP). A new updated CIP for FY 2013-2019 is currently being developed by the planning board.

Under RSA 674:21 V. (c) impact fees must be accounted for separately and segregated from the municipality's general fund and may be spent upon order of the municipal governing body. In addition, the fees may be exempt from all provisions of RSA 32 relative to limitation and expenditure of town moneys, and shall be used solely for the capital improvements for which it was collected, or to recoup the cost of capital improvements made in anticipation of the needs which the fee was collected to meet. Impact fees cannot be used toward upgrade and maintenance of existing facilities and infrastructure, the need for which is not created by new development. It is important to note that in 2012, the New Hampshire Legislature adopted several amendments to RSA 674:21 regarding the administration of impact fees. A new subsection (l) was inserted which states that no later than 60 days following the end of the fiscal year, any municipality having adopted an impact fee ordinance shall prepare a report listing all expenditures of impact fee revenue for the prior fiscal year, identifying the capital improvement project for which the fees were assessed and stating the dates upon which the fees were assessed and collected. The annual report shall enable the public to track the payment, expenditures, and status of the individually collected fees to determine

whether said fees were expended, retained, or refunded. This new language has created two new provisions (1) a reporting requirement; and (2) a provision providing amnesty for the prior collection of impact fees for improvements to state highways.

C. Methodology and Approach

There are a variety of methods that may be used to calculate impact fees. The choice of a particular method depends mainly on the service characteristics of the community and planning requirements for the facility type being addressed. Each method has advantages and disadvantages and to some extent they are interchangeable as each method must allocate facility costs in proportion to the needs created by development. In simplest terms, the process of calculating impact fees involves two basic steps: determining the cost of the development-related capital improvements and allocating these costs equitably to various types of development. The calculation of impact fees however can be complex because of the many variables involved in defining the relationship between development and the need for the facilities. Specifically the public's need for police and fire vehicles and associated equipment resulting from new development within the Town of Chester.

The methodology used in calculating the Town of Chester's Police and Fire impact fees in this report is known as the Incremental Expansion Impact Fee Calculation. The incremental expansion method identifies the current level-of-service (LOS) for the use and need of the capital facility in this case police and fire vehicles in both quantitative and qualitative measures based on service standards. The service standards used in this methodology are (1) the net capital cost of police and fire vehicles per person for residential development; and (2) the net capital cost for police and fire vehicles per weekday vehicle trip ends per 1,000 square feet for various types of non-residential development. These costs are than allocated according to the percent share of the number of police and fire service calls made for residential and nonresidential uses within the community.

The Incremental Expansion Impact Fee Calculation is the most appropriate approach for this report as the Town of Chester intends to use the impact fees assessed and collected to specifically expand or provide police and fire vehicles and associated equipment, as needed, to accommodate new development within the community. This methodology is best applied when the purchase of capital improvements and property are planned to be expanded in regular increments (in this case in accordance with the Town of Chester's Capital Improvement Program) and when LOS standards can be documented based on current conditions in the community. Figure 1 provides an overall summary of the methodology and cost allocation used to calculate the Town of Chester's Police and Fire impact fees.

Figure 1: Summary of Impact Fee Methodology and Cost Components

Type of Public Facility	Incremental Expansion	Cost Allocation
Police	Vehicles/Equipment	Calls for Service
Fire	Vehicles/Equipment	Calls for Service

D. Schedule of Police and Fire Impact Fees

Figure 2 sets forth the schedule for the assessment of Police and Fire Impact Fees for the Town of Chester. For new residential uses, the fees are assessed on a housing unit basis. For new nonresidential uses, the fees are assessed on a square feet of floor area basis. The Town of Chester may adopt Police and Fire Impact Fees that are less than the amounts provided in Figure 2. However, it should be noted that a reduction in impact fee revenue typically will necessitate an increase in other municipal revenues, a decrease in planned capital expenditures, and/or a decrease in the town's LOS standards to address the needs for such capital facilities.

Figure 2: Schedule of Police and Fire Impact Fees

	Police	Fire
Residential	**Per Housing Unit**	**Per Housing Unit**
Single Family	$112.46	$149.49
Multifamily	$91.90	$122.16
Mobile Home	$87.87	$116.80
Nonresidential	**Per Square Foot**	**Per Square Foot**
Convenience Market	$0.07	$0.03
Convenience Market with Gas Pumps	$2.71	$1.36
Nursery (Garden Center)	$0.15	$0.78
Pharmacy Drugstore with Drive Through Window	$0.23	$0.11
Drive-in Bank	$0.33	$0.16
Quality Restaurant	$0.19	$0.09
Assisted Living*	$6.23	$3.11
Church	$0.02	$0.01
Child Day Care	$0.16	$0.08
Nursing Home	$0.018	$0.008
Animal Clinic	$0.007	$0.004
Manufacturing	$0.0087	$0.004
Warehousing	$0.0081	$0.004
Mini Warehousing	$0.0056	$0.003
Nursery Wholesale	$0.0069	$0.003
Other Nonresidential Uses Not Listed Above	Fee is calculated on a use-by-use basis	Fee is calculated on a use-by-use basis

* Fees for Assisted Living are expressed in number of occupied beds.
**Other nonresidential uses not identified in Figure 2 can be found within the Trip Generation Manual, 9th Edition. See Figures 12 and 19 for instructions on calculating police and fire impact fees for other nonresidential uses not identified in this Impact Fee Schedule.

It is recommended that the schedule of Police and Fire impact fees as shown in Figure 2 be reviewed and adjusted if necessary by the Chester Planning Board as part of an annual evaluation and update of the fees. To adjust for inflation, it is recommended that the Planning Board work with the Town of Chester's Finance Office to develop a vehicle sales index that best reflects historic and projected rates of increase in the purchase of police and fire vehicles. Such an index might be available from the dealers or sources where the town purchases the vehicles. This index could be applied against the calculated impact fees accordingly. If the cost estimates change significantly the fees should be recalculated.

E. Background Data and Projections

The Police and Fire impact fees as set forth in this report are based on existing and projected development estimated to occur within the Town of Chester between the years 2013 and 2019. This development may occur sooner or later than projected within this time period, but the rate and timing of this development does not impact the fee calculation. The year 2013 is the base year upon which the calculations are made and the time period 2013-2019 correlates with the Planning Board's current Capital Improvement Program update (FY 2013-2019) for the Town of Chester as well as the six-year time period in which the Town of Chester must spend assessed and collected fees.

The key data and variables developed for this impact fee report include:

- Housing Units (single-family, multi-family and mobile home/other)
- Population (existing and projected)
- Population per Housing Unit
- Employment
- Estimated 2013 nonresidential gross floor area (Town Assessor's Records)
- Trip Generation Rates for residential and nonresidential use (ITE Trip Generation Manual, 9th Edition)
- Average daily weekday vehicle trips (residential and nonresidential)
- Estimated current average daily nonresidential vehicle trips
- Local Police and Fire Calls (responses to incidents)
- Number and Type of Existing and Projected New Police and Fire Vehicles
- Estimated Cost and Replacement Value for Police and Fire Vehicles
- Cost per Demand Unit for Police and Fire Vehicles

<u>Current and Future Development Projections</u>

The following estimates and projections are used within the impact fee calculations to measure the increased demand for police and fire vehicles in the future, establish the existing levels of service measures for these vehicles within the Town of Chester, and to allocate the cost of these vehicles between existing and future development. Figure 3 summarizes the projected population, employment, housing units, and total service population for the Town of Chester.

Figure 3: Current and Future Development Projections, Town of Chester									
Town of Chester	2013	2014	2015	2016	2017	2018	2019	Total Increase	% Increase
Population	4,965	5,031	5,097	5,158	5,220	5,280	5,341	376	7.6%
Employment	648	660	673	689	707	728	752	104	16%
Housing Units	1,665	1,692	1,726	1,766	1,813	1,866	1,928	265	16%

Source: SNHPC population, employment and housing projections.

Population

The population estimates used in this impact fee calculation are based on the five year population projections (2010 through 2035) prepared by SNHPC for the region and considering the Chester's historic growth over the past ten years. The rates of growth between 2010 and 2015 and 2015 and 2020 were applied incrementally to obtain the annual estimates as shown in Figure 3. The Town of Chester's 2019 population is estimated to be approximately 5,341 people an increase of 7.6 percent or 376 new residents from 2013. This population projection is somewhat less than the 2015 and 2020 population projections provided by the town's master plan which are 5,756 and 6,204 respectively. The town's master plan population projections however, did not take into account slower growth which occurred between 2008 and 2013 as a result of the national recession.

Employment

According to the New Hampshire Employment Security, Economic & Market Information Bureau on average a total of 636 persons were employed in goods and service producing industries and government within the Town of Chester in 2011. This estimate was then matched with the number of housing units in 2011 (1,615) to derive a jobs to housing ratio of 0.39 jobs for each housing unit in Chester. To project the number of future jobs in Chester to 2019, this ratio was then multiplied by the projected number of housing units. It is recommended that the Chester Planning Board evaluate this projection with the release by the state of jobs data for Chester in 2020. If the estimated number of housing units does not increase as predicted, then the projected number of jobs is likely too high.

Housing Units

As shown in Figure 3, the total number of housing units in the Town of Chester is projected to increase from an estimated 1,665 units in 2013 to 1,928 units by 2019, an increase of 265 units or 16%. This housing unit projection is based on the number of current housing units as of 2010 and historical trends in residential building permits issued between 2011 and 2012 and applying this historic rate on an annualized basis forward to the year 2019. According to the Town of Chester an average of 22 residential building permits were issued annually between 2011 and 2012.

Population per Unit of Development

There are three main types of housing units in the Town of Chester which will be used in the impact fee calculations: (1) single-family; (2) multi-family; and (3) mobile homes. The total number of housing units, occupied units, population, persons per housing unit, household vacancy and housing distribution is shown in Figure 4. This data is derived from available Town of Chester property tax records and available 2010 census and ACS 2007-2011 five year estimates.

Figure 4: 2013 Persons per Housing Unit, Town of Chester

Housing Unit Type	Total Estimated 2013 Housing Units*	Total Estimated 2013 Occupied Housing Units**	Total Estimated 2013 Population**	2013 Estimated Average Persons Per Housing Unit**	Estimated 2013 Household Vacancy Rate**	2013 Percent Distribution of Housing Units*
Single Family	1,531	1,505	4,199	2.79	3.77	91.95%
Multi-Family	122	29	66	2.28	**.075**	7.33%
Mobile Home	12	17	37	2.18	**.043**	0.72%
Total	**1,665**	**1,551**	**4,965**	**3.04**	**3.90%**	**100%**

*Town of Chester Property Tax Records, August 2013

** Derived from 2010 US Census and ACS 2007-2011 Five Year Estimates

Gross Nonresidential Floor Area

Figure 5 shows the estimated total nonresidential floor area within the Town of Chester as of August 2013 as 432,257 square feet. Government/institutional is the largest non-residential land use in the community followed by the combined category "all other" (consisting of utility, agricultural and wholesale uses), retail, industrial and office.

Figure 5: 2013 Non-Residential Floor Area Estimates, Town of Chester Assessor Records, August 15 & 16, 2013

Town of Chester Non-residential Land Use	Estimated 2013 Non-Residential Floor Area in Square Feet
Office	**18,912**
Retail	**72,929**
Government/Institutional	**233,308**
Industrial	**22,901**
All Other	**84,207**
Total	**432,257**

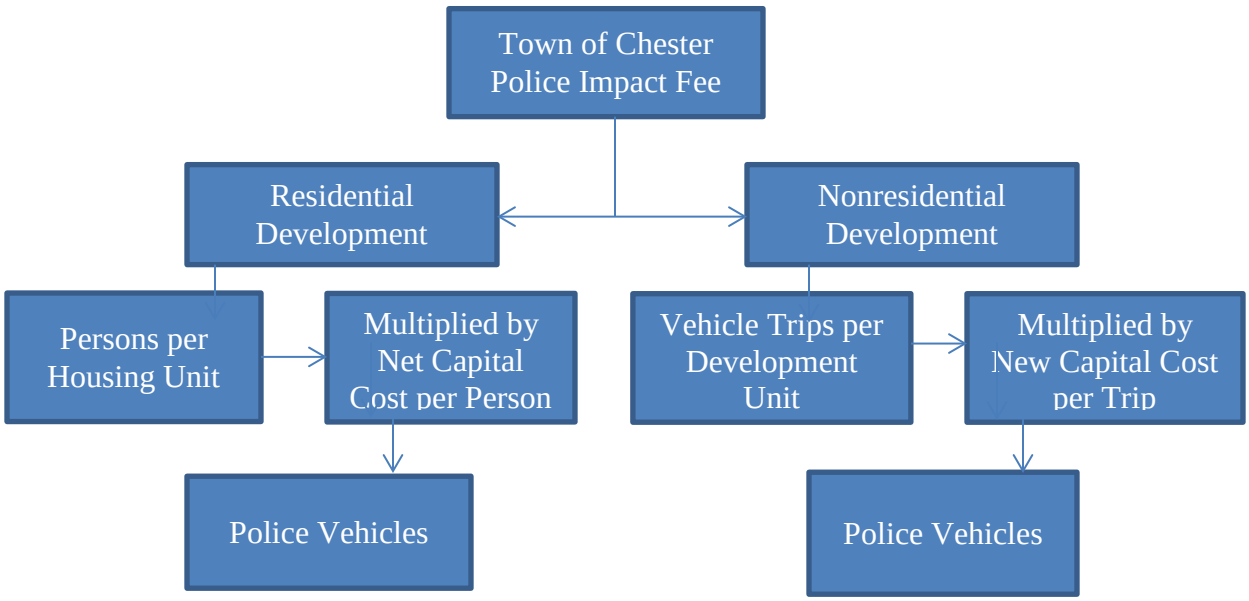
G. Impact Fee Calculations

Police Impact Fee

The impact fee for police vehicles and associated equipment within the vehicles for the Town of Chester is based upon different service demand indicators among the various types of residential and non-residential development within the community. As shown in Figure 6, the residential portion of the police impact fee is calculated on a **per capita basis** based upon the number of persons per housing unit and then converted to a **proportionate fee amount** by type of housing and then multiplied by the net capital cost for police vehicles per person.

The nonresidential portion of the police impact fee is calculated using nonresidential vehicle trips as a level of service demand indicator for police vehicles within the community. The number of vehicle trips per various types of nonresidential development is than multiplied by the net capital cost per trip to obtain the impact fee. Trip generation rates provide a commonly used nonresidential level of service demand indicator for police vehicle needs within a community. Vehicle trips are generally higher for commercial development, such as retail stores and shopping centers, and lower for industrial/warehouse development. Office and institutional trip generation rates often fall between commercial and industrial development. This ranking of trip rates is consistent with the relative demand for public safety from nonresidential development within a community. Because the Town of Chester currently has a low amount of nonresidential development (a total of 432,257 SF of gross floor area as of August 15/16, 2013), the impact fees for nonresidential uses are much less than residential development.

Figure 6: Police Impact Fee Methodology Flow Chart



Proportionate Share Factors

To allocate capital costs of police vehicles and the associated equipment within the vehicles, local calls for police services were analyzed to determine the residential and nonresidential proportionate share factors for the police impact fee.

Between April 1, 2012 and March 31, 2013, the Chester Police Department responded to a total of 3,162 calls of which 3,087 were tied to a residential or nonresidential address (75 calls were traffic or to other locations). Of the 3,087 calls, 90 percent of these were related to residential properties and 10 percent were related to non-residential properties (see summary of calls in Figure 7). This call distribution represents roughly a 90 percent/10 percent split in police services between residential and nonresidential uses within the community. For the impact fee calculations purposes this 90/10 percent call distribution split is used to allocate the capital costs for police vehicles between residential and nonresidential uses within Chester.

Figure 7: Proportionate Residential Share Factors for Police

Responses to Residential Locations:	2,782	90%
Responses to Nonresidential Locations:	305	10%
Subtotal	3,087	
Responses to Traffic Accidents & Other Locations:	75	
Total	3,162	

Source: Town of Chester, Police Department. Call data collected over a 12 month period from April 1, 2012 to March 1, 2013

Level of Service Standards:

The level of service and future need for police vehicles to serve residential and nonresidential development within the Town of Chester is reflected by the vehicle trips that will be generated by such development. Using estimated housing units and nonresidential floor space data, additional vehicle trips are calculated so that vehicle trip data can be used as a service demand indicator to measure the impact of new development in the town. Figure 8 provides an estimate of the 2013 Average Daily Trips for the Town of Chester.

The vehicle trip projections are developed by applying trip generation rates published by the Institute of Transportation Engineers to the 2013 estimates of housing units and nonresidential floor space in Chester. For nonresidential use, existing gross commercial, office and institutional and industrial floor area in the Town of Chester are used to estimate total vehicle trips.

Figure 8: 2013 Average Daily Trip Estimates, Town of Chester

Residential	Units[1]	2013 Housing Units[2]	Avg. Daily Trips per Unit[3]	Adjustment Factor[4]	Adjusted ADT per Unit	Estimated Total 2013 ADT Trips
Single Family	DU	1,531	9.52	55%	5.23	8,007
Multi-Family	DU	122	5.81	55%	3.19	389
Mobile Home	DU	12	4.99	55%	2.74	33
Total		1,665				**8,429**
Non-Residential	1,000 SF	2013 Gross Floor Area (SF)	Avg. Daily Trips per SF	Adjustment Factor	Adjusted ADT per KSF	Estimated Total 2013 ADT Trips
Commercial	KSF	72.93	86.30	50%	43.15	3,147
Office/Institutional	KSF	252.22	10.35	50%	5.17	1,304
Industrial[5]	KSF	107.10	2.05	50%	1.02	109
Total		432.25				**4,560**

[1]DU = dwelling units and KSF = per 1,000 SF

[2]Total Estimated 2013 housing units derived from Figure 4 and estimated 2013 gross floor area (SF) data is provided by the Town Assessor based on property tax records as of August 15 and 16, 2013

[3]Trip Generation Manual, Institute of Transportation Engineers (ITE), 9th Edition, Volumes 2 & 3

[4]Average Daily Trip ends are adjusted to avoid double counting as each trip includes both origin and destination point. Trip adjustment factor for residential uses is 55% reflecting a higher number of residential home to work trips within a community.

[5] Also includes utility, agricultural and wholesale uses

The average weekday vehicle trip ends among various types of nonresidential use are provided directly from the Trip Generation Manual published by the Institute of Transportation Engineers (ITE, 9th Edition) and are shown in Figure 8. A "trip end" represents a vehicle either entering or exiting a designated use. The trip generation rates in the ITE Trip Generation Manual are derived from actual measurements of traffic generated by individual sites based upon either the size of the development (e.g. per 1,000 SF of floor area) or the number of employees, occupied beds or number of units, etc. associated with the development.

Figure 8 provides an estimate of the total number of vehicle trips in 2013 within the Town of Chester and is derived by multiplying the average daily trip generation rates for various existing residential and nonresidential uses with estimates of the total number of housing units and nonresidential gross floor area in the community. However before the total number of vehicle trips can be determined, the average daily vehicle trip generation rates from the ITE Trip Generation Manual must first be adjusted to avoid double counting each trip at both the point of origin and the point of destination. Otherwise a person's trip from home to work would be counted as two trips when it is actually only one trip. For non-residential uses the overall trip adjustment factor is 50%. For residential

uses the overall trip adjustment factor is 55% as there are often a higher number of daily trips occurring from home to work within a community.

In addition to the adjustment for double counting trips, an additional adjustment is needed to the trip generation rates to take into account pass-by-trips which are made as intermediate stops *on the way* from an origin to a primary trip destination without a route diversion. Factors for the percentage of pass-by-trips are available for certain non-residential uses in Chapter 5 of the Trip Generation Manual, 9th Edition, Volume 1: User's Guide and Handbook. These percentages are shown in bold in Figure 9 for the various identified types of non-residential uses. For all other types of non-residential development, the pass-by-trip adjustment factor used in this calculation is 47 percent which represents an average of the adjustment factors provided from the ITE Manual, Volume 1. For specific commercial/retail uses such as convenience markets with or without gas pumps, the pass by trip adjustment factor range from 26% to 56% depending on the floor area of the development.

Figure 9: Average Daily Vehicle Trip Factors for Nonresidential Development

Average Weekday Total Vehicle Trip Ends per 1,000 SF		Multiply by Adjustment Factor (Avg. % of Pass-By Trips)	Adjusted Average One-Way Vehicle Trip Ends per 1,000 SF
Retail/Commercial	*Avg. Weekday VT Ends*		
852 Convenience Market (Open 15-16 hrs.) Avg. 3,000 SF	31.02	47%	14.57
853 Convenience Market w/gas pumps (open 15-16 hrs.) Avg. 3,000 SF	845.60	**66%**	558.09
817 Nursery (Garden Center) Avg. 5,000 SF	68.10	47%	32.00
881 Pharmacy Drugstore with Drive-Thru Window Avg. 13,000 SF	96.91	**49%**	47.48
912 Drive-in Bank Avg. 3,000 SF	148.15	**47%**	69.63
931 Quality Restaurant Avg. 9,000 SF	89.95	**44%**	39.57
Office/Institutional			
254 Assisted Living* Avg. 117 Occupied Beds	2.74	47%	1.28
560 Church			

Avg. 19,000 SF	9.11	47%	4.28
565 Child Day Care Avg. 5,000 SF	74.06	47%	34.80
620 Nursing Home Avg. 63,000 SF	7.6	47%	3.57
640 Animal Clinic Avg. 13,000 SF	4.08	47%	1.63
Industrial			
110 Light Industrial Avg.203,000 SF	6.47	47%	3.04
140 Manufacturing Avg. 349,000 SF	3.82	47%	1.79
150 Warehousing Avg. 431,000 SF	3.56	47%	1.67
151 Mini-Warehouse Avg. 56,000 SF	2.50	47%	1.17
818 Nursery Wholesale Avg. 3,000 SF	3.02	47%	1.42

*Assisted Living vehicle trip-ends are expressed in number of occupied beds.
Source: Trip Generation Manual, 9th Edition, Volume 1 User's Guide and Handbook and Volumes 2 & 3: Data, Institute of Transportation Engineers; Average Pass-By Trips % noted in bold are based on ITE Volume I, data contained with Chapter 5 – for all other uses in Figure 4 - a weighted average of 47% is used as the Average Pass-By Trips adjustment factor.

Police Vehicles and Equipment Incremental Expansion Component

As noted previously, the cost per demand unit for police vehicles and equipment is derived using the incremental expansion approach. Vehicle and equipment costs shown in Figure 10 are obtained directly from the Town of Chester's Finance Officer and Police Chief. This information represents what the town's estimated cost is for replacing vehicles and associated equipment as part of the department's inventory. As shown in Figure 10, the estimated total replacement is valued at $222,405.

In order to determine the cost per demand unit for police vehicles, the total estimated replacement cost ($222,405) is multiplied by the residential (90%) and nonresidential proportionate (10%) share factors. The resulting residential proportionate share ($200,164) is then divided by the town's current 2013 population estimate (4,965) for a cost per demand unit of $40.31 per person.

For nonresidential development, the proportionate share ($22,240) is divided by the 2013 estimate of total daily nonresidential vehicle trips (4,560), for a cost per demand unit of $4.87 per vehicle trip.

Figure 10: Police Vehicles Incremental Expansion Level-of-Service Standards

Vehicle Type	Make/Year	Purchase Price	Planned Retirement	No# of Units	Replacement Cost Per Unit*	Estimated Total Replacement Value
Crown Vic	Ford/2009	$32,565	2013	1	$40,250	$40,250
Crown Vic	Ford/2010	$27,372	2014	1	$42,262	$42,262
Crown Vic	Ford/2011	$34,500	2015	1	$44,375	$44,375
Expedition	Ford/2008	$34,670	2016	1	$46,594	$46,594
Crown Vic	Ford/2013	$40,250	2017	1	$48,924	$48,924
Total				**5**		**$222,405**

*Note: Replacement Cost Per Unit is provided by Town Finance Officer and Police Chief representing current 2013 vehicle cost and a 5% annual inflation rate.

Development Type	Proportionate Share	2013 Demand Units	Cost Per Demand Unit
Residential	90%	4,965 Population*	$40.31
Nonresidential	10%	4,560 ADT**	$4.87

*Note: Chester's 2013 Population is Based on SNHPC Population-Housing Unit Methodology

**Note: Estimated Total Adjusted 2013 Nonresidential Vehicle Trips for Town of Chester, NH – see Figure

Credits

Currently the Town of Chester does not have any outstanding bonded debt or lease payments related to the financing of police vehicles and related equipment. At present, all financing of police vehicles and related equipment has come from directly from general taxation. Therefore, a credit for existing bond/lease financing is not applicable to this impact fee.

Summary of Police Level-of-Service Standards

Figure 11 provides a summary of all the level-of-service (LOS) standards used to calculate the police impact fees. As noted previously, police impact fees are calculated for both residential and nonresidential land uses. As shown in Figure 11, the capital cost per demand unit for residential land uses is $40.31 per person. The cost per demand unit for nonresidential units is $4.87 per nonresidential vehicle trip.

Figure 11: Police LOS Impact Fee Variables

Residential and Nonresidential Demand Indicators	Average Persons Per Housing Unit	Adjusted Average Vehicle One Way Trip Ends Per 1,000 SF
Residential		
Single-Family	2.79	
Multifamily	2.28	
Mobile Home	2.18	
Nonresidential		
Convenience Market		14.57
Convenience Market w/gas pumps		558.09
Nursery (Garden Center)		32.00
Pharmacy Drugstore w/Drive Thru Window		47.48
Drive-In Bank		69.63
Quality Restaurant		39.57
Assisted Living*		1.28
Church		4.28
Child Day Care		34.80
Nursing Home		3.57
Animal Clinic		1.63
Light Industrial		3.04
Manufacturing		1.79
Warehousing		1.67

Mini-Warehouse		1.17
Nursery Wholesale		1.42
Demand Unit Cost Estimates	***Per Person***	***Per Trip***
Capital Cost for New Vehicles	$40.31	$4.87
Total Capital Cost per Demand Unit	$40.31	$4.87

*Assisted Living vehicle trip-ends are expressed in number of occupied beds.

Maximum Sustainable Impact Fee for Police Vehicles

Figure 12 provides the schedule for maximum sustainable impact fees for police vehicles. For new single-family residential units, the average persons per housing unit (2.79) or a single family housing unit) is multiplied by the capital cost per person ($40.31) for an impact fee per unit of **$112.46**. For new multi-family residential units, the average number of persons per a multi-family unit (2.28) is multiplied by the capital cost per person ($40.31) for an impact fee per unit of $91.90. For new mobile home units, the average number of persons per a mobile home unit (2.18) is multiplied by the capital cost per person ($40.31) for an impact fee per unit of $87.87.

For ease of administration, the maximum sustainable impact fee for police vehicles for most types of nonresidential development will be imposed on a per square foot basis of floor area of new development. For example, a convenience store (open 15/16 hours) generates 31.02 trip ends per 1,000 SF of floor area (see Figure 5). This average daily vehicle trips per 1,000 square feet of 31.02 is multiplied by the one way trip adjustment factor (47%) resulting in an adjusted average one way vehicle trip ends per 1,000 SF of 14.57. This adjusted average one way vehicle trip ends per 1,000 SF is then multiplied by the capital cost per vehicle trip ($4.87). The final step as shown in Figure 7 is to divide by the scaling factor of 1,000 SF to yield a fee of $0.07 per square foot of floor area. For assisted living the average daily vehicle trip ends is per occupied bed and not per 1,000 SF of floor area.

Where a specific nonresidential use is not listed in Figure 12, the maximum sustainable police impact fee can be calculated by obtaining the average weekday vehicle trip ends per 1,000 square feet as provided within the Trip Generation Manual, 9th Edition multiplying by an average trip adjustment factor of 48% (48% is the overall average of the trip adjustment factors for nonresidential uses listed in Figure 9) and the capital cost per vehicle trip of $4.87 then dividing by the scaling factor of 1,000 to yield the fee per square foot of floor area of the specific nonresidential use.

Figure 12: Police Impact Fee Schedule

Residential	**Per Housing Unit**	
Single-Family	$112.46	
Multifamily	$91.90	
Mobile Home	$87.87	
Nonresidential		**Per Square Foot**
Convenience Market		$0.07
Convenience Market w/gas pumps		$2.71
Nursery (Garden Center)		$0.15
Pharmacy Drugstore with Drive-Through Window		$0.23
Drive-in Bank		$0.33
Quality Restaurant		$0.19
Assisted Living*		$6.23
Church		$0.02
Child Day Care		$0.16
Nursing Home		$0.018
Animal Clinic		$0.007
Light Industrial		$0.014
Manufacturing		$0.0087
Warehousing		$0.0081
Mini Warehouse		$0.0056
Nursery Wholesale		$0.0069
Other Nonresidential Uses (not listed above)**		Fee is calculated on a use-by-use basis

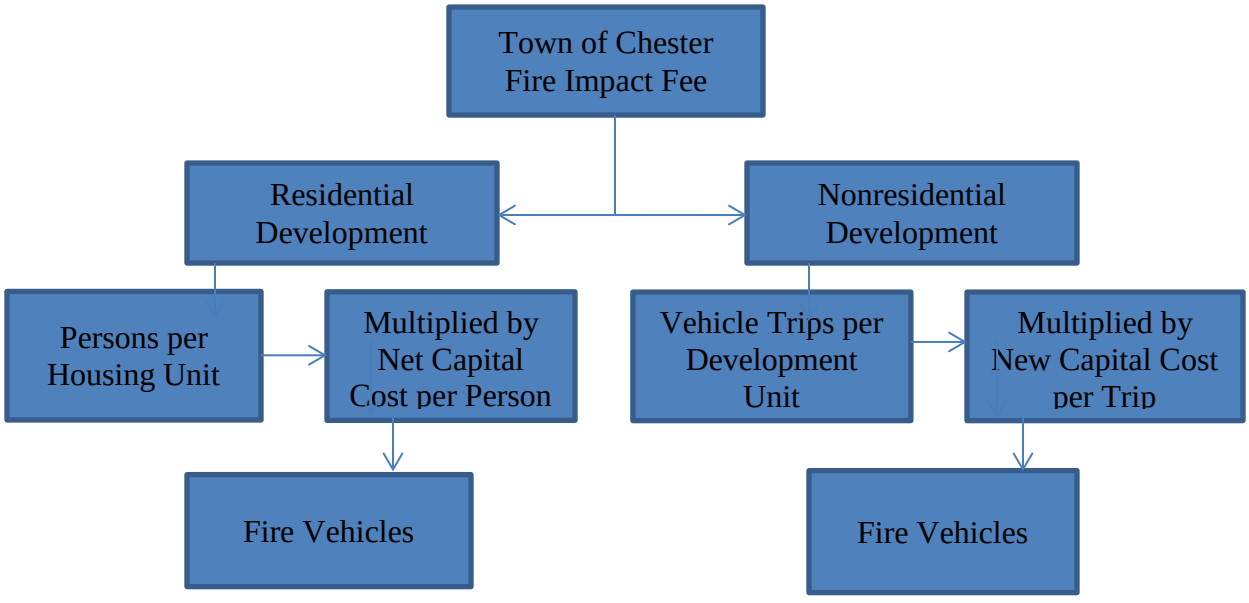
* Fees for Assisted Living are expressed in number of occupied beds.
**Other nonresidential uses not identified in Figure 2 can be found within the Trip Generation Manual, 9th Edition and the fees can be calculated by applying an average one way trip adjustment factor of 48% and multiplying by the capital cost per vehicle trip of $4.87 then dividing by scaling factor of 1,000 to yield an impact fee per SF of floor area.

Fire Impact Fee

Similar to the methodology for the police impact fees for the Town of Chester, the impact fee for fire vehicles and associated equipment contained within the vehicles is based upon different service demand indicators among the various types of residential and non-residential development within the community. As shown in Figure 13, the residential portion of the fire impact fee is calculated on a **per capita basis** based upon the number of persons per housing unit and then converted to a **proportionate fee amount** by type of housing and then multiplied by the net capital cost for fire vehicles per person.

The nonresidential portion of the fire impact fee is calculated using nonresidential vehicle trips as a level of service demand indicator for fire vehicles within the community. The number of vehicle trips per various types of nonresidential development is than multiplied by the net capital cost per trip to obtain the impact fee. Trip generation rates provide a commonly used nonresidential level of service demand indicator for fire vehicle needs within a community. Vehicle trips are generally higher for commercial development, such as retail stores and shopping centers, and lower for industrial/warehouse development. Office and institutional trip generation rates often fall between commercial and industrial development. This ranking of trip rates is consistent with the relative demand for public safety from nonresidential development within a community. Because the Town of Chester currently has a low amount of nonresidential development (a total of 432,257 SF of gross floor area as of August 15/16, 2013), the impact fees for nonresidential uses are much less than residential development.

Figure 13: Fire Impact Fee Methodology Flow Chart



Proportionate Share Factors

To allocate capital costs of fire vehicles and the associated equipment contained within the vehicles, local calls for fire services were analyzed to determine the residential and nonresidential proportionate share factors for the police impact fee.

Between April 1, 2012 and March 31, 2013, the Chester Fire Department responded to a total of 386 calls of which 328 were tied to a residential address; 12 to a non-residential address; and 46 were related to traffic accidents and other incidents. With the 46 calls to other locations removed from the total, 96 percent of the calls were related to residential properties and 4 percent were related to non-residential properties (see summary of calls in Figure 14). This call distribution represents a 96 percent/4 percent split in fire services between residential and nonresidential uses within the community. For impact fee calculation purposes this 96/4 percent call distribution split is used to allocate the capital costs for fire vehicles between residential and nonresidential uses within Chester.

Figure 14: Proportionate Residential Share Factors for Police

Responses to Residential Locations:	328	96%
Responses to Nonresidential Locations:	12	4%
Subtotal	340	
Responses to Traffic Accidents & Other Locations:	46	
Total	386	

Source: Town of Chester, Fire Department. Call data collected over a 12 month period from April 1, 2012 to March 1, 2013

Level of Service Standards:

The level of service and future need for fire vehicles to serve residential and nonresidential development within the Town of Chester is reflected by the vehicle trips that will be generated by such development. Using estimated housing units and nonresidential floor space data, additional vehicle trips are calculated so that vehicle trip data can be used as a service demand indicator to measure the impact of new development in the town. Figure 15 provides an estimate of the 2013 Average Daily Trips for the Town of Chester.

The vehicle trip projections are developed by applying trip generation rates published by the Institute of Transportation Engineers to the 2013 estimates of housing units and nonresidential floor space in Chester. For nonresidential use, existing gross commercial, office and institutional and industrial floor area in the Town of Chester are used to estimate total vehicle trips.

Figure 15: 2013 Average Daily Trip Estimates, Town of Chester

Residential	Units[1]	2013 Housing Units[2]	Avg. Daily Trips per Unit[3]	Adjustment Factor[4]	Adjusted ADT per Unit	Estimated Total 2013 ADT Trips
Single Family	DU	1,531	9.52	55%	5.23	8,007
Multi-Family	DU	122	5.81	55%	3.19	389
Mobile Home	DU	12	4.99	55%	2.74	33
Total		1,665				**8,429**
Non-Residential	1,000 SF	2013 Gross Floor Area (SF)	Avg. Daily Trips per SF	Adjustment Factor	Adjusted ADT per KSF	Estimated Total 2013 ADT Trips
Commercial	KSF	72.93	86.30	50%	43.15	3,147
Office/Institutional	KSF	252.22	10.35	50%	5.17	1,304
Industrial[5]	KSF	107.10	2.05	50%	1.02	109
Total		432.25				**4,560**

[1]DU = dwelling units and KSF = per 1,000 SF

[2]Total Estimated 2013 housing units derived from Figure 4 and estimated 2013 gross floor area (SF) data is provided by the Town Assessor based on property tax records as of August 15 and 16, 2013

[3]Trip Generation Manual, Institute of Transportation Engineers (ITE), 9th Edition, Volumes 2 & 3

[4]Average Daily Trip ends are adjusted to avoid double counting as each trip includes both origin and destination point. Trip adjustment factor for residential uses is 55% reflecting a higher number of residential home to work trips within a community.

[5] Also includes utility, agricultural and wholesale uses

The average weekday vehicle trip ends among various types of nonresidential use are provided directly from the Trip Generation Manual published by the Institute of Transportation Engineers (ITE, 9th Edition) and are shown in Figure 15. A "trip end" represents a vehicle either entering or exiting a designated use. The trip generation rates in the ITE Trip Generation Manual are derived from actual measurements of traffic generated by individual sites based upon either the size of the development (e.g. per 1,000 SF of floor area) or the number of employees, occupied beds or number of units, etc. associated with the development.

Figure 15 provides an estimate of the total number of vehicle trips in 2013 within the Town of Chester and is derived by multiplying the average daily trip generation rates for various existing residential and nonresidential uses with estimates of the total number of housing units and nonresidential gross floor area in the community. However before the total number of vehicle trips can be determined, the average daily vehicle trip generation rates from the ITE Trip Generation Manual must first be adjusted to avoid double counting each trip at both the point of origin and the point of destination. Otherwise a person's trip from home to work would be counted as two trips when it is actually only one trip. For non-residential uses the overall trip adjustment factor is 50%. For residential

uses the overall trip adjustment factor is 55% as there are often a higher number of daily trips occurring from home to work within a community.

In addition to the adjustment for double counting trips, an additional adjustment is needed to the trip generation rates to take into account pass-by-trips which are made as intermediate stops *on the way* from an origin to a primary trip destination without a route diversion. Factors for the percentage of pass-by-trips are available for certain non-residential uses in Chapter 5 of the Trip Generation Manual, 9th Edition, Volume 1: User's Guide and Handbook. These percentages are shown in bold in Figure 16 for the various identified types of non-residential uses. For all other types of non-residential development, the pass-by-trip adjustment factor used in this calculation is 47 percent which represents an average of the adjustment factors provided from the ITE Manual, Volume 1. For specific commercial/retail uses such as convenience markets with or without gas pumps, the pass by trip adjustment factor range from 26% to 56% depending on the floor area of the development.

Figure 16: Average Daily Vehicle Trip Factors for Nonresidential Development

Average Weekday Total Vehicle Trip Ends per 1,000 SF		Multiply by Adjustment Factor (Avg. % of Pass-By Trips)	Adjusted Average One-Way Vehicle Trip Ends per 1,000 SF
Retail/Commercial	*Avg. Weekday VT Ends*		
852 Convenience Market (Open 15-16 hrs.) Avg. 3,000 SF	31.02	47%	14.57
853 Convenience Market w/gas pumps (open 15-16 hrs.) Avg. 3,000 SF	845.60	**66%**	558.09
817 Nursery (Garden Center) Avg. 5,000 SF	68.10	47%	32.00
881 Pharmacy Drugstore with Drive-Thru Window Avg. 13,000 SF	96.91	**49%**	47.48
912 Drive-in Bank Avg. 3,000 SF	148.15	**47%**	69.63
931 Quality Restaurant Avg. 9,000 SF	89.95	**44%**	39.57
Office/Institutional			
254 Assisted Living* Avg. 117 Occupied Beds	2.74	47%	1.28
560 Church			

Avg. 19,000 SF	9.11	47%	4.28
565 Child Day Care Avg. 5,000 SF	74.06	47%	34.80
620 Nursing Home Avg. 63,000 SF	7.6	47%	3.57
640 Animal Clinic Avg. 13,000 SF	4.08	47%	1.63
Industrial			
110 Light Industrial Avg.203,000 SF	6.47	47%	3.04
140 Manufacturing Avg. 349,000 SF	3.82	47%	1.79
150 Warehousing Avg. 431,000 SF	3.56	47%	1.67
151 Mini-Warehouse Avg. 56,000 SF	2.50	47%	1.17
818 Nursery Wholesale Avg. 3,000 SF	3.02	47%	1.42

*Assisted Living vehicle trip-ends are expressed in number of occupied beds.
Source: Trip Generation Manual, 9th Edition, Volume 1 User's Guide and Handbook and Volumes 2 & 3: Data, Institute of Transportation Engineers; Average Pass-By Trips % noted in bold are based on ITE Volume I, data contained with Chapter 5 – for all other uses in Figure 4 - a weighted average of 47% is used as the Average Pass-By Trips adjustment factor.

Fire Vehicles and Equipment Incremental Expansion Component

As noted previously, the cost per demand unit for fire vehicles and associated equipment is derived using the incremental expansion approach. Vehicle and equipment costs shown in Figure 17 are obtained directly from the Town of Chester's Finance Officer and Fire Chief. This information represents what the town's estimated cost is for replacing vehicles and associated equipment as part of the department's inventory. As shown in Figure 17, the estimated total replacement is valued at $234,375.

In order to determine the cost per demand unit for police vehicles, the total estimated replacement cost ($434,375) is multiplied by the residential (96%) and nonresidential proportionate (4%) share factors. The resulting residential proportionate share ($417,000) is then divided by the town's current 2013 population estimate (4,965) for a cost per demand unit of $83.98 per person.

For nonresidential development, the proportionate share ($17,375) is divided by the 2013 estimate of total daily nonresidential vehicle trips (4,560), for a cost per demand unit of $3.81 per vehicle trip.

Figure 17: Fire Vehicles Incremental Expansion Level-of-Service Standards

Vehicle Type	Make/Year	Planned Retirement	No# of Units	Replacement Cost Per Unit	Estimated Total Replacement Value
Command SUV	Ford/2008	2015	1	$45,000	$45,000
Utility P/U	Ford/1993	2017	1	$45,000	$45,000
Forestry Truck	Ford/2004	2019	1	$55,000	$44,375
Forestry Tanker	Amer.M813/1972	ASAP	1	$300,000	$300,000
Total			**5**		**$434,375**

*

Development Type	Proportionate Share	2013 Demand Units	Cost Per Demand Unit
Residential	96%	4,965 Population*	$83.98
Nonresidential	4%	4,560 ADT**	$3.81

*Note: Chester's 2013 Population is Based on SNHPC Population-Housing Unit Methodology.

**Note: Estimated Total Adjusted 2013 Nonresidential Vehicle Trips for Town of Chester, NH – see Figure 15.

Credits

The Town of Chester is currently making lease payments related to the financing of the two fire vehicles and related equipment: International 2010 Rescue Truck scheduled for replacement in 2025 (last payment scheduled for 7/1/2014) and 2010 Engine Quint, HME (last payment scheduled in 2020). These lease payments have come directly from general taxation. Therefore, a credit for these payments is applicable to this impact fee to ensure that future development does not pay twice for fire vehicles, once through the impact fee and again through general taxation.

- 2010 Rescue Truck – Last Payment Date (7/1/2014) at $44,332.22
- 2010 Engine Quint HME- Payment Dates (8/1/2014; 2015; 2016; 2017; 2018 and 2019) at annual payment of $52,019.66 totaling $312,118 over six-year period

  Total combined annual payment = $96,351 during impact fee period

- Credits = town's FY 2012 annual tax revenue $2,667,242.00 (FY 2012-2013 tax rate not yet set) divided by the combined annual payment $96,351 = **3.62%**

Summary of Fire Level-of-Service Standards

Figure 18 provides a summary of all the level-of-service (LOS) standards used to calculate the fire impact fees. As noted previously, fire impact fees are calculated for both residential and nonresidential land uses. As shown in Figure 18, the capital cost per demand unit for residential land uses is $83.98 per person. The cost per demand unit for nonresidential units is $3.81 per nonresidential vehicle trip.

Figure 18: Fire LOS Impact Fee Variables

Residential and Nonresidential Demand Indicators	Average Persons Per Housing Unit	Adjusted Average Vehicle One Way Trip Ends Per 1,000 SF
Residential		
Single-Family	2.79	
Multifamily	2.28	
Mobile Home	2.18	
Nonresidential		
Convenience Market		14.57
Convenience Market w/gas pumps		558.09
Nursery (Garden Center)		32.00
Pharmacy Drugstore w/Drive Thru Window		47.48
Drive-In Bank		69.63
Quality Restaurant		39.57
Assisted Living*		1.28
Church		4.28
Child Day Care		34.80

Nursing Home		3.57
Animal Clinic		1.63
Light Industrial		3.04
Manufacturing		1.79
Warehousing		1.67
Mini-Warehouse		1.17
Nursery Wholesale		1.42
Demand Unit Cost Estimates	***Per Person***	***Per Trip***
Capital Cost for New Vehicles	$83.98	$3.81
Total Capital Cost per Demand Unit	$83.98	$3.81

*Assisted Living vehicle trip-ends are expressed in number of occupied beds.

Maximum Sustainable Impact Fee for Fire Vehicles

Figure 19 provides the schedule for maximum sustainable impact fees for fire vehicles. For new single-family residential units, the average persons per housing unit (2.79) or a single family housing unit) is multiplied by the capital cost per person ($83.98) less the credit of 3.62% for an impact fee per unit of **$149.49**. For new multi-family residential units, the average number of persons per a multi-family unit (2.28) is multiplied by the capital cost per person ($83.98) less the credit of 3.62% for an impact fee per unit of $122.16. For new mobile home units, the average number of persons per a mobile home unit (2.18) is multiplied by the capital cost per person ($83.98) less the credit of 3.62% for an impact fee per unit of $116.80

For ease of administration, the maximum sustainable impact fee for fire vehicles for most types of nonresidential development will be imposed on a per square foot basis of floor area of new development. For example, a convenience store (open 15/16 hours) generates 31.02 trip ends per 1,000 SF of floor area (see Figure 5). This average daily vehicle trips per 1,000 square feet of 31.02 is multiplied by the one way trip adjustment factor (47%) resulting in an adjusted average one way vehicle trip ends per 1,000 SF of 14.57. This adjusted average one way vehicle trip ends per 1,000 SF is then multiplied by the capital cost per vehicle trip ($3.81) less the credit of 3.62%. The final step as shown in Figure 19 is to divide by the scaling factor of 1,000 SF to yield a fee of $0.035 per square foot of floor area. For assisted living the average daily vehicle trip ends is per occupied bed and not per 1,000 SF of floor area.

Where a specific nonresidential use is not listed in Figure 19, the maximum sustainable police impact fee can be calculated by obtaining the average weekday vehicle trip ends per 1,000 square feet as provided within the Trip Generation Manual, 9th Edition multiplying by an average trip adjustment factor of 48% (48% is the overall average of the trip adjustment factors for nonresidential uses listed in Figure 19) and the capital cost per vehicle trip of $3.81 less the credit of 3.62% and then dividing by the scaling factor of 1,000 to yield the fee per square foot of floor area of the specific nonresidential use.

Figure 19: Fire Impact Fee Schedule

Residential	**Per Housing Unit**	
Single-Family	$149.49	
Multifamily	$122.16	
Mobile Home	$116.80	
Nonresidential		**Per Square Foot**
Convenience Market		$0.03
Convenience Market w/gas pumps		$1.36
Nursery (Garden Center)		$0.78
Pharmacy Drugstore with Drive-Through Window		$0.11
Drive-in Bank		$0.16
Quality Restaurant		$0.09
Assisted Living*		$3.11
Church		$0.01
Child Day Care		$0.08
Nursing Home		$0.008
Animal Clinic		$0.004
Light Industrial		$0.007
Manufacturing		$0.004
Warehousing		$0.004
Mini Warehouse		$0.003
Nursery Wholesale		$0.003
Other Nonresidential Uses (not listed above)**		Fee is calculated on a use- by use basis

* Fees for Assisted Living are expressed in number of occupied beds.
**Other nonresidential uses not identified in Figure 2 can be found within the Trip Generation Manual, 9th Edition and the fees can be calculated by applying an average one way trip adjustment factor of 48% and multiplying by the capital cost per vehicle trip of $3.81 less credit of 3.62% and then dividing by scaling factor of 1,000 to yield an impact fee per SF of floor area.

H. Additional Administrative Considerations

This impact fee schedule is applied by type of structure, to any new construction or conversion activity that results in a net increase in the number of dwelling units or new nonresidential floor area (SF) or occupied beds within assisted living establishments or other similar nonresidential uses.

Impact Fee Waiver Provisions

Waiver provisions for the assessment of impact fees are currently set forth within the Town of Chester Zoning Ordinance, Article 14, Fair Share Contribution regulations.

Conversions and Additions

In cases where a conversion or addition to a structure changes the number of dwelling units within the structure to a new classification of dwelling unit, the impact fee may be computed by calculating the impact fee for the new use and number of units, and subtracting the fee that would have applied to the existing development if it were new. For example, if a single family home were converted to a duplex:

Police Fee for multi-family dwelling unit:	2 units @ $91.90	=	$183.80
Less schedule amount for single-family unit			($118.91)
			$ 64.89

In the above example, the net positive difference of $64.89 represents the value of the net impact created by the change in use from a single-family home to a duplex, two-family or multi-family unit. By applying this procedure, the baseline impact already present in the form of an existing single family home is taken into account. The conversion is then assessed only for the incremental impact generated by the change. In order to address these and other similar types of conversions and additions, the Town of Chester building and/or planning department should be responsible for working with the fee-payer at the time of building permit.

Updating the Fee Schedule

The impact fee methodology has been designed to allow for future updates or modification of the underlying assumptions. Periodically, the variables in the impact fee model can be updated based on new information and documentation to produce revised impact fee amounts. Updates to the fee schedule using the methodology described in this report should be made after consideration of all of the variables involved, as some of

these elements are interdependent. The impact fee ordinance should include policies that address the frequency and procedures for adopting updated calculations and fee schedules.

Assessment/Collection of the Impact Fees

Chester's impact fees for police and fire vehicles and associated equipment represent a ***one-time charge*** collected at the point where new residential dwelling units or nonresidential development (floor area) are to be authorized by building permit. As such, this methodology recognizes each new dwelling unit or new nonresidential development as a permanent addition to the base of demand placed on Chester's police and fire vehicle capacity, and recognizes that the average use of these vehicles may vary by type of dwelling unit, size of unit, and number of occupied bedrooms.

These requirements, however, do not prevent the Town of Chester and the assessed party from establishing an alternate, mutually acceptable schedule of payment of impact fees in effect at the time of subdivision plat or site plan approval by the planning board. If an alternative schedule of payment is established, the Town of Chester may require developers to post bonds, issue letters of credit, accept liens, or otherwise provide suitable measures of security so as to guarantee future payment of the assessed impact fees in accordance with RSA 674:21.

The actual implementation of this impact fee methodology and the resulting fee schedule developed herein are subject to the Town of Chester's current "fair share" or impact fee ordinance (Article 14, Town of Chester Zoning Ordinance). While this methodology establishes a rational basis for determining proportionate dollar amounts for impact fees that could be assessed for police and fire vehicles and associated equipment under the provisions of Chester's ordinance, the impact fees to be assessed and collected as a result of this report must be implemented primarily to ensure that adequate public facilities remain available to accommodate new growth and to obtain more of the revenues needed for such facilities at the time new development takes place.

More importantly, it is advisable the Town of Chester Planning Board continue to update the town's capital facilities improvement program (CIP) on an annual basis to ensure that the impact fees collected through adoption of this impact fee schedule are spent by the town within six years of collection and that the police and fire vehicles and associated equipment outlined in the CIP remain consistent with the funding appropriated for them.

It is critical to remember that all impact fees assessed and collected by the Town of Chester must be spent within six years, otherwise the town is legally bound under RSA 674:21 V (e) to refund the fees with any accrued interest.