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AFFORDABLE HOUSING AND REDEVELOPMENT: QUANTIFYING AFFORDABLE HOUSING NEED AND RESPONSES IN NEW YORK CITY

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INTRODUCTION: THE CONTEXT FOR AFFORDABLE HOUSING—DEFINITIONS AND DEMOGRAPHICS

The purpose of this Article is to define what constitutes affordable housing and then to quantify affordable housing need in New York City's five boroughs and their subareas.[1] Subareas are the 60 community districts of New York City—areas of 100,000 to 150,000 in population, ranging from 5 in number in Staten Island to 18 in number in Brooklyn. This Article will involve a discussion of (1) the income group that needs affordable housing in New York City; (2) the various categories of affordable housing need in the city; (3) where and how the definitions of multiple types of need originate; (4) the mitigation of affordable need in New York City, including applicable funding sources; and (5) the share of affordable housing need that mitigation addresses. The first portion of the Article will quantify affordable housing need related to (1) income-qualified households who cannot afford their housing (cost-burdened need); (2) income-qualified households who are living in crowded or deteriorated housing (rehabilitation need); and (3) income-qualified households who will grow in the future, but for whom the market will not provide (new construction need). This Article will then discuss how these components of need compare in each of New York City's

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[1] This paper is part of a larger study undertaken for the Steven L. Newman Real Estate Institute at Baruch College, City University of New York (CUNY). The New York City Office of the Public Advocate funded the study, entitled THE STEVEN L. NEWMAN REAL ESTATE INSTITUTE, REPORT TO THE NEW YORK CITY PUBLIC ADVOCATE: AFFORDABLE HOUSING IN NEW YORK CITY (2005), *available at* http://pubadvocate.nyc.gov/policy/documents/TheContextofAffordableHousinginNewYorkCity_000.pdf

five boroughs and within the city's community districts. The remaining portion of the paper will discuss the responses to or mitigation of affordable housing need within the same need categories specified above, as well as the affordable housing need that remains unfilled as a result of constrained mitigation resources.

I. INCOME GROUPS REQUIRING HOUSING ASSISTANCE IN NEW YORK CITY

The accepted standards for very low-, low-, and moderate-income households are those whose household income falls between 0 and 135% of median family income calculated for a six-county Primary Metropolitan Statistical Area (PMSA) that includes the five boroughs of New York City (The Bronx, Brooklyn, Manhattan, Queens, and Staten Island) and Westchester County.[2] Each of the five boroughs is simultaneously designated as a county in this definition of region. Regional median family income was slightly over $62,000 for a household size of four in 1999.[3]

Very Low Income (<50%)	=	Below $31,800
Low Income (50%-80%)	=	$31,800 to $49,600
Moderate Income (80%-135%)	=	$49,600 to $83,700

Each of these levels is adjusted upward by about 8% for household size increases of one and downward by about 10% for household size decreases of one.[4] Overall, in New York City in 2004, there were approximately 2.1 million very low-, low-, and moderate-income households out of about 3.1 million total households. Two-thirds of

[2] This is the New York City Primary Metropolitan Statistical Area (PMSA). The definition of 135% of median family income and below as requiring affordable housing is a mutually agreed upon figure reflecting the affordable housing practices of the New York City Department of Housing, Preservation and Development (HPD) and the local advisory group on housing in New York City, the Citizens Housing and Planning Council (CHPC).

[3] U.S. CENSUS BUREAU, CENSUS 2000 (2000).

[4] For the details of qualifying households of various sizes by the U.S. Department of Housing and Urban Development (HUD) Section 8 income qualification standards in New Jersey, see N.J. ADMIN. CODE § 5:94 (2006) (entitled Substantive Rules of the New Jersey Council on Affordable Housing for the Period Beginning December 20, 2004); 36 N.J. Reg. 5748(a) (Dec. 20, 2004).

New York City households fall at or below 135% of median family income.

The definitions of very low and low income are derived from the U.S. Department of Housing and Urban Development (HUD) Section 8 eligibility requirements. The definition of moderate income comes from accepted New York City housing practice, which defines a group above 80% of median income (80%-135%) that may also require housing assistance.

In terms of income requirements for the analyses that follow, those households between 0 and 135% of median family income are deemed to require affordable housing assistance if (1) they spend more than they should for housing, (2) the housing they occupy is overcrowded or deteriorated, and/or (3) this income group will grow in the future and the unassisted housing market will not respond to them directly.

II. DEFINITIONS FOR THE SPECIFIC COMPONENTS OF AFFORDABLE HOUSING NEED

Affordable housing need is defined as comprising three basic components: (1) cost-burdened need (those who pay too much), (2) rehabilitation need (those who live in deteriorated or overcrowded housing), and (3) future need (those future households for whom the market will not provide).[5]

A. Cost-Burdened Need

New York City views households as cost-burdened if they are very low-, low-, or moderate-income households who pay more than 35% of their income for rental costs or more than 40% of their income for ownership costs. Average subsidy cost is the difference between actual rent or ownership cost and rent or ownership cost if reduced to

[5] These three components of affordable housing need are often joined with preservation of the existing stock of affordable housing to constitute a local affordable housing program. See, for instance, the affordable housing numbers generated by the Shimberg Center for Affordable Housing at the University of Florida, http://www.shimberg.ufl.edu/ (last visited Mar. 18, 2006).

35% to 40% of income.[6] Average subsidy costs multiplied by the number of households, by income group and size configuration of housing unit, are summed by community district, by borough, and for New York City as a whole. Data on income and rent for 1999-2000 are converted to 2004-2005 equivalents using an inflation factor of approximately 15% for income and 24% for housing costs.[7]

Part A—Cost-Burdened Need

Renters	>35% Income (Gross Rent)
Owners	>40% Income (Ownership)
Income 2004	15% above 1999 Income
Rent/Own Status 2004	24% above 2000 Costs

B. Rehabilitation Need

Housing is deteriorated in New York City if it is occupied by a very low-, low-, or moderate-income household and is (1) older housing with one major deficiency or (2) newer housing with two or more major deficiencies. Older housing is pre-World War II, which the Census defines as housing constructed in 1939 or earlier. Newer housing is housing constructed from 1940 through 2000. The three housing deficiencies used to determine deteriorated housing are (1) lacking complete plumbing; (2) lacking a complete kitchen, or the kitchen is not in the unit; or (3) crowding—1.01 or more persons per room. "Housing rehabilitation costs" are costs to cure these deficiencies where the cost to cure the deficiency is expressed as average expenditure per unit for bathroom and kitchen repairs and for

[6] There is no national standard for cost burden (housing costs as a percentage of income). The number most frequently used by the real estate industry and many housing advocacy groups is 28-30%. HUD uses 50% and describes it as severe housing cost burden. The New York City Department of Housing, Preservation, and Development (HPD) uses 35% for renters and 40% for owners as indications of cost burden.

[7] An average of 3% per year (1999-2004) for income and 6% per year (2000-2004) for housing costs.

internal structure reconfiguration (crowding).[8] The housing rehabilitation costs are made equal to the dominant size configuration for a housing unit by tenure (either 0-1 or 2+ bedrooms) and adjusted upward or downward for the remaining size configurations. The costs are further expressed in 2004 dollars.[9]

Part B—Rehabilitation Need

Very Low-, Low-, and Moderate-Income Households in Deteriorated Housing

Qualifying Deficiencies:	Units Built:		Units With:
Crowding (1.01 +/Room)	1939 or earlier	—	1 Deficiency
Incomplete Plumbing	1940 or later	—	2+ Deficiencies
Incomplete Kitchen/Not in Unit		=	A Deficient Unit

COSTS FROM 2003 *AMERICAN HOUSING SURVEY*—AMOUNT SPENT IN 2003 (IN 2004 DOLLARS) TO:

REMODEL A KITCHEN	$24,200
CREATE A BATHROOM	$22,950
OR CREATE A BEDROOM (STRUCTURAL CHANGE)	$28,100

C. Future Need

Future need in New York City in the five boroughs is determined using New York Statistical Information Systems (NYSIS) projections from 2005 to 2010.[10] Population projections are subjected to headship

[8] U.S. CENSUS BUREAU & U.S. DEPT. OF HOUSING & URBAN DEV., 2003 AMERICAN HOUSING SURVEY: AMERICAN HOUSING SURVEY FOR THE UNITED STATES 2003 (2004).

[9] *Id.* The U.S. Census Bureau and HUD fund the *American Housing Survey* (AHS). It is a 1 in 2000 sample of the existing housing units in the United States. The Census Bureau and HUD attempt to sample the same units every two years during the odd year, from 1973 to 2005. The unique attribute of this Census is that it is a history of what has happened to the same stock of individual housing units over time.

[10] One source of population projections for New York City is the New York Statistical Information System (NYSIS) housed at Cornell University, *at* http://www.nysis.cornell.edu/ (last visited Mar. 18, 2006).

rates by age cohort (18-24, 25-34, 35-44, 45-54, 55-64, 65-74, and 75+) to derive forthcoming households. Households are matched to housing need by size (0-3 persons or 0-1 bedrooms; 4+ persons or 2+ bedrooms), and representative unit costs by borough are determined using average 1990-2000 ownership costs per unit (owners) and gross rent per unit (renters). These costs are compared to what future households can pay at 35% and 40% of their income for renters and owners, respectively; this difference is multiplied by the number of households projected to grow into the future. This comparison is done by tenure and size configuration of forthcoming units for each community district, borough, and for the city as a whole. About 75% of a projected future household growth of 105,000 will require affordable housing under the aforementioned definition of qualifying household incomes.

Part C—Future Need

NYSIS Projections—2005-2010
~ 75% of 100,000 Household Growth
~ 3.5% of Existing Stock, 5 Years; 7%, 10 Years

III. AFFORDABLE HOUSING NEED BY COMPONENT AND COMMUNITY DISTRICT IN NEW YORK CITY

A. Cost-Burdened Affordable Housing Need

In New York City in 2005, there were 3.1 million housing units, of which 2.4 million, or 76%, fell below 135% ($84,100) of median income ($62,300) (see Table 1, Cols. 2 and 3). These households are located primarily in The Bronx, Brooklyn, and Queens. As a share of total housing units, income-qualified households in these three boroughs range from 88% to 77% (see Table 1, Col. 3 and Figure 1). Of income-qualified households, approximately 1.02 million renters (800,000) and owners (220,000) pay more than 35% or 40%, respectively, of their income for housing. This is about 43% of the income-eligible households in New York City (see Table 1, Col. 4).

The greatest percentage of cost burden is found in Manhattan (45% of income-eligible households), followed by Brooklyn (44%), The Bronx (42%), Queens (41%), and Staten Island (37%).

Within the various boroughs, cost burden is much more uneven. It is most pronounced (50% or above for income-eligible households) in Manhattan in Community Districts 1 and 2 (Tribeca, Noho, Soho, Little Italy), in Community District 6 (Murray Hill, Stuyvesant Town), and in Community District 8 (Lenox Hill, Yorkville, Roosevelt Island) (Table 1, Col. 4). It is also high in Brooklyn in Community District 12 (Borough Park, Ocean Parkway). Conversely, cost-burdened affordable housing need is lower (below 40% of income-eligible households) in Manhattan in Community District 3 (Lower East Side, Chinatown), in Community District 11 (East Harlem), and in Community District 12 (Washington Heights, Inwood) (see Table 1, Col. 4 and Figure 2). In Brooklyn, cost-burdened affordable housing need is lower in Community District 2 (Brooklyn Heights, Boerum Hill). In Queens, it is lower (below 40% of income-eligible households) in Community District 2 (Sunnyside, Woodside), in Community District 8 (Fresh Meadows, Kew Gardens Hills, Jamaica Hills), in Community District 13 (Laurelton, Queens Village, Glen Oaks), and in Community District 14 (The Rockaways, Broad Channel) (see Table 1, Col. 4). In The Bronx, cost-burdened affordable housing need is high and, in fact, never falls below 40% in any of the community districts. By contrast, in the three community districts in Staten Island (North Island, Mid Island, South Island), cost-burdened affordable housing need is relatively low and never exceeds 38% of income-qualified households. Thus, cost burden is most severe in Manhattan and Brooklyn community districts and least severe in Staten Island and Queens community districts. There are also community districts in Manhattan where cost-burdened households, as a share of income-eligible households, are less of a problem—Community District 3 (Lower East Side, Chinatown), Community District 11 (East Harlem), and Community District 12 (Washington Heights, Inwood).

The numerical scale of the cost-burdened population also bears mentioning. The cost-burdened population is eight times higher in

Brooklyn (330,000 households) than it is in Staten Island (42,500 households) due to their differences in overall income-qualified households. Brooklyn (745,000 households) has 6.5 times the income-qualified households of Staten Island (115,000 households) and lower median household incomes ($36,700 annual median income versus $61,000 in Staten Island) (see Table 1, Col. 4).

In addition, again in terms of the scale of cost burden, Queens is second in overall magnitude with 258,000 cost-burdened households; Manhattan is third with 214,000 cost-burdened households; The Bronx is fourth with 177,000 cost-burdened households; and Staten Island is fifth with 42,500 cost-burdened households (see Table 1, Col. 4).

With regard to large concentrations of cost-burdened households in community districts, i.e., more than 25,000 cost-burdened households per district, the following locations are notable (see Table 1, Col. 4). More than 25,000 cost-burdened households are found in Manhattan in Community District 7 (Lincoln Square, Upper West Side), in Community District 8 (Lenox Hill, Yorkville, Roosevelt Island), and in Community District 12 (Washington Heights, Inwood). Cost-burdened households in significant numbers are also found in Brooklyn in Community District 11 (Bensonhurst, Bath Beach, Gravesend) and in Queens in Community District 1 (Astoria, Long Island City), in Community District 7 (Flushing, Whitestone, College Point), and in Community District 12 (Jamaica, South Jamaica, Hollis) (see Table 1, Col. 4). The only other concentration of cost burden in community districts approaching 25,000 households is found in The Bronx in Community District 9 (Soundview, Castle Hill, Parkchester).

Cost-Burdened, Rehabilitation, and Future Affordable Housing Need
New York City 2005, 2005-2010

Community District	PUMA Area	Total Units (2005)	Income-Qualified Units (2005)		Cost-Burdened Households (2005)		Rehab Need Households (2005)		Future Very Low, Low or Moderate Need (2005-2010)	
		Col. 1	Col. 2	Col. 3		Col. 4		Col. 5		Col. 6
Manhattan		#	#	%	#	%	#	%	#	%
1&2	3810	68,775	32,930	(48)	17,393	(53)	2,503	(8)	932	(3)
3	3809	71,019	59,533	(84)	22,514	(38)	6,701	(11)	1,884	(3)
4&5	3807	72,934	42,244	(58)	19,958	(47)	3,179	(8)	1,152	(3)
6	3808	89,789	42,165	(47)	22,033	(52)	1,869	(4)	1,372	(3)
7	3806	110,687	55,658	(50)	25,387	(46)	4,124	(7)	2,055	(4)
8	3805	126,693	54,064	(43)	29,100	(54)	1,347	(2)	1,318	(2)
9	3802	47,904	39,292	(82)	16,686	(42)	3,586	(9)	1,096	(3)
10	3803	48,728	44,426	(91)	19,097	(43)	2,433	(5)	1,321	(3)
11	3804	44,021	39,583	(90)	15,184	(38)	2,425	(6)	1,486	(4)
12	3801	77,450	68,583	(89)	26,513	(39)	9,324	(14)	1,952	(3)
Manhattan Total		758,000	478,478	(63)	213,865	(45)	37,491	(8)	14,568	(3)
Brooklyn										
1	4001	51,902	46,035	(89)	18,355	(40)	4,643	(10)	786	(2)
2	4004	49,818	34,896	(70)	13,728	(39)	2,027	(6)	515	(1)
3	4003	44,161	40,487	(92)	19,056	(47)	2,585	(6)	659	(2)
4	4002	36,389	34,435	(95)	16,148	(47)	3,913	(11)	570	(2)
5	4008	47,542	43,323	(91)	19,805	(46)	2,909	(7)	1,020	(2)
6	4005	48,907	30,298	(62)	13,066	(43)	1,934	(6)	193	(1)
7	4012	45,182	38,707	(86)	15,830	(41)	5,172	(13)	472	(1)
8	4006	47,221	40,827	(86)	17,125	(42)	2,571	(6)	665	(2)
9	4011	42,777	37,627	(88)	16,923	(45)	3,146	(8)	816	(2)
10	4013	52,430	38,082	(73)	15,511	(41)	2,487	(7)	395	(1)
11	4017	65,197	53,836	(83)	25,167	(47)	4,367	(8)	791	(1)
12	4014	50,642	42,472	(84)	21,044	(50)	4,937	(12)	281	(1)
13	4018	47,266	41,724	(88)	18,485	(44)	2,361	(6)	865	(2)
14	4015	58,310	48,578	(83)	20,307	(42)	5,695	(12)	677	(1)
15	4016	57,725	44,524	(77)	18,782	(42)	2,887	(6)	639	(1)

Table 1
Cost-Burdened, Rehabilitation, and Future Affordable Housing Need
New York City 2005, 2005-2010

Community District	PUMA Area	Total Units (2005)	Col. 1 Income-Qualified Units (2005)		Col. 2 Cost-Burdened Households (2005)		Col. 3 Rehab Need Households (2005)		Col. 4 Future Very Low, Low or Moderate Need (2005-2010)	
16	4007	38,975	36,682	(94)	17,690	(48)	1,528	(4)	602	(2)
17	4010	50,523	43,138	(85)	20,125	(47)	3,285	(8)	920	(2)
18	4009	66,836	49,274	(74)	22,054	(45)	1,216	(2)	707	(1)
Brooklyn Total		901,803	744,945	(83)	329,201	(44)	57,663	(8)	11,573	(2)
Queens										
1	4101	79,733	65,074	(82)	27,015	(42)	4,837	(7)	2,731	(4)
2	4109	51,606	41,792	(81)	16,125	(39)	4,227	(10)	1,589	(4)
3	4102	58,272	49,951	(86)	19,808	(40)	4,531	(9)	2,058	(4)
4	4107	46,686	39,907	(85)	17,430	(44)	3,457	(9)	1,637	(4)
5	4110	65,913	52,942	(80)	20,988	(40)	2,682	(5)	2,203	(4)
6	4108	54,162	37,121	(69)	15,620	(42)	1,333	(4)	1,493	(4)
7	4103	93,997	70,889	(75)	28,977	(41)	3,346	(5)	2,921	(4)
8	4106	56,920	40,415	(71)	14,668	(36)	1,242	(3)	1,672	(4)
9	4111	48,235	38,708	(80)	17,435	(45)	3,191	(8)	1,446	(4)
10	4113	42,235	32,508	(77)	13,513	(42)	2,105	(6)	1,369	(4)
11	4104	46,473	29,150	(63)	11,753	(40)	390	(1)	1,167	(4)
12	4112	72,811	60,229	(83)	25,653	(43)	2,484	(4)	2,900	(5)
13	4105	64,640	44,306	(69)	16,595	(37)	1,170	(3)	2,096	(5)
14	4114	37,841	31,627	(84)	12,341	(39)	1,039	(3)	1,288	(4)
Queens Total		819,524	634,619	(77)	257,921	(41)	36,034	(6)	26,570	(4)
Bronx										
1&2	3710	43,563	41,559	(95)	16,871	(41)	2,982	(7)	1,821	(4)
3&6	3705	48,039	45,915	(96)	20,927	(46)	2,565	(6)	2,011	(4)
4	3708	44,268	41,962	(95)	18,335	(44)	4,927	(12)	1,702	(4)
5	3707	44,548	42,251	(95)	19,865	(47)	4,977	(12)	1,754	(4)
7	3706	44,936	41,123	(92)	18,005	(44)	5,353	(13)	1,576	(4)
8	3701	43,956	32,566	(74)	12,498	(38)	2,124	(7)	1,199	(4)
9	3709	64,615	58,177	(90)	24,158	(42)	3,449	(6)	2,512	(4)

Table 1
Cost-Burdened, Rehabilitation, and Future Affordable Housing Need
New York City 2005, 2005-2010

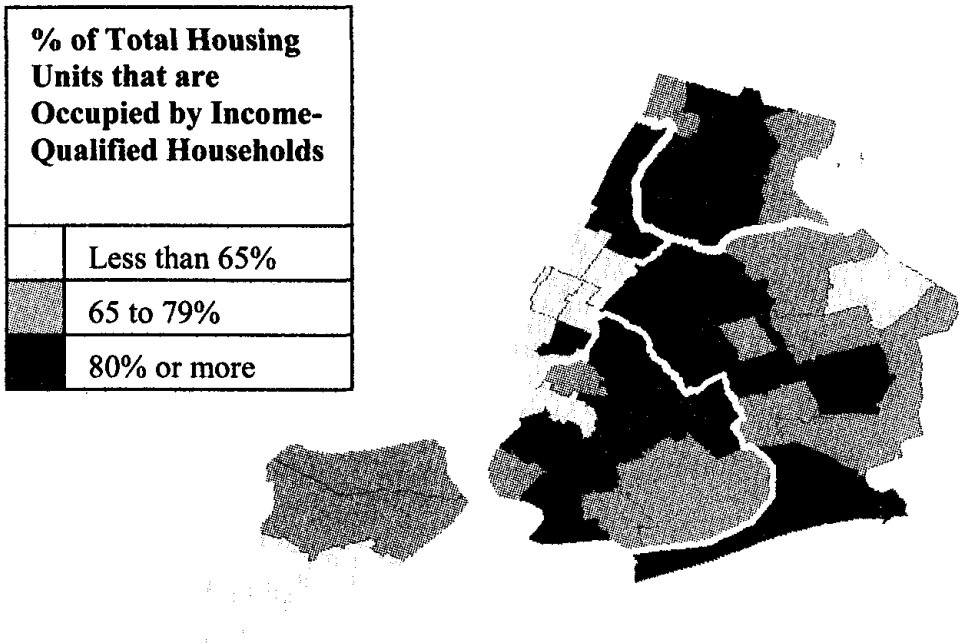
Community District		Col. 1 PUMA Area	Col. 2 Total Units (2005)	Col. 3 Income-Qualified Units (2005)		Col. 4 Cost-Burdened Households (2005)		Col. 5 Rehab Need Households (2005)		Col. 6 Future Very Low, Low or Moderate Need (2005-2010)	
	10	3703	47,629	36,709	(77)	11,711	(32)	759	(2)	1,498	(4)
	11	3704	47,814	40,103	(84)	16,201	(40)	2,406	(6)	1,651	(4)
	12	3702	50,279	41,262	(82)	18,773	(45)	2,136	(5)	1,752	(4)
Bronx Total			479,647	421,627	(88)	177,344	(42)	31,678	(8)	17,476	(4)
Staten Island											
	1	3903	61,527	45,433	(74)	16,789	(37)	1,311	(3)	3,793	(8)
	2	3902	50,343	33,019	(66)	12,632	(38)	304	(1)	2,766	(8)
	3	3901	57,886	35,099	(61)	13,139	(37)	149	(0)	2,936	(8)
Staten Island Total			169,756	113,551	(67)	42,560	(37)	1,764	(2)	9,495	(8)
City Total			3,128,730	2,393,220	(76)	1,020,891	(43)	164,630	(7)	79,682	(3)

Notes:

Col. 1	U.S. Census geographic areas encompassing at least 100,000 in population and established to coincide with community district locations
Col. 2	Total housing units in New York City by community district and borough
Col. 3	Number of housing units of total housing units that are occupied by households whose income falls below 135% of income
Col. 4	Number of units of income-qualified units that pay more than 35% of income for rental housing, or 40% of income for ownership housing
Col. 5	Number of units of income-qualified units that are deteriorated according to the criteria of this report
Col. 6	Projected income-qualified households (<135%) for the period 2005-2010

Source: U.S. CENSUS BUREAU, 2000 CENSUS OF POPULATION AND HOUSING: PUBLIC USE MICRODATA SAMPLE (2003).

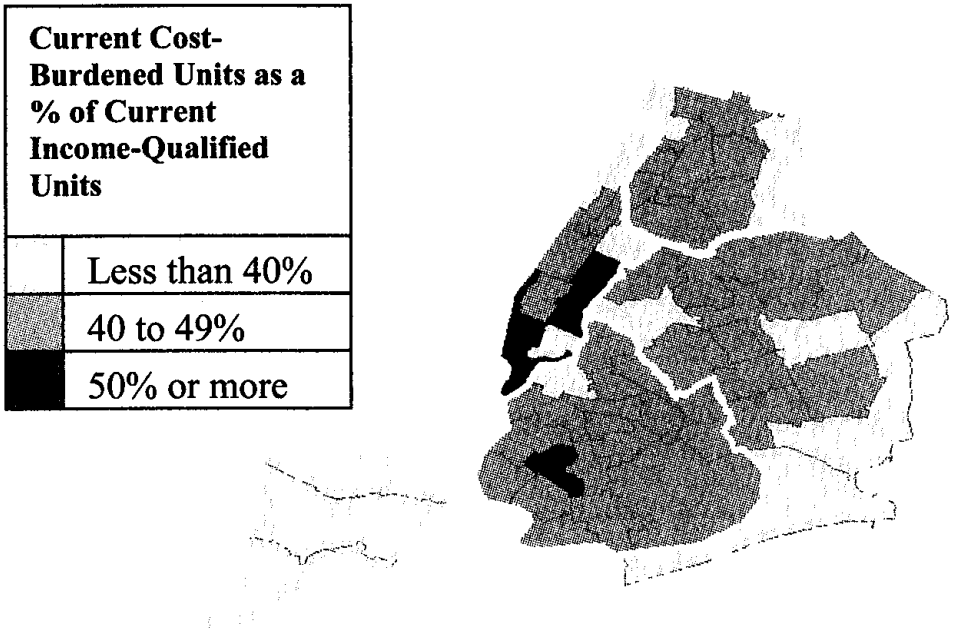
Figure 1
Significant Locations of Income-Qualified Units as a Percentage of All Units
New York City 2005



Note: Visual depiction of location of community districts (in boroughs) with high and low percentages of income-qualified households (<135%) occupying housing units. Source of data is Table 1, Col. 3.

Source: U.S. CENSUS BUREAU, 2000 CENSUS OF POPULATION AND HOUSING: FIVE-PERCENT PUBLIC USE MICRODATA SAMPLE (2003) (updated to 2005).

Figure 2
Significant Locations of Cost-Burdened Affordable Housing Need
New York City 2005



Note Visual depiction of location of community districts (in boroughs) with high and low percentages of income-qualified households (<135%) that are cost-burdened (pay more than 35% [renters] or 40% [owners] of annual income for housing).

Source: U.S. CENSUS BUREAU, 2000 CENSUS OF POPULATION AND HOUSING: FIVE-PERCENT PUBLIC USE MICRODATA SAMPLE (2003) (updated to 2005).

In sum, in 2005, cost burden affected New York City residents (except for those living in Staten Island) relatively evenly in terms of share of the population at 41% to 45% of those who are income-eligible (below 135% of regional median family income, or below $84,100). In Staten Island, 37% of those who are income eligible are cost-burdened. Thus, the cost of the local housing stock is a somewhat compensating effect for the significant differences found between median incomes in Manhattan ($52,500+) and median incomes in Brooklyn ($36,700). Median housing cost in Manhattan (in 2004 dollars) is $1,035 per month to occupy housing; median housing cost in Brooklyn is $872 per month to occupy housing.

B. Rehabilitation Affordable Housing Need

There were approximately 165,000 deteriorated housing units occupied by income-qualified households in 2005 (see Table 1, Col. 5). These are units that lack a complete bathroom, lack a complete kitchen or do not have exclusive use of a kitchen, or are overcrowded. These characteristics are paired with the age of a housing unit such that if the unit is older (pre-1940), only one of the above characteristics need apply to designate the unit as deteriorated; if the unit is newer (1940 to 2000), two characteristics must be evident to signal a deteriorated unit. Ninety percent (149,000) of the 165,000 units are older and, for the most part, are restorable through rehabilitation. Most (84%) of the older units are overcrowded. Crowding is not overly severe at about 1.5 persons per room. For example, a four-room unit would have six rather than four occupants. Of the 16,000 deteriorated new units (1940 or newer), most (51%) have both kitchen and bathroom deficiencies in that they lack the components.

On average, in New York City, 7% of the housing stock occupied by income-qualified households is deteriorated. This ranges from a high of 8% in Manhattan, Brooklyn, and The Bronx to a low of 2% in Staten Island. Six percent (6%) of the housing stock occupied by income-eligible households in Queens is deteriorated (see Table 1, Col. 5).

Locations of significant housing deterioration below the borough level (where 10% or more of the housing stock is deteriorated) are found in Manhattan in Community District 3 (Lower East Side, Chinatown) and in Community District 12 (Washington Heights, Inwood) (see Table 1, Col. 5 and Figure 3). In Brooklyn, significant housing deterioration is found in Community District 1 (Greenpoint, Williamsburg), in Community District 4 (Bushwick), in Community District 7 (Sunset Park, Windsor Terrace), in Community District 12 (Borough Park, Ocean Parkway), and in Community District 14 (Flatbush, Midwood). In Queens, Community District 2 (Sunnyside, Woodside) is the only location of significant housing deterioration. In The Bronx, locations of significant housing deterioration are found in Community District 4 (Highbridge, Concourse), in Community

District 5 (Morris Heights, University Heights), and in Community District 7 (Kingsbridge Heights, Bedford Park, Fordham) (see Table 1, Col. 5). In Staten Island, there are no locations of significant housing deterioration.

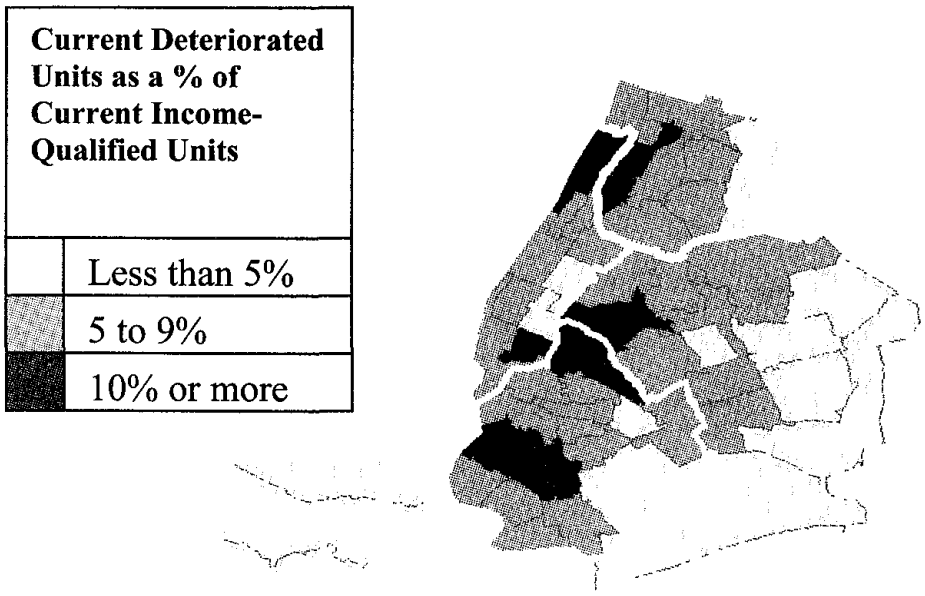
At the other end of the spectrum, locations of relatively low housing deterioration (less than 5% of the housing stock occupied by income-qualified households) are found in Manhattan in Community District 6 (Murray Hill, Stuyvesant Town) and in Community District 8 (Upper East Side, Yorkville, Roosevelt Island) (see Figure 3). Other locations of lower housing deterioration are found in Brooklyn in Community District 16 (Ocean Hill, Brownsville) and in Community District 18 (Canarsie, Marine Park, Mill Basin), and in Queens in Community District 6 (Rego Park, Forest Hills), in Community District 8 (Fresh Meadows, Kew Gardens), in Community District 11 (Bayside, Douglaston, Little Neck), in Community District 12 (Jamaica, South Jamaica, Hollis), in Community District 13 (Laurelton, Queens Village, Glen Oaks), and in Community District 14 (The Rockaways, Broad Channel).

In The Bronx, the only location of relatively low housing deterioration is in Community District 10 (Throgs Neck, Co-op City, City Island). In Staten Island, all community districts (North Island, Mid Island, South Island) have relatively low housing deterioration.

The relative numerical scale of housing deterioration for units occupied by income-eligible households also bears inquiry. Housing deterioration in Manhattan, Queens, and The Bronx amounts to 32,000 to 37,500 units in each borough. In Brooklyn, housing deterioration is approaching 58,000 units, while in Staten Island it is fewer than 2,000 units. Large numerical concentrations of deteriorated units (more than 5,000 units) are found in Manhattan in Community District 3 (Lower East Side, Chinatown) and in Community District 12 (Washington Heights, Inwood); in Brooklyn in Community District 7 (Sunset Park, Windsor Terrace) and in Community District 14 (Flatbush, Midwood); and in The Bronx in Community District 7 (Kingsbridge Heights, Bedford Park, Fordham). Concentrations of deteriorated units of more than 5,000

are not found in community districts in either Queens or Staten Island (see Table 1, Col. 5).

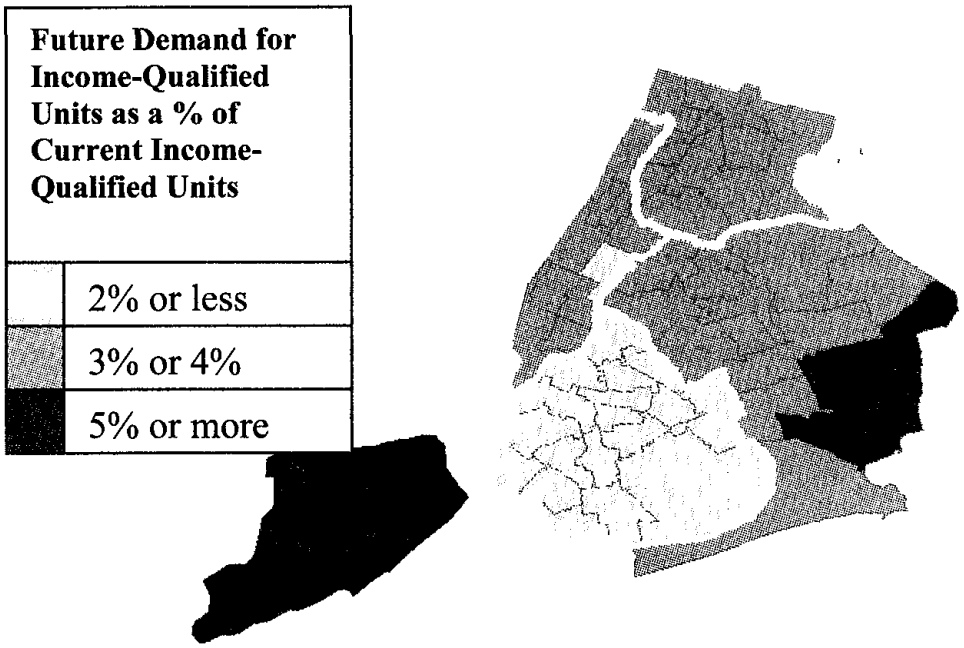
Figure 3
Significant Locations of Rehabilitation Affordable Housing Need
New York City 2005



Note Visual depiction of location of community districts (in boroughs) with high and low percentages of income-qualified households (<135%) that live in deteriorated housing (have one housing deficiency if 1939 or older or have two housing deficiencies if 1940 or newer) Source of data is Table 1, Col 5.

Source: U S CENSUS BUREAU, 2000 CENSUS OF POPULATION AND HOUSING: FIVE-PERCENT PUBLIC USE MICRODATA SAMPLE (2003) (updated to 2005).

Figure 4
Significant Locations of New Construction Affordable Housing Need New York City 2005-2010



Note Visual depiction of location of community districts (in boroughs) with high and low percentages of income-qualified households (<135%) that will be produced from 2005-2010 and that will not have affordable housing available to them. Source of data is Table 1, Col. 6.

Source: NEW YORK STATISTICAL INFORMATION SYSTEM (NYSIS), PROJECTIONS 2005-2010, *available at* http://www.nysis cornell.edu/data html (last updated Nov. 19, 2002); U S CENSUS BUREAU, 2000 CENSUS OF POPULATION AND HOUSING: FIVE-PERCENT PUBLIC USE MICRODATA SAMPLE (2003) (updated to 2005)

In sum, rehabilitation affordable housing need is distributed relatively evenly in select locations of each of the boroughs except Staten Island. Staten Island's percentage distribution of the stock occupied by income-qualified households is one-quarter to one-third of that of the other boroughs.

C. New Construction Affordable Housing Need

Between 2005 and 2010, New York City will expand its number of households by 105,200. This will comprise 79,700 low- and moderate-income households (below 135% of median income) (see Table 1, Col. 6) and 25,500 middle- and upper-income households. If future (2005-2010) New York City affordable housing need reflects

the past (1990-2000), this growth will be met by about 115,000 new housing units, almost all of which will be directed to middle- and upper-income households. Predictably, the new construction market is building to the middle- and upper- income levels of the housing market at a rate of four times what is needed and not building to the very low- and low-income levels. This leaves significant numbers of future low- and moderate-income housing demand unsatisfied in all parts of the city. This situation cries out for an inclusionary component related to market housing as well as a large, new housing program targeted to the lower middle-income sector of the population.

New construction affordable housing demand for the period of 2005 to 2010 (approximately 80,000 units total) will be highest in Queens (26,600 units), second in The Bronx (17,500 units), third in Manhattan (14,600 units), fourth in Brooklyn (11,600 units), and fifth in Staten Island (9,500 units) (see Table 1, Col. 6). As a percentage of the current 2005 housing stock occupied by income-eligible households, future affordable housing need has a pattern somewhat different from absolute need. It is highest in Staten Island (8% of the existing stock), in the middle in Queens and The Bronx (4% of the existing stock), and lowest in Manhattan and Brooklyn (3% and 2% of the existing stock, respectively) (see Table 1). Thus, Staten Island is often immune from affordable housing need due to its relatively high household incomes, and its sound housing stock, which is two and one-half times the New York City average in terms of percentage of future affordable housing need of the existing income-eligible stock. In terms of absolute numbers, Queens has one-third of the future affordable housing need (see Table 1, Col. 6).

Below the borough level, significant locations of future affordable housing need (5% or more of the income-eligible stock) are found in Queens in Community District 12 (Jamaica, South Jamaica, Hollis) and in Community District 13 (Laurelton, Queens Village, Cambria Heights), and in all three of Staten Island's Community Districts (North Island, Mid Island, South Island) (see Table 1, Col. 6 and Figure 4). Low relative levels of affordable housing need (2% or below of the stock) are found in Manhattan in Community District 8

(Upper East Side, Yorkville, Roosevelt Island) and in all of Brooklyn's 18 community districts.

Significant absolute concentrations of future affordable housing need (above 2,000 units for the period 2005-2010) are found in Manhattan's Community District 7 (Lincoln Square, Upper West Side); Queens's Community District 1 (Astoria, Long Island City), Community District 3 (Jackson Heights, East Elmhurst, North Corona), Community District 5 (Maspeth, Middle Village, Glendale), Community District 7 (Flushing, Whitestone, College Point), Community District 12 (Jamaica, South Jamaica, Hollis), and Community District 13 (Laurelton, Cambria Heights, Glen Oaks); The Bronx's Community Districts 3 and 6 (Melrose, Claremont, Crotons Park East; East Tremont, Belmont, West Farms), and Community District 9 (Soundview, Castle Hill, Parkchester); and in all three of Staten Island's community districts (North Island, Mid Island, South Island) (see Table 1, Col. 6).

In sum, more new construction affordable housing need is required in Queens and in The Bronx and less so in Manhattan, Brooklyn, and Staten Island. As a share of existing income-qualified units, Staten Island has significant (two to three times the other boroughs') relative new construction affordable housing need.

IV. AFFORDABLE HOUSING RESPONSES BY COMPONENT AND COMMUNITY DISTRICT IN NEW YORK CITY

A. Cost-Burdened Affordable Housing Need

Cost-burdened affordable housing need is related to the amount of real estate market pressure in an area. It is a function of the amount of real estate transfer in a particular geographic location, which drives up prices in that area. The most closely related source of revenue to real estate transfers in New York City is the Real Property Transfer Tax.[11] The Real Property Transfer Tax applies to conveyances of

[11] The operations and applications of the New York City Real Property Transfer Tax may be found at the City of New York Department of Finance's Web site, http://www.nyc.gov/html/dof/html/property/property_rec_rptt.shtml (last visited Mar. 18, 2006).

residential real estate including shares of a cooperative. The Real Estate Property Transfer Tax Rate is as follows:

Real Property Transfer Tax Fees

Owner of Rental Properties	Value (Minus Outstanding Mortgages)	Rate
1 - 3 family house cooperative unit	< $500,000	1.000%
condominium unit 4 + family residence	> $500,000	1.425%

This Article assumes that increased New York City Real Property Transfer Tax revenues (20%) are available to provide a write-down on cost-burdened rental units. The revenue would come from all residential real estate transfers, both owned and rented units, but it would be applied only against those living in cost-burdened units of rental tenure. To estimate the effects of such a program, the revenue calculation proceeds as follows. The number of units at 30% of median rent or below are subtracted from the number of existing units in each of the five boroughs, encompassing about 60 community districts. The subtracted units are assumed to be mostly subsidized or in structures likely not to be transferred. In addition, 25% of the remaining rental units are randomly removed from transfer considerations because they are in structures that probably would not be transferred because long-term rental income is desired. This produces a number of units citywide (2.45 million) that is about 75% of the total number of units (Table 2, Col. 2).

Table 2
Using a Portion of the Real Property Transfer Tax to Fund Cost-Burdened Affordable Housing Need

	Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10
Community District	PUMA Area	Number of Units	Value of Units ($)	Value of Annual Unit Turnover ($)	Annual Transfer Tax ($)	20% Increment of Transfer Tax	Cost-Burdened Units Removed	Cost to Cure	Cost-Burdened Units Remaining	Remaining Cost to Cure
Manhattan										
1&2	3810	53,873	16,373,882,342	1,309,910,587	15,773,481	3,154,696	2,243	3,154,696	15,150	205,043,373
3	3809	47,768	5,995,974,760	479,677,981	5,150,847	1,030,169	1,480	1,030,169	21,034	132,323,632
4&5	3807	55,166	13,097,762,137	1,047,820,971	12,108,611	2,421,722	2,027	2,421,722	17,931	200,475,170
6	3808	71,180	17,944,002,260	1,435,520,181	16,292,908	3,258,582	2,343	3,258,582	19,689	257,520,545
7	3806	87,362	26,235,215,776	2,098,817,262	25,498,587	5,099,717	4,628	5,099,717	20,759	232,961,135
8	3805	102,226	36,115,050,147	2,889,204,012	35,783,048	7,156,610	5,213	7,156,610	23,887	332,847,406
9	3802	33,733	4,242,125,657	339,370,053	3,667,745	733,549	1,074	733,549	15,613	96,286,269
10	3803	31,653	2,890,590,396	231,247,232	2,442,856	488,571	922	488,571	18,174	85,613,834
11	3804	26,157	2,990,393,266	239,231,461	2,684,395	536,879	988	536,879	14,196	69,678,670
12	3801	56,027	5,100,349,563	408,027,965	4,139,857	827,971	1,320	827,971	25,193	140,696,191
Manhattan Total		565,147	130,985,346,305	10,478,827,704	123,542,335	24,708,467	22,239	24,708,467	191,625	1,753,446,225
Brooklyn										
1	4001	38,110	4,393,310,842	351,464,867	3,605,415	721,083	1,042	721,083	17,313	107,364,279
2	4004	36,982	7,210,057,620	576,804,610	6,643,787	1,328,757	1,671	1,328,757	12,058	91,586,736
3	4003	31,011	3,656,295,792	292,503,663	3,023,994	604,799	778	604,799	18,278	125,412,163
4	4002	26,161	2,727,023,289	218,161,863	2,223,224	444,645	613	444,645	15,535	99,303,016
5	4008	35,455	3,891,107,987	311,288,639	3,135,530	627,106	792	627,106	19,013	132,761,534
6	4005	37,806	9,429,515,736	754,361,259	8,859,616	1,771,923	1,932	1,771,923	11,133	100,194,812
7	4012	35,767	4,763,283,528	381,062,682	3,889,118	777,824	1,029	777,824	14,802	101,091,204
8	4006	34,208	4,025,824,250	322,065,940	3,369,059	673,812	962	673,812	16,163	101,388,949
9	4011	32,728	3,845,504,725	307,640,378	3,135,001	627,000	809	627,000	16,113	111,007,094
10	4013	42,646	7,625,229,950	610,018,396	6,389,725	1,277,945	1,611	1,277,945	13,900	103,468,420
11	4017	53,456	8,783,148,170	702,651,854	7,185,559	1,437,112	1,593	1,437,112	23,574	191,791,052
12	4014	40,278	7,594,450,793	607,556,063	6,613,451	1,322,690	1,481	1,322,690	19,563	158,662,097
13	4018	34,842	3,969,087,658	317,527,013	3,267,806	653,561	1,050	653,561	17,435	97,245,900
14	4015	44,758	6,837,663,657	547,013,093	5,948,904	1,189,781	1,559	1,189,781	18,749	130,726,011
15	4016	47,629	8,257,543,630	660,603,490	7,074,203	1,414,841	1,709	1,414,841	17,073	130,892,335
16	4007	25,856	2,561,747,891	204,939,831	2,067,251	413,450	655	413,450	17,034	94,547,197

Table 2
Using a Portion of the Real Property Transfer Tax to Fund Cost-Burdened Affordable Housing Need

	Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10
Community District	PUMA Area	Number of Units	Value of Units ($)	Value of Annual Unit Turnover ($)	Annual Transfer Tax ($)	20% Increment of Transfer Tax	Cost-Burdened Units Removed	Cost to Cure	Cost-Burdened Units Remaining	Remaining Cost to Cure
17	4010	40,631	5,550,746,980	444,059,758	4,479,525	895,905	985	895,905	19,140	154,844,956
18	4009	57,758	11,171,348,253	893,707,860	9,141,399	1,828,280	1,775	1,828,280	20,278	191,519,693
Brooklyn Total		696,081	106,292,890,751	8,503,431,260	90,052,567	18,010,513	22,047	18,010,513	307,154	2,223,807,448
Queens										
1	4101	59,940	8,629,938,979	690,395,118	7,042,251	1,408,450	1,824	1,408,450	25,191	176,169,274
2	4109	41,973	5,610,416,300	448,833,304	4,548,235	909,647	1,113	909,647	15,013	111,301,944
3	4102	47,260	6,422,518,341	513,801,467	5,179,749	1,035,950	1,130	1,035,950	18,678	153,490,955
4	4107	36,485	4,832,172,104	386,573,768	3,906,343	781,269	921	781,269	16,509	125,010,771
5	4110	54,971	9,073,032,213	725,842,577	7,330,827	1,466,165	1,795	1,466,165	19,192	144,409,659
6	4108	45,094	7,084,078,422	566,726,274	6,004,337	1,200,867	1,436	1,200,867	14,184	109,991,195
7	4103	80,469	15,073,787,020	1,205,902,962	12,537,283	2,507,457	2,748	2,507,457	26,229	222,543,886
8	4106	48,275	8,180,363,495	654,429,080	6,701,128	1,340,226	1,596	1,340,226	13,073	103,506,053
9	4111	39,417	6,156,484,085	492,518,727	4,970,318	994,064	1,063	994,064	16,373	137,799,984
10	4113	38,292	7,033,962,719	562,717,017	5,727,974	1,145,595	1,078	1,145,595	12,435	121,036,091
11	4104	42,465	9,851,716,350	788,137,308	8,329,865	1,665,973	1,482	1,665,973	10,272	110,803,232
12	4112	61,151	8,663,847,387	693,107,791	6,981,110	1,396,222	1,448	1,396,222	24,205	209,079,253
13	4105	60,197	10,993,646,666	879,491,733	8,878,115	1,775,623	1,710	1,775,623	14,885	144,899,837
14	4114	28,960	4,460,245,230	356,819,618	3,755,428	751,086	1,039	751,086	11,302	75,142,321
Queens Total		684,950	112,066,209,310	8,965,296,745	91,892,965	18,378,593	20,382	18,378,593	237,541	1,945,184,456
Bronx										
1&2	3710	26,005	1,967,987,727	157,439,018	1,574,390	314,878	628	314,878	16,243	71,634,757
3&6	3705	30,048	2,503,689,849	200,295,188	2,037,804	407,561	716	407,561	20,212	101,008,135
4	3708	31,829	2,580,351,947	206,428,156	2,090,918	418,184	639	418,184	17,696	101,736,908
5	3707	31,106	2,652,171,786	212,173,743	2,121,737	424,347	627	424,347	19,238	114,019,376
7	3706	31,976	2,959,049,577	236,723,966	2,389,994	477,999	692	477,999	17,312	105,352,657
8	3701	34,196	4,597,599,252	367,807,940	3,941,406	788,281	1,092	788,281	11,406	75,963,193
9	3709	46,695	5,141,660,265	411,332,821	4,181,641	836,328	1,094	836,328	23,064	156,380,305
10	3703	40,129	5,374,582,602	429,966,608	4,433,571	886,714	1,196	886,714	10,515	73,021,663

Table 2
Using a Portion of the Real Property Transfer Tax to Fund Cost-Burdened Affordable Housing Need

Community District	Col. 1 PUMA Area	Col. 2 Number of Units	Col. 3 Value of Units ($)	Col. 4 Value of Annual Unit Turnover ($)	Col. 5 Annual Transfer Tax ($)	Col. 6 20% Increment of Transfer Tax	Col. 7 Cost-Burdened Units Removed	Col. 8 Cost to Cure	Col. 9 Cost-Burdened Units Remaining	Col. 10 Remaining Cost to Cure
11	3704	37,284	5,039,946,879	403,195,750	4,055,262	811,052	1,034	811,052	15,168	107,354,084
12	3702	40,115	5,882,544,805	470,603,584	4,753,701	950,740	1,013	950,740	17,759	148,952,001
Bronx Total		349,383	38,699,584,689	3,095,966,775	31,580,424	6,316,085	8,731	6,316,085	168,613	1,055,423,078
Staten Island										
1	3903	51,337	8,329,939,292	666,395,143	6,795,129	1,359,026	1,778	1,359,026	15,011	107,875,257
2	3902	44,576	9,408,562,630	752,685,010	7,918,984	1,583,797	1,759	1,583,797	10,873	95,206,356
3	3901	54,226	12,966,011,862	1,037,280,949	10,939,632	2,187,926	2,223	2,187,926	10,916	107,885,292
Staten Island Total		150,139	30,704,513,785	2,456,361,103	25,653,745	5,130,749	5,759	5,130,749	36,800	310,966,905
City Total		2,445,701	418,748,544,840	33,499,883,587	362,722,035	72,544,407	79,158	72,544,407	941,733	7,288,828,113

Notes:

Col. 1 U.S. Census geographic areas encompassing at least 100,000 in population and established to coincide with community district locations.

Col. 2 Total housing units in New York City by community district and borough, reduced by those rental units at the lowest end of the distribution (30% of median rent and below) and by rental units in structures not likely to be sold (25% of the remaining rental units randomly chosen).

Col. 3 Value of the remaining units priced according to occupant's estimate of value in 2000 (ownership units) or at 100 times monthly contract rent (rental units). Value is brought to 2004 dollars using an inflation rate of 6% annually.

Col. 4 Ten percent (10%) of the value of the housing stock (in 2004 dollars) that would turn over annually, minus 20% of this value for units that would contain mortgages (the mortgage portion of value is not taxable).

Col. 5 Revenues from the Real Property Transfer Tax applied at a rate of 1% for properties valued at $500,000 or less (in 2004 dollars) or at 1.425% for properties valued at more than $500,000 (in 2004 dollars).

Col. 6 Twenty percent (20%) of the Real Property Transfer Tax revenues dedicated to affordable housing by a 20% increase in this revenue.

Col. 7 Cost-burdened units that are no longer cost-burdened because aggregate Real Property Transfer Tax revenues are applied at a one-third share each, at the top, middle, and bottom of the cost-burden distribution.

Col. 8 The cost in 2004 dollars to achieve the reduction of units stated in Col. 7.

Col. 9 Those cost-burdened units that remain because they are outside the funds generated by the Real Property Transfer Tax increase.

Col. 10 The annual costs that would be required to render these remaining units affordable.

Source: U.S. Census Bureau, 2000 Census of Population and Housing: Public Use Microdata Sample (2003).

These are units likely to be transferred over the next ten years at an average rate of 10% annually. The value associated with these units is then produced by borough and community district (Table 2, Col. 3). This is the actual value of properties reported in the *U.S. Census Public Use Microdata Sample* (PUMS 2000) provided by owners for ownership property and by renters (monthly contract rent) for rental properties. It is projected to the year 2004 by a 6% annual inflation rate. One hundred times the monthly contract rent is used for the value of rental properties. Because the New York City Real Property Transfer Tax does not tax the value of outstanding mortgages on transfer, 20% of the value of properties is subtracted after 10% of the total value is taken for the annual turnover of properties (Table 2, Col. 4). Thus, close to 245,000 units are projected to turn over annually, yielding Real Property Transfer Tax Revenues of $363 million (see Table 2, Col. 5). Increasing the Real Property Transfer Tax by 20% for both price levels (<$500,000 and >$500,000 minus outstanding mortgage) of housing transferred would yield about $72.5 million for a fund to address cost-burdened housing in the various community districts (Table 2, Col. 6). This would render relief from cost burden for about 79,000 households, or about 8% of the 1.2 million cost-burdened units (see Table 2, Col. 7). Close to 942,000 units would remain unaddressed because the $7.3 billion necessary to respond to this additional need would be almost impossible to raise. It should be noted that the only reason that this number of units can be addressed with the $72.5 million raised through the increased Real Property Transfer Tax is that one-third of the money is spent at the top, middle, and bottom of the cost-burden distribution. This enables an uneven emphasis on low-cost efforts at the top of the distribution to swell the number of cost-burdened households that can be addressed annually.

For the purpose of this exercise, real estate transfer funds are left in the community district where the funds are generated. Obviously, multiple systems of distribution, including a citywide fund, could be devised. This option is discussed in Part IV.D of this Article.

Specific areas of significant cost-burden response (about 2,000 units addressed per community district) are Manhattan's Community

Districts 1 and 2 (Civic Center, Wall Street, Tribeca, Governor's Island, Greenwich Village, Little Italy), Community Districts 4 and 5 (Chelsea, Clinton, Midtown Times Square, Herald Square), Community District 7 (Lincoln Square, Upper West Side), and Community District 8 (Upper East Side, Yorkville, Roosevelt Island); Brooklyn's Community District 2 (Downtown Brooklyn, Brooklyn Heights, Boerum Hill), Community District 6 (Red Hook, Park Slope, Carroll Gardens), Community District 10 (Bay Ridge, Fort Hamilton), Community District 11 (Bensonhurst, Bath Beach, Gravesend), Community District 12 (Borough Park, Ocean Parkway), Community District 14 (Flatbush, Ocean Parkway, Redwood), Community District 15 (Sheepshead Bay, Manhattan Beach, Gravesend), and Community District 18 (Canarsie, Marine Park, Mill Basin) (see Table 2, Col. 7).

Other areas of significant potential cost-burden response are Queens's Community District 1 (Astoria and Long Island City), Community District 5 (Maspeth, Middle Village, Glendale), Community District 7 (Flushing, Whitestone, College Point), and Community District 13 (Laurelton, Cambria Heights, Glen Oaks). All of Staten Island's Community Districts are potentially significant cost-burden response sites (North Island, Mid Island, South Island) (see Table 2, Col. 7).

In sum, the New York City Real Property Transfer Tax (which is between 1% and 1.5% of value depending upon class of property), if increased by 20% annually, would yield subsidies that would allow approximately 80,000 units annually to no longer be cost-burdened. This is only 8% of total cost-burdened affordable housing need and leaves more than one million units still cost-burdened. Nonetheless, this begins to make a dent in addressing cost-burdened housing throughout the city.

B. Rehabilitation Affordable Housing Need

Rehabilitation affordable housing need reflects those households whose income falls below 135% of median family income and who live in deteriorated housing. Deteriorated housing is housing that either lacks a basic component of plumbing, lacks a basic component

of a kitchen or occupants of multiple units must share a kitchen, or there are too many occupants relative to the number of rooms. Further, most of these households do not have the economic means to rehabilitate their units.

There is also a very different group of households living in other neighborhoods or other parts of the same neighborhood that spend considerable amounts of money improving their housing units. The households undertake major kitchen and bath repairs and structural reconfigurations to make the unit more accessible, more efficient, or more up-to-date. This latter group of households maintains its units regularly and in so doing must obtain a building permit. New York City has a schedule of fees to obtain building permits for improvements to residential structures.[12] These are "alterations, additions, or repairs" building permits that have the following fee structure:

Residential Improvement Building Permit Fees

Dwelling Type	Cost of Permit
1-, 2-, or 3-family dwelling	$100 for first $5,000 $5.15 per $1,000 increment above $5,000
All other	$100 for first $3,000 $20 per $1,000 increment up to $5,000 $10.30 per $1,000 increment above $5,000

Using the above fee structure, it is assumed that, on average, 12% of the owners of the non-immediately-new (pre-1990) housing stock will attempt a major repair or alteration that is 25% of the value of the unit during one year in the next eight years. For affordable

[12] The operations and application of the New York City Residential Improvement Building Permit Fee may be found at the New York City Department of Transportation's Web site, http://www.nyc.gov/html/dot/html/permits/stpermit.html (last visited Mar. 18, 2006).

housing purposes, it is assumed that the above fee structure is increased by 25% to establish a grant pool for building owners whose tenants are income-eligible and who live in units that require repair. A condition for receiving this improvement money might be to permanently dedicate units to serve this income level of tenantry. Using the 1990 housing stock as a base for units that need potential repair (they would now be at least 15 years old) would reduce the stock of units from 3.1 million to just under 3.0 million units.

In addition to using only the nondeteriorated 1990 housing stock as a base, those rental units below 30% of median rent (converted to value) and those ownership units below 30% of median value are also removed. This leaves about 2.8 million units, 12% of which might file annually for a building permit for 25% of the value of the building (Table 3, Col. 2). In essence, this means that in eight years 100% of the nondeteriorated 1990 and earlier housing stock that is 30% or above median value would apply for a building permit for 25% of the value of the unit or building. The value of such units is $428.5 billion (Table 3, Col. 3). The annual value of repairs is one-eighth of the value of the above portion of the stock multiplied by 25%. This amounts to about $12.85 billion annually (Table 3, Col. 4). The building permit fees from this amount of repairs is $110.5 million annually (Table 3, Col. 5). Increasing this amount by 25% (a 25% increase in building permit fees) and dedicating this to a grant fund for the repair of deteriorated housing units occupied by income-eligible families would create a fund of about $27.5 million annually (Table 3, Col. 6).

At the average cost to repair a unit (render it free from deterioration)—approximately $30,000 per unit—16,471 units are rendered sound at a cost of $27.6 million annually (Table 3, Col. 7). This leaves 82,440 units deteriorated, to be addressed at a cost of $818 million annually (if this money could be found) (see Table 3, Cols. 9 and 10). These cost calculations involve multiple steps and are explained below. The initial calculation is made by using the 2003 *American Housing Survey* data on the cost to effect various

types of repairs and expressing these figures in 2004 dollars.[13] Depending upon the number of deficiencies in a unit, the cost of these repairs is applied, amortized over 15 years, expressed as an annual payment, and added to existing rent or ownership-occupancy costs. The difference between this cost added to rent or occupancy costs and the ability to pay at 35% (renters) or 40% (owners) of income is the annual cost of repairing deteriorated units in structures occupied by the income-eligible population.

Thus, annually tapping building permits from 12% of the nonsubsidized, nondeteriorated housing stock for the 1990 or earlier period yields $27.6 million in building permit fees. This revenue would render close to 16,500 deteriorated dwelling units sound. Only about 15% of the stock of deteriorated units occupied by income-eligible households can be repaired, given the chosen funding source and increment in revenues raised.

The locations of rehabilitation units potentially rendered sound (about 16,500) are found in the greatest numbers in Manhattan (5,600), followed by Brooklyn (4,100), Queens (3,900), The Bronx (2,000), and Staten Island (800). Units are rehabilitated citywide according to their cost; units are rehabilitated in community districts according to the revenues raised there and the average costs to repair units in these locations.

In the five boroughs, locations where significant numbers of units (more than 300 units per community district) potentially will be rehabilitated are Manhattan's Community Districts 1 and 2 (Civic Center, Wall Street, Tribeca, Governor's Island, Greenwich Village, Little Italy), Community District 3 (Lower East Side, Chinatown), Community Districts 4 and 5 (Chelsea, Clinton, Midtown, Times Square, Herald Square), Community District 6 (Murray Hill, East Midtown, Stuyvesant Town), Community District 7 (Lincoln Square, Upper West Side), Community District 8 (Upper East Side,

[13] Remodel kitchen: $24,200; create bathroom: $22,950; create bedroom: $28,100. U.S. CENSUS BUREAU & U.S. DEP'T OF HOUSING & URBAN DEV., AMERICAN HOUSING SURVEY FOR THE UNITED STATES: 2003 (2004).

Yorkville, Roosevelt Island), and Community District 12 (Washington Heights, Inwood) (Table 3, Col. 7).

Other locations of significant potential rehabilitation activity are Brooklyn's Community District 2 (Downtown Brooklyn, Fort Greene, Brooklyn Heights, Boerum Hill), Community District 6 (Red Hook, Park Slope, Carroll Gardens), Community District 14 (Flatbush, Ocean Parkway, Midwood), and Community District 18 (Canarsie, Marine Park, Mill Basin). Still other locations are Queens's Community District 1 (Astoria, Long Island City), Community District 6 (Rego Park, Forest Hills), Community District 7 (Flushing, Whitestone, College Point), and Community District 11 (Bayside, Douglaston, Little Neck). The only other location of significant potential rehabilitation is Staten Island's Community District 2 (Mid Island) (Table 3, Col. 7).

Rehabilitation funds are generated by moderate-, middle-, and upper-income households living in nondeteriorated units, typically seeking to improve or update and modernize their properties. A 25% increase in the building permit fee for these purposes is dedicated to pay for deteriorated units occupied by low- and moderate-income families. The modeling done in this exercise allows more rehabilitated units in areas where substantial numbers of high-value, nondeteriorated units exist. Clearly, more units can be rehabilitated in community districts in Manhattan and Brooklyn than in Queens and The Bronx. If the city taps building permit fees for this purpose, the fund could be citywide to allow monies generated from more affluent boroughs to assist in paying for the rehabilitation needs found in the poorer boroughs.

Table 3
Using a Portion of Building Permit Fees to Fund Rehabilitation Affordable Housing Need

Community District	Col. 1 PUMA Area	Col. 2 Number of Units	Col. 3 Value of Units	Col. 4 Annual Value of Repairs	Col. 5 Annual Building Permit Fees	Col. 6 25 % Increment of Fees	Col. 7 Rehab Units Rendered Sound	Col. 8 Cost to Cure	Col. 9 Rehab Units Remaining	Col. 10 Remaining Cost to Cure
Manhattan										
1&2	3810	60,208	16,732,247,170	501,967,415	4,923,268	1,230,817	666	1,230,817	803	13,556,324
3	3809	60,009	6,270,265,119	188,107,954	1,924,414	481,103	355	481,103	3,872	30,717,222
4&5	3807	64,152	13,783,950,544	413,518,516	4,234,642	1,058,660	691	1,058,660	1,485	17,102,761
6	3808	83,809	19,565,559,802	586,966,794	6,026,120	1,506,530	703	1,506,530	709	14,979,229
7	3806	98,677	26,627,009,719	798,810,292	8,139,759	2,034,940	1,379	2,034,940	890	16,211,083
8	3805	118,819	38,061,925,365	1,141,857,761	11,638,861	2,909,715	978	2,909,715	(342)	7,395,925
9	3802	42,037	4,656,446,195	139,693,386	1,433,103	358,276	212	358,276	2,220	22,060,171
10	3803	41,005	3,010,208,578	90,306,257	913,357	228,339	165	228,339	1,366	11,297,784
11	3804	38,220	3,203,215,679	96,096,470	991,286	247,821	166	247,821	1,391	12,393,817
12	3801	65,370	5,630,885,323	168,926,560	1,771,505	442,876	300	442,876	5,292	44,586,038
Manhattan Total		672,307	137,541,713,492	4,126,251,405	41,996,314	10,499,079	5,617	10,499,079	17,685	190,300,353
Brooklyn										
1	4001	43,658	4,431,409,257	132,942,278	1,161,556	290,389	201	290,389	2,850	23,716,831
2	4004	45,751	7,689,515,052	230,685,452	1,933,285	483,321	376	483,321	792	7,708,757
3	4003	37,080	3,524,022,301	105,720,669	871,183	217,796	124	217,796	1,522	15,517,821
4	4002	29,429	2,600,588,186	78,017,646	700,395	175,099	121	175,099	2,419	19,875,718
5	4008	41,780	3,904,932,569	117,147,977	998,545	249,636	128	249,636	1,850	20,708,298
6	4005	44,874	10,008,694,531	300,260,836	2,235,831	558,958	363	558,958	905	10,086,638
7	4012	38,007	4,769,696,088	143,090,883	1,171,194	292,798	184	292,798	3,309	30,032,850
8	4006	42,212	4,302,787,126	129,083,614	1,149,285	287,321	188	287,321	1,147	10,828,946
9	4011	38,364	4,179,304,200	125,379,126	1,112,577	278,144	193	278,144	1,442	12,565,735
10	4013	47,946	7,889,819,549	236,694,586	1,807,320	451,830	247	451,830	1,106	13,055,840
11	4017	58,094	8,888,782,295	266,663,469	1,993,122	498,280	284	498,280	2,537	26,493,383
12	4014	42,574	7,328,282,018	219,848,461	1,615,617	403,904	250	403,904	3,305	30,890,278
13	4018	43,397	4,194,714,689	125,841,441	1,134,884	283,721	192	283,721	1,471	13,118,021
14	4015	50,719	7,052,010,537	211,560,316	1,733,486	433,371	309	433,371	2,909	24,138,986
15	4016	52,586	8,340,012,893	250,200,387	1,886,318	471,579	252	471,579	1,453	16,892,875
16	4007	34,074	2,643,904,303	79,317,129	693,210	173,303	91	173,303	717	8,237,452
17	4010	45,788	5,851,798,012	175,553,940	1,392,171	348,043	212	348,043	1,878	18,380,592
18	4009	62,763	11,280,107,742	338,403,232	2,323,426	580,856	404	580,856	252	4,563,154

Table 3
Using a Portion of Building Permit Fees to Fund Rehabilitation Affordable Housing Need

Community District	Col. 1 PUMA Area	Col. 2 Number of Units	Col. 3 Value of Units	Col. 4 Annual Value of Repairs	Col. 5 Annual Building Permit Fees	Col. 6 25 % Increment of Fees	Col. 7 Rehab Units Rendered Sound	Col. 8 Cost to Cure	Col. 9 Rehab Units Remaining	Col. 10 Remaining Cost to Cure
Brooklyn Total		799,095	108,880,381,349	3,266,411,440	25,913,404	6,478,351	4,118	6,478,351	31,867	306,812,174
Queens										
1	4101	71,035	9,295,043,686	278,851,311	2,286,654	571,663	398	571,663	2,246	20,124,595
2	4109	44,493	5,659,315,928	169,779,478	1,446,003	361,501	231	361,501	2,152	19,973,801
3	4102	50,907	6,570,123,880	197,103,716	1,615,125	403,781	223	403,781	2,136	22,918,555
4	4107	40,573	5,062,808,466	151,884,254	1,279,928	319,982	219	319,982	1,932	16,826,501
5	4110	60,956	9,433,030,214	282,990,906	2,082,705	520,676	279	520,676	1,159	14,080,723
6	4108	51,084	7,624,069,360	228,722,081	1,968,346	492,086	364	492,086	346	4,744,544
7	4103	86,462	15,265,708,859	457,971,266	3,454,305	863,576	546	863,576	1,492	16,714,433
8	4106	54,263	8,609,029,912	258,270,897	1,968,592	492,148	215	492,148	285	5,733,550
9	4111	43,145	6,315,550,126	189,466,504	1,448,461	362,115	188	362,115	1,783	20,357,929
10	4113	38,676	6,867,615,263	206,028,458	1,438,141	359,535	188	359,535	1,095	13,017,229
11	4104	44,237	9,904,666,431	297,139,993	1,979,142	494,785	372	494,785	(70)	1,694,213
12	4112	65,660	8,596,805,268	257,904,158	1,978,494	494,623	248	494,623	1,030	13,408,874
13	4105	61,296	10,932,890,906	327,986,727	2,315,550	578,887	287	578,887	540	8,525,185
14	4114	34,947	4,541,396,469	136,241,894	1,061,376	265,344	176	265,344	399	4,448,913
Queens Total		747,734	114,678,054,768	3,440,341,643	26,322,820	6,580,705	3,933	6,580,705	16,525	182,569,046
Bronx										
1&2	3710	35,386	1,754,148,367	52,624,451	532,934	133,233	111	133,233	1,543	10,725,685
3&6	3705	38,016	2,362,533,676	70,876,010	708,978	177,244	143	177,244	1,378	10,088,593
4	3708	35,297	2,595,089,083	77,852,672	800,265	200,066	124	200,066	2,883	26,300,975
5	3707	36,005	2,739,018,351	82,170,551	838,737	209,684	168	209,684	2,613	18,703,772
7	3706	37,905	3,292,632,277	98,778,968	1,008,860	252,215	199	252,215	2,898	21,143,106
8	3701	40,485	5,028,274,185	150,848,226	1,407,573	351,893	238	351,893	956	9,284,032
9	3709	59,299	5,599,069,899	167,972,097	1,486,836	371,709	281	371,709	1,635	13,428,005
10	3703	45,012	5,628,880,256	168,866,408	1,322,200	330,550	225	330,550	101	2,282,883
11	3704	43,355	5,334,918,633	160,047,559	1,306,340	326,585	246	326,585	1,145	9,743,131
12	3702	45,756	6,098,002,542	182,940,076	1,411,024	352,756	286	352,756	825	7,119,595
Bronx Total		416,517	40,432,567,269	1,212,977,018	10,823,747	2,705,937	2,020	2,705,937	15,976	128,819,777

Table 3
Using a Portion of Building Permit Fees to Fund Rehabilitation Affordable Housing Need

Community District	Col. 1 PUMA Area	Col. 2 Number of Units	Col. 3 Value of Units	Col. 4 Annual Value of Repairs	Col. 5 Annual Building Permit Fees	Col. 6 25 % Increment of Fees	Col. 7 Rehab Units Rendered Sound	Col. 8 Cost to Cure	Col. 9 Rehab Units Remaining	Col. 10 Remaining Cost to Cure
Staten Island										
1	3903	53,196	7,963,143,414	238,894,302	1,739,382	434,846	245	434,846	676	8,459,494
2	3902	44,217	8,705,883,253	261,176,498	1,763,790	440,947	315	440,947	(155)	779,743
3	3901	45,544	10,336,433,036	310,092,991	2,020,321	505,080	223	505,080	(135)	581,186
Staten Island Total		142,957	27,005,459,703	810,163,791	5,523,493	1,380,873	783	1,380,873	386	9,820,424
City Total		2,778,611	428,538,176,581	12,856,145,297	110,579,779	27,644,945	16,471	27,644,945	82,440	818,321,774

Notes:

- Col. 1 U.S. Census geographic areas encompassing at least 100,000 in population and established to coincide with community district locations.
- Col. 2 The nondeteriorated housing stock of New York City, except for the portion occupied by renter and ownership households below 30% of median income. The former is the portion of the housing stock likely to improve their units.
- Col. 3 The value (in 2004 dollars) of the nondeteriorated housing stock that is likely to be improved. Rental-unit value equals 100 times contract rent. Ownership-unit value is as reported by owners in 2000. A 6% annual inflation rate is used to convert 2000 value to 2004 value.
- Col. 4 Twelve percent (12%) of nondeteriorated, non-lower-end units are improved annually to a level of 25% of their value.
- Col. 5 Building permit fees generated by various types of units undergoing improvement at a rate of about 0.5% of the value of improvements for one- to three-family dwellings, and 1.0% of the value of improvements for all others. The improvement amount is 25% of structure value.
- Col. 6 Improvement building permit-generated fees raised by one-quarter of current magnitude, with these funds dedicated to rehabilitating deteriorated units occupied by those below 135% of median income.
- Col. 7 The number of units rendered sound, reflecting the amount of money raised in a community district for affordable housing purposes and the average cost to rehabilitate units there.
- Col. 8 The costs to render sound the number of units specified in column 7.
- Col. 9 The number of units that could not be repaired due to insufficiency of funds beyond what would be raised by building permit fee increases.
- Col. 10 The costs to render sound these remaining units.

Source: U.S. CENSUS BUREAU, 2000 CENSUS OF POPULATION AND HOUSING: PUBLIC USE MICRODATA SAMPLE (2003).

C. *New Construction Affordable Housing Need*

New construction affordable housing need relates to households that will grow in the future below a certain percentage of median income, for whom unassisted new market housing will not be available. A portion of this future affordable housing need can be met through a program of inclusionary housing. For New York City, the target group is defined as those who fall below 135% of regional median income of $62,300. One hundred thirty-five percent (135%) of regional median income is $84,100. Households are defined as very low-income if they earn below $31,150; low-income if they earn between $31,150 and $49,840; and moderate-income if they earn between $49,840 and $84,100. In New York City, household growth for the period of 2005 to 2010 will comprise 105,250 households, approximately 79,750 of which will be very low-, low-, and moderate-income households, and 25,500 of which will be middle- and upper-income households. Over the decade of 1990 to 2000, New York City grew by 130,000 units, the vast majority of which were households whose income was greater than 135% of median income. For the period of 2005 to 2010, a similar value distribution of units is assumed. About 115,000 units, including vacancy, will be delivered over the period. Ninety percent (90%) of the non-vacant units (105,100 units), or nearly 95,000 units, will be above the affordability requirements of those making 135% of median income (Table 4, Col. 2). Of these units, approximately 75% will be built in residential zones that encourage inclusionary zoning.[14] This amounts to just over 71,000 units (Table 4, Col. 3). Applied to these 71,000 units is a 20% bonus for inclusionary housing. This would enable new construction of another 14,200 units (Table 4, Col. 4). Total units allowed in the zones would be 85,250, of which 10% inclusionary would be 8,525 units (see Table 4, Cols. 5 and 6). The cost of these units would be at

[14] The inclusionary housing program prescribed here reflects a proposal by the New York City Department of Housing, Preservation and Development (HPD) for the Greenpoint/Williamsburg section of Brooklyn. *See* THE STEVEN L. NEWMAN REAL ESTATE INSTITUTE, REPORT TO THE NEW YORK CITY PUBLIC ADVOCATE: AFFORDABLE HOUSING IN NEW YORK CITY pt. 2 (2005), http://pubadvocate.nyc.gov/policy/documents/TheContextofAffordableHousinginNewYorkCity_000.pdf (last visited Mar. 18, 2006).

new construction costs in New York City, by borough. The subsidy cost would be what is required to occupy these units at 35% of income for renters and 40% for owners versus what these units would cost to occupy. Subsidy cost is the difference between the income required to occupy housing and what can be afforded. This cost will be borne by a combination of operating revenues provided by the new housing occupant and developer subsidies. The developer will provide subsidies in reaction to density increases.

The location of housing created in the future in New York City will reflect the immediate past period of housing delivery in the city (1990 to 2000). Ninety-five thousand (95,000) housing units for households whose income exceeds 135% of median income will be delivered of the 105,000 total housing units produced. Of the former, 26% (24,800 units) will be delivered in Manhattan; 21% (19,800 units) will be delivered in Brooklyn; 19% (17,400 units) will be delivered in Staten Island; 18% (17,000 units) will be delivered in Queens; and 16% (15,600 units) will be delivered in The Bronx (Table 4, Col. 2). In zones that will allow inclusionary zoning, this will produce 71,000 units: 18,600 units in Manhattan, 14,900 units in Brooklyn, 13,000 units in Staten Island, 12,800 units in Queens, and 11,700 units in The Bronx (see Table 4, Col. 3). Taking 10% of the above numbers, after inflating them by 20% for a density bonus, the following number of inclusionary units are produced in each of the boroughs: 2,235 units in Manhattan, 1,785 units in Brooklyn, 1,565 units in Staten Island, 1,533 units in Queens, and 1,407 units in The Bronx. Total inclusionary units supported by future market growth over the period is 8,524 units (see Table 4, Col. 6).

Significant concentrations (above 200 units per community district) of inclusionary units (below the borough level) potentially could take place in Manhattan's Community Districts 1 and 2 (Civic Center, Wall Street, Governors Island, Tribeca, Greenwich Village, Little Italy), Community Districts 4 and 5 (Chelsea, Clinton, Midtown, Times Square, Herald Square), Community District 7 (Lincoln Square, Upper West Side), Community District 8 (Upper East Side, Yorkville, Roosevelt Island), and Community District 10 (Central Harlem); Brooklyn's Community District 3 (Bedford

Stuyvesant, Tompkins Park North, Stuyvesant Heights); Queens's Community District 12 (Jamaica, South Jamaica, Hollis); The Bronx's Community Districts 1 and 2 (Mott Haven, Melrose, Port Morris), Community Districts 3 and 6 (Melrose, Morrisania, East Tremont, Bathgate, Belmont), and Community District 4 (Highbridge, Coucourse); and all three of Staten Island's Community Districts—Community District 1 (North Island), Community District 2 (Mid Island), and Community District 3 (South Island) (see Table 4, Col. 6).

In sum, inclusionary zoning as a portion of the new market housing stock coming on-stream potentially can produce about 8,500 new affordable housing units. These will be distributed mainly in Manhattan (2,235 units), followed by Brooklyn (1,784 units), Staten Island (1,565 units), Queens (1,533 units), and The Bronx (1,407 units). These are new units added to the stock of housing specifically for households of low and moderate income. This is not a program that eases cost burden in existing nondeteriorated low- and moderate-income units or makes units sound in deteriorated low- and moderate-income units; it is a program that actually contributes net additional units to the housing stock. Even though, in a numerical sense, inclusionary zoning's effect is diminished by both potential cost-burden efforts (80,000 units rendered affordable) and rehabilitation activities (16,500 units repaired), neither of those programs produces net new units. Inclusionary zoning, therefore, should receive special attention.

Table 4
Using Inclusionary Zoning to Fund New Construction Affordable Housing Need

	Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9
Community District	PUMA	90% of Total Growth Forms Market Growth	75% of Market Growth Forms Inclusionary Share	Density Bonus (20%) of Inclusionary Share	Total Inclusionary Share	10% Additional Inclusionary Units	Subsidy* Cost of Inclusionary Units	Housing Need Not Met by Inclusionary units	Cost of Housing Need Not Met by Inclusionary Units
Manhattan									
1&2	3810	3,632	2,724	545	3,269	327	7,950,392	605	14,715,459
3	3809	2,175	1,631	326	1,957	196	4,114,313	1,688	35,489,882
4&5	3807	3,389	2,542	508	3,050	305	7,971,269	847	22,136,471
6	3808	2,072	1,554	311	1,864	186	5,529,185	1,186	35,160,574
7	3806	4,430	3,322	664	3,987	399	10,073,081	1,656	41,848,235
8	3805	3,470	2,603	521	3,123	312	9,786,199	1,006	31,509,713
9	3802	804	603	121	723	72	1,450,998	1,024	20,536,377
10	3803	2,579	1,934	387	2,321	232	4,712,646	1,089	22,107,505
11	3804	1,709	1,282	256	1,538	154	3,079,927	1,332	26,668,930
12	3801	578	433	87	520	52	940,275	1,900	34,360,163
Manhattan Total		24,838	18,628	3,726	22,354	2,235	55,608,284	12,333	284,533,309
Brooklyn									
1	4001	1,281	961	192	1,153	115	919,748	671	5,349,327
2	4004	861	646	129	775	78	781,851	437	4,411,869
3	4003	2,440	1,830	366	2,196	220	2,156,410	439	4,315,303
4	4002	1,932	1,449	290	1,739	174	1,671,456	396	3,807,094
5	4008	1,510	1,133	227	1,359	136	1,404,182	884	9,132,795
6	4005	1,046	785	157	941	94	1,329,807	99	1,396,291
7	4012	691	518	104	622	62	847,857	410	5,585,288
8	4006	1,047	785	157	942	94	817,432	571	4,950,777

Using Inclusionary Zoning to Fund New Construction Affordable Housing Need

Community District		PUMA	Col. 1: 90% of Total Growth Forms Market Growth	Col. 2: 75% of Market Growth Forms Inclusionary Share	Col. 3: Density Bonus (20%) of Inclusionary Share	Col. 4: Total Inclusionary Share	Col. 5: 10% Additional Inclusionary Units	Col. 6: Subsidy* Cost of Inclusionary Units	Col. 7: Housing Need Not Met by Inclusionary units	Col. 8: Cost of Housing Need Not Met by Inclusionary Units
	9	4011	539	404	81	485	48	426,678	768	6,757,117
	10	4013	583	437	87	525	52	893,492	343	5,834,308
	11	4017	1,040	780	156	936	94	1,142,836	697	8,516,196
	12	4014	1,417	1,063	213	1,276	128	1,797,831	153	2,162,232
	13	4018	642	481	96	578	58	555,723	807	7,767,995
	14	4015	515	386	77	463	46	484,191	631	6,591,005
	15	4016	901	675	135	811	81	1,203,243	558	8,282,550
	16	4007	1,426	1,069	214	1,283	128	1,531,518	474	5,653,771
	17	4010	614	460	92	552	55	703,437	865	11,011,215
	18	4009	1,336	1,002	200	1,202	120	2,108,575	587	10,290,015
Brooklyn Total			19,821	14,866	2,973	17,839	1,784	20,776,270	9,789	111,815,149
Queens										
	1	4101	1,677	1,258	252	1,510	151	988,217	2,580	16,888,474
	2	4109	1,607	1,205	241	1,447	145	979,270	1,444	9,777,766
	3	4102	1,389	1,041	208	1,250	125	1,003,138	1,933	15,516,267
	4	4107	1,348	1,011	202	1,214	121	846,884	1,516	10,577,440
	5	4110	703	527	105	632	63	552,960	2,140	18,713,174
	6	4108	659	494	99	593	59	460,842	1,434	11,136,131
	7	4103	1,946	1,459	292	1,751	175	1,630,757	2,746	25,571,988
	8	4106	681	511	102	613	61	578,641	1,611	15,209,651

Table 4
Using Inclusionary Zoning to Fund New Construction Affordable Housing Need

	Col. 1		Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9
Community District		PUMA	90% of Total Growth Forms Market Growth	75% of Market Growth Forms Inclusionary Share	Density Bonus (20%) of Inclusionary Share	Total Inclusionary Share	10% Additional Inclusionary Units	Subsidy* Cost of Inclusionary Units	Housing Need Not Met by Inclusionary units	Cost of Housing Need Not Met by Inclusionary Units
	9	4111	499	374	75	449	45	469,334	1,401	14,632,812
	10	4113	624	468	94	562	56	828,964	1,313	19,374,116
	11	4104	970	727	145	873	87	1,191,718	1,080	14,743,209
	12	4112	2,912	2,184	437	2,621	262	2,759,620	2,638	27,773,413
	13	4105	1,131	848	170	1,018	102	1,487,095	1,994	29,143,329
	14	4114	888	666	133	799	80	718,111	1,208	10,852,003
Queens Total			17,034	12,776	2,555	15,331	1,533	14,495,551	25,037	239,909,773
Bronx										
	1&2	3710	2,525	1,894	379	2,273	227	710,435	1,594	4,981,457
	3&6	3705	4,014	3,011	602	3,613	361	1,087,006	1,650	4,963,842
	4	3708	2,232	1,674	335	2,009	201	606,126	1,501	4,528,381
	5	3707	2,028	1,521	304	1,825	183	441,425	1,571	3,800,240
	7	3706	417	313	63	375	38	102,150	1,538	4,189,732
	8	3701	340	255	51	306	31	176,953	1,168	6,747,665
	9	3709	986	740	148	888	89	477,682	2,423	13,041,007
	10	3703	850	638	128	765	77	638,034	1,421	11,854,832
	11	3704	938	703	141	844	84	493,513	1,567	9,160,675
	12	3702	1,304	978	196	1,174	117	873,169	1,635	12,162,061
Bronx Total			15,635	11,727	2,345	14,072	1,407	5,606,493	16,069	75,429,891

Table 4
Using Inclusionary Zoning to Fund New Construction Affordable Housing Need

Community District	PUMA	Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9
			90% of Total Growth Forms Market Growth	75% of Market Growth Forms Inclusionary Share	Density Bonus (20%) of Inclusionary Share	Total Inclusionary Share	10% Additional Inclusionary Units	Subsidy* Cost of Inclusionary Units	Housing Need Not Met by Inclusionary units	Cost of Housing Need Not Met by Inclusionary Units
Staten Island										
	1	3903	4,448	3,336	667	4,004	400	4,628,370	3,393	39,221,242
	2	3902	3,706	2,779	556	3,335	334	4,119,336	2,432	30,045,291
	3	3901	9,234	6,926	1,385	8,311	831	11,659,271	2,105	29,530,509
Staten Island Total			17,388	13,041	2,608	15,649	1,565	24,406,977	7,930	98.797.042
City Total			94,716	71,037	14,207	85,244	8,524	116,893,574	71,158	810,485,165

Notes:

*Cost to construct at market prices occupied by those who cannot afford market prices. Subsidy is the yearly occupancy cost amount minus the tenant's contribution at 35% (renters) or 40% (owners) of annual income times the number of units provided by inclusionary zoning.

Col. 1	U.S. Census geographic areas encompassing at least 100,000 in population and established to coincide with community district locations.
Col. 2	Ninety percent (90%) of 105,000-unit growth projected for the period of 2005-2010.
Col. 3	Seventy-five percent (75%) of market growth is the share to which an inclusionary requirement can be attached. This is an expansion of the prime higher-density inclusionary zones to the lower-density zones.
Col. 4	A density bonus of 20% (20% more units) added to the number of units that could potentially support inclusionary zoning initiatives.
Col. 5	Total inclusionary-supporting housing units likely to be constructed over the period of 2005-2010.
Col. 6	Ten percent (10%) of inclusionary-supporting units reserved for affordable housing units.
Col. 7	Cost to construct affordable units at market prices, yielding an occupancy cost per month. The occupancy cost per month is paired with the ability to pay for housing within households formed, matching housing-unit size and household size. The difference in cost to produce and what the household can pay at 35% (renters) or 40% (owners) of income is the subsidy cost.
Col. 8	Units remaining in future housing demand not able to be met by inclusionary zoning.
Col. 9	The cost of units remaining, which are not able to be met by inclusionary zoning.

Source: U.S. CENSUS BUREAU, 2000 CENSUS OF POPULATION AND HOUSING: PUBLIC USE MICRODATA SAMPLE (2003).

D. Locations of Affordable Housing Demand Versus Affordable Housing Supply

This Article modeled affordable housing supply strategies to allow the activities of the housing market at and below the borough level to provide resources to address affordable housing need in these locations. Where markets are stronger, more affordable housing need is addressed; where markets are weaker, less affordable housing need is addressed. In other words, if there is a significant amount of cost-burdened affordable housing need in The Bronx and less need in Manhattan, and a significant amount of real estate transfer revenue is raised in Manhattan and less is raised in The Bronx, these revenues are retained in Manhattan to address affordable housing need there and similarly retained in The Bronx to address affordable housing need there. This procedure is employed for cost-burdened, rehabilitation, and new construction affordable housing need (Table 5, Cols. 2, 3, and 4). In all of these cases, proportional shares of real property transfer taxes, building permit revenues, and new construction inclusionary units are being used to address affordable housing need in these locations. Yet these resources may be more greatly needed to answer affordable housing need in weaker market locations. Thus, revenue support activity for affordable housing development is taking place at a higher rate in Manhattan, Brooklyn, and Staten Island and at a lower rate in Queens and The Bronx, where housing markets are weaker. Housing unit turnover, property improvements, and housing unit growth are more prevalent in locations where affordable housing need is not large. This results in proportionally more affordable housing unit demand being addressed in locations where housing markets are stronger and proportionally less where housing markets are weaker. To avoid this, the city could establish a citywide fund to redistribute raised resources in direct proportion to the locations of greatest affordable housing need. Table 5 shows need addressed versus actual need by borough and community district. Reflective of market conditions, proportionally more need is addressed in Manhattan, Brooklyn, and Staten Island and proportionally less in Queens and The Bronx. To reverse this

situation and deliver affordable housing where it is needed, one would divide the numbers found in Table 2, Col. 7, Table 3, Col. 7, and Table 4, Col. 6 by the ratios found in Table 5, Cols. 2, 3, and 4, respectively.[15] More fairly balancing revenue and need would require dividing the need-addressed numbers of Tables 2, 3, and 4 by the ratios found in Table 5. Locations of potential housing delivery versus housing need will be an issue as New York City addresses affordable housing need in the future. It clearly involves questions of equity, linkage, and possibly, property rights.

V. A NEW CONSTRUCTION PROGRAM FOR MODERATE- AND LOWER-MIDDLE-INCOME HOUSING

While the above statements on inclusionary zoning are clearly accurate, there is a limited ability to deliver new units through this mechanism. Barely 10% of the new income-qualified households formed would have their need addressed via inclusionary zoning. The city needs a new, large, publicly supported housing program to enable more first responders (police, fire, and emergency medical services workers), teachers, government workers, and those in business and personal services to live in New York City. This could resemble the 1955 Mitchell-Lama housing program sponsored by Manhattan State Senator MacNeil Mitchell and former Brooklyn Assembly Member Alfred Lama.[16] Under that initiative, New York State and New York City low-interest loans spurred the development of 105,000 apartments in the city, of which slightly over one-half remain. The program benefited both tenants and landlords. In exchange for keeping rents affordable (by imposing limitations on developers' profit and income limits on tenants), the city and state provided landlords with low-interest loans and tax breaks.

[15] The ratios developed in Table 5 show that in most parts of Manhattan, as opposed to most parts of The Bronx, more revenues are produced than need addressed.

[16] New York City's Mitchell-Lama housing program was one of the premier new construction efforts to provide housing for middle-income households. It lasted for 10 years and provided over 100,000 new units.

Such a program would raise money at the city and state levels to subsidize construction loans and permanent financing for the developers of these buildings with interest rates as low as 1% to 3% for borrowed money. Real estate taxes would be reduced to 10% of actual taxes. This would require a commitment from the city and state to raise the difference between the cost of construction and permanent financing, and what they charge developers.

In addition, the city would not collect real estate taxes for a share of the population to which it would be providing public services. Even if this type of program produced only one-third (34,000 units) of the amount of affordable housing produced through the Mitchell-Lama housing program (105,000 units) over the next five years, this effect would be four times greater than inclusionary zoning alone (8,500 units). It is time to re-initiate a large-scale housing subsidy program in New York City.

Table 5
Affordable Housing Demand Versus Affordable Housing Supply By Borough and Community District 2005, 2005-2010

	Col. 1	Col. 2	Col. 3	Col. 4
Community District	PUMA Area	Ratio of Real Estate Transfer Tax Supported by Cost Burden (Supply) to Actual Cost-Burdened Units (Demand) (2005)	Ratio of Building Permit Fee Charges to Rehabilitate Units (Supply) to Units that Require Rehabilitation (Demand)	Ratio of New Housing Construction for the Period of 2005 to 2010 (Supply) to Total Future Demand 2005 to 2010 (Demand)
Manhattan				
1&2	3810	1.66	2.66	3.67
3	3809	0.85	0.53	1.32
4&5	3807	1.31	2.17	3.12
6	3808	1.37	3.76	1.01
7	3806	2.35	3.34	1.67
8	3805	2.31	7.26	1.32
9	3802	0.83	0.59	0.71
10	3803	0.62	0.68	2.05
11	3804	0.84	0.69	1.16
12	3801	0.64	0.32	0.29
Manhattan Total		1.34	1.50	1.47
Brooklyn				
1	4001	0.73	0.43	1.67
2	4004	1.57	1.85	1.29
3	4003	0.53	0.48	3.46
4	4002	0.49	0.31	3.25
5	4008	0.52	0.44	1.47
6	4005	1.91	1.87	4.45
7	4012	0.84	0.36	1.31
8	4006	0.72	0.73	1.49
9	4011	0.62	0.61	0.58
10	4013	1.34	0.99	0.99
11	4017	0.82	0.65	1.04
12	4014	0.91	0.51	3.27
13	4018	0.73	0.81	0.65

Table 5 (Continued)
Affordable Housing Demand Versus Affordable Housing Supply
By Borough and Community District 2005, 2005-2010

Community District	PUMA Area	Col. 1: Ratio of Real Estate Transfer Tax Supported by Cost Burden (Supply) to Actual Cost-Burdened Units (Demand) (2005)	Col. 2: Ratio of Building Permit Fee Charges to Rehabilitate Units (Supply) to Units that Require Rehabilitation (Demand)	Col. 3: Ratio of New Housing Construction for the Period of 2005 to 2010 (Supply) to Total Future Demand 2005 to 2010 (Demand)
14	4015	0.99	0.54	0.63
15	4016	1.17	0.87	0.99
16	4007	0.48	0.59	2.28
17	4010	0.63	0.64	0.55
18	4009	1.04	3.32	1.26
Brooklyn Total		0.86	0.71	1.45
Queens				
1	4101	0.87	0.82	0.54
2	4109	0.89	0.55	0.85
3	4102	0.74	0.49	0.62
4	4107	0.68	0.63	0.76
5	4110	1.10	1.04	0.27
6	4108	1.19	2.73	0.32
7	4103	1.22	1.63	0.51
8	4106	1.40	1.73	0.29
9	4111	0.79	0.59	0.28
10	4113	1.03	0.89	0.35
11	4104	1.63	9.54	0.48
12	4112	0.73	1.00	0.87
13	4105	1.33	2.45	0.37
14	4114	1.09	1.70	0.60
Queens Total		1.02	1.09	0.51
Bronx				
1&2	3710	0.48	0.37	1.44
3&6	3705	0.44	0.56	2.13
4	3708	0.45	0.25	1.38

Table 5 (Continued)
Affordable Housing Demand Versus Affordable Housing Supply
By Borough and Community District 2005, 2005-2010

Community District	PUMA Area	Col. 2 Ratio of Real Estate Transfer Tax Supported by Cost Burden (Supply) to Actual Cost-Burdened Units (Demand) (2005)	Col. 3 Ratio of Building Permit Fee Charges to Rehabilitate Units (Supply) to Units that Require Rehabilitation (Demand)	Col. 4 Ratio of New Housing Construction for the Period of 2005 to 2010 (Supply) to Total Future Demand 2005 to 2010 (Demand)
5	3707	0.41	0.34	1.21
7	3706	0.50	0.37	0.26
8	3701	1.13	1.12	0.22
9	3709	0.58	0.82	0.38
10	3703	1.32	2.96	0.46
11	3704	0.82	1.02	0.51
12	3702	0.70	1.34	0.63
Bronx Total		0.63	0.64	0.85
Staten Island				
1	3903	1.37	1.87	0.98
2	3902	1.80	10.35	0.98
3	3901	2.18	14.93	2.21
Staten Island Total		1.75	4.44	1.39
City Total		1.00	1.00	1.00

Notes:

Col. 1 U.S. Census geographic areas encompassing at least 100,000 in population and established to coincide with community district locations.

Col. 2 Ratio of cost-burdened affordable housing units delivered to cost-burdened affordable housing units required, if there was a 1 to 1 parity between the scale of units required and the scale of units delivered (required units and delivered units are actually scaled to delivered units).

Col. 3 Ratio of rehabilitation affordable housing units required if there was a 1 to 1 parity between the scale of units required and the scale of units delivered (required units and delivered units are actually scaled to delivered units).

Col. 4 Ratio of new construction affordable housing units delivered to

new construction affordable housing units required, if there was a 1 to 1 parity between the scale of units required and the scale of units delivered (required units and delivered units are scaled to delivered units).

Source: Rutgers University, Center for Urban Policy Research (2005).

CONCLUSION

This Article sought to examine the various types of affordable housing need as they exist at the borough level and below in New York City. The Article scrutinized cost-burdened, rehabilitation, and new construction affordable housing need in terms of its magnitude in community districts throughout New York City. The Article provided the gross numbers of affordable housing need by specific locations. In addition, the Article examined various types of revenue and ameliorative strategies as responses to affordable housing need. Using a 20% increase in the Real Property Transfer Tax to address cost burden, a 25% increase in residential building permit charges to address rehabilitation need, and inclusionary zoning at a rate of 10%, where it is applicable, to address new construction need, the three demand components of affordable housing need were responded to by supply. The findings below are the results of these investigations.

A. Affordable Housing Need

1. Cost burden affects New York City residents (except those who live in Staten Island) relatively evenly (in terms of share of the population) at 41% to 45% of those who are income-eligible. In Staten Island, 37% of those who are income-eligible are cost-burdened. This means that there are somewhat compensating effects in the cost of the local housing stock for the significant differences found between median incomes (in 2004 dollars) in Manhattan ($52,500+) and median incomes in Brooklyn ($36,700). Median housing cost (in 2004 dollars) in Manhattan is $1,035 monthly to occupy housing; median housing cost in Brooklyn is $872 monthly to occupy housing.

2. Rehabilitation affordable housing need is relatively evenly distributed in select locations of each of the boroughs, except in Staten Island. Staten Island's percentage distribution of the stock occupied by income-qualified households is one-quarter to one-third that of the other boroughs.
3. In terms of absolute numbers, Queens and The Bronx would require more new construction affordable housing need and somewhat less in Manhattan, Brooklyn, and Staten Island. Relatively, as a share of existing income-qualified units, Staten Island has significant (two to three times that of the other boroughs) new construction affordable housing need.

B. Mitigating Affordable Housing Need

1. The New York City Real Property Transfer Tax (which is between 1% and 1.5% of value depending upon class of property), if increased by 20% annually, would yield subsidies that would allow approximately 80,000 units annually to no longer be cost-burdened. This is only 8% of total cost-burdened affordable housing need and leaves more than one million units still cost-burdened. Nonetheless, this begins to make a dent in addressing cost-burdened housing need throughout the city.
2. Rehabilitation funds are generated by moderate-, middle-, and upper-income households living in units that are not deteriorated, and who are seeking to improve their properties. A 25% increase in the building permit fees for these purposes is dedicated to pay for deteriorated units occupied by low- and moderate-income families. The modeling done in this exercise allows rehabilitation of more units in an area where substantial numbers of high-value, nondeteriorated units exist; thus, more units are able to be rehabilitated in community districts in Manhattan and Brooklyn than in Queens and The Bronx. If the city taps building permit fees for this purpose, the fund could be citywide to allow monies generated from more affluent boroughs to assist in paying for the rehabilitation needs found in the poorer boroughs.

3. Inclusionary zoning, as a portion of the new market housing stock coming on-stream, potentially can produce about 8,500 new affordable housing units. These will be distributed mostly in Manhattan (2,235 units), followed by Brooklyn (1,785 units), Staten Island (1,565 units), Queens (1,533 units), and The Bronx (1,407 units) (Table 2, Col. 6). These are new units added to the stock of housing specifically for households of low and moderate income.

It is clear that affordable housing need in New York City is large. The revenues to address such need, if they can be found, are relatively small. This means that only a small fraction of any category of affordable housing need can be addressed with revenue streams or public policies that appear to be related to affordable housing delivery (inclusionary zoning). Even if New York City is successful in using a portion of the Real Property Transfer Tax to ease cost burden, a portion of building permit fees to address rehabilitation need, and inclusionary zoning to address new construction affordable housing need, significant amounts (>90%) of affordable housing need remain. The city must add a large-scale housing program similar to the Mitchell-Lama housing program. If this is done and only one-third of the units that were built under the Mitchell-Lama program are built, together with the inclusionary component, 50% of future affordable housing need could be addressed. Obviously, this leaves only 10% of cost-burdened housing need addressed and 15% of rehabilitation need addressed, but the future need response would be significant. This is the direction in which New York City should go in the future.[17]

[17] After the reelection of the Public Advocate in 2005 and the results of the CUNY affordable housing study, the New York City Office of the Public Advocate is committed to putting a variety of affordable housing initiatives in place.

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