



Downtown Housing Study

For: City of Lewiston

October 2002

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Purpose of Project

Lewiston is changing rapidly. There are new jobs. Bates Mill is filling up. The hospitals are expanding. Peoples Heritage has moved its loan processing operations downtown.

There is investment downtown. The new Court House is under renovation. The City is developing plans for a new community center. The Sisters of Charity Health System is building 15 new town homes for working families.

There are immigrants moving to the area. Many Somalis have recently moved to the City looking for good jobs and safe neighborhoods.

With changes in population and economics comes a need for changes in housing policies. A declining city needs a housing policy of shrinkage and problem containment. A growing city needs a housing policy of focused investments and infrastructure improvements.

The changes don't just occur citywide. They happen in neighborhoods. Some neighborhoods are on the upturn, others in the downturn, at the same time.

That is what is going on in Lewiston today, and will happen for years to come.

Because of these changes, the city needs to monitor changes by neighborhood and adjust policies to take advantages of opportunities, and counter threats.

With this in mind, there is a threefold purpose to this study:

1. To give the latest on what's happening in Lewiston neighborhoods,
2. To recommend housing policies for those neighborhoods, and
3. To recommend ways to continually update the housing data system.

Here's how the report is laid out. The Neighborhood Today section describes what is happening in downtown Lewiston neighborhoods today based on Census data and study data. Policy Ideas and Best Practices outlines policies and practices used throughout the country for revitalizing downtown residential areas. Neighborhood Recommendations identifies the best practices that could be used in Lewiston and provides recommended strategies for each neighborhood. The Future section provides recommendations on how to maintain the database for future uses. Appendices A-I describe the database and the methodology used to collect the data.

I. The Neighborhoods Today

The Study Area

The study area is made up of Census Tracts 201 and 204. These two Census Tracts make up the heart of the downtown housing in Lewiston. The Census Tracts each contain two Census Block Groups, Block Group 1 and Block Group 2. The map on the next page shows the Census Tracts and Block Groups.

City officials divided the study area into nine neighborhoods, as indicated on the map on the following page. The study area was further broken down into 17 police sub-beats. The methodology used to collect and analyze the data is in Appendix A. Data sources are listed in Appendix B. The police sub-beat and neighborhood boundaries are displayed on a map on the next page. The summary table of the database and the data dictionary can be found in Appendix D and E respectively. Appendix F and G show the results of the data for the neighborhoods and the police sub-beats, respectively.

Census Data

The study area lost 16.3% of its housing units (or 521 units) from 1990 to 2000. The city as a whole lost 648 units during the same period. This means that over 80% of the units lost in Lewiston were in the study area. In comparison, Androscoggin County gained 2,145 units (a 4.9% increase) and the State of Maine gained 64,856 units (an 11% increase). Census Tract 204 saw the greatest decrease in housing units with 227 units lost in Block Group 1 and 183 units lost in Block Group 2. The total units in the study area was 2,672 in 2000.

Geography	1990	2000	Change	% Change
Block Group 1, Tract 201	746	724	-22	-10.6%
Block Group 2, Tract 201	301	212	-89	-2.9%
Block Group 1, Tract 204	1,468	1,241	-227	-15.5%
Block Group 2, Tract 204	678	495	-183	-27.0%
Total Study Area	3,193	2,672	-521	-16.3%
City of Lewiston	17,118	16,470	-648	-3.8%
Androscoggin County	4,3815	45,960	2,145	4.9%
State of Maine	587,045	651,901	64,856	11.0%

There was a decrease of 59 homeowner units in the study area from 1990 to 2000. The largest proportional loss was in Block Group 2, Tract 201 where an already low number of 16 homeowner units in 1990 was cut in half to 8 homeowner units in 2000. Block Group 1, Tract 201 lost 10 homeowner units for a decrease of 35.7% from 1990 to 2000. The City of Lewiston experienced a 3% decrease in homeowner units from 7,441 in 1990 to 7,215 in 2000. Androscoggin County gained 1,725 new homeowner units, a 6.9% increase while the State of Maine experienced a 13.1% increase in homeowner units. In all there were 267 homeowners in the study area in 2000.

Geography	1990	2000	Change	% Change
Block Group 1, Tract 201	28	18	-10	-35.7%
Block Group 2, Tract 201	16	8	-8	-50.0%
Block Group 1, Tract 204	201	183	-18	-9.0%
Block Group 2, Tract 204	81	58	-23	-28.4%
Total Study Area	326	267	-59	-18.1%
City of Lewiston	7,441	7,215	-226	-3.0%
Androscoggin County	26,904	26,631	1,725	6.9%
State of Maine	327,888	370,905	43,017	13.1%

A total of 304 renter units were lost in the study area from 1990 to 2000, a 13.1% decrease. This accounted for almost all of the lost rental units in the City of Lewiston. Androscoggin County added 286 new rental units, a 1.9% increase from 1990 to 2000. The State of Maine added 9,871 new rental units, a 7.2% increase during the same time period. In all there were 2,021 renter occupied units in the study area in 2000.

Geography	1990	2000	Change	% Change
Block Group 1, Tract 201	585	606	21	3.6%
Block Group 2, Tract 201	228	186	-42	-18.4%
Block Group 1, Tract 204	1,064	900	-164	-15.4%
Block Group 2, Tract 204	448	329	-119	-26.6%
Total Study Area	2,325	2,021	-304	-13.1%
City of Lewiston	8,382	8,075	-307	-3.7%
Androscoggin County	15,111	15,397	286	1.9%
State of Maine	137,424	147,295	9,871	7.2%

Because the number of owners decreased at a faster rate than renters, the study even had a lower proportion of owner units in 2000 (11.7%) than it did in 1990. The lowest occupancy rate in 2000 was in Block Group 1, Tract 201 (2.9%) followed by Block Group 2, Tract 201 (4.1%). The highest owner occupancy rates were in Block Group 2, Tract 204 (15%) and Block Group 1, Tract 204 (16.9%). The City of Lewiston saw a slight increase in owner occupancy rates from 47% in 1990 to 47.2% in 2000. Androscoggin and the State of Maine also saw slight increases in owner occupancy rates to 63.4% and 71.6%, respectively.

Geography	1990	2000
Block Group 1, Tract 201	4.6%	2.9%
Block Group 2, Tract 201	6.6%	4.1%
Block Group 1, Tract 204	15.9%	16.9%
Block Group 2, Tract 204	15.3%	15.0%
Total Study Area	12.3%	11.7%
City of Lewiston	47.0%	47.2%
Androscoggin County	62.2%	63.4%
State of Maine	70.5%	71.6%

Although population declined in the 1990s, the housing stock shrank even more. Thus, the vacancy rates in the study area decrease from 17% in 1990 to 14.4% in 2000. The lowest vacancy rate of 8.5% was found in Block Group 2, Tract 201. The highest vacancy rate of 21.8% was found in Block Group 2, Tract 204. All areas saw a decrease in vacancy rates.

However, 2000 vacancy rates of 14.4% for the study area are still higher than for Lewiston overall (7.2%) or for Androscoggin County (8.6%). Maine has a higher vacancy rate of 20.5% due to the number of seasonal properties in the state.

Table 5 Vacancy Rates			
Geography	1990	2000	% Change
Block Group 1, Tract 201	17.8%	13.8%	-22.5%
Block Group 2, Tract 201	16.4%	8.5%	-55.2%
Block Group 1, Tract 204	13.8%	12.7%	-7.9%
Block Group 2, Tract 204	22.0%	21.8%	-0.7%
Total Study Area	17.0%	14.4%	-15.3%
City of Lewiston	7.6%	7.2%	-5.3%
Androscoggin County	8.7%	8.6%	-1.3%
State of Maine	20.7%	20.5%	-1.1%

Housing characteristics from the 2000 Census are not yet available for Census Tracts. However, in 1990, only 6% of the housing stock was in 1-2 family homes, 23% was in 3-4 unit homes, 34% was in small apartment buildings of 5-9 units, and 37% was in large apartment buildings of 10 or more units. Almost three-quarters of the housing units were built prior to 1940 and only 134 units were built in the past 20 years. Twenty-eight percent of the units were 1-bedroom, 36% were 2-bedrooms, 30% were 3-bedrooms, and 5% were 4 or more bedrooms.

Table 6 1990 Occupancy Characteristics for Census Tracts 201 and 204, Lewiston		
	Total	Percent
Number of Units		
1, Detached	11	0.8%
2	70	4.9%
3 or 4	334	23.2%
5 to 9	489	34.0%
10 to 19	321	22.3%
20 to 49	126	8.8%
50 or more	87	6.1%
Year Structure Built		
1989-1990	0	0.0%
1985-1988	70	2.2%
1980-1984	64	2.0%
1970-1979	83	2.6%
1960-1969	318	9.8%
1950-1959	142	4.4%
1940-1949	229	7.1%
Pre 1940	2,326	72.0%
Number of Bedrooms		
No Bedroom	36	1.1%
1 Bedroom	918	28.4%
2 Bedrooms	1,163	36.0%
3 Bedrooms	957	29.6%
4 Bedrooms	111	3.4%
5 or more Bedrooms	47	1.5%

In summary, the decrease in the supply of housing units has helped lower the vacancy rates in the study area. While many deteriorated and abandoned houses have been torn down, little new housing has been built to replace it. Homeownership rates are very low and have dropped even lower over the past decade. The housing stock in the area is mostly older, multifamily units built before 1940.

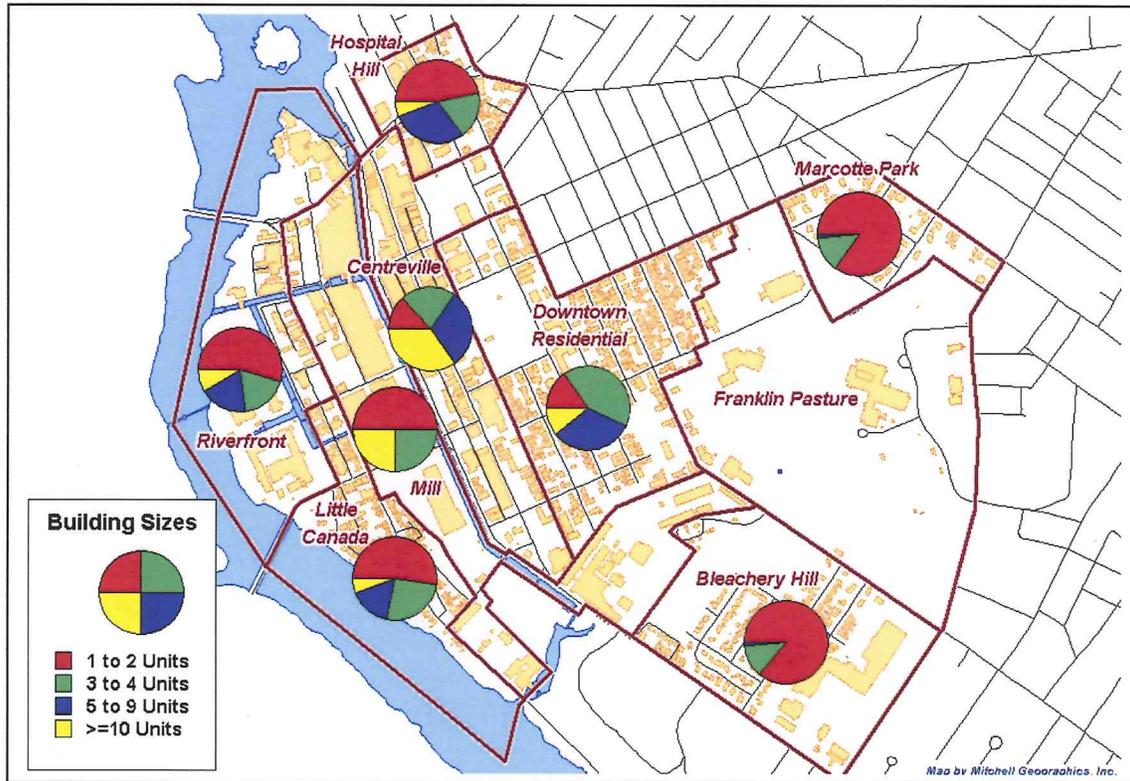
Study Results

The following maps, tables, and text display and describe the data from the previous section and additional local sources of information on a neighborhood basis. It correlates multiple data elements in order to draw conclusions about neighborhood dynamics and compare neighborhood conditions. More detailed neighborhood data summaries can be found in Appendix F and G. City officials divided the study area into nine neighborhoods. The table below shows the number of residential units and buildings by neighborhood as a reference.

Neighborhood	# of Residential Buildings	# of Residential Units	Share of Study Area Units
Downtown Residential	253	1415	55%
Little Canada	86	311	12%
Centreville	23	273	11%
Hospital Hill	34	220	9%
Bleachery Hill	120	200	8%
Marcotte Park	58	97	4%
Riverfront	11	43	2%
Mill	4	19	1%
Franklin Pasture	0	0	0%
TOTAL STUDY AREA	589	2578	100%

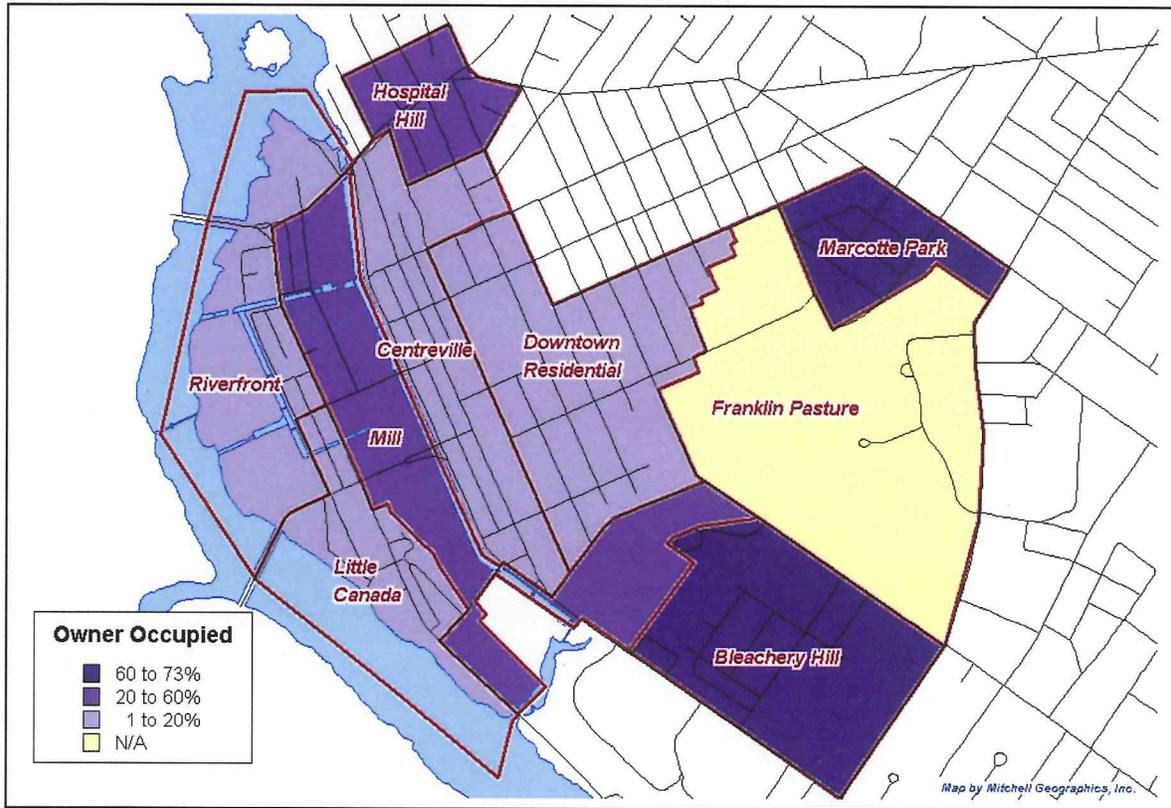
Housing in the study area is concentrated in the Downtown Residential neighborhood, which contains over half of the units in the study area. The Franklin Pasture neighborhood does not have any residential units, and therefore it is not included in the following discussions. Furthermore, while reviewing the data and maps in the rest of this chapter, bear in mind that the Mill and Riverfront neighborhoods have only 4 and 11 residential buildings, containing 19 and 43 residential units, respectively.

Building Size by Neighborhood



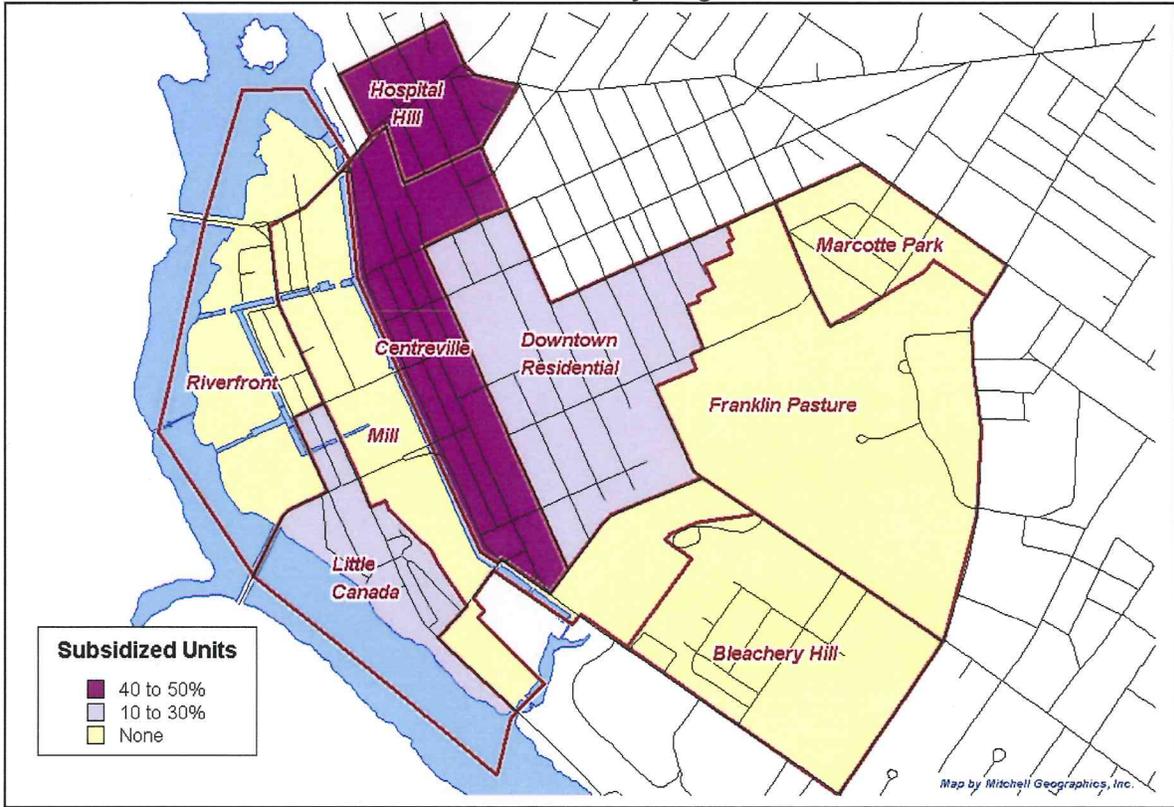
As shown in the map above, the Bleachery Hill and Marcotte Park neighborhoods are mostly composed of owner-occupied single family and duplex homes. Approximately 85% of the structures in these two neighborhoods are single family homes or duplexes. In the Little Canada, Mill, Riverfront, and Hospital Hill neighborhoods, around 50% of the housing is single family and duplexes. The Centreville and Downtown neighborhoods are mainly composed of renter-occupied apartment buildings; in these neighborhoods, approximately 85% of the buildings have 3 or more units. Larger apartment buildings make up the Centreville neighborhood, where over one-third of the buildings have ten or more units, whereas the Downtown neighborhood is characterized by buildings with three to nine units, with 73% of its residential structures falling in this range.

Homeownership Rate by Neighborhood



As shown in the map above, homeownership is strongest in the Marcotte Park (68%) and Bleachery Hill (74%) neighborhoods. Low owner-occupancy rates are found in the Centreville (9%), Riverfront (9%), and Downtown Residential (13%). Some sections of Downtown could not be calculated because the residential units are mostly in mixed unit buildings.

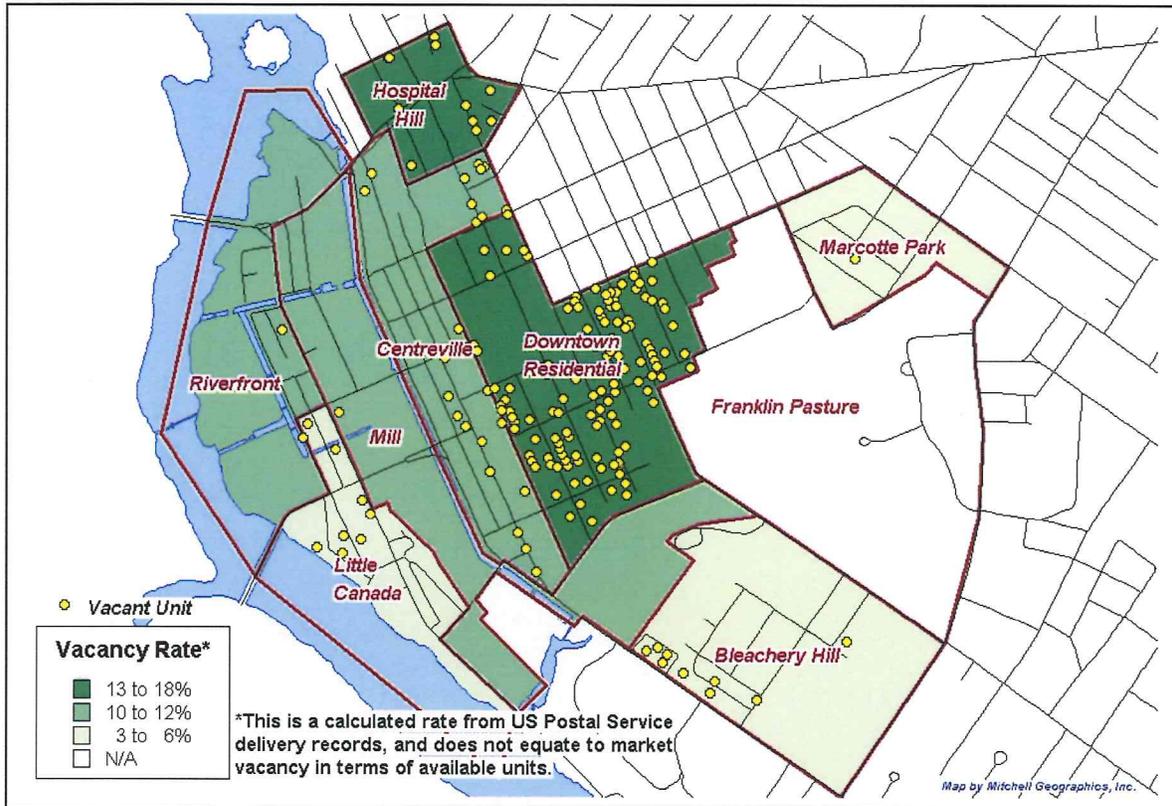
Subsidized Units by Neighborhood



The highest concentrations of subsidized apartments are found in Centreville (48%), Hospital Hill (41%), and Downtown Residential (27%). Four neighborhoods – Marcotte Park, Bleachery Hill, Mill, and Riverfront – have no subsidized units. Over 27% of the residential units in the study area are subsidized. Sixty percent of the study area’s subsidized units are located in the Downtown Residential neighborhood, giving that neighborhood the largest share such units.

Neighborhood	% 1-2 Unit Buildings	Homeownership Rate	% Subsidized units	Vacancy Rate
Bleachery Hill	86%	68%	0%	6%
Marcotte Park	85%	72%	0%	3%
Riverfront	55%	9%	0%	12%
Little Canada	52%	[15%]	12.9%	3%
Mill	50%	50%	0%	11%
Hospital Hill	47%	24%	41.4%	14%
Downtown	15%	13%	26.9%	17%
Centreville	13%	9%	48.4%	11%

Vacancy Rate by Neighborhood



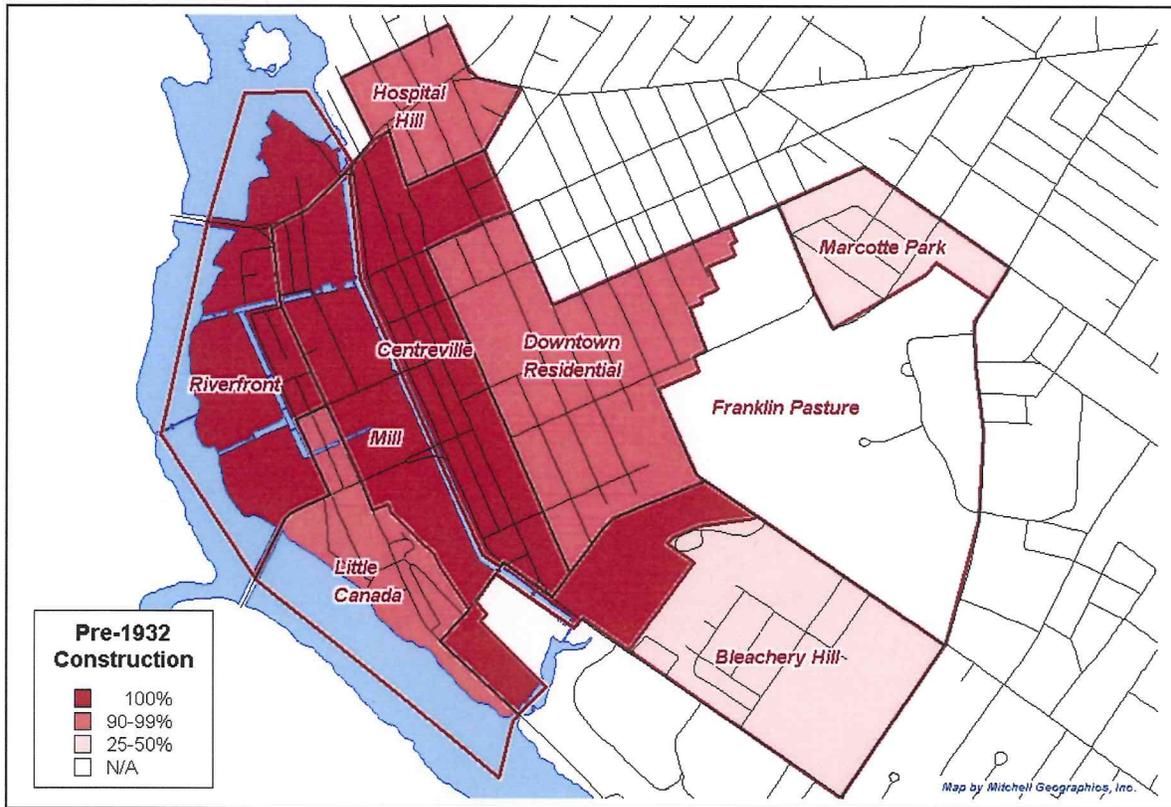
The highest vacancy rates are found in the Downtown Residential Neighborhood (17.4%) and Hospital Hill (13.6%). The lowest vacancy rates are in Marcotte Park (3.1%), Little Canada (3.2%), and Bleachery Hill (5.5%). The vacancy rate for the study area overall is 13%.

When vacancy rates are too high, landlords are unable to achieve a decent return on their apartments and disinvestment occurs. Vacant apartments mean landlords have no income to pay maintenance and taxes. Eventually abandonment may occur.

When vacancy rates are too low, rents begin to rise until they are out of the reach of working families. This is what has happened recently in Portland.

A vacancy of 4-7% is a healthy level where most landlords can fill their apartments and maintain the properties while rents remain affordable.

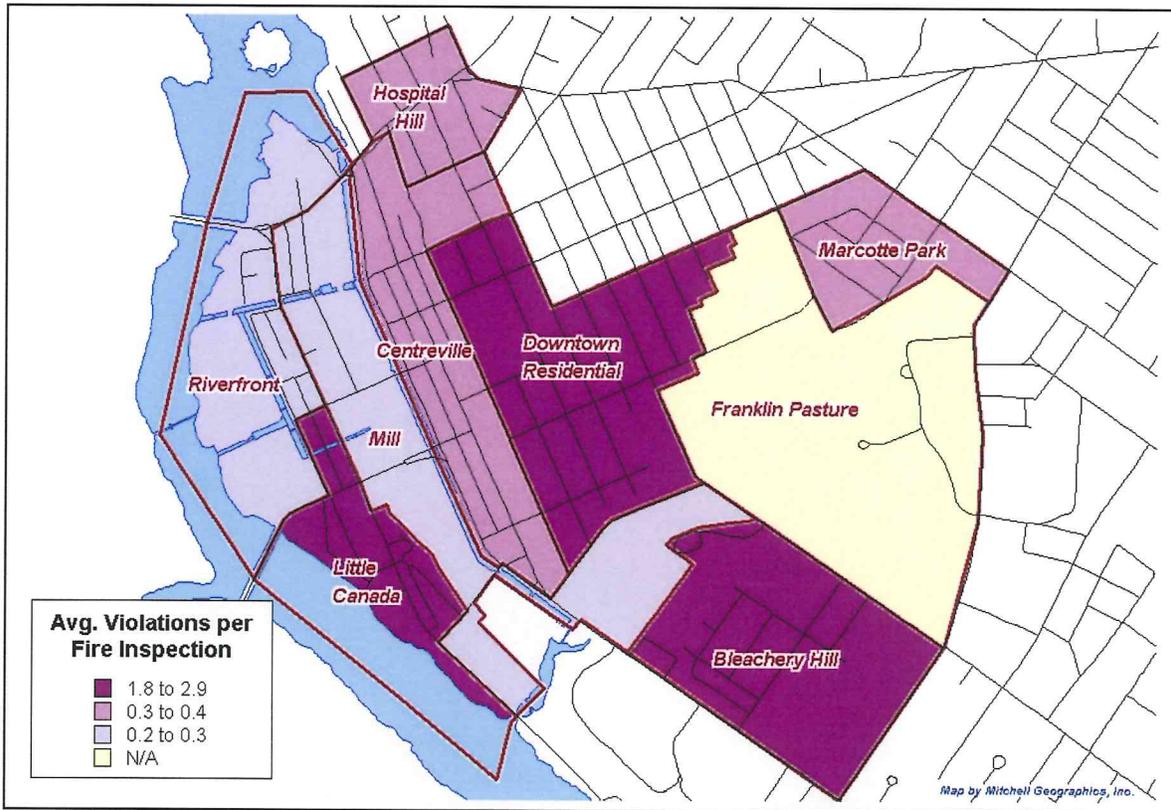
Housing Age by Neighborhood



In three of the study area neighborhoods, 100% of the housing units were constructed prior to 1932. In all of the neighborhoods except Marcotte Park and Bleachery Hill, over 90% of the housing is older than 70 years. In Marcotte Park, only 27.6% of the units were built before 1932 and in Bleachery Hill, 47.5% of the units were constructed before 1932. Overall, the study area has old homes. Only 2% of the homes were built after 1978.

Old housing requires higher maintenance and rehabilitation costs. But there are many parts of Maine, and Lewiston, with older housing yet healthy neighborhoods. With regards to the study area, there may be several buildings of historic significance in the Riverside, Downtown, and Parkside neighborhoods.

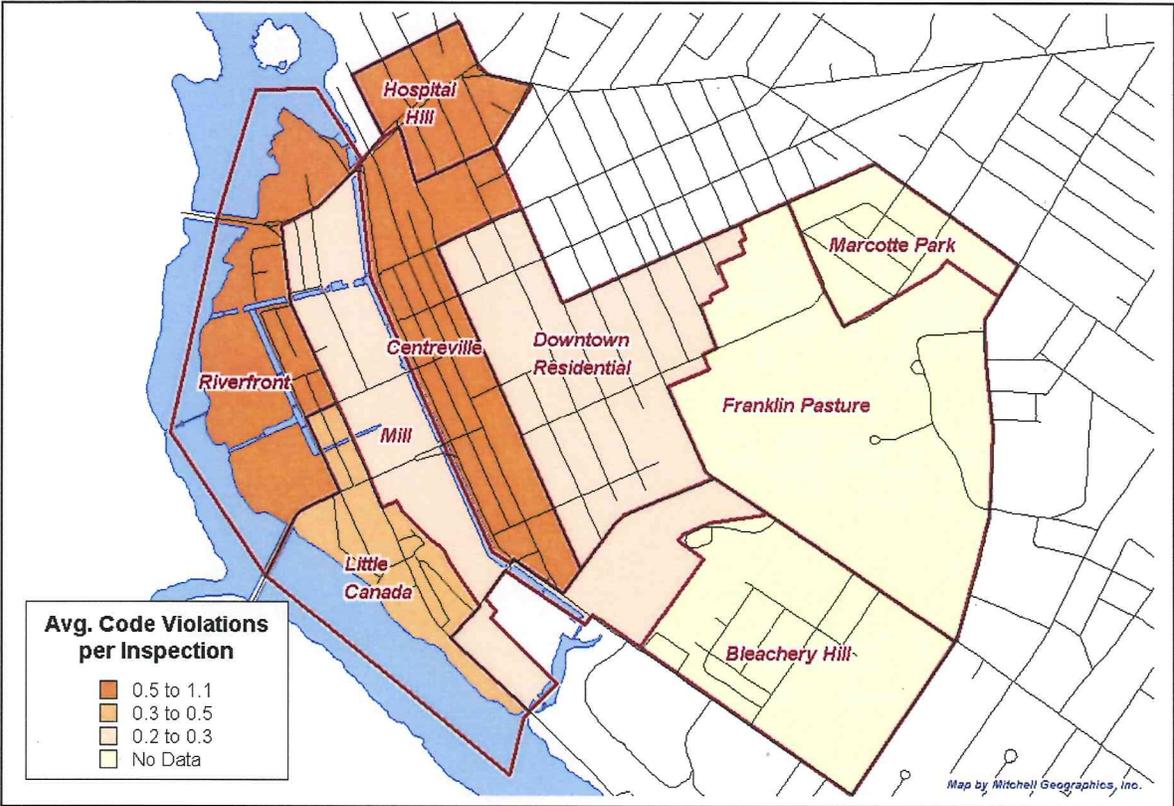
Average Violations per Fire Inspection



City fire code violations have been collected and mapped. The most fire violations per inspection were found in Bleachery Hill with an average of 2.9 violations per inspection. This was followed by the Downtown Residential neighborhood with 2.5 violations per inspections. The average for the study area was 1.7 violations per inspection.

The intensity of fire violations does not follow police calls or vacancy data. The fire department focuses specifically on fire safety issues which may or may not have any effect on marketability of the units.

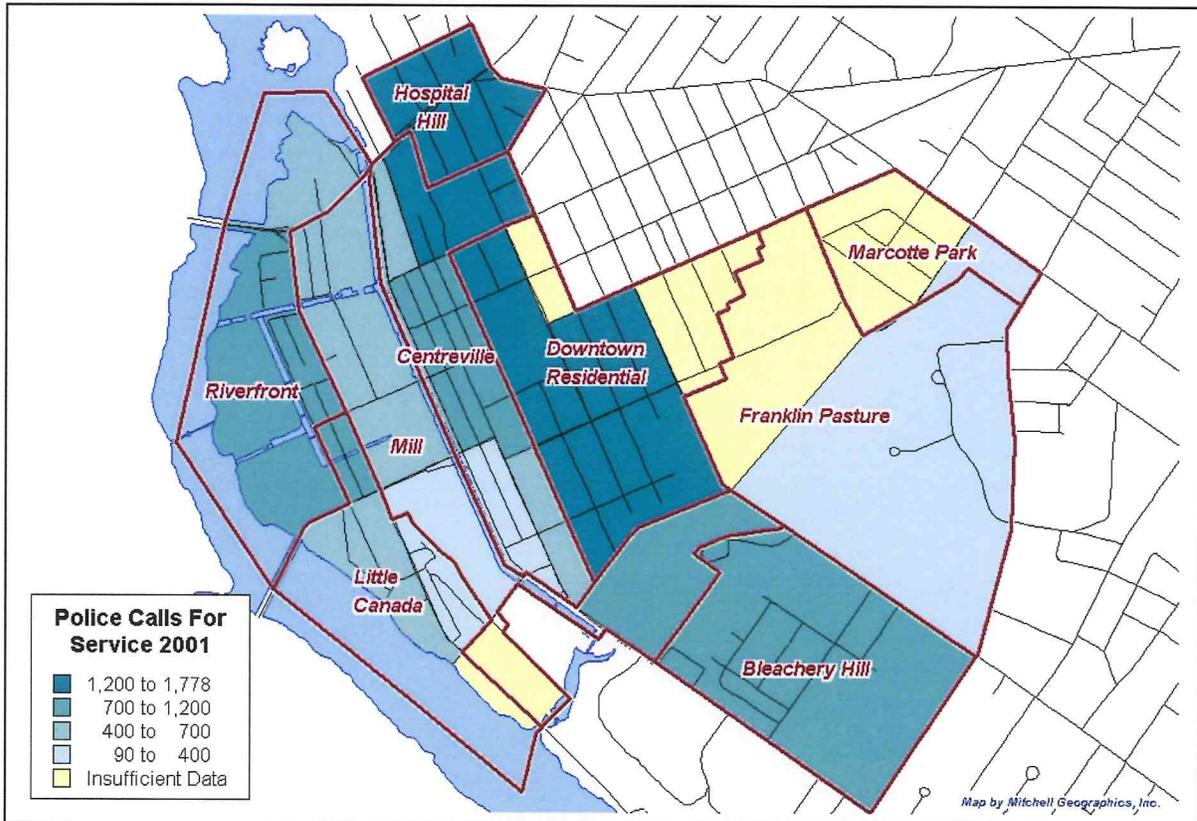
Average Code Violations per Inspection



Likewise, housing code inspections have been mapped. All inspections are for rental housing. The number of code violations per inspection was highest for Riverfront with 1.06 violations per inspection. This was followed by Centreville (.97 violations per inspection) and Hospital Hill (.55 violations per inspection). Bleachery Hill and Marcotte Park had no code violations reported.

Code violations are concentrated in the neighborhoods with old housing and higher vacancy rates.

Police Calls for Service, 2001



Police calls for service have been mapped. The number of police calls is highest in the Hospital Hill and Downtown Residential areas. The fewest police calls are in Marcotte Park and Little Canada.

Lower numbers of police calls are associated with higher homeownership rates and lower vacancy rates. People prefer to invest in homes in safe neighborhoods.

Summary

A pattern emerges from this neighborhood review. Those neighborhoods with a strong mix of housing – single and multi-family, private and subsidized, owner and renter, old and new – tend to have healthier vacancy rates and lower crime rates than those which don't. While every neighborhood is different and will not have the same blend, public policy should seek to diversify housing types and styles in its downtown neighborhoods.

II. Policy Ideas and Best Practices

The previous analysis has identified trends in Lewiston neighborhoods, and suggested goals. These goals can be furthered by effective City housing policies. Planning Decisions has reviewed policies from around the country used to revitalize downtowns.

The biggest lesson from successful turnarounds is that the most successful cities targeted resources to a limited number of strategically selected neighborhoods to maximize impact. They created development thresholds in time and space.

Development threshold is the point where development efforts change the perceptions about a neighborhood and begin to attract more private investment. Clustering development activity in a short period of time creates visible change and faster impact than scattered activity over a longer period of time. This means that local policy initiatives should be targeted to particular neighborhoods or sections of neighborhoods where the promise of a development threshold is achievable. With this in mind, here are some specific housing policies that have worked for cities around the country.

Revitalize Neighborhoods

Strategic Block and Gateway Demolition vs. “Snaggle Tooth” Demolition

A strategic demolition and preservation plan for vacant and near vacant housing is different than just a “demolition policy”. Demolition policies that simply eliminate units identified as unsafe, or that simply eliminate properties that a city receives a lot of complaints about, with no plan to reuse the parcels can result in a “snaggle-tooth” look to the neighborhoods; gaps where buildings had been torn down and nothing had replaced the gaps. Demolition should be targeted to blocks with good opportunity for land assemblage and redevelopment and blocks that serve as gateways to the neighborhood.

Specific demolition policies can stimulate revitalization. If there is a large number of vacant units along a street, the city can tear down the units and introduce new types of housing; replacing it with wider lot configurations with duplex housing with off-street parking, bigger lots, and larger setbacks. A demolition policy can also create side yards by demolishing every third or fourth house and giving the land to the adjacent house. Side yards become part of the existing home, not a vacant lot.

Strategic demolition should also be targeted near existing amenities such as parks and schools. These areas provide open spaces and play equipment for residential use.

Land Bank

Land banks can be used in conjunction with strategic demolition. Land banking is the process whereby a municipality accumulates property through property tax foreclosures and makes the land available to developers at very low cost. Land banks hold vacant parcels until a non-profit is ready to build on the site. Non-profits can withdraw a parcel from the land bank for below market rates. Land banks make it as easy as possible to put vacant land to new uses. Land banks offer one-stop shopping for transferring vacant lots to private owners. Providing free or low cost ready-to-build lots is obviously very attractive to developers.

Infill Housing Incentives

Infill housing is new housing construction on vacant or redeveloped land within existing, older, built-up neighborhoods. Infill housing can occur on lots stored in the land bank or simply on private lots. In order to make infill housing more attractive to private developers, many cities have offered infill incentives. Examples include waiver of building plan review and permit fees, streamlined approval and permit processes, assistance with property acquisition, and revised downtown building codes.

Conversion of Commercial Buildings

Many older mills and schools offer conversion possibilities to residential use. Often these older buildings are brick construction and are structurally sound. Conversions may be attractive as elderly housing. Reutilizing existing infrastructure to a market that would find older buildings appealing is a strong strategy. The layout of older buildings often can be converted into smaller elderly apartments.

Single Family Construction

New construction of single-family homes with improvements in streets, curbs and sidewalks can have a large impact on an old neighborhood. New construction can provide houses with design features that are more in line with current demand. It can also provide homes free of asbestos and lead paint and other hazards that are commonly found in older homes. New homes require less maintenance up front which makes it easier for new homebuyers to budget. New homes also have a positive visual impact on neighborhoods. Design considerations for new infill construction created by the U.S. Department of Housing and Urban Development are listed in Appendix H.

Expand Stable Neighborhoods Into Transitional Neighborhoods

Transitional neighborhoods are neighborhoods that are just starting to decline. The focus is on heading off neighborhood decline when the first vacant house appears, rather than wait to try and bring back communities after they have collapsed.

Most transitional neighborhoods border stable neighborhoods. If transitional neighborhoods are stabilized, then the next neighborhood over—usually a lower income neighborhood—will have

its strength on which to build. A building block strategy connects and builds on strengths of the transitional neighborhood and the bordering stable neighborhood.

Raise the Penalties for Building Code Violations

Many cities have adopted punitive approaches for building code violations. Some cities charge a neglected vacant house registration fee. Providence, Rhode Island developed a Clean and Lien Program that aggressively targets vacant lots by creating an environmental law court that levies stiff penalties on those who use vacant lots as dumps or for other illegal purposes. Pittsburgh initiated a public shaming program whereby building inspectors post signs identifying the owners on the most dilapidated properties in the city. To merit a sign, the owner must have ignored housing court fines and orders to clean up the building. The danger of this approach is that it may encourage abandonment if buildings are not economic to maintain.

Citizen Involvement in Code Enforcement

Many cities are now involving citizens directly in the code enforcement process. Richmond, Virginia's Operation Squalor Program and Pittsburgh's Citizen Inspection Program allow community residents to identify vacant and occupied buildings as public nuisances. If a special grand jury agrees, owners can be tried in civil court and fined. However, most owners try to settle their case through sale, payment of sums-in-lieu of fines, or rehabilitation. Harrisburg, Pennsylvania's Citizen Inspection Program actually trains neighborhood residents to inspect the exterior of properties and send notices to the owners of properties that violate the city's property maintenance code. If the owner does not rectify the problem a city official inspects the property and initiates enforcement actions. Independence, Missouri has encouraged neighborhood groups to exert peer pressure on negligent property owners. The City of Lawrence, Massachusetts has implemented a nuisance property inventory completed by the neighborhood associations. The city uses the list to target strategies to deal with the troubled properties.

Create Edges and Boundaries

Many downtown neighborhoods are surrounded by mixed uses. Creating edges around a neighborhood creates a sense of community and identity. It creates a physical boundary so that residents can feel part of a specific neighborhood. It also prevents commercial uses from encroaching upon residential streets, thus changing the character. Edges and boundaries can be created with buffers around non-compatible uses. Parking lots can be lined with shrubs, unsightly commercial uses can be hidden with fences.

Increase Homeownership

Attract Non-Traditional Households

The structure of the American households is changing. The share of married couples with minor children has declined substantially and has been accompanied by a shift toward non-traditional household types. Single-person households showed the greatest growth and many cities are focusing attention on these non-traditional households. Rise of nontraditional households and self-employment put cities in a stronger position to attract residents and businesses.

Young professionals in their twenties and thirties who have not yet started families are attracted to downtowns. This population – people who are delaying marriage and putting off having children – is also growing. According to the U.S. Census Bureau, approximately 67% of American households are currently childless.

Young professionals are a good match for downtown living. They are not concerned with school quality, something that often deters families from living in cities. They often seek low-maintenance housing that does not require extensive yard work and home repairs.

Promote Alternative Housing Arrangements

Many cities encourage alternative housing arrangements such as condominiums, co-operatives, and loft conversions. Condominiums are multi-unit properties where individuals hold fee simple title to individual units and an undivided interest in common areas. Condos are a well-accepted way to create affordable ownership from rental buildings. Housing co-operatives are a blend of single family and multifamily concepts. Co-ops provide the occupant all the tax, equity, and estate benefits of single-family homes, plus all the tax, financing, and operating cost saving benefits of multifamily ownership. Residents of a housing co-op share ownership of the building through purchasing stock in the cooperative corporation. Limited equity co-ops limit the maximum price at which member shares in the co-op can be sold. Co-ops place greater weight on preserving affordability than on enabling residents to accrue equity. Loft conversions are when large open-spaces are converted to living spaces. Often this is coupled with artists' workspaces. Many cities have converted industrial spaces to art studios/living quarters.

Section 8 Homeownership Program

The Section 8 Homeownership Program, designed by HUD and implemented by local housing agencies, provides income assistance for families to make the transition from rental housing to acquiring their own homes. Homeownership vouchers assist first-time homeowners with their monthly homeownership expenses. Public Housing Authorities choose to administer the homeownership program with their Housing Choice vouchers. The Authority uses its normal voucher program payment standard to determine the amount of the subsidy to be paid, either directly to the family or to the lender. Both Fannie Mae and Freddie Mac have committed to work with local authorities to use Section 8 rental subsidies for mortgage payments.

Low-Interest Mortgage Pools

Mortgage pools help low- and moderate-income homebuyers meet not only the cost of the home and the monthly payments but also the down payment. In many cities across the country partnerships of local lenders have create mortgage pools for an area. The mortgage pool is designed to mitigate risk; usually covering up to 90% of post-rehabilitated appraised value of the property. A second-mortgage pool usually covers any remaining costs up to 120% of the appraised value. Mortgage pools require (1) private lenders willing to invest in a first-mortgage pool, (2) low cost funding sources for a second mortgage pool (such as HUD's Community Development Block Grants or local philanthropies), (3) a community development corporation or other non-profit that can serve as a mortgage lender, and (4) home ownership counseling.

Employer Assisted Housing

Successful employee recruitment depends on the availability of quality affordable housing within reasonable commuting distance. Many employers offer benefits to help moderate- and low-income employees afford housing. Such programs, termed employer-assisted housing, typically provide workers with home-buying assistance in the form of a grant or forgivable loan that can be used for the down payment or closing costs on a home purchase. There are other ways to lower the cost of a home purchase, including "soft" (subsidized) second mortgages, a matched savings program, below-market-interest-rate mortgages, and mortgage guarantees. A relatively smaller, but growing, number of employers are supporting the development of affordable rental or homeownership units or subsidizing rent payments.

Employer assisted housing can also be used to promote targeted neighborhood revitalization. Employers often designate geographic boundaries for their employer assisted housing benefits to encourage employees to purchase homes within a targeted area. This type of program generally requires some type of financial incentive to offset the risk associated with living in a less desirable neighborhood and often is targeted at moderate-income families.

Tax Abatement Programs

Several cities offer tax abatements programs to people who buy homes in targeted neighborhoods. Philadelphia offers a 10-year tax abatement that applies to improvements and conversions but not to new construction. Shreveport, Louisiana's Restoration Tax Abatement Program provides to commercial property owners and homeowners who expand, restore, improve, or develop an existing structure in a downtown development district the right to pay taxes based the pre-rehab value. Richmond's Tax Abatement for Rehabilitated Real Estate Program allows property owners to earn tax credits for up to 15 years for rehabilitating older housing within the city. The tax credit is equal to the amount of the increase in the assessment on the structure after the improvements are made. Tax abatements often transfer with the property.

Direct tax abatements are not legal in Maine. However, there may be creative ways to use Tax Increment Financing to have the same effect.

III. Neighborhood Recommendations

The purpose of this project has been to demonstrate that the collection of data readily available in City records, and analyzed on a regular basis, can give the City staff a “thermometer” reading on how individual neighborhoods are doing and guidance for policy changes.

The following narratives provide an example of how the data can be interpreted. This interpretation is done simply based on the information collected in this study, and does not reflect the wealth of study and experience within City Hall already. It is not meant to second-guess City policies, but instead to illustrate how City policy-makers can update their thinking based on current data.

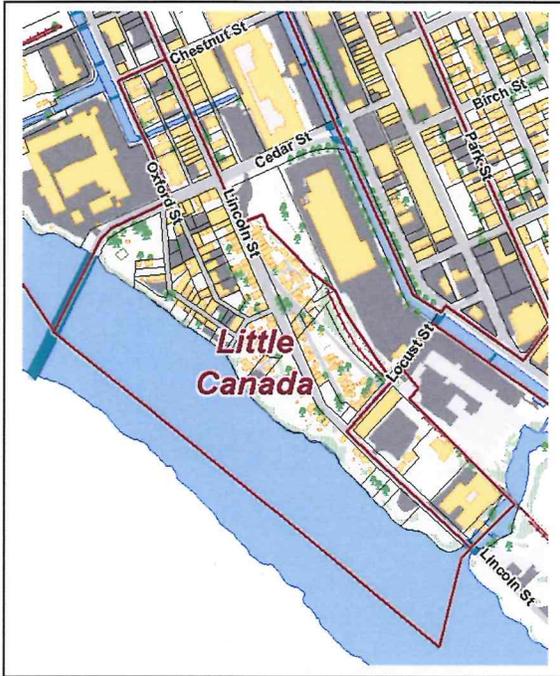
The narrative includes recommendations for current policies – recommendations which run the gamut from conserving what exists to clearing space and creating something entirely new. But there are certain common themes that arise from the analysis that apply to all neighborhoods. They are:

- Urban neighborhoods benefit from mixes of housing types and shops and stores – so long as all are on the same scale;
- Landscaping and trees and sidewalks should buffer residential areas from commercial areas;
- Services for local residents are as important as bricks and mortar in renewing neighborhoods;
- Amenities such as parks, schools, community centers, and churches should be built around, and provide the anchors for, residential renewal;
- Those neighborhoods where private investment is already starting to increase, where the private market is already showing demand, are the most likely to have successful neighborhood renewal efforts; and
- For this reason focus and concentration is important – it is better to make a difference in 2 square blocks than to make general improvements to scattered buildings across a large area.

This project is just a start. There is much more information available locally that could help policy-making. For example, the following additional data would be helpful: more reliable vacancy data, perhaps through a survey of landlords (including a distinction between vacant and abandoned units); data regarding housing/property value and rents by neighborhood; data regarding quality of building construction and current condition; and demographic data and. Further work can be done to assess and integrate existing databases and data systems to make them more useful for policy planning.

With this as a general perspective, the following are policy observations for each neighborhood.

Little Canada Neighborhood



Little Canada is a neighborhood that was settled by workers on leased land. Today, it is often difficult for homeowners to get financing for home improvements because they don't own the land their home sits upon. However, it is a solid, residential neighborhood with some nice landscaping and pocket parks. The housing stock in this neighborhood is old, with 99% of the structures built before 1932. While most of the homes appear to be well-maintained, some appear to be of questionable original construction quality. The neighborhood has a good mix of building sizes, with enough single families and duplexes to promote neighborhood stability through homeownership. The units are typically two-story, single family or duplexes with two or three bedrooms. There is ample parking. Some houses have garages. Tax delinquency rates in the neighborhood are low. There are few police calls in the area. The

vacancy rate is low, but there appear to be some vacant/underutilized parcels for potential infill development. In addition, there may be some opportunities to take advantage of the river as a housing amenity. The new Franco-American Heritage Center at St. Mary's may foster further neighborhood stability and possibly serve as a catalyst for new, quality retail and commercial development in this neighborhood.

This is a neighborhood that can be strengthened. The City of Lewiston should meet with the Franklin Company (the local land leaser) with the goal of working out a long-term strategy to convert their leases over time to straightforward home ownership. With the opportunity of full homeownership finally available, the City could then make available a variety of financial tools (downpayment assistance, mortgage financing, rehabilitation grants and loans) to encourage residents to invest in their housing. Finally, the City might consider ways to improve the visibility and access to the River from this neighborhood.

General Data	
Residential Buildings	86
Total Units	311
Vacant Parcels/Total Parcels	21/117
% Owner Occupied	15.1%
% Subsidized Units	12.9%
Vacancy Rate	3.2%
Avg. Code Violations/Inspection	0.38
% Tax Delinquent	4.3%

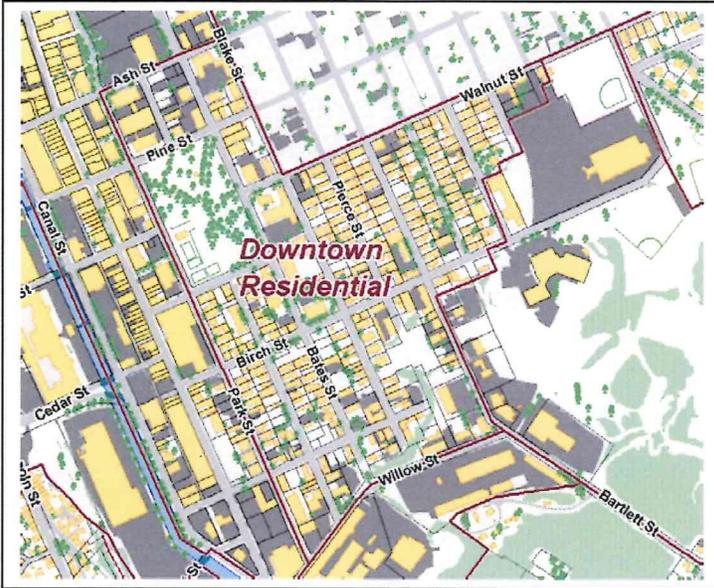
Building Size	
1-2 Units	52.3%
3-4 Units	25.6%
5-9 Units	16.3%
10+ Units	5.8%

Bedroom Size	
1-2 Bedrooms	43.8%
3+ Bedrooms	56.3%

Little Canada Neighborhood Recommendations

1. Meet with the Franklin Company and develop a long-term strategy for converting the area from leased land to full local homeownership.
2. Provide favorable financing to residents – downpayment assistance, rehabilitation loans and grants, mortgages – to encourage homeownership, infill housing, and rehabilitation.
3. Improve visibility and access to the Riverfront from the neighborhood.

Downtown Residential Neighborhood



The Downtown Residential Neighborhood contains over 50% of the housing units in the study area, 1415 units. It is characterized by a low homeownership rate of 13%, a high vacancy rate of 17.4%, and little parking. The buildings in the Downtown Residential Neighborhood are typically very old, 3+ story, multi-family buildings. Many of the city's larger apartment buildings, those containing more than 10 units, are found in this neighborhood. This neighborhood serves an important segment of the Lewiston housing market: affordable rental housing for families. It contains 60% of the

city's subsidized rental units. Finally, the neighborhood also has residents who lack jobs and skills, some with anti-social behaviors, and this affects the quality of life of everyone living here.

The Downtown Residential Neighborhood needs to reinvent itself. On paper, it has several amenities that could be used strategically to improve the housing stock: a large park, proximity to downtown and the River, beautiful churches, walking distance from new jobs at revitalized mills, and walkability. However, it needs less density, more new construction, and more landscaping. Some areas have a "snaggle tooth" look – gaps left by demolished buildings that remain vacant. The integrity of some of the larger apartment buildings needs to be assessed carefully. Large buildings are difficult to convert under the best circumstances; large buildings that were built modestly and have a poor maintenance history may not be worth saving.

Here are three strategies to pursue:

- 1) Intensive social services to tenants and residents to promote employment and education, and build community pride and identity;
- 2) Focus City public investments around strong neighborhood assets – build on the area's strengths – such as Kennedy Park, the Longley Elementary School, the new homes developed by the Sisters of Charity, the churches and stores. In these areas improve public streets and sidewalks and landscaping, enforce codes vigorously, and promote investment.

- 3) In areas without such strengths, focus in the short term in assembling parcels into larger lots for potential sale to a developer in the future.

General Data	
Residential Buildings	253
Total Units	1415
Vacant Parcels/Total Parcels	62/355
% Owner Occupied	13.0%
% Subsidized Units	26.9%
Vacancy Rate	17.4%
Avg. Code Violations/Inspection	0.30
% Tax Delinquent	13.0%

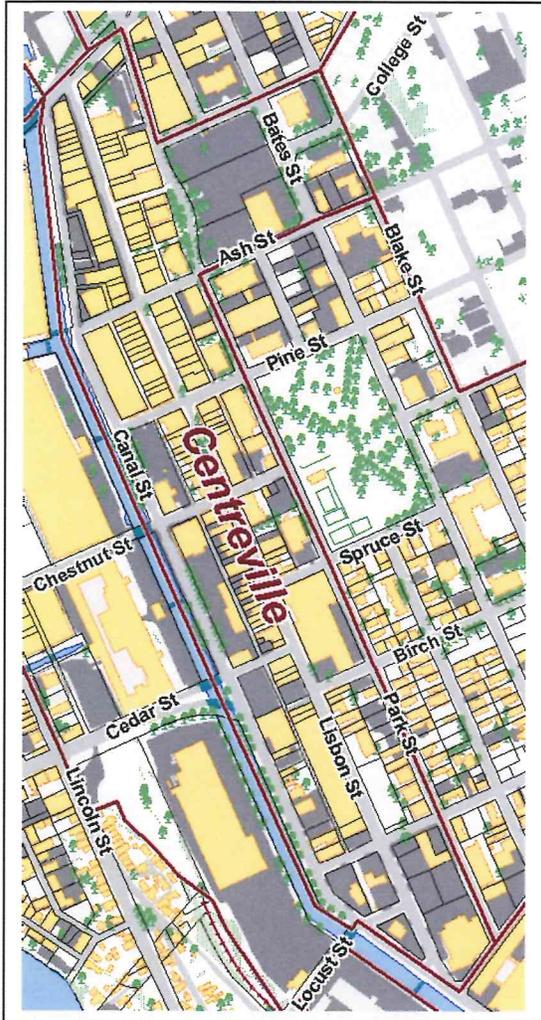
Building Size	
1-2 Units	15.0%
3-4 Units	41.9%
5-9 Units	32.0%
10+ Units	11.1%

Bedroom Size	
1-2 Bedrooms	57.2%
3+ Bedrooms	42.8%

Downtown Residential Neighborhood Recommendations

1. Provide intensive social services.
2. Focus City renewal activities and investments around neighborhood assets.
3. Land bank vacant parcels in outlying areas.

Centreville Neighborhood



The Centreville Neighborhood is located along Lisbon Street and is characterized by few residential units in the upper floors of mostly mixed-use buildings. The buildings in this neighborhood are all pre-1932. While the buildings are old, they appear to be of quality construction. Some of the buildings may be of historic value. There is little owner occupancy; the homeownership rate is 8.7%. There are few fire inspection and code inspection violations. The vacancy rate is high at 11%; the tax delinquency rate is also high at 10.6%. There is a high number of vacant parcels in this neighborhood – 96 of 179 parcels are vacant.

The buildings in this area appear to be well-constructed. A number are architecturally unique and significant.

Residential success downtown depends upon the larger effort to renew Lisbon Street. There's a chicken and egg aspect here. New apartments and condominiums in the upper floors of Lisbon Street buildings can't be marketed unless the stores on the street-level are upgraded. On the other hand new storeowners are hard to attract unless there are residents in the area who will provide steady customers for their products. Thus both residential and commercial renewal must proceed hand in hand – neither can succeed without the

other.

This situation also argues for a block by block intensive approach to renewal, as the City is currently doing. The development of new jobs in the old mills provides a potential opportunity for workforce housing on Lisbon Street – particularly if the employees are young and single.

General Data	
Residential Buildings	23
Total Units	179
Vacant Parcels/Total Parcels	96/179
% Owner Occupied	8.7%
% Subsidized Units	48.4%
Vacancy Rate	11.0%
Avg. Code Violations/Inspection	0.97
% Tax Delinquent	10.6%

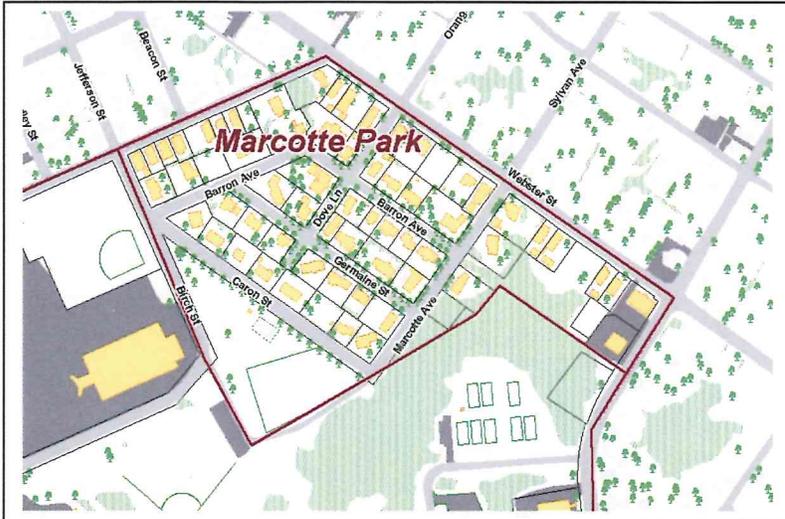
Building Size	
1-2 Units	13.0%
3-4 Units	21.7%
5-9 Units	30.4%
10+ Units	34.8%

Bedroom Size	
1-2 Bedrooms	66.7%
3+ Bedrooms	33.3%

Centreville Neighborhood Recommendations

1. Work on a block-by-block basis to renew street-level stores and upper level housing at the same time.
2. Look for opportunities to provide workforce housing for young singles in upper floor apartments.

Marcotte Park Neighborhood



The Marcotte Park Neighborhood is the kind of urban neighborhood the City should try to preserve and, when possible, replicate elsewhere. It is an area with a distinct identity, beautifully landscaped, private, quiet, with attractive single family homes, located convenient to downtown services. It has the newest housing stock in the study area, with only 1 in 4 structures built prior to 1932. Most (70%) were built between 1932 and 1978.

The neighborhood is characterized by a high homeownership rate (72%), a healthy vacancy rate (3.1%), and low tax delinquency rates. Open space and municipal facilities separate and buffer the neighborhood from downtown.

There are three keys to maintaining this neighborhood's success. First, the City must continue to keep up the maintenance of streets, sidewalks, landscaping, and other amenities. Second, the City must try to keep good quality schools available to residents here. And third, the City must try to keep the cost of homeownership here competitive with the suburban alternatives. This can be done in two ways: first, by keeping property taxes from getting too far out of line with neighboring fast-growing towns; and second, by using City financing programs to reduce mortgage costs for people buying into neighborhoods like these.

General Data	
Residential Buildings	58
Total Units	97
Vacant Parcels/Total Parcels	3/65
% Owner Occupied	72.4%
% Subsidized Units	0.0%
Vacancy Rate	3.1%
Avg. Code Violations/Inspection	0
% Tax Delinquent	3.1%

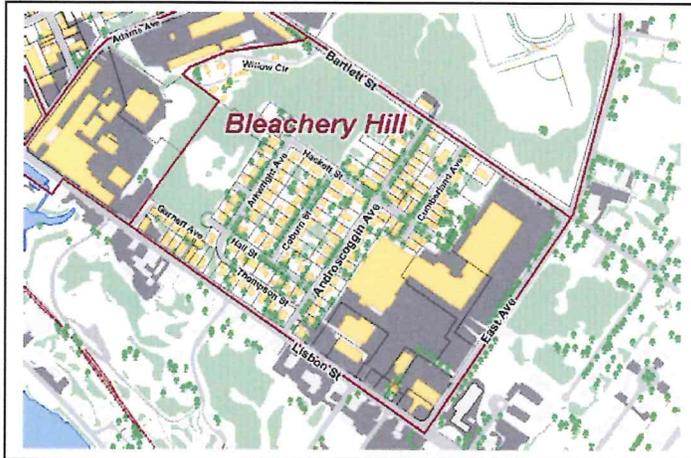
Building Size	
1-2 Units	84.5%
3-4 Units	13.8%
5-9 Units	1.7%
10+ Units	N/A

Bedroom Size	
1-2 Bedrooms	40.4%
3+ Bedrooms	59.6%

Marcotte Park Neighborhood Recommendations

1. Maintain streets, sidewalks, infrastructure
2. Keep good local schools for children in the neighborhood.
3. Through a combination of property tax management and homeowner financing, try to keep the cost of homeownership here not too far out of line with the suburban alternative.

Bleachery Hill Neighborhood



Bleachery Hill is an established residential neighborhood of single family homes and duplexes. It has a high homeownership rate (68%), a healthy vacancy rate (5.5%), and a relatively new housing stock (half constructed since 1932), and good quality homes (no code violations). There is no subsidized housing in this neighborhood.

Bleachery Hill is somewhat of an “island” neighborhood – bordered on one side by strip commercial

development, another side by a mill, another side by wooded open space, and the fourth side by a major road. It is laid out on a grid of streets, and has mature trees. It’s “isolation” and segmentation of land use has protected it in some ways, allowing it to maintain its quiet residential character; on the other hand, there is some potential for better connections to the commercial development on East Ave. and Lisbon Street, perhaps creating more of a neighborhood commercial district. This stretch of busy Lisbon Street is primarily residential on both sides.

This area has the same general needs as Marcotte Park, namely: good infrastructure maintenance, good schools, and competitive homeownership costs. In addition the “borders” of the neighborhood could be enhanced and beautified – particularly the back of the shopping center.

General Data	
Residential Buildings	120
Total Units	200
Vacant Parcels/Total Parcels	9/138
% Owner Occupied	68.3%
% Subsidized Units	0.0%
Vacancy Rate	5.5%
Avg. Code Violations/Inspection	0
% Tax Delinquent	1.4%

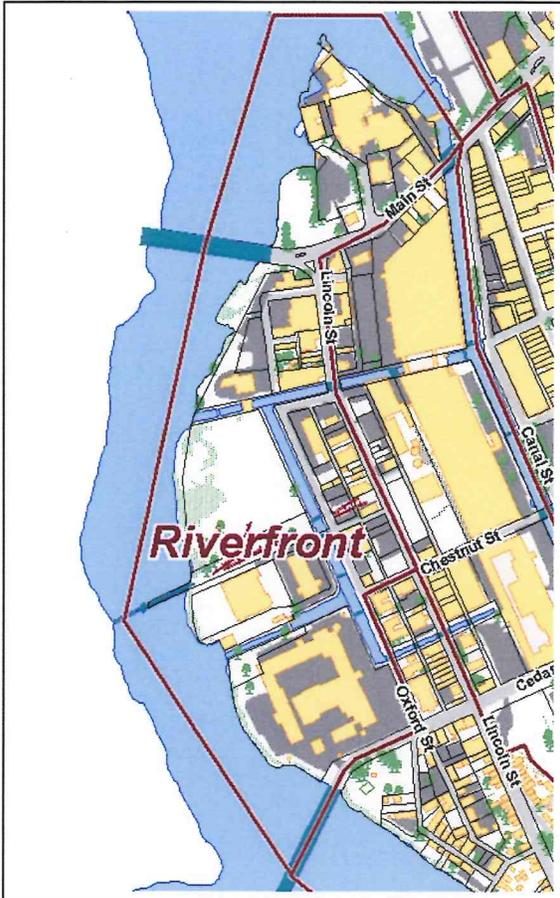
Building Size	
1-2 Units	85.8%
3-4 Units	12.5%
5-9 Units	1.7%
10+ Units	N/A

Bedroom Size	
1-2 Bedrooms	46.1%
3+ Bedrooms	53.9%

Bleachery Hill Neighborhood Recommendations

1. Maintain streets, sidewalks, infrastructure
2. Keep good local schools for children in the neighborhood.
3. Keep the cost of homeownership here not too far out of line with the suburban alternative.
4. Improve aesthetics of neighborhood edge..

Riverfront Neighborhood



The Riverfront Neighborhood is characterized by a wide mix of uses, from industrial to commercial to recreational to transportation to residential – as well as many parcels that are simply vacant (21 of 59). There are only 43 residential units in 11 buildings. The housing that does exist is old – 100% of the buildings are 70 years old or older – and appears to be in questionable condition. It has a high vacancy rate (11.6%) and a low homeownership rate (9.1%). Code and fire violations are high.

This neighborhood has long-term possibilities due to its location on the Androscooggin River. However, the city must first focus on the redevelopment of commercial space at Bates Mill. If the redevelopment of the mill and downtown revitalization is successful then this area may become desirable for private residential development. New jobs in the area, a revitalized retail and commercial district, coupled with the public investments already made in the bicycle and walking trails, long-term plans for loft conversions, and coop and condominium conversions may be possible. Also new construction of moderate to upper income housing along the river may become

feasible. The neighborhood may be able to take advantage of its location on the river to attract nontraditional buyers and renters such as artists. Live-work spaces should be explored. Vacant lots offer opportunities for new construction in the future.

General Data	
Residential Buildings	11
Total Units	43
Vacant Parcels/Total Parcels	21/59
% Owner Occupied	9.1%
% Subsidized Units	0.0%
Vacancy Rate	11.6%
Avg. Code Violations/Inspection	1.06
% Tax Delinquent	1.7%

Building Size	
1-2 Units	54.5%
3-4 Units	18.2%
5-9 Units	18.2%
10+ Units	9.1%

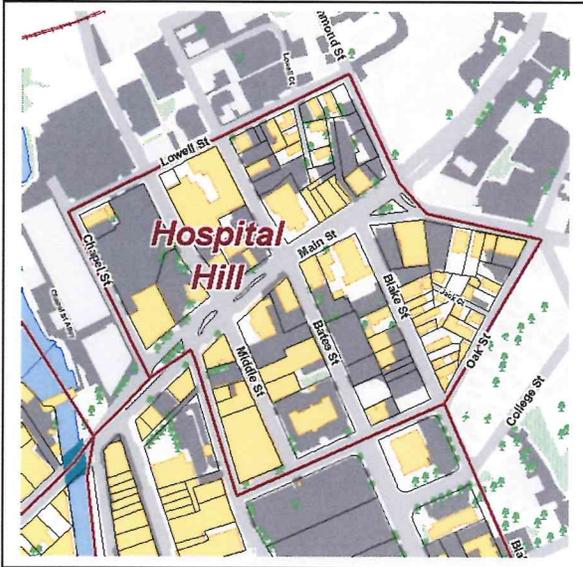
Bedroom Size	
1-2 Bedrooms	45.5%
3+ Bedrooms	54.5%

Riverfront Neighborhood Recommendations

1. Focus on commercial redevelopment in the short-term and residential development in the long-term.
2. Encourage alternative housing arrangements such as loft conversions, co-ops, and condominiums.

Hospital Hill Neighborhood

The Hospital Hill Neighborhood is a mix of commercial and residential uses. On the northwest side of Main Street, the residential neighborhood is encroached by Central Maine Medical Center and its expansion. New construction of a cardiac unit is underway. On the southeast side, the area has several commercial uses, some unsightly, such as garages and parking lots.



The neighborhood is characterized by a relatively high vacancy rate (13.6%) and older homes (over 90% built before 1932). There is ample parking. About 40% of the units in the neighborhood are subsidized due to several large housing projects in the area.

The city must decide how much of this neighborhood they would like to retain for residential living and how much they would like to let go to commercial conversion. For those areas that the city would like to preserve, buffers must be created to define the residential portions of the neighborhood from the commercial sections. Clear boundaries should delineate public spaces, commercial spaces, and residential spaces. Landscaping

should be used to create edges around parking lots and other commercial spaces.

General Data	
Residential Buildings	34
Total Units	220
Vacant Parcels/Total Parcels	21/80
% Owner Occupied	23.5%
% Subsidized Units	41.4%
Vacancy Rate	13.6%
Avg. Code Violations/Inspection	0.55
% Tax Delinquent	6.3%

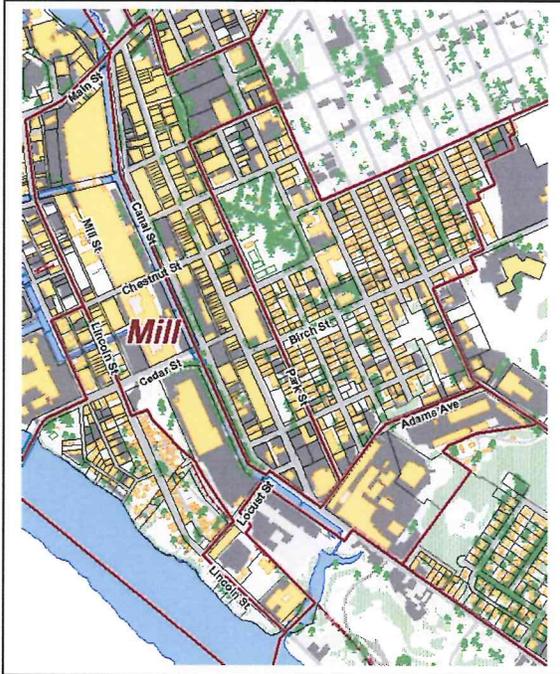
Building Size	
1-2 Units	47.1%
3-4 Units	17.6%
5-9 Units	29.4%
10+ Units	5.9%

Bedroom Size	
1-2 Bedrooms	70.0%
3+ Bedrooms	30.0%

Hospital Hill Recommendations

1. Decide on areas to preserve as residential and areas to allow converting to commercial uses.
2. Create edges and boundaries with the use of buffers to define and preserve residential neighborhood.

Mill Neighborhood



The Mill Neighborhood consists of the Bates Mill complex and several other industrial sites. 19 of the area's 45 parcels are vacant. It has only 4 residential buildings containing 19 residential units. The buildings are all pre-1932.

This neighborhood's future is in the commercial area – as back offices for banks and financial firms, as a potential hotel and convention site, as cultural and entertainment venues, as retail and eating establishments. Residential development may be part of this overall picture, but it will be incidental to its primarily commercial future. Successful commercial development in this area, however, will also be key to residential renewal plans in Little Canada, along the Riverfront, in Centreville, and even in the Downtown Residential area.

General Data	
Residential Buildings	4
Total Units	19
Vacant Parcels/Total Parcels	19/45
% Owner Occupied	50.0%
% Subsidized Units	N/A
Vacancy Rate	10.5%
Avg. Code Violations/Inspection	0.24
% Tax Delinquent	N/A

Building Size	
1-2 Units	50.0%
3-4 Units	25.0%
5-9 Units	N/A
10+ Units	25.0%

Bedroom Size	
1-2 Bedrooms	66.7%
3+ Bedrooms	33.3%

IV. Keeping Track of the Future

Influences

Several changes have occurred and will continue to occur in Lewiston that effect the housing market. These include an influx of immigrants, Southern Maine housing pressures, and downtown development.

Immigrants in the United States have directly affected housing markets, especially for rental units. This is happening in Lewiston. Over the past year about 750 Somalis have moved to Lewiston from other cities looking for good jobs and safe neighborhoods. Most have settled into the downtown area. The influx of immigrants has placed some pressures on the housing market in Lewiston. Waiting lists for affordable housing have grown significantly. Sixty-five Somali families applied for public housing over a 3 ½ month period. The new immigrant arrivals have created a shortage of available rental units, especially of units with three or more bedrooms.

Increasing housing pressures in Southern Maine is also influencing the downtown housing market in Lewiston. Many are unable to afford the rents of almost \$1,000 per month in the Portland area and are moving north. Several are settling in Lewiston increasing the demand for rental housing downtown.

Future development in Downtown Lewiston will also have a positive effect on the Lewiston housing market. Bates Mill comprises 1.2 million square feet in a complex of a dozen buildings covering nearly six acres in downtown Lewiston. The site is anchored by the loan processing operations center of Peoples Heritage Corp. employing more than 300 people as well as more than two-dozen other businesses. The leasing of this site will bring more employees to the downtown area. The City is also developing plans for a \$1.5 million community center in the downtown area. The community center will be a positive influence on the neighborhoods and provide an important focal point for residents. The Sisters of Charity Health System is developing 15 new owner-occupied units affordable to low- and moderate-income families on the corner of Maple and Blake streets.

Immigrants, Southern Maine housing pressures, and future downtown development will have a positive influence on the housing market in downtown Lewiston.

Maintaining the Data System

Importance of Maintaining a Data System

With the changes described above, Lewiston's neighborhoods will continue to evolve. It is important that the City continue to track the indicators used in this study to monitor future opportunities and problems.

This project has involved a significant amount of effort in collecting, standardizing, integrating, and in some cases developing City of Lewiston data sets. There are measurable and substantial benefits to implementing a data management ‘system’ in broad terms. A Municipal Data System that integrates tax assessor data, parcel geography, housing stock and status, fire and safety indicators, digital imagery and other location specific information is an extremely valuable addition to a City’s management toolbox.

City leaders and others who have rapid and reliable access to detailed municipal data can respond to issues and opportunities with greater ease and effectiveness. Modernizing data management systems in a coordinated way will bring about efficiencies in management and improvements in service delivery. When a city department such as Planning, Community Development, or Economic Development becomes a consumer of multi-departmental data, a clear need for standardization and integration emerges.

Obstacles to Maintaining a Data System

Given that the transition to a coordinated Municipal Data System is a far-reaching organizational challenge, significant established procedures must adjust to ensure the success of the system. Prior to the computer age, the reliance on paper records mandated that municipal data be stored in different physical locations. The separation of data created two systemic trends:

1. Documentation and record-keeping protocol were developed independently by each department in order to streamline specific work processes.
2. Most municipal employees had personal direct access to only one department’s set of data limiting their familiarity with other record-keeping protocols.

Due to the fact that each city department has its own specific mission, there are natural organizational obstacles to sharing information and databases. The combined result of these trends is that the City lacks a consistent protocol for sharing related data.

Recommendations

While it is unrealistic to expect a one-size-fits-all data management solution, key common needs can be outlined and addressed through the use of information technology – databases and in particular Geographic Information Systems (GIS). To successfully establish and maintain a municipal data system, the city should address, among other things, the following objectives:

- Establish a universal data management protocol that respects the needs and work processes of each participating department while identifying commonalities.
- Train municipal employees in the universal protocol so that shared elements are treated in the same manner (i.e., consistent storage of address information).
- Create a process for modifying or augmenting the universal protocol over time to meet the changing needs of all participating departments.

This process is often referred to as a needs assessment and implementation plan in the context of GIS and database systems. This planning has been done in Lewiston in the past, and the existing GIS and related planning documents should be reviewed and updated. Once this plan is re-evaluated and made current and actionable, steps should be taken in a prioritized approach to automate data management. Linking as much departmental data as possible to GIS mapping provides a means for comparing, sharing and analyzing between departments, and at the same time makes information more accessible to city management and the public. Investing in data management and GIS planning can help the city build smarter technology-based solutions and avoid costly redundant or incompatible efforts.

Appendices Descriptions

Appendix A describes the methodology and basic data sources used for the study.

Appendix B provides a simple listing of non-Census data elements used in the neighborhood analysis. All are derived from City records.

Appendix C provides detailed house inspection notes. These inspections were done in order to test the validity of the city-derived data elements.

Appendices D and E provide codes for use by City officials when they use the database provided by the project to the City.

Appendix F provides data on each individual neighborhood.

Appendix G provides the same data on police sub-beats in the City.

Appendix H provides design guidelines for new urban housing development.

Appendix A

Methodology and Data Sources

In order to make policy decisions relating to housing issues in downtown Lewiston, a solid foundation of data describing the housing stock and conditions is needed. There are many factors influencing the quantity and quality of housing in the study area, and there are various sources of data providing either hard facts or indicators about those factors.

Some housing information is available from non-city sources such as the US Census and the US Postal Service, and more detailed data are collected and maintained by numerous city departments. The data must be brought together in order to analyze patterns and trends and make effective policy recommendations. Available data has been identified, collected and compiled into a single relational database. The sources vary in their level of detail and data format, and are managed in many independent offices, departments, and systems. Geographic Information System (GIS) and database tools enable the integration and comparison of these datasets by providing a common denominator in geography.

A database system for Census Tracts 201 and 204 in the City of Lewiston was developed to identify and analyze critical housing issues in the area. The methodology involved a number of steps including a focus group, data collection, and housing inspections.

Focus Group

The City of Lewiston requested that the marketability of properties, in addition to the physical condition of buildings, be considered in this study. In order to identify factors that affect the marketability of downtown apartment buildings, the City of Lewiston and PDI organized a focus group. Held in October 2001, the group was composed of 14 landlords, developers, bankers, and city staffers. The group identified several factors that create value in downtown buildings including: fire hazard issues, safety issues, parking, open space, lead paint and asbestos, size of units, amenities, and accessibility. These market factors, along with condition of the building, influenced the data selected for inclusion in the database.

Data Collection

The study uses existing data from various city departments and other sources and combines that data into an Access database. The database is created in a GIS environment that is compatible with Lewiston systems. A detailed table describing the data is shown Appendix D.

Tax Assessors Records

DATA USED;

Basic information on individual properties was entered into the database. The resulting table in Access contains 1053 Parcel records, of which 632 have assessor card data indicating one or more residential housing units. Those with assessor cards have data concerning the number of stories, number of units, number of bedrooms, condition ratings, age of the housing, electrical systems, garages, liens, and recent inspections.

Properties with tax liens against them were provided in the form of a monthly report printout. For this project the parcel addresses on the tax lien report were flagged in the database. This subset of properties represents those with a lien older than 1 year. A data entry screen is provided to facilitate future updates to this field since this project shows only a snapshot in time of a dynamic list.

SOURCE FORMAT and PROCESS;

The tax records are currently on paper cards. These cards were photocopied for all addresses within the study area showing any residential units. Data was entered from the copied records through a data entry form into the Access database. Approximately 12 data items were entered from these cards for each residential property found. Parcel ID, Owner name and address, Deed, Map/Lot, Building Value and Land Value were already provided in the GIS parcels file labeled with a date of 5/23/01.

ISSUES and RECOMMENDATIONS;

Pulling paper records and entering data is time consuming and can be difficult to capture complete addresses. This address listing issue rests on the fact that the source of addresses is the GIS parcel file, but parcels can contain multiple addresses and buildings.

The Assessor's office is in the process of converting records into a new electronic database system. Once complete, a thorough evaluation of addresses should be undertaken and a one-to-one relationship should be created between tax assessor properties and GIS features. In other words every tax assessor property record should be made to have a corresponding address in the GIS map file of buildings and parcels.

Fire Department Inspections

DATA USED;

The sprinkler and tenement inspections database from the Fire Department was used. Total violations found were added to the parcels list in the housing study database where inspections matched addresses.

SOURCE FORMAT and PROCESS;

Data was already in an Access database listing individual inspection events by address along with violations found and many other items. Total violations found was selected and mapped to the downtown parcel base.

ISSUES and RECOMMENDATIONS;

Address consistency between Fire Department and GIS parcel records is an issue. Of the 489 records, 356 could be associated cleanly with the GIS parcels. Geocoding against an independent reference base of street segments provides further matches for mapping the inspections.

Data regarding unit counts, demolished buildings, and vacancies was also received from the Fire Department via the GIS manager (in Public Works) in the form of marked up field maps. Only three of the 10 tax maps that overlap the study area were completed. Consequently, the available data was added to the database but it will not be viable until the Fire Department or GIS department concludes their field review.

Police Department Calls for Service

DATA USED;

Lewiston Police Department provided a map of sub-beats in the downtown area and a spreadsheet of Calls For Service (CFS) numbers by month for each sub-beat for all of 2001.

SOURCE FORMAT and PROCESS;

The data table provided was a spreadsheet and was prepared by an officer/analyst. Source data management system is unknown. In order to integrate this information with the other source material, we created a new layer of mapping representing police sub-beat boundaries in the downtown area. Hand drawn delineations were provided on a base map of streets and MGI digitized the boundaries into a GIS file and attributed the file with beat ID. With this map layer built the calls for service data were attached to the map and associated geographically with the other tables.

ISSUES and RECOMMENDATIONS;

Lewiston Police can benefit from applied crime analysis GIS, as many departments are now doing or are considering doing. The cursory crime mapping conducted for this project is helpful in depicting general levels of police activity by neighborhood as one housing evaluation factor.

More detailed mapping and analysis can be carried out citywide and in greater detail if a crime-mapping GIS is implemented. Examples of uses include daily pin-mapping of crime activity, hotspot identification, beat and precinct balancing, dispatch, neighborhood watch group organizing, and resource allocation. GIS software, police geography development (digitizing all sub-beats), and database development and linkage are some of the required elements to setting up crime-mapping and analysis capabilities.

Code Enforcement Records

DATA USED;

Data on Code Enforcement Orders issued by address for the past 2 years was received and incorporated in the database.

SOURCE FORMAT and PROCESS;

Data was sent in the form of a printed report. Addresses were visually compared with parcels in the database and code enforcement information was added through a data entry form.

The total number of complaint inspections, housing inspections and violations were entered for 145 Parcel records. 15 records were added to the Parcel table to store code enforcement data for addresses that corresponded to second buildings on parcels and which therefore were not in the original Parcel file. By reviewing the parcel map with the building layer superimposed, it was possible to associate these records with the appropriate parcel.

ISSUES and RECOMMENDATIONS;

Code enforcement data resides in a database managed by a contractor. City staff was unable to provide an electronic copy of requested data. If this database is accessible to the department directly, it is recommended that an address matching and verification be conducted in conjunction with the GIS department. Once cleaned and matched, all records from the database could be mapped and made available to GIS consumers including the code enforcement office and others.

Parking

DATA USED;

A contractor who participated in a downtown Lewiston Master Planning project provided parking inventory information. The map files contained a representation of every street parking space in the Downtown Master Plan area classified by space type (i.e. metered, handicapped, etc).

In addition to the street parking inventory, garages were captured in the tax assessor property card data entry process. The square footage of the garages was used to estimate off-street garage parking by property.

SOURCE FORMAT and PROCESS;

The CAD file containing the inventory of street parking was transformed into real-world coordinate space, compiled into a comprehensive single GIS map layer, and attributed with parking space type data. By doing this the inventory is made 'smart' in the context of the GIS and the rest of the housing study layers. Using the police sub-beat boundaries as neighborhood delineators, we counted and summarized on-street parking through map selections.

Neighborhoods were attributed with paved surface area and a percentage paved was created.

Garage parking was calculated by dividing the square footage of garages listed on tax assessor records estimate number of garage parking spaces. Garages with areas less than 200 square feet were assigned one car, 300-500 square feet were given two cars, 500-700 square feet three cars, and greater than 700 square feet were given a value of "4+".

ISSUES and RECOMMENDATIONS;

The street parking inventory did not cover the entire study area. The GIS department's mapping of paved surfaces provided another indicator of parking availability, however it was determined that this aerial-photo derived mapping would not be useful without a separate field assessment and parking lot attributing process. The garage calculation is likely incomplete in the inventory of garages and may also include garages not used for parking. A detailed assessment of parking availability should be conducted for specific property or neighborhood concerns.

Census 2000

DATA USED;

Over 50 variables concerning housing and population were extracted from the 2000 Census Summary File 1 for the four census block groups in the study area. The data covers housing units, tenure, vacancy status, age of householder, household type, household size and population by tenure.

SOURCE FORMAT and PROCESS;

Census tables for SF1 and SF2 were downloaded from the Census Bureau. These data tables require extensive importing, processing, and querying to extract relevant fields for the project database. MGI has developed tools to do this efficiently and can extract any available census data at any available level of geography.

ISSUES and RECOMMENDATIONS;

A more comprehensive citywide Census 2000 dataset and GIS may be useful to the City to evaluate housing and other planning issues.

U.S. Postal Service Vacancy Report

DATA USED;

Vacancy reports from the U.S. Postal Service (USPS) covering all of Lewiston were received from the USPS Address Management Systems representative in Portland, ME.

SOURCE FORMAT and PROCESS;

The data were extracted by MGI from text files into a database table, geocoded (mapped to addresses) and then filtered to remove addresses outside of the study area. Each vacant unit is represented by a record in this table and an associated point in the GIS, enabling us to geographically summarize vacancies into neighborhood groupings. Once neighborhood vacancy counts were derived, they were compared to total housing units in the same neighborhood for a vacancy rate.

ISSUES and RECOMMENDATIONS;

Of the 337 relevant addresses, 201 were linked with parcel table records and the rest were given geographic identities based on a national street map database in a secondary and less precise geocoding pass. Address standardization is again an issue for linking external data tables to city GIS files at either the building or parcel level. A complete addressing of buildings in the GIS would enable more effective matching of external data sources.

Maine State Housing Authority Subsidized Housing List

DATA USED;

Subsidized Housing projects were provided with a listing of addresses and unit counts.

SOURCE FORMAT and PROCESS;

The data was a spreadsheet, which we incorporated into the database and geocoded. Similar to the other address-level data processing, we geocoded the MSHA data first to the Parcel base and then in a secondary pass to a street segment GIS file. Of the 44 projects provided, only 18 matched a parcel record by address. The remainder were researched and mapped manually. One project was divided into two addresses in adjacent neighborhoods.

ISSUES and RECOMMENDATIONS;

Address matching to parcels was again an issue.

GIS Map Data

This is a separate category of data than the tabular data outlined above which resides in the Access project database. The city of Lewiston GIS department supplied the map files used in this project.

These files/layers provide the fundamental geography needed to compare and combine all of the data from the various sources outlined previously.

- **Parcels**
- **Building Footprints**
- **Road Centerlines**
- **Road Text Labels**
- **Census Boundaries (MGI provided)**

We have made some modifications to certain significant map layers during the course of the project database development process. These files are delivered along with the database file for viewing by city staff in a GIS environment.

For more information on Lewiston GIS files and data contact the City of Lewiston GIS Manager.

Inspections

A sample of buildings was selected for inspection to verify the data collected. The buildings were selected using a stratified, systematic sampling method. Buildings rated fair or poor by the assessor's office were listed by number of units and by address and a sample was selected for inspection. This method also tried to spread the inspections throughout both census tracts and across all unit sizes.

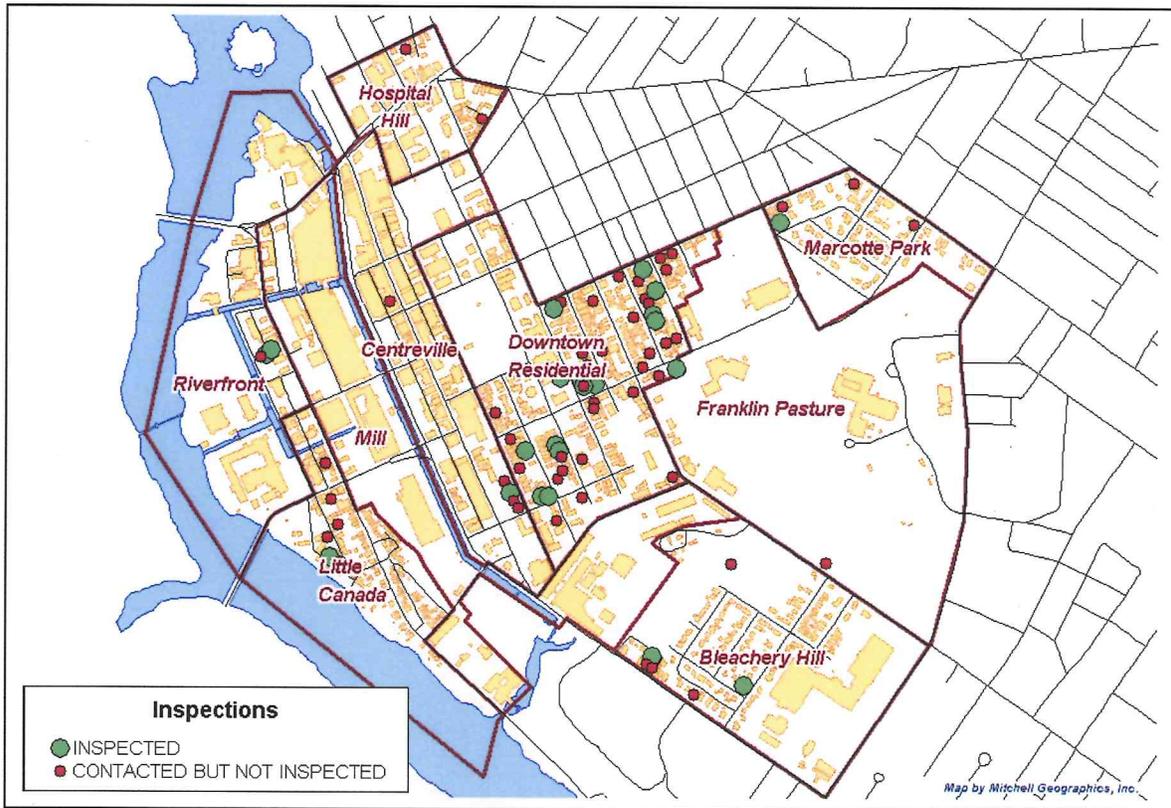
The sample over-sampled multifamily buildings and under-sampled single family and duplex homes due to a small percentage of single family/duplex homes that were rated fair or poor.

Owners of buildings were first contacted by mail explaining the inspection process. This was followed up by a phone call and an attempt to schedule an inspection. Participation was voluntary. An initial sample of 24 buildings was selected of which 9 owners agreed to an inspection. The city also submitted 7 buildings that they wanted inspected, of which 2 agreed to participate. A second round of 46 buildings was selected of which 12 agreed to an inspection. Overall, 77 buildings were selected for inspection and 23 owners agreed to participate. A total of 95 units were inspected.

Units Inspected			
Number of Units in Building	Percent of Buildings in Study Area	Percent of Buildings in Sample	Percent of Buildings Inspected
1 to 2	45%	12%	13%
3 to 4	28%	49%	70%
5 to 9	20%	28%	9%
10 or more	7%	11%	9%

As shown above, there was clearly a higher participation rate by owners of 3 to 4 unit buildings than those owning buildings containing 5 or more units. Seventy percent of the units inspected contained 3 to 4 units while only 9% of units had 5 to 9 units and 9% of the units had 10 or more units. One possible reason may be that owners of smaller buildings are new investors and are more receptive to inspections associated with a city study.

A map displaying the buildings selected for inspection and those actually inspected is shown below.



Inspected buildings were assigned ratings on six factors: exterior, interior, plumbing, heating, electrical, and insulation. The buildings were also given an overall rating. Buildings were rated on a scale of 1 to 7 with 1 representing excellent and 7 representing very poor. Existing data was verified including number of units, bedrooms, garages, and circuit breakers or fuses. The data collected in the inspection was compared to the data in the study's database.

Overall Rating	Number of Units	Percent of Units
2. Very Good	9	10%
3. Good	8	8%
4. Average	61	64%
5. Fair	17	18%

Over 80% of the units received an overall rating of average or better. Only 18% of the units were rated fair. None of the buildings were rated poor. It may be possible be that the owners of buildings in poorer condition refused to participate in the inspections skewing the results.

In general, the quantitative data in the City's database was correct. However, qualitative data such as building condition ratings in the assessor's records were deemed unreliable. This was probably due to the subjective nature of the ratings, the age of the ratings, and the inconsistency of the ratings among different inspectors. Building ratings from assessors records were not used in the analysis.

See Appendix C for individual reports on inspection results.

Appendix B Non-Census Data Elements

Data Source	Data
GIS Department	Parcel and building footprint Demolished buildings Vacant buildings Vacant units
Tax Assessor	Number of units Number of bedrooms Number of stories Garage size Value of building and land Year built Effective year Interior condition rating Exterior condition rating Overall rating Fuses vs. circuit breakers
Fire Department	Number of fire inspection violations Whether the building has sprinklers
Police Department	Number of service calls by sub-beat
Code Enforcement Department	Number of code violations
Parking	Number of street parking spaces, paved lot surfaces, and garages
Tax Collector	Buildings with matured tax liens
Post Office	Vacant units

Appendix C
Inspection Reports

Inspection Reports

Rating Key

1 EXCELLENT	New
2 VERY GOOD	Almost new and modern
3 GOOD	Above average for it's age and function
4 AVERAGE	Average condition for it's age and function
5 FAIR	Below average with some work needed
6 POOR	Much work needed to bring up to standards
7 VERY POOR	Obsolete, well beyond any repair, tear down

Location 32 1/2 OXFORD ST

Owner LALIBERTE, RAYMOND C

Contact

Phone 375-4157

Building Condition FAIR

Exterior Condition FAIR

Interior Condition AVERAGE

Plumbing Condition FAIR

Heating Condition AVERAGE

Electrical Condition FAIR

Insulation Condition FAIR

Units 3

Vacant Units 0

Total Bedrooms 6

Electric Type Fuses

Heat Type FHA

Garage No

Parking Spaces 0

Park Type use rr propert

Lead Paint unknown

Asbestos Siding none

Asbestos Floor Tiles none

Neighborhood Condition close to river - vacant lots

Monday, June 03, 2002

Location 297 BATES ST
Owner WELCH, ORRIN
Contact
Phone
Building Condition AVERAGE
Exterior Condition FAIR
Interior Condition FAIR
Plumbing Condition FAIR
Heating Condition FAIR
Electrical Condition AVERAGE
Insulation Condition AVERAGE
Units 10
Vacant Units 2
Total Bedrooms 20
Electric Type Breakers
Heat Type FHWBB
Garage No
Parking Spaces 3
Park Type on-site
Lead Paint probably
Asbestos Siding none
Asbestos Floor Tiles yes, rear hall
Neighborhood Condition avg

Location **299 BATES ST**
Owner WELCH, ORRIN
Contact WELCH ORRIN
Phone 783-4027
Building Condition FAIR
Exterior Condition FAIR
Interior Condition AVERAGE
Plumbing Condition FAIR
Heating Condition POOR
Electrical Condition POOR
Insulation Condition AVERAGE
Units 6
Vacant Units 0
Total Bedrooms 15
Electric Type Fuses
Heat Type FHWBB
Garage No
Parking Spaces 4
Park Type on-site
Lead Paint likely
Asbestos Siding none
Asbestos Floor Tiles none
Neighborhood Condition avg

Location 74 BIRCH ST
Owner SMITH, BRUCE M
Contact SMITH BRUCE, MARJORIE
Phone 784-8928

Building Condition AVERAGE
Exterior Condition AVERAGE
Interior Condition GOOD
Plumbing Condition AVERAGE
Heating Condition AVERAGE
Electrical Condition GOOD
Insulation Condition FAIR
Units 3
Vacant Units 0
Total Bedrooms 9
Electric Type Breakers
Heat Type FHWBB/FHA
Garage Yes
Parking Spaces 4
Park Type on-site paved,
Lead Paint none
Asbestos Siding none
Asbestos Floor Tiles none
Neighborhood Condition avg

Location **193 BLAKE ST**
Owner BLONDIN, MAURICE R
Contact BLONDIN MAURICE, JACKIE
Phone 782-9549

Building Condition FAIR
Exterior Condition AVERAGE
Interior Condition AVERAGE
Plumbing Condition AVERAGE
Heating Condition FAIR
Electrical Condition POOR
Insulation Condition AVERAGE
Units 3
Vacant Units 0
Total Bedrooms 3
Electric Type Fuses
Heat Type FHWBB
Garage No
Parking Spaces 0
Park Type
Lead Paint probably
Asbestos Siding none
Asbestos Floor Tiles none
Neighborhood Condition fair-avg

Location 198 BLAKE ST
Owner CROWELL, EDWARD S
Contact CROWELL EDWARD, PATRICIA
Phone 782-7635

Building Condition AVERAGE
Exterior Condition AVERAGE
Interior Condition AVERAGE
Plumbing Condition AVERAGE
Heating Condition AVERAGE
Electrical Condition FAIR
Insulation Condition FAIR
Units 4
Vacant Units 0
Total Bedrooms 9
Electric Type Fuses
Heat Type FHWBB
Garage No
Parking Spaces 5
Park Type on-site paved
Lead Paint possible
Asbestos Siding yes
Asbestos Floor Tiles none
Neighborhood Condition avg

Location 200 BLAKE ST
Owner LANGLAIS, YVETTE
Contact
Phone
Building Condition AVERAGE
Exterior Condition GOOD
Interior Condition GOOD
Plumbing Condition GOOD
Heating Condition FAIR
Electrical Condition FAIR
Insulation Condition AVERAGE
Units 2
Vacant Units 0
Total Bedrooms 5
Electric Type Fuses
Heat Type Old HWB
Garage Yes
Parking Spaces 4
Park Type 2 on-site gara
Lead Paint possible
Asbestos Siding none
Asbestos Floor Tiles none
Neighborhood Condition ok

Location **202 BLAKE ST**
Owner HUNTER, LEROY
Contact HUNTER LEROY
Phone 225-3181
Building Condition AVERAGE
Exterior Condition AVERAGE
Interior Condition AVERAGE
Plumbing Condition FAIR
Heating Condition AVERAGE
Electrical Condition FAIR
Insulation Condition FAIR
Units 3
Vacant Units 0
Total Bedrooms 8
Electric Type Fuses
Heat Type FHWBB
Garage No
Parking Spaces 3
Park Type on-site
Lead Paint ?
Asbestos Siding none
Asbestos Floor Tiles none
Neighborhood Condition ok

Location 17 GARNETT AVE
Owner AREL, DONALD M
Contact AREL DON, CELINE
Phone 375-6660

Building Condition AVERAGE
Exterior Condition AVERAGE
Interior Condition FAIR
Plumbing Condition AVERAGE
Heating Condition AVERAGE
Electrical Condition FAIR
Insulation Condition AVERAGE
Units 3
Vacant Units 0
Total Bedrooms 9
Electric Type Fuses
Heat Type FHWBB
Garage No
Parking Spaces 2
Park Type off-street
Lead Paint unknown
Asbestos Siding yes, avg cond
Asbestos Floor Tiles none
Neighborhood Condition avg

Location 1 HALL ST
Owner MOORE, LYNN
Contact
Phone
Building Condition AVERAGE
Exterior Condition GOOD
Interior Condition GOOD
Plumbing Condition AVERAGE
Heating Condition FAIR
Electrical Condition AVERAGE
Insulation Condition FAIR
Units 2
Vacant Units 0
Total Bedrooms 6
Electric Type Square D #3
Heat Type FHA
Garage No
Parking Spaces 4
Park Type off-street
Lead Paint possible
Asbestos Siding yes good
Asbestos Floor Tiles none
Neighborhood Condition good

Location 134 HORTON ST
Owner LEVASSEUR, CECILE
Contact LEVASSEUR CECILE
Phone 782-4928
Building Condition GOOD
Exterior Condition GOOD
Interior Condition AVERAGE
Plumbing Condition GOOD
Heating Condition GOOD
Electrical Condition AVERAGE
Insulation Condition GOOD
Units 5
Vacant Units 0
Total Bedrooms 11
Electric Type Mix
Heat Type FHWBB
Garage No
Parking Spaces 7
Park Type off-street pav
Lead Paint landlord repor
Asbestos Siding yes, good con
Asbestos Floor Tiles none
Neighborhood Condition avg

Location 138 HORTON ST
Owner SUPPORTIVE HOUSING ASSOCIATES
Contact
Phone
Building Condition VERY GOOD
Exterior Condition GOOD
Interior Condition GOOD
Plumbing Condition GOOD
Heating Condition VERY GOOD
Electrical Condition VERY GOOD
Insulation Condition GOOD
Units 5
Vacant Units 0
Total Bedrooms 8
Electric Type Breakers
Heat Type FHWBB
Garage No
Parking Spaces 4
Park Type on-site
Lead Paint none
Asbestos Siding none
Asbestos Floor Tiles none
Neighborhood Condition ok

Location 170 HORTON ST
Owner BEAULIEU, MAURICE Y
Contact BEAULIEU MAURICE, SUZANNE
Phone 777-5823

Building Condition FAIR
Exterior Condition AVERAGE
Interior Condition AVERAGE
Plumbing Condition FAIR
Heating Condition FAIR
Electrical Condition POOR
Insulation Condition FAIR
Units 3
Vacant Units 0
Total Bedrooms 6
Electric Type Fuses
Heat Type FHWBB
Garage No
Parking Spaces 10
Park Type on site
Lead Paint had checked -
Asbestos Siding none
Asbestos Floor Tiles none
Neighborhood Condition OK dead end st vacant lots side and rear

Location 119 HOWE ST
Owner NADEAU, MAURICE L
Contact NADEAU MAURICE, CLAUDETTE
Phone 782-3981

Building Condition GOOD
Exterior Condition GOOD
Interior Condition GOOD
Plumbing Condition AVERAGE
Heating Condition AVERAGE
Electrical Condition GOOD
Insulation Condition AVERAGE
Units 3
Vacant Units 0
Total Bedrooms 3
Electric Type Fuses
Heat Type FHWBB
Garage Yes
Parking Spaces 8
Park Type on-site 5 gara
Lead Paint unknown
Asbestos Siding yes, good con
Asbestos Floor Tiles none
Neighborhood Condition good

Location 88 JEFFERSON ST
Owner FOISY, JOSEPH A
Contact FOISY JOSEPH, MARIETTE
Phone 782-0988

Building Condition VERY GOOD
Exterior Condition VERY GOOD
Interior Condition VERY GOOD
Plumbing Condition GOOD
Heating Condition AVERAGE
Electrical Condition AVERAGE
Insulation Condition AVERAGE
Units 4
Vacant Units 0
Total Bedrooms 8
Electric Type Fuses
Heat Type FHWBB
Garage Yes
Parking Spaces 4
Park Type 2 2car garage
Lead Paint unknown
Asbestos Siding yes, good con
Asbestos Floor Tiles none
Neighborhood Condition good

Location 47 KNOX ST
Owner EDWARDS, ERNEST JR
Contact EDWARDS ERNEST, KARLA
Phone 786-3839

Building Condition AVERAGE
Exterior Condition AVERAGE
Interior Condition AVERAGE
Plumbing Condition AVERAGE
Heating Condition GOOD
Electrical Condition FAIR
Insulation Condition POOR
Units 3
Vacant Units 0
Total Bedrooms 5
Electric Type Fuses
Heat Type FHWBB
Garage No
Parking Spaces 3
Park Type 2 on front law
Lead Paint yes
Asbestos Siding none
Asbestos Floor Tiles none
Neighborhood Condition fair to avg

Location 81 LINCOLN ST
Owner LEIGHTON, ROBERT M
Contact LABBE MARCEL, PAUL
Phone 783-6453

Building Condition AVERAGE
Exterior Condition AVERAGE
Interior Condition AVERAGE
Plumbing Condition AVERAGE
Heating Condition FAIR
Electrical Condition GOOD
Insulation Condition FAIR
Units 1
Vacant Units 0
Total Bedrooms 3
Electric Type Breakers
Heat Type FHA
Garage Yes
Parking Spaces 2
Park Type on-site
Lead Paint possible
Asbestos Siding yes, broken a
Asbestos Floor Tiles none
Neighborhood Condition fair

Location 48 MAPLE ST
Owner LAROCHE, ROGER R
Contact LAROCHE JEANNE, ROGER, RON
Phone 782-0859

Building Condition AVERAGE
Exterior Condition FAIR
Interior Condition FAIR
Plumbing Condition AVERAGE
Heating Condition FAIR
Electrical Condition AVERAGE
Insulation Condition AVERAGE
Units 3
Vacant Units 1
Total Bedrooms 14
Electric Type Mix
Heat Type FHWBB and
Garage No
Parking Spaces 6
Park Type on-site broke
Lead Paint possible
Asbestos Siding yes
Asbestos Floor Tiles #2 bath
Neighborhood Condition less than desireable

Location **52 MAPLE ST**
Owner LAROCHE, ROGER R
Contact
Phone
Building Condition FAIR
Exterior Condition POOR
Interior Condition AVERAGE
Plumbing Condition AVERAGE
Heating Condition AVERAGE
Electrical Condition AVERAGE
Insulation Condition FAIR
Units 2
Vacant Units 0
Total Bedrooms 4
Electric Type Mix
Heat Type FHWBB
Garage No
Parking Spaces 4
Park Type on-site
Lead Paint OK
Asbestos Siding none
Asbestos Floor Tiles none
Neighborhood Condition less than desirable

Location 257 PARK ST
Owner AREL, DONALD M
Contact AREL DON, CELINE
Phone 795-2660
Building Condition AVERAGE
Exterior Condition AVERAGE
Interior Condition AVERAGE
Plumbing Condition AVERAGE
Heating Condition AVERAGE
Electrical Condition GOOD
Insulation Condition AVERAGE
Units 10
Vacant Units 0
Total Bedrooms 10
Electric Type Breakers
Heat Type FHWBB
Garage No
Parking Spaces 10
Park Type on-site gravel
Lead Paint unknown
Asbestos Siding none
Asbestos Floor Tiles none
Neighborhood Condition fam avg

Location 48 RIVER ST
Owner CROTEAU, ROBERT H
Contact CROTEAU ROBERT
Phone 784-7039
Building Condition AVERAGE
Exterior Condition AVERAGE
Interior Condition AVERAGE
Plumbing Condition AVERAGE
Heating Condition FAIR
Electrical Condition POOR
Insulation Condition FAIR
Units 4
Vacant Units 0
Total Bedrooms 12
Electric Type Fuses
Heat Type FHWBB
Garage No
Parking Spaces 0
Park Type none
Lead Paint possibly
Asbestos Siding yes
Asbestos Floor Tiles none
Neighborhood Condition avg - little canada

Location 21 WALNUT ST
Owner HUNTER, LEROY
Contact HUNTER LEROY
Phone 225-3181
Building Condition AVERAGE
Exterior Condition GOOD
Interior Condition GOOD
Plumbing Condition AVERAGE
Heating Condition FAIR
Electrical Condition FAIR
Insulation Condition VERY GOOD
Units 8
Vacant Units 0
Total Bedrooms 24
Electric Type Fuses
Heat Type American Sta
Garage No
Parking Spaces 7
Park Type on-site paved
Lead Paint abatement in
Asbestos Siding none
Asbestos Floor Tiles none
Neighborhood Condition avg for downtown

Location 73 WALNUT ST
Owner BILODEAU, ROBERT L
Contact BILODEAU BOB, ANNE
Phone 784-6115

Building Condition AVERAGE
Exterior Condition AVERAGE
Interior Condition AVERAGE
Plumbing Condition AVERAGE
Heating Condition FAIR
Electrical Condition AVERAGE
Insulation Condition FAIR
Units 5
Vacant Units 0
Total Bedrooms 5
Electric Type Mix
Heat Type FHWBB
Garage No
Parking Spaces 3
Park Type on-site paved
Lead Paint possibly
Asbestos Siding none
Asbestos Floor Tiles none
Neighborhood Condition avg

Location 206 BLAKE ST
Owner HUNTER, LEROY
Contact HUNTER LEROY
Phone 225-3181
Building Condition AVERAGE
Exterior Condition AVERAGE
Interior Condition GOOD
Plumbing Condition AVERAGE
Heating Condition AVERAGE
Electrical Condition FAIR
Insulation Condition FAIR
Units 3
Vacant Units 0
Total Bedrooms 8
Electric Type Fuses
Heat Type FHWBB
Garage No
Parking Spaces 3
Park Type on-site paved
Lead Paint unknown
Asbestos Siding none
Asbestos Floor Tiles none
Neighborhood Condition avg

Insert the Adobe file for the Inspection Reports here.

Appendix D Data Summary Table

Field Name	Description
Nhood_id	Neighborhood Identifier equal to Police subbeat ID
Pct_Own_Occ	Percent Owner Occupied Buildings=Parcel records where the owner address equals location divided by the number of residential buildings
Vacancy_Rate	Vacancy Rate = Vacant mailing addresses from USPS Vacant Report (Geocoded/Mapped to Neighborhood) divided by number of units
Pct_Pre_1932	Percent of residential buildings built before 1932 (Using Year Built from Tax Assessor Cards)
Pct_Pre_1978	Percent of residential buildings built before 1978 (Using Year Built from Tax Assessor Cards)
Paved_Area_Per_Unit	Paved area in square feet (Using Polygon file of Paved Area from Lewiston GIS Dept.) divided by number of units
Pct_Paved_Area	Percent of paved area in square feet within each neighborhood (Using Polygon file of Paved Area from Lewiston GIS Dept.)
Parking_Spaces_Per_Unit	Number of on-street lined parking spaces (Using Master Plan Parking Inventory) divided by the number of units
Police_Calls_Per_Unit	Number of Calls for Service during 2001 divided by number of units
Fire_Violations_Per_Unit	Number of fire violations found (Using geocoded Fire Department Access database) divided by the number of units
Fire_Violations_Per_Insp	Number of fire violations found (Using geocoded Fire Department Access database) divided by the number of inspections
Code_Violations_Per_Unit	Number of code violations found (Using geocoded Code Enforcement database) divided by the number of units
Code_Violation_Per_Insp	Number of code violations found (Using geocoded Code Enforcement database) divided by the number of inspections
Pct_Tax_Delinquent	Percent of tax delinquent parcels (Using Lien from Tax Assessor Cards)
Vacant_Bldgs	Number of buildings where the number of vacant units equals the total number of units
Vacant_Parcels	Number of parcels which do not have buildings on them and are not designated as parking lots or parks on the Tax Assessor Cards
Pct_1-2_Unit_Bldgs Pct_3-4_Unit_Bldgs Pct_5-9_Unit_Bldgs Pct_10+_Unit_Bldgs	Percent of buildings within each group as defined by the number of units from Tax Assessor Cards
Pct_0_Bdrm_Units Pct_1_Bdrm_Units Pct_2_bdrm_units Pct_3_bdrm_units Pct_4_bdrm_units Pct_4+ Bdrm_units	Percent of units within each group as defined by the number of bedrooms from Tax Assessor Cards
Pct_1_Story_Bldgs Pct_2_Story_Bldgs Pct_3_story_bldgs Pct_4+ Story_Bldgs	Percent of buildings within each group as defined by the number of stories from Tax Assessor Cards

Appendix E

Data Dictionary

LewHouse.mdb is the project database in Microsoft Access 2000. Below are details of the contents of each table in the form of field descriptions.

Table: IntParcel (Assessor Fields and Project Fields)

Field Name	Description
ID	Unique Record Identification Number
GIS_ID	GIS Department Parcel Identification Code
PID	GIS Department Field (Internal Use)
ACCT	GIS Department Field (Internal Use)
ADR_NUM	Building Number
ADR_STR	Street Name
LOCATION	Building Number and Street Name
OWN_ADDR	Owner Address
OWNER1	Owner First Line
OWNER2	Owner Second Line
OWN_CSZ	Owner City/State/Zip
DEED	Deed Number
MAP_LOT	Map and Lot
BLDGVAL	Building Value
LANDVAL	Land Value
MAP	Map
LOT	Lot
SUBLOT	Sublot
TRACT	Tract
AssessorCard	Assessor Card Data Entered (Yes/No)
PropType	Property Type
Stories	Stories
Units	Number of Units
Bedrooms	Number of Bedrooms
Electric	Type of Electrical System
InteriorCondition	Interior Condition Rating
ExteriorCondition	Exterior Condition Rating
OverallCondition	Overall Condition Rating
YearBuilt	Year Built
EffectiveYearBuilt	Effective Year Built
Garage	Garage Exists (Yes/No)
GarageSF	Garage Square Footage
GarageFinished	Garage Finished (Yes/No)
Comments	Comments
Lien	Lien on Property (Yes/No)
Inspection	Property Inspected for Report (Yes/No)
InspContactComment	Inspector Comment
FD_Units	Number of units according to Fire Dept.
FD_Vacant	Vacant according to Fire Dept.
FD_Gone	Building Gone according to Fire Dept.
FD_Date	Fire Department Inspection Date
Num_Res_Bldgs	Number of Residential Buildings
Nhood_id	Neighborhood Identification Number
Subbeat	Police Subbeat Code

Table: FDMaster (only relevant fields shown below)

Field Name	Description
FullAddress	Address used to match with Parcel Location field
NO OF INSP	Number of Inspections
NO VIOLA FND	Number of Violations Found

Table: CFS01 (Police Calls for Service)

Field Name	Description
Subbeat	Police Subbeat
Nhood_Id	Neighborhood Identification Number
January01, February01, etc.	Calls for Service by Month in 2001
TotalCFS01	Total Calls for Service in 2001

Table: IntParcel (Code Enforcement Related)

Field Name	Description
ID	IntParcel Table Unique Record Identification Number (Join Field with Enforced Referential Integrity)
LOCATION	Building Number and Street Name (Join Field)
Complaint_Inspections	Number of Complaint Inspections
Housing_Inspections	Number of Housing Inspections
Total_Violations	Total Number of Violations

Table: SB_ParkPointCount (Summary Parking on street)

Field Name	Description
Subbeat	Police Subbeat
Nhood_Id	Neighborhood Identification Number
Parking_Spaces	Number of On-Street Parking Spaces

Table: Parking_Space (One Record per Parking Space)

Field Name	Description
MAPINFO_ID	GIS Identification Number
ENTITY	GIS Field
LAYER	GIS Field
ELEVATION	Elevation
THICKNESS	Thickness
COLOR	Color of Symbol
DAYSTAMP	Date of Record Creation
Nhood_id	Neighborhood Identification Number
Subbeat	Police Subbeat
Type	Type of Parking Space

Table: Census2000 STFID (Housing related variables included)

Field Name	Description
STFID	Census Block Group Code
H001001	Housing Units
H004001	Occupied Housing Units
H004002	Owner Occupied Housing Units
H004003	Renter Occupied Housing Units
H005001	Vacant Housing Units
H005002	Vacant Housing Units For Rent
H005003	Vacant Housing Units For Sale Only
H005004	Vacant Housing Units Rented Or Sold, Not Occupied
H005005	Vacant Housing Units For Seasonal, Recreational, or Occasional Use
H005006	Vacant Housing Units For Migrant Workers
H005007	Vacant Housing Units, Other
H011001	Population in Occupied Housing Units
H011002	Population in Owner Occupied Housing
H011003	Population in Renter Occupied Housing
H012002	Average Household Size: Owner Occupied
H012003	Average Household Size: Renter Occupied

Table: IntVacancy

Field Name	Description
Address1	Building Number
Address2	Apartment Number
Street	Street Name
LOCATION	Building Number and Street Name (Join Field)
City	City
ZIP	Zip Code
DeliveryType	Delivery Type (Residential or Business)
Route	Route Code
GeocodeSource	Geocode Source Data
GeoResult	GIS Internal Use Code
Nhood_id	Neighborhood Identification Number
Subbeat	Police Subbeat Code

Appendix F

Neighborhood Data Summary

NEIGHBORHOOD SUMMARY: BUILDINGS, OCCUPANCY, VACANCY, AGE

Neighborhood Name	Residential Buildings	Parcels	Units	% Owner Occupied	Vacancy Rate	% Pre-1932	% Pre-1978
Riverfront	11	59	43	9.09%	11.63%	100.00%	100.00%
Little Canada	86	117	311	15.12%	3.22%	98.84%	100.00%
Mill	4	45	19	50.00%	10.53%	100.00%	100.00%
Centreville	23	179	273	8.70%	10.99%	100.00%	100.00%
Hospital Hill	34	80	220	23.53%	13.64%	91.18%	100.00%
Downtown Residential	253	355	1415	13.04%	17.39%	93.68%	98.02%
Bleachery Hill	120	138	200	68.33%	5.50%	47.50%	98.33%
Franklin Pasture	0	15	0	NA	NA	NA	NA
Marcotte Park	58	65	97	72.41%	3.09%	27.59%	98.28%

**NEIGHBORHOOD SUMMARY DATA: BUILDING SIZE
(UNITS)**

Neighborhood Name	% 1-2 Unit Buildings	% 3-4 Unit Buildings	% 5-9 Unit Buildings	% 10+ Unit Buildings
Riverfront	54.55%	18.18%	18.18%	9.09%
Little Canada	52.33%	25.58%	16.28%	5.81%
Mill	50.00%	25.00%	0.00%	25.00%
Centreville	13.04%	21.74%	30.43%	34.78%
Hospital Hill	47.06%	17.65%	29.41%	5.88%
Downtown Residential	15.02%	41.90%	32.02%	11.07%
Bleachery Hill	85.83%	12.50%	1.67%	0.00%
Franklin Pasture	NA	NA	NA	NA
Marcotte Park	84.48%	13.79%	1.72%	0.00%

NEIGHBORHOOD SUMMARY DATA: UNIT SIZE

Neighborhood Name	% 1 Bedroom Units	% 2 Bedroom Units	% 3 Bedroom Units	% 4+ Bedroom Units
Riverfront	9.09%	36.36%	36.36%	18.18%
Little Canada	2.50%	41.25%	48.75%	7.50%
Mill	0.00%	66.67%	33.33%	0.00%
Centreville	0.00%	66.67%	33.33%	0.00%
Hospital Hill	20.00%	50.00%	30.00%	0.00%
Downtown Residential	10.69%	46.54%	40.25%	2.52%
Bleachery Hill	2.94%	43.14%	49.02%	4.90%
Franklin Pasture	NA	NA	NA	NA
Marcotte Park	5.26%	35.09%	50.88%	8.77%

**NEIGHBORHOOD SUMMARY DATA: BUILDING SIZE
(STORIES)**

Neighborhood Name	% 1 Story Buildings	% 2 Story Buildings	% 3 Story Buildings	% 4+ Story Buildings
Riverfront	0.00%	36.36%	27.27%	36.36%
Little Canada	2.33%	48.84%	11.63%	37.21%
Mill	0.00%	0.00%	75.00%	25.00%
Centreville	0.00%	21.74%	47.83%	30.43%
Hospital Hill	0.00%	50.00%	44.12%	5.88%
Downtown Residential	0.40%	17.79%	52.96%	28.46%
Bleachery Hill	29.17%	60.83%	10.00%	0.00%
Franklin Pasture	NA	NA	NA	NA
Marcotte Park	46.55%	48.28%	5.17%	0.00%

NEIGHBORHOOD SUMMARY DATA: TAX DELIQUENCY AND VACANCY

Neighborhood Name	% Tax Delinquent	Vacant Buildings	Vacant Parcels
Riverfront	1.69%	0	21
Little Canada	4.27%	1	21
Mill	0.00%	0	19
Centreville	10.61%	0	96
Hospital Hill	6.25%	0	21
Downtown Residential	12.96%	2	62
Bleachery Hill	1.45%	0	9
Franklin Pasture	20.00%	0	3
Marcotte Park	3.08%	0	3

NEIGHBORHOOD SUMMARY: FIRE AND CODE VIOLATIONS

Neighborhood Name	Fire Violations Per Unit	Fire Violations Per Inspection	Code Violations Per Unit	Code Violations Per Inspection
Riverfront	0.14	0.29	0.37	1.06
Little Canada	0.23	1.80	0.33	0.38
Mill	0.37	0.27	1.74	0.24
Centreville	0.04	0.31	0.11	0.97
Hospital Hill	0.03	0.37	0.09	0.55
Downtown Residential	0.34	2.51	0.71	0.30
Bleachery Hill	0.25	2.88	0.00	NA
Franklin Pasture	NA	NA	NA	NA
Marcotte Park	0.03	0.38	0.00	NA

NEIGHBORHOOD SUMMARY DATA: PARKING

Neighborhood Name	Parking Spaces Per Unit	Handicapped Per Unit	Marked Per Unit	Unmarked Per Unit	Metered Per Unit
Riverfront	NA	NA	0.74	1.16	NA
Little Canada	0.65	NA	0.12	0.53	NA
Mill	7.68	NA	2.95	4.32	0.42
Centreville	1.66	0.01	0.78	0.54	0.33
Hospital Hill	1.04	0.04	0.17	0.39	0.44
Downtown Residential	0.53	0.00	0.08	0.42	0.02
Bleachery Hill	NA	NA	NA	NA	NA
Franklin Pasture	NA	NA	NA	NA	NA
Marcotte Park	NA	NA	NA	NA	NA

**NEIGHBORHOOD SUMMARY DATA:
GARAGES**

Neighborhood Name	% Residential Buildings with Garage	% 1 Car Garage	% 2 Car Garage	% 3 Car Garage	% 4+ Car Garage	% No Garage Size Data
Riverfront	9.09%	0.00%	0.00%	9.09%	0.00%	0.00%
Little Canada	23.26%	8.14%	6.98%	4.65%	2.33%	1.16%
Mill	25.00%	0.00%	25.00%	0.00%	0.00%	0.00%
Centreville	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Hospital Hill	17.65%	5.88%	11.76%	0.00%	0.00%	0.00%
Downtown Residential	17.39%	3.95%	5.53%	3.56%	3.56%	0.79%
Bleachery Hill	69.17%	25.00%	26.67%	13.33%	2.50%	1.67%
Franklin Pasture	NA	NA	NA	NA	NA	NA
Marcotte Park	75.86%	5.17%	36.21%	15.52%	12.07%	6.90%

**NEIGHBORHOOD SUMMARY DATA: MIXED USE
BUILDINGS AND SUBSIDIZED UNITS**

Neighborhood Name	# Mixed Use Buildings	% Mixed Use Buildings	# Subsidized Units	% Subsidized Units
Riverfront	2	18.18%	0	0.00%
Little Canada	10	11.63%	40	12.86%
Mill	2	50.00%	0	0.00%
Centreville	13	56.52%	132	48.35%
Hospital Hill	7	20.59%	91	41.36%
Downtown Residential	6	2.37%	381	26.93%
Bleachery Hill	0	0.00%	0	0.00%
Franklin Pasture	NA	NA	NA	NA
Marcotte Park	1	1.72%	0	0.00%

Appendix G
Police Sub-Beat Data Summary

Police Sub-Beat Summary

Police Sub-Beat	Residential Bldgs	Parcels	Units	Pct Owner Occupied	Vacancy Rate	Pct Pre-1932	Pct Pre-1978	Parking		Marked per Unit
								Spaces per Unit	Handicapped per Unit	
1A	10	32	43	20.0%	16.3%	90.0%	100.0%	1.77		0.49
1E	29	82	212	24.1%	15.6%	93.1%	100.0%	1.08	0.04	0.24
5D	9	16	18	55.6%	0.0%	33.3%	88.9%			
5E	119	140	194	68.9%	5.7%	47.9%	98.3%			
5F	125	150	399	43.2%	9.3%	66.4%	99.2%	0.08		
6A	9	12	126	22.2%	5.6%	100.0%	100.0%	0.29	0.01	0.09
6B	64	77	337	3.1%	21.4%	90.6%	95.3%	0.54		
6C	28	51	178	7.1%	21.3%	96.4%	100.0%	1.05		0.58
6D	77	130	460	13.0%	20.7%	94.8%	98.7%	0.68		
7A	0	9	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a
7B	43	63	193	14.0%	3.6%	97.7%	100.0%	0.56		0.16
7C	24	62	123	16.7%	6.5%	100.0%	100.0%	0.50		0.06
7D	4	50	19	50.0%	10.5%	100.0%	100.0%	9.16		6.63
7E	1	22	34	0.0%	2.9%	100.0%	100.0%	1.21		0.53
7F	7	42	81	0.0%	1.2%	100.0%	100.0%	1.10	0.01	0.64
7G	5	33	68	0.0%	16.2%	100.0%	100.0%	1.31	0.01	0.68
7H	4	26	31	25.0%	6.5%	100.0%	100.0%	2.06		
7I	31	56	62	n/a	8.1%	100.0%	100.0%	1.77		0.40
Study Area	589	1053	2578	31.1%	13.1%	78.8%	98.6%	0.72	0.005	0.19

Police Sub-Beat Summary

Police Sub-Beat	Unmarked per Unit	Metered per Unit	Police Calls per Unit	Fire		Fire		Code		Cope		Delinquent	Vacant		Pct 1-2 Unit Bldgs
				Violations per Unit	Inspec	Violations per Unit	Inspec	Unit	Unit	Violations per Unit	Inspec		Violations per Unit	Inspec	
1A	0.28	1.00	29.79	0.00	0.00	0.09	1.75	0.00%	0.00	0.09	1.75	0.00%	11	11	50.0%
1E	0.44	0.36	6.36	0.05	0.48	0.09	0.47	9.8%	0.48	0.09	0.47	9.8%	26	26	37.9%
5D			18.17	0.33	1.50	0.00		6.3%	1.50	0.00		6.3%	2	2	88.9%
5E			4.12	0.22	2.39	0.00		1.4%	2.39	0.00		1.4%	9	9	86.6%
5F	0.08			0.23	1.52	0.46	0.32	11.3%	1.52	0.46	0.32	11.3%	10	10	44.8%
6A	0.19			0.20	4.17	0.16	0.50		4.17	0.16	0.50				11.1%
6B	0.54		5.28	0.23	1.97	0.31	0.53	10.4%	1.97	0.31	0.53	10.4%	2	8	18.8%
6C	0.30	0.17	7.58	0.25	1.33	0.42	0.16	9.8%	1.33	0.42	0.16	9.8%	14	14	
6D	0.68		3.81	0.54	3.95	1.36	0.26	15.4%	3.95	1.36	0.26	15.4%	34	34	13.0%
7A	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
7B	0.41		3.24	0.32	2.14	0.51	0.35	6.3%	2.14	0.51	0.35	6.3%	12	12	37.2%
7C	0.45		5.87	0.09	0.35	0.14	1.18	1.6%	0.35	0.14	1.18	1.6%	1	17	29.2%
7D	2.11	0.42	30.00	0.37	0.44	1.89	0.25		0.44	1.89	0.25		22	22	50.0%
7E	0.47	0.21	15.79	0.00	0.00	0.00			0.00	0.00			16	16	
7F		0.44	9.54	0.00	0.00	0.00		16.7%	0.00	0.00		16.7%	23	23	28.6%
7G	0.24	0.38	11.57	0.00	0.00	0.00		27.3%	0.00	0.00		27.3%	17	17	20.0%
7H	2.06		13.42	0.26	1.00	0.77	0.42		1.00	0.77	0.42		14	14	
7I	1.37		1.55	0.08	0.83	0.06	0.75	1.8%	0.83	0.06	0.75	1.8%	15	15	90.3%
Study Area	0.44	0.09	5.11	0.25	1.76	0.47	0.34	7.9%	1.76	0.47	0.34	7.9%	3	255	44.5%

Police Sub-Beat Summary

Police Sub-Beat	Pct 3-4 Unit		Pct 5-9 Unit		Pct 10+ Unit		Pct 1-Bdrm		Pct 2-Bdrm		Pct 3-Bdrm		Pct 4+ Bdrm		Pct 1-Story		Pct 2-Story		Pct 3-Story		Pct 4+ Story	
	Bldgs	Bldgs	Bldgs	Bldgs	Bldgs	Units	Units	Units	Units	Units	Units	Units	Units	Units	Bldgs	Bldgs	Bldgs	Bldgs	Bldgs	Bldgs	Bldgs	Bldgs
1A		50.0%					25.0%	25.0%	25.0%	50.0%	50.0%						40.0%	40.0%	50.0%			10.0%
1E	27.6%	24.1%	10.3%	15.8%	63.2%	21.1%	63.2%	21.1%	63.2%	21.1%							44.8%	44.8%	48.3%			6.9%
5D		11.1%			37.5%	62.5%	37.5%	62.5%	62.5%	62.5%							22.2%	55.6%	22.2%			
5E	12.6%	0.8%		2.9%	43.1%	49.0%	43.1%	49.0%	49.0%	49.0%							29.4%	61.3%	9.2%			
5F	36.8%	16.0%	2.4%	9.5%	38.1%	45.7%	38.1%	45.7%	45.7%	45.7%							20.0%	32.8%	36.8%			10.4%
6A	11.1%	33.3%	44.4%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%							11.1%	11.1%	88.9%			
6B	40.6%	34.4%	6.3%	13.0%	39.1%	43.5%	39.1%	43.5%	39.1%	43.5%							17.2%	17.2%	54.7%			25.0%
6C	46.4%	35.7%	17.9%	72.7%	27.3%	27.3%	72.7%	27.3%	72.7%	27.3%							7.1%	7.1%	50.0%			42.9%
6D	36.4%	35.1%	15.6%	10.7%	44.6%	42.9%	44.6%	42.9%	44.6%	42.9%							16.9%	16.9%	42.9%			40.3%
7A	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a							n/a	n/a	n/a			n/a
7B	27.9%	27.9%	7.0%	2.4%	43.9%	51.2%	43.9%	51.2%	43.9%	51.2%							32.6%	32.6%	11.6%			53.5%
7C	41.7%	16.7%	12.5%	9.5%	52.4%	23.8%	52.4%	23.8%	52.4%	23.8%							20.8%	20.8%	25.0%			54.2%
7D	25.0%		25.0%		66.7%	33.3%	66.7%	33.3%	66.7%	33.3%									75.0%			25.0%
7E		100.0%																	100.0%			
7F	14.3%	14.3%	42.9%																42.9%			57.1%
7G	20.0%	40.0%	20.0%								100.0%						20.0%	20.0%	40.0%			40.0%
7H	25.0%	25.0%	50.0%				50.0%	50.0%	50.0%	50.0%							100.0%	100.0%				
7I	6.5%		3.2%		27.6%	58.6%	27.6%	58.6%	27.6%	58.6%							87.1%	87.1%	9.7%			
Study Area	28.0%	19.9%	7.6%	6.8%	43.6%	44.5%	43.6%	44.5%	43.6%	44.5%							36.3%	36.3%	32.4%			20.0%

Police Sub-Beat Summary

Police Sub-Beat	Pct Mixed Use		Pct Residential Bldg with No Garage		Pct 1-Car Garage	Pct 2-Car Garage	Pct 3-Car Garage	Pct 4+ Garage	Pct No Garage Data	Garage Size	Subsidized Units	Pct Subsidized Units
	Mixed Use	Use	Garage	No Garage	Garage	Garage	Garage	Garage	Data		Units	Units
1A		2	20.0%	20.0%		20.0%						
1E		7	24.1%	13.8%	6.9%	6.9%					118	55.7%
5D				55.6%		22.2%	11.1%	22.2%				
5E				69.7%	25.2%	26.9%	13.4%	2.5%		1.7%		
5F		2	1.6%	49.6%	6.4%	21.6%	10.4%	7.2%		4.0%	2	0.5%
6A		1	11.1%								11	8.7%
6B				15.6%	6.3%	3.1%	3.1%	3.1%			128	38.0%
6C		2	7.1%	3.6%			3.6%				117	65.7%
6D		2	2.6%	13.0%	1.3%	5.2%	1.3%	3.9%		1.3%	123	26.7%
7A		n/a	n/a	n/a	n/a	n/a	n/a	n/a		n/a	n/a	n/a
7B		4	9.3%	30.2%	9.3%	9.3%	7.0%	2.3%		2.3%		
7C		8	33.3%	8.3%			4.2%	4.2%			40	32.5%
7D		2	50.0%	25.0%		25.0%						
7E		1	100.0%									
7F		5	71.4%								65	80.2%
7G		5	100.0%								40	58.8%
7H												
7I				19.4%	9.7%	6.5%	3.2%					
Study Area		43	7.3%	33.8%	8.8%	13.2%	6.6%	3.6%		1.5%	707	27.4%

Appendix H

Design Considerations Checklist

From the Affordable Housing Design Advisor, U.S. Department of Housing and Urban Development, 2001

- **PARKING**—*Don't let parking dominate the site, the building or the street.*

Overall Impact

Avoid letting garages, driveways and parking lots dominate the streetscape. Consider placing them at the rear or side of the site to allow a majority of dwelling units to “front on” the street. Consider planting trees and shrubs to soften the overall impact of parking areas and to provide shade and noise reduction. At buildings with parking garages, avoid large areas of blank wall facing the street. Consider incorporating decorative elements above the garage door to soften its visual impact. Consider improving unavoidable blank walls with decorative artwork, display cases, vines, and good quality durable materials to minimize graffiti and deterioration.

Access and Surveillance

Provide locations for parking that minimize walking distance between dwelling units and cars and that allow for casual surveillance of cars from a number of different units. Avoid remote parking. Avoid large lots. Consider breaking them into multiple, smaller lots to enhance safety and accessibility and minimize the aesthetic impact of large, unbroken rows of cars. Locate handicapped and elderly parking with immediate access to their respective units. Locate visitor drop off and parking near main entrances and clearly mark all visitor parking spaces.

Vehicle/Pedestrian Interaction

Design to minimize conflicts between vehicles and pedestrians. Consider separating bicycle and pedestrian paths from vehicular traffic. Consider linking open spaces so that they form an uninterrupted network of vehicle-free areas. Avoid parking layouts that erode a project's open space until only “leftover” areas are available for pedestrian use. Consider traffic calming strategies to slow down cars within the project.

Car Maintenance

Recognize that parking areas will be used for car repair and maintenance. Consider providing a space, with access to water and electricity and with adequate drainage, for this purpose.

Security

In underground or multi-story parking structures, provide a limited number of secure entry points. Ensure that all parking areas are well-lighted, but avoid lighting strategies that cause glare or otherwise negatively impact surrounding buildings. Consider locating parking in areas that can be informally observed by passersby.

Parking Podiums

On parking podiums provide adequate landscaping and site furniture. Landscaping should try to include naturalistic features to mask the artificial character of the podium, if permitted by budget.

Consider integrating planters, lighting, trellises, benches and other site furniture with unit and building entries into a coherent open space plan. Make planters at least 30” high to protect plants.

• **PUBLIC OPEN SPACE**—*Public open areas must be designed to the same level of quality as any other “space” in a development.*

Outdoor Rooms

Think of public open space—shared outdoor areas intended for use by all residents—as “outdoor rooms,” and design them as carefully as any other rooms in the project. Avoid undifferentiated, empty spaces. Consider the types of activities that will occur in the “rooms,” including cultural or social activities unique to specific user groups, and design the shared open space accommodate these activities.

Access

Provide direct access to open space from the dwelling units that the open space is intended to serve. At the same time consider designing in ways to control nonresident access to these spaces. When terraces or balconies are used as shared open space, consider locating so they serve as extensions of indoor common areas.

Boundaries

Provide clear boundaries between publicly controlled spaces (streets), community controlled spaces (shared open space) and privately controlled spaces (dwellings and private open space). Consider enclosing or partially enclosing open space with project building(s) to provide clear boundaries.

Surveillance

Provide visual access to shared open spaces from individual units, preferably from the kitchen, living room or dining room.

Play Areas

Consider play—and play areas—as critical to the successful functioning of any family housing project. Avoid placing a low priority on these spaces and leaving their design until the end of a project. In particular, consider how play areas will be used by different age children (2-5 years, 5-12 years, and teenagers) and design these areas accordingly. Avoid “one space fits all” solutions. Locate play areas for small children so that they allow for adult supervision from dwelling units and/or from a central facility such as a laundry. Design play areas so that adults can also congregate and provide supervision.

Nighttime Lighting

Consider a lighting plan for shared open spaces that provides light from a variety of sources. Match lighting intensity and quality to the use for which it is intended; i.e. the lighting required for a pedestrian path is substantially different from that required to illuminate a parking garage. Avoid lighting which shines directly into dwelling units or is overly intense and bright. Consider energy efficient lighting whenever possible.

- **PRIVATE OPEN SPACE**—*Every home should have its own private outdoor space.*

Private Outdoor Space for All Dwelling Units

Provide each household in the project with some form of private open space: patio, porch, deck, balcony, or yard. In certain instances, consider shared entry porches and/or shared balconies. Avoid building layouts where front yards face back yards.

Access

Ensure that private open space is easily accessible—physically and visually—from individual units.

Adequate Size

Ensure that private open space is large enough so that it can actually be used. Avoid spaces, particularly balconies, decks and porches, that are too narrow to accommodate furniture.

Balconies

Attempt to locate balconies adjacent to living rooms. Avoid screening balconies with solid walls. Instead, consider screening materials that provide privacy but also allow residents, particularly small children, to look out. Avoid horizontal railings and other designs which enable children to climb up. Carefully consider how and where balconies will drain.

Fencing

Consider providing fencing around all yards and patios to provide privacy and to help define boundaries between public and private open space.

Storage

Provide outdoor storage for outdoor tools, equipment and furniture.

- **LANDSCAPING**—*Landscaping can make or break a development.*

Landscaping is not a Secondary Consideration

Good landscaping is critical to the quality of any project. Consider how landscaping and planting will be handled from the very beginning of the design process. Avoid considering landscaping as an “extra” that can be added in at the end of the project or, worse, eliminated in the name of cost control.

Plantings

Provide as rich a variety of plantings—trees, shrubs, groundcover, and grass areas—as possible. Anticipate mature sizes and avoid crowding trees, shrubs and buildings. Use hardy, native species of trees and plants that are well suited to the project location and are easy to water and maintain.

Appropriate Plantings

Consider how the landscape will be used by project occupants and specify appropriate plantings. In general, assume heavy use in all landscaped areas. Avoid delicate plants and shrubs in heavily trafficked areas, especially in locations where they can be trampled by children. Instead, consider such plantings in areas that are out of the main traffic flow (e.g., as privacy planting next to

buildings). Avoid providing only grass areas for children to play in. Consider a mix of grass and paved areas instead. Also, consider raising or otherwise protecting grass areas that are not meant for play.

Paved Areas

Recognize that some paved area will be necessary in family housing to facilitate children's play. However, large, empty paved areas should be avoided. Consider using alternative landscape approaches—plantings and grass—to break these areas up into smaller functional units.

Edges

Where planted areas, other than lawns, meet hard surfaces include some form of raised edge to contain the soil and discourage cutting across the bed. Consider designing the edges so they can also serve as outdoor seating areas.

Outdoor Seating

Outdoor seating should be an integral part of any landscape plan and should be thoughtfully designed and located. Avoid simply scattering seats at random through the site. Consider what the seating looks at and what looks at it. Consider how the seating is oriented with respect to the sun and breezes and whether it needs protection from rain or wind. Avoid “one type fits all” solutions, particularly in larger projects. Consider providing different seating for different users.

Paths

Pedestrian paths and walkways are critical to the smooth functioning of any affordable housing project, particularly larger, multi-unit developments. Consider the wide range of uses that any path must accommodate—children, adults, bicycles, skate boards, shopping carts, walkers, pets, furniture moving, etc.—and design with this range of uses in mind. Avoid paths that are too narrow to accommodate multiple users at the same time. Consider rounded corners at all intersections and direction changes, especially in projects with children. Ensure that paths are well lighted so that users can see where they are going and be seen by other people. Consider designing path edges so that they encourage users to stay on the path and not trample on adjacent plantings (e.g. through changes in slope or materials or by providing raised edges). Remember that the shortest route from point A to point B is usually a straight line. Avoid forcing people to follow circuitous routes to their destinations or be prepared for the new, unplanned paths that will inevitably appear to accommodate occupant use patterns.

Storage

Provide adequate space to store landscape maintenance equipment and materials.

- **BUILDING LOCATION**—*A building should respect its street, enhance its site and respond to its climate.*

Site Entry and Circulation

The entry to the site is critical to the public image of the development. Emphasize the main entrance and place central and shared facilities there if possible. Respect the street and locate buildings on the site so that they reinforce street frontages.

Setbacks

To the extent possible, maintain the existing setback patterns within the immediate vicinity of the building. Avoid locating a building far in front of or far behind the average setback lines of the four to five properties located on either side of the proposed project. Respect the prevalent side yard and rear yard setback lines prevalent in the area.

Climate Considerations

Consider placing buildings on the site so as to maximize solar access during cooler months and to control it during warmer months. Also consider maximizing natural ventilation and access to views from within the site. Avoid a layout in which adjacent buildings obstruct one another. Design the building so that sun directly enters each dwelling unit during some part of the day year round.

- **BUILDING SHAPE**—*A building should reinforce the physical “fabric” of the surrounding neighborhood.*

Building Height

Relate the overall height of the new structure to that of adjacent structures and those of the immediate neighborhood. Avoid new construction that varies greatly in height from other buildings in the area, except where the local plan calls for redeveloping the whole area at much greater height and density. To the extent feasible, relate individual floor-to-floor heights to those of neighboring buildings. In particular, consider how the first floor level relates to the street and whether this is consistent with the first floors in neighboring buildings.

Building Scale and Massing

Relate the size and bulk of the new structure to the prevalent scale in other buildings in the immediate neighborhood.

Building Form

Consider utilizing a variety of building forms and roof shapes rather than box-like forms with large, unvaried roofs. Consider how the building can be efficiently manipulated to create clusters of units, and variations in height, setback and roof shape.

- **BUILDING APPEARANCE**—*A building should look good to residents and neighbors.*

Image

Avoid creating a building that look strange or out of place in its neighborhood. Consider a building image that that fits in with the image of middle income housing in the community where the project is located.

Visual Complexity

Consider providing visual and architectural complexity as possible to the building’s appearance. Consider breaking a large building into smaller units or clusters. Consider variations in height, color, setback, materials, texture, trim, and roof shape. Consider variations in the shape and

placement of windows, balconies and other façade elements. Consider using landscape elements to add variety and differentiate units from each other.

Windows

Maximize window number and size (within budget constraints) to enhance views and make spaces feel larger. Use minimum number of different size windows, but consider varying where and how they are used. Consider ways to screen and physically separate ground floor windows from walkways—through screens or plantings—to provide privacy.

Front Doors

Pay careful attention to the design and detailing of front doors. Consider what the front doors convey about the quality of the project and its residents. To the extent possible, respect the placement and detailing of good quality front doors in neighboring homes.

Facade

Relate the character of the new building façade to the façades of similar, good quality buildings in the surrounding neighborhood or region. Horizontal buildings can be made to relate to more vertical adjacent structures by breaking the façade into smaller components that individually appear more vertical. Avoid strongly horizontal or vertical façade expression unless compatible with the character of the majority of the structures in the immediate area.

Roof Shape

Consider relating the roof forms of the new building to those found in similar, good quality buildings in the neighborhood or region. Avoid introducing roof shapes, pitches or materials not found in the neighborhood or region.

Size and Rhythm of Openings

Respect the rhythm, size and proportion of openings—particularly on the street facades—of similar, good quality buildings in the neighborhood or surrounding area. Avoid introducing drastically new window patterns and door openings inconsistent with similar, good quality buildings in the neighborhood or surrounding area.

Trim and Details

Trim and details can provide warmth and character to a building's appearance, particularly on street facades. Carefully consider the design of porch and stair railings, fascia boards, corners, and areas where vertical and horizontal surfaces meet—for example where a wall meets the roof. Generally put trim around windows. Consider adding simple pieces of trim to the top and bottom of porch columns.

Materials and Color

Use materials and colors for the façade (including foundation walls) and roofing that are compatible with those in similar, good quality buildings in the surrounding neighborhood or region. Avoid introducing drastically different colors and materials than those of the surrounding area. Consider using materials that do not require repeated or expensive maintenance, especially those that residents can easily maintain themselves. Consider using materials with high levels of recycled content where possible.

Individual Identity

To the extent possible, provide individual identities and addresses for each dwelling unit. Consider ways to break large, repetitive structures into smaller, individually identifiable clusters. Ensure that all dwelling units have clear, individual addresses. Consider design strategies that allow residents to enhance and individualize the exterior appearance of their own units.

- **BUILDING LAYOUT**—*A building should “work” for residents, staff and visitors.*

Entries

Provide as many private, ground level entries to individual units as possible. Ensure that all building entries are prominent and visible and create a sense that the user is transitioning from a public to a semi-private area. Avoid side entries and those that are not visually defined. At all entries consider issues of shelter, security, lighting, durability, and identity. For apartment buildings, allow visual access from managers office and/or 24 hour desk. Allow visual access to stairs and elevators from the lobby. For buildings with clustered and individual unit entries, consider providing small “porch” areas that residents can personalize with plants, etc. Limit “shared entries” to less than eight households. Consider providing some form of storage—for strollers, bikes, shopping carts, etc.—at or close to all main entries.

Central Facilities and Common Rooms

Consider locating central facilities—such as community rooms and laundries—in a central part of the development or building. Common rooms should be linked to common outdoor space. Ensure that community rooms are comfortable, accessible, durable, and, most important, flexible places. Community room should have access to toilet rooms, a kitchenette, and should have good storage. Consider whether or not a childcare program will be provided and whether the community room will accommodate it. Provide access to daylight and natural ventilation in all common rooms.

Support and Service Areas

Carefully consider the design and location of key support/service areas such as the managers office, maintenance rooms, janitor’s facilities, mechanical equipment rooms and trash collection areas. Provide access to bathrooms and kitchens, and adequate space, furniture and storage for each of these uses, together with access to bathrooms and kitchens as appropriate. The manager’s office should supervise the main entrance and should be located centrally, next to community and maintenance rooms. Provide screened trash collection areas that are convenient and easy to access from all of the units. Consider the path of travel of trash from source to removal area.

Stairs

Ensure stairs are durable, attractive and safe. Avoid treating stairs as an afterthought. Instead, consider them, particularly entry stairs, as major design elements. Consider how they relate to the street and neighborhood, how they accommodate users and visitors, and what they “say” about the project and its occupants. Consider how the area under the stairs will look and be used. Ensure that all stairs can accommodate moving furniture without damage to finishes.

Elevators

Locate elevators in sight of managers office if possible. Design adequate space in front of elevator to allow waiting and passage.

Access Corridors

Avoid corridors of excessive length; i.e. greater than 100 feet unbroken length. Break up long corridors with lobbies, lighting, benches, materials and color changes, offsets, artwork. To the extent possible, provide corridors with access to natural daylight and ventilation. Ensure that all corridors can accommodate moving furniture without damage to finishes.

Security

Consider ease of visual and physical surveillance by the residents of areas such as the street, the main entrances to the site and the building, children's play areas, public open space and parking areas. Consider locating windows from actively used rooms such as kitchens and living rooms so that they look onto key areas. Also consider containing open spaces within the building layout and using the selection and layout of plant materials to enhance, rather than hinder, surveillance and security. Consider specific design strategies to maximize the security of the building, including adequate lighting, lockable gates and doors at all entrances to the site and the buildings, and video cameras and monitors.

- **UNIT LAYOUT**—*A home should “work” for its residents.*

Entry

Consider recessing or otherwise articulating unit entries so as to provide individual identities for each unit and to allow residents to personalize their entry areas.

Room Relationships

Unit layout and room organization will be partly determined by the building type, orientation, location on the site and user profile. Consider activities and behaviors in each space to allow adequate room and durable materials for these activities. Create a clear separation of the private sleeping areas from the less private living areas. Avoid excessive circulation space. To the extent possible in multi-unit buildings, locate similar rooms adjacent to each other; for example, place the bedrooms of one unit adjacent to the bedrooms of the neighboring unit. Try to stack “wet” rooms so that plumbing runs are efficient.

Room Design

Consider how individual rooms will be used. Test furniture arrangements, outlet, telephone and cable jack, and light fixture locations to ensure that all rooms can be reasonably furnished. Consider partly enclosing kitchen to allow flexibility in dining/living room use. The master bedroom may have a private bath; other bedrooms will share bathrooms. Consider how rooms can be arranged to accommodate working at home. Avoid through traffic in living rooms.

Unit Mix

Unless local requirements dictate otherwise, consider providing a variety of unit types—studios, one-, two-, three- and four-bedrooms. The proportion of each type should take into account the population being served and the prevalent mix of units in the area surrounding the project. In

multi-story buildings, try to locate larger family units on the ground floor to allow easy access and surveillance of children.

Dining Rooms

Provide enough space to accommodate a large table and enough chairs for occupants and guests. Consider how the space might be used for other activities such as homework.

Bathrooms

Provide visual screening of bathrooms from the entry and from the living and dining areas. When more than one bedroom shares a bathroom, consider separating the lavatory from the toilet/tub area to allow use by more than one person at a time.

Daylight and Ventilation

Access to natural light in all bedrooms and the living room is essential and cross ventilation throughout the unit is encouraged. Consider layouts that allow natural light to the kitchen and allow the natural ventilation and lighting of bathrooms.

Storage Space

Provide as much storage space as possible. At a minimum provide an amount of bulk storage commensurate with the size of the unit and the number and ages of residents it is expected to accommodate, including: coat closets in the entry area, large closets in the bedrooms, linen closets, pantry spaces, and storage rooms adjacent to exterior balconies or patios. Assume two occupants per bedroom for storage purposes.

Window Views

Consider what residents will see when they look out the window. To the extent possible orient the most used rooms to the best views.

Materials

Avoid materials that require frequent maintenance, especially by specialists. Consider materials that residents can maintain themselves. Provide floor coverings appropriate to use in room—generally use resilient flooring in kitchens, bathroom, laundries, dining rooms and entries. Consider “healthy” building materials for interior finishes and materials, such as: carpet, resilient flooring, paint, glues, cabinets. Evaluate selection of materials in terms of lifecycle cost.

Appliances and Mechanical Systems

Avoid appliances that require frequent care at short intervals by specialists. Provide heavy-duty, energy-efficient appliances and fixtures. Consider providing washer/dryer hookups, especially for families and disabled households. Provide adequate duct/chase space for both vertical and horizontal duct runs, especially for ranges and bathroom fan.