

6.0 OTHER ISSUES

6.1 Irreversible and Irretrievable Commitment of Resources

The Proposed Action would result in the development of seventeen mixed use buildings to include retail, office, residential rental (180 units) and community space along with 300 residential for sale units and a community building in the Union Heights portion.

Overall, approximately 164 acres of the site (area of development) would be disturbed during construction. This would include an addition of 77.7 acres of impervious surfaces for buildings, roadways, parking and sidewalks. The development would result in the loss or disturbance of existing wildlife habitat within the proposed area of development. Of the approximately 156 acres of upland woods on the site, roughly 71 acres would remain undisturbed. The amount of meadow would be reduced from about 29 acres to just over 16 acres. The project would preserve approximately 123 acres, nearly half of the site acreage, in undisturbed woods, meadows and wetlands. An additional 82.2 acres (including lawn and landscape, meadow and dirt road areas) are proposed to be revegetated. Total open space would cover nearly 72 percent (205.4 acres) of the site.

In addition to the land, finite resources that would be irretrievably committed by implementation of the Proposed Action are the materials and energy required for construction and for operation and maintenance of the Union Place development after construction is completed. Construction would involve the commitment of a variety of resources. These include, but are not limited to concrete, asphalt, steel, lumber, glass and paint products. It should be noted that many of the materials accumulated for construction may at some time be recycled or reused.

The construction and operation of the proposed Union Place would result in consumption of fossil fuels and other finite energy sources. When completed, the operation of the proposed facilities would require electricity and the use of fossil fuels either directly as heating fuel or indirectly as electricity. There would also be future commitment of water resources and solid waste disposal requirements associated with the project.

While the Proposed Action is not intended to meet LEED certification levels, it will be designed to incorporate sustainable development practices to offset potential adverse impacts associated with the irreversible and/or irretrievable commitment of resources, as discussed further in Section 6.3.3 below.

Construction of the Project would require a substantial commitment of person hours for labor, which can be viewed as beneficial to the community, the local economy, and the construction industry with respect to the generation of jobs. Based on labor hour estimates included in the *Development Impact Assessment Handbook* published by the ULI, the Union Place project would be expected to generate approximately 3,050 to 3,400 full-time equivalent (FTE) direct construction jobs and roughly 4,400 to 4,850 FTE indirect construction jobs.^{1,2} The ULI standard defines a full-time equivalent job as one that “consists of 2,000 labor hours.” Adding the direct and indirect job creation figures brings the total of directly and indirectly generated FTE

¹ Source of multipliers for direct construction employment: The Urban Land Institute's Development Impact Assessment Handbook (1994). Total direct construction employment breaks down as follows: Residential 1,895 to 2,106 FTE jobs; Commercial 508 to 587 FTE jobs; Office 655 to 698 FTE jobs.

² Source: Secondary effect multiplier - 2004 IMPLAN (Impact Analysis for Planning) data for Putnam County, New York. Total indirect construction employment breaks down as follows: Residential 2,710 to 3,012 FTE jobs; Commercial buildings (office/retail) 1,686 to 1,863 FTE jobs.

construction jobs associated with the development of the Union Place project to a total of approximately 7,450 to 8,250

At full build-out this project is expected to provide approximately 2,700 full-time direct and 1,400 indirect employment positions. See Section 3.9 of this DEIS for further discussion regarding potential impacts on employment from the Proposed Action.

Other manpower commitments which could be required for an emergency would include the services of the police department, fire department, or ambulance corps, as described in Chapter 3.8 of this DEIS.

6.2 Growth Inducing Impacts

The following section of this DEIS evaluates the potential for growth inducement as a result of the proposed Union place project, both in terms of the potential for residential development to support future workers at the proposed commercial establishments (stores, offices, hotel) and the potential for new commercial development along US Route 6 seeking to benefit from proximity to the proposed project. The evaluation of growth inducement is followed by an evaluation of the potential for cumulative impacts as a result of the Union Place project and other projects proposed in the surrounding area.

6.2.1 Induced Growth

Residential Growth

The anticipated employees at Union Place would include managers and supervisors for both the office (i.e corporate and professional) and commercial space (i.e. hotel, retail stores) proposed; moderate income junior staff and administrative positions; and lower paying part-time and full time jobs including sales clerks, stock clerks and janitorial staff. It is anticipated that workers filling the available jobs will be a mix of existing area residents drawn from the available labor force residing in Putnam County or from their existing places of residence in surrounding counties such as Fairfield County and Westchester County as well as individuals moving into the area including those populating the proposed project housing..

The applicant proposes to coordinate with the Putnam County Area Rapid Transit (PART) to add a bus stop on or within a ¼ mile from the project site, improving access for those workers who do not drive or have access to automobiles and those interested in using public transportation for other reasons. Some part-time positions may also be filled by seniors or area youth seeking such employment. These employees would be expected to live nearby the Proposed Action.

It is anticipated that some individuals would relocate to the area to be closer to work including those interested in taking advantage of the live, work and play environment envisioned for the proposed development. Housing needs of those relocating to the area would be met by the existing housing stock, through the usual housing turnover present in any local housing market and within the proposed development itself. The project as proposed would include 480 residential units, comprised of 180 rental apartments with 300, for-sale flats, townhouses and cottages. The nearby Village of Brewster and City of Danbury, Connecticut in particular have a wide variety of housing types, including rental housing that potential Union Place workers may consider affordable. Refer to Section 3.9 for a information pertaining to areas of affordable housing within the vicinity of the project site.

Additional senior housing has been approved in Carmel, including 300 units at the Gateway Summit and Fairways sites and 120 units on Stoneleigh Avenue, and in Danbury, including 175 senior units in the Reserve. The Reserve will include over 1,900 units without age restrictions that might also increase the potential work force in this area while providing housing opportunities. Therefore, the proposed project is not expected to necessitate, or facilitate, significant new demand for housing in the area, or result in induced growth of housing.

Support Services - Operational Phase

The area surrounding the project site currently includes retail and service establishments, such as gas stations and automotive-related businesses, banks and food stores, which serve local businesses and residents. Two shopping centers located in the immediate vicinity of the proposed Union Place development, Mahopac Village Center and Somers Commons Shopping Center are the closest competition for Union Place's retail development. Refer to section 3.9 for a discussion on the potential relationship and impacts between those retail centers and Union Place.

Existing local businesses that could potentially experience an increase in business activity from the proposed residences, hotels, stores, and offices at the Union Place development might include supermarkets, package delivery establishments, local delicatessens and restaurants, gas stations, and banks.

To estimate this potential increase in project related business activity, also known as secondary growth, six categories (General Merchandise, Hotels and Motels, Food Services and Drinking Places, Gas Stations, Management of Companies and Enterprises, All Other Miscellaneous Professional and Technical Services) were analyzed.³ In order to calculate the secondary employment impacts of the proposed development for its General Merchandise portion (45.2 percent), a multiplier of 1.51 was used, resulting in 631 new long term jobs through secondary employment.⁴ A multiplier of 1.40 was used to calculate the secondary employment impacts from the proposed hotel which would comprise 6.3 percent of the total commercial development in the project. The secondary employment from the project's hotel would result in approximately 69 long term jobs.⁵ A multiplier of 1.35 was used to project the secondary employment impacts from the restaurant portions (2.1 percent) of the project, resulting in 20 new long term job through secondary employment.⁶ For the gas station proposed onsite (0.4 percent of the proposed commercial development), a multiplier of 1.40 was used to calculate secondary employment, which would result in 4 jobs.⁷

In order to calculate the secondary employment impacts from the corporate office portion of the proposed development (33.9 percent), a multiplier of 1.49 was used, resulting in 455 new long term job through secondary employment.⁸ A multiplier of 1.69 was used to calculate the

³ Source: IMPLAN Sector Scheme (Appendix A), IMPLAN Professional (Version 2.0) - User Guide, Analysis Guide, Data Guide. 2004 February - 3rd Edition. Please note, there may be minor discrepancies due to rounding.

⁴ Source: Secondary effect multiplier for General Merchandise Retail Category - 2004 IMPLAN (Impact Analysis for Planning) data for Putnam County, New York - (1,238 direct employees multiplied by 0.51 results in 631 indirect employees)

⁵ Source: Secondary effect multiplier for Hotel and Motel Category- 2004 IMPLAN (Impact Analysis for Planning) data for Putnam County, New York (173 direct employees multiplied by 0.40 results in 69 indirect employees)

⁶ Source: Secondary effect multiplier for Food Services and Drinking Places Category- 2004 IMPLAN (Impact Analysis for Planning) data for Putnam County, New York (57 direct employees multiplied by 0.35 results in 20 indirect employees)

⁷ Source: Secondary effect multiplier for Gas Stations Category- 2004 IMPLAN (Impact Analysis for Planning) data for Putnam County, New York (11 direct employees multiplied by 0.40 results in 4 indirect employees)

⁸ Source: Secondary effect multiplier for Management of Companies and Enterprises Category - 2004 IMPLAN (Impact Analysis for Planning) data for Putnam County, New York - (929 direct employees multiplied by 0.49 results in 455 indirect employees)

secondary employment impacts for the office uses proposed (All other miscellaneous professional and technical services - 12.1 percent), resulting in 229 new long term jobs through secondary employment for this portion of the proposed development.⁹

Overall, the total indirect jobs anticipated from the completed Union place is 1,408 full time employees. See Section 3.9 of this DEIS for further discussion regarding potential impacts on employment from the Proposed Action.

The amount of new construction resulting from induced growth as a result of the Union Place project would depend on future real estate market conditions and the availability of developable land in areas surrounding the project site. If all of the additional jobs from secondary employment are assumed to be located within several miles of the project site where induced growth would be most likely to occur, and half of them were in businesses that would occupy newly constructed buildings, applying the secondary job growth assumption to a projection of induced growth based on employee space requirements would result in the approximate square footage of future growth. Applying the secondary job growth assumption to a projection of induced growth based on an employee/commercial space ratio of 2.75 workers per 1,000 square feet would result in approximate overall demand for commercial space. A multiplier of 2.75, was used, which is the average of the office employee space requirement of 3.0 workers per 1,000 square feet of floor area and the retail employee space requirement of 2.5 workers per 1,000 square feet of floor area provided by the Urban Land Institute.¹⁰ Based on these assumptions, the 1,408 secondary full time jobs projected above would generate 512,000 square feet of commercial and office space, of which half, or 256,000 square feet, would be new commercial construction.

Although the secondary employment multiplier accounts for employment effects far beyond those areas where growth inducement would be likely, this magnitude of growth is assumed for the purposes of conservatively analyzing the hypothetical impacts of induced growth.

The specific location of such development effects can not be determined at this time, but growth would be expected along the US Route 6 corridor. This growth would be expected to be at a level consistent with development trends in this area. The additional development would be subject to separate environmental review, and would need to adhere to applicable environmental and code regulations.

6.2.2 Potential Impacts of Induced Growth

Soils and Topography

Specific impacts of induced growth on geology, soils and topography can not be determined without knowing the locations of future development resulting from the Union Place project. However, the level of development that is anticipated is not expected to be of a magnitude that would affect a large area, or require major impacts to steep slopes. Future development would also have to address erosion control and slope stabilization issues in accordance with the Erosion and Sediment Control Guidelines in the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activities (Permit No. GP-0-08-001). As part of the

⁹ Source: Secondary effect multiplier for All other miscellaneous professional and technical services- 2004 IMPLAN (Impact Analysis for Planning) data for Putnam County, New York. (331 direct employees multiplied by 0.69 results in 229 indirect employees)

¹⁰Source: Urban Land Institute. Development Impact Assessment Handbook, 1994.

NYSDEC SPDES permit, no more than five acres of any given site can be unstabilized at one time without permission from the NYSDEC.

Wetlands and Watercourses

Impacts to wetlands, watercourses and associated buffers as a result of induced growth would need to be addressed by wetland permitting through the Town of Carmel, U.S. Army Corp of Engineers, and/or NYSDEC prior to construction within areas regulated by these agencies.

Terrestrial and Aquatic Ecology

No federal or state-listed rare plant species, habitats or significant natural communities were identified for the Union Place project site or adjacent properties in communications from the New York State Department of Environmental Conservation Natural Heritage Program. Furthermore, none were observed during site visits and assessments by project biologists. While impacts to vegetation, wildlife and wildlife habitat as a result of induced growth can not be determined without knowing where such development would take place, construction of the proposed development is not expected to result in significant impacts to vegetation and wildlife. Any individual future projects would be required to analyze impacts to federal or state-listed rare plant species, habitats or significant natural communities as part of the environmental review associated with the proposed development.

Surface Water Resources

Development proposed as a result the presence of Union Place would need to incorporate NYSDEC and NYCDEP approved methods and practices for treating stormwater runoff from impervious areas that are proposed as a result of ancillary growth. A Stormwater Pollution Prevention Plan would be required for most if not all of this potential development. This document would be reviewed by the Town, City and State for compliance with all appropriate guidance and regulations.

Groundwater Resources

Potential impacts to groundwater resources resulting from induced growth related to the development of the Proposed Action would be limited to those projects that would require water be withdrawn from the aquifer the Union Place project is located within and those resulting in changes in the recharge of this aquifer. If the induced development would require the drilling of project specific water supply wells, the applicant would be required to prove water demand can be met and that the proposed wells comply with all State and County regulations. In addition to proving water demand the applicant would provide information on the impacts, if any, to the surrounding properties that use the same aquifer for their water supply. With regard to changes in recharge, the applicant would need to perform a recharge analysis to prove impacts to the aquifer would not result from the proposed changes in land coverage or if impacts were identified, that they would be minimized to the maximum extent practicable.

Zoning and Surrounding Land Use

The replacement of vacant and residential land with a mixed retail, office, hotel and residential development would result in a more intense use of the project site and reinforce the emerging role of US Route 6 in this location as a commercial and business corridor. The commercial growth that would be expected to occur in the vicinity of the project as a result of the proposed

project would continue this trend. Development occurring as a result of induced growth would need to comply with applicable zoning requirements.

Vehicular Traffic and Roadways

The secondary commercial, retail, or personal service development that would be anticipated in association with the Proposed Action would be expected to occur in a variety of locations, and the associated traffic would be expected to spread over the network. This additional development would be subject to SEQRA evaluation under which traffic impacts would likely be assessed. The proposed intersection improvements discussed in Chapter 3.7 of this DEIS would be expected to alleviate traffic impacts due to secondary growth.

Community Services

The growth within the surrounding area that may result from the construction of the Union Place project would be expected to generate some additional demand for community services such as police, fire protection, or highway maintenance services. Additional tax revenues would be generated by the Proposed Action to supplement the budgets of area community service providers.

Socioeconomic

As described above and in detail in Chapter 3.9, this mixed residential and commercial development is expected to create demand for additional commercial growth in the project vicinity by bringing in customers and employees as well as 1,031 residents to the area. The anticipated secondary growth in construction and employment opportunities would be expected to generate concomitant revenues to the municipalities to cover the increases in costs for services that would also result. Certain taxing jurisdictions stand to collect revenues in excess of projected expenditures related to the Proposed Action including the Mahopac Central School District.

Induced growth associated with projects that support the employment, shopping, and service needs of the Town residents and its visitors would be expected to strengthen the local economy as well as increase opportunities for local employment, purchases and sales. In addition, Putnam County and other New York area shoppers that would otherwise make purchases in Connecticut may be recaptured, keeping additional sales tax revenues within New York State and Putnam County.

Noise

Some minor increase in noise levels would be expected in the immediate vicinity of sites developed in the future as a result growth induced by the Proposed Action. Increases in noise through normal vehicular traffic, truck deliveries, and heating and air conditioning equipment would be expected to be typical of retail sites along the US Route 6 corridor and no significant adverse noise effects would be expected.

Visual Quality

Visual impacts related to development induced by the Proposed Action would be dependent on the project site location, place in the landscape and past development among other things. All future non-project related projects would be reviewed by the Town and other regulatory

agencies where appropriate at the time of their proposal. At this time, architecture, landscaping, etceteras, can be addressed to the satisfaction of the review authority(s). As such, impacts to visual quality are not anticipated.

Cultural Resources

All future development in the surrounding environs, however related to the Proposed Action, will result in a review by the State Office of Parks Recreation and Historic Preservation office. Compliance with all State regulations will be a requirement of project development and no significant adverse effects to cultural resources would be expected..

6.3 Effects on the Use and Conservation of Energy Resources

6.3.1 Energy Sources to be used if the Proposed Action is Implemented

Electricity and gas for the proposed project would be provided by New York State Electric and Gas (NYSEG) and Central Hudson Gas & Electric Corporation (Central Hudson) respectively. Once construction is completed and the Project occupied, energy would be required for heating, air conditioning, and the use of various appliances and electrical equipment. According to data published in the 2003 Commercial Buildings Energy Consumption Survey (Source: U.S. Department of Energy), retail space consumes approximately 73,900 BTUs of energy per square foot annually and office space consumes 92,889 BTUs per square foot annually. It is expected that 493,000 square feet of retail space would expend 36.4 billion BTUs¹¹ of energy annually. The proposed office space is expected to expend 51.5 billion BTUs of energy annually. According to data published in the 1997 Residential Energy Consumption Survey (Source: U.S. Department of Energy), approximately 123 million BTUs are consumed per household annually in New York State. It is expected that 480 residential units would consume 59.0 billion BTUs of energy annually.

In a letter dated April 13, 2009 NYSEG stated that they would be able to provide required electrical services at the Project location. See Correspondence in Appendix B.

Central Hudson conducted a formal engineering review of the proposed project and their natural gas distribution facilities in the vicinity of the project site. The company determined that there exists "...system capacity to serve the subject project..." The Applicant will provide Central Hudson with the approved site plans and load letters and work closely with their engineers to develop a plan that will permit the adequate supply of natural gas to the proposed development. Refer to Appendix B herein for a copy of their June 1, 2009 and November 12, 2009 letters.

6.3.2 Increased Energy Consumption

Energy consumption would occur during construction and operation of the proposed Project. During construction, energy would be used for power equipment and construction vehicles. Once construction is completed and the Project occupied, energy would be required for heating, air conditioning, and the use of various appliances and electrical equipment. The completed project would place long-term demands on various energy sources for space heating, air conditioning, water heating, refrigerators and lighting as well as other appliances and incidental electrical uses. Indoor climate control systems will demand the largest quantities of energy

¹¹ BTU, or British Thermal Unit, is a unit of heat equal to the amount of heat required to raise one pound of water one degree Fahrenheit at one atmosphere pressure; equivalent to 251.997 calories.

consumed over the lifetime of the project. Energy efficient heating, cooling and insulation systems will be utilized to conserve energy resources associated with climate control.

6.3.3 Energy Conservation Measures

New York State and Federal Energy Conservation Regulations and Guidelines

Energy conservation in New York is regulated at the state level for new residential and commercial construction. The Union Place development would be constructed in accordance with the New York State Energy Code. In effect since 2002, the code specifies basic requirements that are mandatory for newly constructed buildings. Requirements apply to heating and cooling systems, hot water systems, electrical systems, construction materials, equipment specifications and building sealing and insulation.

In addition, the New York State Energy Research and Development Authority and the Public Service Commission promote compliance with Energy Star[®] and New York Energy SmartSM programs by construction firms, building management firms and homeowners that encourage the use of energy conserving appliances, materials, technologies and building techniques. Compliance with provisions of these energy conservation programs would reduce the overall long-term energy consumption of the project. The Applicant will incorporate some components of these provisions and of the U.S. Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED) standards.

While the Applicant intends that this project will have LEED compliant components, it will not seek LEED certification. The LEED standards for new construction have been considered during the development of the project plan including the site layout and building design. Specific energy conservation measures for the project would be further developed according to the individual building designs as they develop in a later phase according to the needs of tenants.

The following are LEED compliant components that can be incorporated into the Proposed Action.

- Incorporate roof surfaces with high-albedo materials such as polymeric coatings that would contribute to reducing the heat island effect by reflecting the sun's energy.
- Coordinate with the PART (Putnam County Area Rapid Transit) system to add a bus stop within a distance of not more than ¼ mile from the project site thereby providing the site with public transportation.
- Use native plant species adapted to the local conditions that do not need watering from potable water after establishment thereby minimizing irrigation.
- Include high efficiency water-conserving plumbing fixtures and control technologies in the building design as recommended in the Energy Policy Act 1992 to reduce the use of potable water.
- Eliminate HCFC and Halon use by specifying only the use of HVAC and Refrigeration systems that do not use HCFC's and Halons. Specify high efficiency HVAC units.
- Provide an easily-accessible and well-marked recycling area within each building dedicated to the separation, collection, and storage of materials for recycling to limit the amount of construction waste carted to landfills.

- Designate an area on the site for construction waste management to minimize construction waste by redirecting recyclable and recovered resources back to the manufacturing process.
- Provide environmental tobacco smoke control by prohibiting smoking in the building and locating exterior designated smoking areas away from entries and operable windows to keep indoor air quality unaffected.
- Utilize energy efficient, shielded Site lighting to minimize energy use, night-time light pollution and light overspill to neighbors.
- Specify high efficiency interior fluorescent (T5 or T8) with electronic ballasts for greater energy efficiency.
- Incorporate energy efficient double-glazed windows at the store front and second floor offices: LowE glazing on east west and south elevations if applicable.
- Use durable exterior materials (e.g., split face masonry, cultured stone, hardiplank siding, etc.) which require minimal maintenance and are long-lasting, thereby minimizing the need for future replacement.
- Install site equipment (e.g., benches, bicycle racks, refuse containers, etc.) Constructed of recycled materials wherever possible.
- Specify the use of locally derived and manufactured materials to the extent possible.

Final decisions on the components to be included will be addressed during final site plan approval.

6.4 Unavoidable Impacts

Refer to Chapter 5.0, Adverse Environmental Effects that Cannot be Avoided if the Project is Implemented herein for text on this subject.