



VI

***Other
Environmental
Impacts***



VI. OTHER ENVIRONMENTAL IMPACTS

INTRODUCTION

All of the potentially significant adverse impacts resulting from the development of the Project will be mitigated to the maximum extent practicable. However, the development will inevitably result in certain impacts. This portion of the DEIS addresses the resulting adverse impacts that cannot be avoided; irreversible and irretrievable commitment of resources; growth inducing impacts and the effects of the Project on energy use and conservation.

1. ADVERSE ENVIRONMENTAL IMPACTS THAT CANNOT BE AVOIDED

A. Short Term Impacts

The proposed development would result in short term construction related impacts including:

- **Construction Noise**

During the 18 month construction build-out, temporary short term noise impacts will result, as construction related activities increase the ambient noise levels. Actual noise levels will vary significantly depending upon the location of equipment and the relationship to noise receptors. In most cases, the extensive distances from noise source to noise receptors will adequately mitigate most short term noise impacts. Additionally all outdoor activities (including construction activities, but also construction worker vehicle parking, mustering of the work force, lunch and coffee breaks, vehicle idling, equipment maintenance, etc.) shall take place within the delineated limits of construction and not on the perimeter of the Site where such activities may impact neighbors.

- **Construction Traffic**

All construction traffic will utilize a new stabilized construction entrance located on Buxton Road. The majority of larger construction related vehicle trips and material deliveries will make their way to the Site from Bedford Center Road. Construction traffic is expected to be heaviest



during the initial phases of development. Most heavy site work, the transport of cut and fill and construction material deliveries will occur during these early phases.

The development of the Site will not require extensive road closings or alteration of traffic patterns. However, periodically, trucks delivering equipment or materials to the Site may disrupt traffic for short intervals. As such, a traffic control and safety plan will be prepared and submitted to the Police Department concurrently with the filing of the Building Permit. This plan will involve methods of lane closures, utilization of flagmen and pre-notice of the Police Department. No disruption to the traffic along Bedford Center Road or Buxton Road will take place without the notice and consent of the Police Department. Once again, it is expected that impacts to these roadways, and particularly to Bedford Center Road will be infrequent and isolated.

To the extent feasible, the Applicant will schedule deliveries of equipment and construction materials during off-peak traffic hours to further minimize potential impacts to the surrounding roadway network.

▪ **Air Quality Impacts**

Development of the Site will result in emissions from diesel and gasoline fueled construction equipment and vehicles. Maintaining vehicles and equipment in good working order will help to reduce emissions.

The disturbance of 7.52 acres of the Site during construction will generate fugitive or airborne dust. This impact is unavoidable, but will be controlled by employing dust control methods such as minimizing the area of the Site which is subject to disturbance at any one time, use of mulch or other temporary covers on exposed soil areas, limiting the movement of trucks or construction equipment over exposed soil surfaces, and covering haul trucks to prevent dust emissions while in transit to the disposal site. All debris should be thoroughly wet down before loading and while dumping into trucks and other containers.



During dry weather conditions, spraying water on unpaved areas subject to heavy construction vehicle traffic will help control dust. Paved areas should also be kept clear of loose dirt that can be re-entrained into the air during vehicle passage. The use of stone tracking pads at access points to the site or washing of vehicle tires will greatly lessen the tracking of soil onto adjacent roadways

B. Long Term Impacts

Certain long term impacts, although not considered to be significant adverse impacts in SEQR terms, will result from the Project.

- **Land Use**

Approximately 0.89 acres of Parcel A and 5.96 acres of Parcel B will be disturbed to accommodate the Project as described herein. This represents a change in land use, from the vacant wooded condition of Parcel B.

- **Geology, Topography & Soils**

The Project will result in disturbances to 0.89 acres of Parcel A, 5.96 acres of Parcel B, 0.16 acres of Buxton Road, 0.51 acres of the NYSDOT parcel, resulting in a total disturbance of 7.52 acres.

- **Ground Water Resources**

The use of pesticides and fertilizers during routine maintenance of the grounds of the church have the potential to elevate levels of various carcinogens and nitrates in the groundwater supply.

- **Surface Water Resources**

The Project will result in changes to the existing drainage areas on the Site, including the addition of new impervious surfaces.

- **Terrestrial & Aquatic Ecology**

Approximately 6.0 acres of mature oak-tulip forest and approximately 1.6 acres of meadow will be cleared to accommodate the Project. Approximately 290 trees with a dbh of 8” of greater would be lost. In



addition, the understory, shrub and herbaceous vegetation associated with these community cover types would also be lost as well.

- The project would require the clearing of forested and meadow habitat. The change to these resources would decrease the amount of food and shelter for mammalian species such as grey squirrel, chipmunk, woodchuck, gray fox and white-tailed deer. Some species requiring forested habitat would probably relocate outside of the project area where similar habitat exists. Potential construction noise and activity would also likely cause local wildlife to move to quieter, undisturbed portions of the Site and beyond. Lighting around the church building, parking lot and access road during construction and operation of the proposed facility may affect some nocturnal or reclusive animals. While the local wildlife community would be permanently impacted by the loss of forest and meadow associated with the Project, no long-term significant adverse impacts to regional wildlife populations are anticipated.

- **Traffic & Transportation**
The Project will result in the generation of 13 entering and 13 exiting vehicle trips during the AM peak hour, 11 entering and 12 exiting vehicle trips during the PM peak hour, 88 entering and 21 exiting vehicle trips during the Saturday peak hour and 196 entering and 140 exiting vehicle trips during the Sunday peak hour.

- **Infrastructure**
It is estimated that the development of the new church will require a water supply of between 2,520 and 4,000 gallons per day. A similar amount of wastewater sewage will also be generated. Approximately 207 lbs of solid waste would be generated. The Project will also consume energy for lighting, heating and cooling the new facility.

- **Cultural Resources**
The development of the Project will result in a permanent impact to the existing visual character of the Site resulting from the construction of the



new 35,500 square foot church building, off-street parking areas, relocation of Buxton Road and associated Site improvements.

2. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

The Project will result in some irretrievable and irreversible commitment of resources. Construction of the Project will devote the Site to its use in support Bedford Community Church for the foreseeable future.

The Project will involve the physical alteration of the Site, including the disturbance of approximately 7.52 acres of land area.

The construction of the Project, described more fully in section II, will involve the commitment of a variety of natural resources. Those resources include, but are not necessarily limited to, the following: concrete, steel, timber, brick, and wood. The operation of construction equipment would also involve the consumption of fossil fuels, while the completed church building will require electricity and fuel oil for heat and light.

The construction phase will require a temporary commitment of workers. This commitment however, should be looked at as a beneficial impact to the construction industry. The funding utilized to build the potential development would be irretrievably committed to this project and would not be available for use to finance other projects.

3. GROWTH INDUCING AND SECONDARY IMPACTS

It is not anticipated that the Project will result in any significant growth inducing impacts. The Bedford Community Church has been operating on the Site for many years. It is unlikely that the construction of a replacement facility will cause new congregants to move to Bedford, although it is the hope of the Church that its membership will continue to be robust and its ministries effective.

No plans exist for the reuse of the existing church building once the new church is completed. It is possible that the existing church building on Parcel A could be re-used for a use permitted under the existing R-4A zoning.



4. EFFECTS ON ENERGY USE AND CONSERVATION

The Project will consume electricity for lighting and powering appliances and equipment. The estimated cooling requirement for the facility would be 120 tons for the total building. Estimated heating requirement would be 1,100,000 btu/hr. (33 Boiler H.P.).

As the architectural plans for the Project evolve, the design team will investigate the use of alternative energy systems such as geothermal heating and photovoltaic cells as potential life-cycle energy savings options.

If a conventional hot water boiler and air-cooled chiller system is utilized, cooling would be accomplished by an outdoor air-cooled chiller with underground chilled water piping to floor mounted pump(s). From the pumps chilled water piping would serve energy recovery air handlers. The chiller could be located at the southwest corner of the building, enclosed by retaining walls and the buildings so as to be out of site of the neighbors. Sufficient space would be required for air flow and service clearance.

Each floor would be served by several units. Each of the units would have ductwork distribution to variable air volume boxes, each dedicated to a controlled zone. Ducted return air would be routed to its respective energy recovery air handler. Each unit would be capable of using 100% outside air for cooling when temperature-humidity conditions allow without mechanical cooling. The units would be located in mechanical equipment rooms at the southeast and southwest corners of the lower level.

Heating would be accomplished by hot water generated by an oil-fired boiler. Fuel oil serving the boiler would be contained in an underground, double wall storage tank with underground double walled piping routed to the boiler. The boiler would be located in the southwest mechanical equipment room. Generated hot water would be distributed throughout the building via pumped distribution piping to terminal heating items - i.e. controlled fin tube radiation, convectors and air handling systems. Radiant floor systems would be considered for the Sanctuary, Children's Church and Nursery/Crawlers Room.



Proper ventilation requirements shall be maintained by the air supply and exhaust systems. The temperature of the air shall be controlled. The fresh air requirements for this high occupancy building will be significant. The use of energy recovery units will provide substantial operating cost savings and reduce the environment impact of the building through reduced energy usage.

If a geothermal heat pump system is employed, it would provide for both heating and cooling. The system would be comprised of a water loop system which is piped to and from underground vertical piping loops which act as heat exchangers connected to compressorized heat pump units. For this building approximately 40 – 45 well would be required.

The proposed heat pump units for this building would be similar to the energy recovery air handlers described above for the conventional system. In this option, rather than having a boiler and chiller supplying hot and chilled water to coils in each unit, the units would be equipped with a single refrigerant coil. The coil would be connected to a unit mounted water cooled condensing section which in turn would be connected to the geothermal water loop. Water-to-water heat pump units could be utilized to generate hot water for radiant floors or other direct radiation. There would be no outdoor grade mounted equipment, no oil tank and no chimney under this option.

Achieving LEED certification is a goal of the project design team.

During the construction phase, energy would be used to power equipment and various construction vehicles. The primary fuel source for these activities will be diesel fuel. The building will more than exceed the standards of the New York State Energy Code.

The Project proposes to incorporate environmental and energy solutions into its building and campus plan. The building design plans for the use of local building materials such as local granite as a exterior veneer material, a high level of recyclable building materials with low VOC's, low flow plumbing fixtures, solar hot water systems, energy efficient lighting fixtures, extensive use of natural light, programmable intelligent mechanical systems, highly insulated wall systems, and low-E insulated window glazing. As the architectural plans for the Project evolve, the design team will



also investigate other alternative energy systems such as geothermal heating and photovoltaic cells as potential life-cycle energy savings options. Achieving LEED certification is also a goal of the project design team.