

IV. J. – BUILDING DEMOLITION & CONSTRUCTION

INTRODUCTION

This section of the DEIS addresses the potential impacts associated with the demolition of the existing buildings on the Site, and the construction of the self-storage building addition.

1.) ANTICIPATED IMPACTS:

(a.) Construction Phasing Plan:

The construction of the Proposed Action will occur in a single phase consisting of 12 discrete elements. It is the objective of the Applicant to construct the building addition rapidly to minimize the disruption to the existing self-storage facility and Murphy Brothers Contracting which will relocate to the corner building, both of which will remain open and operational during construction. Construction will consist of:

- Installation of erosion control measures;
- Demolition of existing buildings A, C & D;
- Excavate for building foundation;
- Pour foundation and all concrete work;
- Install steel superstructure;
- Complete exterior building finishes;
- Install mechanical, electrical and plumbing equipment;
- Install insulation;
- Complete interior finishes;
- Install hardscape;
- Install landscaping; and
- Install solar equipment

(b.) Building Demolition:

The Proposed Action requires the demolition of the following buildings:

- Building C – 2-story 2,985 square foot concrete block building housing Murphy Brothers Contracting office and warehouse space.
- Building D – 1,734 square foot concrete block building housing auto glass business, and the adjacent lumber storage racks.
- Building A – The “Barn”, an 8,322 square foot, 2-story wood frame building housing an electrician, a holiday storage facility and Murphy Brothers storage.

In addition to the buildings, portions of the existing parking lot will also need to be removed.

Existing utility services would be disconnected from each building, and any asbestos, lead paint or PCB’s identified within the buildings would be removed from the Site in accordance with all applicable requirements and/or fully abated prior to demolition.

(c.) Construction Activities & Need for Blasting:

It is unlikely that blasting will be required for the Proposed Action. Blasting was not necessary when the existing self-storage building was constructed. ~~As~~ the building addition will not have a basement and will be built on a slab foundation, minimal

excavation is anticipated. ~~Approximately 550 cubic yards of material, of which 330 cubic yards would be reused on Site as fill, projected to be less than 400 cubic yards.~~

The following sequence of construction activities is proposed:

- Disconnect utilities;
- Install erosion control, anti-tracking pad and construction fence protection, establish material staging areas and construction worker parking areas;
- Disassemble buildings A, C and D;
- Excavation for foundation footings;
- Pour footings and foundation walls, concrete slab, elevator and stairwells;
- Install drainage system and backfill;
- Install structural steel;
- Finish exterior-side insulation (rigid board), siding and roofing, windows and doors;
- Install electrical and HVAC roughing and finish;
- Install interior-side insulation (spray foam);
- Install elevators, security system wiring, sprinkler system;
- Install interior finishes, metal walls and roll-up doors, drywall, paint;
- Install lighting fixtures;
- Install plumbing fixtures, toilets and sinks;
- Install miscellaneous door hardware, mirrors, shelving, etc.;
- Install and connect solar photovoltaic system;
- Install hardscape including driveway, parking lot, curbing and sidewalks; and
- Install landscaping including shrubbery, trees and miscellaneous plantings.

(d.) Short-Term Construction Impacts:

Both the existing self-storage facility, and the Murphy Brothers Contracting business operations will remain open during the construction of the building addition. As a result, construction activities will be staged to allow for required parking to remain operational on-site.

(i.) Noise:

Local daytime ambient noise levels would increase both on and off-Site during demolition activities, foundation preparation, installation of infrastructure and the construction of the self-storage building addition. Construction activities and the operation of construction equipment are an anticipated and necessary short-term consequence of any development of the Site, and cannot be avoided. As a result, construction related short-term noise impacts are expected.

Noise impacts resulting from construction related activities are an intermittent, short-term, temporary impact, dependent upon the construction activity and the proximity of that activity to local receptors, which would cease upon completion of the construction phase of the Project. Table IV.J-1 presents representative noise levels for construction equipment and activities at a range of receptor distances.

Table IV.J-1 Construction Noise Levels (dBA)				
Equipment/Activity	50 Feet	200 Feet	500 Feet	1,000 feet
Backhoe	82-84	70-72	62-64	56-58
Blasting	88-120	76-108	68-100	62-94

Concrete Pump	74-84	62-72	54-64	48-58
Generator	71-87	59-75	51-67	45-61
Hailer	83-86	71-74	63-66	57-60
Loader	86-90	74-78	66-70	60-64
Rock Drill	83-99	71-87	63-79	57-73
Trucks	81-87	69-75	61-67	55-61

Source: US Department of Transportation, Federal Highway Administration

(ii.) **Air Quality:**

Construction related impacts to air quality would vary based on the proximity of the construction activities to adjacent properties and the type and amount of construction equipment used for each project phase.

Construction related air emissions would result from the use of diesel fuel for construction vehicles and equipment. While well maintained diesel engines are more efficient than gasoline engines, pollution from these engines produce exhaust from the combustion process resulting in the release of hydrocarbons, carbon monoxide, nitrogen oxides and particulate matter.

General construction activities on the Site would have a potential impact on the local air quality through the generation of fugitive or airborne dust. Fugitive dust is generated during demolition, ground clearing and excavation activities. Throughout the construction period, the passage of delivery trucks and other vehicles over exposed soil surfaces also generates fugitive dust.

(iii.) **Erosion:**

Sedimentation resulting from erosion of disturbed soils during construction is a potential impact. The Proposed Action has the potential to increase the volume and velocity of stormwater runoff resulting from land clearing and the conversion of existing impervious surfaces. If not properly controlled, these activities could lead to accelerated erosion and sedimentation during construction. Sedimentation of receiving waterbodies could result in increased turbidity, nutrient enrichment and increased transport of pollutants.

(iv.) **Construction Traffic:**

The development of the Proposed Action will result in temporary construction truck traffic. Construction traffic would be generated initially during the demolition of the existing buildings, construction of the building foundation, site infrastructure and the building itself.

Truck deliveries will occur periodically throughout the course of construction as materials are brought to the Site including concrete, steel, framing materials and related building materials.

The number of truck trips generated per day during construction would vary depending on the phase and pace of construction, weather conditions and seasonal variations. Types of construction vehicles that will routinely come to the Site include dump trucks, delivery vehicles, pick-up trucks, concrete trucks, backhoes and construction worker vehicles. Bulldozers, skid steers, track excavators, front end loaders, graders and pneumatic rock breakers will be delivered to the Site on flatbeds. Much of this equipment will be brought to the Site and remain there until it is no longer required, and will not make daily trips to and from the Site. Depending on the phase of construction, between 10-20 construction workers would be present on the Site at any one time.

(e.) **Impacts to Sensitive Receptors:**

The Project Site is located in the geographic center of the Village's Industrial Area. While several residential uses are located on the west side of Waverly Avenue in the vicinity of the Site, they are entirely surrounded by industrial type uses, and are not considered to be sensitive receptors. No schools, hospitals, daycare facilities, senior housing or convalescent facilities are located anywhere near the Project Site.

(f.) Site Security Measures:

During construction, the existing self-storage facility, and the Murphy Brothers Contracting business will remain operational. The portion of the Site where construction is occurring will be fenced, and when construction is not occurring, a locked gate will prevent unauthorized access. Video surveillance and/or on-site security personnel may be deployed during periods when valuable equipment or supplies are present, or if otherwise found to be necessary. As construction will be limited to the daytime hours prescribed by Village Code, no temporary site lighting will be required in the construction zone.

(g.) Excavation Impacts:

The excavation of the foundation will require the removal of approximately 550 cubic yards of material, of which 330 cubic yards would be reused on Site as fill, leaving 220 cubic yards of material that would need to be removed from the Site. Utilizing haul trucks with a 16 cubic yard capacity, approximately 14 truck trips would be required to remove this excess material, which will be exported in accordance with all applicable regulations to a suitable location(s).

2.) MITIGATION MEASURES

(a.) Construction Management Plan:

A Construction Management Plan will be submitted along with the Building Permit. This plan will provide for the coordination of the workforce, distribution of construction related traffic, staging of equipment and materials and the efficient use of construction crews and equipment. The Construction Management Plan for the Proposed Action will be simplified because the Applicant will also serve as the general contractor for the Project. The Construction Management Plan will include the following elements:

- Construction Manager – Murphy Brothers Contracting, Chris Murphy, Principal;
- Work Schedule – Monday – Saturday 7 AM – 6 PM (no Sundays or holidays);
- Site prep, demolition and excavation – Murphy Brothers Contracting, in-house;
- Subcontractor coordination for all other trades;
- Construction log book;
- Weekly timeline updates and progress reports;
- Weekly on-site safety meetings;
- Building Department inspections and other inspections as needed.

During the construction period, security fencing would be installed around active work areas before building demolition, excavation or construction activities commence to separate the Project Site from the general public. Additionally, construction traffic will be scheduled to avoid conflicts with daily vehicle circulation patterns on the surrounding roadways.

(b.) Construction Staging Plan:

Construction staging will be carefully addressed in order to maintain the active use of the Site while the building addition is constructed. The Construction Staging Plan will consist of the following elements:

- Dismantled buildings A, C and D to be placed into containers and carted off the Site;
- Excavated soil will be placed in designated stockpile location;
- All construction vehicles to be parked on-Site;
- All construction materials to be delivered as needed and stored on-Site; and
- Construction debris and clean-up to be carted off the premises weekly.

(c.) Demolition Mitigation Measures:

The demolition of buildings A, C and D will be undertaken pursuant to a strict demolition protocol. Initial steps involve disconnecting all utilities (water, gas and electric) as well as sewer. Anti-tracking pads will be installed at the construction entrances. Debris will be wetted down to minimize fugitive dust, and all dumpsters and containers will have covers. The demolition of the buildings along Railroad Way will be accomplished in a manner that ensures the continuation of its use and commence. The primary method to ensure that construction related encroachments onto the railroad right-of-way do not occur is through the installation of construction fencing along the Site's eastern property line. This physical barrier will prevent encroachments from occurring. As with any off-site construction related damage, the Applicant would be responsible for damage to neighboring properties, including the railroad.

(d.) Construction Mitigation Measures:

The emission of particulate matter and other airborne pollutants generated during construction can be minimized through the proper tuning of vehicle engines and maintenance of air pollution controls thereby minimizing their contribution to site generated air pollution during construction.

Minimizing fugitive dust can be accomplished through the following methods:

- Minimizing the extent of exposed soil at any one time.
- Minimizing vehicle movement over areas of exposed soil.
- Covering all haul trucks transporting soil with tarpaulins.
- Spraying water on unpaved areas and areas of construction vehicle traffic to reduce dust generation.

(e.) Noise Reduction:

While construction noise is an unavoidable short-term impact, the following measures will be employed to mitigate noise impacts:

- All construction equipment shall be maintained in good working order.
- All construction equipment shall include appropriate muffler systems.
- Stationary equipment (such as generators) shall be shielded and sound attenuated.
- If comparable equipment is available, the use of quieter equipment shall be specified; electric powered equipment is typically quieter than diesel, and hydraulic powered equipment is quieter than pneumatic power.

(f.) Excavation Plan:

The primary impact associated with excavation is erosion. The Erosion Control Plan prepared for the Proposed Action and the preliminary SWPPP included in the Appendix, document in detail all proposed erosion control measures. Soil exposure is limited for any phase of construction, in accordance with NYSDEC SPDES General Permit (GP-0-15-002) for Stormwater Discharges from Construction Activities. The erosion and sedimentation control measures specified on the Plan have been developed specifically for this Project to provide both temporary controls during construction and permanent controls that will be in place and functioning upon final stabilization of the Site.

In addition to the NYSDEC requirements, all construction activities will meet the requirements of the Village Code, Chapters 120 - Blasting, 172 – Excavations, 254 – Noise and 294 Stormwater Management and Erosion and Sediment Control.

The overall intent of the Erosion Control Plan is to minimize the potential for soil erosion from areas exposed during construction and prevent sediment from entering downgradient watercourses and waterbodies. Prior to the commencement of and construction activities or disturbance of any soils, the erosion and sediment control measures will be installed in accordance with the specifications in the SWPPP. The SWPPP has been developed in accordance with New York State Standards and Specifications for Erosion Control and incorporates applicable elements of the New York State Stormwater Design Manual.

The construction contractor would be responsible for complying with all specifications and conditions of the SWPPP. In addition, the Applicant will engage a Certified Professional in Erosion and Sediment Control/Certified Professional in Stormwater Quality or equally qualified professional to oversee the implementation of the SWPPP.

The objectives of the Erosion Control Plan are:

- Control erosion at its source with temporary control measures.
- Minimize the amount of sediment laden runoff from areas of disturbance, and control runoff prior to discharge to off-site areas.
- De-concentrate and distribute stormwater runoff through natural vegetation or structural measures before discharging to critical zones such as streams or wetlands.

Following construction, erosion would be prevented by re-establishing vegetation, and new landscaping and through the installation of the permanent stormwater management devices and facilities as depicted on the Site Plan.

Soil borings revealed the presence of ash and slag within portion of the Site where excavations would occur. This material may not be suitable for reuse on the Site as fill. All excavated materials will be tested prior to reuse or disposal. If excavated materials are found to be unusable as fill, it will be exported from the Site and disposed of in an appropriate location, in full conformance with all applicable regulations and requirements.

In the Applicant's opinion, potential impacts resulting from the construction of the Proposed Action are expected to be minimized through the implementing of the construction practices and measures described above, thereby mitigating impacts to the maximum extent practicable.