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# Consolidated Construction & Operation Management Plan

*Prepared For:*

**Abbyville Residential LLC, and  
Abbyville Development LLC**

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**1.1 Project Names, Applicants/Developers and Descriptions**

1.1.1 Project Names and Developers. The proposed Projects to be subject to this Construction Operations and Management Plan are: Abbyville Commons to be developed by Abbyville Residential, LLC; and, the Preserve at Abbyville to be developed by Abbyville Development, LLC. Each project is a separate and distinct project, and each of which will be governed by a separate comprehensive permit decision issued by the Town of Norfolk Zoning Board of Appeals. For purposes of this Construction Operations and Management Plan only, both Abbyville Commons and The Preserve at Abbyville are to be collectively referred to as “Abbyville.”

1.1.2 Abbyville Commons Project Description. Abbyville Commons is a fifty-six (56) unit rental community consisting of twelve (12) 1-bedroom units, forty (40) 2-bedroom units, and four (4) 3-bedroom units. The residential units, parking, landscaping and other improvements to be a part of Abbyville Commons will be located on a parcel of land consisting of approximately 8 acres (the “Abbyville Commons Parcel”), as more particularly shown on the site plans approved as a part of the Abbyville Residential, LLC Comprehensive Permit Decision.

1.1.3 The Preserve at Abbyville Project Description. The Preserve at Abbyville is a one hundred forty-eight (148) unit home ownership development consisting of thirty-two (32) 2-bedroom units, sixty (60) 3-bedroom units, and fifty-six (56) 4-bedroom units. The residential units, parking, landscaping and other improvements to be a part of The Preserve at Abbyville will be located on a parcel of land consisting of approximately 195 acres (the “Preserve at Abbyville Parcel”), as more particularly shown on the site plans approved as a part of the Abbyville Development, LLC Comprehensive Permit Decision.

**1.2 Location**

1.2.1 Projects Description. Both the Abbyville Commons Parcel and the Preserve at Abbyville Parcel are located at what is currently known and numbered as 17, Lawrence Street, Norfolk. Both the Abbyville Commons Parcel and the Preserve at Abbyville Parcel are located in the northeastern corner of the Town of Norfolk where Lawrence Street meets Park Street. As each Project is developed, the developer will work with the Town to develop appropriate emergency/911 addresses for each project unit to ensure effective emergency response.

The primary construction entrance (“Construction Vehicle Driveway” as depicted on the Phasing Plan attached as Appendix 2.2) is located approximately 1,000 linear feet from the intersection of Park Street and Lawrence Street. Construction and other vehicles will use

this Construction Vehicle Driveway for most of the site construction deliveries, including the import and export of materials. The access for light deliveries & construction personnel will be Elliot Boulevard which will be developed concurrently with Buckley Boulevard.

### **1.3 Overview of Construction Plan**

Of the total of 203 acres comprising both the Abbyville Commons Parcel and the Preserve at Abbyville Parcel, only approximately 52 acres will be used to develop both Abbyville and The Preserve at Abbyville. Of the 52 acres, approximately 10 acres were previously disturbed with existing foundations and remaining concrete floors from the former mill complex and an open gravel pit that will all be used for storage and staging areas. The site will be developed in Phases (as further described below) so that the duration of open disturbed areas will be limited in an effort to reduce runoff and minimize dust from construction operations. Once the roadway, sidewalk, utility and other infrastructure is established in any one phase, the dwelling construction will commence and subsequent occupancy will occur in that particular phase. As each phase nears completion, site and infrastructure work will commence on the next subsequent phase. There will be planned development and concurrent work between certain phases to provide opportunities to reduce and minimize overall potential construction impacts.

### **1.4 Primary Construction Tasks**

The general summary breakdown of major construction tasks for each identified phase, as more detailed in Section 2.0, will be as follows:

- Tree clearing, removal and grubbing, and the stockpiling of loam;
- Once loam is cleared, stockpiled and stabilized, then cuts, fills and exports will be undertaken
- Infrastructure construction, including water main, sewer mains and lines, stormwater drainage facilities, and utilities;
- Construction of wastewater treatment facility and related infrastructure to serve the phase;
- Roadway construction, including paving, sidewalks, berms and curbing, and landscaping; and,
- Residential unit construction.

### **1.5 Phases & General Schedule**

Abbyville Commons and The Preserve at Abbyville will be constructed in order to maximize efficiency and minimize the duration of construction operations among the phases. There are five phases proposed for the development, with Abbyville Commons being constructed in Phases II & III, and segments of The Preserve at Abbyville being

constructed in each of Phases I through V. The Construction Phasing Plan is attached as Appendix 2.2. The duration of each Phase is estimated to range between 18 and 30 months to complete, and at times, there may be up to an eight month overlap of construction between two phases as one phase is approaching completion and the next phase commences. Overall, it is projected that the completion of all construction for both Projects will take approximately seven years, subjection to variations based upon market, the availability of materials, and other factors typically affecting the duration of a residential construction project as further described below.

**2.1 Preconstruction Schedule**

The following tasks constitute the protocol for preconstruction management:

- 14 days prior to commencement of construction, schedule a Preconstruction Meeting with Town Planner, Police Chief, Fire Chief, Conservation Agent, Building Inspector and Town Administrator to review Construction Management Plan;
- After Preconstruction meeting, but no later than 7 days prior to construction commencement, notify immediate abutters on Lawrence Street of the commencement date of the Project;
- Install erosion and sedimentation controls, survey and stake property lines located within 100 feet of the work area, install construction barrier fence to define resource areas and limits of work;
- Install fencing and barricades along Lawrence Street to isolate the construction areas with directional signage to be installed to direct workers, deliveries and office visits to the appropriate route and access points;
- Install offsite signage for traffic mitigation and perform clearing of brush along streets and public right of ways as proposed by Green International Affiliates (See Appendix 2.1), and as conditioned within the Comprehensive Permit Decisions; and,
- Install office site trailer for meetings/construction management and sales operations.

**2.2 Phasing Plan and Description:**

Appendix 2.2 includes a plan defining the limits of each of the five separate construction Phases for both Projects and Off Site Improvement as summarized below:

- Phase I:** 14.7 Acres of Development  
3,084 linear feet of Roadway and Related Infrastructure Construction  
33 Units of Ownership Housing
- Phase II:** 11.6 Acres of Development  
1,499 linear feet of Roadway and Related Infrastructure Construction  
19 Units of Ownership Housing  
28 Units/14 Buildings of Rental Housing
- Phase III:** 8.7 Acres of Development  
1,122 linear feet of Roadway and Related Infrastructure Construction  
17 Units of Ownership Housing  
28Units/14 Buildings of Rental Housing

**Phase IV:** 13.7 Acres of Development  
2,517 linear feet of Roadway and Related Infrastructure Construction  
44 Units of Ownership Housing

**Phase V:** 12.5 Acres of Development  
2,025 linear feet of Roadway and Related Infrastructure Construction  
35 Units of Ownership Housing

**Off Site Improvements:** There are improvements scheduled for Lawrence Street which are above and beyond that work which is to be performed by the award of the Massworks Grant to the Town of Norfolk. These improvements to Lawrence Street may include road widening and reclamation; sidewalk construction; and water main installation. The work to be performed, the parties to perform the work and the schedule in which it will be performed are part of a Development Agreement with the Developers of Abbyville, other Developers proposing projects in the Lawrence Street Locus and the Town of Norfolk.

## **2.3 Days & Hours of Operation:**

2.3.1 On-Site Construction Hours. While the Projects will be constructed in one continuous effort that will be defined by the Five Phases summarized above, the duration of onsite construction operations will be Monday through Friday, 7:00 AM to 6:00 PM and Saturday 7:00AM to 4:00PM. This construction activity will include all site and infrastructure work as well as dwelling construction and related deliveries.

2.3.2 Off-Site Gravel Removal Hours of Operation. Any truck traffic that is specifically related to earth removal from the premises will be limited to exiting the site between the hours of 8:30AM to 2:15PM, Monday through Friday.

2.3.3 Compliance With Town Site Construction Equipment Bylaw. As to construction hours, note that construction activities will conform to, and comply with, Section 35 of Article X (Police Regulation) of the Town of Norfolk General Bylaws, which provides that "...no person or persons shall cause, allow or permit the operation of equipment or machinery associated with site work, construction, or demolition, or the operation of motor vehicles including dump trucks, trailer trucks, tractor units with flatbed trailers or other types of truck equipment, for the specific purpose of loading or unloading equipment, machinery or goods, materials, substances or fluids, including trash, rubbish, or recyclable collection vehicles used to collect household waste between the hours of 7 p.m. and 7 a.m., Monday through Saturday, and all hours on Sunday and all hours on the following Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day and Christmas, without the express approval of the Town Administrator and the issuance of a work permit by the Chief of Police. Such regulation shall not apply to utility companies, private contractors, or municipal workers who are making emergency repairs or deliveries that maintain or restore utility and necessary services under the direction of the municipality or utility company, but such work shall require prior notice to the Police Department."

## **2.4 Primary Construction Schedule per Phase:\***

The following summarizes the projected duration of specified construction activities of each Phase on a task-specific basis (Please see Abbyville Phasing Timeline in Appendix 2.4):

### **Phase I: (24 months)**

**2.4.1. Initial Set Up (7-14 days):** Install office trailer and install utility service to the Trailer near the current driveway entrance of the Buckley & Mann property. This driveway will be the main egress for heavy construction vehicles and truck traffic for earth removal. It is shown as The Construction Vehicle Driveway on the Phasing Plan in Appendix 2.2.

At this driveway, a stone-stabilized pad will be located for the purpose of keeping mud and sediment off of public roads. The stone stabilization entrance/exit pad shall be constructed of 1- 3 inch stone placed 6 inches thick over a geotextile fabric that separates the stone and the earth surface to reduce migration of the soil particles from the underlying soil into the stone and vice versa. The minimum dimensions of this pad shall be 100 feet in length by 24 feet in width. This entrance will be maintained in a condition that will prevent tracking or the flow of sediment into the public right of way. The entrance/exit pad will be inspected daily while in operation and top dressed with new stone and/or replacing existing stone if the soil particles clog the voids and sufficiently limit the effectiveness of the pad.

A temporary staging area will be established for stockpiling materials, pipe and other inventory items on the existing concrete pad that is located near the driveway entrance to the North of Elliott Blvd. At the same time, an onsite parking area will be established for all truck and delivery vehicles so that no vehicles will be delayed and/or idling on Park or Lawrence Street at any time.

**2.4.2 Site Clearing (30-45 days):** Tree clearing, chipping, stump removal, grubbing and partial stripping will be performed for the area defined as Phase I, the leaching facility area for the wastewater treatment plant. An area to the West of Annie's Loop (approximate location is near lots 44-47 and is labelled on the Phasing Plan as "Phases 1, 2 & 3 Material Storage Area") will serve as a short term stockpile and processing area for loam. An area to the West of Mann's Loop at the southerly intersection of Thayer Circle will serve as a Long Term Material Storage Area and is labelled as the same on The Phasing Plan. This will be used for a storage and composting area for stump grindings.

The short term stockpile area is located in a section that is either at grade or will require minimal fill. This area will be a temporary stockpile area for loam to be screened onsite and will be re-used on-site for areas located in Phase I, II and III as required. This re-use will



reduce the need to export loam out of the site and to import screened loam back into the site, thus reducing the overall truck traffic to the projects significantly.

The long term stump stockpile area for stump grindings is located in a section that is either at grade or will require minimal preparation. The stump grindings are a great resource to re-use onsite for erosion control, sedimentation barriers, thermal barriers and composting to add nutrients into the soil. By utilizing these stump grindings on-site, we not only are recycling and repurposing a natural resource but we are also significantly reducing truck traffic by not removing fifty acres of stumps to an off-site disposal facility.

**2.4.3. Stripping & Stockpiling Loam (45-60 days):** Loam will be removed from the cleared areas and stockpiled in the designated short term stockpile area to be screened. Screening will commence as soon as possible to insure that there is an inventory of screened loam for groundcover, landscaping and seeding. Screening will continue on an as needed basis once a significant inventory is established. Any stockpiles not being processed will be covered with stump grindings or seeded after 45 days. Once a fill area is stripped of overburden and a cut area is opened, site leveling will commence.

**2.4.4. Site Levelling & Earth Removal (12 months):** After completing the fills in Phase I as well as the fill required for the Phase II waste water treatment plant leaching area, there will be an approximate export of 227,000 cubic yards (CY) The ways to be known as Elliott Boulevard, Annie's Loop and the northern section of Mann's Loop will be brought to subgrade first so that infrastructure installation can commence. The southern section of Mann's Loop will be the last section brought to subgrade, and the area of the proposed lots on the southeastern side of Mann's Loop will continue to be cut and brought to subgrade while infrastructure installation, and eventually unit construction, continues in the other areas of Phase I.

Open Cuts will not exceed twenty feet in height at the face and will have a safety barrier at the top of the slope. Furthermore, the faces of each cut area will be sloped at the end of each day. During this cut phase along the southern side of Mann's Loop, an adequate supply of material will be reprocessed for sand, pipe bedding and possibly stone for the installation of the infrastructure. This process will take place at the face of the Cut and material will be temporarily stockpiled for use during Phase I.

**2.4.5. Site Infrastructure (3 months):** It is expected that most of the site, with the exception of the Southern side of Mann's Loop, will be brought to subgrade within 60 days of commencing the Site levelling. The roads that are at subgrade in phase I will have sewer, water and drainage installed within the following 60 days while trucking of material offsite continues. The construction of the wastewater treatment plant (WWTP) will commence during this time as well, and the process of bringing the site and roadway network to finish grade will continue so that the bituminous concrete binder course can be installed.

**2.4.6. Unit Foundations, Site Work & Unit Construction (15 months):** Unit foundations, site work for the units, and unit construction will continue until they are completed in Phase I. Dependent on market conditions and other typical construction factors, we expect the units to be completed within an 15-month timeframe. Approximately 9 months into this phase of construction, we expect the WWTP to be completed and operational.

Once the units are complete on a specific road, the sidewalks, curb, berm and bituminous concrete top course will be installed where there is no potential for damage due to construction vehicles or equipment.

Once 50% of the houses are sold in Phase I, we will start to initialize the work in Phase II. This timeframe will allow us to seamlessly finish Phase I house construction and start house construction in Phase II without delays.

## **Phase II: (25 Months)**

### **2.4.1. Initial Set Up (Phase I Only).**

**2.4.2. Site Clearing (20-30 days):** Tree clearing, chipping, stump removal and stockpiling of stumps for grinding in the previously designated long term stockpile area will be performed for the Phase II area.

**2.4.3. Stripping & Stockpiling Loam (20-30 days):** Loam will be removed from the cleared areas and stockpiled in the previously designated short term stockpile area to be screened. Screening will commence as soon as possible to ensure that there is an inventory of screened loam for groundcover, landscaping and seeding. Screening will continue on an as-needed basis once a significant inventory is established. Any stockpiles not being processed will be covered with stump grindings or seeded after 45 days to stabilize the same. Once a fill area is stripped of overburden and a cut area is opened, site leveling will commence.

**2.4.4. Site Levelling & Earth Removal (12 months):** After completing the fill in Phase II, there will be an approximate export of 245,000 CY. Mann's Loop and Waite Road will be brought to subgrade first so that infrastructure installation can commence. The northern section of Elliot Boulevard will be the last section brought to subgrade, and the lots on the northern side of it will continue to be cut and brought to subgrade while infrastructure installation, and eventually unit construction, continues in the other areas of Phase II.

Open cuts will not exceed twenty feet in height at the face and will have a safety barrier at the top of the slope. Furthermore, the faces of open cuts will be sloped at the end of each day. During this cut phase, an adequate supply of material will be processed for sand, pipe bedding and possibly stone for the installation of the infrastructure. This process will take place at the face of the cut, and material will be temporarily stockpiled for use during Phase II.

**2.4.5. Site Infrastructure (1-2 months):** It is expected that most of the site, with the exception of the northern end of Elliott Boulevard, will be brought to subgrade within 90 days of commencing the site levelling. The roads that are at subgrade in Phase II will have sewer, water and drainage installed within the following 60 days while trucking of material offsite continues. The construction of the mail area and Common Area Pavilion will commence during this time as well, and the process of bringing the site and roadway network to finish grade will also continue so that the bituminous concrete binder course can be installed.

**2.4.6. Unit Foundations, Site Work & Unit Construction (18 months):** Unit foundations, site work for the units, and unit construction will continue until they are completed in Phase II. Dependent on market conditions and other factors encountered in a construction project of this nature, we expect the units to be completed within a 18-month timeframe. However, due to market demands, either the rental unit construction or the ownership unit construction may outpace one another. Therefore, Phase III construction would commence once 50% of the combined ownership and rental Units are under agreement to ensure that construction would continue to meet the market demands of the consumer.

Once the units are complete on a specific road, the sidewalks, curb, berm and bituminous concrete top course will be installed where there is no potential for damage due to construction vehicles or equipment.

### **Phase III: (25 Months)**

#### **2.4.1. Initial Set Up (Phase I Only).**

**2.4.2. Site Clearing (20-30 days):** Tree clearing, chipping, stump removal and stockpiling of stumps for grinding in the previously designated long term stockpile area will be performed for the Phase III area. An additional area may be necessary, and thus cleared, near the Long Term Material Storage Area for the stockpiling of loam from Phases III-V at this time.

**2.4.3. Stripping & Stockpiling Loam (20-30 days):** Loam will be removed from the cleared areas and stockpiled in the previously designated short term stockpile area or adjacent to the long term stockpile area. The decision on where to temporarily stockpile the excess loam will be based on the current inventory and needs at the time while the Phase III land area is being stripped. Screening will commence as soon as possible to ensure that there is an inventory of screened loam for groundcover, landscaping and seeding. Screening will continue on an as-needed basis once a significant inventory is established. Any stockpiles not being processed will be covered with stump grindings or seeded after 45 days in order to

stabilize the same. Once a fill area is stripped of overburden and a cut area is opened, site leveling will commence.

**2.4.4. Site Levelling & Earth Removal (6 months):** After completing the fill in Phase III, there will be an approximate export of 133,000CY. Annie's Loop will be brought to subgrade first so that infrastructure installation can commence. The northern section of Elliot Boulevard will be the last section brought to subgrade, and the lots on the northern side of Eliot Boulevard will continue to be cut and brought to subgrade while infrastructure installation and eventually unit construction continues in the other areas of Phase III.

Open cuts will not exceed twenty feet in height at the face and will have a safety barrier at the top of the slope. Furthermore, the faces will be sloped at the end of each day. During this cut phase, an adequate supply of material will be processed for sand, pipe bedding and possibly stone for the installation of the infrastructure. This process will take place at the face of the cut and material will be temporarily stockpiled for use during Phase III.

**2.4.5. Site Infrastructure (1-2 months):** It is expected that most of the site, with the exception of the northern side of Elliott Boulevard, will be brought to subgrade within 60 days of commencing the site levelling. The roads that are at subgrade in Phase III will have sewer, water and drainage installed within the following 60 days while trucking of material offsite continues. The construction of the mail area and Common Area Pavilion will be completed during this Phase. The process of bringing the site and roadway network to finish grade so that the bituminous concrete binder course can be installed will be underway as soon as the utilities are completed.

**2.4.6. Unit Foundations, Site Work & Unit Construction (18 months):** Unit foundations, site work for the units, and unit construction will continue until they are completed in Phase III. Dependent on market conditions and other factors encountered in a construction project of this nature, we expect the units to be completed within a 18 month time frame. However, due to market demands, either the rental unit construction or the ownership unit construction may outpace one another. Therefore, Phase IV construction would commence once 50% of the combined ownership and rental units are under agreement to ensure that construction would continue to meet the market demands of the consumer.

Once the units are complete on a specific road, the sidewalks, curbing, berms and bituminous concrete top course will be installed where there is no potential for damage due to construction vehicles or equipment.

## **Phase IV: (29 Months)**

### ***2.4.1. Initial Set Up (Phase I only).***

***2.4.2. Site Clearing (20-30 days):*** Tree clearing, chipping, stump removal and stockpiling of stumps for grinding will be performed for Phase IV and the fill areas of Phase V.

***2.4.3. Stripping & Stockpiling Loam (20-30 days):*** Loam will be removed from the cleared areas and stockpiled adjacent to the long term stockpile area. Screening will commence as soon as possible to ensure that there is an inventory of screened loam for groundcover, landscaping and seeding. Screening will continue on an as-needed basis once a significant inventory is established. Any stockpiles not being processed will be covered with stump grindings or seeded after 45 days to stabilize the same. Once a fill area is stripped of overburden and a cut area is opened up, site leveling will commence.

***2.4.4. Site Levelling & Earth Removal (18 months):*** After completing the fill in Phase V, there will be an approximate export of 385,000CY. Morse Road will be brought to subgrade first so that infrastructure installation can commence. The northern section of Mann's Loop and Green Circle will be the last section brought to subgrade, and the lots on the northerly side of Mann's Road will continue to be cut and brought to subgrade while infrastructure installation and eventually unit construction continues in the other areas of Phase IV.

Open Cuts will not exceed twenty feet in height at the face and will have a safety barrier at the top of the slope. Furthermore, the faces will be sloped at the end of each day. During this cut phase, an adequate supply of material will be processed for sand, pipe bedding and possibly stone for the installation of the infrastructure. This process will take place at the face of the cut and material will be temporarily stockpiled for use during Phases IV and V.

By working the cut areas of Phase IV with the required fill areas of Phase V, we are reducing the required offsite trucking in Phase IV and efficiently managing construction traffic. Not only does this work coordination reduce overall construction traffic, but it will also consolidate operations prior to the occupancy of houses in Phase IV & V. After Phase IV, there is no additional offsite trucking of earth material anticipated.

***2.4.5. Site Infrastructure (2 months):*** It is expected that most of the site, with the exception of the northern section of Mann's Loop and Green Circle, will be brought to subgrade within 6 months of commencing the site levelling. Once these roads are at subgrade in Phase IV, they will have sewer, water and drainage installed within 60 days while in other areas, trucking of material offsite continues. The process of bringing the site and roadway network to finish grade will continue so that the bituminous concrete binder course can be installed and be underway as soon as utilities are completed.

**2.5.6. Unit Foundations, Site Work & Unit Construction (18 months):** Unit foundations, site work for unit foundations, and unit construction will continue until they are completed in Phase IV. Dependent on market conditions and other factors encountered in a construction project of this nature, we expect the units to be completed within a 18-month timeframe. Therefore, Phase V construction would commence once 50% of the ownership units are sold to ensure that construction would flow seamlessly.

Once the units are complete on a specific road, the sidewalks, curb, berm and bituminous concrete top course will be installed where there is no potential for damage due to construction vehicles or equipment.

### **Phase V (22 Months)**

**2.4.1. Initial Set Up (Phase I only).**

**2.4.2. Site Clearing (14-28 days):** Tree clearing, chipping, stump removal and stockpiling of stumps for grinding will be performed for any remaining areas in Phase V.

**2.4.3. Stripping & Stockpiling Loam (20-30 days):** Loam will be removed from the cleared areas and stockpiled adjacent to the long term stockpile area. Screening will commence as soon as possible to insure that there is an inventory of screened loam for groundcover, landscaping and seeding. Screening will continue on an as-needed basis once a significant inventory is established. Any stockpiles not being processed will be covered with stump grindings or seeded after 45 days to stabilize the same. Once any remaining fill area is stripped of overburden and a cut area is opened up, the remainder of the site leveling will commence.

**2.4.4. Site Levelling (2-3 months):** After completing the fill in Phase V, it is anticipated that there will be no export of material. Due to the filling of this Phase that occurred in Phase IV, there will be less site levelling and the overall buildout time should be far less.

Open cuts will not exceed twenty feet in height at the face and will have a safety barrier at the top of the slope. Furthermore, the faces will be sloped at the end of each day. During this cut phase, an adequate supply of material will be processed for sand, pipe bedding and possibly stone for the installation of the infrastructure. This process will take place at the face of the cut and material will be temporarily stockpiled for use during this final Phase.

**2.4.5. Site Infrastructure (1-2 months):** Once the roads are at subgrade in Phase V, they will have sewer, water and drainage installed within 60 days. Thereafter, the process of bringing the site and roadway network to finish grade will continue so that the bituminous concrete binder course can be installed.

**2.5.6. Unit Foundations, Site Work & Unit Construction (14 months):** Unit foundations, site work for unit foundations, and unit construction will continue until they are completed. Once the units are complete on a specific road, the sidewalks, curb, berm and bituminous concrete top course will be installed where there is no potential for damage due to construction vehicles or equipment.

\*Note that the expected duration of each of the listed tasks is approximate only, is not exact, and will be affected by any number of factors like any typical residential construction project of this nature such as including but not limited to the following, delay, obstruction or interference resulting from: (i) an act of God, landslide, lightning, earthquake, fire, explosion, flood, sabotage or similar occurrence, acts of a public enemy, war, blockage or insurrection, riot or civil disturbance; (ii) any legal proceeding commenced by any party seeking judicial review of any governmental approvals, or any restraint of law (e.g., injunctions, court or administrative orders, or moratorium imposed by a court, or administrative or governmental authority); (iii) the failure of any utility or governmental entity required by law to provide and maintain utilities, services, water and sewer lines and power transmission lines to the project property, which are required for the construction of the Projects or for other obligations of the developer; (iv) any unexpected or unforeseen subsurface condition at the construction site inconsistent with typical background conditions of a similar site, which shall prevent construction, or require a material redesign or change in the construction of, or materially adversely affect the completion schedule for, the Projects, such determination to be made by a qualified engineer; (v) any unexpected or unforeseen subsurface environmental conditions on or from or otherwise affecting the property but not readily identifiable by visual inspection and which originated from the property; (vi) strikes, work stoppages or other substantial labor disputes; (vii) the failure or inability of any subcontractor or supplier to furnish supplies or services if such failure or inability is itself caused by an unavoidable delay and/or could not have been reasonably prevented and the affected party cannot reasonably obtain substitutes therefore; (viii) a change in project financing which could not have been reasonably anticipated by developer; or (ix) any unreasonable delay which is caused or created by a board or officer of the Town from whom a permit or approval is sought, provided that the developer shall have timely complied with the reasonable requests and requirements of any governmental authority. Accordingly, the schedules defined in this Plan shall be extended for the period of the delay, involving not only actual work stoppages but also any consequential delays resulting from such stoppages as well.“

**3.1 Anticipated Traffic Per Construction Schedule:**

**3.1.1 *Site Clearing:*** Construction traffic during site clearing will consist of approximately five workers arriving at the site by 7:00AM to operate land clearing equipment until 4:00PM when they will leave the site. After the first 8-14 days of clearing, we would expect 3-6 truckloads a day of logs and/or wood chips to leave the site until the tree removal and the site clearing is completed.

**3.1.2 *Stripping, Site Levelling & Earth Removal:*** Construction traffic during the stripping, and site levelling will be approximately eight workers arriving at the site by 7:00AM to operate heavy equipment onsite until 4:00PM when they will leave the site. After the first 28-35 days of stripping in any Phase, the offsite Earth Removal could begin to take place. The earth removal quantities were previously presented in Section 2.4. In an effort to reduce the amount of trips, a tractor trailer will be the type of truck that is used to transport material offsite. The typical tractor trailer can transport approximately 34 ton per load, however, for the purposes of this Plan, we will assume 34 tons as an average load per truck. Furthermore, there is a variety of earthen material on the site that has varying densities. The weight per cubic yard of these materials could range from 0.92 tons per cubic yard (tn/cy) to 1.68 tn/cy, but in an effort to conservatively estimate weight, we estimate the average cubic yard to weigh 1.4 tons.

Therefore, based on the earth removal quantities previously presented, and an average daily volume of 45 truckloads (90 trips) per day of earth removal, we can develop the following projected earth removal traffic plan that coordinates into the development schedule of each Phase:

**Phase I:** 227,000 cubic yards of earth removal is 317,800 tons or 9,347 truckloads.  
At an average of 45 loads per day, it will take 207 days to accomplish.  
Based on a 5-day work week, this work will take approximately 42 weeks.

**Phase II:** 245,000 cubic yards of earth removal is 343,000 tons, or 10,088 truckloads.  
At an average of 45 loads per day, it will take 224 days to accomplish.  
Based on a 5-day work week, this work will take approximately 45 weeks.

**Phase III:** 133,000 cubic yards of earth removal is 186,200 tons, or 5,476 truckloads.  
At an average of 45 loads per day, it will take 122 days to accomplish.  
Based on a 5-day work week, this work will take approximately 24 weeks.

**Phase IV:** 385,000 cubic yards of earth removal is 539,000 tons, or 15,853 truckloads.  
At an average of 45 loads per day, it will take 352 days to accomplish.  
Based on a 5-day work week, this work will take approximately 70 weeks.



**Phase V:** No earth removal is anticipated.

With respect to our average daily volume of 45 loads a day, we anticipate that there will be days when there is no offsite trucking and days when there will be limited offsite trucking. Therefore we will have days that exceed 45 loads per day in order to achieve that average, but we would agree that in no circumstance would the number of truck loads exceed 60 loads per day on any day that earth removal operations occur so in order to maintain traffic volume consistency.

In order to properly manage the earth removal operations for the duration of the projects, we will: (a) ensure that experienced, skilled and competent truck drivers from reputable firms are employed; (b) provide equipment that is professionally maintained; and, (c) limit the entities permitted to haul earth from the project with trucks to two.

In an effort to reduce traffic during peak hours, and to not delay any school bus, we have had discussions with WT Holmes Transportation Company Inc. (the school transportation company under contract with the Town of Norfolk) concerning the schedule for bus routes along Lawrence Street. Based on the bus route schedule information provide, we would limit earth removal from any loaded trucks leaving the site to between 8:30AM and 2:15 PM, Monday through Friday.

The Town of Norfolk has recently received a grant to reconstruct the Lawrence Street Bridge (the "Bridge") and to make certain improvements to the Lawrence Street Causeway (the "Causeway"). While we understand that this project is still in the engineering stages, we would agree to work with the Town, the Town's design engineer, and the contractor awarded the bid resulting from the Town's invitation to bid for this work, to not utilize the Lawrence Street Bridge & Causeway for earth removal trucking until construction of the Bridge and Causeway have been completed. If for any reason, the Bridge and Causeway work is delayed, the developer will work with the Town to ensure that construction traffic is adequately and safely managed by, for example, directing traffic by either a one way signalized traffic control, a flagman, a police officer or another means deemed safe and acceptable. We would schedule our site work around these improvements and believe that our construction time lines could coordinate well until the MassWorks Grant work is complete and the earth removal trucking can resume travel over the Bridge and Causeway without limitation

We would also maintain a daily log for the truckloads of earth removal and supply them to the Town of Norfolk upon request.

**3.1.3 Site Infrastructure:** Construction traffic during the site infrastructure installation stage will be minimal and is expected to be approximately eight workers arriving at the site by 7:00AM to operate the equipment required to install water, sewer and drainage. The workers will work until approximately 4:00PM when they will leave the site. We would expect an average of 1 or 2 deliveries per day of water, sewer or drainage stock to be brought into the site and unloaded in a dedicated construction stock storage area.

**3.1.4 Unit Construction:** Recent traffic studies that we have performed in a similar Residential development illustrate that there is an insignificant difference in the total traffic count in connection with traffic generated by either: (a) multiple houses under construction while at the same time homes are being occupied at the site; or, (b) houses that are occupied. If we estimate a delivery schedule of 29 units per year, and ten units are consistently under construction at any given time during that year, than we can project that those ten units will generate between 113 to 144 trips per day for workers and deliveries. Please note that for purposes of Section 3.1.4 the term “Unit” is defined as a residential building that contains one or two single family residences.

### **3.2 Site Staging & Stockpile Management**

(Please see Appendix 2.2 Phasing Plan)

The existing site is well situated for onsite staging of vehicles, equipment, inventory, stock and deliveries so that there would not be any off-site parking or idling. The existing Buckley & Mann driveway will continued to be used for construction vehicles and truck traffic. This plan will lead all construction related traffic to an existing concrete slab that will serve for aggregated on-site storage, pipe & utility stock deliveries.

This plan allows the staging area to have safe and level access that can be easily maintained And located off of Lawrence Street for Phase I and II. As the site is developed, future Staging areas will be located on site as needed on vacant parcels during the site infrastructure work.

Short term and Long Term Material Storage and processing areas are shown on Appendix 2.2, and described Section 2.4. Please see Section 4.2 for Dust Control Measures.

### **3.3 Site Access and Egress**

In an effort to mitigate traffic, trucking for earth removal and construction vehicle access, such traffic will be limited to the existing Buckley and Mann driveway. This driveway is the closest egress point to Park Street and the furthest point away from any existing homes on Lawrence Street. By using this point of egress, only one house exists between this driveway and Park Street, thereby reducing the impact to any other homes on Lawrence Street. This site entrance will be fenced with a gate that will be secured for “off hours” or as directed by Norfolk Fire or Police Department personnel.

As the site is developed, Buckley Boulevard will be dedicated for the residents of Abbyville, and Elliott Boulevard would be reserved for light truck deliveries and worker Egress, in order to maintain separation between residential and construction traffic. The proposed hours of access for operation and construction will be Monday through Saturday, between the hours of 7:00AM to 5:00PM, and subject to the Town of Norfolk Construction Vehicle General Bylaw described above

**3.4 Truck Routes**

Please see Appendix 3.4 for Truck Route Plans that have been reviewed by BETA Group.

**3.5 Traffic Management**

Please see Appendix 2.1 for recommended vegetation clearing, construction signage and proposed truck routing for earth removal that have been reviewed by BETA Group.

Earth Removal Trucking would be limited to the daily loads and hours of operation as listed above in Section 3.1.2 and must egress the site by traveling over the stone sediment entry mat as described in Section 2.4., Phase I: 2.4.1.

In an effort to be efficient and to reduce the overall trucking to the site, trucks leaving the site would return loaded whenever possible with crushed or washed stone from the processing facility in which they left. Processed stone is a necessary product for construction and the existing concrete floors serve as a readymade staging/stockpile area.

The hours of operation for all other construction would be 7:00AM to 5:00PM Monday through Saturday, and subject to the Town of Norfolk Construction Vehicle General Bylaw described above.

**4.1 Construction Period Noise**

Construction will require the use of equipment that will be heard off-site, but ambient background noise conditions as well as the variation of topography and vegetation will lessen the impacts from construction noise.

Every reasonable effort will be made to minimize the noise impact of construction activities. Mitigation measures will be as follows:

- Scheduling work during daytime hours in accordance with Section 2.3 Days & Hours of Operation;
- Using appropriate mufflers on all equipment and providing ongoing maintenance of intake and exhaust mufflers;
- Maintaining muffler enclosures on continuously operating equipment such as generators and air compressors and locating them as far away as possible from residential receptor locations;
- Replacing specific construction operations by less noisy ones where feasible and practical. For instance, electric equipment instead of gas or diesel powered;
- Turn off idle equipment;
- Securing any decking on roadways so that there is no rattling when traffic passes;
- Using vehicles with either ambient sensitive or manually adjustable backup alarms; and,
- Posting speed limit and no tailgate slamming signs within the site to reduce the noise created by bouncing trucks and loud tailgate slams.

**4.2 Dust Control**

During the construction period of the Project, temporary effects on ambient air quality within the construction site may occur. Impacts associated with construction activities will generate fugitive dust, which may result in localized increases in particulate levels.

Principle on-site source particulates include the excavation process, exposed storage piles and unpaved areas. Exposed soil surfaces that are nearly level have little potential for runoff erosion, but may be subject to severe wind erosion.

Fugitive dust is not expected to significantly impact neighbors given the substantial buffers of tree vegetation and elevation between the proposed construction and existing residences. Nevertheless, the construction contract will provide for a number of measures to be utilized by contractors to reduce potential emissions and minimize impacts. These include:

- Using water on exposed unpaved haul roads on a scheduled basis can significantly reduce dust and is recognized by OSHA in Table 1 as a Specified Exposure Control Method, Please See Appendix 4.2;

- Applying stump grindings to exposed non-vegetated areas not under construction;
- Applying stump grindings or seed to stockpiles after 45 days of inactivity;
- Using covered trucks for off-site hauling;
- Minimizing spoils on the construction site
- Minimizing storage of debris on the site
- Monitoring of actual construction practices to ensure that unnecessary transfers and mechanical disturbances of loose materials are minimized;
- Conduct as needed street sweeping & cleaning to minimize dust accumulations;
- Increasing the distance between vehicles traveling on the site. The distance placed between trucks can significantly minimize airborne dust.
- Post speed limits on all haul roads to minimize airborne dust.

#### 4.3 **Sanitation & Construction Waste**

The Construction Manager will be responsible for processing and recycling of construction waste and will contract with a licensed waste hauler having off-site sorting capabilities. All construction debris will be taken off site by the waste hauler, sorted as either recycled debris or waste debris and sent to the proper recycling center or waste facility. As necessary, construction debris will be covered or wetted to minimize air born dust particles.

Portable sanitary facilities will be provided on-site as required by applicable codes at locations appropriate to the stage of construction. The facilities will be maintained on a regular basis to prevent offsite odor migration.

#### 4.4 **Security**

The Main Construction Entrance (Former Buckley & Mann Driveway) will be secured with a gate and fence. The site staging areas will be secured behind the fenced area. Other potential egress areas will be blocked and the Site will posted with “Do Not Enter Ongoing Construction” Signage.

#### 4.5 **Erosion and Sedimentation Controls**

Each of the projects will require the disturbance of more than one (1) acre of land and as a result, the Owner will be required to file with the EPA a Notice of Intent for Stormwater Discharges Associated with Construction Activities under an NPDES General Permit program and prepare a Stormwater Pollution Prevention Plan (SWPPP) in accordance with the NPDES permit requirements. The purpose of the SWPPP is to outline the erosion control best management practices (bmp's) to be installed and maintained by the contractor during the duration of construction for the purposes of preventing construction related sands/sediments discharging onto adjacent properties. Prior to the commencement of site work construction, the engineering team will review with the Owner and Contractor their respective roles and responsibilities as it pertains to

the implementation, inspections, modifications to the erosion control best management practices (bmp's) and record keeping requirements of the SWPPP documents as required under the 2017 NPDES General Permit.

The construction activities associated with the project will require the contractor to implement a variety of erosion control best management practices (bmp's) designed to remove pollutants from stormwater runoff during the duration of construction. To achieve these measures during construction, the contractor will be required to minimize the area of exposed soil, control the rainfall discharge runoff rate and direction, and provide for stabilization of exposed areas upon the conclusion of earthwork activities. To minimize the potential for construction related impacts to adjacent properties, the erosion control bmp's will be inspected and maintained regularly as outlined in the SWPPP report and until such time the site has been stabilized with permanent ground cover.

Design, installation, and maintenance of soil erosion and sediment control best management practices (bmp's) implemented during construction will meet the performance standards outlined in the Massachusetts Stormwater Management Policy Guidelines and shall conform to the Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas. The erosion control bmp's will also be designed, installed and be maintained in accordance with the guidelines for coverage under the EPA NPDES 2017 General Permit for Stormwater Discharges Associated with Construction Activities.

The inspection and maintenance of the erosion and sediment control (bmp) measures is critical to their effectiveness. Maintenance will be an ongoing process for the duration of construction and will continue until the site has been deemed stabilized. As required by the NPDES permit, the erosion and sediment control measures will be inspected weekly, with repairs made as required and after each rainfall event of 0.25 inches or more. The contractor will be required to maintain an erosion control log book which documents the contractor's observations during inspection as well as document any changes and/or repairs made to the erosion control bmp's.

## **5.0**

## **PUBLIC SAFETY & ABUTTER COORDINATION**

### **5.1 Contact Information & Abutter Notification**

A 24-hour emergency contact list will be distributed to all parties involved in the Project, as well as to designated Town personnel. This list shall contain at least three (3) representatives for the Developer/Contractor. A 24-hour complaint telephone number shall be provided and will be posted at the Project Trailer.

Access to the site for emergency vehicles will be coordinated with the Norfolk Police and Fire Departments and maintained at all times.

Immediate Lawrence Street abutters will be notified 7 days prior to the commencement date of the Project, and will be notified at least 7 days prior to the initial offsite earth removal activities commencing with certified mail.

### **5.2 Site Inspections & Reporting**

Site Inspections by the appropriate Town Inspectional Department or Review Engineer will be coordinated for all utility installation and road construction.

Daily trucking logs will be maintained for earth removal, and submitted to the Building Inspector upon request.

Weekly Inspections shall occur by the design engineer when any onsite road construction, earth removal or utility work is performed. Reports will be emailed to the Zoning Board of Appeals and the Building Inspector within 7 days of an inspection upon request.

The reports shall document site activity, the inspection of work completed and earth removal activities.

### **5.3 Compliance With Applicable Laws.**

In connection with construction activities undertaken in accordance with this Plan, the developer and subcontractors shall comply with all applicable federal, state and local laws, including but not limited to, the best management practices contained within the Stormwater Pollution Prevention (SWPPP) Plan that will be issued in connection with a US EPA National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges from Construction Activities which will be obtained by the developer/operator prior to commencement of construction activities at the site, as noted in Section 4.5 above.