

CONSTRUCTION MANAGEMENT PLAN

ORION STUDENT HOUSING
25/35 MAIN STREET – DURHAM, NH

OWNER / APPLICANT:

ORION UNH, LLC
225 FRANKLIN STREET, 26TH FLOOR
BOSTON, MA 02110

PREPARED BY:

ALLEN & MAJOR ASSOCIATES, INC.
250 COMMERCIAL STREET, SUITE 1001
MANCHESTER, NH 03101

DATE ISSUED: MAY 27, 2014

A&M PROJECT #: 1925-01

Table of Contents

1	INTRODUCTION	3
2	LIMIT OF WORK	3
3	LOCAL REQUIREMENTS	3
4	BLASTING REQUIREMENTS	5
5	ACCESS TO THE SITE AND STAGING.....	9
6	NOISE AND DUST CONTROL	10
7	HOURS OF OPERATION.....	11
8	APPROXIMATE CONSTRUCTION SCHEDULE	11

SECTION 1 INTRODUCTION

The property that is the focus of this construction management plan is three parcels identified on the Town of Durham Tax Map 5 as Lots 1-6, 1-7, and 1-8. The total land area is 1.09 acres or 47,676± square feet. The proposed site redevelopment would restore 25 and 35 Main Street to their original architectural significance, demolish 27 and 29 Main Street and a barn, and construct two new residential buildings and two commercial buildings.

SECTION 2 LIMIT OF WORK

The limit of work is identified on the Site Development Plan Sheet C-5 *Construction Management Plan* and is shown as a six-foot high screened construction fence. The locations of the proposed utility trenches within Main Street are shown as well. A row of silt fence further demarcates the limit of work along the rear of the property and at all down gradient areas.

SECTION 3 LOCAL REQUIREMENTS

The applicant/contractor shall meet with the Building Official at least two months (60 days) prior to the start of construction in order to discuss the building process and to plan for the proper submittal of all structural, mechanical, electrical, plumbing and other plans. The Building Official may reduce this timeframe at his reasonable discretion for good cause.

The applicant/contractor shall comply with the provisions contained in the Construction Management Plan.

The applicant/contractor shall hold weekly meetings with the Town Engineer and other appropriate Town staff (as determined by the Town Engineer) to discuss the construction process and the schedule for the upcoming week. In addition, the applicant/contractor shall be responsible for communicating with appropriate Town staff should issues arise in the interim.

In accordance with Planning Board requirements, the applicant/contractor shall not obstruct any road or sidewalk without approval of the Durham Police Department. The applicant/contractor shall contact the Police Department a minimum of 24 hours prior to any activity or delivery that would obstruct any road or sidewalk and the Police Department will determine whether or not a police detail is needed. In all cases, the Police Department shall determine when a police officer is needed on site. Police details shall be billed for a minimum of 4 hours at the prevailing billing rate used by the Police Department.

The Durham Police will not allow any construction or delivery that would cause any lane closure during the period of the last week in August through Labor Day weekend that would coincide with UNH 'move-in'.

In accordance with Planning Board requirements, the Town Engineer may approve reasonable departures from the provisions in the Construction Management Plan for good cause.

In accordance with Planning Board requirements (and pursuant to RSA 676:15), upon failure of the applicant/contractor to comply with the requirements of the Construction Management Plan or other orders related to the construction of the site made by the Durham Public Works Director, Police Chief, Fire Chief, or Building Official, the Town Administrator, upon recommendation of the Durham Public Works Director, Police Chief, Fire Chief, or Building Official may order the job site closed and/or assess a fine payable as follows: the first fine shall be \$275.00 and each subsequent fine shall be \$550.00. Each day that a violation continues shall be considered a separate offense.

In accordance with Town policy, the applicant's building permit fees cover the plans review conducted by the Durham Building Official at the building permit stage. It is understood that should the applicant seek a quicker turnaround than what is available with an in-house review, the applicant has the option of paying additional fees to enable the Building Official to hire an outside reviewer.

The Town of Durham Fire Code Official, or designee, shall perform on-site inspections during fire code and life-safety matters. The applicant shall pay the costs of any supplemental staff hired by the Town to assist the Fire Department in its inspection of this project.

Best management practices shall be followed for the protection of existing trees and vegetation that are planned to be preserved. Also, the provisions of Section 175-123 – Protection During Construction under Article XXII - Landscaping of the Durham Zoning Ordinance shall be followed.

There shall be no occupancy on the site of existing buildings while construction is ongoing unless approved by the Building Official.

The site is to be fenced in during the duration of project.

All buildings are to be completed in the same month: there will be no phasing in the issuance of individual Certificate of Occupancy during construction, unless approved by the Building Official.

If feasible, conduct construction near existing trees during the winter or dormant season, when stress to trees will be less.

To the extent feasible, trees and shrubs to be preserved shall be protected at or along the critical root zone by fencing sufficiently substantial to make clear the intent to protect them. (The critical root zone is a circle with radius equal to 1.5 feet per 1 inch of trunk diameter. If more than 40% of that critical root zone will be disturbed, the tree may be damaged beyond recovery.)

Where roots of existing trees will be disturbed, sever roots cleanly by hand or with a rock saw, rather than using heavy equipment, to minimize tree root system damage. (If too much of the tree root system is removed or damaged by construction, the tree may decline or die.)

Care shall be taken to avoid passes by heavy equipment near planted areas and trees to be preserved, especially when the soil is wet. (Compacted soils have less open pore space, and hence less space for moisture and oxygen needed to sustain tree health. Even one pass with heavy equipment can cause soil compaction.)

SECTION 4 BLASTING REQUIREMENTS

A Town of Durham Blasting Permit shall be obtained from the Durham Fire Department prior to conducting any blasting, and all blasting activities shall be conducted as follows:

- I. General Procedure.** Blasting shall occur only on the hour and the permit holder must notify the fire department dispatch center 15 minutes prior to each blast. Blasting and on-site chipping or hammering (of stone) is restricted to the hours of 9:00 a.m. to 4:00 p.m. Monday through Friday (See *Hours of Construction* in this document). There shall be no processing of stone on site. A notice of intent to blast shall be provided at least 24 hours in advance via signage placed in appropriate places and other appropriate media provided by the Town (such as the Town's website and Friday Updates). The applicant is encouraged (but not required) to do all blasting during the summer when UNH is out of session."
- II. Best Management Practices for Blasting.** All activities related to blasting shall be performed in accordance with the following New Hampshire Department of Environmental Services Blasting Best Management Practices (BMPs) to prevent contamination of groundwater including preparing, reviewing and following an approved blasting plan; proper drilling, explosive handling and loading procedures; observing the entire blasting procedures; evaluating blasting performance; and handling and storage of blasted rock. The blasting plan shall be approved by the Durham Fire Department. In addition, the blasting plan shall be reviewed and approved by a Third-Party Consultant who shall provide nonbinding comments to the applicant and to the Fire Department. The Town of Durham shall propose three names for the Third-Party Consultant who shall then be selected by the applicant.

1. **Loading practices.** The following blasthole loading practices to minimize environmental effects shall be followed:
 - (a) Drilling logs shall be maintained by the driller and communicated directly to the blaster. The logs shall indicate depths and lengths of voids, cavities, and fault zones or other weak zones encountered as well as groundwater conditions.
 - (b) Explosive products shall be managed on-site so that they are either used in the borehole, returned to the delivery vehicle, or placed in secure containers for off-site disposal.
 - (c) Spillage around the borehole shall either be placed in the borehole or cleaned up and returned to an appropriate vehicle for handling or placement in secured containers for off-site disposal.
 - (d) Loaded explosives shall be detonated as soon as possible and shall not be left in the blast holes overnight, unless weather or other safety concerns reasonably dictate that detonation should be postponed.
 - (e) Loading equipment shall be cleaned in an area where wastewater can be properly contained and handled in a manner that prevents release of contaminants to the environment.
 - (f) Explosives shall be loaded to maintain good continuity in the column load to promote complete detonation. Industry accepted loading practices for priming, stemming, decking and column rise need to be attended to.
2. **Explosive Selection.** The following BMPs shall be followed to reduce the potential for groundwater contamination when explosives are used:
 - (a) Explosive products shall be selected that are appropriate for site conditions and safe blast execution.
 - (b) Explosive products shall be selected that have the appropriate water resistance for the site conditions present to minimize the potential for hazardous effect of the product upon groundwater.
3. **Prevention of Misfires.** Appropriate practices shall be developed and implemented to prevent misfires.

-
4. **Muck Pile Management.** Muck piles (the blasted pieces of rock) and rock piles shall be managed in a manner to reduce the potential for contamination by implementing the following measures:
 - (a) Remove the muck pile from the blast area as soon as reasonably possible.
 - (b) Manage the interaction of blasted rock piles and stormwater to prevent contamination of water supply wells or surface water.
 5. **Spill Prevention Measures and Spill Mitigation.** Spill prevention and spill mitigation measures shall be implemented to prevent the release of fuel and other related substances to the environment. The measures shall include at a minimum:
 - (a) The fuel storage requirements shall include:
 1. Storage of regulated substances on an impervious surface.
 2. Secure storage areas against unauthorized entry.
 3. Label regulated containers clearly and visibly.
 4. Inspect storage areas weekly.
 5. Cover regulated containers in outside storage areas.
 6. Wherever possible, keep regulated containers that are stored outside more than 50 feet from surface water and storm drains, 75 feet from private wells, and 400 feet from public wells.
 7. Secondary containment is required for containers containing regulated substances stored outside, except for on premise use heating fuel tanks, or aboveground or underground storage tanks otherwise regulated.
 - (b) The fuel handling requirements shall include:
 1. Except when in use, keep containers containing regulated substances closed and sealed.
 2. Place drip pans under spigots, valves, and pumps.
 3. Have spill control and containment equipment readily available in all work areas.
 4. Use funnels and drip pans when transferring regulated substances.
 5. Perform transfers of regulated substances over an impervious surface.
 - (c) The training of on-site employees and the on-site posting of release response information describing what to do in the event of a spill of regulated substances.
 - (d) Fueling and maintenance of excavation, earthmoving and other construction related equipment will comply with the regulations of the

New Hampshire Department of Environmental Services [note these requirements are summarized in WD-DWGB-22-6 Best Management Practices for Fueling and Maintenance of Excavation and Earthmoving Equipment" or its successor document. (see <http://des.nh.gov/organization/commissioner/pip/factsheets/dwgb/documents/dwgb-22-6.pdf>)

III. Pre-Blast Condition Survey: a minimum of 30 days prior to conducting any blasting, the applicant shall prepare a Pre-Blast Condition Survey Plan (PBS Plan) and submit it to the Third-Party Consultant and the Durham Fire Department for review and approval. The approved PBS Plan shall be implemented accordingly. The PBS Plan shall include pre-blast structural condition inspections of all existing structures and conditions on the site, adjacent to the site or in the vicinity of the site. The approved PBS Plan shall extend to such structures or conditions as may be affected by the applicant's construction operations and the inspections shall be performed on all structures, including homes, foundations, driveways, roadbeds, swimming pools, wells and mobile homes, within a radius of 250' of the subject lot. The blasting contractor and the owner of the property being inspected shall sign all such inspections once completed. If an owner refuses to allow for the conducting of a pre-blast conditions inspection or sign a pre-blast conditions inspection form for whatever reasons the applicant shall note this on the form. The blasting contractor shall make at least three attempts to notify the owner of the need for such inspections, the last such attempt shall include a written notification by certified mail and individual to contact.

1. The pre-blast structural condition inspection shall be performed in the presence of the property owner or an owner's representative and shall consist of photographs and a written description of the interior and exterior condition of each of the structures examined. Descriptions shall locate any existing cracks, damage, or other defects, and shall include such information so as to make it possible to determine the effect, if any, of the construction operations on the defect. A good quality videotape survey with appropriate audio description of locations, conditions, and defects can be used in lieu of a written form. Copies of all inspection forms and photographs shall be submitted to the Durham Fire Department and kept for a minimum of seven (7) years on file with the Durham Fire Department. The Third-Party Consultant shall review the data collected as part of the PBS Plan to ensure completeness and compliance with the PBS Plan.
2. The individual person conducting the inspections shall give written notice, not less than 10 days in advance, to the owner of the property concerned and tenants of the property. The notice shall state the dates on which inspections

are to be made. Copies of all notices shall be provided to the Durham Fire Chief.

3. A Blasting Permit shall only be issued after all pre-blast structural condition inspections have been performed.
4. Upon completion of all earth/rock excavation and blasting work, the applicant shall conduct a post-blast condition inspection of any properties, structures and conditions for which complaints of damage have been received or damage claims have been filed. Notice shall be given to all interested parties so they may be present during the final inspection. Records of the final inspection shall be distributed in the same manner as the original pre-blast structural condition inspection.
5. The Third-Party Consultant shall verify and assess the monitoring equipment utilized and calibration records.
6. The applicant shall hold a neighborhood meeting prior to any blasting to educate the neighborhood about the proposed blasting. The applicant shall send a letter in the mail, in advance, to all property owners within 250 feet of the subject lot notifying them about the neighborhood meeting.

SECTION 5 ACCESS TO THE SITE AND STAGING

All truck traffic will follow standard State and Town posted trucking laws and requirements. Trucks accessing the site from outside of Durham shall be restricted to Route 108 (then to Main Street/Church Hill) and Route 4 or Route 155A (then to Main Street/Old Concord Turnpike), and vice versa.

Access to the site will be from Main Street via two proposed construction entrances. Construction vehicles will access the site at these locations using a stabilized construction entrance. The vehicle gates will be secured at the close of the work day with locks. There are also person-gates at either end of the site where the construction fencing crosses the sidewalk. These gates will normally be closed during work periods and are for emergency access only.

The proposed site improvements include the re-construction and widening of the Main Street sidewalk along the frontage of the property; consequently, the sidewalk will be closed during construction. Pedestrian signage is proposed at either end of the project to alert pedestrians that the sidewalk is closed. Pedestrians will need to cross Main Street at one of the existing crosswalks and utilize the sidewalk on the northerly side of Main Street during construction.

Contractor parking will be located offsite at a 2 Mill Pond Road, which is a nearby property owned by the proponent. Workers may walk or be shuttled to and from the construction site and the satellite parking area. There will be limited parking available on-site for each of the trades to use, typically one parking space per trade will be reserved.

It is not anticipated that any large stockpiling of earth will occur on site. Due to the site constraints, spoils and construction debris will be live-loaded to maximum extent practicable. Stockpile areas shown on the Construction Management Plan are intended for construction materials and other delivered goods to the site.

There will be at least two construction dumpsters located on-site for miscellaneous trash and construction debris. The construction dumpsters will be maintained by the site contractor and emptied on an as-needed basis. On-site temporary sanitary facilities will be provided in accordance with state and local requirements.

Construction deliveries to the site will be coordinated to avoid queuing within Main Street. The dual access points to the site along Main Street will allow construction vehicles to circulate through the site, without the need to back-up onto Main Street.

SECTION 6 NOISE AND DUST CONTROL

The contractor shall have access to a water truck or some other means of dust control such as lime application. The project will also include periodic sweeping of Main Street along the project frontage as required.

Once the construction access points have been constructed, a stabilized construction entrance will be installed. The construction entrance is an 8"-12" thick, 20' wide and 40' long stone pad made of 3" angular, hard stone. At the end of each construction day, the contractor shall remove all visible material tracks and / or related materials in the public ways made by vehicles coming to and exiting the site.

The project will comply with the Town of Durham Noise Ordinance, including the time restrictions placed on construction equipment. Specifically, the Noise Ordinance prohibits outdoor construction equipment from operating between the hours of 10:00 p.m. to 7:00 a.m. In addition to compliance with the Noise Ordinance, the site contractor will be required to limit the idling of construction vehicles to the maximum extent practicable. Construction vehicle operators will be instructed to turn off their engines while the vehicles are not in use.

Further, this project will place more restrictive hours of operation than required by the Noise Ordinance. Truck loading and hauling will only take place between the hours of 7:00 a.m. and 5:00 p.m. Also, the use of rock drills or hammers will be limited to the hours of

9:00 a.m. to 4:00 p.m. on weekdays, with no drilling or hammering on weekends or holidays. See table below for a summary of the hours of operation.

SECTION 7 HOURS OF OPERATION

- Mobilization (workers on site): 6:00 a.m. to 6:00 p.m. Monday through Thursday
6:00 a.m. to 5:00 p.m. Friday
9:00 a.m. to 6:00 p.m. Saturday
- General construction activities, machinery operation, drilling, and truck loading and hauling: 7:00 a.m. to 6:00 p.m. Monday through Thursday
7:00 a.m. to 5:00 p.m. Friday
9:00 a.m. to 6:00 p.m. Saturday
- Blasting, chipping of stone, and use of hoe or rock hammers: 9:00 a.m. to 4:00 p.m. Monday through Friday
- There shall be no operation on the day of the Memorial Day Parade nor on the day of the Spring UNH Graduation.

SECTION 8 APPROXIMATE CONSTRUCTION SCHEDULE

Task	Start Date	Duration	End Date
Mobilization	06-09-2014	5 days	06-13-2014
Building Demolition	06-16-2014	10 days	06-27-2014
Clearing & Grubbing	06-30-2014	5 days	07-04-2014
Earthwork, Foundation & Walls	07-07-2014	30 days	08-15-2014
Utilities	07-28-2014	60 days	10-17-2014
Building Construction	08-18-2014	200 days	05-22-2015
Site Lighting	05-25-2015	10 days	06-05-2015
Hardscape Improvements	06-08-2015	30 days	07-17-2015
Landscaping	07-20-2015	20 days	08-14-2015
Project Closeout	08-17-2015	20 days	09-11-2015