





















DETAIL SHEET

POLLUTION PREVENTION PLAN FOR

RICE POND VILLAGE, MILLBURY, MA

PROJECT DESCRIPTION

This is a proposal to develop this site, first demoliahing the existing house and associated structures and then constructing three apartment buildings having 64 units each along with associated parking and driving alses and necessary utility infrastructure on this 15.6 acre site.

Construction will take place in a single phase and is expected to last from the spring 2024 into the summer of 2026. Total site alteration will be approximately 7.4 acres almost 2 acres of which was previously altered.

Construction Process

Before construction begins, erosion control barriers consisting of silt fencing attached to posts and backed by staked straw bales will be placed at the limit of work as shown on the Erosion & Sediment Control Plans, Sheets ESC1-ESC3.

The first step of the construction process will be the demolition of the existing structures. The resulting debris will be disposed of at appropriate licensed facilities. the second step of the process will be the cutting of any trees within the limits of proposed development. After this has been accomplished in the demoracated areas, clearing and grubbing will take place and loarn will be stockpiled. Then the existing pavement will be removed and also disposed of at an appropriate licensed facility.

The time of construction requiring the most attention and core occurs between the stripping of natural overburden and the stabilization of construction areas. Cut and fill areas create additional risk by increasing the possibility of starmwater runoff causing erosion.

The contractor will, to the extent possible, leave natural cover untouched at the edges of the property. The contractor will limit to the shortest time possible the time that areas are exposed. The landscaping will be completed as early as weather and building construction ollow. During the times between clearing and landscaping, sails will be atabilized with a combination of stump grindings, wood chips, hoy/strow mulch, temporary grass seeding and other measures as necessary to prevent any significant erosion of soils.

Soil stockplie areas will be kept out of the 100 foot buffer zone associated with the delineated wetland on site. Soil stockplies shall be surrounded by stoked slit fence placed at least 5 foot off the toe of slope of the stockpile. One suitable stockpile location is in the area northwest of the existing home and in front of proposed building #1.

In conjunction with the sits grading process, a number of sedimentation control procedures will be followed. The object of the procedures is to prevent the crosion of soils and the transport of sediments to adjacent properties and eventually to wetland resource creas off sits.

Stabilization
Temporary and permanent stabilization of disturbed surfaces is the most reliable method of preventing the erosion and transport of site soils. Toward that end, the creas that are disturbed will be provided temporary stabilization within two weeks after the last disturbance when:

- Work is not complete in that area,

- Work will remain incomplete for a period of three weeks or more, and

- The planting season has not been reached in areas which will be re-vegetated.

- Work is complete in that area and

- The planting season has been reached and areas can be revegetated.

Best Management Practices Employed

best Monagement Process Employed.

To quard against the transport of soils offsite several Best Management Practices (BMP's) may be employed. Sediment control barriers, sediment sumps, temporary settling basins, straw bale check dikes, sweles, a site entrance mat, flocautants in both crystal and block forms, and organic media for capture of silt below flocautants may be used on this site as appropriate. All of these measures are temporary. The site's permanent protection against erosion and the deposition of sediment off site at resource areas is the permanent stabilization of formerly exposed surfaces with povernent, flown and other landscaping.

Solls
According to the MassMapper web site the solls underlying this site are almost entirely Merrimae series solls which are categorized as hydrologic soil group A solls. However, unofficial soil tests at deep holes § \$1-6 and 15-17 revealed soils with a sandy loarn texture that were inconsistent with the expectation of sand textured Merrimae series solls. Sandy loarn texture soils have much more risk of erosion than sand textured soils so there is more risk of erosion at this site than the MassMapper mapping would indicate.

Resource Areas

There is a pond, wetlands and intermittent streams on the southwest and west ends of the site.

SITE PLAN DEVELOPMENT
As part of the Site Plans submitted to the Town of Milibury. Azimuth Land Design, LLC has prepared this erosion and sediment control plan calling for permanent and temporary erosion control measures. The site has no existing drainage system and there will be no drainage system connection to the system in Rice Road.

<u>PHASING</u>
Construction of the project will take place in one phase. Total site alteration will be approximately 7.4 acres.

POLLUTION PREVENTION SITE PLAN

The Site Plans prepared by Thompson-Liston Associates, Inc. contain Erosion & Sediment Control Plans. Various Best Management Practices (BMP's) are described herein and/or shown on the Erosion & Sediment Control Plans or the Detail Sheets and will be used to prevent or to mitigate erosion and pollution.

INSPECTION AND MAINTENANCE OF EROSION CONTROLS

1. At all times, silication fabric fancing, strow wattles or straw bales and stakes sufficient to construct an erosion control barrier a minimum 25 feet long will be stockalled on the site in order to repair established barriers which may have been damaged or breached.

- 2. The Developer will designate as inspector a person or entity other than the site supervisor. The inspector must be accessible seven days a week and be responsible for inspecting and coordinating the maintenance and repair of all erosion control systems on the site.
- 5. An inspection of all erasion control measures shall be conducted by the inspector at least once each week until the completion of construction of the subdivision. The Contractor shall inspect all erasion control systems daily and shall notify the inspector of any breaches or failures. In case of any noted breach or failure, the Contractor shall immediately make appropriate repairs.
- 4. The inspector shall inspect all erosion control systems on the site before, during and after any storm event reaching one of the following thresholds:

 a. Any storm in which rain is predicted to last for 12 consecutive hours or more.
 b. Any storm for which a flosh flood watch or warning is issued.
 c. Any single storm predicted to have a cumulative rainfull greater than 1/2 inch.
 d. Any storm event not meeting the previous three thresholds but which would mark the third consecutive day of measurable rainfall.
- 5. The inspector shall inspect erosion control measures at times of significant increase in runoff due to rapid thowing when the risk of failure of those measures is significant.
- 6. In such instances as remedial action is necessary, the inspector shall cause to be repaired within seven days, any and oil significant deficiencies in erosion control measures.
- 7. The Milliamy Conservation Commission shall be notified of any significant failure of erasion control measures and shall be notified of any release of pollutants.

SOIL TEST RESULTS:

UNOFFICIAL SOIL TEST RESULTS

DH1 - SANDY LOAM TO 84" NO REFUSAL

DH2 - SANDY LOAM TO 72" NO REFUSAL

DH3 - SANDY LOAM TO 100" NO REFUSAL

DH4 - SANDY LOAM TO 88" NO REFUSAL

DH5 - SANDY LOAM TO 113" NO REFUSAL

DH6 - SANDY LOAM TO 84" NO REFUSAL

DH7 - SAND TO 114" NO REFUSAL

DH8 - SAND TO 114" REFUSAL AT THAT DEPTH

DH9 - FILL TO 120"

DH10 - FILL TO 57" THEN SAND TO 119" DH11 - FILL TO 50" THEN SAND TO 114"

DH12 - SAND TO 108" NO REFUSAL

DH 13 - SAND TO 144" NO REFUSAL

DH 14 - SAND TO 144" NO REFUSAL

DH 15 - SANDY LOAM, MOTTLING, WEEPING AT 36"

DH 16 - SANDY LOAM, MOTTLING, WEEPING AT 30"

DH 17 - SANDY LOAM TO 72" NO REFUSAL

DH 18 - SAND TO 108" NO REFUSAL DH 19 - SAND TO 132" NO REFUSAL

DUST WILL BE CONTROLLED ON SITE THROUGH THREE METHODS, THE FIRST WILL BE THE APPLICATION OF MULCH OR STUMP GRINDINGS OVER EXPOSED SOIL TO PREVENT THE DRYING OUT OF SOILS AND THEIR BECOMING WINDBORN. THIS WILL BE UTILIZED IN SITUATIONS SUCH AS COVERING THE AREA OF PROPOSED BUILDINGS # 2 AND 3 AND THE CLUBHOUSE WHILE BUILDING # IS UNDER CONSTRUCTION AND THE SLAB FOUNDATIONS OF THOSE BUILDINGS HAVE NOT YET BEEN POURED.

THE SECOND METHOD OF DUST CONTROL THAT WILL BE APPLIED IS THE SPRAYING OF WATER FROM A TRUCK EQUIPPED WITH THE APPROPRIATE SPRAY SYSTEM. THIS IS TYPICALLY MOST APPLICABLE TO DRIVING AISLE AND PARKING AREAS THAT HAVE BEEN GRADED BUT NOT YET HAD A BASE COURSE OF PAVEMENT APPLIED

THE THIRD METHOD, IF NECESSARY WILL BE THE SPRAYING OF A PALLIATIVE SUCH

PARKING

192 UNITS ARE PROPOSED, CONSISTING OF 102 ONE BEDROOM UNITS, 66 TWO BEDROOM UNITS AND 24 THREE BEDROOM UNITS. 310 PARKING SPACES ARE PROPOSED, A RATIO OF 1.61 PER UNIT.

THESE 310 PARKING SPACES WILL INCLUDE THE FOLLOWING

33 GARAGE SPACES TOTAL, IN 3 BUILDINGS EACH WITH 10 SPACES.

12 VAN ACCESSIBLE SPACES TOTAL, IN FRONT OF THE ENTRANCE OF EACH OF THE FOUR STRUCTURES ON SITE.

33 COMPACT CAR SPACES TOTAL, IN TWO SEPARATE AREAS(EACH MEASURING 8'WIDE BY 18'DEEP).

235 REGULAR OUTDOOR PARKING SPACES(EACH MEASURING 9'WIDE BY 18'DEEP).

EROSION CONTROL DEVICES OR PROCESSES

The secliment control barrier will consist of an approved siltation fabric fencing installed on posts according to the manufacturer's instructions and backed by staked straw bales. The barriers will be placed in a manner that prevents the passage of soil materials under, around or over it. Sediment will be removed from against the barrier when the accumulated sediment has reached one third of the original installed height of the barrier.

Strow bales will be pieced in other locations on the site in order to further prevent the flow of sediment from the site or reduce the velocity of runoff crossing open land or running off stockpile or fill areas. Strow bale diversion dikes will also be placed within developing rills to reduce surface runoff velocities and to shift the path of the water flow. The locations where strow bale diversion dikes are installed will be determined in the field at the Inspector's discretion.

3. Slope Stabilization

Slopes or surfaces that are created due to excavation or filling along the edge of the parking or loading areas will be temporarily stabilized with one or more of the following.

the following:

- Hoy or strow mulch with tackifier
- Soft wood and hard wood chips or stump grindings.

Permanent stabilization of slopes and surfaces will employ one or more of the following:
- 6 inches of foom and grass

Sod
Riprop
Riprop
Erosion control blankets such as Tensar North American Green C125BN or approved equal and vegetation
Erosion control blankets such as Tensar North American Green C125BN or approved equal and vegetation

Mulch and landscaping plantings

A combination of grasses, riprop and/or plants and shrubbery
In arces that will be steeper than 2:1, after construction, the slope will be stabilized by the placement of heavy riprop or by the installation of erosion control matting specifically rated by the manufacturer for use on a 1:1 slope. The riprop slape will be formed by placing heavy stone on a one foot thick layer of gravel that is covered by an approved filter fabric.

4. Diversion Swale
Runoff diversion swales may be provided in order to intercept sheet and concentrated flows above areas of cut, above abutting properties or Rice Read. The swales will direct runoff to sediment sumps or temporary settling basins. The swales will be approximately 5 feet wide and one fact deep. Straw bats diversion dikes may be installed on the downhill side of the swales to assist in containing the water flow.

5. Sediment Sumps
Sediment sumps are excavated depressions of 10 foot diameter and 2 foot depth. The sumps will collect runoff from unfinished drives and slopes and will allow sediment to settle out before flow continues to a detention area or siltation control barrier. Sediment sumps will be cleaned whenever the accumulated sediment has reached one half of the original depth of the sump.

6. Temporary Settling Basins
Temporary settling basins (TSB's) are targer excavations made at locations that will receive significant stormwater runoff flow. They are used to capture and detain stormwater in the construction phase to settle out some eroded material and to issued the rate of flow of stormwater from construction phase work areas. Temporary settling basins are larger than sealment sumps and shall have silt fence or strow bale dikes at their entrance and exit to control flow. They shall be sized according to the DEP Stormwater management standards which requires that they have sufficient capacity to hold 1 Inch of runoff from the watershed contributing flow to them. For example, a TSB receiving flow from 1 acre of lend should have a volume capacity of at least three layers of jute mesh matting at their outlet. TSB's should be cleaned out whenever the accumulated sediment has reached more than 8 Inches deep. No TSB shall be located where the proposed infiltration structures are proposed. Expected locations for TSB's are shown on the Erosion & Sediment Central Plans.

If the appure of flows in sediment sumps and temporary settling basins does not sufficiently reduce the turbidity of runoff before it leaves the eite, flocaulant blocks shall be installed at the outlet of any sediment sump, TSB or swale discharge flow to the site's drainage system. Immediately downstream of the flocaulant blocks, a suitable organic media such as jute mesh matting shall be installed over stone for runoff that has contacted the flocaulant blocks to flow. This will allow capture of silts.

in addition, crystal flocculants may be used to reduce turbidity of captured runoff in sediment sumps and temporary settling basins.

The following is a sequence for the construction of the project. The actual schedule may vary somewhat from that stated if eite or weather conditions require.

An example of a logical change to the schedule would be devicting from the sequence below to allow the laying of berms prior to a freeze in order to better control the site drainage.

- 1. The Developer will hold a preconstruction meeting with representatives of the Town of Millbury in order to review permits, procedures and construction methods.
- 2. The Developer will hold a preconstruction meeting with the Engineer, Contractor's employees and the inspector in order to review permits, procedures and construction methods
- 3. Establish the construction entrance to the site off Rice Read.
- 4, install the site entrance mat in the location of the proposed entrance off Rice Road, and erosion control barriers at the limit of work as shown on the Grading
- 5. Demolish the existing structures, removing any debris from the site and disposing of it in appropriate facilities according to applicable regulations.
-). Cut trees as necessory for the proposed development but no further. Chip wood and then remove existing pavement and dispose of it at an appropriate facility. hen, clear and grub where trees were cut. Grind stumps for use of the grindings as a temporary stabilization cover.
- 7. Stockgile and compact excavated loom in an area surrounded by staked straw bales or silitation fencing. We suggest the proposed location of units 35&36. Place the straw bales or fencing at least five feet from the base of the loam pile.
- 8. Begin earthwork to bring grades to the subgrade elevations for the proposed driving aisles and parking areas.
- 9. Begin construction of the three apartment buildings and install the utility connections to the proposed apartment buildings.

10. Install the new drainage system, new sanitary sewer, new water line services to the buildings and new electric connections and, when complete, lay the binds course of povernent,

- 12. Permanently stabilize exposed elopes with riprap, 6 inches of loam and grass, other vegetation and landscaping.
- 14. Remove accumulated sediment and temporary erosion control measures after all slopes have been permanently stabilized and the risk of erosion has passed

ZONING COMPLIANCE TABLE

THE SITE IS LOCATED IN THE SUBURBAN 2 ZONING DISTRICT. THE FOLLOWING TABLE COMPARES THE S2 ZONING REQUIREMENTS AND DIMENSIONS PROPOSED AT THIS SITE:

DIMENSION	REQUIREMENT	PROPOSED
MIN. LOT AREA	15,000*	654,220 S.F.
MIN. FRONTAGE	150'	346.09"
MIN. FRONT YARD	25'	37.7'(CLUBHOUSE)
MIN. SIDE YARD	10'	17.6'(BUILDING 2)
MIN. REAR YARD	10'	6B'(BUILDING 1)
MAX. LOT COVERAGE	30%	9.7%
MAY BUILDING HEIGHT	30'	85 5'

*THE MINIMUM LOT AREA REQUIREMENT MAY BE REDUCED TO 15,000 S.F. IF THE LOT WILL BE SERVED BY PUBLIC WATER AND PUBLIC SEVERAGE.

--WITH 192 UNITS PROPOSED, THE AREA PER UNIT IS 3,407 S.F.

--FLOOR AREA RATIO WILL BE 0.38 ((21,119 S.F. X 4 FLOORS X 3 BUILDINGS+CLUBHOUSE)/15.6 ACRES)

- ---BUILDING COVERAGE WILL BE 0.10 ((21,119 S.F. X 3 BUILDINGS + CLUBHOUSE)/15.6 ACRES)
 ---TOTAL SITE ALTERATION WILL BE 7.4 ACRES.



CLT. NO.		JOB NO.	
501		224-501	
DATE: OCTOBE	R 24, 2023	DWG NO. RICEROADCURRENT	
	RE	SIONS	
DATE; DES		CRIPTION	
12/29/23	TOWN REVIE	W	
2/19/24	TOWN REVIE	W	
	SCALE: AS	NOTED	

RICE POND VILLAGE SITE PLAN OF LAND

MILLBURY, MASSACHUSETTS

PREPARED FOR OWNER/APPLICANT

SJV INVESTMENTS, LLC 118 TURNPIKE ROAD, SHITE 200 SOUTHBOROUGH, MA 01772

DETAIL SHEET