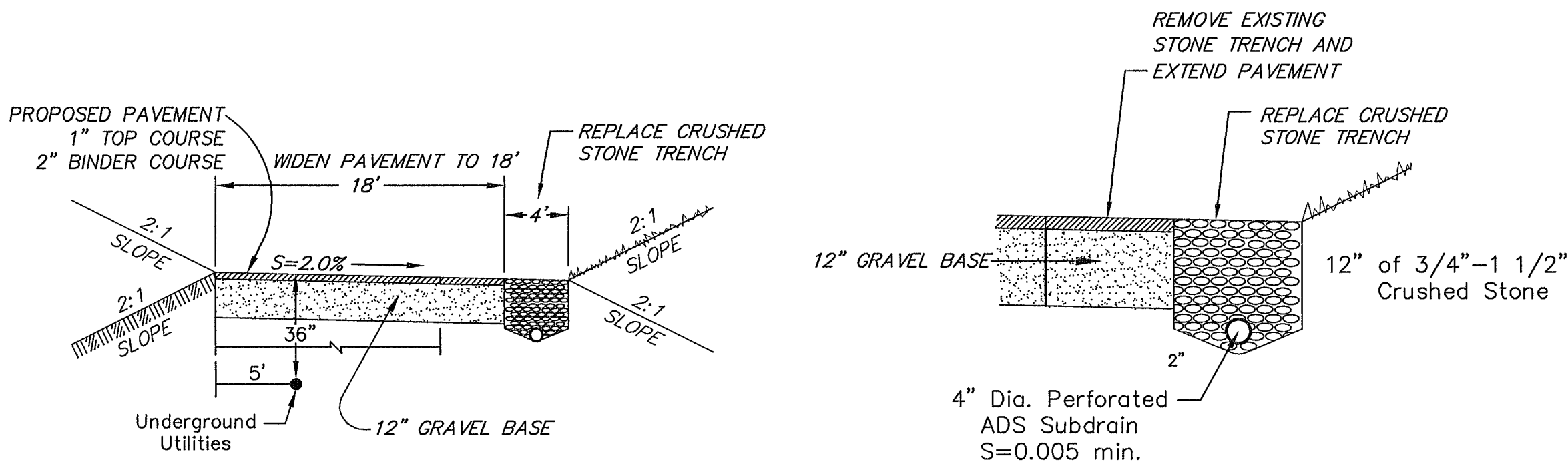


- NOTES:**
1. STRAW ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE ROLL IN A TRENCH, 3" DEEP. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND ROLL.
  2. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.

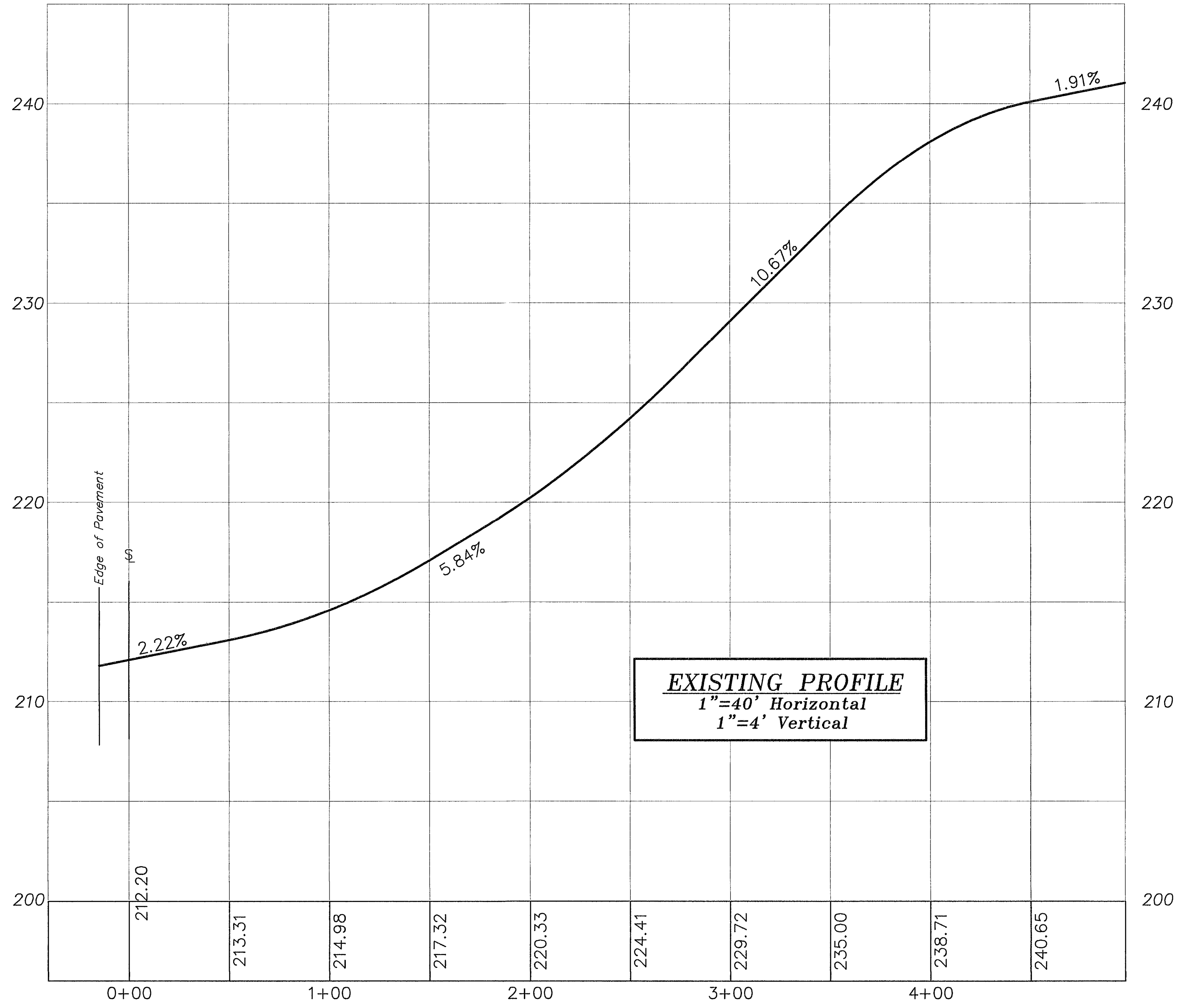
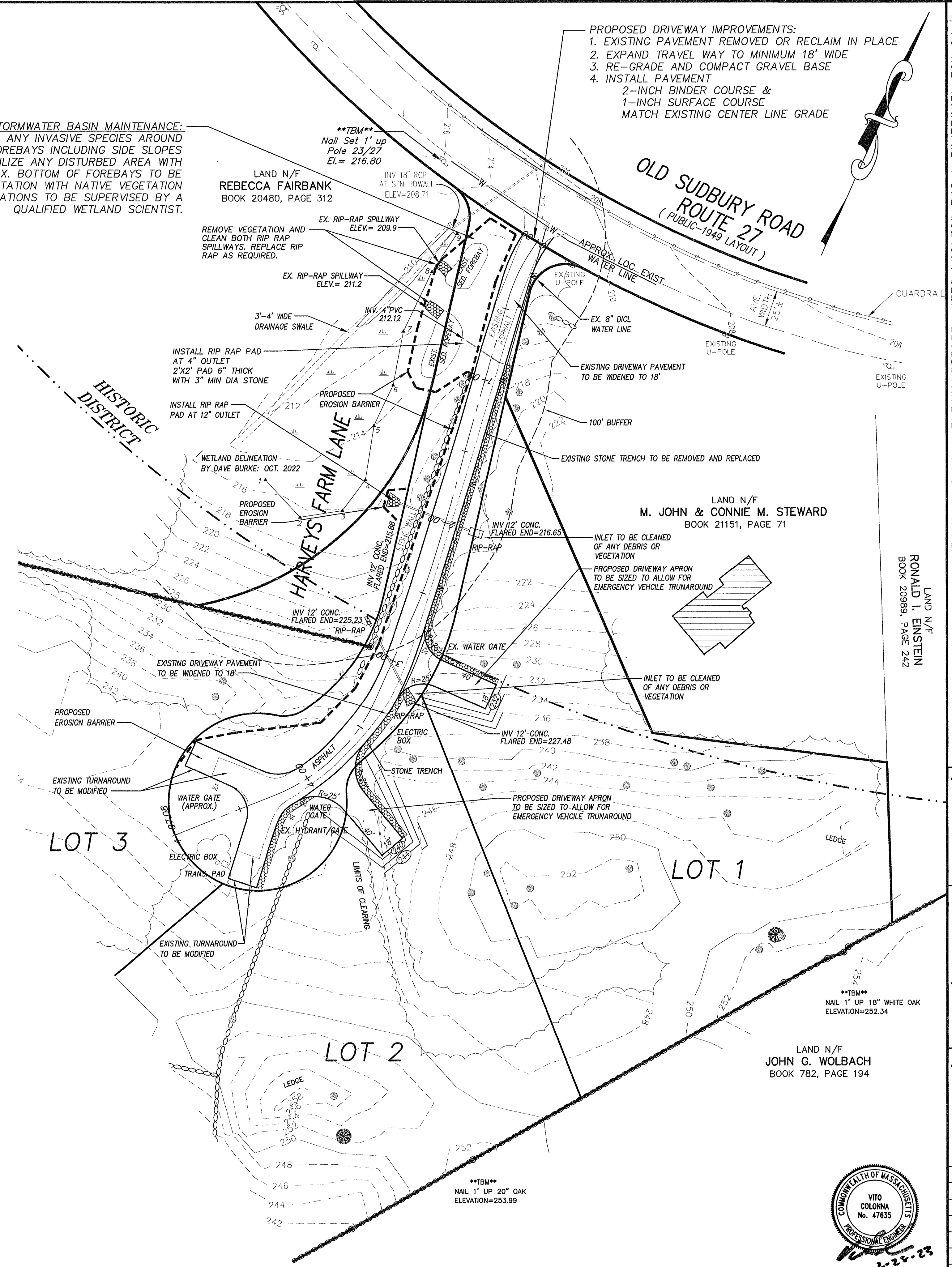
**EROSION BARRIER**  
NOT TO SCALE



**PROPOSED DRIVEWAY IMPROVEMENT DETAIL**  
Not to scale

**PROPOSED STORMWATER BASIN MAINTENANCE:**  
CLEAR VEGETATION AND ANY INVASIVE SPECIES AROUND EXISTING SEDIMENT FOREBAYS INCLUDING SIDE SLOPES AND BERM AREAS. STABILIZE ANY DISTURBED AREA WITH LOAM AND NATIVE SEED MIX. BOTTOM OF FOREBAYS TO BE CLEARED OF WOODY VEGETATION WITH NATIVE VEGETATION TO REMAIN. CLEARING OPERATIONS TO BE SUPERVISED BY A QUALIFIED WETLAND SCIENTIST.

- PROPOSED DRIVEWAY IMPROVEMENTS:**
1. EXISTING PAVEMENT REMOVED OR RECLAIM IN PLACE
  2. EXPAND TRAVEL WAY TO MINIMUM 18' WIDE
  3. RE-GRADE AND COMPACT GRAVEL BASE
  4. INSTALL PAVEMENT  
2-INCH BINDER COURSE &  
1-INCH SURFACE COURSE  
MATCH EXISTING CENTER LINE GRADE



- EROSION AND SEDIMENTATION CONTROL NOTES:**
1. ALL WORK SHALL BE IN ACCORDANCE WITH THE PLANS AND PERMIT CONDITIONS.
  2. PRIOR TO INITIATING CONSTRUCTION, ALL SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND DETAIL DRAWINGS.
  3. THIS PLAN DEPICTS THE MINIMUM REQUIRED SEDIMENTATION AND EROSION CONTROLS. THE CONTRACTOR SHALL EMPLOY ADDITIONAL SEDIMENTATION AND EROSION CONTROL MEASURES AS NECESSITATED BY SITE CONDITIONS, OR AS DIRECTED BY THE OWNER, THE OWNER'S REPRESENTATIVE, OR THE CONSERVATION COMMISSION TO ENSURE PROTECTION OF ALL WETLAND RESOURCES AND CONTROL SEDIMENT TRANSPORT. IF SEDIMENTATION PLUMES OCCUR, THE CONTRACTOR SHALL STOP WORK AND INSTALL ADDITIONAL SEDIMENTATION CONTROL DEVICES IMMEDIATELY TO PREVENT FURTHER SEDIMENTATION.
  4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TEMPORARY AND PERMANENT SEDIMENTATION AND EROSION CONTROLS UNTIL WORK IS COMPLETE AND ALL AREAS HAVE BEEN PERMANENTLY STABILIZED. AT SUCH TIME THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL SEDIMENTATION AND EROSION CONTROL MEASURES.
  5. THE CONTRACTOR SHALL INSPECT SEDIMENTATION AND EROSION CONTROLS ON A DAILY BASIS AND IMMEDIATELY AFTER EACH RAINFALL. REPAIRS SHALL BE MADE BY THE END OF THE WORKING DAY. ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR WHEN THE VOLUME REACHES 1/4 TO 1/2 THE HEIGHT OF SILT FENCE OR SEDIMENT TRAP, OR AS DIRECTED BY THE LOCAL AUTHORITY.
  6. SOIL STOCKPILES SHALL BE STABILIZED TO PREVENT EROSION, AND A PERIMETER SEDIMENT CONTROL SYSTEM SHALL BE INSTALLED. NO MATERIALS SUBJECT TO EROSION SHALL BE STOCKPILED OVERNIGHT WITHIN 100 FEET OF A WETLAND UNLESS COVERED.
  7. DISTURBED AREAS SHALL BE STABILIZED BY LOAMING AND SEEDING, OR BY ANOTHER APPROVED METHOD, AS SOON AS POSSIBLE AFTER THE FINISHED GRADE HAS BEEN MET. DISTURBED AREAS WITH SLOPES 3:1 (H:V) OR GREATER SHALL BE COVERED WITH LOAM AND STABILIZED WITH HYDROSEED AND SOIL TACKIFIER. IF FINAL GRADING DOES NOT OCCUR DURING THE GROWING SEASON, THESE AREAS SHALL BE MULCHED WITH HAY SECURED.
  8. DEWATERING OPERATIONS, IF REQUIRED, SHALL DISCHARGE ONTO STABILIZED AREAS, AND ALL DISCHARGE WATER IS TO PASS THROUGH SEDIMENTATION CONTROL DEVICES TO PREVENT IMPACTS UPON WATER BODIES, BORDERING VEGETATED WETLANDS, DRAINAGE SYSTEMS AND ADJUTING PROPERTIES. AT A MINIMUM ALL DISCHARGES SHALL BE INTERCEPTED BY HAYBALE CORRAL AND HAYBALE CHECK DAMS SPACED 10' APART.
  9. STAKED WATTLES AND SILT FENCE SHALL BE INSTALLED ALONG THE EDGE OF PROPOSED DEVELOPMENT OR AS INDICATED ON THE PLANS. ADDITIONAL WATTLES AND SILT FENCE SHALL BE LOCATED AS CONDITIONS WARRANT, AND IN SOME AREAS STRUCTURES MAY HAVE TO BE DUPLICATED AT REGULAR INTERVALS.
  10. STREET SWEEPING IN THE VICINITY OF THE PROJECT AREA SHALL BE PERFORMED AS NEEDED UNTIL THE PROJECT LIMITS HAVE BEEN STABILIZED. ALL SEDIMENT TRACKED ONTO PUBLIC RIGHT-OF-WAYS SHALL BE SWEEP AT THE END OF EACH WORKING DAY.
  11. ALL EXISTING AND PROPOSED DRAINAGE SYSTEM INLETS, WHICH MAY RECEIVE STORMWATER FLOW FROM DISTURBED AREAS, SHALL BE PROVIDED WITH SILT SACKS. THE CONTRACTOR SHALL MAINTAIN THESE DEVICES PER THE MANUFACTURERS RECOMMENDATIONS UNTIL ALL WORK IS COMPLETE AND ALL AREAS HAVE BEEN ADEQUATELY STABILIZED.
  12. DUST CONTROL MEASURES SHALL BE IMPLEMENTED AND MAINTAINED PROPERLY THROUGHOUT DRY WEATHER PERIODS UNTIL ALL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED. METHODS FOR DUST CONTROL SHALL INCLUDE WATER SPRINKLING AND/OR OTHER METHODS APPROVED BY THE ENGINEER.
  13. ALL VEHICLES SHALL ENTER AND EXIT THE SITE VIA THE STABILIZED CONSTRUCTION ENTRANCE CONSISTING OF CRUSHED STONE TO A DEPTH OF 6" FOR THE FIRST 50 FEET FROM EXISTING PAVED SHEETS. IF THE SITE CONDITIONS ARE SUCH THAT THE GRAVEL PAD DOES NOT REMOVE THE MAJORITY OF THE MUD AND DEBRIS, THEN THE TIRES SHALL BE WASHED BEFORE ANY VEHICLES ENTER ADJACENT ROADWAYS. ALL WATER USED FOR THE WASHING SHALL BE COLLECTED AND TREATED PRIOR TO ENTERING THE DRAINAGE SYSTEM. THE CONTRACTOR SHALL INSPECT THE CONSTRUCTION ENTRANCE DAILY AND AFTER HEAVY USE.

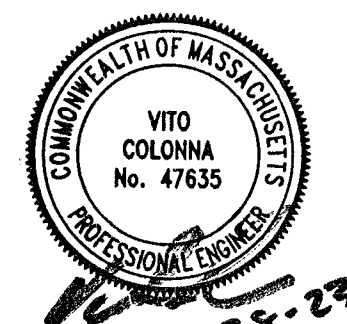
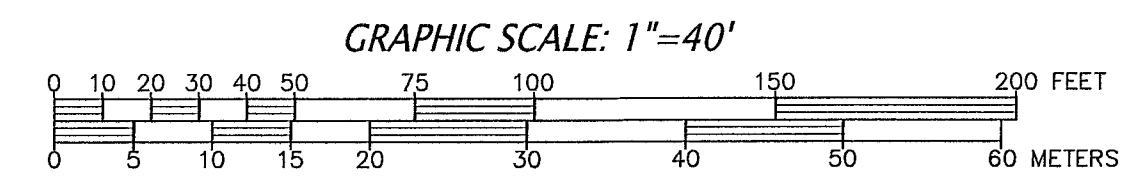
PREPARED FOR:  
**RAIED DINNO**

**CONNORSTONE ENGINEERING INC.**  
CIVIL ENGINEERS AND LAND SURVEYORS  
10 SOUTHWEST CUTOFF, SUITE 7  
NORTHBOROUGH, MASSACHUSETTS 01532  
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SUDBURY, MASSACHUSETTS 01776  
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**DRIVEWAY IMPROVEMENT PLAN**  
OFF  
HARVEYS FARM LANE  
IN  
SUDBURY, MA

2-28-2023 CON. COMM. REVIEW EDITS  
2-9-2023 UPDATED WETLAND DELINEATION

REVISED: \_\_\_\_\_ DESCRIPTION: \_\_\_\_\_  
DRAWN BY: REM CHECK BY: VC  
DATE: MAY 13, 2022  
SCALE: 1"=50' SHEET 1 OF 1.



# STORMWATER OPERATION AND MAINTENANCE PLAN

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Harvey's Farm Lane, Sudbury, MA

**March 3, 2023**

Stormwater Management System Owner:  
and Responsible Party

Name: Homeowners Association

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This Operation and Maintenance Plan has been prepared in accordance with the Sudbury stormwater standards and recommendations outlined in the DEP stormwater handbook. This plan outlines the minimum efforts necessary to ensure that the stormwater collection and treatment system and sedimentation and erosion control system for this site operates in accordance with the design. Efforts in addition to the minimum listed herein may be required to ensure adequate stormwater management.

This plan includes general site restrictions, routing/non-routine operation and maintenance; reporting and record keeping; and an estimated budget.

## General Site Conditions

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The following conditions are imposed as part of this Plan per the Sudbury Stormwater Management Bylaw.

- With prior notification to the Responsible Party, the Conservation Commission or its designee shall be allowed to enter the site at reasonable times and in a reasonable manner for the purposes of inspection.
- Illicit discharges into stormwater management system are perpetually prohibited.
- Store lawn and deicing chemicals under cover
- Apply fertilizers and pesticides sparingly to prevent wash-off
- Use of slow release nitrogen and low phosphorus fertilizers is encouraged
- No fertilization or pesticide application in or near any wetland resource area
- Limit exterior washing of vehicles to locations that drain to pervious surfaces and away from storm drains
- Maintain vehicles and clean up fluid spills/drips from pavement areas
- Pump and maintain septic systems
- Use alternative deicers such as calcium chloride and magnesium chloride in lieu of sodium based deicers
- No coal tar-based pavement sealants are to be used on any site without approval of the Conservation Commission.

## Continuing Inspection/Maintenance

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Schedule: The entire stormwater management system should be inspected twice per year.

Specific inspection and maintenance practices are listed under each component below. Upon completion of inspection, the inspector should specify any necessary corrective actions to be taken by ownership of the facility. The items to be inspected and maintained are described in the following sections.

Based on the observed conditions, the Responsible Party shall immediately schedule the appropriate maintenance. Some minor maintenance, such as the removal of blockages, debris and saplings in the basins may be conducted at the time of the inspection. More difficult maintenance activities, requiring special equipment, will have to be scheduled, such as the removal of excessive sediment or the repair of eroded areas. All sediment must be removed at least once per year.

### Vegetation

Vegetation shall be dense and aesthetically acceptable on all portions of the project, including the side slopes, buffer strips and the embankments. The inspector shall determine and document: (1) whether fertilizing is required (2) the areas where grass shall be mowed, and (3) the areas which shall be protected against erosion. In addition, recently seeded areas shall be inspected for failures. Eroded areas shall be filled and compacted, if necessary, and reseeded as soon as possible. If an area erodes twice, then a geotextile fabric is to be installed to stabilize the area to allow vegetation to be established. These maintenance activities shall take place during the planting season. Areas affected by lack of rainfall shall be watered.

### Roadway & Driveway Surfaces

Paved driveway surfaces shall be inspected for settlement, cracking, potholes, and sediment/sand accumulation on the surface. Surfaces are recommended to be swept twice per year (spring and fall), or as required if accumulated sediment is observed. Any structural deficiencies shall be reported to the Owner and repaired as required.

### Drainage Inlets and Cross Culverts:

Two 12-inch drainage inlets with cross culverts are located along the roadway (inlets along the easterly side of the road). The inlets, outlets, and piping should be inspected for sediment or debris accumulation. Any accumulation should be removed and properly disposed of. The outlets should be equipped with riprap outlet pads, and should be inspected for any signs of scour, downstream erosion, or riprap displacement. Riprap should be replaced as required, and any areas of scour repaired as noted above.

### Stone Trench:

A crushed stone trench with perforated pipe is located along the easterly edge of the roadway. This trench should be inspected for structural condition (settlement, tire ruts, etc.) and debris accumulation. Any structural damage shall be repaired and debris removed.

### Stormwater Basins (Forebays)

Two stormwater forebays are located off the westerly side of the roadway near the intersection with Old Sudbury Road. The forebays are designed to contain wetland plantings within the bottom area and create a 'naturalized area.' The forebays shall be inspected a minimum of twice per year. Inspections shall evaluate the surface for accumulated sediment, vegetation condition, embankment condition, and inlet/outlet areas. The inspector shall also inspect the area for invasive species that may warrant removal.

The embankment and side slopes should exhibit no visible signs of erosion, settlement, slope failure, wildlife damage, or vehicle damage. Damaged side slopes should be repaired using similar fill of adequate permeability. Damaged embankments should be filled and compacted with impermeable soils to prevent seepage. Eroded areas should be reseeded as discussed under "vegetation". Repeated repairs to side slopes may necessitate the flattening of the slopes to ensure structural stability. Signs of vehicle damage may necessitate the construction of fences around certain areas. Repairs to damaged or deteriorating structures shall be made as soon as possible.

Regular maintenance shall include mowing of the side slopes, embankments, and access areas twice per year. The bottoms of the forebays shall be inspected, and any invasive species or woody vegetation shall be removed. Work within the bottom of forebay shall be performed with hand tools to the maximum extent practical. The attached sketch shows the typical area of mowing/maintenance.

Never store snow within forebay areas, and after plowing ensure flow is not diverted around the forebays.

### **Reporting and Record Keeping**

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The responsible party will be responsible for maintaining accurate Maintenance Logs for all maintenance, inspections, repairs, replacements, and disposal (for disposal, the log shall indicate the type of material and the disposal location). The logs shall be kept on site be available for inspection by the Town municipal departments or other auditing authority. This will be a perpetual requirement of the Owners or their Designated Party.

The Site Maintenance Log will be completed as described above, and at a minimum will include:

- a. The date of inspection or activity;
- b. Name of inspector;
- c. The condition of each BMP,;
- d. Description of the need for maintenance; and
- e. For disposal include type of material and the disposal location;

### **Changes to Operation and Maintenance Plans**

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The owner(s) of the stormwater management system must notify the Stormwater Permitting Authority or its designated Reviewing Agent of changes in ownership or assignment of financial responsibility.

### **Emergency Response Plan / Spill Control Practices**

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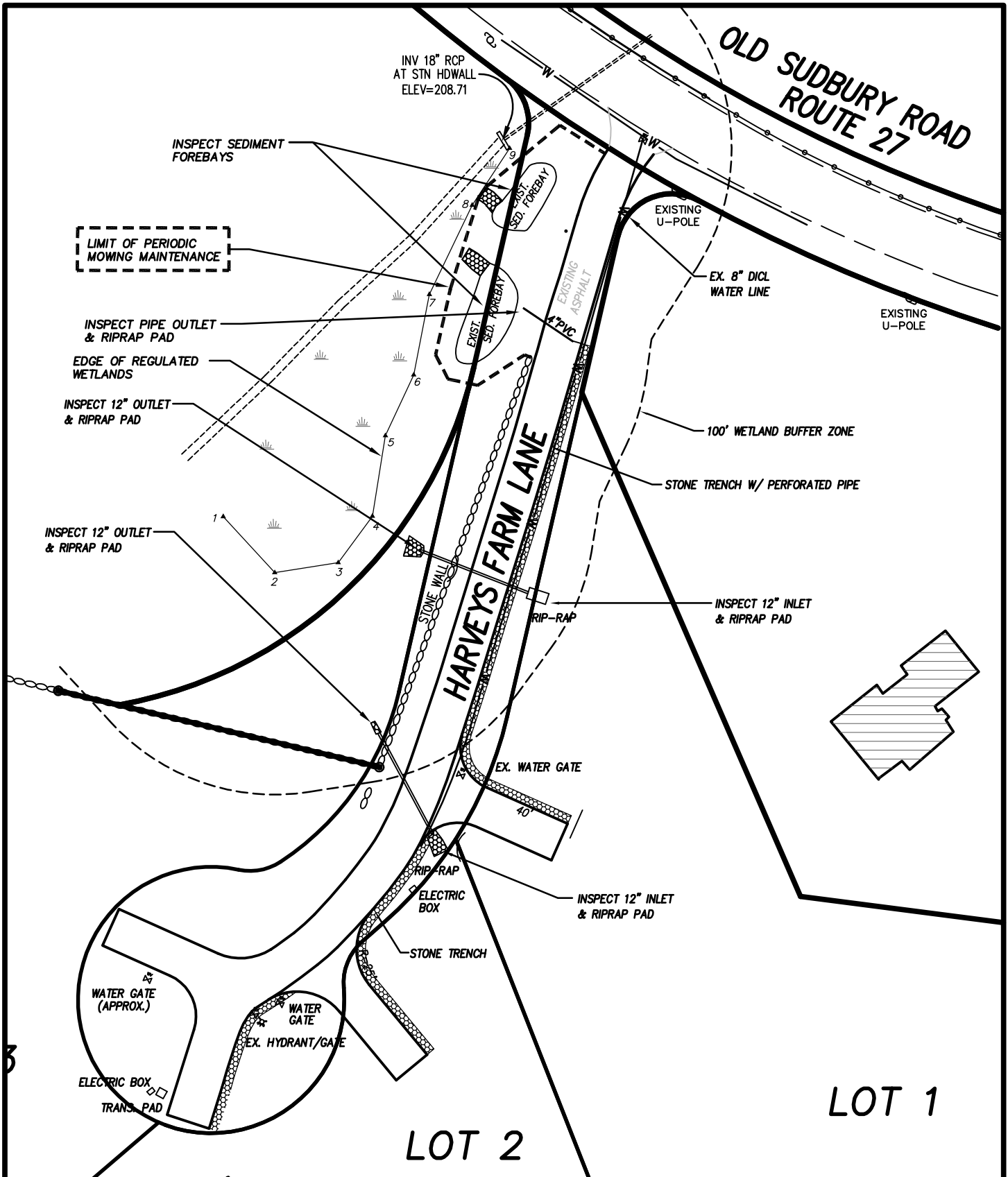
On-site storage of hazardous materials shall not be allowed.

In the event of an accident in the driveway where a significant amount of gasoline or other petroleum product is released, the following procedure should be followed:

1. Immediately contact the following agencies:

Sudbury Fire Department	(508)443-2239
MassDEP Emergency response	(888) 304-1133
2. Provide support to agencies listed above, which may include contacting an outside contractor to provide clean-up or contacting a Licensed Site Professional (LSP) to lead the clean-up.

The outlet to the drainage system should be inspected. If there is evidence of discharge from the drainage system, additional corrective actions must be taken extending to the receiving water or beyond.



**OPERATION AND MAINTENANCE PLAN EXHIBIT**  
**HARVEYS FARM LANE**  
**SUDBURY, MA**

SCALE: 1"=60'