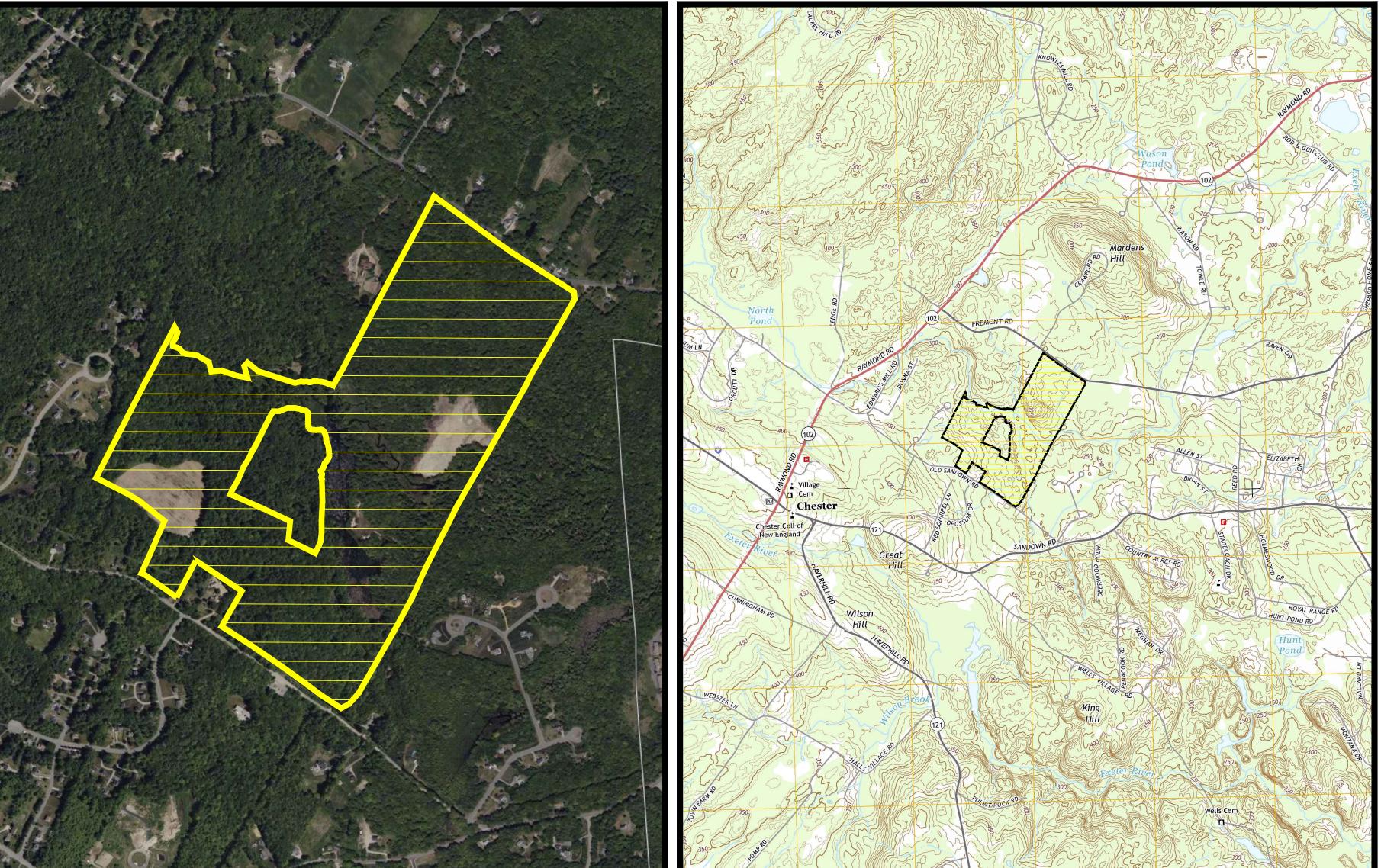
CHESTER GRAVEL PIT

152 FREMONT ROAD CHESTER, NEW HAMPSHIRE

PREPARED FOR:
OLD SANDOWN ROAD, LLC
352 SOUTH BROADWAY STREET
SALEM, NH 03079



AERIAL MAP

SCALE: 1" = 600'

USGS MAP

SCALE: 1" = 2000'

SHEET INDEX

- Cover Sheet
- 2 Site Excavation Overview Plan
- Existing Conditions & Site Specific
 - Soils Plan
- 4 Excavation & Reclamation Plan
- 5 Cross-Section Plan
- 6 Cut/Fill Analysis Plan
- 7 Phasing Plan & Construction Notes
- -9 Site Details

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The Dubay Group, Inc

136 Harvey Rd. Bldg B101 Londonderry, NH 03053 603-458-6462

Engineers

Planners

Surveyors
TheDubayGroup.com

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PROJECT:

CHESTER GRAVEL PIT

MAP 5 LOT 85 152 FREMONT ROAD CHESTER, NH

OLD SANDOWN RD, LLC 352 SOUTH BROADWAY ST. SALEM, NH 03079

PAUL GARABEDIAN, JR
352 SOUTH BROADWAY ST.

SALEM, NH 03079

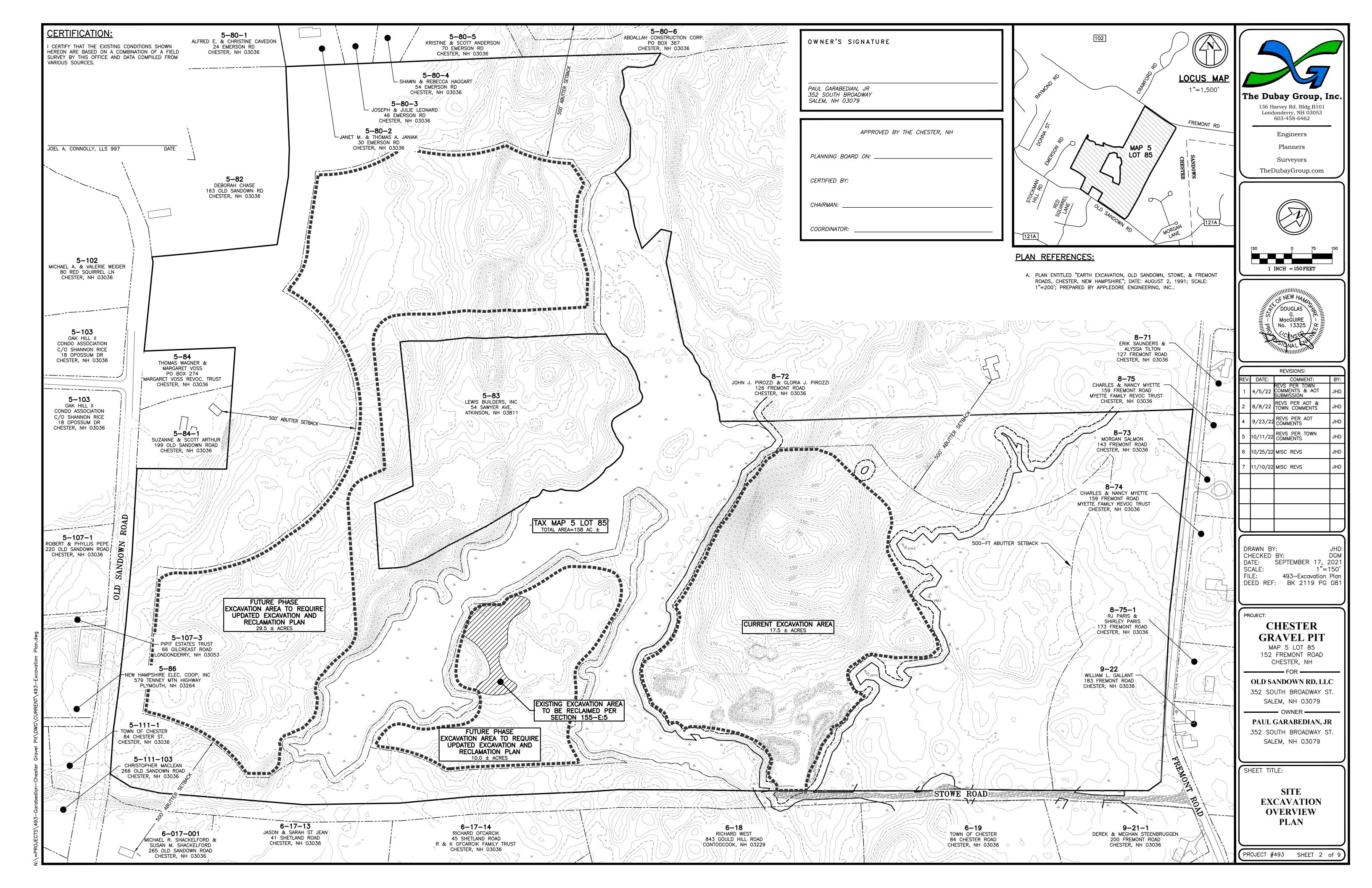
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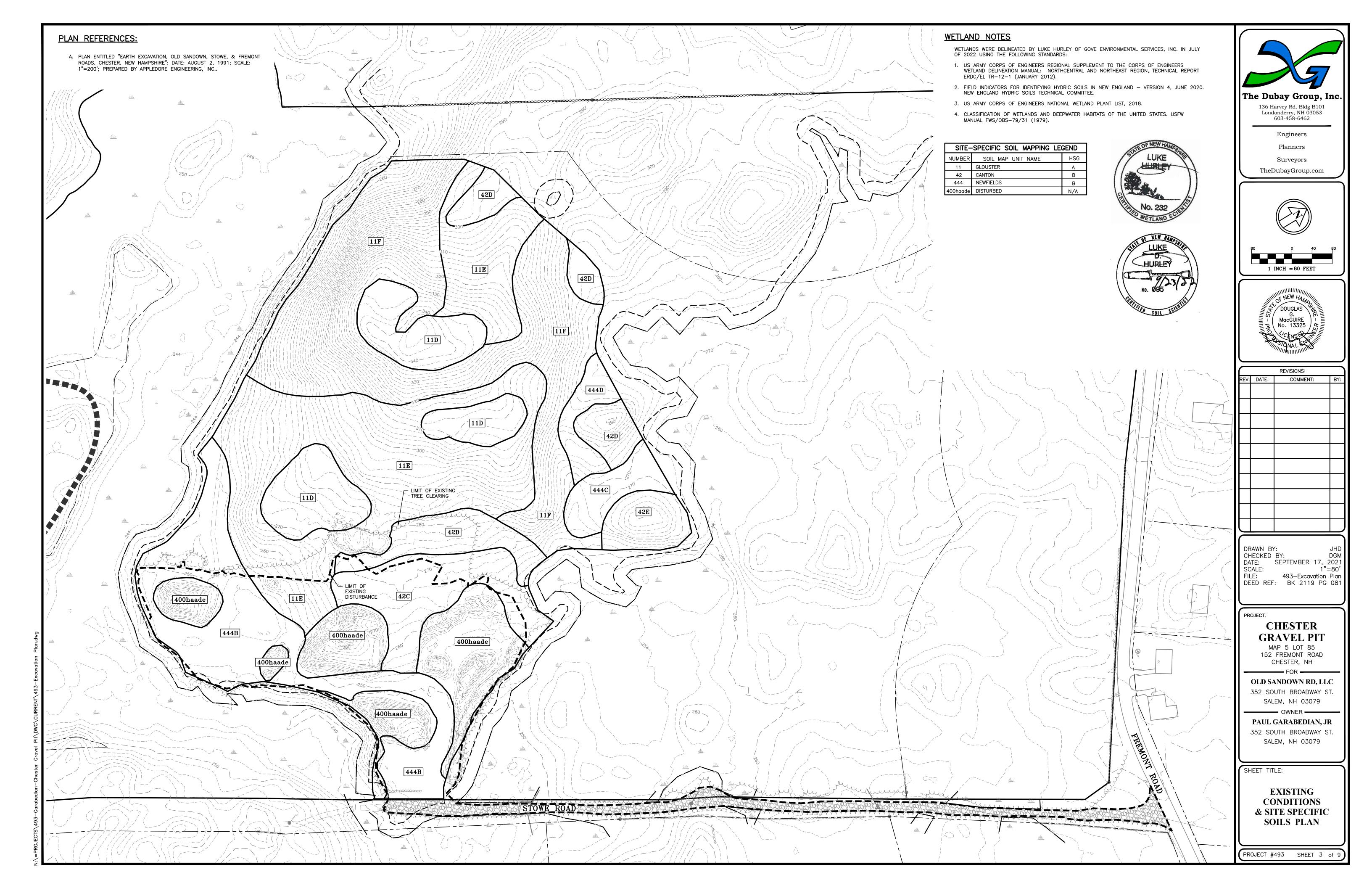
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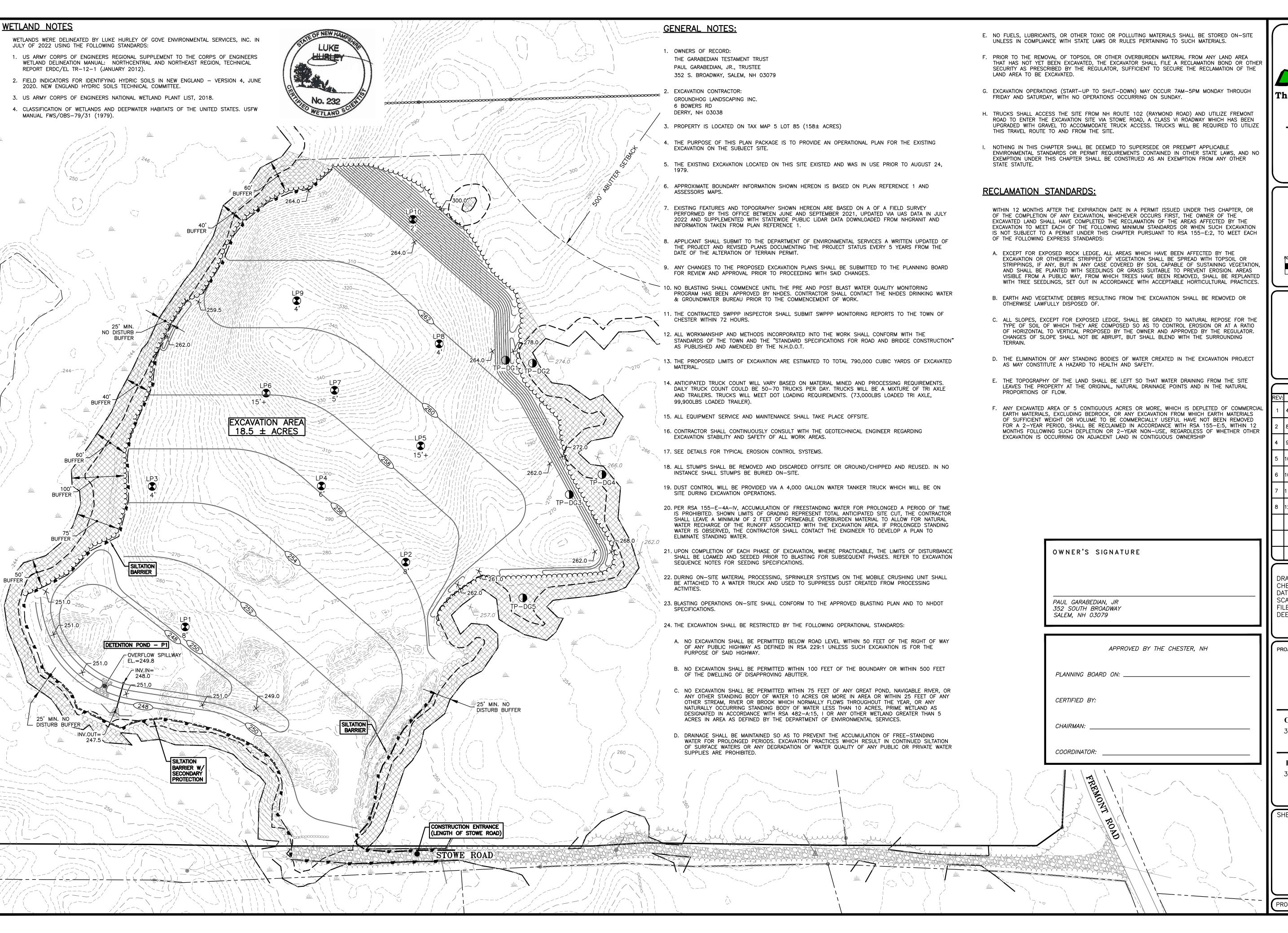
G PROJECT #493 SHEET 1

WILDLIFE PROTECTION NOTES:

- ALL OBSERVATIONS OF THREATENED OR ENDANGERED SPECIES SHALL BE REPORTED IMMEDIATELY TO THE NEW HAMPSHIRE FISH AND GAME DEPARTMENT NONGAME AND ENDANGERED WILDLIFE ENVIRONMENTAL REVIEW PROGRAM BY PHONE AT 603-271-2461 AND BY EMAIL AT NHFGREVIEW@WILDLIFE.NH.GOV. EMAIL SUBJECT LINE: NHB21-2386, CHESTER GRAVEL PIT, WILDLIFE SPECIES OBSERVATION.
- PHOTOGRAPHS OF THE OBSERVED SPECIES AND NEARBY ELEMENTS OF HABITAT OR AREAS OF LAND DISTURBANCE SHALL BE PROVIDED TO NHF&G IN DIGITAL FORMAT AT THE ABOVE EMAIL ADDRESS FOR VERIFICATION AS FEASIBLE.
- IN THE EVENT A THREATENED OR ENDANGERED SPECIES IS OBSERVED ON THE PROJECT SITE DURING THE TERM OF THE PERMIT, THE SPECIES SHALL NOT BE DISTURBED, HANDLED, OR HARMED IN ANY WAY PRIOR TO CONSULTATION WITH NHF&G AND IMPLEMENTATION OF CORRECTIVE ACTIONS RECOMMENDED BY NHF&G, IF ANY, TO ASSURE THE PROJECT DOES NOT APPRECIABLY JEOPARDIZE THE CONTINUED EXISTENCE OF THREATENED AND ENDANGERED SPECIES AS DEFINED IN FIS 1002.04.
- THE NHF&G, INCLUDING ITS EMPLOYEES AND AUTHORIZED AGENTS, SHALL HAVE ACCESS TO THE PROPERTY DURING THE TERM OF THE PERMIT.







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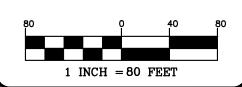
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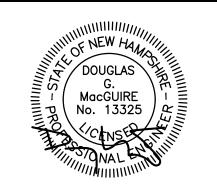
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PROJECT:

CHESTER GRAVEL PIT MAP 5 LOT 85

152 FREMONT ROAD CHESTER, NH

OLD SANDOWN RD, LLC 352 SOUTH BROADWAY ST. SALEM, NH 03079

PAUL GARABEDIAN, JR 352 SOUTH BROADWAY ST.

SALEM, NH 03079

SHEET TITLE:

EXCAVATION & RECLAMATION PLAN

PROJECT #493 SHEET 4

SECTION A-A



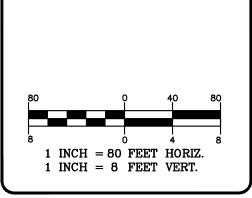
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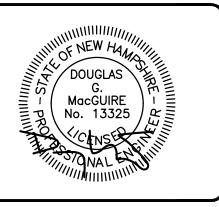
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PROJECT:

CHESTER GRAVEL PIT

MAP 5 LOT 85 152 FREMONT ROAD CHESTER, NH

OLD SANDOWN RD, LLC 352 SOUTH BROADWAY ST. SALEM, NH 03079

----- OWNER -----PAUL GARABEDIAN, JR 352 SOUTH BROADWAY ST. SALEM, NH 03079

SHEET TITLE:

CROSS SECTION PLAN

PROJECT #493 SHEET 5 of 9

NHDES BLASTING NOTES:

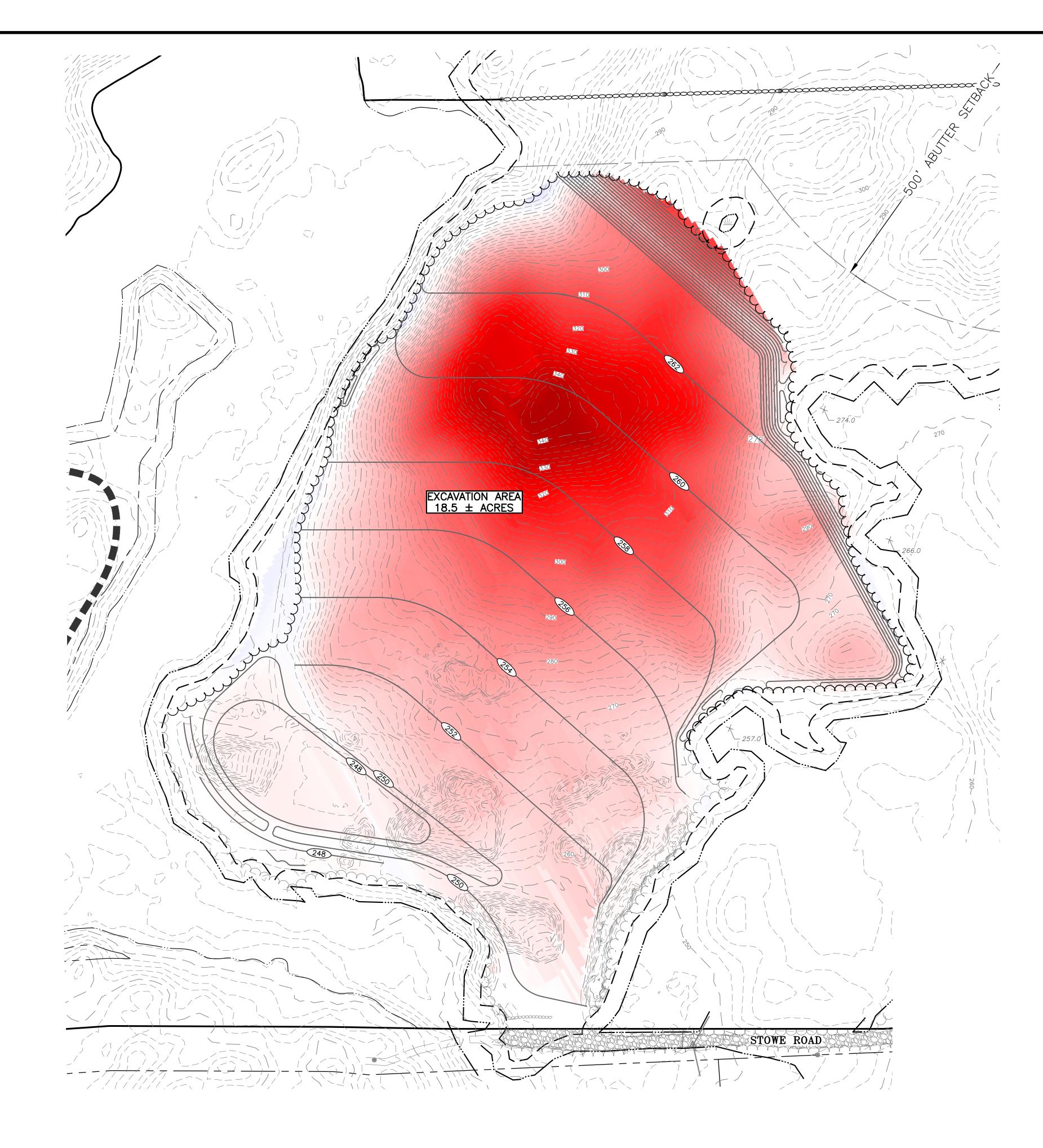
A GROUNDWATER MONITORING PLAN MUST BE DEVELOPED IF LEDGE IS ENCOUNTERED ON SITE AND EXPECTED TO EXCEED 5,000 CUBIC YARDS OF BLAST MATERIAL. THE MONITORING PLAN MUST BE REVIEWED AND APPROVED BY NHDES PRIOR TO COMMENCING WITH BLASTING OPERATIONS

ALL ACTIVITIES RELATED TO BLASTING SHALL FOLLOW 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

- 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 ENCOUNTER 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 FOR HANDLING OR PLACEMENT IN SECURED 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 EXPLOSIVE SHALL BE DETONATED AS SOON AS POSSIBLE AND SHALL NOT BE LEFT IN THE BLASTHOLES 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
- 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.

documents/dwgb-22-6.pdf)]

- 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
- 2) PLACE DRIP PANS UNDER SPIGOTS, VALVES, AND PUMPS.
- 3) HAVE SPILL CONTROL AND CONTAINMENT EQUIPMENT READILY AVAILABLE IN ALL WORK
- 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/commissoner/pip/factsheets/dwgb/





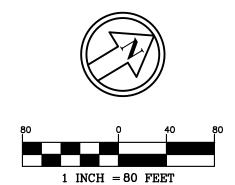
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PROJECT:

CHESTER GRAVEL PIT MAP 5 LOT 85

152 FREMONT ROAD CHESTER, NH

OLD SANDOWN RD, LLC 352 SOUTH BROADWAY ST. SALEM, NH 03079

PAUL GARABEDIAN, JR 352 SOUTH BROADWAY ST. SALEM, NH 03079

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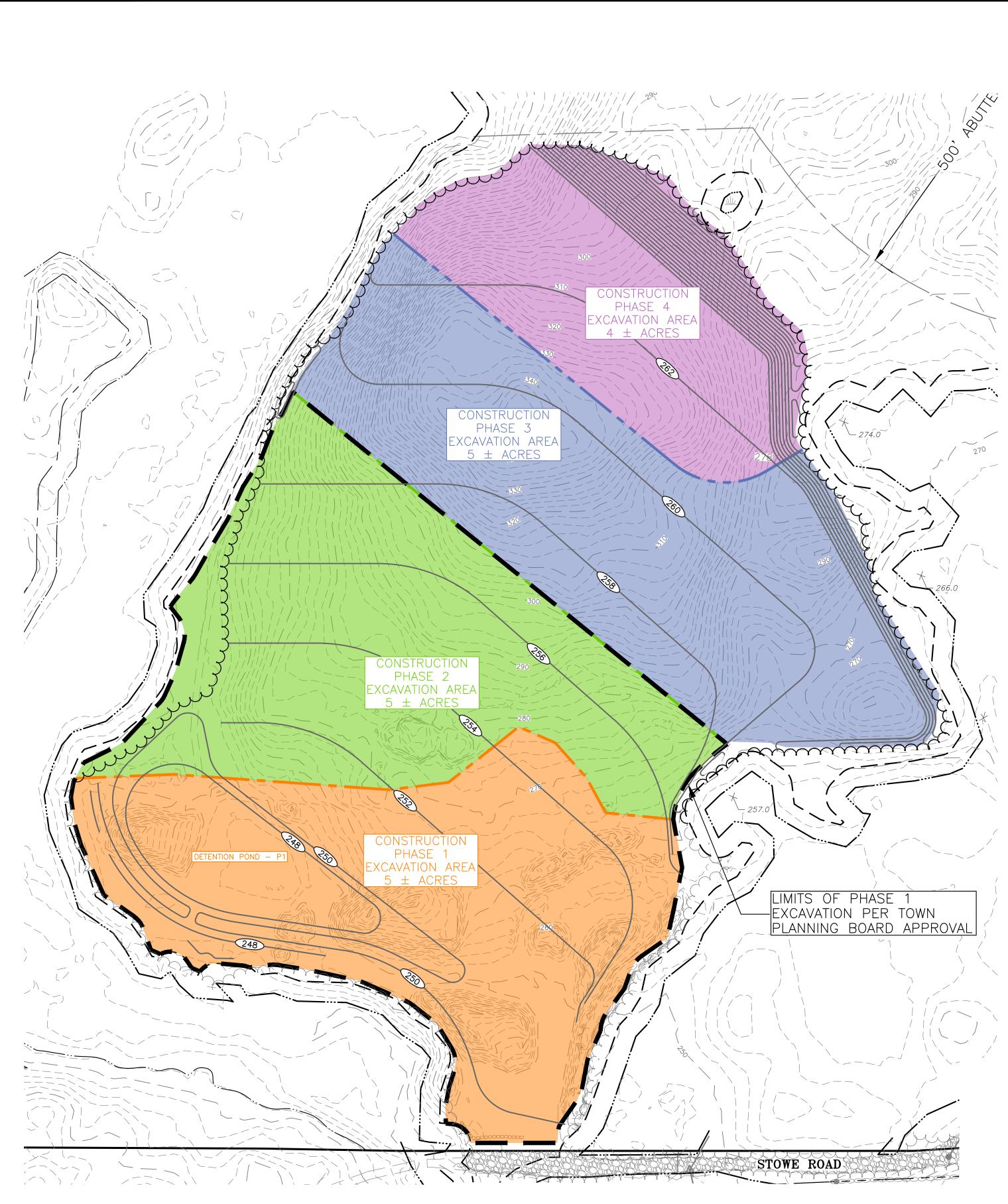
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PLAN

PROJECT #493



MOBILE FUELING NOTES:

MOBILE FUELING OF EXCAVATION EQUIPMENT WILL OCCUR ON SITE. SECONDARY CONTAINMENT MUST BE PROVIDED FOR ALL REGULATED CONTAINERS AND BE IN PLACE DURING REFUELING ACTIVITIES INVOLVING TRANSFERS OF FUEL FROM "ON-ROAD" DELIVERY TRUCKS, "OFF-ROAD" TANK TRUCKS (REFERRED TO AS "MOBILE REFUELERS") OR PORTABLE CONTAINERS TO FIELD EQUIPMENT. PORTABLE CONTAINMENT EQUIPMENT, SUCH AS A RIGID OR FLEXIBLE POP-UP POOL OR BERM, SHALL BE USED DURING MOBILE FUELING AND POSITIONED TO CATCH ANY FUEL SPILLS DUE TO OVERFILLING THE EQUIPMENT AND ANY OTHER SPILLS THAT MAY OCCUR DURING THE FUELING PROCESS. EQUIPMENT (SPILL KIT) TO CLEAN UP SPILLS AND LEAKS MUST BE LOCATED IN THE IMMEDIATE AREA. REFER TO THE NHDES FACT SHEET, WD-DWGB-22-6, BEST MANAGEMENT PRACTICES FOR FUELING AND MAINTENANCE OF EXCAVATION AND EARTHMOVING EQUIPMENT, AVAILABLE AT: WD-DWGB-22-6 BEST MANAGEMENT PRACTICES FOR FUELING AND MAINTENANCE OF EXCAVATION AND EARTHMOVING EQUIPMENT (NH.GOV).

THE BEST MANAGEMENT PRACTICES NOTED IN WD-DWGB-22-6 SHALL BE IMPLEMENTED INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:

- PROVIDE SECONDARY CONTAINMENT DURING FUEL TRANSFERS; COMPLY WITH RELATED STATE AND FEDERAL REQUIREMENTS;
- EMPLOYEE TRAINING TO PREVENT, CONTAIN AND CLEAN UP SPILLS; IMMEDIATELY REPORT SIGNIFICANT OR UNCONTROLLED SPILLS;
- PROPERLY STORE AND DISPOSE OF CONTAMINATED SOIL AND MATERIALS.

CONSTRUCTION SEQUENCE

- 1. PRIOR TO CONSTRUCTION, AN INITIAL PRE CONSTRUCTION MEETING(S) SHALL TAKE PLACE WITH THE CONTRACTOR, OWNER AND TOWN AGENTS.
- THIS SITE WILL REQUIRE A USEPA NPDES PERMIT FOR STORMWATER DISCHARGE FOR THE SITE CONSTRUCTION SINCE THE DISTURBANCE EXCEEDS ONE ACRE. THE CONSTRUCTION SITE OPERATOR SHALL DEVELOP AND IMPLEMENT A CONSTRUCTION STORM WATER POLLUTION PREVENTION PLAN (SWPPP), WHICH SHALL REMAIN ON SITE AND MADE ACCESSIBLE TO THE PUBLIC. A COMPLETED NOTICE OF TERMINATION (NOT) SHALL BE SUBMITTED TO NPDES PERMITTING AUTHORITY WITHIN 30 DAYS AFTER EITHER OF THE FOLLOWING CONDITIONS HAVE BEEN MET: FINAL STABILIZATION HAS BEEN ACHIEVED ON ALL PORTIONS OF THE SITE FOR WHICH THE PERMITTEE IS RESPONSIBLE; OR ANOTHER OPERATOR/PERMITTEE HAS ASSUMED CONTROL OVER ALL AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED.
- SWPPP INSPECTIONS SHALL OCCUR AT LEAST ONCE EVER SEVEN (7) DAYS. COPIES OF INSPECTIONS REPORTS WITH PHOTOS SHALL BE SUBMITTED TO THE TOWN WITHIN 7-DAYS OF
- 4. INSTALL PERIMETER CONTROLS, I.E SILT FENCE AND/OR SILTSOXX AROUND THE LIMITS OF DISTURBANCE BEFORE ANY EARTH MOVING OPERATION.
- 5. CONSTRUCT TEMPORARY CONSTRUCTION EXIT.
- 6. CLEAR AND GRUB WITHIN AREAS OF DISTURBANCE UNLESS OTHERWISE NOTED.
- 7. CONSTRUCT AND STABILIZE DETENTION POND P1.
- 8. REMOVE AND STOCKPILE MATERIALS AS REQUIRED. STOCKPILE SHALL BE SURROUNDED WITH AN EROSION CONTROL DEVICE TO PREVENT EROSION. STOCKPILE AREAS ARE LIMITED AND THUS MANAGEMENT OF MATERIALS WILL BE REQUIRED.
- 9. ESTABLISH STAGING AREAS.
- 10. PERFORM EXCAVATION OPERATIONS BY PHASE.
- 11. COMPLETE EACH PHASE 1-4; EACH PHASE MUST BE STABILIZED PRIOR TO DISTURBANCE OF SUBSEQUENT PHASE.
- 9. UTILIZE ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES TO ENSURE EACH PHASE IS PROTECTED FROM POTENTIAL SEDIMENT TRANSPORT.
- 10. DIRECT SURFACE RUNOFF INTO EXCAVATED AREA OR SEDIMENT TRAPS. NO RUNOFF FROM EXCAVATED AREAS SHALL DISCHARGE OFFSITE.
- 11. LOAM AND SEED ALL DISTURBED AREAS.
- 12. REMOVE TRAPPED SEDIMENTS FROM COLLECTION DEVICES AS APPROPRIATE, AND THEN REMOVE TEMPORARY EROSION CONTROL MEASURES UPON COMPLETION OF FINAL STABILIZATION OF THE SITE.

CONSTRUCTION PHASE

- 1. EACH PHASE MUSH BE STABILIZED PRIOR TO THE COMMENCEMENT OF SUBSEQUENT PHASE.
- 2. THE TEMPORARY BMPS ASSOCIATED WITH THE PHASING OF THIS PROJECT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND LANDOWNER, WHO WILL BE RESPONSIBLE FOR INSPECTION, OPERATION, AND
- 3. EROSION CONTROL PROCEDURES SHALL CONFORM TO SECTION 645 OF THE "STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION OF THE NHDOT". EROSION CONTROL SHALL BE INSTALLED DOWNHILL OF ALL AREAS WHERE WORK WILL EXPOSE UNPROTECTED SOIL TO PREVENT SEDIMENT FROM ENTERING CATCH BASINS, DRAINAGE STRUCTURES AND/OR DRAINAGE WAYS.
- 4. DURING CONSTRUCTION AND THEREAFTER, EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED AS NOTED. THE SMALLEST PRACTICAL AREA OF LAND SHOULD BE EXPOSED AT ANY ONE TIME DURING DEVELOPMENT. IN ALL CASES EXPOSURE SHALL BE KEPT TO THE SHORTEST PRACTICAL PERIOD OF TIME. LAND SHALL NOT BE LEFT UNPROTECTED DURING THE WINTER MONTHS.
- 5. IF, DURING CONSTRUCTION, IT COMES APPARENT THAT ADDITIONAL EROSION CONTROL MEASURES ARE REQUIRED TO STOP ANY EROSION ON THE CONSTRUCTION SITE DUE TO ACTUAL SITE CONDITIONS, THE CONTRACTOR SHALL BE REQUIRED TO IMMEDIATELY INSTALL AND MAINTAIN THE NECESSARY EROSION

ENV-WQ 1505.3 MAXIMUM OPEN AREA ALLOWED:

- (a) ALL AREAS OF UNSTABILIZED SOIL SHALL BE:
- (1) TEMPORARILY STABILIZED AS SOON AS PRACTICABLE BUT IN ALL CASES WITHIN 45 DAYS OF INITIAL DISTURBANCE, UNLESS A SHORTER TIME IS SPECIFIED BY LOCAL AUTHORITIES, THE CONSTRUCTION SEQUENCE APPROVED AS PART OF THE ISSUED PERMIT, OR AN INDEPENDENT MONITOR; AND
- (2) PERMANENTLY STABILIZED AS SOON AS PRACTICABLE BUT IN ALL CASES WITHIN 3 DAYS OF FINAL (b) SUBJECT TO (C) AND (F), BELOW, THE AREA OF UNSTABILIZED SOIL SHALL NOT EXCEED 5 ACRES AT ANY
- (c) THE DEPARTMENT SHALL AUTHORIZE AN APPLICANT TO DISTURB MORE THAN 5 ACRES AT ONE TIME IF THE
- (1) SUBMITS DOCUMENTATION THAT THE REQUIRED AREAS OF EARTH CUTS AND FILLS ARE SUCH THAT AN
- AREA OF DISTURBANCE OF 5 ACRES OR LESS WOULD UNREASONABLY LIMIT THE CONSTRUCTION (2) SUBMITS A CONSTRUCTION SEQUENCE PLAN, DEVELOPED BY A QUALIFIED ENGINEER OR A CPESC
- SPECIALIST: AND (3) EMPLOYS AN ENVIRONMENTAL MONITOR DURING CONSTRUCTION.
- (d) SUBJECT TO (E), BELOW, THE ENVIRONMENTAL MONITOR SHALL:
- (1) INSPECT THE PROJECT SITE AT LEAST ONCE EACH WEEK FROM THE START OF TERRAIN ALTERATION ACTIVITIES UNTIL ALL TERRAIN ALTERATION ACTIVITIES ARE COMPLETED AND THE SITE IS STABILIZED;
- (2) IN ADDITION TO REGULAR WEEKLY INSPECTIONS, INSPECT THE PROJECT SITE DURING ANY RAIN EVENT IN WHICH 0.5 INCH OF PRECIPITATION OR MORE FALLS WITHIN A 24 HOUR PERIOD, PROVIDED THAT IF THE ENVIRONMENTAL MONITOR IS UNABLE TO BE PRESENT DURING SUCH A STORM, THE MONITOR SHALL INSPECT THE SITE WITHIN 24 HOURS OF THE RAIN EVENT;
- (3) SUBMIT A WRITTEN REPORT, STAMPED BY A QUALIFIED ENGINEER OR A CPESC SPECIALIST, TO THE DEPARTMENT WITHIN 24 HOURS OF EACH INSPECTION THAT: a. DESCRIBES THE PROGRESS OF THE PROJECT, INCLUDING WHETHER ALL CONDITIONS OF THE PERMIT
- ARE BEING MET AND, IF NOT, WHICH REQUIREMENTS ARE NOT BEING MET; b. IF ANY REQUIREMENTS ARE NOT BEING MET, AN EXPLANATION OF THE CORRECTIVE ACTION(S) THAT WILL BE OR ARE BEING TAKEN TO BRING THE PROJECT INTO COMPLIANCE WITH APPLICABLE REQUIREMENTS AND THE DEADLINE BY WHICH SUCH ACTIONS WILL BE COMPLETED; AND
- (2) RETAIN A COPY OF THE REPORT PREPARED PURSUANT TO (3), ABOVE, ON-SITE FOR REVIEW DURING SITE INSPECTIONS BY FEDERAL, STATE, AND LOCAL OFFICIALS.
- (b) ROUTINE INSPECTION FREQUENCY MAY BE REDUCED FROM ONCE EACH WEEK TO AT LEAST ONCE EACH MONTH IF EITHER OF THE FOLLOWING CONDITIONS IS MET:

c. INCLUDES PHOTOGRAPHS OF THE SITE THAT ARE REPRESENTATIVE OF THE PROJECT; AND

- (1) WORK HAS BEEN SUSPENDED AND THE ENTIRE SITE IS STABILIZED IN ACCORDANCE WITH ENV-WQ 1505.04; OR (2) RUNOFF IS UNLIKELY BECAUSE:
- a. THE GROUND IS FROZEN OR THE SITE IS COVERED WITH SNOW OR ICE; AND b. THE PROJECT IS IN AN AREA WHERE FROZEN CONDITIONS ARE ANTICIPATED TO CONTINUE FOR MORE THAN ONE MONTH.
- (a) IF THE SITE IS WITHIN 50 FEET OF SURFACE WATER, HAS A GRADE OF 25% OR GREATER, OR CONTAINS SOILS HAVING AN ERODIBILITY FACTOR OF 0.4 OR GREATER, OR ANY COMBINATION OF THESE, THE OWNER
- SHALL, REGARDLESS OF THE SIZE OF THE OPEN AREA: (1) SUBMIT A CONSTRUCTION SEQUENCE PLAN, DEVELOPED BY A QUALIFIED ENGINEER OR A CPESC
- SPECIALIST; (2) EMPLOY AN ENVIRONMENTAL MONITOR; AND
- (3) COMPLY WITH (D) AND (E), ABOVE.

SOURCE. (SEE RN1 AT P. V) #9343, EFF 1-1-09; SS BY #12342, EFF 8-15-17 (FORMERLY ENV-WQ

1505.02) (SEE RN3 AT P. V)



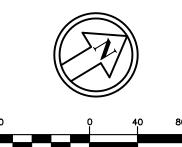
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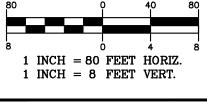
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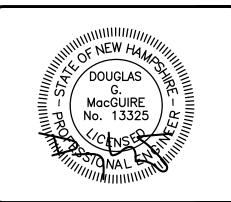
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4	9/23/22	REVS PER AOT COMMENTS	JHD				
6	10/25/22	MISC REVS	JHD				
7	11/10/22	MISC REVS	JHD				
8	12/13/22	MISC REVS	JHD				

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SCALE:			1"	=80
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PROJECT:

CHESTER GRAVEL PIT

MAP 5 LOT 85 152 FREMONT ROAD CHESTER, NH

OLD SANDOWN RD, LLC 352 SOUTH BROADWAY ST. SALEM, NH 03079

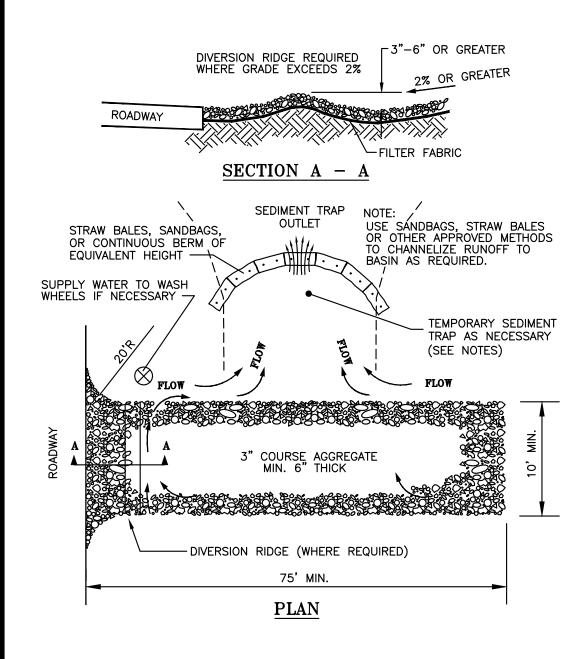
- OWNER -PAUL GARABEDIAN, JR

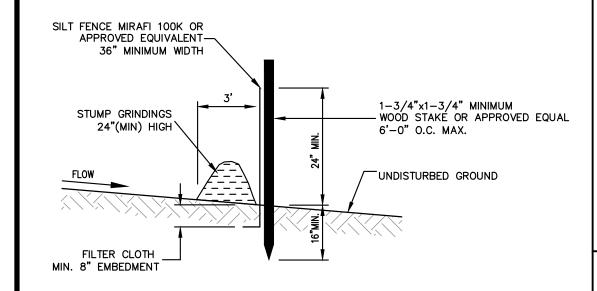
352 SOUTH BROADWAY ST. SALEM, NH 03079

SHEET TITLE:

PHASING PLAN & CONSTRUCTION **NOTES**

PROJECT #493 SHEET 7





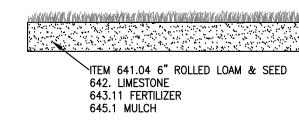
SILT FENCE WITH MULCH BERM NOT TO SCALE

TO BE USED IN AREAS THAT HAVE DISTURBANCE WITHIN 50-FEET OF A WETLAND.

TEMPORARY CONSTRUCTION EXIT

- 1. The minimum stone used shall be 3-inch crushed stone.
- 2. The minimum length of the pad shall be 75 feet, except that the minimum length may be reduced to 50 feet if a 3-inch to 6-inch high berm is installed at the entrance of the project site.
- 3. The pad shall extend the full width of the construction access road or 10 feet, whichever is greater.
- 4. The pad shall slope away from the existing roadway.
- 5. The pad shall be at least 6 inches thick. A geotextile filter fabric shall be placed between the stone pad and the earth surface below the pad.
- 6. The pad shall be maintained or replaced when mud and soil particles clog the voids in the stone such that mud and soil particles are tracked off-site.
- 7. A stabilized construction exit consists of a pad of stone aggregate placed on a geotextile filter fabric, located at any point where traffic will be leaving a construction site to an existing access road way or other paved surface. Its purpose is to reduce or eliminate the tracking of sediment onto public roads by construction vehicles. This helps protect receiving waters from sediment carried by stormwater runoff
- Only construction traffic leaving the site is required to use the temporary stabilized exit. Consider providing a separate, unprotected, entrance for traffic entering the site. This will increase the longevity of the stabilized exit by eliminating heavy loads entering the site and reducing the total traffic over the device.
- Locate construction entrances and exits to limit sediment leaving the site and to provide for maximum utility by all construction vehicles. Avoid entrances that have steep grades and entrances at curves in
- The entrance shall be maintained in a condition that will prevent tracking or flowing of sediment onto public rights-of}-way. This may require periodic top dressing with additional stone as conditions demand, and repair and/or maintenance of any measures used to trap sediment.
- 11. The exit shall be maintained in a condition that will prevent tracking of sediment onto public
- 12. When the control pad becomes ineffective, the stone shall be removed along with the collected soil material, regraded on site, and stabilized. The entrance shall then be reconstructed.
- 13. The contractor shall sweep the pavement at exits whenever soil materials are tracked onto the adjacent pavement or traveled way.
- 14. When wheel washing is required, it shall be conducted on an area stabilized with aggregate, which drains into an approved sediment-trapping device. All sediment shall be prevented from entering storm drains,
- 15. Natural drainage that crosses the location of the stone pad shall be intercepted and piped beneath the pad, as necessary, with suitable outlet protection.
- 16. These requirements may be adjusted to specific site conditions per the direction of jurisdictional Town and State authorities, per SWPPP inspection/management processes, and per Best Management Practices.

TEMPORARY GRAVEL CONSTRUCTION EXIT DETAIL



PLEASE REFER TO THE 'VEGETATING NEW HAMPSHIRE SAND AND GRAVEL PITS' DOCUMENT FOR SPECIFIC SEED MIXES AND APPLICATION PROCEDURES.

SOIL/AGGREGATE STOCKPILE OF

LOAM & SEED DETAIL NOT TO SCALE

EXISTING SITE MATERIAL TO BE REUSED AND/OR NEW MATERIAL TO BE INSTALLED IN THE WORK - DIRECTION OF RUN-OFF FLOW (TYP.) 1. ALL EXISTING EXCAVATED MATERIAL THAT IS NOT TO BE REUSED IN THE WORK IS TO BE IMMEDIATELY REMOVED FROM THE SITE AND PROPERLY 2. SOIL/AGGREGATE STOCKPILE SITES TO BE WHERE SHOWN ON THE DRAWINGS. 3. RESTORE STOCKPILE SITES TO PRE-EXISTING PROJECT CONDITION AND RESEED AS REQUIRED. 4. STOCKPILE HEIGHTS MUST NOT EXCEED 35'. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER. SILT FENCING

MEET EXISTING GRADE -

- 1. AT A MINIMUM, SEDIMENT PONDS MUST PROVIDE STORAGE FOR EITHER (1) THE CALCULATED VOLUME OF RUNOFF FROM THE 2-YEAR, 24-HOUR STORM (SEE CGP APP. H), OR (2) 3,600 CUBIC
- 2. SEDIMENT PONDS MUST ALSO UTILIZE OUTLET STRUCTURES THAT WITHDRAW WATER FROM THE SURFACE, UNLESS INFEASIBLE.
- 3. SEDIMENT PONDS SHALL CONFORM TO ENV-WQ 1506.10.

VARIES - SEE PLAN

VARIES - SEE PLAN

EROSION CONTROL AND REVEGETATION MAT (ECRM)

FEET PER ACRE DRAINED.

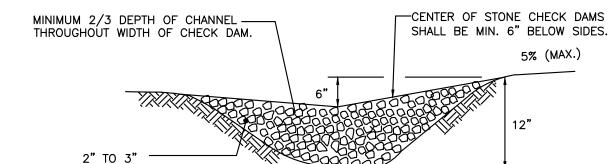
(EXCELSIOR, JUTE, MIRIMAT, OR EQUAL) OR SOD

4" MIN. LOAM OR TOPSOIL & SEED WITH

TEMPORARY SEDIMENT TRAP NOT TO SCALE

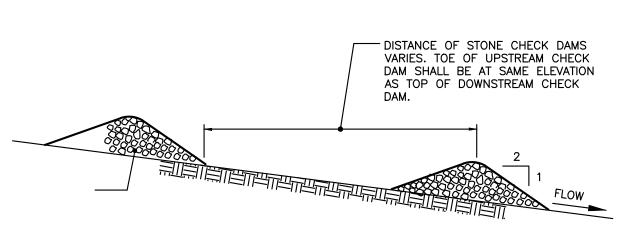
- 1. ALL EXISTING EXCAVATED MATERIAL THAT IS NOT TO BE REUSED IN THE WORK IS TO BE IMMEDIATELY REMOVED FROM THE SITE AND PROPERLY DISPOSED OF.
- 2. RESTORE STOCKPILE SITES TO PRE-EXISTING PROJECT CONDITION AND RESEED AS REQUIRED.
- 3. STOCKPILE HEIGHTS MUST NOT EXCEED 35'. STOCKPILE SLOPES MUST BE 2:1 OR
- 4. STOCKPILE MUST BE STABILIZED WITHIN 72 HOURS.
- 5. STOCKPILE MUST BE SEEDED AND/OR MULCHED PRIOR TO ONSET OF WINTER
- 6. EROSION CONTROL SEED MIX SHALL BE SOWN IN ALL INACTIVE CONSTRUCTION AREAS THAT WILL NOT BE PERMANENTLY SEEDED WITHIN TWO WEEKS OF DISTURBANCE.

MATERIALS STOCKPILE DETAIL NOT TO SCALE



DITCH CROSS-SECTION

STONE (TYP.)



LONGITUDINAL SECTION

STONE CHECK DAM DETAIL

CONSIDERATIONS

THIS PRACTICE IS INTENDED FOR USE IN AREAS WITH CONCENTRATED FLOW BUT MUST NOT BE USED IN STREAM CHANNELS (WHETHER PERENNIAL OR INTERMITTENT).

THE CHECK DAM MAY BE LEFT IN PLACE PERMANENTLY TO AVOID UNNECESSARY DISTURBANCE OF THE SOIL ON REMOVAL. BUT ONLY IF THE PROJECT DESIGN HAS ACCOUNTED FOR THEIR HYDRAULIC PERFORMANCE AND CONSTRUCTION PLANS CALL FOR

IF IT IS NECESSARY TO REMOVE A STONE CHECK DAM FROM A GRASS-LINED CHANNEL THAT WILL BE MOWED, CARE SHOULD BE TAKEN TO ENSURE THAT ALL STONES ARE REMOVED. THIS INCLUDES STONE THAT HAS WASHED DOWNSTREAM.

GENERAL DESCRIPTION

TEMPORARY CHECK DAMS ARE SMALL TEMPORARY DAMS CONSTRUCTED ACROSS A SWALE OR DRAINAGE DITCH. CHECK DAMS ARE USED TO REDUCE THE VELOCITY OF CONCENTRATED STORMWATER FLOWS, THEREBY REDUCING EROSION OF THE SWALE OR DITCH.

CHECK DAMS MY ALSO CATCH SMALL AMOUNTS OF SEDIMENT GENERATED IN THE DITCH ITSELF. HOWEVER, THE CHECK DAM IS NOT A SEDIMENT TRAPPING PRACTICE AND SHOULD NOT BE USED AS SUCH.

THE PRACTICE IS LIMITED TO USE IN SMALL OPEN CHANNELS THAT DRAIN ONE ACRE OR LESS. IT SHOULD NOT BE USED IN EITHER PERENNIALLY FLOWING STREAMS OR INTERMITTENT STREAM CHANNELS.

CHECK DAMS CAN BE CONSTRUCTED OF STONE. IN LOCATIONS WHERE STONE IS NOT AVAILABLE, TIMBER CHECK DAMS MAY BE CONSIDERED. TYPICAL APPLICATIONS INCLUDE TEMPORARY OR PERMANENT DITCHES OR SWALES, WHICH NEED PROTECTION DURING THE ESTABLISHMENT OF

HAY OR STRAW BALES SHOULD GENERALLY NOT BE USED AS CHECK DAMS, OR IN ANY LOCATION WHERE THERE IS CONCENTRATED FLOW. HOWEVER. THEY MAY BE USED FOR CHECK DAMS IN APPLICATIONS WHERE INSTALLATION ACCESS OR OTHER CONDITIONS PREVENT THE USE OF PREFERRED MATERIALS SUCH AS STONE; IN SUCH CASES, INSTALLATION MUST PROVIDE PROPER EMBEDMENT OF THE STRAW OR HAY BALE BARRIER, LIMIT CONTRIBUTING DRAINAGE AREA TO LESS THAN ONE ACRE, AND PROVIDE FOR FREQUENT MONITORING OF BARRIER.

MAINTENANCE REQUIREMENTS

CHECK DAMS SHOULD BE INSPECTED AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL AND NECESSARY REPAIRS SHOULD BE MADE IMMEDIATELY.

INSPECTIONS SHOULD VERIFY THAT THE CENTER OF THE DAM IS LOWER THAN THE EDGES.

EROSION CAUSED BY HIGH FLOWS AROUND THE EDGES OF THE DAM MUST BE CORRECTED IMMEDIATELY.

IF EVIDENCE OF SILTATION IN THE WATER IS APPARENT DOWN STREAM OF THE CHECK DAM, THE CHECK DAM SHOULD BE INSPECTED AND ADJUSTED IMMEDIATELY.

CHECK DAMS SHOULD BE CHECKED FOR SEDIMENT ACCUMULATION AFTER EACH SIGNIFICANT RAINFALL. SEDIMENT SHOULD BE REMOVED WHEN IT REACHES ONE HALF OF THE ORIGINAL HEIGHT OR BEFORE.

SPECIFICATIONS

TEMPORARY CHECK DAMS SHOULD CONFORM TO THE FOLLOWING

CHECK DAMS SHOULD BE INSTALLED BEFORE RUNOFF IS DIRECTED TO THE SWALE OR DRAINAGE DITCH.

THE MAXIMUM CONTRIBUTING DRAINAGE AREA TO THE DAM SHOULD BE LESS THAN ONE ACRE.

THE MINIMUM HEIGHT OF THE DAM SHOULD BE ONE FOOT ON

THE MAXIMUM HEIGHT OF THE DAM SHOULD BE TWO FEET. THE CENTER OF THE DAM SHOULD BE AT LEAST 6 INCHES LOWER THAN THE OUTER EDGES.

THE MAXIMUM SPACING BETWEEN THE DAMS SHOULD BE SUCH THAT THE TOE OF THE UPSTREAM DAM IS AT THE SAME ELEVATION AS THE OVERFLOW ELEVATION OF THE DOWNSTREAM

THE CHECK DAM SHOULD NOT BE USED IN A FLOWING STREAM. STONE CHECK DAMS SHOULD BE CONSTRUCTED OF A WELL-GRADED ANGULAR 2-INCH TO 3-INCH STONE. 3/4-INCH STONE ON THE UPGRADIENT FACE IS RECOMMENDED FOR BETTER

IF CAREFULLY INSTALLED AND MONITORED, TIMBER CHECK DAMS MAY BE USED, AND SHOULD BE CONSTRUCTED OF 4-INCH TO 6-INCH LOGS EMBEDDED AT LEAST 18 INCHES DEEP INTO THE SOIL. HOWEVER, STONE CHECK DAMS ARE GENERALLY PREFERRED. THE STONE HAS THE ABILITY TO CONFORM TO THE CHANNEL AND SETTLE IF SCOUR OCCURS, RENDERING STONE CHECK DAMS LESS SUSCEPTIBLE TO SCOUR AROUND THE ENDS AND DOWNSTREAM OF THE DEVICES.

IF PROVIDED BY DESIGN AND CONSTRUCTION PLANS, LEAVE THE DAM IN PLACE PERMANENTLY.

TEMPORARY STRUCTURES SHOULD BE REMOVED ONCE THE SWALE OR DITCH HAS BEEN STABILIZED:

IN TEMPORARY DITCHES AND SWALES, CHECK DAMS SHOULD BE REMOVED AND THE DITCH FILLED WHEN ITS NO LONGER

IN PERMANENT STRUCTURES, CHECK DAMS SHOULD BE REMOVED WHEN A PERMANENT LINING HAS BEEN ESTABLISHED. IF THE PERMANENT LINING IS VEGETATION. THE THE CHECK DAM SHOULD BE RETAINED UNTIL THE GRASS HAS BEEN MATURED TO PROTECT THE DITCH OR SWALE. THE AREA BENEATH THE CHECK DAM MUST BE SEEDED AND MULCHED IMMEDIATELY AFTER REMOVAL.

CONSTRUCTION ZONE

UNAUTHORIZED PERSONNEL

KEEP OUT

CONSTRUCTION ZONE SIGN OR

APPROVED EQUAL

E NEW HA DOUGLAS MacGUIRE No. 13325

The Dubay Group, Inc.

136 Harvey Rd. Bldg B101

Londonderry, NH 03053

603-458-6462

Engineers

Planners

Surveyors

TheDubayGroup.com

1 INCH = 80 FEET HORIZ.

1 INCH = 8 FEET VERT.

1		REVISIONS.	SIUNS		
REV:	DATE:	COMMENT:	BY:		
1	4/5/22	REVS PER TOWN COMMENTS & AOT SUBMISSION	JHD		
2	8/8/22	REVS PER AOT & TOWN COMMENTS	JHD		

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DEED REF:	BK :	2119	PG	80

PROJECT:

CHESTER GRAVEL PIT MAP 5 LOT 85

152 FREMONT ROAD CHESTER, NH

OLD SANDOWN RD, LLC 352 SOUTH BROADWAY ST. SALEM, NH 03079

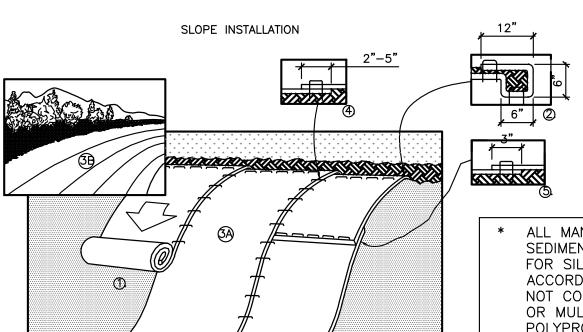
OWNER — PAUL GARABEDIAN, JR 352 SOUTH BROADWAY ST.

SALEM, NH 03079

SHEET TITLE:

DETAILS

PROJECT #493 SHEET 8 of



USE ROLLMAX SHALL BIONET C125BN EROSION CONTROL BLANKET OR EQUIVALENT. BLANKETS ARE MADE OF 100% COCONUT FIBER AND ARE 100% BIODEGRADABLE.

* DUE TO THE POTENTIAL OF

ENDANGERED SPECIES ON

CONTRACTORS

NHFG NOTES:

SITE,

ALL MANUFACTURED EROSION AND SEDIMENT CONTROL PRODUCTS, EXCEPT FOR SILT FENCE, SHALL BE INSTALLED IN ACCORDANCE WITH ENV.EQ 1506.04, SHALL NOT CONTAIN WELDED PLASTIC, PLASTIC, OR MULTI-FILAMENT OR MONOFILAMENT POLYPROPYLENE NETTING OR MESH.

MATTING INSTALLATION NOTES

PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.

2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.

3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.

4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.

5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART

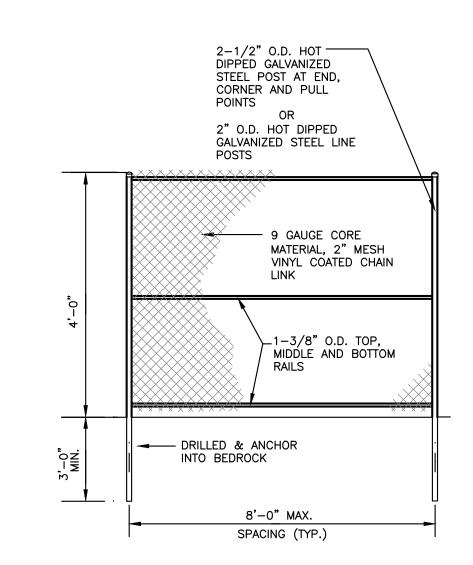
6. IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

7. INSTALL PRODUCT IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. 8. MATTING IS REQUIRED ON ALL SLOPES STEEPER THAN 3:1.

SLOPE PROTECTION EROSION CONTROL MATTING

NOT TO SCALE

(THIS DETAIL IS PROVIDED FOR AREAS THAT MAY REQUIRE ADDITIONAL PROTECTION BASED ON FIELD CONDITIONS.)



TYPICAL CHAIN LINK FENCE DETAIL NOT TO SCALE

GENERAL CONSTRUCTION NOTES

- 1. THE TEMPORARY BMPS ASSOCIATED WITH THIS PROJECT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND LANDOWNER, WHO WILL BE RESPONSIBLE FOR INSPECTION, OPERATION, AND
- 2. EROSION CONTROL PROCEDURES SHALL CONFORM TO SECTION 645 OF THE "STANDARI SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION OF THE NHDOT". EROSION CONTROL SHALL BE INSTALLED DOWNHILL OF ALL AREAS WHERE WORK WILL EXPOSE UNPROTECTED SOIL TO PREVENT SEDIMENT FROM ENTERING CATCH BASINS, DRAINAGE STRUCTURES AND/OR DRAINAGE WAYS. INSTALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES PRIOR TO ANY EARTH MOVING OPERATIONS.
- 3. EROSION CONTROL DEVICES SHALL BE INSTALLED WHERE REQUIRED PRIOR TO ANY ON-SITE GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL. EROSION CONTROL MEASURES SHALL BE MAINTAINED DURING DEVELOPMENT AND SHALL BE CHECKED PERIODICALLY AND EXCESS SILT SHALL BE REMOVED.
- 4. ALL DISTURBED AREAS WHICH ARE FINISH GRADED SHALL BE LOAMED (6" MINIMUM) AND SEEDED. SEE SEEDING AND FERTILIZER SPECIFICATION. SEE SLOPE DESIGN AND/OR LANDSCAPE PLAN FOR ADDITIONAL INFORMATION.
- 5. ANY DISTURBED AREAS WHICH ARE TO BE LEFT TEMPORARILY, AND WHICH WILL BE REGRADED LATER SHALL BE MACHINED STRAW MULCHED AND SEEDED WITH SLOPE STABILIZATION SEED MIXTURE TO PREVENT EROSION. STRAW MULCH SHALL BE APPLIED AT A RATE OF 2 TONS/ACRE.
- 6. CONTRACTOR SHALL PROVIDE DUST CONTROL MEASURES IN ACCORDANCE WITH NHDES, EPA & TOWN REQUIREMENTS FOR THE DURATION OF THE PROJECT. WATER FOR DUST CONTROL SHALL BE PROVIDED ON SITE. FUGITIVE DUST IS CONTROLLED IN ACCORDANCE WITH ENV-A 1000.
- 7. ALL EROSION CONTROLS ARE TO BE INSPECTED WEEKLY.
- 8. ALL DEWATERING OPERATIONS MUST DISCHARGE DIRECTLY INTO A SEDIMENT FILTER AREA.
- 9. THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION, BUT IN NO CASE SHALL EXCEED 5 ACRES AT ANY ONE TIME BEFORE DISTURBED AREAS ARE STABILIZED. ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN 72 HOURS AFTER FINAL GRADING. EXPOSURE OF UNSTABILIZED SOILS SHALL BE TEMPORARILY STABILIZED AS SOON AS POSSIBLE BUT NO LATER THAN 45 DAYS OF INITIAL DISTURBANCE.
- 10. WINTERIZATION EFFORTS FOR AREAS NOT STABILIZED BY OCT. 15TH SHALL BE MADE BY THE APPROPRIATE USE OF MATTING, BLANKETS, MULCH AND SEEDING.
- 11. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
- A. BASE COURSE GRAVELS HAS BEEN INSTALLED IN AREAS TO BE PAVED;
- B. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
- C. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP RAP HAS BEEN INSTALLED: OR
- D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
- 16. IF, DURING CONSTRUCTION, IT BECOMES APPARENT THAT ADDITIONAL EROSION CONTROL MEASURES ARE REQUIRED TO STOP ANY EROSION ON THE CONSTRUCTION SITE DUE TO ACTUAL SITE CONDITIONS, THE CONTRACTOR SHALL BE REQUIRED TO IMMEDIATELY INSTALL AND MAINTAIN THE NECESSARY EROSION PROTECTION.

<u>MAINTENANCE AND PROTECTION</u>

- 1. THE CONTRACTOR SHALL TAKE WHATEVER MEASURES ARE NECESSARY TO PROTECT THE GRASS WHILE IT DEVELOPS.
- 2. TO BE ACCEPTABLE, SEEDED AREAS SHALL CONSIST OF A UNIFORM STAND OF AT LEAST 90 PERCENT ESTABLISHED PERMANENT GRASS SPECIES, WITH A UNIFORM COUNT OF AT LEAST 100 PLANTS PER SQUARE FOOT.
- 3. SEEDED AREAS WILL BE FERTILIZED AND RE-SEEDED AS NECESSARY TO INSURE VEGETATIVE ESTABLISHMENT.
- 4. THE SWALES WILL BE CHECKED WEEKLY AND REPAIRED WHEN NECESSARY, UNTIL ADEQUATE VEGETATION IS ESTABLISHED.
- 5. THE SILT FENCE AND/OR SILTSOXX BARRIER AND ANY OTHER EROSION CONTROL DEVICE SHALL BE CHECKED AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.
- 6. ALL EROSION CONTROL DEVICES SHALL BE REMOVED ONCE VEGETATION IS ESTABLISHED, AND DISTURBED AREAS RESULTING FROM SLIT FENCE AND/OR SILTSOXX REMOVAL SHALL BE PERMANENTLY SEEDED.

WINTER NOTES

- 1. ALL PROPOSED VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS;
- 2. ALL AREAS TO BE PLANTED WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW
- 3. AFTER OCTOBER 15TH, INCOMPLETE SURFACES TO BE PAVED, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3 OR CRUSHED STONE.

SEEDING NOTES

SEEDING SPECIFICATION AND PREPARATION SHALL BE DONE IN ACCORDANCE WITH NRCS PUBLICATION 'VEGETATING NEW HAMPSHIRE SAND AND GRAVEL PITS' (*TECHNICAL NOTE

SITE PREPARATION

- CUT AND FILL SLOPES SHOULD NOT EXCEED 2:1 (2 HORIZONTAL FEET FOR 1 VERTICAL FOOT) TO PROVIDE STABILITY. FLATTER SLOPES (3:1) ARE PREFERRED TO FACILITATE SEEDING EFFORTS.
- · AVOID LONG SLOPES TO HELP PREVENT EROSION AND TO ALLOW ACCESS FOR SEEDING, MULCHING, AND MAINTENANCE. CONTROL SLOPE LENGTH BY INSTALLING ONE TERRACE (10 FEET WIDE AND SLOPED INTO THE CUT SLOPE) FOR EVERY 40 VERTICAL FEET.
- CONSTRUCT DIVERSIONS AT TOPS OF SLOPES TO DIVERT RUNOFF WATER AWAY FROM THE SLOPE BANKS TO A STABLE OUTLET.
- CONSTRUCT ROCK LINED CHUTES OR EQUIVALENT TO CONDUCT CONCENTRATED FLOW OF WATER TO STABLE OUTLETS.
- REMOVE LARGE STONES, BOULDERS, AND OTHER DEBRIS THAT WILL HINDER THE SEEDING PROCESS AND THE ESTABLISHMENT OF VEGETATION.
- SPREAD A MINIMUM DEPTH OF 4 INCHES OF TOPSOIL OVER THE SITE, IF AVAILABLE.
- OBTAIN SOIL SAMPLES BY COLLECTING 6 TO 8 SMALL SAMPLES (1 OR 2 HANDFULS) OF SOIL MATERIAL FROM THE UPPER 4 INCHES OF THE AREA TO BE SEEDED. MIX THE SMALL SÁMPLES TO OBTAIN ONE COMPOSITE SAMPLE.
- USE PART OF THE SAMPLE FOR A SOIL TEST TO DETERMINE LIME AND FERTILIZER NEEDS. RUN THE BALANCE OF THE SAMPLE(S) THROUGH A SIEVE ANALYSIS TO DETERMINE THE PERCENT BY WEIGHT PASSING A NO. 22 SIEVE.* THOSE PASSING ARE CALLED "FINES."

SEEDING PROCEDURES

SPECIES AND VARIETY SELECTION

SELECT ONE OF THE GRASS/LEGUME MIXES BASED ON THE PERCENT WEIGHT PASSING A NO. 200 SIEVE AS OUTLINED ABOVE. MIX 2 IS RECOMMENDED IF SUPPRESSION OF WOODY GROWTH IS DESIRED AND THERE ARE MORE THAN 15 PERCENT FINES. THE STANDARD CONSERVATION <u>MIXES AVAILABLE FROM LOCAL SEED SUPPLIERS ARE NOT RECOMMENDED ON DROUGHTY SITES</u> HESE MIXES USUALLY PROVIDE A GREEN COVER VERY QUICKLY, BUT THE PLANT SPECIES BEGIN TO DIE IN 2-4 YEARS ON STERILE AND DROUGHTY SITES.

WHERE PERCENT BY WEIGHT PASSING A NO. 200 SIEVE IS LESS THAN 15, SELECT FROM MIX 1

MIX 1 (WARM SEASON SPECIES	GRASSES) POUNDS PER ACRE
SWITCHGRASS	6
BIG BLUESTEM	4
LITTLE BLUESTEM	2
SAND LOVEGRASS	4_
TOTAL	16

* ALTERNATIVE SEED MIXES CAN BE FOUND IN 'NRCS PUBLICATION 'VEGETATING NEW HAMPSHIRE SAND AND GRAVEL PITS'.

LIME AND FERTILIZER DETERMINATION

(a) MIX 1 - IN LIEU OF A SOIL TEST, LIME AT THE RATE OF 1 TON/ACRE (50 LBS/1,000 SQ FT). FERTILIZE WITH 500 LBS/ACRE (11 LBS/1,000 SQ FT) OF 10-20-20 OR EQUIVALENT. INCORPORATE LIME, FERTILIZER, AND SEED USING RAKES IF SEEDING IS DONE BY HAND, IT IS STRONGLY RECOMMENDED TO USE A BULLDOZER TO "TRACK" THE SITE AFTER SEEDING. TRACKING WILL INCORPORATE THE LIME, FERTILIZER, AND SEED TO PROMOTE SEED GERMINATION.

THE SEED NEEDS TO BE INCORPORATED TO ENSURE SUCCESS AND TO SHORTEN ESTABLISHMENT TIME. ON THE FLATTER SLOPES, USE A BULLDOZER TO "TRACK IN" THE SEED.

MULCH DETERMINATION (FOR HYDRO AND HAND SEEDING)

(a) MULCHING FOR MIX 1 - WEED FREE MULCH. CLEAN STRAW IS RECOMMENDED. MULCH AT THE MAXIMUM RATE OF 500-700 LBS/ACRE. HIGHER MULCHING RATES AND MULCH WITH WEED SEED CONTENT WILL INHIBIT SEEDING SUCCESS SIGNIFICANTLY. IF THE EROSION HAZARD IS LOW AND THE SEED IS INCORPORATED, MULCHING IS NOT NECESSARY FOR SEEDING SUCCESS. DO NOT APPLY MULCH PRIOR TO TRACKING WITH A BULLDOZER.

SEEDING METHODS

ALTERNATIVE 1 - LARGE AREAS AND/OR STEEP SLOPES.

APPLY LIME, SEED, AND FERTILIZER WITH A HYDROSEEDER AND, DEPENDING ON THE CONSISTENCY OF THE SOIL MATERIAL, STEEPNESS OF SLOPE, AND SEED MIXTURE USED:

(a) PRESS THE SEED INTO THE SOIL BY TRACKING WITH A BULLDOZER, OR

(b) COVER THE SEED BY WALKING BACK AND FORTH OVER STEEP LOOSE SANDY SLOPES, OR

(c) APPLY MULCH AND A TACKIFIER TO HOLD THE MULCH IN PLACE.

ALTERNATIVE 2 - FLAT TO GENTLY SLOPING AREAS (2:1 SLOPES MAXIMUM)

BULLDOZER OR APPLY MULCH.

APPLY LIME, SEED, AND FERTILIZER USING FARM TYPE SPREADERS, AND TRACK THE SITE WITH A

SEEDING DATES

PRIMARY SEEDING DATES BEGIN AS SOON AS THE SNOW MELTS IN THE SPRING AND ENDS MAY 15. THE IMPORTANCE OF EARLY SEEDING CANNOT BE OVEREMPHASIZED. THIS IS ESPECIALLY TRUE FOR MIX 1. DEPENDING ON WEATHER CONDITIONS, SUBSTANTIAL FAILURE CAN BE EXPECTED IF SEEDING IS DONE LATER.

LATE SUMMER AND EARLY FALL SEEDINGS ARE NOT RECOMMENDED FOR MIXES 1 AND

RESPONSE OF SEEDING

THE PLANT SPECIES IN MIX 1 GERMINATE AND GROW SLOWLY. COMPLETE COVER MAY NOT OCCUR FOR 2-4 YEARS. HOWEVER, A WELL-ESTABLISHED STAND WILL ENDURE FOR YEARS.

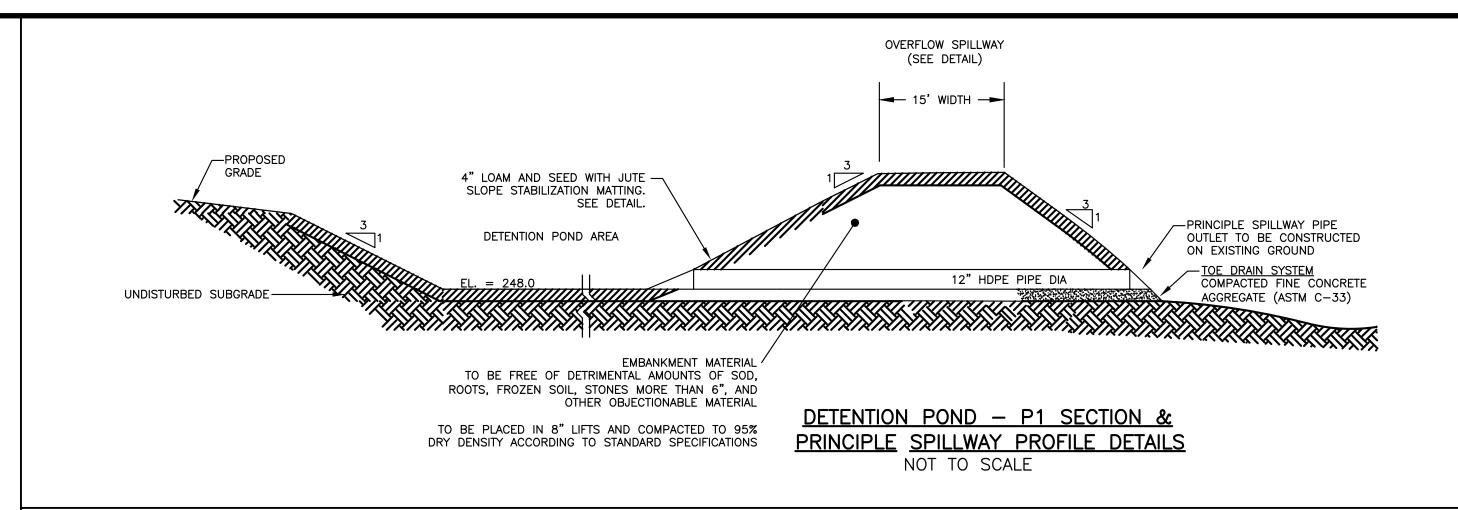
FOLLOW-UP SEEDING MAY BE NEEDED TO ESTABLISH VEGETATION ON THE MORE DIFFICULT PARTS OF SOME SITES. THE NEED TO DO FOLLOW-UP SEEDING CAN BE DETERMINED THE YEAR AFTER

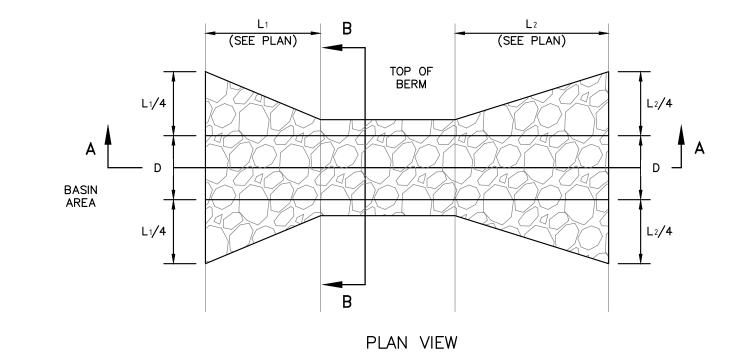
MAINTENANCE

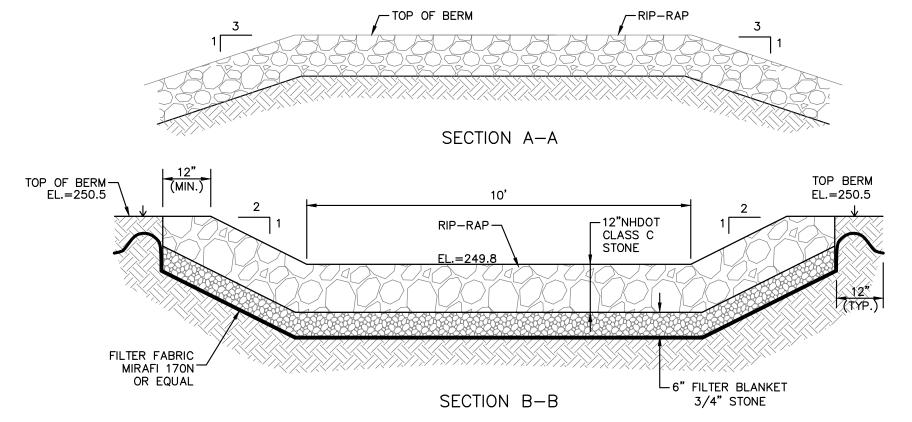
SUBSTANTIAL STAND VIGOR CAN BE ACHIEVED IF THE SITE IS TOPDRESSED WITH FERTILIZER ONE YEAR AFTER PLANTING. IF TOPDRESSING MIX 1, FERTILIZE BETWEEN JUNE 15 AND JULY 15. TOPDRESS MIX 1 SHOULD BE TOPDRESSED IN THE EARLY SPRING, TOPDRESS MIX 1 WITH A BALANCED FERTILIZER, APPLYING 50 LBS OF NITROGEN/ACRE. FOR EXAMPLE, APPLY 250 LBS OF 20-20-20/ACRE. TOPDRESS MIX 2 WITH 500 LBS OF 0-20-20/ACRE IN APRIL, MAY, OR JUNE.

IF MOWING IS DESIRED TO SUPPRESS WOODY GROWTH, MOW MIX 1 ABOUT MID-JULY LEAVING A

STUBBLE HEIGHT OF 6-8 INCHES.







TYPICAL OVERFLOW SPILLWAY NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. THE SUBGRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC, OR RIPRAP SHALL BE CLEARED AND GRUBBED TO REMOVE ALL ROOTS, VEGETATION, AND DEBRIS AND PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS.

2. THE ROCK OR GRAVEL USED FOR FILTER OR RIPRAP SHALL CONFORM TO THE SPECIFIED GRADATION.

GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK RIPRAP BY PLACING A CUSHION OF SAND AND GRAVEL OVER THE FABRIC. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 12 INCHES.

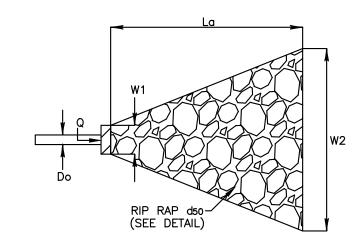
4. STONE FOR THE RIPRAP MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT DISPLACEMENT OF THE UNDERLYING MATERIALS. HAND PLACEMENT MAY BE REQUIRED TO PREVENT DAMAGE TO ANY PERMANENT STRUCTURES.

5. STONES FOR RIPRAP SHALL BE ANGULAR OR SUBANGULAR. THE STONES SHOULD BE SHAPED SO THAT THE LEAST DIMENSION OF THE STONE FRAGMENT SHALL BE NOT LESS THAN ONE-THIRD OF THE GREATEST DIMENSION OF THE FRAGMENT. FLAT ROCKS SHALL NOT BE USED FOR RIPRAP.

6. VOIDS IN THE ROCK RIPRAP SHOULD BE FILLED WITH SPALLS AND SMALLER ROCKS.

<u>MAINTENANCE</u>

THE OUTLET PROTECTION SHOULD BE CHECKED AT LEAST ANNUALLY AND AFTER EVERY MAJOR STORM. IF THE RIPRAP HAS BEEN DISPLACED, UNDERMINED, OR DAMAGED, IT SHOULD BE REPAIRED IMMEDIATELY BEFORE FURTHER DAMAGE CAN TAKE PLACE. WOODY VEGETATION SHOULD BE REMOVED FROM THE ROCK RIPRAP ANNUALLY BECAUSE TREE ROOTS WILL EVENTUALLY DISLODGE THE ROCK RIPRAP. IF THE RIPRAP IS ON A CHANNEL BANK, THE STREAM SHOULD BE KEPT CLEAR OF OBSTRUCTIONS SUCH AS FALLEN TREES, DEBRIS, AND SEDIMENT BARS THAT MAY CHANGE FLOW PATTERNS WHICH COULD DAMAGE OR DISPLACE THE RIPRAP. REPAIRS MUST BE CARRIED OUT IMMEDIATELY TO AVOID ADDITIONAL DAMAGE TO THE



LOCATION	La	W1	W2	d50	DEPTH
OUTLET FROM P1	17'	3'	10'	6"	15"

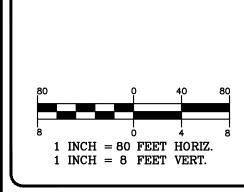
*CHANNEL WIDTH TABLE 7-24 -- RECOMMENDED RIPRAP GRADATION RANGES % OF WEIGHT SIZE OF STONE GIVEN SIZE 1.3 TO 1.8 d 1.0 TO 1.5 d 0.3 TO 0.5 d

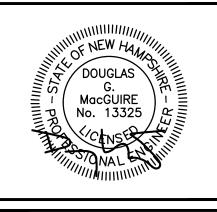
OUTLET PROTECTION APRON DETAIL NOT TO SCALE



Engineers Planners

Surveyors TheDubayGroup.com





	REVISIONS:						
REV:		COMMENT:	BY				
1	4/5/22	REVS PER TOWN COMMENTS & AOT SUBMISSION	JHE				
3	8/26/22	REVS PER TOWN COMMENTS	JHD				
			T				

DRAWN BY: CHECKED BY: DATE: SEPTEMBER 17, 2021 SCALE: 1"=80' 493-DETAILS DEED REF: BK 2119 PG 081

PROJECT:

CHESTER GRAVEL PIT

MAP 5 LOT 85 152 FREMONT ROAD CHESTER, NH

OLD SANDOWN RD, LLC 352 SOUTH BROADWAY ST. SALEM, NH 03079

OWNER — PAUL GARABEDIAN, JR 352 SOUTH BROADWAY ST.

SALEM, NH 03079

SHEET TITLE:

DETAILS

PROJECT #493 SHEET 9 of