# NOTES:

1.) THE SUBJECT PARCEL IS LOT 150C ON THE TOWN OF TAX MAP 4. THE OWNER OF RECORD OF LOT 150C IS MAL-MAR LLC OF 20 SUMMITT AVENUE, DERRY, NH 03038. SEE MCRD V. 2247 P. 434.

2.) THE SUBJECT PARCELS ARE ZONED CI/MF. MINIMUM LOT SIZE IS 2 ACRES. MINIMUM LOT FRONTAGE = 200'. SETBACKS ARE AS FOLLOWS: FRONT = 40' MIN. (90' FROM CENTERLINE OF ROUTE 4, 202 & 9), SIDE = 15' AND REAR = 15', SUBJECT TO EXACT USE. THE SETBACKS SHOWN ARE FOR REFERENCE ONLY AND NEED TO BE VERIFIED WITH THE ZONING COMPLIANCE OFFICER.

3.) THIS PLAN IS THE RESULT OF AN ACTUAL FIELD SURVEY PERFORMED BY THIS OFFICE IN JANUARY TO MARCH OF 2019. I, JOSEPH M. WICHERT, NHLLS #783, CERTIFY THAT THE WORK WAS PREPARED BY ME OR THOSE UNDER MY DIRECT SUPERVISION.

4.) THE INTENT OF THIS PLAN IS TO SHOW THE BOUNDARY OF THE SUBJECT PARCELS AND THE CURRENT CONDITIONS THEREON.

5.) THE SUBJECT PARCELS ARE IN ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AS SHOWN ON THE FLOOD INSURANCE RATE MAP, MERRIMACK COUNTY, NEW HAMPSHIRE, MAP NUMBER 33013C0557E, EFFECTIVE DATE APRIL 19, 2010.

6.) THE VERTICAL DATUM IS NAVD 1988 AND THE HORIZONTAL DATUM IS NHSPC 1983/2011. THE DATUM WERE ESTABLISHED USING STATIC GPS OBSERVATIONS PERFORMED BY THIS OFFICE IN AUGUST OF 2018.

7.) THE UTILITY INFORMATION SHOWN IS BASED ON THE ABOVE GROUND LOCATION OF VISIBLE UTILITIES, THE CONTRACTOR NEEDS TO FIELD VERIFY ALL UTILITIES PRIOR TO ANY CONSTRUCTION. THIS OFFICE DOES NOT GUARANTEE THE LOCATION AND ACCURACY OF THE UTILITY DATA. DIG SAFE SHALL BE CONTACTED 72 HOURS PRIOR TO COMMENCING ANY CONSTRUCTION (811).

8.) THE PURPOSE OF THE PLAN SET IS TO SHOW THE PROPOSED IMPROVEMENTS FOR A GRAVEL STORAGE AREA ON THE SUBJECT PARCEL. DRAINAGE, GRADING AND UTILITIES HAVE BEEN INCLUDED

9.) NO CHANGES TO THE PARKING OR BUILDING ARE PROPOSED AS PART OF THIS GRAVEL STORAGE AREA.

10.) WETLANDS WERE DELINEATED BY ASPEN ENVIRONMENTAL CONSULTANTS IN JAN, 7, MARCH 27, AND JULY 29 2019 BY AARON WECHSLER USING THE ARMY CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL, DATED JANUARY 1987.

11.) AN ENVIRONMENTAL MONITOR MAY WILL BE REQUIRED DUE TO THE AREA OF DISTRUBANCE BEING GREATER THAN 5 ACRES. THE MONITOR SHALL ADHERE TO ALL REQUIREMENTS OF ENV-WQ 1505.03(D)

AGENCY APPROVALS:

NHDOT - DRIVEWAY PERMIT APPR # NH DOT DRIVEWAY PERMIT NO. \_\_\_\_\_\_\_NHDES - ALTERATION OF TERRAIN PERMIT NO.\_\_\_\_\_\_

## PLAN REFERENCES:

1.) "SUBDIVISION OF EDITH TASKER, ROUTE 4, 202 & 9, CHICHESTER, N.H.", DATED AUGUST 1984 AND PREPARED BY SURVEY FIELD SERVICES. MCRD PLAN 8,095.

- 3.) "STATE OF NEW HAMPSHIRE HIGHWAY DEPARTMENT, PLANS OF PROPOSED FEDERAL AID PROJECT, NO. 179 (2), CENTRAL ROAD, AS-BUILT PLANS, TOWN OF CHICHESTER, COUNTY OF MERRIMACK", DATED 4/03/1940 & ON FILE AT THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION.
- 4.) CHICHESTER-EPSOM, P7909, WORKSHEET, PLOTTED 7/07/1967 ON FILE AT THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION.
- 5.) "STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION, CONSTRUCTION PLANS, FEDERAL AID PROJECT, X-A004(170), N.H. PROJECT NO. 29533, US ROUTE 202/4 & NH ROUTE 9. DATED 5/12/2016 & ON FILE AT THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION.



CONTACT DIG SAFE 72 HOURS PRIOR TO CONSTRUCTION

THE LOCATION OF ANY UTILITY INFORMATION SHOWN ON THIS PLAN IS APPROXIMATE. ROKEH CONSULTING, LLC. MAKES NO CLAIM TO THE ACCURACY OR COMPLETENESS OF UTILITIES SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ANY UTILITIES WHETHER THEY BE ABOVE OR BELOW GROUND. PRIOR TO ANY EXCAVATION ON SITE THE CONTRACTOR SHALL CONTACT DIG SAFE AT 1-800-DIG-SAFE.

LIST OF ADDITIONAL CONSULTANTS

LAND SURVEYOR

JOSEPH M. WICHERT, LLS INC
802 AMHERST STREEET
MANCHESTER, NH 03104
Phone: (603) 647-4282

WETLANDS AND SOIL SCIENTIST
AARON WECHSLER
ASPEN ENVIRONMENTAL
41 LIBERTY HILL ROAD
BUILDING 2, UNIT 201
HENNIKER, NH 03242
603) 848-5606

SITE DEVELOPMENT PLANS

DOVER ROAD- CHICHESTER, NH

LIST OF DRAWINGS

EXISTING CONDITIONS

BMP MAINTENANCE SHEETS

SITE AND GRADING PLAN

COVER SHEET

**DESCRIPTION** 

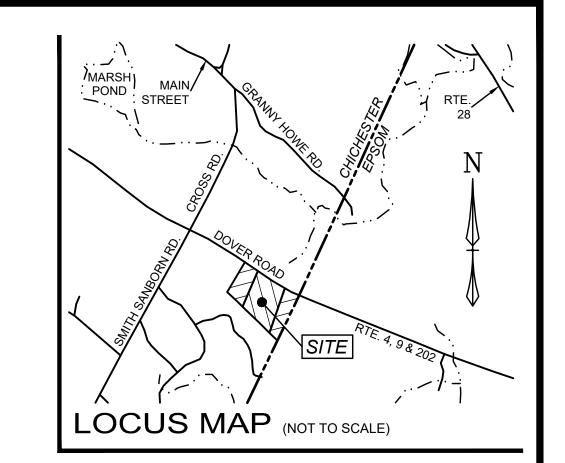
CONSTRUCTION & EROSION CONTROL DETAILS

DWG NO.

3,4

5, 6, 7, 8

9.10



## NOTE:

- 1. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL CONFORM TO THE TOWN OF CHICHESTER REGULATIONS AND THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", LATEST EDITION.
- 2. ELEVATIONS ARE BASED ON NAVD 1988 DATUM.
- 3. PHYSICAL EVIDENCE OF EXISTING UTILITIES WERE LOCATED ON THE GROUND HOWEVER PRIOR TO ANY CONSTRUCTION IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT DIG—SAFE AND VERIFY ALL UNDERGROUND UTILITY LOCATIONS.



| UNDER THE PROVISIONS OF RSA 674: 35 & 673: 36                                    |
|--|
| CHICHESTER PLANNING BOARD IN ACCORDANCE OF A MAJORITY VOTE OF THE BOARD APPROVED |
| CHAIR  |
| SECRETARY DATE SIGNED:   |

Developer Mal-Mar, LLC 20 Summit Avenue, Derry, NH COVER SHEET

SITE PLAN

TAX PARCEL 4 LOT 150C & E

DOVER ROAD

CHICHESTER, MERRIMACK COUNTY, NEW HAMPSHIRE

| REVISIONS |                            |        |       |  |  |
|-----------|----------------------------|--------|-------|--|--|
| DATE      | DESCRIPTION                | DWN BY | CK BY |  |  |
| 03/05/20  | ADDRESS NHDES AOT COMMENTS | JR<br> | JR    |  |  |
|           |                            |        |       |  |  |

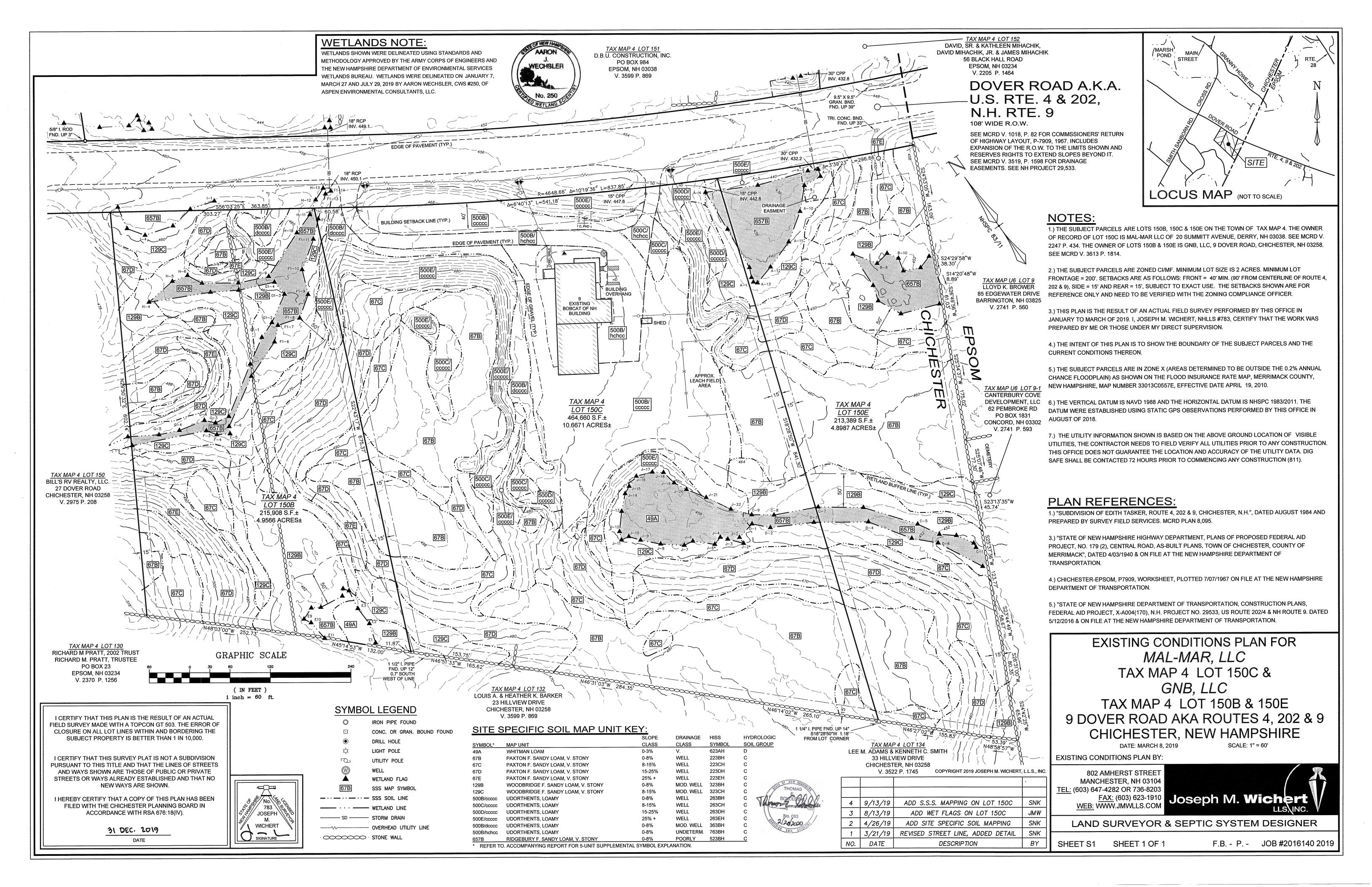
Rokeh Consulting, LLC 89 KING ROAD, CHICHESTER, NH PH: 603-387-8688 SCALE: NTS

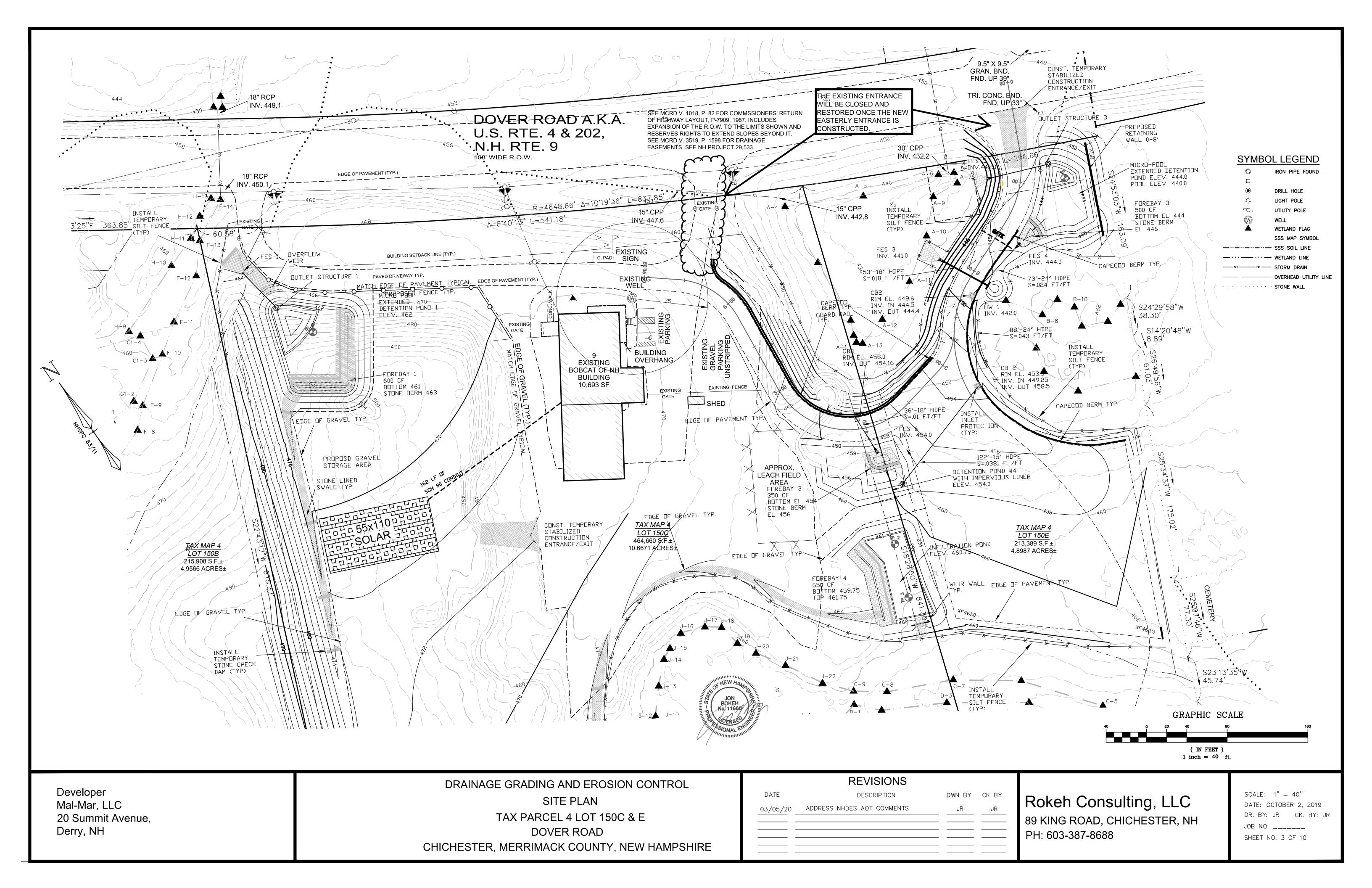
DATE: OCTOBER 2, 2019

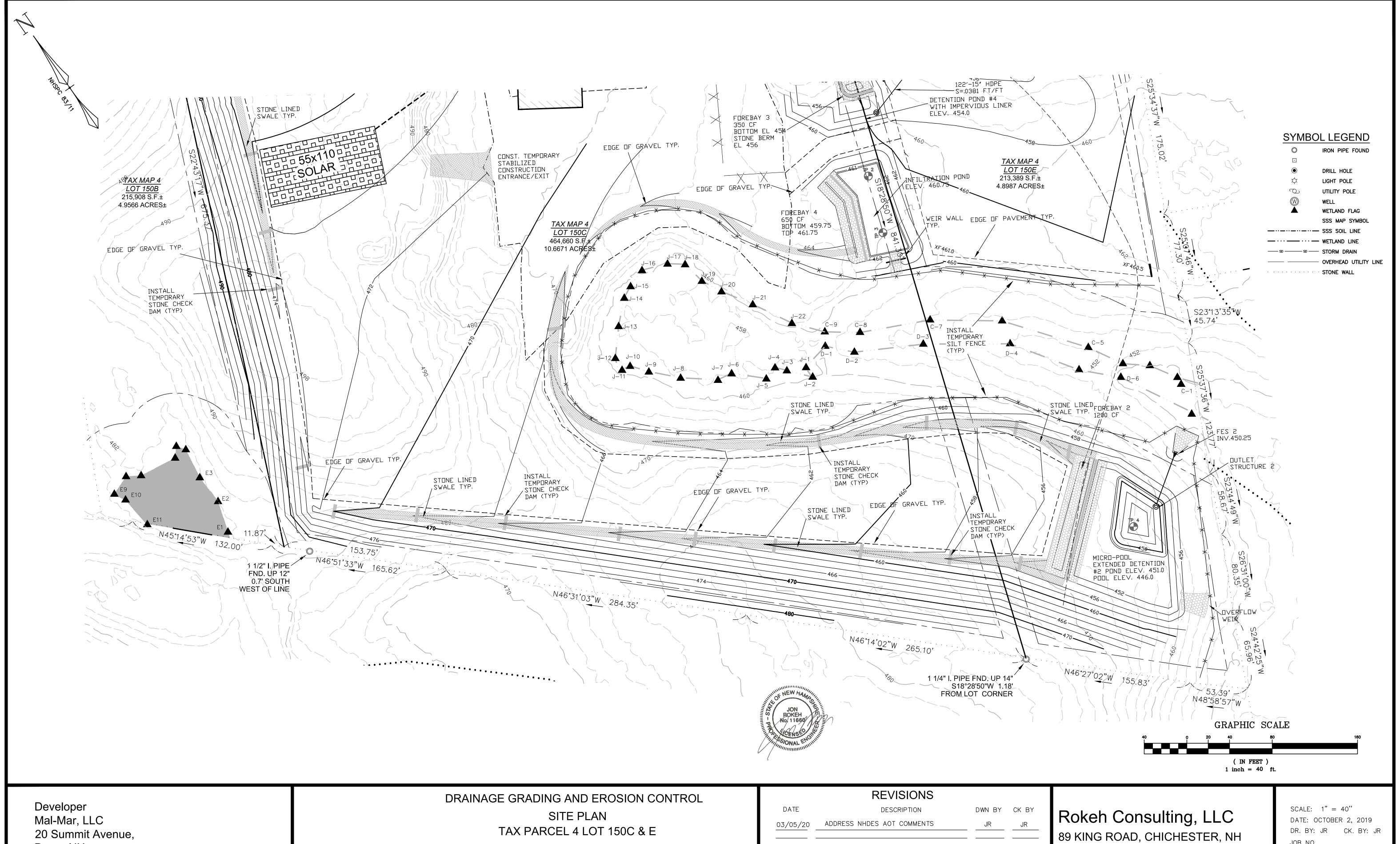
DR. BY: JR CK. BY: JR

JOB NO. \_\_\_\_\_

SHEET NO. 1 OF 10







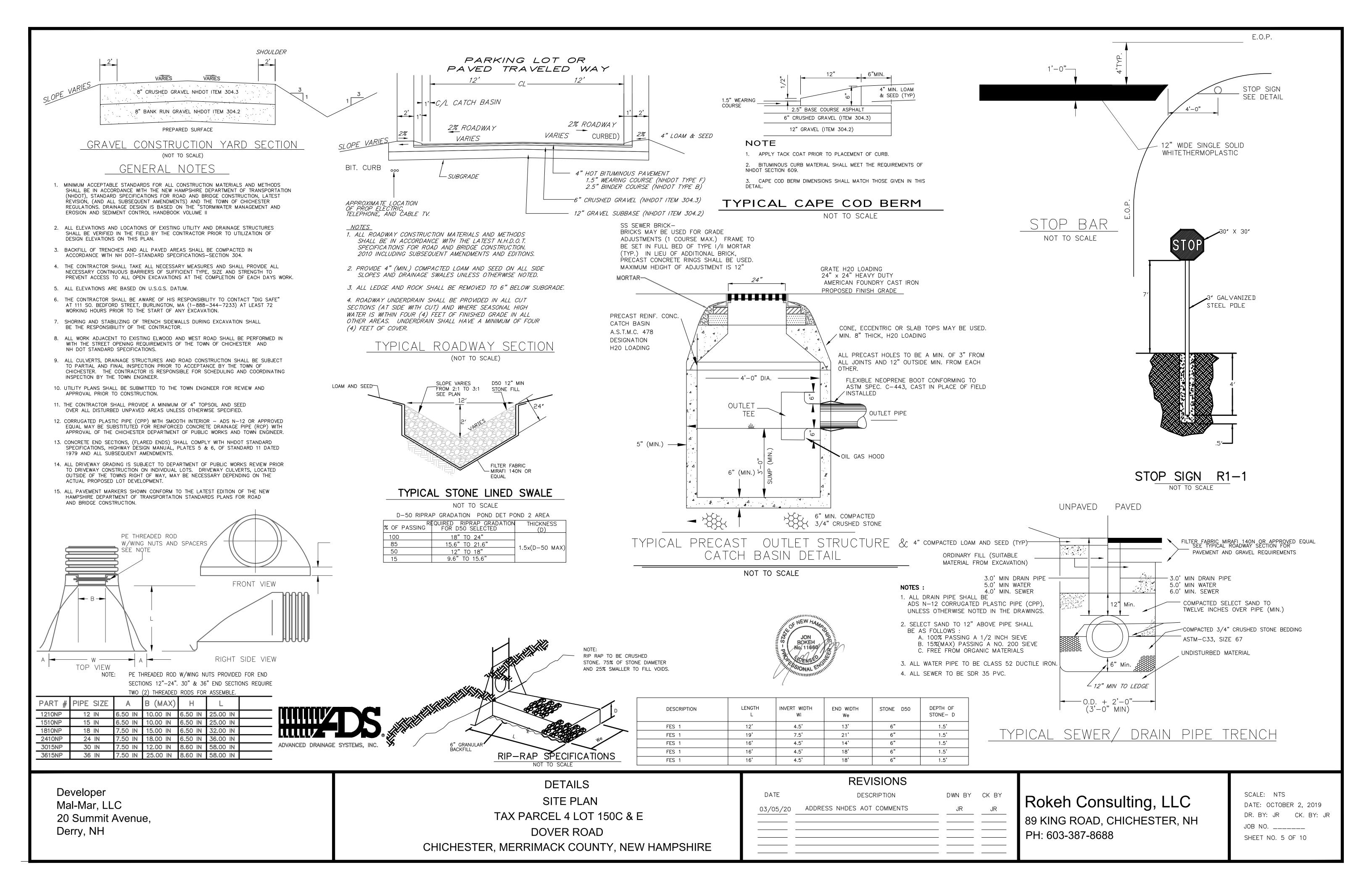
Derry, NH

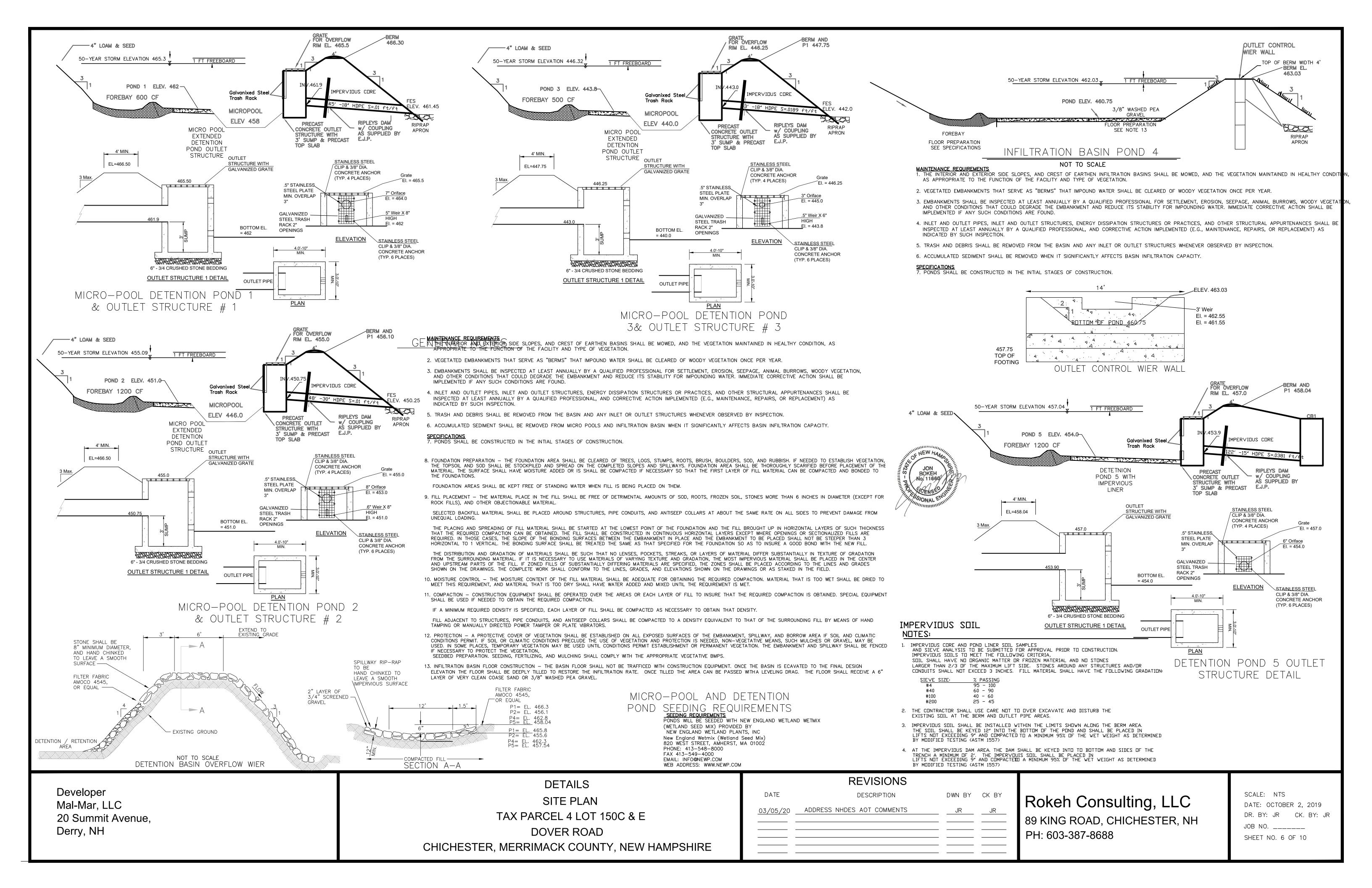
DOVER ROAD CHICHESTER, MERRIMACK COUNTY, NEW HAMPSHIRE

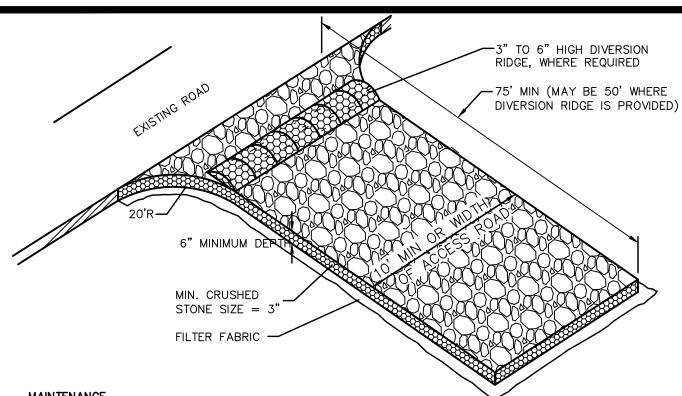
|          | REVISIONS                  |        |       |  |
|----------|----------------------------|--------|-------|--|
| DATE     | DESCRIPTION                | DWN BY | CK BY |  |
| 03/05/20 | ADDRESS NHDES AOT COMMENTS | JR     | JR    |  |
|          |                            |        |       |  |

PH: 603-387-8688

JOB NO. \_\_\_\_\_ SHEET NO. 4 OF 10







- THE EXIT SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. 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
- 2. THE CONTRACTOR SHALL SWEEP THE PAVEMENT AT EXITS WHENEVER SOIL MATERIALS ARE TRACKED ONTO THE ADJACENT PAVEMENT OR TRAVELED WAY.
- 3. 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, DITCHES, OR WATERWAYS.

- CONSTRUCTION SPECIFICATIONS

  4. 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.
- 5. 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
- 6. STONE FOR A TEMPORARY CONSTRUCTION EXIT SHALL BE 3 INCH STONE, RECLAIMED STONE, OR RECYCLED CONCRETE EQUIVALENT.
- 7. 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
- 8. THE THICKNESS OF THE STONE FOR THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 6 INCHES.
- 9. THE WIDTH OF THE ENTRANCE SHALL NOT BE LESS THAN THE FULL WIDTH OF THE EXIT OR 10 FEET, WHICH EVER IS GREATER.
- 10. GEOTEXTILE FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE.
- 11. ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION EXIT SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.

TEMPORARY CONSTRUCTION EXIT

### CONSTRUCTION SEQUENCES:

NOTE: - ALL EROSION CONTROLS TO BE INSPECTED WEEKLY AND AFTER EVERY .5" OF RAINFALL.

- . PRIOR TO CONSTRUCTION INSTALL FABRIC SILTATION FENCING AS SHOWN ON PLAN
- CONSTRUCT TEMPORARY STABILIZED ENTRANCE, AND INSTALL OTHER APPROPRIATE SEDIMENT AND EROSION CONTROL. 2. CUT AND CLEAR ALL VEGETATION AND STUMPS FROM CUT SLOPES, PONDS, AND SWALE AREAS.
- 3. COMPLETE TEMPORARAY SEDIMENT BASINS AT POND LOCATIONS. CONSTRUCT BERMS AND SWALES TO DIRECT STORMWATER TO BASINS. SEDIMENT BASINS LOCATED WITHIN PROPOSED INFILTATION BASIN AREAS ARE TO BE CONSTRUCTED A MINIMUM OF 1' ABOVE THE FINAL BASIN FLOOR ELEVATION.
- 4. AN AREA IS CONSIDERED STABLE IF:

Developer

Derry, NH

Mal-Mar, LLC

20 Summit Avenue,

- A.) BASE COURSE GRAVELS HAVE 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.
- 5. CUT AND CLEAR ALL VEGETATION AND STUMPS FROM AREAS TO BE DISTURBED FOR THE CONSTRUCTION OF THE
- 6. REMOVE TOPSOIL AND OTHER ORGANIC MATERIALS FROM AREAS TO BE DISTURBED. ALL SUCH TOPSOIL REMOVED SHALL BE STOCKPILED FOR LATER USE. ALL STOCKPILES SHALL BE SEEDED AND MULCHED TO PREVENT LOSS DUE TO EROSION, AND ENCIRCLED WITH FABRIC SILT FENCE. WHEN CONSTRUCTION ACTIVITIES ARE TEMPORARILY CEASED FOR MORE THAN 21 DAYS, PERMANENTLY CEASED, OR SHUT DOWN FOR WINTER, THE CONTRACTOR SHALL LEAVE NO SLOPES STEEPER THAN 3;1 AND SHALL IMPLEMENT TEMPORARY LOAMING, SEEDING AND MULCHING. WHERE CONSTRUCTION ACTIVITIES HAVE BEEN SUSPENDED OUTSIDE THE GROWING SEASON ALL EXPOSED SOIL SHALL BE STABILIZED BY MULCHING, AND ALL SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITH NETTING & PINNING.
- 7. CONSTRUCT, CUT, AND FILL SLOPES. ALL CUT AND FILL SLOPES TO BE STABILIZED IMMEDIATELY AFTER CONSTRUCTION. ALL SLOPES GREATER THAN 3:1 TO BE STABILIZED WITH JUTE MATTING. ALL CUT AND FILL SLOPES SHALL BE SEEDED AND LOAMED WITHIN 72 HOURS OF ACHIEVING FINISH GRADE.
- 8. CONSTRUCT STORM DRAINAGE, AND OTHER UNDERGROUND UTILITIES. ALL SWALES TO BE PROTECTED WITH TEMPORARY EROSION CONTROL MEASURES SHOWN. ALL CATCH BASIN OPENINGS TO BE PROTECTED WITH BLOCK AND GRAVEL INLET SEDIMENT FILTERS AS SHOWN. SEDIMENT TRAPS AND/OR BASINS SHOULD BE USED UNTIL BASINS/PONDS ARE STABILIZED.
- 9. BEGIN TOP SOILING, SEEDING AND Mulching IMMEDIATELY AFTER COMPLETION OF EMBANKMENTS. TEMPORARY EROSION CONTROL / DIVERSION CHANNELS SHALL BE IMPLEMENTED WHERE REQUIRED TO PREVENT EROSION OF EMBANKMENTS. ANY EROSION OCCURRING SHALL BE REPAIRED IMMEDIATELY UPON DISCOVERY.
- 10. FINISH GRADING & PAVING. ALL ROADWAYS AND PARKING LOTS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISH GRADES.
- 11. ALL PAVED AREAS TO BE COMPLETED BY OCTOBER 15. ALL LANDSCAPED AREAS TO BE STABILIZED BY OCTOBER 15th, WITH HAY MULCH AND SEED.
- 12. COMPLETE PERMANENT SEEDING AND MULCHING OF ALL DISTURBED AREAS. ALL TEMPORARY EROSION CONTROL
- 13. SILT FENCES AND HAY BALE BARRIERS TO BE REMOVED ONCE THE SITE HAS STABILIZED
- MEASURES TO REMAIN IN PLACE UNTIL A FULL VEGETATIVE COVER HAS BEEN ESTABLISHED ON ALL DISTURBED AREAS.

- 1. TEMPORARY SEEDING SHALL BE INSPECTED WEEKLY AND AFTER ANY RAINFALL EXCEEDING ½ INCH IN 24 HOURS ON ACTIVE CONSTRUCTION SITES. TEMPORARY SEEDING SHALL ALSO BE INSPECTED JUST PRIOR TO SEPTEMBER 15, TO ASCERTAIN WHETHER ADDITIONAL SEEDING IS REQUIRED TO PROVIDE STABILIZATION OVER
- 2. BASED ON INSPECTION, AREAS SHALL BE RESEEDED TO ACHIEVE FULL STABILIZATION OF EXPOSED SOILS. IF IT IS TOO LATE IN THE PLANTING SEASON TO APPLY ADDITIONAL SEED, THEN OTHER TEMPORARY STABILIZATION MEASURES SHALL BE IMPLEMENTED
- 3. AT A MINIMUM, 85% OF THE SOIL SURFACE SHALL BE COVERED BY VEGETATION.
- 4. IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHALL BE MADE AND AREAS SHALL BE RESEEDED, WITH OTHER TEMPORARY MEASURES (E.G., MULCH) USED TO PROVIDE EROSION PROTECTION DURING THE PERIOD OF VEGETATION ESTABLISHMENT.

- <u>SITE PREPARATION</u> 5. INSTALL NEEDED EROSION AND SEDIMENT CONTROL MEASURES SUCH AS SILTATION BARRIERS, DIVERSIONS, AND SEDIMENT TRAPS.
- 6. GRADE AS NEEDED FOR THE ACCESS OF EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING.
- 7. RUNOFF SHALL BE DIVERTED FROM THE SEEDED AREA.
- 8. ON SLOPES 4:1 OR STEEPER, THE FINAL PREPARATION SHALL INCLUDE CREATING HORIZONTAL GROOVES PERPENDICULAR TO THE DIRECTION OF THE SLOPE TO CATCH SEED AND REDUCE RUNOFF.

- 10. WHERE THE SOIL HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF 2 INCHES BEFORE APPLYING FERTILIZER, LIME AND SEED.
- 11. IF APPLICABLE, FERTILIZER AND ORGANIC SOIL AMENDMENTS SHALL BE APPLIED DURING THE GROWING

9. STONES AND TRASH SHALL BE REMOVED SO AS NOT TO INTERFERE WITH THE SEEDING AREA.

- SEASON. - APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL, FERTILIZER MAY BE APPLIED AT THE RATE OF 1000 POUNDS PER ACRE OR 13.8 POUNDS PER 1,000 SQUARE FEET OF LOW PHOSPHATE FERTILIZER1 (N-P205-K20) OR EQUIVALENT. APPLY LIMESTONE (EQUIVALENT TO 50 PERCENT CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER ACRE (138 LB. PER 1,000 SQUARE FEET).
- FERTILIZER SHALL BE RESTRICTED TO A LOW PHOSPHATE, SLOW RELEASE2 NITROGEN FERTILIZER WHEN APPLIED TO AREAS BETWEEN 25 FEET AND 250 FEET FROM A SURFACE WATER BODY. NO FERTILIZER EXCEPT LIMESTONE SHALL BE APPLIED WITHIN 25 FEET OF A SURFACE WATER BODY. THESE LIMITATIONS ARE REQUIREMENTS FOR ANY WATER BODY PROTECTED BY THE COMPREHENSIVE SHORELAND PROTECTION ACT.

### 12. SELECT SEED FROM RECOMMENDATIONS IN TABLE 4-1.

- 13. APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER TYPE SEEDER OR HYDROSEEDER (SLURRY INCLUDING SEED AND FERTILIZER). NORMAL SEEDING DEPTH IS FROM 1/4 TO 1/2 INCH. HYDROSEEDING THAT INCLUDES MULCH MAY BE LEFT ON SOIL SURFACE. SEEDING RATES MUST BE INCREASED 10 % WHEN
- 14. TEMPORARY SEEDING SHALL TYPICALLY OCCUR PRIOR TO SEPTEMBER 15TH.
- 15. AREAS SEEDED BETWEEN MAY 15TH AND AUGUST 15TH SHALL BE COVERED WITH HAY OR STRAW MULCH, ACCORDING TO THE "TEMPORARY AND PERMANENT MULCHING" PRACTICE.
- 16. VEGETATED GROWTH COVERING AT LEAST 85% OF THE DISTURBED AREA SHALL BE ACHIEVED PRIOR TO OCTOBER 15TH. IF THIS CONDITION IS NOT ACHIEVED, IMPLEMENT OTHER TEMPORARY STABILIZATION MEASURES FOR OVERWINTER PROTECTION.

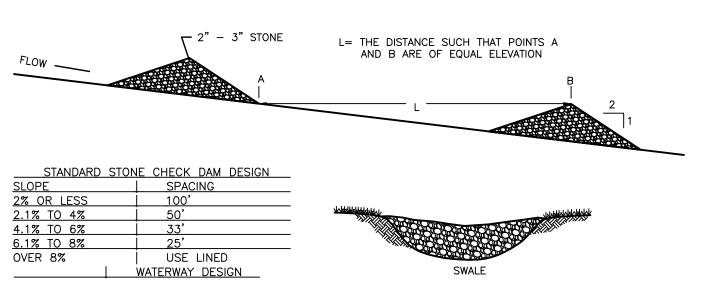
| SPECIES PER ACRE BUSHELS PER 1,000 FT2 (BU) OR POUNDS (LBS) | REMARKS  |
|---|--|
| (BU) OR POUNDS (LBS)  |  |
| MINTER RYE  | 2 BU. OR 112 LBS. 2.5 LBS. BEST FOR FALL SEEDIN SEED FROM AUGUST 15 TO SEPTEMBE 15 FOR BEST COVER. SEED TO A DEP OF 1 INCH.  |
| DATS  | 2.5 BU. OR 80 LE 2 LBS. BEST FO SPRING SEEDINGS. SEED NO LATER THAN MAY 15 FOR SUMMER PROTECTION. SEED TO A DEPTH OF 1 INCH.   |
| ANNUAL RYEGRASS   | 40 LBS. 1 LB. GROWS QUICKLY, BUT I OF SHORT DURATION. USE WHERE APPEARANCES ARE IMPORTANT. SEED EARLY SPRING AND/OR BETWEEN AUGUST 15 AND SEPTEMBER 15. COVE THE SEED WITH NO MORE THAN 0.25 INCH OF SOIL. |
| PERENNIAL RYEGRASS TEMPORARY VEGETATION                     | 30 LBS.  GOOD COVER WHICH IS LONGER LASTING THAN ANNUAL RYEGRASS. SEED BETWEEN APRIL 1 AI JUNE 1 AND/OR BETWEEN AUGUST 15 AND SEPTEMBER 15. MULCHING WILL  |

- 15. THE MAXIMUM AMOUNT OF AREA ALLOWED TO BE DISTURBED & UNSTABILIZED AT ONE TIME IS 1.5 ACRES.
- ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS FROM INITIAL DISTURBANCE.

- A.) DURING WINTER CONDITIONS, THE MAXIMUM ALLOWABLE DISTURBED AREA SHALL BE 0.5 ACRES. B.) ALL PROPOSED VEGETATED AREAS WHICH DO NOT EXHIBIT A MAXIMUM OF 85% VEGETATIVE GROWTH BY OCTORFR 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 FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS. C.) ALL DITCHES AND SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 105% 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 CONDITIONS. D.) AFTER OCTOBER 15th, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER
- SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER N.H.D.O.T. ITEM 304.3.
- 17. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED A.) BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
  - B.) A MINIMUM OF 85% VEGETATIVE GROWTH HAS BEEN ESTABLISHED;

ANY ROUGH GRADING OF THE SITE.

- C.) A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED; OR D.) EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED
- 18. BASINS AND SWALES SHALL BE INSTALLED EARLY IN THE CONSTRUCTION SEQUENCE AND PRIOR TO
- 19. ALL DITCHES, SWALES AND BASINS SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.



### **CONSIDERATIONS**

- THIS PRACTICE IS INTENDED FOR USE IN AREAS OF CONCENTRATED FLOW, BUT MUST NOT BE USED IN STREAM CHANNELS (WHETHER PERENNIAL OR INTERMITTENT).
- 2. 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 THEM TO BE RETAINED.
- 3. IF IT IS NECESSARY TO REMOVE A STONE CHECK DAM FROM A GRASSLINED CHANNEL THAT WILL BE MOWED, CARE SHALL BE TAKEN TO ENSURE THAT ALL STONES ARE REMOVED. THIS INCLUDES STONE THAT HAS

# . CHECK DAMS SHALL BE INSPECTED AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED

- RAINFALL AND NECESSARY REPAIRS SHALL BE MADE IMMEDIATELY. 5. INSPECTIONS SHALL VERIFY THAT THE CENTER OF THE DAM IS LOWER THAN THE EDGES.
- 6. EROSION CAUSED BY HIGH FLOWS AROUND THE EDGES OF THE DAM MUST BE CORRECTED IMMEDIATELY.
- 7. IF EVIDENCE OF SILTATION IN THE WATER IS APPARENT DOWNSTREAM FROM THE CHECK DAM, THE CHECK DAM SHALL BE INSPECTED AND ADJUSTED IMMEDIATELY.
- 8. CHECK DAMS SHALL BE CHECKED FOR SEDIMENT ACCUMULATION AFTER EACH SIGNIFICANT RAINFALL. SEDIMENT SHALL BE REMOVED WHEN IT REACHES ONE HALF OF THE ORIGINAL HEIGHT OR BEFORE.

# 9. CHECK DAMS SHALL BE INSTALLED BEFORE RUNOFF IS DIRECTED TO THE SWALE OR DRAINAGE DITCH.

- 10. THE MAXIMUM CONTRIBUTING DRAINAGE AREA TO THE DAM SHALL BE LESS THAN ONE ACRE.
- 11. THE MAXIMUM HEIGHT OF THE DAM SHALL BE 2 FEET.

SUBBASE

DATE

- 12. THE CENTER OF THE DAM SHALL BE AT LEAST 6 INCHES LOWER THAN THE OUTER EDGES.
- 13. THE MAXIMUM SPACING BETWEEN THE DAMS SHALL BE SUCH THAT THE TOE OF THE UPSTREAM DAM IS AT THE SAME ELEVATION AS THE OVERFLOW ELEVATION OF THE DOWNSTREAM DAM.
- 14. STONE CHECK DAMS SHALL 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 FILTERING.
- 15. IF PROVIDED BY DESIGN AND CONSTRUCTION PLANS, LEAVE THE DAM IN PLACE PERMANENTLY.
- 18. TEMPORARY STRUCTURES SHALL BE REMOVED ONCE THE SWALE OR DITCH HAS BEEN STABILIZED: - IN TEMPORARY DITCHES AND SWALES, CHECK DAMS SHALL BE REMOVED AND THE DITCH FILLED IN WHEN IT IS NO LONGER NEEDED.
  - IN PERMANENT STRUCTURES, CHECK DAMS SHALL BE REMOVED WHEN A PERMANENT LINING HAS BEEN ESTABLISHED. IF THE PERMANENT LINING IS VEGETATION, THEN THE CHECK DAM SHALL BE RETAINED UNTIL THE GRASS HAS MATURED TO PROTECT THE DITCH OR SWALE. THE AREA BENEATH THE CHECK DAM MUST BE SEEDED AND MULCHED IMMEDIATELY AFTER REMOVAL.

NOT TO SCALE

# TEMPORARY STONE CHECK DAMS

### TRAPPING FUNCTION, THEY SHALL BE REMOVED AND REPLACED WITH AN EFFECTIVE ALTERNATIVE BARRIER. TEMPORARY STORM DRAIN

INLET PROTECTION

CONCRETE BLOCK PLACED

WITH HOLES PARALLEL

TO THE GROUND, TO ALLOW

WATER TO FLOW INTO THE

WIRE SCREEN TO BE PLACE

BETWEEN THE STONE AND CMU BLOCK TO PREVENT

THE STONE FROM BEING

(STONE REMOVE FOR GRAPHIC

WASHED INTO THE STRUCTURE

CLARITY ONLY, STONE MUST

BE IN PLACE WHEN

CONSTRUCTED)

STRUCTURE.

CATCH BASIN -

GRATE

HAS BEEN PROPERLY STABILIZED.

ADJACENT AREAS OR STRUCTURES.

9. THE BLOCK ENDS SHALL ABUT ONE ANOTHER.

WITH 1/2-INCH OPENINGS SHALL BE USED.

THE TOP OF THE BLOCK BARRIER.

MANUFACTURED SEDIMENT BARRIERS

12. THE GRAVEL FILTER SHALL BE CLEAN COARSE AGGREGATE.

MINIMUM OF 12 INCHES HIGH AND NO MORE THAN 24 INCHES HIGH.

AFTER THE SITE HAS BEEN FULLY STABILIZED.

1. INLET BARRIERS SHALL BE INSPECTED BEFORE AND AFTER EACH RAIN EVENT AND REPAIRED AS NEEDED

3. THE BARRIERS SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE CONTRIBUTING DRAINAGE AREA

4. ALL CATCH BASINS AND STORM DRAIN INLETS MUST BE CLEANED AT THE END OF CONSTRUCTION AND

6. THE INLET PROTECTION DEVICE SHALL BE CONSTRUCTED IN A MANNER THAT WILL FACILITATE CLEAN-OUT

7. ANY RESULTANT PONDING OF STORMWATER MUST NOT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO

10. THE HEIGHT OF THE BARRIER CAN BE VARIED, DEPENDING ON DESIGN NEEDS, BY STACKING COMBINATIONS

11. A HARDWARE CLOTH OR WIRE MESH SHALL BE PLACED OVER THE OPENINGS OF THE CONCRETE BLOCKS

TRANSPORTED THROUGH THE OPENINGS IN THE BLOCKS. HARDWARE CLOTH OR COMPARABLE WIRE MESH

13. THE GRAVEL SHALL BE PLACED AGAINST THE WIRE AND ALONG THE OUTSIDE EDGES OF THE BLOCKS TO

14. IF THE STONE FILTER BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER ADEQUATELY PERFORMS

15. MANUFACTURED SEDIMENT BARRIERS ARE NOW AVAILABLE THAT COULD BE FUNCTIONALLY EQUIVALENT TO

THE BARRIERS LISTED ABOVE. THESE MEASURES ARE ACCEPTABLE AS LONG AS THEY ARE INSTALLED, USED, AND MAINTAINED AS SPECIFIED BY THE VENDOR OR MANUFACTURER, AND PREVENT SEDIMENT FROM ENTERING THE STORM DRAIN SYSTEM. IF SUCH PRODUCTS FAIL TO PERFORM THE REQUIRED SEDIMENT

AND EXTEND AT LEAST 12 INCHES AROUND THE OPENING TO PREVENT AGGREGATE FROM BEING

ITS FUNCTION, THE STONE MUST BE PULLED AWAY FROM THE BLOCKS, CLEANED AND REPLACED.

OF 4-INCH, 8-INCH AND 12-INCH WIDE BLOCKS. THE BARRIER OF BLOCKS AND GRAVEL FILTER SHALL BE A

8. THE BLOCKS SHALL BE PLACED LENGTHWISE IN A SINGLE ROW AROUND THE PERIMETER OF THE INLET.

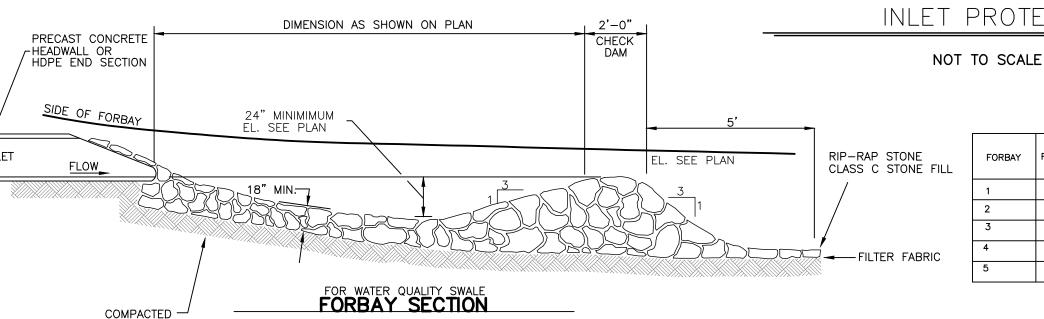
AND DISPOSAL OF TRAPPED SEDIMENTS AND MINIMIZE INTERFERENCE WITH CONSTRUCTION ACTIVITIES.

5. THE MAXIMUM CONTRIBUTING DRAINAGE AREA TO THE TRAP SHALL BE LESS THAN ONE ACRE.

DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE BARRIER. REMOVED

SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.

2. SEDIMENT SHALL BE REMOVED AND THE STORM DRAIN SEDIMENT BARRIER RESTORED TO ITS ORIGINAL



ROCK DAM STONE REQUIRED FORE FORBAY CLASS C 1250CF CLASS C 1241 2.0 CLASS C 427 2.0 CLASS C 650 CF 607 CLASS C 346 350 CF 2

FENCE POST INLET 36" MIN. FENCE POST, RIVEN MIN. 5" INTO GROUND MIN. 8" INTO GROUND FENCE SECTION 1. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6 INCHES, FOLDED AND STAPLED. TEMPORARY FABRIC SILTATION FENCE

NOT TO SCALE

SEDIMENT TRAPS AND SEDIMENT BASINS WILL BE INSPECTED FOR DEPTH OF SEDIMENT, AT A MINIMUM SEDIMENT WOULD BE REMOVED AND TRAP RESTURED TO ITS DRIGINAL SIZE WHEN SEDIMENT REACHES 1/2 OF THE DRIGINAL SIZE

CLEAN AT 12"-CHECK RIP-RAP STONE DAM " MIN. DIMENSION DEPTH MARKER SEDIMENT TRAP

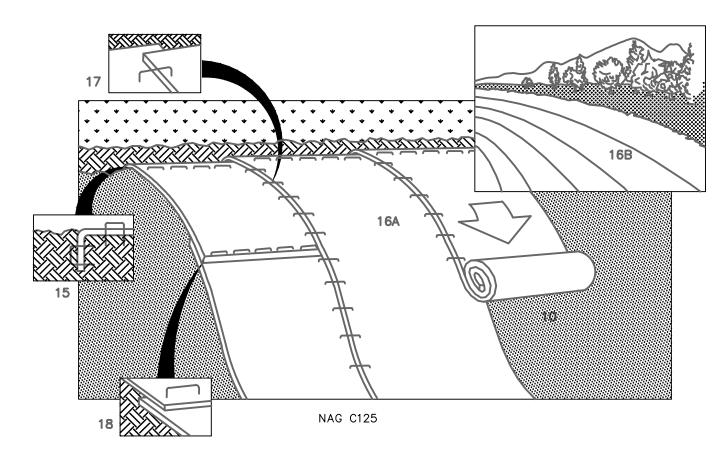
. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP

# **DETAILS** SITE PLAN TAX PARCEL 4 LOT 150C & E DOVER ROAD CHICHESTER, MERRIMACK COUNTY, NEW HAMPSHIRE

**REVISIONS** DESCRIPTION DWN BY CK BY ADDRESS NHDES AOT COMMENTS

Rokeh Consulting, LLC 89 KING ROAD, CHICHESTER, NH PH: 603-387-8688

SCALE: NTS DATE: OCTOBER 2, 2019 DR. BY: JR CK. BY: JR JOB NO. \_\_\_\_\_ SHEET NO. 7 OF 10



- 1. DURING THE GROWING SEASON (APRIL 15 SEPTEMBER 15) USE MATS OR MULCH AND NETTING ON SLOPES 15% OR GREATER AND ANY DISTURBED SOIL WITHIN 100 FEÉT OF LAKES, STREAMS AND OOWETLANDS.
- 2. DURING THE LATE FALL AND WINTER (SEPTEMBER 15 APRIL 15) USE HEAVY GRADE MATS ON ALL AREAS NOTED ABOVE PLUS USE LIGHTER GRADE MATS OR MULCH AND NETTING ON SLOPES GREATER THAN 8%. THERE MAY BE CASES WHERE MATS WILL BE NEEDED ON SLOPES FLATTER THAN 8%, DEPENDING ON SITE CONDITIONS AND THE LENGTH OF THE SLOPE.
- 3. INSTALL MATS AND STAPLE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

### MAINTENANCE REQUIREMENTS

- 4. ALL BLANKET AND MATS SHOULD BE INSPECTED WEEKLY DURING THE CONSTRUCTION PERIOD, AND AFTER ANY RAINFALL EVENT EXCEEDING 1/2 INCH IN A 24-HOUR PERIOD.
- 5. ANY FAILURE SHOULD BE REPAIRED IMMEDIATELY. IF WASHOUT OF THE SLOPE, DISPLACEMENT OF THE MAT. OR DAMAGE TO THE MAT OCCURS, THE AFFECTED SLOPE SHALL BE REPAIRED AND RESEEDED. AND THE AFFECTED AREA OF MAT SHALL BE RE-INSTALLED OR REPLACED.

# SPECIFICATIONS SITE PREPARATION:

### GRADE AND SHAPE AREA OF INSTALLATION.

- 7. REMOVE ALL ROCKS, CLODS, TRASH, VEGETATIVE OR OTHER OBSTRUCTIONS SO THAT THE INSTALLED BLANKETS WILL HAVE DIRECT CONTACT WITH THE SOIL.
- 8. PREPARE SEEDBED BY LOOSENING 2-3 INCHES OF TOPSOIL ABOVE FINAL GRADE.
- 9. INCORPORATE AMENDMENTS, SUCH AS LIME AND FERTILIZER, INTO SOIL ACCORDING TO SOIL TEST AND THE SEEDING PLAN.

- 10. SEED AREA BEFORE BLANKET INSTALLATION FOR EROSION CONTROL AND RE-VEGETATION. SEEDING AFTER MAT INSTALLATION IS OFTEN SPECIFIED FOR TURF REINFORCEMENT APPLICATION. WHEN SEEDING PRIOR TO BLANKET INSTALLATION, ALL CHECK SLOTS AND OTHER AREAS DISTURBED DURING INSTALLATION MUST BE
- 11. WHERE SOIL FILLING IS SPECIFIED, SEED THE MATTING AND THE ENTIRE DISTURBED AREA AFTER INSTALLATION AND PRIOR TO FILLING THE MAT WITH SOIL.

### INSTALLING AND ANCHORING BLANKETS:

- 12. BLANKETS SHALL BE INSTALLED AND ANCHORED PER THE MANUFACTURER'S SPECIFICATIONS.
- 13. ENSURE COMPLETE CONTACT OF THE PROTECTION MATTING WITH THE SOIL.

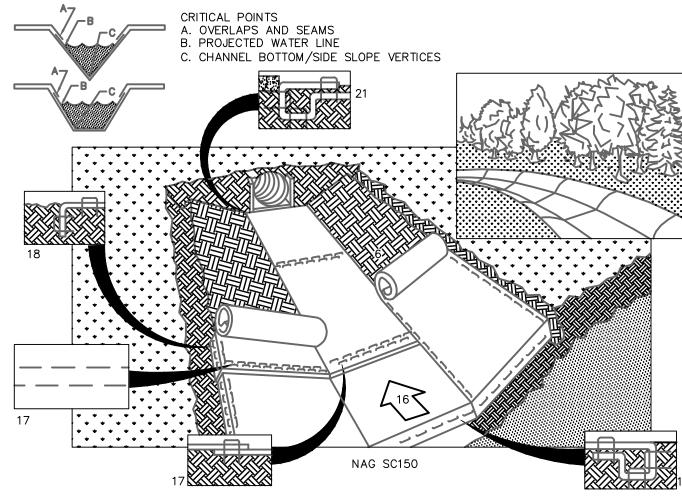
- 14. BLANKETS SHALL BE INSTALLED ON SLOPES PER THE MANUFACTURER'S SPECIFICATIONS. IF THE MANUFACTURER'S INSTRUCTIONS DIFFER FROM THOSE LISTED BELOW, THE MANUFACTURER'S INSTRUCTIONS
- 15. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
- 16. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE.
- 17. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 6" OVERLAP.
- 18. WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH APPROXIMATELY 6" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12"

# TEMPORARY EROSION CONTROL BLANKET ON SLOPES

### NOT TO SCALE

## TEMPORARY EROSION CONTROL BLANKETS NHFG WILDLIFE FRIENDLY REQUIREMENTS

- THE ELIMINATION OF PLASTIC OR 'BIODEGRADABLE PLASTIC' EROSION CONTROL NETTING IS REQUIRED AS THESE ARE KNOWN SOURCE OF ENTRAPMENT AND MORTALITY TO PROTECTED SNAKES AND TURTLES.
- 2. SEVERAL 'WILDLIFE FRIENDLY' OPTIONS SUCH AS WOVEN ORGANIC MATERIAL (E.G., COCO MATTING) OR THE USE OF EROSION CONTROL BERM OKAY
- 3. ACCEPTABLE MATERIALS INCLUDE NORTH AMERICAN GREEN C125BN OR EAST COAST EROSION CONTROL BLANKET ECC-2B BOTH ARE BIODEGRADABLE WITH A COCONUT FIBER MATRIX AND JUTE NETTING



### **CONSIDERATIONS**

- 1. DURING THE GROWING SEASON (APRIL 15 SEPTEMBER 15) USE MATS OR MULCH AND NETTING ON THE BASE OF GRASSED WATERWAYS.
- 2. DURING THE LATE FALL AND WINTER (SEPTEMBER 15 APRIL 15) USE HEAVY GRADE MATS ON SIDE SLOPES OF GRASSED WATERWAYS.
- 3. INSTALL MATS AND STAPLE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

- 4. ALL BLANKET AND MATS SHOULD BE INSPECTED WEEKLY DURING THE CONSTRUCTION PERIOD, AND AFTER ANY RAINFALL EVENT EXCEEDING 1/2 INCH IN A 24-HOUR PERIOD.
- 5. ANY FAILURE SHOULD BE REPAIRED IMMEDIATELY. IF WASHOUT OF THE SLOPE, DISPLACEMENT OF THE MAT, OR DAMAGE TO THE MAT OCCURS, THE AFFECTED SLOPE SHALL BE REPAIRED AND RESEEDED, AND THE AFFECTED AREA OF MAT SHALL BE RE-INSTALLED OR REPLACED.

### <u>SPECIFICATIONS</u>

### GRADE AND SHAPE AREA OF INSTALLATION.

- 7. REMOVE ALL ROCKS, CLODS, TRASH, VEGETATIVE OR OTHER OBSTRUCTIONS SO THAT THE INSTALLED BLANKETS WILL HAVE DIRECT CONTACT WITH THE SOIL.
- 8. PREPARE SEEDBED BY LOOSENING 2-3 INCHES OF TOPSOIL ABOVE FINAL GRADE.
- 9. INCORPORATE AMENDMENTS, SUCH AS LIME AND FERTILIZER, INTO SOIL ACCORDING TO SOIL TEST AND THE SEEDING PLAN.

### 10. SEED AREA BEFORE BLANKET INSTALLATION FOR EROSION CONTROL AND RE-VEGETATION. SEEDING AFTER MAT INSTALLATION IS OFTEN SPECIFIED FOR TURF REINFORCEMENT APPLICATION. WHEN SEEDING PRIOR TO BLANKET INSTALLATION, ALL CHECK SLOTS AND OTHER AREAS DISTURBED DURING INSTALLATION MUST BE

11. WHERE SOIL FILLING IS SPECIFIED, SEED THE MATTING AND THE ENTIRE DISTURBED AREA AFTER INSTALLATION AND PRIOR TO FILLING THE MAT WITH SOIL.

### **INSTALLING AND ANCHORING BLANKETS:**

- 12. BLANKETS SHALL BE INSTALLED AND ANCHORED PER THE MANUFACTURER'S SPECIFICATIONS.
- 13. ENSURE COMPLETE CONTACT OF THE PROTECTION MATTING WITH THE SOIL.

# **INSTALLATION IN CHANNELS:**

- 14. BLANKETS SHALL BE INSTALLED IN CHANNELS PER THE MANUFACTURER'S SPECIFICATIONS. IF THE MANUFACTURER'S INSTRUCTIONS DIFFER FROM THOSE LISTED BELOW, THE MANUFACTURER'S INSTRUCTIONS
- 15. BEGIN AT THE OUTLET OF THE CHANNEL BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
- 16. ROLL CENTER BLANKET IN DIRECTION OF THE INLET END OF THE CHANNEL.

ROW 4" BELOW THE FIRST ROW IN A STAGGERED PATTERN.

- 17. PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH A 6" OVERLAP. USE A DOUBLE ROW OF STAGGERED STAPLES 4" APART TO SECURE BLANKETS.
- 18. FULL LENGTH EDGE OF BLANKETS AT TOP OF SIDE SLOPES MUST BE ANCHORED IN 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
- 19. BLANKETS ON SIDE SLOPES MUST BE OVERLAPPED 4" OVER THE CENTER BLANKET AND STAPLED. 20. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT

INTERVALS. USE A ROW OF STAPLES 4" APART OVER ENTIRE WIDTH OF THE CHANNEL. PLACE A SECOND

21. THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

# TEMPORARY EROSION CONTROL BLANKET FOR CHANNELS

## NOT TO SCALE

# TEMPORARY & PERMANENT MULCHING

- . WITHIN 100 FEET OF STREAMS, WETLANDS AND IN LAKE WATERSHEDS, TEMPORARY MULCH SHOULD BE APPLIED WITHIN 7 DAYS OF EXPOSING SOIL OR PRIOR TO ANY STORM EVENT.
- 2. AREAS THAT HAVE BEEN TEMPORARILY OR PERMANENTLY SEEDED SHOULD BE MULCHED IMMEDIATELY FOLLOWING SEEDING. 3. AREAS THAT CANNOT BE SEEDED WITHIN THE GROWING SEASON SHOULD BE MULCHED FOR OVER-WINTER PROTECTION. THE AREA SHOULD BE SEEDED AT THE BEGINNING OF THE NEXT GROWING SEASON.
- 4. MULCH ANCHORING SHOULD BE USED ON SLOPES WITH GRADIENTS GREATER THAN 5% IN LATE FALL (PAST SEPTEMBER 15), AND OVER-WINTER (SEPTEMBER 15 - MAY 15).
- 5. PERMANENT MULCH CAN BE USED IN CONJUNCTION WITH TREE, SHRUB, VINE, AND GROUND COVER PLANTINGS.

### MAINTENANCE REQUIREMENTS

- . ALL TEMPORARY MULCHES MUST BE INSPECTED PERIODICALLY AND IN PARTICULAR AFTER RAINSTORMS, TO CHECK FOR RILL EROSION OR DISPLACEMENT OF THE MULCH. IF LESS THAN 90% OF THE SOIL SURFACE IS COVERED BY MULCH. ADDITIONAL MULCH SHOULD BE IMMEDIATELY APPLIED. NETS MUST BE INSPECTED AFTER RAIN EVENTS FOR DISLOCATION OR FAILURE, IF WASHOUTS OR BREAKAGES OCCUR, REPAIR ANY DAMAGE TO THE SLOPE AND RE-INSTALL OR REPLACE NETTING AS NECESSARY. INSPECTIONS SHOULD TAKE PLACE UNTIL GRASSES ARE FIRMLY ESTABLISHED (85% SOIL SURFACE UNIFORMLY COVERED WITH HEALTHY STAND OF GRASS)
- 7. EROSION CONTROL MIX MULCH USED FOR TEMPORARY STABILIZATION SHOULD BE LEFT IN PLACE. VEGETATION ADDS STABILITY AND SHOULD BE PROMOTED.
- 8. WHERE PERMANENT MULCH IS USED IN CONJUNCTION WITH ORNAMENTAL PLANTINGS, INSPECT PERIODICALLY THROUGHOUT THE YEAR TO DETERMINE IF MULCH IS MAINTAINING COVERAGE OF THE SOIL SURFACE. REPAIR AS NEEDED.
- 9. PERMANENT MULCHED AREAS SHOULD BE INSPECTED AT LEAST ANNUALLY, AND AFTER EACH LARGE RAINFALL (2.5 INCHES OR MORE IN A 24-HOUR PERIOD). ANY REQUIRED REPAIRS SHOULD BE MADE IMMEDIATELY. WHERE EROSION CONTROL MIX HAS BEEN USED, PLACE ADDITIONAL MIX ON TOP OF THE MULCH TO MAINTAIN THE RECOMMENDED THICKNESS. WHEN THE MULCH IS DECOMPOSED, CLOGGED WITH SEDIMENT, ERODED OR INEFFECTIVE, IT MUST BE REPLACED OR REPAIRED.
- 10. IF THE MULCH NEEDS TO BE REMOVED, SPREAD IT OUT INTO THE LANDSCAPE.

### **SPECIFICATIONS**

- GENERAL: 11. APPLY MULCH PRIOR TO A STORM EVENT. THIS IS APPLICABLE IN EXTREMELY SENSITIVE AREAS SUCH AS WITHIN 100 FEET OF LAKES, PONDS, RIVERS, STREAMS, AND WETLANDS. IT WILL BE NECESSARY TO CLOSELY MONITOR WEATHER PREDICTIONS TO HAVE ADEQUATE WARNING OF SIGNIFICANT STORMS.
- 12. MULCHING SHOULD BE COMPLETED WITHIN THE FOLLOWING SPECIFIED TIME PERIODS FROM ORIGINAL SOIL EXPOSURE:

   WITHIN 100 FEET OF RIVERS AND STREAMS, WETLANDS, AND IN LAKE AND POND WATERSHEDS, THE TIME PERIOD SHOULD BE NO GREATER THAN 7 DAYS. THIS 7-DAY LIMIT SHOULD BE REDUCED FURTHER DURING WET WEATHER
- IN OTHER AREAS, THE TIME PERIOD CAN RANGE FROM 14 TO 30 DAYS, THE LENGTH OF TIME VARYING WITH SITE CONDITIONS (SOIL ERODIBILITY, SEASON OF YEAR, EXTENT OF DISTURBANCE, PROXIMITY TO SENSITIVE RESOURCES) AND THE POTENTIAL IMPACT OF EROSION ON ADJACENT AREAS. OTHER STATE OR LOCAL RESTRICTIONS MAY ALSO APPLY.
- 13. THE CHOICE OF MATERIALS FOR MULCHING SHOULD BE BASED ON SITE CONDITIONS, SOILS, SLOPE, FLOW CONDITIONS, AND
- HAY OR STRAW MULCHES 14. ORGANIC MULCHES INCLUDING HAY AND STRAW SHOULD BE AIR-DRIED, FREE OF UNDESIRABLE SEEDS AND COARSE
- 15. APPLICATION RATE SHOULD BE 2 BALES (70-90 POUNDS) PER 1000 SQUARE FEET OR 1.5 TO 2 TONS (90-100 BALES)
- PER ACRE TO COVER 75 TO 90 % OF THE GROUND SURFACE. 16 HAY OR STRAW MULCH SHOULD BE ANCHORED TO PREVENT DISPLACEMENT BY WIND OR FLOWING WATER, USING ONE OF THE FOLLOWING METHODS:
- · NETTING: INSTALL JUTE, WOOD FIBER, OR BIODEGRADABLE PLASTIC NETTING OVER HAY OR STRAW TO ANCHOR IT TO THE SOIL SURFACE. INSTALL NETTING MATERIAL ACCORDING TO MANUFACTURER'S RECOMMENDATION. NETTING SHOULD BE USED JUDICIOUSLY, AS WILDLIFE CAN BECOME ENTANGLED IN THE MATERIALS. - TACKIFIER: APPLY POLYMER OR ORGANIC TACKIFIER TO ANCHOR HAY OOOR STRAW MULCH. APPLICATION RATES VARY BY MANUFACTURER: TYPICALLY 40-60 LBS/ACRE FOR POLYMER MATERIAL, AND 80-120 LBS/ACRE FOR ORGANIC MATERIAL LIQUID MULCH BINDERS ARE ALSO TYPICALLY APPLIED HEAVIER AT EDGES, IN VALLEYS, AND AT CRESTS
- 17. WHEN MULCH IS APPLIED TO PROVIDE PROTECTION OVER WINTER (PAST THE GROWING SEASON), IT SHOULD BE APPLIED TO A DEPTH OF FOUR INCHES (150-200 POUNDS OF HAY OR STRAW PER 1000 SQUARE FEET, OR DOUBLE STANDARD APPLICATION RATE). SEEDING CANNOT GENERALLY BE EXPECTED TO GROW UP THROUGH THIS DEPTH OF MULCH AND WILL BE SMOTHERED. IF VEGETATION IS DESIRED, THE MULCH WILL NEED TO BE REMOVED IN THE SPRINGTIME AND THE AREA SEEDED AND MULCHED.
- WOOD CHIPS OR BARK:
  18. WOOD CHIPS OR GROUND BARK SHOULD BE APPLIED TO A THICKNESS OF 2 TO 6 INCHES.
- 19 WOOD CHIPS OR GROUND BARK SHOULD BE APPLIED AT A RATE OF 10 TO 20 TONS PER ACRE OR 460 TO 920 POUNDS PER 1,000 SQUARE FEET.
- <u>EROSION CONTROL MIX:</u>
  20. EROSION CONTROL MIX CAN BE MANUFACTURED ON OR OFF THE PROJECT SITE. IT MUST CONSIST PRIMARILY OF ORGANIC MATERIAL, SEPARATED AT THE POINT OF GENERATION, AND MAY INCLUDE SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR ACCEPTABLE MANUFACTURED PRODUCTS. WOOD AND BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSED WOOD PRODUCTS WILL NOT BE ACCEPTABLE AS THE ORGANIC COMPONENT OF THE MIX.
- 21. COMPOSITION OF THE EROSION CONTROL MIX SHOULD BE AS FOLLOWS: FROSION CONTROL MIX SHOULD CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES AND MAY CONTAIN ROCKS LESS THAN 4" IN DIAMETER. EROSION CONTROL MIX MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH. THE MIX COMPOSITION SHOULD MEET THE FOLLOWING STANDARDS:
- THE ORGANIC MATTER CONTENT SHOULD BE BETWEEN 25 AND 65%, DRY WEIGHT BASIS. - PARTICLE SIZE BY WEIGHT SHOULD BE 100% PASSING A 3" SCREEN, 90% TO 100% PASSING A 1-INCH SCREEN, 70% TO 100% PASSING A 0.75-INCH SCREEN, AND A MAXIMUM OF 30% TO 75%, PASSING A 0.25-INCH SCREEN.
- THE ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED.
- THE MIX SHOULD NOT CONTAIN SILTS, CLAYS OR FINE SANDS.
- SOLUBLE SALTS CONTENT SHOULD BE < 4.0 MMHOS/CM. - THE PH SHOULD BE BETWEEN 5.0 AND 8.0.
- 22. THE BARRIER MUST BE PLACED ALONG A RELATIVELY LEVEL CONTOUR. IT MAY BE NECESSARY TO CUT TALL GRASSES OR WOODY VEGETATION TO AVOID CREATING VOIDS AND BRIDGES THAT WOULD ENABLE FINES TO WASH UNDER THE BARRIER THROUGH THE GRASS BLADES OR PLANT STEMS.
- 23. THE BARRIER MUST BE A MINIMUM OF 12" HIGH, AS MEASURED ON THE UPHILL SIDE OF THE BARRIER, AND A MINIMUM OF

# WINTER CONSTRUCTION NOTES

- ALL PROPOSED VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 105% VEGETATIVE GROWTH BY OCT.. 15TH, OR WHICH ARE DISTURBED AFTER OCT. 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.
- ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 105% VEGETATIVE GROWTH BY OCT. 15TH, OR WHICH ARE DISTURBED AFTER OCT. 15TH, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.
- AFTER OCTOBER 15TH, INCOMPLETE ROAD OR PARKING SURFACES, 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.

DATE

# **GN-4: VEGETATION STABILIZATION NOTES**

ALL VEGETATION STABILIZATION SHALL BE IN ACCORDANCE WITH USDA NRCS "VEGETATING NEW HAMPSHIRE SAND and GRAVEL PITS", IN ADDITION TOO "BEST MANAGEMENT PRACTICES FOR ROUTINE ROADWAY MAINTENANCE ACTIVITIES IN NEW HAMPSHIRE". LATEST EDITIONS.

PARK SEED TYPE 15 SHALL NORMALLY BE USED ON LOAM AREAS. THIS SEED MIXTURE SHALL CONFORM TO TABLE 1 UNLESS AMENDED BY THE PROJECT ENGINEER TO SUIT **ACTUAL FIELD CONDITIONS.** 

| TABLE 1           |            |                 |             |  |  |
|-------------------|------------|-----------------|-------------|--|--|
| IND OF SEED       | MINIMUM    | MINIMUM         | POUNDS/ACRE |  |  |
|                   | PURITY (%) | GERMINATION (%) |             |  |  |
| REEPING FESCUE    | 96         | 85              | 40          |  |  |
| ERENNIAL RYEGRASS | 98         | 90              | 50          |  |  |
| ENTUCKY BLUEGRASS | 97         | 85              | 25          |  |  |
| EDTOP             | 95         | 80              | 5           |  |  |
|                   |            | TC              | OTAL 120    |  |  |

SLOPE SEED TYPE 44 SHALL NORMALLY BE USED FOR ALL SLOPE WORK, and SHALL CONFORM TO TABLE 2 UNLESS AMENDED BY THE DESIGN ENGINEER TO SUIT ACTUAL FIELD CONDITIONS.

| TABLE 2             |            |                 |             |  |
|---------------------|------------|-----------------|-------------|--|
| KIND OF SEED        | MINIMUM    | MINIMUM         | POUNDS/ACRE |  |
|                     | PURITY (%) | GERMINATION (%) |             |  |
| CREEPING RED FESCUE | 96         | 85              | 35          |  |
| PERENNIAL RYEGRASS  | 98         | 90              | 30          |  |
| REDTOP              | 95         | 80              | 5           |  |
| ALSIKE CLOVER       | 97         | 90              | 5           |  |
| BIRDSFOOT TREFOIL   | 98         | 80              | 5           |  |
|                     |            | TO              | TAI 80      |  |

### SEEDING SEASON:

1. SEEDBED PREPARATION ALL AREAS TO BE SEEDED SHALL BE A REASONABLY FIRM, BUT FRIABLE.

- SURFACE and SEEPAGE WATER SHOULD BE DRAINED OR DIVERTED FROM THE SITE TO PREVENT DROWNING OR WINTER KILLING.
- C. THE SEEDBED SHOULD BE LEFT IN A REASONABLY FIRM and SMOOTH CONDITION, FOLLOWING **SEEDING OPERATIONS**
- D. ALL AREAS TO BE SEEDED SHALL MEET THE SPECIFIED GRADES, AS SPECIFIED ON THE APPROVED PLAN.
- E. ALL VEGETATION SHALL BE INSPECTED ANNUALLY FOR UNHEALTHY or DEAD AREAS. ANY and ALL SUCH AREAS ARE TO BE REPAIRED or REPLACED IN KIND.

## 2. ESTABLISHING A STAND

- LIME AND FERTILIZER SHOULD BE APPLIED PRIOR TO OR AT THE TIME OF SEEDING AND INCORPORATED INTO THE SOIL. KINDS AND AMOUNTS OF LIME AND FERTILIZER SHOULD BE BASED ON EVALUATION OF SOIL TESTS. WHEN A SOIL TEST IS NOT AVAILABLE, THE
  - FOLLOWING MINIMUM AMOUNTS SHOULD BE APPLIED:
  - AGRICULTURAL LIMESTONE: 2 TONS PER ACRE OR 0.09 LBS. PER SQ. FT.
  - NITROGEN (N): 50 LBS. PER ACRE OR 1.1 LBS. PER 1000 SQ. FT. - PHOSPHATE (P2O5): 100 LBS. PER ACRE OR 2.2 LBS. PER 1000 SQ. FT.
  - POTASH (K<sub>2</sub>O): 100 LBS. PER ACRE OR 2.2 LBS. PER 1000 SQ. FT. (NOTE: THIS IS THE EQUIVALENT OF 500 LBS. PER ACRE OF 10-20-20 FERTILIZER OR 1,000 LBS. PER
- B. SEED SHOULD BE SPREAD UNIFORMLY BY THE METHOD MOST APPROPRIATE FOR THE SITE. METHODS INCLUDE BROADCASTING, DRILLING, AND HYDROSEEDING. WHERE BROADCASTING IS USED, COVER SEED WITH 0.25 INCH O SOIL OR LESS, BY CULTIPACKING OR RAKING.

- HAY, STRAW, OR OTHER MULCH, WHEN NEEDED, SHOULD BE APPLIED IMMEDIATELY AFTER
- MULCH WILL BE HELD IN PLACE USING TECHNIQUES FROM THE "BEST MANAGEMENT PRACTICE FOR MULCHING", AS SHOWN IN, "STORMWATER MANAGEMENT AND SEDIMENTATION CONTROL HANDBOOK FOR URBAN AND DEVELOPING AREAS IN NEW HAMPSHIRE".

### 4. MAINTENANCE TO ESTABLISH A STAND

ACRE OF 5-10-10)

- A. PLANTED AREAS SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRAZING, TRAFFIC, AND DENSE WEED GROWTH.
- B. FERTILIZATION WILL BE PERFORMED ANNUALLY IN ACCORDANCE WITH NOTE 2A..
- IN WATERWAYS, CHANNELS, OR SWALES WHERE UNIFORM FLOW CONDITIONS ARE ANTICIPATED, OCCASIONAL MOWING or TRIMMING WILL BE PERFORMED ANNUALLY TO CONTROL GROWTH.
- ALL VEGETATION SHOULD BE INSPECTED REGULARLY and AFTER EVERY MAJOR RAIN EVENT (> 5"/24 hr). DAMAGED AREAS SHOULD BE REPAIRED AND RE-VEGETATED IMMEDIATELY.



Developer Mal-Mar, LLC 20 Summit Avenue, Derry, NH

SITE PLAN TAX PARCEL 4 LOT 150C & E DOVER ROAD CHICHESTER, MERRIMACK COUNTY, NEW HAMPSHIRE

**DETAILS** 

| REVISIONS |  |
|-----------|--|
|           |  |

DESCRIPTION DWN BY CK BY ADDRESS NHDES AOT COMMENTS

Rokeh Consulting, LLC 89 KING ROAD, CHICHESTER, NH PH: 603-387-8688

SCALE: NTS DATE: OCTOBER 2, 2019 DR. BY: JR CK. BY: JR JOB NO. \_\_\_\_\_ SHEET NO. 8 OF 10

