

# Excavation Permit Application

Minimum (3) working days required  
Phone: 603-352-6550 | Fax: 603-283-5667 | Email: PWInfo@KeeneNH.gov



Date: \_\_\_\_\_  
Applicant Name: \_\_\_\_\_  
Email Address: \_\_\_\_\_  
Company: \_\_\_\_\_  
Company Address: \_\_\_\_\_  
Telephone: \_\_\_\_\_  
Permit Location (Address): \_\_\_\_\_  
Purpose of Excavation: \_\_\_\_\_  
\_\_\_\_\_

Area to be disturbed:	Pavement	Sidewalk	Landscape/Grass
	Length _____	Length _____	Length _____
	Width _____	Width _____	Width _____
	Depth _____	Depth _____	Depth _____

Proposed Date to Begin: \_\_\_\_\_  
Proposed Date of Completion: \_\_\_\_\_

### Following must be completed:

- Dig Safe Number: \_\_\_\_\_
- Sketch of proposed excavation
- Traffic Plan
- Certificate of Liability Insurance in the amount of \$1,000,000, naming the City of Keene as additional insured
- Received and reviewed construction details & specifications

Applicant Signature: \_\_\_\_\_ Date: \_\_\_\_\_

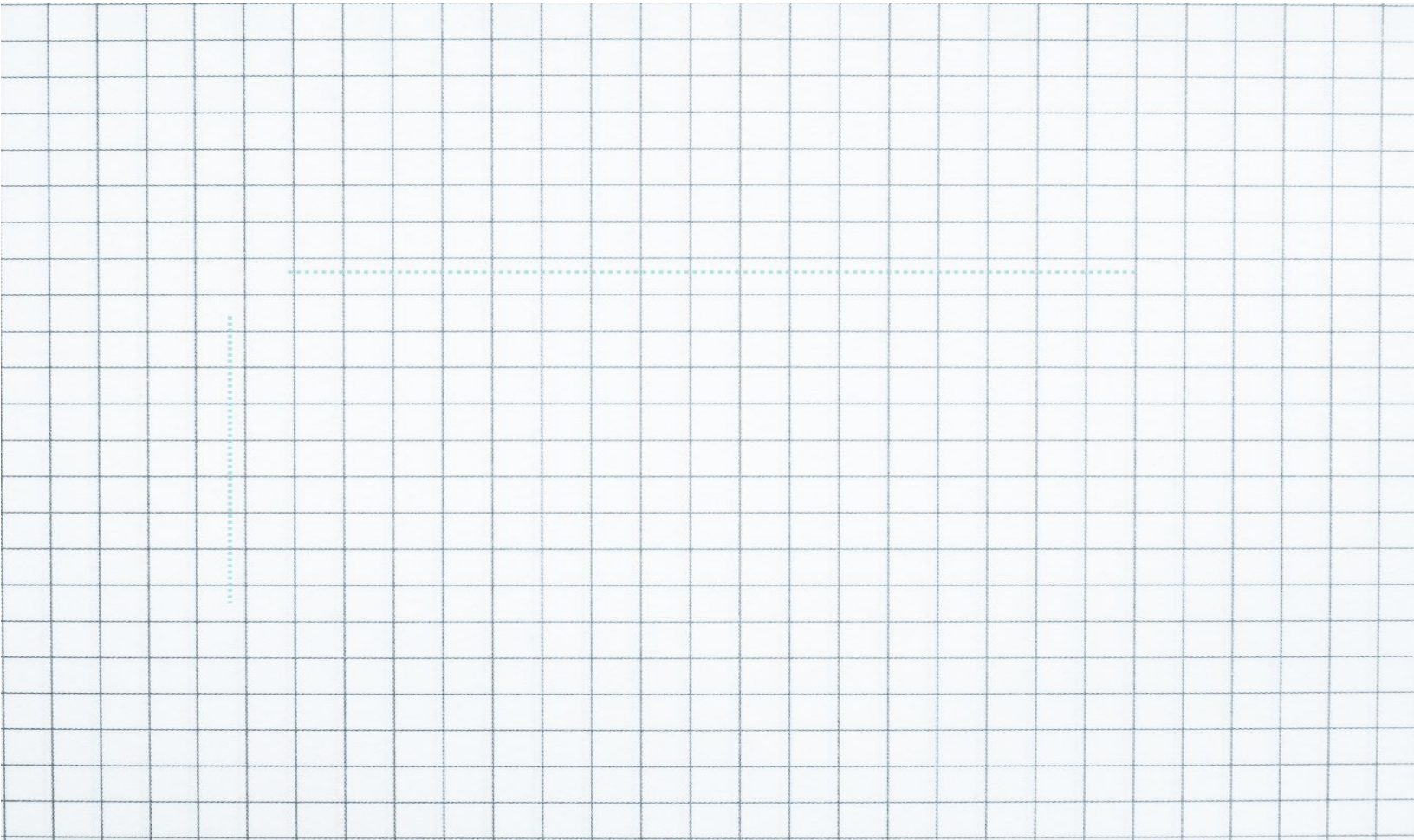
### CITY USE ONLY

City Engineer: \_\_\_\_\_ Date: \_\_\_\_\_

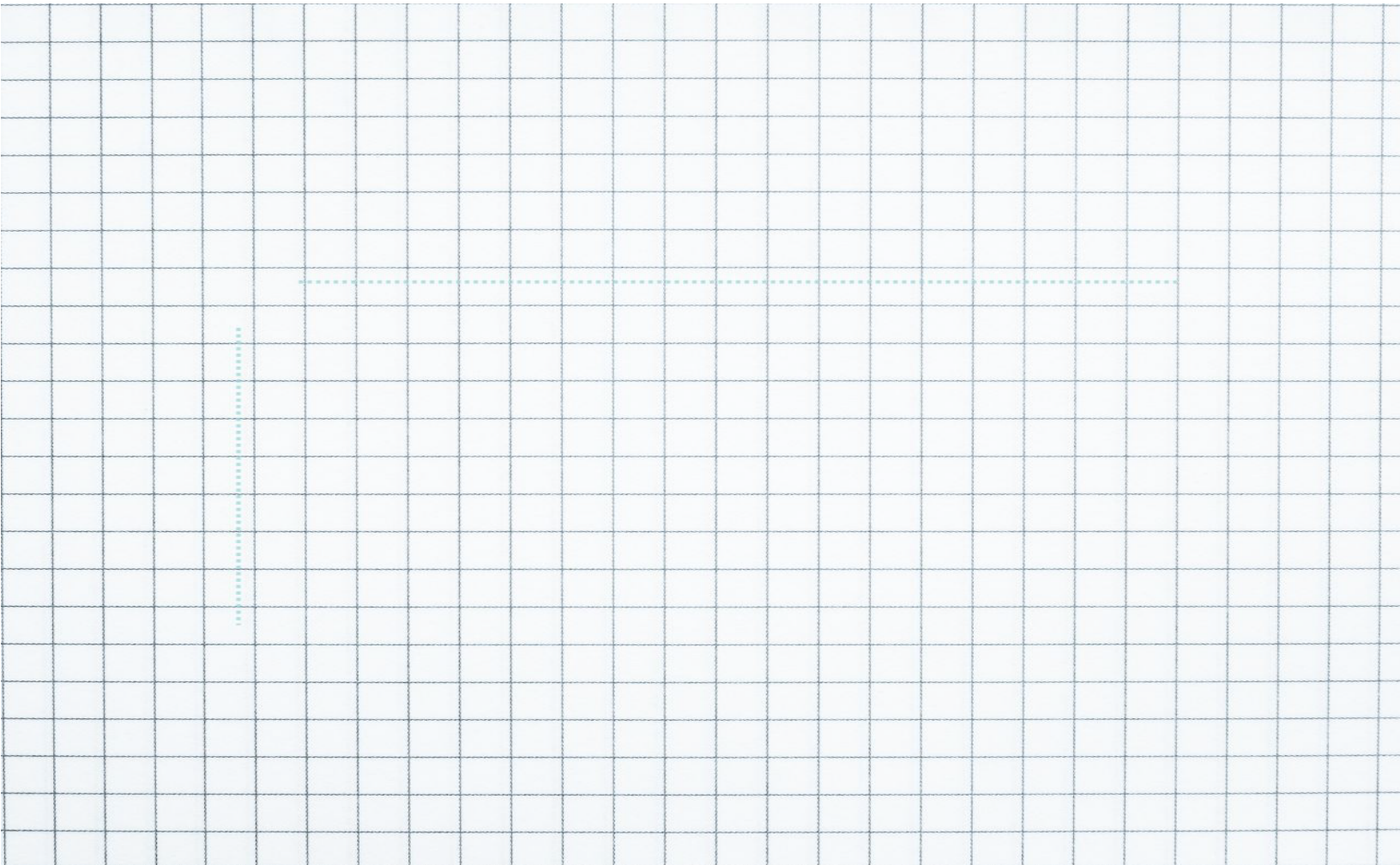
Bond (If Applicable) Estimate: (\$500) + Permit Fee (\$75) = Total Due \_\_\_\_\_

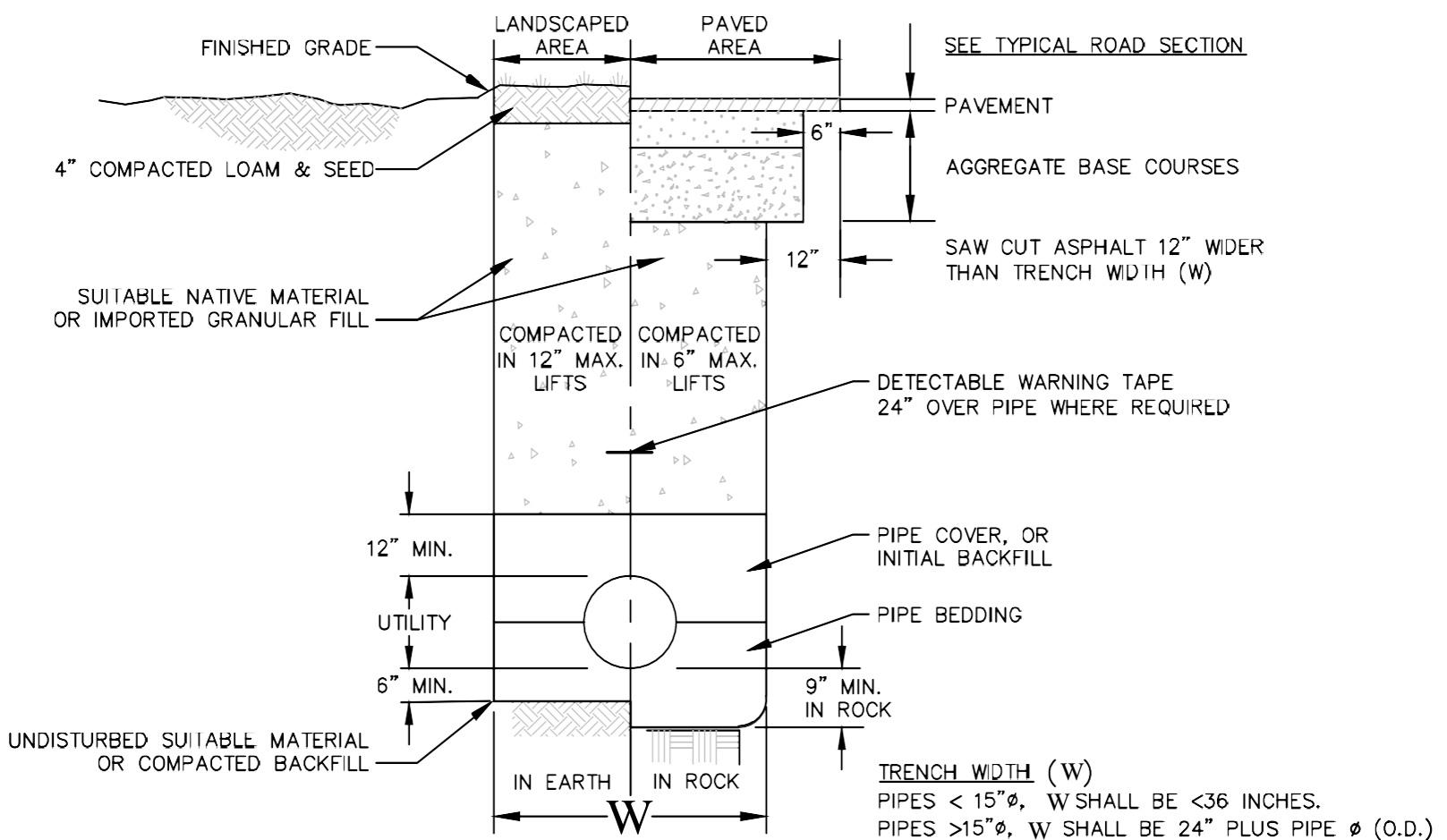
\$ Explanation: \_\_\_\_\_ Permit #: \_\_\_\_\_

Please sketch proposed excavation work in space provided below:



Please sketch traffic control plan in space provided below:





**NOTES:**

1. DPW STANDARD PIPE BEDDING AND BLANKET MATERIAL:  
 SEWER PIPE— BEDDING & BLANKET: ¾" WASHED CONCRETE STONE, NHDOT 304.4.  
 WATER PIPE— BEDDING: CRUSHED STONE (NHDOT 304.4) O.A.E. BLANKET: SAND (NHDOT 209.3)  
 DRAIN PIPE— CLEAN GRANULAR MATERIAL (SEE NOTE 3)  
 ELECT./TEL./CATV/GAS— SEE UTILITY PROVIDER SPECIFICATIONS (PSNH, VERIZON, NHGAS, ETC)
  
3. BACKFILL MATERIAL: IN ROADS, SHOULDERS, WALKWAYS AND TRAVELED WAYS SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE THE MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE DEBRIS, PIECES OF PAVEMENT, ORGANIC MATTER, AND TOP SOIL, EXCAVATED LEDGE MATERIAL, ROCKS OVER 6" IN DIAMETER, AND ANY MATERIAL WHICH IS DETERMINED BY THE ENGINEER AS NOT PROVIDING ADEQUATE SUPPORT TO MAINTAIN THE COMPLETED CONSTRUCTION IN A STABLE CONDITION. WET MATERIAL UNABLE TO MEET COMPACTION REQUIREMENTS SHALL BE REPLACED WITH DRY MATERIAL AT THE CONTRACTOR'S EXPENSE.
  
4. AREAS TO RECEIVE ASPHALT PAVEMENT SHALL BE SAW CUT AS SHOWN IN PAVEMENT REPAIR DETAIL. ALL BONDING SURFACES SHALL BE TACK COATED WITH APPROVED ASPHALT EMULSION ACCORDING TO MANUFACTURER'S INSTRUCTIONS.
  
5. ALL WORK SHALL CONFORM TO THE MOST STRINGENT INTERPRETATION OF THE FOLLOWING: CITY OF KEENE STANDARD DPW SPECIFICATIONS, N.H.D.O.T. STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION, NH CODE OF ADMINISTRATIVE RULES Env-Wq 700, AND "TEN STATE" RECOMMENDED STANDARDS FOR WATERWORKS, WHERE APPLICABLE.
  
6. PIPES WITH < 5 FT OF COVER SHALL BE INSULATED WITH 2" THICK POLYSTYRENE INSULATION, CENTERED ON THE PIPE ALIGNMENT. INSULATION SHALL EXTEND THE SAME DISTANCE BEYOND THE OUTER SURFACE OF PIPE (HORIZONTALLY) AS THE REDUCED AMOUNT OF COVER DEPTH.

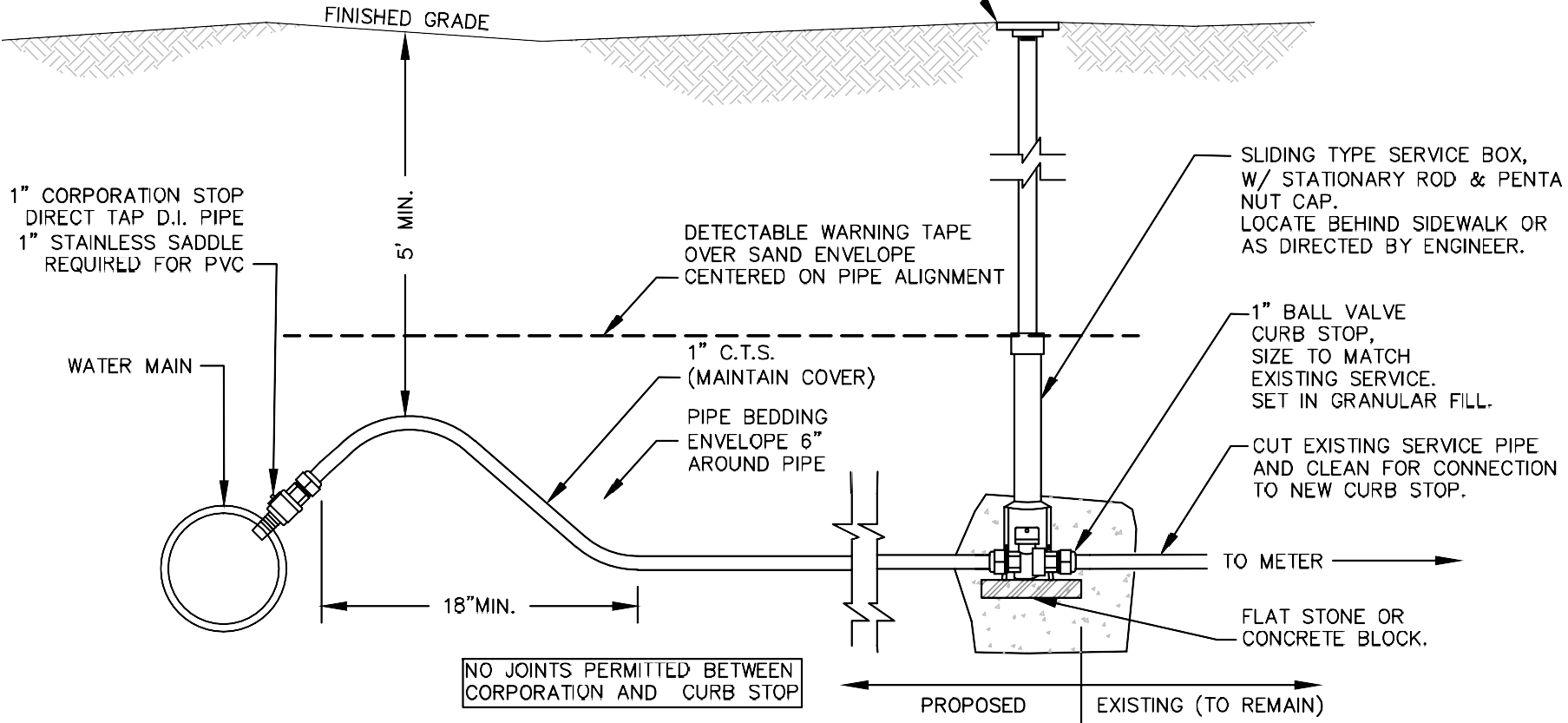
REVISIONS:

**UTILITY TRENCH DETAIL**  
 CITY OF KEENE, NEW HAMPSHIRE

Date: 04/27/2016  
 SCALE: NONE  
 Drawn by: LJD  
 File: CITY STD DET.DWG



THREADED CAP AND PLUG.  
 SET  $\leq 1/8$ " DOWN IN PAVEMENT,  
 $\leq 1$ " DOWN IN EARTH.  
 ALL CUTS TO ADJUST LENGTH  
 SHALL BE MADE AT BURIED END.



REVISIONS:

**WATER SERVICE DETAIL**  
 CITY OF KEENE, NEW HAMPSHIRE

- 1.) SERVICE PIPE SHALL BE MINIMUM 1" ASTM #3608 C.T.S. PLASTIC RATED FOR 200 PSI MIN. NO 1-1/4" OR 3" SERVICES ALLOWED.
- 2.) ALL CORPORATIONS, CURB STOPS, UNIONS, MALE/FEMALE ADAPTORS SHALL BE LEAD-FREE COMPRESSION TYPE FITTINGS. EXISTING FITTINGS THAT ARE NOT COMPRESSION TYPE SHALL BE ABANDONED, OR ADAPTED TO COMPRESSION FITTINGS.
- 3.) NO THREE-PART UNIONS ARE PERMITTED BETWEEN THE CORPORATION AND THE CURB STOP.
- 4.) CURB STOP BOXES SHALL ERIE STYLE, 5'-6" BURIAL DEPTH WITH 30" STAINLESS STEEL ROD AND PLUG TYPE COVER. COVER SHALL BE THREADED ONTO THE BOX. ANY CUTS TO MEET GRADE SHALL BE MADE ON THE BURIED END OF THE EXTENSION.
- 5.) NEW TAPS SHALL BE MADE ON THE SIDE OF THE MAIN, AND MADE FOR CC TYPE THREAD. 1" TAPS MAY BE MADE DIRECTLY INTO THE MAIN. 1-1/2" AND 2" TAPS, OR TAPS INTO PVC WATER MAIN SHALL HAVE DOUBLE STRAP CORPORATION SADDLES. FIRE LINES SHALL NOT BE TAPPED FOR DOMESTIC USE.
- 6.) CORPORATION SADDLES SHALL BE STAINLESS STEEL, DOUBLE STUD, NSF 61 CERTIFIED, RATED FOR 150 PSI. ALL HARDWARE SHALL BE 304 STAINLESS STEEL WITH ANTI-GALLING COMPOUND COATED THREADS. GASKETS SHALL COVER THE SADDLE WITH MULTIPLE CONCENTRIC RIBS.
- 7.) ALL SERVICES MUST BE INSPECTED BY THE ENGINEERING OR WATER DIVISION BEFORE BACKFILLING.

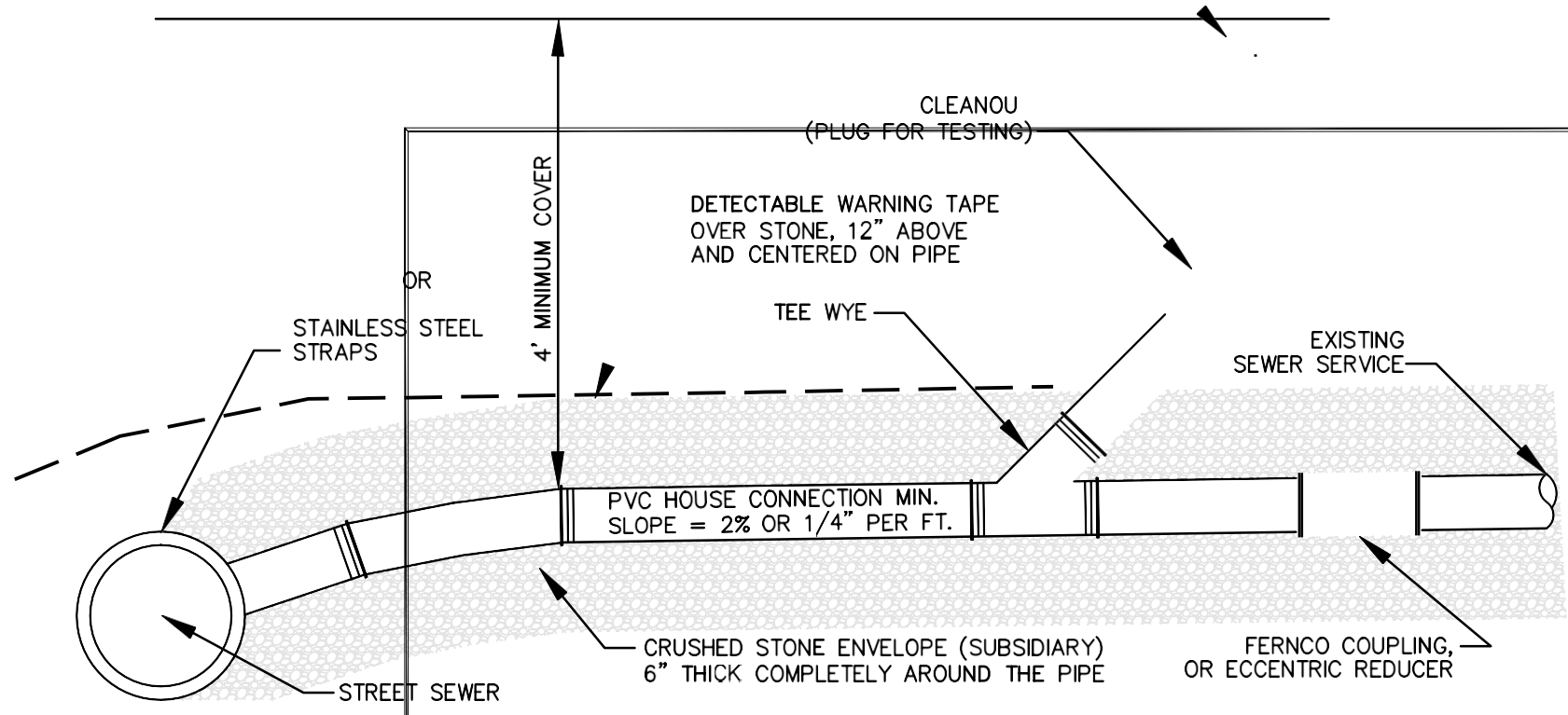
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SHEET

E-2



READED PVC CAP & IRON BOX  
SET FLUSH IN PAVEMENT,  
BURIED 4" EARTH



GRAVITY SEWER PIPE SHALL BE 4" INSIDE DIAMETER, SDR 35 PVC, WITH PUSH-ON, RUBBER GASKET JOINTS -OR- CLASS 52 CEMENTED DUCTILE IRON PIPE. GLUED JOINTS ARE NOT PERMITTED.

- 2.) PRESSURE PIPE SHALL BE SDR 26 PVC (MIN. 160 PSI RATING) WITH PUSH ON, RUBBER GASKET JOINTS.
3. CLEAN-OUT REQUIRED WHENEVER: A 90°, 45°, OR MORE THAN ONE 22.5° BEND OR DEFLECTION IS INSTALLED; WHERE THE SERVICE EXCEEDS 90 FEET LENGTH OR AS DIRECTED BY THE CITY ENGINEER.
4. SLOPE SHALL DETERMINE PIPE FLOW AT 1/4" PER FOOT (MINIMUM SLOPE) TO ENSURE PROPER FUNCTION.
- 5.) ALL CONNECTION OF DISSIMILAR PIPE MATERIALS SHALL HAVE THE APPROPRIATELY SIZED "FERNCO" TYPE COUPLING. CONNECTION OF DISSIMILAR SIZES SHALL TAKE INTO ACCOUNT INVERT ELEVATION WITH AN ECCENTRIC COUPLING.
- 6.) FOR CONNECTION TO SEWER SERVICE ONLY SADDLES OR WYES MAY BE USED.
7. AN SERVICE CONNECTED TO MANHOLE SHALL HAVE A BACKFLOW VALVE INSTALLED IN THE SERVICE LINE.
- 8.) TEN FEET OF HORIZONTAL SEPARATION DISTANCE SHALL BE MAINTAINED BETWEEN ALL DISSIMILAR UTILITIES.
- 9.) SEWER PIPE BEDDING SHALL BE 6" OF 3/4" WASHED STONE, AND A MINIMUM OF 6" CLEAN SAND COVER.

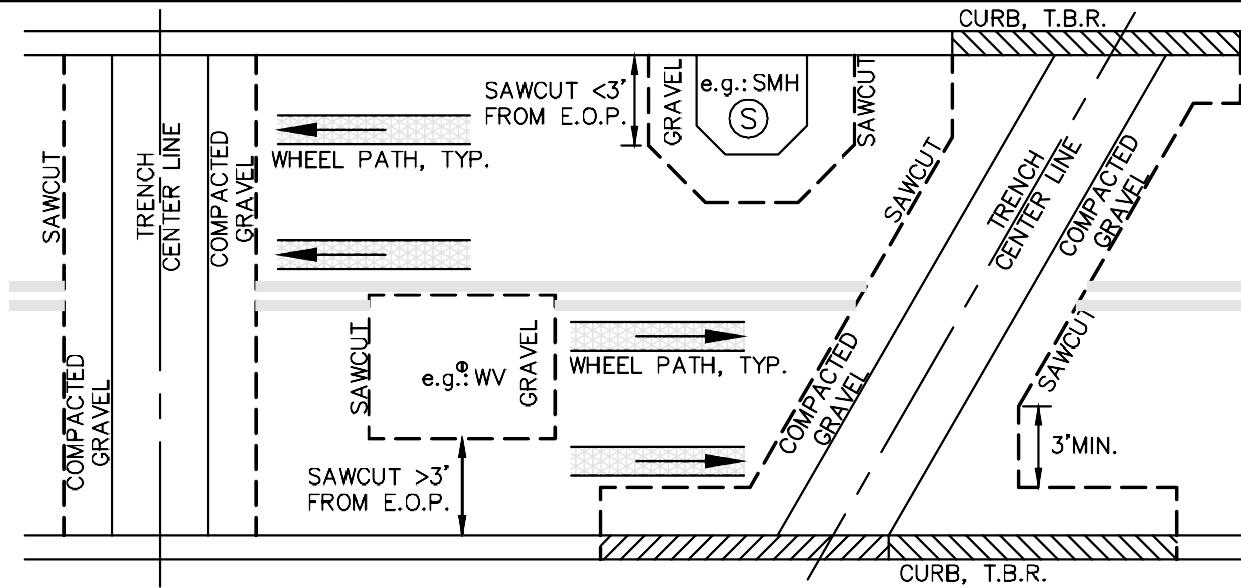
REVISIONS:

**SEWER SERVICE DETAIL**  
CITY OF KEENE, NEW HAMPSHIRE

Date: 04/27/2016  
SCALE: NONE  
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SHEET

E-3



TYPICAL SAW CUTS, ASPHALT ROAD

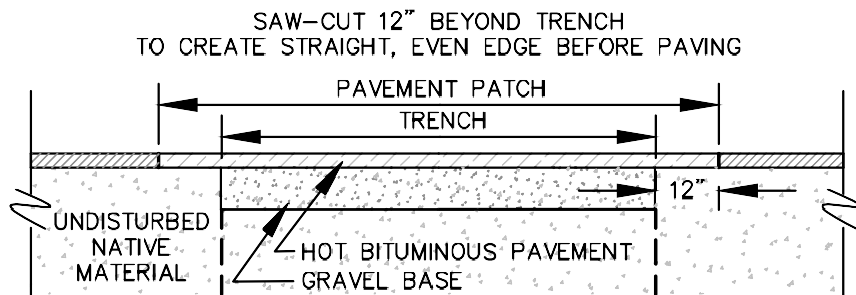
REVISIONS:

PAVEMENT REPAIR DETAILS  
CITY OF KEENE, NEW HAMPSHIRE

Date: 04/27/2016  
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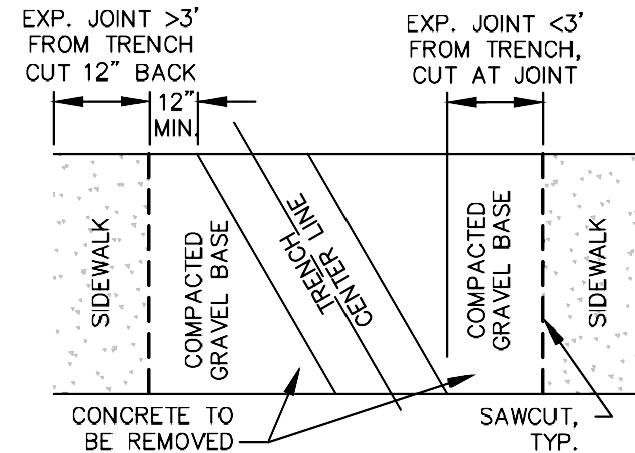
SHEET

E-4



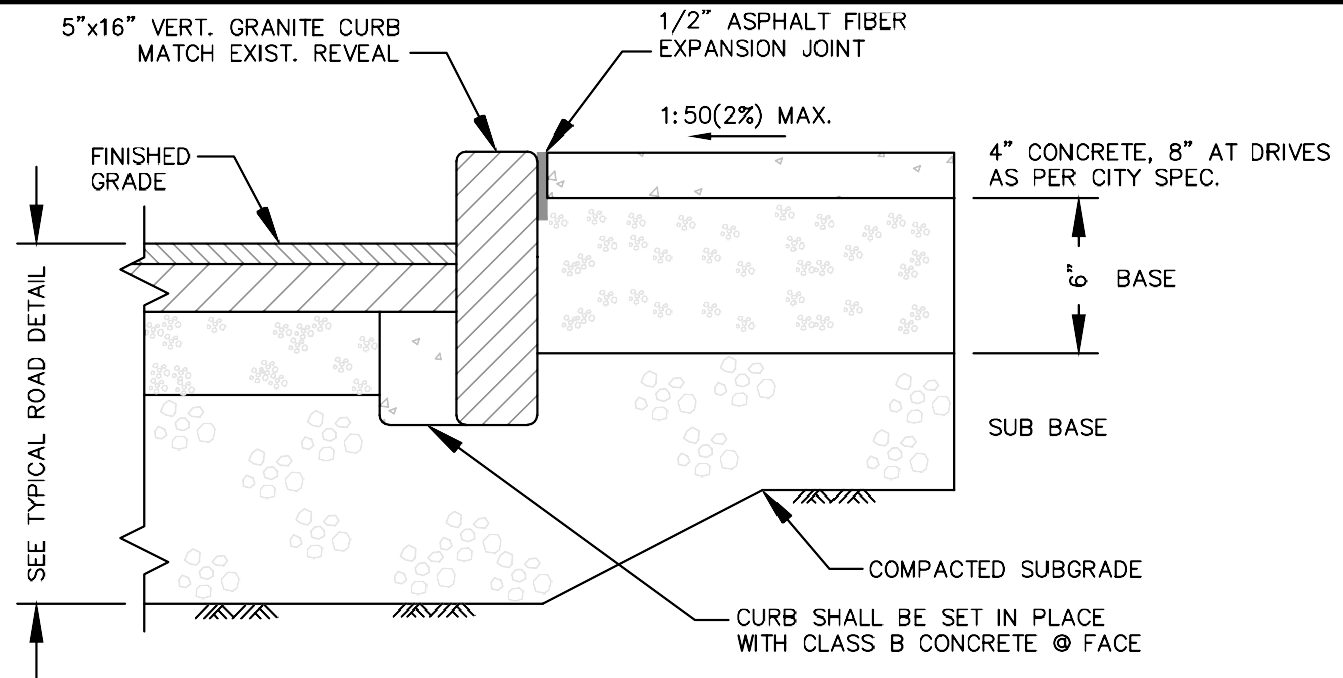
- |   |                                   |
|---|-----------------------------------|
| <u>GRAVEL BASE</u>  | <u>HOT BITUMINOUS PAVEMENT</u>    |
| 8" CRUSHED GRAVEL (NHDOT ITEM 304.3)<br>(SIDEWALKS 12" NHDOT 304.3) | 1-1/2" TOP (1/2" NHDOT 403.12 E)  |
| 14" BANK RUN GRAVEL (NHDOT ITEM 304.2)                              | 2-1/2" BASE (3/4" NHDOT 403.12 B) |

ASPHALT PAVEMENT REPAIR SECTION



TYPICAL SAW CUTS, CONCRETE SIDEWALK

- NOTES:
- CUTTING EQUIPMENT SHALL BE CAPABLE OF PRODUCING A SUBSTANTIALLY VERTICAL AND SOUND FACE, WITHOUT DEFORMATION OF THE ADJACENT PAVING. THE USE OF CUTTING ("PIZZA") WHEELS AND PAVEMENT BREAKERS IS NOT PERMITTED.
  - SAWCUTS SHALL NOT BE LOCATED WITHIN 12 INCHES OF THE TRENCH, OR SIX INCHES OF UNDISTURBED GRAVEL BASE.
  - REMOVE AND REPLACE PAVEMENT IF CLOSER THAN 3 FEET TO A CONSTRUCTION JOINT, OR THE EDGE OF PAVEMENT.
  - AVOID SAWCUTS IN LINE WITH THE WHEEL PATH OF TRAFFIC, OR ADJACENT TO POTHOLES OR FRACTURES.
  - AVOID CORNERS WITH ACUTE ANGLES, OR NUMEROUS CORNERS WHERE A STRAIGHT LINE IS POSSIBLE. CHAMFER OR ROUND-OFF CORNERS WHERE PRACTICAL TO ELIMINATE FRACTURE POINTS.
  - BONDING SURFACES OF ASPHALT SURFACES SHALL BE TACK COATED WITH APPROVED ASPHALT EMULSION ACCORDING TO MANUFACTURER'S INSTRUCTIONS.
  - CONCRETE SIDEWALKS SHALL BE REPLACED IN ACCORDANCE WITH THE CITY OF KEENE SIDEWALK CONSTRUCTION SPECIFICATIONS. CONCRETE GREATER THAN 4 INCHES THICK (ADJACENT TO DRIVEWAYS OR OTHER VEHICLE-BEARING SURFACES) SHALL BE DOWELED INTO THE ADJACENT CONCRETE.
  - CURB SHALL BE REPLACED TO THE NEAREST JOINT BEYOND THE PAVING LIMIT. PAVEMENT SHALL BE REPLACED THE FULL EXTENT OF THE CURB.



REVISIONS:

**CURB & SIDEWALK DETAIL**  
CITY OF KEENE, NEW HAMPSHIRE

CONCRETE SIDEWALK, CITY STANDARD SPECIFICATIONS

1. CONCRETE SIDEWALKS SHALL BE A MINIMUM OF 6 FEET WIDE IN COMMERCIAL AREAS, 5 FEET WIDE AT ALL OTHER LOCATIONS.
2. CONCRETE SIDEWALKS SHALL BE A MINIMUM OF 4" THICK, OR 8" THICK AT DRIVEWAYS AND CURB RAMPS EXPOSED TO VEHICLE TRAFFIC.
3. BASE SHALL BE A MINIMUM THICKNESS OF 6" OF CRUSHED GRAVEL COMPACTED TO 95%. SUB BASE SHALL BE APPROVED NATIVE GRANULAR MATERIAL OR MINIMUM THICKNESS OF 12" OF IMPORTED CLEAN GRANULAR MATERIAL COMPACTED TO 95%.
4. SIDEWALKS SHALL BE GRADED TO DRAIN, WITH A MINIMUM ALLOWABLE GRADE OF 0.5%, AND MAXIMUM GRADES IN ACCORDANCE WITH A.D.A.
5. CONCRETE SHALL BE 4000 PSI CLASS AA CONCRETE WITH 1.5 LBS OF FORTAFIBRE PER CUBIC YARD. CONCRETE SHALL HAVE 5-9% AIR ENTRAINMENT. SLUMP SHALL BE BETWEEN 3" AND 5". 4 TEST CYLINDERS PER LOAD OF CONCRETE REQUIRED, BY CERTIFIED CONCRETE TESTER.
6. MAXIMUM SPACING OF ASPHALT FIBER EXPANSION JOINTS SHALL BE 30 FEET. TOOLED CONTROL JOINTS SHALL BE A UNIFORM DISTANCE APART, TYPICALLY SPACED FIVE FEET, AND 3/4" DEEP.
7. THE SURFACE OF THE SIDEWALK SHALL BE MAG-FLOATED AND TROWELED, AND GIVEN A FINE GRAINED BROOM FINISH. ALL EDGES AND JOINTS SHALL BE FINISHED WITH A HAND EDGING TOOL.
8. AS SOON AS THE CONCRETE HAS ATTAINED ITS INITIAL SET, IT SHALL BE COVERED WITH PLASTIC, BURLAP, OR OTHER APPROVED MATERIAL AND KEPT MOIST FOR A MINIMUM OF 7 DAYS TO CURE, AND SHALL NOT BE ALLOWED TO FREEZE. NO TRAFFIC SHALL BE ALLOWED ON THE SIDEWALK DURING THE CURING PERIOD.
9. A MINIMUM OF TWO WEEKS AFTER PLACING THE CONCRETE, THE SIDEWALK SHALL BE COATED WITH TWO COATS OF SILANE-SILOXANE AS PER MANUFACTURER'S INSTRUCTIONS. THE FIRST COAT SHALL BE ALLOWED TO DRY BEFORE THE SECOND COAT IS APPLIED.

HANDICAPPED ACCESSIBLE CONSTRUCTION REQUIREMENTS

ALL CONSTRUCTION SHALL COMPLY WITH D.O.J. 49 CFR PART 37, A.D.A. STANDARDS FOR ACCESSIBLE DESIGN, INCLUDING THE FOLLOWING:

1. MAXIMUM CROSS-SLOPE ALONG ANY PORTION OF THE ACCESSIBLE ROUTE SHALL NOT EXCEED 1:48 (2%).
2. ANY PART OF AN ACCESSIBLE ROUTE WITH A SLOPE GREATER THAN 1:20 (5%) SHALL BE CONSIDERED A RAMP.
3. THE LEAST POSSIBLE SLOPE SHALL BE USED FOR ANY RAMP. MAXIMUM SLOPE OF ANY RAMP SHALL BE 1:12 (8.33%). CURB RAMP FLARES SHALL NOT EXCEED A SLOPE OF 1:10 (10%).
4. RAMPS SHALL HAVE LEVEL LANDINGS AT THE BOTTOM AND TOP, AND WHERE TOTAL RISE EXCEEDS 30 INCHES OR TOTAL RUN EXCEEDS 30 FEET. LANDINGS SHALL BE AS WIDE AS THE RAMP AND AT LEAST 60 IN. LONG.
5. TRANSITIONS FROM RAMPS SHALL BE FLUSH, FREE OF ABRUPT CHANGES IN ELEVATION (1/4 IN. MAX.) OR GRADE (1:20 MAX. COUNTER-SLOPE).
6. OUTDOOR RAMPS AND THEIR APPROACHES SHALL BE GRADED SO THAT WATER WILL NOT ACCUMULATE ON ANY WALKING SURFACES.
7. SIDEWALKS OR CURB RAMPS AT STREET CROSSINGS OR HIGH TRAFFIC DRIVES SHALL HAVE A CAST IRON DETECTABLE WARNING PANEL THE FULL WIDTH OF THE SIDEWALK AND TWO FEET PERPENDICULAR TO THE DIRECTION OF TRAVEL.
8. IN THE EVENT THAT THESE REQUIREMENTS CONFLICT WITH DESIGN PLANS, OR IF FIELD CONDITIONS RENDER THESE UNATTAINABLE, CONTACT THE ENGINEER PRIOR TO BEGINNING WORK.

Date: 04/27/2016  
SCALE: NONE  
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SHEET

E-5



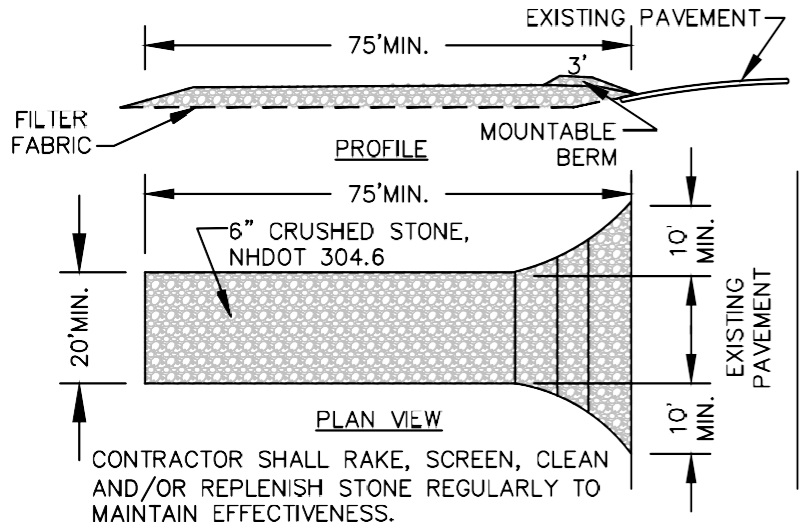
REVISIONS:

**EROSION CONTROL DETAILS**  
CITY OF KEENE, NEW HAMPSHIRE

Date: 04/27/2016  
SCALE: NONE  
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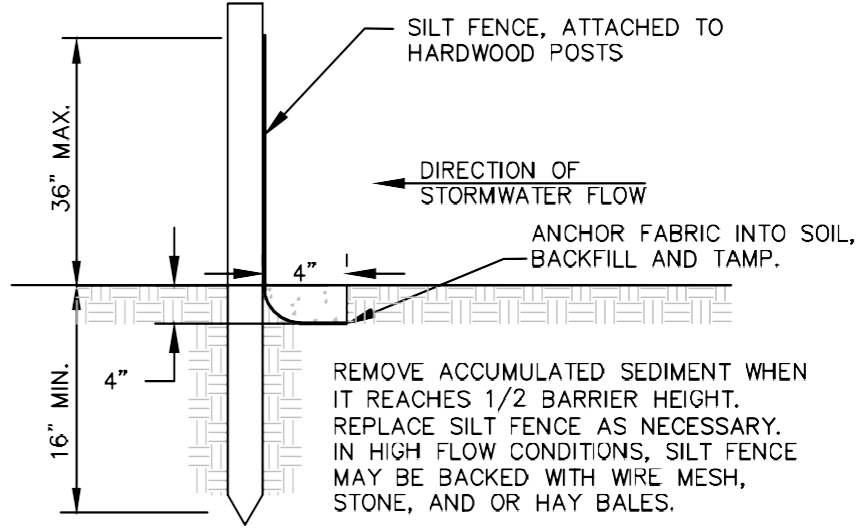
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E-6



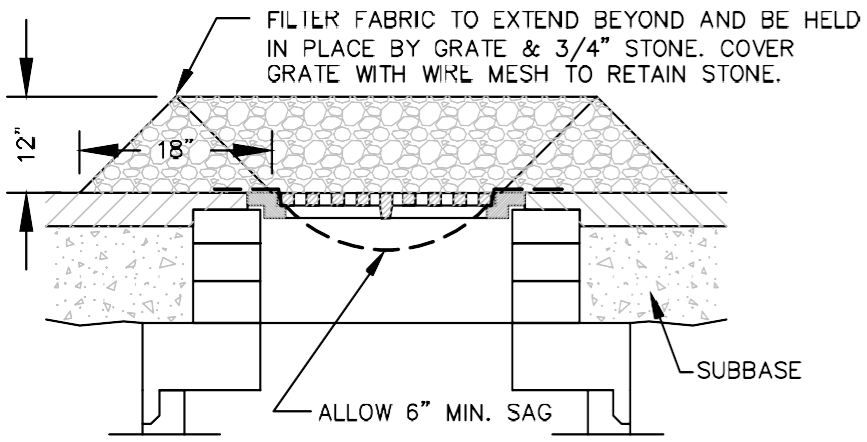
**STABILIZED CONSTRUCTION ENTRANCE**

CONTRACTOR SHALL RAKE, SCREEN, CLEAN AND/OR REPLENISH STONE REGULARLY TO MAINTAIN EFFECTIVENESS.



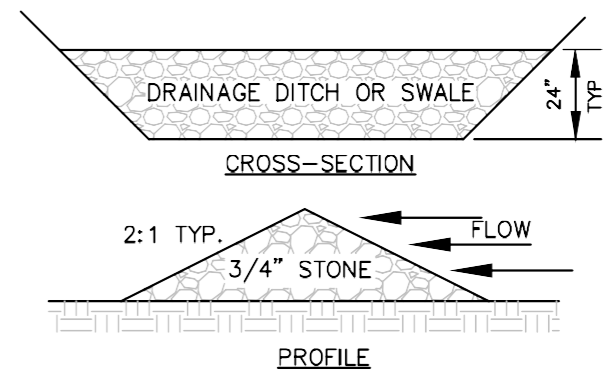
**SILT FENCE**

REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES 1/2 BARRIER HEIGHT. REPLACE SILT FENCE AS NECESSARY. IN HIGH FLOW CONDITIONS, SILT FENCE MAY BE BACKED WITH WIRE MESH, STONE, AND OR HAY BALES.



**CATCH BASIN GRATE INLET FILTER**

CONTRACTOR SHALL EMPTY FABRIC OR SILT SACK REGULARLY, AND REMOVE AND REPLENISH STONE AS NECESSARY. BASINS WITH FAILED SEDIMENT CONTROLS SHALL BE VACUUMED AT CONTRACTOR'S EXPENSE.



**STONE CHECK DAM**

CHECK DAMS SHALL BE PLACED AT INTERVALS DEPENDING ON THE SLOPE OF SWALE, BUT NO LESS THAN EVERY 100 FEET. DURING HIGH FLOW CONDITIONS, RUNOFF SHALL NOT OVERTOP THE CHECK DAMS AT ANY POINT. CONTRACTOR SHALL REMOVE AND REPLENISH STONE AS NECESSARY.

1. THE CONTRACTOR IS RESPONSIBLE FOR EROSION CONTROL AND SHALL IMPLEMENT ANY AND ALL BEST MANAGEMENT PRACTICES NECESSARY TO MINIMIZE EROSION AT HIS OWN EXPENSE, REGARDLESS OF DETAIL SHOWN ON THESE PLANS.
2. INSTALL SEDIMENT & EROSION CONTROL MEASURES ACCORDING TO THE N.H. STORMWATER MANUAL VOL. 3, OR MANUFACTURER'S DIRECTION.
3. CONTRACTOR SHALL INSPECT AND REPAIR ALL SEDIMENT AND EROSION CONTROL MEASURES AFTER EACH RAINFALL AND NOT LESS THAN ONCE A WEEK.
4. SEED & MULCH ALL DISTURBED AREAS AS SOON AS POSSIBLE, BUT NO MORE THAN 72 HOURS AFTER FINAL GRADING.
5. STONE CHECK DAMS AND/OR SILT FENCES SHALL BE REPLACED WHEN CLOGGED AND NO LONGER FUNCTIONAL.
6. STONE CHECK DAMS AND/OR SILT FENCES SHALL REMAIN IN PLACE UNTIL DISTURBED AREAS ARE STABILIZED.
7. DRAINAGE SWALES OR SLOPES GREATER THAN 3:1 SLOPE SHALL BE PROTECTED WITH EROSION CONTROL MATTING.
8. AN AREA SHALL BE CONSIDERED "STABLE" IF ONE OF THE FOLLOWING HAS OCCURRED: A. BINDER COURSE OF BITUMINOUS ASPHALT HAS BEEN INSTALLED IN AREAS TO BE PAVED; B. A MINIMUM OF 85% VEGETATIVE COVER HAS BEEN ESTABLISHED; C. A MINIMUM OF 3 INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP-RAP HAS BEEN INSTALLED; D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.