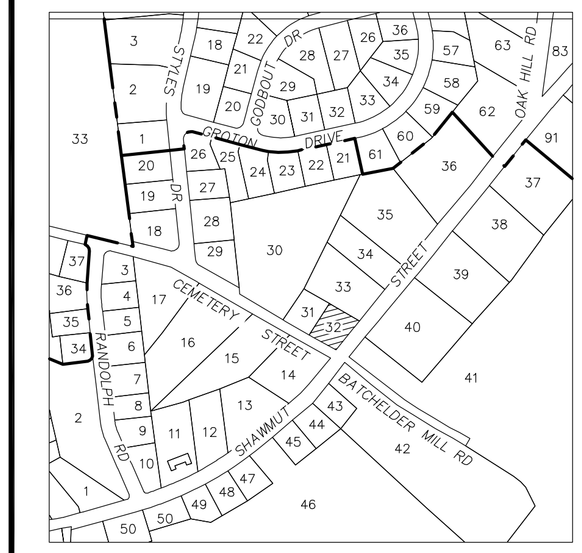
UTILITY IMPROVMENT PROJECT

TRENT SPINER SEWER

LOCATED AT

TAX MAP 413z LOT 32
69 SHAWMUT STREET
CONCORD, NEW HAMPSHIRE

MERRIMACK COUNTY



VICINITY MAP 1"=400'

Symbols Legend:

10 FT CONTOUR	RIP RAP APRON
2 FT CONTOUR	
PROPOSED DITCH OR TROUGH	BASIN BERM
EXISTING DITCH	SILT FENCE OR MULCH SOCK
WETLAND	STONE CHECK DAM
TP-1 TEST PIT	F524.0 SPOT ELEVATION
PERC TEST	FLOW DIRECTION
OHW OVERHEAD WIRES	F524 PROPOSED GRADE CONTOUR
(T.B.R.) TO BE REMOVED	TREELINE

OWNER OF RECORD:

TRENT SPINER
69 SHAWMUT ST
CONCORD, NH 03301-8614
BOOK 3172 PAGE 1080

CONSULTANTS:

Licensed Land Surveyor

J.E. BELANGER LAND SURVEYING PLLC
LICENSED LAND SURVEYOR
61 OLD HOPKINTON ROAD, DUNBARTON, NH 03046

CIVIL ENGINEER

JON ROKEH
ROKEH CONSULTING, LLC
89 KING ROAD
CHICHESTER, NH 03258

811 DigSafe MA • ME • NH • RI • VT

CONTACT DIG SAFE 72 HOURS PRIOR TO CONSTRUCTION

THE LOCATION OF ANY UTILITY INFORMATION SHOWN ON THIS PLAN IS APPROXIMATE. THE ENGINEERS MAKE 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.

JULY 10, 2025

STATE OF NEW HAMPSHIRE — JON BOKEH No. 11868 — LICENSED PROFESSIONAL ENGINEER

SHEET INDEX:

NOTE:

1. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL CONFORM TO THE TOWN OF CONCORD REGULATIONS, AND THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", LATEST EDITION.
2. ELEVATIONS ARE BASED ON NGVD 88 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 AND OVERHEAD UTILITY LOCATIONS.

DATE	DESCRIPTION	BY

APPROVED BY CITY OF CONCORD PLANNING BOARD

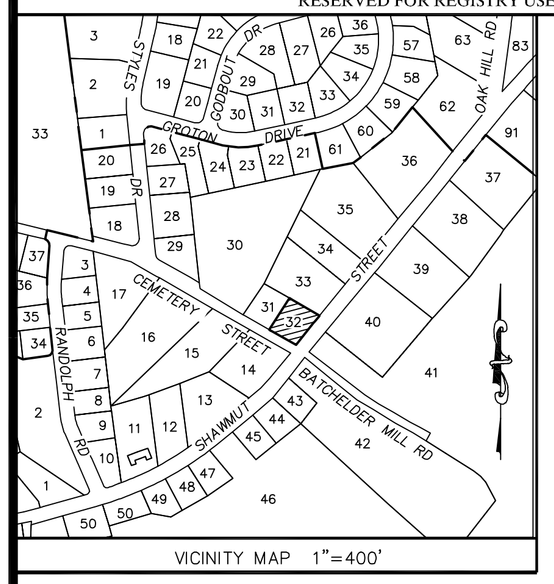
CHAIRPERSON / VICE CHAIRPERSON

DATE

DESIGN ENGINEER:

ROKEH CONSULTING, LLC
89 KING ROAD, CHICHESTER, NH
PH: 603-387-8688

RESERVED FOR REGISTRY USE



VICINITY MAP 1"=400'

REFERENCE PLANS

1. CONCORD STREET LAYOUT SHEETS 158 & 159, ON FILE WITH THE CITY OF CONCORD ENGINEERING DEPARTMENT
2. "SHAWMUT STREET STORM DRAIN" SCALE 1"=40', DATED JUNE 1975, ON FILE WITH THE CITY OF CONCORD ENGINEERING DEPT, PERM PLAN NO. 1770
3. "SHAWMUT STREET SANITARY SEWER EXTENSION" SCALE 1"=40', REVISED 10/17/1975, ON FILE WITH THE CITY OF CONCORD ENGINEERING DEPT, PERM PLAN NO. 1771
4. "BOUNDARY SURVEY FOR ROBERT & LORRAINE MATCHA, CEMETERY ST, CONCORD NH" PREPARED BY RICHARD D. BARTLETT, DATED NOVEMBER 1973 AND RECORDED IN THE MERRIMACK COUNTY REGISTRY OF DEEDS AS PLAN 5843
5. "ANNEXATION PLAN PREPARED FOR MARK D. & DAVID C. CHAMBERLIN LOCATED IN CONCORD, N.H." SCALE 1"=50', PREPARED BY KEAR-WOOD INC., FORESTERS AND SURVEYORS, DATED JANUARY 1986 AND RECORDED IN THE MERRIMACK COUNTY REGISTRY OF DEEDS AS PLAN 8762
6. "RESUBDIVISION PREPARED FOR MADELINE A. WILLIAMS" SCALE 1"=20', PREPARED BY RICHARD D. BARTLETT L.L.S., DATED MAY 6, 1986 AND RECORDED IN THE MERRIMACK COUNTY REGISTRY OF DEEDS AS PLAN 9007

NOTES

1. SURVEY BY ROBOTIC TOTAL STATION IN JUNE 2025
2. BEARINGS AND COORDINATES ARE BASED ON NH STATE PLAN GRID NAD 83 (2011), AND DETERMINED USING POST-PROCESSED STATIC GNSS
3. VERTICAL DATUM IS NAVD88, AND DETERMINED USING POST-PROCESSED STATIC GNSS AND GEOID18

DRAFT COPY

LEGEND

GRANITE/CONC. BOUND	LOT LINE
REBAR	MAJOR CONTOUR (10')
IRON PIPE	MINOR CONTOUR (2')
WATER VALVE	DRAIN PIPE
CURB STOP	EDGE OF PAVEMENT
SEWER MANHOLE	VERTICAL GRANITE CURB
DRAIN MANHOLE	SEWER LINE
ELECTRIC METER/BOX	OVERHEAD UTILITY
PROPANE TANK	WATER LINE
CATCH BASIN	CONCRETE
UTILITY POLE	
ROAD SIGN	
DECIDUOUS TREE	

GRAPHIC SCALE
20 0 10 20 40 80

REVISIONS

7-18-25	EDITS TO PLAN PER CITY COMMENTS	JR	JR

STATE OF NEW HAMPSHIRE No. 758 JACQUES E. BELANGER SIGNATURE LICENSED LAND SURVEYOR

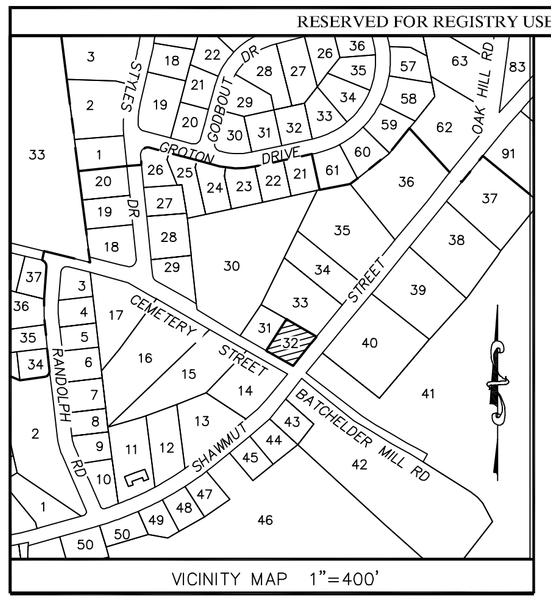
EASEMENT PLAN DRAFT
TAX MAP 413Z LOT 32
69 SHAWMUT ST
CONCORD NH
MERRIMACK COUNTY

OWNER OF RECORD:
TRENT SPINER
69 SHAWMUT ST
CONCORD, NH 03301-8614
BOOK 3172 PAGE 1080

J.E. BELANGER LAND SURVEYING PLLC
LICENSED LAND SURVEYOR
61 OLD HOPKINTON ROAD, DUNBARTON, NH 03046
* BOUNDARY SURVEYS
* SUBDIVISIONS
* LAND PLANNING
TEL (603) 774-3601

PLAN DATE: JUNE 23, 2025
SCALE: 1" = 20'
PROJECT NO.: 252722
SHEET 1 OF 1

RESERVED FOR REGISTRY USE



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LEGEND

- EDGE OF PAVEMENT
- OHU — OVERHEAD UTILITIES
- PROPOSED GAS VALVE
- GAS — PROPOSED GAS SURVICE
- UGE-T-C — PROP. UNDERGROUND UTILITIES
- PROP. TRANSFORMER
- W — PROPOSED WATER MAIN
- PROPOSED CURB STOP
- PROPOSED GATE VALVE
- PROPOSED FIRE HYDRANT
- S — PROPOSED SEWER LINE
- PROPOSED SEWER MANHOLE
- PROPOSED SEWER CLEANOUT

STATE OF NEW HAMPSHIRE
JON ROKEH
No. 11660
LICENSED PROFESSIONAL ENGINEER

20 0 10 20 40
(IN FEET)
1 inch = 20 ft.

OWNER OF RECORD:
TRENT SPINER
69 SHAWMUT ST
CONCORD, NH 03301-8614
BOOK 3172 PAGE 1080

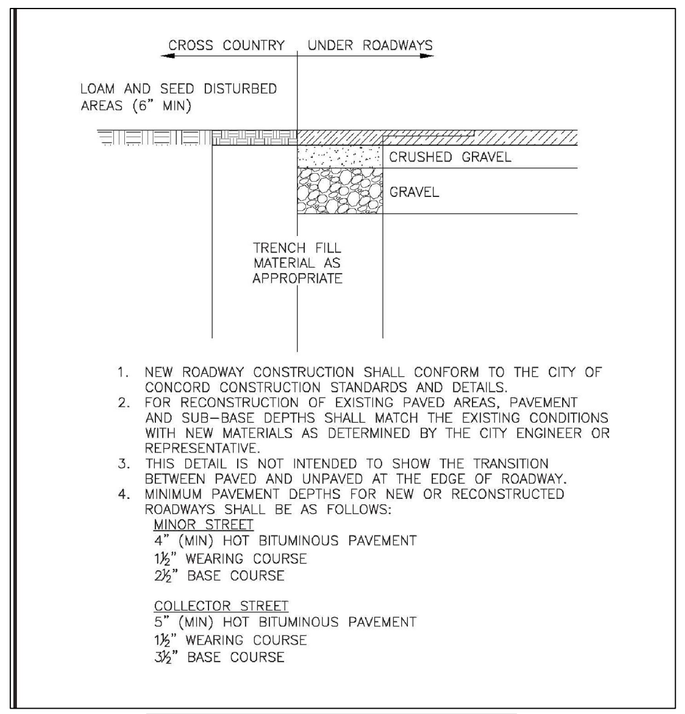
PROPOSED UTILITY PLAN
TAX MAP 413Z LOT 32
69 SHAWMUT ST
CONCORD, NH
MERRIMACK COUNTY

REVISIONS

DATE	DESCRIPTION	DWN BY	CK BY
7-18-25	EDITS TO PLAN PER CITY COMMENTS	JR	JR

ROKEH CONSULTING, LLC
89 KING ROAD, CHICHESTER, NH
PH: 603-387-8688

SCALE: 1" = 20'
DATE: JULY 10, 2025
DR. BY: JR
JOB NO.

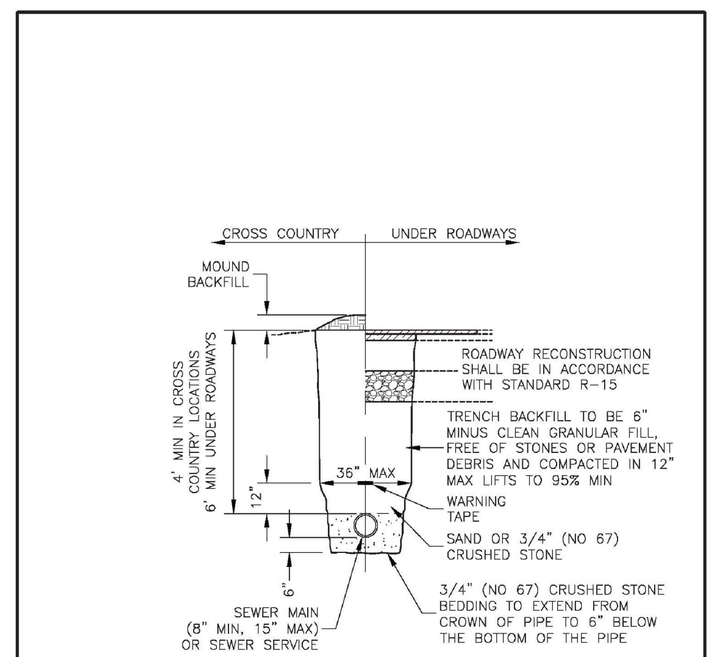


1. NEW ROADWAY CONSTRUCTION SHALL CONFORM TO THE CITY OF CONCORD CONSTRUCTION STANDARDS AND DETAILS.
2. FOR RECONSTRUCTION OF EXISTING PAVED AREAS, PAVEMENT AND SUB-BASE DEPTHS SHALL MATCH THE EXISTING CONDITIONS WITH NEW MATERIALS AS DETERMINED BY THE CITY ENGINEER OR REPRESENTATIVE.
3. THIS DETAIL IS NOT INTENDED TO SHOW THE TRANSITION BETWEEN PAVED AND UNPAVED AT THE EDGE OF ROADWAY.
4. MINIMUM PAVEMENT DEPTHS FOR NEW OR RECONSTRUCTED ROADWAYS SHALL BE AS FOLLOWS:

MINOR STREET
4" (MIN) HOT BITUMINOUS PAVEMENT
1½" WEARING COURSE
2½" BASE COURSE

COLLECTOR STREET
5" (MIN) HOT BITUMINOUS PAVEMENT
1½" WEARING COURSE
3½" BASE COURSE

City of Concord Engineering Services Division	SECTION:
TRENCH RESTORATION	DRAWING NO.
	DATE: PAGE:



NO.	REVISION	DATE	City of Concord Engineering Services Division	SECTION: SEWER
1	STANDARD REF.	3/19	SANITARY SEWER MAIN/SERVICE TRENCH	DRAWING NO. SM-1
–	–	–		DATE: 08/13 PAGE: 1
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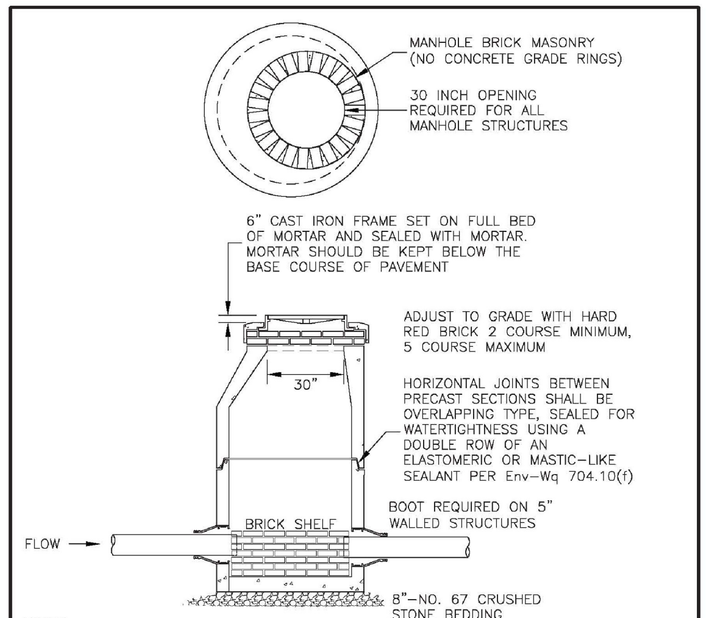
–	–	–		

SM1_SEWR-Trench_3.dwg



NOTES:
1. CONCRETE: 4,000 PSI AFTER 28 DAYS
2. H-20 LOADING REQUIRED
3. 5" THICK REINFORCED CONCRETE WALLS PER Env-Wq 704.10(d)
4. ON INSIDE OF STRUCTURE, PRE-CAST JOINTS AND LADDER RUNG HOLES TO BE SEALED WITH PORTLAND CEMENT
5. LIFT HOLES ARE TO BE SEALED WITH MORTAR FLUSH TO THE OUTSIDE STRUCTURE WALL PRIOR TO BACKFILLING
6. ALL STRUCTURES WITH MULTIPLE PIPES SHALL HAVE A MINIMUM OF 12" OF INSIDE SURFACE BETWEEN HOLES. NO MORE THAN 75% OF A HORIZONTAL CROSS-SECTION SHALL BE HOLES, AND THERE SHALL BE NO HOLES CLOSER THAN 3" TO JOINTS
7. MANHOLES AND TRAFFIC SIGNAL LOOPS SHALL BE SEPARATED BY A MINIMUM OF 2' TO ALLOW FOR MAINTENANCE OF STRUCTURE

NO.	REVISION	DATE	City of Concord Engineering Services Division	SECTION: SEWER
1	DRAFTING	11.11	SEWER MANHOLE	DRAWING NO. SM-2
–	–	–		DATE: 12/08 PAGE: 1
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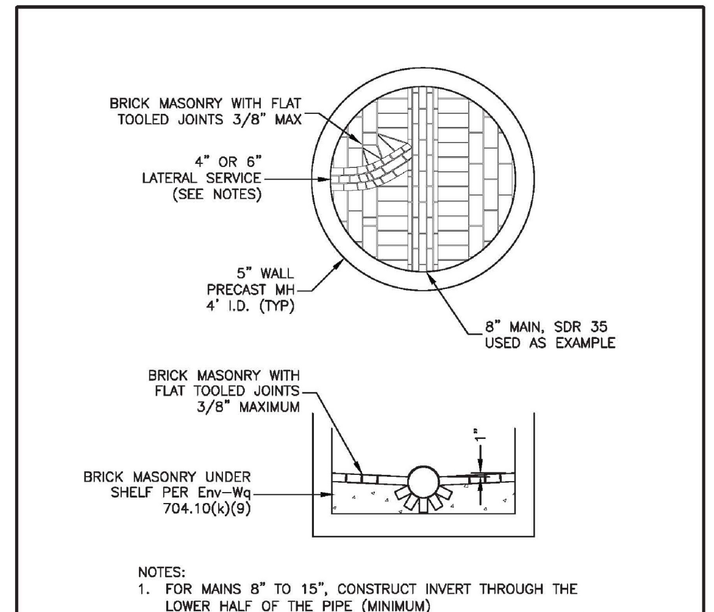
–	–	–		

SM2_SEWR-Manhole_3.dwg



NOTES:
1. FOR MAINS 8" TO 15", CONSTRUCT INVERT THROUGH THE LOWER HALF OF THE PIPE (MINIMUM)
   8" PIPE – 7 BRICK MINIMUM (JUST ABOVE THE MIDPOINT)
   10" PIPE – 7 BRICK MINIMUM
   12" PIPE – 9 BRICK MINIMUM
   15" PIPE – 11 BRICK MINIMUM
2. FOR MAINS GREATER THAN 15", CONSTRUCT BRICK INVERT TO TOP OF PIPE
3. MAINTAIN TROUGH WIDTH THROUGH STRUCTURE.
4. TYPICAL BRICK, ASTM DESIGNATION: C321-93
5. SERVICE CONNECTIONS SHOULD BE PER THE "SEWER SERVICE CONNECTION/ INSIDE DROP MANHOLE" DETAIL. WHERE GRADES PROHIBIT SUCH A CONNECTION THE CONNECTION SHOULD BE AS SHOWN WITH THE SERVICE INVERT 2" ABOVE THE INVERT OF THE MAIN WHERE IT ENTERS THE MANHOLE.

NO.	REVISION	DATE	City of Concord Engineering Services Division	SECTION: SEWER
–	–	–	SANITARY BRICK SHELF CONSTRUCTION	DRAWING NO. SM-3
–	–	–		DATE: 03/15 PAGE: 1
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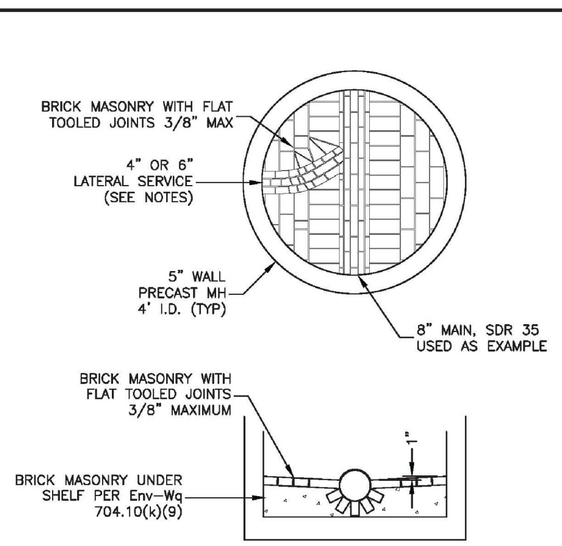
SM3_SEWR-Brick Shelf Const_2.dwg



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NO.	REVISION	DATE	City of Concord Engineering Services Division	SECTION: SEWER
–	–	–	SANITARY BRICK SHELF CONSTRUCTION	DRAWING NO. SM-3
–	–	–		DATE: 03/15 PAGE: 1
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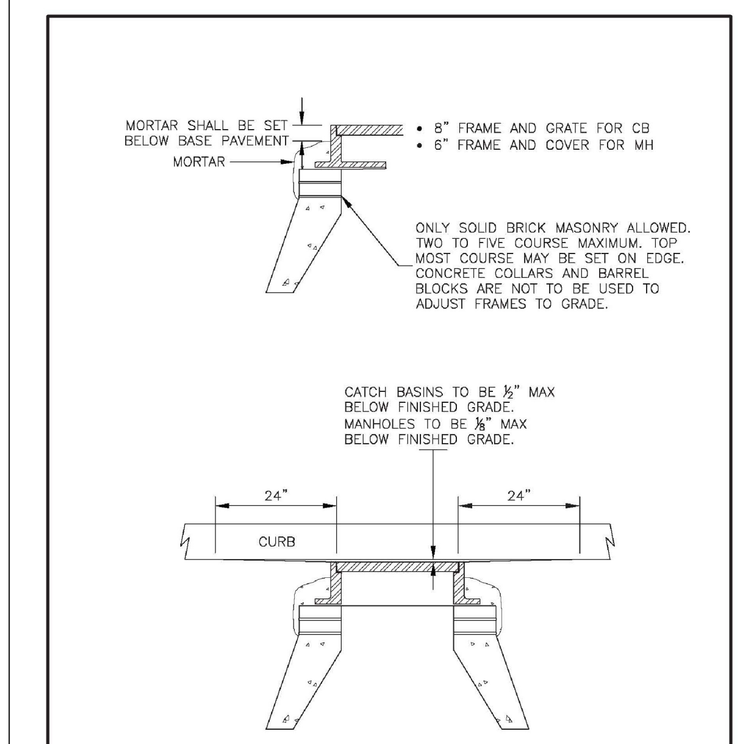
SM3_SEWR-Brick Shelf Const_2.dwg



NO.	REVISION	DATE	City of Concord Engineering Services Division	SECTION: SEWER/STORM
1	DRAFTING	4.15	ADJUSTING FRAMES TO GRADE	DRAWING NO. SM-4
–	–	–		DATE: 12/08 PAGE: 1
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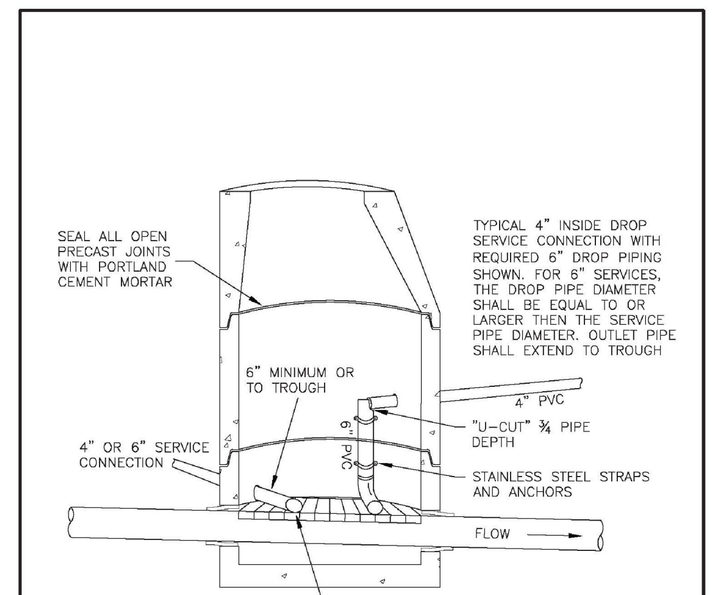
SM4_SEWR-Adj Frames to Grade_1.5.dwg



SHOULD THE SERVICE CONNECTION ENTER A STRUCTURE MORE THAN 24" ABOVE THE INVERT A DROP CONNECTION WILL BE NECESSARY

NO.	REVISION	DATE	City of Concord Engineering Services Division	SECTION: SEWER
1	REVISED NOTE	11.11	SEWER SERVICE CONNECTION / INSIDE DROP MANHOLE	DRAWING NO. SS-2
–	–	–		DATE: 12/08 PAGE: 1
–	–	–		
–	–	–		

SS2_SEWR-Service Inside Drop_2.dwg

OWNER OF RECORD:
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BOOK 3172 PAGE 1080

PROPOSED UTILITY PLAN
TAX MAP 413Z LOT 32
69 SHAWMUT ST
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MERRIMACK COUNTY

REVISIONS

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ROKEH CONSULTING, LLC
89 KING ROAD, CHICHESTER, NH
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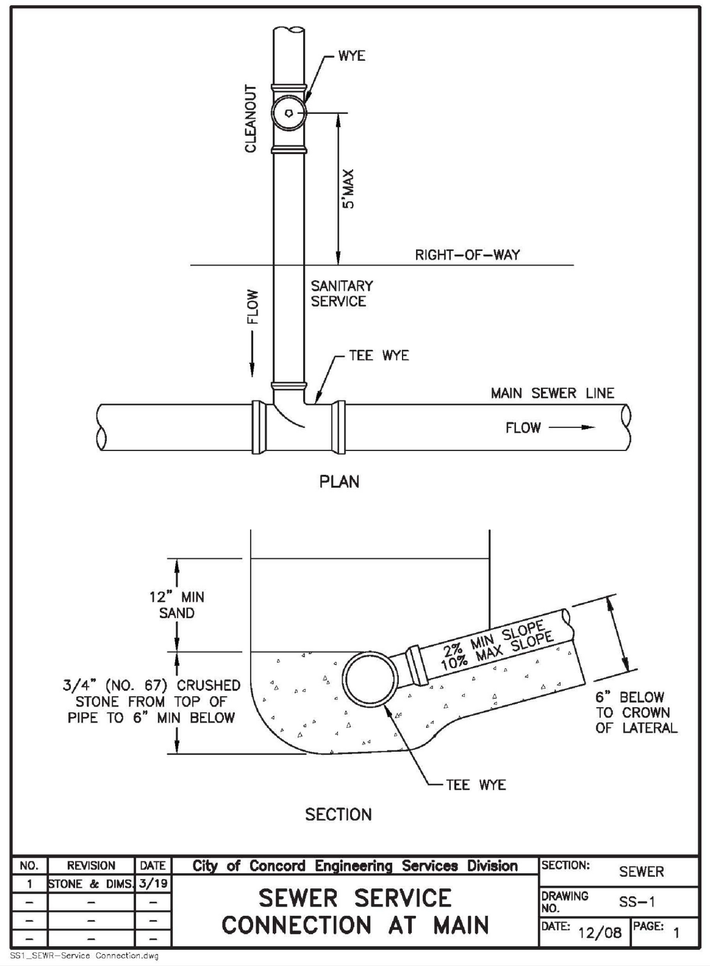

NO.	REVISION	DATE	City of Concord Engineering Services Division	SECTION:	SEWER
1	STONE & DIMS	3/19	SEWER SERVICE CONNECTION AT MAIN	DRAWING NO.	SS-1
–	–	–		DATE: 12/08	PAGE: 1
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SS1_SEWR-Service Connection.dwg

CONSTRUCTION NOTES:

1. ALL WORK PERFORMED WITHIN THE RIGHT-OF-WAY SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION OF THE CITY OF CONCORD AND NHDOT CONSTRUCTION STANDARDS.
2. DIGSAFE TO BE NOTIFIED PRIOR TO CONSTRUCTION
3. STRUCTURAL INTEGRITY OF EXISTING UTILITIES TO BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT.
4. WHEN UNDERGROUND UTILITIES ARE ENCOUNTERED, THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE AGENCY TO ASSURE PROPER CONSTRUCTION PROCEDURE IN THAT AREA. ANY DAMAGE TO A UTILITY IS TO BE REPORTED TO AND REPAIRED BY THAT UTILITY PRIOR TO BACKFILLING.
5. PRIOR TO THE START OF CONSTRUCTION A PRECONSTRUCTION MEETING WITH THE CITY MUST BE CONDUCTED.
6. IN CONFLICTS REQUIRING THE RELOCATION OF UTILITIES, PREFERENCE SHALL: (1) BE GIVEN TO UTILITIES WITH GRADE RESTRICTIONS. (2) BE GIVEN TO EXISTING UTILITIES ALREADY IN SERVICE.
7. PRIOR TO THE START OF CONSTRUCTION, PLEASE COORDINATE WITH THE CONCORD ENGINEERING DIVISION FOR ON SITE INSPECTION AND ASSOCIATED FEES FOR THE ABOVE MENTIONED PROJECT.
8. WORK WITHIN THE CITY RIGHT-OF-WAY WILL REQUIRE AN EXCAVATION PERMIT CONTACT THE ENGINEERING DIVISION
9. ALL DISCONTINUED OR ABANDONED UTILITIES SHALL BE REMOVED FROM THE ROADWAY. ALL ABANDONED PIPE PENETRATIONS TO BE PLUGGED AND SEALED WITH MORTAR.

PROJECT TO BE CONSTRUCTED USING METHODS OUTLINED BY THE LATEST CITY OF CONCORD STANDARDS AND DETAILS

MANHOLE TESTING PER CONCORD CONSTRUCTIN STANDARDS

(1) THE MANHOLE VACUUM TEST SHALL IN ACCORDANCE WITH ASTM C1244 AND CONFORM TO THE FOLLOWING:

(A) THE INITIAL VACUUM GAUGE TEST PRESSURE SHALL BE 10 INCHES HG; AND

(B) THE MINIMUM ACCEPTABLE TEST HOLD TIME FOR A 1-INCH HG PRESSURE DROP TO 9 INCHES HG SHALL BE:
A. NOT LESS THAN 2 MINUTES FOR MANHOLES LESS THAN 10 FEET DEEP IN DEPTH;
B. NOT LESS THAN 2.5 MINUTES FOR MANHOLES 10 TO 15 FEET DEEP; AND
C. NOT LESS THAN 3 MINUTES FOR MANHOLES MORE THAN 15 FEET DEEP;

(2) THE MANHOLE SHALL BE REPAIRED AND RETESTED IF THE TEST HOLD TIMES FAIL TO ACHIEVE THE ACCEPTANCE LIMITS SPECIFIED ABOVE.

(3) FOLLOWING COMPLETION OF THE LEAKAGE TEST, THE FRAME AND COVER SHALL BE PLACED ON THE TOP OF THE MANHOLE OR SOME OTHER MEANS USED TO PREVENT ACCIDENTAL ENTRY BY UNAUTHORIZED PERSONS, CHILDREN, OR ANIMALS, UNTIL THE CONTRACTOR IS READY TO MAKE FINAL ADJUSTMENT TO GRADE.

MINIMUM SIZE PIPE FOR HOUSE SERVICE SHALL BE SIX INCHES @ 1% SLOPE
4" SERVICES ARE ALLOWED AT 2% SLOPE

PIPE AND JOINT MATERIALS

A. PLASTIC PIPE:

1. – PVC SEWER PIPE AND FITTINGS SHALL CONFORM TO ASTM D2412 (SDR 35 MINIMUM). METHODS OF SHIPPING AND STORAGE ON SITE SHALL BE SUCH AS TO AVOID INJURY TO THE PIPE. DAMAGED PIPE SHALL BE REJECTED AND REMOVED FROM THE JOB SITE.

2. – ALL FITTINGS SHALL BE INJECTION MOLDED FITTINGS. FABRICATED FITTINGS ARE NOT ALLOWED EXCEPT AS PERMITTED BY THE TOWN ENGINEER.

3. – JOINTS FOR PVC PIPE SHALL BE OIL RESISTANT COMPRESSION RINGS OF ELASTOMERIC MATERIAL CONFORMING TO ASTM D3212. MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION SHALL BE FOLLOWED. SOLVENT CEMENT JOINTS SHALL NOT BE PERMITTED.

4. DUCTILE IRON PIPE:

DUCTILE IRON PIPE SHALL CONFORM TO AWWA C151/A21.50 & A21.51. PIPE SHALL HAVE EITHER THE RUBBER-RING TYPE, PUSH-ON JOINT, OR STANDARD MECHANICAL JOINT.

5. FORCE MAIN
HDPE FORCE MAIN SEWER PIPE SHALL CONFORM WITH ASTM D3035. PVC FORCE MAIN PIPE SHALL CONFORM WITH ASTM D2241 OR ASTM D1785. FORCE MAIN CLEANOUT VALVES AND FITTINGS SHALL BE INSTALLED IN MAHOLES MEETING THE REQUIREMENTS OF ENV-WQ 704.12 TO 704.17.

GRAVITY SEWER PIPE TESTING, PER CONCORD CONSTRUCTION STANDARDS

(1) ALL NEW GRAVITY SEWERS SHALL BE TESTED FOR WATER TIGHTNESS BY THE USE OF LOW-PRESSURE AIR TESTS.

(2) LOW-PRESSURE AIR TESTING SHALL BE IN CONFORMANCE WITH:
A. ASTM F1417 "STANDARD TEST METHOD FOR INSTALLATION ACCEPTANCE OF PLASTIC GRAVITY SEWER LINES USING LOW-PRESSURE AIR"; OR
B. UNI-BELL PVC PIPE ASSOCIATION UNI-B-6, "LOW-PRESSURE AIR TESTING OF INSTALLED SEWER PIPE"

(3) ALL NEW GRAVITY SEWERS SHALL BE CLEANED AND VISUALLY INSPECTED USING A LAMP TEST AND BY INTRODUCING WATER TO DETERMINE THAT THERE IS NO STANDING WATER IN THE SEWER; AND TRUE TO LINE AND GRADE FOLLOWING INSTALLATION AND PRIOR USE.

(4) ALL PLASTIC SEWER PIPE SHALL VISUALLY INSPECTED AND DEFLECTION TESTED NOT LESS THAN 30 DAYS NOR MORE THAN 90 DAYS FOLLOWING THE INSTALLATION.

(5) THE MAXIMUM ALLOWABLE DEFLECTION OF FLEXIBLE SEWER PIPE SHALL BE 5 PERCENT OF AVERAGE INSIDE DIAMETER. A RIGID BALL OR MANDREL WITH A DIAMETER OF AT LEAST 95% OF THE AVERAGE INSIDE PIPE DIAMETER SHALL BE USED FOR TESTING PIPE DEFLECTION. THE DEFLECTION TEST SHALL BE CONDUCTED WITHOUT MECHANICAL PULLING DEVICES.

SEWER MANHOLE NOTES:

1. IT IS THE INTENTION THAT THE MANHOLE, INCLUDING ALL COMPONENT PARTS, HAVE ADEQUATE SPACE, STRENGTH AND LEAKPROOF QUALITIES CONSIDERED NECESSARY FOR THE INTENDED SERVICE REQUIREMENTS AND CONFIGURATIONS SHALL BE AS SHOWN ON THE DRAWING. MANHOLES MAY BE AN ASSEMBLY OF PRECAST SECTIONS, WITH STEEL REINFORCEMENT, WITH ADEQUATE JOINTING, OR CONCRETE CAST MONOLITHICALLY IN PLACE WITH REINFORCEMENT. IN ANY APPROVED MANHOLE, THE COMPLETE STRUCTURE SHALL BE OF SUCH MATERIAL AND QUALITY AS TO WITHSTAND LOADS OF 9 TONS (H-20 LOADING) WITHOUT FAILURE AND PREVENT LEAKAGE IN EXCESS OF ONE GALLON PER DAY PER VERTICAL FOOT OF MANHOLE, CONTINUOUSLY FOR THE LIFE OF THE STRUCTURE. A PERIOD GENERALLY IN EXCESS OF 25 YEARS IS TO BE UNDERSTOOD IN BOTH CASES. MANHOLE STRUCTURES SHALL HAVE A LIFE IN EXCESS OF 25 YRS.

2. PRECAST CONCRETE MANHOLES SHALL CONFORM WITH ASTM C478 PER ENV-WQ 704.13 (A)(3) BARRELS AND CONE SECTIONS SHALL BE REINFORCED CONCRETE PER Env-Wq 704.12(d). PRECAST CONCRETE BARREL SECTIONS, CONES AND BASES SHALL CONFORM TO ASTM C478. ALL PRECAST SECTIONS AND BASES SHALL HAVE THE DATE OF MANUFACTURER AND THE NAME TRADEMARK OF THE MANUFACTURER IMPRESSED OR INDELIBLY MARKED ON THE SIDE WALL.
BASE SECTIONS SHALL BE MONOLITHIC TO A POINT AT LEAST 6" ABOVE THE CROWN OF INCOMING PIPE PER Env-Wq 704.12(e).

3. ALL SEWERS, MANHOLES AND FORCEMAINS SHALL BE TESTED FOR WATER TIGHTNESS BY USE OF EITHER WATER OR LOW PRESSURE AIR TESTS. LOW PRESSURE AIR TESTS SHALL CONFORM TO ASTM C828. SERVICES TO BE TESTED AT SAME TIME AS MAINS PRIOR TO BUILDING CONNECTION.

4. INVERTS AND SHELVES: MANHOLES SHALL HAVE A BRICK PAVED SHELF AND INVERT CONSTRUCTED TO CONFORM TO THE SIZE OF PIPE AND FLOW. AT CHANGES IN DIRECTION, THE INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST RADIUS POSSIBLE TANGENT TO THE CENTER LINE OF THE SEWER PIPES. SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE HIGHEST PIPE CROWN AND SLOPE TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL. UNDERLAYMENT OF INVERT AND SHELF SHALL CONSIST OF BRICK MASONRY. INVERTS AND SHELVES SHALL BE PLACED AFTER TESTING ALL BRICK MASONRY FOR SHELF, INVERT AND GRADE ADJUSTMENT SHALL COMPLY WITH ASTM C32, CLAY OR SHALE FOR GRADE SS HAND BRICK.
BRICK MASONRY SHALL CONFORM WITH ASTM C32 PER ENV-WQ 704.13 (A)(9)
MORTAR SHALL CONFORM WITH ENV-WQ 704.13 (C). UNDERLAYMENT OF MANHOLE INVERT AND SHELF SHALL BE BRICK MASONRY PER ENV-WQ 704.12(K)

5. BEDDING:SCREENED CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATTER AND MEETING ASTM C33
100% PASSING 1 INCH SCREEN 0-10% PASSING #4 SIEVE
90% PASSING 3/4 INCH SCREEN 0- 5% PASSING #8 SIEVE
20-55% PASSING 3/8 INCH SCREEN 0% PASSING #200 SIEVE
WHERE ORDERED BY THE ENGINEER TO STABILIZE THE BASE, SCREENED GRAVEL OR 1.5 INCH CRUSHED STONE SHALL BE USED.

6. FLEXIBLE JOINT: A FLEXIBLE JOINT SHALL BE PROVIDED WITHIN THE FOLLOWING DISTANCES FROM MANHOLE JOINTS:
RCP CI PIPE - ALL SIZES - WITHIN 48"
PVC GREATER THAN 15" - WITHIN 60"

7. SHALLOW MANHOLE: IN LIEU OF A CONE SECTION, WHEN MANHOLE DEPTH IS LESS THAN 6 FEET, A REINFORCED CONCRETE SLAB COVER MAY BE USED HAVING AN ECCENTRIC ENTRANCE OPENING AND CAPABLE OF SUPPORTING H-20 LOADS.

8. HORIZONTAL JOINTS BETWEEN SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE OF OVERLAPPING TYPE, WHICH SHALL DEPEND FOR WATER TIGHTNESS UPON AN ELASTOMERIC OR MASTIC-LIKE SEALANT.

9. PIPE TO MANHOLE JOINTS SHALL BE ELASTOMERIC, RUBBER SLEEVE WITH WATERTIGHT JOINTS AT THE MANHOLE OPENING AND OPENING SURFACES; CAST INTO THE WALL OR SECURED WITH STAINLESS STEEL CLAMPS. ELASTOMERIC SEALING RING CAST IN MANHOLE OPENING WITH SEAL FORMED ON THE SURFACE OF THE PIPE BY COMPRESSION OF THE RING AND NON-SHRINK GROUTED JOINTS WHERE WATERTIGHT BONDING TO THE MANHOLE AND PIPE CAN BE OBTAINED.

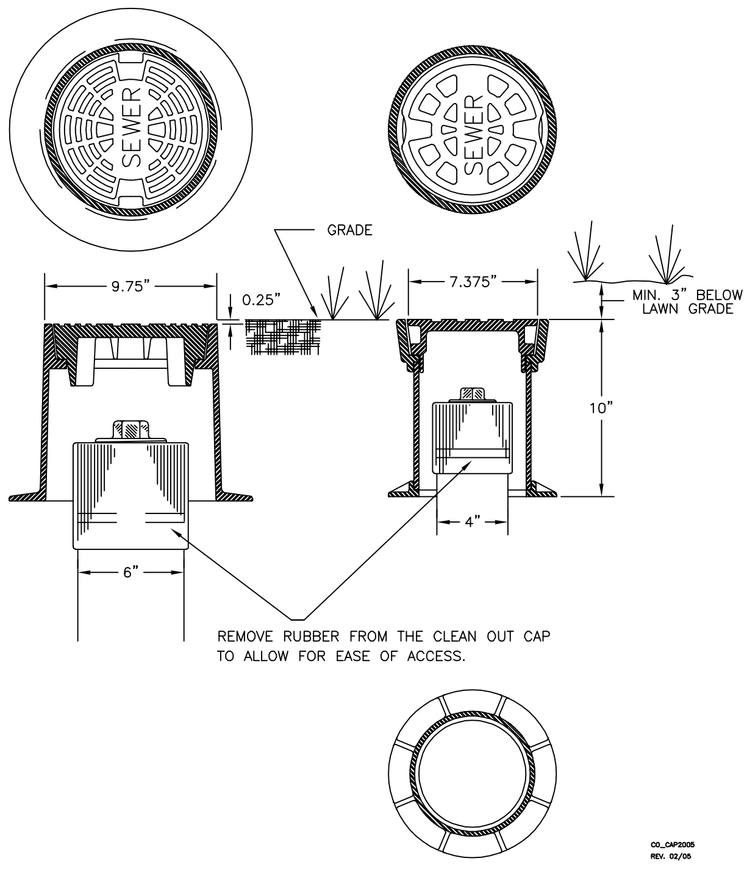
10. FOR BITUMASTIC TYPE JOINTS THE AMOUNT OF SEALANT SHALL BE SUFFICIENT TO FILL AT LEAST 75 % OF THE JOINT CAVITY APPROVED BITUMASTIC SEALANTS:
RAM - NEK
KENT SEAL NO. 2 DOUBLE
ROLL
ALL GASKETS AND SEALANTS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS.

11. MORTAR SHALL CONFORM WITH ENV-WQ 704.13 MORTAR SHALL BE TYPE I/II PORTLAND CEMENT

12. UNLESS OTHERWISE NOTED ALL GRANULAR MATERIAL SHALL BE PLACED IN 12" LIFTS AND COMPACTED TO 95% OF THE MODIFIED PROCTOR TEST.
13. STEPS ARE NOT ALLOWED

CLEANOUT COVERS

6" OR 4"



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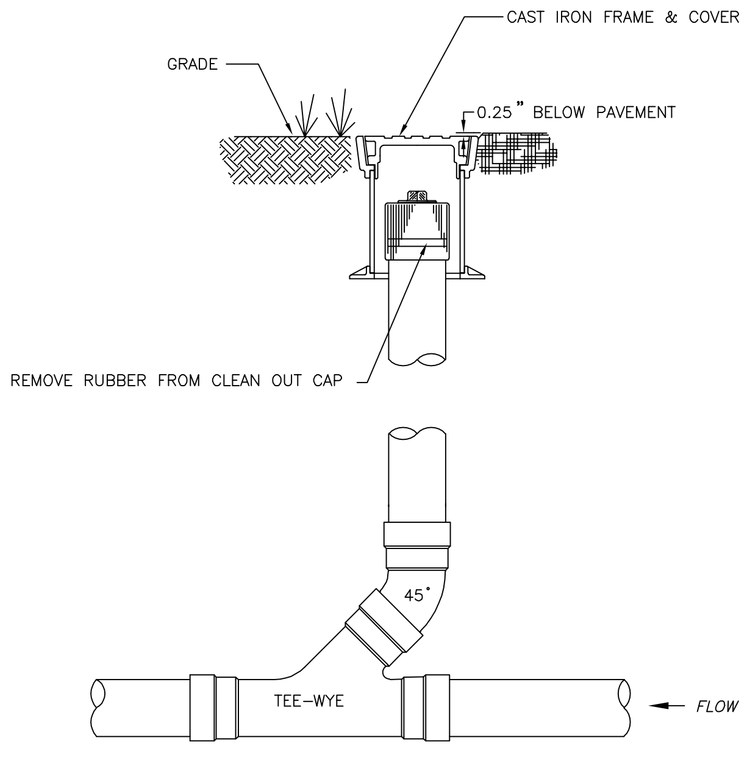
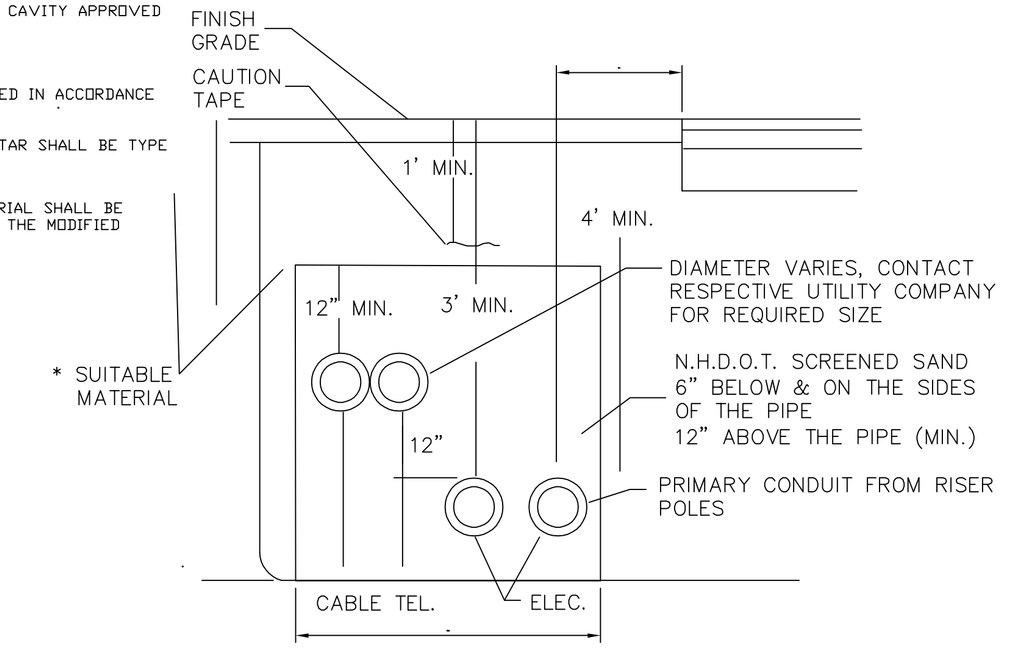
CLEAN OUTS ON SERVICE LATERALS

4" or 6"



REFERENCE: "STANDARDS OF DESIGN AND CONSTRUCTION FOR SEWERAGE AND WASTE WATER TREATMENT FACILITIES", DEPT OF ENVIRONMENTAL SERVICES,

STATE OF NEW HAMPSHIRE
JON ROKEH
No. 11680
LICENSED
PROFESSIONAL ENGINEER



NOTES:
1. UTILITIES SHALL BE INSTALLED ACCORDING TO THE RESPECTIVE UTILITY COMPANY STANDARDS AND SPECIFICATIONS.
2. ALL ABOVE GRADE UTILITIES MUST BE PLACED OUT OF THE R.O.W. AND IN AREAS THAT WILL NOT CONFLICT WITH THE ROADWAY DRAINAGE SYSTEM. PLACEMENT OF TRANSFORMERS CANNOT CONFLICT WITH THE INSTALLATION OF R.O.W. AND PROPERTY CORNER MONUMENTS.

UNDERGROUND UTILITIES TRENCH

NOT TO SCALE

OWNER OF RECORD:
TRENT SPINER
69 SHAWMUT ST
CONCORD, NH 03301-8614
BOOK 3172 PAGE 1080

PROPOSED UTILITY PLAN
TAX MAP 413Z LOT 32
69 SHAWMUT ST
CONCORD, NH
MERRIMACK COUNTY

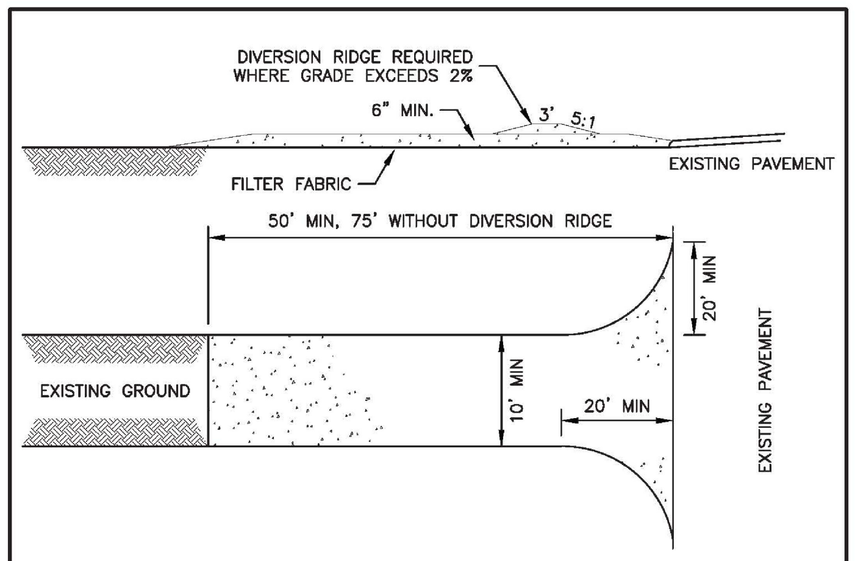
REVISIONS

DATE	DESCRIPTION	DWN BY	CK BY

ROKEH CONSULTING, LLC
89 KING ROAD, CHICHESTER, NH
PH: 603-387-8688

SCALE: 1" = 40'
DATE: JULY 10, 2025
DR. BY: JR
JOB NO.

SHEET
5 OF 6



CONSTRUCTION REQUIREMENTS

1. STONE SIZE – 3" COARSE AGGREGATE.
2. THICKNESS – 6" MIN
5. FILTER CLOTH – WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. LENGTH – NOT LESS THAN 50'. EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30' MIN LENGTH WOULD APPLY.
7. WIDTH – 10' MIN, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
8. SURFACE WATER – ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE.
9. MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
10. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
11. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

NO.	REVISION	DATE	City of Concord Engineering Services Division	SECTION:	EPSC
–	–	–	CONSTRUCTION ENTRANCE DETAIL	DRAWING NO.	E-1
–	–	–		DATE: 01/08	PAGE: 1
–	–	–			

E1-E3_EPSC-Details.dwg

CONSTRUCTION SEQUENCE:

1. A PRECONSTRCTION MEETING WILL BE HELD WITH THE OWNER, CONTRACTOR, ENGINEER, TOWN ENGINEER, AND MEMBERS OF OTHER TOWN DEPARTMENTS. ADDITIONALLY MEETINGS WILL BE HELD WITH ALL HOME OWNERS ONSITE TO IDENTIFY LOCATION OF CONNECTION OF NEW SERVICES.

2. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE AS SHOWN AND DETAILED IN THIS PLAN SET.

3. CONSTRUCT TEMPORARY AND PERMANENT EROSION CONTROL FACILITIES GRASS SWALES, CATCH BASINS AND SILT FENCE. PRIOR TO ANY EARTH MOVING OPERATION. ALL BMP METHODS ON PRIVATE LOTS OR IN PUBLIC RIGHTS-OF-WAY SHALL BE IN PLACE AT THE TIME OF ANY UTILITY CONSTRUCTION.

4. ALL SWALES AND DITCH LINES SHALL BE PROTECTED FROM EROSION.

7. EXISTING CATCH BASIN FRAMES AND GRATES, SPECIFIC SOIL EROSION MEASURES MUST BE INSTALLED SUCH AS GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER OR BLOCK AND GRAVEL DROP INLET SEDIMENT FILTER OR "SILT SAK".

9. COMPLETE PAVEMENT REMOVAL . ALL MATERIALS SHALL BE PROPERLY DISPOSED OF, PREFERABLY OFF SITE.

10. ALL MATERIAL SUITABLE FOR USE AS TOPSOIL SHALL BE STOCKPILED IN UPLANDS AREAS. ALL STOCKPILES SHALL BE SEEDED WITH WINTER RYE AND IF NECESSARY, SURROUNDED WITH SILT FENCE, AND/OR STRAW BALES, IN ORDER TO PREVENT OR CONTAIN SOIL EROSION.

11. ALL MATERIAL SUITABLE FOR FILL OR SELECT MATERIAL SHALL BE STOCKPILED OFF SITE. ALL STOCKPILES SHALL BE SURROUNDED WITH SILT FENCE, AND/OR STRAW BALES, IN ORDER TO CONTAIN SOIL EROSION.

13. CONSTRUCT ALL SEWER AND WATER UTILITES WITHIN THE ROADWAY AND TO THE UNITS.

12. REMOVE ALL IMPROPER ROADWAY/SITE FOUNDATION MATERIAL WITHIN 18" OF SUBGRADE. REPLACE WITH COMPACTED GRANULAR FILL ACCEPTABLE TO THE STATE/TOWN SPECIFICATIONS. ALL SUITABLE FILL MATERIAL SHALL BE COMPACTED TO AT LEAST 95 THE DRY WEIGHT AS DETERMINED BY MODIFIED PROCTOR TESTING (ASTM D-1556) REQUIREMENTS.

14. ROUGH GRADE ROADWAY/SITE WITHIN LIMIT OF WORK AND COMMENCE CONSTRUCTION OF ROADWAY.

15. COMPLETE ROADWAY SLOPE AND LAWN GRADING/EMBANKMENT CONSTRUCTION. ALL SLOPES SHALL BE STABILIZED AND SEEDED IMMEDIATELY AFTER GRADING. THE CONTRACTOR SHALL STABILIZE SLOPES WITH APPROPRIATE SEEDING PROGRAM OR JUTE MAT, WHEREVER SPECIFIED.

16. APPLY TOPSOIL TO ROADWAY SLOPES AND LAWN AREAS DISTURBED BY CONSTRUCTION. TOPSOIL USED MAY BE NATIVE ORGANIC MATERIAL SCREENED AS TO BE FREE FROM ROOTS, BRANCHES, STONES, AND OTHER DELETERIOUS MATERIALS. TOPSOIL SHALL BE APPLIED SO AS TO PROVIDE A MINIMUM OF A 6-INCH COMPACTED THICKNESS. WORK TO BE COMPLETED WITHIN 21 DAYS OF DISTURBED AREAS REMAINING IDLE. UPON COMPLETION OF TOPSOILING, FINISHED SECTIONS ARE TO BE LIMED, SEEDED, AND MULCHED. THE CONTRACTOR SHALL INSPECT COMPLETED SECTIONS OF WORK ON A REGULAR BASIS AND REMEDY ANY PROBLEM AREAS UNTIL A HEALTHY STAND OF GRASS IS ESTABLISHED.

17. PERFORM FINAL PAVING OPERATIONS

18. MAINTAIN, REPAIR, AND REPLACE TEMPORARY EROSION CONTROL MEASURES AS NECESSARY FOR A MINIMUM PERIOD OF 12 MONTHS FOLLOWING SUBSTANTIAL COMPLETION.

19. AFTER STABILIZATION (12 MONTHLY FOLLOWING SUBSTANTIAL COMPLETION), REMOVE AND PROPERLY DISPOSE OF TEMPORARY EROSION CONTROL MEASURES, PREFERABLY OFF SITE.

EROSION CONTROL NOTES

ALL EROSION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED FOR THE DURATION OF THE PROJECT IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS (EPA, NHDES AND TOWN REGULATIONS). THE GENERAL NOTES AND DETAILS CONTAINED IN THIS PLAN SERVE AS A GUIDE ONLY.

1. PERIMETER CONTROLS SHALL BE INSTALLED PRIOR TO EARTH MOVING OPERATIONS. INSTALLATION OF STRAWBALE BARRIERS AND SILTATION FENCES SHALL BE COMPLETED PRIOR TO THE START OF SITE WORK IN ANY SPECIFIC AREA. PREFABRICATED SILTATION FENCES AND SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

2. STRAWBALE BARRIERS AND SILTATION FENCES SHALL BE KEPT CLEAN DURING CONSTRUCTION AND REMOVED WHEN ALL SLOPES HAVE A HEALTHY STAND OF VEGETATIVE COVER. EROSION CONTROL MEASURES SHALL BE INSPECTED ON A WEEKLY BASIS AND WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN 0.5 INCHES

3. EXISTING VEGETATION IS TO REMAIN UNDISTURBED WHEREVER POSSIBLE.

4. 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 ROADWAYS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISH GRADE. CUT AND FILL SLOPES SHALL BE LOAMED & SEEDED WITHIN 72 HOURS OF ACHIEVING FINISH GRADE.

AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURED:
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 INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP-RAP HAS BEEN INSTALLED
d. OR, EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED

TIME LIMIT: ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.

5. ALL DISTURBED AREAS SHALL HAVE A MINIMUM OF 6" OF LOAM INSTALLED WITH NOT LESS THAN 1.1 POUNDS OF SEED MIX PER 1,000 SQ. FT. SEE SEEDING SPECIFICATIONS ON THIS SHEET

6. LIME AND FERTILIZER SHALL BE INCORPORATED INTO THE SOIL PRIOR TO OR AT THE TIME OF AT THE TIME OF SEEDING. A MINIMUM OF 2 TONS PER ACRE OF AGRICULTURAL LIMESTONE AND 500 LBS. PER ACRE OF 10-20-20 FERTILIZER SHALL BE APPLIED. SEEDING PRACTICES SHALL COMPLY WITH LOCAL USDA SOIL CONSERVATION SERVICES RECOMMENDATIONS.

7. STRAW MULCH OR JUTE MATTING SHALL BE USED IF/WHERE INDICATED ON THE PLANS. A MINIMUM OF 1.5 TONS OF MULCH PER ACRE SHALL BE APPLIED. MULCH SHALL BE ANCHORED IN PLACE WHERE NECESSARY. JUTE MATTING SHALL BE LAID IN THE DIRECTION OF RUNOFF FLOW FLOW AND APPLIED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

8. PERMANENT OR TEMPORARY COVER MUST BE IN PLACE BEFORE THE GROWING SEASON ENDS. WHEN SEEDED AREAS ARE MULCHED, PLANTINGS MAY BE MADE FROM EARLY SPRING TO EARLY OCTOBER. WHEN SEEDED AREAS AREA NOT MULCHED, PLANTINGS SHOULD BE MADE FROM EARLY SPRING TO MAY 20 OR FROM AUGUST 15 TO SEPTEMBER 15. NO DISTURBED AREA SHALL BE LEFT EXPOSED DURING WINTER MONTHS.

9. TO CONTROL DUST DURING CONSTRUCTION, WATER DISTRIBUTION SHALL BE USED.

10. TEMPORARY SEDIMENT TRAPS AND/OR BASINS ARE TO BE USED AS NECESSARY TO CONTAIN RUNOFF UNTIL SOILS ARE STABILIZED. SEE DETAIL.

WINTER CONSTRUCTION NOTES

a. ALL PROPOSED VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 95% 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.

b. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 95% 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.

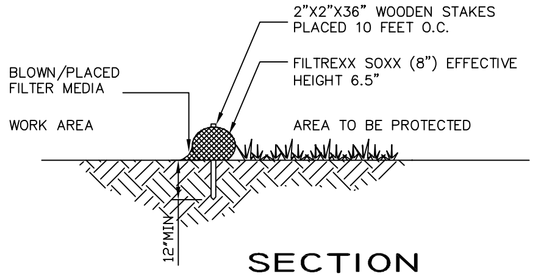
c. AFTER OCTOBER 15TH, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3.

MIXTURE	POUNDS/ACRE	POUNDS/1,000 SF
WARM SEASON GRASSES AND DROUGHTY CONDITIONS		
TALL FESCUE	20	0.45

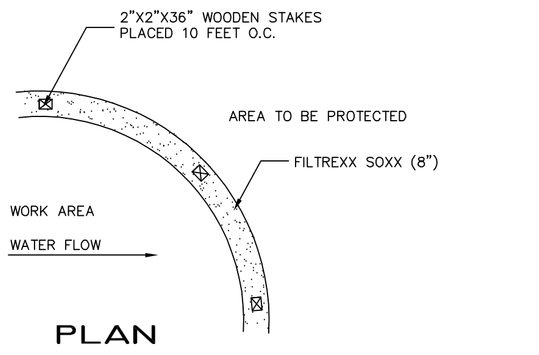
PERMANENT SEEDING SPECIFICATIONS

CREEPING RED FESCUE	20	0.45
REDTOP	2	0.05
TOTAL	42	0.95

1. SEEDBED PREPARATION
   A. SURFACE AND SEEPAGE WATER SHOULD BE DRAINED OR DIVERTED FROM THE SITE TO PREVENT DROWNING OR WINTER KILLING OF THE PLANTS.
   B. STONES LARGER THAN FOUR INCHES AND TRASH SHOULD BE REMOVED BECAUSE THEY INTERFERE WITH SEEDING AND FUTURE MAINTENANCE OF THE AREA. WHERE FEASIBLE, THE SOIL SHOULD BE TILLED TO A DEPTH OF ABOUT FOUR INCHES TO PREPARE A SEEDBED AND MIX FERTILIZER AND LIME INTO THE SOIL. THE SEEDBED SHOULD BE LEFT IN A REASONABLY FIRM AND SMOOTH CONDITION. THE LAST TILLAGE OPERATION SHOULD BE PERFORMED ACROSS THE SLOPE WHEREVER PRACTICAL.
2. ESTABLISHING A STAND
   A. 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 (P_2O_5): 100 LBS. PER ACRE OR 2.2 LBS. PER 1000 SQ. FT.
      – POTASH (K_2O): 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 ACRE OF 5-10-10)
   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 OF SOIL OR LESS, BY CULTIPACKING OR RAKING.
   C. REFER TO TABLE 7-35 OF "STORMWATER MANAGEMENT AND SEDIMENTATION CONTROL HANDBOOK FOR URBAN AND DEVELOPING AREAS IN NEW HAMPSHIRE", FOR APPROPRIATE SEED MIXTURES AND TABLE 7-36 FOR RATES OF SEEDING. ALL LEGUMES (CROWNVETCH, BIRDSFOOT TREFOIL, AND FLATPEA), MUST BE INOCULATED WITH THEIR SPECIFIC INNOCULANT.
   D. WHEN SEEDED AREAS ARE MULCHED, PLANTINGS MAY BE MADE FROM EARLY SPRING TO EARLY OCTOBER. WHEN SEEDED AREAS ARE NOT MULCHED, PLANTINGS SHOULD BE MADE FROM EARLY SPRING TO MAY 20 OR FROM AUGUST 10 TO SEPTEMBER 1.
3. MULCH
   A. STRAW, STRAW, OR OTHER MULCH, WHEN NEEDED, SHOULD BE APPLIED IMMEDIATELY AFTER SEEDING.
   B. MULCH WILL BE HELD IN PLACE USING TECHNIQUES FROM THE "BEST MANAGEMENT PRACTICE FORMULCHING", AS SHOWN IN, "STORMWATER MANAGEMENT AND SEDIMENTATION CONTROL HANDBOOK FOR URBAN AND DEVELOPING AREAS IN NEW HAMPSHIRE".
4. MAINTENANCE TO ESTABLISH A STAND
   A. PLANTED AREAS SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRAZING, TRAFFIC, AND DENSE WEED GROWTH.
   B. FERTILIZATION NEEDS SHOULD BE DETERMINED BY ONSITE INSPECTIONS. SUPPLEMENTAL FERTILIZER IS USUALLY THE KEY TO FULLY COMPLETE THE ESTABLISHMENT OF THE STAND BECAUSE MOST PERENNIALS TAKE 2 TO 3 YEARS TO BECOME ESTABLISHED.
   C. IN WATERWAYS, CHANNELS, OR SWALES WHERE UNIFORM FLOW CONDITIONS ARE ANTICIPATED, OCCASIONAL MOWING MAY BE NECESSARY TO CONTROL GROWTH OF WOODY VEGETATION.



SECTION



PLAN

NOTE

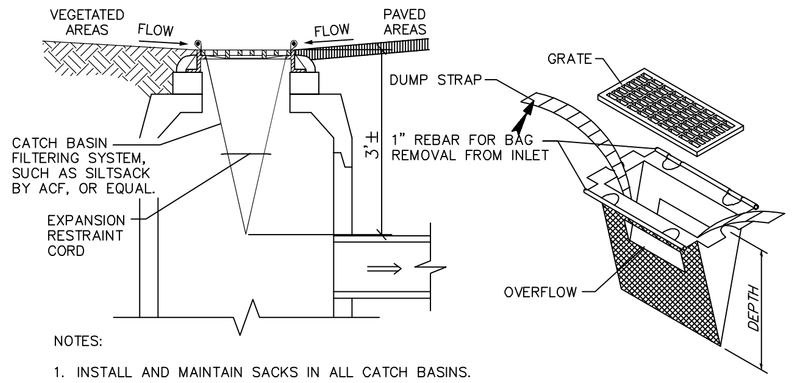
1. ALL MATERIAL TO MEET FILTREXX SPECIFICATIONS
2. FILTER MEDIA TO MEET APPLICATION REQUIREMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON-SITE, AS DETERMINED BY THE ENGINEER
4. MAXIMUM SLOPE LENGTH ABOVE THE FILTREXX SOXX IS 200 FEET FOR A 10% SLOPE, 140 FEET FOR A 15% SLOPE, 100 FEET FOR A 20% SLOPE, 80 FEET FOR A 25% SLOPE.
5. CONTRACTOR IS TO BE FILTREXX CERTIFIED AS DETERMINED BY MANUFACTURER.
6. STAKES SHALL BE INSTALLED THROUGHT THE MIDDLE OF THE SOXX ON 10 FOOT CENTERS.
7. SEDIMENT CONTROL SHOULD BE PLACED NEAR PARALLEL TO THE BASE OF THE SLOPE AS SHOWN ON THE PLANS.
8. LOOSE COMPOST MAY BE BACKFILLED ALONG THE UPSLOPE SIDE OF THE SOXX, FILLING THE SEAM BETWEEN THE SOIL AND THE DEVICE.
9. IF THE "FILTREXX SOXX" IS TO BE LEFT AS A PERMANENT FILTER OR PART OF THE NATURAL LANDSCAPE, IT MAY BE SEEDED AT THE TIME OF INSTALLATION FOR ESTABLISHMENT OF PERMANENT VEGETATION.

MAINTENANCE

1. THE CONTRACTOR SHALL MAINTAIN THE SEDIMENT CONTROL IN A FUNCTIONAL CONDITION AT ALL TIMES AND IT SHALL BE ROUTINELY INSPECTED.
2. IF DAMAGED, IT SHALL BE REPAIRED OR A SECTION REPLACED IF BEYOND REPAIR.
3. THE CONTRACTOR SHALL REMOVE SEDIMENT AT THE BASE OF THE UPSLOPE SIDE OF THE SEDIMENT CONTROL WHEN ACCUMULATION HAS REACHED 1/2 OF THE EFFECTIVE HEIGHT OF THE CONTROL OR 3.25 INCHES (FOR AN 8 INCH SOXX THE EFFECTIVE HEIGHT IS 6.5 INCHES).
4. SEDIMENT CONTROL SHALL BE MAINTAINED UNTIL THE DISTURBED AREA ABOVE THE DEVICE HAS BEEN PERMANENTLY STABILIZED AND CONSTRUCTION ACTIVITY HAS CEASED IN THAT AREA.
5. THE FILTER MEDIA MAY BE DISPERSED ON SITE ONCE THE AREA HAS BEEN PERMANENTLY STABILIZED AND CONSTRUCTION ACTIVITY HAS CEASED IN THAT AREA.

'FILTREXX' SEDIMENT CONTROL DETAIL ("SOXX")

NOT TO SCALE

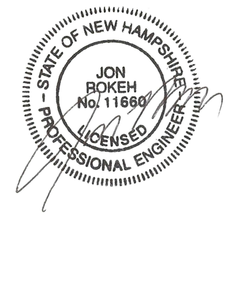


NOTES:

1. INSTALL AND MAINTAIN SACKS IN ALL CATCH BASINS.
2. TO INSTALL SACK, REMOVE CATCH BASIN GRATE AND PLACE SACK IN OPENING. HOLD OUT APPROXIMATELY SIX INCHES OF THE SACK OUTSIDE THE FRAME FOR THE LIFTING STRAPS. REPLACE THE GRATE TO HOLD THE SACK IN PLACE.
3. THE SACK SHOULD BE INSPECTED AFTER EVERY STORM, OR ONCE EVERY TWO WEEKS, WHICH EVER OCCURS FIRST.
4. THE RESTRAINT CORD SHOULD BE VISIBLE AT ALL TIMES. IF THE CORD IS COVERED WITH SEDIMENT, THE SACK SHOULD BE EMPTIED. EMPTY THE SACK AWAY FROM THE CATCH BASIN TO PREVENT SEDIMENT FROM RE-ENTERING THE CATCH BASIN. EMPTY THE SACK PER THE MANUFACTURES RECOMMENDATIONS.
5. REPLACE THE SACK IN THE CATCH BASIN AFTER THE SACK HAS BEEN EMPTIED. ONCE CONSTRUCTION IS COMPLETE AND ALL DISTURBED AREAS HAVE BEEN STABILIZED BY PAVING OR A HEALTHY VEGETATIVE COVER, REMOVE THE SACK FROM THE CATCH BASINS.

"SILT-SAK" SEDIMENT CONTROL

FOR DRAINAGE STRUCTURES NOT TO SCALE



OWNER OF RECORD:
TRENT SPINER
69 SHAWMUT ST
CONCORD, NH 03301-8614
BOOK 3172 PAGE 1080

PROPOSED UTILITY PLAN
TAX MAP 413Z LOT 32
69 SHAWMUT ST
CONCORD, NH
MERRIMACK COUNTY

REVISIONS

DATE	DESCRIPTION	DWN BY	CK BY

ROKEH CONSULTING, LLC
89 KING ROAD, CHICHESTER, NH
PH: 603-387-8688

SCALE: 1" = 40'
DATE: JULY 10, 2025
DR. BY: JR
JOB NO.

SHEET
6 OF 6