

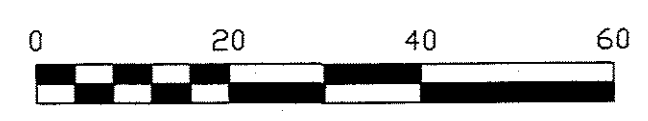
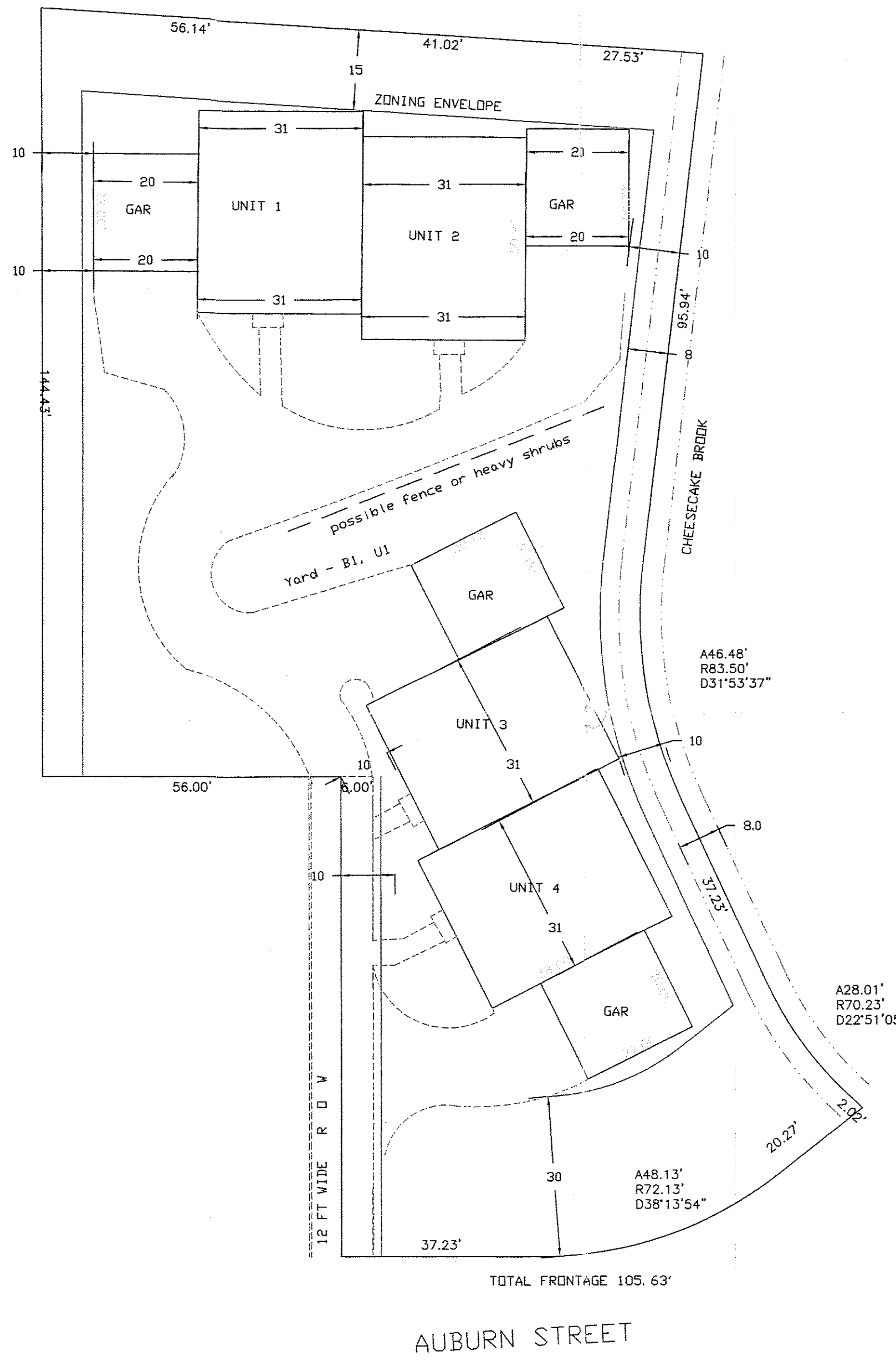
3-5 AUBURN STREET  
 EXISTING CONDITIONS PLAN  
 NEWTON, MA  
 1 IN = 20 FT  
 MARCH 3, 2014

AUBURN STREET



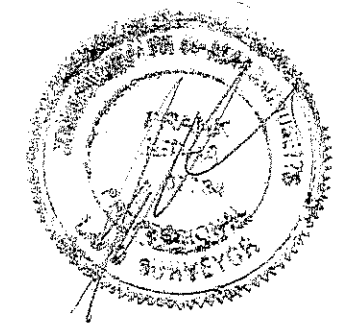
ESSEX ENGINEERING AND SURVEY  
 PO BOX 620622 NEWTON LOWER FALLS  
 MA 02462-0622

617-797-7342  
 FRANK.IEBBA@GMAIL.COM

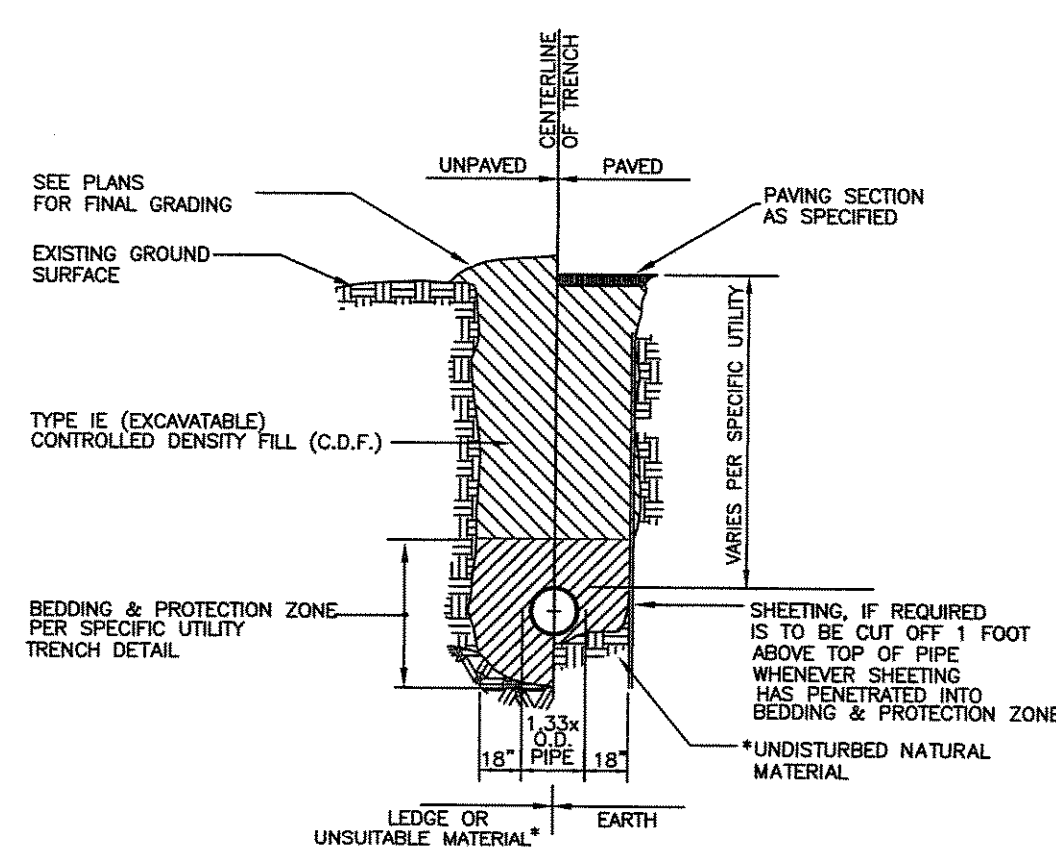


CALCULATED LOT AREA: 23426 SF  
 # 5 AUBURN: 7981 SF  
 # 3 AUBURN: 15445 SF  
  
 LOT COVER: 28.5 %  
 OPEN SPACE: 53 %

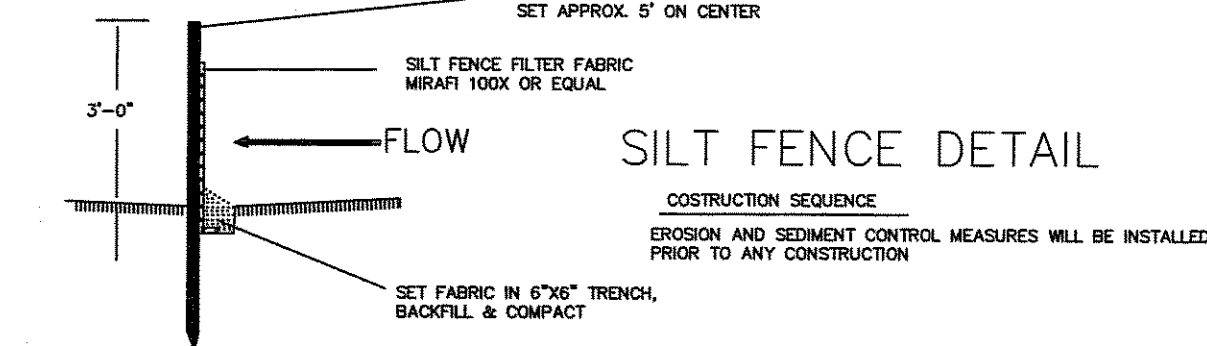
PROPOSED CONDITIONS PLAN  
 3-5 AUBURN STREET  
 NEWTON, MA  
 1 IN = 20 FT  
 FEB 15, 2014



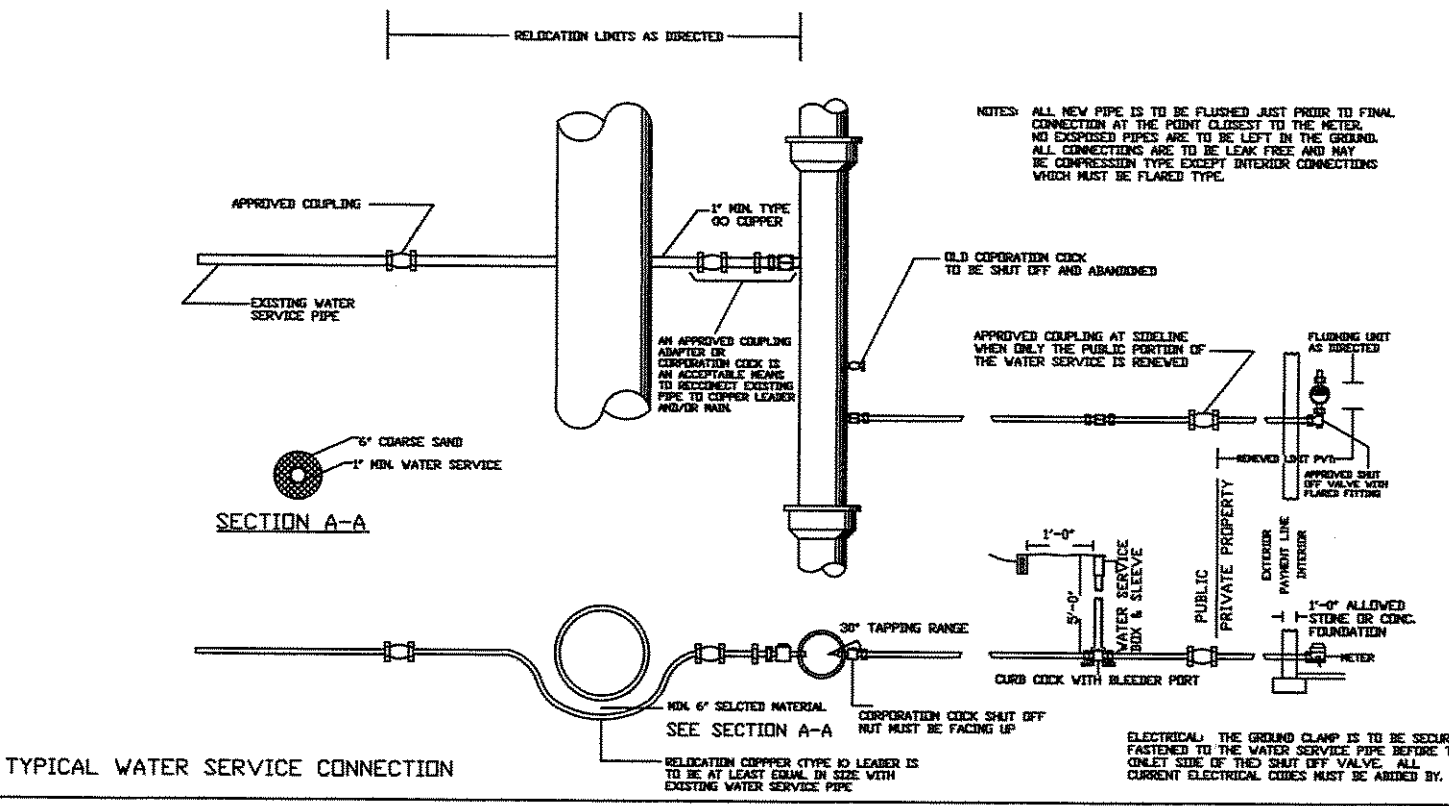
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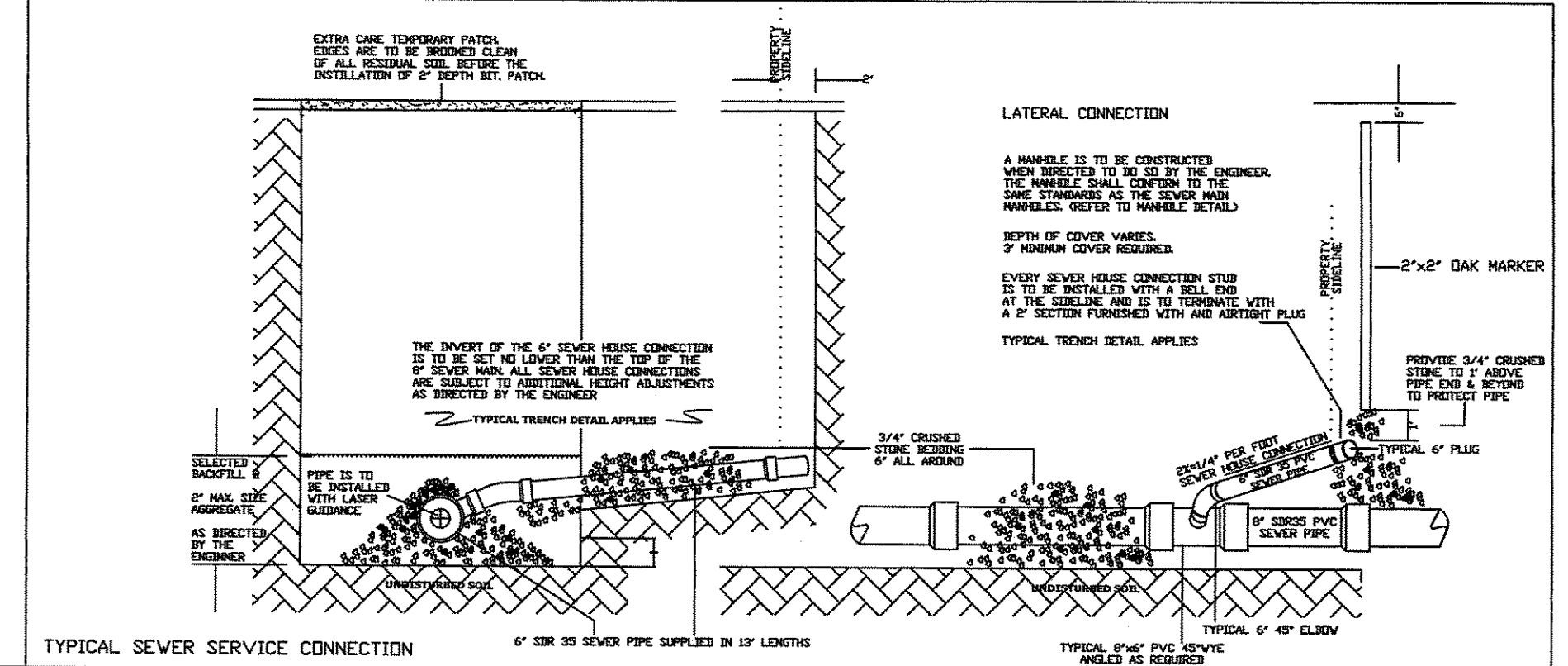
SUITABILITY OF MATERIAL IS TO BE DETERMINED BY THE CITY OF NEWTON.  
**TYPICAL C.D.F. TRENCH DETAIL**  
 NOT TO SCALE



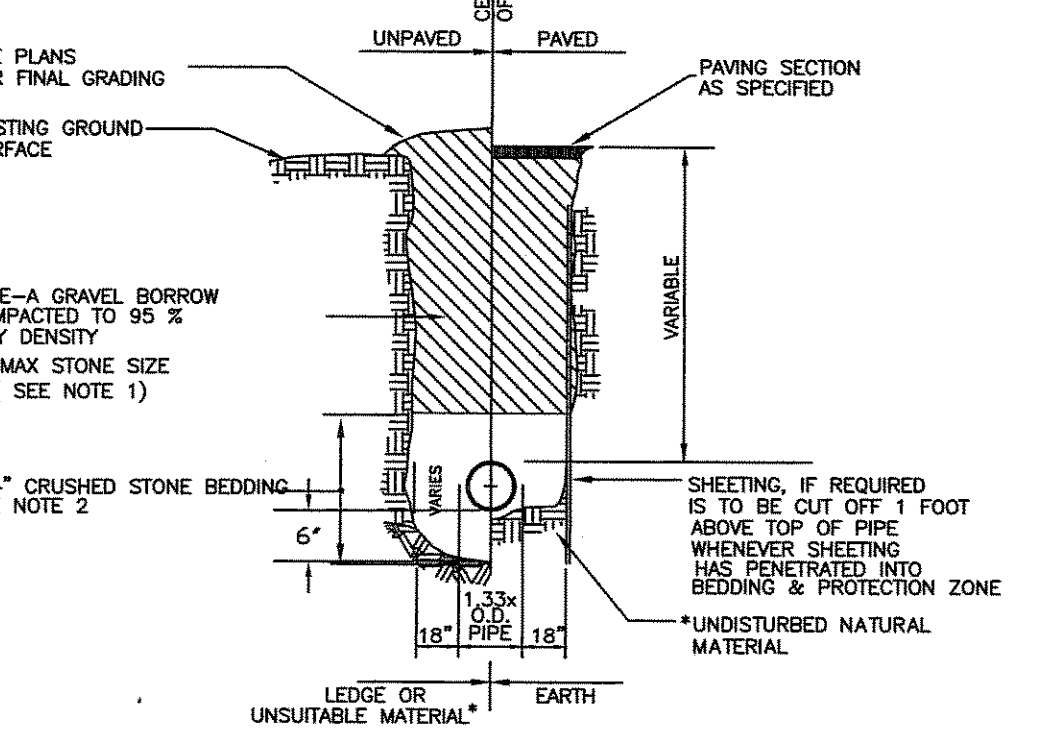
**SILT FENCE DETAIL**  
 CONSTRUCTION SEQUENCE  
 EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED PRIOR TO ANY CONSTRUCTION



TYPICAL WATER SERVICE CONNECTION

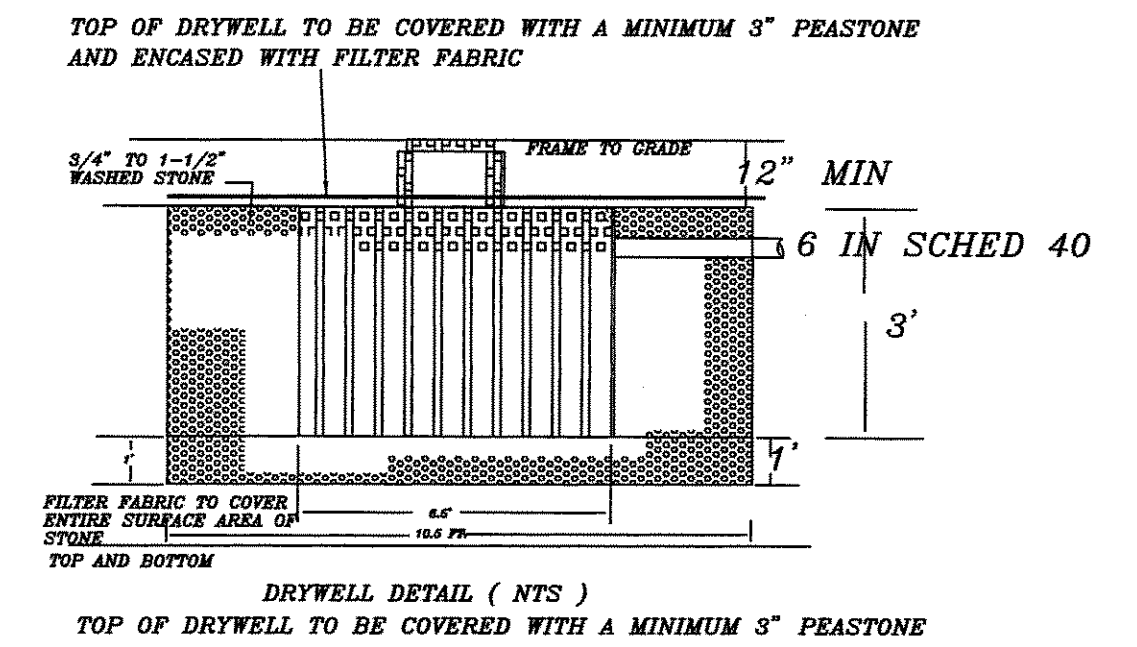
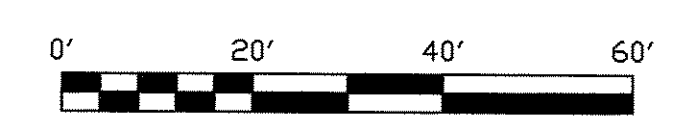
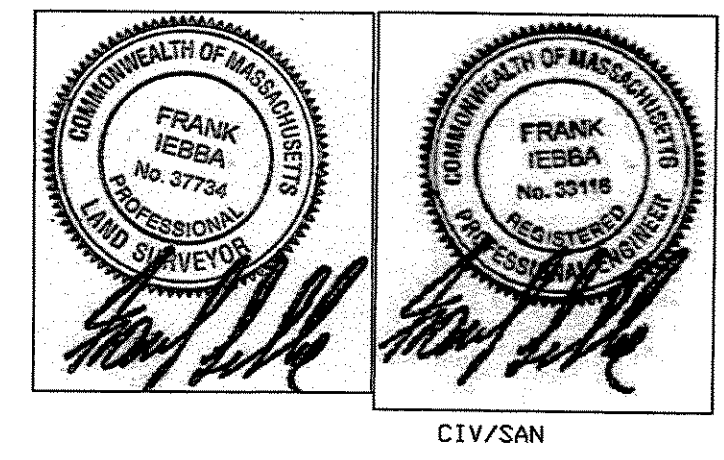


TYPICAL SEWER SERVICE CONNECTION

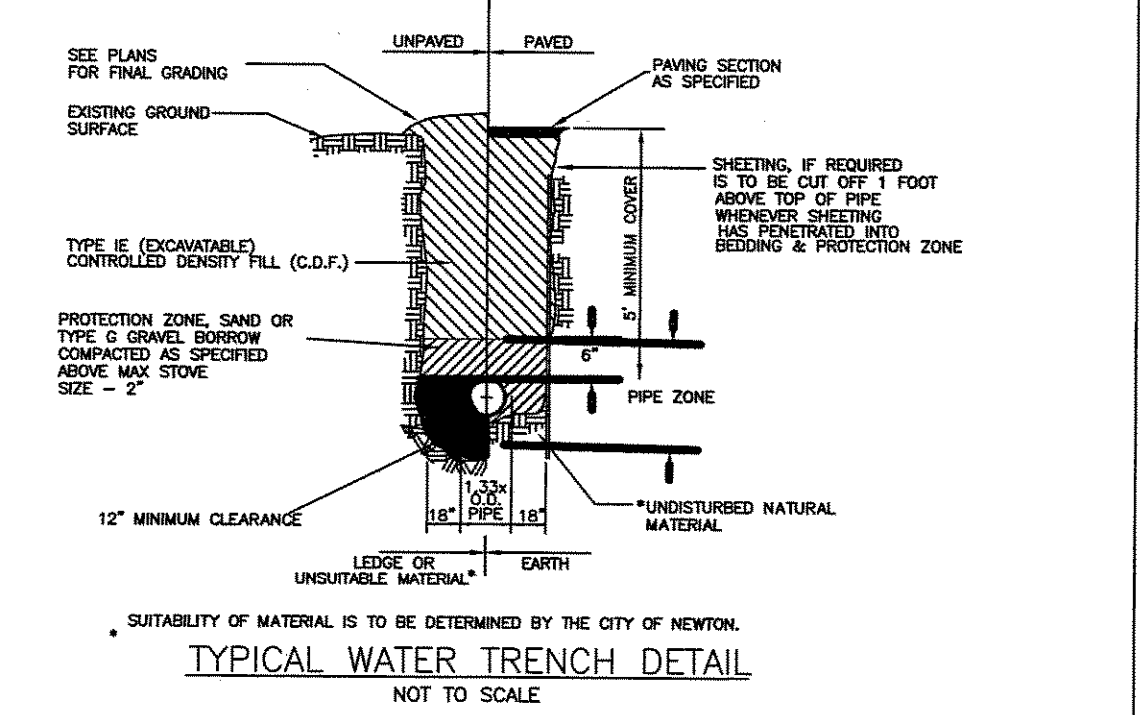


SUITABILITY OF MATERIAL IS TO BE DETERMINED BY THE CITY OF NEWTON.  
**GRAVITY SEWER TRENCH DETAIL**

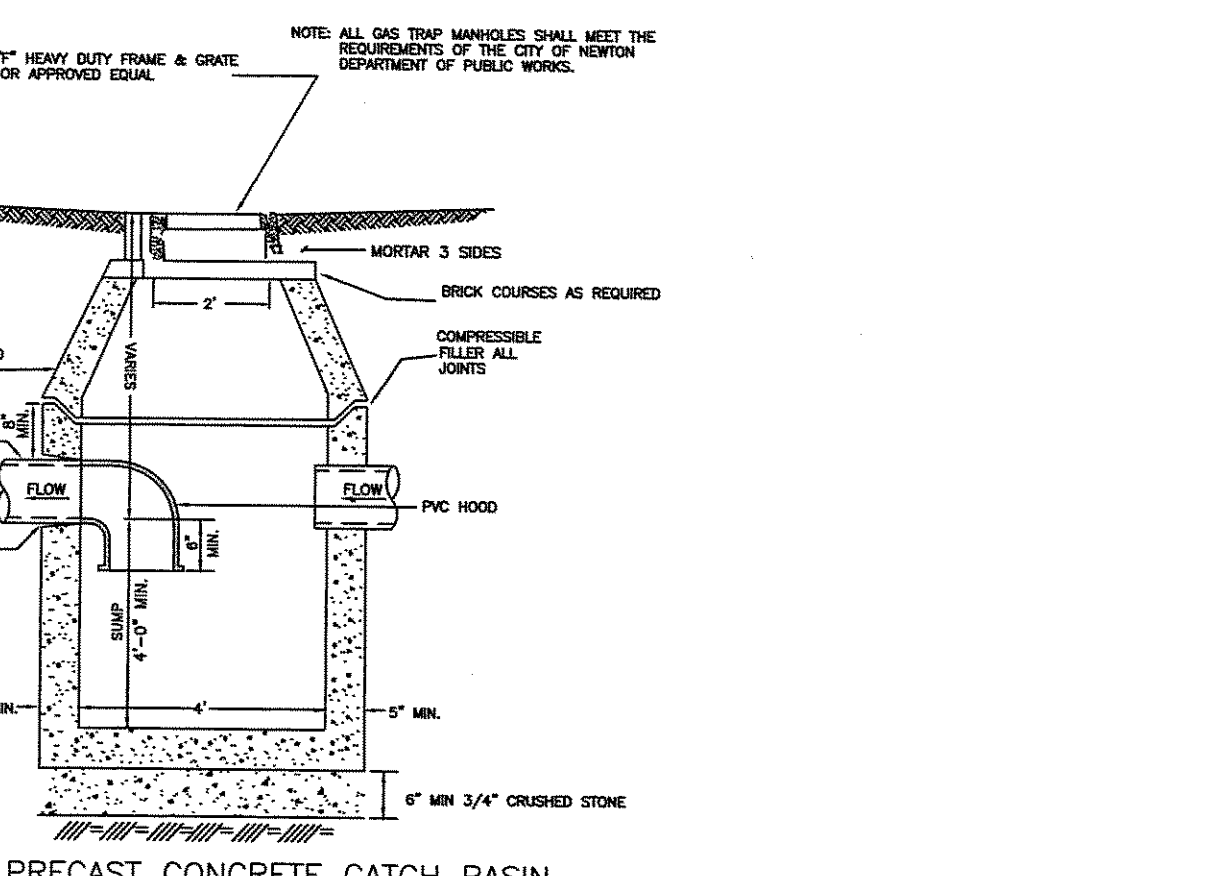
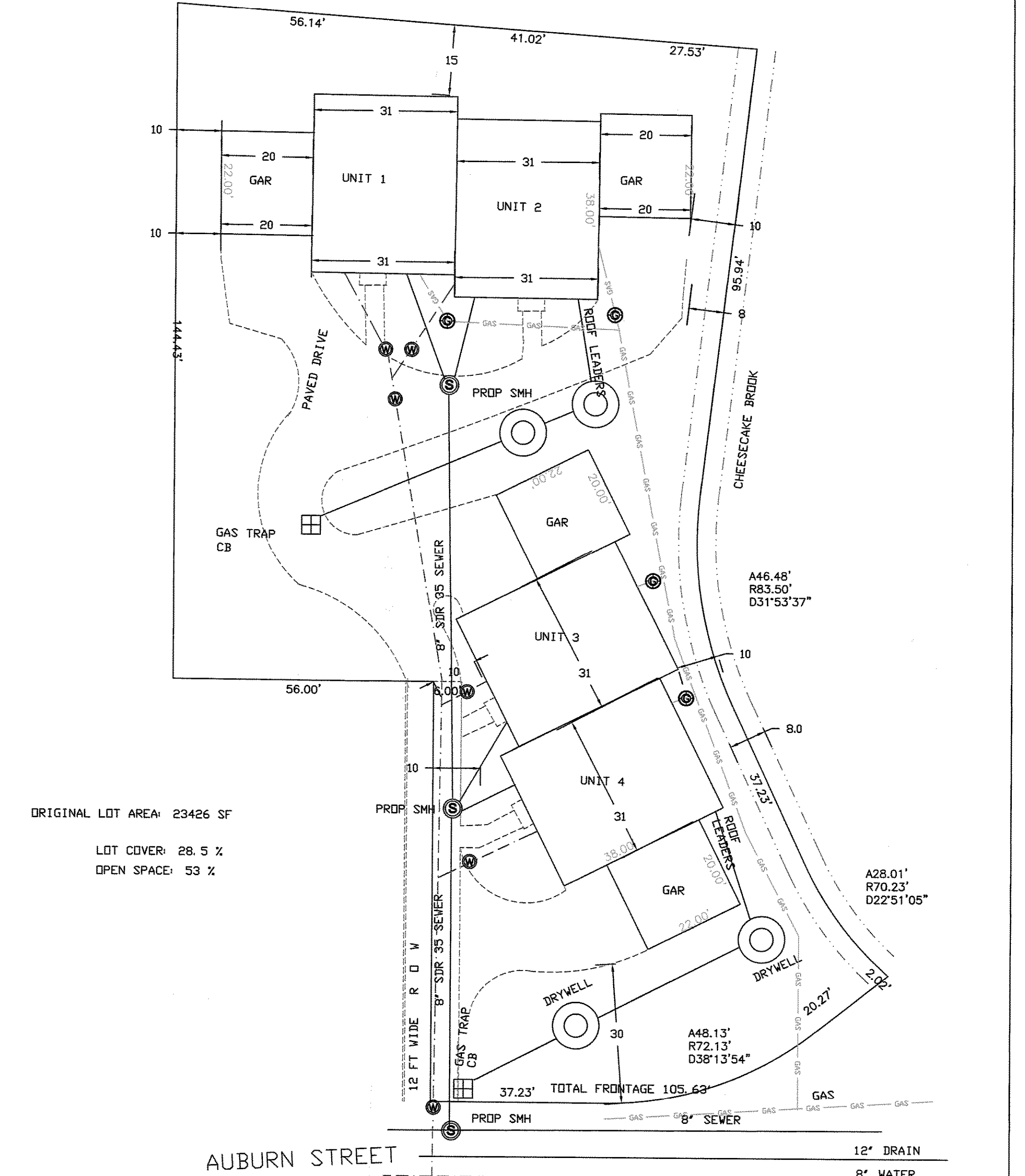
**DISCUSSION:**  
 THE DIFFERENCE IN IMPERVIOUS SURFACE FOR THE LOT FOR DRIVE, WALK AND HOUSE AFTER DEVELOPMENT IS APPROX 10000 SF. USING A SURFACE OF 3 FOR NATURAL AND 9 FOR IMPERVIOUS SURFACES THE POSTDEVELOPMENT RUNOFF IS AS FOLLOWS:  
 10000 SF (9-3)(.01712) = 4185 CF (100 YR STORM)  
 THE PROPOSAL IS TO STORE THE EXTRA VOLUME BY UTILIZING DRYWELLS.  
**METHODOLOGY:**  
 PERCOLATION RATE: 8 MIN. PER INCH ASSUMED  
**DRYWELL SIZES:**  
 10 FT 6 IN DIAMETER  
 3 FT DEEP  
 BOTTOM AREA = 3.14\*D<sup>2</sup>/4 = 3.14\*10.5\*10.5/4 = 86.6 SF  
 VOLUME OF PIT: 3.14\*D<sup>2</sup>H/4 = 3.14\*6.0\*6.0/4 = 99.5 CF  
 VOLUME OF STONE = 3.14\*D<sup>2</sup>H/4 = 3.14\*10.5\*10.5\*4 = 259.8 CF  
 VOID STORAGE VOLUME = VOID RATIO (STONE VOLUME - PIT VOLUME)  
 STORAGE PER DRYWELL = 99.5 + 56.1 = 155.6 CF  
 (.55(259.8-99.5)) = 56.1  
**INFILTRATION CAPACITY - BOTTOM AREA \* INFILTRATION RATE**  
 = 86.6 SF \* .125 IN/MIN \* 1/12 \* 60/HR  
 = 54.1 CF/HOUR  
 = 1299 CF/DAY(1455 TOTAL CAPACITY) **THREE DRYWELL REQUIRED**



TOP OF DRYWELL TO BE COVERED WITH A MINIMUM 3\"/>

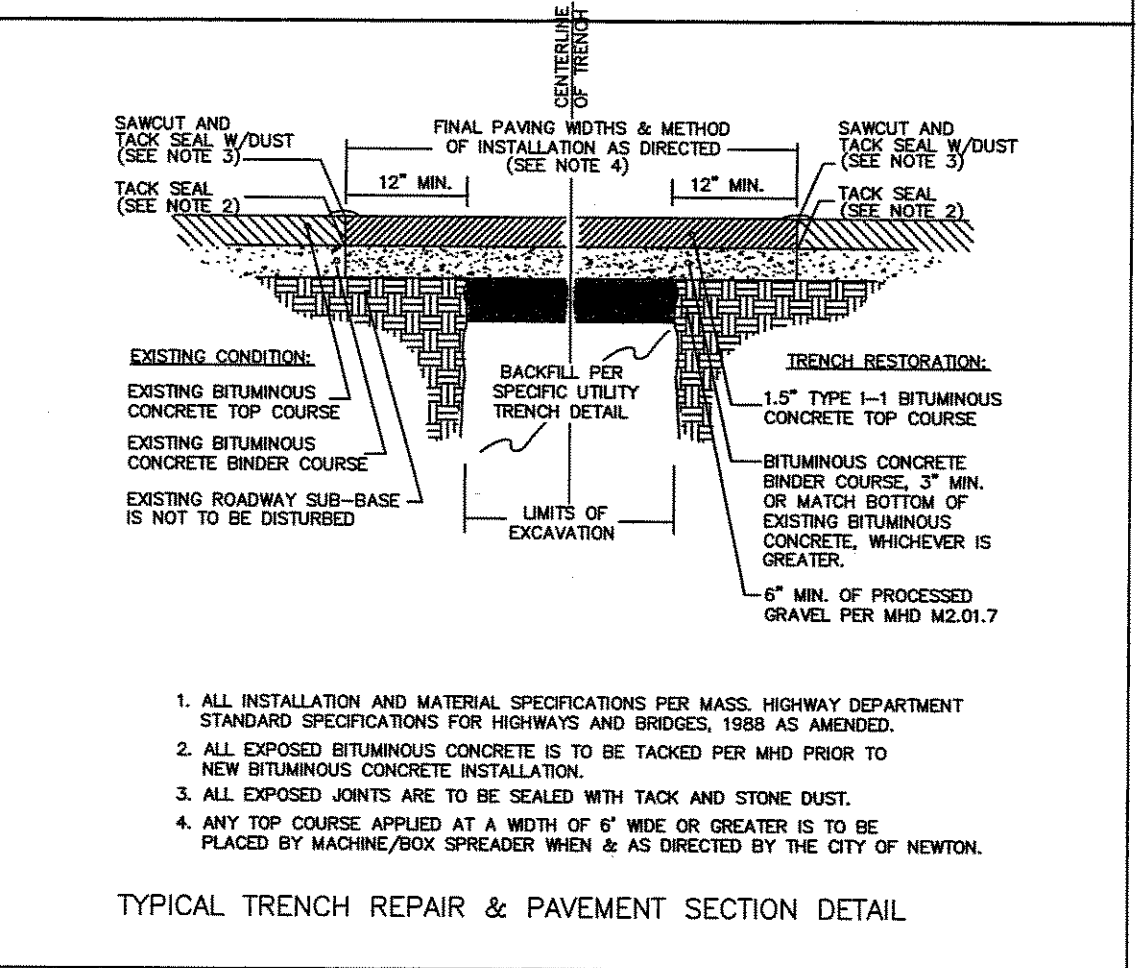


SUITABILITY OF MATERIAL IS TO BE DETERMINED BY THE CITY OF NEWTON.  
**TYPICAL WATER TRENCH DETAIL**  
 NOT TO SCALE



TYPICAL PRECAST CONCRETE CATCH BASIN WITH GAS TRAP - PVC HOOD (NOT TO SCALE)

- 1) ALL WORK TO BE IN ACCORDANCE WITH CITY OF NEWTON AND MASS HIGHWAY STANDARDS. DRIVEWAY WILL CONFORM TO M.A.S. & NEWTON STANDARDS. A MINIMUM 3 FT (3 IN) WIDTH AND MAX 1.5% CROSS SLOPE WILL BE MAINTAINED.
- 2) MINIMUM COMPACTION IN TRENCHES TO BE 98%.
- 3) PRIOR TO START CONSTRUCTION ALL APPLICABLE LOCAL AGENCIES AND DIG SAFE WILL BE NOTIFIED AT LEAST 72 HOURS PRIOR TO COMMENCING WORK.
- 4) NO BACKFILLING OF ANY TRENCHES WILL TAKE PLACE UNTIL WORK HAS BEEN INSPECTED AND APPROVED BY THE CITY AND SEWER MAINS & SERVICES HAVE BEEN AIR TESTED. CONTRACTOR WILL NOTIFY CITY 48 HOURS IN ADVANCE OF UTILITY INSPECTION. UTILITY SYSTEM MUST BE FULLY EXPOSED FOR THE INSPECTOR. UTILITIES CAN ONLY BE BACKFILLED ON APPROVAL & SIGNOFF BY INSPECTOR.
- 5) AS BUILT UTILITY & GRADING PLAN WILL BE SUBMITTED TO NEWTON (DPW/ENG DIV) IN BOTH DIGITAL AND HARD COPY PRIOR TO ISSUANCE OF OCCUPANCY PERMIT. PLAN MUST SHOW ALL UTILITIES, WITH TIES, EASEMENTS AND FINAL GRADING.
- 6) STREET OPENING, SIDEWALK CROSSING, AND UTILITY CONNECTION PERMITS WILL BE OBTAINED FROM THE CITY PRIOR TO COMMENCING ANY WORK.
- 7) WATER AND SEWER SERVICES WILL BE CUT AND CAPPED AT THE MAIN AND REMOVED FROM SITE. PROPERLY BACKFILLED & INSPECTED BY THE CITY. UTILITY CONNECTION PERMIT WILL NOT BE ISSUED IF THIS IS NOT ACCOMPLISHED.
- 8) TRENCH PAVEMENT PERMANENT PATCH WILL CONFORM NEWTON STANDARDS AND WITH THE TRENCH SECTION SPECIFIED HEREIN.
- 9) LOCATION OF UNDERGROUND UTILITIES IS APPROXIMATE. CONTRACTOR WILL NOTIFY DIG SAFE PRIOR TO COMMENCING WORK. CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY DAMAGE RESULTING FROM INCORRECTLY LOCATED UTILITIES.
- 10) IF CO IS REQUESTED PRIOR TO ANY SITE WORK COMPLETION OWNER WILL POST A CERTIFIED CHECK WITH THE CITY AS DETERMINED BY CITY ENG. TO COVER UNFINISHED WORK.
- 11) ALL TRENCH WORK WITHIN THE NEWTON ROW WILL BE BACKFILLED WITH TYPE 1E CDF FILL AS SPECIFIED BY THE ENGINEERING SPECIFICATIONS.
- 12) LOCATION OF UNDERGROUND UTILITIES IS APPROXIMATE. CONTRACTOR WILL VERIFY UTILITY LOCATIONS THROUGH DIGSAFE. ANY DAMAGE CAUSED BY CONTRACTOR AS A RESULT OF UTILITY LOCATIONS SHOWN WILL BE BORNE SOLELY BY CONTRACTOR AT NO COST TO OWNER.
- 13) IT IS THE CONTRACTORS RESPONSIBILITY TO CONTACT THE DESIGN ENGINEER FOR ALL REQUIRED INSPECTIONS SUCH AS MATERIALS USED, COMPACTION, UTILITY AS BUILTS, ETC.. ENGINEER ASSUMES NO RESPONSIBILITY UNLESS HE INSPECTS THE SYSTEM DURING CONSTRUCTION.



1. ALL INSTALLATION AND MATERIAL SPECIFICATIONS PER MASS. HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, 1988 AS AMENDED.  
 2. ALL EXPOSED BITUMINOUS CONCRETE IS TO BE TACKED PER MHD PRIOR TO NEW BITUMINOUS CONCRETE INSTALLATION.  
 3. ALL EXPOSED JOINTS ARE TO BE SEALED WITH TACK AND STONE DUST.  
 4. ANY TOP COURSE APPLIED AT A WIDTH OF 6\"/>

PRELIMINARY SITE PLAN  
 3 AUBURN STREET  
 NEWTON, MA.  
 SCALE: 1 IN = 20 FT

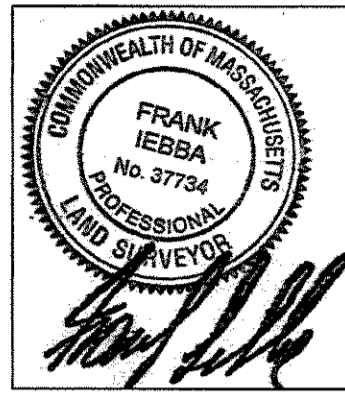
APRIL 9, 2014

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 MA. 02462-0622

617-797-7342

FRANK.IESBA@GMAIL.COM





LOCUS PLAN  
3 AUBURN ST  
AUBURDALE, MA  
1" = 50'  
APRIL 9, 2014

OWNER:  
BENJAMIN F MINAGHAN EST  
1769 COMM. AVE  
AUBURDALE, MA 02466

ESSEX ENG & SURVEY  
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