

### TYPICAL CROSS SECTION ROOF INFILTRATION SYSTEM N.T.S.

- INSPECTION PORT

-4" LOAM & SEED

— COMPACTED FILL

- CULTEC 410 FILTER FABRIC

6" OF 1 1/2"-2" WASHED CRUSHED STONE BELOW

IN LAWN

RAISED TO FINISH GRADE

TOP, SIDES AND BOTTOM

1 CULTEC RECHARGER 180

(H-20) (R MODEL)——

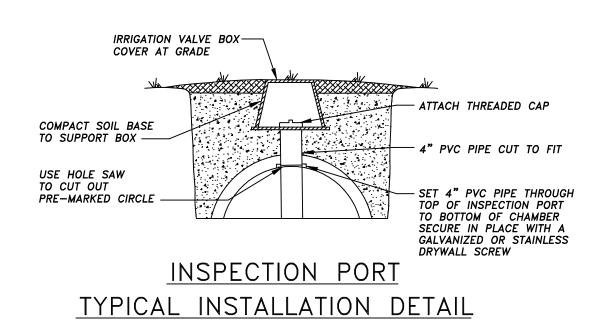
8" COMPACTED —

TOP CHAMBER EL=26.90

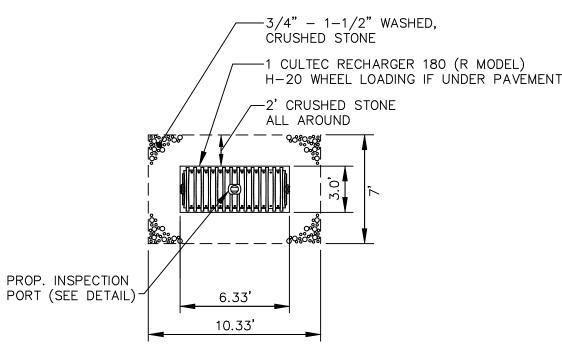
BOT. CHAMBER

BOT. STONE EL=24.69

GRAVEL

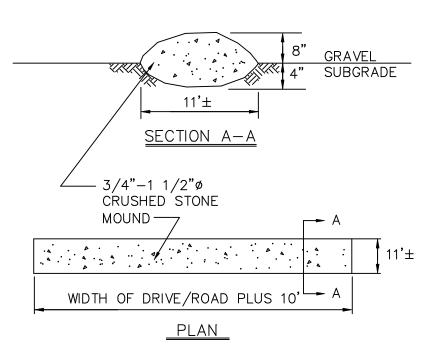


N.T.S.

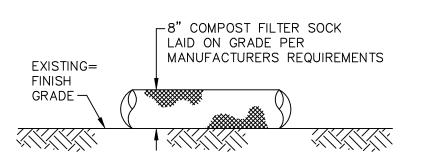


## ROOF INFILTRATION SYSTEM

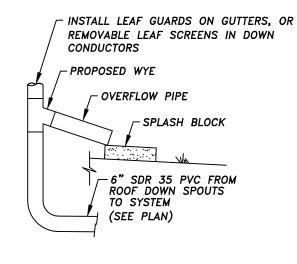
N.T.S.



STABILIZED CONSTRUCTION ENTRANCE N.T.S.

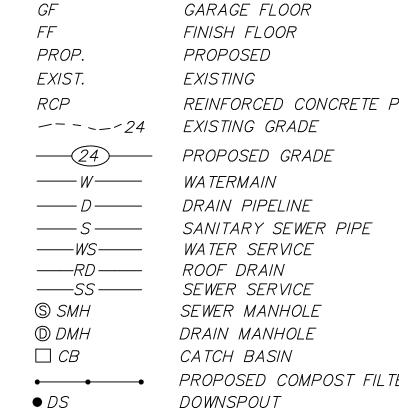


#### COMPOST FILTER SOCK N.T.S.



ROOF LEADER DETAIL N.T.S.

# *LEGEND*



<u>NOTES</u>

1. PROPERTY LINES TAKEN FROM PLANS AND DEEDS OF RECORD.

APRIL 4, 2012 AND REVISED MAY 8, 2012.

TO CAUSE A DRAINAGE PROBLEM ON THE LOT.

6" MINIMUM LOAM AND SEED.

8. ROOF RUNOFF CALCULATIONS

79.04 C.F. > 36.83 C.F.

SEE CITY OF HAVERHILL ASSESSORS MAP #728 BLOCK #706 LOT #12 AND LOT #13 SEE DEED BOOK #36956, PAGE #267 ESDRD FOR SITE. TOPOGRAPHY FROM FIELD SURVEY USING RTK GPS, DATUM NAVD88.

2. WETLANDS SHOWN FROM PLAN BY CHRISTIANSEN & SERGI, INC. DATED

3. ALL WORK SHALL CONFORM TO CITY OF HAVERHILL WATER DEPARTMENT, DPW AND OTHER STANDARDS. ALL NON-PAVED DISTURBED AREAS TO BE

4. TOPOGRAPHIC DATUM IS NAVD88 ESTABLISHED BY RTK GPS. BENCHMARK IS DRAIN MANHOLE RIM LOCATED ON SOUTH KIMBALL STREET, EL.=27.82

5. THE DRIVEWAY RAMP AND SIDEWALK SHALL BE CONSTRUCTED SO AS NOT

7. THIS PROPERTY IS IN ZONE OTHER ZONE X SHOWN ON THE FLOOD INSURANCE

AND IS PARTIALLY LOCATED IN AN ESTABLISHED 100 YEAR FLOOD PLAIN.

RATE MAP, COMMUNITY PANEL NO. 25009C0089H, EFFECTIVE DATE JULY 8, 2025

6. DRIVEWAY TO BE UP TO 18' WIDE 1" TYPE I-1 BITUMINOUS CONCRETE

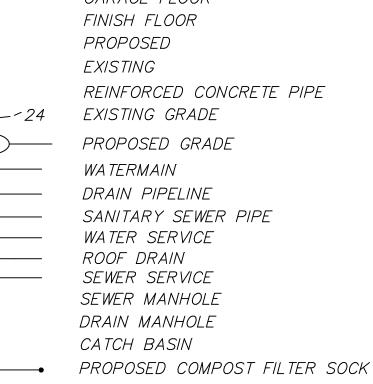
STORAGE PROVIDED = 1 CULTEC CHAMBER @ 25.2 CF EA = 25.2 C.F. VOLUME STONE =  $((10.33 \times 7 \times 2.21) - 25.2) \times 0.4 = 53.84$  C.F.

SURFACE COURSE OVER 2" TYPE I-1 BITUMINOUS CONCRETE

STORAGE REQUIRED = 1/2"/12" x 884 S.F. = 36.83 C.F.

TOTAL STORAGE = 25.2 C.F. + 53.4 C.F. = 79.04 C.F.

BINDER COURSE OVER 12" COMPACTED GRAVEL BASE.



# SITE DEVELOPMENT PLAN OF LAND

STAPINSKI

#29876

91 SOUTH KIMBALL STREET

HAVERHILL, MASSACHUSETTS PREPARED FOR

DATE: AUGUST 13, 2025

DANIEL OTERO, JR. 91 SOUTH KIMBALL STREET

HAVERHILL, MASSACHUSETTS 01835



| MERRIMACK ENGINEERING SERVICES ∥*66 PARK STREET* ANDOVER, MASSACHUSETTS 01810 

| EMAIL: MERRENG@AOL. COM

SCALE: 1"=20'