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# WATER DISTRICT FACILITY **IMPROVEMENTS**

# 199 RAYMOND ROAD

ONS PLAN

DESCRIPTION

Weston (&) Sampson

One Hundred Foxborough Boulevard, Foxborough, Massachusetts 02035

TOWN OF SUDBURY, MASSACHUSETTS

JULY, 2018

**CONSERVATION COMMISSION** SUBMISSION

## **GENERAL NOTES**

- 1. TOPOGRAPHICAL INFORMATION BASED UPON SURVEY PERFORMED BY WESTON & SAMPSON IN FEBRUARY 2017.
- REFER TO EXISTING CONDITIONS FOR SURVEY LEGEND. ALL BIDDERS ARE REQUIRED TO INSPECT THE PROJECT SITE IN ITS ENTIRETY PRIOR TO SUBMITTING THEIR BID, AND BECOME FAMILIAR WITH ALL CONDITIONS AS THEY MAY AFFECT THEIR BID. CONTRACTOR AND SUB-CONTRACTOR SHALL BE FAMILIAR WITH ALL DRAWINGS AND SPECIFICATIONS PRIOR TO COMMENCING THE CONSTRUCTION.
- LOCATIONS OF ANY UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF SUCH UTILITIES, PROTECTING ALL EXISTING UTILITIES AND REPAIRING ANY DAMAGE DONE DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ON-SITE COORDINATION WITH UTILITY COMPANIES AND PUBLIC AGENCIES AND FOR OBTAINING ALL REQUIRED PERMITS AND PAYING ALL REQUIRED FEES. IN ACCORDANCE WITH M.G.L. CHAPTER 82, SECTION 40, INCLUDING AMENDMENTS, CONTRACTORS SHALL NOTIFY ALL UTILITY COMPANIES AND GOVERNMENT AGENCIES IN WRITING PRIOR TO EXCAVATION.
- WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.
- THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY OWNER AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING ALL DRAWINGS AND SPECIFICATIONS TO DETERMINE THE EXTENT OF EXCAVATION AND DEMOLITION REQUIRED TO RECEIVE SITE IMPROVEMENTS.
- ANY DISCREPANCIES OR CONFLICTS BETWEEN THE DRAWINGS AND EXISTING CONDITIONS, EXISTING CONDITIONS TO REMAIN, TEMPORARY CONSTRUCTION, PERMANENT CONSTRUCTION AND WORK OF ADJACENT CONTRACTS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER BEFORE PROCEEDING. ITEMS ENCOUNTERED IN AREAS OF EXCAVATION THAT ARE NOT INDICATED ON THE DRAWINGS, BUT ARE VISIBLE ON SURFACE, SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE REMOVED AT NO ADDITIONAL COST TO THE OWNER.
- ANY ALTERATIONS TO THESE DRAWINGS MADE IN THE FIELD DURING CONSTRUCTION SHALL BE RECORDED BY THE GENERAL CONTRACTOR ON "AS-BUILT" DRAWINGS.
- 9. ALL AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS OUTSIDE THE PROJECT LIMITS, SHALL BE RESTORED TO THE ORIGINAL CONDITION BY THE CONTRACTOR AT NO ADDITIONAL COST AND TO THE SATISFACTION OF THE OWNER.
- 10. ALL WORK SHOWN ON THE PLANS AS BOLD SHALL REPRESENT PROPOSED WORK. THE TERM "PROPOSED (PROP)" INDICATES WORK TO BE CONSTRUCTED USING NEW MATERIALS OR. WHERE APPLICABLE. RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE AND RESET (R&R)" OR REMOVE, RELOCATE, RESET, (R.R&R)
- 11. ALL KNOWN EXISTING STATE, COUNTY AND TOWN LOCATION LINES AND PRIVATE PROPERTY LINES HAVE BEEN ESTABLISHED FROM AVAILABLE INFORMATION AND ARE INDICATED ON THE PLANS. 12. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT HIS EMPLOYEES, AS WELL AS PUBLIC USERS FROM INJURY
- DURING THE ENTIRE CONSTRUCTION PERIOD USING ALL NECESSARY SAFEGUARDS, INCLUDING BUT NOT LIMITED TO, THE ERECTION OF TEMPORARY WALKS, STRUCTURES, PROTECTIVE BARRIERS, COVERING, OR FENCES AS NEEDED.
- 13. THE CONTRACTOR SHALL SUPPLY THE OWNER WITH THE NAME OF THE OSHA "COMPETENT PERSON" PRIOR TO CONSTRUCTION. 14. FILLING OF EXCAVATED AREAS SHALL NOT TAKE PLACE WITHOUT THE PRESENCE OR PERMISSION OF THE OWNER.
- 15. EXISTING TREES TO REMAIN SHALL BE PROTECTED FROM CONSTRUCTION ACTIVITIES. NO STOCKPILING OF MATERIAL, EQUIPMENT OR VEHICULAR TRAFFIC SHALL BE ALLOWED WITHIN THE DRIP LINE OF TREES TO REMAIN. NO GUYS SHALL BE ATTACHED TO ANY TREE TO REMAIN. WHEN NECESSARY OR AS DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL ERECT TEMPORARY BARRIERS FOR THE PROTECTION OF EXISTING TREES DURING CONSTRUCTION.
- 16. TREES AND SHRUBS WITHIN THE LIMITS OF WORK SHALL BE REMOVED ONLY UPON THE APPROVAL OF THE ENGINEER OR AS NOTED ON THE
- 17. THE CONTRACTOR SHALL CALL DIGSAFE AT 1-888-344-7233 AT LEAST 72 HOURS, SATURDAYS, AND HOLIDAYS EXCLUDED, PRIOR TO EXCAVATING AT ANY LOCATION. A COPY OF THE DIGSAFE PROJECT REFERENCE NUMBER(S) SHALL BE GIVEN TO THE OWNER PRIOR TO EXCAVATION
- 18. NO FILLING SHALL OCCUR AROUND EXISTING TREES TO REMAIN WITHOUT THE APPROVAL OF THE OWNER OR OWNER REPRESENTATIVE.
- 19. THE CONTRACTOR SHALL REMOVE ALL SURFACE VEGETATION PRIOR TO GRADING THE SITE. STUMPS SHALL BE STOCKPILED ON SITE FOR DISPOSAL BY THE GC. TEMPORARY EROSION CONTROL MEASURES SHOWN ON THE DRAWINGS (INCLUDING SILT FENCE, STRAW WATTLES, OR SILT SOCKS) SHALL BE INSTALLED BY THE CONTRACTOR UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THESE TEMPORARY EROSION CONTROL MEASURES THROUGHOUT THE PROJECT WHICH COST SHALL BE INCIDENTAL TO THE PROJECT
- 20. ALL UNSUITABLE UNCONTAMINATED EXCESS SOIL FROM CONSTRUCTION ACTIVITIES SHALL BE STOCKPILED ON SITE, AS DIRECTED BY THE TOWN, AT NO ADDITIONAL COST TO THE OWNER. REMOVAL ACTIVITIES SHALL BE IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS AT NO ADDITIONAL COST TO THE OWNER. SUITABLE SOIL EXCAVATION AS PART OF THE PROJECT MUST MEET ONE OR MORE OF THE MATERIAL REQUIREMENTS SPECIFIED IN 02300-EARTHWORK. ON-SITE FILL MATERIALS, WHICH DO NOT CONFORM TO SPEC 02300, SHALL NOT BE USED BELOW ANY STRUCTURES. IF THE CONTRACTOR PROPOSES TO USE THE EXISTING FILL ON SITE BELOW PAVEMENT AREAS. HE MUST DEMONSTRATE THAT THE FILL MEETS THE REQUIREMENTS PER SECTION 02300 OF THE SPECIFICATIONS ALL EXCAVATED FILL MATERIAL WHICH DOES NOT MEET THE REQUIREMENTS OF THE CONTRACT DOCUMENTS SHALL BE REMOVED AND DISPOSED OF OFF-SITE AT NO ADDITIONAL COST
- 21. CONTRACTOR IS RESPONSIBLE FOR STAKING CONSTRUCTION BASELINES IN FIELD. NO CONSTRUCTION WILL BE PERFORMED WITHOUT THE PROPOSED BASELINES AND LAYOUTS APPROVED BY THE ENGINEER. 22. NO FILL SHALL CONTAIN HAZARDOUS MATERIALS.
- 23. CONTRACTOR SHALL PROVIDE TEMPORARY FENCING AROUND PERIMETER OF WORK AREA (LIMIT OF WORK). FENCE SHALL NOT IMPEDE TRAVEL WAYS
- 24. ANY QUANTITIES SHOWN ON PLANS ARE FOR COMPARATIVE BIDDING PURPOSES ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE PROJECT SITE TO VERIFY ALL QUANTITIES AND CONDITIONS PRIOR TO SUBMITTING BI 25. ALL EXISTING DRAINAGE FACILITIES TO REMAIN SHALL BE MAINTAINED FREE OF DEBRIS, SOIL, SEDIMENT, AND FOREIGN MATERIAL AND
- OPERATIONAL THROUGHOUT THE LIFE OF THE CONTRACT. REMOVE ALL SOIL, SEDIMENT, DEBRIS AND FOREIGN MATERIAL FROM ALL DRAINAGE STRUCTURES, INCLUDING BUT NOT LIMITED TO, DRAINAGE INLETS, MANHOLES AND CATCH BASINS WITHIN THE LIMIT OF WORK AND DRAINAGE STRUCTURES OUTSIDE THE LIMIT OF WORK THAT ARE IMPACTED BY THE WORK FOR THE ENTIRE DURATION OF CONSTRUCTION.
- 26. CONTRACTOR'S STAGING AREA MUST BE WITHIN THE CONTRACT LIMIT LINE AND IN AREAS APPROVED BY OWNER. ANY OTHER AREAS THAT THE CONTRACTOR MAY WISH TO USE FOR STAGING MUST BE COORDINATED WITH THE OWNER.
- 27. THE CONTRACTOR SHALL KEEP ALL STREETS, PARKING LOTS AND WALKS THAT ARE NOT RESTRICTED FROM PUBLIC USE DURING CONSTRUCTION BROOM CLEAN AT ALL TIMES. THE CONTRACTOR SHALL USE ACCEPTABLE METHODS AND MATERIALS TO MAINTAIN ADEQUATE DUST CONTROL THROUGHOUT CONSTRUCTION 28. CONTRACTOR SHALL COORDINATE ALL WORK WITH THE OWNER.
- 29. CONTRACTOR SHALL DEWATER AS NECESSARY TO PERFORM THE PROPOSED WORK. CONTRACTOR SHALL BE AWARE OF PERCHED GROUNDWATER. (SEE SPECIFICATION SECTION 00320 SUBSURFACE DATA).
- 30. THE LIMIT OF WORK SHALL BE DELINEATED IN THE FIELD PRIOR TO THE START OF SITE CLEARING OR CONSTRUCTION.
- 31. DEEP SUMP CATCH BASINS AND STORMWATER BASIN SHALL BE CLEANED FOLLOWING CONSTRUCTION AND SHALL FOLLOW THE OPERATION AND MAINTENANCE PLAN THEREAFTER.
- 32. HAULING OF EARTH MATERIALS TO AND FROM THE SITE SHALL BE RESTRICTED TO THE HOURS OF 7:00 AM TO 5:00 PM MONDAY THROUGH
- 33. ANY BOULDERS 3 CY OR SMALLER SHALL BE CONSIDERED UNDOCUMENTED FILL AND SHALL BE DISPOSED OF AT NO ADDITIONAL COST TO THE OWNER
- 34. WORK ON SATURDAYS SHALL ONLY BE CONDUCTED IF PRIOR WRITTEN PERMISSION IS PROVIDED BY THE TOWN.

35. THE TERM "AS DIRECTED" AS USED IN THE CONTRACT DRAWINGS SHALL BE REPLACED WITH "AS REQUIRED". **EROSION AND SEDIMENT CONTROL NOTES** 

- 1. ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE PUT INTO PLACE PRIOR TO BEGINNING ANY CONSTRUCTION OR DEMOLITION. REFER TO PLAN FOR APPROXIMATE LOCATION OF EROSION AND SEDIMENT CONTROL. REFER TO SPECS AND DETAILS FOR TYPE OF EROSION AND SEDIMENT CONTROL.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTINUAL MAINTENANCE OF ALL CONTROL DEVICES THROUGHOUT THE DURATION OF THE PROJECT.
- CONTRACTOR SHALL MEET ALL OF THE STATE OF MASSACHUSETTS D.E.P. AND THE TOWN OF SUDBURY WETLAND ORDINANCE REGULATIONS FOR SEDIMENT AND EROSION CONTROL.
- EXCAVATED MATERIAL STOCKPILED ON THE SITE SHALL BE SURROUNDED BY A RING OF UNBROKEN SEDIMENT AND EROSION CONTROL FENCE. THE LIMITS OF ALL GRADING AND DISTURBANCE SHALL BE KEPT TO A MINIMUM WITHIN THE APPROVED AREA OF CONSTRUCTION. ALL AREAS OUTSIDE OF THE LIMIT OF CONTRACT SHALL REMAIN TOTALLY UNDISTURBED UNLESS OTHERWISE APPROVED BY OWNER'S REPRESENTATIVE
- ALL CATCH BASINS AND DRAIN GRATES WITHIN LIMIT OF CONTRACT SHALL BE PROTECTED WITH FILTER FABRIC DURING THE ENTIRE DURATION OF CONSTRUCTION.
- EROSION CONTROL BARRIERS TO BE INSTALLED AT THE TOE OF SLOPES. SEE SITE PREPARATION PLAN, NOTES, DETAILS AND SPECIFICATIONS.
- 7. ANY AREA OUTSIDE THE PROJECT LIMIT THAT IS DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO COST TO THE OWNER.
- 8. THE CONTRACTOR SHALL PROVIDE DUST CONTROL FOR CONSTRUCTION OPERATIONS AS APPROVED BY OWNER.
- 9. ALL POINTS OF CONSTRUCTION EGRESS OR INGRESS SHALL BE MAINTAINED TO PREVENT TRACKING OR FLOWING OF SEDIMENT ON TO PUBLIC/PRIVATE ROADS.

## **DEMOLITION & SITE PREPARATION NOTES**

- 3. UNLESS SPECIFICALLY NOTED TO BE SAVED / STOCKPILED (R&S) OR REUSED / RELOCATED (R&R), ALL SITE FEATURES CALLED FOR REMOVAL

ADDITIONAL COST

- COMMENCEMENT OF CONSTRUCTION.
- SEDIMENT CONTROLS.

## LAYOUT & MATERIALS NOTES

REPRESENTATIVE.

- THOSE REQUIRED
- DESIGNATED WITH ANGLE OFFSETS NOTED.
- ADDITIONAL COST TO THE OWNER.

## **GRADING, UTILITIES & DRAINAGE NOTES**

- OWNER.
- IMPROVEMENTS

- CONTOURS.

(SECTION 220)

1. THE CONTRACTOR SHALL INCLUDE IN THE BID THE COST OF REMOVING ANY EXISTING SITE FEATURES AND APPURTENANCES NECESSARY TO ACCOMPLISH THE CONSTRUCTION OF THE PROPOSED SITE IMPROVEMENTS. THE CONTRACTOR SHALL ALSO INCLUDE IN THE BID THE COST NECESSARY TO RESTORE SUCH ITEMS IF THEY ARE SCHEDULED TO REMAIN AS PART OF THE FINAL SITE IMPROVEMENTS. REFER TO PLANS TO DETERMINE EXCAVATION, DEMOLITION AND TO DETERMINE THE LOCATION OF THE PROPOSED SITE IMPROVEMENTS.

2. THE OWNER RESERVES THE RIGHT TO REVIEW ALL MATERIALS DESIGNATED FOR REMOVAL AND TO RETAIN OWNERSHIP OF SUCH MATERIALS. IF THE OWNER RETAINS ANY MATERIAL THE CONTRACTOR SHALL ALLOW ARRANGEMENTS WITH THE OWNER TO HAVE THOSE MATERIALS REMOVED OFF SITE AT NO ADDITIONAL COST.

(REM) SHALL BE REMOVED WITH THEIR FOOTINGS, ATTACHMENTS, BASE MATERIAL, ETC, TRANSPORTED FROM THE SITE TO BE DISPOSED OF IN A LAWFUL MANNER AT AN ACCEPTABLE DISPOSAL SITE AND AT NO COST TO THE OWNER. 4. ALL EXISTING SITE FEATURES TO REMAIN SHALL BE PROTECTED THROUGHOUT THE CONSTRUCTION PERIOD. ANY FEATURES DAMAGED

DURING CONSTRUCTION OPERATIONS SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE AT NO DURING EARTHWORK OPERATIONS, CONTRACTOR SHALL TAKE CARE TO NOT DISTURB EXISTING MATERIALS TO REMAIN, OUTSIDE THE LIMITS

OF EXCAVATION AND BACKFILL AND SHALL TAKE WHATEVER MEASURES NECESSARY, AT THE CONTRACTOR'S EXPENSE, TO PREVENT ANY EXCAVATED MATERIAL FROM COLLAPSING. ALL BACKFILL MATERIALS SHALL BE PLACED AND COMPACTED AS SPECIFIED TO THE SUBGRADE REQUIRED FOR THE INSTALLATION OF THE REMAINDER OF THE CONTRACT WORK.

6. IT SHALL BE THE CONTRACTOR'S OPTION, WITH CONCURRENCE OF THE OWNER, TO REUSE EXISTING GRAVEL IF IT MEETS THE REQUIREMENTS OF THE SPECIFICATIONS FOR GRAVEL BORROW.

ALL ITEMS CALLED FOR REMOVAL SHALL BE REMOVED TO FULL DEPTH INCLUDING ALL FOOTINGS, FOUNDATIONS, AND OTHER APPURTENANCES, EXCEPT AS SPECIFICALLY NOTED OTHERWISE

8. 'CLEAR AND GRUB VEGETATION' SHALL INCLUDE REMOVAL OF GRASS, SHRUBS, AND UNDERBRUSH, REMOVAL OF ROOTS, ROUGH GRADING, INSTALLATION OF LOAM (IF APPLICABLE), FINE GRADING, SEEDING AND TURF ESTABLISHMENT BY THE CONTRACTOR, 9. TREES DESIGNATED FOR REMOVAL SHALL BE TAGGED BY CONTRACTOR AND APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO

10. THE STORAGE OF MATERIALS AND EQUIPMENT WILL BE PERMITTED AT LOCATIONS DESIGNATED BY OWNER OR OWNER'S REPRESENTATIVE. PROTECTION OF STORED MATERIALS AND EQUIPMENT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. 11. STRIP & STORE EXISTING TOPSOIL FOR LATER REUSE WHERE APPROPRIATE, AND AS NOTED ON PLAN, WITH APPROPRIATE EROSION AND

12. LOAM / TOP SOIL DESIGNATED FOR REUSE AS GENERAL FILL SHALL BE BLENDED WITH SUITABLE BORROW MATERIAL AS SPECIFIED. 13. THE CONTRACTOR SHALL PROTECT EXISTING TREES TO REMAIN, CONTRACTOR SHALL INSTALL TREE PROTECTION BARRIER AFTER CLEARING UNDERBRUSH AND TAKE DUE CARE TO PREVENT INJURY TO TREES DURING CLEARING OPERATIONS.

1. REFER TO EXISTING CONDITIONS PLANS FOR SURVEY INFORMATION (SHEET C1.01).

2. COORDINATE ALL LAYOUT ACTIVITIES WITH THE SCOPE OF WORK CALLED FOR BY DEMOLITION, GRADING AND UTILITIES OPERATIONS ENCOMPASSED BY THIS CONTRACT. SET, PROTECT AND REPLACE REFERENCE STAKES AS NECESSARY OR AS REQUIRED BY THE OWNER'S

3. ALL WORK SHALL BE PERFORMED BY CONTRACTOR UNLESS SPECIFICALLY INDICATED THAT THE WORK WILL BE PERFORMED "BY TOWN".

4. TO FACILITATE LAYOUT OF PROPOSED SITE FEATURES AND FACILITIES, LAYOUT INFORMATION FOR CERTAIN FUTURE WORK, WHICH IS NOT INCLUDED WITHIN THE SCOPE OF THIS CONTRACT HAS BEEN PROVIDED ON THE LAYOUT AND MATERIALS PLAN FOR INFORMATION ONLY. THE LAYOUT OF SITE AMENITIES AND FENCES MUST BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION. SOME ITEMS ARE "NOT IN CONTRACT" (NIC) AND SHOWN FOR REFERENCE ONLY.

5. THE LAYOUT OF SITE AMENITIES AND FENCES MUST BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION. 6. THE LAYOUT OF ALL NEW PATHWAYS / WALKWAYS AND THE GRADING OF ALL SLOPES AND CROSS SLOPES SHALL CONFORM TO THE COMMONWEALTH OF MASSACHUSETTS RULES AND REGULATIONS FOR HANDICAP ACCESS CMR 521, AND THE AMERICANS WITH DISABILITIES ACT (ADA), TITLE 3. THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY OF ANY DISCREPANCIES BETWEEN ACTUAL CONDITIONS AND

7. ALL LAYOUT LINES, OFFSETS, OR REFERENCES TO LOCATING OBJECTS ARE EITHER PARALLEL OR PERPENDICULAR UNLESS OTHERWISE

8 ALL PROPOSED SITE FEATURES SHALL BE LAID OUT AND STAKED FOR REVIEW AND APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO COMMENCEMENT OF INSTALLATION. ANY REQUIRED ADJUSTMENTS TO THE LAYOUT SHALL BE UNDERTAKEN AS REQUIRED, AT NO

9. ALL PROPOSED PAVEMENTS SHALL MEET THE LINE AND GRADE OF EXISTING ADJACENT PAVEMENT SURFACES AND SHALL BE TREATED WITH AN RS-1 TACK COAT AT POINT OF CONNECTION. ALL PATHWAY WIDTHS SHALL BE AS NOTED ON THE LAYOUT AND MATERIALS PLAN. 10. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND GRADES ON THE GROUND AND REPORT ANY DISCREPANCIES IMMEDIATELY TO THE

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD MEASUREMENT OF ALL PROPOSED FENCES AND GATES.

THE DEPTH OF LOAM BORROW FOR ALL PROPOSED LAWN AREAS SHALL BE 6" MINIMUM. ALL DISTURBED AREAS SHALL BE RESTORED WITH LOAM AND SEED UNLESS OTHERWISE NOTED

13. ALL REFERENCES TO LOAM AND SEED (L&S) REFER TO HYDROMULCH SEEDED LAWN.

14. REFER TO DETAIL DRAWINGS FOR CONSTRUCTION DETAILS.

1. ALL WORK RELATING TO INSTALLATION, RENOVATION OR MODIFICATION OF WATER, DRAINAGE AND/OR SEWER SERVICES SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARDS OF THE TOWN OF SUDBURY

2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND GRADES ON THE GROUND AND REPORT ANY DISCREPANCIES IMMEDIATELY TO THE

3. ALL GRADING IS TO BE SMOOTH AND CONTINUOUS WHERE PROPOSED GRAVEL SURFACE MEETS EXISTING SURFACE, BLEND THE TWO PAVEMENTS AND ELIMINATE ROUGH SPOTS AND ABRUPT GRADE CHANGES AND MEET LINE AND GRADE OF EXISTING CONDITIONS WITH NEW

4. CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE (1.5% MINIMUM) AWAY FROM ALL BUILDING FOUNDATIONS AND STRUCTURES. 5. CONTRACTOR SHALL ENSURE ALL AREAS ARE PROPERLY PITCHED TO DRAIN, WITH NO SURFACE WATER PONDING OR PUDDLING. 6 ALL NEW WALKWAYS / ACCESS PATHS MUST CONFORM TO CURRENT AMERICANS WITH DISABILITIES ACT (ADA) REGULATIONS: WALKWAYS SHALL MAINTAIN A CROSS PITCH OF NOT MORE THAN ONE AND A HALF PERCENT (1.5%) AND THE RUNNING SLOPE (PARALLEL TO THE

DIRECTION OF TRAVEL) BETWEEN 1% MIN. AND 5% MAX. MINIMUM SLOPE ON ALL WALKWAYS WILL BE 1:100 OR 1% TO PROVIDE POSITIVE DRAINAGE. ANY DISCREPANCIES NOT ALLOWING THIS TO OCCUR SHALL BE REPORTED TO THE OWNER PRIOR TO CONTINUING WORK.

8. ALL UTILITY GRATES, COVERS OR OTHER SURFACE ELEMENTS INTENDED TO BE EXPOSED AT GRADE SHALL BE FLUSH WITH THE ADJACENT FINISHED GRADE AND ADJUSTED TO PROVIDE A SMOOTH TRANSITION AT ALL EDGES.

9. THE CONTRACTOR SHALL SET SUBGRADE ELEVATIONS TO ALLOW FOR POSITIVE DRAINAGE AND PROVIDE EROSION CONTROL DEVICES, STRUCTURES, MATERIALS AND CONSTRUCTION METHODS TO DIRECT SILT MIGRATION AWAY FROM DRAINAGE AND OTHER UTILITY SYSTEMS, PUBLIC/PRIVATE STREETS AND WORK AREAS. CLEAN BASINS REGULARLY AND AT THE END OF THE PROJECT. 10. EXCAVATION REQUIRED WITHIN PROXIMITY OF KNOWN EXISTING UTILITY LINES SHALL BE DONE BY HAND. CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATIONS AT NO COST TO THE OWNER.

11. WHERE NEW EARTHWORK MEETS EXISTING EARTHWORK, CONTRACTOR SHALL BLEND NEW EARTHWORK SMOOTHLY INTO EXISTING, PROVIDING VERTICAL CURVES OR ROUNDS AT ALL TOP AND BOTTOM OF SLOPES.

12. WHERE A SPECIFIC LIMIT OF WORK LINE IS NOT OBVIOUS OR IMPLIED, BLEND GRADES TO EXISTING CONDITIONS WITHIN 5 FEET OF PROPOSED

13. RESTORE ALL DISTURBED AREAS AND LIMITS OF ALL REMOVALS TO LOAM AND SEED (L&S) UNLESS OTHERWISE NOTED. 14. SEE EARTHWORK SECTION OF SPECIFICATIONS FOR SPECIFIC EXCAVATION AND FILLING PROCEDURES.

15. FOR STRUCTURE REMODELING (REMOD), CONSTRUCTION METHODS SHALL FOLLOW MASSACHUSETTS DOT STANDARD SPEC. LATEST EDITION

## ABBREVIATIONS GENERAL

	PROPOSED
	ADJUST
. CONC.	BITUMINOUS CONCRETE
M. CONC.	CEMENT CONCRETE
	BASELINE
r.s.	NOT TO SCALE
И.	BENCH MARK
AN	ABANDON
}	MAIL BOX
AN CURB	GRANITE CURB
	EXISTING
N	FOUNDATION
RF)	FLOW LINE
	PROPERTY LINE
MT	PAVEMENT
N.W.	PAVED WATERWAY
;	REINFORCED CONCRETE
H.B.	MASSACHUSETTS HIGHWAY BOUND
Μ	REMOVE
MOD	REMODEL
T	RETAIN
י. אור	
J.VV.	
KAR	REMOVE, RELOCATED AND RESET
S	REMOVE AND STACK
.D	REMOVE AND DISPOSE
	STONE BOUND
2	NOT IN CONTRACT
C.	HANDICAP
CR	WHEELCHAIR RAMP
	FINISHED FLOOR
1A	HOT MIX ASPHALT
2	GENERAL CONTRACTOR
о. Г	
). /=1	
EL	
/DH	STONE BOUND/ DRILL HOLE
F	CHAIN LINK FENCE
MP.	TEMPORARY
Ρ.	TYPICAL
2	EQUIPMENT
C.	HANDICAP
P	EDGE OF PAVEMENT
ОТ	PROTECT
E	CONNECT TO EXISTING
	ROOFLEADER
W/ C	
=	
TRUA.	AFFRUAIMATE

## UTILITIES

GICI

CBCI

C.I.T.

CTE

F&G

F&C

CMP

ACCM

INV. E

WG

HDPE PVC RCP

DMH

OCS

OGT

OHW

UPLF

SWT

GAL\

BGS

F&I

IB

	GUTTER INLET W/ CURB INLET
	CATCH BASIN W/ CURB INLET
	CATCH BASIN
	CHANGE IN TYPE
	CONNECT TO EXISTING
	FRAME AND GRATE
	FRAME AND COVER
	CURB INLET
	CAST IRON PIPE
	CORRUGATED METAL PIPE
	DUCTILE IRON PIPE
	GUTTER INLET
I PIPE	ASPHALT COATED CORRUGATED METAL PIP
	HYDRANT
LEV.	INVERT ELEVATION
	UTILITY POLE
	SEWER MANHOLE
	WATER GATE
	DOWN SPOUT
	HIGH DENSITY POLYETHYLENE PIPE
	POLYVINYL CHLORIDE
	REINFORCED CONCRETE PIPE
	DRAIN MANHOLE
	LEACHING BASIN
	LEACHING GALLEY
	CAST IRON
	OUTLET CONTROL STRUCTURE
	OIL AND GRIT TRAP
	VITRIFIED CLAY PIPE
	LIGHT POLE
	OVERHEAD WIRE
	UTILITY POLE WITH LIGHT
l	STORM WATER TREATMENT UNIT
	HANDHOLE
	GARAGE WASTE
	CLEANOUT
	LEACHING CHAMBER
	GATE VALVE
	GALVANIZED
	FURNISH & INSTALL

**TEMPORARY BENCHMARK** 

ALTERNATE

ALIGNMENT/GRADING

BELOW GRADE SURFACE



BOTTOM OF WALL BOTTOM OF CURB POINT OF INTERSECTION POINT OF CURVATURE POINT OF TANGENCY POINT OF REVERSE CURVATURE POINT OF COMPOUND CURVATURE POINT OF VERTICAL INTERSECTION POINT OF VERTICAL CURVATURE POINT OF VERTICAL TANGENCY **FI EVATION** CENTER OF CURVE HIGH POINT LOW POINT RADIUS OF CURVATURE STATION STOPPING SIGHT DISTANCE TOP OF CURB TOP OF WALL

## GENERAL SYMBOLS

## **EXISTING**

Ξ	) E	CB
	(	CBCI
		_
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		ΙH
C	ÐE	MH
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6	ð [	MH

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\land WG

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\_\_\_\_\_ G\_\_\_\_ \_\_\_\_\_ W/\_\_\_\_ — OHW — OHW — \_\_\_\_ \_\_\_\_GUARD RAIL LABEL / DATE NAMF 12 NO0° 00'00" +57.59

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OR WOOD FENCE

M#.#.#

FLAG POLE 0

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CBF

PROPOSED	
св 🎛	CATCH BASIN
	CATCH BASIN CURB INLET
	LEACHING GALLEY
_	CURB (OR BERM)-TYPE NOTED
	EDGE OF ROAD
	HANDHOLE (NUMBER AS NOTED)
	ELECTRIC MANHOLE
	TELEPHONE MANHOLE
<u> </u>	SEWER MANHOLE
Ô	DRAINAGE MANHOLE
Ň	GAS GATE
X	WATER GATE VALVE
	HYDRANT
0	WELL
•□	
OR	LIGHTPOLE
Ф LP	
D	DRAIN PIPE
	SEWER MAIN
— » — » —	SEWER MAIN BY P.C.
	ELECTRIC DUCT
	TELEPHONE/COMMUNICATIONS/FIRE
	GARAGE WASTE LINE
GW GW	GARAGE WASTE LINE BY P.C.
	VENTS BY P.C.
	GAS MAIN
GAS GAS GAS	WATER MAIN
W	OVERHEAD WIRES
OR	GUARD RAIL (SIZE AND TYPE NOTED)
	HIGHWAY / PROPERTY BOUND (TYPE I
	CITY OR TOWN OR COUNTY LAYOUT L
	CITY, TOWN OR COUNTY BOUNDARY
	BASE OR SURVEY LINE
	CENTERLINE OF CONSTRUCTION
	PROPERTY LINE
WCR	
	WHEELCHAIR RAMP (WCR)
SEE PLANS	TREE (SIZE AND TYPE NOTED)
SEE PLANS	FENCE (SIZE AND TYPE NOTED)
	EASEMENT LINE/ FUTURE CITY PROPE
	MADOT STANDARD SPECIFICATION
	REFERENCE NUMBER
OR	TEST PIT/BORINGS
TP1	
	MONITORING WELL
онw онw	UTILITY POLE
-	GUY POLE
-	FLAG POLE

-0-0  $\sim$ \_\_\_\_\_\_

CHING GALLEY IRB (OR BERM)-TYPE NOTED GE OF ROAD NDHOLE (NUMBER AS NOTED) ECTRIC MANHOLE LEPHONE MANHOLE **WER MANHOLE** AINAGE MANHOLE S GATE TER GATE VALVE RANT HTPOLE AIN PIPE VER MAIN VER MAIN BY P.C. ECTRIC DUCT \_EPHONE/COMMUNICATIONS/FIRE ALARM RAGE WASTE LINE RAGE WASTE LINE BY P.C. NTS BY P.C S MAIN TER MAIN RHEAD WIRES

HWAY / PROPERTY BOUND (TYPE NOTED TY OR TOWN OR COUNTY LAYOUT LINE LY TOWN OR COUNTY BOUNDARY SE OR SURVEY LINE NTERLINE OF CONSTRUCTION OPERTY LINE

NCE (SIZE AND TYPE NOTED) SEMENT LINE/ FUTURE CITY PROPERTY LINE

NITORING WELL LITY POLE Y POLE G POLE SIGN TREE LINE BOLLARD BIKE RACK SAWCUT EROSION CONTROL (SPECIFIED ON PLANS) **OBSERVATION WELL** LIMIT OF WORK

TEMPORARY FENCE CONCRETE BOUND FOUND TEMPORARY BENCHMARK (TBM) DI WATER REDUCER





Sheet Number

## NOTES:

- BEARINGS REFER TO THE MASSACHUSETTS NAD 83 STATE PLANE COORDINATE SYSTEM (MAINLAND ZONE).
- ELEVATIONS REFER TO THE 1988 NORTH AMERICAN DATUM (NAVD 88).
- UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATIONS DEPICTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING AND OTHER DATA SUPPLIED BY THE RESPECTIVE UTILITY COMPANIES, GOVERNMENTAL AGENCIES AND/OR OTHER SOURCES. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE, THE EXISTENCE OF WHICH ARE UNKNOWN TO WESTON & SAMPSON. THE EXISTENCE, SIZE AND LOCATION OF ALL SUCH FEATURES MUST BE DETERMINED AND VERIFIED IN THE FIELD BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG.

WELL HEAD — PROTECTION AREA ZONE I

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## **LEGEND**

	EDGE OF WOODS
£33	DECIDUOUS TREE
and the second s	CONIFEROUS TREE
G	SHRUB/BUSH
-	SIGN
പ	UTILITY POLE
¢	LIGHT POLE
Q	HYDRANT
* <del>3</del> 0	WATER SHUTOFF
<b>X</b> <sup>8</sup>	GAS VALVE
×	WATER VALVE
$\mathbf{\overline{\cdot}}$	MONUMENT
0	IRON PIN / IRON ROD
Ġ.	HANDICAP SPACE
	PROPERTY LINE
	EASEMENT
— st ——	STORM SEWER LINE
— ss ——	SANITARY SEWER LINE
— w ——	WATER LINE
— c ——	GAS LINE
— SIG ———	SIGNAL WIRE LINE
— c ——	CABLE LINE
— F0 ——	FIBER OPTIC LINE
— LPS	LOW PRESSURE SEWER LINE
— Е ——	ELECTRIC LINE
— н ——	HEATING LINE
— т ——	TELEPHONE LINE
— UGE	UNDERGROUND ELECTRIC LINE
89	SANITARY MANHOLE (SMH)
ଶ୍ର	STORM MANHOLE (STMH)
□ ©	CATCHBASIN (CB)
0	METAL POST/BOLLARD (BOL)
E	ELECTRIC MANHOLE (MHE)
Ø	UNKNOWN MANHOLE
Ō	TELEPHONE MANHOLE (MHT)
10	MAJOR CONTOUR LINE
g	MINOR CONTOUR LINE

\_\_\_\_\_



## SITE PREPARATIONS LEGEND



STABILIZED CONST ENTRANCE

STRUCTURES TO BE DEMOLISHED OR REMOVED FROM SITE

TREE PROTECTION

COMPOST FILTER TUBES LIMIT OF WORK

NOTES:

- 1. SITE PERIMETER SHALL HAVE COMPOST FILTER TUBES INSTALLED AT THE LIMIT OF WORK. WHERE LIMIT OF WORK EXTENDS INTO ADJACENT ROADWAYS OR PROPERTY, THE LOCATION OF STRAW WATTLES SHALL BE LOCATED AT EDGE OF ROADWAY OR PROPERTY.
- 2. ALL EXIST UTILITIES AND DRAIN LINES WHICH ARE TO BE ABANDONED MUST BE CUT AT PROPERTY LINE AND CAPPED AND FILLED WITH CDF.
- 3. SAW CUTTING SHALL BE CONDUCTED ALONG THE LIMIT OF WORK OF RAYMOND ROAD AS NECESSARY TO INSTALL DRIVEWAYS AND UTILITIES.
- 4. ALL SAW CUT/ EXCAVATED PAVEMENT IN EXISTING ROADWAYS SHALL BE RESTORED AT NO ADDITIONAL COST TO THE OWNER.
- 5. CONTRACTOR SHALL MAINTAIN CONSTRUCTION ENTRANCE/PAD,. CONSTRUCTION ENTRANCE SHALL BE IN ACCORDANCE WITH DETAIL 1 ON SHEET C7.01 AND MAINTAINED THROUGHOUT ENTIRE PROJECT.
- ALL EXISTING BITUMINOUS CONCRETE SHALL BE REMOVED TO COMPLETE THE PROPOSED WORK WITHOUT ADJUSTMENT TO COMPENSATION.
- 7. IF POLICE DETAIL IS REQUIRED FOR WORK ON RAYMOND ROAD, THE CONTRACTOR SHALL COORDINATE AND PAY FOR THE DETAIL AS REQUIRED AT NO ADDITIONAL COST TO THE OWNER.

LIMIT OF WORK 100 FT WETLAND —

BUFFER

CONST EXIT TO PUMP STATION

158 157 156 155

CLEAR AND GRUB AS NECESSARY TO INSTALL STORMWATER STRUCTURES

REM. OR ABANDON

N

83

DAN

CLEAR AND GRUB WITHIN

 $\bigotimes$ 







## NOTES:

- 1. ON-SITE EXCAVATION MATERIAL MAY BE USED FOR BACKFILL OUTSIDE PAVEMENT LIMITS ONLY IF IT MEETS THE REQUIREMENTS FOR BACKFILL PER SPECIFICATION SECTION 02300-EARTHWORKS.
- UNLESS OTHERWISE NOTED ALL DRAIN PIPES SHALL BE 12" HDPE (HIGH DENSITY POLYETHYLENE).
- UNLESS OTHERWISE NOTED, ALL DRAIN MANHOLES SHALL BE 4' DIAMETER.
- 4. ALL RIM ELEVATIONS SHALL BE FLUSH WITH FINISH GRADE.
- 5. EROSION CONTROL FABRIC "A" SHALL BE USED FOR ALL SLOPES 3:1 OR STEEPER.







SCALE: N.T.S.



- ALL ENTRANCES.

STABILIZED TEMPORARY CONSTRUCTION ENTRANCE 4 SCALE: N.T.S.

5. CONTRACTOR IS RESPONSIBLE FOR DAILY INSPECTION AND ALL NECESSARY MAINTENANCE OF

6. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF SEDIMENTS OR ANY OTHER MATERIALS TRACKED ONTO THE STREET, AS WELL MAINTENANCE OF EROSION CONTROL MEASURES.

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Westo	n & Sampson
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![](_page_10_Figure_1.jpeg)

**SUDBURY** 

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![](_page_11_Figure_0.jpeg)

![](_page_11_Figure_6.jpeg)

![](_page_12_Figure_0.jpeg)

# 6 INFILTRATION/RECHARGE CHAMBER - 24" HDPE CLEAN OUT WITH CONCRETE COLLAR SCALE: N.T.S.

![](_page_12_Figure_10.jpeg)

![](_page_12_Figure_12.jpeg)

5 INFILTRATION/RECHARGE CHAMBER - MANIFOLD CONNECTION SCALE: N.T.S.

## - PLACE MINIMUM 12.5' OF AASHTO M288 CLASS 1 WOVEN GEOTEXTILE OVER **BEDDING STONE FOR SCOUR PROTECTION** AT ALL CHAMBER INLET ROWS

— PROPOSED END CAP

SUDBURY WATER DISTRICT Sudbury Water District of Sudbury, Massachusetts 199 Raymond Road Sudbury, MA Weston & Sampson 100 Foxboro Blvd. Foxboro, MA 02035 (508) 698-3034 (800) SAMPSON www.westonandsampson.com Revisions: Rev Date Description NAMAAAAA Seal: LAURENCI KEEGAN, J NO. 3370 Issued For: Conservation Commission Submission JULY 2, 2018 Date: Scale: 1"=20' Drawn By: NAP Reviewed By: AKP Checked By: JJA JJA Approved By: Drawing Title: DETAILS

Sheet Number:

**C7.05** 

STORAGE SYSTEM FIELD	FIELD DIMENSIONS	REQUIRED CHAMBER QUANTITY	INLET STRUCTURE BAFFLE WALL ELEVATION	OUTLET PIPE INVERT
INF1	A1 = 25.67 X 66.50 A2 = 16.00 X 31.50	48	132.2	132.2
INF-2	14.75 X 52	21	131.1	130.0
INF-3	A1 = 6.33 X 28 A2 = 6.33 X 112	20	133.1	133.0

NOTE:

- 1) INFILTRATION CHAMBERS SHALL BE CULTEC R-330 X LHD FOR INF-1, AND CULTEC R-280 HD FOR INF-2
- 2) SEE SHEET C5.01 FOR STRUCTURE LOCATIONS AND INVERTS
- THIS DETAIL IS TYPICAL AND MAY CHANGE DEPENDING ON THE PROPOSED FIELD.

![](_page_13_Figure_5.jpeg)

UNDERGROUND INFILTRATION/RECHARGE CHAMBER DETAIL (FIELDS INF-1, INF-2, AND INF-3) SCALE: N.T.S.

INFILTRATION CHAMBER ROW	0	
INFILTRATION CHAMBER ROW	0	
INFILTRATION CHAMBER ROW	0	
	U W W	
INFILTRATION CHAMBER ROW		
	PROVIDE INSPECTION PORT @ EVERY 50' ON CENTER 6" PVC CLEAN OUT SHALL BE HS-20 LOADED	12" MIN.

![](_page_13_Figure_8.jpeg)

![](_page_14_Figure_0.jpeg)

## PROPOSED VENT

- EDGE OF 5 FT OVER DIG UTILIZING TITLE V MATERIAL

- PROPOSED INSPECTION PORT (TYP.)

- PROPOSED LEACHING FIELD -CONTAINS (55) INFILTRATOR QUICK - 4 LOW PROFILE CHAMBERS

- PROPOSED 40 MIL BREAKOUT BARRIER

- PROPOSED (5) OUTLET DISTIRBUTION BOX H20 LOADING

- PROPOSED 2" SCH. 80 PVC FORCE MAIN

PROPOSED 1500 GALLON SINGLE COMPARTMENT PUMP CHAMBER H20 LOADING TANK

- PROPOSED 1500 GALLON TWO COMPARTMENT H20 LOADING TANK

### BENCHMARK PK IN UP BECO11 ELEV. 135.65

- PROPOSED 4" SCH 80 PVC DRAIN LINE

![](_page_14_Picture_12.jpeg)

## **GENERAL NOTES:** DESIGN CRITERIA

### OFFICE SPACE: 7,625 SF, ROUND TO 8,000 SF (8) X 75 (GPD / 1000 SF) = 600 GPD (2) SHOWERS X 50 GPD / SHOWER = 100 GPD (PER AGREEMENT WITH HEALTH DEPARTMENT)

TOTAL DESIGN FLOW: 700 GPD DESIGN PERCOLATION RATE: <2 MIN./INCH DESIGN SOIL

CLASSIFICATION: CLASS I EFFLUENT LOADING RATE: 0.74 GPD/SF

## SEPTIC TANK DESIGN

DESIGN FLOW: 700 GPD

NON-RESIDENTIAL: TWO-COMPARTMENT TANK 200 % DAILY FLOW = 700 GPD X 2 = 1400 GALLONS USE - 1500 GALLON TANK.

## PUMP CHAMBER DESIGN

DESIGN FLOW: 700 GPD

DOSING REQUIREMENT: xxx

PLUS DRAIN BACK : xxx GAL/DOSE + xx GAL = xxx GAL/DOSE

RESERVE REQUIREMENT = 700 GPD

DRAINBACK VOLUME (FORCE MAIN & MANIFOLD) = xxx GALLONS

(REQUIRED) USE A 1,500 GALLON TANK

RESERVE =xxxx

## PUMPING SYSTEM

<sup>1</sup>/<sub>2</sub> HP DUPLEX GRINDER PUMP

DESIGN: 25 GALS/MIN @ 25' TDH

LEACHING BED DESIGN

700 GPD / 0.74 GPD/SF = 946 SF (REQUIRED)

EFFECTIVE LEACHING AREA:

USE INFILTRATOR QUICK 4 PLUS HIGH CAPACITY LOW CHAMBERS = 4.72 SF/LF 946 SF / 4.72 SF/LF = 200.40 LF OF CHAMBERS (REQUIRED)

PROVIDE : 5 ROWS OF 11 UNITS/CHAMBERS TOTAL NUMBER OF INFILTRATOR UNITS: 55

55 CHAMBERS X 4 LF / CHAMBER X 4.71 SF/LF = 1,038.40 SF PROVIDED: OK SYSTEM DESIGN FLOW = 1,038.40 SF X .74 GPD/ SF = 768.40 GPD

## **GROUNDWATER SEPARATION**

BOTTOM OF BED EL. = 70.66' GROUNDWATER MOUNDING = 0.47'

ESTIMATED SEASONAL HIGH GROUNDWATER ELEVATION = 65.19' + 0.47' (MOUNDING) = 65.66'

ESTIMATED SEASONAL HIGH GROUND WATER ELEVATION BASED ON OBSERVATIONS AT TEST PIT TP-1.

SOIL EVALUATION SOIL EVALUATOR: MARK MARIANO (WESTON & SAMPSON ENGINEERS) WITNESS: BILL MURPHY (SUDBURY BOARD OF HEALTH) COMPLETION DATE: AUGUST 16, 2017

SUDBURY

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**C7.07** 

SEPTIC LAYOUT &

**ELEVATIONS PLAN** 

Rev Date Description

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Conservation

Commission

Submission

JULY 2, 2018

1"=10'

NAP

AKP

JJA

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SUNNY 80 DEGREES

GROUND ELEVATION OF TP #4: 138.54' 0"-12" - Ab - 10 YR 4/4 - LOAMY SAND 12"-22" - Bw - 2.5 YR 6/6 - LOAMY SAND 22"-75" - C1 - 10 YR 6/2 - LOAMY SAND 75"-103" - C2 - 2.5 Y 5/2 - SANDY LOAM REDOX FEATURES FOUND AT 48" WEEPING - 60"

STANDING WATER - 87" LANDFORM: OUTWASH PLAIN PARENT MATERIAL - LOOSE SANDY GLACIOFLUVIAL DEPOSITS PERC AT 48" - PERC START - 12:43 PM PERC END - 12:58 PM

12" = 12:58 PM 9" = 1:00 PM 6" = 1:03 PM PERC RATE: LESS THAN 2 MPI - 5 FT SEPERATION REQUIRED. ESTIMATED HIGH GROUNDWATER: 134.54 GROUND ELEVATION OF TP #5: 138.92'

WEEPING = 80"

PERC WAS NOT PERFORMED. MATERIAL WAS IDENTICAL TO FIRST TEST PIT. AGREED UPON BY HEALTH AGENT.

ESTIMATED HIGH GROUNDWATER: 134.67'

![](_page_14_Figure_53.jpeg)

VERTICAL

![](_page_14_Figure_54.jpeg)

# NOT FOR CONSTRUCTION

REDOX FEATURES FOUND AT 51" TO GET STANDING WATER) LANDFORM: OUTWASH PLAIN

PARENT MATERIAL - LOOSE SANDY GLACIOFLUVIAL DEPOSITS

NO STANDING WATER (HOLE WAS UNSTABLE, NOT HELD OPEN LONG ENOUGH

0"-12"- Ab - 10 YR 4/6 - LOAMY SAND 12"-36" - Bw - 10 YR 6/8 - LOAMY SAND 36"-91" - C1 - 2.5 Y 6/2 - LOAMY SAND 91"-121" - C2 -2.5 Y 5/2 - SANDY LOAM

![](_page_15_Figure_0.jpeg)

![](_page_15_Figure_10.jpeg)

![](_page_15_Figure_11.jpeg)

![](_page_15_Figure_12.jpeg)

**SUDBURY** WATER DISTRICT

<u>ה</u> –

- UNDISTURBED MATERIAL

**1ST COMPARTMENT** 

LIQUID CAPACITY

1,000 GALLON

11'-0"

SECTION

![](_page_16_Figure_0.jpeg)

![](_page_16_Figure_1.jpeg)

![](_page_16_Picture_2.jpeg)

## 2 INFILTRATOR QUICK 4 PLUS LOW PROFILE SCALE: N.T.S.

	- HATCH RISER BROUGHT TO FINISH GRADE
	- 316 STAINLESS STEEL GUIDE RAILS
	-2 IN PVC GATE VALVE (TYP.) -2-IN Ø OUTLET
B-3"	-2 IN PVC CHECK VALVE (TTP,)
	-SUBMERSIBLE PUMPS WITH LIFT-OUT SYSTEM (SEE SPECS)
	-12 INCHES OF 1 1/2-IN MINUS CRUSHED STONE UNDER STRUCTURE

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