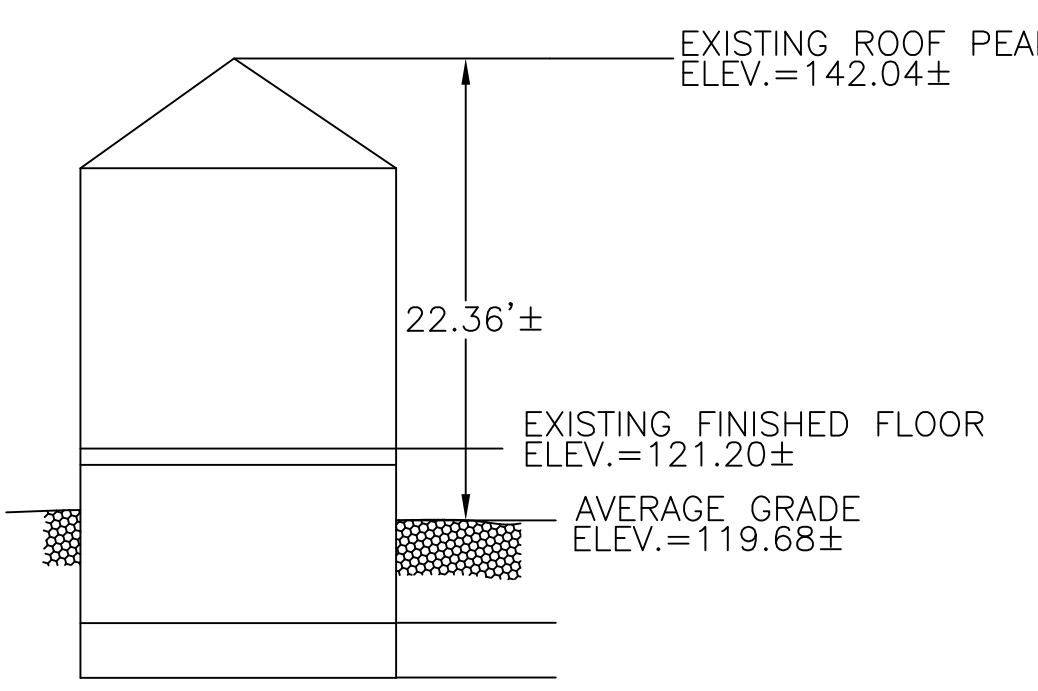


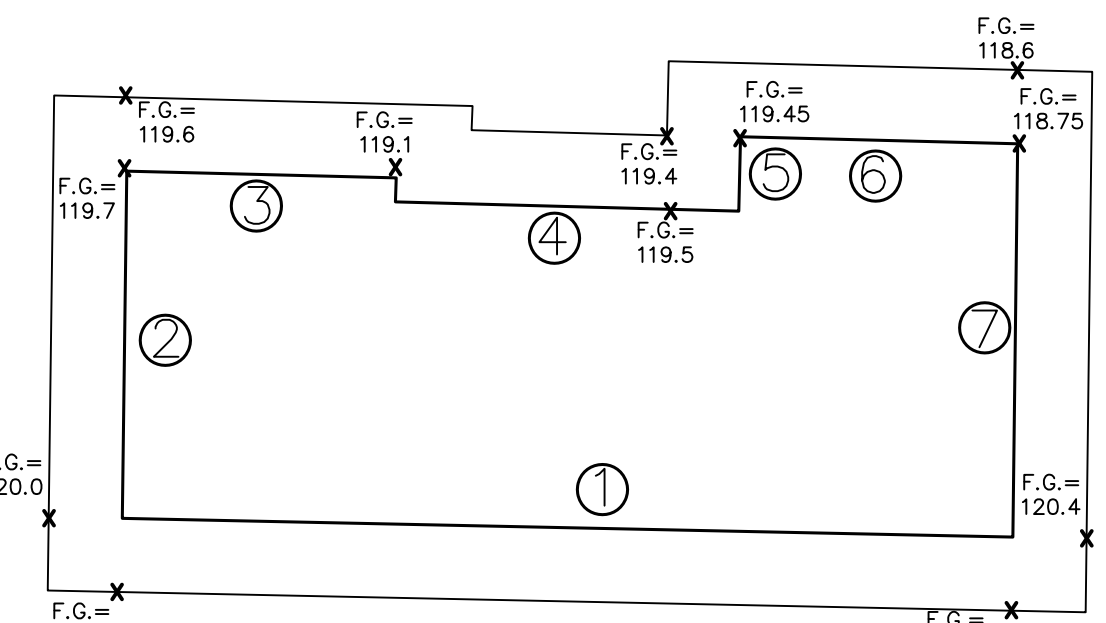
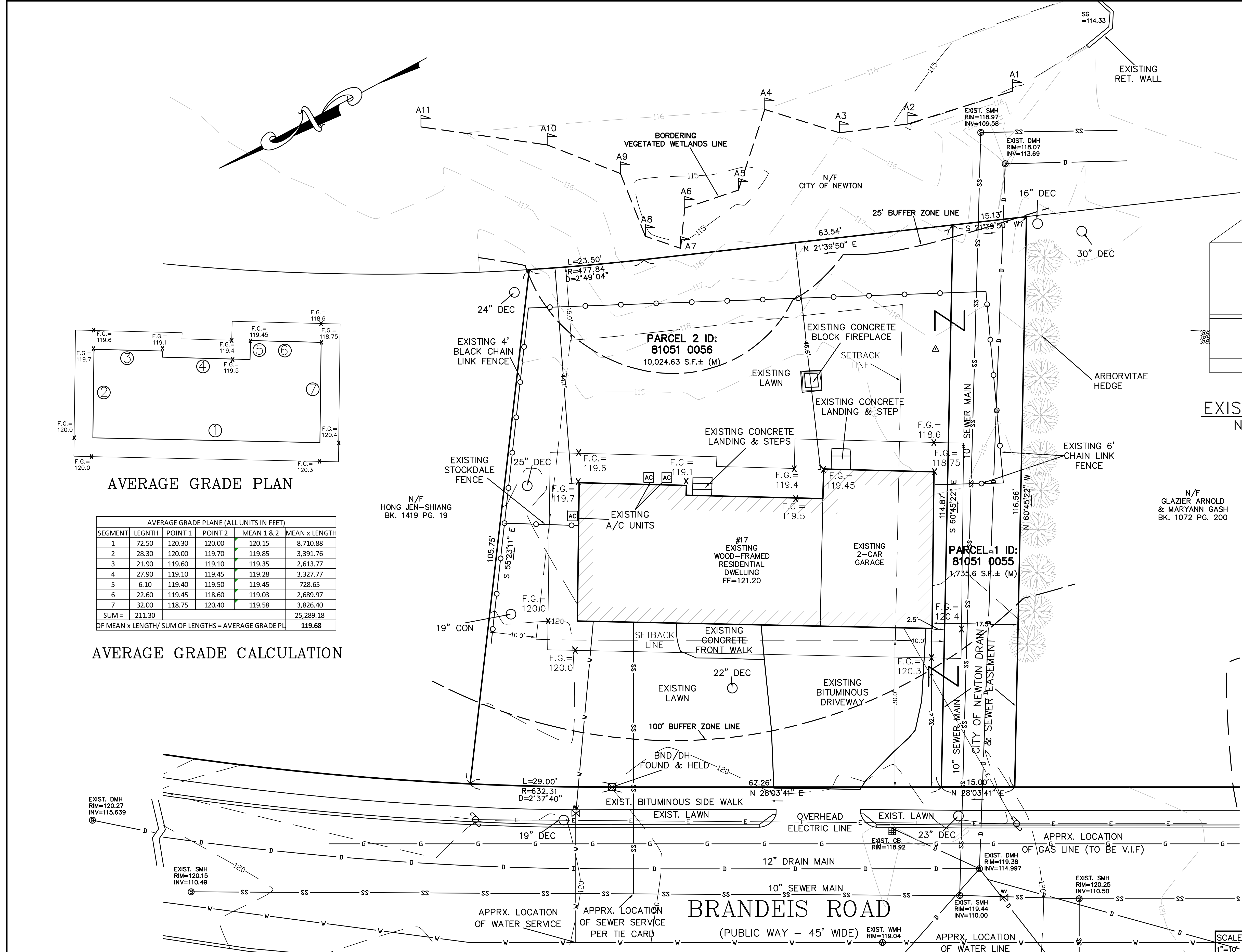
LEGEND

	BOUND
	IRON PIN/PIPE
	STONE POST
	TREE
	TREE STUMP
	SHRUBS/FLOWERS
	SIGN
	BOLLARD
	SEWER MANHOLE
	DRAIN MANHOLE
	CATCH BASIN
	WATER MANHOLE
	WATER VALVE
	HYDRANT
	GAS VALVE
	ELECTRIC MANHOLE
	ELECTRIC HANDHOLE
	UTILITY POLE
	LIGHT POLE
	MANHOLE
	SPOT GRADE
	TOP OF WALL
	BOTTOM OF WALL
	EXISTING BUILDING
	RETAINING WALL
	STONE WALL
	FENCE
	TREE LINE
	SEWER LINE
	DRAIN LINE
	WATER LINE
	GAS LINE
	UNDERGROUND ELECTRIC LINE
	OVERHEAD WIRES
	CONTOUR LINE (MJR)
	CONTOUR LINE (MNR)
	WETLAND LINE



EXISTING PROFILE
NOT TO SCALE

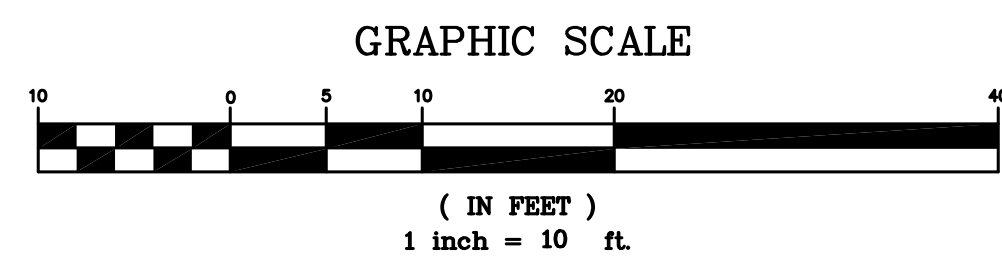
- NOTES:
- INFORMATION SHOWN ON THIS PLAN IS THE RESULT OF A FIELD SURVEY PERFORMED BY PETER NOLAN & ASSOCIATES LLC AS OF 12/16/2021.
 - DEED REFERENCE: DOC#504368
LC PLAN #22505-D; LC PLAN #22505-G
MIDDLESEX COUNTY SOUTH DISTRICT REGISTRY OF DEEDS
 - THIS PLAN IS NOT INTENDED TO BE RECORDED.
 - THE SITE IS NOT MAPPED WITHIN A SPECIAL FLOOD HAZARD ZONE AS SHOWN ON FLOOD INSURANCE RATE MAP (FIRM) 25017C0554E, DATED JUNE 4, 2010. THE FIRM DOES SHOW A MAPPED ZONE AE (100-YEAR FLOODPLAIN) THAT IS ASSOCIATED WITH PAUL BROOK LOCATED ACROSS BRANDEIS ROAD TO THE NORTHWEST OF THE SITE. ON AND OFF-SITE SURVEY DEMONSTRATE THAT THE 100-YEAR FLOODPLAIN ASSOCIATED WITH PAUL BROOK DOES REACH AND INCLUDE THE SITE. THE 100-YEAR FLOOD ELEVATION AT THE SITE IS 115.5 NAVD 1988 (122 CITY OF NEWTON DATUM).
 - TWO SECTIONS OF THE NEWTON FLOODPLAIN ORDINANCE (SECTION 22-22) ARE APPLICABLE TO THE SITE: SECTION G.1.21, WHICH IS ASSOCIATED WITH PAUL BROOK, HAS A 100-YEAR FLOOD ELEVATION OF 122 CITY OF NEWTON DATUM AND SECTION G.4.12, WHICH IS ASSOCIATED WITH GREAT MEADOW SWAMP, HAS A 100-YEAR FLOOD ELEVATION OF 119 CITY OF NEWTON DATUM. UNDER THE ORDINANCE, THE HIGHER FLOODPLAIN ELEVATION WOULD PREVAIL.
 - THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST. A REASONABLE AND DILIGENT ATTEMPT HAS BEEN MADE TO OBSERVE ANY APPARENT USES OF THE LAND; HOWEVER THIS NOT CONSTITUTE A GUARANTEE THAT NO SUCH EASEMENTS EXIST.
 - FIRST FLOOR ELEVATIONS ARE TAKEN AT THRESHOLD.
 - NO RESPONSIBILITY IS TAKEN FOR ZONING TABLE AS PETER NOLAN & ASSOCIATES LLC ARE NOT ZONING EXPERTS. TABLE IS TAKEN FROM TABLE PROVIDED BY LOCAL ZONING ORDINANCE. CLIENT AND/OR ARCHITECT TO VERIFY THE ACCURACY OF ZONING ANALYSIS.
 - THE ELEVATIONS SHOWN ARE BASED ON CITY OF NEWTON DATUM.
 - ZONING DISTRICT: PARCEL 1 - PUBLIC USE; PARCEL 2 - SINGLE-RESIDENCE 3; LOT CREATED AFTER 12/07/1953.



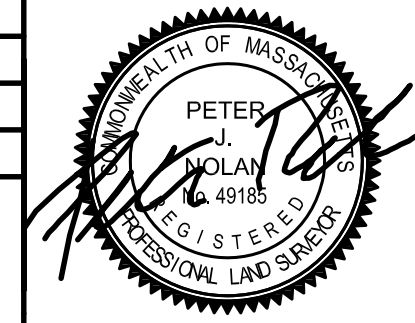
AVERAGE GRADE PLAN

AVERAGE GRADE PLANE (ALL UNITS IN FEET)					
SEGMENT	LEGTH	POINT 1	POINT 2	MEAN 1 & 2	MEAN x LENGTH
1	72.50	120.30	120.00	120.15	8,710.88
2	28.30	120.00	119.70	119.85	3,391.76
3	21.90	119.60	119.10	119.35	2,613.77
4	27.90	119.10	119.45	119.28	3,327.77
5	6.10	119.40	119.50	119.45	728.65
6	22.60	119.45	118.60	119.03	2,689.97
7	32.00	118.75	120.40	119.58	3,826.40
SUM =	211.30				25,289.18
DF MEAN x LENGTH / SUM OF LENGTHS = AVERAGE GRADE PL					119.68

AVERAGE GRADE CALCULATION



SCALE	1"=10'
DATE	3/11/2022
SHEET	1
PLAN NO.	1 OF 1
CLIENT:	17 BRANDEIS ROAD NEWTON MASSACHUSETTS
DRAWN BY	DK
CHKD BY	PJN
APPD BY	PJN
EXISTING CONDITIONS	
PETER NOLAN & ASSOCIATES LLC LAND SURVEYORS/CIVIL ENGINEERING CONSULTANTS 80 JEWETT STREET, SUITE 2 NEWTON, MA 02458 PHONE: 857 891 7478/617 782 1533 FAX: 617 202 5691 EMAIL: pnolan@pnasurveyors.com	
SHEET NO.	1



FLOODPLAIN FILL&CUT TABLE

ELEVATION (FT)	FLOODPLAIN CUT VOLUME (CF)	FLOODPLAIN FILL VOLUME (CF)	FLOODPLAIN NET (CF)
117-118	490.6	71.58	419.02
118-119	782.8	11.29	771.51
119-120	1560.46	292.564	1267.896
120-121	2089.92	925.84	1164.08
121-122	2072.72	845.96	1227.76
TOTAL	6996.5	2146.834	4849.666

FLOODPLAIN NET = FLOODPLAIN CUT - FLOODPLAIN FILL
 FLOODPLAIN FILL IS SUM OF FILL VOLUMES FROM TABLES BELOW
 FLOODPLAIN CUT IS SUM OF CUT VOLUMES FROM TABLES BELOW

FOR EXIST. BUILDING

ELEVATION (FT)	CUT AREA (SF)	HEIGHT (FT)	CUT VOLUME (CF)
118-120	2089.9	0.5	1044.96
120-121	2089.9	1	2089.92
121-122	2072.7	1	2072.72
TOTAL			5207.6

FOR PROPOSED BUILDING

ELEVATION (FT)	FILL AREA (SF)	HEIGHT (FT)	FILL VOLUME (CF)
118-119	0	1	0
119-120	272.9	1	272.9
120-121	824	1	824
121-122	824	1	824
TOTAL			1920.9

FOR PROPOSED PIERS

ELEVATION (FT)	FILL AREA (SF)	HEIGHT (FT)	FILL VOLUME (CF)
117-118	3.95	0.4	1.58
118-119	8.69	1	8.69
119-120	18.96	0.9	17.064
120-121	18.96	1	18.96
121-122	18.96	1	18.96
TOTAL			65.254

*AREA OF PIER = 0.79 SF

P-1,2,3,...,24

ELEVATION (FT)	CUT AREA (SF)	HEIGHT (FT)	CUT VOLUME (CF)
117-118	490.6	1	490.6
118-119	978.5	0.8	782.8
119-120	515.5	1	515.5
TOTAL			1788.9

GRADE SURFACE (PATIO, DRIVEWAY, WALKWAY, STEPS)

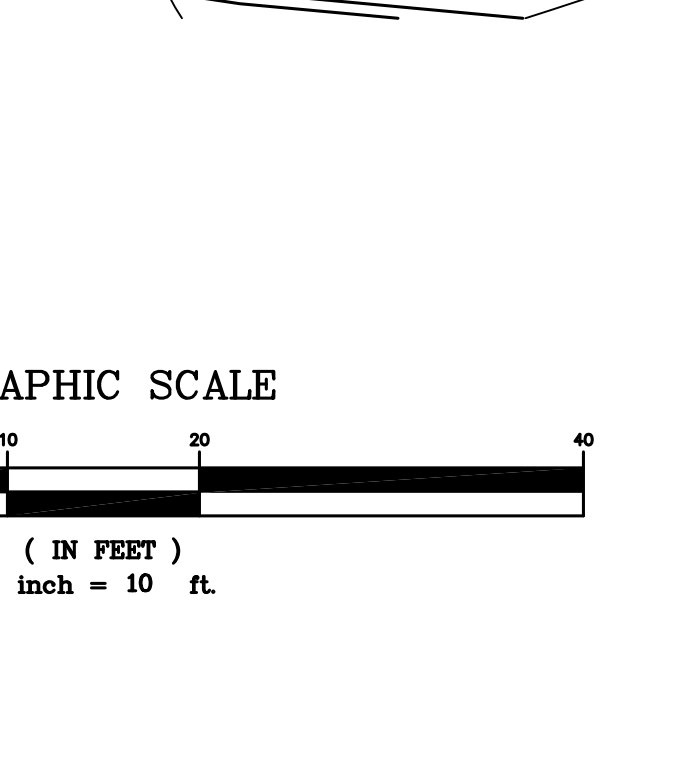
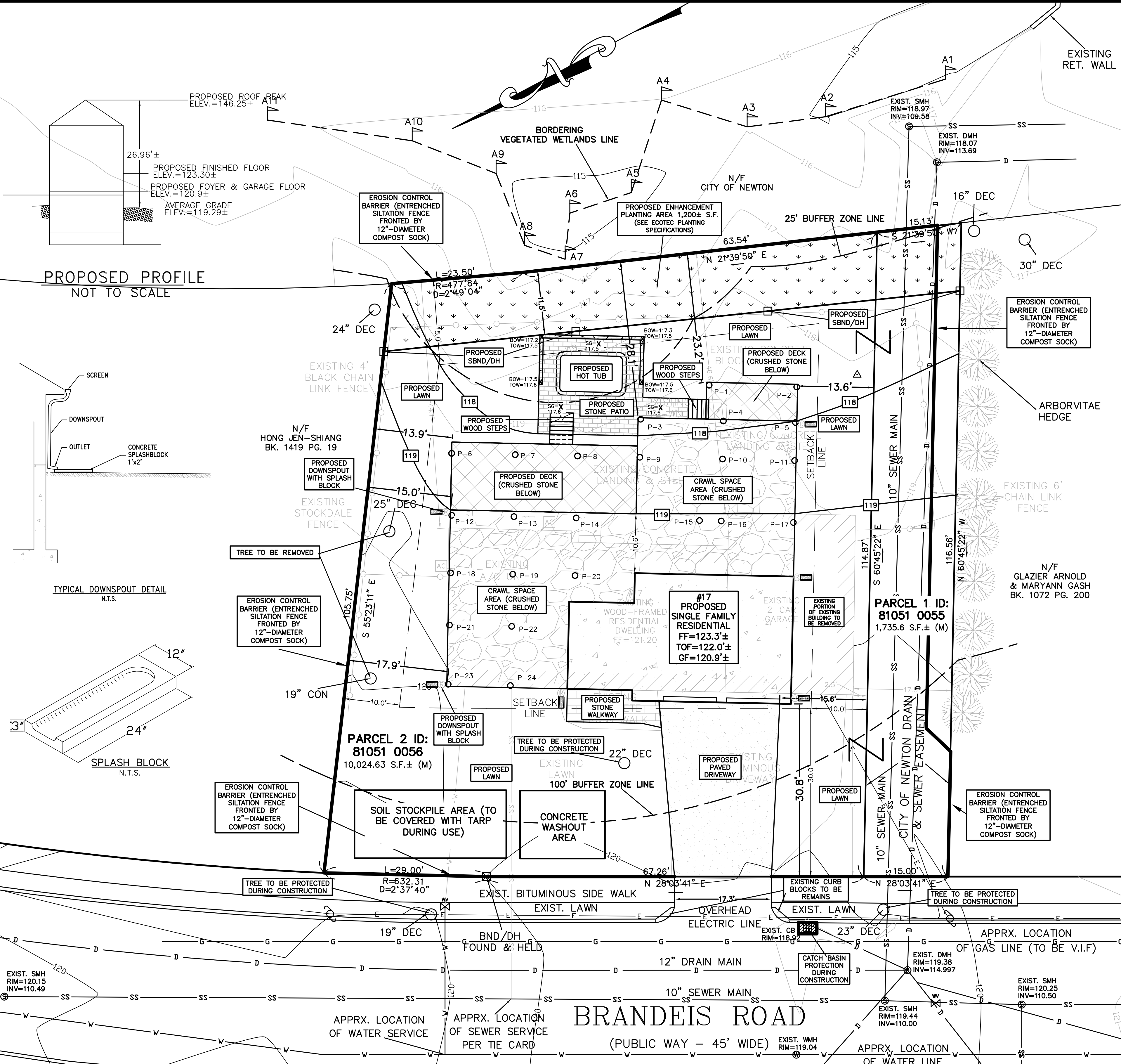
ELEVATION (FT)	CUT AREA (SF)	HEIGHT (FT)	CUT VOLUME (CF)
117-118	490.6	1	490.6
118-119	978.5	0.8	782.8
119-120	515.5	1	515.5
TOTAL			1788.9

FOR GRADING AT REAR YARD+PATIO+HOT TUBE

ELEVATION (FT)	FILL AREA (SF)	HEIGHT (FT)	FILL VOLUME (CF)
117-118	70	1	70
118-119	2.6	1	2.6
119-120	2.6	1	2.6
120-121	82.88	1	82.88
121-122	2.6	1	2.6
TOTAL			160.68

SF AREA OF EACH PIER (P-1, P-2, P-3, ... P-24) EQUAL 0.79 SF

COMMON AREA OF PIERS EQUAL N*0.79 SF, WHERE N IS NUMBER OF PIERS = 24
 24 * 0.79 SF = 18.96 SF



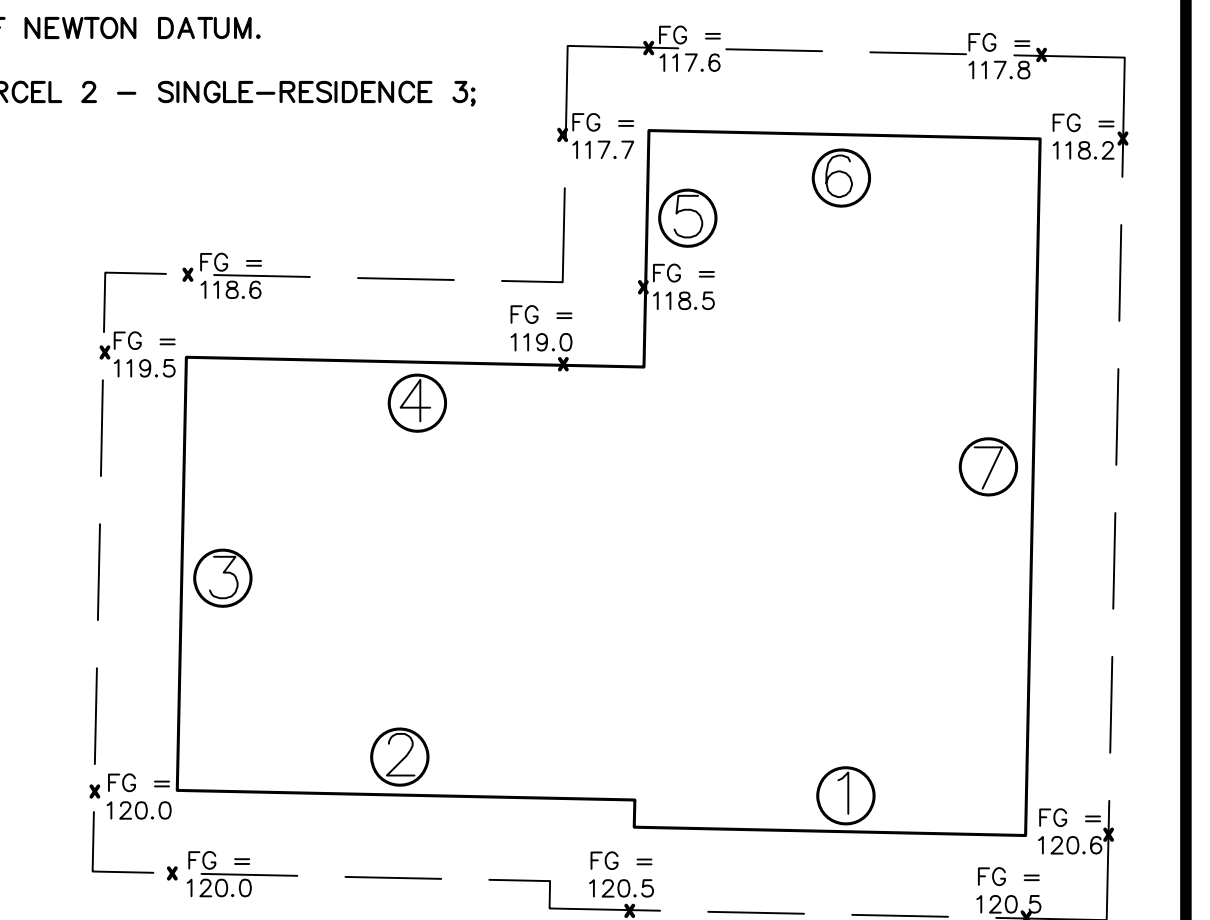
PROPOSED IMPERVIOUS AREA		EXISTING IMPERVIOUS AREA	
HOUSE	DRIVEWAY	HOUSE	DRIVEWAY
2,469.48 S.F.	602.13 S.F.	2,072.72 S.F.	953.11 S.F.
355.55 S.F.	- S.F.	31.05 S.F.	- S.F.
89.29 S.F.	3,516.45 S.F.	119.58 S.F.	3,193.67 S.F.
TOTAL		TOTAL	

EXISTING IMPERVIOUS AREA = 3,193.67 SF
 PROPOSED IMPERVIOUS AREA = 3,516.45 SF
 3,516.45 SF - 3,193.67 SF = 322.78 SF
 WHICH IS LESS THAN 4% (=400.96 SF) OF LOT (10,024.63 SF)
 WHICH IS LESS THAN 400 SF THEREFORE ENGINEERING APPROVAL NOT REQUIRED

ZONING LEGEND		
ZONING DISTRICT: SINGLE-RESIDENCE 3 (LOT CREATED BEFORE 12/07/1953)		
REQUIRED	EXISTING	PROPOSED
MIN. AREA	10,000 S.F.	10,024.63 S.F. ± (MEASURED)
MIN. FRONTAGE	80'	96.26'
MIN. YARD FRONT	30'	32.4'
SIDE	10'	2.5'
REAR	15'	44.1'
MAX. LOT COV.	30%	20.7% ±
MIN. OPEN SPACE	50%	69.8% ±
MAX. BLDG. HEIGHT	36'	22.36' ±

- NOTES:
- INFORMATION SHOWN ON THIS PLAN IS THE RESULT OF A FIELD SURVEY PERFORMED BY PETER NOLAN & ASSOCIATES LLC AS OF 12/24/2020.
 - DEED REFERENCE: DOC#504368 LC PLAN #22505-D; LC PLAN #22505-G MIDDLESEX COUNTY SOUTH DISTRICT REGISTRY OF DEEDS
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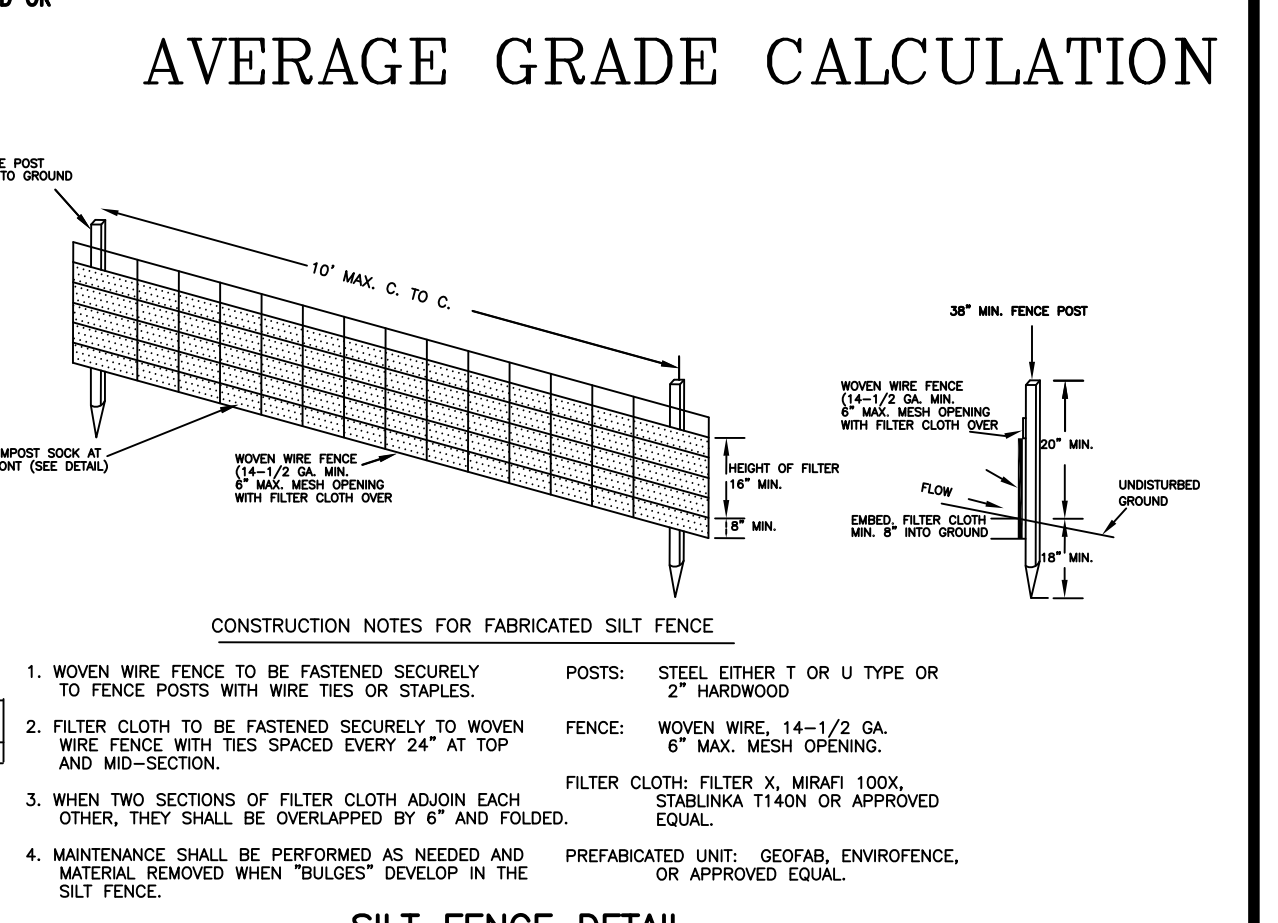
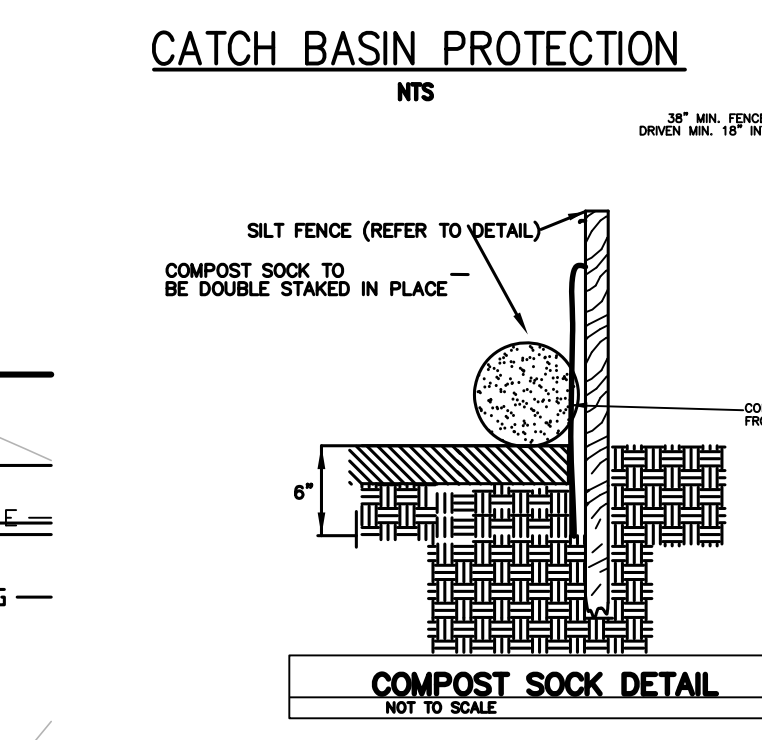
EXISTING LEGEND	
(Symbol)	SEWER MANHOLE
(Symbol)	WATER LINE
(Symbol)	GAS LINE
(Symbol)	UTILITY POLE
(Symbol)	GAS VALVE
(Symbol)	OVERHEAD ELECTRIC SERVICE
(Symbol)	WATER VALVE
(Symbol)	CATCH BASIN
(Symbol)	FENCE
(Symbol)	CONTOUR LINE (M/R)
(Symbol)	CONTOUR LINE (M/NR)
(Symbol)	SPOT GRADE
(Symbol)	DRAIN MANHOLE
(Symbol)	HYDRANT
(Symbol)	TREE



AVERAGE GRADE PLANE (ALL UNITS IN FEET)					
SEGMENT	LENGTH	POINT 1	POINT 2	MEAN 1 & 2	MEAN x LENGTH
1	28.30	120.50	120.50	120.50	3,410.15
2	33.10	120.50	120.00	120.25	3,980.28
3	31.30	120.00	119.50	119.75	3,748.18
4	33.10	118.60	118.50	118.55	3,924.01
5	17.10	119.00	117.70	118.35	2,023.79
6	28.30	117.60	117.80	117.70	3,330.91
7	50.40	118.20	120.60	119.40	6,017.76
SUM =	221.60				26,435.06

MEAN x LENGTH / SUM OF LENGTHS = AVERAGE GRADE PL = 119.29

- INSPECTION AND MAINTENANCE:**
- FILTER FABRIC BARRIERS SHALL BE INSPECTED WEEKLY AFTER EACH SIGNIFICANT STORM - 1 INCH RAINFALL (25.4 MM) IN 24 HOUR PERIOD. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
 - SEDIMENT SHOULD BE REMOVED WHEN IT REACHES 0.5" MAXIMUM HEIGHT. AT THAT TIME INSPECT THE FILTER MATERIAL FOR TEARS AND CLEAN OR REPLACE AS REQUIRED.
 - THE REMOVED SEDIMENT SHALL BE DISTRIBUTED EVENLY ACROSS AREAS ON-SITE, CONFORM WITH THE EXISTING GRADE AND BE REVEGETATED OR OTHERWISE STABILIZED PER EROSION CONTROL NOTES.



SCALE 1"=10'	DATE 3/11/2022	SHEET 1	PLAN NO. 1 OF 1	CLIENT:
17 BRANDEIS ROAD NEWTON MASSACHUSETTS PROPOSED CONDITIONS PLAN				
SPRUHAN ENGINEERING, P.C. 80 JEWETT STREET, SUITE 2 NEWTON, MA 02458 Tel: 617-816-0722 Email: edmond@spruhaneng.com				
PETER NOLAN & ASSOCIATES, LLC LAND SURVEYORS/CIVIL ENGINEERING CONSULTANTS 80 JEWETT STREET, SUITE 2 NEWTON, MA 02458 Tel: 857-891-7478 617-782-1531 Fax: 617-2025691				
DRAWN BY DK CHKD BY PUN APPD BY ETS			REVISION DATE BY	
SHEET NO. 1			SHEET NO.	