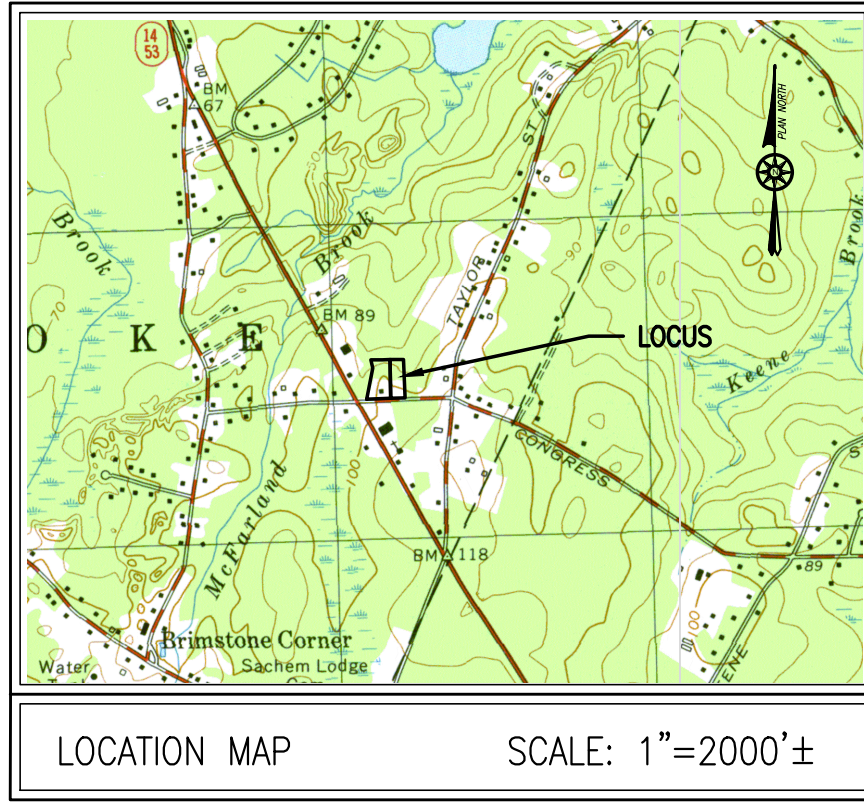




PEMBROKE PLANNING BOARD

THIS SITE PLAN DOES NOT NECESSARILY INDICATE COMPLIANCE WITH THE PEMBROKE ZONING BYLAW

DATE APPROVED: _____

DATE SIGNED: _____

PEMBROKE TOWN CLERK

I, TOWN CLERK OF THE TOWN OF PEMBROKE, MA HEREBY CERTIFY THAT THE NOTICE OF APPROVAL OF THIS PLAN BY THE PLANNING BOARD HAS BEEN RECEIVED AND RECORDED AT THIS OFFICE AND NO APPEAL WAS RECEIVED DURING THE NEXT TWENTY DAYS AFTER RECEIPT AND RECORDING OF SAID NOTICE.

DATE: _____

TOWN CLERK, TOWN OF PEMBROKE: _____

FLOOD NOTE:
BY GRAPHIC PLOTTING ONLY, THIS PROPERTY IS IN ZONE X OF THE FLOOD INSURANCE RATE MAP, COMMUNITY PANEL No. 250257 00139J, WHICH BEARS AN EFFECTIVE DATE OF JULY 17, 2012 AND IS NOT IN A SPECIAL FLOOD HAZARD AREA.



ZONE:	RESIDENTIAL-COMMERCIAL		
EXISTING USE:	RESIDENTIAL		
PROPOSED USE:	ALLOWED USE WITH SPECIAL PERMIT PER ZBL SECTION IV.2.B.3 - MULTI-DWELLING STRUCTURES, NOT TO EXCEED 4 UNITS PER ACRE		
PARCEL SIZE:	143,515 SF		
*VARIANCE REQUIRED, ** SPECIAL PERMIT REQUIRED (PB)			
DIMENSIONAL REQUIREMENTS:			
LOT AREA (RECORD 143,515 S.F.)	REQUIRED 120,000 S.F.	EXISTING 143,515 S.F.	PROPOSED 143,515 S.F.
LOT AREA EXCLUSIVE OF WETLANDS	120,000 S.F.	112,951 S.F.	112,951 S.F.*
LOT PERIMETER RATIO (143,515/1,568.9)	55:1	92:1	92:1
LOT FRONTAGE	250 FT	399.72 FT	399.72 FT
MULTIUNIT DWELLINGS REQUIRE AT LEAST TWENTY FEET OF FRONTAGE PER UNIT	220 FT	N/A	399.72
11 UNITS X 20			
(BUILDING, STRUCTURES, PAVED AREAS)			
FRONT SETBACK	100 FT	9.9 FT	41 FT*
SIDE SETBACK	40 FT	43.4 FT	21 FT*
REAR SETBACK	100 FT	65.2 FT	65 FT*
MAX HEIGHT	2.5 STORIES	2 STORIES	2 STORIES
MAX BUILDING FLOOR AREA (%) 27,630/143,515	35%	N/A	19.3%
COVERAGE (%) 36500/146,515	60%	N/A	24.9%
LANDSCAPING	40%	N/A	75.1%
*(SEE NOTE 7)			

PARKING V.4.A.1.a. RESIDENCE, BUSINESS A AND RESIDENTIAL COMMERCIAL DISTRICTS:
A. FOR MULTIUNIT DWELLINGS, TWO PARKING SPACES PER DWELLING UNIT.

(MULTIUNIT DWELLING)	2 SP/UNIT	REQUIRED 22 SPACES	PROPOSED 27 SPACES
TOTAL		22 SPACES	27 SPACES

**MULTI-DWELLING STRUCTURES, NOT TO EXCEED A DENSITY OF FOUR DWELLING UNITS PER ACRE 143515/43560 *4 = 13 ALLOWED 11 PROPOSED

ALL MULTIPLE UNIT DWELLINGS ARE LIMITED TO NO MORE THAN ONE DWELLING UNIT PER 10,000 SQUARE FEET OF LOT AREA EXCLUSIVE OF ALL EASEMENTS, CRANBERRY BOGS, WETLANDS, FLOODPLAINS AND WATERSHED AREAS - 112,951/10,000 = 11.3 ALLOWED, 11 PROPOSED

NOTES:

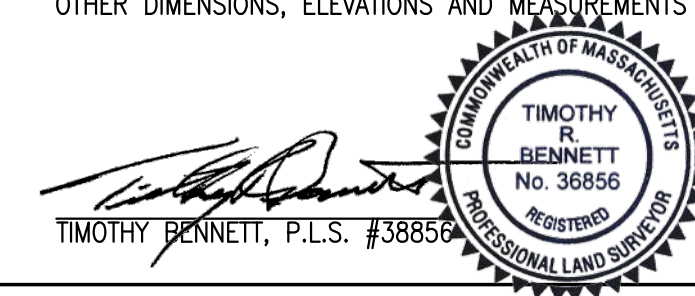
- PROPERTY LINE, STREET LINE AND OWNER INFORMATION WAS COMPILED FROM RECORDS ON FILE AT THE PLYMOUTH COUNTY REGISTRY OF DEEDS AND PEMBROKE TOWN HALL.
- TOPOGRAPHIC INFORMATION SHOWN ON THIS PLAN IS BASED UPON AN ACTUAL ON THE GROUND SURVEY PERFORMED BY GRADY CONSULTING, L.L.C. ON JULY 2022.
- ALL ELEVATIONS ARE BASED ON THE 1988 NORTH AMERICAN VERTICAL DATUM.
- THE SUBJECT SITE IS LOCATED WITHIN THE "RESIDENTIAL-COMMERCIAL" DISTRICT AS DEPICTED ON THE TOWN OF PEMBROKE ZONING DISTRICT MAP, REVISED OCTOBER 27, 2015.
- WETLAND RESOURCE AREAS WERE DELINEATED BY SOUTH RIVER ENVIRONMENTAL SERVICES AND APPROVED VIA AN ORDER OF RESOURCE AREA DELINEATION BY THE PEMBROKE CONSERVATION COMMISSION FILE UMBER SE 056-1086.
- THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED ON FIELD OBSERVATIONS AND RECORD INFORMATION. THEY ARE NOT WARRANTED TO BE EXACTLY LOCATED AS SHOWN OR THAT ALL UNDERGROUND UTILITIES OR OTHER STRUCTURES ARE SHOWN ON THIS PLAN.
- THE PROPERTY IS SUBJECT TO A GRANT OF VARIANCES FROM THE ZONING BOARD OF APPEALS DATED OCTOBER 24, 2022. GRANT OF VARIANCE IS RECORDED AT THE PLYMOUTH COUNTY REGISTRY OF DEEDS IN BOOK 57438 PAGE 195. VARIANCES INCLUDE THE FOLLOWING:

SECTION	REQUIRED	APPROVED
A. SECTION IV.2.D.1 LOT SIZES:	120,000 SF	113,735 SF
B. SECTION IV.2.D.4 (FRONT YARDS)	100 FT	40 FT
C. SECTION IV.2.D.5 (SIDE YARDS)	40 FT	20 FT
D. SECTION IV.2.D.6 (REAR YARDS)	100 FT	65 FT

WAIVER REQUESTS:

- 4.22 THE APPLICANT REQUESTS A WAIVER FOR THE REQUIREMENT OF A TRAFFIC STUDY.
5.6.2 TO ELIMINATE THE REQUIREMENT OF CURBING AT EDGES OF ALL PAVED SURFACES.

AI HEREBY CERTIFY THAT AND INSTRUMENT BOUNDARY SURVEY HAS BEEN CONDUCTED ON THIS PROPERTY AND I CERTIFY THAT THE LOCATIONS OF THE BUILDING, SETBACKS AND ALL OTHER DIMENSIONS, ELEVATIONS AND MEASUREMENTS ARE ACCURATE.



RECORD OWNER:

ASSESSOR MAP F9 LOT 11
KEVIN ST. GEORGE
PO BOX 174
NO. PEMBROKE, MA 02358
DEED BOOK 44242 PAGE 242
LOT 1 - PLAN No. 865 OF 1967
ASSESSOR MAP F9 LOT 12C
KEVIN ST. GEORGE
DEED BOOK 49318 PAGE 82
LOT 4- PLAN No. 270 OF 1993

SHEET INDEX

SHEET 1	ZONING
SHEET 2	EXISTING CONDITIONS
SHEET 3	LAYOUT
SHEET 4	GRADING
SHEET 5	GRADING
SHEET 6	UTILITIES-DRAIN
SHEET 7	UTILITIES-WATER, ELECTRIC, GAS
SHEET 8	LANDSCAPE
SHEET 9	LANDSCAPE DETAILS
SHEET 10	PLAN AND PROFILE-DRAIN
SHEET 11	PLAN AND PROFILE SEPTIC
SHEET 12	PLAN AND PROFILE SEPTIC
SHEET 13	SEPTIC-DETAILS
SHEET 14	SEPTIC-DETAILS
SHEET 15	EROSION CONTROL
SHEET 16	SAFETY
SHEET 17	DETAILS-SITE
SHEET 18	DETAILS-WATER, DRAIN
SHEET 19	DETAILS-DRAIN
SHEET 20	PRE-DEVELOPMENT DRAIN
SHEET 21	POST-DEVELOPMENT DRAIN



PLAN REFERENCES

- PLAN BOOK 35 PAGE 1040
- PLAN BOOK 3415 PAGE 383

SITE PLAN

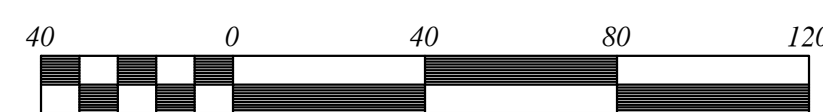
ASSESSORS MAP F9 LOT 11 & 12C
#0 & 74 CONGRESS STREET
PEMBROKE, MASSACHUSETTS



PREPARED FOR:
WHATBARN, LLC
29 DUCK HILL ROAD
DUXBURY MA 02332

MARCH 13, 2023
SCALE: AS NOTED
JOB No. 22-286

GRADY CONSULTING, L.L.C.
Civil Engineers, Land Surveyors & Landscape Architects
71 Evergreen Street, Suite 1, Kingston, MA 02364
Phone (781) 585-2300



Scale 1" = 40'

PLAN 895 OF 1967

ASSESSORS PARCEL F9-23B
#752 WASHINGTON STREET
N/F 1.30 MAYNARD, LLC
DEED BOOK 50322 PAGE 276

ASSESSORS PARCEL F9-38
#754 WASHINGTON STREET
N/F TOWN OF PEMBROKE
DEED BOOK 7202 PAGE 12

ASSESSORS PARCEL F9-12B
#86 CONGRESS STREET
N/F TOWN OF PEMBROKE



Scale 1" = 20'



SITE PLAN

ASSESSORS MAP F9 LOT 11 & 12C
#0 & 74 CONGRESS STREET
PEMBROKE, MASSACHUSETTS

PREPARED FOR:
WHATABARN, LLC
29 DUCK HILL ROAD
DUXBURY MA 02332

MARCH 13, 2023
SCALE: AS NOTED
JOB No. 22-286



GRADY CONSULTING, L.L.C.

Civil Engineers, Land Surveyors & Landscape Architects
71 Evergreen Street, Suite 1, Kingston, MA 02364
Phone (781) 585-2300



PLAN 895 OF 987

ASSESSORS PARCEL F9-7
#177 TAYLOR STREET
N/F DENISE MORASKI
LC CERT. 95684

ASSESSORS PARCEL F9-23B
#752 WASHINGTON STREET
N/F 130 MAYNARD, LLC
DEED BOOK 50322 PAGE 276

ASSESSORS PARCEL F9-38
#754 WASHINGTON STREET
N/F TOWN OF PEMBROKE
DEED BOOK 7202 PAGE 12

ASSESSORS PARCEL F9-12B
#86 CONGRESS STREET
N/F TOWN OF PEMBROKE



SITE PLAN

ASSESSORS MAP F9 LOT 11 & 12C
#0 & 74 CONGRESS STREET
PEMBROKE, MASSACHUSETTS

PREPARED FOR:
WHATBARN, LLC
29 DUCK HILL ROAD
DUXBURY MA 02332

MARCH 13, 2023
SCALE: AS NOTED
JOB No. 22-286



GRADY CONSULTING, L.L.C.

Civil Engineers, Land Surveyors & Landscape Architects
71 Evergreen Street, Suite 1, Kingston, MA 02364
Phone (781) 585-2300



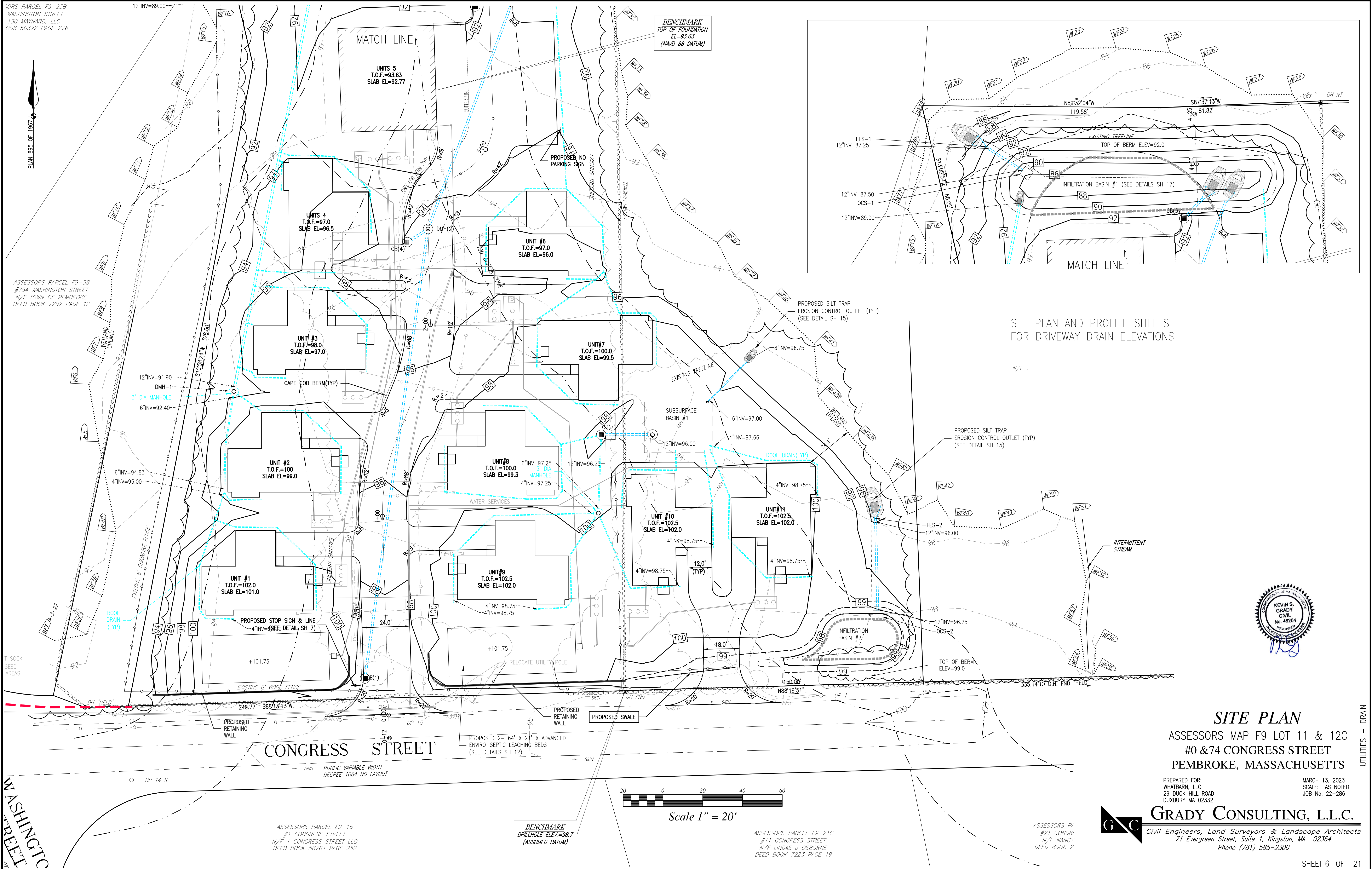
Scale 1" = 20'

GRADING

ORS PARCEL F9-23B
WASHINGTON STREET
130 MAYNARD, LLC
OOK 50322 PAGE 276

ASSESSORS PARCEL F9-38
#754 WASHINGTON STREET
N/F TOWN OF PEMBROKE
DEED BOOK 7202 PAGE 12

WASHINGTON STREET

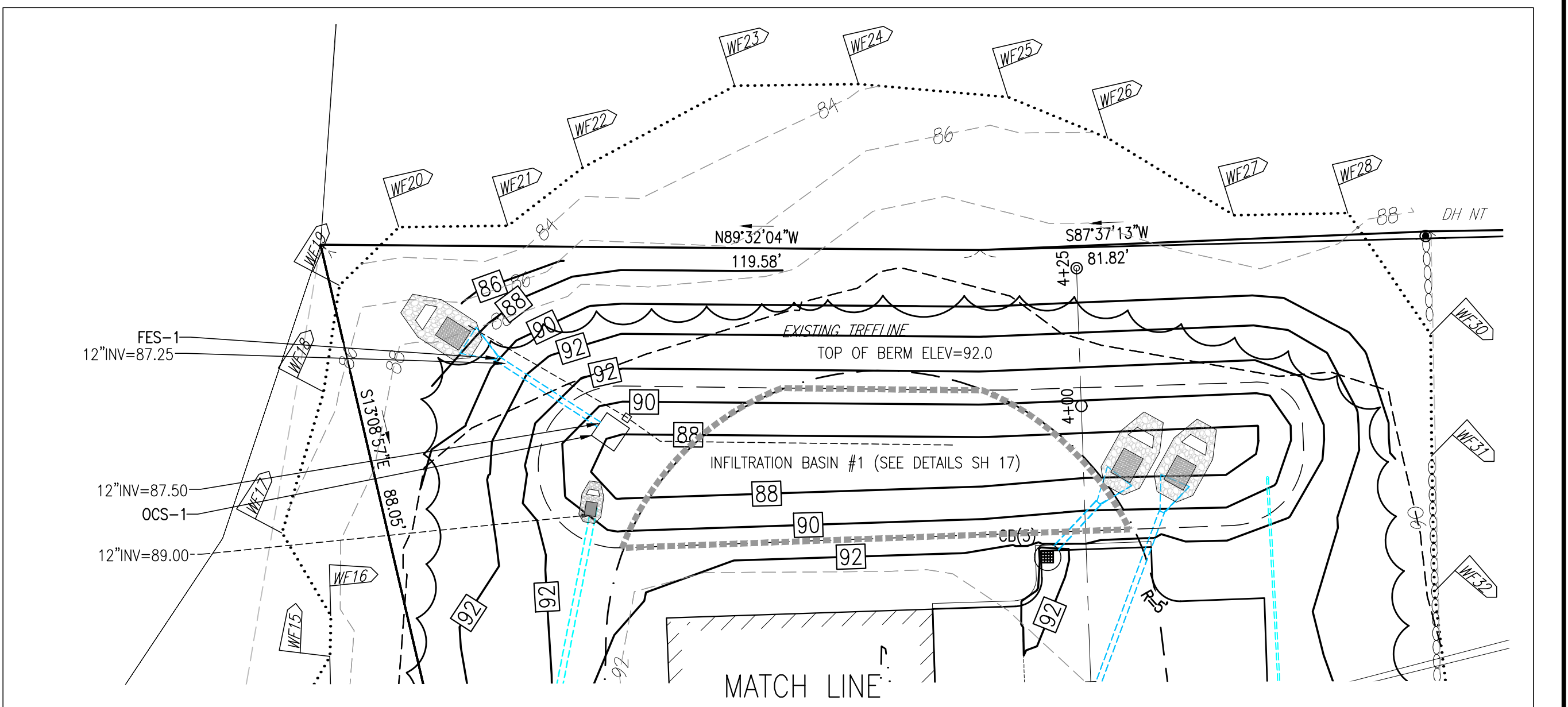


BENCHMARK
TOP OF FOUNDATION
EL=93.63
(NAVD 88 DATUM)

BENCHMARK
DRILLHOLE ELEV=98.7
(ASSUMED DATUM)

ASSESSORS PARCEL F9-21C
#11 CONGRESS STREET
N/F LINDAS J OSBORNE
DEED BOOK 7223 PAGE 19

ASSESSORS PA
#21 CONGR
N/F NANCY
DEED BOOK 2



SEE PLAN AND PROFILE SHEETS
FOR DRIVEWAY DRAIN ELEVATIONS



SITE PLAN
ASSESSORS MAP F9 LOT 11 & 12C
#0 & 74 CONGRESS STREET
PEMBROKE, MASSACHUSETTS

PREPARED FOR:
WHATBARN, LLC
29 DUCK HILL ROAD
DUXBURY MA 02332

MARCH 13, 2023
SCALE: AS NOTED
JOB No. 22-286

GRADY CONSULTING, L.L.C.
Civil Engineers, Land Surveyors & Landscape Architects
71 Evergreen Street, Suite 1, Kingston, MA 02364
Phone (781) 585-2300

PLAN 895 OF 1967

ASSESSORS PARCEL F9-38
#754 WASHINGTON STREET
N/F TOWN OF PEMBROKE
DEED BOOK 7202 PAGE 12

WASHINGTON STREET
PUBLIC 80' WIDE 1931 LAYOUT 277

ASSESSORS PARCEL E9-16
#1 CONGRESS STREET
N/F 1 CONGRESS STREET LLC
DEED BOOK 56764 PAGE 252

ASSESSORS PARCEL F9-21C
#11 CONGRESS STREET
N/F LINDAS J OSBORNE
DEED BOOK 7223 PAGE 19



SITE PLAN

ASSESSORS MAP F9 LOT 11 & 12C
#0 & 74 CONGRESS STREET
PEMBROKE, MASSACHUSETTS

PREPARED FOR:
WHATBARN, LLC
29 DUCK HILL ROAD
DUXBURY MA 02332

MARCH 13, 2023
SCALE: AS NOTED
JOB No. 22-286

GRADY CONSULTING, L.L.C.
Civil Engineers, Land Surveyors & Landscape Architects
71 Evergreen Street, Suite 1, Kingston, MA 02364
Phone (781) 585-2300

UTILITIES - WATER, ELECTRIC, GAS

ASSESSORS PARCEL F9-23B
#752 WASHINGTON STREET
N/F 130 MAYNARD, LLC
DEED BOOK 50322 PAGE 276

ASSESSORS PARCEL F9-38
#754 WASHINGTON STREET
N/F TOWN OF PEMBROKE
DEED BOOK 7202 PAGE 12

FINE GRADE LOAM AND SEED
ALL DISTURBED AREAS WITH
N.E. WARM SEASON GRASS
MIX (TYP.)

BENCHMARK
TOP OF FOUNDATION
EL=93.63
(NAVD 88 DATUM)

FINE GRADE LOAM AND SEED
ALL DISTURBED AREAS WITH
N.E. WARM SEASON GRASS
MIX (TYP.)

PROPOSED CRUSHED
STONE SWALE

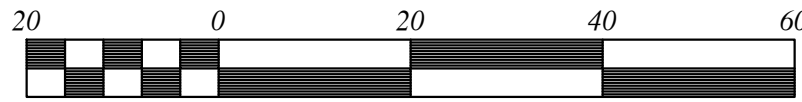
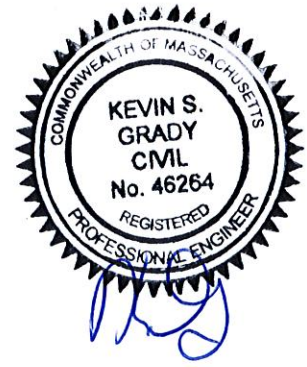
FINE GRADE LOAM AND SEED
ALL DISTURBED AREAS WITH
N.E. WARM SEASON GRASS
MIX (TYP.)

FINE GRADE LOAM AND SEED
ALL DISTURBED AREAS WITH
N.E. WARM SEASON GRASS
MIX (TYP.)

PLANT SCHEDULE

DECIDUOUS TREES	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
ACE RUB	3	ACER RUBRUM 'RED SUNSET' / RED SUNSET MAPLE	B & B	25'-30" CAL.	
GLE TRI	7	GLADISTIA TRIACANTHOS INERMIS / THORNLESS COMMON HONEYLOCUST	B & B	25'-30" CAL.	
PLA XLP	6	PLATANUS X ACERIFOLIA / LONDON PLANE TREE	B & B	25'-30" CAL.	
TIL COD	4	TILIA CORDATA / LITTLELEAF LINDEN	B & B	25'-30" CAL.	
EVERGREEN TREES	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
PIN STR	25	PINUS STROBUS / WHITE PINE	B & B	6-7' HGT.	
THU GIA	12	THUJA PLICATA 'GREEN GIANT' / WESTERN RED CEDAR	B & B	5-6' HGT.	
FLOWERING TREES	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
COR FLO	5	CORNUS FLORIDA / EASTERN DOGWOOD	B & B	2" CAL.	
CLUMP TREES	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
BET NIG	12	BETULA NIGRA / RIVER BIRCH MULTI-TRUNK	B & B	10-12' HGT.	
SHRUBS	QTY	BOTANICAL / COMMON NAME	SIZE	SIZE	SP
AME CAN	5	AMELANCHIER CANADENSIS / SHADBLow SERVICEBERRY MULTITRUNK	B & B	5-6' HGT.	
ILE GLA	13	ILEX GLABRA 'SHAMROCK' / INK BERRY	B & B	2.5-3' HGT.	

NOTE:
RETAIN STONEWALL ALONG FRONTAGE (EXCEPT DRIVEWAY
ACCESS AREAS). RETAIN STONEWALLS WITHIN THE
PROPERTY TO THE MAXIMUM EXTENT FEASIBLE.



Scale 1" = 20'

SITE PLAN

ASSESSORS MAP F9 LOT 11 & 12C
#0 & 74 CONGRESS STREET
PEMBROKE, MASSACHUSETTS

PREPARED FOR:
WHATBARN, LLC
29 DUCK HILL ROAD
DUXBURY MA 02332

MARCH 13, 2023
SCALE: AS NOTED
JOB No. 22-286



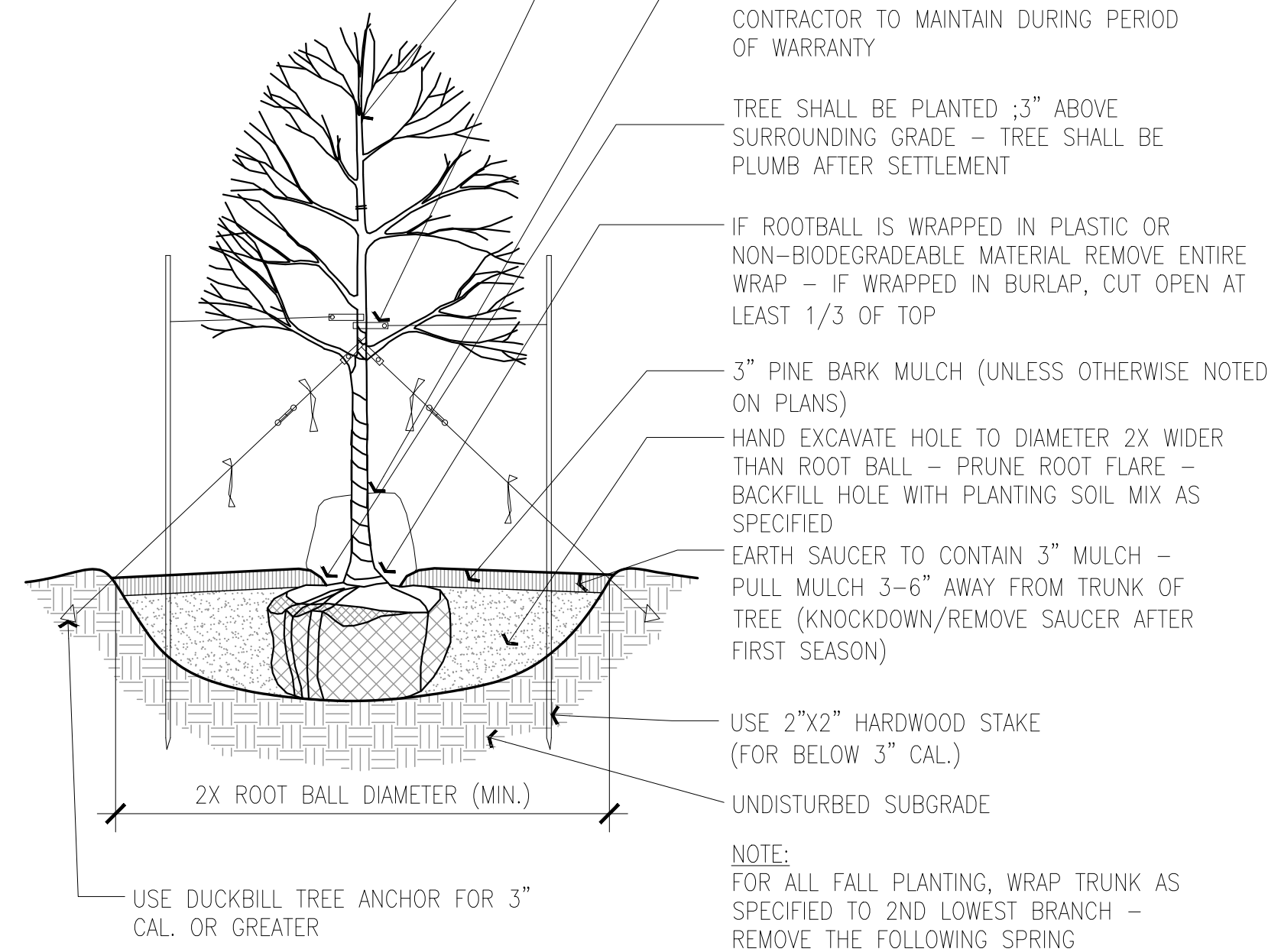
GRADY CONSULTING, L.L.C.

Civil Engineers, Land Surveyors & Landscape Architects
71 Evergreen Street, Suite 1, Kingston, MA 02364
Phone (781) 585-2300

NOTES:
ON TREES BELOW 3" CAL.
USE WOOD STAKES.

ON TREES 3" CAL. OR GREATER
USE GUYING CABLES.

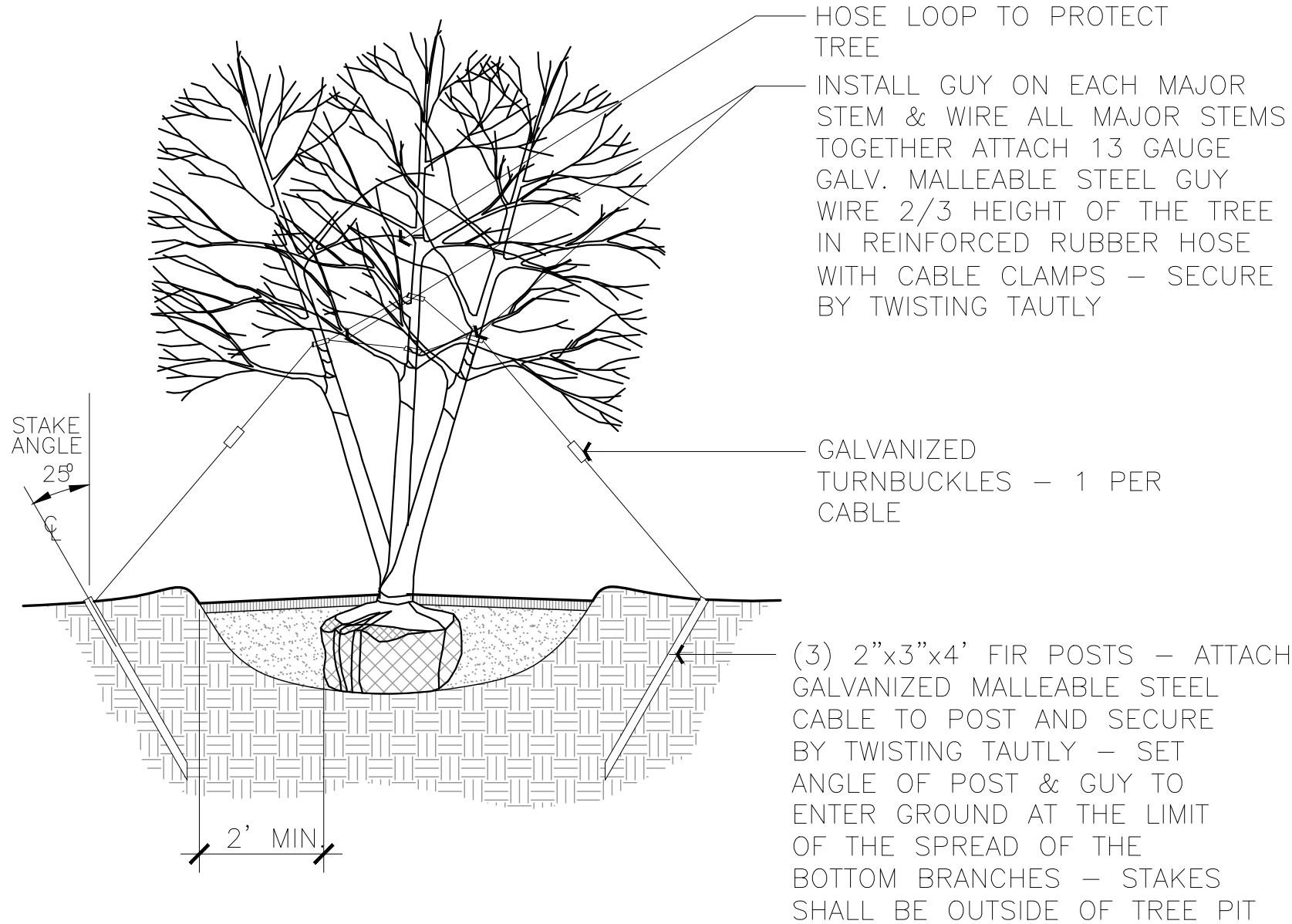
IF GUYING CABLES USE 3 PER TREE



PLANTING SOIL MIX:

1/3 PEAT – BLEND MANURE
1/3 HIGH ORGANIC LOAM
1/3 EX. SOIL

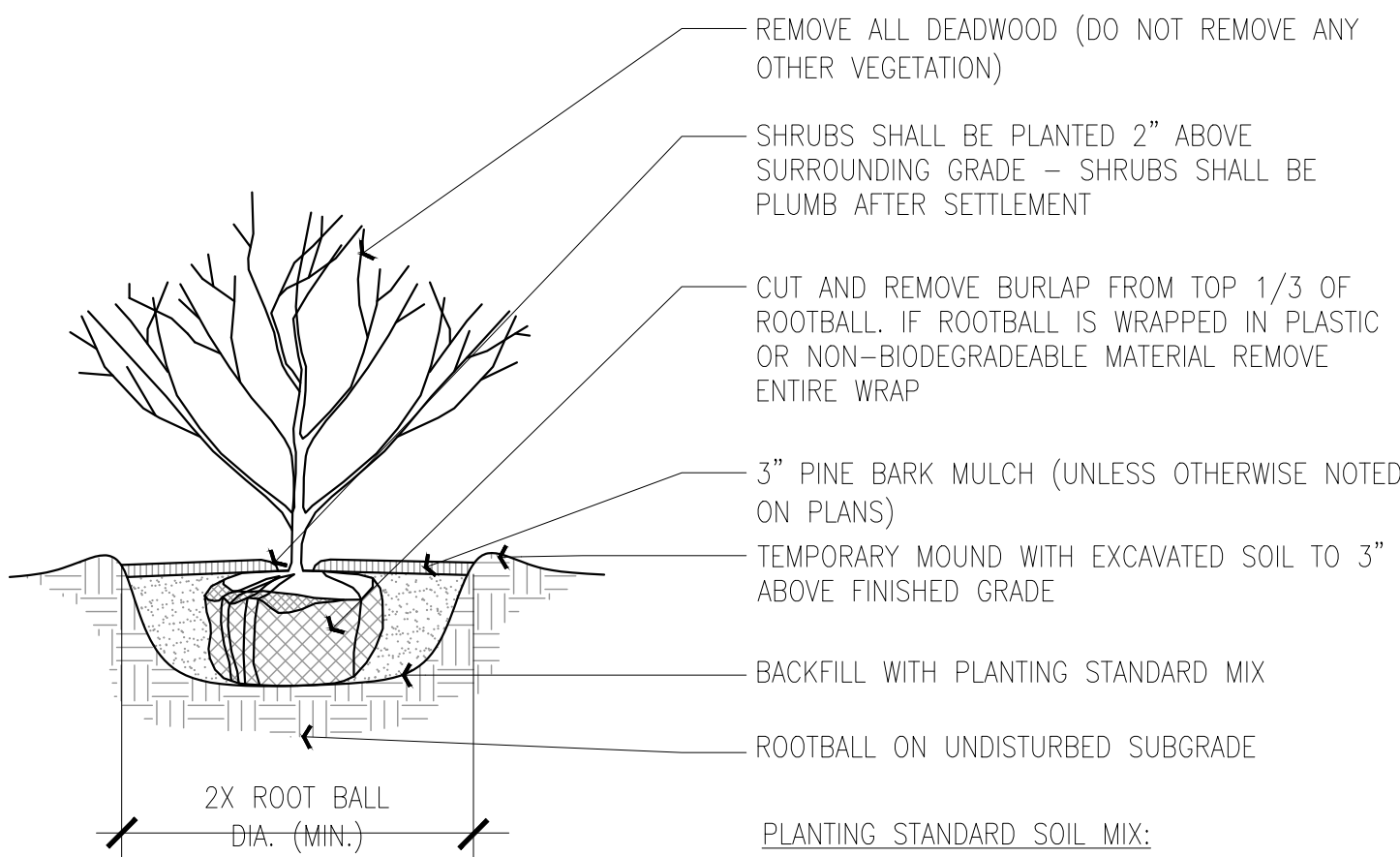
ALL TREES SHALL BE FLOODED TWICE
DURING THE FIRST 24 HOURS AFTER
PLANTING



3 TREE GUYING DETAIL - MULTISTEM

1/2" = 1'-0"

32 9343.02-01



4 SHRUB DETAIL

1" = 1'-0"

32 9333.00-02

LOCATION	DEPTH	DESCRIPTION
GENERAL PLANTING BEDS	6"	1/3 PEAT – MANURE BLEND 1/3 HIGH ORGANIC LOAM 1/3 EXISTING SOIL
FLOWER BEDS	6"	SCREENED LOAM 1/3 PEAT – MANURE BLEND LIME – PELATIZED OR GROUND (50 LB. PER 100 SF.) GROUND BONE MEAL (50 LB. PER 100 SF.) 10–10–10 INORGANIC FERTILIZER (50 LB. PER 5000 SF.)
LAWNS – SOD & SEED	6"	6" SCREENED LOAM
PITS/TREE WELLS "STANDARD MIX" FOR BACKFILL	12"	SOIL MIX 'A' – 1/3 PEAT – MANURE BLEND 1/3 HIGH ORGANIC LOAM 1/3 EXISTING SOIL
PITS/TREE WELLS "LITE WEIGHT MIX"	12"	70% LIGHT WEIGHT SHALE 20% SAND 10% COMPOST
PITS/TREE WELLS "STRUCTURAL MIX"	12"	SOIL MIX 'C' – MIX COMPOSITION TO BE SUPPLIED BY LANDSCAPE ARCHITECT.

5 SCHEDULE OF TOPSOILS & ADDITIVES

1" = 1'-0"

32 9301.03-01

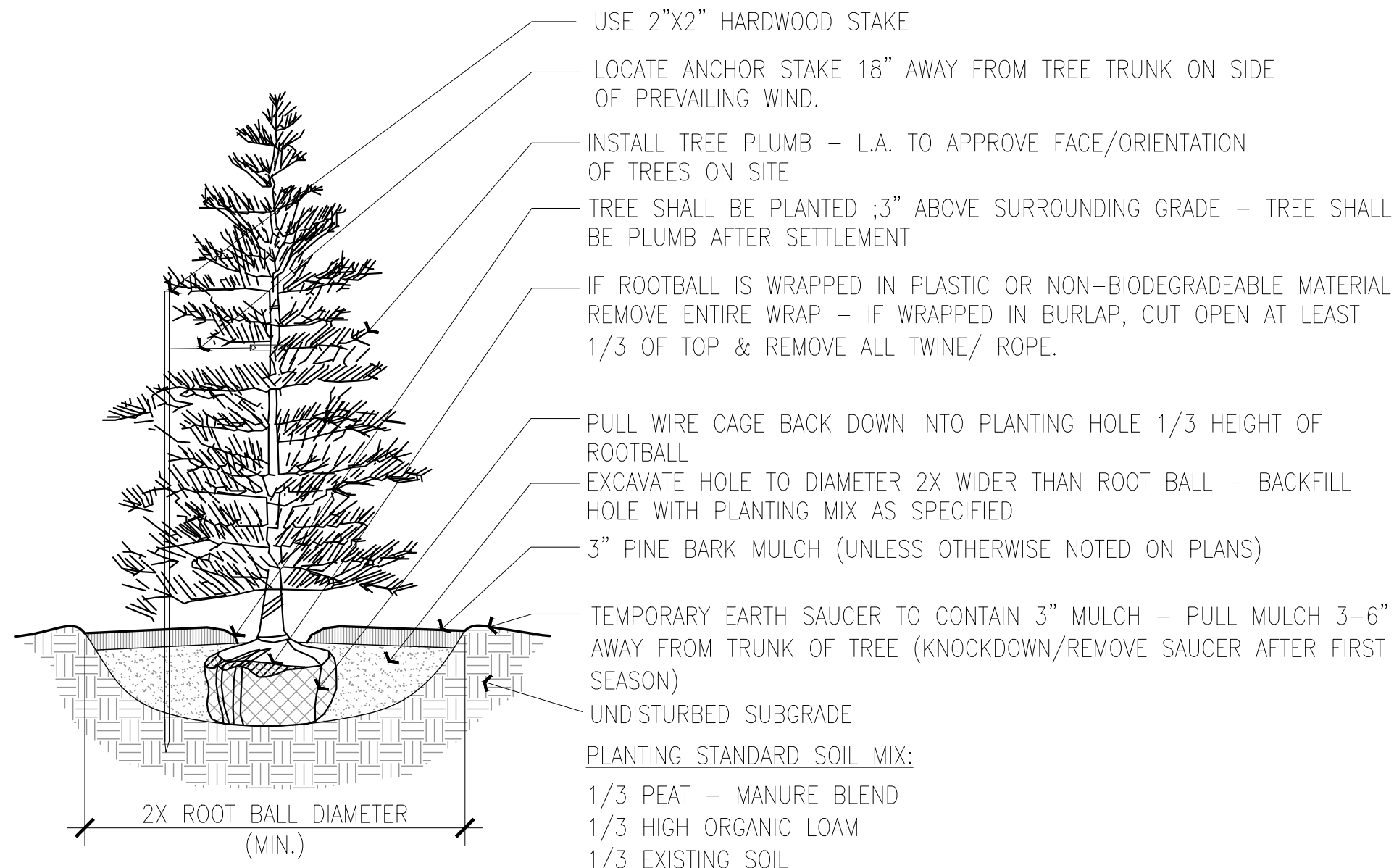
PLANTING NOTES

- 1) NOTIFY DIG-SAFE AND LOCAL AUTHORITIES PRIOR TO ANY TYPE OF SITE PREPARATION OR CONSTRUCTION
- 2) ALL PLANTS TO HAVE THE SAME RELATIONSHIP TO FINISH GRADE AFTER SETTLEMENT AS TO THEIR ORIGINAL GRADE BEFORE DIGGING. LOCATE PLANT COLLAR TWO OR THREE INCHES HIGHER THAN PLANTING SOIL MIX TO INSURE CORRECT FINAL RELATIONSHIP.
- 3) APPLY AN APPROVED ANTI-DESSICANT TO ALL PLANTS IN LEAF AT PLANTING TIME, AND TO ALL EVERGREENS BEFORE THEIR FIRST WINTER.
- 4) FLOOD ALL PLANTS WITH CLEAN WATER TWICE IN THE FIRST 24 HOURS AFTER PLANTING. CONTRACTOR TO ARRANGE FOR ALL PLANTS TO BE PLANTED WITHIN THREE DAYS AFTER DELIVERY TO THE SITE UNLESS OTHERWISE APPROVED BY THE LANDSCAPE ARCHITECT.
- 5) NEVER CUT A LEADER.
- 6) TRIM ONLY BROKEN OR DEAD BRANCHES FROM EVERGREEN PLANTS.
- 7) THE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIAL AND MULCH IN SUFFICIENT QUANTITIES TO COMPLETE PLANTING AS SHOWN ON THE DRAWINGS. DRAWING QUANTITIES TAKE PRECEDENCE OVER PLANT LIST QUANTITIES.
- 8) ALL PLANT MATERIAL SHALL CONFORM TO THE GUIDELINES BY "THE AMERICAN STANDARD FOR NURSERY STOCK," PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC.
- 9) ALL TREES SHALL HAVE "BEST FACE" SIDE TAGGED AT NURSERY PRIOR TO DIGGING.
- 10) ALL PLANTS SHALL BE BALLED AND BURLAPPED OR CONTAINER GROWN, UNLESS OTHERWISE APPROVED BY THE LANDSCAPE ARCHITECT.
- 11) CONTRACTOR TO STAKE TREE LOCATIONS FOR APPROVAL BY LANDSCAPE ARCHITECT.
- 12) LANDSCAPE ARCHITECT TO APPROVE IN PLACE ALL SHRUBS, PERENNIALS AND VINES PRIOR TO PLANTING.
- 13) ALL TREES TO RECEIVE A MINIMUM OF THREE INCHES OF MULCH. ALL SHRUBS, VINES AND GROUND COVERS TO RECEIVE A MINIMUM OF TWO INCHES OF MULCH.
- 14) WHERE SPECIFIED, CALIPER SIZE TO BE OVERRIDING FACTOR IN TREE SELECTION.
- 15) STAKE OR GUY ALL TREES AND LARGE EVERGREEN MATERIAL.
- 16) CONTRACTOR TO PROVIDE TWO YEAR GUARANTEE ON ALL MATERIAL. CONTRACTOR TO MAINTAIN ALL PLANTING AND LAWNS UNTIL FINAL PROJECT ACCEPTANCE. GUARANTEE PERIOD TO BEGIN AT FINAL ACCEPTANCE.
- 17) ALL PLANT MATERIAL SHALL BE INSTALLED PRIOR TO FINAL TOP-DRESSING AND SODDING/SEEDING.
- 18) COORDINATE LANDSCAPE INSTALLATION WITH INSTALLATION OF UNDERGROUND SPRINKLER SYSTEM & LANDSCAPE LIGHTING (IF APPLICABLE).
- 19) NO PLANTING BEFORE THE ACCEPTANCE OF ROUGH GRADING.
- 20) CONTRACTOR TO PROVIDE SOIL TESTS IN AREAS DESIGNATED BY LANDSCAPE ARCHITECT IN FIELD FOR EXISTING SOILS TO DETERMINE APPROPRIATE SOIL AMENDMENTS PRIOR TO THE DISTURBANCE OF SITE.
- 21) ALL PLANTING BEDS TO BE TREATED WITH PREEN AND GREEN OR APPROVED EQUAL TO PROHIBIT WEED GERMINATION AND GROWTH PRIOR TO THE SPREADING OF MULCH.
- 22) ALL PERENNIALS ARE TO BE PLANTED INTO DAMP SOIL.
- 23) PLANT LIST: A COMPLETE LIST OF PLANTS INCLUDING A SCHEDULE OF QUANTITIES, SIZES, TYPES AND NAMES IS INCLUDED IN THIS SET OF DRAWINGS. IN THE EVENT OF DISCREPANCIES BETWEEN QUANTITIES OF PLANTS IN THE PLANT LIST AND THE QUANTITIES SHOWN ON THE DRAWINGS, THE PLAN SHALL GOVERN. WHEN MULTIPLE PLANT SPECIES ARE LISTED IN ONE PLANT CATEGORY, THE GOAL IS TO PROVIDE THE BEST PLANTS AVAILABLE AT THE TIME OF INSTALLATION. THE LANDSCAPE ARCHITECT SHALL SELECT OR COORDINATE THE SELECTION OF THE APPROPRIATE PLANTS AT LOCAL NURSERIES. GRADY CONSULTING HAS THE RIGHT TO REJECT ANY PLANT THAT DOES NOT MEET THE SPECIFICATIONS LISTED IN THE PLANT TABLE.
- 24) PLANT SUBSTITUTION ARE NOT ALLOWED UNLESS APPROVED BY LANDSCAPE ARCHITECT.
- 25) ALL DISTURBED AREAS TO BE LOAMED AND SEEDDED AND BLENDED INTO EXISTING GRADE AND CONDITIONS (REFER TO ENGINEER'S SOIL STABILIZATION AND EROSION CONTROL PLAN FOR FURTHER INFORMATION).
- 26) CONTRACTOR SHALL (IF APPLICABLE) REVIEW WITH CLIENT ALL IRRIGATION PROCEDURES AND PROCESSES (I.e. TIMERS, ZONES AND ALL OTHER ITEMS INVOLVED W/ THE IRRIGATION SYSTEM).

1 SHADE / FLOWERING TREE DETAIL

1/2" = 1'-0"

32 9343.01-01



2 EVERGREEN TREE DETAIL

1/2" = 1'-0"

32 9343.04-01

SITE PLAN

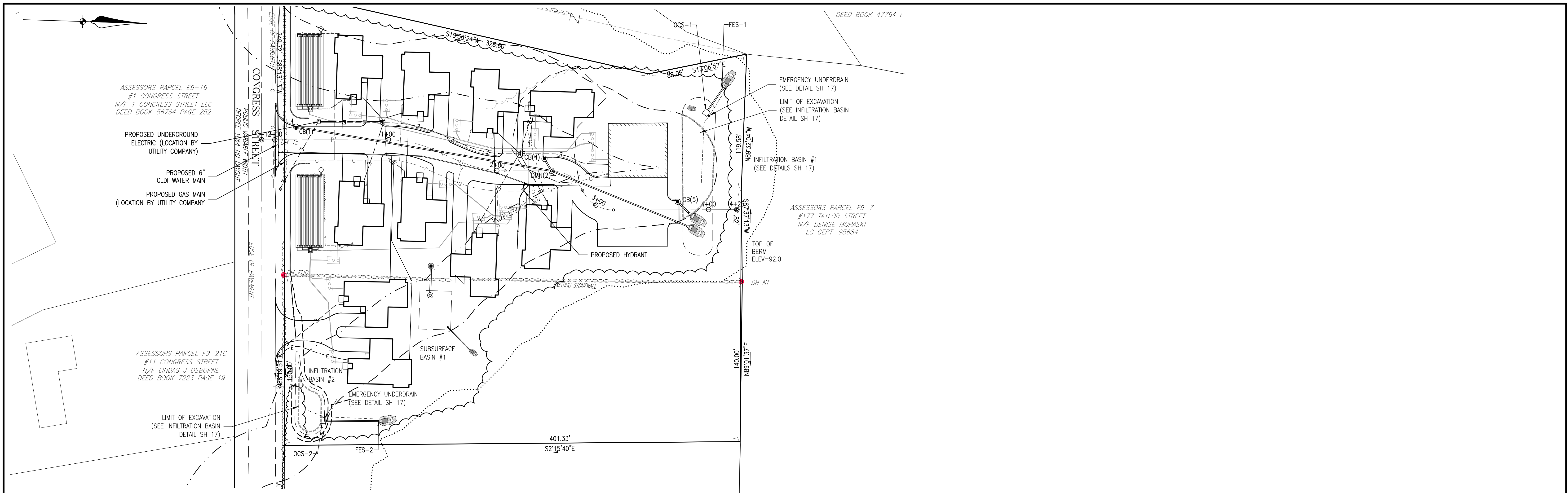
ASSESSORS MAP F9 LOT 11 & 12C
#0 & 74 CONGRESS STREET
PEMBROKE, MASSACHUSETTS



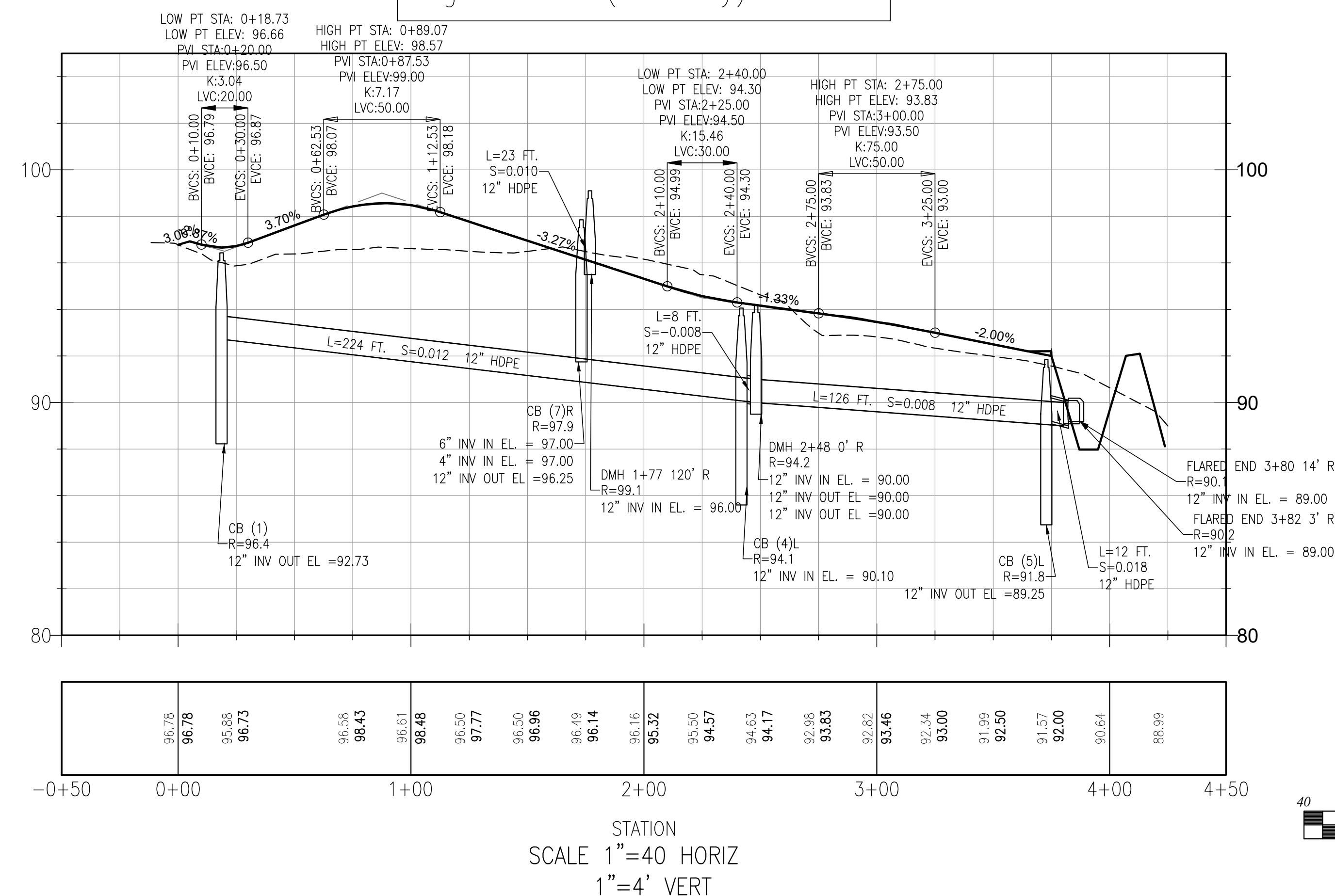
PREPARED FOR:
WHATABARN, LLC
29 DUCK HILL ROAD
DUXBURY MA 02332

MARCH 13, 2023
SCALE: AS NOTED
JOB No. 22-286

GRADY CONSULTING, L.L.C.
Civil Engineers, Land Surveyors & Landscape Architects
71 Evergreen Street, Suite 1, Kingston, MA 02364
Phone (781) 585-2300



Alignment - (Driveway) PROFILE



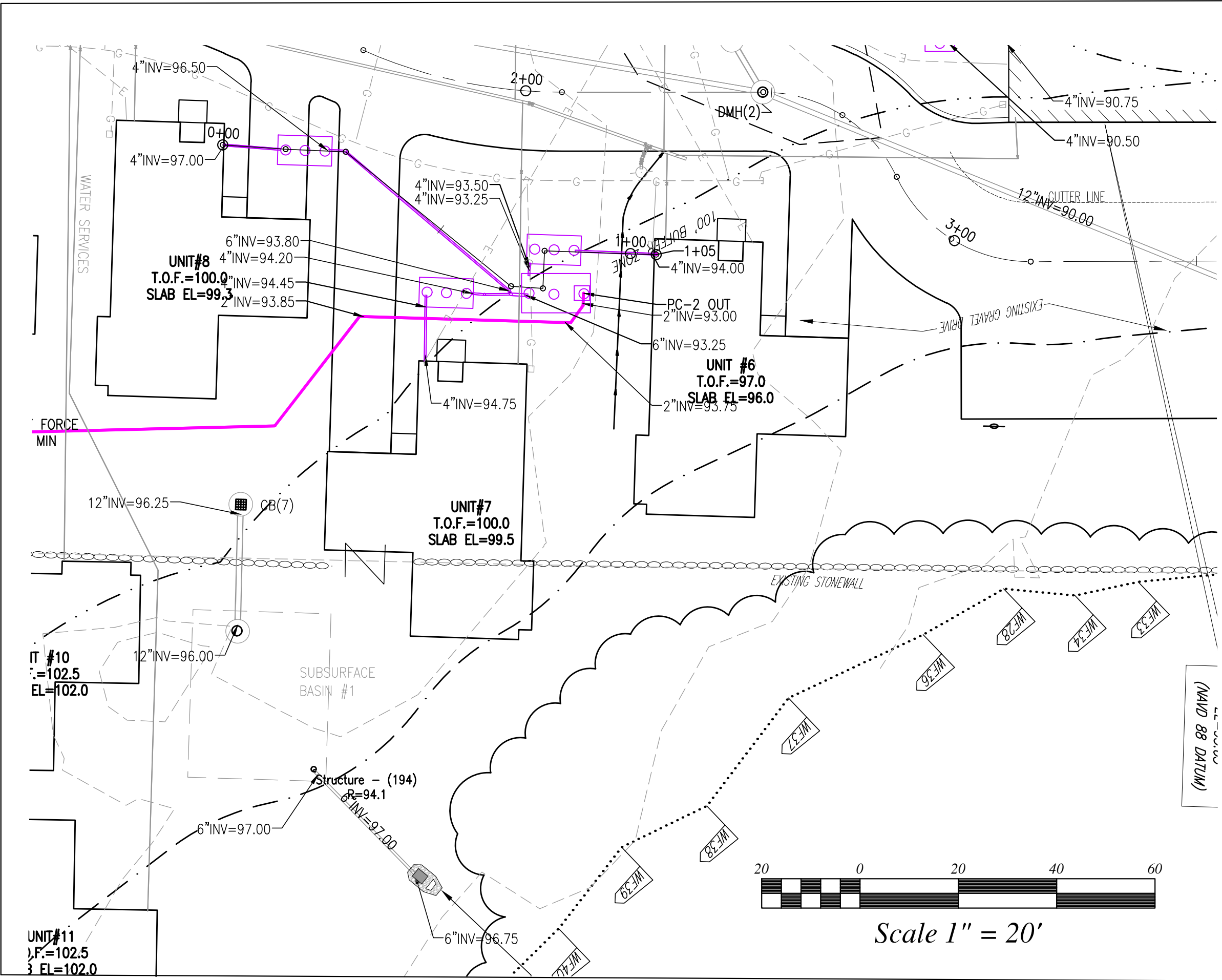
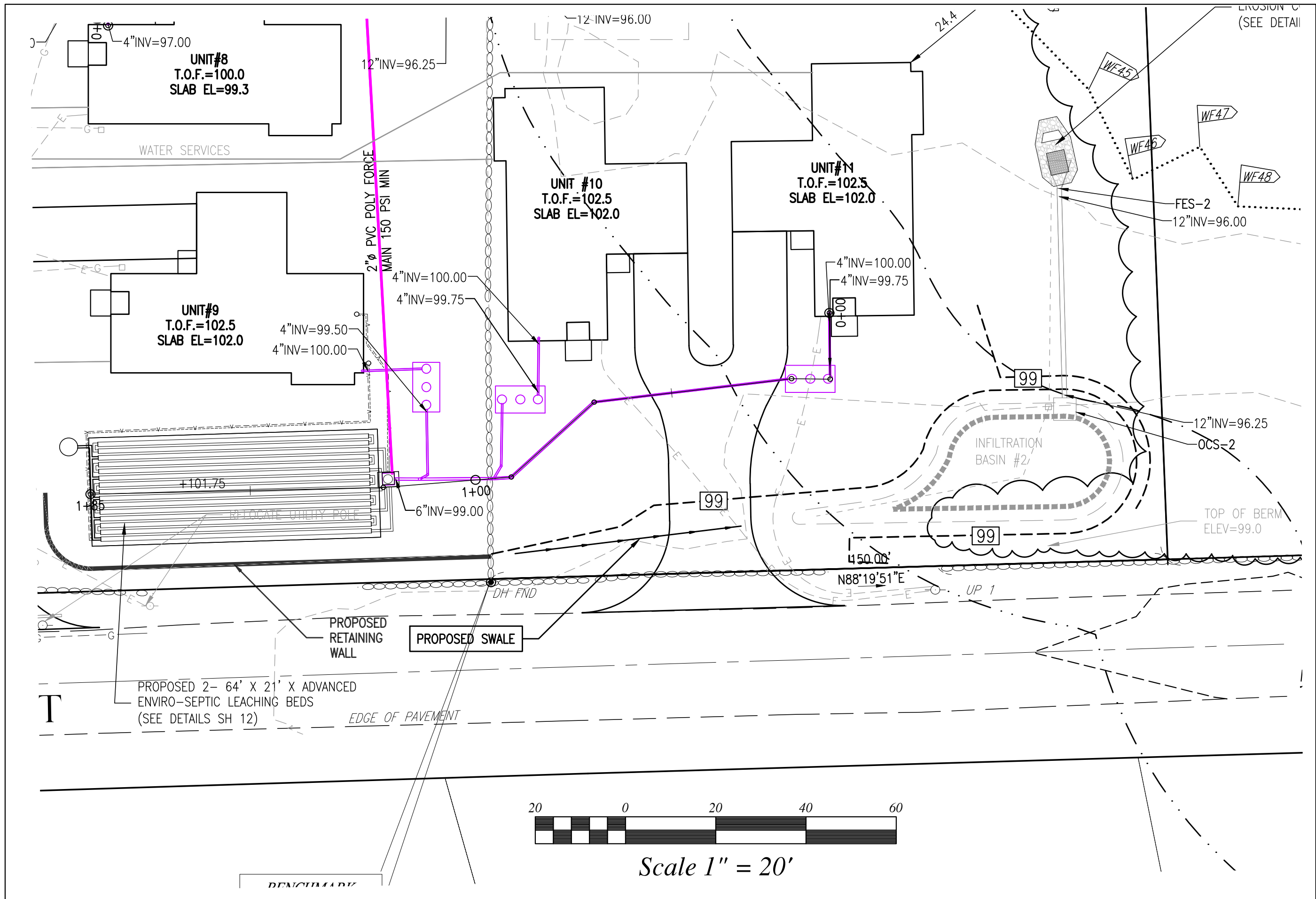
SITE PLAN
ASSESSORS MAP F9 LOT 11 & 12C
#0 & 74 CONGRESS STREET
PEMBROKE, MASSACHUSETTS

PREPARED FOR:
WHATABARN, LLC
29 DUCK HILL ROAD
DUXBURY MA 02332

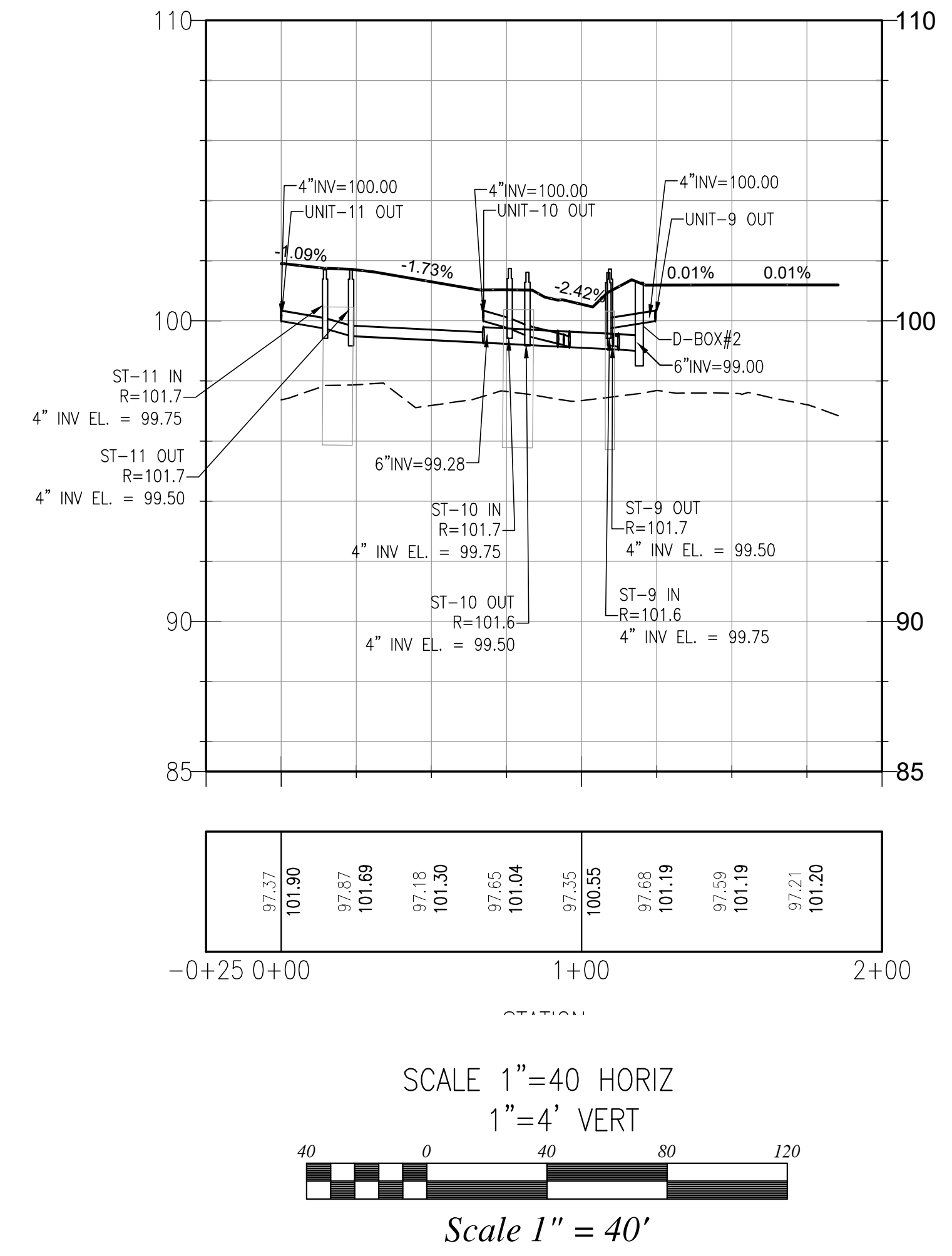
MARCH 13, 2023
SCALE: AS NOTED
JOB No. 22-286

GRADY CONSULTING, L.L.C.
Civil Engineers, Land Surveyors & Landscape Architects
71 Evergreen Street, Suite 1, Kingston, MA 02364
Phone (781) 585-2300

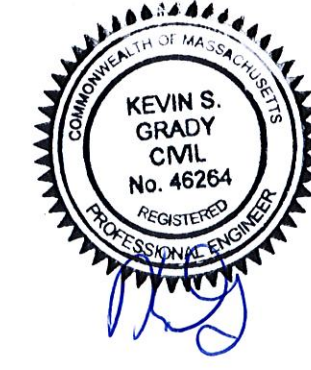
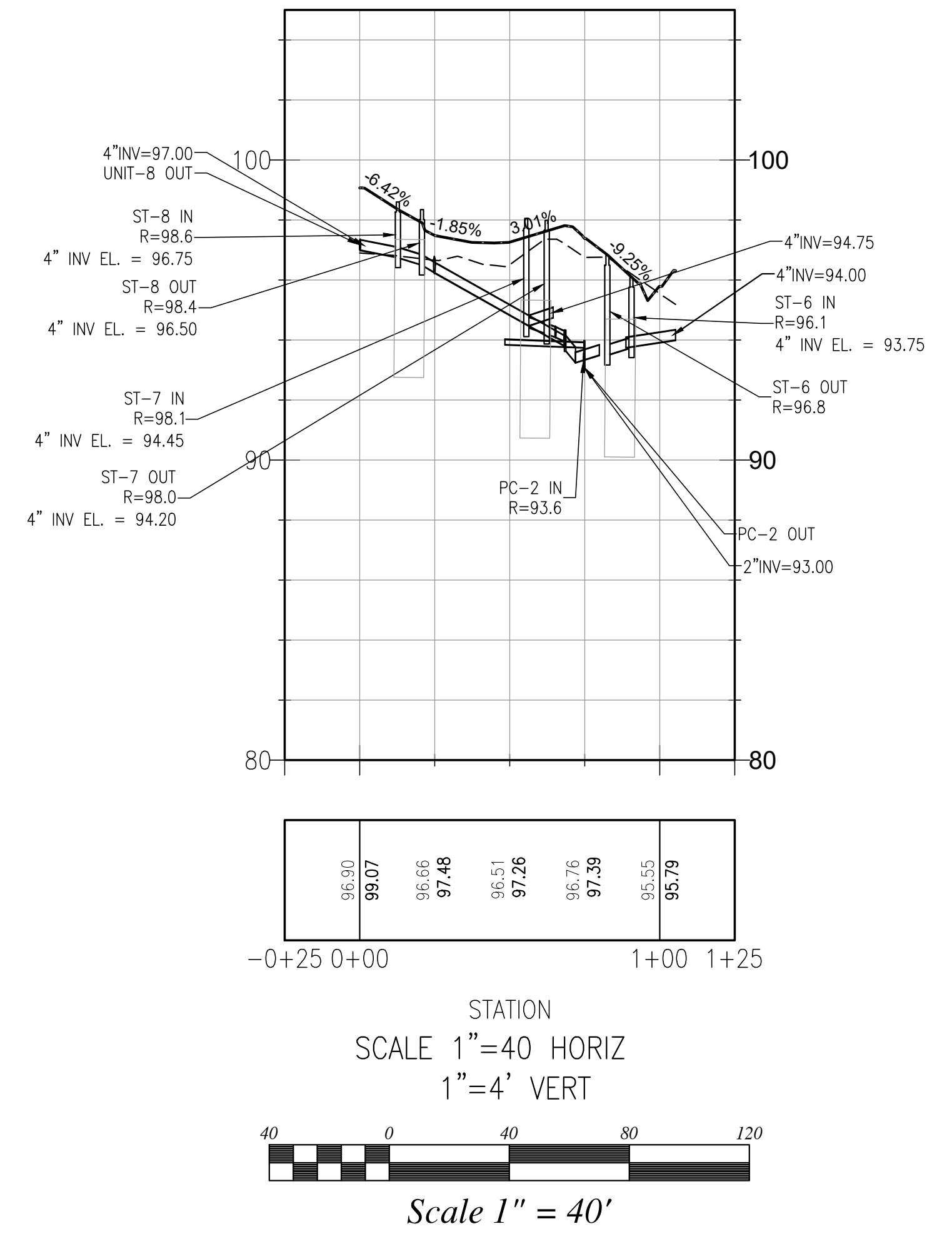
PLAN & PROFILE-DRAIN



Alignment - (UNITS 9 10 11) PROFILE



Alignment - (Unit 6 7 8) PROFILE

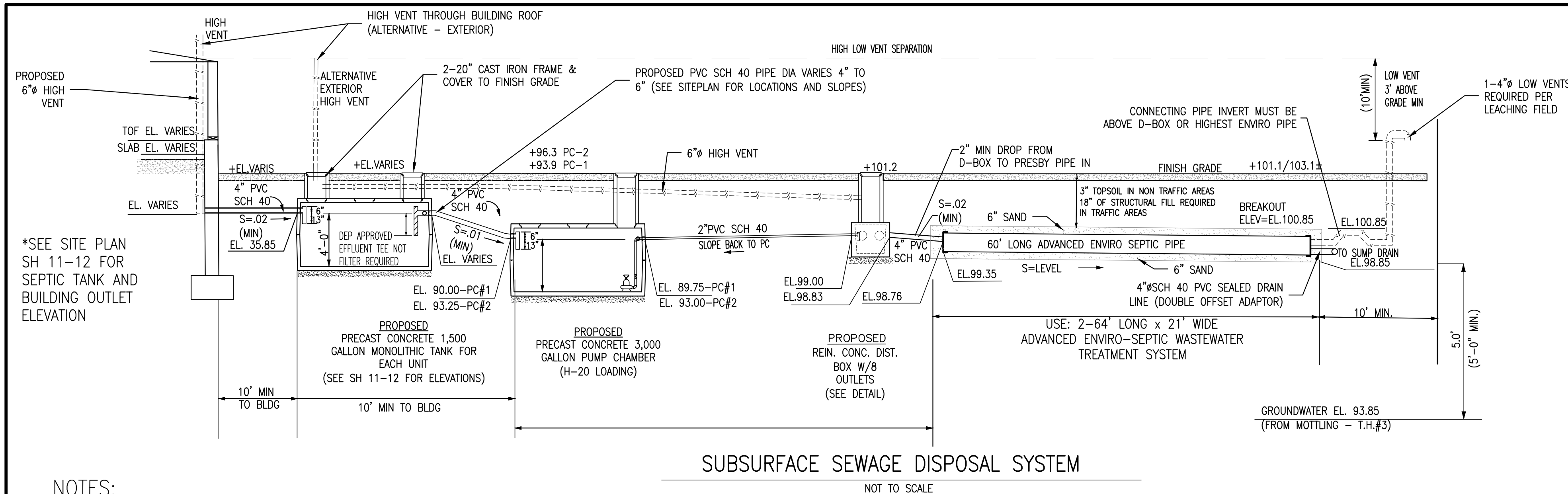


SITE PLAN
 ASSESSORS MAP F9 LOT 11 & 12C
 #0 & 74 CONGRESS STREET
 PEMBROKE, MASSACHUSETTS

PREPARED FOR:
 WHATBARN, LLC
 29 DUCK HILL ROAD
 DUXBURY MA 02332

MARCH 13, 2023
 SCALE: AS NOTED
 JOB No. 22-286

GRADY CONSULTING, L.L.C.
 Civil Engineers, Land Surveyors & Landscape Architects
 71 Evergreen Street, Suite 1, Kingston, MA 02364
 Phone (781) 585-2300



SOIL LOGS			
T.H.1	T.H.2	T.H.3	T.H.4
EL. 97.04	EL. 96.61	EL. 97.69	EL. 95.68
0'-30" A FILL/LOAM	0'-10" A LOAM	0'-18" A LOAM	0'-10" A LOAM
94.54	95.77	96.19	94.84
30'-44" C1 LOAMY SAND	10'-24" B LOAMY SAND	18'-40" B LOAMY SAND	10'-24" B LOAMY SAND
93.37	94.61	94.35	93.68
PERC	24'-54" C1 LOAMY SAND	40'-120" C1 MEDIUM LOAMY SAND	24'-54" C1 LOAMY SAND
92.11	92.11	91.18	91.18
44'-132" C1 MEDIUM SAND	40'-58" P.R.=4 MIN/IN	53'-71" P.R.=4 MIN/IN	54'-120" C1 MEDIUM LOAMY SAND
86.04	86.61	87.69	85.68
D=11'-0" MOTTLING 3'-4" (EL=93.70)	D=10'-0" MOTTLING 3'-4" (EL=93.27)	D=10'-0" MOTTLING 3'-10" (EL=93.85)	D=10'-0" MOTTLING 3'-4" (EL=92.34)

T.H. D-1	T.H. D-2	T.H. D-3	T.H. D-4
EL. 93.00	EL. 97.00	EL. 98.10	EL. 91.24
0'-8" FILL/LOAM		0'-20" FILL	0'-80" FILL
92.33		96.43	84.57
8'-14" A LOAM			
91.83			
14'-20" B LOAMY SAND	0'-120" SANDY FILL	20'-76" C1 SANDY LOAM	80'-110" C1 MEDIUM SAND
91.33		91.76	82.07
20'-72" C1 LOAMY SAND			
87.00			
72'-108" C2 MEDIUM LOAMY SAND		76'-108" C1 MEDIUM TO COARSE SAND	110'-126" C2 LOAMY SAND
84.00		89.10	80.74
D=9'-0" MOTTLING 3'-0" (EL=90.00)	D=10'-0"	D=9'-0" MOTTLING 3'-0" (EL=95.10)	D=10'-6" MOTTLING 9'-6" (EL=81.74)

SEPTIC DESIGN FLOW (NOT DESIGNED FOR GARBAGE GRINDER)

1. DESIGN DAILY FLOW UNITS = 22 BR UNITS = 3,300 GPD

CAPACITY 22 BR X 150 = 3,300 GPD

2. PERC RATE: P.R. = 6 MIN/IN CLASS I

ENVIRO-SEPTIC DESIGN (NOT DESIGNED FOR GARBAGE GRINDER)

*USE 3,300 GPD FOR ENVIRO-SEPTIC DESIGN CRITERIA

TITLE 5 MINIMUM AREA = 3,300 GPD / 0.70 GPD/S.F. = 4,714 S.F.
 PER CERTIFICATION FOR GENERAL USE SECTION 13 TABLE B LTAR = 1.4 GPD/SF

3,300 GPD / 1.4 GPD/SF = 2,357 SF MIN
 USE: 2-64' LONG x 21' WIDE ENVIRO-SEPTIC PIPE LEACHING BED SYSTEM

PROPOSED AREA: 2 X 64 X 21 = 2,688 > 2,357

ENVIRO-SEPTIC PIPE REQUIRED

420 LF FOR FIRST 6 BR + (70 L.F. X 16 BR) = 1,540 LF REQUIRED - 1,560 LF PROPOSED
 2 X 13-60 FT PIPES IN 5 COMBINATION SERIAL SECTIONS EACH

ENVIRO-SEPTIC MAX FLOW PER SERIAL SECTION = 500 GPD LOADING RATE
 2,420 / 500 = 4.8 SERIAL SECTIONS EACH - USE 10 SECTIONS TOTAL

CONVENTIONAL REPLACEMENT AREA

LEACHING FIELDS: P.R. = 6 MIN/IN

TITLE 5 MINIMUM AREA = 2,420 GPD / 0.70 GPD/S.F. = 3,457 S.F.
 USE 8 -100' LONG X 2' WIDE X 2' DEEP LEACHING TRENCHES

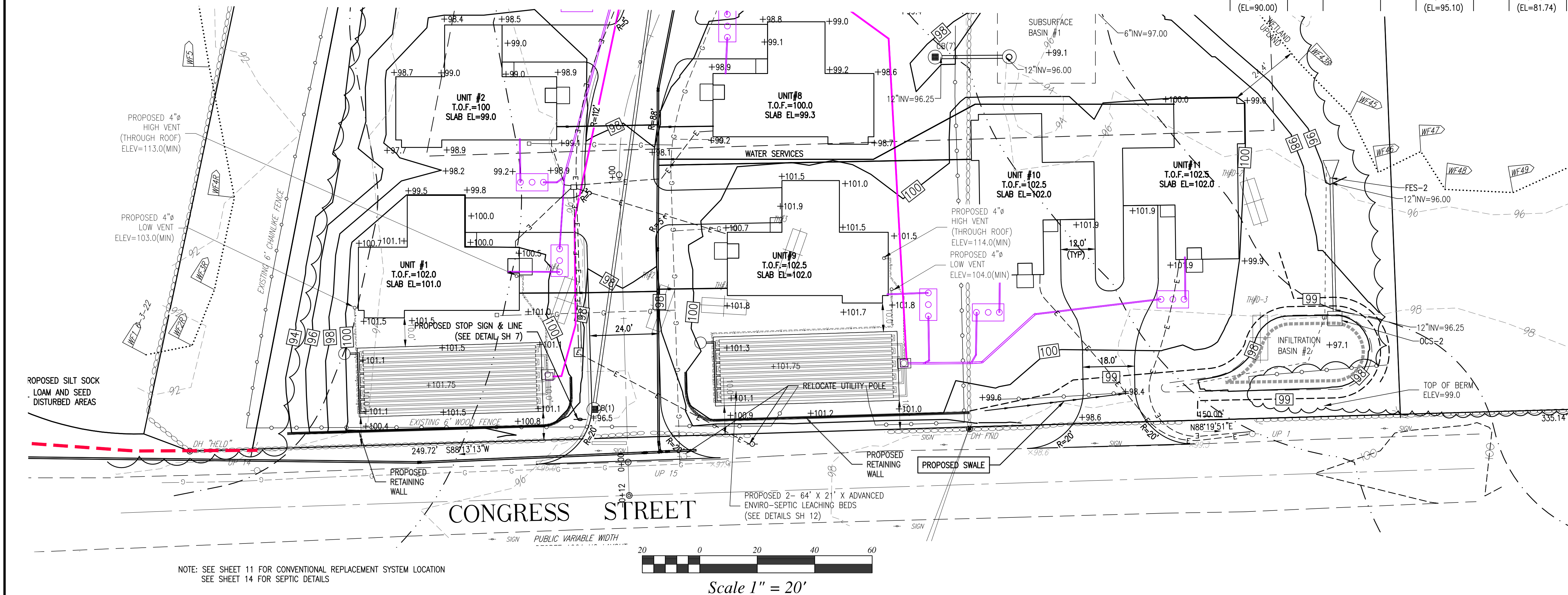
8 X 100 X 6 SF/LF = 4,800 X 0.70 = 3,360 > 3,300 GPD

SEPTIC TANK DESIGN
 PEMBROKE LOCAL REGULATION 15.290 SHARED SYSTEMS
 REQUIRE EACH UNIT TO HAVE THEIR OWN INDIVIDUAL SEPTIC TANK

2 BR X 150 GPD/BR = 300 GPD X 2 = 600: USE 1,500 GAL (MIN)

ALTERNATIVE SYSTEM APPROVAL REFERENCE

THIS SYSTEM HAS BEEN DESIGNED IN ACCORDANCE WITH THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION MODIFIED CERTIFICATION FOR GENERAL USE, PURSUANT TO TITLE V, 310 CMR 15.000, REVISED DECEMBER 17, 2013, MODIFIED OCTOBER 30, 2019, MODIFIED FEBRUARY 2, 2022 AND STANDARD CONDITIONS FOR ALTERNATIVE SOIL ABSORPTION SYSTEMS WITH GENERAL USE CERTIFICATION AND/OR APPROVED FOR REMEDIAL USE REVISED MARCH 5, 2018. A DISCLOSURE NOTICE IN THE DEED TO THE PROPERTY IS REQUIRED FOR SYSTEMS INSTALLED UNDER THE REMEDIAL USE APPROVAL.



SITE PLAN
 ASSESSORS MAP F9 LOT 11 & 12C
 #0 & 74 CONGRESS STREET
 PEMBROKE, MASSACHUSETTS

PREPARED FOR:
 WHITBARN, LLC
 29 DUCK HILL ROAD
 DUXBURY MA 02332

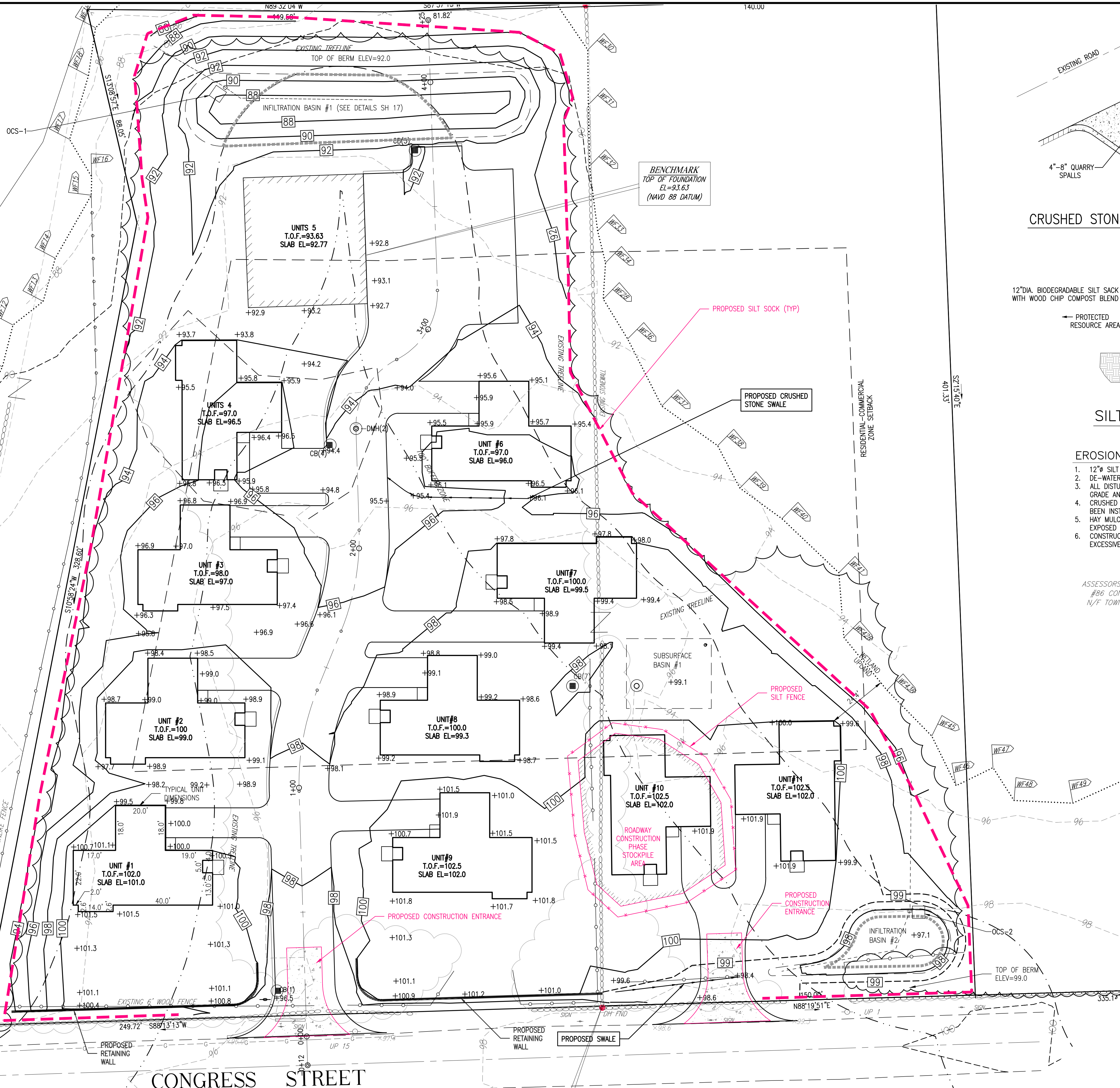
MARCH 13, 2023
 SCALE: AS NOTED
 JOB No. 22-286

GRADY CONSULTING, L.L.C.
 Civil Engineers, Land Surveyors & Landscape Architects
 71 Evergreen Street, Suite 1, Kingston, MA 02364
 Phone (781) 585-2300

ASSESSORS PARCEL F9-23B
#752 WASHINGTON STREET
N/F 130 MAYNARD, LLC
DEED BOOK 50322 PAGE 276

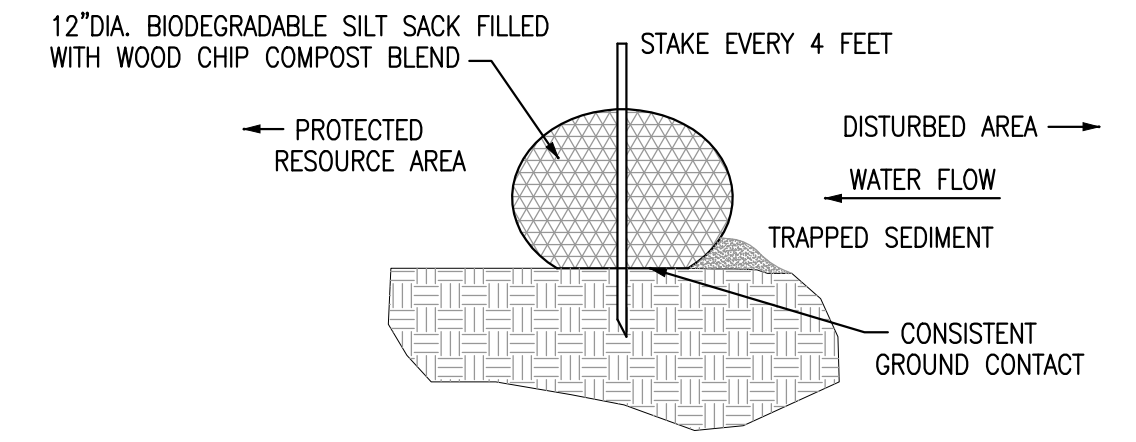
ASSESSORS PARCEL F9-38
#754 WASHINGTON STREET
N/F TOWN OF PEMBROKE
DEED BOOK 7202 PAGE 12

PLAN 895 OF 1967



CRUSHED STONE CONSTRUCTION ENTRANCE
(NOT TO SCALE)

SILT FENCE
(NOT TO SCALE)



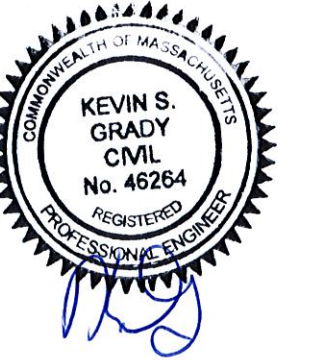
SILT SOCK DETAIL
NOT TO SCALE

EROSION CONTROL:

1. 12" DIA. SILT SOCK OR APPROVED EQUAL TO BE INSTALLED AS SHOWN ON PLAN.
2. DE-WATERING TO BE PUMPED TO DIRT BAG, LOCATIONS AS SHOWN ON PLAN.
3. ALL DISTURBED AREAS, CUT AND FILL AREAS, ARE TO BE BROUGHT TO FINISHED GRADE AND PLANTED PER LANDSCAPE PLAN BY ECCOTERRA DESIGN GROUP LLC.
4. CRUSHED STONE ENTRANCE TO BE MAINTAINED UNTIL PAVEMENT BASE COURSE HAS BEEN INSTALLED
5. HAY MULCH, OR OTHER SUITABLE EROSION PROTECTION, SHALL BE UTILIZED ON ALL EXPOSED SLOPES
6. CONSTRUCTION SITE TO BE SPRINKLED TO CONTROL DUST DURING TIMES OF EXCESSIVE CONSTRUCTION DUST.

ASSESSORS PARCEL F9-12B
#86 CONGRESS STREET
N/F TOWN OF PEMBROKE

Scale 1" = 20'



SITE PLAN

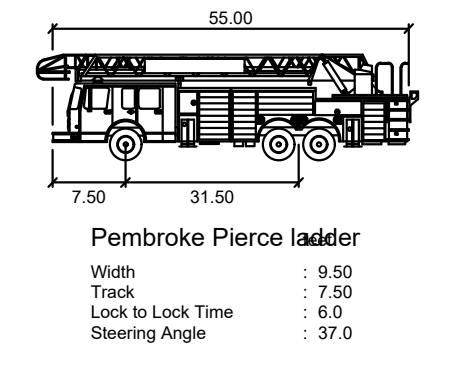
ASSESSORS MAP F9 LOT 11 & 12C
#0 & 74 CONGRESS STREET
PEMBROKE, MASSACHUSETTS

PREPARED FOR:
WHATABARN, LLC
29 DUCK HILL ROAD
DUXBURY MA 02332

MARCH 13, 2023
SCALE: AS NOTED
JOB No. 22-286

GRADY CONSULTING, L.L.C.
Civil Engineers, Land Surveyors & Landscape Architects
71 Evergreen Street, Suite 1, Kingston, MA 02364
Phone (781) 585-2300

EROSION CONTROL



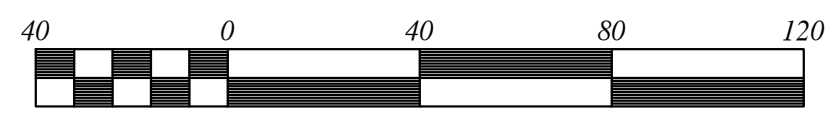
FIRE TRUCK DETAIL
NOT TO SCALE

Pembroke Pierce Ladder	55,000ft
Overall Length	9,500ft
Overall Width	11,000ft
Min. Body Ground Clearance	1,247ft
Track Width	7,500ft
Lock-to-lock time	6.00s
Max Wheel Angle	37.0°

POSTED SPEED LIMIT = 30 MPH

STOPPING SIGHT DISTANCE	REQUIRED	PROP. MAIN DRIVE	PROP DRIVE 2
30 MPH	200 FT	340 FT +	340 FT +
35 MPH	250 FT	340 FT +	340 FT +

INTERSECTION SIGHT DISTANCE	REQUIRED	PROP. MAIN DRIVE	PROP DRIVE 2
30 MPH	335 FT	340 FT +	340 FT +
35 MPH	390 FT	340 FT +	340 FT +



Scale 1" = 40'

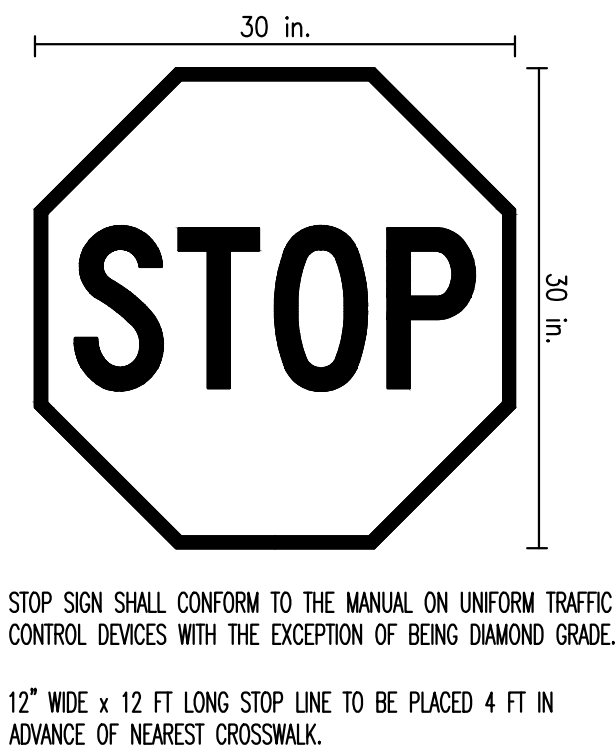
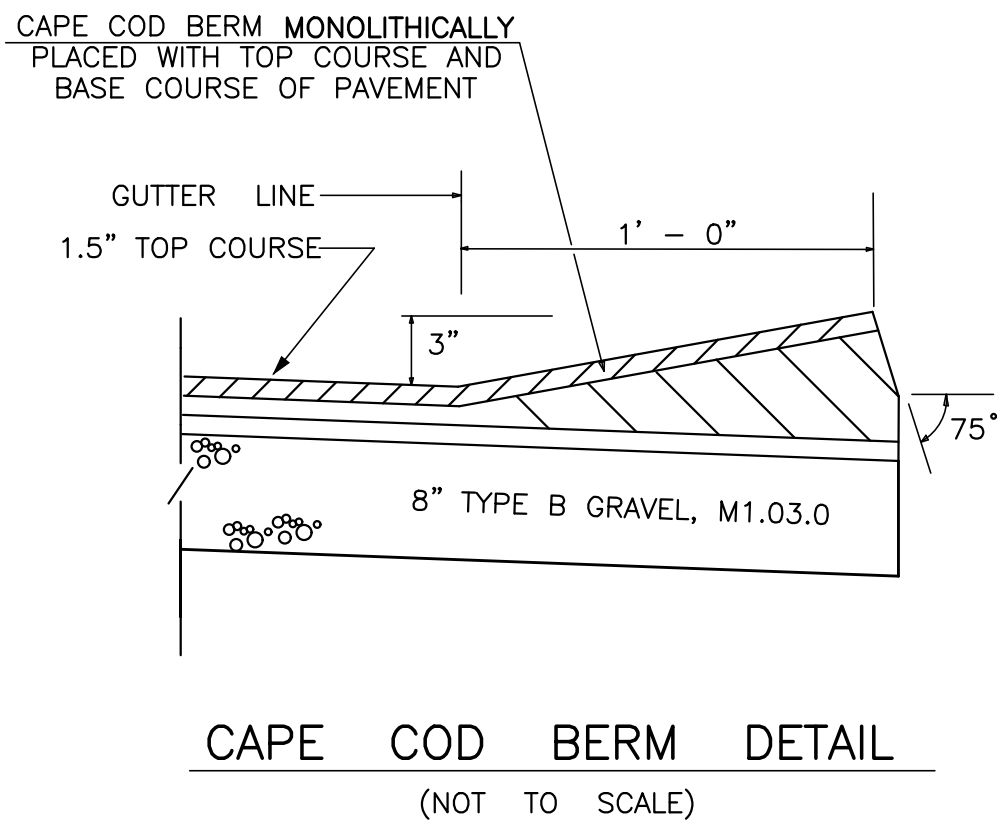
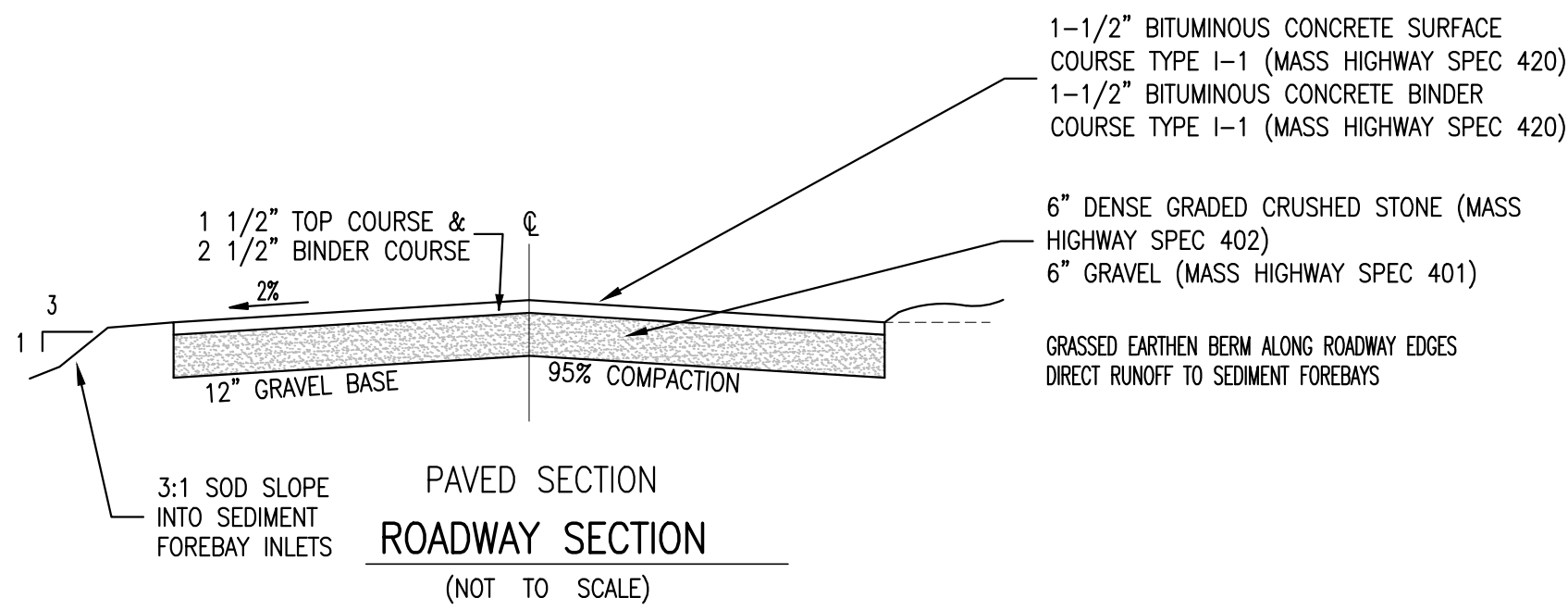


SITE PLAN
ASSESSORS MAP F9 LOT 11 & 12C
#0 & 74 CONGRESS STREET
PEMBROKE, MASSACHUSETTS

PREPARED FOR:
WHATBARN, LLC
29 DUCK HILL ROAD
DUXBURY MA 02332

MARCH 13, 2023
SCALE: AS NOTED
JOB No. 22-286

GRADY CONSULTING, L.L.C.
Civil Engineers, Land Surveyors & Landscape Architects
71 Evergreen Street, Suite 1, Kingston, MA 02364
Phone (781) 585-2300



CONSTRUCTION SEQUENCE:

STAKE LIMIT OF WORK CLEARING
 INSTALL TURTLE EXCLUSION BARRIERS
 INSTALL SILT SOCK EROSION CONTROL BARRIER
 RAZE EXISTING BUILDING
 CLEAR AND GRUB SITE AREAS
 INSTALL CONSTRUCTION APRON & DRIVEWAY BASE
 STAKE BUILDING PARKING LOT & DRAINAGE BASIN LOCATION
 BRING CUT AREAS TO SUBGRADE
 INSTALL SILT FENCE FOR STOCKPILE AREA
 INSTALL FOUNDATION & BEGIN FRAMING
 INSTALL TEMPORARY DRAINAGE AREAS WHERE NECESSARY
 INSTALL ELECTRIC, GAS & WATER UTILITIES
 PLACE FILL MATERIAL TO BASE COURSE
 CONSTRUCT DRAINAGE BASINS
 COMPLETE FINISH GRADING
 INSTALL ENERGY DISSIPATORS AND CONNECT ALL OUTLETS
 COMPLETE BUILDING CONSTRUCTION
 INSTALL/RAISE MANHOLE STRUCTURES TO FINISH GRADE DRAIN, SEWER, LOAM & SEED DISTURBED AREAS, MULCH AND PLANT RAIN GARDEN & LANDSCAPE AREAS
 INSTALL FINISH PAVEMENT COAT
 SCHEDULE FINAL SITE INSPECTION FOR CERTIFICATION
 REMOVE SEDIMENT CONTROLS

GENERAL:

1. THE ACCURACY OF EXISTING UTILITY LOCATIONS, DIMENSIONS AND LINES IS FROM EXISTING INFORMATION OF RECORD AND IS NOT WARRANTED. CONTRACTOR TO VERIFY PRIOR TO INITIATING CONSTRUCTION.
2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL SECURE ALL NECESSARY STATE, MUNICIPAL AND OTHER UTILITY PERMITS AND VERIFY THE PROPOSED LOCATIONS OF UTILITIES WITH UTILITY COMPANIES.
3. CONTRACTOR SHALL NOTIFY "DIG SAFE" (1-800-322-4844) AT LEAST 4 DAYS PRIOR TO CONSTRUCTION.
4. UNDERGROUND UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE APPROPRIATE DEPARTMENT OR COMPANY.
5. ALL CONSTRUCTION SHALL CONFORM TO TOWN OF PEMBROKE PLANNING BOARD RULES AND REGULATIONS, DPW SPECIFICATIONS, CONSERVATION COMMISSION REGULATIONS AND ALL OTHER APPLICABLE CODES.
6. ALL STUMPS SHALL BE DISPOSED OFF SITE.
7. CLEANUP – UPON COMPLETION OF ALL WORK ON THE GROUND, THE DEVELOPER SHALL REMOVE FROM THE STREETS AND ADJOINING PROPERTY, ALL TEMPORARY STRUCTURES AND ALL SURPLUS MATERIAL AND RUBBISH WHICH MAY HAVE ACCUMULATED DURING CONSTRUCTION, AND SHALL LEAVE THE WORK IN A NEAT AND ORDERLY CONDITION. DURING CONSTRUCTION, THE DEVELOPER SHALL KEEP THE SITE FREE OF RUBBISH WHICH MAY BE CARRIED BY WIND OR RAIN OFF THE SITE TO ABUTTING PROPERTIES OR ONTO PUBLIC WAYS.

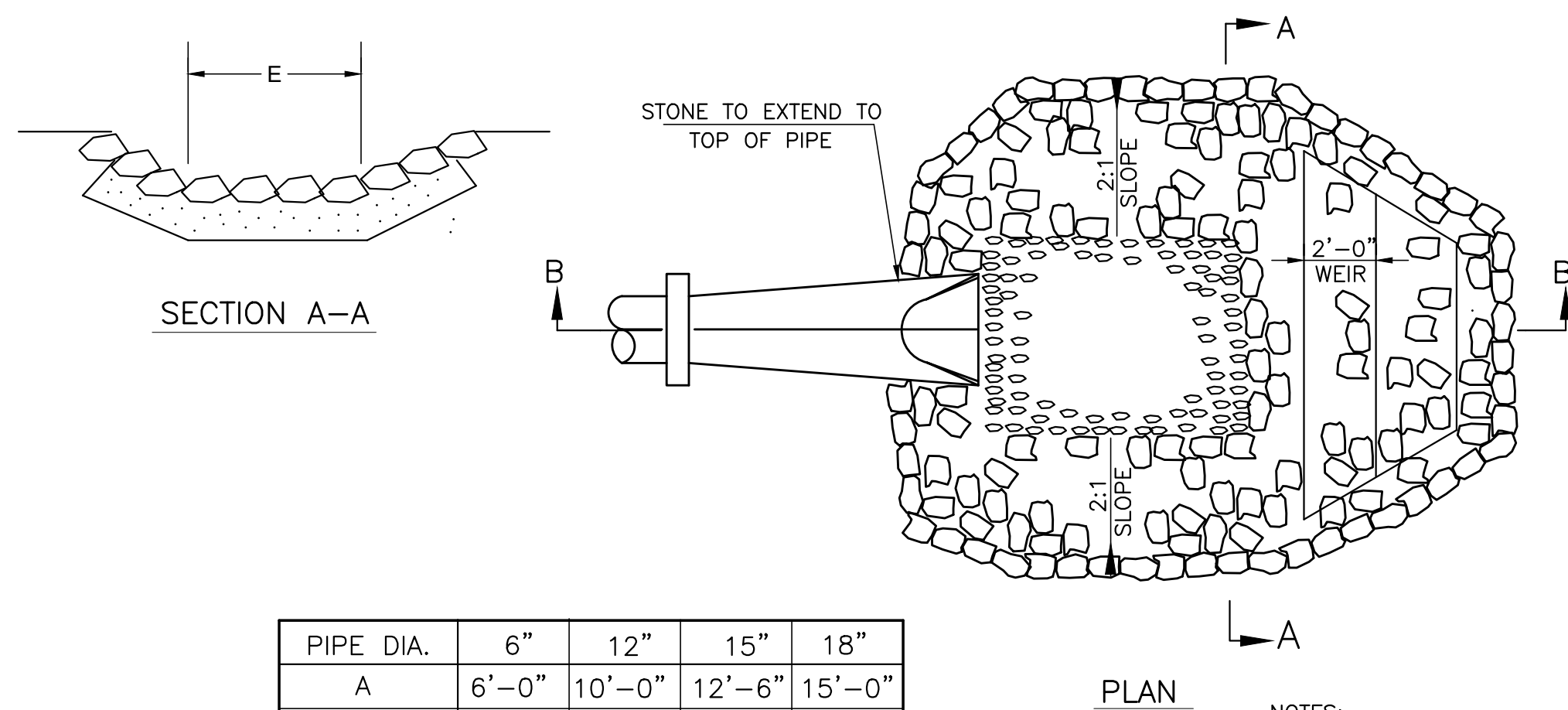
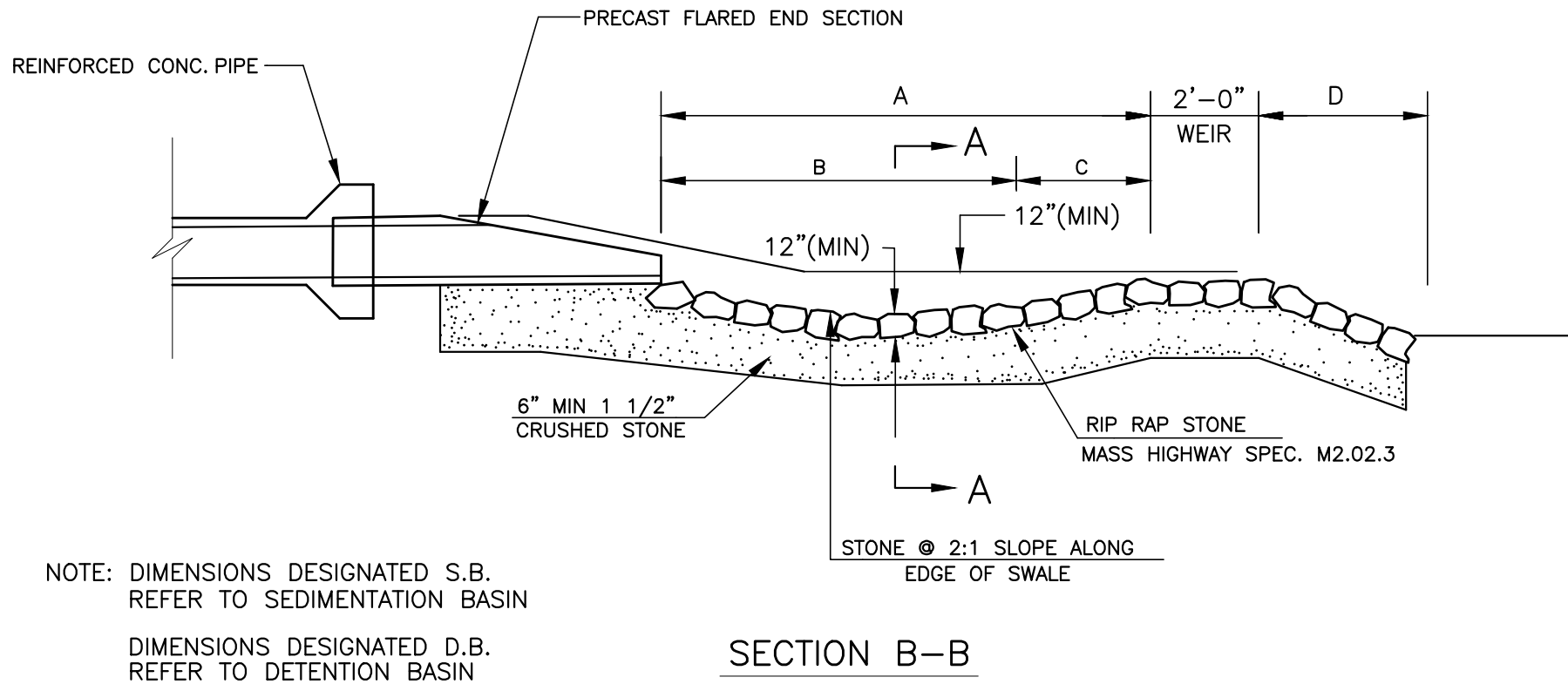
DRAINAGE SYSTEM NOTES:

1. CONTACT THE DESIGN ENGINEER FOR APPROVAL OF ANY CONSTRUCTION PHASE CHANGES.
2. CONTRACTOR TO AVOID SOILS COMPACTION WITHIN DRAINAGE SYSTEM AREA. CONTRACTOR SHOULD AVOID MACHINERY OR VEHICLE USE OVER STORM WATER SYSTEMS.

Table 1
Minimum Cover Requirements for ADS N-12®, N-12 ST, and N-12 WT (per AASHTO) with AASHTO H-25 or HS-25 Load

Inside Diameter, ID, in.(mm)	Minimum Cover ft. (m)	Inside Diameter, ID, in.(mm)	Minimum Cover ft. (m)
4 (100)	1 (0.3)	24 (600)	1 (0.3)
6 (150)	1 (0.3)	30 (750)	1 (0.3)
8 (200)	1 (0.3)	36 (900)	1 (0.3)
10 (250)	1 (0.3)	42 (1050)	1 (0.3)
12 (300)	1 (0.3)	48 (1200)	1 (0.3)
15 (375)	1 (0.3)	54 (1350)	2 (0.6)
18 (450)	1 (0.3)	60 (1500)	2 (0.6)

Note: Minimum covers presented here were calculated assuming Class III backfill material compacted to 90% standard Proctor density around the pipe and a minimum of 6-inches (0.15m) structural backfill over the pipe crown, as recommended in Section 5 of the Drainage Handbook, with an additional layer of compacted traffic lane sub-base for a total cover as required. In shallow traffic installations, especially where pavement is involved, a good quality compacted material to grade is required to prevent surface settlement and rutting.



PIPE DIA.	6"	12"	15"	18"
A	6'-0"	10'-0"	12'-6"	15'-0"
B	4'-6"	7'-6"	9'-6"	11'-3"
C	1'-6"	2'-6"	3'-0"	3'-9"
D	2'-0"	3'-0"	4'-0"	4'-6"
E	2'-0"	4'-0"	5'-0"	6'-0"

- NOTES:
1. STONE FOR EROSION CONTROL PADS SHALL COMPLY WITH MDPW MATERIAL SPEC M 2.02.3
 2. STONE BERM FOR SILT TRAP SHALL BE CONSTRUCTED AROUND SIDES OF EROSION CONTROL PADS

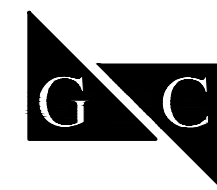


SITE PLAN

ASSESSORS MAP F9 LOT 11 & 12C
 #0 &74 CONGRESS STREET
 PEMBROKE, MASSACHUSETTS

PREPARED FOR:
 WHATABARN, LLC
 29 DUCK HILL ROAD
 DUXBURY MA 02332

MARCH 13, 2023
 SCALE: AS NOTED
 JOB No. 22-286



GRADY CONSULTING, L.L.C.

Civil Engineers, Land Surveyors & Landscape Architects
 71 Evergreen Street, Suite 1, Kingston, MA 02364
 Phone (781) 585-2300



Maximum Cover

Wall thrust generally governs the maximum cover a pipe can withstand and conservative maximum cover heights will result when using the information presented in the *Structures* section (Section 2) of the Drainage Handbook.

The maximum burial depth is highly influenced by the type of backfill and level of compaction around the pipe. General maximum cover limits for ADS N-12, N-12 ST, N-12 WT pipe, (ASTM F2306 and AASTHO M252/M294 Type S pipes) are shown in Table 3 for a variety of backfill conditions.

Table 3 was developed assuming pipe is installed in accordance with ASTM D2321 and the *Installation* section (Section 5) of the Drainage Handbook. Additionally, the calculations assume zero hydrostatic load, incorporate the maximum safety factors represented in Structures section of the Drainage Handbook, use material properties consistent with the expected performance characteristics for N-12 (per ASTM F2306) materials as shown in Table 2 below, and assume the native soil is of adequate strength and is suitable for installation. For applications requiring fill heights greater than those shown in Table 3 or where hydrostatic pressure due to groundwater is present, contact an ADS engineering representative.

Figure 1
ADS N-12®, N-12 ST, and N-12 WT (per AASHTO) Trench Detail Under Pavement

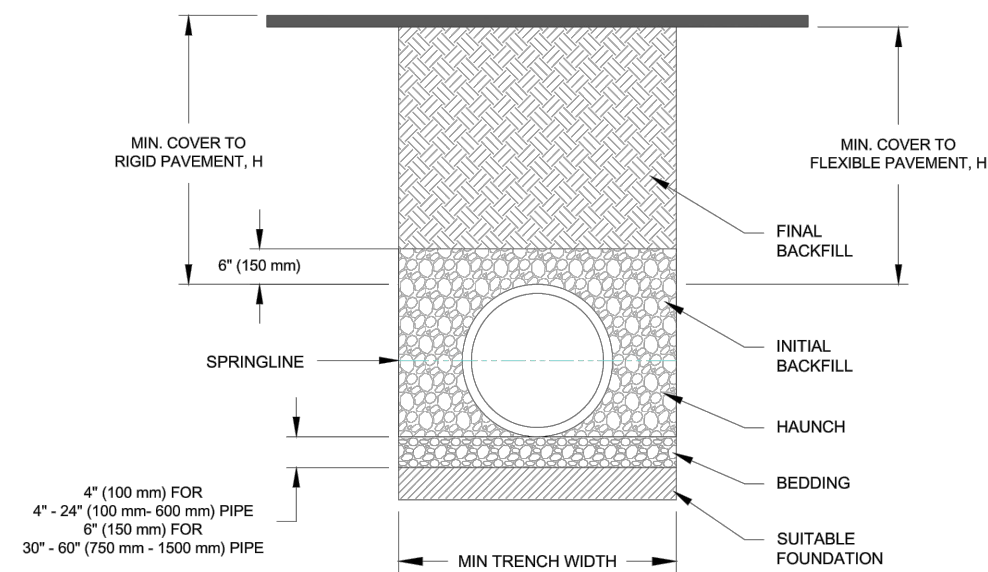
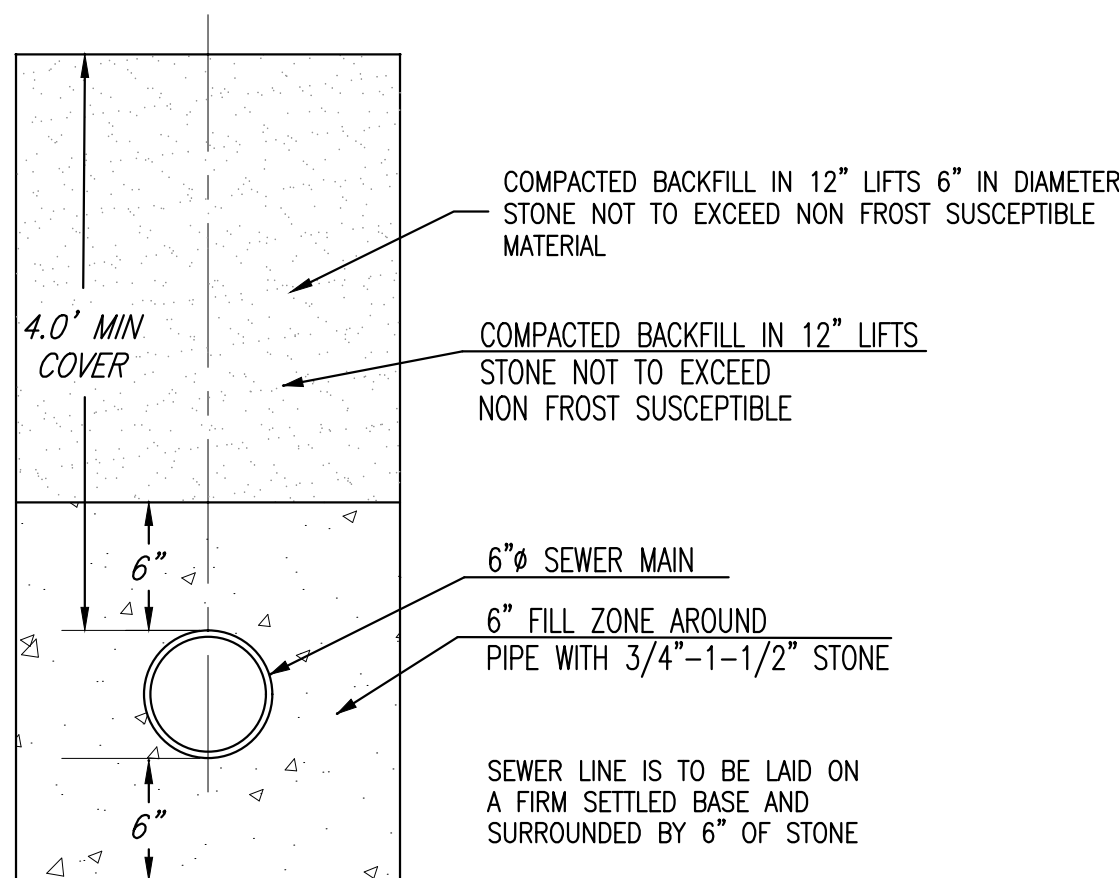


Table 2
ADS N-12 (per AASHTO) Mechanical Properties

Cell Class	Factored Compressive Strain (%)	Tension Strain (%)	Initial Fu (psi)	Initial E (psi)	75-Year Fu (psi)	75-Year E (psi)
ASTM D3350 435400C	4.1	5.0	3,000	110,000	900	21,000

TYPICAL SEWER TRENCH DETAIL
 (NOT TO SCALE)



SEWER CONNECTION NOTES:

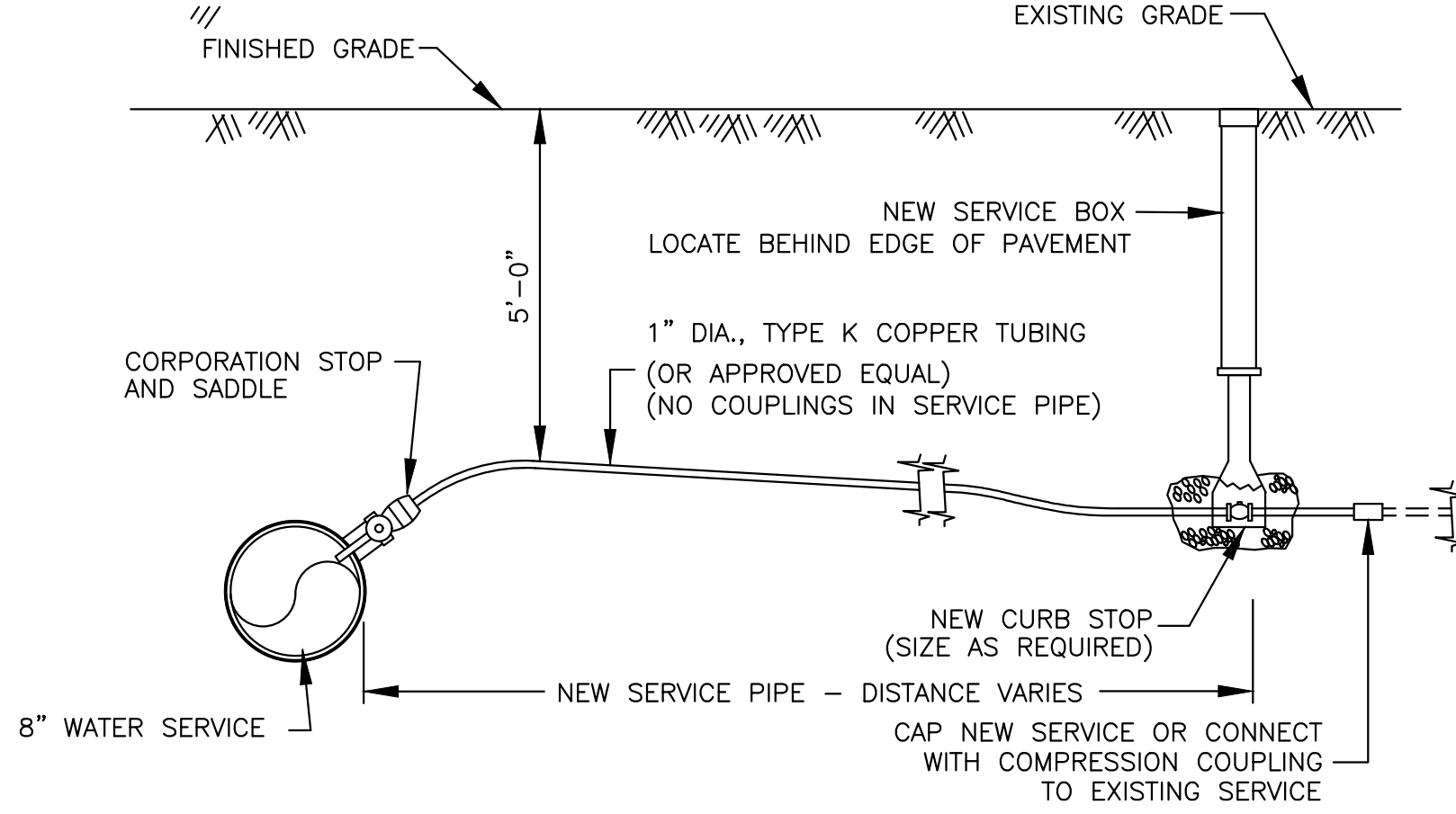
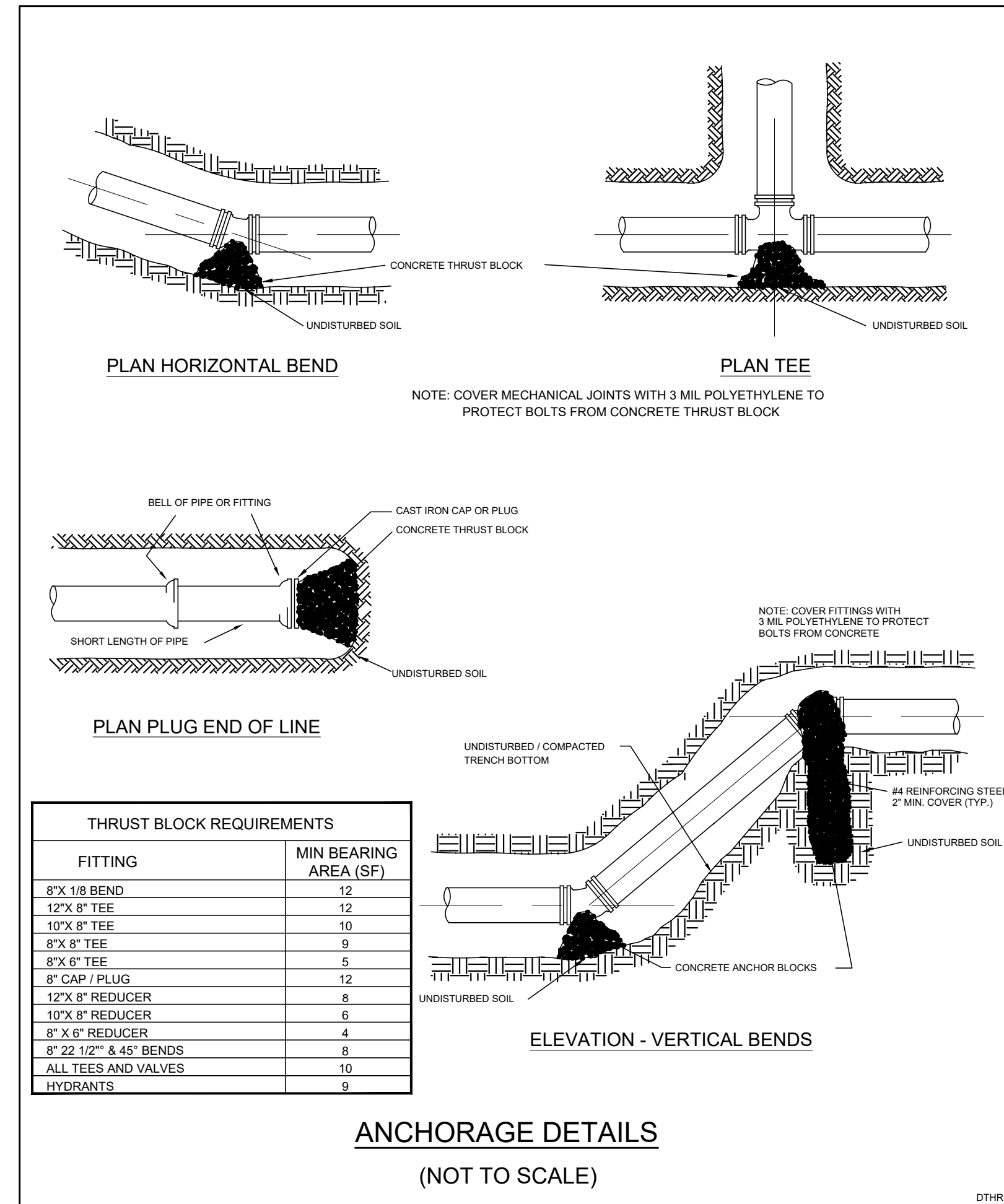
1. THE CONNECTION AT THE EXISTING SEWER LINE IS TO BE AS DIRECTED BY THE BOARD OF HEALTH
2. CONSTRUCTION MATERIALS AND METHODS SHALL CONFORM TO TOWN OF PEMBROKE AND STATE OF MASSACHUSETTS STANDARDS AND REQUIREMENTS.
3. DE-WATERING OF TRENCH, IF REQUIRED, SHOULD BE CONDUCTED IN CONFORMITY WITH LOCAL REGULATIONS.
4. PRIOR TO ANY CONSTRUCTION, A STREET OPENING PERMIT AND A SEWER CONSTRUCTION PERMIT MUST BE OBTAINED BY THE CONTRACTOR FROM THE TOWN OF PEMBROKE D.P.W. (UNLESS SEWER CONNECTION IS NOT IN R.O.W.)
5. SEWER MAINS TO BE PVC SCH 40 OR AS OTHERWISE NOTED.
6. CONTRACTOR SHALL NOTIFY THE TOWN OF PEMBROKE BOARD OF HEALTH OF TIMING OF CONSTRUCTION
7. SURPLUS EXCAVATION MATERIAL TO BE HAULED OFF AND LEGALLY DISPOSED OF BY CONTRACTOR.
8. THE CONTRACTOR MUST INSTALL DETECTABLE "GREEN" MARKING TAPE, APPROXIMATELY ONE (1) FOOT ABOVE THE PROPOSED SEWER MAIN FOR ITS ENTIRE LENGTH.
9. THERE SHALL BE NO FIELD CHANGES TO THIS PLAN WITHOUT PRIOR NOTIFICATION OF BOTH THE DESIGN ENGINEER AND THE TOWN OF PEMBROKE SEWER DIVISION.
10. THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO BACKFILLING SO THAT AN "AS-BUILT" PLAN MAY BE COMPILED AND SUBMITTED TO THE PEMBROKE BOARD OF HEALTH.
11. ALL INTERIOR PLUMBING CHANGES SHALL BE MADE BY A LICENSED PLUMBER AND IN FULL COMPLIANCE WITH ALL STATE AND LOCAL PLUMBING CODE REQUIREMENTS.
12. CONTRACTOR IS TO RESTORE TO ORIGINAL CONDITION ANY UTILITIES OR IMPROVEMENTS DAMAGED DURING CONSTRUCTION INCLUDING LOAMING AND SEEDING OF LAWNS.
13. CONTRACTOR TO VERIFY EXISTING SEWER ELEVATIONS.

WATER SUPPLY NOTES

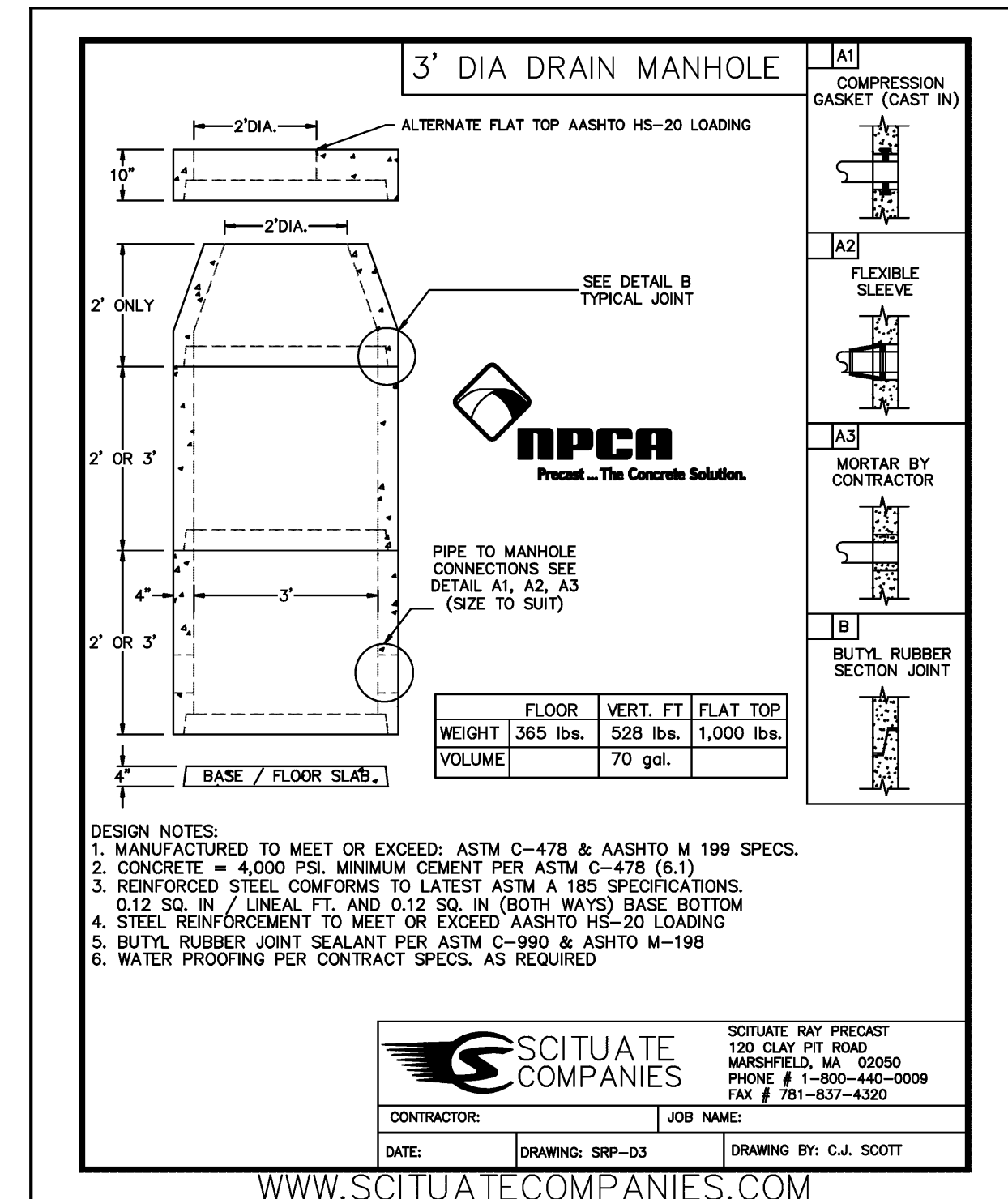
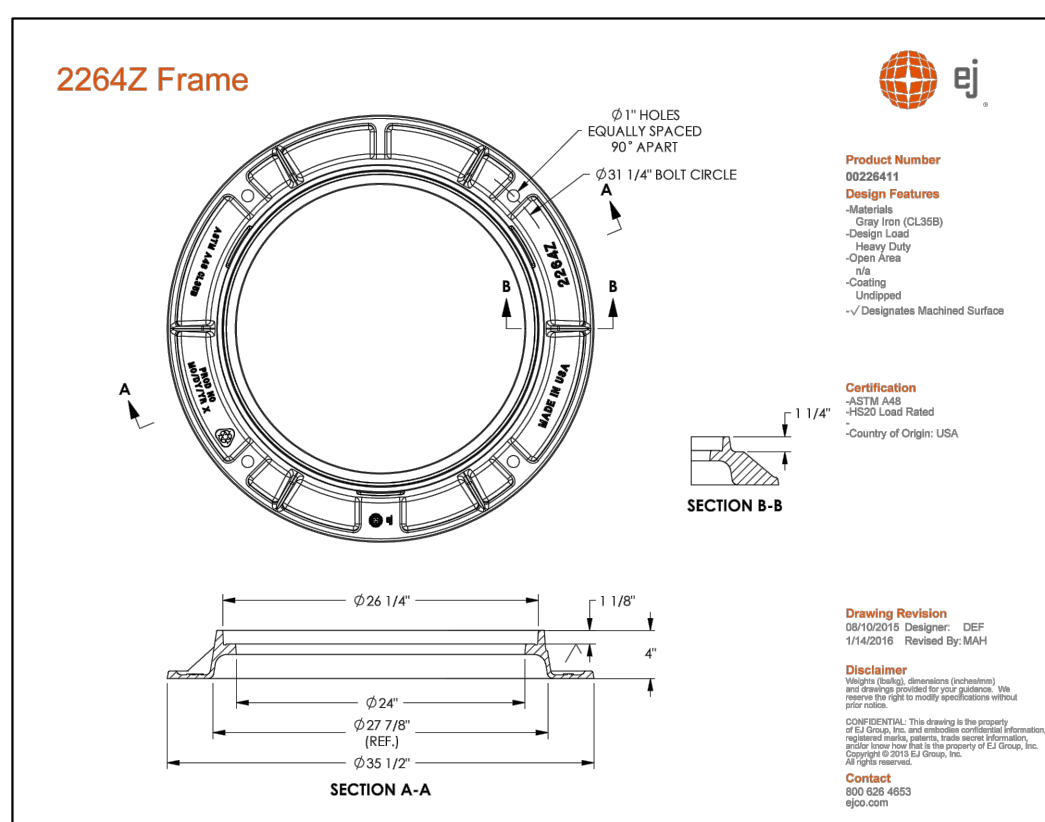
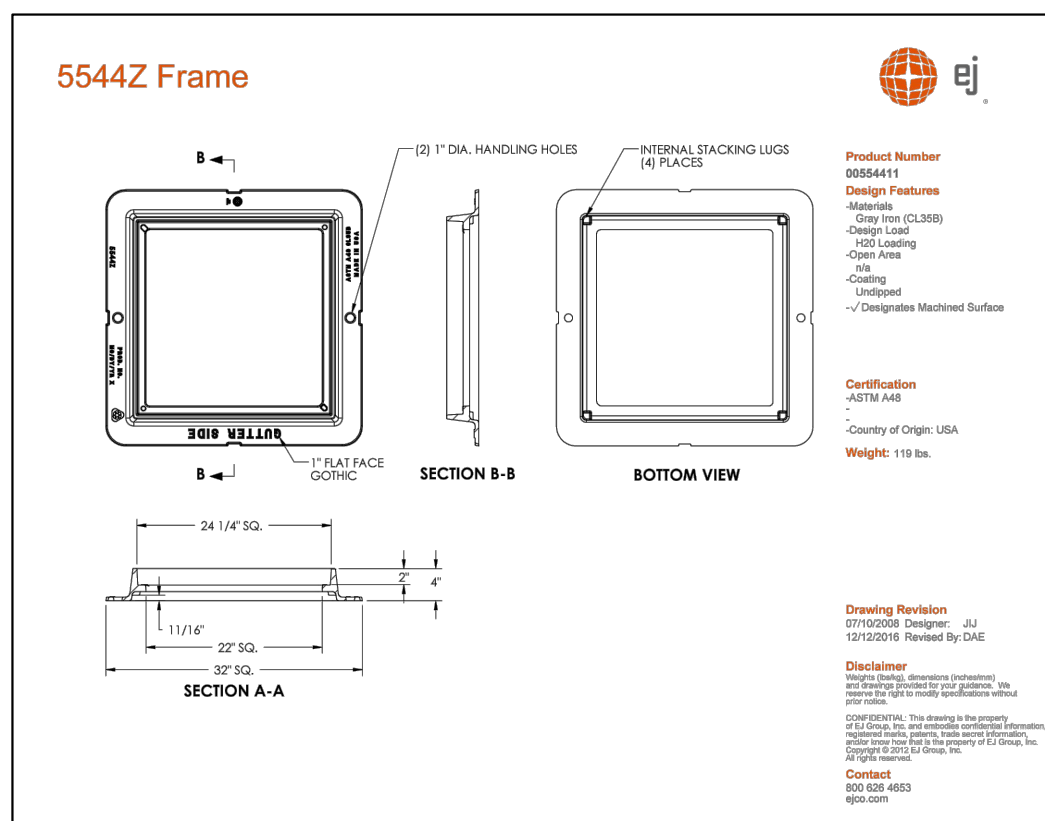
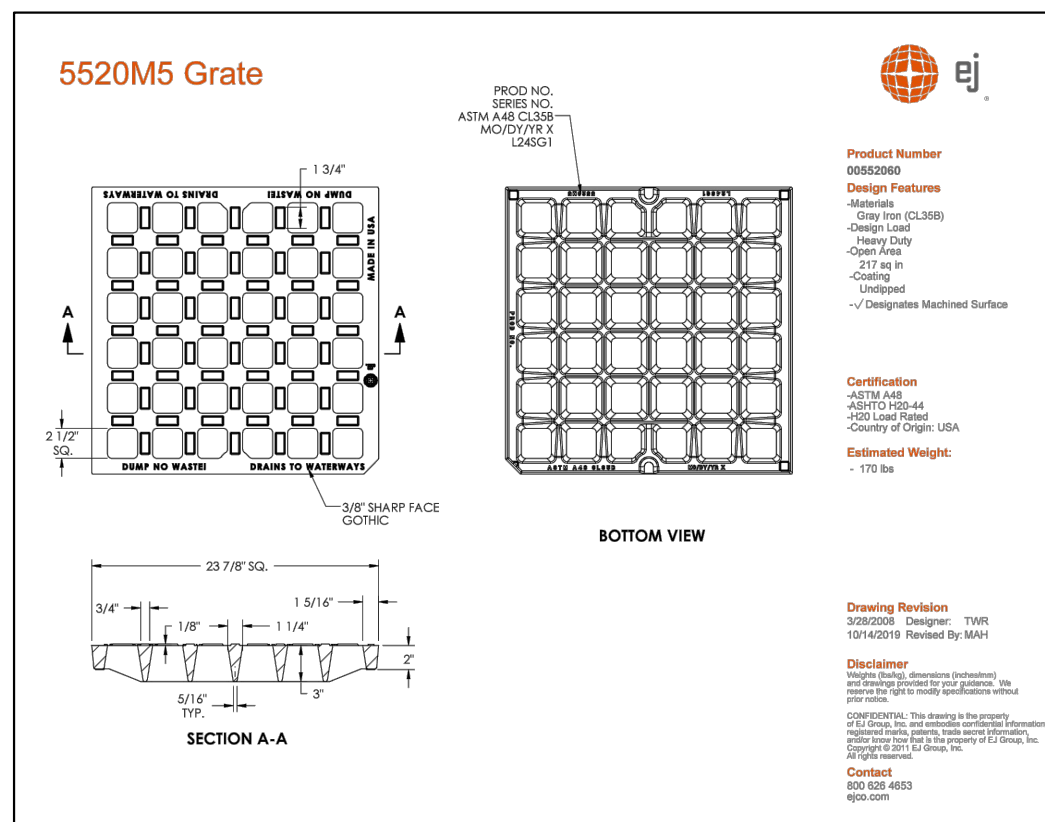
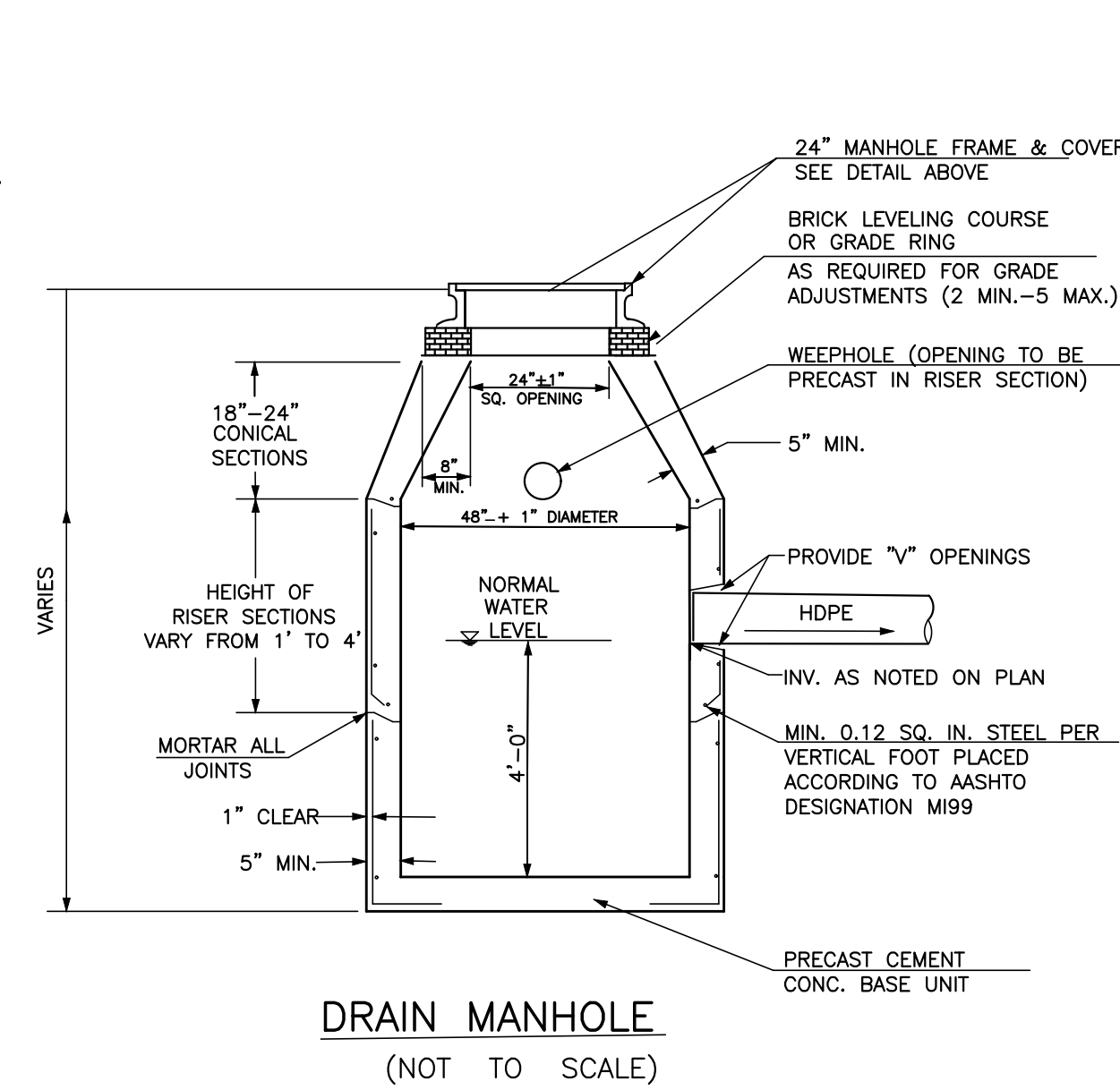
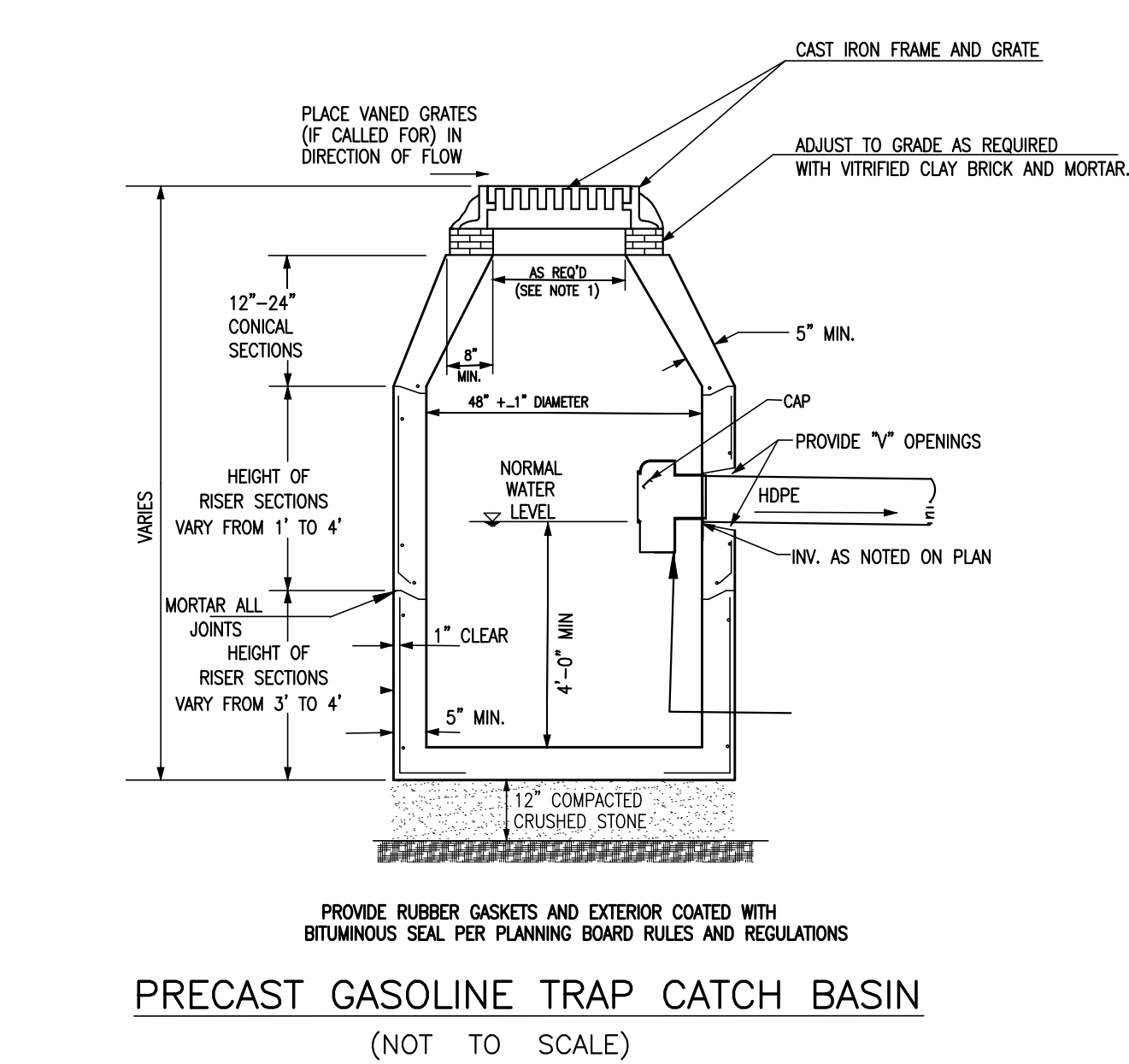
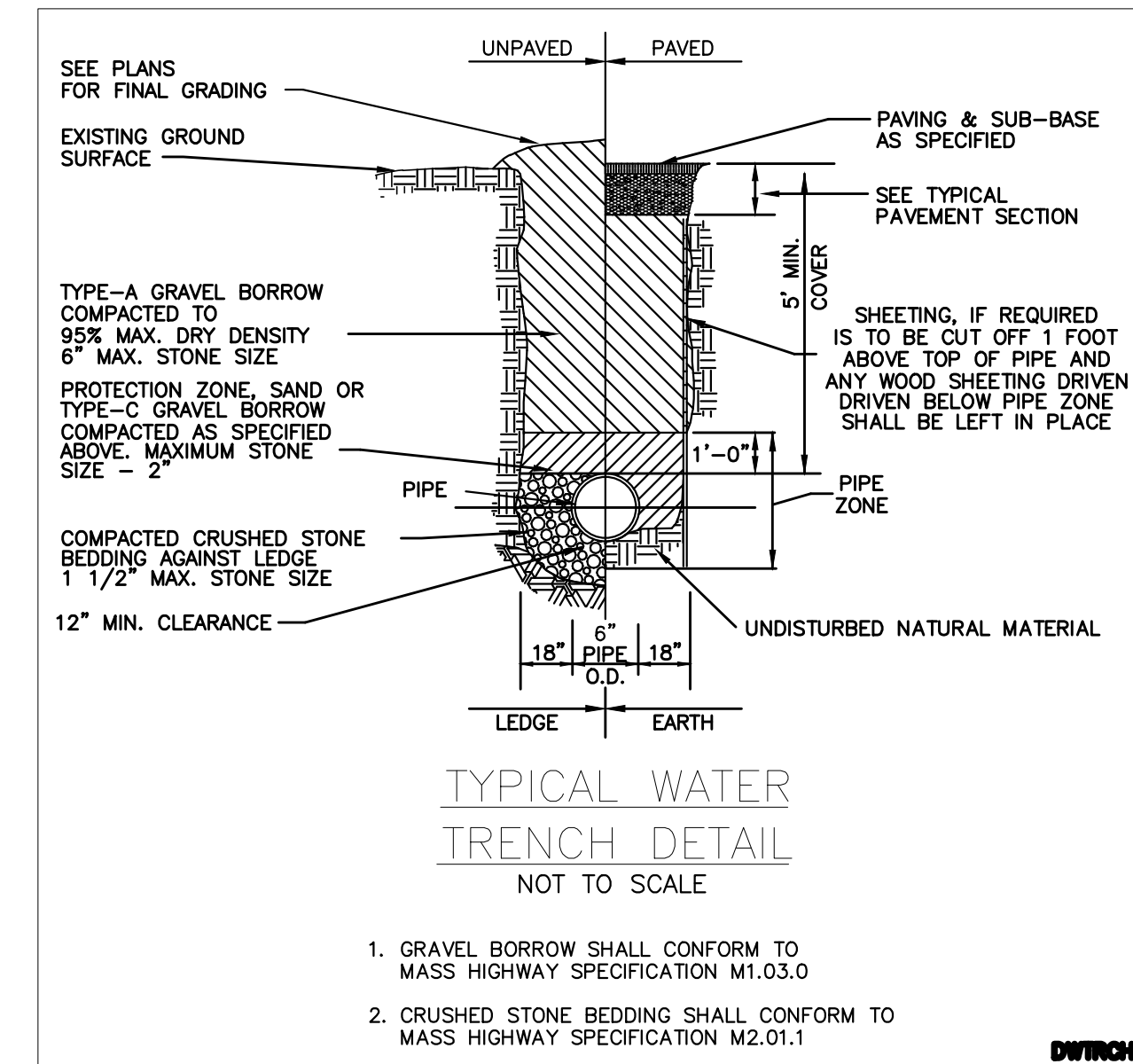
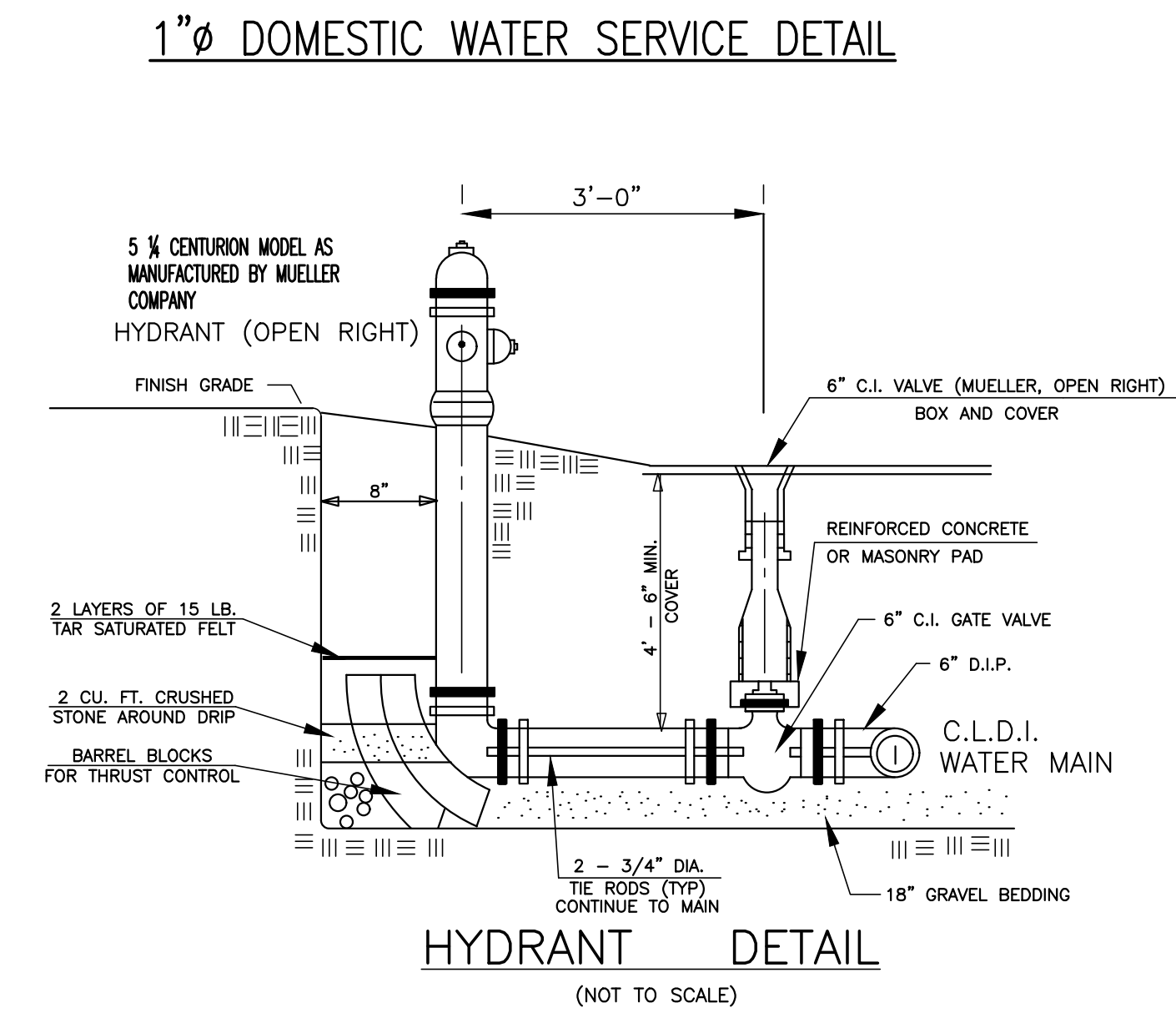
1. THERE SHALL BE NO PHYSICAL CONNECTION BETWEEN A PUBLIC OR PRIVATE POTABLE WATER SUPPLY SYSTEM AND A SEWER, OR APPURTENANCE THERETO WHICH WOULD PERMIT THE PASSAGE OF ANY WASTEWATER OR POLLUTED WATER INTO THE POTABLE SUPPLY.
2. THE SEWER MAY BE LAID CLOSER THAN 10 FEET TO A WATER MAIN PROVIDED THAT IT IS
 - A. LAID IN A SEPARATE TRENCH, AND
 - B. THE ELEVATION OF THE TOP(CROWN) OF THE SEWER IS AT LEAST 18 INCHES BELOW THE BOTTOM(INVERT) OF THE WATER MAIN.
3. WHENEVER SEWERS MUST CROSS UNDER WATER MAINS, THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE TOP OF THE SEWER IS AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN. WHEN THE ELEVATION OF THE SEWER CANNOT BE VARIED TO MEET THIS REQUIREMENT, THE WATER MAIN SHALL BE RELOCATED TO PROVIDE THIS SEPARATION OR RECONSTRUCTED WITH MECHANICAL JOINT PIPE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE SEWER. ONE FULL LENGTH OF WATER MAIN SHOULD BE CENTERED OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE.
4. WHEN IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION AS STIPULATED ABOVE, BOTH THE WATER MAIN AND SEWER SHALL BE CONSTRUCTED OF MECHANICAL JOINT CAST IRON PIPE AND SHALL BE PRESSURE TESTED TO ASSURE WATER TIGHTNESS.

SPECIFICATIONS

1. ALL WATER MAIN PIPE SHALL BE MANUFACTURED IN ACCORDANCE WITH A WW A C 151. PIPE SHALL BE DUCTILE IRON, THICKNESS CLASS 52. THE INSIDE OF THE PIPE SHALL BE GIVEN A CEMENT LINING AND ASPHALTIC SEAL COAT IN ACCORDANCE WITH A WW A C 104.
2. ALL INSTALLED WATER PIPE SHALL HAVE FIVE FEET OF COVER MEASURED AT FINAL GRADE.
3. GENERALLY, NO PIPE SMALLER THAN EIGHT INCHES IN INTERNAL DIAMETER SHALL BE UTILIZED FOR WATER MAINS CONNECTED TO A HYDRANT.
4. ALL FITTINGS SHALL BE MECHANICAL JOINT, CONFORM TO THE REQUIREMENTS OF A WW A CL 10 OR C153, AND BE CAPABLE OF WITHSTANDING 250 PSI. "MEG-A-LUG" SERIES 100 OR APPROVED EQUAL.
5. TAPPING SLEEVES SHALL HAVE STAINLESS STEEL WRAP TEES.
6. ALL VALVES AND FITTINGS SHALL BE BRACED AGAINST MOVEMENT UTILIZING APPROVED JOINT RESTRAINT SYSTEMS (I.E. MEGALUG/FITTINGS SERIES 1100 OR APPROVED EQUAL).
7. WATER VALVES SHALL BE RESILIENT WEDGE TYPE GATE VALVES MANUFACTURED TO AWWA C509 STANDARDS. VALVES SHALL OPEN RIGHT (CLOCKWISE). ALL VALVES THAT ARE 16 INCHES IN SIZE OR GREATER, SHALL BE BUTTERFLY VALVES. BUTTERFLY VALVES SHALL BE IN ACCORDANCE WITH "RUBBER SEATED BUTTERFLY VALVES", AWWA DESIGNATION C504. ALL GATE VALVES AND BUTTERFLY VALVES SHALL BE MANUFACTURED BY MUELLER CO.
8. GATE BOXES SHALL BE SET PLUMB AND FLUSH WITH THE GROUND SURFACE AND CONFORM TO A WWA C500. GATE VALVE BOXES SHALL BE EQUIPPED WITH PAVEMENT FLANGE.
9. NO PIPE OR FITTING SHALL BE BACKFILLED BEFORE INSPECTION BY A PERSON DESIGNATED BY THE WATER DEPARTMENT.
10. HYDRANTS SHALL CONFORM TO THE REQUIREMENTS OF AWWA C502. HYDRANTS SHALL BE SET PLUMB, WITH THE STEAMER NOZZLE FACING THE ROAD. THE AREA AROUND THE DRIPS SHALL BE FILLED WITH CLEAN STONE. APPROVED JOINT RESTRAINT FITTINGS SHALL BE UTILIZED FOR HYDRANT INSTALLATION. HYDRANTS SHALL BE PLACED SO THAT THEY ARE WITHIN ONE FOOT OF THE PROPERTY LINE AND SHALL BE THE 5 1/4 CENTURION MODEL AS MANUFACTURED BY MUELLER COMPANY.
11. THE COMPLETED WATER MAIN SHALL BE CHLORINATED BY USING ONE PART SOLUTION OF AVAILABLE CHLORINE IN SUCH VOLUME THAT THE RATE OF DOSAGE OF THE WATER CONTENT OF THE MAIN SHALL BE AT LEAST FIFTY PARTS PER MILLION AVAILABLE CHLORINE. THE CONTACT PERIOD SHALL BE AT LEAST TWENTY-FOUR HOURS, LONGER IF THE TEST FOR RESIDUAL CHLORINE INDICATES THAT IT IS NECESSARY FOR PROPER DISINFECTION. WATER MAIN DISINFECTION SHALL BE IN ACCORDANCE WITH AN APPROVED A WW A METHOD FOR DISINFECTING WATER MAINS. THE DEPARTMENT WILL TAKE BACTERIA SAMPLES AND PERFORM ANALYSIS. THE CUSTOMER SHALL BE RESPONSIBLE FOR FLUSHING AND PRESSURE TESTING NEW WATER MAIN. NO WATER MAIN SHALL BE PLACED INTO SERVICE UNTIL THE DEPARTMENT HAS GIVEN APPROVAL.
12. ALL DAMAGES OF WHATEVER NATURE RESULTING FROM THE WORK OR RESULTING TO THE WORK, FROM WHATEVER CAUSE SHALL BE BORNE AND SUSTAINED BY THE CONTRACTOR.
13. DAMAGE TO ANY EXISTING UNDERGROUND STRUCTURE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. PRESSURE TESTS OF THE NEW WATER MAIN SHALL BE CARRIED OUT AT 150 POUNDS GAUGE FOR ONE HOUR. LEAKAGE TESTS SHALL BE PERFORMED IF THE PRESSURE DROPS AFTER THE ONE HOUR TIME PERIOD. THE RATE OF LEAKAGE SHALL NOT EXCEED ONE GALLON PER DAY PER LINEAR FOOT OF JOINT.
15. THE CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR AFTER THE COMPLETION OF STRENGTH AND LEAKAGE TESTS.
16. IN THE CASE WHERE THE TOWN OF PEMBROKE SUPPLIES WATER TO INDIVIDUAL HOUSES IN A DEVELOPMENT AND AFTER ALL THE FOREGOING CONDITIONS HAVE BEEN MET, AND BEFORE THE TOWN ACCEPTS THE ROAD OR ROADS AND/OR UTILITIES, THE OWNER OF THE DEVELOPMENT SHALL PAY, AT COST, FOR- ANY REPAIRS TO THE MAINS AND APPURTENANCES WHICH MAY BECOME NECESSARY.
17. THE WATER MAIN SHOULD HAVE A MINIMUM OF 18" OF CLEARANCE BETWEEN ANY UTILITIES WHETHER RUNNING PARALLEL OR CROSSING A UTILITY.
18. THE WATER MAIN, FITTINGS AND HYDRANTS LATERALS SHALL BE POLYETHYLENE ENCASED WITH V-BIO IN ANY INSTANCE THE WATER SYSTEM APPURTENANCES MAY BE INSTALLED WITHIN THE SEASONAL HIGH GROUND WATER.



1. SERVICES SHALL CONSIST OF COPPER TUBING, A CORPORATION COCK AT THE MAIN, A CURB STOP AND CURB BOX AT THE PROPERTY LINE AND AN INSIDE VALVE AND METER ON THE OWNERS PROMISES.
2. ALL SERVICE PIPE SHALL BE OF TYPE "K" COPPER TUBING, THE SIZE TO BE DETERMINED BY THE DEPARTMENT.
3. SERVICE PIPE SHALL BE PLACED FIVE FEET BELOW FINAL GRADE.
4. SERVICE BOXES SHALL BE CENTERED OVER THE CURB STOP AND SET FLUSH WITH THE GROUND SURFACE.
5. CONNECTIONS TO WATER MAINS SHALL BE DONE BY THE DEPARTMENT. A SERVICE CHARGE WILL BE LEVIED FOR THIS SERVICE.
6. NO PIPE OR FITTING SHALL BE BACKFILLED BEFORE INSPECTION BY A PERSON DESIGNATED BY THE DEPARTMENT.
7. ALL DAMAGE OF WHATEVER NATURE RESULTING FROM THE WORK, OR RESULTING TO THE WORK FROM WHATEVER CAUSE SHALL BE BORNE AND SUSTAINED BY THE CONTRACTOR.
8. DAMAGES TO ANY EXISTING UNDERGROUND STRUCTURE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
9. NO WATER SERVICE SHALL BE INSTALLED NEARER THAN 10 FEET TO ANY SEPTIC TANK, CESSPOOL, LEACHING FIELD DRAINAGE PIT, SEWER LINE OR DRAIN LINE AS PER DEP 310 CWR, SECTION 15.211.
10. THE CONTRACTOR WILL HAVE AN APPROVED STREET OPENING PERMIT FROM THE PEMBROKE DEPARTMENT OF PUBLIC WORKS (THE DEPARTMENT) PRIOR TO THE START OF ANY WORK PERFORMED IN A PUBLIC WAY.
11. A SERVICE LINE INSTALLED BY A PRIVATE CONTRACTOR IN A PUBLIC WAY MUST BE GUARANTEED FOR ONE YEAR FROM THE DATE OF COMPLETION. THE CONTRACTOR SHALL REPAIR ANY SETTLEMENT OF THE TRENCH PAVEMENT BY A METHOD APPROVED BY THE DEPARTMENT AND AT HIS OWN EXPENSE FOR THE SAME ONE-YEAR PERIOD STARTING FROM THE DATE OF COMPLETION.



MANHOLE FOR ROOF DRAIN SYSTEM

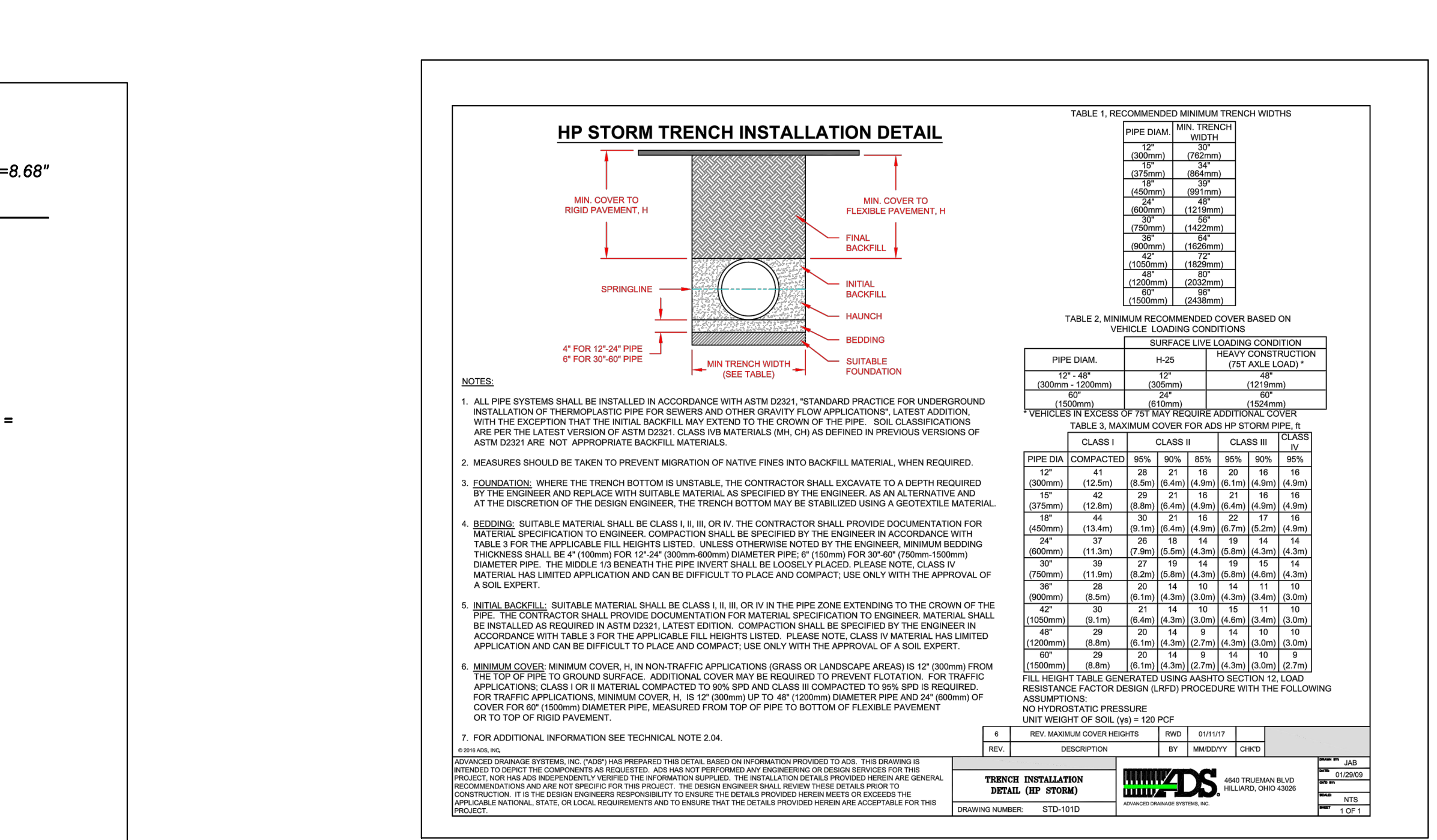
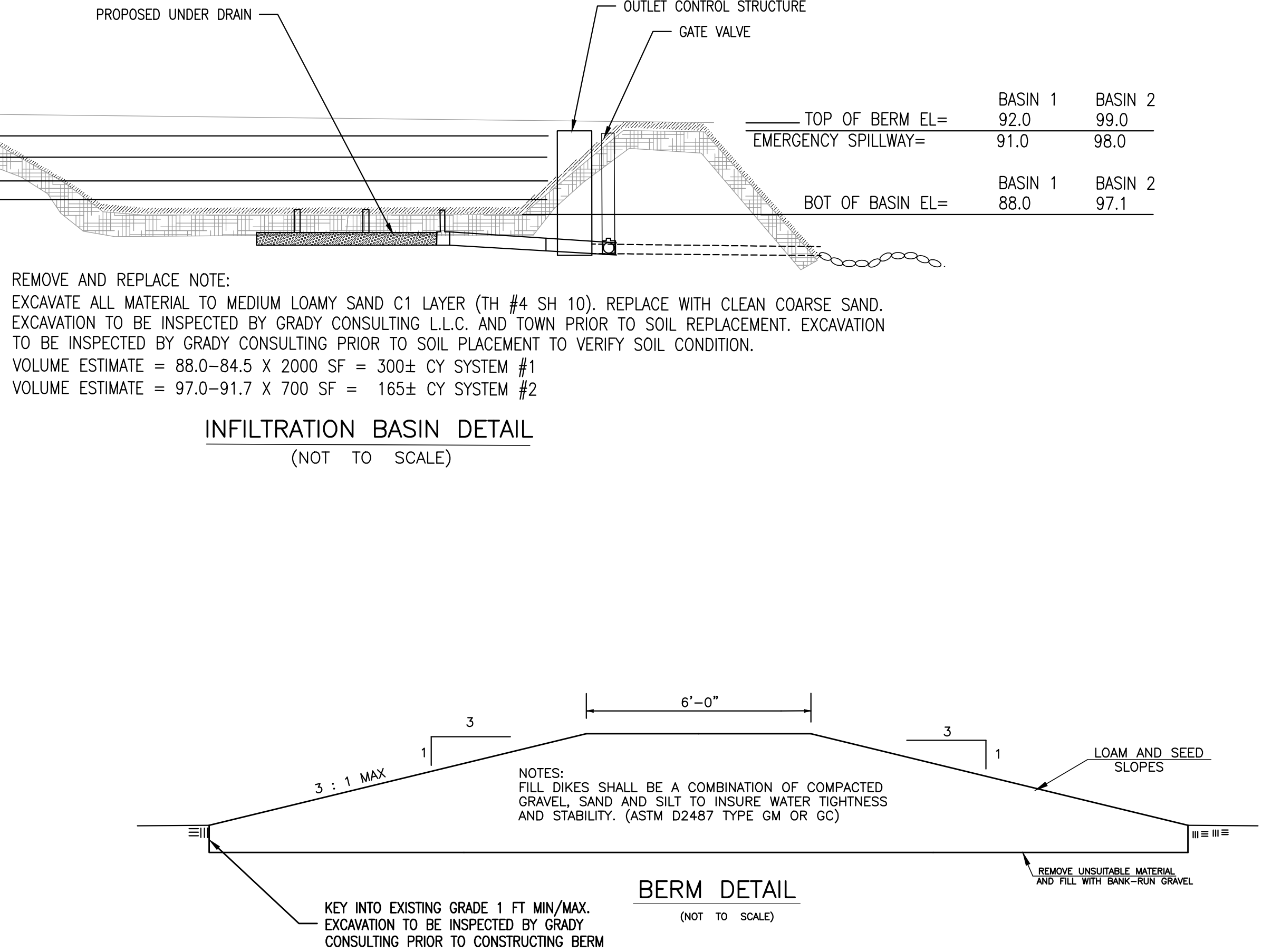
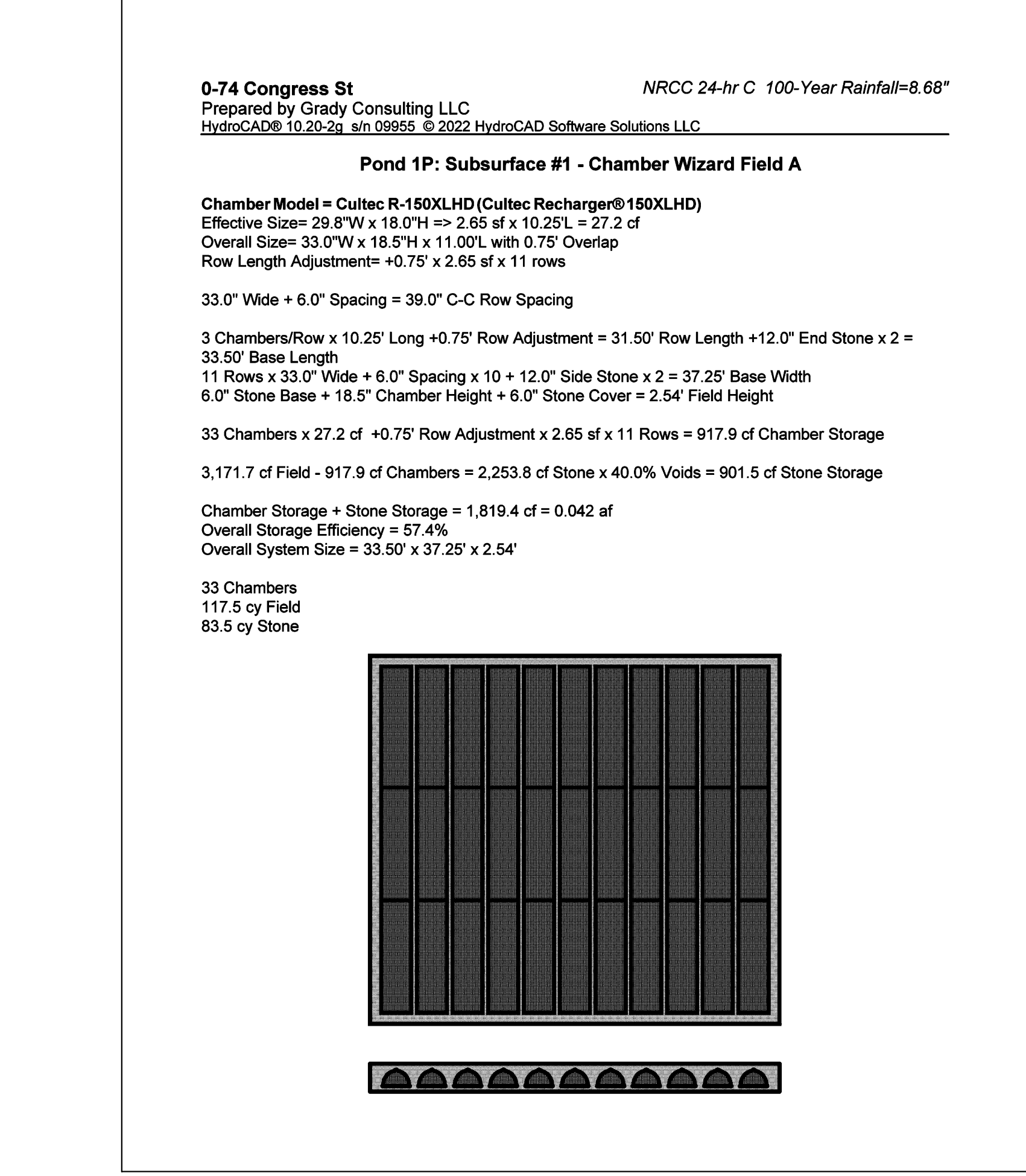
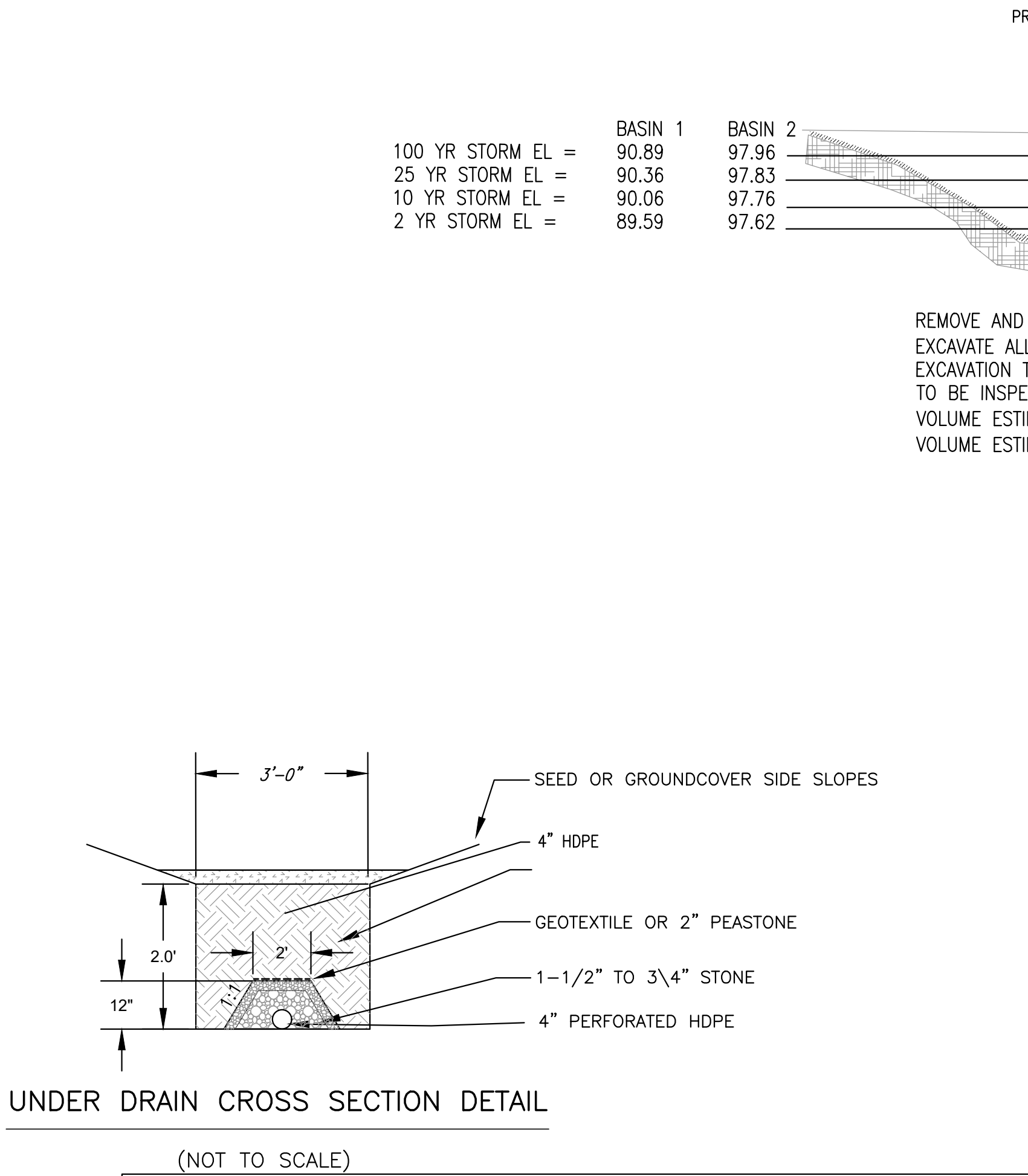
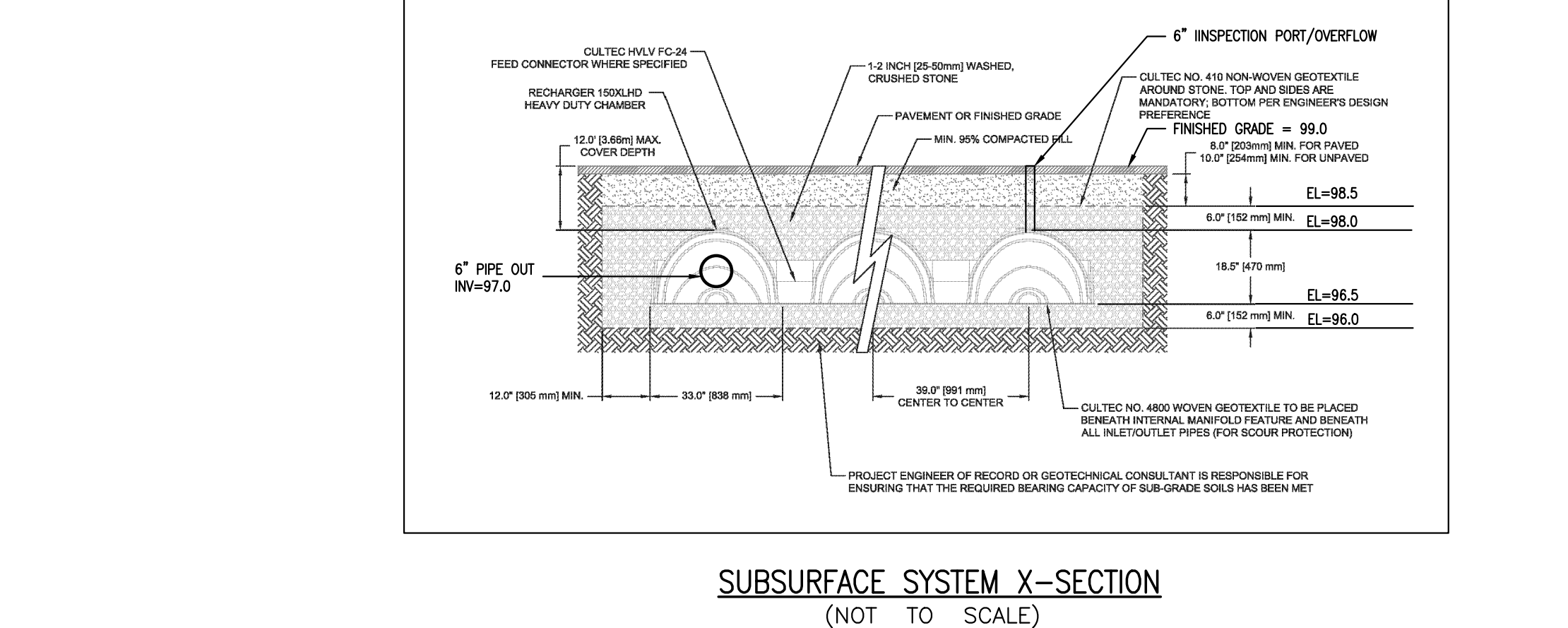
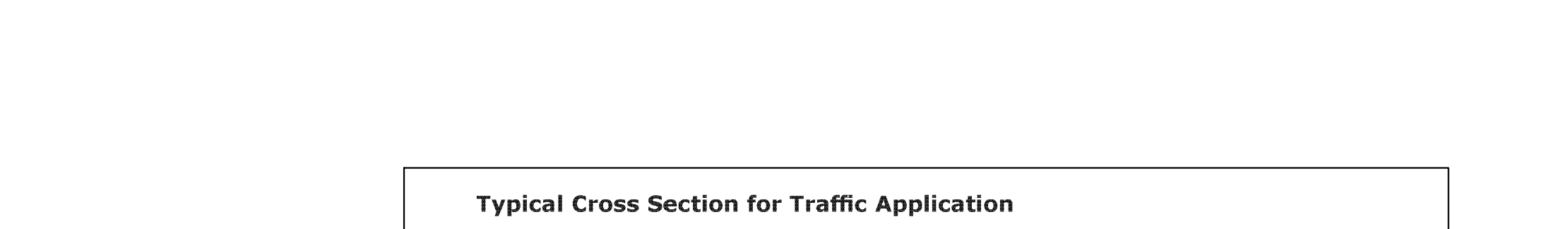
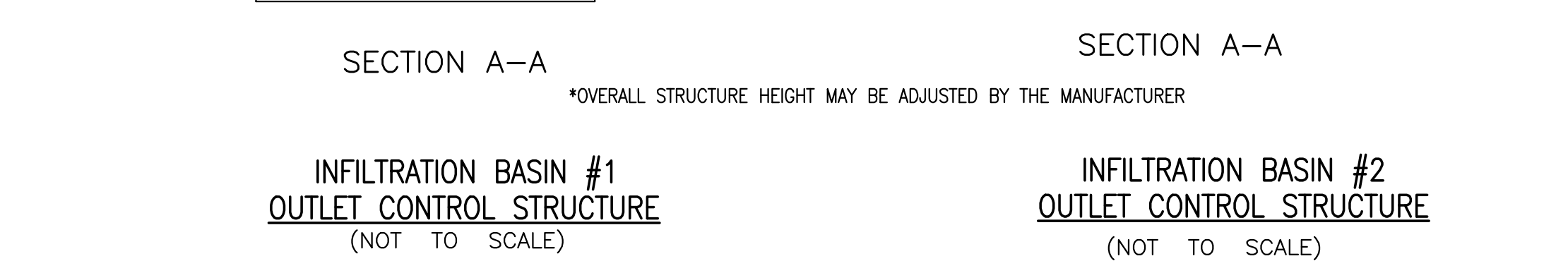
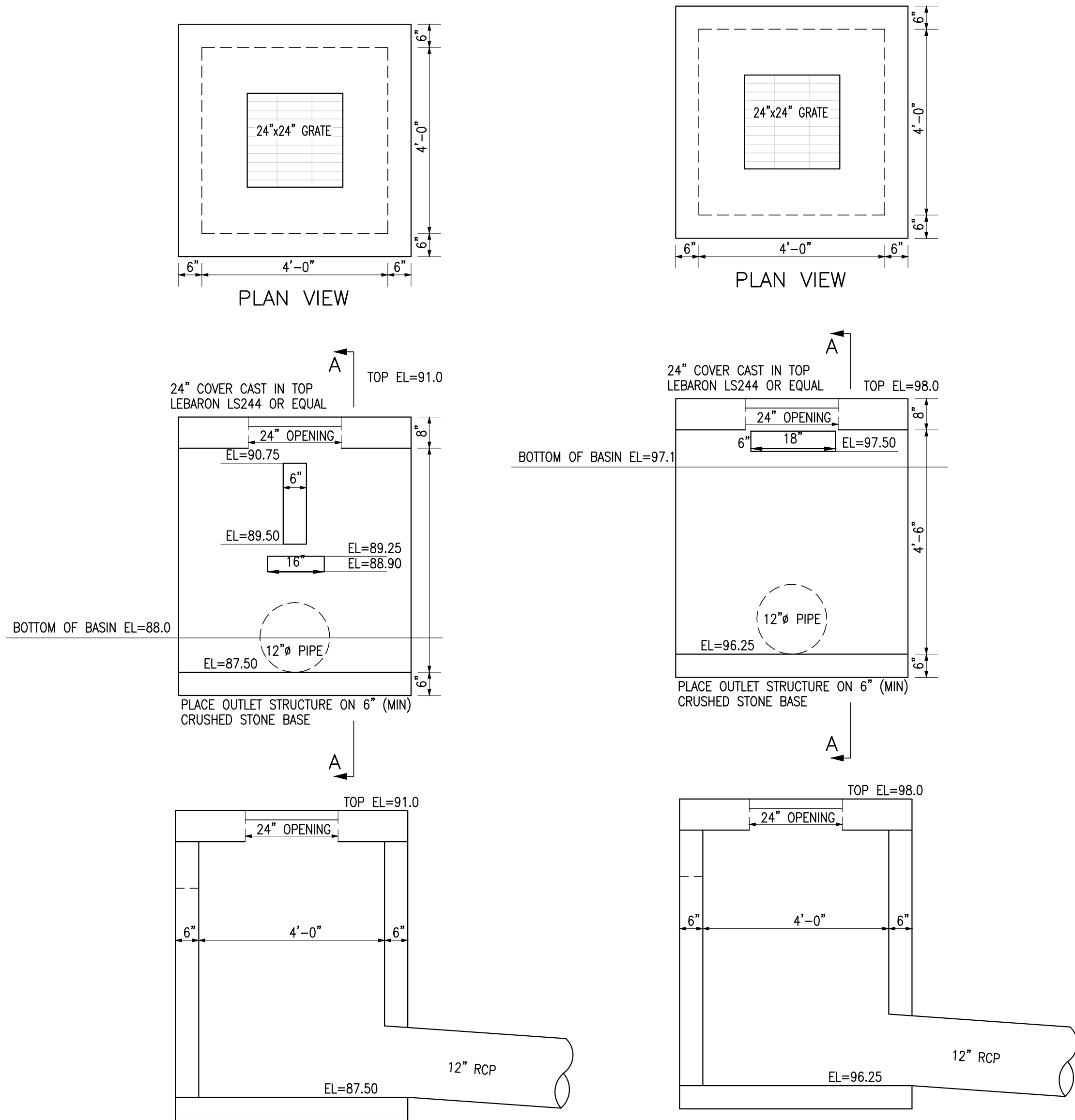


Grady Consulting, L.L.C.
Civil Engineers, Land Surveyors & Landscape Architects
71 Evergreen Street, Suite 1, Kingston, MA 02364
Phone (781) 585-2300

SITE PLAN
ASSESSORS MAP F9 LOT 11 & 12C
#0 & 74 CONGRESS STREET
PEMBROKE, MASSACHUSETTS

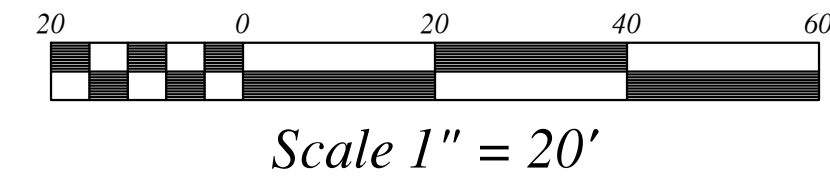
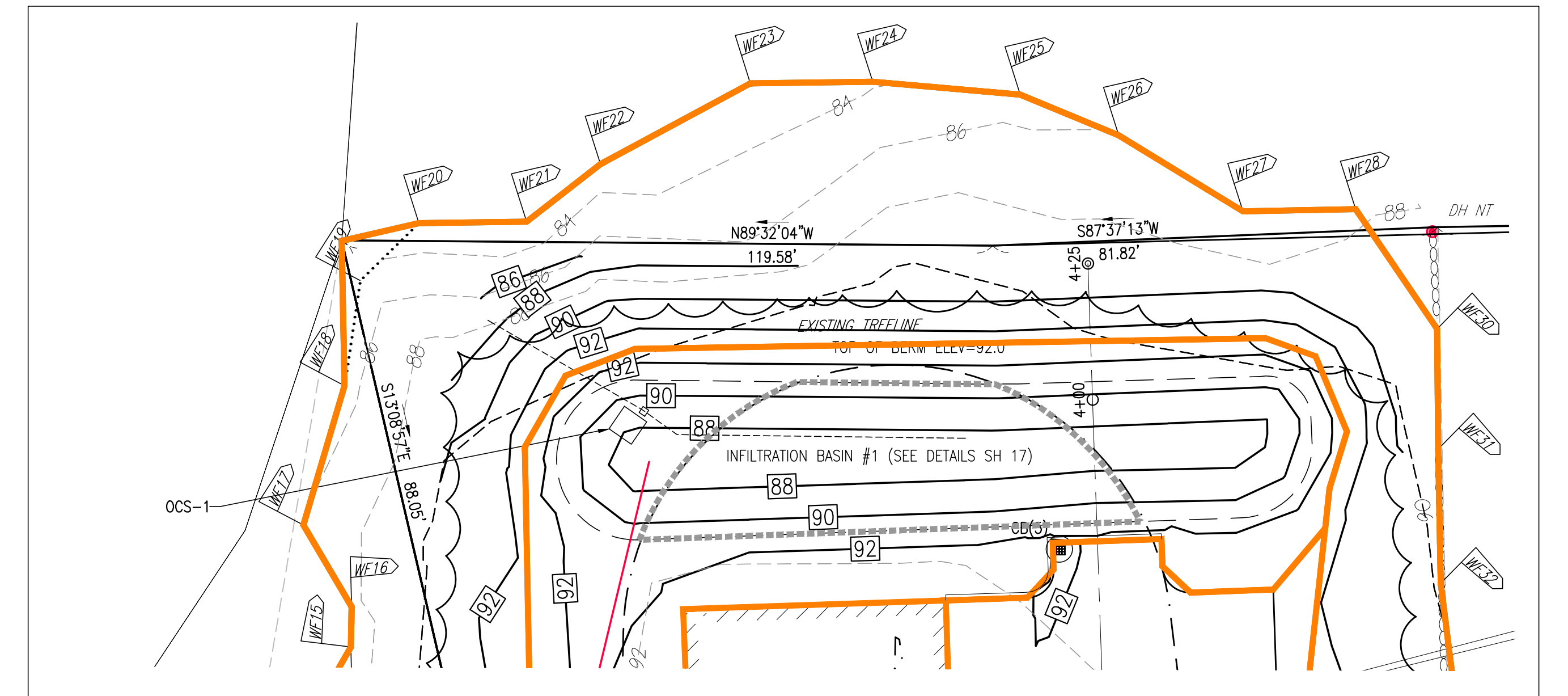
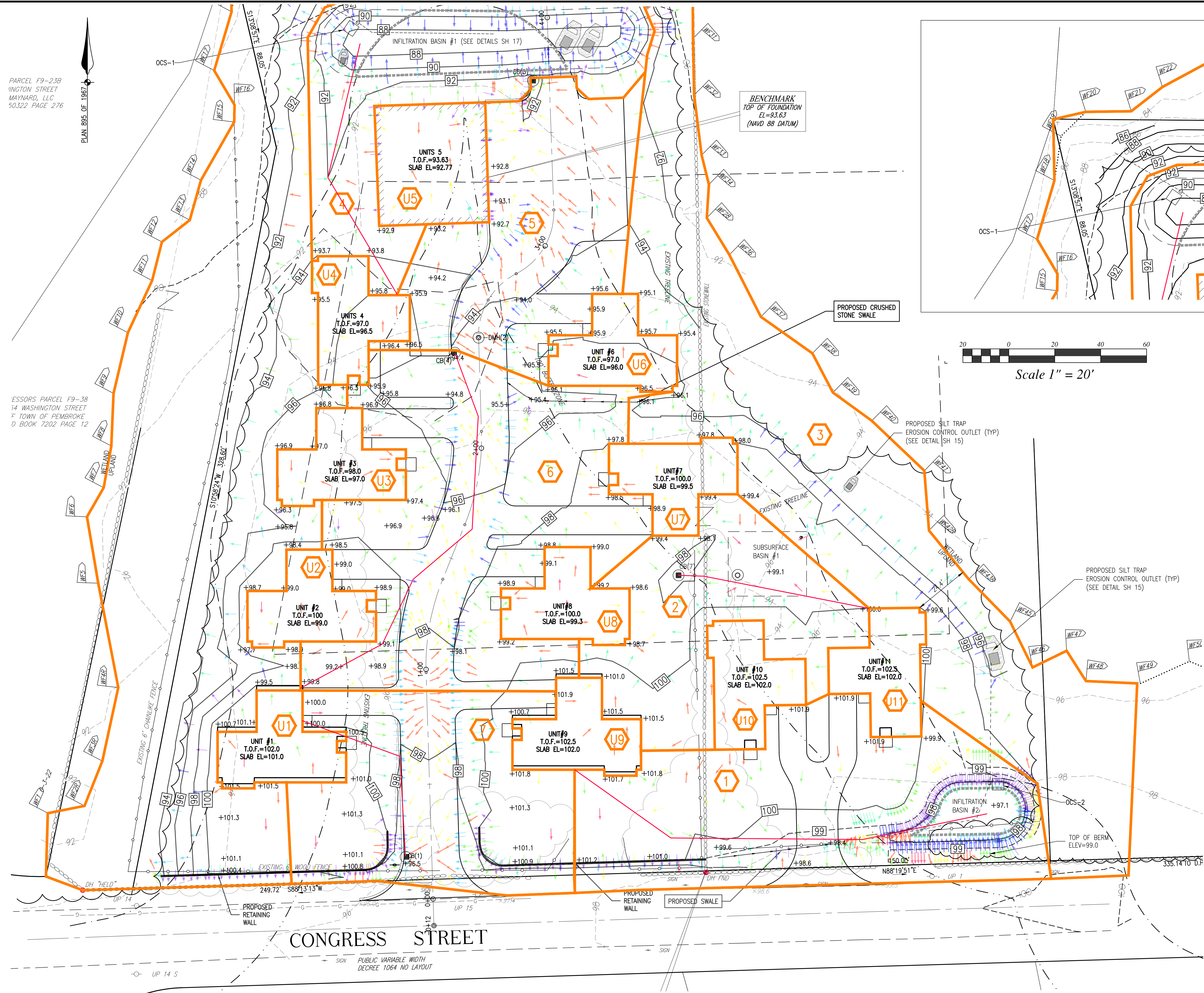
PREPARED FOR:
WHITBARN, LLC
29 DUCK HILL ROAD
DUXBURY MA 02332

MARCH 13, 2023
SCALE: AS NOTED
JOB No. 22-286



PARCEL F9-23B
INGTON STREET
MAYNARD, LLC
50322 PAGE 276

ESSORS PARCEL F9-38
14 WASHINGTON STREET
TOWN OF PEMBROKE
D BOOK 7202 PAGE 12



SITE PLAN
ASSESSORS MAP F9 LOT 11 & 12C
#0 & 74 CONGRESS STREET
PEMBROKE, MASSACHUSETTS

PREPARED FOR:
WHATABARN, LLC
29 DUCK HILL ROAD
DUXBURY MA 02332

MARCH 13, 2023
SCALE: AS NOTED
JOB No. 22-286

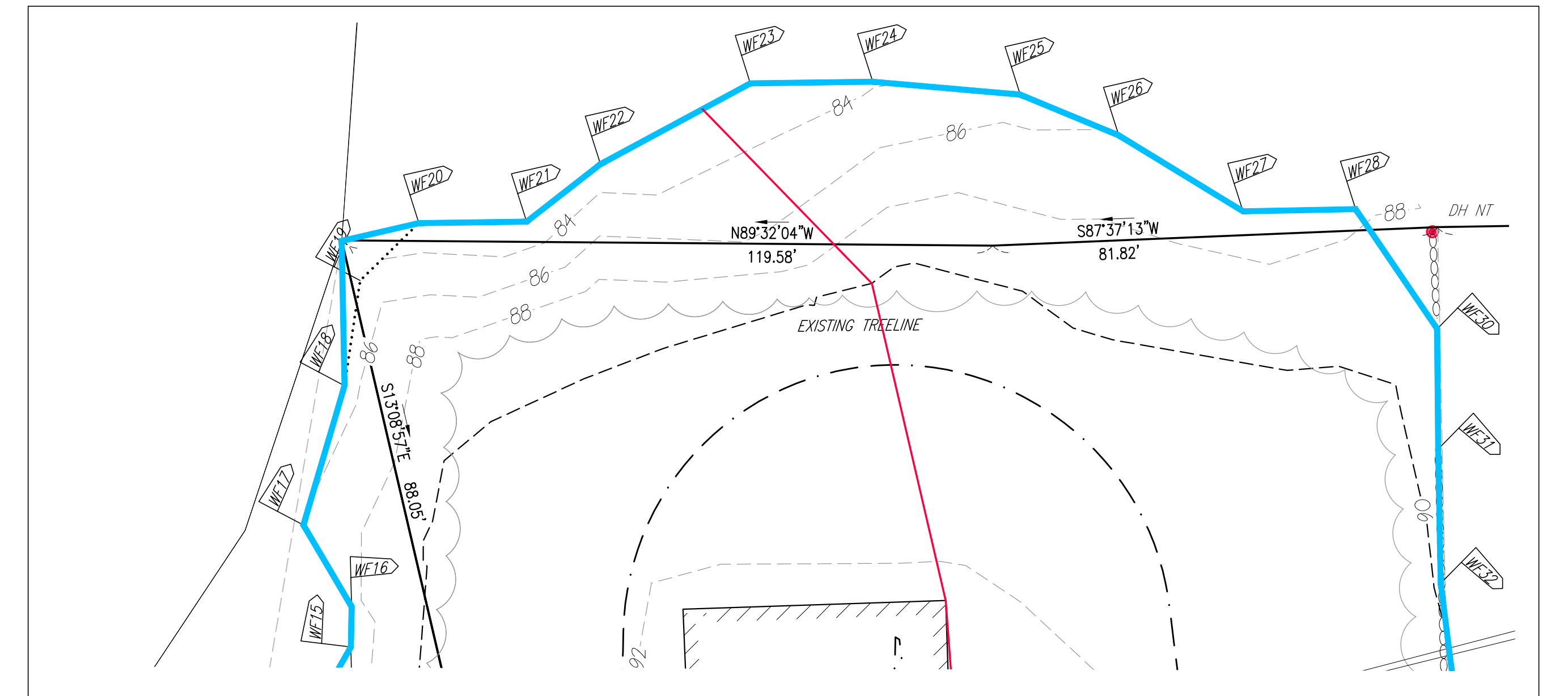
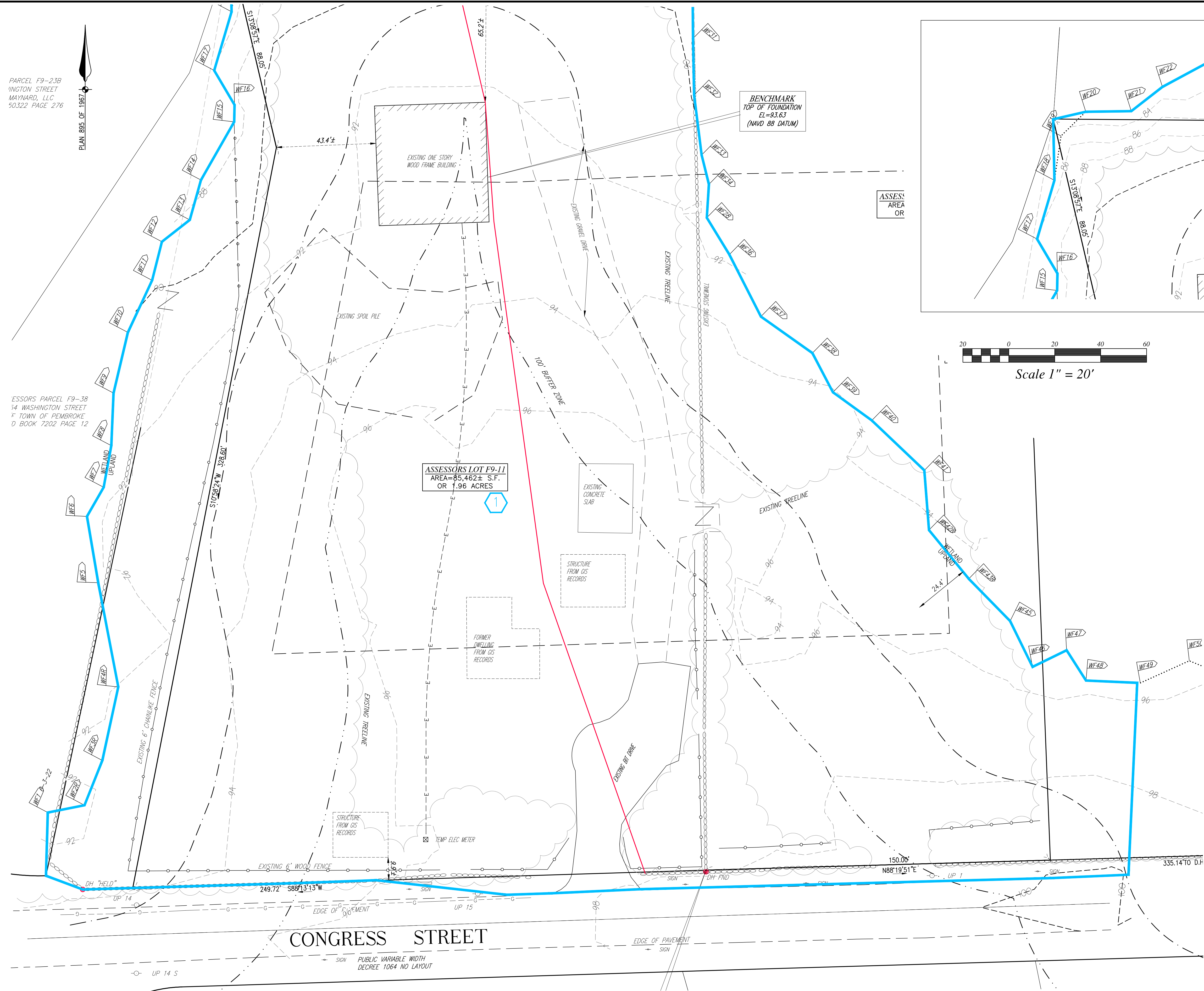
GRADY CONSULTING, L.L.C.
Civil Engineers, Land Surveyors & Landscape Architects
71 Evergreen Street, Suite 1, Kingston, MA 02364
Phone (781) 585-2300

POST-DEVELOPMENT PLAN

PARCEL F9-23B
11 WINGTON STREET
MAYNARD, LLC
50322 PAGE 276

PLAN 895 OF 1987

ESSORS PARCEL F9-38
54 WASHINGTON STREET
TOWN OF PEMBROKE
D BOOK 7202 PAGE 12



SITE PLAN
ASSESSORS MAP F9 LOT 11 & 12C
#0 & 74 CONGRESS STREET
PEMBROKE, MASSACHUSETTS

PREPARED FOR:
WHATABARN, LLC
29 DUCK HILL ROAD
DUXBURY MA 02332

MARCH 13, 2023
SCALE: AS NOTED
JOB No. 22-286

GRADY CONSULTING, L.L.C.
Civil Engineers, Land Surveyors & Landscape Architects
71 Evergreen Street, Suite 1, Kingston, MA 02364
Phone (781) 585-2300