

RECORD OWNER:

ASSESSORS PARCEL ID No. 14-V15-0
575 ROUTE 28
HARWICHPORT, MA

MAIN STREET HP, LLC
15 COPELAND DRIVE
BEDFORD, MA 01730
DEED BOOK 26995 PAGE 106

NOTES:

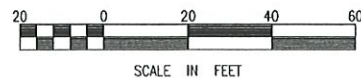
- PLAN REFERENCES:
 - LAND COURT PLAN No. 23643-D
 - PLAN BOOK 640 PAGE 62
- TOPOGRAPHIC AND DETAIL INFORMATION SHOWN HEREON IS BASED UPON AN ON THE GROUND SURVEY PERFORMED BY MERRILL ENGINEERS AND LAND SURVEYORS DURING MARCH OF 2022
- ALL ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988.
- SUBJECT SITE IS IN THE COMMERCIAL VILLAGE "CV" ZONING DISTRICT AND THE VILLAGE COMMERCIAL OVERLAY DISTRICT "CVOD" AS DEPICTED ON THE TOWN OF HARWICH ZONING MAP.
- EXISTING UTILITIES, WHERE SHOWN, HAVE BEEN COMPILED BASED ON OBSERVED ABOVE GROUND EVIDENCE AND AVAILABLE RECORD PLANS AND ARE TO BE CONSIDERED APPROXIMATE. MERRILL ENGINEERS AND LAND SURVEYORS DOES NOT GUARANTEE THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN OR THAT ALL EXISTING UTILITIES AND/OR SUBSURFACE STRUCTURES ARE SHOWN.
- EXISTING SEPTIC SYSTEM COMPONENTS SHOWN HEREON TAKEN FROM RECORD AS-BUILT PLAN ON FILE WITH THE TOWN OF HARWICH BOARD OF HEALTH.

ENVIRONMENTAL NOTES:

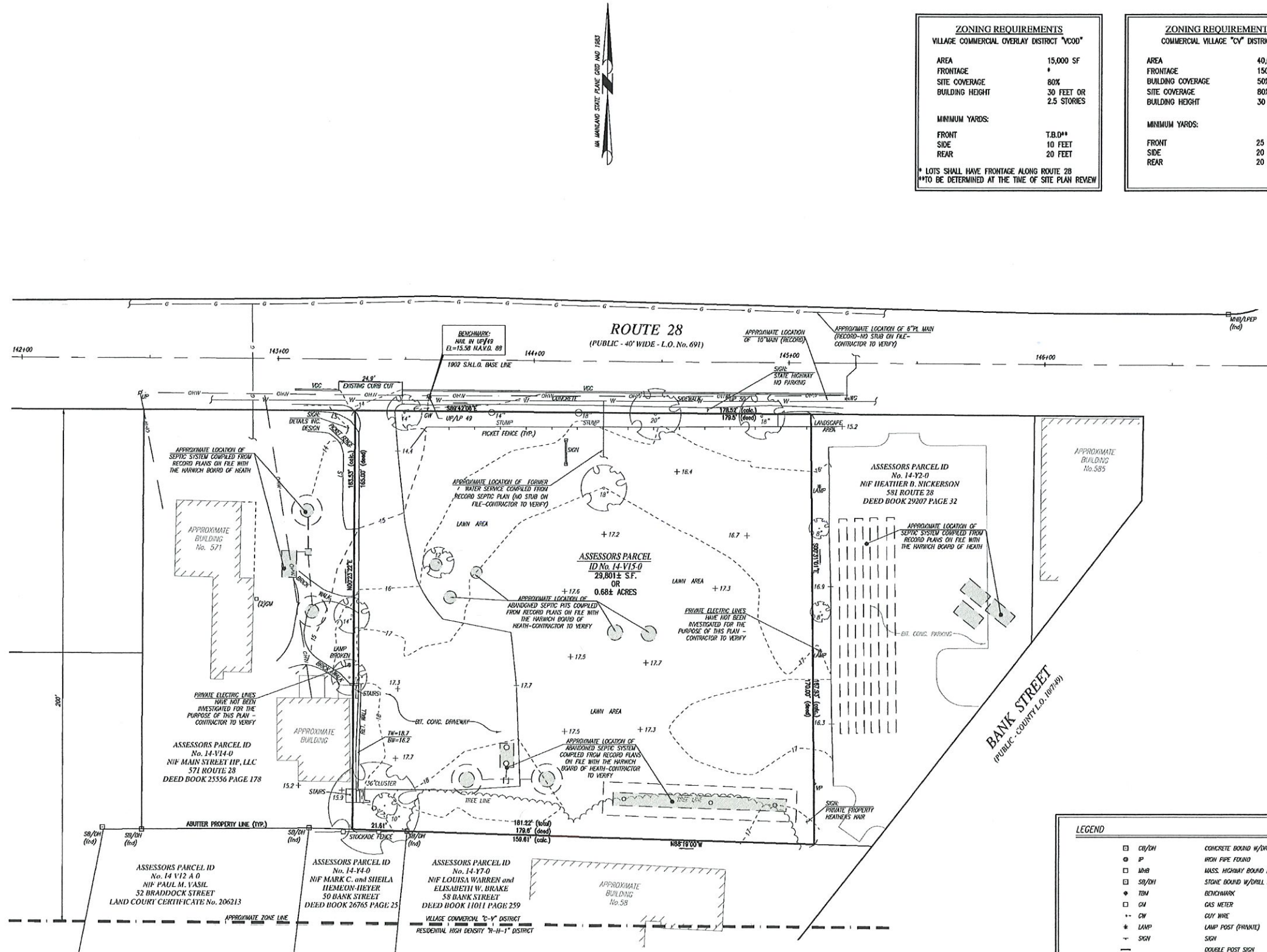
- SITE IS NOT WITHIN AN A.C.E.C. (AREA OF CRITICAL ENVIRONMENTAL CONCERN).
- SITE IS NOT WITHIN AN AREA OF ESTIMATED HABITAT OF RARE WILDLIFE PER NHESP MAP AUGUST 1, 2021 "ESTIMATED HABITATS OF RARE WILDLIFE" FOR USE WITH THE MA WETLANDS PROTECTION ACT REGULATIONS (310 CMR 10)."
- SITE DOES NOT CONTAIN A CERTIFIED VERNAL POOL PER NHESP MAP AUGUST 1, 2021 "CERTIFIED VERNAL POOLS."
- SITE IS NOT WITHIN A PRIORITY HABITAT PER NHESP MAP AUGUST 1, 2021 "PRIORITY HABITATS OF RARE SPECIES" FOR SPECIES UNDER THE MASSACHUSETTS ENDANGERED SPECIES ACT, REGULATIONS (321 CMR10).
- SITE IS NOT LOCATED WITHIN A STATE APPROVED ZONE II GROUND WATER RECHARGE PROTECTION AREA.

FLOOD NOTE:

BY GRAPHIC PLOTTING ONLY, THIS PROPERTY IS LOCATED IN ZONE "X" OF THE FLOOD INSURANCE RATE MAP, AS SHOWN ON COMMUNITY MAP No. 25001C0612J, WHICH BEARS AN EFFECTIVE DATE OF JULY 16, 2014, AND IS NOT IN A SPECIAL FLOOD HAZARD AREA.



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ZONING REQUIREMENTS
VILLAGE COMMERCIAL OVERLAY DISTRICT "CVOD"

AREA	15,000 SF
FRONTAGE	+
SITE COVERAGE	80%
BUILDING HEIGHT	30 FEET OR 2.5 STORIES
MINIMUM YARDS:	
FRONT	T.B.D.**
SIDE	10 FEET
REAR	20 FEET

* LOTS SHALL HAVE FRONTAGE ALONG ROUTE 28
** TO BE DETERMINED AT THE TIME OF SITE PLAN REVIEW

ZONING REQUIREMENTS
COMMERCIAL VILLAGE "CV" DISTRICT

AREA	40,000 SF
FRONTAGE	150 FEET
BUILDING COVERAGE	50%
SITE COVERAGE	80%
BUILDING HEIGHT	30 FEET
MINIMUM YARDS:	
FRONT	25 FEET
SIDE	20 FEET
REAR	20 FEET

LEGEND

□ CB/DH	CONCRETE BOUND W/DRILL HOLE FOUND
○ IP	IRON PIPE FOUND
□ MB	MASS. HIGHWAY BOUND FOUND
□ SB/DH	STONE BOUND W/DRILL HOLE FOUND
● BM	BENCHMARK
□ GM	GAS METER
— CW	CUI WIRE
— LAMP	LAMP POST (PRINTED)
— SIGN	SIGN
— DP	DOUBLE POST SIGN
○	DECIDUOUS TREE
— UP	UTILITY POLE
— VENT	SEWER VENT PIPE
— WC	WATER GATE
—	FICKET FENCE
—	STOCKADE FENCE
—	CONTOUR LINE
— LS	LANDSCAPE AREA
—	BUILDING OVERHANG
— G	GAS LINE
— GHW	OVERHEAD WIRES
— W	WATERMAIN

REVISIONS

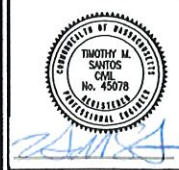
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DESIGNED BY:
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26 UNION STREET, PLYMOUTH MA 02360 / T: (508) 746-6060
WWW.MERRILLINC.COM

SITE PLAN
#575 ROUTE 28 (MAIN STREET)
HARWICH, MASSACHUSETTS
PREPARED FOR: MAIN STREET HP, LLC
P.O. BOX 51299
BOSTON, MA 02250

MAY 19, 2022
SCALE: 1"=20'
JOB NO. 22-145
LATEST REVISION:
EXISTING CONDITIONS PLAN
SHEET 2 OF 8

REVISIONS



DRAWN BY: TMS

DESIGNED BY: TMS

CHECKED BY: TAP

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 P.O. BOX 51299
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MAY 19, 2022

SCALE: 1"=20'

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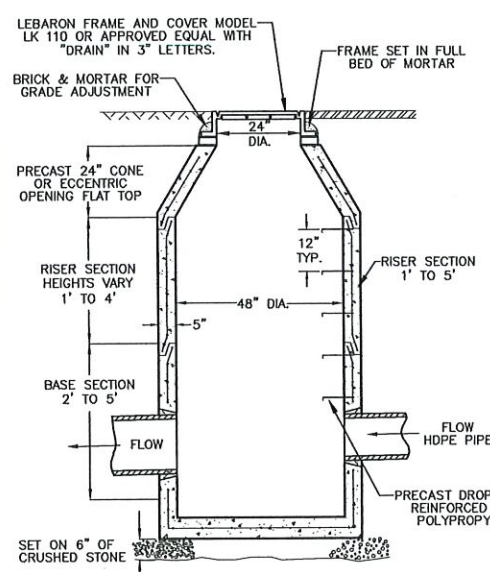
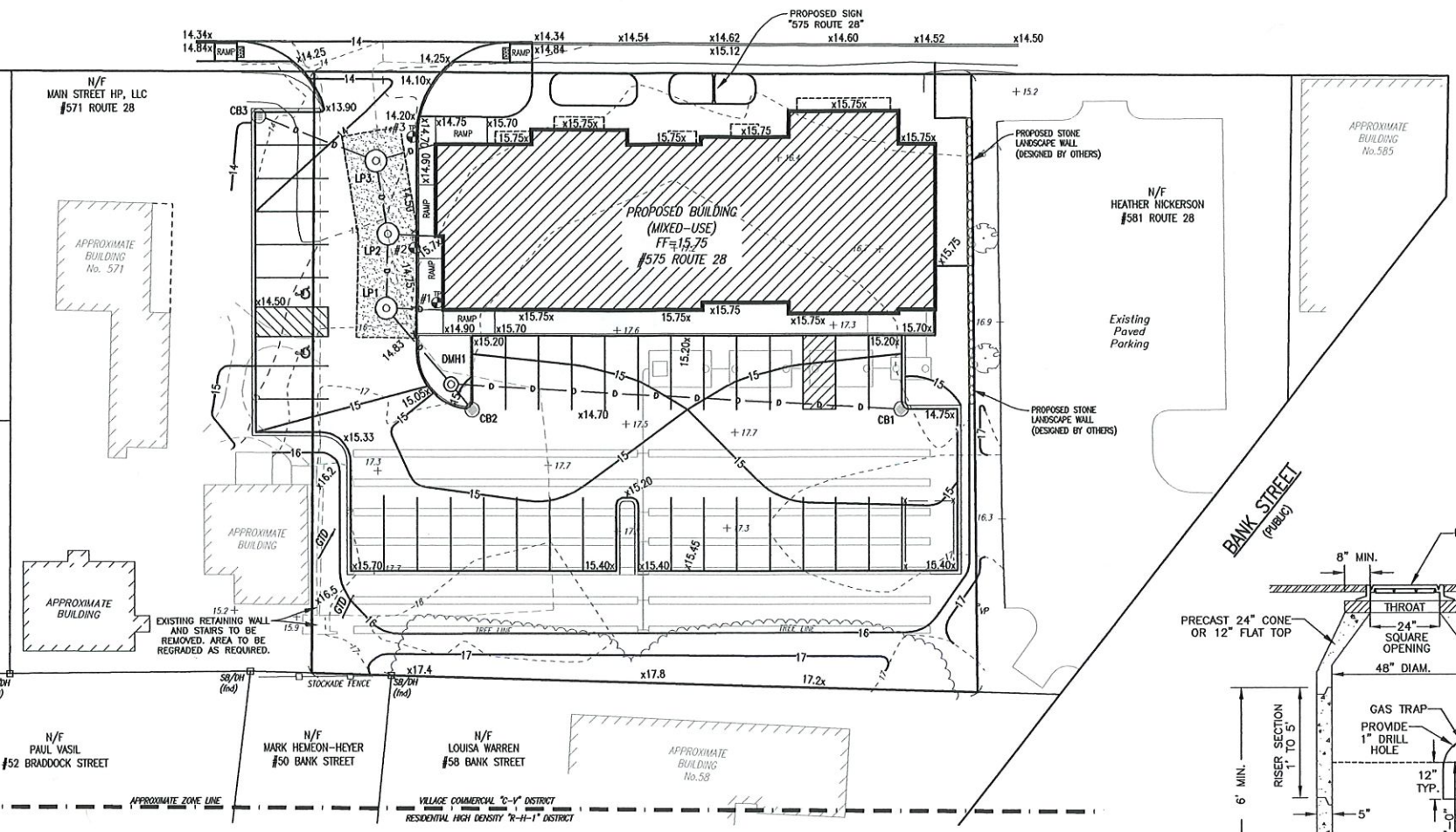
LATEST REVISION:

GRADING & DRAINAGE PLAN

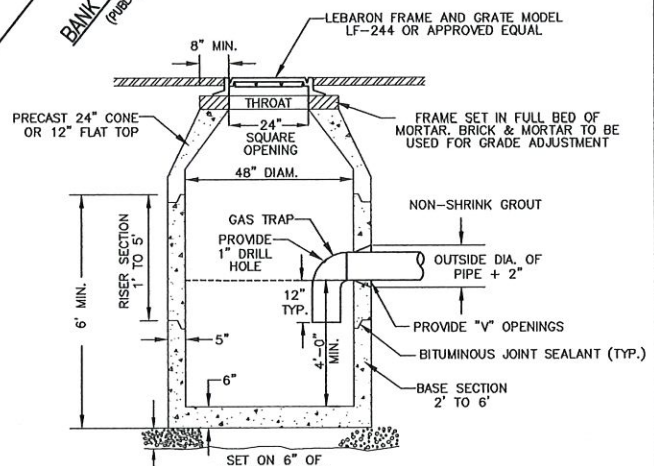
SHEET 3 OF 8



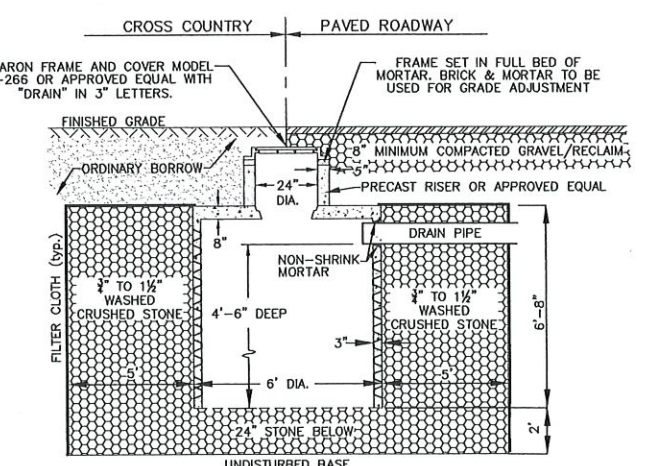
ROUTE 28
 (PUBLIC - 40' WIDE)



DRAIN MANHOLE
 SCALE: NTS

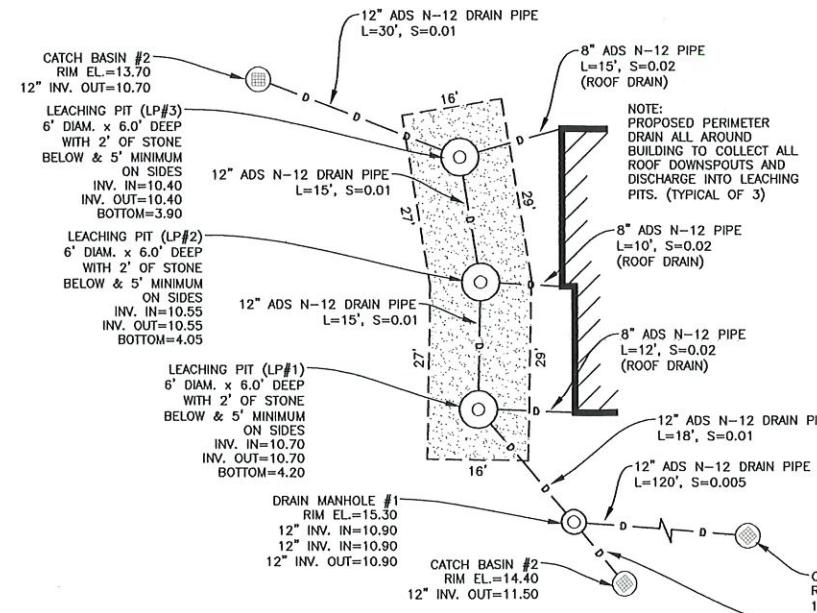


TYPICAL SOLID CATCH BASIN
 SCALE: NTS



NOTE:
 ALL LEACHING PITS MUST BE INSTALLED IN STRATUM OF MEDIUM TO COARSE SAND TO ALLOW PROPER FUNCTIONING. THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO INSPECT THE SOILS PRIOR TO INSTALLATION.

TYPICAL LEACHING PIT
 SCALE: NTS



DRAINAGE SYSTEM LAYOUT
 NOT TO SCALE

DRAINAGE STRUCTURES INVERT SCHEDULE

#	FROM	TO	RIM ELEV	INV(IN) ELEV	INV(OUT) ELEV	PIPE INFO
CB1	DMH1	14.40		11.50	12.00	12" ADS N-12 ADS S=0.50%
CB2	DMH1	14.40		11.50	12.00	5'-12" ADS S=12.00%
DMH1	LP2	14.70	10.90	10.90	20'-12" ADS S=1.00%	
LP2	LP3	14.45	10.55	10.55	15'-12" ADS S=1.00%	
LP3	LP3	14.25	10.40			
CB3	LP3	13.70		10.70	30'-12" ADS S=1.00%	

CB = SOLID CATCH BASIN: 4 FT. INTERIOR DIAMETER, 4 FT. SUMP.
 LP = SUBSURFACE LEACHING PITS: 6 FT. INTERIOR DIAMETER x 6 FT. DEEP WITH 2 FT. OF STONE BELOW.
 ALL DRAIN PIPES SHALL BE ADS N-12 INSTALLED AT S=0.50% MIN.
 ALL ROOF DRAINS SHALL BE 8" ADS N-12 INSTALLED AT S=2.00% MIN.

SOIL TEST PIT INFORMATION: APRIL 14, 2022

TEST PIT #	TP#1	TP#2	TP#3
SURFACE ELEVATION	16.2±	16.0±	15.0±
TOP & SUBSOIL	0"-40"	0"-38"	0"-36"
SUBSTRATUM (COARSE SAND)	40"-84"	38"-84"	36"-84"
SUBSTRATUM (MEDIUM SAND)	84"-132"	84"-132"	84"-150"
MOTTLES	NONE	NONE	NONE
OBSERVED GWT	NONE	NONE	NONE
ELEVATION OBSERVED GWT	---	---	---
PERC RATE	2 Min/Inch	2 Min/Inch	2 Min/Inch

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 HARMICH, MASSACHUSETTS

PREPARED FOR: MAIN STREET HP, LLC
 P.O. BOX 51299
 BOSTON, MA 02205

MAY 19, 2022

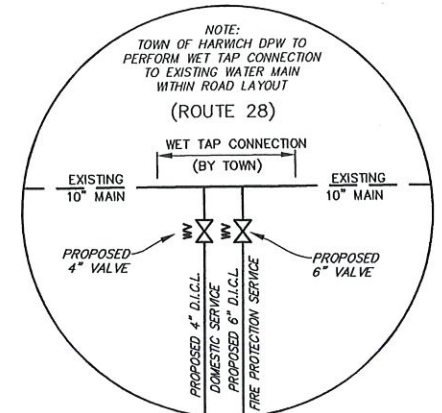
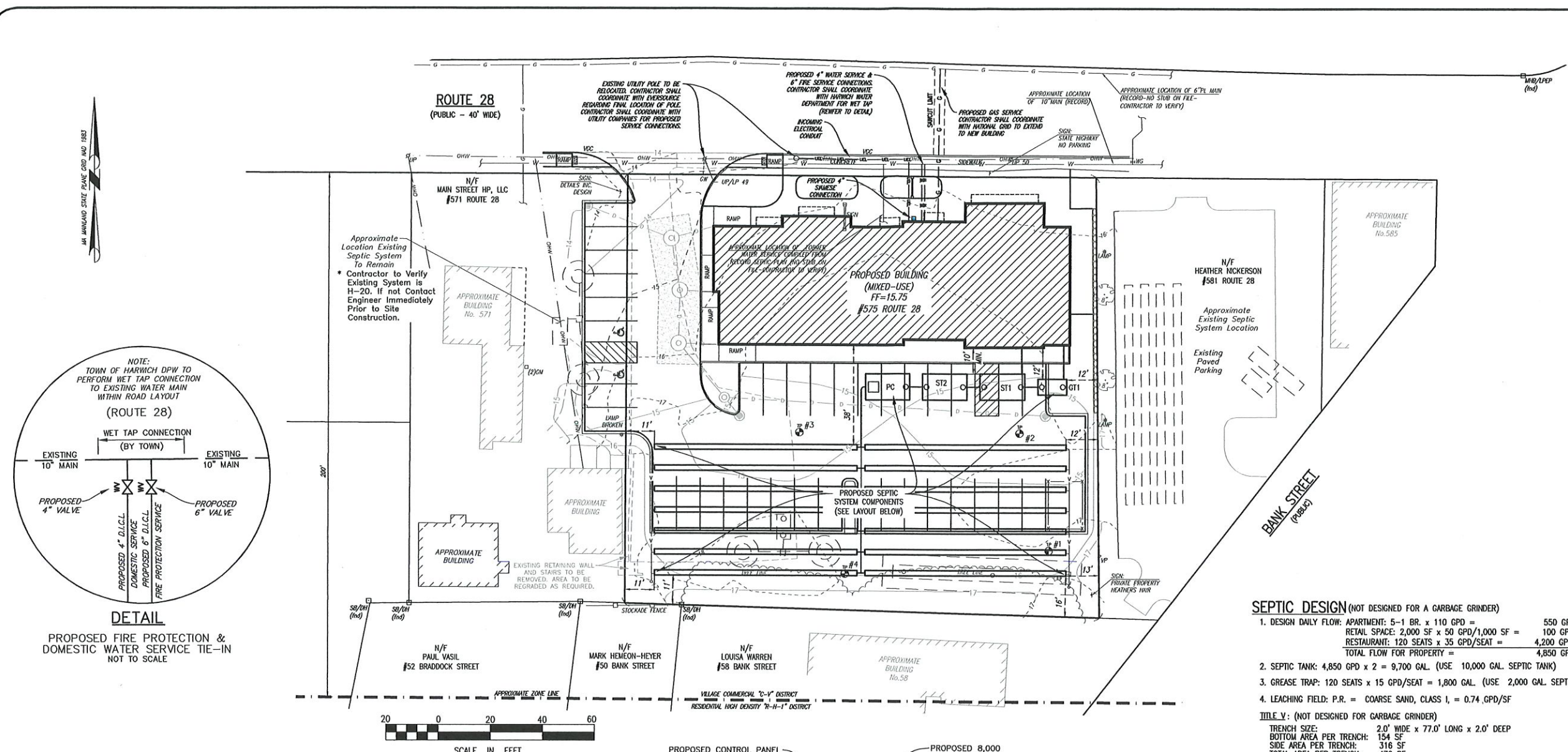
SCALE: 1"=20'

JOB No. 22-145

LATEST REVISION:

SEPTIC & UTILITIES PLAN

SHEET 4 OF 8



DETAIL

PROPOSED FIRE PROTECTION & DOMESTIC WATER SERVICE TIE-IN NOT TO SCALE

SEPTIC DESIGN (NOT DESIGNED FOR A GARBAGE GRINDER)

- DESIGN DAILY FLOW: APARTMENT: 5-1 BR. x 110 GPD = 550 GPD
 RETAIL SPACE: 2,000 SF x 50 GPD/1,000 SF = 100 GPD
 RESTAURANT: 120 SEATS x 35 GPD/SEAT = 4,200 GPD
 TOTAL FLOW FOR PROPERTY = 4,850 GPD
 - SEPTIC TANK: 4,850 GPD x 2 = 9,700 GAL. (USE 10,000 GAL. SEPTIC TANK)
 - GREASE TRAP: 120 SEATS x 15 GPD/SEAT = 1,800 GAL. (USE 2,000 GAL. SEPTIC TANK)
 - LEACHING FIELD: P.R. = COARSE SAND, CLASS I, = 0.74 GPD/SF
- TITLE V: (NOT DESIGNED FOR GARBAGE GRINDER)**
- TRENCH SIZE: 2.0' WIDE x 77.0' LONG x 2.0' DEEP
 BOTTOM AREA PER TRENCH: 154 SF
 SIDE AREA PER TRENCH: 316 SF
 TOTAL AREA PER TRENCH: 470 SF
 LEACHING PER TRENCH: 347.8 GPD
 TRENCHS REQUIRED: 4,850/347.8 = 13.94 TRENCHES
 TRENCHS PROVIDED: 14 x 347.8 = 4,869 GPD
 CAPACITY: 4,869 GPD > 4,850 GPD
- EXCAVATE ALL MATERIAL 5' ALL AROUND SYSTEM TO C1 LAYER (SEE SOIL LOGS). REPLACE WITH CLEAN COARSE MATERIAL IN ACCORDANCE WITH 310 CMR 15.255 TO TOP OF S.A.S. (SEE PROFILE & SOIL LOG). EXCAVATION MUST BE INSPECTED BY THE TOWN AND MERRILL CORPORATION BEFORE SOIL PLACEMENT.

SOIL LOGS

PERFORMED BY: TIMOTHY SANTOS (MERRILL ENGINEERING)
 WITNESSED BY: CARRIE SCHOENER (HARMICH B.O.H.)
 DATE: APRIL 14, 2022

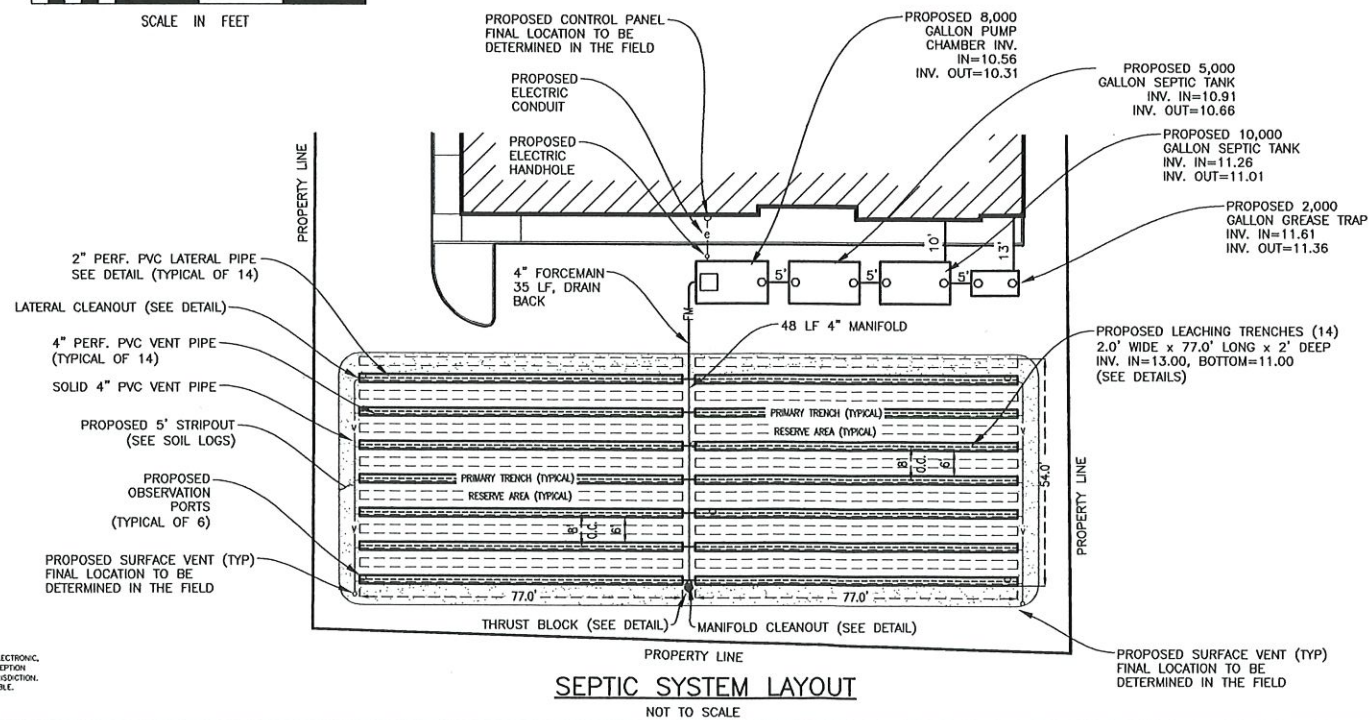
T.H. #1	T.H. #2	T.H. #3	T.H. #4
EL. 16.8	EL. 16.9	EL. 17.2	EL. 17.8
0" TO 42" FILL	0" TO 48" FILL	18" TO 36" A HORIZON LOAMY SAND 10YR 3/3	18" TO 40" A HORIZON COARSE SAND 10YR 5/6
13.3	12.9	15.7	16.3
42" TO 98" C1 HORIZON COARSE SAND 2.5Y 6/8	48" TO 84" C1 HORIZON COARSE SAND 2.5Y 6/8	36" TO 84" C1 HORIZON COARSE SAND 2.5Y 7/2	40" TO 84" C1 HORIZON COARSE SAND 2.5Y 7/2
8.8	9.9	10.2	10.8
98" TO 120" C2 LAYER MEDIUM SAND 2.5Y 7/2	84" TO 132" C2 LAYER MEDIUM SAND 2.5Y 7/2	84" TO 132" C2 LAYER MEDIUM SAND 2.5Y 6/8	84" TO 120" C2 LAYER MEDIUM SAND 2.5Y 6/8
8.8	5.9	6.2	7.8
0 = 10'	0 = 11'	0 = 10'	0 = 10'
REDOX: NONE	REDOX: NONE	REDOX: NONE	REDOX: NONE

NO GROUNDWATER ENCOUNTERED

SEPTIC STRUCTURES INVERT SCHEDULE

COMPONENT	INV(IN) ELEV	INV(OUT) ELEV	PIPE INFO
GREASE TRAP @ BUILDING		11.87	13'-4" PIPE S=2.00%
GREASE TRAP (2,000)	11.61	11.36	5'-4" PIPE S=2.00%
SEPTIC TANK @ BUILDING		11.46	10'-4" PIPE S=2.00%
SEPTIC TANK (10,000)	11.26	11.01	5'-4" PIPE S=2.00%
SEPTIC TANK (5,000)	10.91	10.66	5'-4" PIPE S=2.00%
PUMP CHAMBER (8,000)	10.56	10.31	20'-4" PIPE FORCEMAIN
TRENCH INVERT		13.00	
TRENCH BOTTOM		11.00	

GT = GREASE TRAP
 ST = SEPTIC TANK
 PC = PUMP CHAMBER
 ALL SEWER PIPES SHALL BE INSTALLED AT S=2.00% MIN. FROM BUILDING THROUGH PUMP CHAMBER.
 FORCEMAIN SHALL PITCH FROM MANIFOLD BACK TO THE PUMP CHAMBER.



SEPTIC SYSTEM LAYOUT
 NOT TO SCALE

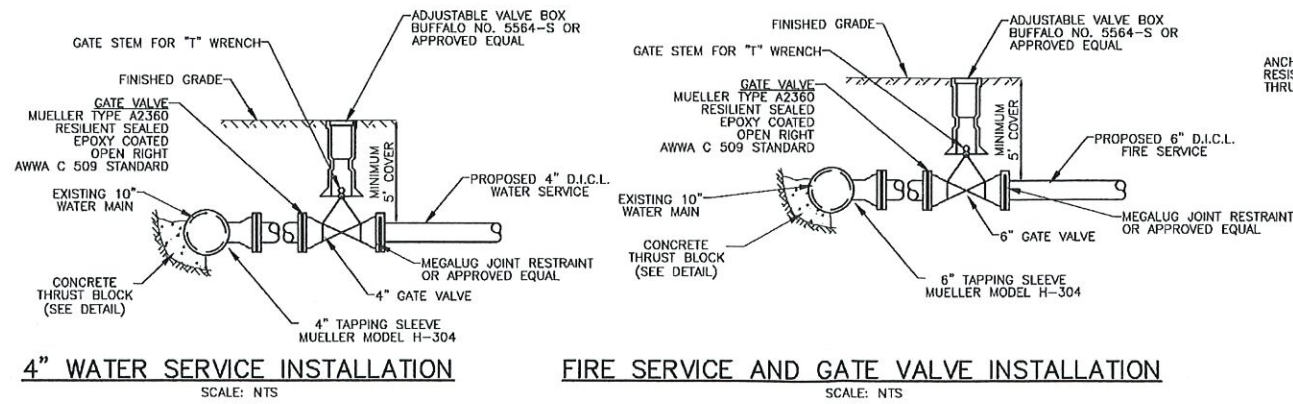
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WATER CONSTRUCTION GENERAL NOTES:

1. ALL STANDARDS, POLICIES, CONSTRUCTION PRACTICES OR RULES AND REGULATIONS OF THE HARWICH WATER DEPARTMENT SHALL BE ADHERED TO THROUGHOUT THE DURATION OF THE PROJECT. THIS INCLUDES ALL VERTICAL AND HORIZONTAL SEPARATION OF ANY PORTIONS OF THE WATER SYSTEM AND ANY OTHER UTILITY OR UNDERGROUND INSTALLATION.
2. THERE ARE NO DEVIATIONS TO THE PLANS WITHOUT THE WRITTEN CONSENT OF THE WATER SUPERINTENDENT.
3. THE HYDRANT SHALL BE PAINTED WHITE WITH A BLUE BONNET AND CAPS OR AS OTHERWISE DIRECTED BY THE HARWICH WATER DEPARTMENT.

WATERMAIN INSTALLATION NOTES:

1. ALL MAINS AND APPURTENANCES SHALL BE INSTALLED STRICTLY IN CONFORMITY WITH THE STANDARDS AND SPECIFICATIONS OF THE AMERICAN WATER WORKS ASSOCIATION AND RULES AND REGULATIONS ADOPTED BY THE HARWICH WATER DEPARTMENT.
2. UPON COMPLETION OF THE CONSTRUCTION OF ALL WATER MAIN AND APPURTENANCES THE CONTRACTOR SHALL REQUEST APPROVAL OF THE INSTALLATION FROM THE HARWICH WATER DEPARTMENT.
3. THE CONTRACTOR SHALL CERTIFY IN WRITING THAT THE INSTALLATION COMPLIES IN ALL RESPECT TO THE TOWN RULES AND REGULATIONS.

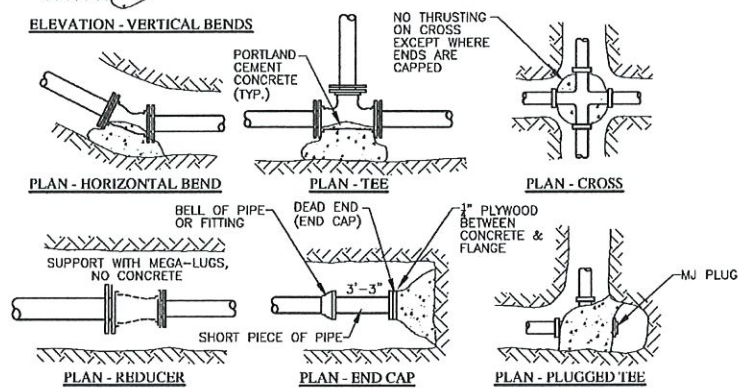


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FIRE SERVICE AND GATE VALVE INSTALLATION

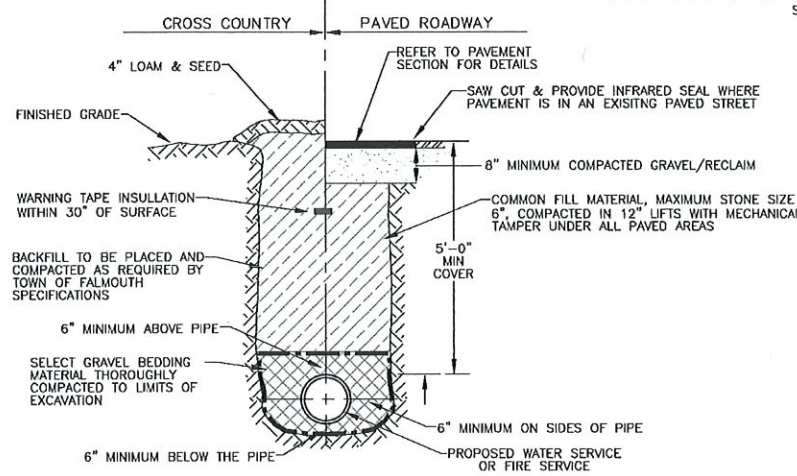
FIRE SERVICE NOTE:
CONTRACTOR TO COORDINATE INSTALLATION OF FIRE LINE WITH SPRINKLER CONTRACTOR. FIRE LINE MUST MEET CURRENT STANDARDS AS REFERENCED IN THE NATIONAL FIRE PROTECTION AGENCY (N.F.P.A.)

MINIMUM THRUST BLOCK BEARING AREAS IN SQUARE FEET				
PIPE SIZE	90'	45'	22 1/2'	PLUG/TEES
4", 6", 8"	6	3	2	5
10"	9	5	3	9
12"	13	7	4	11
16"	24	12	6	17

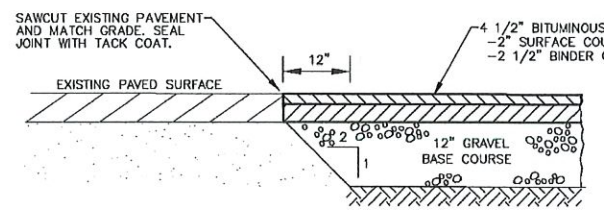


- NOTES:**
- 1) CONCRETE SHALL BE 2,000 PSI MINIMUM AT 28 DAYS
 - 2) THRUST BLOCKS SHALL BE PLACED AGAINST UNDISTURBED EARTH
 - 3) ALL FITTINGS (EXCEPT AS INDICATED) SHALL BE SUPPORTED AND ANCHORED IN CONCRETE AND WITH "MEGALUG JOINT RESTRAINTS" OR APPROVED EQUAL
 - 4) FOR FIRE HYDRANT THRUSTING SEE HYDRANT CONNECTION DETAIL
 - 5) POURED CONCRETE SHALL BE KEPT 6" CLEAR OF MECHANICAL JOINTS TO ALLOW FOR FUTURE REPAIR OR REMOVAL
 - 6) RETAINER GLANDS REQUIRED ON ALL FITTINGS
 - 7) CLOW F-1058 OR APPROVED EQUAL RETAINER GLANDS USED WITH D.I.C.L. PIPE ONLY
 - 8) INSTALL CONCRETE THRUST BLOCKS AT ALL BENDS AND TEES

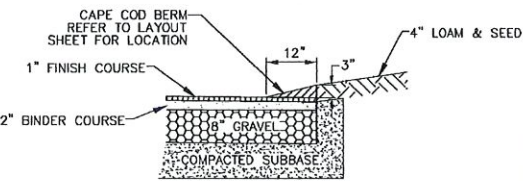
ANCHORAGE DETAILS
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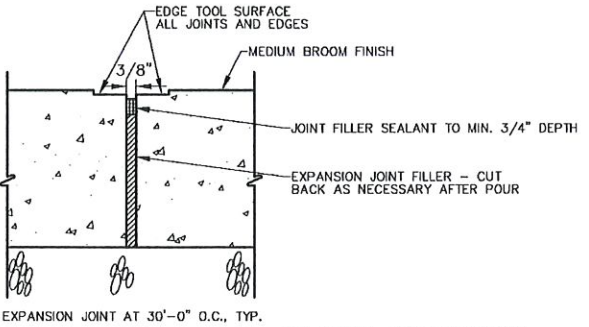
WATER/ FIRE SERVICE TRENCH SECTION
SCALE: NTS



SAWCUT/PAVEMENT MATCHING DETAIL
SCALE: NTS



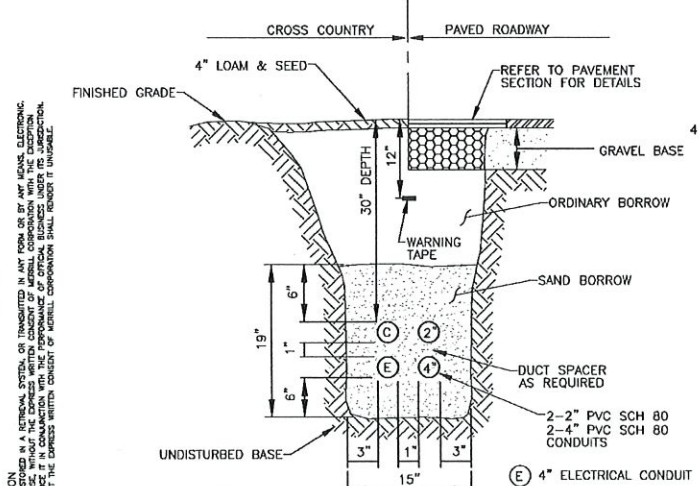
CAPE COD BERM & PAVEMENT DETAIL FOR PARKING LOT
SCALE: NTS



EXPANSION AND CONTROL JOINTS
SCALE: NTS

GAS MAIN GENERAL NOTES:

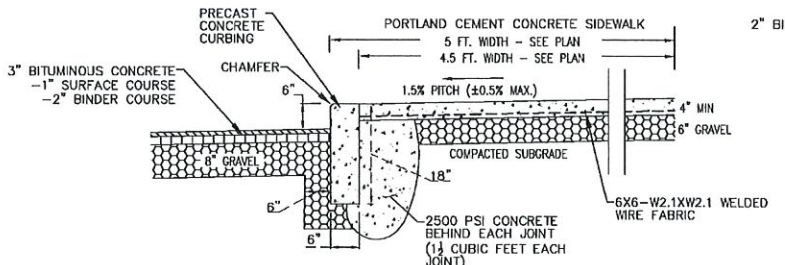
1. ALL STANDARDS, POLICIES, CONSTRUCTION PRACTICES & RULES AND REGULATIONS OF NATIONAL GRID SHALL BE ADHERED TO THROUGHOUT THE DURATION OF THE PROJECT. THIS INCLUDES ALL VERTICAL AND HORIZONTAL SEPARATION OF ANY PORTIONS OF THE GAS SYSTEM AND ANY OTHER UTILITY OR UNDERGROUND INSTALLATION.
2. THE CONTRACTOR SHALL OBTAIN FINAL APPROVALS FROM NATIONAL GRID FOR LAYOUT AND INSTALLATION OF THE GAS MAIN EXTENSION AND SERVICES TO EACH LOT. THE UTILITY PROVIDER WILL MAKE THE FINAL DETERMINATION ON UTILITY LOCATIONS AND APPURTENANCES.
3. THERE ARE NO DEVIATIONS TO THE PLANS WITHOUT THE WRITTEN CONSENT OF NATIONAL GRID.



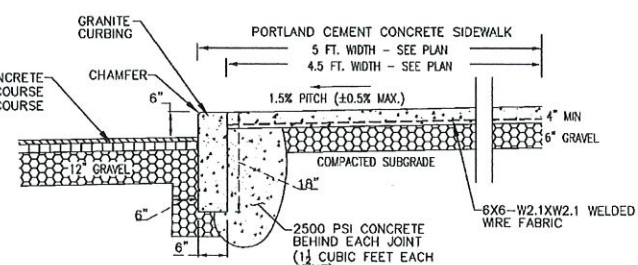
NOTE:
ELECTRICAL DUCT BANK NOT INCLUDED IN THIS DETAIL. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY.

(E) 4" ELECTRICAL CONDUIT
 (C) 2" CABLE TV CONDUIT
 (4) 4" SPARE CONDUIT
 (2) 2" SPARE CONDUIT

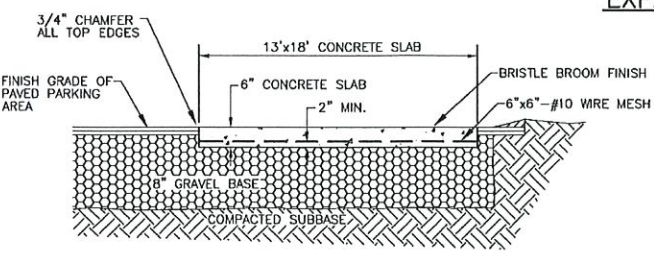
ELECTRICAL/TELECOMMUNICATION DUCT TRENCH SECTION (2 SPARE DUCT)
SCALE: NTS



CONCRETE CURBING/SIDEWALK DETAIL
SCALE: NTS



GRANITE CURBING/SIDEWALK DETAIL (ROUTE 28 ONLY)
SCALE: NTS



CONCRETE PAD FOR DUMPSTER AREA
SCALE: NTS

REVISIONS

NO.	DESCRIPTION



DRAWN BY: TMS

DESIGNED BY: TMS

CHECKED BY: TAP

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Engineers and Land Surveyors
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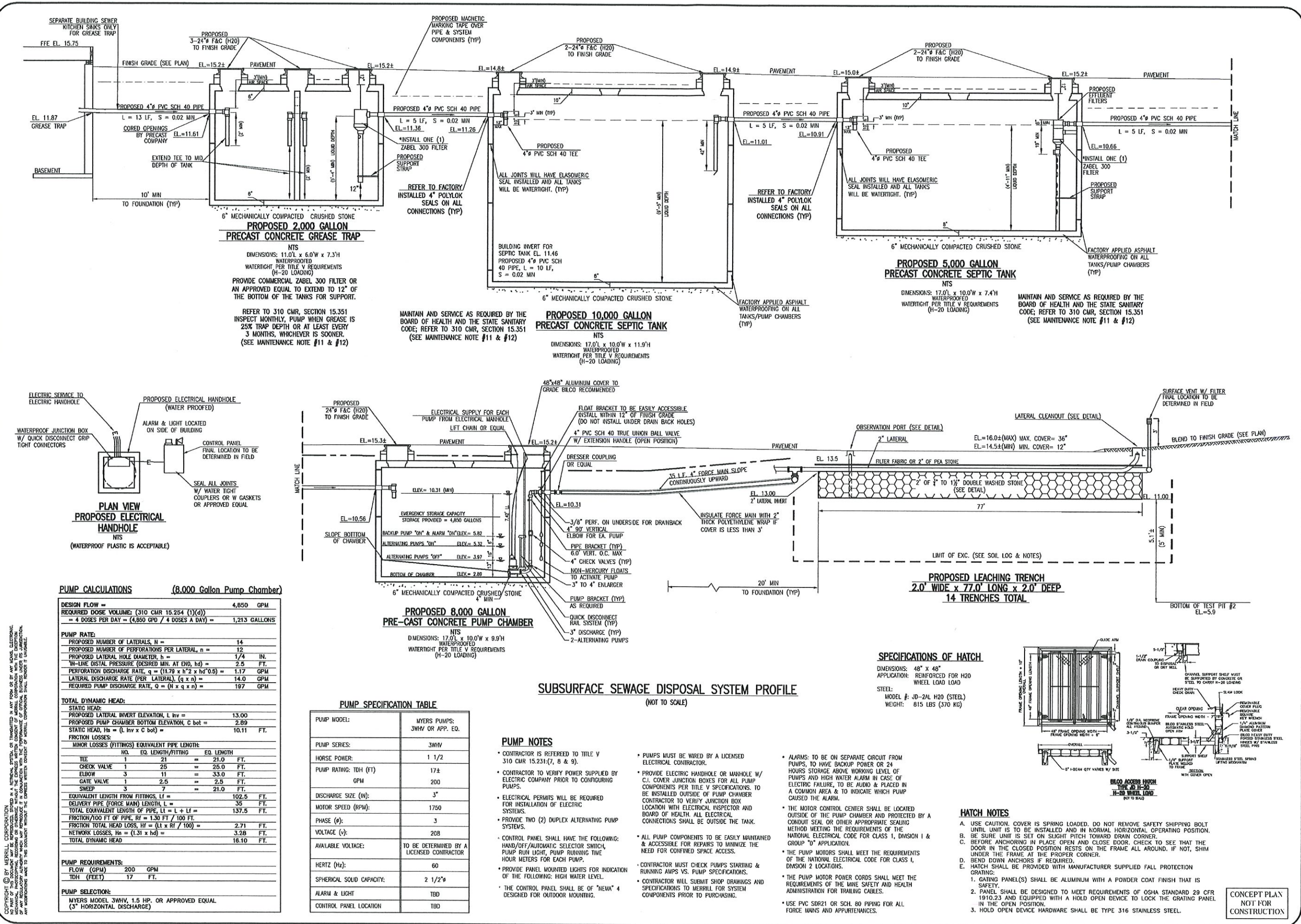
SCALE: 1"=20'

JOB NO. 22-145

LATEST REVISION:

CONSTRUCTION DETAILS

CONCEPT PLAN
NOT FOR
CONSTRUCTION



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PUMP CALCULATIONS (8,000 Gallon Pump Chamber)

DESIGN FLOW	=	4,850	GPM
REQUIRED DOSE VOLUME (310 CMR 15.254 (1)(d))	=	1,213	GALLONS
= 4 DOSES PER DAY = (4,850 GPD / 4 DOSES A DAY)	=	1,213	GALLONS

PUMP RATE:

PROPOSED NUMBER OF LATERALS, N	=	14	
PROPOSED NUMBER OF PERFORATIONS PER LATERAL, n	=	12	
PROPOSED LATERAL HOLE DIAMETER, h	=	1.74	IN.
W-LINE DISTAL PRESSURE (DESIGN MIN. AT END, hd)	=	2.5	FT.
PERFORATION DISCHARGE RATE, q = (11.79 x h ² x hd ^{0.5})	=	1.17	GPM
LATERAL DISCHARGE RATE (PER LATERAL), (q x n)	=	14.0	GPM
REQUIRED PUMP DISCHARGE RATE, Q = (N x q x n)	=	197	GPM

TOTAL DYNAMIC HEAD:

STATIC HEAD:			
PROPOSED LATERAL INVERT ELEVATION, L Inv	=	13.00	
PROPOSED PUMP CHAMBER BOTTOM ELEVATION, C bot	=	2.89	
STATIC HEAD, H _s = (L Inv x C bot)	=	10.11	FT.

FRICTION LOSSES:

NO.	EQ. LENGTH/FITTING	EQ. LENGTH
TEE	1	21.0
CHECK VALVE	1	25.0
ELBOW	3	33.0
GATE VALVE	1	2.5
SWEEP	3	21.0

EQUIVALENT LENGTH FROM FITTINGS, L_f = 102.5 FT.

DELIVERY PIPE (FORCE MAIN) LENGTH, L = 35 FT.

TOTAL EQUIVALENT LENGTH OF PIPE, L_t = L + L_f = 137.5 FT.

FRICTION/100 FT OF PIPE, R_f = 1.30 FT / 100 FT

FRICTION TOTAL HEAD LOSS, H_f = (L_t x R_f / 100) = 2.71 FT.

NETWORK LOSSES, H_n = (L_t x h_d) = 3.28 FT.

TOTAL DYNAMIC HEAD = 16.10 FT.

PUMP REQUIREMENTS:

FLOW (GPM)	200
TDH (FEET)	17

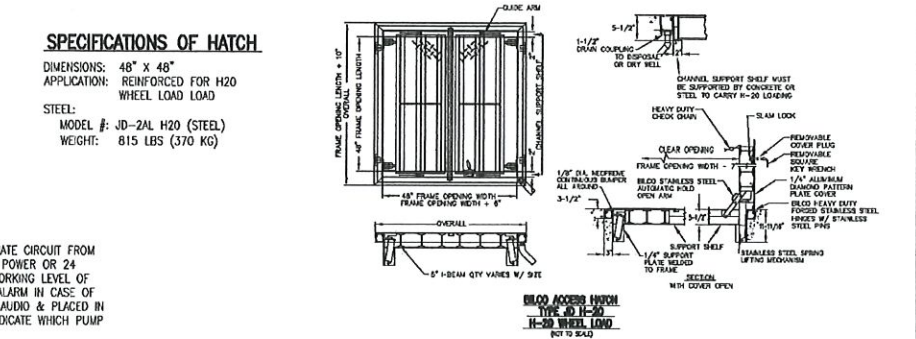
PUMP SELECTION:
MYERS MODEL 3MIV, 1.5 HP. OR APPROVED EQUAL (3" HORIZONTAL DISCHARGE)

PUMP SPECIFICATION TABLE

PUMP MODEL:	MYERS PUMPS: 3MIV OR APP. EQ.
PUMP SERIES:	3MIV
HORSE POWER:	1 1/2
PUMP RATING: TDH (FT)	17±
GPM	200
DISCHARGE SIZE (IN):	3"
MOTOR SPEED (RPM):	1750
PHASE (φ):	3
VOLTAGE (v):	208
AVAILABLE VOLTAGE:	TO BE DETERMINED BY A LICENSED CONTRACTOR
HERTZ (Hz):	60
SPHERICAL SOLID CAPACITY:	2 1/2"
ALARM & LIGHT:	TBD
CONTROL PANEL LOCATION:	TBD

PUMP NOTES

- CONTRACTOR IS REFERRED TO TITLE V 310 CMR 15.231(7, 8 & 9).
- CONTRACTOR TO VERIFY POWER SUPPLIED BY ELECTRICAL COMPANY PRIOR TO CONFIGURING PUMPS.
- ELECTRICAL PERMITS WILL BE REQUIRED FOR INSTALLATION OF ELECTRIC SYSTEMS.
- PROVIDE TWO (2) DUPLEX ALTERNATING PUMP SYSTEMS.
- CONTROL PANEL SHALL HAVE THE FOLLOWING: HAND/OFF/AUTOMATIC SELECTOR SWITCH, PUMP RUN LIGHT, PUMP RUNNING TIME HOUR METERS FOR EACH PUMP.
- PROVIDE PANEL MOUNTED LIGHTS FOR INDICATION OF THE FOLLOWING: HIGH WATER LEVEL.
- THE CONTROL PANEL SHALL BE OF "NEMA" 4 DESIGNED FOR OUTDOOR MOUNTING.
- PUMPS MUST BE WIRED BY A LICENSED ELECTRICAL CONTRACTOR.
- PROVIDE ELECTRIC HANDHOLE OR MANHOLE W/ C.I. COVER JUNCTION BOXES FOR ALL PUMP COMPONENTS PER TITLE V SPECIFICATIONS. TO BE INSTALLED OUTSIDE OF PUMP CHAMBER.
- CONTRACTOR TO VERIFY JUNCTION BOX LOCATION WITH ELECTRICAL INSPECTOR AND BOARD OF HEALTH. ALL ELECTRICAL CONNECTIONS SHALL BE OUTSIDE THE TANK.
- ALL PUMP COMPONENTS TO BE EASILY MAINTAINED & ACCESSIBLE FOR REPAIRS TO MINIMIZE THE NEED FOR CONTINUED SPACE ACCESS.
- CONTRACTOR MUST CHECK PUMPS STARTING & RUNNING AMPS VS. PUMP SPECIFICATIONS.
- CONTRACTOR WILL SUBMIT SHOP DRAWINGS AND SPECIFICATIONS TO MERRILL FOR SYSTEM COMPONENTS PRIOR TO PURCHASING.
- ALARMS: TO BE ON SEPARATE CIRCUIT FROM PUMPS, TO HAVE BACKUP POWER OR 24 HOURS STORAGE ABOVE WORKING LEVEL OF PUMPS AND HIGH WATER ALARM IN CASE OF ELECTRIC FAILURE, TO BE AUDIO & PLACED IN A COMMON AREA & TO INDICATE WHICH PUMP CAUSED THE ALARM.
- THE MOTOR CONTROL CENTER SHALL BE LOCATED OUTSIDE OF THE PUMP CHAMBER AND PROTECTED BY A CONDUIT SEAL OR OTHER APPROPRIATE SEALING METHOD MEETING THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE FOR CLASS 1, DIVISION 1 & GROUP "D" APPLICATION.
- THE PUMP MOTORS SHALL MEET THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE FOR CLASS 1, DIVISION 2 LOCATIONS.
- THE PUMP MOTOR POWER CORDS SHALL MEET THE REQUIREMENTS OF THE MINE SAFETY AND HEALTH ADMINISTRATION FOR TRAILING CABLES.
- USE PVC SDR21 OR SCH. 80 PIPING FOR ALL FORCE MAINS AND APPURTENANCES.



HATCH NOTES

- USE CAUTION, COVER IS SPRING LOADED. DO NOT REMOVE SAFETY SHIPPING BOLT UNTIL UNIT IS TO BE INSTALLED AND IN NORMAL HORIZONTAL OPERATING POSITION.
- BE SURE UNIT IS SET ON SLIGHT PITCH TOWARD DRAIN CORNER.
- BEFORE ANCHORING IN PLACE OPEN AND CLOSE DOOR. CHECK TO SEE THAT THE DOOR IN THE CLOSED POSITION RESTS ON THE FRAME ALL AROUND. IF NOT, SHIM UNDER THE FRAME AT THE PROPER CORNER.
- BEND DOWN ANCHORS IF REQUIRED.

HATCH SHALL BE PROVIDED WITH MANUFACTURER SUPPLIED FALL PROTECTION GRATING:

- GATING PANEL(S) SHALL BE ALUMINUM WITH A POWDER COAT FINISH THAT IS SAFETY.
- PANEL SHALL BE DESIGNED TO MEET REQUIREMENTS OF OSHA STANDARD 29 CFR 1910.23 AND EQUIPPED WITH A HOLD OPEN DEVICE TO LOCK THE GRATING PANEL IN THE OPEN POSITION.
- HOLD OPEN DEVICE HARDWARE SHALL BE TYPE 316 STAINLESS STEEL.

CONCEPT PLAN NOT FOR CONSTRUCTION

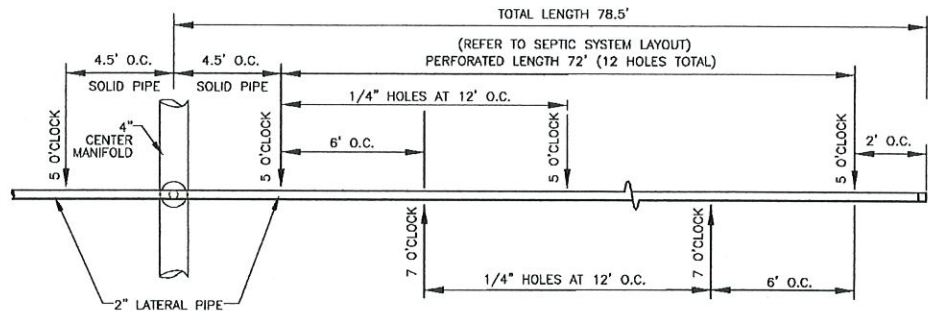
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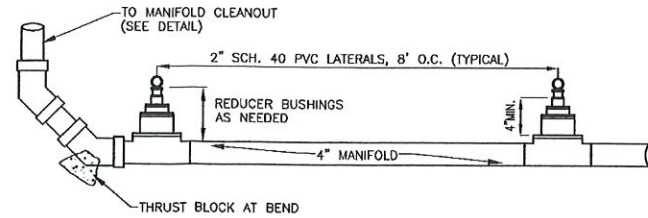
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#575 ROUTE 28 (MAIN STREET)
 HARWICH, MASSACHUSETTS
 PREPARED FOR: MAIN STREET HP, LLC
 P.O. BOX 51299
 BOSTON, MA 02205

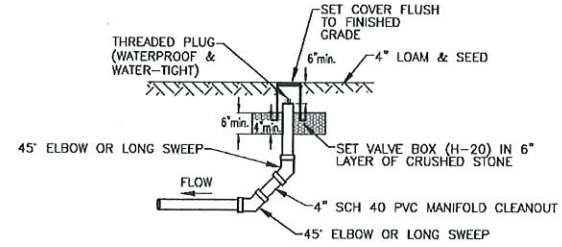
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 JOB NO. 22-145
 LATEST REVISION:
 CONSTRUCTION DETAILS
 SHEET 6 OF 8



LATERAL PIPE PERFORATION LAYOUT
SCALE: NTS



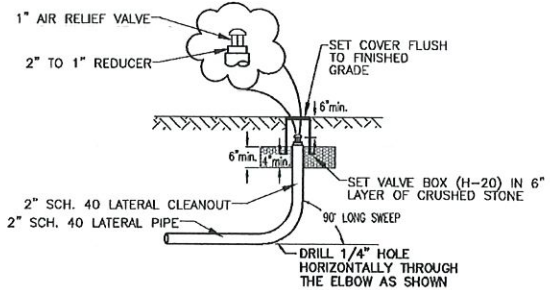
MANIFOLD TYPICAL ELEVATION
SCALE: NTS



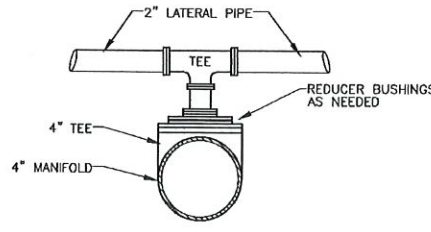
MANIFOLD PIPE: CLEANOUT DETAIL
SCALE: NTS



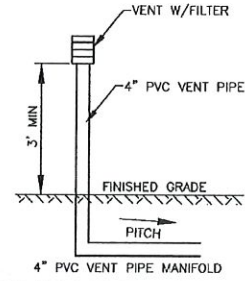
LATERAL PIPE PERFORATION
SCALE: NTS



LATERAL PIPE: CLEANOUT
SCALE: NTS

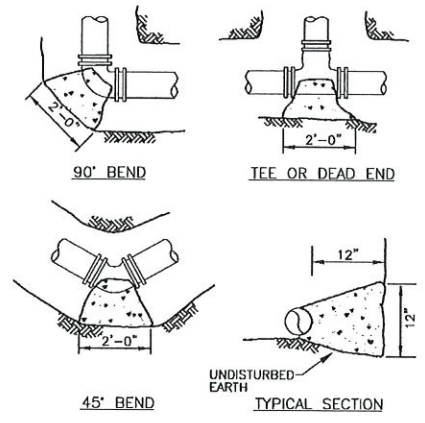


MANIFOLD & LATERAL ASSEMBLY
SCALE: NTS

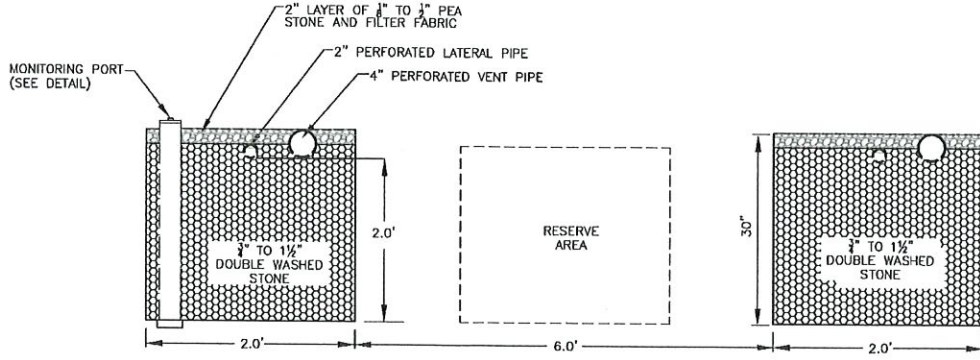


SURFACE VENT PIPE DETAIL
SCALE: NTS

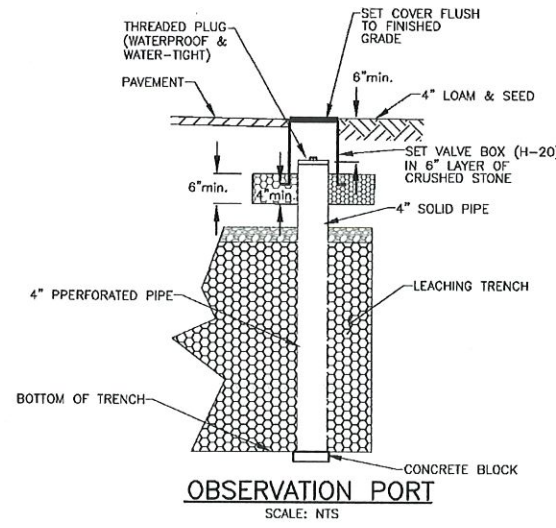
- CONSTRUCTION - INSPECTION - MAINTENANCE (CIM) NOTES:**
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL STANDARDS AND REGULATIONS.
 - ALL YARD WASTE & DEBRIS SHALL BE DISPOSED OF OFF SITE AT AN APPROPRIATE FACILITY. THE HARWICH BOARD OF HEALTH & BUILDING INSPECTOR MAY REQUIRE PROOF OF DISPOSAL.
 - ALL AREAS DISTURBED BY CONSTRUCTION AND NOT TO BE PAVED OR OTHERWISE TREATED AS NOTED ON PLAN, SHALL BE GRADED WITH 4" OF SCREENED LOAM AND SEEDED.
 - THE INSTALLATION OF THE SEPTIC SYSTEM MUST BE PERFORMED BY A LICENSED CONTRACTOR.
 - CONTRACTOR MUST NOTIFY DIG-SAFE PRIOR TO CONSTRUCTION. EXISTING UTILITIES, WHERE SHOWN, ARE APPROXIMATE. MERRILL ENGINEERS AND LAND SURVEYORS DOES NOT GUARANTEE THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN OR THAT ALL EXISTING UTILITIES AND/OR SUBSURFACE STRUCTURES ARE SHOWN.
 - ELECTRIC, TELEPHONE AND CABLE UTILITIES PER UTILITY COMPANY REQUIREMENTS.
 - PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL SECURE ALL NECESSARY STATE, MUNICIPAL AND UTILITY PERMITS AND VERIFY THE PROPOSED LOCATION OF UTILITIES WITH UTILITY COMPANIES.
 - CONTRACTOR TO NOTIFY MERRILL ENGINEERS AND LAND SURVEYORS OF ANY INCONSISTENCIES ON THE PLAN. NO CHANGES ARE TO BE MADE IN THE FIELD WITHOUT THE APPROVAL OF THE HARWICH BOARD OF HEALTH AND MERRILL ENGINEERS & LAND SURVEYORS.
 - ALL SYSTEM COMPONENTS SHALL BE MARKED WITH MAGNETIC MARKING TAPE.
 - THE INSTALLER WILL PROVIDE 48 HOURS NOTICE TO THE HARWICH BOARD OF HEALTH AND MERRILL ENGINEERS AND LAND SURVEYORS FOR THE FOLLOWING INSPECTIONS:
 - EXCAVATION
 - INSTALLED SYSTEM PRIOR TO BACKFILL
 - THE SEPTIC TANK SHALL BE INSPECTED ANNUALLY. THE TANK SHALL BE PUMPED WHENEVER NECESSARY TO ENSURE PROPER FUNCTIONING OF THE SYSTEM. PUMPING IS REQUIRED WHENEVER THE TOP OF THE SLUDGE OR SOLIDS LAYER IS WITHIN 12 INCHES OR LESS OF THE BOTTOM OF THE OUTLET TEE OR THE TOP OF THE SCUM LAYER IS WITHIN TWO INCHES OF THE BOTTOM OF THE OUTLET TEE. PUMPING FREQUENCY IS A FUNCTION OF USE AND IS RECOMMENDED ON AN ANNUAL BASIS.
 - THE SEPTIC TANK EFFLUENT FILTER SHALL BE INSPECTED ANNUALLY WHEN THE TANK IS INSPECTED. CLEAN FILTER BY SPRAYING WITH A HOSE SO THAT THE RUNOFF DRAINS INTO THE SEPTIC TANK.
 - THE GREASE TRAP SHALL BE INSPECTED MONTHLY BY THE OWNER/OPERATOR AND SHALL BE CLEANED BY A LICENSED SEPTAGE HAULER WHENEVER THE LEVEL OF GREASE IS 25% OF THE EFFECTIVE DEPTH OF THE TRAP, OR AT LEAST EVERY THREE MONTHS, WHICHEVER IS SOONER. THE OWNER/OPERATOR SHALL KEEP ALL INSPECTION AND PUMPING RECORDS AND SUBMIT RECORDS TO THE BOARD OF HEALTH.
 - THE GREASE TRAP EFFLUENT FILTER SHALL BE INSPECT MONTHLY WHEN THE GREASE TRAP IS INSPECTED. CLEAN FILTER BY SPRAYING WITH A HOSE SO THAT THE RUNOFF DRAINS INTO THE GREASE TRAP.
 - SEPTIC TANKS, GREASE TRAP & PUMP CHAMBER ARE DESIGNED FOR VEHICLE (H-20) LOADS.
 - CONTRACTOR TO ABANDON/REMOVE/CRUSH AND FILL EXISTING SEPTIC STRUCTURES IN ACCORDANCE WITH TITLE V AND LOCAL REGULATIONS AND THE CONSTRUCTION WORKS PERMIT.
 - DISPOSAL FACILITIES SHALL BE AT LEAST 18- INCHES BELOW WATER SUPPLY LINES. WHENEVER SEWER LINES MUST CROSS WATER LINES, BOTH PIPES SHALL BE CONSTRUCTED OF CLASS 150 PRESSURE PIPE, WITH PIPES CENTERED AT THE CROSSINGS, AND SHALL BE PRESSURE TESTED TO ASSURE WATER TIGHTNESS.
 - THERE WILL BE NO BUOYANT FORCES ACTING ON ANY COMPONENTS OF THE PROPOSED SUBSURFACE SEWAGE DISPOSAL SYSTEM.
 - THE CONTRACTOR SHALL ENSURE ALL COMPONENTS OF THE SUBSURFACE SEWAGE DISPOSAL SYSTEM HAVE A MINIMUM OF 10 FT SEPARATION TO EXISTING AND PROPOSED WATER SUPPLY LINES.
 - INSTALL RISERS WITH COVERS TO GRADE ON ALL SEPTIC TANKS, GREASE TRAP & PUMP CHAMBER INLET AND OUTLET OPENINGS UNLESS OTHERWISE NOTED.
 - THERE ARE NO WELLS WITHIN 100' OF THE PROPOSED SYSTEM.
 - MERRILL RECOMMENDS PROPERLY DESIGNED FOUNDATION DRAINS, BY OTHERS, FOR EVERY STRUCTURE WITH A BASEMENT.
 - THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT THE GRADING AROUND THE FOUNDATION MEETS THE REQUIREMENTS OF THE MASS. STATE BUILDING CODE AND THE INTERNATIONAL RESIDENTIAL CODE (IRC 2009) SECTION R401.3. THE GRADE SHALL DROP A MINIMUM OF 6" WITHIN 10 FEET OF THE FOUNDATION AS REQUIRED TO ENSURE WATER DRAINS AWAY FROM THE FOUNDATION. ADDITIONALLY, THE MINIMUM DISTANCE FROM FINISH GRADE TO ANY WOOD FRAMING/CONSTRUCTION SHALL MEET THE MINIMUM REQUIREMENTS OF THE MASS. STATE BUILDING CODE AND THE IRC 2009.



CONCRETE THRUST BLOCKS
SCALE: NTS



LEACHING TRENCH CROSS SECTION
SCALE: NTS



OBSERVATION PORT
SCALE: NTS

NO.	REVISIONS



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SITE PLAN
#575 ROUTE 28 (MAIN STREET)
HARWICH, MASSACHUSETTS
PREPARED FOR: MAIN STREET HP, LLC
P.O. BOX 51299
BOSTON, MA 02205

MAY 19, 2022
SCALE: 1"=20'
JOB NO. 22-145
LATEST REVISION:

CONSTRUCTION DETAILS
SHEET 7 OF 8

CONCEPT PLAN
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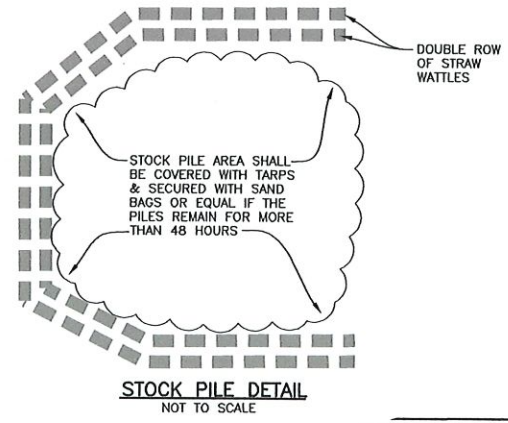


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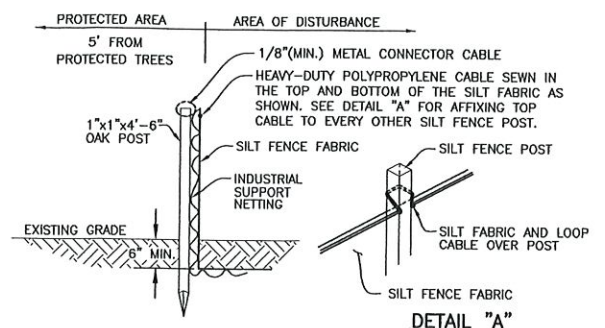
SITE PLAN
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MAY 19, 2022
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 JOB No. 22-145
 LATEST REVISION:
DEMOLITION & EROSION CONTROL PLAN
 SHEET 8 OF 8

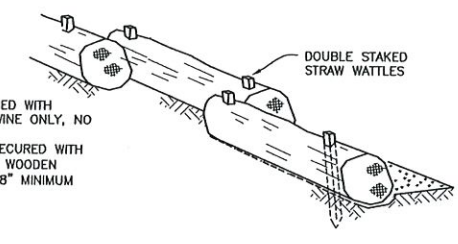


STOCK PILE DETAIL
 NOT TO SCALE

- NOTES:**
- 1) THOROUGHLY COMPACT EXCAVATED SOILS BACK INTO THE TRENCH AFTER INSTALLATION OF EROSION CONTROL DEVICES.
 - 2) SILT FENCE FABRIC SHALL NOT BE SLIT.
 - 3) 1"x1"x4'-6" OAK POSTS FOR THE SILT FENCE SHALL BE LOCATED ON CENTER 8'-0" (MAX.)

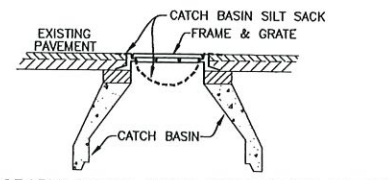
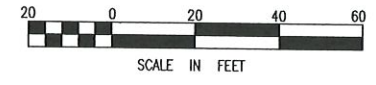
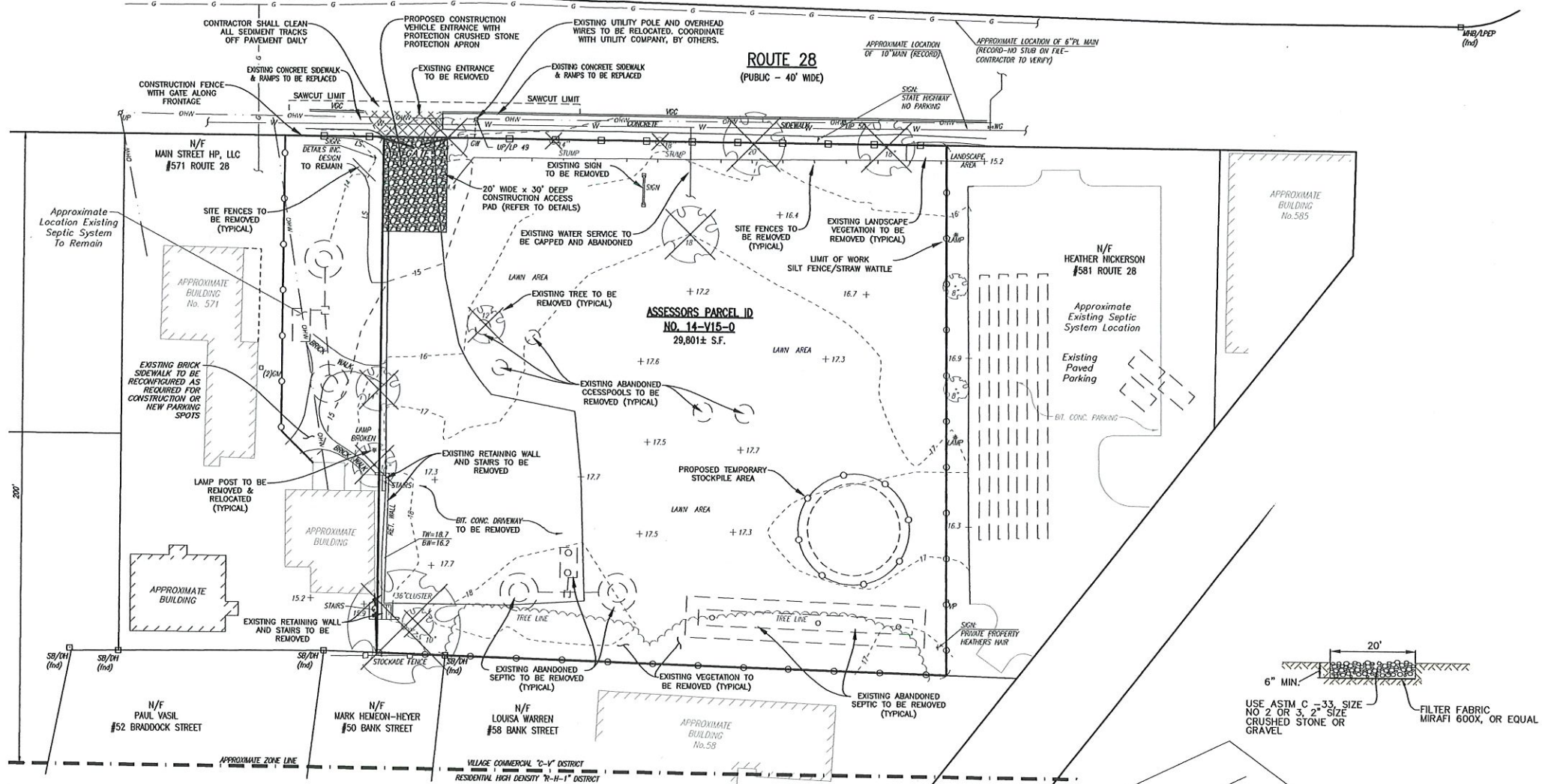


SILT FENCE / WORK LIMIT
 NOT TO SCALE



LIMIT OF WORK - STRAW WATTLE DETAIL
 NOT TO SCALE

- EROSION AND SEDIMENTATION CONTROL PLAN:**
 The Erosion and Sedimentation Control Plan includes the following:
1. The Installer shall examine the work area and site conditions under which this work is to be performed prior to installation of sedimentation and erosion control.
 2. The Contractor is responsible for establishing and maintaining the limit of work and sedimentation controls throughout the duration of the work and prior to performing any clearing and excavation activities on the site.
 3. The Contractor shall provide adequate protection to the existing stormwater system on or near the site as indicated on the construction drawings.
 4. The Contractor shall protect existing catch basins with the use of silt-bags at the inlet of the structures. The Contractor may remove such protection once the disturbed areas have been stabilized and no signs of erosion and sedimentation exist in the direction to the protected catch basins.
 5. The Contractor shall construct a "Stone Tracking Pad" at entrances to and from Route 28. All construction site vehicles exiting the work site shall use the "Stone Tracking Pad" to avoid tracking sediment off-site. The contractor shall remove all sediments spilled, dropped, washed or tracked onto public and private roadways.
 6. The Contractor shall stabilize all graded and/or disturbed areas by installing loam and seeding at the earliest time possible to prevent erosion and sedimentation.
 7. The Contractor shall implement supplemental drainage and erosion control measures (such as temporary swales, stone checks, seeding or mulching) as may be necessary during the course of the construction based on changes of stormwater runoff patterns if necessary.
 8. After every rainstorm during construction the Contractor shall examine the conditions of all the erosion and sedimentation controls and perform any required repairs or replacements.
 9. The Contractor shall maintain 50 linear feet of silt fence or straw wattles on site in the event erosion occurs. If erosion occurs during construction the Contractor shall take steps to control the erosion and mitigate the damaged areas.
 10. The Contractor shall remove all land clearing waste material (brush, stumps, wood, leaves, chips, etc.) during construction from site and properly transport to an approved disposal site. The Contractor shall not mix land clearing waste material with other construction activities waste material.
 11. All excavated areas rendering a slope equal or greater than 3 horizontal to 1 vertical (3:1) shall be stabilized with the installation of erosion control matting.
 12. Stripped topsoil from areas to be graded shall be stockpiled at locations approved by the project engineer and shall not cause damage to the sedimentation and erosion controls.
 13. The Contractor shall implement measures to control dust levels by means such as water trucks during construction until all disturbed areas are stabilized.
 14. Stabilization for paved areas shall be achieved by installing the gravel base immediately after the rough grading and sub-base compaction is complete.
 15. The Contractor shall avoid smearing the bottom levels of the excavation and the exposed excavation face walls for subsurface leaching systems and/or bio-filtration systems. The contractor shall scarify any areas where smearing occurs to provide adequate filtration through the soils.
 16. The Contractor shall avoid using dirty or silty crushed stone for the construction of the subsurface leaching systems. Instead the Contractor shall use double washed crushed stone for these components.
 17. All protective measures (filter fabric, silt sacs, haybale dams) installed in the vicinity of construction of the site protecting existing stormwater systems shall be removed once the disturbed areas are stabilized.



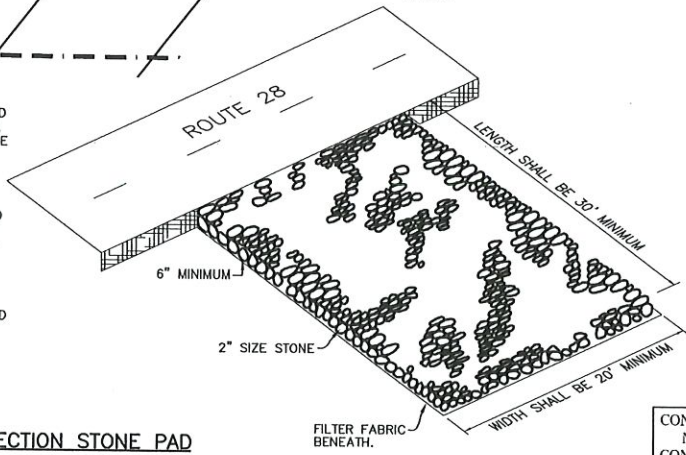
TEMPORARY CATCH BASIN PROTECTION DETAIL
 NOT TO SCALE

INSTALLATION
 THE AREA OF THE CONSTRUCTION ENTRANCE SHOULD BE CLEARED OF ALL VEGETATION, ROOTS, PAVEMENT, WALKWAYS AND OTHER OBJECTIONABLE MATERIAL. THE GRAVEL SHALL BE PLACED TO THE SPECIFIED DIMENSIONS, AS NOTED.

MAINTENANCE
 THE CONSTRUCTION ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENTS ONTO ADJACENT ROADWAYS. THIS WILL REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE, OR ADDITIONAL LENGTH, AS CONDITIONS DEMAND, AND REPAIR, AND / OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO ADJACENT ROADWAYS MUST BE REMOVED IMMEDIATELY.

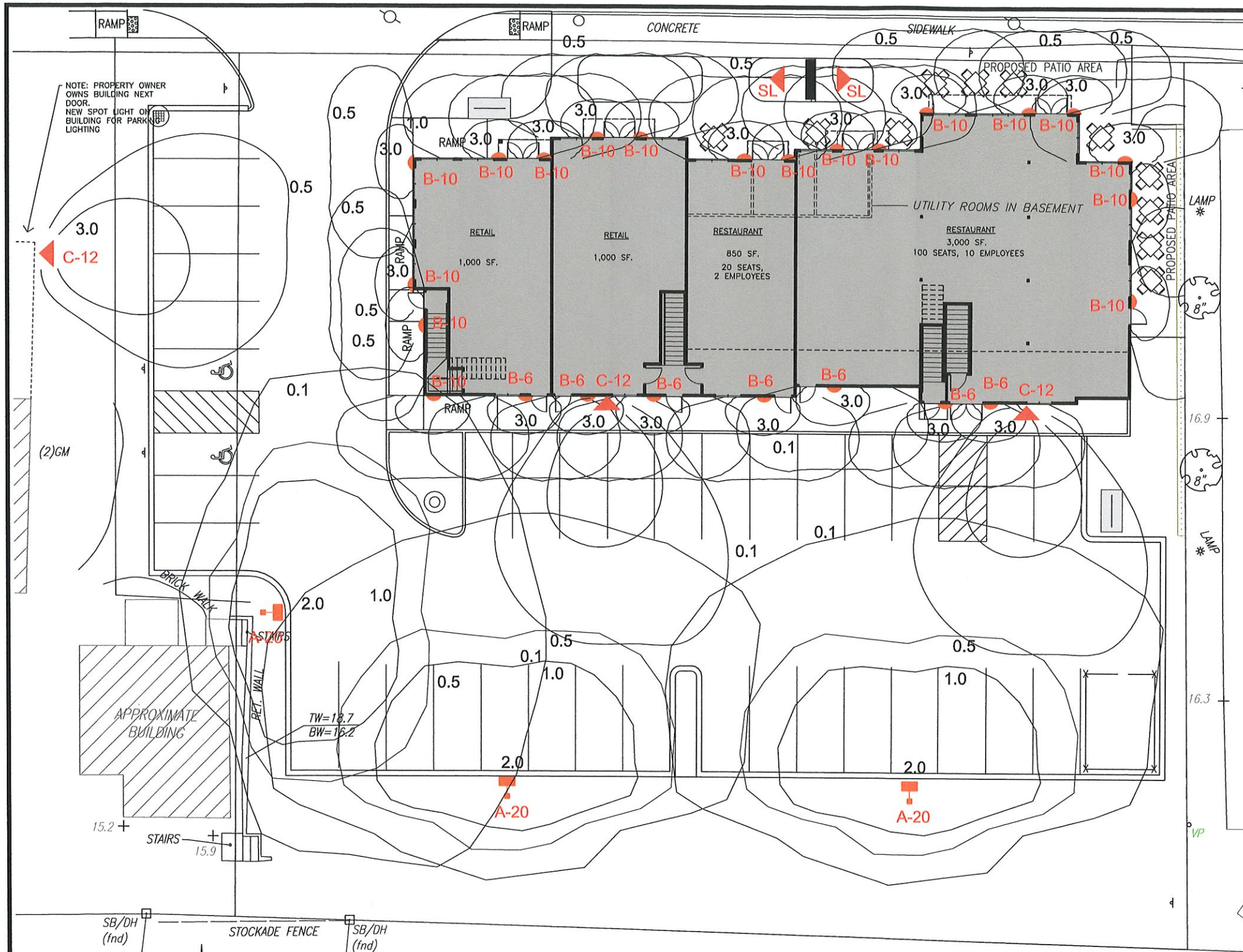
PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

CONSTRUCTION ENTRANCE PROTECTION STONE PAD
 NOT TO SCALE



CONCEPT PLAN
 NOT FOR CONSTRUCTION

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d#series
TYPE A



TYPE B



TYPE C



TYPE SL

1 LIGHTING PLAN
L1.1 SCALE: 1" = 10'-0"



TENANT SIGN LIGHTS

LIGHT FIXTURE SCHEDULE							
SYMBOL	LABEL	MANUFACTURER	DESCRIPTION	REMARKS	LAMP	WATTAGE	LUMENS
■	A	LITHONIA LIGHTING	AREA POLE LIGHT D-SERIES T4M	CUT OFF SHIELD	LED	54	6,327
◐	B	PROGRESS LIGHTING	WALL MOUNTED, WET LOCATION, TRADITIONAL FORM	GLASS, BLACK FINISH	LED	9	623
▲	C	WAC LIGHTING	ENDURANCE DOUBLE SPOT LIGHT	DUAL HEAD, BLACK FINISH	LED	30	965
◑	SL	MPL	MULTIPURPOSE AREA LIGHT-LED	FREE STANDING SIGN LIGHT	LED	15	1600

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05-19-22

DRAWING TITLE:
LIGHTING PLAN

REVISIONS		
NO.	DATE	DESCRIPTION

DATE OF ISSUE: 05-19-22

DRAWN BY: MRH CHECKED BY: GBS

DRAWING NUMBER:
L1.1

PROJECT:

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05-19-22



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SIGNAGE ELEVATIONS

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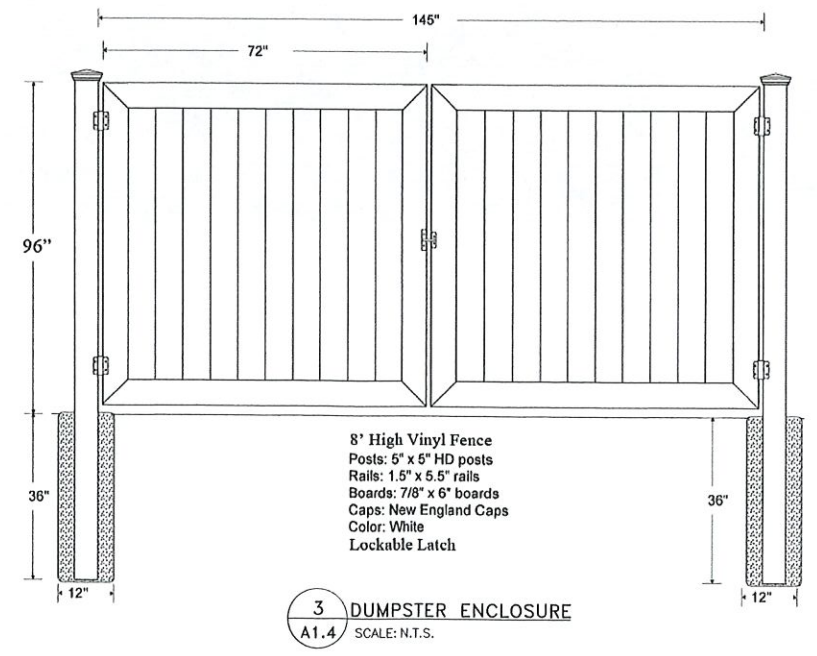
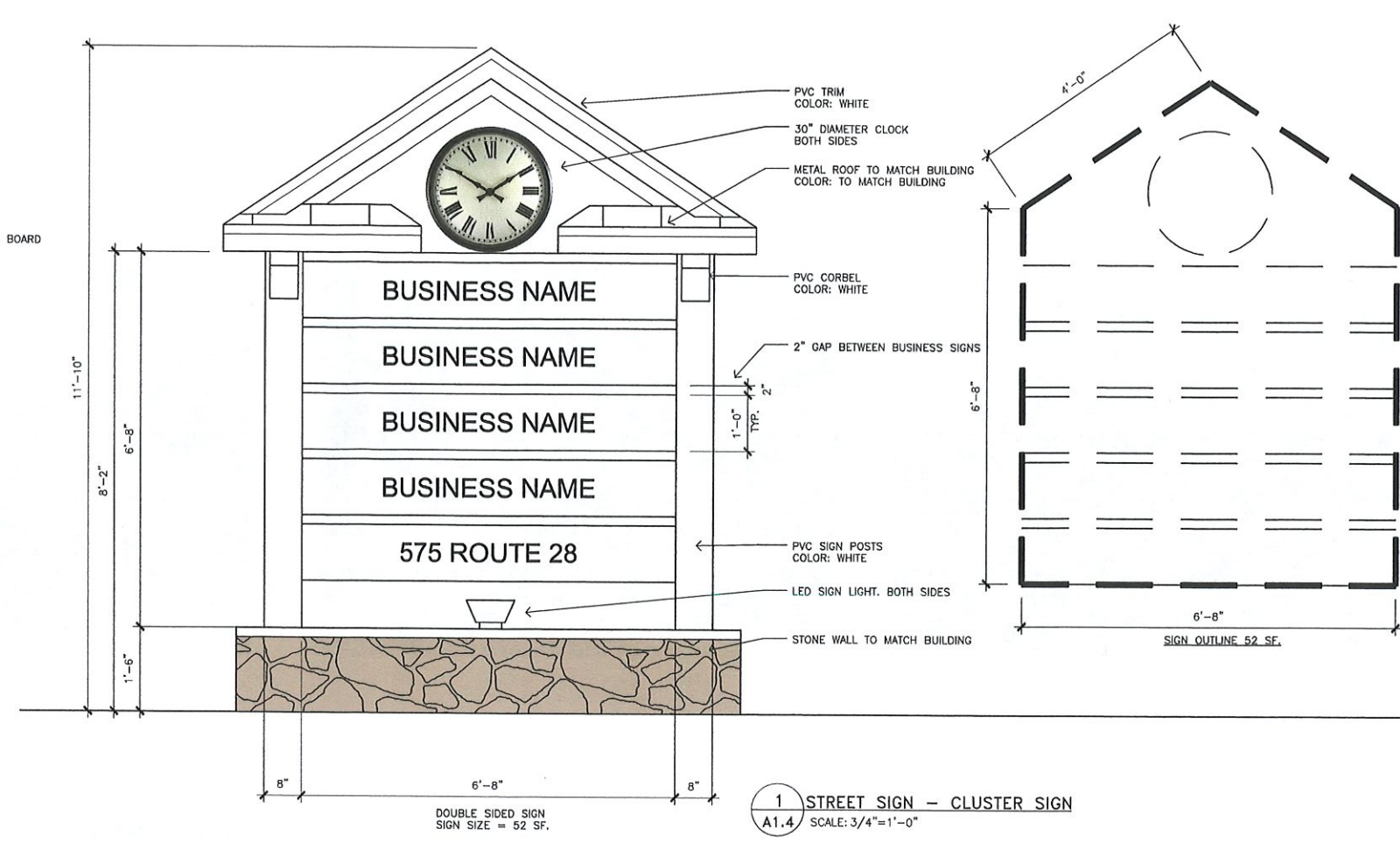
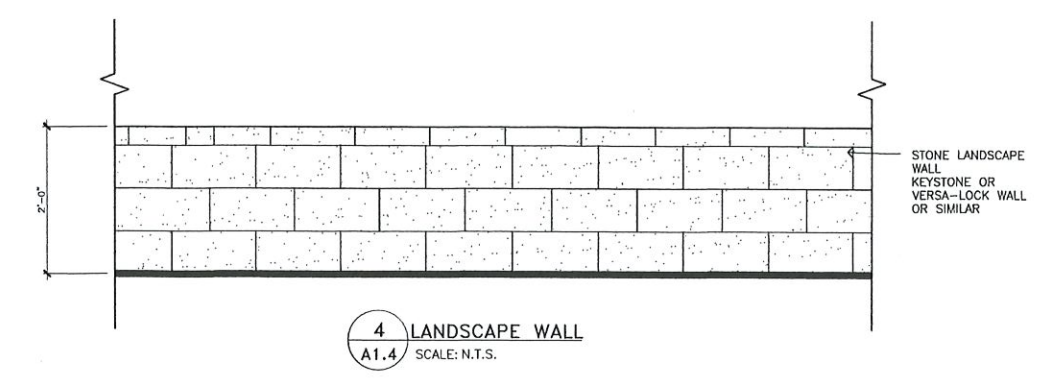
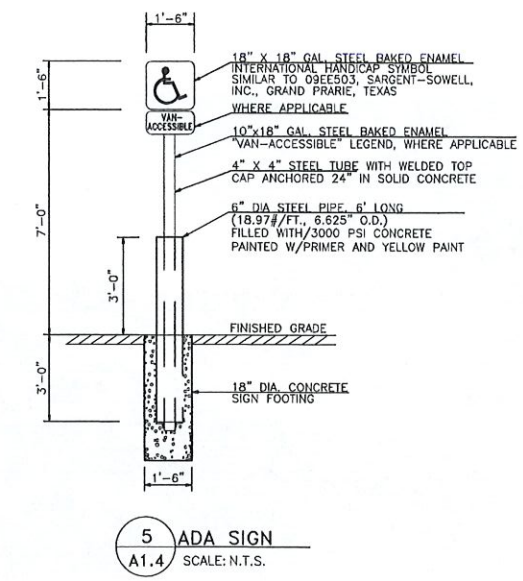
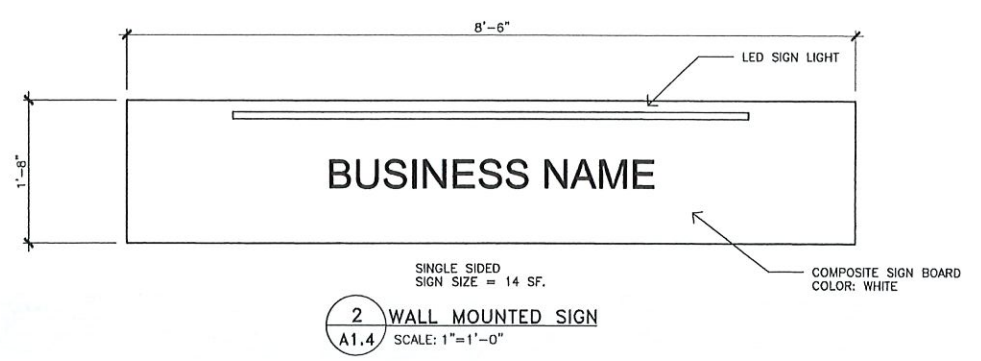
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DRAWING NUMBER:

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HARWICH ZONING BYLAW

§ 325-27. Sign area measurement.

A. Unless otherwise specified in the definition, all signs shall meet the area measurement requirements of this section.

B. The area of a sign face shall be computed by measurement of the smallest square, circle, rectangle, triangle, or combination thereof that will encompass the extreme limits of the writing, representation, emblem, or other display. This shall include any material or color forming an integral part of the background of the display or used to differentiate the sign from the backdrop or structure against which it is placed. The area calculation shall not include structural supporting framework, bracing or wall. If any advertising is present on the supports of a sign, the area of the supports will count towards the total allowable signage. Where there are two faces back to back, the total area of the largest face shall determine the area of the sign.

C. No ground sign may exceed 12 feet in height unless otherwise specified.

D. For single-tenant, nonmunicipal business accessed directly from a street, right-of-way or parking area, the maximum permitted area of all nonexempt signs shall be 48 square feet per respective public entrance facade. Nonexempt signs counting towards the 48 square feet include any sign on a property at any time, including but not limited to signs put out and taken in on a daily basis, and signs in windows.

E. Nonmunicipal developments having more than one tenant or use within a project or premises may construct one cluster sign containing the name of the development and/or listings of individual businesses, products or services within the development of up to 60 square feet.

(1) Each tenant may have signage at the location of its business of up to 48 square feet per public entrance facade. Nonexempt signs counting towards the 48 square feet include any sign on a property at any time, including but not limited to signs put out and taken in on a daily basis, and signs in windows.

(2) Total sign area within the master sign plan is subject to the size limitations of this section. Sign area cannot be transferred to a single building or facade from other buildings in the project. In addition, the amount of signage assigned to a specific space in a building shall be tied to that space through the lease or purchase agreement. Under no circumstances may the sign area designated for an individual space be transferred to another space in the same building or complex.

F. Additional cluster signs may be allowed by special permit from the Planning Board. Signage in excess of 48 square feet and/or allocation of total allowed square footage over entry and nonentry facades, as referenced above in Subsections D and E(1), may also be allowed by special permit from the Planning Board.

