



SITE RE-DEVELOPMENT 330 OLD OAK STREET PEMBROKE, MA

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMANCE WITH THE RULES AND

Drawing Index:

Drawing Title Cover Sheet

General Notes, Legend & Abbreviations

EX-1 **Existing Conditions Plan**

Site Layout Plan

Grading & Utility Plan

D-1-D-2 **Construction Details**

Erosion & Sedimentation Control Plan



SCALE: 1" = 60'

Issued Date: MARCH 1, 2023 REVISED APRIL 24, 2023

McKenzie Engineering Group, Inc. Consulting Engineers

150 Longwater Drive, Suite 101, Norwell, Massachusetts 02061

DATE OF APPLICATION:	
DATE OF HEARING:	
DATE OF APPROVAL:	*
DATE OF ENDORSEMENT:	
-	

List of Waivers Requested from the Planning Board Rules & Regulations Governing The Issuance of Site Plan Approval Town of Pembroke, Massachusetts August 29, 2005

IN LIEU OF A LANDSCAPE PLAN, THE PROJECT PROPONENT HAS AGREED TO PROVIDE A

SECTION IV.4.22 TRAFFIC IMPACT STUDY

THE STORAGE UNIT WILL GENERATE FEWER DAILY TRIPS THAN THE EXISTING

THE PROJECT PROPONENT PROPOSES WALL PACK LIGHTING.

SECTION V.5.3 DRAINAGE

SECTION V.5.2 SITE LIGHTING

THE PROJECT PROPONENT HAS AGREED TO INSTALL A ROOF DRY WELL SYSTEM.

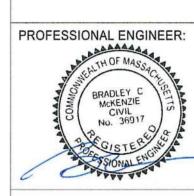
Owner/Applicant:

330 Old Oak Street, LLC 289 St. George Street Duxbury, MA 02332

Engineer/Surveyor:

McKenzie Engineering Group, Inc. 150 Longwater Drive Suite 101 Norwell, MA 02061

150 Longwater Drive, Suite 101 www.mckeng.com



DRAWN BY: DESIGNED BY CHECKED BY:

APPROVED BY SCALE: PROJECT NO .: DWG. TITLE:

COVER SHEET

M:\MEG\2022 PROJECTS\222-190 JEI VENTURES - 330 OLD OAK ST., PEMBROKE\DWGS\(R1)\222-190 C-1-C-2 (R1).D\

Abb	reviations		Legend	
ABAN	ARANDONED	EXISTING	PROPOSED	
ACP	ABANDONED ASBESTOS CEMENT PIPE			
ACR ADJ	ACCESSIBLE CURB RAMP ADJUST	55	100	CONTOUR ELEVATION
APPROX ASPH	APPROXIMATE ASPHALT	X 100.2	+ 100.00	SPOT GRADE
ACCMP B	ASPHALT COATED CORRUGATED METAL PIPE BOLLARD	27.21TC _× 27.15BC	27.21TC _× 27.15BC [×]	TOP & BOTTOM ELEVATION
BD BLDG	BOUND BUILDING	21.25	21.25	SPOT ELEVATION w/LEADER
BIT CONC	BITUMINOUS CONCRETE	×		
BM BS	BENCHMARK BOTTOM OF SLOPE	(\$)	(\$)	SEWER MANHOLE (SMH)
CAP CB	CORRUGATED ALUMINUM PIPE CATCH BASIN		®	FIRST DEFENSE UNIT (FD)
C&C CB/DH	CUT AND CAPPED CONC. BOUND/DRILL HOLE	(1)	0	DRAIN MANHOLE (DMH)
CB/EPLP CCB	CB/ESCUTCHEON CAPE COD BERM			CATCH BASIN (CB)
CIP	CAST IRON PIPE			DOUBLE CATCH BASIN (DCB)
CIT C	CHANGE IN TYPE CENTERLINE	\$ -	~	HYDRANT (HYD)
CLF CO	CHAIN LINK FENCE CLEAN OUT	¢	•	UTILITY POLE (UP)
CONC	CONCRETE			
CMP CPP	CORRUGATED METAL PIPE	φ	*	LIGHT
CS	CORRUGATED POLYETHYLENE PIPE COMBINED SEWER	\bowtie	H	WATER GATE (WG)
CSMH	COMBINED SEWER MANHOLE CULVERT	\bowtie	×	GAS GATE (GG)
Δ D	DELTA ANGLE DRAIN	-0	-	SIGN
DCB DIP	DOUBLE CATCH BASIN DUCTILE IRON PIPE	EP	EP	EDGE OF PAVEMENT (NO CURB)
DMH E	DRAIN MANHOLE			EDOL OF TAVENENT (NO COND)
ECC	ELECTRIC EXTRUDED CONCRETE CURB	TP	TP	TEST PIT AND/OR PERC TEST LOCATION
ELEV EMH	ELEVATION ELECTRIC MANHOLE			TERO TEST ESSATION
E/T/C EW	ELECTRIC, TELEPHONE, & CABLE TV END WALL	(* - 1)	(\cdot)	EXISTING TREE
EXIST FAB	EXISTING FIRE ALARM BOX		\sim	
FES FND.	FLARED END SECTION	O	0	BOLLARD
FND F&C	FOUNDATION		D	DUMPSTER PAD
F&G	FRAME AND COVER FRAME AND GRATE		10	PARKING COUNT
FD G	FIRST DEFENSE UNIT GAS			HANDICAP RAMP
GD GG	GROUND GAS GATE	<u>A</u> A	<u> </u>	
GIP GP	GALVANIZED IRON PIPE GUARD POST		گ	HANDICAP PARKING
GS GR	GAS SERVICE		VAN	VAN-ACCESSIBLE HANDICAP PARKING
GRAN.	GUARD RAIL GRANITE	-O-	-	UTILITY POLE
HH HOR	HANDHOLE HORIZONTAL			GUY POLE
HP HWL	HIGH PRESSURE HEADWALL	O-	←	HAND HOLE
HYD INV	HYDRANT INVERT		HH —	
I.P. I.R.	IRON PIN	PB	PB	PULL BOX
L LP	IRON ROD LEAD		①	TELEPHONE MANHOLE
MAX	LIGHT POLE MAXIMUM	T	T	TRANSFORMER PAD
MC MH	METAL COVER MANHOLE	Name of the Control o	<u></u>	
MHB MIN	MASS. HIGHWAY BOUND MINIMUM	M	$\sim \sim$	TREE LINE
MLP NIC	METAL LIGHT POLE NOT IN CONTRACT		—x——x—	CHAIN LINK FENCE
NTS OHW	NOT TO SCALE		0000000	STONE WALL
PB PE	OVERHEAD WIRE PULL BOX	to residence a resident de la constante de la		RETAINING WALL
Р	POLYETHYLENE PIPE PROPERTY LINE	∧ △ ^{A1}		WETLAND FLAG LOCATION
PROP	PROPOSED POLYVINYL CHLORIDE PIPE	△ — — A1 — A2		METIANDLINE
PVMT PWW	PAVEMENT			WETLAND LINE
RCP REM	PAVED WATER WAY REINFORCED CONCRETE PIPE	sammenta presenta	A STREETHING REALITY OF THE STREET, ST	WETLAND BUFFER
REMOD	REMOVE REMODEL			
RET ROW	RETAIN RIGHT OF WAY			LIMIT OF MORKIER COLON CO.
RR R&R	RAILROAD REMOVE AND RESET		gad the fire comment of the fire com-	LIMIT OF WORK/EROSION CONTROL
R&S S	REMOVE AND STACK			SNOW STORAGE AREA
SB SB/DH	SEWER STONE BOUND			
SGC SMH	STONE BOUND/DRILL HOLE SLOPED GRANITE CURB SEWER MANHOLE			

TRAFFIC CONTROL BOX

TELEPHONE MANHOLE

TAPPING SLEEVE, VALVE AND BOX

TRAFFIC LIGHT

TRANSFORMER

TOP OF SLOPE

UTILITY POLE

VITRIFIED CLAY PIPE

VERTICAL GRANITE CURB

SEWER MANHOLE

STATION SEWER SERVICE

STEEL SIDEWALK TELEPHONE

TREE

TYPICAL

VERTICAL

WATER MAIN WATER GATE

STA

STL

TCB

TMH

TRANS

TSV

TYP

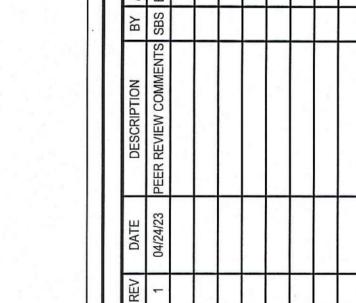
VCP

VERT

VGC

GENERAL NOTES:

- LOCUS IS SHOWN AS PARCEL NUMBER G15-3 ON THE TOWN OF PEMBROKE ASSESSOR'S MAPS.
- DEED TO LOCUS IS RECORDED IN THE PLYMOUTH COUNTY REGISTRY OF DEEDS AT BOOK 57242, PAGE 35.
- 3. SURVEY OF THE FRONT PORTION OF THE SITE WAS MADE ON THE GROUND IN SEPTEMBER OF 2022 BY MCKENZIE ENGINEERING GROUP, INC. THE REMAINDER OF THE SITE IS FROM COMPILED DATA.
- 4. ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988.
- 5. WETLAND RESOURCE AREAS WERE NOT ENCOUNTERED DURING THE FIELD SURVEY.
- MINIMUM SETBACK REQUIREMENTS: ZONING DISTRICT: BUSINESS B (ADULT USE OVERLAY) FRONT YARD 40' SIDE YARD 25' REAR YARD 20'
- 7. THE PROPERTY SHOWN HEREON IS LOCATED IN ZONE X OF THE FLOOD INSURANCE RATE MAP COMMUNITY PANEL No. 25023C0207K, WHICH BEARS AN EFFECTIVE DATE OF JULY 6, 2022.
- 8. THE PROPERTY SHOWN HEREON IS LOCATED IN A DEP ZONE 2, AND NOT LOCATED IN A TOWN OF PEMBROKE WATER RESOURCE AND GROUNDWATER PROTECTION DISTRICT.
- 9. THE LOCUS IS NOT LOCATED WITHIN AN AREA MAPPED AS PRIORITY HABITAT & ESTIMATED HABITAT FOR RARE SPECIES ACCORDING TO THE NATURAL HERITAGE AND ENDANGERED SPECIES PROGRAM (NHESP).
- 10. PLAN REFERENCES: PB 4090 3414 3538 3654



FOR REGISTRY USE ONLY

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMANCE WITH THE RULES AND REGULATIONS OF THE REGISTER OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

4-24-23

MCKENZIE ENGINEERING GROUP Assinippi Office Park 150 Longwater Drive, Suite 101 Norwell, MA 02061 P: 781.792.3900

F: 781.792.0333

www.mckeng.com

GENERAL UTILITY NOTES:

- 1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY, AND "DIGSAFE" AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST EXACT FIELD LOCATION OF UTILITIES AND THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION SHALL BE TAKEN BEFORE PROCEEDING WITH THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLAN.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL CONTROL POINTS AND BENCHMARKS NECESSARY FOR THE WORK.
- 3. THE CONTRACTOR SHALL COORDINATE ALL STREET WORK WITH THE PEMBROKE DEPARTMENT OF PUBLIC WORKS.
- 4. THE CONTRACTOR SHALL EXCAVATE THE UTILITY TRENCHES IN THE LOCATIONS SHOWN ON THE PLAN PRIOR TO COMMENCING WORK TO VERIFY THE ELEVATIONS AND LOCATIONS OF EXISTING UTILITIES. THE CONTRACTOR SHALL PROVIDE THE OWNER AND ENGINEER WITH THE RESULTS PRIOR TO COMMENCING ANY WORK.
- 5. ALL WATER AND FIRE SERVICES SHALL BE INSTALLED WITH 5' OF COVER EXCEPT AS NOTED OR DETAILED OTHERWISE.
- 6. THE LOCATION AND SIZES OF THE DOMESTIC WATER AND FIRE SERVICES SHALL BE PROVIDED DURING FINAL DESIGN AND WERE NOT SPECIFIED BY MCKENZIE ENGINEERING GROUP, INC.
- 7. THE DOMESTIC WATER SERVICES SHALL BE POLYETHYLENE AND FIRE SERVICES SHALL BE CEMENT LINED DUCTILE IRON PIPE (C.L.D.I.) AND SHALL BE INSTALLED WITH APPROPRIATELY SIZED TAPPING SLEEVE, GATE VALVE AND BOX.
- 8. ALL WATER AND FIRE SERVICE APPURTENANCES, MATERIALS, METHODS OF INSTALLATION SHALL MEET OR EXCEED ALL LOCAL MUNICIPAL REQUIREMENTS.
- 9. THE FIRE SERVICE AND DOMESTIC WATER SERVICE SHALL BE ADEQUATELY PROTECTED AGAINST BACKFLOW (BACKFLOW PREVENTION) AT THE BUILDING.
- 10. AFTER PRESSURE TESTING AND CHLORINATION IS COMPLETED, SAMPLES SHALL BE TAKEN FROM THE FIRE SERVICE AND DOMESTIC WATER SERVICE AND SHALL BE TESTED AT 200 PSI FOR A MINIMUM OF 2 HOURS. THE CONTRACTOR IS REQUIRED TO NOTIFY THE PEMBROKE DEPARTMENT OF PUBLIC WORKS AT LEAST 24 HOURS PRIOR TO THE TESTING.
- 11. THE FIRE SERVICE AND DOMESTIC WATER SERVICE SHALL BE TESTED IN ACCORDANCE WITH DEPARTMENT OF ENVIRONMENTAL PROTECTION REGULATIONS. A MINIMUM OF 2 SEPARATE WATER SAMPLES SHALL BE TESTED AT A STATE CERTIFIED LABORATORY.
- 12. A MINIMUM OF 10 FEET CLEAR HORIZONTALLY SHALL BE MAINTAINED BETWEEN SANITARY SEWER SERVICES AND WATER SERVICES. WHENEVER CONDITIONS PREVENT A LATERAL SEPARATION OF 10 FEET TO A WATER SERVICE THE ELEVATION OF THE CROWN OF THE SEWER SHALL BE AT LEAST 18 INCHES BELOW THE INVERT OF THE WATER SERVICE.
- 13. ALL GRAVITY SEWER PIPE SHALL BE POLYVINYL CHLORIDE (PVC) SDR-35 UNLESS OTHERWISE NOTED.
- 14. WHERE SANITARY SEWERS CROSS WATER MAINS, THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE CROWN OF THE SEWER IS AT LEAST 18 INCHES BELOW THE INVERT OF THE WATER MAIN. IF THE ELEVATION OF THE SEWER CANNOT BE VARIED TO MEET THIS REQUIREMENT, THE WATER MAIN SHALL BE RELOCATED TO PROVIDE THIS SEPARATION OR CONSTRUCTED WITH MECHANICAL-JOINT PIPE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE SEWER. ONE FULL LENGTH OF WATER MAIN SHALL BE CENTERED OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. WHENEVER IT IS IMPOSSIBLE TO OBTAIN VERTICAL SEPARATION AS STIPULATED ABOVE, BOTH THE WATER MAIN AND THE SEWER MAIN SHALL BE ENCASED IN CONCRETE FOR A MINIMUM DISTANCE OF 10 FEET FROM THE CROSSING POINT OF THE OTHER PIPE AS MEASURED NORMALLY FROM ALL POINTS ALONG THE PIPE.
- 15. THE LOCATIONS OF PROPOSED ELECTRIC, TELEPHONE, COMMUNICATION (E.T.C.) AND FIRE SERVICES ARE APPROXIMATE. THE PROJECT ELECTRICAL ENGINEER SHALL VERIFY THESE LOCATIONS PRIOR TO THE START OF CONSTRUCTION AND SHALL COORDINATE ALL E.T.C. WORK WITH THE APPROPRIATE UTILITY COMPANIES.
- 16. THE PROPOSED GAS SERVICE LOCATIONS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL COORDINATE THE GAS SERVICE INSTALLATION WITH THE GAS COMPANY. THE CLIENT AND CONTRACTOR SHALL CONFIRM THE LOCATION AND SIZE OF THE PROPOSED GAS SERVICES WITH THE GAS COMPANY.
- 17. IF DURING THE CONSTRUCTION PROCESS THE NEED FOR EXCAVATION DEWATERING ARISES, A DEWATERING FILTER PIT SHALL BE CONSTRUCTED IN ACCORDANCE WITH APPROPRIATE STORMWATER MANAGEMENT AND ENGINEERING PRACTICES.

Z $\widehat{\mathbb{S}}$ **PME**IL G15-ഗധമ S

PROFESSIONAL ENGINEER:

330 289 S DRAWN BY: **DESIGNED BY:** CHECKED BY: APPROVED BY: MARCH 1, 2023 SCALE:

PROJECT NO .: 222-190 DWG. TITLE: **GENERAL NOTES** LEGEND &

ABBREVIATIONS

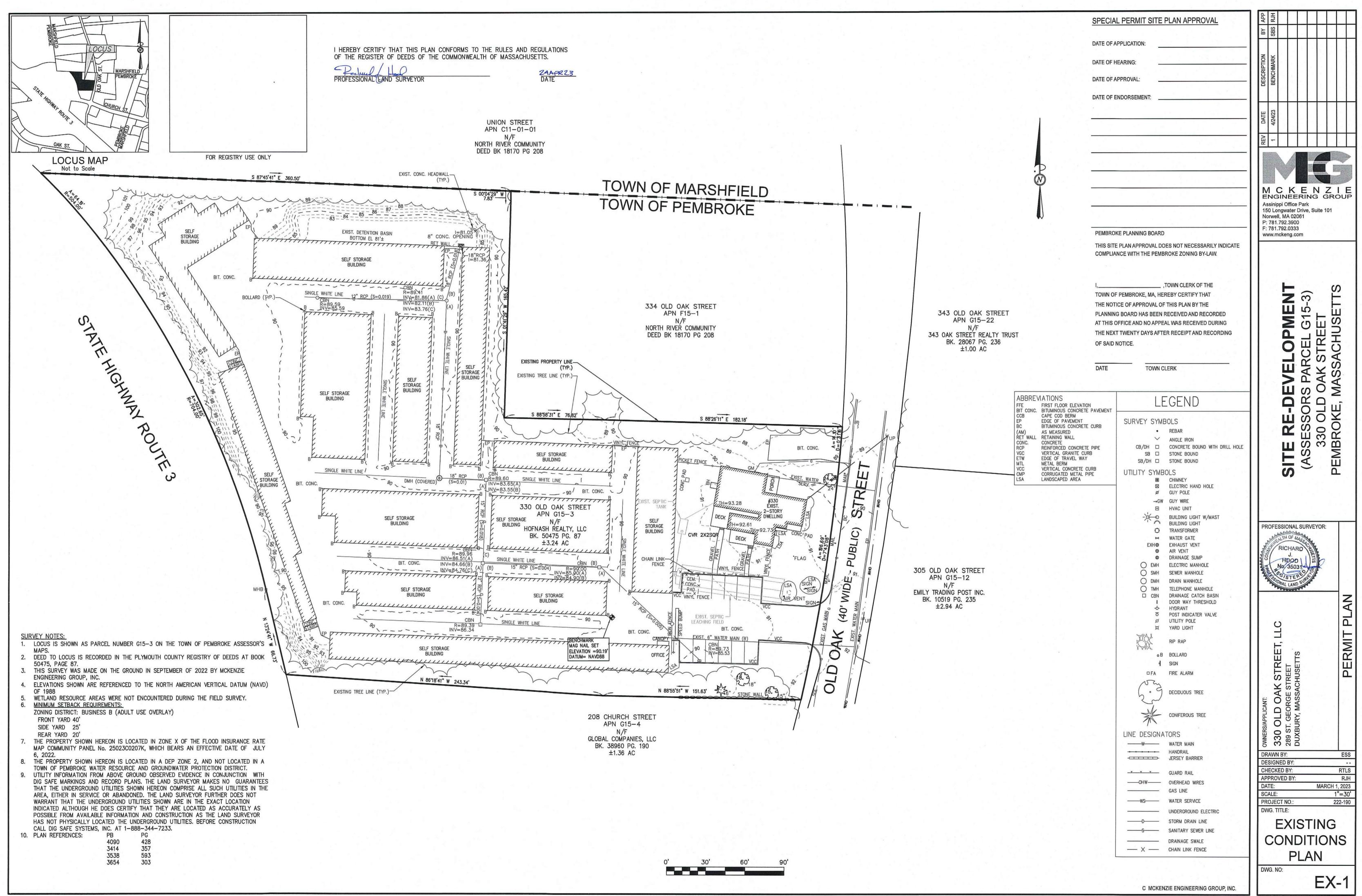
DWG. NO:

M:\MEG\2022 PROJECTS\222-190 JEI VENTURES - 330 OLD OAK ST., PEMBROKE\DWGS\(R1)\222-190 C-1-C-2 (R1).DWG

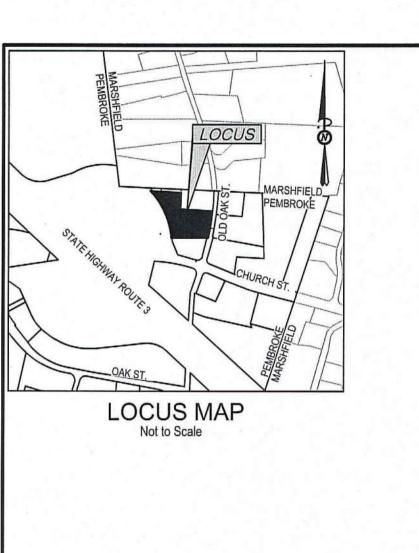
BCM

BCM

NTS



M:\MEG\2022 PROJECTS\222-190 JEI VENTURES - 330 OLD OAK ST., PEMBROKE\DWGS\222-205 ECP.DWG



BUSINESS DISTRICT B/ADULT USE OVE	RLAY DISTRICT	PARCEL	. ID G15-3
	REQUIRED	EXISTING	PROPOSED
MINIMUM LOT AREA	40,000 SQUARE FT. 35,000 SQUARE FT. *	3.24 ACRES	NO CHANGE
MINIMUM LOT FRONTAGE	150' FT.	210.79 FT.	NO CHANGE
MINIMUM FRONT SETBACK	40 FT.	22.15 FT.	40.1'
MINIMUM SIDE SETBACK	25 FT.	29.51 FT.	25 FT.
MINIMUM REAR SETBACK	20 FT.	> 20 FT.	> 20 FT.
MAXIMUM BUILDING HEIGHT	(3) STORIES	1 STORY	1 STORY

35%

60%

*EXCLUSIVE OF ALL EASEMENTS, CRANBERRY BOGS, WETLANDS, FLOODPLAINS AND WATERSHED AREAS.

BUILDING FLOOR AREA 1

MAXIMUM LOT COVERAGE

¹ EXISTING FLOOR AREAS DETERMINED BY PEMBROKE ASSESSORS CARDS: MINI WAREHOUSES = 42,150 SF, HOUSE = 3,033.5 SF TOTAL=45,183.50

UNION STREET APN C11-01-01 NORTH RIVER COMMUNITY

32.65%

95,668.11 SF. OR 67.78%

31.97%

95,289.70 SF. OR 67.52%

PLANTING SCHEDULE

	NAME	SIZE	NUMBER OF SPECIMENS
SHRUB	HP PANICLE HYDRANGEA (HYDRANGEA PANICULATA)	POT	7
GRASSES	df WAVY HAIRGRASS (DESCAMPSIA FLEXUOSA)	РОТ	9
	HYDROSEED WITH NEW ENGLAND EROSION CONTROL/ RESTORATION MIX AT 1 LB/1250 SQUARE FEET	SEED	

PLANTING NOTES

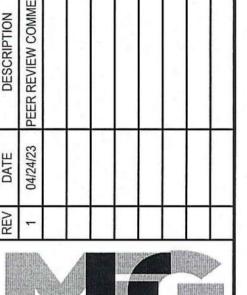
- THE PROJECT SUPERVISOR SHALL HOLD A PRE-CONSTRUCTION CONFERENCE WITH THE CONTRACTOR TO ENSURE ALL ASPECTS OF THE PROJECT.
- 2. EROSION CONTROL BARRIERS SHALL BE INSTALLED ALONG THE PROPOSED WORK AREA. THIS EROSION CONTROL BARRIER SHALL ALSO SERVE AS A LIMIT OF WORK.
- 3. ROUGH GRADES SHALL BE VERIFIED BY FIELD SURVEY TO CONFIRM DESIGN ELEVATIONS HAVE BEEN MET. ADJUSTMENTS SHALL BE MADE AS DIRECTED BY THE ENGINEER.
- 4. PLANTINGS WILL BE WITH CONTAINER GROWN NURSERY STOCK. SUBSTITUTIONS MAY BE REQUIRED DEPENDING ON AVAILABILITY

FOR REGISTRY USE ONLY

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMANCE WITH THE RULES AND REGULATIONS OF THE REGISTER OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

4-24-23

DEED BK 18170 PG 208 DATE TOWN OF MARSHFIELD
TOWN OF PEMBROKE SELF STORAGE BUILDING SELF STORAGE BUILDING BOLLARD (TYP.)-R=89.59 334 OLD OAK STREET APN F15-1 343 OLD OAK STREET APN G15-22 71171111111111 N/F NORTH RIVER COMMUNITY N/F 343 OAK STREET REALTY TRUST BK. 28067 PG. 236 DEED BK 18170 PG 208 ±1.00 AC EXISTING PROPERTY LINE ___ SELF EXISTING TREE LINE (TYP.)-BUILDING SELF STORAGE BUILDING SELF STORAGE PROP. 3' WIDE ___ REMOVE EXIST. -LANDSCAPED BIT. CONC. DRIVE AREA PROP. LOAM & SEED S 88'58'31" E 76/82' S 88'26'11" E 182.18 ROUTE RETAIN EXIST. BIT. CONC. S 24" TREE RAMPS 2-STORY 1111111111 BUILDING DWELLING ! Challand to harbert both to the total SINGLE WHITE LINE PROP.-STORAGE 1-STORY BIT. CONC. 4,000 SQ. FT. BUILDING LANDSCAPED 330 OLD OAK STREET PROP. 13'x10' "T' APN G15-3 FOR TURN-AROUND SELF STORAGE SELF STORAGE BUILDING HOFNASH REALTY, LLC BUILDING PROP. DARK SKY BK. 50475 PG. 87 WALL PACK (TYP.) ±3.24 AC RETAIN Q PROP. 20' WIDE -EXIST. BIT. CONC. DRIVE SIGNS 🛨 W/ VERTICAL CEM. BIT. CONC. CONC. CURB (VCC) 305 OLD OAK STREET APN G15-12 SELF STORAGE EMILY TRADING POST INC. BUILDING SELF STORAGE BK. 10519 PG. 235 BUILDING ±2.94 AC PROP. 9'x16' CEM. -CONC. DUMPSTER PAD ENCLOSED LANDSCAPED EXIST. SINGLE WHITE LINE WITH 6' HIGH **AREA** VGC BIT. CONC. CHAINLINK FENCE W/GATE & BLACK PRIVACY SLATS ELEVATION =90.19' OFFICE / PROP. HANDICAP PARKING SIGN N 86'18'41" W 243.34' N 88'55'51" W 151.63' STONE WALL (5. 9) EXISTING TREE LINE (TYP.) 208 CHURCH STREET APN G15-4 GLOBAL COMPANIES, LLC BK. 38960 PG. 190 226 CHURCH STREET APN G15-12A ±1.36 AC PMG NORTHEAST LLC BK. 52181 PG. 76 ±1.84 AC



M C K E N Z I E ENGINEERING GROUP Assinippi Office Park 150 Longwater Drive, Suite 101 Norwell, MA 02061

P: 781.792.3900 F: 781.792.0333 www.mckeng.com

OPMENT SEL G15-3)

PROFESSIONAL ENGINEER:

DRAWN BY: **DESIGNED BY:** CHECKED BY: APPROVED BY: MARCH 1, 2023 DATE: SCALE: 1"=30 222-190 PROJECT NO .:

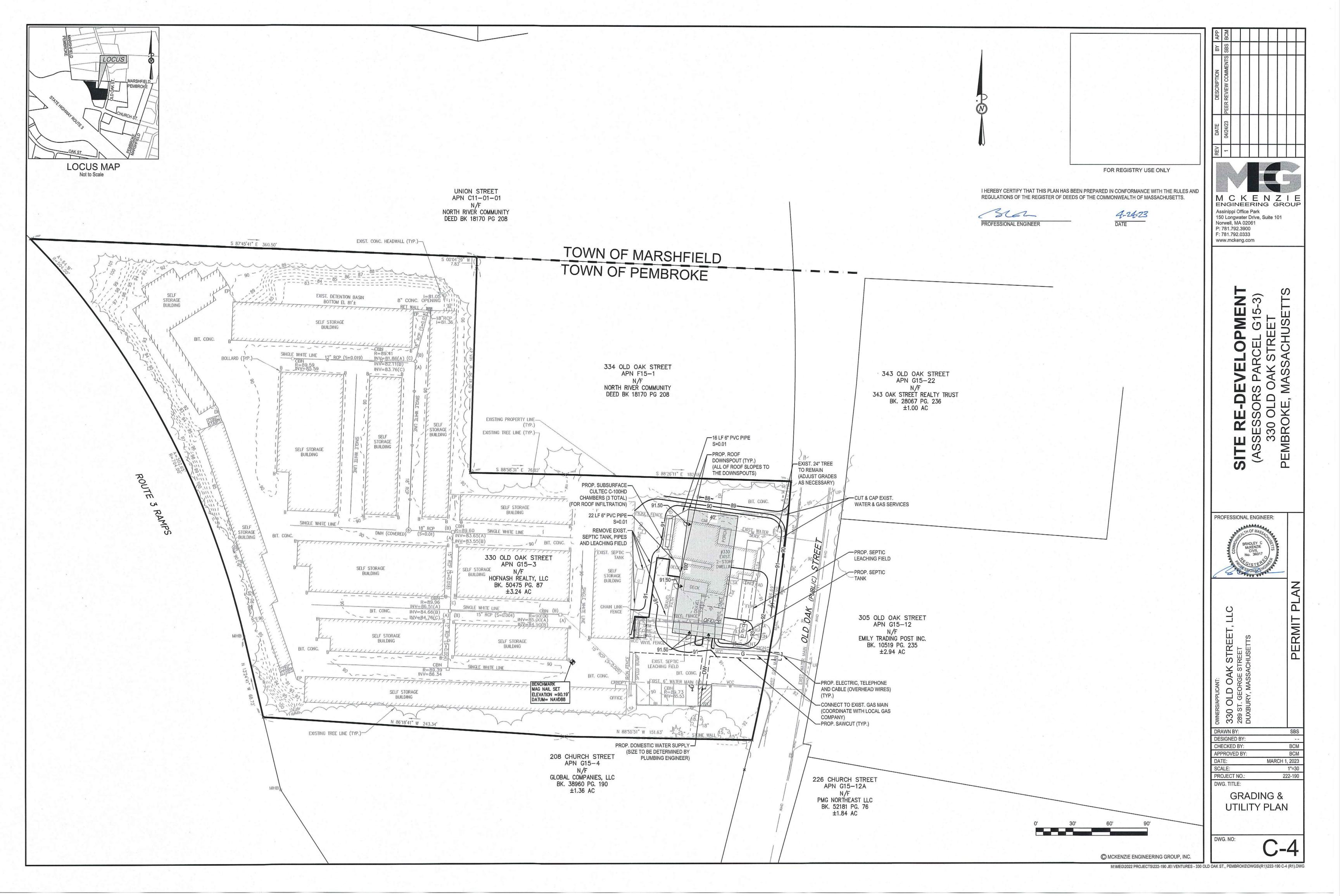
DWG. TITLE:

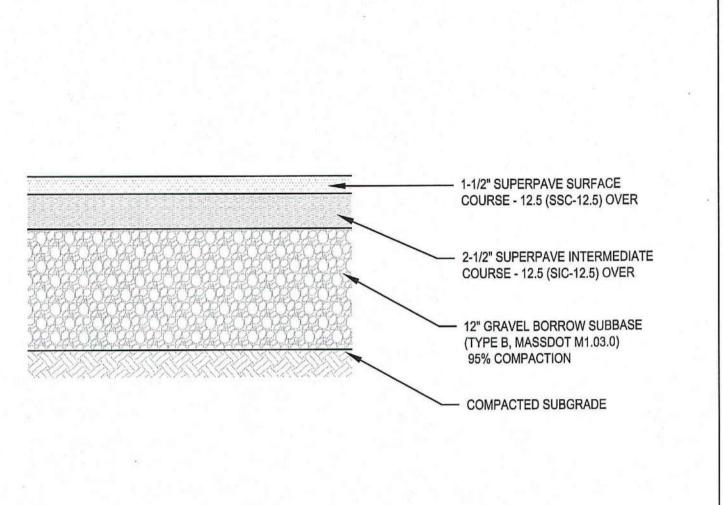
SITE LAYOUT **PLAN**

DWG. NO:

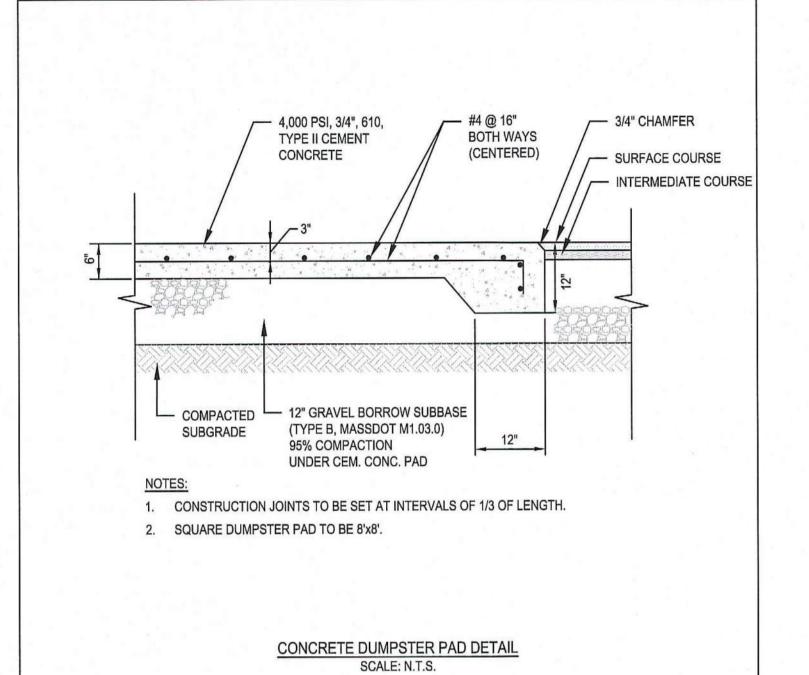
M:\MEG\2022 PROJECTS\222-190 JEI VENTURES - 330 OLD OAK ST., PEMBROKE\DWGS\(R1)\222-190 C-3 (R1).DWG

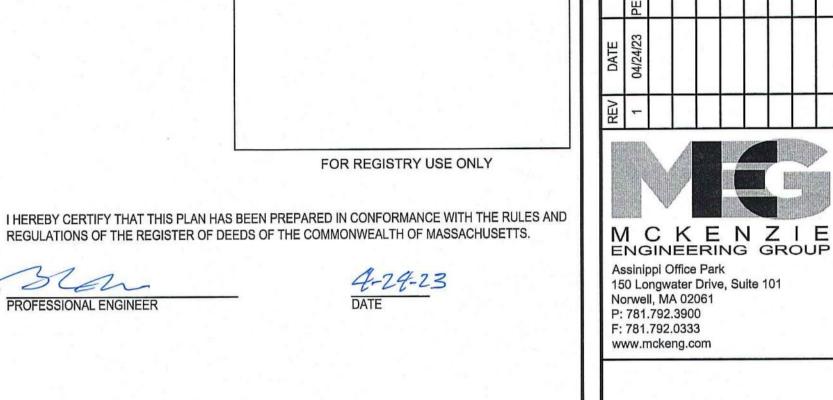
MCKENZIE ENGINEERING GROUP, INC.





PRECAST VERTICAL CONCRETE CURB — 4" LOAM & SEED SURFACE COURSE — INTERMEDIATE COURSE MIN. — COMPACTED — FOR PAVEMENT CONSTRUCTION SUBGRADE SEE BITUMINOUS PAVEMENT DETAIL ALL CURBING TO BE 3000 PSI 28 DAY CONCRETE PRECAST VERTICAL CONCRETE CURB (VCC) DETAIL SCALE: N.T.S.





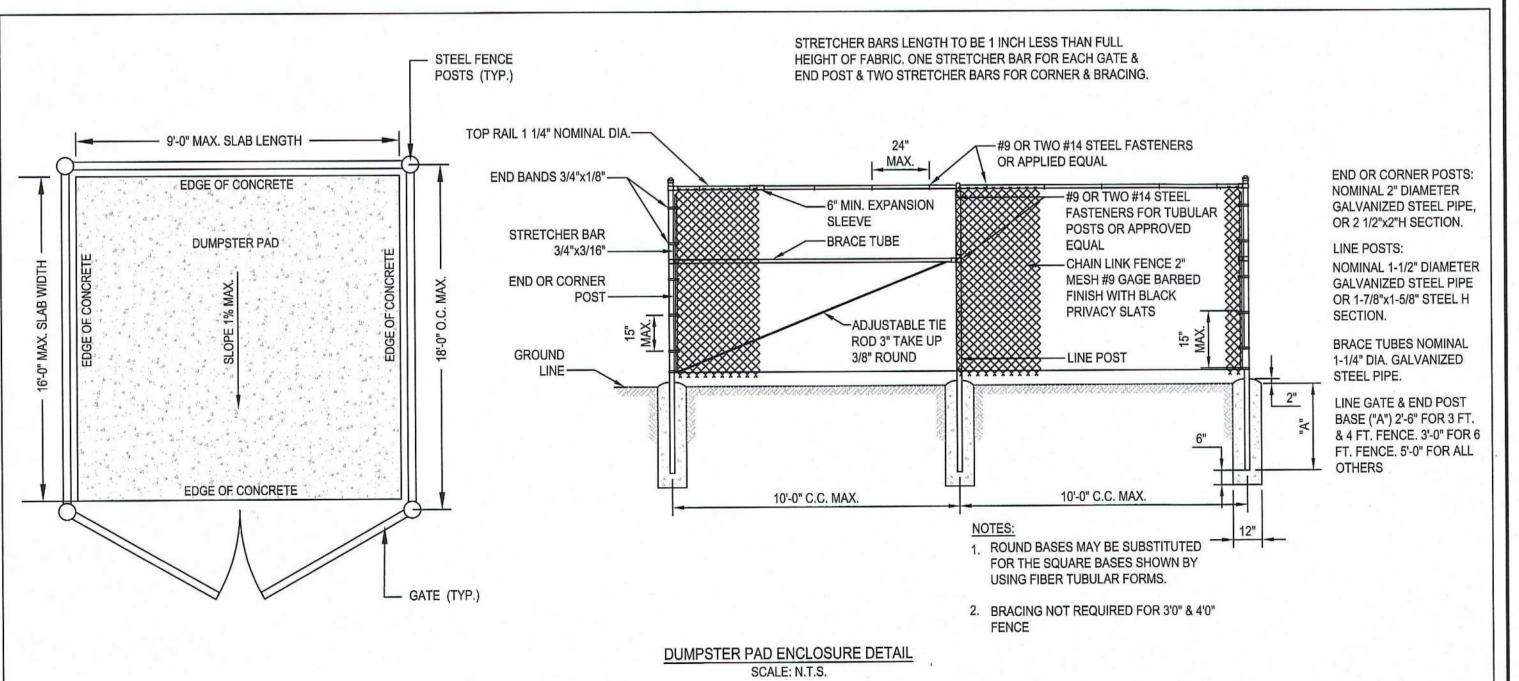
SEEDING RATES POUNDS / 1,000 S.F. POUND / ACRE A. TALL FESCUE 0.45 CREEPING RED FESCUE A. SURFACE AND SEEPAGE WATER SHOULD BE DRAINED OR DIVERTED FROM THE SITE TO REDTOP PREVENT DROWNING OR WINTER KILLING OF THE PLANTS. TOTAL B. STONES LARGER THAN FOUR INCHES AND TRASH SHOULD BE REMOVED BECAUSE THEY 0.35 B. TALL FESCUE INTERFERE WITH SEEDING AND FUTURE MAINTENANCE OF THE AREA. WHERE FEASIBLE, THE SOIL 0.25 CREEPING RED FESCUE SHOULD BE TILLED TO A DEPTH OF ABOUT FOUR INCHES TO PREPARE A SEEDBED AND MIX 0.35 **BIRDSFOOT TREFOIL** FERTILIZER AND LIME INTO THE SOIL. THE SEEDBED SHOULD BE LEFT IN A REASONABLY FIRM 0.95 AND SMOOTH CONDITION. THE LAST TILLAGE OPERATION SHOULD BE PERFORMED ACROSS THE SLOPE WHEREVER PRACTICAL. 0.45 C. TALL FESCUE CREEPING RED FESCUE 0.45 2. ESTABLISHING A STAND 0.20 BIRDSFOOT TREFOIL 1.10 TOTAL A. LIME AND FERTILIZER SHOULD BE APPLIED PRIOR TO OR AT THE TIME OF SEEDING AND INCORPORATED INTO THE SOIL. KINDS AND AMOUNTS OF LIME AND FERTILIZER SHOULD BE D. BIRDSFOOT TREFOIL BASED ON EVALUATION OF SOIL TESTS. WHEN A SOIL TEST IS NOT AVAILABLE, THE FOLLOWING REDTOP 0.10 MINIMUM AMOUNTS SHOULD BE APPLIED: 0.35 **REED CANARY GRASS** TOTAL AGRICULTURAL LIMESTONE: 2 TONS PER ACRE OR 100 LBS. PER SQ. FT. 50 LBS. PER ACRE OR 1.1 LBS. PER 1000 SQ. FT. NITROGEN (N) E. TALL FESCUE PHOSPHATE (PO): 100 LBS. PER ACRE OR 2.2 LBS. PER 1000 SQ. FT. **FLATPEA** 0.75 100 LBS. PER ACRE OR 2.2 LBS. PER 1000 SQ. FT. POTASH (K O): TOTAL 1.20 (NOTE: THIS IS THE EQUIVALENT OF 500 LBS. PER ACRE OF 10-20-20 FERTILIZER OR 1,000 LBS. F. CREEPING RED FESCUE 1/ PER ACRE OF 5-10-10 FERTILIZER) **KENTUCKY BLUEGRASS 1/** 2.00 4.00 B. SEED SHOULD BE SPREAD UNIFORMLY BY THE METHOD MOST APPROPRIATE FOR THE SITE. METHODS INCLUDE BROADCASTING, DRILLING, AND HYDROSEEDING. WHERE BROADCASTING IS 3.60 G. TALL FESCUE 1/ USED, COVER SEED WITH 0.25 INCH OF SOIL OR LESS, BY CULTIVATING OR RAKING. TEMPORARY SEEDING RATES

H. WINTER RYE 2.50 (BEST FOR FALL SEEDING, AUG 15 TO SEPT. 5) OATS 2.00 (BEST FOR SPRING SEEDING, BEFORE MAY 15) ANNUAL RYEGRASS 1.00 (BEST FOR FALL SEEDING, AUG 15 TO SEPT. 15) 5.50 (MAY BE USED EARLY SPRING ALSO) TOTAL

1/ FOR HEAVY USE ATHLETIC FIELDS CONSULT THE UNIVERSITY OF NEW HAMPSHIRE COOPERATIVE EXTENSION TURF SPECIALIST FOR CURRENT VARIETIES AND SEEDING RATES.

A. HAY, STRAW, OR OTHER MULCH, WHEN NEEDED, SHOULD BE APPLIED IMMEDIATELY AFTER	SEEDING GUIDE	
B. MULCH WILL BE HELD IN PLACE USING TECHNIQUES AS SPECIFIED IN THE "BEST MANAGEMENT PRACTICES OPERATION AND MAINTENANCE PLAN"	<u>USE</u>	SEEDIN MIXTUR
MAINTENANCE TO ESTABLISH A STAND	STEEP CUTS AND FILLS, BORROW	E
 A. PLANTED AREAS SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRAZING, TRAFFIC, AND DENSE WEED GROWTH. 	AND DISPOSAL AREAS	
B. FERTILIZATION NEEDS SHOULD BE DETERMINED BY ONSITE INSPECTIONS. SUPPLEMENTAL FERTILIZER IS USUALLY THE KEY TO FULLY COMPLETE THE ESTABLISHMENT OF THE STAND BECAUSE MOST PERENNIALS TAKE 2 TO 3 YEARS TO BECOME ESTABLISHED.	WATERWAYS, EMERGENCY SPILLWAYS, AND OTHER CHANNELS WITH FLOWING WATER	D
C. IN WATERWAYS, CHANNELS, OR SWALES WHERE UNIFORM FLOW CONDITIONS ARE ANTICIPATED OCCASIONAL MOWING MAY BE NECESSARY TO CONTROL GROWTH OF WOODY VEGETATION.	LAWN AREAS	F

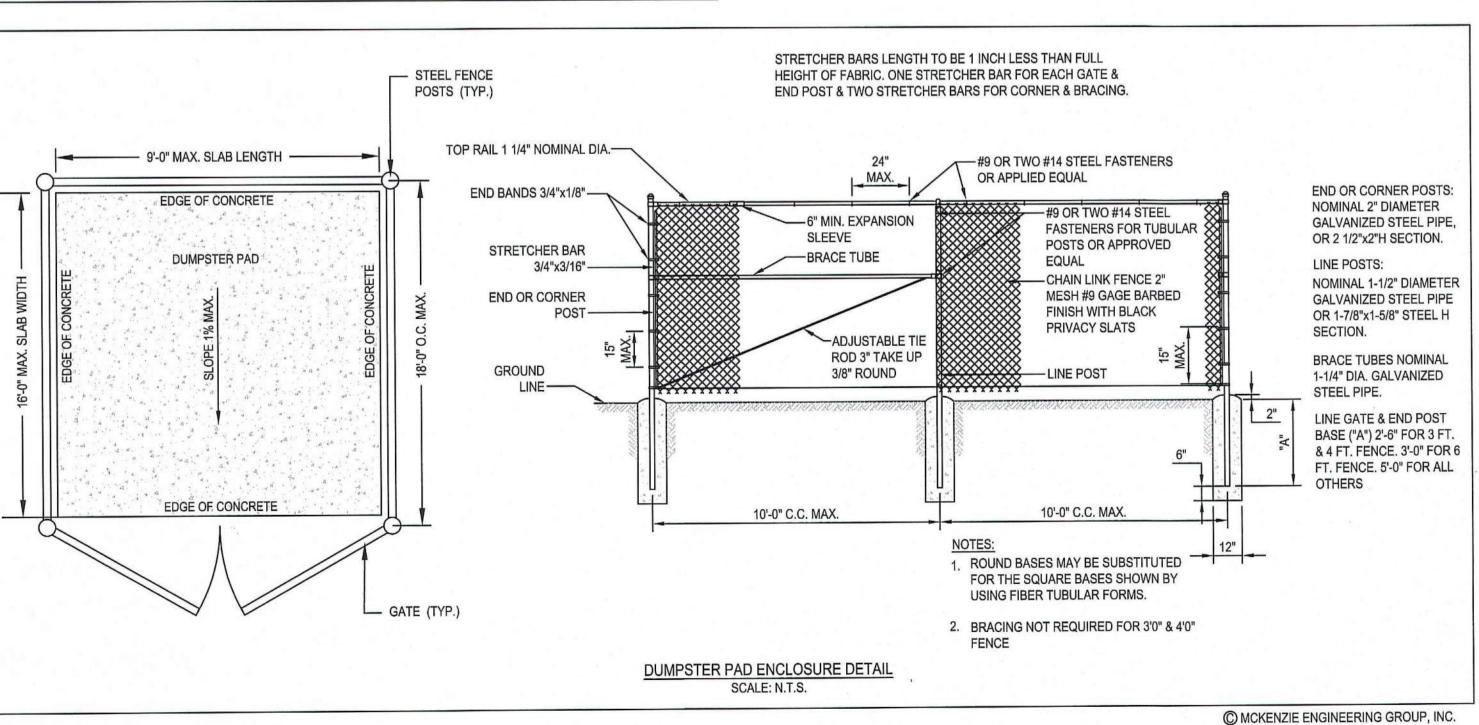
MANANAMAN MANANAMANAMANAMANAMANAMANAMANA	PREPARED SEEDED LAWN OR SOD
5	PREPARED SCREENED TOPSOIL (NO STONES LARGER THAN 3/4")
	PREPARED SUBGRADE



DRAWN BY: **DESIGNED BY:** CHECKED BY: APPROVED BY: MARCH 1, 2023 NOT TO SCALE SCALE: PROJECT NO.: DWG. TITLE: CONSTRUCTION **DETAILS** DWG. NO:

222-190

PROFESSIONAL ENGINEER:



BITUMINOUS PAVEMENT DETAIL SCALE: N.T.S. SEEDING SPECIFICATIONS SEEDING RECOMMENDATIONS SEEDBED PREPARATION

 2" MIN. DEPRESSION FINISHED GRADE EDGE OF LAWN -4" BARK MULCH (DO NOT PLACE ABOVE FINISHED LAWN GRADE) REMOVE BURLAP FROM TOP HALF OF ROOTBALL. IF 1'-0" MIN. SYNTHETIC MATERIAL, REMOVE COMPLETELY. APPROVED SOIL MIX 6" MIN. — CONSISTING OF 75% TOPSOIL (NO STONES LARGER THAN 1 1/4") AND 25% PEAT MOSS, 40 LB. BAG MANURE AND 2 x ROOTBALL FERTILIZER AS REQUIRED. (3'x3' MINIMUM) TYPICAL SHRUB PLANTING DETAIL SCALE: N.T.S.

RATES OF SEEDING.

1. TOP OF LOAM (TOPSOIL) IS FINISHED GRADE.

2. TOPSOIL SHALL CONTAIN BETWEEN 5% AND 12% ORGANIC MATTER AND SHALL HAVE A MAXIMUM STONE SIZE OF 3/4" AND SHALL CONFORM TO THE FOLLOWING GRADATION:

C. REFER TO SEEDING RATES AND SEEDING GUIDES FOR APPROPRIATE SEED MIXTURES AND

EARLY SPRING TO MAY 20 OR FROM AUGUST 10 TO SEPTEMBER 1.

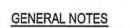
D. WHEN SEEDED AREAS ARE MULCHED, PLANTINGS MAY BE MADE FROM EARLY SPRING SPRING TO

EARLY OCTOBER. WHEN SEEDED AREAS ARE NOT MULCHED, PLANTINGS SHOULD BE MADE FROM

SIEVE 1 1/4 INCH 85-100 60-85 No.40 38-60 No.100 28-40 No.200

> SEEDED OR SODDED LAWN DETAIL SCALE: N.T.S.

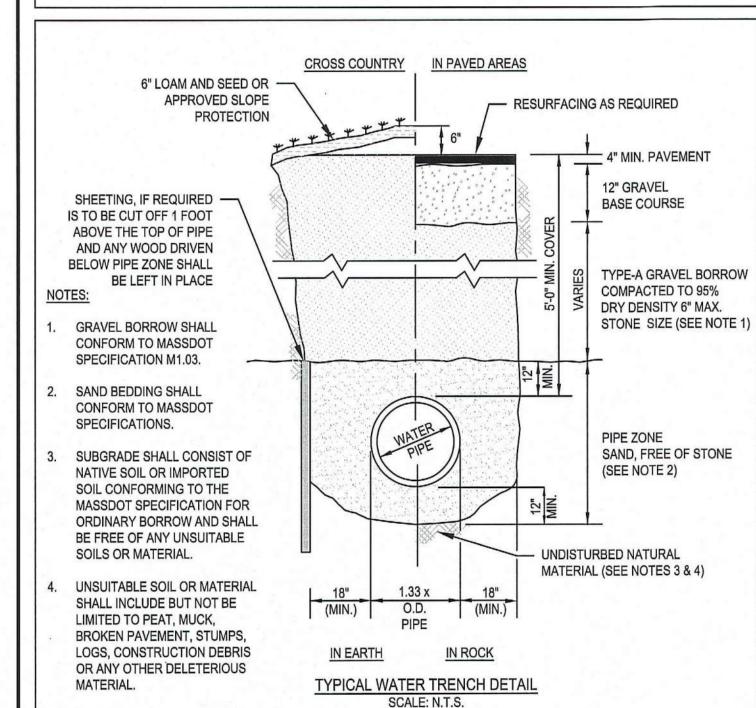
> > M:\MEG\2022 PROJECTS\222-190 JEI VENTURES - 330 OLD OAK ST., PEMBROKE\DWGS\(R1)\222-190 DETAIL SHEETS (R1).DWG

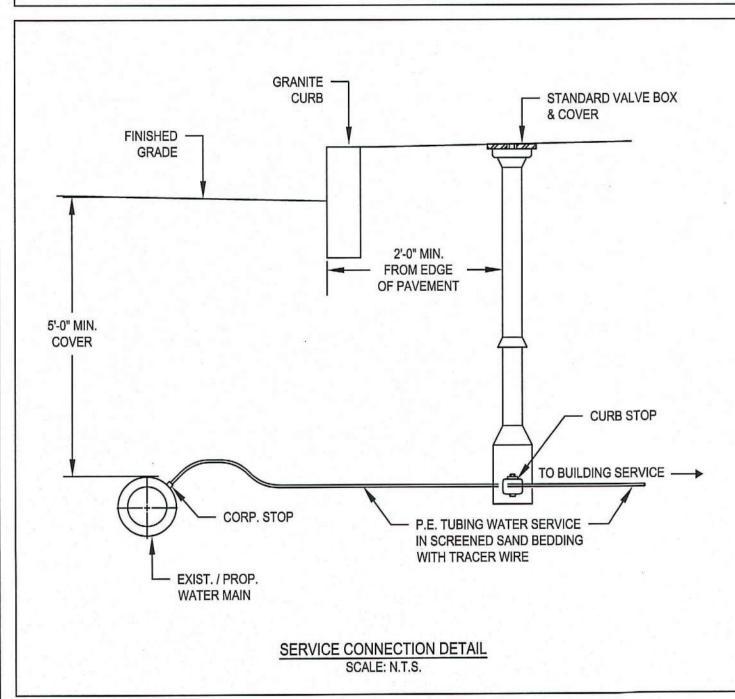


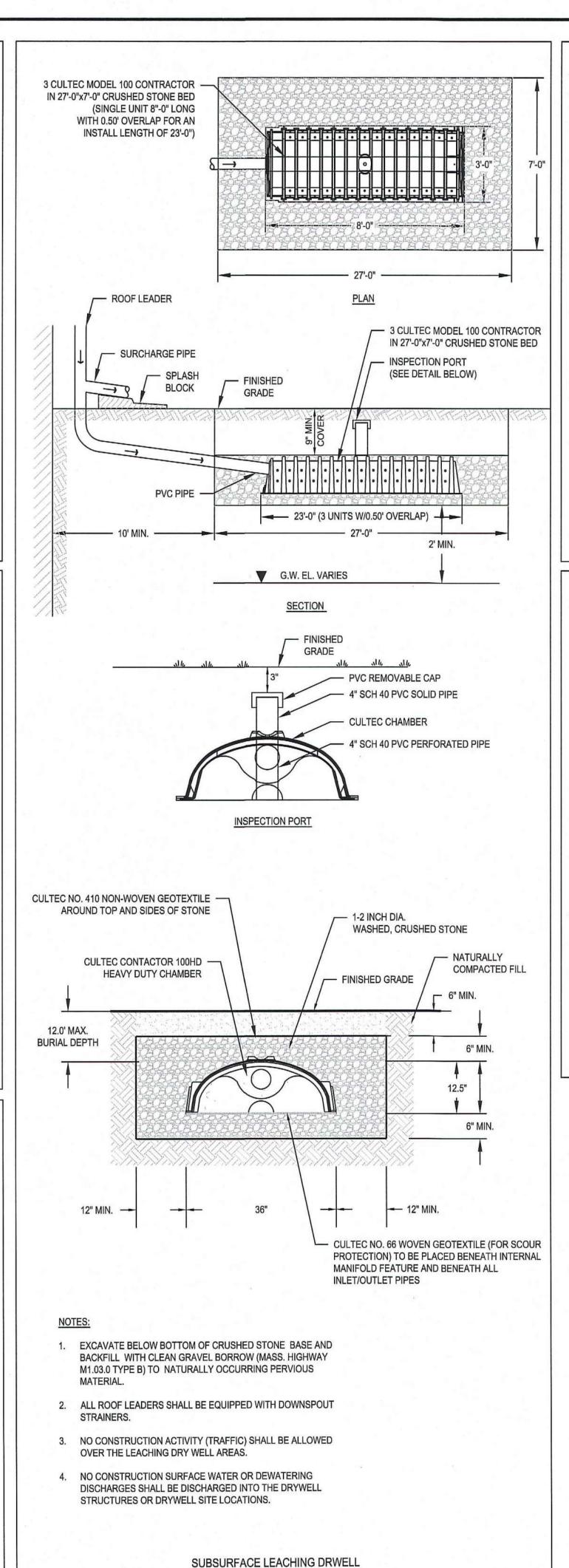
- 1. IF SHEETING IS USED, IT SHALL BE CUT OFF NO MORE THAN 12" ABOVE TOP OF PIPE.
- 2. ALL PIPES SHALL BE PRESSURE TESTED AT 200 PSI WORKING PRESSURE FOR A MINIMUM DURATION OF TWO
- 3. WATER SYSTEM IS TO BE DISINFECTED TO 50 P.P.M. AVAILABLE CHLORINE AND AFTER 24 HOURS TO 25 P.P.M. OR AS REQUIRED BY PEMBROKE WATER SUPERINTENDENT/ENGINEER.
- WATER PIPE IS TO BE CEMENT LINED DUCTILE IRON "TYTON" OR EQUAL TYPE JOINT, CONFORMING TO A.N.S.I./A.W.W.A. C150/A21.50, CLASS 52, AS APPROVED BY THE TOWN'S WATER SUPERINTENDENT/ENGINEER.
- ALL PIPING SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH A.W.W.A. STANDARDS PRIOR TO PAVING IF PAVING ABOVE TRENCH IS REQUIRED.

6. BACKFILL IS TO BE COMPACTED TO 90% MAXIMUM DRY DENSITY BY AASHTO T-180 D.

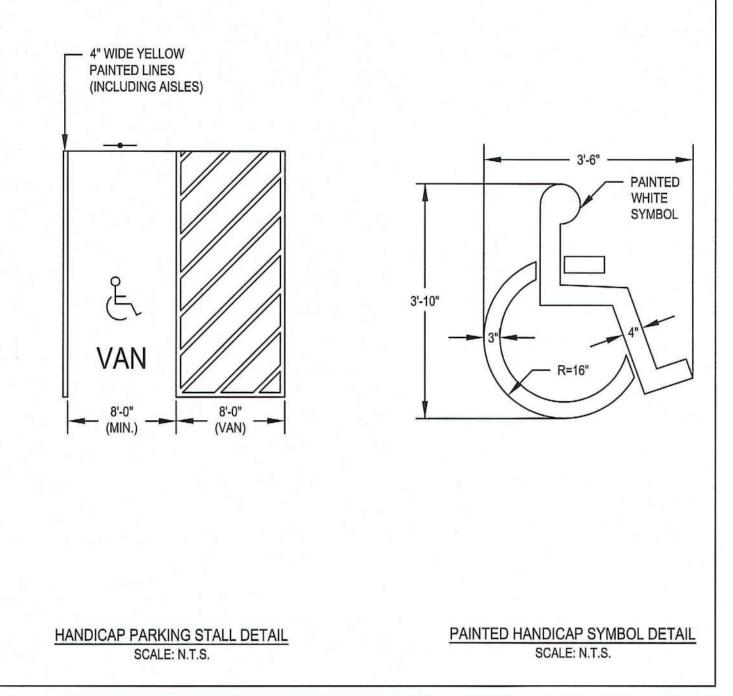
- 7. ALL WATER PIPE SHALL BE LAID WITH A MINIMUM OF 5 FEET OF COVER OF APPROVED MATERIALS.
- RESULTS FROM PRESSURE TESTING AND DISINFECTION SHALL BE FURNISHED TO THE DIRECTOR OF PUBLIC WORKS FOR APPROVAL PRIOR TO WATER BEING TURNED ON.
- ALL WORK SHALL BE IN CONFORMANCE WITH PEMBROKE WATER DEPARTMENT STANDARDS.
- 10. ALL PERMITS REQUIRED FOR STREET OPENINGS AND WATER MAIN TAPPING MUST BE OBTAINED.
- 11. NO WATER WILL BE TURNED ON IN THE PROJECT WITHOUT WATER DEPARTMENT APPROVAL.

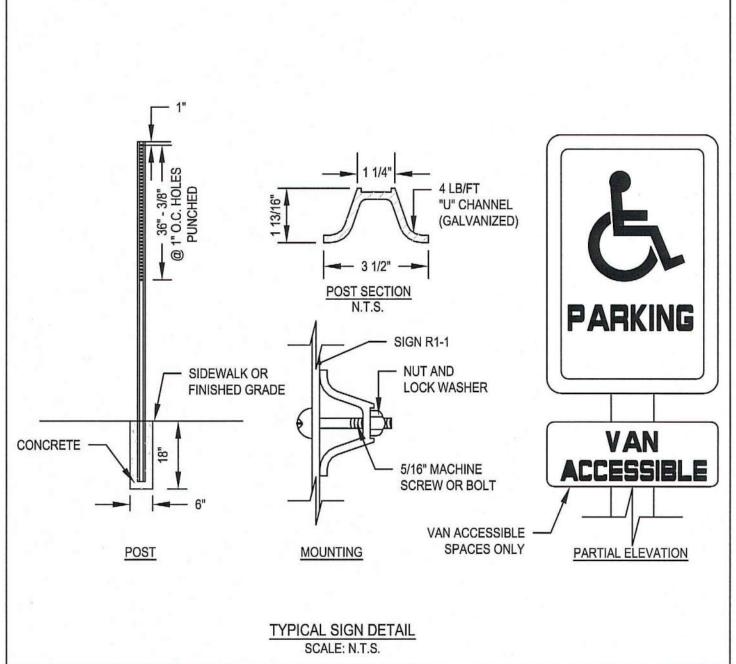


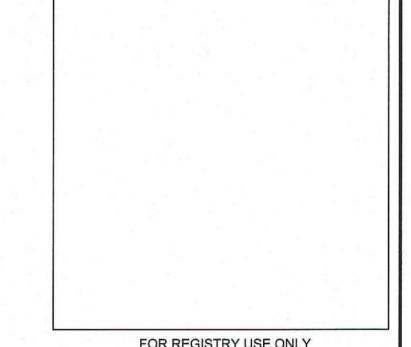




SCALE: N.T.S.







FOR REGISTRY USE ONLY

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMANCE WITH THE RULES AND REGULATIONS OF THE REGISTER OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

4-24-23

M C K E N Z I E ENGINEERING GROUP

150 Longwater Drive, Suite 101

Assinippi Office Park Norwell, MA 02061 P: 781.792.3900 F: 781.792.0333 www.mckeng.com

OPMENT CEL G15-3)

PROFESSIONAL ENGINEER:

STREET,

OAK SAC

OLD T. GEOF 330 289 ST DUXBI DRAWN BY: SBS DESIGNED BY: **BCM** CHECKED BY: APPROVED BY: BCM DATE: MARCH 1, 2023 NOT TO SCALE SCALE: PROJECT NO .: 222-190

DWG. TITLE: CONSTRUCTION **DETAILS**

DWG. NO:

© MCKENZIE ENGINEERING GROUP, INC.

CONSTRUCTION SEQUENCE

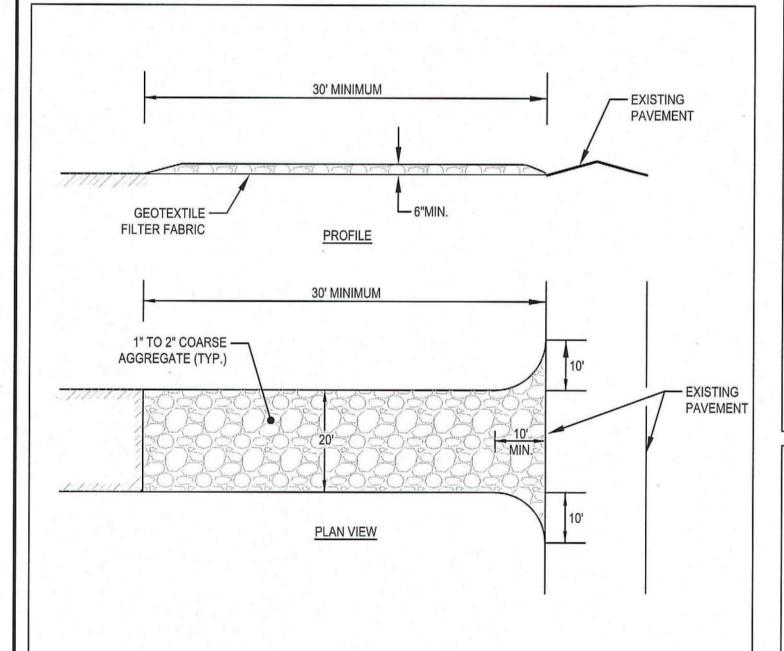
TO PREVENT EXCESSIVE EROSION AND SILTING, THE FOLLOWING CONSTRUCTION SEQUENCE COUPLED WITH OTHER WIDELY ACCEPTED PRINCIPALS FOR REDUCING EROSION AND SEDIMENTATION SHALL BE IMPLEMENTED IN THE DEVELOPMENT OF THE SITE.

- THE CONTRACTOR SHALL COORDINATE A PRE-CONSTRUCTION MEETING PRIOR TO ANY CONSTRUCTION ACTIVITY.
- 2. STABILIZATION PRACTICES FOR EROSION AND SEDIMENT CONTROL SHALL BE INSTALLED PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. REFER TO "EROSION AND SEDIMENTATION CONTROL" SECTION OF THIS PLAN. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE AT OLD OAK STREET.
- CLEAR AND GRUB UP AS REQUIRED FOR THE CONSTRUCTION OF THE BUILDING AND RELATED INFRASTRUCTURE.
- 4. EXCAVATE TOPSOIL AND SUBSOIL FROM CUT AND FILL AREAS AND STOCKPILE OFF SITE.
- CONSTRUCT CUT AND FILL AREAS. ALL FILL WILL BE INSTALLED USING 12" MAXIMUM COMPACTION LIFTS. PLACE ALL SLOPE PROTECTION WHERE INDICATED ON THE PLAN.
- 6. INSTALL UTILITIES. ALL CATCH BASINS SHALL BE COVERED WITH SILT SACK OR EQUIVALENT INLET PROTECTION.
- GRADE SITE TO SUBGRADE ELEVATIONS AND CONSTRUCT SIDE SLOPES. APPLY TEMPORARY STABILIZATION MEASURES WHERE WARRANTED. REFER TO "EROSION AND SEDIMENTATION CONTROL" SECTION OF THIS PLAN.
- GRADE SLOPES AND STABILIZE CUT AREAS AT TOE OF SLOPES. BLEND ALL INTO EXITING TOPOGRAPHY AND LOAM AND SEED ALL DISTURBED AREAS. SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITH JUTE MESH.
- 9. COMPLETE FINE GRADING OF SITE.
- 10. REMOVE TEMPORARY EROSION CONTROL DEVICES ONCE ADEQUATE GROWTH IS ESTABLISHED. ADEQUATE GROWTH IS DEFINED AS VEGETATION COVERING 75% OR MORE OF THE GROUND SURFACE.

EROSION AND SEDIMENTATION CONTROL

REFER TO MASS DEP STORMWATER MANAGEMENT HANDBOOK FOR SPECIFICATIONS AND STRUCTURAL AND DUST CONTROL EROSION BEST MANAGEMENT PRACTICES.

- STRUCTURAL PRACTICES UTILIZED FOR THE PROJECT WILL INCLUDE SILT SOCK BARRIER CONTROLS, STABILIZED CONSTRUCTION ENTRANCE, TEMPORARY DIVERSION SWALES WITH STONE CHECK DAMS, SEDIMENT BASINS, AND INLET PROTECTION SUBJECT TO TOWN OF PEMBROKE ENGINEERING APPROVAL.
- STABILIZATION PRACTICES UTILIZED FOR THE PROJECT WILL INCLUDE TEMPORARY SEEDING, GEOTEXTILES (JUTE MESH), MULCHING, AND PERMANENT SEEDING.
- IN GENERAL, THE SMALLEST POSSIBLE AREA OF LAND SHOULD BE EXPOSED AT ONE TIME. WHEN LAND IS EXPOSED DURING DEVELOPMENT, THE EXPOSURE SHALL BE CONFINED TO A MAXIMUM PERIOD OF 3 MONTHS. LAND SHALL NOT BE EXPOSED DURING THE WINTER MONTHS. ANY DISTURBED AREAS WHICH ARE TO BE LEFT TEMPORARILY AND THAT WILL BE REGRADED AT A LATER DATE SHALL BE MACHINE HAY MULCHED AND SEEDED WITH WINTER RYE TO PREVENT EROSION.



(SCE) CONSTRUCTION SPECIFICATIONS:

. STONE FOR A STABILIZATION CONSTRUCTION ENTRANCE SHALL BE 1 TO 2 INCH

- STONE, RECLAIMED STONE. THE LENGTH OF THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 50 FEET,
- EXCEPT FOR A SINGLE RESIDENTIAL LOT A 30 FOOT MINIMUM LENGTH WOULD APPLY. 3. THE THICKNESS OF THE STONE FOR THE STABILIZED ENTRANCE SHALL NOT BE LESS
- THAN 6 INCHES. I. THE WIDTH OF THE ENTRANCE SHALL NOT BE LESS THAN A FULL WIDTH OF THE ENTRANCE WHERE INGRESS OR EGRESS OCCURS OR 10 FEET, WHICH EVER IS
- 5. GEOTEXTILE FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO
- PLACING THE STONE.
- ALL SURFACE WATER THAT IS FLOWING TO OR DEVERTED TOWARDS THE CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.
- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOPDRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. SEDIMENT SPILLED, WASHED, OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED PROMPTLY.

STABILIZED CONSTRUCTION ENTRANCE (SCE) DETAIL

CONSTRUCTION PHASE BMP OPERATION AND MAINTENANCE NOTES:

- STRUCTURAL PRACTICES UTILIZED FOR THE PROJECT WILL INCLUDE EROSION CONTROL BARRIERS, STABILIZED CONSTRUCTION ENTRANCE AND INLET PROTECTION.
- 2. STABILIZATION PRACTICES UTILIZED FOR THE PROJECT WILL INCLUDE TEMPORARY SEEDING, GEOTEXTILES (JUTE MESH), MULCHING, AND PERMANENT
- 3. OPERATOR PERSONNEL MUST INSPECT THE CONSTRUCTION SITE AT LEAST ONCE EVERY 14 CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT OF 1/2 INCH OR GREATER. THE INSPECTOR SHOULD REVIEW THE EROSION AND
- SEDIMENT CONTROLS WITH RESPECT TO THE FOLLOWING: A. WHETHER OR NOT THE MEASURE WAS INSTALLED/PERFORMED CORRECTLY. B. WHETHER OR NOT THERE HAS BEEN DAMAGE TO THE MEASURE SINCE IT

INSTALLED OR PERFORMED.

CATCH BASIN GRATE -

SILTSACK -

SILTSACK -

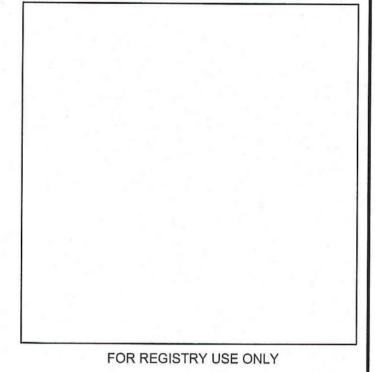
SECTION

SILTSACK SEDIMENT TRAP

FLOW

ションドン・ション・ション

C. WHAT SHOULD BE DONE TO CORRECT ANY PROBLEMS WITH THE MEASURE.



I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMANCE WITH THE RULES AND REGULATIONS OF THE REGISTER OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

PROP. COMPOST SILT SOCK

-90-

EROSION CONTROL BARRIER (TYP.)

PROP. STABILIZED CONSTRUCTION

ENTRANCE

WATER

MCKENZIE ENGINEERING GROUP Assinippi Office Park 150 Longwater Drive, Suite 101 Norwell, MA 02061 P: 781.792.3900

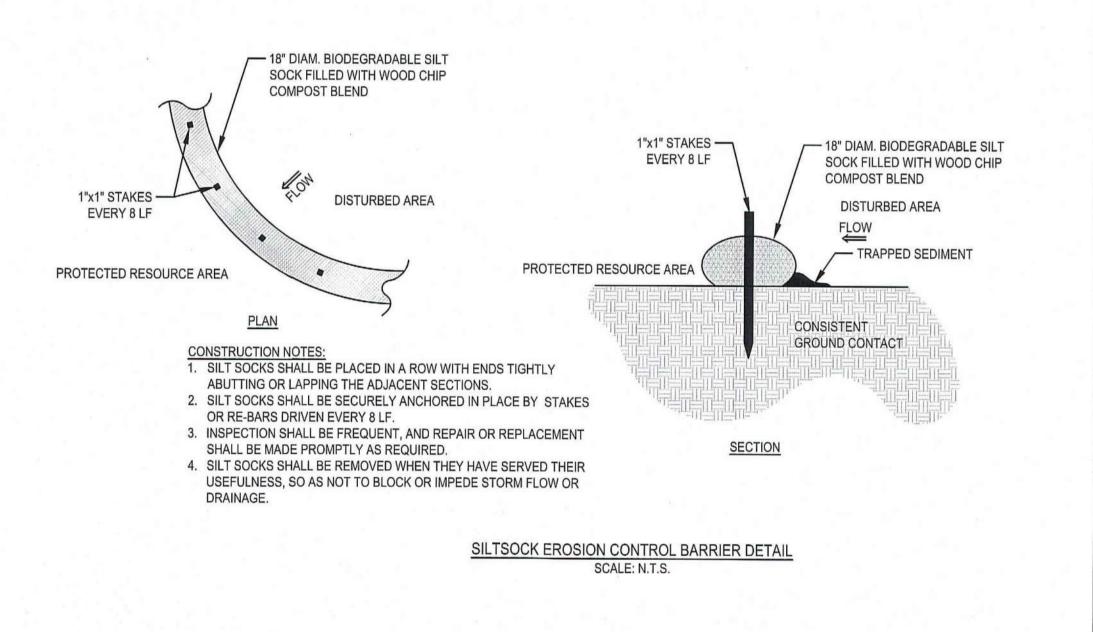
F: 781.792.0333 www.mckeng.com

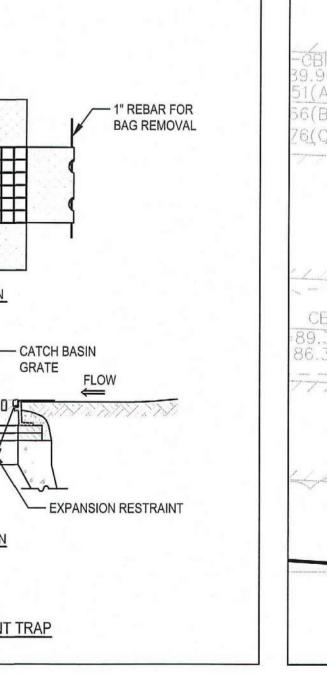
Z $\widehat{\mathbb{S}}$

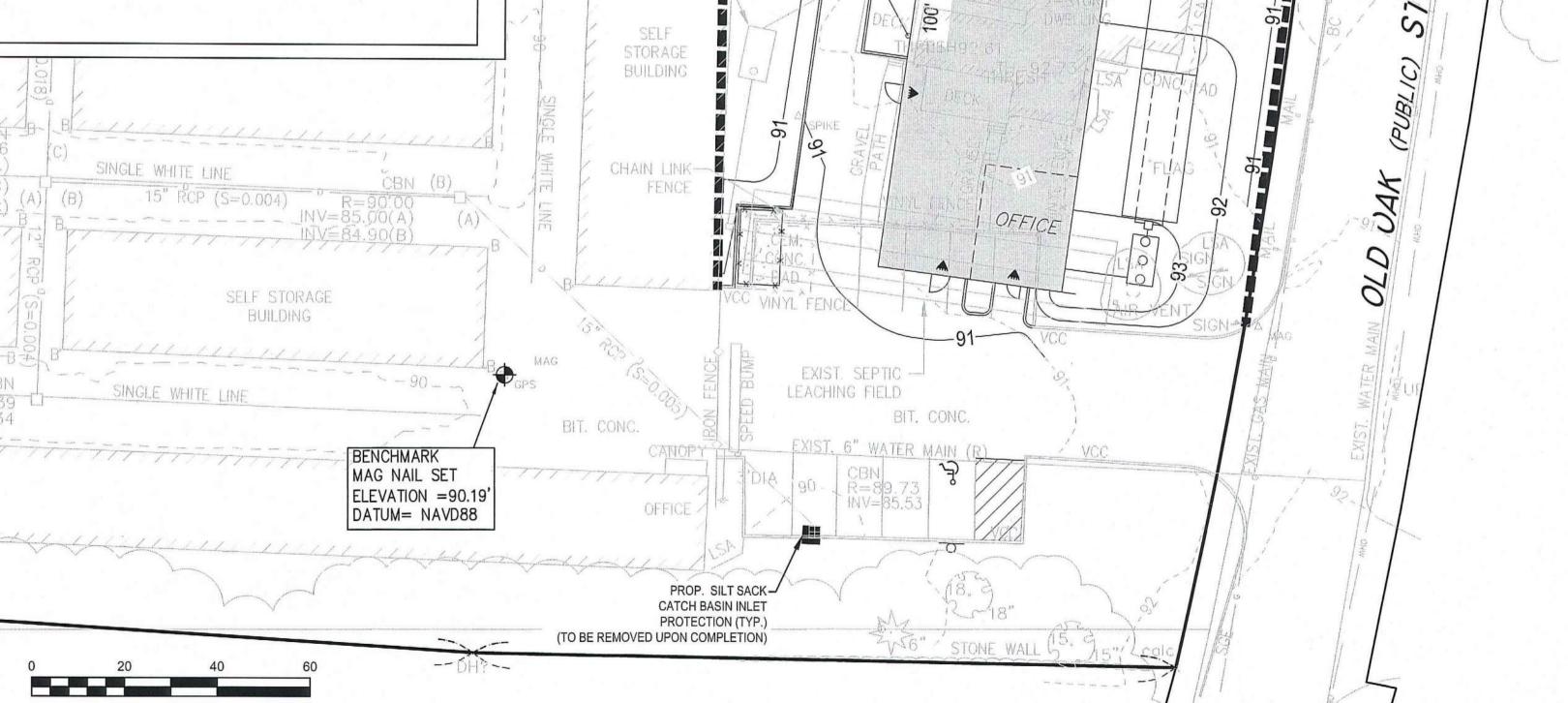
PROFESSIONAL ENGINEER:

DRAWN BY: DESIGNED BY CHECKED BY: **BCM** APPROVED BY: **BCM** MARCH 1, 2023 SCALE: AS NOTED

Erosion & Sedimentation Control Plan







EXIST. SEPTIC

MAG