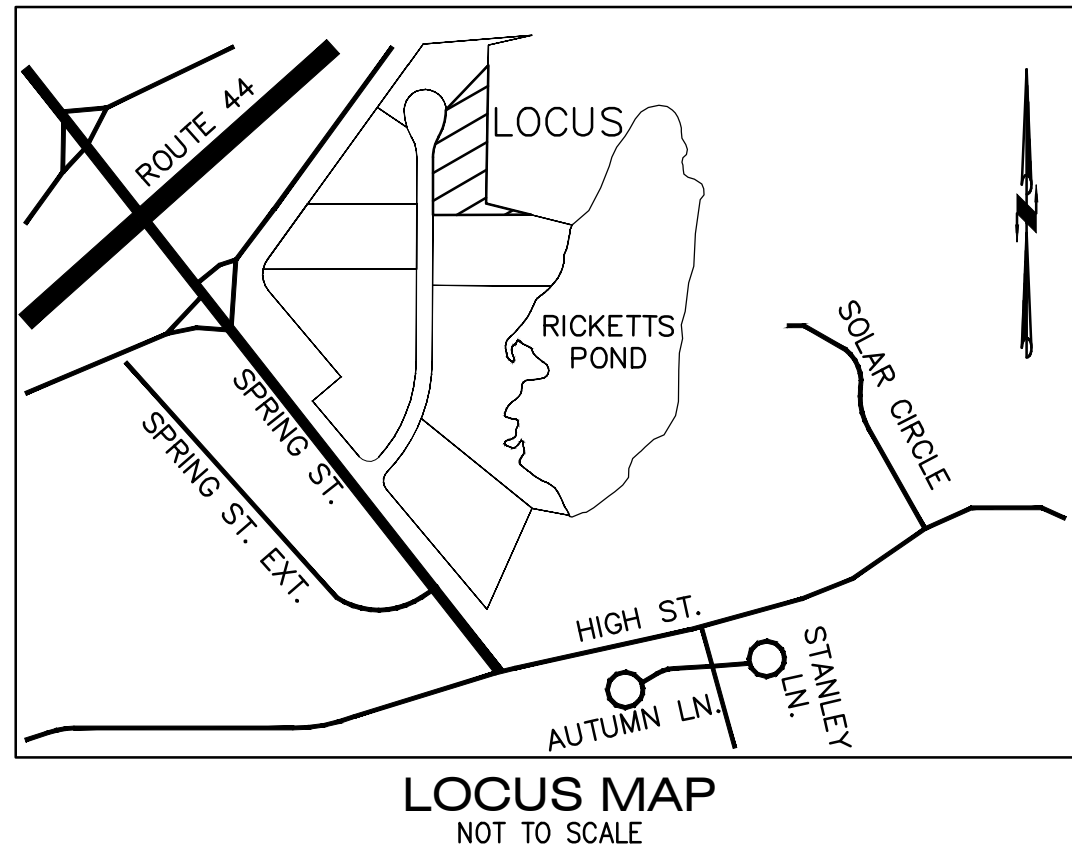


ABBREVIATIONS

ABAN	ABANDONED
ACP	ASBESTOS CEMENT PIPE
ACR	ACCESSIBLE CURB RAMP
ADJ	ADJUST
APPROX	APPROXIMATE
ASPH	ASPHALT
ACOMP	ASPHALT COATED CORRUGATED METAL PIPE
B	BOLLARD
BD	BOUND
BLDG	BUILDING
BIT CONC	BITUMINOUS CONCRETE
BM	BENCHMARK
BS	BOTTOM OF SLOPE
CAP	CORRUGATED ALUMINUM PIPE
CB	CATCH BASIN
C&C	CUT AND CAPPED
CB/DH	CONC. BOUND/DRILL HOLE
CB/EPLP	CB/ESCUTCHEON
CCB	CAPE COD BERM
CIP	CAST IRON PIPE
CIT	CHANGE IN TYPE
C	CENTERLINE
CLF	CHAIN LINK FENCE
CO	CLEAN OUT
CONC	CONCRETE
COND	CONDUIT
CMP	CORRUGATED METAL PIPE
CPP	CORRUGATED POLYETHYLENE PIPE
CS	COMBINED SEWER
CSMH	COMBINED SEWER MANHOLE
CULV	CULVERT
Δ	DELTA ANGLE
D	DRAIN
DCB	DOUBLE CATCH BASIN
DIP	DUCTILE IRON PIPE
DMH	DRAIN MANHOLE
E	ELECTRIC
ECC	EXTRUDED CONCRETE CURB
ELEV	ELEVATION
EMH	ELECTRIC MANHOLE
E/T/C	ELECTRIC, TELEPHONE, & CABLE TV
EW	END WALL
EXIST	EXISTING
FAB	FIRE ALARM BOX
FES	FLARED END SECTION
FND	FOUND
FND	FOUNDATION
F&C	FRAME AND COVER
F&G	FRAME AND GRATE
G	GAS
GD	GROUND
GG	GAS GATE
GIP	GALVANIZED IRON PIPE
GP	GUARD POST
GS	GAS SERVICE
GR	GRASS
GRAN	GRANITE
HDPE	HIGH-DENSITY POLYETHYLENE PIPE
HH	HANDHOLE
HOR	HORIZONTAL
HP	HIGH PRESSURE
HWL	HEADWALL
HYD	HYDRANT
INV	INVERT
I.P.	IRON PIN
I.R.	IRON ROD
L	LEAD
LSA	LANDSCAPED AREA
LP	LIGHT POLE
MAX	MAXIMUM
MC	METAL COVER
MCC	MONOLITHIC CONCRETE CURB
MH	MANHOLE
MHB	MASS. HIGHWAY BOUND
MIN	MINIMUM
MPL	METAL LIGHT POLE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OHW	OVERHEAD WIRE
PB	PULL BOX
PE	POLYETHYLENE PIPE
P	PROPERTY LINE
PROP	PROPOSED
PVC	POLYVINYL CHLORIDE PIPE
PWMT	PAVEMENT
PWT	PAVED WATER WAY
RCP	REINFORCED CONCRETE PIPE
REM	REMOVE
REMOD	REMODEL
RET	RETAIN
ROW	RIGHT OF WAY
RR	RAILROAD
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
S	SEWER
SB	STONE BOUND
SB/DH	STONE BOUND/DRILL HOLE
SCE	SLOPED GRANITE EDGING
SMH	SEWER MANHOLE
STA	STATION
SS	SEWER SERVICE
STL	STEEL
SW	SIDEWALK
T	TELEPHONE
TCB	TRAFFIC CONTROL BOX
TL	TRAFFIC LIGHT
TMH	TELEPHONE MANHOLE
Tr	TREE
TRANS	TRANSFORMER
TS	TOP OF SLOPE
TSV	TAPPING SLEEVE, VALVE AND BOX
TP	TYPICAL
UP	UTILITY POLE
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
VGC	VERTICAL GRANITE CURB
W	WATER MAIN
WG	WATER GATE

LEGEND

Existing	Proposed	Description
× 100.50 100.50 100.00 100.50	× 100.50 100.50 100.00 100.50	SPOT ELEVATIONS
— X —	— X —	TOP & BOTTOM ELEVATIONS
— 100.50 —	— 100.50 —	SPOT ELEVATIONS WITH LEADER
⊕	⊕	HYDRANT
⊕	⊕	WATER GATE VALVE
⊕	⊕	WELL
⊕	⊕	GAS GATE
⊕	⊕	ELECTRIC HANDHOLE
⊕	⊕	LIGHT POLE
⊕	⊕	UTILITY POLE
⊕	⊕	GUY POLE
⊕	⊕	GUY ANCHOR
⊕	⊕	DRAIN MANHOLE
⊕	⊕	SEWER MANHOLE
⊕	⊕	CATCH BASIN
⊕	⊕	DOUBLE CATCH BASIN
⊕	⊕	TEST PIT
⊕	⊕	BORING
⊕	⊕	SIGN SINGLE POST
⊕	⊕	GRANITE OR CONCRETE BOUND
⊕	⊕	WETLAND FLAG
⊕	⊕	EXISTING BUILDING
⊕	⊕	PROPOSED BUILDING
⊕	⊕	MAJOR CONTOUR
⊕	⊕	MINOR CONTOUR
⊕	⊕	CHAINLINK FENCE
⊕	⊕	CABLE TV LINE
⊕	⊕	ELECTRIC, TELEPHONE, CABLE TV DUCTBANK
⊕	⊕	UNDERGROUND ELECTRIC
⊕	⊕	OVERHEAD ELECTRIC
⊕	⊕	NATURAL GAS LINE
⊕	⊕	SANITARY SEWER MAIN
⊕	⊕	DRAIN PIPE
⊕	⊕	TELEPHONE LINE
⊕	⊕	WATER MAIN
⊕	⊕	FIRE PROTECTION LINE
⊕	⊕	RETAINING WALL
⊕	⊕	TREELINE
⊕	⊕	HAYBALE & SILT FENCE
⊕	⊕	LIMIT BORDERING VEGETATED WETLAND RESOURCE
⊕	⊕	100' WETLAND BUFFER ZONE



GENERAL NOTES

CARVER, ASSESSOR'S MAP 32, LOT 1-5  
LOCUS OWNER:  
RBPB, LLC  
3 MARION DRIVE  
CARVER, MASSACHUSETTS 02330

- DEED BOOK REFERENCE: PLYMOUTH COUNTY REGISTRY OF DEEDS  
BOOK 50438, PAGE 270  
BOOK 51637, PAGE 211  
PLAN BOOK 63, PAGE 848
- LOCUS IS SHOWN ON THE TOWN OF CARVER'S ASSESSOR'S MAP 32 AS LOT 1-5, TOTAL AREA = 62,067± S.F. (1.42 AC)
- LOCUS IS LOCATED WITHIN THE TOWN OF CARVER'S WATER RESOURCE PROTECTION DISTRICT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL CONTROL POINTS AND BENCHMARKS NECESSARY FOR THE WORK.
- THE CONTRACTOR SHALL PROVIDE INLET PROTECTION, SUCH AS SILT SACKS, AT ALL CATCH BASINS TO PREVENT SEDIMENT FROM ENTERING THE STORMWATER INFILTRATION BASINS. INLET PROTECTION WILL ALLOW THE STORM DRAIN INLETS TO BE USED BEFORE FINAL STABILIZATION.
- ALL EXISTING CONDITIONS INFORMATION, INCLUDING PERIMETER AND TOPOGRAPHIC INFORMATION WAS PREPARED FROM AN ON THE GROUND FIELD SURVEY PERFORMED BY MCKENZIE ENGINEERING GROUP, INC. IN FEBRUARY OF 2018, MAY AND AUGUST 2022, AND MARCH 2023.
- BORDERING VEGETATED WETLANDS DELINEATED BY ENVIRONMENTAL CONSULTING & RESTORATION, LLC. ON FEBRUARY 6, 2018. DELINEATED BY METHODOLOGY ESTABLISHED BY THE MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION (MASS DEP) REGULATIONS FOUND AT 310 CMR 10.55. AN ORAD APPROVING THE LIMIT OF BORDERING VEGETATED WETLAND WAS ISSUED BY THE TOWN OF CARVER CONSERVATION COMMISSION ON JULY 9, 2018 (DEP FILE NO. SE 126-0566).
- THE PROPERTY SHOWN HEREON IS LOCATED IN THE TOWN OF CARVER SPRING STREET INNOVATION ZONING DISTRICT PER ZONING MAP DATED 2016.
- UTILITY INFORMATION FROM ABOVE GROUND OBSERVED EVIDENCE IN CONJUNCTION WITH DIG SAFE MARKINGS AND RECORD PLANS. THE LAND SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN HEREON COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE LAND SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM AVAILABLE INFORMATION AND CONSTRUCTION AS THE LAND SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. BEFORE CONSTRUCTION CALL DIG SAFE SYSTEMS, INC. AT 1-888-344-7233.
- ANY CHANGE IN THE FIELD CONDITIONS SHALL BE REPORTED TO THE ENGINEER TO ENSURE THAT ANY MODIFICATIONS TO THE ORIGINAL DESIGN ARE PROPER AND ADEQUATE TO SERVE THE PROJECT'S NEEDS, AND COMPLY WITH THE APPLICABLE STANDARDS AND REGULATION.
- LOCUS FALLS WITHIN ZONE X AS SHOWN ON F.I.R.M. PANEL NO: 25023C0334K DATED JULY 6, 2021.
- ALL ELEVATIONS SHOWN REFER TO NAVD 1988 DATUM.
- NO MUNICIPAL WATER SERVICE IS LOCATED ON SPRING STREET. THE PROPOSED BUILDINGS WILL USE PRIVATE WELLS THAT WILL BE APPROVED AND INSTALLED PER THE TOWN OF CARVER BOARD OF HEALTH REGULATIONS.
- SEE PLANS ENTITLED "DEFINITIVE SUBDIVISION PLANS, RICKETTS POND BUSINESS PARK, SPRING STREET, CARVER, MASSACHUSETTS" PREPARED BY MEG DATED JANUARY 10, 2019 AND REVISED APRIL 2, 2019 FOR EXISTING AND PROPOSED SITE CONDITIONS FOR THE SUBDIVISION.

GENERAL UTILITY NOTES

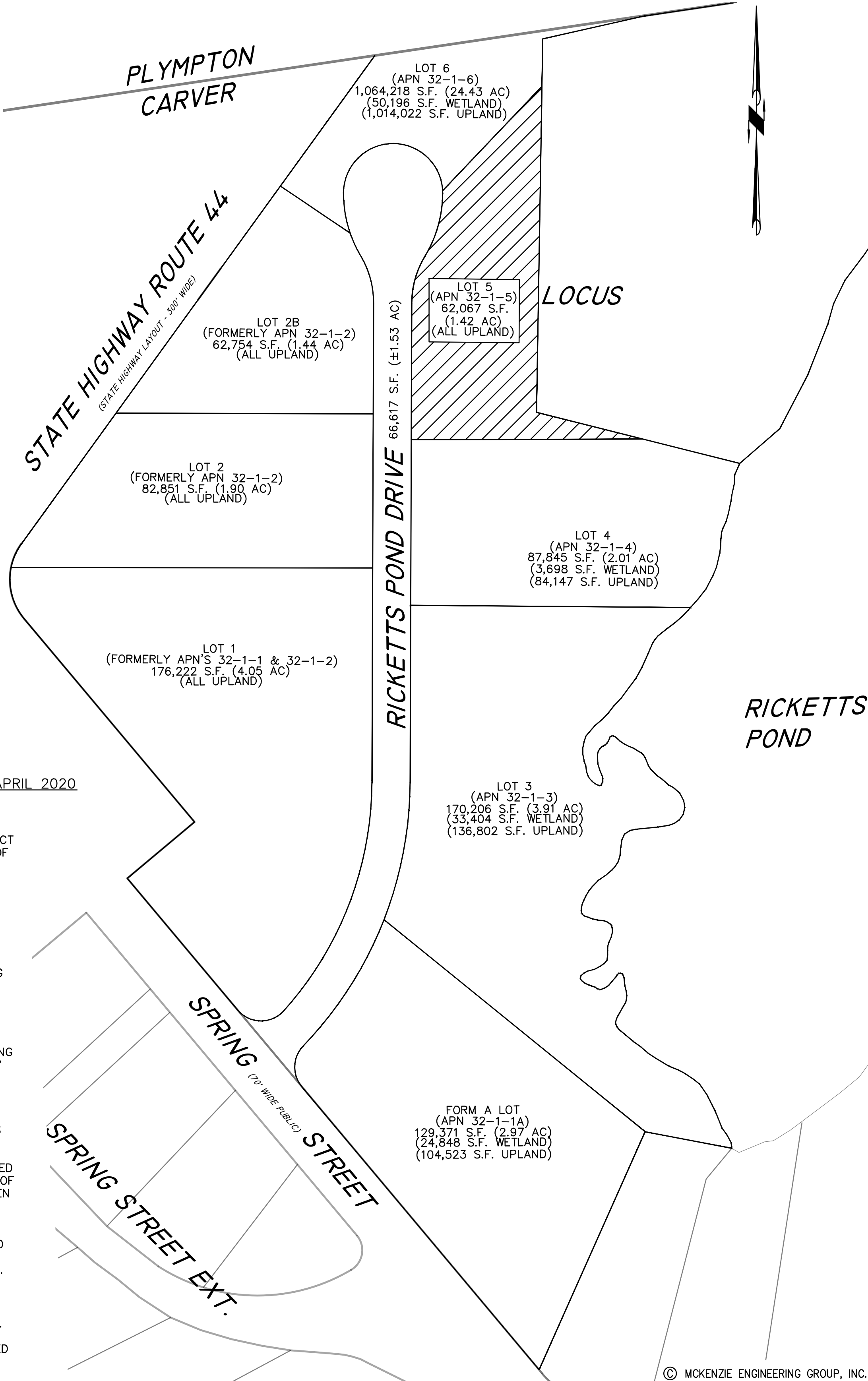
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR 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.
- THE CONTRACTOR SHALL COORDINATE ALL STREET WORK WITH THE CARVER DPW.
- ALL WATER SERVICES SHALL BE INSTALLED WITH 5' OF COVER EXCEPT AS NOTED OR DETAILED OTHERWISE.
- ALL POTABLE WELL WATER SERVICE APPURTENANCES, MATERIALS, METHODS OF INSTALLATION SHALL MEET OR EXCEED ALL LOCAL MUNICIPAL REQUIREMENTS.
- AFTER PRESSURE TESTING AND CHLORINATION IS COMPLETED, SAMPLES SHALL BE TAKEN FROM THE WATER SERVICE AND SHALL BE TESTED AT 200 PSI FOR A MINIMUM OF 2 HOURS. THE CONTRACTOR IS REQUIRED TO NOTIFY THE CARVER DEPARTMENT OF PUBLIC WORKS AT LEAST 24 HOURS PRIOR TO THE TESTING.
- THE LOCATIONS OF PROPOSED ELECTRIC, TELEPHONE AND COMMUNICATION (E.T.C.) SERVICES ARE APPROXIMATE. THE PROJECT ELECTRICAL ENGINEER SHALL VERIFY THESE LOCATIONS PRIOR TO THE START OF CONSTRUCTION. COORDINATE ALL E.T.C. WORK WITH THE APPROPRIATE UTILITY COMPANIES.
- ALL CONSTRUCTION WORK SHALL BE PERFORMED IN ACCORDANCE WITH CARVER DEPARTMENT OF PUBLIC WORKS SPECIFICATIONS.

WAIVERS REQUESTED FROM THE TOWN OF CARVER ZONING BY-LAW EFFECTIVE APRIL 2020

- SEC 3341 PARKING LOT DESIGN:  
**REQUIRED:** "TO THE EXTENT FEASIBLE, REQUIRED PARKING AREAS SHALL NOT BE LOCATED FORWARD OF ANY BUILDING FRONT LINE ON THE LOT. NOTWITHSTANDING THE ABOVE, ANY DISTRICT EXCEPT FOR RA, V AND PTCD, THE PLANNING BOARD MAY GRANT PERMISSION IN THE COURSE OF SITE PLAN REVIEW TO LOCATE NOT MORE THAN EIGHT (8) PARKING SPACES IN FRONT OF THE PRINCIPAL BUILDING, WHERE SUCH LOCATION PROMOTES A BETTER SITE LAYOUT...."  
**PROVIDED:** 17 PARKING SPACES ARE PROVIDED IN BUILDING FRONT LINE.
- SEC 3130.G. SUBMITTAL REQUIREMENTS:  
**REQUIRED:** "EXISTING TREES 10" CALIPER OR BETTER AND EXISTING TREE/SHRUB MASSES; PROPOSED PLANTING, LANDSCAPING AND SCREENING."  
**PROVIDED:** DUE TO THE SIZE OF THE PROPOSED DEVELOPMENT, SPECIFIC LOCATIONS OF EXISTING TREES 10" CALIPER OR GREATER ARE NOT INCLUDED. OUR SUBMISSION WILL SHOW THE EXISTING TREELINE AS SURVEYED BY MCKENZIE ENGINEERING GROUP, INC.
- SEC 3345 PARKING LOT DESIGN:  
**REQUIRED:** "FOR PARKING AREAS OF FIFTEEN (15) OR MORE SPACES, BICYCLE RACKS FACILITATING LOCKING SHALL BE PROVIDED TO ACCOMMODATE ONE BICYCLE PER FIVE (5) PARKING SPACES...."  
**PROVIDED:** BICYCLE PARKING SPACES ARE NOT PROVIDED BY THIS SUBMISSION.
- SEC 3242 PARKING LOT PERIMETER LANDSCAPING:  
**REQUIRED:** BUFFER STRIP OF 25 FT. LOCATED ALONG THE PERIMETER OF AT LEAST THREE SIDES OF THE PARKING AREA.  
**PROVIDED:** A LANDSCAPE BUFFER EXCEEDING 25 FT. IS LOCATED BETWEEN THE NORTHERN SIDE PROPERTY LINE AND THE PROPOSED PARKING AREA. A LANDSCAPE BUFFER OF 25 FT. IS LOCATED BETWEEN THE SOUTHERN SIDE PROPERTY LINE AND THE ONE-WAY DRIVING AISLE, IN THE AREA OF DUMPSTER PADS A LANDSCAPE BUFFER OF 14 FT. IS PROVIDED. THE DUMPSTER PADS HAVE BEEN SITUATED ADJACENT TO THE LOADING AREA IN ORDER TO BE UTILIZED BY THE WORK VEHICLES PRIOR TO LEAVING FOR THE WORK DAY. A LANDSCAPE BUFFER OF 25 FT. IS PROVIDED BETWEEN THE REAR PROPERTY LINE AND PROPOSED PARKING STALLS. A LANDSCAPE BUFFER OF 7 FT. IS PROVIDED ALONG THE FRONT PROPERTY LINE. A 10 FT. MINIMUM LANDSCAPE BUFFER IS LOCATED BETWEEN THE REAR PROPERTY LINE AND THE PROPOSED LOADING AREA. THE LANDSCAPE PLAN PROPOSES 62 TREES AND 24 SHRUBS TO SCREEN THE PARKING AREA FROM ABUTTING PARCELS. THE SITE IS LOCATED AT THE END OF THE RICKETTS POND BUSINESS PARK SUBDIVISION AND IS SITUATED IN THE TOWN OF CARVER'S SPRING STREET INNOVATION ZONING DISTRICT, THE SITE IS NOT VISIBLE FROM SPRING STREET RIGHT-OF-WAY OR ANY RESIDENTIAL USES. THE CLOSEST RESIDENTIAL USE (2 SOLAR CR) IS LOCATED APPROXIMATELY 1,000 FT. FROM THE DEVELOPMENT. THE 45.8 FT. LOADING AREA BEHIND THE PRINCIPAL BUILDING HAS BEEN SIZED DUE TO THE TURNING RADIUS OF A BOX TRUCK ACCESSING THE LOADING DOCK AND LEAVING THE SITE. BASED ON THE TECHNICAL JUSTIFICATION ABOVE WE BELIEVE ADEQUATE PARKING LOT PERIMETER LANDSCAPING HAS BEEN PROVIDED.

Drawing Index:

No.	Drawing Title
G-1	LEGEND, ABBREVIATIONS & GENERAL NOTES
EX-1	EXISTING CONDITIONS PLAN
C-1	SITE LAYOUT PLAN
C-2	GRADING AND DRAINAGE PLAN
C-3	UTILITY PLAN
ESC-1	EROSION AND SEDIMENT CONTROL PLAN
LA-1	LANDSCAPING PLAN
T-1	TRUCK TURNING PLAN
D-1 - D-4	CONSTRUCTION DETAILS



BY

APP

DESCRIPTION

DATE

REV

**MG**  
MCKENZIE  
ENGINEERING GROUP  
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150 Longwater Drive, Suite 101  
Norwell, MA 02061  
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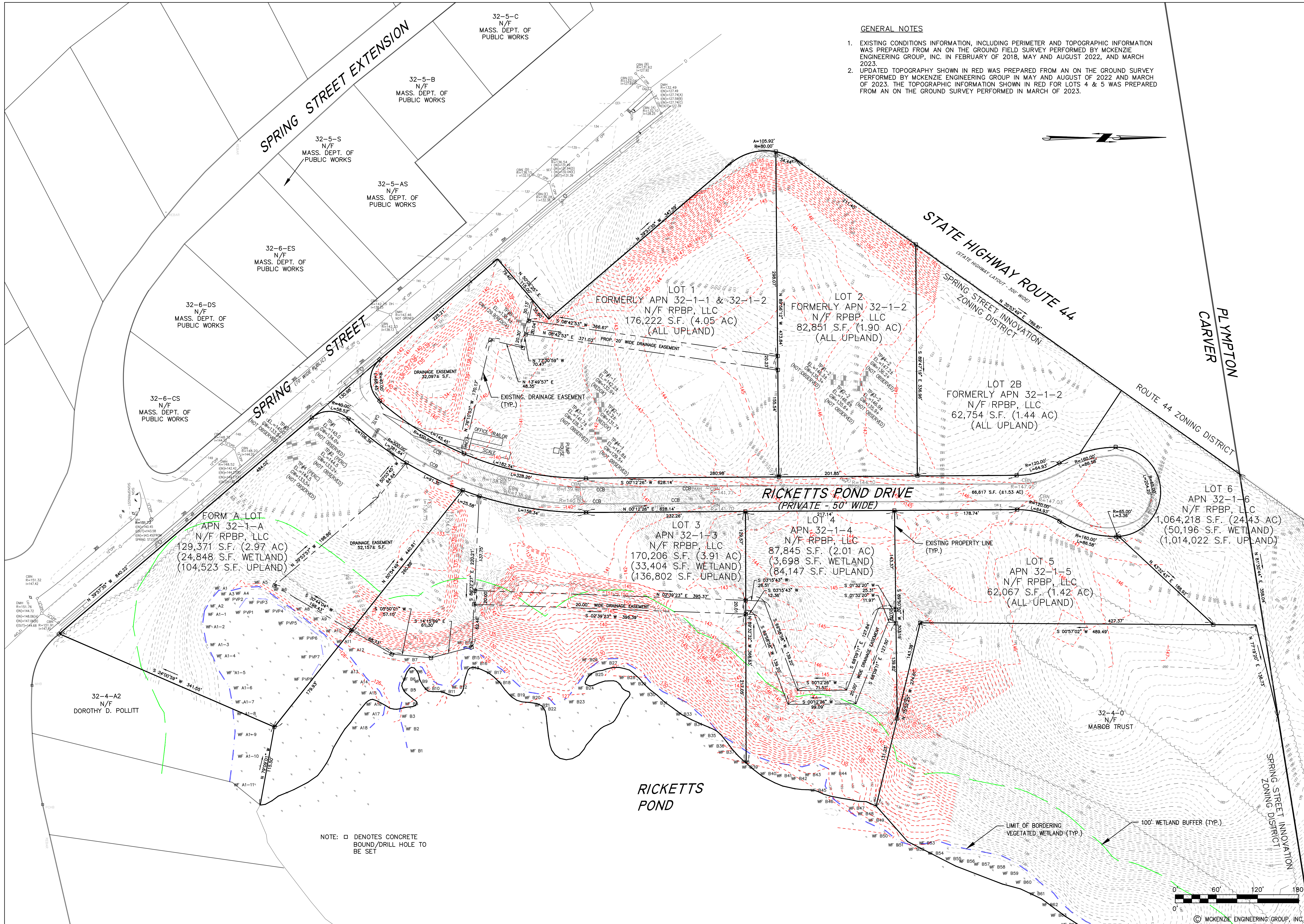
**SITE DEVELOPMENT PLAN**  
**RICKETTS POND BUSINESS PARK**  
**LOT 5 (APN 32-1-5)**  
**OFF SPRING STREET**  
**CARVER, MASSACHUSETTS**

PROFESSIONAL ENGINEER:  
  
APPLICANT:  
**BEANTOWN HOME SERVICES, INC.**  
9 ALDRIN ROAD  
PLYMOUTH, MA 02360

DESIGNED BY: ESS  
CHECKED BY: BOM  
APPROVED BY: BOM  
DATE: MAY 10, 2023  
SCALE: 1"=100'  
PROJECT NO.: 223-123  
DWG. TITLE:  
**LEGEND, ABBREVIATIONS & GENERAL NOTES**  
DWG. NO.: **G-1**

**PERMIT PLAN SET**







LAND USAGE TABLES

SECTION 2300: DIMENSIONAL REGULATIONS

SPRING STREET INNOVATION ZONING DISTRICT (SSID)		
CRITERIA	REQUIRED	PROPOSED
MIN. LOT AREA	60,000 S.F.	62,067 S.F.
MIN. FRONTAGE	175 FT.	333.6 FT.
MAX. BUILDING HEIGHT	40 FT.	26.67 FT.
FRONT YARD BUILDING SETBACK	50 FT.	50.5 FT.
REAR YARD BUILDING SETBACK	40 FT.	57.9 FT.
SIDE YARD BUILDING SETBACK	40 FT.	41.0 FT.
MIN. LOT WIDTH AT BUILDING LINE	80 FT.	379.9 FT.
MAX. % OF LOT COVERED BY BUILDING	25%	10.7%

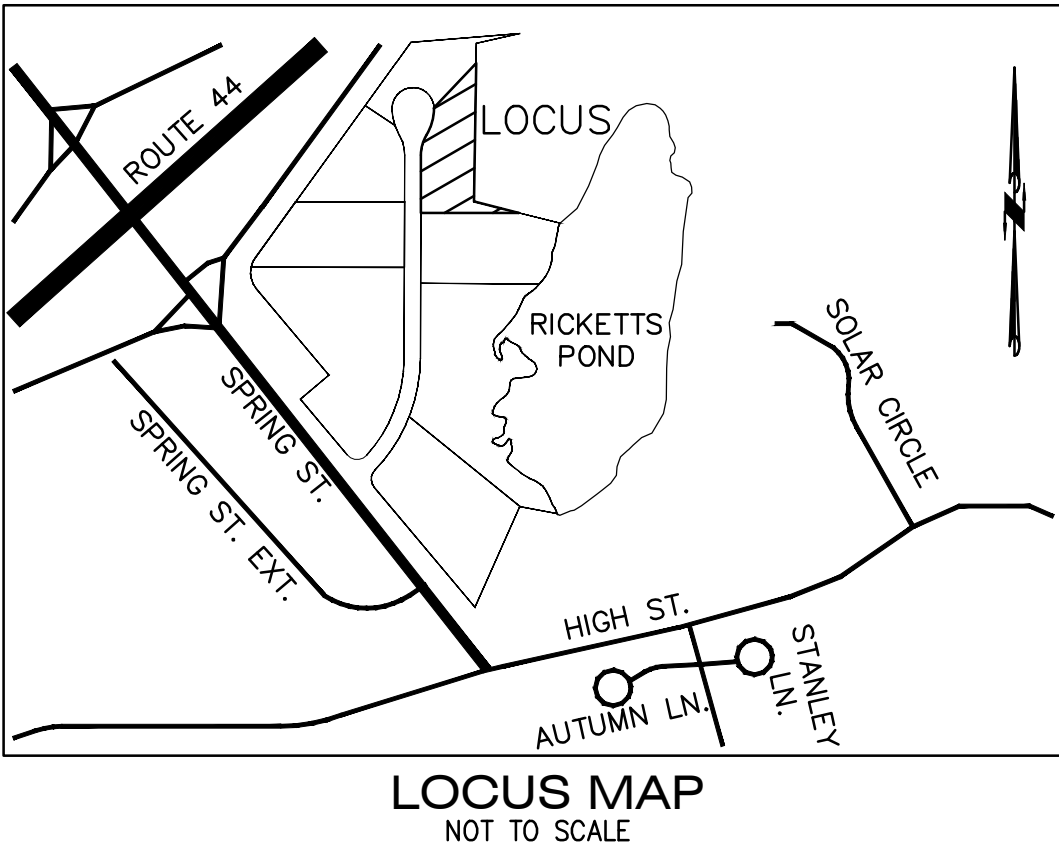
PARKING CALCULATIONS

SECTION 3300: TOWNWIDE PARKING AND LOADING REGULATIONS

CRITERIA	REQUIRED (CARVER ZONING BYLAW)	REQUIRED	PROPOSED
OFFICE	1 SPACE/250 S.F. GFA = (5,000 S.F.) / 250 S.F. = 20	20 + 1.5 = 21.5	
WAREHOUSE AND STORAGE	1 PER 2 EMPLOYEES BUT NOT LESS THAN 1 PER 5,000 S.F. (3 WAREHOUSE EMPLOYEES) = (1 SPACE/2 EMPLOYEES) X 3 EMPLOYEES = 1.5 SPACES	=22 SPACES	38 SPACES

PARKING NOTES

1. 38 TOTAL SPACES INCLUDES 2 ADA ACCESSIBLE SPACES 10'X18' WITH 1-8'X18' (VAN ACCESSIBLE SPACES, (521 CMR: ARCHITECTURAL ACCESS BOARD) ACCESSIBLE SPACES REQUIRED = 2 (26-50 TOTAL SPACES)



BY

APP

DESCRIPTION

DATE

REV


M

G

MCKENZIE

ENGINEERING GROUP

Assinippi Office Park

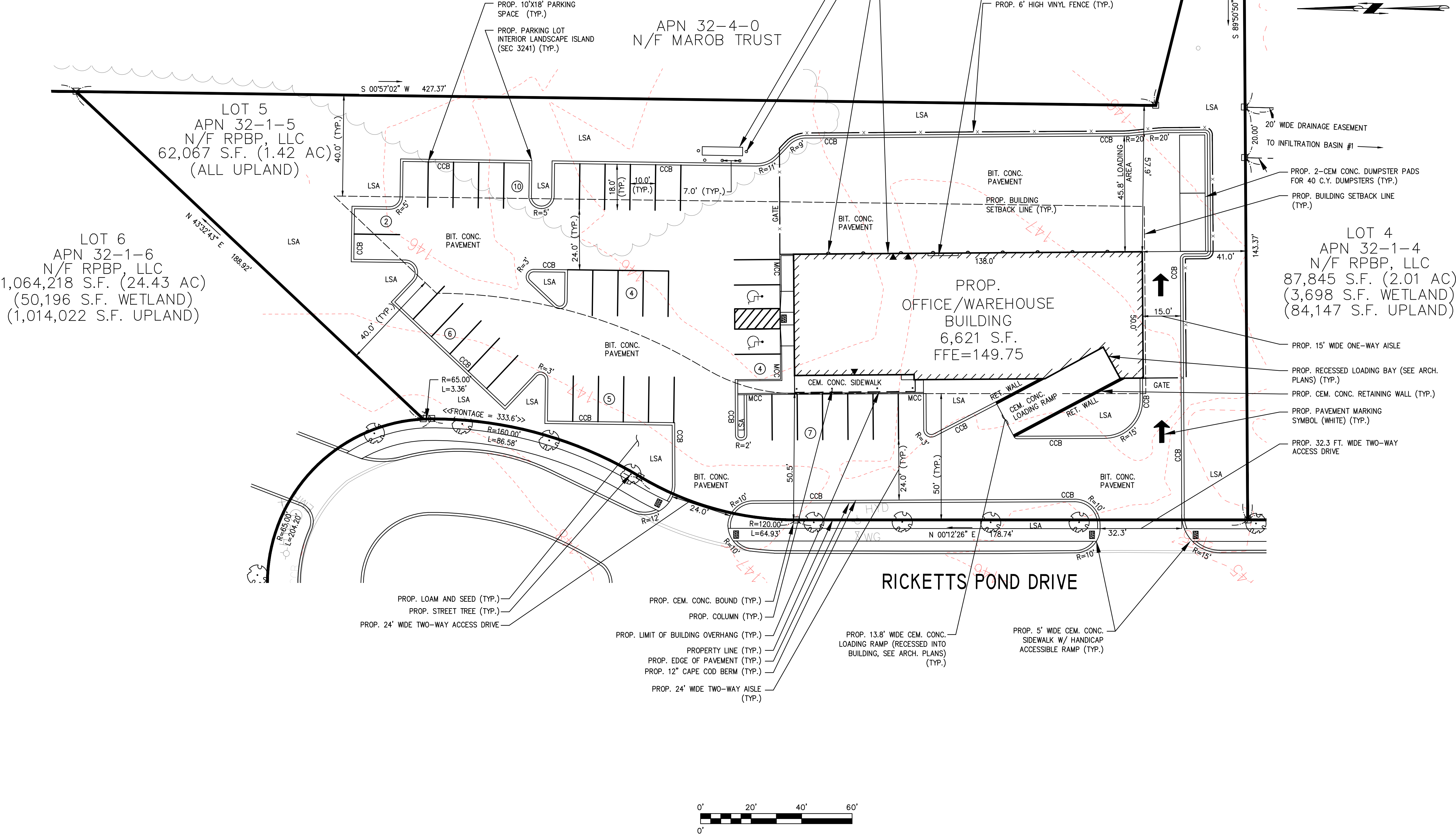
150 Longwater Drive, Suite 101

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SITE DEVELOPMENT PLAN

RICKETTS POND BUSINESS PARK

LOT 5 (APN 32-1-5)

OFF SPRING STREET

CARVER, MASSACHUSETTS

PROFESSIONAL ENGINEER:

APPLICANT:

BEANTOWN HOME SERVICES, INC.

9 ALDRIN ROAD

PLYMOUTH, MA 02360

DRAWN BY:

ESS

DESIGNED BY:

ESS

CHECKED BY:

BCM

APPROVED BY:

BCM

DATE:

MAY 10, 2023

SCALE:

1"=20'

PROJECT NO.:

223-123

DWG. TITLE:

SITE LAYOUT PLAN

DWG. NO.:

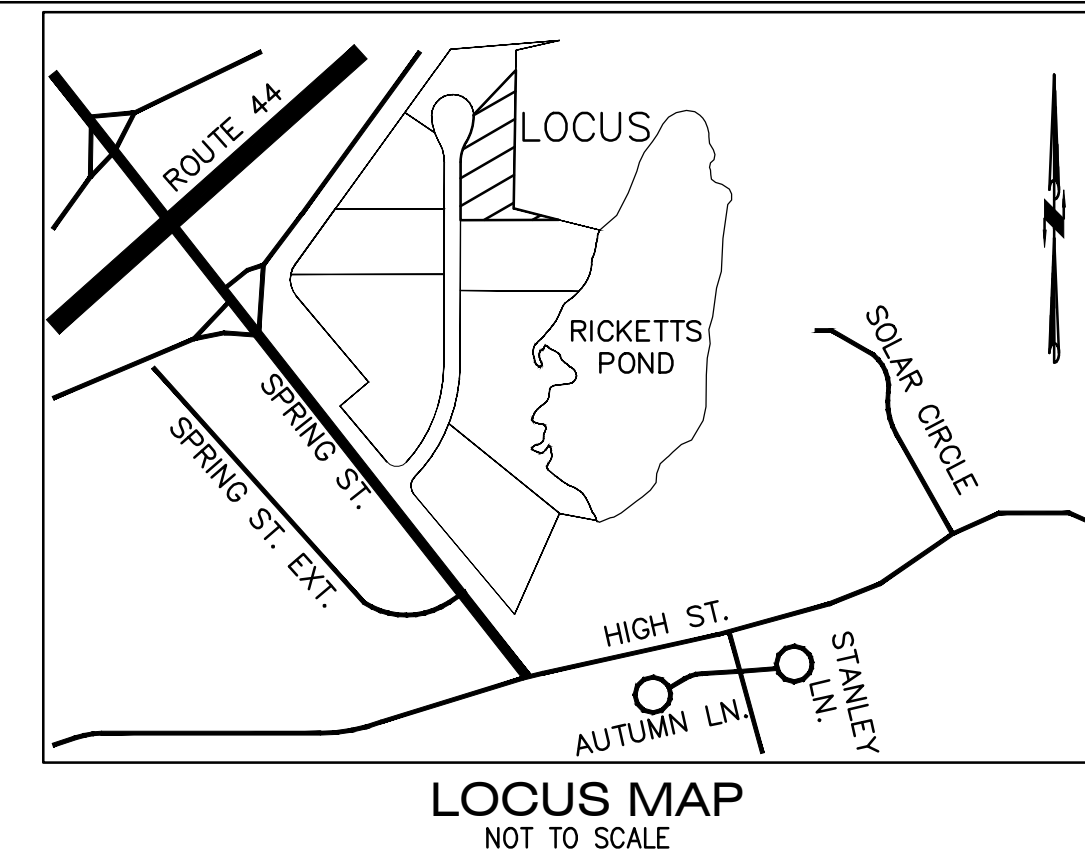
C-1

PERMIT PLAN SET



DRAINAGE NOTES

1. ALL EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY EARTH MOVING ACTIVITIES.
2. THE CONTRACTOR SHALL KEEP ON SITE AT ALL TIMES, ADDITIONAL SILTATION FENCING AND FILTER FABRIC FOR INSTALLATION AS DIRECTED BY THE TOWN TO MITIGATE ANY EMERGENCY CONDITIONS.
3. UPON COMPLETION OF ALL SITE WORK THE CONTRACTOR SHALL INSPECT ALL ON-SITE AND OFF-SITE CATCH BASINS (THAT RECEIVED CATCH BASIN PROTECTION) AND DRAINAGE MANHOLES AND REMOVE ALL SEDIMENT AND DEBRIS THAT HAS ACCUMULATED DURING THE COURSE OF CONSTRUCTION.
4. UPDATED TOPOGRAPHY SHOWN IN RED WAS PREPARED FROM AN ON THE GROUND SURVEY PERFORMED BY MCKENZIE ENGINEERING GROUP IN MAY AND AUGUST OF 2022 AND MARCH OF 2023. THE TOPOGRAPHIC INFORMATION SHOWN IN RED FOR LOTS 4 & 5 WAS PREPARED FROM AN ON THE GROUND SURVEY PERFORMED IN MARCH OF 2023.



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**SITE DEVELOPMENT PLAN  
RICKETTS POND BUSINESS PARK  
LOT 5 (APN 32-1-5)  
OFF SPRING STREET  
CARVER, MASSACHUSETTS**

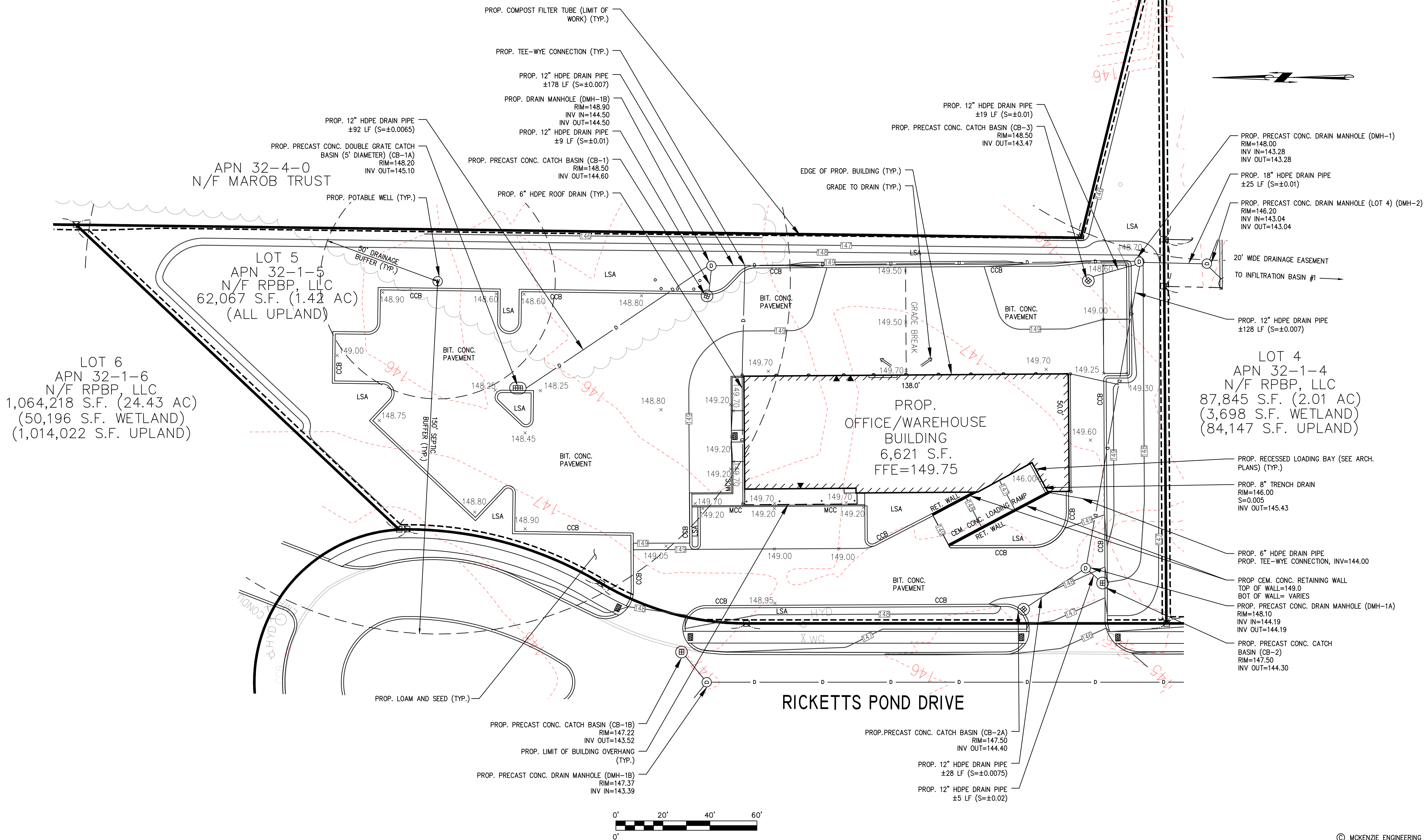
PROFESSIONAL ENGINEER:

APPLICANT:  
**BEANTOWN HOME SERVICES, INC.**  
9 ALDRIN ROAD  
PLYMOUTH, MA 02360

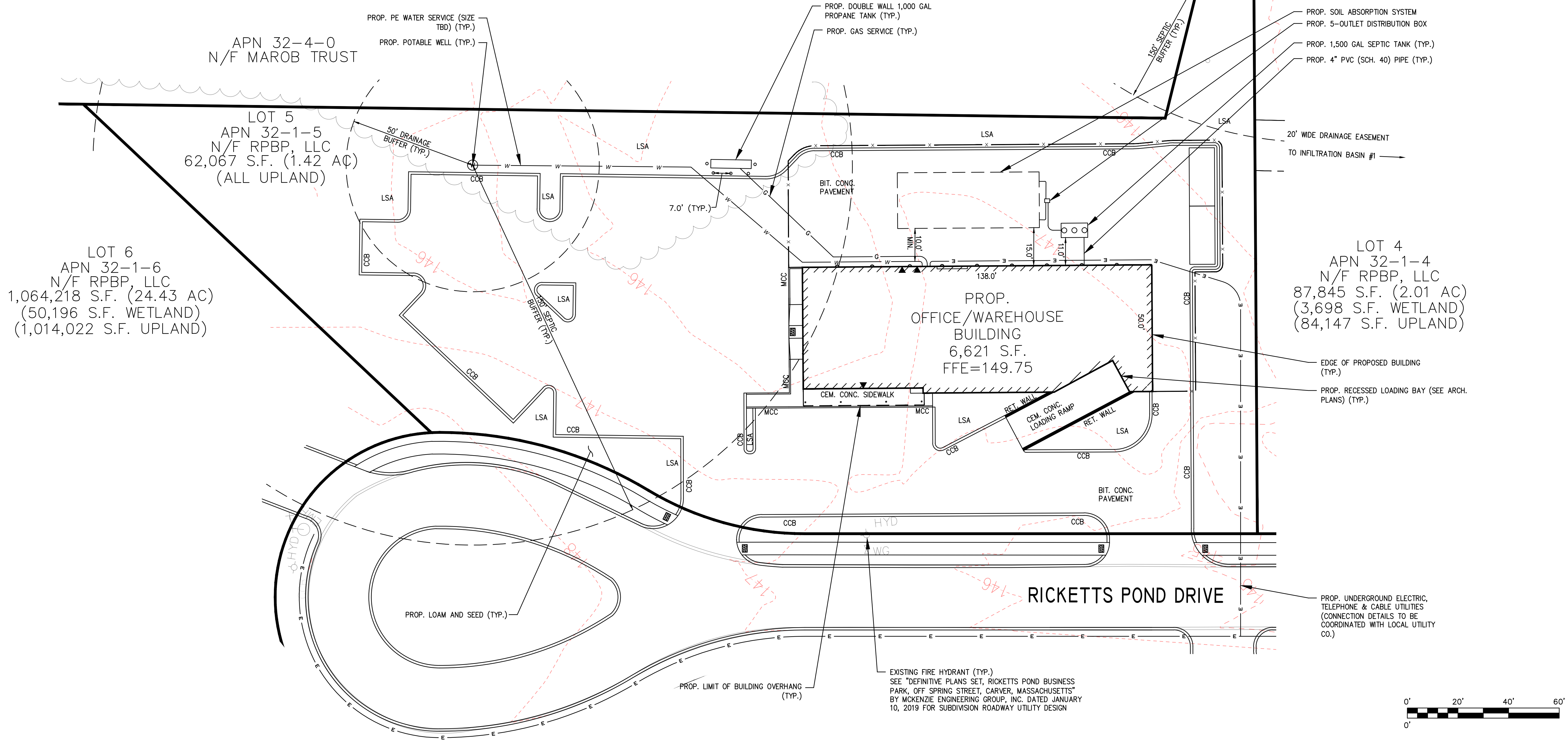
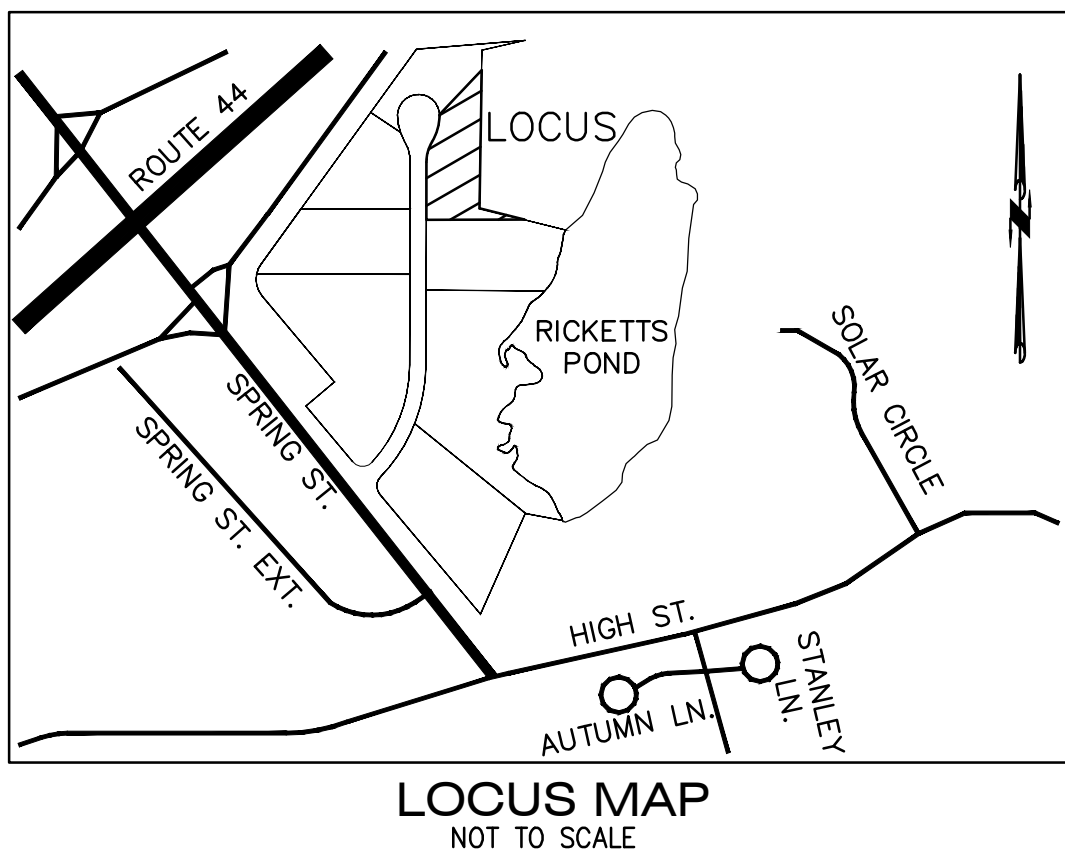
DRAWN BY: ESS  
DESIGNED BY: ESS  
CHECKED BY: BCM  
APPROVED BY: BCM  
DATE: MAY 10, 2023  
SCALE: 1"=20'  
PROJECT NO.: 223-123  
DWG. TITLE:

**GRADING AND DRAINAGE PLAN**

DWG. NO.: **C-2**







REVDATEDESCRIPTIONBY APP

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SITE DEVELOPMENT PLAN

RICKETTS POND BUSINESS PARK

LOT 5 (APN 32-1-5)

OFF SPRING STREET

CARVER, MASSACHUSETTS

PROFESSIONAL ENGINEER:

APPLICANT:  
BEANTOWN HOME  
SERVICES, INC.  
9 ALDRIN ROAD  
PLYMOUTH, MA 02360

PERMIT PLAN SET

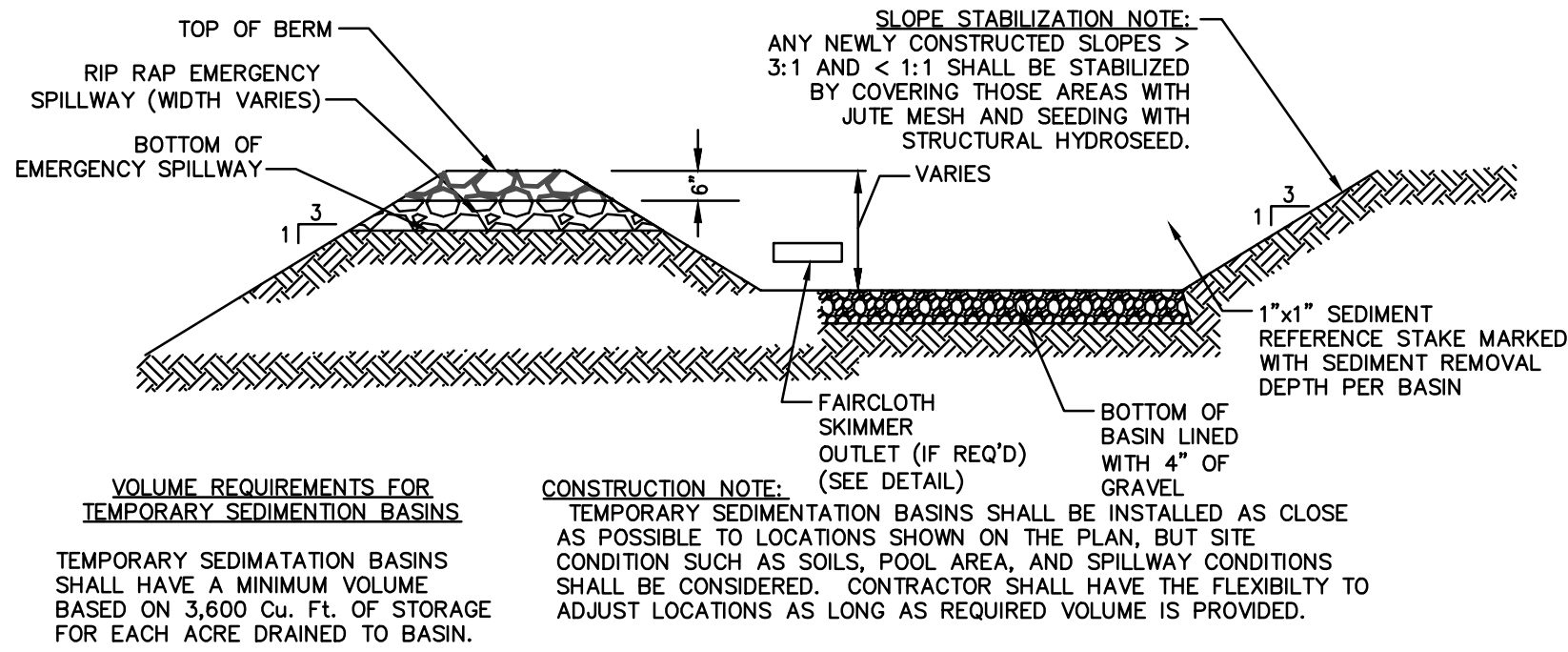
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CHECKED BY: BCM  
APPROVED BY: BCM  
DATE: MAY 10, 2023  
SCALE: 1"=20'  
PROJECT NO.: 223-123  
DWG. TITLE:

UTILITY PLAN

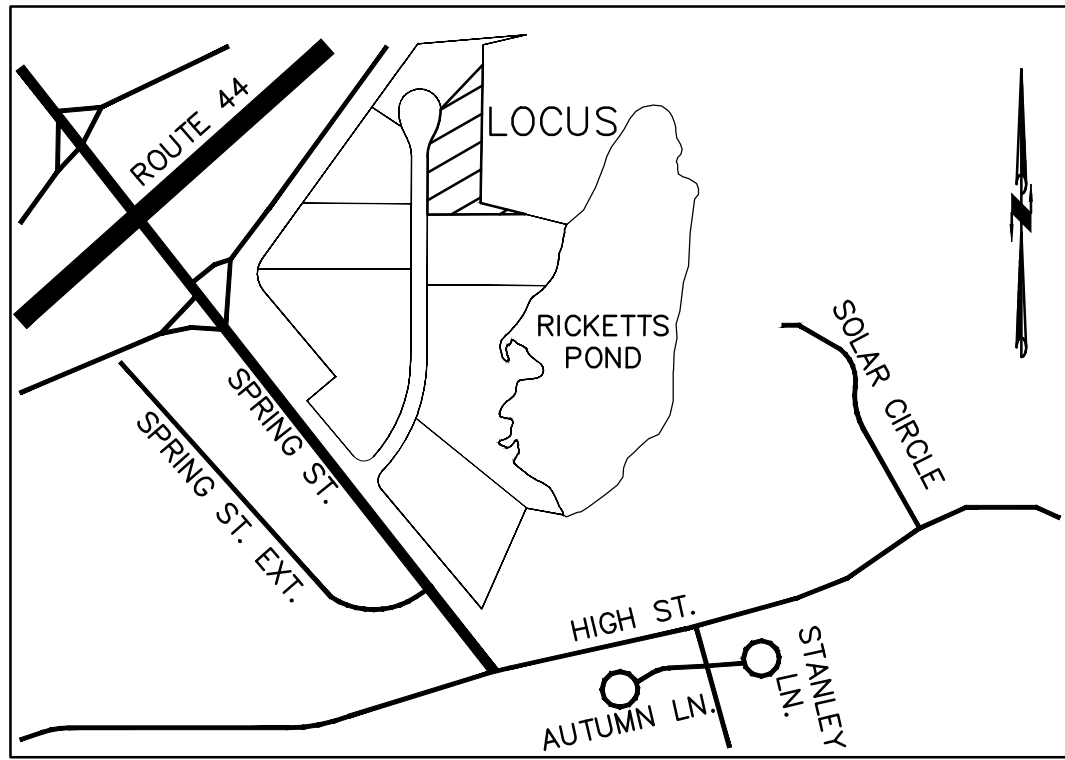
DWG. NO:

C-3





TEMPORARY SEDIMENTATION BASIN  
NOT TO SCALE



LOCUS MAP  
NOT TO SCALE

LOT 4  
APN 32-1-4  
N/F RBPB, LLC  
87,845 S.F. (2.01 AC)  
(3,698 S.F. WETLAND)  
(84,147 S.F. UPLAND)

**DUST CONTROL**

DUST CONTROL WILL BE UTILIZED THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS OF THE SITE. FOR EXAMPLE, KEEPING DISTURBED SURFACES MOIST DURING WINDY PERIODS WILL BE AN EFFECTIVE CONTROL MEASURE. ESPECIALLY FOR CONSTRUCTION ACCESS ROADS. DUST CONTROL WILL PREVENT THE MOVEMENT OF SOIL TO OFFSITE AREAS HOWEVER, CARE MUST BE TAKEN TO NOT CREATE RUNOFF FROM EXCESSIVE USE OF WATER TO CONTROL DUST. DUST CONTROL SHALL BE EVALUATED BY THE CONTRACTOR WEEKLY, AND FOLLOWING HEAVY RAINFALL EVENTS. THE FOLLOWING ARE METHODS OF DUST CONTROL THAT MAY BE USED ON-SITE:

1. VEGETATIVE COVER - THE MOST PRACTICAL METHOD FOR DISTURBED AREAS NOT SUBJECT TO TRAFFIC
2. CALCIUM CHLORIDE - MAY BE APPLIED BY MECHANICAL SPREADER AS LOOSE, DRY GRANULES OR FLAKES AT A RATE THAT KEEPS THE SURFACE MOIST BUT NOT SO HIGH AS TO CAUSE WATER POLLUTION OR PLANT DAMAGE
3. SPRINKLING - THE SITE MAY BE SPRINKLED UNTIL THE SURFACE IS WET. SPRINKLING WILL BE EFFECTIVE FOR DUST CONTROL ON HAUL ROADS AND OTHER TRAFFIC ROUTES.
4. STONE - STONE WILL BE USED TO STABILIZE CONSTRUCTION ROADS; WILL ALSO BE EFFECTIVE FOR DUST CONTROL.

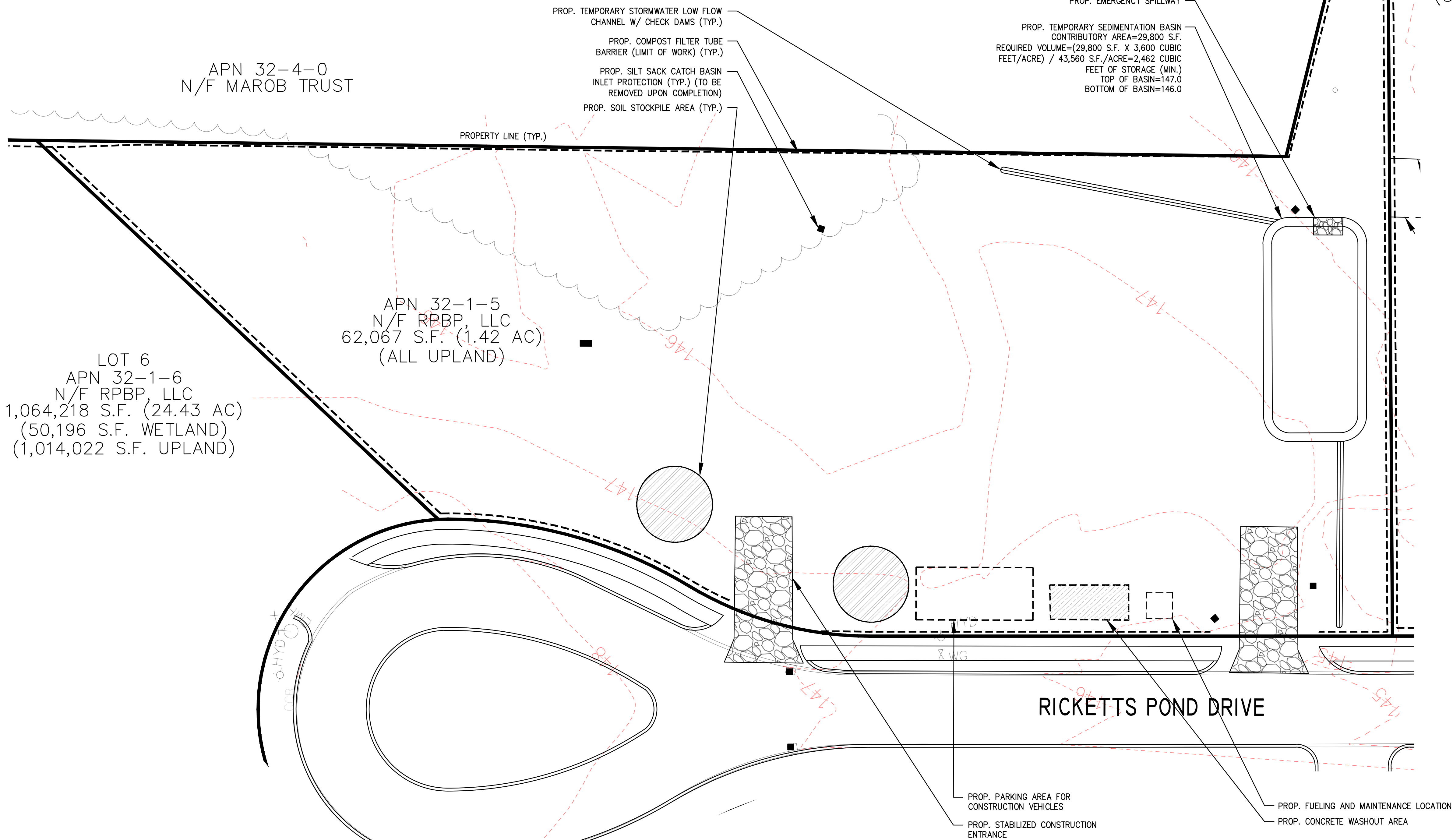
**CONSTRUCTION PHASE BMP OPERATION AND MAINTENANCE NOTES:**

1. STRUCTURAL PRACTICES UTILIZED FOR THE PROJECT WILL INCLUDE SILT SOCK EROSION CONTROL BARRIERS, STABILIZED CONSTRUCTION ENTRANCES, CONCRETE WASH STATIONS, STOCKPILE AREAS, AND INLET PROTECTION.
2. STABILIZATION PRACTICES UTILIZED FOR THE PROJECT WILL INCLUDE TEMPORARY SEEDING, GEOTEXTILES (JUTE MESH), MULCHING, AND PERMANENT SEEDING.
3. OPERATOR PERSONNEL AND/OR ITS CONSULTANTS MUST INSPECT THE CONSTRUCTION SITE AT LEAST ONCE EVERY 7 CALENDAR DAYS OR EVERY 14 CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT 1 INCH OR GREATER. THE INSPECTOR SHOULD REVIEW THE EROSION AND SEDIMENT CONTROLS WITH RESPECT TO THE FOLLOWING:  
A. WHETHER OR NOT THE BMP WAS INSTALLED/PERFORMED CORRECTLY.  
B. WHETHER OR NOT THERE HAS BEEN DAMAGE TO THE BMP SINCE IT WAS INSTALLED OR PERFORMED.  
C. WHAT SHOULD BE DONE TO CORRECT ANY PROBLEMS WITH THE BMP.
4. THE INSPECTOR SHALL COMPLETE THE INSPECTION SCHEDULE AND EVALUATION CHECKLIST FOR FINDINGS AND SHOULD REQUEST THE REQUIRED MAINTENANCE OR REPAIR.
5. ALL SLOPES EXCEEDING 15% RESULTING FROM SITE GRADING SHALL BE BOTH COVERED WITH FOUR INCHES OF TOPSOIL AND PLANTED WITH A VEGETATED COVER SUFFICIENT TO PREVENT EROSION.

**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.

1. 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 & PLACE SILTATION FENCE ON THE SITE PLANS.
3. CLEAR AND GRUB UP AS REQUIRED FOR THE CONSTRUCTION OF THE ROADWAY, PARKING AREAS AND RELATED INFRASTRUCTURE.
4. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE.
5. EXCAVATE TOPSOIL AND SUBSOIL FROM CUT AND FILL AREAS AND STOCKPILE ON SITE IN LOCATIONS SHOWN ON THE PLAN. CONSIDERATION SHOULD BE GIVEN TO LOCATING STOCKPILES ON THE UPHILL SIDE OF DISTURBED AREAS, WHERE POSSIBLE, TO ACT AS TEMPORARY DIVERSIONS.
6. CONSTRUCT CUT AND FILL AREAS, INSTALLING HAYBALE CHECK DAMS AT TOES OF ALL 3:1 OR GREATER SLOPES, AND AT ENDS OF ALL CUT AREAS. ALL FILL WILL BE INSTALLED USING 12" MAXIMUM COMPACTION LIFTS. PLACE ALL SLOPE PROTECTION WHERE INDICATED ON THE PLAN.
7. INSTALL CLOSED DRAINAGE SYSTEM AND OTHER UTILITIES. ALL CATCH BASINS SHALL BE COVERED WITH SILTSACK OR EQUIVALENT INLET PROTECTION.
8. GRADE ROADWAY AND PARKING AREAS TO SUBGRADE ELEVATION AND CONSTRUCT SIDE SLOPES. APPLY TEMPORARY STABILIZATION MEASURES WHERE WARRANTED. REFER TO "EROSION AND SEDIMENTATION CONTROL" SECTION OF THIS PLAN.
9. EXCAVATE AND CONSTRUCT BUILDING FOUNDATION.
10. PLACE GRAVEL SUBBASE.
11. PLACE THE BITUMINOUS CONCRETE BINDER COURSE ON ROADWAY AND PARKING AREAS.
12. CONSTRUCT BUILDING STRUCTURE AND ASSOCIATED UTILITY CONNECTIONS.
13. GRADE SLOPES AND STABILIZE CUT AREAS AT TOE OF SLOPES. BLEND ALL SLOPES INTO EXISTING TOPOGRAPHY AND LOAM AND SEED ALL DISTURBED AREAS. SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITH JUTE MESH.
14. PLACE THE FINAL WEARING COURSE OF PAVEMENT.
15. COMPLETE FINE GRADING OF SHOULDERS AND PLACE PAVEMENT IN MISCELLANEOUS AREAS.
16. REMOVE TEMPORARY EROSION CONTROL DEVICES ONCE ADEQUATE GROWTH IS ESTABLISHED. ADEQUATE GROWTH IS DEFINED AS VEGETATION COVERING 75% OR MORE OF THE GROUND SURFACE.



REV	DATE	DESCRIPTION	BY	APP

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**SITE DEVELOPMENT PLAN**  
**RICKETTS POND BUSINESS PARK**  
**LOT 5 (APN 32-1-5)**  
**OFF SPRING STREET**  
**CARVER, MASSACHUSETTS**

PROFESSIONAL ENGINEER:



**PERMIT PLAN SET**

APPLICANT:  
**BEANTOWN HOME SERVICES, INC.**  
9 ALDRIN ROAD  
PLYMOUTH, MA 02360

DRAWN BY:	ESS
DESIGNED BY:	ESS
CHECKED BY:	BCM
APPROVED BY:	BCM
DATE:	MAY 10, 2023
SCALE:	1"=20'
PROJECT NO.:	223-123
DWG. TITLE:	

**EROSION AND SEDIMENT CONTROL PLAN**

DWG. NO.:

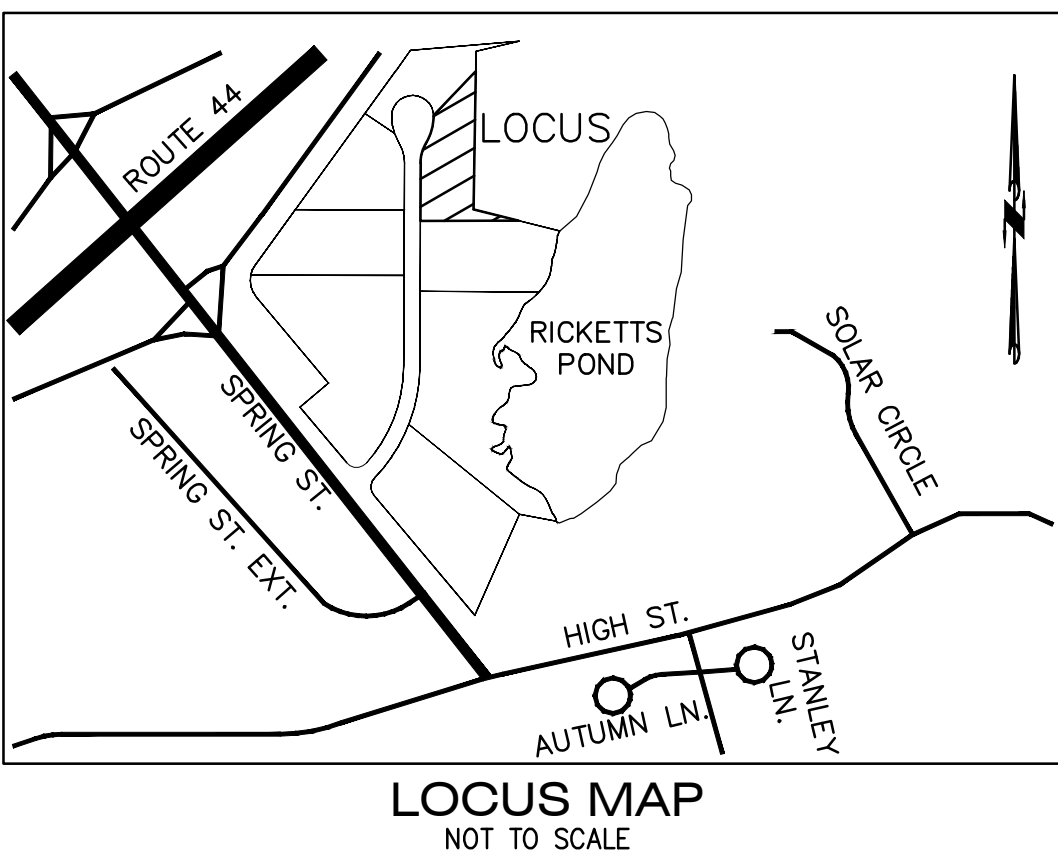
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PROPOSED SURFACE TREATMENTS TABLE	
	CEMENT CONCRETE
	LANDSCAPED AREA (LOAM AND SEED)
	PROPOSED BUILDING
	BITUMINOUS CONCRETE PAVEMENT

- LANDSCAPING NOTES:
- TO THE GREATEST EXTENT POSSIBLE, EXISTING NATIVE TREES AND SHRUBS SHALL BE MAINTAINED.
  - NO TREE, SHRUB OR PLANT SHALL BE USED THAT HAS BEEN IDENTIFIED AS AN INVASIVE SPECIES BY THE MASSACHUSETTS PLANT ADVISORY GROUP IN THE MOST RECENT VERSION OF "THE EVALUATION OF NON-NATIVE PLANT SPECIES FOR INVASIVENESS IN MASSACHUSETTS" (WITH ANNOTATED LIST) OR HAS BEEN IDENTIFIED AS INVASIVE OR BANNED ON THE "MASSACHUSETTS PROHIBITED PLANT LIST" AS PERIODICALLY UPDATED BY THE MASSACHUSETTS DEPARTMENT OF AGRICULTURE.
  - EXISTING INVASIVE PLANTS SHALL BE REMOVED.

PLANTING LIST				
QTY.	BOTANICAL NAME	COMMON NAME	SIZE	SYMBOL
<b>TREES</b>				
7	QUERCUS PALUSTRIS	PIN OAK	2.5"-3" CALIPER	
5	CERCIS CANADENSIS	EASTERN REDBUD	20' HEIGHT	
10	JUNIPERUS VIRGINIANA	EASTERN RED CEDAR	7'-8' HEIGHT	
34	THUJA OCCIDENTALIS	EMERALD GREEN ARBORVITAE	8' HEIGHT	
6	PINUS STROBUS	EASTERN WHITE PINE	8' HEIGHT	
<b>SHRUBS</b>				
12	SALIX DISCOLOR	PUSSY WILLOW (MALE)	5 GALLON POT	
12	BAILMER HYDRANGEA	HYDRANGEA MACROPHYLLA "ENDLESS SUMMER"	5 GALLON POT	



BY

APP

DESCRIPTION

DATE

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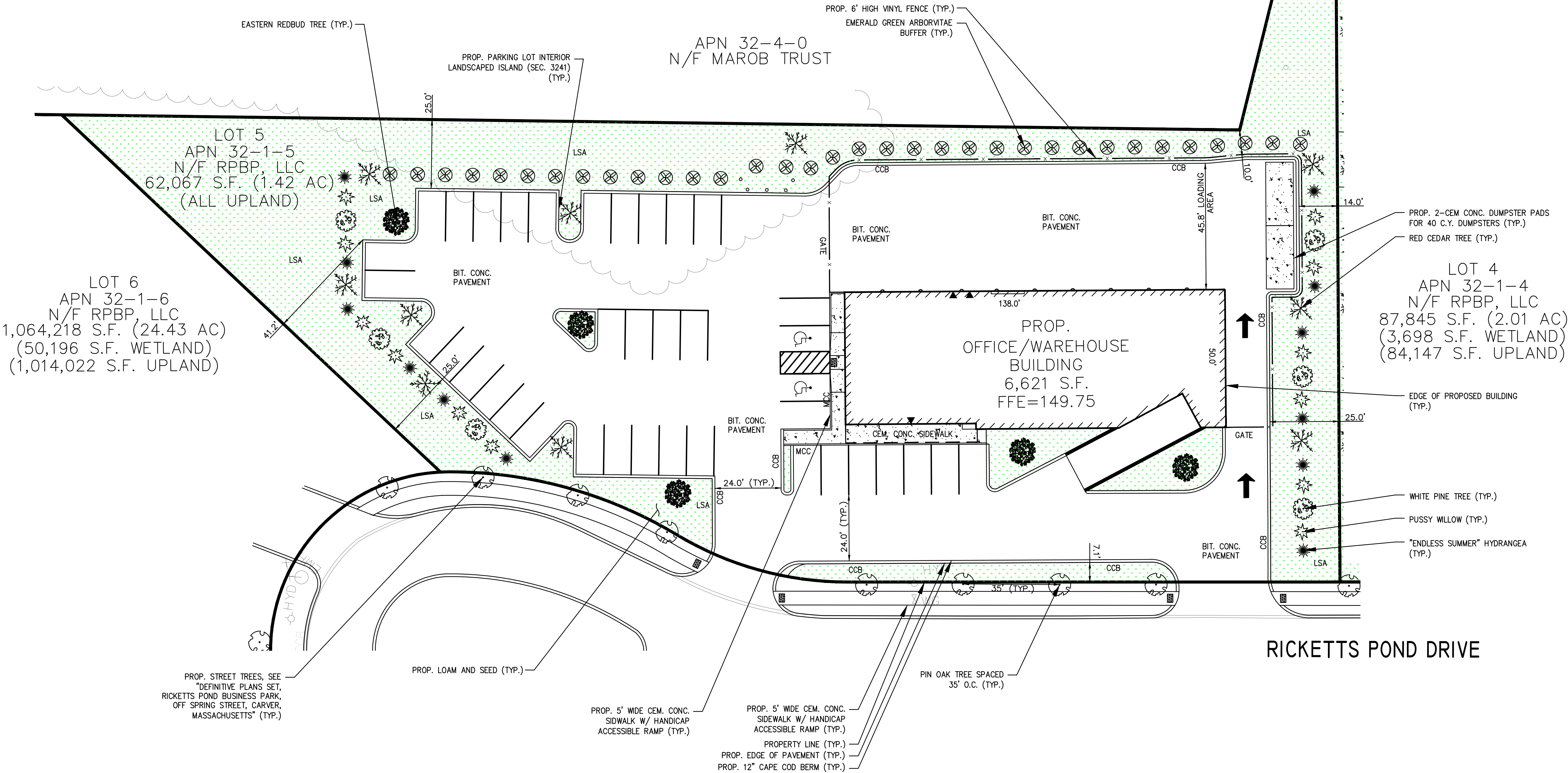
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SITE DEVELOPMENT PLAN  
RICKETTS POND BUSINESS PARK  
LOT 5 (APN 32-1-5)  
OFF SPRING STREET  
CARVER, MASSACHUSETTS

PROFESSIONAL ENGINEER:

COMMONWEALTH OF MASSACHUSETTS

BRADLEY C. MCKENZIE

REGISTERED PROFESSIONAL ENGINEER

EXPIRATION DATE 12/31/2024

APPLICANT:

BEANTOWN HOME SERVICES, INC.

9 ALDRIN ROAD

PLYMOUTH, MA 02360

DRAWN BY: ESS

DESIGNED BY: ESS

CHECKED BY: BCM

APPROVED BY: BCM

DATE: MAY 10, 2023

SCALE: 1"=20'

PROJECT NO.: 223-123

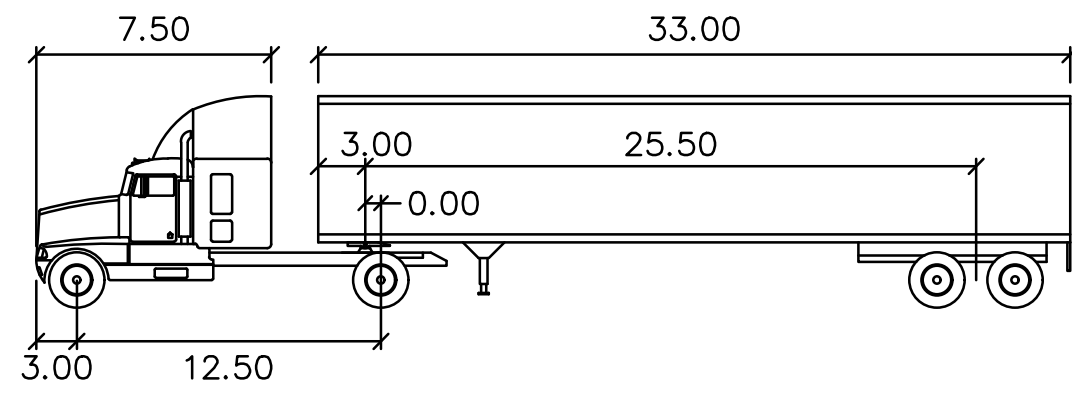
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LANDSCAPING PLAN

DWG. NO:

LA-1

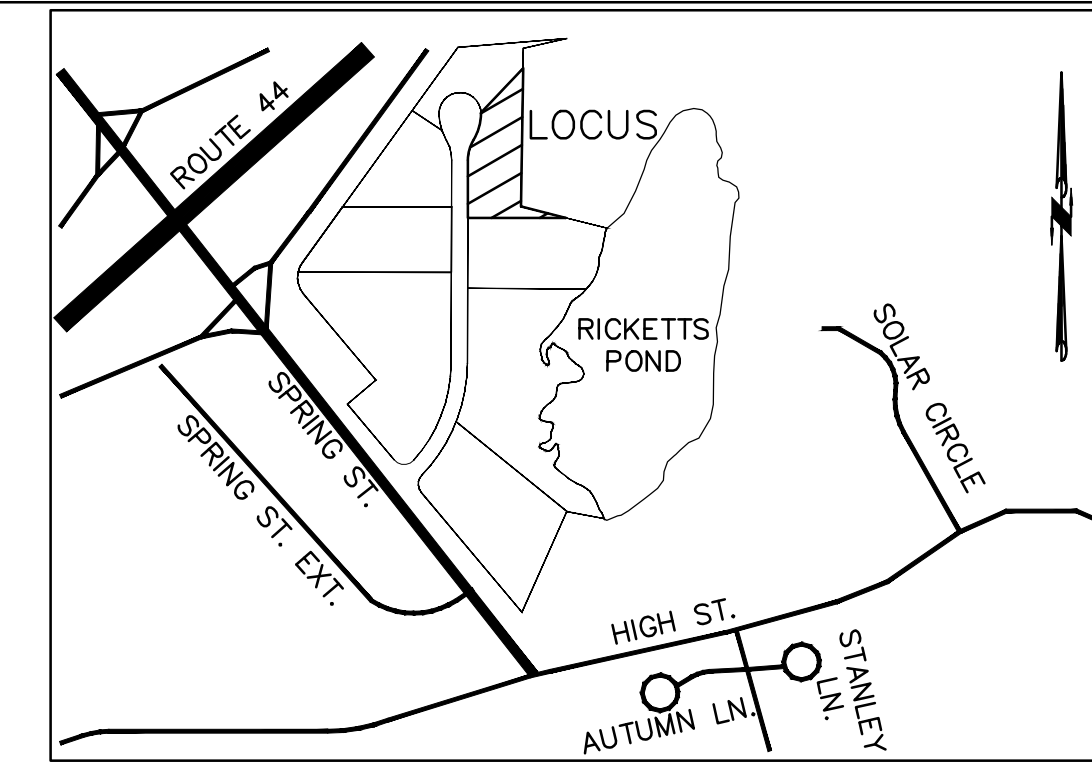




WB-40

feet			
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.00	Steering Angle	: 20.3
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.00		

NOTE: LIMIT OF BUMPER OVERHANG IS SHOWN IN RED. VEHICLE WHEEL PATH IS SHOWN AS BLACK LINES.



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**SITE DEVELOPMENT PLAN**  
**RICKETTS POND BUSINESS PARK**  
**LOT 5 (APN 32-1-5)**  
**OFF SPRING STREET**  
**CARVER, MASSACHUSETTS**

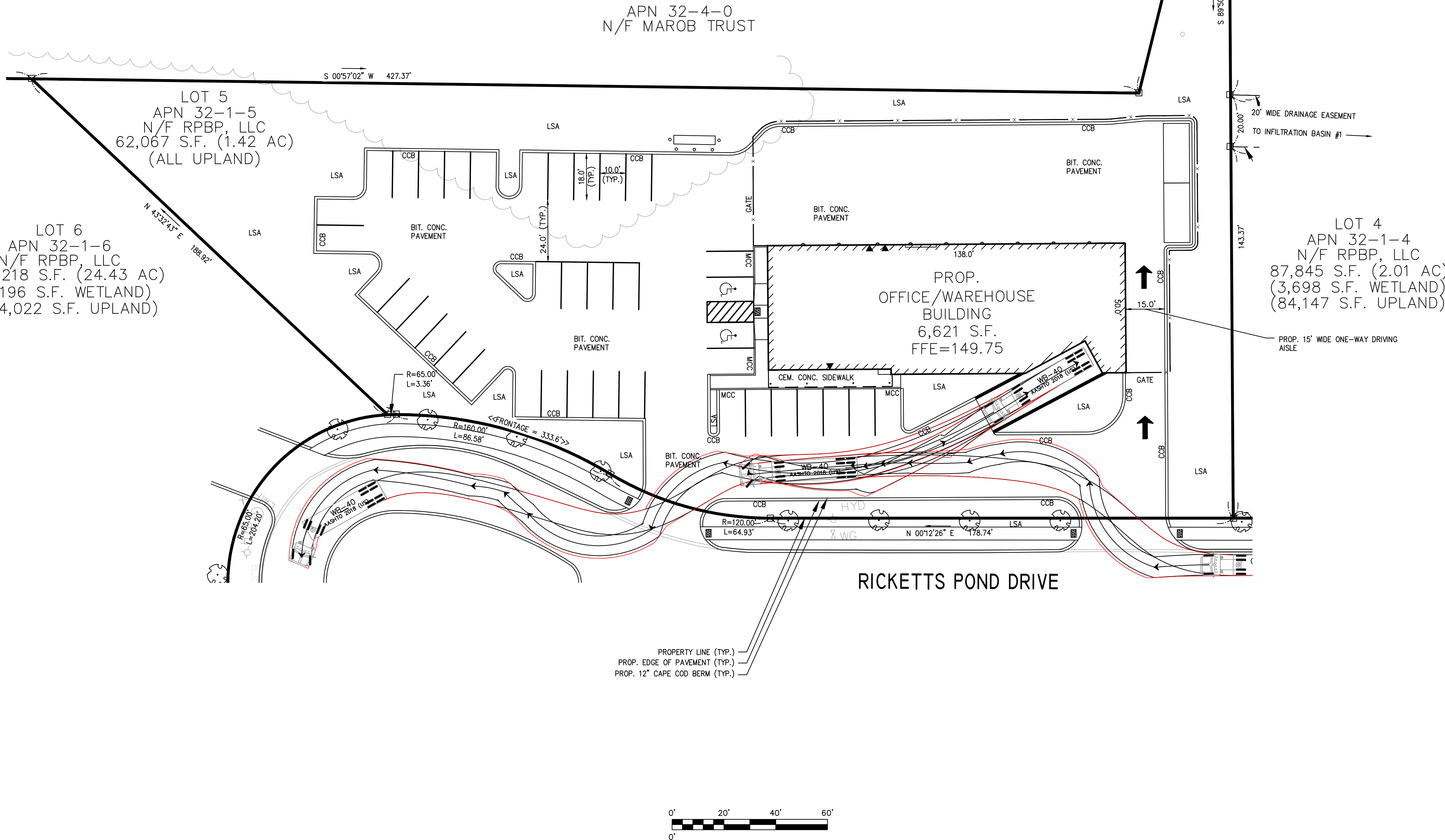
PROFESSIONAL ENGINEER:  
  
BRADLEY C. MCKENZIE  
No. 30917  
REGISTERED PROFESSIONAL ENGINEER  
COMMONWEALTH OF MASSACHUSETTS

APPLICANT:  
**BEANTOWN HOME SERVICES, INC.**  
9 ALDRIN ROAD  
PLYMOUTH, MA 02360

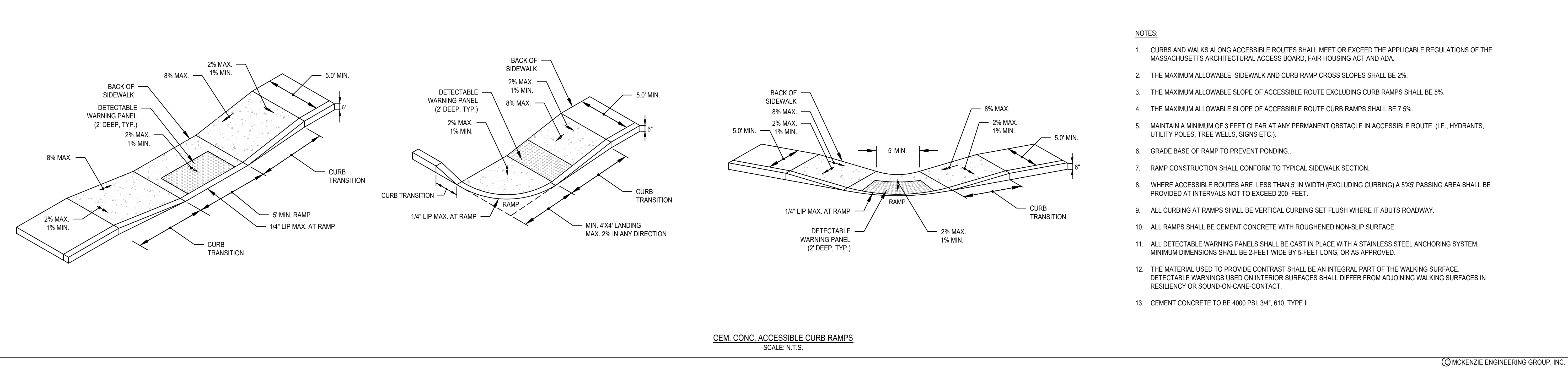
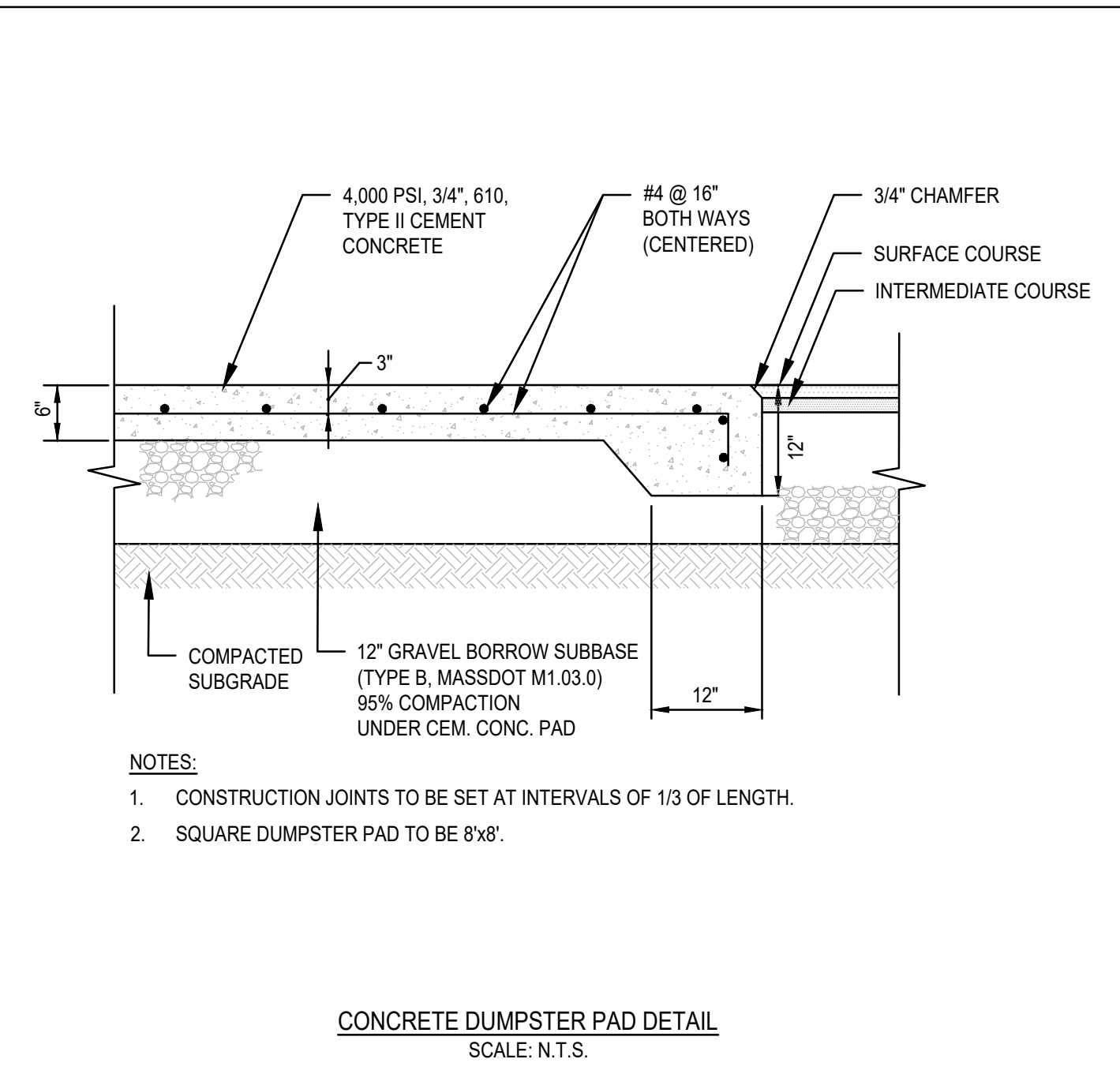
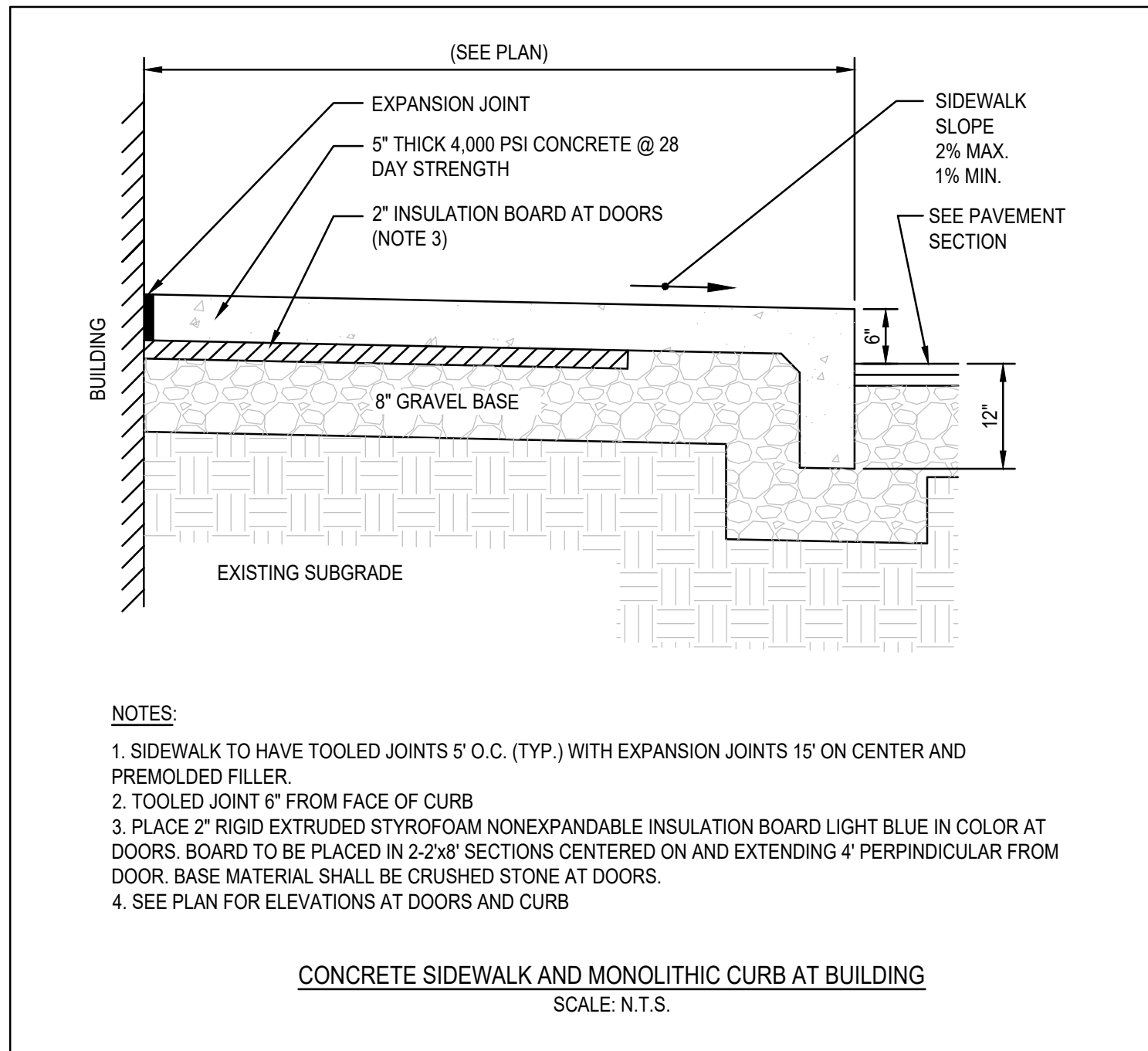
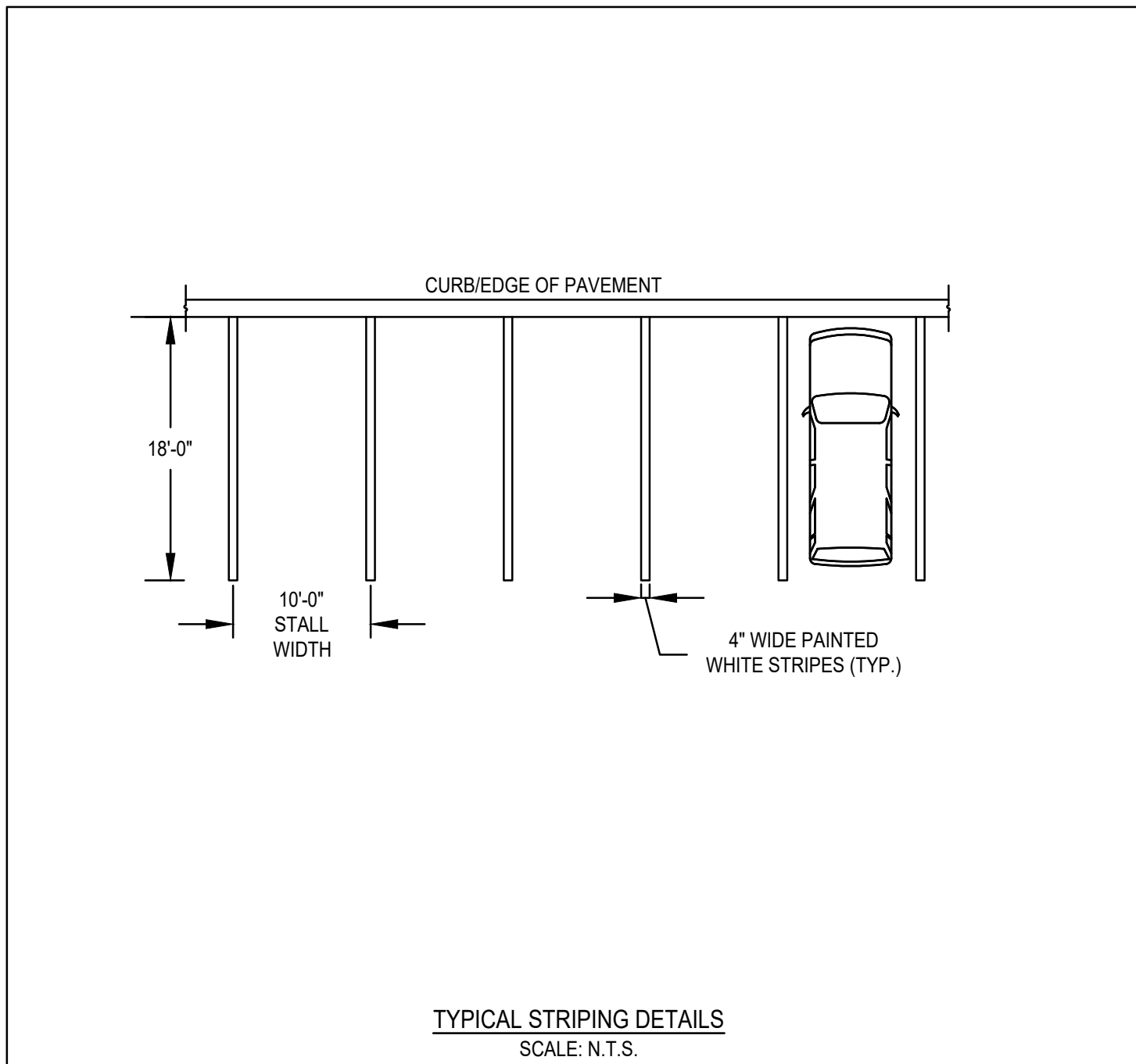
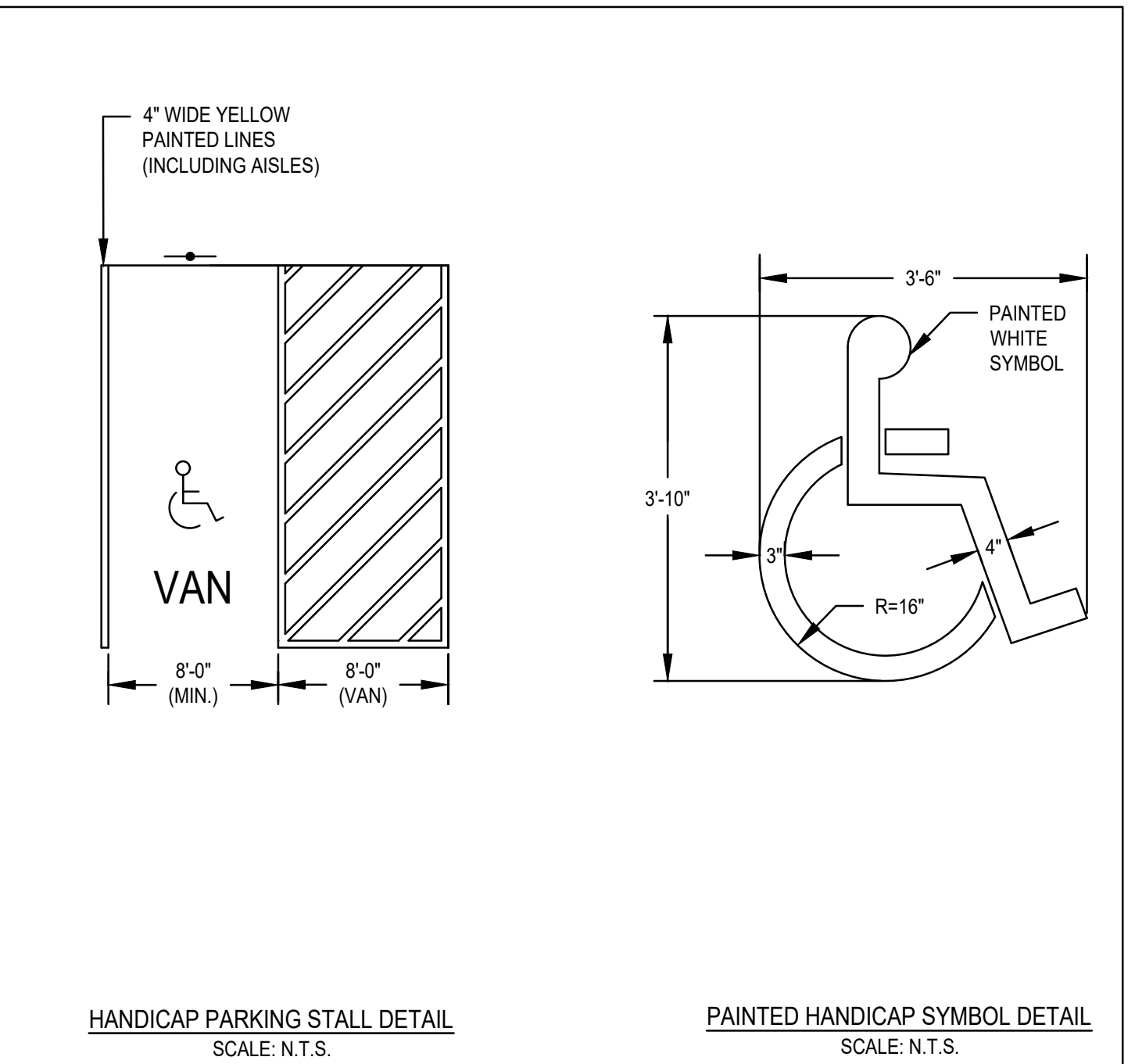
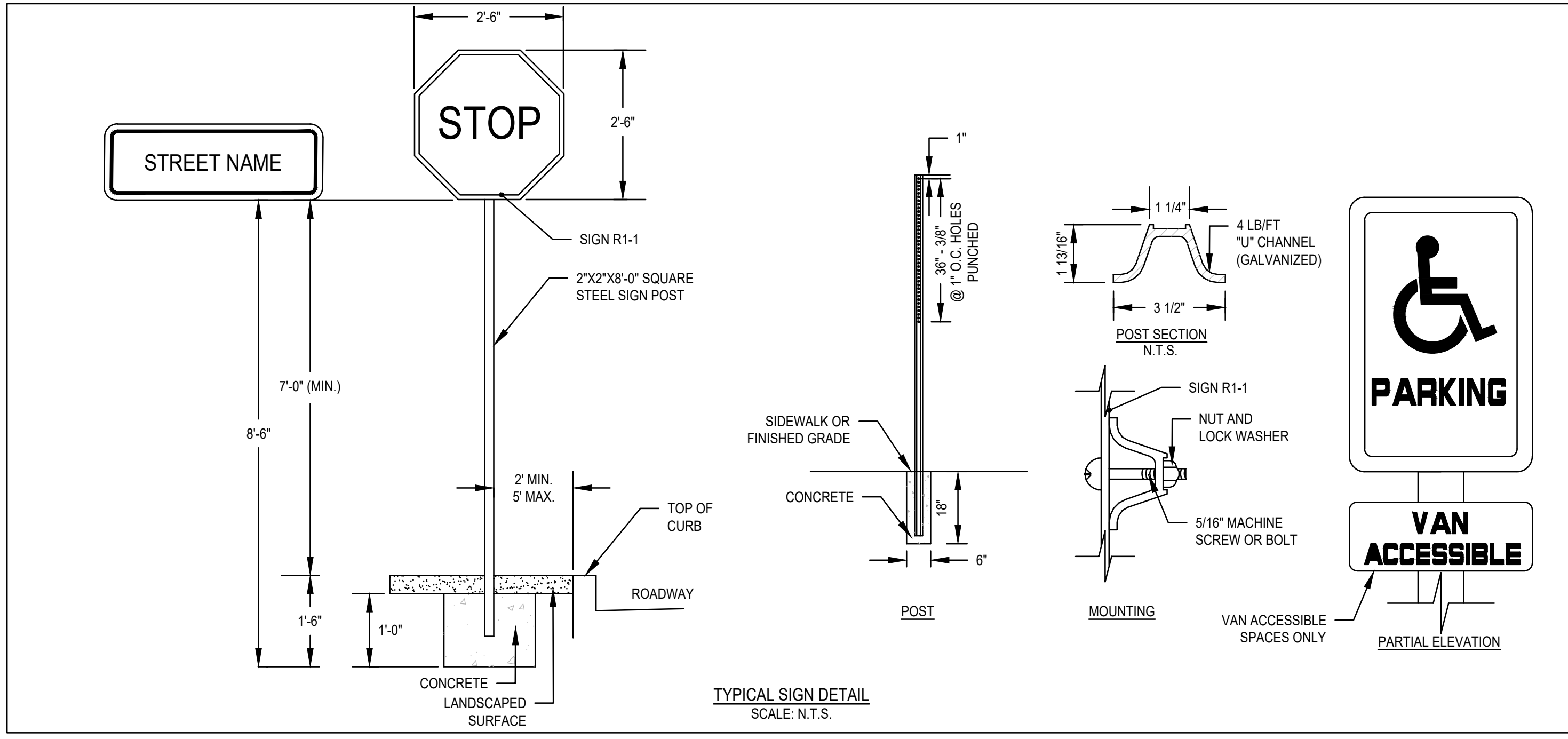
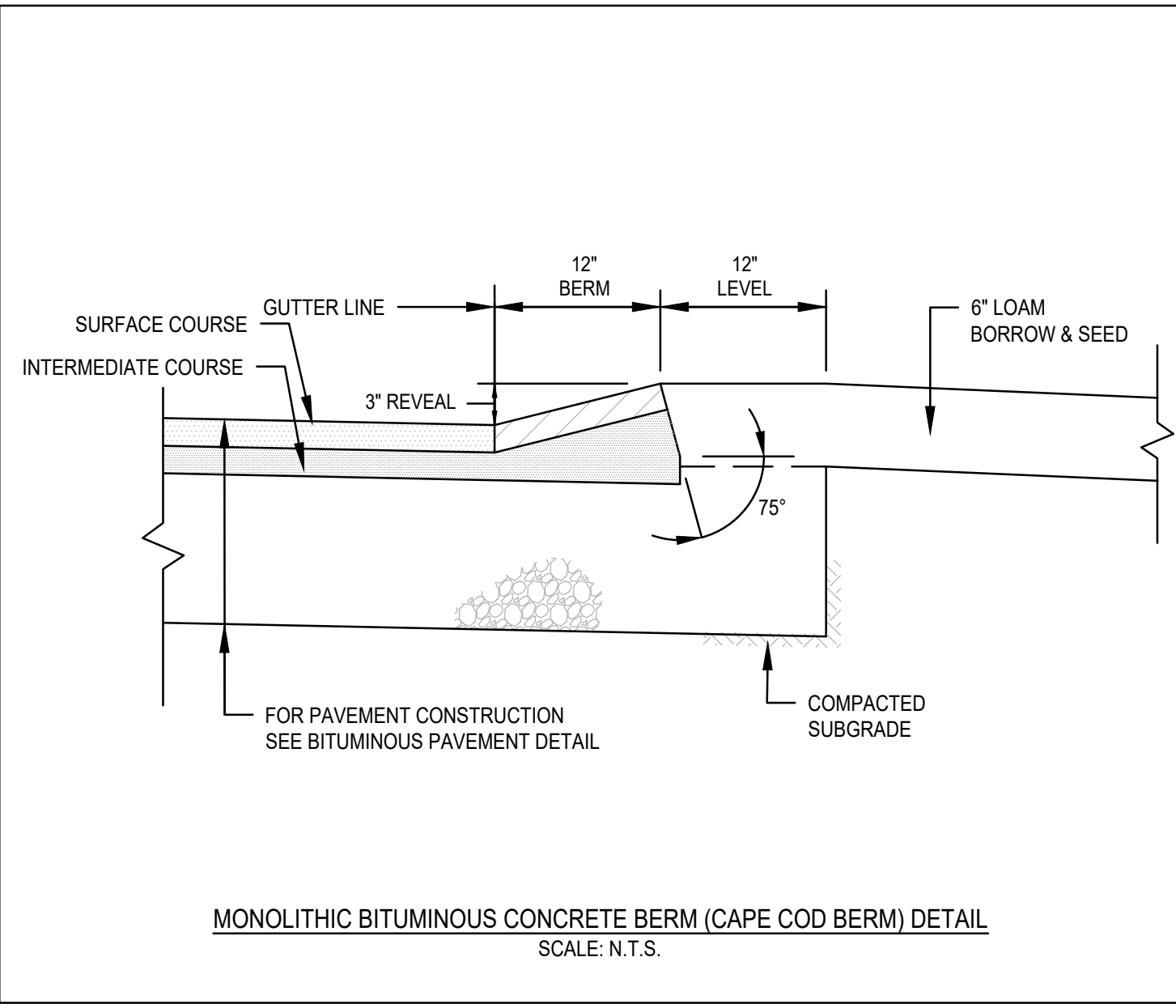
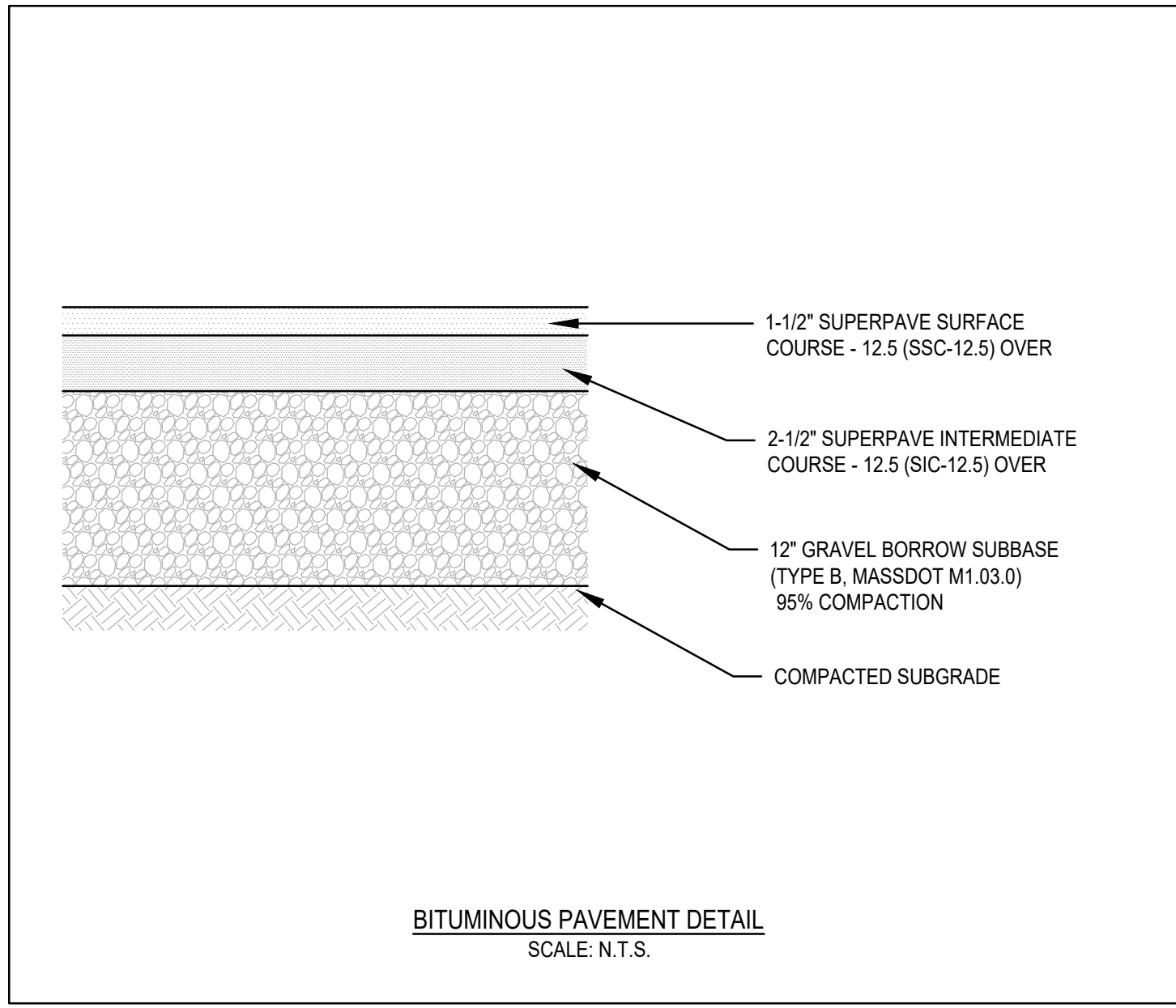
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DESIGNED BY: ESS  
CHECKED BY: BCM  
APPROVED BY: BCM  
DATE: MAY 10, 2023  
SCALE: 1" = 20'  
PROJECT NO.: 223-123  
DWG. TITLE:

**TRUCK TURNING PLAN**

DWG. NO.: **T-1**








- NOTES:
1. CURBS AND WALKS ALONG ACCESSIBLE ROUTES SHALL MEET OR EXCEED THE APPLICABLE REGULATIONS OF THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD, FAIR HOUSING ACT AND ADA.
  2. THE MAXIMUM ALLOWABLE SIDEWALK AND CURB RAMP CROSS SLOPES SHALL BE 2%.
  3. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE EXCLUDING CURB RAMPS SHALL BE 5%.
  4. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE CURB RAMPS SHALL BE 7.5%..
  5. MAINTAIN A MINIMUM OF 3 FEET CLEAR AT ANY PERMANENT OBSTACLE IN ACCESSIBLE ROUTE (I.E., HYDRANTS, UTILITY POLES, TREE WELLS, SIGNS ETC.).
  6. GRADE BASE OF RAMP TO PREVENT PONDING..
  7. RAMP CONSTRUCTION SHALL CONFORM TO TYPICAL SIDEWALK SECTION.
  8. WHERE ACCESSIBLE ROUTES ARE LESS THAN 5' IN WIDTH (EXCLUDING CURBING) A 5'X5' PASSING AREA SHALL BE PROVIDED AT INTERVALS NOT TO EXCEED 200 FEET.
  9. ALL CURBING AT RAMPS SHALL BE VERTICAL CURBING SET FLUSH WHERE IT ABUTS ROADWAY.
  10. ALL RAMPS SHALL BE CEMENT CONCRETE WITH ROUGHENED NON-SLIP SURFACE.
  11. ALL DETECTABLE WARNING PANELS SHALL BE CAST IN PLACE WITH A STAINLESS STEEL ANCHORING SYSTEM. MINIMUM DIMENSIONS SHALL BE 2-FEET WIDE BY 5-FEET LONG, OR AS APPROVED.
  12. THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE. DETECTABLE WARNINGS USED ON INTERIOR SURFACES SHALL DIFFER FROM ADJOINING WALKING SURFACES IN RESILIENCY OR SOUND-ON-CANE-CONTACT.
  13. CEMENT CONCRETE TO BE 4000 PSI, 3/4\", 610, TYPE II.

REV	DATE	DESCRIPTION	BY	APP

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**SITE DEVELOPMENT PLAN**  
RICKETTS POND BUSINESS PARK  
LOT 5 (APN 32-1-5)  
OFF SPRING STREET  
CARVER, MASSACHUSETTS

PROFESSIONAL ENGINEER:  


APPLICANT:  
**BEANTOWN HOME SERVICES, INC.**  
9 ALDRIN ROAD  
PLYMOUTH, MA 02360

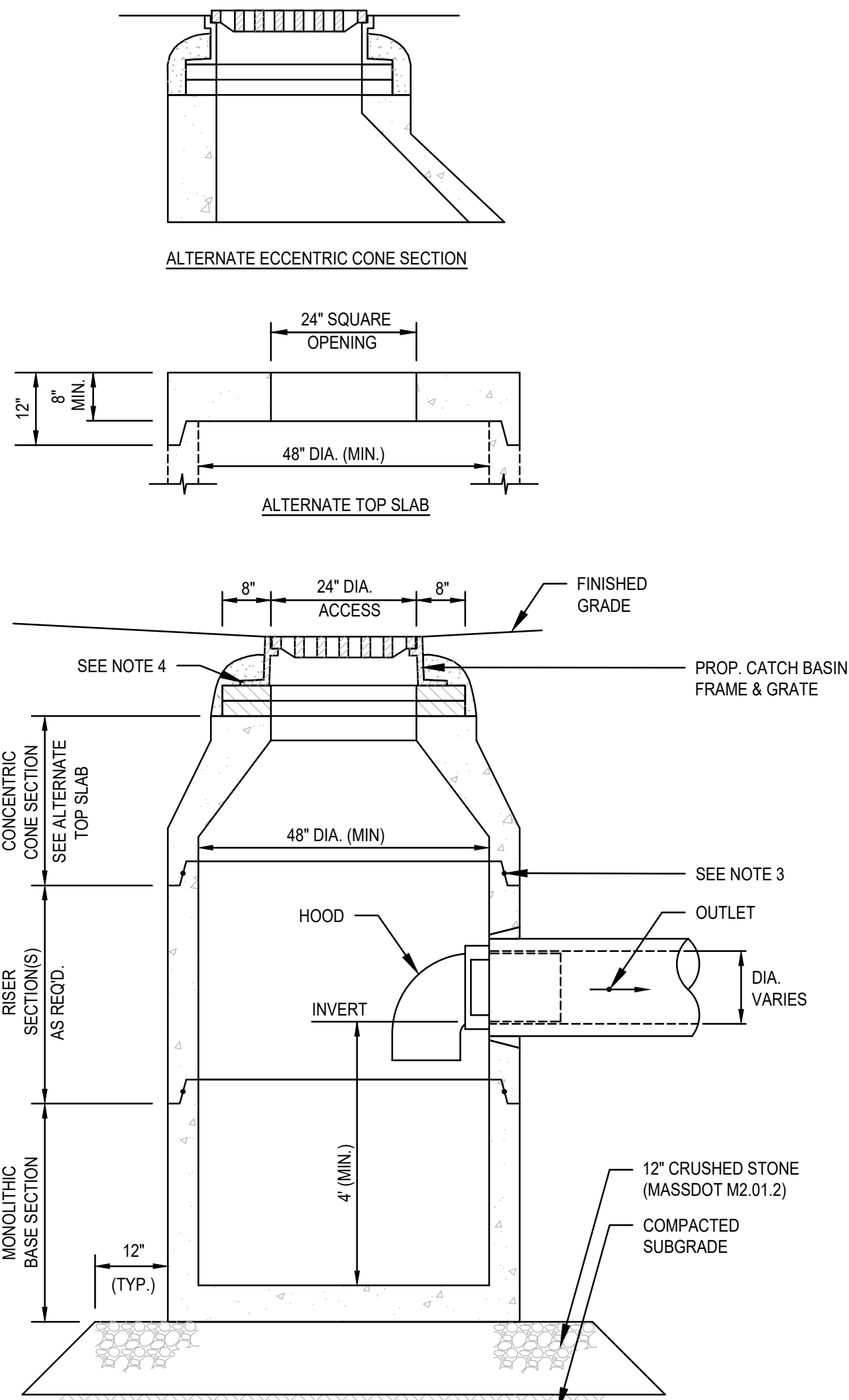
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DESIGNED BY: ESS  
CHECKED BY: BCM  
APPROVED BY: BCM  
DATE: MAY 10, 2023  
SCALE: AS NOTED  
PROJECT NO.: 223-123  
DWG. TITLE:  
**CONSTRUCTION DETAILS**  
DWG. NO.: **D-1**

PERMIT PLAN SET

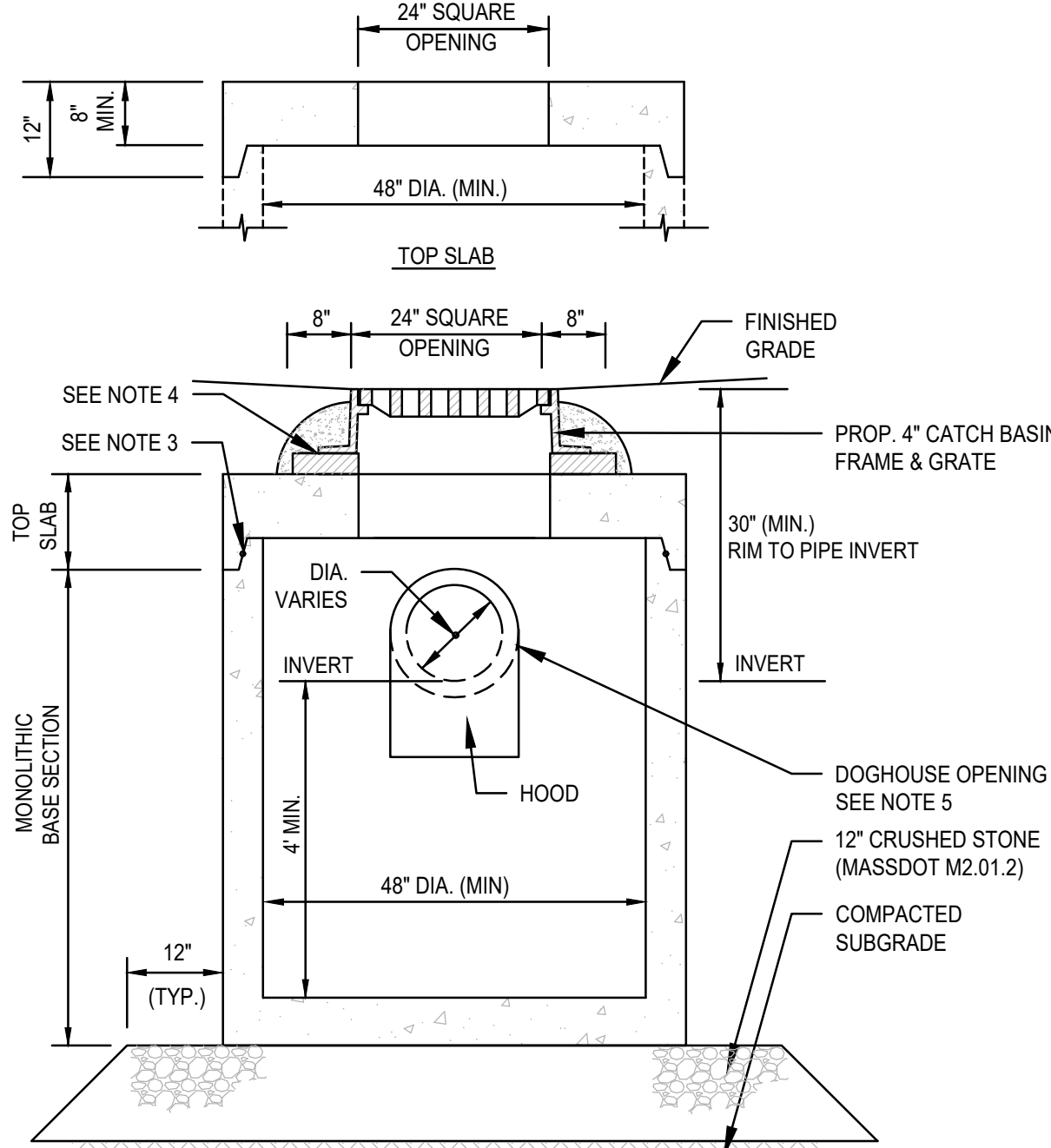
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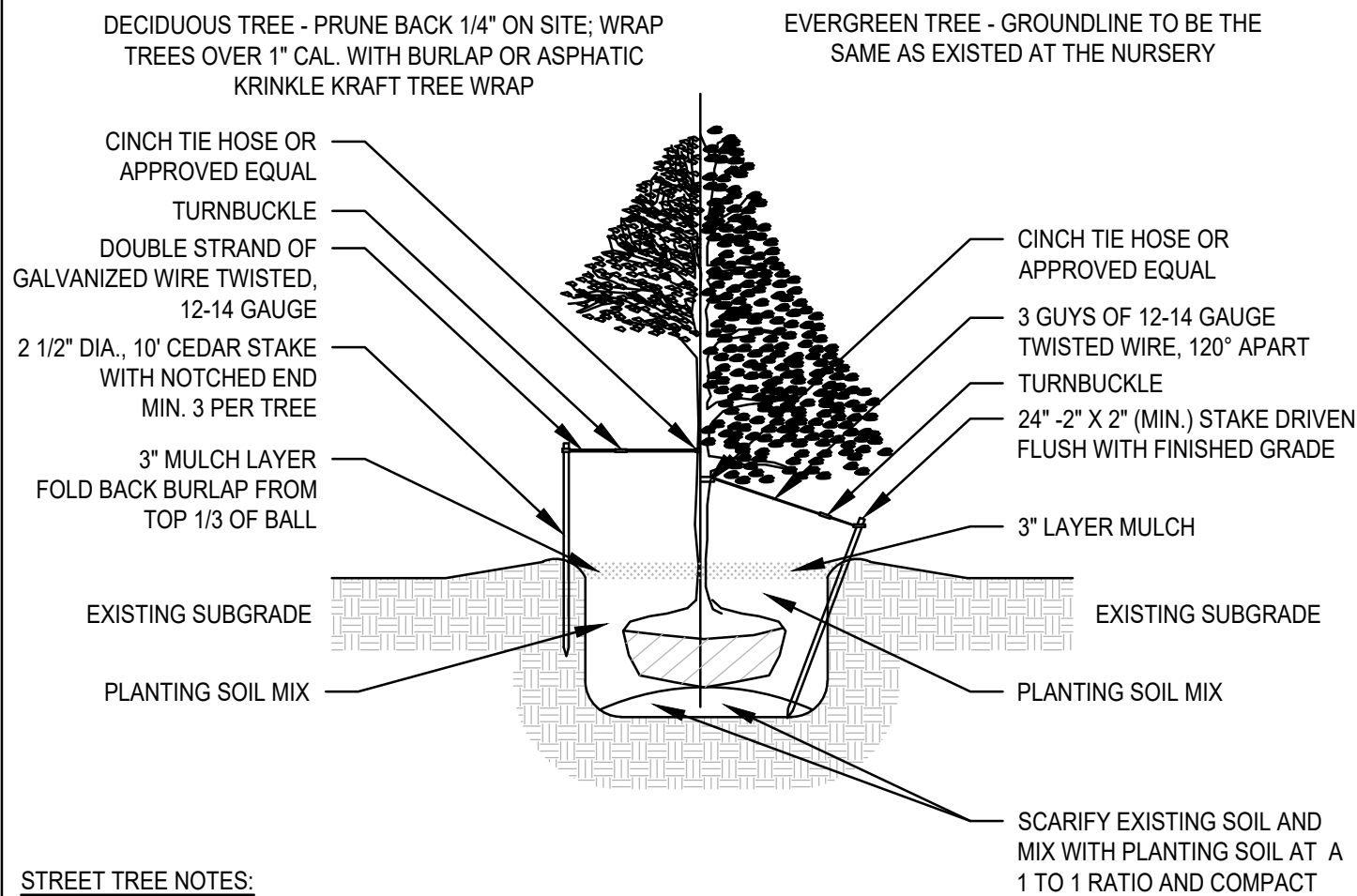
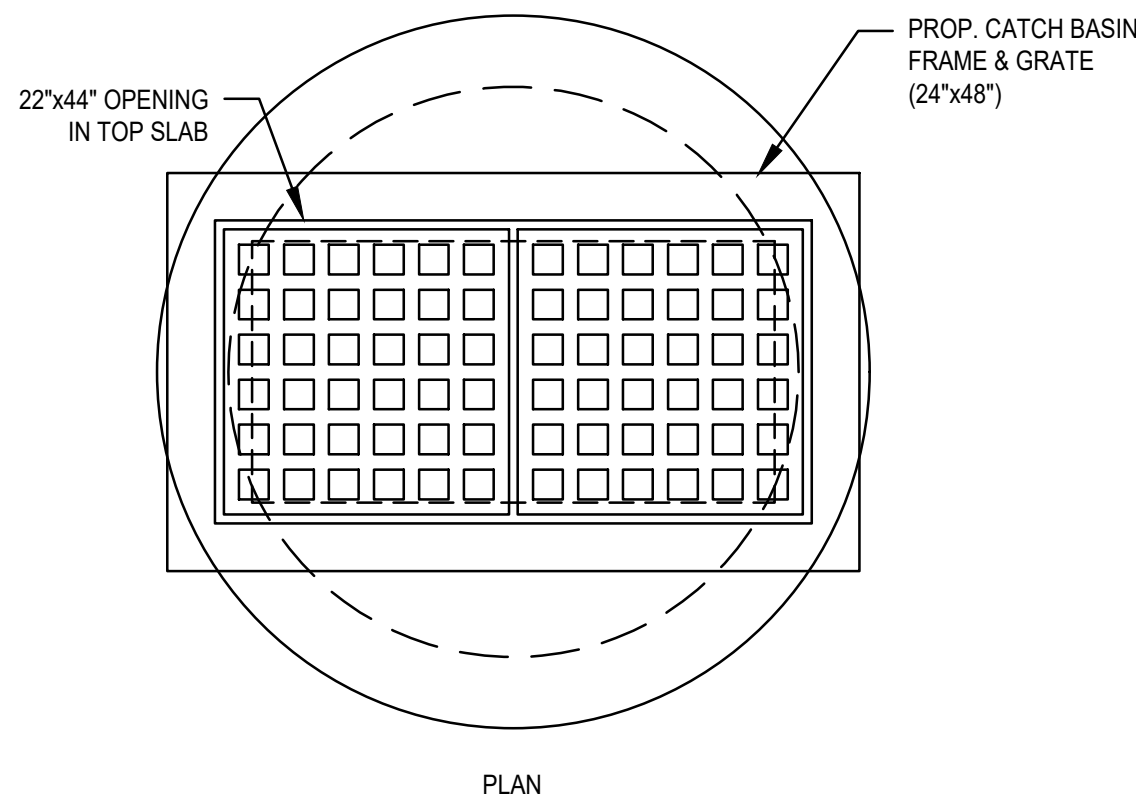
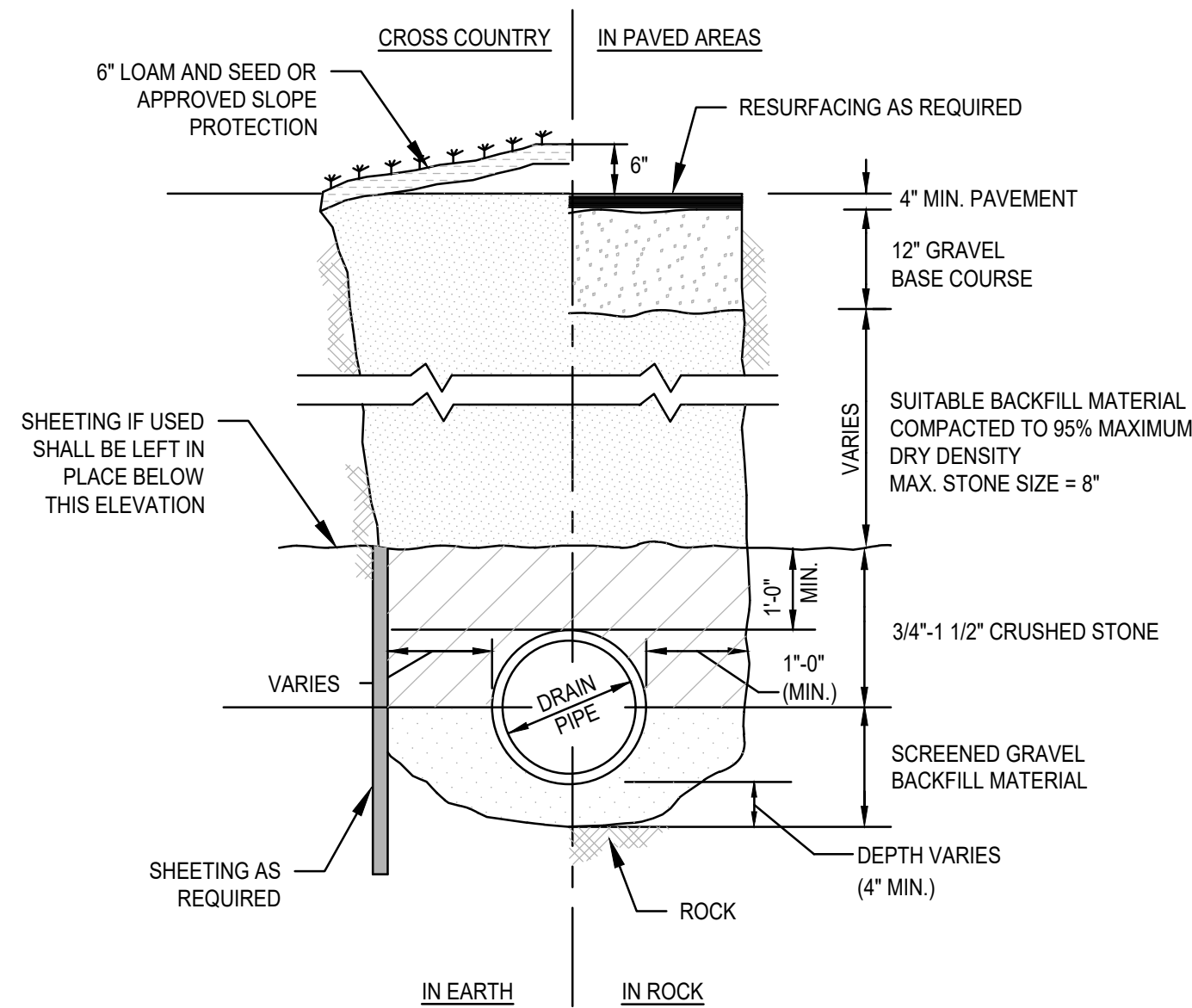




- NOTES:**
- ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING.
  - PROVIDE "V" KNOCKOUTS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
  - MORTAR ALL PIPE CONNECTIONS. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
  - CATCH BASIN FRAME AND GRATE SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM).

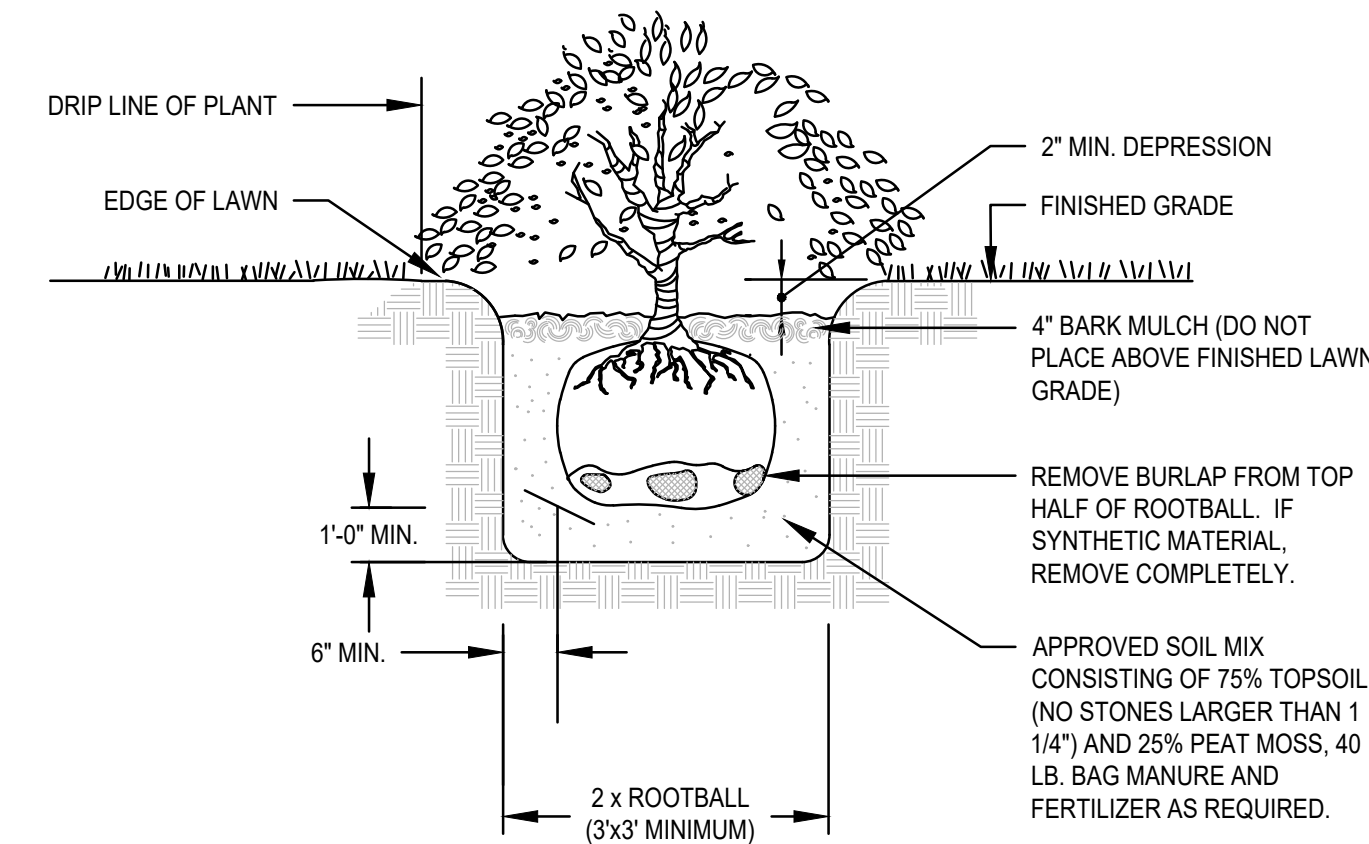


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  - CATCH BASIN FRAME AND GRATE SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM).
  - PROVIDE DOG HOUSE OPENING FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. TOP SLAB SHOULD NOT REST DIRECTLY ON PIPE. MORTAR ALL PIPE CONNECTIONS.



**STREET TREE NOTES:**

- NEW TREES SHALL BE NURSERY GROWN AND COMPLY WITH THE ASSOCIATION OF AMERICAN NURSERIES SPECIFICATIONS AND BE AT LEAST 3 INCHES IN CALIPER.
- THE PRESERVATION OF EXISTING TREES AND THE VARIETIES OF NEW TREES FOR PLANTING SHALL BE SUBJECT TO THE APPROVAL OF THE PLANNING BOARD WHICH SHALL BE GUIDED BY THE RECOMMENDATION OF THE TOWNS DIRECTOR OF LANDS AND NATURAL RESOURCES AS TO THE NUMBER, LOCATION, CONDITION AND SPECIES OF SUCH TREES AND UNDER APPENDIX III 0 DETAIL B.



**SEEDING SPECIFICATIONS**

**SEEDING RECOMMENDATIONS**

**1. SEEDBED PREPARATION**

- SURFACE AND SEEPAGE WATER SHOULD BE DRAINED OR DIVERTED FROM THE SITE TO PREVENT DROWNING OR WINTER KILLING OF THE PLANTS.
- STONES LARGER THAN FOUR INCHES AND TRASH SHOULD BE REMOVED BECAUSE THEY INTERFERE WITH SEEDING AND FUTURE MAINTENANCE OF THE AREA. WHERE FEASIBLE, THE SOIL SHOULD BE TILLED TO A DEPTH OF ABOUT FOUR INCHES TO PREPARE A SEEDBED AND MIX FERTILIZER AND LIME INTO THE SOIL. THE SEEDBED SHOULD BE LEFT IN A REASONABLY FIRM AND SMOOTH CONDITION. THE LAST TILLAGE OPERATION SHOULD BE PERFORMED ACROSS THE SLOPE WHEREVER PRACTICAL.

**2. ESTABLISHING A STAND**

- 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 BASED ON EVALUATION OF SOIL TESTS. WHEN A SOIL TEST IS NOT AVAILABLE, THE FOLLOWING MINIMUM AMOUNTS SHOULD BE APPLIED:

AGRICULTURAL LIMESTONE:	2 TONS PER ACRE OR 100 LBS. PER 1000 SQ. FT.
NITROGEN (N):	50 LBS. PER ACRE OR 1.1 LBS. PER 1000 SQ. FT.
PHOSPHATE (P O):	100 LBS. PER ACRE OR 2.2 LBS. PER 1000 SQ. FT.
POTASH (K O):	100 LBS. PER ACRE OR 2.2 LBS. PER 1000 SQ. FT.

(NOTE: THIS IS THE EQUIVALENT OF 500 LBS. PER ACRE OF 10-20-20 FERTILIZER OR 1,000 LBS. PER ACRE OF 5-10-10 FERTILIZER)

- SEED SHOULD BE SPREAD UNIFORMLY BY THE METHOD MOST APPROPRIATE FOR THE SITE. METHODS INCLUDE BROADCASTING, DRILLING, AND HYDROSEEDING. WHERE BROADCASTING IS USED, COVER SEED WITH 0.25 INCH OF SOIL OR LESS, BY CULTIVATING OR RAKING.
- REFER TO SEEDING RATES AND SEEDING GUIDES FOR APPROPRIATE SEED MIXTURES AND RATES OF SEEDING.
- WHEN SEEDED AREAS ARE MULCHED, PLANTINGS MAY BE MADE FROM EARLY SPRING TO EARLY OCTOBER. WHEN SEEDED AREAS ARE NOT MULCHED, PLANTINGS SHOULD BE MADE FROM EARLY SPRING TO MAY 20 OR FROM AUGUST 10 TO SEPTEMBER 1.

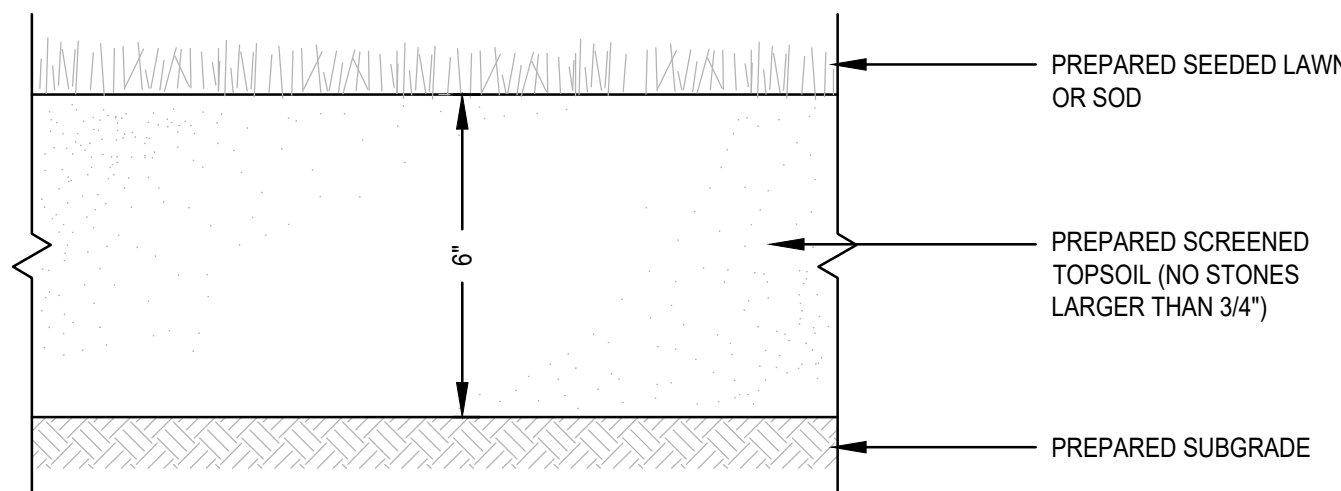
**3. MULCH**

- HAY, STRAW, OR OTHER MULCH, WHEN NEEDED, SHOULD BE APPLIED IMMEDIATELY AFTER SEEDING.
- MULCH WILL BE HELD IN PLACE USING TECHNIQUES AS SPECIFIED IN THE "BEST MANAGEMENT PRACTICES OPERATION AND MAINTENANCE PLAN"
- MAINTENANCE TO ESTABLISH A STAND**
  - PLANTED AREAS SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRAZING, TRAFFIC, AND DENSE WEED GROWTH.
  - 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.
  - IN WATERWAYS, CHANNELS, OR SWALES WHERE UNIFORM FLOW CONDITIONS ARE ANTICIPATED OCCASIONAL MOWING MAY BE NECESSARY TO CONTROL GROWTH OF WOODY VEGETATION.

**NOTES:**

- TOP OF LOAM (TOPSOIL) IS FINISHED GRADE.
- 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:

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



**SEEDING RATES**

	POUND / ACRE	POUNDS / 1,000 S.F.
A. TALL FESCUE	20	0.45
CREeping RED FESCUE	20	0.45
REDTOP	2	0.05
TOTAL	42	0.95
B. TALL FESCUE	15	0.35
CREeping RED FESCUE	10	0.25
BIRDSFOOT TREFOIL	15	0.35
TOTAL	40	0.95
C. TALL FESCUE	20	0.45
CREeping RED FESCUE	20	0.45
BIRDSFOOT TREFOIL	8	0.20
TOTAL	48	1.10
D. BIRDSFOOT TREFOIL	10	0.25
REDTOP	5	0.10
TOTAL	15	0.35
E. TALL FESCUE	20	0.45
FLATPEA	30	0.75
TOTAL	50	1.20
F. CREeping RED FESCUE 1/	85	2.00
KENTUCKY BLUEGRASS 1/	85	2.00
TOTAL	170	4.00
G. TALL FESCUE 1/	150	3.60

**TEMPORARY SEEDING RATES**

H. WINTER RYE	112	2.50 (BEST FOR FALL SEEDING, AUG 15 TO SEPT. 5)
OATS	80	2.00 (BEST FOR SPRING SEEDING, BEFORE MAY 15)
ANNUAL RYEGRASS	40	1.00 (BEST FOR FALL SEEDING, AUG 15 TO SEPT. 15)
TOTAL	232	5.50 (MAY BE USED EARLY SPRING ALSO)

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

**SEEDING GUIDE**

USE	SEEDING MIXTURE 1/
STEEP CUTS AND FILLS, BORROW AND DISPOSAL AREAS	E
WATERWAYS, EMERGENCY SPILLWAYS, AND OTHER CHANNELS WITH FLOWING WATER	D
LAWN AREAS	F

BY APP

DESCRIPTION

DATE

REV

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CARVER, MASSACHUSETTS

**PROFESSIONAL ENGINEER:**



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9 ALDRIN ROAD  
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DESIGNED BY:	ESS
CHECKED BY:	BCM
APPROVED BY:	BCM
DATE:	MAY 10, 2023
SCALE:	AS NOTED
PROJECT NO.:	223-123
DWG. TITLE:	

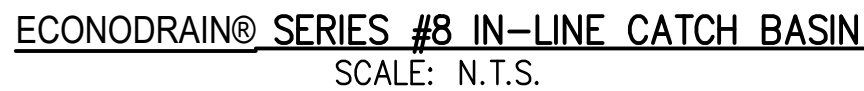
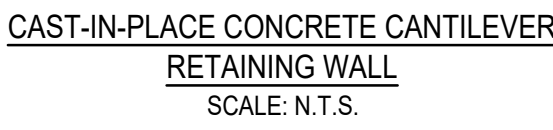
**CONSTRUCTION DETAILS**

DWG. NO:

**D-2**

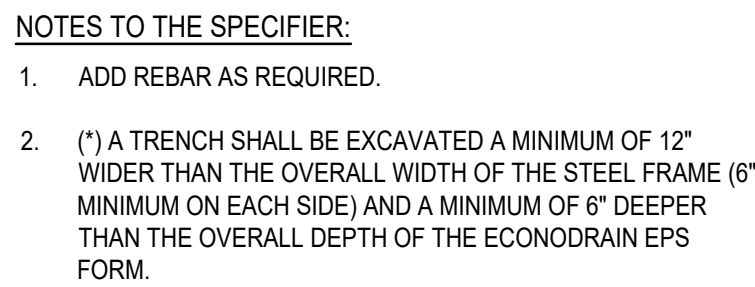
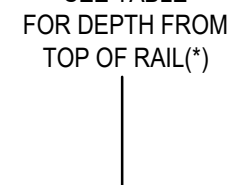


1. IF SHEETING IS USED, IT SHALL BE CUT OFF NO MORE THAN 12" ABOVE TOP OF PIPE.
2. ALL PIPES SHALL BE PRESSURE TESTED AT 200 PSI WORKING PRESSURE FOR A MINIMUM DURATION OF TWO HOUR.
3. WATER SYSTEM IS TO BE DISINFECTED TO 50 P.P.M. AVAILABLE CHLORINE AND AFTER 24 HOURS TO 25 P.P.M. OR AS REQUIRED BY CARVER WATER SUPERINTENDENT/ENGINEER.
4. WATER PIPE IS TO BE CEMENT LINED DUCTILE IRON "TYTON" OR EQUAL TYPE JOIN, CONFORMING TO A.N.S.I./A.W.A. C150/A21.50, CLASS 52, AS APPROVED BY THE TOWN'S WATER SUPERINTENDENT/ENGINEER.
5. 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.
8. RESULTS FROM PRESSURE TESTING AND DISINFECTION SHALL BE FURNISHED TO THE CARVER WATER DEPT. AND DIRECTOR OF PUBLIC WORKS FOR APPROVAL PRIOR TO WATER BEING TURNED ON.
9. ALL WORK SHALL BE IN CONFORMANCE WITH CARVER WATER DEPT. 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 CARVER WATER DEPT. APPROVAL.



**NOTES:**

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND INSTALLATION INSTRUCTIONS.
2. A TRENCH SHALL BE EXCAVATED A MINIMUM OF 12" WIDER THAN THE OVERALL WIDTH OF THE STEEL FRAME (6" MINIMUM ON EACH SIDE) AND A MINIMUM OF 6 INCHES DEEPER THAN THE OVERALL DEPTH OF THE ECONODRAIN EPS FORM.
3. DO NOT SCALE DRAWINGS.



ECONODRAIN® SERIES #8 TRENCH DRAIN  
SCALE: N.T.S.



**McKENZIE**  
ENGINEERING GROUP

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150 Longwater Drive, Suite 101  
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## PERMIT PLAN SET

DRAWN BY:	ESS
DESIGNED BY:	ESS
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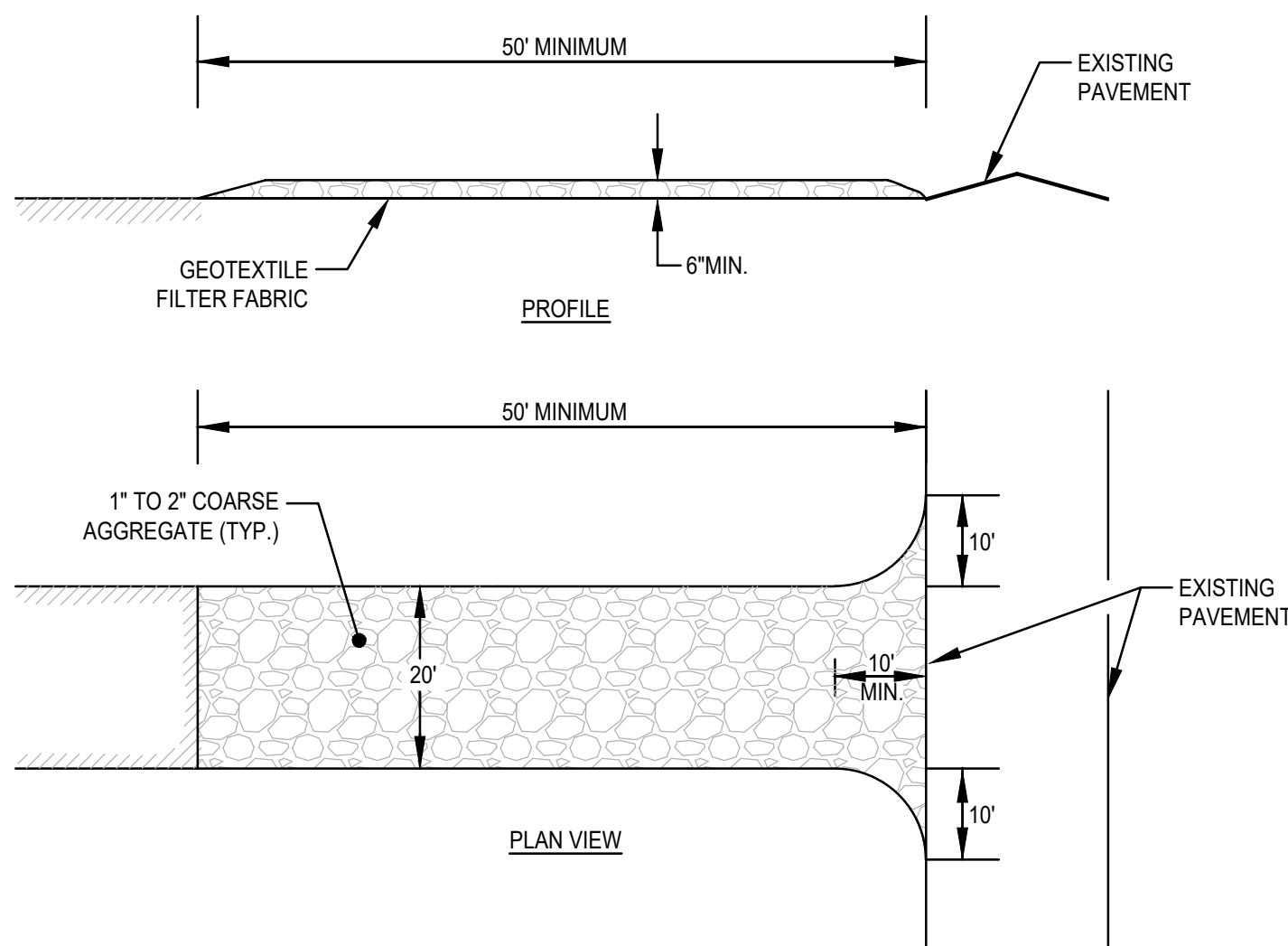
**D-3**



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.

1. THE CONTRACTOR SHALL COORDINATE A PRE-CONSTRUCTION MEETING PRIOR TO ANY CONSTRUCTION ACTIVITY.
2. STABILIZATION MEASURES FOR EROSION AND SEDIMENT CONTROL SHALL BE INSTALLED PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. REFER TO "EROSION AND SEDIMENTATION CONTROL" SECTION OF THIS PLAN & PLACE SILTATION FENCE ON THE SITE PLANS.
3. CLEAR AND GRUB UP AS REQUIRED FOR THE CONSTRUCTION OF THE ROADWAY, PARKING AREAS AND RELATED INFRASTRUCTURE.
4. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE.
5. EXCAVATE TOPSOIL AND SUBSOIL FROM CUT AND FILL AREAS AND STOCKPILE ON SITE IN LOCATIONS SHOWN ON THE PLAN. CONSTRUCTION SHOULD BE GIVEN TO THE INSTALLED SLOPES ON THE DOWNHILL SIDE OF DISTURBED AREAS, WHERE POSSIBLE, TO ACT AS TEMPORARY DIVERSIONS.
6. CONSTRUCT CUT AND FILL AREAS, INSTALLING HAYBALE CHECK DAMS AT TOPS OF ALL 3:1 OR GREATER SLOPES, ADJACENT TO EROSION CONTROL MEASURES. SLOPES SHALL BE INSTALLED USING MAXIMUM COMPACTION LIFTS. PLACE ALL SLOPE PROTECTION WHERE INDICATED ON THE PLAN.
7. INSTALL CLOSED DRAINAGE SYSTEM AND OTHER UTILITIES. ALL CATCH BASINS SHALL BE COVERED WITH SILTTRAC OR EQUIVALENT LIFT PROTECTION.
8. GRADE ROADWAY AND PARKING AREAS TO SUBGRADE ELEVATION AND CONSTRUCT SIDE SLOPES. APPLY TEMPORARY STABILIZATION MEASURES WHERE WARRANTED. REFER TO EROSION AND SEDIMENTATION CONTROL SECTION OF THIS PLAN.
9. EXCAVATE AND CONSTRUCT BUILDING FOUNDATION.
10. PLACE GRAVEL SUBBASE.
11. PLACE THE BITUMINOUS CONCRETE BINDER COURSE ON ROADWAY AND PARKING AREAS. PLACE THE BITUMINOUS CONCRETE FINISH COURSE AND ASSOCIATED UTILITY CONNECTIONS.
12. STABILIZE SLOPES WITH VEGETATION.
13. GRADE SLOPES AND STABILIZE CUT AREAS AT TOP OF SLOPES. BLEND ALL SLOPES INTO EXISTING TOPOGRAPHY AND LOAM AND SEED ALL DISTURBED AREAS. SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITH VEGETATION.
14. PLACE THE FINAL GRADING COURSE OF PAVEMENT.
15. COMPLETE FINAL WEARING OF SHOULDERS AND PLACE PAVEMENT IN MISCELLANEOUS AREAS.
16. REMOVE TEMPORARY EROSION CONTROL DEVICES ONCE ADEQUATE GROWTH IS ESTABLISHED. VEGETATION GROWTH IS DEFINED AS VEGETATION COVERING 75% OR MORE OF THE GROUND SURFACE.

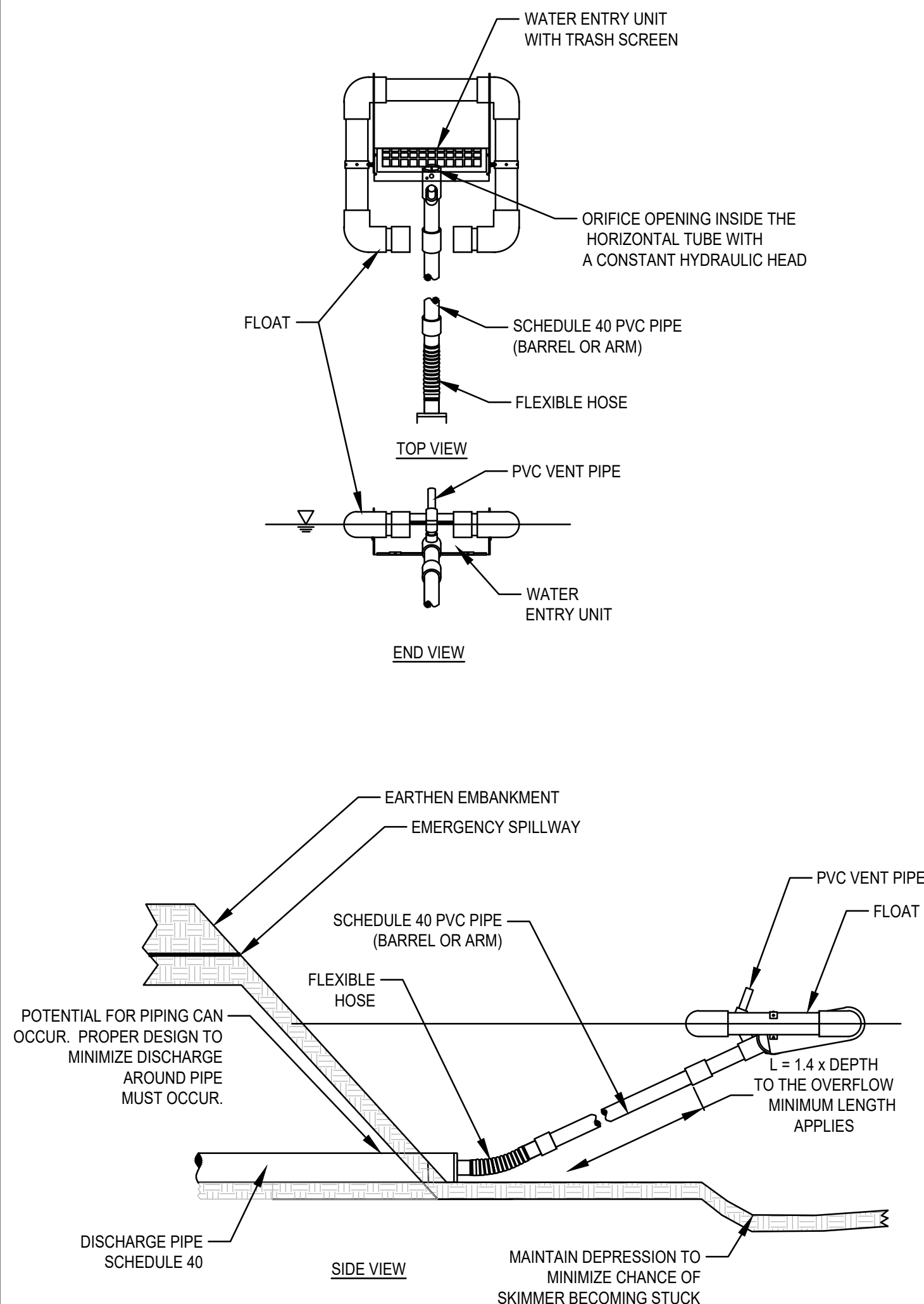
1. STRUCTURAL PRACTICES UTILIZED FOR THE PROJECT WILL INCLUDE SILT SOAK BARRIER CONTROLS, STABILIZED CONSTRUCTION ENTRANCE, TEMPORARY DIVERSION SWALES WITH STONE CHECK DAMS, SEDIMENT BASINS, AND INLET PROTECTION
2. EROSION CONTROL PRACTICES UTILIZED FOR THE PROJECT WILL INCLUDE TEMPORARY SEEDING, GEOTEXTILES (JUTE MESH), MULCHING, AND PERMANENT SEEDING.
3. 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 SHALL BE COVERED TO BEYOND THE WINTER MONTHS. ALL EXPOSED AREAS SHALL BE DATE SHALL BE MACHINE HAY MULCHED AND SEEDDED WITH WINTER RYE TO PREVENT EROSION.



1. STONE FOR A STABILIZATION CONSTRUCTION ENTRANCE SHALL BE 1 TO 2 INCH STONE, RECLAIMED STONE.
2. 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.
4. 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 GREATER.
5. GEOTEXTILE FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE.
6. 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.
7. 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.

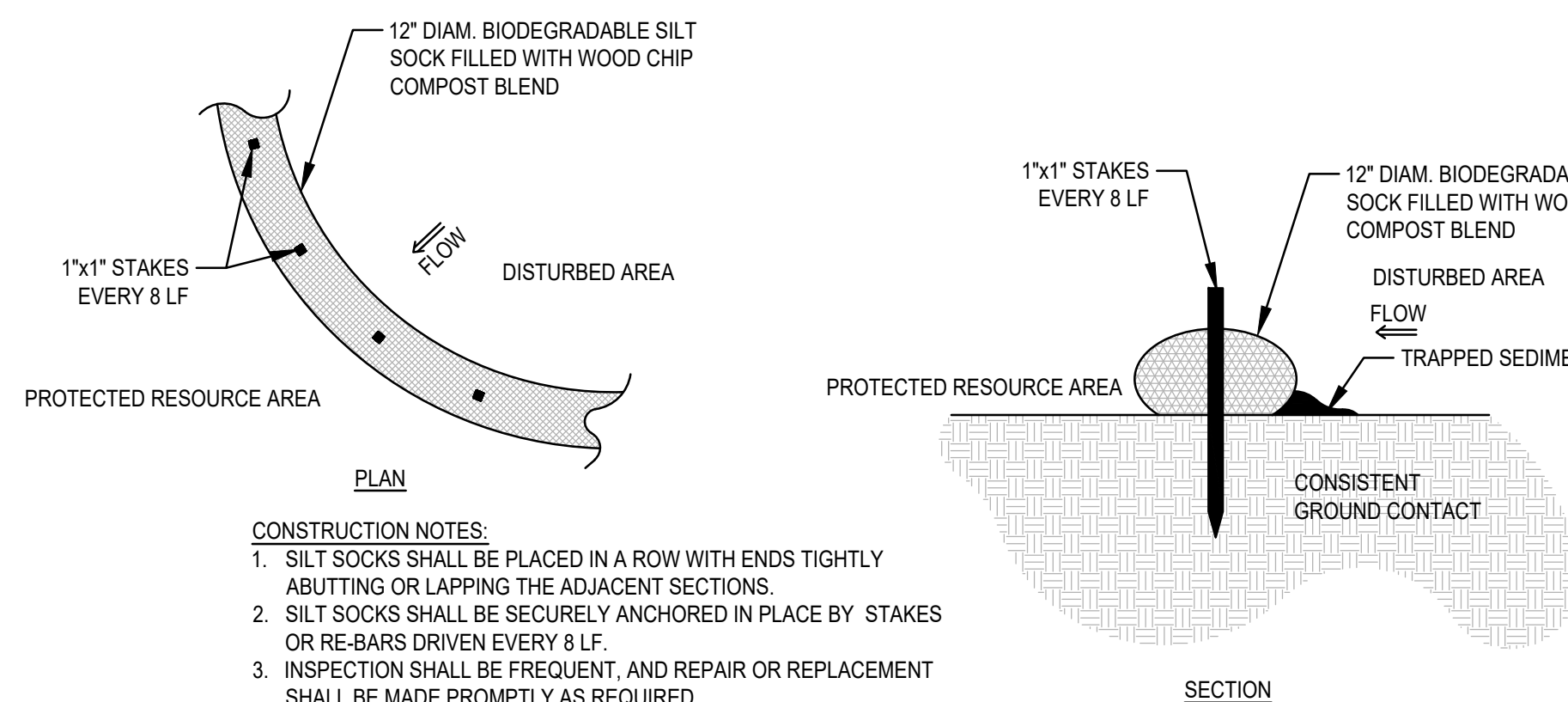
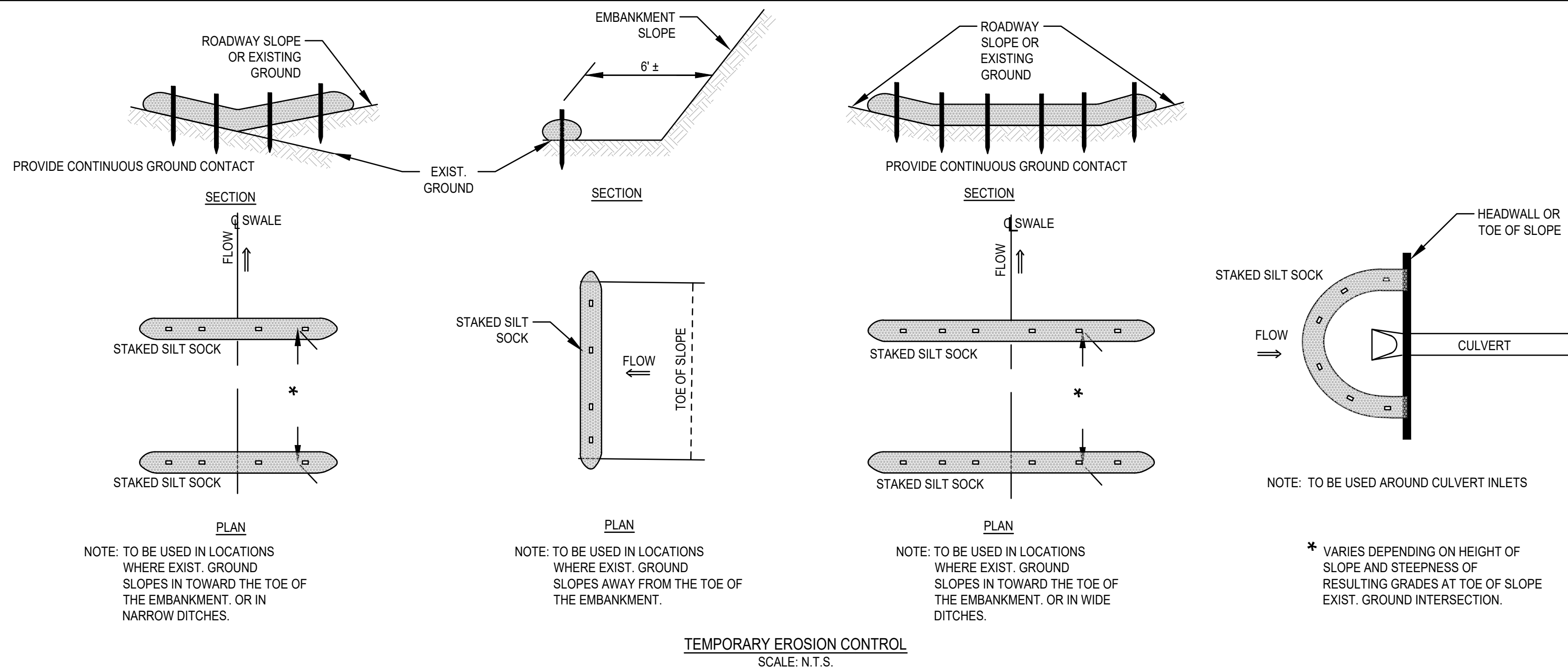
STABILIZED CONSTRUCTION ENTRANCE (SCE) DETAIL  
SCALE: N.T.S.

1. STRUCTURAL PRACTICES UTILIZED FOR THE PROJECT WILL INCLUDE SILT SOCK EROSION CONTROL, BARRIERS, STABILIZED CONSTRUCTION ENTRANCES, CONCRETE WASH STATIONS, STOCKPILE AREAS, AND INLET PROTECTION.
2. TEMPORARY PRACTICES UTILIZED FOR THE PROJECT WILL INCLUDE TEMPORARY SEEDING, GEOTEXTILES (JUTE MESH), MULCHING, AND PERMANENT SEEDING.
3. OPERATOR PERSONNEL AND/OR ITS CONSULTANTS MUST INSPECT THE CONSTRUCTION AREA FOR EROSION AND SEDIMENT CONTROLS EVERY 24 HOURS AND WITHIN 24 HOURS OF A STORM EVENT 1/4 INCH OR GREATER. THE INSPECTOR SHOULD REVIEW THE EROSION AND SEDIMENT CONTROLS WITH RESPECT TO THE FOLLOWING:
  - A. WHETHER OR NOT THE BMP WAS INSTALLED/PERFORMED CORRECTLY
  - B. WHETHER OR NOT THERE HAS BEEN DAMAGE TO THE BMP SINCE IT WAS INSTALLED OR PERFORMED.
4. WHAT SHOULD BE DONE TO CORRECT ANY PROBLEMS WITH THE BMP.
5. THE INSPECTOR SHALL COMPLETE THE INSPECTION SCHEDULE AND EVALUATION CHECKLIST FOR FINDINGS AND SHOULD REQUEST THE REQUIRED MAINTENANCE OR REPAIR.
6. ALL SLOPES EXCEEDING 15% RESULTING FROM SITE GRADING SHALL BE BOTH PROTECTED FROM EROSION AND WEAR BY TOPSOIL AND PLANTED WITH A VEGETATED COVER SUFFICIENT TO PREVENT EROSION.



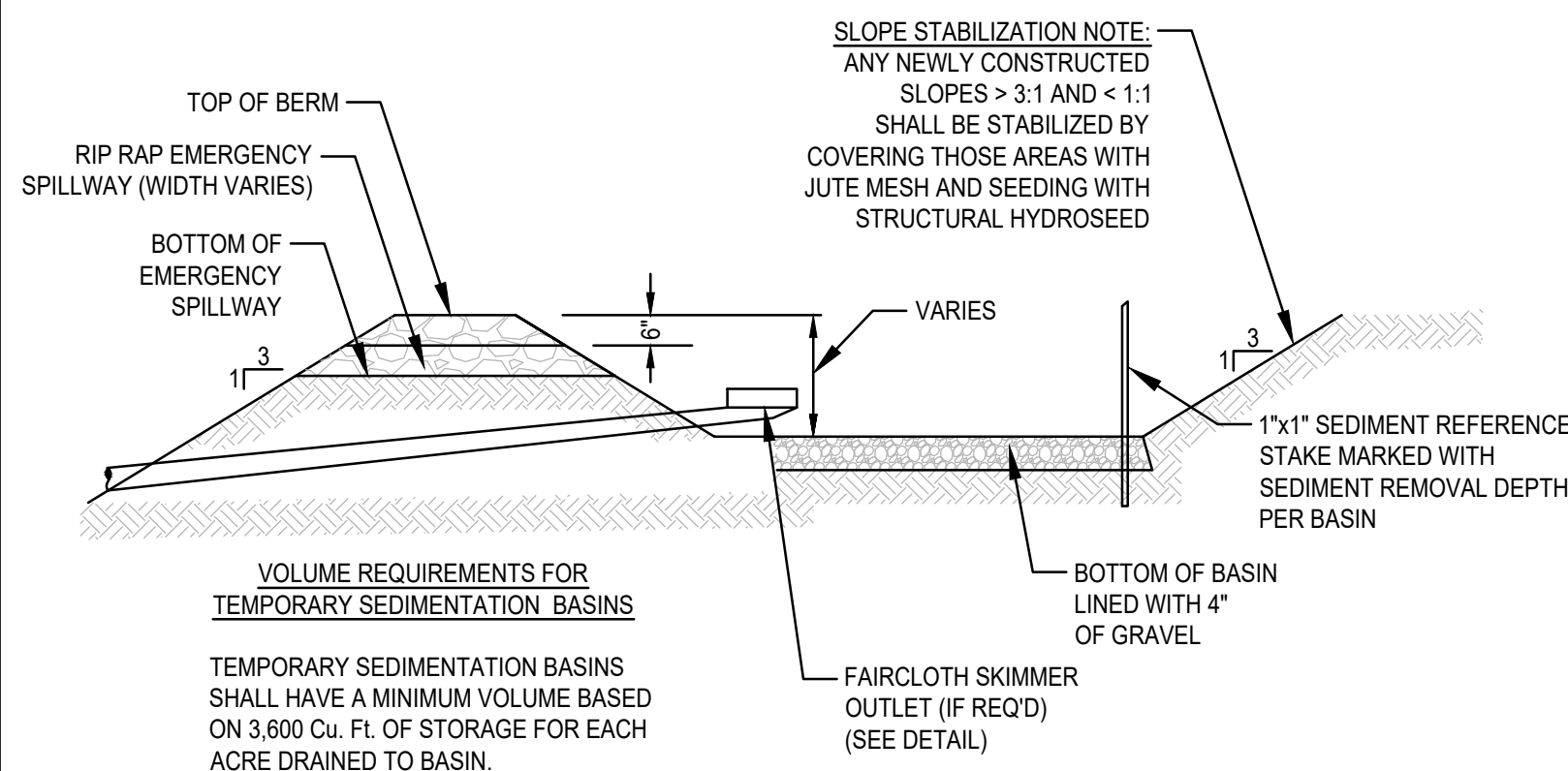
1. PROPER DESIGN MUST BE COMPLETED TO MINIMIZE PIPING AROUND DISCHARGE PIPE.
2. PROPER OFFICE OPENING MUST BE SELECTED TO ENSURE POND DRAINS IN CORRECT AMOUNT OF TIME. MODIFICATIONS MAY BE REQUIRED IF FIELD CONDITIONS WARRANT.
3. CHANGE
4. EMBANKMENT MUST BE COMPACTED TO DESIGN SPECIFICATIONS.
5. EMERGENCY SPILLWAY MUST BE CORRECTLY SIZED AND EROSION PROTECTION INSTALLED.
6. EROSION PROTECTION MUST BE INSTALLED ALONG THE EMBANKMENT AND AT THE DISCHARGE END OF THE PIPE.
7. INSPECT SYSTEM REGULARLY TO ENSURE IT IS FUNCTIONING IN A CORRECT MANNER.
8. NIGHT SIGNS OR MARKERS ARE AVAILABLE. REFER TO THE FLOW SHEET, CUT SHEET, AND INSTRUCTIONS ON WEB SITE FOR EACH SIZE.

FAIRCLOTH SKIMMER DISCHARGE SYSTEM W/EMBANKMENT  
SCALE: N.T.S.

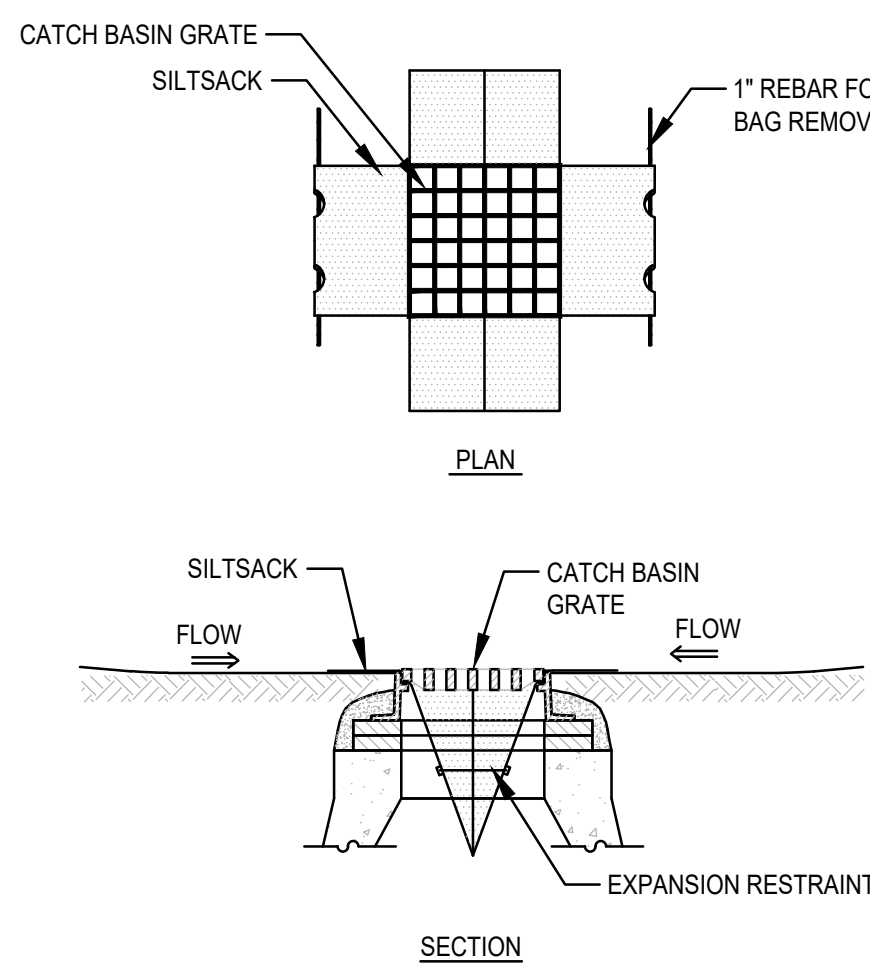


SILT SOCK EROSION CONTROL BARRIER DETAIL  
SCALE: N.T.S.

1. SILT SOCKS SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ADJUTING OR LAPPING THE ADJACENT SECTIONS.
2. SILT SOCKS SHALL BE SECURELY ANCHORED IN PLACE BY STAKES OR RE-BARS DRIVEN EVERY 8 LF.
3. INSPECTION SHALL BE FREQUENT, AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS REQUIRED.
4. SILT SOCKS SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS, SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.



TEMPORARY SEDIMENTATION BASIN  
SCALE: N.T.S.



SILTSACK SEDIMENT TRAP  
SCALE: N.T.S.

[illegible]

**SITE DEVELOPMENT PLAN**  
RICKETTS POND BUSINESS PARK  
LOT 5 (APN 32-1-5)  
OFF SPRING STREET  
CARVER, MASSACHUSETTS

DRAWN BY:	ESS
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DWG. TITLE:	

## EROSION AND SEDIMENTATION DETAILS

DWG. NO

**D-4**

PERMIT PLAN SET