

MAIN OFFICE:

49 Herring Pond Road
Buzzards Bay, MA 02532
TEL: (508) 833-0070
FAX: (508) 833-2282



NANTUCKET OFFICE:

19 Old South Road
Nantucket, MA 02554
TEL: (508) 325-0044
www.brackeneng.com

September 7, 2023

Bourne Planning Board
Bourne Town Hall
24 Perry Avenue
Buzzards Bay, MA 02532

**RE: Site Plan Review Request
3 Forest Park Drive, Map 39, Parcel 77.7**

Dear Planning Board Members:

On behalf of the applicant, C & L Shearer Holdings, LLC., Bracken Engineering, Inc. (BEI) cordially submits the following information in accordance with Sections 1230 & 4700 of the Town of Bourne Zoning By-Law for the construction of a proposed warehouse building at the above-mentioned site. The following information has been submitted for your use in reviewing the project:

- 1 original & 8 copies of a completed “Site Plan Review – Special Permit” Application;
- 9 copies of the “Project Narrative for 3 Forest Park Drive”
- 9 copies of the “*Proposed Site Development at 3 Forest Park Drive in Bourne, MA*”, prepared by BEI, dated 09/05/2023 (5 full-size, 4 reduced);
- 9 copies of the “Emergency Spill Clean Up Plan”;
- 9 copies of “Hazardous Waste Acknowledgement Addendum”;
- 9 copies of the Nitrogen Loading Calculations”;
- 1 copy of “Drainage Calculations” prepared by BEI, dated 09/05/2023
- 2 copies Original Certified Abutters List, and;
- A Filing Fee Check in amount of \$1,121.80 made payable to the Town of Bourne.

In closing and on behalf of the applicant; BEI thanks you in advance for your time and consideration on this matter. We look forward to reviewing the proposed project with you, in further detail, at your next available meeting. Should you have any questions or require any further information prior to then, please call our office or email me at zac@brackeneng.com.

Sincerely,

BRACKEN ENGINEERING, INC.

A handwritten signature in black ink, appearing to read 'Zachary L. Basinski', is written over a horizontal line.

Zachary L. Basinski, P.E.
Senior Project Manager

cc: Doug Shearer, C & L Shearer Holdings, LLC.

NO. SPR/SP
TOWN OF BOURNE
APPLICATION FOR SITE PLAN REVIEW & SPECIAL PERMIT

DATE: 9/7/2023
8 Copies Required

FEE: \$1,000 + \$50 + (10 @ \$7.18 = \$1,121.80
See Fee Schedule

PLEASE ANSWER ALL QUESTIONS COMPLETELY

I. APPLICANT INFORMATION

1. Owner of Property

Name: C & L Shearer Holdings, LLC
Address: P.O. Box 538, West Falmouth, MA 02574
Phone: 508-274-5611 Email: dhshearer@aol.com

2. Applicant Prospective buyer Tenant _____ Licensee _____

Name: Same
Mailing Address: Same
Phone: Same Email: Same

3. Engineer/Registered Land Surveyor Or Architect (If Applicable)

Name: ZACHARY L. BASINSKI, PE, CFM - BRACKEN ENGINEERING, INC.
Address: 49 HERRING POND ROAD, BUZZARDS BAY, MA 02532
Phone: 508-833-0070 EXT 303 Fax: 508-833-2282
Email: ZAC@BRACKENENG.COM

4. Attorney (If Applicable)

Name: N/A
Address: _____
Phone: _____ Fax: _____
Email: _____

II. SITE INFORMATION
(For assistance see Engineering Dept.)

Assessors Information

Site Address: 3 FOREST PARK DRIVE
Map: 39.0 Parcel: 77 Lot: 7

Zoning District: B4 Required Area: 40,000 SF Required Frontage: 150 LF
Actual Area: 40,000 SF Actual Frontage: 209.42 LF
Town Sewer (Yes Or No) NO

III. SPECIAL PERMIT INFORMATION

1. Application for Special Permit as authorized by Section 1230 of the Bourne Zoning Bylaw:

New development with gross floor area greater than 1,600 SF.

2. Generally state or attach information necessary so that compliance with Section 1330 of the Bourne Zoning Bylaws may be determined:

See attached narrative.

3. Are you applying for a Special Permit under any other sections of the Bourne Zoning Bylaw: (If yes, please state the section number and reason.)

Section 4722(a) - Removal of >70% natural existing groundcover

Section 4722(b) - Impervious surfaces > 40% lot coverage

See the plans and supporting information submitted with the application for more information.

4. Describe specifically the nature of your request for Special Permit ONLY:

Construction of a proposed warehouse building within the water resource district.

5. Generally state or attach information necessary so that compliance with the appropriate section of the Bourne Zoning Bylaw may be determined:

See attached narrative.

Attachments: Plot Plan: X Certified list of Abutters (2 copies): X
Ground floor and/or architectural elevations: X
Other: NITROGEN CALCULATIONS
 HYDROLOGY REPORT

- 2. Please provide a brief narrative description of your proposed project (# of buildings, size, use of property, type of business, etc.).

Construction of a 9,600 sf warehouse building with associated site appurtenances.

See attached narrative.

VI. REQUIRED SUBMITTALS
(Zoning Bylaws, Section 1238 B-2) - attached

Please submit nine (9) copies of the following materials to the Planning Board in the Town of Bourne.

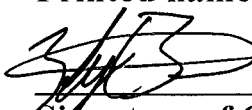
- a). A site plan showing existing and proposed topography and vegetation, drives, parking, park or recreation areas, use of structures and land, screening, water supply, sanitary sewerage, storm drainage, and outlining methods of preventing erosion, silting or other instability during and after construction. For non-residential uses, loading facilities shall be shown, accompanied by sufficient information to allow determination of their compliance with Section 3370. (4 large, 5 reduced)
- b). Ground floor plans and architectural elevations of all proposed buildings and signs, building plans to be prepared (except in the case of one and two-family dwellings) by a registered architect or engineer (P.E., Civil) if such buildings contain 35,000 cubic feet of space or more. (4 large, 5 reduced)
- c). Such additional materials as may reasonably be required by the Planning Board in order to make the determinations required at Section 1233.
- d). All plans must be submitted electronically as well.
- e). Revisions only require 4 paper copies and electronic file.

AFFIDAVIT

The below signed does assert that this Application for Site Plan Review and Special Permit is true and complete to the best of his knowledge and belief.

Doug Shearer of C & L Shearer Holdings, LLC.

Printed name of Applicant

 **Signature of Owner or ~~Authorized Representative~~**

BRACKEN ENGINEERING, INC.
 APPLICANT REPRESENTATIVE

9/7/23

Date

Zachary L. Basinski, PE, CFM
 Bracken Engineering, Inc.

For Planning Board Use Only

Planning Board Action

1. **Date Submitted to Planning Board:** _____
2. **65 Days:** _____
3. **Time Waiver Signed:** _____ **Date:** _____
4. **Fee: Waived?** _____ **Carried Over:** _____
5. **Hearing(s) Held: Date(s):** _____
6. **Decision Date:** _____
7. **Decision: Approved** _____ **Denied:** _____ **Withdrawn:** _____
8. **Conditions of Approval: (Attach as voted by Planning Board)**
9. **Date Decision filed with Town Clerk:** _____
10. **Date Decision forwarded to Building Inspector:** _____

7. **Vote:** _____ **in favor** _____ **opposed**

Reviewing Member: _____

Chairman, Planning Board

PROJECT NARRATIVE

3 Forest Park Drive Map 39, Parcel 77.7

On behalf of the applicant, C & L Shearer Holdings, LLC., Bracken Engineering, Inc. (BEI), submits the following application package under Sections 1233, 4722(a), & 4722(b) of the Bourne Zoning By-law (By-law) to construct a 9,600 s.f. warehouse building with associated bituminous asphalt parking lot and driveways, as well as all associated site features and appurtenances.

The parcel is a 40,000± SF., (0.92 acres) lot located in the B4 Zoning District and Water Resource Overlay Protection District. The site is abutted to the west by a commercial lot currently under construction. To the east lies a developed parcel on the corner of Forest Park Drive and Macarthur Boulevard containing an existing restaurant. Two developed commercial/warehouse buildings/lots abut to the south and Forest Park Drive to the north. Forest Park Drive is a private way off General Macarthur Boulevard (MA State Route 28). Forest Park Drive contains four parcels and terminates in a cul-de-sac.

The proposed project consists of an “L” shaped warehouse building with parking and loading facing Forest Park Drive. Accompanying the building is a proposed septic system designed for 440 gallons per day and onsite stormwater recharge systems designed to infiltrate all runoff from the parking areas and roof up to a 100-year storm event. The applicants propose to construct a total of 4 parking spaces, including 1 van-accessible handicap space with space and drainage design accounted for to construct 6 additional, future, spaces if necessary. A private pass-through between 5 Forest Park Drive and the subject locus is proposed. The project also includes all associated grading, utilities, landscaping and site appurtenances.

In accordance with section 1330 of the bylaw the proposed project has been designed to be in harmony with the surrounding commercial warehouse buildings in the area. The proposed project:

- Will not have a detrimental effect on pedestrian or vehicular flow in the area,
- Will be serviced by adequate utilities in the area and not effect public services;

- Will not impact the natural environment. The proposed stormwater management systems have been constructed in accordance Section 4721(b)(7) of the by-law.
- Will not impact nearby developed premises, as it has been designed in harmony with the surrounding building and uses;
- Will not affect the Water Resource District as the project has been design with low impact stormwater management systems and is designed in accordance with the section 4700 of the bylaw, and;
- Will have no impact on year-round housing in the town.

In accordance with section 4700 of the Bylaw, the applicant also requests the following two special permits:

Per Section 4722(a) - The removal of existing groundcover vegetation from more than 70% of the lot area:

- The applicant proposes the removal of 89.2% of the existing natural groundcover.
- The existing topography of the parcel requires clearing to the rear lot line to allow the necessary grading for parking and/or building construction.
- The relatively small size of the parcel for commercial development, especially within a Water Resource District and Zone II dictates a substantial amount of clearing for installation of on-site stormwater management.
- The loss of natural groundcover will be mediated with proposed landscaping and construction of the onsite stormwater management system.

Per Section 4722(b) - Covering with impervious surface more than 40% of the lot area within the Water Resource District.

- The applicant proposes an impervious coverage of 47.7%.
- The required turning radii of trucks with trailers as well as required parking, dictates pavement in excess of 40% of the lot area.
- Stormwater management has been designed to provide storage and infiltration of all runoff from the impervious areas up to a 100-yr storm.

EMERGENCY SPILL CLEANUP PLAN

- 1) The owner of the facility shall have a designated person with overall responsibility for spill response cleanup.
- 2) Key personnel shall be trained in the use of this plan and spill containment and cleanup methods. All employees should have basic knowledge of spill control procedures.
- 3) A summary of this plan shall be posted in a prominent location in the building. The Summary shall identify the spill cleanup coordinators, location of cleanup kit, and phone numbers of regulatory agencies and individuals to be contacted in the event of a spill.
- 4) In the event of a spill, the following shall be notified:
 - a. Bourne Fire Department 508-759-4412
 - b. Department of Environmental Protection 508-946-2700
 - c. Bourne Water District 508-563-2294
 - d. Bourne Board of Health 508-759-0600 Ext 1513
- 5) The cleanup of spills shall begin immediately.
- 6) An emergency spill containment and cleanup kit shall be stored and maintained on site. The kit shall be stored in a manner that allows rapid access and use by employees. A Spill Safety Supply-Oilup Sorbent® 31 Gallon Spill Response Kit or equal and Two Spillmagnet™ 24" x 24" drain covers shall be stored with the emergency spill response and containment kit. Kits and refills are available from Lab Safety Supply (800-356-0783).
- 7) The emergency spill cleanup plan shall be updated regularly.

HAZARDOUS WASTE ACKNOWLEDGEMENT ADDENDUM
3 Forest Park Drive
Map 39 Parcel 77.7

THE FOLLOWING USES ARE PROHIBITED:

- 1) Storage of sludge and septage.
- 2) Storage of commercial fertilizers and soil conditioners.
- 3) Storage of animal manure.
- 4) Storage of liquid hazardous materials as defined in MGL C. 21E unless in a free standing container within a building or above ground with adequate secondary containment.
- 5) Storage of liquid petroleum products, except:
 - a) Normal household use, outdoor maintenance, and heating of a structure.
 - b) Emergency generators required by statute, rule, or regulation.
- 6) Motor vehicle service, washing, or repair.
- 7) Storage of more than 100 tons of coal.
- 8) Storage of ice removal chemicals.

DISPOSAL OF ANY HAZARDOUS WASTE INTO THE FACILITY'S SEPTIC SYSTEM OR CATCH BASINS IS STRICTLY PROHIBITED. PERSONS FOUND DISPOSING OF ANY HAZARDOUS WASTE MATERIALS INTO THE SEPTIC SYSTEM OR CATCH BASINS, RETENTION PONDS, AND GROUNDS IN GENERAL WILL BE PROSECUTED TO THE HIGHEST EXTENT ALLOWABLE BY LAW.

In addition, safely transport the following items to approved collections facilities:

Pesticides, Herbicides, Fungicides
Outdated Pesticides-DDT, Chlordane, Silvex, Pentawood Preservatives
Rodent Poisons, "No Pest" Strips, Flea Collars
Gasoline, Brake, and Power Steering Fluids
Radiator Flush, White Wall Cleaner, Bug and Tar Remover
Furniture Polish, Metal Polish, Moth Balls
Drain Cleaners, Spot Removers, Solvents
Cesspool Cleaners, Acids
Marine Paints, Auto Paints, Solvent-based Paints
Solvent-based Paint Thinners and Strippers
Solvent-based Wood Finishes, Varnish, Shellac, Wood Preservatives
Construction materials covered with lead paint

Section 4742 of the Bourne Zoning Bylaw requires the following, if hazardous materials will be used or stored on the premises or if potentially hazardous wastes will be generated:

- a) A complete list of all hazardous materials to be used or stored on the premises, accompanied by a description of the measures proposed to protect all storage container or facilities from vandalism, corrosion, and leakage, and to provide for control of spills.
- b) A description of potentially hazardous wastes to be generated, including storage and disposal methods.
- c) Evidence of qualified professional supervision of design and installation of any proposed storage facilities or containers for hazardous materials or waste.

Tenant (Signature)

Date

Nonresidential Nitrogen Loading Calculations

Job: 3 Forest Park Drive Location: Same
 Date: 8/8/2023 Town: Bourne

Warehouse:

Lot Size:	40,000 ft ²		
Impervious Surfaces:		Concentration	Recharge
Roof Area:	10,015 ft ²	0.75 ppm (mg/L)	95 %
Paved Area:	9,083 ft ²	3.00 ppm (mg/L)	95 %
Lawn Area:	11,809 ft ²	0.05 ppm (mg/L)	45 %
Natural Area:	9,093 ft ²	0.05 ppm (mg/L)	45 %
Fertilizer Lawn Area:	0.6 lbs/1000 ft ²		
Title V Area (Design):	440 GPD	40 ppm (mg/L)	95 %
Yearly Rainfall:	42 inches		
Natural Area Recharge:	1.6 ft/yr		

Wastewater

$$(\text{Area s.f.})(3.785 \text{ L/gal})(\text{Recharge \%}) \times (\text{concentration})$$

$$440 \text{ GPD} = 1,582.1 \text{ L/d} @ 40 \text{ mg/L} = 63,285.2 \text{ mg/d}$$

Impervious Surfaces

$$(\text{Area s.f.})(\text{Rainfall in/yr})(\text{Recharge \%})(1 \text{ ft}/12 \text{ in})(28.32 \text{ L}/\text{ft}^3)(1 \text{ yr}/365 \text{ d}) \times (\text{concentration})$$

$$10,015 \text{ s.f. (Roof)} = 2,583.7 \text{ L/d} @ 0.75 \text{ mg/L} = 1,937.8 \text{ mg/d}$$

$$9,083 \text{ s.f. (Paved)} = 2,343.3 \text{ L/d} @ 3.00 \text{ mg/L} = 7,029.8 \text{ mg/d}$$

Lawn

$$(\text{Area s.f.})(\text{Fertilizer lbs}/\text{ft}^2 \cdot \text{yr})(1 \text{ yr}/365 \text{ d})(\text{Recharge \%})$$

$$11,809 \text{ s.f.} = 3,965.9 \text{ mg/d}$$

Natural

$$(\text{Natural Area s.f.})(\text{Natural Area Recharge ft}/\text{yr})(28.32 \text{ L}/\text{ft}^3)(1 \text{ yr}/365 \text{ d})$$

$$9,093 \text{ s.f.} = 1,128.8 \text{ L/d}$$

Summary

76,219 mg	
7,638 L	10.0 ppm



TOWN OF BOURNE
Board of Assessors
24 Perry Avenue
Buzzards Bay, MA 02532
(508) 759-0600 Ext. 1510



Michael Leitzel, Chairperson
Ellen Doyle Sullivan, Clerk
Donna Barakauskas, Member

Rui Pereira, MAA
Director of Assessing

August 15, 2023

C and L Shearer Holdings LLC
c/o Bracken Engineering, Inc.
49 Herring Pond Rd.
Buzzards Bay, MA 02532

Reference: Abutters List for: Map 39 Parcel 77.7
Subject Property: 3 Forest Park Drive

Pursuant to the provisions of Massachusetts General Laws Chapter 40A, Section 11, as amended, this is to certify that the enclosed list of names and addresses constitutes all of the abutters to abutters within 300 feet of the property and abutters directly across the street on the most recent tax list of the Town of Bourne. The purpose of the abutters list is for an application of a Special Permit/Site Plan Review from the Planning Board.

Abutting properties are: Map 39 Parcels 77, 77.03, 77.04, 77.05, 77.06, 160, 161, 218, 231, 260 & 261.

Your filing fee of \$25.00 has been received by the Assessors Office.

Please be advised that this abutters list is only good for 30 days from the date on this letter. Expired abutters list can be recertified for an additional filing fee.

See enclosed Data Base Inquiry Forms for abutters mailing addresses.

Board of Assessors

List Enclosed

*Ellen Doyle Sullivan -
Donna Barakauskas
Michael Leitzel*

Extract:
Database:
Filter:

ABUTTERS LIST
LIVE
Key IN
8519,8522,8523,8524,8525,8612,8613,8670,8709,14815,14816

Report #24: Owner Listing Report
Fiscal Year 2024

Bourne MA

Sort:

Key	Parcel ID	Owner	Location	LC/Ci	Bk-Pa(Cert) /Dt	Mailing Street	Mailing City	ST	Zip Cd/County
8519	39.0-77-0	S & C REALTY INVESTMENT CO LLC	568 MACARTHUR BLVD	N	35728/240 3900 4/12/2023	169 MAIN ST	STONEHAM	MA	02180
8522	39.0-77-3	BOPHA ANGKOR'S STIR CRAZY, LLC	570 MACARTHUR BLVD	N	31179/172 3260 4/4/2018	570 MACARTHUR BOULEVARD	BOURNE	MA	02532
8523	39.0-77-4	JPF DEVELOPMENT LLC	4 FOREST PARK DR	N	34587/297 3160 10/20/2021	16 JENNA CIRCLE	NEEDHAM	MA	02492
8524	39.0-77-5	JPF DEVELOPMENT LLC	6 FOREST PARK DR	N	34587/297 3900 10/20/2021	16 JENNA CIRCLE	NEEDHAM	MA	02492
8525	39.0-77-6	SHEARER HOLDINGS LLC	5 FOREST PARK DR	N	33314/249 3160 9/30/2020	PO BOX 538	WEST FALMOUTH	MA	02574
8612	39.0-160-0	COMMERCE ROAD LLC	53 PORTSIDE DR	Y	231120 4010 9/21/2022	293R WASHINGTON ST	NORWELL	MA	02061
8613	39.0-161-0	ALDRICH ARTHUR G III & DAREN J MCDONALD TRS OF THE A&D RLTY T	584 MACARTHUR BLVD	Y	168022 3160 1/24/2003	584 MACARTHUR BLVD	BUZZARDS BAY	MA	02532
8670	39.0-218-0	TAYLOR HEIDI TRS OF QUARTER REALTY TRUST	580 MACARTHUR BLVD	Y	208778 0310 2/17/2016	580 MACARTHUR BLVD	BOURNE	MA	02532
8709	39.0-231-0	JONATHAN BOURNE LLC	51 JONATHAN BOURNE DR	N	35709/185 3160 3/31/2023	17 PORTSIDE DR	POCASSET	MA	02559
14815	39.0-260-0	MGL PROPERTIES LLC	53 JONATHAN BOURNE DR	Y	205020 3160 11/21/2014	53 JONATHAN BOURNE DR	POCASSET	MA	02559
14816	39.0-261-0	RAPONI FRANCO TRS OF NOBLE REALTY TRUST	55 JONATHAN BOURNE DR	Y	189245 3160 8/10/2009	PO BOX 3139	POCASSET	MA	02559-3139

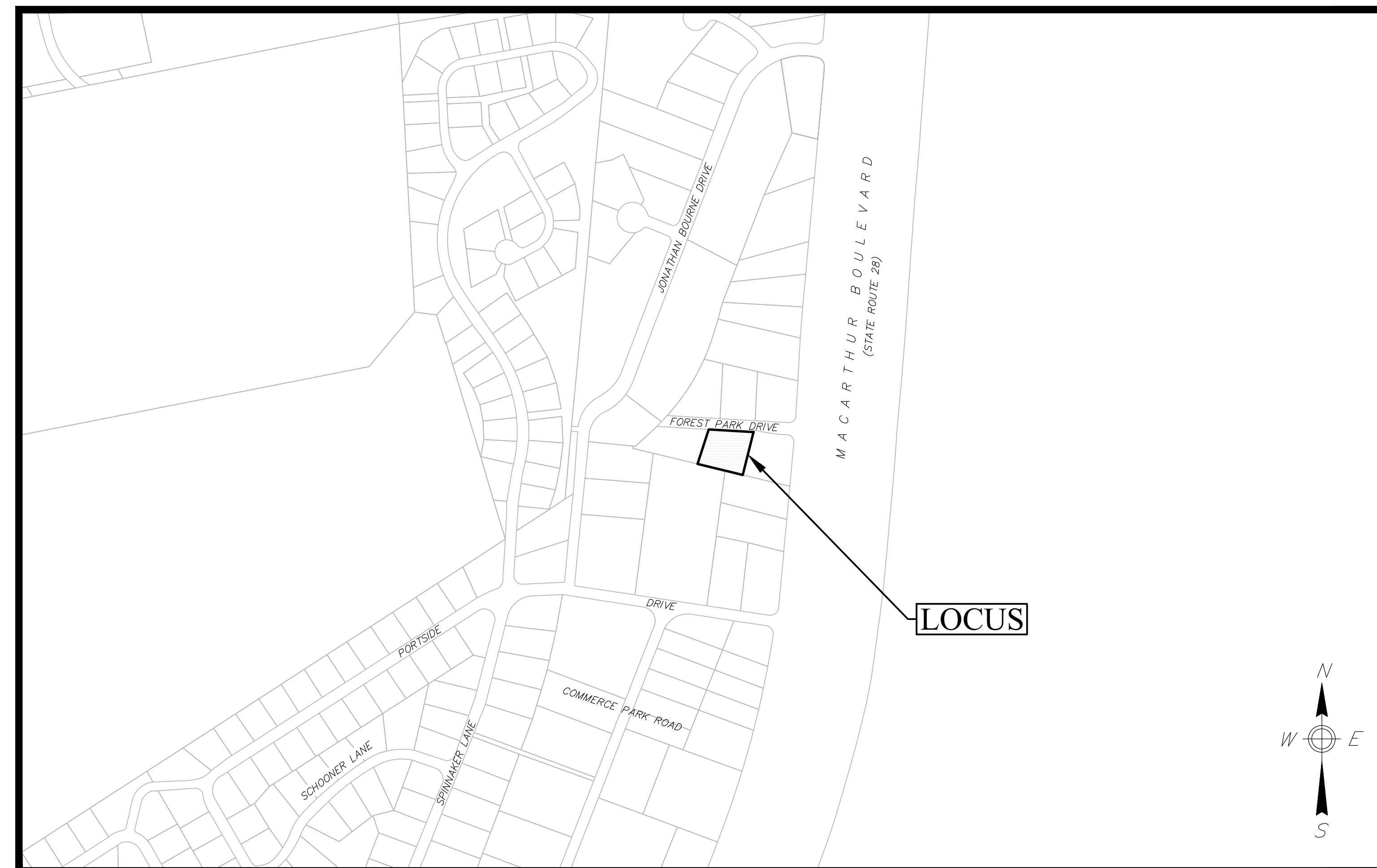
Total Records 11

PROPOSED SITE DEVELOPMENT AT 3 FOREST PARK DRIVE BOURNE, MASSACHUSETTS

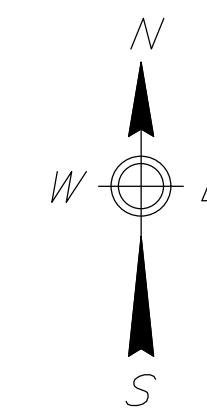
SEPTEMBER 5, 2023

- LOCUS: #3 FOREST PARK DRIVE
MAP 39.0 PARCEL 77.7
- OWNER/APPLICANT:
C & L SHEARER HOLDINGS, LLC.
P.O. BOX 538
WEST FALMOUTH, MA 02574
- DEED REF: Deed Bk: 35438 Pg: 276
- PLAN REF: Plan Bk: 362 Pg: 46
- ZONING DISTRICT: B4
- LOCUS FALLS ENTIRELY WITHIN THE BOURNE WATER RESOURCE DISTRICT.
- LOCUS FALLS ENTIRELY WITHIN A ZONE II WELLHEAD PROTECTION AREA.
- LOCUS DOES NOT FALL WITHIN A SPECIAL FLOOD HAZARD ZONE AS SHOWN ON FEMA FLOOD INSURANCE RATE MAP No. 25001C-0504-J dated 07/16/2014.
- LOCUS DOES NOT FALL WITHIN THE NATURAL HERITAGE and ENDANGERED SPECIES PROGRAM (NHESP) AREAS OF ESTIMATED HABITATS OF RARE WILDLIFE and PRIORITY HABITATS OF RARE SPECIES.
- THE LOCATION OF UNDERGROUND UTILITIES AS REPRESENTED ON THESE PLANS IS BASED UPON PLANS AND INFORMATION PROVIDED BY THE RESPECTIVE UTILITY COMPANIES OF MUNICIPAL DEPARTMENTS SUPPLEMENTED BY FIELD IDENTIFICATION WHEREVER POSSIBLE. NO WARRANTY IS MADE AS TO THE ACCURACY OF THESE LOCATIONS OR THAT ALL UNDERGROUND UTILITIES ARE SHOWN. THE CONTRACTOR SHALL CONTACT DIG SAFE AT LEAST 72 HOURS PRIOR TO THE START OF CONSTRUCTION. DIG SAFE TELEPHONE NUMBER IS 1-800-322-4844.

SHEET INDEX		REVISED DATES		△ CONSTRUCTION REVISIONS	
1	TITLE SHEET				
2	CONSTRUCTION NOTES				
3	EXISTING CONDITIONS, EROSION CONTROL & SITE PREPARATION				
4	LAYOUT, ZONING and LANDSCAPING				
5	GRADING & DRAINAGE				
6	SUBSURFACE SEWAGE DISPOSAL and UTILITIES				
7	CONSTRUCTION DETAILS				
8	LIGHTING PLAN				



LOCUS MAP
Scale : 1" = 400'

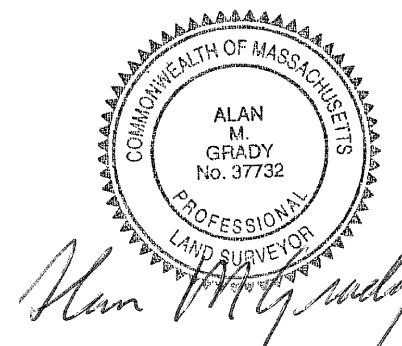
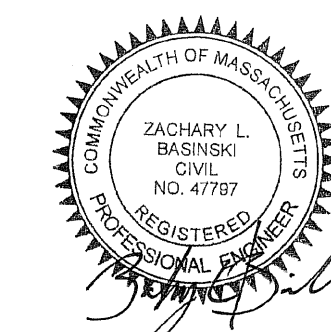


CIVIL ENGINEER / LAND SURVEYOR:

BRACKEN
ENGINEERING, INC.

49 HERRING POND ROAD BUZZARDS BAY, MA 02532
19 OLD SOUTH ROAD NANTUCKET, MA 02554
(Tel) 508.833.0070 (Tel) 508.325.0044
(Fax) 508.833.2282 www.brackeneng.com

OWNER/APPLICANT :
C & L SHEARER HOLDINGS, LLC.
P.O. BOX 538
WEST FALMOUTH, MA 02574



GENERAL CONSTRUCTION NOTES:

- 1. ALL SITE PREPARATION NECESSARY TO COMPLETE THIS PROJECT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
2. ALL NECESSARY POLICE DETAIL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL COORDINATE WITH THE LOCAL POLICE DEPARTMENT.
3. THE CONTRACTOR SHALL MAKE ALL NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN ALL NECESSARY CONSTRUCTION PERMITS, PAY ALL FEES INCLUDING POLICE DETAILS AND POST ALL BONDS, IF NECESSARY, ASSOCIATED WITH THE SAME, AND COORDINATE WITH THE OWNER AND THE ENGINEER.
4. ALL EXISTING CONDITIONS SHOWN SHALL BE CONSIDERED APPROXIMATE AND ARE BASED ON THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS DO NOT CONFLICT WITH ANY KNOW EXISTING OR OTHER PROPOSED IMPROVEMENTS. IF ANY CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER PRIOR TO INSTALLING ANY PORTION OF THE SITE WORK WHICH WOULD BE AFFECTED.
5. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND WHEREVER 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 IN THE TOWN, AND "DIGSAFE" (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK IN PREVIOUSLY UNALTERED AREAS TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RESOLVE CONFLICTS BETWEEN THE PROPOSED UTILITIES AND FIELD LOCATED UTILITIES AND SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED, INCOMPLETELY OR INACCURATELY LOCATED OR NOT MAINTAINING ACCURATE RECORDS OF THE LOCATION AND ELEVATION OF ALL WORK INSTALLED AND EXISTING UTILITIES FOUND DURING CONSTRUCTION FOR THE PREPARATION OF THE AS-BUILT PLAN.
6. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL EXISTING UTILITIES IN WORKING ORDER AND FREE FROM DAMAGE DURING THE ENTIRE DURATION OF THE PROJECT. ALL COST RELATED TO THE REPAIR OF UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. EXCAVATION REQUIRED WITHIN THE PROXIMITY OF EXISTING UTILITY LINES SHALL BE DONE BY HAND. CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATIONS AT NO COST TO THE OWNER.
7. THE CONTRACTOR SHALL UTILIZE ALL PRECAUTIONS AND MEASURES TO ENSURE THE SAFETY OF THE PUBLIC, ALL PERSONNEL, AND PROPERTY DURING CONSTRUCTION IN ACCORDANCE WITH OSHA STANDARDS, INCLUDING BARRICADE SAFETY LIGHTING, CONE PLACEMENT, AND/OR FLAGMEN AS DETERMINED NECESSARY BY THE ENGINEER AND/OR TOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF POLICE DETAIL AND FOR COORDINATING WITH THE LOCAL OR STATE POLICE DEPARTMENT FOR ALL REQUIRED POLICE DETAIL.
8. ALL TRENCHING WORK WITHIN A ROADWAY SHALL BE COORDINATED WITH THE PROPER LOCAL & STATE AGENCY. TRENCH SAFETY SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR INCLUDING ANY LOCAL AND/OR STATE PERMITS REQUIRED FOR THE TRENCHWORK. THIS WORK MAY BE REQUIRED TO TAKE PLACE OUTSIDE OF NORMAL HOURS OF OPERATION FOR THE FACILITY, THE CONTRACTOR SHALL PLAN ACCORDINGLY.
9. ALL TRENCH WORK WITHIN EXISTING PAVEMENT SHALL BE SAWCUT PER THE APPLICABLE DETAILS. TRENCHWORK BACKFILL AND COMPACTION SHALL HAVE MAX 8-INCH LISTS. CONTRACTOR SHALL BE REQUIRED TO REMOVE PATCH AND REPAVE AFTER ONE COMPLETE 12-MONTH CYCLE IF SETTLEMENT OCCURS DUE TO INADEQUATE COMPACTION AS DETERMINED BY THE ENGINEER WITHIN THE WARRANTY PERIOD.
10. THE CONTRACTOR SHALL MAKE ALL CONNECTION ARRANGEMENTS WITH UTILITY COMPANIES, AS REQUIRED.
11. ALL IMPORTED MATERIAL, IF REQUIRED, SHALL BE CLEAN. NO MATERIAL WILL BE ACCEPTED FROM AN EXISTING OR FORMER 21E SITE AS DEFINED BY THE MASSACHUSETTS CONTINGENCY PLAN 310 OMR 40.0000.
12. SITE LAYOUT SURVEY REQUIRED FOR CONSTRUCTION WILL BE PROVIDED BY THE CONTRACTOR AND SHALL BE CONDUCTED BY A MASSACHUSETTS REGISTERED PROFESSIONAL LAND SURVEYOR. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE SURVEYOR FOR ALL SITE SURVEY WORK.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL CONTROL POINTS AND BENCHMARKS DURING CONSTRUCTION INCLUDING BENCHMARK LOCATIONS AND ELEVATIONS AT CRITICAL AREAS. THE LOCATION OF ALL CONTROL POINTS AND BENCHMARKS SHALL BE COORDINATED WITH THE ENGINEER.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL GRADE STAKES SET BY THE SURVEYOR. GRADE STAKES SHALL REMAIN UNTIL A FINAL INSPECTION OF THE ITEM HAS BEEN COMPLETED BY THE ENGINEER. ANY RE-STAKING OF PREVIOUSLY SURVEYED SITE FEATURES SHALL BE THE RESPONSIBILITY (INCLUDING COSTS) OF THE CONTRACTOR.
15. UNLESS OTHERWISE SPECIFIED ON THE PLANS AND DETAILS/SPECIFICATIONS, ALL SITE CONSTRUCTION MATERIALS AND METHODOLOGIES ARE TO CONFORM TO THE MOST RECENT VERSION OF THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS (THE MASSACHUSETTS HIGHWAY DEPARTMENT 1988 STANDARD SPECIFICATION FOR HIGHWAYS AND BRIDGES, THE 2002 SUPPLEMENTAL SPECIFICATIONS AND THE 2006 SPECIAL PROVISIONS).
16. CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS REGARDING NOISE, VIBRATION, DUST, SEDIMENTATION CONTAINMENT, AND TRENCH WORK.
17. SOLID WASTES SHALL BE COLLECTED AND STORED IN A SECURED DUMPSTER. THE DUMPSTER SHALL MEET ALL LOCAL AND STATE SOLID WASTE MANAGEMENT REGULATIONS.
18. THE CONTRACTOR SHALL RESTORE ALL SURFACES EQUAL TO THEIR ORIGINAL CONDITION AFTER CONSTRUCTION IS COMPLETE. AREAS NOT DISTURBED BY CONSTRUCTION SHALL BE LEFT NATURAL. THE CONTRACTOR SHALL TAKE CARE TO PREVENT DAMAGE TO SHRUBS, TREES, OTHER LANDSCAPING, AND/OR NATURAL FEATURES. WHEREAS THE PLANS DO NOT SHOW ALL LANDSCAPE FEATURES, EXISTING CONDITIONS MUST BE VERIFIED BY THE CONTRACTOR IN ADVANCE OF THE WORK.
19. ALL UNPAVED AREAS DISTURBED BY THE WORK SHALL HAVE A MINIMUM OF 4-INCHES OF LOAM INSTALLED AND BE SEEDDED WITH GRASS SEED AS SHOWN ON THE PLAN AND/OR DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING ANY LOAM AND SEEDDED AREAS UNTIL LAWN GROWTH IS ESTABLISHED AND APPROVED BY THE ENGINEER AND/OR OWNER.
20. ALL PROPOSED STRUCTURES SHALL BE DESIGNED BY THEIR MANUFACTURERS FOR AASHTO H-20 LOADING, PRECAST CONCRETE SHALL HAVE A MINIMUM 28-DAY STRENGTH OF 4000 PSI UNLESS OTHERWISE NOTED HEREIN.
21. ALL WHEELCHAIR RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE MASSACHUSETTS HIGHWAY DEPARTMENT STANDARD SPECIFICATION AND CONSTRUCTION AND TRAFFIC STANDARD SPECIFICATIONS (1998) DRAWING NUMBER 107.1.0 AND 107.2.0 RAMPS SHALL HAVE AN 8% MAX. SLOPE AND 2% CROSS SLOPE.
22. LEDGE OR BOULDER EXCAVATION IS NOT ANTICIPATED FOR THIS SITE. HOWEVER, THE CONTRACTOR SHALL PROVIDE A UNIT PRICE COST IN CUBIC YARD MEASURE FOR LEDGE AND/OR BOULDER REMOVAL. LEDGE OR BOULDERS LESS THAN 1 CUBIC YARD IN SIZE BASED ON THE AVERAGE DIMENSIONS WILL NOT BE CONSIDERED PAYABLE ROCK. UNIT PRICE SHALL BE GIVEN FOR BOTH ON AND OFF SITE DISPOSAL. COST OF REPLACEMENT MATERIAL SHALL BE INCLUDED IF ADDITIONAL FILL MATERIAL IS REQUIRED.
23. THE CONTRACTOR SHALL REGULARLY INSPECT THE PERIMETER OF THE PROPERTY TO CLEAN UP AND REMOVE LOOSE CONSTRUCTION DEBRIS BEFORE IT LEAVES THE SITE. ALL DEMOLITION DEBRIS SHALL BE PROMPTLY REMOVED FROM THE SITE TO AN APPROVED DUMP SITE. ALL TRUCKS LEAVING THE SITE SHALL BE COVERED.
24. CONCRETE TRUCKS SHALL NOT BE WASHED ONSITE. ANY CEMENT OR CONCRETE DEBRIS LEFT IN THE DISTURBED AREA SHALL BE REMOVED BY HAND AT THE CONTRACTOR'S EXPENSE.
25. BURIAL OF ANY STUMPS, SOLID DEBRIS, AND/OR STONES/BOULDERS ONSITE IS PROHIBITED. NO ROAD SALT OR OTHER DE-ICING CHEMICALS SHALL BE USED ON THE ACCESS ROADWAY.
26. IF ANY DEVIATION OR ALTERATION OF THE WORK PROPOSED ON THESE DRAWINGS IS REQUIRED, THE CONTRACTOR IS TO IMMEDIATELY CONTACT AND COORDINATE WITH THE ENGINEER AND OWNER.
27. AT THE END OF CONSTRUCTION, THE CONTRACTOR SHALL REMOVE ALL CONSTRUCTION DEBRIS AND SURPLUS MATERIALS FROM THE SITE. A THOROUGH INSPECTION OF THE WORKING PERIMETER IS TO BE MADE AND ALL DISCARDED MATERIALS, BLOWN OR WATER CARRIED DEBRIS, SHALL BE COLLECTED AND REMOVED FROM THE SITE.
28. THIS ENGINEERING FIRM MAKES NO DETERMINATION AND ASSUMES NO LIABILITY REGARDING THE STATUS OF THE PROPOSED SITE IMPROVEMENTS WITH REGARDS TO APPLICABLE FEMA STANDARDS, THE MASSACHUSETTS STATE BUILDING CODE, OR OTHER APPLICABLE STANDARDS, RULES, OR REGULATIONS REGARDING CONSTRUCTION IN THE FEMA DESIGNATED SPECIAL FLOOD HAZARD ZONE.

GENERAL GRADING & DRAINAGE NOTES:

- 1. ALL CUT AND FILL SLOPES SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED.
2. EXISTING GRADE CONTOUR INTERVALS SHOWN AT 2 FOOT.
3. PROPOSED GRADE CONTOUR INTERVALS SHOWN AT 2 FOOT.
4. CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.
5. CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS.
6. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLAN AND SPECIFICATIONS FOR EARTHWORK AND COMPACTION REQUIREMENTS FOR ALL SLABS AND BUILDING FOUNDATIONS.
7. PROPOSED ELEVATIONS ARE SHOWN TO FINISH PAVEMENT OR GRADE UNLESS NOTED OTHERWISE.
8. ALL EARTHWORK AND SITE PREPARATION SHALL BE DONE IN STRICT ACCORDANCE WITH THE RECOMMENDATIONS OF ANY SUBSURFACE INVESTIGATION OR GEOTECHNICAL REPORTS PREPARED FOR THIS SITE.
9. PARKING AREAS ARE NOT TO BE PAVED UNTIL THE ENTIRE PERMANENT DRAINAGE SYSTEM HAS BEEN INSTALLED AND ALL PIPE CONNECTIONS COMPLETE.
10. DRAINAGE PIPING SHALL BE HIGH DENSITY POLYETHYLENE PIPE AND CONFORM TO AASHTO M284 CORRUGATED POLYETHYLENE PIPE. PIPE SHALL BE INSTALLED AT THE LOCATIONS INDICATED ON THE PLAN. MINIMUM CLEARANCE BETWEEN PROPOSED DRAINAGE PIPING AND OTHER UTILITIES/STRUCTURES SHALL BE 18" VERTICALLY AND 4'-FT HORIZONTALLY. CPP SHALL BE CAREFULLY BACKFILLED IN ACCORDANCE WITH THE LATEST MASSACHUSETTS HIGHWAY DEPARTMENT STAND SPECIFICATIONS. THE MINIMUM COVER FOR HOPE PIPES IS 1'-0" FOR H-20 TRAFFIC LOADS IF INSTALLED IN ACCORDANCE WITH ASSESSMENT SECTION 30. THIS IS BASED ON EMPIRICAL CALCULATION OF LOAD RESPONSE, MANUFACTURER'S TESTING, AND FIELD EXPERIENCE WITH THE PIPE. AASHTO SPECIFICATIONS SECTION 18.4.1.5 DEFINES THE MINIMUM COVER AS 10/8 BUT NOT LESS THAN 12 INCHES". THIS COVER IS MEASURED FROM THE PIPE TO THE TOP OF A RIGID (CONCRETE) PAVEMENT OR THE BOTTOM OF A FLEXIBLE (BITUMINOUS) PAVEMENT, BOTH AASHTO AND ASTM AS WELL AS MOST MANUFACTURERS, REQUIRE ADDITIONAL (TEMPORARY) COVER FOR CONSTRUCTION LOADS GREATER THAN H-20. GENERALLY AN ADDITIONAL 2' OF TEMPORARY COVER, MOUNDDED OVER THE PIPE AND REMOVED FOR FINAL GRADING AND PAVING IS SUFFICIENT FOR LARGE CONSTRUCTION VEHICLE LOADS.
11. BACKFILL ADJACENT TO PIPES AND STRUCTURES SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE ADJOINING FILL MATERIAL. BACKFILL SHALL BE PLACE IN HORIZONTAL LAYERS NOT TO EXCEED SIX INCHES IN THICKNESS AND COMPACTED TO A DENSITY OF 95% OF MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT WITHIN +/- 2% OF OPTIMUM. ALL COMPACTION IS TO BE DETERMINED BY AASHTO METHOD T-99. TESTING OF BACKFILL MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

BASIC CONSTRUCTION SEQUENCE:

THE FOLLOWING CONSTRUCTION SEQUENCE IS TO BE USED AS A GENERAL GUIDELINE. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER AND ENGINEER AND SUBMIT A PROPOSED CONSTRUCTION SEQUENCE FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

- 1. SURVEY AND STAKE THE PROPOSED LIMIT OF DISTURBANCE AND LIMIT OF SEDIMENTATION BARRIERS.
2. PLACE SEDIMENTATION BARRIERS (STRAWBALES, SILT FENCE, ETC.) AS SHOWN ON THE PLANS AND STAKED OUT IN THE FIELD. IN NO CASE IS THE LIMIT OF WORK TO EXTEND BEYOND THE SEDIMENTATION BARRIERS/LIMIT OF DISTURBANCE AS SHOWN ON THE PROJECT PLANS.
3. INSTALL TEMPORARY CONSTRUCTION ENTRANCES IN LOCATIONS SHOWN ON PLANS. NO OTHER ENTRANCES SHALL BE USED TO GAIN ACCESS TO THE SITE BY ANY CONSTRUCTION OR DELIVERY VEHICLES.
4. BEGIN CLEARING THE SITE AND DEMOLITION AS REQUIRED.
5. SURVEY AND STAKE CENTERLINE OF THE PROPOSED DRAINAGE SYSTEMS AND DRAINAGE LINES.
6. EXCAVATE AND ROUGH GRADE THE PROPOSED STORMWATER MANAGEMENT AREAS (SWMA) AND ANY ADDITIONAL TEMPORARY BASINS NECESSARY TO CONTROL SITE RUNOFF AND SEDIMENTS. PERMANENT SWMA SEEDING AND PLANTING SHALL BE COMPLETED AFTER THE CONTRIBUTING AREA TO THE BASIN HAS REACHED A MINIMUM OF 80% STABILIZATION AND IS NO LONGER REQUIRED TO BE USED AS A CONSTRUCTION SEDIMENTATION BASIN.
7. BEGIN CLEARING AND DEMOLITION IN AREAS OF PARKING LOTS AND STORMWATER MANAGEMENT AREAS. TOPSOIL IS TO BE STRIPPED FROM THE AREA OF THE PROPOSED PARKING AND SWMA AND STOCKPILED IN APPROVED LOCATIONS. TOPSOIL STOCKPILES ARE TO BE PROTECTED BY A SEDIMENT BARRIER.
8. INSTALL TEMPORARY CONVEYANCE DEVICES (SWALES, CHECK DAMS, PIPES, ETC.) AS NECESSARY TO CONVEY RUNOFF TO TREATMENT AREAS.
9. BEGIN ROUGH GRADING AREAS FOR PARKING AND BUILDINGS. BRING ROUGH GRADING TO PROPER ELEVATIONS AS SOON AS PRACTICABLE. WORK SHALL PROGRESS DILIGENTLY TO MINIMIZE TIME SOILS ARE UN-STABILIZED.
10. BEGIN SITE AND UTILITY CONSTRUCTION, CONTRACTOR SHALL BE FREE TO INSTALL UTILITIES IN ANY ORDER HE/SHE CHOOSES. ANY EROSION CONTROL DEVICE DISTURBED DURING THE UNDERGROUND UTILITY CONSTRUCTION SHALL BE IMMEDIATELY REPAIRED OR REPLACED IN KIND AND STABILIZED. MODIFY TEMPORARY CONVEYANCE DEVICES AS NECESSARY TO CONVEY RUNOFF TO TREATMENT AREAS.
11. INSTALL DRAINAGE PIPES, DRAINAGE MANHOLES AND UNDERGROUND DRAINAGE STRUCTURES. WORK SHALL BEGIN AT THE SWMA(S) AND PROGRESS UP-GRADE, PROTECT DISCHARGE OUTLETS WITH RIP-RAP APRONS. THE SWMA(S) AND DRAINAGE NETWORK ARE TO BE PROTECTED FROM SEDIMENTATION WITH SILT FENCE AND STRAWBALES UNTIL ALL UN-STABILIZED AREAS ARE STABILIZED WITH STONE SUB-BASE OR VEGETATION. INSTALL SEDIMENT BARRIERS AT POINTS OF ENTRY INTO THE DRAINAGE NETWORK. PARTICULAR CARE SHALL BE TAKEN TO PROTECT THE UNDERGROUND SWMA(S) FROM SEDIMENT.
12. PERMANENTLY SEED ALL DISTURBED AREAS OUTSIDE OF THE AREA TO BE PAVED OR GRAVELED.
13. ONCE ALL UNDERGROUND UTILITIES HAVE BEEN CONSTRUCTED, PLACE COMPACTED GRAVEL FOUNDATION AND ROUGH GRADE THE PARKING AREAS IN ACCORDANCE WITH THE SITE PLANS AND IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL REGULATIONS AS SOON AS POSSIBLE.
14. BEGIN PARKING CONSTRUCTION PER SITE PLANS AND IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL REGULATIONS. PARKING AREAS ARE NOT TO BE PAVED UNTIL THE ENTIRE PERMANENT DRAINAGE SYSTEM HAS BEEN INSTALLED AND ALL PIPE CONNECTIONS COMPLETE.
15. FINISH PERMANENT STABILIZATION. SWEEP THE ROADWAY TO REMOVE ALL SEDIMENTS. REPAIR DRAINAGE OUTLETS AND SWMA(S) AS REQUIRED. THE CONTRACTOR SHALL CLEAN AND FLUSH THE DRAINAGE STRUCTURES AND PIPES AT THE END OF CONSTRUCTION AND ALL ACCUMULATED SEDIMENTS IN THE SWMA(S) SHALL BE REMOVED. CONTRACTOR SHALL INSPECT THE DRAINAGE NETWORK AND REPAIR ANY DAMAGE IMMEDIATELY.
16. COMPLETE ALL REMAINING PLANTING AND SEEDING.
17. REMOVAL OF ALL TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES FOLLOWING VEGETATIVE ESTABLISHMENT OF ALL DISTURBED AREAS SHALL BE APPROVED BY THE ENGINEER AND WHEN THE CONTRIBUTING AREA HAS REACHED A MINIMUM OF 80% STABILIZATION.

EROSION & SEDIMENT CONTROL NOTES:

- 1. THE SITE CONSTRUCTION FOREMAN SHALL BE DESIGNATED AS THE ON-SITE PERSONNEL RESPONSIBLE FOR THE DAILY INSPECTION AND MAINTENANCE OF ALL SEDIMENT AND EROSION CONTROLS AND SHALL IMPLEMENT ALL NECESSARY MEASURES TO CONTROL EROSION AND PREVENT SEDIMENT FROM LEAVING THE SITE.
2. THE CONTRACTOR SHALL INSTALL ALL EROSION AND SEDIMENT CONTROL (ESC) MEASURES AS SHOWN ON THE SIGNED PLANS IN CONSULTATION WITH THE TOWN, AND AS DETERMINED NECESSARY IN THE FIELD BY THE ENGINEER BEFORE ANY CONSTRUCTION ACTIVITIES ARE TO BEGIN. THESE MEASURES SHALL BE CHECKED, MAINTAINED, REPLACED AS NECESSARY DURING THE ENTIRE CONSTRUCTION PERIOD OF THE PROJECT, SUCH MEASURES SHALL REPRESENT THE LIMIT OF WORK. WORKERS SHALL BE INFORMED THAT NO CONSTRUCTION ACTIVITY IS TO OCCUR BEYOND THE LIMIT OF WORK AT ANY TIME THROUGH THE CONSTRUCTION PERIOD.
3. A MINIMUM SURPLUS OF 50 FEET OF EROSION CONTROL BARRIER (SILT FENCE, STRAWBALE AND/OR SILT SOCK) SHALL BE STOCKPILED ONSITE AT ALL TIMES.
4. THE CONTRACTOR SHALL PROTECT THE ADJACENT PROPERTIES FROM SEDIMENTATION DURING PROJECT CONSTRUCTION UNTIL ACCEPTANCE BY THE OWNER.
5. A CONSTRUCTION EXIT SHALL BE CONSTRUCTED AS SHOWN IN THE DETAILS TO SHED DIRT FROM CONSTRUCTION VEHICLE TIRES. THE CRUSHED STONE PAD WILL BE REPLACE/CLEANED AS NEEDED TO MAINTAIN ITS EFFECTIVENESS.
6. THE LIMIT OF ALL CLEARING, GRADING AND DISTURBANCES SHALL BE KEPT TO A MINIMUM WITHIN THE PROPOSED AREA OF CONSTRUCTION. THE CONTRACTOR SHALL PHASE THE SITE WORK IN A MANNER TO MINIMIZE AREAS OF EXPOSED SOIL. IF TREES ARE TO BE CUT ON THE ENTIRE SITE, ONLY THOSE AREAS WHICH ARE ACTIVELY UNDER CONSTRUCTION SHALL BE GRUBBED. THE REQUIRED SEDIMENTATION CONTROL FACILITIES MUST BE PROPERTY ESTABLISHED, CLEARLY VISIBLE AND IN OPERATION PRIOR TO INITIATING ANY LAND CLEARING ACTIVITY AND/OR OTHER CONSTRUCTION RELATED WORK.
7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MONITOR LOCAL WEATHER REPORTS DURING CONSTRUCTION AND PRIOR TO SCHEDULING EARTHMOVING OR OTHER CONSTRUCTION ACTIVITIES WHICH WILL LEAVE LARGE DISTURBED AREAS UN-STABILIZED. IF INCLEMENT WEATHER IS PREDICTED, THE CONTRACTOR SHALL USE THEIR BEST PROFESSIONAL JUDGEMENT WHEN SCHEDULING CONSTRUCTION ACTIVITIES AND SHALL BE RESPONSIBLE FOR ENSURING THE NECESSARY EROSION CONTROL DEVICES ARE INSTALLED AND FUNCTIONING PROPERLY TO MINIMIZE EROSION FROM ANY IMPENDING WEATHER EVENTS.
8. ESC MEASURES SHALL BE INSPECTED AND MAINTAINED ON A WEEKLY BASIS AND AFTER EACH RAINFALL EVENT OF 0.50 INCH OR GREATER DURING CONSTRUCTION TO ENSURE THAT THE EROSION AND SEDIMENTATION CONTROL MEASURES ARE INTACT AND FUNCTIONING PROPERLY. IDENTIFIED DEFICIENCIES SHALL BE CORRECTED IMMEDIATELY NO LATER THAN 24 HOURS AFTER IDENTIFICATION.
9. SOIL STOCKPILES LEFT OVERNIGHT SHALL BE SURROUNDED ON THEIR PERIMETERS WITH SILT SOCK, SILT FENCE, STRAWBALES OR A COMBINATION OF SILT FENCE WITH STRAWBALE, AS DETERMINED NECESSARY.
10. DISTURBED AREAS AND SLOPES SHALL NOT BE LEFT UNATTENDED OR EXPOSED FOR EXCESSIVE PERIODS OF TIME SUCH AS THE INACTIVE WINTER SEASON. THE CONTRACTOR SHOULD PROVIDE APPROPRIATE STABILIZATION PRACTICES ON ALL DISTURBED AREAS AS SOON AS POSSIBLE BUT NOT MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS TEMPORARILY OR PERMANENTLY CEASED. TEMPORARY AREAS HAVING A SLOPE GREATER THAN 4:1 SHALL BE REINFORCED WITH EROSION BLANKETS OR APPROVED EQUAL UNTIL THE SITE IS PROPERTY STABILIZED. TEMPORARY SWALES MAY ALSO BE REQUIRED IF DETERMINED NECESSARY IN THE FIELD BY THE ENGINEER.
11. THE CONTRACTOR SHALL INSTALL A SILT-SACK OR APPROVED EQUIVALENT IN EACH EXISTING CATCH BASIN RECEIVING RUNOFF FROM THE SITE. UPON THE INSTALLATION OF EACH CATCH BASIN, THE CONTRACTOR SHALL INSTALL A SILT-SACK OR APPROVED EQUIVALENT. THESE ARE TO BE INSPECTED AFTER EACH SIGNIFICANT STORM EVENT AND REMOVED AND EMPTIED AS NEEDED DURING THE ENTIRE CONSTRUCTION PERIOD.
12. SMALL, TEMPORARY SEDIMENTATION BASINS MAY BE CONSTRUCTED ON AN AS-NEEDED BASIS DURING CONSTRUCTION TO AND IN THE CAPTURE OF SITE RUNOFF AND SEDIMENT. IT WILL BE THE RESPONSIBILITY OF THE SITE CONTRACTOR, IN CONSULTATION WITH THE ENGINEER, TO SIZE AND CREATE THESE BASINS IN APPROPRIATE LOCATIONS.
13. THE CONTRACTOR SHALL CONTAIN ALL SEDIMENT ONSITE. ALL EXITS FROM THE SITE WILL BE SWEEP AS NECESSARY INCLUDING ANY SEDIMENT TRACKING. PAVED AREAS SHALL BE SWEEP AS NEEDED TO REMOVE SEDIMENT AND POTENTIAL POLLUTANTS WHICH MAY ACCUMULATE DURING SITE WORK.
14. ACCUMULATED SEDIMENT SHALL BE REMOVED FROM ALL TEMPORARY PRACTICES AND DISPOSED OF IN A PRE-APPROVED LOCATION BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER.
15. THE CONTRACTOR SHALL PROVIDE ONSITE OR MAKE READILY AVAILABLE THE NECESSARY EQUIPMENT AND SITE PERSONNEL DURING CONSTRUCTION HOURS FOR THE DURATION OF THE PROJECT TO ENSURE ALL ESC DEVICES ARE PROPERLY MAINTAINED AND REPAIRED IN A TIMELY AND RESPONSIBLE MANNER. IF SITE WORK IS SUSPENDED DURING THE WINTER MONTHS, THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE PERSONNEL AND EQUIPMENT EITHER ONSITE OR MAKE READILY AVAILABLE TO ENSURE ALL ESC DEVICES ARE PROPERLY MAINTAINED AND REPAIRED IN A TIMELY AND RESPONSIBLE MANNER.
16. PROPER MEASURES SHALL BE IMPLEMENTED BY THE CONTRACTOR IF DEWATERING IS NECESSARY DURING CONSTRUCTION. THESE MEASURES SHALL INCLUDE DEWATERING BAGS, TEMPORARY STRAWBALES, SILT FENCES, SILT SOCKS, AND/OR OTHER APPROVED DEVICES. THE DEWATERING SET UP SHALL BE APPROVED BY THE ENGINEER.
17. ALL SEDIMENT COLLECTED IN THE TEMPORARY PARTIALLY CONSTRUCTED BIOTRETENTION AREAS WILL BE REMOVED AND DISPOSED OF PROPERLY PRIOR TO FILTER FABRIC AND/OR MEDIA INSTALLATION WITHIN THE BIOTRETENTION AREAS, PARTIALLY CONSTRUCTED BIOTRETENTION AREAS WILL HAVE A SURFACE ELEVATION AT A MINIMUM OF 1'-FOOT ABOVE THE BOTTOM OF MEDIA ELEVATION AS SHOWN ON THE BIOTRETENTION SCHEDULE. THIS WILL ALLOW AN OVER-DIG OF THE COLLECTED SEDIMENT FROM WITHIN THE BIOTRETENTION AREA PRIOR TO MEDIA/FABRIC INSTALLATION.
18. DUST SHALL BE CONTROLLED BY WATERING OR OTHER APPROVED METHODS AS NECESSARY, OR AS DIRECTED BY THE ENGINEER AT NO EXTRA COST TO THE OWNER.
19. THE CONTRACTOR IS RESPONSIBLE FOR THE INSPECTION AND MAINTENANCE DURING CONSTRUCTION OF ALL STORMWATER FACILITIES INSTALLED OR AFFECTED BY THE PROJECT. ANY SEDIMENT OR DEBRIS COLLECTED WITHIN THESE FACILITIES FROM THE PROJECT WORK SHALL BE REMOVED PRIOR TO THE OWNER'S ACCEPTANCE.

STORMWATER FACILITY OPERATION & MAINTENANCE:

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER INSPECTION AND MAINTENANCE OF ALL STORMWATER MANAGEMENT FACILITIES UNTIL SUCH TIME THAT THE PARKING LOT, BUILDING, AND ASSOCIATED UTILITIES ARE ACCEPTED BY THE OWNER AND THE ENGINEER.
2. THE CONTRACTOR SHALL CONTACT AND RESTORE/CLEAN ALL FACILITIES (INLETS, FOREBAYS, RAINGARDENS ETC.) OF SEDIMENT AND DEBRIS PRIOR TO

THE OWNER'S ACCEPTANCE.

- 3. ALL SEDIMENT AND DEBRIS SHALL BE DISPOSED OF PROPERLY IN A PRE-APPROVED LOCATION.
4. THE CONTRACTOR SHOULD REFER TO THE OPERATION & MAINTENANCE PLAN FOR ADDITIONAL INFORMATION PERTAINING TO STORMWATER FACILITY OPERATION AND MAINTENANCE REQUIREMENTS AND SHALL MAINTAIN A WORKING COPY ON SITE AT ALL TIMES.
5. ALL STORMWATER FACILITIES SHALL BE INSPECTED BY THE CONTRACTOR AFTER EVERY MAJOR RAINFALL EVENT FOR THE ENTIRE DURATION OF THE CONSTRUCTION PROJECT AND THE FIRST 3 MONTHS AFTER CONSTRUCTION TO ENSURE PROPER STABILIZATION AND CONSTRUCTION.
6. SPECIFIC ANNUAL MAINTENANCE SHALL BE AS FOLLOWS:

 - A. **DRAINAGE STRUCTURES (INLETS, MANHOLES & TREE BOXES):** ALL DRAINAGE STRUCTURES WILL BE INSPECTED ANNUALLY TO MONITOR FOR PROPER OPERATION, COLLECTION OF LITTER OR TRASH, AND STRUCTURAL DETERIORATION. THE TREE BOXES AND INVERTS WILL BE CLEANED OF SEDIMENT AS NECESSARY, AND REPAIRED WHEN REQUIRED.
 - B. **INFILTRATION CHAMBERS:** THE CHAMBERS WILL BE INSPECTED ANNUALLY TO ENSURE THAT DESIGN INFILTRATION RATES ARE BEING MET. IF SEDIMENT OR ORGANIC DEBRIS BUILD-UP HAS LIMITED THE INFILTRATION CAPABILITIES AND BUILT UP WITHIN THE CHAMBERS THE SYSTEM SHALL BE CLEANED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS.
 - C. **ROUTINE MAINTENANCE:** OTHER ROUTINE MAINTENANCE WILL INCLUDE REMOVAL OF TRASH AND LITTER FROM PAVED AND PERIMETER AREAS, AND ANNUAL STREET AND PARKING LOT SWEEPING AFTER THE SPRING THAW TO AVOID EXCESSIVE ACCUMULATION OF SEDIMENT IN THE DRAINAGE SYSTEM. THE PIPES DRAINING THE PROJECT WILL BE INSPECTED ANNUALLY FOR PROPER FLOW.

NOTE: OPERATION AND MAINTENANCE CHECKLIST AVAILABLE UPON REQUEST

WATER & SEWER INSTALLATION NOTES:

UTILITY TYPE	MINIMUM COVER OVER TOP OF PIPE	MINIMUM HORIZONTAL DISTANCE TO DRAIN STRUCTURE
WATER MAIN	5'	2'

- 1. SEPTIC AND WATER MAINS SHALL BE INSTALLED ACCORDING TO THE FOLLOWING GUIDELINES TO PREVENT FREEZING OF THE MAIN OR SEPTIC.
2. DEAD END WATER LINES SHALL BE INSULATED WHERE SOIL COVER OR HORIZONTAL SEPARATION TO PRECAST STRUCTURES IS LESS THAN THE DISTANCE SPECIFIED ABOVE AND/OR WHERE SHOWN ON PLANS.
3. INSULATION SHALL BE 2" THICK POLYURETHANE INSULATION WITH PVC JACKET PLACED AROUND PIPE OR DESIGNER APPROVED EQUAL.
4. WATER AND SEWER SEPARATION SHALL TYPICALLY BE 10-FEET MINIMUM HORIZONTAL AND 18-INCHES VERTICAL WITH SEWER MAINS BELOW THE WATER MAINS (SEE DETAIL). IF SITE CONDITIONS REQUIRE LESS, THEN THE UTILITIES SHALL BE INSTALLED AS SHOWN IN THE CONSTRUCTION DETAILS.

WATER SYSTEM NOTES:

- 1. THE CONTRACTOR SHALL CONSTRUCT THE WATER LINE AND ITS APPURTENANCE IN ACCORDANCE WITH THE LOCAL WATER DEPARTMENT'S STANDARDS AND SPECIFICATIONS AND PAY FOR ALL ASSOCIATED FEES AS REQUIRED BY THE WATER DEPARTMENT.
2. THE CONTRACTOR SHALL SUPPLY TWO COPIES OF SWORN CERTIFICATES TO PROVE THAT ALL PIPES AND FITTINGS ARE INSPECTED AND TESTED AS REQUIRED BY THE STANDARD SPECIFICATIONS TO WHICH THE MATERIAL IS MANUFACTURED.
3. ALL NEWLY INSTALLED WATER SYSTEM COMPONENTS SHALL BE CLEARED OF ALL FOREIGN MATERIALS SUCH AS DIRT AND MISCELLANEOUS DEBRIS PRIOR TO SYSTEM TESTING AND SHALL BE WITNESSED BY THE LOCAL WATER DEPARTMENT. NOT TESTING IS ALLOWED WITHOUT REMOVAL OF ALL FOREIGN MATERIALS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE TO INSTALL AND REMOVE ALL NECESSARY BLOW-OFFS REQUIRED FOR THIS PROJECT AT NO EXTRA COST TO THE OWNER.
5. THE CONTRACTOR IS RESPONSIBLE FOR PAYING ALL CONNECTION AND INSPECTION FEES.

WATER SYSTEM INSTALLATION INSPECTION NOTES:

- 1. A PRESSURE TEST AND DISINFECTION TEST OF ALL WATER LINES SHALL BE CONDUCTED BY THE CONTRACTOR AND WITNESSED BY THE APPROVED INSPECTOR OF THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A MINIMUM OF 48-HOUR ADVANCE NOTICE TO THE LOCAL WATER DEPARTMENT PRIOR TO THE PRESSURE AND DISINFECTION TESTS. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ALL NECESSARY EQUIPMENT AND CHEMICALS TO PROPERLY CONDUCT THE TESTS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE TO COLLECT ALL BACTERIOLOGICAL SAMPLES AND PAY FOR ALL RELATED LABORATORY FEES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN UP-TO-DATE AS-BUILT DRAWINGS AND NOTES INDICATE THE HORIZONTAL AND VERTICAL LOCATION WITHIN TWO TIES OFF ALL SYSTEM COMPONENTS INSTALLED. THESE AS-BUILT DRAWINGS AND NOTES WILL BE UTILIZED BY THE ENGINEER FOR THE PREPARATION OF RECORD PLANS.

LEGEND

EXISTING	PROPOSED	
-----100-----	-----100-----	MAJOR/MINOR CONTOUR
-----99-----	--- 99.99 ---	SPOT ELEVATION
100x1	-----	LIMIT OF WORK/EDGE OF CLEARING
Ⓢ IP10 ⊠ IP 51	--- X --- X ---	SILT FENCE
-----	--- W ---	WATER SERVICE
-----	---	WATER GATE
Δ WF A-20	⌘	HYDRANT
---	---	GAS SERVICE
Ⓢ	---	ELECTRIC SERVICE
---	-----	DRAIN LINE
---	⊙	DRAIN MANHOLE
⊙	⊙	CATCH BASIN
---	Ⓢ	FLARED END SECTION
---	Ⓢ	RIP-RAP
---	☆	PEDESTAL LIGHT
---	■	WALL PACK LIGHT
---	-----	12" WIDE CAPE COD BERM
---	-----	GUARDRAIL
---	♿	HANDICAP PARKING SPACE
---	HP	HANDICAPPED SIGN
---	LS	LANDSCAPED AREA
---	EOP	EDGE OF PAVEMENT
---	EOG	EDGE OF GRAVEL
---	R=5'	CURB AND/OR PAVEMENT RADIUS
---	WSL	12" WIDE WHITE STOP LINE
---	Ⓢ	PROPOSED STOP SIGN



Prepared By:
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Sheet Title:

CONSTRUCTION NOTES

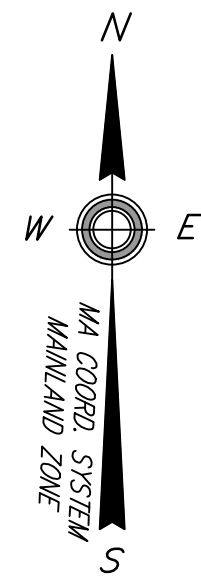
Project:

PROPOSED SITE DEVELOPMENT IN BOURNE, MASSACHUSETTS
Prepared For:
C & L SHEARER HOLDINGS, LLC.
#3 FOREST PARK DRIVE MAP 39.0 PARCEL 77.7

No.	Date	Revision Description	By

Date: SEPTEMBER 5, 2023 Drawn: [REDACTED] Checked: [REDACTED] Sheet: 2 of 8

PERMIT SET - NOT FOR CONSTRUCTION



MAP 39 PARCEL 77.5
#6 FOREST PARK DRIVE

MAP 39 PARCEL 77.4
#4 FOREST PARK DRIVE

MAP 39 PARCEL 77.0
#568 MACARTHUR BOULEVARD

FOREST PARK DRIVE

SITE BENCHMARK
TOP OF CONCRETE BOUND
EL: 93.42 (NAV088)

CONTRACTOR TO PROTECT EXISTING CATCH BASIN WITH SILT SACK OR APPROVED EQUAL (TYP.) (SEE DETAIL)

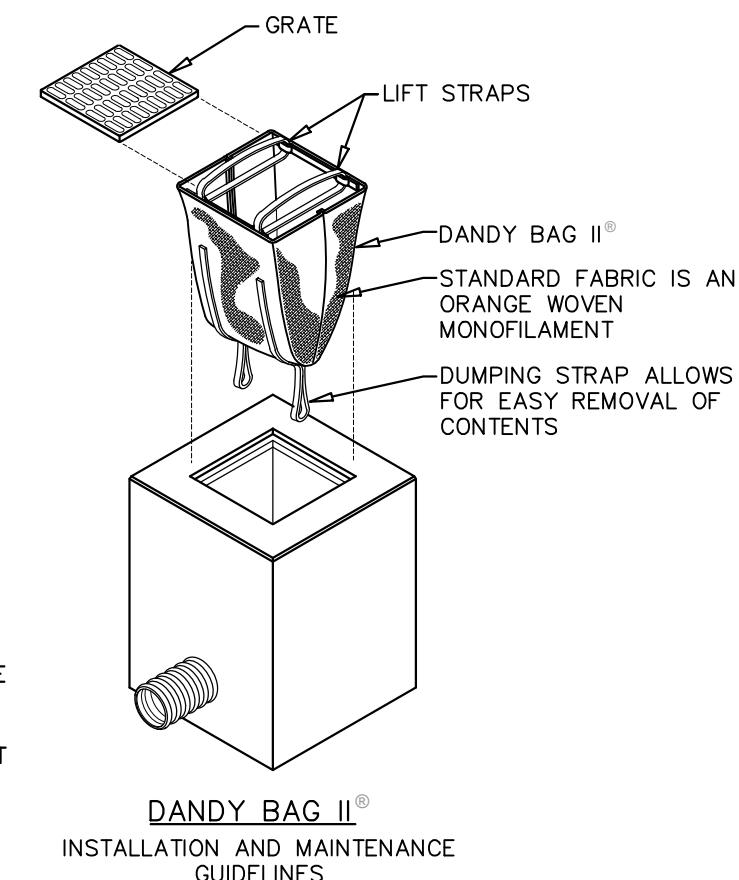
CONSTRUCTION ENTRANCE & TRACKING PAD (SEE DETAIL)

INSTALLATION:

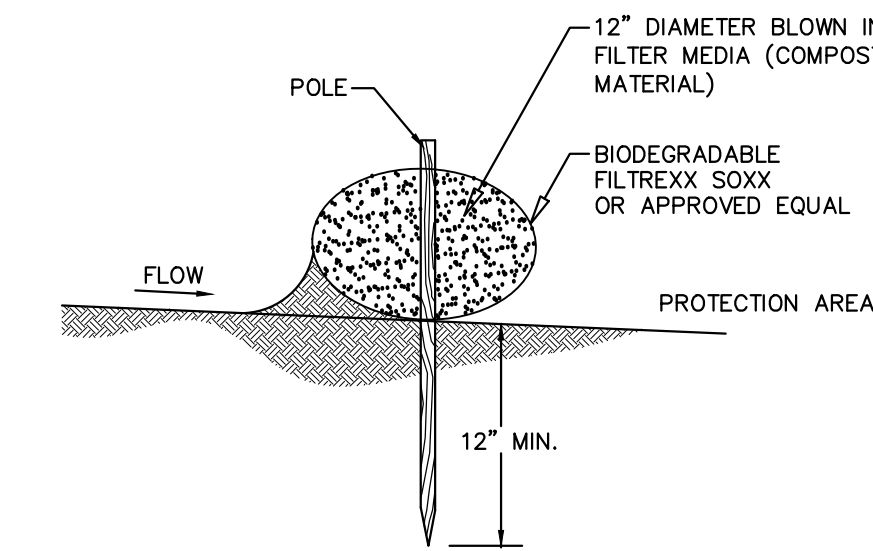
REMOVE THE GRATE FROM CATCH BASIN. IF USING OPTIONAL OIL ABSORBENTS, PLACE ABSORBENT FILL IN UNIT. STAND THE GRATE ON END. MOVE THE TOP LIFTING STRAPS OUT OF THE WAY AND PLACE THE GRATE INTO THE DANDY BAG II SO THAT THE GRATE IS BELOW THE TOP STRAPS AND ABOVE THE LOWER STRAPS. HOLDING THE LIFTING DEVICES, INSERT THE GRATE INTO THE INLET.

MAINTENANCE:

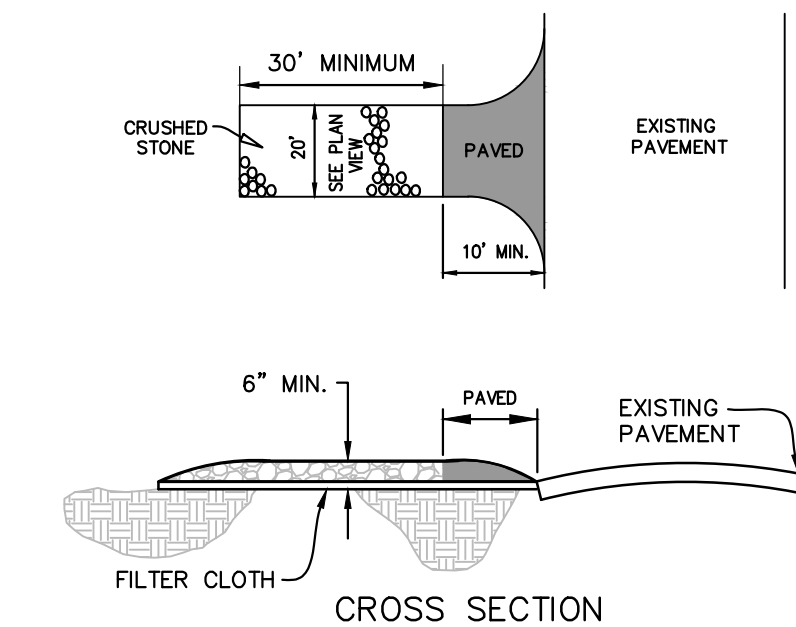
REMOVE ALL ACCUMULATED SEDIMENT AND DEBRIS FROM VICINITY OF UNIT AFTER EACH STORM EVENT. AFTER EACH STORM EVENT AND AT REGULAR INTERVALS, LOOK INTO THE DANDY BAG II. IF THE CONTAINMENT AREA IS MORE THAN 1/2 FULL OF SEDIMENT, THE UNIT MUST BE EMPTIED. TO EMPTY UNIT, LIFT THE UNIT OUT OF THE INLET USING THE LIFTING STRAPS AND REMOVE THE GRATE. IF USING OPTIONAL OIL ABSORBENTS, REPLACE ABSORBENT WHEN NEAR SATURATION.



SILT SACK DETAIL
NOT TO SCALE



FILTREXX SOXX BARRIER DETAIL
NOT TO SCALE



CONSTRUCTION ENTRANCE TRACKING PAD DETAIL
NOT TO SCALE

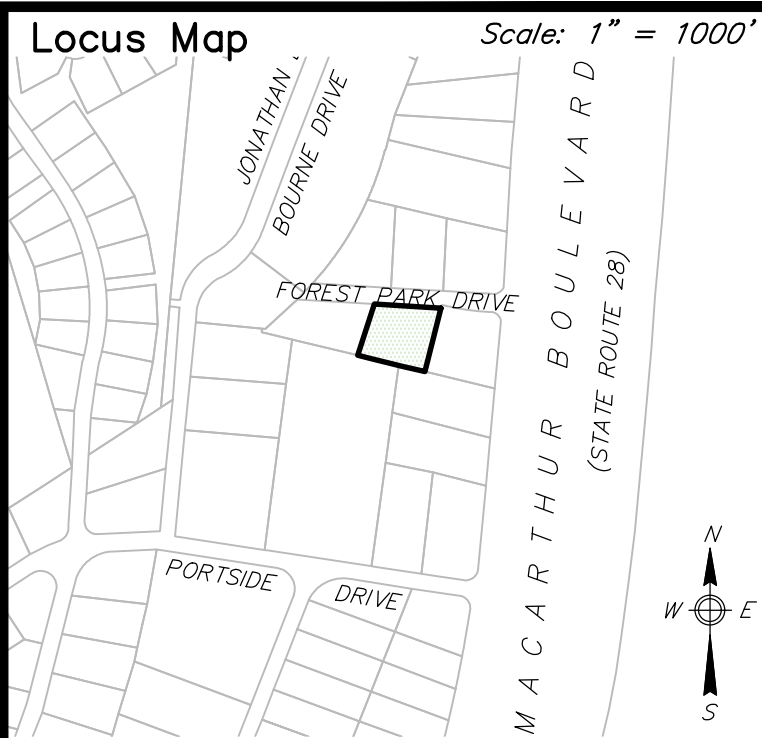
TRACKING PAD NOTES:

STONE SIZE - USE 2" CRUSHED STONE

FILTER CLOTH - SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. STONE USED SHALL BE LARGE ENOUGH SO THAT IT DOES NOT GET PICKED UP AND TRACKED OFF THE SITE BY THE VEHICLE TRAFFIC.

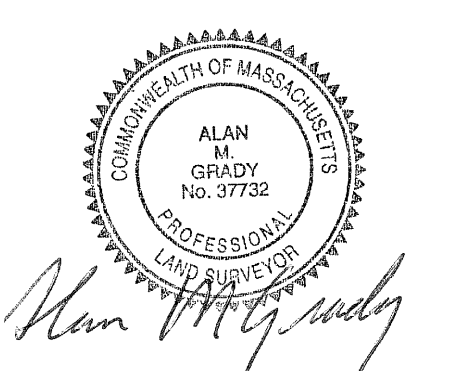
SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHOULD BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM SHOULD BE PERMITTED.

MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH PREVENTS TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANING OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.

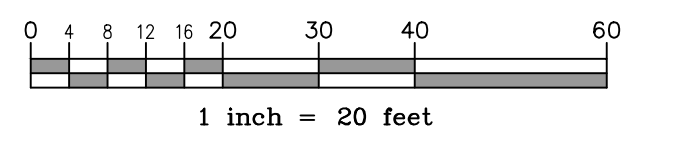


GENERAL NOTES

- LOCUS: #3 FOREST PARK DRIVE
MAP 39.0 PARCEL 77.7
- OWNER: C & L SHEARER HOLDINGS, LLC.
P.O. BOX 538
WEST FALMOUTH, MA 02574
- DEED REF: Deed Bk: 35438 276
- PLAN REF: Plan Bk: 362 Pg: 46
- ZONING DISTRICT: B4
- LOCUS FALLS ENTIRELY WITHIN THE BOURNE WATER RESOURCE DISTRICT.
- LOCUS FALLS ENTIRELY WITHIN A ZONE II WELLHEAD PROTECTION AREA.
- LOCUS DOES NOT FALL WITHIN A SPECIAL FLOOD HAZARD ZONE AS SHOWN ON FEMA FLOOD INSURANCE RATE MAP No. 25001C-0504-J dated 07/16/2014.
- LOCUS DOES NOT FALL WITHIN THE NATURAL HERITAGE and ENDANGERED SPECIES PROGRAM (NHESP) AREAS OF ESTIMATED HABITATS OF RARE WILDLIFE and PRIORITY HABITATS OF RARE SPECIES.
- THE LOCATION OF UNDERGROUND UTILITIES AS REPRESENTED ON THESE PLANS IS BASED UPON PLANS AND INFORMATION PROVIDED BY THE RESPECTIVE UTILITY COMPANIES OF MUNICIPAL DEPARTMENTS SUPPLEMENTED BY FIELD IDENTIFICATION WHEREVER POSSIBLE. NO WARRANTY IS MADE AS TO THE ACCURACY OF THESE LOCATIONS OR THAT ALL UNDERGROUND UTILITIES ARE SHOWN. THE CONTRACTOR SHALL CONTACT DIG SAFE AT LEAST 72 HOURS PRIOR TO THE START OF CONSTRUCTION. DIG SAFE TELEPHONE NUMBER IS 1-800-322-4844.



PLAN SCALE



Prepared By:



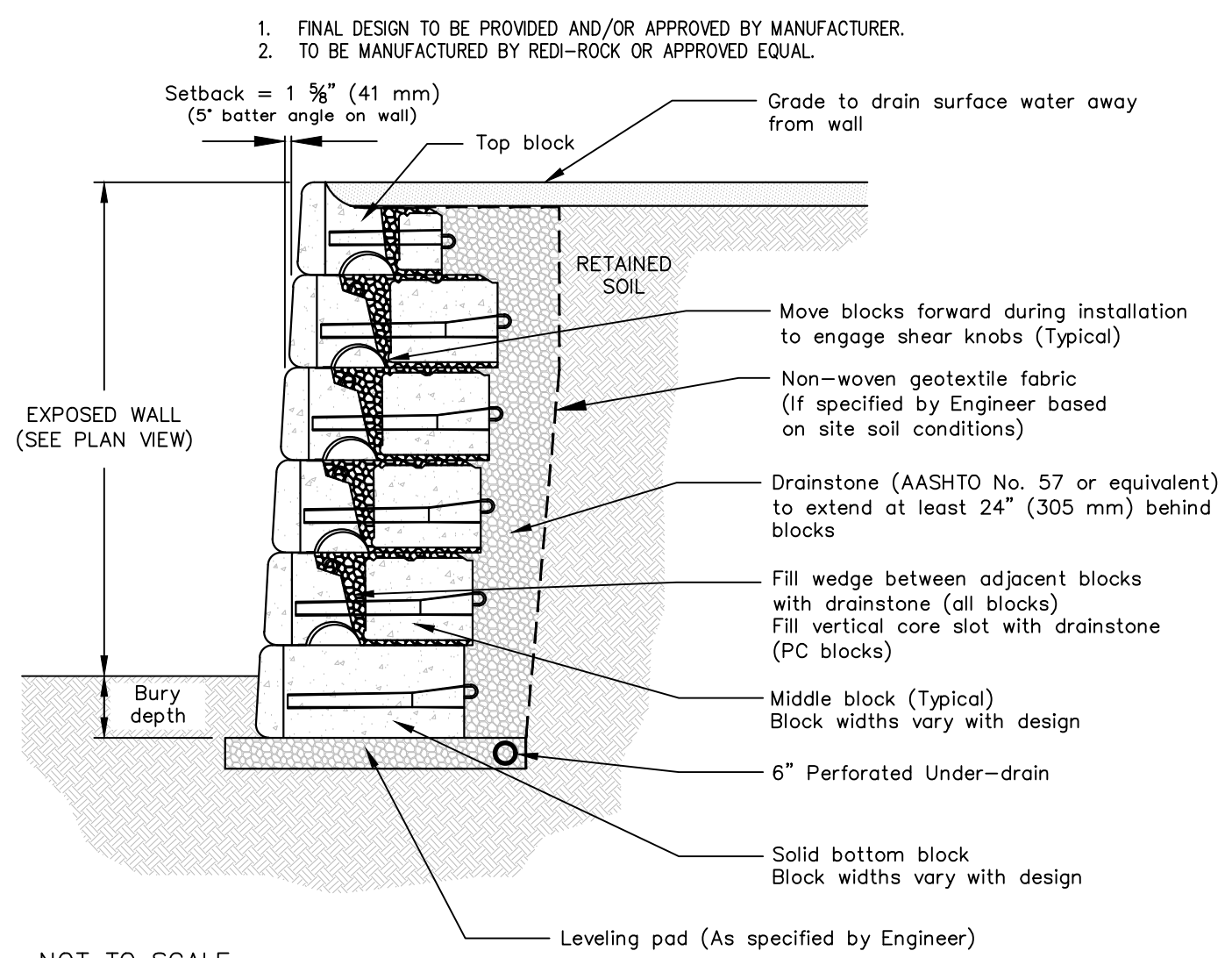
49 HERRING POND ROAD BUZZARDS BAY, MA 02532
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(tel) 508.325.0044 (fax) 508.325.0044
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EXISTING CONDITIONS, EROSION CONTROL & SITE PREPARATION

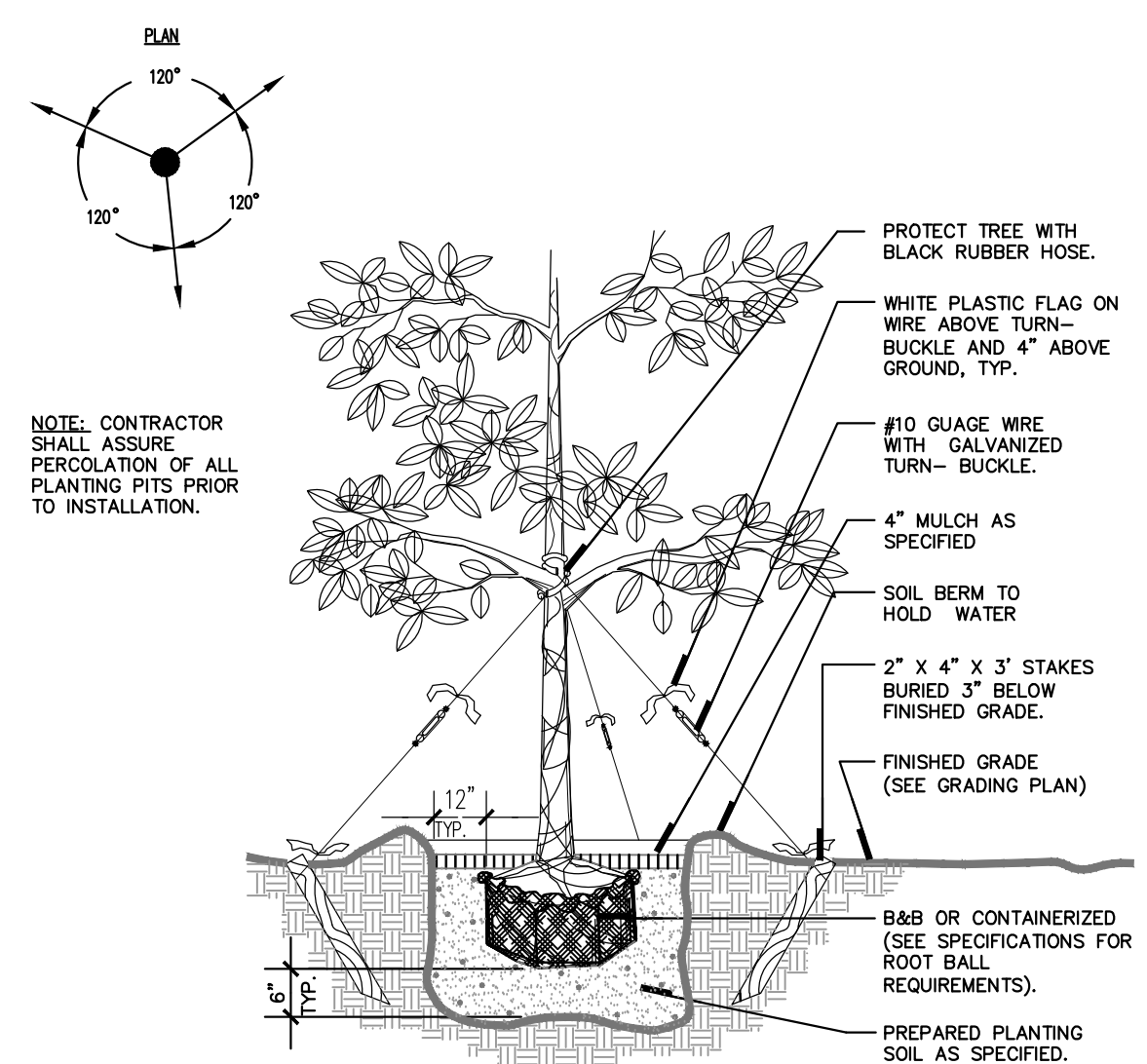
Project: **PROPOSED SITE DEVELOPMENT IN BOURNE, MASSACHUSETTS**
Prepared For: **C & L SHEARER HOLDINGS, LLC.**
#3 FOREST PARK DRIVE
MAP 39.0 PARCEL 77.7

No.	Date	Revision Description	By

Date: SEPTEMBER 5, 2023 Drawn: RED/BEI Checked: ZLB/AMG Sheet: 3 of 8



GRAVITY BLOCK WALL
NOT TO SCALE



LARGE TREE PLANTING DETAIL
NOT TO SCALE

NOTE: APPLY MULCH IN A 6" DIAMETER WHERE PROPOSED TREE PLANTINGS OCCUR IN SOD.

MULCH AS SPECIFIED 4" DEPTH MIN.

SMOOTH CONTINUOUSLY CUT SOD EDGE

TYPICAL OVERSTORY TREE

SEE TYPICAL TREE PLANTING DETAIL FOR TREE STAKING

MULCH RING IN SOD AREA DETAIL
NOT TO SCALE

SYMB.	BOTANICAL NAME	COMMON NAME	SIZE	COMMENTS	QNTY.
GENERAL SITE SHRUBS					
HMN	HYDRANGEA MACROPHYLLA 'NIKKO BLUE'	NIKKO BLUE HYDRANGEA	24"-30" HT	3 GAL. 5' O/C	28
SJN	SPIRAEA JAPONICA 'NEON FLASH'	RED DWARF MOUNDED SPIREA	18"-24" HT	3 GAL. 5' O/C	21
VPTS	VIBURNUM PLICATUM TOMENTOSUM 'SHOSHONI'	COMPACT DOUBLEFILE VIBURNUM	18"-24" HT	3 GAL. 5' O/C	24
GENERAL SITE TREES					
OAK	QUERCUS RUBRA	RED OAK	3" CAL.	B & B	3
HLO	GLEDITSIA TRIACANTHOS	HONEYLOCUST	3" CAL.	B & B	4

- LANDSCAPING NOTES:**
- ALL PLANT STOCK SHALL CONFORM TO ANSI Z260.1 NURSERY STOCK, LATEST EDITION (AMERICAN ASSOCIATION OF NURSERYMEN, INC.).
 - 4" AGED PINEBARK MULCH SHALL BE APPLIED TO ALL SHRUB & GROUND COVER BEDS.
 - PLANT PIT BACKFILL SHALL BE MIXED AT A RATE OF 7 PARTS OF TOPSOIL TO 1 PART OF DEHYDRATED COW MANURE. USE EXISTING ON SITE TOPSOIL AS PART OF BACKFILL WHEN AVAILABLE.
 - ALL LANDSCAPED AREAS NOT PLANTED WITH TREES, SHRUBS OR GROUND COVER SHALL BE RESTORED WITH SEEDING OR SODDING AS INDICATED ON PLANS.
 - ALL SOD, SEED, SHRUB AND TREE AREAS SHALL RECEIVE 6"PH CORRECTED TOPSOIL. AFTER TOP-SOIL IS SPREAD EVENLY OVER ENTIRE AREA, ALL CLODS, LUMPS, STONES AND OTHER DELTERIOUS MATERIAL SHALL BE RAKED UP AND REMOVED.
 - APPLICATION OF GRASS SEED, FERTILIZERS, LIME AND MULCH SHALL BE ACCOMPLISHED BY BROADCAST SEEDING OR HYDROSEEDING AT THE RATES OUTLINED.
 - NEWLY GRADED AREAS REQUIRING SLOPE PROTECTION OUTSIDE OF NORMAL SEEDING SEASON SHALL RECEIVE HAY MULCH AT THE APPROXIMATE RATE OF NO MORE THAN 3 TONS PER ACRE.
 - ANY CHANGES IN PLANT LOCATIONS OR TYPE SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
 - CLEAR AND GRUB (TO LIMITS SHOWN ON GRADING PLAN) TO REMOVE TREES, ROCKS, DEBRIS, ROOTS, ETC. STUMPS SHALL BE REMOVED AND DISPOSED OF OFF SITE IN ACCORDANCE WITH STATE REGULATIONS. AFTER CLEARING, ROTOTILL, STRIP AND STOCKPILE ALL ON-SITE TOPSOIL FOR REUSE TO THE MAXIMUM EXTENT POSSIBLE.
 - FOR SEED AND SOD AREAS G.C. TO USE EXISTING TOPSOIL, IF AVAILABLE, FOR A 4" DEPTH AND TOP DRESS WITH 2" OF SCREENED TOPSOIL, UNLESS OTHERWISE NOTED ON PLAN.
 - ALL TREES, SHRUBS AND SOD SHALL BE GUARANTEED BY THE CONTRACTOR FOR ONE YEAR AFTER ACCEPTANCE.

ZONING DISTRICT: B4		
REQUIRED	PROVIDED	
MINIMUM LOT AREA	40,000 S.F.	40,000 S.F.
MINIMUM FRONTAGE	150'	209.42'
MINIMUM FRONT YARD	30'	39.8'±
MINIMUM SIDE YARD	30'	31.9'±
MINIMUM REAR YARD	30'	31'±
MAXIMUM LOT COVERAGE	25%	24.9%
MAXIMUM HEIGHT	40'	<40'
MINIMUM USABLE OPEN SPACE	40%	52.8%
MAXIMUM GROUND COVER REMOVAL	70% WITHOUT S.P.	89.2%
MAXIMUM IMPERVIOUS COVERAGE	40% WITHOUT S.P.	47.7%

ADA PARKING SUMMARY
per §521 CMR 23.2.1

REQUIRED:
TOTAL PARKING SPACES = 10
MIN. ACCESSIBLE SPACES REQUIRED = 1 (MIN. OF 1 VAN ACCESSIBLE)

PROVIDED:
(1) VAN ACCESSIBLE SPACE

PARKING SUMMARY
per §3300 & TABLE 3320

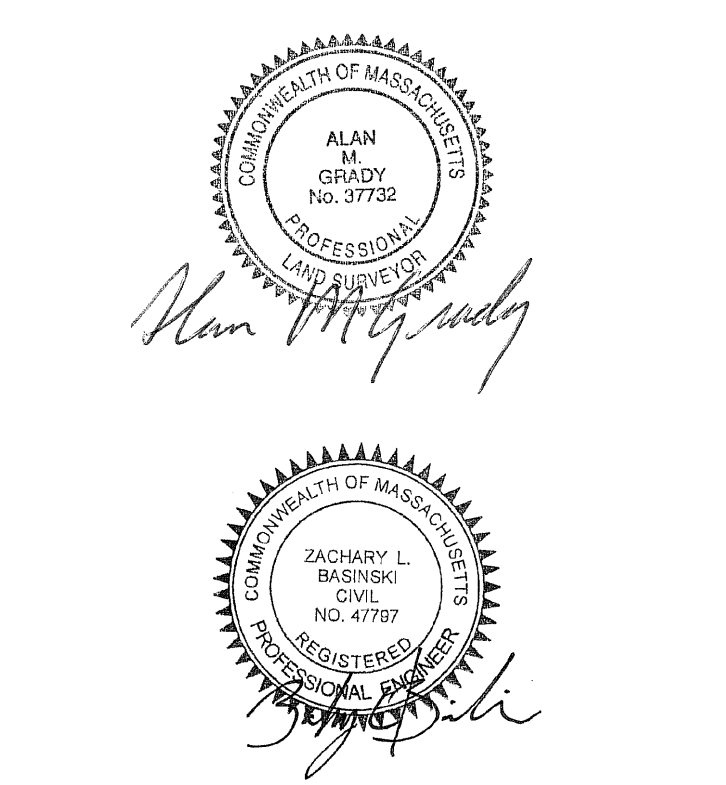
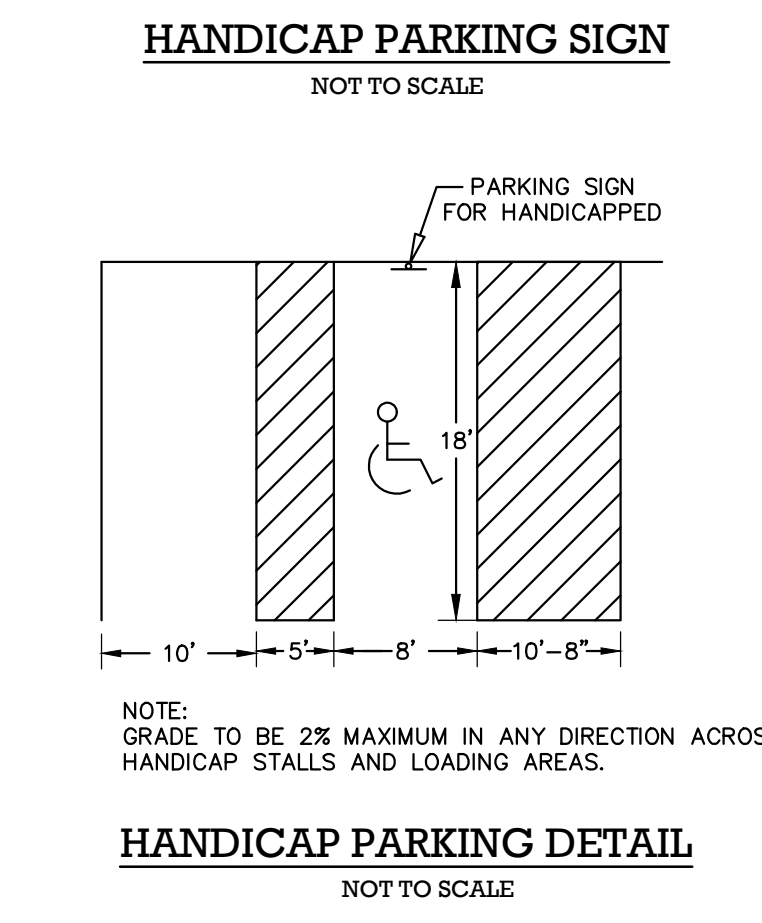
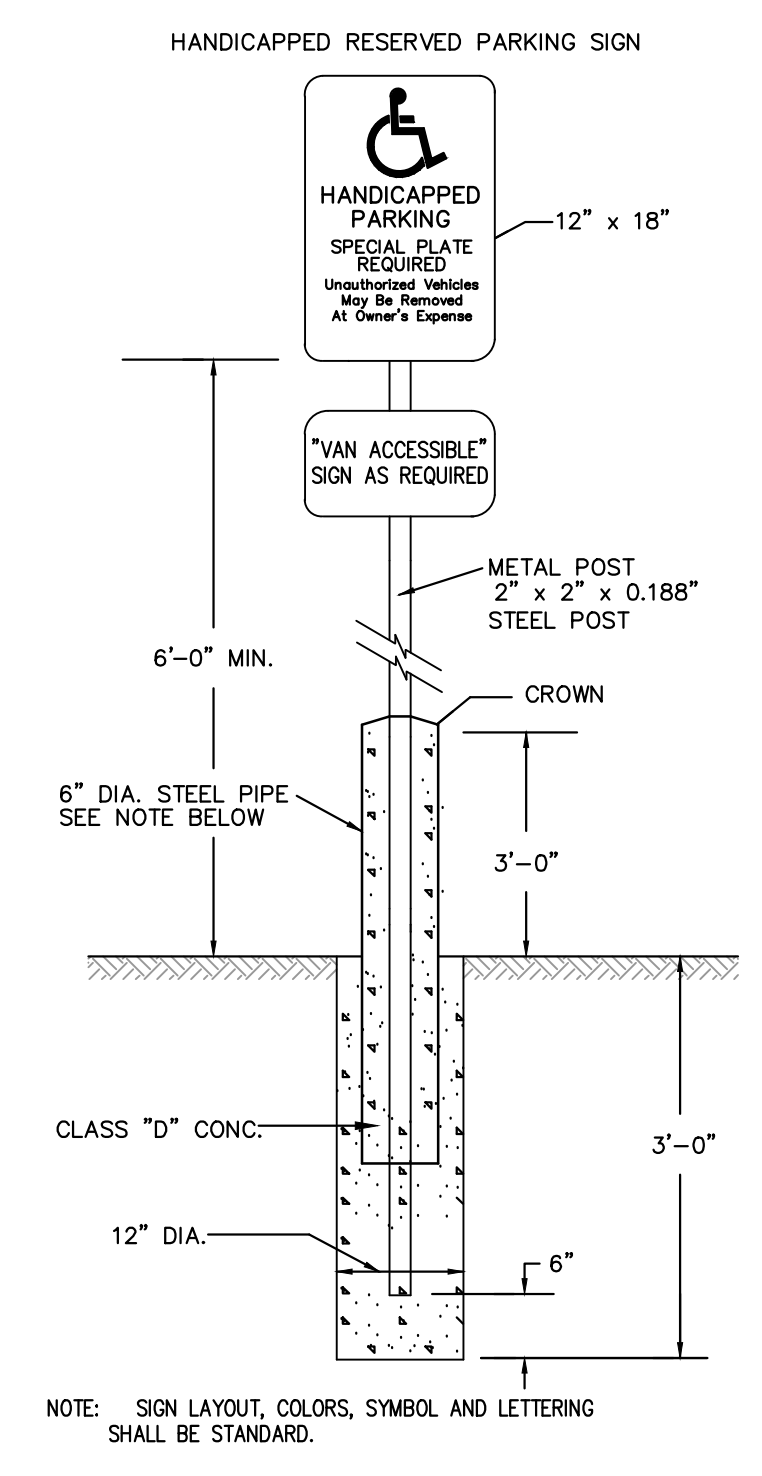
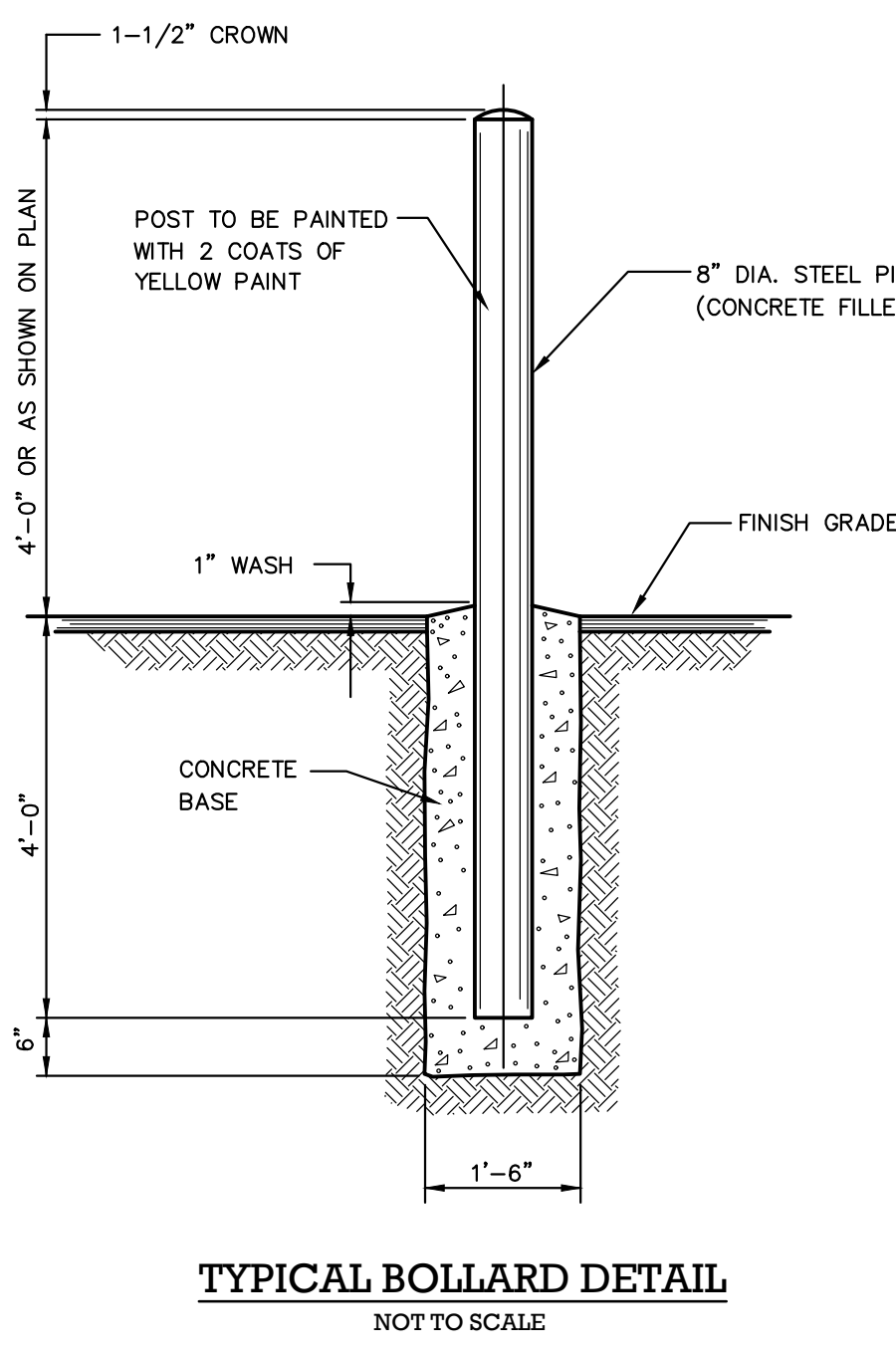
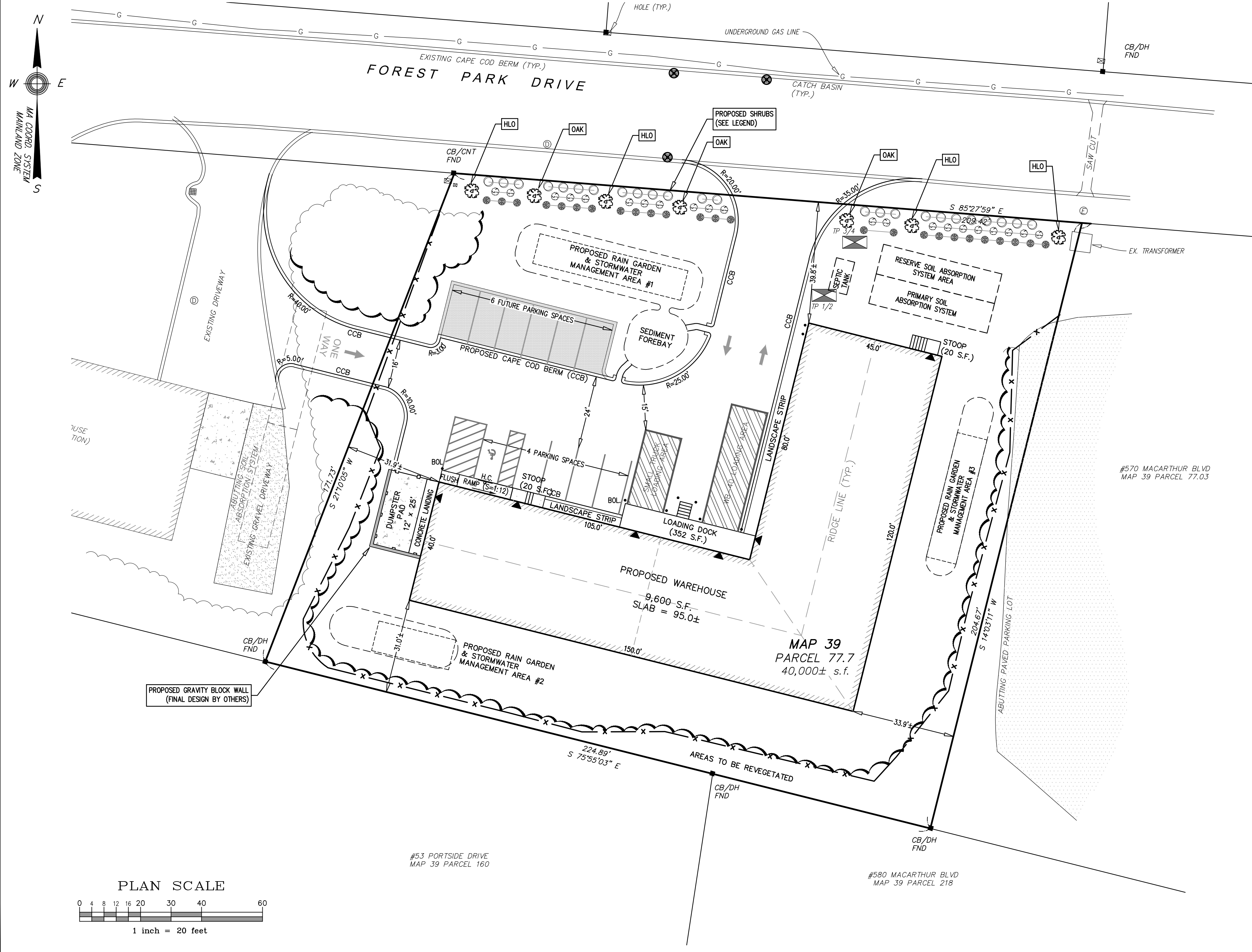
USE	REQUIRED	TOTAL
WAREHOUSE	1 per 1,000 S.F.	10
TOTAL REQUIRED = 10 SPACES		
TOTAL PROVIDED = 10 SPACES		

NOTE: 4 SPACES (INCLUDING ADA SPACES) TO BE CONSTRUCTED. 6 REMAINING SPACES TO BE CONSTRUCTED AS NEEDED IN FUTURE.

- NOTE:**
- THE LOCUS IS LOCATED WITHIN A WATER RESOURCE DISTRICT AND IS SUBJECT TO THE PROHIBITIONS AND LIMITATIONS OF §4700 OF THE BOURNE ZONING BYLAW. THESE INCLUDE BUT ARE NOT LIMITED TO:
- NO MOTOR VEHICLE SERVICE, WASHING OR REPAIR
 - NO STORAGE OF ICE REMOVAL CHEMICALS
 - NO STORAGE OF LIQUID HAZARDOUS MATERIAL AS DEFINED IN MGL C.21E UNLESS IN A FREESTANDING CONTAINER WITHIN A BUILDING WITH ADEQUATE SECONDARY CONTAINMENT
 - NO STORAGE OF COMMERCIAL FERTILIZERS AND SOLID CONDITIONERS UNLESS WITHIN A STRUCTURE DESIGNED TO PREVENT GENERATION AND ESCAPE OF CONTAMINATED RUNOFF OR LEACHATE.

PLANTING SUMMARY
per §3500

USE	REQUIRED	REQUIRED	PROPOSED
TREES	1 TREE / 30 L.F.	7	7
SHRUBS	1 SHRUB / 3 L.F.	70	70



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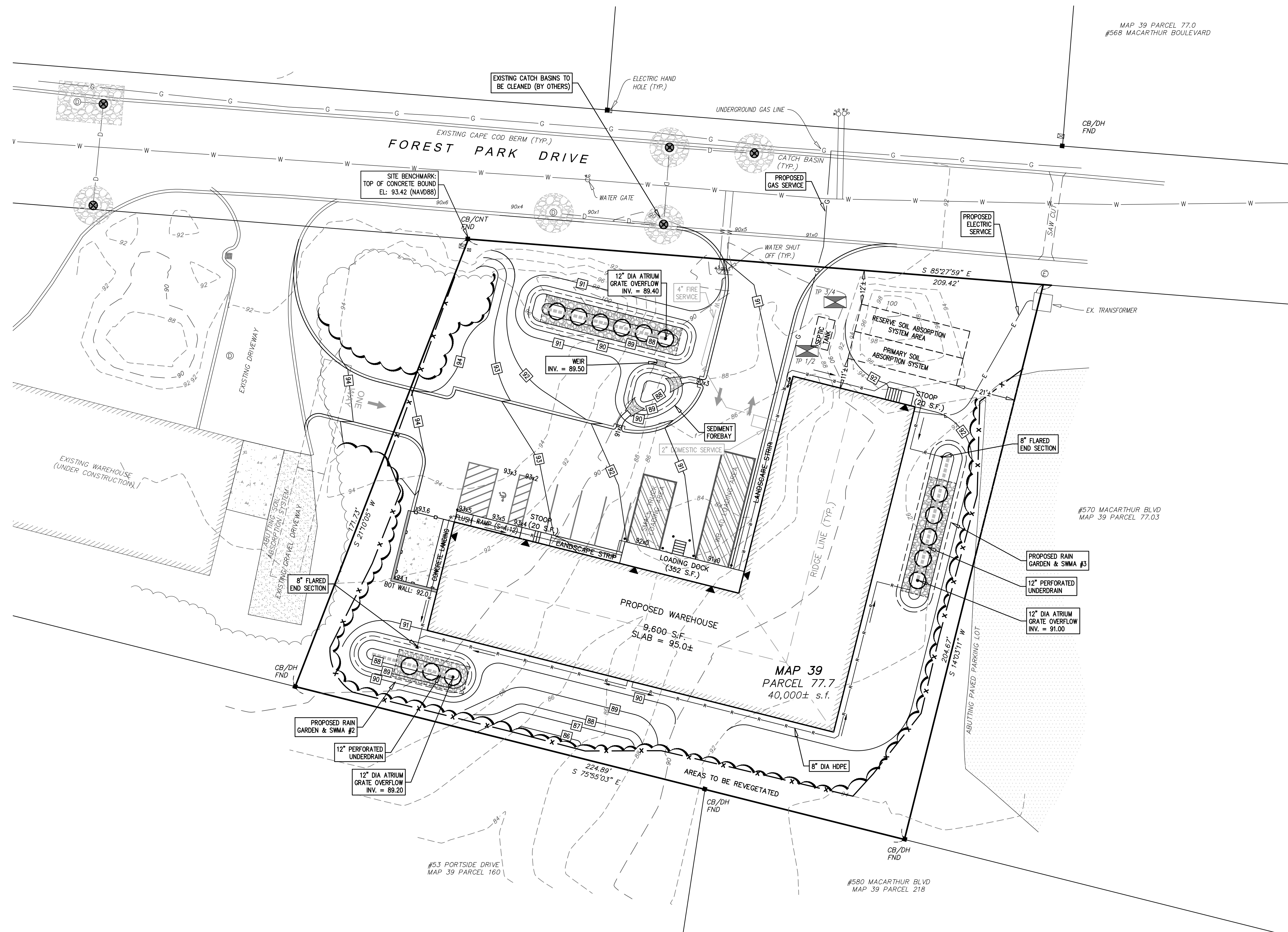
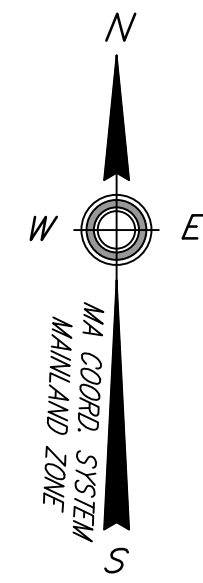
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Sheet Title: **LAYOUT, ZONING & LANDSCAPING**

Project: **PROPOSED SITE DEVELOPMENT IN BOURNE, MASSACHUSETTS**
Prepared For: **C & L SHEARER HOLDINGS, LLC.**
#3 FOREST PARK DRIVE
MAP 39.0 PARCEL 77.7

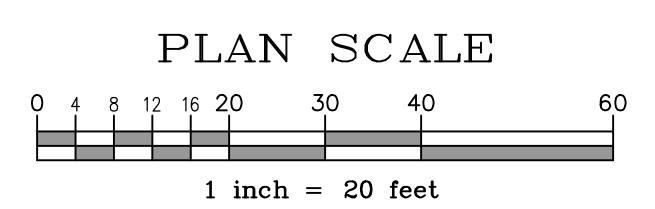
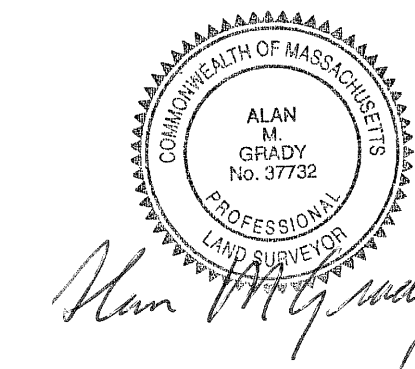
No.	Date	Revision	Description	By
1	SEPTEMBER 5, 2023			RED/BEI

Date: SEPTEMBER 5, 2023 Drawn: RED/BEI Checked: ZLB/AMG Sheet: 4 of 8



DRAINAGE NOTES:

1. BENCHMARK: ELEVATION = 93.42 (NAVD88)
TOP OF CONCRETE BOUND
3. ALL BURIED DRAINAGE COMPONENTS SHALL BE MARKED WITH MAGNETIC TAPE OR A COMPARABLE MEANS IN ORDER TO LOCATE THEM ONCE BURIED.
4. THE LOCATION OF UNDERGROUND UTILITIES AS REPRESENTED ON THESE PLANS IS BASED UPON PLANS AND INFORMATION PROVIDED BY THE RESPECTIVE UTILITY COMPANIES OF MUNICIPAL DEPARTMENTS SUPPLEMENTED BY FIELD IDENTIFICATION WHEREVER POSSIBLE. NO WARRANTY IS MADE AS TO THE ACCURACY OF THESE LOCATIONS OR THAT ALL UNDERGROUND UTILITIES ARE SHOWN. THE CONTRACTOR SHALL CONTACT DIG SAFE AT LEAST 72 HOURS PRIOR TO THE START OF CONSTRUCTION. DIG SAFE TELEPHONE NUMBER IS 1-800-322-4844.
5. ALL ROOF LEADERS SHALL BE CONNECTED RAIN GARDENS #2 & #3 FOR PRETREATMENT PRIOR TO INFILTRATION.
6. FINAL PLANT SELECTION FOR RAIN GARDENS TO BE COORDINATED.
7. NO SLOPE SHALL BE CUT GREATER THAN 3:1 NOR FILLED GREATER THAN 4:1.
8. RAIN GARDEN SIDE SLOPES SHALL BE ESTABLISHED AT 3:1.



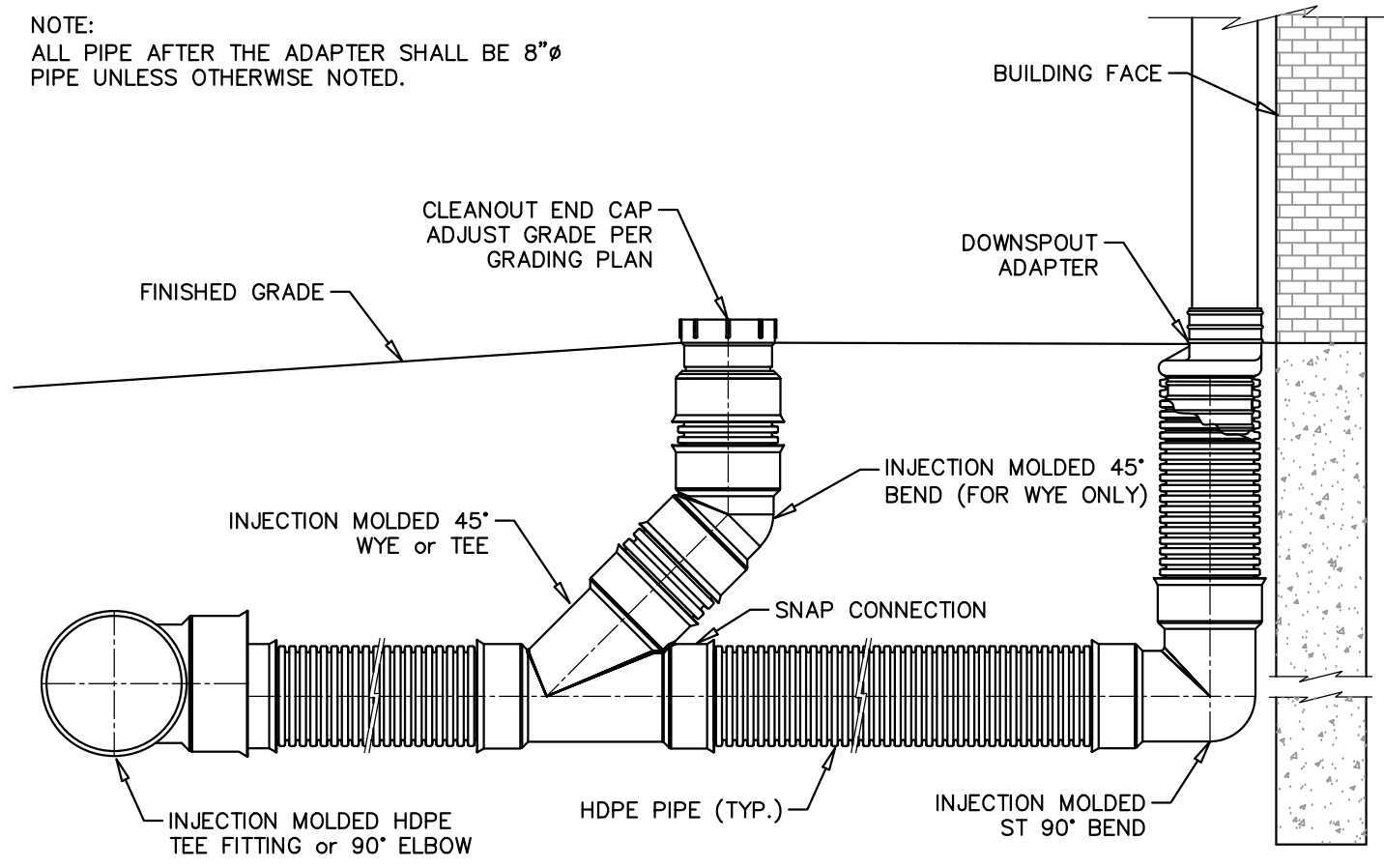
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Sheet Title:
GRADING & DRAINAGE

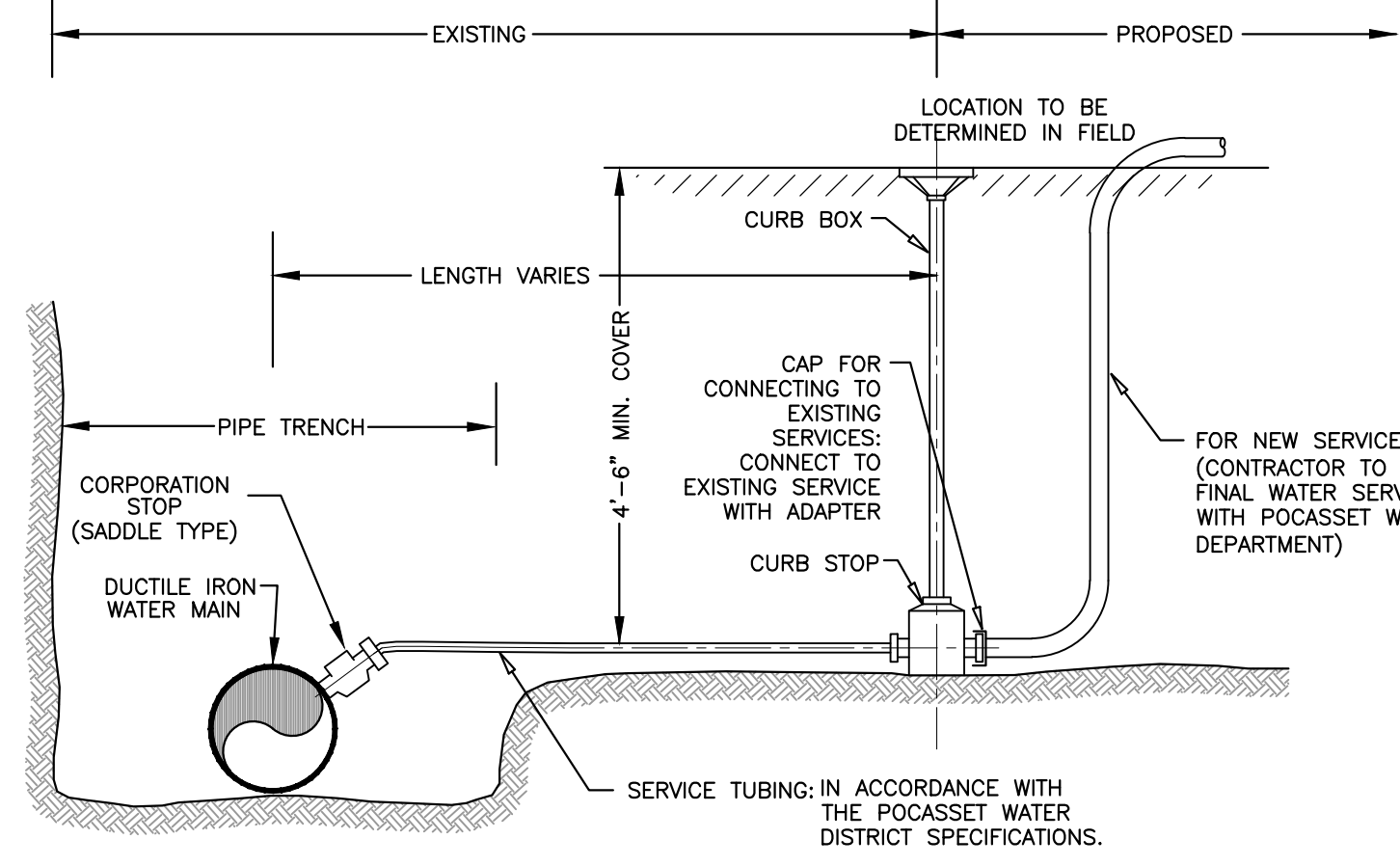
Project:
PROPOSED SITE DEVELOPMENT IN BOURNE, MASSACHUSETTS
 Prepared For:
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 #3 FOREST PARK DRIVE
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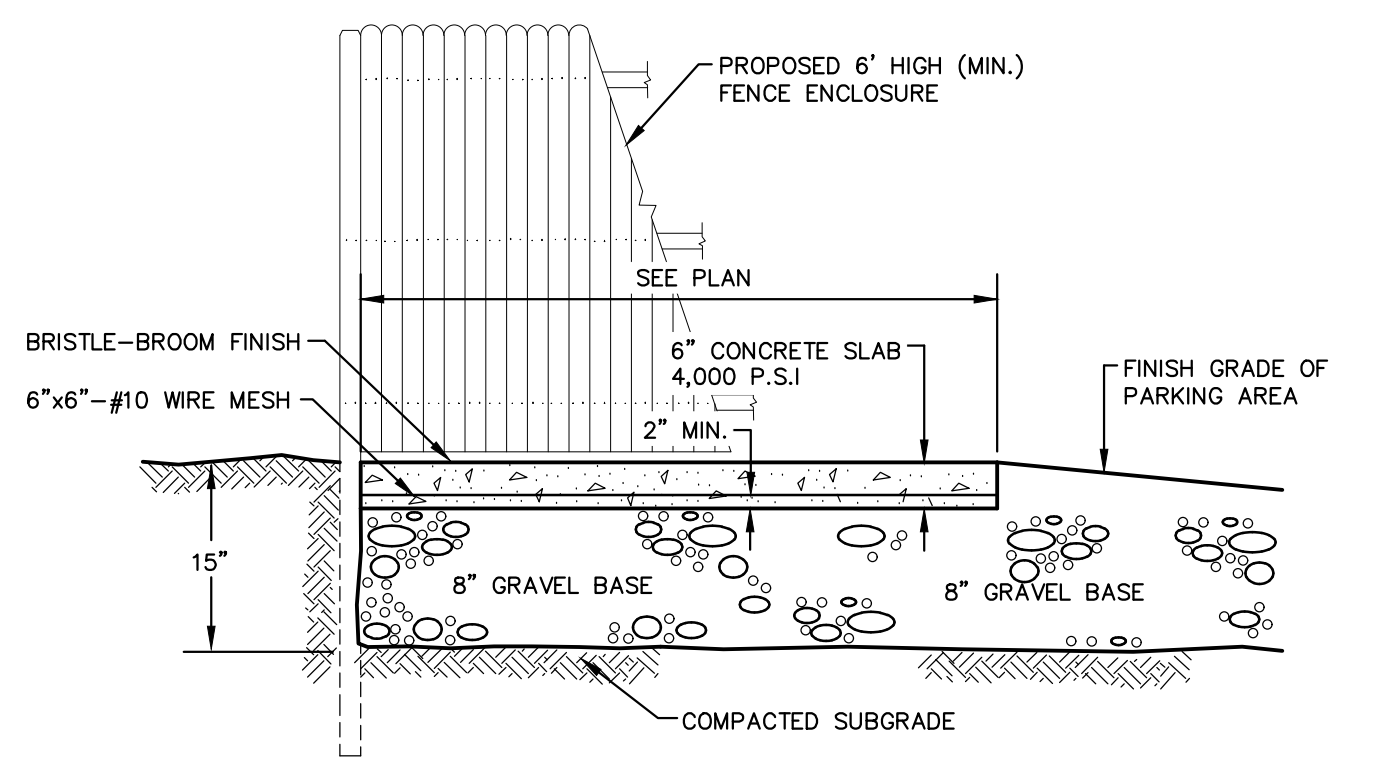
Date: SEPTEMBER 5, 2023 Drawn: RED/BE Checked: ZLB/AMG Sheet: 5 of 8



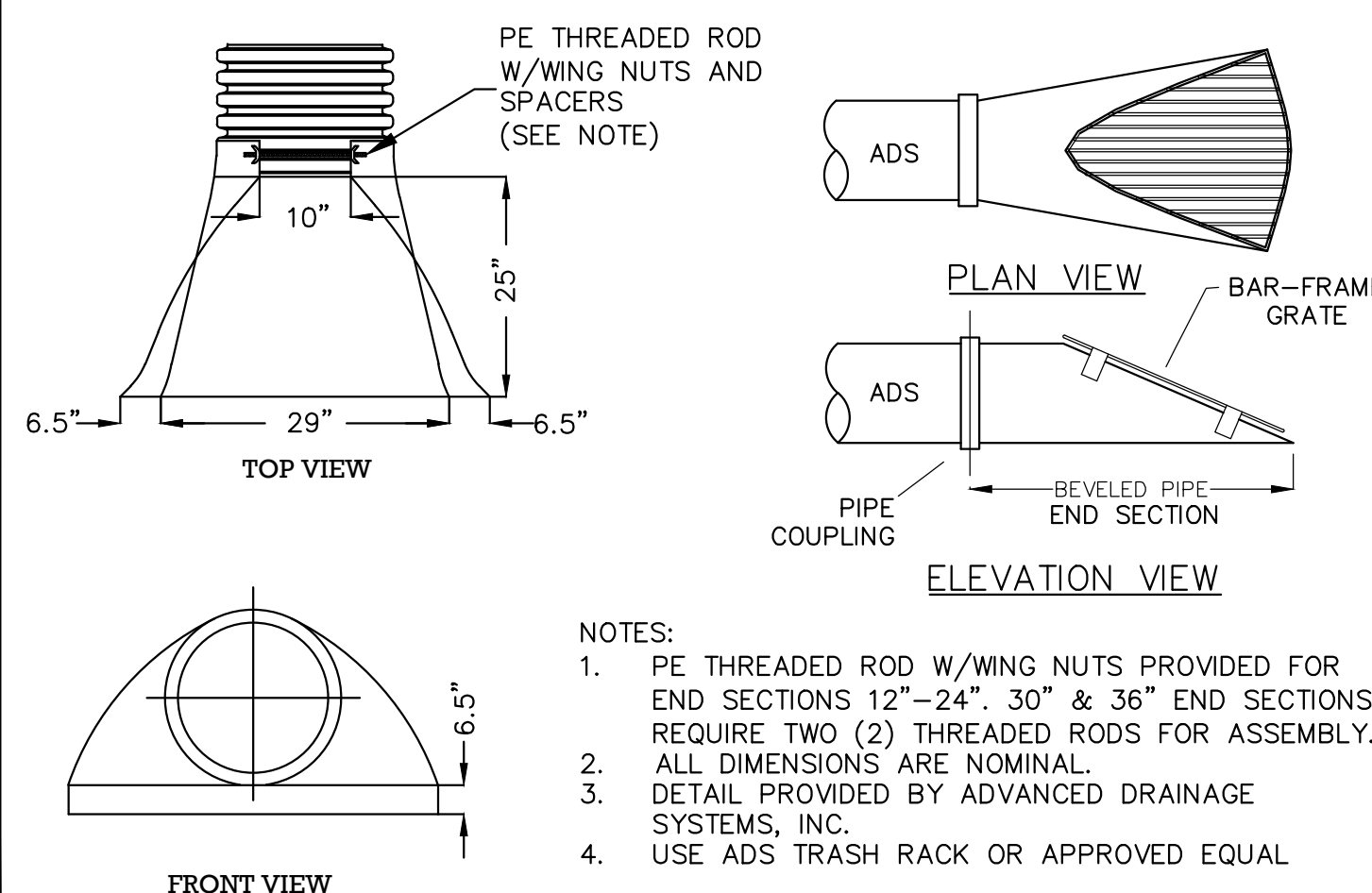
TYPICAL ROOF DRAIN DETAIL
NOT TO SCALE



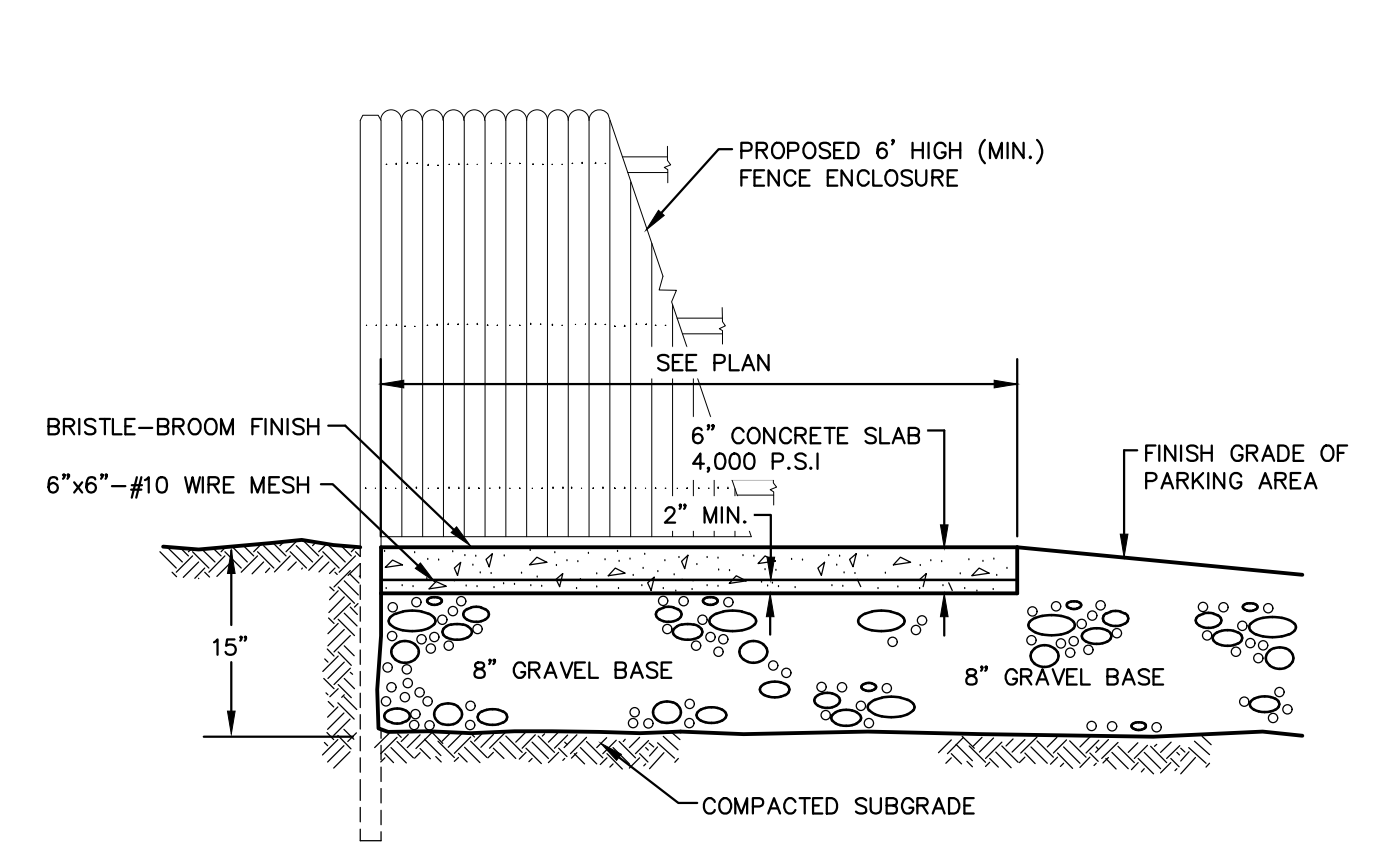
TYPICAL WATER SERVICE CONNECTION
NOT TO SCALE



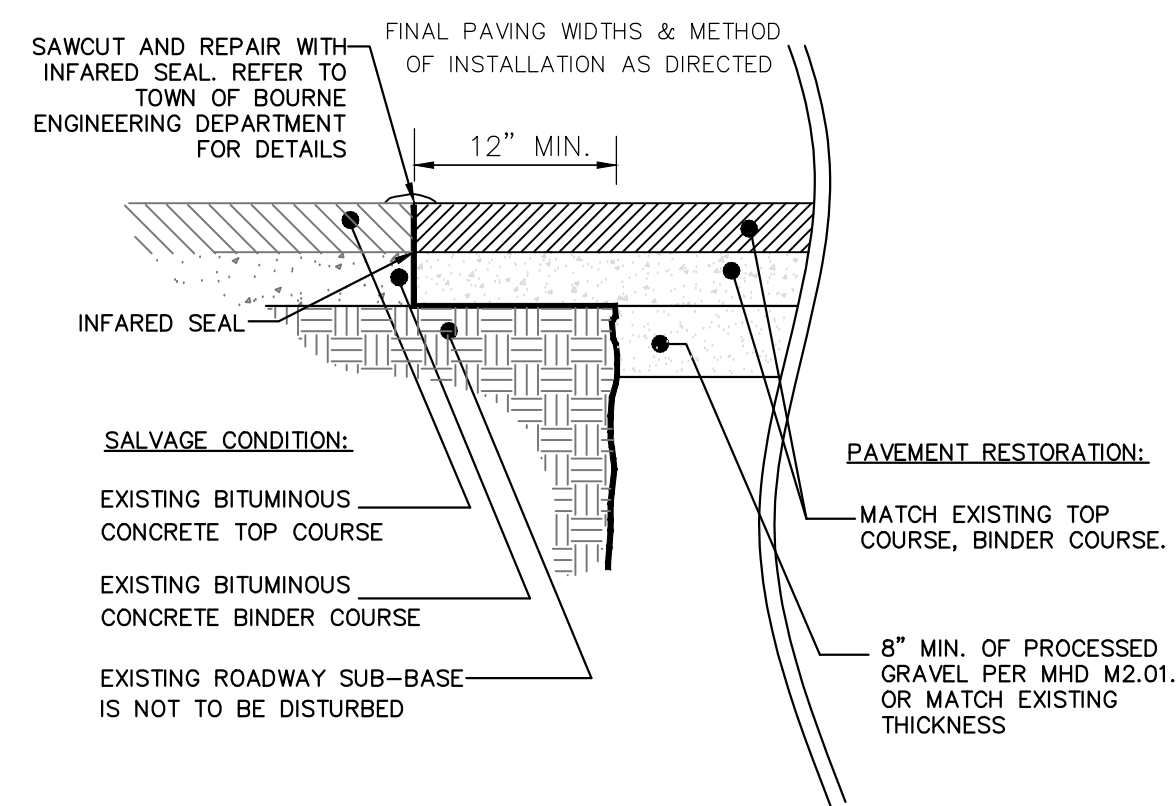
CONCRETE PAD and FENCE FOR TRASH CONTAINER
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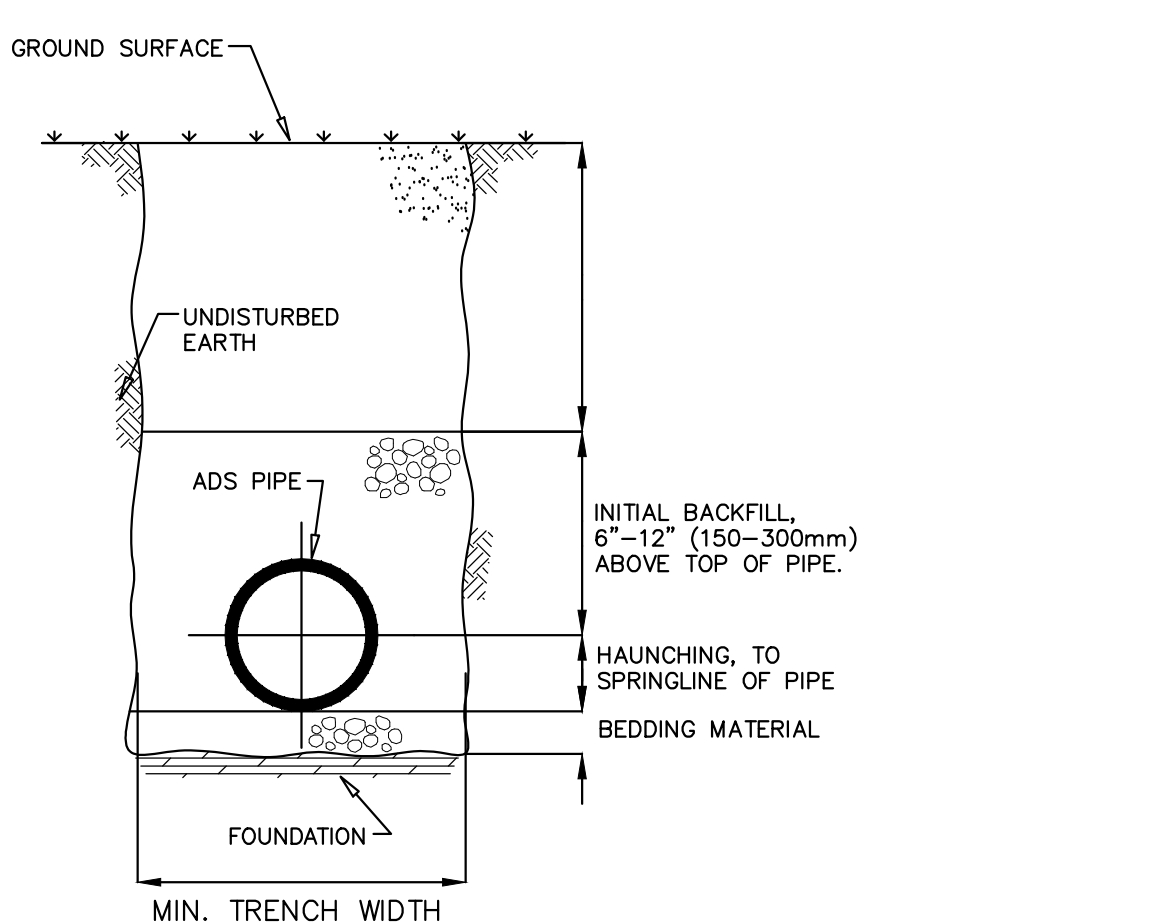
FLARED END SECTION & TRASH RACK DETAIL
NOT TO SCALE



CONCRETE PAD and FENCE FOR TRASH CONTAINER
NOT TO SCALE



PAVEMENT SAW CUT & INFRARED SEAL DETAIL
NOT TO SCALE

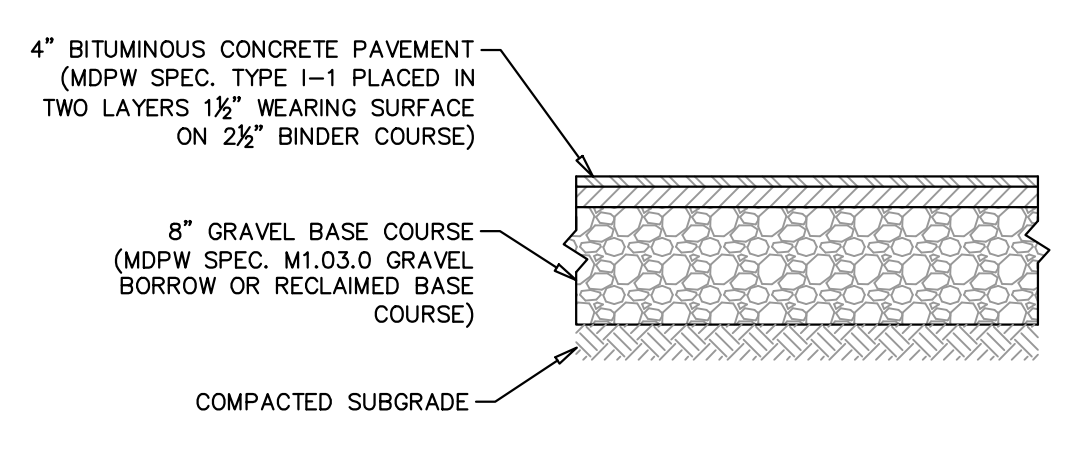


- NOTES:**
- FOUNDATION:** WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH A FOUNDATION OF CLASS I OR II MATERIAL AS DEFINED IN ASTM D2321.
 - STANDARD PRACTICE FOR INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS:** LATEST EDITION; AS AN ALTERNATIVE AND AT THE DISCRETION OF THE ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A WOVEN GEOTEXTILE FABRIC.
 - MINIMUM BEDDING THICKNESS SHALL BE 4" (100MM) FOR 4"-24" (100-600MM) AND 42"-48" (1050-1200MM) CORRUGATED POLYETHYLENE PIPE (CPEP); 6" (150MM) FOR 30"-36" (750-900MM) CPEP.**
 - MINIMUM TRENCH WIDTHS SHALL BE AS FOLLOWS:**

NOMINAL ϕ in (mm)	MIN. RECOMMENDED TRENCH WIDTH, in (mm)
8 (200)	25 (630)
10 (250)	28 (710)
12 (300)	31 (790)
15 (375)	34 (860)
18 (450)	39 (990)
 - MINIMUM COVER:** MINIMUM RECOMMENDED DEPTHS OF COVER FOR VARIOUS LIVE LOADING CONDITIONS ARE SUMMARIZED IN THE FOLLOWING TABLE. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE TAKEN FROM THE TOP OF PIPE TO THE GROUND SURFACE.

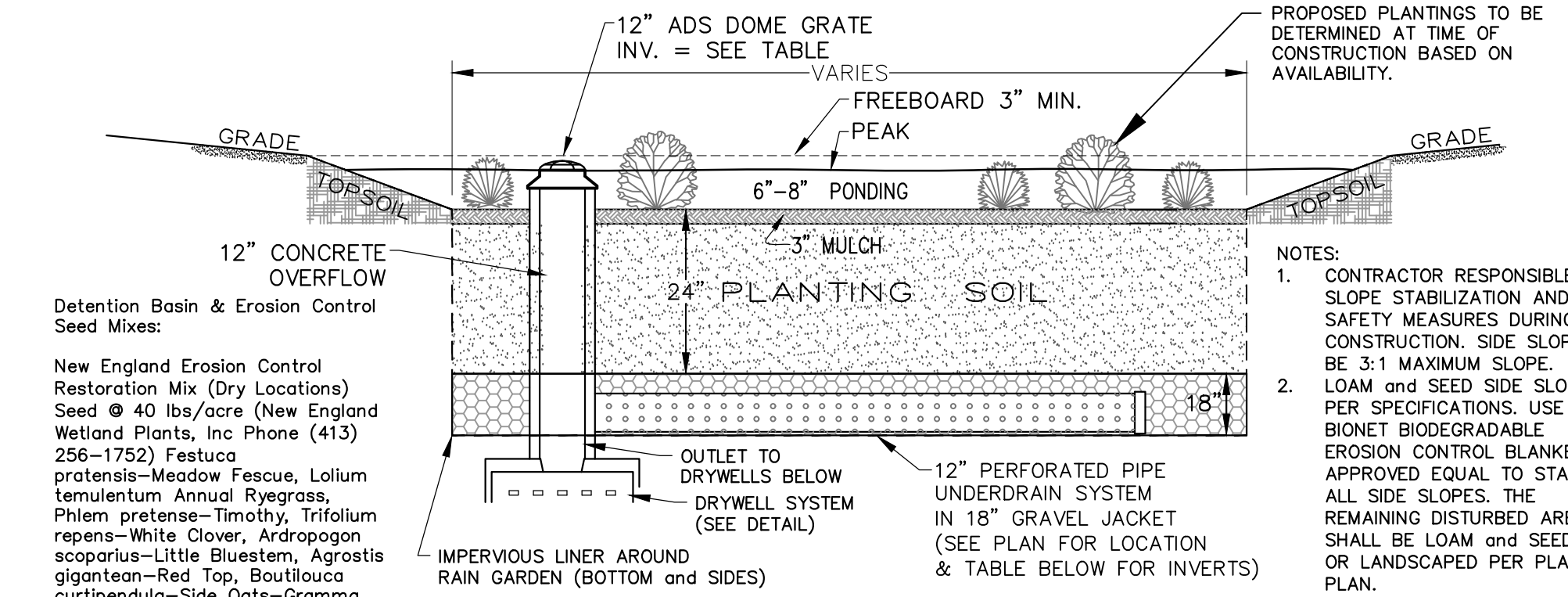
SURFACE LIVE LOADING CONDITION	MINIMUM RECOMMENDED COVER, in (mm)
H25 (FLEXIBLE PAVEMENT)	12 (300)*
H25 (RIGID PAVEMENT)	12 (300)
EBD RAILWAY	24 (610)
HEAVY CONSTRUCTION	48 (1220)
- MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
- MINIMUM BEDDING THICKNESS SHALL BE 4" (100MM) FOR 4"-24" (100-600MM) AND 42"-48" (1050-1200MM) CORRUGATED POLYETHYLENE PIPE (CPEP); 6" (150MM) FOR 30"-36" (750-900MM) CPEP.
- *TOP OF PIPE TO BOTTOM OF BITUMINOUS PAVEMENT SECTION

TRENCH CROSS-SECTION & A.D.S. PIPE INSTALLATION DETAIL
NOT TO SCALE



- NOTE:**
- SANDY LOAM and/or LOAMY SAND TOPSOIL MATERIAL SHALL BE EXCAVATED FROM ALL PAVED AREAS PRIOR TO SUB-BASE INSTALLATION.
 - SUB-GRADE (EXISTING MATERIAL) SHALL CONSIST OF INERT MATERIAL THAT IS HARD, DURABLE STONE and/or COARSE SAND, FREE FROM LOAM and CLAY TO A DEPTH NOT LESS THAN 4 FEET BELOW THE FINISH PAVEMENT SURFACE.
 - SUBGRADE FILL SHALL BE COMPACTED TO 95% COMPACTION UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
 - SEE LAYOUT PLAN FOR PAVEMENT WIDTH and LOCATION.
 - SEE GRADING PLAN FOR PAVEMENT SLOPE and CROSS SLOPE.
 - PRIOR TO INSTALLING THE WEARING COURSE, THE EXISTING BINDER COURSE SURFACE SHALL BE SWEEP COMPLETELY CLEAN BY A STREET SWEEPING MACHINE AND A TACK COAT SHALL BE INSTALLED TO A LEVEL APPROVED BY THE ENGINEER.

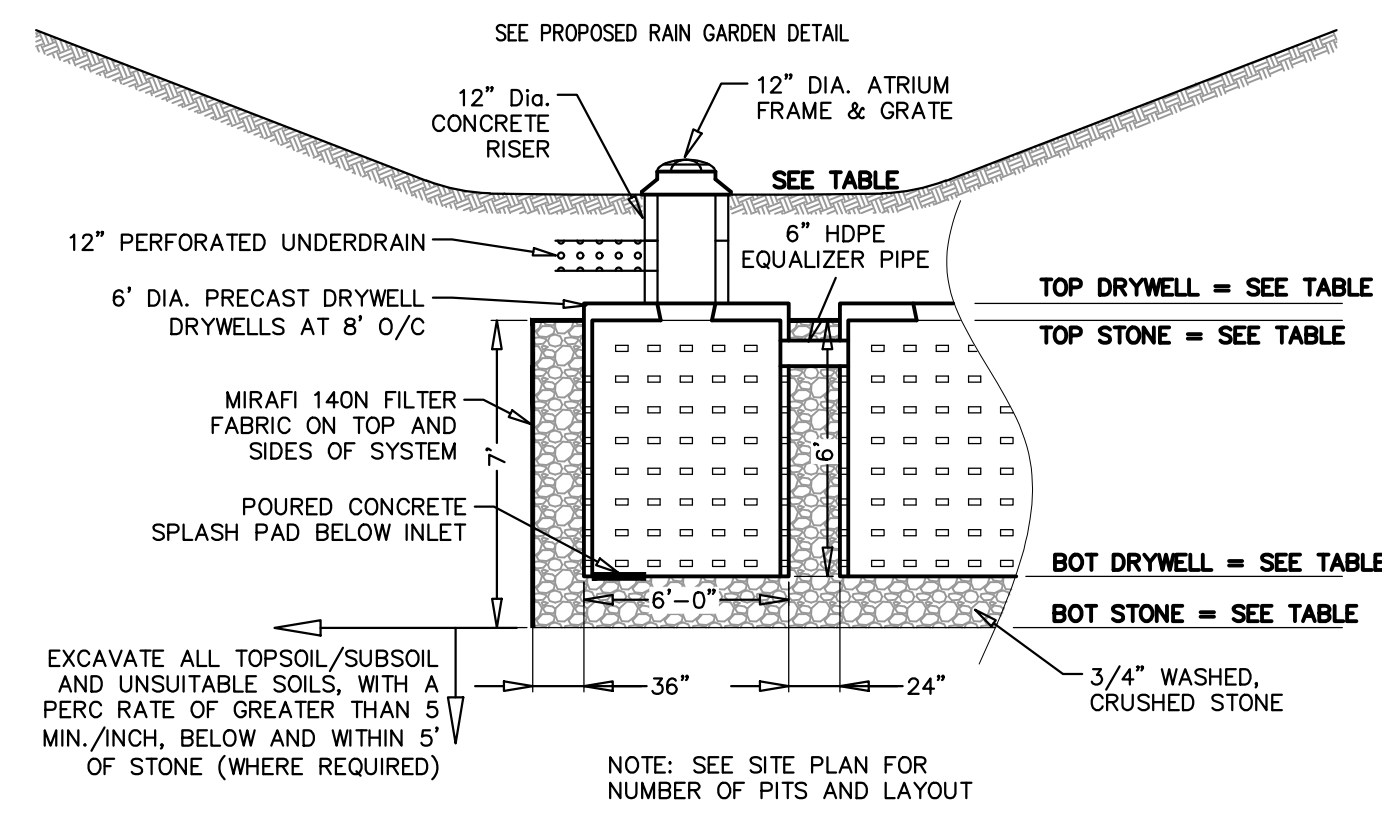
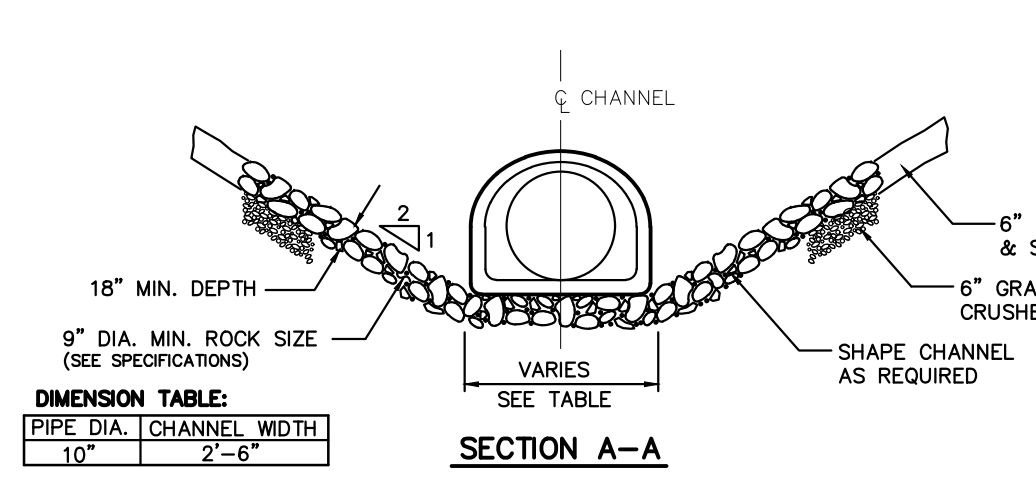
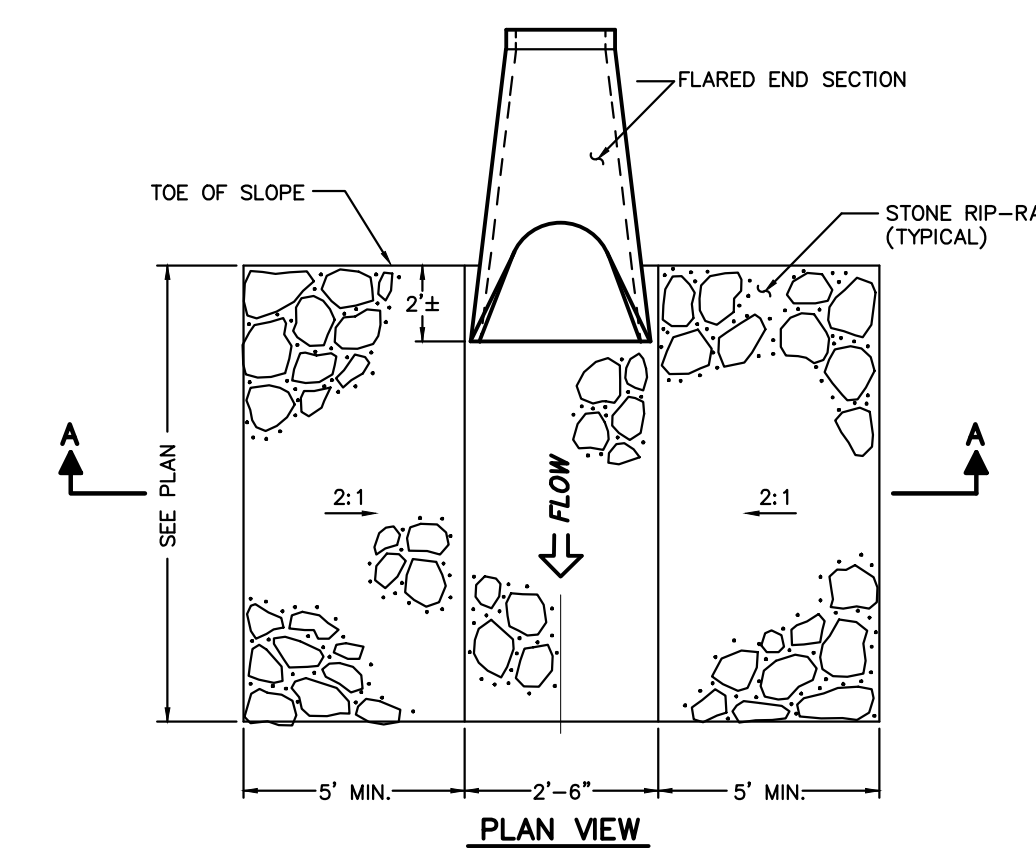
PARKING AREA PAVEMENT SECTION
NOT TO SCALE



ELEVATION SCHEDULE	TOP OF MULCH/BASIN BOTTOM	TOP OF PLANTING SOIL	BOTTOM OF PLANTING SOIL	OVERFLOW RIM ELEVATION	UNDERDRAIN INVERT	25 YEAR PEAK	100 YEAR PEAK
RAIN GARDEN #1	88.00	87.75	86.00	89.40	84.50	82.74	88.86
RAIN GARDEN #2	88.00	87.75	86.00	89.20	84.50	86.88	89.33
RAIN GARDEN #3	90.00	89.75	88.00	91.00	86.50	84.58	90.20

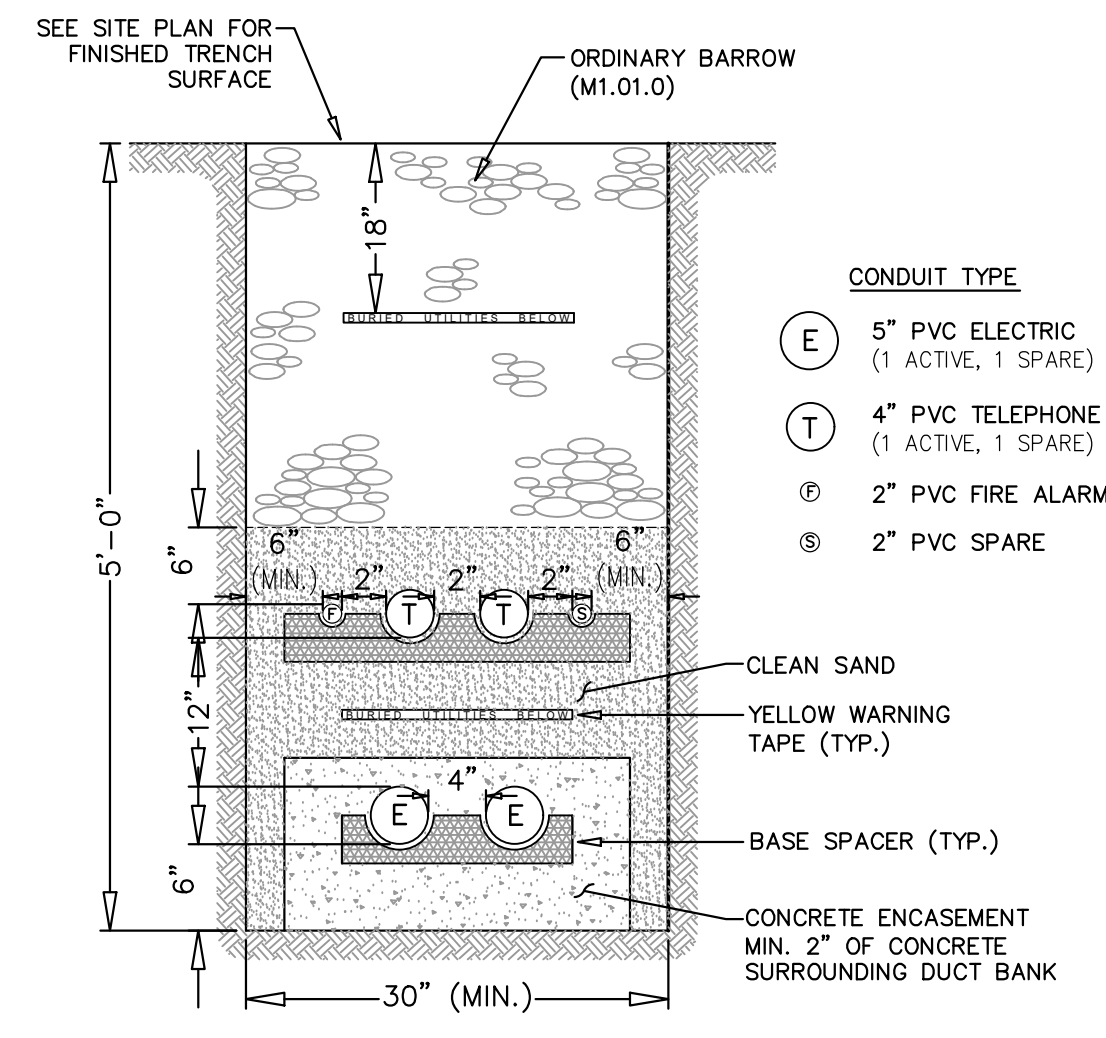
- USE ENGINEERED SOIL MIX FOR BIOTENTION/RAIN GARDEN SYSTEMS
- THE SOIL MIX SHOULD BE A MIXTURE OF SAND, COMPOST AND SOIL (40% SAND; 20-30% TOPSOIL; 30-40% COMPOST)
 - THE SOIL MIX MUST BE UNIFORM, FREE OF STONES, STUMPS, ROOTS OR SIMILAR OBJECTS LARGER THAN 2 INCHES. CLAY CONTENT SHOULD NOT EXCEED 5%.
 - SOIL pH SHOULD GENERALLY BE BETWEEN 5.5-6.5.
 - USE SOILS WITH 15% TO 3% ORGANIC CONTENT AND MAXIMUM 500 ppm SOLUBLE SALTS.
 - THE SAND COMPONENT SHOULD BE GRAVELY SAND THAT MEETS ASTM D422.
 - ON-SITE SOIL MIXING OR PLACEMENT IS NOT ALLOWED IF SOIL IS SATURATED OR SUBJECT TO WATER WITHIN 48 HOURS. COVER AND STORE SOIL TO PREVENT WETTING OR SATURATION.
 - PLACE PLANTING SOILS IN 6" LIFTS AND COMPACT WITH MINIMAL PRESSURE UNTIL THE DESIRED ELEVATION IS REACHED.

RAIN GARDEN DETAIL
NOT TO SCALE



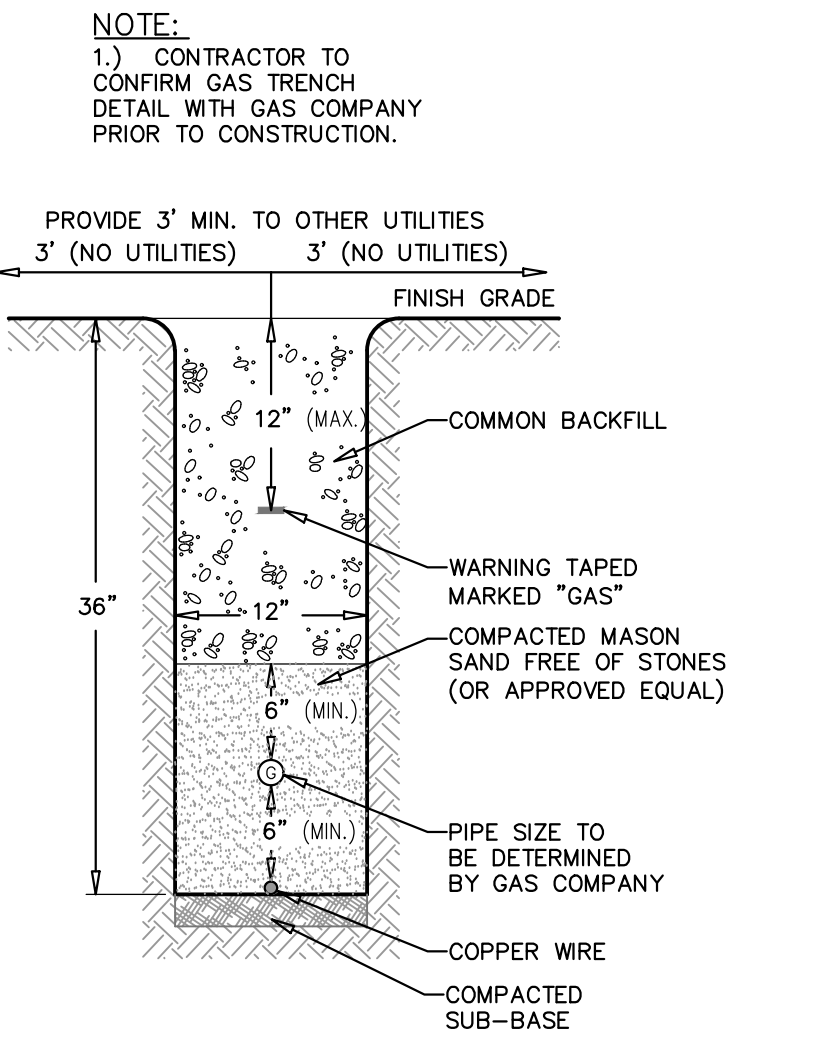
ELEVATION SCHEDULE	INLET RIM ELEVATION	TOP OF DRYWELL	TOP OF STONE	12" INVERT IN	BOTTOM OF DRYWELL	BOTTOM OF STONE
SWMA #1	88.00	83.50	82.83	84.50	77.50	76.50
SWMA #2	88.00	83.50	86.00	84.50	77.50	76.50
SWMA #3	88.00	85.50	86.00	86.50	79.50	78.50

STORMWATER MANAGEMENT AREA DETAIL
NOT TO SCALE



ALL TRENCH CONDUITS SHALL BE SCHEDULE 40 PVC, UNLESS OTHERWISE NOTED. FINAL CONFIGURATION SUBJECT TO CHANGE BASED ON FINAL UTILITY COMPANY DESIGN.

COMMON TRENCH DETAIL
ELECTRIC/TELEPHONE/FIRE ALARM/CABLE
NOT TO SCALE



TYPICAL NATURAL GAS TRENCH DETAIL
NOT TO SCALE

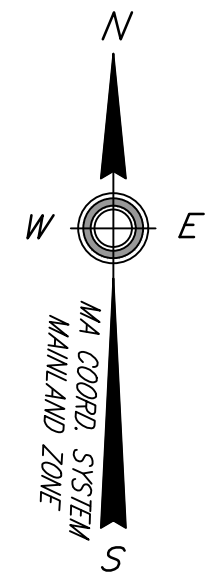


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Sheet Title:
CONSTRUCTION DETAILS

Project:
PROPOSED SITE DEVELOPMENT IN BOURNE, MASSACHUSETTS
Prepared For:
C & L SHEARER HOLDINGS, LLC.
#3 FOREST PARK DRIVE MAP 39.0 PARCEL 77.7

No.	Date	Revision Description	By
1	SEPTEMBER 5, 2023	Drawn: ZLB/AMG	Checked: ZLB/AMG

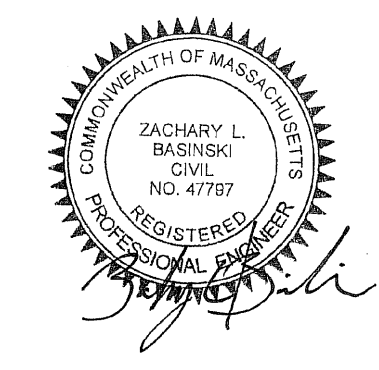
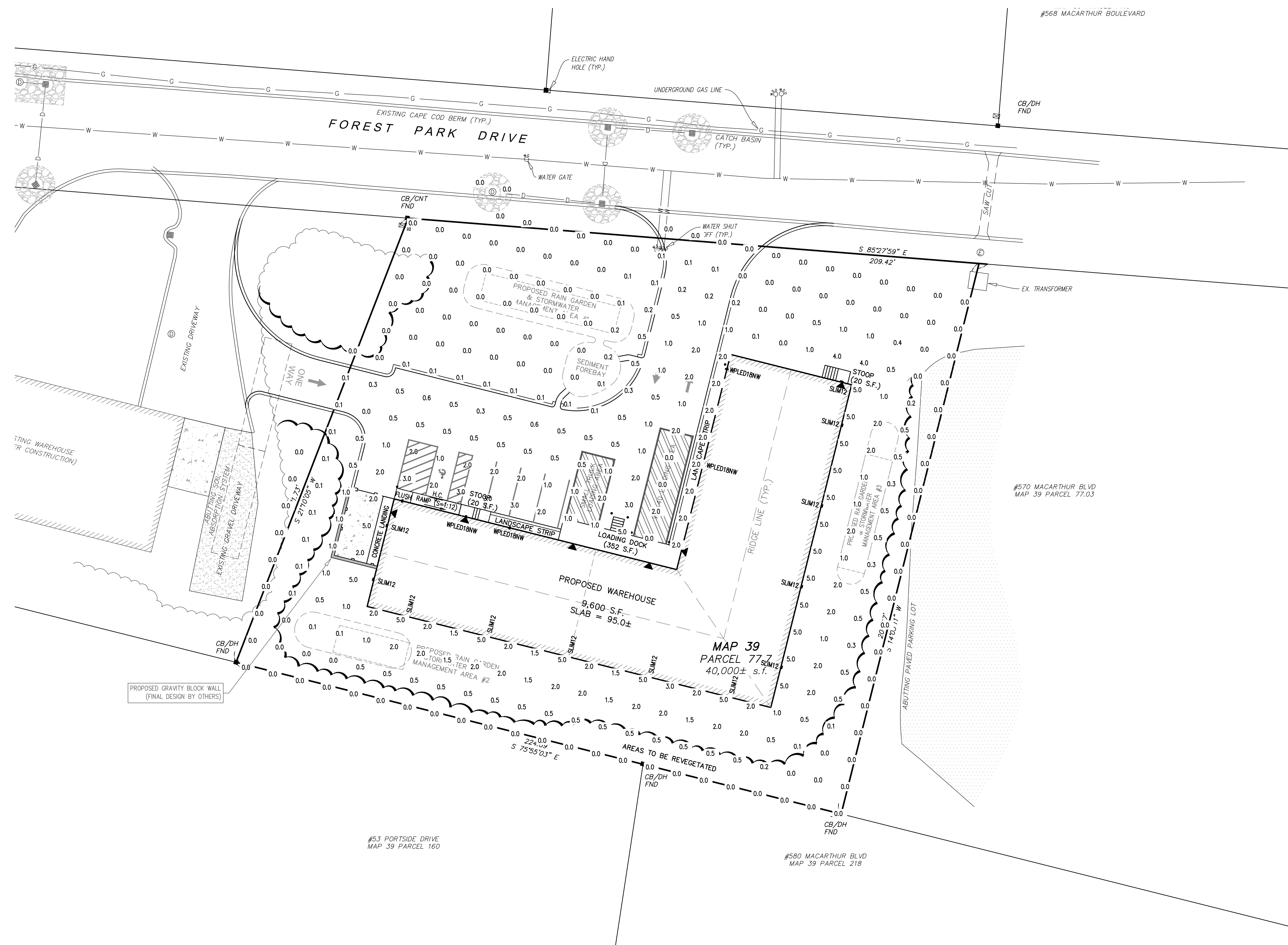
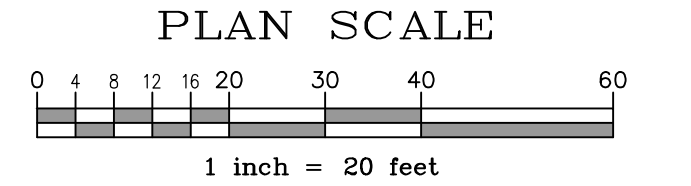
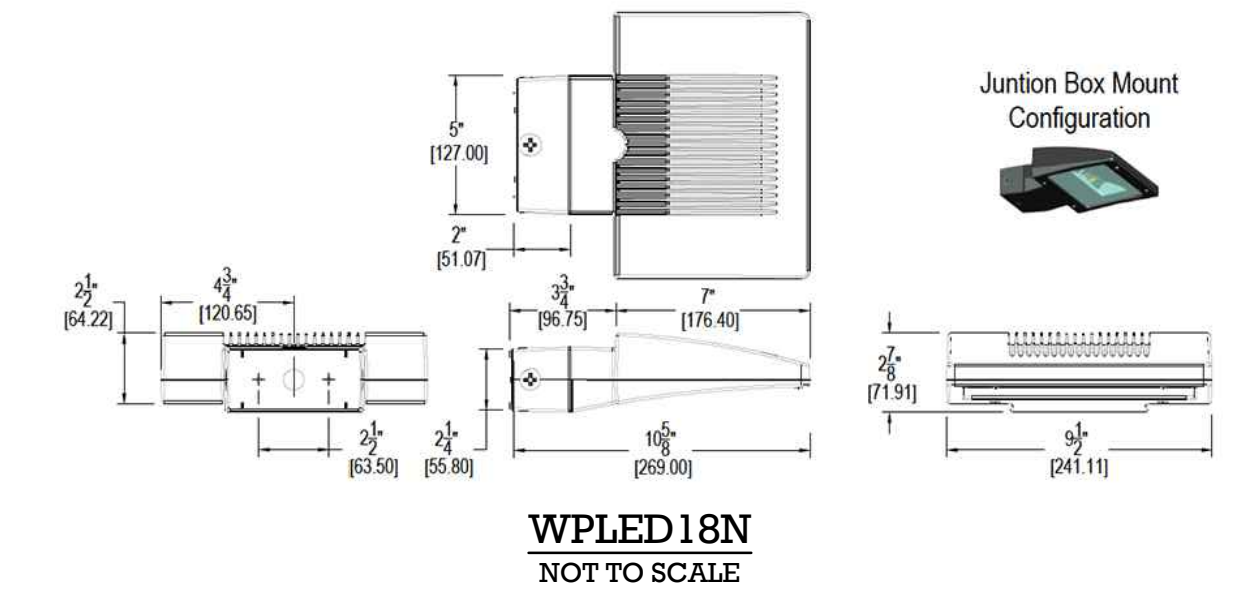
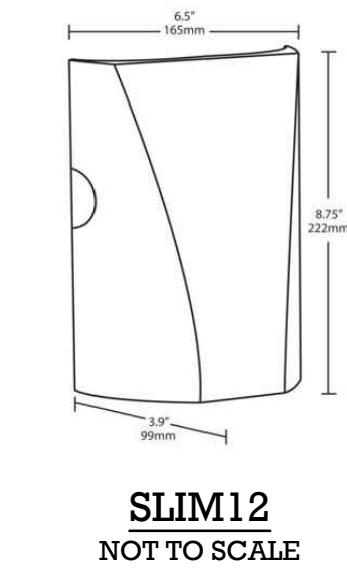


LIGHTING NOTES

1. ALL LIGHT FIXTURES ARE TO BE DARK SKY COMPLIANT.
2. ALL FIXTURES ARE TO BE SITED SO AS TO PREVENT LIGHT INTRUSION ON TO ABUTTING PROPERTIES AND ADJACENT ROADWAYS.
3. X.X AS SHOWN ON THE PLAN DENOTES ILLUMINATION IN LUMENS.

LUMINAIRE SCHEDULE

SYMBOL	QUANTITY	ARRANGEMENT	DESCRIPTION	MOUNT HEIGHT
■ SLIM12	10	WALL PACK	RAB LIGHTING LED 12 WATT WALLPACK	12.0'
■ WPLED18	6	WALL PACK	RAB LIGHTING LED 18 WATT WALLPACK	16.0'



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Sheet Title:
LIGHTING PLAN

Project:
PROPOSED SITE DEVELOPMENT IN BOURNE, MASSACHUSETTS
 Prepared For:
C & L SHEARER HOLDINGS, LLC.
 #3 FOREST PARK DRIVE
 MAP 39.0 PARCEL 77.7

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