

SERVICE 34147

Fire Supply

NEW BEDFORD WATER WORKS

APPLICATION FOR SERVICE AND METER

NEW BEDFORD

I HEREBY ACKNOWLEDGE the receipt of a copy of the Regulations prescribed in the Ordinance of the City, for the use of Water, and I request that the water may be furnished through a

8" inch Duct meter at 259 Samuel Barnett Blvd
16 D/I main in N.B. Dart. Ma.
02747

at such rates as may from time to time be established by the City.

I hereby agree to pay promptly the bill for the Service pipe laid down for my premises, and to pay all dues for water, and I agree to conform to the said Regulations and to all provisions of the Water Ordinances, until written notice is given by me or my agent to cut off the supply.

Dartmouth
Parcel: *

TELEPHONE

Service laid

Farland Co

Size and kind of pipe

Ductile

From

St.

Turned on

Meter Set

Reading

Location

Building rates

Paid

Cost of Service

Paid

31-727

\$ 465

10851

Pressure Test 1-3-2022
Lengthg of main 350'
Number of hydrants 2
Number of gate valves 2
Number of services 1
Test Pressure 200 PSI 2hr
Leakage 0

Company: Winwater / City Inspector P.Reynold

11-9-2021: Inspection of Fire supply
11-10-21: Inspection of Fire Supply
11-29-21: Inspection of Fire Supply
11-30-21: Inspection of Fire Supply
12-15-21: Inspection of Fire Supply
12-1-2021: Inspection of Fire Supply
Contractor: Farland Corp
Inspector: Percy/Manny Rose

To Whom It May Concern:

I William Riorden, Dir of Facilities & Engineering, being
(Name) (Mailing Address)

Owner of property located at

259 Samuel Barnett Blvd., Dartmouth

Plot _____, Lot _____, hereby agree to allow John Hitt, Farland Corp
(Name) (Farland Group)

21 Ventura Drive, to act on my behalf including affixing my
(Mailing Address) Dartmouth

signature in securing permit for:

- ☒ Sewer/Drain Service Permits
- ☒ Water Service Permits
- _____ Driveway Installation Permits
- _____ Sidewalk Installation Permits

I further agree to conform to, and abide by, All City rules and ask regulations applicable to the permit (s) being applied for:

Name [Signature]
Signature

259 Samuel Barnett Blvd, Dartmouth
Address

10/26/21
Date

617-908-5040
Telephone Number



TOWN OF DARTMOUTH TRENCH PERMIT

Permit No. <u>DA 10 21 21</u> 09	
Date Issued: _____	
Expiration Date: _____	
Permit Fee: \$25	
Permit Paid: <u>10/26/21</u>	
CK 18800	

Pursuant to G.L. c.822A §1 and 520 CMR 7.00 et seq. (as amended)

Private Property

- ☐ Issuing Authority: Board of Health
400 Slocum Road, Dartmouth, MA 02747
(508) 910-1804

- ☐ Issuing Authority: Building Department
400 Slocum Road, Dartmouth, MA 02747
(508) 910-1820

Public Property

- ☐ Issuing Authority: Department of Public Works
749 Russells Mills Road, Dartmouth, MA 02748
(508) 999-0740

Property: Plat _____ Lot _____

Street Address: 259 Samuel Barnett
BVD

THIS PERMIT MUST BE FULLY COMPLETED PRIOR TO CONSIDERATION

Applicant Information

Name: <u>Farland Corp</u>	
Street Address: <u>21 Ventura Drive</u>	
City/Town: <u>Dartmouth</u>	
State: <u>Ma</u>	Zip Code: <u>02747</u>
Phone #: <u>508-773479</u>	Cell #: <u>N/A</u>

Excavator Information (if different from applicant)

Name: <u>SAME</u>	
Street Address: _____	
City/Town: _____	
State: _____	Zip Code: _____
Phone #: _____	Cell #: _____

Owner Information

Name: <u>Brian Bonenfant</u>	
Street Address: <u>120 Presidential</u> <u>Way Suite 100</u>	
City/Town: <u>Woburn</u>	
State: <u>Ma</u>	Zip Code: <u>01801</u>
Phone #: _____	Cell #: _____

Insurance Information

Name and Contact of Insurer: <u>See Attached</u>	
Insurance Certification: _____	
Policy Expiration Date: _____	
Dig Safe #: _____	
Name of Competent Person (as defined by 520 CMR 7.02): _____	

Description, location and purpose of proposed trench:

Please describe the exact location of the proposed trench and its purpose (include a description of what is (or is intended) to be laid in proposed trench (e.g.; pipelines/cables lines, etc.) Please use reverse side if additional space is needed.

From Street Into Private Property
for Fire line Service & Domestic Water
Service



Commonwealth of Massachusetts
Division of Professional Licensure

Hoisting Engineer

HE-166212

Expires: 03/16/2023

MICHAEL ATKINSON
647 HIGHLAND AVENUE
NORTH DARTMOUTH 02747



Commissioner *Layla R. Demilia*



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

1/14/2021

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Partners Insurance Group, LLC
560 Wilbur Avenue
Swansea MA 02777

CONTACT NAME: Maria Arruda

PHONE (A/C No. Ext): 508-491-3176

FAX (A/C No): 508-491-3108

E-MAIL ADDRESS: MArruda@partnersinsgrpilc.com

INSURER(S) AFFORDING COVERAGE

NAIC #

INSURER A: TRAVELERS INSURANCE COMPANY

25682

INSURER B: Lloyd's of London

INSURER C: The Ohio Casualty Insurance Company

24074

INSURER D:

INSURER E:

INSURER F:

INSURED
Farland Corp. Inc.
Christian Farland
21 Ventura Drive
Dartmouth MA 02747

FARLA-1

COVERAGES

CERTIFICATE NUMBER: 2019822161

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	GENERAL LIABILITY			4T-CO-6G656644-TCT-21	1/1/2021	1/1/2022	
	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY						EACH OCCURRENCE \$ 1,000,000
	<input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 300,000
							MED EXP (Any one person) \$ 10,000
							PERSONAL & ADV INJURY \$ 1,000,000
							GENERAL AGGREGATE \$ 2,000,000
							PRODUCTS - COMP/OP AGG \$ 2,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						
	<input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC						
A	AUTOMOBILE LIABILITY			810-0P185896-21-2S-G	1/1/2021	1/1/2022	
	<input type="checkbox"/> ANY AUTO						COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000
	<input type="checkbox"/> ALL OWNED AUTOS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				BODILY INJURY (Per person) \$
	<input checked="" type="checkbox"/> HIRED AUTOS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				BODILY INJURY (Per accident) \$
							PROPERTY DAMAGE (Per accident) \$ Included
	UMBRELLA LIAB						EACH OCCURRENCE \$
	EXCESS LIAB						AGGREGATE \$
	DED						
	RETENTION \$						
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY			UB-9J635485	1/1/2021	1/1/2022	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)	Y/N	N/A				<input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTH-ER
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. EACH ACCIDENT \$ 1,000,000
							E.L. DISEASE - EA EMPLOYEE \$ 1,000,000
							E.L. DISEASE - POLICY LIMIT \$ 1,000,000
C B A	Equipment Floater Professional BPP			BMO57097682 HSAEC190032 4T-CO-6G656644-TCT-21	1/1/2021 1/1/2021 1/1/2021	1/1/2022 1/1/2022 1/1/2022	Equipment Prof/Per Cl & Aggreg BPP 842,950 1,000,000 100,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

CERTIFICATE HOLDER

CANCELLATION

Town of Dartmouth
500 Slocum Road
Dartmouth MA 02747

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

TOWN OF DARTMOUTH, MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS



Permit Fee \$75
CK 10400
Paid 10/28/21

**APPLICATION FOR PERMIT
TO OBSTRUCT AND DISTURB ROADWAY SURFACE**

☒ \$2,000 Street Obstruction Permit in Escrow

(Please type or print neatly)

Farland Corp (Applicant) hereby makes application for a permit to obstruct and disturb the surface 259 Samuel Barnett Street between Samuel Barnett and Capaldi St ^{BLVD} Streets for the purpose of Fire Line Supply & Domestic water Service ^{BLVD}.

Work will begin (weather permitting) on 11-2, 2021. It is estimated that the street will be obstructed from 7:00 a.m./p.m. to 4:00 a.m./p.m. for 5 days from and after permit is granted and worked is commenced.

The applicant agrees that a suitable barrier shall be put and at all times kept around the section or parts of the street, lane, alley, or public place so disturbed, so long as the same shall be or remain unsafe, and that the barrier shall be sufficiently lighted by one or more lanterns fixed to such barrier or in some other proper manner every night from twilight in the evening, and through the whole night, so long as such barrier shall be kept standing; and it is further agreed that the Town shall be held harmless from all damage, costs, or expense, on account of any injury to persons or property, which is due to anything done under the authority of the permit, it is further agreed that upon verbal or written notice to the applicant that the disturbed surface is in disrepair, the applicant shall within a reasonable time as established by the Town, make repair to the disturbed surface. The applicant further agrees that the Town may utilize the escrow funds established by the General Bylaws to make the required repair to the disturbed surface.

The applicant further agrees that notice shall be given at the Department of Public Works office prior to back filling of any utility trench and prior to restoration of the surface of the street to allow for inspection of the work. Failure by the applicant to notify the Town may require excavation of the utility for inspection.

Issuance of such a permit is conditional upon the applicant having posted a street opening bond and certificate of liability insurance in the amount of \$1,000,000.00 unless a specific permit warrants otherwise.

24 HOUR EMERGENCY TELEPHONE NUMBER 401-318-1184

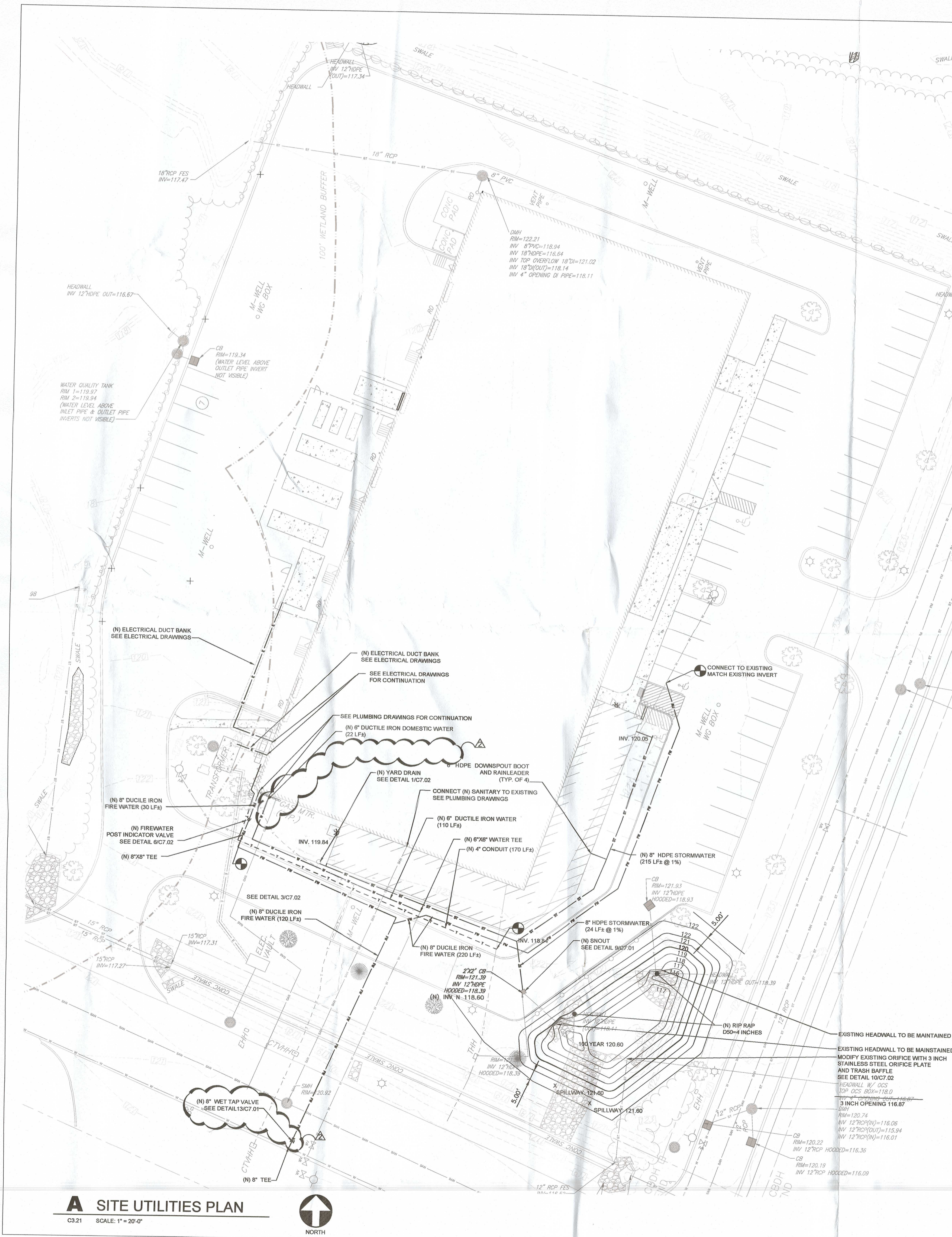
Supervisor responsible for site safety: Mike Atkinson

Applicant's Authorized Signature [Signature] Date 10/28/2021

Approval Date 10/28/2021

[Signature]
Director, Department of Public Works

☒ Controlled Density Fill Required



UTILITY PIPE SPECIFICATIONS

1. ALL STORM SEWERS, PRECAST STORM SEWER STRUCTURES AND APPURTENANCES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE TOWN OF DARTMOUTH DEPARTMENT OF PUBLIC WORKS CONSTRUCTION SPECIFICATIONS AND MassDOT STANDARD SPECIFICATIONS, LATEST EDITION.

MATERIALS:

PIPE: THE TYPE OF PIPE ALLOWABLE FOR STORM DRAINS SHALL BE LIMITED TO:

1. REINFORCED CONCRETE PIPE CONFORMING TO ASTM C-76, "SPECIFICATIONS FOR REINFORCED CONCRETE CULVERT, STORM DRAIN AND SEWER PIPE". THE PIPE SHALL BE CLASS IV FOR DIAMETERS BETWEEN 12 INCHES AND 27 INCHES, CLASS III FOR DIAMETERS 30 INCHES AND LARGER.

2. CORRUGATED METAL PIPE WHICH SHALL BE ALUMINUM OR BE COATED INSIDE AND OUTSIDE WITH ASPHALT CEMENT, AND SHALL CONFORM TO THE REQUIREMENTS OF ASHTO M-38. PERFORATED PIPE MAY BE USED ON APPROVAL OF THE DIRECTOR.

3. HIGH-DENSITY POLYETHYLENE PIPE (HDPE) CONFORMING TO ASTM D 3505, "STANDARD SPECIFICATION FOR POLYETHYLENE PLASTICS PIPE AND FITTINGS MATERIALS" AND ASHTO M-252 AND ASHTO M-284. HIGH-DENSITY POLYETHYLENE PIPE SHALL NOT BE ALLOWED FOR FLARED ENDS OR OUTLETS.

4. DUCTILE IRON (DI) GRAVITY PIPE AND FITTINGS: ASTM A 748 SERVICE CLASS, FLEXIBLE LINE, PASTLE JOINTS.

5. DUCTILE IRON (DI) PIPE FOR POTABLE WATER, ANSI/AWWA C100/A21.50. INSTALL PIPING BEGINNING AT LOW POINT OF SYSTEM, TRUE TO GRADES AND ALIGNMENT INDICATED WITH UNBROKEN CONTINUITY OF INVERT. PLACE BELL ENDS OF PIPING FACING UPSTREAM.

6. INSTALL PIPING PITCHED DOWN IN DIRECTION OF FLOW, AT SLOPES AND COVER SHOWN.

7. ALL PRECAST DRAINAGE STRUCTURES SHALL CONTAIN REINFORCING STEEL AND BE DESIGNED FOR ASHTO H-20 LOADING.

8. PIPE LENGTHS SHOWN ARE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.

9. ALL RCP JOINTS SHALL BE MORTARED WITH 2:1 SAND MORTAR UNLESS OTHERWISE NOTED ON THE PLANS.

10. CONDUIT OUTLET PROTECTION SHALL BE INSTALLED PRIOR TO THE CONSTRUCTION OF ANY PIPE RUN.

11. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AS CONSTRUCTION OF STORM SEWER PROGRESSES IN ACCORDANCE WITH THE SEQUENCE OF CONSTRUCTION.

12. INFILTRATION DETENTION REDDIPPING TO BE INSTALLED WITH NO SLOPE (S=0.00%).

13. ALL PROPOSED CLEANOUTS TO BE SET FLUSH WITH FINISHED GRADE. FINAL GRADE ELEVATION OF ALL MANHOLE CASTINGS TO BE FLUSH WITH FINISHED PAVEMENT GRADE (PAVED AREAS) AND SIX-INCHES (6") ABOVE FINISHED GRADE IN ALL LAWN AREAS.

14. PRECAST OR CAST-IN-PLACE REINFORCED CONCRETE STRUCTURES MAY BE UTILIZED FOR DRAINAGE AND SANITARY SEWER SYSTEMS INCLUDING DETENTION OUTLET STRUCTURES UPON SUBMISSION OF AND APPROVAL OF SHOP DRAWINGS BY ENGINEER. ALL SHOP DRAWINGS ARE TO BE CERTIFIED BY A STATE LICENSED PROFESSIONAL ENGINEER.

15. ALL PRECAST AND CAST-IN-PLACE STRUCTURES ARE TO BE DESIGNED TO ASHTO H-20 LOADING REQUIREMENTS.

16. PRECAST OR CAST-IN-PLACE REINFORCED CONCRETE STRUCTURES MAY BE UTILIZED FOR DRAINAGE AND SANITARY SEWER SYSTEMS INCLUDING DETENTION OUTLET STRUCTURES UPON SUBMISSION OF AND APPROVAL OF SHOP DRAWINGS BY ENGINEER. ALL SHOP DRAWINGS ARE TO BE CERTIFIED BY A STATE LICENSED PROFESSIONAL ENGINEER.

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NOTE:

1. ALL UTILITIES (INCLUDING BUT NOT LIMITED TO WATER, STORM WATER, GAS, ELECTRIC, PHONE, ETC.) SHALL HAVE A MINIMUM 18-INCHES OF VERTICAL CLEARANCE AND 10 FEET OF HORIZONTAL CLEARANCE WITH THE SANITARY LINES, OR WHATEVER IS REQUIRED BY THE INDIVIDUAL UTILITY, WHICHEVER IS GREATER. SANITARY LINES SHALL BE LOCATED BELOW WATER LINES.

2. SEWER LATERALS SHALL HAVE A RECOMMENDED SLOPE OF 2% AND A MINIMUM SLOPE OF 1%.

3. SEE PLUMBING DWGS FOR INTERIOR CONTINUATION OF STORM, SANITARY AND FIRE UTILITIES.

4. SEE ELECTRICAL DWGS FOR INTERIOR CONTINUATION OF ELECTRICAL UTILITIES.

5. ALL GRAVITY SHALL BE VIDEO INSPECTED FOR LEAKS. PRIOR TO VIDEO INSPECTION, RUN SUFFICIENT WATER THROUGH THE PIPE TO SATURATE POTENTIAL LOW SPOTS SO THEY MAY BE DETECTED DURING INSPECTION. INSPECT EACH PIPE SEGMENT BETWEEN MANHOLES OR ACCESS POINTS IN A SINGLE CONTINUOUS RUN. PROGRESS THROUGH THE ENTIRE PROJECT IN A UNIFORM DIRECTION.

6. THE CONTRACTOR SHALL CALL THE DIG SAFE SYSTEM (CALL 877) NOT LESS THAN 72 HOURS NOR MORE THAN 10 WORKING DAYS PRIOR TO PLANNED WORK TO NOTIFY UTILITY OWNERS OF THE INTENT TO START WORK. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING NON-MEMBER OR NON-RESPONSIVE UTILITY OWNERS INDIVIDUALLY. ALL WORK SHALL BE COORDINATED WITH UTILITY OWNERS INCLUDING, OWNERS, PRIOR TO THE START OF CONSTRUCTION.

7. SANITARY SEWER AND WATER MAIN TO BE SEPARATED BY A MINIMUM DISTANCE OF 10.0 HORIZONTAL FEET. WHEN PARALLEL OR 18" VERTICALLY (WATER OVER SEWER) WHEN HORIZONTAL SEPARATION IS LESS THAN 10.0', CONCRETE ENCASUREMENT SHALL BE PROVIDED FOR UTILITY CROSSINGS THAT ARE SEPARATED BY LESS THAN 10'.

8. WATER MAIN VALVES SHALL BE PROVIDED AS REQUIRED.

9. MINIMUM PIPE COVER SHALL BE PER MANUFACTURER'S RECOMMENDATIONS OR MUNICIPAL REQUIREMENTS, WHICHEVER IS GREATER.

10. PIPE LENGTHS SHOWN ARE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.

11. ALIGNMENT OF UTILITIES WHICH CROSS EXISTING VEGETATION SHALL BE ADJUSTED IN ORDER TO MINIMIZE DISTURBANCE TO EXISTING VEGETATION SUBJECT TO PROPER UTILITY SPACING AND EASEMENT REQUIREMENTS.

12. EXISTING TREES SHALL BE PRESERVED WHEREVER POSSIBLE. FIELD ADJUSTMENTS TO PROPOSED GRADING, UTILITY STRUCTURE LOCATIONS, ETC. WILL BE MADE IN AN EFFORT TO PRESERVE EXISTING TREES.

13. ALL UTILITY TRENCHES LOCATED IN PUBLIC ROADWAYS SHALL BE REPAIRED IN ACCORDANCE WITH APPLICABLE STANDARDS.

14. METERING DEVICES AND OTHER UTILITY APPURTENANCES, INCLUDING BUT NOT LIMITED TO WATER, SEWER, ELECTRIC, CABLE, TELEPHONE, AND NATURAL GAS SHALL BE INSTALLED WHERE AND AS REQUIRED BY MUNICIPAL OR UTILITY COMPANY STANDARDS.

15. NEW ELECTRIC AND TELEPHONE UTILITIES TO BE INSTALLED UNDERGROUND.

16. PRECAST OR CAST-IN-PLACE REINFORCED CONCRETE STRUCTURES MAY BE UTILIZED FOR DRAINAGE AND SANITARY SEWER SYSTEMS INCLUDING DETENTION OUTLET STRUCTURES UPON SUBMISSION OF AND APPROVAL OF SHOP DRAWINGS BY ENGINEER. ALL SHOP DRAWINGS ARE TO BE CERTIFIED BY A STATE LICENSED PROFESSIONAL ENGINEER.

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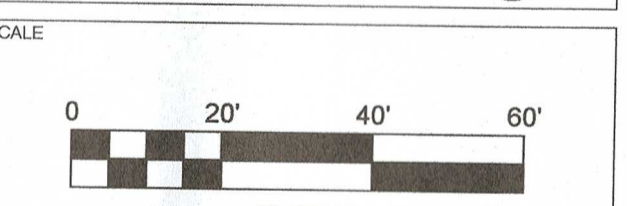
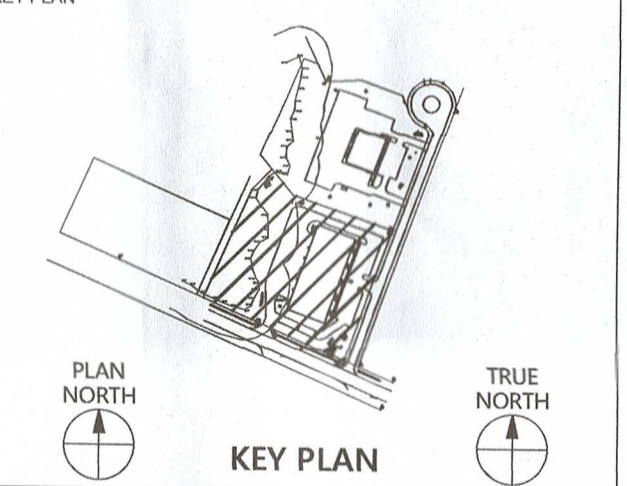
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PROJECT No: 011-2113



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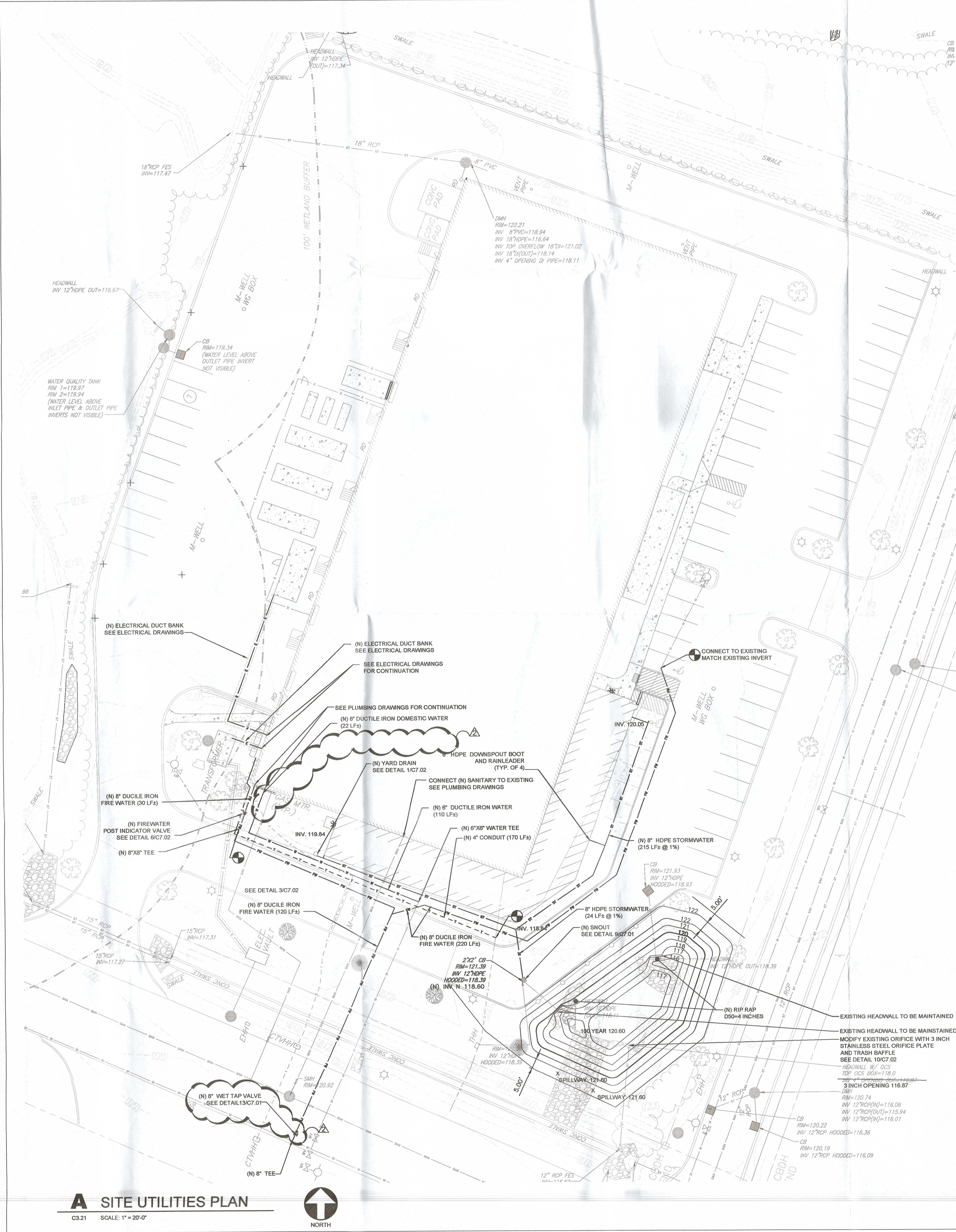
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PROJECT - ADC

DRAWING TITLE
SITE UTILITIES PLAN

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ISSUE FOR CONSTRUCTION



UTILITY PIPE SPECIFICATIONS

1. ALL STORM SEWERS, PRECAST STORM SEWER STRUCTURES AND APPURTENANCES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE TOWN OF DARTMOUTH DEPARTMENT OF PUBLIC WORKS CONSTRUCTION SPECIFICATIONS AND MASSDOT STANDARD SPECIFICATIONS, LATEST EDITION.

MATERIALS:

PIPE, THE TYPE OF PIPE ALLOWABLE FOR STORM DRAIN SHALL BE LIMITED TO:

1. REINFORCED CONCRETE PIPE CONFORMING TO ASTM C-76, SPECIFICATIONS FOR REINFORCED CONCRETE CULVERT, STORM DRAIN AND SEWER PIPE. THE PIPE SHALL BE CLASS IV FOR DIAMETERS BETWEEN 12 INCHES AND 27 INCHES, CLASS III FOR DIAMETERS 30 INCHES AND LARGER.
2. CORRUGATED METAL PIPE WHICH SHALL BE ALUMINUM OR BE COATED INSIDE AND OUTSIDE WITH ASPHALT CEMENT AND SHALL CONFORM TO THE REQUIREMENTS OF ASHOTO M-38. PERFORATED PIPE MAY BE USED ON APPROVAL OF THE DIRECTOR.
3. HIGH DENSITY POLYETHYLENE PIPE (HDPE) CONFORMING TO ASTM D 3505, STANDARD SPECIFICATION FOR POLYETHYLENE PLASTICS PIPE AND FITTINGS MATERIALS AND ASHOTO M-282 AND ASHOTO M-284. HIGH-DENSITY POLYETHYLENE PIPE SHALL NOT BE ALLOWED FOR FLARED ENDS OR PIPING EXISTING MANHOLES OR CATCH BASINS TO FLARED ENDS OR OUTLETS.
4. DUCTILE IRON (DI) GRAVITY PIPE AND FITTINGS: ASTM A 748 SERVICE CLASS, FLEXIBLE UNIONS, FASTITE JOINTS.
5. DUCTILE IRON (DI) PIPE FOR POTABLE WATER: ANSI/AWWA C150/A21.50.
6. INSTALL PIPING BEGINNING AT LOW POINT OF SYSTEMS, TRUE TO GRADES AND ALIGNMENT INDICATED WITH UNBROKEN CONTINUITY OF INVERT.
7. PLACE BELL ENDS OF PIPING FACING UPSTREAM.
8. INSTALL PIPING PITCHED DOWN IN DIRECTION OF FLOW, AT SLOPES AND COVER SHOWN.
9. ALL PRECAST DRAINAGE STRUCTURES SHALL CONTAIN REINFORCING STEEL AND BE DESIGNED FOR ASHOTO H-20 LOADING.
10. PIPE LENGTHS SHOWN ARE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
11. ALL RCP JOINTS SHALL BE MORTARED WITH 2:1 SAND MORTAR UNLESS OTHERWISE NOTED ON THE PLANS.
12. CONDUIT OUTLET PROTECTION SHALL BE INSTALLED PRIOR TO THE CONSTRUCTION OF ANY PIPE RUN.
13. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AS CONSTRUCTION OF STORM SEWER PROGRESSES IN ACCORDANCE WITH THE REQUIREMENTS OF CONSTRUCTION.
14. INFILTRATION DETENTION BEDDING TO BE INSTALLED WITH NO SLOPE (0%+0.00).
15. ALL PROPOSED CLEANOUTS TO BE SET FLUSH WITH FINISHED GRADE.
16. FINAL GRADE ELEVATIONS OF ALL MANHOLE CASTINGS TO BE FLUSH WITH FINISHED PAYMENT GRADE (PAVED AREA) AND SIX INCHES (6") ABOVE FINISHED GRADE IN ALL LAWN AREAS.
17. PRECAST OR CAST-IN-PLACE REINFORCED CONCRETE STRUCTURES MAY BE UTILIZED FOR DRAINAGE, AND SANITARY SEWER SYSTEMS INCLUDING DETENTION OUTLET STRUCTURES UPON SUBMISSION OF AND APPROVAL OF SHOP DRAWINGS BY ENGINEER. ALL SHOP DRAWINGS ARE TO BE CERTIFIED BY A STATE LICENSED PROFESSIONAL ENGINEER.
18. ALL PRECAST AND CAST-IN-PLACE STRUCTURES ARE TO BE DESIGNED TO ASHOTO H-20 LOADING REQUIREMENTS.

THE OPERATOR SHALL BE RESPONSIBLE FOR IMPLEMENTING ALL OPERATIONS AND MAINTENANCE RESPONSIBILITIES.

UTILITY OPERATIONS AND MAINTENANCE:

STORMWATER PIPES, INLETS AND OUTFALLS:

1. ALL STORMWATER INLETS AND OUTFALLS SHALL BE INSPECTED TWICE PER YEAR.
2. TRASH, LEAVES, DEBRIS AND SEDIMENT SHALL BE REMOVED FROM INLETS AND OUTFALLS AS NEEDED TO KEEP THEM FREE FLOWING.
3. IF INSPECTIONS INDICATE THAT STORMWATER PIPELINES HAVE BECOME PARTIALLY OBSTRUCTED WITH TRASH, LEAVES, DEBRIS OR SEDIMENT, THE PIPELINES SHALL BE CLEANED BY WATER JET TRUCK AND THE OBSTRUCTIONS REMOVED AND DISPOSED OF.

ADDITIONAL DETENTION BASIN NOTES:

INSPECT DRY DETENTION BASINS AT LEAST ONCE PER YEAR TO ENSURE THAT THEY ARE OPERATING AS INTENDED. INSPECT BASINS DURING AND AFTER STORMS TO DETERMINE IF THE BASIN IS MEETING THE LISTED DETENTION TIMES. INSPECT THE OUTLET STRUCTURE FOR EVIDENCE OF CLOGGING OR OUTFLOW RELEASE VELOCITIES THAT ARE GREATER THAN DESIGN FLOW. POTENTIAL PROBLEMS THAT SHOULD BE CHECKED INCLUDE: SUBSIDENCE, EROSION, OR TREE GROWTH ON THE EMBANKMENT, DAMAGE TO THE EMERGENCY SPILLWAY, SEDIMENT ACCUMULATION AROUND THE OUTLET, AND EROSION WITHIN THE BASIN AND BANKS. MAKE ANY NECESSARY REPAIRS IMMEDIATELY DURING INSPECTIONS. NOTE CHANGES TO THE DETENTION BASIN, NOW THE SITE SLOPES, EMBANKMENT, AND EMERGENCY SPILLWAY AT LEAST TWICE PER YEAR. REMOVE TRASH AND DEBRIS AT THIS TIME. REMOVE SEDIMENT FROM THE BASIN AS NECESSARY.

NOTE:

1. ALL UTILITIES (INCLUDING BUT NOT LIMITED TO WATER, STORM WATER, GAS, ELECTRIC, PHONE, ETC) SHALL HAVE A MINIMUM 18 INCHES OF VERTICAL CLEARANCE AND 10 FEET OF HORIZONTAL CLEARANCE WITH THE SANITARY LINES, OR WHATEVER IS REQUIRED BY THE INDIVIDUAL UTILITY, WHICHEVER IS GREATER. SANITARY LINES SHALL BE LOCATED BELOW WATER LINES.
2. SEWER LATERALS SHALL HAVE A RECOMMENDED SLOPE OF 2% AND A MINIMUM SLOPE OF 1%.
3. SEE PLUMBING DRAWINGS FOR INTERIOR CONTINUATION OF STORM, SANITARY AND FIRE UTILITIES.
4. SEE ELECTRICAL DWGS FOR INTERIOR CONTINUATION OF ELECTRICAL UTILITIES.
5. ALL GRAVITY SHALL BE VIDEO INSPECTED FOR LEAKS. PRIOR TO VIDEO INSPECTION, RUN SUFFICIENT WATER THROUGH THE PIPE TO SATURATE POTENTIAL LOW SPOTS SO THEY MAY BE DETECTED DURING INSPECTION. INSPECT EACH PIPE SEGMENT BETWEEN MANHOLES OR ACCESS POINTS IN A SINGLE CONTINUOUS RUN. PROGRESS THROUGH THE ENTIRE PROJECT IN A UNIFORM DIRECTION.

UTILITY CONSTRUCTION NOTES:

1. ALL WATER PIPING AND SANITARY SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE APPLICABLE UTILITIES AUTHORITY COMPANY AND MASSDOT REQUIREMENTS AND STANDARDS.
2. EXISTING UTILITY INFORMATION SHOWN HEREON HAS BEEN COLLECTED FROM VARIOUS SOURCES AND IS NOT GUARANTEED AS TO ACCURACY OR COMPLETENESS. THE CONTRACTOR SHALL VERIFY ALL INFORMATION TO HIS/HER SATISFACTION PRIOR TO EXCAVATION. WHERE EXISTING UTILITIES ARE TO BE CROSSED BY PROPOSED CONSTRUCTION, TEST PITS SHALL BE DUG BY THE CONTRACTOR PRIOR TO CONSTRUCTION TO ASCERTAIN EXISTING INVERTS, MATERIALS, AND SIZES. TEST PIT INFORMATION SHALL BE GIVEN TO THE ENGINEER PRIOR TO CONSTRUCTION TO PERMIT ADJUSTMENTS AS REQUIRED TO AVOID CONFLICTS.
3. THE CONTRACTOR SHALL CALL THE DIG SAFE SYSTEM (DIAL 811), NOT LESS THAN 72 HOURS NOR MORE THAN 10 WORKING DAYS PRIOR TO PLANNED WORK TO NOTIFY UTILITY OWNERS OF THE INTENT TO START WORK. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING NON-MEMBER OR NON-RESPONSIVE UTILITY OWNERS INDIVIDUALLY. ALL WORK SHALL BE COORDINATED WITH UTILITY OWNERS INCLUDING, BUT NOT LIMITED TO: ELECTRIC, GAS, COMMUNICATIONS, WATER, SANITARY AND STORM SEWER OWNERS, PRIOR TO THE START OF CONSTRUCTION.
4. SANITARY SEWER AND WATER MAIN TO BE SEPARATED BY A MINIMUM DISTANCE OF 10' HORIZONTALLY WHEN PARALLEL, OR 18" VERTICALLY (WATER OVER SEWER) WHEN HORIZONTAL. SEPARATION IS LESS THAN 10' CONCRETE ENCASEMENT SHALL BE PROVIDED FOR UTILITY CROSSINGS THAT ARE SEPARATED BY LESS THAN 10'.
5. WATER MAIN VALVES SHALL BE PROVIDED AS REQUIRED.
6. MINIMUM PIPE COVER SHALL BE PER MANUFACTURER'S RECOMMENDATIONS OR MUNICIPAL REQUIREMENTS, WHICHEVER IS GREATER.
7. PIPE LENGTHS SHOWN ARE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
8. ALIGNMENT OF UTILITIES WHICH CROSS EXISTING VEGETATION SHALL BE ADJUSTED IN ORDER TO MINIMIZE DISTURBANCE TO EXISTING VEGETATION SUBJECT TO PROPER UTILITY SPACING AND EASEMENT REQUIREMENTS.
9. EXISTING TREES SHALL BE PRESERVED WHEREVER POSSIBLE. FIELD ADJUSTMENTS TO PROPOSED GRADING, UTILITY STRUCTURE LOCATIONS, ETC. WILL BE MADE IN AN EFFORT TO PRESERVE EXISTING TREES.
10. ALL UTILITY TRENCHES LOCATED IN PUBLIC ROADWAYS SHALL BE REPAIRED IN ACCORDANCE WITH APPLICABLE STANDARDS.
11. METERING DEVICES AND OTHER UTILITY APPURTENANCES, INCLUDING BUT NOT LIMITED TO WATER, SEWER, ELECTRIC, CABLE, TELEPHONE, AND NATURAL GAS SHALL BE INSTALLED WHERE AND AS REQUIRED BY MUNICIPAL OR UTILITY COMPANY STANDARDS.
12. NEW ELECTRIC AND TELEPHONE UTILITIES TO BE INSTALLED UNDERGROUND.
13. PRECAST OR CAST-IN-PLACE REINFORCED CONCRETE STRUCTURES MAY BE UTILIZED FOR DRAINAGE, AND SANITARY SEWER SYSTEMS INCLUDING DETENTION OUTLET STRUCTURES UPON SUBMISSION TO AND APPROVAL OF SHOP DRAWINGS BY ENGINEER. ALL SHOP DRAWINGS ARE TO BE CERTIFIED BY A STATE LICENSED PROFESSIONAL ENGINEER.
14. ALL PRECAST AND CAST-IN-PLACE STRUCTURES ARE TO BE DESIGNED TO ASHOTO H-20 LOADING REQUIREMENTS.

UTILITY CONDUIT TRENCH EXCAVATION NOTES:

1. LIMIT ADVANCED CLEARING AND GRUBBING OPERATIONS TO A DISTANCE EQUAL TO TWO TIMES THE LENGTH OF PIPE INSTALLATION THAT CAN BE COMPLETED IN ONE DAY.
2. WORK CREWS AND EQUIPMENT FOR TRENCHING, PLACEMENT OF PIPE, PLUG CONSTRUCTION AND BACKFILLING WILL BE SELF-CONTAINED AND SEPARATE FROM CLEARING AND GRUBBING AND SITE RESTORATION AND STABILIZATION OPERATIONS.
3. ALL SOIL EXCAVATED FROM THE TRENCH SHALL BE PLACED ON THE UPHILL SIDE OF THE TRENCH.
4. LIMIT DAILY TRENCH EXCAVATION TO THE LENGTH OF PIPE PLACEMENT, PLUG INSTALLATION AND BACKFILLING THAT CAN BE COMPLETED THE SAME DAY.
5. WATER WHICH ACCUMULATES IN THE OPEN TRENCH WILL BE COMPLETELY REMOVED BY PUMPING BEFORE PIPE PLACEMENT AND/OR BACKFILLING BEGINS. WATER REMOVED FROM THE TRENCH SHALL BE PUMPED THROUGH A FILTRATION DEVICE.
6. ON THE DAY FOLLOWING PIPE PLACEMENT AND TRENCH BACKFILLING, THE DISTURBED AREA WILL BE GRADED TO FINAL CONTOURS AND IMMEDIATELY STABILIZED.

STRUCTURES:

MANHOLES AND CATCH BASINS SHALL BE PRECAST CONCRETE OR CONCRETE BLOCK CONFORMING TO STANDARD DIMENSIONS SHOWN ON THE TYPICAL DETAIL. PRECAST CONES AND SECTIONS SHALL BE CONSTRUCTED OF REINFORCED CONCRETE CONFORMING TO ASTM C-478 & ASHOTO M-100. CONCRETE SHALL BE 4000 PSI MINIMUM PER ASTM C-478 (1). REINFORCING STEEL SHALL CONFORM TO ASTM A-305 FOR BAR REINFORCEMENT AND ASTM A-185 FOR WIRE MESH AND SHALL MEET ASHOTO H-20 LOADING. MANHOLE STEPS SHALL MEET OSHA REGULATIONS 29 CFR 1910.21, SECTION 16 OF ASTM C-478 & SECTION 10 OF ASTM C-477. BUTYL RUBBER JOINT SEALANT SHALL CONFORM TO ASTM C-800 & ASHOTO M-100.

RADIAL CONCRETE BLOCKS SHALL CONFORM TO ASTM C-130 AND NOT BE NOT LESS THAN 8 INCHES IN LENGTH AND OF SUCH SHAPE THAT THE JOINTS CAN BE EFFECTIVELY SEALED AND BONDED WITH MORTAR.

CONCRETE FOR HEADWALLS, FOOTINGS AND OTHER STRUCTURES SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSIG AT 28 DAYS.

MORTAR FOR MASONRY WORK AND PIPE JOINTS SHALL CONSIST OF ONE (1) PART PORTLAND CEMENT TO TWO (2) PARTS SAND. PORTLAND CEMENT SHALL CONFORM TO ASTM C-150, TYPE II. SAND SHALL CONFORM TO ASTM C-144. THE MORTAR SHALL BE USED WITHIN THIRTY (30) MINUTES FROM THE TIME THAT THE INGREDIENTS ARE MIXED WITH WATER. WATER SHALL BE CLEAN AND FREE FROM IMPURITIES.

FRAMES, COVERS, GRATINGS AND HOODS: SHALL BE MANUFACTURED IN THE USA AND SHALL CONFORM TO THE LATEST REVISION OF THE TOWN'S SPECIFICATIONS FOR MATERIALS WHICH ARE USED FOR BRIDGING PURPOSES. ALL CASTINGS SHALL BE TRUE TO PATTERN IN FORM AND DIMENSIONS, FREE FROM FAULTS, SPONGINESS, CRACKS, BLOWHOLES AND OTHER DEFECTS AFFECTING THEIR STRENGTH.

OUTLET CONTROL STRUCTURES: SHALL BE PRECAST REINFORCED CONCRETE CONFORMING TO STANDARD DIMENSIONS OF THOSE SHOWN ON THE TYPICAL DETAIL. CONCRETE SHALL BE 4000 PSI MINIMUM PER ASTM C-478 (1).

REINFORCING STEEL SHALL CONFORM TO ASTM A-305 FOR BAR REINFORCEMENT AND ASTM A-185 FOR WIRE MESH AND SHALL MEET ASHOTO H-20 LOADING. WEIR PLATES AND TRASH BATTERIES SHALL BE 1/2" THICK STAINLESS STEEL AND SHALL BE TWO SEPARATE PIECES BOLTED TO THE OUTLET CONTROL STRUCTURE WITH 1/2" DIAMETER STAINLESS STEEL LAG BOLTS AND WASHERS.

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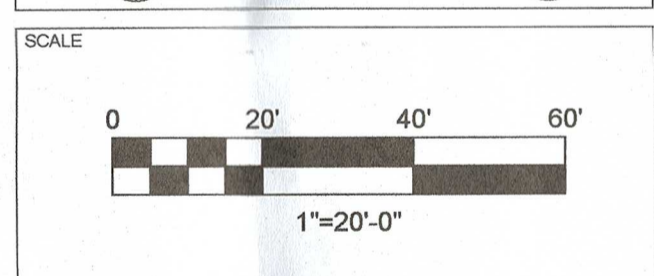
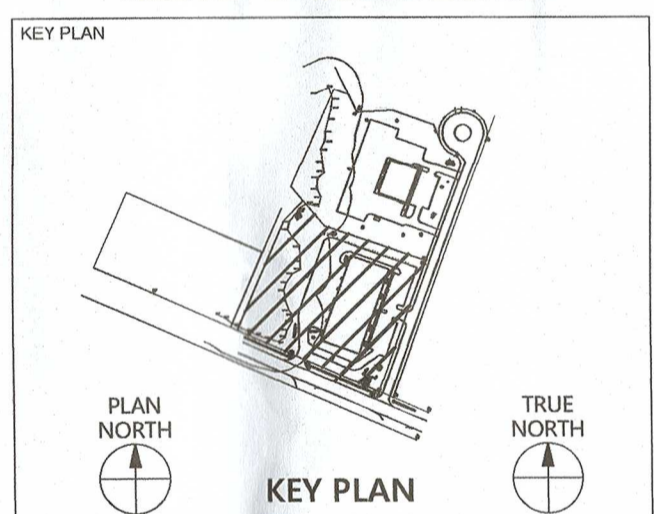
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**SITE UTILITIES
PLAN**

ENGINEER JEO	ARCHITECT SRF	DESIGNER JEO	IPS PROJECT # MAD21200.01
DRAWN BY AP	REVIEWED BY DPC	SCALE AS NOTED	CADD FILE NAME
XREF FILES		DRAWING NUMBER C3.21	