

Preliminary Determination Submission

Iron Mine Hill Road Dry Hydrant

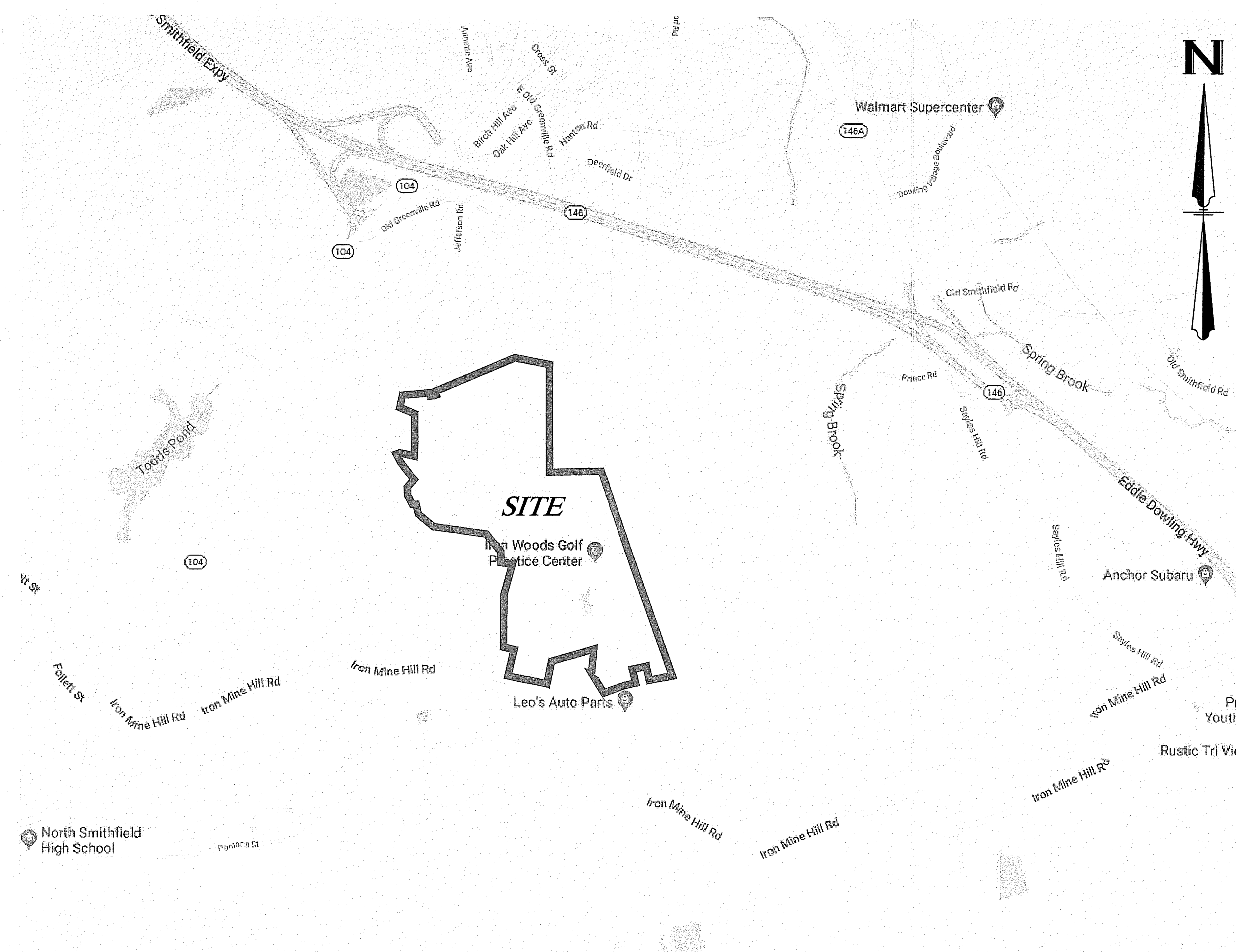
Iron Mine Hill Road
North Smithfield, Rhode Island 02896
Assessor's Plat 16 Lots 6 & 97

Office of Water Resources
APR 24 2019
Environmental Management

Kindly be advised that this
Permit is not equivalent to a
verification of the type or extent
of freshwater wetlands on site.

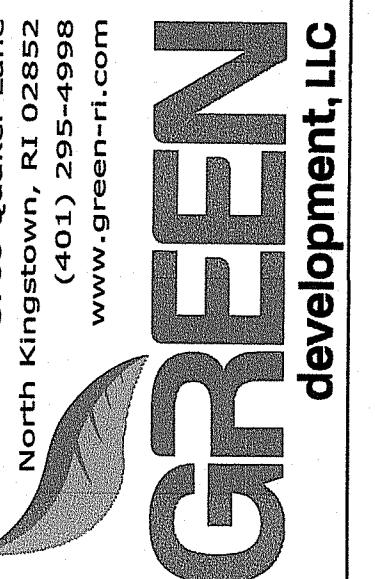
Sheet Index

Sheet Number	Sheet Title
C1.1	Cover Sheet
C1.2	Overall Site Plan
C1.3	Enlarged Dry Hydrant Site Plan
C1.4	Dry Hydrant Details



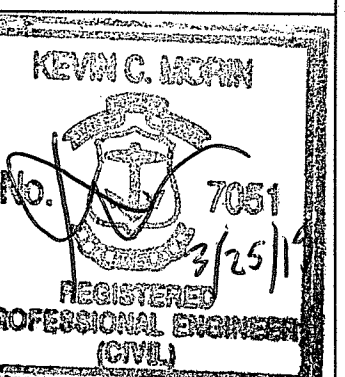
Vicinity Map (N.T.S.)

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WETLANDS PROGRAM
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED JUN 05 2019 FILE # 19-0125
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Kevin C. Morin

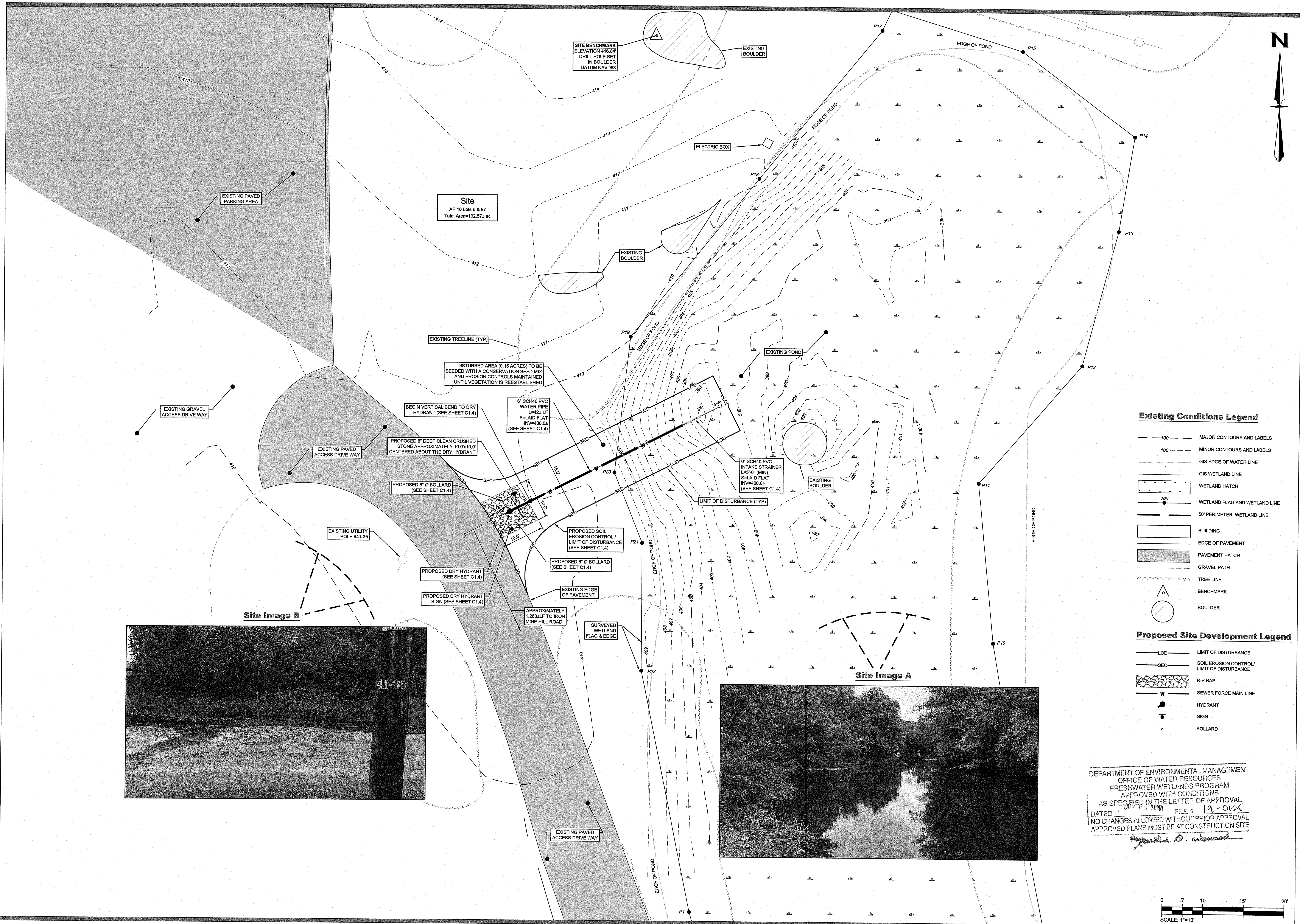


APPLICANT INFO: **Ralph F & Muriel J Ferra**
1081 IRON MINE HILL ROAD, N SMITHFIELD, RI 02896
OWNER INFO: **Ralph F & Muriel J Ferra**
1081 IRON MINE HILL ROAD, N SMITHFIELD, RI 02896
PREPARED BY: **Green Development, LLC**
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

SHEET TITLE:
Cover Sheet
PROJECT INFORMATION:
Iron Mine Hill Road Dry Hydrant
IRON MINE HILL ROAD, NORTH SMITHFIELD, RI 02896
AP 16 LOTS 6 & 97



SHEET NO.:
C1.1 OF 4



Existing Conditions Legend

- MAJOR CONTOURS AND LABELS
- MINOR CONTOURS AND LABELS
- GIS EDGE OF WATER LINE
- GIS WETLAND LINE
- WETLAND HATCH
- WETLAND FLAG AND WETLAND LINE
- 50' PERIMETER WETLAND LINE
- BUILDING
- EDGE OF PAVEMENT
- PAVEMENT HATCH
- GRAVEL PATH
- TREE LINE
- BENCHMARK
- BOULDER

Proposed Site Development Legend

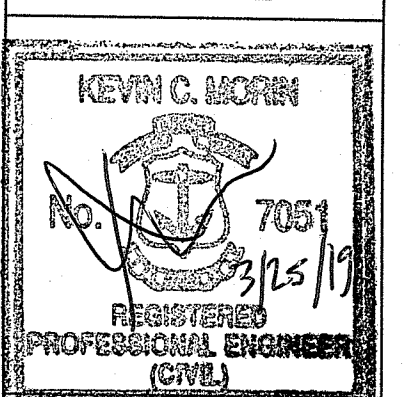
- LIMIT OF DISTURBANCE
- SOIL EROSION CONTROL / LIMIT OF DISTURBANCE
- RIP RAP
- SEWER FORCE MAIN LINE
- HYDRANT
- SIGN
- BOLLARD

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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0 5' 10' 15' 20'
SCALE: 1"=10'

NO.	DATE	REVISION	BY
1	3/25/2019	FILE DEPARTMENT SUBMISSION FOR DRY HYDRANT	RBS

SHEET TITLE:
Enlarged Dry Hydrant Site Plan
PROJECT INFORMATION:
Iron Mine Hill Road Dry Hydrant
IRON MINE HILL ROAD, NORTH SMITHFIELD, RI 02896
AP 16 LOTS 6 & 97



SHEET NO.:
C1.3 OF 4

3760 Quaker Lane
North Kingstown, RI 02852
(401) 295-4998
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GREEN
development, LLC

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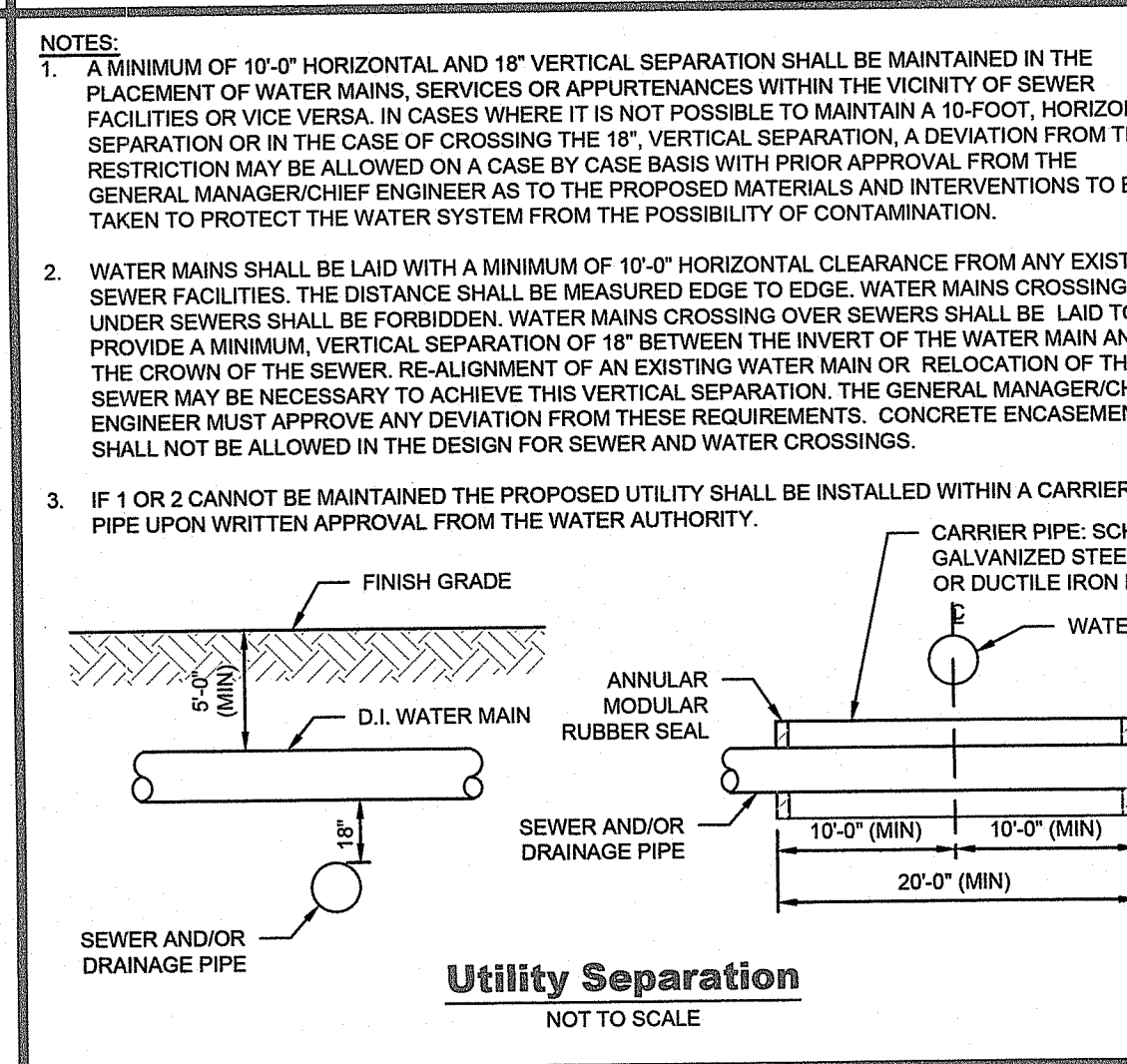
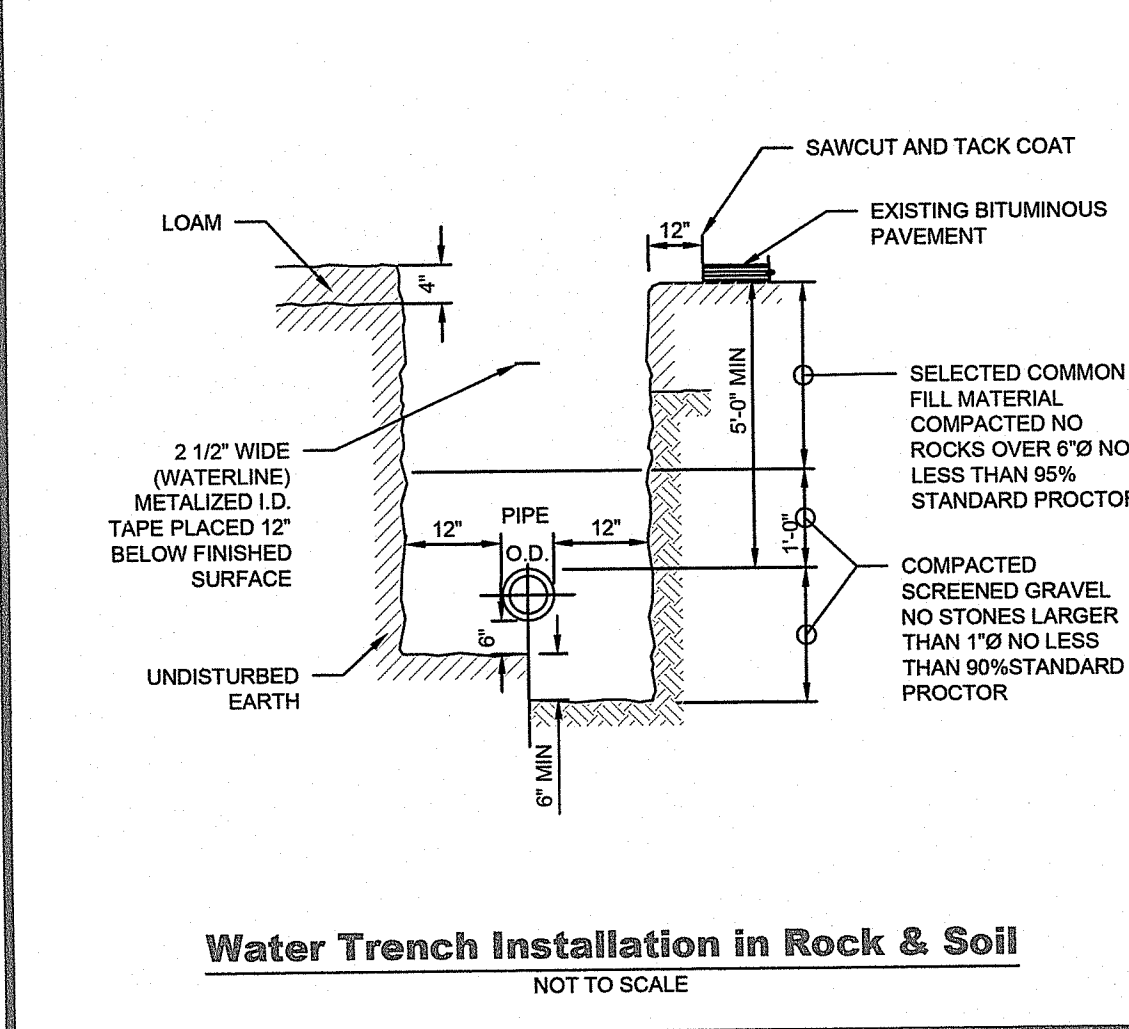
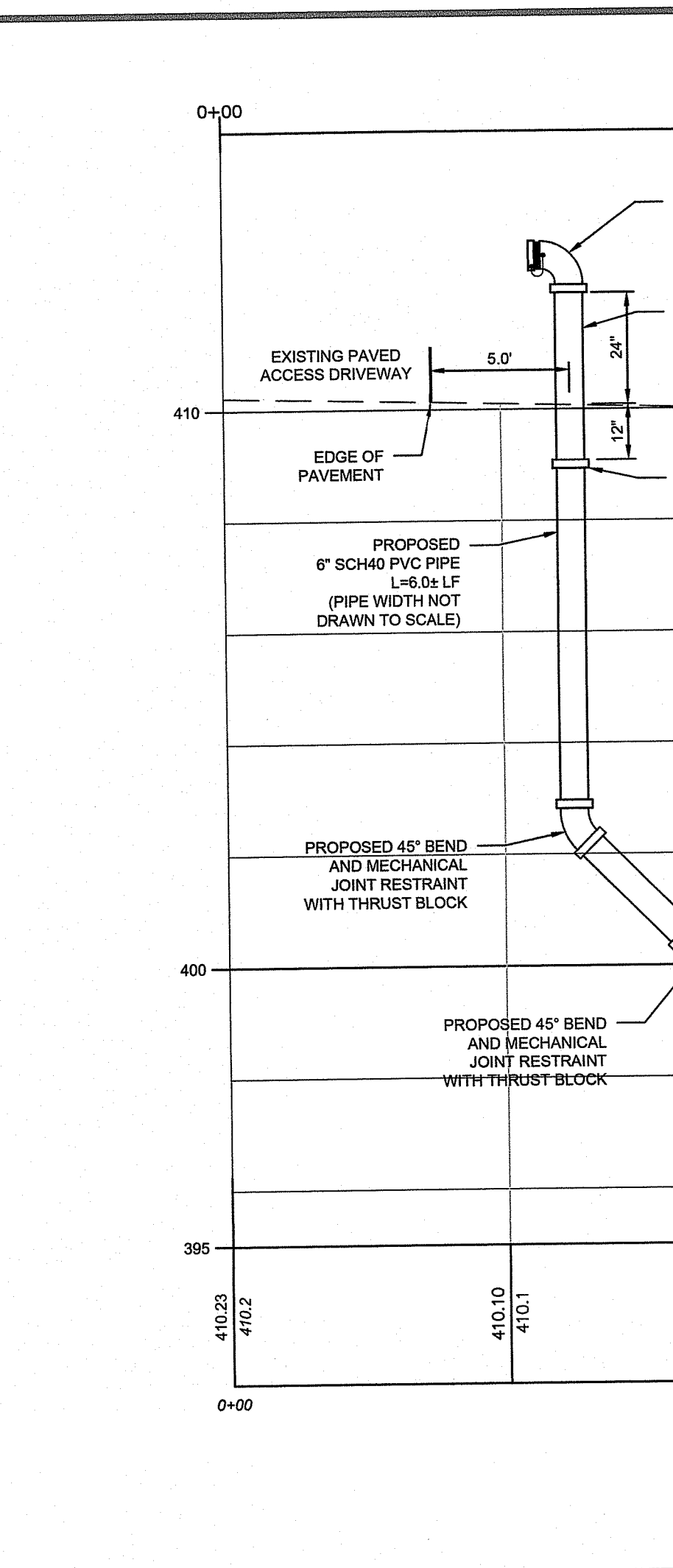
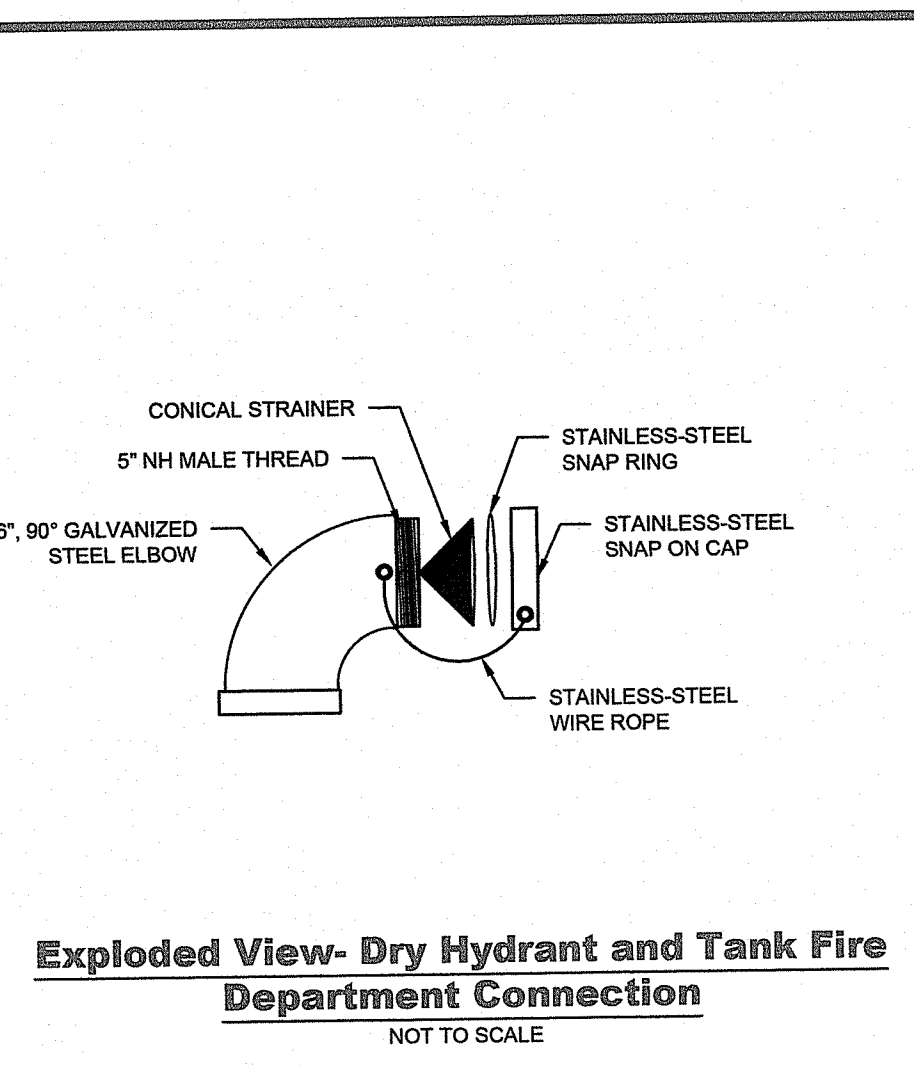
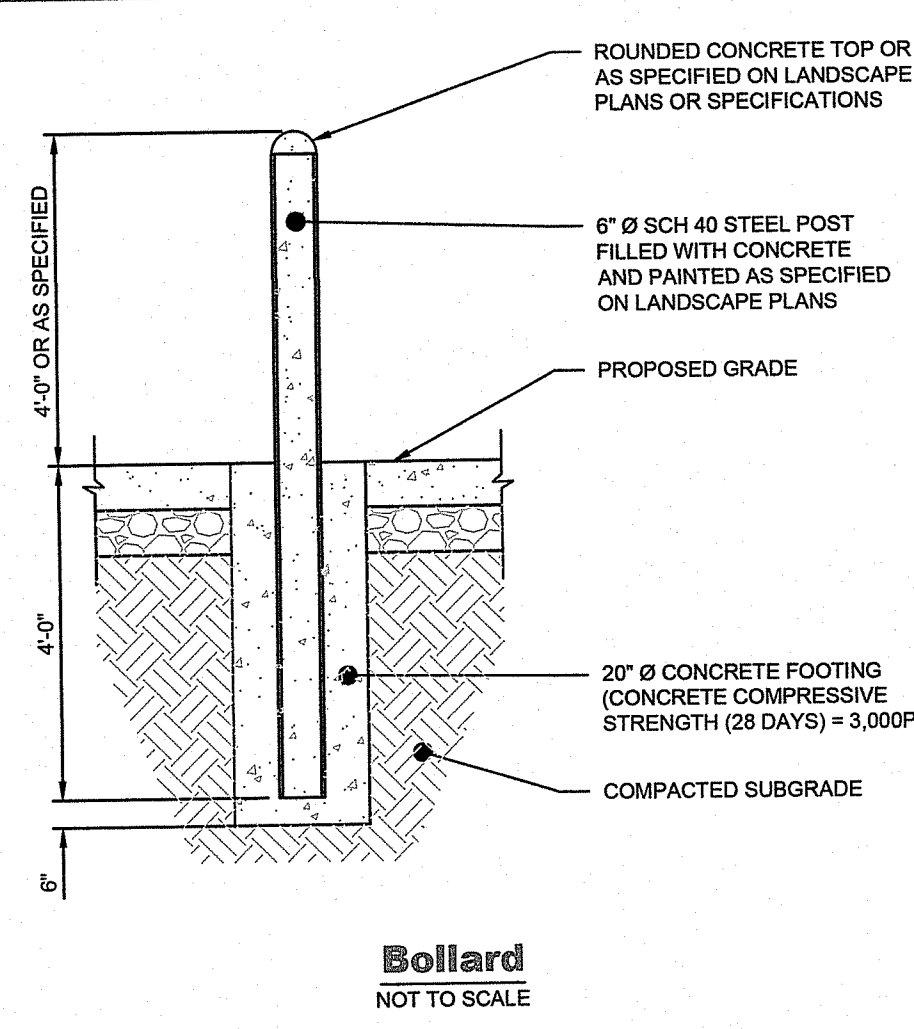
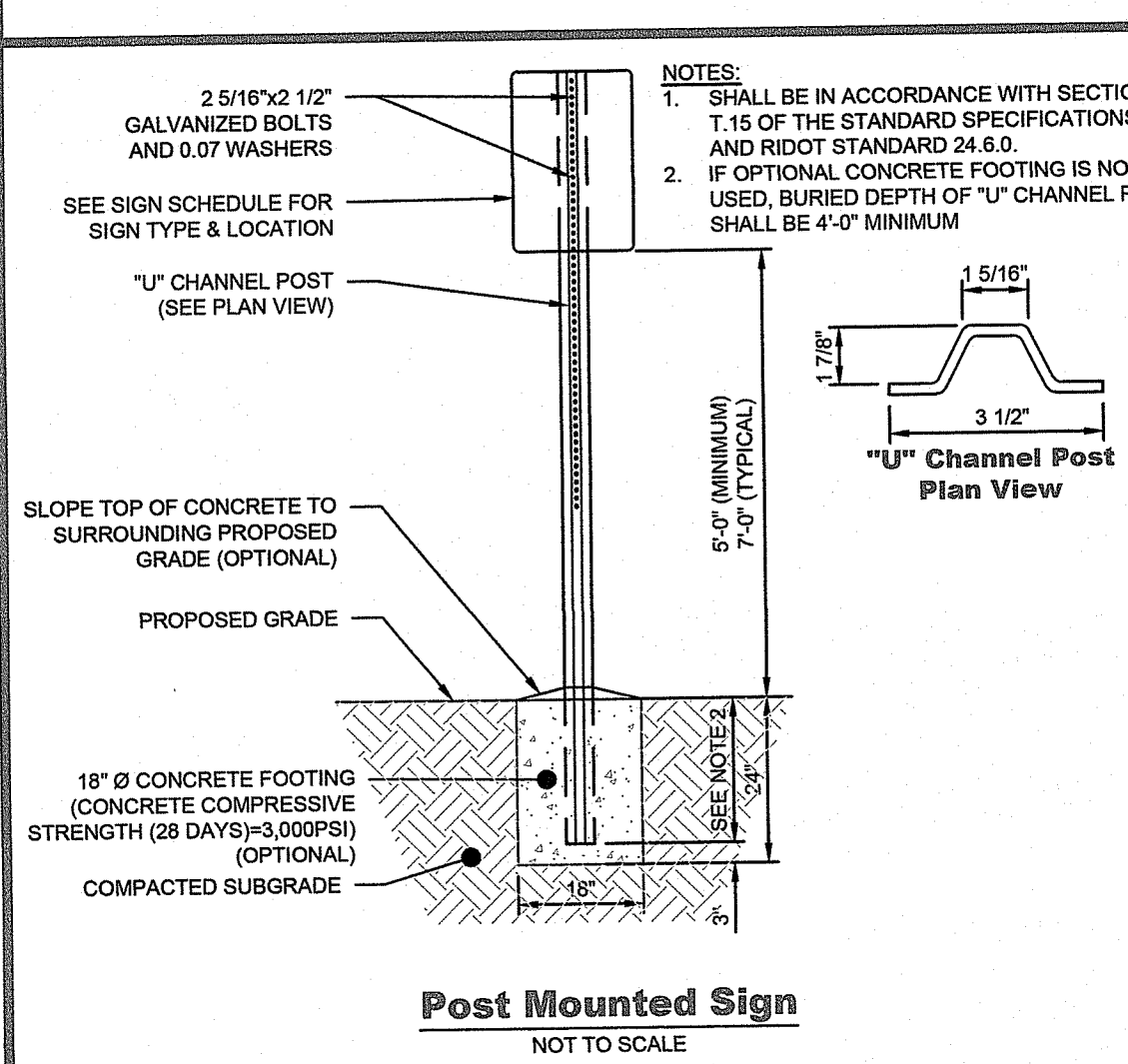
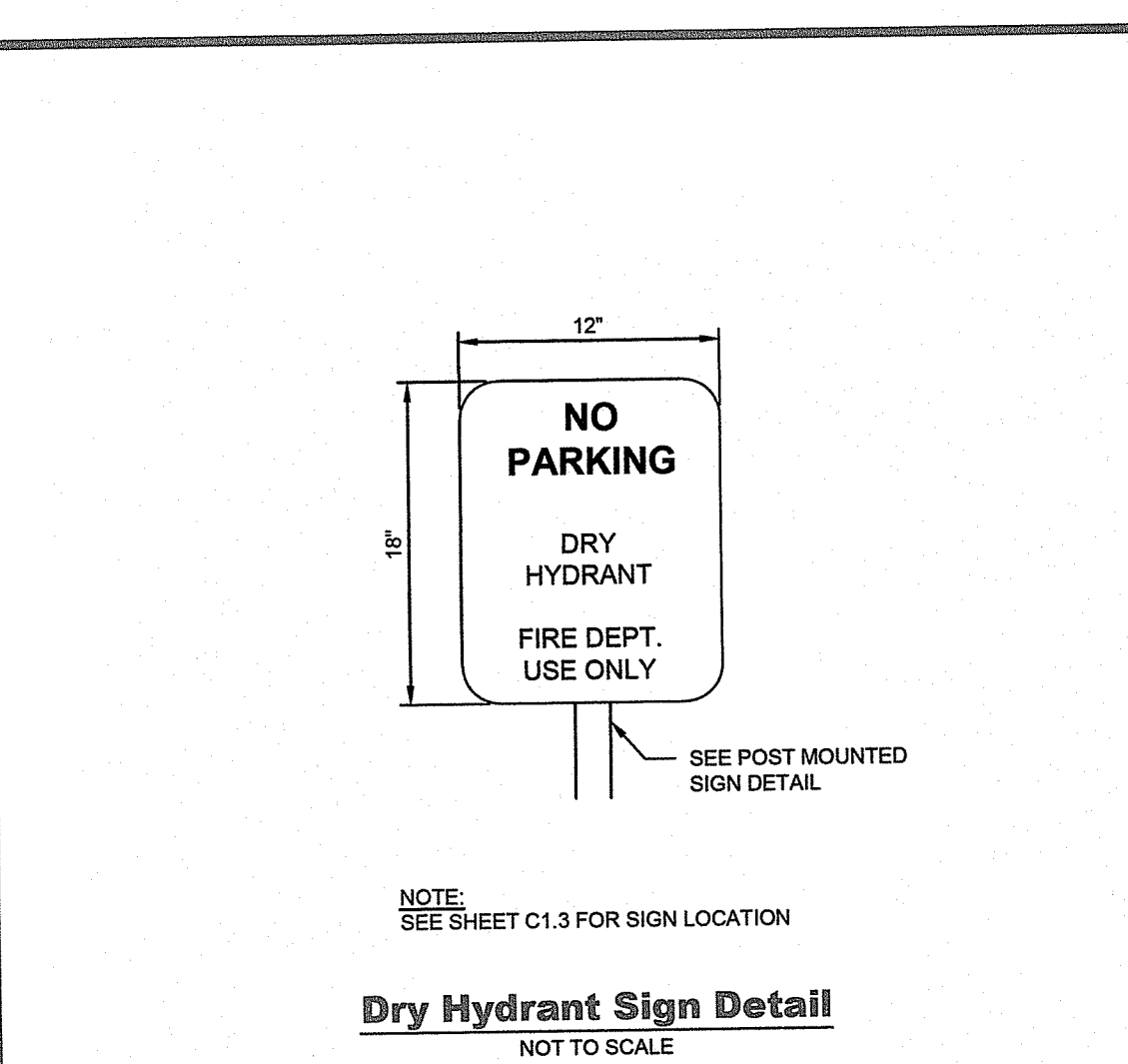
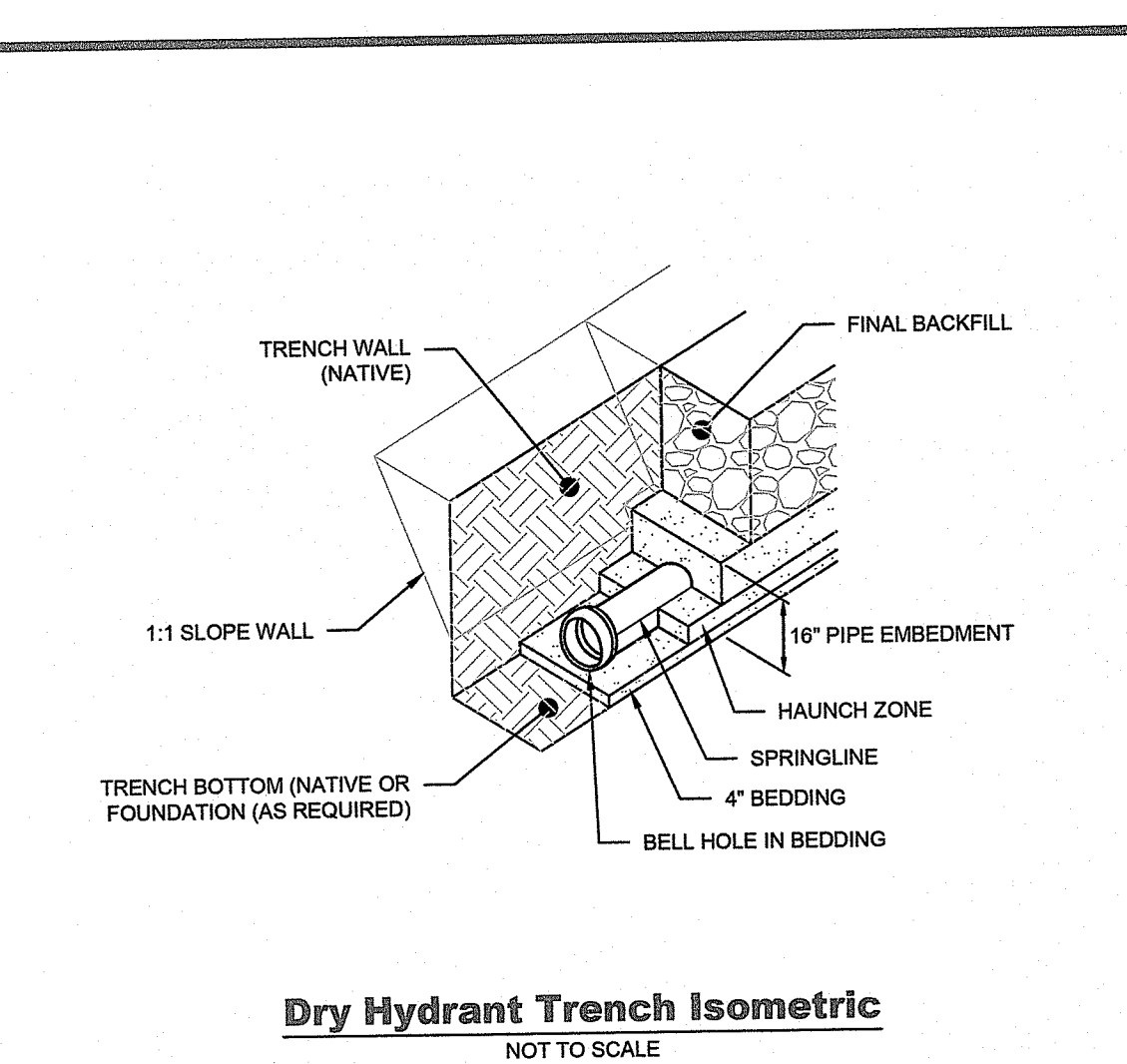
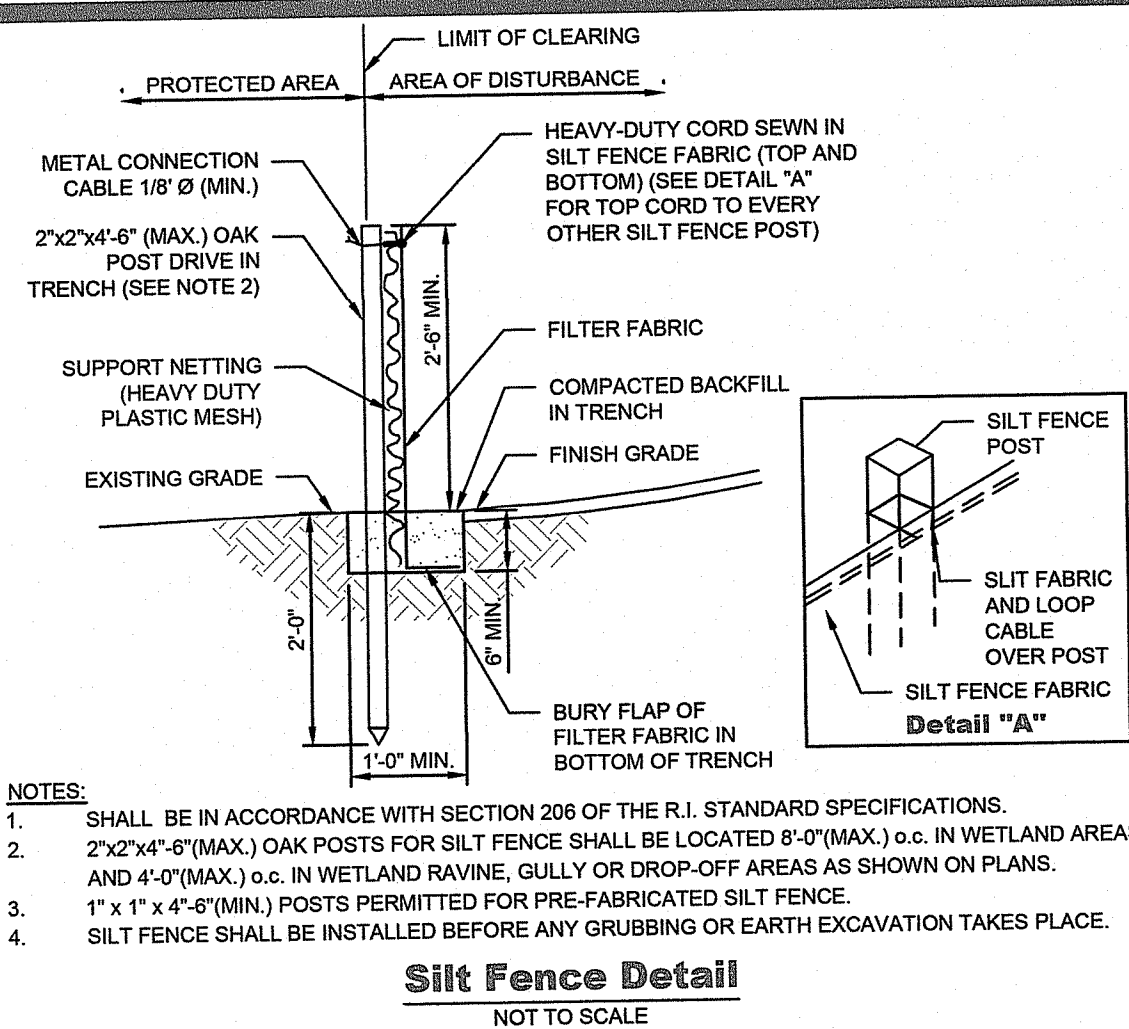
PREPARED BY: **Green Development, LLC**
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

General Notes:

- ALL EXISTING UTILITIES SHOWN ARE FROM VISIBLE INFORMATION, DRAWINGS FROM OTHERS, RIGIS DATA, SURVEYED INFORMATION AND/OR INFORMATION PROVIDED TO GREEN DEVELOPMENT AND IS SUBJECT TO CHANGE AND ARE TO BE CONSIDERED APPROXIMATE ONLY. PRIOR TO CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE TO CONTACT THE PROPER UTILITY ENGINEERING DEPARTMENTS AND COMPANIES TO LOCATE ALL EXISTING SUBSURFACE UTILITIES AND STRUCTURES IN AND AROUND THE LIMIT OF DISTURBANCE.
- CONTRACTOR TO CALL THE DIG SAFE CENTER TOLL FREE AT 1-888-344-7233, 72 HOURS PRIOR TO ANY EXCAVATION WORK TAKES PLACE. CONTRACTOR TO NOTIFY THE DESIGN ENGINEER OF ANY DISCREPANCIES FOUND DURING UTILITY RESEARCH PRIOR TO EXCAVATION. ANY DAMAGE TO ANY EXISTING UTILITIES WHICH ARE SHOWN AND NOT SHOWN ON THE PLANS OR DETAILED BY DIG SAFE SHALL BE THE RESPONSIBILITY OF THE SITE CONTRACTOR.
- DAILY SWEEPING AT CONSTRUCTION SITE DURING CONSTRUCTION IS REQUIRED TO MINIMIZE SEDIMENTS WITHIN THE PROPERTY AND ON IRON MINE HILL ROAD. THE CONTRACTOR SHALL PROVIDE STORAGE FOR WATER AS NECESSARY TO ENSURE PROPER DUST CONTROL.
- THIS PLAN SET REFERENCES RHODE ISLAND DEPARTMENT OF TRANSPORTATION (RIDOT) STANDARD DETAILS WHICH CAN BE FOUND ON THE RIDOT ONLINE DATABASE. DESIGNATED DETAILS ARE LABELED WITHIN THIS PLAN SET AS RIDOT STD X.X.X. REFERENCE LINK: [HTTP://WWW.DOT.RI.GOV/DOCUMENTS/DOINGBUSINESS/RIDOT_STD_DETAILS.PDF](http://www.dot.ri.gov/documents/doingbusiness/ridot_std_details.pdf)
- INSTALLATION MATERIALS SHALL MEET THE NFPA AND NORTH SMITHFIELD FIRE DEPARTMENT REQUIREMENTS FOR DRY HYDRANTS. ANY MODIFICATIONS SHALL BE CLEARLY INDICATED ON THE DRAWINGS AND SHALL BE OBTAINED BY THE DESIGN ENGINEER AND NORTH SMITHFIELD FIRE DEPARTMENT PRIOR TO INSTALLATION.
- ALL PERMITS NEEDED TO INSTALL AND OPERATE THIS SYSTEM ARE THE RESPONSIBILITY OF THE OWNER AND SHALL BE OBTAINED BEFORE CONSTRUCTION BEGINS.
- NO CONSTRUCTION SHALL TAKE PLACE UNTIL EROSION CONTROL MEASURES, AS SHOWN ON THE PLANS, ARE INSTALLED.
- ANY EXCESS EXCAVATED MATERIAL THAT CANNOT BE USED FOR EARTH FILL SHALL BE DISPOSED OUTSIDE OF ANY RIVERBANK OR PERIMETER WETLAND.
- RESEED ALL DISTURBED AREAS ACCORDING TO THE SEEDING SPECIFICATION.
- PLASTIC PIPE SHALL BE SCH40 PVC AND SHALL HAVE A MINIMUM OF 3 FT. OF BEDDING MATERIAL OVER THE PIPE TO PROTECT IT FROM FREEZING. THE PIPE SHALL BE LOW ENOUGH THAT THE PIPE WILL NORMALLY BE FULL OF WATER, FOR EASE IN PRIMING THE SYSTEM. (SEE DETAILS)
- ALL EARTH FILL MATERIAL SHALL CONTAIN NO SOD, BRUSH, ROOTS OR OTHER PERISHABLE MATERIALS. EARTH EMBANKMENTS SHALL CONTAIN NO STONES OR ROCKS PARTICLES OVER 6 INCHES IN DIAMETER. BACKFILL MATERIALS WITHIN 2 FEET OF ANY STRUCTURE OR PIPE SHALL BE PLACED IN LAYERS NOT TO EXCEED 4 INCHES IN THICKNESS AND SHALL BE BROUGHT UP UNIFORMLY AROUND THE STRUCTURE. THIS BACKFILL SHALL BE COMPACTED BY HAND TAMPING OR MANUALLY DIRECTED POWER TAMPERS OR PLATE VIBRATORS. HEAVY EQUIPMENT SHOULD BE KEPT A SAFE DISTANCE WITHIN OR OVER ANY STRUCTURE OR PIPE SO AS NOT TO CAUSE ANY STRUCTURAL DAMAGE.
- THE HYDRANT SLEEVE SHALL BE MADE OF BRONZE, BRASS, ALUMINUM ALLOY OR OTHER DURABLE, NON-CORROSIVE, METAL. SLEEVE MUST BE PERMANENTLY AFFIXED INSIDE A PVC HEAD USING EPOXY ADHESIVE AND STAINLESS STEEL BOLTS. THE HYDRANT HEAD SHALL BE ABLE TO ACCEPT A 6" NHT (AMERICAN NATIONAL FIRE HOSE THREAD) CONNECTION TO PROVIDE MAXIMUM SUPPLY. HYDRANT (6") HEAD SHALL CONFORM TO ASTM 2466. THE HYDRANT SHALL CONTAIN A REMOVABLE HEAD STRAINER AND STAINLESS STEEL SNAP RING THAT CAN BE REMOVED WITHOUT SPECIAL TOOLS. THE STRAINER SHALL BE CONICAL IN SHAPE TO MAXIMIZE STRAINING AREA. THE HYDRANT SHALL USE A RUBBER "O" RING BETWEEN THE THREADED SLEEVE AND PVC HEAD.
- THE DRY HYDRANT CAP SHALL BE SNAP-ON/ SNAP-OFF DESIGN AND REMOVABLE WITHOUT SPECIAL TOOLS. IT SHALL BE JOINED WITH A STEEL CABLE OR CHAIN AND BE PERMANENTLY ATTACHED TO THE DRY HYDRANT HEAD. THE CAP SHALL BE HARD PLASTIC OR OF THE SAME METAL AS NHT CONNECTION FOR MAXIMUM CORROSION RESISTANCE. (SEE DETAIL)
- STRAINER SHALL BE 6" DIAMETER SCH40 PVC PLASTIC PIPE, WITH FIXED END CAPS 1:1 INTAKE RATIO, AND 3/8" MINIMUM DIAMETER INTAKE HOLES. A SUPPORT ROD SHALL ALSO BE PROVIDED.
- DRY HYDRANT SHALL BE UTILIZED FOR FIRE SUPPRESSION.

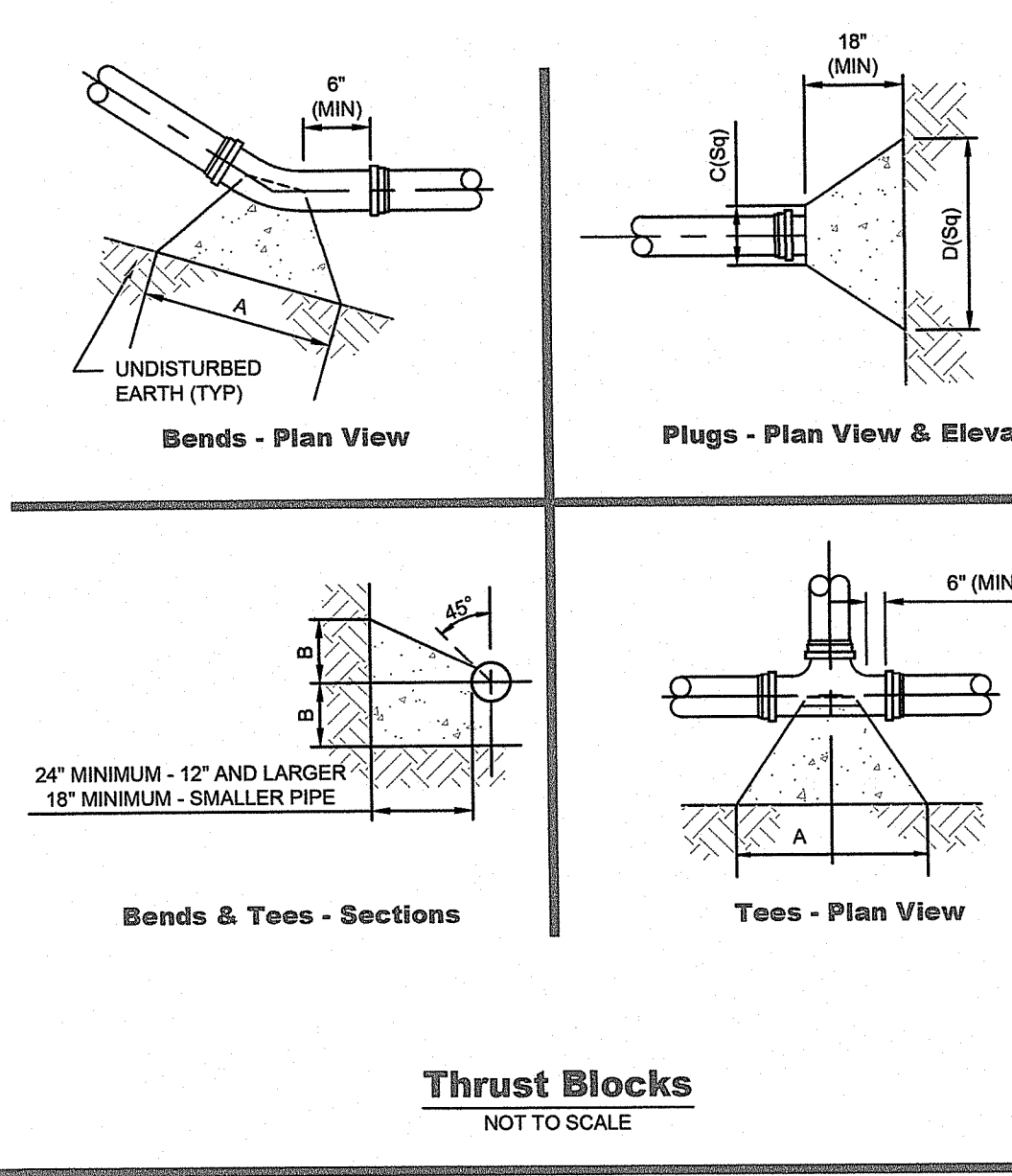
Buried Pipeline Installation Notes:

- THIS PROJECT IS PROPOSED TO BE BUILT IN 1 PHASE 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 AND OTHER GRAVITY-LOW APPLICATIONS, LATEST EDITION, AS AN ALTERNATIVE A THE DISCRETION OF THE ENGINEER THE TRENCH BOTTOM MAY BE STABILIZED USING A WOVEN GEOTEXTILE FABRIC.
- BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III AND INSTALLATION AS REQUIRED IN ASTM D2321, LATEST EDITION, UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4".
- HAUNCHING AND INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III AND INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.



- NOTES:
- ALL CONCRETE SHALL BE 4,000 P.S.I. @ 28 DAYS.
 - CONCRETE THRUST BLOCKS SHALL BEAR AGAINST UNDISTURBED EARTH.
 - FORMS TO BE USED AS NECESSARY.
 - ALL BOLTS AND NUTS TO BE PROTECTED FROM CONCRETE AND EASILY ACCESSIBLE WHEN THRUST BLOCK INSTALLED.
 - REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF RHODE ISLAND SHALL VERIFY CALCULATIONS DURING DESIGN TO MEET CONDITIONS OF PROJECT AND WATER AUTHORITY REQUIREMENTS.

SIZE	TEES				PLUGS				90° BEND				45° BEND				22.5° BEND				11.25° BEND			
	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
6"	20"	10"	10"	21"	24"	12"	18"	9"	13"	7"	9"	5"												
8"	26"	13"	12"	28"	32"	16"	24"	12"	17"	9"	12"	8"												
10"	34"	17"	14"	34"	40"	20"	30"	15"	22"	11"	15"	8"												
12"	41"	20"	16"	41"	48"	24"	35"	18"	25"	13"	18"	9"												
16"	54"	27"	20"	54"	64"	32"	47"	23"	34"	17"	24"	12"												



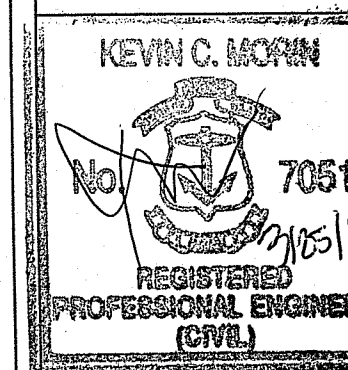
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3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

NO.	DATE	REVISION
1	1.3/25/2019	FIRE DEPARTMENT SUBMISSION FOR DRY HYDRANT

SHEET TITLE: **Dry Hydrant Details**
PROJECT INFORMATION:
Iron Mine Hill Road Dry Hydrant
IRON MINE HILL ROAD, NORTH SMITHFIELD, RI 02896
AP 16 LOTS 6 & 97



SHEET NO.: **C1.4 OF 4**