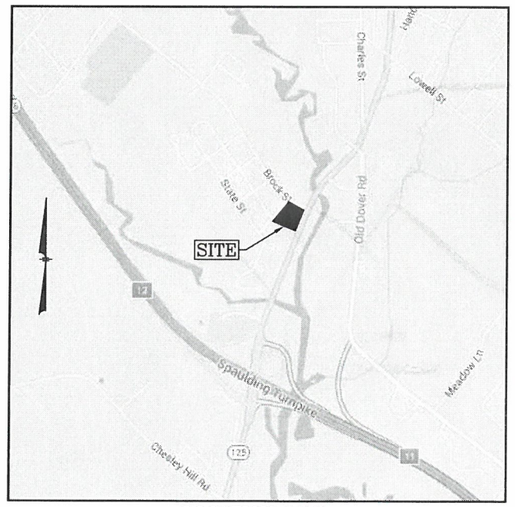
SITE DEVELOPMENT PLANS
for
PROPOSED RETAIL MOTOR FUEL OUTLET
TAX MAP 131 LOT 7
717 COLUMBUS AVENUE
ROCHESTER, NEW HAMPSHIRE 03867
Prepared for:
TROPIC STAR DEVELOPMENT, LLC
321D LAFAYETTE ROAD
HAMPTON, NH 03842



LOCATION MAP
NOT TO SCALE

IRVING

INDEX TO DRAWINGS

NEW HAMPSHIRE FISH AND GAME AOT PERMIT CONDITIONS RELATED TO THREATENED AND ENDANGERED SPECIES:

- ALL OBSERVATIONS OF THREATENED OR ENDANGERED SPECIES SHALL BE REPORTED IMMEDIATELY TO THE NEW HAMPSHIRE FISH AND GAME DEPARTMENT NONGAME AND ENDANGERED WILDLIFE REVIEW PROGRAM BY PHONE AT 603-271-2461 AND BY EMAIL AT NHFGREVIEW@WILDLIFE.NH.GOV. EMAIL SUBJECT LINE: NHB19-3578, PROPOSED RETAIL MOTOR FUEL OUTLET, WILDLIFE SPECIES OBSERVATION. PHOTOGRAPHS SHALL BE PROVIDED FOR VERIFICATION AS FEASIBLE; AND
- THE NEW HAMPSHIRE FISH AND GAME DEPARTMENT SHALL HAVE ACCESS TO THE PROPERTY DURING THE TERM OF THE PERMIT.
- ALL MANUFACTURED EROSION AND SEDIMENT CONTROL PRODUCTS, UTILIZED FOR, BUT NOT LIMITED TO, SLOPE PROTECTION, RUNOFF DIVERSION, SLOPE INTERRUPTION, PERIMETER CONTROL, INLET PROTECTION, CHECK DAMS, SEDIMENT TRAPS, AND SILT FENCE INSTALLED IN ACCORDANCE WITH ENV-WQ 1506.04, SHALL NOT CONTAIN WELDED PLASTIC, PASTIC, OR MULTI-FILAMENT OR MONOFILAMENT POLYPROPYLENE NETTING OR MESH.

NO.	DESCRIPTION	BY	DATE
	REVISIONS		
5	REVISE SHEETS 4, 6. ADD NHFG CONDITIONS	FCM	4/8/21
4	REVISE SHEET 3	FCM	3/29/21
3	REVISE SHEETS 4, 6	FCM	2/24/21
2	ADD SHEET 2A & REVISE SHEETS 2-7, 9, TT	PWM	11/5/20
1	REVISE SHEETS 2-7, 9-12, 16	PWM	6/8/20

TITLE SHEET

IRVING

MAP 131 LOT 7
717 COLUMBUS AVENUE
ROCHESTER, NEW HAMPSHIRE
PREPARED FOR:
TROPIC STAR DEVELOPMENT, LLC
321D LAFAYETTE ROAD
HAMPTON, NH 03842

FINAL APPROVAL BY ROCHESTER PLANNING BOARD
CERTIFIED BY: Seth Creighton DATE: 4/28/21
Chief Planner

STATE OF NEW HAMPSHIRE · FRANK C. MONTERO No. 7402 LICENSED PROFESSIONAL ENGINEER · 4/8/21

GPI Engineering Design Planning Construction Management
603.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Stiles Road
Suite One
Salem, NH 03079

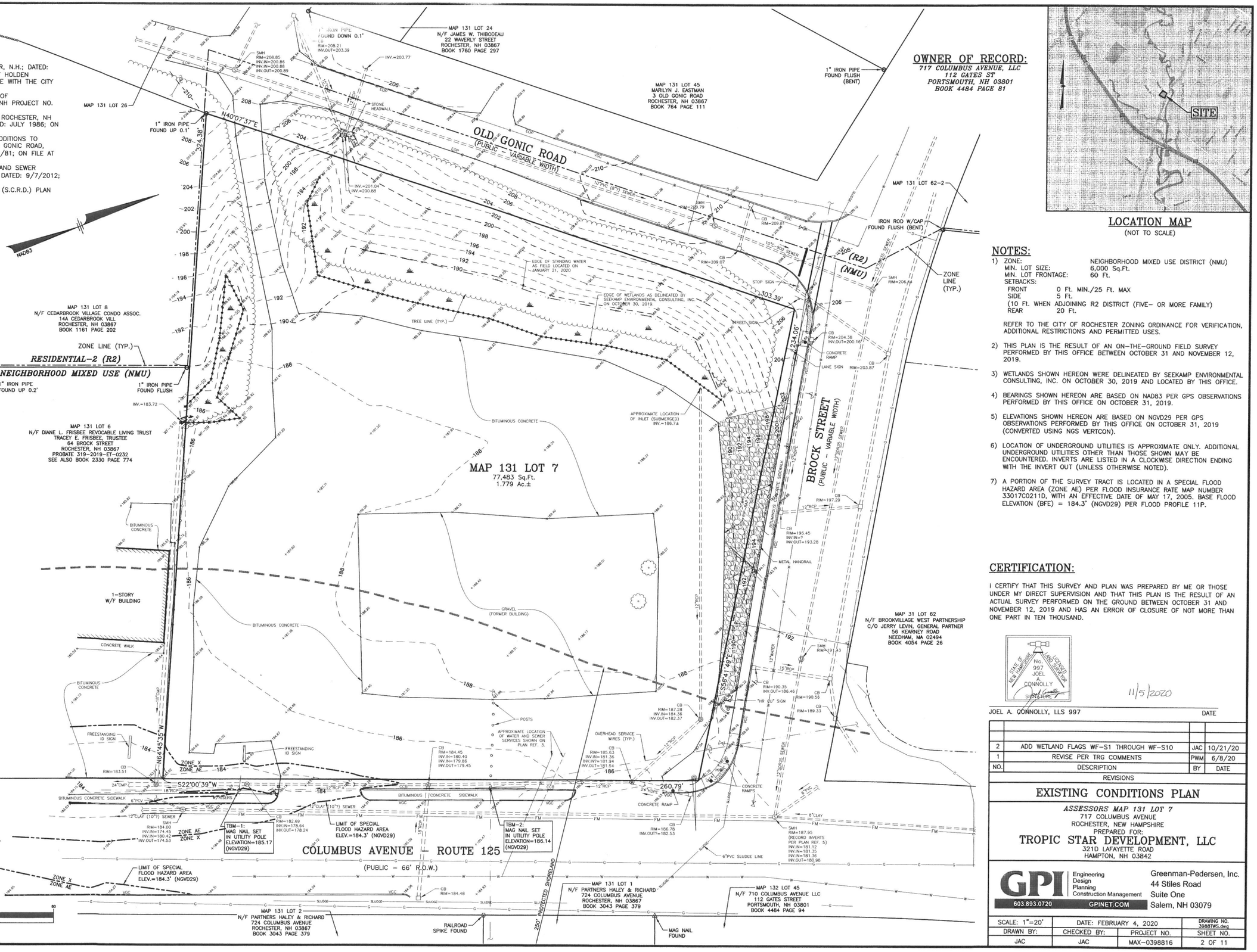
NOT TO SCALE	DATE: FEBRUARY 4, 2020		DRAWING NO. 398816VR
DRAWN BY:	CHECKED BY:	PROJECT NO.	SHEET NO.
CCC	FCM	398816	1 OF 11

PLAN REFERENCES:

1) SITE PLAN, RICHARD DUFOUR, ROCHESTER, N.H.; DATED: 7-22-88; SCALE: 1"=20'; PREPARED BY HOLDEN ENGINEERING & SURVEYING, INC.; ON FILE WITH THE CITY OF ROCHESTER.
2) STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION RIGHT OF WAY PLANS, NH PROJECT NO. 10620-D.
3) WATER MAIN AND SLUDGE LINE, CITY OF ROCHESTER, NH BROCK STREET AND GONIC STREET; DATED: JULY 1986; ON FILE AT ROCHESTER DPW.
4) CITY OF ROCHESTER, NEW HAMPSHIRE, ADDITIONS TO SEWER SYSTEM, PLAN AND PROFILE, OLD GONIC ROAD, LAWN & PARK AVENUE; REV. DATE: 10/9/81; ON FILE AT ROCHESTER DPW.
5) BROCK STREET RECONSTRUCTION WATER AND SEWER REPLACEMENT, WATER AND SEWER PLAN, DATED: 9/7/2012; ON FILE AT THE ROCHESTER DPW.
6) STRAFFORD COUNTY REGISTRY OF DEEDS (S.C.R.D.) PLAN 378A-1
7) S.C.R.D PLAN 37A-106.
8) S.C.R.D. PLAN 51-1.
9) S.C.R.D. PLAN 61-79
10) S.C.R.D. PLAN 71-93.
11) S.C.R.D. PLAN 81-36.
12) S.C.R.D. PLAN 82-46.
13) S.C.R.D. PLAN 82-47.
14) S.C.R.D. PLAN 86-100.
15) S.C.R.D. PLAN 104-39.

LEGEND

- VGC — VERTICAL GRANITE CURB
- CCB — CAPE COD BERM
- EOP — EDGE OF PAVEMENT
- G — GAS LINE
- FM — SEWER FORCE MAIN
- W — WATER LINE
- E — UNDERGROUND ELECTRIC
- CHAIN LINK FENCE
- SPOT ELEVATION
- CONTOUR ELEVATION
- TREE
- UTILITY POLE
- GUY WIRE
- OVERHEAD WIRE
- TREELINE
- SIGN
- DRAIN MANHOLE
- CATCH BASIN
- SEWER MANHOLE
- GAS VALVE
- GAS SHUT OFF
- WATER VALVE
- WATER SHUT OFF
- FIRE HYDRANT
- BOLLARD
- GM — GAS METER
- EM — ELECTRIC METER
- MONITORING WELL
- LIGHT POLE



LOCATION MAP
(NOT TO SCALE)

OWNER OF RECORD:
717 COLUMBUS AVENUE, LLC
112 GATES ST
PORTSMOUTH, NH 03801
BOOK 4484 PAGE 81

NOTES:

1) ZONE: NEIGHBORHOOD MIXED USE DISTRICT (NMU)
MIN. LOT SIZE: 6,000 Sq.Ft.
MIN. LOT FRONTAGE: 60 Ft.
SETBACKS:
FRONT 0 Ft. MIN./25 Ft. MAX
SIDE 5 Ft.
(10 Ft. WHEN ADJOINING R2 DISTRICT (FIVE- OR MORE FAMILY)
REAR 20 Ft.

REFER TO THE CITY OF ROCHESTER ZONING ORDINANCE FOR VERIFICATION, ADDITIONAL RESTRICTIONS AND PERMITTED USES.

2) THIS PLAN IS THE RESULT OF AN ON-THE-GROUND FIELD SURVEY PERFORMED BY THIS OFFICE BETWEEN OCTOBER 31 AND NOVEMBER 12, 2019.

3) WETLANDS SHOWN HEREON WERE DELINEATED BY SEEKAMP ENVIRONMENTAL CONSULTING, INC. ON OCTOBER 30, 2019 AND LOCATED BY THIS OFFICE.

4) BEARINGS SHOWN HEREON ARE BASED ON NAD83 PER GPS OBSERVATIONS PERFORMED BY THIS OFFICE ON OCTOBER 31, 2019.

5) ELEVATIONS SHOWN HEREON ARE BASED ON NGVD29 PER GPS OBSERVATIONS PERFORMED BY THIS OFFICE ON OCTOBER 31, 2019 (CONVERTED USING NGS VERTCON).

6) LOCATION OF UNDERGROUND UTILITIES IS APPROXIMATE ONLY. ADDITIONAL UNDERGROUND UTILITIES OTHER THAN THOSE SHOWN MAY BE ENCOUNTERED. INVERTS ARE LISTED IN A CLOCKWISE DIRECTION ENDING WITH THE INVERT OUT (UNLESS OTHERWISE NOTED).

7) A PORTION OF THE SURVEY TRACT IS LOCATED IN A SPECIAL FLOOD HAZARD AREA (ZONE AE) PER FLOOD INSURANCE RATE MAP NUMBER 33017C0211D, WITH AN EFFECTIVE DATE OF MAY 17, 2005. BASE FLOOD ELEVATION (BFE) = 184.3' (NGVD29) PER FLOOD PROFILE 11P.

CERTIFICATION:

I CERTIFY THAT THIS SURVEY AND PLAN WAS PREPARED BY ME OR THOSE UNDER MY DIRECT SUPERVISION AND THAT THIS PLAN IS THE RESULT OF AN ACTUAL SURVEY PERFORMED ON THE GROUND BETWEEN OCTOBER 31 AND NOVEMBER 12, 2019 AND HAS AN ERROR OF CLOSURE OF NOT MORE THAN ONE PART IN TEN THOUSAND.

STATE OF NEW HAMPSHIRE — No. 997 — JOEL A. CONNOLLY — LAND SURVEYOR — SIGNATURE

11/5/2020

JOEL A. CONNOLLY, LLS 997 — DATE

NO.	DESCRIPTION	BY	DATE
	REVISIONS		
2	ADD WETLAND FLAGS WF-S1 THROUGH WF-S10	JAC	10/21/20
1	REVISE PER TRG COMMENTS	PWM	6/8/20

EXISTING CONDITIONS PLAN

ASSESSORS MAP 131 LOT 7
717 COLUMBUS AVENUE
ROCHESTER, NEW HAMPSHIRE
PREPARED FOR:
TROPIC STAR DEVELOPMENT, LLC
321D LAFAYETTE ROAD
HAMPTON, NH 03842

GPI — Engineering, Design, Planning, Construction Management
603.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Stiles Road
Suite One
Salem, NH 03079

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

SCALE: 1"=20'	DATE: FEBRUARY 4, 2020		DRAWING NO. 3988TWS.dwg
DRAWN BY:	CHECKED BY:	PROJECT NO.	SHEET NO.
JAC	JAC	MAX-0398816	2 OF 11

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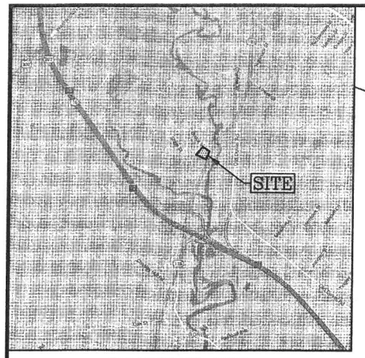


LOCATION MAP
(NOT TO SCALE)

NAD83

LEGEND

- VGC — VERTICAL GRANITE CURB
- CCB — CAPE COD BERM
- EOP — EDGE OF PAVEMENT
- G — GAS LINE
- FM — SEWER FORCE MAIN
- W — WATER LINE
- E — UNDERGROUND ELECTRIC
- CHAIN LINK FENCE
- +188.49 — SPOT ELEVATION
- 190 — CONTOUR ELEVATION
- TREE
- UTILITY POLE
- GUY WIRE
- OVERHEAD WIRE
- TREELINE
- SIGN
- DRAIN MANHOLE
- CATCH BASIN
- SEWER MANHOLE
- GAS VALVE
- GAS SHUT OFF
- WATER VALVE
- WATER SHUT OFF
- FIRE HYDRANT
- BOLLARD
- GM — GAS METER
- EM — ELECTRIC METER
- MONITORING WELL
- LIGHT POLE
- 140B — SITE SPECIFIC SOIL CLASSIFICATION
- SOIL BOUNDARY
- WETLAND BOUNDARY
- RIPRAP

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

MAP 131 LOT 24
N/F JAMES W. THIBODEAU
22 WAVERLY STREET
ROCHESTER, NH 03867
BOOK 1760 PAGE 297

1" IRON PIPE FOUND DOWN 0.1'

MAP 131 LOT 45
MARILYN J. EASTMAN
3 OLD GONIC ROAD
ROCHESTER, NH 03867
BOOK 764 PAGE 111

1" IRON PIPE FOUND FLUSH (BENT)

MAP 131 LOT 62-2

IRON ROD W/CAP FOUND FLUSH (BENT)

MAP 131 LOT 26

1" IRON PIPE FOUND UP 0.1'

N40°07'37"E 324.38'

OLD GONIC ROAD
(PUBLIC – VARIABLE WIDTH)

STONE HEADWALL

32D

32E

38B

600A–CECCC

299A–DECCC

600A–FECCD

EDGE OF STANDING WATER AS FIELD LOCATED ON JANUARY 21, 2020

EDGE OF WETLANDS AS DELINEATED BY SEEKAMP ENVIRONMENTAL CONSULTING, INC. ON OCTOBER 30, 2019.

EDGE OF WETLANDS AS DELINEATED BY SEEKAMP ENVIRONMENTAL CONSULTING, INC. ON OCTOBER 9, 2020.

TREE LINE (TYP.)

STOP SIGN

STREET SIGN

303.39'

234.06'

CONCRETE RAMP

LANE SIGN

MAP 131 LOT 8
N/F CEDARBROOK VILLAGE CONDO ASSOC.
14A CEDARBROOK VILL
ROCHESTER, NH 03867
BOOK 1161 PAGE 202

1" IRON PIPE FOUND UP 0.2'

1" IRON PIPE FOUND FLUSH

MAP 131 LOT 6
N/F DIANE L. FRISBEE REVOCABLE LIVING TRUST
TRACEY E. FRISBEE, TRUSTEE
64 BROCK STREET
ROCHESTER, NH 03867
PROBATE 319–2019–ET–0232
SEE ALSO BOOK 2330 PAGE 774

MAP 131 LOT 7
77,483 Sq.Ft.
1.779 Ac.±

BITUMINOUS CONCRETE

BROCK STREET
(PUBLIC – VARIABLE WIDTH)

METAL HANDRAIL

BITUMINOUS CONCRETE SIDEWALK

1–STORY W/F BUILDING

GRAVEL (FORMER BUILDING)

CONCRETE WALK

BITUMINOUS CONCRETE

POSTS

"HIR CU" SIGN

FREESTANDING ID SIGN

N64°45'35"W

S22°00'39"W

ZONE X
ZONE AE

OVERHEAD SERVICE WIRES (TYP.)

CCB

BITUMINOUS CONCRETE SIDEWALK

W/METERS

CONCRETE RAMPS

LIMIT OF SPECIAL FLOOD HAZARD AREA ELEV.=184.3' (NGVD29)

ZONE AE
ZONE X

COLUMBUS AVENUE – ROUTE 125
(PUBLIC – 66' R.O.W.)

MAP 31 LOT 62
N/F BROOKVILLAGE WEST PARTNERSHIP
C/O JERRY LEVIN, GENERAL PARTNER
56 KEARNEY ROAD
NEEDHAM, MA 02494
BOOK 4054 PAGE 26

S56°41'49"E 260.79'

MAP 131 LOT 2
N/F PARTNERS HALEY & RICHARD
724 COLUMBUS AVENUE
ROCHESTER, NH 03867
BOOK 3043 PAGE 379

RAILROAD SPIKE FOUND

255' PROTECTED SHORELAND

MAP 131 LOT 1
N/F PARTNERS HALEY & RICHARD
724 COLUMBUS AVENUE
ROCHESTER, NH 03867
BOOK 3043 PAGE 379

MAG NAIL FOUND

MAP 132 LOT 45
N/F 710 COLUMBUS AVENUE LLC
112 GATES STREET
PORTSMOUTH, NH 03801
BOOK 4484 PAGE 94

SOIL NOTES:

(REFER TO SOIL SURVEY REPORT DATED SEPTEMBER 28, 2020 PREPARED BY MARC JACOBS, CSS, CWS, PWS, CPESC)

TABLE 1 Site Specific Soil Survey Map Legend

Soil Series Name & Number	Drainage Class	Parent Material (C horizon)	Restrictive Features*	Saturated Hydraulic Conductivity (K_{sat})** Inches/Hour Low to high B & C horizons	HSG**
32 Boxford	Moderately Well	Glaciolacustrine or Glaciomarine Silt and Clay	Mineral restrictive layer	0.1 to 0.2 0.00 to 0.2	C
33 Scitico†	Poor	Glaciolacustrine or Glaciomarine Silt and Clay	Mineral restrictive layer	0.0 to 0.2 0.0 to 0.2	C
299 Udorthents	Moderately Well	Variable – cut and/or filled	Mineral restrictive layer	Low to very low††	C††
600 Endoaquepts, loamy†	Various – see Table 3 below	Variable – excavated – See Table 3 below	Mineral restrictive Layer	Low to very low††	D††

*Within 40 inches of the soil surface.
**From K_{sat} Values for New Hampshire Soils – Society of Soil Scientists of Northern New England – Special Publication Number 5 – September 2009 unless noted otherwise. On-site K_{sat} testing may be warranted.
†These are hydric soils and customarily represent jurisdictional wetlands (which could also be considered a type of restrictive feature).
††Estimated based upon soil properties observed in the field. No published data is available. On-site testing recommended if necessary.

TABLE 2 Slope Phase Legend (percent)

A	B	C	D	E	F
0-3	3-8	8-15	15-25	25-50	50+

TABLE 3 Disturbed Soil Mapping Unit Supplemental Symbol Legend

Supplemental Symbol (1-5)	Drainage class (Symbol 1)	Parent material (Symbol 2)	Restrictive / Impervious layers (Symbol 3)	Estimated Ksat (Symbol 4)	Hydrologic Soil Group (Symbol 5)
299-deccc	Moderately well (d)	Loam/sandy over silt/clay (e)	Mineral restrictive layer (c)	Low* (c)	C* (c)
600-feccd	Poor (f)	Loam/sandy over silt/clay (e)	Mineral restrictive layer (c)	Low* (c)	D* (d)
600-geccd	Very poor (g)	Loam/sandy over silt/clay (e)	Mineral restrictive layer (c)	Low* (c)	D* (d)

*Estimated based upon soil properties observed in the field. No published data available. On-site testing recommended if necessary.

This soil map falls within the technical standards of the National Cooperative Soil Survey. It is a special purpose product intended for use in complying with the New Hampshire Alteration of Terrain (AoT) Regulations (Env-Wq 1500). It was produced by Marc Jacobs, Certified Soil Scientist #038, based upon actual field investigations conducted in September 2020 and is not a product of the USDA Natural Resources Conservation Service. The site-specific soil survey was conducted according to Special Publication No. 3 – Site-Specific Soil Mapping Standards for New Hampshire and Vermont, Version 5.0 dated December 2017 as published, maintained and amended by the Society of Soil Scientists of Northern New England. There is a report that accompanies this soil map. Copies of the soil survey map that have been reviewed by the scientist(s) are individually stamped, signed and dated. This note has been customized for this site.

Marc E Jacobs NOVEMBER 11,2020

MARC JACOBS, CSS, CWS, PWS, CPESC — DATE

SOIL SURVEY & WETLAND DELINEATION PERFORMED

STATE OF NEW HAMPSHIRE — MARC ERNEST JACOBS — No. 038 — CERTIFIED SOIL SCIENTIST — 11/11/20

STATE OF NEW HAMPSHIRE — MICHAEL A SEEKAMP — No. 109 — CERTIFIED WETLAND SCIENTIST

MARC JACOBS
P.O. BOX 417,
GREENLAND, NH 03840–0417

BY Michael Seekamp 11-11-20
MICHAEL SEEKAMP
129 ROUTE 125,
KINGSTON, NH 03848

NO.	DESCRIPTION	BY	DATE
	REVISIONS		

SOIL PLAN

ASSESSORS MAP 131 LOT 7
717 COLUMBUS AVENUE
ROCHESTER, NEW HAMPSHIRE
PREPARED FOR:
TROPIC STAR DEVELOPMENT, LLC
321D LAFAYETTE ROAD
HAMPTON, NH 03842

GPI
Engineering
Design
Planning
Construction Management
603.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Stiles Road
Suite One
Salem, NH 03079

SCALE: 1"=20'	DATE: NOVEMBER 5, 2020		DRAWING NO. 3988TWS.dwg
DRAWN BY:	CHECKED BY:	PROJECT NO.	SHEET NO.
JAC	JAC	MAX–0398816	2A OF 11

F:\Projects\CAD\3988\16\3988TWS.dwg SOILS 11/11/20 2:58pm stonlam

TABLE OF ZONING REGULATIONS – ROCHESTER, NH

ZONE: NEIGHBORHOOD MIXED USE DISTRICT (NMU)

DESCRIPTION	REQUIRED	PROVIDED
MINIMUM LOT AREA Sq. Ft.	6,000 SF	77,483 SF
MINIMUM LOT FRONTAGE	60'	260.79'
MINIMUM FRONT YARD BUILDING SETBACK	0' MIN. / 25' MAX. (BUILD-TO ZONE)	54'*
MINIMUM SIDE YARD BUILDING SETBACK	5' (8' WHEN ABUTTING RESIDENTIAL)**	56'
MINIMUM REAR YARD BUILDING SETBACK	20'	82'
MINIMUM LANDSCAPE STRIP	15' FRONT/ 10' SIDE	15' FRONT / 10' SIDE
PARKING SPACE DIMENSIONS	9' X 18'	10' X 20'
MINIMUM NUMBER PARKING SPACES	RETAIL: 3 SPACES PER 1,000 SF GFA 4,350 SF X 3 SP/ 1,000 SF = 13 SPACES	29 SPACES
MAXIMUM LOT COVERAGE/ IMPERVIOUS	90%	40,687 SF/77,483 SF = 53%
MAXIMUM BUILDING HEIGHT	20' (3 STORIES)	20' (3 STORIES)
MAXIMUM BUILDING SIZE	4,000 SF	4,350 SF*
MAXIMUM BUILDING FRONTAGE	75'	87'*
FREESTANDING SIGN AREA,HEIGHT+SETBACK	20 SF (ADDITION 24 SF ON CORNER LOTS WITH A C.U.P.), 5' SETBACK, 8' HEIGHT	SEE SIGN & GRAPHICS PLAN
WALL SIGN AREA	10% OF AREA OF THE BLDG. FRONTAGE (CANOPY: 25% OF AREA OF CANOPY FACE)	SEE SIGN & GRAPHICS PLAN
LOADING SPACE REQUIREMENTS	12'W X 45'L X 14'H	12'W X 45'L X 14'H

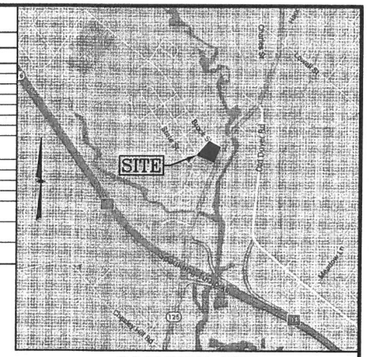
* CONDITIONAL USE PERMIT FROM THE PLANNING BOARD REQUIRED
** TRIPLE FRONTAGE LOT ONLY HAS ONE FRONT YARD

SIGN KEY

SIGN I.D. NUMBER	TEXT/COLOR	SIZE/REMARKS
R1-1	STOP R/W	30" x 30" NEW SIGN WITH POST
R5-1	DO NOT ENTER R/W	30" x 30" NEW SIGN WITH POST
R7-8	RESERVED PARKING E G/B/W	12" x 18" NEW SIGN WITH POST
R7-8A	VAN ACCESSIBLE G/W	6" X 12"

LOCATION MAP

(NOT TO SCALE)



NOTES:

1) TAX MAP 131 LOT 7
2) LOT AREA: 1.779 AC.±
3) ZONING DISTRICT: NEIGHBORHOOD MIXED USE DISTRICT (NMU)
   FLOOD HAZARD OVERLAY DISTRICT (FHOD)*

   * A PORTION OF THE SITE IS LOCATED WITHIN THE 100 YEAR FLOOD PLAIN; HOWEVER, SINCE NO BUILDINGS ARE PROPOSED WITHIN THE FLOODPLAIN, THE FHOD IS NOT APPLICABLE TO THIS PROPOSED DEVELOPMENT.

4) EXISTING USE: UNDEVELOPED
   PROPOSED USE: A 4,350 SF CONVENIENCE STORE WITH DELI INCLUDING 12 INTERIOR SEATS AND 16 EXTERIOR SEATS PLUS FIVE FUEL DISPENSER ISLANDS (10 VEHICLE FUELING POSITIONS)
5) A VARIANCE WAS GRANTED ON NOVEMBER 14, 2018 TO PERMIT A GAS STATION, CONVENIENCE STORE, AND RESTAURANT WITH A DRIVE-THROUGH IN THE NEIGHBORHOOD MIXED USE ZONE.
6) ALL NON-RESIDENTIAL USES REQUIRE A CONDITIONAL USE PERMIT FROM THE PLANNING BOARD.
7) A PORTION OF THE SITE IS WITHIN THE FEMA FLOOD PLAIN. THE PROJECT WILL REQUIRE A SPECIAL PERMIT FOR DEVELOPMENT WITHIN THE FHOD.
8) A PORTION OF THE SITE IS LOCATED WITHIN THE 250' PROTECTED SHORELAND BUFFER AND WILL REQUIRE A NHDES SHORELAND PERMIT. THE PROJECT WILL ALSO REQUIRE A NHDES ALTERATION OF TERRAIN (AOT) PERMIT SINCE THE PROPOSED DISTURBANCE ASSOCIATED WITH THE PROJECT EXCEEDS 50,000 SF. (ESTIMATED DISTURBED AREA = 58,000 SF±)
9) ALL BUILDINGS AND SITE CONSTRUCTION SHALL COMPLY WITH THE RULES AND REGULATIONS OF THE AMERICANS WITH DISABILITIES ACT (ADA) AS REVISED IN 2010.
10) THE LOCATIONS OF EXISTING SUBSURFACE UTILITIES SHOWN ON THIS PLAN WERE COMPILED FROM AVAILABLE RECORD DRAWINGS AND ARE NOT WARRANTED TO BE CORRECT. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING SUBSURFACE UTILITIES PRIOR TO PERFORMING ANY WORK.
11) WRITTEN DIMENSIONS ON THIS PLAN TAKE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN THE EVENT OF A CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWINGS AND/OR SPECIFICATIONS, THE ENGINEER SHALL BE NOTIFIED BY THE CONTRACTOR.
12) THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIGSAFE 811 PRIOR TO ANY EXCAVATION.
13) ALL CONSTRUCTION SHALL CONFORM TO THE APPLICABLE REGULATIONS AND STANDARDS OF THE CITY OF ROCHESTER AND THE STATE OF NEW HAMPSHIRE.
14) THE A PORTION OF THE SURVEY TRACT IS LOCATED IN A SPECIAL FLOOD HAZARD AREA (100 YEAR FLOOD) PER FLOOD INSURANCE RATE MAP NUMBER 33017C0211D, WITH AN EFFECTIVE DATE OF MAY 17, 2005. BASE FLOOD ELEVATION (BFE) = 184.3' (NGVD29) PER FLOOD PROFILE 11P.
15) ALL CONSTRUCTION SHALL CONFORM TO THESE PLANS AND THE STANDARD CONSTRUCTION DRAWINGS AS SUPPLIED BY THE DEVELOPER.
16) A SIGN PERMIT SHALL BE OBTAINED PRIOR TO INSTALLATION.
17) PROPOSED SNOW STORAGE AREAS AS SHOWN.

    REQUIRED SNOW STORAGE: 1 SF PER 5-10 SF OF CLEARED AREA (30,200 SF) = 3,020-6,040 SF
    PROVIDED SNOW STORAGE: 4,400 SF

    ANY EXCESS SNOW TO BE TRUCKED OFF-SITE.
18) THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND FOR CONDITIONS AT THE SITE. THESE PLANS, PREPARED BY GREENMAN-PEDERSEN, INC., DO NOT EXTEND TO OR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR THEIR EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF THE SURVEYOR AND/OR ENGINEER AS INCLUDED IN THE PLAN SET DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED INTO THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PREPARE AND/OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS WHICH MAY BE REQUIRED BY THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND/OR LOCAL REGULATIONS.
19) ALL UNDERGROUND STORAGE TANKS, PRODUCT PIPING AND VENT LINES SHALL COMPLY WITH CURRENT STATE AND E.P.A. REGULATIONS.
20) FOR MORE INFORMATION ABOUT THIS SITE PLAN CONTACT FRANK C. MONTEIRO, GREENMAN-PEDERSEN, INC.
21) TRASH/RECYCLING SERVICE SHALL BE LIMITED TO THE HOURS OF 7:00AM TO 7:00PM, EASTERN TIME.
22) THE PROPERTY WILL WORK IN GOOD FAITH WITH ABUTTING PROPERTIES TO INCORPORATE A FUTURE VEHICULAR CONNECTION.
23) THE USE IS PROPOSED TO BE OPEN 24-HOURS PER DAY. IF THIS CHANGES, THE OPERATOR WILL WORK WITH PLANNING STAFF TO REDUCE LIGHTING AFTER HOURS.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

LEGEND

- VGC — VERTICAL GRANITE CURB
- G — GAS LINE
- FM — SEWER FORCE MAIN
- W — WATER LINE
- E — UNDERGROUND ELECTRIC
- CHAIN LINK FENCE
- SPOT ELEVATION
- 150 — CONTOUR ELEVATION
- TREE
- UTILITY POLE
- GUY WIRE
- OVERHEAD WIRE
- TREELINE
- SIGN
- DRAIN MANHOLE
- CATCH BASIN
- SEWER MANHOLE
- GAS VALVE
- GAS SHUT OFF
- WATER VALVE
- WATER SHUT OFF
- FIRE HYDRANT
- BOLLARD
- GM — GAS METER
- EM — ELECTRIC METER
- MONITORING WELL
- LIGHT POLE
- VERTICAL GRANITE CURB
- VERTICAL CONCRETE CURB
- (1) — NUMBER OF PARKING SPACES

811 DigSafe MA.ME.NH.RI.VT

3	REVISE NOTES	FCM	3/29/21
2	UPDATE WETLANDS/MISC. REVISIONS	PWM	11/5/20
1	REVISE PER TRG COMMENTS	PWM	6/8/20
NO.	DESCRIPTION	BY	DATE

REVISIONS

SITE PLAN

MAP 131 LOT 7
717 COLUMBUS AVENUE
ROCHESTER, NEW HAMPSHIRE
PREPARED FOR:
TROPIC STAR DEVELOPMENT, LLC
321D LAFAYETTE ROAD
HAMPTON, NH 03842

IRVING

FRANK C. MONTEIRO No. 7152 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE
3/29/21

GPI Engineering Design Planning Construction Management
603.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Stiles Road
Suite One
Salem, NH 03079

SCALE: 1"=20'	DATE: FEBRUARY 4, 2020		DRAWING NO. 3958sp
DRAWN BY: CCC	CHECKED BY: FCM	PROJECT NO. 398816	SHEET NO. 3 OF 11

Certified by: Scott Crompton 4/28/21

OWNER OF RECORD:
717 COLUMBUS AVENUE, LLC
112 GATES ST
PORTSMOUTH, NH 03801
BOOK 4484 PAGE 81

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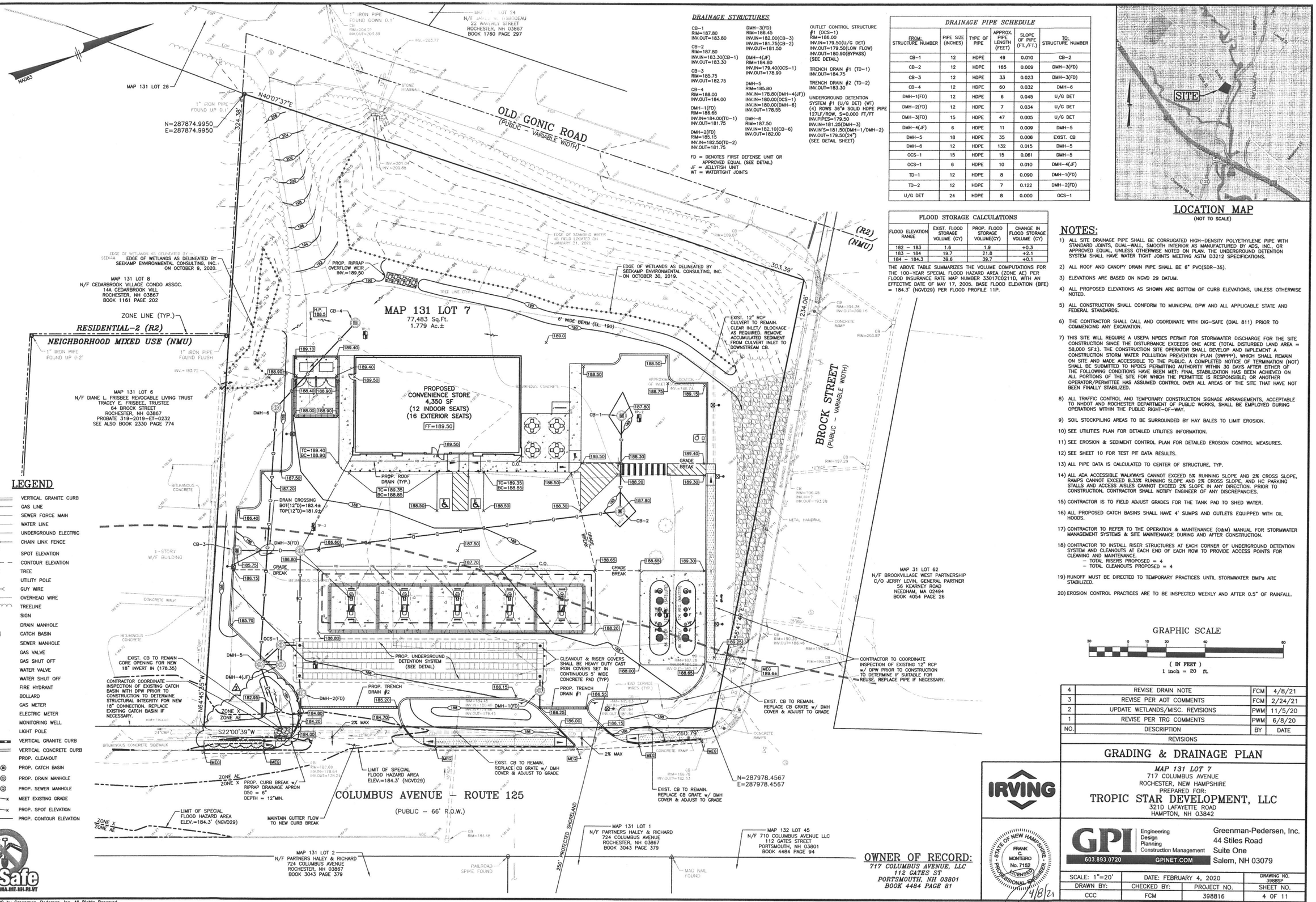


DRAINAGE STRUCTURES

CB–1
RIM=187.80
INV.OUT=183.80

CB–2
RIM=187.80
INV.IN=183.30(CB–1)
INV.OUT=183.30

CB–3
RIM=185.75
INV.OUT=182.75

CB–4
RIM=188.00
INV.OUT=184.00

DMH–1(FD)
RIM=186.65
INV.IN=184.00(TD–1)
INV.OUT=181.75

DMH–2(FD)
RIM=185.15
INV.IN=182.50(TD–2)
INV.OUT=181.75

DMH–3(FD)
RIM=186.45
INV.IN=182.00(CB–3)
INV.IN=181.75(CB–2)
INV.OUT=181.50

DMH–4(JF)
RIM=184.80
INV.IN=179.40(OCS–1)
INV.OUT=178.90

DMH–5
RIM=185.80
INV.IN=178.80(DMH–4(JF))
INV.IN=180.00(OCS–1)
INV.IN=180.00(DMH–6)
INV.OUT=178.55

DMH–6
RIM=187.50
INV.IN=182.10(CB–6)
INV.OUT=182.00

FD = DENOTES FIRST DEFENSE UNIT OR APPROVED EQUAL (SEE DETAIL)
JF = JELLYFISH UNIT
WT = WATERTIGHT JOINTS

OUTLET CONTROL STRUCTURE #1 (OCS–1)
RIM=186.00
INV.IN=179.50(U/G DET)
INV.OUT=179.50(LOW FLOW)
INV.OUT=180.90(BYPASS)
(SEE DETAIL)

TRENCH DRAIN #1 (TD–1)
INV.OUT=184.75

TRENCH DRAIN #2 (TD–2)
INV.OUT=183.30

UNDERGROUND DETENTION SYSTEM #1 (U/G DET) (WT)
(4) ROWS 36"ø SOLID HDPE PIPE
127LF/ROW, S=0.000 FT/FT
INV.PIPES=179.50
INV.IN=181.25(DMH–3)
INV.INS=181.50(DMH–1/DMH–2)
INV.OUT=179.50(24")
(SEE DETAIL SHEET)

DRAINAGE PIPE SCHEDULE

FROM: STRUCTURE NUMBER	PIPE SIZE (INCHES)	TYPE OF PIPE	APPROX. PIPE LENGTH (FEET)	SLOPE OF PIPE (FT./FT.)	TO: STRUCTURE NUMBER
CB–1	12	HDPE	49	0.010	CB–2
CB–2	12	HDPE	165	0.009	DMH–3(FD)
CB–3	12	HDPE	33	0.023	DMH–3(FD)
CB–4	12	HDPE	60	0.032	DMH–6
DMH–1(FD)	12	HDPE	6	0.045	U/G DET
DMH–2(FD)	12	HDPE	7	0.034	U/G DET
DMH–3(FD)	15	HDPE	47	0.005	U/G DET
DMH–4(JF)	6	HDPE	11	0.009	DMH–5
DMH–5	18	HDPE	35	0.006	EXIST. CB
DMH–6	12	HDPE	132	0.015	DMH–5
OCS–1	15	HDPE	15	0.061	DMH–5
OCS–1	6	HDPE	10	0.010	DMH–4(JF)
TD–1	12	HDPE	8	0.090	DMH–1(FD)
TD–2	12	HDPE	7	0.122	DMH–2(FD)
U/G DET	24	HDPE	8	0.000	OCS–1

FLOOD STORAGE CALCULATIONS

FLOOD ELEVATION RANGE	EXIST. FLOOD STORAGE VOLUME (CY)	PROP. FLOOD STORAGE VOLUME(CY)	CHANGE IN FLOOD STORAGE VOLUME (CY)
182 – 183	1.6	1.9	+0.3
183 – 184	19.7	21.8	+2.1
184 – 184.3	39.6	39.7	+0.1

THE ABOVE TABLE SUMMARIZES THE VOLUME COMPUTATIONS FOR THE 100–YEAR SPECIAL FLOOD HAZARD AREA (ZONE AE) PER FLOOD INSURANCE RATE MAP NUMBER 33017C0211D, WITH AN EFFECTIVE DATE OF MAY 17, 2005. BASE FLOOD ELEVATION (BFE) = 184.3' (NGVD29) PER FLOOD PROFILE 11P.

LOCATION MAP

(NOT TO SCALE)

NOTES:

1) ALL SITE DRAINAGE PIPE SHALL BE CORRUGATED HIGH–DENSITY POLYETHYLENE PIPE WITH STANDARD JOINTS, DUAL–WALL, SMOOTH INTERIOR AS MANUFACTURED BY ADS, INC., OR APPROVED EQUAL, UNLESS OTHERWISE NOTED ON PLAN. THE UNDERGROUND DETENTION SYSTEM SHALL HAVE WATER TIGHT JOINTS MEETING ASTM D3212 SPECIFICATIONS.
2) ALL ROOF AND CANOPY DRAIN PIPE SHALL BE 6" PVC(SDR–35).
3) ELEVATIONS ARE BASED ON NGVD 29 DATUM.
4) ALL PROPOSED ELEVATIONS AS SHOWN ARE BOTTOM OF CURB ELEVATIONS, UNLESS OTHERWISE NOTED.
5) ALL CONSTRUCTION SHALL CONFORM TO MUNICIPAL DPW AND ALL APPLICABLE STATE AND FEDERAL STANDARDS.
6) THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIG–SAFE (DIAL 811) PRIOR TO COMMENCING ANY EXCAVATION.
7) THIS SITE WILL REQUIRE A USEPA NPDES PERMIT FOR STORMWATER DISCHARGE FOR THE SITE CONSTRUCTION SINCE THE DISTURBANCE EXCEEDS ONE ACRE (TOTAL DISTURBED LAND AREA = 58,000 SF±). THE CONSTRUCTION SITE OPERATOR SHALL DEVELOP AND IMPLEMENT A CONSTRUCTION STORM WATER POLLUTION PREVENTION PLAN (SWPPP), WHICH SHALL REMAIN ON SITE AND MADE ACCESSIBLE TO THE PUBLIC. A COMPLETED NOTICE OF TERMINATION (NOT) SHALL BE SUBMITTED TO NPDES PERMITTING AUTHORITY WITHIN 30 DAYS AFTER EITHER OF THE FOLLOWING CONDITIONS HAVE BEEN MET: FINAL STABILIZATION HAS BEEN ACHIEVED ON ALL PORTIONS OF THE SITE FOR WHICH THE PERMITTEE IS RESPONSIBLE; OR ANOTHER OPERATOR/PERMITTEE HAS ASSUMED CONTROL OVER ALL AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED.
8) ALL TRAFFIC CONTROL AND TEMPORARY CONSTRUCTION SIGNAGE ARRANGEMENTS, ACCEPTABLE TO NHDOT AND ROCHESTER DEPARTMENT OF PUBLIC WORKS, SHALL BE EMPLOYED DURING OPERATIONS WITHIN THE PUBLIC RIGHT–OF–WAY.
9) SOIL STOCKPILING AREAS TO BE SURROUNDED BY HAY BALES TO LIMIT EROSION.
10) SEE UTILITIES PLAN FOR DETAILED UTILITIES INFORMATION.
11) SEE EROSION & SEDIMENT CONTROL PLAN FOR DETAILED EROSION CONTROL MEASURES.
12) SEE SHEET 10 FOR TEST PIT DATA RESULTS.
13) ALL PIPE DATA IS CALCULATED TO CENTER OF STRUCTURE, TYP.
14) ALL ADA ACCESSIBLE WALKWAYS CANNOT EXCEED 5% RUNNING SLOPE AND 2% CROSS SLOPE, RAMPS CANNOT EXCEED 8.33% RUNNING SLOPE AND 2% CROSS SLOPE, AND HC PARKING STALLS AND ACCESS AISLES CANNOT EXCEED 2% SLOPE IN ANY DIRECTION. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES.
15) CONTRACTOR IS TO FIELD ADJUST GRADES FOR THE TANK PAD TO SHED WATER.
16) ALL PROPOSED CATCH BASINS SHALL HAVE 4' SUMPS AND OUTLETS EQUIPPED WITH OIL HOODS.
17) CONTRACTOR TO REFER TO THE OPERATION & MAINTENANCE (O&M) MANUAL FOR STORMWATER MANAGEMENT SYSTEMS & SITE MAINTENANCE DURING AND AFTER CONSTRUCTION.
18) CONTRACTOR TO INSTALL RISER STRUCTURES AT EACH CORNER OF UNDERGROUND DETENTION SYSTEM AND CLEANOUTS AT EACH END OF EACH ROW TO PROVIDE ACCESS POINTS FOR CLEANING AND MAINTENANCE.
    – TOTAL RISERS PROPOSED = 4
    – TOTAL CLEANOUTS PROPOSED = 4
19) RUNOFF MUST BE DIRECTED TO TEMPORARY PRACTICES UNTIL STORMWATER BMPs ARE STABILIZED.
20) EROSION CONTROL PRACTICES ARE TO BE INSPECTED WEEKLY AND AFTER 0.5" OF RAINFALL.

LEGEND

- VGC — VERTICAL GRANITE CURB
- G — GAS LINE
- FM — SEWER FORCE MAIN
- W — WATER LINE
- E — UNDERGROUND ELECTRIC
- CHAIN LINK FENCE
- SPOT ELEVATION
- CONTOUR ELEVATION
- TREE
- UTILITY POLE
- GUY WIRE
- OVERHEAD WIRE
- TREELINE
- SIGN
- DRAIN MANHOLE
- CATCH BASIN
- SEWER MANHOLE
- GAS VALVE
- GAS SHUT OFF
- WATER VALVE
- WATER SHUT OFF
- FIRE HYDRANT
- BOLLARD
- GM — GAS METER
- EM — ELECTRIC METER
- MONITORING WELL
- LIGHT POLE
- VERTICAL GRANITE CURB
- VERTICAL CONCRETE CURB
- C.O. — PROP. CLEANOUT
- CB–1 — PROP. CATCH BASIN
- DMH–1 — PROP. DRAIN MANHOLE
- SMH–1 — PROP. SEWER MANHOLE
- MEG — MEET EXISTING GRADE
- 188.50 — PROP. SPOT ELEVATION
- PROP. CONTOUR ELEVATION

811 DigSafe MA-ME-NH-RI-VT

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

NO.	DESCRIPTION	BY	DATE
4	REVISE DRAIN NOTE	FCM	4/8/21
3	REVISE PER AOT COMMENTS	FCM	2/24/21
2	UPDATE WETLANDS/MISC. REVISIONS	PWM	11/5/20
1	REVISE PER TRG COMMENTS	PWM	6/8/20

REVISIONS

GRADING & DRAINAGE PLAN

MAP 131 LOT 7
717 COLUMBUS AVENUE
ROCHESTER, NEW HAMPSHIRE
PREPARED FOR:
TROPIC STAR DEVELOPMENT, LLC
321D LAFAYETTE ROAD
HAMPTON, NH 03842

IRVING

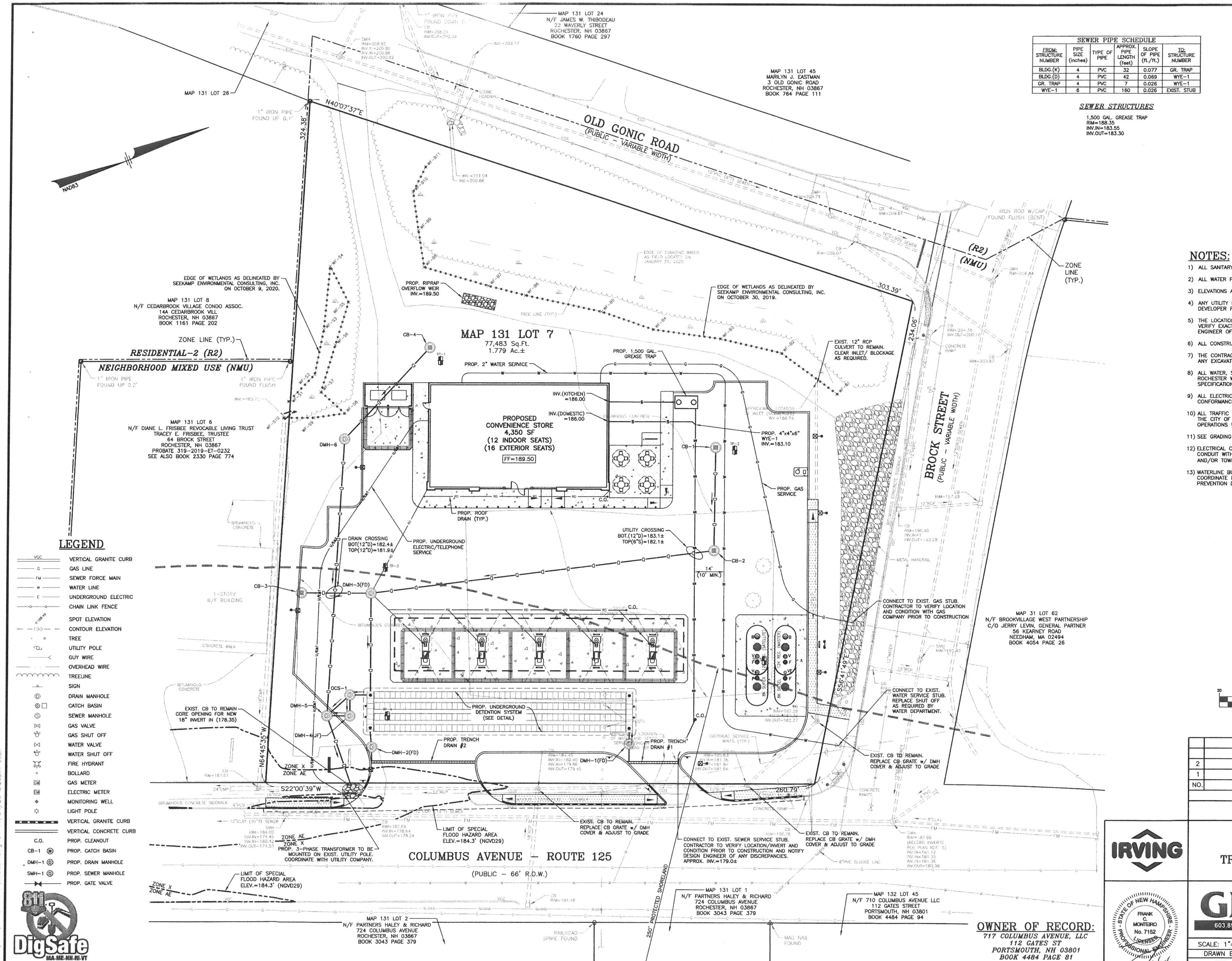
FRANK C. MONTEIRO No. 7162 LICENSED PROFESSIONAL ENGINEER – STATE OF NEW HAMPSHIRE – 4/8/21

GPI Engineering Design Planning Construction Management
603.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Stiles Road
Suite One
Salem, NH 03079

SCALE: 1"=20'	DATE: FEBRUARY 4, 2020		DRAWING NO. 398SP
DRAWN BY:	CHECKED BY:	PROJECT NO.	SHEET NO.
CCC	FCM	398816	4 OF 11

OWNER OF RECORD:

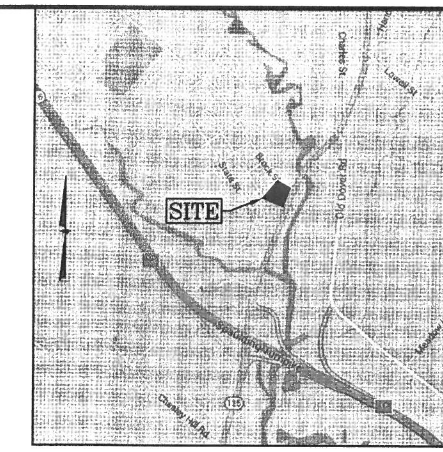
717 COLUMBUS AVENUE, LLC
112 GATES ST
PORTSMOUTH, NH 03801
BOOK 4484 PAGE 81


MAP 131 LOT 24
N/F JAMES W. THIBODEAU
22 WAVERLY STREET
ROCHESTER, NH 03867
BOOK 1760 PAGE 297
MAP 131 LOT 26
MAP 131 LOT 45
MARILYN J. EASTMAN
3 OLD GONIC ROAD
ROCHESTER, NH 03867
BOOK 764 PAGE 111
N40°07'37"E
324.38'
OLD GONIC ROAD
(PUBLIC - VARIABLE WIDTH)
NAD83
EDGE OF WETLANDS AS DELINEATED BY
SEEKAMP ENVIRONMENTAL CONSULTING, INC.
ON OCTOBER 9, 2020.
MAP 131 LOT 8
N/F CEDARBROOK VILLAGE CONDO ASSOC.
14A CEDARBROOK VILL
ROCHESTER, NH 03867
BOOK 1161 PAGE 202
ZONE LINE (TYP.)
RESIDENTIAL-2 (R2)
NEIGHBORHOOD MIXED USE (NMU)
MAP 131 LOT 6
N/F DIANE L. FRISBEE REVOCABLE LIVING TRUST
TRACEY E. FRISBEE, TRUSTEE
64 BROCK STREET
ROCHESTER, NH 03867
PROBATE 319-2019-ET-0232
SEE ALSO BOOK 2330 PAGE 774
PROP. RIPRAP
OVERFLOW WEIR
INV.=189.50
EDGE OF WETLANDS AS DELINEATED BY
SEEKAMP ENVIRONMENTAL CONSULTING, INC.
ON OCTOBER 30, 2019.
MAP 131 LOT 7
77,483 Sq.Ft.
1.779 Ac.±
PROP. 1,500 GAL.
GREASE TRAP
PROP. 2" WATER SERVICE
PROPOSED
CONVENIENCE STORE
4,350 SF
(12 INDOOR SEATS)
(16 EXTERIOR SEATS)
FF=189.50
INV.(KITCHEN)
=186.00
INV.(DOMESTIC)
=186.00
303.39'
(R2)
(NMU)
ZONE
LINE
(TYP.)
234.06'
EXIST. 12" RCP
CULVERT TO REMAIN.
CLEAR INLET/ BLOCKAGE
AS REQUIRED.
BROCK STREET
(PUBLIC - VARIABLE WIDTH)
PROP. 4"x4"x6"
WYE-1
INV.=183.10
PROP. GAS
SERVICE
CB-4
DMH-6
CB-1
CB-2
CB-3
DMH-3(FD)
PROP. ROOF
DRAIN (TYP.)
DRAIN CROSSING
BOT(12"D)=182.4±
TOP(12"D)=181.9±
PROP. UNDERGROUND
ELECTRIC/TELEPHONE
SERVICE
UTILITY CROSSING
BOT.(12"D)=183.1±
TOP(6"S)=182.1±
14'
(10' MIN.)
1-STORY
W/F BUILDING
CONNECT TO EXIST. GAS STUB.
CONTRACTOR TO VERIFY LOCATION
AND CONDITION WITH GAS
COMPANY PRIOR TO CONSTRUCTION
MAP 31 LOT 62
N/F BROOKVILLAGE WEST PARTNERSHIP
C/O JERRY LEVIN, GENERAL PARTNER
56 KEARNEY ROAD
NEEDHAM, MA 02494
BOOK 4054 PAGE 26
S56°41'49"E
OCS-1
DMH-5
DMH-4(JF)
DMH-2(FD)
DMH-1(FD)
PROP. UNDERGROUND
DETENTION SYSTEM
(SEE DETAIL)
CONNECT TO EXIST.
WATER SERVICE STUB.
REPLACE SHUT OFF
AS REQUIRED BY
WATER DEPARTMENT.
EXIST. CB TO REMAIN
CORE OPENING FOR NEW
18" INVERT IN (178.35)
N64°45'35"W
PROP. TRENCH
DRAIN #2
PROP. TRENCH
DRAIN #1
EXIST. CB TO REMAIN.
REPLACE CB GRATE w/ DMH
COVER & ADJUST TO GRADE
ZONE X
ZONE AE
S22°00'39"W
260.79'
LIMIT OF SPECIAL
FLOOD HAZARD AREA
ELEV.=184.3' (NGVD29)
EXIST. CB TO REMAIN.
REPLACE CB GRATE w/ DMH
COVER & ADJUST TO GRADE
PROP. 3-PHASE TRANSFORMER TO BE
MOUNTED ON EXIST. UTILITY POLE.
COORDINATE WITH UTILITY COMPANY.
CONNECT TO EXIST. SEWER SERVICE STUB.
CONTRACTOR TO VERIFY LOCATION/INVERT AND
CONDITION PRIOR TO CONSTRUCTION AND NOTIFY
DESIGN ENGINEER OF ANY DISCREPANCIES.
APPROX. INV.=179.0±
EXIST. CB TO REMAIN.
REPLACE CB GRATE w/ DMH
COVER & ADJUST TO GRADE
COLUMBUS AVENUE - ROUTE 125
(PUBLIC - 66' R.O.W.)
250' PROTECTED SHORELAND
MAP 131 LOT 1
N/F PARTNERS HALEY & RICHARD
724 COLUMBUS AVENUE
ROCHESTER, NH 03867
BOOK 3043 PAGE 379
MAP 132 LOT 45
N/F 710 COLUMBUS AVENUE LLC
112 GATES STREET
PORTSMOUTH, NH 03801
BOOK 4484 PAGE 94
MAP 131 LOT 2
N/F PARTNERS HALEY & RICHARD
724 COLUMBUS AVENUE
ROCHESTER, NH 03867
BOOK 3043 PAGE 379
LEGEND
VERTICAL GRANITE CURB
GAS LINE
SEWER FORCE MAIN
WATER LINE
UNDERGROUND ELECTRIC
CHAIN LINK FENCE
SPOT ELEVATION
CONTOUR ELEVATION
TREE
UTILITY POLE
GUY WIRE
OVERHEAD WIRE
TREELINE
SIGN
DRAIN MANHOLE
CATCH BASIN
SEWER MANHOLE
GAS VALVE
GAS SHUT OFF
WATER VALVE
WATER SHUT OFF
FIRE HYDRANT
BOLLARD
GAS METER
ELECTRIC METER
MONITORING WELL
LIGHT POLE
VERTICAL GRANITE CURB
VERTICAL CONCRETE CURB
C.O. PROP. CLEANOUT
CB-1 PROP. CATCH BASIN
DMH-1 PROP. DRAIN MANHOLE
SMH-1 PROP. SEWER MANHOLE
PROP. GATE VALVE
811
DigSafe
MA-ME-NH-RI-VT

SEWER PIPE SCHEDULE					
FROM: STRUCTURE NUMBER	PIPE SIZE (inches)	TYPE OF PIPE	APPROX. PIPE LENGTH (feet)	SLOPE OF PIPE (ft./ft.)	TO: STRUCTURE NUMBER
BLDG.(K)	4	PVC	32	0.077	GR. TRAP
BLDG.(D)	4	PVC	42	0.069	WYE-1
GR. TRAP	4	PVC	7	0.026	WYE-1
WYE-1	6	PVC	160	0.026	EXIST. STUB

SEWER STRUCTURES

1,500 GAL. GREASE TRAP
RIM=188.35
INV.IN=183.55
INV.OUT=183.30



LOCATION MAP
(NOT TO SCALE)

NOTES:

1) ALL SANITARY SEWER PIPE SHALL BE PVC (SDR-35), UNLESS OTHERWISE NOTED.
2) ALL WATER PIPE SHALL BE COPPER (TYPE K), UNLESS OTHERWISE NOTED.
3) ELEVATIONS ARE BASED ON NGVD 29 DATUM.
4) ANY UTILITY FIELD ADJUSTMENTS SHALL BE APPROVED BY THE LOCAL AUTHORITIES AND THE DEVELOPER PRIOR TO INSTALLATION.
5) THE LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE ONLY. THE CONTRACTOR IS TO VERIFY EXACT LOCATION PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO NOTIFY THE DESIGN ENGINEER OF ANY DISCREPANCIES.
6) ALL CONSTRUCTION SHALL CONFORM TO APPLICABLE TOWN, STATE AND FEDERAL STANDARDS.
7) THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIG-SAFE (811) PRIOR TO COMMENCING ANY EXCAVATION.
8) ALL WATER, SEWER AND DRAINAGE CONSTRUCTION SHALL CONFORM TO THE CITY OF ROCHESTER WATER UTILITIES DEPARTMENT AND PUBLIC WORKS DEPARTMENT STANDARDS AND SPECIFICATIONS.
9) ALL ELECTRIC, TELEPHONE AND CABLE TV LINES ARE TO BE UNDERGROUND AND INSTALLED IN CONFORMANCE WITH UTILITY COMPANY.
10) ALL TRAFFIC CONTROL AND TEMPORARY CONSTRUCTION SIGNAGE ARRANGEMENTS, ACCEPTABLE THE CITY OF ROCHESTER DEPARTMENT OF PUBLIC WORKS, SHALL BE EMPLOYED DURING OPERATIONS WITHIN THE PUBLIC RIGHT-OF-WAY.
11) SEE GRADING & DRAINAGE PLAN FOR DETAILED DRAINAGE INFORMATION.
12) ELECTRICAL CONDUIT WITHIN 20' OF TANKS OR DISPENSERS MAY NEED TO BE RIGID METAL CONDUIT WITH CONCRETE ENCASEMENT. CONTRACTOR TO COORDINATE WITH UTILITY COMPANY AND/OR TOWN ELECTRICAL INSPECTOR AS REQUIRED.
13) WATERLINE BUILDING CONNECTION SHALL BE EQUIPPED WITH BACKFLOW PREVENTER. COORDINATE INSPECTION WITH BUILDING DEPARTMENT. COORDINATE WITH DPW FOR BACKFLOW PREVENTION DEVICE PERMITTING.

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

NO.	DESCRIPTION	BY	DATE
2	UPDATE WETLANDS/MISC. REVISIONS	PWM	11/5/20
1	REVISE PER TRG COMMENTS	PWM	6/8/20

REVISIONS

UTILITIES PLAN

MAP 131 LOT 7
717 COLUMBUS AVENUE
ROCHESTER, NEW HAMPSHIRE
PREPARED FOR:
TROPIC STAR DEVELOPMENT, LLC
321D LAFAYETTE ROAD
HAMPTON, NH 03842

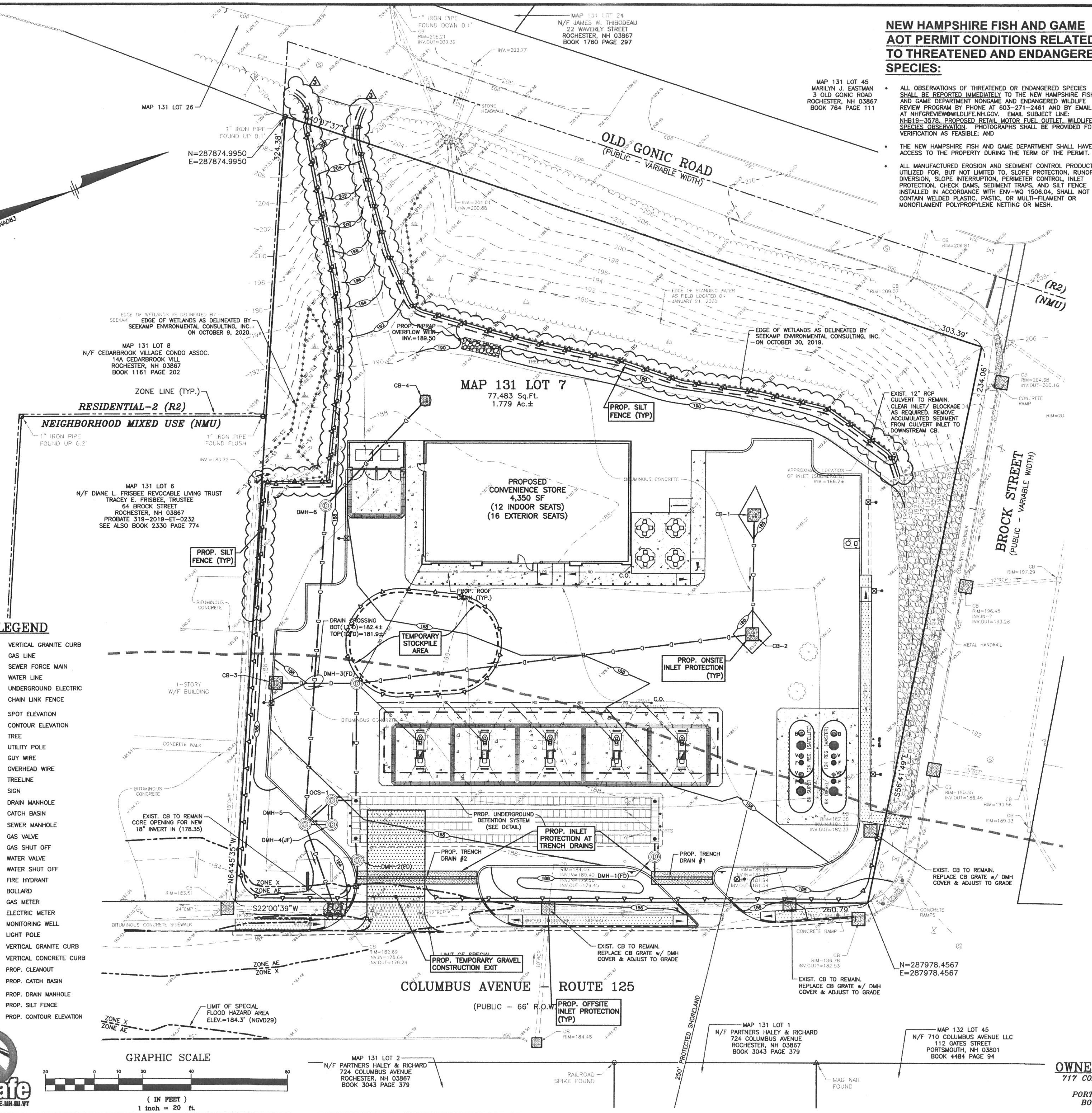
IRVING

OWNER OF RECORD:
717 COLUMBUS AVENUE, LLC
112 GATES ST
PORTSMOUTH, NH 03801
BOOK 4484 PAGE 81

STATE OF NEW HAMPSHIRE - FRANK C. MONTEIRO No. 7152 LICENSED PROFESSIONAL ENGINEER
11/5/2020

GPI Engineering Design Planning Construction Management
603.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Stiles Road
Suite One
Salem, NH 03079

SCALE: 1"=20'	DATE: FEBRUARY 4, 2020		DRAWING NO. 3988SP
DRAWN BY:	CHECKED BY:	PROJECT NO.	SHEET NO.
CCC	FCM	398816	5 OF 11



NEW HAMPSHIRE FISH AND GAME AOT PERMIT CONDITIONS RELATED TO THREATENED AND ENDANGERED SPECIES:

- ALL OBSERVATIONS OF THREATENED OR ENDANGERED SPECIES SHALL BE REPORTED IMMEDIATELY TO THE NEW HAMPSHIRE FISH AND GAME DEPARTMENT NONGAME AND ENDANGERED WILDLIFE REVIEW PROGRAM BY PHONE AT 603-271-2461 AND BY EMAIL AT NHFGREVIEW@WILDLIFE.NH.GOV. EMAIL SUBJECT LINE: NHB19-3578, PROPOSED RETAIL MOTOR FUEL OUTLET, WILDLIFE SPECIES OBSERVATION. PHOTOGRAPHS SHALL BE PROVIDED FOR VERIFICATION AS FEASIBLE; AND
- THE NEW HAMPSHIRE FISH AND GAME DEPARTMENT SHALL HAVE ACCESS TO THE PROPERTY DURING THE TERM OF THE PERMIT.
- ALL MANUFACTURED EROSION AND SEDIMENT CONTROL PRODUCTS, UTILIZED FOR, BUT NOT LIMITED TO, SLOPE PROTECTION, RUNOFF DIVERSION, SLOPE INTERRUPTION, PERIMETER CONTROL, INLET PROTECTION, CHECK DAMS, SEDIMENT TRAPS, AND SILT FENCE INSTALLED IN ACCORDANCE WITH ENV-WQ 1506.04, SHALL NOT CONTAIN WELDED PLASTIC, PASTIC, OR MULTI-FILAMENT OR MONOFILAMENT POLYPROPYLENE NETTING OR MESH.

LEGEND

- VERTICAL GRANITE CURB
- GAS LINE
- SEWER FORCE MAIN
- WATER LINE
- UNDERGROUND ELECTRIC
- CHAIN LINK FENCE
- SPOT ELEVATION
- CONTOUR ELEVATION
- TREE
- UTILITY POLE
- GUY WIRE
- OVERHEAD WIRE
- TREELINE
- SIGN
- DRAIN MANHOLE
- CATCH BASIN
- SEWER MANHOLE
- GAS VALVE
- GAS SHUT OFF
- WATER VALVE
- WATER SHUT OFF
- FIRE HYDRANT
- BOLLARD
- GAS METER
- ELECTRIC METER
- MONITORING WELL
- LIGHT POLE
- VERTICAL GRANITE CURB
- VERTICAL CONCRETE CURB
- C.O. PROP. CLEANOUT
- CB-1 PROP. CATCH BASIN
- DMH-1 PROP. DRAIN MANHOLE
- PROP. SILT FENCE
- PROP. CONTOUR ELEVATION

WINTER STABILIZATION NOTES:

MAINTENANCE REQUIREMENTS:
MAINTENANCE MEASURES SHOULD CONTINUE AS NEEDED THROUGHOUT CONSTRUCTION, INCLUDING THE OVER-WINTER PERIOD. AFTER EACH RAINFALL, SNOWSTORM, OR PERIOD OF THAWING AND RUNOFF, THE SITE CONTRACTOR SHOULD CONDUCT AN INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES AND PERFORM REPAIRS AS NEEDED TO INSURE THEIR CONTINUING FUNCTION.
FOR ANY AREA STABILIZED BY TEMPORARY OR PERMANENT SEEDING PRIOR TO THE ONSET OF THE WINTER SEASON, THE CONTRACTOR SHOULD CONDUCT AN INSPECTION IN THE SPRING TO ASCERTAIN THE CONDITION OF VEGETATION COVER, AND REPAIR ANY DAMAGE AREAS OR BARE SPOTS AND RESEED AS REQUIRED TO ACHIEVE AN ESTABLISHED VEGETATIVE COVER (AT LEAST 85% OF AREA VEGETATED WITH HEALTHY, VIGOROUS GROWTH).
SPECIFICATIONS:
TO ADEQUATELY PROTECT WATER QUALITY DURING COLD WEATHER AND DURING SPRING RUNOFF, THE FOLLOWING STABILIZATION TECHNIQUES SHOULD BE EMPLOYED DURING THE PERIOD FROM OCTOBER 15TH THROUGH MAY 15TH.

1. THE AREA OF EXPOSED, UNSTABILIZED SOIL SHOULD BE LIMITED TO ONE ACRE AND SHOULD BE PROTECTED AGAINST EROSION BY THE METHODS DESCRIBED IN THIS SECTION PRIOR TO ANY THAW OR SPRING MELT EVENT. SUBJECT TO APPLICABLE REGULATIONS, THE ALLOWABLE AREA OF EXPOSED SOIL MAY BE INCREASED IF ACTIVITIES ARE CONDUCTED ACCORDING TO A WINTER CONSTRUCTION PLAN, DEVELOPED BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF NEW HAMPSHIRE OR A CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL AS CERTIFIED BY THE CSPESC COUNCIL OF ENVIROCERT INTERNATIONAL, INC.
2. STABILIZATION AS FOLLOWS SHOULD BE COMPLETED WITHIN A DAY OF ESTABLISHING THE GRADE THAT IS FINAL OR THAT OTHERWISE WILL EXIST FOR MORE THAN 5 DAYS:
   A. ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF LESS THAN 15% WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHOULD BE SEEDED AND COVERED WITH 3 TO 4 TONS OF HAY OR STRAW MULCH PER ACRE SECURED WITH ANCHORED NETTING, OR 2 INCHES OF EROSION CONTROL MIX (SEE DESCRIPTION OF EROSION CONTROL MIX BERMS FOR MATERIAL SPECIFICATION).
   B. ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF GREATER THAN 15% WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHOULD BE SEEDED AND COVERED WITH A PROPERLY INSTALLED AND ANCHORED EROSION CONTROL BLANKET OR WITH A MINIMUM 4 INCH THICKNESS OF EROSION CONTROL MIX, UNLESS OTHERWISE SPECIFIED BY THE MANUFACTURER. NOTE THAT COMPOST BLANKETS SHOULD NOT EXCEED 2 INCHES IN THICKNESS OR THEY MAY OVERHEAT.
3. ALL STONE-COVERED SLOPES MUST BE CONSTRUCTED AND STABILIZED BY OCTOBER 15.
4. INSTALLATION OF ANCHORED HAY MULCH OR EROSION CONTROL MIX SHOULD NOT OCCUR OVER SNOW OF GREATER THAN ONE INCH IN DEPTH.
5. ALL MULCH APPLIED DURING WINTER SHOULD BE ANCHORED (E.G., BY NETTING, TRACKING, WOOD CELLULOSE FIBER).
6. STOCKPILES OF SOIL MATERIALS SHOULD BE MULCHED FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR WITH A FOUR-INCH LAYER OF EROSION CONTROL MIX. MULCHING SHOULD BE DONE WITHIN 24 HOURS OF STOCKING, AND RE-ESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL. NO SOIL STOCKPILE SHOULD BE PLACED (EVEN COVERED WITH MULCH) WITHIN 100 FEET FROM ANY WETLAND OR OTHER WATER RESOURCE AREA.
7. FROZEN MATERIALS, (E.G., FROST LAYER THAT IS REMOVED DURING WINTER CONSTRUCTION), SHOULD BE STOCKPILED SEPARATELY AND IN A LOCATION THAT IS AWAY FROM ANY AREA NEEDING TO BE PROTECTED. STOCKPILES OF FROZEN MATERIAL CAN MELT IN THE SPRING AND BECOME UNWORKABLE AND DIFFICULT TO TRANSPORT DUE TO THE HIGH MOISTURE CONTENT IN THE SOIL.
8. INSTALLATION OF EROSION CONTROL BLANKETS SHOULD NOT OCCUR OVER SNOW OF GREATER THAN ONE INCH IN DEPTH OR ON FROZEN GROUND.
9. ALL GRASS-LINED DITCHES AND CHANNELS SHOULD BE CONSTRUCTED AND STABILIZED BY SEPTEMBER 1. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHOULD BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS, AS DETERMINED BY A QUALIFIED PROFESSIONAL ENGINEER OR A CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL AS CERTIFIED BY THE CSPESC COUNCIL OF ENVIROCERT INTERNATIONAL, INC. IF A STONE LINING IS NECESSARY, THE CONTRACTOR MAY NEED TO RE-GRADE THE DITCH AS REQUIRED TO PROVIDE ADEQUATE CROSS-SECTION AFTER ALLOWING FOR PLACEMENT OF THE STONE.
10. ALL STONE-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED BY OCTOBER 15.
11. AFTER NOVEMBER 15, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3.
12. SEDIMENT BARRIERS THAT ARE INSTALLED DURING FROZEN CONDITIONS SHOULD CONSIST OF EROSION CONTROL MIX BERMS, OR CONTINUOUS CONTAINED BERMS. SILT FENCES AND HAY BALES SHOULD NOT BE INSTALLED WHEN FROZEN CONDITIONS PREVENT PROPER EMBEDMENT OF THESE BARRIERS.

CONSTRUCTION SEQUENCE NOTES:

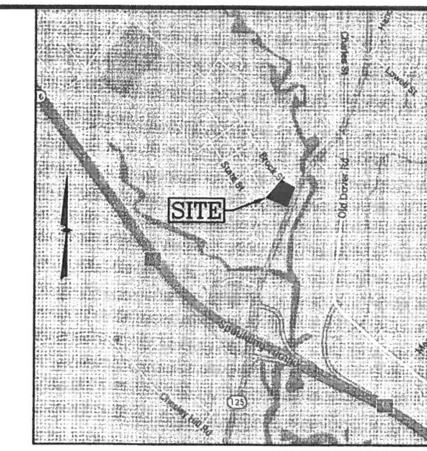
1. SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY ON-SITE CONSTRUCTION AS SHOWN. ADDITIONAL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED AS SOON AS PRACTICAL.
2. CONSTRUCT TEMPORARY STABILIZED CONSTRUCTION ENTRANCE AS SHOWN ON THIS SHEET.
3. CUT AND STUMP AREAS OF PROPOSED CONSTRUCTION.
4. REMOVE ALL EXISTING PAVEMENT.
5. REMOVE AND STOCKPILE TOPSOIL. STOCKPILE SHALL BE SEEDED TO PREVENT EROSION.
6. CONSTRUCT PONDS, SWALES & LEVEL SPREADERS & STABILIZE PRIOR TO DIRECTING ANY RUNOFF TO THEM.
7. CONSTRUCT ROADWAYS AND PERFORM SITE GRADING, PLACING HAY BALES AND SILTATION FENCES AS REQUIRED TO CONTROL SOIL EROSION. STABILIZE ROADS, PARKING LOTS AND CUT/FILL SLOPES WITHIN 72-HOURS OF ACHIEVING FINISH GRADES.
8. EXCAVATE, CONSTRUCT & BEGIN STABILIZATION OF GRAVEL WETLAND.
9. INSTALL UNDERGROUND UTILITIES AND DRAINAGE SYSTEM.
10. REMOVE ALL COMPACTED SOILS FROM PROPOSED LANDSCAPE AREAS. BEGIN TEMPORARY AND PERMANENT SEEDING AND MULCHING. ALL CUT AND FILL SLOPES SHALL BE SEEDED OR MULCHED WITHIN 72-HOURS OF ACHIEVING FINISHED GRADES.
11. DAILY, OR AS REQUIRED, CONSTRUCT, INSPECT, AND IF NECESSARY, RECONSTRUCT TEMPORARY BERMS, DRAINS, DITCHES, SILT FENCES AND SEDIMENT TRAPS INCLUDING MULCHING AND SEEDING. AT A MINIMUM, INSPECT EROSION CONTROLS WEEKLY AND AFTER EVERY 1/2" OF RAINFALL.
12. BEGIN EXCAVATION FOR CONSTRUCTION OF BUILDINGS.
13. FINISH PAVING ALL ROADWAYS AND DRIVEWAYS.
14. COMPLETE PERMANENT SEEDING AND LANDSCAPING.
15. AFTER GRASS HAS BEEN FULLY GERMINATED IN ALL SEEDED AREAS, REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.
16. APPLICATION OF GRASS SEED, FERTILIZERS AND MULCH SHALL BE ACCOMPLISHED BY BROADCAST SEEDING OR HYDROSEEDING AT THE RATES OUTLINED BELOW:

    138 lbs./1,000 square feet.
    13.8 lbs./1,000 SF
    straw mulch approximately 3 tons/acre unless erosion control matting is used.

Permanent Seed Mix	lbs./acre
Creeping Red Fescue	20
Tall Fescue	20
	2
TOTAL	42

Temporary Seed Mix:	lbs./acre
Winter Rye (Aug. 15–Sept. 15)	112
Oats (No later than May 15)	80

17. NEWLY GRADED AREAS REQUIRING SLOPE PROTECTION OUTSIDE OF NORMAL SEEDING SEASON SHALL RECEIVE HAY MULCH AT THE APPROXIMATE RATE OF NO MORE THAN 2 TONS PER ACRE.
18. THE CONTRACTOR AND DEVELOPER MUST MANAGE THE PROJECT TO MEET THE REQUIREMENTS AND INTENT OF RSA 430:53 AND AGR 3800 RELATIVE TO INVASIVE SPECIES.
19. FUGITIVE DUST MUST BE CONTROLLED IN ACCORDANCE WITH ENV-A 1000.



LOCATION MAP

(NOT TO SCALE)

EROSION CONTROL NOTES:

1. THE EROSION CONTROL PROCEDURES SHALL CONFORM TO THE NH STORMWATER MANUAL, VOLUME 3, EROSION & SEDIMENT CONTROLS DURING CONSTRUCTION, DECEMBER 2008.
2. DURING CONSTRUCTION AND THEREAFTER, EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED AS NOTED: THE SMALLEST PRACTICAL AREA OF LAND SHOULD BE EXPOSED AT ANY ONE TIME DURING DEVELOPMENT. WHEN LAND IS EXPOSED DURING DEVELOPMENT, THE EXPOSURE SHOULD BE KEPT TO THE SHORTEST PRACTICAL PERIOD OF TIME AS APPROVED BY THE ENGINEER. LAND SHOULD NOT BE LEFT EXPOSED DURING THE WINTER MONTHS.
3. LIMIT OF MAXIMUM AREA OF EXPOSED SOIL AT ANY ONE TIME TO LESS THAN 5 ACRES. THE EXPOSED AREA THAT IS BEING ACTIVELY WORKED DURING WINTER IS TO BE LESS THAN 3 ACRES DURING THE WINTER SEASON.
4. ALL PERMANENT STORM WATER STRUCTURES SHALL BE STABILIZED PRIOR TO DIRECTING FLOW INTO THEM. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
   A) BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED.
   B) A MINIMUM OF 85 PERCENT VEGETATED GROWTH HAS BEEN ESTABLISHED.
   C) A MINIMUM OF 3 INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP-RAP HAS BEEN INSTALLED.
   D) OR, EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
5. SILT FENCE SHALL BE INSTALLED AND MAINTAINED DURING AND AFTER DEVELOPMENT TO REMOVE SEDIMENT FROM RUNOFF WATER AND FROM LAND UNDERGOING DEVELOPMENT. WHERE POSSIBLE, NATURAL DRAINAGE WAYS SHOULD BE UTILIZED AND LEFT OPEN TO REMOVE EXCESS SURFACE WATER. SILT FENCE TO BE MAINTAINED AND CLEANED UNTIL ALL SLOPES HAVE A HEALTHY STAND OF GRASS.
6. ALL DISTURBED AREAS AND SIDE SLOPES WHICH ARE FINISHED GRADED, WITH NO FURTHER CONSTRUCTION TO TAKE PLACE, SHALL BE LOAMED AND SEEDED WITHIN 72 HOURS AFTER FINAL GRADING. A MINIMUM OF 4" OF LOAM SHALL BE INSTALLED WITH NOT LESS THAN ONE POUND OF SEED PER 50 SQUARE YARDS OF AREA. THE SEED MIX SHALL BE AS DESIGNATED BELOW.
7. ANY DISTURBED AREAS WHICH ARE TO BE LEFT TEMPORARILY, AND WHICH WILL BE REGRADED LATER DURING CONSTRUCTION SHALL BE MACHINE HAY MULCHED AND SEEDED WITH RYE GRASS TO PREVENT EROSION. THE MAXIMUM LENGTH OF TIME FOR THE EXPOSURE OF DISTURBED SOILS SHALL BE 45 DAYS. HAY OR STRAW MULCH SHALL BE APPLIED TO ALL FRESHLY SEEDED AREAS AT THE RATE OF 2 TONS PER ACRE. BALES SHALL BE UNSPOILED, AIR DRIED, AND FREE FROM WEED, SEEDS AND ANY COARSE MATERIAL.
8. DURING GRADING OPERATIONS INSTALL HAY BALE BARRIERS ALONG TOE OF SLOPE OF FILL AREAS WHERE SHOWN. BARRIERS ARE TO BE MAINTAINED UNTIL DISTURBED AREAS ARE PAVED OR GRASSED.
9. THE FILL MATERIAL SHALL BE OF APPROVED SOIL TYPE FREE FROM STUMPS, ROOTS, WOOD, ETC. TO BE PLACED IN 12" LIFTS OR AS SPECIFIED. BULLDOZERS, TRUCKS, TRACTORS, OR ROLLERS MAY BE USED FOR COMPACTION BY ROUTING THE EQUIPMENT TO ALL AREAS OR EACH LAYER.
10. AVOID THE USE OF FUTURE OPEN SPACES (LOAM & SEED) WHEREVER POSSIBLE DURING CONSTRUCTION. CONSTRUCTION TRAFFIC SHALL USE THE ROADBEDS OF FUTURE ROADS.

TEMPORARY EROSION CONTROL MEASURES:

1. THE SMALLEST PRACTICAL AREA OF LAND SHALL BE EXPOSED AT ANY ONE TIME. ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.
2. HAY BALE BARRIERS AND SEDIMENT TRAPS SHALL BE INSTALLED AS REQUIRED. BARRIERS AND TRAPS ARE TO BE MAINTAINED AND CLEANED UNTIL ALL SLOPES HAVE A HEALTHY STAND OF GRASS.
3. BALED HAY AND MULCH SHALL BE MOWINGS OF ACCEPTABLE HERBACEOUS GROWTH, FREE FROM NOXIOUS WEEDS OR WOODY STEMS, AND SHALL BE DRY. NO SALT HAY SHALL BE USED.
4. FILL MATERIAL SHALL BE FREE FROM STUMPS, WOOD, ROOTS, ETC.
5. STOCKPILED MATERIALS SHALL BE PLACED ONLY IN AREAS SHOWN ON THE PLANS. STOCKPILES SHALL BE PROTECTED BY SILTATION FENCE AND SEEDED TO PREVENT EROSION. THESE MEASURES SHALL REMAIN UNTIL ALL MATERIAL HAS BEEN PLACED OR DISPOSED OFF SITE.
6. ALL DISTURBED AREAS SHALL BE LOAMED AND SEEDED. A MINIMUM OF 4 INCHES OF LOAM SHALL BE INSTALLED AND SEEDING AS SPECIFIED.
7. AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZED THE TEMPORARY EROSION CONTROL MEASURES ARE TO BE REMOVED.
8. PAVED ROADWAYS MUST BE KEPT CLEAN AT ALL TIMES.
9. ALL CATCH BASIN INLETS WILL BE PROTECTED WITH LOW POINT SEDIMENTATION BARRIER.
10. ALL STORM DRAINAGE OUTLETS WILL BE STABILIZED AND CLEANED AS REQUIRED, BEFORE THE DISCHARGE POINTS BECOME OPERATIONAL.
11. ALL DEWATERING OPERATIONS MUST DISCHARGE DIRECTLY INTO A SEDIMENT FILTER AREA.
12. JUTE MATTING OR APPROVED EQUIVALENT SHALL BE PROVIDED ON ALL SLOPES GREATER THAN 3:1.
13. RUNOFF MUST BE DIRECTED TO TEMPORARY PRACTICES UNTIL STORMWATER BMPs ARE STABILIZED.
14. EROSION CONTROL PRACTICES ARE TO BE INSPECTED WEEKLY AND AFTER 0.5" OF RAINFALL.

NO.	DESCRIPTION	BY	DATE
4	ADD FISH & GAME CONDITIONS	FCM	4/8/21
3	REVISE PER AOT COMMENTS	FCM	2/24/21
2	UPDATE WETLANDS/MISC. REVISIONS	PWM	11/5/20
1	REVISE PER TRG COMMENTS	PWM	6/8/20

REVISIONS

EROSION & SEDIMENT CONTROL PLAN

MAP 131 LOT 7
717 COLUMBUS AVENUE
ROCHESTER, NEW HAMPSHIRE
PREPARED FOR:
TROPIC STAR DEVELOPMENT, LLC
321D LAFAYETTE ROAD
HAMPTON, NH 03842

IRVING

OWNER OF RECORD:
717 COLUMBUS AVENUE, LLC
112 GATES ST
PORTSMOUTH, NH 03801
BOOK 4484 PAGE 81

STATE OF NEW HAMPSHIRE - FRANK C. MONTEIRO No. 7152 LICENSED - PROFESSIONAL ENGINEER - 4/8/21

GPI Engineering Design Planning Construction Management
603.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Stiles Road
Suite One
Salem, NH 03079

SCALE: 1"=20'	DATE: FEBRUARY 4, 2020		DRAWING NO. 3988SP
DRAWN BY:	CHECKED BY:	PROJECT NO.	SHEET NO.
CCC	FCM	398816	6 OF 11

DigSafe MA-ME-NH-RI-VT

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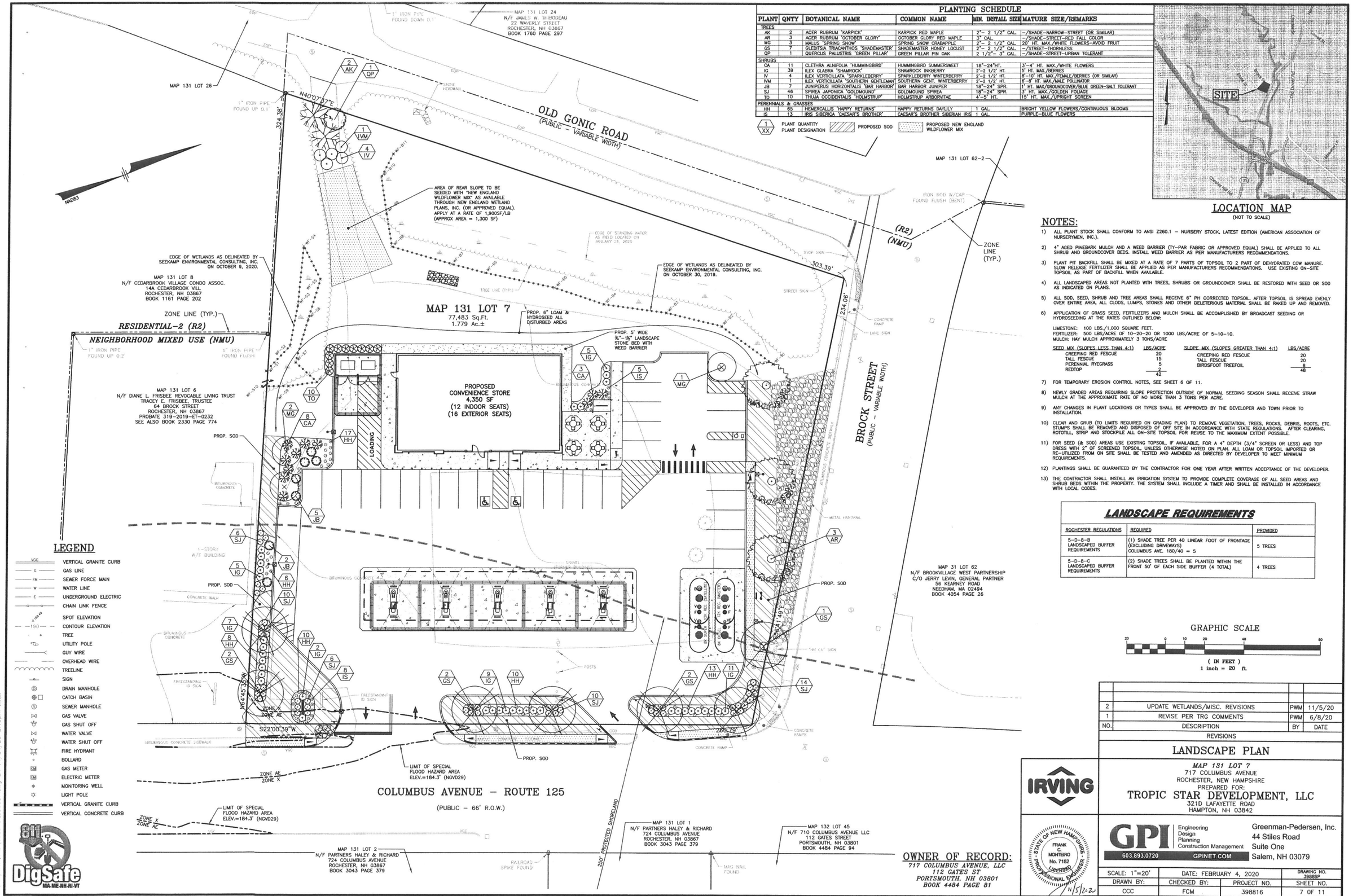
PLANTING SCHEDULE

PLANT	QNTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALL SIZE	MATURE SIZE/REMARKS
TREES					
AK	2	ACER RUBRUM 'KARPICK'	KARPICK RED MAPLE	2"- 2 1/2" CAL.	-/SHADE-NARROW-STREET (OR SIMILAR)
AR	3	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	3" CAL.	-/SHADE-STREET-RED FALL COLOR
MG	3	MALUS 'SPRING SNOW'	SPRING SNOW CRABAPPLE	2"- 2 1/2" CAL.	20' HT. MAX./WHITE FLOWERS-AVOID FRUIT
GS	7	GLEDITSIA TRIACANTHOS 'SHADEMASTER'	SHADEMASTER HONEY LOCUST	2"- 2 1/2" CAL.	-/STREET-THORNLESS
QP	1	QUERCUS PALUSTRIS 'GREEN PILLAR'	GREEN PILLAR PIN OAK	2 1/2"- 3" CAL.	-/SHADE-STREET-URBAN TOLERANT
SHRUBS					
CA	11	CLETHRA ALNIFOLIA 'HUMMINGBIRD'	HUMMINGBIRD SUMMERSWEET	18"-24"HT.	3'-4' HT. MAX./WHITE FLOWERS
IG	39	ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERRY	2'-2 1/2' HT.	5' HT. MAX./BERRIES
IV	4	ILEX VERTICILLATA 'SPARKLEBERRY'	SPARKLEBERRY WINTERBERRY	2'-2 1/2' HT.	8'-10' HT. MAX./FEMALE/BERRIES (OR SIMILAR)
NM	1	ILEX VERTICILLATA 'SOUTHERN GENTLEMAN'	SOUTHERN GENT. WINTERBERRY	2'-2 1/2' HT.	6'-8' HT. MAX./MALE POLLINATOR
JB	7	JUNIPERUS HORIZONTALIS 'BAR HARBOR'	BAR HARBOR JUNIPER	18"-24" SPR.	1' HT. MAX/GROUNDCOVER/BLUE GREEN-SALT TOLERANT
SJ	46	SPIREA JAPONICA 'GOLDMOUND'	GOLDMOUND SPIREA	18"-24" SPR.	3' HT. MAX./GOLDEN FOLIAGE
TO	10	THUJA OCCIDENTALIS 'HOLMSTRUP'	HOLMSTRUP ARBORVITAE	4'-5' HT.	15' HT. MAX./UPRIGHT SCREEN
PERENNIALS & GRASSES					
HH	65	HEMERCALLIS 'HAPPY RETURNS'	HAPPY RETURNS DAYLILY	1 GAL.	BRIGHT YELLOW FLOWERS/CONTINUOUS BLOOMS
IS	13	IRIS SIBERICA 'CAESAR'S BROTHER'	CAESAR'S BROTHER SIBERIAN IRIS	1 GAL.	PURPLE-BLUE FLOWERS

1/XX — PLANT QUANTITY / PLANT DESIGNATION; PROPOSED SOD; PROPOSED NEW ENGLAND WILDFLOWER MIX



LOCATION MAP
(NOT TO SCALE)

NOTES:

1) ALL PLANT STOCK SHALL CONFORM TO ANSI Z260.1 – NURSERY STOCK, LATEST EDITION (AMERICAN ASSOCIATION OF NURSERYMEN, INC.).
2) 4" AGED PINEBARK MULCH AND A WEED BARRIER (TY-PAR FABRIC OR APPROVED EQUAL) SHALL BE APPLIED TO ALL SHRUB AND GROUNDCOVER BEDS. INSTALL WEED BARRIER AS PER MANUFACTURERS RECOMMENDATIONS.
3) PLANT PIT BACKFILL SHALL BE MIXED AT A RATE OF 7 PARTS OF TOPSOIL TO 2 PART OF DEHYDRATED COW MANURE. SLOW RELEASE FERTILIZER SHALL BE APPLIED AS PER MANUFACTURERS RECOMMENDATIONS. USE EXISTING ON-SITE TOPSOIL AS PART OF BACKFILL WHEN AVAILABLE.
4) ALL LANDSCAPED AREAS NOT PLANTED WITH TREES, SHRUBS OR GROUNDCOVER SHALL BE RESTORED WITH SEED OR SOD AS INDICATED ON PLANS.
5) ALL SOD, SEED, SHRUB AND TREE AREAS SHALL RECEIVE 6" PH CORRECTED TOPSOIL. AFTER TOPSOIL IS SPREAD EVENLY OVER ENTIRE AREA, ALL CLODS, LUMPS, STONES AND OTHER DELETERIOUS MATERIAL SHALL BE RAKED UP AND REMOVED.
6) APPLICATION OF GRASS SEED, FERTILIZERS AND MULCH SHALL BE ACCOMPLISHED BY BROADCAST SEEDING OR HYDROSEEDING AT THE RATES OUTLINED BELOW:

   LIMESTONE: 100 LBS./1,000 SQUARE FEET.
   FERTILIZER: 500 LBS/ACRE OF 10-20-20 OR 1000 LBS/ACRE OF 5-10-10.
   MULCH: HAY MULCH APPROXIMATELY 3 TONS/ACRE

SEED MIX (SLOPES LESS THAN 4:1)	LBS/ACRE
CREEPING RED FESCUE	20
TALL FESCUE	15
PERENNIAL RYEGRASS	5
REDTOP	2
	42

SLOPE MIX (SLOPES GREATER THAN 4:1)	LBS/ACRE
CREEPING RED FESCUE	20
TALL FESCUE	20
BIRDSFOOT TREEFOIL	8
	48

7) FOR TEMPORARY EROSION CONTROL NOTES, SEE SHEET 6 OF 11.
8) NEWLY GRADED AREAS REQUIRING SLOPE PROTECTION OUTSIDE OF NORMAL SEEDING SEASON SHALL RECEIVE STRAW MULCH AT THE APPROXIMATE RATE OF NO MORE THAN 3 TONS PER ACRE.
9) ANY CHANGES IN PLANT LOCATIONS OR TYPES SHALL BE APPROVED BY THE DEVELOPER AND TOWN PRIOR TO INSTALLATION.
10) CLEAR AND GRUB (TO LIMITS REQUIRED ON GRADING PLAN) TO REMOVE VEGETATION, 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.
11) FOR SEED (& SOD) AREAS USE EXISTING TOPSOIL, IF AVAILABLE, FOR A 4" DEPTH (3/4" SCREEN OR LESS) AND TOP DRESS WITH 2" OF SCREENED TOPSOIL, UNLESS OTHERWISE NOTED ON PLAN. ALL LOAM OR TOPSOIL IMPORTED OR RE-UTILIZED FROM ON SITE SHALL BE TESTED AND AMENDED AS DIRECTED BY DEVELOPER TO MEET MINIMUM REQUIREMENTS.
12) PLANTINGS SHALL BE GUARANTEED BY THE CONTRACTOR FOR ONE YEAR AFTER WRITTEN ACCEPTANCE OF THE DEVELOPER.
13) THE CONTRACTOR SHALL INSTALL AN IRRIGATION SYSTEM TO PROVIDE COMPLETE COVERAGE OF ALL SEED AREAS AND SHRUB BEDS WITHIN THE PROPERTY. THE SYSTEM SHALL INCLUDE A TIMER AND SHALL BE INSTALLED IN ACCORDANCE WITH LOCAL CODES.

LANDSCAPE REQUIREMENTS

ROCHESTER REGULATIONS	REQUIRED	PROVIDED
5-D-8-B LANDSCAPED BUFFER REQUIREMENTS	(1) SHADE TREE PER 40 LINEAR FOOT OF FRONTAGE (EXCLUDING DRIVEWAYS) COLUMBUS AVE. 180/40 = 5	5 TREES
5-D-8-C LANDSCAPED BUFFER REQUIREMENTS	(2) SHADE TREES SHALL BE PLANTED WITHIN THE FRONT 50' OF EACH SIDE BUFFER (4 TOTAL)	4 TREES

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

LEGEND

- VGC — VERTICAL GRANITE CURB
- G — GAS LINE
- FM — SEWER FORCE MAIN
- W — WATER LINE
- E — UNDERGROUND ELECTRIC
- CHAIN LINK FENCE
- SPOT ELEVATION
- 190 — CONTOUR ELEVATION
- TREE
- UTILITY POLE
- GUY WIRE
- OVERHEAD WIRE
- TREELINE
- SIGN
- DRAIN MANHOLE
- CATCH BASIN
- SEWER MANHOLE
- GAS VALVE
- GAS SHUT OFF
- WATER VALVE
- WATER SHUT OFF
- FIRE HYDRANT
- BOLLARD
- GM — GAS METER
- EM — ELECTRIC METER
- MONITORING WELL
- LIGHT POLE
- VERTICAL GRANITE CURB
- VERTICAL CONCRETE CURB

DigSafe MA-ME-NH-RI-VT

NO.	DESCRIPTION	BY	DATE
	REVISIONS		
2	UPDATE WETLANDS/MISC. REVISIONS	PWM	11/5/20
1	REVISE PER TRG COMMENTS	PWM	6/8/20

LANDSCAPE PLAN

MAP 131 LOT 7
717 COLUMBUS AVENUE
ROCHESTER, NEW HAMPSHIRE
PREPARED FOR:
TROPIC STAR DEVELOPMENT, LLC
321D LAFAYETTE ROAD
HAMPTON, NH 03842

IRVING

FRANK C. MONTEIRO No. 7152 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE
11/5/2020

GPI — Engineering, Design, Planning, Construction Management
603.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Stiles Road
Suite One
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SCALE: 1"=20'	DATE: FEBRUARY 4, 2020		DRAWING NO. 39885P
DRAWN BY: CCC	CHECKED BY: FCM	PROJECT NO. 398816	SHEET NO. 7 OF 11

OWNER OF RECORD:
717 COLUMBUS AVENUE, LLC
112 GATES ST
PORTSMOUTH, NH 03801
BOOK 4484 PAGE 81

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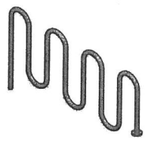
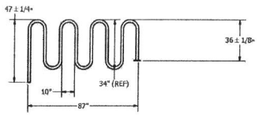
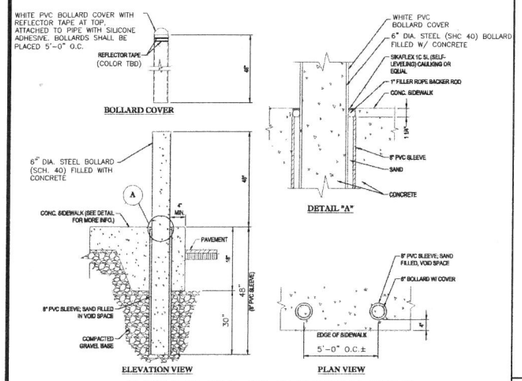


A CONTEMPORARY BIKE RACK AVAILABLE IN GROUND OR SURFACE MOUNT STYLES. CONSTRUCTED OF 2 - 3/8" O.D. SCHEDULE 40 GALVANIZED PIPE. POWDER COATED FINISH AVAILABLE IN BLACK, BROWN, GREEN, BLUE, AND RED.

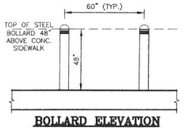


9 CAPACITY WAVE BIKE RACK DETAIL

NOT TO SCALE



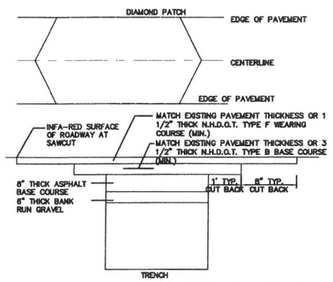
BOLLARD SET IN CONCRETE WALK



BOLLARD ELEVATION

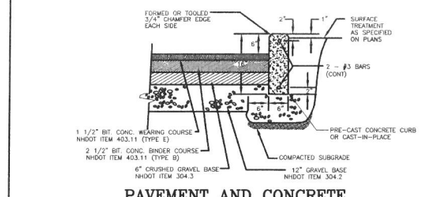
BOLLARD DETAILS AT STOREFRONT

NOT TO SCALE



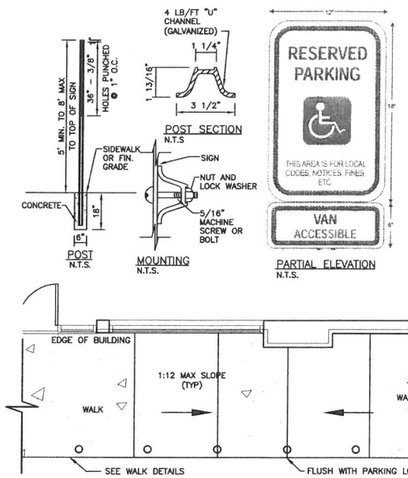
TYPICAL PAVEMENT REPAIR DETAIL

NOT TO SCALE



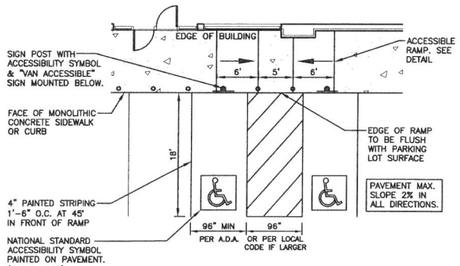
PAVEMENT AND CONCRETE CURB SECTION ON-SITE

NOT TO SCALE



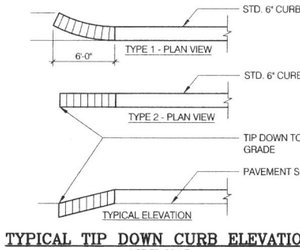
ACCESSIBLE PARKING RAMP

NOT TO SCALE



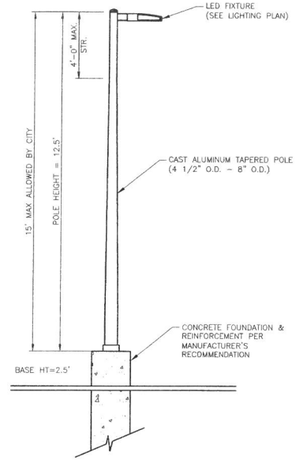
ACCESSIBLE PARKING STALL

NOT TO SCALE



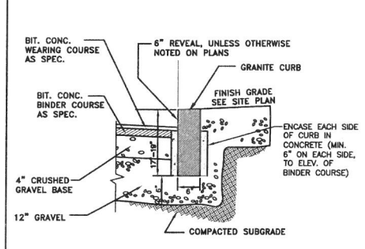
TYPICAL TIP DOWN CURB ELEVATION

NOT TO SCALE



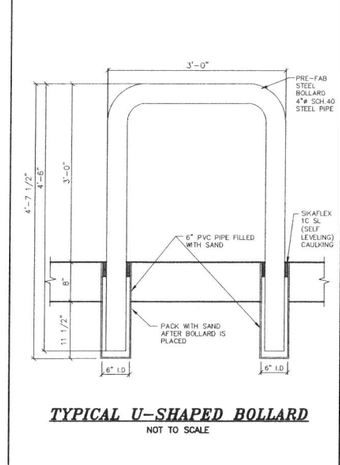
LIGHT FIXTURE DETAIL

NOT TO SCALE



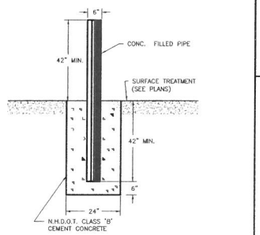
VERTICAL GRANITE CURB

NOT TO SCALE



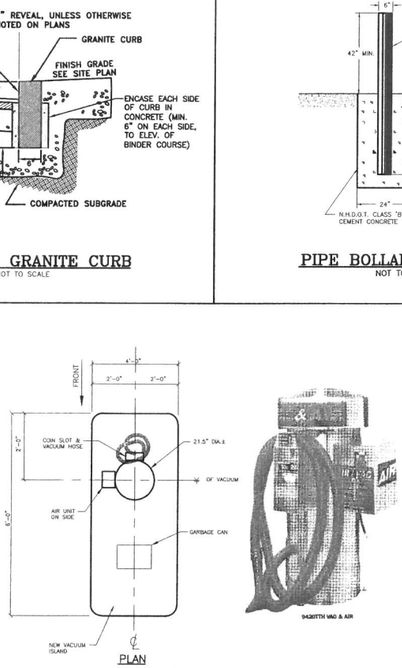
TYPICAL U-SHAPED BOLLARD

NOT TO SCALE



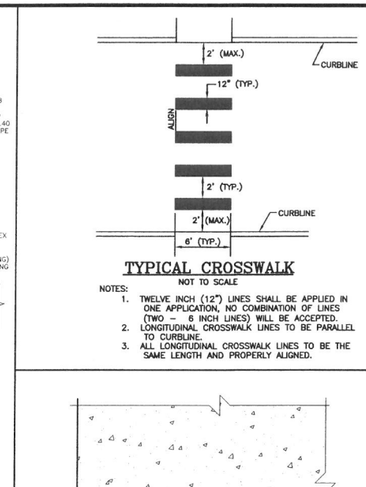
PIPE BOLLARD DETAIL

NOT TO SCALE



VACUUM/AIR ISLAND DETAIL

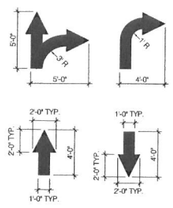
NOT TO SCALE



TYPICAL CROSSWALK

NOT TO SCALE

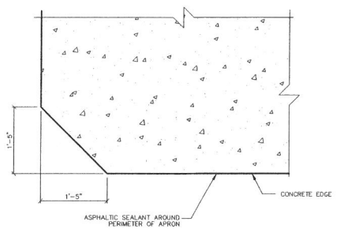
NOTES:
1. TWELVE INCH (12") LINES SHALL BE APPLIED IN ONE APPLICATION, NO COMBINATION OF LINES (TWO - 6 INCH LINES) WILL BE ACCEPTED.
2. LONGITUDINAL CROSSWALK LINES TO BE PARALLEL TO CURBLINE.
3. ALL LONGITUDINAL CROSSWALK LINES TO BE THE SAME LENGTH AND PROPERLY ALIGNED.



ALL PAVEMENT MARKINGS TO BE WHITE PAVEMENT PAINT, UNLESS STATED OTHERWISE.

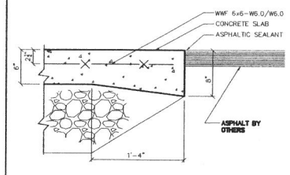
ON-SITE PAVEMENT MARKING DETAILS

NOT TO SCALE



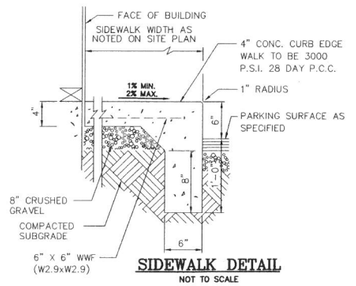
DISPENSER APRON CHAMFER DETAIL

NOT TO SCALE



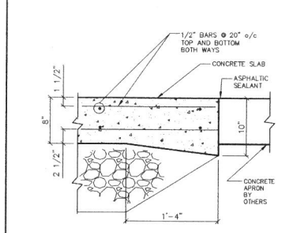
DISPENSER APRON EDGE DETAIL

NOT TO SCALE



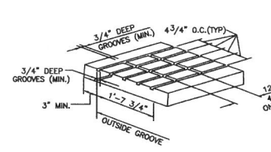
SIDEWALK DETAIL

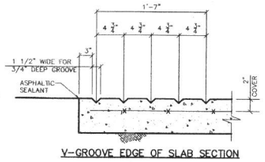
NOT TO SCALE



TANK APRON EDGE DETAIL

NOT TO SCALE





V-GROOVE EDGE OF SLAB SECTION

SPILL CONTAINMENT GROOVES

NOT TO SCALE

NO.	DESCRIPTION	BY	DATE

REVISIONS

SITE DETAILS

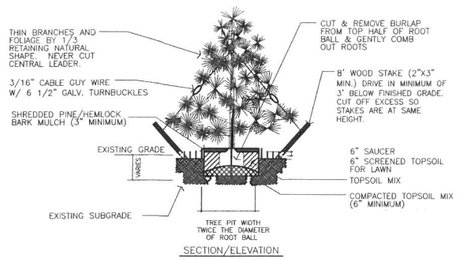
MAP 131 LOT 7
717 COLUMBUS AVENUE
ROCHESTER, NEW HAMPSHIRE
PREPARED FOR:
TROPIC STAR DEVELOPMENT, LLC
321D LAFAYETTE ROAD
HAMPTON, NH 03842

IRVING

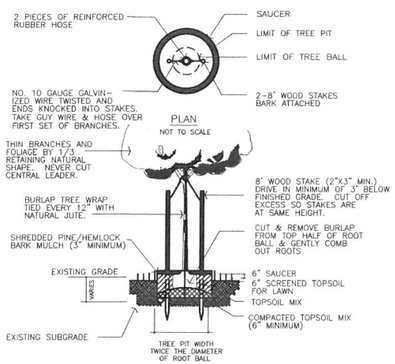
FRANK C. MONTEIRO No. 7152 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE

GPI Engineering Design Planning Construction Management
603.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Stiles Road
Suite One
Salem, NH 03079

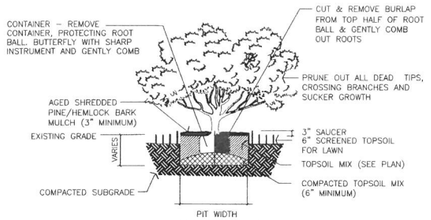
SCALE: AS NOTED	DATE: FEBRUARY 4, 2020		DRAWING NO. 3988DET
DRAWN BY:	CHECKED BY:	PROJECT NO.	SHEET NO.
CCC	FCM	398816	8 OF 11



TYPICAL EVERGREEN TREE PLANTING
NOT TO SCALE

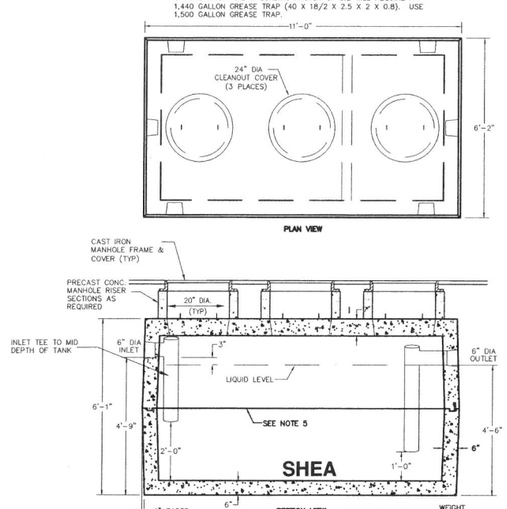


TYPICAL TREE PLANTING
NOT TO SCALE



TYPICAL SHRUB PLANTING
NOT TO SCALE

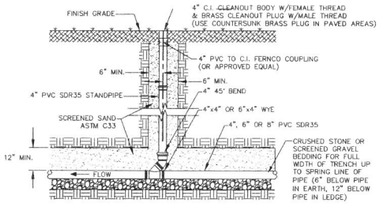
NOTE:
A) REQUIRED CAPACITY PER ME 10-144 CMR 241 (750 GAL. MIN.) # OF SEATS X (HOURS OF OPERATION/2) X 2.5 X 2 X LOADING FACTOR. THE PROPOSED RESTAURANT WITH **40** SEATS, **18** HOURS OF OPERATION AND A LOADING FACTOR OF **0.8** WILL REQUIRE A 1,440 GALLON GREASE TRAP (40 X 18/2 X 2.5 X 2 X 0.8). USE 1,500 GALLON GREASE TRAP.



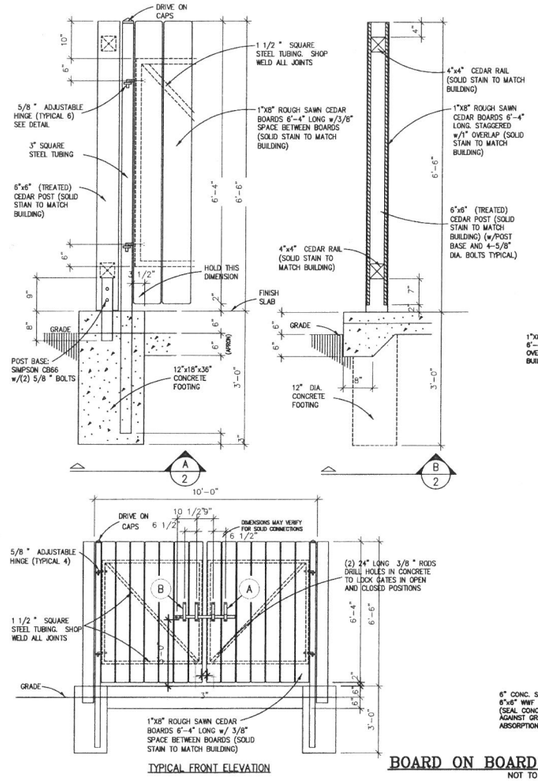
ITEM NO.	WEIGHT
TK-1500C	22,840#

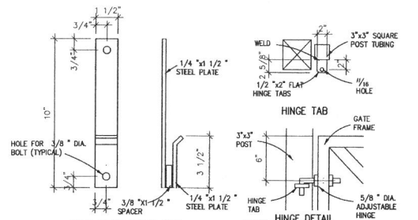
NOTES:
1. CONCRETE: 5,000 PSI MINIMUM AFTER 28 DAYS.
2. DESIGN CONFORMS WITH MEDEP 10-144 CMR 241 FOR GREASE TRAPS
3. ALL REINFORCEMENT PER ASTM C1227-93.
4. DESIGNED FOR H-20 LOADING.
5. TONGUE & GROOVE JOINT SEALED WITH BUTYLE RESIN.
6. TEES AND BAFFLES SOLD SEPARATELY.

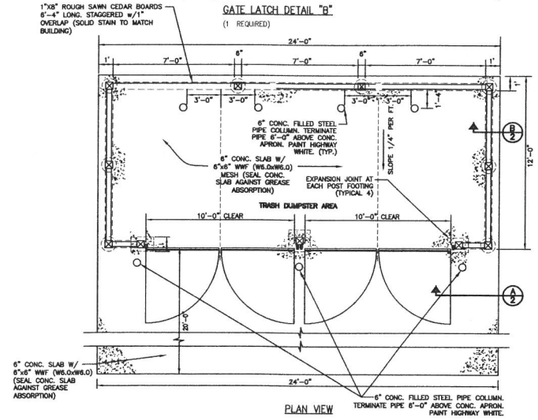
1,500 GALLON GREASE TRAP DETAIL
(H-20 LOADING)



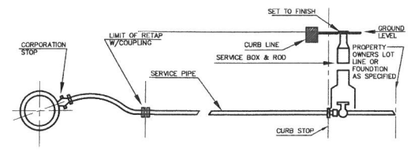
TYPICAL SEWER SERVICE CLEANOUT
NOT TO SCALE





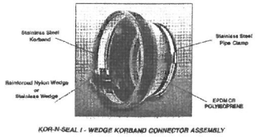


BOARD ON BOARD TRASH ENCLOSURE
NOT TO SCALE



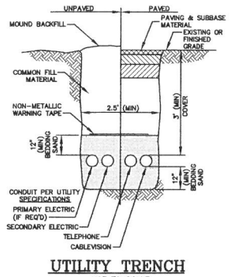
TYPICAL WATER SERVICE CONNECTION
NOT TO SCALE

KOR-N-SEAL® I & II
FLEXIBLE PIPE-TO-MANHOLE CONNECTORS
SPECIFICATION SHEET

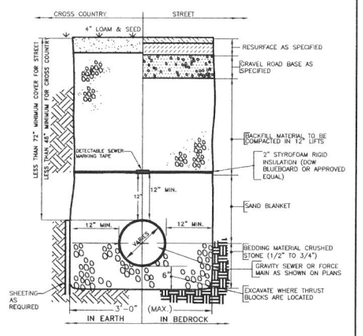


KOR-N-SEAL I - WEDGE KORBAND CONNECTOR ASSEMBLY

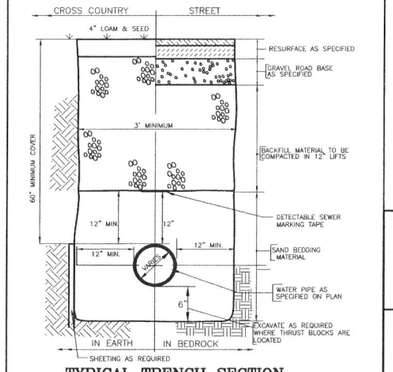
KOR-N-SEAL DETAIL
NOT TO SCALE



UTILITY TRENCH
NOT TO SCALE



TYPICAL TRENCH SECTION FOR SANITARY SEWER SERVICE WITH LESS THAN 6' OF COVER
NOT TO SCALE



TYPICAL TRENCH SECTION FOR WATER SERVICE
NOT TO SCALE
NOTE: ALL BACKFILL TO BE COMPACTED TO 95% OF THE MAXIMUM PROCTOR DENSITY

NO.	DESCRIPTION	BY	DATE
2	UPDATE TRASH ENCLOSURE DETAIL	PWM	11/5/20
1	REVISE PER TRG COMMENTS	PWM	6/8/20

REVISIONS

SITE DETAILS

IRVING

MAP 131 LOT 7
717 COLUMBUS AVENUE
ROCHESTER, NEW HAMPSHIRE
PREPARED FOR:
TROPIC STAR DEVELOPMENT, LLC
321D LAFAYETTE ROAD
HAMPTON, NH 03842

FRANK C. MONTEIRO No. 7152 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE
11/5/2020

GPI Engineering Design Planning Construction Management
603.893.0720 GPINET.COM

Greenman-Pedersen, Inc.
44 Stiles Road
Suite One
Salem, NH 03079

SCALE: AS NOTED	DATE: FEBRUARY 4, 2020		DRAWING NO. 3988DET
DRAWN BY:	CHECKED BY:	PROJECT NO.	SHEET NO.
CCC	FCM	398816	9 OF 11

F:\Projects\CAD\3988\6\3988DET.dwg DET2 11/04/20 3:16pm ccall

GPI
Engineering | Design | Planning | Construction Management

TEST PIT DATA

NEW HAMPSHIRE Designer of Subsurface Disposal Systems *** Diane M. Pantermoller No. 1685 Department of Environmental Services

Client:	Tropic Star Development
Project Address:	717 Columbus Avenue
Town, State:	Rochester, NH
Job Number:	MAX-0398816
Date:	January 29, 2020
Performed by:	Diane Pantermoller

Test Pit No. 1 — SCS Soil: Buxton Silt Loam
ESHWT: 24" — Standing Water: 24"
Refusal: >96" — Roots: None

Depth	Horizon	Soil Texture	Color	Consistence	Mottles; Quantity/Contrast
0-36"	Fill	Sand/Gravel			
36-96"	C	Silt	2.5y 6/1	Platy	

Test Pit No. 2 — SCS Soil: Buxton Silt Loam
ESHWT: 24" — Standing Water: 96"
Refusal: >108" — Roots: None

Depth	Horizon	Soil Texture	Color	Consistence	Mottles; Quantity/Contrast
0-24"	Fill	Sand/Gravel			
24-108"	C	Clay	2.5y 6/1	Platy	Pockets of gravel

Test Pit No. 3 — SCS Soil: Buxton Silt Loam
ESHWT: 36" — Standing Water: 36"
Refusal: >114" — Roots: None

Depth	Horizon	Soil Texture	Color	Consistence	Mottles; Quantity/Contrast
0-36"	Fill	Sand/Gravel			
36-60"	C1	Silt Loam	7.5y 5/1	Platy	
60-114"	C2	Clay	2.5y 6/1	Platy	

Test Pit No. 4 — SCS Soil: Buxton Silt Loam
ESHWT: 72" — Standing Water: 72"
Refusal: >118" — Roots: None

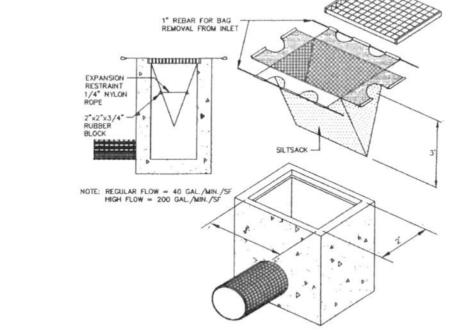
Depth	Horizon	Soil Texture	Color	Consistence	Mottles; Quantity/Contrast
0-72"	Fill	Urban Fill			Brick, wood
72-118"	C	Silt Loam	7.5y 5/1	Platy	Pockets of gravel

Test Pit No. 5 — SCS Soil: Buxton Silt Loam
ESHWT: 72" — Standing Water: 72"
Refusal: >126" — Roots: None

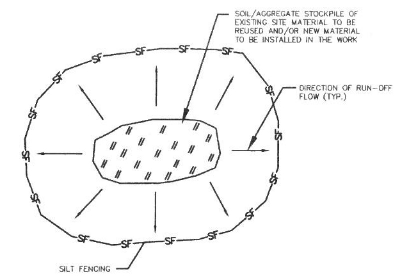
Depth	Horizon	Soil Texture	Color	Consistence	Mottles; Quantity/Contrast
0-72"	Fill	Urban Fill			Iron Pipe, Old SDS
72-126"	C	Silt Loam	7.5y 5/1	Platy	

Greenman-Pedersen, Inc. 44 Stiles Road, Suite One Salem, NH 03079 p 603-893-0720
An Equal Opportunity Employer

TEST PIT LOGS

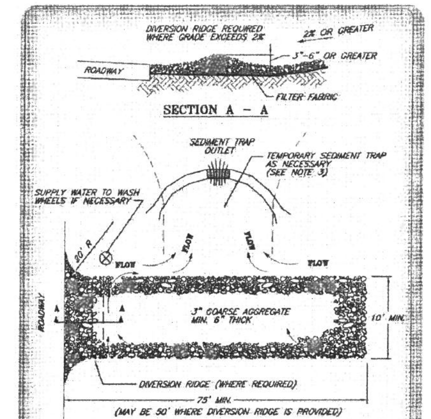


SILTSACK DETAIL–ON OR OFF SITE
NOT TO SCALE



NOTES:
1. ALL EXISTING EXCAVATED MATERIAL THAT IS NOT TO BE REUSED IN THE WORK IS TO BE IMMEDIATELY REMOVED FROM THE SITE AND PROPERLY DISPOSED OF.
2. SOIL/AGGREGATE STOCKPILE SITES TO BE WHERE SHOWN ON THE DRAWINGS.
3. RESTORE STOCKPILE SITES TO PRE-EXISTING PROJECT CONDITION AND RESEED AS REQUIRED.
4. STOCKPILE HEIGHTS MUST NOT EXCEED 35'. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER.

MATERIALS STOCKPILE DETAIL
NOT TO SCALE

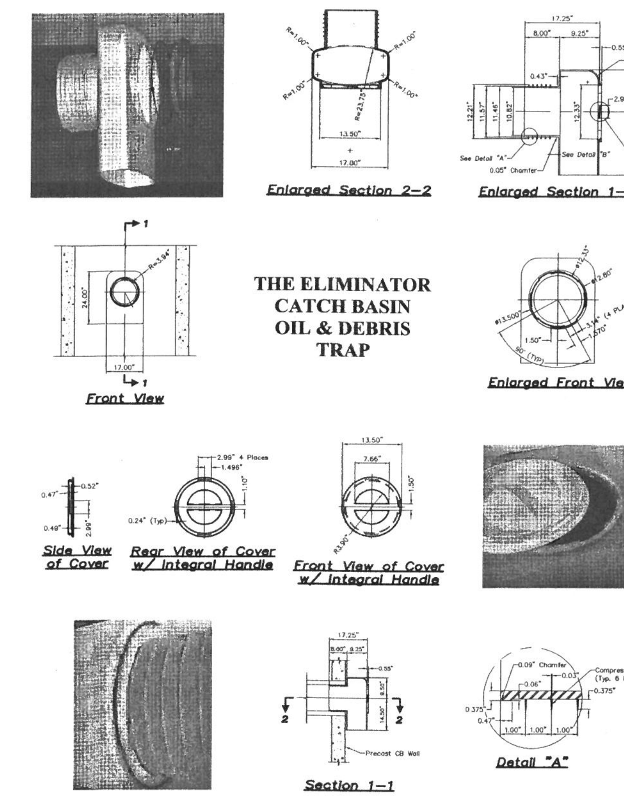


DIVERSION RIDGE REQUIRED WHERE GRADE EXCEEDS 2%
2% OR GREATER
3"-6" OR GREATER
ROADWAY
FILTER FABRIC
SECTION A – A
SEDIMENT TRAP OUTLET
TEMPORARY SEDIMENT TRAP AS NECESSARY (SEE NOTE 3)
SUPPLY WATER TO WASH WHEELS IF NECESSARY
FLOW
3" COARSE AGGREGATE MIN. 6" THICK
10' MIN.
DIVERSION RIDGE (WHERE REQUIRED)
75' MIN.
(MAY BE 50' WHERE DIVERSION RIDGE IS PROVIDED)
PLAN

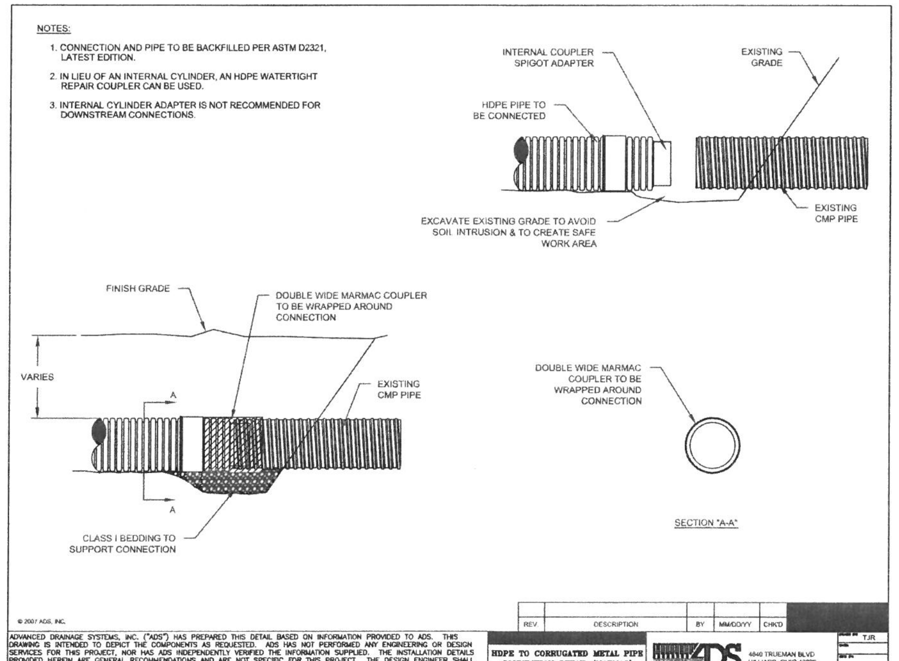
NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

TEMPORARY GRAVEL CONSTRUCTION EXIT

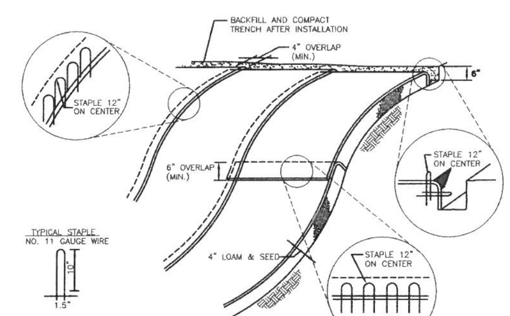
GRAVEL CONSTRUCTION EXIT
NOT TO SCALE



THE ELIMINATOR CATCH BASIN OIL & DEBRIS TRAP

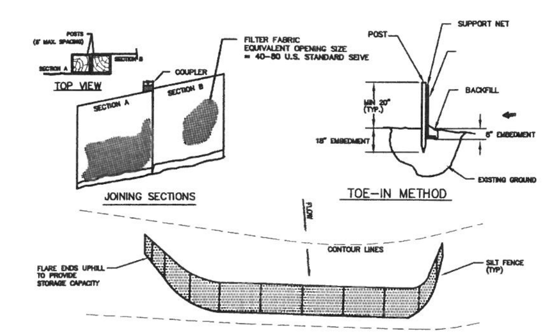


NOTES:
1. CONNECTION AND PIPE TO BE BACKFILLED PER ASTM D2321, LATEST EDITION.
2. IN LIEU OF AN INTERNAL CYLINDER, AN HDPE WATERTIGHT REPAIR COUPLER CAN BE USED.
3. INTERNAL CYLINDER ADAPTER IS NOT RECOMMENDED FOR DOWNSTREAM CONNECTIONS.
INTERNAL COUPLER SPIGOT ADAPTER
EXISTING GRADE
HDPE PIPE TO BE CONNECTED
EXISTING CMP PIPE
EXCAVATE EXISTING GRADE TO AVOID SOIL INTRUSION & TO CREATE SAFE WORK AREA
FINISH GRADE
DOUBLE WIDE MARMAC COUPLER TO BE WRAPPED AROUND CONNECTION
VARIES
CLASS I BEDDING TO SUPPORT CONNECTION
SECTION "A-A"
HDPE TO CORRUGATED METAL PIPE CONNECTION DETAIL (MARMAC)
DRAWING NUMBER: STD-602



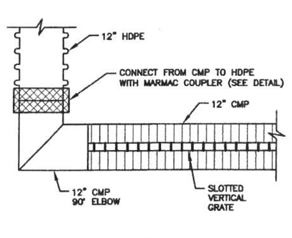
NOTES:
1. BEGIN AT THE TOP OF BLANKET INSTALLATION AREA BY ANCHORING BLANKET IN A 6" DEEP TRENCH. BACKFILL AND COMPACT TRENCH AFTER STAPLING.
2. ROLL THE BLANKET DOWN THE SWALE IN THE DIRECTION OF THE WATER FLOW.
3. THE EDGES OF BLANKETS MUST BE STAPLED WITH APPROX. 4 INCH OVERLAP WHERE 2 OR MORE STRIP WIDTHS ARE REQUIRED.
4. WHEN BLANKETS MUST BE SPLICED DOWN THE SWALE, PLACE BLANKET END OVER END WITH 6 INCH (MIN.) OVERLAP AND ANCHOR DOWN SLOPE BLANKET IN A 6 INCH DEEP TRENCH.
5. BLANKET SHALL BE NORTH AMERICAN GREEN SC–150 OR APPROVED EQUAL.

BLANKET SLOPE PROTECTION FOR EROSION CONTROL
NOT TO SCALE

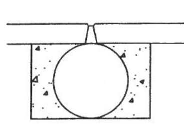


NOTES:
1) WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6 INCHES, FOLDED AND STAPLED.
2) MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE. 3. ENDS OF THE FENCE SHALL BE PLACED UP CONTOUR OF THE FLOW TO TRAP SEDIMENT.

SEDIMENT CONTROL FENCE
NOT TO SCALE



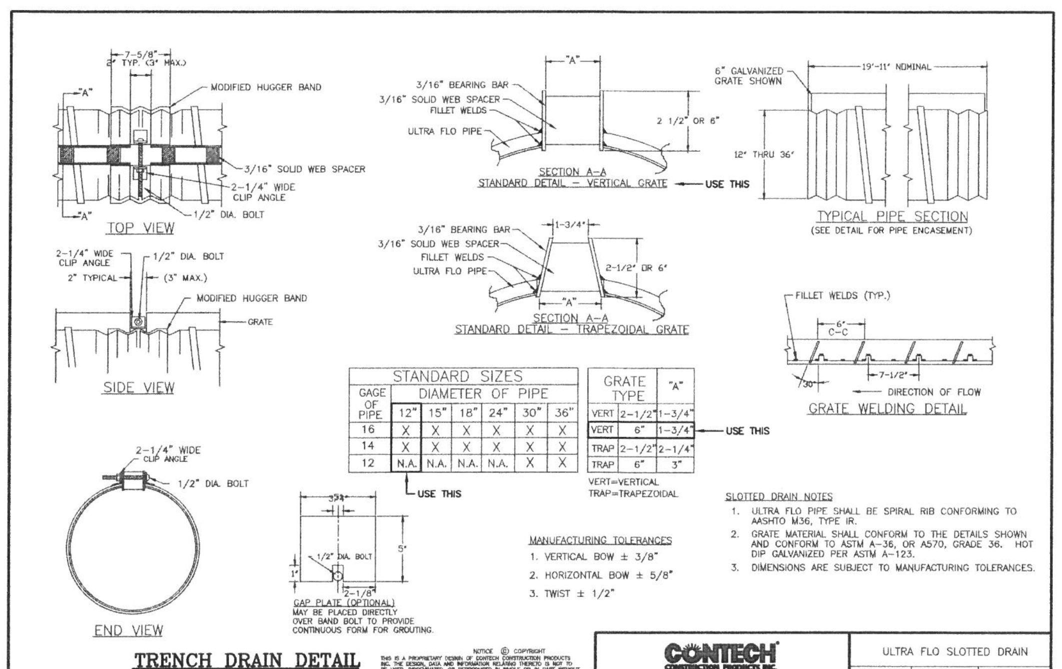
TRENCH DRAIN CONNECTION DETAIL
NOT TO SCALE



RECOMMENDED INSTALLATION PRACTICES ASK FOR CONTECH DRAWING 1008607

FOR INSTALLATION AIDS, CALL YOUR LOCAL CONTECH SALES ENGINEER

PIPE ENCASEMENT DETAIL
NOT TO SCALE



MODIFIED HUGGER BAND
3/16" SOLID WEB SPACER
2-1/4" WIDE CLIP ANGLE
1/2" DIA. BOLT
TOP VIEW
SIDE VIEW
END VIEW
SECTION A–A STANDARD DETAIL – VERTICAL GRATE
SECTION A–A STANDARD DETAIL – TRAPEZOIDAL GRATE
USE THIS
TYPICAL PIPE SECTION (SEE DETAIL FOR PIPE ENCASEMENT)
GRATE WELDING DETAIL
GAP PLATE (OPTIONAL) MAY BE PLACED DIRECTLY OVER BAND BOLT TO PROVIDE CONTINUOUS FORM FOR GROUTING.
CONTECH
ULTRA FLO SLOTTED DRAIN

STANDARD SIZES

GAGE OF PIPE	12"	15"	18"	24"	30"	36"
16	X	X	X	X	X	X
14	X	X	X	X	X	X
12	N.A.	N.A.	N.A.	N.A.	X	X

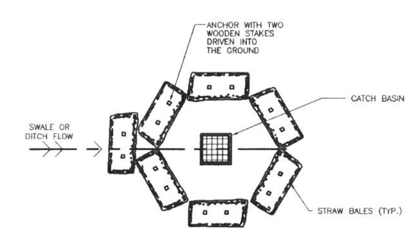
GRATE TYPE		"A"
VERT	2-1/2"	1-3/4"
VERT	6"	1-3/4"
TRAP	2-1/2"	2-1/4"
TRAP	6"	3"

VERT=VERTICAL
TRAP=TRAPEZOIDAL

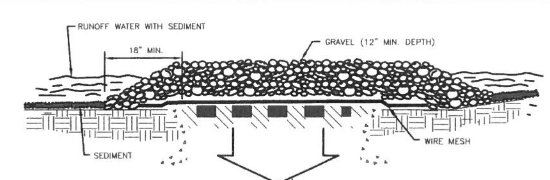
MANUFACTURING TOLERANCES
1. VERTICAL BOW ± 3/8"
2. HORIZONTAL BOW ± 5/8"
3. TWIST ± 1/2"

SLOTTED DRAIN NOTES
1. ULTRA FLO PIPE SHALL BE SPIRAL RIB CONFORMING TO AASHTO M36, TYPE IR.
2. GRATE MATERIAL SHALL CONFORM TO THE DETAILS SHOWN AND CONFORM TO ASTM A-36, OR A570, GRADE 36. HOT DIP GALVANIZED PER ASTM A-123.
3. DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.

TRENCH DRAIN DETAIL
NOT TO SCALE



LOW POINT SEDIMENTATION CONTROL BARRIER
NOT TO SCALE



CONSTRUCTION SEQUENCE:

1) A WIRE MESH SHOULD BE PLACED OVER THE DROP INLET OR CURB OPENING SO THAT THE ENTIRE OPENING AND A MINIMUM OF 12 INCHES AROUND THE OPENING ARE COVERED BY THE MESH. THE MESH MAY BE ORDINARY HARDWARE CLOTH OR WIRE MESH WITH OPENINGS UP TO 1/2 INCH.

2) THE WIRE MESH SHOULD BE COVERED WITH CLEAN COARSE AGGREGATE SUCH AS SEWER STONE FOR A MINIMUM DEPTH OF 12 INCHES.

3) THE COARSE AGGREGATE SHOULD EXTEND AT LEAST 18 INCHES ON ALL SIDES OF THE DRAIN OPENING.

MAINTENANCE: ALL STRUCTURES SHOULD BE INSPECTED AFTER EVERY RAIN STORM AND REPAIRS MADE AS NECESSARY. SEDIMENT SHOULD BE REMOVED FROM THE TRAPPING DEVICES AFTER THE SEDIMENT HAS REACHED A MAXIMUM OF ONE HALF THE DEPTH OF THE TRAP. THE SEDIMENT SHOULD BE DISPOSED OF IN A SUITABLE AREA AND PROTECTED FROM EROSION BY EITHER STRUCTURAL OR VEGETATIVE MEANS. THE TEMPORARY TRAPS SHOULD BE REMOVED AND THE AREA REPAIRED AS SOON AS THE CONTRIBUTING DRAINAGE AREA TO THE INLET HAS BEEN COMPLETELY STABILIZED.

ON–SITE INLET PROTECTION DETAIL
NOT TO SCALE

NO.	DESCRIPTION	BY	DATE
1	REVISE PER TRG COMMENTS	PWM	6/8/20

REVISIONS

SITE DETAILS

MAP 131 LOT 7
717 COLUMBUS AVENUE
ROCHESTER, NEW HAMPSHIRE
PREPARED FOR:
TROPIC STAR DEVELOPMENT, LLC
321D LAFAYETTE ROAD
HAMPTON, NH 03842

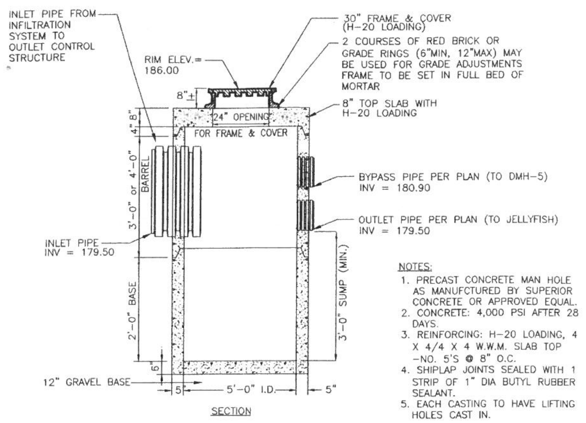
IRVING

STATE OF NEW HAMPSHIRE – FRANK C. MONTEIRO No. 7152 LICENSED PROFESSIONAL ENGINEER — 6/9/20

GPI Engineering Design Planning Construction Management
603.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Stiles Road
Suite One
Salem, NH 03079

SCALE: AS NOTED	DATE: FEBRUARY 4, 2020		DRAWING NO. 3988DET
DRAWN BY:	CHECKED BY:	PROJECT NO.	SHEET NO.
CCC	FCM	398816	10 OF 11

F:\Projects\CAD\398816\3988DET.dwg DET3 6/09/20 9:32am ccoll

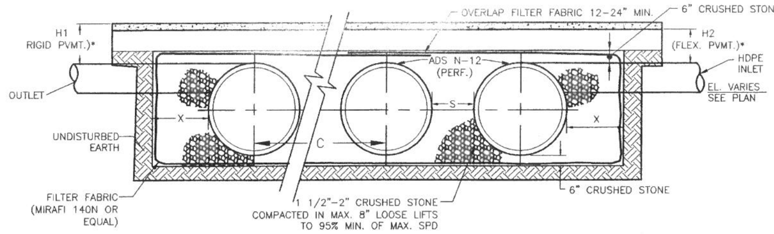


NOTES:

1. PRECAST CONCRETE MAN HOLE AS MANUFCTURED BY SUPERIOR CONCRETE OR APPROVED EQUAL.
2. CONCRETE: 4,000 PSI AFTER 28 DAYS.
3. REINFORCING: H-20 LOADING, 4 X 4/4 X 4 W.W.M. SLAB TOP -NO. 5'S @ 8" O.C.
4. SHIPLAP JOINTS SEALED WITH 1 STRIP OF 1" DIA BUTYL RUBBER SEALANT.
5. EACH CASTING TO HAVE LIFTING HOLES CAST IN.

PRECAST CONCRETE OUTLET CONTROL STRUCTURE (OCS) FOR UNDERGROUND DETENTION SYSTEM

NOT TO SCALE



* H1, H2 = 12" FOR UP TO AND INCLUDING 48" N-12
* H1, H2 = 24" FOR 60" N-12
* FOR TRAFFIC LOAD INSTALLATIONS PROVIDE 24" COVER FOR 42"-60" N-12

NOMINAL DIAMETER	NOMINAL O.D.	TYPICAL SPACING "S"	TYPICAL SPACING "C"	TYPICAL SIDE WALL "X"
12"	14.5"	11"	25.4"	8"
15"	18"	12"	28.9"	8"
18"	21"	13"	33.9"	9"
24"	28"	13"	40.7"	10"
30"	36"	18"	53.1"	18"
36" (U.G. DET)	42"	22"	63"	18"
42"	48"	24"	71.9"	18"

NOTES

1. ALL UNDERGROUND SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION.
2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
3. SEE GRADING & DRAINAGE PLAN FOR INVERT DATA.
4. EXISTING TOPSOIL, BRUSH, TREES, BOULDERS, FILL AND DEBRIS TO BE REMOVED FOR 5' ALL AROUND UNDERGROUND SYSTEMS DOWN TO NATIVE MATERIAL. BACKFILL WITH STONE BEDDING MATERIAL (CLASS 1A OR 1B).

GENERAL NOTES:

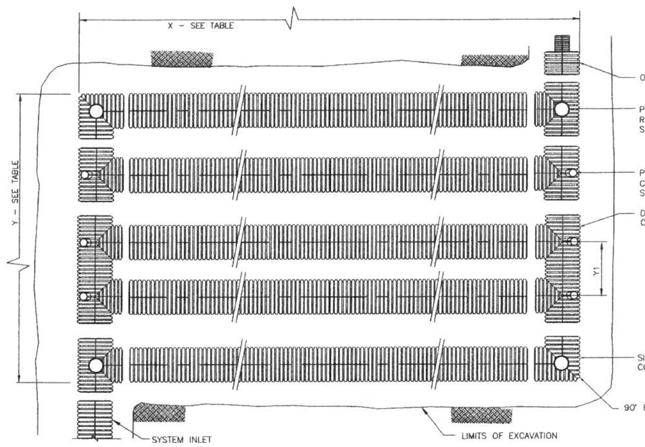
1. ALL REFERENCES TO SAND, STONE, OR GRAVEL MATERIAL ARE PER ASTM D2321 "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION.
2. ALL RETENTION AND DETENTION SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, LATEST EDITION AND THE MANUFACTURER'S PUBLISHED INSTALLATION GUIDELINES.
3. MEASURES SHOULD BE TAKEN TO PREVENT THE MIGRATION OF NATIVE FINES INTO THE BACKFILL MATERIAL, WHEN REQUIRED. SEE ASTM D2321.
4. NO STORMWATER FLOWS ARE TO BE DIRECTED TO THE INFILTRATION SYSTEMS UNTIL ALL CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
5. FILTER FABRIC: GEOTEXTILE FABRIC SHALL BE MIRAFI 140N (OR APPROVED EQ.) TO PREVENT THE MIGRATION OF FINES FROM THE NATIVE SOIL INTO THE SELECT BACKFILL MATERIAL.
6. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE OR UNSUITABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE GEOTECHNICAL ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE GEOTECHNICAL ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE GEOTECHNICAL ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL. ALL DELETERIOUS OR UNSUITABLE FILL MATERIAL SHALL BE REMOVED BELOW THE TRENCH BOTTOM UNTIL NATIVE MATERIAL IS ENCOUNTERED.
7. BEDDING: SUITABLE MATERIAL SHALL BE CLEAN COMPACT SAND. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER.
8. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE PLACED IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
9. MINIMUM COVER: MINIMUM COVER OVER ALL RETENTION/DETENTION SYSTEMS IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER IS 12" UP TO 36" DIAMETER PIPE AND 24" OF COVER FOR 42" - 60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

TYPICAL UNDERGROUND DETENTION SYSTEM CROSS SECTION

NOT TO SCALE

UNDERGROUND SYSTEM NOTES:

1) ALL SITE DRAINAGE PIPE SHALL BE CORRUGATED HIGH-DENSITY POLYETHYLENE PIPE, DUAL WALL, SMOOTH INTERIOR AS MANUFACTURED BY ADS, INC., OR APPROVED EQUAL, UNLESS OTHERWISE NOTED ON PLAN.
2) CONTRACTOR SHOULD CONFIRM SYSTEM PARTS AND PROVIDE SHOP DRAWINGS FROM MANUFACTURER. SUBSTITUTIONS AND SHOP DRAWINGS SHOULD BE APPROVED BY THE ENGINEER.
3) PARTS SPECIFICATIONS SHOWN ARE AS PROVIDED BY ADS, INC., OR APPROVED EQUAL. ANY CHANGES TO THESE SPECIFICATIONS SHOULD BE APPROVED BY DESIGN ENGINEER FOR PERFORMANCE.



NOTE: FOR ADDITIONAL DETAILS, SEE ADS STD-702 & STD-703.

UNDERGROUND STORMWATER DETENTION SYSTEM TABLE							
UG INFILTRATION SYSTEM	LENGTH (X)	WIDTH (Y)	SPACING (Y1) (O.C. TYP.) *	PIPE SIZE (INCHES) PERF	INV. PIPE ELEV. (A)	# PIPE ROWS	STONE BED
DETENTION SYS#1	127'	20.75'	63"	36"	179.50	4	22.25'x130'

*SEE TYPICAL CROSS SECTION BELOW.

Table 5-2
Classes of Embedment and Backfill Materials

ASTM D2321[1] Class	ASTM D2321[1] Description	Notation	ASTM D2487 Description	AASHTO M43 Notation	Min. Compaction Required (Std. Proctor Density %)[3]	Percentage Passing Sieve Sizes: 1 ½ in. (40mm)	No. 4 (4.75mm)	No. 200 (0.075mm)	Atterberg Limits: LL	PI	Coefficients: Uniformity Cu	Curvature Cc
IA[4]	Open-graded, clean manufactured aggregates	N/A	Angular crushed stone or rock, crushed gravel, crushed slag; large voids with little or no fines	5 56	Dumped to Slight	100%	≤10%	<5%	Non Plastic		N/A	
IB	Dense-graded, clean manufactured, processed aggregates	N/A	Angular crushed stone or other Class IA material and stone/sand mixtures with gradations selected to minimize migration of adjacent soils; little or no fines			100%	≤50%	<5%	Non Plastic			
II	Clean, coarse-grained soils	GW	Well-graded gravel, gravel-sand mixtures; little or no fines	57 6 67	Moderate (85%)	100%	<50% of "Coarse Fraction"	<5%	Non Plastic		>4	1 to 3
		GP	Poorly-graded gravels, gravel-sand mixtures; little or no fines								<4	<1 or >3
		SW	Well-graded sands, gravelly sands; little or no fines				>50% of "Coarse Fraction"				>6	1 to 3
		SP	Poorly-graded sands, gravelly sands; little or no fines								<6	<1 or >3
	Coarse-Grained Soils, borderline clean to w/fines	GW-GC, SP-SM	Sands and gravels which are borderline between clean and with fines	N/A		100%	Varies	5% to 12%	Non Plastic		Same as for GW, GP, SW and SP	
III	Coarse-grained soils with fines	GM	Silty gravels, gravel-sand-silt mixtures	Gravel & sand with <10% fines	Moderate to High (90%)	100%	<50% of "Coarse Fraction"	12% to 50%	N/A	<4 or <"A" Line	N/A	
		GC	Clayey gravels, gravel-sand-clay mixtures							<7 & >"A" Line		
		SM	Silty sands, sand-silt mixtures				>50% of "Coarse Fraction"			>4 or <"A" Line		
		SC	Clayey sands, sand-clay mixtures							>7 & >"A" Line		
IVA[2]	Inorganic fine-grained soils	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands, silts with slight plasticity	N/A	N/R	100%	100%	>50%	<50	<4 or <"A" Line	N/A	
		CL	Inorganic clays of low to medium plasticity; gravelly, sandy, or silty clays; lean clays	N/A						>7 & >"A" Line		
IVB	Inorganic fine-grained soils	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts	N/A	N/R	100%	100%	>50%	>50	<"A" Line	N/A	
		CH	Inorganic clays of high plasticity, fat clays	N/A						>"A" Line		
V	Organic soils or Highly organic soils	OL	Organic silts and organic silty clays of low plasticity	N/A	N/R	100%	100%	>50%	<50	<4 or <"A" Line	N/A	
		OH	Organic clays of medium to high plasticity, organic silts	N/A					>50	<"A" Line		
		PT	Peat and other high organic soils	N/A								

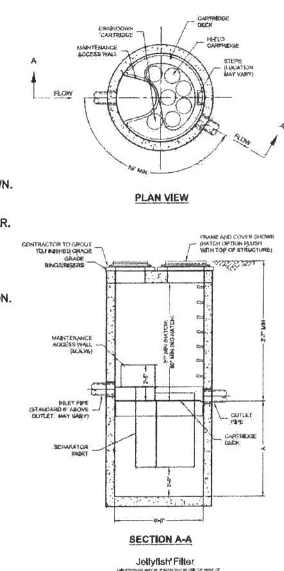
Notes:

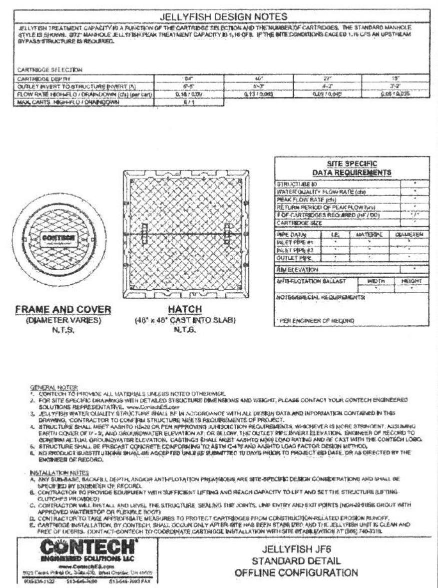
1) Refer to ASTM D2321 for more complete soil descriptions.
2) Class IVA material has limited applications and can be difficult to place and compact; use ONLY with the approval of a soil expert. Contact ADS for additional information regarding suitability of this backfill material.
3) N/R indicates that use of this material and/or compaction level is not recommended by ASTM D2321 for the backfill envelope.
4) When using open-graded material, additional precaution must be taken to reduce or eliminate the risk of migration of fines from adjacent material. Refer to ASTM D2321 for more complete information.

NOTES:

1) INDIVIDUAL UNIT SPECIFICATIONS MAY DIFFER FROM THE TYPICAL CONFIGURATION AS SHOWN.
2) PRELIMINARY SIZING WAS TAKEN FROM LITERATURE PROVIDED BY THE MANUFACTURER. FINAL DESIGN SPECIFICATION AND SHOP DRAWINGS SHALL BE PROVIDED TO THE DESIGN ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.
3) SEE UNIT SCHEDULE FOR SIZING INFORMATION.

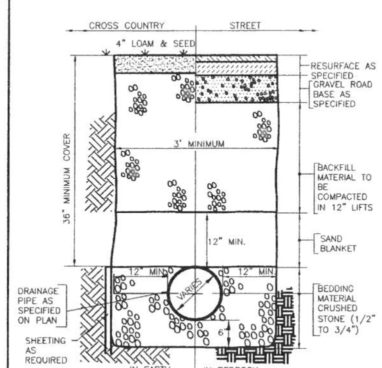
FIRST DEFENSE UNIT SCHEDULE	
STRUCTURE ID	MODEL
DMH-2	JF6-5-1





TYPICAL JELLYFISH TREATMENT UNIT

NOT TO SCALE

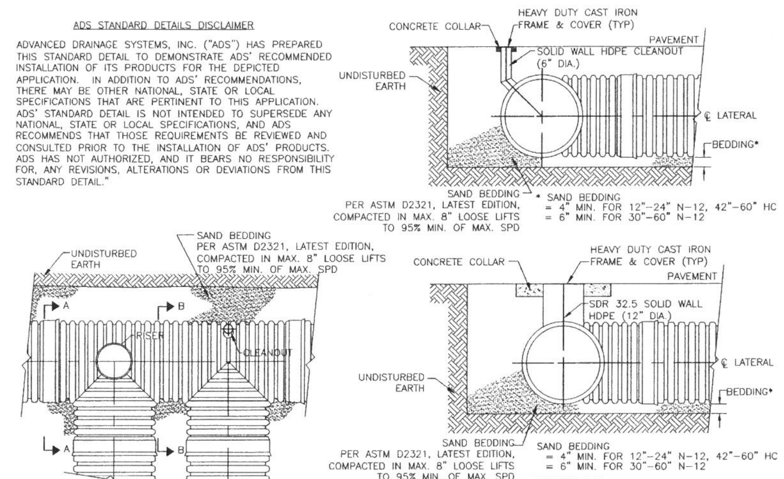


TYPICAL TRENCH SECTION FOR STORM DRAIN

NOT TO SCALE

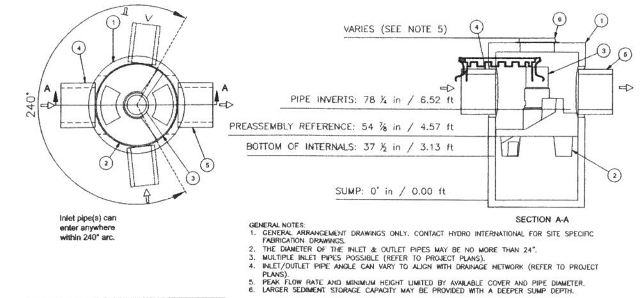
ADS STANDARD DETAILS DISCLAIMER

ADVANCED DRAINAGE SYSTEMS, INC. ("ADS") HAS PREPARED THIS STANDARD DETAIL TO DEMONSTRATE ADS' RECOMMENDED INSTALLATION OF ITS PRODUCTS FOR THE DEPICTED APPLICATION. IN ADDITION TO ADS' RECOMMENDATIONS, THERE MAY BE OTHER NATIONAL, STATE OR LOCAL SPECIFICATIONS THAT ARE PERTINENT TO THIS APPLICATION. ADS' STANDARD DETAIL IS NOT INTENDED TO SUPERSEDE ANY NATIONAL, STATE OR LOCAL SPECIFICATIONS, AND ADS RECOMMENDS THAT THOSE REQUIREMENTS BE REVIEWED AND CONSULTED PRIOR TO THE INSTALLATION OF ADS' PRODUCTS. ADS HAS NOT AUTHORIZED, AND IT BEARS NO RESPONSIBILITY FOR, ANY REVISIONS, ALTERATIONS OR DEVIATIONS FROM THIS STANDARD DETAIL."



TYPICAL RISER AND CLEANOUT DETAILS

NOT TO SCALE

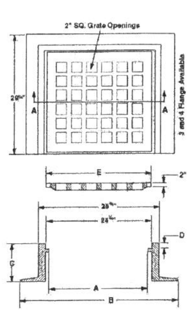


Parts List		
ITEM	SIZE (in)	DESCRIPTION
1	72	I.D. PRECAST MANHOLE
2		LEDGER SUPPORT
3		SEPARATION MODULE
4	30	INLET PIPE (BY OTHERS)
5	30	OUTLET PIPE (BY OTHERS)
6	30	FRAME AND COVER (OR GRATE) (ROUND)

"FIRST DEFENSE" UNIT DETAIL - FD-6HC

(OR APPROVED EQUAL)
NOT TO SCALE

NOTE: CONTRACTOR SHOULD CONFIRM SYSTEM PARTS AND OBTAIN SHOP DRAWINGS FROM MANUFACTURER PRIOR TO CONSTRUCTION.



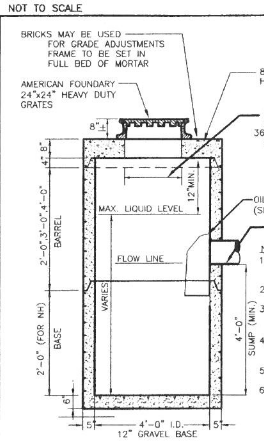
Heavy Duty Catch Basin with 2" Square Openings

Features:
- Reduced excess weight
- Economical alternative to DOT standard
- High strength casting
- Non-rocking grate
- Solid covers are available

Specifications:
- Quality cast frame and grate
- Non-rocking grate
- Gray cast iron meets ASTM A48 Class 30
- H-20 load rated

CATCH BASIN FRAME & GRATE DETAIL

NOT TO SCALE

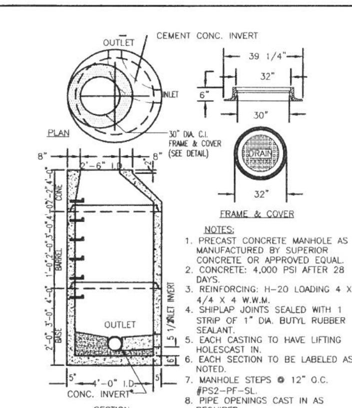


NOTES:

1. PRECAST CONCRETE CATCH BASIN AS MANUFACTURED BY SUPERIOR CONCRETE OR APPROVED EQUAL.
2. CONCRETE: 4,000 PSI AFTER 28 DAYS.
3. REINFORCING: H-20 LOADING, 4 X 4/4 X 4 W.W.M. SLAB TOP -NO. 5'S @ 8" O.C.
4. SHIPLAP JOINTS SEALED WITH 1 STRIP OF 1" DIA BUTYL RUBBER SEALANT.
5. EACH CASTING TO HAVE LIFTING HOLES CAST IN.
6. EACH SECTION TO BE LABELED AS NOTED.

PRECAST CONCRETE CATCH BASIN WITH HOOD

NOT TO SCALE

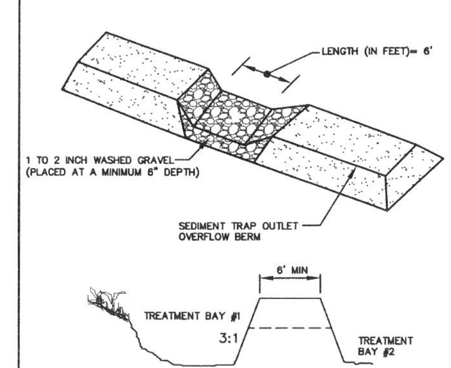


NOTES:

1. PRECAST CONCRETE MANHOLE AS MANUFACTURED BY SUPERIOR CONCRETE OR APPROVED EQUAL.
2. CONCRETE: 4,000 PSI AFTER 28 DAYS.
3. REINFORCING: H-20 LOADING 4 X 4/4 X 4 W.W.M.
4. SHIPLAP JOINTS SEALED WITH 1 STRIP OF 1" DIA. BUTYL RUBBER SEALANT.
5. EACH CASTING TO HAVE LIFTING HOLESCAST IN.
6. EACH SECTION TO BE LABELED AS NOTED.
7. MANHOLE STEPS @ 12" O.C. (PS2-PF-SL.
8. PIPE OPENINGS CAST IN AS REQUIRED.
9. 8" SLAB TOP AVAILABLE.

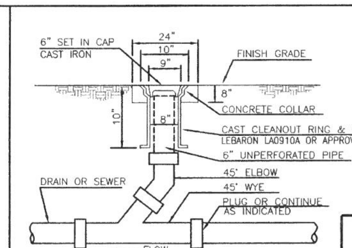
PRECAST CONCRETE DRAIN MANHOLE

MAXIMUM PIPE DIAMETER 30"
NOT TO SCALE



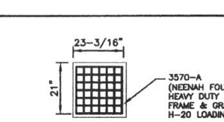
STONE WEIR DETAIL

NOT TO SCALE



TYPICAL CLEANOUT

NOT TO SCALE



LOW PROFILE GRATE PLAN VIEW

NOT TO SCALE

1	REVISE PER TRG COMMENTS	PWM	6/8/20
NO.	DESCRIPTION	BY	DATE
REVISIONS			

SITE DETAILS

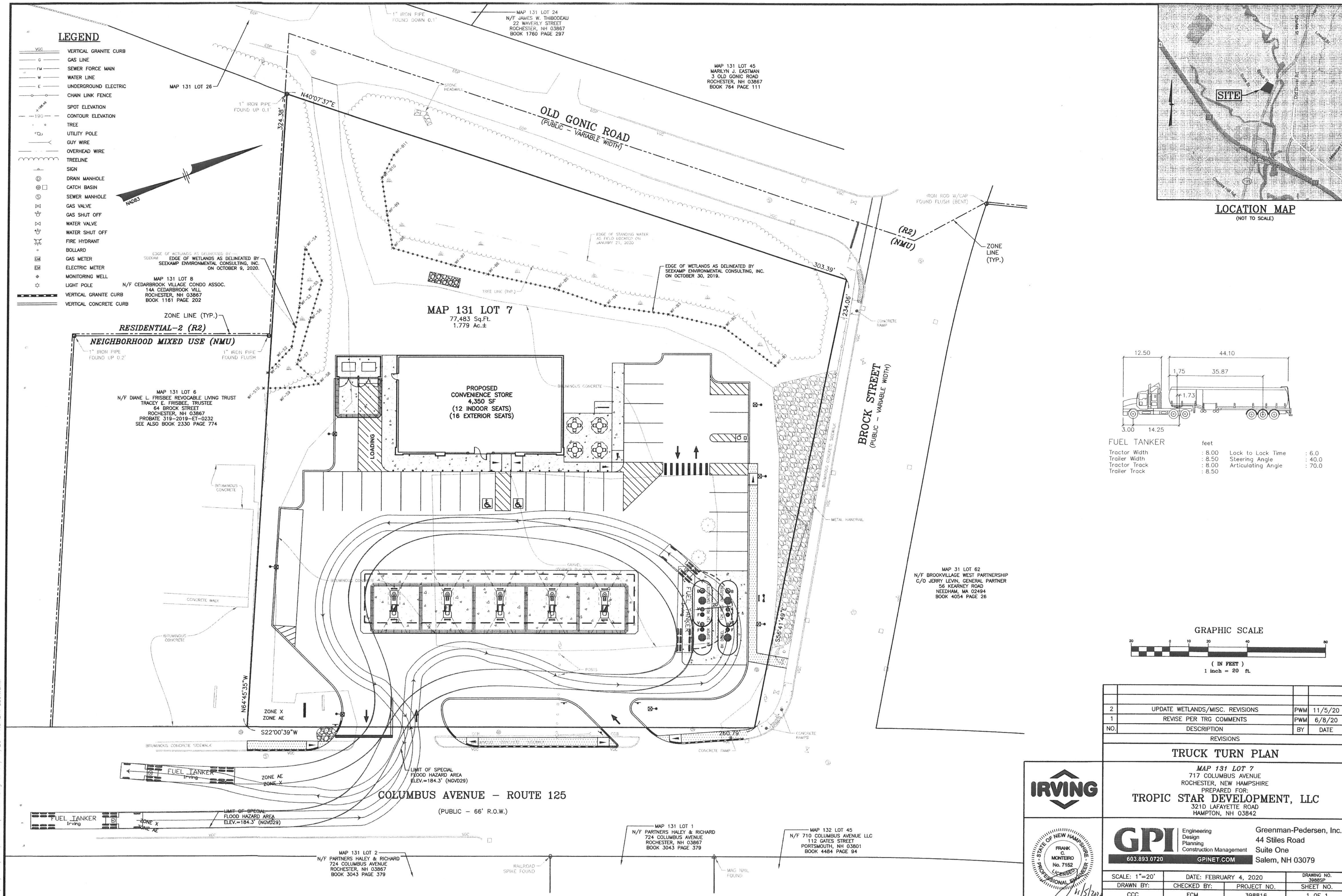
MAP 131 LOT 7
717 COLUMBUS AVENUE
ROCHESTER, NEW HAMPSHIRE
PREPARED FOR:
TROPIC STAR DEVELOPMENT, LLC
321D LAFAYETTE ROAD
HAMPTON, NH 03842

IRVING

GPI Engineering Design Planning Construction Management
603.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Stiles Road
Suite One
Salem, NH 03079

STATE OF NEW HAMPSHIRE FRANK C. MONTEIRO No. 7152 LICENSED PROFESSIONAL ENGINEER
6/9/20

SCALE: AS NOTED	DATE: FEBRUARY 4, 2020		DRAWING NO. 3988DET
DRAWN BY:	CHECKED BY:	PROJECT NO.	SHEET NO.
CCC	FCM	398816	11 OF 11



NO.	DESCRIPTION	BY	DATE
2	UPDATE WETLANDS/MISC. REVISIONS	PWM	11/5/20
1	REVISE PER TRG COMMENTS	PWM	6/8/20

REVISIONS

TRUCK TURN PLAN

MAP 131 LOT 7
717 COLUMBUS AVENUE
ROCHESTER, NEW HAMPSHIRE
PREPARED FOR:
TROPIC STAR DEVELOPMENT, LLC
321D LAFAYETTE ROAD
HAMPTON, NH 03842

IRVING

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Suite One
Salem, NH 03079

STATE OF NEW HAMPSHIRE FRANK C. MONTEIRO No. 7152 LICENSED PROFESSIONAL ENGINEER 11/5/2020

SCALE: 1"=20'	DATE: FEBRUARY 4, 2020		DRAWING NO. 3988SP
DRAWN BY:	CHECKED BY:	PROJECT NO.	SHEET NO.
CCC	FCM	398816	1 OF 1

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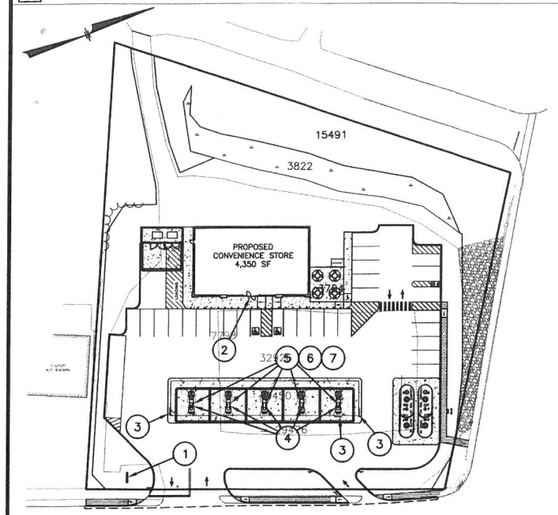
01 SITE LAYOUT

SCALE: 1" = 50'



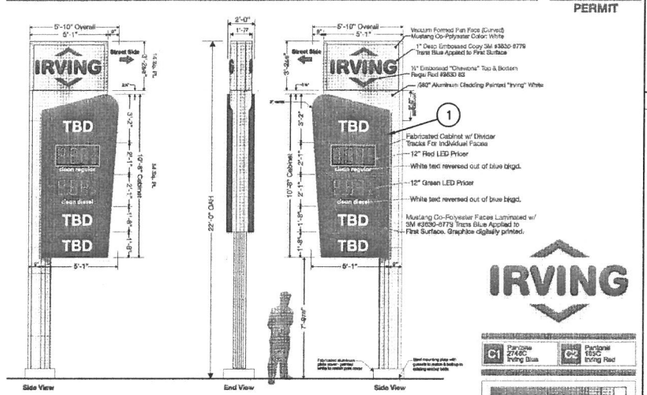
COLUMBUS AVENUE – ROUTE 125

02 PROPOSED PYLON SIGN ELEVATION

NOT TO SCALE

5' SINGLE POLE HARP SYSTEM MAIN ID | OVERVIEW

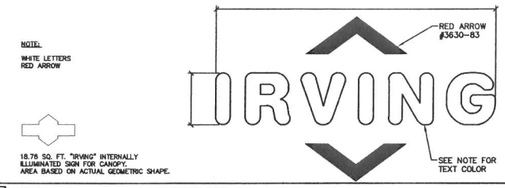
PERMIT



68 Total Sq.Ft.

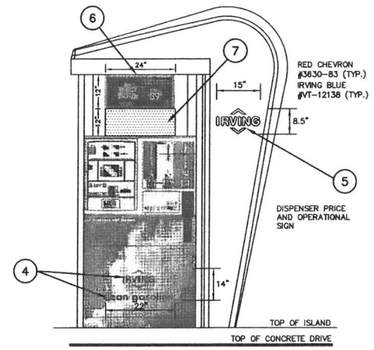
06 PROPOSED "IRVING" CANOPY LOGO

NOT TO SCALE

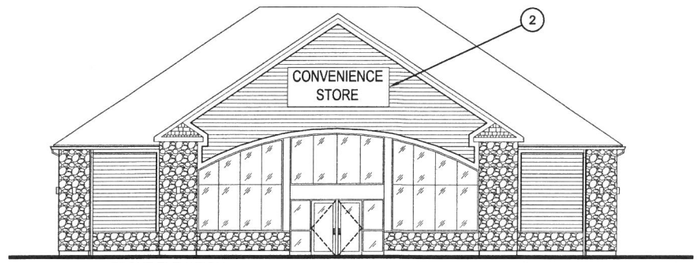


07 PROPOSED MULTI-PRODUCT DISPENSER

NOT TO SCALE



03 PROPOSED STORE ELEVATIONS



FRONT ELEVATION

N.T.S.

04 C-STORE BUILDING WALL SIGN

NOT TO SCALE

65 Sq.Ft.

08 PROPOSED SIGN SCHEDULE

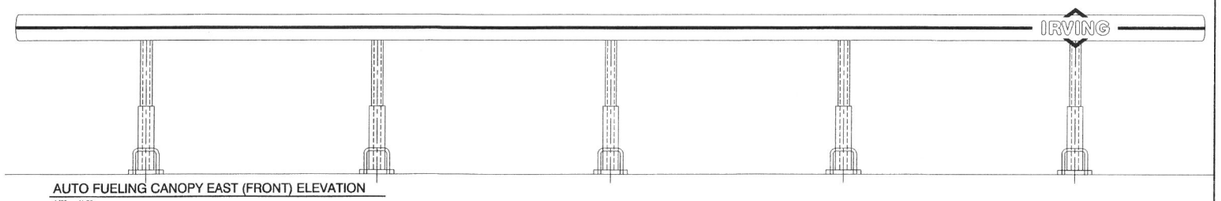
NOT TO SCALE

PROPOSED SIGN SCHEDULE

MARK	DESCRIPTION	SIZE	AREA	QTY.	TOTAL SF	ILLUM'D.
1	PYLON SIGN	SEE DETAIL 2	68	1	68	YES (INTERNAL)
2	C-STORE WALL SIGN	SEE LOGO DETAIL 4	65	1	65	YES (INTERNAL)
3	"IRVING" CANOPY – LOGO SIGN	SEE LOGO DETAIL 6	18.76	3	56.28	YES (INTERNAL)
4	"IRVING" DISPENSER DOOR GRAPHIC	SEE DISPENSER DETAIL 7	2.14	10	21.4	NO
5	"IRVING" DISPENSER SHROUD LOGO	SEE DISPENSER DETAIL 7	0.89	10	8.9	NO
6	"IRVING" DISPENSER ADVERTISING SIGN	SEE DISPENSER DETAIL 7	2.0	10	20	NO
7	LED DISPENSER PRICE SIGN	SEE DISPENSER DETAIL 7	2.0	10	20	NO

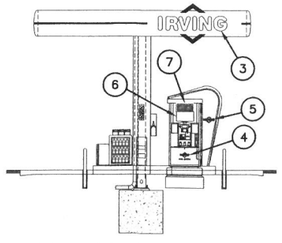
05 PROPOSED CANOPY ELEVATION

SCALE: 1/8"=1'-0"



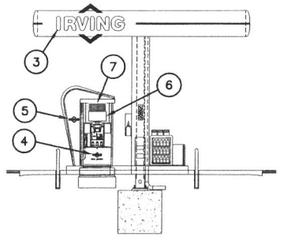
AUTO FUELING CANOPY EAST (FRONT) ELEVATION

1/8" = 1'-0"



AUTO FUELING CANOPY SOUTH ELEVATION

1/8" = 1'-0"



AUTO FUELING CANOPY NORTH ELEVATION

1/8" = 1'-0"

NO.	DESCRIPTION	BY	DATE

REVISIONS

SIGN & GRAPHICS PLAN

MAP 131 LOT 7
717 COLUMBUS AVENUE
ROCHESTER, NEW HAMPSHIRE
PREPARED FOR:
TROPIC STAR DEVELOPMENT, LLC
321 LAFAYETTE ROAD
HAMPTON, NH 03842

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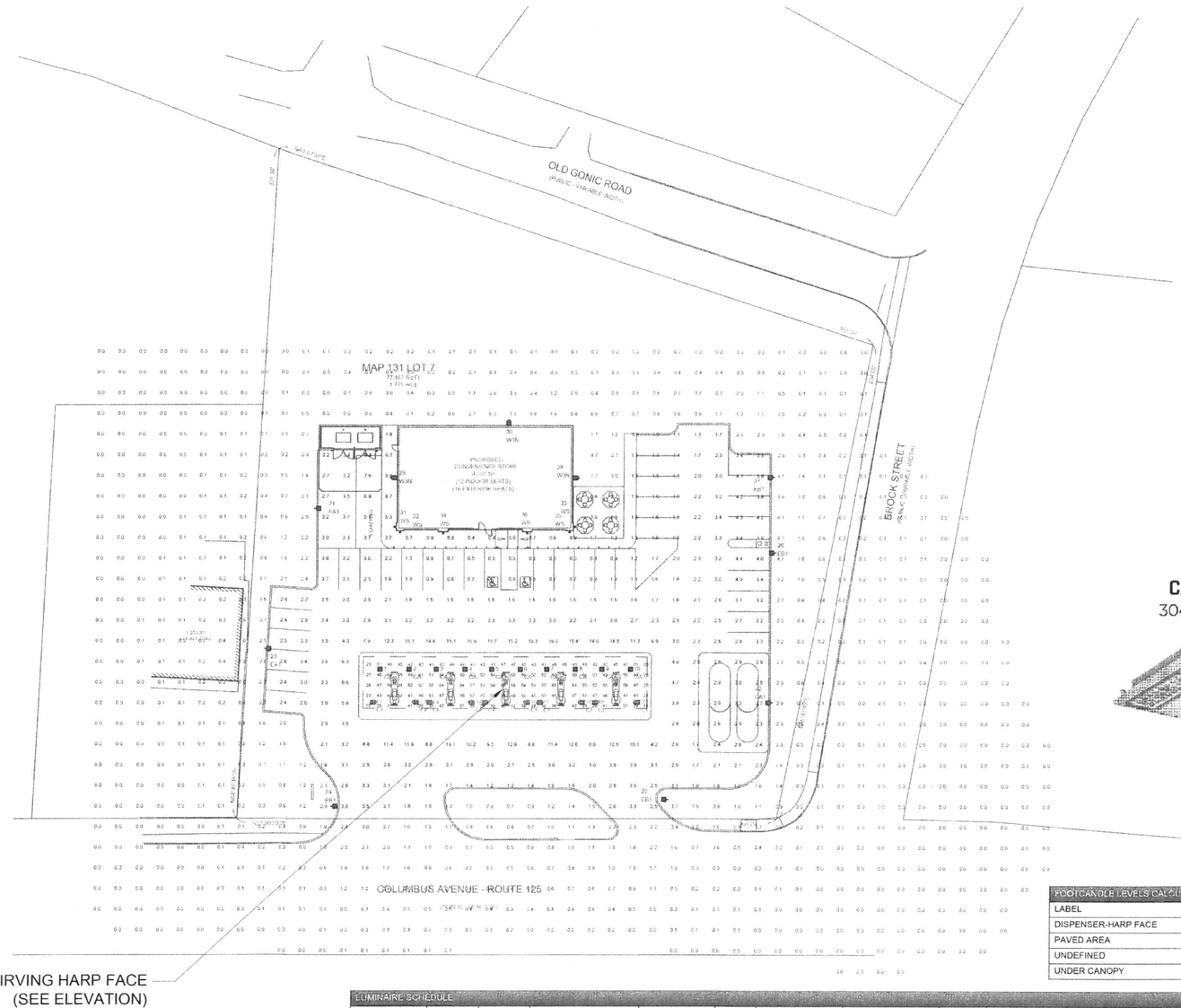
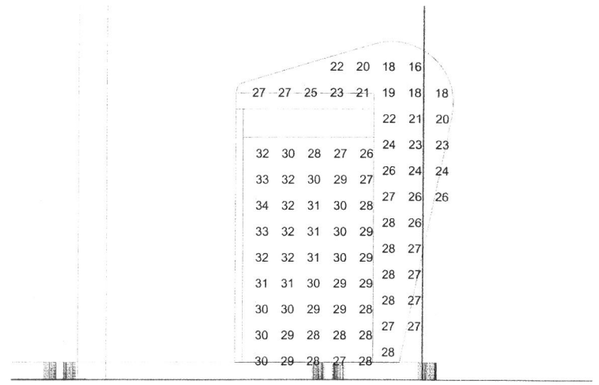
FRANK C. MONTEIRO No. 7152 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE

SCALE: AS SHOWN	DATE: FEBRUARY 4, 2020		DRAWING NO. 3988SIGN
DRAWN BY:	CHECKED BY:	PROJECT NO.	SHEET NO.
CCC	FCM	398816	1 OF 1

F:\Projects\CAD\3988\16\3988SIGN.dwg Layout1 6/09/20 2:30pm ccall

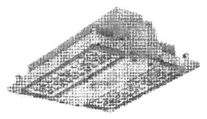
red leonard associates
5630 Bridgetown Rd, Ste 2 | Cincinnati, OH 45248 | 513-574-9500
www.redleonard.com



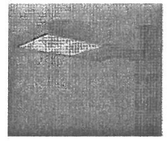


IRVING HARP FACE ELEVATION
SCALE: 1" = 2'

CANOPY
304 SERIES

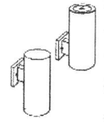


AREA
EATON-MCGRAW



WALL MOUNTED
EDGE SERIES

SCONCE
SOLERA



FOOTCANDLE LEVELS CALCULATED AT GRADE USING INITIAL LUMEN VALUES

LABEL	AVG	MAX	MIN	AVG/MIN	MAX/MIN
DISPENSER-HARP FACE	27.25	34	16	1.70	2.13
PAVED AREA	3.62	16.0	0.4	9.05	40.00
UNDEFINED	0.44	7.7	0.0	N.A.	N.A.
UNDER CANOPY	44.77	66	15	2.98	4.40

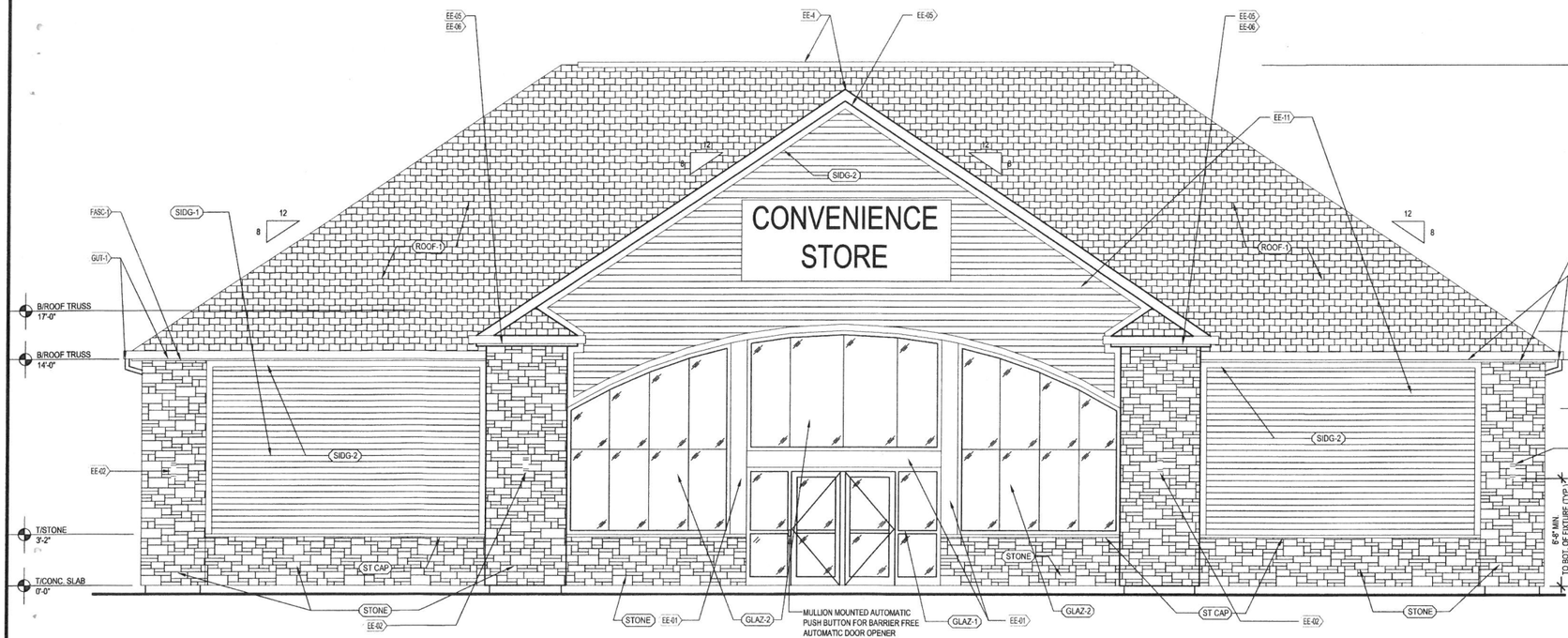
LUMINAIRE SCHEDULE

SYMBOL	QTY	LABEL	ARRANGEMENT	LUMENS	LLF	BUG RATING	WATTS/LUMINAIRE	TOTAL WATTS	MANUFACTURER	DESCRIPTION
	10	CA	SINGLE	13251	1.030	B3-U0-G1	134	1340	CREE, INC.	CAN-304-SL-RS-06-E-UL-WH-700-57K
	10	CF	SINGLE	12862	1.030	B2-U1-G1	141	1410	RUUD LIGHTING, INC., A CREE COMPANY	CAN-304-AF-RS-06-E-UL-WH-700
	3	EA1	SINGLE	12185	1.000	B2-U0-G2	113	339	EATON - McGRAW-EDISON (FORMER COOPER LIGHTING	GLEON-AF-02-LED-E1-T3-7050
	4	EB1	SINGLE	12252	1.000	B2-U0-G2	113	452	EATON - McGRAW-EDISON (FORMER COOPER LIGHTING	GLEON-AF-02-LED-E1-T4FT-7050
	2	W3N	SINGLE	5893	1.030	B2-U0-G2	68	204	CREE, INC.	SRC-EDG-3M-WM-04-E-UL-525-57K
	6	WS	SINGLE	819	1.000	B1-U3-G0	20.18	121.08		2SRBK-4-9W-LED-120V

SCALE	LAYOUT BY
1" = 30'	JSG
DWG SIZE	DATE
D	1/31/20

PROJECT NAME
IRVING OIL
ROCHESTER, NH
DRAWING NUMBER
RL-6553-S1

rla



A SOUTH ELEVATION
1/4" = 1'-0"

EXTERIOR ELEVATION NOTES:

EE-01 CLEAR ANODIZED BRAKE ALUMINUM COLUMN/BEAM COVER TO MATCH ALUMINUM FRAMING.

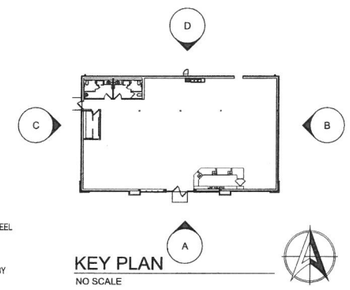
EE-02 EXTERIOR LIGHT FIXTURE - COORDINATE WITH ELECTRICAL DRAWINGS.

EE-03 EQUIPMENT PLATFORM GALV. STEEL ACCESS LADDER WITH GALV. STEEL SECURITY DOOR (PTD)

EE-04 RIDGE VENT, REFER TO DETAIL.

EE-05 6" PREFINISHED METAL COMMERCIAL GUTTER AND DOWNSPOUT SYSTEM
BASIS OF DESIGN: METAL-ERA: SEAL-TITE 6" INDUSTRIAL GUTTER (IG-2 VERSION) WITH LEAF GUARD (COLOR AS SELECTED BY OWNER FROM FULL RANGE).
- EXTEND BEHIND DRIP FLASHING - REFER TO DETAIL 1/A4.06
- DOWNSPOUTS (DS) TO BE CONNECTED TO UNDERGROUND DRAINAGE - SEE ROOF PLAN FOR GUTTER AND DOWNSPOUT LOCATIONS
- 4" DRAINAGE PIPE TO EXTEND 12" ABOVE SIDEWALK. DOWNSPOUTS TO EXTEND 4" INTO PIPE. PROVIDE TOP CAP (CUT OPENING TO SUIT). WRAP DRAINAGE PIPE AND CAP WITH STAINLESS STEEL AND SECURE TO SIDEWALK AS PER DETAIL 2/A4.09.
- COORDINATE WITH PLUMBING DRAWINGS.

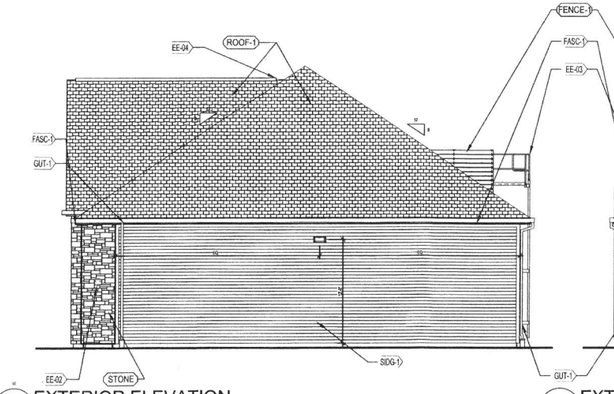
EE-06 2"x8" FASCIA BOARD WITH PREFINISHED METAL FLASHING, SEE SECTIONS, COLOR AS SELECTED BY OWNER FROM FULL RANGE..



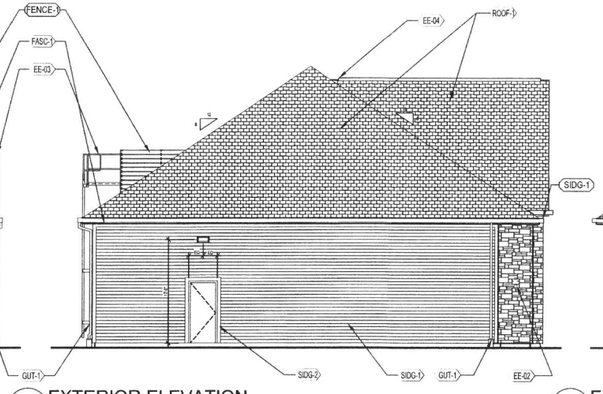
KEY PLAN
NO SCALE

NO:	MATERIAL:	NOTES:
FASC-1	MATERIAL: 2" X 8" FASCIA BOARD WITH PREFINISHED METAL FLASHING MANUFACTURER: TBD FASCIA: TBD COLOR: AS SELECTED BY OWNER FROM FULL RANGE	
FENCE-1	MATERIAL: ROOFTOP EQUIPMENT FENCE ENCLOSURE MANUFACTURER: TBD COLOR: TO MATCH SIDING COLOR	
GLZ-1	MATERIAL: ANODIZED ALUMINUM CURTAINWALL SYSTEM CURTAINWALL MANUFACTURER: KAWNEER CURTAINWALL SYSTEM: 1600 WALL SYSTEM 1 ALUMINUM COLOR: CLEAR ANODIZED	NOTES 1 THRU 5
GLZ-2	MATERIAL: ANODIZED ALUMINUM TWO SIDED STRUCT. GLAZING SYSTEM CURTAINWALL MANUFACTURER: KAWNEER CURTAINWALL SYSTEM: 1600 WALL SYSTEM 1 ALUMINUM COLOR: CLEAR ANODIZED	NOTES 1 THRU 5
GUT-1	MATERIAL: 6" PREFINISHED ALUMINUM INDUSTRIAL BOX GUTTER MANUFACTURER: TBD GUTTER COLOR: AS SELECTED BY OWNER FROM FULL RANGE DOWNSPOUT COLOR: AS SELECTED BY OWNER FROM FULL RANGE	
ROOF-1	MATERIAL: DIMENSIONAL LAMINATE ASPHALT ROOF SHINGLES MANUFACTURER: CERTAINTEED PATTERN: LANDMARK COLOR: GRANITE GREY	NOTE 6
ROOF-2	MATERIAL: MEMBRANE ROOFING SYSTEM MANUFACTURER: COORDINATE WITH ROOF PLAN COLOR: BLACK	
SIDG-1	MATERIAL: FACTORY FINISHED HORIZONTAL WOOD SIDING MANUFACTURER: MAIBEC EM+ STYLE: 1" X 6" RABBETTED BEVEL (TEXTURED FINISH) COLOR: IRVING BEIGE (L84769-258173-NG)	NOTE 6
	ALTERNATE MATERIAL: VINYL SIDING MANUFACTURER: GENTEK BUILDING PRODUCTS STYLE: SEQQUIA SELECT - DOUBLE 5" PROFILE COLOR: MONTEREY SAND	NOTE 6
SIDG-2	ALTERNATE MATERIAL: FACTORY FINISHED WOOD TRIM BOARD MANUFACTURER: MAIBEC EM+ SIZE: 2 X 5 (TEXTURED FINISH) COLOR: IRVING BEIGE (L84769-258173-NG)	NOTE 6
	MATERIAL: 5" WINDOW/DOOR SURROUND MANUFACTURER: GENTEK BUILDING PRODUCTS STYLE: 5" FACE COLOR: MONTEREY SAND	NOTE 6
STONE	MATERIAL: BEONSTONE PANELIZED STONE SIDING SYSTEM MANUFACTURER: PERMACON PATTERN: CLASSIC COLOR: CARBO GREY	NOTE 6
ST CAP	MATERIAL: STONE SILL CAP MANUFACTURER: PERMACON BEONSTONE PATTERN: TO BE DETERMINED COLOR: CLASSIC CARBO GREY	NOTE 6

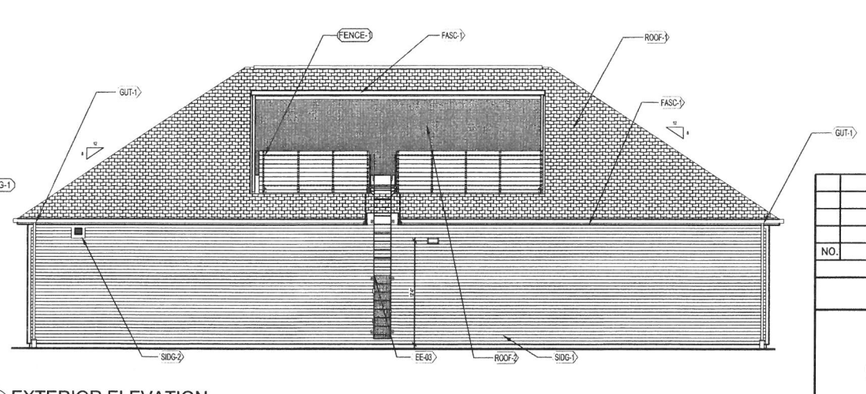
1. COORDINATE CURTAINWALL SYSTEM, GLAZING AND ENTRY DOOR WITH **WINDOW TYPES** AND **DOOR TYPES** ON SHEET A6.01.
2. ALL NON-SPECIFIED EXTERIOR FLASHING MATERIALS SHALL BE PREFINISHED ALUMINUM (MIN. .032" THICKNESS, UNLESS NOTED OTHERWISE) WITH HEMMED EDGES.
3. SHIM ALL CURTAINWALL FRAMING AND WINDOW SYSTEMS W/BACKER ROD & SEALANT (AS REQUIRED BY MFR.) AT ALL EDGES.
4. INSTALLER SHALL NOT ALLOW ALUMINUM CURTAINWALL, FLASHING, ETC. TO COME IN DIRECT CONTACT WITH DISSIMILIAR METALS.
5. INSTALLER SHALL COORDINATE FLASHING AND WEEPAGE OF ALL EXTERIOR GLAZING SYSTEMS WITH MFR'S. REQUIREMENTS.
6. COORDINATE UNDERLAYMENT REQUIREMENTS WITH WALL SECTIONS.
7. COORDINATE SNOW GUARD PLACEMENT WITH DETAIL 1/A3.01.



B EXTERIOR ELEVATION
1/8" = 1'-0"



C EXTERIOR ELEVATION
1/8" = 1'-0"



D EXTERIOR ELEVATION
1/8" = 1'-0"

NO. | DESCRIPTION | BY | DATE

REVISIONS

BUILDING ELEVATIONS

MAP 131 LOT 7
717 COLUMBUS AVENUE
ROCHESTER, NEW HAMPSHIRE
PREPARED FOR:
TROPIC STAR DEVELOPMENT, LLC
321D LAFAYETTE ROAD
HAMPTON, NH 03842

IRVING

STATE OF NEW HAMPSHIRE
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6/9/20

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SCALE: 1"=20'	DATE: FEBRUARY 4, 2020		DRAWING NO. 398ELEV
DRAWN BY:	CHECKED BY:	PROJECT NO.	SHEET NO.
CCC	FCM	398816	1 OF 1

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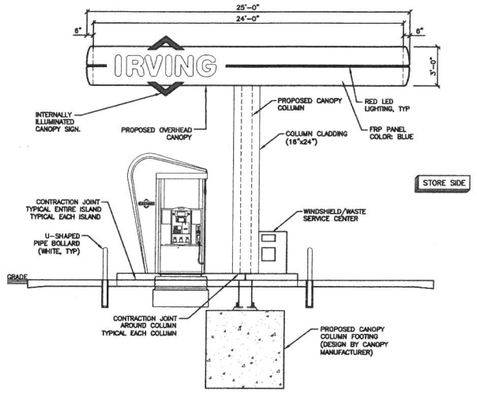
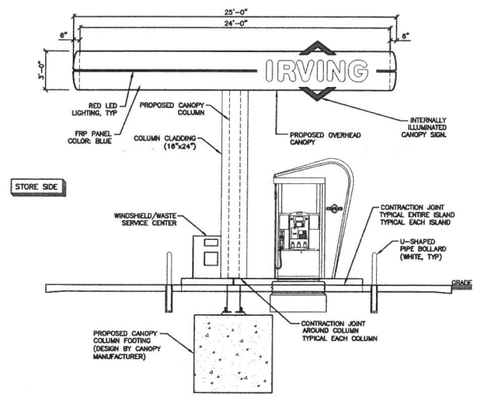
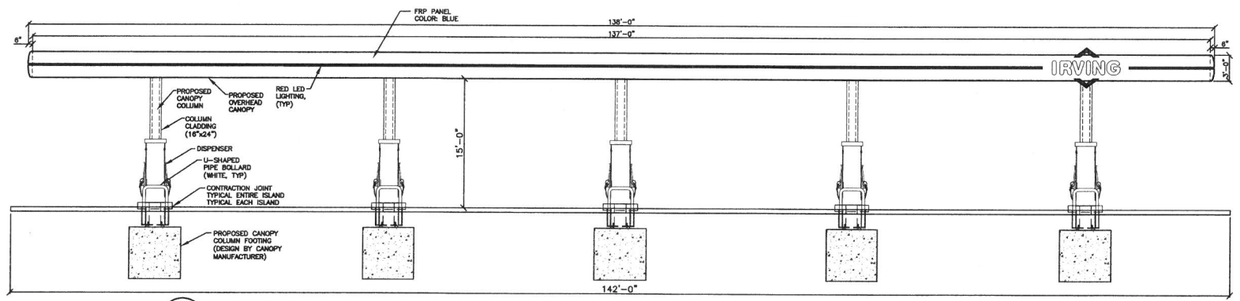


A AUTO FUELING CANOPY NORTH ELEVATION
3/16" = 1'-0"

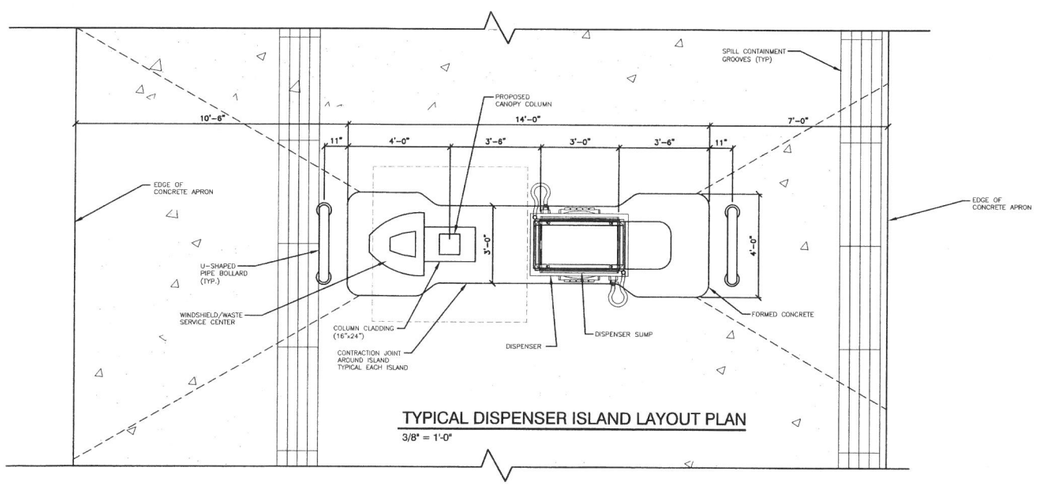


B AUTO FUELING CANOPY SOUTH ELEVATION
3/16" = 1'-0"



1 AUTO FUELING CANOPY FRONT ELEVATION
1/8" = 1'-0"

NOTE: NO CANOPY ILLUMINATION SHALL BE PROVIDED ON THE REAR (WEST) ELEVATION



TYPICAL DISPENSER ISLAND LAYOUT PLAN
3/8" = 1'-0"

NO.	DESCRIPTION	BY	DATE
1	REVISE PER TRG COMMENTS	PWM	6/8/20

REVISIONS

CANOPY ELEVATIONS

MAP 131 LOT 7
717 COLUMBUS AVENUE
ROCHESTER, NEW HAMPSHIRE
PREPARED FOR:
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HAMPTON, NH 03842

IRVING

STATE OF NEW HAMPSHIRE
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7/6/20

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SCALE: 1"=20'	DATE: FEBRUARY 4, 2020		DRAWING NO. 3988CANOPY
DRAWN BY:	CHECKED BY:	PROJECT NO.	SHEET NO.
CCC	FCM	398816	1 OF 1

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