P0595-015
January 25, 2023

Mr. Peter Britz, Director of Planning and Sustainability
City of Portsmouth Planning Department
1 Junkins Avenue
Portsmouth, New Hampshire 03801

Re: **Site Review Permit & Subdivision Applications**
Proposed Advanced Manufacturing Facility

Dear Peter:

On behalf of Aviation Avenue Group, LLC, we are pleased to submit the following information to support a request to the Planning Board for a recommendation for approval to the Pease Development Authority (PDA) for Site Plan Review and Subdivision for a proposed Advanced Manufacturing Facility on a previously developed site located at 80 Rochester Avenue:

- One (1) copy of TAC Comment Response Report, dated January 25, 2023;
- One (1) copy of the PDA Application for Subdivision, dated January 25, 2023;
- One (1) full size & one (1) half size copy of the Site Plan Set, dated January 25, 2023;
- Three (3) full size & one (1) half size copy of the Subdivision Plan, dated January 25, 2023;
- One (1) copy of the Truck Turning Exhibits, dated January 25, 2023;
- One (1) copy of the Drainage Analysis, dated January 25, 2023;
- One (1) copy of the Signed Eversource Will Serve Letter, dated December 6, 2022;
- One (1) copy of correspondence with Unitil; January 5, 2023

The proposed project is located at 80 Rochester Avenue which is identified as Map 308 Lot 1 on the City of Portsmouth Tax Maps. The proposed project is for the construction of a ±209,750 SF advanced manufacturing building including ±18,145 SF of office space, two (2) parking areas, two (2) loading dock areas, minor realignment of a portion of Rochester Avenue, and associated site improvements consisting of underground utilities, landscaping, lighting, and a stormwater management system.

There is approximately 196,665 SF of existing impervious area that is currently untreated before entering the municipal drainage system. The proposed stormwater management system has been designed to provide treatment for the existing impervious surface that is currently untreated and for ±161,130 SF of additional impervious that results from the proposed project as required by the PDA Site Plan Regulations.

On October 20, 2022, the PDA Board granted conceptual approval for the proposed project. The project was granted a variance from the Zoning Board of Adjustment for the front yard setback requirements at their meeting on November 15, 2022.

We respectfully request to be placed on the Technical Advisory Committee (TAC) meeting agenda for the February 7, 2023, meeting. If you have any questions or need any additional information, please contact Patrick Crimmins by phone at (603) 433-8818 or by email at pmcrimmins@tighebond.com.

Sincerely,
TIGHE & BOND, INC.

Patrick M. Crimmins, PE
Vice President

Neil A. Hansen, PE
Project Manager

Copy: Aviation Avenue Group, LLC (via email)
Pease Development Authority

J:\P\P0595 Pro Con General Proposals\P0595-015 100 NH Avenue\Report_Evaluation\Applications\City of Portsmouth\TAC\20230125_TAC Resubmission\TAC-Resubmission Cover Letter.docx

PROPOSED ADVANCED MANUFACTURING FACILITY - TAC COMMENTS (12/30/2022) RESPONSE

80 Rochester Avenue (100 New Hampshire Avenue)
Portsmouth, New Hampshire
January 25, 2023

Prepared by: CML
Project # P0595-015

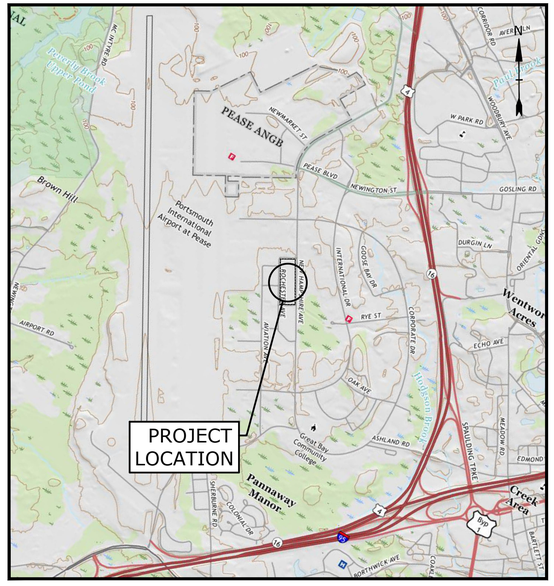
	Comment	Response	Corresponding Plan Sheet #
1	Please confirm this project includes a lot line adjustment and not the creation of a new parcel.	The project is no longer proposing the relocation of the ROW line on Rochester Avenue. However, a subdivision application will still be required in order to create a new lease area over the parcel with the PDA.	PROPOSED SUBDIVISION PLAN (1 OF 1) & Enclosed Subdivision Application
2	Rochester Ave pavement is too far deteriorated for the mill and pave process. The road needs reclamation, fortified and new pavement. Stratham and Newfields Streets need to be reconstructed as well.	The plans have been updated to call for Rochester Avenue to be reclaimed and re-paved, and to mill and overlay Newfields & Stratham Street.	C-102
3	The new lease line may extend over the street drainage system and sidewalk. A license may be required.	See comment 1. Also a note has been added to the plans stating "Location of existing drain line to be confirmed and drainage license area within the project site to be determined prior to construction."	PROPOSED SUBDIVISION PLAN (1 OF 1)
4	PCB 18 should tie into the street drainage, not the site drainage	The proposed grading in Rochester Avenue the entrances to each of the loading areas have been revised to make highpoints at the center of the drives and provide six (6) new catch basins within Rochester Avenue. In addition, the drainage analysis was updated to identify the overall reduction of impervious area within the Rochester Avenue Right of Way.	C-104 & Drainage Analysis
5	DMH 1925 is likely not large enough to accept such a large new core. Please confirm this design will work by investigating the structure with Stormwater division from DPW.	Based on Tighe & Bonds inspection of DMH 1925, which is a vault structure and not a typical circular manhole, the structure should be capable of accepting the increased opening for a new 48" HDPE vs. the existing 36" RCP pipe at this location.	C-103.2
6	Proposed sidewalk should be at least 5.5’ wide, preferably 6’ wide.	Sidewalk widths have been increased to 5.5'	C-102
7	Third party review of stormwater design. Is location of pretreatment outlet structure after detention basin appropriate? Is treatment prior to detention basin more appropriate?	The applicant has executed a thrid party review agreement. The Jellyfish treatment unit post detention is the same configuration we have used numerous times in Portsmouth on projects that have also received City and NHDES approval. Per our prior approvals with NHDES using this configuration, the WQF is calculated to determine the sizing of the treatment unit rather than the 1" WQ Storm as would be done upstream.	
8	State sizes of domestic water and fire services.	The sizes for the domestic water and fire services have been called out on the plans.	C-104
9	Provide flow tests to show the existing water main can supply adequate water to proposed building.	Flow testing is scheduled to be completed prior to construction.	
10	Provide vehicle speed data for New Hampshire Avenue to confirm adequacy of sight lines at driveways and to determine need for additional safety measures at proposed crosswalks.	The project location on NH Ave is located near the center of a mile long stretch of road the is very flat and straight. Proposed crosswalks were requested by the PDA and have the same extended sight distance as the driveways. PDA is also currently having the traffic study reviewed by a third party who will likely also look at this aspect.	
11	Provide pedestrian counts and vehicle turning movement counts at intersections of New Hampshire Avenue with Newfields and Stratham, to document need for crosswalks across New Hampshire Ave.	Crosswalks were requested by the PDA to connect the site to the existing pedestrian infrastructure already in place	
12	A third party peer review of the traffic study should be done.	PDA is currently having the traffic study reviewed by a third party.	

PROPOSED ADVANCED MANUFACTURING FACILITY

100 NEW HAMPSHIRE AVENUE
PORTSMOUTH, NEW HAMPSHIRE
PERMIT DRAWINGS

JANUARY 25, 2023

LIST OF DRAWINGS		
SHEET NO.	SHEET TITLE	LAST REVISED
	COVER SHEET	01/25/2023
1 OF 8	EXISTING CONDITIONS PLAN	09/21/2022
2 OF 8	EXISTING CONDITIONS PLAN	09/21/2022
7 OF 8	EXISTING CONDITIONS PLAN	09/21/2022
8 OF 8	EXISTING CONDITIONS PLAN	09/21/2022
C-101	OVERALL EXISTING CONDITIONS / DEMOLITION PLAN	01/25/2023
C-101.1	EXISTING CONDITIONS / DEMOLITION PLAN	01/25/2023
C-101.2	EXISTING CONDITIONS / DEMOLITION PLAN	01/25/2023
C-102	OVERALL SITE PLAN	01/25/2023
C-102.1	SITE PLAN	01/25/2023
C-102.2	SITE PLAN	01/25/2023
C-103	OVERALL GRADING, DRAINAGE & EROSION CONTROL PLAN	01/25/2023
C-103.1	GRADING, DRAINAGE & EROSION CONTROL PLAN	01/25/2023
C-103.2	GRADING, DRAINAGE & EROSION CONTROL PLAN	01/25/2023
C-104	UTILITY PLAN	01/25/2023
C-105	OVERALL LANDSCAPE PLAN	01/25/2023
C-105.1	LANDSCAPE PLAN	01/25/2023
C-105.2	LANDSCAPE PLAN	01/25/2023
C-501	EROSION CONTROL NOTES & DETAILS SHEET	01/25/2023
C-502	DETAILS SHEET	01/25/2023
C-503	DETAILS SHEET	01/25/2023
C-504	DETAILS SHEET	01/25/2023
C-505	DETAILS SHEET	01/25/2023
C-506	DETAILS SHEET	01/25/2023
A1	PROPOSED EXTERIOR ELEVATIONS	12/12/2022
1 OF 1	PHOTOMETRICS ALT 2	12/16/2022



LOCATION MAP
SCALE: 1" = 2,000'

CONSTRUCTION NOTES:
1. THE CONTRACTOR SHALL NOT RELY ON SCALED DIMENSIONS AND SHALL CONTACT THE ENGINEER FOR CLARIFICATION IF A REQUIRED DIMENSION IS NOT PROVIDED ON THE PLANS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION MEANS AND METHODS, AND FOR SITE CONDITIONS THROUGHOUT CONSTRUCTION. NEITHER THE PLANS NOR THE SEAL OF THE ENGINEER AFFIXED HEREON EXTEND TO OR INCLUDE SYSTEMS REQUIRED FOR THE SAFETY OF THE CONTRACTOR, THEIR EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING AND IMPLEMENTING SAFETY PROCEDURES AND SYSTEMS AS REQUIRED BY THE UNITED STATES OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), AND ANY STATE OR LOCAL SAFETY REGULATIONS.
3. TIGHE & BOND. ASSUMES NO RESPONSIBILITY FOR ANY ISSUES LEGAL OR OTHERWISE, RESULTING FROM CHANGES MADE TO THESE DRAWINGS WITHOUT WRITTEN AUTHORIZATION OF TIGHE & BOND.

PREPARED BY:
Tighe&Bond
177 Corporate Drive
Portsmouth New Hampshire, 03801
603.433.8818

STATE OF NEW HAMPSHIRE – PATRICK CRIMMINS No. 12378 LICENSED PROFESSIONAL ENGINEER – 1/25/23

STATE OF NEW HAMPSHIRE – NEIL A. HANSEN No. 15227 LICENSED PROFESSIONAL ENGINEER – 1/25/23

LESSOR:
Pease Development Authority
55 International Drive
Portsmouth, NH 03801
603.433.6088

SURVEY CONSULTANT:
DOUCET SURVEY INC
Serving Your Professional Surveying & Mapping Needs
102 Kent Place, Newmarket, NH 03857 (603) 659-6560
2 Commerce Drive (Suite 202) Bedford, NH 03110 (603) 614-4060
10 Storer Street (Riverview Suite) Kennebunk, ME (207) 502-7005
http://www.doucetsurvey.com

APPLICANT:
Aviation Avenue Group, LLC
210 Commerce Way, Suite 300
Portsmouth New Hampshire, 03801
603.427.5500

811 DigSafe MA-ME-NH-RI-VT

COMPLETE SET 26 SHEETS

Last Save Date: January 25, 2023 8:35 AM By: CML
Plot Date: Wednesday, January 25, 2023 Plotted By: Craig M. Langton
T&B File Location: J:\P\P0595 Pro Con General Proposals\P0595-015 100 NH Avenue\Drawings_Figures\AutoCAD\Sheet\P0595-015_CS.dwg Layout Tab: CS

NOTES:

1. REFERENCE: PEASE HANGAR 227 AREA
(ENCOMPASSING PARTS OF NEW HAMPSHIRE AVE, AVIATION AVE, STRATHAM ST, ROCHESTER AVE, NEWFIELD ST, LEE STREET, & FLIGHTLINE ROAD IN PORTSMOUTH, NH)
D.S.I. PROJECT NO. 7239

2. OWNER OF RECORD: PEASE DEVELOPMENT AUTHORITY (ALL BUT ONE PARCEL)
55 INTERNATIONAL DRIVE
PORTSMOUTH NH 03801

NEW ENGLAND TELEGRAPH & TELEPHONE (MAP 308 LOT 6 ONLY)
NKA FAIRPOINT COMMUNICATIONS
770 ELM STREET
MANCHESTER, NH 03101

3. FIELD SURVEY PERFORMED BY DOUCET SURVEY LLC STAFF DURING JANUARY & FEBRUARY 2022 USING A TRIMBLE S7 TOTAL STATION AND A TRIMBLE R10 SURVEY GRADE GPS WITH A TRIMBLE TSC3 DATA COLLECTOR AND A SOKKIA B21 AUTO LEVEL. TRAVERSE ADJUSTMENT BASED ON LEAST SQUARE ANALYSIS.

4. HORIZONTAL DATUM BASED ON NAD83(2011) NEW HAMPSHIRE STATE PLANE COORDINATE ZONE (2800) DERIVED FROM REDUNDANT GPS OBSERVATIONS UTILIZING THE KEYNET GPS VRS NETWORK INCLUDING OBSERVATIONS ON PRIMARY AIRPORT CONTROL STATION PSM C AND PSM D.

5. VERTICAL DATUM IS BASED PRIMARY AIRPORT CONTROL STATION PSM C (NAVD88 ELEVATION = 78.70 AS PUBLISHED BY NATIONAL GEODETIC SURVEY).

6. JURISDICTIONAL WETLANDS DELINEATED BY TIGHE & BOND DURING DECEMBER 2021 IN ACCORDING TO THE:
   - US ARMY CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL, TECHNICAL REPORT Y-87-1 (JANUARY, 1987).
   - REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION (2012).
   - NATIONAL LIST OF PLANT SPECIES THAT OCCUR IN WETLANDS: NORTHEAST (REGION 1). U.S. FISH AND WILDLIFE SERVICE (2013).
   - CODE OF ADMINISTRATIVE RULES. WETLANDS BOARD, STATE OF NEW HAMPSHIRE (CURRENT).
   - FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, VERSION 8.0, 2016 AND (FOR DISTURBED SITES) FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VERSION 4. NEHSTC (MAY 2017).

7. PROPER FIELD PROCEDURES WERE FOLLOWED IN ORDER TO GENERATE CONTOURS AT 2' INTERVALS. ANY MODIFICATION OF THIS INTERVAL WILL DIMINISH THE INTEGRITY OF THE DATA, AND DOUCET SURVEY. WILL NOT BE RESPONSIBLE FOR ANY SUCH ALTERATION PERFORMED BY THE USER.

8. UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON OBSERVED PHYSICAL EVIDENCE AND PAINT MARKS FOUND ON-SITE.

9. THE ACCURACY OF MEASURED UTILITY INVERTS AND PIPE SIZES/TYPES IS SUBJECT TO NUMEROUS FIELD CONDITIONS, INCLUDING; THE ABILITY TO MAKE VISUAL OBSERVATIONS, DIRECT ACCESS TO THE VARIOUS ELEMENTS, MANHOLE CONFIGURATION, ETC. SEVERAL STRUCTURES SHOWN HEREON WERE INACCESSIBLE FOR INVERT MEASUREMENTS DUE TO WINTER CONDITIONS.

10. DUE TO THE COMPLEXITY OF RESEARCHING ROAD RECORDS AS A RESULT OF INCOMPLETE, UNORGANIZED, INCONCLUSIVE, OBLITERATED, OR LOST DOCUMENTS, THERE IS AN INHERENT UNCERTAINTY INVOLVED WHEN ATTEMPTING TO DETERMINE THE LOCATION AND WIDTH OF A ROADWAY RIGHT OF WAY. THE EXTENT OF (THE ROAD(S)) AS DEPICTED HEREON IS/ARE BASED ON RESEARCH CONDUCTED AT THE PEASE DEVELOPMENT AUTHORITY (PDA), NHDOT, PORTSMOUTH ENGINEERING DEPARTMENT, AND ROCKINGHAM COUNTY REGISTRY OF DEEDS. AN OFFICIAL AT PDA ADVISED DOUCET SURVEY THAT THEY HAVE PREVIOUSLY SEARCHED AND BELIEVE THAT THERE WERE NEVER ANY LAYOUT PLANS DEVELOPED FOR THE RIGHT-OF-WAYS AT PEASE. ROAD LAYOUTS FOR THE STREETS SHOWN HEREON WERE ALSO NOT FOUND AT NHDOT PROJECT VIEWER OR AT THE PORTSMOUTH CITY ENGINEERING OFFICES.

11. ALL UNDERGROUND UTILITIES (ELECTRIC, GAS, TEL. WATER, SEWER DRAIN SERVICES) ARE SHOWN IN SCHEMATIC FASHION, THEIR LOCATIONS ARE NOT PRECISE OR NECESSARILY ACCURATE. NO WORK WHATSOEVER SHALL BE UNDERTAKEN USING THIS PLAN TO LOCATE THE ABOVE SERVICES. CONSULT WITH THE PROPER AUTHORITIES CONCERNED WITH THE SUBJECT SERVICE LOCATIONS FOR INFORMATION REGARDING SUCH. CALL DIG-SAFE AT 1-888-DIG-SAFE.

12. AERIAL TOPOGRAPHY WAS CONDUCTED BY EASTERN TOPOGRAPHICS FROM IMAGES TAKEN DURING DECEMBER 2021 WITH A PHOTO SCALE OF 40 FEET. AERIAL MAPPING CONTOURS AND OBJECTS SHOWN WITHIN OBSCURED AREAS ARE APPROXIMATE AND SHOULD BE VERIFIED BEFORE USE FOR DESIGN & CONSTRUCTION PURPOSES.

13. THIS FIELD SURVEY WAS PERFORMED IN WINTER CONDITIONS WITH SNOW AND ICE COVER ON THE GROUND. A SITE CHECK IS RECOMMENDED IN THE SPRING TO ENSURE THE COMPLETENESS/ACCURACY OF THE INFORMATION SHOWN HEREON.

14. THIS PLAN WAS PREPARED FROM RECORD RESEARCH, OTHER MAPS, LIMITED FIELD MEASUREMENTS AND OTHER SOURCES. IT IS NOT TO BE CONSTRUED AS A PROPERTY / BOUNDARY SURVEY FOR THE COMPLETE SET OF TAX MAP AND LOTS SHOWN HEREON, AND IS SUBJECT TO SUCH FACTS AS SAID SURVEYS MAY DISCLOSE. THIS PLAN DOES, HOWEVER, ILLSTRATE THE BOUNDARIES OF THE FOLLOWING TAX MAP AND LOT NUMBERS PER THE REFERENCE PLANS INDICATED BELOW AND RECORD MONUMENTS RECOVERED BY THIS SURVEY:
    A. MAP 307 LOT 1 (PER REF. PLAN 3)
    B. MAP 307 LOT 2 (PER REF. PLAN 7)
    C. MAP 306 LOT 4 (PER REF. PLAN 12)

15. THE LOCATIONS OF THE VARIOUS RESTRICTED ZONES CALLED FOR IN REFERENCE PLANS 8, 9, 10, 12, AND 14 ARE SHOWN HEREON BASED ON COORDINATE VALUES PROVIDED IN THOSE PLANS AND/OR FEATURES SHOWN IN THOSE PLANS (E.G. MONITORING WELLS) THAT WERE LOCATED DURING THIS SURVEY.

REFERENCE PLANS:

1. "SUBLEASE BOUNDARY PLAN FOR PEASE DEVELOPMENT AUTHORITY – BUILDINGS 115 AND 116 – 31 ROCHESTER AVENUE – PEASE INTERNATIONAL TRADEPORT – PORTSMOUTH, N.H.: DATED NOV. 6, 1995 AND LAST REVISED (REV-2) ON 03/03/97 BY RICHARD P. MILLETTE AND ASSOCIATES.

2. "SUBDIVISION PLAN FOR 5, 7, 19, AND 21 HAMPTON STREET – PORTSMOUTH, NH – LAND OF PEASE DEVELOPMENT AUTHORITY LEASED TO EXECUTIVE AIRDOCK, LLC (A PORTION OF TAX MAP 310, LOT 0) HAMPTON ST. & AVIATION AVE. PORTSMOUTH, NEW HAMPSHIRE" DATED JULY 1, 2021 AND REVISED (REV-1) NOV 30, 2021 BY DOUCET SURVEY LLC

3. "ALTA/NSPS LAND TITLE SURVEY FOR CINTHESYS REAL ESTATE MANAGEMENT LLC (LESSEE) C/O THE KANE COMPANY AND PEASE DEVELOPMENT AUTHORITY (LESSOR) OF TAX MAP 307, LOT 1 – 68 NEW HAMPSHIRE AVE. PORTSMOUTH, NEW HAMPSHIRE" DATED DECEMBER 21, 2021 BY DOUCET SURVEY LLC.

4. "APPENDIX VI MUNICIPAL SERVICES AGREEMENT BETWEEN CITY OF PORTSMOUTH – TOWN OF NEWINGTON– AND PEASE DEVELOPMENT AUTHORITY EFFECTIVE AS OF JULY 1, 1998".

5. "SUBDIVISION PLAN 68 NEW HAMPSHIRE AVENUE"FOR LONDAVIA, INC. DATED 29-SEPT-1998 BY KIMBALL CHASE. R.C.R.D. PLAN 26777.

6. "SUBDIVISION PLAN – AIR CARGO FACILITY 139 FLIGHTLINE ROAD" DATED 20-FEB-1998 AND REVISED (REV-1) 26-OCT-98 BY KIMBALL CHASE. R.C.R.D. PLAN 26778.

7. "SUBDIVISON PLAN FOR LAND TO BE LEASED TO PAN-AM 14 AVIATION AVE. PEASE INTERNATIONAL TRADEPORT PORTSMOUTH, NH" LAST REVISED (REV-3) ON AUG. 26, 1999 BY EMANUEL ENGINEERING, INC. R.C.R.D. PLAN 27540.

8. "EXCEPTED SUBPARCEL ZONE 3 PEASE AIR FORCE BASE PORTSMOUTH AND NEWINGTON, NEW HAMPSHIRE PREPARED FOR MWH AMERICAS MALVERN, PA" DATED OCTOBER 22, 2002 AND LAST REVISED (REV-3) 10/22-03 BY TFM. R.C.R.D. PLAN 31494.

9. "PLAN OF GROUNDWATER MANAGEMENT ZONE – ZONE 3 – PEASE AIR FORCE BASE PORTSMOUTH AND NEWINGTON, NEW HAMPSHIRE PREPARED FOR MWH AMERICAS MALVERN, PA" DATED JUNE 4, 2002 AND LAST REVISED (REV-2) 6/27/02 BY TFM. R.C.R.D. PLAN 31503.

10. "PLAN OF USE RESTRICTION ZONE SITE 32 PEASE AIR FORCE BASE PORTSMOUTH, NEW HAMPSHIRE PREPARED FOR MWH AMERICAS MALVERN, PA" DATED JULY 11, 2002 AND REVISED (REV-1) 7/18/02 BY TFM. R.C.R.D. PLAN 31506.

11. "PLAN OF USE RESTRICTION ZONE SITE 81 PEASE AIR FORCE BASE PORTSMOUTH, NEW HAMPSHIRE PREPARED FOR MWH AMERICAS MALVERN, PA" DATED JUNE 10, 2005 BY TFM. R.C.R.D. PLAN 33301.

12. "PLAN OF USE RESTRICTION ZONE SITE 72 – BASE MOTOR POOL – PEASE AIR FORCE BASE PORTSMOUTH, NEW HAMPSHIRE PREPARED FOR MWH AMERICAS MALVERN, PA" DATED JUNE 10, 2005 BY TFM. R.C.R.D. PLAN 33302.

13. "SUBDIVISION PLAN DEPICTING PORTSMOUTH TAX MAP 306 LOT 3" DATED AUGUST 1, 2005 AND LAST REVISED (REV-2) SAME DATE AUGUST 1, 2005 BY ALTUS ENGINEERING. R.C.R.D. PLAN 33592.

14. "USE RESTRICTION ZONE – ZONE 3 – PEASE AIR FORCE BASE PORTSMOUTH AND NEWINGTON, NEW HAMPSHIRE PREPARED FOR MWH AMERICAS MALVERN, PA" DATED JUNE 10, 2005 AND REVISED (REV-1) JUNE 17, 2005 BY TFM. R.C.R.D. PLAN 33593.

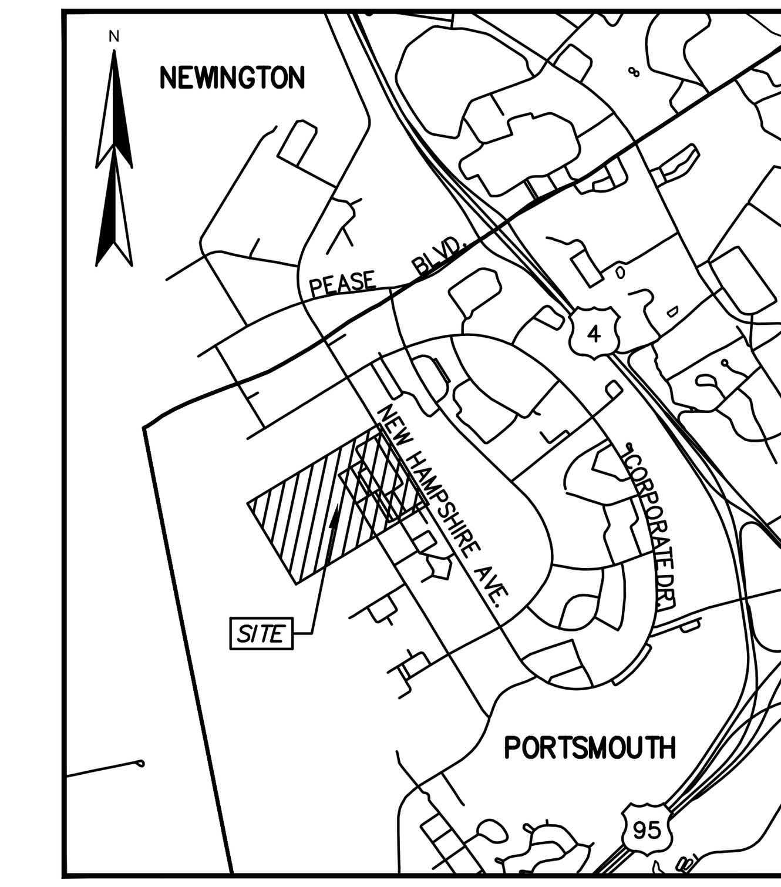
15. "SUBDIVISION PLAN FOR 75 NEW HAMPSHIRE LLC – 75 NEW HAMPSHIRE AVENUE – 50 INTERNATIONAL DRIVE & 80 INTERNATIONAL DRIVE (TAX MAP 306, LOTS 1, 2, 4 & 5) PEASE INTERNATIONAL TRADEPORT ROCKINGHAM COUNTY PORTSMOUTH, NEW HAMPSHIRE" DATED AUG 14, 2007 AND LAST REVISED (REV-4) 10/15/07 BY DOUCET SURVEY INC. R.C.R.D. PLAN 35260.

16. "PLAN FOR NEW HAMPSHIRE AIR NATIONAL GUARD PEASE BLVD, AIRLINE AVE & NEW HAMSHIRE AVE PEASE INTERNATIONAL TRADEPORT, NEWINGTON ROCKINGHAM COUNTY, NH" DATED 7-DEC-2009 AND LAST REVISED 1/21/11 BY EASTERLY SURVEYING, INC.

17. "PROPOSED 4 STORY OFFICE BUILDING 100 NEW HAMPSHIRE AVENUE PORTSMOUTH, NH" DATED NOVEMBER 16, 2018 AND LAST REVISED 12/04/18 BY HOYLE, TANNER & ASSOCIATES.

FILE NAME: C:\Users\whitney\AppData\Local\Temp\AcPublish_7172\7239A (REV 1) 2022-09-21.dwg LAYOUT NAME: COVER PLOTTED: Wednesday, September 21, 2022 – 11:20am

KEY MAP



LOCATION MAP (n.t.s.)

300 0 300 600
SCALE: 1 INCH = 300 FT.

EXISTING CONDITIONS PLAN
FOR
TIGHE & BOND
OF
PEASE HANGAR 227 AREA
PORTIONS OF AVIATION AVENUE,
FLIGHTLINE ROAD, LEE STREET,
NEWFIELDS STREET,
NEW HAMPSHIRE AVENUE
ROCHESTER AVENUE
AND STRATHAM STREET
PORTSMOUTH, NEW HAMPSHIRE

LEGEND

- LOT LINE
- APPROXIMATE LOT LINE
- APPROXIMATE ABUTTERS LOT LINE
- EXISTING EASEMENT LINE
- APPROXIMATE RIGHT-OF-WAY LINE
- CHAIN LINK FENCE
- FENCE
- FENCE OBSCURED
- OHW — OVERHEAD WIRE
- SS — SEWER LINE
- SD — DRAIN LINE
- G — GAS LINE
- W — WATER LINE
- 100 — MAJOR CONTOUR LINE
- 98 — MINOR CONTOUR LINE
- 100 — LIDAR MAJOR CONTOUR LINE
- 98 — LIDAR MINOR CONTOUR LINE
- TREE LINE
- SHRUB LINE
- EDGE OF WETLAND
- EDGE OF WETLAND (PER CLIENT)
- EDGE OF WATER
- WATERCOURSE
- WETLAND AREA
- CONCRETE

- MEDIUM LONE TREE
- SMALL LONE TREE
- UTILITY COVER
- UTILITY COVER
- FIRE HYDRANT
- WV WATER GATE VALVE
- GV GAS GATE VALVE
- VP VENT PIPE
- E ELECTRIC BOX
- TB TELEPHONE BOX
- DRAIN
- CATCH BASIN
- D DRAIN MANHOLE
- F.E.S FLARED END SECTION
- M MANHOLE
- E ELECTRIC MANHOLE
- T TELEPHONE MANHOLE
- S SEWER MANHOLE
- CO CLEANOUT
- FLAG POLE
- MONITORING WELL LOCATION
- ACCESSIBLE PARKING SPACE

- RIP RAP
- RETAINING WALL
- DRIVEWAY
- DRIVEWAY OBSCURED
- ASPHALT TAXIWAY
- CONCRETE TAXIWAY
- CURB BOTTOM
- CURB BACK
- PIPELINES
- UTILITY POLE
- UTILITY POLE & GUY WIRE
- UTILITY POLE W/LIGHT
- UTILITY POLE OBSCURED
- LIGHT POLE
- SIGN
- SIGN (TWO POSTS)
- BOUND FOUND
- IRON PIPE/ROD FOUND
- POST
- POST
- BOLLARD
- LOCATED OBJECT

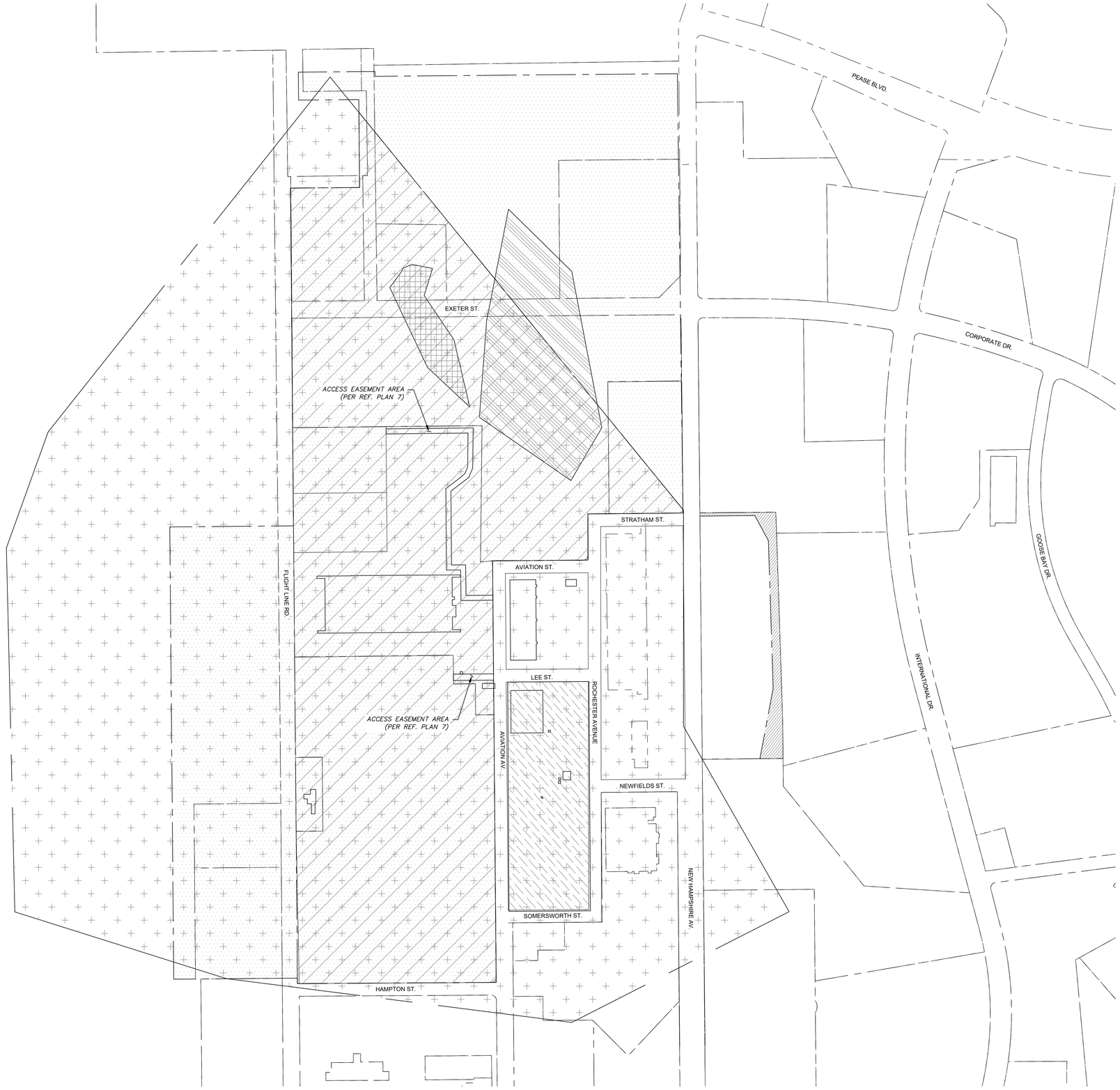
×100.0	SPOT GRADE
TYP.	TYPICAL
BND. FND.	BOUND FOUND
I.P.F.	IRON PIPE FOUND
CONC.	CONCRETE
GRAN.	GRANITE
HDWL	HEADWALL
SGC	SLOPED GRANITE CURB
"NP"	NO PARKING SIGN
"NT"	NO TRESPASSING SIGN
"NTT"	NO THRU TRAFFIC SIGN
ACP	ASBESTOS CEMENT PIPE
CIP	CAST IRON PIPE
CMP	CORRUGATED METAL PIPE
RCP	REINFORCED CONCRETE PIPE
HDPE	HIGH DENSITY POLYETHYLENE PIPE
PVC	POLYVINYL CHLORIDE PIPE
UNK	UNKNOWN
VCP	VITREOUS CLAY PIPE
TOP	TOP OF PIPE
NM	NOT MEASURED

NO.	DATE	DESCRIPTION	BY
1	09/21/22	UPDATED DMH 1925 OUTLET SIZE	W.D.C.

DRAWN BY: W.D.C.	DATE: FEBRUARY 2022
CHECKED BY: M.J.C.	DRAWING NO. 7239A
JOB NO. 7239	SHEET 1 OF 8

DOUCET® SURVEY LLC

Serving Your Professional Surveying & Mapping Needs
102 Kent Place, Newmarket, NH 03857 (603) 659-6560
2 Commerce Drive (Suite 202) Bedford, NH 03110 (603) 614-4060
10 Storer Street (Riverview Suite) Kennebunk, ME (207) 502-7005
http://www.doucetsurvey.com



LEGEND

- EXCEPTED SUBPARCEL ZONE 3 (PER REF. PLAN 8)
- GROUNDWATER MANAGEMENT ZONE 3 (PER REF. PLAN 9)
- USE RESTRICTION ZONE SITE 32 (PER REF. PLAN 10)
- USE RESTRICTION ZONE SITE 81 (PER REF. PLAN 11)
- USE RESTRICTION ZONE SITE 72 (PER REF. PLAN 12)
- LIMIT OF DRAINAGE LICENSE RESERVED BY OWNER (PER REF. PLAN 13)
- USE RESTRICTION ZONE SITE 3 (PER REF. PLAN 14)

250 0 250 500

SCALE: 1 INCH = 250 FT.

EXISTING CONDITIONS PLAN

FOR

TIGHE & BOND

OF

PEASE HANGAR 227 AREA

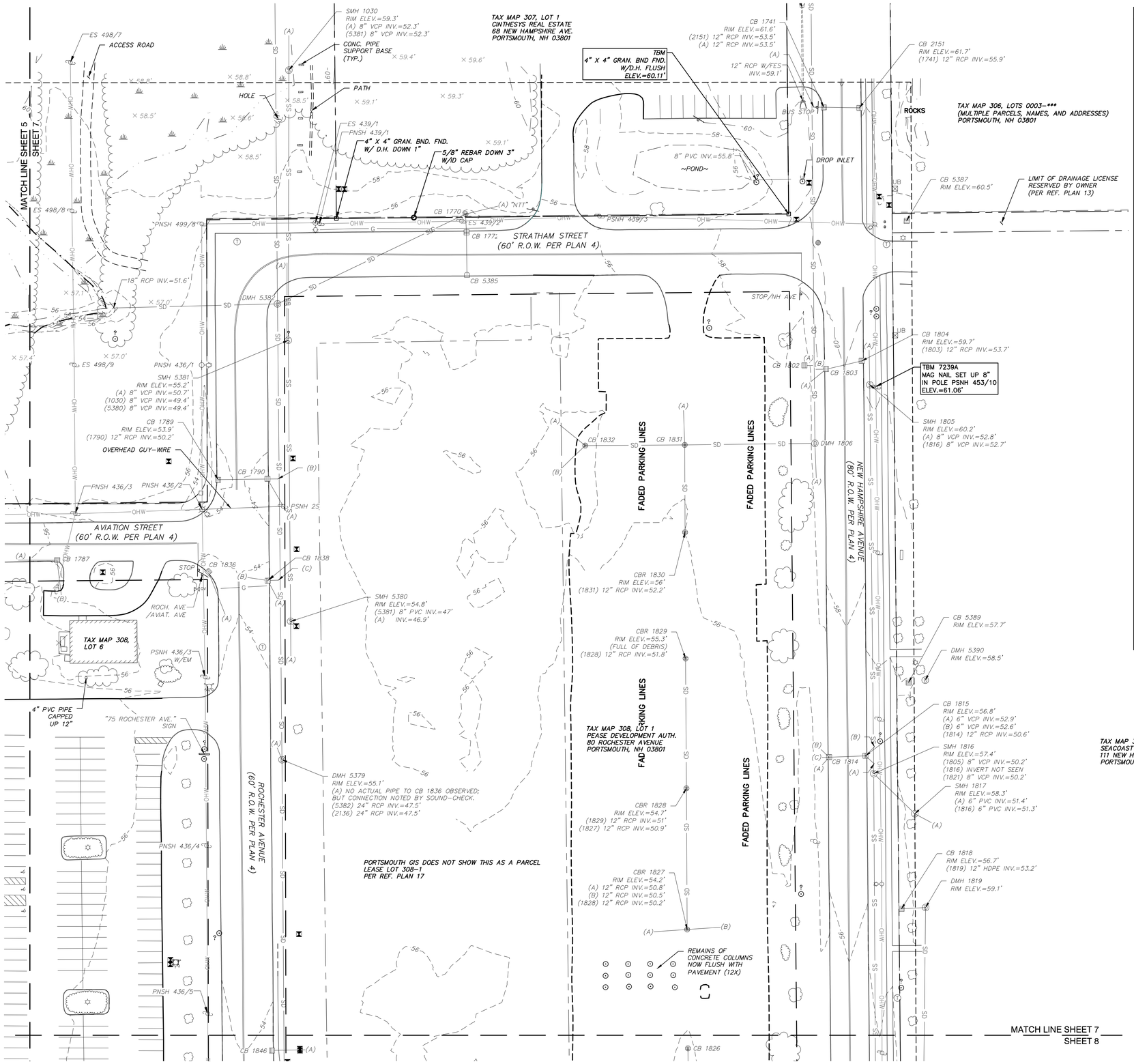
PORTIONS OF AVIATION AVENUE,
FLIGHTLINE ROAD, LEE STREET,
NEWFIELDS STREET,
NEW HAMPSHIRE AVENUE
ROCHESTER AVENUE
AND STRATHAM STREET
PORTSMOUTH, NEW HAMPSHIRE

NO.	DATE	DESCRIPTION	BY
1	09/21/22	UPDATED DMH 1925 OUTLET SIZE	W.D.C.

DRAWN BY:	W.D.C.	DATE:	FEBRUARY 2022
CHECKED BY:	M.J.C.	DRAWING NO.	7239A
JOB NO.	7239	SHEET	2 OF 8

DOUCET SURVEY LLC
Serving Your Professional Surveying & Mapping Needs
102 Kent Place, Newmarket, NH 03857 (603) 659-6560
2 Commerce Drive (Suite 202) Bedford, NH 03110 (603) 614-4060
10 Storer Street (Riverview Suite) Kennebunk, ME (207) 502-7005
http://www.doucetsurvey.com

FILE NAME: C:\Users\whitney.kyle\Documents\Revit Autodesk_7170_R24_(NO 1) 2022-09-21.rvt LAYOUT NAME: TOPO PLAN (2) PLOTTED: Wednesday, September 21, 2022 - 11:05:10am



DRAINAGE STRUCTURES	
CB 1770	CB 1831
RIM ELEV.=52.3'	RIM ELEV.=56.5'
(1772) 12" RCP INV.=50.4'	(1806) 12" RCP INV.=51.7'
(A) 4" HDPE INV.=50.2'	(1830) 12" RCP INV.=51.5'
(5382) 15" RCP INV.=49.9'	(A) 12" RCP INV.=51.5'
SUMP ELEV.=50.2'	(1832) 10" VCP INV.=51.5'
CB 1772	CB 1832
RIM ELEV.=54.1'	RIM ELEV.=55'
(5385) 12" RCP INV.=50.5'	(A) 6" PVC INV.=53.1'
(1770) 12" RCP INV.=50.3'	(B) 6" PVC INV.=53'
DEBRIS=50.7'	(1831) 10" VCP INV.=52.5'
CB 1787	CB 1836
RIM ELEV.=55.7'	RIM ELEV.=53.6'
(A) 6" VCP INV.=51.1'	(A) 12" RCP INV.=50.4'
NOTE: "A" DOES NOT CON. TO CB 1719	DEBRIS=50.4'
(B) 12" RCP INV.=51.0'	
CB 1790	CB 1838
RIM ELEV.=53.8'	RIM ELEV.=53.9'
(A) 6" UNK INV.=49.6'	(A) 6" VCP INV.=49.5'
(1789) 12" RCP INV.=49.6'	(B) 18" RCP INV.=49.5'
(B) 12" RCP INV.=49.6'	(C) 18" RCP INV.=49.4'
TO REFUSAL=49.5'	DEBRIS=49.3'
CB 1802	CB 1846
RIM ELEV.=56.4'	RIM ELEV.=53.8'
(A) 12" RCP INV.=52.5'	(A) 12" RCP INV.=49.5'
	BROKEN BOTTOM=49.6'
CB 1803	DMH 5382
RIM ELEV.=59.6'	RIM ELEV.=55.4'
(A) 6" VCP INV.=55.3'	(1770) 15" RCP INV.=49.1'
(1804) 12" RCP INV.=51.1'	(WETLAND INLET) 18" RCP INV.=49.0'
(B) 12" RCP INV.=50.6'	(5383) 24" RCP INV.=48.7'
	(5379) 24" RCP INV.=48.7'
DMH 1806	DEBRIS=48.6'
RIM ELEV.=58.5'	
(1831) 12" RCP INV.=50.6'	CB 5385
(2152) 36" RCP INV.=49.0'	RIM ELEV.=54.3'
(A) 36" RCP INV.=48.8'	(1772) 12" RCP INV.=50.6'
GIS SHOWS ONE STRUCTURE	DEBRIS=50.7'
BETWEEN DMH 1806 & DMH 1925	
(VERY CLOSE TO 1925) BUT IT	
WAS NOT FOUND BELOW SNOWBANKS.	
CB 1814	
RIM ELEV.=56.8'	
(A) 6" VCP INV.=52'	
(B) 6" VCP INV.=51.9'	
(1815) 12" RCP INV.=49.3'	
(C) 12" RCP INV.=49.1'	

DOUCET SURVEY
NHSPC (NAD83 / 2011)

40 0 40 80
SCALE: 1 INCH = 40 FT.

EXISTING CONDITIONS PLAN
FOR
TIGHE & BOND
OF
PEASE HANGAR 227 AREA
PORTIONS OF AVIATION AVENUE,
FLIGHTLINE ROAD, LEE STREET,
NEWFIELDS STREET,
NEW HAMPSHIRE AVENUE
ROCHESTER AVENUE
AND STRATHAM STREET
PORTSMOUTH, NEW HAMPSHIRE

NO.	DATE	DESCRIPTION	BY
1	09/21/22	UPDATED DMH 1925 OUTLET SIZE	W.D.C.

DRAWN BY:	W.D.C.	DATE:	FEBRUARY 2022
CHECKED BY:	M.J.C.	DRAWING NO.	7239A
JOB NO.	7239	SHEET	7 OF 8

DOUCET SURVEY LLC
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FILE NAME: C:\Users\whitney\AppData\Local\Temp\AcPublish_31772\7239A (REV 1) 2022-09-21.dwg LAYOUT NAME: TOPO PLAN (7) PLOTTED: Wednesday, September 21, 2022 - 11:21am

MATCH LINE SHEET 7
SHEET 8

MATCH LINE SHEET 6
SHEET 8

DRAINAGE STRUCTURES	
CB 1824	DMH 1925
RIM ELEV.=54.7'	RIM ELEV.=52.2'
(A) 6" VCP INV.=50.2'	(A) 12" RCP RECESSED UNABLE TO MEAS.
(B) 6" VCP INV.=49.1'	(B) 36" RCP INV.=43.7'
(1820) 12" RCP INV.=48'	(C) 36" RCP INV.=43.5'
(C) 12" RCP INV.=48'	(OUTFALL) 60" RCP INV.=41.7'
CB 1825	DMH 2136
RIM ELEV.=53.6'	RIM ELEV.=54.2'
(1826) 12" RCP INV.=50.1'	(5379) 24" RCP INV.=47.0'
(1912) 12" RCP INV.=49.9'	(A) 42" RCP INV.=46.9'
	(1947) 42" RCP INV.=46.7'
CB 1826	
RIM ELEV.=53.9'	CB 2137
(1825) 12" RCP INV.=50.4'	RIM ELEV.=52.7'
SUMP ELEV.=50.4'	(A) 8" VCP INV.=48.6'
	(B) 12" RCP INV.=48.1'
CB 1846	(C) 8" VCP INV.=48.1'
RIM ELEV.=53.8'	(D) 12" RCP INV.=48.1'
(A) 12" RCP INV.=49.5'	
BROKEN BOTTOM=49.6'	CB 2142
	RIM ELEV.=52.2'
CB 1855	(A) 12" RCP INV.=48.3'
RIM ELEV.=52.7'	
(A) 12" HDPE INV.=46.6'	CB 2144
(1853) 12" HDPE INV.=46.5'	RIM ELEV.=50.8'
BOTTOM OF CHANNEL=46.6'	(A) 6" VCP INV.=46.3'
	(1902) 12" RCP INV.=46.3'
CB 1879	(B) 12" RCP INV.=46.1'
RIM ELEV.=51.2'	
(A) 6" VCP INV.=46.3'	
(B) 6" VCP INV.=46.3'	
(1878) 12" RCP INV.=44.3'	
(C) 12" RCP INV.=43.9'	
SUMP ELEV.=44.3'	
CB 1912	
RIM ELEV.=53.5'	
(1825) 12" RCP INV.=49.3'	
(1913) 12" RCP INV.=49.2'	

NO.	DATE	DESCRIPTION	BY
1	09/21/22	UPDATED DMH 1925 OUTLET SIZE	W.D.C.

DRAWN BY: W.D.C.	DATE: FEBRUARY 2022
CHECKED BY: M.J.C.	DRAWING NO. 7239A
JOB NO. 7239	SHEET 8 OF 8

SCALE: 1 INCH = 40 FT.

EXISTING CONDITIONS PLAN
FOR
TIGHE & BOND
OF
PEASE HANGAR 227 AREA
PORTIONS OF AVIATION AVENUE,
FLIGHTLINE ROAD, LEE STREET,
NEWFIELDS STREET,
NEW HAMPSHIRE AVENUE
ROCHESTER AVENUE
AND STRATHAM STREET
PORTSMOUTH, NEW HAMPSHIRE

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FILE NAME: C:\Users\whitney.dyjack\Documents\Survey\AutoData_7172\7239A (REV 1) 2022-09-21.dwg LAYOUT NAME: TOPO PLAN 09 PLOTTED: Wednesday, September 21, 2022 - 11:21am

EXISTING CONDITIONS PLAN NOTES:

1. EXISTING CONDITIONS ARE BASED ON A FIELD SURVEY BY DOUCET SURVEY LLC DURING JANUARY & FEBRUARY 2022.
2. JURISDICTIONAL WETLANDS DELINEATED BY TIGHE & BOND, DURING DECEMBER 2021.

REFERENCE PLANS:

1. "EXISTING CONDITIONS PLAN FOR TIGHE & BOND OF PEASE HANGAR 227 AREA, PORTIONS OF AVIATION AVENUE, FLIGHTLINE ROAD, LEE STREET, NEWFIELDS STREET, NEW HAMPSHIRE AVENUE, ROCHESTER AVENUE, AND STRATHEM STREET" PREPARED BY DOUCET SURVEY LLC, LAST REVISED 09/21/2022.

DEMOLITION NOTES:

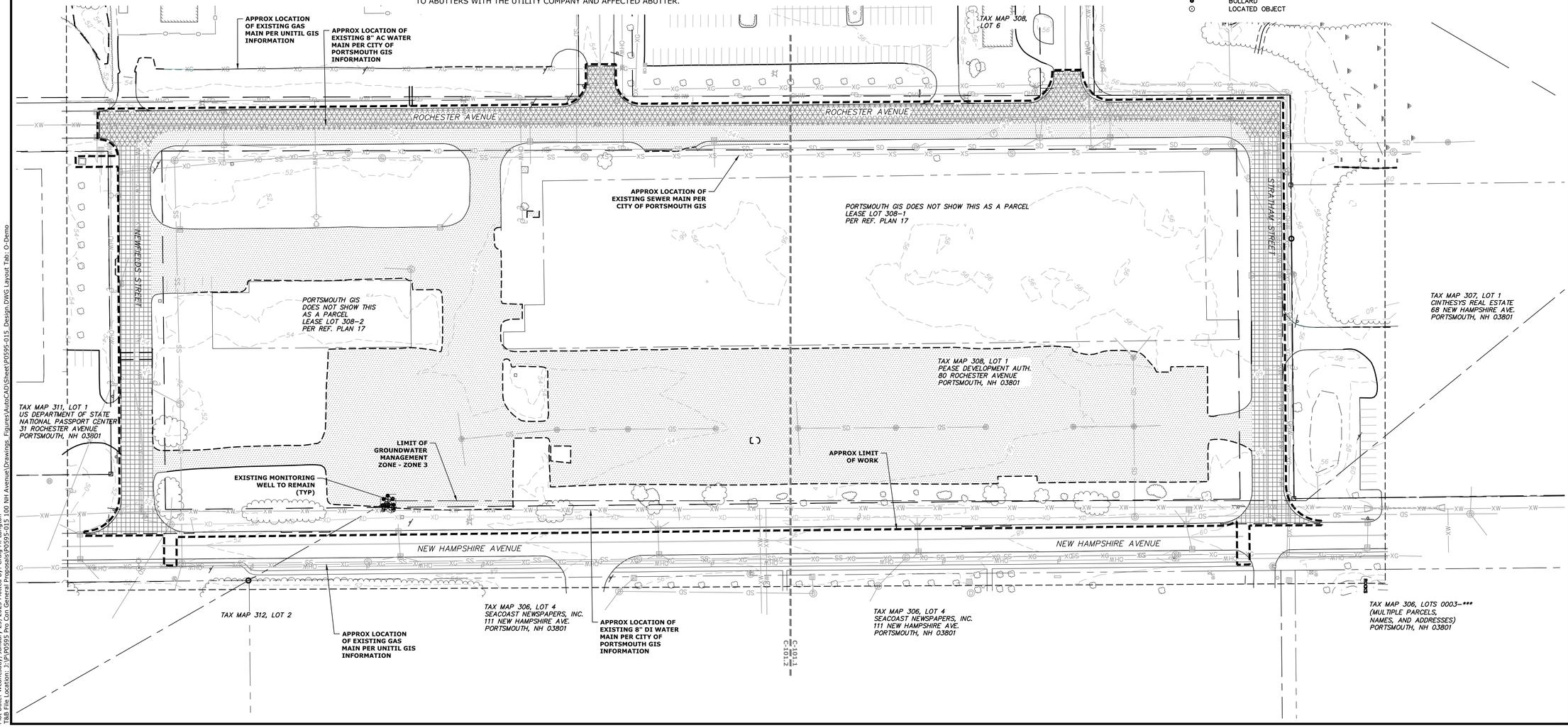
1. THE LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE AND THE LOCATIONS ARE NOT GUARANTEED BY THE OWNER OR THE ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR EXISTING UTILITIES AND RELOCATE EXISTING UTILITIES REQUIRED TO COMPLETE THE WORK.
2. THE CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES. CALL DIG SAFE AT LEAST 72 HOURS PRIOR TO THE COMMENCEMENT OF ANY DEMOLITION/CONSTRUCTION ACTIVITIES.
3. ALL MATERIALS SCHEDULED TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. THE CONTRACTOR SHALL DISPOSE OF ALL MATERIALS OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS, ORDINANCES AND CODES.
4. COORDINATE REMOVAL, RELOCATION, DISPOSAL OR SALVAGE OF UTILITIES WITH THE OWNER AND APPROPRIATE UTILITY COMPANY.
5. ANY EXISTING WORK OR PROPERTY DAMAGED OR DISRUPTED BY CONSTRUCTION/ DEMOLITION ACTIVITIES SHALL BE REPLACED OR REPAIRED TO MATCH ORIGINAL EXISTING CONDITIONS BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
6. SAW CUT AND REMOVE PAVEMENT ONE (1) FOOT OFF PROPOSED EDGE OF PAVEMENT OR EXISTING CURB LINE IN ALL AREAS WHERE PAVEMENT TO BE REMOVED ABUTS EXISTING PAVEMENT OR CONCRETE TO REMAIN.
7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE CONDITIONS OF ALL OF THE PERMIT APPROVALS.
8. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ADDITIONAL PERMITS, NOTICES AND FEES NECESSARY TO COMPLETE THE WORK AND ARRANGE FOR AND PAY FOR NECESSARY INSPECTIONS AND APPROVALS FROM THE AUTHORITIES HAVING JURISDICTION.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMOLITION AND OFF-SITE DISPOSAL OF MATERIALS REQUIRED TO COMPLETE THE WORK, EXCEPT FOR WORK NOTED TO BE COMPLETED BY OTHERS. MATERIAL DEMOLITION AND DISPOSAL SHALL BE DONE IN CONFORMANCE WITH THE PEASE WASTE MANAGEMENT PLAN REQUIREMENTS.
10. UTILITIES SHALL BE TERMINATED AT THE MAIN LINE PER UTILITY COMPANY AND CITY OF PORTSMOUTH STANDARD. THE CONTRACTOR SHALL REMOVE ALL ABANDONED UTILITIES LOCATED WITHIN THE LIMITS OF WORK.
11. CONTRACTOR SHALL VERIFY ORIGIN OF ALL DRAINS AND UTILITIES PRIOR TO REMOVAL/TERMINATION TO DETERMINE IF DRAINS OR UTILITY IS ACTIVE, AND SERVICES ANY ON OR OFF-SITE STRUCTURE TO REMAIN. THE CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY OF ANY SUCH UTILITY FOUND AND SHALL MAINTAIN THESE UTILITIES UNTIL PERMANENT SOLUTION IS IN PLACE.
12. PAVEMENT REMOVAL LIMITS ARE SHOWN FOR CONTRACTOR'S CONVENIENCE. ADDITIONAL PAVEMENT REMOVAL MAY BE REQUIRED DEPENDING ON THE CONTRACTOR'S OPERATION. CONTRACTOR TO VERIFY FULL LIMITS OF PAVEMENT REMOVAL PRIOR TO BID.
13. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING STRUCTURES, CONCRETE PADS, UTILITIES AND PAVEMENT WITHIN THE WORK LIMITS SHOWN UNLESS SPECIFICALLY IDENTIFIED TO REMAIN. ITEMS TO BE REMOVED INCLUDE BUT ARE NOT LIMITED TO: CONCRETE, PAVEMENT, CURBS, MANHOLES, CATCH BASINS, UNDER GROUND PIPING, POLES, SIGNS, BOLLARDS, TREES AND LANDSCAPING.
14. COORDINATE ALL WORK WITHIN THE PUBLIC RIGHT OF WAYS WITH THE CITY OF PORTSMOUTH AND PEASE DEVELOPMENT AUTHORITY.
15. REMOVE TREES AND BRUSH AS REQUIRED FOR COMPLETION OF WORK. CONTRACTOR SHALL GRUB AND REMOVE ALL STUMPS WITHIN LIMITS OF WORK AND DISPOSE OF OFF SITE IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS.
16. CONTRACTOR SHALL PROTECT ALL PROPERTY MONUMENTATION THROUGHOUT DEMOLITION AND CONSTRUCTION OPERATIONS. SHOULD ANY MONUMENTATION BE DISTURBED BY THE CONTRACTOR, THE CONTRACTOR SHALL EMPLOY A NEW HAMPSHIRE LICENSED SURVEYOR TO REPLACE DISTURBED MONUMENTS.
17. PROVIDE INLET PROTECTION BARRIERS AT ALL CATCH BASINS/CURB INLETS WITHIN CONSTRUCTION LIMITS AS WELL AS CATCH BASINS/CURB INLETS THAT RECEIVE RUNOFF FROM CONSTRUCTION ACTIVITIES. INLET PROTECTION BARRIERS SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT. INLET PROTECTION BARRIERS SHALL BE "HIGH FLOW SILT SACK" BY ACF ENVIRONMENTAL OR EQUAL. INSPECT BARRIERS WEEKLY AND AFTER EACH RAIN EVENT OF 0.25 INCHES OR GREATER. CONTRACTOR SHALL COMPLETE A MAINTENANCE INSPECTION REPORT AFTER EACH INSPECTION. SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT OR MORE OFTEN IF THE FABRIC BECOMES CLOGGED OR SEDIMENT HAS ACCUMULATED TO 1/3 THE DESIGN DEPTH OF THE BARRIER.
18. THE CONTRACTOR SHALL PHASE DEMOLITION AND CONSTRUCTION AS REQUIRED TO PROVIDE CONTINUOUS SERVICE TO EXISTING BUSINESSES AND HOMES THROUGHOUT THE CONSTRUCTION PERIOD. EXISTING BUSINESS AND HOME SERVICES INCLUDE, BUT ARE NOT LIMITED TO ELECTRICAL, COMMUNICATION, FIRE PROTECTION, DOMESTIC WATER AND SEWER SERVICES. TEMPORARY SERVICES, IF REQUIRED, SHALL COMPLY WITH ALL FEDERAL, STATE, LOCAL AND UTILITY COMPANY STANDARDS. CONTRACTOR SHALL PROVIDE DETAILED CONSTRUCTION SCHEDULE TO OWNER PRIOR TO ANY DEMOLITION/CONSTRUCTION ACTIVITIES AND SHALL COORDINATE TEMPORARY SERVICES TO ABUTTERS WITH THE UTILITY COMPANY AND AFFECTED ABUTTER.
19. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF ANY CLEARING OR DEMOLITION ACTIVITIES.
20. THE CONTRACTOR SHALL PAY ALL COSTS NECESSARY FOR TEMPORARY PARTITIONING, BARRICADING, FENCING, SECURITY AND SAFETY DEVICES REQUIRED FOR THE MAINTENANCE OF A CLEAN AND SAFE CONSTRUCTION SITE.
21. SAW CUT AND REMOVE PAVEMENT AND CONSTRUCT PAVEMENT TRENCH PATCH FOR ALL UTILITIES TO BE REMOVED AND PROPOSED UTILITIES LOCATED IN EXISTING PAVEMENT AREAS TO REMAIN.
22. BEFORE ANY DEWATERING IS PERFORMED A TEMPORARY DISCHARGE PERMIT FROM THE NHDES IS REQUIRED.
23. THE SITE IS IN A GROUNDWATER MANAGEMENT ZONE (GMZ). THE APPLICANT SHALL COORDINATE WITH PDA, NHDES AND THE AIR FORCE TO DETERMINE IF ANY SPECIAL MEASURES ARE REQUIRED DURING CONSTRUCTION TO ENSURE THE SAFETY OF WORKERS AND PROPER HANDLING OF MATERIALS. NO EXISTING SOILS OR MATERIALS MAY BE REMOVED AND DISPOSED OF OFFSITE UNLESS TESTING AND PROTOCOLS ESTABLISHED ARE FOLLOWED. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE APPROVED AREA OF SPECIAL NOTICE PROVISIONS ISSUED BY THE AIR FORCE.
24. THE CONTRACTOR SHALL ACQUIRE A PDA DIG PERMIT BEFORE ANY DISTURBANCE CAN TAKE PLACE. ALLOW 7 CALENDAR DAYS FOR PROCESSING.
25. ALL MONITORING WELLS WITHIN THE LIMIT OF WORK SHALL BE PROTECTED DURING CONSTRUCTION. IF ANY MONITORING WELL NEEDS TO BE REMOVED OR ADJUSTED THIS WORK SHALL BE COORDINATED WITH PDA AND THE AIR FORCE.

DEMOLITION LEGEND

- APPROXIMATE LIMIT OF WORK
- APPROXIMATE LIMIT OF SAWCUT
- APPROXIMATE LIMIT OF PAVEMENT TO BE REMOVED
- APPROXIMATE LIMIT OF PAVEMENT TO BE RECLAIMED
- APPROXIMATE LIMIT OF PAVEMENT TO BE MILL AND OVERLAID

LEGEND

- LOT LINE
- APPROXIMATE LOT LINE
- APPROXIMATE ABUTTERS LOT LINE
- EXISTING EASEMENT LINE
- APPROXIMATE RIGHT-OF-WAY LINE
- CHAIN LINK FENCE
- FENCE
- FENCE OBSCURED
- OHW — OVERHEAD WIRE
- SS — SEWER LINE
- SD — DRAIN LINE
- G — GAS LINE
- W — WATER LINE
- 100 — MAJOR CONTOUR LINE
- 100 — MINOR CONTOUR LINE
- 100 — LIDAR MAJOR CONTOUR LINE
- 98 — LIDAR MINOR CONTOUR LINE
- TREE LINE
- SHRUB LINE
- EDGE OF WETLAND
- EDGE OF WETLAND (PER CLIENT)
- EDGE OF WATER
- WATERCOURSE
- WETLAND AREA
- CONCRETE
- RIP RAP
- RETAINING WALL
- DRIVEWAY
- DRIVEWAY OBSCURED
- ASPHALT TAXIWAY
- CONCRETE TAXIWAY
- CURB BOTTOM
- CURB BACK
- PIPELINES
- UTILITY POLE
- UTILITY POLE & GUY WIRE
- UTILITY POLE W/LIGHT
- UTILITY POLE OBSCURED
- LIGHT POLE
- SIGN
- SIGN (TWO POSTS)
- BOUND FOUND
- IRON PIPE/ROD FOUND
- POST
- POST
- BOLLARD
- LOCATED OBJECT
- MEDIUM LONE TREE
- SMALL LONE TREE
- UTILITY COVER
- UTILITY COVER
- FIRE HYDRANT
- WATER GATE VALVE
- GAS GATE VALVE
- VENT PIPE
- ELECTRIC BOX
- TELEPHONE BOX
- DRAIN
- CATCH BASIN
- DRAIN MANHOLE
- F.E.S — FLARED END SECTION
- MANHOLE
- ELECTRIC MANHOLE
- TELEPHONE MANHOLE
- SEWER MANHOLE
- CLEANOUT
- FLAG POLE
- MONITORING WELL LOCATION
- ACCESSIBLE PARKING SPACE
- ×100.0 — SPOT GRADE
- TYP. — TYPICAL
- BND. FND. — BOUND FOUND
- I.P.F. — IRON PIPE FOUND
- CONC. — CONCRETE
- GRAN. — GRANITE
- HDWL — HEADWALL
- SGC — SLOPED GRANITE CURB
- "NP" — NO PARKING SIGN
- "NT" — NO TRESPASSING SIGN
- "NTT" — NO THRU TRAFFIC SIGN
- ACP — ASBESTOS CEMENT PIPE
- CIP — CAST IRON PIPE
- CMP — CORRUGATED METAL PIPE
- RCP — REINFORCED CONCRETE PIPE
- HDPE — HIGH DENSITY POLYETHYLENE PIPE
- PVC — POLYVINYL CHLORIDE PIPE
- UNK — UNKNOWN
- VCP — VITREOUS CLAY PIPE
- TOP — TOP OF PIPE
- NM — NOT MEASURED



Tighe&Bond

STATE OF NEW HAMPSHIRE — PATRICK CRIMMINS — No. 12378 — LICENSED PROFESSIONAL ENGINEER — 1/25/23

STATE OF NEW HAMPSHIRE — NEIL A. HANSEN — No. 15227 — LICENSED PROFESSIONAL ENGINEER — 1/25/23

SCALE IN FEET
0 60' 120'
GRAPHIC SCALE

Proposed Advanced Manufacturing Facility

Aviation Avenue Group, LLC

100 New Hampshire Avenue
Portsmouth, NH

MARK	DATE	DESCRIPTION
B	1/25/2023	TAC Resubmission
A	12/19/2022	TAC Submission

PROJECT NO:	P0595-015
DATE:	12/19/2022
FILE:	P0595-015_DESIGN.DWG
DRAWN BY:	CML
CHECKED:	NAH
APPROVED:	PMC

OVERALL EXISTING CONDITIONS / DEMOLITION PLAN

SCALE: AS SHOWN

C-101

Last Save Date: January 24, 2023 5:03 PM By: CML
Plot Date: January 24, 2023 5:03 PM By: Craig M. Langton
T&B File Location: I:\P\P0595 Pro Con General Proposals\P0595-015 100 NH Avenue\Drawings, Figures\AutoCAD\Sheet\P0595-015_Design.DWG Layout Tab: D-Demo

Tighe&Bond

PROPOSED PAVEMENT TO BE MILL AND OVERLAID (TYP)

APPROX LIMIT OF WORK

MILL AND OVERLAY STRATHAM STREET

EXISTING LEASE LINE TO BE ABANDONED (TYP)

PROPOSED PAVEMENT TO BE REMOVED (TYP)

PROPOSED SAW CUT (TYP)

PORTION OF ROCHESTER AVE PAVEMENT TO BE REMOVED

PORTION OF ROCHESTER AVE TO BE RECLAIMED AND RE-PAVED

APPROX LOCATION OF EXISTING SEWER MAIN TO REMAIN

APPROX LOCATION OF EXISTING WATER MAIN TO REMAIN

APPROX LOCATION OF EXISTING DRAIN LINE TO REMAIN

UTILITY POLE TO REMAIN

REMAINS OF CONCRETE COLUMNS NOW FLUSH WITH PAVEMENT (12X)

PORTSMOUTH GIS DOES NOT SHOW THIS AS A PARCEL LEASE LOT 308-1 PER REF. PLAN 17

TO REMAIN

EDGE OF POND LOCATED ON ICE

TOE OF DITCH LINE SHOT ON ICE

~POND~

~STREAM~

5' CHAIN-LINK FENCE W/BARBED WIRE

6" DIA. PIPE CUT FLUSH

ACCESS ROAD

PATH

HOLE

CONC. PIPE SUPPORT BASE (TYP.)

TAX MAP 307, LOT 1
CINTHESYS REAL ESTATE
68 NEW HAMPSHIRE AVE.
PORTSMOUTH, NH 03801

TAX MAP 307, LOT 3
PEASE DEV AUTH.
PEASE, NH 03801

TAX MAP 307, LOT 2
PEASE DEV AUTH.
PEASE, NH 03801

TAX MAP 308, LOT 5
PEASE DEVELOPMENT AUTH.
CORPORATE DRIVE
PORTSMOUTH, NH 03801

TAX MAP 308, LOT 6

TAX MAP 308, LOT 1
PEASE DEVELOPMENT AUTH.
80 ROCHESTER AVENUE
PORTSMOUTH, NH 03801

TAX MAP 306, LOTS 0003-*** (MULTIPLE PARCELS, NAMES, AND ADDRESSES)
PORTSMOUTH, NH 03801

LIMIT OF DRAINAGE LICENSE RESERVED BY OWNER (PER REF. PLAN 13)

TBM
4" X 4" GRAN. BND FND.
W/D.H. FLUSH
ELEV.=60.11'

TBM 7239A
MAG NAIL SET UP 8"
IN POLE PSNH 453/10
ELEV.=61.06'

DMH 2152
RIM ELEV.=62.4'
(A) 12" RCP INV.=53.9'
(B) 24" RCP INV.=53.5'
(C) 36" RCP INV.=52.9'
(1806) 36" RCP INV.=52.8'

12" RCP W/FES INV.=59.5'

CB 1741
RIM ELEV.=61.6'
(2151) 12" RCP INV.=53.5'
(A) 12" RCP INV.=53.5'

12" RCP W/FES INV.=59.1'

CB 2151
RIM ELEV.=61.7'
(1741) 12" RCP INV.=55.9'

CB 1770
RIM ELEV.=52.3'
(1772) 12" RCP INV.=50.4'
(A) 4" HDPE INV.=50.2'
(5382) 15" RCP INV.=49.9'
SUMP ELEV.=50.2'

CB 1772
RIM ELEV.=54.1'
(5385) 12" RCP INV.=50.5'
(1770) 12" RCP INV.=50.3'
DEBRIS=50.7'

8" PVC INV.=55.8'

CB 5385 TO REMAIN
RIM ELEV.=54.3'
(1772) 12" RCP INV.=50.6'
DEBRIS=50.7'

DROP INLET

CB 5387
RIM ELEV.=60.5'

CB 1803
RIM ELEV.=59.6'
(A) 6" VCP INV.=55.3'
(1804) 12" RCP INV.=51.1'
(B) 12" RCP INV.=50.6'

CB 1804
RIM ELEV.=59.7'
(1803) 12" RCP INV.=53.7'

CB 1802

CB 1832

CB 1831

CBR 1830
RIM ELEV.=56'
(1831) 12" RCP INV.=52.2'

CBR 1829
RIM ELEV.=55.3'
(FULL OF DEBRIS)
(1828) 12" RCP INV.=51.8'

CBR 1828
RIM ELEV.=54.7'
(1829) 12" RCP INV.=51'
(1827) 12" RCP INV.=50.9'

CBR 1827
RIM ELEV.=54.2'
(A) 12" RCP INV.=50.8'
(B) 12" RCP INV.=50.5'
(1828) 12" RCP INV.=50.2'

SMH 1805
RIM ELEV.=60.2'
(A) 8" VCP INV.=52.8'
(1816) 8" VCP INV.=52.7'

DMH 1806
RIM ELEV.=58.5'
(1831) 12" RCP INV.=50.6'
(2152) 36" RCP INV.=49.0'
(A) 36" RCP INV.=48.8'
GIS SHOWS ONE STRUCTURE BETWEEN DMH 1805 & DMH 1925 (VERY CLOSE TO 1925) BUT IT WAS NOT FOUND BELOW SNOWBANKS.
TO REMAIN

CB 1814 TO REMAIN
RIM ELEV.=56.8'
(A) 6" VCP INV.=52'
(B) 6" VCP INV.=51.9'
(1815) 12" RCP INV.=49.3'
(C) 12" RCP INV.=49.1'

CB 5389
RIM ELEV.=57.7'

DMH 5390
RIM ELEV.=58.5'

CB 1815
RIM ELEV.=56.8'
(A) 6" VCP INV.=52.9'
(B) 6" VCP INV.=52.6'
(1814) 12" RCP INV.=50.6'

SMH 1816
RIM ELEV.=57.4'
(1805) 8" VCP INV.=50.2'
(1816) INVERT NOT SEEN
(1821) 8" VCP INV.=50.2'

SMH 1817
RIM ELEV.=58.3'
(A) 6" PVC INV.=51.4'
(1816) 6" PVC INV.=51.3'

TAX MAP 306, LOT 4
SEACOAST NEWSPAPERS, INC.
111 NEW HAMPSHIRE AVE.
PORTSMOUTH, NH 03801

CB 1818
RIM ELEV.=56.7'
(1819) 12" HDPE INV.=53.2'

DMH 1819
RIM ELEV.=59.1'

CB 1789
RIM ELEV.=53.9'
(1790) 12" RCP INV.=50.2'
OVERHEAD GUY-WIRE

CB 1790
RIM ELEV.=53.8'
(A) 6" UNK INV.=49.6'
(1789) 12" RCP INV.=49.6'
(B) 12" RCP INV.=49.6'
TO REFUSAL=49.5'

CB 1838
RIM ELEV.=53.9'
(A) 6" VCP INV.=49.5'
(B) 18" RCP INV.=49.5'
(C) 18" RCP INV.=49.4'
DEBRIS=49.3'

CB 1836
RIM ELEV.=53.6'
(A) 12" RCP INV.=50.4'
DEBRIS=50.4'

CB 1685
RIM ELEV.=56.9'
(A) 6" VCP INV.=52.3'
(B) 12" RCP INV.=52.0'
(NO CON. OBSERVED TO CB 1720)

CB 1720

CB 1719

CB 2132

DMH 2131

DMH 1715

SMH 1717
RIM ELEV.=58.3'
(VAULTED STRUCTURE)
INV.'S BEHIND WEIR
UNABLE TO MEASURE
WATER ELEV.=50.9'
SUMP ELEV.=49.1'

SMH 1691
RIM ELEV.=57.3'
(A) 6" VCP INV.=53.2'
(1717) 8" ACP INV.=49.3'
(B) 6" VCP INV.=49.2'
(1737) 8" VCP INV.=48.5'
(1695) 8" PVC INV.=48.4'

SMH 1696
RIM ELEV.=58.4'
(OLD OIL SEPARATOR, PER TENANT)
(A) 4" CIP INV.=56'
(B) 4" CIP INV.=55'
(C) 6" PVC INV.=53.6'
(D) 4" CIP INV.=53.4'
(E) 6" PVC INV.=53.3'
(F) CAPPED 4" CIP TOP=53.1'
SUMP ELEV.=48.9'

SMH 1695
RIM ELEV.=57.3'
(A) 8" VCP INV.=48.2'
(1691) 8" VCP INV.=48.0'

CB 1929

DMH 1697

CB 1698

CB 1694

SMH 5382
RIM ELEV.=55.4'
(1770) 15" RCP INV.=49.1'
(WETLAND INLET) 18" RCP INV.=49.0'
(5383) 24" RCP INV.=48.7'
(5379) 24" RCP INV.=48.7'
STORM MH

SMH 5381
RIM ELEV.=55.2'
(A) 8" VCP INV.=50.7'
(1030) 8" VCP INV.=49.4'
(5380) 8" VCP INV.=49.4'

SMH 5380
RIM ELEV.=54.8'
(5381) 8" PVC INV.=47'
INV.=45.9'

DMH 5379
RIM ELEV.=55.1'
(A) NO ACTUAL PIPE TO CB 1836 OBSERVED; BUT CONNECTION NOTED BY SOUND-CHECK.
(5382) 24" RCP INV.=47.5'
(2136) 24" RCP INV.=47.5'

CBR 5383
RIM ELEV.=59.2'
(A) 24" RCP INV.=50.4'
(5382) 24" RCP INV.=49.9'

SMH 1030
RIM ELEV.=59.3'
(A) 8" VCP INV.=52.3'
(5381) 8" VCP INV.=52.3'

ES 498/7

ES 498/8

ES 498/9

ES 439/1

PNSH 439/1

PNSH 499/8

PNSH 433/28 (ABANDONED)

12" CMP INV.=56.6'

PNSH 433/27

PNSH 433/26

PNSH 433/25

PNSH 436/1

PNSH 436/2

PNSH 436/3

PNSH 436/4

18" RCP INV.=51.6'

4" PVC PIPE CAPPED UP 12"

"75 ROCHESTER AVE." SIGN

MW 782

AVIATION STREET

NEW HAMPSHIRE AVENUE

ROCH. AVE./AVIAT. AVE

STOP BAR TO REMAIN

ROCKS

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STATE OF NEW HAMPSHIRE
PATRICK CRIMMINS
No. 12378
LICENSED PROFESSIONAL ENGINEER
1/25/23

STATE OF NEW HAMPSHIRE
NEIL A. HANSEN
No. 15227
LICENSED PROFESSIONAL ENGINEER
1/25/23

SCALE IN FEET
0 40' 80'
GRAPHIC SCALE

Proposed Advanced Manufacturing Facility

Aviation Avenue Group, LLC

100 New Hampshire Avenue
Portsmouth, NH

MARK	DATE	DESCRIPTION
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APPROVED:	PMC

EXISTING CONDITIONS / DEMOLITION PLAN

SCALE: AS SHOWN

C-101.1

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EXISTING CONDITIONS / DEMOLITION PLAN

SCALE: AS SHOWN

C-101.2

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SITE NOTES:

1. STRIPE PARKING AREAS AS SHOWN, INCLUDING PARKING SPACES, STOP BARS, ADA SYMBOLS, PAINTED ISLANDS, CROSS WALKS, ARROWS, LEGENDS AND CENTERLINES SHALL BE THERMOPLASTIC MATERIAL. THERMOPLASTIC MATERIAL SHALL MEET THE REQUIREMENTS OF AASHTO AASHTO M249. (ALL MARKINGS EXCEPT CENTERLINE AND MEDIAN ISLANDS TO BE CONSTRUCTED USING WHITE TRAFFIC PAINT. CENTERLINE AND MEDIAN ISLANDS TO BE CONSTRUCTED USING YELLOW TRAFFIC PAINT. ALL TRAFFIC PAINT SHALL MEET THE REQUIREMENTS OF AASHTO M248 TYPE "F").
2. ALL PAVEMENT MARKINGS AND SIGNS TO CONFORM TO "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS", AND THE AMERICANS WITH DISABILITIES ACT REQUIREMENTS, LATEST EDITIONS.
3. SEE DETAILS FOR PARKING STALL MARKINGS, ADA SYMBOLS, SIGNS AND SIGN POSTS.
4. CENTERLINES SHALL BE FOUR (4) INCH WIDE YELLOW LINES. STOP BARS SHALL BE EIGHTEEN (18) INCHES WIDE.
5. PAINTED ISLANDS SHALL BE FOUR (4) INCH WIDE DIAGONAL LINES AT 3'-0" O.C. BORDERED BY FOUR (4) INCH WIDE LINES.
6. THE CONTRACTOR SHALL EMPLOY A NEW HAMPSHIRE LICENSED LAND SURVEYOR TO DETERMINE ALL LINES AND GRADES.
7. CLEAN AND COAT VERTICAL FACE OF EXISTING PAVEMENT AT SAW CUT LINE WITH RS-1 EMULSION IMMEDIATELY PRIOR TO PLACING NEW BITUMINOUS CONCRETE.
8. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, STATE, AND LOCAL CODES & SPECIFICATIONS.
9. COORDINATE ALL WORK WITHIN PUBLIC RIGHT OF WAY WITH THE CITY OF PORTSMOUTH AND PEASE DEVELOPMENT AUTHORITY.
10. CONTRACTOR TO SUBMIT AS-BUILT PLANS IN DIGITAL FORMAT (.DWG AND .PDF FILES) ON DISK TO THE OWNER AND ENGINEER UPON COMPLETION OF THE PROJECT. AS-BUILTS SHALL BE PREPARED AND CERTIFIED BY A NEW HAMPSHIRE LICENSED LAND SURVEYOR.
11. SEE ARCHITECTURAL/BUILDING DRAWINGS FOR ALL CONCRETE PADS & SIDEWALKS ADJACENT TO BUILDING.
12. ALL WORK SHALL CONFORM TO THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS, STANDARD SPECIFICATIONS AND WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION, "STANDARD SPECIFICATIONS OF ROAD AND BRIDGE CONSTRUCTION", CURRENT EDITION.
13. CONTRACTOR TO PROVIDE BACKFILL AND COMPACTION AT CURB LINE AFTER CONCRETE FORMS FOR SIDEWALKS AND PADS HAVE BEEN STRIPPED. COORDINATE WITH BUILDING CONTRACTOR.
14. COORDINATE ALL WORK ADJACENT TO BUILDING WITH BUILDING CONTRACTOR.
15. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
16. THE SITE ENGINEER SHALL OBSERVE THE CONSTRUCTION AND SHALL SUBMIT TO THE PDA A LETTER STATING THAT THE PROJECT WAS COMPLETED IN ACCORDANCE WITH THE PLANS.
17. CONSTRUCTION CANNOT BEGIN UNTIL A DETERMINATION OF NO OBJECTION IS ISSUED BY FAA. TO OBTAIN THE FAA DETERMINATION, THE CONTRACTOR/DEVELOPER MUST SUBMIT TO FAA A NOTICE OF PROPOSED CONSTRUCTION OR ALTERATION FORM 7460-1, AVAILABLE AT "https://www.faa.gov/documentLibrary/media/Form/FAA_Form_7460-1_042023.pdf".
18. PROPERTY MANAGER WILL BE RESPONSIBLE FOR TIMELY SNOW REMOVAL FROM ALL PUBLIC WALKS, DRIVES, AND AIRSIDE PAVEMENT AREAS ON-SITE. SNOW SHALL BE HAULED OFF-SITE AND LEGALLY DISPOSED OF, WHEN NECESSARY, WHEN SNOW STORAGE AREAS HAVE REACHED CAPACITY.
19. RETAINING WALL SHALL BE DESIGNED AND STAMPED BY A NEW HAMPSHIRE LICENSED PROFESSIONAL ENGINEER AND SHALL BE SUBMITTED TO PEASE DEVELOPMENT AUTHORITY FOR REVIEW.

SITE DATA:
LOCATION: TAX MAP 308, LOT 1
80 ROCHESTER AVENUE
PORTSMOUTH, NEW HAMPSHIRE

ZONING DISTRICT: INDUSTRIAL
ALLOWED USE: INDUSTRIAL / WAREHOUSE

DIMENSIONAL REQUIREMENTS:	REQUIRED	PROPOSED
MINIMUM LOT AREA:	10 ACRES	±10.9 ACRES
MINIMUM STREET FRONTAGE:	200 FT	±1,200 FT
MINIMUM SETBACKS:		
• FRONT:	70 FT	±51 FT(1)
• SIDE:	50 FT	±202 FT
• REAR:	50 FT	±28.4 FT(2)
MAXIMUM BUILDING HEIGHT:	PER FAA	36 FT
MINIMUM OPEN SPACE:	25%	±30%

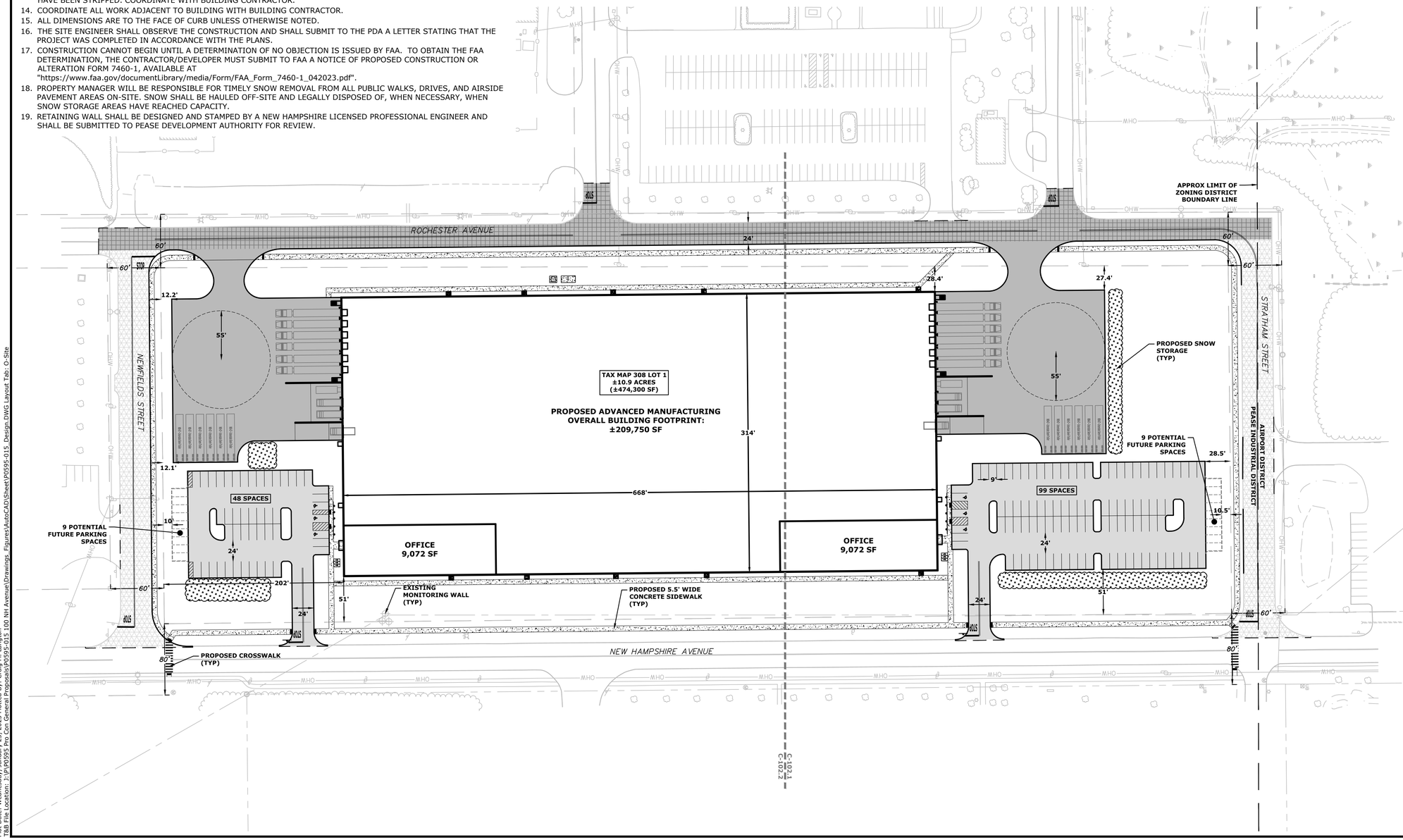
(1) - ON NOVEMBER 15, 2022 THE CITY OF PORTSMOUTH ZONING BOARD OF ADJUSTMENT VOTED TO RECOMMEND APPROVAL TO THE PDA BOARD FOR A VARIANCE FROM PART 304.03(C) TO ALLOW A 51 FOOT FRONT YARD WHERE 70 FEET IS REQUIRED.
(2) - VARIANCE REQUIRED FROM PART 304.03(E) OF THE PEASE INTERNATIONAL TRADEPORT ZONING ORDINANCE TO ALLOW FOR A ±28.4 FOOT REAR YARD WHERE 70 FEET IS REQUIRED.

PARKING REQUIREMENTS:	REQUIRED	PROPOSED
PARKING STALL LAYOUT:		
• STANDARD 90°	WIDTH: 8.5' MIN AREA: 160 SF MIN	9' X 18' (162 SF)
DRIVE AISLE WIDTH:		
• 90° (2-WAY TRAFFIC)	24 FT	24 FT (MIN)
PARKING SPACE REQUIREMENTS:		
INDUSTRIAL:		
2 / 3 EMPLOYEES (LARGEST SHIFT) +1 / COMPANY-OWNED-VEHICLE = 161 EMPLOYEES x 2/3 EMPLOYEES) + 2 COMPANY-OWNED-VEHICLE =	110 SPACES	
OFFICE:		
1 / 2 EMPLOYEES = 73 EMPLOYEES x (1 / 2 EMPLOYEES) =	37 SPACES	
TOTAL REQUIRED PARKING:	147 SPACES	147 SPACES(1)

(1) - SIX (6) ADA SPACES PROVIDED

LEGEND

- PROPOSED LEASE LINE
- PROPOSED CONCRETE
- PROPOSED STANDARD DUTY PAVEMENT SECTION
- PROPOSED HEAVY DUTY PAVEMENT SECTION
- PROPOSED RECLAIM AND RE-PAVE
- PROPOSED MILL AND OVERLAY
- PROPOSED SNOW STORAGE AREA
- APPROXIMATE LIMIT OF SAWCUT
- PROPOSED LIGHT POLE BASE
- EXISTING PROPOSED SIGN
- PROPOSED BOLLARD



C-102.1
C-102.2

Tighe&Bond

STATE OF NEW HAMPSHIRE
PATRICK CRIMMINS
No. 12378
LICENSED
PROFESSIONAL ENGINEER
1/25/23

STATE OF NEW HAMPSHIRE
NEIL A. HANSEN
No. 15527
LICENSED
PROFESSIONAL ENGINEER
1/25/23

SCALE IN FEET
0 60' 120'
GRAPHIC SCALE

Proposed Advanced Manufacturing Facility

Aviation Avenue Group, LLC

100 New Hampshire Avenue
Portsmouth, NH

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CHECKED:	NAH
APPROVED:	PMC

OVERALL SITE PLAN

SCALE: AS SHOWN

C-102

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SCALE IN FEET
0 40' 80'
GRAPHIC SCALE

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SITE PLAN

SCALE: AS SHOWN

C-102.1

RESET EXISTING CURB
PROPOSED CONCRETE TIP DOWN RAMP WITH DETECTABLE WARNING PANEL
BEGIN VGC MEET/MATCH EXISTING
END VGC MEET/MATCH EXISTING
BEGIN VGC MEET/MATCH EXISTING
END VGC MEET/MATCH EXISTING
PROPOSED CROSSWALK (COORD W/ PDA & DPW)
AIRPORT DISTRICT
PEASE INDUSTRIAL DISTRICT
BEGIN VGC MEET/MATCH EXISTING
VGC
VGC
VGC
STOP
APPROX LIMIT OF ZONING DISTRICT BOUNDARY LINE
30'R
PROPOSED 5.5' WIDE CONCRETE SIDEWALK
PROPOSED CONCRETE TIP DOWN RAMP WITH DETECTABLE WARNING PANEL
RESET EXISTING CURB
PROPOSED MILL AND OVERLAY
9 POTENTIAL FUTURE PARKING SPACES
PROPOSED RECONSTRUCTED PAVEMENT SECTION
PROPOSED STANDARD DUTY PAVEMENT SECTION
PROPOSED DOUBLE YELLOW LANE LINE (TYP)
PROPOSED SNOW STORAGE (TYP)
PROPOSED HEAVY DUTY PAVEMENT SECTION
PROPOSED TRAILER STORAGE AREA
SGC
END VGC BEGIN SGC WITH CURB TRANSITION
45'R
22'R
55'
190'
20'R
PROPOSED WALL (COORD W/ BLDG DWGS)
PROPOSED CONCRETE TIP DOWN RAMP WITH DETECTABLE WARNING PANEL
PROPOSED CONCRETE TIP DOWN RAMP WITH DETECTABLE WARNING PANEL
BEGIN VGC MEET/MATCH EXISTING
END VGC MEET/MATCH EXISTING
PROPOSED R7-1 "NO PARKING" SIGN
PROPOSED R1-1 "STOP" SIGN, BAR & LEGEND
PROPOSED CONCRETE TIP DOWN RAMP WITH DETECTABLE WARNING PANEL
RESET EXISTING CURB
160'
6 PROPOSED LOADING DOCKS
PROPOSED WALL (COORD W/ BLDG DWGS)
END SGC MEET @ BLDG
END SGC MEET @ BLDG
PROPOSED BIKE RACK (TYP OF 3)
PROPOSED RECLAIMED AND RE-PAVED
PROPOSED TRASH COMPACTOR (COORD W/ BLDG DWGS)
PROPOSED R7-8 "RESERVED" & R7-8A "VAN ACCESSIBLE" SIGNS
PROPOSED AT GRADE LOADING BAY
2 PROPOSED BOX TRUCK LOADING DOCKS
RESET EXISTING CURB
257'
57'
177'
OFFICE 9,072 SF
PROPOSED 5.5' WIDE CONCRETE SIDEWALK
PROPOSED 5.5' WIDE CONCRETE SIDEWALK
TAX MAP 308 LOT 1
±10.9 ACRES
(±474,300 SF)
PROPOSED ADVANCED MANUFACTURING OVERALL BUILDING FOOTPRINT:
±209,750 SF
C-102.1
C-102.2
6 SPACES
22 SPACES
21 SPACES
27 SPACES
23 SPACES
24'
18'
9'
TH=58.8'

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TAX MAP 308 LOT 1
±10.9 ACRES
(±474,300 SF)

C-102.1
C-102.2

PROPOSED ADVANCED MANUFACTURING
OVERALL BUILDING FOOTPRINT:
±209,750 SF

PROPOSED EGRESS (TYP)

PROPOSED GENERATOR PAD (COORD W/ BLDG DWGS)

PROPOSED TRANSFORMER PAD (COORD W/ EVERSOURCE)

PROPOSED 5.5' WIDE CONCRETE SIDEWALK

PROPOSED 5.5' WIDE CONCRETE SIDEWALK

PROPOSED RECLAIMED AND RE-PAVED

257'

57'

171'

OFFICE
9,072 SF

PROPOSED AT GRADE LOADING BAY

2 PROPOSED BOX TRUCK LOADING DOCKS

PROPOSED TRASH COMPACTER (COORD W/ BLDG DWGS)

END SGC MEET @ BLDG

PROPOSED R7-8 "RESERVED" & R7-8A "VAN ACCESSIBLE" SIGNS

PROPOSED R7-8 "RESERVED" SIGN

END SGC MEET @ BLDG

PROPOSED DOUBLE YELLOW LANE LINE (TYP)

6 PROPOSED LOADING DOCKS

PROPOSED WALL (COORD W/ BLDG DWGS)

PROPOSED BIKE RACK (TYP OF 3)

PROPOSED R7-1 "NO PARKING" SIGN

BEGIN VGC MEET/MATCH EXISTING

PROPOSED CONCRETE TIP DOWN RAMP WITH DETECTABLE WARNING PANEL

PROPOSED STANDARD DUTY PAVEMENT SECTION

END VGC MEET/MATCH EXISTING

PROPOSED R1-1 "STOP" SIGN, BAR & LEGEND

END VGC BEGIN SGC WITH CURB TRANSITION

PROPOSED CONCRETE TIP DOWN RAMP WITH DETECTABLE WARNING PANEL AND FLUSH VGC

PROPOSED CONCRETE TIP DOWN RAMP WITH DETECTABLE WARNING PANEL

PROPOSED WALL (COORD W/ BLDG DWGS)

125 SPACES

18 SPACES

9'

24'

55'

PROPOSED 5.5' WIDE CONCRETE SIDEWALK

PROPOSED SNOW STORAGE (TYP)

9 POTENTIAL FUTURE PARKING SPACES

BEGIN VGC MEET/MATCH EXISTING

END VGC BEGIN SGC WITH CURB TRANSITION

PROPOSED HEAVY DUTY PAVEMENT SECTION

PROPOSED TRAILER STORAGE AREA

PROPOSED CONCRETE TIP DOWN RAMP WITH DETECTABLE WARNING PANEL

PROPOSED CONCRETE TIP DOWN RAMP WITH DETECTABLE WARNING PANEL

PROPOSED CROSSWALK (COORD W/ PDA & DPW)

PROPOSED MILL AND OVERLAY

Tighe&Bond

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SCALE IN FEET
0 40' 80'
GRAPHIC SCALE

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SITE PLAN

SCALE: AS SHOWN

C-102.2

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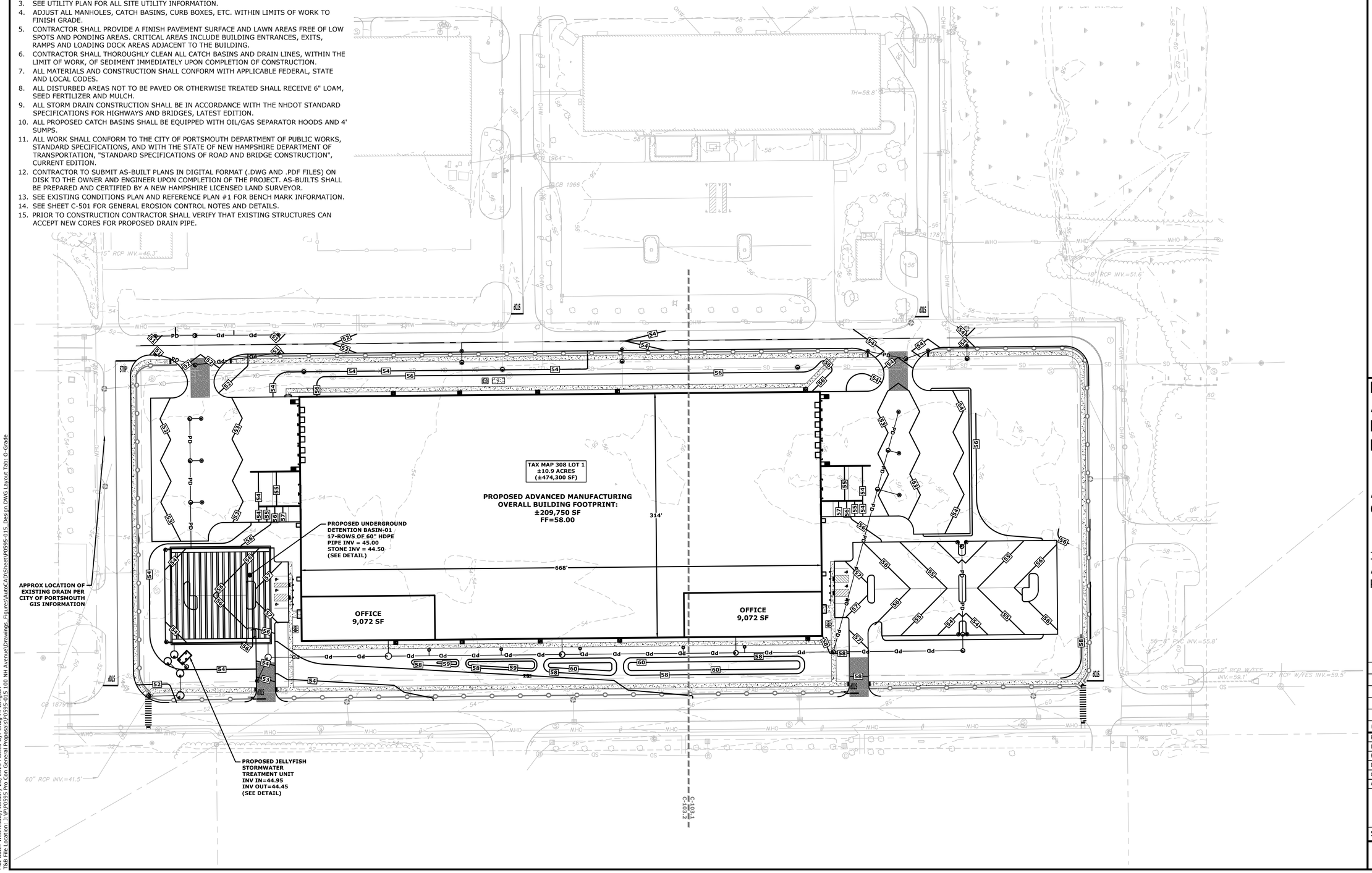
GRADING AND DRAINAGE & EROSION CONTROL NOTES:

1. COMPACTION REQUIREMENTS:
   - BELOW PAVED OR CONCRETE AREAS 95%
   - TRENCH BEDDING MATERIAL AND SAND BLANKET BACKFILL 95%
   - BELOW LOAM AND SEED AREAS 90%
   - * ALL PERCENTAGES OF COMPACTION SHALL BE OF THE MAXIMUM DRY DENSITY AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED AND CONTROLLED IN ACCORDANCE WITH ASTM D-1557, METHOD C FIELD DENSITY TESTS SHALL BE MADE IN ACCORDANCE WITH ASTM D-1556 OR ASTM-2922.
2. ALL STORM DRAINAGE PIPES SHALL BE HIGH DENSITY POLYETHYLENE (HANCOR HI-Q, ADS N-12 OR EQUAL), UNLESS OTHERWISE SPECIFIED.
3. SEE UTILITY PLAN FOR ALL SITE UTILITY INFORMATION.
4. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
5. CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE AND LAWN AREAS FREE OF LOW SPOTS AND PONDING AREAS. CRITICAL AREAS INCLUDE BUILDING ENTRANCES, EXITS, RAMPS AND LOADING DOCK AREAS ADJACENT TO THE BUILDING.
6. CONTRACTOR SHALL THOROUGHLY CLEAN ALL CATCH BASINS AND DRAIN LINES, WITHIN THE LIMIT OF WORK, OF SEDIMENT IMMEDIATELY UPON COMPLETION OF CONSTRUCTION.
7. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, STATE AND LOCAL CODES.
8. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM, SEED FERTILIZER AND MULCH.
9. ALL STORM DRAIN CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE NHDOT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, LATEST EDITION.
10. ALL PROPOSED CATCH BASINS SHALL BE EQUIPPED WITH OIL/GAS SEPARATOR HOODS AND 4' SUMPS.
11. ALL WORK SHALL CONFORM TO THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS, STANDARD SPECIFICATIONS, AND WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION, "STANDARD SPECIFICATIONS OF ROAD AND BRIDGE CONSTRUCTION", CURRENT EDITION.
12. CONTRACTOR TO SUBMIT AS-BUILT PLANS IN DIGITAL FORMAT (.DWG AND .PDF FILES) ON DISK TO THE OWNER AND ENGINEER UPON COMPLETION OF THE PROJECT. AS-BUILTS SHALL BE PREPARED AND CERTIFIED BY A NEW HAMPSHIRE LICENSED LAND SURVEYOR.
13. SEE EXISTING CONDITIONS PLAN AND REFERENCE PLAN #1 FOR BENCH MARK INFORMATION.
14. SEE SHEET C-501 FOR GENERAL EROSION CONTROL NOTES AND DETAILS.
15. PRIOR TO CONSTRUCTION CONTRACTOR SHALL VERIFY THAT EXISTING STRUCTURES CAN ACCEPT NEW CORES FOR PROPOSED DRAIN PIPE.

LEGEND

- PROPOSED DRAIN LINE
- EXISTING MAJOR CONTOUR LINE
- EXISTING MINOR CONTOUR LINE
- PROPOSED CONTOUR LINE
- PROPOSED CATCH BASIN
- PROPOSED YARD DRAIN
- PROPOSED DRAIN MANHOLE
- APPROX EXISTING SPOT GRADE
- PROPOSED SPOT GRADE



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PATRICK CRIMMINS No. 12378 LICENSED PROFESSIONAL ENGINEER — STATE OF NEW HAMPSHIRE
1/25/23

NEIL A. HANSEN No. 15227 LICENSED PROFESSIONAL ENGINEER — STATE OF NEW HAMPSHIRE
1/25/23

SCALE IN FEET
0 60' 120'
GRAPHIC SCALE

Proposed Advanced Manufacturing Facility

Aviation Avenue Group, LLC

100 New Hampshire Avenue
Portsmouth, NH

MARK	DATE	DESCRIPTION
B	1/25/2023	TAC Resubmission
A	12/19/2022	TAC Submission

PROJECT NO:	P0595-015
DATE:	12/19/2022
FILE:	P0595-015_DESIGN.DWG
DRAWN BY:	CML
CHECKED:	NAH
APPROVED:	PMC

OVERALL GRADING, DRAINAGE & EROSION CONTROL PLAN

SCALE: AS SHOWN

C-103

Last Save Date: January 24, 2023 5:03 PM By: CML
Plot Date: Wednesday, January 25, 2023 2:20 PM By: Craig M. Langdon
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Tighe&Bond

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STATE OF NEW HAMPSHIRE
PATRICK CRIMMINS
No. 12378
LICENSED PROFESSIONAL ENGINEER
1/25/23

STATE OF NEW HAMPSHIRE
NEIL A. HANSEN
No. 15527
LICENSED PROFESSIONAL ENGINEER
1/25/23

SCALE IN FEET
0 40' 80'
GRAPHIC SCALE

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APPROVED:	PMC

GRADING, DRAINAGE & EROSION CONTROL PLAN

SCALE: AS SHOWN

C-103.1

Last Save Date: January 24, 2023 5:02 PM By: CML
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TAX MAP 308 LOT 1
±10.9 ACRES
(±474,300 SF)

PROPOSED ADVANCED MANUFACTURING
OVERALL BUILDING FOOTPRINT:
±209,750 SF

C-103.1
C-103.2

PCB-16
RIM=53.90
INV OUT=50.10 NE

11 LF 12" HDPE
@ S=0.009

REPLACE CATCH BASIN FRAME & GRATE WITH DRAIN MANHOLE FRAME & COVER SET RIM TO ELEV=55.15

CONNECT NEW 12" HDPE INTO EXISTING STRUCTURE @ ELEV=50.00

RESET RIM TO ELEV=55.30

CONNECT NEW 12" HDPE TO EXISTING RCP @ ELEV=48.35 (CONTRACTOR TO CONFIRM CONNECTION ELEVATION PRIOR TO CONSTRUCTION)

PCB-17
RIM=52.85
INV IN=48.30 SW
INV OUT=48.20 NE

10 LF 12" HDPE
@ S=0.010

CONNECT NEW 12" HDPE INTO EXISTING STRUCTURE @ ELEV=48.10

9 LF 12" HDPE
@ S=0.006

REPLACE CATCH BASIN FRAME & GRATE WITH DRAIN MANHOLE FRAME & COVER SET RIM TO ELEV=54.30

INV OUT=46.30 SE

6 LF 6" HDPE
@ S=0.033

PYD-02
RIM=57.20
INV OUT=52.20 NE

217 LF 36" HDPE
@ S=0.0025

6 LF 6" HDPE
@ S=0.033

PYD-03
RIM=57.20
INV OUT=52.20 NE

PROPOSED ROOF LEADER
17 LF 18" PVC @ S=0.029
INV @ BLDG=53.00
(COORD W/ BLDG DWGS)

PDMH-08 (6' DIA)
RIM=56.20
INV IN=45.75 NW
INV IN=52.50 SW
INV OUT=45.75 SE

6 LF 6" HDPE
@ S=0.033

PYD-04
RIM=57.20
INV OUT=52.20 NE

216 LF 42" HDPE
@ S=0.0021

6 LF 6" HDPE
@ S=0.033

PYD-05
RIM=57.20
INV OUT=52.20 NE

PDMH-09 (7' DIA)
RIM=56.20
INV IN=45.30 NW
INV IN=52.50 SW
INV OUT=45.30 SE

PROPOSED ROOF LEADER
17 LF 18" PVC @ S=0.029
INV @ BLDG=53.00
(COORD W/ BLDG DWGS)

OFFICE
9,072 SF

147 LF 48" HDPE
@ S=0.0014

PDMH-10 (7' DIA)
RIM=52.90
INV IN=47.75 E
INV IN=45.10 NW
INV OUT=45.00 SW

CB 1824
RIM ELEV.=54.7'
(A) 6" VCP INV.=50.2'
(B) 6" VCP INV.=49.1'
(1820) 12" RCP INV.=48'
(C) 12" RCP INV.=48'

CB 1820
RIM ELEV.=54.8'
(A) 6" VCP INV.=50'
(B) 6" VCP INV.=49.8'
(1824) 12" RCP INV.=48.9'

PROPOSED INLET PROTECTION BARRIER (TYP)

DMH 1823
RIM ELEV.=55.9'
(1822) 12" HDPE INV.=52.1'
(A) 15" HDPE INV.=52.0'
(1819) 18" HDPE INV.=52.0'

CB 1822
RIM ELEV.=55.1'
(NO VISIBLE INV. FULL OF WATER)
WATER ELEV.=52.1'
SUMP ELEV.=48.9'

PROPOSED SILT SOCK (TYP)

CB 1855
RIM ELEV.=52.7'
(A) 12" HDPE INV.=46.6'
(1853) 12" HDPE INV.=46.5'
BOTTOM OF CHANNEL=46.6'

CB 1853
RIM ELEV.=52.6'
(A) 6" VCP INV.=47.8'
(B) 6" VCP INV.=47.8'
(1855) 12" RCP INV.=47'
SUMP ELEV.=47'

PROPOSED SILT SOCK (TYP)

RESET RIM TO ELEV=54.50

FF: 58.00
BOTTOM OF LOADING DOCK: 54.00

FF: 58.00
BOTTOM OF LOADING DOCK: 55.50

PROPOSED UNDERGROUND DETENTION BASIN-01
17-ROWS OF 60" HDPE
PIPE INV = 45.00
STONE INV = 44.50
(SEE DETAIL)

TOC: 57.85
BOC: 57.35

FF: 58.00

PCB-18
RIM=50.95
INV OUT=46.80 SE

PCB-22
RIM=50.95
INV OUT=47.25 SE

104 LF 12" HDPE
@ S=0.005

103 LF 12" HDPE
@ S=0.005

CB 2144
RIM ELEV.=50.8'
(A) 6" VCP INV.=46.3'
(1902) 12" RCP INV.=46.3'
(B) 12" RCP INV.=46.1'

CORE INTO EXISTING STRUCTURE TO ACCEPT NEW 12" HDPE @ ELEV=46.30

PROPOSED STABILIZED CONSTRUCTION EXIT

CORE INTO EXISTING STRUCTURE TO ACCEPT NEW 12" HDPE @ ELEV=46.70

REPLACE CATCH BASIN FRAME & GRATE WITH DRAIN MANHOLE FRAME & COVER SET RIM TO ELEV=52.00

52.20

CB 1902
RIM ELEV.=50.9'
(A) 6" VCP INV.=47.2'
(2144) 12" RCP INV.=46.6'

CORE INTO EXISTING STRUCTURE TO ACCEPT NEW 12" HDPE @ ELEV=46.70

47 LF 12" HDPE
@ S=0.005

REPLACE CATCH BASIN FRAME & GRATE WITH DRAIN MANHOLE FRAME & COVER SET RIM TO ELEV=52.20

PCB-21
RIM=50.95
INV OUT=46.95 NW

PCB-20
RIM=50.95
INV OUT=46.73 N

RESET CURB INLET FRAME AND GRATE

PDMH-11 (4' DIA)
RIM=52.20
INV IN=45.75 NW
INV IN=45.75 SW
INV OUT=45.65 NE

PCB-09
RIM=52.10
INV OUT=45.85 SE

50 LF 12" HDPE
@ S=0.005

13 LF 12" HDPE
@ S=0.008

13 LF 12" HDPE
@ S=0.008

13 LF 12" HDPE
@ S=0.008

52.75

49 LF 12" HDPE
@ S=0.000

49 LF 12" HDPE
@ S=0.005

PCB-08
RIM=52.10
INV OUT=46.10 SE

PCB-10
RIM=52.10
INV OUT=45.50 SE

PDMH-12 (4' DIA)
RIM=52.20
INV IN=45.40 NW
INV IN=45.40 SW
INV OUT=45.30 NE

PDMH-18 (4' DIA)
RIM=52.20
INV IN=46.00 NW
INV OUT=46.00 NE

RESET CURB INLET FRAME AND GRATE

6 LF 12" HDPE
@ S=0.017

PCB-11
RIM=53.50
INV OUT=48.50 NW

POS-01 (SEE DETAIL)
RIM=54.35
INV IN=45.00 SW
INV OUT=45.65 E
INV OUT=45.00 N

4 LF 48" HDPE
@ S=0.050

PDMH-13
RIM=53.95
INV IN=45.45 W
INV OUT=45.35 N

CB 1893
RIM ELEV.=52.9'
(A) 6" VCP INV.=47.8'
(B) 12" RCP INV.=47.7'
NOTE: "B" DOES NOT AIM TOWARD CB 1895
SUMP ELEV.=47.7'

CB 1895
RIM ELEV.=52.0'
(A) 12" RCP INV.=46.9'
(B) 12" RCP INV.=46.8'

CB 1896
RIM ELEV.=50.2'
(A) 12" RCP INV.=47.1'

CB 1898
RIM ELEV.=51.7'
(1897) 12" RCP INV.=46.7'

CB 1897
RIM ELEV.=51.7'
(1898)12" RCP INV.=46.3'
(A) 12" RCP INV.=46.5'

15 LF 48" HDPE

56 LF 18" HDPE
@ S=0.005

4 LF 24" HDPE
@ S=0.013

4 LF 24" HDPE
@ S=0.012

PROPOSED JELLYFISH STORMWATER TREATMENT UNIT
INV IN=44.95
INV OUT=44.45
(SEE DETAIL)

6 LF 12" HDPE
@ S=0.017

PCB-12
RIM=53.50
INV OUT=48.50 NW

10 LF 60" HDPE

53.50

57.70

54.90

52.65

30 LF 12" HDPE
@ S=0.005

PCB-13
RIM=52.90
INV OUT=47.90 W

PROPOSED STABILIZED CONSTRUCTION EXIT

PDMH-14 (4' DIA)
RIM=54.10
INV IN=44.40 S
INV OUT=44.30 E

6 LF 24" HDPE
@ S=0.008

PDMH-16 (8' DIA)
RIM=53.90
INV IN=44.65 S
INV IN=44.25 W
INV OUT=44.15 NE

20 LF 48" HDPE
@ S=0.005

CONNECT EXISTING 36" RCP TO NEW MANHOLE @ ELEV=±44.05 (VERIFY EXISTING INVERT ELEVATION IN FIELD)

PDMH-17 (8' DIA)
RIM=52.10
INV IN=44.05 NW
INV IN=44.05 SW
INV OUT=43.95 SE

35 LF 48" HDPE
@ S=0.021

14 LF 48" HDPE
@ S=0.050

DMH 1925
RIM ELEV.=52.2'
(A) 12" PCP RECESSED, UNABLE TO MEAS.
(B) 36" RCP INV.=43.7'
(C) 36" RCP INV.=43.5'
(OUTFALL) 60" RCP INV.=41.7'

CORE INTO EXISTING STRUCTURE TO ACCEPT NEW 48" HDPE @ ELEV=43.20 (SEE G&D NOTE #15)

RESET RIM TO ELEV=51.55

60" RCP INV.=41.5'

CB 1879

DMH 1947
RIM ELEV.=56.7'
(1945) RECESSED
(1951) 28" ACP INV.=48.8'
(1697) 28" ACP INV.=48.6'
(2136) 42" RCP INV.=48.4'

CB 1846
RIM ELEV.=53.8'
(A) 12" RCP INV.=49.5'
BROKEN BOTTOM=49.6'

CB 1966

CB 1964

CB 1965
RIM ELEV.=55.3'
(1964) 12" RCP INV.=50.8'
(A) 12" RCP INV.=50.7'

CB 2138
RIM ELEV.=54.8'
(A) 12" RCP INV.=51.4'

DMH 2136
RIM ELEV.=54.2'
(5379) 24" RCP INV.=47.0'
(A) 42" RCP INV.=46.9'
(1947) 42" RCP INV.=46.7'

CB 2137
RIM ELEV.=52.7'
(A) 8" VCP INV.=48.6'
(B) 12" RCP INV.=48.1'
(C) 8" VCP INV.=48.1'
(D) 12" RCP INV.=48.1'

DMH 2145
RIM ELEV.=52.6'

CB 1929
(E) DMH 1697

CB 1598

CB 1931

CB 1932

CB 1945

DMH 1951

CONC. INLET

CB 1952

CB 1953

CB 1972
RIM ELEV.=54.4'
(1971) 12" RCP INV.=49.6'
DIRT=49.6

CB 1971
RIM ELEV.=54.3'
(1972) 12" RCP INV.=49.3'
(1970) 12" RCP INV.=48.9'

DMH 1970
RIM ELEV.=54.4'
(A) 12" RCP INV.=49.2'
(1971) 12" RCP INV.=48.9'
(B) 15" RCP TOP BELL=49.9'
DIRT=48.9'

U.P.?

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SCALE IN FEET
0 40' 80'
GRAPHIC SCALE

Proposed Advanced Manufacturing Facility

Aviation Avenue Group, LLC

100 New Hampshire Avenue
Portsmouth, NH

STATE OF NEW HAMPSHIRE
PATRICK CRIMMINS
No. 12378
LICENSED PROFESSIONAL ENGINEER
1/25/23

STATE OF NEW HAMPSHIRE
NEIL A. HANSEN
No. 15527
LICENSED PROFESSIONAL ENGINEER
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CHECKED:	NAH
APPROVED:	PMC

GRADING, DRAINAGE & EROSION CONTROL PLAN

SCALE: AS SHOWN

C-103.2

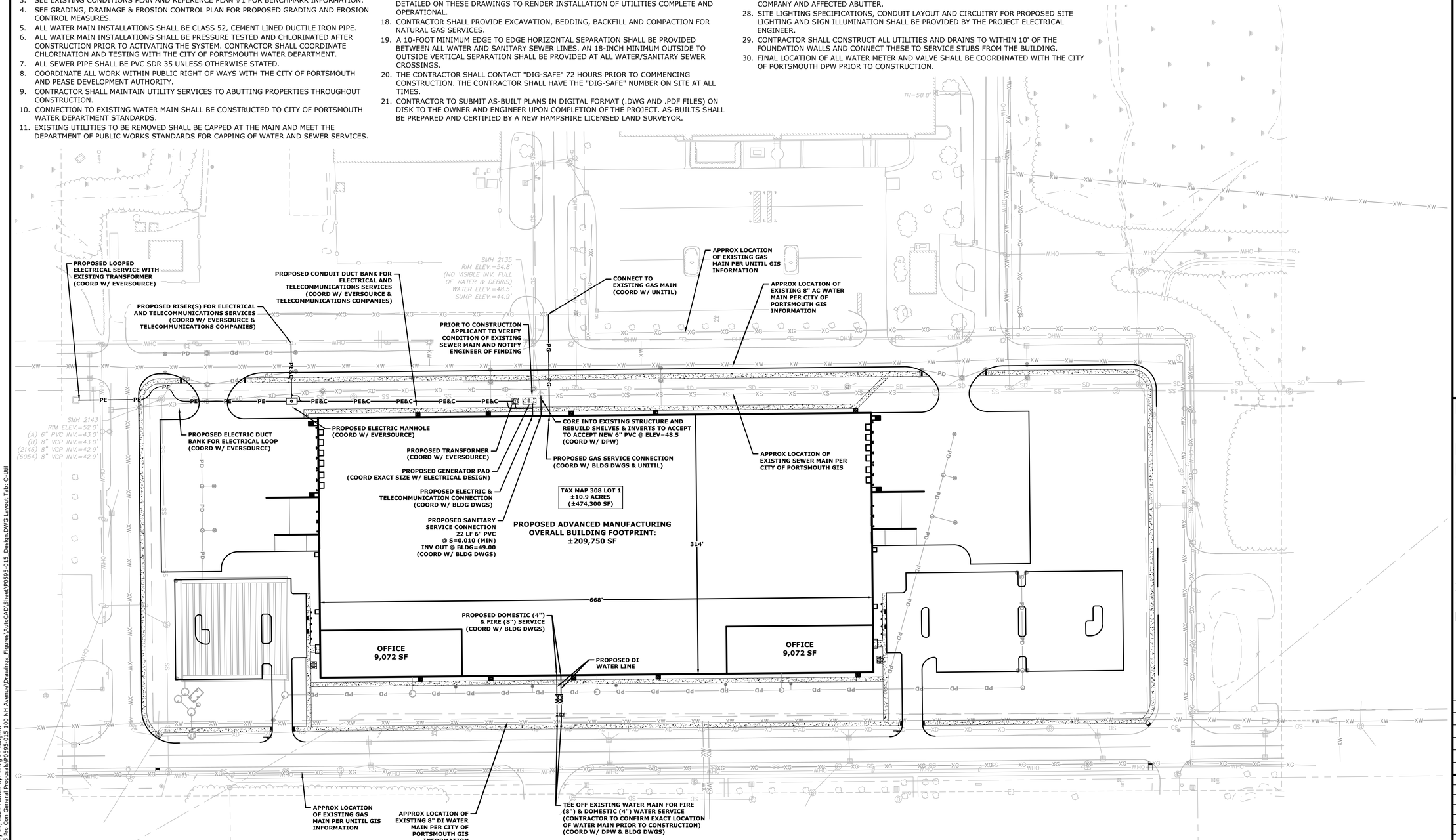
Last Save Date: January 24, 2023 5:03 PM By: CML
Plot Date: January 25, 2023 Plotted by: Craig M. Langton
T&B File Location: J:\P\P0595 Pro Con General Proposals\P0595-015 100 NH Avenue\Drawings, Figures\AutoCAD\Sheet\P0595-015_Design.DWG Layout Tab: Grade-2

UTILITY NOTES:

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE AND THE LOCATIONS ARE NOT GUARANTEED BY THE OWNER OR ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR EXISTING UTILITIES, AND RELOCATE EXISTING UTILITIES REQUIRED TO COMPLETE THE WORK AT NO ADDITIONAL COST TO THE OWNER.
2. COORDINATE ALL UTILITY WORK WITH APPROPRIATE UTILITY COMPANY.
   - NATURAL GAS - UNITIL / NORTHERN UTILITIES
   - WATER - CITY OF PORTSMOUTH
   - SEWER - CITY OF PORTSMOUTH
   - ELECTRIC - EVERSOURCE
   - COMMUNICATIONS - FAIRPOINT COMMUNICATIONS
3. SEE EXISTING CONDITIONS PLAN AND REFERENCE PLAN #1 FOR BENCHMARK INFORMATION.
4. SEE GRADING, DRAINAGE & EROSION CONTROL PLAN FOR PROPOSED GRADING AND EROSION CONTROL MEASURES.
5. ALL WATER MAIN INSTALLATIONS SHALL BE CLASS 52, CEMENT LINED DUCTILE IRON PIPE.
6. ALL WATER MAIN INSTALLATIONS SHALL BE PRESSURE TESTED AND CHLORINATED AFTER CONSTRUCTION PRIOR TO ACTIVATING THE SYSTEM. CONTRACTOR SHALL COORDINATE CHLORINATION AND TESTING WITH THE CITY OF PORTSMOUTH WATER DEPARTMENT.
7. ALL SEWER PIPE SHALL BE PVC SDR 35 UNLESS OTHERWISE STATED.
8. COORDINATE ALL WORK WITHIN PUBLIC RIGHT OF WAYS WITH THE CITY OF PORTSMOUTH AND PEASE DEVELOPMENT AUTHORITY.
9. CONTRACTOR SHALL MAINTAIN UTILITY SERVICES TO ABUTTING PROPERTIES THROUGHOUT CONSTRUCTION.
10. CONNECTION TO EXISTING WATER MAIN SHALL BE CONSTRUCTED TO CITY OF PORTSMOUTH WATER DEPARTMENT STANDARDS.
11. EXISTING UTILITIES TO BE REMOVED SHALL BE CAPPED AT THE MAIN AND MEET THE DEPARTMENT OF PUBLIC WORKS STANDARDS FOR CAPPING OF WATER AND SEWER SERVICES.
12. ALL ELECTRICAL MATERIAL WORKMANSHIP SHALL CONFORM TO THE NATIONAL ELECTRIC CODE, LATEST EDITION, AND ALL APPLICABLE STATE AND LOCAL CODES.
13. THE EXACT LOCATION OF NEW UTILITY SERVICES AND CONNECTIONS SHALL BE COORDINATED WITH THE BUILDING DRAWINGS AND THE APPLICABLE UTILITY COMPANIES.
14. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
15. ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES TO FACILITATE PULLING CABLES.
16. THE CONTRACTOR SHALL OBTAIN, PAY FOR, AND COMPLY WITH ALL REQUIRED PERMITS, ARRANGE FOR ALL INSPECTIONS, AND SUBMIT COPIES OF ACCEPTANCE CERTIFICATES TO THE OWNER PRIOR TO THE COMPLETION OF THIS PROJECT.
17. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL MANHOLES, BOXES, FITTINGS, CONNECTORS, COVER PLATES, AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THESE DRAWINGS TO RENDER INSTALLATION OF UTILITIES COMPLETE AND OPERATIONAL.
18. CONTRACTOR SHALL PROVIDE EXCAVATION, BEDDING, BACKFILL AND COMPACTION FOR NATURAL GAS SERVICES.
19. A 10-FOOT MINIMUM EDGE TO EDGE HORIZONTAL SEPARATION SHALL BE PROVIDED BETWEEN ALL WATER AND SANITARY SEWER LINES. AN 18-INCH MINIMUM OUTSIDE TO OUTSIDE VERTICAL SEPARATION SHALL BE PROVIDED AT ALL WATER/SANITARY SEWER CROSSINGS.
20. THE CONTRACTOR SHALL CONTACT "DIG-SAFE" 72 HOURS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL HAVE THE "DIG-SAFE" NUMBER ON SITE AT ALL TIMES.
21. CONTRACTOR TO SUBMIT AS-BUILT PLANS IN DIGITAL FORMAT (.DWG AND .PDF FILES) ON DISK TO THE OWNER AND ENGINEER UPON COMPLETION OF THE PROJECT. AS-BUILTS SHALL BE PREPARED AND CERTIFIED BY A NEW HAMPSHIRE LICENSED LAND SURVEYOR.
22. SAW CUT AND REMOVE PAVEMENT AND CONSTRUCT PAVEMENT TRENCH PATCH FOR ALL PROPOSED UTILITIES LOCATED IN EXISTING PAVEMENT AREAS TO REMAIN
23. HYDRANTS, GATE VALVES, FITTINGS, ETC. SHALL MEET THE REQUIREMENTS OF THE CITY OF PORTSMOUTH / PEASE FIRE DEPARTMENT.
24. COORDINATE TESTING OF SEWER CONSTRUCTION WITH THE CITY OF PORTSMOUTH.
25. ALL SEWER PIPE WITH LESS THAN 6' OF COVER IN PAVED AREAS OR LESS THAT 4' OF COVER IN UNPAVED AREAS SHALL BE INSULATED.
26. CONTRACTOR SHALL COORDINATE ALL ELECTRIC WORK INCLUDING BUT NOT LIMITED TO: CONDUIT CONSTRUCTION, MANHOLE CONSTRUCTION, UTILITY POLE CONSTRUCTION, OVERHEAD WIRE RELOCATION, AND TRANSFORMER CONSTRUCTION WITH POWER COMPANY.
27. CONTRACTOR SHALL PHASE UTILITY CONSTRUCTION, PARTICULARLY WATER MAIN AND GAS MAIN CONSTRUCTION AS TO MAINTAIN CONTINUOUS SERVICE TO ABUTTING PROPERTIES. CONTRACTOR SHALL COORDINATE TEMPORARY SERVICES TO ABUTTERS WITH THE UTILITY COMPANY AND AFFECTED ABUTTER.
28. SITE LIGHTING SPECIFICATIONS, CONDUIT LAYOUT AND CIRCUITRY FOR PROPOSED SITE LIGHTING AND SIGN ILLUMINATION SHALL BE PROVIDED BY THE PROJECT ELECTRICAL ENGINEER.
29. CONTRACTOR SHALL CONSTRUCT ALL UTILITIES AND DRAINS TO WITHIN 10' OF THE FOUNDATION WALLS AND CONNECT THESE TO SERVICE STUBS FROM THE BUILDING.
30. FINAL LOCATION OF ALL WATER METER AND VALVE SHALL BE COORDINATED WITH THE CITY OF PORTSMOUTH DPW PRIOR TO CONSTRUCTION.

LEGEND

- PS — PROPOSED SEWER LINE
- PG — PROPOSED GAS LINE
- PC — PROPOSED COMMUNICATIONS LINE
- PE — PROPOSED ELECTRIC LINE
- PE&C — PROPOSED ELECTRIC & COMMUNICATIONS LINE
- PW — PROPOSED WATER LINE
- PROPOSED WATER GATE VALVE
- PROPOSED ELECTRIC MANHOLE
- PROPOSED SEWER MANHOLE



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STATE OF NEW HAMPSHIRE — PATRICK CRIMMINS — No. 12378 — LICENSED PROFESSIONAL ENGINEER — 1/25/23

STATE OF NEW HAMPSHIRE — NEIL A. HANSEN — No. 15227 — LICENSED PROFESSIONAL ENGINEER — 1/25/23

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UTILITY PLAN

SCALE: AS SHOWN

C-104

Last Save Date: January 24, 2023 5:03 PM By: CML
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T&B File Location: J:\P\P0595 Pro Con General Proposals\P0595-015 100 NH Avenue\Drawings_Figures\AutoCAD\Sheet\P0595-015_Design.DWG Layout Tab: O-Util

LANDSCAPE NOTES:

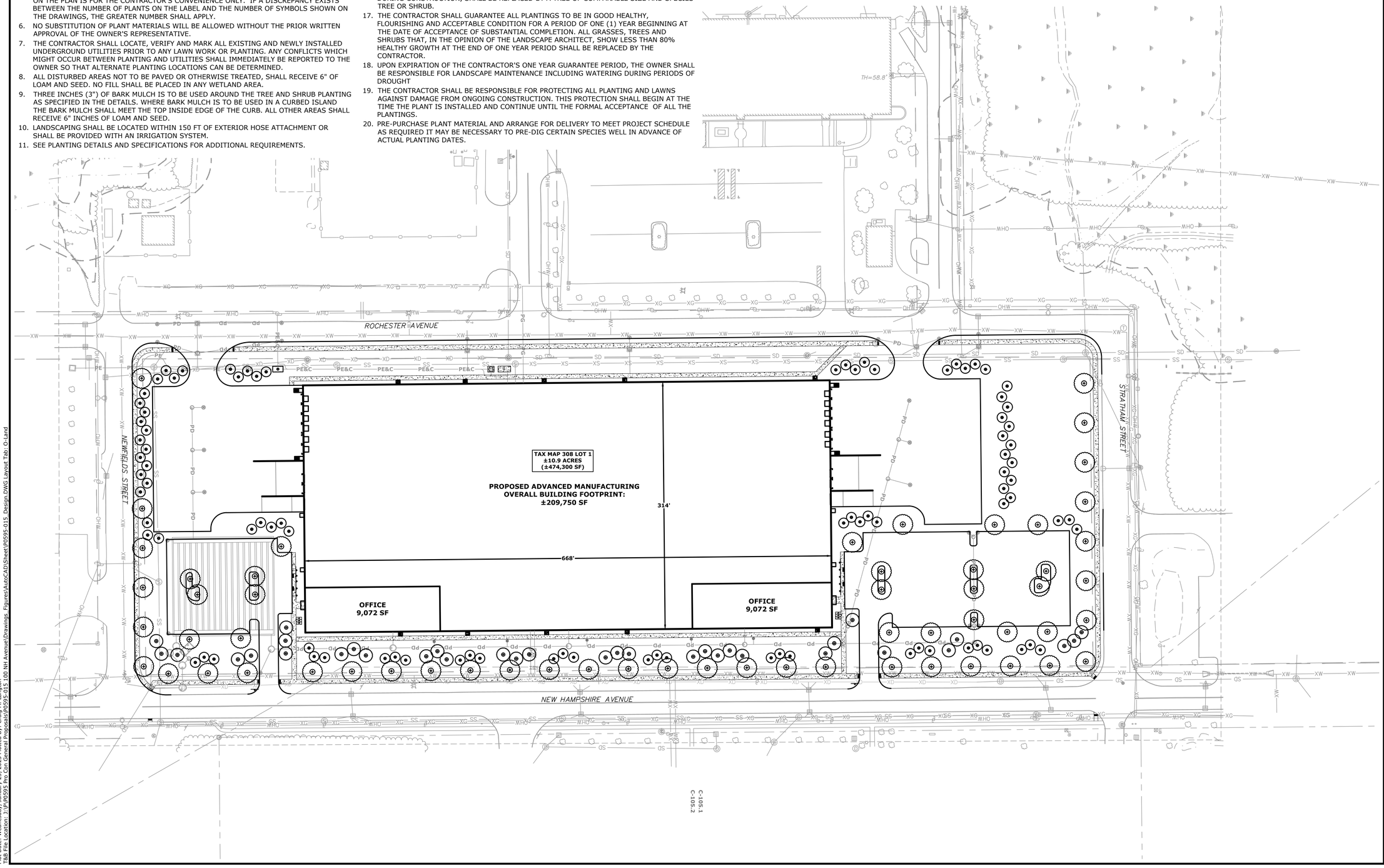
1. THE CONTRACTOR SHALL FURNISH AND PLANT ALL PLANTS IN QUANTITIES AS SHOWN ON THIS PLAN. NO SUBSTITUTIONS WILL BE PERMITTED UNLESS APPROVED BY OWNER. ALL PLANTS SHALL BE NURSERY GROWN.
2. ALL PLANTS SHALL BE NURSERY GROWN AND PLANTS AND WORKMANSHIP SHALL CONFORM TO THE AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS, INCLUDING BUT NOT LIMITED TO SIZE, HEALTH, SHAPE, ETC., AND SHALL BE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO ARRIVAL ON-SITE AND AFTER PLANTING.
3. PLANT STOCK SHALL BE GROWN WITHIN THE HARDINESS ZONES 4 THRU 7 ESTABLISHED BY THE PLANT HARDINESS ZONE MAP, MISCELLANEOUS PUBLICATIONS NO. 814, AGRICULTURAL RESEARCH SERVICE, UNITED STATES DEPARTMENT AGRICULTURE, LATEST REVISION.
4. PLANT MATERIAL SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE AS TO THE ORIGINAL PLANTING GRADE PRIOR TO DIGGING.
5. THE NUMBER OF EACH INDIVIDUAL PLANT TYPE AND SIZE PROVIDED IN THE PLANT LIST OR ON THE PLAN IS FOR THE CONTRACTOR'S CONVENIENCE ONLY. IF A DISCREPANCY EXISTS BETWEEN THE NUMBER OF PLANTS ON THE LABEL AND THE NUMBER OF SYMBOLS SHOWN ON THE DRAWINGS, THE GREATER NUMBER SHALL APPLY.
6. NO SUBSTITUTION OF PLANT MATERIALS WILL BE ALLOWED WITHOUT THE PRIOR WRITTEN APPROVAL OF THE OWNER'S REPRESENTATIVE.
7. THE CONTRACTOR SHALL LOCATE, VERIFY AND MARK ALL EXISTING AND NEWLY INSTALLED UNDERGROUND UTILITIES PRIOR TO ANY LAWN WORK OR PLANTING. ANY CONFLICTS WHICH MIGHT OCCUR BETWEEN PLANTING AND UTILITIES SHALL IMMEDIATELY BE REPORTED TO THE OWNER SO THAT ALTERNATE PLANTING LOCATIONS CAN BE DETERMINED.
8. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED, SHALL RECEIVE 6" OF LOAM AND SEED. NO FILL SHALL BE PLACED IN ANY WETLAND AREA.
9. THREE INCHES (3") OF BARK MULCH IS TO BE USED AROUND THE TREE AND SHRUB PLANTING AS SPECIFIED IN THE DETAILS. WHERE BARK MULCH IS TO BE USED IN A CURBED ISLAND THE BARK MULCH SHALL MEET THE TOP INSIDE EDGE OF THE CURB. ALL OTHER AREAS SHALL RECEIVE 6" INCHES OF LOAM AND SEED.
10. LANDSCAPING SHALL BE LOCATED WITHIN 150 FT OF EXTERIOR HOSE ATTACHMENT OR SHALL BE PROVIDED WITH AN IRRIGATION SYSTEM.
11. SEE PLANTING DETAILS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
12. TREE STAKES SHALL REMAIN IN PLACE FOR NO LESS THAN 6 MONTHS AND NO MORE THAN 1 YEAR.
13. PLANTING SHALL BE COMPLETED FROM APRIL 15TH THROUGH OCTOBER 1ST. NO PLANTING DURING JULY AND AUGUST UNLESS SPECIAL PROVISIONS ARE MADE FOR DROUGHT.
14. TREES SHALL BE PRUNED IN ACCORDANCE WITH THE LATEST EDITION OF ANSI A300 'TREES, SHRUBS AND OTHER WOOD PLANT MAINTENANCE STANDARD PRACTICES.
15. ALL PLANTS SHALL BE WATERED THOROUGHLY TWICE DURING THE FIRST 24 HOUR PERIOD AFTER PLANTING. ALL PLANTS SHALL BE WATERED WEEKLY, OR MORE OFTEN, IF NECESSARY DURING THE FIRST GROWING SEASON. LANDSCAPE CONTRACTOR SHALL COORDINATE WATERING SCHEDULE WITH OWNER DURING THE ONE (1) YEAR GUARANTEE PERIOD.
16. EXISTING TREES AND SHRUBS SHOWN ON THE PLAN ARE TO REMAIN UNDISTURBED. ALL EXISTING TREES AND SHRUBS SHOWN TO REMAIN ARE TO BE PROTECTED WITH A 4-FOOT SNOW FENCE PLACED AT THE DRIP LINE OF THE BRANCHES OR AT 8 FEET MINIMUM FROM THE TREE TRUNK. ANY EXISTING TREE OR SHRUB SHOWN TO REMAIN, WHICH IS REMOVED DURING CONSTRUCTION, SHALL BE REPLACED BY A TREE OF COMPARABLE SIZE AND SPECIES TREE OR SHRUB.
17. THE CONTRACTOR SHALL GUARANTEE ALL PLANTINGS TO BE IN GOOD HEALTHY, FLOURISHING AND ACCEPTABLE CONDITION FOR A PERIOD OF ONE (1) YEAR BEGINNING AT THE DATE OF ACCEPTANCE OF SUBSTANTIAL COMPLETION. ALL GRASSES, TREES AND SHRUBS THAT, IN THE OPINION OF THE LANDSCAPE ARCHITECT, SHOW LESS THAN 80% HEALTHY GROWTH AT THE END OF ONE YEAR PERIOD SHALL BE REPLACED BY THE CONTRACTOR.
18. UPON EXPIRATION OF THE CONTRACTOR'S ONE YEAR GUARANTEE PERIOD, THE OWNER SHALL BE RESPONSIBLE FOR LANDSCAPE MAINTENANCE INCLUDING WATERING DURING PERIODS OF DROUGHT
19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL PLANTING AND LAWNS AGAINST DAMAGE FROM ONGOING CONSTRUCTION. THIS PROTECTION SHALL BEGIN AT THE TIME THE PLANT IS INSTALLED AND CONTINUE UNTIL THE FORMAL ACCEPTANCE OF ALL THE PLANTINGS.
20. PRE-PURCHASE PLANT MATERIAL AND ARRANGE FOR DELIVERY TO MEET PROJECT SCHEDULE AS REQUIRED IT MAY BE NECESSARY TO PRE-DIG CERTAIN SPECIES WELL IN ADVANCE OF ACTUAL PLANTING DATES.

PLANT SCHEDULE				
CODE	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
TREES				
AF	ACER FREEMANII	AUTUM BLAZE MAPLE	2-1/2" - 3"	CALIPER
GD	GYMNOCLADUS DIOICUS 'ESPROSSO'	KENTUCKY COFFEE	2-1/2" - 3"	CALIPER
LT	LIRIODENDRON TULIPIFERA	TULIP TREE	2-1/2" - 3"	CALIPER
QR	QUERCUS RUBRA	RED OAK	2-1/2" - 3"	CALIPER
MS	MALUS 'SUTYZAM'	SUGAR TYME CRABAPPLE	2" - 2-1/2"	CALIPER
MP	MALUS 'PRAIRIE FIRE'	PRAIRIE FIRE CRABAPPLE	2" - 2-1/2"	CALIPER
CK	CORNUS KOUSA	KOUSA DOGWOOD	2" - 2-1/2"	CALIPER
PG	PICEA GLAUCA	WHITE SPRUCE	7' - 8' HT	
PN	CASUARINA EQUISETIFOLIA	AUSTRALIAN PINE	7' - 8' HT	

LEGEND

PROPOSED DECIDUOUS TREE (W/ BARK MULCH)

PROPOSED DECICUOUS TREE (W/O BARK MULCH)



Tighe&Bond

STATE OF NEW HAMPSHIRE
PATRICK CRIMMINS
No. 12378
LICENSED
PROFESSIONAL ENGINEER
1/25/23

STATE OF NEW HAMPSHIRE
NEIL A. HANSEN
No. 15227
LICENSED
PROFESSIONAL ENGINEER
1/25/23

SCALE IN FEET
0 60' 120'
GRAPHIC SCALE

Proposed Advanced Manufacturing Facility

Aviation Avenue Group, LLC

100 New Hampshire Avenue
Portsmouth, NH

MARK	DATE	DESCRIPTION
B	1/25/2023	TAC Resubmission
A	12/19/2022	TAC Submission

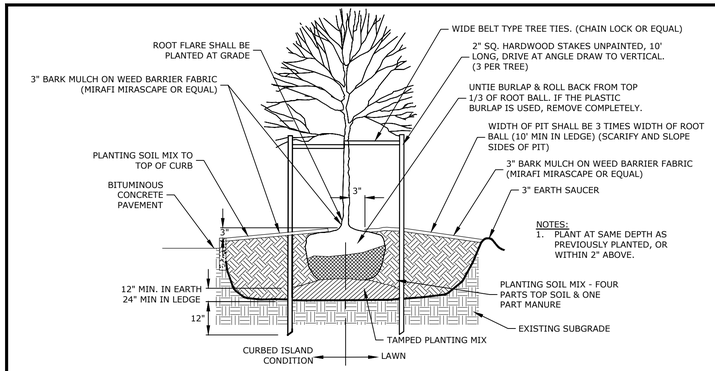
PROJECT NO:	P0595-015
DATE:	12/19/2022
FILE:	P0595-015_DESIGN.DWG
DRAWN BY:	CML
CHECKED:	NAH
APPROVED:	PMC

OVERALL LANDSCAPE PLAN

SCALE: AS SHOWN

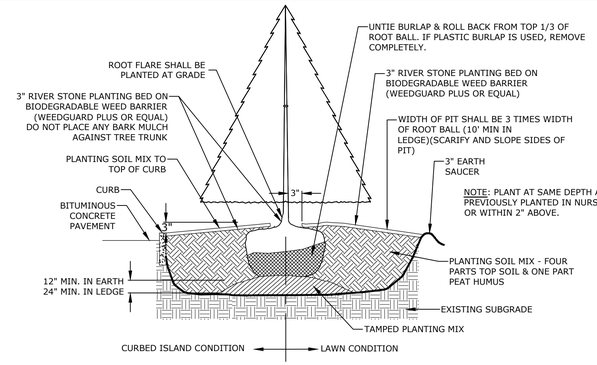
C-105

Last Save Date: January 24, 2023 5:03 PM By: CML
Plot Date: January 25, 2023 Plotted By: Craig M. Langton
T&B File Location: J:\P\P0595 Pro Con General Proposals\P0595-015 100 NH Avenue\Drawings, Figures\AutoCAD\Sheet\P0595-015_Design.DWG Layout Tab: O-Land



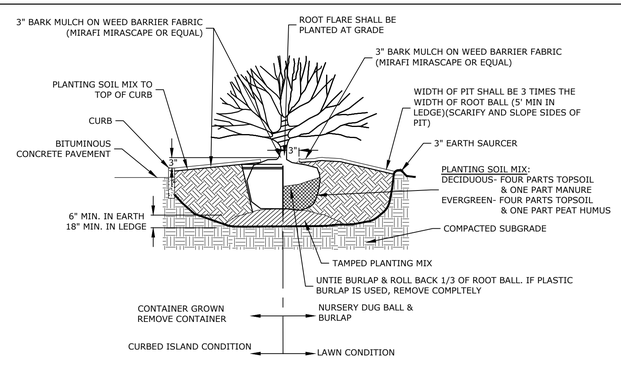
DECIDUOUS TREE PLANTING

NO SCALE



EVERGREEN TREE PLANTING

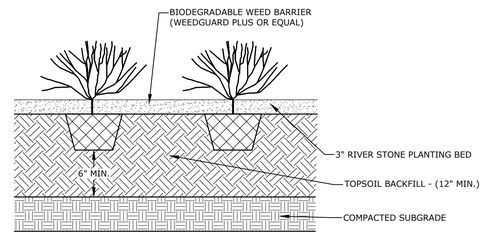
NO SCALE



NOTES:
1. PLANT AT SAME DEPTH AS PREVIOUSLY PLANTED, OR WITHIN 2" ABOVE.

SHRUB PLANTING

NO SCALE



PERENNIAL PLANTING

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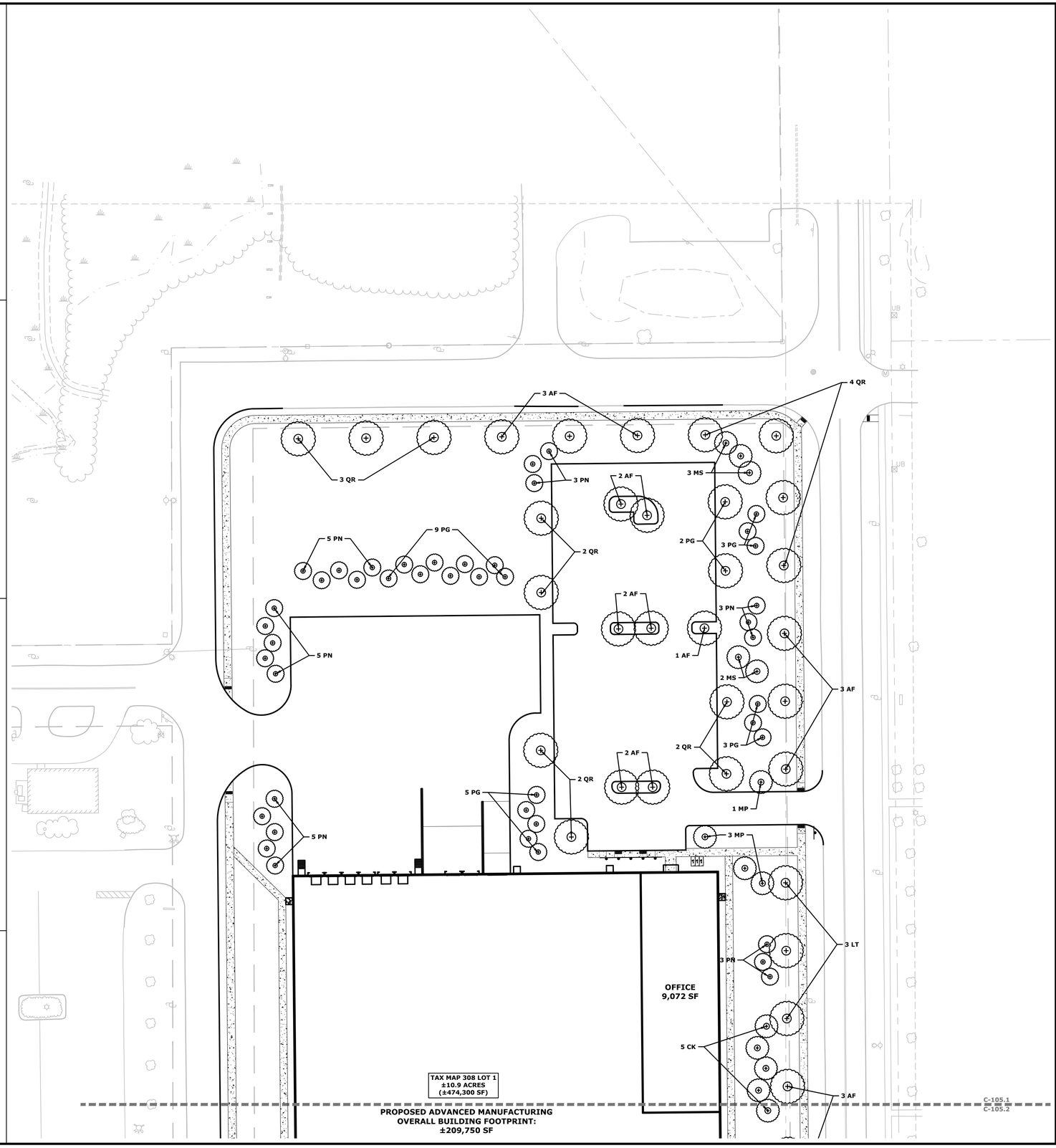

Tighe&Bond

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PATRICK CRIMMINS
No. 12378
LICENSED PROFESSIONAL ENGINEER
1/25/23

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NEIL A. HANSEN
No. 15527
LICENSED PROFESSIONAL ENGINEER
1/25/23

SCALE IN FEET
0 40' 80'
GRAPHIC SCALE

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Aviation Avenue Group, LLC

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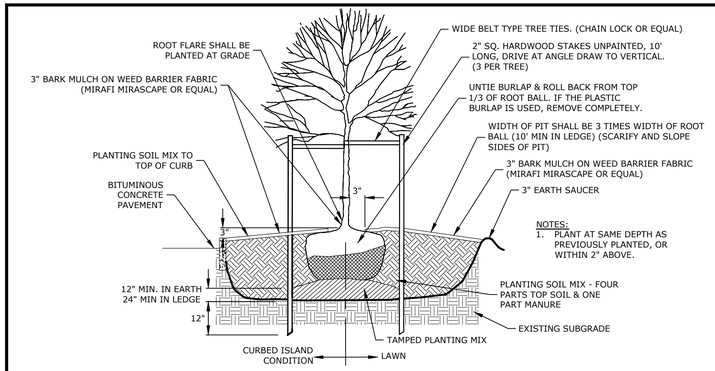
APPROVED:	PMC

LANDSCAPE PLAN

SCALE: AS SHOWN

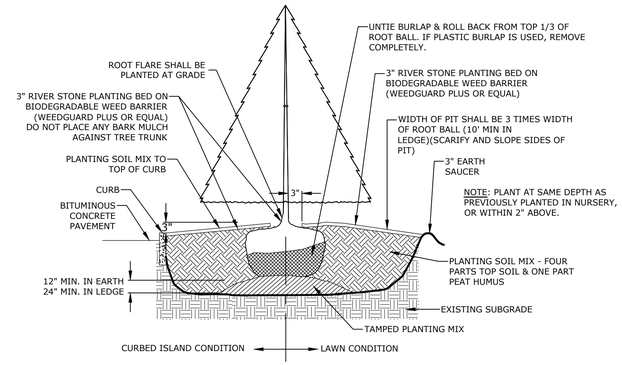
C-105.1

Last Save Date: January 24, 2023 5:03 PM By: CML
Plot Date: Wednesday, January 25, 2023 2:20 PM By: Craig M. Langton
File Location: J:\P\P0595 Pro Con General Proposals\P0595-015 100 NH Avenue\Drawings, Figures\AutoCAD\Sheet\P0595-015_Design.DWG Layout Tab: Land-1



DECIDUOUS TREE PLANTING

NO SCALE



EVERGREEN TREE PLANTING

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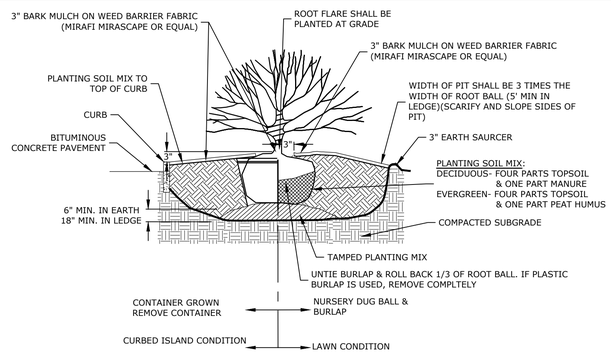

NOTES:
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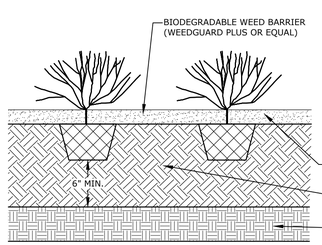
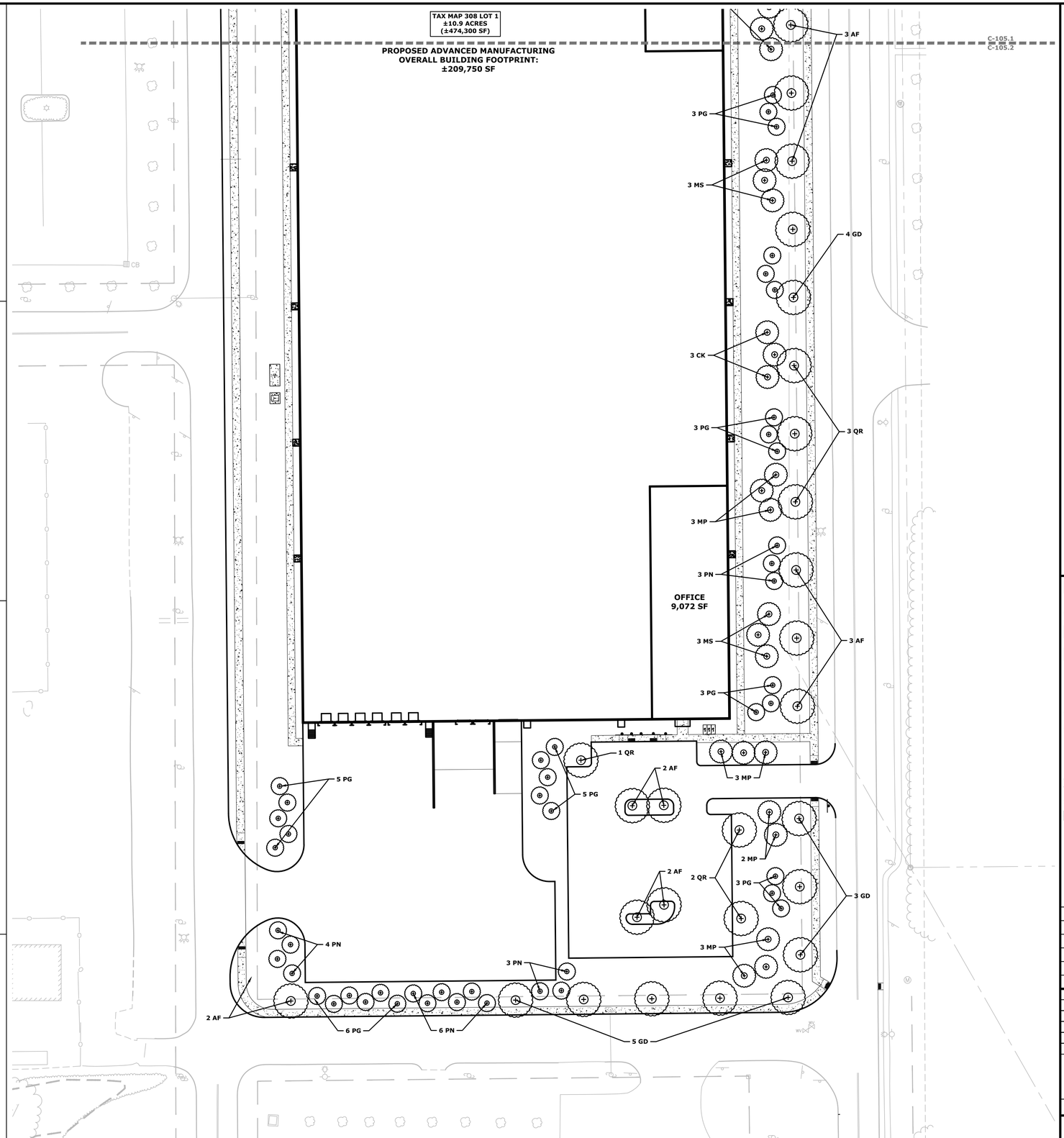
SHRUB PLANTING

NO SCALE



PERENNIAL PLANTING

NO SCALE



Tighe&Bond

SCALE IN FEET
0 40' 80'
GRAPHIC SCALE

Proposed Advanced Manufacturing Facility

Aviation Avenue Group, LLC

100 New Hampshire Avenue
Portsmouth, NH

MARK	DATE	DESCRIPTION
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DRAWN BY:	CML
CHECKED:	NAH
APPROVED:	PMC

LANDSCAPE PLAN

SCALE: AS SHOWN

C-105.2

Last Save Date: January 24, 2023 5:03 PM By: CML
Plot Date: January 25, 2023 Plotted By: Craig M. Langton
T&B File Location: J:\P\P0595 Pro Con General Proposals\P0595-015 100 NH Avenue\Drawings, Figures\AutoCAD\Sheet\P0595-015_Design.DWG Layout Tab: Land-2

GENERAL PROJECT INFORMATION

PROJECT LESSOR: PEASE DEVELOPMENT AUTHORITY
55 INTERNATIONAL DRIVE
PORTSMOUTH, NH 03801
PROJECT APPLICANT: AVIATION AVENUE GROUP, LLC
210 COMMERCE WAY, SUITE 300
PROJECT NAME: PROPOSED ADVANCED MANUFACTURING FACILITY
PROJECT ADDRESS: 80 ROCHESTER AVE (100 NEW HAMPSHIRE AVE)
PORTSMOUTH, NH 03801
PROJECT MAP / LOT: MAP 308 / LOT 1
PROJECT LATITUDE: 43°04'49.9"N
PROJECT LONGITUDE: 70°48'33.6"W

PROJECT DESCRIPTION

THE PROJECT CONSISTS OF THE CONSTRUCTION OR A NEW INDUSTRIAL WAREHOUSE ON A PREVIOUSLY DEVELOPED LOT THE WORK IS ANTICIPATED TO START IN SUMMER OF 2023, AND BE COMPLETED BY WINTER OF 2025.

DISTURBED AREA

THE TOTAL AREA TO BE DISTURBED IS APPROXIMATELY 11.4 ACRES.

SOIL CHARACTERISTICS

BASED ON THE NRCS WEB SOIL SURVEY FOR ROCKINGHAM COUNTY - NEW HAMPSHIRE. THE SOILS ON SITE CONSIST OF URBAN LAND AS THE SITE HAS BEEN PREVIOUSLY DEVELOPED AND THE HYDROLOGIC SOIL GROUP RATING(S) IS ASSUMED TO BE "C".

NAME OF RECEIVING WATERS

THE STORMWATER RUNOFF FROM THE SITE WILL BE DISCHARGED VIA OVERLAND FLOW TO A CLOSED DRAINAGE SYSTEM AND ULTIMATELY FLOWS TO NEWFIELDS DITCH.
(STATE WATERBODY ID: NHRIV600031001-10).

CONSTRUCTION SEQUENCE OF MAJOR ACTIVITIES:

1. CUT AND CLEAR TREES.
2. CONSTRUCT TEMPORARY AND PERMANENT SEDIMENT, EROSION AND DETENTION CONTROL FACILITIES. EROSION, SEDIMENT AND DETENTION MEASURES SHALL BE INSTALLED PRIOR TO ANY EARTH MOVING OPERATIONS THAT WILL INFLUENCE STORMWATER RUNOFF SUCH AS:
   - NEW CONSTRUCTION
   - CONTROL OF DUST
   - CONSTRUCTION OF ACCESS DRIVES
   - NEARNESS OF CONSTRUCTION SITE TO RECEIVING WATERS
   - CONSTRUCTION DURING LATE WINTER AND EARLY SPRING
3. ALL PERMANENT DITCHES, SWALES, DETENTION, RETENTION AND SEDIMENTATION BASINS TO BE STABILIZED USING THE VEGETATIVE AND NON-STRUCTURAL BMPS PRIOR TO DIRECTING RUNOFF TO THEM.
4. CLEAR AND DISPOSE OF DEBRIS.
5. CONSTRUCT TEMPORARY CULVERTS AND DIVERSION CHANNELS AS REQUIRED.
6. GRADE AND GRAVEL ROADWAYS AND PARKING AREAS - ALL ROADS AND PARKING AREA SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
7. BEGIN PERMANENT AND TEMPORARY SEEDING AND MULCHING. ALL CUT AND FILL SLOPES SHALL BE SEEDED AND MULCHED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
8. DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINS, DITCHES, PERIMETER EROSION CONTROL MEASURES, SEDIMENT TRAPS, ETC., MULCH AND SEED AS REQUIRED.
9. SEDIMENT TRAPS AND/OR BASINS SHALL BE USED AS NECESSARY TO CONTAIN RUNOFF UNTIL SOILS ARE STABILIZED.
10. FINISH PAVING ALL ROADWAYS AND PARKING LOTS.
11. INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES.
12. COMPLETE PERMANENT SEEDING AND LANDSCAPING.
13. REMOVE TRAPPED SEDIMENTS FROM COLLECTOR DEVICES AS APPROPRIATE AND THEN REMOVE TEMPORARY EROSION CONTROL MEASURES.

SPECIAL CONSTRUCTION NOTES:

1. THE CONSTRUCTION SEQUENCE MUST LIMIT THE DURATION AND AREA OF DISTURBANCE.
2. THE PROJECT IS TO BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES.

EROSION CONTROL NOTES:

1. ALL EROSION CONTROL MEASURES AND PRACTICES SHALL CONFORM TO THE "NEW HAMPSHIRE STORMWATER MANUAL VOLUME 3: EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION" PREPARED BY THE NHDES.
2. PRIOR TO ANY WORK OR SOIL DISTURBANCE, CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR EROSION CONTROL MEASURES AS REQUIRED IN THE PROJECT MANUAL.
3. CONTRACTOR SHALL INSTALL TEMPORARY EROSION CONTROL BARRIERS, INCLUDING HAY BALES, SILT FENCES, MULCH BERMS, SILT SACKS AND SILT SOCKS AS SHOWN IN THESE DRAWINGS AS THE FIRST ORDER OF WORK.
4. SILT SACK INLET PROTECTION SHALL BE INSTALLED IN ALL EXISTING AND PROPOSED CATCH BASIN INLETS WITHIN THE WORK LIMITS AND BE MAINTAINED FOR THE DURATION OF THE PROJECT.
5. PERIMETER CONTROLS INCLUDING SILT FENCES, MULCH BERM, SILT SOCK, AND/OR HAY BALE BARRIERS SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT UNTIL NON-PAVED AREAS HAVE BEEN STABILIZED.
6. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF CONSTRUCTION.
7. ALL DISTURBED AREAS NOT OTHERWISE BEING TREATED SHALL RECEIVE 6" LOAM, SEED AND FERTILIZER.
8. INSPECT ALL INLET PROTECTION AND PERIMETER CONTROLS WEEKLY AND AFTER EACH RAIN STORM OF 0.25 INCH OR GREATER. REPAIR/MODIFY PROTECTION AS NECESSARY TO MAXIMIZE EFFICIENCY OF FILTER. REPLACE ALL FILTERS WHEN SEDIMENT IS 1/3 THE FILTER HEIGHT.
9. CONSTRUCT EROSION CONTROL BLANKETS ON ALL SLOPES STEEPER THAN 3:1.

STABILIZATION:

1. AN AREA SHALL BE CONSIDERED STABLE WHEN ONE OF THE FOLLOWING HAS OCCURRED:
   A. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
   B. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
   C. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED;
   D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.;
   E. IN AREAS TO BE PAVED, "STABLE" MEANS THAT BASE COURSE GRAVELS MEETING THE REQUIREMENTS OF NHDOT STANDARD FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION, ITEM 304.2 HAVE BEEN INSTALLED.
2. WINTER STABILIZATION PRACTICES:
   A. ALL PROPOSED VEGETATED AREAS THAT DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS;
   B. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS;
   C. AFTER OCTOBER 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, OR IF CONSTRUCTION IS TO CONTINUE THROUGH THE WINTER SEASON BE CLEARED OF ANY ACCUMULATED SNOW AFTER EACH STORM EVENT;
3. STABILIZATION SHALL BE INITIATED ON ALL LOAM STOCKPILES, AND DISTURBED AREAS, WHERE CONSTRUCTION ACTIVITY SHALL NOT OCCUR FOR MORE THAN TWENTY-ONE (21) CALENDAR DAYS BY THE FOURTEENTH (14TH) DAY AFTER CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED IN THAT AREA. STABILIZATION MEASURES TO BE USED INCLUDE:
   A. TEMPORARY SEEDING;
   B. MULCHING.
4. ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.
5. WHEN CONSTRUCTION ACTIVITY PERMANENTLY OR TEMPORARILY CEASES WITHIN 100 FEET OF NEARBY SURFACE WATERS OR DELINEATED WETLANDS, THE AREA SHALL BE STABILIZED WITHIN SEVEN (7) DAYS OR PRIOR TO A RAIN EVENT. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN THESE AREAS, SILT FENCES, MULCH BERMS, HAY BALE BARRIERS AND ANY EARTH/DIKES SHALL BE REMOVED ONCE PERMANENT MEASURES ARE ESTABLISHED.
6. DURING CONSTRUCTION, RUNOFF WILL BE DIVERTED AROUND THE SITE WITH EARTH DIKES, PIPING OR STABILIZED CHANNELS WHERE POSSIBLE. SHEET RUNOFF FROM THE SITE WILL BE FILTERED THROUGH SILT FENCES, MULCH BERMS, HAY BALE BARRIERS, OR SILT SOCKS. ALL STORM DRAIN BASIN INLETS SHALL BE PROVIDED WITH FLARED END SECTIONS AND TRASH RACKS. THE SITE SHALL BE STABILIZED FOR THE WINTER BY OCTOBER 15.

DUST CONTROL:

1. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTROL DUST THROUGHOUT THE CONSTRUCTION PERIOD.
2. DUST CONTROL METHODS SHALL INCLUDE, BUT BE NOT LIMITED TO SPRINKLING WATER ON EXPOSED AREAS, COVERING LOADED DUMP TRUCKS LEAVING THE SITE, AND TEMPORARY MULCHING.
3. DUST CONTROL MEASURES SHALL BE UTILIZED SO AS TO PREVENT THE MIGRATION OF DUST FROM THE SITE TO ABUTTING AREAS.

STOCKPILES:

1. LOCATE STOCKPILES A MINIMUM OF 50 FEET AWAY FROM CATCH BASINS, SWALES, AND CULVERTS.
2. ALL STOCKPILES SHOULD BE SURROUNDED WITH TEMPORARY EROSION CONTROL MEASURES PRIOR TO THE ONSET OF PRECIPITATION.
3. PERIMETER BARRIERS SHOULD BE MAINTAINED AT ALL TIMES, AND ADJUSTED AS NEEDED TO ACCOMMODATE THE DELIVERY AND REMOVAL OF MATERIALS FROM THE STOCKPILE. THE INTEGRITY OF THE BARRIER SHOULD BE INSPECTED AT THE END OF EACH WORKING DAY.
4. PROTECT ALL STOCKPILES FROM STORMWATER RUN-OFF USING TEMPORARY EROSION CONTROL MEASURES SUCH AS BERMS, SILT SOCK, OR OTHER APPROVED PRACTICE TO PREVENT MIGRATION OF MATERIAL BEYOND THE IMMEDIATE CONFINES OF THE STOCKPILES.

OFF SITE VEHICLE TRACKING:

1. THE CONTRACTOR SHALL CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE(S) PRIOR TO ANY EXCAVATION ACTIVITIES.

VEGETATION:

1. TEMPORARY GRASS COVER:
   A. SEEDBED PREPARATION:
      a. APPLY FERTILIZER AT THE RATE OF 600 POUNDS PER ACRE OF 10-10-10. APPLY LIMESTONE (EQUIVALENT TO 50 PERCENT CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF THREE (3) TONS PER ACRE;
   B. SEEDING:
      a. UTILIZE ANNUAL RYE GRASS AT A RATE OF 40 LBS/ACRE;
      b. WHERE THE SOIL HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF TWO (2) INCHES BEFORE APPLYING FERTILIZER, LIME AND SEED;
      c. APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, OR HYDROSEEDER (SLURRY INCLUDING SEED AND FERTILIZER). HYDROSEEDINGS, WHICH INCLUDE MULCH, MAY BE LEFT ON SOIL SURFACE. SEEDING RATES MUST BE INCREASED 10% WHEN HYDROSEEDING;
   C. MAINTENANCE:
      a. TEMPORARY SEEDING SHALL BE PERIODICALLY INSPECTED. AT A MINIMUM, 95% OF THE SOIL SURFACE SHOULD BE COVERED BY VEGETATION. IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHALL BE MADE AND OTHER TEMPORARY MEASURES USED IN THE INTERIM (MULCH, FILTER BARRIERS, CHECK DAMS, ETC.).
2. PERMANENT MEASURES AND PLANTINGS:
   A. LIMESTONE SHALL BE THOROUGHLY INCORPORATED INTO THE LOAM LAYER AT A RATE OF THREE (3) TONS PER ACRE IN ORDER TO PROVIDE A PH VALUE OF 5.5 TO 6.5;
   B. FERTILIZER SHALL BE SPREAD ON THE TOP LAYER OF LOAM AND WORKED INTO THE SURFACE. FERTILIZER APPLICATION RATE SHALL BE 800 POUNDS PER ACRE OF 10-20-20 FERTILIZER;
   C. SOIL CONDITIONERS AND FERTILIZER SHALL BE APPLIED AT THE RECOMMENDED RATES AND SHALL BE THOROUGHLY WORKED INTO THE LOAM. LOAM SHALL BE RAKED UNTIL THE SURFACE IS FINELY PULVERIZED, SMOOTH AND EVEN, AND THEN COMPACTED TO AN EVEN SURFACE CONFORMING TO THE REQUIRED LINES AND GRADES WITH APPROVED ROLLERS WEIGHING BETWEEN 4-1/2 POUNDS AND 5-1/2 POUNDS PER INCH OF WIDTH;
   D. SEED SHALL BE SOWN AT THE RATE SHOWN BELOW. SOWING SHALL BE DONE ON A CALM, DRY DAY, PREFERABLY BY MACHINE, BUT IF BY HAND, ONLY BY EXPERIENCED WORKMEN. IMMEDIATELY BEFORE SEEDING, THE SOIL SHALL BE LIGHTLY RAKED. ONE HALF THE SEED SHALL BE SOWN IN ONE DIRECTION AND THE OTHER HALF AT RIGHT ANGLES TO THE ORIGINAL DIRECTION. IT SHALL BE LIGHTLY RAKED INTO THE SOIL TO A DEPTH NOT OVER 1/4 INCH AND ROLLED WITH A HAND ROLLER WEIGHING NOT OVER 100 POUNDS PER LINEAR FOOT OF WIDTH;
   E. HAY MULCH SHALL BE APPLIED IMMEDIATELY AFTER SEEDING AS INDICATED ABOVE;
   F. THE SURFACE SHALL BE WATERED AND KEPT MOIST WITH A FINE SPRAY AS REQUIRED, WITHOUT WASHING AWAY THE SOIL, UNTIL THE GRASS IS WELL ESTABLISHED. ANY AREAS WHICH ARE NOT SATISFACTORILY COVERED WITH GRASS SHALL BE RESEEDED, AND ALL NOXIOUS WEEDS REMOVED;
   G. THE CONTRACTOR SHALL PROTECT AND MAINTAIN THE SEEDED AREAS UNTIL ACCEPTED;
   H. A GRASS SEED MIXTURE CONTAINING THE FOLLOWING SEED REQUIREMENTS SHALL BE APPLIED AT THE INDICATED RATE:

SEED MIX	APPLICATION RATE	MINIMUM GERMINATION (%)	MINIMUM PURITY (%)
TALL FESCUE (*FESTUCA ARUNDINACEA)*	72 LBS/ACRE	85%	96%
SALTY ALKALI GRASS (*PUCCINELLIA TENUIFLORA)*	36 LBS/ACRE	85%	96%
RELIANT HARD FESCUE / CREEPING RED FESCUE	12 LBS/ACRE	85%	96%

   IN NO CASE SHALL THE WEED CONTENT EXCEED ONE (1) PERCENT BY WEIGHT. ALL SEED SHALL COMPLY WITH STATE AND FEDERAL SEED LAWS. SEEDING SHALL BE DONE NO LATER THAN SEPTEMBER 15. IN NO CASE SHALL SEEDING TAKE PLACE OVER SNOW.
3. DORMANT SEEDING (SEPTEMBER 15 TO FIRST SNOWFALL):
   A. FOLLOW PERMANENT MEASURES SLOPE, LIME, FERTILIZER AND GRADING REQUIREMENTS. APPLY SEED MIXTURE AT TWICE THE INDICATED RATE. APPLY MULCH AS INDICATED FOR PERMANENT MEASURES.

CONCRETE WASHOUT AREA:

1. THE FOLLOWING ARE THE ONLY NON-STORMWATER DISCHARGES ALLOWED. ALL OTHER NON-STORMWATER DISCHARGES ARE PROHIBITED ON SITE:
   A. THE CONCRETE DELIVERY TRUCKS SHALL, WHENEVER POSSIBLE, USE WASHOUT FACILITIES AT THEIR OWN PLANT OR DISPATCH FACILITY;
   B. IF IT IS NECESSARY, SITE CONTRACTOR SHALL DESIGNATE SPECIFIC WASHOUT AREAS AND DESIGN FACILITIES TO HANDLE ANTICIPATED WASHOUT WATER;
   C. CONTRACTOR SHALL LOCATE WASHOUT AREAS AT LEAST 150 FEET AWAY FROM STORM DRAINS, SWALES AND SURFACE WATERS OR DELINEATED WETLANDS;
   D. INSPECT WASHOUT FACILITIES DAILY TO DETECT LEAKS OR TEARS AND TO IDENTIFY WHEN MATERIALS NEED TO BE REMOVED.

ALLOWABLE NON-STORMWATER DISCHARGES:

1. FIRE-FIGHTING ACTIVITIES;
2. FIRE HYDRANT FLUSHING;
3. WATERS USED TO WASH VEHICLES WHERE DETERGENTS ARE NOT USED;
4. WATER USED TO CONTROL DUST;
5. POTABLE WATER INCLUDING UNCONTAMINATED WATER LINE FLUSHING;
6. ROUTINE EXTERNAL BUILDING WASH DOWN WHERE DETERGENTS ARE NOT USED;
7. PAVEMENT WASH WATERS WHERE DETERGENTS ARE NOT USED;
8. UNCONTAMINATED AIR CONDITIONING/COMPRESSOR CONDENSATION;
9. UNCONTAMINATED GROUND WATER OR SPRING WATER;
10. FOUNDATION OR FOOTING DRAINS WHICH ARE UNCONTAMINATED;
11. UNCONTAMINATED EXCAVATION DEWATERING;
12. LANDSCAPE IRRIGATION.

WASTE DISPOSAL:

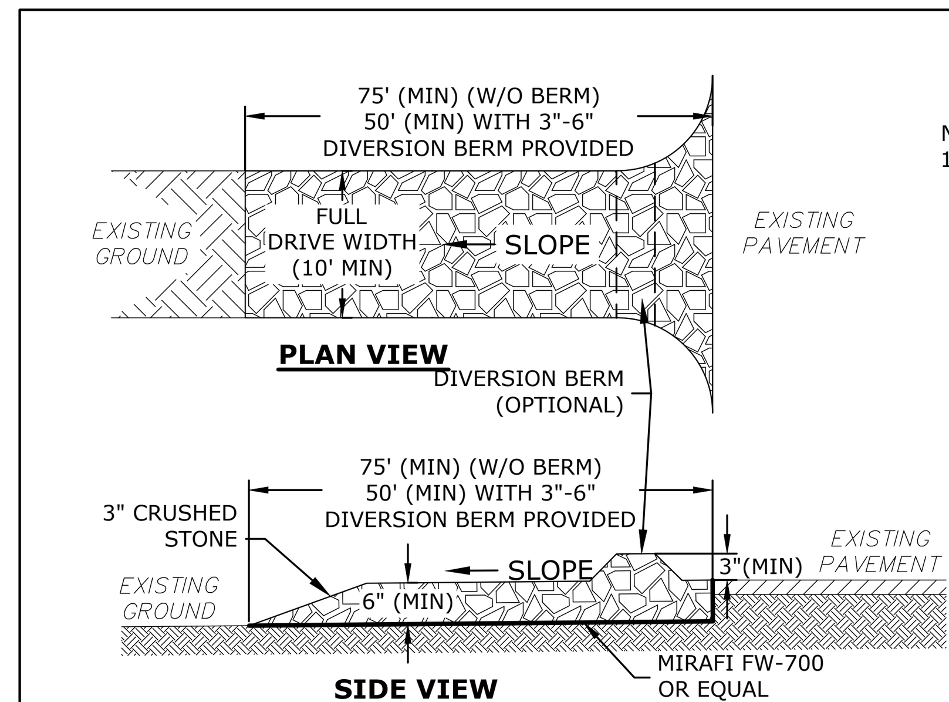
1. WASTE MATERIAL:
   A. ALL WASTE MATERIALS SHALL BE COLLECTED AND STORED IN SECURELY LIDDED RECEPTACLES. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE SHALL BE DEPOSITED IN A DUMPSTER;
   B. NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED ON SITE;
   C. ALL PERSONNEL SHALL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL BY THE SUPERINTENDENT.
2. HAZARDOUS WASTE:
   A. ALL HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER;
   B. SITE PERSONNEL SHALL BE INSTRUCTED IN THESE PRACTICES BY THE SUPERINTENDENT.
3. SANITARY WASTE:
   A. ALL SANITARY WASTE SHALL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONCE PER WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.

SPILL PREVENTION:

1. CONTRACTOR SHALL BE FAMILIAR WITH SPILL PREVENTION MEASURES REQUIRED BY LOCAL, STATE AND FEDERAL AGENCIES. AT A MINIMUM, CONTRACTOR SHALL FOLLOW THE BEST MANAGEMENT SPILL PREVENTION PRACTICES OUTLINED BELOW.
2. THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT SHALL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES DURING CONSTRUCTION TO STORMWATER RUNOFF:
   A. GOOD HOUSEKEEPING - THE FOLLOWING GOOD HOUSEKEEPING PRACTICE SHALL BE FOLLOWED ON SITE DURING CONSTRUCTION:
      a. ONLY SUFFICIENT AMOUNTS OF PRODUCTS TO DO THE JOB SHALL BE STORED ON SITE;
      b. ALL REGULATED MATERIALS STORED ON SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR PROPER (ORIGINAL IF POSSIBLE) CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE, ON AN IMPERVIOUS SURFACE;
      c. MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL SHALL BE FOLLOWED;
      d. THE SITE SUPERINTENDENT SHALL INSPECT DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS;
      e. SUBSTANCES SHALL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER;
      f. WHENEVER POSSIBLE ALL OF A PRODUCT SHALL BE USED UP BEFORE DISPOSING OF THE CONTAINER.
      g. THE TRAINING OF ON-SITE EMPLOYEES AND THE ON-SITE POSTING OF RELEASE RESPONSE INFORMATION DESCRIBING WHAT TO DO IN THE EVENT OF A SPILL OF REGULATED SUBSTANCES.
   B. HAZARDOUS PRODUCTS - THE FOLLOWING PRACTICES SHALL BE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS:
      a. PRODUCTS SHALL BE KEPT IN THEIR ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE;
      b. ORIGINAL LABELS AND MATERIAL SAFETY DATA SHALL BE RETAINED FOR IMPORTANT PRODUCT INFORMATION;
      c. SURPLUS PRODUCT THAT MUST BE DISPOSED OF SHALL BE DISCARDED ACCORDING TO THE MANUFACTURER'S RECOMMENDED METHODS OF DISPOSAL.
   C. PRODUCT SPECIFIC PRACTICES - THE FOLLOWING PRODUCT SPECIFIC PRACTICES SHALL BE FOLLOWED ON SITE:
      a. PETROLEUM PRODUCTS:
         - ALL ON SITE VEHICLES SHALL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE LEAKAGE;
         - PETROLEUM PRODUCTS SHALL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT BASED SUBSTANCES USED ON SITE SHALL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
         - SECURE FUEL STORAGE AREAS AGAINST UNAUTHORIZED ENTRY;
         - INSPECT FUEL STORAGE AREAS WEEKLY;
         - WHEREVER POSSIBLE, KEEP REGULATED CONTAINERS THAT ARE STORED OUTSIDE MORE THAN 50 FEET FROM SURFACE WATER AND STORM DRAINS, 75 FEET FROM PRIVATE WELLS, AND 400 FEET FROM PUBLIC WELLS;
         - COVER REGULATED CONTAINERS IN OUTSIDE STORAGE AREAS;
         - SECONDARY CONTAINMENT IS REQUIRED FOR CONTAINERS CONTAINING REGULATED SUBSTANCES STORED OUTSIDE, EXCEPT FOR ON PREMISE USE HEATING FUEL TANKS, OR ABOVEGROUND OR UNDERGROUND STORAGE TANKS OTHERWISE REGULATED.
         - THE FUEL HANDLING REQUIREMENTS SHALL INCLUDE:
           (1) EXCEPT WHEN IN USE, KEEP CONTAINERS CONTAINING REGULATED SUBSTANCES CLOSED AND SEALED;
           (2) PLACE DRIP PANS UNDER SPIGOTS, VALVES, AND PUMPS;
           (3) HAVE SPILL CONTROL AND CONTAINMENT EQUIPMENT READILY AVAILABLE IN ALL WORK AREAS;
           (4) USE FUNNELS AND DRIP PANS WHEN TRANSFERRING REGULATED SUBSTANCES;
           (5) PERFORM TRANSFERS OF REGULATED SUBSTANCES OVER AN IMPERVIOUS SURFACE.
         - FUELING AND MAINTENANCE OF EXCAVATION, EARTHMOVING AND OTHER CONSTRUCTION RELATED EQUIPMENT SHALL COMPLY WITH THE REGULATIONS OF THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES THESE REQUIREMENTS ARE SUMMARIZED IN WD-DWGB-22-6 BEST MANAGEMENT PRACTICES FOR FUELING AND MAINTENANCE OF EXCAVATION AND EARTHMOVING EQUIPMENT, OR ITS SUCCESSOR DOCUMENT.
           HTTPS://WWW.DES.NH.GOV/ORGANIZATION/COMMISSIONER/PIP/FACTSHEETS/DWGB/DOCUMENTS/DWGB-22-6.PDF
      b. FERTILIZERS:
         - FERTILIZERS USED SHALL BE APPLIED ONLY IN THE MINIMUM AMOUNTS DIRECTED BY THE SPECIFICATIONS;
         - ONCE APPLIED FERTILIZER SHALL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORMWATER;
         - STORAGE SHALL BE IN A COVERED SHED OR ENCLOSED TRAILERS. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER SHALL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.
         - PAINTS:
         - ALL CONTAINERS SHALL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE;
         - EXCESS PAINT SHALL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM;
         - EXCESS PAINT SHALL BE DISPOSED OF PROPERLY ACCORDING TO MANUFACTURER'S INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.
   D. SPILL CONTROL PRACTICES - IN ADDITION TO GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTION, THE FOLLOWING PRACTICES SHALL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:
      a. MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP SHALL BE CLEARLY POSTED AND SITE PERSONNEL SHALL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES;
      b. MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP SHALL BE KEPT IN THE MATERIAL STORAGE AREA ON SITE. EQUIPMENT AND MATERIALS SHALL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST AND PLASTIC OR METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE;
      c. ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY;
      d. THE SPILL AREA SHALL BE KEPT WELL VENTILATED AND PERSONNEL SHALL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE;
      e. SPILLS OF TOXIC OR HAZARDOUS MATERIAL SHALL BE REPORTED TO THE APPROPRIATE LOCAL, STATE OR FEDERAL AGENCIES AS REQUIRED;
      f. THE SITE SUPERINTENDENT RESPONSIBLE FOR DAY-TO-DAY SITE OPERATIONS SHALL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR.
   E. VEHICLE FUELING AND MAINTENANCE PRACTICE:
      a. CONTRACTOR SHALL MAKE AN EFFORT TO PERFORM EQUIPMENT/VEHICLE FUELING AND MAINTENANCE AT AN OFF-SITE FACILITY;
      b. CONTRACTOR SHALL PROVIDE AN ON-SITE FUELING AND MAINTENANCE AREA THAT IS CLEAN AND DRY;
      c. IF POSSIBLE THE CONTRACTOR SHALL KEEP AREA COVERED;
      d. CONTRACTOR SHALL KEEP A SPILL KIT AT THE FUELING AND MAINTENANCE AREA;
      e. CONTRACTOR SHALL REGULARLY INSPECT VEHICLES FOR LEAKS AND DAMAGE;
      f. CONTRACTOR SHALL USE DRIP PANS, DRIP CLOTHS, OR ABSORBENT PADS WHEN REPLACING SPENT FLUID.

EROSION CONTROL OBSERVATIONS AND MAINTENANCE PRACTICES

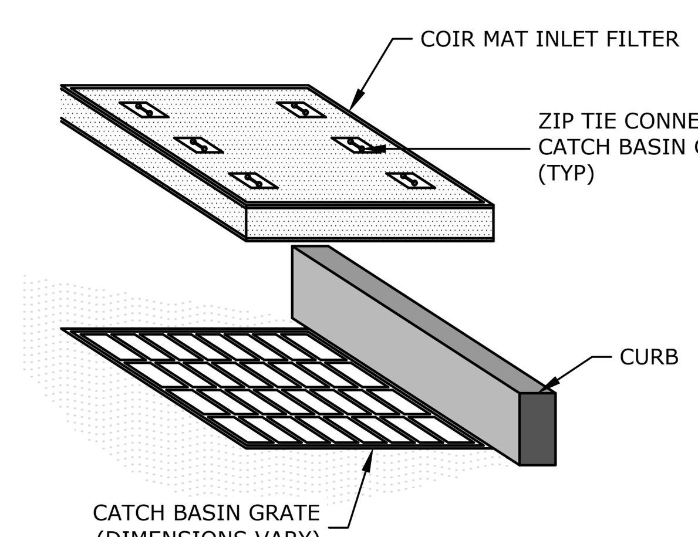
1. THIS PROJECT EXCEEDS ONE (1) ACRE OF DISTURBANCE AND THUS REQUIRES CONSTRUCTION GENERAL PERMIT (CGP), FILING OF AN NOTICE OF INTENT (NOI), AND THE PREPARATION OF A STORMWATER POLLUTION PREVENTION PLAN (SWPPP).
2. THE SWPPP SHALL BE PREPARED BY A QUALIFIED ENGINEER. THE CONTRACTOR SHALL BE FAMILIAR WITH THE SWPPP AND KEEP AN UPDATED COPY OF THE SWPPP ONSITE AT ALL TIMES.
3. THE FOLLOWING REPRESENTS THE GENERAL OBSERVATION AND REPORTING PRACTICES THAT SHALL BE FOLLOWED AS PART OF THIS PROJECT:
   A. OBSERVATIONS OF THE PROJECT FOR COMPLIANCE WITH THE SWPPP SHALL BE MADE BY A QUALIFIED PERSON AT LEAST ONCE A WEEK OR WITHIN 24 HOURS OF A STORM 0.25 INCHES OR GREATER;
   B. AN OBSERVATION REPORT SHALL BE MADE AFTER EACH OBSERVATION AND DISTRIBUTED TO THE ENGINEER, THE OWNER, AND THE CONTRACTOR;
   C. A REPRESENTATIVE OF THE SITE CONTRACTOR, SHALL BE RESPONSIBLE FOR MAINTENANCE AND REPAIR ACTIVITIES;
   D. IF A REPAIR IS NECESSARY, IT SHALL BE INITIATED WITHIN 24 HOURS OF REPORT.



NOTES:
1. THE EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF SEDIMENT FROM THE SITE. WHEN WASHING IS REQUIRED, IT SHALL BE DONE SO RUNOFF DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES, OR WATERWAYS

STABILIZED CONSTRUCTION EXIT

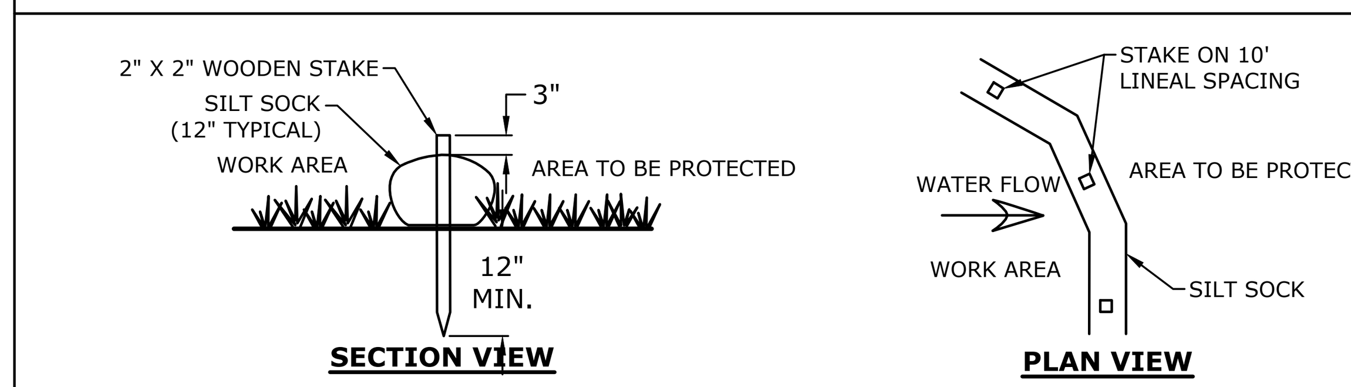
NO SCALE



NOTES:
1. COIR MAT INLET FILTER SHALL BE STORM WATER INLET FILTER BY BLOCKSOM & CO. OR APPROVED EQUAL.
2. INSTALL AND MAINTAIN INLET PROTECTION IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

INLET PROTECTION BARRIER

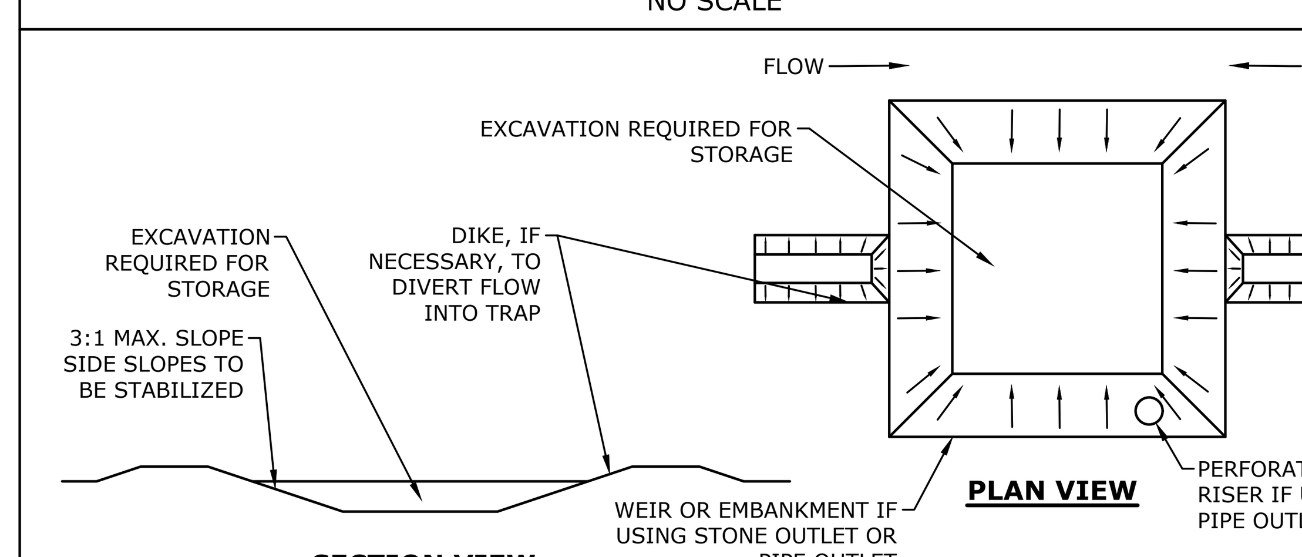
NO SCALE



NOTES:
1. SILT SOCK SHALL BE SILT SOXX BY FILTREXX OR APPROVED EQUAL.
2. SILT SOCK SHALL BE FILLED WITH FILTERMEDIA BY FILTREXX OR APPROVED EQUAL.
3. WHERE TWO SILT SOCKS ARE JOINED, A MINIMUM OF 2 FEET OF OVERLAP SHALL BE MAINTAINED.
4. SILT SOCKS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

SILT SOCK

NO SCALE

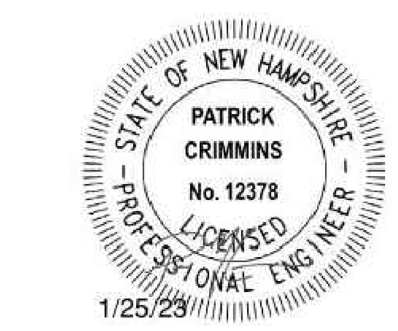


NOTES:
1. THE TRAP SHALL BE INSTALLED AS CLOSE TO THE DISTURBED AREA AS POSSIBLE.
2. THE MAXIMUM CONTRIBUTING AREA TO A SINGLE TRAP SHALL BE LESS THAN 5 ACRES.
3. THE MINIMUM VOLUME OF THE TRAP SHALL BE 3,600 CUBIC FEET OF STORAGE FOR EACH ACRE OF DRAINAGE AREA.
4. TRAP OUTLET SHALL BE MINIMUM OF ONE FOOT BELOW THE CREST OF THE TRAP.
5. TRAP SHALL DISCHARGE TO A STABILIZED AREA.
6. TRAP SHALL BE CLEANED WHEN 50 PERCENT OF THE ORIGINAL VOLUME IS FILLED.
7. MATERIALS REMOVED FROM THE TRAP SHALL BE PROPERLY DISPOSED OF AND STABILIZED.
8. SEDIMENT TRAPS MUST BE USED AS NEEDED TO CONTAIN RUNOFF UNTIL SOILS ARE STABILIZED.

SEDIMENT TRAP

NO SCALE

Tighe&Bond



Proposed Advanced Manufacturing Facility

Aviation Avenue Group, LLC

100 New Hampshire Avenue
Portsmouth, NH

MARK	DATE	DESCRIPTION
B	1/25/2023	TAC Resubmission
A	12/19/2022	TAC Submission

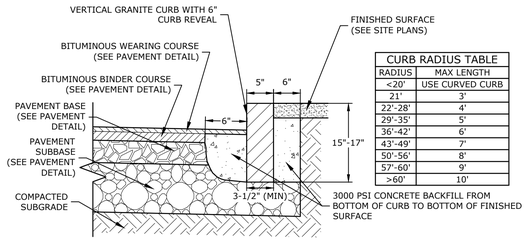
PROJECT NO:	P0595-015
DATE:	12/19/2022
FILE:	P0595-015_DETAILS.DWG
DRAWN BY:	CML
CHECKED:	NAH
APPROVED:	PMC

EROSION CONTROL NOTES & DETAILS SHEET

SCALE: AS SHOWN

C-501

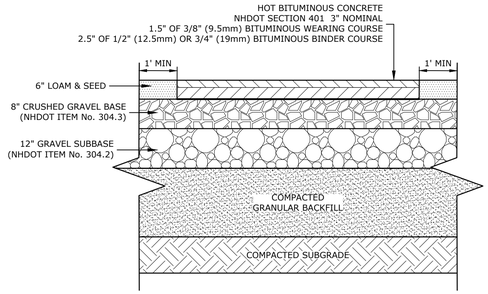
Last Save Date: January 25, 2023 8:25 AM By: CML
Plot Date: Wednesday, January 25, 2023 Plotted By: Craig M. Langton
T&B File Location: J:\P\P0595 Pro Con General Proposals\P0595-015 100 NH Avenue\Drawings_Figures\AutoCAD\Sheet\P0595-015_Details.DWG Layout Tab: C-501



CURB RADIUS TABLE	
RADIUS	MAX LENGTH
<20'	USE CURVED CURB
21'	3'
22'-28'	4'
29'-35'	5'
36'-42'	6'
43'-49'	7'
50'-56'	8'
57'-60'	9'
>60'	10'

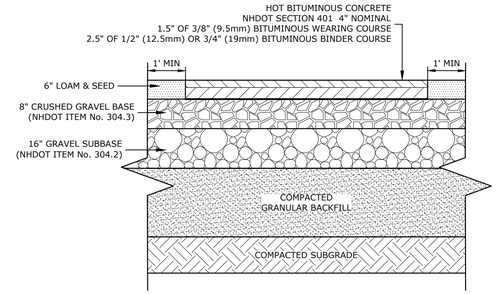
NOTES:
1. SEE SITE PLAN(S) FOR LIMITS OF VERTICAL GRANITE CURB (VGC).
2. ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.
3. MINIMUM LENGTH OF STRAIGHT CURB STONES = 3'
4. MAXIMUM LENGTH OF STRAIGHT CURB STONES = 10'
5. MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES (SEE TABLE).
6. ALL RADII 20 FEET AND SMALLER SHALL BE CONSTRUCTED USING CURVED SECTIONS.
7. JOINTS BETWEEN STONES SHALL HAVE A MAXIMUM SPACING OF 1/2" AND SHALL BE MORTARED.

VERTICAL GRANITE CURB
NO SCALE



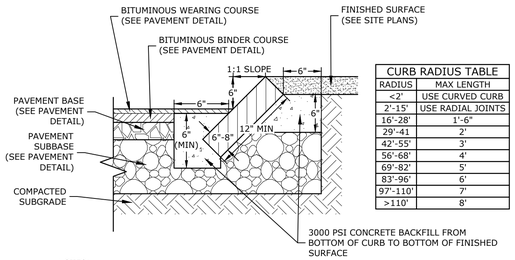
NOTES:
1. SEE SITE PLAN FOR PAVEMENT WIDTH AND LOCATION.
2. SEE GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR PAVEMENT SLOPE AND CROSS-SLOPE.
3. A TACK COAT SHALL BE PLACED ON TOP OF BINDER COURSE PAVEMENT PRIOR TO PLACING WEARING COURSE.
4. FINAL PAVEMENT SECTION DESIGN SHALL BE APPROVED BY THE PROJECTS GEOTECHNICAL ENGINEER.

TYPICAL STANDARD DUTY PAVEMENT SECTION
NO SCALE



NOTES:
1. SEE SITE PLAN FOR PAVEMENT WIDTH AND LOCATION.
2. SEE GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR PAVEMENT SLOPE AND CROSS-SLOPE.
3. A TACK COAT SHALL BE PLACED ON TOP OF BINDER COURSE PAVEMENT PRIOR TO PLACING WEARING COURSE.
4. FINAL PAVEMENT SECTION DESIGN SHALL BE APPROVED BY THE PROJECTS GEOTECHNICAL ENGINEER.

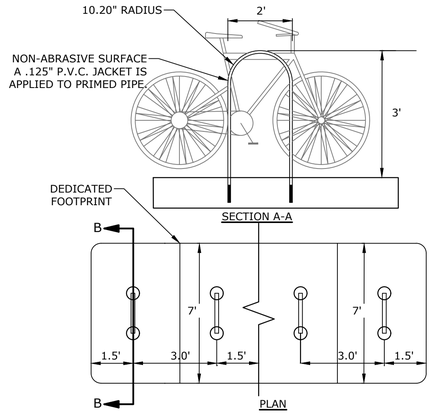
TYPICAL HEAVY DUTY PAVEMENT SECTION
NO SCALE



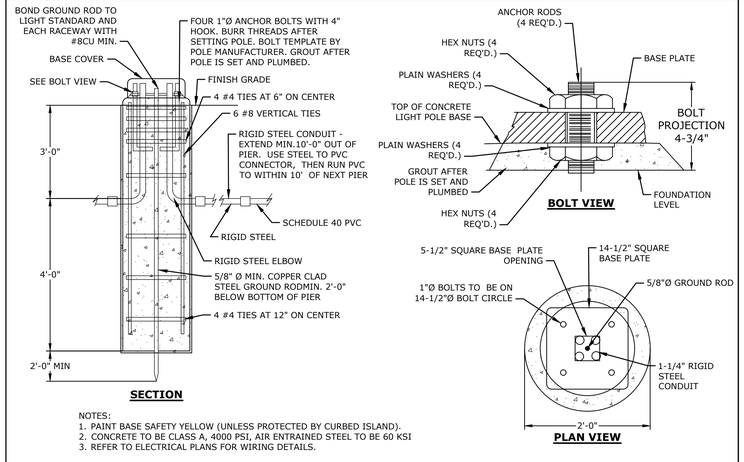
CURB RADIUS TABLE	
RADIUS	MAX LENGTH
<2'	USE CURVED CURB
2'-15'	USE RADIAL JOINTS
16'-28'	1'-6"
29'-41	2'
42'-55'	3'
56'-68'	4'
69'-82'	5'
83'-96'	6'
97'-110'	7'
>110'	8'

NOTES:
1. SEE SITE PLAN(S) FOR LIMITS OF SLOPED GRANITE CURB (SGC).
2. ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.
3. MINIMUM LENGTH OF STRAIGHT CURB STONES = 18"
4. MAXIMUM LENGTH OF STRAIGHT CURB STONES = 8'
5. MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES (SEE TABLE).
6. JOINTS BETWEEN STONES SHALL HAVE A MAXIMUM SPACING OF 1/2" AND SHALL BE MORTARED.

SLOPED GRANITE CURB
NO SCALE

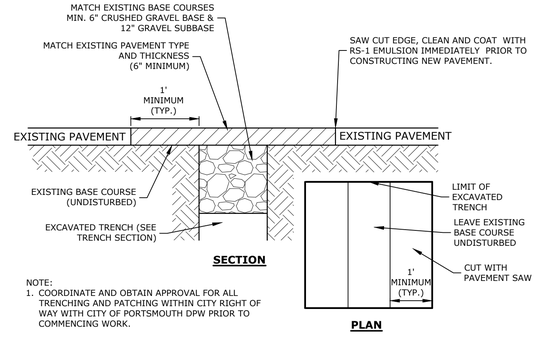


BIKE RACK
NO SCALE



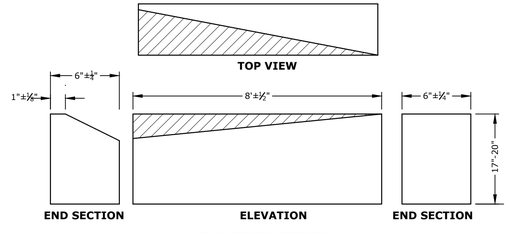
NOTES:
1. PAINT BASE SAFETY YELLOW (UNLESS PROTECTED BY CURBED ISLAND).
2. CONCRETE TO BE CLASS A, 4000 PSI, AIR ENTRAINED STEEL TO BE 60 KSI
3. REFER TO ELECTRICAL PLANS FOR WIRING DETAILS.

TYPICAL LIGHT POLE BASE
NO SCALE



NOTE:
1. COORDINATE AND OBTAIN APPROVAL FOR ALL TRENCHING AND PATCHING WITHIN CITY RIGHT OF WAY WITH CITY OF PORTSMOUTH DPW PRIOR TO COMMENCING WORK.

ROADWAY TRENCH PATCH
NO SCALE



TRANSITION SECTION
GRANITE SLOPE CURB TO VERTICAL GRANITE CURB

NOTES:
1. THE INTENT OF THIS ITEM IS TO PROVIDE A SMOOTH TRANSITION BETWEEN STRAIGHT GRANITE CURB AND SLOPE CURB WITHOUT REQUIRING FIELD CHIPPING DURING INSTALLATION. THE SLOPE CURB MAY REQUIRE ADJUSTMENTS TO MEET THE TRANSITION PIECE HEIGHT. TRANSITION SLOPE CURB TO STANDARD REVEAL AS QUICKLY AS POSSIBLE TO PROVIDE FOR THIS SMOOTH TRANSITION.

CURB TRANSITION
NO SCALE

Tighe&Bond

STATE OF NEW HAMPSHIRE
PATRICK CRIMMINS
No. 12378
LICENSED PROFESSIONAL ENGINEER
1/25/23

STATE OF NEW HAMPSHIRE
NEIL A. HANSEN
No. 15527
LICENSED PROFESSIONAL ENGINEER
1/25/23

Proposed Advanced Manufacturing Facility

Aviation Avenue Group, LLC

100 New Hampshire Avenue
Portsmouth, NH

MARK	DATE	DESCRIPTION
B	1/25/2023	TAC Resubmission
A	12/19/2022	TAC Submission

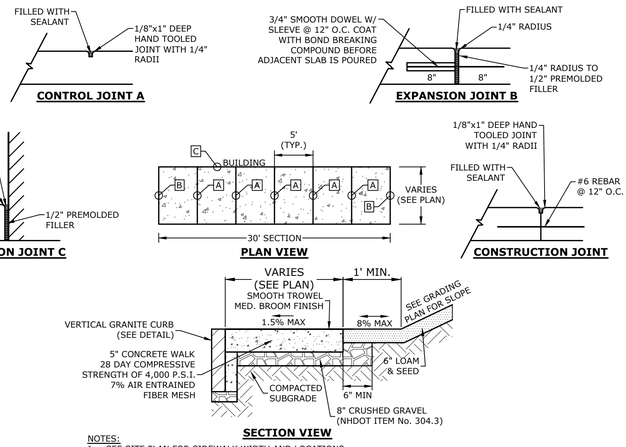
PROJECT NO:	P0595-015
DATE:	12/19/2022
FILE:	P0595-015_DETAILS.DWG
DRAWN BY:	CML
CHECKED:	NAH
APPROVED:	PMC

DETAILS SHEET

SCALE: AS SHOWN

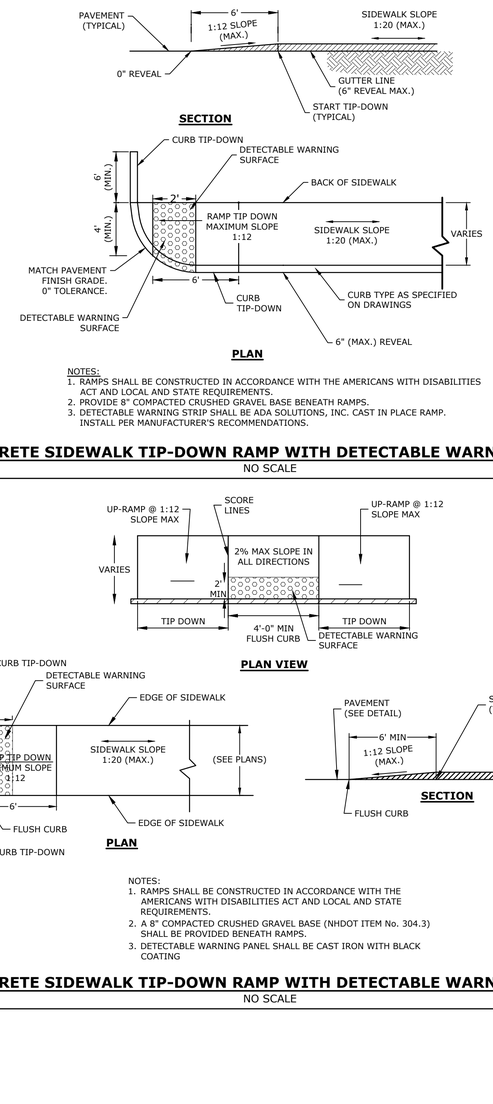
C-502

Last Save Date: January 25, 2023 8:25 AM By: CML
Plotted on: Wednesday, January 25, 2023 Plotted By: Craig M. Langton
T&B File Location: J:\P\P0595 Pro Con General Proposals\P0595-015 100 NH Avenue\Drawings, Figures\AutoCAD\Sheet\P0595-015_Details.DWG Layout Tab: C-502



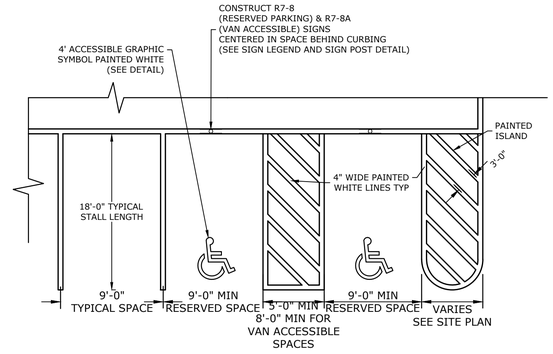
NOTES:
1. SEE SITE PLAN FOR SIDEWALK WIDTH AND LOCATIONS.
2. SEE GRADING, DRAINAGE & EROSION CONTROL PLAN FOR WALK AND SIDE SLOPE GRADES.
3. ISOLATION JOINTS ADJACENT TO BUILDING SHALL BE COORDINATED WITH BUILDING DRAWINGS.

CONCRETE SIDEWALK WITH GRANITE CURB
NO SCALE



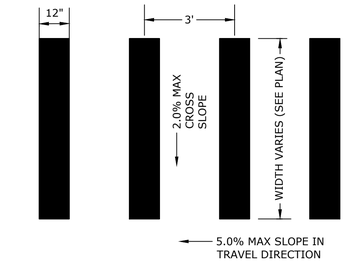
NOTES:
1. RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT AND LOCAL AND STATE REQUIREMENTS.
2. PROVIDE 8" COMPACTED CRUSHED GRAVEL BASE BENEATH RAMPS.
3. DETECTABLE WARNING STRIP SHALL BE ADA SOLUTIONS, INC. CAST IN PLACE RAMP. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

CONCRETE SIDEWALK TIP-DOWN RAMP WITH DETECTABLE WARNING PANEL
NO SCALE



NOTE:
1. ALL PAINT SHALL BE FAST DRYING TRAFFIC PAINT, MEETING THE REQUIREMENTS OF AASHTO M248-TYPE F. PAINT SHALL BE APPLIED AS SPECIFIED BY MANUFACTURER.
2. SYMBOLS & PARKING STALLS SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT AND LOCAL AND STATE REQUIREMENTS.
3. FINISH PAVEMENT GRADES AT ALL HANDICAP ACCESSIBLE STALLS AND PAINTED ACCESS AISLES SHALL NOT EXCEED 2% IN ANY DIRECTION.

PARKING SPACE STRIPING
NO SCALE

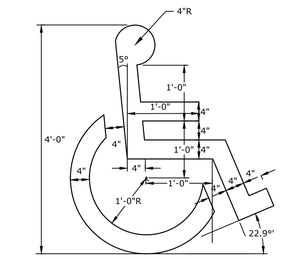


NOTE:
STRIPING SHALL BE CONSTRUCTED USING WHITE THERMO PLASTIC, REFLECTERIZED PAVEMENT MARKING MATERIAL MEETING THE REQUIREMENTS OF ASTM D 4505

CROSSWALK STRIPING
NO SCALE

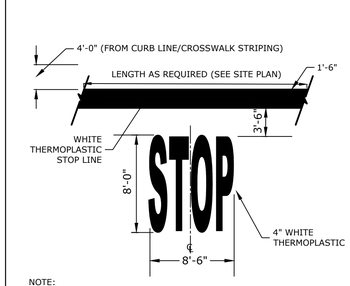
NOTES:
1. RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT AND LOCAL AND STATE REQUIREMENTS.
2. A 8" COMPACTED CRUSHED GRAVEL BASE (NHDOT ITEM No. 304.3) SHALL BE PROVIDED BENEATH RAMPS.
3. DETECTABLE WARNING PANEL SHALL BE CAST IRON WITH BLACK COATING

CONCRETE SIDEWALK TIP-DOWN RAMP WITH DETECTABLE WARNING PANEL
NO SCALE



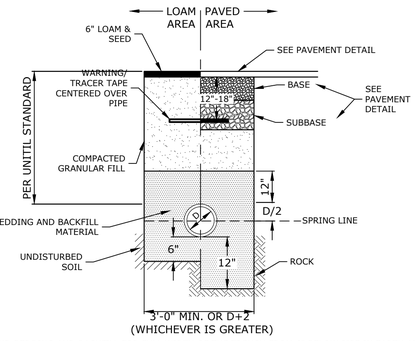
NOTES:
1. SYMBOL SHALL BE CONSTRUCTED IN ALL ACCESSIBLE SPACES USING FAST DRYING TRAFFIC PAINT, MEETING THE REQUIREMENTS OF AASHTO M248-TYPE F. PAINT SHALL BE APPLIED AS SPECIFIED BY MANUFACTURER.
2. SYMBOL SHALL BE CONSTRUCTED TO THE LATEST ADA, STATE AND LOCAL REQUIREMENTS.

ACCESSIBLE SYMBOL
NO SCALE



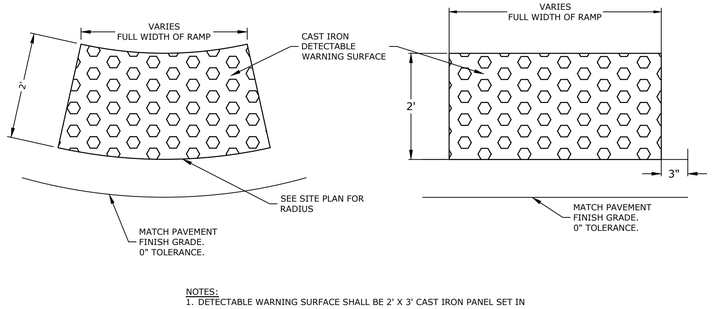
NOTE:
1. PAVEMENT MARKINGS TO BE INSTALLED IN LOCATIONS AS SHOWN ON SITE PLAN.
2. STRIPING SHALL BE CONSTRUCTED USING WHITE THERMO PLASTIC, REFLECTERIZED PAVEMENT MARKING MATERIAL MEETING THE REQUIREMENTS OF ASTM D 4505

STOP BAR & LEGEND
NO SCALE



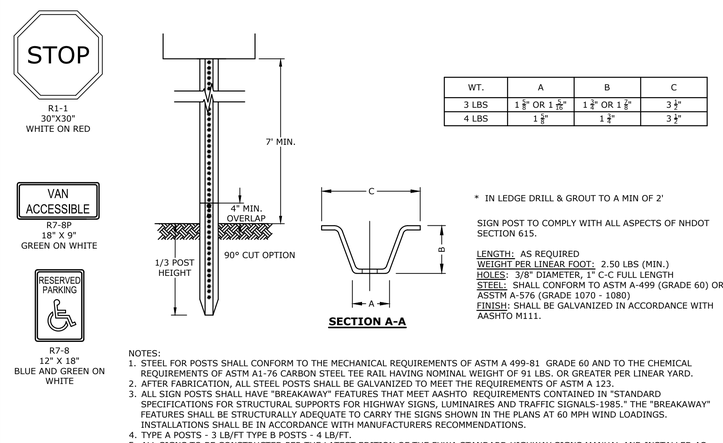
NOTE:
1. SAND BEDDING AND BACKFILL FOR FULL WIDTH OF THE TRENCH FROM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK UP TO 12" ABOVE TOP OF PIPE.
2. GAS SHALL BE INSTALLED PER UNITIL STANDARDS. COORDINATE ALL INSTALLATIONS WITH UNITIL AND THE CITY OF PORTSMOUTH.

TYPICAL GAS TRENCH
NO SCALE



NOTES:
1. DETECTABLE WARNING SURFACE SHALL BE 2' X 3' CAST IRON PANEL SET IN CONCRETE.
2. DETECTABLE WARNING SURFACE SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

CAST IRON DETECTABLE WARNING SURFACE
NO SCALE



SIGN POST TO COMPLY WITH ALL ASPECTS OF NHDOT SECTION 615.

LENGTH: AS REQUIRED
WEIGHT PER LINEAR FOOT: 2.50 LBS (MIN.)
HOLES: 3/8" DIAMETER, 1" C-C FULL LENGTH
STEEL: SHALL CONFORM TO ASTM A-499 (GRADE 60) OR ASSTM A-576 (GRADE 1070 - 1080)
FINISH: SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M111.

NOTES:
1. STEEL FOR POSTS SHALL CONFORM TO THE MECHANICAL REQUIREMENTS OF ASTM A 499-81 GRADE 60 AND TO THE CHEMICAL REQUIREMENTS OF ASTM A1-76 CARBON STEEL TEE RAIL HAVING NOMINAL WEIGHT OF 91 LBS. OR GREATER PER LINEAR YARD.
2. AFTER FABRICATION, ALL STEEL POSTS SHALL BE GALVANIZED TO MEET THE REQUIREMENTS OF ASTM A 123.
3. ALL SIGN POSTS SHALL HAVE "BREAKAWAY" FEATURES THAT MEET AASHTO REQUIREMENTS CONTAINED IN "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS-1985." THE "BREAKAWAY" FEATURES SHALL BE STRUCTURALLY ADEQUATE TO CARRY THE SIGNS SHOWN IN THE PLANS AT 60 MPH WIND LOADINGS. INSTALLATIONS SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
4. TYPE A POSTS - 3 LB/FT TYPE B POSTS - 4 LB/FT.
5. ALL SIGNS TO BE CONSTRUCTED PER THE LATEST EDITION OF THE FHWA STANDARD HIGHWAY SIGNS MANUAL AND INSTALLED AS INDICATED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
6. MEET REQUIREMENTS OF SECTION 615 SIGNS OF NHDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2010 EDITION, AS AMENDED.

SIGN LEGEND & POST
NO SCALE

Tighe&Bond

STATE OF NEW HAMPSHIRE – PATRICK CRIMMINS – No. 12378 – LICENSED PROFESSIONAL ENGINEER – 1/25/23

STATE OF NEW HAMPSHIRE – NEIL A. HANSEN – No. 15527 – LICENSED PROFESSIONAL ENGINEER – 1/25/23

Proposed Advanced Manufacturing Facility

Aviation Avenue Group, LLC

100 New Hampshire Avenue
Portsmouth, NH

MARK	DATE	DESCRIPTION
B	1/25/2023	TAC Resubmission
A	12/19/2022	TAC Submission

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File Location: J:\P\P0595 Pro Con General Proposals\P0595-015 100 NH Avenue\Drawings, Figures\AutoCAD\Sheet\P0595-015_Details.DWG Layout Tab: C-503

JELLYFISH DESIGN NOTES

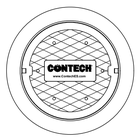
JELLYFISH TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE LENGTH AND THE NUMBER OF CARTRIDGES. THE STANDARD PEAK DIVERSION STYLE WITH PRECAST TOP SLAB IS SHOWN. ALTERNATE OFFLINE VAULT AND/OR SHALLOW ORIENTATIONS ARE AVAILABLE. PEAK CONVEYANCE CAPACITY TO BE DETERMINED BY ENGINEER OF RECORD

CARTRIDGE SELECTION

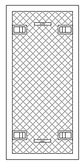
CARTRIDGE LENGTH	54"	40"	27"	15"
OUTLET INVERT TO STRUCTURE INVERT (A)	6'-0"	5'-4"	4'-3"	3'-3"
FLOW RATE HI-FLO / DRAINDOWN (CFS) (PER CART)	0.178 / 0.089	0.133 / 0.067	0.089 / 0.045	0.049 / 0.025
MAX. TREATMENT (CFS)	7.84	5.88	3.92	2.16
DECK TO INSIDE TOP (MIN) (B)	5.00	4.00	4.00	4.00

SITE SPECIFIC DATA REQUIREMENTS

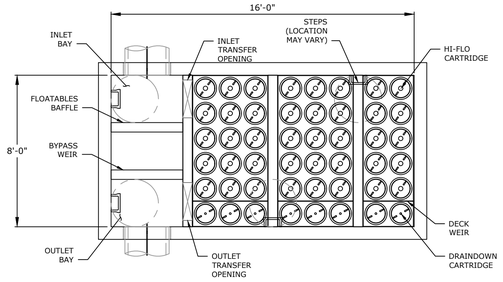
STRUCTURE ID	JFPD0816
WATER QUALITY FLOW RATE (cfs)	7.46
PEAK FLOW RATE (cfs)	23.8
RETURN PERIOD OF PEAK FLOW (yrs)	50
# OF CARTRIDGES REQUIRED (HF / DD)	(40/8)
CARTRIDGE LENGTH	54"



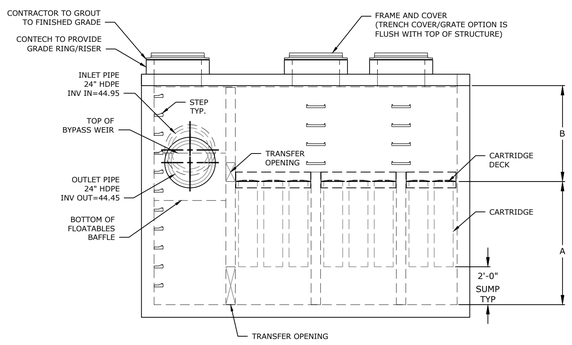
FRAME AND COVER
(DIAMETER VARIES)
N.T.S.



24" TRENCH COVER
(LENGTH VARIES)
N.T.S.



PLAN VIEW

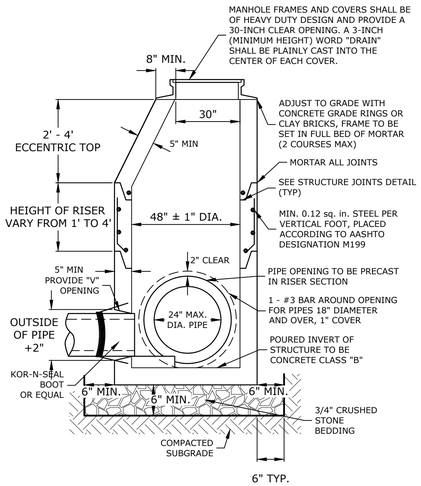


ELEVATION VIEW

GENERAL NOTES:
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS REPRESENTATIVE. www.ContechES.com
3. JELLYFISH WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 OR PER APPROVING JURISDICTION REQUIREMENTS, WHICHEVER IS MORE STRINGENT, ASSUMING EARTH COVER OF 0' - 10', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
5. STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-857, ASTM C-918, AND AASHTO LOAD FACTOR DESIGN METHOD.
6. OUTLET PIPE INVERT IS EQUAL TO THE CARTRIDGE DECK ELEVATION.
7. THE OUTLET PIPE DIAMETER FOR NEW INSTALLATIONS IS RECOMMENDED TO BE ONE PIPE SIZE LARGER THAN THE INLET PIPE AT EQUAL OR GREATER SLOPE.
8. NO PRODUCT SUBSTITUTIONS SHALL BE ACCEPTED UNLESS SUBMITTED 10 DAYS PRIOR TO PROJECT BID DATE, OR AS DIRECTED BY THE ENGINEER OF RECORD.

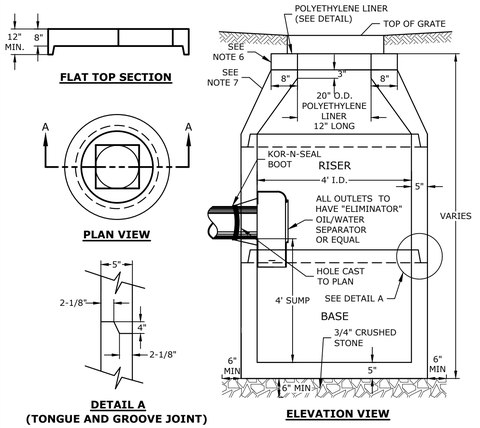
INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE.
C. CONTRACTOR WILL INSTALL AND LEVEL THE STRUCTURE, SEALING THE JOINTS, LINE ENTRY AND EXIT POINTS (NON-SHRINK GROUT WITH APPROVED WATERSTOP OR FLEXIBLE BOOT).
D. CARTRIDGE INSTALLATION, BY CONTECH, SHALL OCCUR ONLY AFTER SITE HAS BEEN STABILIZED AND THE JELLYFISH UNIT IS CLEAN AND FREE OF DEBRIS. CONTACT CONTECH TO COORDINATE CARTRIDGE INSTALLATION WITH SITE STABILIZATION.

JELLYFISH (JFPD0816) TREATMENT UNIT
NO SCALE



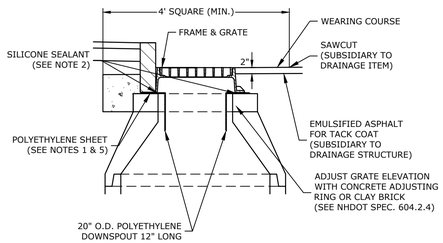
NOTES:
1. ALL SECTIONS SHALL BE 4,000 PSI CONCRETE.
2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQUARE INCHES PER LINEAR FOOT IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
3. THE TONGUE AND THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQUARE INCHES PER LINEAR FOOT.
4. THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING.
5. CONSTRUCT CRUSHED STONE BEDDING AND BACKFILL UNDER (6" MINIMUM THICKNESS)
6. THE TONGUE AND GROOVE JOINT SHALL BE SEALED WITH ONE STRIP OF BUTYL RUBBER SEALANT.
7. PIPE ELEVATIONS SHOWN ON PLANS SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.
8. OUTSIDE EDGES OF PIPES SHALL PROJECT NO MORE THAN 3" BEYOND INSIDE WALL OF STRUCTURE.
9. PRECAST SECTIONS SHALL HAVE A TONGUE AND GROOVE JOINT 4" HIGH AT AN 11° ANGLE CENTERED IN THE WIDTH OF THE WALL AND SHALL BE ASSEMBLED USING AN APPROVED FLEXIBLE SEALANT IN JOINTS.
10. ALL STRUCTURES WITH MULTIPLE PIPES SHALL HAVE A MINIMUM OF 12" OF INSIDE SURFACE BETWEEN HOLES, NO MORE THAN 75% OF A HORIZNTAL CROSS SECTION SHALL BE HOLES, AND THERE SHALL BE NO HOLES CLOSER THAN 3" TO JOINTS.

4' DIAMETER DRAIN MANHOLE
NO SCALE

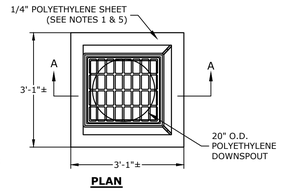


NOTES:
1. ALL SECTIONS SHALL BE CONCRETE CLASS AA(4000 psi).
2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQ.IN. PER LINEAR FT. IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
3. THE TONGUE AND GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ. IN. PER LINEAR FT.
4. RISERS OF 1', 2', 3' & 4' CAN BE USED TO REACH DESIRED DEPTH.
5. THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING.
6. FITTING FRAME TO GRADE MAY BE DONE WITH PREFABRICATED ADJUSTMENT RINGS OR CLAY BRICKS (2 COURSES MAX.).
7. CONE SECTIONS MAY BE EITHER CONCENTRIC OR ECCENTRIC, OR FLAT SLAB TOPS MAY BE USED WHERE PIPE WOULD OTHERWISE ENTER INTO THE CONE SECTION OF THE STRUCTURE AND WHERE PERMITTED.
8. PIPE ELEVATIONS SHOWN ON PLANS SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.
9. OUTSIDE EDGES OF PIPES SHALL PROJECT NO MORE THAN 3" BEYOND INSIDE WALL OF STRUCTURE.
10. PRECAST SECTIONS SHALL HAVE A TONGUE AND GROOVE JOINT 4" HIGH AT AN 11° ANGLE CENTERED IN THE WIDTH OF THE WALL AND SHALL BE ASSEMBLED USING AN APPROVED FLEXIBLE SEALANT IN JOINTS.
11. THE TONGUE AND GROOVE JOINT SHALL BE SEALED WITH ONE STRIP OF BUTYL RUBBER SEALANT.
12. "ELIMINATOR" OIL/WATER SEPARATOR SHALL BE INSTALLED TIGHT TO INSIDE OF CATCHBASIN.

4' DIAMETER CATCH BASIN
NO SCALE



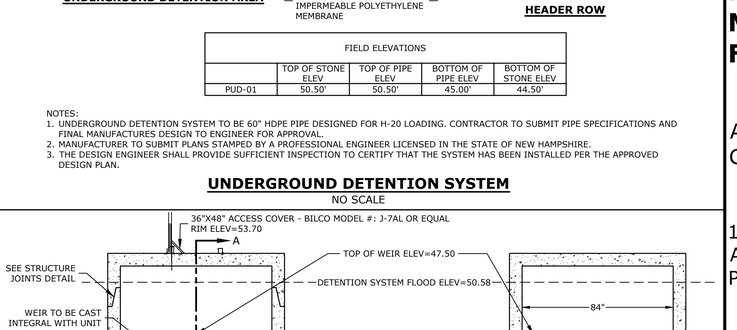
SECTION A-A



PLAN

NOTES:
1. POLYETHYLENE LINER (ITEM 604.0007) SHALL BE FABRICATED AT THE SHOP. DOWNSPOUT SHALL BE EXTRUSION FILLET WELDED TO THE POLYETHYLENE SHEET.
2. PLACE A CONTINUOUS BEAD OF AN APPROVED SILICONE SEALANT (SUBSIDIARY TO ITEM 604.0007) BETWEEN FRAME AND POLYETHYLENE SHEET.
3. PLACE CLASS AA CONCRETE TO 2" BELOW THE TOP OF THE GRATE ELEVATION (SUBSIDIARY TO DRAINAGE STRUCTURE).
4. USE ON DRAINAGE STRUCTURES 4' MIN. DIAMETER ONLY.
5. TRIM POLYETHYLENE SHEET A MAXIMUM OF 4" OUTSIDE THE FLANGE ON THE FRAME FOR THE CATCH BASIN BEFORE PLACING CONCRETE (EXCEPT AS SHOWN WHEN USED WITH 3-FLANGE FRAME AND CURB).
6. THE CENTER OF THE GRATE & FRAME MAY BE SHIFTED A MAXIMUM OF 6" FROM THE CENTER OF THE DOWNSPOUT IN ANY DIRECTION.
7. PLACED ONLY IN DRAINAGE STRUCTURES IN PAVEMENT.
8. SEE NHDOT DR-04, "DI-DB, UNDERDRAIN FLUSHING BASIN AND POLYETHYLENE LINER DETAILS", FOR ADDITIONAL INFORMATION.
9. CATCHBASINS WITHIN CITY RIGHT OF WAY SHALL HAVE A POLYETHYLENE LINER

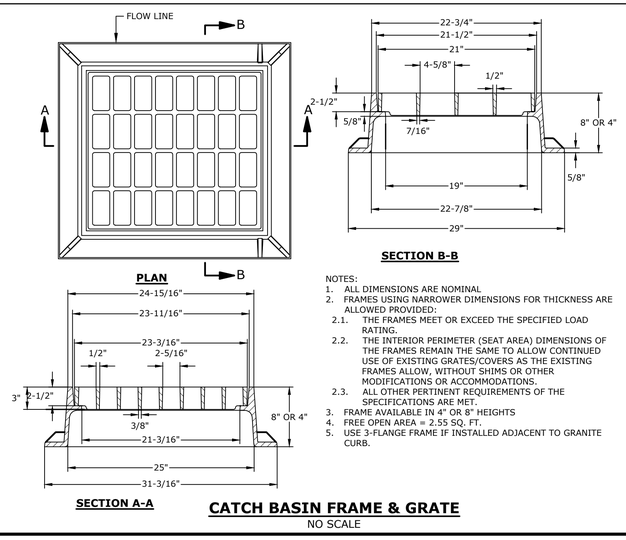
POLYETHYLENE LINER
NO SCALE



FIELD ELEVATIONS				
	TOP OF STONE ELEV	TOP OF PIPE ELEV	BOTTOM OF PIPE ELEV	BOTTOM OF STONE ELEV
PUD-01	50.50'	50.50'	45.00'	44.50'

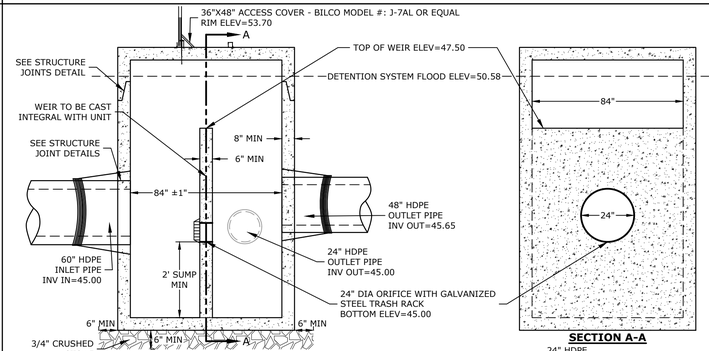
NOTES:
1. UNDERGROUND DETENTION SYSTEM TO BE 60" HDPE PIPE DESIGNED FOR H-20 LOADING. CONTRACTOR TO SUBMIT PIPE SPECIFICATIONS AND FINAL MANUFACTURES DESIGN TO ENGINEER FOR APPROVAL.
2. MANUFACTURER TO SUBMIT PLANS STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW HAMPSHIRE.
3. THE DESIGN ENGINEER SHALL PROVIDE SUFFICIENT INSPECTION TO CERTIFY THAT THE SYSTEM HAS BEEN INSTALLED PER THE APPROVED DESIGN PLAN.

UNDERGROUND DETENTION SYSTEM
NO SCALE

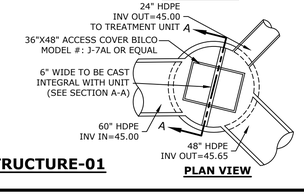


NOTES:
1. ALL DIMENSIONS ARE NOMINAL
2. FRAMES USING NARROWER DIMENSIONS FOR THICKNESS ARE ALLOWED PROVIDED:
   2.1. THE FRAMES MEET OR EXCEED THE SPECIFIED LOAD RATING.
   2.2. THE INTERIOR PERIMETER (SEAT AREA) DIMENSIONS OF THE FRAMES REMAIN THE SAME TO ALLOW CONTINUED USE OF EXISTING GRATES/COVERS AS THE EXISTING FRAMES ALLOW, WITHOUT SHIMS OR OTHER MODIFICATIONS OR ACCOMMODATIONS.
   2.3. ALL OTHER PERTINENT REQUIREMENTS OF THE SPECIFICATIONS ARE MET.
3. FRAME AVAILABLE IN 4" OR 8" HEIGHTS
4. FREE OPEN AREA = 2.55 SQ. FT.
5. USE 3-FLANGE FRAME IF INSTALLED ADJACENT TO GRANITE CURB.

CATCH BASIN FRAME & GRATE
NO SCALE



NOTES:
1. ALL SECTIONS SHALL BE 4,000 PSI CONCRETE (TYPE II CEMENT).
2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQUARE INCHES PER LINEAR FOOT IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
3. THE TONGUE OR THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQUARE INCHES PER LINEAR FOOT.
4. THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING.
5. ALL JOINTS ON THE STRUCTURE AND PIPING SHALL BE WATERTIGHT.



PROPOSED OUTLET STRUCTURE-01
NO SCALE

Tighe&Bond

STATE OF NEW HAMPSHIRE
PATRICK CRIMMINS
No. 12378
LICENSED PROFESSIONAL ENGINEER
1/25/23

STATE OF NEW HAMPSHIRE
NEIL A. HANSEN
No. 15527
LICENSED PROFESSIONAL ENGINEER
1/25/23

Proposed Advanced Manufacturing Facility

Aviation Avenue Group, LLC

100 New Hampshire Avenue
Portsmouth, NH

MARK	DATE	DESCRIPTION
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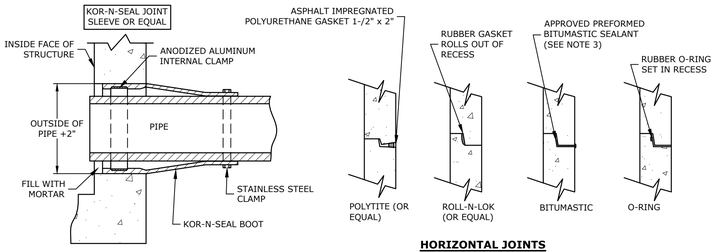
DRAWN BY:	CML
CHECKED:	NAH
APPROVED:	PMC

DETAILS SHEET

SCALE: AS SHOWN

C-504

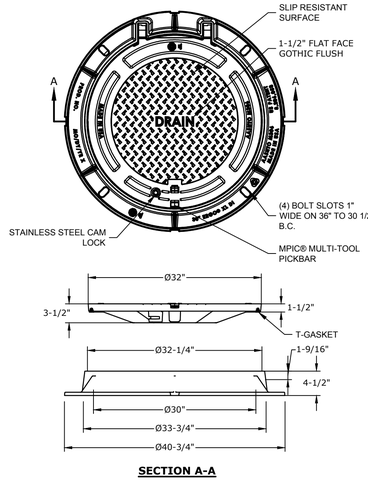
Last Save Date: January 25, 2023 8:25 AM By: CML
Plot Date: January 25, 2023 8:25 AM By: Craig M. Langton
T&B File Location: J:\P\P0595 Pro Con General Proposals\P0595-015 100 NH Avenue\Drawings, Figures\AutoCAD\Sheet\P0595-015_Details.DWG Layout Tab: C-504



PIPE JOINTS | **HORIZONTAL JOINTS**

NOTES:
1. HORIZONTAL JOINTS BETWEEN THE SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE PER CITY OF PORTSMOUTH DPW STANDARD AND SHALL BE SEALED FOR WATERTIGHTNESS USING A DOUBLE ROW ELASTOMERIC OR MASTIC-LIKE GASKET.
2. PIPE TO MANHOLE JOINTS SHALL BE PER CITY OF PORTSMOUTH STANDARD.
3. FOR BITUMASTIC TYPE JOINTS THE AMOUNT OF SEALANT SHALL BE SUFFICIENT TO FILL AT LEAST 75% OF THE JOINT CAVITY.
4. ALL GASKETS, SEALANTS, MORTAR, ETC. SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' WRITTEN INSTRUCTIONS.

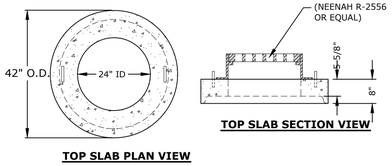
STRUCTURE JOINTS
NO SCALE



SECTION A-A

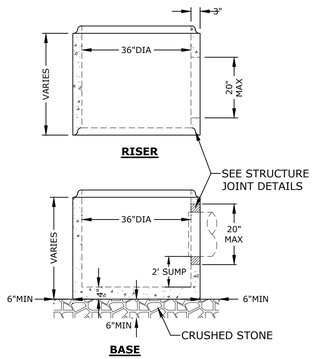
NOTES:
1. MANHOLE FRAME AND COVER SHALL BE 32" HINGED ERGO XL BY EJ CO.
2. ALL DIMENSIONS ARE NOMINAL.
3. FRAMES USING NARROWER DIMENSIONS FOR THICKNESS ARE ALLOWED PROVIDED:
   A. THE FRAMES MEET OR EXCEED THE SPECIFIED LOAD RATING.
   B. THE INTERIOR PERIMETER (SEAT AREA) DIMENSIONS OF THE FRAMES REMAIN THE SAME TO ALLOW CONTINUED USE OF EXISTING GRATES/COVERS AS THE EXISTING FRAMES ALLOW, WITHOUT SHIMS OR OTHER MODIFICATIONS OR ACCOMMODATIONS.
   C. ALL OTHER PERTINENT REQUIREMENTS OF THE SPECIFICATIONS ARE MET.
4. LABEL TYPE OF MANHOLE WITH 3" HIGH LETTERS IN HE CENTER OF THE COVER.

DRAIN MANHOLE FRAME & COVER
NO SCALE



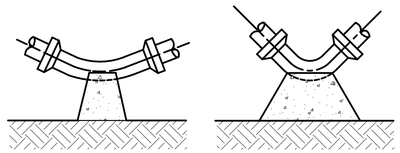
TOP SLAB PLAN VIEW

TOP SLAB SECTION VIEW

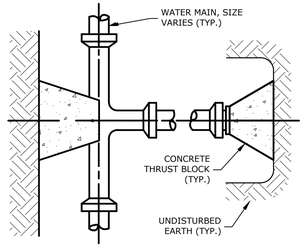


NOTES:
1. ALL SECTIONS SHALL BE 4,000 PSI CONCRETE.
2. THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING.
3. ALL JOINTS ON THE STRUCTURE AND PIPING SHALL BE WATERTIGHT.
4. PRECAST CONCRETE YARD DRAINS SHALL BE PHOENIX PRECAST PRODUCTS OR EQUAL.

YARD DRAIN
NO SCALE

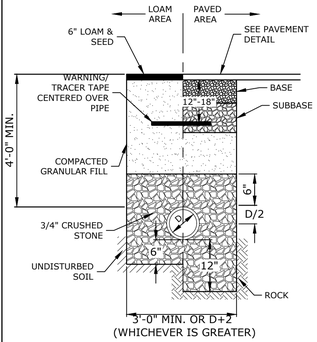


TEST PRESSURE = 200psi	SQUARE FEET OF CONCRETE THRUST BLOCKING BEARING ON UNDISTURBED MATERIAL					
	REACTION TYPE	PIPE SIZE				
		4"	6"	8"	10"	12"
	A 90°	0.89	2.19	3.82	11.14	17.24
	B 180°	0.65	1.55	2.78	8.38	12.00
	C 45°	0.48	1.19	2.12	6.02	9.32
	D 22-1/2°	0.25	0.60	1.06	3.08	4.74
	E 11-1/4°	0.13	0.30	0.54	1.54	2.38



NOTES:
1. POUR THRUST BLOCKS AGAINST UNDISTURBED MATERIAL, WHERE TRENCH WALL HAS BEEN DISTURBED, EXCAVATE LOOSE MATERIAL AND EXTEND THRUST BLOCK TO UNDISTURBED MATERIAL. NO JOINTS SHALL BE COVERED WITH CONCRETE.
2. ON BENDS AND TEES, EXTEND THRUST BLOCKS FULL LENGTH OF FITTING.
3. PLACE BOARD IN FRONT OF ALL PLUGS BEFORE POURING THRUST BLOCKS.
4. WHERE M.J. PIPE IS USED, M.J. PLUG WITH RETAINER GLAND MAY BE SUBSTITUTED FOR END BLOCKINGS.
5. INSTALLATION AND STANDARD DIMENSIONAL REQUIREMENTS SHALL BE WITH CITY OF PORTSMOUTH WATER DEPARTMENT STANDARDS.

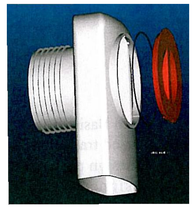
THRUST BLOCKING
NO SCALE



(WHICHEVER IS GREATER)

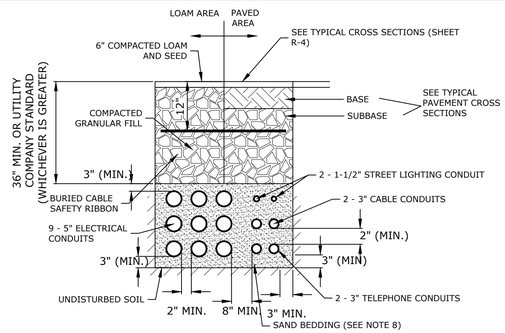
NOTE:
1. CRUSHED STONE BEDDING AND BACKFILL FOR FULL WIDTH OF THE TRENCH FROM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK UP TO 6" ABOVE TOP OF PIPE.
2. ALL UTILITIES SHALL BE INSTALLED PER THE INDIVIDUAL UTILITY COMPANY STANDARDS. COORDINATE ALL INSTALLATIONS WITH INDIVIDUAL UTILITY COMPANIES AND THE CITY OF PORTSMOUTH.

STORM DRAIN TRENCH
NO SCALE



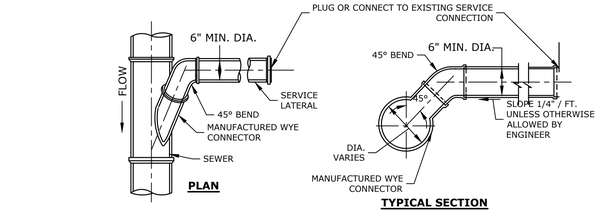
NOTES:
1. ALL CATCH BASIN OUTLETS TO HAVE "ELIMINATOR" OIL AND FLOATING DEBRIS TRAP MANUFACTURED BY KLEANSTREAM (NO EQUAL)
2. INSTALL DEBRIS TRAP TIGHT TO INSIDE OF STRUCTURE.
3. 1/4" HOLE SHALL BE DRILLED IN TOP OF DEBRIS TRAP

"ELIMINATOR" OIL FLOATING DEBRIS TRAP
NO SCALE

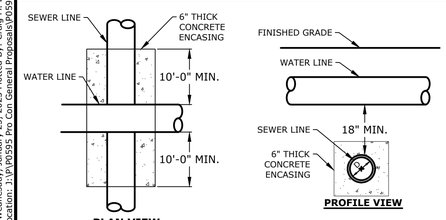


NOTES:
1. NUMBER, MATERIAL, AND SIZE OF UTILITY CONDUITS TO BE DETERMINED BY LOCAL UTILITY OR AS SHOWN ON ELECTRICAL DRAWINGS. CONTRACTOR TO PROVIDE ONE SPARE CONDUIT FOR EACH UTILITY TO BUILDING.
2. DIMENSIONS SHOWN REPRESENT OWNERS MINIMUM REQUIREMENTS. ACTUAL DIMENSIONS MAY BE GREATER BASED ON UTILITY COMPANY STANDARDS, BUT SHALL NOT BE LESS THAN THOSE SHOWN.
3. NO CONDUIT RUN SHALL EXCEED 360 DEGREES IN TOTAL BENDS.
4. A SUITABLE PULLING STRING, CAPABLE OF 200 POUNDS OF PULL, MUST BE INSTALLED IN THE CONDUIT BEFORE UTILITY COMPANY IS NOTIFIED TO INSTALL CABLE. THE STRING SHOULD BE BLOWN INTO THE CONDUIT AFTER THE RUN IS ASSEMBLED TO AVOID BONDING THE STRING TO THE CONDUIT.
5. UTILITY COMPANY MUST BE GIVEN THE OPPORTUNITY TO INSPECT THE CONDUIT PRIOR TO BACKFILL. THE CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS SHOULD THE UTILITY COMPANY BE UNABLE TO INSTALL ITS CABLE IN A SUITABLE MANNER.
6. ALL CONDUIT INSTALLATIONS MUST CONFORM TO THE CURRENT EDITION OF THE NATIONAL ELECTRIC SAFETY CODE, STATE AND LOCAL CODES AND ORDINANCES, AND, WHERE APPLICABLE, THE NATIONAL ELECTRIC CODE.
7. ALL 90° SWEEPS WILL BE MADE USING RIGID GALVANIZED STEEL. SWEEPS WITH A 36 TO 48 INCH RADIUS.
8. SAND BEDDING TO BE REPLACED WITH CONCRETE ENCASEMENT WHERE COVER IS LESS THAN 3 FEET, WHEN LOCATED BELOW PAVEMENT, OR WHERE SHOWN ON THE UTILITIES PLAN.

TYPICAL ELECTRICAL AND COMMUNICATION CONDUIT
NO SCALE

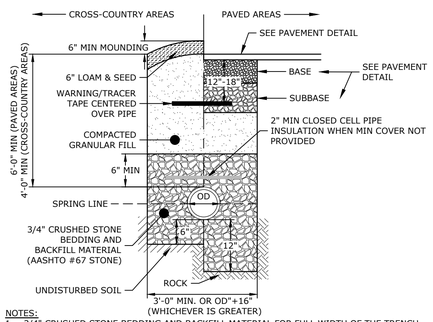


STANDARD SERVICE LATERAL CONNECTION
NO SCALE



NOTES:
1. A 10 FOOT MINIMUM EDGE TO EDGE HORIZONTAL SEPARATION SHALL BE PROVIDED FROM ANY EXISTING OR PROPOSED WATER LINE.
2. AN 18" MINIMUM EDGE TO EDGE VERTICAL SEPARATION SHALL BE PROVIDED, WITH WATER ABOVE SEWER, AT ALL CROSSINGS.
3. SEWER PIPE JOINTS SHALL BE LOCATED AT LEAST 6 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN.
4. WHERE AN 18" VERTICAL SEPARATION CANNOT BE PROVIDED, SEWER PIPE SHALL BE CONSTRUCTED USING A SDR 26 PVC PIPE OR ENCASED CONCRETE FOR A MINIMUM DISTANCE OF 10 FEET ON BOTH SIDES OF THE LINE BEING CROSSED, AS SHOWN ABOVE.
5. CROSSINGS SHALL CONFORM TO THE CITY PORTSMOUTH DPW STANDARDS AND SPECIFICATIONS.

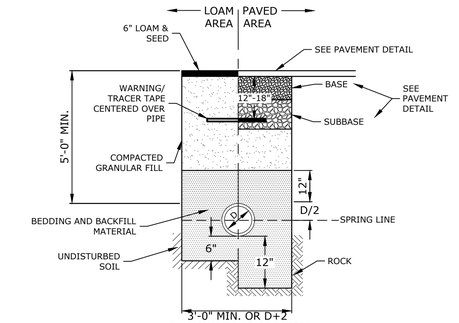
WATER SEWER CROSSING
NO SCALE



(WHICHEVER IS GREATER)

NOTES:
1. 3/4" CRUSHED STONE BEDDING AND BACKFILL MATERIAL FOR FULL WIDTH OF THE TRENCH FROM MINIMUM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK UP TO MINIMUM OF 6" OVER THE TOP OF THE PIPE.
2. SANITARY SEWER SHALL BE INSTALLED PER THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS STANDARDS. COORDINATE ALL INSTALLATIONS WITH THE CITY OF PORTSMOUTH.

TYPICAL SEWER TRENCH
NO SCALE



(WHICHEVER IS GREATER)

NOTES:
1. SAND BEDDING AND BACKFILL FOR FULL WIDTH OF THE TRENCH FROM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK UP TO 12" ABOVE TOP OF PIPE.
2. WATER MAIN SHALL BE INSTALLED PER CITY OF PORTSMOUTH STANDARDS. COORDINATE ALL INSTALLATIONS WITH THE CITY OF PORTSMOUTH.

TYPICAL WATER TRENCH
NO SCALE

Tighe&Bond

STATE OF NEW HAMPSHIRE — PATRICK CRIMMINS — No. 12378 — LICENSED PROFESSIONAL ENGINEER — 1/25/23

STATE OF NEW HAMPSHIRE — NEIL A. HANSEN — No. 15527 — LICENSED PROFESSIONAL ENGINEER — 1/25/23

Proposed Advanced Manufacturing Facility

Aviation Avenue Group, LLC

100 New Hampshire Avenue
Portsmouth, NH

MARK	DATE	DESCRIPTION
B	1/25/2023	TAC Resubmission
A	12/19/2022	TAC Submission

PROJECT NO:	P0595-015
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FILE:	P0595-015_DETAILS.DWG
DRAWN BY:	CML
CHECKED:	NAH
APPROVED:	PMC

DETAILS SHEET

SCALE: AS SHOWN

C-505

Last Save Date: January 25, 2023 8:25 AM By: CML
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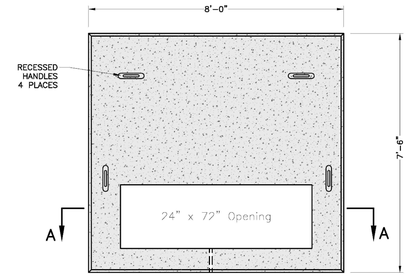
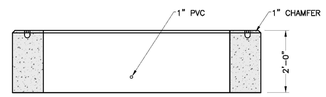


PLAN

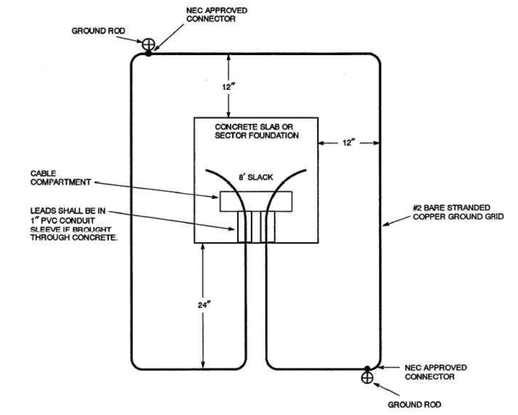


SECTION A-A

NOTES:
1. DIMENSIONS SHOWN REPRESENT TYPICAL REQUIREMENTS. MANHOLE LOCATIONS AND REQUIREMENTS SHALL BE COORDINATED WITH EVERSOURCE PRIOR TO CONSTRUCTION
2. CONCRETE MINIMUM STRENGTH - 4,000 PSI @ 28 DAYS
3. STEEL REINFORCEMENT - ASTM A615, GRADE 60
4. PAD MEETS OR EXCEEDS EVERSOURCE SPECIFICATIONS

TYPICAL 3-PHASE TRANSFORMER PAD

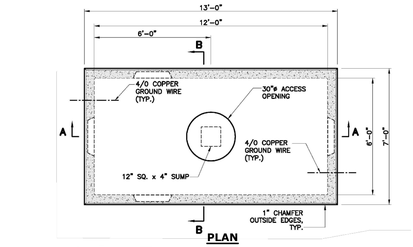
NO SCALE



NOTES:
1. THE GROUND GRID SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR AND IS TO BE BURIED AT LEAST 12 INCHES BELOW GRADE. EIGHT FEET OF EXTRA WIRE FOR EACH GROUND GRID LEG SHALL BE LEFT EXPOSED IN THE CABLE COMPARTMENT TO ALLOW FOR THE CONNECTION TO THE TRANSFORMER. THE TWO 8-FOOT GROUND RODS MAY BE EITHER GALVANIZED STEEL OR COPPERWELD AND THEY SHALL BE CONNECTED TO THE GRID WITH NEC APPROVED CONNECTORS.

TYPICAL PAD-MOUNTED EQUIPMENT GROUNDING GRID DETAIL

NO SCALE



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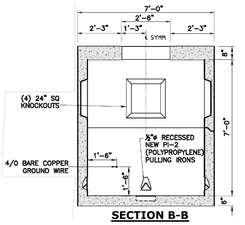
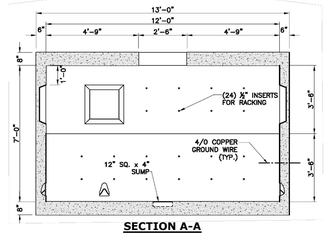


SECTION B-B



SECTION A-A

NOTE:
1. CONCRETE: 5,000 PSI MINIMUM AFTER 28 DAYS.
2. ALL REINFORCEMENT PERASTM A615, GRADE 60, 1" MINIMUM COVER.
3. DESIGNED FOR HS20-44 LOADING.
4. EXTERIOR COATING PROVIDED.
5. DIMENSIONS SHOWN REPRESENT TYPICAL REQUIREMENTS. MANHOLE LOCATIONS AND REQUIREMENTS SHALL BE COORDINATED WITH EVERSOURCE PRIOR TO CONSTRUCTION.

TYPICAL ELECTRIC MANHOLE

NO SCALE

Tighe&Bond

STATE OF NEW HAMPSHIRE - PATRICK CRIMMINS No. 12378 LICENSED PROFESSIONAL ENGINEER
1/25/23

STATE OF NEW HAMPSHIRE - NEIL A. HANSEN No. 15227 LICENSED PROFESSIONAL ENGINEER
1/25/23

Proposed Advanced Manufacturing Facility

Aviation Avenue Group, LLC

100 New Hampshire Avenue
Portsmouth, NH

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APPROVED:	PMC

DETAILS SHEET

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C-506

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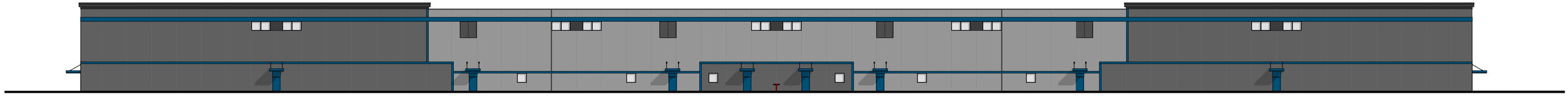
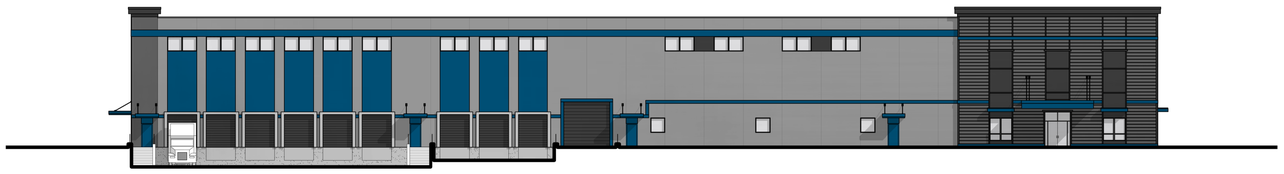
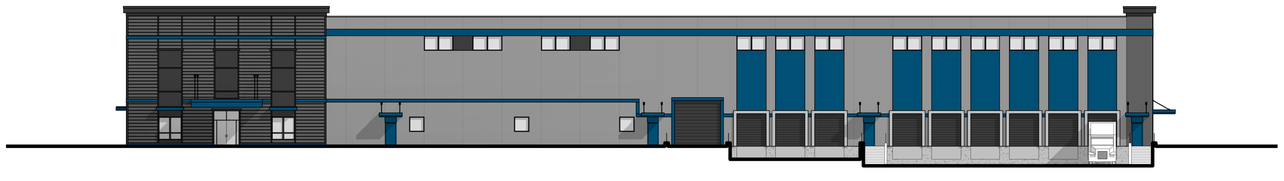
1 NEW HAMPSHIRE AVENUE ELEVATION
3/64" = 1'-0"



2 ROCHESTER AVENUE ELEVATION
3/64" = 1'-0"



3 NEWFIELDS AVENUE ELEVATION
3/64" = 1'-0"



4 STRATHAM STREET ELEVATION
3/64" = 1'-0"

PROCON
CONNECT • CREATE • CONSTRUCT

Scale: 3/64" = 1'-0"

PROPOSED EXTERIOR ELEVATIONS

Project
ADVANCED MANUFACTURING
100 NEW HAMPSHIRE AVE
PORTSMOUTH, NH

Date
12/12/2022

Dwg. No.
A1

Page 1 of 1

100 NH Ave Portsmouth
Photometrics Alt 2

Drawn By: Daniel Hebert
Checked By:
Date:12/16/2022

Scale:

Revisions

#	Date	Comments

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Manchester, NH 03108
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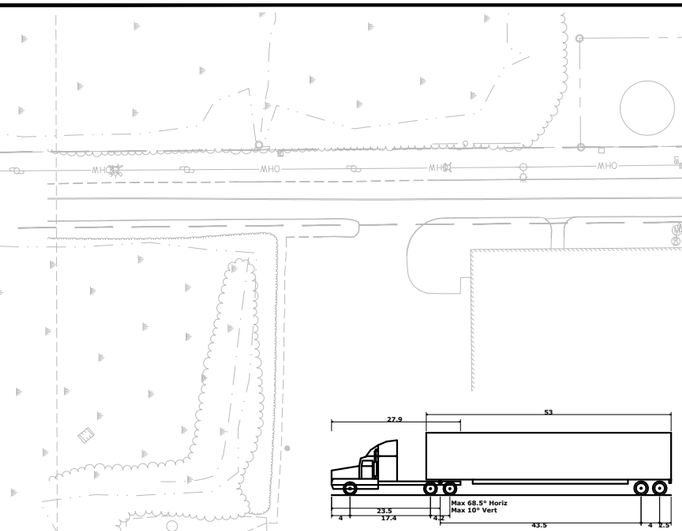
CHARRON



WB-67 - Interstate Semi-Trailer

Overall Length	**73.501ft**
Overall Width	**8.500ft**
Overall Body Height	**13.500ft**
Min Body Ground Clearance	**1.334ft**
Max Track Width	**8.500ft**
Lock-to-lock time	**6.00s**
Max Steering Angle (Virtual)	**28.40°**

Tighe&Bond

SCALE IN FEET
0 60' 120'
GRAPHIC SCALE

Proposed Advanced Manufacturing Facility

Aviation Avenue Group, LLC

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APPROVED:	PMC

WB-67 TRUCK ENTERING TURNING EXHIBIT

SCALE: AS SHOWN

1 OF 2

Last Save Date: January 24, 2023 4:27 PM By: CML
Plot Date: Tuesday, January 24, 2023 4:27 PM By: Craig M. Langton
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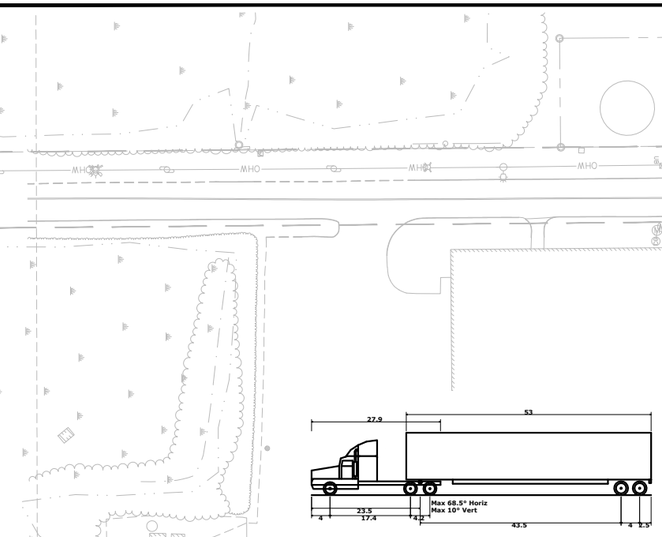

WB-67 - Interstate Semi-Trailer

Overall Length	73.501ft
Overall Width	8.500ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.334ft
Max Track Width	8.500ft
Lock-to-lock time	6.00s
Max Steering Angle (Virtual)	28.40°

AVIATION AVENUE

LEE STREET

TH=58.8'

ROCHESTER AVENUE

NEWFIELDS STREET

STRATHAM STREET

NEW HAMPSHIRE AVENUE

TAX MAP 308 LOT 1
±10.9 ACRES
(±474,300 SF)

PROPOSED ADVANCED MANUFACTURING OVERALL BUILDING FOOTPRINT: ±209,750 SF

314'

668'

OFFICE
9,072 SF

OFFICE
9,072 SF

SCALE IN FEET
0 60' 120'
GRAPHIC SCALE

Proposed Advanced Manufacturing Facility

Aviation Avenue Group, LLC

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APPROVED:	PMC

WB-67 TRUCK EXITING TURNING EXHIBIT

SCALE: AS SHOWN

2 OF 2

Last Save Date: January 24, 2023 4:17 PM By: CML
Plot Date: Tuesday, January 24, 2023 4:17 PM By: Chip M. Langton
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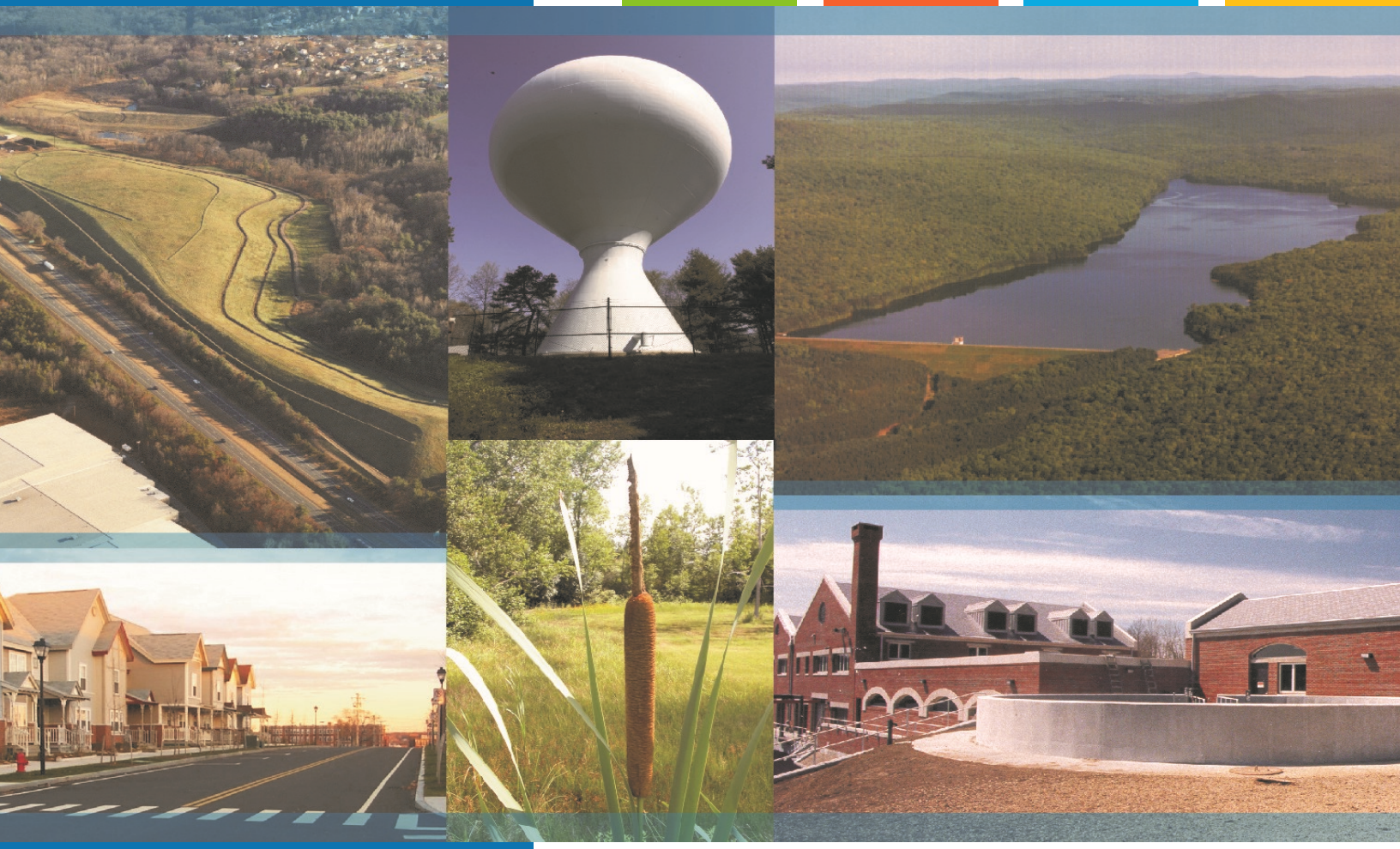

Proposed Advanced Manufacturing Facility

Portsmouth, NH

Drainage Analysis

Prepared For:

Aviation Avenue Group, LLC
210 Commerce Way Suite 300
Portsmouth, NH 03801

December 19, 2022

Last Revised: January 25, 2023

100% Recyclable

Section 1 Drainage Analysis

Appendices

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Section 1
Drainage Analysis

The project site is identified as Map 308 Lot 1 on the City of Portsmouth Tax Maps. The site is located on a piece of land that is bound by Stratham Street to the north, New Hampshire Avenue to the east, Newfields Street to the south, and Rochester Avenue to the west. The proposed project is for the construction of a ±209,750 SF advanced manufacturing facility including ±18,145 SF of office space, two (2) parking areas, two (2) loading dock areas, minor realignment of a portion of Rochester Avenue, and associated site improvements consisting of underground utilities, landscaping, lighting, and a stormwater management system. There is approximately 196,665 SF of existing impervious area that is currently untreated before entering the municipal drainage system. The proposed stormwater management system has been designed to provide treatment for the existing impervious surface that are currently untreated and for ±161,130 SF of additional impervious that results from the proposed project. In addition to the on-site stormwater treatment the proposed project decreases the impervious area within the Rochester Avenue Right of Way by ±15,900 SF, while also adding seven (7) new offline catch basins to provide additional stormwater treatment within the Right of Way.

The Stormwater Management System was designed in accordance with the requirements of the New Hampshire Department of Environmental Services (NHDES) Alteration of Terrain (AoT) rules and regulations (Env-Wq 1500). The system includes deep sump catch basins with oil water separator hoods, an underground detention system and a proprietary Jellyfish Filter Treatment Unit. The use of a proprietary treatment unit is proposed due to the site being located within multiple remediation areas as well a Groundwater Management Zone (GMZ), and per the requirements of Env-Wq 1507.02 (c) no infiltration, filtering, or groundwater recharge practices are permitted in these areas.

1.1 Calculation Methods

The design storms analyzed in this study are the 1-year, 2-year, 10-year, 25-year and 50-year 24-hour Type III duration storm events. The stormwater modeling system, HydroCAD 10.0 was utilized to predict the peak runoff rates from these storm events. A Type III storm pattern was used in the model. The rainfall data for these storm events was obtained from the data published by the Northeast Regional Climate Center (NRCC) at Cornell University, with an additional 15% added factor of safety as required by Env-Wq 1503.08(l) and shown in Table 1.1.

TABLE 1.1 – EXTREME PRECIPITATION ESTIMATES (NRCC)

YEAR	24-hr Estimate (inches)	+ 15% (inches)
1	2.66	3.06
2	3.21	3.69
10	4.87	5.60
25	6.17	7.10
50	7.40	8.51

The time of concentration was computed using the TR-55 Method, which provides a means of determining the time for an entire watershed to contribute runoff to a specific location via sheet flows, shallow concentrated flow, and channel flow. Runoff curve numbers were calculated by estimating the coverage areas and then summing the curve number for the coverage area as a percent of the entire watershed.

References:

1. HydroCAD Stormwater Modeling System, by HydroCAD Software Solutions LLC, Chocorua, New Hampshire.

2. New Hampshire Stormwater Management Manual, Volume 2, Post-Construction Best Management Practices Selection and Design, December 2008.

3. "Extreme Precipitation in New York & New England." Extreme Precipitation in New York & New England by Northeast Regional Climate Center (NRCC), 26 June 2012.

1.2 Pre-Development Conditions

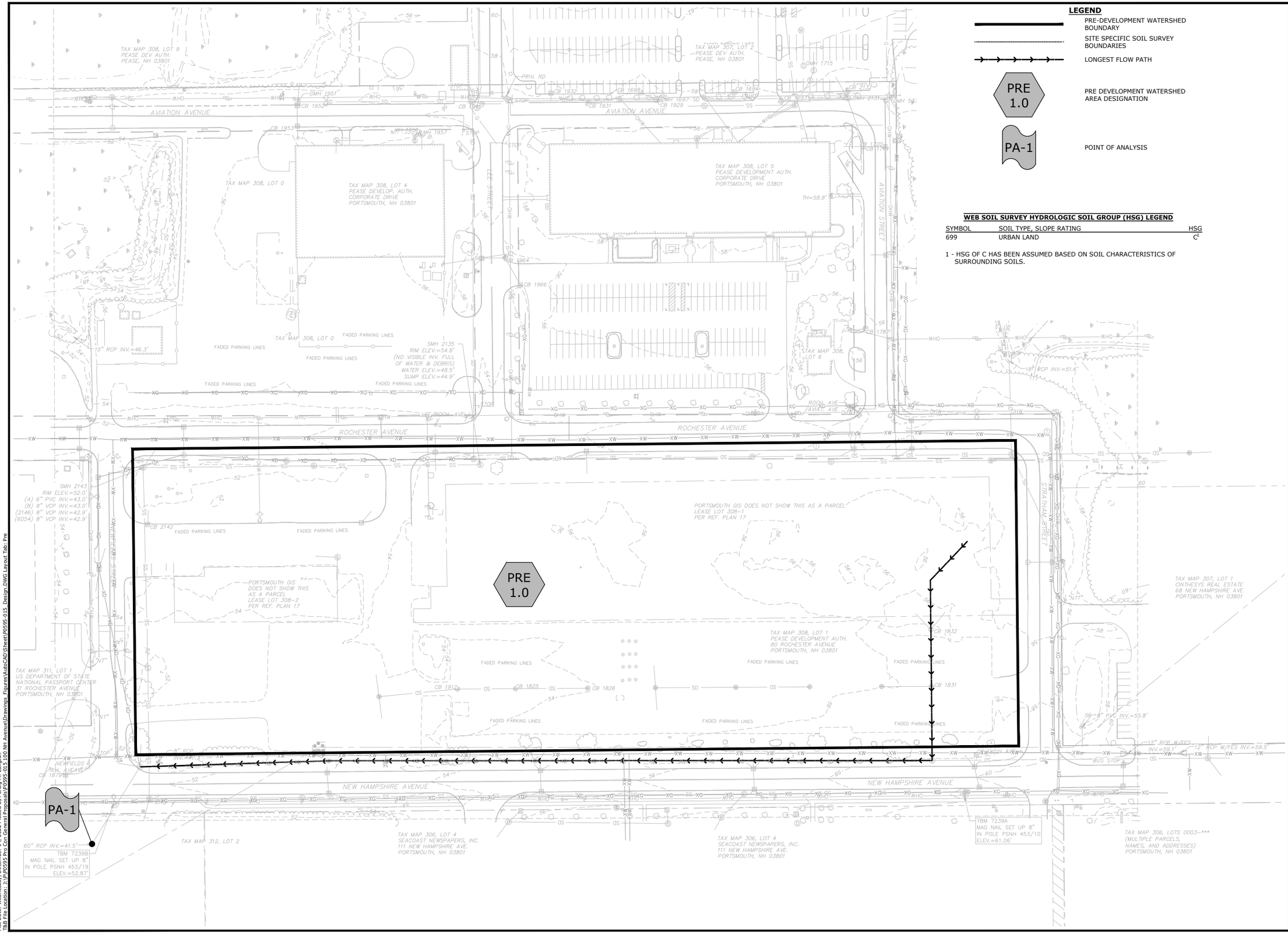
To analyze the Pre-Development condition, the site has been modeled utilizing one (1) sub-catchment area (PRE-1.0) with the distinct point of analysis (PA-1). This point of analysis and watershed are depicted on the plan entitled "Pre-Development Watershed Plan", Sheet C-801.

The point of analysis and their contributing watershed area is described below:

Point of Analysis One (PA-1)

Point of analysis PA-1 is comprised of one (1) watershed area (PRE-1.0). This area includes the land that is currently utilized as an abandoned parking lot along with a grassed area. Runoff from this area travels southwest to northeast across the site via overland flow which is then collected in a closed drainage system then flowing through Point of Analysis 1 (PA-1).

1.2.1 Pre-Development Watershed Plan



LEGEND

- PRE-DEVELOPMENT WATERSHED BOUNDARY
- SITE SPECIFIC SOIL SURVEY BOUNDARIES
- LONGEST FLOW PATH
- PRE 1.0 — PRE DEVELOPMENT WATERSHED AREA DESIGNATION
- PA-1 — POINT OF ANALYSIS

WEB SOIL SURVEY HYDROLOGIC SOIL GROUP (HSG) LEGEND

SYMBOL	SOIL TYPE, SLOPE RATING	HSG
699	URBAN LAND	C[1]

1 - HSG OF C HAS BEEN ASSUMED BASED ON SOIL CHARACTERISTICS OF SURROUNDING SOILS.

SCALE IN FEET
0 60' 120'
GRAPHIC SCALE

Proposed Advanced Manufacturing Facility

Aviation Avenue Group, LLC

100 New Hampshire Avenue
Portsmouth, NH

MARK	DATE	DESCRIPTION
A	12/19/2022	TAC Submission

PROJECT NO:	P0595-015
DATE:	12/19/2022
FILE:	P0595-015_DESIGN.DWG
DRAWN BY:	CML
CHECKED:	NAH
APPROVED:	PMC

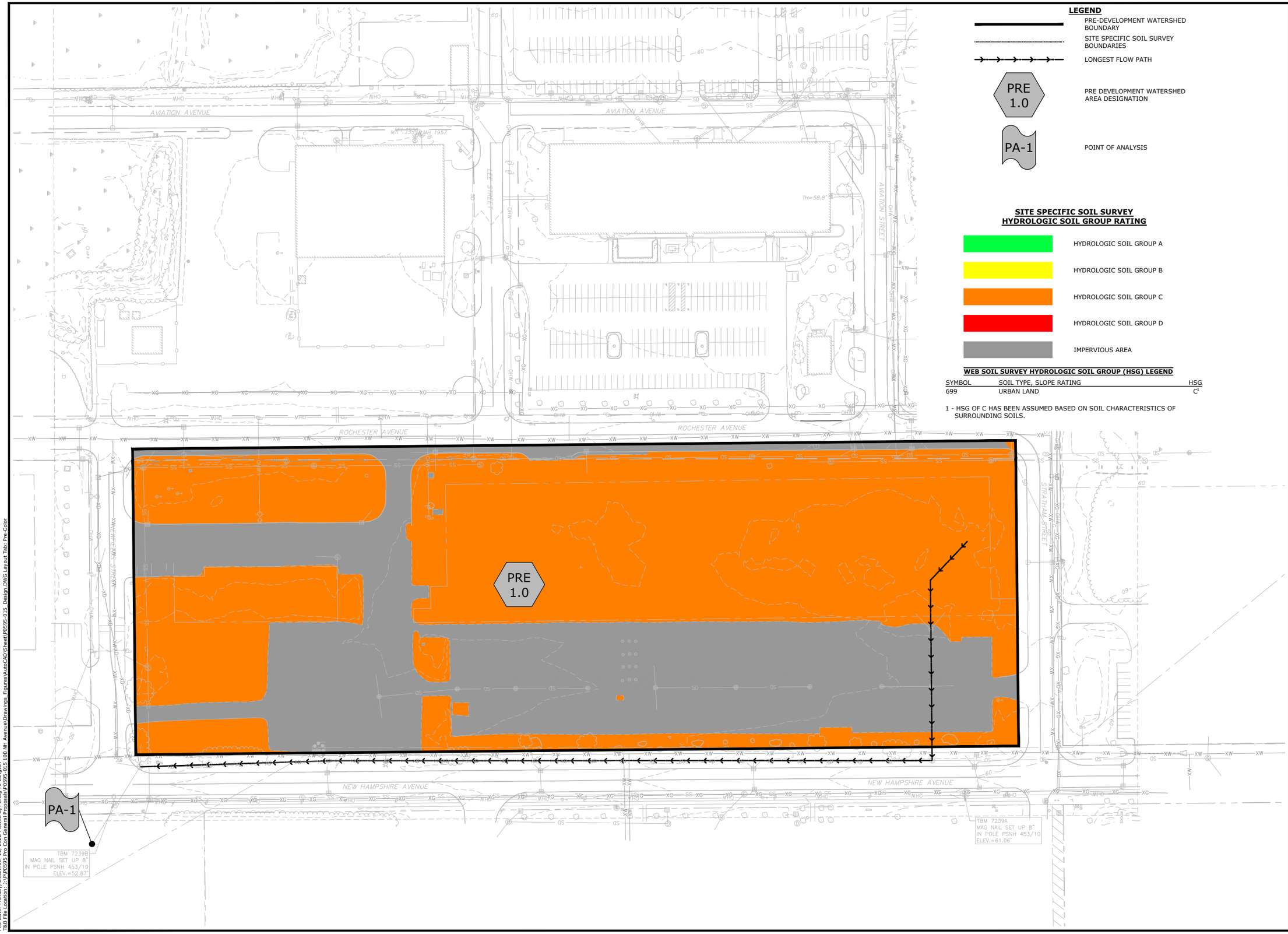
PRE-DEVELOPMENT WATERSHED PLAN

SCALE: AS SHOWN

C-801

Last Save Date: December 14, 2022 11:43 AM By: CML
Plot Date: December 14, 2022 11:43 AM By: Craig M. Langton
T&B File Location: J:\P\P0595 Pro Con General Proposals\P0595-015 100 NH Avenue\Drawings, Figures\AutoCAD\Sheet\P0595-015_Design.DWG Layout Tab: Pre

1.2.2 Pre-Development Soil Plan



LEGEND

- PRE-DEVELOPMENT WATERSHED BOUNDARY
- SITE SPECIFIC SOIL SURVEY BOUNDARIES
- LONGEST FLOW PATH
- PRE 1.0 — PRE DEVELOPMENT WATERSHED AREA DESIGNATION
- PA-1 — POINT OF ANALYSIS

SITE SPECIFIC SOIL SURVEY HYDROLOGIC SOIL GROUP RATING

- HYDROLOGIC SOIL GROUP A
- HYDROLOGIC SOIL GROUP B
- HYDROLOGIC SOIL GROUP C
- HYDROLOGIC SOIL GROUP D
- IMPERVIOUS AREA

WEB SOIL SURVEY HYDROLOGIC SOIL GROUP (HSG) LEGEND

SYMBOL	SOIL TYPE, SLOPE RATING	HSG
699	URBAN LAND	C[1]

1 - HSG OF C HAS BEEN ASSUMED BASED ON SOIL CHARACTERISTICS OF SURROUNDING SOILS.

SCALE IN FEET
0 60' 120'
GRAPHIC SCALE

Proposed Advanced Manufacturing Facility

Aviation Avenue Group, LLC

100 New Hampshire Avenue
Portsmouth, NH

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A	12/19/2022	TAC Submission

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DATE:	12/19/2022
FILE:	P0595-015_DESIGN.DWG
DRAWN BY:	CML
CHECKED:	NAH
APPROVED:	PMC

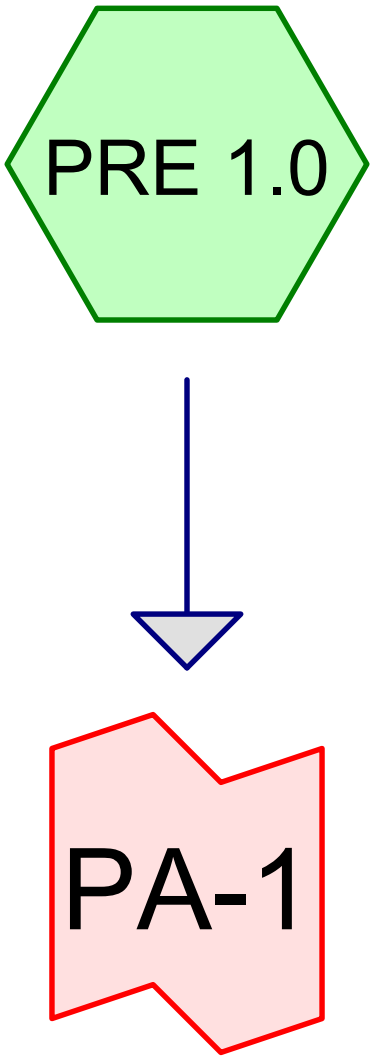
PRE-DEVELOPMENT SOIL COVERAGE COLOR PLAN

SCALE: AS SHOWN

C-803

Last Save Date: December 12, 2022 4:02 PM By: CML
Last Plot Date: December 12, 2022 4:02 PM By: Craig M. Langton
T&B File Location: J:\P0595 Pro Con General Proposals\P0595-015 100 NH Avenue\Drawings_Figures\AutoCAD\Sheet\P0595-015_Design.DWG Layout Tab: Pre-Color

1.2.3 Pre-Development Calculation



Subcat Reach Pond Link

Routing Diagram for P0595-015_Pre
Prepared by Tighe & Bond, Printed 12/14/2022
HydroCAD® 10.00-20 s/n 03436 © 2017 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
6.914	74	>75% Grass cover, Good, HSG C (PRE 1.0)
4.515	98	Paved parking, HSG C (PRE 1.0)
11.429	**83**	**TOTAL AREA**

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPRE 1.0: Runoff Area=497,841 sf 39.50% Impervious Runoff Depth>1.49"
Flow Length=1,512' Tc=5.0 min CN=83 Runoff=20.01 cfs 1.423 af

Link PA-1: Inflow=20.01 cfs 1.423 af
Primary=20.01 cfs 1.423 af

Total Runoff Area = 11.429 ac Runoff Volume = 1.423 af Average Runoff Depth = 1.49"
60.50% Pervious = 6.914 ac 39.50% Impervious = 4.515 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPRE 1.0: Runoff Area=497,841 sf 39.50% Impervious Runoff Depth>2.02"
Flow Length=1,512' Tc=5.0 min CN=83 Runoff=27.08 cfs 1.922 af

Link PA-1: Inflow=27.08 cfs 1.922 af
Primary=27.08 cfs 1.922 af

Total Runoff Area = 11.429 ac Runoff Volume = 1.922 af Average Runoff Depth = 2.02"
60.50% Pervious = 6.914 ac 39.50% Impervious = 4.515 ac

Summary for Subcatchment PRE 1.0:

Runoff = 49.71 cfs @ 12.07 hrs, Volume= 3.542 af, Depth> 3.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=5.60"

Area (sf)	CN	Description
301,177	74	>75% Grass cover, Good, HSG C
196,664	98	Paved parking, HSG C
497,841	83	Weighted Average
301,177		60.50% Pervious Area
196,664		39.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	10	0.0150	0.83		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.69"
0.2	38	0.0050	3.47	2.73	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
2.3	595	0.0030	4.27	13.42	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012 Concrete pipe, finished
2.3	869	0.0030	6.20	59.70	**Pipe Channel,** 42.0" Round Area= 9.6 sf Perim= 11.0' r= 0.88' n= 0.012 Concrete pipe, finished
5.0	1,512	Total			

Summary for Link PA-1:

Inflow Area = 11.429 ac, 39.50% Impervious, Inflow Depth > 3.72" for 10-Year event
Inflow = 49.71 cfs @ 12.07 hrs, Volume= 3.542 af
Primary = 49.71 cfs @ 12.07 hrs, Volume= 3.542 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPRE 1.0: Runoff Area=497,841 sf 39.50% Impervious Runoff Depth>5.12"
Flow Length=1,512' Tc=5.0 min CN=83 Runoff=67.64 cfs 4.876 af

Link PA-1: Inflow=67.64 cfs 4.876 af
Primary=67.64 cfs 4.876 af

Total Runoff Area = 11.429 ac Runoff Volume = 4.876 af Average Runoff Depth = 5.12"
60.50% Pervious = 6.914 ac 39.50% Impervious = 4.515 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPRE 1.0: Runoff Area=497,841 sf 39.50% Impervious Runoff Depth>6.46"
Flow Length=1,512' Tc=5.0 min CN=83 Runoff=84.49 cfs 6.154 af

Link PA-1: Inflow=84.49 cfs 6.154 af
Primary=84.49 cfs 6.154 af

Total Runoff Area = 11.429 ac Runoff Volume = 6.154 af Average Runoff Depth = 6.46"
60.50% Pervious = 6.914 ac 39.50% Impervious = 4.515 ac

1.3 Post-Development Conditions

The post-development drainage condition is characterized by one (1) watershed area (POST-1.0) modeled at the same point of analysis as the pre-development condition. This point of analysis and watersheds are depicted on the plan entitled "Post Development Watershed Plan", Sheets C-802.

The point of analysis and their contributing watershed area is described below:

Point of Analysis One (PA-1)

Point of analysis PA-1 is comprised of one (1) watershed area (POST-1.0). This area includes all additional proposed impervious area on site as well the proposed green / landscaped areas on site. The proposed impervious areas generating runoff on site include roofs, parking lots, concrete sidewalks, and loading dock areas. Runoff from site is captured via overland flow then captured in the proposed onsite drainage system where it is detained and treated prior to being discharged through Point of Analysis 1 (PA-1).

1.3.1 Post-Development Watershed Plan

LEGEND

- POST-DEVELOPMENT WATERSHED BOUNDARY
- LONGEST FLOW PATH
- POST 1.0 — PRE DEVELOPMENT WATERSHED AREA DESIGNATION
- POST POND 1 — POST-DEVELOPMENT POND DESIGNATION
- PA-1 — POINT OF ANALYSIS

WEB SOIL SURVEY HYDROLOGIC SOIL GROUP (HSG) LEGEND

SYMBOL	SOIL TYPE, SLOPE RATING	HSG
699	URBAN LAND	C[1]

1 - HSG OF C HAS BEEN ASSUMED BASED ON SOIL CHARACTERISTICS OF SURROUNDING SOILS.

POST 1.0

TAX MAP 308 LOT 1
±10.9 ACRES
(±474,300 SF)

PROPOSED ADVANCED MANUFACTURING
OVERALL BUILDING FOOTPRINT:
±209,750 SF
FF=58.00

314'

668'

OFFICE
9,072 SF

OFFICE
9,072 SF

POST POND PUD-1

PROPOSED UNDERGROUND DETENTION BASIN-01
17-ROWS OF 60" HDPE
PIPE INV = 45.00
STONE INV = 44.50
(SEE DETAIL)

PROPOSED JELLYFISH STORMWATER TREATMENT UNIT
INV IN=44.95
INV OUT=44.45
(SEE DETAIL)

APPROX LOCATION OF EXISTING DRAIN PER CITY OF PORTSMOUTH GIS INFORMATION

PA-1

15" RCP INV.=46.3'

18" RCP INV.=51.6'

60" RCP INV.=41.5'

56" 8" PVC INV.=55.8'

12" RCP W/FES INV.=59.1'

12" RCP W/FES INV.=59.5'

SCALE IN FEET
0 60' 120'
GRAPHIC SCALE

Proposed Advanced Manufacturing Facility

Aviation Avenue Group, LLC

100 New Hampshire Avenue
Portsmouth, NH

MARK	DATE	DESCRIPTION
B	1/25/2023	TAC Resubmission
A	12/19/2022	TAC Submission

PROJECT NO:	P0595-015
DATE:	12/19/2022
FILE:	P0595-015_DESIGN.DWG
DRAWN BY:	CML
CHECKED:	NAH
APPROVED:	PMC

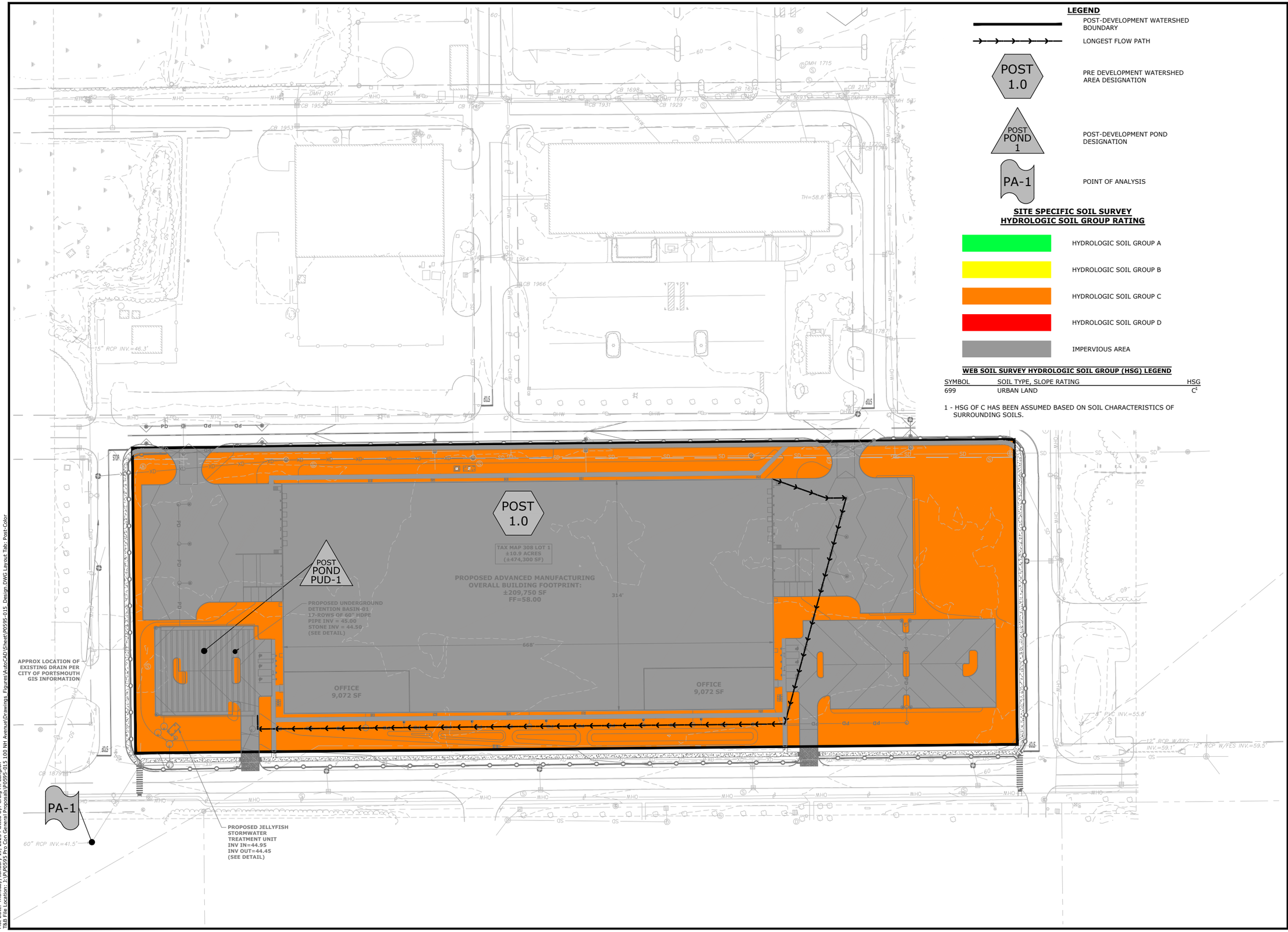
POST-DEVELOPMENT WATERSHED PLAN

SCALE: AS SHOWN

C-802

Last Save Date: January 19, 2023 12:43 PM By: CML
Plot Date: Thursday, January 19, 2023 12:44 PM By: Christine M. Langton
T&B File Location: J:\P0595 Pro Con General Proposals\P0595-015 100 NH Avenue\Drawings, Figures\AutoCAD\Sheet\P0595-015_Design.DWG Layout Tab: Post

1.3.2 Post-Development Soil Plan



LEGEND

- POST-DEVELOPMENT WATERSHED BOUNDARY
- LONGEST FLOW PATH
- POST 1.0 — PRE DEVELOPMENT WATERSHED AREA DESIGNATION
- POST POND 1 — POST-DEVELOPMENT POND DESIGNATION
- PA-1 — POINT OF ANALYSIS

SITE SPECIFIC SOIL SURVEY
HYDROLOGIC SOIL GROUP RATING

- HYDROLOGIC SOIL GROUP A
- HYDROLOGIC SOIL GROUP B
- HYDROLOGIC SOIL GROUP C
- HYDROLOGIC SOIL GROUP D
- IMPERVIOUS AREA

WEB SOIL SURVEY HYDROLOGIC SOIL GROUP (HSG) LEGEND

SYMBOL	SOIL TYPE, SLOPE RATING	HSG
699	URBAN LAND	C[1]

1 - HSG OF C HAS BEEN ASSUMED BASED ON SOIL CHARACTERISTICS OF SURROUNDING SOILS.

Tighe&Bond

SCALE IN FEET
0 60' 120'
GRAPHIC SCALE

Proposed Advanced Manufacturing Facility

Aviation Avenue Group, LLC

100 New Hampshire Avenue
Portsmouth, NH

MARK	DATE	DESCRIPTION
B	1/25/2023	TAC Resubmission
A	12/19/2022	TAC Submission

PROJECT NO:	P0595-015
DATE:	12/19/2022
FILE:	P0595-015_DESIGN.DWG
DRAWN BY:	CML
CHECKED:	NAH
APPROVED:	PMC

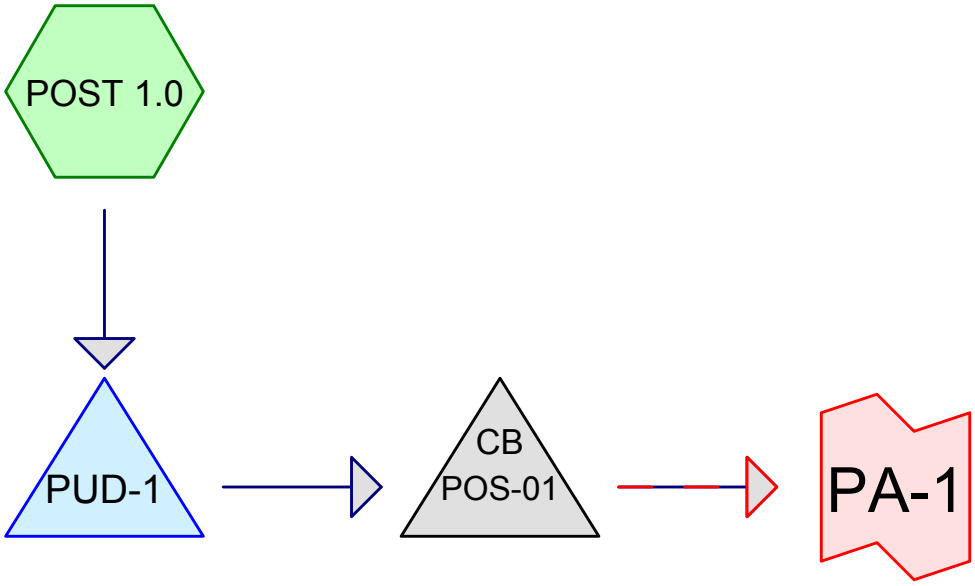
POST-DEVELOPMENT SOIL COVERAGE COLOR PLAN

SCALE: AS SHOWN

C-804

Last Save Date: January 19, 2023 12:48 PM By: CML
Plot Date: Thursday, January 19, 2023 12:49 PM By: Chip M. Langdon
T&B File Location: J:\P\P0595 Pro Con General Proposals\P0595-015 100 NH Avenue\Drawings, Figures\AutoCAD\Sheet\P0595-015_Design.DWG Layout Tab: Post-Color

1.3.3 Post-Development Calculation



Subcat Reach Pond Link

Routing Diagram for P0595-015_Post
Prepared by Tighe & Bond, Printed 12/14/2022
HydroCAD® 10.00-20 s/n 03436 © 2017 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
3.215	74	>75% Grass cover, Good, HSG C (POST 1.0)
2.469	98	Paved parking, HSG C (POST 1.0)
5.745	98	Roofs, HSG C (POST 1.0)
11.429	**91**	**TOTAL AREA**

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPOST 1.0: Runoff Area=497,842 sf 71.87% Impervious Runoff Depth>2.13"
Flow Length=934' Tc=5.0 min CN=91 Runoff=28.25 cfs 2.025 af

Pond POS-01: Peak Elev=46.40' Inflow=14.24 cfs 2.025 af
Primary=9.45 cfs 1.769 af Secondary=4.79 cfs 0.255 af Outflow=14.24 cfs 2.025 af

Pond PUD-1: Peak Elev=47.28' Storage=15,242 cf Inflow=28.25 cfs 2.025 af
Outflow=14.24 cfs 2.025 af

Link PA-1: Inflow=14.24 cfs 2.025 af
Primary=14.24 cfs 2.025 af

Total Runoff Area = 11.429 ac Runoff Volume = 2.025 af Average Runoff Depth = 2.13"
28.13% Pervious = 3.215 ac 71.87% Impervious = 8.214 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPOST 1.0: Runoff Area=497,842 sf 71.87% Impervious Runoff Depth>2.72"
Flow Length=934' Tc=5.0 min CN=91 Runoff=35.79 cfs 2.590 af

Pond POS-01: Peak Elev=46.58' Inflow=18.71 cfs 2.590 af
Primary=11.41 cfs 2.198 af Secondary=7.30 cfs 0.392 af Outflow=18.71 cfs 2.590 af

Pond PUD-1: Peak Elev=47.71' Storage=19,767 cf Inflow=35.79 cfs 2.590 af
Outflow=18.71 cfs 2.590 af

Link PA-1: Inflow=18.71 cfs 2.590 af
Primary=18.71 cfs 2.590 af

Total Runoff Area = 11.429 ac Runoff Volume = 2.590 af Average Runoff Depth = 2.72"
28.13% Pervious = 3.215 ac 71.87% Impervious = 8.214 ac

Summary for Subcatchment POST 1.0:

Runoff = 58.48 cfs @ 12.07 hrs, Volume= 4.347 af, Depth> 4.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=5.60"

Area (sf)	CN	Description
250,258	98	Roofs, HSG C
140,048	74	>75% Grass cover, Good, HSG C
107,536	98	Paved parking, HSG C
497,842	91	Weighted Average
140,048		28.13% Pervious Area
357,794		71.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	77	0.0125	1.16		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.69"
0.2	27	0.0125	2.27		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.5	102	0.0050	3.21	2.52	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.9	216	0.0050	4.20	7.43	**Pipe Channel,** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
0.4	125	0.0050	5.09	16.00	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Corrugated PE, smooth interior
0.8	223	0.0025	4.72	33.35	**Pipe Channel,** 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.013 Corrugated PE, smooth interior
0.6	164	0.0015	4.43	55.63	**Pipe Channel,** 48.0" Round Area= 12.6 sf Perim= 12.6' r= 1.00' n= 0.013 Corrugated PE, smooth interior
4.5	934	Total, Increased to minimum Tc = 5.0 min			

Summary for Pond POS-01:

Inflow Area = 11.429 ac, 71.87% Impervious, Inflow Depth > 4.56" for 10-Year event
Inflow = 42.20 cfs @ 12.15 hrs, Volume= 4.344 af
Outflow = 42.20 cfs @ 12.15 hrs, Volume= 4.344 af, Atten= 0%, Lag= 0.0 min
Primary = 18.00 cfs @ 12.14 hrs, Volume= 3.391 af
Secondary = 24.20 cfs @ 12.15 hrs, Volume= 0.954 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 47.42' @ 12.14 hrs
Flood Elev= 54.35'

Device	Routing	Invert	Outlet Devices
#1	Primary	45.00'	**24.0" Vert. To JellyFish Treatment Unit** C= 0.600
#2	Secondary	45.65'	**48.0" Vert. To PDMH-13** C= 0.600

Primary OutFlow Max=17.93 cfs @ 12.14 hrs HW=47.41' TW=0.00' (Dynamic Tailwater)
└─**1=To JellyFish Treatment Unit** (Orifice Controls 17.93 cfs @ 5.71 fps)

Secondary OutFlow Max=23.95 cfs @ 12.15 hrs HW=47.41' TW=0.00' (Dynamic Tailwater)
└─**2=To PDMH-13** (Orifice Controls 23.95 cfs @ 4.51 fps)

Summary for Pond PUD-1:

Inflow Area = 11.429 ac, 71.87% Impervious, Inflow Depth > 4.56" for 10-Year event
Inflow = 58.48 cfs @ 12.07 hrs, Volume= 4.347 af
Outflow = 42.20 cfs @ 12.15 hrs, Volume= 4.344 af, Atten= 28%, Lag= 4.4 min
Primary = 42.20 cfs @ 12.15 hrs, Volume= 4.344 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Starting Elev= 45.00' Surf.Area= 16,096 sf Storage= 0 cf
Peak Elev= 48.51' @ 12.16 hrs Surf.Area= 16,096 sf Storage= 28,105 cf
Flood Elev= 50.00' Surf.Area= 16,096 sf Storage= 40,389 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 13.6 min (795.5 - 781.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	44.50'	0 cf	**128.59'W x 125.17'L x 6.08'H Field A** 97,923 cf Overall - 48,988 cf Embedded = 48,934 cf x 0.0% Voids
#2A	45.00'	41,267 cf	**ADS N-12 60"** x 85 Inside #1 Inside= 59.5"W x 59.5"H => 19.30 sf x 20.00'L = 386.0 cf Outside= 67.0"W x 67.0"H => 22.91 sf x 20.00'L = 458.2 cf Row Length Adjustment= +11.00' x 19.30 sf x 17 rows 125.59' Header x 19.30 sf x 2 = 4,847.8 cf Inside
		41,267 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	45.00'	**24.0" Vert. Orifice** C= 0.600
#2	Primary	47.50'	**8.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)

Primary OutFlow Max=40.99 cfs @ 12.15 hrs HW=48.49' TW=47.41' (Dynamic Tailwater)
├─**1=Orifice** (Orifice Controls 15.77 cfs @ 5.02 fps)
└─**2=Sharp-Crested Rectangular Weir** (Weir Controls 25.22 cfs @ 3.26 fps)

Summary for Link PA-1:

Inflow Area = 11.429 ac, 71.87% Impervious, Inflow Depth > 4.56" for 10-Year event
Inflow = 42.20 cfs @ 12.15 hrs, Volume= 4.344 af
Primary = 42.20 cfs @ 12.15 hrs, Volume= 4.344 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPOST 1.0: Runoff Area=497,842 sf 71.87% Impervious Runoff Depth>6.03"
Flow Length=934' Tc=5.0 min CN=91 Runoff=76.11 cfs 5.747 af

Pond POS-01: Peak Elev=47.98' Inflow=60.59 cfs 5.741 af
Primary=21.29 cfs 4.239 af Secondary=39.31 cfs 1.502 af Outflow=60.59 cfs 5.741 af

Pond PUD-1: Peak Elev=48.97' Storage=32,678 cf Inflow=76.11 cfs 5.747 af
Outflow=60.59 cfs 5.741 af

Link PA-1: Inflow=60.59 cfs 5.741 af
Primary=60.59 cfs 5.741 af

Total Runoff Area = 11.429 ac Runoff Volume = 5.747 af Average Runoff Depth = 6.03"
28.13% Pervious = 3.215 ac 71.87% Impervious = 8.214 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPOST 1.0: Runoff Area=497,842 sf 71.87% Impervious Runoff Depth>7.42"
Flow Length=934' Tc=5.0 min CN=91 Runoff=92.55 cfs 7.071 af

Pond POS-01: Peak Elev=48.42' Inflow=76.08 cfs 7.062 af
Primary=23.53 cfs 4.988 af Secondary=52.55 cfs 2.073 af Outflow=76.08 cfs 7.062 af

Pond PUD-1: Peak Elev=49.39' Storage=36,337 cf Inflow=92.55 cfs 7.071 af
Outflow=76.08 cfs 7.062 af

Link PA-1: Inflow=76.08 cfs 7.062 af
Primary=76.08 cfs 7.062 af

Total Runoff Area = 11.429 ac Runoff Volume = 7.071 af Average Runoff Depth = 7.42"
28.13% Pervious = 3.215 ac 71.87% Impervious = 8.214 ac

1.4 Peak Rate Comparisons

The following table summarizes and compares the pre- and post-development peak runoff rates from the 1-year, 2-year, 10-year, 25-year and 50-year storm events at each point of analysis.

Table 1.4 – Comparison of Pre- and Post-Development Flows (CFS)

Point of Analysis	1-Year Storm	2-Year Storm	10-Year Storm	25-Year Storm	50-Year Storm
Pre-Development Watershed (PA-1)	20.01	27.08	49.71	67.64	84.49
Post-Development Watershed (PA-1)	14.24	18.71	42.20	60.59	76.08

The Peak Runoff Control Requirements of Env-Wq 1507.06 are required to be met for the point of analysis. As shown in Table 1.4 the Post-Development flows are decreased from the Pre-Development flows at PA-1.

The Channel Protection requirements of Env-Wq 1507.05 are met for the point of analysis as the 2-year, 24-hour Post-Development peak flowrate (18.71 cfs) is less than or equal to the 1-year, 24-hour pre-development peak flowrate (20.01 cfs).

1.5 Mitigation Description

1.5.1 Mitigation Calculations

The proposed project area has been evaluated to treat the required water quality flow (WQF) per the requirements of Env-Wq 1500. These calculations have been provided in appendix E of this report.

1.5.2 Pre-Treatment Methods for Protecting Water Quality

Pretreatment methods for protecting water quality on this site include offline deep sump catch basins with oil water separator hoods.

Table 1.5 – Pollutant Removal Efficiencies

BMP	Total Suspended Solids	Total Phosphorus
Deep Sump Catch Basin w/Hood[1]	15%	5%

1. Pollutant removal efficiencies from NH Stormwater Manual Volume 2, Appendix B.

1.5.3 Treatment Methods for Protecting Water Quality

The runoff from proposed impervious areas will be captured in the proposed closed drainage system directed to an underground detention system and then treated by an ADS Water Quality Unit. The water quality unit has been sized to treat the Water Quality Flow from the contributing subcatchment areas. The system has been designed with an internal bypass structure that diverts peak flows greater than the 1-inch storm event.

Table 1.6 below, shows design pollutant removal efficient for the proposed Jellyfish Filter Treatment Unit which meets the requirements of Env-Wq 1508.10. Additional reference information on the proposed Jellyfish Filter Treatment Unit can be found in Appendix C.

Table 1.6 – Pollutant Removal Efficiencies		
BMP	Total Suspended Solids	Total Phosphorus
Jellyfish Filter Treatment Unit [1]	89%	59%

1. Pollutant removal efficiencies per Contech Engineered Solutions Jellyfish Filter Performance testing results.

Table 1.7 – Pollutant Removal Calculations				
Total Suspended Solids Removal				
BMP	TSS Removal Rate	Starting TSS Load	TSS Removed	Remaining TSS Load
Deep Sump Catch Basin w/Hood[1]	0.15	1.00	0.15	0.85
Jellyfish Filter Treatment Unit [2]	0.89	0.85	0.76	0.09
			Total Suspended Solids Removed:	**91%**

Total Phosphorus Removal				
	TP Removal Rate	Starting TP Load	TP Removed	Remaining TP Load
Deep Sump Catch Basin w/Hood[1]	0.05	1.00	0.05	0.95
Jellyfish Filter Treatment Unit [2]	0.59	0.95	0.56	0.39
			Total Phosphorus Removed:	**61%**

1. Pollutant removal efficiencies from NH Stormwater Manual Volume 2, Appendix B.
2. Pollutant removal efficiencies per Contech Engineered Solutions Jellyfish Filter Performance testing results.

APPENDIX A

(Bound Separately)

APPENDIX B

Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Smoothing	Yes
State	New Hampshire
Location	
Longitude	70.808 degrees West
Latitude	43.075 degrees North
Elevation	0 feet
Date/Time	Tue, 29 Jun 2021 09:16:17 -0400

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.26	0.40	0.50	0.65	0.82	1.04	**1yr**	0.70	0.98	1.21	1.56	2.03	2.66	2.92	**1yr**	2.35	2.81	3.21	3.94	4.54	**1yr**
2yr	0.32	0.50	0.62	0.81	1.02	1.30	**2yr**	0.88	1.18	1.51	1.94	2.49	3.21	3.57	**2yr**	2.84	3.43	3.93	4.67	5.32	**2yr**
5yr	0.37	0.58	0.73	0.97	1.24	1.60	**5yr**	1.07	1.46	1.88	2.43	3.14	4.07	4.57	**5yr**	3.60	4.40	5.03	5.93	6.70	**5yr**
10yr	0.41	0.64	0.81	1.11	1.44	1.88	**10yr**	1.25	1.72	2.22	2.88	3.74	4.87	5.53	**10yr**	4.31	5.31	6.07	7.10	7.98	**10yr**
25yr	0.47	0.75	0.96	1.32	1.76	2.32	**25yr**	1.52	2.13	2.76	3.61	4.73	6.17	7.10	**25yr**	5.46	6.82	7.78	9.02	10.06	**25yr**
50yr	0.53	0.85	1.09	1.52	2.05	2.74	**50yr**	1.77	2.51	3.27	4.30	5.65	7.40	8.58	**50yr**	6.55	8.25	9.40	10.81	11.99	**50yr**
100yr	0.60	0.97	1.25	1.76	2.39	3.22	**100yr**	2.06	2.96	3.86	5.11	6.74	8.86	10.38	**100yr**	7.84	9.98	11.35	12.96	14.30	**100yr**
200yr	0.67	1.09	1.41	2.02	2.79	3.80	**200yr**	2.41	3.49	4.58	6.09	8.06	10.62	12.55	**200yr**	9.40	12.07	13.71	15.54	17.05	**200yr**
500yr	0.79	1.30	1.69	2.45	3.43	4.71	**500yr**	2.96	4.34	5.71	7.65	10.19	13.50	16.15	**500yr**	11.95	15.53	17.61	19.77	21.55	**500yr**

Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.23	0.36	0.44	0.59	0.73	0.89	**1yr**	0.63	0.87	0.92	1.32	1.66	2.23	2.53	**1yr**	1.97	2.43	2.85	3.16	3.88	**1yr**
2yr	0.32	0.49	0.60	0.81	1.00	1.19	**2yr**	0.86	1.16	1.37	1.82	2.34	3.05	3.46	**2yr**	2.70	3.32	3.82	4.55	5.07	**2yr**
5yr	0.35	0.54	0.67	0.92	1.17	1.40	**5yr**	1.01	1.37	1.61	2.13	2.74	3.80	4.21	**5yr**	3.36	4.05	4.71	5.54	6.26	**5yr**
10yr	0.39	0.59	0.73	1.03	1.32	1.60	**10yr**	1.14	1.56	1.81	2.40	3.07	4.38	4.89	**10yr**	3.88	4.70	5.46	6.43	7.22	**10yr**
25yr	0.44	0.67	0.83	1.19	1.56	1.90	**25yr**	1.35	1.86	2.10	2.78	3.56	4.70	5.94	**25yr**	4.16	5.72	6.69	7.84	8.73	**25yr**
50yr	0.48	0.73	0.91	1.31	1.77	2.17	**50yr**	1.53	2.12	2.35	3.10	3.97	5.31	6.88	**50yr**	4.70	6.61	7.80	9.11	10.08	**50yr**
100yr	0.54	0.81	1.02	1.47	2.02	2.47	**100yr**	1.74	2.42	2.63	3.45	4.40	5.96	7.96	**100yr**	5.27	7.65	9.09	10.60	11.64	**100yr**
200yr	0.59	0.89	1.13	1.64	2.29	2.82	**200yr**	1.98	2.76	2.94	3.83	4.86	6.67	9.21	**200yr**	5.91	8.85	10.59	12.34	13.46	**200yr**
500yr	0.69	1.03	1.32	1.92	2.73	3.38	**500yr**	2.36	3.30	3.41	4.39	5.56	7.76	11.16	**500yr**	6.87	10.73	12.98	15.12	16.29	**500yr**

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.28	0.44	0.54	0.72	0.89	1.08	**1yr**	0.77	1.06	1.26	1.75	2.21	3.00	3.14	**1yr**	2.66	3.02	3.58	4.37	5.05	**1yr**
2yr	0.33	0.52	0.64	0.86	1.06	1.26	**2yr**	0.92	1.24	1.48	1.96	2.51	3.43	3.69	**2yr**	3.03	3.54	4.07	4.82	5.64	**2yr**
5yr	0.40	0.61	0.76	1.05	1.33	1.61	**5yr**	1.15	1.58	1.88	2.53	3.24	4.33	4.93	**5yr**	3.84	4.74	5.36	6.34	7.13	**5yr**
10yr	0.47	0.71	0.89	1.24	1.60	1.96	**10yr**	1.38	1.92	2.27	3.09	3.93	5.33	6.16	**10yr**	4.72	5.92	6.75	7.80	8.71	**10yr**
25yr	0.57	0.87	1.08	1.54	2.03	2.55	**25yr**	1.75	2.49	2.93	4.05	5.10	7.79	8.26	**25yr**	6.90	7.95	9.02	10.27	11.35	**25yr**
50yr	0.66	1.01	1.26	1.81	2.43	3.10	**50yr**	2.10	3.03	3.57	4.96	6.24	9.76	10.34	**50yr**	8.64	9.94	11.25	12.63	13.88	**50yr**
100yr	0.78	1.18	1.47	2.13	2.92	3.77	**100yr**	2.52	3.68	4.34	6.10	7.64	12.21	12.94	**100yr**	10.81	12.44	14.02	15.57	16.99	**100yr**
200yr	0.91	1.37	1.73	2.51	3.50	4.59	**200yr**	3.02	4.49	5.29	7.51	9.36	15.32	16.21	**200yr**	13.56	15.59	17.49	19.17	20.80	**200yr**
500yr	1.12	1.67	2.15	3.13	4.44	5.95	**500yr**	3.84	5.81	6.86	9.90	12.27	20.70	21.84	**500yr**	18.32	21.00	23.45	25.25	27.19	**500yr**

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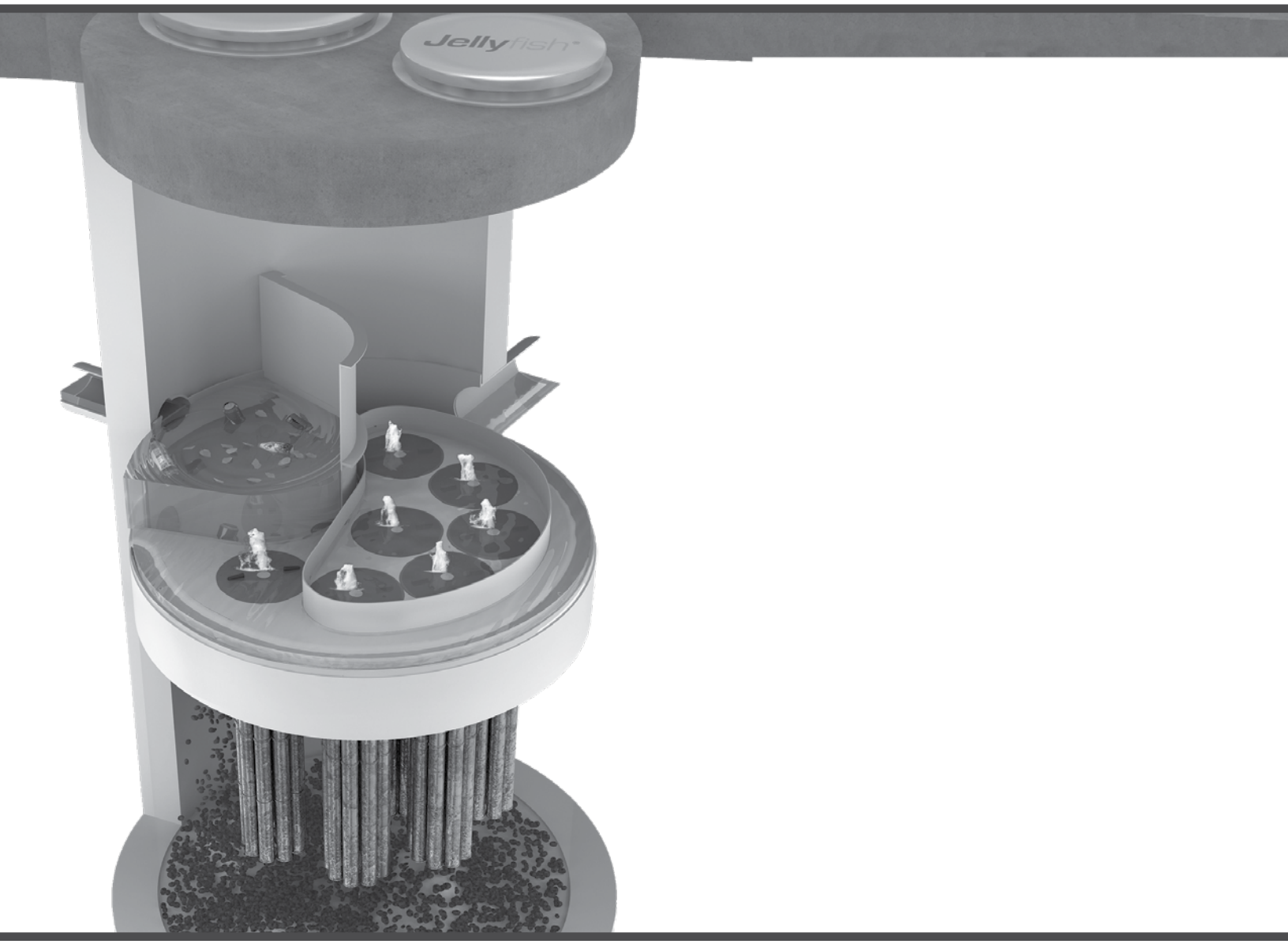
Northeast Regional Climate Center

APPENDIX C

CONTECH®
ENGINEERED SOLUTIONS

Jellyfish® Filter Maintenance Guide



Jellyfish®

JELLYFISH® FILTER
INSPECTION & MAINTENANCE GUIDE

Jellyfish units are often just one of many structures in a more comprehensive stormwater drainage and treatment system.

In order for maintenance of the Jellyfish filter to be successful, it is imperative that all other components be properly maintained. The maintenance and repair of upstream facilities should be carried out prior to Jellyfish maintenance activities.

In addition to considering upstream facilities, it is also important to correct any problems identified in the drainage area. Drainage area concerns may include: erosion problems, heavy oil loading, and discharges of inappropriate materials.

TABLE OF CONTENTS

1.0 Inspection and Maintenance Overview

The primary purpose of the Jellyfish® Filter is to capture and remove pollutants from stormwater runoff. As with any filtration system, these pollutants must be removed to maintain the filter's maximum treatment performance. Regular inspection and maintenance are required to insure proper functioning of the system.

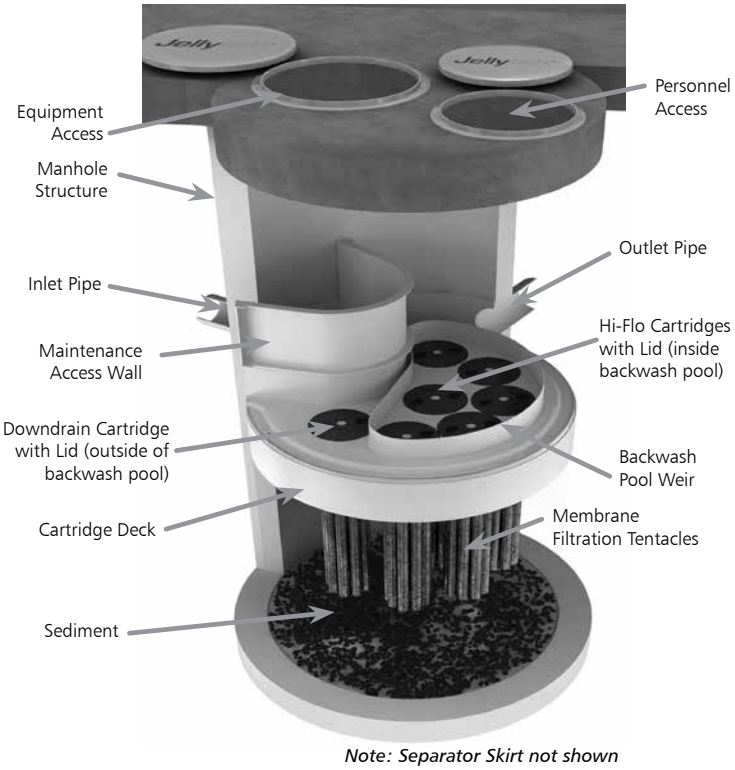
Maintenance frequencies and requirements are site specific and vary depending on pollutant loading. Additional maintenance activities may be required in the event of non-storm event runoff, such as base-flow or seasonal flow, an upstream chemical spill or due to excessive sediment loading from site erosion or extreme runoff events. It is a good practice to inspect the system after major storm events.

Inspection activities are typically conducted from surface observations and include:

- Observe if standing water is present
- Observe if there is any physical damage to the deck or cartridge lids
- Observe the amount of debris in the Maintenance Access Wall (MAW) or inlet bay for vault systems

Maintenance activities include:

- Removal of oil, floatable trash and debris
- Removal of collected sediments
- Rinsing and re-installing the filter cartridges
- Replace filter cartridge tentacles, as needed



Note: Separator Skirt not shown

2.0 Inspection Timing

Inspection of the Jellyfish Filter is key in determining the maintenance requirements for, and to develop a history of, the site's pollutant loading characteristics. In general, inspections should be performed at the times indicated below; *or per the approved project stormwater quality documents (if applicable), whichever is more frequent*.

1. A minimum of quarterly inspections during the first year of operation to assess the sediment and floatable pollutant accumulation, and to ensure proper functioning of the system.
2. Inspection frequency in subsequent years is based on the inspection and maintenance plan developed in the first year of operation. Minimum frequency should be once per year.
3. Inspection is recommended after each major storm event.
4. Inspection is required immediately after an upstream oil, fuel or other chemical spill.

3.0 Inspection Procedure

The following procedure is recommended when performing inspections:

1. Provide traffic control measures as necessary.
2. Inspect the MAW or inlet bay for floatable pollutants such as trash, debris, and oil sheen.
3. Measure oil and sediment depth in several locations, by lowering a sediment probe until contact is made with the floor of the structure. Record sediment depth, and presences of any oil layers.
4. Inspect cartridge lids. Missing or damaged cartridge lids to be replaced.
5. Inspect the MAW (where appropriate), cartridge deck and receptacles, and backwash pool weir, for damaged or broken components.

3.1 Dry weather inspections

- Inspect the cartridge deck for standing water, and/or sediment on the deck.
- No standing water under normal operating conditions.
- Standing water inside the backwash pool, but not outside the backwash pool indicates, that the filter cartridges need to be rinsed.

Inspection Utilizing Sediment Probe

- Standing water outside the backwash pool is not anticipated and may indicate a backwater condition caused by high water elevation in the receiving water body, or possibly a blockage in downstream infrastructure.
- Any appreciable sediment (≥1/16") accumulated on the deck surface should be removed.

3.2 Wet weather inspections

- Observe the rate and movement of water in the unit. Note the depth of water above deck elevation within the MAW or inlet bay.
- Less than 6 inches, flow should be exiting the cartridge lids of each of the draindown cartridges (i.e. cartridges located outside the backwash pool).
- Greater than 6 inches, flow should be exiting the cartridge lids of each of the draindown cartridges and each of the hi-flo cartridges (i.e. cartridges located inside the backwash pool), and water should be overflowing the backwash pool weir.
- 18 inches or greater and relatively little flow is exiting the cartridge lids and outlet pipe, this condition indicates that the filter cartridges need to be rinsed.

4.0 Maintenance Requirements

Required maintenance for the Jellyfish Filter is based upon results of the most recent inspection, historical maintenance records, or the site specific water quality management plan; whichever is more frequent. In general, maintenance requires some combination of the following:

1. Sediment removal for depths reaching 12 inches or greater, or within 3 years of the most recent sediment cleaning, whichever occurs sooner.
2. Floatable trash, debris, and oil removal.
3. Deck cleaned and free from sediment.
4. Filter cartridges rinsed and re-installed as required by the most recent inspection results, or within 12 months of the most recent filter rinsing, whichever occurs sooner.
5. Replace tentacles if rinsing does not restore adequate hydraulic capacity, remove accumulated sediment, or if damaged or missing. It is recommended that tentacles should remain in service no longer than 5 years before replacement.
6. Damaged or missing cartridge deck components must be repaired or replaced as indicated by results of the most recent inspection.
7. The unit must be cleaned out and filter cartridges inspected immediately after an upstream oil, fuel, or chemical spill. Filter cartridge tentacles should be replaced if damaged or compromised by the spill.

5.0 Maintenance Procedure

The following procedures are recommended when maintaining the Jellyfish Filter:

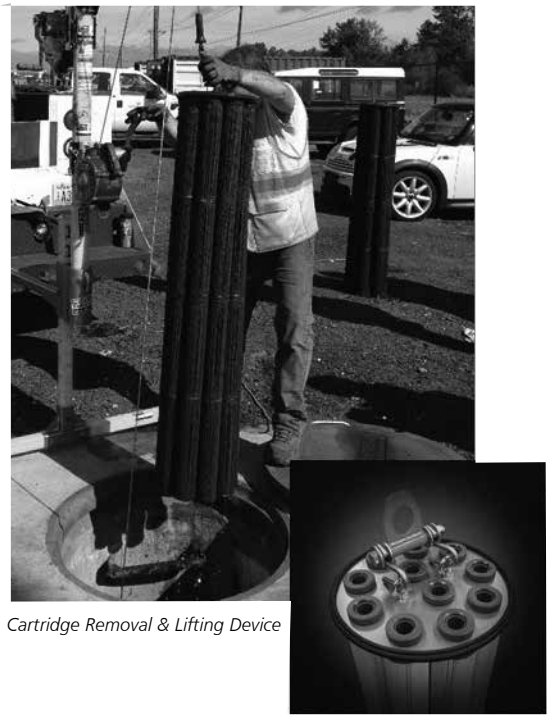
1. Provide traffic control measures as necessary.
2. Open all covers and hatches. Use ventilation equipment as required, according to confined space entry procedures. *Caution: Dropping objects onto the cartridge deck may cause damage*.
3. Perform Inspection Procedure prior to maintenance activity.
4. To access the cartridge deck for filter cartridge service, descend into the structure and step directly onto the deck. Caution: Do not step onto the maintenance access wall (MAW) or backwash pool weir, as damage may result. Note that the cartridge deck may be slippery.
5. Maximum weight of maintenance crew and equipment on the cartridge deck not to exceed 450 lbs.

5.1 Filter Cartridge Removal

1. Remove a cartridge lid.
2. Remove cartridges from the deck using the lifting loops in the cartridge head plate. Rope or a lifting device (available from Contech) should be used. *Caution: Should a snag occur, do not force the cartridge upward as damage to the tentacles may result. Wet cartridges typically weigh between 100 and 125 lbs*.
3. Replace and secure the cartridge lid on the exposed empty receptacle as a safety precaution. Contech does not recommend exposing more than one empty cartridge receptacle at a time.

5.2 Filter Cartridge Rinsing

1. Remove all 11 tentacles from the cartridge head plate. Take care not to lose or damage the O-ring seal as well as the plastic threaded nut and connector.



Cartridge Removal & Lifting Device

2. Position tentacles in a container (or over the MAW), with the threaded connector (open end) facing down, so rinse water is flushed through the membrane and captured in the container.
3. Using the Jellyfish rinse tool (available from Contech) or a low-pressure garden hose sprayer, direct water spray onto the tentacle membrane, sweeping from top to bottom along the length of the tentacle. Rinse until all sediment is removed from the membrane. *Caution: Do not use a high pressure sprayer or focused stream of water on the membrane. Excessive water pressure may damage the membrane*.

4. Collected rinse water is typically removed by vacuum hose.
5. Reassemble cartridges as detailed later in this document. Reuse O-rings and nuts, ensuring proper placement on each tentacle.

5.3 Sediment and Flotables Extraction

1. Perform vacuum cleaning of the Jellyfish Filter only after filter cartridges have been removed from the system. Access the lower chamber for vacuum cleaning only through the maintenance access wall (MAW) opening. Be careful not to damage the flexible plastic separator skirt that is attached to the underside of the deck on manhole systems. Do not lower the vacuum wand through a cartridge receptacle, as damage to the receptacle will result.
2. Vacuum floatable trash, debris, and oil, from the MAW opening or inlet bay. Alternatively, floatable solids may be removed by a net or skimmer.

Vacuuming Sump Through MAW

3. Pressure wash cartridge deck and receptacles to remove all sediment and debris. Sediment should be rinsed into the sump area. Take care not to flush rinse water into the outlet pipe.
4. Remove water from the sump area. Vacuum or pump equipment should only be introduced through the MAW or inlet bay.
5. Remove the sediment from the bottom of the unit through the MAW or inlet bay opening.

Vacuuming Sump Through MAW

6. For larger diameter Jellyfish Filter manholes (≥8-ft) and some vaults complete sediment removal may be facilitated by removing a cartridge lid from an empty receptacle and inserting a jetting wand (not a vacuum wand) through the receptacle. Use the sprayer to rinse loosened sediment toward the vacuum hose in the MAW opening, being careful not to damage the receptacle.

5.4 Filter Cartridge Reinstallation and Replacement

1. Cartridges should be installed after the deck has been cleaned. It is important that the receptacle surfaces be free from grit and debris.
2. Remove cartridge lid from deck and carefully lower the filter cartridge into the receptacle until head plate gasket is seated squarely in receptacle. ***Caution: Do not force the cartridge downward; damage may occur.***
3. Replace the cartridge lid and check to see that both male threads are properly seated before rotating approximately 1/3 of a full rotation until firmly seated. Use of an approved rim gasket lubricant may facilitate installation. See next page for additional details.
4. If rinsing is ineffective in removing sediment from the tentacles, or if tentacles are damaged, provisions must be made to replace the spent or damaged tentacles with new tentacles. Contact Contech to order replacement tentacles.

5.5 Chemical Spills

Caution: If a chemical spill has been captured, do not attempt maintenance. Immediately contact the local hazard response agency and contact Contech.

5.6 Material Disposal

The accumulated sediment found in stormwater treatment and conveyance systems must be handled and disposed of in accordance with regulatory protocols. It is possible for sediments to contain measurable concentrations of heavy metals and organic chemicals (such as pesticides and petroleum products). Areas with the greatest potential for high pollutant loading include industrial areas and heavily traveled roads. Sediments and water must be disposed of in accordance with all applicable waste disposal regulations. When scheduling maintenance, consideration must be made for the disposal of solid and liquid wastes. This typically requires coordination with a local landfill for solid waste disposal. For liquid waste disposal a number of options are available including a municipal vacuum truck decant facility, local waste water treatment plant or on-site treatment and discharge.

Jellyfish Filter Components & Filter Cartridge Assembly and Installation

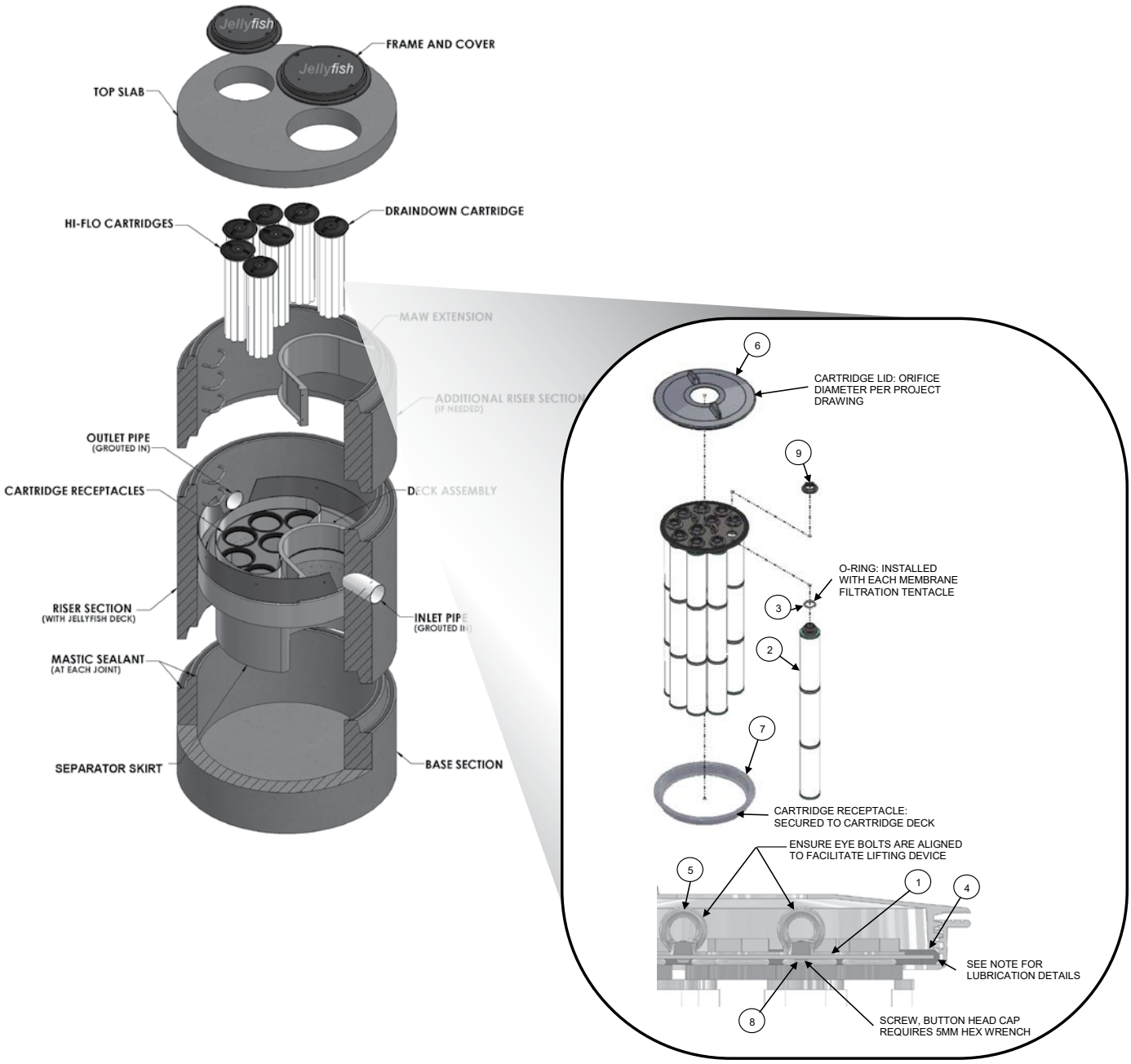


TABLE 1: BOM

ITEM NO.	DESCRIPTION
1	JF HEAD PLATE
2	JF TENTACLE
3	JF O-RING
4	JF HEAD PLATE GASKET
5	JF CARTRIDGE EYELET
6	JF 14IN COVER
7	JF RECEPTACLE
8	BUTTON HEAD CAP SCREW M6X14MM SS
9	JF CARTRIDGE NUT

TABLE 2: APPROVED GASKET LUBRICANTS

PART NO.	MFR	DESCRIPTION
78713	LA-CO	LUBRI-JOINT
40501	HERCULES	DUCK BUTTER
30600	OATEY	PIPE LUBRICANT
PSLUBXL1Q	PROSELECT	PIPE JOINT LUBRICANT

NOTES:

Head Plate Gasket Installation:
Install Head Plate Gasket (Item 4) onto the Head Plate (Item 1) and liberally apply a lubricant from Table 2: Approved Gasket Lubricants onto the gasket where it contacts the Receptacle (Item 7) and Cartridge Lide (ITem 6). Follow Lubricant manufacturer's instructions.

Lid Assembly:
Rotate Cartridge Lid counter-clockwise until both male threads drop down and properly seat. Then rotate Cartridge Lid clock-wise approximately one-third of a full rotation until Cartridge Lid is firmly secured, creating a watertight seal.

Jellyfish Filter Inspection and Maintenance Log

Owner:				Jellyfish Model No:		
Location:				GPS Coordinates:		
Land Use:	Commercial:		Industrial:		Service Station:	
	Roadway/Highway:		Airport:		Residential:	

Date/Time:						
Inspector:						
Maintenance Contractor:						
Visible Oil Present: (Y/N)						
Oil Quantity Removed:						
Floatable Debris Present: (Y/N)						
Floatable Debris Removed: (Y/N)						
Water Depth in Backwash Pool						
Draindown Cartridges externally rinsed and recommissioned: (Y/N)						
New tentacles put on Draindown Cartridges: (Y/N)						
Hi-Flo Cartridges externally rinsed and recommissioned: (Y/N)						
New tentacles put on Hi-Flo Cartridges: (Y/N)						
Sediment Depth Measured: (Y/N)						
Sediment Depth (inches or mm):						
Sediment Removed: (Y/N)						
Cartridge Lids intact: (Y/N)						
Observed Damage:						
Comments:						

Jellyfish®

CONTECH ENGINEERED SOLUTIONS

Support

- Drawings and specifications are available at www.conteches.com/jellyfish.
- Site-specific design support is available from Contech Engineered Solutions.
- Find a Certified Maintenance Provider at www.conteches.com/ccmp

800.338.1122
www.ContechES.com

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APPENDIX D

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APPENDIX E

GENERAL CALCULATIONS - WQV and WQF
(optional worksheet)

This worksheet may be useful when designing a BMP **that does not fit into one of the specific worksheets already provided** (i.e. for a technology which is not a stormwater wetland, infiltration practice, etc.)

Water Quality Volume (WQV)

11.43	ac	A = Area draining to the practice
8.21	ac	A_I = Impervious area draining to the practice
0.72	decimal	I = Percent impervious area draining to the practice, in decimal form
0.70	unitless	Rv = Runoff coefficient = 0.05 + (0.9 x I)
7.96	ac-in	WQV= 1" x Rv x A
28,909	cf	WQV conversion (ac-in x 43,560 sf/ac x 1ft/12")

Water Quality Flow (WQF)

1	inches	P = Amount of rainfall. For WQF in NH, P = 1".
0.70	inches	Q = Water quality depth. Q = WQV/A
97	unitless	CN = Unit peak discharge curve number. CN =1000/(10+5P+10Q–10*[Q^2 + 1.25*Q*P] $^{0.5}$)
0.3	inches	S = Potential maximum retention. S = (1000/CN) - 10
0.064	inches	Ia = Initial abstraction. Ia = 0.2S
5.0	minutes	T_c = Time of Concentration
600.0	cfs/mi^2/in	q_u is the unit peak discharge. Obtain this value from TR-55 exhibits 4-II and 4-III.
7.466	cfs	WQF = q_u x WQV. Conversion: to convert "cfs/mi^2/in * ac-in" to "cfs" multiply by 1mi^2/640ac.

Designer's Notes:

This calculation represents the treatment train directed to Contech Jellyfish Treatment Unit.

Full Treatment in compliance with Env-Wq 1508.10 shall be achieved by use of a proprietary flow-through device. The proposed Contech Jellyfish Treatment Unit - Model#: JFPD0816 will be used to treat the WQF as calculated in the above spreadsheet. The specified device is designed to treat up to 7.84 cfs of flow.

Tighe&Bond

APPENDIX F

Underground Injection Control Project Report

Site Number: **100330336**

Name and Address: **BUILDING 119 (SITE 36) 5B6**
PEASE AIR FORCE BASE
PORTSMOUTH

Mapit

Project Number: **0036693**

Responsible Party: **BUILDING 119 (SITE 36) 5B6**
PORTSMOUTH

Wellhead Protection Area: **No**

Assigned To: **REGISTRATION**

Eligibile:

MTBE: **N**

Risk Level: **DW SUPPLY WITHIN 1000' OR SITE IN SWPA**

Discovery Date: **04/12/2016**

Eligibilty Determined on:

Brownfield: **N**

Activities (1)

Submittal Date	Submittal Description	Staff Assigned	Action Date	Action Description	Comments
04/12/2016	UIC Application Received	LOCKER	04/26/2016	UIC Registration Issued	REGISTERED

Activity Documents (1)

	Document Type	Document Title	Document Date	File Size
4601803	REGISTRATION	SITE #36 INJECTION REGISTRATION (5B6) ISSUED	04/26/2016	.08 MB

Underground Injection Control Project Report

Site Number:	**100330336**	Project Number:	**0036693**
Name and Address:	**BUILDING 119 (SITE 36) 5B6 PEASE AIR FORCE BASE PORTSMOUTH**	Responsible Party:	**BUILDING 119 (SITE 36) 5B6 PORTSMOUTH**
Mapit			
Wellhead Protection Area:	**No**	Risk Level:	**DW SUPPLY WITHIN 1000' OR SITE IN SWPA**
Assigned To:	**REGISTRATION**	Discovery Date:	**04/12/2016**
Eligibile:		Eligibilty Determined on:	
MTBE:	**N**	Brownfield:	**N**

No Vapor Recovery Information

Site Number: **100330336**

Name and Address: **BUILDING 119 (SITE 36)**
PEASE AIR FORCE BASE
PORTSMOUTH

Mapit

Project Number: **0004283**

Responsible Party: **U S AIR FORCE**
2261 HUGHES AVE, STE 155
JBSA LACKLAND TX 78236-9853

PHONE: 210-395-9420

Wellhead Protection Area: **Unknown**

Risk Level: **DW SUPPLY WITHIN 1000' OR SITE IN SWPA**

Assigned To: **SANDIN**

Discovery Date: **05/14/1993**

Eligibile:

Eligibilty Determined on:

MTBE: **N**

Brownfield: **N**

Activities (31)

Submittal Date	Submittal Description	Staff Assigned	Action Date	Action Description	Comments
06/09/2022	Non-Permit GW Monitoring Result Received	UNASSIGNED			

Activity Documents (1)

	Document Type	Document Title	Document Date	File Size
5001486	REPORT TO DES	SITE 36 FALL 2021 SAMPLING EVENT DATA TRANSMITTAL 7-APR-2022	06/09/2022	5.00 MB

10/19/2021	Additional Information Received	UNASSIGNED			

Activity Documents (1)

	Document Type	Document Title	Document Date	File Size
4958065	REPORT TO DES	FINAL SS036 FAALL 2021 REMEDIAL ACTION-OPERATIONS FIELD WORK NOTIFICATION	10/19/2021	4.61 MB

10/23/2020	Annual Report Received	UNASSIGNED			

Activity Documents (1)

	Document Type	Document Title	Document Date	File Size
4884500	REPORT	DRAFT 2019 GROUNDWATER MONITORING REPORT	10/23/2020	5.00 MB

01/22/2019	Additional Information Received	UNASSIGNED			

Activity Documents (1)

	Document Type	Document Title	Document Date	File Size
4755436	REPORT TO DES	FINAL IN SITU CHEMICAL OXIDATION PILOT STUDY COMPLETION REPORT	01/22/2019	5.00 MB

Site Number: **100330336**

Name and Address: **BUILDING 119 (SITE 36)**
PEASE AIR FORCE BASE
PORTSMOUTH

Mapit

Project Number: **0004283**

Responsible Party: **U S AIR FORCE**
2261 HUGHES AVE, STE 155
JBSA LACKLAND TX 78236-9853

PHONE: 210-395-9420

Wellhead Protection Area: **Unknown**

Risk Level: **DW SUPPLY WITHIN 1000' OR SITE IN SWPA**

Assigned To: **SANDIN**

Discovery Date: **05/14/1993**

Eligibile:

Eligibilty Determined on:

MTBE: **N**

Brownfield: **N**

Activities (31)

Submittal Date	Submittal Description	Staff Assigned	Action Date	Action Description	Comments
11/14/2018	Additional Information Received	SANDIN	12/14/2018	TECHNICAL INFORMATION PROVIDED	REPORT INCOMPLETE

Activity Documents (2)

	Document Type	Document Title	Document Date	File Size
4749416	CORRESPONDENCE	DES COMMENTS 12.14.18	12/14/2018	.08 MB
4746936	REPORT TO DES	DRAFT IN-SITU CHEMICAL OXIDATION PILOT STUDY COMPLETION REPORT	11/14/2018	5.00 MB

11/07/2018	Additional Information Received	OTHER	11/13/2018	No Action Necessary (Report filed)	WETLANDS VIOLATIONS CASE CLOSED

Activity Documents (2)

	Document Type	Document Title	Document Date	File Size
4747011	CORRESPONDENCE-FROM	WETLANDS CASE CLOSED	11/13/2018	.20 MB
4746460	REPORT TO DES	2018 WETLAND MONITORING REPORT	11/07/2018	2.90 MB

01/31/2018	Additional Information Received	UNASSIGNED			

Activity Documents (1)

	Document Type	Document Title	Document Date	File Size
4696966	REPORT TO DES	FINAL IN SITU CHEMICAL OXIDATION PILOT STUDY	01/31/2018	5.00 MB

Site Number: **100330336**

Name and Address: **BUILDING 119 (SITE 36)**
PEASE AIR FORCE BASE
PORTSMOUTH

Mapit

Project Number: **0004283**

Responsible Party: **U S AIR FORCE**
2261 HUGHES AVE, STE 155
JBSA LACKLAND TX 78236-9853

PHONE: 210-395-9420

Wellhead Protection Area: **Unknown**

Risk Level: **DW SUPPLY WITHIN 1000' OR SITE IN SWPA**

Assigned To: **SANDIN**

Discovery Date: **05/14/1993**

Eligibile:

Eligibilty Determined on:

MTBE: **N**

Brownfield: **N**

Activities (31)

Submittal Date	Submittal Description	Staff Assigned	Action Date	Action Description	Comments
01/30/2018	Additional Information Received	UNASSIGNED			

Activity Documents (1)

	Document Type	Document Title	Document Date	File Size
4696071	REPORT TO DES	DRAFT IN SITU CHEMICAL OXIDATION PILOT STUDY IMPLEMENTATION REPORT	01/30/2018	5.00 MB

12/20/2017	Additional Information Received	UNASSIGNED			

Activity Documents (1)

	Document Type	Document Title	Document Date	File Size
4688637	REPORT TO DES	2017 WETLAND MONITORING REPORT	12/20/2017	5.00 MB

08/24/2017	Additional Information Received	UNASSIGNED			
01/27/2017	Additional Information Received	UNASSIGNED			

Activity Documents (1)

	Document Type	Document Title	Document Date	File Size
4640648	CORRESPONDENCE-TO	RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION	01/27/2017	1.20 MB

Site Number: **100330336**

Name and Address: **BUILDING 119 (SITE 36)**
PEASE AIR FORCE BASE
PORTSMOUTH

Mapit

Project Number: **0004283**

Responsible Party: **U S AIR FORCE**
2261 HUGHES AVE, STE 155
JBSA LACKLAND TX 78236-9853

PHONE: 210-395-9420

Wellhead Protection Area: **Unknown**

Risk Level: **DW SUPPLY WITHIN 1000' OR SITE IN SWPA**

Assigned To: **SANDIN**

Discovery Date: **05/14/1993**

Eligibile:

Eligibilty Determined on:

MTBE: **N**

Brownfield: **N**

Activities (31)

Submittal Date	Submittal Description	Staff Assigned	Action Date	Action Description	Comments
12/21/2016	Additional Information Received	OTHER			

Activity Documents (1)

	Document Type	Document Title	Document Date	File Size
4635429	REPORT TO DES	2016 WETLAND MONITORING REPORT	12/21/2016	3.81 MB

11/15/2016	Additional Information Received	UNASSIGNED			

Activity Documents (1)

	Document Type	Document Title	Document Date	File Size
4632437	REPORT TO DES	2015 ANNUAL REPORT	11/15/2016	5.00 MB

11/02/2016	Additional Information Received	OTHER	11/16/2016	TECHNICAL INFORMATION PROVIDED	RESTORATION PLAN APPROVED BY D. PRICE

Activity Documents (2)

	Document Type	Document Title	Document Date	File Size
4637567	CORRESPONDENCE	WETLANDS RESTORATION PLAN APPROVAL	11/16/2016	.22 MB
4630201	REPORT TO DES	WETLAND RESTORATION PLAN LEE STREET SITE 36	11/01/2016	5.00 MB

Site Number: **100330336**

Name and Address: **BUILDING 119 (SITE 36)**
PEASE AIR FORCE BASE
PORTSMOUTH

Mapit

Project Number: **0004283**

Responsible Party: **U S AIR FORCE**
2261 HUGHES AVE, STE 155
JBSA LACKLAND TX 78236-9853

PHONE: 210-395-9420

Wellhead Protection Area: **Unknown**

Risk Level: **DW SUPPLY WITHIN 1000' OR SITE IN SWPA**

Assigned To: **SANDIN**

Discovery Date: **05/14/1993**

Eligibile:

Eligibilty Determined on:

MTBE: **N**

Brownfield: **N**

Activities (31)

Submittal Date	Submittal Description	Staff Assigned	Action Date	Action Description	Comments
10/27/2016	Additional Information Received	HILTON	11/04/2016	Not Approved	ISCO FAILURE NOT EVALUATED. DES DID NOT APPROVE ORIGINALLY, CANNOT CONCUR NOW

Activity Documents (2)

	Document Type	Document Title	Document Date	File Size
4630401	CORRESPONDENCE	DES COMMENTS 11.4.16 TO ISCO RESTART PLAN 10.27.16	11/04/2016	.08 MB
4629781	REPORT TO DES	IN SITU CHEMICAL OXIDATION (ISCO) INJECTIONS RESTART PLAN	10/27/2016	1.75 MB

10/27/2016	Additional Information Received	OTHER	11/01/2016	No Action Necessary (Report filed)	WETLANDS BUREAU TO OVERSEE VIOLATIONS

Activity Documents (1)

	Document Type	Document Title	Document Date	File Size
4629780	CORRESPONDENCE-TO	RESPONSE TO NHDES LRM REGARDING ISCO	10/25/2016	.13 MB

08/10/2016	Additional Information Received	UNASSIGNED			

Activity Documents (1)

	Document Type	Document Title	Document Date	File Size
4616481	REPORT TO DES	DRAFT LONG-TERM MONITORING PLAN REVISION 5	08/10/2016	5.00 MB

Site Number: **100330336**

Name and Address: **BUILDING 119 (SITE 36)**
PEASE AIR FORCE BASE
PORTSMOUTH

Mapit

Project Number: **0004283**

Responsible Party: **U S AIR FORCE**
2261 HUGHES AVE, STE 155
JBSA LACKLAND TX 78236-9853

PHONE: 210-395-9420

Wellhead Protection Area: **Unknown**

Risk Level: **DW SUPPLY WITHIN 1000' OR SITE IN SWPA**

Assigned To: **SANDIN**

Discovery Date: **05/14/1993**

Eligibile:

Eligibilty Determined on:

MTBE: **N**

Brownfield: **N**

Activities (31)

Submittal Date	Submittal Description	Staff Assigned	Action Date	Action Description	Comments
07/27/2016	Additional Information Received	HILTON	09/14/2016	TECHNICAL INFORMATION PROVIDED	AF PROCEEDING WITHOUT REGULATOR CONCURRENCE. IMPLEMENTATION RESULTED IN WETLANDS VIOLATIONS

Activity Documents (2)

	Document Type	Document Title	Document Date	File Size
4624264	CORRESPONDENCE	DES EMAIL 9.22.16	09/22/2016	.07 MB
4614946	REPORT TO DES	FINAL ADDITIONAL INVESTIGATION AND PILOT STUDY WORK PLAN 01-JUL-2016	07/27/2016	5.00 MB

06/09/2016	Additional Information Received	HILTON	06/30/2016	No Action Necessary (Report filed)	EPA TO ADDRESS

Activity Documents (1)

	Document Type	Document Title	Document Date	File Size
4606629	CORRESPONDENCE-TO	RESPONSE TO COMMENTS (EPA) ON DRAFT SUPPLEMENTAL SITE INVEST STATUS REPORT 22-APR-2016	06/09/2016	.17 MB

06/09/2016	Additional Information Received	HILTON	06/30/2016	Not Approved	SEE 6.30.16 PBC LETTER ATTACHED TO DRAFT PSWP

Activity Documents (1)

	Document Type	Document Title	Document Date	File Size
4606630	CORRESPONDENCE-TO	RESPONSE TO COMMENTS ON THE DRAFT SUPPPLEMENTAL SITE INVESTIGATION STATUS REPORT 22-APR-2016	06/09/2016	.19 MB

Site Number: **100330336**

Name and Address: **BUILDING 119 (SITE 36)**
PEASE AIR FORCE BASE
PORTSMOUTH

Mapit

Project Number: **0004283**

Responsible Party: **U S AIR FORCE**
2261 HUGHES AVE, STE 155
JBSA LACKLAND TX 78236-9853

PHONE: 210-395-9420

Wellhead Protection Area: **Unknown**

Risk Level: **DW SUPPLY WITHIN 1000' OR SITE IN SWPA**

Assigned To: **SANDIN**

Discovery Date: **05/14/1993**

Eligibile:

Eligibilty Determined on:

MTBE: **N**

Brownfield: **N**

Activities (31)

Submittal Date	Submittal Description	Staff Assigned	Action Date	Action Description	Comments
06/09/2016	Work Plan Received	HILTON	06/30/2016	Not Approved	PREVIOUS COMMENTS UNRESOLVED, DES DOES NOT CONCUR WITH APPROACH AS PROPOSED. PROGRAM-WIDE LETTTER OF 6.30.16 APPLIES

Activity Documents (3)

	Document Type	Document Title	Document Date	File Size
4624250	CORRESPONDENCE	EMAIL TRANSMITING DES 6.30.16 LETTER	06/30/2016	.04 MB
4624249	CORRESPONDENCE	DES LETTER 6.30.16	06/30/2016	.04 MB
4606631	REPORT TO DES	DRAFT ADDITIONAL INVESTIGATION AND PILOT STUDY WORK PLAN 01-JUN-2016	06/09/2016	5.00 MB

06/05/2015	Additional Information Received	UNASSIGNED			
01/27/2015	Additional Information Received	HILTON	03/31/2015	TECHNICAL INFORMATION PROVIDED	DES EMAIL DETAILING REPORT AND CONCEPTUAL SITE MODEL DEFICIENCIES

Activity Documents (2)

	Document Type	Document Title	Document Date	File Size
4541861	CORRESPONDENCE	DES EMAIL COMMENTS 3.31.15 TO 1.26.15 SSI STATUS REPORT	03/31/2015	.06 MB
4535965	REPORT TO DES	SUPPLEMENTAL SITE INVESTIGATION STATUS REPORT SITE 36 SS036 BUILDING 119 26-JAN-2015	01/27/2015	5.00 MB

Site Number: **100330336**

Name and Address: **BUILDING 119 (SITE 36)**
PEASE AIR FORCE BASE
PORTSMOUTH

Mapit

Project Number: **0004283**

Responsible Party: **U S AIR FORCE**
2261 HUGHES AVE, STE 155
JBSA LACKLAND TX 78236-9853

PHONE: 210-395-9420

Wellhead Protection Area: **Unknown**

Risk Level: **DW SUPPLY WITHIN 1000' OR SITE IN SWPA**

Assigned To: **SANDIN**

Discovery Date: **05/14/1993**

Eligibile:

Eligibilty Determined on:

MTBE: **N**

Brownfield: **N**

Activities (31)

Submittal Date	Submittal Description	Staff Assigned	Action Date	Action Description	Comments
02/10/2014	Additional Information Received	HILTON	10/02/2014	TECHNICAL INFORMATION PROVIDED	DES EMAIL COMMENTS TO SITE STATUS AND WORK THROUGH SUMMER 2014

Activity Documents (4)

	Document Type	Document Title	Document Date	File Size
4520591	CORRESPONDENCE	SITE 36 ADDITIONAL COMMENTS-CONCERNS	11/03/2014	.08 MB
4521795	CORRESPONDENCE	10-2-14 DES EMAIL	10/02/2014	.07 MB
4487323	CORRESPONDENCE	SITE 36 STATUS REPORT AND WORK PLAN; DES COMMENTS	03/17/2014	.05 MB
4484102	REPORT TO DES	STATUS REPORT AND SUPPLEMENTAL SITE INVESTIGATION WORK PLAN ADDENDUM 10-FEB-2014	02/10/2014	3.72 MB

12/13/2012	Additional Information Received	HILTON	12/13/2012	TECHNICAL INFORMATION PROVIDED	S HILTON HELD CONF CALL WITH SHAW TO DISCUSS HYDROPUNCH DRILL & SAMPLE DEPTHS.

Activity Documents (1)

	Document Type	Document Title	Document Date	File Size
4424839	CORRESPONDENCE-FROM	SITE 36 S HILTON DEC 13 2012 EMAIL TO SHAW ENV	12/13/2012	.03 MB

Site Number: **100330336**

Name and Address: **BUILDING 119 (SITE 36)**
PEASE AIR FORCE BASE
PORTSMOUTH

Mapit

Project Number: **0004283**

Responsible Party: **U S AIR FORCE**
2261 HUGHES AVE, STE 155
JBSA LACKLAND TX 78236-9853

PHONE: 210-395-9420

Wellhead Protection Area: **Unknown**

Risk Level: **DW SUPPLY WITHIN 1000' OR SITE IN SWPA**

Assigned To: **SANDIN**

Discovery Date: **05/14/1993**

Eligibile:

Eligibilty Determined on:

MTBE: **N**

Brownfield: **N**

Activities (31)

Submittal Date	Submittal Description	Staff Assigned	Action Date	Action Description	Comments
11/09/2012	Additional Information Received	HILTON	12/13/2012	TECHNICAL INFORMATION PROVIDED	SEE DES TELE CONFERENCE E-MAIL DATED 13-DEC-2012

Activity Documents (1)

	Document Type	Document Title	Document Date	File Size
4422065	REPORT TO DES	RESPONSE TO COMMENTS TABLE SUPPLEMENTAL SITE INVESTIGATION WORK PLAN 01-NOV-2012	11/09/2012	.14 MB

11/09/2012	Additional Information Received	HILTON	12/13/2012	TECHNICAL INFORMATION PROVIDED	SEE DES TELE CONFERENCE E-MAIL 13 DEC 2012

Activity Documents (1)

	Document Type	Document Title	Document Date	File Size
4422064	REPORT TO DES	DRAFT FINAL SUPPLEMENTAL SITE INVESTIGATION WORK PLAN 01-NOV-2012	11/09/2012	2.48 MB

08/03/2012	Additional Information Received	HILTON	09/13/2012	TECHNICAL INFORMATION PROVIDED	

Activity Documents (3)

	Document Type	Document Title	Document Date	File Size
4487465	CORRESPONDENCE	SITE 36 COMMENTS TO AUG 2012 DRAFT SOIL GW CONF SAM.	09/13/2012	.05 MB
4487464	CORRESPONDENCE	SITE 36 COVER TO COMMENTS SI WORK PLAN AUGUST 2012.	09/13/2012	.06 MB
4402604	REPORT TO DES	DRAFT SUPPLEMENTAL SITE INVESTIGATION WORK PLAN 01-AUG-2012	08/03/2012	1.43 MB

Site Number: **100330336**

Name and Address: **BUILDING 119 (SITE 36)**
PEASE AIR FORCE BASE
PORTSMOUTH

Mapit

Project Number: **0004283**

Responsible Party: **U S AIR FORCE**
2261 HUGHES AVE, STE 155
JBSA LACKLAND TX 78236-9853

PHONE: 210-395-9420

Wellhead Protection Area: **Unknown**

Risk Level: **DW SUPPLY WITHIN 1000' OR SITE IN SWPA**

Assigned To: **SANDIN**

Discovery Date: **05/14/1993**

Eligibile:

Eligibilty Determined on:

MTBE: **N**

Brownfield: **N**

Activities (31)

Submittal Date	Submittal Description	Staff Assigned	Action Date	Action Description	Comments
12/12/2011	Additional Information Received	UNASSIGNED			

Activity Documents (2)

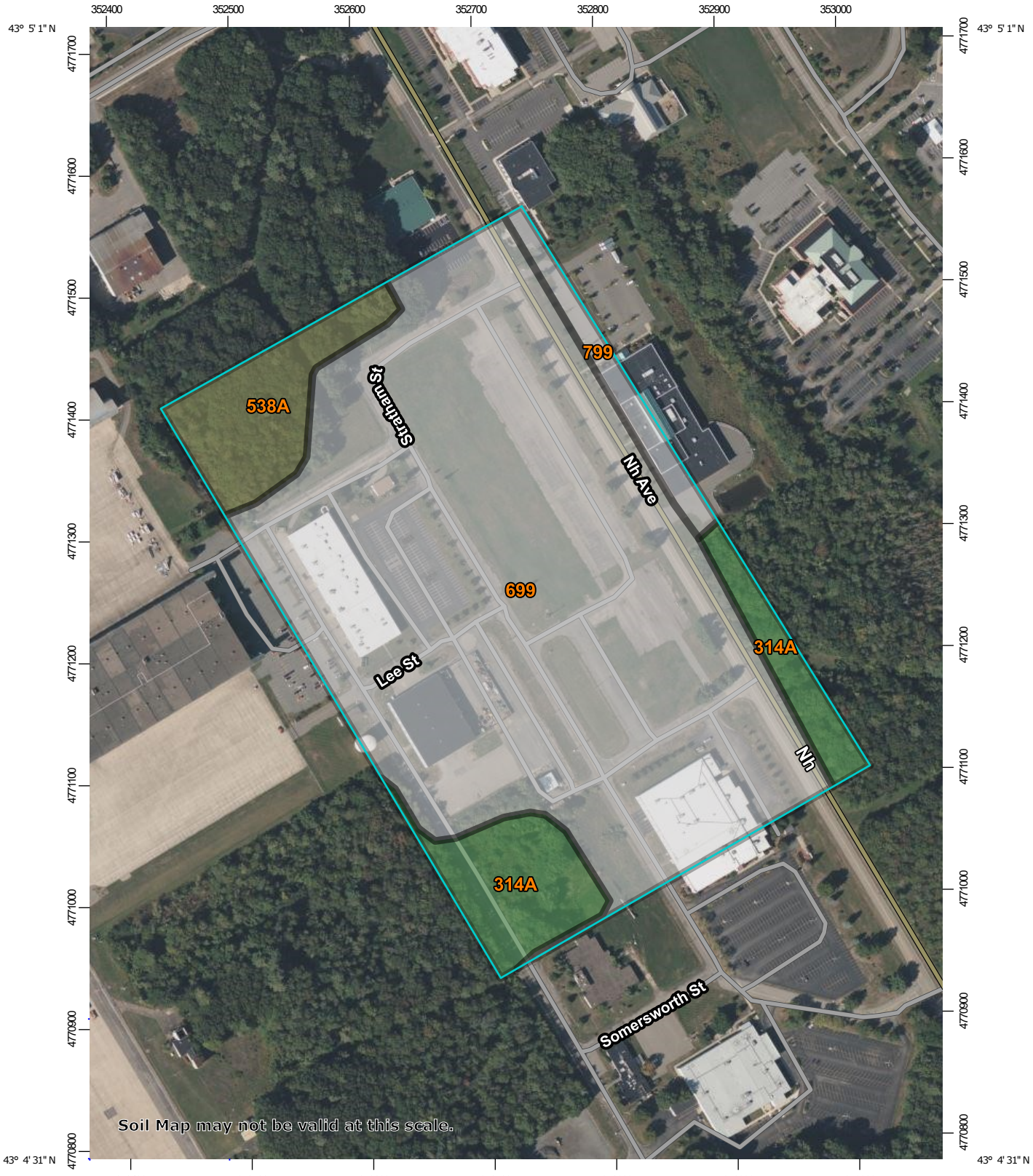
	Document Type	Document Title	Document Date	File Size
4543394	CORRESPONDENCE	PEASE AFB; DES REVIEW OF WHITE PAPER FOR SITE 36	12/12/2011	.02 MB
4543395	CORRESPONDENCE	CDES REVIEW WHITE PAPER FOR SITE 36	12/12/2011	.02 MB

06/29/1993	Additional Information Received	SMITH	07/02/1993	Technical Report Approved	
04/07/1993	Additional Information Received	SMITH	05/14/1993	Comments to Waste Management Division	

Site Number:	**100330336**	Project Number:	**0004283**
Name and Address:	**BUILDING 119 (SITE 36)** **PEASE AIR FORCE BASE** **PORTSMOUTH**	Responsible Party:	**U S AIR FORCE** **2261 HUGHES AVE, STE 155** **JBSA LACKLAND TX 78236-9853** **PHONE: 210-395-9420**
Mapit			
Wellhead Protection Area:	**Unknown**	Risk Level:	**DW SUPPLY WITHIN 1000' OR SITE IN SWPA**
Assigned To:	**SANDIN**	Discovery Date:	**05/14/1993**
Eligibile:		Eligibilty Determined on:	
MTBE:	**N**	Brownfield:	**N**

No Vapor Recovery Information

Hydrologic Soil Group—Rockingham County, New Hampshire
(100 New Hampshire Ave)



Map Scale: 1:4,520 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 50 100 200 300

Feet
0 200 400 800 1200

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Rockingham County, New Hampshire
Survey Area Data: Version 24, Aug 31, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 19, 2020—Sep 20, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
314A	Pipestone sand, 0 to 5 percent slopes	A/D	4.7	10.0%
538A	Squamscott fine sandy loam, 0 to 5 percent slopes	C/D	3.4	7.4%
699	Urban land		36.8	79.3%
799	Urban land-Canton complex, 3 to 15 percent slopes		1.5	3.3%
Totals for Area of Interest			**46.5**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The aggregation method "Dominant Condition" first groups like attribute values for the components in a map unit. For each group, percent composition is set to the sum of the percent composition of all components participating in that group. These groups now represent "conditions" rather than components. The attribute value associated with the group with the highest cumulative percent composition is returned. If more than one group shares the highest cumulative percent composition, the corresponding "tie-break" rule determines which value should be returned. The "tie-break" rule indicates whether the lower or higher group value should be returned in the case of a percent composition tie. The result returned by this aggregation method represents the dominant condition throughout the map unit only when no tie has occurred.

Component Percent Cutoff: None Specified

Components whose percent composition is below the cutoff value will not be considered. If no cutoff value is specified, all components in the database will be considered. The data for some contrasting soils of minor extent may not be in the database, and therefore are not considered.

Tie-break Rule: Higher

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

EVERSOURCE ENERGY

December 6, 2022

1700 Lafayette Road
Portsmouth, NH 03801

Michael J Busby
603-436-7708 x555-5678
michael.busby@eversource.com

Craig Langton
Tighe & Bond, Inc.
177 Corporate Drive
Portsmouth, NH 03801

Dear Mr. Langton:

I am responding to your request to confirm the availability of electric service for the proposed 80 Rochester Avenue project being constructed for/by Aviation Avenue Group, LLC.

The proposed project consists of a 1-story ±191,600 SF Manufacturing and approximately 18,144 s/f of office space with at grade parking. The proposed development will be constructed along New Hampshire Avenue.

The developer will be responsible for the installation of all underground/overhead facilities and infrastructure required to service the new building. The service will be as shown on attached marked up Utility Plan C-104, dated 12/6/2022. The proposed building service will be fed from new transforms adjacent to the building as determined by Eversource Engineering as depicted on utility plan C-104, dated 12/6/2022. The developer will work with Eversource to obtain all necessary easements and licenses for the proposed underground/overhead facilities listed above.

This letter serves as confirmation that Eversource has sufficient capacity in the area to provide service to this proposed development. The cost of extending service to the aforementioned location and any associated infrastructure improvements necessary to provide service will be borne by the developer unless otherwise agreed upon.

The attached drawing titled "Overall Utility Plan" sheet C-104 dated 12/6/2022, shows proposed transformer locations to service your proposed project.

Eversource approves the location shown; assuming the final installed location meet all clearances, physical protection, and access requirements as outlined in Eversource's "Information & Requirements For Electric Supply" (https://www.eversource.com/content/docs/default-source/pdfs/requirements-for-electric-service-connections.pdf?sfvrsn=2).

If you require additional information or I can be of further assistance please do not hesitate to contact me at our Portsmouth Office, 603-436-7708 Ext. 555-5678

Respectfully.

Michael J. Busby, PE
NH Eastern Regional Engineering and Design Manager, Eversource

cc: (via e-mail)
Thomas Boulter, Eastern Region Operations Manager, Eversource
Nickolai Kosko, Field Supervisor, Electric Design, Eversource

Craig M. Langton

From: MacLean, David <macleand@unitil.com>
Sent: Thursday, January 5, 2023 1:54 PM
To: Craig M. Langton; Olson, Jeffery; Beaulieu, David
Cc: Kickham, Charlie; Kenny, Gary
Subject: RE: 100 New Hampshire Ave - Portsmouth, NH (Pease)

[Caution - External Sender]

Hi Craig,

This location has high pressure gas on several sides of the property- I stopped in to gas engineering and they agree you are in a great place for gas. The service location looks good. Once you have an estimated gas load please let me know and I will have engineering run an analysis and size your service.

Dave

Dave MacLean
Senior Business Development Rep

Unitil

325 West Rd
Portsmouth, NH 03801
T 603.294.5261
M 603.534.2379
F 603.294.5264
Email macleand@unitil.com
www.unitil.com

From: Craig M. Langton <CMLangton@tigheBond.com>
Sent: Thursday, January 5, 2023 12:48 PM
To: Olson, Jeffery <olsonj@unitil.com>; Beaulieu, David <beaulieu@unitil.com>
Cc: MacLean, David <macleand@unitil.com>; Kickham, Charlie <kickham@unitil.com>; Kenny, Gary <kennyg@unitil.com>
Subject: RE: 100 New Hampshire Ave - Portsmouth, NH (Pease)

Mimecast Attachment Protection has deemed this file to be safe, but always exercise caution when opening files.

Jeff / David,

We are going through the local permitting process for this project now there was a comment that the City brought ups and wanted us to confirm with you, is the status of the existing gas mains around the site and if any upgrades would be required. As you will see on the attached draft utilities plan for the site we are proposing to tap into the main as it crosses Lee street. Is this an acceptable place to tap into the gas main?

Thanks,
Craig

Craig Langton, PE
Project Engineer

Tighe&Bond

o. 603.433.8818 | d. 603.294.9231

177 Corporate Drive, Portsmouth, NH, 03801
w: tighebond.com | halvorsondesign.com

From: Olson, Jeffery <olsonj@unitil.com>
Sent: Friday, October 14, 2022 5:58 PM
To: Craig M. Langton <CMLangton@tigheBond.com>
Cc: Beaulieu, David <beaulieu@unitil.com>; Neil A. Hansen <NAHansen@tighebond.com>; MacLean, David <macleand@unitil.com>; Kickham, Charlie <kickham@unitil.com>; Kenny, Gary <kennyg@unitil.com>
Subject: RE: 100 New Hampshire Ave - Portsmouth, NH (Pease)

[Caution - External Sender]

Craig,

As requested in your correspondence, we have reviewed the location of our gas mains in the subject project area. Please be advised that any information provided in this response referencing the location of Unitil gas mains and any attributes describing these facilities in the subject project area is to be considered SUE-LEVEL D data – "REFERENCE ONLY" if used to help facilitate graphic representation on your project plans.

Attached to this email is a pdf showing Unitil owned gas mains around 100 New Hampshire Ave. In your project area pdf, the highlighted gas pipe that your survey found turned is most likely an abandoned service line to the building formerly stadning on the 100 New Hampshire Ave property. That being said, a digsafe ticket is still the best method to determine exact locations of active gas pipes before any construction.

It is understood between Unitil Corp. and any other parties who may be provided these map drawings, that this information is "reference only" and that prior to any construction commencing on this project appropriate DigSafe ticket must be executed.

Let me know if you need anything else or have any questions.

Thanks,

Jeff Olson, GISP
GIS Analyst

Unitil

30 Energy Way
Exeter, NH 03833
T 603.379.3837

The information transmitted in this e-mail is intended for the person or entity to which it is addressed and may contain confidential and/or privileged material. Electronic files transmitted are for the use and information of the intended recipient only, and are not intended as official documents issued by Unitil Service Corporation. Unitil has prepared these data based on best available information; the data provided are not warranted for accuracy and may be incomplete. Field verification is advised for all data. It is the recipient's responsibility to check these files against any corresponding signed drawings and specifications issued by Unitil Service Corporation. Once transmitted, Unitil Service Corporation, Inc. has no control over the use or application of

these files, and assumes no responsibility or liability for their accuracy or completeness, or for any changes made to them. If you have received this e-mail in error, please reply to the sender so that we may redirect this information.

From: Craig M. Langton [mailto:CMLangton@tigheBond.com]
Sent: Wednesday, October 5, 2022 10:18 AM
To: MacLean, David <macleand@unitil.com>
Cc: Beaulieu, David <beaulieu@unitil.com>; Neil A. Hansen <NAHansen@tighebond.com>
Subject: 100 New Hampshire Ave - Portsmouth, NH (Pease)

Your attachments have been security checked by Mimecast Attachment Protection. Files where no threat or malware was detected are attached.

David,

We are working on a potential development on the Pease Tradeport at a site on the corner of Rochester Ave, Stratham St, and New Hampshire Ave. We have survey for the site, but as you'll see in the attached gas was only picked up in one location around the site. I was hoping you could provide us with any GIS or other information you have for gas service in the area se we can include in our conceptual design plans?

Thanks,
Craig

Craig Langton, PE
Project Engineer

Tighe&Bond

o. 603.433.8818 | d. 603.294.9231

177 Corporate Drive, Portsmouth, NH, 03801
w: tighebond.com | halvorsondesign.com

P0595-015
January 25, 2023

Mr. Peter Britz, Director of Planning and Sustainability
City of Portsmouth Planning Department
1 Junkins Avenue
Portsmouth, New Hampshire 03801

Re: **Site Review Permit & Subdivision Applications**
Proposed Advanced Manufacturing Facility

Dear Peter:

On behalf of Aviation Avenue Group, LLC, we are pleased to submit the following information to support a request to the Planning Board for a recommendation for approval to the Pease Development Authority (PDA) for Site Plan Review and Subdivision for a proposed Advanced Manufacturing Facility on a previously developed site located at 80 Rochester Avenue:

- One (1) copy of TAC Comment Response Report, dated January 25, 2023;
- One (1) copy of the PDA Application for Subdivision, dated January 25, 2023;
- One (1) full size & one (1) half size copy of the Site Plan Set, dated January 25, 2023;
- Three (3) full size & one (1) half size copy of the Subdivision Plan, dated January 25, 2023;
- One (1) copy of the Truck Turning Exhibits, dated January 25, 2023;
- One (1) copy of the Drainage Analysis, dated January 25, 2023;
- One (1) copy of the Signed Eversource Will Serve Letter, dated December 6, 2022;
- One (1) copy of correspondence with Unitil; January 5, 2023

The proposed project is located at 80 Rochester Avenue which is identified as Map 308 Lot 1 on the City of Portsmouth Tax Maps. The proposed project is for the construction of a ±209,750 SF advanced manufacturing building including ±18,145 SF of office space, two (2) parking areas, two (2) loading dock areas, minor realignment of a portion of Rochester Avenue, and associated site improvements consisting of underground utilities, landscaping, lighting, and a stormwater management system.

There is approximately 196,665 SF of existing impervious area that is currently untreated before entering the municipal drainage system. The proposed stormwater management system has been designed to provide treatment for the existing impervious surface that is currently untreated and for ±161,130 SF of additional impervious that results from the proposed project as required by the PDA Site Plan Regulations.

On October 20, 2022, the PDA Board granted conceptual approval for the proposed project. The project was granted a variance from the Zoning Board of Adjustment for the front yard setback requirements at their meeting on November 15, 2022.

We respectfully request to be placed on the Technical Advisory Committee (TAC) meeting agenda for the February 7, 2023, meeting. If you have any questions or need any additional information, please contact Patrick Crimmins by phone at (603) 433-8818 or by email at pmcrimmins@tighebond.com.

Sincerely,
TIGHE & BOND, INC.

Patrick M. Crimmins, PE
Vice President

Neil A. Hansen, PE
Project Manager

Copy: Aviation Avenue Group, LLC (via email)
Pease Development Authority

J:\P\P0595 Pro Con General Proposals\P0595-015 100 NH Avenue\Report_Evaluation\Applications\City of Portsmouth\TAC\20230125_TAC Resubmission\TAC-Resubmission Cover Letter.docx

PROPOSED ADVANCED MANUFACTURING FACILITY - TAC COMMENTS (12/30/2022) RESPONSE

80 Rochester Avenue (100 New Hampshire Avenue)
Portsmouth, New Hampshire
January 25, 2023

Prepared by: CML
Project # P0595-015

	Comment	Response	Corresponding Plan Sheet #
1	Please confirm this project includes a lot line adjustment and not the creation of a new parcel.	The project is no longer proposing the relocation of the ROW line on Rochester Avenue. However, a subdivision application will still be required in order to create a new lease area over the parcel with the PDA.	PROPOSED SUBDIVISION PLAN (1 OF 1) & Enclosed Subdivision Application
2	Rochester Ave pavement is too far deteriorated for the mill and pave process. The road needs reclamation, fortified and new pavement. Stratham and Newfields Streets need to be reconstructed as well.	The plans have been updated to call for Rochester Avenue to be reclaimed and re-paved, and to mill and overlay Newfields & Stratham Street.	C-102
3	The new lease line may extend over the street drainage system and sidewalk. A license may be required.	See comment 1. Also a note has been added to the plans stating "Location of existing drain line to be confirmed and drainage license area within the project site to be determined prior to construction."	PROPOSED SUBDIVISION PLAN (1 OF 1)
4	PCB 18 should tie into the street drainage, not the site drainage	The proposed grading in Rochester Avenue the entrances to each of the loading areas have been revised to make highpoints at the center of the drives and provide six (6) new catch basins within Rochester Avenue. In addition, the drainage analysis was updated to identify the overall reduction of impervious area within the Rochester Avenue Right of Way.	C-104 & Drainage Analysis
5	DMH 1925 is likely not large enough to accept such a large new core. Please confirm this design will work by investigating the structure with Stormwater division from DPW.	Based on Tighe & Bonds inspection of DMH 1925, which is a vault structure and not a typical circular manhole, the structure should be capable of accepting the increased opening for a new 48" HDPE vs. the existing 36" RCP pipe at this location.	C-103.2
6	Proposed sidewalk should be at least 5.5’ wide, preferably 6’ wide.	Sidewalk widths have been increased to 5.5'	C-102
7	Third party review of stormwater design. Is location of pretreatment outlet structure after detention basin appropriate? Is treatment prior to detention basin more appropriate?	The applicant has executed a thrid party review agreement. The Jellyfish treatment unit post detention is the same configuration we have used numerous times in Portsmouth on projects that have also received City and NHDES approval. Per our prior approvals with NHDES using this configuration, the WQF is calculated to determine the sizing of the treatment unit rather than the 1" WQ Storm as would be done upstream.	
8	State sizes of domestic water and fire services.	The sizes for the domestic water and fire services have been called out on the plans.	C-104
9	Provide flow tests to show the existing water main can supply adequate water to proposed building.	Flow testing is scheduled to be completed prior to construction.	
10	Provide vehicle speed data for New Hampshire Avenue to confirm adequacy of sight lines at driveways and to determine need for additional safety measures at proposed crosswalks.	The project location on NH Ave is located near the center of a mile long stretch of road the is very flat and straight. Proposed crosswalks were requested by the PDA and have the same extended sight distance as the driveways. PDA is also currently having the traffic study reviewed by a third party who will likely also look at this aspect.	
11	Provide pedestrian counts and vehicle turning movement counts at intersections of New Hampshire Avenue with Newfields and Stratham, to document need for crosswalks across New Hampshire Ave.	Crosswalks were requested by the PDA to connect the site to the existing pedestrian infrastructure already in place	
12	A third party peer review of the traffic study should be done.	PDA is currently having the traffic study reviewed by a third party.	

Pease Development Authority
55 International Drive, Portsmouth, NH 03801, (603) 433-6088

Subdivision Application

For PDA Use Only			
Date Submitted:_____	Municipal Review:_____	Fee:_____	
Application Complete:_____	Date Forwarded:_____	Paid:_____	Check #:_____

Applicant Information

Applicant: **Aviation Avenue Group, LLC**	Agent: **Tighe & Bond**
Address: **210 Commerce Way, Suite 300, Portsmouth, NH**	Address: **177 Corporate Drive Portsmouth, NH**
Business Phone: **603-430-4000**	Business Phone: **603-433-8818**
Mobile Phone:	Mobile Phone:
Fax: **603-430-8940**	Fax:

Site Information

Address / Location of Original Lot: **80 Rochester Ave (100 New Hampshire Ave)**

Portsmouth Tax Map: **308** **Lot #:** **1** **Zone:** **Pease Industrial (PI)**

Proposed Activity (check one) **Subdivision** **X** **Lot Line Adjustment** _____

Existing Lot

Total # of Existing Lot(s) **1**

Existing Lot Area **±10.9**

Created Lot

Total # of Proposed Lot(s) **1**

Area of Proposed Lot(s) **±10.9**

All above information shall be shown on a site plan submitted with this application. Provide 3 Full size hard copies and 1 PDF copy of all application materials as well as 1 half size set of drawings to PDA. Applicant shall supply additional copies as may be required by applicable municipality. Refer to Chapter 500 of PDA Land Use Controls for additional information

Checklist: Application fee (as required) **(X)** Abbutters List **(X)** Drawings **(X)**

Copies of approvals for any Required State/Federal permits (See Ch 500 of PDA LUC) ( )

Certification

I hereby certify under the penalties of perjury that the foregoing information and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge. I hereby apply for Subdivision and acknowledge I will comply with all regulations and any conditions established by the Review Committee(s) and the PDA Board of Directors in the development and construction of this

Neil Hansen — Signature of Applicant

1/25/23 — Date

Neil A. Hansen — Printed Name

N:\Engineer\Subdivision Application.xlsx

TAX MAP 308, LOT 9
PEASE DEV AUTH.
PEASE, NH 03801

TAX MAP 307, LOT 2
PEASE DEV AUTH.
PEASE, NH 03801

AVIATION AVENUE

AVIATION AVENUE

TAX MAP 308, LOT 0

TAX MAP 308, LOT 4
PEASE DEVELOP. AUTH.
CORPORATE DRIVE
PORTSMOUTH, NH 03801

LEE STREET

TAX MAP 308, LOT 5
PEASE DEVELOPMENT AUTH.
CORPORATE DRIVE
PORTSMOUTH, NH 03801

TH=58.8'

AVIATION STREET

TAX MAP 307, LOT 3
PEASE DEV AUTH.
PEASE, NH 03801

TAX MAP 308, LOT 0

TAX MAP 308,
LOT 6

ROCHESTER AVENUE

ROCHESTER AVENUE

PROPOSED MONUMENT
(TYP)

PROPOSED MONUMENT
(TYP)

±N31° 07' 09.17"W
±1199.752'

LOCATION OF EXISTING DRAIN LINE
TO BE CONFIRMED AND DRAINAGE
LICENSE AREA WITHIN THE
PROJECT SITE TO BE DETERMINED
PRIOR TO CONSTRUCTION

APPROX LOCATION OF
LOT LINE TO BE
ESTABLISHED

PORTSMOUTH GIS DOES NOT SHOW THIS AS A PARCEL
LEASE LOT 308-1
PER REF. PLAN 17

PROPOSED LEASE AREA
±10.9 ACRES
(474,333 SF)
TAX MAP 308 LOT 1

STRATHAM STREET

NEWFIELDS STREET

PORTSMOUTH GIS
DOES NOT SHOW THIS
AS A PARCEL
LEASE LOT 308-2
PER REF. PLAN 17

±S58° 24' 18.88"W
±399.986'

±N58° 26' 01.83"E
±390.846'

ZONE 3 GMZ
AREA

TAX MAP 307, LOT 1
CINTHESYS REAL ESTATE
68 NEW HAMPSHIRE AVE.
PORTSMOUTH, NH 03801

TAX MAP 308, LOT 1
PEASE DEVELOPMENT AUTH.
80 ROCHESTER AVENUE
PORTSMOUTH, NH 03801

APPROX LOCATION OF
LOT LINE TO BE
ESTABLISHED

±2848.060'
±S70° 12' 41.00"E

ZONE 3 GMZ
BOUNDARY

TAX MAP 311, LOT 1
US DEPARTMENT OF STATE
NATIONAL PASSPORT CENTER
31 ROCHESTER AVENUE
PORTSMOUTH, NH 03801

APPROX LOCATION OF
LOT LINE TO BE
ESTABLISHED

PROPOSED MONUMENT
(TYP)

±1199.507'
±S31° 33' 17.07"E

±1024.230'
±S31° 00' 21.00"E

PROPOSED MONUMENT
(TYP)

NEW HAMPSHIRE AVENUE

NEW HAMPSHIRE AVENUE

ZONE 3 GMZ
BOUNDARY

±1010.340'
±S60° 40' 32.00"E

TBM 7239B
MAG NAIL SET UP 8"
IN POLE PSNH 453/19
ELEV.=52.87'

TAX MAP 312, LOT 2

TAX MAP 306, LOT 4
SEACOAST NEWSPAPERS, INC.
111 NEW HAMPSHIRE AVE.
PORTSMOUTH, NH 03801

TAX MAP 306, LOT 4
SEACOAST NEWSPAPERS, INC.
111 NEW HAMPSHIRE AVE.
PORTSMOUTH, NH 03801

TBM 7239A
MAG NAIL SET UP 8"
IN POLE PSNH 453/10
ELEV.=61.06'

TAX MAP 306, LOTS 0003-***
(MULTIPLE PARCELS,
NAMES, AND ADDRESSES)
PORTSMOUTH, NH 03801

SUBDIVISION LINES SHOWN HEREIN ARE FOR PERMITTING PURPOSES ONLY. FINAL SUBDIVISION PLAN SHALL BE PREPARED BY THE PROJECT SURVEYOR AND RECORDED AT THE ROCKINGHAM COUNTY REGISTRY OF DEEDS PRIOR TO ISSUING BUILDING PERMITS.

SITE DATA:
LOCATION: TAX MAP 308, LOT 1
80 ROCHESTER AVENUE
PORTSMOUTH, NEW HAMPSHIRE

ZONING DISTRICT: INDUSTRIAL
ALLOWED USE: INDUSTRIAL / WAREHOUSE

DIMENSIONAL REQUIREMENTS:	REQUIRED
MINIMUM LOT AREA:	10 ACRES
MINIMUM STREET FRONTAGE:	200 FT
MINIMUM SETBACKS:	
• FRONT:	70 FT
• SIDE:	50 FT
• REAR:	50 FT
MAXIMUM BUILDING HEIGHT:	PER FAA
MINIMUM OPEN SPACE:	25%

Tighe&Bond

STATE OF NEW HAMPSHIRE
PATRICK
CRIMMINS
No. 12378
LICENSED
PROFESSIONAL ENGINEER
1/25/23

STATE OF NEW HAMPSHIRE
NEIL
A.
HANSEN
No. 15227
LICENSED
PROFESSIONAL ENGINEER
1/25/23

SCALE IN FEET
0 60' 120'
GRAPHIC SCALE

Proposed Advanced Manufacturing Facility

Aviation Avenue Group, LLC

100 New Hampshire Avenue
Portsmouth, NH

MARK	DATE	DESCRIPTION
B	1/25/2023	TAC Resubmission
A	12/19/2022	TAC Submission

PROJECT NO:	P0595-015
DATE:	12/19/2022
FILE:	P0595-015_DESIGN.DWG
DRAWN BY:	CML
CHECKED:	NAH
APPROVED:	PMC

PROPOSED SUBDIVISION PLAN

SCALE: AS SHOWN

1 OF 1

Last Save Date: January 24, 2023 5:03 PM By: CML
Print Date: January 25, 2023 10:33 AM By: Craig M. Langdon
T&B File Location: J:\P\P0595 Pro Con General Proposals\P0595-015 100 NH Avenue\Drawings_Figures\AutoCAD\Sheet\P0595-015_Design.DWG Layout Tab: Subdivision