



THE STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION



Victoria F. Sheehan
Commissioner

William Cass, P.E.
Assistant Commissioner

Bureau of Environment
Tel. (603) 271-3226
Fax (603) 271-7199

February 21, 2020

Michael Hicks
US Army Corps of Engineers
Regulatory Branch
696 Virginia Road
Concord, MA 01742-2851

Re: Individual Section 404 Permit Application
Derry-Londonderry, 13065 (Exit 4A)

Dear Mr. Hicks:

Forwarded herewith is the Individual Section 404 Wetlands Permit Application package prepared by Normandeau Associates, Inc. and Fuss & O'Neil, Inc. for the NH Department of Transportation (NHDOT). The Towns of Derry and Londonderry, and the NHDOT, in cooperation with the Federal Highway Administration (FHWA) are proposing the discharge of dredged or fill material into Waters of the United States for the purpose of construction of a new interchange on I-93 (known as Exit 4A), and other transportation improvements to reduce congestion and improves safety along NH Route 102.

A complete project description is included within the permit application.

The application package for this "Design Build" project includes plans that encompass the impacts anticipated for the base technical concept for the entire project. Because this project is "Design Build," it is possible that the successful team would propose an alternative technical concept which could include additional or reduced impacts to jurisdictional areas. As necessary, NHDOT will submit permit amendments from the "Design Build" team to account for any changes.

The final Environmental Impact Statement and FHWA Record of Decision are available at: <http://www.i93exit4a.com/documents.aspx>. Application materials are available electronically at: <https://www.nh.gov/dot/org/projectdevelopment/environment/units/program-management/wetland-applications.htm>.

Sincerely,

Andrew M. O'Sullivan
Wetlands Program Manager
Bureau of Environment

Enclosures

cc: Town of Derry (via certified mail)
Town of Londonderry (via certified mail)
Karl Benedict, NHDES (via E-mail)
Beth Alafat and Jean Brochi,, EPA (via E-mail)
Maria Turr, USF&WS (via E-mail)
Carol Henderson, NHF&G (via E-mail)
Keith Cota, NHDOT (via E-mail)
Marc Laurin, NHDOT (via E-mail)

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17. DIRECTIONS TO THE SITE

The project area for the preferred alignment (Alternative A) encompasses the area of a new interchange along Interstate 93 (I-93) in the Towns of Londonderry, and a new corridor that runs eastward from the interchange location to the intersection of Folsom Road, North High Street and Madden Road in Derry. The interchange is located north of the existing Exit 4 on I-93. The project then follows Tsienneto to its intersection with Route 102. A complete description of the project location is provided in Section "3.6.2 Build Alternatives" of the I-93 Exit 4A Final Environmental Impact Statement (FEIS), and accompanying Figures 3.6-1 and 3.6-2, and Attachment A, the USGS map of the Project site.

18. Nature of Activity (Description of project, include all features)

Discharge of fill to construct a new interchange with I-93 (known as Exit 4A) in Londonderry, NH, with additional improvements on local roads in Derry and Londonderry, and other transportation improvements to reduce congestion and improve safety along NH Route 102, from I-93 Exit 4 easterly through downtown Derry. The Project is approximately 3.2 miles in length between the new, proposed I-93 Exit 4A interchange and the eastern terminus in Derry. There would be approximately 1 mile of new roadway construction on a new alignment and 2.2 miles of existing roadway reconstruction. The new alignment would originate from the new I-93 Exit 4A interchange location and travel southeast through a wooded area to Folsom Road, near its intersection with North High Street and Madden Road in Derry. This project would continue to follow Folsom Road to Ross' Corner (Manchester Road/NH 28) and continue on Tsienneto Road across NH 28 Bypass to its intersection with NH 102, adjacent to Beaver Lake. This project is known as Alternative A, and is fully described in Section "3.6.2 Build Alternatives" of the I-93 Exit 4A FEIS. See also Attachment B, the Wetland Impact Plans.

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

The project purpose is to reduce congestion and improve safety along NH Route 102 from I-93 easterly through downtown Derry and to promote economic vitality in the Derry / Londonderry area. Please see Section "2.0 Purpose and Need" in the I-93 Exit 4A FEIS for additional detail.

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

Approximately 5.39 acres of direct, permanent impacts and 0.49 acres of temporary impacts to vegetated wetlands/vernal pools will result from fill or cuts for construction of new highway access ramps, the 1 mile connector road, 2.2 miles of existing road widening, and stormwater BMPs. These facilities will also have secondary and indirect impacts to wetlands/vernal pools that have also been quantified. Approximately 3,098 LF of stream channel disturbance (not including banks) or 0.72 acres, will result from installation of new culverts, extension of existing culverts where roads are widened, and stream relocation. 1,938 LF (0.50 acres) of this is temporary stream impact and will be restored. The affected environment and environmental consequences related to wetlands, vernal pools and streams associated with Project are fully described in Sections "4.12. Wetlands and Vernal Pools", and "4.14. Aquatic Life and Essential Fish Habitat" of the I-93 Exit 4A FEIS. See also Attachment E -Wetland Determination Data Sheets, Attachment F - ORM table, and I -Functions and Values.

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type Amount in Cubic Yards	Type Amount in Cubic Yards	Type Amount in Cubic Yards
-------------------------------	-------------------------------	-------------------------------

905 CY clean fill in 100-yr floodplain

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres Permanent: 5.39 acres of wetlands, 0.21 acres of stream channel; Temporary: 0.49 acres of wetlands, 0.50 acres of stream channel.
or
Linear Feet Permanent: 1,160 LF of stream channel, 543 LF perennial streambanks; Temporary: 1,938 LF stream channel, 115 LF banks

23. Description of Avoidance, Minimization, and Compensation (see instructions)

Scoping/Alternatives analysis began in 1998, and various routes were reviewed. Of 5 build alternatives in the FEIS, Alternative A was selected in part due to low wetland impacts and no impact on highest ranked wildlife habitat while still meeting project purposes. See Section "3.0 Alternatives Analysis" and "Appendix M" of the I-93 Exit 4A FEIS for details, and Attachment J- Impact Avoidance and Minimization. NHDOT is working with Londonderry and Derry to evaluate stream crossing locations that qualify for improvement funding under the Stream Passage Improvement Program (SPIP) agreement with NHDES to upgrade culverts in the Beaver Brook watershed. Payment to the Aquatic Resource Mitigation fund is also proposed. See Attachment C, Mitigation and Attachment K- Previously Mitigated Wetlands.

24. Is Any Portion of the Work Already Complete? Yes No IF YES, DESCRIBE THE COMPLETED WORK

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list).

a. Address- Please see Attachment D for a complete list of adjoining property owners

City - State - Zip -

b. Address-

City - State - Zip -

c. Address-

City - State - Zip -

d. Address-

City - State - Zip -

e. Address-

City - State - Zip -

26. List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED
Please see full list in	Attachment G				

* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for permit or permits to authorize the work described in this application. I certify that this information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.


SIGNATURE OF APPLICANT

2/20/20
DATE

SIGNATURE OF AGENT

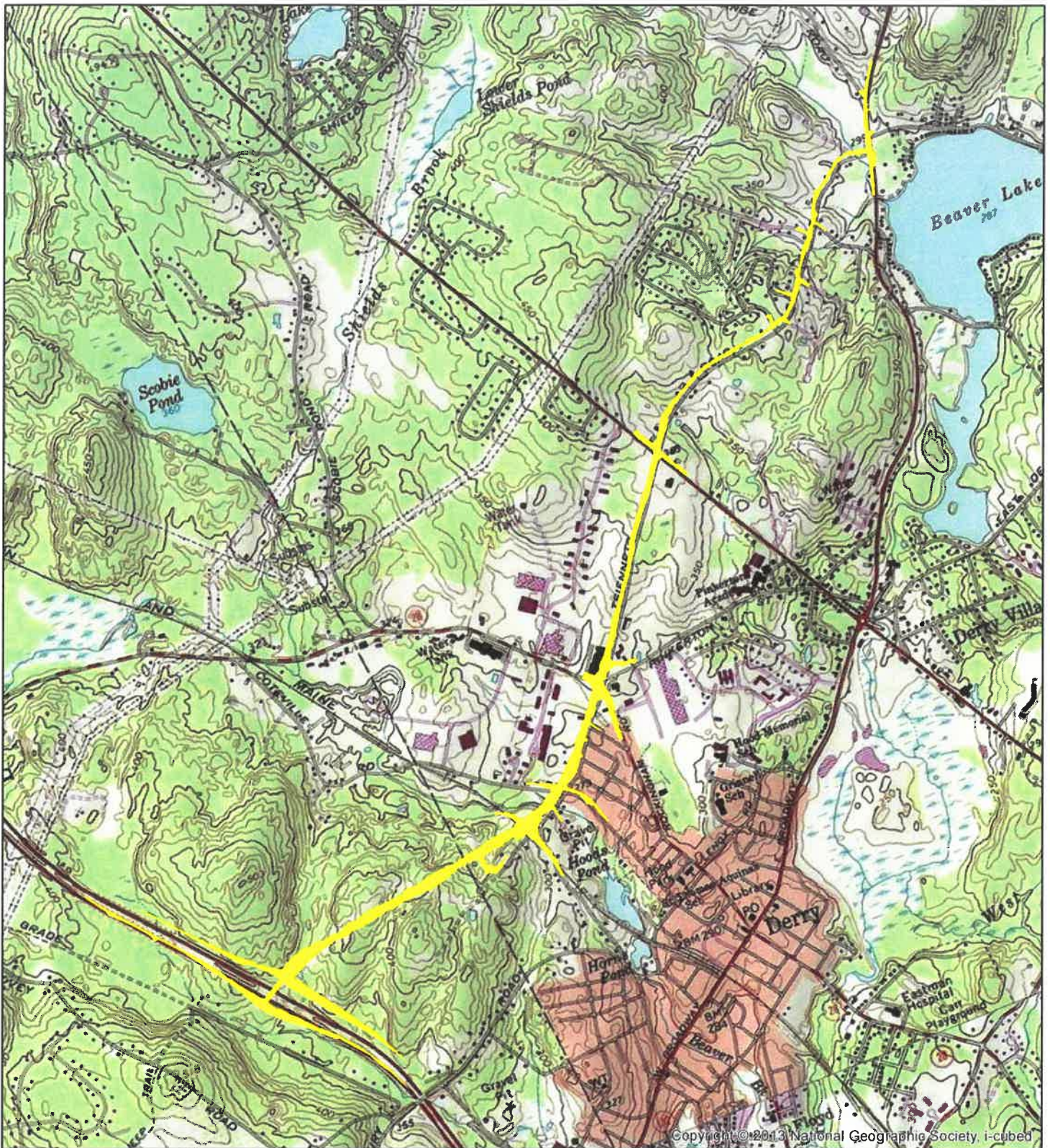
DATE

The Application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.

Attachment A

USGS Map



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Sources: CLD Engineers, Town of Derry GIS
 Town of Londonderry GIS, New Hampshire DOT
 NHDES (2016), U.S. Geological Survey (1991)

**I-93 Exit 4A
 Derry-Londonderry 13065
 Site Location**

Scale = 1:24,000

Coordinate System:
 NAD 1983 StatePlane
 New Hampshire (feet) Date:
 September 11, 2018

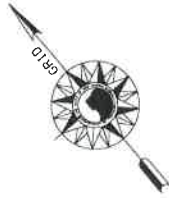


Attachment B
Wetland Permitting Plans

INDEX OF SHEETS

- 1 FRONT SHEET
- 2-3 STANDARD SYMBOLS
- 4-5 WETLAND IMPACT TABLES
- 6-28 WETLAND IMPACT PLANS

STATE OF NEW HAMPSHIRE
 DEPARTMENT OF TRANSPORTATION
WETLAND PLANS
 I-93 EXIT 4A DERRY-LONDONDERRY
 FEDERAL PROJECT IM-0931(201)
 NH PROJECT 13065



13065



TOWNS OF LONDONDERRY & DERRY
 COUNTY OF ROCKINGHAM
SCALE : 1" = 1000'
 FOR CONSTRUCTION AND ALIGNMENT DETAILS -
 SEE CONSTRUCTION PLANS



THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION	RECOMMENDED FOR APPROVAL:	DATE
	DIRECTOR OF PROJECT DEVELOPMENT	
APPROVED:	ASSISTANT COMMISSIONER AND CHIEF ENGINEER	DATE
	U. S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION	
APPROVED:		
	DIVISION ADMINISTRATOR	DATE
	FEDERAL PROJECT NO. 13065	SHEET NO. 1
	IM-0931(201)	TOTAL SHEETS 28



GENERAL

EDGE OF PAVEMENT TRAVELED WAY	PROPOSED ROADWAY	EXISTING ROADWAY	EXISTING PAVED OUTSIDE SLOPE LINES	ORIGINAL GROUND (TYPICALS)	ROCK OUTCROP
DRIVEWAYS					
BUILDINGS					
FOUNDATION					
LEACH FIELD					
BRIDGE CROSSINGS					
STEPS AND WALK					
INTERMITTENT WATER COURSE					
SHORE LINE					
POTENTIAL WET AREA SYMBOL					
BRUSH OR WOODS LINE					
TREES (PLANS)					
TREE OR STUMP (CROSS-SECTIONS)					
HEDGE					
MONITORING WELL					
WELL					
FLAG POLE					

SHORELAND - WETLAND

WETLAND DESIGNATION AND TYPE	SYMBOLS
DELINEATED WETLAND	—DU—
AERIAL DELINEATED WETLAND	—ADW—
ORDINARY HIGH WATER	—OHW—
TOP OF BANK	—TOB—
TOP OF BANK & ORDINARY HIGH WATER	—TOB&OHW—
NORMAL HIGH WATER	—HNW—
WIDTH AT BANK FULL	—WABF—
PRIME WETLAND	—PMT—
PRIME WETLAND 100' BUFFER	—PMT100—
NON-JURISDICTIONAL DRAINAGE AREA	—NJDA—
COMARDIN DISTINCTION LINE	—CDL—
TIDAL BUFFER ZONE	—TBZ—
DEVELOPED TIDAL BUFFER ZONE	—DTBZ—
HIGHEST OBSERVABLE TIDE LINE	—HOTL—
MEAN HIGH WATER	—MHW—
MEAN LOW WATER	—MLW—
VERNAL POOL	—VP—
SPECIAL AQUATIC SITE	—SAS—
REFERENCE LINE	—REF—
WATER FRONT BUFFER	—WFB—
NATURAL WOODLAND BUFFER	—NWB—
PROTECTED SHORELAND	—PS—
INVASIVE SPECIES LABEL	—IN—
INVASIVE SPECIES	—IN—

FLOODPLAIN / FLOODWAY

500 YEAR FLOODPLAIN BOUNDARY	—F500—
100 YEAR FLOODPLAIN BOUNDARY	—F100—
FLOODWAY	—FW—

ENGINEERING

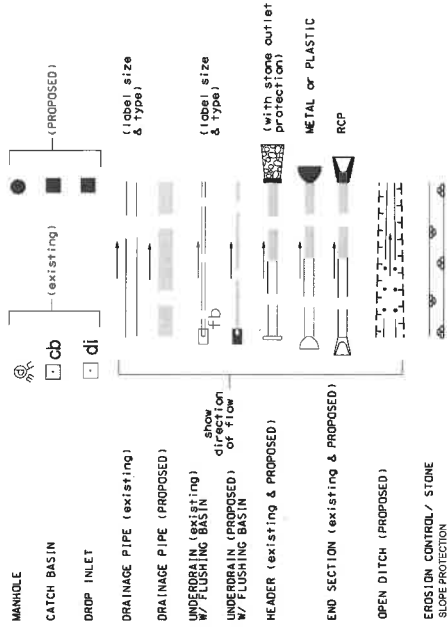
CONSTRUCTION BASELINE	—CB—
PC+PT+ POT (ON CONST BASELINE)	—PCPT—
PI (IN CONSTRUCTION BASELINES)	—PI—
INTERSECTION OR EQUATION OF TWO LINES	—INT—
ORIGINAL GROUND LINE (PROFILES AND CROSS-SECTIONS)	—OG—
PROFILE GRADE LINE (PROFILES AND CROSS-SECTIONS)	—PG—
CLEARING LINE	—CL—
SLOPE LINE	—SL—
SLOPE LINE (FILL)	—SL(F)—
SLOPE LINE (CUT)	—SL(C)—
PROFILES AND CROSS SECTIONS:	
ORIGINAL GROUND ELEVATION (LEFT)	—OG(E)—
FINISHED GRADE ELEVATION (RIGHT)	—FG(E)—

STATE OF NEW HAMPSHIRE
 DEPARTMENT OF TRANSPORTATION & BUREAU OF HIGHWAY DESIGN

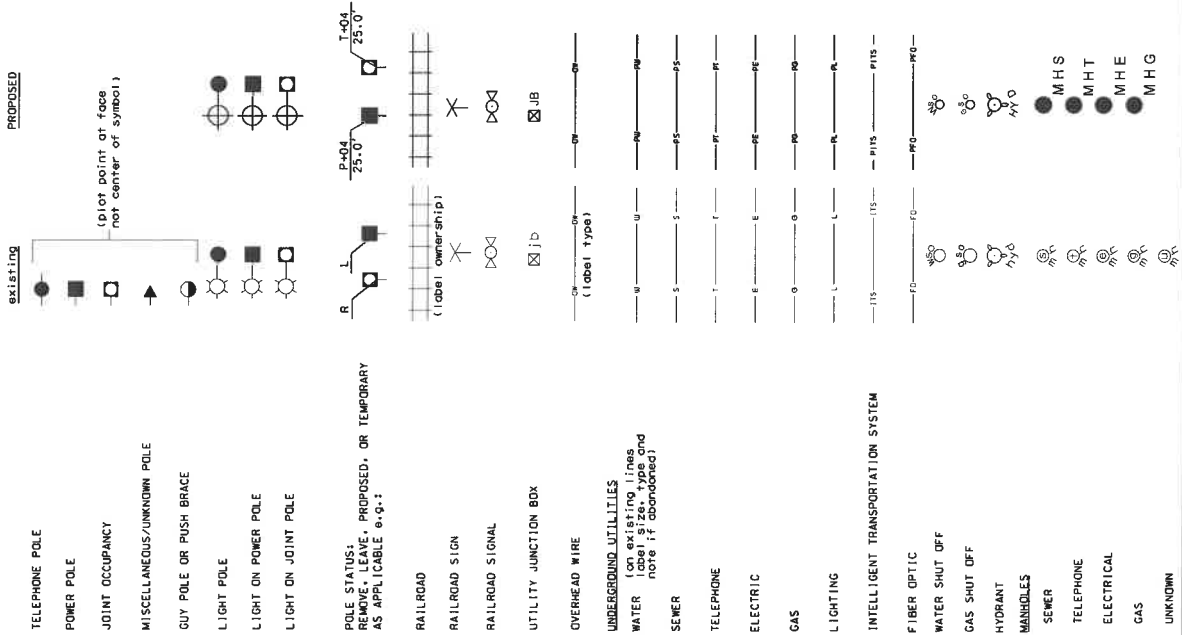
STANDARD SYMBOLS

REVISED DATE: 11-21-2011
 DRAWING NO.: 130655TDSYM
 SHEET NO.: 2
 TOTAL SHEETS: 28

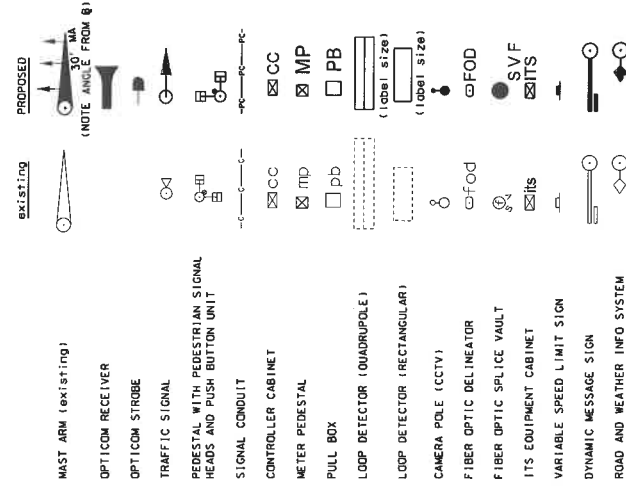
DRAINAGE



UTILITIES



TRAFFIC SIGNALS / ITS



CONSTRUCTION NOTES

- CURB MARK NUMBER - BITUMINOUS B-1
- CURB MARK NUMBER - GRANITE G-1
- CLEARING AND GRUBBING AREA A
- DRAINAGE NOTE 1
- EROSION CONTROL NOTE A
- FENCING NOTE A
- GUARDRAIL NOTE 1
- ITS NOTE 1
- LIGHTING NOTE A
- TRAFFIC SIGNAL NOTE 1

STATE OF NEW HAMPSHIRE		
DEPARTMENT OF TRANSPORTATION & BUREAU OF HIGHWAY DESIGN		
STANDARD SYMBOLS		
REVISION DATE	DATE	TOTAL SHEETS
9-1-2016	1306551051M	3
SHEET NO.		28

DATE	DATE	DATE	DATE
2/6/2020	2/6/2020	2/6/2020	2/6/2020
DESCRIPTION	DESCRIPTION	DESCRIPTION	DESCRIPTION
REVISIONS AFTER PROPOSAL	STATION	STATION	STATION
NUMBER	DATE	DATE	DATE

WETLAND IMPACT SUMMARY									
WETLAND NUMBER	WETLAND CLASSIFICATION	LOCATION	PERMANENT N.H.W.B. & A.C.D.F. (WETLAND) SF	BANK	CHANNEL	TEMPORARY IMPACTS SF	TOWN	COMMENTS	
51	RAUB3	A	136		44	136	L	self-mitigating	
52	RAUB3	B	163		163	163	L	self-mitigating	
53	PROI/ZE	C	2125				L		
54	PROI/ZE	D	1838				L		
55	PROI/ZE	E	432				L		
56	VP2	F	7236				L		
57	PROI/ZE	G	6278				L		
58	PROI/ZE	H	1324				L		
59	PROI/ZE	I	2336				L		
60	VP3	J	9387				L		
61	PROI/ZE	K	507		70		L		
62	RAUB3	L	187				L		
63	PROI/ZE	M	18656				L		
64	PROI/ZE	N	37008				L		
65	PROI/ZE	O	199				L		
66	VP4	P	9278				L		
67	PROI/ZE	Q	2061				L		
68	PROI/ZE	R	1919				L		
69	PROI/ZE	S	48		23		L		
70	PROI/ZE	T	86				L		
71	PROI/ZE	U	2484		117		L		
72	PROI/ZE	V	2484				L		
73	PROI/ZE	W	738		116		L		
74	PROI/ZE	X	1820				L		
75	PROI/ZE	Y	692				L		
76	PROI/ZE	Z	909				L		
77	PROI/ZE	AA	3312				L		
78	PROI/ZE	AB	1463				L		
79	PROI/ZE	AC	365				L		
80	PROI/ZE	AD	2519				L		
81	PROI/ZE	AE	9131				L		
82	VP4	AF	5415				L		
83	PROI/ZE	AG	659				L		
84	PROI/ZE	AH	1232		291		L		
85	PROI/ZE	AI	273				L		
86	PROI/ZE	AJ	1232				L		
87	PROI/ZE	AK	361				L		
88	PROI/ZE	AL	911				L		
89	PROI/ZE	AM	149				L		
90	PROI/ZE	AN	1521				L		
91	VP5	AO	1521				L		
92	PROI/ZE	AP	5				L		
93	PROI/ZE	AQ	452				L		
94	PROI/ZE	AR	98				L		
95	PROI/ZE	AS	2538				L		
96	PROI/ZE	AT	168				L		
97	PROI/ZE	AU	1148				L		
98	PROI/ZE	AV	135				L		
99	PROI/ZE	AW	1195				L		
100	VP8	AX	10722				L		
101	PROI/ZE	AY	21				L		
102	PROI/ZE	AZ	301				L		
103	PROI/ZE	BA	5				L		
104	VP9	BB	505				L		
105	PROI/ZE	BC	335				L		
106	PROI/ZE	BD	36				L		
107	PROI/ZE	BE	36				L		
108	PROI/ZE	BF	1139				L		
109	PROI/ZE	BG	4370				L		
110	VP9	BH	77		77		L		
111	PROI/ZE	BI	852				L		

WETLAND IMPACT SUMMARY									
WETLAND NUMBER	WETLAND CLASSIFICATION	LOCATION	PERMANENT N.H.W.B. & A.C.D.F. (WETLAND) SF	BANK	CHANNEL	TEMPORARY IMPACTS SF	TOWN	COMMENTS	
86	PROI/ZE	BJ	552				D	Prime Wetland	
87	PSS/PEMIE	BK	195				D		
88	PROI/ZE	BL	498		202		D		
89	PROI/ZE	BM	680				D		
90	PROI/ZE	BN	780				D		
91	PROI/ZE	BO	2661		107		D		
92	PROI/ZE	BP	2661				D		
93	PROI/ZE	BQ	3025				D		
94	PROI/ZE	BR	311				D		
95	PROI/ZE	BS	90				D		
96	PROI/ZE	BT	54				D		
97	PROI/ZE	BU	54		13		D		
98	PROI/ZE	BV	582				D		
99	PROI/ZE	BW	273				D		
100	PROI/ZE	BX	62				D		
101	PROI/ZE	BY	159		24		D		
102	PROI/ZE	BZ	265				D		
103	PROI/ZE	CA	219		46		D		
104	PROI/ZE	CB	196		29		D		
105	PROI/ZE	CC	941				D		
106	PROI/ZE	CD	11				D		
107	PROI/ZE	CE	598				D		
108	PROI/ZE	CF	598				D		
109	PROI/ZE	CG	40				D		
110	PROI/ZE	CH	125		22		D		
111	PROI/ZE	CI	815				D		
112	PROI/ZE	CJ	615				D		
113	PSS/PEMIE	CK	1380				D	Prime Wetland	
114	PROI/ZE	CL	1666				D		
115	PSS/PEMIE	CM	172				D	Prime Wetland	
116	PROI/ZE	CO	109		32		D		
117	PROI/ZE	CP	410				D		
118	PROI/ZE	CQ	212				D		
119	PROI/ZE	CR	497				D		
120	PROI/ZE	CS	37				D	self-mitigating	
121	PROI/ZE	CT	694				D		
122	PROI/ZE	CU					D		
123	PROI/ZE	CV					D		
124	PROI/ZE	CA					D		
125	PROI/ZE	CB					D		
126	PROI/ZE	CC					D		
127	PROI/ZE	CD					D		
128	PROI/ZE	CE					D		
129	PROI/ZE	CF					D		
130	PROI/ZE	CG					D		
131	PROI/ZE	CH					D		
132	PROI/ZE	CI					D		
133	PROI/ZE	CJ					D		
134	PROI/ZE	CK					D		
135	PROI/ZE	CL					D		
136	PROI/ZE	CM					D		
137	PROI/ZE	CO					D		
138	PROI/ZE	CP					D		
139	PROI/ZE	CQ					D		
140	PROI/ZE	CR					D		
141	PROI/ZE	CS					D		
142	PROI/ZE	CT					D		
143	PROI/ZE	CU					D		
144	PROI/ZE	CV					D		
145	PROI/ZE	CA					D		
146	PROI/ZE	CB					D		
147	PROI/ZE	CC					D		
148	PROI/ZE	CD					D		
149	PROI/ZE	CE					D		
150	PROI/ZE	CF					D		
151	PROI/ZE	CG					D		
152	PROI/ZE	CH					D		
153	PROI/ZE	CI					D		
154	PROI/ZE	CJ					D		
155	PROI/ZE	CK					D		
156	PROI/ZE	CL					D		
157	PROI/ZE	CM					D		
158	PROI/ZE	CO					D		
159	PROI/ZE	CP					D		
160	PROI/ZE	CQ					D		
161	PROI/ZE	CR					D		
162	PROI/ZE	CS					D		
163	PROI/ZE	CT					D		
164	PROI/ZE	CU					D		
165	PROI/ZE	CV					D		
166	PROI/ZE	CA					D		
167	PROI/ZE	CB					D		
168	PROI/ZE	CC					D		
169	PROI/ZE	CD					D		
170	PROI/ZE	CE					D		
171	PROI/ZE	CF					D		
172	PROI/ZE	CG					D		
173	PROI/ZE	CH					D		
174	PROI/ZE	CI					D		
175	PROI/ZE	CJ					D		
176	PROI/ZE	CK					D		
177	PROI/ZE	CL					D		
178	PROI/ZE	CM					D		
179	PROI/ZE	CO					D		
180	PROI/ZE	CP					D		
181	PROI/ZE	CQ					D		
182	PROI/ZE	CR					D		
183	PROI/ZE	CS					D		
184	PROI/ZE	CT					D		
185	PROI/ZE	CU					D		
186	PROI/ZE	CV					D		
187	PROI/ZE	CA					D		
188	PROI/ZE	CB					D		
189	PROI/ZE	CC					D		
190	PROI/ZE	CD					D		
191	PROI/ZE	CE					D		
192	PROI/ZE	CF					D		
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194	PROI/ZE	CH					D		
195	PROI/ZE	CI					D		
196	PROI/ZE	CJ					D		
197	PROI/ZE	CK					D		
198	PROI/ZE	CL					D		
199	PROI/ZE	CM					D		
200	PROI/ZE	CO					D		
201	PROI/ZE	CP					D		
202	PROI/ZE	CQ					D		
203	PROI/ZE	CR					D		
204	PROI/ZE	CS					D		
205	PROI/ZE	CT					D		
206	PROI/ZE	CU					D		
207	PROI/ZE	CV					D		
208	PROI/ZE	CA					D		
209	PROI/ZE	CB					D		
210	PROI/ZE	CC					D		
211	PROI/ZE	CD					D		
212	PROI/ZE	CE					D		
213	PROI/ZE	CF					D		
214	PROI/ZE	CG					D		
215	PROI/ZE	CH					D		
216	PROI/ZE	CI					D		
217	PROI/ZE	CJ					D		
218	PROI/ZE	CK					D		
219	PROI/ZE	CL					D		
220	PROI/ZE	CM					D		
221	PROI/ZE	CO					D		
222	PROI/								

WETLAND IMPACT SUMMARY									
WETLAND NUMBER	WETLAND CLASSIFICATION	LOCATION	PERMANENT A.C.D.E (WETLAND) SF	BANK LF	CHANNEL LF	TEMPORARY IMPACTS SF	TOWN	COMMENTS	
24	PFOIE	TAD				79	L		
24	VP6	TAE	32			32	L		
24	VP6	TAF				378	L		
24	PFOIE	TAG			20		D	Prime Wetland	
35	PFOIE	TAH				105	L		
35	VP8	TAI				76	L		
35	VP8	TAJ				15	L		
35	PFOIE	TAK				611	L		
35	PFOIE	TAL				90	L		
35	PFOIE	TAM				7	L		
35	PFOIE	TAN				619	L		
35	PFOIE	TAO				38	L		
35	PEMIE	TAQ				25	L		
35	RUB3	TAR	32			32	L		
72	PSS/PEM/FOJB	TAS				100	D		
52	RUB3	TAT	10		5	150	D		
52	RUB3	TAU	10		5	154	D		
52	RUB3	TAV	10		5	77	D		
52	RUB3	TAW	10		5	87	D		
85	PSSIE	TAX				666	D		
46	PFOIE	TAZ				100	D		
73	PEM/PSIE	TBA				1381	D		
49	PFOIE	TBB				459	D		
49	PFOIE	TBC				53	D		
49	PFOIE	TBD				54	D		
60	PFOIE	TBE				144	D		
81	PEM/PUSH	TBF				280	D		
81	PEM/PUSH	TBG				162	D		
103	PFOIE	TBH				9	D		
53	RAS5	TBI			5	34	D		
53	RAS5	TBK			5	33	D		
54	RAS5	TBL			5	15	D		
80	PFOIE/PEMIE	TBN			5	400	D		
80	PFOIE/PEMIE	TBO				561	D		
80	PFOIE/PEMIE	TBP				130	D		
80	PFOIE/PEMIE	TBQ				52	D		
59	PFOIE	TBR				176	D		
56	PEMIE	TBT				112	D		
62	PSS/PEMIE	TBU				1228	D	Prime Wetland	
59	PFOIE	TBV				94	D		
59	PFOIE	TBW				135	D		
55	RUB3	TBX	25		5	482	D		
59	PFOIE	TBY			8	24	D	Prime Wetland	
62	PSS/PEMIE	TBZ	18			159	D	Prime Wetland	
54	PEMIE	TCC				27	D		
54	VP	TCD				87	D		
51	RUB3	TCE			5	114	L		
51	RUB3	TCF			121	370	L		

WETLAND CLASSIFICATION CODES	
BANK	BANK
PEMIE	PALLISTRINE EMERGENT, PERSISTENT, SEASONALLY FLOODED (SATURATED)
PFOIE	PALLISTRINE EMERGENT, PERSISTENT, SEASONALLY FLOODED (UNSATURATED)
PFOIUB	PALLISTRINE EMERGENT, PERSISTENT, SEASONALLY FLOODED (SATURATED), UNCONSOLIDATED BOTTOM
PFOIUB	PALLISTRINE EMERGENT, PERSISTENT, SEASONALLY FLOODED (UNSATURATED), UNCONSOLIDATED BOTTOM
PFOIUB	PERMANENTLY FLOODED PALLISTRINE EMERGENT, PERSISTENT WETLAND MIXED WITH OPEN WETLANDS, SEASONALLY FLOODED (SATURATED)
PFOIUB	PALLISTRINE, FORESTED, BROAD-LEAVED DECIDUOUS, MIXED WITH HERBACEOUS LEAVED DECIDUOUS, SEASONALLY FLOODED (SATURATED)
PFOIUB	PALLISTRINE, FORESTED, BROAD-LEAVED DECIDUOUS, SEASONALLY FLOODED (UNSATURATED)
PFOIUB	PALLISTRINE, FORESTED, BROAD-LEAVED DECIDUOUS WETLAND MIXED WITH SEASONALLY SATURATED EMERGENT PERSISTENT WETLAND
PSS/PEMIE	PALLISTRINE, DOMINANTLY SCRUB-SHRUB MIXED WITH EMERGENT, PERSISTENT, SEASONALLY FLOODED (SATURATED)
PSSIE	PALLISTRINE, DOMINANTLY SCRUB-SHRUB MIXED WITH EMERGENT, PERSISTENT, SEASONALLY FLOODED (UNSATURATED)
RUB3	PALLISTRINE, UPPER PERENNIAL, UNCONSOLIDATED BOTTOM, MUD
RUB3	RIVERINE, INTERMITTENT, UNCONSOLIDATED BOTTOM, MUD
RAS5	RIVERINE, INTERMITTENT, STREAMBED
VP	RIVERINE, INTERMITTENT, STREAMBED, MUD
VP	VERNAL POOL

TOTAL IMPACTS FOR WETLANDS	224,853.00 SF
WETLAND AND STREAM IMPACTS (AREA)	9,333.00 SF
PERMANENT IMPACTS (WETLAND)	43,103.00 SF
TEMPORARY IMPACTS	287,289.00 SF
TOTAL WETLAND IMPACTS:	
PERMANENT IMPACTS TO BANKS	545.00 LF
PERMANENT IMPACTS TO CHANNEL	1,560.00 LF
TEMPORARY IMPACTS TO BANKS	1,838.00 LF
TEMPORARY IMPACTS TO CHANNEL	3,756.00 LF
TOTAL STREAM IMPACTS:	



STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION & BUREAU OF HIGHWAY DESIGN

WETLAND IMPACT TABLES

DATE 2/6/2020 ERM SHEET CHECKED MCF DATE 2/6/2020 AS BUILT DETAILS DATE

SR# PROCESS530

NUMBER DATE

STATION DATE

STATION DATE

DESCRIPTION

DATE 2/6/2020

DATE 2/6/2020

DATE 2/6/2020

DATE 2/6/2020

DATE 2/6/2020

DATE 2/6/2020

DATE 2/6/2020

DATE 2/6/2020

DATE 2/6/2020

DATE 2/6/2020

DATE 2/6/2020

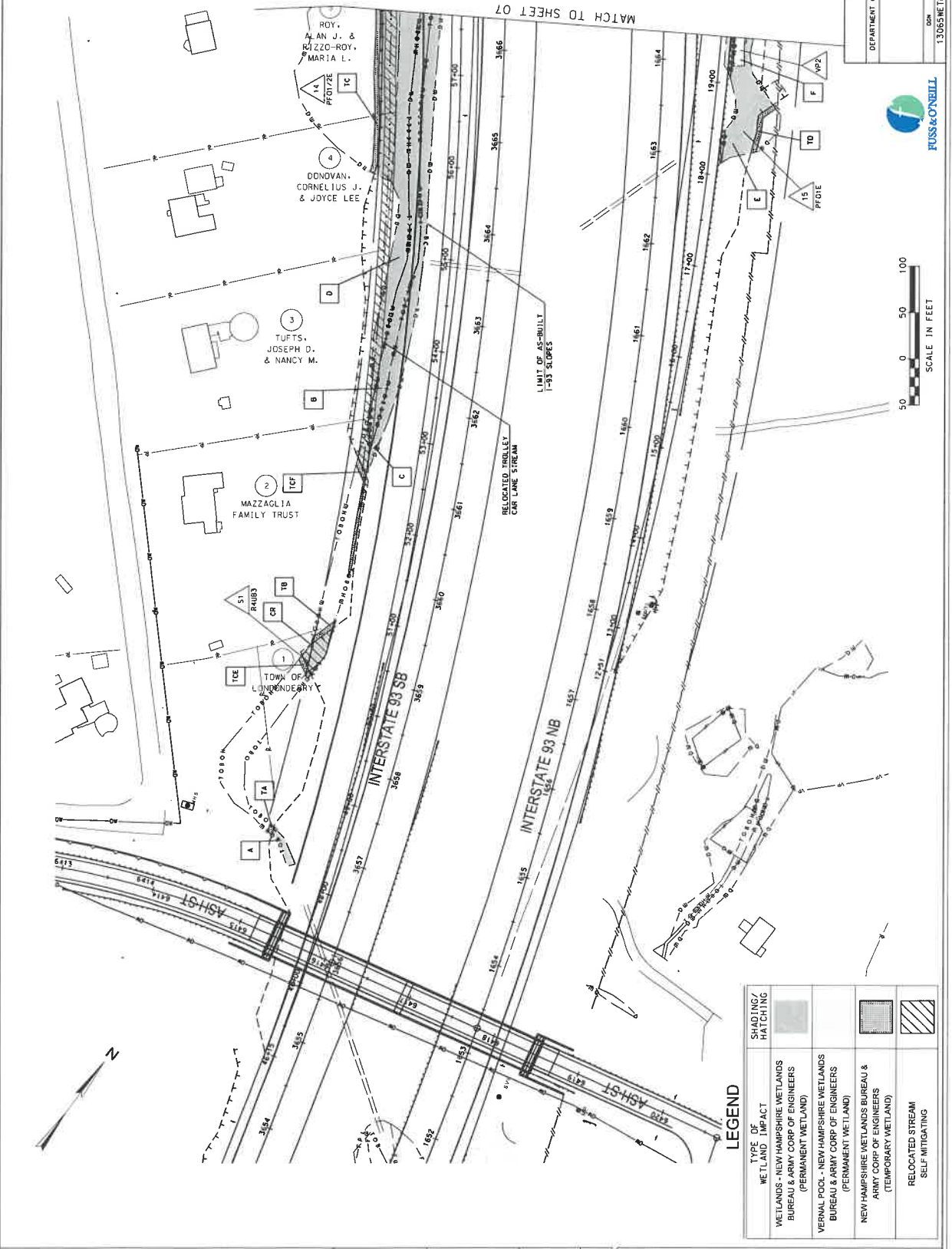
DATE 2/6/2020

DATE 2/6/2020

DATE 2/6/2020

DATE 2/6/2020

DATE	2/6/2020	DATE	2/6/2020	DATE	2/6/2020
NEW DESIGN	EM	SHEET CHECKED	MC	AS BUILT DETAILS	
REVISIONS AFTER PROPOSAL					
NUMBER	DATE	STATION	STATION	DESCRIPTION	

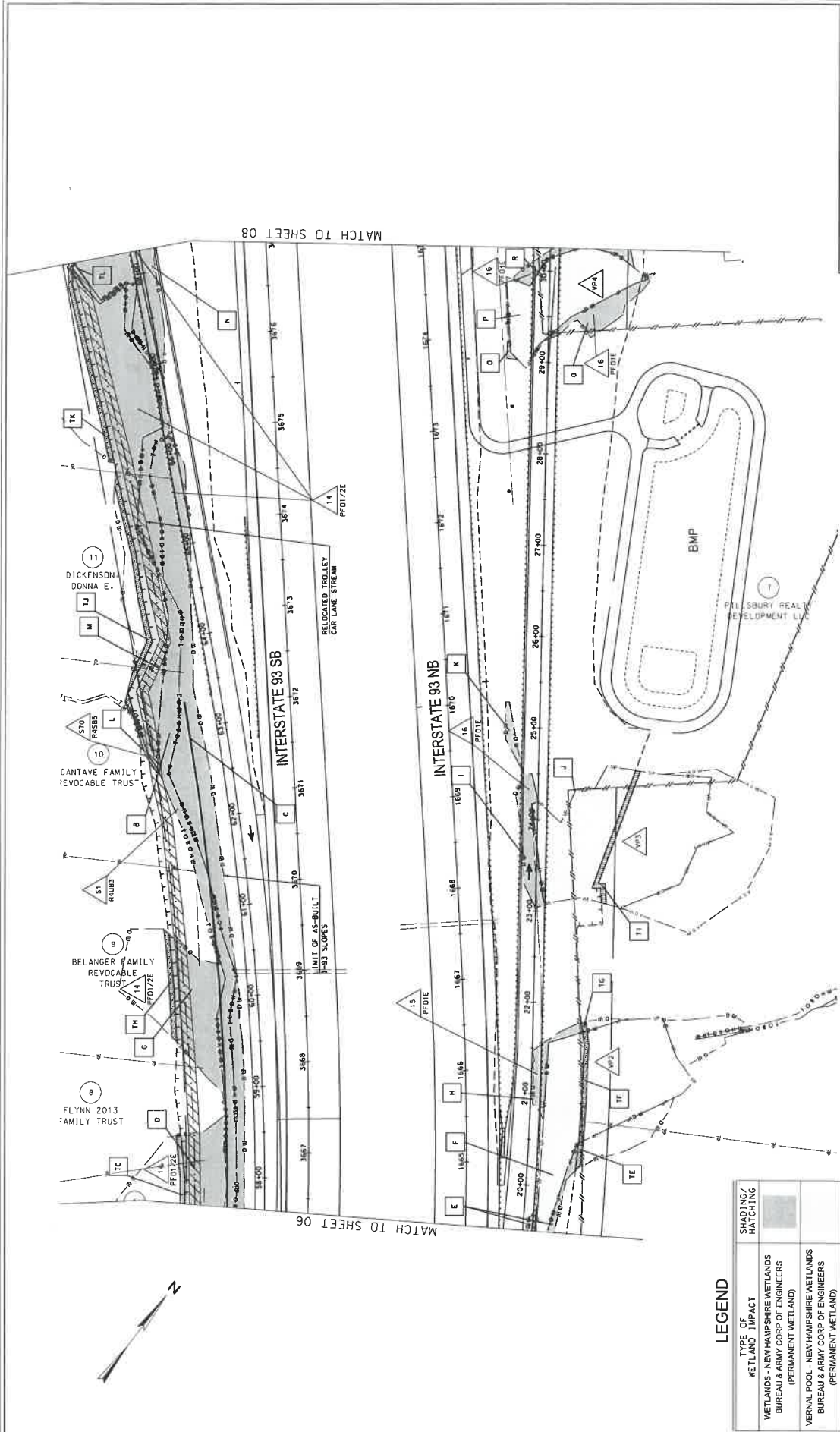


TYPE OF WETLAND IMPACT	SHADING/HATCHING
WETLANDS - NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (PERMANENT WETLAND)	[Solid Grey Shading]
VERNAL POOL - NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (PERMANENT WETLAND)	[Diagonal Hatching]
NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (TEMPORARY WETLAND)	[Cross-hatching]
RELOCATED STREAM SELF-MITIGATING	[Diagonal Hatching]



STATE OF NEW HAMPSHIRE	
DEPARTMENT OF TRANSPORTATION & BUREAU OF HIGHWAY DESIGN	
DATE	13065 WETL
SHEET NO.	6
TOTAL SHEETS	28
WETLAND IMPACT PLAN	

MATCH TO SHEET 07



STATE OF NEW HAMPSHIRE	
DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN	
WETLAND IMPACT PLAN	
CON. NO.	TOTAL SHEETS
13065BETL	7
SHEET NO.	28



LEGEND

TYPE OF WETLAND IMPACT	SOLID LINE/HATCHING
WETLANDS - NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (PERMANENT WETLAND)	[Solid Grey]
VERNAL POOL - NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (PERMANENT WETLAND)	[Stippled]
NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (TEMPORARY WETLAND)	[Cross-hatched]
RELOCATED STREAM SELF MITIGATING	[Diagonal Lines]

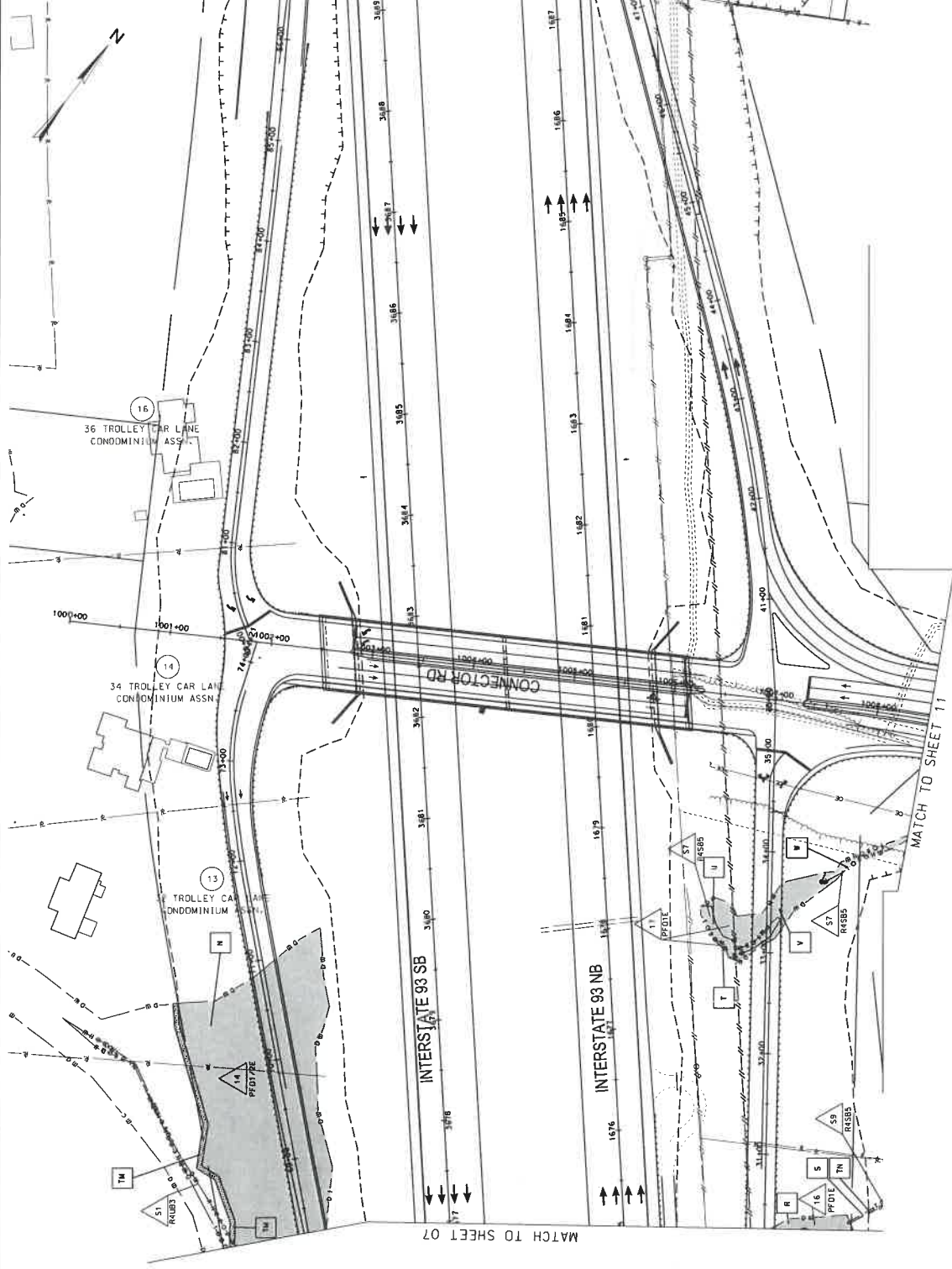
DATE	DATE	DATE	DATE
2/6/2020	2/6/2020	2/6/2020	2/6/2020
DATE	DATE	DATE	DATE
2/6/2020	2/6/2020	2/6/2020	2/6/2020
DATE	DATE	DATE	DATE
2/6/2020	2/6/2020	2/6/2020	2/6/2020
DATE	DATE	DATE	DATE
2/6/2020	2/6/2020	2/6/2020	2/6/2020

REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	DESCRIPTION

DATE	DESCRIPTION	STATION
DATE	REVISIONS AFTER PROPOSAL	
DATE	NEW DESIGN	
DATE	CHECKED	
DATE	AS BUILT DETAILS	

TYPE OF WETLAND IMPACT	SHADING/HATCHING
WETLANDS - NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (PERMANENT WETLAND)	[Solid Grey Box]
VERNAL POOL - NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (PERMANENT WETLAND)	[Cross-hatched Box]
NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (TEMPORARY WETLAND)	[Dotted Box]



STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION - BUREAU OF HIGHWAY DESIGN

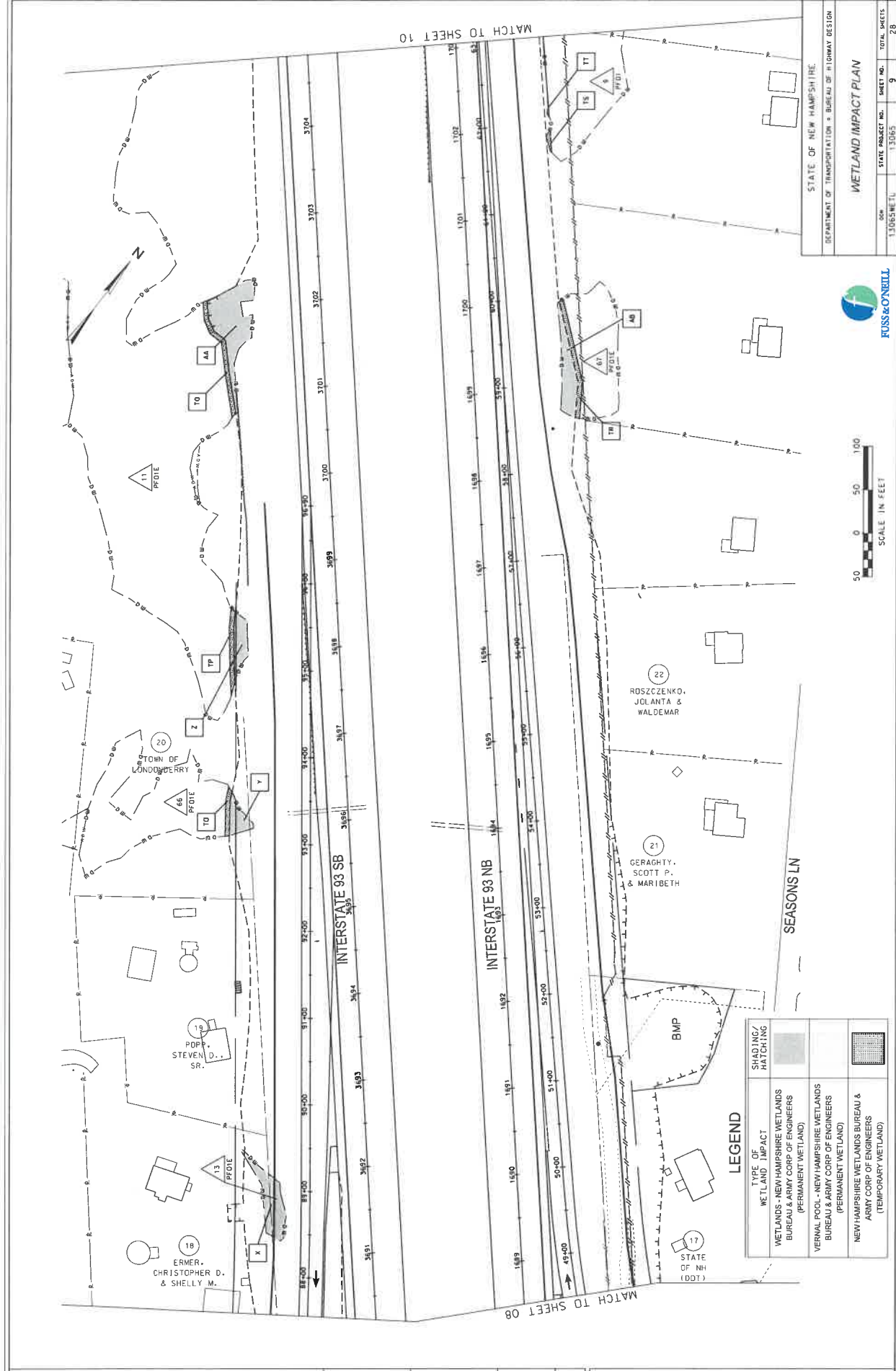


WETLAND IMPACT PLAN

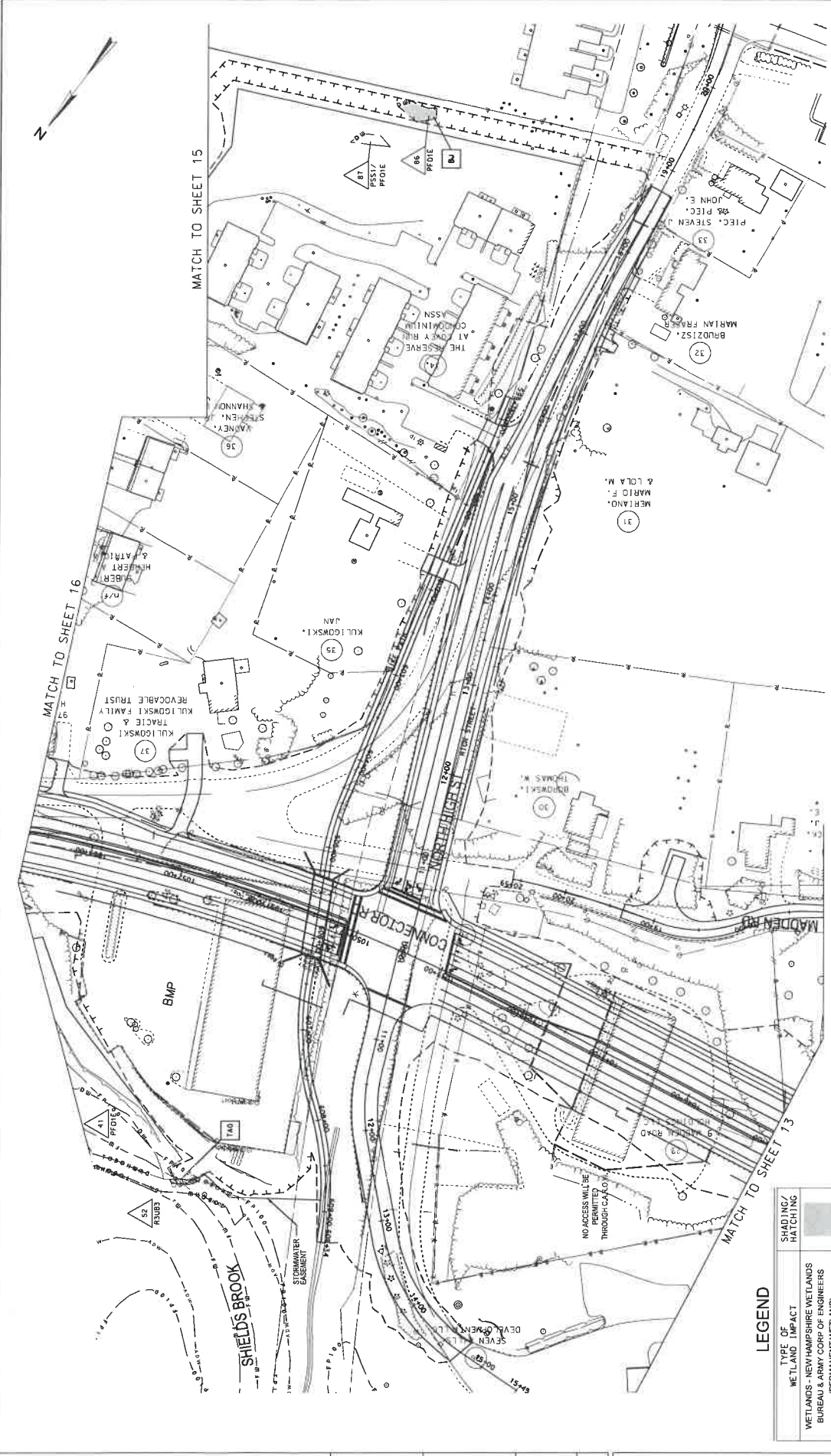
DATE: 2/8/2020
STATE PROJECT NO.: 13065WETL
SHEET NO.: B
TOTAL SHEETS: 28

SCALE IN FEET
0 50 100

DATE	DESCRIPTION	STATION	DATE	STATION	DATE	NUMBER
2/8/2020	SR PROCESSING		2/8/2020		2/8/2020	1
2/8/2020	NEW DESIGN		2/8/2020		2/8/2020	2
2/8/2020	SHEET CHECKED		2/8/2020		2/8/2020	3
	AS BUILT DETAILS					

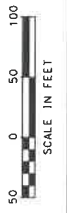


STATE OF NEW HAMPSHIRE
 DEPARTMENT OF TRANSPORTATION - BUREAU OF HIGHWAY DESIGN
WETLAND IMPACT PLAN
 000
 13085-NH-TL
 STATE PROJECT NO. 13085
 SHEET NO. 9
 TOTAL SHEETS 28



LEGEND

TYPE OF WETLAND IMPACT	SHADING/HATCHING
WETLANDS - NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (PERMANENT WETLAND)	[Solid Grey Box]
VERNAL POOL - NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (PERMANENT WETLAND)	[Diagonal Hatching Box]
NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (TEMPORARY WETLAND)	[Cross-hatching Box]

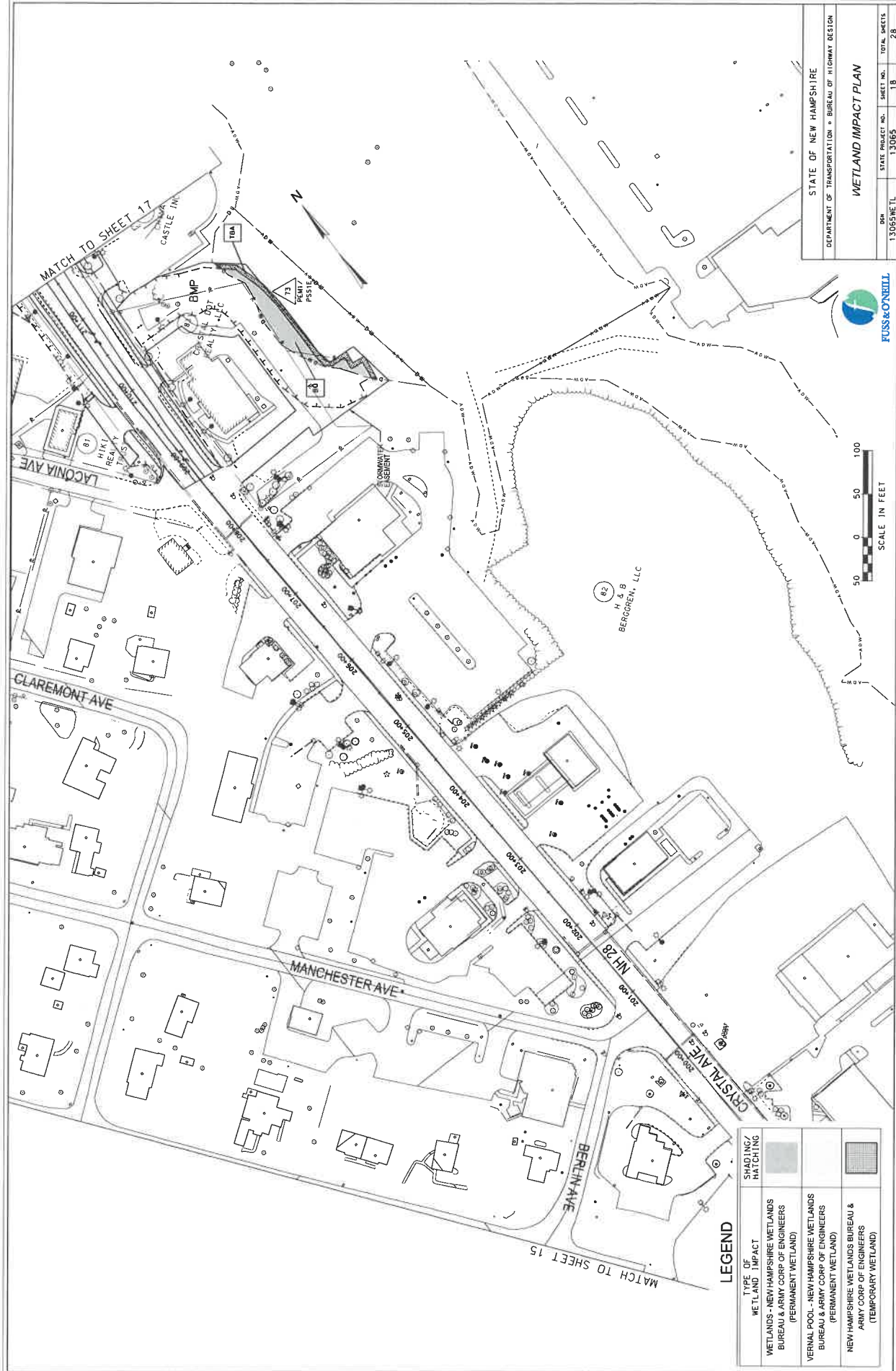


STATE OF NEW HAMPSHIRE
 DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN

WETLAND IMPACT PLAN

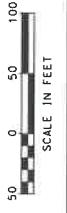
NO. 1305SHEETL
 STATE PROJECT NO. 13065
 SHEET NO. 14
 TOTAL SHEETS 26

DATE	DESCRIPTION
2/6/2020	SR PROCESSING
2/6/2020	NEW DESIGN
2/6/2020	SHEET CHECKED
2/6/2020	AS BUILT DETAILS



STATE OF NEW HAMPSHIRE
 DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN

STATE PROJECT NO. 13095WE1L
 SHEET NO. 18
 TOTAL SHEETS 28



LEGEND

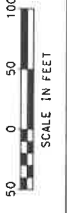
TYPE OF WETLAND / IMPACT	SHADING / HATCHING
WETLANDS - NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (PERMANENT WETLAND)	[Solid Grey Box]
VERNAL POOL - NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (PERMANENT WETLAND)	[Diagonal Hatching Box]
NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (TEMPORARY WETLAND)	[Cross-hatching Box]

DATE	DESCRIPTION	STATION	NUMBER	DATE	DATE
2/6/2020	REVISED			2/6/2020	2/6/2020
2/6/2020	CHECKED			2/6/2020	2/6/2020
2/6/2020	AS BUILT DETAILS			2/6/2020	2/6/2020



LEGEND

TYPE OF WETLAND - IMPACT	SHADING/HATCHING
WETLANDS - NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (PERMANENT WETLAND)	
VERNAL POOL - NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (PERMANENT WETLAND)	
NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (TEMPORARY WETLAND)	

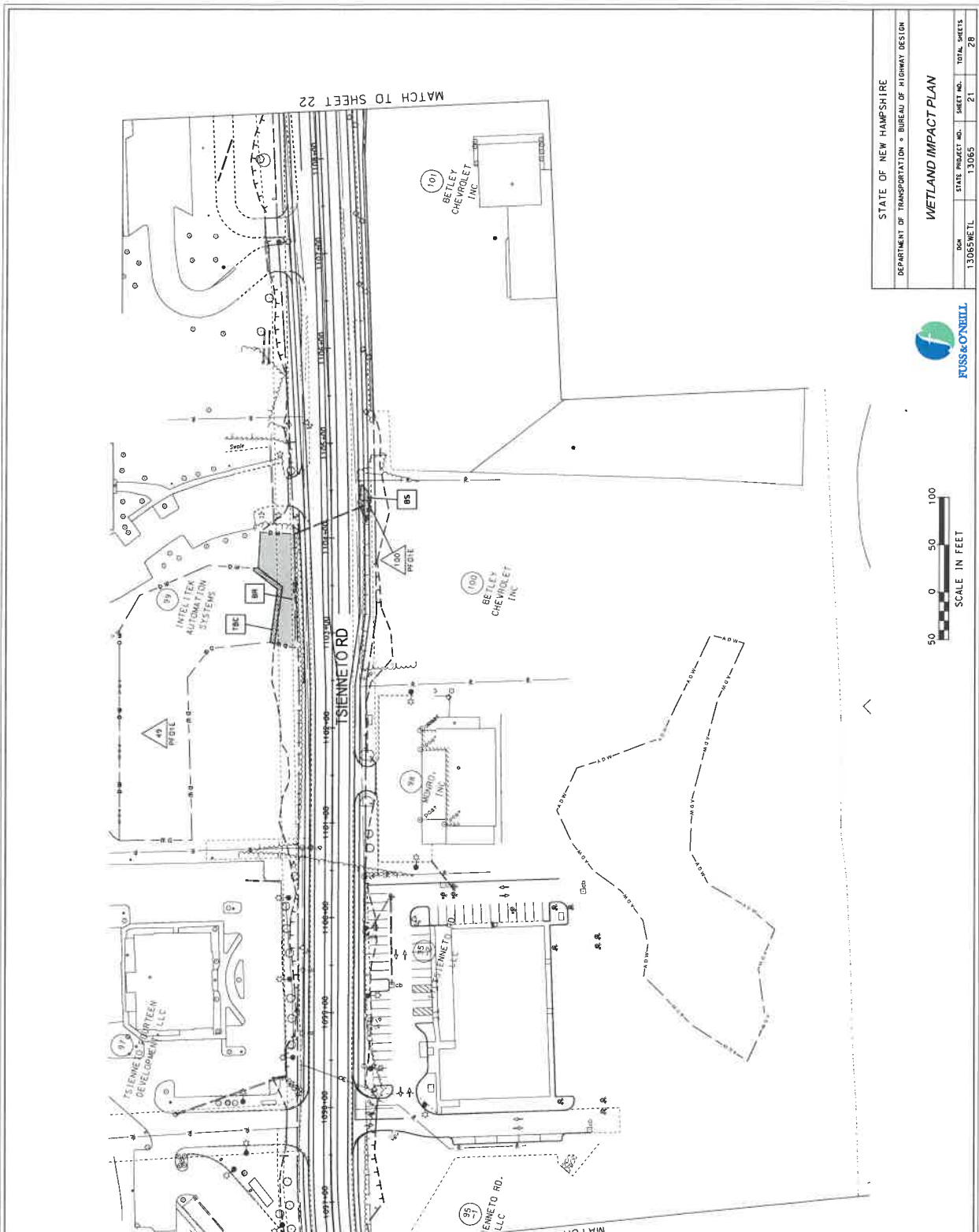


STATE OF NEW HAMPSHIRE	
DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN	
WETLAND IMPACT PLAN	
CON 13065WETL	STATE PROJECT NO. 13065
SHEET NO. 20	TOTAL SHEETS 28

DATE	DESCRIPTION	DATE	DATE	NUMBER	STATION	STATION	DATE	DATE
2/6/2020	NEW DESIGN	2/6/2020	2/6/2020					
	SHEET CHECKED							
	NCF							
	AS BUILT DETAILS							

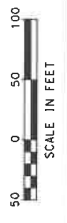
DATE	DESCRIPTION	STATION	DATE	NUMBER
2/8/2020	NEW DESIGN		2/8/2020	1
2/8/2020	SHEET CHECKED		2/8/2020	2
	AS BUILT DETAILS			

DATE	REVISIONS AFTER PROPOSAL	STATION	DATE	NUMBER



LEGEND

TYPE OF WETLAND IMPACT	SHADING/HATCHING
WETLANDS - NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (PERMANENT WETLAND)	[Solid Grey Box]
WETLANDS - NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (PERMANENT WETLAND)	[Diagonal Hatching Box]
NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (TEMPORARY WETLAND)	[Cross-hatching Box]



STATE OF NEW HAMPSHIRE	
DEPARTMENT OF TRANSPORTATION & BUREAU OF HIGHWAY DESIGN	
WETLAND IMPACT PLAN	
DIST. 13065WETL	STATE PROJECT NO. 13065
SHEET NO. 21	TOTAL SHEETS 28

MATCH TO SHEET 22

MATCH TO SHEET 20

LEGEND

TYPE OF WETLAND / IMPACT	SHADING/HATCHING
WETLANDS - NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (PERMANENT WETLAND)	[Solid Grey Box]
VERNAL POOL - NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (PERMANENT WETLAND)	[Diagonal Lines Box]
NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (TEMPORARY WETLAND)	[Cross-hatch Box]



MATCH TO SHEET 23

MATCH TO SHEET 21

MATCH TO SHEET 24



SCALE IN FEET



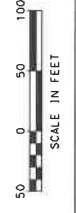
FUSS & O'NEILL

STATE OF NEW HAMPSHIRE	
DEPARTMENT OF TRANSPORTATION & BUREAU OF HIGHWAY DESIGN	
WETLAND IMPACT PLAN	
DSN 13065WETL	STATE PROJECT NO. 13065
SHEET NO. 22	TOTAL SHEETS 28

DATE	DESCRIPTION
2/6/2020	50% PROPOSED
2/6/2020	EMM
2/6/2020	NCF
AS BUILT DETAILS	DATE

LEGEND

TYPE OF WETLAND / IMPACT	SHADING / HATCHING
WETLANDS - NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (PERMANENT WETLAND)	[Solid Grey Box]
VERNAL POOL - NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (PERMANENT WETLAND)	[Cross-hatched Box]
NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (TEMPORARY WETLAND)	[Stippled Box]

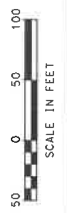
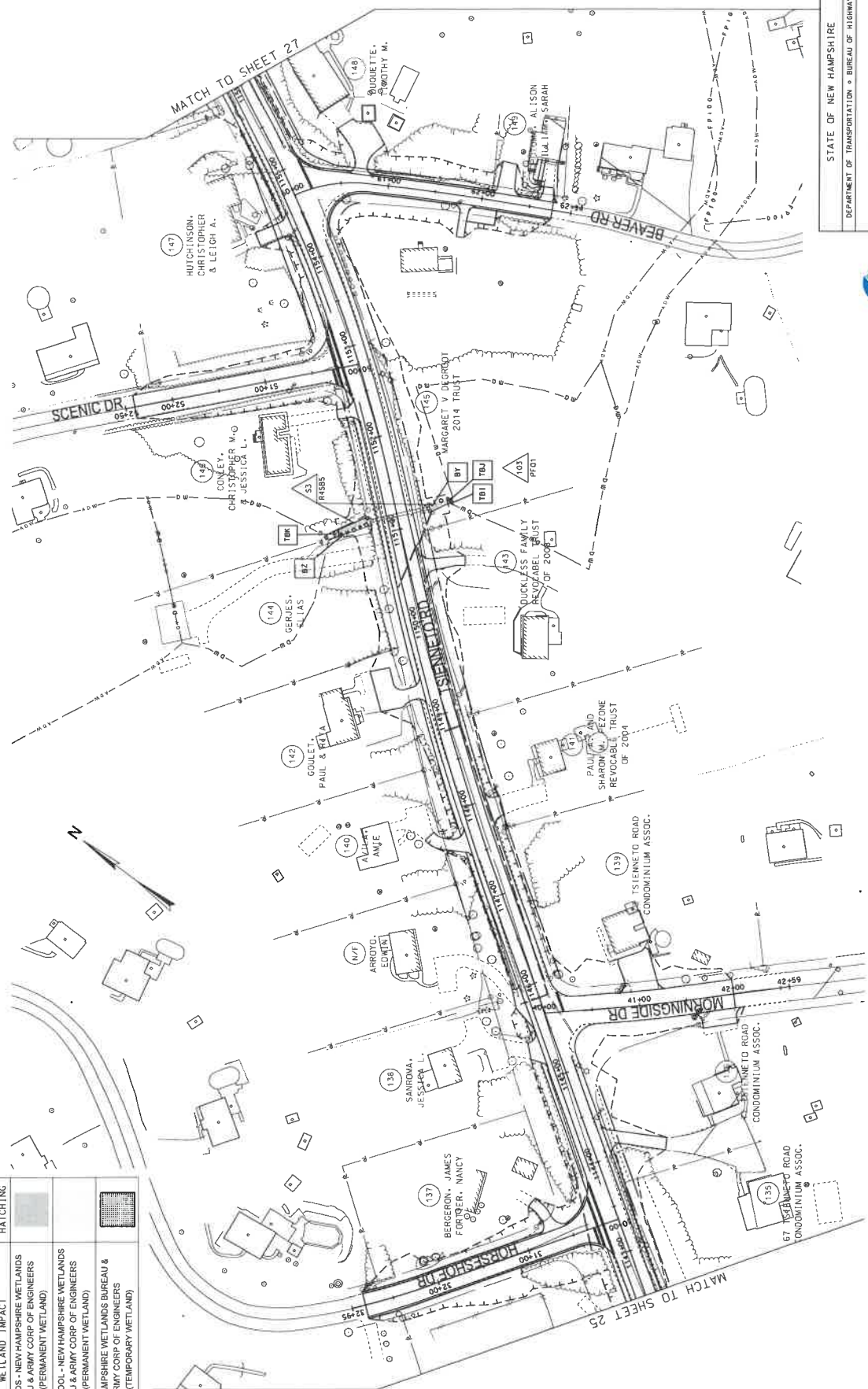


STATE OF NEW HAMPSHIRE	
DEPARTMENT OF TRANSPORTATION & BUREAU OF HIGHWAY DESIGN	
WETLAND IMPACT PLAN	
DATE	STATE PROJECT NO.
13/06/2011	13065
SHEET NO.	TOTAL SHEETS
23	28

53	AS BUILT DETAILS	DATE
52	SHEET CHECKED	DATE 2/6/2020
51	EIM	DATE 2/6/2020
50	NRW DESIGN	DATE 2/6/2020
49	NRW PROCESSING	DATE
48	REVISIONS AFTER PROPOSAL	DATE
47	DESCRIPTION	DATE
46	STATION	DATE
45	STATION	DATE
44	NUMBER	DATE

LEGEND

TYPE OF WETLAND IMPACT	SHADING/HATCHING
WETLANDS - NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (PERMANENT WETLAND)	[Solid Grey Box]
VERNAL POOL - NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (PERMANENT WETLAND)	[Diagonal Lines Box]
NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (TEMPORARY WETLAND)	[Cross-hatch Box]



STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION - BUREAU OF HIGHWAY DESIGN

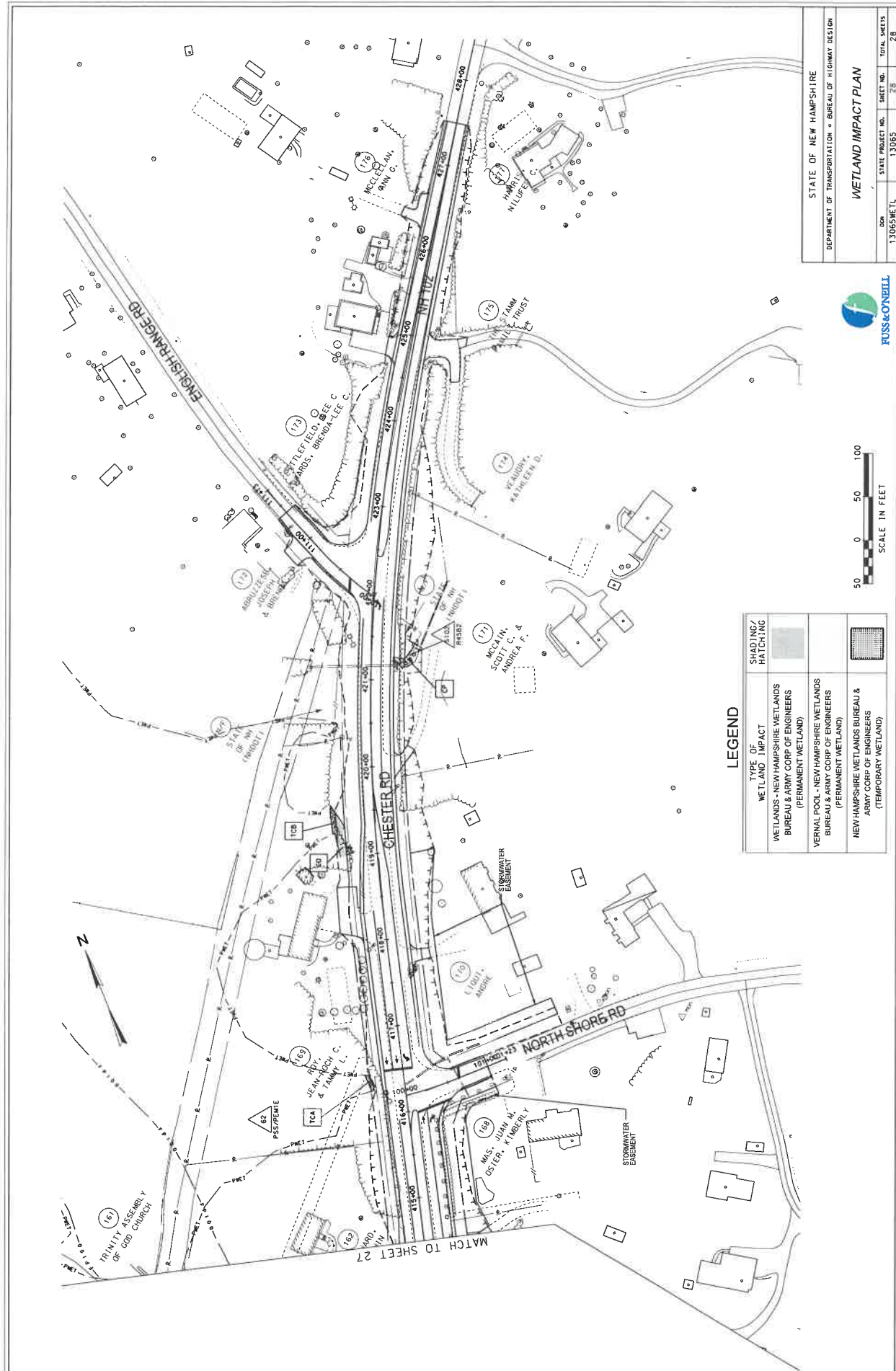
WETLAND IMPACT PLAN

DATE	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
13/05/2021	13095	26	28

DATE	DESCRIPTION	NUMBER	DATE	DATE
2/8/2020	NEW DESIGN	ERM	2/8/2020	
2/8/2020	SHEET CHECKED	NSF	2/8/2020	
	AS BUILT DETAILS			

DATE	DESCRIPTION	DATE	DATE	NUMBER	DATE	STATION	STATION	STATION	DATE
2/6/2020	SRP PROCESSED	2/6/2020	2/6/2020						
2/6/2020	ME # DESIGN	2/6/2020	2/6/2020						
2/6/2020	SHEET CHECKED	2/6/2020	2/6/2020						
	NCF								
	AS BUILT DETAILS								

REVISIONS AFTER PREPROPOSAL



LEGEND

TYPE OF WETLAND IMPACT	SHADING/HATCHING
WETLANDS - NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (PERMANENT WETLAND)	[Solid Grey Box]
VERNAL POOL - NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (PERMANENT WETLAND)	[Diagonal Hatching Box]
NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (TEMPORARY WETLAND)	[Cross-hatched Box]

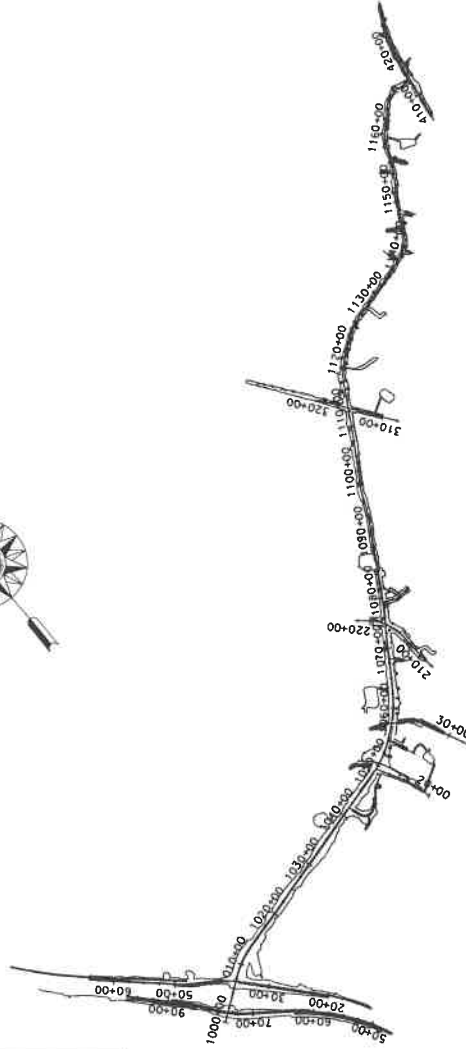
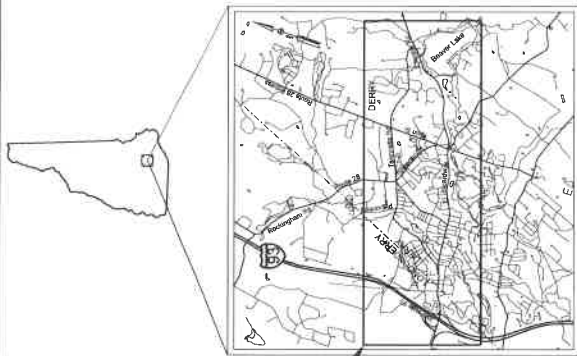


STATE OF NEW HAMPSHIRE
 DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN

WETLAND IMPACT PLAN

NO. 13058METL STATE PROJECT NO. 13085 SHEET NO. 26 TOTAL SHEETS 26

STATE OF NEW HAMPSHIRE
 DEPARTMENT OF TRANSPORTATION
EROSION & SEDIMENT CONTROL PLANS
 I-93 EXIT 4A DERRY-LONDONDERRY
 FEDERAL PROJECT IM-0931(201)
 NH PROJECT 13065



TOWNS OF LONDONDERRY & DERRY
 COUNTY OF ROCKINGHAM
 SCALE : 1" = 1000'



NH DOT		THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION	
RECOMMENDED FOR APPROVAL:		DATE	
APPROVED:		DATE	
DIRECTOR OF PROJECT DEVELOPMENT		DATE	
ASSISTANT COMMISSIONER AND CHIEF ENGINEER		DATE	
U. S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION		DATE	
APPROVED:		DATE	
DIVISION ADMINISTRATOR		DATE	
FEDERAL PROJECT NO.	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
IM-0931(201)	13065	1	28

SHORELAND - WETLAND

DELIMITED WETLAND	—DB—	—DB—
AERIAL DELIMITED WETLAND	—ADW—	—ADW—
ORDINARY HIGH WATER	—OH—	—OH—
TOP OF BANK	—TOB—	—TOB—
TOP OF BANK & ORDINARY HIGH WATER	—TOB&OH—	—TOB&OH—
NORMAL HIGH WATER	—NH—	—NH—
WIDTH AT BANK FULL	—WABF—	—WABF—
PRIME WETLAND	—PWT—	—PWT—
PRIME WETLAND 100' BUFFER	—PWT100—	—PWT100—
NON-JURISDICTIONAL DRAINAGE AREA	—NJD—	—NJD—
COWARD IN DISTINCTION LINE	—COL—	—COL—
TIDAL BUFFER ZONE	—TBZ—	—TBZ—
DEVELOPED TIDAL BUFFER ZONE	—DTBZ—	—DTBZ—
HIGHEST OBSERVABLE TIDE LINE	—HOTL—	—HOTL—
MEAN HIGH WATER	—MHW—	—MHW—
MEAN LOW WATER	—MLW—	—MLW—
VERNAL POOL	—VP—	—VP—
SPECIAL AQUATIC SITE	—SAS—	—SAS—
REFERENCE LINE	—REF—	—REF—
WATER FRONT BUFFER	—WFB—	—WFB—
NATURAL WOODLAND BUFFER	—NWB—	—NWB—
PROTECTED SHORELAND	—PS—	—PS—
INVASIVE SPECIES LABEL	—IS—	—IS—
INVASIVE SPECIES	—INV—	—INV—

DELIMITED WETLAND	—DB—
AERIAL DELIMITED WETLAND	—ADW—
ORDINARY HIGH WATER	—OH—
TOP OF BANK	—TOB—
TOP OF BANK & ORDINARY HIGH WATER	—TOB&OH—
NORMAL HIGH WATER	—NH—
WIDTH AT BANK FULL	—WABF—
PRIME WETLAND	—PWT—
PRIME WETLAND 100' BUFFER	—PWT100—
NON-JURISDICTIONAL DRAINAGE AREA	—NJD—
COWARD IN DISTINCTION LINE	—COL—
TIDAL BUFFER ZONE	—TBZ—
DEVELOPED TIDAL BUFFER ZONE	—DTBZ—
HIGHEST OBSERVABLE TIDE LINE	—HOTL—
MEAN HIGH WATER	—MHW—
MEAN LOW WATER	—MLW—
VERNAL POOL	—VP—
SPECIAL AQUATIC SITE	—SAS—
REFERENCE LINE	—REF—
WATER FRONT BUFFER	—WFB—
NATURAL WOODLAND BUFFER	—NWB—
PROTECTED SHORELAND	—PS—
INVASIVE SPECIES LABEL	—IS—
INVASIVE SPECIES	—INV—

FLOODPLAIN / FLOODWAY

500 YEAR FLOODPLAIN BOUNDARY	—F500—
100 YEAR FLOODPLAIN BOUNDARY	—F100—
FLOODWAY	—FW—

500 YEAR FLOODPLAIN BOUNDARY	—F500—
100 YEAR FLOODPLAIN BOUNDARY	—F100—
FLOODWAY	—FW—

ENGINEERING

CONSTRUCTION BASELINE	—CB—
PC, PT, POT (ON CONST BASELINE)	—PC/PT/POT—
PI (IN CONSTRUCTION BASELINES)	—PI—
INTERSECTION OR EQUATION OF TWO LINES	—INT—
ORIGINAL GROUND LINE (PROFILES AND CROSS-SECTIONS)	—OG—
PROFILE GRADE LINE (PROFILES AND CROSS-SECTIONS)	—PG—
CLEARING LINE	—CL—
SLOPE LINE	—SL—
SLOPE LINE (FILL)	—SL(F)—
SLOPE LINE (CUT)	—SL(C)—
PROFILES AND CROSS SECTIONS:	—P&C—
ORIGINAL GROUND ELEVATION (LEFT)	—OGE(L)—
FINISHED GRADE ELEVATION (RIGHT)	—FGE(R)—

CONSTRUCTION BASELINE	—CB—
PC, PT, POT (ON CONST BASELINE)	—PC/PT/POT—
PI (IN CONSTRUCTION BASELINES)	—PI—
INTERSECTION OR EQUATION OF TWO LINES	—INT—
ORIGINAL GROUND LINE (PROFILES AND CROSS-SECTIONS)	—OG—
PROFILE GRADE LINE (PROFILES AND CROSS-SECTIONS)	—PG—
CLEARING LINE	—CL—
SLOPE LINE	—SL—
SLOPE LINE (FILL)	—SL(F)—
SLOPE LINE (CUT)	—SL(C)—
PROFILES AND CROSS SECTIONS:	—P&C—
ORIGINAL GROUND ELEVATION (LEFT)	—OGE(L)—
FINISHED GRADE ELEVATION (RIGHT)	—FGE(R)—

GENERAL

EDGE OF PAVEMENT TRAVELED WAY	—EPTW—
PROPOSED ROADWAY	—PR—
EXISTING ROADWAY	—EX—
DRIVEWAYS	—DR—
BUILDINGS	—BL—
FOUNDATION	—FO—
LEACH FIELD	—LF—
BRIDGE CROSSINGS	—BC—
STEPS AND WALK	—SW—
INTERMITTENT WATER COURSE	—IWC—
SHORE LINE	—SL—
POTENTIAL WET AREA SYMBOL	—PWAS—
BRUSH OR WOODS LINE	—BWL—
TREES (PLANS)	—TR—
TREE OR STUMP (CROSS-SECTIONS)	—TS—
HEDGE	—HD—
MONITORING WELL	—MW—
WELL	—W—
FLAG POLE	—FP—

EDGE OF PAVEMENT TRAVELED WAY	—EPTW—
PROPOSED ROADWAY	—PR—
EXISTING ROADWAY	—EX—
DRIVEWAYS	—DR—
BUILDINGS	—BL—
FOUNDATION	—FO—
LEACH FIELD	—LF—
BRIDGE CROSSINGS	—BC—
STEPS AND WALK	—SW—
INTERMITTENT WATER COURSE	—IWC—
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POTENTIAL WET AREA SYMBOL	—PWAS—
BRUSH OR WOODS LINE	—BWL—
TREES (PLANS)	—TR—
TREE OR STUMP (CROSS-SECTIONS)	—TS—
HEDGE	—HD—
MONITORING WELL	—MW—
WELL	—W—
FLAG POLE	—FP—

ORIGINAL GROUND (TYPICALS)	—OG—
ROCK OUTCROP	—RO—
ROCK LINE (TYPICALS & SECTIONS ONLY)	—RL—
GUARDRAIL (label type)	—GR—
JERSEY BARRIER	—JB—
CURB (LABEL TYPE)	—CB—
STONE WALL	—SW—
RETAINING WALL (LABEL TYPE)	—RW—
FENCE (LABEL TYPE)	—FE—
STONS	—ST—
GAS PUMP	—GP—
FUEL TANK (ABOVE GROUND)	—FT—
STORAGE TANK FILLER CAP	—STFC—
SEPTIC TANK	—STK—
GRAVE	—GRV—
MAILBOX	—MB—
VENT PIPE	—VP—
SATELLITE DISH ANTENNA	—SDA—
PHONE	—PH—
GROUND LIGHT/LAMP POST	—GLP—
BORING LOCATION	—BL—
TEST PIT	—TP—
INTERSTATE NUMBERED HIGHWAY	—I—
UNITED STATES NUMBERED HIGHWAY	—U—
STATE NUMBERED HIGHWAY	—S—

ORIGINAL GROUND (TYPICALS)	—OG—
ROCK OUTCROP	—RO—
ROCK LINE (TYPICALS & SECTIONS ONLY)	—RL—
GUARDRAIL (label type)	—GR—
JERSEY BARRIER	—JB—
CURB (LABEL TYPE)	—CB—
STONE WALL	—SW—
RETAINING WALL (LABEL TYPE)	—RW—
FENCE (LABEL TYPE)	—FE—
STONS	—ST—
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UNITED STATES NUMBERED HIGHWAY	—U—
STATE NUMBERED HIGHWAY	—S—

EDGE OF PAVEMENT TRAVELED WAY	—EPTW—
PROPOSED ROADWAY	—PR—
EXISTING ROADWAY	—EX—
DRIVEWAYS	—DR—
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FOUNDATION	—FO—
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EDGE OF PAVEMENT TRAVELED WAY	—EPTW—
PROPOSED ROADWAY	—PR—
EXISTING ROADWAY	—EX—
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BUILDINGS	—BL—
FOUNDATION	—FO—
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TREES (PLANS)	—TR—
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HEDGE	—HD—
MONITORING WELL	—MW—
WELL	—W—
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EDGE OF PAVEMENT TRAVELED WAY	—EPTW—
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EXISTING ROADWAY	—EX—
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BUILDINGS	—BL—
FOUNDATION	—FO—
LEACH FIELD	—LF—
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STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION & BUREAU OF HIGHWAY DESIGN

STANDARD SYMBOLS

REVISION DATE: 11-21-2014
STATE PROJECT NO.: 13065SDSYM
SHEET NO.: 2
TOTAL SHEETS: 28

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DEPARTMENT OF TRANSPORTATION & BUREAU OF HIGHWAY DESIGN

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STANDARD SYMBOLS

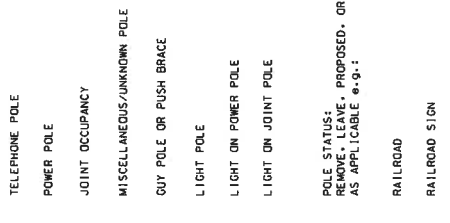
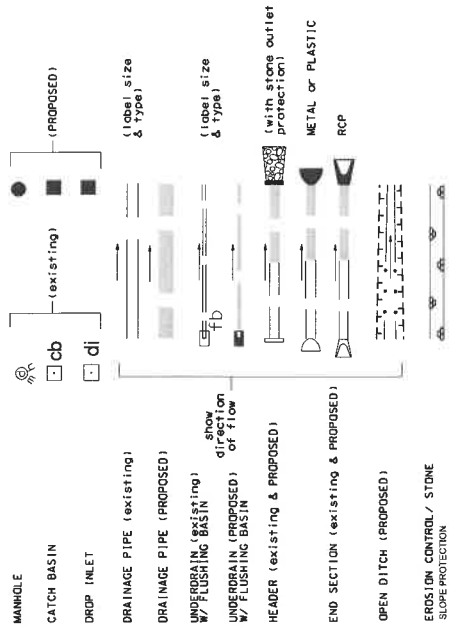
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STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION & BUREAU OF HIGHWAY DESIGN

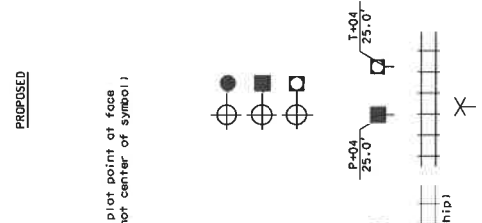
STANDARD SYMBOLS

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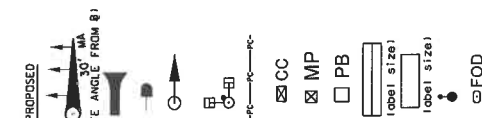
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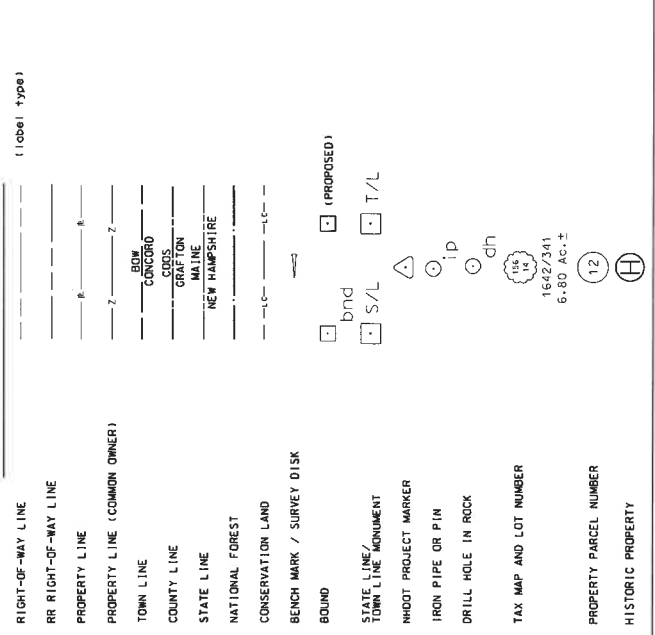
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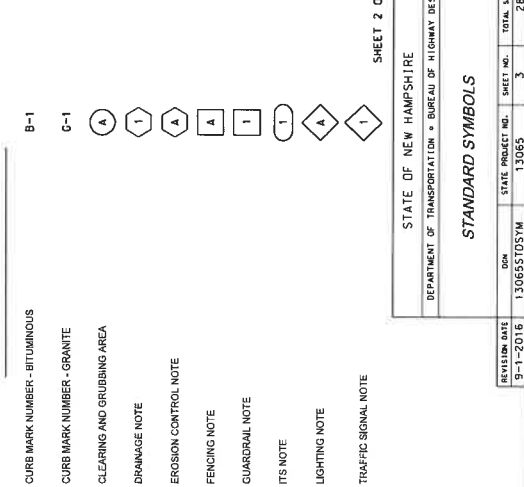
TRAFFIC SIGNALS / ITS



BOUNDARIES / RIGHT-OF-WAY



CONSTRUCTION NOTES



STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN

STANDARD SYMBOLS

REVISION DATE	DESCRIPTION	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
9-11-2016	130651051M	13065	3	28

EROSION CONTROL PLAN LEGEND

- PERIMETER CONTROL
 - SILT FENCE
 - EROSION CONTROL MIX BERM
 - EROSION CONTROL MIX SOX
 - TURBIDITY CURTAIN
 - SHEET PILE
 - COFFER DAM
- NATURAL BUFFER/PERIMETER CONTROL
 - SILT FENCE
 - EROSION CONTROL MIX BERM
 - EROSION CONTROL MIX SOX
 - TURBIDITY CURTAIN
 - SHEET PILE
 - COFFER DAM
- CHANNEL PROTECTION
 - STONE CHECK DAMS
 - STRAW MATTES
 - COFFER DAMS
 - CLASS D EROSION STONE
 - CLASS C STONE
- CLEAN WATER BYPASS
 - PUMP THROUGH PIPE
 - DRAIN THROUGH PIPE OR CHANNEL



STATE OF NEW HAMPSHIRE			
DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN			
EROSION CONTROL SYMBOLS			
REVISION DATE	ISS	STATE PROJECT NO.	TOTAL SHEETS
1-17-2020	13065	130651031MERO	4
			28

EROSION CONTROL STRATEGIES

1. ENVIRONMENTAL COMMITMENTS:
 - 1.1. THESE REGULATIONS DO NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH ANY CONTRACT PROVISIONS, OR APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.
 - 1.2. THIS PROJECT WILL BE SUBJECT TO THE USEPA'S NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORM WATER CONSTRUCTION GENERAL PERMIT ADMINISTERED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA). THIS PROJECT IS SUBJECT TO REQUIREMENTS IN THE MOST RECENT CERTIFICATION GENERAL PERMIT FOR CONSTRUCTION OF THE NEW HAMPSHIRE STATE HIGHWAY SYSTEM.
 - 1.3. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE NHDES WETLAND PERMIT, THE US ARMY CORPS OF ENGINEERS PERMIT, WATER QUALITY CERTIFICATION AND THE SPECIAL ATTENTION ITEMS INCLUDED IN THE CONTRACT DOCUMENTS.
 - 1.4. THE CONTRACTOR SHALL CONSULT THE NHDES WETLAND PERMIT, THE US ARMY CORPS OF ENGINEERS PERMIT, WATER QUALITY CERTIFICATION AND THE SPECIAL ATTENTION ITEMS INCLUDED IN THE CONTRACT DOCUMENTS.
 - 1.5. THE CONTRACTOR SHALL CONSULT THE NHDES WETLAND PERMIT, THE US ARMY CORPS OF ENGINEERS PERMIT, WATER QUALITY CERTIFICATION AND THE SPECIAL ATTENTION ITEMS INCLUDED IN THE CONTRACT DOCUMENTS.
 - 1.6. THE CONTRACTOR IS DIRECTED TO REVIEW AND COMPLY WITH SECTION 107.1 OF THE CONTRACT AS IT REFERS TO SPILLAGE, AND ALSO WITH REGARDS TO EROSION, POLLUTION, AND TURBIDITY PRECAUTIONS.
2. STANDARD EROSION CONTROL SEQUENCING APPLICABLE TO ALL CONSTRUCTION PROJECTS:
 - 2.1. EROSION CONTROL MEASURES SHALL BE INSTALLED AS SHOWN IN THE BMP MANUAL AND AS DIRECTED BY THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) PREPARED.
 - 2.2. EROSION, SEDIMENTATION CONTROL MEASURES AND INFILTRATION BASINS SHALL BE CLEANED, REPLACED AND AUGMENTED AS NECESSARY TO PREVENT EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED IN ACCORDANCE WITH THE CONSTRUCTION GENERAL PERMIT AND SECTION 645 OF THE NHDES WETLAND PERMIT.
 - 2.4. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
 - (A) A MINIMUM OF 3" OF NON-FROSTIVE MATERIAL, SUCH AS STONE OR RIP-RAP HAS BEEN INSTALLED;
 - (B) A MINIMUM OF 3" OF NON-FROSTIVE MATERIAL, SUCH AS STONE OR RIP-RAP HAS BEEN ESTABLISHED;
 - (C) A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
 - (D) A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
 - 2.5. ALL STOCKPILES SHALL BE CONTAINED WITH A PERIMETER CONTROL. IF THE STOCKPILE IS TO REMAIN UNDISTURBED FOR MORE THAN 14 DAYS, MULCHING WILL BE REQUIRED.
 - 2.6. MULCHING SHALL BE AVAILABLE TO CONTROL EXCESSIVE SOIL AT THE LOCATION OF THE CONSTRUCTION DISTURBANCES.
 - 2.7. TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES SHALL REMAIN UNTIL THE AREA HAS BEEN PERMANENTLY STABILIZED.
 - 2.8. CONSTRUCTION PERFORMED ANY TIME BETWEEN NOVEMBER 30TH AND MAY 1ST OF ANY YEAR SHALL BE CONSIDERED WINTER CONSTRUCTION AND SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
 - (A) 15TH SHALL BE STABILIZED IN ACCORDANCE WITH TABLE 1.
 - (B) ALL DITCHES OR SHALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED IN ACCORDANCE WITH TABLE 1.
 - (C) AFTER NOVEMBER 30TH COMPLETE ROAD SURFACES, WHERE WORK HAS STOPPED FOR THE SEASON, SHALL BE PROTECTED IN ACCORDANCE WITH TABLE 1.
 - (D) WINTER EXCAVATION AND EARTHWORK SHALL BE DONE SUCH THAT NO MORE THAN 1 ACRE OF THE PROJECT IS WITHOUT STABILIZATION AT ONE TIME, UNLESS A WINTER EXCAVATION PLAN HAS BEEN APPROVED BY NHDES THAT MEETS THE REQUIREMENTS OF ENV-WO 1505.02 AND ENV-WO 1505.05 AND INCLUDING THE REQUIREMENTS OF NO LESS THAN 30 DAYS PRIOR TO THE COMMENCEMENT OF WORK SCHEDULED AFTER NOVEMBER 30TH.
 - (E) THE REQUIREMENTS OF NO LESS THAN 30 DAYS PRIOR TO THE COMMENCEMENT OF WORK SCHEDULED AFTER NOVEMBER 30TH.

GENERAL CONSTRUCTION PLANNING AND SELECTION OF STRATEGIES TO CONTROL EROSION AND SEDIMENT ON HIGHWAY CONSTRUCTION PROJECTS

3. PLAN ACTIVITIES TO ACCORD TO SENSITIVE SITE CONDITIONS:
 - 3.1. CONSTRUCTION SHALL BE SCHEDULED TO LIMIT THE DURATION AND AREA OF EXPOSED SOILS. MINIMIZE THE AREA OF EXPOSED SOIL AT ANY ONE TIME. PHASING CONSTRUCTION SHALL BE EXISTING TO LIMIT THE DURATION AND AREA OF EXPOSED SOILS.
 - 3.2. CONSTRUCTION SHALL BE SCHEDULED TO LIMIT THE DURATION AND AREA OF EXPOSED SOILS.
 - 3.3. PROTECT AND MAXIMIZE EXISTING NATIVE VEGETATION AND NATURAL FOREST BUFFERS BETWEEN CONSTRUCTION ACTIVITY AND SENSITIVE AREAS.
 - 3.4. CONSTRUCTION SHALL BE SCHEDULED TO LIMIT THE DURATION AND AREA OF EXPOSED SOILS.
 - 3.5. WITH WORK IS PERFORMED WITHIN 50 FEET OF SURFACE WATERS (WETLAND, OPEN WATER OR FLOWING WATER), PERIMETER CONTROL SHALL BE ENHANCED CONSISTENT WITH SECTION 2.1.2.1. OF THE 2012 NPDES CONSTRUCTION GENERAL PERMIT.
4. MINIMIZE THE AMOUNT OF EXPOSED SOIL:
 - 4.1. CONSTRUCTION SHALL BE SCHEDULED TO LIMIT THE DURATION AND AREA OF EXPOSED SOILS. MINIMIZE THE AREA OF EXPOSED SOIL AT ANY ONE TIME. PHASING CONSTRUCTION SHALL BE EXISTING TO LIMIT THE DURATION AND AREA OF EXPOSED SOILS.
 - 4.2. UTILIZE TEMPORARY MULCHING OR PROVIDE ALTERNATE TEMPORARY STABILIZATION ON EXPOSED SOILS IN ACCORDANCE WITH TABLE 1.
 - 4.3. THE MAXIMUM AMOUNT OF DISTURBED EARTH SHALL NOT EXCEED A TOTAL OF 5 ACRES FOR ANY 15TH THROUGH NOVEMBER 30TH, OR EXCEED ONE ACRE DURING WINTER CONSTRUCTION.
 - 4.4. CONSTRUCTION SHALL BE SCHEDULED TO LIMIT THE DURATION AND AREA OF EXPOSED SOILS.
 - 4.5. CONSTRUCTION SHALL BE SCHEDULED TO LIMIT THE DURATION AND AREA OF EXPOSED SOILS.
5. CONTROL STORMWATER FLOWING ONTO AND THROUGH THE PROJECT:
 - 5.1. DIVERT OFF-SITE RUNOFF OR CLEAN WATER AWAY FROM THE CONSTRUCTION ACTIVITY TO REDUCE THE VOLUME THAT NEEDS TO BE TREATED ON-SITE.
 - 5.2. LOCATION, FROM RUNOFF FROM UPSLOPE DRAINAGE AREAS AWAY FROM DISTURBED AREAS, SLOPES, AND AROUND ACTIVE WORK AREAS AND TO A STABILIZED OUTLET.
 - 5.3. CONSTRUCT IMPERMEABLE BARRIERS AS NECESSARY TO COLLECT OR DIVERT CONCENTRATED FLOWS FROM WORK OR DISTURBED AREAS.
 - 5.4. CONSTRUCT IMPERMEABLE BARRIERS AS NECESSARY TO COLLECT OR DIVERT CONCENTRATED FLOWS FROM WORK OR DISTURBED AREAS.
 - 5.5. DIVERT OFF-SITE WATER THROUGH THE PROJECT IN AN APPROPRIATE MANNER SO NOT TO DISTURB THE UPSTREAM OR DOWNSTREAM SOILS; VEGETATION OR HYDROLOGY BEYOND THE PERMITTED AREA.
6. PROTECT SLOPES:
 - 6.1. CONSIDER HOW GROUNDWATER SEEPAGE ON CUT SLOPES MAY IMPACT SLOPE STABILITY AND INCORPORATE APPROPRIATE MEASURES TO MINIMIZE EROSION.
 - 6.2. CONSIDER HOW GROUNDWATER SEEPAGE ON CUT SLOPES MAY IMPACT SLOPE STABILITY AND INCORPORATE APPROPRIATE MEASURES TO MINIMIZE EROSION.
 - 6.3. CONSIDER HOW GROUNDWATER SEEPAGE ON CUT SLOPES MAY IMPACT SLOPE STABILITY AND INCORPORATE APPROPRIATE MEASURES TO MINIMIZE EROSION.
 - 6.4. UP AND DOWN THE SLOPE, DISKED, HARROWED, DRAGGED WITH A CHAIN OR MAT, MACHINE-RAKED, OR HAND-WORKED TO PRODUCE A RUFFLED SURFACE.
7. ESTABLISH STABILIZED CONSTRUCTION EXITS:
 - 7.1. INSTALL AND MAINTAIN CONSTRUCTION EXITS. ANYWHERE TRAFFIC LEAVES A CONSTRUCTION SITE ONTO A PUBLIC RIGHT-OF-WAY.
 - 7.2. SHEEP ALL CONSTRUCTION RELATED DEBRIS AND SOIL FROM THE ADJACENT PAVED ROADWAYS AS NECESSARY.
8. PROTECT STORM DRAIN INLETS:
 - 8.1. WATER AWAY FROM INLET STRUCTURES TO THE EXTENT POSSIBLE.
 - 8.2. INSTALL SEDIMENT BARRIERS AND SEDIMENT TRAPS AT INLETS TO PREVENT SEDIMENT FROM ENTERING THE DRAINAGE SYSTEM.
 - 8.3. CLEAN CATCH BASINS, DRAINAGE PIPES, AND COLLECTORS IF SIGNIFICANT SEDIMENT IS DEPOSITED.
 - 8.4. CONSTRUCT SEDIMENT BARRIERS AND SEDIMENT TRAPS AT INLETS TO PREVENT SEDIMENT FROM ENTERING THE DRAINAGE SYSTEM.
 - 8.5. CONSTRUCT SEDIMENT BARRIERS AND SEDIMENT TRAPS AT INLETS TO PREVENT SEDIMENT FROM ENTERING THE DRAINAGE SYSTEM.
 - 8.6. CONSTRUCT SEDIMENT BARRIERS AND SEDIMENT TRAPS AT INLETS TO PREVENT SEDIMENT FROM ENTERING THE DRAINAGE SYSTEM.
9. SOIL STABILIZATION:
 - 9.1. WITHIN THREE DAYS OF THE LAST ACTIVITY IN AN AREA, ALL EXPOSED SOIL AREAS, WHERE CONSTRUCTION ACTIVITIES ARE COMPLETE, SHALL BE STABILIZED.
 - 9.2. IN ALL AREAS, TEMPORARY SOIL STABILIZATION MEASURES SHALL BE APPLIED IN ACCORDANCE WITH THE STABILIZATION REQUIREMENTS (SECTION 6.2.2) OF THE CONSTRUCTION GENERAL PERMIT AND SECTION 645 OF THE NHDES WETLAND PERMIT.
 - 9.3. EROSION CONTROL SEED MIX SHALL BE SOWN IN ALL INACTIVE CONSTRUCTION AREAS THAT WILL NOT BE PERMANENTLY SEEDING WITHIN TWO WEEKS OF DISTURBANCE AND PRIOR TO SEPTEMBER 15TH OF ANY GIVEN YEAR, IN ORDER TO ACHIEVE VEGETATIVE STABILIZATION PRIOR TO THE END OF THE GROWING SEASON.
 - 9.4. LOSS UNTIL PERMANENT VEGETATION IS ESTABLISHED.
10. RETAIN SEDIMENT ON-SITE AND CONTROL DEWATERING ACTIVITIES:
 - 10.1. TEMPORARY SEDIMENT BASINS (COP-SECTION 2.1.1.2.2) OR SEDIMENT TRAPS (ENV-WO 1506-10) SHALL BE SIZED TO RETAIN, ON-SITE, THE VOLUME OF A 2-YEAR 24-HOUR STORM EVENT FOR ANY AREA OF DISTURBANCE OR 3,600 CUBIC FEET OF STORMWATER RUNOFF PER ACRE OF DISTURBANCE, WHICHEVER IS GREATER.
 - 10.2. CONSTRUCT AND STABILIZE DEWATERING INFILTRATION BASINS PRIOR TO ANY EXCAVATION THAT MAY REQUIRE DEWATERING.
 - 10.3. CONSTRUCT AND STABILIZE DEWATERING INFILTRATION BASINS PRIOR TO ANY EXCAVATION THAT MAY REQUIRE DEWATERING.
 - 10.4. CONSTRUCT AND STABILIZE DEWATERING INFILTRATION BASINS PRIOR TO ANY EXCAVATION THAT MAY REQUIRE DEWATERING.
 - 10.5. SURROUNDING ENVIRONMENT FROM AREAS OF UNSTABILIZED EARTH DISTURBING ACTIVITIES.

BEST MANAGEMENT PRACTICES (BMP) BASED ON AMOUNT OF OPEN CONSTRUCTION AREA

12. STRATEGIES SPECIFIC TO OPEN AREAS LESS THAN 5 ACRES:
 - 12.1. THE CONTRACTOR SHALL COMPLY WITH RSA 485:417 AND ENV-WO 1500; ALTERATION OF TERRAIN FOR CONSTRUCTION AND USE ALL CONVENTIONAL BMP STRATEGIES.
 - 12.2. SLOPES STEEPER THAN 3:1 WILL RECEIVE TURF ESTABLISHMENT WITH MATTING.
 - 12.3. SLOPES 3:1 OR FLATTER WILL RECEIVE TURF ESTABLISHMENT ALONE.
 - 12.4. FOR HILLSIDE ADJACENT TO SENSITIVE ENVIRONMENTAL AREAS OR STEEPER THAN 5%, THE DEPARTMENT WILL CONSIDER INFILTRATION, GRAVEL, OR CRUSHED STONE BASE TO HELP MINIMIZE EROSION ISSUES.
 - 12.5. ALL AREAS THAT CAN BE STABILIZED SHALL BE STABILIZED PRIOR TO OPENING UP NEW TERRITORY.
 - 12.6. OPENING BASINS SHALL BE DESIGNED AND CONSTRUCTED TO ACCOMMODATE A 2 YEAR STORM EVENT.
13. STRATEGIES SPECIFIC TO OPEN AREAS BETWEEN 5 AND 10 ACRES:
 - 13.1. TREATMENT OPTIONS USED FOR UNDER 5 ACRES WILL BE UTILIZED.
 - 13.2. DETENTION BASINS WILL BE CONSTRUCTED TO ACCOMMODATE THE 2-YEAR 24-HOUR STORM EVENT AND CONTROL A 10-YEAR 24-HOUR STORM EVENT.
 - 13.3. THE CONTRACTOR MAY ALSO CONSIDER A SOIL BINDER IN ACCORDANCE WITH THE NHDES APPROVALS OR SOIL STABILIZATION METHODS DETAIL IN TABLE 1.
 - 13.4. BONDING MATERIALS (FIBER) OR FLEXIBLE GROWTH MEDIUMS (FGMS) MAY BE UTILIZED, IF MEETING THE NHDES APPROVALS AND REGULATIONS.
 - 13.5. BONDING MATERIALS (FIBER) OR FLEXIBLE GROWTH MEDIUMS (FGMS) MAY BE UTILIZED, IF MEETING THE NHDES APPROVALS AND REGULATIONS.
14. STRATEGIES SPECIFIC TO OPEN AREAS GREATER THAN 10 ACRES:
 - 14.1. TREATMENT OPTIONS USED FOR UNDER 5 ACRES WILL BE UTILIZED.
 - 14.2. THE DEPARTMENT ANTICIPATES THAT SOIL BINDERS AND BETWEEN 5 AND 10 ACRES WILL BE UTILIZED.
 - 14.3. THE CONTRACTOR WILL BE REQUIRED TO HAVE AN APPROVED DESIGN IN ACCORDANCE WITH ENV-WO 1506-12 FOR AN ACTIVE FLOCCULANT TREATMENT SYSTEM TO TREAT AND RELEASE WATER CAPTURED IN STORM WATER BASINS. THE CONTRACTOR SHALL ALSO RETAIN THE SERVICES OF AN ENVIRONMENTAL CONSULTANT WHO HAS EXPERIENCE WITH FLOCCULANT TREATMENT SYSTEMS. IN THE DESIGN OF FLOCCULANT TREATMENT SYSTEMS, THE CONSULTANT WILL ALSO BE RESPONSIBLE FOR THE IMPLEMENTATION AND MONITORING OF THE SYSTEM.

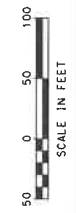
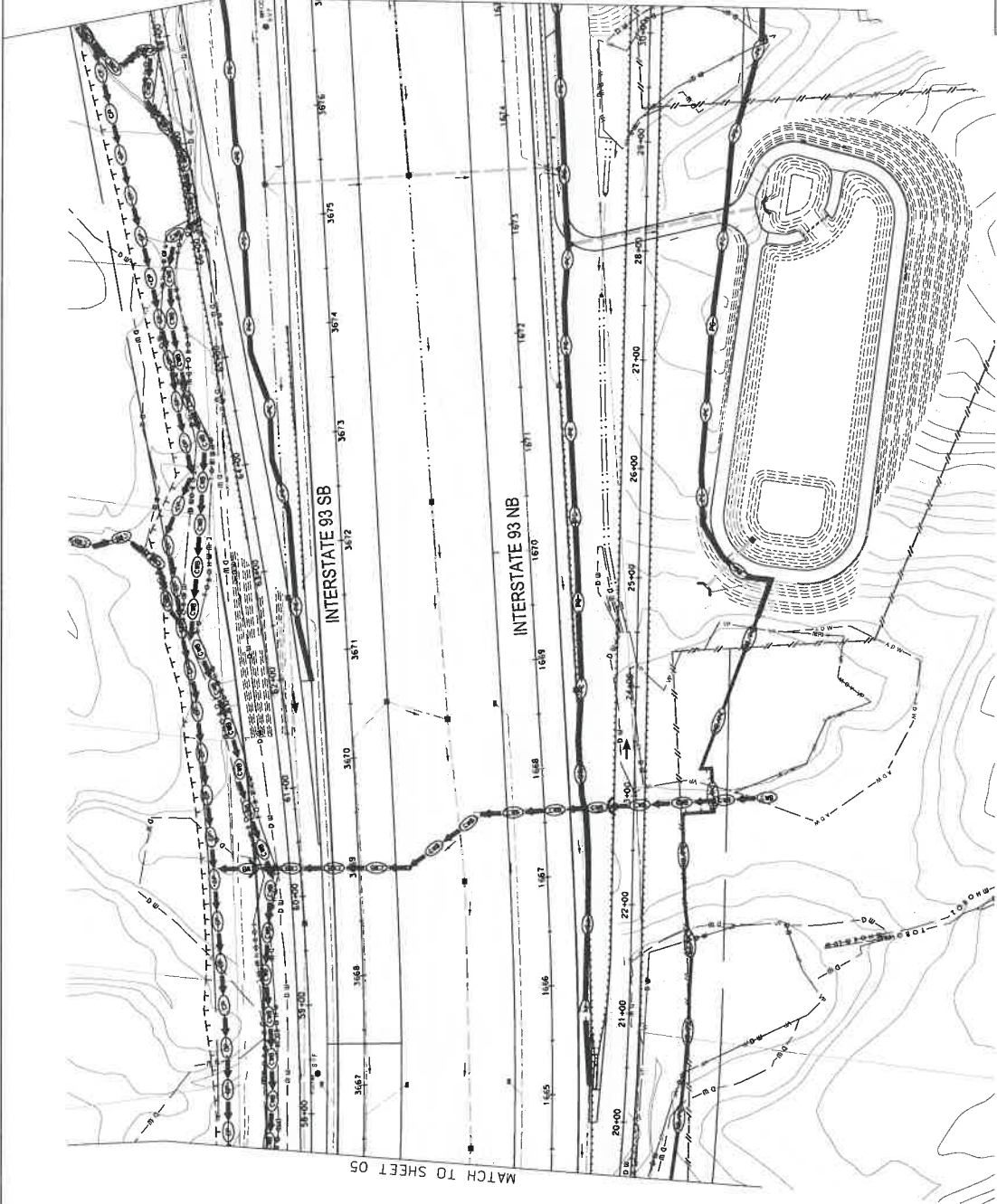
GUIDANCE ON SELECTING TEMPORARY SOIL STABILIZATION MEASURES

APPLICATION AREAS	HMT	WC	SC	CB	HM	SHM	BFM	FRM	SMSB	DNBSB	DNCSB	DNCSB
SLOPES ¹												
Steeper than 2:1	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO
2:1 Slope	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO
3:1 Slope	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO
4:1 Slope	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO
Winter Stabilization	4TAC	YES	YES	YES	NO	NO	YES	YES	YES	YES	YES	YES
Channels												
Low Flow Channels	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
High Flow Channels	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Abbrev.	Stabilization Measure	Abbrev.	Stabilization Measure	Abbrev.	Stabilization Measure	Abbrev.	Stabilization Measure	Abbrev.	Stabilization Measure	Abbrev.	Stabilization Measure	Abbrev.
HMT	HAY MULCH & TACK	HM	HYDRAULIC MULCH	SHM	STABILIZED MULCH MATRIX	DNBSB	DOUBLE NET STRAW BLANKET	DNCSB	2 NET STRAW-COCOON BLANKET	DNCSB	2 NET COCONUT BLANKET	
WC	WOOD CHIPS	SC	BONDED FIBER MATRIX	FRM	FIBER REINFORCED MEDIUM	DNCSB	2 NET COCONUT BLANKET					
CB	COMPOST BLANKET											

- NOTES:
1. ALL SLOPE STABILIZATION ASSUME A SLOPE LENGTH ≤ 10 TIMES THE HORIZONTAL DISTANCE COMPONENT OF THE SLOPE, IN FEET.
 2. PRODUCTS CONTAINING POLYACRYLAMIDE (PAM) SHALL NOT BE APPLIED DIRECTLY TO OR WITHIN 100 FEET OF ANY SURFACE EXCEPT FOR THE APPLICATION OF PAM TO STABILIZED SOILS.
 3. ALL EROSION CONTROL BLANKETS SHALL BE MADE WITH WILDLIFE FRIENDLY BIODEGRADABLE NETTING.

STATE OF NEW HAMPSHIRE DEPT. AND LANDS			
DEPARTMENT OF TRANSPORTATION - BUREAU OF HIGHWAY DESIGN			
EROSION CONTROL STRATEGIES AND STABILIZATION MATRIX			
REVISION DATE	DOI	STATE PROJECT NO.	SHEET NO.
12-21-2018	30655105	13065	5
			TOTAL SHEETS
			28

DATE	DESCRIPTION
DATE	REVISIONS AFTER PROPOSAL
DATE 11/01/2019	NEW DESIGN ERM
DATE 01/17/2020	SHEET CHECKED KAH
DATE	AS BUILT DETAILS



STATE OF NEW HAMPSHIRE	
DEPARTMENT OF TRANSPORTATION & BUREAU OF HIGHWAY DESIGN	
EXIT 4A	
EROSION CONTROL PLAN	
DATE	TOTAL SHEETS
1305EROP-ANS	7
STATE PROJECT NO.	SHEET NO.
13065	7
TOTAL SHEETS	
28	



STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN

EXIT 4A

EROSION CONTROL PLAN

DESIGN NO.	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
1305E/ER/PLANS	11005	8	28

DATE	DESCRIPTION
11/01/2019	NEW DESIGN ERM
01/17/2020	SHEET CHECKED KAH
AS BUILT DETAILS	DATE

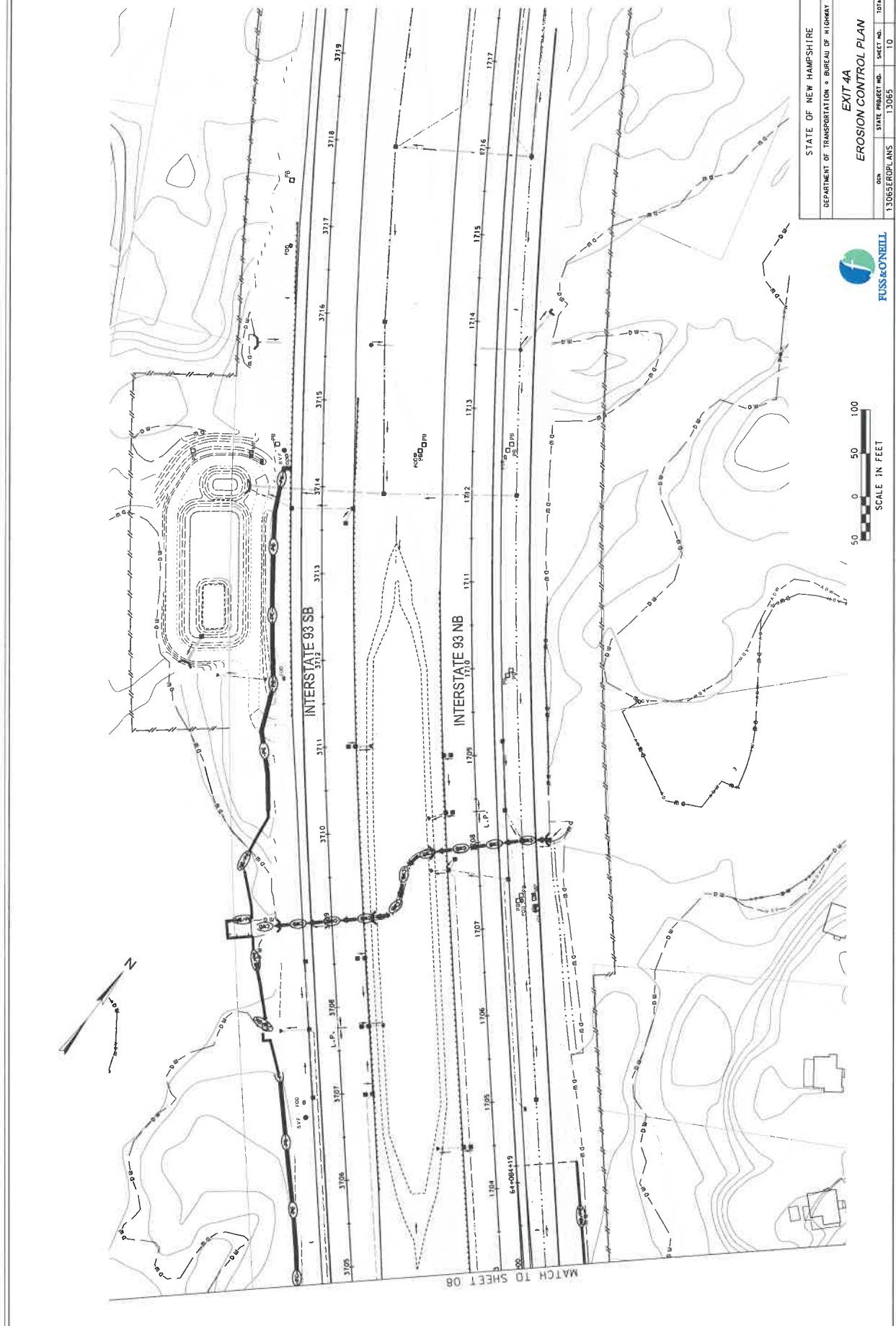
DATE	NUMBER	DATE	STATION	STATION	DESCRIPTION

REVISIONS AFTER PROPOSAL

NO.	DATE	DESCRIPTION

DATE	11/01/2019	DATE	01/17/2020
NO.		NO.	
DATE		DATE	
NO.		NO.	

AS BUILT DETAILS



STATE OF NEW HAMPSHIRE
 DEPARTMENT OF TRANSPORTATION & BUREAU OF HIGHWAY DESIGN



PROJECT NO. 13065
 SHEET NO. 10
 TOTAL SHEETS 28

EROSION CONTROL PLAN
 EXIT 4A

DATE 11/01/2019
 CHECKED KAM
 SHEET NO. 10

DATE 01/17/2020

AS BUILT DETAILS

NO. DATE DESCRIPTION

NO. DATE DESCRIPTION

NO. DATE DESCRIPTION

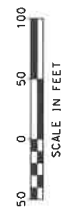
NO. DATE DESCRIPTION

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NO. DATE DESCRIPTION



STATE OF NEW HAMPSHIRE	
DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN	
EXIT 4A	
EROSION CONTROL PLAN	
NO. 13065	STATE PROJECT NO. 13065
EROSION PLANS	SHEET NO. 11
	TOTAL SHEETS 28

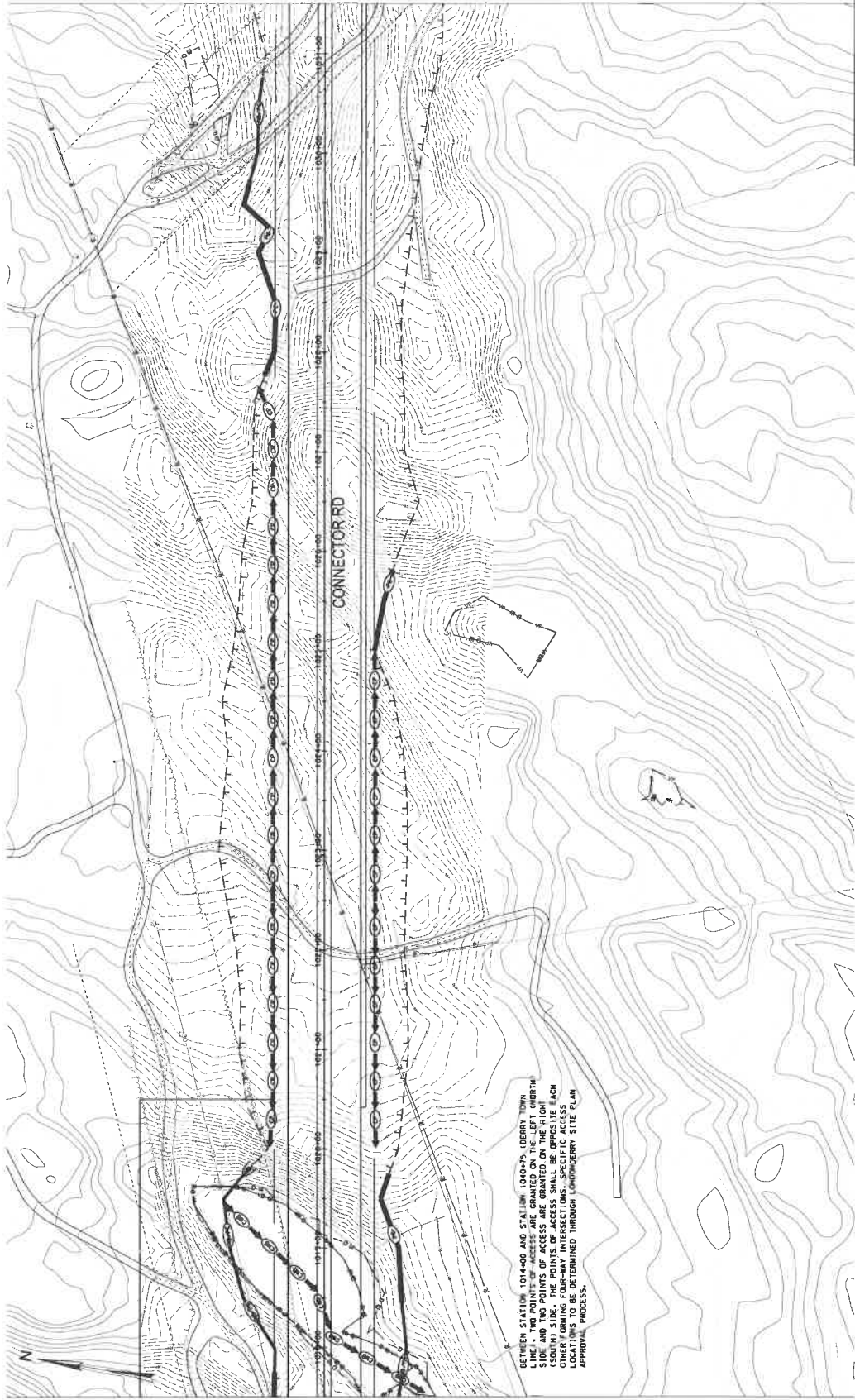
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11/01/2019	NEW DESIGN EAM				
01/17/2020	SHEET CHECKED KAH				
AS BUILT DETAILS					
DATE	NUMBER	DATE	STATION	STATION	DATE

REVISIONS AFTER PROPOSAL



MATCH TO SHEET 07

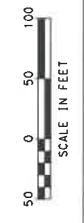
MATCH TO SHEET 11



MATCH TO SHEET 12

MATCH TO SHEET 10

BETWEEN STATION 1014+00 AND STATION 1000+00, CHECK DAMS, SILT FENCES, TRAP LINES, AND TWO POINTS OF ACCESS ARE GRANTED ON THE LEFT (NORTH) SIDE AND TWO POINTS OF ACCESS ARE GRANTED ON THE RIGHT (SOUTH) SIDE. THE POINTS OF ACCESS SHALL BE OPPOSITE EACH OTHER AND THE POINTS OF ACCESS SHALL BE DETERMINED THROUGH LANDOWNER APPROVAL PROCESS.

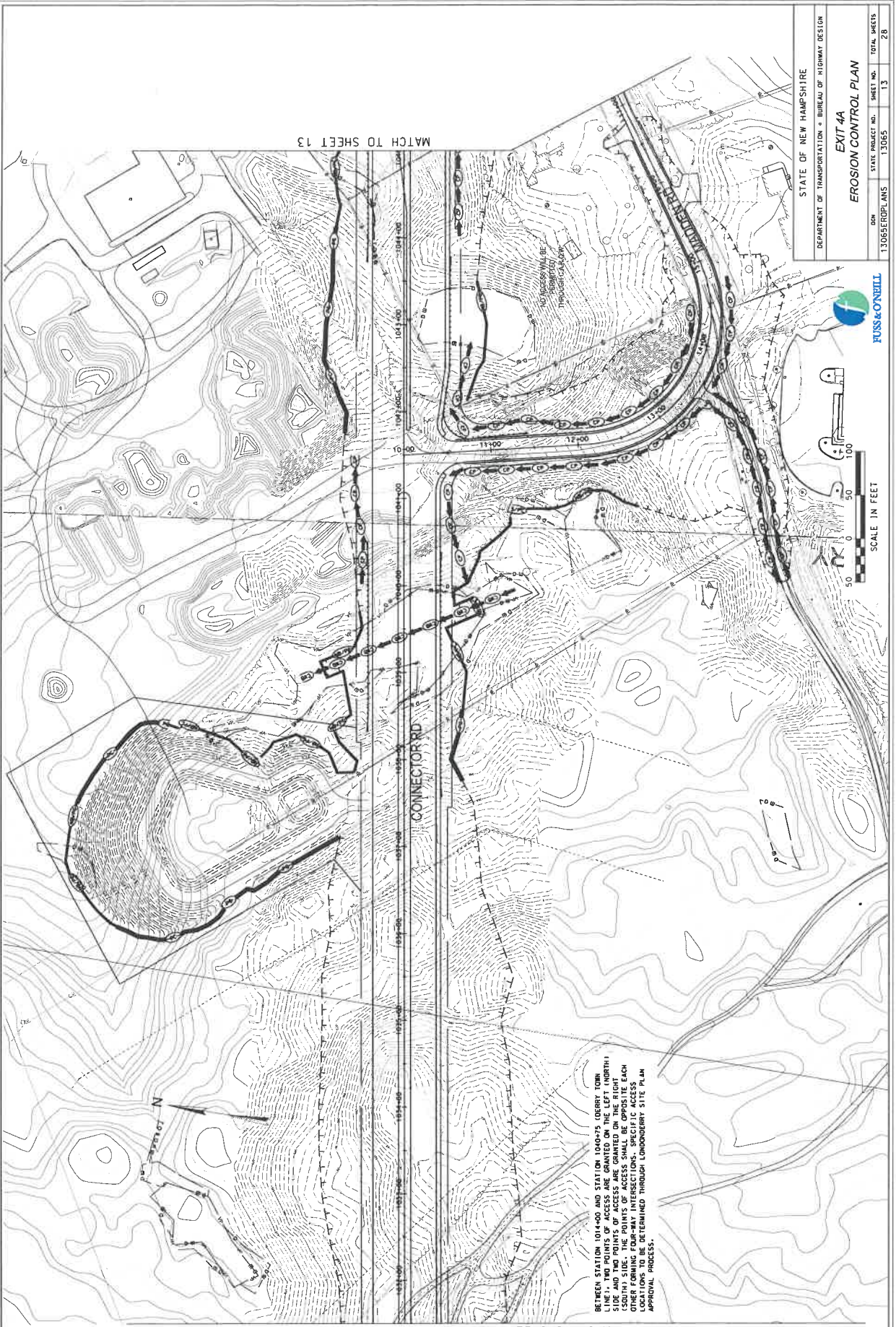


FUSS & O'NEILL

STATE OF NEW HAMPSHIRE	
DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN	
EXIT 4A	
EROSION CONTROL PLAN	
DATE	TOTAL SHEETS
13065ER01.PLAN	12
STATE PROJECT NO.	SHEET NO.
13065	12
28	

DATE	DESCRIPTION
11/01/2019 <td>NEW DESIGN</td>	NEW DESIGN
01/17/2020 <td>SHEET CHECKED</td>	SHEET CHECKED
	AS BUILT DETAILS

NUMBER	DATE	STATION	DESCRIPTION
			REVISIONS AFTER PROPOSAL

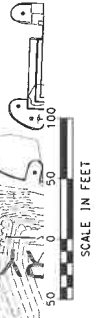


MATCH TO SHEET 13

MATCH TO SHEET 11

BETWEEN STATION 1014+00 AND STATION 1000+75 (CHERRY CORN LINE), TWO POINTS OF ACCESS ARE GRANTED ON THE LEFT (NORTH) SIDE OF THE ROAD AND ONE POINT OF ACCESS IS GRANTED ON THE RIGHT (SOUTH) SIDE. THE POINTS OF ACCESS SHALL BE OPPOSITE EACH OTHER FORMING FOUR-WAY INTERSECTIONS. SPECIFIC ACCESS LOCATIONS TO BE DETERMINED THROUGH LINDOBERY SITE PLAN APPROVAL PROCESS.

STATE OF NEW HAMPSHIRE	
DEPARTMENT OF TRANSPORTATION & BUREAU OF HIGHWAY DESIGN	
EXIT 4A	
EROSION CONTROL PLAN	
DATE	STATE PROJECT NO.
13065ERDPLANS	13065
SHEET NO.	TOTAL SHEETS
13	28



DATE	DESCRIPTION	STATION	NUMBER	DATE	REVISIONS AFTER PROPOSAL
11/01/2019	NEW DESIGN				
01/17/2020	SHEET CHECKED				
	AS BUILT DETAILS				



DATE	DESCRIPTION
11/01/2019	NEW DESIGN
01/17/2020	SHEET CHECKED
	AS BUILT DETAILS



STATE OF NEW HAMPSHIRE
 DEPARTMENT OF TRANSPORTATION - BUREAU OF HIGHWAY DESIGN
EXIT 4A
EROSION CONTROL PLAN
 CON. STATE PROJECT NO. 13065
 SHEET NO. 14
 TOTAL SHEETS 28

REVISIONS AFTER PROPOSAL

DATE	STATION	DESCRIPTION

DATE	NUMBER	DATE	STATION
11/01/2019		01/17/2020	

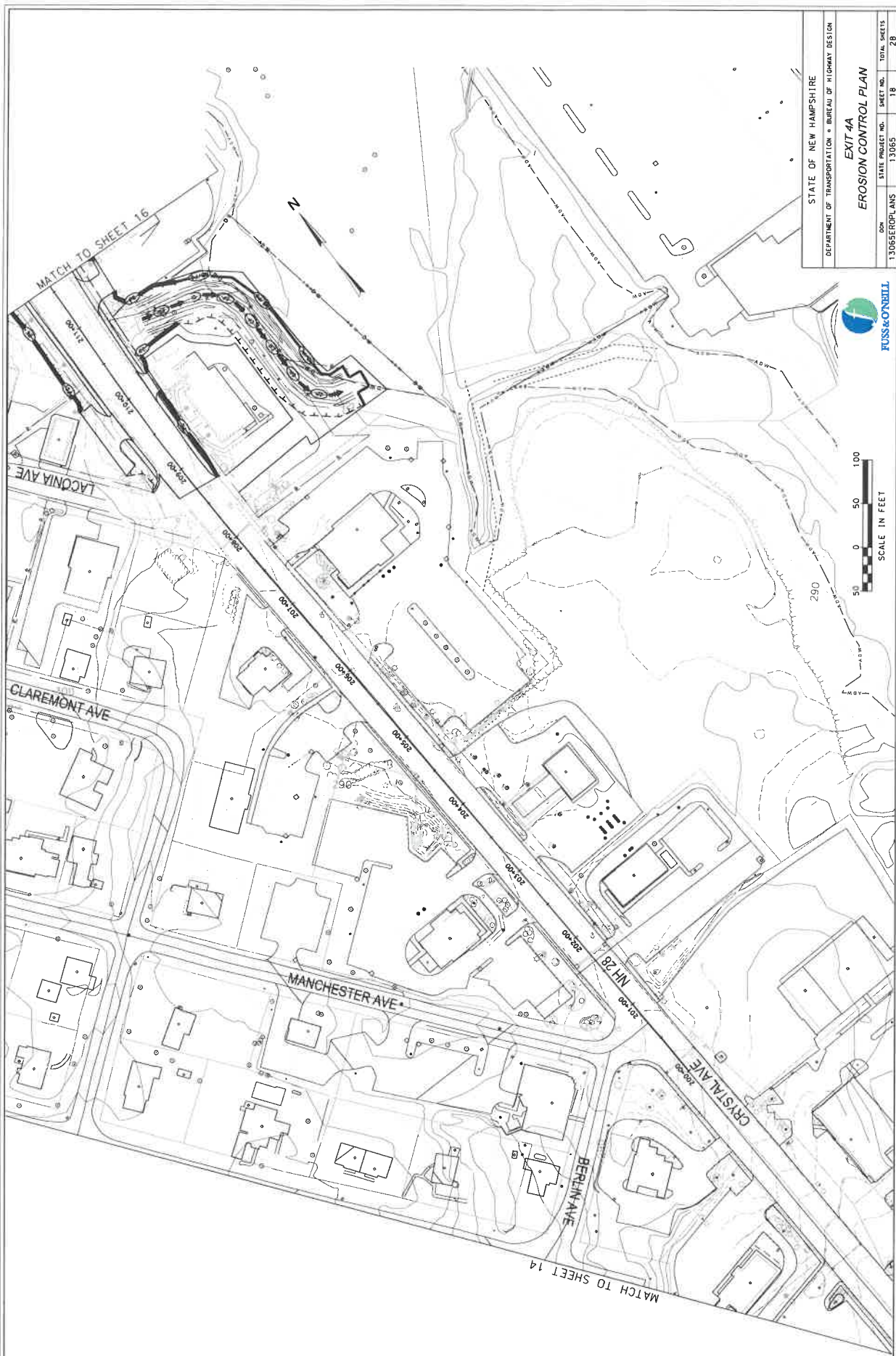


FUSS & O'NEILL

STATE OF NEW HAMPSHIRE	
DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN	
EXIT 4A	
EROSION CONTROL PLAN	
DATE	TOTAL SHEETS
13065E/01/PLANS	16
STATE PROJECT NO.	SHEET NO.
13065	16

DATE	DESCRIPTION
11/01/2019	NEW DESIGN EMM
01/17/2020	SHEET CHECKED KAH
AS BUILT DETAILS	

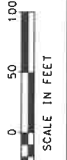
DATE	STATION	STATION	NUMBER	DESCRIPTION
REVISIONS AFTER PROPOSAL				



STATE OF NEW HAMPSHIRE
 DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN

EXIT 4A
EROSION CONTROL PLAN

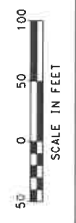
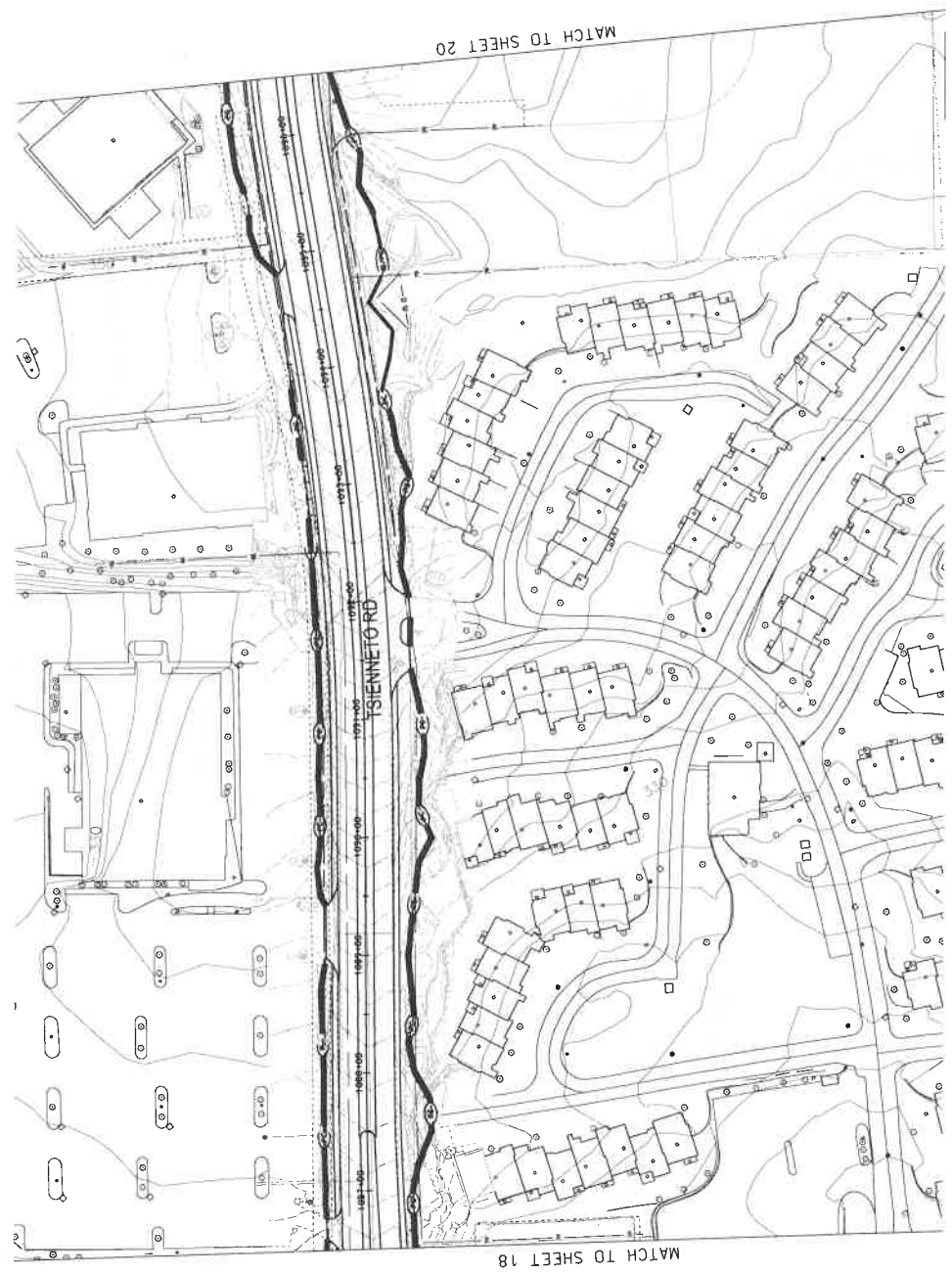
CON. STATE PROJECT NO. 1305ER01PLANS SHEET NO. 16 TOTAL SHEETS 28



DATE	DESCRIPTION
11/01/2019	NEW DESIGN ERM
01/17/2020	SHEET CHECKED KAM
AS BUILT DETAILS	DATE

DATE	STATION	STATION	NUMBER	REVISIONS AFTER PROPOSAL

SR# PROCESSED	DATE	11/01/2019	NUMBER	DATE	01/17/2020	SHEET CHECKED	KAM	AS BUILT DETAILS
NEW DESIGN	DATE	11/01/2019	NUMBER	DATE	01/17/2020	SHEET CHECKED	KAM	AS BUILT DETAILS
REVISIONS AFTER PROPOSAL	DATE		NUMBER	DATE		SHEET CHECKED		AS BUILT DETAILS
DESCRIPTION	STATION		STATION					AS BUILT DETAILS

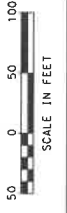


STATE OF NEW HAMPSHIRE	
DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN	
EXIT 4A	
EROSION CONTROL PLAN	
CON. NO.	13065ER01PLANS
STATE PROJECT NO.	13062
SHEET NO.	20
TOTAL SHEETS	28



FUSS & O'NEILL

STATE OF NEW HAMPSHIRE
 DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN
EXIT 4A
EROSION CONTROL PLAN
 CON. STATE PROJECT NO. 1305E/OP/PLANS SHEET NO. 22 TOTAL SHEETS 28



DATE	DESCRIPTION
AS BUILT DETAILS	
SHEET CHECKED KAH	
DATE 01/17/2020	
NEW DESIGN EAM	
DATE 11/01/2019	
NUMBER	DATE
STATION	STATION
STATION	STATION
REVISIONS AFTER PROPOSAL	

MATCH TO SHEET 22

MATCH TO SHEET 20

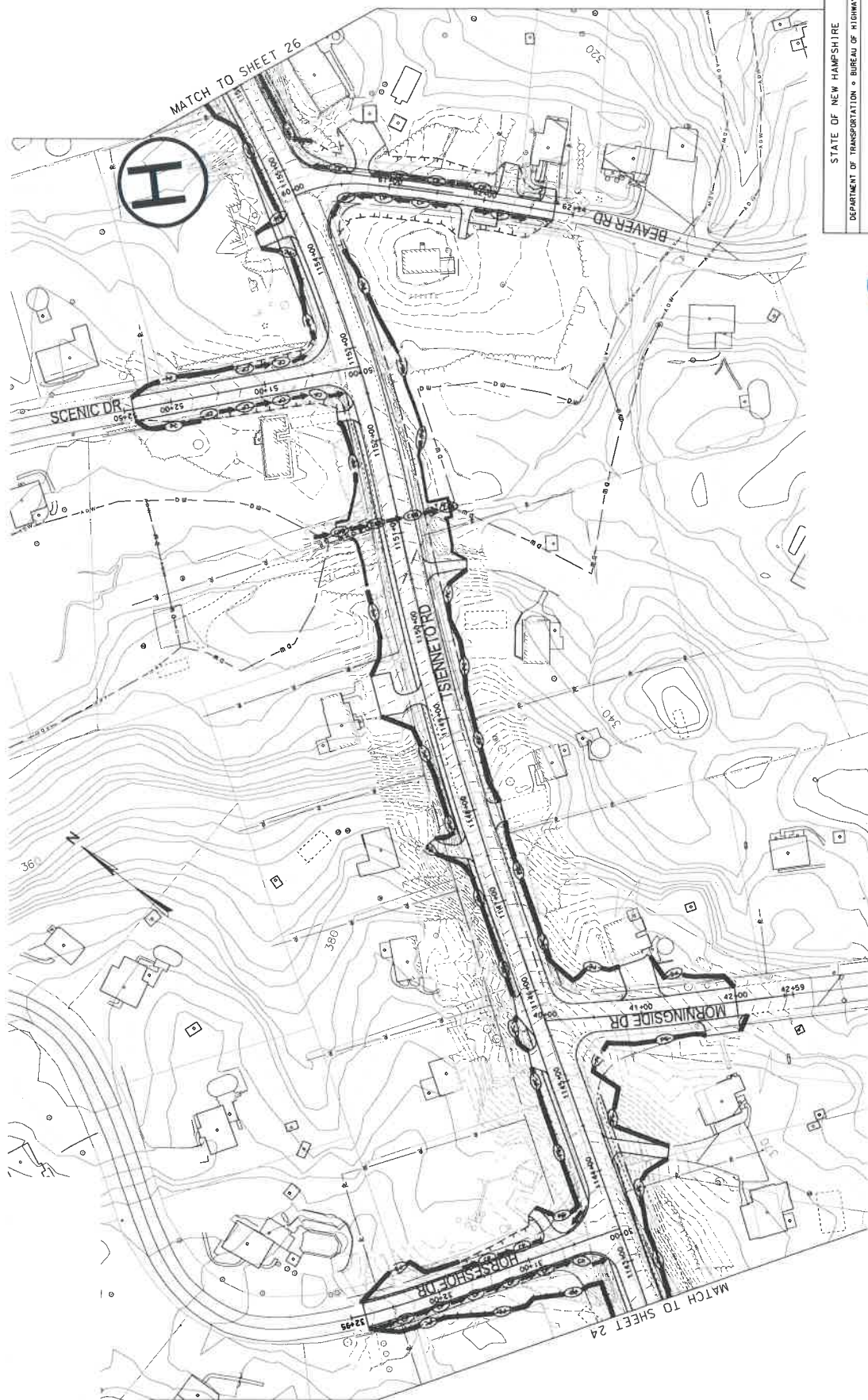
MATCH TO SHEET 23





STATE OF NEW HAMPSHIRE	
DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN	
EXIT 4A	
EROSION CONTROL PLAN	
CON	STATE PROJECT NO. 13085
13085ER/PLANS	SHEET NO. 25
	TOTAL SHEETS 28

DATE	DESCRIPTION
DATE	AS BUILT DETAILS
DATE	SRP PROCESSED
DATE	NEW DESIGN
DATE	SHEET CHECKED
DATE	REVISIONS AFTER PROPOSAL
DATE	NUMBER
DATE	STATION
DATE	STATION
DATE	STATION
DATE	STATION



MATCH TO SHEET 26

MATCH TO SHEET 24

DATE	DESCRIPTION	STATION	STATION	NUMBER	DATE	DATE
AS BUILT DETAILS					DATE	
SHEET CHECKED					DATE	
NEW DESIGN					DATE	
SOR PROCESSED					DATE	



STATE OF NEW HAMPSHIRE
 DEPARTMENT OF TRANSPORTATION - BUREAU OF HIGHWAY DESIGN
EXIT 4A
EROSION CONTROL PLAN
 DATE: 13065/ERD/PLANS
 STATE PROJECT NO.: 13065
 SHEET NO.: 26
 TOTAL SHEETS: 28



SCALE IN FEET
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STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN

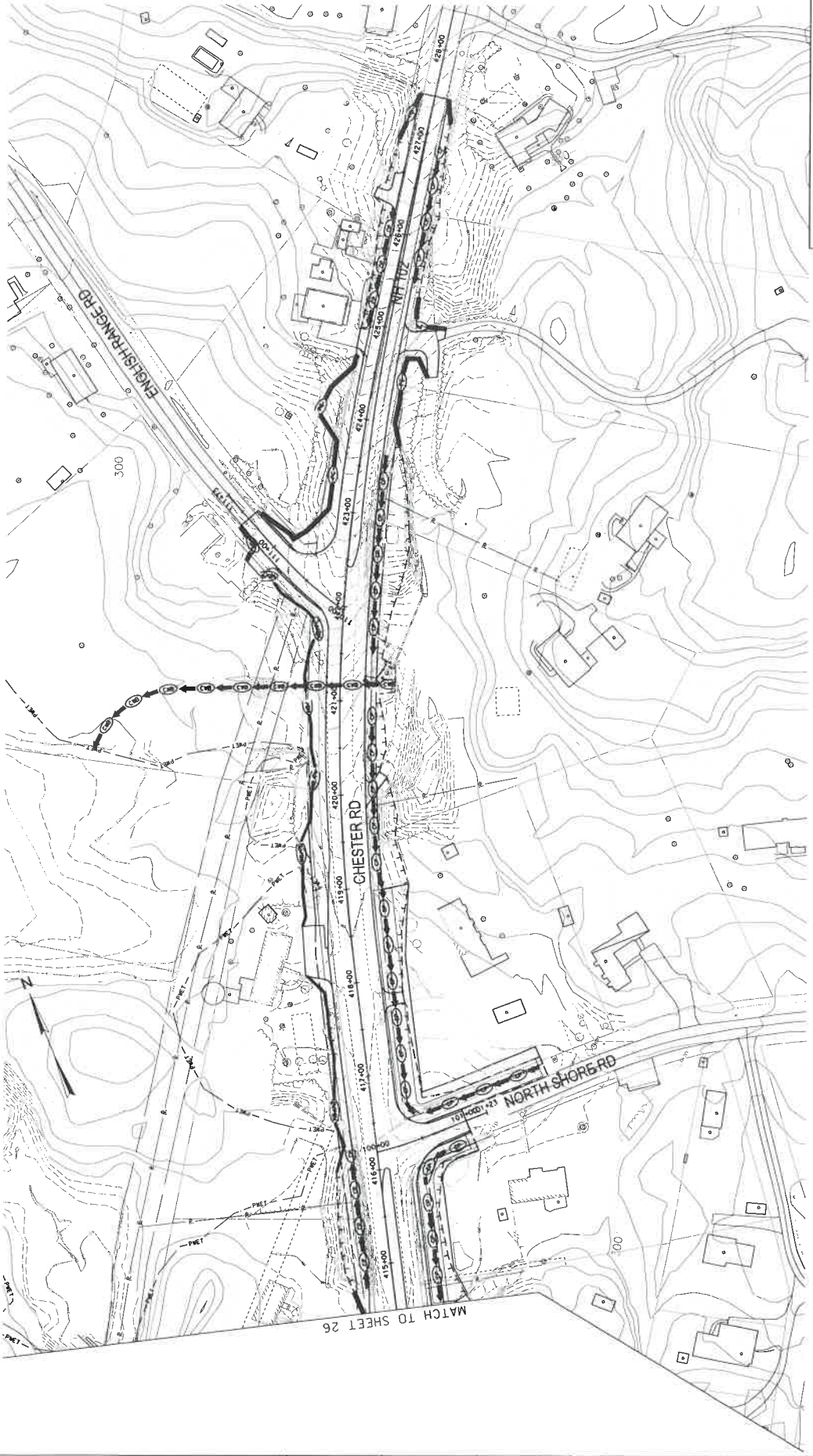
EXIT 4A
EROSION CONTROL PLAN

DATE: 1306SERIPLANS
STATE PROJECT NO.: 1306S
SHEET NO.: 27
TOTAL SHEETS: 28

DATE	DESCRIPTION
11/01/2019	NEW DESIGN ERM
01/17/2020	SHEET CHECKED RHM
	AS BUILT DETAILS

REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	DESCRIPTION



STATE OF NEW HAMPSHIRE
 DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN

EXIT 4A
EROSION CONTROL PLAN

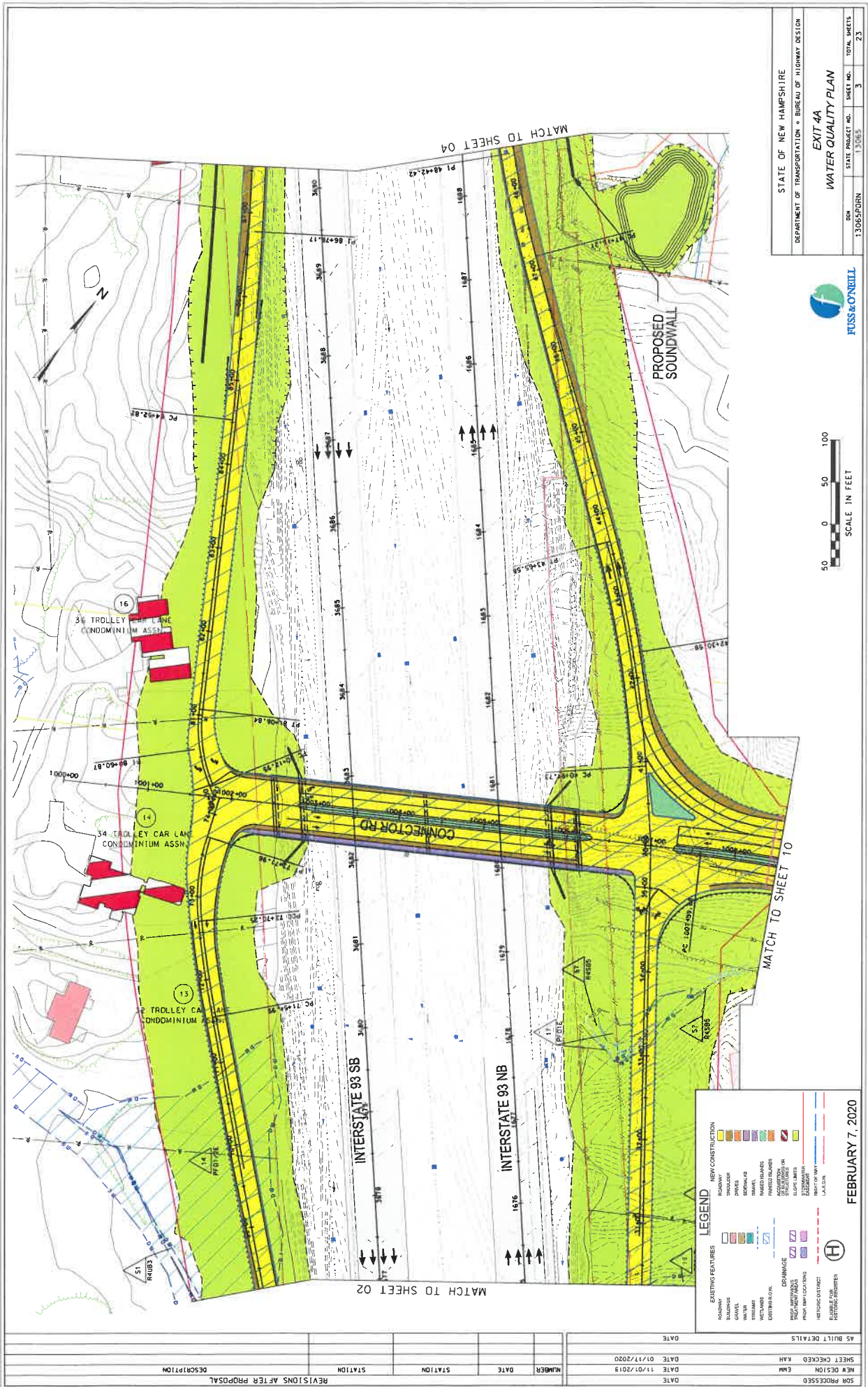
DATE: 13/06/2019
 SHEET NO.: 28
 TOTAL SHEETS: 28



DATE	DESCRIPTION	STATION	NUMBER	DATE	DATE
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	SHEET CHECKED				
	AS BUILT DETAILS				

REVISIONS AFTER PROPOSAL

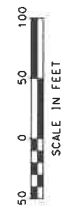
MATCH TO SHEET 26



DATE	NUMBER	DATE	STATION	STATION	DESCRIPTION
DATE		DATE			
DATE		DATE			
DATE		DATE			

SR PROJECT 5500 ERM DATE 11/01/2019 DATE 01/17/2020 SHEET CHECKED RAN AS BUILT DETAILS DATE

STATE OF NEW HAMPSHIRE
 DEPARTMENT OF TRANSPORTATION & BUREAU OF HIGHWAY DESIGN
EXIT 4A
WATER QUALITY PLAN
 PROJ. NO. 13065PDRN
 STATE PROJECT NO. 13065
 SHEET NO. 3
 TOTAL SHEETS 23



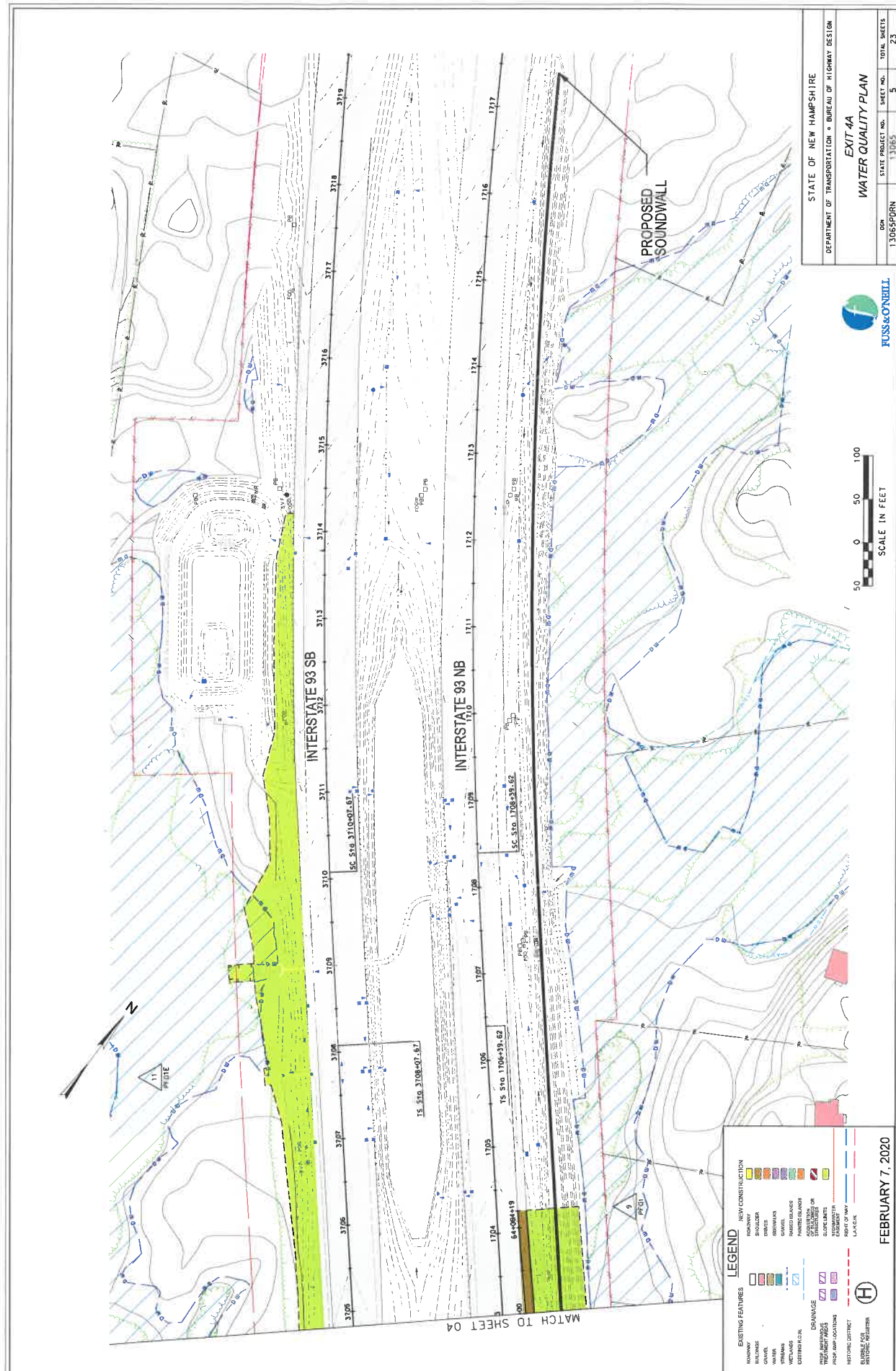
FEBRUARY 7, 2020

LEGEND

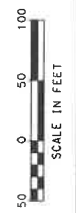
EXISTING FEATURES	NEW CONSTRUCTION
ROADWAY	ROADWAY
DRAINAGE	BRICKLIER
WATER	BRICK AS
WETLAND	BRICK
WETLANDS	PAVED DRIVEWAYS
CONTOUR	ACCOMMODATION
ADJUSTMENT	STABILIZATION
PROPOSED WETLANDS	SLOPE LIMITS
PROPOSED WETLANDS	EROSION CONTROL
HYDROLOGICAL	EROSION CONTROL
EROSION CONTROL	EROSION CONTROL
EROSION CONTROL	EROSION CONTROL

DATE	DESCRIPTION	STATION	NUMBER	DATE
11/01/2019	NEW DESIGN			
01/17/2020	SHEET CHECKED			
	AS BUILT DETAILS			

SRP PROCESSED BY EAM DATE 11/01/2019 SHEET CHECKED KAH DATE 01/17/2020

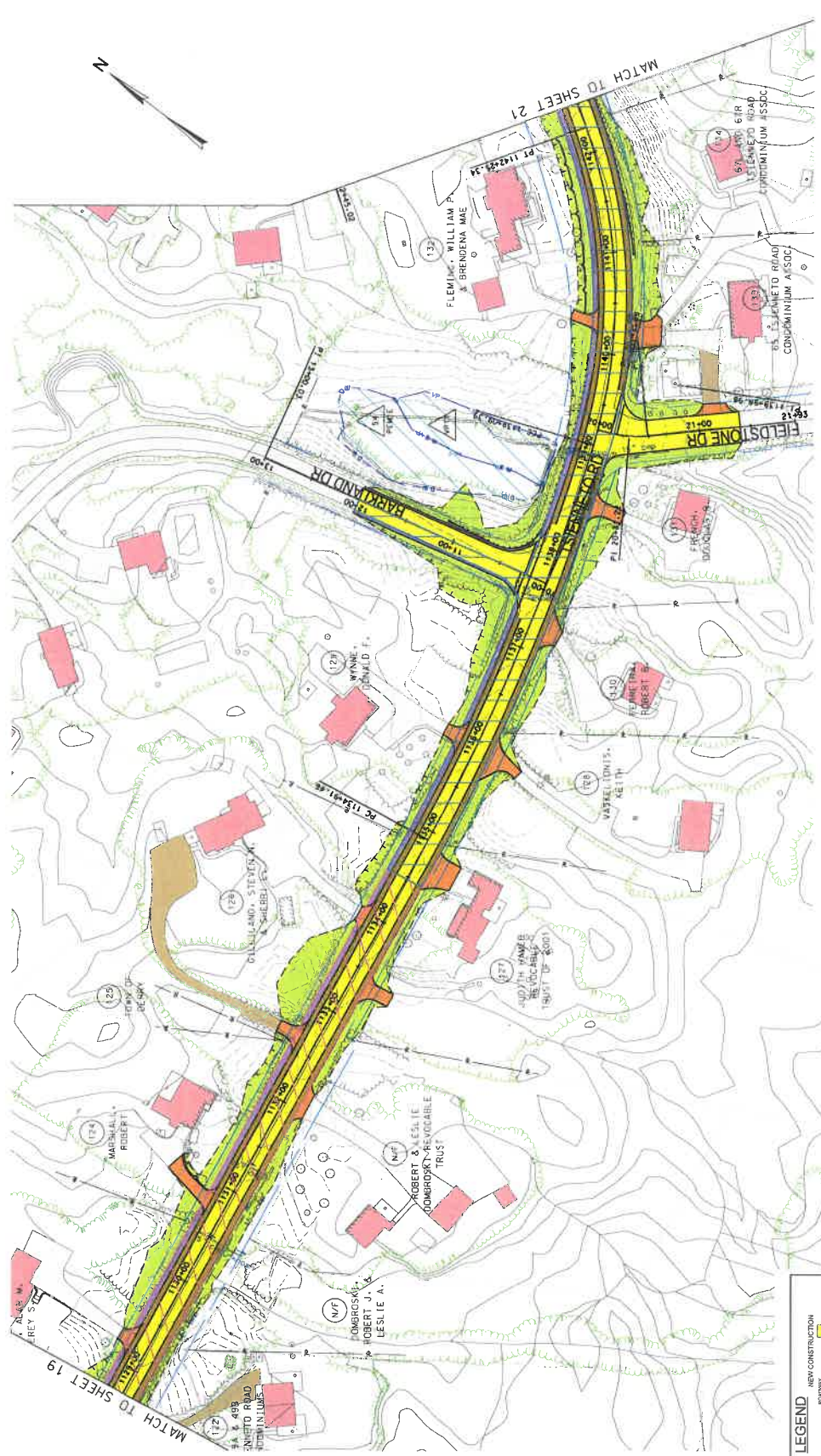


STATE OF NEW HAMPSHIRE
 DEPARTMENT OF TRANSPORTATION & BUREAU OF HIGHWAY DESIGN
 EXIT 4A
 WATER QUALITY PLAN



FEBRUARY 7, 2020

STATE PROJECT NO. 13065
 SHEET NO. 5
 TOTAL SHEETS 23



EXISTING FEATURES		NEW CONSTRUCTION	
ROADWAY	ROADWAY	ROADWAY	ROADWAY
ALLEYWAY	ALLEYWAY	ALLEYWAY	ALLEYWAY
WATER	WATER	WATER	WATER
WETLANDS	WETLANDS	WETLANDS	WETLANDS
UTILITIES	UTILITIES	UTILITIES	UTILITIES
CONSTRUCTION	CONSTRUCTION	CONSTRUCTION	CONSTRUCTION
DRAINAGE	DRAINAGE	DRAINAGE	DRAINAGE
PROPOSED	PROPOSED	PROPOSED	PROPOSED
PROPOSED	PROPOSED	PROPOSED	PROPOSED
HISTORIC DISTRICT	HISTORIC DISTRICT	HISTORIC DISTRICT	HISTORIC DISTRICT
PROPOSED	PROPOSED	PROPOSED	PROPOSED
PROPOSED	PROPOSED	PROPOSED	PROPOSED



STATE OF NEW HAMPSHIRE
 DEPARTMENT OF TRANSPORTATION & BUREAU OF HIGHWAY DESIGN
EXIT 4A
WATER QUALITY PLAN

DATE	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
13065P00N	13065	20	23

DATE	DESCRIPTION	STATION	DATE	DESCRIPTION	STATION
11/01/2019	AS BUILT DETAILS		01/17/2020	REVISIONS AFTER PROPOSAL	
11/01/2019	DATE		01/17/2020	DATE	
11/01/2019	NUMBER		01/17/2020	NUMBER	
11/01/2019	DATE		01/17/2020	DATE	
11/01/2019	DESCRIPTION		01/17/2020	DESCRIPTION	

FEBRUARY 7, 2020

SRR PROGRESSO
 EAM
 SHEET CHECKED KAH
 DATE 01/17/2020

Attachment C

Mitigation

Attachment C - Mitigation

Mitigation plans have not been finalized at this design stage. NHDOT is committing to working with the Towns of Londonderry and Derry to evaluate local stream crossing locations that would qualify for improvement funding as part of the Stream Passage Improvement Program (SPIP) agreement with NHDES to upgrade culverts within the Beaver Brook watershed. Additionally, a potential 35 acre preservation parcel in Derry (Sakr parcel) adjacent to Ballard Pond and Ballard State Forest suggested to the DOT by the Derry Conservation Commission is being evaluated.

Other than culvert improvements to be made through the SPIP and the potential preservation site in Derry, presently mitigation is proposed to be a payment to the Aquatic Resource Mitigation (ARM) fund. With the final determination of the applicability of culvert improvements and the preservation of the Sakr parcel site as mitigation, the in-lieu fee ARM payment would be reduced to reflect the values of these permittee-responsible mitigation efforts. Proposed mitigation for previous iterations of the Exit 4A project had incorporated elements of stream restoration, vernal pool creation, and land preservation. A summary of the history of mitigation package development follows.

Exit 4A Mitigation history

The Project investigated several potential mitigation parcels suggested by both Derry and Londonderry in 2012. The parcels in Londonderry were first identified as priorities in a 2006 Open Space Task Force report. The Derry parcels were identified by the Derry Conservation Commission. Landowners were contacted and baseline documentation reports and maps were drafted for some of the most promising properties, including the Caras and Sawyer properties, and discussed with local, state and federal agencies, as described below. Meeting notes are in Attachment D.

9/18/12 – A mitigation natural resource agency meeting was held with CLD, NAI, EPA, USACE, NHDES, Derry, and Londonderry. Proposed mitigation was for 3.48 acres of proposed wetland impact and impact to seven vernal pools – six direct, one by impacts of over 25% 250-foot critical habitat buffer. Mitigation included relocation of the stream east of Trolley Car Land along the Exit 4A southbound on-ramp and creation of riparian buffer, preservation of 125 acre Caras Property, and creation of five clusters of three vernal pools on the Caras Property. The developers identified a 30-acre parcel for protection and vernal pool creation. M. Kern indicated that he thought there should be more preservation than 125 acres for long term sustainability for the highway and that 30 acres was insufficient for the development. The project team planned to discuss additional mitigation approaches with the Developers and the Towns, and then revise the compensation packages and resubmit to the regulatory agencies. Mr. Roach suggests creating a Limited Access Highway and precluding development access to the interchange until mitigation costs for the development are recouped.

12/11/12 – Natural resource agency meeting (at CLD): CLD, NAI, NWR, NHDOT, NHDES, USACE, USEPA, FHWA in attendance: The modified mitigation package discussed includes 134 acres of Caras parcels. M. Kern said the proposed mitigation would only mitigate half of the 7 vernal pool impacts. For guidance it was suggested that \$250K would compensate for one high quality VP. M. Kern stated that it would take at least \$1 million of an ILF payment to complete the package for the highway alone, but that the amount should be worked out with the Corps mitigation staff and other agencies. He further said mitigation for the Hyrax/Pillsbury development should include ILF

payment, protecting a large area with many valuable vernal pools and VP creation in a large, sustainable area. If only ILF is offered, it would likely cost at least \$5 million.

2016 – Normandeau conducts field investigations on the Caras Parcel.

2017 - The western Caras parcel (identified as Parcel 070 on Town of Derry Tax Map 020) was purchased by the Town of Derry on 7/19/2017 for groundwater protection. The Town of Derry purchases the Sawyer property at some time between 2012 and 2018.

6/20/18 - Natural Resource Agency meeting at NHDOT - the proposed mitigation of ARM fund payment and SPIP was presented. No in-lieu fee calculations were presented at the meeting.

6/26/18 – The stream relocation (east of Trolley Car Lane) should be included in the proposed mitigation package. The western Caras parcel (identified as Parcel 070 on Town of Derry Tax Map 020) was purchased by the Town of Derry on 7/19/2017 and it is unknown if the parcel could be used for wetland mitigation, or whether the other parcels are still available. Creation of vernal pools is not expected to be pursued as regulatory agencies have moved away from vernal pool creation. It is expected that mitigation will be primarily an in-lieu fee.

7/2/18 - Steering Committee Meeting, NHDOT, Town of Derry, Town of Londonderry, F&O: F&O explain that in 2012, the Sawyer and Caras parcels in Derry were the best available mitigation options, but the towns have purchased these parcels for other purposes. DOT asked each Town to coordinate with their Conservation Commissions and get feedback from them if they have a prioritized listing on conservation parcels. NHDOT provided a list of culverts in the Beaver Brook watershed that have been identified for potential improvements as part of the SPIP and asked each Town to review the list and provide a prioritized list of culverts for consideration.

3/15/19 – Mitigation meeting, NHDOT, Town of Derry, Town of Londonderry, F&O, Normandeau, USEPA, USACE, NHDES: After a recap of the project design and purpose by NHDOT, mitigation for stream impacts and vernal pools was discussed. NHDOT presented information on five culverts that DOT was assessing for possible mitigation under the Stream Passage Improvement Program (SPIP). Two were proposed by the Town of Derry, and three are on State roads. NHDES gave approval for continued evaluation of culverts for possible SPIP program. USACE and USEPA then provided guidance on calculating impacts to vernal pools for inclusion in the ARM fund as presented in the 2016 Mitigation Guidance document. The mitigation will address direct fill quantities, functional loss of pools that will be totally impacted, and value loss for pools partially or indirectly impacted. Overlapping wetland edge effect impacts can be eliminated. NHDES requested a follow-up meeting to discuss the results of the recalculation of impacts and mitigation. Additionally, a review of a potential preservation parcel in Derry adjacent to Ballard Pond and Ballard State Forest was recently suggested to the DOT by the Derry Conservation Commission was discussed. An evaluation of the property will be conducted in early spring 2019 by DOT in consultation with NHDES and USACE. If suitable the ARM fund payment will be adjusted based on the USACE preservation mitigation values.

Exit 4A Proposed In-Lieu Fee Summary

The estimated total in-lieu fee for this project is **\$3,769,086.39** as summarized in Table 1.

Table 1. Exit 4A Proposed In-Lieu Fee Summary

Resource	Impact Quantity	In Lieu Fee Estimate	Assumptions
All Wetlands ¹	210,643 sf (4.84 acres)	\$1,061,965.82	Includes direct impacts to wetlands/vernal pools in accordance with NHDES Rules Wt 800.
Secondary Impacts "Edge Effects"	89,298 sf (2.05 acres)	\$450,199.74	Mitigation for secondary "Edge Effects" are calculated as recommended in the 2016 USACE Mitigation Guidance.
Vernal Pools Loss	286,000 sf (6.57 acres)	\$1,441,881.41	Mitigation for functional loss of 4 medium and 2 high value vernal pools ² based on ratios recommended in 2016 USACE Mitigation Guidance
Vernal Pools - Secondary	78,000 sf (1.79 acres)	\$393,240.38	For partially or indirectly impacted vernal pools, modeled to drop in value ²
Streams ³	1,703 lf	\$421,799.04	Impacts to channels of all streams and banks of perennial streams in accordance with NHDES Rules Wt 800.
TOTAL		\$3,769,086.39	

- 1- 24,210 sf of wetland impacts permitted under the I-93 Project were subtracted as they have been previously mitigated.
- 2- See table in Attachment A, and also below in ARM fund calculations.
- 3- Stream S1 is considered self-mitigating, as there is sufficient data for stream simulation when the stream is relocated. Stream S1 has also been determined to be intermittent.

Proposed Wetland Mitigation - Direct Impacts

Direct vegetated wetland impacts for the Exit 4A Project as currently proposed are listed in Table 2. Direct impacts are measured on project plans, and include the area of the wetland directly filled by footprint of the project; or, in the Case of Wetland 64 and Vernal Pool 9, may be drained; or, as in the case of Wetland 19 and Vernal Pool 42, will likely remain as a non-functional wetland remnant.

Table 2. Proposed Direct Wetland Impacts

Cowardin	Impact (SF)	Impact (Acres)
PFO (forested)	161,605	3.710
Prime (PSS/EM and PSS)	2,126	0.049
PSS (scrub-shrub)	852	0.020
PEM (emergent)	8,655	0.199
Vernal Pools	61,615	1.414
SubTotal	234,853	5.391
Previously mitigated impacts (I-93)	-24,210	0.556
Total	210,643	4.835

In-Lieu fee Estimated Payment for Direct Vegetated Wetland Impacts

Using the 2018 In-Lieu Fee Calculator, the in-lieu fee for direct wetland impacts, not counting streams but including vernal pools as forested wetlands, is estimated at \$1,061,965.82.

Table 3. In-Lieu Fee Calculation for Direct Wetland Impact

NHDES AQUATIC RESOURCE MITIGATION FUND WETLAND PAYMENT CALCULATION ***INSERT AMOUNTS IN YELLOW CELLS***			
1	Convert square feet of impact to acres:		
INSERT SQ FT OF IMPACT	Square feet of impact =		210643.00
			43560.00
	Acres of impact =		4.8357
2	Determine acreage of wetland construction:		
	Forested wetlands:		7.2535
	Tidal wetlands:		14.5071
	All other areas:		7.2535
3	Wetland construction cost:		
	Forested wetlands:		\$647,091.45
	Tidal Wetlands:		\$1,294,182.90
	All other areas:		\$647,091.45
4	Land acquisition cost (See land value table):		
INSERT LAND VALUE FROM TABLE WHICH APPEARS TO THE LEFT. (Insert the amount do not copy and paste.)	Town land value:		32795
	Forested wetlands:		\$237,880.07
	Tidal wetlands:		\$475,760.14
	All other areas:		\$237,880.07
5	Construction + land costs:		
	Forested wetland:		\$884,971.52
	Tidal wetlands:		\$1,769,943.04
	All other areas:		\$884,971.52
6	NHDES Administrative cost:		
	Forested wetlands:		\$176,994.30
	Tidal wetlands:		\$353,988.61
	All other areas:		\$176,994.30

*****			TOTAL ARM PAYMENT*****		
	Forested wetlands:		\$1,061,965.82		
	Tidal wetlands:		\$2,123,931.65		
	All other areas:		\$1,061,965.82		

Secondary Impacts (Edge Effects)

The US Army Corps of Engineers 2016 Mitigation guidance also provides ratios for temporary fill, permanent conversion (forested to emergent) and secondary impact edge effects. The guidelines recommend that a portion of the standard amount of mitigation that would be required if a wetland were directly impacted should be added to the total if the project is within the “Impact Zone” of the project. The size of the Impact Zone varies by wetland type, and Impact Zones are broken into two types, depending on proximity to the project, with “High Level Impact Zone” being the closer portion, and requiring more mitigation than the rest of the impact zone (Table 4). Impact zones were measured from the toe of slope or edge of cut. Since overlapping impact areas are not to be double counted, edge effects that overlap vernal pool secondary impact areas were subtracted.

Temporary fill and permanent conversion of wetland type are unlikely to be significant in this project. Secondary Impact Edge Effects are tabulated in Table 5. Secondary Impact Edge Effects were tabulated for areas of new alignment, road widening, and proposed stormwater treatment areas.

**Table 4. USACE Recommended Secondary Impact Edge Effects
(from Table C2, Page 58 in 2016 USACE Guidance)**

Wetland Type	Impact Zone ^a	Acreage in Impact Zone (30% Design)	% of Standard Amount	Acreage to be mitigated
Palustrine Emergent	25	0.23	25%	0.06
	75	0.50	10%	0.05
Scrub Shrub	50	0.97	25%	0.24
	100	2.46	10%	0.25
Forested	50	2.77	25%	0.69
	150	7.61	10%	0.76
			Total	2.05^b

Notes – a USACE identifies “High level impact zones” and “remainder of impact zone” for emergent, scrub shrub, and forested wetlands. The amount of mitigation required is a percentage of what would be required for direct impacts.

b Secondary impact edge effects were refined after June 20, 2018 Natural Resource Agency meeting, again after the 3/15/19 meeting with state and federal wetland regulators, and after stormwater BMP design.

In-Lieu fee Estimated Payment for Secondary Edge Effect Impacts

Secondary Impact Edge Effects add an estimated **\$450,199.74** to the fee.

Table 5. In-Lieu Fee Calculation Secondary Edge Effect Impacts

NHDES AQUATIC RESOURCE MITIGATION FUND WETLAND PAYMENT CALCULATION ***INSERT AMOUNTS IN YELLOW CELLS***			
1 Convert square feet of impact to acres:			
INSERT SQ FT OF IMPACT	Square feet of impact =		89298.00
			43560.00
	Acres of impact =		2.0500
2 Determine acreage of wetland construction:			
	Forested wetlands:		3.0750
	Tidal wetlands:		6.1500
	All other areas:		3.0750
3 Wetland construction cost:			
	Forested wetlands:		\$274,321.83
	Tidal Wetlands:		\$548,643.65
	All other areas:		\$274,321.83
4 Land acquisition cost (See land value table):			
INSERT LAND VALUE FROM TABLE WHICH APPEARS TO THE LEFT. (Insert the amount do not copy and paste.)	Town land value:		32795
	Forested wetlands:		\$100,844.63
	Tidal wetlands:		\$201,689.25
	All other areas:		\$100,844.63
5 Construction + land costs:			
	Forested wetland:		\$375,166.45
	Tidal wetlands:		\$750,332.90
	All other areas:		\$375,166.45
6 NHDES Administrative cost:			
	Forested wetlands:		\$75,033.29
	Tidal wetlands:		\$150,066.58
	All other areas:		\$75,033.29
***** TOTAL ARM PAYMENT*****			
	Forested wetlands:		\$450,199.74
	Tidal wetlands:		\$900,399.48
	All other areas:		\$450,199.74

Vernal Pool Impact and Mitigation Assessment

The assessment of vernal pool impacts in accordance with the 2016 USACE mitigation guidelines is summarized in Table 6. Details regarding the application of the guidance was provided to the project team in a meeting on March 15, 2019 (Attachment E). The analysis of the vernal pool value change was based on a GIS assessment of the post-construction land area quantities and classification within the 100-ft Vernal Pool Envelope and 750- ft Critical Terrestrial Habitat. The new quantities for each land classification were entered into the USACE habitat evaluation worksheet and the vernal pool quality re-evaluated and compared to the pre-construction evaluation (Table 7). Mitigation is proposed for all pools with loss of one or more value class.

Table 6. Exit 4A Vernal Pool Impacts for Mitigation

VERNAL POOL ID	PLAN IMPACT CODE	DIRECT PERM IMPACT (SF)	SECONDARY IMPACT TYPE	VALUE CHANGE OR LOSS	IMPACT EQUIVALENT
VP2	F	7,236	Permanent loss	M value loss	39,000
VP3	J	9,387	Value drop	M to L drop	26,000
VP4	P	9,278	Permanent loss	M value loss	39,000
VP6	AO	15,631	Permanent Loss	M value loss	39,000
VP8	AX	10,722	Permanent Loss	H value loss	65,000
VP9	BC	3,335	Permanent Loss	H value loss	65,000
VP42	AF	4,811	Permanent loss	M value loss	39,000
VP46	AL	611	Value drop	H to M drop	26,000
VP64		(buffer only)	Value drop	H to M drop	26,000
Perm Direct Impact Area:		61,011	Secondary Impact Area:		364,000

**Table 7. Exit 4A Vernal Pool Value Change¹ Post-Construction for Vernal Pools not Lost².
Highlighted Rows Indicate a Drop in Value.**

VP ID	Current Landscape Score	Post-Const. Landscape Score	Score Change	Pool Score (unchanged)	Current VP Value ³	Post-Const. VP Value ³
PVP 87	10.61	4.77	-5.84	X	L	L
VP 03	18.30	14.74	-3.55	16	M	M ⁴
VP 05	25.38	17.47	-7.91	17	M	M
VP 07	29.54	22.58	-6.95	16	M	M
VP 11	13.83	12.62	-1.21	14	M	M
VP 12	21.99	19.80	-2.19	20	M	M
VP 13	29.49	23.56	-5.93	20	M	M
VP 22	28.41	28.39	-0.02	16	M	M
VP 23	26.78	26.67	-0.11	16	M	M
VP 27	21.44	21.35	-0.09	16	M	M
VP 28	16.97	16.88	-0.09	18	M	M
VP 29	16.26	16.21	-0.05	22	M	M
VP 44	26.79	23.30	-3.49	18	M	M
VP 46	30.16	20.41	-9.75	22	H	M
VP 47	27.98	23.48	-4.50	22	H	H
VP 48	28.72	25.19	-3.53	22	H	H
VP 49	28.89	27.78	-1.12	20	M	M
VP 54	22.88	21.26	-1.62	18	M	M
VP 56	27.37	26.85	-0.52	4	L	L
VP 57	28.90	27.97	-0.94	21	H	H
VP 58	27.99	27.57	-0.42	21	H	H
VP 59	30.39	30.34	-0.05	22	H	H
VP 60	28.55	28.04	-0.51	20	M	M
VP 63	29.57	25.91	-3.66	24	H	H
VP 64	24.63	18.53	-6.10	21	H	M

1 –Based on the USACE Vernal Pool Characterization Worksheets.

2 – Vernal Pools judged to be lost include 2, 4, 6, 8, 9 and 42, and are already included in mitigation calculations.

3 - Low value vernal pools have a landscape score of 11 or less or a pool score of 10 or less. Medium value vernal pools have a landscape score of 12 to 22 and a pool score of 11 to 20. High value vernal pools have a landscape score of 23 or more and a pool score of 21 or more. The lower of the two scores determines vernal pool value.

4 – Although not indicated by the post-construction worksheet, professional judgement was applied to determine that VP 3 would also likely drop in value.

Vernal Pool Loss Mitigation

The 2016 USACE Mitigation Guidance provides recommendations for in-lieu payments based on the quality of vernal pools that will be eliminated. This applies to vernal pools that receive direct fill by the project and judged unlikely to function as vernal pools due to that fill, even if some wetland remains. This functional mitigation requirement is in addition to the direct fill mitigation previously calculated. Vernal pool quality is evaluated using the USACE’s “Vernal Pool Characterization” form¹ that provides a scoring system for low, medium, and high quality vernal pools based on the characteristics of the vernal pool itself and of the surrounding landscape. For Exit 4A, using the USACE scoring system in the Vernal Pool Characterization Form for the six vernal pools that will be lost to the Project, there are four medium quality and two high quality vernal pools that will be substantially impacted and probably cease to function as vernal pools. These are VPs 2, 4, 6, 8, 9 and 42 on the plan set. Therefore, recommended mitigation under the USACE Guidance would be as provided in Table 6. The loss of VP9 is a conservative assessment, as this pool is not directly filled, but the adjacent road cut may alter the hydrology substantially.

In-Lieu Fee Estimated Payment for Vernal Pool Loss

The 2016 USACE Guidance recommends a vernal pool functional loss mitigation ratio of 1:1 (low quality): 1:3 (medium quality): 1:5 (high quality). These ratios are applied as a 13,000 factor per pool for in-lieu fee calculations. This factor is based on an equivalent cost of preserving one vernal pool. Following this guidance, factors of 13,000 is applied to the ARM fund calculator for each low value vernal pool, 39,000 for each medium value pool, and 65,000 for each high value pool. Using this guidance, the total factor applied for mitigation of lost vernal pool function for four medium and two high value pools would be 286,000 (Table 8). This is the square foot area entered into the ARM fund calculator for vernal pool loss.

**Table 8. USACE Recommended In- Lieu Fee Multiplier for Vernal Pool Loss
(from USACE 2016 Mitigation Guidance, Page 95)**

Vernal Pool Characterization	Recommended ratio for preservation	Number of lost vernal pools	USACE impact multiplier required per pool	Number of lost vernal pools x USACE multiplier
High	1:5	2	65,000	130,000
Medium	1:3	4	39,000	156,000
Low	1:1	0	13,000	0
	TOTAL			286,000

In addition to the in-lieu fee payment already calculated for direct vernal pool fill under wetland impacts (1.20 acres forested wetland). The ARM fund payment for the vernal pools loss is estimated at **\$1,441,881.41** as detailed in Table 9.

¹<http://www.nae.usace.army.mil/Portals/74/docs/regulatory/StateGeneralPermits/NEGP/VPCharacterizationFormDRAFT.pdf>

Table 9. In-Lieu Fee Calculation for Vernal Pool Loss

NHDES AQUATIC RESOURCE MITIGATION FUND WETLAND PAYMENT CALCULATION ***INSERT AMOUNTS IN YELLOW CELLS***			
1 Convert square feet of impact to acres:			
INSERT SQ FT OF IMPACT	Square feet of impact =		286000.00
			43560.00
	Acres of impact =		6.5657
2 Determine acreage of wetland construction:			
	Forested wetlands:		9.8485
	Tidal wetlands:		19.6970
	All other areas:		9.8485
3 Wetland construction cost:			
	Forested wetlands:		\$878,586.78
	Tidal Wetlands:		\$1,757,173.56
	All other areas:		\$878,586.78
4 Land acquisition cost (See land value table):			
INSERT LAND VALUE FROM TABLE WHICH APPEARS TO THE LEFT. (Insert the amount do not copy and paste.)	Town land value:		32795
	Forested wetlands:		\$322,981.06
	Tidal wetlands:		\$645,962.12
	All other areas:		\$322,981.06
5 Construction + land costs:			
	Forested wetland:		\$1,201,567.84
	Tidal wetlands:		\$2,403,135.68
	All other areas:		\$1,201,567.84
6 NHDES Administrative cost:			
	Forested wetlands:		\$240,313.57
	Tidal wetlands:		\$480,627.14
	All other areas:		\$240,313.57
***** TOTAL ARM PAYMENT*****			
	Forested wetlands:		\$1,441,881.41
	Tidal wetlands:		\$2,883,762.82
	All other areas:		\$1,441,881.41

Vernal Pool Secondary (indirect) Impact Mitigation

The 2016 USACE Mitigation Guidance also provides recommendations for additional in-lieu fee payments for vernal pools that will be partially impacted or that will have impacts to their Critical Terrestrial Habitat (a 750 ft. buffer around each pool) that would reduce their vernal pool value. Value loss is determined by scoring the landscape portion of the USACE “Vernal Pool Characterization” form² and identifying any pools whose current landscape plus pool value combined drop from high to medium, high to low, or medium to low under the built condition. Based on our GIS analysis and USACE review of the project footprint impacts to the vernal pools and their critical terrestrial habitat, three vernal pools will be affected sufficiently to drop in value due to project impacts, but will likely continue to function as vernal pools in the near term. Vernal pools 3 and 46 have direct pool impacts, and pool 64 will have impacts to the critical terrestrial habitat that result in a drop in value. Therefore, recommended mitigation under the USACE Guidance would be as provided in Table 10.

In-Lieu Fee Estimated Payment for Vernal Pool Secondary (Indirect) Impacts

The 2016 USACE Guidance recommends that if the total value score under the built condition drops the vernal pool value below the existing condition, then this loss in value is to be included in the ARM fund calculator. The vernal pool area factors described in the vernal pool loss section above are to be used in the ARM fund calculator for each loss of value. For example, if a high value VP (value of 65,000) drops to a medium value VP (value of 39,000) the loss value of 26,000 is entered in the ARM fund calculator (65,000 – 39,000 = 26,000). Low value vernal pools do not need to be evaluated. Using this guidance, the total area to be mitigated for secondary impacts to the three vernal pools that have been evaluated to have dropped one value level would be 3 X 26,000 or 78,000 sf (1.79 acres). This is estimated at **\$393,240.38** as shown in Table 10.

Table 10. In-Lieu-Fee Calculation for Vernal Pool Secondary Impacts

NHDES AQUATIC RESOURCE MITIGATION FUND WETLAND PAYMENT CALCULATION ***INSERT AMOUNTS IN YELLOW CELLS***			
1	Convert square feet of impact to acres:		
INSERT SQ FT OF IMPACT	Square feet of impact =		78000.00
			43560.00
	Acres of impact =		1.7906
2	Determine acreage of wetland construction:		
	Forested wetlands:		2.6860
	Tidal wetlands:		5.3719

²<http://www.nae.usace.army.mil/Portals/74/docs/regulatory/StateGeneralPermits/NEGP/VPCharacterizationFormDRAFT.pdf>

	All other areas:		2.6860	
3	Wetland construction cost:			
	Forested wetlands:		\$239,614.58	
	Tidal Wetlands:		\$479,229.15	
	All other areas:		\$239,614.58	
4	Land acquisition cost (See land value table):			
INSERT LAND VALUE FROM TABLE WHICH APPEARS TO THE LEFT. (Insert the amount do not copy and paste.)	Town land value:		32795	
	Forested wetlands:		\$88,085.74	
	Tidal wetlands:		\$176,171.49	
	All other areas:		\$88,085.74	
5	Construction + land costs:			
	Forested wetland:		\$327,700.32	
	Tidal wetlands:		\$655,400.64	
	All other areas:		\$327,700.32	
6	NHDES Administrative cost:			
	Forested wetlands:		\$65,540.06	
	Tidal wetlands:		\$131,080.13	
	All other areas:		\$65,540.06	
*****	TOTAL ARM PAYMENT*****			
	Forested wetlands:		\$393,240.38	
	Tidal wetlands:		\$786,480.77	
	All other areas:		\$393,240.38	

Stream Mitigation

NHDES Stream Mitigation

Linear feet of stream and bank impacts are provided in the wetland application. Approximately 803 linear feet of impact to Stream S1, the Trolley Car Lane stream west of I-93, was already permitted for the I-93 Project (Contracts 14463D and I, NHDES Permit 2014-03446), although the construction and stream relocation/restoration was not completed. As sufficient information has been collected to insure stream simulation when stream S1 is relocated and restored for the Exit 4A project, the 1,719 linear feet of impact is assumed to be self-mitigating and is not included in the calculation. All other stream impacts are included in the in-lieu fee calculation. Stream mitigation ARM fund contribution may be further reduced by the costs associated with stream culvert replacement(s) project(s) that are determined to qualify for the Stream Passage Improvement Program (SPIP). These evaluations are to be conducted by DOT in consultation with DES to determine the appropriate stream crossing(s) to mitigate. The estimated ARM fund payment for stream mitigation is **\$421,799.04** as shown in Table 11.

Table 11. In-Lieu Fee Calculation for Stream Impacts

NHDES AQUATIC RESOURCE MITIGATION FUND STREAM PAYMENT CALCULATION		
INSERT LINEAR FEET OF IMPACT on BOTH BANKS AND CHANNEL	Right Bank	271.00
	Left Bank	272.0000
	Channel	1160.0000
	TOTAL IMPACT	1703.0000
	Stream Impact Cost:	\$351,499.20
	NHDES Administrative cost:	
		\$70,299.84
***** TOTAL ARM FUND STREAM PAYMENT*****		
		\$421,799.04

Attachment D
Adjoining Property Owners List

Parcel#	Parcel Size	Parcel Address	Party Type	Party Name	Party Address
0001	0.20 ACRES	10/34 LONDONDERRY 4 TROLLEY CAR LANE	OWNER	TOWN OF LONDONDERRY	2688 MAMMOTH ROAD LONDONDERRY NH 03053 USA
0002	1.17 ACRES	10/32 LONDONDERRY 8 TROLLEY CAR LANE	OWNER	MAZZAGLIA FAMILY TRUST	PO BOX 1021 LONDONDERRY NH 03053 USA
0003	43735 SQUARE FEET	10/31-2 LONDONDERRY 10 TROLLEY CAR LANE	OWNER	JOSEPH D TUFTS	10 TROLLEY CAR LANE LONDONDERRY NH 03053 USA
0004	1.0 ACRES	10/31-1 LONDONDERRY 10 TROLLEY CAR LANE	OWNER	NANCY M TUFTS	10 TROLLEY CAR LANE LONDONDERRY NH 03053 USA
0005	1.23 ACRES	10/31-1 LONDONDERRY 12 TROLLEY CAR LANE	OWNER	CORNELIUS J DONOVAN	12 TROLLEY CAR LN LONDONDERRY NH 03053-2931 USA
0006	20.48 ACRES	10/31 LONDONDERRY 14 TROLLEY CAR LANE	OWNER	JOYCE LEE DONOVAN	12 TROLLEY CAR LN LONDONDERRY NH 03053-2931 USA
0007	1.23 ACRES	10/31 LONDONDERRY 14 TROLLEY CAR LANE	OWNER	ALAN J ROY	14 TROLLEY CAR LANE LONDONDERRY NH 03053 USA
0008	1.15 ACRES	10/31 LONDONDERRY 14 TROLLEY CAR LANE	OWNER	MARIA L RIZZO-ROY	14 TROLLEY CAR LANE LONDONDERRY NH 03053 USA
0009	1.825 ACRES	10/30-1 LONDONDERRY 16 TROLLEY CAR LANE	OWNER	PILLSBURY REALTY DEVELOPMENT, LLC.	214 N MAIN ST CONCORD NH 03301 USA
0010	1.9 ACRES	10/30-2 LONDONDERRY 18 TROLLEY CAR LANE	OWNER	FLYNN 2013 FAMILY TRUST	16 TROLLEY CAR LANE LONDONDERRY NH 03053 USA
0011	1.925 ACRES	10/30-3 LONDONDERRY 22 TROLLEY CAR LANE	OWNER	CANTAVE FAMILY REVOCABLE TRUST	22 TROLLEY CAR LANE LONDONDERRY NH 03053 USA
0012	3.793 ACRES	10/30 LONDONDERRY 24 TROLLEY CAR LANE	OWNER	DONNA E DICKENSON	24 TROLLEY CAR LN LONDONDERRY NH 03053 USA
0013	2.374 ACRES	10/30 LONDONDERRY 28 TROLLEY CAR LANE	OWNER	DENNIS DOUCETTE	28 TROLLEY CAR LN LONDONDERRY NH 03053 USA
0014	2.663 ACRES	10/30 LONDONDERRY 28 TROLLEY CAR LANE	OWNER	CAROLYN L DOUCETTE	28 TROLLEY CAR LN LONDONDERRY NH 03053 USA
0015	2.374 ACRES	10/29C-2A/29C-2B LONDONDERRY 32 A/32 B TROLLEY CAR LANE	OWNER	32 TROLLEY CAR LANE CONDOMINIUM ASSOCIATION	214 N MAIN ST CONCORD NH 03301 USA
0016	2.663 ACRES	10/29C-1A/29C-1B LONDONDERRY 34 TROLLEY CAR LANE	OWNER	PILLSBURY REALTY DEVELOPMENT LLC	214 N MAIN ST CONCORD NH 03301 USA
0017	2.347 ACRES	10/29C-1A/29C-1B LONDONDERRY 34 TROLLEY CAR LANE	OWNER	LISETTE COSTA	214 N MAIN ST CONCORD NH 03301 USA
0018	4.308 ACRES	10/29C-A/29C-B LONDONDERRY 36 TROLLEY CAR LANE	OWNER	36 TROLLEY CAR LANE CONDOMINIUM ASSOC	348 TROLLEY CAR LN LONDONDERRY NH 03053 USA
0019	4.308 ACRES	10/29C-A/29C-B LONDONDERRY 36 TROLLEY CAR LANE	OWNER	LINDA CARTER	344 TROLLEY CAR LN LONDONDERRY NH 03053 USA
0020	4.308 ACRES	10/29C-A/29C-B LONDONDERRY 36 TROLLEY CAR LANE	OWNER	CHARLES CARTER	344 TROLLEY CAR LN LONDONDERRY NH 03053 USA
0021	2.347 ACRES	10/29C-4 LONDONDERRY 60A SEASONS LANE	OWNER	HYRAX DERRY PARTNERS LLC	214 N MAIN STREET CONCORD NH 03301 USA
0022	1.38 ACRES	10/29C-4 LONDONDERRY 60A SEASONS LANE	OWNER	36 TROLLEY CAR LANE CONDOMINIUM ASSOCIATION	364 TROLLEY CAR LANE LONDONDERRY NH 03053 USA
0023	1.38 ACRES	10/29C-4 LONDONDERRY 60A SEASONS LANE	OWNER	ROCHELLE BROWN	364 TROLLEY CAR LANE LONDONDERRY NH 03053 USA
0024	1.11 ACRES	10/27 LONDONDERRY 52 TROLLEY CAR LANE	OWNER	JAMES E LANGLEY	368 TROLLEY CAR LANE LONDONDERRY NH 03053 USA
0025	1.12 ACRES	10/27 LONDONDERRY 52 TROLLEY CAR LANE	OWNER	JAMES E LANGLEY	368 TROLLEY CAR LN LONDONDERRY NH 03053 USA
0026	1.12 ACRES	10/27 LONDONDERRY 52 TROLLEY CAR LANE	OWNER	JAMES E LANGLEY	368 TROLLEY CAR LANE LONDONDERRY NH 03053 USA
0027	1.12 ACRES	10/27 LONDONDERRY 52 TROLLEY CAR LANE	OWNER	STATE OF NEW HAMPSHIRE	368 TROLLEY CAR LANE LONDONDERRY NH 03053 USA
0028	1.12 ACRES	10/27 LONDONDERRY 52 TROLLEY CAR LANE	OWNER	CHRISTOPHER D ERMER	52 TROLLEY CAR LANE LONDONDERRY NH 03053 USA
0029	1.12 ACRES	10/27 LONDONDERRY 52 TROLLEY CAR LANE	OWNER	SHELLY M ERMER	52 TROLLEY CAR LANE LONDONDERRY NH 03053 USA
0030	1.12 ACRES	10/27 LONDONDERRY 52 TROLLEY CAR LANE	OWNER	STEVEN D POPP SR	54 TROLLEY CAR LANE LONDONDERRY NH 03053 USA
0031	1.12 ACRES	13/4 DERRY 51 REAR TROLLEY CAR LANE	OWNER	TOWN OF LONDONDERRY	2688 MAMMOTH ROAD LONDONDERRY NH 03053 USA
0032	1.12 ACRES	13/71-44 LONDONDERRY 58 SEASONS LANE	OWNER	MARIBETH GERAGHTY	58 SEASONS LN LONDONDERRY NH 03053-2962 USA
0033	1.12 ACRES	13/71-44 LONDONDERRY 58 SEASONS LANE	OWNER	SCOTT P GERAGHTY	58 SEASONS LN LONDONDERRY NH 03053-2962 USA
0034	1.12 ACRES	13/71-44 LONDONDERRY 58 SEASONS LANE	OWNER	WALDEMAR ROSZCZENKO	58 SEASONS LN LONDONDERRY NH 03053 USA
0035	1.12 ACRES	13/71-44 LONDONDERRY 58 SEASONS LANE	OWNER	JOLANTA ROSZCZENKO	56 SEASONS LN LONDONDERRY NH 03053 USA
0036	1.12 ACRES	13/71-44 LONDONDERRY 58 SEASONS LANE	OWNER	PILLSBURY REALTY DEVELOPMENT, LLC.	214 N MAIN ST CONCORD NH 03301 USA
0037	1.12 ACRES	13/71-44 LONDONDERRY 58 SEASONS LANE	OWNER	SEVEN HILLS DEVELOPMENT, LLC.	5 MADDEN RD DERRY NH 03038 USA
0038	1.12 ACRES	13/71-44 LONDONDERRY 58 SEASONS LANE	OWNER	DERRY BUSINESS CENTER UNIT OWNERS ASSOCIATION	11 CORPORATE DRIVE BELMONT NH 03220 USA
0039	1.12 ACRES	13/71-44 LONDONDERRY 58 SEASONS LANE	OWNER	SEVEN HILLS DEVELOPMENT, LLC.	PO BOX 1220 DERRY NH 03038-6220 USA
0040	1.12 ACRES	13/71-44 LONDONDERRY 58 SEASONS LANE	OWNER	MARCIA E ABBOTT	11 MADDEN ROAD DERRY NH 03038 USA
0041	1.12 ACRES	13/71-44 LONDONDERRY 58 SEASONS LANE	OWNER	A & W PROPERTIES, LLC	57 FLOYD AVENUE DERRY NH 03038 USA
0042	1.12 ACRES	13/71-44 LONDONDERRY 58 SEASONS LANE	OWNER	9 MADDEN ROAD HOLDINGS,LLC	17 NOTTINGHAM RD WINDHAM NH 03087 USA
0043	1.12 ACRES	13/71-44 LONDONDERRY 58 SEASONS LANE	OWNER	THOMAS W BOROWSKI	2 MADDEN ROAD DERRY NH 03038 USA
0044	1.12 ACRES	13/71-44 LONDONDERRY 58 SEASONS LANE	OWNER	MARIO F MERIANO	59 WHEELER AVE SALEM NH 03079 USA
0045	1.12 ACRES	13/71-44 LONDONDERRY 58 SEASONS LANE	OWNER	LOLA M MERIANO	59 WHEELER AVE SALEM NH 03079 USA
0046	1.12 ACRES	13/71-44 LONDONDERRY 58 SEASONS LANE	OWNER	MARIAN FRASER BRUDJISZ	74 NORTH HIGH ST DERRY NH 03038 USA
0047	1.12 ACRES	13/71-44 LONDONDERRY 58 SEASONS LANE	OWNER	STEVEN J PIER	13 DORIS RD WESTFORD MA 01886 USA
0048	1.12 ACRES	13/71-44 LONDONDERRY 58 SEASONS LANE	OWNER	JOHN E PIER	17 NORTH MAIN ST DERRY NH 03038 USA
0049	1.12 ACRES	13/71-44 LONDONDERRY 58 SEASONS LANE	OWNER	THE RESERVE AT COVEY RUN CONDOMINIUM ASSOCIATION	81 N HIGH ST DERRY NH 03038 USA
0050	1.12 ACRES	13/71-44 LONDONDERRY 58 SEASONS LANE	OWNER	JAN KULIGOWSKI	85 NORTH HIGH STREET DERRY NH 03038 USA
0051	1.12 ACRES	13/71-44 LONDONDERRY 58 SEASONS LANE	OWNER	SHANNON L VADNEY	5 FERLAND DR DERRY NH 03038 USA
0052	1.12 ACRES	13/71-44 LONDONDERRY 58 SEASONS LANE	OWNER	STEPHEN VADNEY JR	5 FERLAND DR DERRY NH 03038 USA
0053	1.12 ACRES	13/71-44 LONDONDERRY 58 SEASONS LANE	OWNER	TRACE KULIGOWSKI	92 PROSPECT ST MANCHESTER NH 03104 3616 USA
0054	1.12 ACRES	13/71-44 LONDONDERRY 58 SEASONS LANE	OWNER	KULIGOWSKI FAMILY REVOCABLE TRUST	85 NORTH HIGH STREET DERRY NH 03038 USA
0055	1.12 ACRES	13/71-44 LONDONDERRY 58 SEASONS LANE	OWNER	97 NORTH HIGH ST LLC	80 MASHUA RD LONDONDERRY NH 03053 USA
0056	1.12 ACRES	13/71-44 LONDONDERRY 58 SEASONS LANE	OWNER	CENTURY AUTO PARTS, INC	23 BIRCH ST DERRY NH 03038 USA
0057	1.12 ACRES	13/71-44 LONDONDERRY 58 SEASONS LANE	OWNER	RONALD S RANDALL	2 FERLAND DRIVE DERRY NH 03038 USA
0058	1.12 ACRES	13/71-44 LONDONDERRY 58 SEASONS LANE	OWNER	CHRISTINE M RANDALL	2 FERLAND DRIVE DERRY NH 03038 USA

0041	17600. SQUARE FEET	31/16 DERRY 4 FERLAND DR	OWNER	MATTHEW R MAHONEY	4 FERLAND DR DERRY NH 03038 USA
0042	0.46 ACRES	31/42-2 DERRY 99 NORTH HIGH ST	OWNER	BROOKVIEW MANOR COURT, INC.	161 NORTH RIVER ROAD MANCHESTER NH 03104 USA
0043	0.26 ACRES	31/42 DERRY 92 FRANKLIN STREET	OWNER	WILLIAM H NEVE IV	92 FRANKLIN STREET DERRY NH 03038 USA
0044	0.80 ACRES	31/42-1 DERRY 90 FRANKLIN ST	OWNER	BROOKVIEW MANOR COURT, INC.	530 CHESTNUT ST MANCHESTER NH 03101 USA
0045	0.13 ACRES	35/56 DERRY 99 FRANKLIN ST	OWNER	CATHERINE RUDD	4 BUTLER STREET SALEM NH 03079 USA
0046	0.13 ACRES	35/56 DERRY 99 FRANKLIN ST	OWNER	WILLIAM L RUDD JR	4 BUTLER STREET SALEM NH 03079 USA
0047	23616 SQUARE FEET	31/42-3 DERRY 88 FRANKLIN ST	OWNER	NICHOLAS CHAGARIS	99 FRANKLIN ST DERRY NH 03038 USA
0048	0.33 ACRES	35/58 DERRY 89 FRANKLIN ST	OWNER	MARIA L ANDRADE	530 CHESTNUT ST MANCHESTER NH 03101 USA
0049	22485 SQUARE FEET	35/58 DERRY 89 FRANKLIN ST	OWNER	PEDRO M ANDRADE	89 FRANKLIN ST DERRY NH 03038 USA
0050	0.219995 ACRES	31/42-4 DERRY 86 FRANKLIN ST	OWNER	BROOKVIEW MANOR COURT INC.	89 FRANKLIN ST DERRY NH 03038 USA
0051	10552 SQUARE FEET	31/60 DERRY 87 FRANKLIN ST	OWNER	ALICE L ARCHAMBAULT	87 FRANKLIN ST DERRY NH 03038 USA
0052	0.230004 ACRES	31/42-5 DERRY 80 FRANKLIN ST	OWNER	BROOKVIEW MANOR COURT INC.	87 FRANKLIN ST DERRY NH 03038 USA
0053	10552 SQUARE FEET	31/61 DERRY 85 FRANKLIN ST	OWNER	KELLY M ROSE	530 CHESTNUT ST MANCHESTER NH 03101 USA
0054	0.42 ACRES	31/62 DERRY 83 FRANKLIN ST	OWNER	ROBERT J ROSE	85 FRANKLIN ST DERRY NH 03038 USA
0055	10552 SQUARE FEET	31/62 DERRY 83 FRANKLIN ST	OWNER	JANE F DANIELS	530 CHESTNUT ST MANCHESTER NH 03101 USA
0056	0.56 ACRES	31/63 DERRY 81 FRANKLIN ST	OWNER	PAUL R DANIELS	83 FRANKLIN ST DERRY NH 03038 USA
0057	0.18 ACRES	35/65 DERRY 3 FOLSOM RD	OWNER	BROOKVIEW MANOR COURT INC.	83 FRANKLIN ST DERRY NH 03038 USA
0057-1	10957 SQUARE FEET	35/54 DERRY 5 FOLSOM RD	OWNER	KATHLEEN A FOWLER	530 CHESTNUT ST MANCHESTER NH 03101 USA
0057-1	10957 SQUARE FEET	35/54 DERRY 5 FOLSOM RD	OWNER	BRIAN E FOWLER	81 FRANKLIN ST DERRY NH 03038 USA
0058	0.26 ACRES	35/08-1 DERRY 103 FRANKLIN ST	OWNER	JOHN MADDEN	81 FRANKLIN ST DERRY NH 03038 USA
0059	1.36 ACRES	35/07 DERRY 105 FRANKLIN STREET	OWNER	SUSAN J MADDEN	21 FORDWAY RD RAYMOND NH 03077 USA
0060	1.1 ACRES	35/06 DERRY 107 FRANKLIN ST	OWNER	PATRICIA ROWE	66 OLD STAGE RD LITCHFIELD NH 03052 USA
0062	1.56 ACRES	35/08 DERRY 101 FRANKLIN ST	OWNER	THE NUSBAUM FAMILY REVOCABLE TRUST	66 OLD STAGE RD LITCHFIELD NH 03052 USA
0063	1.0 ACRES	35/49 DERRY 7 FOLSOM RD	OWNER	FRANKLIN PLACE, CONDOMINIUM ASSOCIATIONM	103 FRANKLIN STREET DERRY NH 03038 USA
0064	12088 SQUARE FEET	35/49 DERRY 7 FOLSOM RD	OWNER	FRANKLIN DERRY LIMITED PARTNERSHIP	105 DERRY NH 03038 USA
0065	14696 SQUARE FEET	35/48 DERRY 20 MANCHESTER AVE	OWNER	101 FRANKLIN DERRY LLC	500 VICTORY ROAD N QUINCY MA 02171 USA
0065-1	10348 SQUARE FEET	35/48 DERRY 20 MANCHESTER AVE	OWNER	EUGENE R NESMITH	44 WEST BROADWAY DERRY NH 03038 USA
0065-1	10348 SQUARE FEET	35/41 DERRY 9 FOLSOM RD	OWNER	SHERLEY A NESMITH	7 FOLSOM RD DERRY NH 03038 USA
0066	1 ACRES	35/10 DERRY 8 FOLSOM RD	OWNER	GREGORY LABO	7 FOLSOM RD DERRY NH 03038 USA
0067	0.69 ACRES	35/11 DERRY 10 FOLSOM RD	OWNER	JANICE A MOBSBY	20 MANCHESTER AVE DERRY NH 03038 USA
0068	25059 SQUARE FEET	35/12 DERRY 12 FOLSOM RD	OWNER	BRUCE A MOBSBY	20 MANCHESTER AVE DERRY NH 03038 USA
0069	0.25 ACRES	35/40 DERRY 11 FOLSOM RD	OWNER	RICHARD A BRANN JR	9 FOLSOM RD DERRY NH 03038 USA
0070	3.49 ACRES	35/11-1 DERRY 14 FOLSOM RD	OWNER	MARY M MCBRIDE	8 FOLSOM RD DERRY NH 03038 USA
0071	30908 SQUARE FEET	35/13 DERRY 16 FOLSOM RD	OWNER	SEAN W CAREY	10 FOLSOM RD DERRY NH 03038 USA
0072	39688 SQUARE FEET	35/14-4 DERRY 18 FOLSOM RD	OWNER	CHARLES J GODDARD JR	12 FOLSOM RD DERRY NH 03038 USA
0073	11608 SQUARE FEET	35/28 DERRY 13 FOLSOM RD	OWNER	CHARLES M COOPER	11 FOLSOM RD DERRY NH 03038 USA
0074	0.23 ACRES	35/27 DERRY 8 LACONIA AVENUE	OWNER	STINSON HILLS LLC	317 SOUTH RIVER RD BEDFORD NH 03110 USA
0075	0.18 ACRES	35/26 DERRY 6 LACONIA AVE	OWNER	EDWARD R ADAMS	16 FOLSOM RD DERRY NH 03038 USA
0075	0.18 ACRES	35/26 DERRY 6 LACONIA AVE	OWNER	THE SALVATION ARMY	10 FERRY ST CONCORD NH 03301 USA
0076	1.083 ACRES	35/5 DERRY 20 FOLSOM RD	OWNER	MARY E DERVISHIAN	PO BOX 57 DERRY NH 03038 USA
0077	0.83 ACRES	35/20 DERRY 19 FOLSOM RD	OWNER	BRADLEY A CARSON	8 LACONIA AVENUE DERRY NH 03038 USA
0078	5.592 ACRES	35/14-2 DERRY 1 MUNICIPAL DR.	OWNER	MARVIS A CARSON	8 LACONIA AVENUE DERRY NH 03038 USA
0079	0.83 ACRES	35/16 DERRY 72 CRYSTAL AVENUE	OWNER	NANCY CRAIG	6 LACONIA AVE DERRY NH 03038 USA
0080	1.18 ACRES	35/18 DERRY 68 CRYSTAL AVE	OWNER	GINA M BROWN	6 LACONIA AVE DERRY NH 03038 USA
0081	0.23 ACRES	35/17 DERRY 66 CRYSTAL AVE	OWNER	BRIAN & LAURA REAL ESTATE LLC	6 LACONIA AVE DERRY NH 03038 USA
0082	6.24 ACRES	32/25-3 DERRY 43.5 CRYSTAL AVE	OWNER	CYNTHIA MARIE ZARRELLI	20 FOLSOM RD DERRY NH 03038 USA
0083	39827 SQUARE FEET	36/20 DERRY 47 CRYSTAL AVE	OWNER	TOWN OF DERRY	15 ENGLISH RANGE RD DERRY NH 03038 USA
0084	2.73999 ACRES	36/19 DERRY 51 CRYSTAL AVE	OWNER	72 CRYSTAL AVENUE LLC	14 MANNING ST DERRY NH 03038 USA
0085	23.03 ACRES	36/17 DERRY 55 CRYSTAL AVE	OWNER	KENT NUTRITION GROUP, INC	720 LAFAYETTE RD SEABROOK NH 03874 USA
			OWNER	HIKI REALTY TRUST	10 FERRY ST CONCORD NH 03301 USA
			OWNER	H & B BERGGREN, LLC	66 CRYSTAL AVE DERRY NH 03038 USA
			OWNER	CRYSTAL DOT REALTY, LLC	74 GILCREAST RD LONDONDERRY NH 03053 USA
			OWNER	CHINA CASTLE INC	732 CHESTNUT ST MANCHESTER NH 03104 USA
			OWNER	HOOD COMMONS BSD LLC	34 BRANDYWYNE COMMON DERRY NH 03038 USA
					3 EXECUTIVE PARK DRIVE 201A BEDFORD NH 03110 USA

0086	1.13 ACRES	36/17-1 DERRY 57 CRYSTAL AVE	OWNER	BANK OF AMERICA	100 N TRYON ST CHARLOTTE NC 28202 USA
0087	3.062 ACRES	36/18 DERRY 61 CRYSTAL AVENUE	OWNER	61 CRYSTAL AVE, LLC	9 CAPITOL ST CONCORD NH 03301 USA
0087-1	1.375 ACRES	36/18-1 DERRY 42 PINKERTON ST	OWNER	PINKERTON-CRYSTAL LLC	2 1/2 BEACON ST CONCORD NH 03301 USA
0088	8.96 ACRES	08/269 DERRY 3 MANCHESTER RD	OWNER	FIREY INC	3 CAPITOL ST CONCORD NH 03301 USA
0089	32082 SQUARE FEET	36/22 DERRY 13 PINKERTON ST	OWNER	HOOKKROFT CONDOMINIUM	3 TSIENNETO RD DERRY NH 03038 USA
0090	48450 SQUARE FEET	36/24 DERRY 1 TSIENNETO RD	OWNER	HOOKKROFT CONDOMINIUM ASSOCIATION	3 TSIENNETO RD DERRY NH 03038 USA
0090-1	0.1 ACRES	8/ DERRY TSIENNETO RD	OWNER	HOOKKROFT ASSOCIATES INC	70 MARKET ST MANCHESTER NH 03101 USA
0091	19.826 ACRES	08/077 DERRY 5 TSIENNETO RD	OWNER	SUNVIEW CONDOMINIUM	3 HOLLAND WAY SUITE 201 EXETER NH 03833 USA
0092	47547 SQUARE FEET	08/078 DERRY 3 TSIENNETO RD	OWNER	HOOKKROFT CONDOMINIUM ASSOCIATION	3 TSIENNETO RD DERRY NH 03038 USA
0093	6.83 ACRES	08/079-1 DERRY 6 TSIENNETO ROAD	OWNER	TWO TSIENNETO ROAD REALTY, LLC	6 BUTTRICK RD LONDONDERRY NH 03053 USA
0094	3.6105 ACRES	08/079 DERRY 10 TSIENNETO RD	OWNER	THE MENTAL HEALTH CENTER FOR SOUTHERN NEW HAMPSHIRE	10 TSIENNETO RD DERRY NH 03038 USA
0095	34525 SQUARE FEET	08/076 DERRY 7 TSIENNETO RD	OWNER	THOMAS O MITCHELL REVOCABLE LIVING TRUST	43392 W HILLMAN DR MARICOPA AZ 85138 USA
0095-1	2.871 ACRES	8/73 DERRY 11 TSIENNETO RD	OWNER	11 TSIENNETO ROAD, LLC	6 BUTTRICK RD LONDONDERRY NH 03053 USA
0095-2	2.931 ACRES	8/74 DERRY 15 TSIENNETO RD	OWNER	CLOVER REAL ESTATE, LLC	6 BUTTRICK RD LONDONDERRY NH 03053 USA
0096	3.1845 ACRES	8/79-6 DERRY 12 TSIENNETO RD	OWNER	TSIENNETO FOURTEEN DEVELOPMENT LLC	12 TSIENNETO RD DERRY NH 03038 USA
0097	3.4569 ACRES	08/79-5 DERRY 14 TSIENNETO RD	OWNER	MONRO, INC	6 BUTTRICK RD LONDONDERRY NH 03053 USA
0098	1 ACRES	08/73-3 DERRY 17 TSIENNETO RD	OWNER	INTELTEK INC.	9 CAPITOL ST CONCORD NH 03301 USA
0099	5.37 ACRES	08/079-4 DERRY 18 TSIENNETO RD	OWNER	BETLEY CHEVROLET INC	39 CENTRAL SQUARE S204 KEENE NH 03431 USA
0100	3.708 ACRES	08/073-2 DERRY 19 TSIENNETO RD	OWNER	BETLEY CHEVROLET INC	1 LIBERTY LANE E HAMPTON NH 03842 USA
0101	5 ACRES	08/073-1 DERRY 50 NORTH MAIN STREET	OWNER	BETLEY CHEVROLET INC	1 LIBERTY LANE E HAMPTON NH 03842 USA
0102	7.327 ACRES	08/079-3 DERRY 24 TSIENNETO RD	OWNER	UNITED STATES POSTAL SERVICE	6 GRIFFIN RD N WINDSOR CT 06006 0300 USA
0103	2.20 ACRES	08/096 DERRY 55 BY-PASS 28	OWNER	IRVING OIL PROPERTIES NH CORP	9 CAPITOL STREET CONCORD NH 03301 USA
0104	7.151 ACRES	08/071 DERRY 53 NORTH MAIN ST	OWNER	TRINITY ASSEMBLY OF GOD INC	53 NORTH MAIN ST DERRY NH 03038 USA
0105	3.65 ACRES	08/096-1 DERRY 28 TSIENNETO RD	OWNER	ELLIOT MORE REALTY TRUST	58 OLD CENTER RD S DEERFIELD NH 03037-1409 USA
0106	6.441 ACRES	08/068-2 DERRY 31 TSIENNETO RD	OWNER	PINKERTON ACADEMY	58 OLD CENTER RD S DEERFIELD NH 03037-1409 USA
0107	3.45 ACRES	08/097 DERRY 30 TSIENNETO RD	OWNER	WILLIAM GERALD KENT JR	5 PINKERTON ST DERRY NH 03038 USA
0108	5.6 ACRES	08/68 DERRY 33 TSIENNETO RD	OWNER	PINKERTON ACADEMY	30 TSIENNETO RD DERRY NH 03038 USA
0109	1.15 ACRES	08/69 DERRY 32 TSIENNETO RD	OWNER	JOHN S TAYLOR	5 PINKERTON ST DERRY NH 03038 USA
0110	1.15 ACRES	08/69 DERRY 32 TSIENNETO RD	OWNER	ELISABETH H TAYLOR	32 TSIENNETO RD DERRY NH 03038 USA
0111	1.0319 ACRES	08/70 DERRY 34 TSIENNETO RD	OWNER	LARRY RIDER	32 TSIENNETO RD DERRY NH 03038 USA
0112	1.001 ACRES	08/67-1 DERRY 37 TSIENNETO RD	OWNER	JOHNNY P HAWKES	32 TSIENNETO RD DERRY NH 03038 USA
0112	1.001 ACRES	08/67-1 DERRY 37 TSIENNETO RD	OWNER	PETER D MOTSIS	37 TSIENNETO RD DERRY NH 03038 USA
0113	21.585 ACRES	08/38 DERRY 36 TSIENNETO RD	OWNER	VITO SOLIMINI REALTY TRUST	37 TSIENNETO RD DERRY NH 03038 USA
0114	4.40 ACRES	08/067 DERRY 39 TSIENNETO RD	OWNER	NICHOLAS P SAVVAS	14 MANNING ST DERRY NH 03038 USA
0115	1.34 ACRES	08/066 DERRY 41 TSIENNETO RD	OWNER	DAVID A FRASER JR	196 ROCKINGHAM RD LONDONDERRY NH 03053 USA
0116	1.00 ACRES	08/039 DERRY 42 TSIENNETO RD	OWNER	MARY ANN FRASER	41 TSIENNETO RD DERRY NH 03038 USA
0116	1.00 ACRES	08/039 DERRY 42 TSIENNETO RD	OWNER	LIFESTYLE HOMES OF DERRY NH LLC	42 TSIENNETO RD DERRY NH 03038 USA
0116-1	31.89 ACRES	8/39-4 DERRY 42 TSIENNETO ROAD	OWNER	PETER KLIM	42 TSIENNETO RD DERRY NH 03038 USA
0117	1.07 ACRES	08/066-1 DERRY 43 TSIENNETO RD	OWNER	ROBERT F RYZNAL	722 CHESTNUT ST MANCHESTER NH 03104 USA
0118	1.03 ACRES	08/066-2 DERRY 45 TSIENNETO RD	OWNER	LESUE A RYZNAL	12 OLD COACH RD LONDONDERRY NH 03053 USA
0118	1.03 ACRES	08/066-2 DERRY 45 TSIENNETO RD	OWNER	SAM SAAD	45 TSIENNETO RD DERRY NH 03038 USA
0119	1.51 ACRES	08/039-1 DERRY 44 TSIENNETO RD	OWNER	DASKAL FAMILY REVOCABLE TRUST OF 2007	45 TSIENNETO RD DERRY NH 03038 USA
0120	1.75 ACRES	08/039-2 DERRY 46 TSIENNETO RD	OWNER	49A & 49B TSIENNETO ROAD CONDOMINIUMS	44 TSIENNETO RD DERRY NH 03038 USA
0121	1.77 ACRES	08/066-4 DERRY 47 TSIENNETO RD	OWNER	SEREY S GINGRAS	47 TSIENNETO RD DERRY NH 03038 USA
0122	2.81 ACRES	08/066-3/L DERRY 49 L/R TSIENNETO RD	OWNER	ALAN M GINGRAS	49 L/R TSIENNETO RD DERRY NH 03038 USA
0123	1.75 ACRES	08/039-3 DERRY 48 TSIENNETO RD	OWNER	ROBERT MARSHALL	48 TSIENNETO RD DERRY NH 03038 USA
0123	1.75 ACRES	08/039-3 DERRY 48 TSIENNETO RD	OWNER	TOWN OF DERRY	48 TSIENNETO RD DERRY NH 03038 USA
0124	68200 SQUARE FEET	08/060 DERRY 50 TSIENNETO RD	OWNER	SHERRI L GILLULAND	50 TSIENNETO RD DERRY NH 03038 USA
0125	0.34 ACRES	8/60-2 DERRY 50.5 TSIENNETO RD	OWNER	STEVEN N GILLULAND	14 MANNING ST DERRY NH 03038 USA
0126	58008 SQUARE FEET	08/060-1 DERRY 52 TSIENNETO RD	OWNER	JUDITH HAMER REVOCABLE TRUST OF 2001	26 LAMPTON DR DERRY NH 03038 USA
0126	58008 SQUARE FEET	08/060-1 DERRY 52 TSIENNETO RD	OWNER	KEITH VASKELIONIS	26 LAMPTON DR DERRY NH 03038 USA
0127	2.23 ACRES	08/064 DERRY 57 TSIENNETO RD	OWNER	DONALD F WYNE	57 TSIENNETO RD DERRY NH 03038 USA
0128	2.00 ACRES	08/64-1 DERRY 59 TSIENNETO RD	OWNER	ROBERT B FERREIRA	59 TSIENNETO RD DERRY NH 03038 USA
0129	1.52 ACRES	08/61 DERRY 54 TSIENNETO RD	OWNER	DOUGLAS R FRENCH	54 TSIENNETO RD DERRY NH 03038 USA
0130	43562 SQUARE FEET	08/065-1 DERRY 61 TSIENNETO RD	OWNER	BRENDENA MAE FLEMING	23 PLUMMER CT EPPING NH 03040 USA
0131	1.11 ACRES	08/062 DERRY 63 TSIENNETO ROAD	OWNER	WILLIAM P FLEMING	56 TSIENNETO RD DERRY NH 03038 USA
0132	2.11 ACRES	08/062 DERRY 56 TSIENNETO RD	OWNER	65 TSIENNETO ROAD CONDOMINIUM ASSOCIATION	65 TSIENNETO RD DERRY NH 03038 USA
0132	2.11 ACRES	08/062 DERRY 56 TSIENNETO RD	OWNER	67 L AND 67 R TSIENNETO ROAD CONDOMINIUM ASSOCIATION	67 L/R TSIENNETO RD DERRY NH 03038 USA
0133	43564 SQUARE FEET	08/065-3/L R DERRY 65 L/R TSIENNETO RD	OWNER		
0134	1.00 ACRES	08/065-4/L R DERRY 67 L/R TSIENNETO RD	OWNER		

0135	1.0 ACRES	08/063-5L/R DERRY 69 L/R TSIENNETO RD	OWNER	69 TSIENNETO ROAD CONDOMINIUM ASSOCIATION	69 L/R TSIENNETO RD DERRY NH 03038 USA
0136	4361.4 SQUARE FEET	08/063-6L/R DERRY 71 L/R TSIENNETO RD	OWNER	71 TSIENNETO ROAD CONDOMINIUM ASSOCIATION	71 L/R TSIENNETO RD DERRY NH 03038 USA
0137	0.68 ACRES	54/94 DERRY 1 HORSHOE DRIVE	OWNER	NANCY FORTIER	1 HORSHOE DRIVE DERRY NH 03038 USA
0138	0.68 ACRES	54/94 DERRY 1 HORSHOE DRIVE	OWNER	JAMES BERGERON	1 HORSHOE DRIVE DERRY NH 03038 USA
0139	4647.7 SQUARE FEET	54/95 DERRY 60 TSIENNETO ROAD	OWNER	JESSICA L SANROMA	60 TSIENNETO RD DERRY NH 03038 USA
0140	0.63 ACRES	54/97 DERRY 64 TSIENNETO RD	OWNER	73 TSIENNETO ROAD CONDOMINIUM ASSOCIATION	73 L/R TSIENNETO RD DERRY NH 03038 USA
0141	1.10 ACRES	50/20-2 DERRY 75 TSIENNETO RD	OWNER	AMIE AVILA	64 TSIENNETO RD DERRY NH 03038 USA
0142	0.71 ACRES	54/98 DERRY 66 TSIENNETO RD	OWNER	PAUL GOULET	75 TSIENNETO RD DERRY NH 03038 USA
0143	1.15 ACRES	54/98 DERRY 66 TSIENNETO RD	OWNER	PAUL GOULET	66 TSIENNETO RD DERRY NH 03038 USA
0144	0.98 ACRES	50/20-1 DERRY 77 TSIENNETO RD	OWNER	RITA GOULET	66 TSIENNETO RD DERRY NH 03038 USA
0145	1.91 ACRES	55/06 DERRY 68 TSIENNETO RD	OWNER	ELIAS GERJES	77 TSIENNETO RD DERRY NH 03038 USA
0146	1.25 ACRES	55/05 DERRY 79 TSIENNETO RD	OWNER	MARGARET V DEGROOT 2014 TRUST	1 TSIENNETO ROAD DERRY NH 03038 USA
0146	1.25 ACRES	55/07 DERRY 70 TSIENNET RD	OWNER	CHRISTOPHER M CONLEY	79 TSIENNETO RD DERRY NH 03038 USA
0146	1.25 ACRES	55/07 DERRY 70 TSIENNET RD	OWNER	JESSICA L CONLEY	103 CLUFF CROSSING RD SALEM NH 03079 USA
0147	1.05 ACRES	55/08 DERRY 72 TSIENNETO RD	OWNER	CHRISTOPHER HUTCHINSON	103 CLUFF CROSSING RD SALEM NH 03079 USA
0147	1.05 ACRES	55/08 DERRY 72 TSIENNETO RD	OWNER	LEIGH A HUTCHINSON	72 TSIENNETO RD DERRY NH 03038 USA
0148	1.28 ACRES	55/13 DERRY 83 TSIENNETO RD	OWNER	TIMOTHY M DUQUETTE	83 TSIENNETO RD DERRY NH 03038 USA
0149	0.49 ACRES	55/14 DERRY 7 BEAVER RD	OWNER	SARAH GILLIAM	7 BEAVER RD DERRY NH 03038 USA
0149	0.49 ACRES	55/14 DERRY 7 BEAVER RD	OWNER	ALISON POTOMIA	7 BEAVER RD DERRY NH 03038 USA
0150	6692.6 SQUARE FEET	08/041-2 DERRY 74 TSIENNETO RD	OWNER	LISA MARCOTTE	74 TSIENNETO RD DERRY NH 03038 USA
0150	6692.6 SQUARE FEET	08/041-2 DERRY 74 TSIENNETO RD	OWNER	RONALD P MARCOTTE	74 TSIENNETO RD DERRY NH 03038 USA
0151	5.0 ACRES	55/12-1 DERRY 85 TSIENNETO RD	OWNER	THE KEVIN AND CAROL LANG JOINT REVOCABLE TRUST	2 TANGLEWOOD DR RAYMOND NH 03077 USA
0152	1.52 ACRES	08/041-1 DERRY 76 TSIENNETO RD	OWNER	JUDITH E GENDREAU	80 TSIENNETO RD DERRY NH 03038 USA
0153	2.00 ACRES	08/041-3 DERRY 80 TSIENNETO RD	OWNER	CLAYTON SOUCY	76 TSIENNETO RD DERRY NH 03038 USA
0153	2.00 ACRES	08/041-3 DERRY 80 TSIENNETO RD	OWNER	ANNA SOUCY	80 TSIENNETO RD DERRY NH 03038 USA
0154	1.21 ACRES	55/12 DERRY 87 TSIENNETO RD	OWNER	ROBIN M MCROBBIE	87 TSIENNETO RD DERRY NH 03038 USA
0154	1.21 ACRES	55/12 DERRY 87 TSIENNETO RD	OWNER	JOYCE E MCROBBIE	87 TSIENNETO RD DERRY NH 03038 USA
0155	2.13 ACRES	08/042-1 DERRY 84 TSIENNETO RD	OWNER	ROBERT T MCROBBIE	87 TSIENNETO RD DERRY NH 03038 USA
0156	2.01 ACRES	55/11 DERRY 91 TSIENNETO RD	OWNER	ELEANOR M DEGROOT	125 SUMMER ST BOSTON MA 02110 USA
0158	0.33 ACRES	55/10 DERRY 93 TSIENNETO RD	OWNER	CHASE IRREVOCABLE FAMILY TRUST	91 TSIENNETO RD DERRY NH 03038 USA
0159	2.0 ACRES	08/042-2 DERRY 88 TSIENNETO RD	OWNER	JULIE AMBER LABRIE	125 SUMMER ST BOSTON MA 02110 USA
0159	2.0 ACRES	08/042-2 DERRY 88 TSIENNETO RD	OWNER	THOMAS JAMES GREENFIELD	88 TSIENNETO RD DERRY NH 03038 USA
0160	0.66 ACRES	55/09 DERRY 95 TSIENNETO ROAD	OWNER	RICHARD W WATTS	PO BOX 261 EAST DERRY NH 03041 USA
0161	27.00 ACRES	08/043 DERRY 90 TSIENNETO RD	OWNER	TRINITY ASSEMBLY OF GOD CHURCH	53 NORTH MAIN STREET LONDONDERRY NH 03038 USA
0162	4677.8 SQUARE FEET	08/044 DERRY 92 TSIENNETO RD	OWNER	BENJAMIN BOUCHARD	92 TSIENNETO RD DERRY NH 03038 USA
0163	1.53 ACRES	55/21 DERRY 84 CHESTER RD	OWNER	DANIEL JACKSON	84 CHESTER RD DERRY NH 03038 USA
0163	1.53 ACRES	55/21 DERRY 84 CHESTER RD	OWNER	MEGAN M RAYMOND	84 CHESTER RD DERRY NH 03038 USA
0164	1.15 ACRES	55/11-1 DERRY 80 CHESTER RD	OWNER	JOHN G DEGROOT	80 CHESTER RD DERRY NH 03038 USA
0164-1	1.272 ACRES	55/12-3 DERRY 76 CHESTER RD	OWNER	KATHRYN NORA COYLE	74 CHESTER RD DERRY NH 03038 USA
0164-1	1.272 ACRES	55/12-3 DERRY 76 CHESTER RD	OWNER	KEVIN LONGREN COYLE	74 CHESTER RD DERRY NH 03038 USA
0165	0.70 ACRES	55/45-1 DERRY 85.5 CHESTER RD	OWNER	DIANA L TOMPKINS REVOCABLE TRUST	85 1/2 CHESTER RD DERRY NH 03038 USA
0165-1	2.31 ACRES	55/45 DERRY 87 CHESTER RD	OWNER	VORSTVELD FAMILY TRUST	87 CHESTER RD DERRY NH 03038 USA
0165-2	0.91 ACRES	55/46 DERRY 85 CHESTER RD	OWNER	JUDITH E VICTORY	85 CHESTER RD DERRY NH 03038 USA
0165-2	0.91 ACRES	55/46 DERRY 85 CHESTER RD	OWNER	MARK F VICTORY	85 CHESTER RD DERRY NH 03038 USA
0166	0.67 ACRES	55/44 DERRY 91 CHESTER RD	OWNER	JANICE M ARGIRO	100 ENGLISH RANGE RD DERRY NH 03038 USA
0166	0.67 ACRES	55/44 DERRY 91 CHESTER RD	OWNER	MARY A JAMES	100 ENGLISH RANGE RD DERRY NH 03038 USA
0167	1.08 ACRES	55/43-1 DERRY 93 CHESTER RD	OWNER	KATHLEEN CIRCEO	93 CHESTER RD DERRY NH 03038 USA
0167	1.08 ACRES	55/43-1 DERRY 93 CHESTER RD	OWNER	EDWARD CIRCEO	93 CHESTER RD DERRY NH 03038 USA
0168	1.01 ACRES	55/43 DERRY 1 NORTH SHORE RD	OWNER	JUAN M MAS	1 NORTH SHORE RD DERRY NH 03038 USA
0168	1.01 ACRES	55/43 DERRY 1 NORTH SHORE RD	OWNER	KIMBERLY OSIER	1 NORTH SHORE RD DERRY NH 03038 USA
0169	67331 SQUARE FEET	08/044-1 DERRY 92 CHESTER RD	OWNER	TAMMY L ROY	92 CHESTER RD DERRY NH 03038 USA
0169	67331 SQUARE FEET	08/044-1 DERRY 92 CHESTER RD	OWNER	JEAN-ROCH C ROY	92 CHESTER RD DERRY NH 03038 USA
0170	57885 SQUARE FEET	12/10-1 DERRY 99 CHESTER RD	OWNER	ANDRE LIQUI	99 CHESTER RD DERRY NH 03038 USA
0171	66980 SQUARE FEET	12/10-4 DERRY 101 CHESTER RD	OWNER	SCOTT C MCCAIN	101 CHESTER RD DERRY NH 03038 USA
0171	66980 SQUARE FEET	12/10-4 DERRY 101 CHESTER RD	OWNER	ANDREA F MCCAIN	101 CHESTER RD DERRY NH 03038 USA
0172	2.72 ACRES	08/045 DERRY 101 ENGLISH RANGE RD	OWNER	BRENDA ABRUZZESE	101 ENGLISH RANGE RD DERRY NH 03038 USA
0172	2.72 ACRES	08/045 DERRY 101 ENGLISH RANGE RD	OWNER	JOSEPH ABRUZZESE	101 ENGLISH RANGE RD DERRY NH 03038 USA
0173	41700 SQUARE FEET	12/11 DERRY 96 CHESTER RD	OWNER	LEE C LITTLEFIELD	96 CHESTER RD DERRY NH 03038 USA
0173	41700 SQUARE FEET	12/11 DERRY 96 CHESTER RD	OWNER	BRENDA-LEE C EDWARDS	96 CHESTER RD DERRY NH 03038 USA

0174	2.23 ACRES	12/10-5 DERRY 105 CHESTER RD	OWNER	KATHELEEN D VEAUDRY	105 CHESTER RD DERRY NH 03038 USA
0175	2.14 ACRES	12/10-6 DERRY 107 CHESTER RD	OWNER	THE STAMM FAMILY TRUST	18 HENRY DRIVE HUDSON NH 03051 USA
0176	1.04 ACRES	12/12-1 DERRY 98 CHESTER RD	OWNER	ANN G MCCLELLAN	98 CHESTER RD DERRY NH 03038 USA
0177	1.13 ACRES	12/10-7 DERRY 109 CHESTER RD	OWNER	NILUFER C HARRIS	109 CHESTER RD DERRY NH 03038 USA
07/023	34.29 ACRES	07/023 DERRY 4 GILL ROAD	OWNER	OSSAMAE SAKR	18 PLEASANT VALLEY ROAD AMESBURY MA 01913-4510 USA
10/29C-2	2.374 ACRES	10/29C-2 LONDON DERRY 32 TROLLEY CAR LANE	OWNER	32 TROLLEY CAR LANE CONDOMINIUM ASSOC	214 N MAIN ST CONCORD NH 03301 USA
10/33	0.37 ACRES	10/33 LONDON DERRY 1 TROLLEY CAR LANE	OWNER	TRACEY A OLIVERIO	1 TROLLEY CAR LN LONDON DERRY NH 03038 USA
10/33	0.37 ACRES	10/33 LONDON DERRY 1 TROLLEY CAR LANE	OWNER	CHRIS M OLIVERIO	1 TROLLEY CAR LN LONDON DERRY NH 03038 USA
10/45	28.00 ACRES	10/45 LONDON DERRY 42 ASH STREET	OWNER	PILLSBURY REALTY DEVELOPMENT, LLC.	214 N MAIN ST CONCORD NH 03301 USA
10/47	9.00 ACRES	10/47 LONDON DERRY 2 ASH STREET	OWNER	PILLSBURY REALTY DEVELOPMENT, LLC.	214 N MAIN ST CONCORD NH 03301 USA
158	0.33 ACRES	55/10 DERRY 93 TSIENNETO RD	OWNER	MARCO BONENFANT	214 N MAIN ST CONCORD NH 03301 USA
31/05-1	17586 SQUARE FEET	31/05-1 DERRY 68 NORTH HIGH ST	OWNER	STEPHANIE L FOSTER	68 NORTH HIGH ST DERRY NH 03038 USA
31/05-1	17586 SQUARE FEET	31/05-1 DERRY 68 NORTH HIGH ST	OWNER	MATTHEW E MURPHY	68 NORTH HIGH ST DERRY NH 03038 USA
31/10	0.98 ACRES	31/10 DERRY 6 MADDEN ROAD	OWNER	EDWARD BRODERICK	6 MADDEN ROAD DERRY NH 03038 USA
31/10	0.98 ACRES	31/10 DERRY 6 MADDEN ROAD	OWNER	MARY E BRODERICK	6 MADDEN ROAD DERRY NH 03038 USA
31/18	17150.00 SQUARE FEET	31/18 DERRY 1 FERLAND DR	OWNER	PATRICIA A BUBERT	21 MONTGOMERY FARM RD DERRY NH 03038 USA
31/18	17150.00 SQUARE FEET	31/18 DERRY 1 FERLAND DR	OWNER	HERBERT A BUBERT JR	21 MONTGOMERY FARM RD DERRY NH 03038 USA
31/64	.66 ACRES	31/64 DERRY 79 FRANKLIN ST	OWNER	JAMES M SMITH	79 FRANKLIN ST DERRY NH 03038 USA
35/05-1	0.51 ACRES	35/05-1 DERRY 109 FRANKLIN STREET	OWNER	FRANKLIN DERRY LIMITED PARTNERSHIP	500 VICTORY ROAD N QUINCY MA 02171 USA
35/101	3.63 ACRES	35/101 DERRY FRANKLIN ST RR-ROW	OWNER	STATE OF NEW HAMPSHIRE	PO BOX 856 CONCORD NH 03301 USA
35/3	4.0 ACRES	35/3 DERRY 120 FRANKLIN ST EXT.	OWNER	HYRAX DERRY PARTNERS LLC	214 N MAIN STREET CONCORD NH 03301 USA
54/93	25010 SQUARE FEET	54/93 DERRY 3 HORSESHOE DR	OWNER	JUDITH G MOODY	3 HORSESHOE DR DERRY NH 03038 USA
54/93	25010 SQUARE FEET	54/93 DERRY 3 HORSESHOE DR	OWNER	JOHN H MOODY	3 HORSESHOE DR DERRY NH 03038 USA
54/96	0.63 ACRES	54/96 DERRY 62 TSIENNETO RD	OWNER	EDWIN ARROYO	62 TSIENNETO RD DERRY NH 03038 USA
55/8-1	30000 SQUARE FEET	55/8-1 DERRY 1 SCENIC DR	OWNER	MARIE TRUDEL	1 SCENIC DR DERRY NH 03038 USA
55/8-1	30000 SQUARE FEET	55/8-1 DERRY 1 SCENIC DR	OWNER	GEORGE TRUDEL	1 SCENIC DR DERRY NH 03038 USA
8/065	1.78 ACRES	8/065 DERRY 53 TSIENNETO RD	OWNER	ROBERT & LESLIE DOMBROSKI REVOCABLE TRUST	53 TSIENNETO RD DERRY NH 03038 USA
8/065-1	2.45 ACRES	8/065-1 DERRY 51 TSIENNETO RD	OWNER	ROBERT & LESLIE DOMBROSKI REVOCABLE TRUST	51 TSIENNETO RD DERRY NH 03038 USA
8/272	10.03 ACRES	8/272 DERRY 7 MANCHESTER RD	OWNER	HADCO CORPORATION	2700 N. FIRST STREET SAN JOSE CA 95134 USA

Attachment E

**US Army Corps of Engineers (USACE)
Wetland Determination Data Forms**

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/25/19
 Applicant/Owner: NHDOT State: NH Sampling Point: W11 Up
 Investigator(s): W. McCloy Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Top of small ridge Local relief (concave, convex, none): Convex Slope %: 1-4
 Subregion (LRR or MLRA): LRR R Lat: 42.88936 Long: -71.354401 Datum: WGS84
 Soil Map Unit Name: Chatfield-Hollis-Canton complex, 8-15 percent slopes, rocky NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Upland plot is for W11 and W66	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/25/19
 Applicant/Owner: NHDOT State: NH Sampling Point: W11 Wet
 Investigator(s): W. McCloy Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 1-4
 Subregion (LRR or MLRA): LRR R Lat: 42.889482 Long: -71.354586 Datum: WGS84
 Soil Map Unit Name: Chatfield-Hollis-Canton complex, 8-15 percent slopes, rocky NWI classification: PFO1E
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) <u>X</u> Water-Stained Leaves (B9) <u>X</u> High Water Table (A2) _____ Aquatic Fauna (B13) <u>X</u> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <u>X</u> Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>2</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Saturated at surface; water table at 2 inch depth; also a depression; located adjacent to I93 highway recent work/expansion

VEGETATION – Use scientific names of plants.

Sampling Point: W11 Wet

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80.0%</u> (A/B)																
1. <u>Acer rubrum</u>	<u>80</u>	Yes	FAC																	
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>80</u>	=Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15</u>)																				
1. <u>Carpinus caroliniana</u>	<u>5</u>	Yes	FAC																	
2. <u>Hamamelis virginiana</u>	<u>5</u>	Yes	FACU																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>10</u>	=Total Cover																		
Herb Stratum (Plot size: <u>5</u>)																				
1. <u>Glyceria striata</u>	<u>40</u>	Yes	OBL																	
2. <u>Solidago rugosa</u>	<u>10</u>	Yes	FAC																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	<u>50</u>	=Total Cover																		
Woody Vine Stratum (Plot size: <u>15</u>)																				
1. <u>None</u>																				
2. _____																				
3. _____																				
4. _____																				
		=Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.)				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Total % Cover of:</th> <th style="width:50%;">Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>40</u></td> <td>x 1 = <u>40</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>95</u></td> <td>x 3 = <u>285</u></td> </tr> <tr> <td>FACU species <u>5</u></td> <td>x 4 = <u>20</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>140</u> (A)</td> <td><u>345</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>2.46</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>40</u>	x 1 = <u>40</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>95</u>	x 3 = <u>285</u>	FACU species <u>5</u>	x 4 = <u>20</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>140</u> (A)	<u>345</u> (B)	Prevalence Index = B/A = <u>2.46</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>40</u>	x 1 = <u>40</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>95</u>	x 3 = <u>285</u>																			
FACU species <u>5</u>	x 4 = <u>20</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>140</u> (A)	<u>345</u> (B)																			
Prevalence Index = B/A = <u>2.46</u>																				
				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/25/19
 Applicant/Owner: NHDOT State: NH Sampling Point: W13 Up
 Investigator(s): W. McCloy Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope %: 5-10
 Subregion (LRR or MLRA): LRR R Lat: 42.888423 Long: -71.353263 Datum: _____
 Soil Map Unit Name: Chatfield-Hollis-Canton complex, 8-15 percent slopes, rocky NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No hydrology indicators present

VEGETATION – Use scientific names of plants.

Sampling Point: W13 Up

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30</u>)				<p>Dominance Test worksheet:</p> <p>Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>6</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)</p> <p>Prevalence Index worksheet:</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; text-align: center;">Total % Cover of:</td> <td style="width:50%; text-align: center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>5</u></td> <td>x 2 = <u>10</u></td> </tr> <tr> <td>FAC species <u>15</u></td> <td>x 3 = <u>45</u></td> </tr> <tr> <td>FACU species <u>148</u></td> <td>x 4 = <u>592</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>168</u> (A)</td> <td><u>647</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>3.85</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>5</u>	x 2 = <u>10</u>	FAC species <u>15</u>	x 3 = <u>45</u>	FACU species <u>148</u>	x 4 = <u>592</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>168</u> (A)	<u>647</u> (B)	Prevalence Index = B/A = <u>3.85</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>5</u>	x 2 = <u>10</u>																			
FAC species <u>15</u>	x 3 = <u>45</u>																			
FACU species <u>148</u>	x 4 = <u>592</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>168</u> (A)	<u>647</u> (B)																			
Prevalence Index = B/A = <u>3.85</u>																				
1. <u>Quercus alba</u>	30	Yes	FACU																	
2. <u>Betula papyrifera</u>	10	Yes	FACU																	
3. <u>Pinus strobus</u>	5	No	FACU																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	45	=Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15</u>)																				
1. <u>Vaccinium corymbosum</u>	5	No	FACW																	
2. <u>Acer rubrum</u>	10	No	FAC																	
3. <u>Pinus strobus</u>	3	No	FACU																	
4. <u>Hamamelis virginiana</u>	40	Yes	FACU																	
5. _____																				
6. _____																				
7. _____																				
	58	=Total Cover																		
Herb Stratum (Plot size: <u>5</u>)																				
1. <u>Pinus strobus</u>	5	No	FACU																	
2. <u>Mitchella repens</u>	30	Yes	FACU																	
3. <u>Gaultheria procumbens</u>	10	Yes	FACU																	
4. <u>Betula papyrifera</u>	5	No	FAC																	
5. <u>Quercus alba</u>	10	Yes	FACU																	
6. <u>Vaccinium angustifolium</u>	5	No	FACU																	
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	65	=Total Cover																		
Woody Vine Stratum (Plot size: <u>15</u>)																				
1. <u>None</u>																				
2. _____																				
3. _____																				
4. _____																				
			=Total Cover																	
<p>Remarks: (Include photo numbers here or on a separate sheet.)</p>																				

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤3.0¹

 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/25/19
 Applicant/Owner: NHDOT State: NH Sampling Point: W13 Wet
 Investigator(s): W. McCloy Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 1-4
 Subregion (LRR or MLRA): LRR R Lat: 42.888262 Long: -71.353076 Datum: WGS84
 Soil Map Unit Name: Chatfield-Hollis-Canton complex, 8-15 percent slopes, rocky NWI classification: PFO1E
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) <u>X</u> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ <u>X</u> Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>13</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>2</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Saturated at 2 inches of depth, also a depression; located adjacent to I93 highway recent work/expansion

VEGETATION – Use scientific names of plants.

Sampling Point: W13 Wet

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30</u>)																				
1. <u><i>Acer rubrum</i></u>	<u>30</u>	<u>Yes</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	<u>30</u>	=Total Cover		Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="text-align:center;">Total % Cover of:</td> <td style="text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>15</u></td> <td>x 1 = <u>15</u></td> </tr> <tr> <td>FACW species <u>105</u></td> <td>x 2 = <u>210</u></td> </tr> <tr> <td>FAC species <u>50</u></td> <td>x 3 = <u>150</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>170</u></td> <td>(A) <u>375</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>2.21</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>15</u>	x 1 = <u>15</u>	FACW species <u>105</u>	x 2 = <u>210</u>	FAC species <u>50</u>	x 3 = <u>150</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>170</u>	(A) <u>375</u> (B)	Prevalence Index = B/A = <u>2.21</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>15</u>	x 1 = <u>15</u>																			
FACW species <u>105</u>	x 2 = <u>210</u>																			
FAC species <u>50</u>	x 3 = <u>150</u>																			
FACU species <u>0</u>	x 4 = <u>0</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>170</u>	(A) <u>375</u> (B)																			
Prevalence Index = B/A = <u>2.21</u>																				
Sapling/Shrub Stratum (Plot size: <u>15</u>)																				
1. <u><i>Vaccinium corymbosum</i></u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u><i>Acer rubrum</i></u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	<u>40</u>	=Total Cover																		
Herb Stratum (Plot size: <u>5</u>)																				
1. <u><i>Onoclea sensibilis</i></u>	<u>25</u>	<u>Yes</u>	<u>FACW</u>	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes <u>X</u> No _____																
2. <u><i>Thelypteris palustris</i></u>	<u>60</u>	<u>Yes</u>	<u>FACW</u>																	
3. <u><i>Carex comosa</i></u>	<u>15</u>	<u>No</u>	<u>OBL</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
	<u>100</u>	=Total Cover																		
Woody Vine Stratum (Plot size: <u>15</u>)																				
1. <u>None</u>																				
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
			=Total Cover																	
Remarks: (Include photo numbers here or on a separate sheet.)																				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/25/19
 Applicant/Owner: NHDOT State: NH Sampling Point: W14 Up
 Investigator(s): W. McCloy Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope %: 5-10
 Subregion (LRR or MLRA): LRR R Lat: 42.885823 Long: -71.35045 Datum: WGS84
 Soil Map Unit Name: Chatfield-Hollis-Canton complex, 8-14 percent slopes, rocky NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) ? _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: No hydrology indicators present	

VEGETATION – Use scientific names of plants.

Sampling Point: W14 Up

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30</u>)																				
1. <u><i>Acer saccharum</i></u>	60	Yes	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B)																
2. <u><i>Pinus strobus</i></u>	20	Yes	FACU																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	80	=Total Cover		Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="text-align:right;">Total % Cover of:</td> <td style="text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>20</u></td> <td>x 3 = <u>60</u></td> </tr> <tr> <td>FACU species <u>93</u></td> <td>x 4 = <u>372</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>113</u></td> <td>(A) <u>432</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>3.82</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>20</u>	x 3 = <u>60</u>	FACU species <u>93</u>	x 4 = <u>372</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>113</u>	(A) <u>432</u> (B)	Prevalence Index = B/A = <u>3.82</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>20</u>	x 3 = <u>60</u>																			
FACU species <u>93</u>	x 4 = <u>372</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>113</u>	(A) <u>432</u> (B)																			
Prevalence Index = B/A = <u>3.82</u>																				
Sapling/Shrub Stratum (Plot size: <u>15</u>)																				
1. <u><i>Carpinus caroliniana</i></u>	20	Yes	FAC																	
2. <u><i>Fraxinus americana</i></u>	3	No	FACU																	
3. <u><i>Ostrya virginiana</i></u>	5	No	FACU																	
4. <u><i>Hamamelis virginiana</i></u>	5	No	FACU																	
5. _____																				
6. _____																				
7. _____																				
	33	=Total Cover																		
Herb Stratum (Plot size: <u>5</u>)																				
1. <u><i>None in plot</i></u>				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. _____																				
3. _____																				
4. _____			FAC																	
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
Woody Vine Stratum (Plot size: <u>15</u>)																				
1. <u><i>None</i></u>				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
2. _____																				
3. _____																				
4. _____																				
<table style="width:100%; border:none;"> <tr> <td style="width:60%;"></td> <td style="width:20%; text-align:center;">Hydrophytic Vegetation Present?</td> <td style="width:10%; text-align:center;">Yes <u> </u></td> <td style="width:10%; text-align:center;">No <u> X</u></td> </tr> </table>						Hydrophytic Vegetation Present?	Yes <u> </u>	No <u> X</u>												
	Hydrophytic Vegetation Present?	Yes <u> </u>	No <u> X</u>																	
Remarks: (Include photo numbers here or on a separate sheet.) Very sparse herbaceous layer, none in plot																				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/25/19
 Applicant/Owner: NHDOT State: NH Sampling Point: W14 Wet
 Investigator(s): W. McCloy Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 1-4
 Subregion (LRR or MLRA): LRR R Lat: 42.885766 Long: -71.350299 Datum: WGS84
 Soil Map Unit Name: Scituate-Newfields complete, 3 to 8 % slopes, very stony NWI classification: PFO1/2E
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) <u>X</u> High Water Table (A2) _____ Aquatic Fauna (B13) <u>X</u> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Wetland saturated at the surface with the water table at the surface as well

VEGETATION – Use scientific names of plants.

Sampling Point: W14 Wet

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
1. <u>Acer rubrum</u>	<u>75</u>	<u>Yes</u>	<u>FAC</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
			<u>75</u> =Total Cover																	
Sapling/Shrub Stratum (Plot size: <u>15</u>)																				
1. <u>Lindera benzoin</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>	Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Total % Cover of:</th> <th style="width:50%;">Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>102</u></td> <td>x 1 = <u>102</u></td> </tr> <tr> <td>FACW species <u>40</u></td> <td>x 2 = <u>80</u></td> </tr> <tr> <td>FAC species <u>96</u></td> <td>x 3 = <u>288</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>238</u> (A)</td> <td><u>470</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>1.97</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>102</u>	x 1 = <u>102</u>	FACW species <u>40</u>	x 2 = <u>80</u>	FAC species <u>96</u>	x 3 = <u>288</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>238</u> (A)	<u>470</u> (B)	Prevalence Index = B/A = <u>1.97</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>102</u>	x 1 = <u>102</u>																			
FACW species <u>40</u>	x 2 = <u>80</u>																			
FAC species <u>96</u>	x 3 = <u>288</u>																			
FACU species <u>0</u>	x 4 = <u>0</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>238</u> (A)	<u>470</u> (B)																			
Prevalence Index = B/A = <u>1.97</u>																				
2. <u>Fraxinus pennsylvanica</u>	<u>10</u>	<u>No</u>	<u>FACW</u>																	
3. <u>Acer rubrum</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
			<u>60</u> =Total Cover																	
Herb Stratum (Plot size: <u>5</u>)																				
1. <u>Carex comosa</u>	<u>50</u>	<u>Yes</u>	<u>OBL</u>																	
2. <u>Glyceria striata</u>	<u>50</u>	<u>Yes</u>	<u>OBL</u>																	
3. <u>Equisetum fluviatile</u>	<u>2</u>	<u>No</u>	<u>OBL</u>																	
4. <u>Aster sp</u>	<u>1</u>	<u>No</u>	<u>FAC</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
			<u>103</u> =Total Cover																	
Woody Vine Stratum (Plot size: <u>15</u>)																				
1. <u>None</u>	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
			_____ =Total Cover																	
Remarks: (Include photo numbers here or on a separate sheet.) Unsure of aster ID; however not a dominant part of herb community in wetland plot																				
Hydrophytic Vegetation Present? Yes <u>X</u> No _____																				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/15/19

Applicant/Owner: NHDOT State: NH Sampling Point: W15-UPL

Investigator(s): B. Griffith Section, Township, Range: _____

Landform (hillside, terrace, etc.): Mound Local relief (concave, convex, none): Convex Slope %: 5

Subregion (LRR or MLRA): LRR R Lat: 42.88411468 Long: -71.34652217 Datum: WGS84

Soil Map Unit Name: Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Unusually Dry, heavily modified by interstate widening. Plot collocated with W16-UPL	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No _____ Depth (inches): _____ Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W15-UPL

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30' R</u>)																				
1. <u>Quercus rubra</u>	5	Yes	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	5	=Total Cover		Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:center;">Total % Cover of:</td> <td style="width:50%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>65</u></td> <td>x 4 = <u>260</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>65</u> (A)</td> <td><u>260</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>4.00</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>65</u>	x 4 = <u>260</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>65</u> (A)	<u>260</u> (B)	Prevalence Index = B/A = <u>4.00</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>65</u>	x 4 = <u>260</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>65</u> (A)	<u>260</u> (B)																			
Prevalence Index = B/A = <u>4.00</u>																				
Sapling/Shrub Stratum (Plot size: <u>15' R</u>)																				
1. <u>Hamamelis virginiana</u>	20	Yes	FACU																	
2. <u>Quercus rubra</u>	10	Yes	FACU																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	30	=Total Cover																		
Herb Stratum (Plot size: <u>5' R</u>)																				
1. <u>Gaultheria procumbens</u>	20	Yes	FACU	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Prunus serotina</u>	5	No	FACU																	
3. <u>Vaccinium angustifolium</u>	5	No	FACU																	
4. <u>Aronia</u>	1	No																		
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	31	=Total Cover																		
Woody Vine Stratum (Plot size: <u>30' R</u>)																				
1. _____																				
2. _____																				
3. _____																				
4. _____																				
		=Total Cover																		
				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
				Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u>																
Remarks: (Include photo numbers here or on a separate sheet.)																				

SOIL

Sampling Point W15-UPL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type	Loc ²		
0-3	10YR 3/1	100					Sandy	
3-10	10YR 5/6	100					Sandy	

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/15/2019

Applicant/Owner: NHDOT State: NH Sampling Point: W15-WET

Investigator(s): B. Griffith Section, Township, Range: _____

Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0

Subregion (LRR or MLRA): LRR R Lat: 42.88391593 Long: -71.34635889 Datum: WGS84

Soil Map Unit Name: Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Unusually dry	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ X Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ X Microtopographic Relief (D4) ___ X FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W15-WET

	Absolute % Cover	Dominant Species?	Indicator Status																									
Tree Stratum (Plot size: <u>30' R</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																								
1. <u>Acer rubrum</u>	30	Yes	FAC																									
2. _____																												
3. _____																												
4. _____																												
5. _____																												
6. _____																												
7. _____																												
<u>30</u> =Total Cover				Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%;"></td> <td style="width:25%; text-align:center">Total % Cover of:</td> <td style="width:25%; text-align:center">Multiply by:</td> </tr> <tr> <td>OBL species</td> <td style="text-align:center"><u>75</u></td> <td style="text-align:center">x 1 = <u>75</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align:center"><u>22</u></td> <td style="text-align:center">x 2 = <u>44</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align:center"><u>35</u></td> <td style="text-align:center">x 3 = <u>105</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align:center"><u>0</u></td> <td style="text-align:center">x 4 = <u>0</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align:center"><u>0</u></td> <td style="text-align:center">x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals:</td> <td style="text-align:center"><u>132</u> (A)</td> <td style="text-align:center"><u>224</u> (B)</td> </tr> <tr> <td colspan="3" style="text-align:center">Prevalence Index = B/A = <u>1.70</u></td> </tr> </table>		Total % Cover of:	Multiply by:	OBL species	<u>75</u>	x 1 = <u>75</u>	FACW species	<u>22</u>	x 2 = <u>44</u>	FAC species	<u>35</u>	x 3 = <u>105</u>	FACU species	<u>0</u>	x 4 = <u>0</u>	UPL species	<u>0</u>	x 5 = <u>0</u>	Column Totals:	<u>132</u> (A)	<u>224</u> (B)	Prevalence Index = B/A = <u>1.70</u>		
	Total % Cover of:	Multiply by:																										
OBL species	<u>75</u>	x 1 = <u>75</u>																										
FACW species	<u>22</u>	x 2 = <u>44</u>																										
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Column Totals:	<u>132</u> (A)	<u>224</u> (B)																										
Prevalence Index = B/A = <u>1.70</u>																												
Sapling/Shrub Stratum (Plot size: <u>15' R</u>)																												
1. <u>Acer rubrum</u>	5	Yes	FAC																									
2. <u>Ilex verticillata</u>	2	Yes	FACW																									
3. _____																												
4. _____																												
5. _____																												
6. _____																												
7. _____																												
<u>7</u> =Total Cover																												
Herb Stratum (Plot size: <u>5' R</u>)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																								
1. <u>Carex stricta</u>	60	Yes	OBL																									
2. <u>Typha latifolia</u>	5	No	OBL																									
3. <u>Scirpus cyperinus</u>	10	No	OBL																									
4. <u>Thelypteris palustris</u>	20	Yes	FACW																									
5. _____																												
6. _____																												
7. _____																												
8. _____																												
9. _____																												
10. _____																												
11. _____																												
12. _____																												
<u>95</u> =Total Cover																												
Woody Vine Stratum (Plot size: _____)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																								
1. _____																												
2. _____																												
3. _____																												
4. _____																												
_____ =Total Cover																												
Hydrophytic Vegetation Present? Yes <u>X</u> No _____																												
Remarks: (Include photo numbers here or on a separate sheet.)																												

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/15/19

Applicant/Owner: NHDOT State: NH Sampling Point: W16-UPL

Investigator(s): B. Griffith Section, Township, Range: _____

Landform (hillside, terrace, etc.): Mound Local relief (concave, convex, none): Convex Slope %: 5

Subregion (LRR or MLRA): LRR R Lat: 42.88411468 Long: -71.34652217 Datum: WGS84

Soil Map Unit Name: Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.)
 Unusually Dry, heavily modified by interstate widening. Plot collocated with W15-UPL

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No _____ Depth (inches): _____ Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W16-UPL

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30' R</u>)																				
1. <u><i>Quercus rubra</i></u>	5	Yes	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B) Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:center;">Total % Cover of:</td> <td style="width:50%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>65</u></td> <td>x 4 = <u>260</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>65</u> (A)</td> <td><u>260</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>4.00</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>65</u>	x 4 = <u>260</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>65</u> (A)	<u>260</u> (B)	Prevalence Index = B/A = <u>4.00</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>65</u>	x 4 = <u>260</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>65</u> (A)	<u>260</u> (B)																			
Prevalence Index = B/A = <u>4.00</u>																				
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
5 =Total Cover																				
Sapling/Shrub Stratum (Plot size: <u>15' R</u>)																				
1. <u><i>Hamamelis virginiana</i></u>	20	Yes	FACU	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u><i>Quercus rubra</i></u>	10	Yes	FACU																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
30 =Total Cover																				
Herb Stratum (Plot size: <u>5' R</u>)																				
1. <u><i>Gaultheria procumbens</i></u>	20	Yes	FACU	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																
2. <u><i>Prunus serotina</i></u>	5	No	FACU																	
3. <u><i>Vaccinium angustifolium</i></u>	5	No	FACU																	
4. <u><i>Aronia</i></u>	1	No																		
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
31 =Total Cover																				
Woody Vine Stratum (Plot size: <u>30' R</u>)																				
1. _____																				
2. _____																				
3. _____																				
4. _____																				
=Total Cover																				

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/15/2019
 Applicant/Owner: NHDOT State: NH Sampling Point: W16-Wet
 Investigator(s): B. Griffith Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0
 Subregion (LRR or MLRA): LRR R Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No ___ (If no, explain in Remarks.)
 Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ___ No ___
 Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No ___ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No ___ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No ___	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No ___ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) <input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Field Observations: Surface Water Present? Yes ___ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes ___ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes ___ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No ___
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W16-Wet

<u>Tree Stratum</u> (Plot size: <u>30' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
=Total Cover				Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>5</u> x 2 = <u>10</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>5</u> (A) <u>10</u> (B) Prevalence Index = B/A = <u>2.00</u>	
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Alnus incana</u>	<u>5</u>	<u>Yes</u>	<u>FACW</u>		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
=Total Cover					
<u>Herb Stratum</u> (Plot size: <u>5' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> <u>2</u> - Dominance Test is >50% <u>X</u> <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
=Total Cover					
<u>Woody Vine Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____	_____	_____	_____	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
=Total Cover				Hydrophytic Vegetation Present? Yes <u>X</u> No _____	

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point W16-Wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	7.5YR 2.5/1	100					Muck	organic material (sapric)
				</				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Londonderry Sampling Date: 10/15/19
 Applicant/Owner: NHDOT State: NH Sampling Point: W17 Wet
 Investigator(s): W. McCloy Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0-3
 Subregion (LRR or MLRA): LRR R Lat: 42.886469 Long: -71.349035 Datum: WGS84
 Soil Map Unit Name: Chatfield-Hollis-Canron Complex, 8-15 % slopes, rocky NWI classification: PFO1E
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) <u>X</u> Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) <u>X</u> Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: Water stained leaves present in wetland depression	

VEGETATION – Use scientific names of plants.

Sampling Point: W17 Wet

	Absolute % Cover	Dominant Species?	Indicator Status																									
<u>Tree Stratum</u> (Plot size: <u>30</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																								
1. <u><i>Ulmus americana</i></u>	<u>5</u>	<u>No</u>	<u>FACW</u>																									
2. <u><i>Acer rubrum</i></u>	<u>60</u>	<u>Yes</u>	<u>FAC</u>																									
3. _____																												
4. _____																												
5. _____																												
6. _____																												
7. _____																												
	<u>65</u>	=Total Cover																										
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>)																												
1. <u>None in plot</u>																												
2. _____																												
3. _____																												
4. _____																												
5. _____																												
6. _____																												
7. _____																												
		=Total Cover																										
<u>Herb Stratum</u> (Plot size: <u>5</u>)				Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%;"></td> <td style="width:25%; text-align:center;">Total % Cover of:</td> <td style="width:25%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>60</u></td> <td style="text-align:center;"><u>60</u></td> <td style="text-align:center;">x 1 = <u>60</u></td> </tr> <tr> <td>FACW species <u>20</u></td> <td style="text-align:center;"><u>20</u></td> <td style="text-align:center;">x 2 = <u>40</u></td> </tr> <tr> <td>FAC species <u>60</u></td> <td style="text-align:center;"><u>60</u></td> <td style="text-align:center;">x 3 = <u>180</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td style="text-align:center;"><u>0</u></td> <td style="text-align:center;">x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td style="text-align:center;"><u>0</u></td> <td style="text-align:center;">x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>140</u></td> <td style="text-align:center;"><u>140</u></td> <td style="text-align:center;">(A) <u>280</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:right;">Prevalence Index = B/A =</td> <td style="text-align:center;"><u>2.00</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		Total % Cover of:	Multiply by:	OBL species <u>60</u>	<u>60</u>	x 1 = <u>60</u>	FACW species <u>20</u>	<u>20</u>	x 2 = <u>40</u>	FAC species <u>60</u>	<u>60</u>	x 3 = <u>180</u>	FACU species <u>0</u>	<u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	<u>0</u>	x 5 = <u>0</u>	Column Totals: <u>140</u>	<u>140</u>	(A) <u>280</u> (B)	Prevalence Index = B/A =		<u>2.00</u>
	Total % Cover of:	Multiply by:																										
OBL species <u>60</u>	<u>60</u>	x 1 = <u>60</u>																										
FACW species <u>20</u>	<u>20</u>	x 2 = <u>40</u>																										
FAC species <u>60</u>	<u>60</u>	x 3 = <u>180</u>																										
FACU species <u>0</u>	<u>0</u>	x 4 = <u>0</u>																										
UPL species <u>0</u>	<u>0</u>	x 5 = <u>0</u>																										
Column Totals: <u>140</u>	<u>140</u>	(A) <u>280</u> (B)																										
Prevalence Index = B/A =		<u>2.00</u>																										
1. <u><i>Osmunda spectabilis</i></u>	<u>30</u>	<u>Yes</u>	<u>OBL</u>																									
2. <u><i>Impatiens capensis</i></u>	<u>15</u>	<u>Yes</u>	<u>FACW</u>																									
3. <u><i>Carex lupulina</i></u>	<u>15</u>	<u>Yes</u>	<u>OBL</u>																									
4. <u><i>Glyceria striata</i></u>	<u>10</u>	<u>No</u>	<u>OBL</u>																									
5. <u><i>Lycopus uniflorus</i></u>	<u>5</u>	<u>No</u>	<u>OBL</u>																									
6. _____																												
7. _____																												
8. _____																												
9. _____																												
10. _____																												
11. _____																												
12. _____																												
	<u>75</u>	=Total Cover																										
<u>Woody Vine Stratum</u> (Plot size: <u>30</u>)																												
1. <u>None in plot</u>																												
2. _____																												
3. _____																												
4. _____																												
		=Total Cover																										
Remarks: (Include photo numbers here or on a separate sheet.)																												

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/12/2019

Applicant/Owner: NHDOT State: NH Sampling Point: W17-UPL

Investigator(s): B. Griffith Section, Township, Range: _____

Landform (hillside, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope %: _____

Subregion (LRR or MLRA): LRR R Lat: 42.88645182 Long: -71.34886550 Datum: WGS 84

Soil Map Unit Name: Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W17-UPL

<u>Tree Stratum</u> (Plot size: <u>30' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u><i>Tsuga canadensis</i></u>	20	Yes	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																
2. <u><i>Acer rubrum</i></u>	10	No	FAC																	
3. <u><i>Acer saccharum</i></u>	30	Yes	FACU																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	60 =Total Cover			Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:center">Total % Cover of:</td> <td style="width:50%; text-align:center">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>11</u></td> <td>x 3 = <u>33</u></td> </tr> <tr> <td>FACU species <u>66</u></td> <td>x 4 = <u>264</u></td> </tr> <tr> <td>UPL species <u>5</u></td> <td>x 5 = <u>25</u></td> </tr> <tr> <td>Column Totals: <u>82</u> (A)</td> <td><u>322</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center">Prevalence Index = B/A = <u>3.93</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>11</u>	x 3 = <u>33</u>	FACU species <u>66</u>	x 4 = <u>264</u>	UPL species <u>5</u>	x 5 = <u>25</u>	Column Totals: <u>82</u> (A)	<u>322</u> (B)	Prevalence Index = B/A = <u>3.93</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>11</u>	x 3 = <u>33</u>																			
FACU species <u>66</u>	x 4 = <u>264</u>																			
UPL species <u>5</u>	x 5 = <u>25</u>																			
Column Totals: <u>82</u> (A)	<u>322</u> (B)																			
Prevalence Index = B/A = <u>3.93</u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' R</u>)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u><i>Corylus americana</i></u>	5	Yes	FACU																	
2. <u><i>Viburnum acerifolium</i></u>	5	Yes	UPL																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	10 =Total Cover			Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																
<u>Herb Stratum</u> (Plot size: <u>5'R</u>)																				
1. <u><i>Mitchella repens</i></u>	10	Yes	FACU																	
2. <u><i>Trientalis borealis</i></u>	1	No	FAC																	
3. <u><i>Acer saccharum</i></u>	1	No	FACU																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	12 =Total Cover																			
<u>Woody Vine Stratum</u> (Plot size: _____)				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																
1. _____																				
2. _____																				
3. _____																				
4. _____																				
	=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.)																				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Londonderry Sampling Date: 10/15/19
 Applicant/Owner: NHDOT State: NH Sampling Point: W18 Wet
 Investigator(s): W. McCloy Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0-3
 Subregion (LRR or MLRA): LRR R Lat: 42.887183 Long: -71.348697 Datum: WGS84
 Soil Map Unit Name: Chatfield-Hollis-Canron Complex, 8-15 % slopes, rocky NWI classification: PEM1E
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil X, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.)
 Soils very disturbed due to rutting, likely that A has been stripped away. Soils with redox concentrations and some depletions.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) <u>X</u> Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Water stained leaves present in wetland depression; area rutted and disturbed by ATV and other related uses in powerline ROW

VEGETATION – Use scientific names of plants.

Sampling Point: W18 Wet

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30</u>)				<p>Dominance Test worksheet:</p> <p>Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>3</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)</p> <p>Prevalence Index worksheet:</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; text-align: center;">Total % Cover of:</td> <td style="width:50%; text-align: center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>70</u></td> <td>x 1 = <u>70</u></td> </tr> <tr> <td>FACW species <u>20</u></td> <td>x 2 = <u>40</u></td> </tr> <tr> <td>FAC species <u>30</u></td> <td>x 3 = <u>90</u></td> </tr> <tr> <td>FACU species <u>5</u></td> <td>x 4 = <u>20</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>125</u> (A)</td> <td><u>220</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>1.76</u></td> </tr> </table> <p>Hydrophytic Vegetation Indicators:</p> <p><u> </u> 1 - Rapid Test for Hydrophytic Vegetation</p> <p><input checked="" type="checkbox"/> 2 - Dominance Test is >50%</p> <p><input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0¹</p> <p><u> </u> 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)</p> <p><u> </u> Problematic Hydrophytic Vegetation¹ (Explain)</p> <p>¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</p> <p>Definitions of Vegetation Strata:</p> <p>Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.</p> <p>Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.</p> <p>Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.</p> <p>Woody vines – All woody vines greater than 3.28 ft in height.</p> <p>Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	Total % Cover of:	Multiply by:	OBL species <u>70</u>	x 1 = <u>70</u>	FACW species <u>20</u>	x 2 = <u>40</u>	FAC species <u>30</u>	x 3 = <u>90</u>	FACU species <u>5</u>	x 4 = <u>20</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>125</u> (A)	<u>220</u> (B)	Prevalence Index = B/A = <u>1.76</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>70</u>	x 1 = <u>70</u>																			
FACW species <u>20</u>	x 2 = <u>40</u>																			
FAC species <u>30</u>	x 3 = <u>90</u>																			
FACU species <u>5</u>	x 4 = <u>20</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>125</u> (A)	<u>220</u> (B)																			
Prevalence Index = B/A = <u>1.76</u>																				
1. <u>None in wetland</u>																				
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
			=Total Cover																	
Sapling/Shrub Stratum (Plot size: <u>15</u>)																				
1. <u>Acer rubrum</u>	<u>15</u>	Yes	FAC																	
2. <u>Salix bebbiana</u>	<u>20</u>	Yes	FACW																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
			=Total Cover																	
Herb Stratum (Plot size: <u>5</u>)																				
1. <u>Juncus tenuis</u>	<u>15</u>	No	FAC																	
2. <u>Lythrum salicaria</u>	<u>60</u>	Yes	OBL																	
3. <u>Glyceria striata</u>	<u>10</u>	No	OBL																	
4. <u>Solidago canadensis</u>	<u>5</u>	No	FACU																	
5. <u>Aster sp.</u>	<u>5</u>	No																		
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
			=Total Cover																	
Woody Vine Stratum (Plot size: <u>30</u>)																				
1. <u>None in plot</u>																				
2. _____																				
3. _____																				
4. _____																				
			=Total Cover																	
<p>Remarks: (Include photo numbers here or on a separate sheet.)</p>																				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/12/2019

Applicant/Owner: NHDOT State: NH Sampling Point: W18-UPL

Investigator(s): B. Griffith Section, Township, Range: _____

Landform (hillside, terrace, etc.): Hillside Local relief (concave, convex, none): Convex Slope %: 5

Subregion (LRR or MLRA): LRR R Lat: 42.88714598 Long: -71.34886051 Datum: WGS 84

Soil Map Unit Name: Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Unusually dry	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W18-UPL

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30' R</u>)				<p>Dominance Test worksheet:</p> <p>Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>3</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)</p> <p>Prevalence Index worksheet:</p> <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:center;">Total % Cover of:</td> <td style="width:50%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>10</u></td> <td>x 3 = <u>30</u></td> </tr> <tr> <td>FACU species <u>45</u></td> <td>x 4 = <u>180</u></td> </tr> <tr> <td>UPL species <u>115</u></td> <td>x 5 = <u>575</u></td> </tr> <tr> <td>Column Totals: <u>170</u> (A)</td> <td><u>785</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>4.62</u></td> </tr> </table> <p>Hydrophytic Vegetation Indicators:</p> <p><u> </u> 1 - Rapid Test for Hydrophytic Vegetation</p> <p><u> </u> 2 - Dominance Test is >50%</p> <p><u> </u> 3 - Prevalence Index is ≤3.0¹</p> <p><u> </u> 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)</p> <p><u> </u> Problematic Hydrophytic Vegetation¹ (Explain)</p> <p>¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</p> <p>Definitions of Vegetation Strata:</p> <p>Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.</p> <p>Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.</p> <p>Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.</p> <p>Woody vines – All woody vines greater than 3.28 ft in height.</p> <p>Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u></p>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>10</u>	x 3 = <u>30</u>	FACU species <u>45</u>	x 4 = <u>180</u>	UPL species <u>115</u>	x 5 = <u>575</u>	Column Totals: <u>170</u> (A)	<u>785</u> (B)	Prevalence Index = B/A = <u>4.62</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>10</u>	x 3 = <u>30</u>																			
FACU species <u>45</u>	x 4 = <u>180</u>																			
UPL species <u>115</u>	x 5 = <u>575</u>																			
Column Totals: <u>170</u> (A)	<u>785</u> (B)																			
Prevalence Index = B/A = <u>4.62</u>																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover																				
Sapling/Shrub Stratum (Plot size: <u>15'R</u>)																				
1. <u>Quercus rubra</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Comptonia peregrina</u>	<u>50</u>	<u>Yes</u>	<u>UPL</u>																	
3. <u>Rhus glabra</u>	<u>5</u>	<u>No</u>	<u>UPL</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover																				
Herb Stratum (Plot size: <u>5'R</u>)																				
1. <u>Solidago rugosa</u>	<u>10</u>	<u>No</u>	<u>FAC</u>																	
2. <u>Dennstaedtia punctilobula</u>	<u>60</u>	<u>Yes</u>	<u>UPL</u>																	
3. <u>Pteridium aquilinum</u>	<u>10</u>	<u>No</u>	<u>FACU</u>																	
4. <u>Solidago canadensis</u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ =Total Cover																				
Woody Vine Stratum (Plot size: <u>30'R</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ =Total Cover																				
Remarks: (Include photo numbers here or on a separate sheet.)																				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Londonderry Sampling Date: 10/15/19
 Applicant/Owner: NHDOT State: NH Sampling Point: W19 Wet
 Investigator(s): W. McCloy Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0-3
 Subregion (LRR or MLRA): LRR R Lat: 42.887183 Long: -71.348697 Datum: WGS84
 Soil Map Unit Name: Chatfield-Hollis-Canron Complex, 8-15 % slopes, rocky NWI classification: PFO1E
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) <u>X</u> Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <u>X</u> Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Water stained leaves present in wetland depression

VEGETATION – Use scientific names of plants.

Sampling Point: W19 Wet

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30</u>)																				
1. <u>None in wetland</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:center;">Total % Cover of:</td> <td style="width:50%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>70</u></td> <td>x 1 = <u>70</u></td> </tr> <tr> <td>FACW species <u>20</u></td> <td>x 2 = <u>40</u></td> </tr> <tr> <td>FAC species <u>30</u></td> <td>x 3 = <u>90</u></td> </tr> <tr> <td>FACU species <u>5</u></td> <td>x 4 = <u>20</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>125</u> (A)</td> <td><u>220</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>1.76</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>70</u>	x 1 = <u>70</u>	FACW species <u>20</u>	x 2 = <u>40</u>	FAC species <u>30</u>	x 3 = <u>90</u>	FACU species <u>5</u>	x 4 = <u>20</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>125</u> (A)	<u>220</u> (B)	Prevalence Index = B/A = <u>1.76</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>70</u>	x 1 = <u>70</u>																			
FACW species <u>20</u>	x 2 = <u>40</u>																			
FAC species <u>30</u>	x 3 = <u>90</u>																			
FACU species <u>5</u>	x 4 = <u>20</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>125</u> (A)	<u>220</u> (B)																			
Prevalence Index = B/A = <u>1.76</u>																				
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u> </u>	=Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15</u>)																				
1. <u>Acer rubrum</u>	<u>15</u>	<u>Yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> X</u> 2 - Dominance Test is >50% <u> X</u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Salix bebbiana</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>35</u>	=Total Cover																		
Herb Stratum (Plot size: <u>5</u>)																				
1. <u>Juncus tenuis</u>	<u>15</u>	<u>No</u>	<u>FAC</u>																	
2. <u>Lythrum salicaria</u>	<u>60</u>	<u>Yes</u>	<u>OBL</u>																	
3. <u>Glyceria striata</u>	<u>10</u>	<u>No</u>	<u>OBL</u>																	
4. <u>Solidago canadensis</u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
5. <u>Aster sp.</u>	<u>5</u>	<u>No</u>																		
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	<u>95</u>	=Total Cover																		
Woody Vine Stratum (Plot size: <u>30</u>)																				
1. <u>None in plot</u>				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
2. _____																				
3. _____																				
4. _____																				
	=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.)																				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/12/2019
 Applicant/Owner: NHDOT State: NH Sampling Point: W19-UPL
 Investigator(s): B. Griffith Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Mound Local relief (concave, convex, none): Convex Slope %: 2
 Subregion (LRR or MLRA): LRR R Lat: 42.88758951 Long: -71.34769993 Datum: WGS 84
 Soil Map Unit Name: Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky NWI classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Unusually dry	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ ? Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W19-UPL

<u>Tree Stratum</u> (Plot size: <u>30'R</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u><i>Acer saccharum</i></u>	40	Yes	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>20.0%</u> (A/B)																
2. <u><i>Pinus strobus</i></u>	20	Yes	FACU																	
3. <u><i>Tilia americana</i></u>	5	No	FACU																	
4. <u><i>Carya ovata</i></u>	5	No	FACU																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	<u>70</u>	=Total Cover		Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:center;">Total % Cover of:</td> <td style="width:50%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>86</u></td> <td>x 4 = <u>344</u></td> </tr> <tr> <td>UPL species <u>1</u></td> <td>x 5 = <u>5</u></td> </tr> <tr> <td>Column Totals: <u>92</u></td> <td>(A) <u>364</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>3.96</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>86</u>	x 4 = <u>344</u>	UPL species <u>1</u>	x 5 = <u>5</u>	Column Totals: <u>92</u>	(A) <u>364</u> (B)	Prevalence Index = B/A = <u>3.96</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>5</u>	x 3 = <u>15</u>																			
FACU species <u>86</u>	x 4 = <u>344</u>																			
UPL species <u>1</u>	x 5 = <u>5</u>																			
Column Totals: <u>92</u>	(A) <u>364</u> (B)																			
Prevalence Index = B/A = <u>3.96</u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15'R</u>)																				
1. <u><i>Hamamelis virginiana</i></u>	10	Yes	FACU	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u><i>Acer rubrum</i></u>	5	Yes	FAC																	
3. <u><i>Quercus rubra</i></u>	5	Yes	FACU																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	<u>20</u>	=Total Cover																		
<u>Herb Stratum</u> (Plot size: <u>5' R</u>)																				
1. <u><i>Quercus rubra</i></u>	1	No	FACU	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
2. <u><i>Viburnum acerifolium</i></u>	1	No	UPL																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
	<u>2</u>	=Total Cover																		
<u>Woody Vine Stratum</u> (Plot size: _____)																				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
	_____	=Total Cover																		

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/12/2019

Applicant/Owner: NHDOT State: NH Sampling Point: W20-UPL

Investigator(s): B. Griffith Section, Township, Range: _____

Landform (hillside, terrace, etc.): Mound Local relief (concave, convex, none): Convex Slope %: 2

Subregion (LRR or MLRA): LRR R Lat: 42.88758951 Long: -71.34769993 Datum: WGS 84

Soil Map Unit Name: Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Unusually dry	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> ? Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W20-UPL

<u>Tree Stratum</u> (Plot size: <u>30'R</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u><i>Acer saccharum</i></u>	<u>40</u>	<u>Yes</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>20.0%</u> (A/B)																
2. <u><i>Pinus strobus</i></u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u><i>Tilia americana</i></u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
4. <u><i>Carya ovata</i></u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	<u>70</u> =Total Cover			Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="text-align:center;">Total % Cover of:</td> <td style="text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>86</u></td> <td>x 4 = <u>344</u></td> </tr> <tr> <td>UPL species <u>1</u></td> <td>x 5 = <u>5</u></td> </tr> <tr> <td>Column Totals: <u>92</u> (A)</td> <td><u>364</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>3.96</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>86</u>	x 4 = <u>344</u>	UPL species <u>1</u>	x 5 = <u>5</u>	Column Totals: <u>92</u> (A)	<u>364</u> (B)	Prevalence Index = B/A = <u>3.96</u>	
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OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>5</u>	x 3 = <u>15</u>																			
FACU species <u>86</u>	x 4 = <u>344</u>																			
UPL species <u>1</u>	x 5 = <u>5</u>																			
Column Totals: <u>92</u> (A)	<u>364</u> (B)																			
Prevalence Index = B/A = <u>3.96</u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15'R</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u><i>Hamamelis virginiana</i></u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u><i>Acer rubrum</i></u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>																	
3. <u><i>Quercus rubra</i></u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	<u>20</u> =Total Cover			Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																
<u>Herb Stratum</u> (Plot size: <u>5' R</u>)																				
1. <u><i>Quercus rubra</i></u>	<u>1</u>	<u>No</u>	<u>FACU</u>																	
2. <u><i>Viburnum acerifolium</i></u>	<u>1</u>	<u>No</u>	<u>UPL</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
	<u>2</u> =Total Cover																			
<u>Woody Vine Stratum</u> (Plot size: _____)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
	_____ =Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.)																				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 12/2019

Applicant/Owner: NHDOT State: NH Sampling Point: W20-Wet

Investigator(s): B. Griffith, W. McCloy Section, Township, Range: _____

Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 1

Subregion (LRR or MLRA): LRR R Lat: 42.88757450 Long: -71.34757736 Datum: WGS 84

Soil Map Unit Name: Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.)
 Unusually dry

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) <u>X</u> Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W20-Wet

<u>Tree Stratum</u> (Plot size: <u>30' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status																									
1. <u><i>Acer rubrum</i></u>	5	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																								
2. _____	_____	_____	_____																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
5. _____	_____	_____	_____																									
6. _____	_____	_____	_____																									
7. _____	_____	_____	_____																									
5 =Total Cover				Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:30%;"></td> <td style="width:30%; text-align:center;">Total % Cover of:</td> <td style="width:40%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species</td> <td style="text-align:center;"><u>30</u></td> <td style="text-align:center;">x 1 = <u>30</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align:center;"><u>15</u></td> <td style="text-align:center;">x 2 = <u>30</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align:center;"><u>7</u></td> <td style="text-align:center;">x 3 = <u>21</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align:center;"><u>0</u></td> <td style="text-align:center;">x 4 = <u>0</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align:center;"><u>0</u></td> <td style="text-align:center;">x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals:</td> <td style="text-align:center;"><u>52</u> (A)</td> <td style="text-align:center;"><u>81</u> (B)</td> </tr> <tr> <td colspan="3" style="text-align:center;">Prevalence Index = B/A = <u>1.56</u></td> </tr> </table>		Total % Cover of:	Multiply by:	OBL species	<u>30</u>	x 1 = <u>30</u>	FACW species	<u>15</u>	x 2 = <u>30</u>	FAC species	<u>7</u>	x 3 = <u>21</u>	FACU species	<u>0</u>	x 4 = <u>0</u>	UPL species	<u>0</u>	x 5 = <u>0</u>	Column Totals:	<u>52</u> (A)	<u>81</u> (B)	Prevalence Index = B/A = <u>1.56</u>		
	Total % Cover of:	Multiply by:																										
OBL species	<u>30</u>	x 1 = <u>30</u>																										
FACW species	<u>15</u>	x 2 = <u>30</u>																										
FAC species	<u>7</u>	x 3 = <u>21</u>																										
FACU species	<u>0</u>	x 4 = <u>0</u>																										
UPL species	<u>0</u>	x 5 = <u>0</u>																										
Column Totals:	<u>52</u> (A)	<u>81</u> (B)																										
Prevalence Index = B/A = <u>1.56</u>																												
5 =Total Cover																												
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' R</u>)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)																								
1. <u><i>Vaccinium corymbosum</i></u>	5	Yes	FACW																									
2. _____	_____	_____	_____																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
5. _____	_____	_____	_____																									
6. _____	_____	_____	_____																									
7. _____	_____	_____	_____																									
5 =Total Cover																												
<u>Herb Stratum</u> (Plot size: <u>5' R</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																								
1. <u><i>Glyceria melicaria</i></u>	30	Yes	OBL																									
2. <u><i>Onoclea sensibilis</i></u>	5	No	FACW																									
3. <u><i>Bidens frondosa</i></u>	5	No	FACW																									
4. <u><i>Symphyotrichum lateriflorum</i></u>	2	No	FAC																									
5. _____	_____	_____	_____																									
6. _____	_____	_____	_____																									
7. _____	_____	_____	_____																									
8. _____	_____	_____	_____																									
9. _____	_____	_____	_____																									
10. _____	_____	_____	_____																									
11. _____	_____	_____	_____																									
12. _____	_____	_____	_____																									
42 =Total Cover																												
<u>Woody Vine Stratum</u> (Plot size: _____)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____																								
1. _____	_____	_____	_____																									
2. _____	_____	_____	_____																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
_____ =Total Cover																												
Remarks: (Include photo numbers here or on a separate sheet.)																												

SOIL

Sampling Point W20-Wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	2.5Y 3/1	100					Loamy/Clayey	
5-9	2.5Y 3/1	80	5Y 5/1	20	D	M	Loamy/Clayey	
9-17	2.5Y 3/1	100					Loamy/Clayey	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soil Indicators:</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7)</p>	<p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)</p> <p><input type="checkbox"/> High Chroma Sands (S11) (LRR K, L)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input checked="" type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR K, L)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)</p> <p><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)</p> <p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)</p> <p><input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)</p> <p><input type="checkbox"/> Red Parent Material (F21)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (F22)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
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³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
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Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Londonderry Sampling Date: 10/15/19
 Applicant/Owner: NHDOT State: NH Sampling Point: W19 Wet
 Investigator(s): W. McCloy Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0-3
 Subregion (LRR or MLRA): LRR R Lat: 42.887183 Long: -71.348697 Datum: WGS84
 Soil Map Unit Name: Chatfield-Hollis-Canron Complex, 8-15 % slopes, rocky NWI classification: PFO1E
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) <u>X</u> Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) <u>X</u> Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: Water stained leaves present in wetland depression	

VEGETATION – Use scientific names of plants.

Sampling Point: W19 Wet

	Absolute % Cover	Dominant Species?	Indicator Status																		
Tree Stratum (Plot size: <u>30</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																	
1.					Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Total % Cover of:</th> <th style="width:50%;">Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>70</u></td> <td>x 1 = <u>70</u></td> </tr> <tr> <td>FACW species <u>20</u></td> <td>x 2 = <u>40</u></td> </tr> <tr> <td>FAC species <u>30</u></td> <td>x 3 = <u>90</u></td> </tr> <tr> <td>FACU species <u>5</u></td> <td>x 4 = <u>20</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>125</u></td> <td>(A) <u>220</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>1.76</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>70</u>	x 1 = <u>70</u>	FACW species <u>20</u>	x 2 = <u>40</u>	FAC species <u>30</u>	x 3 = <u>90</u>	FACU species <u>5</u>	x 4 = <u>20</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>125</u>	(A) <u>220</u> (B)	Prevalence Index = B/A = <u>1.76</u>	
Total % Cover of:	Multiply by:																				
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Prevalence Index = B/A = <u>1.76</u>																					
2.																					
3.																					
4.																					
5.																					
6.																					
7.																					
<u> </u> =Total Cover																					
Sapling/Shrub Stratum (Plot size: <u>15</u>)																					
1.	<u>15</u>	<u>Yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> X</u> 2 - Dominance Test is >50% <u> X</u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																	
2.	<u>20</u>	<u>Yes</u>	<u>FACW</u>																		
3.																					
4.																					
5.																					
6.																					
7.																					
<u>35</u> =Total Cover																					
Herb Stratum (Plot size: <u>5</u>)																					
1.	<u>15</u>	<u>No</u>	<u>FAC</u>	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes <u> X </u> No <u> </u>																	
2.	<u>60</u>	<u>Yes</u>	<u>OBL</u>																		
3.	<u>10</u>	<u>No</u>	<u>OBL</u>																		
4.	<u>5</u>	<u>No</u>	<u>FACU</u>																		
5.	<u>5</u>	<u>No</u>																			
6.																					
7.																					
8.																					
9.																					
10.																					
11.																					
12.																					
<u>95</u> =Total Cover																					
Woody Vine Stratum (Plot size: <u>30</u>)																					
1.																					
2.																					
3.																					
4.																					
<u> </u> =Total Cover																					
Remarks: (Include photo numbers here or on a separate sheet.) Eastern hemlock and red maple had rased roots where rooted in the wetland depression; counting hemlock as a hydrophyte given the adaptations results in plot passing the Dominance Test.																					

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/12/2019

Applicant/Owner: NHDOT State: NH Sampling Point: W21-UPL

Investigator(s): B. Griffith Section, Township, Range: _____

Landform (hillside, terrace, etc.): Mound Local relief (concave, convex, none): Convex Slope %: 1

Subregion (LRR or MLRA): LRR R Lat: 42.88787864 Long: -71.34741020 Datum: WGS 84

Soil Map Unit Name: Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Unusually dry, colocated with W22-UPL	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W21-UPL

<u>Tree Stratum</u> (Plot size: <u>30' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status																		
1. <u><i>Acer saccharum</i></u>	80	Yes	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																	
2. <u><i>Quercus rubra</i></u>																					
3. _____																					
4. _____																					
5. _____																					
6. _____																					
7. _____																					
	80	=Total Cover		Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>110</u></td> <td>x 4 = <u>440</u></td> </tr> <tr> <td>UPL species <u>1</u></td> <td>x 5 = <u>5</u></td> </tr> <tr> <td>Column Totals: <u>111</u></td> <td>(A) <u>445</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>4.01</u></td> </tr> </table>		Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>110</u>	x 4 = <u>440</u>	UPL species <u>1</u>	x 5 = <u>5</u>	Column Totals: <u>111</u>	(A) <u>445</u> (B)	Prevalence Index = B/A = <u>4.01</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>0</u>	x 2 = <u>0</u>																				
FAC species <u>0</u>	x 3 = <u>0</u>																				
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UPL species <u>1</u>	x 5 = <u>5</u>																				
Column Totals: <u>111</u>	(A) <u>445</u> (B)																				
Prevalence Index = B/A = <u>4.01</u>																					
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' R</u>)																					
1. <u><i>Hamamelis virginiana</i></u>	10	Yes	FACU	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																	
2. _____																					
3. _____																					
4. _____																					
5. _____																					
6. _____																					
7. _____																					
	10	=Total Cover																			
<u>Herb Stratum</u> (Plot size: <u>5' R</u>)																					
1. <u><i>Mitchella repens</i></u>	15	Yes	FACU	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																	
2. <u><i>Gaultheria procumbens</i></u>	5	Yes	FACU																		
3. <u><i>Viburnum acerifolium</i></u>	1	No	UPL																		
4. _____																					
5. _____																					
6. _____																					
7. _____																					
8. _____																					
9. _____																					
10. _____																					
11. _____																					
12. _____																					
	21	=Total Cover																			
<u>Woody Vine Stratum</u> (Plot size: _____)				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>																	
1. _____																					
2. _____																					
3. _____																					
4. _____																					
		=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.)																					

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/12/2019
 Applicant/Owner: NHDOT State: NH Sampling Point: W22-UPL
 Investigator(s): B. Griffith Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Mound Local relief (concave, convex, none): Convex Slope %: 1
 Subregion (LRR or MLRA): LRR R Lat: 42.88787864 Long: -71.34741020 Datum: WGS 84
 Soil Map Unit Name: Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Unusually dry, colocated with W21-UPL	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W22-UPL

<u>Tree Stratum</u> (Plot size: <u>30' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u><i>Acer saccharum</i></u>	80	Yes	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																
2. <u><i>Quercus rubra</i></u>																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	80	=Total Cover		Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:center;">Total % Cover of:</td> <td style="width:50%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>110</u></td> <td>x 4 = <u>440</u></td> </tr> <tr> <td>UPL species <u>1</u></td> <td>x 5 = <u>5</u></td> </tr> <tr> <td>Column Totals: <u>111</u> (A)</td> <td><u>445</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>4.01</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>110</u>	x 4 = <u>440</u>	UPL species <u>1</u>	x 5 = <u>5</u>	Column Totals: <u>111</u> (A)	<u>445</u> (B)	Prevalence Index = B/A = <u>4.01</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>110</u>	x 4 = <u>440</u>																			
UPL species <u>1</u>	x 5 = <u>5</u>																			
Column Totals: <u>111</u> (A)	<u>445</u> (B)																			
Prevalence Index = B/A = <u>4.01</u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' R</u>)																				
1. <u><i>Hamamelis virginiana</i></u>	10	Yes	FACU																	
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	10	=Total Cover																		
<u>Herb Stratum</u> (Plot size: <u>5' R</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u><i>Mitchella repens</i></u>	15	Yes	FACU																	
2. <u><i>Gaultheria procumbens</i></u>	5	Yes	FACU																	
3. <u><i>Viburnum acerifolium</i></u>	1	No	UPL																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	21	=Total Cover																		
<u>Woody Vine Stratum</u> (Plot size: _____)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
1. _____																				
2. _____																				
3. _____																				
4. _____				Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u>																
		=Total Cover																		

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/12/2019

Applicant/Owner: NHDOT State: NH Sampling Point: W22-Wet

Investigator(s): B. Griffith Section, Township, Range: _____

Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0

Subregion (LRR or MLRA): LRR R Lat: 42.88796839 Long: -71.34720510 Datum: WGS 84

Soil Map Unit Name: Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Unusually dry	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes _____ No _____ Depth (inches): _____ Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W22-Wet

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30' R</u>)				
1.	_____	_____	_____	
2.	_____	_____	_____	
3.	_____	_____	_____	
4.	_____	_____	_____	
5.	_____	_____	_____	
6.	_____	_____	_____	
7.	_____	_____	_____	
	=Total Cover			
Sapling/Shrub Stratum (Plot size: <u>15'R</u>)				
1.	_____	_____	_____	
2.	_____	_____	_____	
3.	_____	_____	_____	
4.	_____	_____	_____	
5.	_____	_____	_____	
6.	_____	_____	_____	
7.	_____	_____	_____	
	=Total Cover			
Herb Stratum (Plot size: <u>5'R</u>)				
1.	_____	_____	_____	
2.	_____	_____	_____	
3.	_____	_____	_____	
4.	_____	_____	_____	
5.	_____	_____	_____	
6.	_____	_____	_____	
7.	_____	_____	_____	
8.	_____	_____	_____	
9.	_____	_____	_____	
10.	_____	_____	_____	
11.	_____	_____	_____	
12.	_____	_____	_____	
	=Total Cover			
Woody Vine Stratum (Plot size: <u>30'R</u>)				
1.	_____	_____	_____	
2.	_____	_____	_____	
3.	_____	_____	_____	
4.	_____	_____	_____	
	=Total Cover			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)
Prevalence Index = B/A = _____	

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No _____

Remarks: (Include photo numbers here or on a separate sheet.)
 Very sparsely vegetated. No vegetation in plot, but sparse cinnamon fern in wetland.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Londonderry Sampling Date: 10/15/19
 Applicant/Owner: NHDOT State: NH Sampling Point: W24Wet
 Investigator(s): W. McCloy Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0-3
 Subregion (LRR or MLRA): LRR R Lat: 42.887896 Long: -71.345225 Datum: WGS84
 Soil Map Unit Name: Chatfield-Hollis-Canron Complex, 8-15 % slopes, rocky NWI classification: PFO1E
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) <u>X</u> Water-Stained Leaves (B9) <u>X</u> High Water Table (A2) _____ Aquatic Fauna (B13) <u>X</u> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) <u>? Sparsely Vegetated Concave Surface (B8)</u>	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>1</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Water stained leaves present in wetland depression; saturation and shallow water table also present

VEGETATION – Use scientific names of plants.

Sampling Point: W24Wet

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
1. <u><i>Acer rubrum</i></u>	<u>30</u>	Yes	FAC																	
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>30</u>	=Total Cover		Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="text-align:right">Total % Cover of:</td> <td style="text-align:right">Multiply by:</td> </tr> <tr> <td>OBL species <u>50</u></td> <td>x 1 = <u>50</u></td> </tr> <tr> <td>FACW species <u>50</u></td> <td>x 2 = <u>100</u></td> </tr> <tr> <td>FAC species <u>30</u></td> <td>x 3 = <u>90</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>130</u></td> <td>(A) <u>240</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center">Prevalence Index = B/A = <u>1.85</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>50</u>	x 1 = <u>50</u>	FACW species <u>50</u>	x 2 = <u>100</u>	FAC species <u>30</u>	x 3 = <u>90</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>130</u>	(A) <u>240</u> (B)	Prevalence Index = B/A = <u>1.85</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>50</u>	x 1 = <u>50</u>																			
FACW species <u>50</u>	x 2 = <u>100</u>																			
FAC species <u>30</u>	x 3 = <u>90</u>																			
FACU species <u>0</u>	x 4 = <u>0</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>130</u>	(A) <u>240</u> (B)																			
Prevalence Index = B/A = <u>1.85</u>																				
Sapling/Shrub Stratum (Plot size: <u>15</u>)																				
1. <u><i>Ilex verticillata</i></u>	<u>50</u>	Yes	FACW																	
2. <u><i>Cephalanthus occidentalis</i></u>	<u>50</u>	Yes	OBL																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>100</u>	=Total Cover																		
Herb Stratum (Plot size: <u>5</u>)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u><i>None in plot</i></u>																				
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
		=Total Cover																		
Woody Vine Stratum (Plot size: <u>30</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
1. <u><i>None in plot</i></u>																				
2. _____																				
3. _____																				
4. _____																				
		=Total Cover																		
<table style="width:100%; border:none;"> <tr> <td style="width:60%;">Hydrophytic Vegetation Present?</td> <td style="width:20%; text-align:center">Yes <u>X</u></td> <td style="width:20%; text-align:center">No _____</td> </tr> </table>				Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____														
Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____																		
Remarks: (Include photo numbers here or on a separate sheet.) No herbs in plot; wetland water levels low, also a Vernal Pool																				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/12/2019

Applicant/Owner: NHDOT State: NH Sampling Point: W24-UPL

Investigator(s): B. Griffith Section, Township, Range: _____

Landform (hillside, terrace, etc.): Hillside Local relief (concave, convex, none): Convex Slope %: 10

Subregion (LRR or MLRA): LRR R Lat: 42.88785029 Long: -71.34498578 Datum: WGS 84

Soil Map Unit Name: Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Unusually dry	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W24-UPL

<u>Tree Stratum</u> (Plot size: <u>30' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Quercus rubra</u>	<u>70</u>	Yes	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>14.3%</u> (A/B)																
2. <u>Acer rubrum</u>	<u>10</u>	No	FAC																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>80</u>	=Total Cover		Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="text-align:right;">Total % Cover of:</td> <td style="text-align:right;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>2</u></td> <td>x 2 = <u>4</u></td> </tr> <tr> <td>FAC species <u>15</u></td> <td>x 3 = <u>45</u></td> </tr> <tr> <td>FACU species <u>107</u></td> <td>x 4 = <u>428</u></td> </tr> <tr> <td>UPL species <u>5</u></td> <td>x 5 = <u>25</u></td> </tr> <tr> <td>Column Totals: <u>129</u> (A)</td> <td><u>502</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>3.89</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>2</u>	x 2 = <u>4</u>	FAC species <u>15</u>	x 3 = <u>45</u>	FACU species <u>107</u>	x 4 = <u>428</u>	UPL species <u>5</u>	x 5 = <u>25</u>	Column Totals: <u>129</u> (A)	<u>502</u> (B)	Prevalence Index = B/A = <u>3.89</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>2</u>	x 2 = <u>4</u>																			
FAC species <u>15</u>	x 3 = <u>45</u>																			
FACU species <u>107</u>	x 4 = <u>428</u>																			
UPL species <u>5</u>	x 5 = <u>25</u>																			
Column Totals: <u>129</u> (A)	<u>502</u> (B)																			
Prevalence Index = B/A = <u>3.89</u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' R</u>)																				
1. <u>Pinus strobus</u>	<u>10</u>	Yes	FACU																	
2. <u>Hamamelis virginiana</u>	<u>10</u>	Yes	FACU																	
3. <u>Viburnum acerifolium</u>	<u>5</u>	Yes	UPL																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>25</u>	=Total Cover																		
<u>Herb Stratum</u> (Plot size: <u>5'R</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain)																
1. <u>Mitchella repens</u>	<u>10</u>	Yes	FACU																	
2. <u>Kalmia angustifolia</u>	<u>5</u>	Yes	FAC																	
3. <u>Vaccinium corymbosum</u>	<u>2</u>	No	FACW																	
4. <u>Pinus strobus</u>	<u>1</u>	No	FACU																	
5. <u>Gaultheria procumbens</u>	<u>1</u>	No	FACU																	
6. <u>Quercus alba</u>	<u>5</u>	Yes	FACU																	
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	<u>24</u>	=Total Cover																		
<u>Woody Vine Stratum</u> (Plot size: _____)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
1. _____																				
2. _____																				
3. _____																				
4. _____																				
				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>																

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/25/19

Applicant/Owner: NHDOT State: NH Sampling Point: W35 Up

Investigator(s): W. McCloy Section, Township, Range: _____

Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope %: 0-2

Subregion (LRR or MLRA): LRR R Lat: 42.888454 Long: -71.337213 Datum: WGS84

Soil Map Unit Name: Chatfield-Hollis-Canton Complex, 8-15% Slope, Rocky NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.)
 Upland plot located between W64 and W35, one upland plot serving to document the conditions adjacent to both wetlands.

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) _____ <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No hydrology indicators

VEGETATION – Use scientific names of plants.

Sampling Point: W35 Up

<u>Tree Stratum</u> (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status																		
1. <u>Quercus alba</u>	25	Yes	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>8</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>12.5%</u> (A/B)																	
2. <u>Quercus rubra</u>	25	Yes	FACU																		
3. <u>Acer rubrum</u>	20	Yes	FAC																		
4. <u>Tsuga canadensis</u>	10	No	FACU																		
5. <u>Pinus strobus</u>	5	No	FACU																		
6. _____																					
7. _____																					
	85	=Total Cover		Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:center;">Total % Cover of:</td> <td style="width:50%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>20</u></td> <td>x 3 = <u>60</u></td> </tr> <tr> <td>FACU species <u>155</u></td> <td>x 4 = <u>620</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>175</u> (A)</td> <td><u>680</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>3.89</u></td> </tr> </table>		Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>20</u>	x 3 = <u>60</u>	FACU species <u>155</u>	x 4 = <u>620</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>175</u> (A)	<u>680</u> (B)	Prevalence Index = B/A = <u>3.89</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>0</u>	x 2 = <u>0</u>																				
FAC species <u>20</u>	x 3 = <u>60</u>																				
FACU species <u>155</u>	x 4 = <u>620</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>175</u> (A)	<u>680</u> (B)																				
Prevalence Index = B/A = <u>3.89</u>																					
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is $\leq 3.0^1$ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																	
1. <u>Pinus strobus</u>	5	No	FACU																		
2. <u>Quercus rubra</u>	10	Yes	FACU																		
3. <u>Quercus alba</u>	10	Yes	FACU																		
4. <u>Betula papyrifera</u>	5	No	FACU																		
5. <u>Fraxinus americana</u>	15	Yes	FACU																		
6. _____																					
7. _____																					
	45	=Total Cover		Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u>																	
<u>Herb Stratum</u> (Plot size: <u>5</u>)																					
1. <u>Mitchella repens</u>	25	Yes	FACU																		
2. <u>Gaultheria procumbens</u>	15	Yes	FACU																		
3. <u>Pinus strobus</u>	5	No	FACU																		
4. _____																					
5. _____																					
6. _____																					
7. _____																					
8. _____																					
9. _____																					
10. _____																					
11. _____																					
12. _____																					
	45	=Total Cover																			
<u>Woody Vine Stratum</u> (Plot size: <u>15</u>)				Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u>																	
1. <u>None</u>																					
2. _____																					
3. _____																					
4. _____				=Total Cover																	
5. _____																					

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/25/19
 Applicant/Owner: NHDOT State: NH Sampling Point: W35 Wet
 Investigator(s): W. McCloy Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0-2
 Subregion (LRR or MLRA): LRR R Lat: 42.888478 Long: -71.337425 Datum: _____
 Soil Map Unit Name: Chatfield-Hollis-Canton Complex, 8-15% Slope, Rocky NWI classification: PFO1E
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) <u>X</u> Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ <u>X</u> Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: Water stained leaves present, tipped up trees present with shallow roots observed; tip up presumed to be due to wetness; evidence of spring/early summer ponding	

VEGETATION – Use scientific names of plants.

Sampling Point: W35 Wet

	Absolute % Cover	Dominant Species?	Indicator Status																	
<u>Tree Stratum</u> (Plot size: <u>30</u>)																				
1. <u><i>Acer rubrum</i></u>	50	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
2. <u><i>Fraxinus pennsylvanica</i></u>	20	Yes	FACW																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>70</u>	=Total Cover																		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>)																				
1. <u><i>Cornus amomum</i></u>	5	Yes	FACW	Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="text-align:right;">Total % Cover of:</td> <td style="text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>5</u></td> <td>x 1 = <u>5</u></td> </tr> <tr> <td>FACW species <u>30</u></td> <td>x 2 = <u>60</u></td> </tr> <tr> <td>FAC species <u>50</u></td> <td>x 3 = <u>150</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>85</u> (A)</td> <td><u>215</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>2.53</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>5</u>	x 1 = <u>5</u>	FACW species <u>30</u>	x 2 = <u>60</u>	FAC species <u>50</u>	x 3 = <u>150</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>85</u> (A)	<u>215</u> (B)	Prevalence Index = B/A = <u>2.53</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>5</u>	x 1 = <u>5</u>																			
FACW species <u>30</u>	x 2 = <u>60</u>																			
FAC species <u>50</u>	x 3 = <u>150</u>																			
FACU species <u>0</u>	x 4 = <u>0</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>85</u> (A)	<u>215</u> (B)																			
Prevalence Index = B/A = <u>2.53</u>																				
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>5</u>	=Total Cover																		
<u>Herb Stratum</u> (Plot size: <u>5</u>)																				
1. <u><i>Onoclea sensibilis</i></u>	5	Yes	FACW	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> <u>2</u> - Dominance Test is >50% <input checked="" type="checkbox"/> <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u><i>Carex lupulina</i></u>	5	Yes	OBL																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	<u>10</u>	=Total Cover																		
<u>Woody Vine Stratum</u> (Plot size: <u>15</u>)																				
1. <u>None</u>				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
2. _____																				
3. _____																				
4. _____																				
				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																

Remarks: (Include photo numbers here or on a separate sheet.)
 Not 100% sure on sedge ID, sparse herbs in wetland, likely inundated in spring/early summer; seasonally dry conditions when observed, lower water table

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/25/19
 Applicant/Owner: NHDOT State: NH Sampling Point: W39 Up
 Investigator(s): W. McCloy Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope %: 10
 Subregion (LRR or MLRA): LRR R Lat: 42.888853 Long: -71.336481 Datum: WGS84
 Soil Map Unit Name: Chatfield-Hollis-Canton Complex, 15-35% Slope, Rocky NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling-point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Hydric Soil Present?	Yes _____ No <u>X</u>	
Wetland Hydrology Present?	Yes _____ No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.)		

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p><u>Primary Indicators</u> (minimum of one is required; check all that apply)</p> <p> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) </p>	<p><u>Secondary Indicators</u> (minimum of two required)</p> <p> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5) </p>
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<p>Field Observations:</p> <p>Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____</p> <p>Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____</p> <p>Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)</p>	<p>Wetland Hydrology Present? Yes _____ No <u>X</u></p>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No hydrology indicators present.

VEGETATION – Use scientific names of plants.

Sampling Point: W39 Up

	Absolute % Cover	Dominant Species?	Indicator Status																																	
Tree Stratum (Plot size: <u>30</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>9</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>11.1%</u> (A/B)																																
1. <u>Acer saccharum</u>	25	Yes	FACU																																	
2. <u>Quercus rubra</u>	30	Yes	FACU																																	
3. <u>Pinus strobus</u>	25	Yes	FACU																																	
4. <u>Betula papyrifera</u>	10	No	FACU																																	
5. _____																																				
6. _____																																				
7. _____																																				
	<u>90</u>	=Total Cover																																		
Sapling/Shrub Stratum (Plot size: <u>15</u>)																																				
1. <u>Pinus strobus</u>	5	Yes	FACU	Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="text-align:right">Total % Cover of:</td> <td style="text-align:center"><u>0</u></td> <td style="text-align:right">Multiply by:</td> <td style="text-align:center"><u>0</u></td> </tr> <tr> <td>OBL species</td> <td style="text-align:center"><u>0</u></td> <td>x 1 =</td> <td style="text-align:center"><u>0</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align:center"><u>5</u></td> <td>x 2 =</td> <td style="text-align:center"><u>10</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align:center"><u>0</u></td> <td>x 3 =</td> <td style="text-align:center"><u>0</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align:center"><u>125</u></td> <td>x 4 =</td> <td style="text-align:center"><u>500</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align:center"><u>5</u></td> <td>x 5 =</td> <td style="text-align:center"><u>25</u></td> </tr> <tr> <td>Column Totals:</td> <td style="text-align:center"><u>135</u></td> <td>(A)</td> <td style="text-align:center"><u>535</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:right">Prevalence Index = B/A =</td> <td></td> <td style="text-align:center"><u>3.96</u></td> </tr> </table>	Total % Cover of:	<u>0</u>	Multiply by:	<u>0</u>	OBL species	<u>0</u>	x 1 =	<u>0</u>	FACW species	<u>5</u>	x 2 =	<u>10</u>	FAC species	<u>0</u>	x 3 =	<u>0</u>	FACU species	<u>125</u>	x 4 =	<u>500</u>	UPL species	<u>5</u>	x 5 =	<u>25</u>	Column Totals:	<u>135</u>	(A)	<u>535</u> (B)	Prevalence Index = B/A =			<u>3.96</u>
Total % Cover of:	<u>0</u>	Multiply by:	<u>0</u>																																	
OBL species	<u>0</u>	x 1 =	<u>0</u>																																	
FACW species	<u>5</u>	x 2 =	<u>10</u>																																	
FAC species	<u>0</u>	x 3 =	<u>0</u>																																	
FACU species	<u>125</u>	x 4 =	<u>500</u>																																	
UPL species	<u>5</u>	x 5 =	<u>25</u>																																	
Column Totals:	<u>135</u>	(A)	<u>535</u> (B)																																	
Prevalence Index = B/A =			<u>3.96</u>																																	
2. <u>Acer saccharum</u>	8	Yes	FACU																																	
3. <u>Quercus rubra</u>	10	Yes	FACU																																	
4. <u>Fraxinus americana</u>	2	No	FACU																																	
5. _____																																				
6. _____																																				
7. _____																																				
	<u>25</u>	=Total Cover																																		
Herb Stratum (Plot size: <u>5</u>)																																				
1. <u>Celastrus orbiculatus</u>	5	Yes	UPL	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																																
2. <u>Festuca rubra</u>	10	Yes	FACU																																	
3. <u>Cornus amomum</u>	5	Yes	FACW																																	
4. _____																																				
5. _____																																				
6. _____																																				
7. _____																																				
8. _____																																				
9. _____																																				
10. _____																																				
11. _____																																				
12. _____																																				
	<u>20</u>	=Total Cover																																		
Woody Vine Stratum (Plot size: <u>15</u>)																																				
1. <u>None</u>				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																																
2. _____																																				
3. _____																																				
4. _____																																				
			=Total Cover																																	
Remarks: (Include photo numbers here or on a separate sheet.) Unsure with grass ID, late season, little left for positive ID				Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u>																																

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/25/19
 Applicant/Owner: NHDOT State: NH Sampling Point: W39 Wet
 Investigator(s): W. McCloy Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): None Slope %: 0-2
 Subregion (LRR or MLRA): LRR R Lat: 42.888855 Long: -71.336368 Datum: WGS84
 Soil Map Unit Name: Chatfield-Hollis-Canton Complex, 15-35% Slope, Rocky NWI classification: PEM1F
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) <u>X</u> High Water Table (A2) _____ Aquatic Fauna (B13) <u>X</u> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>1</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W39 Wet

	Absolute % Cover	Dominant Species?	Indicator Status																		
Tree Stratum (Plot size: <u>30</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																	
1.					Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Total % Cover of:</th> <th style="width:50%;">Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>35</u></td> <td>x 1 = <u>35</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>35</u></td> <td>(A) <u>35</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>1.00</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>35</u>	x 1 = <u>35</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>35</u>	(A) <u>35</u> (B)	Prevalence Index = B/A = <u>1.00</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>35</u>	x 1 = <u>35</u>																				
FACW species <u>0</u>	x 2 = <u>0</u>																				
FAC species <u>0</u>	x 3 = <u>0</u>																				
FACU species <u>0</u>	x 4 = <u>0</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>35</u>	(A) <u>35</u> (B)																				
Prevalence Index = B/A = <u>1.00</u>																					
2.																					
3.																					
4.																					
5.																					
6.																					
7.																					
=Total Cover																					
Sapling/Shrub Stratum (Plot size: <u>15</u>)																					
1.																					
2.																					
3.																					
4.																					
5.																					
6.																					
7.																					
=Total Cover																					
Herb Stratum (Plot size: <u>5</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																	
1.	<u>35</u>	<u>Yes</u>	<u>OBL</u>																		
2.																					
3.																					
4.																					
5.																					
6.																					
7.																					
8.																					
9.																					
10.																					
11.																					
12.																					
=Total Cover																					
Woody Vine Stratum (Plot size: <u>15</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																	
1.																					
2.																					
3.																					
4.																					
=Total Cover				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																	
Remarks: (Include photo numbers here or on a separate sheet.)																					

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/25/19
 Applicant/Owner: NHDOT State: NH Sampling Point: W40 Up
 Investigator(s): W. McCloy Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope %: 10-15
 Subregion (LRR or MLRA): LRR R Lat: 42.889199 Long: -71.335904 Datum: WGS84
 Soil Map Unit Name: Chatfield-Hollis-Canton Complex, 15-35% Slope, Rocky NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Hydric Soil Present?	Yes _____	No <u>X</u>	
Wetland Hydrology Present?	Yes _____	No <u>X</u>	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ <u>X</u> Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No hydrology indicators present

VEGETATION – Use scientific names of plants.

Sampling Point: W40 Up

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30</u>)																				
1. <u>Fraxinus americana</u>	20	Yes	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>16.7%</u> (A/B)																
2. <u>Acer saccharum</u>	35	Yes	FACU																	
3. <u>Quercus rubra</u>	25	Yes	FACU																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	80	=Total Cover		Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="text-align:right;">Total % Cover of:</td> <td style="text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>28</u></td> <td>x 3 = <u>84</u></td> </tr> <tr> <td>FACU species <u>93</u></td> <td>x 4 = <u>372</u></td> </tr> <tr> <td>UPL species <u>40</u></td> <td>x 5 = <u>200</u></td> </tr> <tr> <td>Column Totals: <u>161</u> (A)</td> <td><u>656</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>4.07</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>28</u>	x 3 = <u>84</u>	FACU species <u>93</u>	x 4 = <u>372</u>	UPL species <u>40</u>	x 5 = <u>200</u>	Column Totals: <u>161</u> (A)	<u>656</u> (B)	Prevalence Index = B/A = <u>4.07</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>28</u>	x 3 = <u>84</u>																			
FACU species <u>93</u>	x 4 = <u>372</u>																			
UPL species <u>40</u>	x 5 = <u>200</u>																			
Column Totals: <u>161</u> (A)	<u>656</u> (B)																			
Prevalence Index = B/A = <u>4.07</u>																				
Sapling/Shrub Stratum (Plot size: <u>15</u>)																				
1. <u>Carpinus caroliniana</u>	18	Yes	FAC																	
2. <u>Lonicera morrowii</u>	10	Yes	FACU																	
3. <u>Pinus strobus</u>	2	No	FACU																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	30	=Total Cover																		
Herb Stratum (Plot size: <u>5</u>)																				
1. <u>Dennstaedtia punctilobula</u>	40	Yes	UPL	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Osmunda claytoniana</u>	10	No	FAC																	
3. <u>Lonicera morrowii</u>	1	No	FACU																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	51	=Total Cover																		
Woody Vine Stratum (Plot size: <u>15</u>)																				
1. <u>None</u>				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
2. _____																				
3. _____																				
4. _____																				
				Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u>																

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/25/19
 Applicant/Owner: NHDOT State: NH Sampling Point: W40 Wet
 Investigator(s): W. McCloy Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 2-4
 Subregion (LRR or MLRA): LRR R Lat: 42.889187 Long: -71.335775 Datum: _____
 Soil Map Unit Name: Chatfield-Hollis-Canton Complex, 15-35% Slope, Rocky NWI classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) <u>X</u> Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) <u>X</u> Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Water stained leaves present

VEGETATION – Use scientific names of plants.

Sampling Point: W40 Wet

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>83.3%</u> (A/B)																
1. <u>Salix bebbiana</u>	10	Yes	FACW																	
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>10</u>	=Total Cover		Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:center;">Total % Cover of:</td> <td style="width:50%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>20</u></td> <td>x 1 = <u>20</u></td> </tr> <tr> <td>FACW species <u>35</u></td> <td>x 2 = <u>70</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>5</u></td> <td>x 4 = <u>20</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>65</u></td> <td>(A) <u>125</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>1.92</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>20</u>	x 1 = <u>20</u>	FACW species <u>35</u>	x 2 = <u>70</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>5</u>	x 4 = <u>20</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>65</u>	(A) <u>125</u> (B)	Prevalence Index = B/A = <u>1.92</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>20</u>	x 1 = <u>20</u>																			
FACW species <u>35</u>	x 2 = <u>70</u>																			
FAC species <u>5</u>	x 3 = <u>15</u>																			
FACU species <u>5</u>	x 4 = <u>20</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>65</u>	(A) <u>125</u> (B)																			
Prevalence Index = B/A = <u>1.92</u>																				
Sapling/Shrub Stratum (Plot size: <u>15</u>)																				
1. <u>Cornus alba</u>	10	Yes	FACW																	
2. <u>Sambucus racemosa</u>	5	Yes	FACU																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>15</u>	=Total Cover																		
Herb Stratum (Plot size: <u>5</u>)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Impatiens capensis</u>	15	Yes	FACW																	
2. <u>Glyceria striata</u>	10	Yes	OBL																	
3. <u>Lycopus uniflorus</u>	10	Yes	OBL																	
4. <u>Aster sp</u>	5	No	FAC																	
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	<u>40</u>	=Total Cover																		
Woody Vine Stratum (Plot size: <u>15</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
1. <u>None</u>																				
2. _____																				
3. _____																				
4. _____																				
			=Total Cover																	
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																				
Remarks: (Include photo numbers here or on a separate sheet.) Unsure of aster ID; however not a dominant part of herb community in wetland plot																				

VEGETATION – Use scientific names of plants.

Sampling Point: W41 Up

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B)																
1. <u>Rhamnus cathartica</u>	10	Yes	FAC																	
2. <u>Quercus rubra</u>	10	Yes	FACU																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>20</u>	=Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15</u>)																				
1. <u>Lonicera morrowii</u>	8	Yes	FACU	Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="text-align:right">Total % Cover of:</td> <td style="text-align:center">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>18</u></td> <td>x 3 = <u>54</u></td> </tr> <tr> <td>FACU species <u>68</u></td> <td>x 4 = <u>272</u></td> </tr> <tr> <td>UPL species <u>15</u></td> <td>x 5 = <u>75</u></td> </tr> <tr> <td>Column Totals: <u>101</u> (A)</td> <td><u>401</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center">Prevalence Index = B/A = <u>3.97</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>18</u>	x 3 = <u>54</u>	FACU species <u>68</u>	x 4 = <u>272</u>	UPL species <u>15</u>	x 5 = <u>75</u>	Column Totals: <u>101</u> (A)	<u>401</u> (B)	Prevalence Index = B/A = <u>3.97</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>18</u>	x 3 = <u>54</u>																			
FACU species <u>68</u>	x 4 = <u>272</u>																			
UPL species <u>15</u>	x 5 = <u>75</u>																			
Column Totals: <u>101</u> (A)	<u>401</u> (B)																			
Prevalence Index = B/A = <u>3.97</u>																				
2. <u>Rhamnus cathartica</u>	8	Yes	FAC																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>16</u>	=Total Cover																		
Herb Stratum (Plot size: <u>5</u>)																				
1. <u>Rosa multiflora</u>	30	Yes	FACU	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Celastrus orbiculatus</u>	15	Yes	UPL																	
3. <u>Taraxacum officinale</u>	10	No	FACU																	
4. <u>Poa pratensis</u>	5	No	FACU																	
5. <u>Festuca rubra</u>	5	No	FACU																	
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	<u>65</u>	=Total Cover																		
Woody Vine Stratum (Plot size: <u>15</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
1. _____																				
2. _____																				
3. _____																				
4. _____																				
			=Total Cover																	
Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u>																				
Remarks: (Include photo numbers here or on a separate sheet.) Area a roadside area, mowed																				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/25/19
 Applicant/Owner: NHDOT State: NH Sampling Point: W41 Wet
 Investigator(s): W. McCloy Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0-2
 Subregion (LRR or MLRA): LRR R Lat: 42.890009 Long: -71.331846 Datum: WGS84
 Soil Map Unit Name: Chatfield-Hollis-Canton Complex, 3-8% Slope, Rocky NWI classification: PSS1E
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) <u>X</u> Water-Stained Leaves (B9) <u>X</u> High Water Table (A2) _____ Aquatic Fauna (B13) <u>X</u> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <u>X</u> Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>2</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Plot located in wetland area that is likely a floodplain

VEGETATION – Use scientific names of plants.

Sampling Point: W41 Wet

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
1. <u><i>Acer rubrum</i></u>	<u>25</u>	Yes	FAC																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	<u>25</u> =Total Cover			Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:center;">Total % Cover of:</td> <td style="width:50%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>25</u></td> <td>x 1 = <u>25</u></td> </tr> <tr> <td>FACW species <u>35</u></td> <td>x 2 = <u>70</u></td> </tr> <tr> <td>FAC species <u>25</u></td> <td>x 3 = <u>75</u></td> </tr> <tr> <td>FACU species <u>5</u></td> <td>x 4 = <u>20</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>90</u></td> <td>(A) <u>190</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>2.11</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>25</u>	x 1 = <u>25</u>	FACW species <u>35</u>	x 2 = <u>70</u>	FAC species <u>25</u>	x 3 = <u>75</u>	FACU species <u>5</u>	x 4 = <u>20</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>90</u>	(A) <u>190</u> (B)	Prevalence Index = B/A = <u>2.11</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>25</u>	x 1 = <u>25</u>																			
FACW species <u>35</u>	x 2 = <u>70</u>																			
FAC species <u>25</u>	x 3 = <u>75</u>																			
FACU species <u>5</u>	x 4 = <u>20</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>90</u>	(A) <u>190</u> (B)																			
Prevalence Index = B/A = <u>2.11</u>																				
Sapling/Shrub Stratum (Plot size: <u>15</u>)																				
1. <u><i>Cornus amomum</i></u>	<u>10</u>	Yes	FACW																	
2. <u><i>Cornus alba</i></u>	<u>10</u>	Yes	FACW																	
3. <u><i>Alnus incana</i></u>	<u>5</u>	No	FACW																	
4. <u><i>Prunus virginiana</i></u>	<u>5</u>	No	FACU																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	<u>30</u> =Total Cover																			
Herb Stratum (Plot size: <u>5</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> <u>2</u> - Dominance Test is >50% <input checked="" type="checkbox"/> <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u><i>Carex crinita</i></u>	<u>15</u>	Yes	OBL																	
2. <u><i>Onoclea sensibilis</i></u>	<u>10</u>	Yes	FACW																	
3. <u><i>Glyceria striata</i></u>	<u>10</u>	Yes	OBL																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
	<u>35</u> =Total Cover																			
Woody Vine Stratum (Plot size: <u>15</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
	_____ =Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____																

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/25/19

Applicant/Owner: NHDOT State: NH Sampling Point: W46 Up

Investigator(s): W. McCloy Section, Township, Range: _____

Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0-2

Subregion (LRR or MLRA): LRR R Lat: 42.892463 Long: -71.328056 Datum: WGS84

Soil Map Unit Name: Chatfield-Hollis-Canton Complex, 0-8% Slope, Rocky NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Sampling point for W46/B-5 Wetland	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: No hydrology indicators present.	

VEGETATION – Use scientific names of plants.

Sampling Point: W46 Up

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)																
1. <u>Acer saccharinum</u>	<u>50</u>	<u>Yes</u>	<u>FACW</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
<u>50</u> =Total Cover				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; text-align: center;">Total % Cover of:</td> <td style="width:50%; text-align: center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>55</u></td> <td>x 2 = <u>110</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>100</u></td> <td>x 4 = <u>400</u></td> </tr> <tr> <td>UPL species <u>10</u></td> <td>x 5 = <u>50</u></td> </tr> <tr> <td>Column Totals: <u>170</u> (A)</td> <td><u>575</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>3.38</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>55</u>	x 2 = <u>110</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>100</u>	x 4 = <u>400</u>	UPL species <u>10</u>	x 5 = <u>50</u>	Column Totals: <u>170</u> (A)	<u>575</u> (B)	Prevalence Index = B/A = <u>3.38</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>55</u>	x 2 = <u>110</u>																			
FAC species <u>5</u>	x 3 = <u>15</u>																			
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Column Totals: <u>170</u> (A)	<u>575</u> (B)																			
Prevalence Index = B/A = <u>3.38</u>																				
Sapling/Shrub Stratum (Plot size: <u>15</u>)																				
1. <u>Barbarea vulgaris</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>																	
2. <u>Ulmus americana</u>	<u>5</u>	<u>Yes</u>	<u>FACW</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
<u>10</u> =Total Cover																				
Herb Stratum (Plot size: <u>5</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Poa pratensis</u>	<u>50</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Festuca rubra</u>	<u>50</u>	<u>Yes</u>	<u>FACU</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
<u>100</u> =Total Cover																				
Woody Vine Stratum (Plot size: <u>15</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
1. <u>Celastrus orbiculatus</u>	<u>10</u>	<u>Yes</u>	<u>UPL</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
<u>10</u> =Total Cover																				
Remarks: (Include photo numbers here or on a separate sheet.) Upland plot in mowed roadside/lawn area				Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u>																

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/25/19
 Applicant/Owner: NHDOT State: NH Sampling Point: W46 Wet
 Investigator(s): W. McCloy Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0-2
 Subregion (LRR or MLRA): LRR R Lat: 42.892467 Long: -71.327911 Datum: WGS84
 Soil Map Unit Name: Chatfield-Hollis-Canton Complex, 0-8% Slope, Rocky NWI classification: PFO1E
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.)
 Sampling point for W46/B-5 Wetland

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators</u> (minimum of one is required; check all that apply) _____ _____ Surface Water (A1) _____ Water-Stained Leaves (B9) <u>X</u> High Water Table (A2) _____ Aquatic Fauna (B13) <u>X</u> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators</u> (minimum of two required) _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>6</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W46 Wet

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>83.3%</u> (A/B)																
1. <u>None in plot</u>																				
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
_____ =Total Cover																				
Sapling/Shrub Stratum (Plot size: <u>15</u>)				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Total % Cover of:</th> <th style="width:50%;">Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>40</u></td> <td>x 1 = <u>40</u></td> </tr> <tr> <td>FACW species <u>25</u></td> <td>x 2 = <u>50</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>5</u></td> <td>x 4 = <u>20</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>75</u> (A)</td> <td><u>125</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>1.67</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>40</u>	x 1 = <u>40</u>	FACW species <u>25</u>	x 2 = <u>50</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>5</u>	x 4 = <u>20</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>75</u> (A)	<u>125</u> (B)	Prevalence Index = B/A = <u>1.67</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>40</u>	x 1 = <u>40</u>																			
FACW species <u>25</u>	x 2 = <u>50</u>																			
FAC species <u>5</u>	x 3 = <u>15</u>																			
FACU species <u>5</u>	x 4 = <u>20</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>75</u> (A)	<u>125</u> (B)																			
Prevalence Index = B/A = <u>1.67</u>																				
1. <u>Cephalanthus occidentalis</u>	<u>15</u>	<u>Yes</u>	<u>OBL</u>																	
2. <u>Rhamnus cathartica</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>																	
3. <u>Ilex verticillata</u>	<u>5</u>	<u>Yes</u>	<u>FACW</u>																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
_____ =Total Cover																				
Herb Stratum (Plot size: <u>5</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> <u>2</u> - Dominance Test is >50% <input checked="" type="checkbox"/> <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Typha latifolia</u>	<u>20</u>	<u>Yes</u>	<u>OBL</u>																	
2. <u>Iris versicolor</u>	<u>5</u>	<u>No</u>	<u>OBL</u>																	
3. <u>Impatiens capensis</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
_____ =Total Cover																				
Woody Vine Stratum (Plot size: <u>15</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
1. <u>Vitis labrusca</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>																	
2. _____																				
3. _____																				
4. _____																				
_____ =Total Cover																				
Hydrophytic Vegetation Present? Yes <u>X</u> No _____																				
Remarks: (Include photo numbers here or on a separate sheet.)																				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/24/2019

Applicant/Owner: NHDOT State: NH Sampling Point: W49-UPL

Investigator(s): B. Griffith Section, Township, Range: _____

Landform (hillside, terrace, etc.): Road Shoulder Local relief (concave, convex, none): Convex Slope %: 1

Subregion (LRR or MLRA): LRR R Lat: 42.89996609 Long: -71.32111919 Datum: WGS 84

Soil Map Unit Name: Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Unusually dry. Plot located in road shoulder.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W49-UPL

<u>Tree Stratum</u> (Plot size: <u>30' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status																		
1. <u><i>Acer rubrum</i></u>	<u>40</u>	<u>Yes</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>20.0%</u> (A/B)																	
2. <u><i>Prunus serotina</i></u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>																		
3. _____																					
4. _____																					
5. _____																					
6. _____																					
7. _____																					
	<u>50</u>	=Total Cover		Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:center;">Total % Cover of:</td> <td style="width:50%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>1</u></td> <td>x 2 = <u>2</u></td> </tr> <tr> <td>FAC species <u>40</u></td> <td>x 3 = <u>120</u></td> </tr> <tr> <td>FACU species <u>30</u></td> <td>x 4 = <u>120</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>71</u> (A)</td> <td><u>242</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>3.41</u></td> </tr> </table>		Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>1</u>	x 2 = <u>2</u>	FAC species <u>40</u>	x 3 = <u>120</u>	FACU species <u>30</u>	x 4 = <u>120</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>71</u> (A)	<u>242</u> (B)	Prevalence Index = B/A = <u>3.41</u>	
Total % Cover of:	Multiply by:																				
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Column Totals: <u>71</u> (A)	<u>242</u> (B)																				
Prevalence Index = B/A = <u>3.41</u>																					
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' R</u>)																					
1. <u><i>Eleagnus umbellata</i></u>	<u>20</u>	<u>Yes</u>																			
2. <u><i>Pinus strobus</i></u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>																		
3. _____																					
4. _____																					
5. _____																					
6. _____																					
7. _____																					
	<u>30</u>	=Total Cover																			
<u>Herb Stratum</u> (Plot size: <u>5' R</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																	
1. <u><i>Berberis thunbergii</i></u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>																		
2. <u><i>Onoclea sensibilis</i></u>	<u>1</u>	<u>No</u>	<u>FACW</u>																		
3. _____																					
4. _____																					
5. _____																					
6. _____																					
7. _____																					
8. _____																					
9. _____																					
10. _____																					
11. _____																					
12. _____																					
	<u>11</u>	=Total Cover																			
<u>Woody Vine Stratum</u> (Plot size: _____)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																	
1. _____																					
2. _____																					
3. _____																					
4. _____																					
				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																	

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/24/2019
 Applicant/Owner: NHDOT State: NH Sampling Point: W49-Wet
 Investigator(s): B. Griffith Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0
 Subregion (LRR or MLRA): LRR R Lat: 42.90003494 Long: -71.32104216 Datum: WGS 84
 Soil Map Unit Name: Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Unusually dry	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators</u> (minimum of one is required; check all that apply)	<u>Secondary Indicators</u> (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1) _____ Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	_____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>10</u> Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W49-Wet

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30' R</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:center;">Total % Cover of:</td> <td style="width:50%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>20</u></td> <td>x 1 = <u>20</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>10</u></td> <td>x 3 = <u>30</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>30</u></td> <td>(A) <u>50</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>1.67</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>20</u>	x 1 = <u>20</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>10</u>	x 3 = <u>30</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>30</u>	(A) <u>50</u> (B)	Prevalence Index = B/A = <u>1.67</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>20</u>	x 1 = <u>20</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>10</u>	x 3 = <u>30</u>																			
FACU species <u>0</u>	x 4 = <u>0</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>30</u>	(A) <u>50</u> (B)																			
Prevalence Index = B/A = <u>1.67</u>																				
1. <u>Acer rubrum</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
<u>10</u> =Total Cover																				
Sapling/Shrub Stratum (Plot size: <u>15' R</u>)																				
1. <u>Cephalanthus occidentalis</u>	<u>20</u>	<u>Yes</u>	<u>OBL</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
<u>20</u> =Total Cover																				
Herb Stratum (Plot size: <u>5' R</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ =Total Cover																				
Woody Vine Stratum (Plot size: _____)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ =Total Cover																				
Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																				
Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____																				
Remarks: (Include photo numbers here or on a separate sheet.) 																				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/24/2019

Applicant/Owner: NHDOT State: NH Sampling Point: W54-UPL

Investigator(s): B. Griffith Section, Township, Range: _____

Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope %: 5

Subregion (LRR or MLRA): LRR R Lat: 42.90509260 Long: -71.31050236 Datum: WGS 84

Soil Map Unit Name: Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) _____ <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W54-UPL

<u>Tree Stratum</u> (Plot size: <u>30'R</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u><i>Pinus strobus</i></u>	<u>15</u>	Yes	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>28.6%</u> (A/B)
2. <u><i>Quercus rubra</i></u>	<u>10</u>	Yes	FACU	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
	<u>25</u> =Total Cover			Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>10</u> x 2 = <u>20</u> FAC species <u>5</u> x 3 = <u>15</u> FACU species <u>30</u> x 4 = <u>120</u> UPL species <u>12</u> x 5 = <u>60</u> Column Totals: <u>57</u> (A) <u>215</u> (B) Prevalence Index = B/A = <u>3.77</u>
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u><i>Ilex verticillata</i></u>	<u>10</u>	Yes	FACW	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u><i>Euonymus alatus</i></u>	<u>10</u>	Yes	UPL	
3. <u><i>Berberis vulgaris</i></u>	<u>5</u>	Yes	FACU	
4. _____				
5. _____				
6. _____				
7. _____				
	<u>25</u> =Total Cover			Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
<u>Herb Stratum</u> (Plot size: <u>5' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u><i>Dryopteris intermedia</i></u>	<u>5</u>	Yes	FAC	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
2. <u><i>Euonymus alatus</i></u>	<u>2</u>	Yes	UPL	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
	<u>7</u> =Total Cover			
<u>Woody Vine Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				
2. _____				
3. _____				
4. _____				
	_____ =Total Cover			
Remarks: (Include photo numbers here or on a separate sheet.)				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/24/2019
 Applicant/Owner: NHDOT State: NH Sampling Point: W54-Wet
 Investigator(s): B. Griffith Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0
 Subregion (LRR or MLRA): LRR R Lat: 42.90503458 Long: -71.31039321 Datum: WGS 84
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Unusually dry	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) <u>X</u> Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) <u>X</u> Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <u>X</u> Geomorphic Position (D2) _____ Shallow Aquitard (D3) <u>X</u> Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W54-Wet

<u>Tree Stratum</u> (Plot size: <u>30' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; text-align: center;">Total % Cover of:</td> <td style="width:50%; text-align: center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>30</u></td> <td>x 1 = <u>30</u></td> </tr> <tr> <td>FACW species <u>10</u></td> <td>x 2 = <u>20</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>40</u></td> <td>(A) <u>50</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>1.25</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>30</u>	x 1 = <u>30</u>	FACW species <u>10</u>	x 2 = <u>20</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>40</u>	(A) <u>50</u> (B)	Prevalence Index = B/A = <u>1.25</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>30</u>	x 1 = <u>30</u>																			
FACW species <u>10</u>	x 2 = <u>20</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>0</u>	x 4 = <u>0</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>40</u>	(A) <u>50</u> (B)																			
Prevalence Index = B/A = <u>1.25</u>																				
=Total Cover																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' R</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
<u>Herb Stratum</u> (Plot size: <u>5'R</u>)																				
1. <u>Lythrum salicaria</u>	<u>30</u>	<u>Yes</u>	<u>OBL</u>																	
2. <u>Thelypteris palustris</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
=Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: _____)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
=Total Cover																				
=Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
=Total Cover				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																
Remarks: (Include photo numbers here or on a separate sheet.)																				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/24/2019

Applicant/Owner: NHDOT State: NH Sampling Point: W56-UPL

Investigator(s): B. Griffith Section, Township, Range: _____

Landform (hillside, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope %: _____

Subregion (LRR or MLRA): LRR R Lat: 42.91006170 Long: -71.30409828 Datum: WGS 84

Soil Map Unit Name: Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Unusually dry	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W56-UPL

<u>Tree Stratum</u> (Plot size: <u>30' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover				Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align: center;">Total % Cover of:</td> <td style="width:50%; text-align: center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>20</u></td> <td>x 4 = <u>80</u></td> </tr> <tr> <td>UPL species <u>5</u></td> <td>x 5 = <u>25</u></td> </tr> <tr> <td>Column Totals: <u>25</u> (A)</td> <td><u>105</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>4.20</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>20</u>	x 4 = <u>80</u>	UPL species <u>5</u>	x 5 = <u>25</u>	Column Totals: <u>25</u> (A)	<u>105</u> (B)	Prevalence Index = B/A = <u>4.20</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>20</u>	x 4 = <u>80</u>																			
UPL species <u>5</u>	x 5 = <u>25</u>																			
Column Totals: <u>25</u> (A)	<u>105</u> (B)																			
Prevalence Index = B/A = <u>4.20</u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' R</u>)				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
=Total Cover																				
<u>Herb Stratum</u> (Plot size: <u>5' R</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																
1. <u>Tanacetum vulgare</u>	10	Yes	FACU																	
2. <u>Festuca rubra</u>	10	Yes	FACU																	
3. <u>Daucus carota</u>	5	Yes	UPL																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
=Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: _____)				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
=Total Cover																				
Remarks: (Include photo numbers here or on a separate sheet.)																				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/24/2019
 Applicant/Owner: NHDOT State: NH Sampling Point: W56-Wet
 Investigator(s): B. Griffith Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0
 Subregion (LRR or MLRA): LRR R Lat: 42.91010002 Long: -71.30410034 Datum: WGS 84
 Soil Map Unit Name: Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Water-Stained Leaves (B9) <u>X</u> High Water Table (A2) ___ Aquatic Fauna (B13) <u>X</u> Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>2</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W56-Wet

<u>Tree Stratum</u> (Plot size: <u>30' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status																									
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																								
2. _____	_____	_____	_____																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
5. _____	_____	_____	_____																									
6. _____	_____	_____	_____																									
7. _____	_____	_____	_____																									
=Total Cover				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:30%;"></td> <td style="width:30%; text-align: center;">Total % Cover of:</td> <td style="width:40%; text-align: center;">Multiply by:</td> </tr> <tr> <td>OBL species</td> <td style="text-align: center;"><u>75</u></td> <td style="text-align: center;">x 1 = <u>75</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;"><u>10</u></td> <td style="text-align: center;">x 2 = <u>20</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;"><u>30</u></td> <td style="text-align: center;">x 3 = <u>90</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;"><u>0</u></td> <td style="text-align: center;">x 4 = <u>0</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;"><u>0</u></td> <td style="text-align: center;">x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals:</td> <td style="text-align: center;"><u>115</u> (A)</td> <td style="text-align: center;"><u>185</u> (B)</td> </tr> <tr> <td colspan="3" style="text-align: center;">Prevalence Index = B/A = <u>1.61</u></td> </tr> </table>		Total % Cover of:	Multiply by:	OBL species	<u>75</u>	x 1 = <u>75</u>	FACW species	<u>10</u>	x 2 = <u>20</u>	FAC species	<u>30</u>	x 3 = <u>90</u>	FACU species	<u>0</u>	x 4 = <u>0</u>	UPL species	<u>0</u>	x 5 = <u>0</u>	Column Totals:	<u>115</u> (A)	<u>185</u> (B)	Prevalence Index = B/A = <u>1.61</u>		
	Total % Cover of:	Multiply by:																										
OBL species	<u>75</u>	x 1 = <u>75</u>																										
FACW species	<u>10</u>	x 2 = <u>20</u>																										
FAC species	<u>30</u>	x 3 = <u>90</u>																										
FACU species	<u>0</u>	x 4 = <u>0</u>																										
UPL species	<u>0</u>	x 5 = <u>0</u>																										
Column Totals:	<u>115</u> (A)	<u>185</u> (B)																										
Prevalence Index = B/A = <u>1.61</u>																												
=Total Cover																												
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' R</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> <u>2</u> - Dominance Test is >50% <input checked="" type="checkbox"/> <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																								
1. <u>Ilex verticillata</u>	<u>10</u>	Yes	FACW																									
2. <u>Viburnum dentatum</u>	<u>30</u>	Yes	FAC																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
5. _____	_____	_____	_____																									
6. _____	_____	_____	_____																									
7. _____	_____	_____	_____																									
=Total Cover																												
<u>Herb Stratum</u> (Plot size: <u>5' R</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes <u>X</u> No _____																								
1. <u>Calamagrostis canadensis</u>	<u>70</u>	Yes	OBL																									
2. <u>Geum rivale</u>	<u>5</u>	No	OBL																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
5. _____	_____	_____	_____																									
6. _____	_____	_____	_____																									
7. _____	_____	_____	_____																									
8. _____	_____	_____	_____																									
9. _____	_____	_____	_____																									
10. _____	_____	_____	_____																									
11. _____	_____	_____	_____																									
12. _____	_____	_____	_____																									
=Total Cover																												
<u>Woody Vine Stratum</u> (Plot size: _____)																												
1. _____	_____	_____	_____																									
2. _____	_____	_____	_____																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
=Total Cover																												

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/24/2019

Applicant/Owner: NHDOT State: NH Sampling Point: W59-UPL

Investigator(s): B. Griffith Section, Township, Range: _____

Landform (hillside, terrace, etc.): Road Shoulder Local relief (concave, convex, none): Convex Slope %: 5

Subregion (LRR or MLRA): LRR R Lat: 42.91010379 Long: -71.30286349 Datum: WGS 84

Soil Map Unit Name: Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.)

Unusually dry. Plot located in road shoulder.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W59-UPL

<u>Tree Stratum</u> (Plot size: <u>30' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u><i>Acer rubrum</i></u>	5	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	5	=Total Cover		Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:center;">Total % Cover of:</td> <td style="width:50%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>5</u></td> <td>x 2 = <u>10</u></td> </tr> <tr> <td>FAC species <u>15</u></td> <td>x 3 = <u>45</u></td> </tr> <tr> <td>FACU species <u>7</u></td> <td>x 4 = <u>28</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>27</u> (A)</td> <td><u>83</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>3.07</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>5</u>	x 2 = <u>10</u>	FAC species <u>15</u>	x 3 = <u>45</u>	FACU species <u>7</u>	x 4 = <u>28</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>27</u> (A)	<u>83</u> (B)	Prevalence Index = B/A = <u>3.07</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>5</u>	x 2 = <u>10</u>																			
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FACU species <u>7</u>	x 4 = <u>28</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>27</u> (A)	<u>83</u> (B)																			
Prevalence Index = B/A = <u>3.07</u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' R</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u><i>Quercus rubra</i></u>	5	Yes	FACU																	
2. <u><i>Acer saccharum</i></u>	1	No	FACU																	
3. <u><i>Fraxinus americana</i></u>	1	No	FACU																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	7	=Total Cover																		
<u>Herb Stratum</u> (Plot size: <u>5' R</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
1. <u><i>Solidago rugosa</i></u>	10	Yes	FAC																	
2. <u><i>Impatiens capensis</i></u>	5	Yes	FACW																	
3. <u><i>Spiraea alba</i></u>	5	Yes	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
	20	=Total Cover																		
<u>Woody Vine Stratum</u> (Plot size: _____)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
	_____	=Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.)																				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/24/2019
 Applicant/Owner: NHDOT State: NH Sampling Point: W59-Wet
 Investigator(s): B. Griffith Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope %: 0
 Subregion (LRR or MLRA): LRR R Lat: 42.91002320 Long: -71.30292794 Datum: WGS 84
 Soil Map Unit Name: Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Unusually dry	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators</u> (minimum of one is required; check all that apply)	<u>Secondary Indicators</u> (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>2</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/24/2019

Applicant/Owner: NHDOT State: NH Sampling Point: W61-UPL

Investigator(s): B. Griffith Section, Township, Range: _____

Landform (hillside, terrace, etc.): Road Shoulder Local relief (concave, convex, none): Convex Slope %: 2

Subregion (LRR or MLRA): LRR R Lat: 42.90418757 Long: -71.31416539 Datum: WGS 84

Soil Map Unit Name: Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Unusually dry	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) _____ <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W61-UPL

Tree Stratum (Plot size: <u>30' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

=Total Cover

Sapling/Shrub Stratum (Plot size: <u>15' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>5</u>	x 2 = <u>10</u>
FAC species <u>70</u>	x 3 = <u>210</u>
FACU species <u>5</u>	x 4 = <u>20</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>80</u> (A)	<u>240</u> (B)
Prevalence Index = B/A = <u>3.00</u>	

=Total Cover

Herb Stratum (Plot size: <u>5' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Euthamia graminifolia</u>	<u>60</u>	<u>Yes</u>	<u>FAC</u>
2. <u>Solidago rugosa</u>	<u>10</u>	<u>No</u>	<u>FAC</u>
3. <u>Potentilla simplex</u>	<u>5</u>	<u>No</u>	<u>FACU</u>
4. <u>Verbena hastata</u>	<u>5</u>	<u>No</u>	<u>FACW</u>
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤3.0¹

 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

80 =Total Cover

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____

_____ =Total Cover

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/24/2019
 Applicant/Owner: NHDOT State: NH Sampling Point: W61-Wet
 Investigator(s): B. Griffith Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0
 Subregion (LRR or MLRA): LRR R Lat: 42.90415920 Long: -71.31414958 Datum: WGS 84
 Soil Map Unit Name: Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) _____ <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No _____ Depth (inches): _____ Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W61-Wet

<u>Tree Stratum</u> (Plot size: <u>30' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
=Total Cover				Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>30</u> x 1 = <u>30</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>30</u> (A) <u>30</u> (B) Prevalence Index = B/A = <u>1.00</u>
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' R</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
=Total Cover				
<u>Herb Stratum</u> (Plot size: <u>5' R</u>)				
1. <u>Juncus effusus</u>	15	Yes	OBL	
2. <u>Boehmeria cylindrica</u>	10	Yes	OBL	
3. <u>Lythrum salicaria</u>	5	No	OBL	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
30 =Total Cover				
<u>Woody Vine Stratum</u> (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
=Total Cover				
Hydrophytic Vegetation Present? Yes <u>X</u> No _____				
				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> <u>2</u> - Dominance Test is >50% <input checked="" type="checkbox"/> <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks: (Include photo numbers here or on a separate sheet.)				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/24/2019

Applicant/Owner: NHDOT State: NH Sampling Point: W62-UPL

Investigator(s): B. Griffith Section, Township, Range: _____

Landform (hillside, terrace, etc.): Road Shoulder Local relief (concave, convex, none): None Slope %: 2

Subregion (LRR or MLRA): LRR R Lat: 42.91024860 Long: -71.30284301 Datum: WGS 84

Soil Map Unit Name: Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Unusually dry, plot conducted in road shoulder	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/24/2019

Applicant/Owner: NHDOT State: NH Sampling Point: W62-Wet

Investigator(s): B. Griffith Section, Township, Range: _____

Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope %: 0

Subregion (LRR or MLRA): LRR R Lat: 42.91026204 Long: -71.30297121 Datum: WGS84

Soil Map Unit Name: Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) _____ <input checked="" type="checkbox"/> Surface Water (A1) _____ Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) _____ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) ? Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>18</u> Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W62-Wet

<u>Tree Stratum</u> (Plot size: <u>30'R</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover				Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>1</u></td> <td>x 1 = <u>1</u></td> </tr> <tr> <td>FACW species <u>1</u></td> <td>x 2 = <u>2</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>2</u></td> <td>(A) <u>3</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>1.50</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>1</u>	x 1 = <u>1</u>	FACW species <u>1</u>	x 2 = <u>2</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>2</u>	(A) <u>3</u> (B)	Prevalence Index = B/A = <u>1.50</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>1</u>	x 1 = <u>1</u>																			
FACW species <u>1</u>	x 2 = <u>2</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>0</u>	x 4 = <u>0</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>2</u>	(A) <u>3</u> (B)																			
Prevalence Index = B/A = <u>1.50</u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' R</u>)				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Spiraea alba</u>	<u>1</u>	<u>No</u>	<u>FACW</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes <u>X</u> No _____																
<u>Herb Stratum</u> (Plot size: <u>5'R</u>)																				
1. <u>Lythrum salicaria</u>	<u>1</u>	<u>No</u>	<u>OBL</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: _____)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ =Total Cover																				
Remarks: (Include photo numbers here or on a separate sheet.)																				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/25/19
 Applicant/Owner: NHDOT State: NH Sampling Point: W64 Up
 Investigator(s): W. McCloy Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope %: 0-2
 Subregion (LRR or MLRA): LRR R Lat: 42.888454 Long: -71.337213 Datum: WGS84
 Soil Map Unit Name: Chatfield-Hollis-Canton Complex, 8-15% Slope, Rocky NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.)
 Upland plot located between W64 and W35, one upland plot serving to document the conditions adjacent to both wetlands.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No hydrology indicators

VEGETATION – Use scientific names of plants.

Sampling Point: W64 Up

<u>Tree Stratum</u> (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Quercus alba</u>	25	Yes	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>8</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>12.5%</u> (A/B)																
2. <u>Quercus rubra</u>	25	Yes	FACU																	
3. <u>Acer rubrum</u>	20	Yes	FAC																	
4. <u>Tsuga canadensis</u>	10	No	FACU																	
5. <u>Pinus strobus</u>	5	No	FACU																	
6. _____																				
7. _____																				
	85	=Total Cover		Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:center;">Total % Cover of:</td> <td style="width:50%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>20</u></td> <td>x 3 = <u>60</u></td> </tr> <tr> <td>FACU species <u>155</u></td> <td>x 4 = <u>620</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>175</u></td> <td>(A) <u>680</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>3.89</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>20</u>	x 3 = <u>60</u>	FACU species <u>155</u>	x 4 = <u>620</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>175</u>	(A) <u>680</u> (B)	Prevalence Index = B/A = <u>3.89</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>20</u>	x 3 = <u>60</u>																			
FACU species <u>155</u>	x 4 = <u>620</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>175</u>	(A) <u>680</u> (B)																			
Prevalence Index = B/A = <u>3.89</u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>)																				
1. <u>Pinus strobus</u>	5	No	FACU																	
2. <u>Quercus rubra</u>	10	Yes	FACU																	
3. <u>Quercus alba</u>	10	Yes	FACU																	
4. <u>Betula papyrifera</u>	5	No	FACU																	
5. <u>Fraxinus americana</u>	15	Yes	FACU																	
6. _____																				
7. _____																				
	45	=Total Cover																		
<u>Herb Stratum</u> (Plot size: <u>5</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Mitchella repens</u>	25	Yes	FACU																	
2. <u>Gaultheria procumbens</u>	15	Yes	FACU																	
3. <u>Pinus strobus</u>	5	No	FACU																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	45	=Total Cover																		
<u>Woody Vine Stratum</u> (Plot size: <u>15</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
1. <u>None</u>																				
2. _____																				
3. _____																				
4. _____																				
			=Total Cover																	
Remarks: (Include photo numbers here or on a separate sheet.)				Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u>																

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/25/19
 Applicant/Owner: NHDOT State: NH Sampling Point: W64 Wet
 Investigator(s): W. McCloy Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0-2
 Subregion (LRR or MLRA): LRR R Lat: 42.888478 Long: -71.337044 Datum: WGS84
 Soil Map Unit Name: Chatfield-Hollis-Canton Complex, 8-15% Slope, Rocky NWI classification: PFO1E
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) <u>X</u> Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <u>X</u> Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Area seasonally dry, can tell that it is inundated in the spring

VEGETATION – Use scientific names of plants.

Sampling Point: W64 Wet

	Absolute % Cover	Dominant Species?	Indicator Status																									
Tree Stratum (Plot size: <u>30</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																								
1. <u>Acer rubrum</u>	<u>25</u>	<u>Yes</u>	<u>FAC</u>																									
2. _____																												
3. _____																												
4. _____																												
5. _____																												
6. _____																												
7. _____																												
	<u>25</u> =Total Cover			Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="text-align:right;">Total % Cover of:</td> <td style="text-align:right;">Multiply by:</td> <td></td> </tr> <tr> <td>OBL species <u>50</u></td> <td>x 1 =</td> <td><u>50</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 =</td> <td><u>0</u></td> </tr> <tr> <td>FAC species <u>30</u></td> <td>x 3 =</td> <td><u>90</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 =</td> <td><u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 =</td> <td><u>0</u></td> </tr> <tr> <td>Column Totals: <u>80</u></td> <td>(A)</td> <td><u>140</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:right;">Prevalence Index = B/A =</td> <td><u>1.75</u></td> </tr> </table>	Total % Cover of:	Multiply by:		OBL species <u>50</u>	x 1 =	<u>50</u>	FACW species <u>0</u>	x 2 =	<u>0</u>	FAC species <u>30</u>	x 3 =	<u>90</u>	FACU species <u>0</u>	x 4 =	<u>0</u>	UPL species <u>0</u>	x 5 =	<u>0</u>	Column Totals: <u>80</u>	(A)	<u>140</u> (B)	Prevalence Index = B/A =		<u>1.75</u>
Total % Cover of:	Multiply by:																											
OBL species <u>50</u>	x 1 =	<u>50</u>																										
FACW species <u>0</u>	x 2 =	<u>0</u>																										
FAC species <u>30</u>	x 3 =	<u>90</u>																										
FACU species <u>0</u>	x 4 =	<u>0</u>																										
UPL species <u>0</u>	x 5 =	<u>0</u>																										
Column Totals: <u>80</u>	(A)	<u>140</u> (B)																										
Prevalence Index = B/A =		<u>1.75</u>																										
Sapling/Shrub Stratum (Plot size: <u>15</u>)																												
1. <u>Acer rubrum</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>																									
2. _____																												
3. _____																												
4. _____																												
5. _____																												
6. _____																												
7. _____																												
	<u>5</u> =Total Cover																											
Herb Stratum (Plot size: <u>5</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> <u>2</u> - Dominance Test is >50% <input checked="" type="checkbox"/> <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																								
1. <u>Osmunda spectabilis</u>	<u>50</u>	<u>Yes</u>	<u>OBL</u>																									
2. _____																												
3. _____																												
4. _____																												
5. _____																												
6. _____																												
7. _____																												
8. _____																												
9. _____																												
10. _____																												
11. _____																												
12. _____																												
	<u>50</u> =Total Cover																											
Woody Vine Stratum (Plot size: <u>15</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																								
1. <u>None</u>																												
2. _____																												
3. _____																												
4. _____																												
	=Total Cover																											

Remarks: (Include photo numbers here or on a separate sheet.)
 Unsure with grass ID, late season, little left for positive ID

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/25/19
 Applicant/Owner: NHDOT State: NH Sampling Point: W66 Up
 Investigator(s): W. McCloy Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Top of small ridge Local relief (concave, convex, none): Convex Slope %: 1-4
 Subregion (LRR or MLRA): LRR R Lat: 42.88936 Long: -71.354401 Datum: WGS84
 Soil Map Unit Name: Chatfield-Hollis-Canton complex, 8-15 percent slopes, rocky NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Upland plot is for W11 and W66	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W66 Up

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																
1. <u>Quercus rubra</u>	30	Yes	FACU																	
2. <u>Pinus strobus</u>	40	Yes	FACU																	
3. <u>Quercus alba</u>	10	No	FACU																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	80	=Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15</u>)																				
1. <u>Betula populifolia</u>	5	No	FAC	Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="text-align:right;">Total % Cover of:</td> <td style="text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>126</u></td> <td>x 4 = <u>504</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>131</u> (A)</td> <td><u>519</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>3.96</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>126</u>	x 4 = <u>504</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>131</u> (A)	<u>519</u> (B)	Prevalence Index = B/A = <u>3.96</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>5</u>	x 3 = <u>15</u>																			
FACU species <u>126</u>	x 4 = <u>504</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>131</u> (A)	<u>519</u> (B)																			
Prevalence Index = B/A = <u>3.96</u>																				
2. <u>Hamamelis virginiana</u>	35	Yes	FACU																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	40	=Total Cover																		
Herb Stratum (Plot size: <u>5</u>)																				
1. <u>Mitchella repens</u>	10	Yes	FACU	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Pinus strobus</u>	1	No	FACU																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	11	=Total Cover																		
Woody Vine Stratum (Plot size: <u>15</u>)																				
1. <u>None</u>				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
2. _____																				
3. _____																				
4. _____																				
			=Total Cover																	
Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u>																				
Remarks: (Include photo numbers here or on a separate sheet.) 																				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/25/19
 Applicant/Owner: NHDOT State: NH Sampling Point: W66 Wet
 Investigator(s): W. McCloy Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 1-4
 Subregion (LRR or MLRA): LRR R Lat: 42.889177 Long: -71.354253 Datum: WGS84
 Soil Map Unit Name: Chatfield-Hollis-Canton complex, 8-15 percent slopes, rocky NWI classification: PFO1E
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) _____ <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>1</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Saturated at surface; water table at 1 inch depth; also a depression; located adjacent to I93 highway recent work/expansion

VEGETATION – Use scientific names of plants.

Sampling Point: W66 Wet

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
1. <u><i>Acer rubrum</i></u>	60	Yes	FAC																	
2. <u><i>Betula papyrifera</i></u>	5	No	FACU																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>65</u> =Total Cover			Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:center;">Total % Cover of:</td> <td style="width:50%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>45</u></td> <td>x 1 = <u>45</u></td> </tr> <tr> <td>FACW species <u>55</u></td> <td>x 2 = <u>110</u></td> </tr> <tr> <td>FAC species <u>60</u></td> <td>x 3 = <u>180</u></td> </tr> <tr> <td>FACU species <u>5</u></td> <td>x 4 = <u>20</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>165</u> (A)</td> <td><u>355</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>2.15</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>45</u>	x 1 = <u>45</u>	FACW species <u>55</u>	x 2 = <u>110</u>	FAC species <u>60</u>	x 3 = <u>180</u>	FACU species <u>5</u>	x 4 = <u>20</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>165</u> (A)	<u>355</u> (B)	Prevalence Index = B/A = <u>2.15</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>45</u>	x 1 = <u>45</u>																			
FACW species <u>55</u>	x 2 = <u>110</u>																			
FAC species <u>60</u>	x 3 = <u>180</u>																			
FACU species <u>5</u>	x 4 = <u>20</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>165</u> (A)	<u>355</u> (B)																			
Prevalence Index = B/A = <u>2.15</u>																				
Sapling/Shrub Stratum (Plot size: <u>15</u>)																				
1. <u><i>Vaccinium corymbosum</i></u>	15	Yes	FACW																	
2. <u><i>Fraxinus pennsylvanica</i></u>	5	Yes	FACW																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>20</u> =Total Cover																			
Herb Stratum (Plot size: <u>5</u>)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u><i>Osmundastrum cinnamomeum</i></u>	25	Yes	FACW																	
2. <u><i>Thelypteris palustris</i></u>	10	No	FACW																	
3. <u><i>Lycopus uniflorus</i></u>	20	Yes	OBL																	
4. <u><i>Osmunda spectabilis</i></u>	25	Yes	OBL																	
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	<u>80</u> =Total Cover																			
Woody Vine Stratum (Plot size: <u>15</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
1. <u>None</u>																				
2. _____																				
3. _____																				
4. _____																				
	=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____																

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Londonderry Sampling Date: 10/15/19
 Applicant/Owner: NHDOT State: NH Sampling Point: W67 Up
 Investigator(s): W. McCloy Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Hillside Local relief (concave, convex, none): None Slope %: 5-15
 Subregion (LRR or MLRA): LRR R Lat: 42.89112 Long: -71.354089 Datum: WGS84
 Soil Map Unit Name: Chatfield-Hollis-Canron Complex, 8-15 % slopes, rocky NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Hydric Soil Present?	Yes _____ No <u>X</u>	
Wetland Hydrology Present?	Yes _____ No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.)		

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <p> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) </p>	<p><u>Secondary Indicators (minimum of two required)</u></p> <p> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5) </p>
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<p>Field Observations:</p> <p>Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____</p> <p>Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____</p> <p>Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)</p>	<p>Wetland Hydrology Present? Yes _____ No <u>X</u></p>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No hydrology indicators present

VEGETATION – Use scientific names of plants.

Sampling Point: W67 Up

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30</u>)				Dominance Test worksheet:																
1. <u>Quercus rubra</u>	40	Yes	FACU	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)																
2. <u>Acer rubrum</u>	40	Yes	FAC	Total Number of Dominant Species Across All Strata: <u>8</u> (B)																
3. <u>Pinus strobus</u>	30	Yes	FACU	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>25.0%</u> (A/B)																
4. _____				Prevalence Index worksheet:																
5. _____																				
6. _____																				
7. _____																				
	110 =Total Cover			<table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Total % Cover of:</th> <th style="width:50%;">Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>50</u></td> <td>x 3 = <u>150</u></td> </tr> <tr> <td>FACU species <u>100</u></td> <td>x 4 = <u>400</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>150</u> (A)</td> <td><u>550</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>3.67</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>50</u>	x 3 = <u>150</u>	FACU species <u>100</u>	x 4 = <u>400</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>150</u> (A)	<u>550</u> (B)	Prevalence Index = B/A = <u>3.67</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>50</u>	x 3 = <u>150</u>																			
FACU species <u>100</u>	x 4 = <u>400</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>150</u> (A)	<u>550</u> (B)																			
Prevalence Index = B/A = <u>3.67</u>																				
Sapling/Shrub Stratum (Plot size: <u>15</u>)				Hydrophytic Vegetation Indicators:																
1. <u>Acer rubrum</u>	10	Yes	FAC																	
2. <u>Fraxinus americana</u>	10	Yes	FACU																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	20 =Total Cover																			
Herb Stratum (Plot size: <u>5</u>)																				
1. <u>Mitchella repens</u>	10	Yes	FACU																	
2. <u>Vaccinium angustifolium</u>	5	Yes	FACU																	
3. <u>Aralia nudicaulis</u>	5	Yes	FACU																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	20 =Total Cover																			
Woody Vine Stratum (Plot size: <u>30</u>)				Definitions of Vegetation Strata:																
1. <u>None in plot</u>																				
2. _____																				
3. _____																				
4. _____																				
	=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.)				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u>																

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Londonderry Sampling Date: 10/15/19
 Applicant/Owner: NHDOT State: NH Sampling Point: W67 Wet
 Investigator(s): W. McCloy Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0-2
 Subregion (LRR or MLRA): LRR R Lat: 42.891034 Long: -71.354207 Datum: WGS84
 Soil Map Unit Name: Chatfield-Hollis-Canron Complex, 8-15 % slopes, rocky NWI classification: PFO1E
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Water stained leaves, some fine siltation present; adjacent to recent/ongoing highway construction project on I93

VEGETATION – Use scientific names of plants.

Sampling Point: W67 Wet

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30</u>)																				
1. <u><i>Pinus strobus</i></u>	<u>25</u>	Yes	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80.0%</u> (A/B) Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:center;">Total % Cover of:</td> <td style="width:50%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>70</u></td> <td>x 1 = <u>70</u></td> </tr> <tr> <td>FACW species <u>2</u></td> <td>x 2 = <u>4</u></td> </tr> <tr> <td>FAC species <u>35</u></td> <td>x 3 = <u>105</u></td> </tr> <tr> <td>FACU species <u>25</u></td> <td>x 4 = <u>100</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>132</u> (A)</td> <td><u>279</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>2.11</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>70</u>	x 1 = <u>70</u>	FACW species <u>2</u>	x 2 = <u>4</u>	FAC species <u>35</u>	x 3 = <u>105</u>	FACU species <u>25</u>	x 4 = <u>100</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>132</u> (A)	<u>279</u> (B)	Prevalence Index = B/A = <u>2.11</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>70</u>	x 1 = <u>70</u>																			
FACW species <u>2</u>	x 2 = <u>4</u>																			
FAC species <u>35</u>	x 3 = <u>105</u>																			
FACU species <u>25</u>	x 4 = <u>100</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>132</u> (A)	<u>279</u> (B)																			
Prevalence Index = B/A = <u>2.11</u>																				
2. <u><i>Acer rubrum</i></u>	<u>30</u>	Yes	FAC																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>55</u> =Total Cover																			
Sapling/Shrub Stratum (Plot size: <u>15</u>)																				
1. <u><i>Betula populifolia</i></u>	<u>5</u>	Yes	FAC	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u><i>Ulmus americana</i></u>	<u>2</u>	Yes	FACW																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>7</u> =Total Cover																			
Herb Stratum (Plot size: <u>5</u>)																				
1. <u><i>Osmunda spectabilis</i></u>	<u>50</u>	Yes	OBL	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes <u>X</u> No _____																
2. <u><i>Bidens cernua</i></u>	<u>10</u>	No	OBL																	
3. <u><i>Carex crinita</i></u>	<u>10</u>	No	OBL																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	<u>70</u> =Total Cover																			
Woody Vine Stratum (Plot size: <u>30</u>)																				
1. <u><i>None in plot</i></u>																				
2. _____																				
3. _____																				
4. _____																				
	_____ =Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.)																				

SOIL

Sampling Point W67 Wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	2.5Y 2.5/1		10YR 4/4	5	C	M	Loamy/Clayey	Fine sandy loam, A horizon
12-16	2.5Y 4/2		10YR 4/4	7	C	M	Sandy	Sandy loam, B Horizon

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils³:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> High Chroma Sands (S11) (LRR K, L)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Red Parent Material (F21)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Marl (F10) (LRR K, L)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Dark Surface (S7)			

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
 This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Londonderry Sampling Date: 10/15/19
 Applicant/Owner: NHDOT State: NH Sampling Point: W68 WET
 Investigator(s): W. McCloy Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0-3
 Subregion (LRR or MLRA): LRR R Lat: 42.886623 Long: -71.347628 Datum: WGS84
 Soil Map Unit Name: Chatfield-Hollis-Canron Complex, 8-15 % slopes, rocky NWI classification: PFO1E
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators</u> (minimum of one is required; check all that apply)	<u>Secondary Indicators</u> (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Water stained leaves present in wetland depression

VEGETATION – Use scientific names of plants.

Sampling Point: W68 WET

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)																
1. <u><i>Tsuga canadensis*</i></u>	50	Yes	FACU																	
2. <u><i>Acer rubrum*</i></u>	40	Yes	FAC																	
3. <u><i>Acer saccharum</i></u>	5	No	FACU																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>95</u>	=Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15</u>)					Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:center;">Total % Cover of:</td> <td style="width:50%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>45</u></td> <td>x 3 = <u>135</u></td> </tr> <tr> <td>FACU species <u>60</u></td> <td>x 4 = <u>240</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>105</u> (A)</td> <td><u>375</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>3.57</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>45</u>	x 3 = <u>135</u>	FACU species <u>60</u>	x 4 = <u>240</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>105</u> (A)	<u>375</u> (B)	Prevalence Index = B/A = <u>3.57</u>
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>45</u>	x 3 = <u>135</u>																			
FACU species <u>60</u>	x 4 = <u>240</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>105</u> (A)	<u>375</u> (B)																			
Prevalence Index = B/A = <u>3.57</u>																				
1. <u><i>Betula alleghaniensis</i></u>	5	Yes	FAC																	
2. <u><i>Acer saccharum</i></u>	5	Yes	FACU																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>10</u>	=Total Cover																		
Herb Stratum (Plot size: <u>5</u>)				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ <input checked="" type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. _____																				
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
			=Total Cover																	
Woody Vine Stratum (Plot size: <u>30</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
1. <u><i>None in plot</i></u>																				
2. _____																				
3. _____																				
4. _____																				
			=Total Cover																	
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																				
Remarks: (Include photo numbers here or on a separate sheet.) Eastern hemlock and red maple had rasied roots where rooted in the wetland depression; counting hemlock as a hydrophyte given the adaptations results in plot passing the Dominance Test.																				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/12/2019

Applicant/Owner: NHDOT State: NH Sampling Point: W68-Up

Investigator(s): B. Griffith Section, Township, Range: _____

Landform (hillside, terrace, etc.): Mound Local relief (concave, convex, none): Convex Slope %: 5

Subregion (LRR or MLRA): LRR R Lat: 42.88676695 Long: -71.34770853 Datum: WGS 84

Soil Map Unit Name: Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W68-Up

<u>Tree Stratum</u> (Plot size: <u>30' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u><i>Tsuga canadensis</i></u>	20	Yes	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>16.7%</u> (A/B)																
2. <u><i>Betula alleghaniensis</i></u>	10	Yes	FAC																	
3. <u><i>Acer saccharum</i></u>	20	Yes	FACU																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	50	=Total Cover		Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:center;">Total % Cover of:</td> <td style="width:50%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>10</u></td> <td>x 3 = <u>30</u></td> </tr> <tr> <td>FACU species <u>80</u></td> <td>x 4 = <u>320</u></td> </tr> <tr> <td>UPL species <u>10</u></td> <td>x 5 = <u>50</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>400</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>4.00</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>10</u>	x 3 = <u>30</u>	FACU species <u>80</u>	x 4 = <u>320</u>	UPL species <u>10</u>	x 5 = <u>50</u>	Column Totals: <u>100</u> (A)	<u>400</u> (B)	Prevalence Index = B/A = <u>4.00</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>10</u>	x 3 = <u>30</u>																			
FACU species <u>80</u>	x 4 = <u>320</u>																			
UPL species <u>10</u>	x 5 = <u>50</u>																			
Column Totals: <u>100</u> (A)	<u>400</u> (B)																			
Prevalence Index = B/A = <u>4.00</u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' R</u>)																				
1. <u><i>Hamamelis virginiana</i></u>	5	Yes	FACU																	
2. <u><i>Acer saccharum</i></u>	5	Yes	FACU																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	10	=Total Cover																		
<u>Herb Stratum</u> (Plot size: <u>5' R</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u><i>Mitchella repens</i></u>	30	Yes	FACU																	
2. <u><i>Dennstaedtia punctilobula</i></u>	5	No	UPL																	
3. <u><i>Viburnum acerifolium</i></u>	5	No	UPL																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	40	=Total Cover																		
<u>Woody Vine Stratum</u> (Plot size: <u>30' R</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
1. _____																				
2. _____																				
3. _____																				
4. _____																				
				Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u>																
Remarks: (Include photo numbers here or on a separate sheet.)																				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/14/19
 Applicant/Owner: NHDOT State: NH Sampling Point: W72 Up
 Investigator(s): W. McCloy Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope %: 0-2
 Subregion (LRR or MLRA): LRR R Lat: 42.887899 Long: -71.330913 Datum: WGS84
 Soil Map Unit Name: Udorthents, smoothed NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Wetland 72, 2019 ID is W88	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> ? Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No hydrology indicators present

VEGETATION – Use scientific names of plants.

Sampling Point: W72 Up

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>25.0%</u> (A/B)																
1. <u>None in plot</u>																				
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
=Total Cover				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Total % Cover of:</th> <th style="width:50%;">Multiply by:</th> </tr> </thead> <tbody> <tr><td>OBL species <u>0</u></td><td>x 1 = <u>0</u></td></tr> <tr><td>FACW species <u>25</u></td><td>x 2 = <u>50</u></td></tr> <tr><td>FAC species <u>10</u></td><td>x 3 = <u>30</u></td></tr> <tr><td>FACU species <u>60</u></td><td>x 4 = <u>240</u></td></tr> <tr><td>UPL species <u>17</u></td><td>x 5 = <u>85</u></td></tr> <tr><td>Column Totals: <u>112</u> (A)</td><td><u>405</u> (B)</td></tr> <tr><td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>3.62</u></td></tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>25</u>	x 2 = <u>50</u>	FAC species <u>10</u>	x 3 = <u>30</u>	FACU species <u>60</u>	x 4 = <u>240</u>	UPL species <u>17</u>	x 5 = <u>85</u>	Column Totals: <u>112</u> (A)	<u>405</u> (B)	Prevalence Index = B/A = <u>3.62</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>25</u>	x 2 = <u>50</u>																			
FAC species <u>10</u>	x 3 = <u>30</u>																			
FACU species <u>60</u>	x 4 = <u>240</u>																			
UPL species <u>17</u>	x 5 = <u>85</u>																			
Column Totals: <u>112</u> (A)	<u>405</u> (B)																			
Prevalence Index = B/A = <u>3.62</u>																				
Sapling/Shrub Stratum (Plot size: <u>15</u>)																				
1. <u>Rhus typhina</u>	<u>15</u>	<u>Yes</u>	<u>UPL</u>																	
2. <u>Corylus americana</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
=Total Cover																				
Herb Stratum (Plot size: <u>5</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤ 3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Solidago canadensis</u>	<u>25</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Dichanthelium clandestinum</u>	<u>25</u>	<u>Yes</u>	<u>FACW</u>																	
3. <u>Rosa multiflora</u>	<u>15</u>	<u>No</u>	<u>FACU</u>																	
4. <u>Rubus idaeus</u>	<u>10</u>	<u>No</u>	<u>FACU</u>																	
5. <u>Poa pratensis</u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
6. <u>Euthamia graminifolia</u>	<u>10</u>	<u>No</u>	<u>FAC</u>																	
7. <u>Verbascum thapsus</u>	<u>2</u>	<u>No</u>	<u>UPL</u>																	
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
=Total Cover																				
Woody Vine Stratum (Plot size: <u>30</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
1. <u>None in plot</u>																				
2. _____																				
3. _____																				
4. _____																				
=Total Cover																				
Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u>																				
Remarks: (Include photo numbers here or on a separate sheet.)																				

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: NHDOT Exit 4A City/County: Derry Sampling Date: 10/14/19
 Applicant/Owner: NHDOT State: NH Sampling Point: W72 Wet Plot
 Investigator(s): McCloy Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Flat, floodplain Local relief (concave, convex, none): Concave
 Slope (%): 0-2 Lat.: 42.887863 Long.: -71.330782 Datum: WGS84
 Soil Map Unit Name: Freetown mucky peat, 0-2% slopes NWI Classification: PSS1E
 Are climatic/hydrologic conditions of the site typical for this time of the year? _____ (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p style="text-align: center;">Wetland 72, 2019 ID is W88</p>	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes <u> </u> No <u>X</u> Depth (inches): _____ Water table present? Yes <u>X</u> No <u> </u> Depth (inches): <u>1</u> Saturation present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0 - at surf</u> (includes capillary fringe)		Indicators of wetland hydrology present? <u>Y</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 		
Remarks: <p style="text-align: center;">Beaver influence/sign in area, some drainage patterns</p>		

VEGETATION - Use scientific names of plants

Sampling Point: W72 Wet Plot

Tree Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status																		
1	<i>None in Plot</i>			-	50/20 Thresholds <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:60%;"></td> <td style="width:20%;">20%</td> <td style="width:20%;">50%</td> </tr> <tr> <td>Tree Stratum</td> <td>0</td> <td>0</td> </tr> <tr> <td>Sapling/Shrub Stratum</td> <td>12</td> <td>30</td> </tr> <tr> <td>Herb Stratum</td> <td>17</td> <td>43</td> </tr> <tr> <td>Woody Vine Stratum</td> <td>0</td> <td>0</td> </tr> </table>				20%	50%	Tree Stratum	0	0	Sapling/Shrub Stratum	12	30	Herb Stratum	17	43	Woody Vine Stratum	0	0
	20%	50%																				
Tree Stratum	0	0																				
Sapling/Shrub Stratum	12	30																				
Herb Stratum	17	43																				
Woody Vine Stratum	0	0																				
2																						
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10		0	= Total Cover																			
Sapling/Shrub Stratum	Plot Size (15)	Absolute % Cover	Dominant Species	Indicator Status																		
1	<i>Cornus alba</i>	20	Y	FACW	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across all Strata: <u>6</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)																	
2	<i>Ilex verticillata</i>	20	Y	FACW																		
3	<i>Alnus incana</i>	20	Y	FACW																		
4																						
5																						
6																						
7																						
8																						
9																						
10		60	= Total Cover																			
Herb Stratum	Plot Size (5)	Absolute % Cover	Dominant Species	Indicator Status																		
1	<i>Calamagrostis canadensis</i>	20	Y	OBL	Prevalence Index Worksheet Total % Cover of: OBL species $\frac{70}{70} \times 1 = \frac{70}{70}$ FACW species $\frac{75}{75} \times 2 = \frac{150}{75}$ FAC species $\frac{0}{0} \times 3 = \frac{0}{0}$ FACU species $\frac{0}{0} \times 4 = \frac{0}{0}$ UPL species $\frac{0}{0} \times 5 = \frac{0}{0}$ Column totals $\frac{145}{145}$ (A) $\frac{220}{220}$ (B) Prevalence Index = B/A = <u>1.52</u>																	
2	<i>Carex striata</i>	20	Y	OBL																		
3	<i>Carex comosa</i>	20	Y	OBL																		
4	<i>Lythrum salicaria</i>	10	N	OBL																		
5	<i>Phalaris arundinacea</i>	10	N	FACW																		
6	<i>Bidens frondosa</i>	5	N	FACW																		
7																						
8																						
9																						
10																						
11																						
12																						
13																						
14																						
15		85	= Total Cover																			
Woody Vine Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status																		
1	<i>None in Plot</i>			-	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid test for hydrophytic vegetation <input checked="" type="checkbox"/> Dominance test is >50% <input checked="" type="checkbox"/> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic																	
2																						
3																						
4																						
5		0	= Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet) Very sparse herbs in depression					Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.																	
					Hydrophytic vegetation present? <u>Y</u>																	

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: NHDOT Exit 4A City/County: Derry Sampling Date: 10/14/19
 Applicant/Owner: NHDOT State: NH Sampling Point: W73(84) Up
 Investigator(s): McCloy Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Gentle slope above depression Local relief (concave, convex, none): None
 Slope (%): 2-5 Lat.: 42.891194 Long.: -71.32631 Datum: WGS84
 Soil Map Unit Name: Udorthents, smoothed NWI Classification: Upland
 Are climatic/hydrologic conditions of the site typical for this time of the year? _____ (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u> N </u> Hydric soil present? <u> N </u> Indicators of wetland hydrology present? <u> N </u>	Is the sampled area within a wetland? <u> N </u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center">Forested area between parking lots and wetland</p>	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) <input type="checkbox"/> Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)	Field Observations: Surface water present? Yes _____ No <u> X </u> Depth (inches): _____ Water table present? Yes _____ No <u> X </u> Depth (inches): _____ Saturation present? Yes _____ No <u> X </u> Depth (inches): _____ (includes capillary fringe)
Indicators of wetland hydrology present? <u> N </u>		
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 		
Remarks: <p align="center">No hydrology indicators present</p>		

VEGETATION - Use scientific names of plants

Sampling Point: W73(84) Up

Tree Stratum					50/20 Thresholds		
Plot Size (30)		Absolute % Cover	Dominant Species	Indicator Status	20%	50%	
1	<i>Acer saccharum</i>	60	Y	FACU	Tree Stratum	20	50
2	<i>Pinus strobus</i>	25	Y	FACU	Sapling/Shrub Stratum	5	13
3	<i>Acer saccharinum</i>	10	N	FACW	Herb Stratum	8	21
4	<i>Quercus rubra</i>	5	N	FACU	Woody Vine Stratum	4	10
5							
6							
7							
8							
9							
10							
		100	=	Total Cover			
Sapling/Shrub Stratum					Dominance Test Worksheet		
Plot Size (15)		Absolute % Cover	Dominant Species	Indicator Status	Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A)		
1	<i>Lonicera morrowii</i>	15	Y	FACU	Total Number of Dominant Species Across all Strata: <u>9</u> (B)		
2	<i>Acer saccharum</i>	10	Y	FACU	Percent of Dominant Species that are OBL, FACW, or FAC: <u>11.11%</u> (A/B)		
3							
4							
5							
6							
7							
8							
9							
10							
		25	=	Total Cover			
Herb Stratum					Prevalence Index Worksheet		
Plot Size (1m)		Absolute % Cover	Dominant Species	Indicator Status	Total % Cover of:		
1	<i>Solidago rugosa</i>	10	Y	FAC	OBL species	<u>0</u> x 1 =	<u>0</u>
2	<i>Rosa multiflora</i>	10	Y	FACU	FACW species	<u>10</u> x 2 =	<u>20</u>
3	<i>Acer saccharum</i>	10	Y	FACU	FAC species	<u>10</u> x 3 =	<u>30</u>
4	<i>Celastrus orbiculatus</i>	10	Y	UPL	FACU species	<u>137</u> x 4 =	<u>548</u>
5	<i>Pinus strobus</i>	2	N	FACU	UPL species	<u>30</u> x 5 =	<u>150</u>
6	<i>Poa pratensis</i>	0	N	FACU	Column totals	<u>187</u> (A)	<u>748</u> (B)
7					Prevalence Index = B/A = <u>4.00</u>		
8							
9							
10							
11							
12							
13							
14							
15							
		42	=	Total Cover			
Woody Vine Stratum					Hydrophytic Vegetation Indicators:		
Plot Size (15)		Absolute % Cover	Dominant Species	Indicator Status	<input type="checkbox"/> Rapid test for hydrophytic vegetation <input type="checkbox"/> Dominance test is >50% <input type="checkbox"/> Prevalence index is ≤3.0* <input type="checkbox"/> Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic hydrophytic vegetation* (explain)		
1	<i>Celastrus orbiculatus</i>	20	Y	UPL	*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
2							
3							
4							
5							
		20	=	Total Cover			
Definitions of Vegetation Strata:					Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.		
Hydrophytic vegetation present?					<input type="checkbox"/> <u>N</u>		

Remarks: (Include photo numbers here or on a separate sheet)

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: NHDOT Exit 4A City/County: Derry Sampling Date: 10/14/19
 Applicant/Owner: NHDOT State: NH Sampling Point: W73(84) Wet
 Investigator(s): McCloy Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave
 Slope (%): 0-1 Lat.: 42.891076 Long.: -71.326334 Datum: WGS84
 Soil Map Unit Name: Freetown Mucky Peat, 0-2 % Slopes NWI Classification: PEM1E
 Are climatic/hydrologic conditions of the site typical for this time of the year? _____ (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes <u> </u> No <u>X</u> Depth (inches): _____ Water table present? Yes <u>X</u> No <u> </u> Depth (inches): <u>1</u> Saturation present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> (includes capillary fringe)		Indicators of wetland hydrology present? <u>Y</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Saturated at surface, high water table present		

VEGETATION - Use scientific names of plants

Sampling Point: W73(84) Wet

Tree Stratum	Plot Size (30)	Absolute % Cover	Dominant Species	Indicator Status																		
1	<i>None in Plot</i>			-	50/20 Thresholds <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:60%;"></td> <td style="width:20%;">20%</td> <td style="width:20%;">50%</td> </tr> <tr> <td>Tree Stratum</td> <td>0</td> <td>0</td> </tr> <tr> <td>Sapling/Shrub Stratum</td> <td>0</td> <td>0</td> </tr> <tr> <td>Herb Stratum</td> <td>20</td> <td>50</td> </tr> <tr> <td>Woody Vine Stratum</td> <td>0</td> <td>0</td> </tr> </table>				20%	50%	Tree Stratum	0	0	Sapling/Shrub Stratum	0	0	Herb Stratum	20	50	Woody Vine Stratum	0	0
	20%	50%																				
Tree Stratum	0	0																				
Sapling/Shrub Stratum	0	0																				
Herb Stratum	20	50																				
Woody Vine Stratum	0	0																				
2																						
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10		0 = Total Cover																				
Sapling/Shrub Stratum	Plot Size (15)	Absolute % Cover	Dominant Species	Indicator Status																		
1	<i>None in Plot</i>			-	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across all Strata: <u>2</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)																	
2																						
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10		0 = Total Cover																				
Herb Stratum	Plot Size (5)	Absolute % Cover	Dominant Species	Indicator Status																		
1	<i>Carex comosa</i>	80	Y	OBL	Prevalence Index Worksheet Total % Cover of: OBL species $\frac{100}{100} \times 1 = \frac{100}{100}$ FACW species $\frac{0}{100} \times 2 = \frac{0}{100}$ FAC species $\frac{0}{100} \times 3 = \frac{0}{100}$ FACU species $\frac{0}{100} \times 4 = \frac{0}{100}$ UPL species $\frac{0}{100} \times 5 = \frac{0}{100}$ Column totals <u>100</u> (A) <u>100</u> (B) Prevalence Index = B/A = <u>1.00</u>																	
2	<i>Typha latifolia</i>	20	Y	OBL																		
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						
13																						
14																						
15		100 = Total Cover																				
Woody Vine Stratum	Plot Size ()	Absolute % Cover	Dominant Species	Indicator Status																		
1	<i>None in Plot</i>			-	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid test for hydrophytic vegetation <input checked="" type="checkbox"/> Dominance test is >50% <input checked="" type="checkbox"/> Prevalence index is ≤ 3.0 * Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic																	
2																						
3																						
4																						
5		0 = Total Cover																				
Remarks: (Include photo numbers here or on a separate sheet)					Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.																	
Later season observations, no inflorescences left for Carex																						
					Hydrophytic vegetation present? <u>Y</u>																	

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/12/2019

Applicant/Owner: NHDOT State: NH Sampling Point: W80-UPL

Investigator(s): B. Griffith Section, Township, Range: _____

Landform (hillside, terrace, etc.): Hillslop Local relief (concave, convex, none): Convex Slope %: 5

Subregion (LRR or MLRA): LRR R Lat: 42.90794975 Long: -71.30406670 Datum: WGS 84

Soil Map Unit Name: Chatfield-Hollis-Canton Complex, 0-8% slopes NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil X, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Unusually dry (D0)	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W80-UPL

<u>Tree Stratum</u> (Plot size: <u>30' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Acer saccharum</u>	25	Yes	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>40.0%</u> (A/B)																
2. <u>Acer rubrum</u>	25	Yes	FAC																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	50	=Total Cover		Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="text-align:center">Total % Cover of:</td> <td style="text-align:center">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>1</u></td> <td>x 2 = <u>2</u></td> </tr> <tr> <td>FAC species <u>55</u></td> <td>x 3 = <u>165</u></td> </tr> <tr> <td>FACU species <u>35</u></td> <td>x 4 = <u>140</u></td> </tr> <tr> <td>UPL species <u>1</u></td> <td>x 5 = <u>5</u></td> </tr> <tr> <td>Column Totals: <u>92</u> (A)</td> <td><u>312</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center">Prevalence Index = B/A = <u>3.39</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>1</u>	x 2 = <u>2</u>	FAC species <u>55</u>	x 3 = <u>165</u>	FACU species <u>35</u>	x 4 = <u>140</u>	UPL species <u>1</u>	x 5 = <u>5</u>	Column Totals: <u>92</u> (A)	<u>312</u> (B)	Prevalence Index = B/A = <u>3.39</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>1</u>	x 2 = <u>2</u>																			
FAC species <u>55</u>	x 3 = <u>165</u>																			
FACU species <u>35</u>	x 4 = <u>140</u>																			
UPL species <u>1</u>	x 5 = <u>5</u>																			
Column Totals: <u>92</u> (A)	<u>312</u> (B)																			
Prevalence Index = B/A = <u>3.39</u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15'R</u>)																				
1. <u>Elaeagnus umbellatus</u>	20	Yes																		
2. <u>Acer saccharum</u>	5	Yes	FACU																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	25	=Total Cover																		
<u>Herb Stratum</u> (Plot size: <u>5' R</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Parathelypteris noveboracensis</u>	30	Yes	FAC																	
2. <u>Aralia nudicaulis</u>	5	No	FACU																	
3. <u>Rubus hispidus</u>	1	No	FACW																	
4. <u>Euonymus alatus</u>	1	No	UPL																	
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	37	=Total Cover																		
<u>Woody Vine Stratum</u> (Plot size: _____)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
1. _____																				
2. _____																				
3. _____																				
4. _____																				
				Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u>																
Remarks: (Include photo numbers here or on a separate sheet.)																				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/12/2019
 Applicant/Owner: NHDOT State: NH Sampling Point: W80-Wet
 Investigator(s): B. Griffith Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Floodplain Terrace Local relief (concave, convex, none): None Slope %: 0
 Subregion (LRR or MLRA): LRR R Lat: 42.90787707 Long: -71.30394787 Datum: WGS84
 Soil Map Unit Name: Swansea mucky peat, 0-2% slopes NWI classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Unusually dry at time of survey	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) <u>X</u> Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/12/2019
 Applicant/Owner: NHDOT State: NH Sampling Point: W81-UPL
 Investigator(s): B. Griffith Section, Township, Range: _____
 Landform (hillside, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope %: _____
 Subregion (LRR or MLRA): LRR R Lat: 42.90350765 Long: -71.31375753 Datum: WGS84
 Soil Map Unit Name: Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W81-UPL

Tree Stratum (Plot size: <u>30' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status																		
1. <u><i>Pinus strobus</i></u>	<u>50</u>	<u>Yes</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>11</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>18.2%</u> (A/B)																	
2. <u><i>Betula lenta</i></u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>																		
3. <u><i>Acer saccharum</i></u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>																		
4. <u><i>Carya ovata</i></u>	<u>10</u>	<u>No</u>	<u>FACU</u>																		
5. _____																					
6. _____																					
7. _____																					
	<u>120</u>	=Total Cover		Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:center;">Total % Cover of:</td> <td style="width:50%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>1</u></td> <td>x 2 = <u>2</u></td> </tr> <tr> <td>FAC species <u>2</u></td> <td>x 3 = <u>6</u></td> </tr> <tr> <td>FACU species <u>152</u></td> <td>x 4 = <u>608</u></td> </tr> <tr> <td>UPL species <u>3</u></td> <td>x 5 = <u>15</u></td> </tr> <tr> <td>Column Totals: <u>158</u> (A)</td> <td><u>631</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>3.99</u></td> </tr> </table>		Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>1</u>	x 2 = <u>2</u>	FAC species <u>2</u>	x 3 = <u>6</u>	FACU species <u>152</u>	x 4 = <u>608</u>	UPL species <u>3</u>	x 5 = <u>15</u>	Column Totals: <u>158</u> (A)	<u>631</u> (B)	Prevalence Index = B/A = <u>3.99</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>1</u>	x 2 = <u>2</u>																				
FAC species <u>2</u>	x 3 = <u>6</u>																				
FACU species <u>152</u>	x 4 = <u>608</u>																				
UPL species <u>3</u>	x 5 = <u>15</u>																				
Column Totals: <u>158</u> (A)	<u>631</u> (B)																				
Prevalence Index = B/A = <u>3.99</u>																					
Sapling/Shrub Stratum (Plot size: <u>15' R</u>)																					
1. <u><i>Quercus rubra</i></u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)																	
2. <u><i>Fagus grandifolia</i></u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>																		
3. <u><i>Acer saccharum</i></u>	<u>5</u>	<u>No</u>	<u>FACU</u>																		
4. _____																					
5. _____																					
6. _____																					
7. _____																					
	<u>30</u>	=Total Cover		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																	
Herb Stratum (Plot size: <u>5' R</u>)																					
1. <u><i>Smilax herbacea</i></u>	<u>2</u>	<u>Yes</u>	<u>FAC</u>			Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>															
2. <u><i>Quercus rubra</i></u>	<u>1</u>	<u>Yes</u>	<u>FACU</u>																		
3. <u><i>Euonymus alatus</i></u>	<u>2</u>	<u>Yes</u>	<u>UPL</u>																		
4. <u><i>Vaccinium corymbosum</i></u>	<u>1</u>	<u>Yes</u>	<u>FACW</u>																		
5. <u><i>Prunus serotina</i></u>	<u>1</u>	<u>Yes</u>	<u>FACU</u>																		
6. <u><i>Viburnum acerifolium</i></u>	<u>1</u>	<u>Yes</u>	<u>UPL</u>																		
7. _____																					
8. _____																					
9. _____																					
10. _____																					
11. _____																					
12. _____																					
	<u>8</u>	=Total Cover																			
Woody Vine Stratum (Plot size: <u>30' R</u>)																					
1. _____																					
2. _____																					
3. _____																					
4. _____																					
		=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.)																					

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/12/19
 Applicant/Owner: NHDOT State: NH Sampling Point: W81-UPL
 Investigator(s): B. Griffith Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0
 Subregion (LRR or MLRA): LRR R Lat: 42.90338345 Long: -71.31384685 Datum: WGS 84
 Soil Map Unit Name: Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Unusually dry	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) <u>x</u> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) <u>x</u> Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>x</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>x</u> Depth (inches): _____ Saturation Present? Yes <u>x</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W81-UPL

<u>Tree Stratum</u> (Plot size: <u>30' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Total % Cover of:</th> <th style="width:50%;">Multiply by:</th> </tr> </thead> <tbody> <tr><td>OBL species <u>7</u></td><td>x 1 = <u>7</u></td></tr> <tr><td>FACW species <u>20</u></td><td>x 2 = <u>40</u></td></tr> <tr><td>FAC species <u>0</u></td><td>x 3 = <u>0</u></td></tr> <tr><td>FACU species <u>0</u></td><td>x 4 = <u>0</u></td></tr> <tr><td>UPL species <u>0</u></td><td>x 5 = <u>0</u></td></tr> <tr><td>Column Totals: <u>27</u></td><td>(A) <u>47</u> (B)</td></tr> <tr><td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>1.74</u></td></tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>7</u>	x 1 = <u>7</u>	FACW species <u>20</u>	x 2 = <u>40</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>27</u>	(A) <u>47</u> (B)	Prevalence Index = B/A = <u>1.74</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>7</u>	x 1 = <u>7</u>																			
FACW species <u>20</u>	x 2 = <u>40</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>0</u>	x 4 = <u>0</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>27</u>	(A) <u>47</u> (B)																			
Prevalence Index = B/A = <u>1.74</u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' R</u>)																				
1. <u>Cornus amomum</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover																				
<u>Herb Stratum</u> (Plot size: <u>5' R</u>)																				
1. <u>Calamagrostis canadensis</u>	<u>5</u>	<u>Yes</u>	<u>OBL</u>																	
2. <u>Carex lacustris</u>	<u>2</u>	<u>Yes</u>	<u>OBL</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
=Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: _____)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
=Total Cover																				

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/12/2019

Applicant/Owner: NHDOT State: NH Sampling Point: W82-UPL

Investigator(s): B. Griffith Section, Township, Range: _____

Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): _____ Slope %: 2

Subregion (LRR or MLRA): LRR R Lat: 42.90113350 Long: -71.31677654 Datum: WGS84

Soil Map Unit Name: Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Unusually dry	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W82-UPL

<u>Tree Stratum</u> (Plot size: <u>30' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status																		
1. <u><i>Pinus strobus</i></u>	20	Yes	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																	
2. _____																					
3. _____																					
4. _____																					
5. _____																					
6. _____																					
7. _____																					
	20	=Total Cover		Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:right;">Total % Cover of:</td> <td style="width:50%; text-align:left;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>25</u></td> <td>x 3 = <u>75</u></td> </tr> <tr> <td>FACU species <u>105</u></td> <td>x 4 = <u>420</u></td> </tr> <tr> <td>UPL species <u>20</u></td> <td>x 5 = <u>100</u></td> </tr> <tr> <td>Column Totals: <u>150</u></td> <td>(A) <u>595</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>3.97</u></td> </tr> </table>		Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>25</u>	x 3 = <u>75</u>	FACU species <u>105</u>	x 4 = <u>420</u>	UPL species <u>20</u>	x 5 = <u>100</u>	Column Totals: <u>150</u>	(A) <u>595</u> (B)	Prevalence Index = B/A = <u>3.97</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>0</u>	x 2 = <u>0</u>																				
FAC species <u>25</u>	x 3 = <u>75</u>																				
FACU species <u>105</u>	x 4 = <u>420</u>																				
UPL species <u>20</u>	x 5 = <u>100</u>																				
Column Totals: <u>150</u>	(A) <u>595</u> (B)																				
Prevalence Index = B/A = <u>3.97</u>																					
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' R</u>)																					
1. <u><i>Elaeagnus umbellata</i></u>	20	Yes	UPL	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																	
2. _____																					
3. _____																					
4. _____																					
5. _____																					
6. _____																					
7. _____																					
	20	=Total Cover																			
<u>Herb Stratum</u> (Plot size: <u>5' R</u>)																					
1. <u><i>Poa compressa</i></u>	80	Yes	FACU	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																	
2. <u><i>Ranunculus repens</i></u>	20	No	FAC																		
3. <u><i>Rumex crispus</i></u>	5	No	FAC																		
4. <u><i>Plantago lanceolata</i></u>	5	No	FACU																		
5. _____																					
6. _____																					
7. _____																					
8. _____																					
9. _____																					
10. _____																					
11. _____																					
12. _____																					
	110	=Total Cover																			
<u>Woody Vine Stratum</u> (Plot size: _____)																					
1. _____																					
2. _____																					
3. _____																					
4. _____																					
		=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.)																					

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/12/2019
 Applicant/Owner: NHDOT State: NH Sampling Point: W82-WET
 Investigator(s): B. Griffith Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0
 Subregion (LRR or MLRA): LRR R Lat: 42.31670398 Long: -71.31670398 Datum: WGS84
 Soil Map Unit Name: Swansea mucky peat, 0-2% slopes NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) _____ <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>3</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W82-WET

Tree Stratum (Plot size: <u>30' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75.0%</u> (A/B) Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>40</u></td> <td>x 1 = <u>40</u></td> </tr> <tr> <td>FACW species <u>105</u></td> <td>x 2 = <u>210</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>30</u></td> <td>x 4 = <u>120</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>175</u> (A)</td> <td><u>370</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>2.11</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>40</u>	x 1 = <u>40</u>	FACW species <u>105</u>	x 2 = <u>210</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>30</u>	x 4 = <u>120</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>175</u> (A)	<u>370</u> (B)	Prevalence Index = B/A = <u>2.11</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>40</u>	x 1 = <u>40</u>																			
FACW species <u>105</u>	x 2 = <u>210</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
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Column Totals: <u>175</u> (A)	<u>370</u> (B)																			
Prevalence Index = B/A = <u>2.11</u>																				
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover																				
Sapling/Shrub Stratum (Plot size: <u>15' R</u>)																				
1. <u>Cornus amomum</u>	<u>70</u>	<u>Yes</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> <u>2</u> - Dominance Test is >50% <input checked="" type="checkbox"/> <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Rosa multiflora</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover																				
Herb Stratum (Plot size: <u>5' R</u>)																				
1. <u>Calamagrostis canadensis</u>	<u>40</u>	<u>Yes</u>	<u>OBL</u>	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
2. <u>Symphotrichum novae-angliae</u>	<u>10</u>	<u>No</u>	<u>FACW</u>																	
3. <u>Onoclea sensibilis</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>																	
4. <u>Impatiens capensis</u>	<u>5</u>	<u>No</u>	<u>FACW</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
=Total Cover																				
Woody Vine Stratum (Plot size: _____)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
=Total Cover																				
Remarks: (Include photo numbers here or on a separate sheet.)																				

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: NHDOT Exit 4A City/County: Derry Sampling Date: 10/14/19
 Applicant/Owner: NHDOT State: NH Sampling Point: W86 Up Plot
 Investigator(s): McCloy Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None
 Slope (%): 2-4 Lat.: 42.887193 Long.: -71.331911 Datum: WGS84
 Soil Map Unit Name: Udorthents, smoothed NWI Classification: Upland
 Are climatic/hydrologic conditions of the site typical for this time of the year? _____ (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u> N </u> Hydric soil present? <u> N </u> Indicators of wetland hydrology present? <u> N </u>	Is the sampled area within a wetland? <u> N </u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes <u> </u> No <u> X </u> Depth (inches): _____ Water table present? Yes <u> </u> No <u> X </u> Depth (inches): _____ Saturation present? Yes <u> </u> No <u> X </u> Depth (inches): _____ (includes capillary fringe)		Indicators of wetland hydrology present? <u> N </u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: <p style="text-align: center;">No hydrology indicators observed</p>		

VEGETATION - Use scientific names of plants

Sampling Point: W86 Up Plot

Tree Stratum					50/20 Thresholds		
Plot Size (30)		Absolute % Cover	Dominant Species	Indicator Status	20%	50%	
1	<i>Betula populifolia</i>	50	Y	FAC	Tree Stratum	20	50
2	<i>Pinus strobus</i>	50	Y	FACU	Sapling/Shrub Stratum	14	35
3					Herb Stratum	0	0
4					Woody Vine Stratum	0	0
5							
6							
7							
8							
9							
10							
		100 = Total Cover					
Sapling/Shrub Stratum					Dominance Test Worksheet		
Plot Size (15)		Absolute % Cover	Dominant Species	Indicator Status	Number of Dominant Species that are OBL, FACW, or FAC: <u>2</u> (A)		
1	<i>Pinus strobus</i>	50	Y	FACU	Total Number of Dominant Species Across all Strata: <u>4</u> (B)		
2	<i>Betula populifolia</i>	20	Y	FAC	Percent of Dominant Species that are OBL, FACW, or FAC: <u>50.00%</u> (A/B)		
3					Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>70</u> x 3 = <u>210</u> FACU species <u>100</u> x 4 = <u>400</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>170</u> (A) <u>610</u> (B) Prevalence Index = B/A = <u>3.59</u>		
4							
5							
6							
7							
8							
9							
10							
		70 = Total Cover					
Herb Stratum					Hydrophytic Vegetation Indicators:		
Plot Size (5)		Absolute % Cover	Dominant Species	Indicator Status	<input type="checkbox"/> Rapid test for hydrophytic vegetation <input type="checkbox"/> Dominance test is >50% <input type="checkbox"/> Prevalence index is ≤3.0* <input type="checkbox"/> Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic hydrophytic vegetation* (explain)		
1	None in Plot			-	*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.		
2							
3							
4							
5							
6							
7							
8							
9							
10							
		0 = Total Cover					
Woody Vine Stratum					Hydrophytic vegetation present?		
Plot Size (30)		Absolute % Cover	Dominant Species	Indicator Status	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <u>N</u>		
1	None in Plot			-			
2							
3							
4							
5							
		0 = Total Cover					
Remarks: (Include photo numbers here or on a separate sheet) Very sparse herbs							

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: NHDOT Exit 4A City/County: Derry Sampling Date: 10/14/19
 Applicant/Owner: NHDOT State: NH Sampling Point: W86 Wet Plot
 Investigator(s): McCloy Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave
 Slope (%): 0-2 Lat.: 42.887227 Long.: -71.332013 Datum: WGS84
 Soil Map Unit Name: Udorthents, smoothed NWI Classification: PFO1E
 Are climatic/hydrologic conditions of the site typical for this time of the year? _____ (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) <input type="checkbox"/> Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery <input type="checkbox"/> (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)	Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): _____ Water table present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)
Indicators of wetland hydrology present? <u>Y</u>		
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: <u>Water stained leaves, indicators of surface water during the earlier growing season</u>		

VEGETATION - Use scientific names of plants

Sampling Point: W86 Wet Plot

Tree Stratum					50/20 Thresholds		
Plot Size (30)		Absolute % Cover	Dominant Species	Indicator Status	20%	50%	
1	<i>Betula populifolia</i>	60	Y	FAC	16	40	
2	<i>Pinus strobus</i>	20	Y	FACU	5	13	
3					0	0	
4					0	0	
5							
6							
7							
8							
9							
10							
		80	= Total Cover				
Sapling/Shrub Stratum					Dominance Test Worksheet		
Plot Size (15)		Absolute % Cover	Dominant Species	Indicator Status	Number of Dominant Species that are OBL, FACW, or FAC: <u>4</u> (A)		
1	<i>Acer rubrum</i>	10	Y	FAC	Total Number of Dominant Species Across all Strata: <u>5</u> (B)		
2	<i>Ulmus americana</i>	10	Y	FACW	Percent of Dominant Species that are OBL, FACW, or FAC: <u>80.00%</u> (A/B)		
3	<i>Rhamnus cathartica</i>	5	Y	FAC			
4							
5							
6							
7							
8							
9							
10							
		25	= Total Cover				
Herb Stratum					Prevalence Index Worksheet		
Plot Size (5)		Absolute % Cover	Dominant Species	Indicator Status	Total % Cover of:		
1	None in Plot			-	OBL species	<u>0</u> x 1 = <u>0</u>	
2					FACW species	<u>10</u> x 2 = <u>20</u>	
3					FAC species	<u>75</u> x 3 = <u>225</u>	
4					FACU species	<u>20</u> x 4 = <u>80</u>	
5					UPL species	<u>0</u> x 5 = <u>0</u>	
6					Column totals	<u>105</u> (A)	<u>325</u> (B)
7					Prevalence Index = B/A = <u>3.10</u>		
8							
9							
10							
11							
12							
13							
14							
15							
		0	= Total Cover				
Woody Vine Stratum					Hydrophytic Vegetation Indicators:		
Plot Size (30)		Absolute % Cover	Dominant Species	Indicator Status	<input type="checkbox"/> Rapid test for hydrophytic vegetation <input checked="" type="checkbox"/> Dominance test is >50% <input type="checkbox"/> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic hydrophytic vegetation* (explain)		
1	None in Plot			-	*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
2							
3							
4							
5							
		0	= Total Cover				
Definitions of Vegetation Strata:							
Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.							
					Hydrophytic vegetation present? <u>Y</u>		

Remarks: (Include photo numbers here or on a separate sheet)
 Very sparse herbs in depression

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Londonderry Sampling Date: 10/15/19
 Applicant/Owner: NHDOT State: NH Sampling Point: W90 Up
 Investigator(s): W. McCloy Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope %: 5-8
 Subregion (LRR or MLRA): LRR R Lat: 42.88971 Long: -71.338685 Datum: WGS84
 Soil Map Unit Name: Chatfield-Hollis-Carron Complex, 8-15 % slopes, rocky NWI classification: Upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No hydrology indicators present

VEGETATION – Use scientific names of plants.

Sampling Point: W90 Up

<u>Tree Stratum</u> (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status																																	
1. <u><i>Acer saccharum</i></u>	<u>25</u>	Yes	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>8</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>12.5%</u> (A/B)																																
2. <u><i>Betula papyrifera</i></u>	<u>25</u>	Yes	FACU																																	
3. <u><i>Populus tremuloides</i></u>	<u>20</u>	Yes	FACU																																	
4. <u><i>Quercus rubra</i></u>	<u>15</u>	No	FACU																																	
5. _____																																				
6. _____																																				
7. _____																																				
	<u>85</u>	=Total Cover		Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="text-align:right;">Total % Cover of:</td> <td style="text-align:center;">_____</td> <td style="text-align:right;">Multiply by:</td> <td style="text-align:center;">_____</td> </tr> <tr> <td>OBL species</td> <td style="text-align:center;"><u>0</u></td> <td>x 1 =</td> <td style="text-align:center;"><u>0</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align:center;"><u>0</u></td> <td>x 2 =</td> <td style="text-align:center;"><u>0</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align:center;"><u>30</u></td> <td>x 3 =</td> <td style="text-align:center;"><u>90</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align:center;"><u>140</u></td> <td>x 4 =</td> <td style="text-align:center;"><u>560</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align:center;"><u>20</u></td> <td>x 5 =</td> <td style="text-align:center;"><u>100</u></td> </tr> <tr> <td>Column Totals:</td> <td style="text-align:center;"><u>190</u></td> <td>(A)</td> <td style="text-align:center;"><u>750</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A =</td> <td></td> <td style="text-align:center;"><u>3.95</u></td> </tr> </table>	Total % Cover of:	_____	Multiply by:	_____	OBL species	<u>0</u>	x 1 =	<u>0</u>	FACW species	<u>0</u>	x 2 =	<u>0</u>	FAC species	<u>30</u>	x 3 =	<u>90</u>	FACU species	<u>140</u>	x 4 =	<u>560</u>	UPL species	<u>20</u>	x 5 =	<u>100</u>	Column Totals:	<u>190</u>	(A)	<u>750</u> (B)	Prevalence Index = B/A =			<u>3.95</u>
Total % Cover of:	_____	Multiply by:	_____																																	
OBL species	<u>0</u>	x 1 =	<u>0</u>																																	
FACW species	<u>0</u>	x 2 =	<u>0</u>																																	
FAC species	<u>30</u>	x 3 =	<u>90</u>																																	
FACU species	<u>140</u>	x 4 =	<u>560</u>																																	
UPL species	<u>20</u>	x 5 =	<u>100</u>																																	
Column Totals:	<u>190</u>	(A)	<u>750</u> (B)																																	
Prevalence Index = B/A =			<u>3.95</u>																																	
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>)																																				
1. <u><i>Rhus typhina</i></u>	<u>20</u>	Yes	UPL																																	
2. <u><i>Acer saccharum</i></u>	<u>15</u>	Yes	FACU																																	
3. <u><i>Acer rubrum</i></u>	<u>10</u>	Yes	FAC																																	
4. _____																																				
5. _____																																				
6. _____																																				
7. _____																																				
	<u>45</u>	=Total Cover																																		
<u>Herb Stratum</u> (Plot size: <u>5</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																																
1. <u><i>Pinus strobus</i></u>	<u>20</u>	Yes	FACU																																	
2. <u><i>Rubus allegheniensis</i></u>	<u>20</u>	Yes	FACU																																	
3. <u><i>Osmunda claytoniana</i></u>	<u>10</u>	No	FAC																																	
4. <u><i>Aster sp</i></u>	<u>10</u>	No	FAC																																	
5. _____																																				
6. _____																																				
7. _____																																				
8. _____																																				
9. _____																																				
10. _____																																				
11. _____																																				
12. _____																																				
	<u>60</u>	=Total Cover																																		
<u>Woody Vine Stratum</u> (Plot size: <u>30</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																																
1. <u><i>None in plot</i></u>																																				
2. _____																																				
3. _____																																				
4. _____																																				
			=Total Cover																																	
Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u>																																				
Remarks: (Include photo numbers here or on a separate sheet.) 																																				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 10/12/2019

Applicant/Owner: NHDOT State: NH Sampling Point: W90-Wet

Investigator(s): B. Griffith Section, Township, Range: _____

Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0

Subregion (LRR or MLRA): LRR R Lat: 42.88970998 Long: -71.33883277 Datum: WGS 84

Soil Map Unit Name: Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Unusually dry	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) <u>X</u> Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) <u>X</u> Geomorphic Position (D2) ___ Shallow Aquitard (D3) <u>X</u> Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W90-Wet

<u>Tree Stratum</u> (Plot size: <u>30'R</u>)	Absolute % Cover	Dominant Species?	Indicator Status																		
1. <u><i>Acer rubrum</i></u>	30	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>85.7%</u> (A/B)																	
2. <u><i>Populus tremuloides</i></u>	10	Yes	FACU																		
3. _____																					
4. _____																					
5. _____																					
6. _____																					
7. _____																					
	40	=Total Cover		Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:center;">Total % Cover of:</td> <td style="width:50%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>44</u></td> <td>x 2 = <u>88</u></td> </tr> <tr> <td>FAC species <u>35</u></td> <td>x 3 = <u>105</u></td> </tr> <tr> <td>FACU species <u>10</u></td> <td>x 4 = <u>40</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>89</u> (A)</td> <td><u>233</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>2.62</u></td> </tr> </table>		Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>44</u>	x 2 = <u>88</u>	FAC species <u>35</u>	x 3 = <u>105</u>	FACU species <u>10</u>	x 4 = <u>40</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>89</u> (A)	<u>233</u> (B)	Prevalence Index = B/A = <u>2.62</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>44</u>	x 2 = <u>88</u>																				
FAC species <u>35</u>	x 3 = <u>105</u>																				
FACU species <u>10</u>	x 4 = <u>40</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>89</u> (A)	<u>233</u> (B)																				
Prevalence Index = B/A = <u>2.62</u>																					
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' R</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> <u>2</u> - Dominance Test is >50% <input checked="" type="checkbox"/> <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																	
1. <u><i>Ilex verticillata</i></u>	20	Yes	FACW																		
2. <u><i>Aronia arbutifolia</i></u>	5	No	FACW																		
3. <u><i>Ulmus americana</i></u>	15	Yes	FACW																		
4. _____																					
5. _____																					
6. _____																					
7. _____																					
	40	=Total Cover		Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes <u>X</u> No _____																	
<u>Herb Stratum</u> (Plot size: <u>5' R</u>)																					
1. <u><i>Viburnum dentatum</i></u>	5	Yes	FAC																		
2. <u><i>Packera aurea</i></u>	2	Yes	FACW																		
3. <u><i>Lysimachia ciliata</i></u>	2	Yes	FACW																		
4. _____																					
5. _____																					
6. _____																					
7. _____																					
8. _____																					
9. _____																					
10. _____																					
11. _____																					
12. _____																					
	9	=Total Cover																			
<u>Woody Vine Stratum</u> (Plot size: <u>30' R</u>)																					
1. _____																					
2. _____																					
3. _____																					
4. _____																					
			=Total Cover																		

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 1/16/2019
 Applicant/Owner: NHDOT State: NH Sampling Point: W100-Upl
 Investigator(s): B. Griffith Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): None Slope %: 0
 Subregion (LRR or MLRA): LRR R Lat: 42.90015168 Long: -71.32052791 Datum: WGS84
 Soil Map Unit Name: Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky NWI classification: U
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) ? _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W100-Upl

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30' R</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B)																
1. <u>Populus grandidentata</u>	<u>20</u>	Yes	FACU																	
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>20</u>	=Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15' R</u>)																				
1. <u>Cornus racemosa</u>	<u>40</u>	Yes	FAC	Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="text-align:right;">Total % Cover of:</td> <td style="text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>40</u></td> <td>x 3 = <u>120</u></td> </tr> <tr> <td>FACU species <u>40</u></td> <td>x 4 = <u>160</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>80</u> (A)</td> <td><u>280</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>3.50</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>40</u>	x 3 = <u>120</u>	FACU species <u>40</u>	x 4 = <u>160</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>80</u> (A)	<u>280</u> (B)	Prevalence Index = B/A = <u>3.50</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>40</u>	x 3 = <u>120</u>																			
FACU species <u>40</u>	x 4 = <u>160</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>80</u> (A)	<u>280</u> (B)																			
Prevalence Index = B/A = <u>3.50</u>																				
2. <u>Populus grandidentata</u>	<u>20</u>	Yes	FACU																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>60</u>	=Total Cover																		
Herb Stratum (Plot size: <u>5' R</u>)																				
1. _____																				
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
		=Total Cover																		
Woody Vine Stratum (Plot size: _____)																				
1. _____																				
2. _____																				
3. _____																				
4. _____																				
		=Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
				Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u>																

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 1/16/2019
 Applicant/Owner: NHDOT State: NH Sampling Point: W100-Wet
 Investigator(s): B. Griffith Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): _____ Slope %: 0
 Subregion (LRR or MLRA): LRR R Lat: 42.90022881 Long: -71.32044819 Datum: WGS84
 Soil Map Unit Name: Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky NWI classification: U
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators</u> (minimum of one is required; check all that apply) _____ _____ Surface Water (A1) _____ Water-Stained Leaves (B9) <u>X</u> High Water Table (A2) _____ Aquatic Fauna (B13) <u>X</u> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) <u>?</u> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators</u> (minimum of two required) _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>6</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W100-Wet

<u>Tree Stratum</u> (Plot size: <u>30' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Total % Cover of:</th> <th style="width:50%;">Multiply by:</th> </tr> </thead> <tbody> <tr><td>OBL species <u>0</u></td><td>x 1 = <u>0</u></td></tr> <tr><td>FACW species <u>55</u></td><td>x 2 = <u>110</u></td></tr> <tr><td>FAC species <u>0</u></td><td>x 3 = <u>0</u></td></tr> <tr><td>FACU species <u>0</u></td><td>x 4 = <u>0</u></td></tr> <tr><td>UPL species <u>0</u></td><td>x 5 = <u>0</u></td></tr> <tr><td>Column Totals: <u>55</u></td><td>(A) <u>110</u> (B)</td></tr> <tr><td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>2.00</u></td></tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>55</u>	x 2 = <u>110</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>55</u>	(A) <u>110</u> (B)	Prevalence Index = B/A = <u>2.00</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>55</u>	x 2 = <u>110</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>0</u>	x 4 = <u>0</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>55</u>	(A) <u>110</u> (B)																			
Prevalence Index = B/A = <u>2.00</u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' R</u>)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Cornus amomum</u>	<u>25</u>	<u>Yes</u>	<u>FACW</u>																	
2. <u>Ilex verticillata</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
_____ =Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
<u>Herb Stratum</u> (Plot size: <u>5' R</u>)					Hydrophytic Vegetation Present? Yes <u>X</u> No _____															
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ =Total Cover				Woody Vine Stratum (Plot size: _____)																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ =Total Cover																				

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 12/17/2019

Applicant/Owner: NHDOT State: NH Sampling Point: W102-Upl

Investigator(s): B. Griffith Section, Township, Range: _____

Landform (hillside, terrace, etc.): slope Local relief (concave, convex, none): _____ Slope %: 2

Subregion (LRR or MLRA): LRR R Lat: 42.90238430 Long: -71.31819760 Datum: WGS84

Soil Map Unit Name: Chatfield-hollis-canton 0-8% slopes, Rocky NWI classification: U

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil X, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<p><u>Secondary Indicators (minimum of two required)</u></p> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
<p>Field Observations:</p> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	<p>Wetland Hydrology Present? Yes _____ No <u>X</u></p>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: W102-Upl

<u>Tree Stratum</u> (Plot size: <u>30'R</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' R</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>95</u>	x 4 = <u>380</u>
UPL species <u>2</u>	x 5 = <u>10</u>
Column Totals: <u>97</u> (A)	<u>390</u> (B)
Prevalence Index = B/A = <u>4.02</u>	

<u>Herb Stratum</u> (Plot size: <u>5'R</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Festuca rubra</u>	<u>90</u>	<u>Yes</u>	<u>FACU</u>
2. <u>Plantago lanceolata</u>	<u>5</u>	<u>No</u>	<u>FACU</u>
3. <u>Daucus carota</u>	<u>2</u>	<u>No</u>	<u>UPL</u>
4. <u>Cirsium canadense</u>	<u>2</u>	<u>No</u>	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 3 - Prevalence Index is $\leq 3.0^1$

 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

<u>Woody Vine Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Exit 4A City/County: Derry Sampling Date: 12/17/2019
 Applicant/Owner: NHDOT State: NH Sampling Point: W102-Wet
 Investigator(s): B. Griffith Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): _____ Slope %: 2
 Subregion (LRR or MLRA): LRR R Lat: 42.90238137 Long: -71.31815030 Datum: WGS84
 Soil Map Unit Name: Chatfield-hollis-canton 0-8% slopes, Rocky NWI classification: U

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	_____ Surface Soil Cracks (B6)
<u>X</u> Surface Water (A1)	_____ Drainage Patterns (B10)
<u>X</u> High Water Table (A2)	_____ Moss Trim Lines (B16)
_____ Saturation (A3)	_____ Dry-Season Water Table (C2)
_____ Water Marks (B1)	_____ Crayfish Burrows (C8)
_____ Sediment Deposits (B2)	_____ Saturation Visible on Aerial Imagery (C9)
_____ Drift Deposits (B3)	_____ Stunted or Stressed Plants (D1)
_____ Algal Mat or Crust (B4)	_____ Geomorphic Position (D2)
_____ Iron Deposits (B5)	_____ Shallow Aquitard (D3)
_____ Inundation Visible on Aerial Imagery (B7)	_____ Microtopographic Relief (D4)
_____ Sparsely Vegetated Concave Surface (B8)	<u>X</u> FAC-Neutral Test (D5)
_____ Water-Stained Leaves (B9)	
_____ Aquatic Fauna (B13)	
_____ Marl Deposits (B15)	
_____ Hydrogen Sulfide Odor (C1)	
_____ Oxidized Rhizospheres on Living Roots (C3)	
_____ Presence of Reduced Iron (C4)	
_____ Recent Iron Reduction in Tilled Soils (C6)	
_____ Thin Muck Surface (C7)	
_____ Other (Explain in Remarks)	

Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>1</u> Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W102-Wet

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30'R</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
1.																				
2.																				
3.																				
4.																				
5.																				
6.																				
7.																				
_____ =Total Cover				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Total % Cover of:</th> <th style="width:50%;">Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>35</u></td> <td>x 1 = <u>35</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>10</u></td> <td>x 3 = <u>30</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>45</u></td> <td>(A) <u>65</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>1.44</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>35</u>	x 1 = <u>35</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>10</u>	x 3 = <u>30</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>45</u>	(A) <u>65</u> (B)	Prevalence Index = B/A = <u>1.44</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>35</u>	x 1 = <u>35</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>10</u>	x 3 = <u>30</u>																			
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UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>45</u>	(A) <u>65</u> (B)																			
Prevalence Index = B/A = <u>1.44</u>																				
Sapling/Shrub Stratum (Plot size: <u>15' R</u>)																				
1.																				
2.																				
3.																				
4.																				
5.																				
6.																				
7.																				
_____ =Total Cover																				
Herb Stratum (Plot size: <u>5'R</u>)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1.	<u><i>Typha angustifolia</i></u>	<u>30</u>	<u>Yes</u>		<u>OBL</u>															
2.	<u><i>Juncus tenuis</i></u>	<u>10</u>	<u>Yes</u>		<u>FAC</u>															
3.	<u><i>Lythrum salicaria</i></u>	<u>5</u>	<u>No</u>		<u>OBL</u>															
4.																				
5.																				
6.																				
7.																				
8.																				
9.																				
10.																				
11.																				
12.																				
_____ =Total Cover																				
Woody Vine Stratum (Plot size: _____)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
1.																				
2.																				
3.																				
_____ =Total Cover																				
Hydrophytic Vegetation Present? Yes <u>X</u> No _____																				

Remarks: (Include photo numbers here or on a separate sheet.)

Attachment F

US Army Corps of Engineers (USACE) ORM Table

Waters_Name	State	Cowardin_Code	HGM_Code	Meas_Type	Amount	Units	Waters_Type	Latitude	Longitude
9	NEW HAMPSHIRE	PFO	DEPRESS	Area	3.631	ACRE	DELINPJD	42.8936605636779	-71.3569975667511
11	NEW HAMPSHIRE	PFO	DEPRESS	Area	3.384	ACRE	DELINPJD	42.8906115355271	-71.3562520788183
13	NEW HAMPSHIRE	PFO	DEPRESS	Area	0.058	ACRE	DELINPJD	42.8882625344845	-71.3630786358889
14	NEW HAMPSHIRE	PFO	DEPRESS	Area	3.462	ACRE	DELINPJD	42.884278004031	-71.348860621938
15	NEW HAMPSHIRE	PFO	DEPRESS	Area	0.266	ACRE	DELINPJD	42.8838527192429	-71.3463400145232
16	NEW HAMPSHIRE	PFO	DEPRESS	Area	0.458	ACRE	DELINPJD	42.885824197615	-71.348119919026
17	NEW HAMPSHIRE	PFO	DEPRESS	Area	0.301	ACRE	DELINPJD	42.8863549482683	-71.3493035114389
18	NEW HAMPSHIRE	PEM	DEPRESS	Area	0.015	ACRE	DELINPJD	42.8871661538058	-71.3486923676709
19	NEW HAMPSHIRE	PFO	DEPRESS	Area	0.224	ACRE	DELINPJD	42.8873301726643	-71.3481514089578
20	NEW HAMPSHIRE	PFO	DEPRESS	Area	0.035	ACRE	DELINPJD	42.8875623141756	-71.3475993892304
21	NEW HAMPSHIRE	PFO	DEPRESS	Area	0.064	ACRE	DELINPJD	42.8879810501497	-71.3474682827069
22	NEW HAMPSHIRE	PFO	DEPRESS	Area	0.605	ACRE	DELINPJD	42.8885194956669	-71.3466192808167
24	NEW HAMPSHIRE	PFO	DEPRESS	Area	0.11	ACRE	DELINPJD	42.8877530525883	-71.3454187676355
35	NEW HAMPSHIRE	PFO	DEPRESS	Area	0.098	ACRE	DELINPJD	42.8886820339982	-71.3376619928509
39	NEW HAMPSHIRE	PEM	DEPRESS	Area	0.191	ACRE	DELINPJD	42.888717152833	-71.3362725108755
40	NEW HAMPSHIRE	PSS	SLOPE	Area	0.02	ACRE	DELINPJD	42.8891618550606	-71.3357679458452
41	NEW HAMPSHIRE	PFO	RIVERINE	Area	0.876	ACRE	DELINPJD	42.89019491	-71.33345738
46	NEW HAMPSHIRE	PFO	DEPRESS	Area	0.176	ACRE	DELINPJD	42.8923418440088	-71.3278185241953
49	NEW HAMPSHIRE	PFO	DEPRESS	Area	0.688	ACRE	DELINPJD	42.9001234531789	-71.3214243034619
54	NEW HAMPSHIRE	PEM	DEPRESS	Area	0.121	ACRE	DELINPJD	42.9051442097958	-71.310340003817
56	NEW HAMPSHIRE	PEM	DEPRESS	Area	0.305	ACRE	DELINPJD	42.910358601856	-71.3047086846001
59	NEW HAMPSHIRE	PFO	RIVERINE	Area	2.864	ACRE	DELINPJD	42.9096392061878	-71.3036888081596
60	NEW HAMPSHIRE	PFO	DEPRESS	Area	0.037	ACRE	DELINPJD	42.9044211848628	-71.3142925511802
61	NEW HAMPSHIRE	PFO	DEPRESS	Area	0.16	ACRE	DELINPJD	42.9041488344788	-71.3141978216796
62	NEW HAMPSHIRE	PSS	RIVERINE	Area	16.293	ACRE	DELINPJD	42.91219388	-71.30315963
64	NEW HAMPSHIRE	PFO	DEPRESS	Area	0.039	ACRE	DELINPJD	42.88836769	-71.33704670
66	NEW HAMPSHIRE	PFO	DEPRESS	Area	0.363	ACRE	DELINPJD	42.8890082471059	-71.354540944848
67	NEW HAMPSHIRE	PFO	DEPRESS	Area	0.311	ACRE	DELINPJD	42.89098295	-71.35425538
72	NEW HAMPSHIRE	PSS	RIVERINE	Area	0.498	ACRE	DELINPJD	42.8878762089162	-71.3307364495497
73	NEW HAMPSHIRE	PEM	DEPRESS	Area	3.745	ACRE	DELINPJD	42.8912963859766	-71.32623639219
80	NEW HAMPSHIRE	PFO	DEPRESS	Area	3.145	ACRE	DELINPJD	42.9088503737135	-71.3049596899204
81	NEW HAMPSHIRE	PFO	DEPRESS	Area	0.303	ACRE	DELINPJD	42.9033138675649	-71.3136138156657
83	NEW HAMPSHIRE	PEM	DEPRESS	Area	0.107	ACRE	DELINPJD	42.8962095699151	-71.3258995628652
85	NEW HAMPSHIRE	PSS	RIVERINE	Area	0.016	ACRE	DELINPJD	42.8916593694188	-71.3319689228432
86	NEW HAMPSHIRE	PFO	DEPRESS	Area	0.013	ACRE	DELINPJD	42.8872247840636	-71.3319645046296
90	NEW HAMPSHIRE	PFO	DEPRESS	Area	0.037	ACRE	DELINPJD	42.8897049457858	-71.3388375809347
100	NEW HAMPSHIRE	PFO	DEPRESS	Area	0.007	ACRE	DELINPJD	42.90020300	-71.32045800
102	NEW HAMPSHIRE	PEM	DEPRESS	Area	0.007	ACRE	DELINPJD	42.90236900	-71.31814800

Waters_Name	State	Cowardin_Code	HGM_Code	Meas_Type	Amount	Units	Waters_Type	Latitude	Longitude
103	NEW HAMPSHIRE	PFO	DEPRESS	Area	0.65	ACRE	DELINPJD	42.90712600	-71.30667800
S1	NEW HAMPSHIRE	R4	RIVERINE	Area	0.462	ACRE	DELINPJD	42.88454000	-71.34899000
S100	NEW HAMPSHIRE	R4	RIVERINE	Area	0.003	ACRE	DELINPJD	42.90905600	-71.30537100
S101	NEW HAMPSHIRE	R4	RIVERINE	Area	0.001	ACRE	DELINPJD	42.90294200	-71.31766500
S102	NEW HAMPSHIRE	R4	RIVERINE	Area	0.005	ACRE	DELINPJD	42.91197300	-71.30102600
S11	NEW HAMPSHIRE	R4	RIVERINE	Area	0.002	ACRE	DELINPJD	42.88909000	-71.33596000
S2	NEW HAMPSHIRE	R3	RIVERINE	Area	0.087	ACRE	DELINPJD	42.88970000	-71.33176000
S3	NEW HAMPSHIRE	R4	RIVERINE	Area	0.006	ACRE	DELINPJD	42.90739000	-71.30724000
S4	NEW HAMPSHIRE	R4	RIVERINE	Area	0.004	ACRE	DELINPJD	42.90869000	-71.30592000
S5	NEW HAMPSHIRE	R3	RIVERINE	Area	0.31	ACRE	DELINPJD	42.91005000	-71.30286000
S7	NEW HAMPSHIRE	R4	RIVERINE	Area	0.026	ACRE	DELINPJD	42.86642000	-71.34903000
S70	NEW HAMPSHIRE	R4	RIVERINE	Area	0.026	ACRE	DELINPJD	42.88397000	-71.34847000
S8	NEW HAMPSHIRE	R4	RIVERINE	Area	0.028	ACRE	DELINPJD	42.88760000	-71.34752000

Waters_Name	Name	Activity	Resource_Type	Permanent_Loss	Impact_Duration	Amount_Type	Amount_Units	Initially_Proposed_Amount
S1	S1 - A	Discharge of fill material	River/Stream	NO	Temporary	Fill Area	Square Feet	336
S1	S1 - B	Discharge of fill material	River/Stream	NO	Temporary	Fill Area	Square Feet	19364
	14 14 - C	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	21575
	14 14 - D	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	13598
	15 - E	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	4382
VP2	VP2 - F	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	7236
	14 14 - G	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	6278
	15 15 - H	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	1324
	15 16 - I	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	2336
VP3	VP3 - J	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	9387
	15 16 - K	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	507
S70	S70 - L	Discharge of fill material	River/Stream	YES	Permanent	Fill Area	Square Feet	187
	14 14 - M	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	16866
	14 14 - N	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	37008
	15 16 - O	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	199
VP4	VP4 - P	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	9278
	15 16 - Q	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	2061
	15 16 - R	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	1919
S9	S9 - S	Discharge of fill material	River/Stream	YES	Permanent	Fill Area	Square Feet	48
	17 17 - T	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	39
S7	S7 - U	Discharge of fill material	River/Stream	YES	Permanent	Fill Area	Square Feet	884
	17 17 - V	Discharge of fill material	River/Stream	YES	Permanent	Fill Area	Square Feet	3484
S7	S7 - W	Discharge of fill material	River/Stream	YES	Permanent	Fill Area	Square Feet	738
	13 13 - X	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	1820
	66 66 - Y	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	692
	11 11 - Z	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	909
	11 11 - AA	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	3312
	67 67 - AB	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	1483
	11 11 - AC	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	366
	11 11 - AD	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	2519
	19 19 - AE	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	9131
VP42	VP42 - AF	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	5415
	18 18 - AG	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	659
S8	S8 - AH	Discharge of fill material	River/Stream	YES	Permanent	Fill Area	Square Feet	1232
	20 20 - AI	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	273
	20 20 - AJ	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	1232
	21 21 - AK	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	361
VP46	VP46 - AL	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	611
	22 22 - AM	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	216
	24 24 - AN	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	167
VP6	VP6 - AO	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	15631
	24 24 - AP	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	5
	24 24 - AQ	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	452
	24 24 - AR	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	98
	24 24 - AS	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	2598
	24 24 - AT	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	168
	90 90 - AU	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	1148
	35 35 - AV	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	136
	35 35 - AW	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	1155
VP8	VP8 - AX	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	10722
	35 35 - AY	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	21
	35 35 - AZ	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	301

Waters_Name	Name	Activity	Resource_Type	Permanent_Loss	Impact_Duration	Amount_Type	Amount_Units	Initially_Proposed_Amount
	35 35 - BA	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	5
	35 35 - BB	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	526
VP9	VP9 - BC	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	3335
	64 64 - BD	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	180
	64 64 - BE	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	382
	64 64 - BF	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	1139
	39 39 - BG	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	4379
S11	S11 - BH	Discharge of fill material	River/Stream	YES	Permanent	Fill Area	Square Feet	77
	40 40 - BI	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	852
	86 86 - BJ	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	552
	72 72 - BK	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	155
S2	S2 - BL	Discharge of fill material	River/Stream	YES	Permanent	Fill Area	Square Feet	4048
	41 41 - BM	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	176
	41 41 - BN	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	6901
S2	S2 - BO	Discharge of fill material	River/Stream	YES	Permanent	Fill Area	Square Feet	780
	46 46 - BP	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	2561
	73 73 - BQ	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	2850
	49 49 - BR	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	3025
	100 100 - BS	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	311
	102 102 - BT	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	90
S101	S101 - BU	Discharge of fill material	River/Stream	YES	Permanent	Fill Area	Square Feet	54
	61 61 - BV	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	582
	81 81 - BW	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	273
	54 54 - BX	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	62
S3	S3 - BY	Discharge of fill material	River/Stream	YES	Permanent	Fill Area	Square Feet	159
S3	S3 - BZ	Discharge of fill material	River/Stream	YES	Permanent	Fill Area	Square Feet	265
S4	S4 - CA	Discharge of fill material	River/Stream	YES	Permanent	Fill Area	Square Feet	219
	S4 - CB	Discharge of fill material	River/Stream	YES	Permanent	Fill Area	Square Feet	196
	80 80 - CC	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	941
	80 80 - CD	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	81
	80 80 - CE	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	215
	80 80 - CF	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	598
	80 80 - CG	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	40
S100	S100 - CH	Discharge of fill material	River/Stream	YES	Permanent	Fill Area	Square Feet	125
	59 59 - CI	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	815
	56 56 - CJ	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	615
	62 62 - CK	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	1389
	59 59 - CL	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	1666
	62 62 - CM	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	172
S5	S5 - CN	Discharge of fill material	River/Stream	YES	Permanent	Fill Area	Square Feet	109
	62 62 - CO	Discharge of fill material	Non-Tidal Wetland	YES	Permanent	Fill Area	Square Feet	410
S102	S102 - CP	Discharge of fill material	River/Stream	YES	Permanent	Fill Area	Square Feet	212
	19 19 - CQ	Discharge of fill material	River/Stream	YES	Permanent	Fill Area	Square Feet	497
S1	S1 - CR	Discharge of fill material	River/Stream	NO	Temporary	Fill Area	Square Feet	694
S1	S1 - TA	Discharge of fill material	River/Stream	NO	Temporary	Fill Area	Square Feet	42
S1	S1 - TB	Discharge of fill material	Non-Tidal Wetland	NO	Temporary	Fill Area	Square Feet	150
	14 14 - TC	Discharge of fill material	Non-Tidal Wetland	NO	Temporary	Fill Area	Square Feet	1261
	15 15 - TD	Discharge of fill material	Non-Tidal Wetland	NO	Temporary	Fill Area	Square Feet	290
	15 15 - TE	Discharge of fill material	Non-Tidal Wetland	NO	Temporary	Fill Area	Square Feet	145
VP2	VP2 - TF	Discharge of fill material	Non-Tidal Wetland	NO	Temporary	Fill Area	Square Feet	606
	15 15 - TG	Discharge of fill material	Non-Tidal Wetland	NO	Temporary	Fill Area	Square Feet	50
	14 14 - TH	Discharge of fill material	Non-Tidal Wetland	NO	Temporary	Fill Area	Square Feet	593

Waters_Name	Name	Activity	Resource_Type	Permanence_Loss	Impact_Duration	Amount_Type	Amount_Units	Initially_Proposed_Amount
S4	S4 - TBM	Discharge of fill material	River/Stream	NO	Temporary	Fill Area	Square Feet	15
	80 80 - TBN	Discharge of fill material	River/Stream	NO	Temporary	Fill Area	Square Feet	420
	80 80 - TBO	Discharge of fill material	River/Stream	NO	Temporary	Fill Area	Square Feet	561
	80 80 - TBP	Discharge of fill material	Non-Tidal Wetland	NO	Temporary	Fill Area	Square Feet	213
	80 80 - TBQ	Discharge of fill material	Non-Tidal Wetland	NO	Temporary	Fill Area	Square Feet	130
	80 80 - TBR	Discharge of fill material	Non-Tidal Wetland	NO	Temporary	Fill Area	Square Feet	52
	59 59 - TBS	Discharge of fill material	Non-Tidal Wetland	NO	Temporary	Fill Area	Square Feet	176
	56 56 - TBT	Discharge of fill material	Non-Tidal Wetland	NO	Temporary	Fill Area	Square Feet	112
	62 62 - TBU	Discharge of fill material	Non-Tidal Wetland	NO	Temporary	Fill Area	Square Feet	1228
	59 59 - TBV	Discharge of fill material	Non-Tidal Wetland	NO	Temporary	Fill Area	Square Feet	92
	59 59 - TBW	Discharge of fill material	Non-Tidal Wetland	NO	Temporary	Fill Area	Square Feet	94
	59 59 - TBY	Discharge of fill material	Non-Tidal Wetland	NO	Temporary	Fill Area	Square Feet	135
	55 - TBX	Discharge of fill material	Non-Tidal Wetland	NO	Temporary	Fill Area	Square Feet	482
	55 - TBZ	Discharge of fill material	River/Stream	NO	Temporary	Fill Area	Square Feet	22
	62 62 - TCA	Discharge of fill material	Non-Tidal Wetland	NO	Temporary	Fill Area	Square Feet	73
	62 62 - TCB	Discharge of fill material	River/Stream	NO	Temporary	Fill Area	Square Feet	159
	54 54 - TCC	Discharge of fill material	Non-Tidal Wetland	NO	Temporary	Fill Area	Square Feet	27
	VP11 - TCD	Discharge of fill material	Non-Tidal Wetland	NO	Temporary	Fill Area	Square Feet	87
	S1 - TCE	Discharge of fill material	River/Stream	NO	Temporary	Fill Area	Square Feet	114
S1 - TCF	Discharge of fill material	River/Stream	NO	Temporary	Fill Area	Square Feet	370	

Attachment G

Box 26 – Agency Approvals

26. List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED
USEPA	NPDES CGP*	TBD	NOI will be filed at the start of Construction		
USEPA	NPDES MS4-NHDOT	NHR04001	9/17/2018	3/18/2019	
USEPA	NPDES MS4-Derry	NHN04005	9/29/2018	8/21/2019	
USEPA	NPDES MS4-Londonderry	NHN04016	9/29/2-18	6/12/2019	
FHWA	FEIS/ROD**	4910-22-P	6/12/1998	TBD	
NHDES	NH Alteration of Terrain Program	MOA Updated on	7/11/2019	7/11/2019	
NHDES	Dredge and Fill Permit	2018-03134	10/3/2018	TBD	
NHDES	Shoreland Water Quality Protection Act Permit	TBD	TBD	TBD	
SHPO	Adverse Effect Determination			8/12/2019	
FHWA	Section 106 MOA			10/29/2019	
USFWS	NLEB No Effect Determination		8/21/2016	11/25/2019	

*NPDES Construction General Permit (CGP).

<https://www.epa.gov/npdes/stormwater-discharges-construction-activities>

**FHWA Exit 4A Record of Decision (ROD)

Attachment H

USFWS – NLEB Coordination



Victoria F. Sheehan
Commissioner

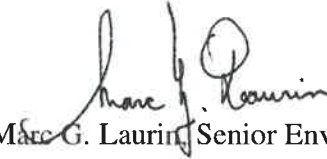
THE STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION



William Cass, P.E.
Assistant Commissioner

MEMO

TO: File

FROM:  Marc G. Laurin, Senior Environmental Manager

DATE: November 27, 2019

RE: Section 7 Endangered Species Act Consultation Derry-Londonderry, 13065, IM-0931(201)

The Project includes construction of a new interchange with I-93 (known as Exit 4A) in Londonderry, NH, with additional improvements on local roads in Derry and Londonderry, and other transportation improvements to reduce congestion and improve safety along NH Route 102, from I-93 Exit 4 easterly through downtown Derry, NH. The Project is approximately 3.2 miles in length between the new, proposed I-93 Exit 4A interchange and the eastern terminus in Derry. There would be approximately 1 mile of new roadway construction on a new alignment and 2.2 miles of existing roadway reconstruction. The new alignment would originate from the new I-93 Exit 4A interchange location and travel southeast through a wooded area to Folsom Road, near its intersection with North High Street and Madden Road in Derry. This project would continue to follow Folsom Road to Ross' Corner (Manchester Road/NH 28) and continue on Tsienneto Road across NH 28 Bypass to its intersection with NH 102, adjacent to Beaver Lake.

The IPAC review for Federally-listed ESA species identified that the Northern Long-eared Bat (NLEB), *Myotis septentrionalis*, could occur within the proposed project location, and/or may be affected by the proposed project. No critical habitats were identified within the project area. No other Federally-listed species were identified.

In August 2016 a Northern Long-eared Bat Acoustic Survey for the potential presence or absence of the NLEB was performed within the I-93 Exit 4A interchange project area by environmental consultants Normandeau Associates, Inc. The survey was conducted in conformance with the methods and approach outlined in the USFWS Guidelines. The field survey and the data analysis were conducted by personnel trained and qualified to conduct their respective tasks. Although Kaleidoscope Pro software identified four potential NLEB calls (one night each at Segments 9 and 12, and both nights at Segment 7) the P-values for these nights are not below the required threshold to confirm this identification. Therefore, per USFWS survey protocols no manual analysis was conducted and NLEB were deemed to not be present. A copy of the Acoustic Survey was provided to the USFWS on August 31, 2016, who concurred that the survey was performed per the survey plan.

For these reasons, NHDOT concludes that the Exit 4A Project will have “no effect” on the NLEB.

s:\environment\projects\derry\13065\2015-2017 feis update\nleb\nleb no effects memo.docx



United States Department of the Interior



FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104
<http://www.fws.gov/newengland>

In Reply Refer To:
Consultation Code: 05E1NE00-2020-SLI-0599
Event Code: 05E1NE00-2020-E-01582
Project Name: Derry-Londonderry, 13065

November 26, 2019

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New England Ecological Services Field Office

70 Commercial Street, Suite 300

Concord, NH 03301-5094

(603) 223-2541

Project Summary

Consultation Code: 05E1NE00-2020-SLI-0599

Event Code: 05E1NE00-2020-E-01582

Project Name: Derry-Londonderry, 13065

Project Type: TRANSPORTATION

Project Description: The Project includes construction of a new interchange with I-93 (known as Exit 4A) in Londonderry, NH, with additional improvements on local roads in Derry and Londonderry, and other transportation improvements to reduce congestion and improve safety along NH Route 102, from I-93 Exit 4 easterly through downtown Derry, NH. The Project is approximately 3.2 miles in length between the new, proposed I-93 Exit 4A interchange and the eastern terminus in Derry. There would be approximately 1 mile of new roadway construction on a new alignment and 2.2 miles of existing roadway reconstruction. The new alignment would originate from the new I-93 Exit 4A interchange location and travel southeast through a wooded area to Folsom Road, near its intersection with North High Street and Madden Road in Derry. This project would continue to follow Folsom Road to Ross' Corner (Manchester Road/NH 28) and continue on Tsienneto Road across NH 28 Bypass to its intersection with NH 102, adjacent to Beaver Lake.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/42.89752851830917N71.32326925530609W>



Counties: Rockingham, NH

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

From: [Laurin, Marc](#)
To: [Lee Carbonneau](#)
Subject: FW: [EXTERNAL] Derry-Londonderry, 13065 - Presence/Absence Survey
Date: Monday, November 25, 2019 2:50:14 PM

Lee,

FYI. Here is Susi's response to my inquiry on the P/A review.

Marc

From: vonOettingen, Susi <susi_vonoettingen@fws.gov>
Sent: Monday, November 25, 2019 12:55 PM
To: Laurin, Marc <Marc.Laurin@dot.nh.gov>
Cc: Martin, Rebecca <Rebecca.Martin@dot.nh.gov>; Jamie Sikora <jamie.sikora@dot.gov>
Subject: Re: [EXTERNAL] Derry-Londonderry, 13065 - Presence/Absence Survey

EXTERNAL: Do not open attachments or click on links unless you recognize and trust the sender.

Hi Marc,

I generally do not confirm survey reports. I did not have any comments to send Sarah, I believe they performed the survey per the survey plan. And since I am not a trained acoustic call analyzer, I don't review the data for mis-IDs.

I would say you are good to go if the verification form was submitted and you received no response.

Susi

Susi von Oettingen
Endangered Species Biologist
New England Field Office
70 Commercial Street, Suite 300
Concord, NH 03301
(W) 603-227-6418
(Fax) 603-223-0104

www.fws.gov/newengland

On Mon, Nov 25, 2019 at 12:06 PM Laurin, Marc <Marc.Laurin@dot.nh.gov> wrote:

Susi,

I am following up on the August 2016 P/A NLEB survey conducted for the project, which proposes the construction of a new Exit 4A Interchange on I-93 in Londonderry, with a new connector road extending east only into Derry to Madden Road and requiring upgrades to Folsom Road, and Tsienneto Road, to its intersection with NH 102.

I have a copy of the Normandeau report in my files, and the attached email to you from Sarah Barnum indicating that it was forwarded to FWS. However I did not find any correspondence from USFW on concurrence on the survey results. I have inquired of Normandeau and they also did not find any.

Can we assume that this was an oversight and that the P/A determination was appropriately performed?

Let me know if this is something you can provide at this time or if you need more information, as NHDOT is planning to submit an updated application to the Corps in early December and they will want to confirmation that we have coordinated appropriately on the ESA.

Thanks,

Marc

Attachment I

Wetland Functions and Values

Wetlands proposed to be permanently impacted by Alternative A were reviewed to determine what functions and values the wetland currently provides that may be affected by construction of the project. The Highway Methodology Workbook Supplement (USACE, 1999) recognizes up to 13 different functions and values, including:

1. Groundwater recharge/discharge; GW
2. Floodflow Alteration; FA
3. Fish and Shellfish habitat; FS
4. Sediment/toxicant retention; SR
5. Nutrient removal/retention/transformation; NR
6. Production Export; PE
7. Sediment/shoreline stabilization; SS
8. Wildlife habitat; WH
9. Recreation; RE
10. Education/scientific value; ED
11. Uniqueness/Heritage; UH
12. Visual Quality/aesthetics; VQ and
13. Endangered Species; ES

Results of the impact review follow. In accordance with Highway Methodology practices, functions are either assigned a P, for Primary Function provided by the wetland, an X for function provided by the wetland, or left blank to indicate that the function is not provided by the wetland.

Table I-1. Permanent Impacts to Wetland Functions and Values for Exit 4A Selected Alternative (Bold font indicates Prime Wetland)

Alternative A (Selected Alternative) Permanent Impacts to Wetland Functions and Values																
Wetland ID	Total Wetland Acres	Square Feet Impact	Cowardin Class	GM	FA	FS	SR	NR	RF	SS	WH	RE	ED	UH	VQ	ES
11	3.38	7,106	PFO	X	X	-	X	X	X	-	X	-	-	-	-	-
13	0.06	1,820	PFO	X	-	-	-	-	-	-	-	-	-	-	-	-
14	3.46	95,325	PFO	X	P	X	P	X	X	X	P	-	-	-	X	-
15 ¹	0.27	12,942	PFO	X	X	-	X	X	X	-	P	-	-	-	-	-
16 ¹	0.46	25,687	PFO	X	X	-	X	X	X	-	P	-	-	-	-	-
17	0.30	3,523	PFO	X	X	-	X	X	X	-	P	-	-	-	-	-
18	0.02	659	PEM	X	-	-	-	-	-	-	X	-	-	-	-	-
19 ¹	0.22	15,043	PFO	X	X	-	X	X	X	-	P	-	-	-	-	-
20	0.03	1,505	PFO	X	X	-	X	X	X	-	P	-	-	-	-	-
21	0.06	361	PFO	X	-	-	-	-	-	-	X	-	-	-	-	-
22 ¹	0.61	827	PFO	X	X	-	X	X	X	-	P	-	-	-	-	-
24 ¹	0.11	19,119	PFO	X	X	-	P	X	X	-	X	-	-	-	-	-
35 ¹	0.10	12,866	PFO	X	-	-	-	-	-	-	P	-	-	-	-	-
39	0.19	4,379	PEM	X	-	-	X	-	-	-	X	-	-	-	-	-
40	0.02	852	PSS	X	-	-	X	-	-	-	-	-	-	-	-	-
41	0.95	7,077	PFO	X	P	X	P	X	P	X	P	-	-	-	-	-
46	0.18	2,561	PFO	X	P	X	P	X	P	X	P	-	-	-	X	-
49	1.15	3,025	PFO	X	-	X	X	X	-	-	P	-	-	-	-	-

Alternative A (Selected Alternative) Permanent Impacts to Wetland Functions and Values																
Wetland ID	Total Wetland Acres	Square Feet Impact	Cowardin Class	GW	FA	FS	SR	NR	RE	SS	WH	RE	ED	UH	VQ	ES
54	0.12	62	PEM	X	-	-	-	-	X	-	P	-	-	-	-	-
56	0.31	615	PEM	X	X	-	P	-	X	-	X	-	-	-	-	-
59	2.91	2,481	PFO	P	X	X	P	X	X	P	X	X	X	X	X	-
61	0.01	582	PFO	X	P	-	X	X	X	-	-	-	X	-	-	-
62	17.79	1,971	PSS/EM	X	P	X	X	X	P	X	P	X	-	-	X	-
64'	0.12	5,036	PFO	X	-	-	X	-	-	-	P	-	-	-	-	-
66	0.36	692	PFO	X	-	-	P	X	X	-	X	-	-	-	-	-
67	0.31	1,483	PFO	X	X	-	X	-	-	-	X	-	-	-	-	-
72	13.82	155	PSS	X	P	X	P	P	X	P	P	X	-	-	X	-
73	10.13	2,850	PEM	X	X	-	P	X	X	X	X	-	-	-	X	-
80	3.15	1,875	PFO	X	P	-	X	X	-	P	X	X	-	-	-	-
86	0.01	552	PFO	X	-	-	-	-	-	-	-	-	-	-	-	-
90	0.04	1,148	PFO	X	-	-	S	-	-	-	-	-	-	-	-	-
100	0.01	311	PFO	X	-	-	-	-	-	-	-	-	-	-	-	-
102	0.02	90	PEM	X	-	-	P	-	-	-	-	-	-	-	-	-

1 – Vernal Pool impacts are included in wetland impact quantities.

Attachment J
Wetland Impact Avoidance and Minimization

Attachment J - Wetland Impact Avoidance and Minimization

Avoiding and minimizing impacts to wetland resources has been an important consideration throughout Exit 4A project development, from the identification of alternatives through the design of the base technical concept. Specific efforts are described below. Wetland impact avoidance and minimization efforts will continue as the Design/Build team undertakes final design. For purposes of this narrative, wetland resources include wetlands, streams, and vernal pools.

Alternatives Analysis and Selection

Documentation of wetland resource impact avoidance and minimization efforts during alternatives analysis and selection are described in the FEIS. Several excerpts from the FEIS are included here.

Early in Project planning, a number of conceptual corridors for a new interchange location and connecting roadways were identified. And each corridor was evaluated based on engineering, environmental, cultural, topographic, and socioeconomic constraints. As noted in the 2007 DEIS, a 300-foot-corridor width was used to represent the potential physical characteristics associated with a new location alternative and for the initial screening of alternatives from an environmental impact standpoint. This width was based on the likely required cross-section of the proposed roadway needed to serve projected traffic volumes, as well as the design criteria outlined in the 2007 DEIS. These preliminary design criteria used to develop potential highway alternatives, as well as upgrade options for existing highways, are based on American Association of State Highway and Transportation Officials (AASHTO) policy and the NHDOT Highway Design Manual. Conceptual corridor alternatives considered during the screening process for the 2007 DEIS include (1) upgrade existing roadways, (2) new I-93 interchange/connector road options, and (3) combinations of 1 and 2.

Two iterative stages of conceptual corridor screening were outlined in the 2007 DEIS and are summarized in this FEIS. Five alternatives remained after the screening process was completed (referred to as alternatives A, B, C, D and F) and these alternatives are described in ES2.3. (*From ES.2.1 Conceptual Corridors, page ES-7*).

Alternative A was selected as the preferred alternative based on the results of engineering, environmental, and socioeconomic studies (see Table ES-1 and Chapter 4). Advantages of the preferred alternative compared to the other Build Alternatives include lowest cost, including transmission line relocations; least acreage for ROW acquisitions; lowest wetland impacts of the alternatives that meet the purpose and need; and no impact on Wildlife Action Plan (WAP) highest ranked habitat.

The No Build Alternative and Alternative F do not meet the purpose and need of the Project. Even with the upgrades to the existing roadway under Alternative F, traffic in downtown Derry would increase 16 percent compared to the No Build Alternative. Additionally, Alternative F would not contribute to economic development. Although Alternative D would result in a modest decrease in traffic in downtown Derry (11 percent), it would not contribute to economic development. Alternative C would decrease the downtown Derry traffic the most (22 percent reduction); however, it would not contribute to economic development. It is the most costly of the Build Alternatives (\$42,260,000). Although Alternatives A and B both satisfy the traffic and economic development needs of the Project, Alternative

A more closely follows existing roads than Alternative B, and Alternative A has considerably less impact on wetlands, wildlife habitat, and parks and recreational lands than Alternative B. For example, Alternative A would impact 4.77 acres of wetlands¹, and Alternative B would impact 10.0 acres of wetlands. Alternative A would impact 0.02 acre of Rider Fields, and Alternative B would impact 1.31 acres of Rider Fields. (From FEIS Section ES 2.3 Description of and Rationale for the Preferred Alternative, Page ES-13)

Alternative F (NH 102 upgrade) would not meet the transportation need for the project because it would increase traffic through downtown Derry and this point has been clarified in Section 3.7.2 of the FEIS. Alternative A and B are considered to have the same potential for induced development as discussed in Chapter 5. Alternative A does not have the greatest impacts to the aquatic environment. In terms of direct impacts, the impacts of Alternative B and C are greater than Alternative A. Wetland edge effect impacts, though not measured for Alternatives B and C, would also be greater than for Alternative A, as these impacts extend out from direct wetland impacts, which are greater for Alternatives B and C. Alternative B impacts a greater number of vernal pool envelopes and critical terrestrial habitat than Alternative A, although direct vernal pool fill may be less. Alternative C has less direct and secondary vernal pool impacts than either Alternative A or B. In terms of indirect and cumulative impacts, of the alternatives that meet the purpose and need, Alternatives A and B could result in a similar potential for induced growth related impacts; however, Alternative B is anticipated to result in greater cumulative impacts to aquatic resources. (from FEIS Appendix M: Response F4).

Alternative A Base Technical Concept Design

Trolley Car Lane/Wetlands West of I-93 (Plan Sheets 6-8)

Wetlands west of I-93 and east of Trolley Car Lane are associated with an un-named intermittent stream (S1), sometimes referred to as Wheeler Brook or Trolley Car Lane Brook. This stream flows south along the west side of I-93, then crosses diagonally under the highway through a culvert over 1,000 ft long and continues south to Wheeler Pond. The stream will be relocated up to approximately 50 feet to the west to accommodate both sound wall and ramp construction. A portion of Stream S1 permitted for relocation as part of the I-93 project to accommodate sound walls, but the sound wall work and stream relocation/restoration has been deferred to the Exit 4A project. Impact calculations for Exit 4A include the portion of the work that was to be done by I-93. The sound walls, designed to match the sound wall design for the I-93 project, will be constructed on berms with a 2:1 slope. The berms are the minimum dimensions necessary to support the walls. The earthwork for ramps will have 2:1 slopes rather than the typical 4:1 slopes, to minimize wetland impacts. Along the toe of slope for most of the project area, a 5-foot wide temporary disturbance zone will accommodate the installation of erosion and sedimentation (E&S) control Best Management Practices (BMPs). Wetlands temporarily impacted by E&S BMPs will be restored to pre-construction grades and seeded with an appropriate wetland seed mix.

Normandeau wetland scientists delineated wetland boundaries (Wetland 14) along Stream S1 and a tributary (S70), and conducted stream surveys to document channel morphology, bankfull width, and

¹ Permanent impacts to vegetated wetlands for Alternative A are now 5.39 acres based on advances to the Base Technical Concept since completion of the FEIS.

substrate composition in sufficient detail to re-establish stream habitat. The stream survey and restoration reports for Stream S1 by Normandeau and by NHDOT are attached (Permit Attachment B). Relocation and restoration of this stream is considered self-mitigating. This intermittent stream will be relocated during low flow conditions to the extent possible, and care will be taken to maintain flow and minimize downstream aquatic impacts. Streambanks and temporarily disturbed wetlands will be stabilized with native wetland/riparian vegetation, and stream channel substrates will match the material currently in the streambed. Further information regarding stream impacts and mitigation are included in Exhibit C and Attachment B of the application. The Design-Build contractors are expected to submit additional construction and stream restoration details.

Wetlands Northwest of Trolley Car Lane (Plan Sheets 9 and 10)

Construction of the I-93 southbound off-ramp to Exit 4A will impact wetlands 11, 13, and 66. While this ramp is initially going to be single lane, traffic projections associated with a full buildout of the currently undeveloped property around the Connector Road indicate that widening to two lanes will be necessary in the future. Therefore the design accommodates a two-lane ramp, resulting in impacts to the edges of these three wetlands. Ramp slopes are 2:1, the maximum vegetated slope consistent with standard highway design.

Wetlands and Vernal Pools on the Eastern Edge of I-93 (Plan Sheets 6-10)

The I-93 northbound off-ramp to Exit 4A and stormwater collection and treatment features require fill in Wetlands 15, 16, and 17; Stream S7; and Vernal Pools 2, 3, and 4. Drainage will be directed along the ramp slope, away from the vernal pools, and under the highway via new swales and extensions of existing drainage pipes. The added fill is expected to reduce the value of Vernal Pools 2 and 3, and eliminate Vernal Pool 4. Impacts calculated for mitigation purposes include direct wetland, stream and vernal pool fill impacts, and indirect (edge effect) impacts. Vernal pool loss and secondary (indirect) impacts that reduce vernal pool value are also included in the mitigation impact calculations. Many of these resource areas were also incrementally impacted by the recent I-93 construction. The Exit 4A on-ramp to I-93 North will also require fill in Wetland 67 for ramp construction, and temporary disturbance in Wetland 9, for installation of erosion and sedimentation controls. As on the west side, the eastern ramp slopes are 2:1 to minimize wetland impacts and temporary impacts for E&S BMPs will be restored.

Connector Road Wetlands and Vernal Pools (Plan Sheets 11-15)

The Connector Road crosses mostly undeveloped land with rolling topography, as well as two electric transmission line easements. The selection of this project route (Alternative A) and connection point to I-93 is discussed in the FEIS. The western end of the Connector Road will be constructed on fill, as it is elevated over I-93. The eastern end of the Connector Road near Madden Road and Folsom Road is partially within a disturbed gravel mining and industrial area, and the highly variable topography will require both cuts and fills for the road. Wetland 64 and associated Vernal Pool 9 were located in close proximity to a proposed road cut for the Madden Road intersection, which could result in secondary hydrologic impacts (draining of the wetland). Maximizing slopes to avoid direct impacts will not necessarily avoid secondary impacts. The permit plans therefore show a total impact to Wetland 64 and VP 9, even though only a portion of these areas will be directly filled or excavated by the Project. These

impacts are included in the mitigation total and ARM fund calculations. Previously, only secondary edge and vernal pool buffer impacts were included in the mitigation package. The Design-Build team will be directed to minimize secondary impacts to Wetland 64 and VP 9 if possible.

The middle portion of this four-lane Connector Road will be located primarily in a cut. Where the Connector Road overlaps with the Eversource transmission easement, several transmission structures will need to be relocated. This will be addressed in final design by the Design-Builder. There will be significant impacts to Wetlands 18, 19, 20, 24 and 35 and Vernal Pools 42, 6, and 8, and impacts to the edges of several other wetlands will occur. Wetland 19 and Vernal Pool 42 will not be completely filled, but the remnant left after construction will likely have minimal function and was therefore considered a total impact. Given the quantity and distribution of vernal pools in this block of land, total avoidance of resource impacts and habitat fragmentation was not possible. Fill slopes in the vicinity of wetlands have been minimized where possible, but the Connector Road width must also accommodate guardrails. As one of the project purposes is to provide access for the future development of this undeveloped land, additional resource impacts are likely, as discussed in Section 5.4 of the FEIS.

Both Derry and Londonderry, and therefore the Exit 4A Project area, are included in the MS4 General Permit program. Because both towns have discharges that impact an impaired AU for which a TMDL has been prepared (i.e., Beaver Brook), both are required to meet additional requirements of the MS4 permitting program. Compliance with the NH Alteration of Terrain program and a 401 Water Quality Certificate are also required. Locating stormwater basins and treatment swales is challenging in urban locations. Two of the stormwater basins for the project will be located along the Connector Road, one at each end. These have been sited to avoid and minimize permanent wetland impacts to the extent practicable. The outlet of the basin at the western end of the Connector Road was redirected to avoid discharging to Vernal Pool 5. The stormwater basin located north of the Connector Road, just west of the proposed intersection with Madden Road was placed between the existing Eversource transmission line easement and Wetland 35, Vernal Pool 8, and Wetland 90. This basin grading was revised and refined to minimize the impacts to these wetlands to the extent practicable and impacts to Wetland 35 and Vernal Pool 8 were reduced significantly during design.

Shields Brook (Plan Sheets 15 and 16)

The Folsom Road crossing structure over Shields Brook will be replaced. This crossing was designed to meet the 2.2 times bankfull width requirements of the NHDES stream rules to minimize flooding potential at the crossing location and greatly improve aquatic organism passage and hydraulic and geomorphic compatibility. This crossing has a skew, and the Design-Build contractors may propose an alternate design. The stream morphology survey and an excerpt of the hydraulic study are attached (Permit Attachments G and C, respectively). Impacts have been significantly reduced from the October 2018 permit application based on hydraulic studies and crossing design development. This crossing could be considered self-mitigating, but at this time, impacts to the channel and banks for bridge construction are included in the stream ARM fund estimate. Details supporting the design of this crossing are included in Exhibit C and Attachments C and H.

Several stormwater features will discharge treated stormwater to Shields Brook. One of these will have an outlet into Wetland #72 (Derry Prime Wetland A-01) with permanent impacts of approximately 155 sf. As runoff from existing impervious road surfaces in this part of Derry is not currently treated, these structures should improve water quality in the stream/wetland system. The stormwater BMPs have

been located to minimize wetland impacts. Protection of Prime Wetland functions and values is addressed in the NHDES Wetland Application Narrative.

Tsienneto Road Wetland and Streams (Plan Sheets 18-27)

Tsienneto Road will be widened slightly, and a drainage catchment system added to treat runoff from existing and additional impervious surfaces. There are small impacts to wetlands and intermittent streams along this roadway. The contractor will determine which culverts and other drainage pipes need replacement, but temporary and permanent impacts have been included for all pipes that connect to jurisdictional resources in the event that replacement is required.

The crossing of Tributary E (Sheet 27) will be modified from the undersized 30-inch diameter corrugated metal pipe (CMP) and a 36-inch diameter CMP to a 40-foot clear-span structure (actually 50-feet on centerline, due to an existing skew). Wetland 62 on the upstream side of the Tributary E crossing is a prime wetland (Derry Prime Wetland B-12). An assessment of the effects of the Project on prime wetland functions and values is included in the permit application narrative. The new crossing includes a downstream weir to prevent the prime wetland marsh from draining at normal flows when the culverts are replaced with a bridge span. The weir will pass the 2-year storm and greater with reduced flooding, and a low-flow channel will accommodate passage of fish and other aquatic organisms. An excerpt from the hydraulic analysis is attached (Permit Attachment C). Stream surveys have also been completed for Tributary E (Attachment G), and the assessment data was incorporated into the stream crossing design. The Type, Span and Location Study for the Tributary E crossing is also attached (Attachment H). The crossing design may be self-mitigating, but impacts have been included in the ARM fund calculations at this time.

Route 102 Wetlands and Streams (Sheets 27 and 28).

The project includes improvements to the intersection of Tsienneto Road and Route 102 (Chester Road), including the addition of turning lanes, which will require widening of the paved roadway. A portion of the Route 102 improvements on Sheet 26 lies within the Protected Shoreland of Beaver Lake, and therefore a Shoreland Permit Application will be submitted for this Project. Tributary E flows under Route 102 at the edge of the project area, and into Beaver Lake. The possible replacement of the culvert which carries Tributary E under Route 102 is being evaluated under the Stream Passage Improvement Program (SPIP), but is not part of the Exit 4A project design.

To the east of the Tsienneto Road intersection (Sheet 28), turning lanes and stormwater treatment swales will be added, and minor improvements to the intersections of residential roads will also take place to tie in to the improved Route 102. Minor impacts to the edge of Derry Prime Wetland B-14 (Wetland 62) would occur along the edge of Route 102 for culvert replacements and road widening.

Construction Impact Avoidance and Minimization Measures

NHDOT has committed to the following impact avoidance and minimization efforts during construction, as stated in several sections of the FEIS. Further impact avoidance and minimization methods will be identified during final design by the Design-Builder.

- For protection of wildlife, sweeps and fencing of construction areas and material storage areas will be conducted to insure that snakes and turtles and their nests are not crushed by construction activities.
- Only wildlife-friendly erosion control materials will be deployed during construction activities.
- Project will develop and implement a sedimentation and erosion control program. This sedimentation and erosion control plan (as part of the Stormwater Pollution Prevention Plan) will be consistent with the National Pollutant Discharge Elimination System, the NHDES' AoT permitting requirements, and the 2017 Construction General Permit.
- Temporary erosion and sediment controls will be installed as necessary during construction. Proper maintenance of erosion control devices such as silt socks and silt fences will be an integral part of the Project so as to ensure their adequate installation and use.
- Erosion control measures and construction schedules will require that areas stripped of vegetation be stabilized as soon as practicable after exposure to prevent soil loss by wind and water.
- Vegetation removal and vegetation disturbance in riparian areas will be minimized, and extend no further than 5 feet beyond the project footprint in wetland areas for E&S controls. Where practical, efforts will be made to maintain a buffer strip of vegetation near streams.
- Where appropriate, upslope drainage will be diverted around work areas.
- Stream work will be timed to avoid impacts to breeding fish and wildlife, and high flows.
- BMPs for fertilizer application during construction will also be followed.
- Mechanisms to avoid and control chemical leaks and spills from the construction equipment will be instituted.
- Temporary impact areas will be restored to natural grades with clean, appropriate surficial material (if needed, including stream gravel, topsoil, etc.) and seeded with native seed appropriate for the location.
- Disturbed areas will be monitored for soil stability, and erosion control materials removed once stabilization is achieved.
- Minor road adjustments to limit stream and wetland crossings will continue to be evaluated for the Project to further minimize impacts.

Attachment K
Map of Previously Permitted/Mitigated Wetlands



NOTE: IMPACTED WETLANDS ASSOCIATED WITH THE PERMIT ARE SHOWN IN GREEN. WETLANDS NOT COVERED UNDER THE PERMIT ARE SHOWN IN BLUE. WETLANDS COVERED UNDER THE PERMIT ARE SHOWN IN RED.



WETLAND IMPACT SUMMARY					
WETLAND NUMBER	WETLAND CLASSIFICATION	LOCATION	PERMANENT ACREAGE & WETLAND (SF)	BANK	TEMPORARY IMPACTS (SF)
			IF	IF	SF
17A	PERM/FCD	N1	1351		
17A	PERM/FCD	N2	717		
17A	PERM/FCD	N3	2535		
17A	PERM/FCD	N4	5282		850
17A	PERM/FCD	N5	1832		

Notes: Impacts are in square feet from Contract 14633D, N.S. is from Contract 14633B

TOTAL IMPACTS FOR WETLANDS	
TOTAL WETLANDS IMPACTED (AREA)	24,200 SF
PERMANENT IMPACTS (WETLAND)	7,170 SF
TEMPORARY IMPACTS (WETLAND)	850 SF
TOTAL WETLAND IMPACTS	31,960 SF
STREAM IMPACTS (LINEAR)	
PERMANENT IMPACTS TO BANKS	0.00 LF
PERMANENT IMPACTS TO CHANNEL	800.00 LF
TEMPORARY IMPACTS TO BANKS	0.00 LF
TEMPORARY IMPACTS TO CHANNEL	0.00 LF
TOTAL STREAM IMPACTS	800.00 LF

I-93 AS-BUILT CONDITIONS

- PREVIOUSLY PERMITTED/ SELF MITIGATED STREAM IMPACTS
- PREVIOUSLY PERMITTED/ MITIGATED WETLAND IMPACTS

LEGEND

- WETLAND
- IMPACT AREA
- SURFACE WATERS
- PREVIOUSLY ACCOUNTED IMPACT
- PROPOSED BMP BASIN
- DETENTION EXCAVATION
- CUT
- FILL



INTERSTATE 93 IMPROVEMENTS
SALEM TO MANCHESTER
A004(375), 14633D
I-93 NB MAINLINE STA. 1555+00 THRU STA. 1668+42
I-93 SB MAINLINE STA. 3552+50 THRU STA. 3676+75
EXIT 4 INTERCHANGE, ASH ST/PILLSBURY RD & NH ROUTE 102

AT: TOWNS OF DERRY & LONDONDERRY
IN: COUNTY OF ROCKINGHAM
NEW HAMPSHIRE

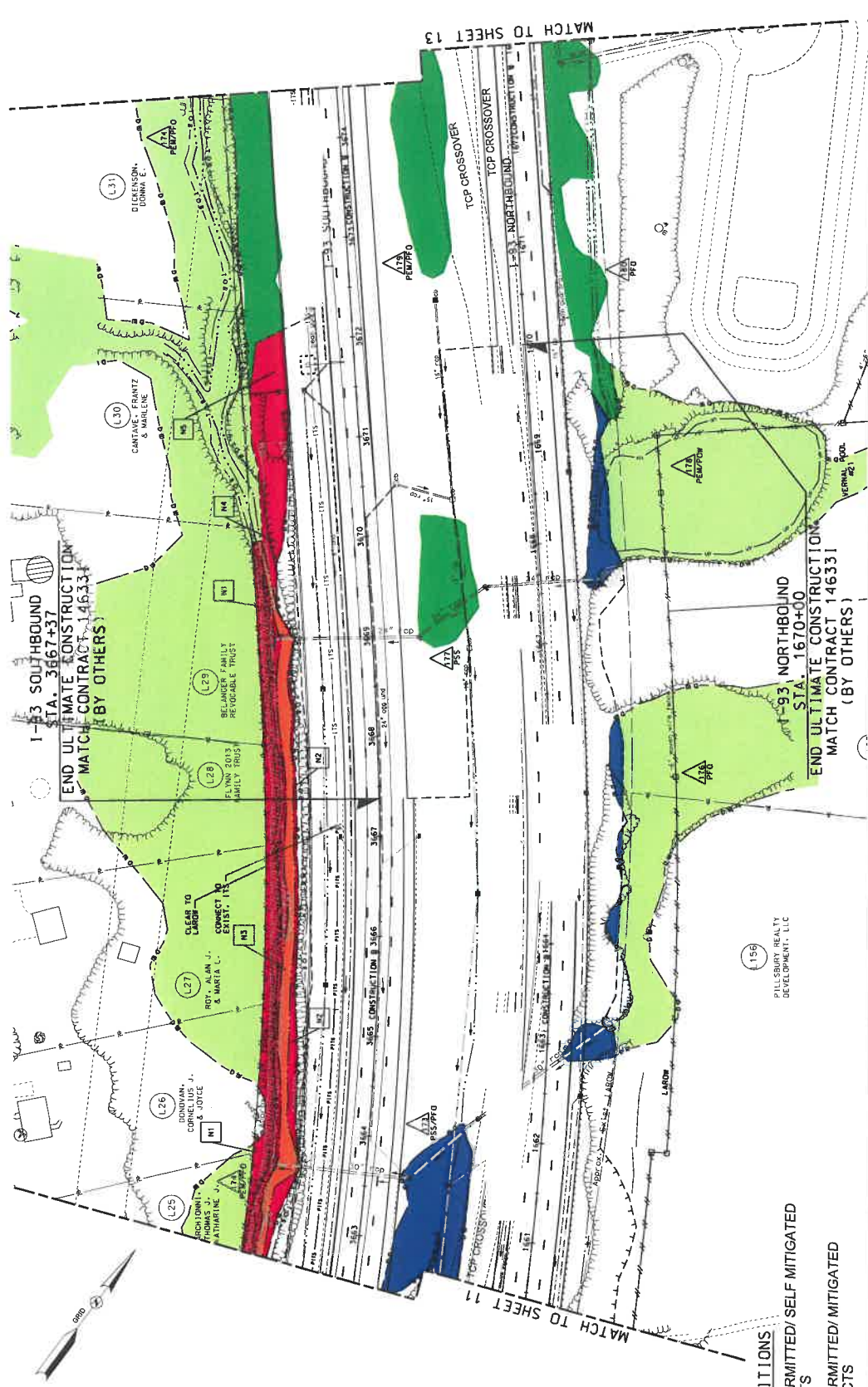
**PARSONS
BRINCKERHOFF**

THE STATE OF
NEW HAMPSHIRE
DEPARTMENT OF
TRANSPORTATION

NHDOT

DATE: 11-22-2016

SHEET: \$SHT\$ OF



- I-93 AS-BUILT CONDITIONS**
- PREVIOUSLY PERMITTED/SELF MITIGATED STREAM IMPACTS
 - PREVIOUSLY PERMITTED/MITIGATED WETLAND IMPACTS

- LEGEND**
- WETLAND
 - IMPACT AREA
 - SURFACE WATERS
 - PREVIOUSLY ACCOUNTED IMPACT
 - PROPOSED BMP BASIN
 - CUT
 - FILL
- SCALE IN FEET: 0, 50, 100

INTERSTATE 93 IMPROVEMENTS
 SALEM TO MANCHESTER
 A000(1375), 14633D
 I-93 NB MAINLINE STA. 1555+00 THRU STA. 1668+42
 I-93 SB MAINLINE STA. 3552+50 THRU STA. 3676+75
 EXIT 4 INTERCHANGE, ASH ST/PILLSBURY RD & NH ROUTE 102
 AT: TOWNS OF DERRY & LONDONDERRY
 IN: COUNTY OF ROCKINGHAM
 NEW HAMPSHIRE

PARSONS BRINCKERHOFF

NHDOT

THE STATE OF
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