

STATE OF NEW HAMPSHIRE

Inter-Department Communication

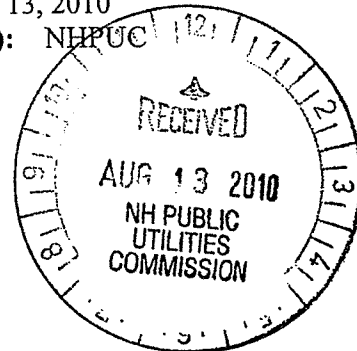
DATE: August 13, 2010

AT (OFFICE): NHPUC

FROM: Randy Knepper, Director, Safety *RSK*
Kate Bailey, Director, Telecom *KMB*

SUBJECT: Staff Recommendation in Docket No. DT 10-010

TO: Commission
Executive Director



As follow-up to Staff's previous memos in this proceeding, Staff worked with BayRing, Comcast and Unitil to insure the existing Comcast attachment across the Merrimack River, in Concord, NH, becomes compliant with the National Electrical Safety Code (NESC) concurrently with the attachment proposed by BayRing in this docket. In order to satisfy all parties and bring its existing attachment into compliance, Comcast will raise its attachment on the north side of the Merrimack River on CECO pole 51 by approximately 6 feet. BayRing will overlash its attachment onto the Comcast facilities.

Unitil calculated the appropriate tensioning using the strand size, type, diameter and weight of each of the Comcast and BayRing cables and confirmed the proposed crossing would comply with the NESC. Staff notes Unitil's extraordinary assistance in this matter and points out that without Unitil's assistance, resolution of the issues raised would not have been achieved as expeditiously.

The following revisions are noted updates of Staff's previous memos and include details that are not included in the final, revised petition (see Attachments 1 and 2) but are necessary for a complete record.

1. FairPoint Communications was incorrectly identified in the first revised petition filed with the Commission on April 1, 2010, as attached to CE Pole 50 and CE Pole 51. The existing facility attached to the poles in question is an alarm cable operated by the City of Concord that transitions to under water from aerial at CE Pole 50, crosses the floor of the Merrimack River via conduit and transitions to aerial cable at CE Pole 51.
2. Comcast of Maine/New Hampshire, Inc. (Comcast) identified its existing aerial facilities as the following:
 - 96 F Fiber Optic (96 count) 0.56 inch diameter cable (weight 0.098#/ft)
 - 240F Fiber Optic (240 count) 0.76 inch diameter cable (weight 0.163#/ft)
 - 240 F Fiber Optic (240 count) 0.76inch diameter cable (weight 0.163#/ft)
 - Abandoned Coax Cable 0.75 inch diameter (weight 0.08#/ft)
 - 240 F Fiber Optic (240 count) 0.76 inch diameter cable(weight 0.163#/ft)

- 0.375 inch diameter galvanized steel stranded support wire (assumed high strength) (weight 0.273#/ft)
3. Comcast's facilities were originally installed between the years 1968 and 1972 by the former Telecable (cable franchise holder within the City of Concord).
 4. Comcast has agreed to petition the PUC for a license covering the same crossing of the Merrimack River in Concord once its facilities are physically moved; the Comcast license petition will reference many of the drawings and record within this petition.
 5. BayRing submitted Attachment 1 to Staff on July 29, 2010.
 6. BayRing submitted a revised Attachment 2 to Staff on August 9, 2010.
 7. Pole Loadings were recalculated assuming a conservative scenario in which the tensioning of the attached cables was transferred to the anchors and referenced guying. Staff found this to be adequate to satisfy potential concerns.
 8. Staff reviewed Attachment 2 for compliance with all NESC requirements, including loading, clearances and materials and found Attachment 2 sufficient in detail to provide sufficient safeguards of potential hazards for the public.

.Staff recommends this crossing be approved.

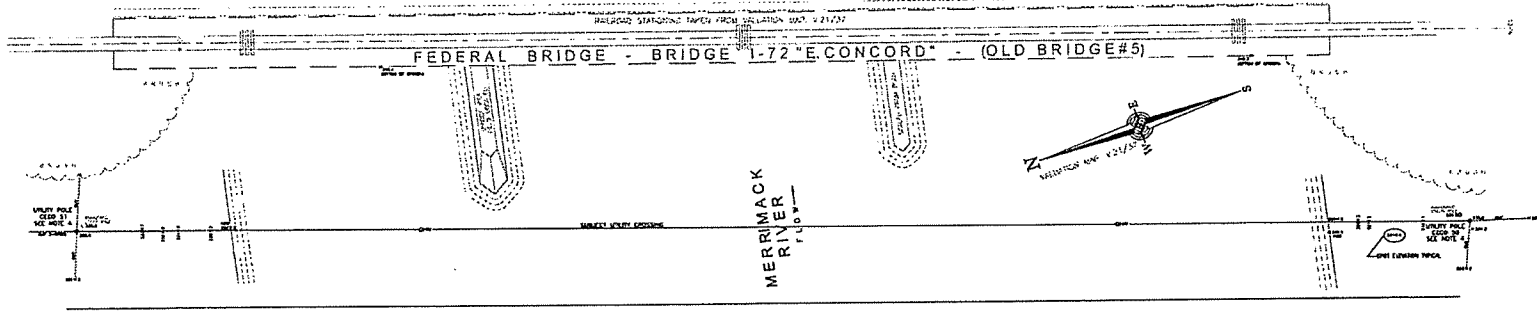
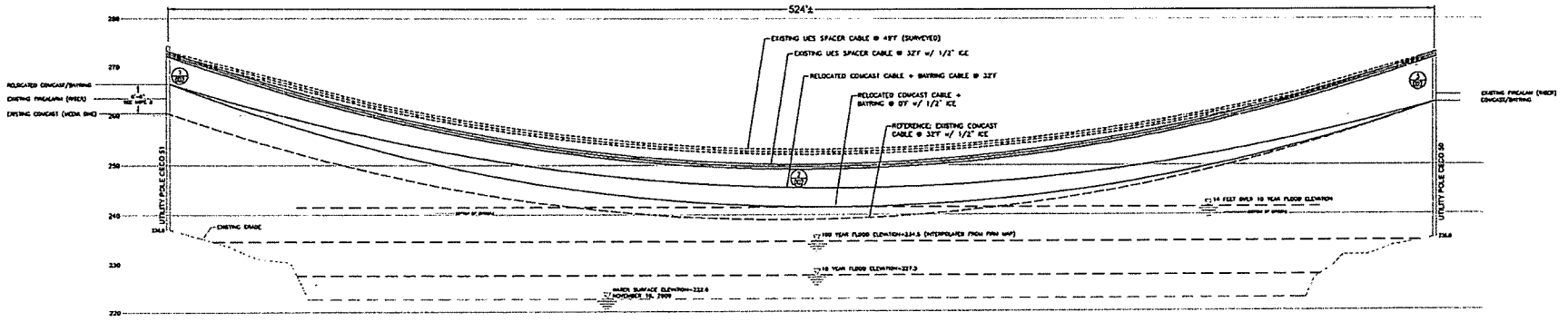
Attachments:

- Attachment 1 – BayRing Final, Revised Petition Drawings (August 9, 2010)
- Attachment 2 – BayRing Second, Revised Petition (July 29, 2010)

ATTACHMENT 1

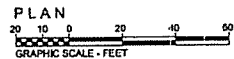
Final Revised Petition Drawings (August 9, 2010)

SHOWING SPAN/SPAN LOCATED BY NOVEMBER 14, 2009
 PROJECT NUMBER: 08-04-10



NOTES:

1. This plan was prepared from actual ground survey for the purpose of installing a utility cable/cables above the Merrimack River between Utility Pole CECO 51 & Utility Pole CECO 50 for the benefit of Bayling Communications.
2. The BEYCHAMPTON for this project was taken from the FRM (Flood Insurance Rate Map) for the City of Concord, New Hampshire, Merrimack County, Community Panel Number: 330110 0020 B, Map Revised: August 23, 1999 (See Title Block for description).
3. Raise existing Concast cable assembly 6 feet above current attachment height on Pole CECO 51 only. Guy in accordance with Sag and Tension data on Sheet 2 of 2 (this drawing).
4. Poles 50 and 51 each require one (1) new electric deadend guy strand attached at 13' from top of pole to existing electric anchor with 25' lead. Communication deadend guy on pole 51 needs to be raised to new attachment height. Both poles require separate communication anchor having minimum 20' lead.



Sheet 1 of 2

Consulting Engineers Group Inc.
 ENGINEERS & CONSULTANTS
 ONE CHAMPLAIN BLVD., CONCORD, MASSACHUSETTS
 WWW.CEGROUPINC.COM

ADD Proposed Communication Site profiles and data table 12/14/09 TO/PP
 Add span data and details 03/17/10 TO/PP
 Add new Guying poles and cables 06/25/10 TO/PP
 Revise scheme option 07/28/10 TO/PP
 P/E: comments 08/04/10 TO/PP

RENDER IN 25% DIMENSION
 CORRECTED SIZE OF ELECTRIC WIRES & HOVED LABELS IN PROFILE

EXISTING OVERHEAD RIVER CROSSING
 PLAN of LAND
 of
CONCORD, NH

Prepared For: Bayling Communications
 201 Concord Drive
 Portsmouth, NH 03801

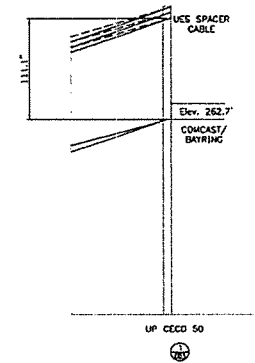
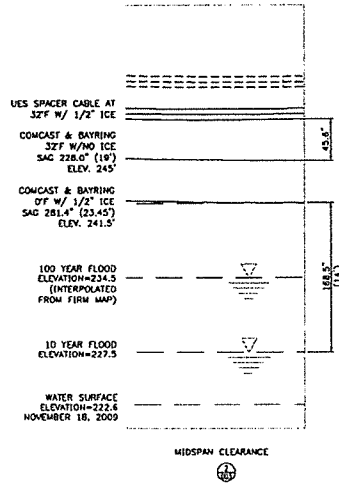
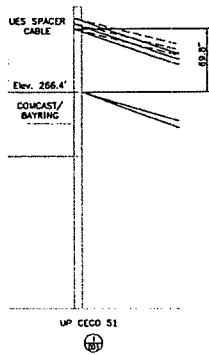
SCALE: As Shown
 DATE: November 27, 2009

Prepared By: DENHAM ENGINEERING ASSOCIATES LLP
 100 BROADWAY
 PORTSMOUTH, NH 03801
 TEL: 603.883.8800
 FAX: 603.883.8801
 WWW.DENHAM-ENG.COM

This plan was prepared for the exclusive use of Bayling Communications and Denham Engineering Associates LLP. Use of this plan by others without the written consent of Bayling Communications is strictly prohibited.

Project No: 785-PAD-A-52D
 Date: 11/27/09

ATTACHMENT I (1/2)



PROFILE DETAILS
Scale: 1" = 10' HORIZ
1" = 5' VERT

BAYRING CABLE SAG CHART											
ALUMINUM COMPANY OF AMERICA 246 AND TENSILE DATA											
Bayring Communications Midspan River Crossing											
Computer: 000001 Diameter 3/2" 3 Strand Steel 252											
Anchor: 2750 Lb. Dia. 2 1/2" .362 In. Dia. .375 Lb/7' 875# 33400 Lb											
Bolt: from Chart No. 3-1333											
Welding: None											
Span: 331.0 Feet MSC Heavy load line											
Cramp to MPV = Factor											
Temp	Ice	Wind	K	Height	Sag	Tension	K/W	Sag	Tension	K/W	Initial
F	in.	ft/lb	lb/ft	ft	ft	lb	ft	ft	lb	ft	ft
0	.00	0.00	.00	0.000	16.10	2094	100%	16.20	2094	100%	16.10
10	.00	.00	.00	0.000	16.00	2064	100%	16.10	2052	100%	16.00
20	.00	.00	.00	0.000	15.80	2004	100%	15.90	1980	100%	15.80
30	.00	.00	.00	0.000	15.50	1920	100%	15.60	1896	100%	15.50
40	.00	.00	.00	0.000	15.10	1800	100%	15.20	1776	100%	15.10
50	.00	.00	.00	0.000	14.60	1680	100%	14.70	1656	100%	14.60
60	.00	.00	.00	0.000	14.00	1560	100%	14.10	1536	100%	14.00
70	.00	.00	.00	0.000	13.30	1440	100%	13.40	1416	100%	13.30
80	.00	.00	.00	0.000	12.50	1320	100%	12.60	1296	100%	12.50
90	.00	.00	.00	0.000	11.60	1200	100%	11.70	1176	100%	11.60
100	.00	.00	.00	0.000	10.60	1080	100%	10.70	1056	100%	10.60
110	.00	.00	.00	0.000	9.50	960	100%	9.60	936	100%	9.50
120	.00	.00	.00	0.000	8.30	840	100%	8.40	816	100%	8.30
130	.00	.00	.00	0.000	7.00	720	100%	7.10	696	100%	7.00
140	.00	.00	.00	0.000	5.60	600	100%	5.70	576	100%	5.60
150	.00	.00	.00	0.000	4.10	480	100%	4.20	456	100%	4.10
160	.00	.00	.00	0.000	2.50	360	100%	2.60	336	100%	2.50
170	.00	.00	.00	0.000	0.80	240	100%	0.90	216	100%	0.80
180	.00	.00	.00	0.000	0.00	120	100%	0.10	96	100%	0.00

BayRing Sag 0' w/1/2" ICE

BayRing Sag 32' w/No ICE

Note
Communication Cable Bundle comprised of the following:
Messenger 3/8" 0.273 lb/ft
One (1) 3/4" Coaxial Trunk Cable 0.08 lb/ft
One (1) 96 count Fiberoptic Cable 0.56"; 0.098 lb/ft
Three (3) 240 Count Fiberoptic Cables 0.76" 0.163 lb/ft
Proposed BayRing Fiberoptic Cable 0.75" 0.124 lb/ft

Sheet 2 of 2

Consulting Engineers Group Inc.
ENGINEERS & CONSULTANTS
ONE CHURCHVILLE RD. WINDSOR, MASSACHUSETTS
www.CEGCONSULTING.COM

ADD Proposed Communication line profiles and detail table
12/14/09 10/PP
ADD span data and details 03/17/10 10/PP
ADD new BayRing poles and cables 06/25/10 10/PP
Revise scheme option 03/28/10 10/PP
PUC comments 06/06/10 10/PP

PROJ: 06-09-010
CONCORD SAG OF ELECTRIC LINES & RIVER CROSSING

EXISTING OVERHEAD RIVER CROSSING
PLAN of LAND
CONCORD, NH

Prepared For: Bayring Communications
100 Greenway
Pittsford, NH 03256

DATE: November 25, 2009

Drawn By: DEB
Checked By: JVE
Scale: 1" = 5' VERT
1" = 10' HORIZ

ATTACHMENT 1 (2/2)

ATTACHMENT 2

Second Revised Petition (July 29, 2010)

BayRing

COMMUNICATIONS

July 29, 2010

Debra Howland, Executive Director
New Hampshire Public Utilities Commission
21 South Fruit Street, Suite 10
Concord, NH 03301-2429

Re: Revised Petition of Freedom Ring d/b/a BayRing Communications to construct and maintain utility cable over and across the Public Waters of the Merrimack River between Utility Pole CECO 51 and Utility Pole CECO 50, Concord, New Hampshire.

Dear Ms Howland:

Please find a final revised Petition of Freedom Ring Communications d/b/a/BayRing Communications to construct and maintain utility cable over and across the Public Waters of the Merrimack River between Utility Pole CECO 51 and Utility Pole CECO 50, Concord, New Hampshire.

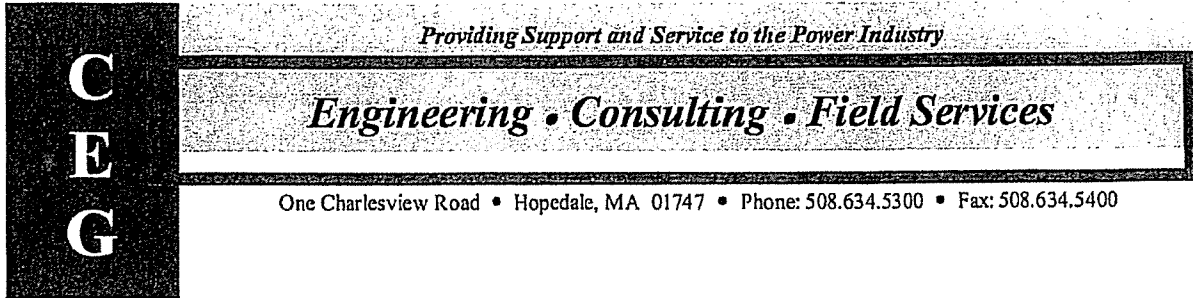
Thank you for your assistance in this matter, please do not hesitate to contact me with any questions or further requirements.

Respectfully Submitted,

Wendy C. Wilusz
Director of Operations
BayRing Communications

359 Corporate Drive, Portsmouth, NH 03801-6808

(603) 766-1000 – Fax (603) 766-1050



Donny Pellitier
Outside Plant Manager
Bayring Communication
359 Corporate Drive
Portsmouth NH, 03801-2888

July 29, 2010

Subject: Revised, Merrimack River Crossing with Comcast/Bayring Cable

Dear Mr. Pellitier,

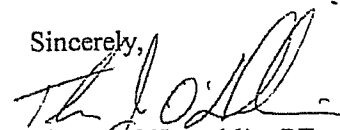
Attached are the revised Merrimack River crossing drawings and pole loading calculations. This revision utilizes existing poles with BayRing lashing on the existing Comcast cable. The attachment height of the combined cable is being raised six feet on pole 51. The pole loading calculations were performed using Power Line Technology, Pole Foreman software version 3.4.10.

The revised crossing provides meets the clearances required by the National Electric Safety Code (NESC). Clearance at each of the structures and midspan clearances between the electric supply cables and communication meet or exceed the NESC requirements. Additionally, the combination Comcast/BayRing cable assembly maintains over 14 feet of clearance over the 10 year flood level under extreme loading conditions.

Pole loading models were created for both poles with only cable spanning the river (no back spans). The loading for both poles is within design limits. An additional electric deadend guy is required to support the river crossing for the modeled condition. Additionally, a separate communication anchor with a 20' lead is required for the modeled condition.

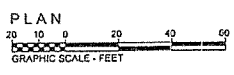
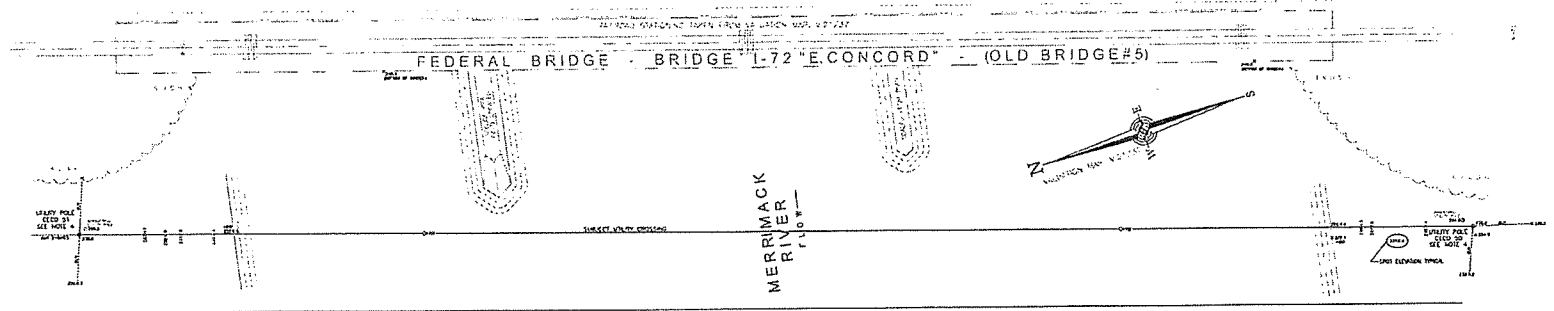
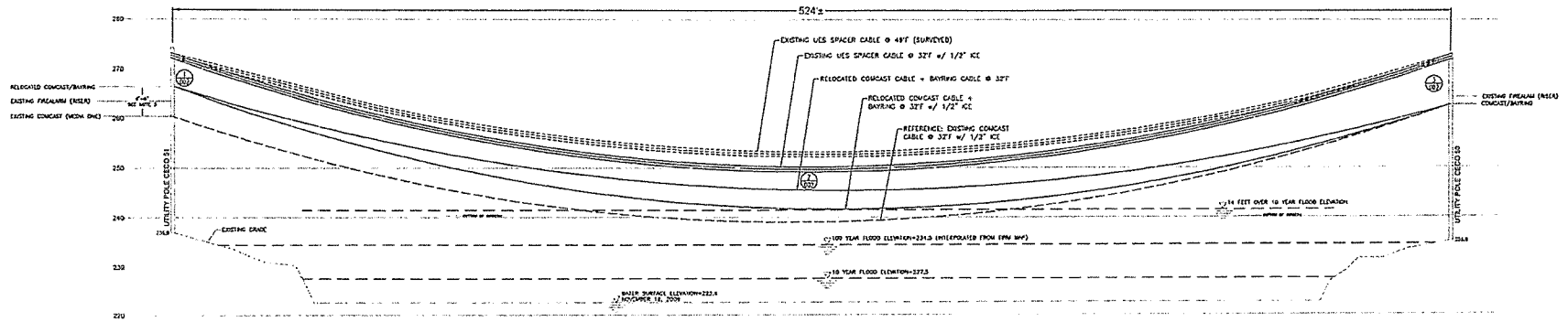
Should you have any questions, or require additional information, please do not hesitate to call me.

Sincerely,



Thomas O'Loughlin, PE
Principal Engineer

BENCHMARK SURFACE LOCATED ON NOVEMBER 16, 2009
 ABOVE TEMPERATURE = 48°F



NOTES:

1. This plan was prepared from actual ground survey for the purpose of installing a utility cable/fancoil above the Merimack River between Utility Pole CECO 51 & Utility Pole CECO 50 for the benefit of BayRing Communications.
2. The BENCHMARK for this project was taken from the FRM (Flood Insurance Rate Map) for the City of Concord, New Hampshire, Merrimack County, Community Flood Number: 330110 0020 B. Map Revised: August 23, 1993 (See Title Block for description).
3. Raise existing Comcast cable assembly 6 feet above current attachment height on Pole CECO 51 only in accordance with Sag and Tension data on Sheet 2 of 2 (this drawing).
4. Poles 50 and 51 each require one (1) new electric dropoff guy above attached at 13' from top of pole to existing electric splicer with 25' lead. Communication dropoff guy on pole 51 needs to be raised to new attachment height. Both poles require separate communication anchor having minimum 20' lead.

Sheet 1 of 2

Consulting Engineers Group Inc.
 ENGINEERS & CONSULTANTS
 ONE CHAMPLAIN RD. HOPKINS, MASSACHUSETTS
 www.CEGConsulting.com

Add Proposed Communication line profiles and pole load
 12/14/09 10/PT
 Add span data and obtain 03/17/10 10/PT
 Add new Drafting poles and scales 03/20/10 10/PT
 Revise scheme option 07/28/10 10/PT

REVISION: 101-BH-2010
 CORRECTED SIDE OF EXISTING WIRE & REVISED WIRE IN PROFILE

EXISTING OVERHEAD RIVER CROSSING
 PLAN of LAND
CONCORD, NH

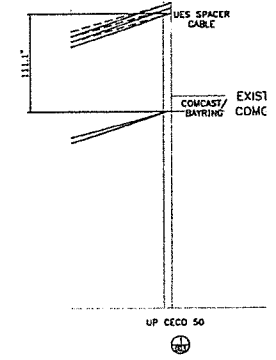
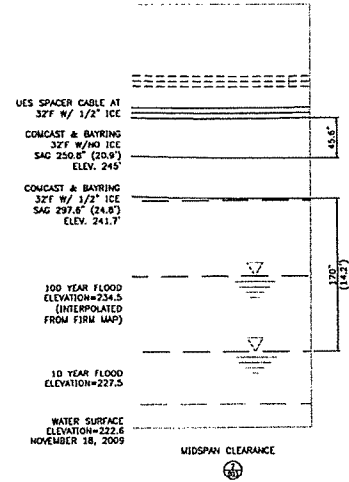
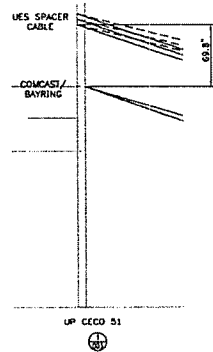
Prepared For: BayRing Communications
 101 Champaign Street
 Concord, NH 03301

DATE: As Shown
 DATE: November 23, 2009

Project No: DEWSPUR ENGINEERING ASSOCIATES LLP
 101 Champaign Street
 Concord, NH 03301
 TEL: 603-271-2121 FAX: 603-271-2122

Author: [Name]
 Designer: [Name]
 Checker: [Name]
 Date: 11/23/09
 Total Price: \$ 800.00
 Scale: 1" = 40'

This plan was prepared for the express use of BayRing Communications and should not be used for any other purpose without the written consent of BayRing Communications in writing and shall be void if used for any other purpose.



PROFILE DETAILS
Scale: 1" = 10' HORIZ
1" = 5' VERT

BAYRING CABLE SAG CHART									
ADDITIONAL COMPANY OF AMERICA SAG AND TENSION DATA									
Bayring Communication Burrhead River Crossing									
Conductor	Minimal Diameter	1/4"	9 Strand Steel BMS						
Area	.0322 Sq. In	Disc.	.268 In	Wt.	.272 Lb/Ft	RTS	14494 Lb		
Design Details									
Span	151.8 Feet	BASC Heavy Load Span							
Crew in BOP & Factor									
Temp	Span	Wind	S	Weight	Sag	Tension	HTW	HTW	HTW
F	In	Mph	Lb/Ft	Lb	Ft	Lb	Lb	Lb	Lb
9	10	4.00	.30	1.274	16.54	2384	1833	18.33	1833
32	10	8.00	.30	1.484	18.07	3241	1887	17.59	1887
70	10	16.00	.30	2.272	22.59	6464	2081	16.23	2081
9	10	8.00	.30	2.272	18.50	562	2187	15.41	2187
38	10	8.00	.30	2.272	16.57	562	2019	16.20	2019
65	10	8.00	.30	2.272	15.00	352	2021	16.55	2021
86	10	8.00	.30	2.272	13.51	524	2087	16.76	2087
98	10	8.00	.30	2.272	12.00	352	2100	17.21	2100
126	10	8.00	.30	2.272	10.51	556	2189	17.46	2189
167	10	8.00	.30	2.272	9.00	456	2189	18.05	2189
232	10	8.00	.30	2.272	7.51	672	2741	19.49	2741
Notes: Initial Base Price See Cable Specification									
Notes: 1 non-supporting Cable (e) 24.00 in. Wt. .7912 Lb/Ft. 9891 Lb/Ft									
Temp	Span	Wind	S	Weight	Sag	Tension	HTW	HTW	HTW
F	In	Mph	Lb/Ft	Lb	Ft	Lb	Lb	Lb	Lb
9	10	4.00	.30	2.391	22.43	1882	1677	22.45	1882
32	10	8.00	.30	2.391	21.00	2856	1639	22.69	2856
70	10	16.00	.30	3.614	26.27	2832	1892	19.84	2868
9	10	8.00	.30	3.614	21.00	1976	1809	18.10	2026
38	10	8.00	.30	3.614	19.91	1921	1891	18.41	1976
65	10	8.00	.30	3.614	18.20	2282	1779	18.90	2046
86	10	8.00	.30	3.614	16.39	1887	1762	19.07	1828
98	10	8.00	.30	3.614	14.91	2461	1722	19.37	1883
126	10	8.00	.30	3.614	13.20	1886	1613	19.94	1814
167	10	8.00	.30	3.614	11.87	2768	1523	20.04	1788
232	10	8.00	.30	3.614	10.70	1888	1393	21.38	1731
Design Conditions									

Sheet 2 of 2
Consulting Engineers Group Inc.
INCORPORATED CONSULTANTS
ONE CHARLES RD. FERRIS, NEWHAMPSHIRE
www.CEG.com/usa/tehb.com

Add Proposed Communication line prices and date table 12/14/09 TO/FF
Add span data and details 03/17/10 TO/FF
Add new Bayring poles and cables 08/25/10 TO/FF
Revise scheme option 07/28/10 TO/FF

NOVEMBER 18, 2009
CONNECTED SAG OF ELECTRIC WIRING & REVERSED WIRING PROFILE

EXISTING OVERHEAD RIVER CROSSING
PLAN OF LAND
CONCORD, NH

Prepared For: Bayring Communications
201 Commerce Street
Ferris, NH 03041

Prepared By:
DENISHAP ENGINEERING ASSOCIATES LLP
175 W. Main Street
Manchester, NH 03103
Tel: 603.271.7226
Fax: 603.271.7226

DATE: November 23, 2009

This plan was prepared for the express use of Bayring Communications and Denishap Engineering Associates LLP. Use of this plan by others without the written consent of Bayring Communications is strictly prohibited.

Drawn By: F.S.B., P.E., S.F.P.
Date: 11/23/09

(4/8)

PoleForeman - Pole Loading Analysis Report



License: Consulting Engineers Group

POLE LOADING DATA

Pole: 45/2

Pole Loading

Horizontal: 33% (250B)
Vertical: 58% (250B)

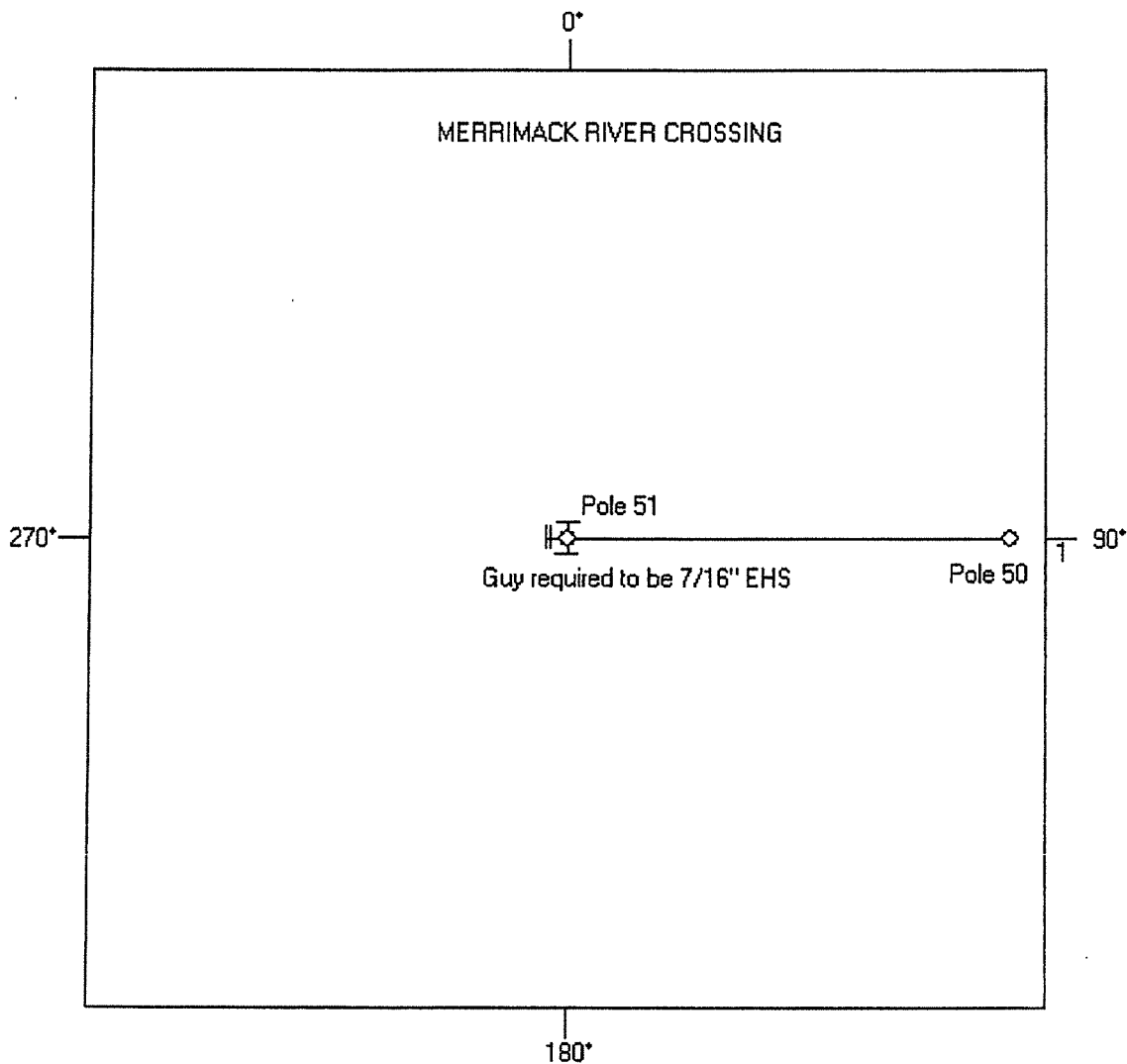
NESC Edition: 2007
Loading District: Heavy
Construction: Grade B

Rule 250B Loading: Wind (psf): 4 Ice (in): 0.5

POLES

Pole #	Length (ft)	Depth (ft)	Elevation (ft)
0	45	6.5	0
1	45	6.5	-1

POLE LINE TOPOLOGY



PoleForeman - Pole Loading Analysis Report

License: Consulting Engineers Group

GUY STRAND DATA							
Anchor	Strand	Attach	Length	Direction	Tension	Strength	Loading
1	7/16" EHS	13"	25'	270°	11,219	18,720	60%
1	7/16" EHS	13"	25'	270°	11,219	18,720	60%
2	7/16" EHS	13"	19'	180°	4,106	18,720	22%
3	7/16" EHS	13"	19'	0°	4,865	18,720	26%
4	7/16" EHS	95°	20'	270°	15,113	18,720	81%

ANCHOR DATA						
Anchor	Rod	Anchor	Soil	Tension	Rod Strength	Anchor Strength
1	3/4" Rod	10" Single Hell	Class - 3	22,438	23,000	24,000
2	3/4" Rod	10" Single Hell	Class - 3	4,106	23,000	24,000
3	3/4" Rod	10" Single Hell	Class - 3	4,865	23,000	24,000
4	1" Rod	12" Single Hell	Class - 3	15,113	36,000	30,500

INSULATORS				
Insulator	Attach	Loading	Angle	
ASC 3Ø Spacer	13"		0°	

ARM / BRACKET DATA				
Arm/Bracket	Attach	Vert Loading	Horz Loading	
ASC DE Bracket	13"			
ASC 24" Tang Bracket	13"	13%		

SPANS							
Span: 1	Span Length (ft): 524	Direction: 90°					
Circuit: 1							
Primary	Ruling Span (ft)	Offset (in)	Attach A (in)	Attach B (in)	Tension		
4/0 AAC 15KV ASC	25	28	23	23	500		
4/0 AAC 15KV ASC	25	24	31	31	500		
4/0 AAC 15KV ASC	25	20	23	23	500		
Neutral							
7 # 8 AWG	500	24	15	15	4883		
Joint Use							
Joint Use Cable	Ruling Span (ft)	Diameter (in)	Weight (lbs/ft)	Attach A (in)	Attach B (in)	Tension (lbs)	Description
User Defined	0	2.30	1.06	95	95	5900	

FILE NOTES
Loading for Pole 51 acceptable as is.
Pole modeled by adding one new guy to existing anchor at attachment height of 13" to existing anchor.
A separate communication anchor is required with a minimum lead to height ratio of 2:3 (20') for Communication cable guying
Guy #2 to West side of pole modeled as 7/16" guy, actual guys in field need to be confirmed and replaced if required.
Software did not have 3/0 AAC cable, therefore to be conservative 4/0 AAC modeled.

PoleForeman - Pole Loading Analysis Report



License: Consulting Engineers Group

POLE LOADING DATA

Pole: 45/2

Pole Loading

Horizontal: 88% (250B)
Vertical: 56% (250B)

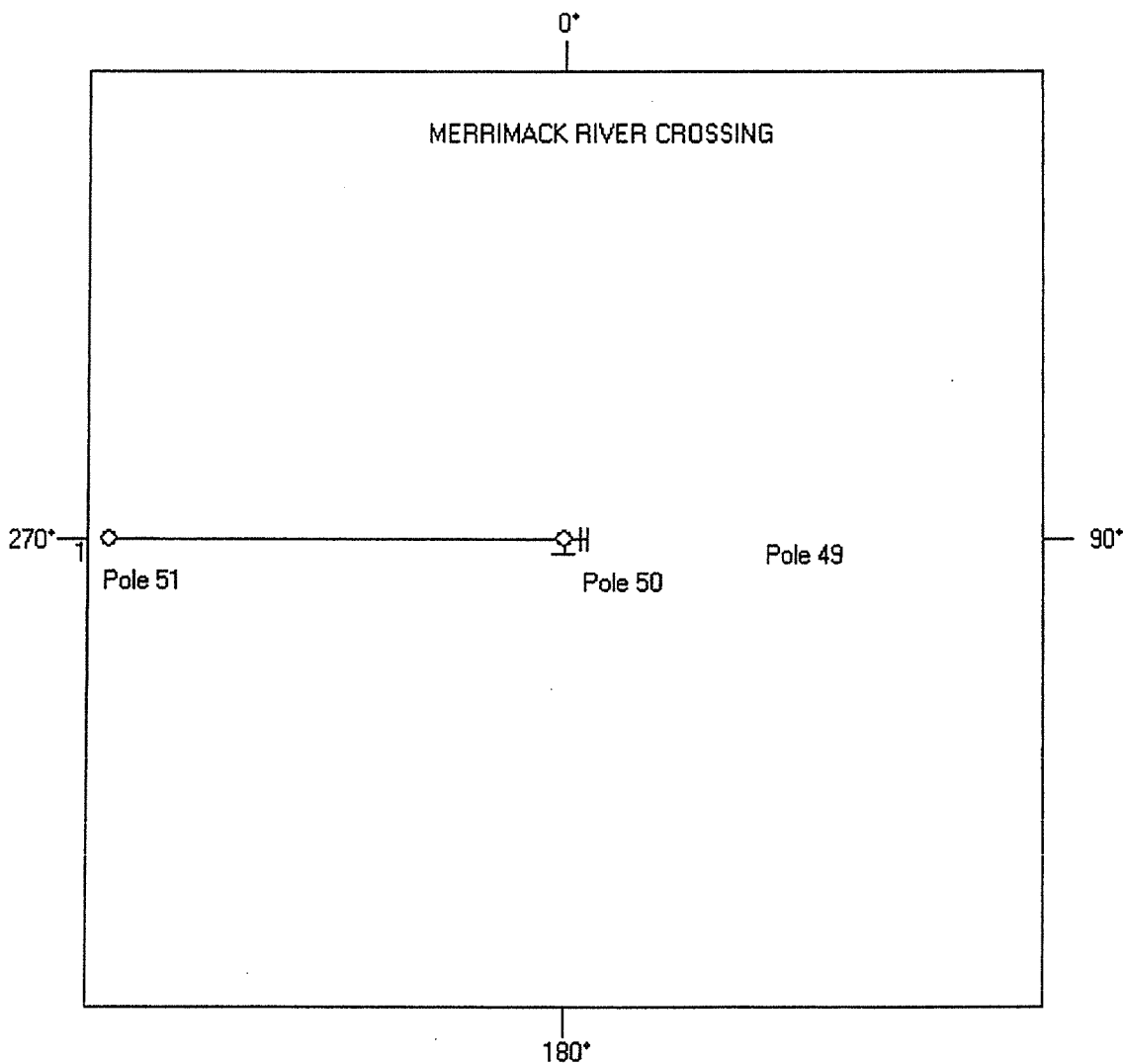
NESC Edition: 2007
Loading District: Heavy
Construction: Grade B

Rule 250B Loading: Wind (psf): 4 Ice (in): 0.5

POLES

Pole #	Length (ft)	Depth (ft)	Elevation (ft)
0	45	6.5	0
1	45	6.5	-1

POLE LINE TOPOLOGY



PoleForeman - Pole Loading Analysis Report

License: Consulting Engineers Group

GUY STRAND DATA							
Anchor	Strand	Attach	Length	Direction	Tension	Strength	Loading
1	7/16" EHS	13"	25'	90°	14,633	18,720	78%
1	7/16" EHS	13"	25'	90°	14,633	18,720	78%
2	3/8" EHS	20"	18'	180°	4,835	13,860	35%
3	7/16" EHS	123"	19'	90°	15,970	18,720	85%

ANCHOR DATA						
Anchor	Rod	Anchor	Soil	Tension	Rod Strength	Anchor Strength
1	1" Rod	12" Single Hell	Class - 3	29,266	36,000	30,500
2	1" Rod	10" Single Hell	Class - 3	4,835	36,000	24,000
3	1" Rod	12" Single Hell	Class - 3	15,970	36,000	30,500

INSULATORS				
Insulator	Attach	Loading	Angle	
ASC 3Ø Spacer	13"		0°	

ARM / BRACKET DATA			
Arm/Bracket	Attach	Vert Loading	Horz Loading
ASC 24" Tang Bracket	13"	67%	
Spool Rack	13"		

SPANS							
Span: 1		Span Length (ft): 524	Direction: 270°				
Circuit: 1							
Primary	Ruling Span (ft)	Offset (in)	Attach A (in)	Attach B (in)	Tension		
4/0 AAC 15KV ASC	35	28	23	23	500		
4/0 AAC 15KV ASC	35	24	32	32	500		
4/0 AAC 15KV ASC	35	20	23	23	500		
Neutral							
7 # 8 AW	500	24	15	15	7500		
Joint Use							
Joint Use Cable	Ruling Span (ft)	Diameter (in)	Weight (lbs/ft)	Attach A (in)	Attach B (in)	Tension (lbs)	Description
User Defined	0	2.30	1.06	123	123	5900	

FILE NOTES
Loading for Pole 50 acceptable as is.
Pole modeled by adding one new guy to at attachment height of 13" from top of pole to existing anchor. Requires one (1) new guys strand.
A separate communication anchor is required with a minimum lead to height ratio of 2:3 (19') for Communication cable guying
Software did not have 3/0 AAC cable, therefore to be conservative 4/0 AAC modeled.