Exhibit VGS-AG-029 Part 2

HORIZONTAL SCALE: 50 25 0 50 100 150 feet
VERTICAL SCALE: 25 12.5 0 25 50 75 feet

PIPE MATERIAL:
1 12.75" O.D. X 0.312" WT, API-5L, GR. X65, PSL-2, AND ADDITIONAL SPECIFICATIONS IN 192.112 — 1,400 FT
2 20" O.D. X 0.375" WT, API-5L, GR. B — 0 FT

PIPE COATING:
A EPOXY POLYETHYLENE 10/40 — 1,295 FT
B FBE, ABRASION RESISTANT OVERCOAT, 14-16 MILS/40 MILS, 54-56 MILS TOTAL — 105 FT
C FBE 14-16 MILS, W/ 1-1/2" REINFORCED CONCRETE W/ 140 LBS/FT³ — 0 FT

STATE OF VERMONT — MICHAEL E. HOLLOWOOD — NO. 97764 — CIVIL — LICENSED PROFESSIONAL ENGINEER

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
ANGP-EPSC-060	EPSC PLAN				
G-001 – 010	COVER, INDEX, LEGEND & NOTES, AND CONSTRUCTION DETAILS	1	GJM	BCK	IFC 2016 EDITS (05/2016)

	BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
ALIGNMENT SHEET

LOC. ADDISON COUNTY, VERMONT

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

YEAR: 2016 | W.O. | SCALE: 1" = 50' | DWG. ANGP-T-C-060 | REV. 1

RIGHT–OF–WAY

MATCHLINE

181
N/F
HURLBURT, HERRICK & CHARLOTTE

182
OLD STAGE ROAD

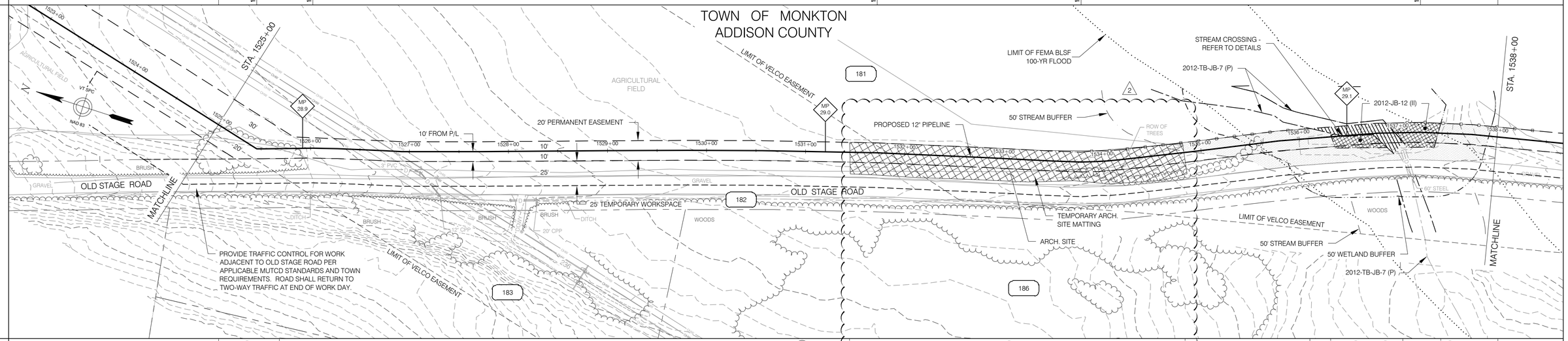
MATCH LINE

SURVEY DATA

PIPE ALIGNMENT PARALLELS ROAD RIGHT-OF-WAY, FOR CLARITY, NOT ALL SURVEY DATA IS SHOWN

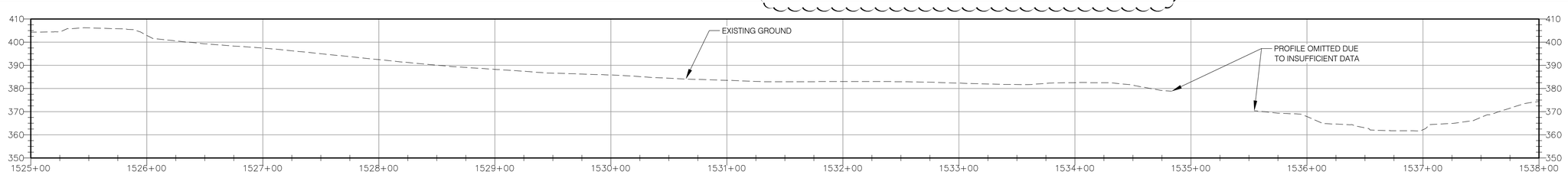
1525+46	1526+02	1531+72	1533+78	1537+23
S 14° 22' W	S 18° 36' E	S 17° 52' E	S 15° 21' E	S 24° 55' E	S 12° 55' E
32.59' LT	00.44' RT	02.31' RT	09.34' LT	12.00' RT

ALIGNMENT DETAIL



CONST. TYPE	2D	4A	A	7	W	4A

PROFILE



MATERIALS

MATCHLINE	1	1	1	MATCHLINE
	989 FT	303 FT	8 FT	
COATING	A	C	A	
CLASSIFICATION	1			
DESIGN FACTOR	0.5			

HORIZONTAL SCALE
50 25 0 50 100 150 feet

VERTICAL SCALE
25 12.5 0 25 50 75 feet

PIPE MATERIAL:
1 12.75" O.D. X 0.312" WT, API-5L, GR. X65, PSL-2, AND ADDITIONAL SPECIFICATIONS IN 192.112 — 1,300 FT
2 20" O.D. X 0.375" WT, API-5L, GR. B — 0 FT

PIPE COATING:
A EPOXY POLYETHYLENE 10/40 — 997 FT
B FBE, ABRASION RESISTANT OVERCOAT, 14-16 MILS/40 MILS, 54-56 MILS TOTAL — 0 FT
C FBE 14-16 MILS, W/ 1-1/2" REINFORCED CONCRETE W/ 140 LBS/FT³ — 303 FT

STATE OF VERMONT
MICHAEL E. WOODWORTH
NO. 97764
CIVIL
LICENSED PROFESSIONAL ENGINEER

VHB Vanasse Hangen Brustlin, Inc.

DWG. NO.	REFERENCE DWG.	REV	DSN	CK		DESCRIPTION		BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
							ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
							DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
							DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
ANGP–EPSC–061A	EPSC PLAN	2	GJM	BCK		IFC 2016 EDITS (05/2016)	DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
G–001 – 010	COVER, INDEX, LEGEND & NOTES, AND CONSTRUCTION DETAILS	1	VGS	VGS		OLD STAGE ROAD RE–ROUTE (11/13/15)	DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
ALIGNMENT SHEET

LOC. ADDISON COUNTY, VERMONT

Vermont Gas

YEAR: 2016 | W.O. | SCALE: 1" = 50' | DWG. ANGP–T–C–061A | REV. 2

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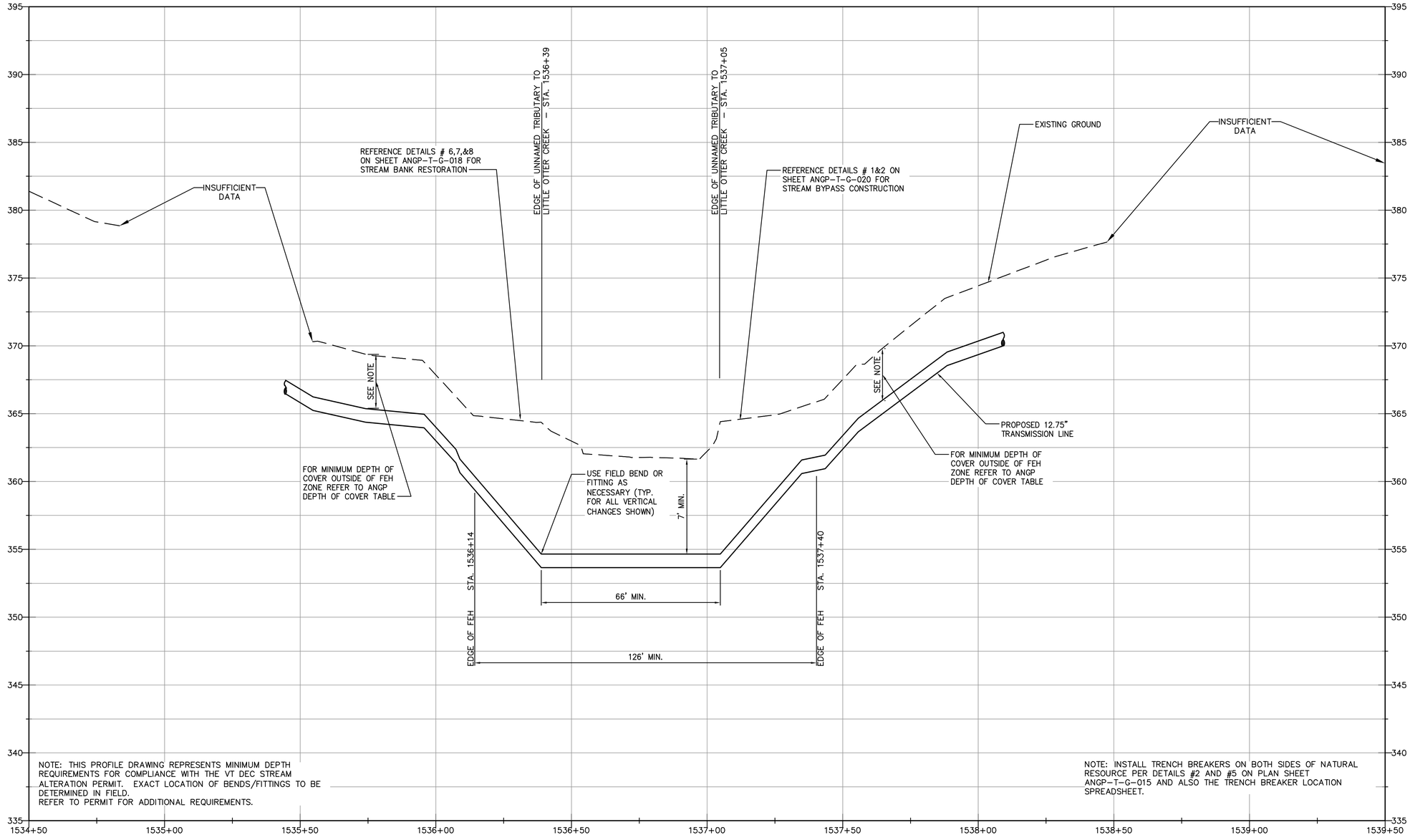
PROFILE



NOTE: STREAM CROSSING MUST BE CONSTRUCTED BETWEEN JUNE 1 AND OCTOBER 1

STREAM CROSSING PROFILE
UNNAMED TRIBUTARY TO LITTLE OTTER CREEK
STATION 1536+73±
MILE POST 29.10

SCALE: HORIZ. 1"=20'
VERT. 1"=4'

HORIZONTAL SCALE
20 10 0 20 40 60 feet
4 2 0 4 8 12 feet
VERTICAL SCALE

NOTE: THE LIMITS SHOWN FOR THIS STREAM DO NOT MATCH UP WITH WHAT IS SHOWN ON THE ALIGNMENT SHEET PLAN VIEW. FULL FEH COMPLIANCE IS NOT REQUIRED DUE TO THE PROXIMITY TO THE ROADWAY, THEREFORE A TRANSITION BACK TO NORMAL BURIAL DEPTH CAN OCCUR ONCE OUTSIDE OF APPARENT TOP OF BANK (1536+39 AND 1537+05).

STATE OF VERMONT
MICHAEL E. PRITCHARD
NO. 97764
CIVIL
REGISTERED PROFESSIONAL ENGINEER

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION

	BID		CONSTRUCTION	
	INITIALS	DATE	INITIALS	DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
OPEN TRENCH STREAM CROSSING PROFILE

LOC. ADDISON COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: AS NOTED | DWG. ANGP-T-C-061AA | REV. 0

VHB Vanasse Hangen Brustlin, Inc.

Vermont Gas

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HORIZONTAL SCALE: 50 25 0 50 100 150 feet

VERTICAL SCALE: 25 12.5 0 25 50 75 feet

PIPE MATERIAL:

1	12.75" O.D. X 0.312" WT, API–5L, GR. X65, PSL–2, AND ADDITIONAL SPECIFICATIONS IN 192.112	1,525 FT
2	20" O.D. X 0.375" WT, API–5L, GR. B	0 FT

PIPE COATING:

A	EPOXY POLYETHYLENE 10/40	1,475 FT
B	FBE, ABRASION RESISTANT OVERCOAT, 14–16 MILS/40 MILS, 54–56 MILS TOTAL	0 FT
C	FBE 14–16 MILS, W/ 1–1/2" REINFORCED CONCRETE W/ 140 LBS/FT^3	50 FT

STATE OF VERMONT — NO. 97764 — CIVIL — LICENSED PROFESSIONAL ENGINEER

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
ANGP–EPSC–061B	EPSC PLAN	2	GJM	BCK	IFC 2016 EDITS (05/2016)
G–001 – 010	COVER, INDEX, LEGEND & NOTES, AND CONSTRUCTION DETAILS	1	VGS	VGS	OLD STAGE ROAD RE–ROUTE (11/13/15)

	BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
ALIGNMENT SHEET

LOC. ADDISON COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: 1" = 50' | DWG. ANGP–T–C–061B | REV. 2

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

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HORIZONTAL SCALE
50 25 0 50 100 150 feet
25 12.5 0 25 50 75 feet
VERTICAL SCALE

PIPE MATERIAL:		
1	12.75" O.D. X 0.312" WT, API-5L, GR. X65, PSL-2, AND ADDITIONAL SPECIFICATIONS IN 192.112	1,225 FT
2	20" O.D. X 0.375" WT, API-5L, GR. B	0 FT
PIPE COATING:		
A	EPOXY POLYETHYLENE 10/40	1,125 FT
B	FBE, ABRASION RESISTANT OVERCOAT, 14-16 MILS/40 MILS, 54-56 MILS TOTAL	0 FT
C	FBE 14-16 MILS, W/ 1-1/2" REINFORCED CONCRETE W/ 140 LBS/FT³	100 FT

MICHAEL E. HOLLOWOOD
NO. 97764

DWG. NO.	REFERENCE DWG.	REV	DSN	CK		DESCRIPTION
ANGP-EPSC-062	EPSC PLAN	2	GJM	BCK		IFC 2016 EDITS (05/2016)
G-001 - 010	COVER, INDEX, LEGEND & NOTES, AND CONSTRUCTION DETAILS	1	VGS	VGS		OLD STAGE ROAD RE-ROUTE (11/13/15)

	BID		CONSTRUCTION	
	INITIALS	DATE	INITIALS	DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
ALIGNMENT SHEET

LOC. ADDISON COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: 1" = 50' | DWG. ANGP-T-C-062 | REV. 2

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

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Main: (802) 735-0372 · www.chacompanies.com

MATERIALS

	MATCHLINE						MATCHLINE
MATERIALS		1	1	1	1	1	1
		1,317 FT	313 FT	625 FT	50 FT	551 FT	86 FT
COATING		A	C	A	C	A	C
CLASSIFICATION		1					
DESIGN FACTOR		0.5					

HORIZONTAL SCALE
100 50 0 100 200 300 feet
50 25 0 50 100 150 feet
VERTICAL SCALE

PIPE MATERIAL:	
1 12.75" O.D. X 0.312" WT, API–5L, GR. X65, PSL–2, AND ADDITIONAL SPECIFICATIONS IN 192.112	2,942 FT
2 20" O.D. X 0.375" WT, API–5L, GR. B	0 FT
PIPE COATING:	
A EPOXY POLYETHYLENE 10/40	2,493 FT
B FBE, ABRASION RESISTANT OVERCOAT, 14–16 MILS/40 MILS, 54–56 MILS TOTAL	0 FT
C FBE 14–16 MILS, W/ 1–1/2" REINFORCED CONCRETE W/ 140 LBS/FT^3	449 FT

NO. 97764

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
ANGP–EPSC–063	EPSC PLAN	2	GJM	BCK	IFC 2016 EDITS (05/2016)
G–001 – 010	COVER, INDEX, LEGEND & NOTES, AND CONSTRUCTION DETAILS	1	VGS	VGS	ARCH SITE ADDED (11/13/15)

	BID		CONSTRUCTION	
	INITIALS	DATE	INITIALS	DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
ALIGNMENT SHEET

LOC. ADDISON COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP–T–C–063 | REV. 2

Vermont Gas

Vanasse Hangen Brustlin, Inc.

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RIGHT-OF-WAY

MATCHLINE

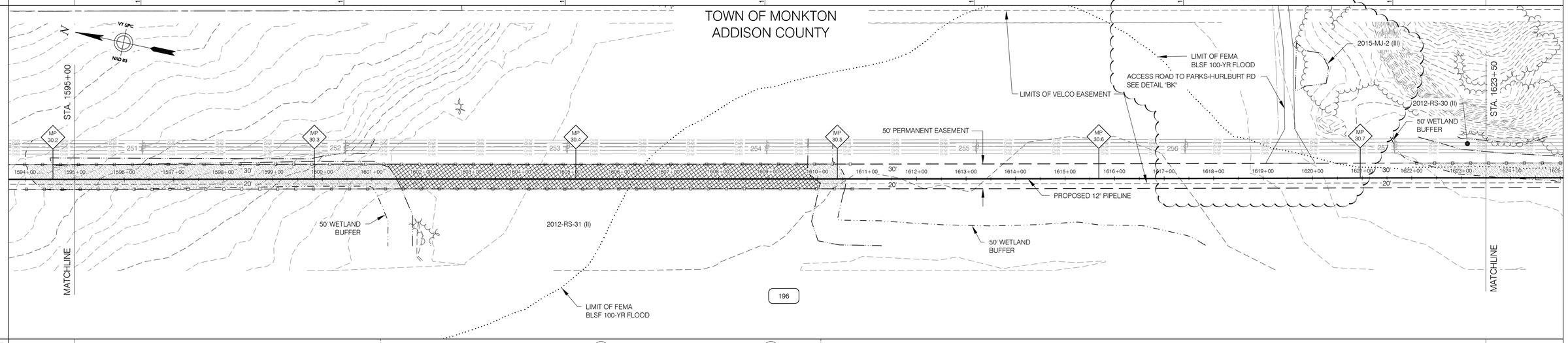
196
N/F
HURLBURT, HERRICK & CHARLOTTE

MATCH LINE

SURVEY DATA

00.00' LT	00.00' RT	00.03' LT	00.01' RT	00.05' LT	00.01' LT	00.05' RT
1596+39	1600+48	1604+96	1608+99	1613+22	1617+44	1621+67
S 12° 06' E	S 12° 12' E	S 12° 04' E	S 12° 08' E	S 12° 06' E	S 12° 12' E	S 12° 14' E	S 12° 08' E

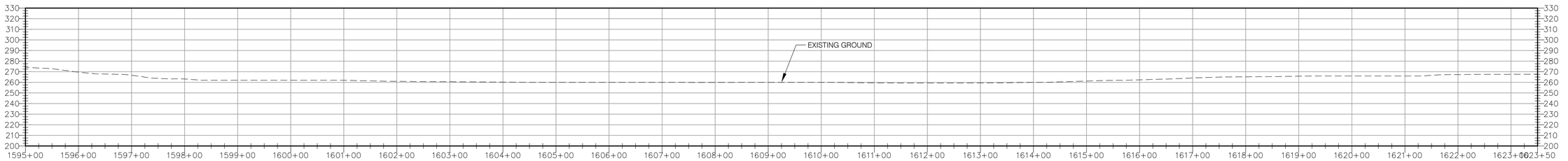
ALIGNMENT DETAIL



CONST. TYPE

W 2D

PROFILE



MATERIALS

MATCHLINE	1	1	1	MATCHLINE
	1,557 FT	1,159 FT	134 FT	
COATING	C	A	C	
CLASSIFICATION	1			
DESIGN FACTOR	0.5			

HORIZONTAL SCALE
100 50 0 100 200 300 feet
50 25 0 50 100 150 feet
VERTICAL SCALE

PIPE MATERIAL:
1 12.75" O.D. X 0.312" WT, API-5L, GR. X65, PSL-2, AND ADDITIONAL SPECIFICATIONS IN 192.112 — 2,850 FT
2 20" O.D. X 0.375" WT, API-5L, GR. B — 0 FT

PIPE COATING:
A EPOXY POLYETHYLENE 10/40 — 1,159 FT
B FBE, ABRASION RESISTANT OVERCOAT, 14-16 MILS/40 MILS, 54-56 MILS TOTAL — 0 FT
C FBE 14-16 MILS, W/ 1-1/2" REINFORCED CONCRETE W/ 140 LBS/FT³ — 1,691 FT

STATE OF VERMONT
ROBERT E. HOLLINGSHEAD
NO. 97764
CIVIL
LICENSED PROFESSIONAL ENGINEER

							BID		CONSTRUCTION	
						ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
						DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
						DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
ANGP-EPSC-064	EPSC PLAN					DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
G-001 - 010	COVER, INDEX, LEGEND & NOTES, AND CONSTRUCTION DETAILS	1	VGS	VGS		DESIGN MANAGER	SAB	06/28/13	JEO	05/2016
DWG. NO.	REFERENCE DWG.	REV	DSN	CK		DESCRIPTION		INITIALS DATE		INITIALS DATE

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
ALIGNMENT SHEET

LOC. ADDISON COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP-T-C-064 | REV. 1

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

CHA
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RIGHT-OF-WAY

MATCHLINE	196 N/F HURLBERT, HERRICK; & CHARLOTTE	TOWN OF MONKTON TOWN OF NEW HAVEN	197 N/F MERRITT, MARGARET	198 N/F MERRITT, MARGARET	199 N/F MERRITT, MARGARET	200 N/F MERRITT, MARGARET	201 N/F MERRITT, MARGARET	202 N/F EVEREST, DOUGLAS A.	MATCH LINE

SURVEY DATA

Bearing	Station	Angle
S 12° 08' E	1626+16	00°49' LT
S 12° 57' E	1630+76	26°00' RT
S 13° 03' W	1635+69	00°34' LT
S 12° 29' W	1641+10	00°17' LT
S 12° 12' W	1645+82	00°08' RT
S 12° 21' W		

ALIGNMENT DETAIL

CONST. TYPE	2D	7		2D	W

PROFILE

MATERIALS

MATERIALS	MATCHLINE ① 455 FT	① 506 FT	① 233 FT	① 449 FT	① 1,007 FT MATCHLINE
COATING	C	A	C	A	C
CLASSIFICATION	1				
DESIGN FACTOR	0.5				

HORIZONTAL SCALE

100 50 0 100 200 300 feet

50 25 0 50 100 150 feet

VERTICAL SCALE

PIPE MATERIAL:

1	12.75" O.D. X 0.312" WT, API–5L, GR. X65, PSL–2, AND ADDITIONAL SPECIFICATIONS IN 192.112	2,650 FT
2	20" O.D. X 0.375" WT, API–5L, GR. B	0 FT

PIPE COATING:

A	EPOXY POLYETHYLENE 10/40	955 FT
B	FBE, ABRASION RESISTANT OVERCOAT, 14–16 MILS/40 MILS, 54–56 MILS TOTAL	0 FT
C	FBE 14–16 MILS, W/ 1–1/2" REINFORCED CONCRETE W/ 140 LBS/FT³	1,695 FT

STATE OF VERMONT
MICHAEL E. HOLLOWOOD
NO. 97764

	BID		CONSTRUCTION	
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016
	INITIALS	DATE	INITIALS	DATE

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
ANGP–T–G–07–010	ACCESS ROAD DETAILS				
ANGP–EPSC–065	EPSC PLAN				
G–001 – 010	COVER, INDEX, LEGEND & NOTES, AND CONSTRUCTION DETAILS	1	VGS	VGS	ACCESS ROAD "AL" REMOVED (11/13/15)

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
ALIGNMENT SHEET

LOC. ADDISON COUNTY, VERMONT

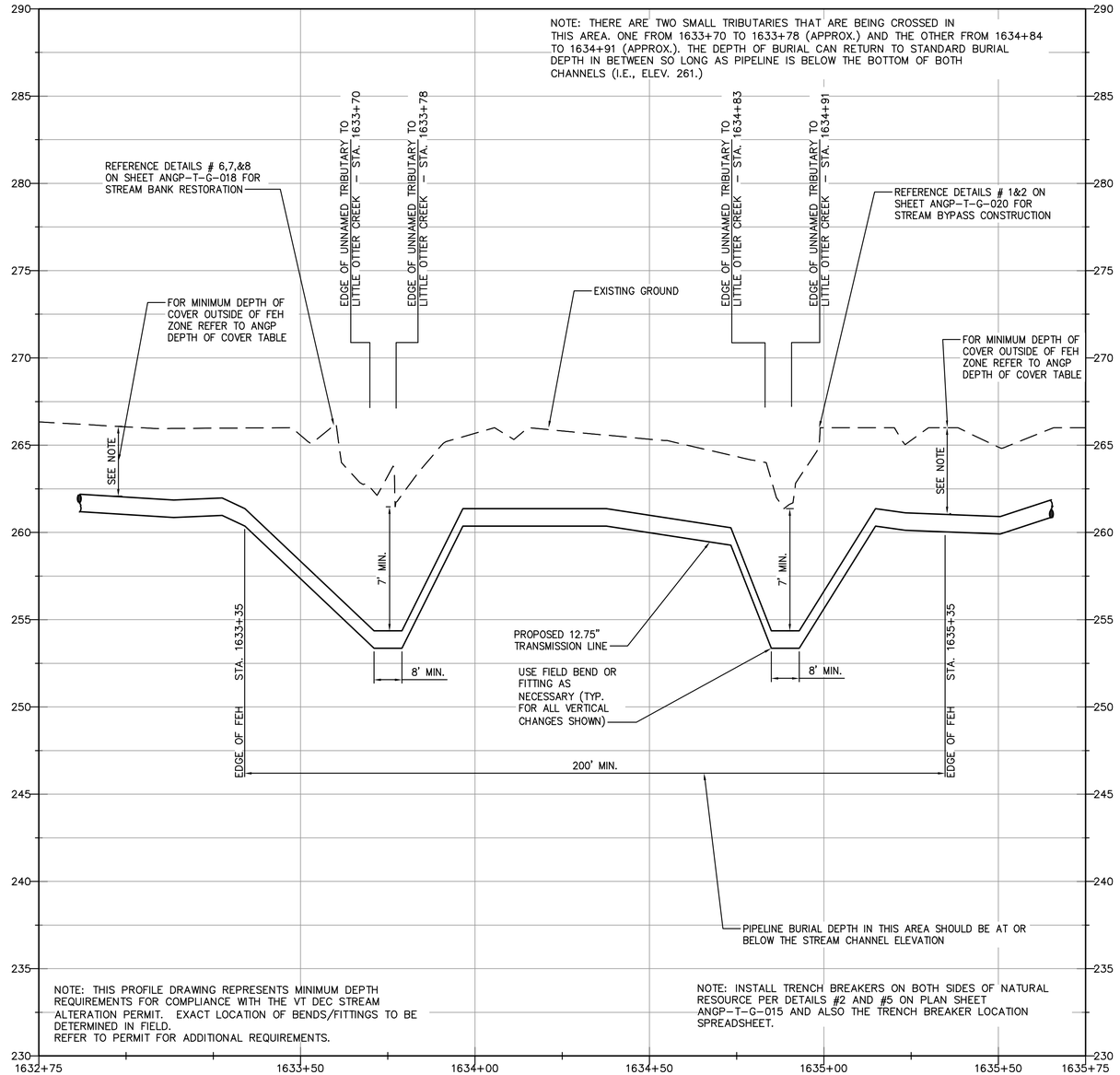
Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

YEAR: 2016	W.O.	SCALE: 1" = 100'	DWG. ANGP–T–C–065	REV. 1

PROFILE



STREAM CROSSING PROFILE
UNNAMED TRIBUTARY TO
LITTLE OTTER CREEK
STATION 1634+27±
MILE POST 30.95

SCALE: HORIZ. 1"=20'
VERT. 1"=4'

NOTE: STREAM CROSSING MUST BE CONSTRUCTED BETWEEN JUNE 1 AND OCTOBER 1

HORIZONTAL SCALE
20 10 0 20 40 60 feet
4 2 0 4 8 12 feet
VERTICAL SCALE

STATE OF VERMONT
JEREMY E. HOLCOMB
NO. 97764
CIVIL
PROFESSIONAL ENGINEER

DWG. NO.	REFERENCE DWG.	REV	DSN	CK		DESCRIPTION	BID		CONSTRUCTION	
							INITIALS	DATE	INITIALS	DATE
						ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
						DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
						DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
						DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
						DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
OPEN TRENCH STREAM CROSSING PROFILE

LOC. ADDISON COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: AS NOTED | DWG. ANGP-T-C-065A | REV. 0

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

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RIGHT-OF-WAY

MATCHLINE

202	206	205	207	208	211	212	213
N/F EVEREST, JEFFREY	N/F MERRITT, MARGARET	N/F PECK, JOHN	N/F MERRITT, MARGARET	N/F PECK, JOHN	N/F LEGAULT, JOHN & ANN	N/F MERRITT, MARGARET	N/F CHOINIERE, JAMES & SHERRY

MATCH LINE

SURVEY DATA

Station	Deflection	Bearing
1650+15	00°02' RT	S 12° 21' W
		S 12° 23' W
1654+67	00°07' LT	S 12° 16' W
1659+20	00°16' RT	S 12° 32' W
1663+66	00°12' LT	S 12° 19' W
1666+63	29°59' RT	S 42° 19' W
1667+33	29°59' LT	S 12° 19' W
1668+08	00°01' RT	S 12° 21' W
1672+35	00°01' LT	S 12° 19' W
1676+93	00°01' LT	S 12° 17' W

ALIGNMENT DETAIL

CONST. TYPE: 2D W | W | 2A | 1A

PROFILE

MATERIALS	① 2,193 FT	① 470 FT	① 103 FT	① 134 FT
COATING	C	A	C	A
CLASSIFICATION	1			
DESIGN FACTOR	0.5			

HORIZONTAL SCALE
100 50 0 100 200 300 feet
50 25 0 50 100 150 feet
VERTICAL SCALE

PIPE MATERIAL:

1	12.75" O.D. X 0.312" WT, API-5L, GR. X65, PSL-2, AND ADDITIONAL SPECIFICATIONS IN 192.112	2,900 FT
2	20" O.D. X 0.375" WT, API-5L, GR. B	0 FT

PIPE COATING:

A	EPOXY POLYETHYLENE 10/40	604 FT
B	FBE, ABRASION RESISTANT OVERCOAT, 14-16 MILS/40 MILS, 54-56 MILS TOTAL	0 FT
C	FBE 14-16 MILS, W/ 1-1/2" REINFORCED CONCRETE W/ 140 LBS/FT^3	2,296 FT

STATE OF VERMONT
MICHAEL E. HOLLOWAY
NO. 97764
CIVIL
LICENSED
PROFESSIONAL ENGINEER

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
ANGP-EPSC-066	EPSC PLAN				
G-001 - 010	COVER, INDEX, LEGEND & NOTES, AND CONSTRUCTION DETAILS				

	BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
ALIGNMENT SHEET

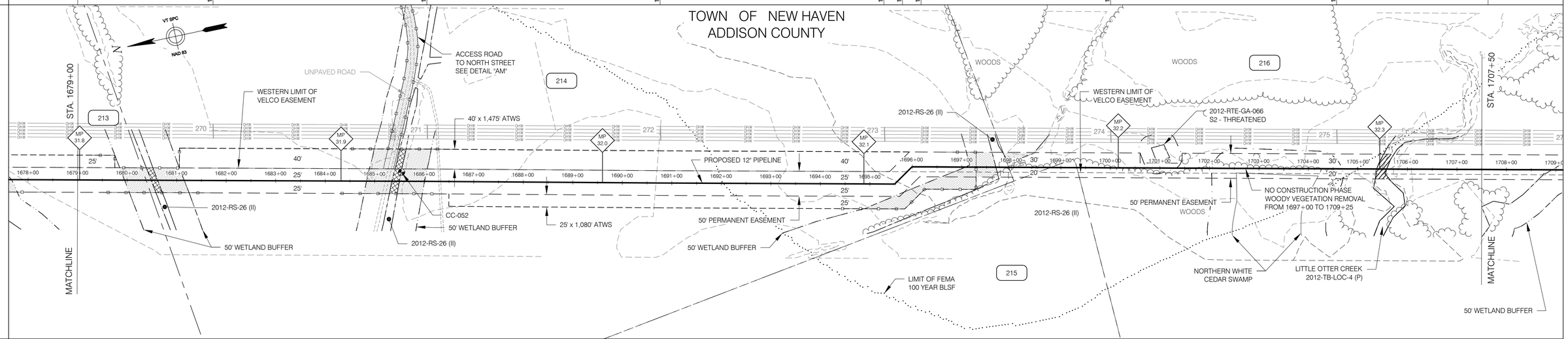
LOC. ADDISON COUNTY, VERMONT

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP-T-C-066 | REV. 0



HORIZONTAL SCALE
100 50 0 100 200 300 feet
50 25 0 50 100 150 feet
VERTICAL SCALE

PIPE MATERIAL:

1	12.75" O.D. X 0.312" WT, API–5L, GR. X65, PSL–2, AND ADDITIONAL SPECIFICATIONS IN 192.112	2,850 FT
2	20" O.D. X 0.375" WT, API–5L, GR. B	0 FT

PIPE COATING:

A	EPOXY POLYETHYLENE 10/40	1,462 FT
B	FBE, ABRASION RESISTANT OVERCOAT, 14–16 MILS/40 MILS, 54–56 MILS TOTAL	1,150 FT
C	FBE 14–16 MILS, W/ 1–1/2" REINFORCED CONCRETE W/ 140 LBS/FT^3	238 FT

STATE OF VERMONT
MICHAEL E. HOLLOWAY
NO. 97764
CIVIL
LICENSED PROFESSIONAL ENGINEER

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
ANGP–T–G–07–010	ACCESS ROAD DETAILS				
ANGP–EPSC–067	EPSC PLAN				
G–001 – 010	COVER, INDEX, LEGEND & NOTES, AND CONSTRUCTION DETAILS				

	BID		CONSTRUCTION	
	INITIALS	DATE	INITIALS	DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
ALIGNMENT SHEET

LOC. ADDISON COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP–T–C–067 | REV. 0

Vermont Gas

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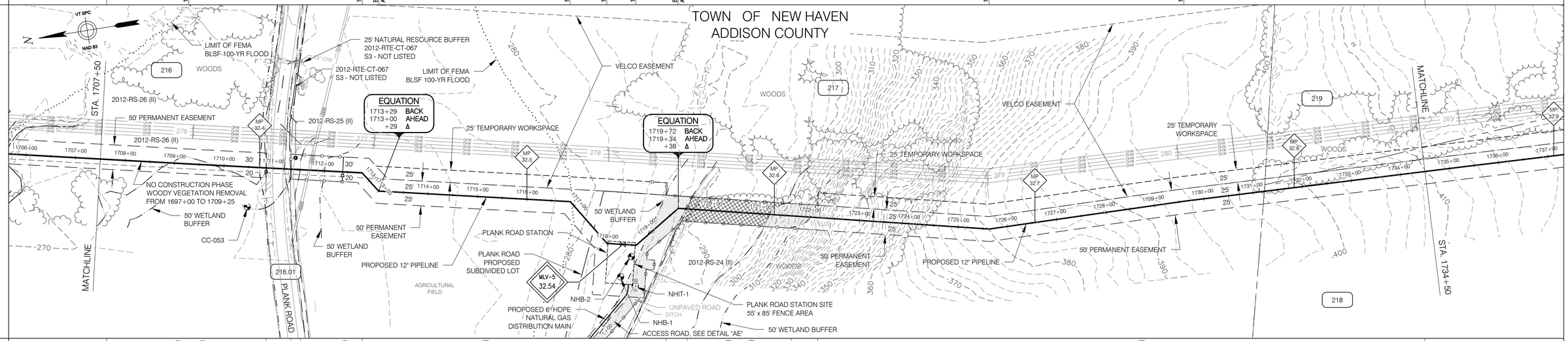
RIGHT–OF–WAY

MATCHLINE | 216 N/F FOUR-HILLS FARM | 216.01 PLANK ROAD | 217 N/F ELGIN SPRING FARM | 219 N/F LUTTON, DAVID / 218 N/F ELGIN SPRING FARM | MATCHLINE

SURVEY DATA

00°14" RT	45°01" RT	29 ft.	45°33" RT	44°59" LT	45°00" LT	38.4 ft.	11°55" LT	01°05" RT
S 12° 19" W	S 12° 06" W	S 57° 07" W	S 12° 18" W	S 57° 52" W	S 12° 52" W	S 32° 08" E	S 12° 57" W	S 01° 01" W	S 02° 07" W
1709+29	1712+79	Bac: 1713+29 Ahd: 1713+00 44°59" LT	1716+88	1718+00	1718+59	Bac: 1719+72 Ahd: 1719+34 45°05" RT	1725+63	1729+60

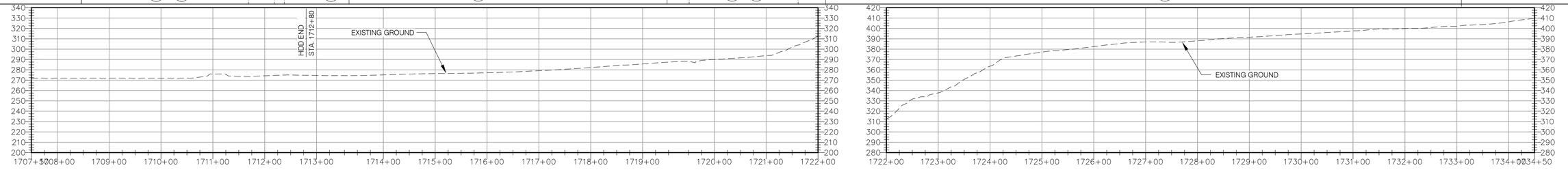
ALIGNMENT DETAIL



CONST. TYPE

MATCHLINE	W 8	W	1A	W 2A	1A	MATCHLINE

PROFILE



MATERIALS

MATCHLINE	1	1	1	1	MATCHLINE
	529 FT	640 FT	351 FT	1,247 FT	
COATING	B	A	C	A	
CLASSIFICATION	1				
DESIGN FACTOR	0.5				

HORIZONTAL SCALE
100 50 0 100 200 300 feet
50 25 0 50 100 150 feet
VERTICAL SCALE

PIPE MATERIAL:

1	12.75" O.D. X 0.312" WT, API–5L, GR. X65, PSL–2, AND ADDITIONAL SPECIFICATIONS IN 192.112	2,767 FT
2	20" O.D. X 0.375" WT, API–5L, GR. B	0 FT

PIPE COATING:

A	EPOXY POLYETHYLENE 10/40	1,887 FT
B	FBE, ABRASION RESISTANT OVERCOAT, 14–16 MILS/40 MILS, 54–56 MILS TOTAL	529 FT
C	FBE 14–16 MILS, W/ 1–1/2" REINFORCED CONCRETE W/ 140 LBS/FT³	351 FT

STATE OF VERMONT · WAYNE E. HOLLOWAY · NO. 97764 · CIVIL · PROFESSIONAL ENGINEER

VHB Vanasse Hangen Brustlin, Inc.

							BID		CONSTRUCTION	
ANGP–T–G–07–010	ACCESS ROAD DETAILS					ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
ANGP–EPSC–V001	EPSC PLAN					DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
ANGP–T–G–021	STATION AND VALVE DETAILS					DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
ANGP–EPSC–068	EPSC PLAN					DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
G–001 – 010	COVER, INDEX, LEGEND & NOTES, AND CONSTRUCTION DETAILS	1	GJM	TDB		DESIGN MANAGER	SAB	06/28/13	JEO	05/2016
DWG. NO.	REFERENCE DWG.	REV	DSN	CK		DESCRIPTION		INITIALS DATE		INITIALS DATE

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
ALIGNMENT SHEET

LOC. ADDISON COUNTY, VERMONT

Vermont Gas

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YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP–T–C–068 | REV. 1

RIGHT–OF–WAY

MATCHLINE

218
N/F
ELGIN SPRING FARM

MATCHLINE

SURVEY DATA

S 02° 07' W | 20.00' RT | 1735+31

S 02° 14' W | 20.00' LT | 1739+82

S 02° 08' W | Bk: 1744+10 Ahd: 1744+11 | −1.1 ft. | 00°06' RT

S 02° 15' W | 20.00' LT | 1748+73

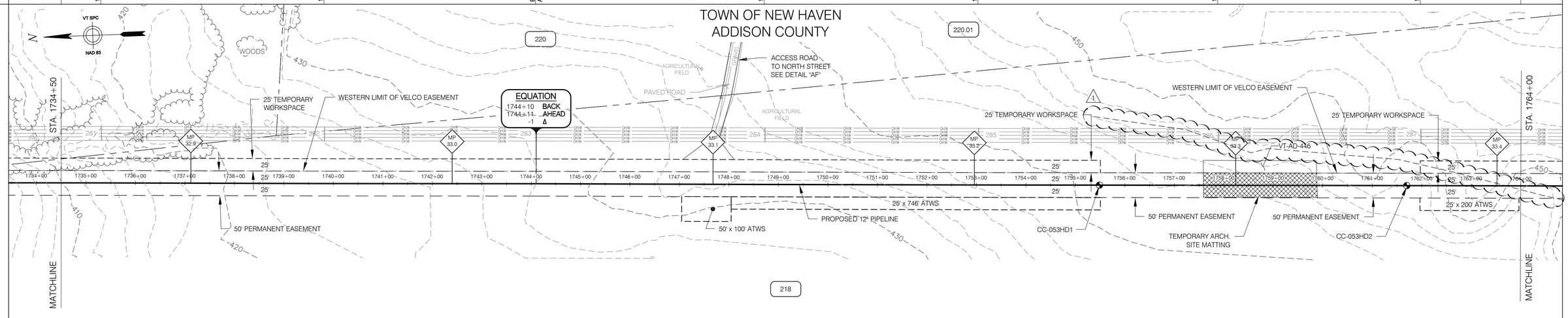
S 02° 13' W | 20.00' LT | 1753+05

S 02° 08' W | 20.00' RT | 1757+89

S 02° 11' W | 20.00' LT | 1761+98

S 02° 12' W

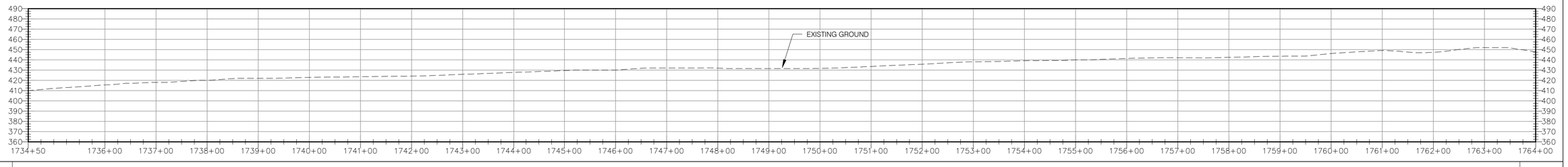
ALIGNMENT DETAIL



CONST. TYPE

1A | 2A | A | 1A

PROFILE



MATERIALS

MATCHLINE — ① — 2,084 FT — MATCHLINE

COATING	A
CLASSIFICATION	1
DESIGN FACTOR	0.5

HORIZONTAL SCALE
100 50 0 100 200 300 feet

VERTICAL SCALE
50 25 0 50 100 150 feet

PIPE MATERIAL:	
1 12.75" O.D. X 0.312" WT, API–5L, GR. X65, PSL–2, AND ADDITIONAL SPECIFICATIONS IN 192.112	2,949 FT
2 20" O.D. X 0.375" WT, API–5L, GR. B	0 FT
PIPE COATING:	
A EPOXY POLYETHYLENE 10/40	2,949 FT
B FBE, ABRASION RESISTANT OVERCOAT, 14–16 MILS/40 MILS, 54–56 MILS TOTAL	0 FT
C FBE 14–16 MILS, W/ 1–1/2" REINFORCED CONCRETE W/ 140 LBS/FT³	0 FT

STATE OF VERMONT — MICHAEL E. HOLLOWAY — NO. 97764 — CIVIL — LICENSED PROFESSIONAL ENGINEER

DWG. NO.	REFERENCE DWG.	REV	DSN	CK		DESCRIPTION		BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
							ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
							DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
ANGP–T–G–07–010	ACCESS ROAD DETAILS						DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
ANGP–EPSC–069	EPSC PLAN						DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
G–001 – 010	COVER, INDEX, LEGEND & NOTES, AND CONSTRUCTION DETAILS	1	GJM	BCK		IFC 2016 EDITS (05/2016)	DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
ALIGNMENT SHEET

LOC. ADDISON COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP–T–C–069 | REV. 1

Vermont Gas

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RIGHT-OF-WAY				
MATCHLINE	218 N/F ELGIN SPRING FARM	220.02 QUARRY ROAD	221 N/F FARNSWORTH, RALPH & YVONNE	222 N/F SMITH, JEAN

SURVEY DATA							
Bearing	S 02° 12' W	S 02° 11' W	S 02° 11' W	S 02° 18' W	S 02° 07' W	S 02° 09' W	S 02° 17' W
Angle / Station	00°01' LT 1766+88	00°00' LT 1768+38	00°06' RT 1773+62	00°10' LT 1778+36	00°01' RT 1783+88	00°08' RT 1789+68	

ALIGNMENT DETAIL

CONST. TYPE	1A	11	1A	W	2A	1A	W	2A	1A	2A	W	A	2A	W	A	1A	2A

PROFILE

MATERIALS	1	1	1	1	1	1	1	1	1	1	1
Length	410 FT	57 FT	590 FT	212 FT	140 FT	218 FT	64 FT	209 FT	274 FT	197 FT	517 FT
COATING	A	C	A	C	A	C	A	C	A	C	A
CLASSIFICATION	1										
DESIGN FACTOR	0.5										

HORIZONTAL SCALE: 100 50 0 100 200 300 feet
VERTICAL SCALE: 50 25 0 50 100 150 feet

PIPE MATERIAL:

1	12.75" O.D. X 0.312" WT, API-5L, GR. X65, PSL-2, AND ADDITIONAL SPECIFICATIONS IN 192.112	2,888 FT
2	20" O.D. X 0.375" WT, API-5L, GR. B	0 FT

PIPE COATING:

A	EPOXY POLYETHYLENE 10/40	1995 FT
B	FBE, ABRASION RESISTANT OVERCOAT, 14-16 MILS/40 MILS, 54-56 MILS TOTAL	0 FT
C	FBE 14-16 MILS, W/ 1-1/2" REINFORCED CONCRETE W/ 140 LBS/FT³	893 FT

STATE OF VERMONT — MICHAEL E. HOLLOWOOD — NO. 97764 — CIVIL — LICENSED PROFESSIONAL ENGINEER

DWG. NO.	REFERENCE DWG.
ANGP-EPSC-070	EPSC PLAN
G-001 - 010	COVER, INDEX, LEGEND & NOTES, AND CONSTRUCTION DETAILS

REV	DSN	CK	DESCRIPTION
1	GJM	BCK	IFC 2016 EDITS (05/2016)

	BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
ALIGNMENT SHEET

LOC. ADDISON COUNTY, VERMONT

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

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38 Eastwood Drive, Suite 105
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Main: (802) 735-0372 · www.chacompanies.com

YEAR: 2016	W.O.	SCALE: 1" = 100'	DWG. ANGP-T-C-070	REV. 1

RIGHT-OF-WAY

MATCHLINE	222 N/F SMITH, JEAN	223 N/F SMITH, JEAN	224 N/F FOUR-HILLS FARM	225 N/F FOUR-HILLS FARM	MATCHLINE

SURVEY DATA

1793+82	1798+54	1802+53	1807+44	1811+76	1816+49	1821+38
00°15' LT	00°06' RT	00°06' RT	00°05' LT	00°05' LT	00°06' RT	00°09' RT

S 02° 17' W — S 02° 02' W — S 02° 08' W — S 02° 15' W — S 02° 10' W — S 02° 05' W — S 02° 12' W — S 02° 21' W

ALIGNMENT DETAIL

CONST. TYPE: 2A W | 1A

PROFILE

MATERIALS	2 (56 FT)	2 (48 FT)	1 (2,896 FT)	MATCHLINE
COATING	A	C	A	
CLASSIFICATION	1			
DESIGN FACTOR	0.5			

HORIZONTAL SCALE: 100 50 0 100 200 300 feet

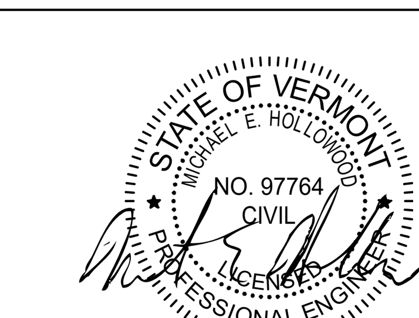
VERTICAL SCALE: 50 25 0 50 100 150 feet

PIPE MATERIAL:

1	12.75" O.D. X 0.312" WT, API–5L, GR. X65, PSL–2, AND ADDITIONAL SPECIFICATIONS IN 192.112	3,000 FT
2	20" O.D. X 0.375" WT, API–5L, GR. B	0 FT

PIPE COATING:

A	EPOXY POLYETHYLENE 10/40	2,952 FT
B	FBE, ABRASION RESISTANT OVERCOAT, 14–16 MILS/40 MILS, 54–56 MILS TOTAL	0 FT
C	FBE 14–16 MILS, W/ 1–1/2" REINFORCED CONCRETE W/ 140 LBS/FT^3	48 FT



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Vermont Gas

DWG. NO.	REFERENCE DWG.
ANGP–EPSC–071	EPSC PLAN
G–001 – 010	COVER, INDEX, LEGEND & NOTES, AND CONSTRUCTION DETAILS

REV	DSN	CK	DESCRIPTION

	BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
ALIGNMENT SHEET

LOC. ADDISON COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP–T–C–071 | REV. 0

RIGHT-OF-WAY

MATCHLINE

225	226	226.01	229	231
N/F FOUR-HILLS FARM	N/F ELGIN SPRING FARM	ROUTE 17	N/F VERMONT TRANSCO, LLC	N/F VERMONT TRANSCO, LLC

MATCHLINE

SURVEY DATA

Station	Angle	Bearing
		S 02° 21' W
1824+59	44°59' RT	S 47° 21' W
1824+79	35°32' RT	S 82° 54' W
1826+30	00°00' LT	S 82° 54' W
1829+69	33°15' LT	S 49° 38' W
1829+91	45°00' LT	S 04° 38' W
Bck: 1830+30 Ahd: 1830+44	-14.0 ft.	S 04° 38' W
1835+49	00°00' LT	S 04° 38' W
1836+37	28°10' RT	S 32° 48' W
1841+64	19°31' LT	S 13° 17' W
Bck: 1842+98 Ahd: 1843+00 18°29' LT	-2.2 ft.	S 05° 13' E
1851+40	17°59' RT	S 12° 46' W

ALIGNMENT DETAIL

CONST. TYPE	1A	1H	1A	9	1H

PROFILE

MATERIALS

MATCHLINE

MATERIALS	1 1881 FT	1 70 FT	1 883 FT
COATING	A	C	A
CLASSIFICATION	1		
DESIGN FACTOR	0.5		

MATCHLINE

PIPE MATERIAL:

1	12.75" O.D. X 0.312" WT, API-5L, GR. X65, PSL-2, AND ADDITIONAL SPECIFICATIONS IN 192.112	2,834 FT
2	20" O.D. X 0.375" WT, API-5L, GR. B	0 FT

PIPE COATING:

A	EPOXY POLYETHYLENE 10/40	2,764 FT
B	FBE, ABRASION RESISTANT OVERCOAT, 14-16 MILS/40 MILS, 54-56 MILS TOTAL	0 FT
C	FBE 14-16 MILS, W/ 1-1/2" REINFORCED CONCRETE W/ 140 LBS/FT^3	70 FT

MICHAEL E. HOLLOWOOD
NO. 97764
CIVIL

Vanasse Hangen Brustlin, Inc.

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Vermont Gas

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
ANGP-T-C-072A	VAOT PROFILE VT STATE RTE. 17 (MAIN ST.) CROSSING DETAIL				
ANGP-EPSC-072	EPSC PLAN				
G-001 - 010	COVER, INDEX, LEGEND & NOTES, AND CONSTRUCTION DETAILS				

	BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
ALIGNMENT SHEET

LOC. ADDISON COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP-T-C-072 | REV. 0

RIGHT-OF-WAY	
MATCHLINE	231 N/F VERMONT TRANSCO
	MATCH LINE

SURVEY DATA

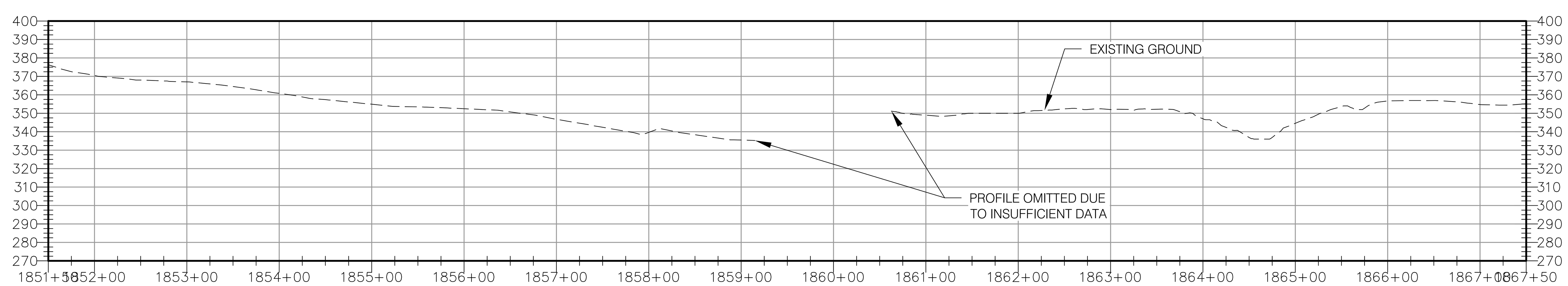
1853+02	1854+33	1859+60	1862+63	1866+33
34°15' RT	44°39' LT	55°34' LT	20°23' RT	01°03' LT

S 12° 46' W — S 47° 02' W — S 02° 22' W — S 53° 12' E — S 32° 49' E — S 33° 52' E

ALIGNMENT DETAIL

CONST. TYPE	W	1H	1J

PROFILE



MATERIALS	1	1	1	1	1
	78 FT	48 FT	1,051 FT	154 FT	269 FT
COATING	A	C	A	C	A
CLASSIFICATION	1				
DESIGN FACTOR	0.5				

HORIZONTAL SCALE: 100 50 0 100 200 300 feet

VERTICAL SCALE: 50 25 0 50 100 150 feet

PIPE MATERIAL:

1	12.75" O.D. X 0.312" WT, API-5L, GR. X65, PSL-2, AND ADDITIONAL SPECIFICATIONS IN 192.112	1,600 FT
2	20" O.D. X 0.375" WT, API-5L, GR. B	0 FT

PIPE COATING:

A	EPOXY POLYETHYLENE 10/40	1,398 FT
B	FBE, ABRASION RESISTANT OVERCOAT, 14-16 MILS/40 MILS, 54-56 MILS TOTAL	0 FT
C	FBE 14-16 MILS, W/ 1-1/2" REINFORCED CONCRETE W/ 140 LBS/FT³	202 FT

STATE OF VERMONT — MICHAEL E. HOLLOWOOD — NO. 97764 — CIVIL — LICENSED PROFESSIONAL ENGINEER

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
ANGP-EPSC-073	EPSC PLAN				
G-001 – 010	COVER, INDEX, LEGEND & NOTES, AND CONSTRUCTION DETAILS				

	BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
ALIGNMENT SHEET

LOC. ADDISON COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP-T-C-073 | REV. 0

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

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RIGHT-OF-WAY

231	232	233.01	234.01	234	236
N/F VERMONT TRANSCO	N/F COUSINO, EUGENE & LINDA	TOWN HILL ROAD	N/F SHORTSLEEVE, GEORGE & JANE	N/F SHORTSLEEVE, GEORGE & JANE	N/F MAINE DRILLING AND BLASTING

MATCHLINE

SURVEY DATA

S 33° 52' E	
1869+68	00°25' RT
S 33° 26' E	
1872+80	35°19' RT
S 01° 54' W	
Bck: 1877+11 Ahd: 1877+27 22.54' LT	−15.9 ft.
S 21° 01' E	
1881+19	21°37' LT
S 42° 38' E	
1883+51	14°07' RT
S 28° 30' E	
1885+33	30°38' RT
S 02° 09' W	
1886+46	00°03' RT
S 02° 12' W	

MATERIALS

MATERIALS	1	1	1	1	1	1	1	1
	423 FT	17 FT	648 FT	163 FT	143 FT	66 FT	659 FT	615 FT
COATING	A	C	A	C	A	C	A	B
CLASSIFICATION	1							
DESIGN FACTOR	0.5							

HORIZONTAL SCALE
100 50 0 100 200 300 feet
50 25 0 50 100 150 feet
VERTICAL SCALE

PIPE MATERIAL:

1	12.75" O.D. X 0.312" WT, API-5L, GR. X65, PSL-2, AND ADDITIONAL SPECIFICATIONS IN 192.112	2,734 FT
2	20" O.D. X 0.375" WT, API-5L, GR. B	0 FT

PIPE COATING:

A	EPOXY POLYETHYLENE 10/40	1,873 FT
B	FBE, ABRASION RESISTANT OVERCOAT, 14-16 MILS/40 MILS, 54-56 MILS TOTAL	615 FT
C	FBE 14-16 MILS, W/ 1-1/2" REINFORCED CONCRETE W/ 140 LBS/FT³	246 FT

STATE OF VERMONT
MICHAEL E. HOLLOWOOD
NO. 97764
CIVIL
LICENSED PROFESSIONAL ENGINEER

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
		3	GJM	BCK	IFC 2016 EDITS (05/2016)
ANGP-EPSC-074	EPSC PLAN	2	BCK	BCK	SUPPLEMENTAL SURFACE INFO ADDED (3/16/16)
G-001 – 010	COVER, INDEX, LEGEND & NOTES, AND CONSTRUCTION DETAILS	1	GJM	TDB	VHB HDD AREA REVISIONS (6/24/15)

	BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
ALIGNMENT SHEET

LOC. ADDISON COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP-T-C-074 | REV. 3

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

PIPE MATERIAL:

1 12.75" O.D. X 0.312" WT, API–5L, GR. X65, PSL–2, AND ADDITIONAL SPECIFICATIONS IN 192.112 — 2,950 FT

2 20" O.D. X 0.375" WT, API–5L, GR. B — 0 FT

PIPE COATING:

A EPOXY POLYETHYLENE 10/40 — 1,733 FT

B FBE, ABRASION RESISTANT OVERCOAT, 14–16 MILS/40 MILS, 54–56 MILS TOTAL — 425 FT

C FBE 14–16 MILS, W/ 1-1/2" REINFORCED CONCRETE W/ 140 LBS/FT³ — 792 FT

STATE OF VERMONT
MICHAEL E. HOLLOWOOD
NO. 97764
CIVIL
LICENSED PROFESSIONAL ENGINEER

Vanasse Hangen Brustlin, Inc.

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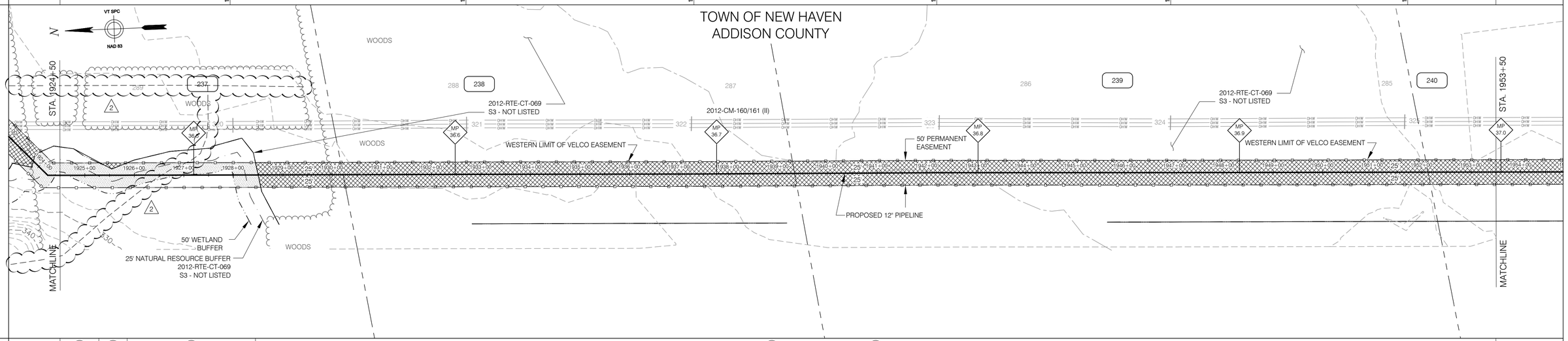
Vermont Gas

								BID		CONSTRUCTION	
		5	GJM	BCK	IFC 2016 EDITS (05/2016)	ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
		4	BCK	BCK	SUPPLEMENTAL SURFACE INFO ADDED (3/16/16)	DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
ANGP-T-G-07-010	ACCESS ROAD DETAILS	3	GJM	TDB	VHB HDD AREA REVISIONS (6/24/15)	DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
ANGP-EPSC-075	EPSC PLAN	2	BCK	TDB	VHB EDITS (6/09/15)	DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
G-001 – 010	COVER, INDEX, LEGEND & NOTES, AND CONSTRUCTION DETAILS	1	BCK	TDB	ACCESS ROAD "AG" REMOVED (5/14/15)	DESIGN MANAGER	SAB	06/28/13	JEO	05/2016
DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION		INITIALS	DATE	INITIALS	DATE

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
ALIGNMENT SHEET

LOC. ADDISON COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP-T-C-075 | REV. 5



COATING	C
CLASSIFICATION	1
DESIGN FACTOR	0.5

PIPE MATERIAL:

1	12.75" O.D. X 0.312" WT, API–5L, GR. X65, PSL–2, AND ADDITIONAL SPECIFICATIONS IN 192.112	2,900 FT
2	20" O.D. X 0.375" WT, API–5L, GR. B	0 FT

PIPE COATING:

A	EPOXY POLYETHYLENE 10/40	0 FT
B	FBE, ABRASION RESISTANT OVERCOAT, 14–16 MILS/40 MILS, 54–56 MILS TOTAL	0 FT
C	FBE 14–16 MILS, W/ 1–1/2" REINFORCED CONCRETE W/ 140 LBS/FT^3	2,900 FT

STATE OF VERMONT
MICHAEL E. HOLLOWOOD
NO. 97764
CIVIL
LICENSED
PROFESSIONAL ENGINEER

VHB Vanasse Hangen Brustlin, Inc.

ANGP–T–G–07–010	ACCESS ROAD DETAILS					
ANGP–EPSC–076	EPSC PLAN	2	GJM	BCK		IFC 2016 EDITS (05/2016)
G–001 – 010	COVER, INDEX, LEGEND & NOTES, AND CONSTRUCTION DETAILS	1	BCK	TDB		ACCESS ROAD "AG" REMOVED (5/14/15)
DWG. NO.	REFERENCE DWG.	REV	DSN	CK		DESCRIPTION

	BID		CONSTRUCTION	
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016
	INITIALS	DATE	INITIALS	DATE

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
ALIGNMENT SHEET

LOC. ADDISON COUNTY, VERMONT

Vermont Gas

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YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP–T–C–076 | REV. 2

MATERIALS	MATCHLINE				MATCHLINE
	1	1	1	1	
	1,289 FT	458 FT	630 FT	523 FT	
COATING	C	A	C	A	
CLASSIFICATION	1				
DESIGN FACTOR	0.5				

HORIZONTAL SCALE: 100 50 0 100 200 300 feet

VERTICAL SCALE: 50 25 0 50 100 150 feet

PIPE MATERIAL:

1	12.75" O.D. X 0.312" WT, API–5L, GR. X65, PSL–2, AND ADDITIONAL SPECIFICATIONS IN 192.112	2,900 FT
2	20" O.D. X 0.375" WT, API–5L, GR. B	0 FT

PIPE COATING:

A	EPOXY POLYETHYLENE 10/40	981 FT
B	FBE, ABRASION RESISTANT OVERCOAT, 14–16 MILS/40 MILS, 54–56 MILS TOTAL	0 FT
C	FBE 14–16 MILS, W/ 1–1/2" REINFORCED CONCRETE W/ 140 LBS/FT³	1,919 FT

STATE OF VERMONT — MICHAEL E. HOLLOWOOD — NO. 97764 — CIVIL — LICENSED PROFESSIONAL ENGINEER

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
ANGP–EPSC–077	EPSC PLAN				
G–001 – 010	COVER, INDEX, LEGEND & NOTES, AND CONSTRUCTION DETAILS	1	GJM	BCK	IFC 2016 EDITS (05/2016)

	BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
ALIGNMENT SHEET

LOC. ADDISON COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP–T–C–077 | REV. 1

Vermont Gas

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RIGHT-OF-WAY

MATCHLINE

Tract	Owner
246	N/F SWEENEY, MICHAEL & LINDA
244	N/F GREEN, DARIN, HAYES & NANCY
245	N/F REISS, SCOTT & LYNDA
246	N/F SWEENEY, MICHAEL & LINDA

MATCHLINE

SURVEY DATA

Bearing	Station	Deflection
S 03° 08' W	1984+21	04°03' RT
S 07° 11' W	1985+69	30°24' LT
S 23° 14' E	1986+85	05°31' RT
S 17° 42' E	1991+08	00°43' RT
S 16° 59' E	1996+31	00°12' LT
S 17° 11' E	2000+41	00°16' RT
S 16° 55' E	2005+62	00°02' LT
S 16° 57' E		

ALIGNMENT DETAIL

CONST. TYPE						
1A	2A	1A	2A	W	1A	W

PROFILE

MATERIALS

MATCHLINE

MATERIALS	1	1	1	1	1	1
Length	1,232 FT	118 FT	898 FT	180 FT	212 FT	60 FT
COATING	A	C	A	C	A	C
CLASSIFICATION	1					
DESIGN FACTOR	0.5					

MATCHLINE

HORIZONTAL SCALE

100 50 0 100 200 300 feet

50 25 0 50 100 150 feet

VERTICAL SCALE

PIPE MATERIAL:

1	12.75" O.D. X 0.312" WT, API-5L, GR. X65, PSL-2, AND ADDITIONAL SPECIFICATIONS IN 192.112	2,700 FT
2	20" O.D. X 0.375" WT, API-5L, GR. B	0 FT

PIPE COATING:

A	EPOXY POLYETHYLENE 10/40	2,342 FT
B	FBE, ABRASION RESISTANT OVERCOAT, 14-16 MILS/40 MILS, 54-56 MILS TOTAL	0 FT
C	FBE 14-16 MILS, W/ 1-1/2" REINFORCED CONCRETE W/ 140 LBS/FT³	358 FT

NO. 97764
CIVIL

Vanasse Hangen Brustlin, Inc.

DWG. NO.	REFERENCE DWG.
ANGP-EPSC-078	EPSC PLAN
G-001 - 010	COVER, INDEX, LEGEND & NOTES, AND CONSTRUCTION DETAILS

REV	DSN	CK		DESCRIPTION
1	GJM	BCK		IFC 2016 EDITS (05/2016)

	BID		CONSTRUCTION	
	INITIALS	DATE	INITIALS	DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
ALIGNMENT SHEET

LOC. ADDISON COUNTY, VERMONT

Vermont Gas

CHA
38 Eastwood Drive, Suite 105
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YEAR: 2016	W.O.	SCALE: 1" = 100'	DWG. ANGP-T-C-078	REV. 1

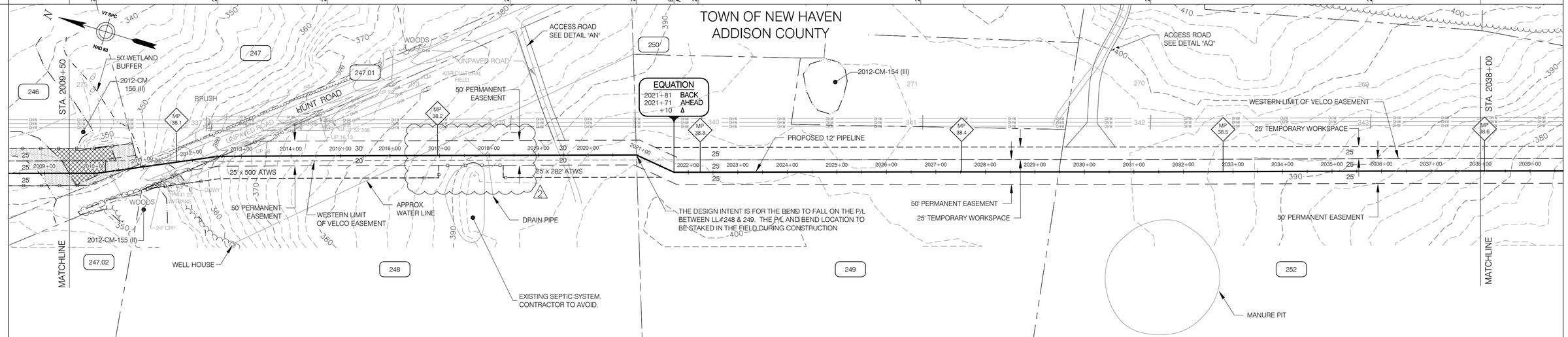
RIGHT–OF–WAY

MATCHLINE | 246 N/F SWEENEY, MICHAEL & LINDA | 247 N/F COUSINO, AMBROSE & STARLYN | 247.01 HUNT ROAD | 248 N/F STURTEVANT, ROGER | 249 N/F HILL, RON, BRIAN, KEVIN & JOANNE dba FOUR HILLS FARM | 252 N/F HILL, RON, BRIAN, KEVIN & JOANNE dba FOUR HILLS FARM | MATCHLINE

SURVEY DATA

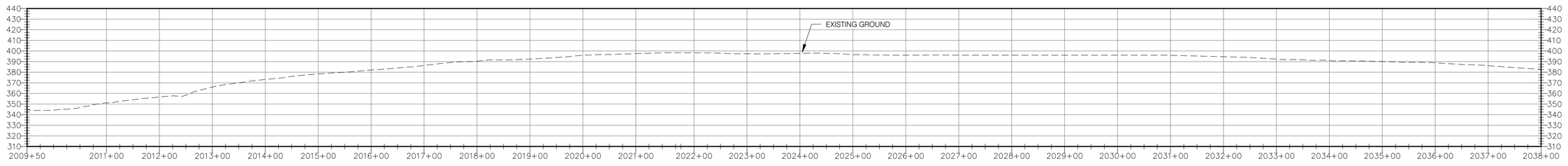
2010+06	2012+54	2014+75	2018+44	2020+98	2022+21	2026+71	2031+36	2035+84
S 16° 57' E	S 24° 48' E	S 17° 08' E	S 17° 02' E	S 17° 02' E	S 07° 48' W	S 16° 59' E	S 16° 54' E	S 17° 04' E	S 16° 56' E
07°50' LT	07°40' RT	00°05' RT	00°00' RT	24°49' RT	Bgn: 2021+81 Ahd: 2021+71 24°49' LT 10.0 ft.	00°03' RT	00°04' RT	00°09' LT	00°08' RT

ALIGNMENT DETAIL



CONST. TYPE: 1A W | 11 | 2D | 1A

PROFILE



MATERIALS

MATCHLINE | (1) 304 FT | (1) 2,556 FT | MATCHLINE

COATING	C	A
CLASSIFICATION	1	
DESIGN FACTOR	0.5	

HORIZONTAL SCALE
100 50 0 100 200 300 feet
VERTICAL SCALE
50 25 0 50 100 150 feet

PIPE MATERIAL:

1	12.75" O.D. X 0.312" WT, API–5L, GR. X65, PSL–2, AND ADDITIONAL SPECIFICATIONS IN 192.112	2,860 FT
2	20" O.D. X 0.375" WT, API–5L, GR. B	0 FT

PIPE COATING:

A	EPOXY POLYETHYLENE 10/40	2,556 FT
B	FBE, ABRASION RESISTANT OVERCOAT, 14–16 MILS/40 MILS, 54–56 MILS TOTAL	0 FT
C	FBE 14–16 MILS, W/ 1–1/2" REINFORCED CONCRETE W/ 140 LBS/FT³	304 FT

STATE OF VERMONT · MICHAEL E. HOLLOWAY · NO. 97764 · CIVIL · LICENSED PROFESSIONAL ENGINEER

VHB Vanasse Hangen Brustlin, Inc.

DWG. NO.	REFERENCE DWG.	REV	DSN	CK		DESCRIPTION		BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
							ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
ANGP–T–G–07–010	ACCESS ROAD DETAILS						DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
ANGP–T–G–021	STATION AND VALVE DETAILS						DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
ANGP–EPSC–079	EPSC PLAN	2	BCK	TDB		EASEMENT ADJUSTMENT & EPSC MEASURES ADDED (5/18/15)	DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
G–001 – 010	COVER, INDEX, LEGEND & NOTES, AND CONSTRUCTION DETAILS	1	BCK	TDB		PERMANENT EASEMENT ADJUSTMENT (5/14/15)	DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
ALIGNMENT SHEET

LOC. ADDISON COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP–T–C–079 | REV. 2

Vermont Gas

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RIGHT-OF-WAY

MATCHLINE

252
N/F
HILL, RON, BRIAN, KEVIN & JOANNE
dba FOUR HILLS FARM

253
N/F
PALMER, PATRICK,
MICHAEL & CATHERINE

254
N/F
CAROTHERS, PETER F.

MATCHLINE

SURVEY DATA

S 16° 56' E
2040+14 — 00°06' LT
S 17° 02' E
2044+82 — 00°03' RT
S 16° 59' E
2047+00 — 44°59' LT
S 61° 59' E
2047+50 — 44°59' RT
S 16° 59' E
2049+65 — 00°07' RT
S 16° 51' E
2054+83 — 00°14' LT
S 17° 06' E
2057+79 — 45°00' RT
S 27° 54' W
Bck: 2058+29
Ahd: 2058+00 45°00' LT — 28.9 ft.
S 17° 06' E
2060+10 — 00°10' RT
S 16° 55' E
2064+50 — 00°01' LT
S 16° 57' E

ALIGNMENT DETAIL

CONST. TYPE: 1A | 2D | 2A | W | 1A

PROFILE

MATERIALS	① 2,087 FT	① 8 FT	① 784 FT
COATING	A	C	A
CLASSIFICATION	1		
DESIGN FACTOR	0.5		

HORIZONTAL SCALE
100 50 0 100 200 300 feet
50 25 0 50 100 150 feet
VERTICAL SCALE

PIPE MATERIAL:

1	12.75" O.D. X 0.312" WT, API-5L, GR. X65, PSL-2, AND ADDITIONAL SPECIFICATIONS IN 192.112	2,879 FT
2	20" O.D. X 0.375" WT, API-5L, GR. B	0 FT

PIPE COATING:

A	EPOXY POLYETHYLENE 10/40	2,871 FT
B	FBE, ABRASION RESISTANT OVERCOAT, 14-16 MILS/40 MILS, 54-56 MILS TOTAL	0 FT
C	FBE 14-16 MILS, W/ 1-1/2" REINFORCED CONCRETE W/ 140 LBS/FT^3	8 FT

MICHAEL E. HOLLOWOOD
NO. 97764
CIVIL

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
ANGP-EPSC-080	EPSC PLAN				
G-001 - 010	COVER, INDEX, LEGEND & NOTES, AND CONSTRUCTION DETAILS				

	BID		CONSTRUCTION	
	INITIALS	DATE	INITIALS	DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
ALIGNMENT SHEET

LOC. ADDISON COUNTY, VERMONT

Vermont Gas

Vanasse Hangen Brustlin, Inc.

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP-T-C-080 | REV. 0

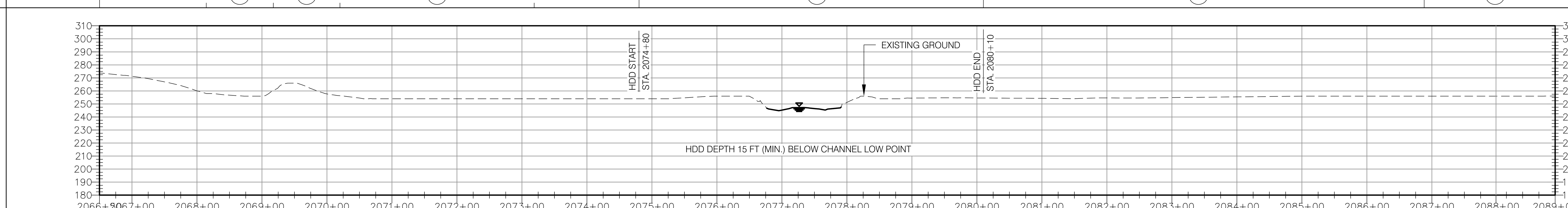
RIGHT-OF-WAY				
MATCHLINE	254 N/F CAROTHERS, PETER F.	254.01 NEW HAVEN RIVER	255 N/F HILL, RON, BRIAN, KEVIN & JOANNE dba FOUR HILLS FARM	255.01 RIVER ROAD	MATCHLINE

SURVEY DATA								
S 16° 57' E	S 17° 01' E	S 17° 04' E	S 17° 01' E	S 16° 60' E	S 36° 02' W	S 81° 02' W	S 83° 36' W	S 84° 55' W
2070+42 00°04' LT	2076+68 00°02' LT	2081+49 00°02' RT	2086+47 00°01' RT	2087+73 53°01' RT	Bdc. 2087+93	Ahd. 2088+03 ~10.4 ft. 45'00" RT	2088+28 02°33' RT	2088+73 01°19' RT

ALIGNMENT DETAIL

CONST. TYPE	W	1A	W	8	1A	4B

PROFILE



MATERIALS	MATCHLINE	1	1	1	1	1	MATCHLINE
		132 FT	566 FT	132 FT	530 FT	880 FT	
COATING		A	C	A	B	A	
CLASSIFICATION		1					
DESIGN FACTOR		0.5					

HORIZONTAL SCALE 100 50 0 100 200 300 feet
VERTICAL SCALE 50 25 0 50 100 150 feet

PIPE MATERIAL:

1	12.75" O.D. X 0.312" WT, API-5L, GR. X65, PSL-2, AND ADDITIONAL SPECIFICATIONS IN 192.112	2,240 FT
2	20" O.D. X 0.375" WT, API-5L, GR. B	0 FT

PIPE COATING:

A	EPOXY POLYETHYLENE 10/40	1,144 FT
B	FBE, ABRASION RESISTANT OVERCOAT, 14-16 MILS/40 MILS, 54-56 MILS TOTAL	530 FT
C	FBE 14-16 MILS, W/ 1-1/2" REINFORCED CONCRETE W/ 140 LBS/FT³	566 FT

STATE OF VERMONT MICHAEL E. HOLLOWOOD NO. 97764 CIVIL PROFESSIONAL ENGINEER

DWG. NO.	REFERENCE DWG.
ANGP-T-G-07-010	ACCESS ROAD DETAILS
ANGP-EPSC-081	EPSC PLAN
G-001 - 010	COVER, INDEX, LEGEND & NOTES, AND CONSTRUCTION DETAILS

REV	DSN	CK	DESCRIPTION
2	GJM	BCK	IFC 2016 EDITS (05/2016)
1	GJM	TDB	VHB HDD AREA REVISIONS (6/24/15)

	BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
ALIGNMENT SHEET

LOC. ADDISON COUNTY, VERMONT

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

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38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

YEAR: 2016	W.O.	SCALE: 1" = 100'	DWG. ANGP-T-C-081	REV. 2

RIGHT-OF-WAY

MATCHLINE

255.01
RIVER ROAD

255
N/F
FOUR-HILLS FARM PARTNERSHIP

MATCHLINE

SURVEY DATA

Station	Deflection	Bearing
2089+25	01°14' RT	S 84° 55' W
2089+72	00°45' RT	S 86° 10' W
2090+21	00°24' RT	S 86° 56' W
2090+27	17°28' RT	S 87° 20' W
2090+94	15°17' LT	N 75° 11' W
2097+13	27°08' LT	S 89° 31' W
2097+86	17°12' RT	S 62° 23' W
2098+18	02°17' LT	S 79° 35' W
2098+67	01°25' LT	S 77° 17' W
2099+22	01°27' LT	S 75° 52' W
2099+69	00°28' LT	S 74° 24' W
2100+18	01°13' LT	S 73° 55' W
2100+71	00°32' LT	S 72° 42' W
		S 72° 09' W

ALIGNMENT DETAIL

CONST. TYPE	4B	7	4B	7	4B

PROFILE

MATERIALS	MATCHLINE					MATCHLINE
		1	1	1	1	1
		229 FT	137 FT	272 FT	175 FT	387 FT
COATING		A	C	A	C	A
CLASSIFICATION		1				
DESIGN FACTOR		0.5				

HORIZONTAL SCALE
50 25 0 50 100 150 feet
25 12.5 0 25 50 75 feet
VERTICAL SCALE

PIPE MATERIAL:

1	12.75" O.D. X 0.312" WT, API–5L, GR. X65, PSL–2, AND ADDITIONAL SPECIFICATIONS IN 192.112	1,200 FT
2	20" O.D. X 0.375" WT, API–5L, GR. B	0 FT

PIPE COATING:

A	EPOXY POLYETHYLENE 10/40	888 FT
B	FBE, ABRASION RESISTANT OVERCOAT, 14–16 MILS/40 MILS, 54–56 MILS TOTAL	0 FT
C	FBE 14–16 MILS, W/ 1–1/2" REINFORCED CONCRETE W/ 140 LBS/FT³	312 FT

MICHAEL E. HOLLOWOOD
NO. 97764
CIVIL

Vanasse Hangen Brustlin, Inc.

38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
ANGP–EPSC–082A	EPSC PLAN				
G–001 – 010	COVER, INDEX, LEGEND & NOTES, AND CONSTRUCTION DETAILS				

	BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
ALIGNMENT SHEET

LOC. ADDISON COUNTY, VERMONT

Vermont Gas

YEAR: 2016 | W.O. | SCALE: 1" = 50' | DWG. ANGP–T–C–082A | REV. 0

RIGHT-OF-WAY

MATCHLINE

255.01
RIVER ROAD

255
N/F
FOUR-HILLS FARM PARTNERSHIP

257.01
N/F
LANDON, BEVERLY;
& WILLIAM

255
N/F
FOUR-HILLS FARM PARTNERSHIP

259.01
N/F
CUNNINGHAM, BARBARA

MATCHLINE

SURVEY DATA

		S 72° 09' W
2101+17	00°53' LT	S 71° 16' W
2101+60	00°52' LT	S 70° 23' W
2102+12	02°28' LT	S 67° 54' W
2102+61	03°51' LT	S 64° 03' W
2102+98	03°38' LT	S 60° 25' W
2103+55	06°23' LT	S 54° 01' W
2104+12	07°35' LT	S 46° 25' W
2104+62	03°55' LT	S 42° 30' W
2105+08	01°05' LT	S 41° 24' W
2105+39	00°00' LT	S 41° 24' W
2105+49	00°14' RT	S 41° 39' W
2105+89	01°36' RT	S 43° 15' W
2106+35	03°44' RT	S 47° 00' W
2106+73	05°09' RT	S 52° 10' W
2107+24	05°55' RT	S 58° 05' W
2107+72	03°59' RT	S 62° 04' W
2108+22	02°13' RT	S 64° 17' W
2108+37	15°16' RT	S 79° 33' W
2108+72	12°28' LT	S 67° 05' W
2112+85	16°12' LT	S 50° 52' W
2113+24	18°26' RT	S 69° 18' W
2113+26	00°00' RT	S 69° 18' W
2113+39	00°43' RT	S 70° 02' W
2113+85	00°50' RT	S 70° 52' W
2114+32	00°46' RT	S 71° 39' W
2114+81	00°03' RT	S 71° 43' W
2115+30	00°04' LT	S 71° 38' W

ALIGNMENT DETAIL

CONST. TYPE	4B	7	4B	7	4B

PROFILE

MATERIALS					
	1	1	1	1	1
	763 FT	120 FT	275 FT	112 FT	180 FT
COATING	A	C	A	C	A

MATCHLINE

CLASSIFICATION	1	3
DESIGN FACTOR	0.5	

HORIZONTAL SCALE
50 25 0 50 100 150 feet
25 12.5 0 25 50 75 feet
VERTICAL SCALE

PIPE MATERIAL:

1	12.75" O.D. X 0.312" WT, API-5L, GR. X65, PSL-2, AND ADDITIONAL SPECIFICATIONS IN 192.112	1,450 FT
2	20" O.D. X 0.375" WT, API-5L, GR. B	0 FT

PIPE COATING:

A	EPOXY POLYETHYLENE 10/40	1,218 FT
B	FBE, ABRASION RESISTANT OVERCOAT, 14-16 MILS/40 MILS, 54-56 MILS TOTAL	0 FT
C	FBE 14-16 MILS, W/ 1-1/2" REINFORCED CONCRETE W/ 140 LBS/FT³	232 FT

STATE OF VERMONT
MICHAEL E. HOLLOWAY
NO. 97764
CIVIL
LICENSED PROFESSIONAL ENGINEER

						BID		CONSTRUCTION	
					ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
					DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
					DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
ANGP-EPSC-082B	EPSC PLAN				DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
G-001 – 010	COVER, INDEX, LEGEND & NOTES, AND CONSTRUCTION DETAILS				DESIGN MANAGER	SAB	06/28/13	JEO	05/2016
DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION	INITIALS	DATE	INITIALS	DATE

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
ALIGNMENT SHEET

LOC. ADDISON COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: 1" = 50' | DWG. ANGP-T-C-082B | REV. 0

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

MATERIALS	1	1	1	1
	483 FT	147 FT	491 FT	375 FT
COATING	A	C	A	C
CLASSIFICATION	3			
DESIGN FACTOR	0.5			

HORIZONTAL SCALE
50 25 0 50 100 150 feet
25 12.5 0 25 50 75 feet
VERTICAL SCALE

PIPE MATERIAL:

1	12.75" O.D. X 0.312" WT, API–5L, GR. X65, PSL–2, AND ADDITIONAL SPECIFICATIONS IN 192.112	1,496 FT
2	20" O.D. X 0.375" WT, API–5L, GR. B	0 FT

PIPE COATING:

A	EPOXY POLYETHYLENE 10/40	974 FT
B	FBE, ABRASION RESISTANT OVERCOAT, 14–16 MILS/40 MILS, 54–56 MILS TOTAL	0 FT
C	FBE 14–16 MILS, W/ 1–1/2" REINFORCED CONCRETE W/ 140 LBS/FT³	522 FT

STATE OF VERMONT
NO. 97764
CIVIL
LICENSED PROFESSIONAL ENGINEER

DWG. NO.	REFERENCE DWG.	REV	DSN	CK		DESCRIPTION
ANGP–VAOT–083C	VAOT PROFILE RTE. 7 (ETHAN ALLEN HGWY) CROSSING DETAIL					
ANGP–VAOT–083A	VAOT ALIGNMENT SHEET					
ANGP–EPSC–083A	EPSC PLAN					
G–001 – 010	COVER, INDEX, LEGEND & NOTES, AND CONSTRUCTION DETAILS					

	BID		CONSTRUCTION	
	INITIALS	DATE	INITIALS	DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
ALIGNMENT SHEET

LOC. ADDISON COUNTY, VERMONT

Vermont Gas

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YEAR: 2016 | W.O. | SCALE: 1" = 50' | DWG. ANGP–T–C–083A | REV. 0

RIGHT–OF–WAY

MATCHLINE

265.01
ROUTE 7

273.01
N/F
DUPOISE, STEPHEN;
& MARCIA

MATCH LINE

SURVEY DATA

S 31° 34' E

14°29' LT

2131+34

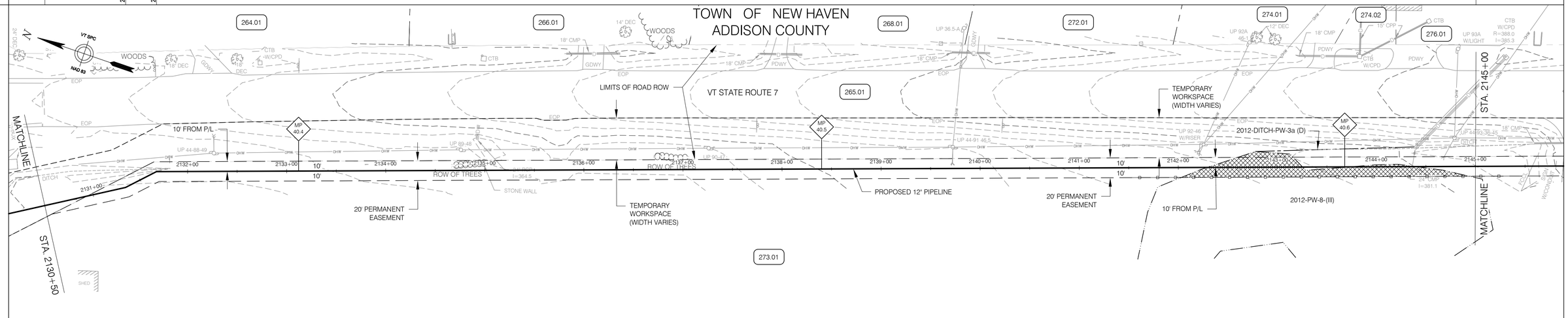
S 46° 03' E

29°55' RT

2131+69

S 19° 08' E

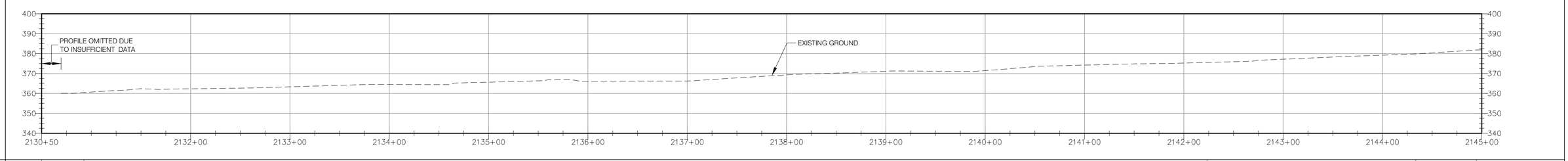
ALIGNMENT DETAIL



CONST. TYPE

MATCHLINE	11	4B	W	MATCHLINE

PROFILE



MATERIALS

	MATCHLINE	1		1		1	1	MATCHLINE
		44 FT		1,136 FT		210 FT	60 FT	
COATING		C		A		C	A	
CLASSIFICATION				3				
DESIGN FACTOR				0.5				

HORIZONTAL SCALE
50 25 0 50 100 150 feet

VERTICAL SCALE
25 12.5 0 25 50 75 feet

PIPE MATERIAL:
1 12.75" O.D. X 0.312" WT, API–5L, GR. X65, PSL–2, AND ADDITIONAL SPECIFICATIONS IN 192.112 — 1,450 FT
2 20" O.D. X 0.375" WT, API–5L, GR. B — 0 FT

PIPE COATING:
A EPOXY POLYETHYLENE 10/40 — 1,196 FT
B FBE, ABRASION RESISTANT OVERCOAT, 14–16 MILS/40 MILS, 54–56 MILS TOTAL — 0 FT
C FBE 14–16 MILS, W/ 1–1/2" REINFORCED CONCRETE W/ 140 LBS/FT³ — 254 FT

STATE OF VERMONT
MICHAEL E. HOLLOWAY
NO. 97764
CIVIL
LICENSED PROFESSIONAL ENGINEER

Vanasse Hangen Brustlin, Inc.

							BID		CONSTRUCTION	
						ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
						DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
ANGP–VAOT–083B	VAOT ALIGNMENT SHEET					DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
ANGP–EPSC–083B	EPSC PLAN					DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
G–001 – 010	COVER, INDEX, LEGEND & NOTES, AND CONSTRUCTION DETAILS					DESIGN MANAGER	SAB	06/28/13	JEO	05/2016
DWG. NO.	REFERENCE DWG.	REV	DSN	CK		DESCRIPTION	INITIALS	DATE	INITIALS	DATE

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
ALIGNMENT SHEET

LOC. ADDISON COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: 1" = 50' | DWG. ANGP–T–C–083B | REV. 0

Vermont Gas

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

PIPE MATERIAL:

1	12.75" O.D. X 0.312" WT, API–5L, GR. X65, PSL–2, AND ADDITIONAL SPECIFICATIONS IN 192.112	1,400 FT
2	20" O.D. X 0.375" WT, API–5L, GR. B	0 FT

PIPE COATING:

A	EPOXY POLYETHYLENE 10/40	1,400 FT
B	FBE, ABRASION RESISTANT OVERCOAT, 14–16 MILS/40 MILS, 54–56 MILS TOTAL	0 FT
C	FBE 14–16 MILS, W/ 1–1/2" REINFORCED CONCRETE W/ 140 LBS/FT³	0 FT

MICHAEL E. HOLLOWOOD
NO. 97764
CIVIL

Vanasse Hangen Brustlin, Inc.

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Vermont Gas

DWG. NO.	REFERENCE DWG.	REV	DSN	CK		DESCRIPTION
ANGP–VAOT–084A	VAOT ALIGNMENT SHEET					
ANGP–EPSC–084A	EPSC PLAN					
G–001 – 010	COVER, INDEX, LEGEND & NOTES, AND CONSTRUCTION DETAILS					

	BID		CONSTRUCTION	
	INITIALS	DATE	INITIALS	DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
ALIGNMENT SHEET

LOC. ADDISON COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: 1" = 50' | DWG. ANGP–T–C–084A | REV. 0

MATERIALS	1	1	1
	284 FT	296 FT	916 FT
COATING	A	C	A
CLASSIFICATION	3		
DESIGN FACTOR	0.5		

HORIZONTAL SCALE
50 25 0 50 100 150 feet
25 12.5 0 25 50 75 feet
VERTICAL SCALE

PIPE MATERIAL:

1	12.75" O.D. X 0.312" WT, API–5L, GR. X65, PSL–2, AND ADDITIONAL SPECIFICATIONS IN 192.112	1,496 FT
2	20" O.D. X 0.375" WT, API–5L, GR. B	0 FT

PIPE COATING:

A	EPOXY POLYETHYLENE 10/40	1,200 FT
B	FBE, ABRASION RESISTANT OVERCOAT, 14–16 MILS/40 MILS, 54–56 MILS TOTAL	0 FT
C	FBE 14–16 MILS, W/ 1–1/2" REINFORCED CONCRETE W/ 140 LBS/FT^3	296 FT

STATE OF VERMONT
MICHAEL E. HOLLOWOOD
NO. 97764
CIVIL

Vanasse Hangen Brustlin, Inc.

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
ANGP–VAOT–084B	VAOT ALIGNMENT SHEET				
ANGP–EPSC–084B	EPSC PLAN				
G–001 – 010	COVER, INDEX, LEGEND & NOTES, AND CONSTRUCTION DETAILS	1	BCK	TDB	ENV. EDITS (6/08/15)

	BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

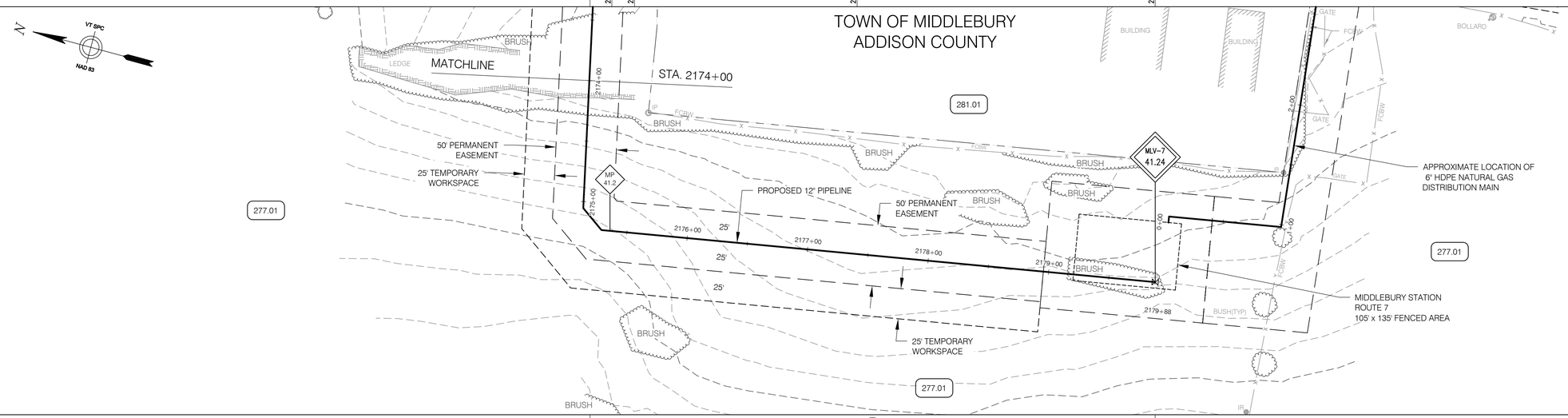
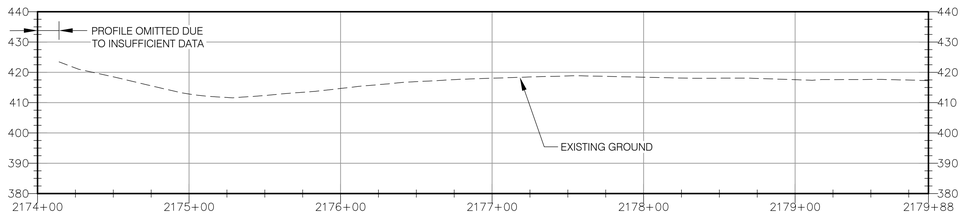
VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
ALIGNMENT SHEET

LOC. ADDISON COUNTY, VERMONT

Vermont Gas

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

YEAR: 2016 | W.O. | SCALE: 1" = 50' | DWG. ANGP–T–C–084B | REV. 1

RIGHT–OF–WAY	MATCHLINE	277.01 N/F DELINEATION CORPORATION CORBIN, THOMAS	END
SURVEY DATA		S 77° 39' W 42'14" LT 2175+05 S 35° 24' W 45'07" LT 2175+29 S 09° 43' E 00'22" LT 2177+41 S 10° 05' E 2179+91	
ALIGNMENT DETAIL			
CONST. TYPE		1E	
PROFILE			
MATERIALS	MATCHLINE	1 588 FT	END
COATING		A	
CLASSIFICATION		3	
DESIGN FACTOR		0.5	

HORIZONTAL SCALE
50 25 0 50 100 150 feet

VERTICAL SCALE
25 12.5 0 25 50 75 feet

PIPE MATERIAL:
1 12.75" O.D. X 0.312" WT, API–5L, GR. X65, PSL–2, AND ADDITIONAL SPECIFICATIONS IN 192.112 — 588 FT
2 20" O.D. X 0.375" WT, API–5L, GR. B — 0 FT

PIPE COATING:
A EPOXY POLYETHYLENE 10/40 — 588 FT
B FBE, ABRASION RESISTANT OVERCOAT, 14–16 MILS/40 MILS, 54–56 MILS TOTAL — 0 FT
C FBE 14–16 MILS, W/ 1–1/2" REINFORCED CONCRETE W/ 140 LBS/FT³ — 0 FT

STATE OF VERMONT — DEPARTMENT OF PUBLIC SERVICE — NO. 97764 — CIVIL — PROFESSIONAL ENGINEER

VHB Vanasse Hangen Brustlin, Inc.

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION		BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
						ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
ANGP–D2–C–01	ALIGNMENT SHEET					DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
ANGP–T–G–021	STATION AND VALVE DETAILS					DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
ANGP–EPSC–085	EPSC PLAN					DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
G–001 – 010	COVER, INDEX, LEGEND & NOTES, AND CONSTRUCTION DETAILS					DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
ALIGNMENT SHEET

LOC. ADDISON COUNTY, VERMONT

Vermont Gas

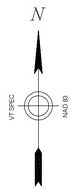
CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

YEAR: 2016 | W.O. | SCALE: 1" = 50' | DWG. ANGP–T–C–085 | REV. 0

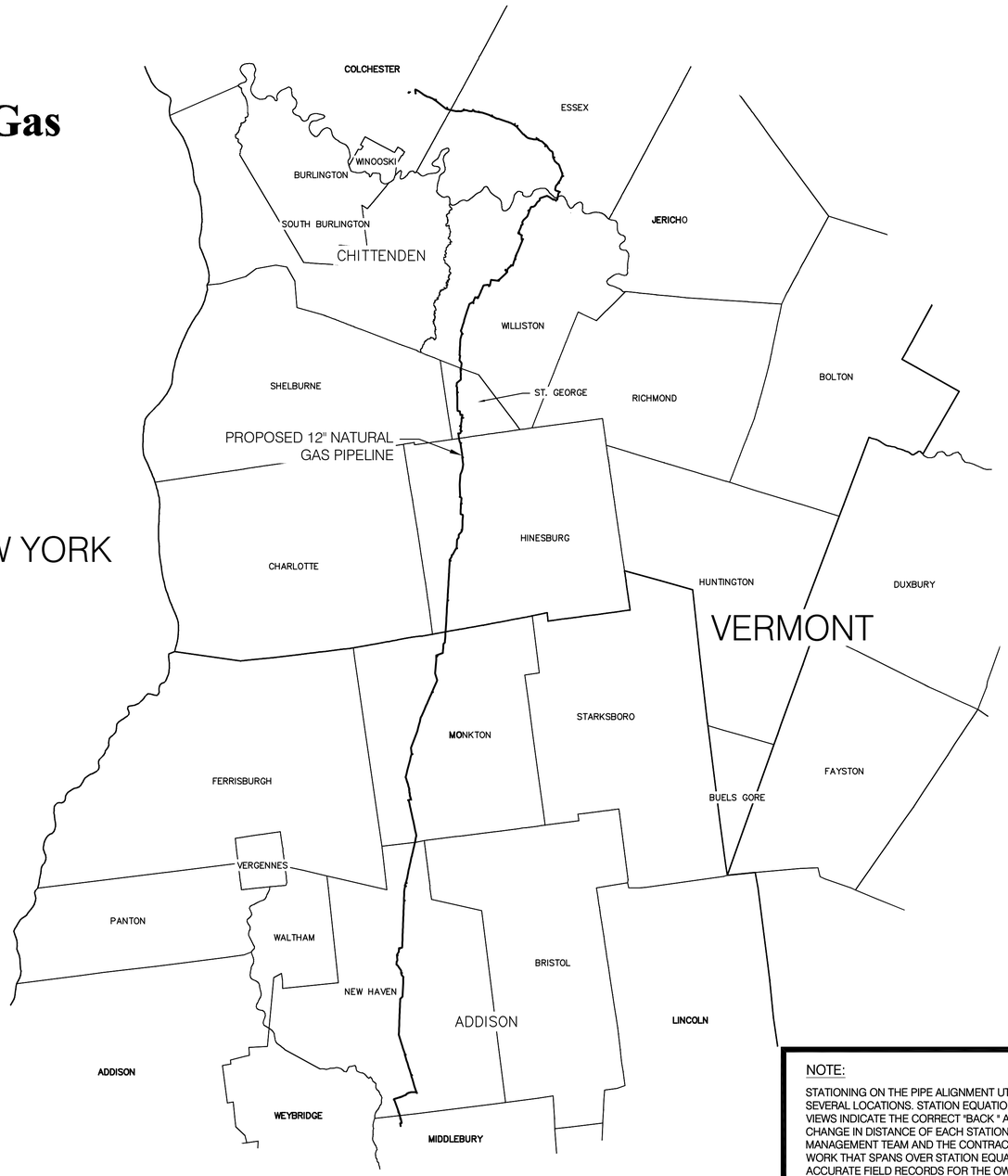
ADDISON NATURAL GAS PROJECT
TRANSMISSION MAINLINE

CHITTENDEN AND ADDISON COUNTIES
VERMONT

Vermont Gas



NEW YORK



SCALE 1" = 12,000'

DRAWING INDEX

DRAWING NUMBER	DRAWING TITLE
ANGP-T-G-001	COVER SHEET
ANGP-T-G-002	INDEX SHEET
ANGP-T-G-003	LEGEND & NOTES
ANGP-T-G-004 TO 006	CONSTRUCTION CONFIGURATION DETAILS
ANGP-T-G-007 TO 010	ACCESS ROAD DETAILS
ANGP-T-G-011	EPSC NOTES
ANGP-T-G-012 TO 020C	CONSTRUCTION DETAILS
ANGP-T-G-021	STATION AND VALVE DETAILS
ANGP-T-G-022	WILLISTON PIPEYARD
ANGP-T-G-023	PLANK ROAD PIPEYARD

DRAWING #	REV #	DRAWING TITLE
ANGP-EPSC-001A	1	EPSC PLAN
ANGP-EPSC-001B	1	EPSC PLAN
ANGP-EPSC-002	3	EPSC PLAN
ANGP-EPSC-003	2	EPSC PLAN
ANGP-EPSC-004	1	EPSC PLAN
ANGP-EPSC-005	3	EPSC PLAN
ANGP-EPSC-006	1	EPSC PLAN
ANGP-EPSC-007	1	EPSC PLAN
ANGP-EPSC-008	1	EPSC PLAN
ANGP-EPSC-009	1	EPSC PLAN
ANGP-EPSC-010	1	EPSC PLAN
ANGP-EPSC-011	1	EPSC PLAN
ANGP-EPSC-012	2	EPSC PLAN
ANGP-EPSC-013	1	EPSC PLAN
ANGP-EPSC-014	2	EPSC PLAN
ANGP-EPSC-015	3	EPSC PLAN
ANGP-EPSC-016	2	EPSC PLAN
ANGP-EPSC-017	1	EPSC PLAN
ANGP-EPSC-018	0	EPSC PLAN
ANGP-EPSC-019	0	EPSC PLAN
ANGP-EPSC-020	1	EPSC PLAN
ANGP-EPSC-021	1	EPSC PLAN
ANGP-EPSC-022	0	EPSC PLAN
ANGP-EPSC-023B	1	EPSC PLAN
ANGP-EPSC-024	1	EPSC PLAN
ANGP-EPSC-025	1	EPSC PLAN
ANGP-EPSC-026	0	EPSC PLAN
ANGP-EPSC-027	2	EPSC PLAN
ANGP-EPSC-028	1	EPSC PLAN
ANGP-T-C-028A	0	STREAM CROSSING PROFILE
ANGP-EPSC-029	1	EPSC PLAN
ANGP-EPSC-030	0	EPSC PLAN
ANGP-EPSC-031	1	EPSC PLAN
ANGP-EPSC-032	1	EPSC PLAN
ANGP-EPSC-033	1	EPSC PLAN
ANGP-EPSC-034	1	EPSC PLAN
ANGP-EPSC-035	1	EPSC PLAN
ANGP-EPSC-036	1	EPSC PLAN
ANGP-EPSC-037	0	EPSC PLAN
ANGP-EPSC-038	0	EPSC PLAN
ANGP-EPSC-039	0	EPSC PLAN
ANGP-T-C-039A	0	STREAM CROSSING PROFILE
ANGP-EPSC-040	1	EPSC PLAN
ANGP-EPSC-041	2	EPSC PLAN
ANGP-EPSC-042	2	EPSC PLAN
ANGP-T-C-042A	0	STREAM CROSSING PROFILE
ANGP-EPSC-043	2	EPSC PLAN
ANGP-EPSC-044	0	EPSC PLAN

DRAWING #	REV #	DRAWING TITLE
ANGP-EPSC-045	0	EPSC PLAN
ANGP-EPSC-046	0	EPSC PLAN
ANGP-EPSC-047	1	EPSC PLAN
ANGP-EPSC-048	1	EPSC PLAN
ANGP-EPSC-049	2	EPSC PLAN
ANGP-EPSC-050	2	EPSC PLAN
ANGP-EPSC-051	3	EPSC PLAN
ANGP-T-C-051A	0	STREAM CROSSING PROFILE
ANGP-EPSC-052	1	EPSC PLAN
ANGP-EPSC-053	0	EPSC PLAN
ANGP-EPSC-054	0	EPSC PLAN
ANGP-EPSC-055	1	EPSC PLAN
ANGP-EPSC-056	0	EPSC PLAN
ANGP-EPSC-057	0	EPSC PLAN
ANGP-EPSC-058	0	EPSC PLAN
ANGP-EPSC-059	1	EPSC PLAN
ANGP-EPSC-060	1	EPSC PLAN
ANGP-EPSC-061A	2	EPSC PLAN
ANGP-T-C-061AA	0	STREAM CROSSING PROFILE
ANGP-EPSC-061B	2	EPSC PLAN
ANGP-EPSC-062	2	EPSC PLAN
ANGP-EPSC-063	2	EPSC PLAN
ANGP-EPSC-064	0	EPSC PLAN
ANGP-EPSC-065	0	EPSC PLAN
ANGP-T-C-065A	0	STREAM CROSSING PROFILE
ANGP-EPSC-066	0	EPSC PLAN
ANGP-EPSC-067	0	EPSC PLAN
ANGP-EPSC-068	1	EPSC PLAN
ANGP-EPSC-069	1	EPSC PLAN
ANGP-EPSC-070	1	EPSC PLAN
ANGP-EPSC-071	0	EPSC PLAN
ANGP-EPSC-072	0	EPSC PLAN
ANGP-EPSC-073	0	EPSC PLAN
ANGP-EPSC-074	3	EPSC PLAN
ANGP-EPSC-075	5	EPSC PLAN
ANGP-EPSC-076	2	EPSC PLAN
ANGP-EPSC-077	1	EPSC PLAN
ANGP-EPSC-078	1	EPSC PLAN
ANGP-EPSC-079	2	EPSC PLAN
ANGP-EPSC-080	0	EPSC PLAN
ANGP-EPSC-081	2	EPSC PLAN
ANGP-EPSC-082A	0	EPSC PLAN
ANGP-EPSC-082B	0	EPSC PLAN
ANGP-EPSC-083A	0	EPSC PLAN
ANGP-EPSC-083B	0	EPSC PLAN
ANGP-EPSC-084A	0	EPSC PLAN
ANGP-EPSC-084B	1	EPSC PLAN
ANGP-EPSC-085	0	EPSC PLAN

NOTE:

STATIONING ON THE PIPE ALIGNMENT UTILIZES STATION EQUATIONS IN SEVERAL LOCATIONS. STATION EQUATION CALL-OUTS NOTED ON THE PLAN VIEWS INDICATE THE CORRECT "BACK " AND "AHEAD" STATIONS AS WELL AS THE CHANGE IN DISTANCE OF EACH STATION EQUATION. THE CONSTRUCTION MANAGEMENT TEAM AND THE CONTRACTOR SHOULD PROPERLY DOCUMENT WORK THAT SPANS OVER STATION EQUATIONS IN ORDER TO PROVIDE ACCURATE FIELD RECORDS FOR THE OWNER.

NOTE:

THE ALIGNMENT AND EPSC PLAN SETS DATED 05/2016 SUPERSEDE ALL PREVIOUSLY "ISSUED FOR CONSTRUCTION" PLAN SETS AND INCORPORATE ALL PROJECT CHANGES SUBSEQUENT TO THE 2015 "ISSUED FOR CONSTRUCTION" PLAN SETS DATED 04/02/15. THE PLAN CHANGES ARE INDICATED BY REVISION CLOUDS AND/OR DENOTED IN THE REVISION BOX, WITH THE EXCEPTION OF THE FOLLOWING MODIFICATIONS: REMOVAL OF THE CATHODIC PROTECTION TEST LEAD LOCATIONS, THE ADDITIONAL SHEETS FOR TRENCH BREAKER LOCATIONS, THE ADDITIONAL SHEETS FOR DEPTH OF COVER, AND THE ADDITIONAL SHEETS FOR PIPE PROFILES AT JURISDICTIONAL STREAM CROSSINGS.

STATE OF VERMONT — MICHAEL E. HOLTHAUS — NO. 97764 — CIVIL — PROFESSIONAL ENGINEER

4

VHB Vanasse Hangen Brustlin, Inc.

DWG. NO.	REFERENCE DWG.	REV	DSN	CK		DESCRIPTION		BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
							ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
		4	GJM	BCK		IFC 2016 EDITS (05/2016)	DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
		3	BCK	TDB		CP TEST LEAD EDIT (9/14/15)	DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
		2	GJM	TDB		PLAN SET ISSUED FOR COLLATERAL PERMIT AMENDMENTS (6/30/15)	DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
		1	BCK	TDB		COMPLETE PLAN SET RE-ISSUE (6/15/15)	DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
COVER SHEET

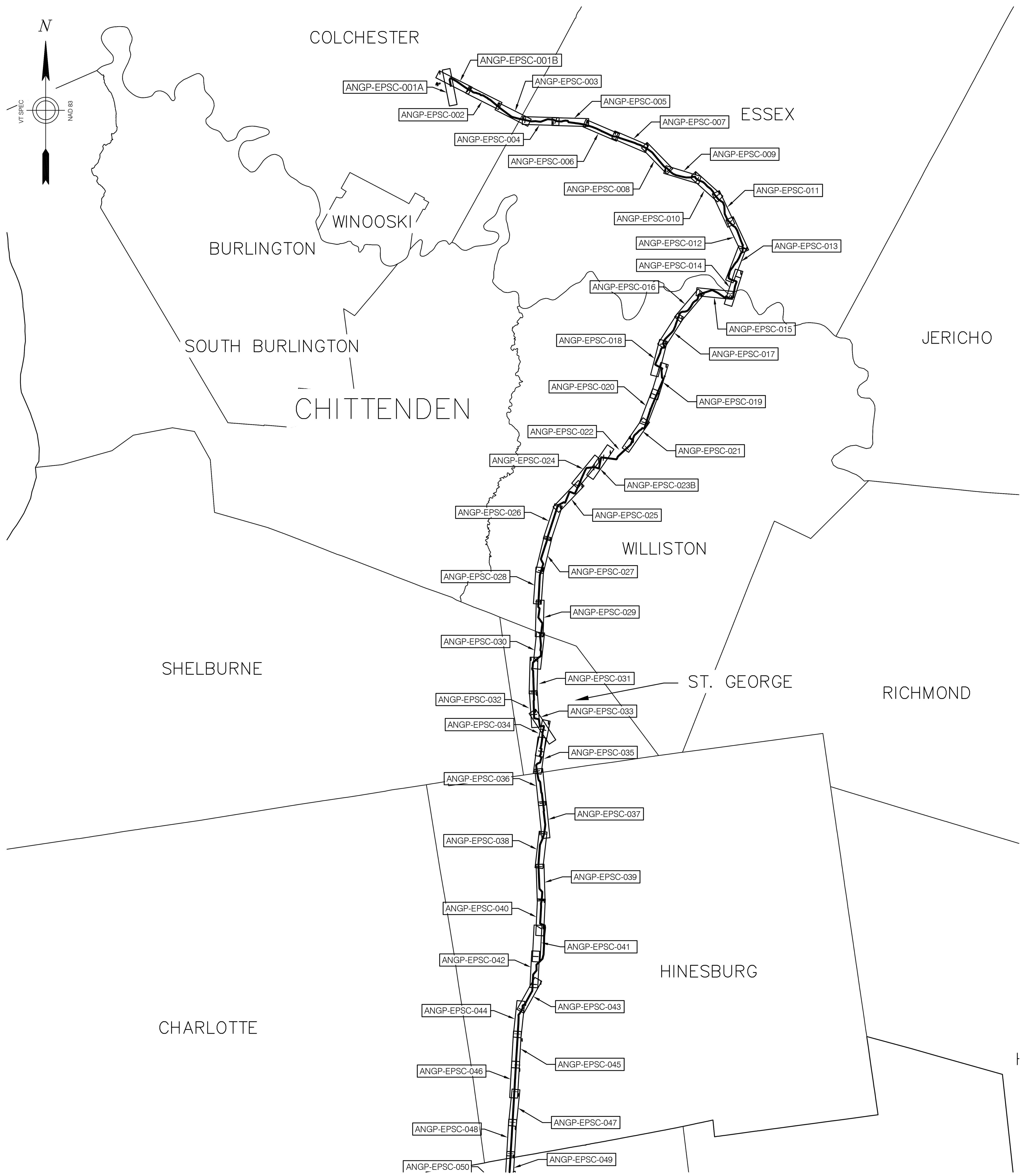
LOC. CHITTENDEN & ADDISON COUNTIES

Vermont Gas

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 • www.chacompanies.com

YEAR: 2016 | W.O. | SCALE: NOTED | DWG. ANGP-T-G-001 | REV. 4

CHITTENDEN AND ADDISON COUNTIES
VERMONT



SCALE 1" = 500'

SCALE 1" = 500'

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION

	BID		CONSTRUCTION	
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016
	INITIALS	DATE	INITIALS	DATE

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
INDEX SHEET

LOC. CHITTENDEN & ADDISON COUNTIES

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YEAR: 2016	W.O.	SCALE: 1"=500'	DWG. ANGP-T-G-002	REV. 0

CHITTENDEN AND ADDISON COUNTIES
VERMONT

QUANTITIES

MATERIAL QUANTITIES (FT)

		PIPE		COATING				PIPE		COATING		
		12.75" O.D. X 0.312" WT, API-5L, GR. X65, PSL-2, AND ADDITIONAL SPECIFICATIONS IN 192.112	20" O.D. X 0.375" WT, API-5L, GR. B	EPOXY POLYETHYLENE 10/40	ABRASION RESISTANT COATING, 40 MILS, FBE W/ POWERCRETE OVERCOAT	EPOXY POLYETHYLENE 10/40, W/ 1-1/2" REINFORCED CONCRETE W/ 140 LBS/FT³		12.75" O.D. X 0.312" WT, API-5L, GR. X65, PSL-2, AND ADDITIONAL SPECIFICATIONS IN 192.112	20" O.D. X 0.375" WT, API-5L, GR. B	EPOXY POLYETHYLENE 10/40	ABRASION RESISTANT COATING, 40 MILS, FBE W/ POWERCRETE OVERCOAT	EPOXY POLYETHYLENE 10/40, W/ 1-1/2" REINFORCED CONCRETE W/ 140 LBS/FT³
		1	2	A	B	C		1	2	A	B	C
SHEET NUMBERS	ANGP-T-C-001A	577'	0'	156'	0'	421'	ANGP-T-C-045	2700'	0'	2685'	0'	15'
	ANGP-T-C-001B	1950'	0'	1637'	0'	313'	ANGP-T-C-046	2350'	0'	485'	1245'	620'
	ANGP-T-C-002	2950'	0'	1385'	896'	669'	ANGP-T-C-047	2561'	0'	326'	2235'	0'
	ANGP-T-C-003	2706'	0'	99'	2607'	0'	ANGP-T-C-048	2700'	0'	1971'	380'	349'
	ANGP-T-C-004	2700'	0'	2090'	510'	100'	ANGP-T-C-049	2450'	0'	1450'	0'	1000'
	ANGP-T-C-005	2682'	0'	2215'	467'	0'	ANGP-T-C-050	2250'	0'	2012'	0'	238'
	ANGP-T-C-006	2857'	0'	2857'	0'	0'	ANGP-T-C-051	1652'	0'	577'	0'	1075'
	ANGP-T-C-007	2750'	0'	1689'	0'	1061'	ANGP-T-C-052	2800'	0'	2187'	0'	613'
	ANGP-T-C-008	2694'	0'	2119'	0'	575'	ANGP-T-C-053	2000'	0'	1773'	0'	227'
	ANGP-T-C-009	2806'	0'	2631'	0'	175'	ANGP-T-C-054	2637'	0'	2369'	0'	268'
	ANGP-T-C-010	2250'	0'	1953'	0'	297'	ANGP-T-C-055	2900'	0'	2671'	0'	229'
	ANGP-T-C-011	2604'	0'	2604'	0'	0'	ANGP-T-C-056	2700'	0'	1281'	250'	1169'
	ANGP-T-C-012	2900'	0'	2748'	0'	152'	ANGP-T-C-057	2500'	0'	0'	2500'	0'
	ANGP-T-C-013	2977'	0'	2513'	0'	464'	ANGP-T-C-058	1000'	0'	575'	175'	250'
	ANGP-T-C-014	2160'	0'	757'	940'	463'	ANGP-T-C-059	2837'	0'	1411'	975'	451'
	ANGP-T-C-015	2750'	121'	1788'	0'	962'	ANGP-T-C-060	1400'	0'	1295'	105'	0'
	ANGP-T-C-016	3000'	0'	2618'	0'	382'	ANGP-T-C-061A	1300'	0'	997'	0'	303'
	ANGP-T-C-017	2667'	0'	2165'	0'	502'	ANGP-T-C-061B	1525'	0'	1475'	0'	50'
	ANGP-T-C-018	2495'	0'	2148'	0'	347'	ANGP-T-C-062	1225'	0'	1125'	0'	100'
	ANGP-T-C-019	2800'	0'	2714'	0'	86'	ANGP-T-C-063	2942'	0'	2493'	0'	449'
	ANGP-T-C-020	2550'	0'	2031'	0'	519'	ANGP-T-C-064	2850'	0'	1159'	0'	1691'
	ANGP-T-C-021	2927'	0'	1962'	0'	965'	ANGP-T-C-065	2650'	0'	955'	0'	1695'
	ANGP-T-C-022	2438'	0'	1315'	0'	1123'	ANGP-T-C-066	2900'	0'	604'	0'	2296'
	ANGP-T-C-023B	1604'	0'	456'	880'	268'	ANGP-T-C-067	2850'	0'	1462'	1150'	238'
	ANGP-T-C-024	2350'	0'	2043'	0'	307'	ANGP-T-C-068	2767'	0'	1887'	529'	351'
	ANGP-T-C-025	2966'	0'	2384'	0'	582'	ANGP-T-C-069	2949'	0'	2949'	0'	0'
	ANGP-T-C-026	2900'	0'	2900'	0'	0'	ANGP-T-C-070	2888'	0'	1995'	0'	893'
	ANGP-T-C-027	2970'	0'	2841'	0'	129'	ANGP-T-C-071	3000'	0'	2952'	0'	48'
	ANGP-T-C-028	2650'	0'	2350'	0'	300'	ANGP-T-C-072	2834'	0'	2764'	0'	70'
	ANGP-T-C-029	3000'	0'	2204'	0'	796'	ANGP-T-C-073	1600'	0'	1398'	0'	202'
	ANGP-T-C-030	2437'	0'	1977'	0'	460'	ANGP-T-C-074	2734'	0'	1824'	615'	295'
	ANGP-T-C-031	2869'	0'	2869'	0'	0'	ANGP-T-C-075	2950'	0'	1733'	425'	792'
	ANGP-T-C-032	1950'	0'	1333'	0'	617'	ANGP-T-C-076	2900'	0'	0'	0'	2900'
	ANGP-T-C-033	2050'	0'	1340'	0'	710'	ANGP-T-C-077	2900'	0'	981'	0'	1919'
	ANGP-T-C-034	1887'	0'	1813'	0'	74'	ANGP-T-C-078	2700'	0'	2342'	0'	358'
	ANGP-T-C-035	2018'	0'	1382'	0'	636'	ANGP-T-C-079	2860'	0'	2556'	0'	304'
	ANGP-T-C-036	2850'	0'	2799'	0'	51'	ANGP-T-C-080	2879'	0'	2871'	0'	8'
	ANGP-T-C-037	2579'	0'	2431'	0'	148'	ANGP-T-C-081	2240'	0'	1144'	530'	566'
	ANGP-T-C-038	2900'	0'	2863'	0'	37'	ANGP-T-C-082A	1200'	0'	888'	0'	312'
	ANGP-T-C-039	2961'	0'	1553'	0'	1408'	ANGP-T-C-082B	1450'	0'	1218'	0'	232'
	ANGP-T-C-040	2977'	0'	1699'	675'	603'	ANGP-T-C-083A	1496'	0'	974'	0'	522'
	ANGP-T-C-041	2910'	0'	2711'	0'	199'	ANGP-T-C-083B	1450'	0'	1196'	0'	254'
	ANGP-T-C-042	2002'	0'	1748'	0'	254'	ANGP-T-C-084A	1400'	0'	1400'	0'	0'
	ANGP-T-C-043	2484'	0'	1475'	0' TL	1009'	ANGP-T-C-084B	1496'	0'	1200'	0'	296'
	ANGP-T-C-044	2111'	0'	1908'	0'	203'	ANGP-T-C-085	588'	0'	588'	0'	0'
							TOTAL =	217575'	121'	157471'	18089'	42015'

NOTE:

STATIONING ON THE PIPE ALIGNMENT UTILIZES STATION EQUATIONS IN SEVERAL LOCATIONS. STATION EQUATION CALL-OUTS NOTED ON THE PLAN VIEWS INDICATE THE CORRECT "BACK " AND "AHEAD" STATIONS AS WELL AS THE CHANGE IN DISTANCE OF EACH STATION EQUATION. THE CONSTRUCTION MANAGEMENT TEAM AND THE CONTRACTOR SHOULD PROPERLY DOCUMENT WORK THAT SPANS OVER STATION EQUATIONS IN ORDER TO PROVIDE ACCURATE FIELD RECORDS FOR THE OWNER.

LEGEND

PROPOSED GAS LINE
GAS LINE STATIONING — 314+00
PROPERTY LINE
TOWN LINE
EDGE OF PAVEMENT
RAILROAD
CONTOUR (10-FOOT INT.) — 510
CONTOUR (2-FOOT INT.)
FENCE
GUARDRAIL
OVERHEAD WIRES — OHW
DRAIN LINE — D
DRAIN LINE > 12" Ø — D
SEWER LINE — S
WATER LINE — W
GAS LINE — G
ELECTRICAL LINE — E
VELCO ACCESS ROADS — 3

TELEPHONE LINE — T
STONEWALL
BRUSH LINE
TREE LINE
IRON PIN
CONCRETE/GRANITE BOUND
UTILITY MANHOLE — E S S E C
CATCH BASIN — CTB
ELECTRIC POLE STRUCTURES — 53
UTILITY POLE
LIGHT POST
GUY ANCHOR
WATER GATE — WV
WELL
GAS GATE — GV
HYDRANT
MAIL BOX — MB

TRAFFIC SIGN
TRAFFIC SIGNAL
GATE POST / BOLLARD
MARKER POST — MP
VENT
DECIDUOUS TREE
CONIFEROUS TREE
EXISTING STRUCTURE
DITCH LINE
PROPOSED TEST STATION — 3 S
PROPOSED GAS VALVE — GV
SPOT GRADE — X 546
SAND BAG
GEOTECHNICAL SOIL BORINGS — SB-1
MILE POST — M.P. MILE

LINE LIST — XXXXXX
TEST LEAD (2-WIRE) — TL — 2
TEST LEAD (4-WIRE) — 4TL
WATER SURFACE INDICATOR
PERMANENT EASEMENT
TEMPORARY WORKSPACE
FEMA BLSF ZONE
CENTERLINE OF STREAM
TEMPORARY STREAM IMPACT
50' WETLAND BUFFER
TEMPORARY WETLAND IMPACT
TEMPORARY WETLAND BUFFER IMPACT
WETLAND AREA
PROPOSED EROSION AND SEDIMENT CONTROLS
WETLAND FLAG — WF 1
AS-BUILT 12" TRANSMISSION LINE
BAT TREE — BT — 2

ABBREVIATIONS

A.	ASSUMED	ELFC	ELECTRIC FENCE	PCCSP	POLYMER COATED CORRUGATED STEEL PIPE
ABD.	ABANDON	EXIST. (OR EX.)	EXISTING	(P)	PROPOSED
ADJ.	ADJUST	FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY	R	RADIUS OF CURVATURE/RIGHT
AG, AGR	AGRICULTURAL	FOMK	FIBER OPTIC MARK	(R)	RECORD
APPROX.	APPROXIMATE	FB	FLUSHING BASIN	RCP	REINFORCED CONCRETE PIPE
ARCH.	ARCHAEOLOGICAL	GG	GAS GATE	RD.	ROAD
ATWS	ADDITIONAL TEMPORARY WORKSPACE	GMK	GAS LINE – MARKED	REC.	RECORD LOCATION
BWF	BARBED WIRE FENCE	GMP	GREEN MOUNTAIN POWER	REM.	REMOVE
BND.	BOUND	GSO	GAS SHUT OFF	RET.	RETAIN
BCC	BITUMINOUS CONCRETE CURB	GRAN.	GRANITE	RET. WALL	RETAINING WALL
BIT. CONC.	BITUMINOUS CONCRETE	GC	GRANITE CURB	RMDL	REMODEL
℄	BASELINE	GRV	GRAVEL	RT	RIGHT
BLDG.	BUILDING	GDWY	GRAVEL DRIVEWAY	R.O.W., R/W	RIGHT–OF–WAY
BLSF	BORDERING LAND SUBJECT TO FLOODING	GRL	GUARDRAIL	RR	RAILROAD
B.O.	BY OTHERS	HDPE	HIGH DENSITY POLYETHYLENE PIPE	R&R	REMOVE AND RESET
B.W.	BOTTOM OF WALL	HDD	HORIZONTAL DIRECTIONAL DRILL	R&S	REMOVE AND STACK
BWLL	BROKEN WHITE LANE LINE	HMA	HOT MIX ASPHALT	S.B.	STONE BOUND
CHH	CABLE HANDHOLE	HOR.	HORIZONTAL	SMH	SEWER MANHOLE
CMK	CABLE MARK	HSE	HOUSE	SMK	SEWER LINE – MARKED
CPED	CABLE PEDESTAL	HYD.	HYDRANT	S.W.	SIDEWALK
C/O	CARE OF	I. (OR INV.)	INVERT	ST.	STREET
CTB	CATCH BASIN	IPL	INTERNATIONAL PAPER LATERAL	STA.	STATION
CTB/DI	CATCH BASIN WITH DROP INLET	IPX	INTERNATIONAL PAPER EXTENTION	SWEL	SOLID WHITE EDGE LINE
CEM.	CEMENT	LT	LEFT	SWLL	SOLID WHITE LANE LINE
CLDI	CEMENT LINED DUCTILE IRON PIPE	L	LENGTH OF CURVE/LEFT	SYCL	SINGLE YELLOW CENTERLINE
CLFC	CHAIN LINK FENCE	LBS	POUNDS	SYLL	SINGLE YELLOW LANE LINE
C.I.	CURB INLET	L.P.	LIGHT POLE	SHW	STONE HEADWALL
℄	CENTERLINE	L.F.	LINEAR FEET	STPL	STOP LINE
℄ CONST.	CENTERLINE OF CONSTRUCTION	MH	MANHOLE	T	TANGENT/TRUCK PERCENTAGE
CONC.	CONCRETE	MLV	MAIN LINE VALVE	TAN.	TANGENT DISTANCE OF CURVE
CC	CONCRETE CURB	M.P.	MILE POST	TEMP.	TEMPORARY
CDWY	CONCRETE DRIVEWAY	MHD	MASS HIGHWAY BOUND	TMH	TELEPHONE MANHOLE
CHW	CONCRETE HEADWALL	MSE	MECHANICALLY STABILIZED EARTH	TMK	TELEPHONE LINE – MARKED
CPD	CONCRETE PAD	MPOST	METAL POST	TPED	TELEPHONE PEDESTAL
CON	CONIFEROUS TREE	MWELL	MONITORING WELL	TL	TEST LEAD
CONST.	CONSTRUCT(ION)	NAD	NORTH AMERICAN DATUM	TWR	TOWER
CU	CONTINUATION UNKNOWN	NTS	NOT TO SCALE	TWY	TRAVELED WAY
CMP	CORRUGATED METAL PIPE	N/F	NOW OR FORMERLY	TSP	TRAFFIC SIGNAL POLE
CPP	CORRUGATED PLASTIC PIPE	ODWY	OTHER DIRT DRIVEWAY	T.W.	TOP OF WALL
DSWL	DASHED SINGLE WHITE LINE	OTFC	OTHER FENCE	TYP.	TYPICAL
DSYL	DASHED SINGLE YELLOW LINE	PAVT.	PAVEMENT	UTC	UTILITY COVER
DEC	DECIDUOUS TREE	PED	PEDESTRIAN	UTP, UP	UTILITY POLE
DDWY	DIRT DRIVEWAY	PDWY	PAVED DRIVEWAY	VT SPC	VERMONT STATE PLANE COORDINATE
DDYL	DOUBLE DASHED YELLOW LINE	P.C.	POINT OF CURVATURE	VEC	VERMONT ELECTRIC COOPERATIVE
D	DRAIN	P.C.C.	POINT OF COMPOUND CURVATURE	VELCO	VERMONT ELECTRIC POWER COMPANY
DMH	DRAINAGE MANHOLE	PGL	PROFILE GRADE LINE	VERT.	VERTICAL
DTWY	DIRT TRAVELED WAY	P.I.	POINT OF INTERSECTION	WMK	WATER LINE – MARKED
DWY	DRIVEWAY	(PAS)	PRIME AGRICULTURAL SOIL	W.M.	WATER METER/WATER MAIN
DYCL	DOUBLE YELLOW CENTERLINE	ℙ, P/L	PROPERTY LINE	WSO	WATER SHUT OFF
EOP	EDGE OF PAVEMENT	PM	PARKING METER	WV	WATER VALVE
E	ELECTRIC	PWWY	PAVED WALKWAY	WIF	WIRE FENCE
EBOX	ELECTRIC BOX	P.R.C.	POINT OF REVERSE CURVATURE	WDFC	WOOD FENCE
EHH	ELECTRIC HANDHOLE	P.C.	POINT OF CURVATURE	WPOST	WOOD POST
EMK	ELECTRIC LINE – MARKED	PLA	PLANTER	X–ING	CROSSING
ELEV. (OR EL)	ELEVATION	P.T.	POINT OF TANGENCY		

CONSTRUCTION NOTES

1. PROPOSED PIPE IS 12.75" O.D. ITS WALL THICKNESS AND PROTECTIVE COATINGS VARY DEPENDING ON CLASS DETERMINATION AND SITE CONDITIONS.

2. AREAS WHERE THE PIPE IS INSTALLED IN ROCK TRENCH SHALL REQUIRE THE EPOXY POLYETHYLENE 10/40 COATED PIPE TO BE WRAPPED WITH TUFF N NUFF ROCK SHIELD. CONTRACTOR TO IDENTIFY AND DOCUMENT THESE AREAS DURING INSTALLATION.

3. ALL CONSTRUCTION MUST CONFORM TO FEDERAL SPECIFICATIONS, PART 192 IN TITLE 49 CFR AND APPLICABLE, STATE AND LOCAL REGULATIONS.

4. ALL CONSTRUCTION SIGNING, DRUMS, BARRICADES AND OTHER DEVICES SHALL CONFORM WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) INCLUDING ALL REVISIONS AND ADENDA.

5. ALL VEHICLES ARE TO BE HIGHLY VISIBLE USING ROTATING BEACONS AND BE MARKED BY USE OF TRAFFIC CONES.

6. VERMONT GAS SYSTEMS SHALL NOTIFY EACH ABUTTER AT LEAST 48 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY OBSTRUCTION OF ACCESS.

7. CONTRACTOR SHALL MAINTAIN 1–FOOT MINIMUM CLEARANCE BETWEEN PROPOSED PIPELINES AND OTHER UTILITIES.

8. CONTRACTOR SHALL REMOVE AND REPLACE EXISTING RIGHT OF WAY FENCE AS NECESSARY.

9. CONTRACTOR SHALL SUPPLY TEMPORARY ROAD SIGNS AS NECESSARY.

10. ALL TRENCH EXCAVATION PROTECTION SYSTEMS SHALL BE IN COMPLIANCE WITH OSHA SPECIFICATIONS.

11. CONTRACTOR MUST CONFIRM WITH OWNER AND ENGINEER THAT ALL PERMITS AND RIGHTS OF WAY HAVE BEEN OBTAINED, REVIEWED, AND UNDERSTOOD BEFORE CONSTRUCTING IN ANY AREA.

12. THE PIPE COATING TYPE, LOCATION AND LENGTH IDENTIFIED ON THE DRAWINGS IS TO BE VERIFIED PRIOR TO CONSTRUCTION BASED ON ACTUAL FIELD CONDITIONS. THE CONTRACTOR SHALL PROVIDE THE APPROPRIATE PIPE COATING TYPE, LOCATION AND LENGTH AS DETERMINED BY THE CONSTRUCTION MANAGER BASED ON ACTUAL CONDITIONS.

GENERAL NOTES

1.TOPOGRAPHICAL DETAIL SHOWN HEREON IS THE RESULT OF SURVEY CONDUCTED BY CHA IN THE SUMMER AND FALL OF 2012 AND THE COMPILATION OF EXISTING TOPOGRAPHIC DATA PROVIDED BY THE VERMONT AGENCY OF TRANSPORTATION (VTRANS) AND THE VERMONT TRANSMISSION COMPANY (VELCO).

2. PROPERTY LINES SHOWN HEREON ARE BASED ON TAX MAP AND DO NOT REPRESENT A PROPERTY LINE RETRACEMENT SURVEY EFFORT.

3. LOCATION OF ANY IDENTIFIED UNDERGROUND UTILITIES IS APPROXIMATE ONLY, AND IS NOT WARRANTED TO BE CORRECT. ADDITIONAL UTILITIES MAY EXIST WHICH ARE NOT INDICATED ON THESE PLANS. ALL EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR FOR SERVICE, SIZE, INVERT ELEVATIONS, LOCATION, ETC. CONTRACTOR MUST NOTIFY DIG–SAFE VERMONT AT 811 AT LEAST 48 HOURS PRIOR TO ANY CONSTRUCTION.

4. SURVEY WAS CONDUCTED IN VERMONT ZONE, NAD83 HORIZONTAL COORDINATE SYSTEM. ELEVATIONS ARE BASED ON NAVD 88 AND REFERENCED TO TEMPORARY BENCHMARKS AS SHOWN ON THE PLANS.

5. ENVIRONMENTAL CONDITIONS INFORMATION SHOWN IS THE RESULT OF SURVEY CONDUCTED BY VHB IN 2013 AND 2014.

6. THE LOCUS LIES IN VARIOUS FIRM ZONES, DESCRIBED ON THE FOLLOWING COMMUNITY PANEL NUMBERS: 5007C0143 D, 5007C0144 D, 5007C0163 D, 5007C0164 D, 5007C0277 D, 5007C0281 D, 5007C0279 D, 5007C0290 D, 5001670005 A, 5001670010 A, 5000090002 A, 5000090004 A, AND 5000080003 A

7. THE PURPOSE OF THIS PLAN SET IS TO IDENTIFY TO THE APPROPRIATE PERMITTING AGENCIES THE PROPOSED LOCATION FOR A NATURAL GAS PIPELINE AND ITS LOCATION RELATIVE TO TOPOGRAPHICAL FEATURES, EXISTING, AND PROPOSED UTILITIES.

8. CONTRACTOR MUST CONFIRM WITH OWNER AND ENGINEER THAT ALL PERMITS AND R.O.W. HAVE BEEN OBTAINED BEFORE CONSTRUCTING IN ANY AREA.

STATE OF VERMONT — MICHAEL E. HOLLOWAY — NO. 97764 — CIVIL — LICENSED PROFESSIONAL ENGINEER

VHB Vanasse Hangen Brustlin, Inc.

DWG. NO.	REFERENCE DWG.	REV	DSN	CK		DESCRIPTION
		3	GJM	BCK		IFC 2016 EDITS (05/2016)
		2	BCK	TDB		CP TEST LEAD EDIT (9/14/15)
		1	BCK	TDB		PILLSBURY REROUTE & REDMOND RD. HDD CHANGE (6/05/15)

		BID		CONSTRUCTION	
	INITIALS	DATE	INITIALS	DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

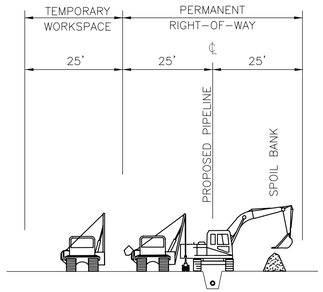
VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
LEGEND & NOTES

LOC. CHITTENDEN & ADDISON COUNTIES

Vermont Gas

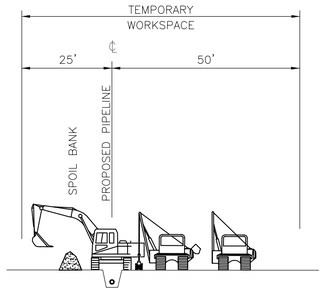
CHA — 38 Eastwood Drive, Suite 105, South Burlington, VT 05403, Main: (802) 735-0372 · www.chacompanies.com

YEAR: 2016 | W.O. | SCALE: N/A | DWG. ANGP–T–G–003 | REV. 3



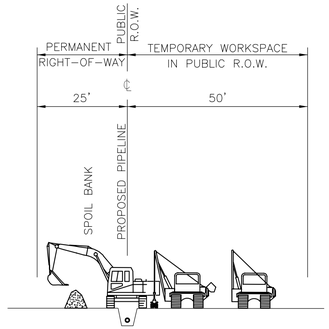
CONSTRUCTION TYPE 1A
NOT TO SCALE

NOTE:
1. THIS CONFIGURATION IS FOR 75' CONSTRUCTION SPACE AND DOES NOT DEPICT ADDITIONAL TEMP. WORKSPACE.
2. ADDITIONAL TEMP. WORKSPACE HAS BEEN TYPICALLY INCORPORATED ON THE ALIGNMENT SHEETS FOR AREAS SUCH AS ROAD, RIVER/STREAM/WATERBODY, AND ARCHEOLOGICAL SITE CROSSINGS WHERE HORIZONTAL DIRECTIONAL DRILL CONSTRUCTION HAS BEEN PROPOSED.
3. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS) IN THE SOIL TYPE BAND OF THE EPSC SHEETS, SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.
4. SEE ALIGNMENT SHEETS FOR LOCATIONS OF THIS CONFIGURATION.
5. SEE DETAIL #7 ON ANGP–T–G–015 FOR PIPELINE MINIMUM COVER REQUIREMENTS.



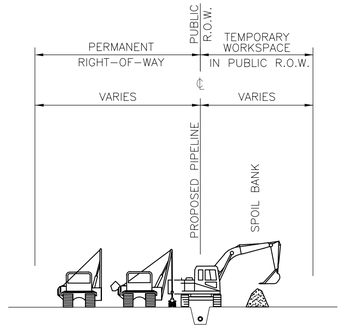
CONSTRUCTION TYPE 1B
NOT TO SCALE

NOTE:
1. THIS CONFIGURATION IS FOR 75' CONSTRUCTION SPACE AND DOES NOT DEPICT ADDITIONAL TEMP. WORKSPACE.
2. ADDITIONAL TEMP. WORKSPACE HAS BEEN TYPICALLY INCORPORATED ON THE ALIGNMENT SHEETS FOR AREAS SUCH AS ROAD, RIVER/STREAM/WATERBODY, AND ARCHEOLOGICAL SITE CROSSINGS WHERE HORIZONTAL DIRECTIONAL DRILL CONSTRUCTION HAS BEEN PROPOSED.
3. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS) IN THE SOIL TYPE BAND OF THE EPSC SHEETS, SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.
4. SEE ALIGNMENT SHEETS FOR LOCATIONS OF THIS CONFIGURATION.
5. SEE DETAIL #7 ON ANGP–T–G–015 FOR PIPELINE MINIMUM COVER REQUIREMENTS.



CONSTRUCTION TYPE 1C
NOT TO SCALE

NOTE:
1. THIS CONFIGURATION IS FOR 75' CONSTRUCTION SPACE AND DOES NOT DEPICT ADDITIONAL TEMP. WORKSPACE.
2. ADDITIONAL TEMP. WORKSPACE HAS BEEN TYPICALLY INCORPORATED ON THE ALIGNMENT SHEETS FOR AREAS SUCH AS ROAD, RIVER/STREAM/WATERBODY, AND ARCHEOLOGICAL SITE CROSSINGS WHERE HORIZONTAL DIRECTIONAL DRILL CONSTRUCTION HAS BEEN PROPOSED.
3. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS) IN THE SOIL TYPE BAND OF THE EPSC SHEETS, SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.
4. SEE ALIGNMENT SHEETS FOR LOCATIONS OF THIS CONFIGURATION.
5. SEE DETAIL #7 ON ANGP–T–G–015 FOR PIPELINE MINIMUM COVER REQUIREMENTS.



CONSTRUCTION TYPE 1D
NOT TO SCALE

NOTE:
1. THIS CONFIGURATION IS FOR VARIABLE CONSTRUCTION SPACE AND DOES NOT DEPICT ADDITIONAL TEMP. WORKSPACE.
2. ADDITIONAL TEMP. WORKSPACE HAS BEEN TYPICALLY INCORPORATED ON THE ALIGNMENT SHEETS FOR AREAS SUCH AS ROAD, RIVER/STREAM/WATERBODY, AND ARCHEOLOGICAL SITE CROSSINGS WHERE HORIZONTAL DIRECTIONAL DRILL CONSTRUCTION HAS BEEN PROPOSED.
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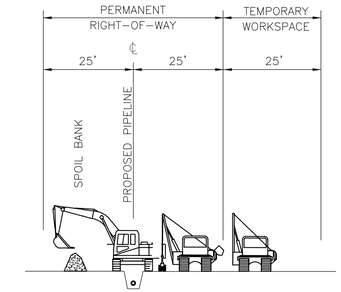
4. SEE ALIGNMENT SHEETS FOR LOCATIONS OF THIS CONFIGURATION.
5. SEE DETAIL #7 ON ANGP–T–G–015 FOR PIPELINE MINIMUM COVER REQUIREMENTS.



CONSTRUCTION TYPE 1E
NOT TO SCALE

NOTE:
1. THIS CONFIGURATION IS FOR 75' CONSTRUCTION SPACE AND DOES NOT DEPICT ADDITIONAL TEMP. WORKSPACE.
2. ADDITIONAL TEMP. WORKSPACE HAS BEEN TYPICALLY INCORPORATED ON THE ALIGNMENT SHEETS FOR AREAS SUCH AS ROAD, RIVER/STREAM/WATERBODY, AND ARCHEOLOGICAL SITE CROSSINGS WHERE HORIZONTAL DIRECTIONAL DRILL CONSTRUCTION HAS BEEN PROPOSED.
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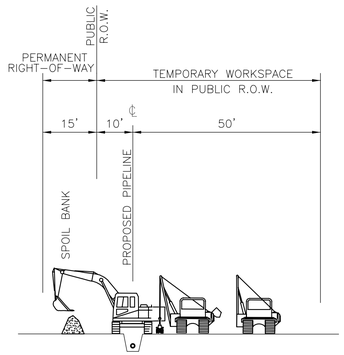
4. SEE ALIGNMENT SHEETS FOR LOCATIONS OF THIS CONFIGURATION.
5. SEE DETAIL #7 ON ANGP–T–G–015 FOR PIPELINE MINIMUM COVER REQUIREMENTS.



CONSTRUCTION TYPE 1F
NOT TO SCALE

NOTE:
1. THIS CONFIGURATION IS FOR 75' CONSTRUCTION SPACE AND DOES NOT DEPICT ADDITIONAL TEMP. WORKSPACE.
2. ADDITIONAL TEMP. WORKSPACE HAS BEEN TYPICALLY INCORPORATED ON THE ALIGNMENT SHEETS FOR AREAS SUCH AS ROAD, RIVER/STREAM/WATERBODY, AND ARCHEOLOGICAL SITE CROSSINGS WHERE HORIZONTAL DIRECTIONAL DRILL CONSTRUCTION HAS BEEN PROPOSED.
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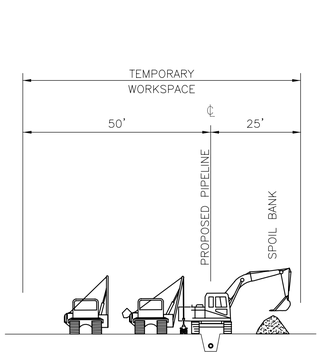
4. SEE ALIGNMENT SHEETS FOR LOCATIONS OF THIS CONFIGURATION.
5. SEE DETAIL #7 ON ANGP–T–G–015 FOR PIPELINE MINIMUM COVER REQUIREMENTS.



CONSTRUCTION TYPE 1G
NOT TO SCALE

NOTE:
1. THIS CONFIGURATION IS FOR 75' CONSTRUCTION SPACE AND DOES NOT DEPICT ADDITIONAL TEMP. WORKSPACE.
2. ADDITIONAL TEMP. WORKSPACE HAS BEEN TYPICALLY INCORPORATED ON THE ALIGNMENT SHEETS FOR AREAS SUCH AS ROAD, RIVER/STREAM/WATERBODY, AND ARCHEOLOGICAL SITE CROSSINGS WHERE HORIZONTAL DIRECTIONAL DRILL CONSTRUCTION HAS BEEN PROPOSED.
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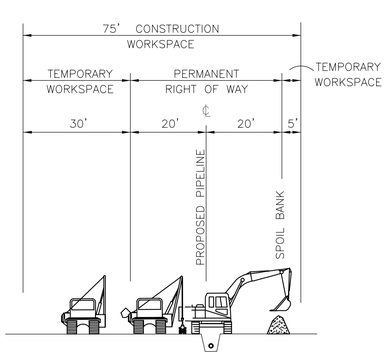
4. SEE ALIGNMENT SHEETS FOR LOCATIONS OF THIS CONFIGURATION.
5. SEE DETAIL #7 ON ANGP–T–G–015 FOR PIPELINE MINIMUM COVER REQUIREMENTS.



CONSTRUCTION TYPE 1H
NOT TO SCALE

NOTE:
1. THIS CONFIGURATION IS FOR 75' CONSTRUCTION SPACE AND DOES NOT DEPICT ADDITIONAL TEMP. WORKSPACE.
2. ADDITIONAL TEMP. WORKSPACE HAS BEEN TYPICALLY INCORPORATED ON THE ALIGNMENT SHEETS FOR AREAS SUCH AS ROAD, RIVER/STREAM/WATERBODY, AND ARCHEOLOGICAL SITE CROSSINGS WHERE HORIZONTAL DIRECTIONAL DRILL CONSTRUCTION HAS BEEN PROPOSED.
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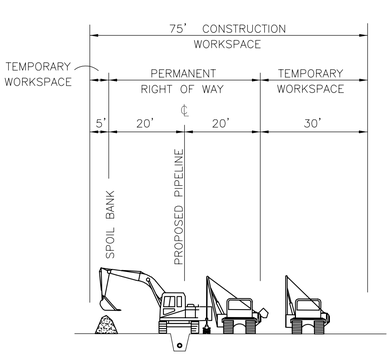
4. SEE ALIGNMENT SHEETS FOR LOCATIONS OF THIS CONFIGURATION.
5. SEE DETAIL #7 ON ANGP–T–G–015 FOR PIPELINE MINIMUM COVER REQUIREMENTS.



CONSTRUCTION TYPE 1J
NOT TO SCALE

NOTE:
1. THIS CONFIGURATION IS FOR 75' CONSTRUCTION SPACE AND DOES NOT DEPICT ADDITIONAL TEMP. WORKSPACE.
2. ADDITIONAL TEMP. WORKSPACE HAS BEEN TYPICALLY INCORPORATED ON THE ALIGNMENT SHEETS FOR AREAS SUCH AS ROAD, RIVER/STREAM/WATERBODY, AND ARCHEOLOGICAL SITE CROSSINGS WHERE HORIZONTAL DIRECTIONAL DRILL CONSTRUCTION HAS BEEN PROPOSED.
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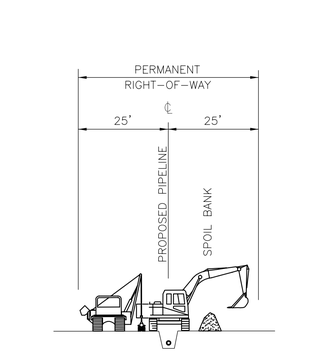
4. SEE ALIGNMENT SHEETS FOR LOCATIONS OF THIS CONFIGURATION.
5. SEE DETAIL #7 ON ANGP–T–G–015 FOR PIPELINE MINIMUM COVER REQUIREMENTS.



CONSTRUCTION TYPE 2A
NOT TO SCALE

NOTE:
1. THIS CONFIGURATION IS FOR 50' CONSTRUCTION SPACE AND DOES NOT DEPICT ADDITIONAL TEMP. WORKSPACE.
2. ADDITIONAL TEMP. WORKSPACE HAS BEEN TYPICALLY INCORPORATED ON THE ALIGNMENT SHEETS FOR AREAS SUCH AS ROAD, RIVER/STREAM/WATERBODY, AND ARCHEOLOGICAL SITE CROSSINGS WHERE HORIZONTAL DIRECTIONAL DRILL CONSTRUCTION HAS BEEN PROPOSED.
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4. SEE ALIGNMENT SHEETS FOR LOCATIONS OF THIS CONFIGURATION.
5. SEE DETAIL #7 ON ANGP–T–G–015 FOR PIPELINE MINIMUM COVER REQUIREMENTS.

DWG. NO.	REFERENCE DWG.	REV	DSN	CK		DESCRIPTION	BID		CONSTRUCTION	
							INITIALS	DATE	INITIALS	DATE
						ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
						DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
						DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
						DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
						DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
CONSTRUCTION CONFIGURATION DETAILS

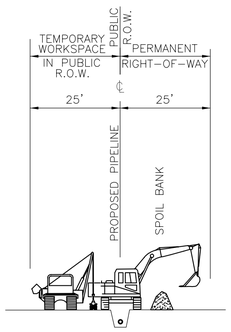
LOC. CHITTENDEN & ADDISON COUNTIES

YEAR: 2016 | W.O. | SCALE: NOTED | DWG. ANGP–T–G–004 | REV. 0

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com



CONSTRUCTION TYPE 2B
NOT TO SCALE

NOTE:
1. THIS CONFIGURATION IS FOR 50' CONSTRUCTION SPACE AND DOES NOT DEPICT ADDITIONAL TEMP. WORKSPACE.
2. ADDITIONAL TEMP. WORKSPACE HAS BEEN TYPICALLY INCORPORATED ON THE ALIGNMENT SHEETS FOR AREAS SUCH AS ROAD, RIVER/STREAM/WATERBODY, AND ARCHEOLOGICAL SITE CROSSINGS WHERE HORIZONTAL DIRECTIONAL DRILL CONSTRUCTION HAS BEEN PROPOSED.
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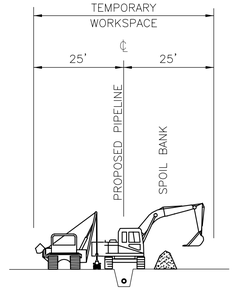
4. SEE ALIGNMENT SHEETS FOR LOCATIONS OF THIS CONFIGURATION.
5. SEE DETAIL #7 ON ANGP-T-G-015 FOR PIPELINE MINIMUM COVER REQUIREMENTS.



CONSTRUCTION TYPE 2C
NOT TO SCALE

NOTE:
1. THIS CONFIGURATION IS FOR 50' CONSTRUCTION SPACE AND DOES NOT DEPICT ADDITIONAL TEMP. WORKSPACE.
2. ADDITIONAL TEMP. WORKSPACE HAS BEEN TYPICALLY INCORPORATED ON THE ALIGNMENT SHEETS FOR AREAS SUCH AS ROAD, RIVER/STREAM/WATERBODY, AND ARCHEOLOGICAL SITE CROSSINGS WHERE HORIZONTAL DIRECTIONAL DRILL CONSTRUCTION HAS BEEN PROPOSED.
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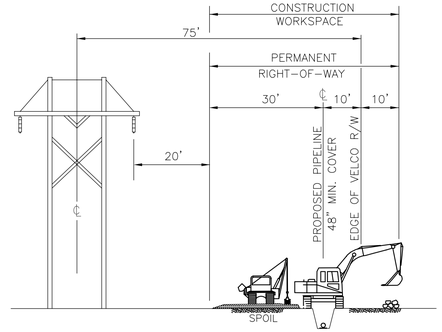
4. SEE ALIGNMENT SHEETS FOR LOCATIONS OF THIS CONFIGURATION.
5. SEE DETAIL #7 ON ANGP-T-G-015 FOR PIPELINE MINIMUM COVER REQUIREMENTS.



CONSTRUCTION TYPE 2D
NOT TO SCALE

NOTE:
1. THIS CONFIGURATION IS FOR 50' CONSTRUCTION SPACE AND DOES NOT DEPICT ADDITIONAL TEMP. WORKSPACE.
2. ADDITIONAL TEMP. WORKSPACE HAS BEEN TYPICALLY INCORPORATED ON THE ALIGNMENT SHEETS FOR AREAS SUCH AS ROAD, RIVER/STREAM/WATERBODY, AND ARCHEOLOGICAL SITE CROSSINGS WHERE HORIZONTAL DIRECTIONAL DRILL CONSTRUCTION HAS BEEN PROPOSED.
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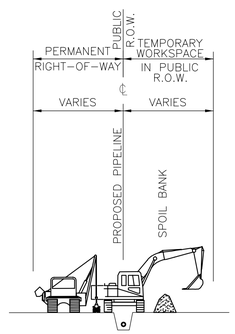
4. SEE ALIGNMENT SHEETS FOR LOCATIONS OF THIS CONFIGURATION.
5. 10-FOOT TEMPORARY WORKSPACE TO THE WEST OF VELCO ROW REPLACED BY 20-FOOT WORKROAD CORRIDOR LOCATED TO THE EAST OF VELCO STRUCTURES FROM STATION 1639+90 TO 1666+50.



CONSTRUCTION TYPE 2E
NOT TO SCALE

NOTE:
1. THIS CONFIGURATION IS FOR VARIABLE CONSTRUCTION SPACE AND DOES NOT DEPICT ADDITIONAL TEMP. WORKSPACE.
2. ADDITIONAL TEMP. WORKSPACE HAS BEEN TYPICALLY INCORPORATED ON THE ALIGNMENT SHEETS FOR AREAS SUCH AS ROAD, RIVER/STREAM/WATERBODY, AND ARCHEOLOGICAL SITE CROSSINGS WHERE HORIZONTAL DIRECTIONAL DRILL CONSTRUCTION HAS BEEN PROPOSED.
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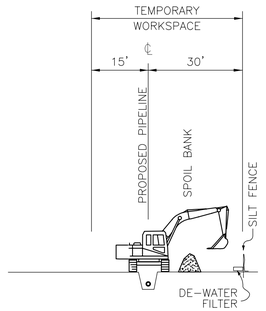
4. SEE ALIGNMENT SHEETS FOR LOCATIONS OF THIS CONFIGURATION.
5. SEE DETAIL #7 ON ANGP-T-G-015 FOR PIPELINE MINIMUM COVER REQUIREMENTS.



CONSTRUCTION TYPE 3
NOT TO SCALE

NOTE:
1. THIS CONFIGURATION IS FOR ROADSIDE CONSTRUCTION SPACE AND DOES NOT DEPICT ADDITIONAL TEMP. WORKSPACE.
2. ADDITIONAL TEMP. WORKSPACE HAS BEEN TYPICALLY INCORPORATED ON THE ALIGNMENT SHEETS FOR AREAS SUCH AS ROAD, RIVER/STREAM/WATERBODY, AND ARCHEOLOGICAL SITE CROSSINGS WHERE HORIZONTAL DIRECTIONAL DRILL CONSTRUCTION HAS BEEN PROPOSED.
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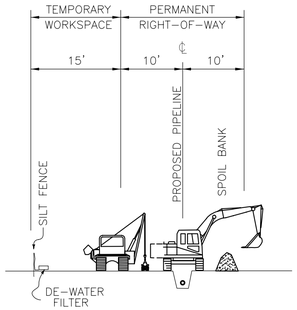

CONSTRUCTION TYPE 3A
NOT TO SCALE

NOTE:
1. THIS CONFIGURATION IS FOR ROADSIDE CONSTRUCTION SPACE AND DOES NOT DEPICT ADDITIONAL TEMP. WORKSPACE.
2. ADDITIONAL TEMP. WORKSPACE HAS BEEN TYPICALLY INCORPORATED ON THE ALIGNMENT SHEETS FOR AREAS SUCH AS ROAD, RIVER/STREAM/WATERBODY, AND ARCHEOLOGICAL SITE CROSSINGS WHERE HORIZONTAL DIRECTIONAL DRILL CONSTRUCTION HAS BEEN PROPOSED.
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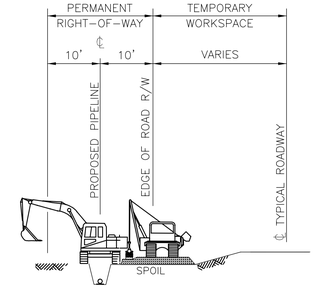
4. SEE ALIGNMENT SHEETS FOR LOCATIONS OF THIS CONFIGURATION.
5. SEE DETAIL #7 ON ANGP-T-G-015 FOR PIPELINE MINIMUM COVER REQUIREMENTS.



CONSTRUCTION TYPE 4A
NOT TO SCALE

NOTE:
1. THIS CONFIGURATION IS FOR ROADSIDE CONSTRUCTION SPACE AND DOES NOT DEPICT ADDITIONAL TEMP. WORKSPACE.
2. ADDITIONAL TEMP. WORKSPACE HAS BEEN TYPICALLY INCORPORATED ON THE ALIGNMENT SHEETS FOR AREAS SUCH AS ROAD, RIVER/STREAM/WATERBODY, AND ARCHEOLOGICAL SITE CROSSINGS WHERE HORIZONTAL DIRECTIONAL DRILL CONSTRUCTION HAS BEEN PROPOSED.
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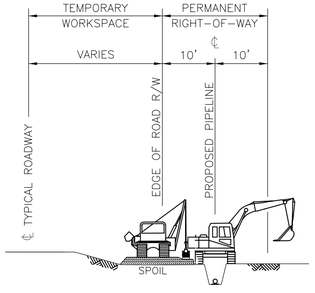

CONSTRUCTION TYPE 4B
NOT TO SCALE

NOTE:
1. THIS CONFIGURATION IS FOR ROADSIDE CONSTRUCTION SPACE AND DOES NOT DEPICT ADDITIONAL TEMP. WORKSPACE.
2. ADDITIONAL TEMP. WORKSPACE HAS BEEN TYPICALLY INCORPORATED ON THE ALIGNMENT SHEETS FOR AREAS SUCH AS ROAD, RIVER/STREAM/WATERBODY, AND ARCHEOLOGICAL SITE CROSSINGS WHERE HORIZONTAL DIRECTIONAL DRILL CONSTRUCTION HAS BEEN PROPOSED.
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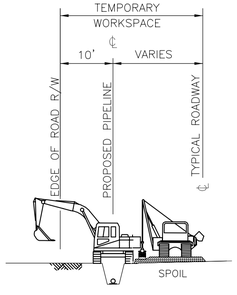
4. SEE ALIGNMENT SHEETS FOR LOCATIONS OF THIS CONFIGURATION.
5. SEE DETAIL #7 ON ANGP-T-G-015 FOR PIPELINE MINIMUM COVER REQUIREMENTS.



CONSTRUCTION TYPE 4C
NOT TO SCALE

NOTE:
1. THIS CONFIGURATION IS FOR ROADSIDE CONSTRUCTION SPACE AND DOES NOT DEPICT ADDITIONAL TEMP. WORKSPACE.
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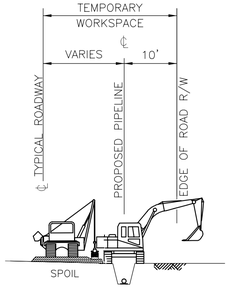
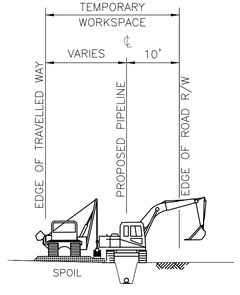


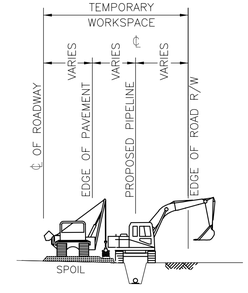
CONSTRUCTION TYPE 4D
NOT TO SCALE

NOTE:
1. THIS CONFIGURATION IS FOR ROADSIDE CONSTRUCTION SPACE AND DOES NOT DEPICT ADDITIONAL TEMP. WORKSPACE.
2. ADDITIONAL TEMP. WORKSPACE HAS BEEN TYPICALLY INCORPORATED ON THE ALIGNMENT SHEETS FOR AREAS SUCH AS ROAD, RIVER/STREAM/WATERBODY, AND ARCHEOLOGICAL SITE CROSSINGS WHERE HORIZONTAL DIRECTIONAL DRILL CONSTRUCTION HAS BEEN PROPOSED.
3. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS) IN THE SOIL TYPE BAND OF THE EPSC SHEETS, SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.
4. SEE ALIGNMENT SHEETS FOR LOCATIONS OF THIS CONFIGURATION.
5. SEE DETAIL #7 ON ANGP-T-G-015 FOR PIPELINE MINIMUM COVER REQUIREMENTS.



CONSTRUCTION TYPE 4E
NOT TO SCALE

NOTE:
1. THIS CONFIGURATION IS FOR ROADSIDE CONSTRUCTION SPACE AND DOES NOT DEPICT ADDITIONAL TEMP. WORKSPACE.
2. ADDITIONAL TEMP. WORKSPACE HAS BEEN TYPICALLY INCORPORATED ON THE ALIGNMENT SHEETS FOR AREAS SUCH AS ROAD, RIVER/STREAM/WATERBODY, AND ARCHEOLOGICAL SITE CROSSINGS WHERE HORIZONTAL DIRECTIONAL DRILL CONSTRUCTION HAS BEEN PROPOSED.
3. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS) IN THE SOIL TYPE BAND OF THE EPSC SHEETS, SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.
4. SEE ALIGNMENT SHEETS FOR LOCATIONS OF THIS CONFIGURATION.
5. SEE DETAIL #7 ON ANGP-T-G-015 FOR PIPELINE MINIMUM COVER REQUIREMENTS.



CONSTRUCTION TYPE 4F
NOT TO SCALE

NOTE:
1. THIS CONFIGURATION IS FOR ROADSIDE CONSTRUCTION SPACE AND DOES NOT DEPICT ADDITIONAL TEMP. WORKSPACE.
2. ADDITIONAL TEMP. WORKSPACE HAS BEEN TYPICALLY INCORPORATED ON THE ALIGNMENT SHEETS FOR AREAS SUCH AS ROAD, RIVER/STREAM/WATERBODY, AND ARCHEOLOGICAL SITE CROSSINGS WHERE HORIZONTAL DIRECTIONAL DRILL CONSTRUCTION HAS BEEN PROPOSED.
3. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS) IN THE SOIL TYPE BAND OF THE EPSC SHEETS, SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.
4. SEE ALIGNMENT SHEETS FOR LOCATIONS OF THIS CONFIGURATION.
5. SEE DETAIL #7 ON ANGP-T-G-015 FOR PIPELINE MINIMUM COVER REQUIREMENTS.

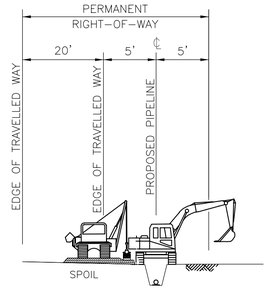
DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION		BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
						ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
						DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
						DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
						DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
						DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
CONSTRUCTION CONFIGURATION DETAILS
LOC. CHITTENDEN & ADDISON COUNTIES
YEAR: 2016 | W.O. | SCALE: NOTED | DWG. ANGP-T-G-005 | REV. 0

Vermont Gas

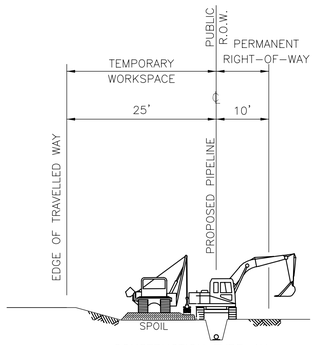
VHB Vanasse Hangen Brustlin, Inc.

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 - www.chacompanies.com



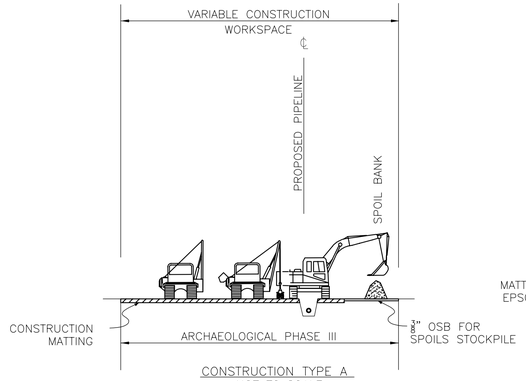
CONSTRUCTION TYPE 4G
NOT TO SCALE

NOTE:
1. THIS CONFIGURATION IS FOR ROADSIDE CONSTRUCTION SPACE AND DOES NOT DEPICT ADDITIONAL TEMP. WORKSPACE.
2. ADDITIONAL TEMP. WORKSPACE HAS BEEN TYPICALLY INCORPORATED ON THE ALIGNMENT SHEETS FOR AREAS SUCH AS ROAD, RIVER/STREAM/WATERBODY, AND ARCHEOLOGICAL SITE CROSSINGS WHERE HORIZONTAL DIRECTIONAL DRILL CONSTRUCTION HAS BEEN PROPOSED.
3. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS) IN THE SOIL TYPE BAND OF THE EPSC SHEETS, SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.
4. SEE ALIGNMENT SHEETS FOR LOCATIONS OF THIS CONFIGURATION.
5. SEE DETAIL #7 ON ANGP–T–G–015 FOR PIPELINE MINIMUM COVER REQUIREMENTS.



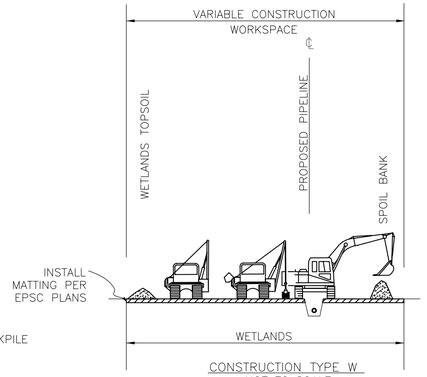
CONSTRUCTION TYPE 4H
NOT TO SCALE

NOTE:
1. THIS CONFIGURATION IS FOR ROADSIDE CONSTRUCTION SPACE AND DOES NOT DEPICT ADDITIONAL TEMP. WORKSPACE.
2. ADDITIONAL TEMP. WORKSPACE HAS BEEN TYPICALLY INCORPORATED ON THE ALIGNMENT SHEETS FOR AREAS SUCH AS ROAD, RIVER/STREAM/WATERBODY, AND ARCHEOLOGICAL SITE CROSSINGS WHERE HORIZONTAL DIRECTIONAL DRILL CONSTRUCTION HAS BEEN PROPOSED.
3. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS) IN THE SOIL TYPE BAND OF THE EPSC SHEETS, SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.
4. SEE ALIGNMENT SHEETS FOR LOCATIONS OF THIS CONFIGURATION.
5. SEE DETAIL #7 ON ANGP–T–G–015 FOR PIPELINE MINIMUM COVER REQUIREMENTS.



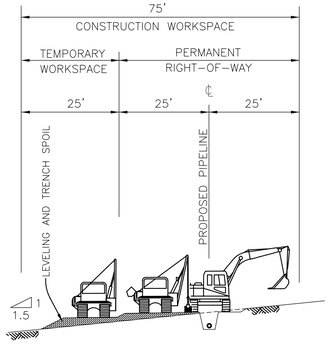
CONSTRUCTION TYPE A
NOT TO SCALE

NOTE:
1. THIS CONFIGURATION IS FOR VARIABLE CONSTRUCTION SPACE IN "ARCHAEOLOGICAL PHASE III" AREAS AND DOES NOT DEPICT ADDITIONAL TEMP. WORKSPACE. THE PHASE III AREAS ARE AS FOLLOWS: VT–AD–483, LOCUS 2 (8/14/2013), VT–CH–414 (8/14/2013), VT–AD–456, LOCUS 3, VT–AD–1559, VT–AD–138, LOCUS 2 (8/14/2013), VT–AD–87, LOCUS 2 (8/14/2013), 1 VT–AD–446, VT–AD–793, VT–AD–808 LOCUS 1 AND 2, VT–CH–103, VT–AD–1625.
2. ADDITIONAL TEMP. WORKSPACE HAS BEEN TYPICALLY INCORPORATED ON THE ALIGNMENT & EPSC SHEETS FOR AREAS SUCH AS ROAD, RIVER/STREAM/WATERBODY, AND ARCHEOLOGICAL SITE CROSSINGS WHERE HORIZONTAL DIRECTIONAL DRILL CONSTRUCTION HAS BEEN PROPOSED.
3. SEE ALIGNMENT & EPSC SHEETS FOR LOCATIONS OF THIS CONSTRUCTION CONFIGURATION.
4. WHEN BACKFILLING, SOILS SHALL BE REPLACED IN ORDER THEY WERE EXCAVATED, WITH TOPSOIL AS UPPER LAYER FILL AND COMPACT SUBSOIL TO DEPTH OF ADJACENT NATIVE SUBSOIL/TOPSOIL INTERFACE. REPLACE TOPSOIL AS UPPER LAYER AND BLEND TO EXISTING GRADE OF UNDISTURBED SOILS. DISPOSE OF EXCESS SUBSOIL AT SUITABLE LOCATION AS APPROVED BY THE OSPC.
5. SEE EPSC PLAN "ADDITIONAL ENVIRONMENTAL NOTES" FOR ADDITIONAL INSTRUCTIONS RELATED TO CONSTRUCTION IN "ARCHAEOLOGICAL PHASE III" AREAS, INCLUDING FINAL STABILIZATION NOTES.
6. SEE DETAIL #7 ON ANGP–T–G–015 FOR PIPELINE MINIMUM COVER REQUIREMENTS.



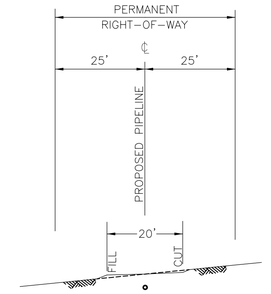
CONSTRUCTION TYPE W
NOT TO SCALE

NOTE:
1. THIS CONFIGURATION IS FOR VARIABLE CONSTRUCTION SPACE IN WETLANDS AND DOES NOT DEPICT ADDITIONAL TEMP. WORKSPACE.
2. ADDITIONAL TEMP. WORKSPACE HAS BEEN TYPICALLY INCORPORATED ON THE ALIGNMENT & EPSC SHEETS FOR AREAS SUCH AS ROAD, RIVER/STREAM/WATERBODY, AND ARCHEOLOGICAL SITE CROSSINGS WHERE HORIZONTAL DIRECTIONAL DRILL CONSTRUCTION HAS BEEN PROPOSED.
3. SEE ALIGNMENT & EPSC SHEETS FOR LOCATIONS OF THIS CONFIGURATION.
4. WHEN BACK–PILING, SOILS SHALL BE REPLACED IN ORDER THEY WERE EXCAVATED, WITH TOPSOIL AS UPPER LAYER FILL AND COMPACT SUBSOIL TO DEPTH OF ADJACENT NATIVE SUBSOIL/TOPSOIL INTERFACE. REPLACE TOPSOIL AS UPPER LAYER AND BLEND TO EXISTING GRADE OF UNDISTURBED SOILS. DISPOSE OF EXCESS SUBSOIL AT SUITABLE LOCATION AS APPROVED BY THE OSPC.
5. SEE EPSC PLAN "ADDITIONAL ENVIRONMENTAL NOTES" FOR ADDITIONAL INSTRUCTIONS RELATED TO CONSTRUCTION IN WETLANDS, INCLUDING FINAL STABILIZATION NOTES.
6. SEE DETAIL #7 ON ANGP–T–G–015 FOR PIPELINE MINIMUM COVER REQUIREMENTS.



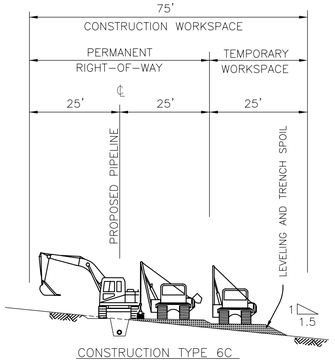
CONSTRUCTION TYPE 6A
NOT TO SCALE

NOTE:
1. THIS CONFIGURATION IS FOR SIDE HILL SLOPE CONSTRUCTION AND DOES NOT DEPICT ADDITIONAL TEMP. WORKSPACE.
2. ADDITIONAL TEMP. WORKSPACE HAS BEEN TYPICALLY INCORPORATED ON THE ALIGNMENT SHEETS FOR AREAS SUCH AS ROAD, RIVER/STREAM/WATERBODY, AND ARCHEOLOGICAL SITE CROSSINGS WHERE HORIZONTAL DIRECTIONAL DRILL CONSTRUCTION HAS BEEN PROPOSED.
3. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS) IN THE SOIL TYPE BAND OF THE EPSC SHEETS, SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.
4. SEE ALIGNMENT SHEETS FOR LOCATIONS OF THIS CONFIGURATION.
5. SEE DETAIL #7 ON ANGP–T–G–015 FOR PIPELINE MINIMUM COVER REQUIREMENTS.



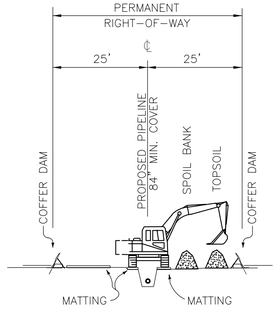
CONSTRUCTION TYPE 6B
NOT TO SCALE
POST CONSTRUCTION

NOTE:
1. THIS CONFIGURATION IS FOR SIDE HILL SLOPE CONSTRUCTION AND DOES NOT DEPICT ADDITIONAL TEMP. WORKSPACE.
2. ADDITIONAL TEMP. WORKSPACE HAS BEEN TYPICALLY INCORPORATED ON THE ALIGNMENT SHEETS FOR AREAS SUCH AS ROAD, RIVER/STREAM/WATERBODY, AND ARCHEOLOGICAL SITE CROSSINGS WHERE HORIZONTAL DIRECTIONAL DRILL CONSTRUCTION HAS BEEN PROPOSED.
3. SEE DETAIL #7 ON ANGP–T–G–015 FOR PIPELINE MINIMUM COVER REQUIREMENTS.



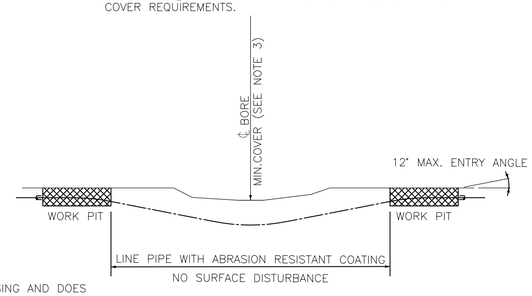
CONSTRUCTION TYPE 6C
NOT TO SCALE

NOTE:
1. THIS CONFIGURATION IS FOR SIDE HILL SLOPE CONSTRUCTION AND DOES NOT DEPICT ADDITIONAL TEMP. WORKSPACE.
2. ADDITIONAL TEMP. WORKSPACE HAS BEEN TYPICALLY INCORPORATED ON THE ALIGNMENT SHEETS FOR AREAS SUCH AS ROAD, RIVER/STREAM/WATERBODY, AND ARCHEOLOGICAL SITE CROSSINGS WHERE HORIZONTAL DIRECTIONAL DRILL CONSTRUCTION HAS BEEN PROPOSED.
3. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS) IN THE SOIL TYPE BAND OF THE EPSC SHEETS, SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.
4. SEE ALIGNMENT SHEETS FOR LOCATIONS OF THIS CONFIGURATION.
5. SEE DETAIL #7 ON ANGP–T–G–015 FOR PIPELINE MINIMUM COVER REQUIREMENTS.



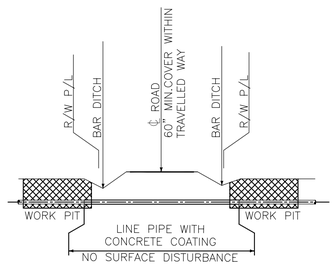
CONSTRUCTION TYPE 7
NOT TO SCALE

NOTE:
1. THIS CONFIGURATION IS FOR STREAM CROSSING AND DOES NOT DEPICT ADDITIONAL TEMP. WORKSPACE.
2. ADDITIONAL TEMP. WORKSPACE HAS BEEN TYPICALLY INCORPORATED ON THE ALIGNMENT SHEETS FOR AREAS SUCH AS ROAD, RIVER/STREAM/WATERBODY, AND ARCHEOLOGICAL SITE CROSSINGS WHERE HORIZONTAL DIRECTIONAL DRILL CONSTRUCTION HAS BEEN PROPOSED.
3. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS) IN THE SOIL TYPE BAND OF THE EPSC SHEETS, SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.
4. SEE ALIGNMENT SHEETS FOR LOCATIONS OF THIS CONFIGURATION.



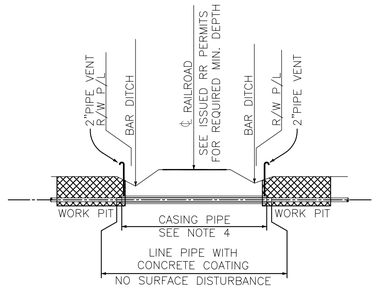
CONSTRUCTION TYPE 8
NOT TO SCALE

NOTE:
1. THIS CONFIGURATION IS FOR OPTIONAL STREAM OR ROAD CROSSING HORIZONTAL DIRECTIONAL DRILL.
2. SEE ALIGNMENT SHEETS FOR LOCATIONS OF THIS CONFIGURATION.
3. SEE TABLE ON ANGP–T–G–020 FOR COVER REQUIREMENTS.



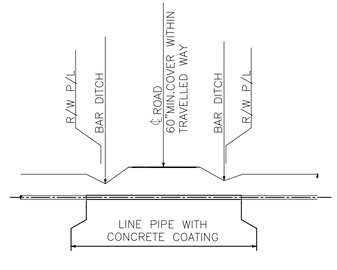
CONSTRUCTION TYPE 9
NOT TO SCALE

NOTE:
1. THIS CONFIGURATION IS FOR UNCASED ROAD CROSSING CONSTRUCTION.
2. SEE ALIGNMENT SHEETS FOR LOCATIONS OF THIS CONFIGURATION AND MATERIAL SPECIFICATIONS.
3. SEE SITE SPECIFIC SOIL BORING DETAILS FOR ADDITIONAL INFORMATION.
4. BORE HOLE SHALL NOT EXCEED THE PIPE DIAMETER BY MORE THAN ONE AND ONE HALF (1–1/2) INCHES.



CONSTRUCTION TYPE 10
NOT TO SCALE

NOTE:
1. THIS CONFIGURATION IS FOR CASED ROAD AND RAILROAD CROSSING CONSTRUCTION.
2. SEE ALIGNMENT SHEETS FOR LOCATIONS OF THIS CONFIGURATION AND MATERIAL SPECIFICATIONS.
3. SEE SITE SPECIFIC SOIL BORING DETAILS FOR ADDITIONAL INFORMATION.
4. ANNULUS FILLED WITH DIELECTRIC MATERIAL PER VT GAS SPECIFICATIONS FOR ABRASION RESISTANT COATED CARRYING PIPE ONLY. DIELECTRIC MATERIAL SHALL NOT FILL THE ANNULUS SPACE WHERE CONCRETE COATED CARRYING PIPE IS SPECIFIED.
5. THE BORE HOLE SHALL NOT EXCEED THE CASING DIAMETER BY MORE THAN ONE AND ONE HALF (1–1/2) INCHES.



CONSTRUCTION TYPE 11
NOT TO SCALE

NOTE:
1. THIS CONFIGURATION IS FOR OPEN CUT ROAD CROSSING CONSTRUCTION.
2. SEE ALIGNMENT SHEETS FOR LOCATIONS OF THIS CONFIGURATION AND MATERIAL SPECIFICATIONS.
3. SEE SITE SPECIFIC SOIL BORING DETAILS FOR ADDITIONAL INFORMATION.
4. COMPACTION AND RESTORATION TO TOWN AND VT GAS SPECIFICATIONS.

NOTE:
1. CONSTRUCTION TYPE 5 NOT USED.

STATE OF VERMONT
MICHAEL E. HOLCOMBE
NO. 97764
CIVIL
ACCEPTANCE
PROFESSIONAL ENGINEER

							BID		CONSTRUCTION	
						ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
						DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
						DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
						DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
		1	BCK	TDB		DESIGN MANAGER	SAB	06/28/13	JEO	05/2016
DWG. NO.	REFERENCE DWG.	REV	DSN	CK		DESCRIPTION	INITIALS	DATE	INITIALS	DATE

ADDED ARCH. SITES (6/08/15)

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
CONSTRUCTION CONFIGURATION DETAILS

LOC. CHITTENDEN & ADDISON COUNTIES

YEAR: 2016 | W.O. | SCALE: NOTED | DWG. ANGP–T–G–006 | REV. 1

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
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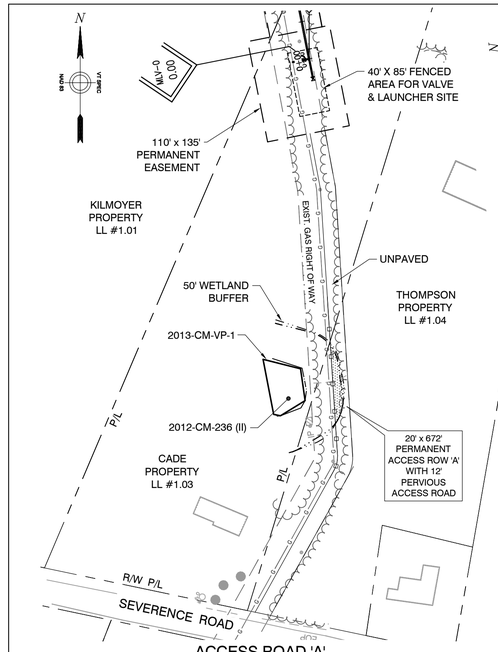
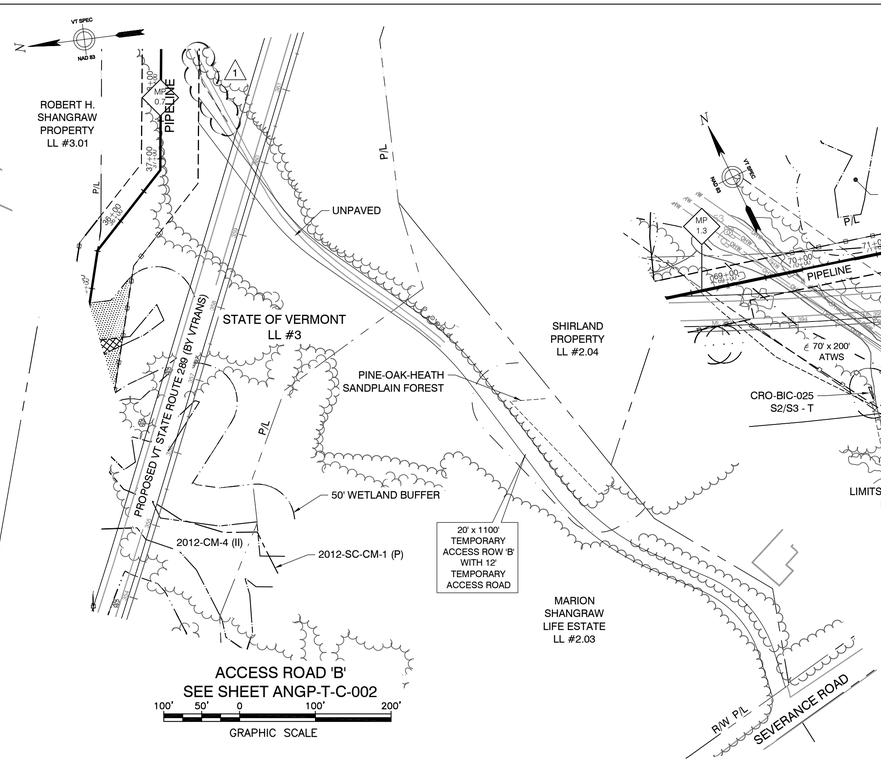


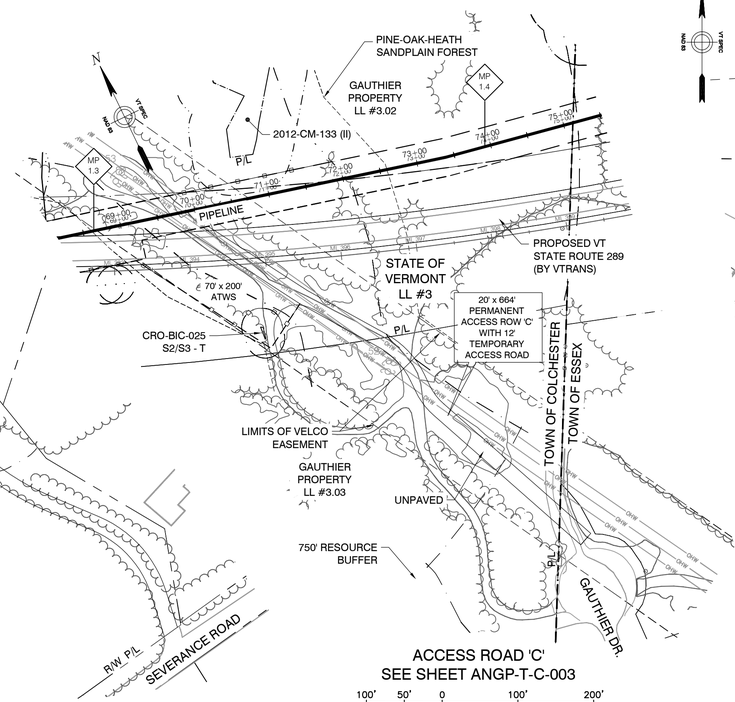
ACCESS ROAD 'A'
SEE SHEET ANGP-T-C-001A

100' 50' 0 100' 200'
GRAPHIC SCALE



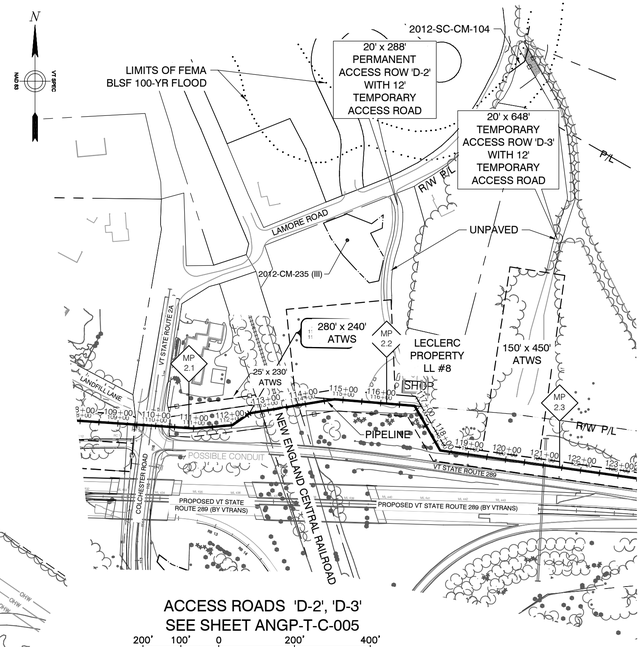
ACCESS ROAD 'B'
SEE SHEET ANGP-T-C-002

100' 50' 0 100' 200'
GRAPHIC SCALE



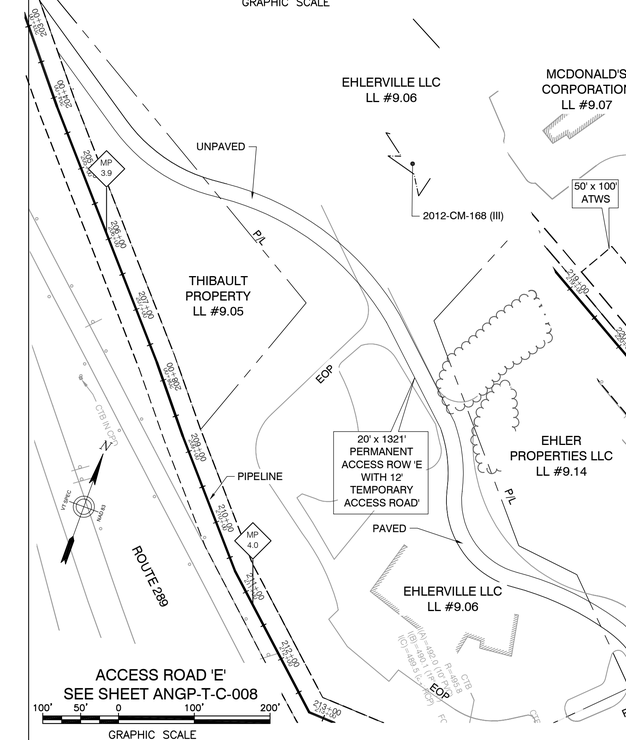
ACCESS ROAD 'C'
SEE SHEET ANGP-T-C-003

100' 50' 0 100' 200'
GRAPHIC SCALE



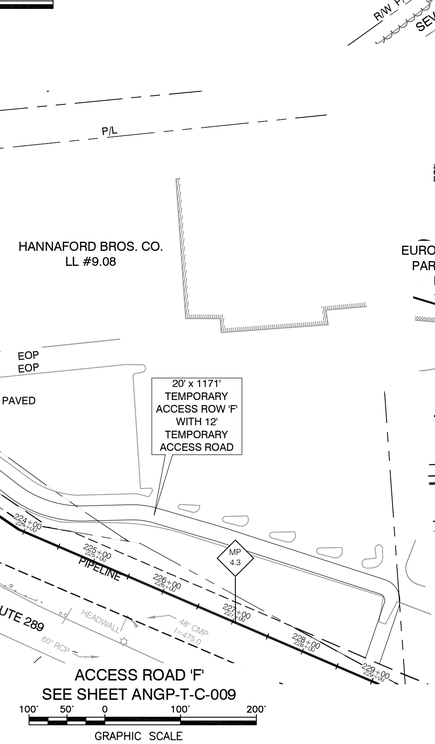
ACCESS ROADS 'D-2', 'D-3'
SEE SHEET ANGP-T-C-005

200' 100' 0 200' 400'
GRAPHIC SCALE



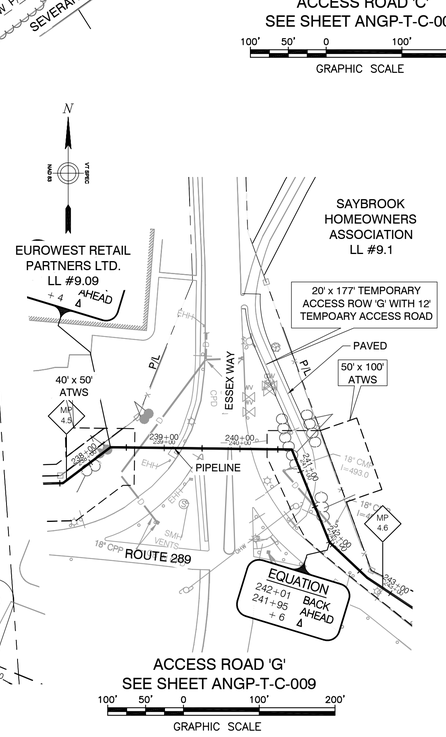
ACCESS ROAD 'E'
SEE SHEET ANGP-T-C-008

100' 50' 0 100' 200'
GRAPHIC SCALE



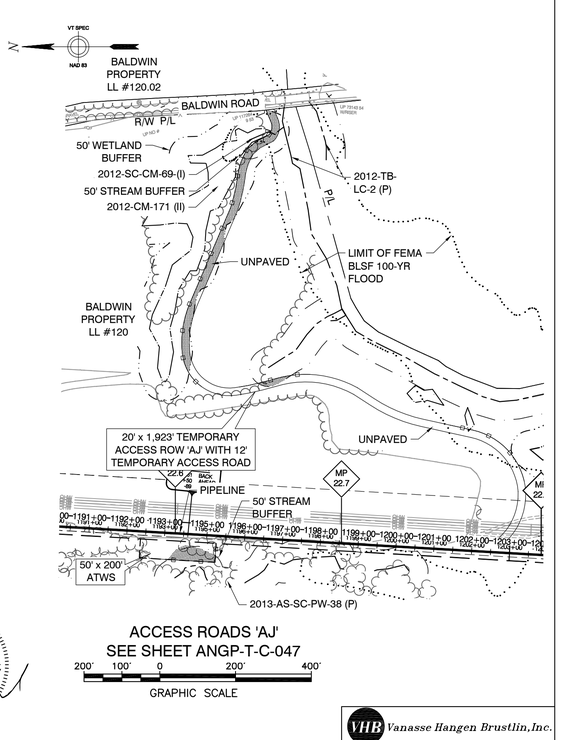
ACCESS ROAD 'F'
SEE SHEET ANGP-T-C-009

100' 50' 0 100' 200'
GRAPHIC SCALE



ACCESS ROAD 'G'
SEE SHEET ANGP-T-C-009

100' 50' 0 100' 200'
GRAPHIC SCALE



ACCESS ROADS 'AJ'
SEE SHEET ANGP-T-C-047

200' 100' 0 200' 400'
GRAPHIC SCALE

STATE OF VERMONT
MICHAEL E. HOLLOWAY
NO. 97764
CIVIL
LICENSED
PROFESSIONAL ENGINEER

VHB Vanasse Hangen Brustlin, Inc.

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0572 - www.chacompanies.com

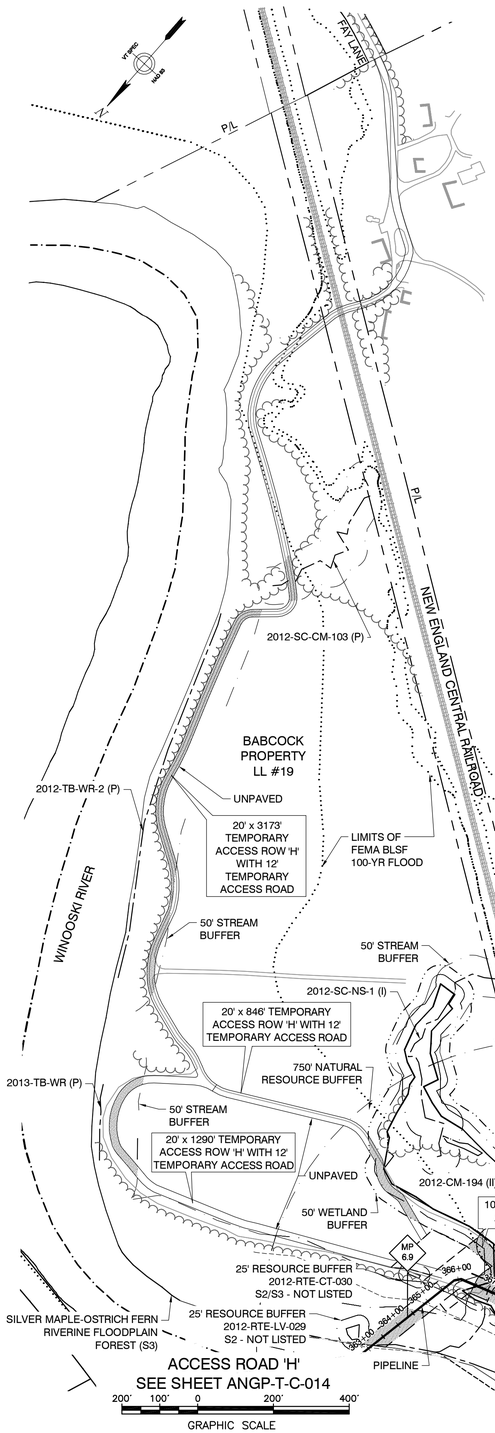
DWG. NO.	REFERENCE DWG.	REV	DSN	CK		DESCRIPTION		BID		CONSTRUCTION	
								INITIALS	DATE	INITIALS	DATE
							ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
							DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
							DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
							DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
		1	GJM	BCK		IFC 2016 EDITS (05/2016)	DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
ACCESS ROAD DETAILS

LOC. CHITTENDEN & ADDISON COUNTIES

Vermont Gas

YEAR: 2016 | W.O. | SCALE: AS NOTED | DWG. ANGP-T-G-007A | REV. 1



ACCESS ROAD 'H'
SEE SHEET ANGP-T-C-014

ACCESS ROAD 'AM'
SEE SHEET ANGP-T-C-067

ACCESS ROAD 'AK'
SEE SHEET ANGP-T-C-048

ACCESS ROAD 'BK'
SEE SHEET ANGP-T-C-064

ACCESS ROAD 'AN' & 'AQ'
SEE SHEET ANGP-T-C-079

MICHAEL E. HOLLOWOOD
NO. 97764

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
		3	GJM	BCK	IFC 2016 EDITS (05/2016)
		2	VGS	VGS	ACCESS ROAD "BK" ADDED (11/13/15)
		1	BCK	TDB	VHB EDITS (6/09/15)

	BID		CONSTRUCTION	
	INITIALS	DATE	INITIALS	DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
ACCESS ROAD DETAILS

LOC. CHITTENDEN & ADDISON COUNTIES

YEAR: 2016 | W.O. | SCALE: AS NOTED | DWG. ANGP-T-G-007B | REV. 3

Vermont Gas

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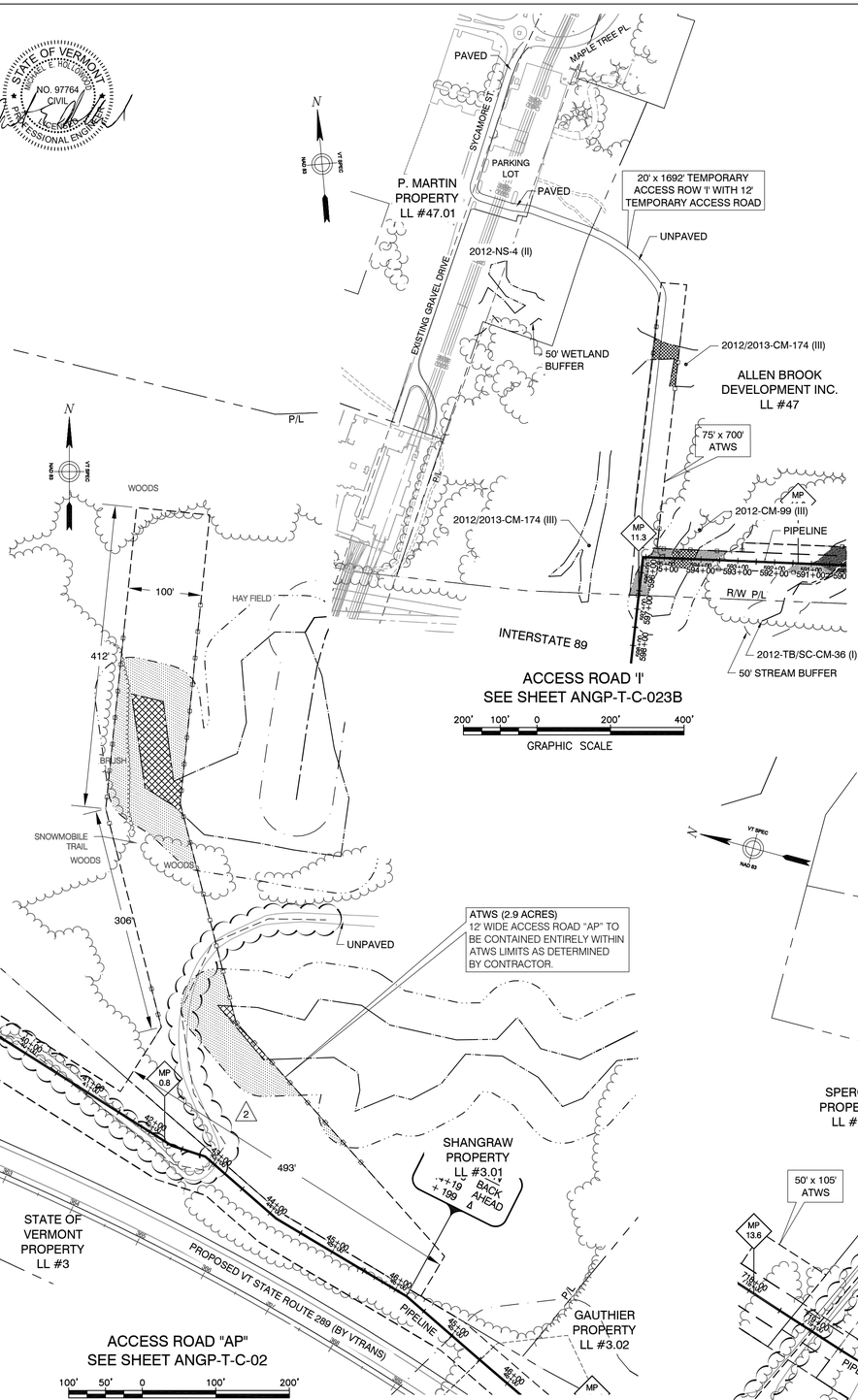
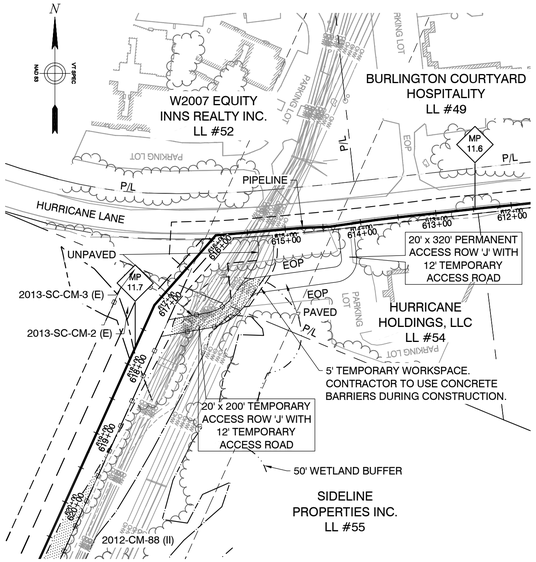
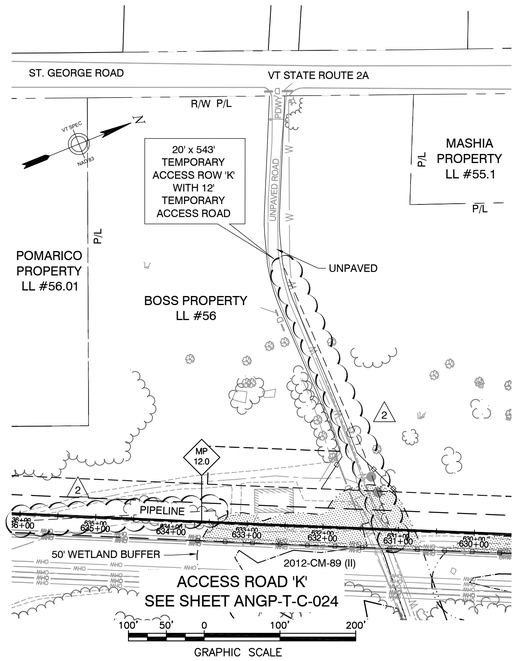
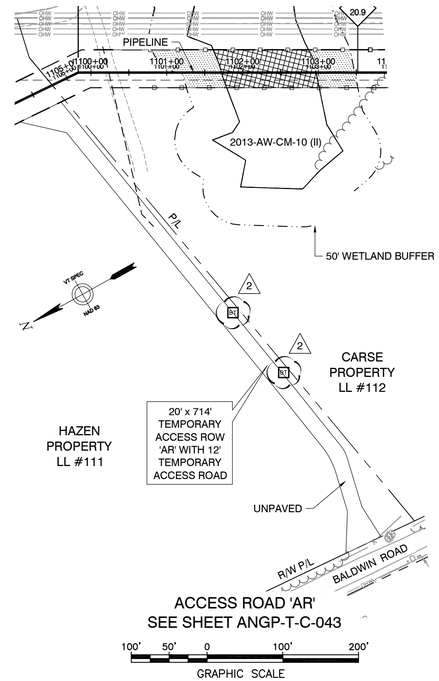
CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

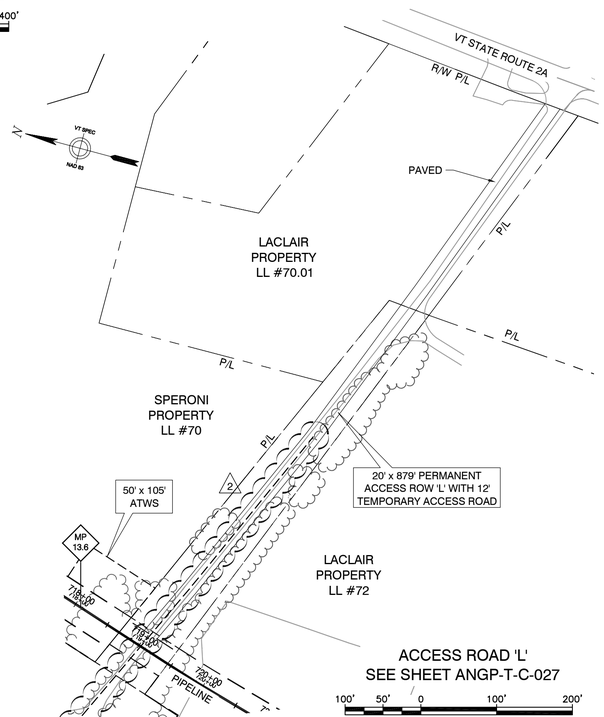
STATE OF VERMONT
MICHAEL E. HOLLINGSWORTH
NO. 97764
CIVIL
LICENSED
PROFESSIONAL ENGINEER

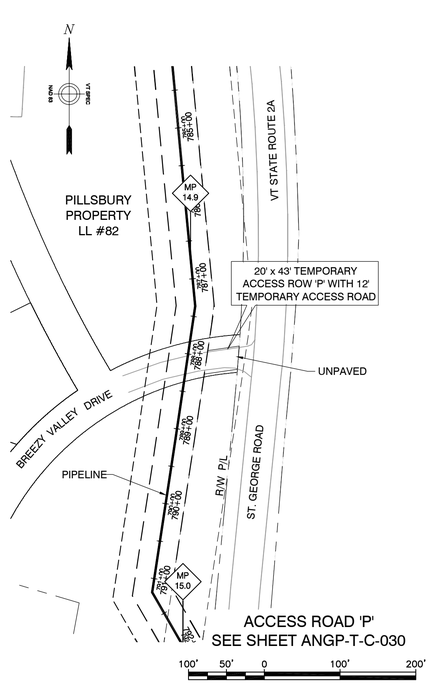


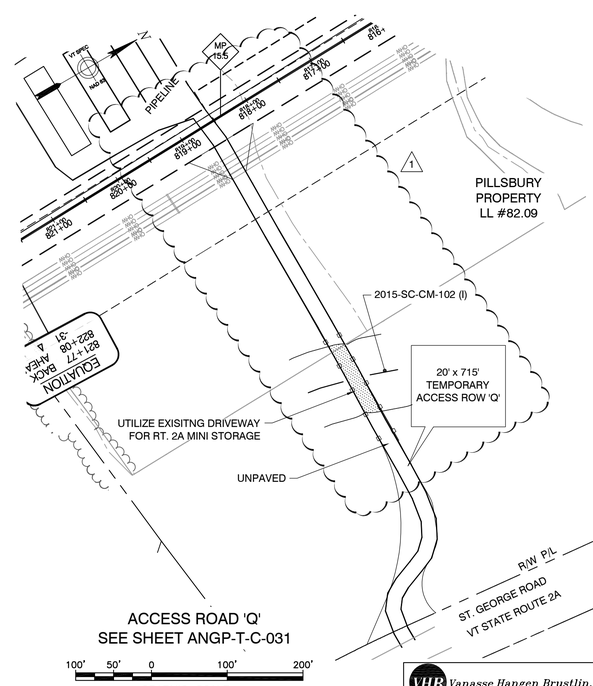












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DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
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		1	BCK	TDB	PILLSBURY REROUTE AND ADDED NR DATA (6/05/15)

	BID		CONSTRUCTION	
	INITIALS	DATE	INITIALS	DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
ACCESS ROAD DETAILS

LOC. CHITTENDEN & ADDISON COUNTIES

Vermont Gas

CHA
38 Eastwood Drive, Suite 105
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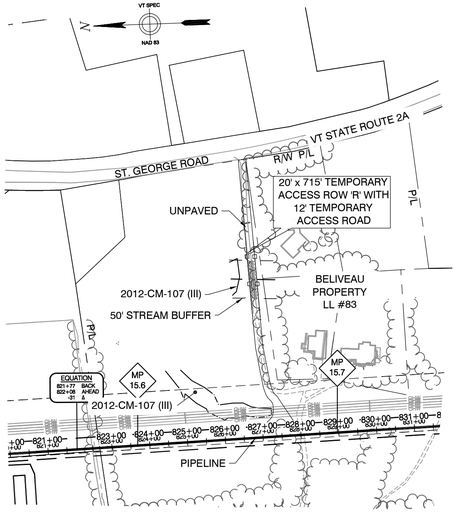
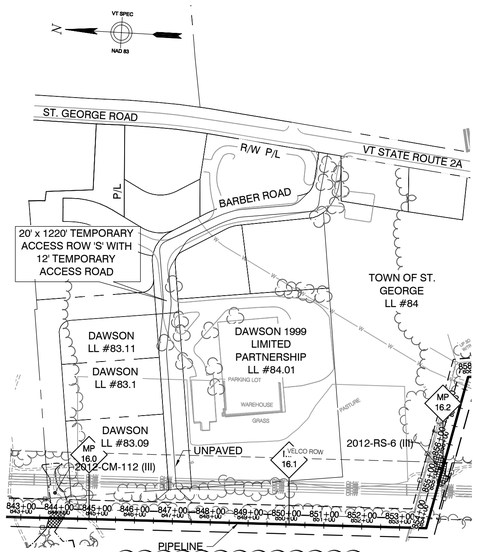
YEAR: 2016 | W.O. | SCALE: AS NOTED | DWG. ANGP-T-G-008 | REV. 2



ACCESS ROAD 'R'
SEE SHEET ANGP-T-C-031

200' 100' 0 200' 400'
GRAPHIC SCALE



ACCESS ROAD 'S'
SEE SHEET ANGP-T-C-032

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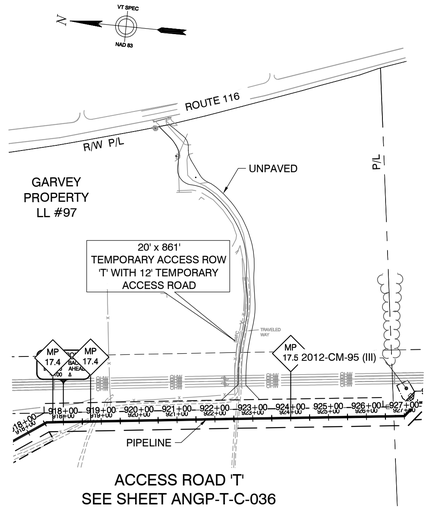
GRAPHIC SCALE



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SEE SHEET ANGP-T-C-036

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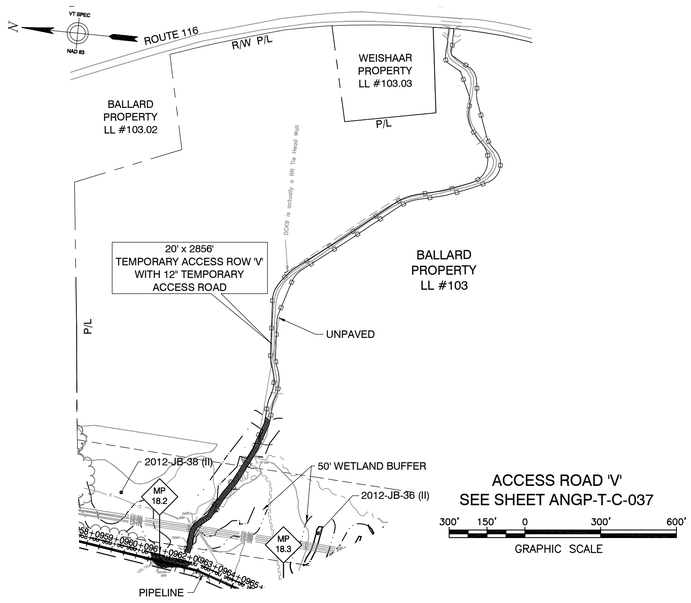
GRAPHIC SCALE



ACCESS ROAD 'V'
SEE SHEET ANGP-T-C-037

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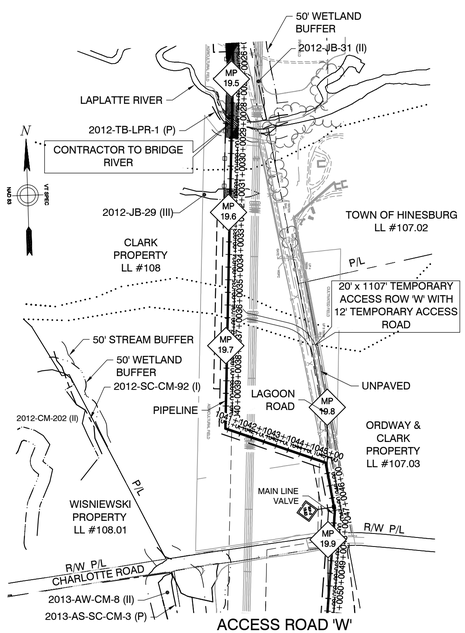

ACCESS ROAD 'W'
SEE SHEET ANGP-T-C-040

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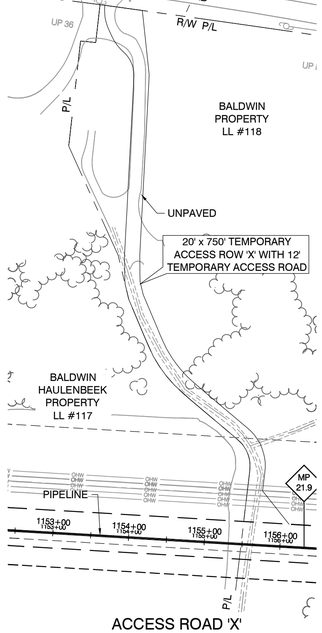
GRAPHIC SCALE



ACCESS ROAD 'X'
SEE SHEET ANGP-T-C-045

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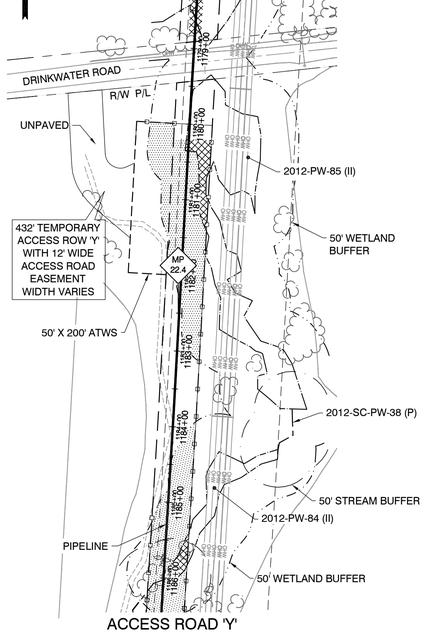
GRAPHIC SCALE



ACCESS ROAD 'Y'
SEE SHEET ANGP-T-C-046

100' 50' 0 100' 200'
GRAPHIC SCALE

ACCESS ROAD 'AA'
SEE SHEET ANGP-T-C-049

100' 50' 0 100' 200'
GRAPHIC SCALE

STATE OF VERMONT
JEFFREY E. HOLCOMB
NO. 97764
CIVIL
LICENSED
PROFESSIONAL ENGINEER

VHB Vanasse Hangen Brustlin, Inc.

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
		1	BCK	TDB	VHB EDITS (6/09/15)

	BID		CONSTRUCTION	
	INITIALS	DATE	INITIALS	DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
ACCESS ROAD DETAILS

LOC. CHITTENDEN & ADDISON COUNTIES

Vermont Gas

CHA
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South Burlington, VT 05403
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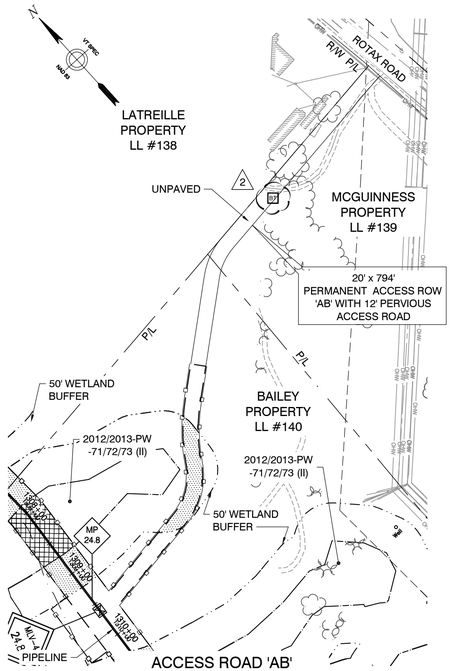
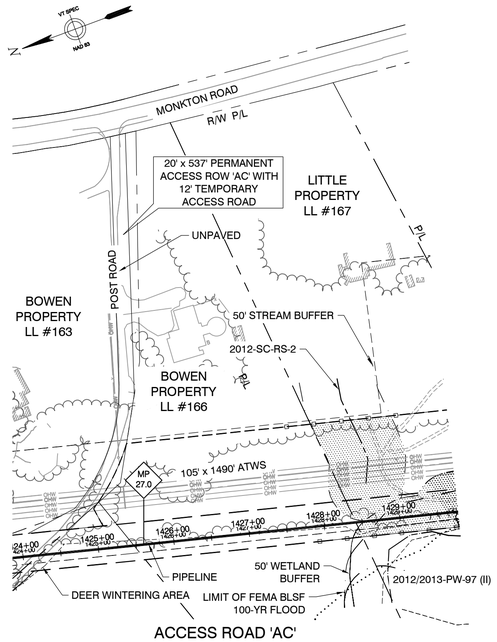
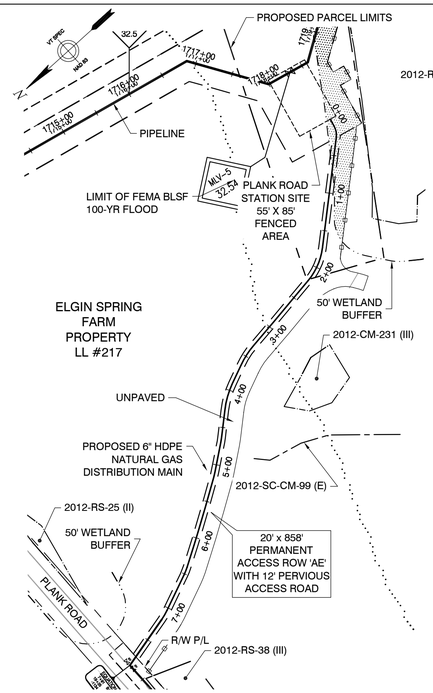
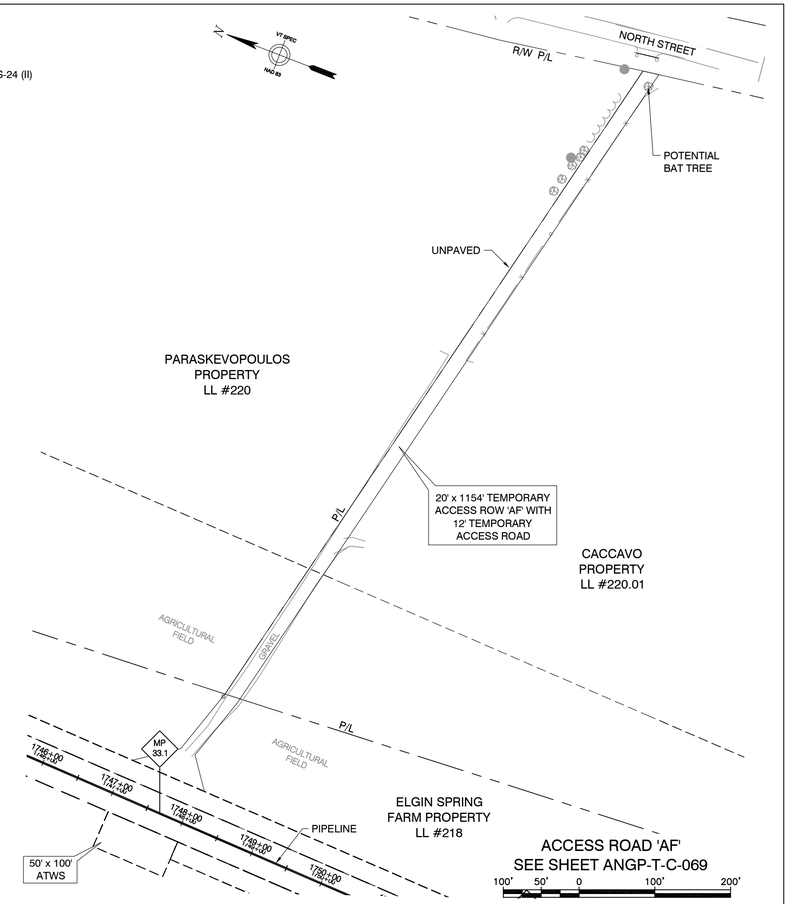
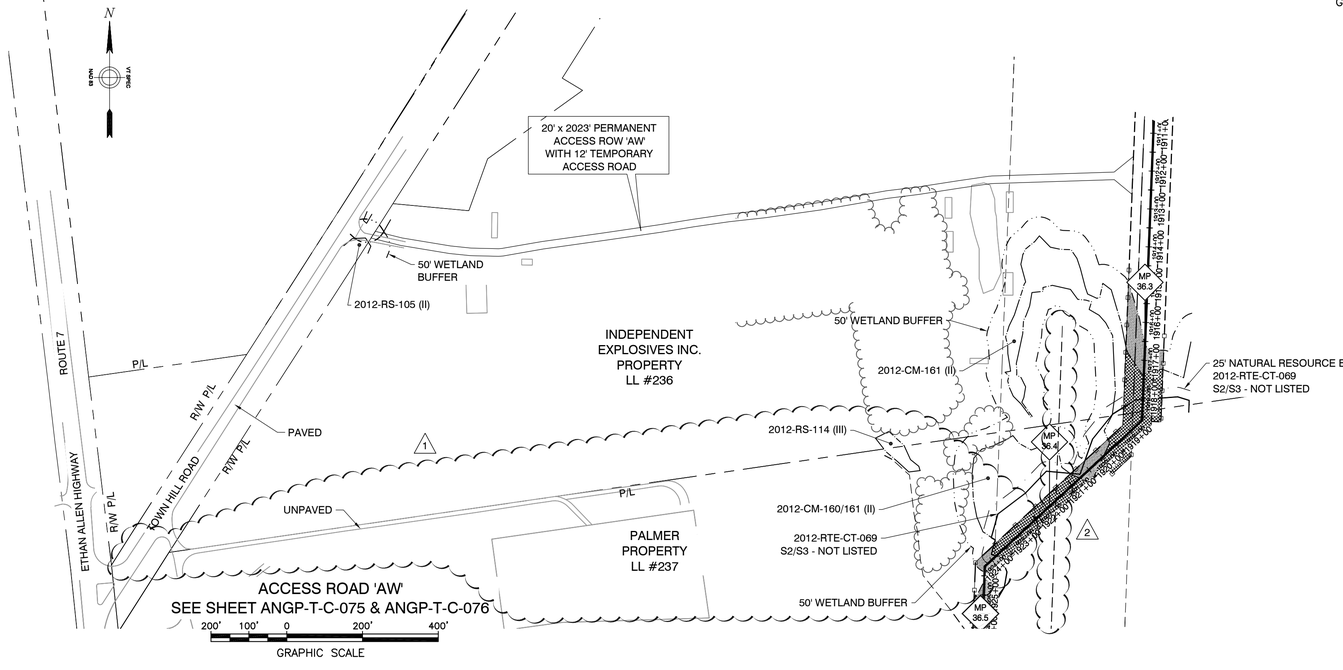
YEAR: 2016 | W.O. | SCALE: AS NOTED | DWG. ANGP-T-G-009 | REV. 1











Vanasse Hangen Brustlin, Inc.

DWG. NO.	REFERENCE DWG.	REV	DSN	CK		DESCRIPTION		BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
							ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
							DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
							DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
		2	GJM	BCK		IFC 2016 EDITS (05/2016)	DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
		1	BCK	TDB		ACCESS ROAD "AG" REMOVED (5/14/15)	DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
ACCESS ROAD DETAILS

LOC. CHITTENDEN & ADDISON COUNTIES

Vermont Gas

CHA
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South Burlington, VT 05403
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YEAR: 2016	W.O.	SCALE: AS NOTED	DWG. ANGP-T-G-010	REV. 2

CONSTRUCTION EPSC NOTES:

1. MAXIMUM CONCURRENT EARTH DISTURBANCE IS **40 ACRES** WITH EXCEPTIONS (SEE NOTE 3).
2. TOTAL DURATION OF EXPOSED SOIL IS **21 DAYS** MAXIMUM WITH EXCEPTIONS (SEE NOTE 3).
3. CONSTRUCTION WITHIN INDIAN BROOK, ALLEN BROOK, AND OTTER CREEK WATERSHEDS MUST:
    - a. LIMIT NUMBER OF MAINLINE WORK CREWS TO ONE PER WATERSHED, WITH A MAXIMUM OF **10 ACRES** OF SOIL DISTURBANCE AT ONE TIME WITHIN THAT WATERSHED.
    - b. TEMPORARILY OR PERMANENTLY STABILIZE EXPOSED SOILS WITHIN **7 DAYS** OF INITIAL EARTH DISTURBANCE, WITH THE EXCEPTION OF EXPOSED SOILS WITHIN OFF-CORRIDOR ACCESS ROADS AND ON-CORRIDOR ACCESS ROUTES TO BE UTILIZED WITHIN 24 HOURS AND HAVE SUFFICIENT EPSC MEASURES IN PLACE; THESE AREAS MAY REMAIN OPEN FOR UP TO 14 DAYS (SEE "TEMPORARY AND FINAL STABILIZATION NOTES" 1 AND 2.)
4. PRIOR TO STUMPING AND GRUBBING, LOGGING ACTIVITIES SHALL BE CONDUCTED IN ACCORDANCE WITH ACCEPTABLE MANAGEMENT PRACTICES FOR MAINTAINING WATER QUALITY ON LOGGING JOBS IN VERMONT (AMPS, 2006). STUMPING AND GRUBBING ACTIVITIES SHALL BE CONDUCTED IN ACCORDANCE WITH THE PROJECTS CONSTRUCTION STORMWATER DISCHARGE PERMIT AND EPSC PLAN. NO STUMPING/GRUBBING IN WETLANDS, CLASS II WETLAND BUFFERS, RARE THREATENED AND ENDANGERED (RTE) PLANT LOCATIONS, OR SIGNIFICANT COMMUNITIES WITH EXCEPTION OF PIPELINE TRENCH CORRIDOR, WHERE APPLICABLE.
5. EPSC MEASURES SHALL BE INSTALLED PURSUANT TO THE CONSTRUCTION PHASE STORMWATER DISCHARGE PERMIT FOR THE PROJECT, THE EPSC PLAN, THE VERMONT STANDARDS AND SPECIFICATIONS FOR EROSION PREVENTION AND SEDIMENT CONTROL (2006, AMENDED 2008), VERMONT EROSION PREVENTION AND SEDIMENT CONTROL FIELD GUIDE (2006), AND OTHER RELEVANT PROJECT PERMITS.
6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS SHALL COMPLY WITH THE FOLLOWING:

CONSTRUCTION DEMARCATION:

- a. CONSTRUCTION DEMARCATION TO BE INSTALLED ALONG PERIMETER OF LIMITS OF DISTURBANCE PER THE EPSC PLAN.
- b. DEMARCATION IS NOT TO CROSS ACTIVE ACCESS ROUTES.
- c. WITHIN 50 FEET OF A WATER RESOURCE AREA, DEMARCATION MUST INCLUDE:
    - 2 TO 3 ROWS OF STAKED (OR STAPLED) 3-INCH ORANGE BARRIER MESH TAPE,
    - ORANGE CONSTRUCTION FENCE, OR
    - ORANGE SNOW FENCE.
- d. GREATER THAN 50 FEET FROM A WATER RESOURCE AREA, DEMARCATION MAY INCLUDE:
    - ONE ROW OF STAKED (OR STAPLED) 3 INCH ORANGE BARRIER MESH TAPE, OR
    - ORANGE FLAGGING.

PERIMETER CONTROLS:

- a. PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SEDIMENT RUNOFF AND/OR SOIL EROSION.
- b. PERIMETER CONTROLS ARE NOT TO CROSS ACTIVE ACCESS ROUTES OR PERENNIAL FLOW PATHS (E.G., A STREAM).
- c. PARTICULAR CARE IS TO BE TAKEN WHEN INSTALLING PERIMETER CONTROLS IN A WETLAND.
- d. WITHIN 50 FEET OF A WATER RESOURCE AREA, PERIMETER CONTROLS MUST INCLUDE:
    - REINFORCED SILT FENCE - TO BE REINFORCED WITH WIRE MESH, STAKED HAYBALES, STAKED FIBER ROLLS, EROSION CONTROL MIX BERMS, OR WOOD CHIP BERMS.
- e. GREATER THAN 50 FEET FROM A WATER RESOURCE AREA, PERIMETER CONTROLS MAY INCLUDE:
    - SILT FENCE (NON-REINFORCED)
    - STAKED FIBER ROLLS
    - EROSION CONTROL MIX BERMS, OR
    - WOOD CHIP BERMS

7. PROJECT DEMARCATION OF AN AREA SHALL BE INSTALLED PRIOR TO EARTH DISTURBING ACTIVITIES WITHIN THAT AREA. AN EXCEPTION IS LAND DISTURBANCE THAT MAY BE NEEDED TO ACCESS THE AREA WITH EQUIPMENT IN ORDER TO INSTALL THE EPSC MEASURES.
8. EPSC MEASURES INTENDED TO PROVIDE PERIMETER CONTROL AND/OR TRAP SEDIMENT SHALL BE MADE FUNCTIONAL PRIOR TO UPSLOPE LAND DISTURBANCE, WITH THE EXCEPTION OF THOSE LAND DISTURBING ACTIVITIES THAT ARE NECESSARY TO INSTALL THESE MEASURES.
9. RESOURCE AREAS (E.G., WETLANDS, STREAMS, BUFFERS, RTE PLANT SPECIES, ARCHEOLOGICALLY SENSITIVE AREAS, ETC.) SHALL BE FLAGGED PRIOR TO ANY CONSTRUCTION RELATED ACTIVITIES WITHIN CLOSE PROXIMITY TO THOSE AREAS.
10. PROJECT AREAS THAT ARE BORDERED BY ROADWAYS ON ONE SIDE MAY NOT HAVE RESOURCE AREAS FLAGGED ON THE OTHER (NON-PROJECT) SIDE OF THE ROAD.
11. CONSTRUCTION WITHIN RESOURCE AREA BOUNDARIES SHALL BE CONDUCTED PURSUANT TO THE EPSC PLAN AND APPLICABLE ENVIRONMENTAL PERMIT CONDITIONS.
12. ACCESS THROUGH WETLANDS REQUIRES USE OF CONSTRUCTION MATS PER THE EPSC PLAN.
13. VEGETATED BUFFERS SHALL BE MAINTAINED FOR WATER BODIES (E.G., WETLANDS AND STREAMS) PURSUANT TO THE EPSC PLAN AND APPLICABLE ENVIRONMENTAL PERMIT CONDITIONS.
14. ALL OTHER VEGETATION (OUTSIDE BUFFER AREAS AND RESOURCE AREAS) SHALL BE PROTECTED AND MAINTAINED TO THE EXTENT PRACTICABLE.
15. ACCESS ROUTES, LAYDOWN/STAGING AREAS, AND WORK SPACES ARE SHOWN ON THE EPSC PLAN. ANY OTHER ACCESS ROUTES, LAYDOWN/STAGING AREAS, AND/OR WORK SPACES MUST BE AUTHORIZED BY THE OSPC PRIOR TO THEIR USE.
16. WHERE THERE ARE EXISTING CULVERTS WITHIN TEMPORARY ACCESS ROUTES, PROTECTION (E.G., STONE ON FABRIC OR CONSTRUCTION MATS) MAY BE REQUIRED TO MAINTAIN THEIR INTEGRITY.
17. ANY STONE AND/OR GEOTEXTILE FABRIC THAT IS USED TO PROVIDE A STABILIZED SURFACE IN ACCESS ROUTES, LAYDOWN/STAGING AREAS, WORK SPACES, ETC., DURING CONSTRUCTION MUST BE REMOVED AND ANY EXPOSED SOIL STABILIZED ONCE AREAS ARE NO LONGER NEEDED.
18. FLAGGING AND SIGNAGE (E.G., "NO ACCESS") SHALL BE PLACED AT THOSE LOCATIONS WHERE OFF-RIGHT-OF-WAY ACCESS MAY INADVERTENTLY BE USED (E.G., EXISTING FARM ROADS) BUT THAT ARE OTHERWISE NOT APPROVED FOR PROJECT ACCESS.
19. AREAS OF DISTURBANCE THAT SLOPE TOWARDS BORDERING ROADSIDES SHALL HAVE AN APPROPRIATE SEDIMENT BARRIER (E.G., SILT FENCE) SPANNING THE EDGE OF DISTURBANCE TO MINIMIZE WASH-OFF OF SEDIMENT INTO ROADWAYS OR ROADSIDE DITCHES.
20. STABILIZED CONSTRUCTION ENTRANCES SHALL BE MAINTAINED REGULARLY TO CONTROL EQUIPMENT AND VEHICLES FROM TRACKING MATERIAL OFF SITE AND ONTO ROADWAYS.
21. CONDUCT ROUTINE SWEEPING OF ROADWAYS AS NEEDED.
22. BLASTING SHALL BE CONDUCTED PURSUANT TO THE PROJECT'S **BLASTING PLAN**.
23. IN AREAS WHERE HORIZONTAL DIRECTIONAL DRILLING (HDD) IS TO OCCUR, EPSC MEASURES ARE TO BE INSTALLED PER THIS EPSC PLAN. CONTRACTOR TO BE RESPONSIBLE FOR LEGAL DISPOSAL OF ALL WASTE MATERIALS.
24. IN ADVANCE OF FORECASTED RAINFALL OR SNOWMELT, EPSC MEASURES SHALL BE INSPECTED AND REPAIRED, AS NEEDED.
25. TO THE EXTENT PRACTICABLE, SURFACE FLOW SHALL BE DIVERTED AWAY FROM EXPOSED SOILS.
26. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH A SEDIMENT TRAPPING DEVICE AND DISCHARGED IN A MANNER THAT DOES NOT RESULT IN IMPACTS TO WATER QUALITY OR CONTRIBUTE TO EROSION.
27. WATER GENERATED DURING HYDROSTATIC TESTING IS TO BE FILTERED AS NEEDED AND DISPOSED OF IN AN UPLAND LOCATION, AT LEAST 50 FEET (MINIMUM) FROM RESOURCE AREAS, AND IN A MANNER THAT DOES NOT CAUSE SOIL EROSION.
28. SEDIMENT REMOVED FROM SEDIMENT CONTROL PRACTICES SHALL BE DISPOSED OF IN AN UPLAND AREA AND OUTSIDE WETLAND AND STREAM BUFFERS, WITH STABILIZATION VIA SEED AND MULCH FOLLOWING DISPOSAL OF MATERIAL.
29. DUST CONTROL SHALL BE HANDLED VIA WATER OR CALCIUM CHLORIDE APPLICATION TO ROADWAYS AND OTHER AREAS WHERE DUST MAY BE GENERATED.

PRE-CONSTRUCTION AND PERMITTING NOTES:

1. A PRE-CONSTRUCTION CONFERENCE WITH THE VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION (VT DEC), THE ON-SITE PLAN COORDINATOR (OSPC), AND THE EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) SPECIALIST SHALL BE HELD PRIOR TO INITIATING CONSTRUCTION ACTIVITIES.
2. THE NAME AND DAYTIME PHONE NUMBER OF THE OSPC SHALL BE PROVIDED IN WRITING TO VT DEC PRIOR TO THE START OF CONSTRUCTION.
3. THE NAME, ADDRESS, DAYTIME PHONE NUMBER, AND BASIC QUALIFICATIONS OF THE EPSC SPECIALIST SHALL BE PROVIDED IN WRITING TO VT DEC PRIOR TO THE START OF CONSTRUCTION.
4. ALL PARTIES ASSOCIATED WITH CONSTRUCTION ACTIVITIES WHO MEET EITHER OF THE FOLLOWING TWO CRITERIA OF "PRINCIPAL OPERATOR"' MUST OBTAIN COVERAGE AS A CO-PERMITTEE UNDER THE CONSTRUCTION STORMWATER DISCHARGE PERMIT FOR THE PROJECT PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES BY THAT OPERATOR:
    - a. THE PARTY HAS OPERATIONAL CONTROL OVER CONSTRUCTION PLANS AND SPECIFICATIONS, INCLUDING BUT NOT LIMITED TO THE ABILITY TO MAKE MODIFICATIONS TO THOSE PLANS AND SPECIFICATIONS; OR
    - b. THE PARTY HAS CONTINUOUS DAY-TO-DAY OPERATIONAL CONTROL OF THOSE ACTIVITIES AT THE PROJECT THAT ARE NECESSARY TO ENSURE COMPLIANCE WITH THE EPSC PLAN FOR THE SITE OR OTHER PERMIT CONDITIONS (E.G., THEY ARE AUTHORIZED TO DIRECT WORKERS AT A SITE TO CARRY OUT ACTIVITIES REQUIRED BY THE EPSC PLAN OR COMPLY WITH OTHER PERMIT CONDITIONS).
5. THE NOTICE OF AUTHORIZATION (NOA) ISSUED BY VT DEC SHALL BE POSTED IN A LOCATION THAT IS VISIBLE TO THE PUBLIC (E.G., NEAR THE CONSTRUCTION ENTRANCE).
6. A COPY OF THE EPSC PLAN SHALL BE MAINTAINED ON-SITE DURING NORMAL WORKING HOURS FROM THE DATE OF COMMENCEMENT OF CONSTRUCTION ACTIVITIES TO THE DATE OF FINAL STABILIZATION. THE EPSC PLAN SHALL BE MADE AVAILABLE TO VT DEC UPON REQUEST.
7. PERMISSION MUST BE GRANTED BY VT DEC PRIOR TO USE OF ANY SUPPORT ACTIVITIES THAT MAY OCCUR OUTSIDE OF THE APPROVED PROJECT BOUNDARIES (E.G., USE OF WASTE OR BORROW AREAS).

TEMPORARY AND FINAL STABILIZATION NOTES:

1. DURING REGULAR CONSTRUCTION SEASON (APRIL 15 TO OCTOBER 15), ALL AREAS OF EARTH DISTURBANCE MUST BE STABILIZED WITHIN **21 DAYS** OF INITIAL DISTURBANCE WITH EXCEPTIONS (SEE "CONSTRUCTION EPSC NOTES" #3). AFTER THIS INITIAL 21-DAY PERIOD, ALL EARTH DISTURBANCE AREAS MUST BE STABILIZED BY THE END OF EACH WORK DAY, WITH THE FOLLOWING EXCEPTIONS:
    - a. WORK IS TO CONTINUE IN THAT AREA WITHIN THE NEXT 24 HOURS AND THERE IS NO PRECIPITATION FORECAST FOR THE NEXT 24 HOURS.
    - b. WORK IS OCCURRING IN A SELF-CONTAINED EXCAVATION (I.E., NO OUTLET FOR STORMWATER) WITH A DEPTH OF 2 FEET OR GREATER (E.G., UNDERGROUND LINE INSTALLATION).
2. DURING WINTER CONSTRUCTION SEASON (OCTOBER 15 TO APRIL 15), ALL AREAS OF EARTH DISTURBANCE MUST BE STABILIZED BY THE END OF EACH WORK DAY, WITH THE FOLLOWING EXCEPTIONS:
    - a. WORK IS TO CONTINUE IN THAT AREA WITHIN THE NEXT 24 HOURS AND THERE IS NO PRECIPITATION FORECAST FOR THE NEXT 24 HOURS.
    - b. WORK IS OCCURRING IN A SELF-CONTAINED EXCAVATION (I.E., NO OUTLET FOR STORMWATER) WITH A DEPTH OF 2 FEET OR GREATER (E.G., UNDERGROUND LINE INSTALLATION).
3. TEMPORARY STABILIZATION OF EXPOSED SOILS SHALL GENERALLY BE ACHIEVED BY MULCH (E.G., HAY/STRAW, COMPOST, WOOD CHIPS, WOOD STUMP GRINDINGS, AND/OR EROSION CONTROL MIX), SEED AND MULCH, AND/OR HYDROSEEDING WITH MULCH TACKIFIER TO PROVIDE COMPLETE COVER AT LEAST UNTIL PERMANENT STABILIZATION.
4. PERMANENT STABILIZATION OF EXPOSED SOILS SHALL BE ACHIEVED BY 70% VEGETATIVE COVER, STONE, ASPHALT, BEDROCK, OR OTHER PERMANENT MATERIAL (E.G., WOOD CHIPS) THAT PROVIDES COMPLETE COVER.
5. STEEP SIDESLOPES ($\geq$3:1) SHALL BE PERMANENTLY STABILIZED WITH STONE OR SEED/ROLLED EROSION CONTROL PRODUCT (RECP). SIDESLOPES <3:1 MAY BE STABILIZED WITH SEED AND MULCH AND/OR HYDROSEEDING (OR BONDED FIBER MATRIX) WITH MULCH TACKIFIER. NOTE: 70 PERCENT VEGETATIVE COVER MUST BE REACHED TO ATTAIN PERMANENT STABILIZATION.
6. AREAS THAT HAVE REACHED TEMPORARY OR FINAL STABILIZATION SHALL NOT BE CONSIDERED PART OF TOTAL AREA OF EARTH DISTURBANCE.
7. APPROPRIATE SEED MIX SHALL BE APPLIED TO DESIGNATED AREAS PER THE EPSC PLAN'S SEED SPECIFICATIONS (ALSO SEE "ADDITIONAL ENVIRONMENTAL NOTES" #23). SEEDING PRIOR TO WINTER MUST BE COMPLETED BY SEPTEMBER 15 UNLESS WEATHER PERMITS SEED APPLICATION AND GERMINATION AFTER SEPTEMBER 15.

CHITTENDEN AND ADDISON COUNTIES
VERMONT

8. AREAS TO BE STABILIZED FOR WINTER THAT DO NOT HAVE ESTABLISHED VEGETATION BY OCTOBER 15 SHALL BE STABILIZED BY ANCHORED MULCH AT THE WINTER APPLICATION RATE OR OTHER APPROVED STABILIZATION MEASURES (E.G., ROLLED EROSION CONTROL PRODUCT). DORMANT SEEDING WITH WINTER RYE MAY BE BE APPLIED TO ACCOMMODATE EARLY SPRING GERMINATION.
9. ALL TEMPORARY EPSC MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY EPSC MEASURES ARE NO LONGER NEEDED.

RELEVANT VT DEC DEFINITIONS (GP 3-9020, APPENDIX C):

"COMMENCEMENT OF CONSTRUCTION ACTIVITIES" - THE INITIAL DISTURBANCE OF SOILS ASSOCIATED WITH CLEARING, GRADING, OR EXCAVATING ACTIVITIES OR OTHER CONSTRUCTION-RELATED ACTIVITIES (E.G., STOCKPILING OF FILL MATERIAL).

"CONSTRUCTION AND CONSTRUCTION-RELATED ACTIVITIES" - ALL CLEARING, GRADING, EXCAVATION, AND STOCKPILING ACTIVITIES THAT WILL RESULT IN THE DISTURBANCE OF ONE OR MORE ACRE OF LAND AREA. EARTH DISTURBANCE THAT IS A NORMAL PART OF THE LONG-TERM USE OR MAINTENANCE OF A PROPERTY IS NOT COVERED BY [THE PERMIT] (E.G., MINING OPERATIONS, DIRT ROAD REGRADING, ROUTINE ROAD RESURFACING).

"CONSTRUCTION SITE" - THE LAND OR WATER AREA WHERE ANY FACILITY OR ACTIVITY IS PHYSICALLY LOCATED OR CONDUCTED, INCLUDING ADJACENT LAND USED IN CONNECTION WITH THE FACILITY OR ACTIVITY OR THE AREA OF EARTH DISTURBANCE DIRECTLY ASSOCIATED WITH THE PERMITTED ACTIVITY.

"DISTURBED EARTH" - ANY SOIL ON A CONSTRUCTION SITE OR ASSOCIATED SUPPORT ACTIVITIES (E.G., STAGING AREA, BORROW AREA, DISPOSAL SITE FOR EXCESS FILL) THAT IS EXPOSED TO EROSIVE EFFECTS OF WIND, RAIN, OR RUNOFF DUE TO CONSTRUCTION OR CONSTRUCTION RELATED ACTIVITIES.

"FINAL STABILIZATION" - ALL SOIL DISTURBING ACTIVITIES AT THE SITE HAVE BEEN COMPLETED AND EITHER OF THE TWO FOLLOWING CRITERIA ARE MET:

1. A UNIFORM (E.G.,, EVENLY DISTRIBUTED, WITHOUT LARGE BARE AREAS) PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70 PERCENT OF THE NATIVE BACKGROUND VEGETATIVE COVER FOR THE AREA HAS BEEN ESTABLISHED ON ALL UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES, OR
2. EQUIVALENT FINAL STABILIZATION MEASURES (SUCH AS THE USE OF GRAVEL, RIPRAP, GABIONS, OR GEOTEXTILES) HAVE BEEN EMPLOYED.

"PRINCIPAL OPERATOR" - ANY PARTY ASSOCIATED WITH A CONSTRUCTION PROJECT THAT MEETS EITHER OF THE FOLLOWING TWO CRITERIA:

1. THE PARTY HAS OPERATIONAL CONTROL OVER CONSTRUCTION PLANS AND SPECIFICATIONS INCLUDING, BUT NOT LIMITED TO, THE ABILITY TO MAKE MODIFICATIONS TO THOSE PLANS AND SPECIFICATIONS; OR
2. THE PARTY HAS DAY-TO-DAY OPERATIONAL CONTROL OF THOSE ACTIVITIES AT A PROJECT WHICH ARE NECESSARY TO ENSURE COMPLIANCE WITH A EPSC PLAN FOR THE SITE OR OTHER PERMIT CONDITIONS (E.G., THEY ARE AUTHORIZED TO DIRECT WORKERS AT A SITE TO CARRY OUT ACTIVITIES REQUIRED BY THE EPSC PLANNER COMPLY WITH OTHER PERMIT CONDITIONS).

"STORMWATER" - STORMWATER RUNOFF, SNOWMELT RUNOFF, AND SURFACE RUNOFF AND DRAINAGE.

"STORMWATER DISCHARGE-RELATED ACTIVITIES" - ACTIVITIES THAT CAUSE, CONTRIBUTE TO, OR RESULT IN STORMWATER POINT SOURCE POLLUTANT DISCHARGES, INCLUDING BUT NOT LIMITED TO: EXCAVATION, SITE DEVELOPMENT, GRADING AND OTHER SURFACE DISTURBANCE ACTIVITIES; AND MEASURES TO CONTROL STORMWATER INCLUDING THE SITING, CONSTRUCTION AND OPERATION OF BMPS TO CONTROL, REDUCE OR PREVENT STORMWATER POLLUTION.

"TEMPORARY STABILIZATION" - PROTECTING SOILS IN AREAS WHERE ADDITIONAL SOIL DISTURBANCE ACTIVITIES FROM EROSION BY RAINFALL, RUNOFF, OR WIND, WITH A SURFACE COVER, INCLUDING, BUT NOT LIMITED TO, ESTABLISHMENT OF GROUND VEGETATION, APPLICATION OF MULCH, ROLLED EROSION CONTROL PRODUCTS, GRAVELING OR PAVING.

"VEGETATED BUFFER" - ANY UNDISTURBED AREA BETWEEN A CONSTRUCTION SITE AND A RECEIVING WATER THAT CONSISTS OF A NATURAL VEGETATED GROUND SURFACE (E.G., TREES, SHRUBS, DUFF LAYER, GRASSES AND OTHER GROUND PLANTS). THIS DOES NOT INCLUDE LAWNS OR ANY AREA OF CONCENTRATED FLOW (E.G., DITCHES, SWALES).

"WATERS OF THE STATE" - ALL RIVERS, STREAMS, CREEKS, BROOKS, RESERVOIRS, PONDS, LAKES, SPRINGS, AND ALL BODIES OF SURFACE WATERS, ARTIFICIAL OR NATURAL, WHICH ARE CONTAINED WITHIN, FLOW THROUGH OR BORDER UPON THE STATE OF VERMONT OR ANY PORTION OF IT.

WINTER CONSTRUCTION NOTES:

1. WINTER CONSTRUCTION SEASON IS DEFINED BY VT DEC AS OCTOBER 15 TO APRIL 15.
2. THE FOLLOWING WINTER CONSTRUCTION CONDITIONS APPLY TO THOSE CONSTRUCTION ACTIVITIES INVOLVING EARTH DISTURBANCE BETWEEN OCTOBER 15 AND APRIL 15:
    - a. FOR AREAS STABILIZED BY VEGETATION, SEED SHALL BE APPLIED NO LATER THAN SEPTEMBER 15 UNLESS WEATHER PERMITS SEED APPLICATION AND GERMINATION AFTER SEPTEMBER 15.
    - b. MULCH SHALL BE APPLIED AT DOUBLE THE REGULAR CONSTRUCTION SEASON RATE OR ROUGHLY 2 INCHES OF MULCH WITH 80 TO 90% COVER. MULCH SHALL BE TRACKED IN OR STABILIZED WITH NETTING.
    - c. ENLARGE ACCESS POINTS AS NEEDED TO PROVIDE SPACE FOR SNOW STOCKPILING.
    - d. LIMITS OF DISTURBANCE SHALL BE MOVED OR REPLACED TO REFLECT BOUNDARY OF WINTER WORK, AS NEEDED.
    - e. CLEARED SNOW SHALL BE PLACED DOWN GRADIENT OF ALL AREAS OF DISTURBANCE WHERE FEASIBLE.
    - f. SNOW SHALL NOT BE PLACED IN STORMWATER TREATMENT STRUCTURES (E.G., BASINS).
    - g. TO THE EXTENT PRACTICABLE, A MINIMUM 25-FOOT BUFFER FROM PERIMETER CONTROLS (E.G., SILT FENCE) SHALL BE MAINTAINED TO ALLOW FOR SNOW CLEARING AND MAINTENANCE.
    - h. FOR AREAS OF DISTURBANCE WITHIN 100 FEET OF RECEIVING WATERS, SILT FENCE SHALL BE REINFORCED OR ELSE REPLACED WITH PERIMETER DIKES, SWALES, OR OTHER PRACTICES RESISTANT TO THE FORCES OF SNOW LOADS, AS NEEDED.
    - i. DRAINAGE STRUCTURES ARE TO BE KEPT OPEN AND FREE OF SNOW AND ICE DAMS WHERE FEASIBLE.
    - j. EPSC MEASURES THAT REQUIRE SOIL DISTURBANCE TO INSTALL (E.G., SILT FENCE) SHALL BE INSTALLED PRIOR TO GROUND FREEZING.
    - k. SNOW AND ICE SHALL BE REMOVED TO LESS THAN 1 INCH THICKNESS PRIOR TO STABILIZATION, TO EXTENT FEASIBLE.
    - l. A 10 TO 20-FOOT WIDE STONE PAD SHALL BE USED IN AREAS WHERE CONSTRUCTION VEHICLE TRAFFIC IS ANTICIPATED (E.G., AROUND THE PERIMETER OF A BUILDING) WHERE APPLICABLE.
    - m. TO ENSURE COVER OF DISTURBED SOIL IN ADVANCE OF A SNOWMELT EVENT, AREAS OF DISTURBED SOIL SHALL BE STABILIZED AT THE END OF EACH WORKDAY, UNLESS:
    - i. WORK IS TO CONTINUE WITHIN THE AREA WITHIN THE NEXT 24 HOURS AND THERE IS NO PRECIPITATION FORECAST FOR THE NEXT 24 HOURS OR
    - ii. WORK IS OCCURRING IN A SELF-CONTAINED EXCAVATION (I.E., NO OUTLET) WITH A DEPTH OF 2 FEET OR GREATER (E.G., UTILITY TRENCHES).

ADDITIONAL ENVIRONMENTAL NOTES:

1. SOIL TYPE SYMBOLS ON THE EPSC PLAN CORRESPOND TO USDA NATURAL RESOURCES CONSERVATION SERVICE (NRCS) SOIL SERIES AND NAMES.
2. MAPPED WETLANDS AND THEIR BUFFERS (IF CLASS II) ARE DEPICTED ON THE EPSC PLAN AS EXAMPLE "2012-PW-72". CODES REPRESENT: DELINEATION YEAR- DELINEATOR INITIALS-WETLAND NUMBER. MAPPED WETLANDS WITHIN THE PROJECT AREA ARE TO BE FLAGGED PRIOR TO CONSTRUCTION.
3. IMPACTS TO CLASS II WETLANDS AND THEIR 50-FOOT BUFFERS ARE SUBJECT TO SPECIFIC AUTHORIZATIONS AND CONDITIONS OF THE INDIVIDUAL VERMONT WETLAND PERMIT.
4. IMPACTS TO ALL JURISDICTIONAL WATERS OF THE U.S. (INCLUDING STREAMS, RIVERS, WETLANDS, ETC.) ARE SUBJECT TO SPECIFIC AUTHORIZATIONS AND CONDITIONS OF THE INDIVIDUAL DEPARTMENT OF THE ARMY (USACE) SECTION 404 AND SECTION 10 PERMITS, AND THE RELATED VT DEC SECTION 401 WATER QUALITY CERTIFICATION.
5. CONSTRUCTION MATS ARE TO BE INSTALLED IN WETLANDS TO PROVIDE STABLE AREAS FOR EQUIPMENT ACCESS, EQUIPMENT AND MATERIAL STAGING, AND SOIL STOCKPILING.
6. IN RESOURCE AREAS, MINIMIZE DURATION THAT MATS ARE IN PLACE TO EXTENT POSSIBLE. SEE "RTE MATTING DETAIL" ON SHEET ANGP-T-G-015 FOR ADDITIONAL INSTRUCTIONS.
7. CONSTRUCTION MATS THAT BECOME COVERED WITH SOIL AND/OR CONSTRUCTION DEBRIS SHOULD BE CLEANED AND THE MATERIALS REMOVED AND DISPOSED OF IN AN UPLAND LOCATION. THE MATERIAL SHOULD NOT BE SCRAPED OR SHOVELED INTO THE RESOURCE AREA.
8. CONSTRUCTION MATS THAT BECOME IMBEDDED MUST BE RESET OR LAYERED TO PREVENT MUD FROM COVERING THEM OR WATER PASSING OVER THEM.
9. CONSTRUCTION MATS SHOULD BE CLEANED BEFORE TRANSPORT TO ANOTHER WETLAND LOCATION TO REMOVE SOIL AND ANY INVASIVE PLANT SPECIES, SEED STOCK OR PLANT MATERIAL. CLEANING METHODS INCLUDE BUT ARE NOT LIMITED TO SHAKING OR DROPPING MATS IN A CONTROLLED MANNER WITH A PIECE OF MACHINERY TO KNOCK OFF ATTACHED SOIL AND DEBRIS, SPRAYING WITH WATER OR AIR, AND SWEEPING.
10. CONSTRUCTION MAT BRIDGES ARE TO BE USED FOR STREAM AND DITCH CROSSINGS (WHERE NOT HORIZONTALLY DIRECTIONALLY DRILLED) REGARDLESS OF WHETHER OR NOT THERE IS ACTIVE FLOW. AT "DRY" CROSSINGS WHERE THERE IS NO FLOW OCCURRING OR ANTICIPATED, CONSTRUCTION MATS MAY BE PLACED DIRECTLY ONTO THE GROUND IN ORDER TO PREVENT EXCESSIVE RUTTING, PROVIDED STREAM BANKS AND BOTTOMS ARE NOT ADVERSELY ALTERED.
11. MAPPED STREAMS AND THEIR ASSIGNED BUFFERS ARE DEPICTED ON THE EPSC PLAN AS EXAMPLES "2012-SC-CM-3" OR "2012-TB-JB-7". CODES REPRESENT: DELINEATION YEAR-STREAM FLAGGING TYPE (SC=STREAM CENTER, TB=TOP-OF-BANK)-DELINEATOR INITIALS-RESOURCE NUMBER. MAPPED STREAMS WITHIN THE PROJECT AREA ARE TO BE FLAGGED PRIOR TO CONSTRUCTION.
12. MAPPED RARE, THREATENED, AND ENDANGERED (RTE) PLANT SPECIES AND THEIR BUFFERS ARE DEPICTED ON THE EPSC PLAN BY THEIR NAME (OR CODE). RTE PLANT SPECIES INDIVIDUALS OR MAPPED POLYGONS THAT ARE "LISTED" AND THEIR ASSIGNED BUFFERS ARE TO BE AVOIDED. RTE PLANT SPECIES THAT ARE "NOT LISTED" AND ASSOCIATED BUFFERS ARE TO BE AVOIDED TO THE EXTENT PRACTICABLE WITH EXCEPTION OF "2012-RTE-CT-030" WHICH IS TO BE PROTECTED WITH ORANGE FENCING AND AVOIDED (SHEET ANGP-EPSC-014).
13. ACCESS THROUGH MAPPED ARCHAEOLOGICALLY-SENSTITIVE AREAS, HISTORICALLY-SENSITIVE AREAS, AND SIGNIFICANT NATURAL COMMUNITIES ARE TO BE CONDUCTED PER RELEVANT ENVIRONMENTAL PERMITS AND PER THIS EPSC PLAN.
14. MAPPED ARCHEOLOGICAL AREAS OUTSIDE OF THE PROJECT CORRIDOR MAY NOT BE FLAGGED.
15. DEBRIS FROM TREE CLEARING TO FOLLOW SPECIFIC DISPOSAL CONDITIONS FROM APPLICABLE ENVIRONMENTAL PERMITS. WHERE NO SPECIFIC CONDITIONS APPLY, TREE AND BRUSH DEBRIS FROM INITIAL CLEARING SHOULD BE DISPOSED OF IN A MANNER WHICH DOES NOT HAVE THE EFFECT OF PLACING FILL IN WETLAND, WATERS, OR BUFFERS, AND DOES NOT IMPEDE NATURAL HYDROLOGY. SPECIFICALLY:
    - a. NO CLEARING MACHINERY TO BE PLACED IN WETLAND THAT WILL BE MATTED DURING CONSTRUCTION;
    - b. DO NOT LEAVE ANY DEBRIS (SLASH, TOPS, LOGS) IN SURFACE WATERS
    - c. IF WETLANDS ARE SMALL, DEBRIS TO BE PULLED OUT OF WETLAND AREA AND STOCKPILED OR CHIPPED IN UPLAND AREAS OUTSIDE OF CLASS II WETLAND BUFFERS;
    - d. CHIP CUT SLASH AND TOPS AND BLOW IN UPLAND AREAS, OUTSIDE OF CLASS II WETLAND BUFFERS, OR USE FOR MULCH PROTECTION OUTSIDE OF CLASS II WETLAND BUFFERS;
    - e. IF WETLANDS ARE LARGE (AND DEBRIS REMOVAL IS DIFFICULT), PLAN TO BUCK UP LOGS AND REDUCE SLASH/TOP SIZE BY CUTTING - IF FLOW PATHS ARE APPARENT WITHIN THE WETLAND, ORIENT DEBRIS PARALLEL WITH FLOW DIRECTION.
16. ANY STUMPS AND/OR OTHER WOODY DEBRIS THAT IS DISPOSED OF OFF-SITE SHALL BE PLACED IN UPLAND, NON-WETLAND, NON WET AREA LOCATIONS.
17. DISTURBANCE AND CONSTRUCTION ACTIVITIES ASSOCIATED WITH APPROVED TEMPORARY STREAM CROSSINGS MUST BE COMPLETED AND STABILIZED AS SOON AS PRACTICABLE. STREAM CROSSINGS SHALL BE PERFORMED ACCORDING TO THE FOLLOWING GUIDELINES:
    - a. STREAM CROSSINGS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPLICABLE ENVIRONMENTAL PERMITS AND THE APPROVED EPSC STREAM CROSSING DETAILS. EPSC MEASURES SHALL BE IMPLEMENTED PRIOR TO EARTH DISTURBING ACTIVITIES AT STREAM CROSSINGS TO MINIMIZE DISCHARGE OF SEDIMENT TO RECEIVING WATERS.
    - b. MATERIALS EXCAVATED FROM STREAM CHANNELS SHALL BE SEGREGATED AND STOCKPILED ON GEOSYTHETIC OR SIMILAR PRODUCT SEPARATELY FROM TOPSOIL AND SUBSURFACE SPOIL MATERIALS. UPON COMPLETION OF PIPELINE INSTALLATION, STREAM CHANNEL AND STREAM BANK SUBSTRATE PROFILES (SOIL HORIZONS) SHALL BE RESTORED TO THE MAXIMUM EXTENT PRACTICABLE.
    - c. FOLLOWING COMPLETION OF WORK AND REMOVAL OF MATTING AND TEMPORARY BRIDGES, STREAM BANK STABILIZATION SHALL BE PERFORMED ACCORDING TO THE STREAM BANK RESTORATION WITH RECP AND STREAM BANK RESTORATION WITH COIR LOG DETAILS. DISTURBED STREAM BANK AND BUFFER AREAS WITHIN 50 FEET OF THE STREAM CHANNEL SHALL BE RESTORED. APPLY COIR LOG DETAIL TO SITES WHERE STREAM BANK IS DISTURBED OR TRENCHED THROUGH DURING PIPELINE INSTALLATION AND SOIL MATERIAL COMPOSITION PERMITS STAKES TO BE DRIVEN.
    - d. TO PREVENT DITCHING AND EROSION THROUGH THE RESTORED PIPELINE TRENCH, WATERBARS SHALL BE INSTALLED AT THE TOP OF SLOPES TO INTERCEPT AND DIVERT RUNOFF.
    - e. APPLICATION OF RIPRAP FOR BANK STABILIZATION MUST COMPLY WITH THE USACE PERMIT TERMS AND CONDITIONS AND VT DEC RIVER MANAGEMENT APPROVAL. UNLESS OTHERWISE SPECIFIED, THE USE OF RIPRAP WILL BE LIMITED TO AREAS WHERE EXISTING RIPRAPPED BANKS ARE DISTURBED OR WHERE FLOW CONDITIONS PRECLUDE EFFECTIVE VEGETATIVE STABILIZATION TECHNIQUES SUCH AS SEEDING AND RECP.
18. FOR CLASS II WETLANDS 2012-JB-31 (SHEET ANGP-EPSC-039+40), 2013-AW-CM-8 (SHEET ANGP-EPSC-041), AND 2012-CM-87 (SHEET ANGP-EPSC-043): IF BLASTING IS REQUIRED, INSTALL A BENTONITE PLUB/TRENCH BREAKER AT BASE OF BLASTED SEGMENT OF TRENCH.
19. PERMANENT TRENCHBREAKERS TO BE INSTALLED AS REQUIRED PER DETAILS 4 AND 5 ON EPSC PLAN SHEET ANGP-T-G-015. ADDITIONAL TRENCHBREAKERS ARE ALSO TO BE INSTALLED (TEMPORARILY OR PERMANENTLY) WHERE POTENTIAL FOR FLOW TO A DOWNSLOPE WATER RESOURCE AREA IS TO BE MINIMIZED OR AVOIDED AND TO PREVENT CHANNELIZATION OF FLOW AT ANY TIME (E.G., BEFORE PIPE IS INSTALLED).
20. TRENCH EXCAVATION IN WETLANDS SHALL INVOLVE SEGREGATING TOPSOIL FROM SUBSOIL IN SEPARATE STOCKPILES.
21. WHEN BACK-FILLING, SOILS SHALL BE REPLACED IN THE ORDER IN WHICH THEY WERE EXCAVATED, WITH TOPSOIL AS THE UPPERMOST LAYER. BACK-FILL AND COMPACT SUBSOIL TO DEPTH OF ADJACENT NATIVE AND UNDISTURBED SUBSOIL/TOPSOIL INTERFACE. REPLACE TOPSOIL AS UPPER LAYER AND BLEND TO EXISTING GRADE OF UNDISTURBED SOILS. DISPOSE OF EXCESS SUBSOIL AT A SUITABLE LOCATION AS APPROVED BY THE OSPC.
22. EXPOSED SOILS SHALL BE SEEDED AND MULCHED AS SOON AS POSSIBLE FOLLOWING CONSTRUCTION ACTIVITIES IN THAT AREA. SEED MIX SHALL BE COMPRISED OF NATIVE MATERIAL PER THE SEEDING SPECIFICATION DETAILS. MULCH SHALL NOT CONTAIN ANY MATERIALS OR SEED THAT ARE NOT NATIVE TO THE WETLANDS.
23. ADDITIONAL SITE RESTORATION PROTOCOLS FOR THE FOLLOWING MAPPED SENSITIVE NATURAL RESOURCE AREAS:
    - a. UPLAND SIGNIFICANT NATURAL COMMUNITIES: AREAS TO BE TEMPORARILY IMPACTED BY CONSTRUCTION ARE TO BE ALLOWED TO NATURALLY REGENERATE FOLLOWING CONSTRUCTION. FINAL RESTORATION OF DISTURBED SOILS TO INCLUDE APPLICATION OF NATIVE DUFF/LEAF LITTER COLLECTED/STOCKPILED PRIOR TO SOIL DISTURBANCE OR WITH WEED FREE STRAW AS DIRECTED BY THE OPSC, WITH FINAL SEEDING ACCORDING TO THE UPLAND NATURAL COMMUNITY SEEDING SPECIFICATION.
    - b. WETLANDS: GROUND DISTURBED DURING CONSTRUCTION TO BE RETURNED TO PRE-CONSTRUCTION CONTOURS AND CONDITIONS TO EXTENT POSSIBLE PER THIS PLAN. APPLY WITH WEED-FREE STRAW TO DISTURBED AREAS AS DIRECTED BY THE OPSC AND SEED AREAS. ACCORDING TO THE RIPARIAN AND WETLAND SEEDING SPECIFICATION. AREAS IMPACTED WITH NO GROUND DISTURBANCE (SUCH AS MATTED OR CLEARED WETLAND AREAS) ARE TO BE ALLOWED TO NATURALLY REGENERATE FOLLOWING CONSTRUCTION.
    - c. RTE PLANT LOCATIONS: GROUND DISTURBED DURING CONSTRUCTION TO BE RETURNED TO PRE-CONSTRUCTION CONTOURS AND CONDITIONS TO EXTENT POSSIBLE PER THIS PLAN AND ALLOWED TO NATURALLY REGENERATE FOLLOWING CONSTRUCTION. APPLY WITH WEED-FREE STRAW TO DISTURBED AREAS AS DIRECTED BY THE OPSC. LARGE LOGS FROM INITIAL TREE CLEARING TO BE PLACED IN A SINGLE ROW ALONG THE PERIMETER (25 FT SETBACK) FROM IDENTIFIED RTE PLANT LOCATION, WITHIN FINAL ROW.

ON-SITE PLAN COORDINATOR (OPSC) NOTES:

1. THE OSPC DESIGNATED TO THE PROJECT (AND HIS/HER DESIGNEE) SHALL:
    - a. REVIEW VT DEC'S "ON-SITE PLAN COORDINATOR MANUAL",
    - b. BE ON-SITE ON A DAILY BASIS (OR HAVE A DESIGNEE THAT IS ON SITE WHEN HE/SHE CANNOT BE),
    - c. BE DIRECTLY RESPONSIBLE FOR ON-SITE IMPLEMENTATION OF THE EPSC PLAN,
    - d. BE KNOWLEDGEABLE IN THE PRINCIPLES AND PRACTICES OF EPSC,
    - e. POSSESS THE SKILLS TO ASSESS CONDITIONS AT THE CONSTRUCTION SITE THAT COULD IMPACT STORMWATER QUALITY,
    - f. POSSESS THE SKILLS TO ASSESS THE EFFECTIVENESS OF EPSC MEASURES SELECTED TO CONTROL THE QUALITY OF STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITY,
    - g. POSSESS THE SKILLS AND EQUIPMENT TO CONDUCT TURBIDITY MONITORING PURSUANT TO THE CONSTRUCTION STORMWATER DISCHARGE PERMIT, AND
    - h. HAVE THE AUTHORITY TO STOP AND/OR MODIFY CONSTRUCTION ACTIVITIES AS NECESSARY TO COMPLY WITH THE EPSC PLAN AND THE CONSTRUCTION STORMWATER DISCHARGE PERMIT.
2. ALL PROPOSED CHANGES TO THE EPSC PLAN MUST BE APPROVED BY THE OSPC OR HIS/HER DESIGNEE, THE PLAN DESIGNER OR A CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC) PRIOR TO IMPLEMENTATION, AND BE CONSIDERED MINOR AMENDMENTS AS DEFINED IN THE OSPC HANDBOOK. ALL MINOR AMENDMENTS ARE TO BE RECORDED USING THE MINOR AMENDMENT RECORD FORM AND MARKED ON THE MASTER OSPC PLANSET ALL MODIFICATIONS THAT FALL OUTSIDE OF THE MINOR AMENDMENT DEFINITION MUST BE APPROVED BY VT-DEC.
3. DURING THE REGULAR CONSTRUCTION SEASON (APRIL 15 TO OCT 15), THE OSPC OR HIS/HER DESIGNEE SHALL CONDUCT INSPECTIONS AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HRS FOLLOWING A STORM EVENT RESULTING IN DISCHARGE OF STORMWATER FROM THE CONSTRUCTION SITE.
4. DURING THE WINTER CONSTRUCTION SEASON (OCT 15 TO APRIL 15), THE OSPC OR HIS/HER DESIGNEE SHALL CONDUCT INSPECTIONS ON A DAILY BASIS DURING ACTIVE EARTHWORK.
5. THE OSPC AND HIS/HER DESIGNEE(S) SHALL FOLLOW TURBIDITY MONITORING PROTOCOLS OUTLINED IN VT DEC'S "MONITORING OF TURBIDITY IN STORMWATER RUNOFF FROM CONSTRUCTION ACTIVITIES" MANUAL.
6. INSPECTIONS CONDUCTED BY THE OSPC OR HIS/HER DESIGNEE SHALL COVER ALL AREAS OF THE SITE THAT ARE BEING ACTIVELY DISTURBED BY CONSTRUCTION OR CONSTRUCTION-RELATED ACTIVITIES, INCLUDING AREAS THAT HAVE BEEN TEMPORARILY STABILIZED.
7. OSPC INSPECTIONS SHALL BE DOCUMENTED USING THE VT DEC INSPECTION REPORT FORM OR A VT DEC-ACCEPTED INSPECTION REPORT FORM.
8. OSPC INSPECTION REPORTS SHALL BE MAINTAINED ON-SITE FOR THE DURATION OF THE PROJECT AND MADE AVAILABLE TO VT DEC UPON REQUEST.

EPSC SPECIALIST OVERSIGHT NOTES:

1. THE EPSC SPECIALIST DESIGNATED TO THE PROJECT SHALL:
    - a. BE RESPONSIBLE FOR PERFORMING ENVIRONMENTAL INSPECTIONS AND REPORTING AT A FREQUENCY PURSUANT TO THE CONSTRUCTION STORMWATER DISCHARGE PERMIT ISSUED FOR THE PROJECT,
    - b. BE RESPONSIBLE FOR ASSESSING THE SITE TO ENSURE COMPLIANCE WITH THE EPSC PLAN AND DIRECTING CORRECTIVE ACTION AS NEEDED,
    - c. NOTIFY THE OSPC WHEN CHANGES IN PRACTICE ARE NEEDED TO COMPLY WITH THE EPSC PLAN, AND
    - d. DETERMINE/CONFIRM/REPORT THAT APPROPRIATE EPSC PLAN MODIFICATIONS ARE BEING MADE AND RECORDED, AS NECESSARY,
2. THE EPSC SPECIALIST SHALL NOT BE THE OSPC.
3. EPSC SPECIALIST INSPECTIONS SHALL BE DOCUMENTED USING AN INSPECTION REPORT FORM THAT HAS BEEN APPROVED IN WRITING BY VT DEC.
4. EPSC SPECIALIST INSPECTIONS SHALL INCLUDE A REVIEW OF THE OSPC'S INSPECTION REPORTS.
5. EPSC SPECIALIST INSPECTION REPORTS SHALL BE SUBMITTED TO VT DEC AT A FREQUENCY PURSUANT TO THE CONSTRUCTION STORMWATER DISCHARGE PERMIT, AS WELL AS BEING MAINTAINED ON-SITE FOR THE DURATION OF THE PROJECT AND MADE AVAILABLE TO VT DEC UPON REQUEST.

CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS:

1. SEE "SOIL TYPE" ON EPSC PLAN SHEETS FOR REFERENCE TO PRIME AGRICULTURAL SOILS (PAS) AND THEIR LOCATION WITHIN THE PROJECT AREA.
2. SEE CORRESPONDING "CONSTRUCTION TYPE 4G" ON EPSC PLAN SHEET ANGP-T-G-006 FOR CONSTRUCTION PROTOCOL INVOLVING SOIL SEGREGATION.
3. TOPSOIL IS TO BE SEGREGATED IN ALL PAS AREAS.
4. A SUBSOILER IS TO BE UTILIZED TO BREAK UP AND/OR MINIMIZE COMPACTION.
5. CONSTRUCTION DEMARCATION (E.G., STAKED ORANGE FLAGGING - SEE CONSTRUCTION EPSC NOTES #6) SHALL BE INSTALLED ALONG THE PERIMETER OF THE PROJECT AREA.
6. PERIMETER CONTROLS (E.G., SILT FENCE - SEE CONSTRUCTION EPSC NOTES #6) SHALL BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF. IN SOME AREAS WHERE THE GROUND SURFACE IS LEVEL AND THERE ARE NO PATHWAYS (E.G., DITCHES OR RUTS) THAT COULD TRANSPORT RUNOFF FROM THE PROJECT AREA, INSTALLATION OF PERIMETER CONTROLS MAY NOT BE NECESSARY PER APPROVAL BY THE OSPC.
7. WHEN RESTORING PAS AREAS, TOPSOIL IS TO BE REPLACED AS CLOSE TO ORIGINAL CONDITIONS AS POSSIBLE WITH OVERSIGHT BY THE OSPC.
8. IN AREAS WHERE CONSTRUCTION-RELATED SOIL DISTURBANCE HAS OCCURRED WITHIN AN ACTIVELY CULTIVATED FARM FIELD, STABILIZATION (E.G., SEED AND MULCH) IS NOT NECESSARY. IN ALL OTHER AREAS WHERE CONSTRUCTION-RELATED SOIL DISTURBANCE HAS OCCURRED (PARTIALLY WITHIN NON-ACTIVELY CULTIVATED PAS AREAS), EXPOSED SOIL IS TO BE STABILIZED WITH SEED AND MULCH (OR SEED AND RECP) CONSISTENT WITH THE EPSC PLAN.

MICHAEL E. HOLLOWOOD
NO. 97764

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION

	BID		CONSTRUCTION	
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016
	INITIALS	DATE	INITIALS	DATE

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
EPSC NOTES

LOC. CHITTENDEN & ADDISON COUNTIES

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

YEAR: 2016 | W.O. | SCALE: NOTED | DWG. ANGP-T-G-011 | REV. 0

CONSTRUCTION DEMARCATION:

1. CONSTRUCTION DEMARCATION TO BE INSTALLED ALONG PERIMETER OF LIMITS OF DISTURBANCE PER THE EPSC PLAN.
2. DEMARCATION IS NOT TO CROSS ACTIVE ACCESS ROUTES.
3. WITHIN AT LEAST 50 FEET OF A WATER RESOURCE AREA, DEMARCATION MUST INCLUDE:
   a. 2 TO 3 ROWS OF STAKED (OR STAPLED) 3 INCH ORANGE BARRIER MESH TAPE OR ROPE,
   b. ORANGE CONSTRUCTION FENCE, OR
   c. ORANGE SNOW FENCE.
   d. OTHER INTERCHANGEABLE AND/OR DEC APPROVED MEASURE.
4. GREATER THAN AT LEAST 50 FEET FROM WATER RESOURCE AREAS, DEMARCATION MAY INCLUDE:
   a. ONE ROW OF STAKED (OR STAPLED) 3 INCH ORANGE BARRIER MESH TAPE OR ROPE, OR
   b. ORANGE FLAGGING OR PAINT.
   c. OTHER INTERCHANGEABLE AND/OR DEC APPROVED MEASURE.

1 Construction Demarcation Table

12/12

N.T.S. Source: VHB LD_

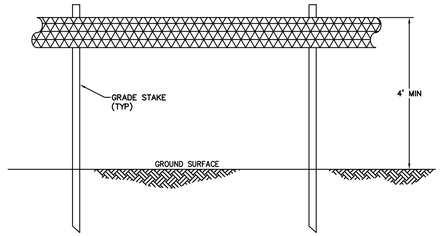
PERIMETER CONTROLS:

1. PERIMETER CONTROLS ARE TO BE INSTALLED ON DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SEDIMENT RUNOFF AND/OR SOIL EROSION.
2. PERIMETER CONTROLS ARE NOT TO CROSS ACTIVE ACCESS ROUTES (E.G., ROADS) OR ACTIVE FLOW PATHS (E.G., A STREAM).
3. PARTICULAR CARE IS TO BE TAKEN WHEN INSTALLING PERIMETER CONTROLS IN A WETLAND.
4. WITHIN AT LEAST 50 FEET OF WATER RESOURCE AREAS, PERIMETER CONTROLS MUST INCLUDE:
   a. REINFORCED SILT FENCE – TO BE REINFORCED WITH WIRE MESH, STAKED HAYBALES, STAKED FIBER ROLLS, EROSION CONTROL MIX BERMS, OR WOOD CHIP BERMS.
   b. STONE BERMS
   c. OTHER INTERCHANGEABLE AND/OR DEC–APPROVED MEASURE.
5. GREATER THAN AT LEAST 50 FEET FROM WATER RESOURCE AREAS, PERIMETER CONTROLS MAY INCLUDE:
   a. SILT FENCE (NON–REINFORCED)
   b. STAKED FIBER ROLLS
   c. EROSION CONTROL MIX BERMS
   d. OTHER INTERCHANGEABLE AND/OR DEC–APPROVED MEASURE.

2 Perimeter Control Table

12/12

N.T.S. Source: VHB LD_



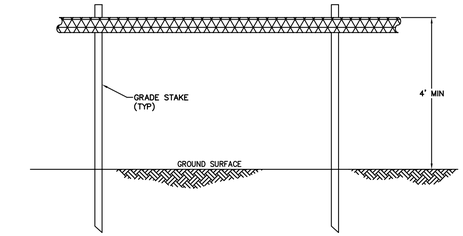
Notes:

1. BARRIER MESH TAPE OR ROPE SHALL BE INSTALLED ALONG THE PERIMETER OF THE PROJECT AREA TO DEMARCATE THE LIMIT OF DISTURBANCE. NO EARTHWORK OR STORAGE OF MATERIALS SHALL BE CONDUCTED BEYOND THIS LIMIT WITHOUT PRIOR APPROVAL FROM THE OSPC.
2. USE 3" ORANGE BARRIER MESH TAPE OR 1/2" YELLOW POLYPROPYLENE ROPE.
3. WITHIN 50' OF WATER RESOURCE AREAS, USE 2–3 ROWS OF TAPE OR ROPE. BEYOND 50' OF WATER RESOURCE AREAS USE 1 ROW OF TAPE OR ROPE.
4. TAPE OR ROPE MAY BE FASTENED TO STAKES, TREES, OR OTHER APPROPRIATE FIXED OBJECTS.
5. PROJECT DEMARCATION SHALL NOT CROSS ACTIVE ACCESS ROUTES (E.G. ROADS). PROJECT DEMARCATION MAY CROSS RESOURCES AREAS WITH EXCEPTION OF LARGER WATER BODIES WHERE IT IS NOT FEASIBLE OR ADVISABLE.
6. PROJECT DEMARCATION SHALL REMAIN IN PLACE AND BE MAINTAINED/REPLACED AS NEEDED UNTIL FINAL STABILIZATION IN THE AREA HAS BEEN ACHIEVED.

3 Barrier Mesh Tape or Rope

12/12

N.T.S. Source: VHB LD_



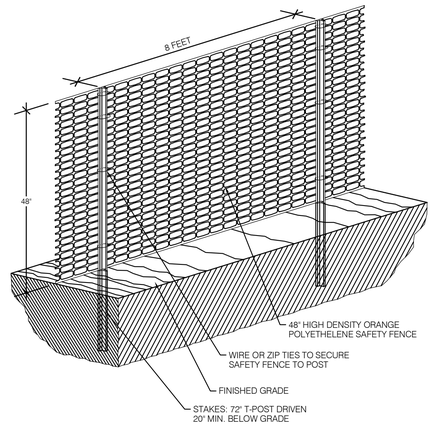
Notes:

1. BARRIER FLAGGING OR PAINT SHALL BE INSTALLED ALONG THE PERIMETER OF THE PROJECT AREA TO DEMARCATE THE LIMIT OF DISTURBANCE. NO EARTHWORK OR STORAGE OF MATERIALS SHALL BE CONDUCTED BEYOND THIS LIMIT WITHOUT PRIOR APPROVAL FROM THE OSPC.
2. FLAGGING OR PAINT MAY BE FASTENED TO STAKES, TREES, OR OTHER APPROPRIATE FIXED OBJECTS.
3. PROJECT DEMARCATION SHALL NOT CROSS ACTIVE ACCESS ROUTES (E.G. ROADS). PROJECT DEMARCATION MAY CROSS RESOURCE AREAS WITH THE EXCEPTION OF LARGER WATER BODIES WHERE IT IS NOT FEASIBLE OR ADVISABLE.
4. PROJECT DEMARCATION SHALL REMAIN IN PLACE AND BE MAINTAINED/REPLACED AS NEEDED UNTIL FINAL STABILIZATION IN THE AREA HAS BEEN ACHIEVED.

4 Barrier Flagging or Paint

12/12

N.T.S. Source: VHB LD_



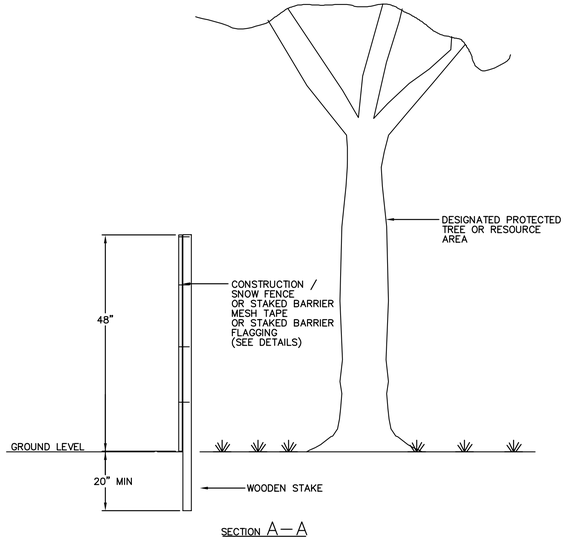
Notes:

1. CONSTRUCTION/SNOW FENCE SHALL BE INSTALLED WITHIN 50' OF A WATER RESOURCE, (STREAM, BROOK, LAKE, POND, ETC.) UNLESS THE AREA IS DENSELY WOODED, IN WHICH CASE 2 TO 3 ROWS OF ORANGE BARRIER MESH TAPE OR ROPE MAY BE USED.
2. CONSTRUCTION/SNOW FENCE SHALL NOT CROSS ACTIVE ACCESS ROUTES (E.G. ROADS). CONSTRUCTION/SNOW FENCE MAY CROSS RESOURCE AREAS WITH THE EXCEPTION OF LARGER WATER BODIES WHERE IT IS NOT FEASIBLE OR ADVISABLE.
3. CONSTRUCTION/SNOW FENCE SHALL REMAIN IN PLACE AND BE MAINTAINED/REPLACED AS NEEDED UNTIL FINAL STABILIZATION IN THE AREA HAS BEEN ACHIEVED.

5 Construction/Snow Fence

12/12

N.T.S. Source: VHB LD_651



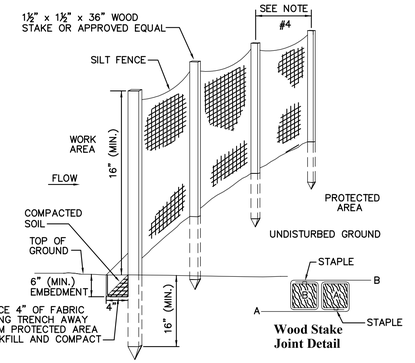
NOTES:

1. MINIMUM DISTANCE BETWEEN RESOURCE AND BARRIER SHALL BE 25' UNLESS OTHERWISE DIRECTED BY OSPC.
2. RESOURCES REQUIRING PROTECTION FOR ALL SIDES WILL BE BOXED WITH A MINIMUM OF 4 PANELS.
3. BARRIER MAY BE CONSTRUCTION/SNOW FENCE, STAKED BARRIER MESH TAPE, OR STAKED BARRIER FLAGGING. (SEE DETAILS.)
4. BARRIER TO REMAIN IN PLACE UNTIL CONSTRUCTION ACTIVITIES IN AREA ARE COMPLETE OR AS AS OTHERWISE DIRECTED BY OSPC.

6 Wetland, RTE, and Vegetation Protection Barrier

12/12

N.T.S. Source: CHA LD_



Notes:

1. SEE DETAIL # 2 ON SHEET ANGP–T–G–012 FOR LIST OF APPROPRIATE PERIMETER CONTROLS TO USE.
2. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N OR APPROVED EQUIVALENT.
3. FOR FILTER CLOTH FENCE WHEN ELONGATION IS >50%, POST SPACING SHALL NOT EXCEED 4 FT. FOR FILTER CLOTH FENCE WHEN ELONGATION IS <50%, POST SPACING SHALL NOT EXCEED 6 FT.
4. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER–LAPPED BY 6 INCHES AND FOLDED.
5. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE OR APPROVED EQUIVALENT.
6. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN SEDIMENT REACHES HALF OF FABRIC HEIGHT AND DISPOSED OF IN AN UPLAND AREA.
7. PERIMETER CONTROLS SHALL NOT CROSS ACTIVE ACCESS ROUTES (E.G., ROADS) OR ACTIVE FLOW PATHS (E.G., LARGER STREAMS/RIVERS).
8. PERIMETER CONTROLS SHALL REMAIN IN PLACE AND BE MAINTAINED/REPLACED AS NEEDED UNTIL FINAL STABILIZATION IN THE AREA HAS BEEN ACHIEVED.

7 Silt Fence

12/12

N.T.S. Source: VHB LD_650VT

STATE OF VERMONT — ENGINEER — NO. 97764 — CIVIL — PROFESSIONAL ENGINEER

VHB Vanasse Hangen Brustlin, Inc.

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION		BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
						ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
						DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
						DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
						DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
						DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
CONSTRUCTION DETAILS

LOC. CHITTENDEN & ADDISON COUNTIES

Vermont Gas

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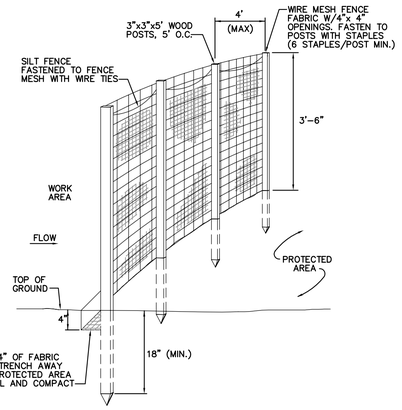
YEAR: 2016	W.O.	SCALE: NOTED	DWG. ANGP–T–G–012	REV. 0



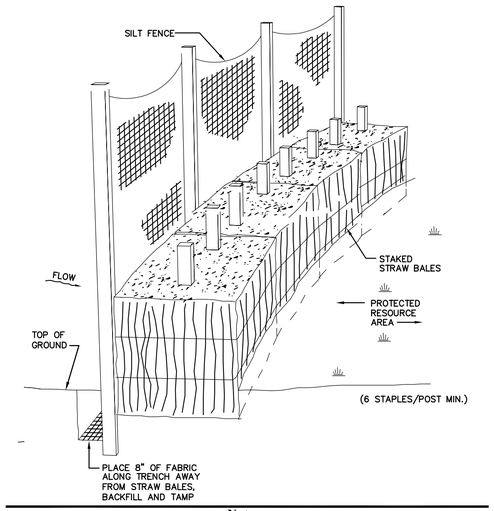
Notes:

1. SEE DETAIL #2 ON SHEET ANGP-T-G-012 FOR LIST OF APPROPRIATE PERIMETER CONTROLS TO USE
2. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N OR APPROVED EQUIVALENT.
3. FOR FILTER CLOTH FENCE WHEN ELONGATION IS >50%, POST SPACING SHALL NOT EXCEED 4 FT. FOR FILTER CLOTH FENCE WHEN ELONGATION IS <50%, POST SPACING SHALL NOT EXCEED 6 FT.
4. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY 6 INCHES AND FOLDED.
5. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE OR APPROVED EQUIVALENT.
6. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN SEDIMENT REACHES HALF OF FABRIC HEIGHT AND DISPOSED OF IN AN UPLAND AREA.
7. PERIMETER CONTROLS SHALL NOT CROSS ACTIVE ACCESS ROUTES (E.G., ROADS) OR ACTIVE FLOW PATHS (E.G., LARGER STREAMS/RIVERS).
8. PERIMETER CONTROLS SHALL REMAIN IN PLACE AND BE MAINTAINED/REPLACED AS NEEDED UNTIL FINAL STABILIZATION IN THE AREA HAS BEEN ACHIEVED.

1 Reinforced Silt Fence with Wire Mesh

12/12

N.T.S. Source: VHB LD_651



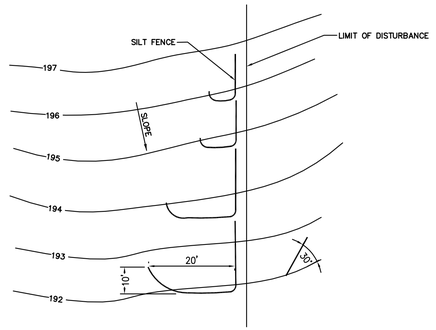
Notes:

1. SEE DETAIL # 2 ON SHEET ANGP-T-G-012 FOR LIST OF APPROPRIATE PERIMETER CONTROLS TO USE
2. SEE SILT FENCE DETAIL AND NOTES FOR INSTALLATION SPECIFICATIONS FOR SILT FENCE.
3. SEE STAKED HAY BALE DETAIL AND NOTES FOR INSTALLATION SPECIFICATIONS FOR STAKED STRAW BALES. SEEDLESS STRAW BALES ARE TO BE USED IN RESOURCE AREAS AND THEIR BUFFERS; DO NOT USE HAY BALES.
4. STAKED STRAW BALES MAY BE INTERCHANGED WITH STAKED FIBER ROLLS.
5. PERIMETER CONTROLS SHALL NOT CROSS ACTIVE ACCESS ROUTES (E.G., ROADS) OR ACTIVE FLOW PATHS (E.G., LARGER STREAMS/RIVERS).
6. PERIMETER CONTROLS SHALL REMAIN IN PLACE AND BE MAINTAINED/REPLACED AS NEEDED UNTIL FINAL STABILIZATION IN AREA HAS BEEN ACHIEVED.

2 Reinforced Silt Fence with Staked Straw Bales

12/12

N.T.S. Source: VHB LD_



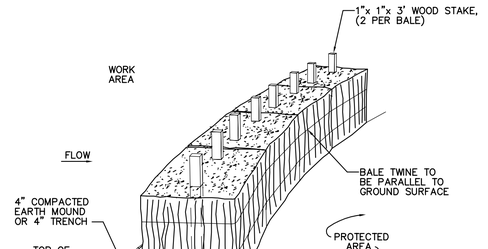
Notes:

1. SILT FENCE SHALL BE INSTALLED IN SHORTER RUNS WITH "J-HOOKS" TO AVOID CONCENTRATION OF FLOWS AT ONE LOCATION BY TRAPPING RUNOFF AT MULTIPLE POINTS ALONG A SLOPE.
2. MINIMUM WIDTH OF J-HOOK RECOMMENDED AT 20 FT WITH A DEPTH OF 10 FT. WHERE SPACE IS LIMITED (E.G., ALONG NARROW RIGHTS OF WAY), NARROWER HOOKS CAN BE USED WITH A HIGHER SPACING FREQUENCY.
3. START DOWN-GRADIENT SILT FENCE LINE AS CLOSE AS POSSIBLE TO UP-GRADIENT J-HOOK.
4. SEE SILT FENCE NOTES FOR INSTALLATION SPECIFICATIONS.

3 Silt Fence "J-Hooks"

12/12

N.T.S. Source: VHB LD_



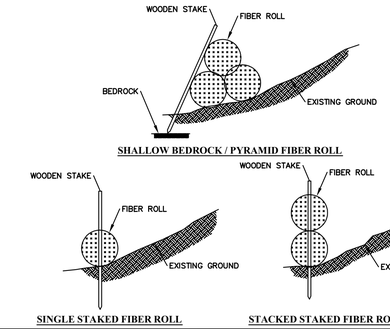
Notes:

1. ENSURE BALES ARE TRENCHED INTO THE GROUND (4" MIN) OR A 4" COMPACTED EARTH MOUND IS PRESENT ON UP GRADIENT SIDE OF BARRIER.
2. ENSURE BALES ARE INSTALLED SO ROPE RUNS PARALLEL TO GROUND.
3. ENSURE STAKES ARE PROPERLY HAMMERED IN, LEAVING ~ 4" OF EXPOSURE ABOVE THE BALE.
4. REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES ½ OF THE OVERALL HEIGHT. DISPOSE OF IN AN UPLAND AREA AWAY FROM WATER FLOW.
5. MAINTAIN AND REPLACE HAY BALES AS NEEDED.

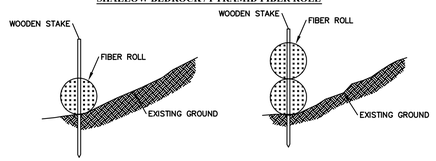
4 Staked Hay Bales

12/12

N.T.S. Source: VHB LD_653



SHALLOW BEDROCK / PYRAMID FIBER ROLL



SINGLE STAKED FIBER ROLL **STACKED STAKED FIBER ROLL**

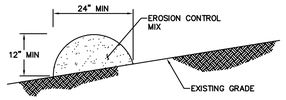
Notes:

1. SEE DETAIL # 2 ON SHEET ANGP-T-G-012 FOR LIST OF APPROPRIATE PERIMETER CONTROLS TO USE.
2. FIBER ROLL SHALL BE PLACED IN SHALLOW TRENCH UP TO 4", WHERE FEASIBLE, PLACING SOIL REMOVED FROM TRENCH BEHIND THE ROLL.
3. FIBER ROLLS SHALL BE ANCHORED WITH 2" BY 2" WOODEN STAKES (36" LONG), OR SIMILAR, WHERE FEASIBLE, EITHER INSTALLED THROUGH CENTER OF ROLL (AS SHOWN) OR PLACED ON BOTH SIDES OF ROLL.
4. STAKES TO BE PLACED 4 FT APART, MINIMUM.
5. SINGLE OR DOUBLE STACKED STAKED FIBER ROLLS TO BE INSTALLED WHERE SOIL DEPTH ALLOWS. WHERE SHALLOW TO BEDROCK, PYRAMID FIBER ROLLS TO BE UTILIZED WITH STAKES, AS FEASIBLE.
6. FIBER ROLLS TO BE REPLACED OR REPLENISHED AS NEEDED DURING ACTIVE EARTH WORK.
7. PERIMETER CONTROLS SHALL NOT CROSS ACTIVE ACCESS ROUTES (E.G., ROADS) OR ACTIVE FLOW PATHS (E.G., STREAMS/RIVERS).
8. PERIMETER CONTROLS SHALL REMAIN IN PLACE AND BE MAINTAINED/REPLACED AS NEEDED UNTIL FINAL STABILIZATION IN THE AREA HAS BEEN ACHIEVED.

5 Staked Fiber Roll

12/12

N.T.S. Source: VHB LD_



Notes:

COMPOSITION

EROSION CONTROL MIX BERM SHALL CONSIST PRIMARILY OF ORGANIC MATERIAL AND MAY INCLUDE: SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK AND/OR ACCEPTABLE MANUFACTURED PRODUCTS. WOOD AND BARK CHIPS, GROUND CONSTRUCTION DEBRIS, OR REPROCESSED WOOD PRODUCTS ARE NOT ACCEPTABLE AS THE ORGANIC COMPONENT OF THE MIX.

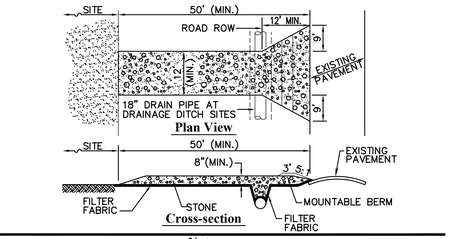
INSTALLATION

1. SEE DETAILS # 2 ON SHEET ANGP-T-G-012 FOR LIST OF APPROPRIATE PERIMETER CONTROLS TO USE.
2. THE BERM SHALL BE PLACED ALONG A RELATIVELY LEVEL CONTOUR.
3. EXISTING GROUND SHALL BE PREPARED AS NEEDED SUCH THAT THE BERM LIES NEARLY FLAT ALONG THE GROUND TO AVOID THE CREATION OF VOIDS AND BRIDGES IN ORDER TO MINIMIZE THE POTENTIAL OF WASH OUTS UNDER THE BERM.
4. ON SLOPES < 5% OR AT THE BOTTOM OF STEEPER SLOPES (<2:1) UP TO 20' LONG, THE BERM MUST BE A MINIMUM OF 12" HIGH, AS MEASURED ON THE UPHILL SIDE OF THE BERM, AND A MINIMUM OF 2 FT. WIDE. ON LONGER OR STEEPER SLOPES, THE BERM SHALL BE WIDER TO ACCOMMODATE ADDITIONAL FLOW.
5. BERM MAY BE INSTALLED IN PLACE OF SILT FENCE EXCEPT IN, BUT NOT LIMITED TO, THE FOLLOWING AREAS: WETLAND AREAS, AT POINTS OF CONCENTRATED FLOW, BELOW STORMWATER OUTFALLS, AROUND CATCH BASINS AND CLOSED STORM SYSTEMS AND AT THE BOTTOM OF STEEP SLOPES THAT ARE MORE THAN 50 FEET FROM TOP TO BOTTOM. BERM MAY BE USED IN WETLAND BUFFER AREAS BUT MAY NOT BE USED IN WETLANDS AREA.
6. PERIMETER CONTROLS SHALL NOT CROSS ACTIVE ACCESS ROUTES (E.G., ROADS) OR ACTIVE FLOW PATHS (E.G., LARGER STREAMS RIVERS).
7. PERIMETER CONTROLS SHALL REMAIN IN PLACE AND BE MAINTAINED/REPLACED AS NEEDED UNTIL FINAL STABILIZATION IN AREA HAS BEEN ACHIEVED.

6 Erosion Control Mix Berm

12/12

N.T.S. Source: VHB LD_



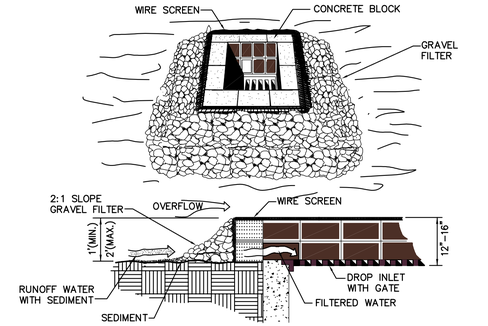
Notes:

1. STONE SIZE: USE 1 TO 4 INCH DIAMETER STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH: NOT LESS THAN 50 FEET.
3. THICKNESS: NOT LESS THAT 8 INCHES.
4. WIDTH: EXIT WIDTH SHALL BE A TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
5. GEOTEXTILE: MUST BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE.
6. SURFACE WATER: ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION EXITS SHALL BE PIPED BENEATH THE EXIT. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE: THE EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY. MAINTENANCE MAY REQUIRE TOP DRESSING W/ADDITIONAL AGGREGATE.
8. WHEN WHEEL/EQUIPMENT WASHING IS REQUIRED IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED ACCORDING TO PERMIT REQUIREMENTS.
10. STABILIZED CONSTRUCTION EXIT SHALL BE REMOVED PRIOR TO FINAL FINISH MATERIALS BEING INSTALLED.

7 Stabilized Construction Exit

12/12

N.T.S. Source: VHB LD_



Notes:

1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE FOR DEWATERING. FOUNDATION SHALL BE 2" MINIMUM BELOW THE REST OF THE INLET AND BLOCKS SHALL BE PLACED AGAINST THE INLET FOR SUPPORT.
2. CONCRETE BLOCKS SHOULD BE PLACED LENGTHWISE ON THEIR SIDES IN A SINGLE ROW AROUND THE PERIMETER OF THE INLET. THE ENDS OF EACH BLOCK SHOULD BE ABUTTING. THE HEIGHT OF THE BARRIER CAN BE VARIED DEPENDING ON THE DESIGN BY STACKING VARIOUS COMBINATIONS OF DIFFERENT SIZED BLOCKS. THE BARRIER SHOULD BE A MINIMUM OF 12 INCHES HIGH AND A MAXIMUM OF 16 INCHES HIGH.
3. HARDWARE CLOTH OR ½" WIRE MESH SHOULD BE PLACED OVER THE OPENINGS OF THE CONCRETE BLOCKS AND EXTENDED AT LEAST 12 INCHES AROUND THE OPENING TO PREVENT AGGREGATE FROM BEING TRANSPORTED THROUGH THE OPENINGS IN THE BLOCK.
4. USE CLEAN STONE OR GRAVEL ½" TO ¾" IN DIAMETER PLACED 2" BELOW TOP OF THE BLOCK ON A 2H:1V SLOPE OR FLATTER.
5. A 1 FOOT THICK LAYER OF FILTER STONE WILL BE PLACED AGAINST THE 3" STONE.
6. MAXIMUM DRAINAGE AREA PER SEDIMENT TRAP IS 1 ACRE.
7. BLOCK AND GRAVEL DROP INLET SEDIMENT FILTER SHALL BE CONSTRUCTED IN PAVED AREAS.

8 Block and Gravel Drop Inlet Sediment Filter (Paved Areas)

10/13

N.T.S. Source: VHB LD_

VHB Vanasse Hangen Brustlin, Inc.

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION

	BID		CONSTRUCTION	
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016
	INITIALS	DATE	INITIALS	DATE

VERMONT GAS
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CONSTRUCTION DETAILS

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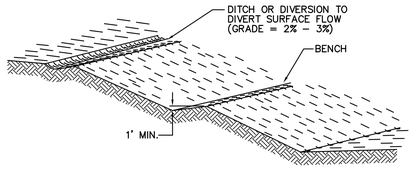
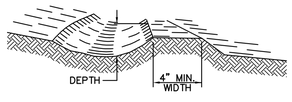
Main: (802) 735-0372 - www.chacompanies.com

YEAR: 2016 | W.O. | SCALE: NOTED | DWG. ANGP-T-G-013 | REV. 0



PLAN VIEW
N.T.S.



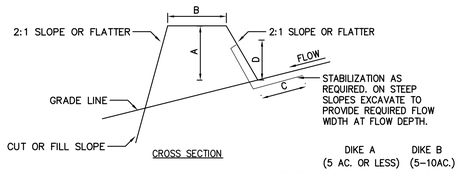
CROSS–SECTION
N.T.S.

Notes:

1. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE DIVERSION.
2. THE DIVERSION SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS SECTION AS REQUIRED TO MEET CRITERIA SPECIFIED HEREIN, AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
3. FILLS SHALL BE COMPACTED AS NEEDED TO PREVENT UNEQUAL SETTLEMENT THAT WOULD CAUSE DAMAGE IN THE COMPLETED DIVERSION.
4. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED FOLLOWING FINISHED GRADING.
5. SILT FENCE OR HAY BALES SHALL BE PLACED AT THE OUTLET OF EACH STRUCTURE.

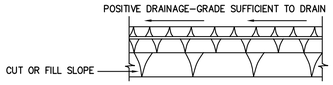
1 Diversion Swale and Bench

N.T.S. Source: VHB 12/12 LD_



CROSS SECTION

	DIKE A (5 AC. OR LESS)	DIKE B (5–10AC.)
A – DIKE HEIGHT	18"	36"
B – DIKE WIDTH	24"	36"
C – FLOW WIDTH	48"	60"
D – FLOW DEPTH	8"	15"



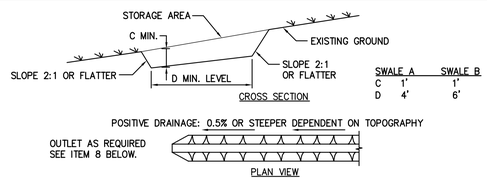
CONSTRUCTION SPECIFICATIONS

1. ALL DIKES SHALL BE COMPACTED BY EARTH–MOVING EQUIPMENT.
2. ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
3. TOP WIDTH MAY BE WIDER AND SIDE SLOPES BE FLATTER IF DESIRED TO FACILITATE CONSTRUCTION TRAFFIC.
4. FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED SAFE OUTLET.
5. EARTH DIKES SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIMUM OF EROSION. RUNOFF SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE SUCH AS A SEDIMENT TRAP OR SEDIMENT BASIN WHERE EITHER THE DIKE CHANNEL OR THE DRAINAGE AREA ABOVE THE DIKE ARE NOT ADEQUATELY STABILIZED.
6. STABILIZATION SHALL BE: (A) IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR MULCH IF NOT IN SEEDING SEASON, (B) PER THE FOLLOWING CHART

TYPE OF TREATMENT	CHANNEL GRADE	A(5 AC OR LESS)	B(5 AC – 10 AC)
1	0.5%–3.0%	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1%–5.0%	SEED AND STRAW MULCH	SEED AND COVER USING RECP
3	5.1%–8.0%	SEED AND COVER WITH RECP	LINED WITH 4–8" RIP–RAP OR GEOTEXTILE
4	8.1%–20.0%	LINED WITH 4–8" RIP–RAP	ENGINEERED DESIGN

2 Earth Dike

N.T.S. Source: VHB / VT S+S EPSC 12/12 LD_



CROSS SECTION

	SWALE A	SWALE B
C	1'	1'
D	4'	6'

POSITIVE DRAINAGE: 0.5% OR STEEPER DEPENDENT ON TOPOGRAPHY

PLAN VIEW

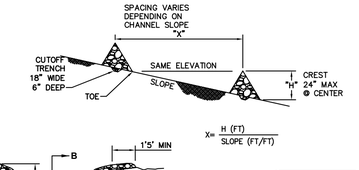
CONSTRUCTION SPECIFICATIONS

1. ALL TEMPORARY SWALES SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET.
2. DIVERTED RUNOFF FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.
3. DIVERTED RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET DIRECTLY INTO AN UNDISTURBED STABILIZED AREA AT NON–EROSIVE VELOCITY.
4. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE SWALE.
5. THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
6. FILLS SHALL BE COMPACTED BY EARTH MOVING EQUIPMENT.
7. ALL EARTH REMOVED AND NOT NEEDED FOR CONSTRUCTION SHALL BE PLACED SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE SWALE.
8. STABILIZATION SHALL BE AS PER THE FLOW CHANNEL STABILIZATION CHART BELOW:

TYPE OF TREATMENT	CHANNEL GRADE	A(5 AC OR LESS)	B(5 AC – 10 AC)
1	0.5%–3.0%	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1%–5.0%	SEED AND STRAW MULCH	SEED AND COVER USING RECP
3	5.1%–8.0%	SEED AND COVER WITH RECP	LINED WITH 4–8" RIP–RAP OR GEOTEXTILE
4	8.1%–20.0%	LINED WITH 4–8" RIP–RAP	ENGINEERED DESIGN

3 Temporary Swale

N.T.S. Source: VHB / VT S+S EPSC 12/12 LD_



SECTION 'A-A'

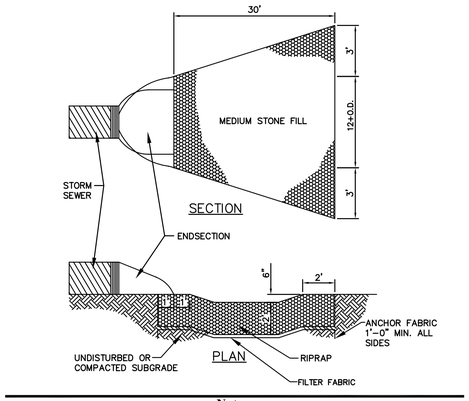
SECTION 'B-B'

Notes:

1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION TO THE LINES, GRADES AND LOCATIONS SHOWN IN THE PLAN USING A WELL GRADED STONE MATRIX 2 TO 9 INCHES IN SIZE.
2. SET SPACING OF CHECK DAMS TO ASSUME THAT THE ELEVATIONS OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM.
3. EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
4. PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
5. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.
6. MAXIMUM DRAINAGE AREA ABOVE CHECK DAM SHALL NOT EXCEED 2 AC.

4 Stone Check Dam

N.T.S. Source: VHB / VT S+S EPSC 12/12 LD_

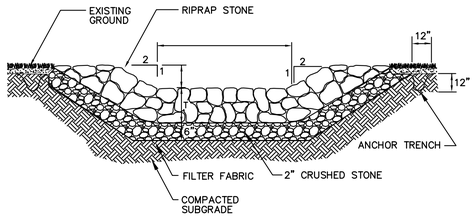


Notes:

1. OUTLET PROTECTION MAY BE DONE BY USING ROCK RIP–RAP, GROUTED RIP–RAP, OR GABIONS.
2. STONE SIZE SHALL BE A WELL GRADED MIXTURE SO THAT 50% OF THE STONE SIZE, BY WEIGHT, SHALL BE LARGER THAN THE d50 SIZE DETERMINED USING THE CHARTS.

5 Outlet Protection

N.T.S. Source: CHA 12/12 LD_



Notes:

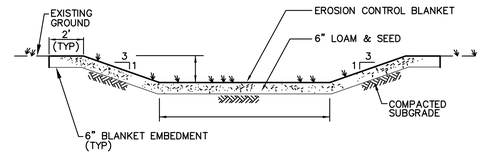
1. MIN. CAPACITY SHALL CARRY PEAK FLOW RATE DURING 10–YR, 24–HR STORM EVENT.
2. MAX SIZE OF RIPRAP STONE SHALL BE:

VEL (FPS)	DMAX (IN.)
5.0	6
8.5	12
10	18
12	24
15	36

3. FOUNDATION AREA SHALL BE CLEARED OF TREES, STUMPS, ROOTS, SOD, LOOSE ROCK, OR OTHER OBJECTIONABLE MATERIAL.
4. OUTLET STABILIZATION MAY BE NEEDED TO PREVENT EROSION.

6 Stone-lined Swale

N.T.S. Source: VHB 12/12 LD_358

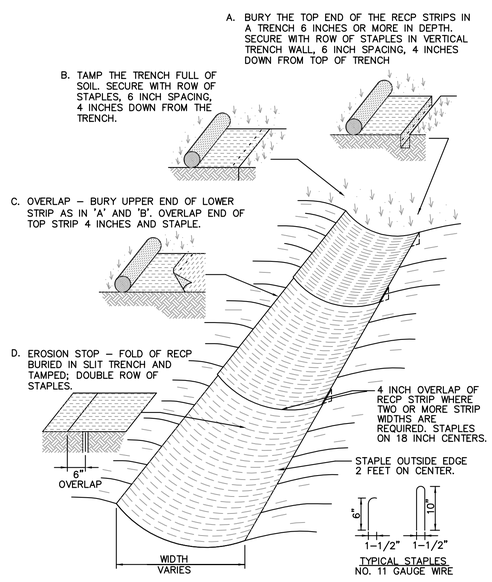


Notes:

1. NOT TO BE USED IN AREAS WHERE FLOW VOLUME AND RATES MAY CAUSE EROSION AND SHOULD OTHERWISE BE CONVEYED VIA STONE–LINED SWALE.
2. FOUNDATION AREA SHALL BE CLEARED OF TREES, STUMPS, ROOTS, SOD, LOOSE ROCK, OR OTHER OBJECTIONABLE MATERIAL.
3. INSTALL TEMPORARY COVER (E.G., MULCH) TO PROTECT AREA WHILE SEED IS GERMINATING.
4. SEE SEEDING SPECIFICATIONS FOR SEED TYPES AND SEED APPLICATION RATES.

7 Grassed Swale

N.T.S. Source: VHB 12/12 LD_171



1. INSTALLATION SHALL BE AS PER MANUFACTURER'S RECOMMENDATIONS
2. RECP TO BE BIODEGRADABLE; NO NYLON MESH. SEE SHEET ANGP–T–G–017 FOR RECP SPECIFICATIONS.

8 Rolled Erosion Control Blanket (RECP) - Swale Installation

N.T.S. Source: VHB 12/12 LD_

STATE OF VERMONT – MICHAEL E. HOLLOWAY – NO. 97764 – CIVIL – LICENSED PROFESSIONAL ENGINEER

VHB Vanasse Hangen Brustlin, Inc.

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION		BID		CONSTRUCTION	
						ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
						DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
						DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
						DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
						DESIGN MANAGER	SAB	06/28/13	JEO	05/2016
							INITIALS	DATE	INITIALS	DATE

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
CONSTRUCTION DETAILS

LOC. CHITTENDEN & ADDISON COUNTIES

Vermont Gas

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
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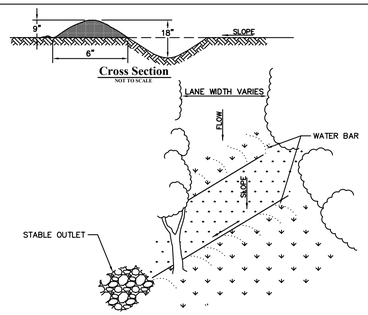
YEAR: 2016 | W.O. | SCALE: NOTED | DWG. ANGP–T–G–014 | REV. 0



Construction Specifications

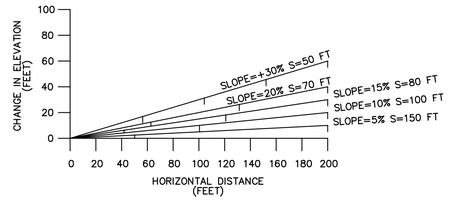
1. INSTALL THE WATER BAR AS SOON AS THE RIGHT OF WAY IS CLEARED AND GRADED.
2. DISK OR STRIP THE SOD FROM THE BASE FOR THE CONSTRUCTED RIDGE BEFORE PLACING FILL.
3. TRACK THE RIDGE TO COMPACT IT TO THE DESIGN CROSS SECTION.
4. THE OUTLET SHALL BE LOCATED ON AN UNDISTURBED AREA. FIELD SPACING WILL BE ADJUSTED TO USE THE MOST STABLE OUTLET AREAS. OUTLET PROTECTION WILL BE PROVIDED WHEN NATURAL AREAS ARE NOT ADEQUATE.
5. FOR PERMANENT WATER BARS, VEHICLE CROSSING SHALL BE STABILIZED WITH GRAVEL. EXPOSED AREAS SHALL BE SEEDED AND MULCHED. FOR TEMPORARY WATER BARS, VEHICLE CROSSING SHALL BE COMPACTED AND MAINTAINED PER THESE SPECIFICATIONS. FOLLOWING THEIR USE, WATER BARS SHALL BE REGRADED TO MATCH PRE-CONSTRUCITON CONDITIONS. TOPSOIL SHALL BE RE-APPLIED THEN ALL AREAS OF EXPOSED SOIL SHALL BE FULLY STABILIZED PER THE EPSC PLAN.
6. INSPECT WATER BARS FOR EROSION DAMAGE AND SEDIMENT. CHECK OUTLET AREAS AND MAKE REPAIRS AS NEEDED TO RESTORE OPERATION.
7. SPACING:

SLOPE (%)	SPACING (FT)
<5	125
5-10	100
10-20	75
20-35	50
>35	25

1 Water Bars

10/13

N.T.S. Source: Vermont Standards and Specs for EPSC 2006 LD_



NOTE: S = TRENCH BREAKER SPACING

NOTES:

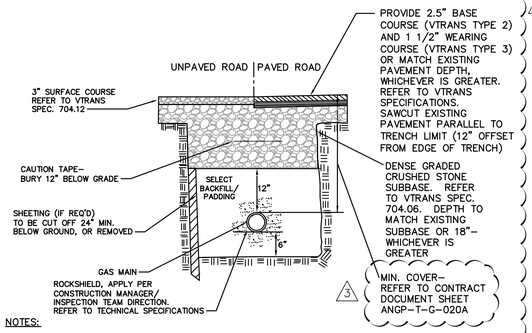
1. PERMANENT TRENCH BREAKER SANDBAGS SHALL NOT BE FILLED WITH TOPSOIL.
2. SPACINGS SHOWN ARE RECOMMENDED MINIMUM GUIDELINES. OSPC REPRESENTATIVE MAY ADJUST SPACING IN THE FIELD WITH PRIOR WRITTEN APPROVAL OF OWNER.
3. ONE TRENCH BREAKER IS REQUIRED AT ALL STREAM BANKS AND AT WETLAND BOUNDARIES.
4. REFER TO SHEETS ANGP-T-G-020B AND 020C FOR APPROXIMATE TRENCH BREAKER LOCATIONS.

3

2 Permanent Trench Break Spacing Guideline

12/12

N.T.S. Source: CHA LD_



NOTES:

1. REFER TO TECHNICAL SPECIFICATIONS FOR BOTH GENERAL AND SELECT/PADDING BACKFILL REQUIREMENTS.
2. IN RESOURCE AREAS (E.G. WETLANDS AND PAS AREAS) GENERAL BACKFILL SHALL BE NATIVE MATERIAL TO MATCH PROFILE DEPTH OF ADJACENT NATIVE, UNDISTURBED SUBSOIL/SURFACE SOIL INTERFACE. EXCESS SUBSOIL TO BE PROPERLY DISPOSED OF AND STABILIZED.
3. THE OWNER SHALL PROVIDE TESTING SERVICES TO INSURE THAT THE IN-PLACE DENSITY OF THE BACKFILL MEETS REQUIREMENTS DETERMINED IN THE SPECIFICATIONS.
4. ALL TRENCH CONSTRUCTION SHALL CONFORM TO APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.
5. FOR PIPE SUPPORT METHODS AND OTHER PIPE-IN-TRENCH REQUIREMENTS, REFER TO TECHNICAL SPECIFICATIONS.

3 Typical Trench Detail-Roadways and Driveways

11/14

N.T.S. Source: CHA LD_

CHA PLAN SHEET #	TOWN	PROJECT COMPONENT	PLANT ID CODE	STATE RANK	MATTING LOCATIONS (STATION)
ANGP-EPSC-014	WILLISTON	TRANSMISSION (ACCESS ROAD)	2012-RTE-CT-03 1	S2/S3	366+50 TO 368+75 AND ON ACCESS ROAD
ANGP-EPSC-022	WILLISTON	TRANSMISSION	2012-RTE-CT-08 4	S2/S3	562+50 TO 563+75
ANGP-EPSC-039	HINESBURG	TRANSMISSION	2012-RTE-CT-08 0	S2/S3	992+80 TO 993+50
ANGP-EPSC-039	HINESBURG	TRANSMISSION	2012-RTE-CT-08 1	S2/S3	1001+20 TO 1002+20
ANGP-EPSC-039	HINESBURG	TRANSMISSION	2012-RTE-CT-08 2	S2/S3	1003+50 TO 1005+80
ANGP-EPSC-040	HINESBURG	TRANSMISSION	2012-RTE-CT-04 1	S2/S3	1021+20 TO 1023+00
ANGP-EPSC-051	MONKTON	TRANSMISSION	2012-RTE-ACT-0 83	S2/S3	1302+10 TO 1307+90
ANGP-EPSC-066	NEW HAVEN	TRANSMISSION	2012-RTE-CT-05 1	S2/S3	1649+50 TO 1652+00
ANGP-EPSC-066	NEW HAVEN	TRANSMISSION	2012-RTE-CT-06 1	S2/S3	1665+50
ANGP-EPSC-066	NEW HAVEN	TRANSMISSION	2012-RTE-AT-05 3	S1	1659+60
ANGP-EPSC-066	NEW HAVEN	TRANSMISSION	2012-RTE-LV-05 4	S2	1659+60
ANGP-EPSC-066	NEW HAVEN	TRANSMISSION	2012-RTE-AT-06 3	S1	1669+70 TO 1670+50
ANGP-EPSC-075, 079, 077	NEW HAVEN	TRANSMISSION	2012-RTE-CT-06 9	S2/S3	1918+00 TO 1966+50
ANGP-EPSC-V011	FERRISBURGH	DISTRIBUTION MAIN	2012-RTE-CT-06 8	S2/S3	118+80 TO 119+10

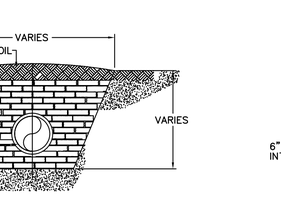
Notes:

1. INSTALL CONSTRUCTION MATS ON STATION LOCATIONS LISTED IN TABLE TO PROTECT RARE PLANT SPECIES.
2. LIMIT DURATION OF MATTING DURING GROWING SEASON TO EXTENT PRACTICABLE.
3. REMOVE MATTING IMMEDIATELY FOLLOWING THEIR USE. FOR EXAMPLE, WHERE MATTING IS USED FOR TEMPORARY STOCKPILING OF SOIL FROM TRENCHING OPERATIONS, REMOVE MATTING IMMEDIATELY FOLLOWING BACKFILL OPERATIONS.
4. AT A MINIMUM, MATTING IS NOT TO BE LEFT IN PLACE FOR MORE THAN 28 DAYS WHERE FEASIBLE.
5. REFER TO ADDITIONAL ENVIRONMENTAL NOTE 12 ON SHEET ANGP-T-G-011

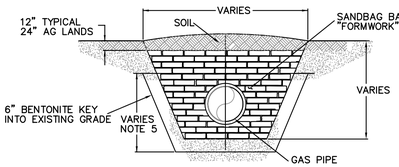
4 RTE Matting Table

09/13

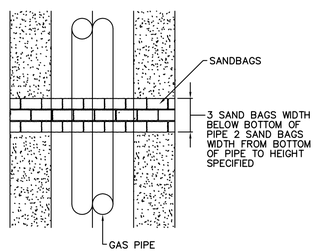
N.T.S. Source: VHB



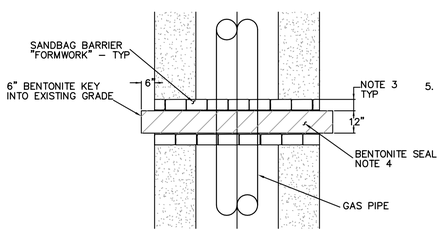
PROFILE VIEW



PROFILE VIEW



PLAN VIEW
SAND BAG TRENCH BREAKER



PLAN VIEW
TRENCH BREAKER WITH BENTONITE

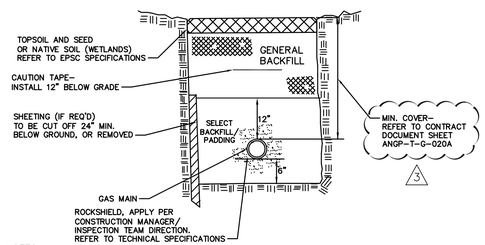
NOTES:

1. PERMANENT TRENCH BREAKER WITH BENTONITE SEAL IS INTENDED TO PROHIBIT WATER FLOW THROUGH THE BREAKER.
2. PERMANENT TRENCH BREAKER WITH BENTONITE SEAL TO BE INSTALLED AT EDGE OF WETLANDS AND STREAMS.
3. SAND BAG BARRIER WIDTH SHALL BE MINIMUM 1 BAG WIDE AND/OR AS FIELD DETERMINED TO PROVIDE STABILITY.
4. BENTONITE IS TO BE INSTALLED IN THE VOID SPACE BETWEEN THE SANDBAG BARRIER "FORMWORK" IN SUCH A MANNER TO COMPLETELY SURROUND THE PIPE AND FILL THE VOID FROM THE BOTTOM OF THE TRENCH TO A HEIGHT 6" ABOVE THE LEVEL OF IMPORTED PADDING MATERIAL WHICH IS INSTALLED ON THE EXTERIOR SIDE OF THE SANDBAG BARRIER IN THE WETLAND ZONE.
5. AFTER BENTONITE PLACEMENT, INSTALL SAND BAGS ON TOP OF THE PERMANENT TRENCH BREAKER AND BENTONITE SEAL TO THE REQUIRED HEIGHT PER DETAIL 2 AND BACKFILL EXTERIOR SIDES OF SAND BAG BARRIERS.

5 Permanent Trench Break or Sandbags

12/12

N.T.S. Source: CHA LD_



NOTES:

1. REFER TO TECHNICAL SPECIFICATIONS FOR BOTH GENERAL AND SELECT/PADDING BACKFILL REQUIREMENTS.
2. IN RESOURCE AREAS (E.G. WETLANDS AND PAS AREAS) GENERAL BACKFILL SHALL BE NATIVE MATERIAL TO MATCH PROFILE DEPTH OF ADJACENT NATIVE, UNDISTURBED SUBSOIL/SURFACE SOIL INTERFACE. EXCESS SUBSOIL TO BE PROPERLY DISPOSED OF AND STABILIZED.
3. THE OWNER SHALL PROVIDE TESTING SERVICES TO INSURE THAT THE IN-PLACE DENSITY OF THE BACKFILL MEETS REQUIREMENTS DETERMINED IN THE SPECIFICATIONS.
4. ALL TRENCH CONSTRUCTION SHALL CONFORM TO APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.
5. FOR PIPE SUPPORT METHODS AND OTHER PIPE-IN-TRENCH REQUIREMENTS, REFER TO TECHNICAL SPECIFICATIONS.

6 Typical Trench Detail-Cross Country

11/14

N.T.S. Source: CHA LD_

3

DWG. NO.	REFERENCE DWG.	REV	DSN	CK		DESCRIPTION		BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
							ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
							DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
		3	GJM	BCK		IFC 2016 EDITS (05/2016)	DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
		2	BCK	TDB		TRENCH DETAIL UPDATE (1/6/16)	DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
		1	BCK	TDB		DEPTH OF COVER UPDATE (6/11/15)	DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
CONSTRUCTION DETAILS

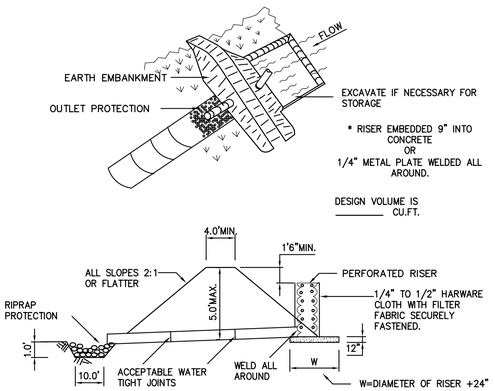
LOC. CHITTENDEN & ADDISON COUNTIES

YEAR: 2016 | W.O. | SCALE: NOTED | DWG. ANGP-T-G-015 | REV. 3

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 - www.chacompanies.com



EMBANKMENT SECTION THRU RISER

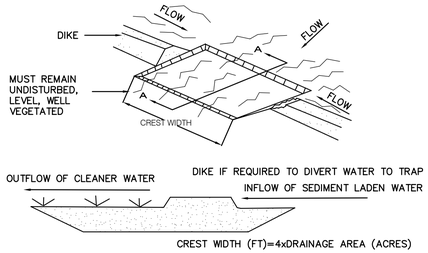
CONSTRUCTION SPECIFICATIONS

1. AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED.
2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION AS WELL AS OVER-SIZED STONES, ROCKS, ORGANIC MATERIAL, OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
3. VOLUME OF SEDIMENT STORAGE SHALL BE 3600 CUBIC FEET PER ACRE OF CONTRIBUTORY DRAINAGE.
4. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND STABILIZED.
5. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
6. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND SEDIMENT ARE CONTROLLED.
7. THE STRUCTURE SHALL BE REMOVED AND AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
8. ALL FILL SLOPES SHALL BE 2:1 OR FLATTER; CUT SLOPES 1:1 OR FLATTER.
9. ALL PIPE CONNECTIONS SHALL BE WATERTIGHT.
10. THE TOP 2/3 OF THE RISER SHALL BE PERFORATED WITH ONE (1) INCH DIAMETER HOLES OR SLITS SPACED SIX (6) INCHES VERTICALLY AND HORIZONTALLY AND PLACED IN THE CONCAVE PORTION OF PIPE. NO HOLES WILL BE ALLOWED WITHIN SIX (6) INCHES OF THE HORIZONTAL BARREL.
11. THE RISER SHALL BE WRAPPED WITH 1/4 TO 1/2 INCH HARDWARE CLOTH WIRE THEN WRAPPED WITH FILTER CLOTH (HAVING AN EQUIVALENT SIEVE SIZE OF 40-80). THE FILTER CLOTH SHALL EXTEND SIX (6) INCHES ABOVE THE HIGHEST HOLE AND SIX (6) INCHES BELOW THE LOWEST HOLE. WHERE ENDS OF THE FILTER CLOTH COME TOGETHER, THEY SHALL BE OVER-LAPPED, FOLDED AND STAPLED TO PREVENT BYPASS.
12. STRAPS OR CONNECTING BANDS SHALL BE USED TO HOLD THE FILTER CLOTH AND WIRE FABRIC IN PLACE. THEY SHALL BE PLACED AT THE TOP AND BOTTOM OF THE CLOTH.
13. FILL MATERIAL AROUND THE PIPE SPILLWAY SHALL BE HAND COMPACTED IN FOUR (4) INCH LAYERS. A MINIMUM OF TWO (2) FEET OF HAND COMPACTED BACKFILL SHALL BE PLACED OVER THE PIPE SPILLWAY BEFORE CROSSING IT WITH CONSTRUCTION EQUIPMENT.
14. THE RISER SHALL BE ANCHORED WITH EITHER A CONCRETE BASE OR STEEL PLATE BASE TO PREVENT FLOTATION. FOR CONCRETE BASED THE DEPTH SHALL BE TWELVE (12) INCHES WITH THE RISER EMBEDDED NINE (9) INCHES. A 1/4 INCH MINIMUM THICKNESS STEEL PLATE SHALL BE ATTACHED TO THE RISER BY A CONTINUOUS WELD AROUND THE BOTTOM TO FORM A WATERTIGHT CONNECTION AND THEN PLACE TWO (2) FEET OF STONE, GRAVEL, OR TAMPED EARTH ON THE PLATE.

1 Pipe Outlet Sediment Trap

12/12

N.T.S. Source: VHB / VT S+S EPSC LD_



SECTION A – A
EXCAVATED GRASS OUTLET SEDIMENT TRAP

CONSTRUCTION SPECIFICATIONS

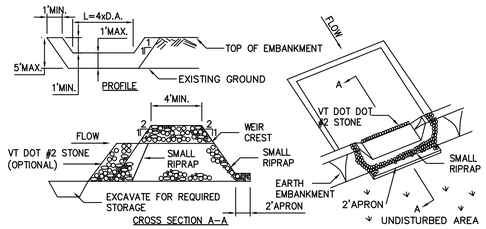
1. VOLUME OF SEDIMENT STORAGE SHALL BE 1800 CUBIC FEET PER ACRE OF CONTRIBUTORY DRAINAGE AREA.
2. MINIMUM CREST WIDTH SHALL BE 4 x DRAINAGE AREA
3. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
4. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
5. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION SHALL BE MINIMIZED.
6. THE SEDIMENT TRAP SHALL BE REMOVED AND AREA STABILIZED WHEN THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
7. ALL CUT SLOPES SHALL BE 1:1 OR FLATTER.

MAXIMUM DRAINAGE AREA: 5 ACRES

2 Grass Outlet Sediment Trap

12/12

N.T.S. Source: VHB / VT S+S EPSC LD_



CONSTRUCTION SPECIFICATIONS

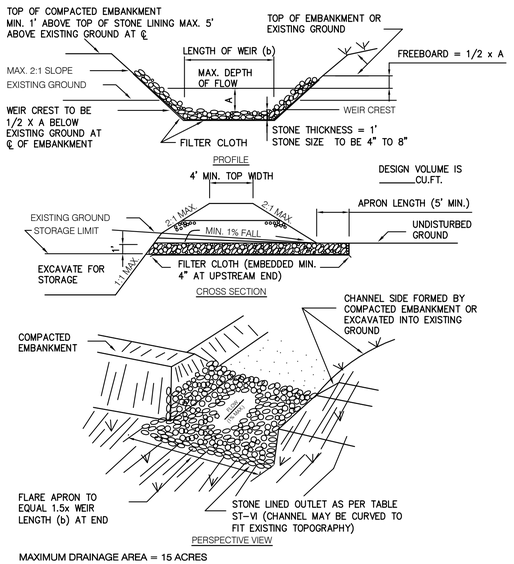
1. AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED.
2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS AND OTHER WOODY VEGETATION AS WELL AS OVER-SIZED STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
3. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER.
4. THE STONE USED IN THE OUTLET SHALL BE SMALL RIPRAP 4"-8" ALONG WITH A 1' THICKNESS OF 2" AGGREGATE PLACED ON THE UP-GRADE SIDE ON THE SMALL RIPRAP OR EMBEDDED FILTER CLOTH IN THE RIPRAP.
5. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMEN- SIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP.
6. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND AS REQUIRED BY THE PERMIT.
7. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED.
8. THE STRUCTURE SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

MAXIMUM DRAINAGE AREA 5 ACRES

3 Stone Outlet Sediment Trap

12/12

N.T.S. Source: VHB / VT S+S EPSC LD_



MAXIMUM DRAINAGE AREA = 15 ACRES

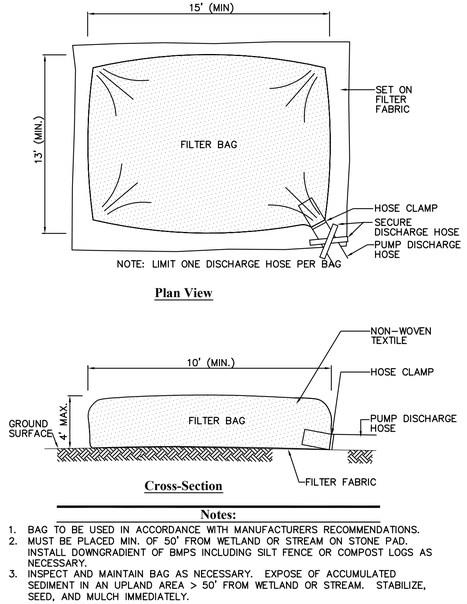
CONSTRUCTION SPECIFICATIONS

1. THE AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED.
2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION AS WELL AS OVER-SIZED STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED. MAXIMUM HEIGHT OF EMBANKMENT SHALL BE FIVE (5) FEET, MEASURED AT CENTERLINE OF EMBANKMENT.
3. ALL FILL SLOPES SHALL BE 2:1 OR FLATTER, CUT SLOPES 1:1 OR FLATTER.
4. ELEVATION OF THE TOP OF ANY DIKE DIRECTING WATER INTO TRAP MUST EQUAL OR EXCEED THE HEIGHT OF EMBANKMENT.
5. STORAGE AREA PROVIDED SHALL BE FIGURED BY COMPUTING THE VOLUME AVAILABLE BEHIND THE OUTLET CHANNEL UP TO AN ELEVATION OF ONE (1) FOOT BELOW THE LEVEL WEIR CREST.
6. FILTER CLOTH SHALL BE PLACED OVER THE BOTTOM AND SIDES OF THE OUTLET CHANNEL PRIOR TO PLACEMENT OF STONE. SECTIONS OF FABRIC MUST OVERLAP AT LEAST ONE (1) FOOT WITH SECTION NEAREST THE ENTRANCE PLACED ON TOP. FABRIC SHALL BE EMBEDDED AT LEAST SIX (6) INCHES INTO EXISTING GROUND AT ENTRANCE OUTLET CHANNEL.
7. STONE USED IN THE OUTLET CHANNEL SHALL BE FOUR (4) TO EIGHT (8) INCH RIPRAP. TO PROVIDE A FILTERING EFFECT, A LAYER OF FILTER CLOTH SHALL BE EMBEDDED ONE (1) FOOT WITH SECTION NEAREST ENTRANCE PLACED ON TOP. FABRIC SHALL BE EMBEDDED AT LEAST SIX (6) INCHES INTO EXISTING GROUND AT ENTRANCE OF OUTLET CHANNEL.
8. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
9. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRED AS NEEDED.
10. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND SEDIMENT ARE CONTROLLED.
11. THE STRUCTURE SHALL BE REMOVED AND THE AREA STABILIZED WHEN DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
12. DRAINAGE AREA FOR THIS PRACTICE IS LIMITED TO 15 ACRES OR LESS.

4 Riprap Outlet Sediment Trap

12/12

N.T.S. Source: VHB / VT S+S EPSC LD_



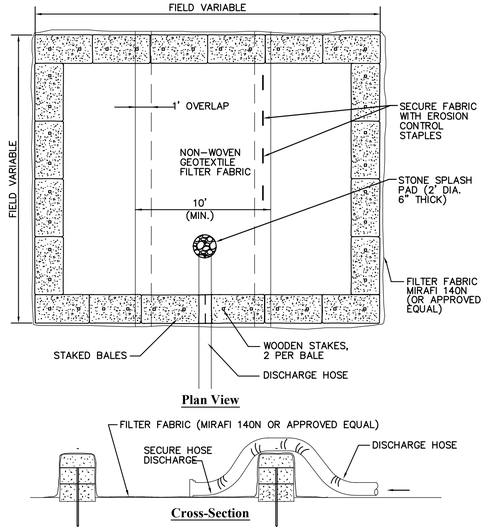
Notes:

1. BAG TO BE USED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
2. MUST BE PLACED MIN. OF 50' FROM WETLAND OR STREAM ON STONE PAD. INSTALL DOWNGRADIENT OF BMP'S INCLUDING SILT FENCE OR COMPOST LOGS AS NECESSARY.
3. INSPECT AND MAINTAIN BAG AS NECESSARY. EXPOSE OF ACCUMULATED SEDIMENT IN AN UPLAND AREA > 50' FROM WETLAND OR STREAM. STABILIZE, SEED, AND MULCH IMMEDIATELY.

5 Dewatering Filter Bag

12/12

N.T.S. Source: VHB LD_



Notes:

1. NUMBERS OF BALES MAY VARY DEPENDING ON SITE CONDITIONS.
2. BASIN TO BE SIZED TO PREVENT DISCHARGE WATER FROM OVERTOPPING BASIN.
3. MUST BE PLACED MIN OF 50' FROM WETLAND OR STREAM, PREFERABLY IN A VEGETATED AREA.

6 Dewatering Straw Bale Basin

12/12

N.T.S. Source: VHB LD_

VHB Vanasse Hangen Brustlin, Inc.

DWG. NO.	REFERENCE DWG.	REV	DSN	CK		DESCRIPTION	BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
						ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
						DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
						DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
						DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
						DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

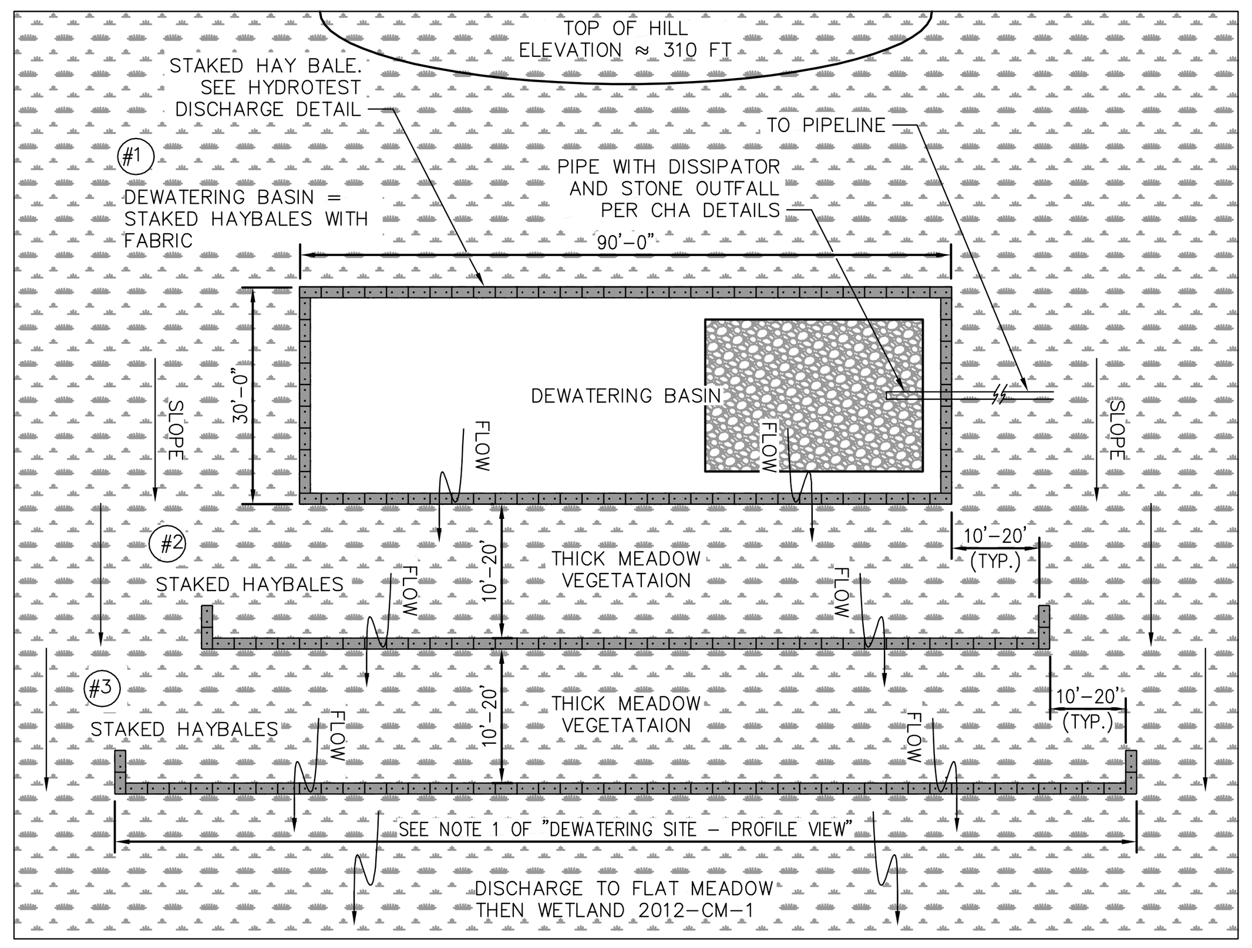
VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
CONSTRUCTION DETAILS

LOC. CHITTENDEN & ADDISON COUNTIES

Vermont Gas

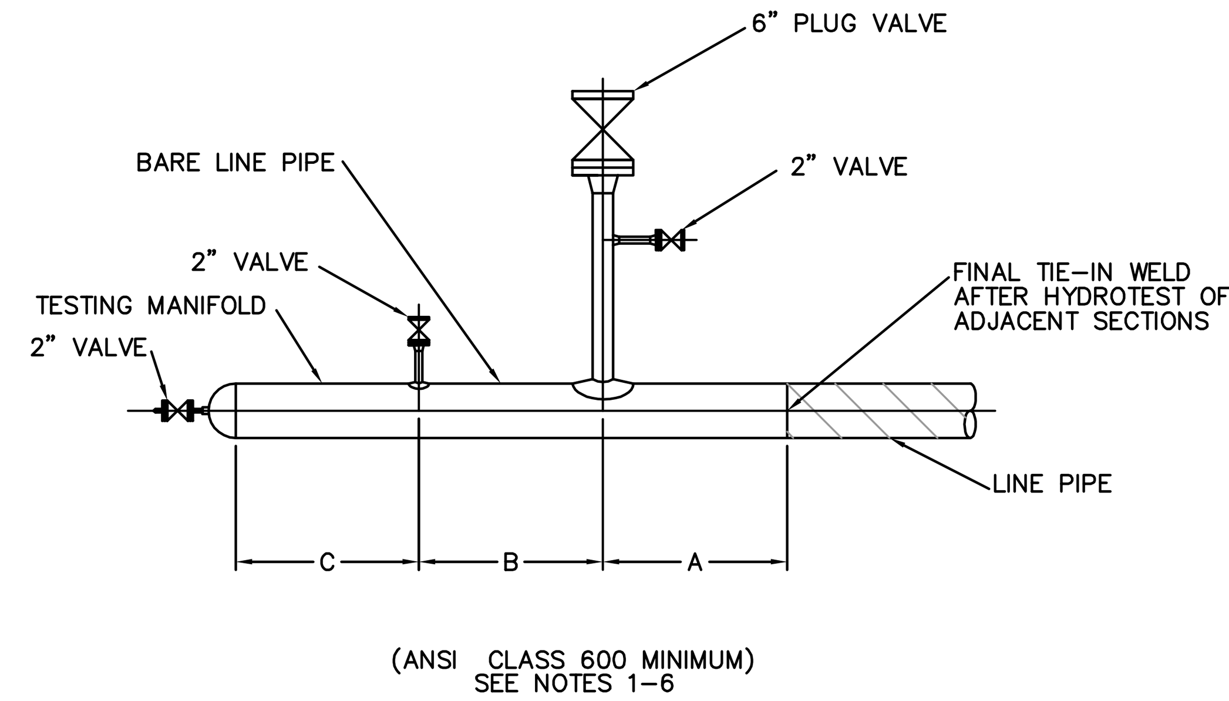
CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 • www.chacompanies.com

YEAR: 2016 | W.O. | SCALE: NOTED | DWG. ANGP-T-G-016 | REV. 0



1 Dewatering Site - Plan View

N.T.S. Source: VHB 09/13

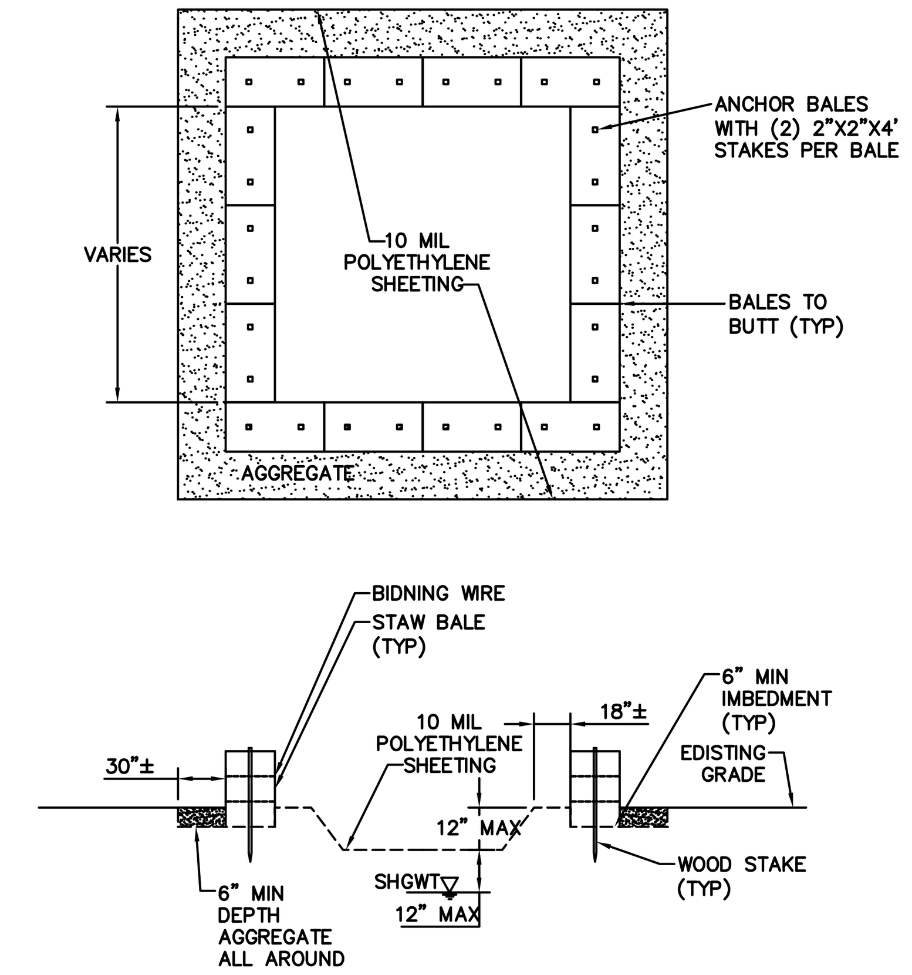


NOTES:

1. DIMENSIONS A, B & C ARE DEPENDENT ON PIPE DIAMETER & PIG LENGTH AND ARE TO BE DETERMINED BY CONTRACTOR.
2. FOR MANIFOLD TEST LOCATIONS & DISCHARGE LOCATIONS REFER TO EM&CP DRAWINGS.
3. TEST WATER SHALL BE TRANSFERRED BY PUMPING FROM ONE TEST SECTION TO THE NEXT ADJACENT TEST SECTION THROUGH THE 6" PIPE BRANCH AND MAKE-UP PIPING BETWEEN TEST SECTIONS. USE OF "HARD PIPING" & UNIONS IS RECOMMENDED.
4. FINAL TIE-IN WELD(S) BETWEEN TEST SECTIONS TO BE 100% RADIOGRAPHED.
5. TAP AND BRANCH SIZES AND VALVES FOR MANIFOLD ARE CONCEPTUAL AND SHALL BE DESIGNED BY CONTRACTOR TO BE COMPATIBLE WITH TEST EQUIPMENT AND PIPING.

2 Typical Hydrastatic Test Manifold

N.T.S. Source: CHA 12/12 LD_



Notes:

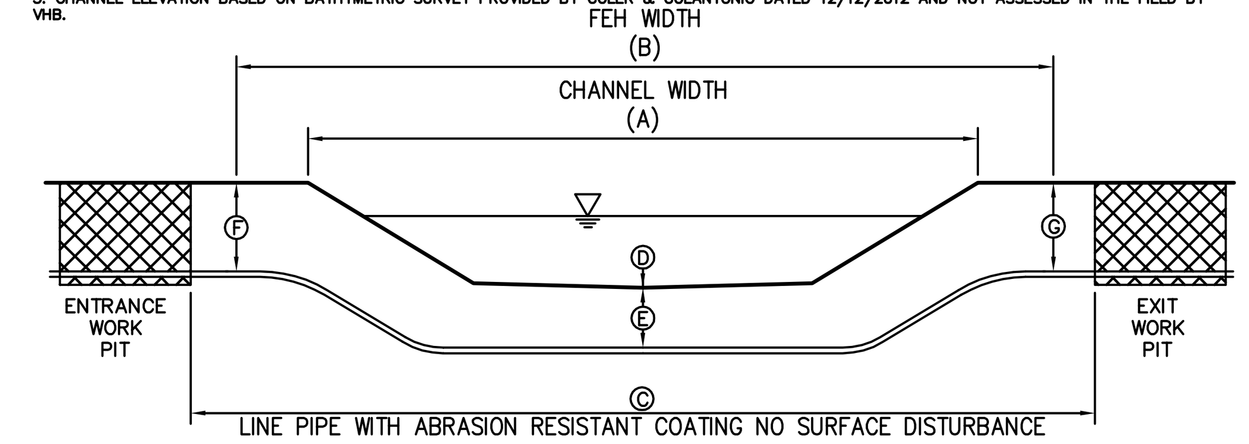
1. CONTAINMENT MUST BE STRUCTURALLY SOUND AND LEAK FREE AND CONTAIN ALL LIQUID WASTES.
2. CONTAINMENT DEVICES MUST BE SUFFICIENT QUANTITY OR VOLUME TO COMPLETELY CONTAIN THE LIQUID WASTES GENERATED.
3. WASHOUT MUST BE CLEANED OR NEW FACILITIES CONSTRUCTED AND READY TO USE ONCE WASHOUT IS 75% FULL.
4. WASHOUT AREA(S) SHALL BE INSTALLED IN A LOCATION EASILY ACCESSIBLE BY CONCRETE TRUCKS.
5. ONE OR MORE AREAS MAY BE INSTALLED ON THE CONSTRUCTION SITE AND MAY BE RELOCATED AS CONSTRUCTION PROGRESSES.
6. AT LEAST WEEKLY REMOVE ACCUMULATION OF SAND AND AGGREGATE AND DISPOSE OF PROPERLY.
7. PLACE 50' FROM RIVER OR STREAM.

3 Concrete Washout Area

N.T.S. Source: VHB 12/12 LD_

MILEPOST	STREAM NAME	CHANNEL WIDTH (A)	FEH WIDTH (B)	HDD LENGTH (C)	CHANNEL ELEV. (D)	ELEV. BELOW CHANNEL (E)	ENTRY ELEV. (F)	EXIT ELEV. (G)
0.99	INDIAN BROOK	4	100	2,339	208 [1]	< 198	< 208	< 208
1.52	INDIAN BROOK	15	125	1,530	188 [2]	< 178	< 188	< 188
6.75	WINOOSKI RIVER (SECTION 10 WATERS)	320	N/A (1,195)	900	263 [3]	< 238	< 275	< 275
19.47	LAPLATTE RIVER	30	360	640	317 [2]	< 307	< 317	< 317
22.86	LEWIS CREEK	80	435	2,500	310 [1]	< 300	< 310	< 310
32.30	LITTLE OTTER CREEK	35	240	1,680	267 [1]	< 260	< 267	< 267
35.85	UNNAMED TRIB. TO LITTLE OTTER CREEK	4	640	1,010	303 [2]	< 293	< 303	< 303
39.30	NEW HAVEN RIVER	120	785	530	245 [2]	< 235	< 245	< 245
DISTRIBUTION MAIN 30+00	UNNAMED TRIB TO LITTLE OTTER CREEK	8	N/A (108)	300	261 [1]	< 254	< 261	< 261

1. CHANNEL ELEVATION BASED ON CONTOURS SHOWN ON EPSC PLAN PROVIDED BY CHA, INC. DATED 02/28/2013 AND NOT ASSESSED IN THE FIELD BY VHB.
2. CHANNEL ELEVATION BASED ON CONTOURS SHOWN ON EPSC PLAN PROVIDED BY CHA, INC. DATED 02/28/2013 AND MODIFIED BASED ON FIELD ASSESSMENT BY VHB.
3. CHANNEL ELEVATION BASED ON BATHYMETRIC SURVEY PROVIDED BY COLER & COLANTONIO DATED 12/12/2012 AND NOT ASSESSED IN THE FIELD BY VHB.

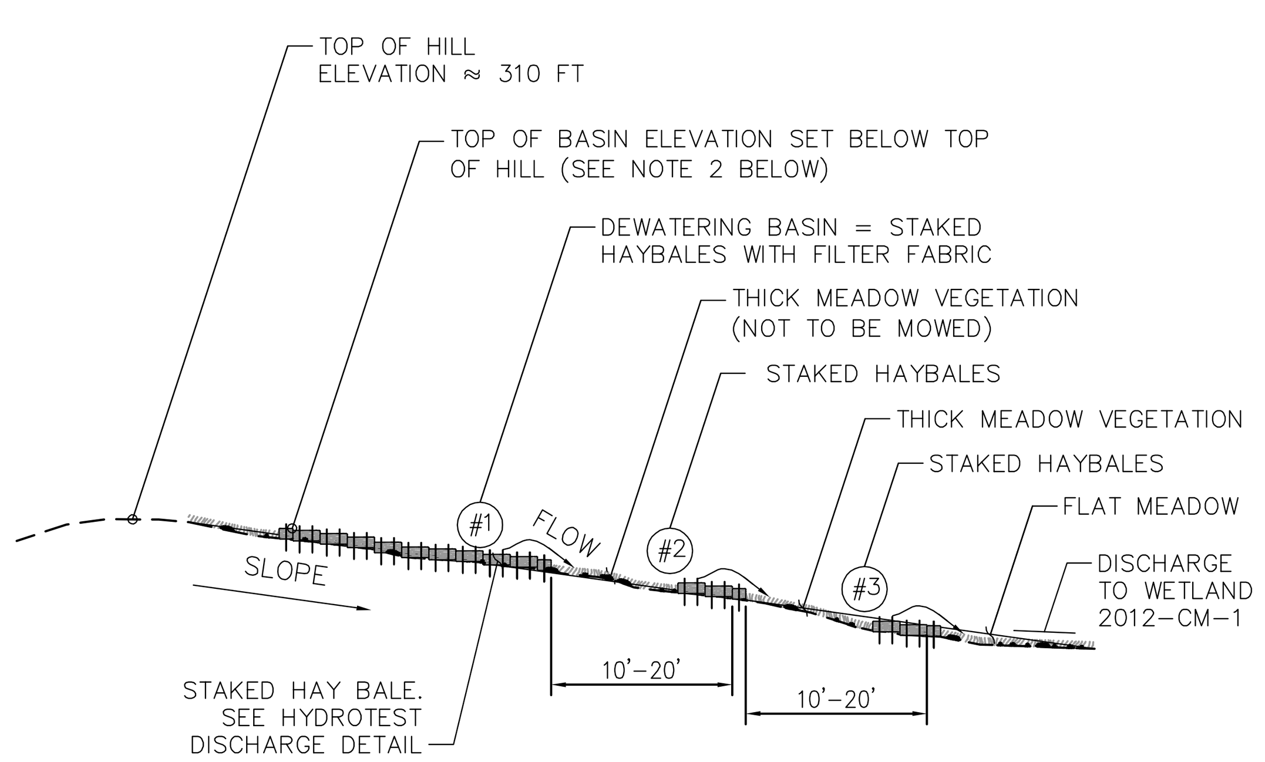


Notes:

1. THIS CONFIGURATION IS FOR HORIZONTAL DIRECTIONAL DRILL OF STREAM CROSSINGS AS SHOWN ON PROJECT PLANS. SEE ALIGNMENT SHEETS FOR LOCATIONS OF THIS CONFIGURATION.
2. TOP OF PIPELINE MUST BE AT LEAST AS DEEP AS THE CHANNEL BOTTOM (DIMENSION D) THROUGHOUT THE FLUVIAL EROSION HAZARD (FEH) CORRIDOR.
3. MINIMUM SEPARATION BETWEEN THE TOP OF PIPELINE AND THE CHANNEL BOTTOM (DIMENSION E) MUST BE AT LEAST 7 FEET.
4. ELEVATIONS PROVIDED ARE BASED ON APPROXIMATE NAVD 88 DATUM AND MUST BE FIELD VERIFIED PRIOR TO INSTALLATION OF PIPELINE.
5. FEH CORRIDOR IS LISTED AS NOT APPLICABLE (N/A) WHERE THE STREAM CROSSES OR IS ADJACENT TO AN EXISTING ROADWAY OR OTHER INFRASTRUCTURE THAT RESULTS IN RIVER MANAGEMENT CONSTRAINTS AT THAT LOCATION. FEH CORRIDOR WIDTHS AT THESE LOCATIONS ARE SHOWN FOR INFORMATION PURPOSES ONLY.

4 Horizontal Directional Drill (HDD) Stream Crossing - Typical Section

N.T.S. SOURCE 4/13



Notes:

1. THE DEWATERING SITE SHALL CONSIST OF THREE ROWS OF STAKED HAYBALES. THE TOP ROW SHALL BE ENCLOSED TO ACT AS A BASIN WITH FILTER FABRIC AND STONE OUTFALL AT THE DISCHARGE OUTLET. EACH DOWNSLOPE ROW OF HAYBALES SHALL BE CONSECUTIVELY LONGER THAN THE ROW UPSLOPE OF IT AS PER THE PLAN VIEW DETAIL. THE BOTTOM ROW IS TO EXTEND ACROSS THE ENTIRE WIDTH OF THE DENSELY VEGETATED MEADOW
2. THE HIGHEST ELEVATION OF THE TOP ROW OF HAY BALES SHALL BE LOWER THAN THE ELEVATION AT THE TOP OF THE HILL TO ENSURE DISCHARGE DOES NOT FLOW OVER THE HILL.
3. DURING TESTING, THE CONTRACTOR SHALL HAVE ADDITIONAL STONE, HAYBALES, AND STAKES ON SITE FOR USE IF ADDITIONAL EPSC MEASURES ARE NEEDED.
4. SEE HYDROTEST DISCHARGE DETAIL FOR DEWATERING BASIN INSTALLATION SPECIFICATIONS.
5. SEE HAY BALE BARRIER DETAIL FOR STAKED HAYBALE INSTALLATION SPECIFICATIONS.
6. MEADOW IS NOT TO BE MOWED PRIOR TO USE FOR FILTERING FLOW.

5 Dewatering Site - Profile View

N.T.S. Source: VHB 09/13

PRODUCT DESCRIPTION	MATERIAL COMPOSITION	LONGEVITY (MONTHS)	SLOPE APPLICATIONS* MAXIMUM GRADIENT (H:V)	SLOPE APPLICATIONS* C FACTOR [2,5]	CHANNEL APPLICATIONS* MAXIMUM SHEAR STRESS [3,4,6] Pa (lbs/ft^2)	MINIMUM TENSILE STRENGTH [1] kN/m(lbs/ft)
MULCH CONTROL NETS	MESH OR WOVEN BIODEGRADABLE NATURAL FIBER NETTING.	3	5:1	≤ 0.10	12 (0.25)	0.073 (5)
		12	5:1	≤ 0.10	12 (0.25)	0.073 (5)
		24	5:1	≤ 0.10	12 (0.25)	0.36 (25)
NETLESS ROLLED EROSION CONTROL BLANKETS	NATURAL FIBERS MECHANICALLY INTERLOCKED TOGETHER TO FORM A RECP.	3	4:1	≤ 0.10	24 (0.5)	0.073 (5)
		12	4:1	≤ 0.10	24 (0.5)	0.073 (5)
SINGLE-NET EROSION CONTROL BLANKETS	PROCESSED BIODEGRADABLE NATURAL FIBERS MECHANICALLY BOUND TOGETHER BY A SINGLE NATURAL FIBER NETTING OF PROCESSED NATURAL YARNS OR TWINES WOVEN INTO A CONTINUOUS MATRIX.	3	3:1	≤ 0.15	72 (1.5)	0.73 (50)
		12	3:1	≤ 0.15	72 (1.5)	0.73 (50)
DOUBLE-NET EROSION CONTROL BLANKETS	PROCESSED BIODEGRADABLE NATURAL FIBERS MECHANICALLY BOUND TOGETHER BETWEEN TWO NATURAL FIBER NETTING OF PROCESSED NATURAL YARNS OR TWINES WOVEN INTO A CONTINUOUS MATRIX.	3	2:1	≤ 0.20	84 (1.75)	1.09 (75)
		12	2:1	≤ 0.20	84 (1.75)	1.09 (75)
		24	1.5:1	≤ 0.25	96 (2.00)	1.45 (100)
		36	1:1	≤ 0.25	108 (2.25)	1.82 (125)

* "C" FACTOR AND SHEAR STRESS FOR MULCH CONTROL NETTINGS MUST BE OBTAINED WITH NETTING USED IN CONJUNCTION WITH PRE-APPLIED MATERIAL.

1 MINIMUM AVERAGE ROLL VALUES, MACHINE DIRECTION USING EROSION CONTROL TECHNOLOGY COUNCIL (ECTC) MOD. ASTM D 5035.

2 "C" FACTOR CALCULATED AS RATIO OF SOIL LOSS FROM RECP PROTECTED SLOPE (TESTED AT SPECIFIED OR GREATER GRADIENT, H:V) TO RATIO OF SOIL LOSS FROM UNPROTECTED (CONTROL) PLOT IN LARGE-SCALE TESTING. THESE PERFORMANCE TEST VALUES SHOULD BE SUPPORTED BY PERIODIC BENCH SCALE TESTING UNDER SIMILAR TEST CONDITIONS AND FAILURE CRITERIA USING ECTC TEST METHOD #2.

3 REQUIRED MINIMUM SHEAR STRESS RECP (UNVEGETATED) CAN SUSTAIN WITHOUT PHYSICAL DAMAGE OR EXCESS EROSION (> 12.7mm (0.5 IN) SOIL LOSS) SURING A 30-MINUTE FLOW EVENT IN LARGE-SCALE TESTING. THESE PERFORMANCE TEST VALUES SHOULD BE SUPPORTED BY PERIODIC BENCH SCALE TESTING UNDER SIMILAR TEST CONDITIONS AND FAILURE CRITERIA USING ECTC TEST METHOD #3.

4 THE PERMISSIBLE SHEAR STRESS LEVELS ESTABLISHED FOR EACH PERFORMANCE CATEGORY ARE BASED ON HISTORICAL EXPERIENCE WITH PRODUCTS CHARACTERIZED BY MANNINGS ROUGHNESS COEFFICIENTS IN THE RANGE OF 0.01 – 0.05.

5 ACCEPTABLE LARGE SCALE TEST METHODS MAY INCULDE ASTM D 6459, ECTC TEST METHOD #2 OR OTHERINDEPENDENT TESTING DEEMED ACCEPTABLE BY THE DEC.

6 RECOMMENDED ACCEPTABLE LARGE-SCALE TESTING PROTOCOL MAY INCLUDE ASTM D 6440, ECTC TEST METHOD #3 OR OTHER INDEPENDENT TESTING DEEMED ACCEPTABLE BY THE DEC.

6 Specifications for Temporary RECP

N.T.S. Source: VT S+S EPSC

TYPE	PRODUCT DESCRIPTION	MATERIAL COMPOSITION	SLOPE APPLICATIONS MAXIMUM GRADIENT	CHANNEL APPLICATIONS MAXIMUM SHEAR STRESS [4,5] Pa(lbs/ft^2)	MINIMUM TENSILE STRENGTH [2,3] kN/m (lbs/ft)
A	TURF REINFORCED MAT	NON-DEGRADABLE SYNTHETIC FIBERS, FILAMENTS, NETS, WIRE MESH AND/OR OTHER ELEMENTS, PROCESSED INTO A PERMANENT THREE-DIMENSIONAL MATRIX OF SUFFICIENT THICKNESS. TRM'S, WHICH MAY BE SUPPLEMENTED WITH DEGRADABLE COMPONENTS ARE DESIGNED TO IMPART IMMEDIATE EROSION PROTECTION, ENHANCED VEGETATION ESTABLISHMENT AND PROVIDE LONG-TERM FUNCTIONALITY BY PERMANENTLY REINFORCING VEGETATION DURING AND AFTER MATURATION. NOTE: TRM'S ARE TYPICALLY USED IN HYDRAULIC APPLICATIONS, SUCH AS HIGH FLOW DITCHES AND CHANNELS, STEEP SLOPES, STREAM BANKS, AND SHORELINES, WHERE EROSIVE FORCES MAY EXCEED THE LIMITS OF NATURAL, UNREINFORCED VEGETATION OR IN AREAS WHERE LIMITED VEGETATION ESTABLISHMENT IS ANTICIPATED.	0.5:1	288 (6.0)	1.82 (125)
B	TURF REINFORCED MAT		0.5:1	384 (8.0)	2.19 (150)
C	TURF REINFORCED MAT		0.5:1	480 (10.0)	2.55 (175)

PERMANENT[1] – ALL CATEGORIES OF TURF REINFORCEMENT MAT (TRM) MUST HAVE A MINIMUM THICKNESS OF 6.35mm (0.25 INCHES) PER ASTM D 6525 AND U.V. STABILITY OF 80% PER ASTM D 4355 (500 HOURS EXPOSURE)

1. FOR TRMS CONTAINING DEGRADABLE COMPONENTS ALL PROPERTY VALUES MUST BE OBTAINED ON THE NON-DEGRADABLE PORTION OF THE MATTING ALONE.
2. MINIMUM AVERAGE ROLL VALUES, MACHINE DIRECTION ONLY FOR TENSILE STRENGTH DETERMINATION USING ASTM D 6818 (SUPERSEDES MOD. ASTM D 5035 FOR RECP'S).
3. FIELD CONDITIONS WITH HIGH LOADING AND/OR HIGH SURVIVABILITY REQUIREMENTS MAY WARRANT THE USE OF A TRM WITH A TENSILE STRENGTH OF 44 k/N/m(3,000 lb/ft) OR GREATER.
4. REQUIRED MINIMUM SHEAR STRESS TRM (FULLY VEGETATED) CAN SUSTAIN WITHOUT PHYSICAL DAMAGE OR EXCESS EROSION (>12.7mm (0.5 IN.) SOIL LOSS) DURING A 30-MINUTE FLOW EVENT IN LARGE SCALE TESTING. THESE PERFORMANCE TEST VALUES SHOULD BE SUPPORTED BY PERIODIC BENCH SCALE TESTING UNDER SIMILAR TEST CONDIDTIONS AND FAILURE CRITERIA USING ECTC TEST METHOD #3.
5. ACCEPTABLE LARGE-SCALE TESTING PROTOCOL MAY INCLUDE ASTM D 6460 ECTC TEST METHOD #3 OR OHER INDEPENDENT TESTING DEEMED ACCEPTABLE BY THE DEC.

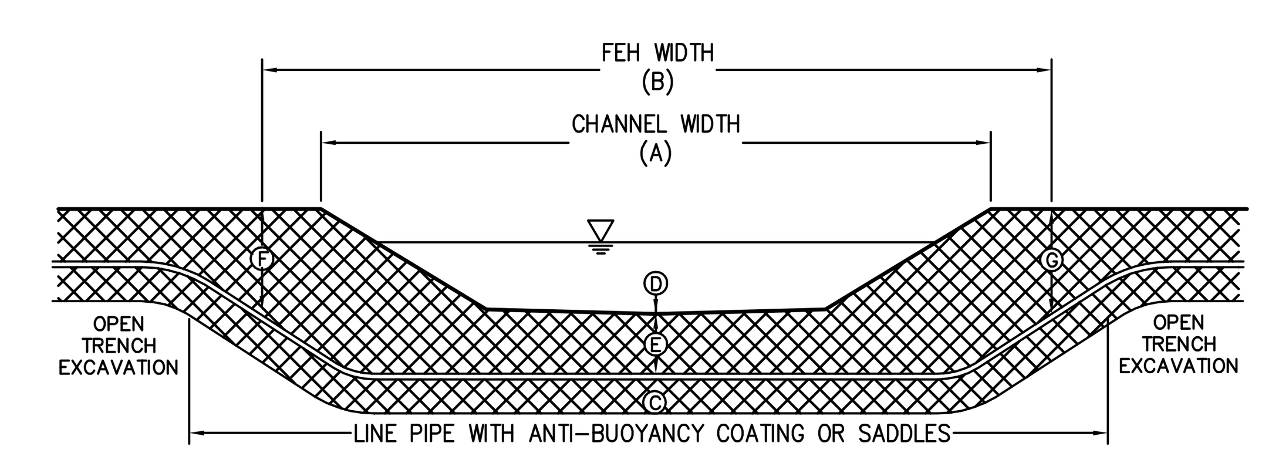
7 Specifications for Permanent RECP

N.T.S. Source: VT S+S EPSC

2

MILEPOST	STREAM NAME	CHANNEL WIDTH (A)	FEH WIDTH (B)	CHANNEL ELEV. (C)	ELEV. BELOW CHANNEL (D)	ENTRY ELEV. (E)	EXIT ELEV. (F)
3.62	INDIAN BROOK	7	N/A (185)	430 [2]	< 420	< 430	< 430
6.60	ALDER BROOK	35	N/A (150)	281 [1]	< 274	< 281	< 281
10.32	ALLEN BROOK	35	360	376 [2]	< 366	< 376	< 376
13.79	SUCKER BROOK	15	120	371 [2]	< 364	< 371	< 371
18.93	UNNAMED TRIBUTARY TO LAPLATTE RIVER	4	N/A (310)	328 [1]	< 321	< 328	< 328
20.45	UNNAMED TRIBUTARY TO LAPLATTE RIVER	4	185	364 [2]	< 357	< 364	< 364
24.40	UNNAMED TRIBUTARY TO LEWIS CREEK	6	106	437 [2]	< 430	< 437	< 437
29.11	UNNAMED TRIBUTARY TO LITTLE OTTER CREEK	8	N/A (400)	364 [2]	< 357	< 364	< 364
30.94	UNNAMED TRIBUTARY TO LITTLE OTTER CREEK	4	200	267 [2]	< 260	< 267	< 267

1. CHANNEL ELEVATION BASED ON CONTOURS SHOWN ON EPSC PLAN PROVIDED BY CHA, INC. DATED 02/28/2013 AND MODIFIED BASED ON FIELD ASSESSMENT BY VHB.
2. CHANNEL ELEVATION BASED ON CONTOURS SHOWN ON EPSC PLAN PROVIDED BY CHA, INC. DATED 02/28/2013 AND NOT ASSESSED IN THE FIELD BY VHB.

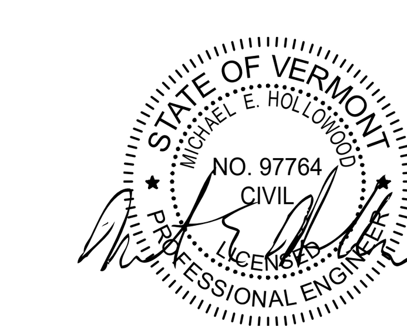


Notes:

1. THIS CONFIGURATION IS FOR OPEN TRENCH EXCAVATION OF STREAM CROSSINGS AS SHOWN ON PROJECT PLANS. SEE ALIGNMENT SHEETS FOR LOCATIONS OF THIS CONFIGURATION.
2. THE INFORMATION PROVIDED IN THIS TABLE WAS UTILIZED FOR PERMITTING. ACCURATE PIPELINE PROFILE DRAWINGS HAVE BEEN CREATED THAT SHOW THE INTENT OF THIS TABLE USING FIELD VERIFIED SURVEY. CONTRACTOR SHALL REFERENCE SHEETS ANGPT-C-028A, 039A, 042A, 051A, 061AA, AND 065A FOR CONSTRUCTION.
3. TOP OF PIPELINE MUST BE AT LEAST AS DEEP AS THE CHANNEL BOTTOM (DIMENSION D) THROUGHOUT THE FLUVIAL EROSION HAZARD (FEH) CORRIDOR.
4. MINIMUM SEPARATION BETWEEN THE TOP OF PIPELINE AND THE CHANNEL BOTTOM (DIMENSION E) MUST BE AT LEAST 7 FEET.
5. ELEVATIONS PROVIDED ARE BASED ON APPROXIMATE NAVD 88 DATUM AND MUST BE FIELD VERIFIED PRIOR TO INSTALLATION OF PIPELINE.
6. FEH CORRIDOR IS LISTED AS NOT APPLICABLE (N/A) WHERE THE STREAM CROSSES OR IS ADJACENT TO AN EXISTING ROADWAY OR OTHER INFRASTRUCTURE THAT RESULTS IN RIVER MANAGEMENT CONSTRAINTS AT THAT LOCATION. FEH CORRIDOR WIDTHS AT THESE LOCATIONS ARE SHOWN FOR INFORMATION PURPOSES ONLY.
7. RESTORE DISTURBED CHANNEL, STREAM BANKS, AND APPROACHES FOLLOWING PIPELINE INSTALLATION PER EPSC PLAN.

8 Open Trench Stream Crossing - Typical Section

N.T.S. Source: VHB 04/13



VHB Vanasse Hangen Brustlin, Inc.

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
		2	BCK	TDB	VHB EDITS (12/10/15)
		1	BCK	TDB	VHB EDITS (6/09/15)

	BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

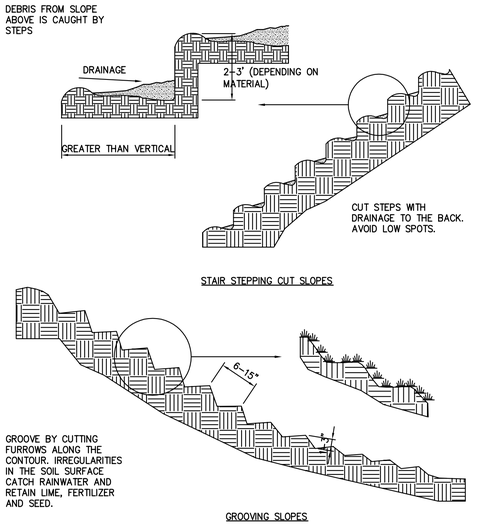
VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
CONSTRUCTION DETAILS

LOC. CHITTENDEN & ADDISON COUNTIES

Vermont Gas

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

YEAR: 2016 | W.O. | SCALE: NOTED | DWG. ANGP-T-G-017 | REV. 2



1 Surface Roughening

12/12

N.T.S. Source: VHB LD_

MULCH MATERIAL AND APPLICATION

MULCH MATERIAL	QUALITY STANDARDS	PER 1,000 SQ-FT	PER ACRE	DEPTH OF APPLICATION
WOOD CHIPS OR SHAVINGS	AIR DRIED; FREE OF OBJECTIONABLE MATERIAL	500 – 900 LBS	10 – 20 TONS	2" – 7"
WOOD FIBER CELLULOSE (PARTIALLY DIGESTED WOOD FIBERS)	MADE FROM NATURAL WOOD USUALLY WITH GREEN DYE AND DISPERSING AGENT	50 LBS	2,000 LBS	N/A
GRAVEL, CRUSHED STONE OR SLAG	WASHED; SIZE 2B OR 3A – 1 1/2"	9 CY	405 CY	3"
HAY OR STRAW	AIR-DRIED; FREE OF UNDESIRABLE SEEDS AND COARSE MATERIALS	90 – 100 LBS, 2-3 BALES	2 TONS (100-120 BALES)	COVER ABOUT 90% SURFACE
COMPOST	UP TO 3" PIECES, MODERATELY TO HIGHLY STABLE	3 – 9 CY	3 – 9 CY	1-3"
Erosion Control Mix	WELL-GRADED MIXTURE OF PARTICLE SIZES. ORGANIC CONTENT BETWEEN 80-100% DRY WEIGHT. PARTICLE SIZE SHALL PASS 6" SCREEN (100%)	*Slopes 3(Hz.):1(Vert.) = 2 inch depth plus additional 1/2 inch depth per 20 ft. of slope up to 100 ft. **Slopes between 3(Hz.):1(Vert.) and 2(Hz.):1(Vert.) = 4 inch depth plus additional 1/2 inch per 20 ft. of slope up to 100 ft. ***Slopes steeper than 2(Hz.):1(Vert.) applicability to specific site and mulch depth to be reviewed and approved prior to use by OPSC or EPSC Specialist		

Notes:

1. APPLY TACKIFIER AS NEEDED TO MINIMIZE POTENTIAL FOR MULCH TO BLOW AWAY.
2. MULCH MUST NOT CONTAIN INVASIVE PLANT SPECIES. (SEEDS OR SEEDLINGS)
3. TACKIFIER MAY BE WATER, NETTING, OR SIMILAR.
4. OTHER THAN EROSION CONTROL MIX, MULCH IS NOT TO BE INSTALLED ON SLOPES > 3:1.

2 Mulch Table

12/12

N.T.S. Source: VHB LD_

TEMPORARY SEEDING

1. AREA TO BE SEEDED MUST BE ROUGH GRADED AND SLOPES PHYSICALLY STABLE.
2. SEEDING METHOD TO RESULT IN GOOD SOIL TO SEED CONTACT.
3. AFTER SEEDING, MULCH THE AREA WITH HAY OR STRAW AT 2 TONS/AC (APPROX 90 LBS/1,000 SF OR 2 BALES/1,000 SF); SEE MULCH DETAIL AND SPECIFICATIONS.
4. MULCH ANCHORING MAY BE NEEDED WHERE WIND OR AREAS OF CONCENTRATED WATER ARE POSSIBLE.
5. WOOD FIBER HYDROMULCH OR OTHER SPRAYABLE PRODUCTS APPROVED FOR EROSION CONTROL MAY BE USED IF APPLIED ACCORDING TO MANUFACTURERS' SPECIFICATIONS.

PERMANENT SEEDING

1. SEE SEEDDING SPECIFICATIONS FOR RECOMMENDED SEED MIXES. USE RIPARIAN AND WETLAND SEEDING MIX WITHIN 50 FEET OF STREAM CROSSINGS AND IN DISTURBED WETLAND AREAS. USE UPLAND NATURAL COMMUNITY MIX WITHIN AREAS IDENTIFIED AS SIGNIFICANT NATURAL COMMUNITIES. USE PERMANENT SEEDING MIX FOR ALL OTHER DISTURBED UPLAND AREAS. SEE VERMONT STANDARDS AND SPECIFICATIONS FOR EROSION PREVENTION AND SEDIMENT CONTROL FOR ADDITIONAL SEED MIXTURES.
2. AREA TO BE SEEDED MUST BE ROUGH GRADED AND SLOPES PHYSICALLY STABLE; CHISELING OR DISKING MAY BE NEEDED IF SOIL IS COMPACTED.
3. SEEDING METHOD TO RESULT IN GOOD SOIL TO SEED CONTACT.
4. PERMANENT SEEDING TO OCCUR PRIOR TO SEPTEMBER 15TH UNLESS WEATHER PERMITS SEEDING BEYOND SEPTEMBER 15TH.
5. AFTER SEEDING, MULCH THE AREA WITH HAY OR STRAW AT 2 TONS/AC (APPROX 90 LBS/1,000 SF OR 2 BALES/1,000 SF); SEE MULCH DETAIL AND SPECIFICATIONS.
6. MULCH ANCHORING MAY BE NEEDED WHERE WIND OR AREAS OF CONCENTRATED WATER ARE POSSIBLE.
7. WOOD FIBER HYDROMULCH OR OTHER SPRAYABLE PRODUCTS APPROVED FOR EROSION CONTROL MAY BE USED IF APPLIED ACCORDING TO MANUFACTURERS' SPECIFICATIONS.
8. IRRIGATION MAY BE NEEDED TO FACILITATE GRASS GROWTH AND ESTABLISH ADEQUATE GRASS COVER.

3 Seeding Notes

12/12

N.T.S. Source: VHB LD_

TEMPORARY SEEDING MIX

TYPE	SEASON	RATE (LBS/ACRE)
RYEGRASS (ANNUAL OR PERENNIAL)	APRIL 15 – SEPTEMBER 15	20
"AROOSTOOK" WINTER RYE	SEPTEMBER 15 – APRIL 15	90

PERMANENT SEEDING MIX*

TYPE	SEASON	RATE (LBS/ACRE)
BIRDSFOOT TREFOIL(1)**	APRIL 15 – SEPTEMBER 15	5
COMMON WHITE CLOVER (1)**	APRIL 15 – SEPTEMBER 15	8
TALL FESCUE (2)	APRIL 15 – SEPTEMBER 15	10
REDTOP (3)	APRIL 15 – SEPTEMBER 15	2
RYEGRASS (PERENNIAL) (3)	APRIL 15 – SEPTEMBER 15	5

*PERMANENT SEEDING MIX IS A COMBINATION OF BIRDSFOOT TREFOIL OR COMMON WHITE CLOVER PLUS TALL FESCUE PLUS REDTOP OR RYEGRASS (PERENNIAL). I.E. PERMANENT SEEDING MIX = (1) + (2) + (3). (SEE PAGE 4.27 OF THE VERMONT STANDARDS AND SPECIFICATIONS FOR EROSION PREVENTION AND SEDIMENT CONTROL.)
** ADD INOCULANT IMMEDIATELY PRIOR TO SEEDING

RIPARIAN AND WETLAND SEEDING MIX

TYPE	SEASON	RATE (LBS/ACRE)
"WET MEADOW AND DETENTION BASIN"* OR APPROVED EQUAL	APRIL 15 –SEPTEMBER 15	35

*SEED SPECIFIED IS FROM VERMONT WETLAND PLANT SUPPLY AND COMPOSED OF THE FOLLOWING SPECIES: PANICUM VIRGATUM, ELYMUS VIRGINICUS, FESTUCA RUBRA, CAREX VULPINOIDEA, CAREX SCOPARIA, SCIRPUS CYPERINUS, SCIRPUS ATROVIRENS, BIDENS CERNUA, EUPATORIUM PERFOLIATUM, EUPATORIADELPHUS MACULATUS, JUNCUS EFFUSUS, ONOCLEA SENSIBILIS, VERBENA HASTATA, SYMPHYOTRICHUM NOVAE-ANGLIAEA

UPLAND NATURAL COMMUNITY MIX

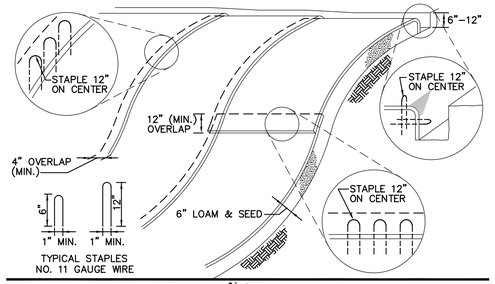
TYPE	SEASON	RATE (LBS/ACRE)
"VERMONT CONSERVATION AND WILDLIFE"* OR APPROVED EQUIVALENT	APRIL 15 –SEPTEMBER 15	25

*SEED SPECIFIED IS, IN PART, FROM VERMONT WETLAND PLANT SUPPLY AND COMPOSED OF THE FOLLOWING SPECIES: ELYMUS VIRGINICUS, FESTUCA RUBRA, SCHIZACHYRIUM SCOPARIUM, ANDROPOGON GERARDII, PANICUM CLANDESTINUM, SORGHASTRUM NUTANS, ASCLEPIA SYRIACA, VERBENA HASTATA, EUPATORIUM FISTULOSUM, EUTHAMIA GRAMINIFOLIA, SOLIDAGO JUNCEA, SYMPHYOTRICHUM NOVAE-ANGLIAE
NOTE: SEE MIX SHOULD EXCLUDE BOTH CHAMAECRISTA FASCICULATA AND HELIOPSIS HELIANTHOIDES, WHICH ARE BOTH COMMONLY INCLUDED IN THIS COMMERCIAL MIX.

4 Seeding Specifications

06/13

N.T.S. Source: VHB LD_

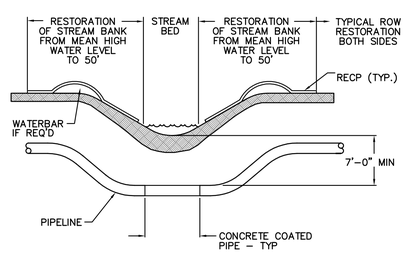


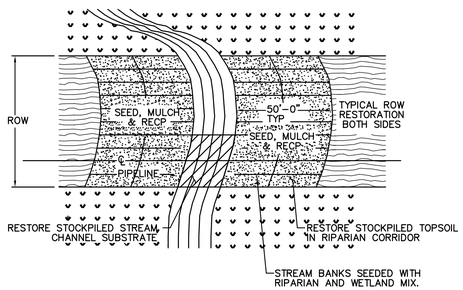
Notes:

1. APPLY TO SLOPES GREATER THAN 3H:1V OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.
2. APPLY TOP SOIL, FERTILIZER, LIME AND SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4'x225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4'x150' ROLL OF MATERIAL.
4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION PREVENTION AND SEDIMENT CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE, DO NOT STRETCH AND ENSURE CLOSE CONTACT WITH THE GROUND SURFACE..
5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.
6. BEGIN AT THE TOP OF BLANKET INSTALLATION AREA BY ANCHORING BLANKET IN A 6" TO 12" DEEP TRENCH BACKFILL AND COMPACT TRENCH AFTER STAPLING.
7. ROLL THE BLANKET DOWN IN THE DIRECTION OF THE WATER FLOW.
8. THE EDGES OF BLANKETS MUST BE STAPLED WITH APPROX. 4" OVERLAP WHERE 2 OR MORE STRIP WIDTHS ARE REQUIRED.
9. WHEN BLANKETS MUST BE SPLICED, PLACE UPPER BLANKET END OVER LOWER END WITH 12" (MIN.) OVERLAP AND STAPLE BOTH TOGETHER.
10. METHOD OF INSTALLATION SHALL BE AS PER MANUFACTURER'S RECOMMENDATIONS. SEE SHEET ANGP-T-G-017 FPR RECP SPECIFICATIONS

5 Rolled Erosion Control Blanket (RECP) - Slope Installation

N.T.S. Source: VHB LD_680-vt





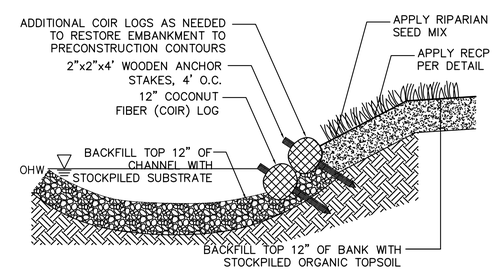
Notes:

1. SEE SHEET ANGP-T-G-017 FOR RECP SPECIFICATIONS

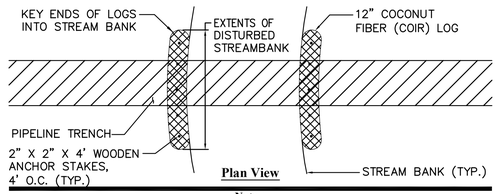
6 Streambank Restoration with RECP

12/12

N.T.S. Source: CHA LD_



Channel Section



Plan View

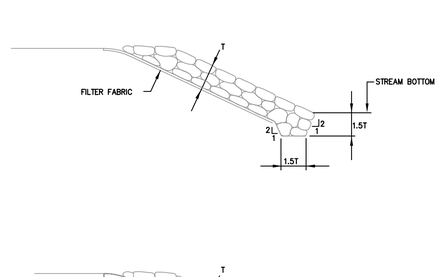
Notes:

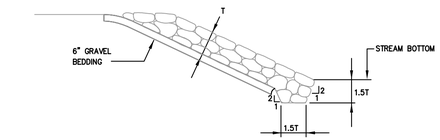
1. APPLY COIR LOG DETAIL TO SITES WHERE STREAMBANK IS DISTURBED OR TRENCHED THROUGH DURING PIPELINE INSTALLATION AND BANK COMPOSITION PERMITS STAKES TO BE DRIVEN
2. INSTALL ROLLED EROSION CONTROL PRODUCT (RECP) PRIOR TO INSTALLATION OF COIR LOGS
3. PLACE COIR LOG IN 2" DEEP TRENCH ALONG SLOPE OF EMBANKMENT AND STAKE INTO PLACE THROUGH RCEP
4. KEY-IN COIR LOG BOTH UPSTREAM AND DOWNSTREAM FROM PIPELINE TRENCH TO MAKE COIR LOG FLUSH WITH STREAMBANK IN ORDER TO PREVENT UNRAVELING OF BANK DURING HIGH FLOW EVENTS.
5. COIR LOG MESH TO CONSIST OF BIODEGRADABLE MATERIAL.

7 Streambank Restoration with Coir Logs

6/13

N.T.S. Source: VHB





T = 1.5 TIMES THE MAXIMUM STONE DIAMETER, BUT NO LESS THAN 6 INCHES.

8 Streambank Stabilization with Rip Rap

12/12

N.T.S. Source: VHB LD_

STATE OF VERMONT MICHAEL E. HOLLOWAY NO. 97764 CIVIL LICENSED PROFESSIONAL ENGINEER

VHB Vanasse Hangen Brustlin, Inc.

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 - www.chacompanies.com

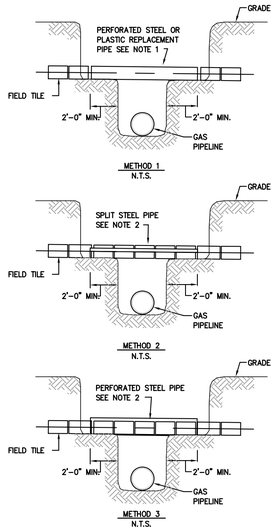
DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION		BID		CONSTRUCTION	
							INITIALS	DATE	INITIALS	DATE
						ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
						DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
						DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
						DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
						DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
CONSTRUCTION DETAILS

LOC. CHITTENDEN & ADDISON COUNTIES

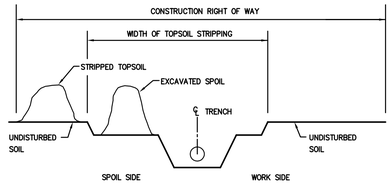
Vermont Gas

YEAR: 2016 | W.O. | SCALE: NOTED | DWG. ANGP-T-G-018 | REV. 0

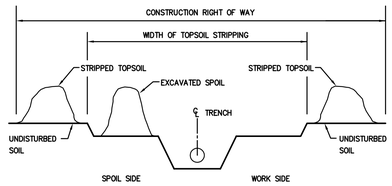


NOTES:
1. REPLACEMENT PIPE TO BE AS NEAR AS POSSIBLE TO THE DIAMETER OF THE FIELD TILE.
2. STEEL CARRIER PIPE TO HAVE INSIDE DIAMETER AS NEAR AS POSSIBLE TO THE OUTSIDE DIAMTER OF THE FIELD TILE.
3. MAINTAIN ORIGINAL FLOW LINE OF FIELD TILE IN ALL METHODS.

1 Typical Drain Tile Protection
N.T.S. Source: VHB 12/12 LD_



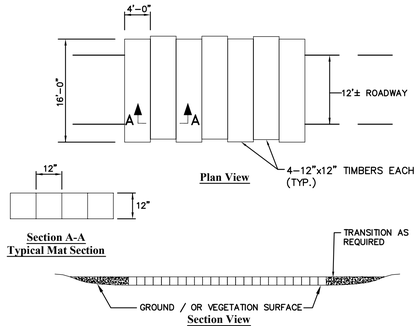
DITCH PLUS SPOILSIDE TOPSOIL SEGREGATION
N.T.S.



FULL RIGHT OF WAY TOPSOIL STRIPPING
N.T.S.

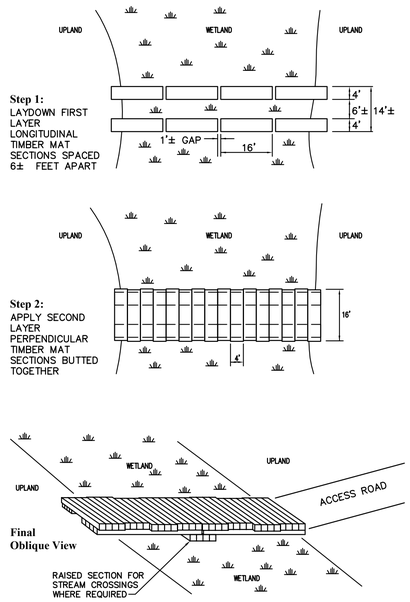
NOTES: 1. TOPSOIL MAY BE STORED IN LOCATIONS AS SHOWN ABOVE OR AT OTHER LOCATIONS WITHIN THE CONSTRUCTION ROW.
2. SEE SHEET ANGP-T-G-015 FOR TRENCH BACK-FILLING DETAIL AND SPECIFICATIONS

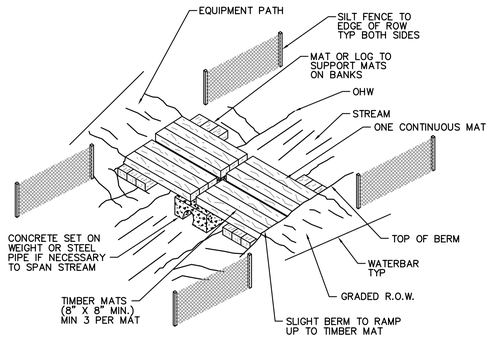
2 Topsoil Segregation
N.T.S. Source: VHB 12/12 LD_



Notes:
1. TO BE INSTALLED WHERE NECESSARY IN WETLAND FOR ACCESS FOR CONSTRUCTION. ALTERNATIVE CONSTRUCTION MATTING (E.G., RUBBER MATS) MAY BE SUBSTITUTED FOR TIMBER MATTING.
2. PREPARATION FOR INSTALLATION OF TIMBER MATS WILL CONSIST OF CUTTING TALL WOODY SPECIES AND TRIMMING SHRUBS IF CONDITIONS REQUIRE. VEGETATION ROOT MASS IS TO REMAIN UNDISTURBED. MATS TO BE PLACED TO MAINTAIN NATURAL SOIL CONTOURS/CONDITIONS.
3. TIMBER SECTIONS TO BE SECURED TOGETHER WITH NO SPACES BY BOLTS, NAILS, STRAPS OR OTHER APPROPRIATE METHODS.
4. TIMBER MATS TO BE REMOVED UPON COMPLETION OF PROJECT AND AREA RESTORED TO NEAR ORIGINAL CONDITIONS PER EPSC PLANS
5. SNOW/ICE REMOVAL BY MECHANICAL METHODS: NO DEICING SALT OR CHEMICALS TO BE USED. LIGHT APPLICATION OF SAND FOR TRACTION ACCEPTABLE SO AS RESIDUE DOES NOT ACCUMULATE IN WETLAND.
6. MATS ARE TO BE IN PLACE FOR MINIMUM DURATION FEASIBLE.

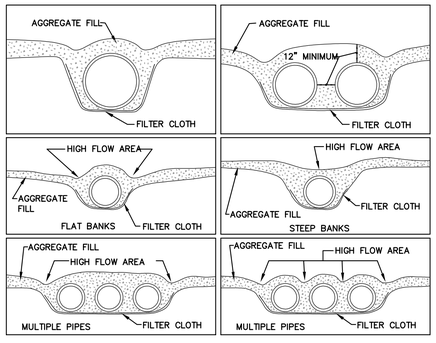
3 Construction Matting - Timber Mat Typ.
N.T.S. Source: VHB 12/12 LD_



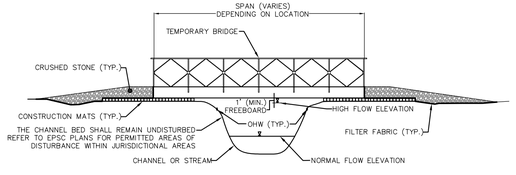


NOTES:
1. THERE IS TO BE NO UNNECESSARY MOVEMENT OF EQUIPMENT THROUGH WATER.
2. TIMBER MATS TO BE POSITIONED TO RUN FROM TOP OF BANK TO TOP OF BANK WHERE POSSIBLE. AT MINIMUM, THE TIMBER MAT BRIDGE SHALL SPAN THE ORDINARY HIGH WATER (OHW) WIDTH OF THE CHANNEL.
3. TIMBER MATS SHALL BE CLEANED OF SEDIMENT PRIOR TO EACH INSTALLATION.
4. TIMBER MATS SHOULD BE INSTALLED SO THERE ARE NO GAPS BETWEEN MATS.

4 Construction Mat Bridge
N.T.S. Source: CHA 12/12 LD_

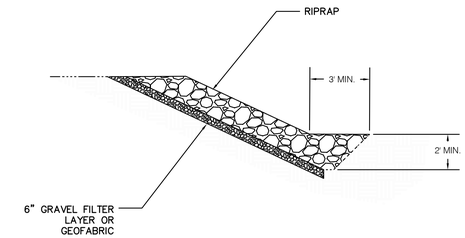


5 Temporary Access Culverts
N.T.S. Source: VHB 12/12 LD_



NOTES:
1. BRIDGE SHALL BE DESIGNED TO PROVIDE A CLEAR SPAN THAT IS EQUAL TO OR GREATER THAN OHW AT THE CROSSING SITE.
2. NO MATERIALS SHALL BE PLACED IN THE CHANNEL BELOW OHW WITHOUT PRIOR AUTHORIZATION.
3. BRIDGE SHALL BE DESIGNED TO CARRY THE MAXIMUM ANTICIPATED CONSTRUCTION LOADS. HOWEVER SHALL NOT BE LESS THAN AASHTO HS-25 LOADING CRITERIA.
4. BRIDGE SHALL BE DESIGNED SUCH THAT A MINIMUM ONE FOOT (1 FT) OF FREE BOARD EXISTS BETWEEN THE LOWEST MEMBER AND THE ANTICIPATED HIGH FLOW (Q25) WATER ELEVATION.
5. ADDITIONAL LOAD BEARING DEVICES BEYOND CONSTRUCTION MATTING MAY BE REQUIRED. THE CONTRACTOR SHALL CONDUCT A GEOTECHNICAL ANALYSIS OF EACH BRIDGE SITE TO DETERMINE THE NECESSARY BEARING CAPACITY OF SOILS AND TO DETERMINE THE MINIMUM DISTANCE BETWEEN BEARING SURFACES AND THE TOP OF STREAM/CHANNEL BANK.
6. APPROACH GRADES SHALL BE AS DEEMED NECESSARY BY THE CONTRACTOR.

6 Temporary Bridge Detail
N.T.S. Source: VHB LD_



Notes:
1. MINIMUM THICKNESS SHALL BE 1.5X MAX STONE DIAMETER, BUT IN NO CASE < 6".
2. THE TOE OF RIP RAP SHALL BE KEYED IN STABLE FOUNDATION @ IT'S BASE.
3. STONE SIZE SHOULD BE BASED ON ANGLE OF REPOSE FOR SPECIFIC SIZE. (FIG 4.3 P 4.38)

7 Riprap Slope Protection
N.T.S. Source: VHB 12/12 LD_

STATE OF VERMONT — MICHAEL E. HOLCOMB — NO. 97764 — CIVIL — LICENSED PROFESSIONAL ENGINEER

VHB Vanasse Hangen Brustlin, Inc.

DWG. NO.	REFERENCE DWG.	REV	DSN	CK		DESCRIPTION	BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
						ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
						DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
						DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
						DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
						DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
CONSTRUCTION DETAILS

LOC. CHITTENDEN & ADDISON COUNTIES

Vermont Gas

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

YEAR: 2016 | W.O. | SCALE: NOTED | DWG. ANGP-T-G-019 | REV. 0

NOTES:

1. USE DIVERSION FLUME STREAM CROSSING ON WATER COURSES WITH LIMITED STREAM FLOW TO PREVENT SEDIMENTATION AND INTERRUPTION OF STREAM FLOW DURING CONSTRUCTION. THIS METHOD IS APPROPRIATE IN LOCATIONS WHERE FISH PASSAGE IS A CONCERN.

2. SCHEDULE CONSTRUCTION DURING LOW FLOW PERIOD, IF POSSIBLE.

3. THIS DETAIL REPRESENTS ONE POSSIBLE CONFIGURATION OF CONSTRUCTION ELEMENTS WITHIN THE TEMPORARY AND PERMANENT ROW. ALTERNATE CONFIGURATIONS OF CONSTRUCTION ELEMENTS BETWEEN THE UPSTREAM AND DOWNSTREAM DIVERSION STRUCTURES ARE ALLOWABLE SO LONG AS APPROPRIATE MEASURES ARE MAINTAINED TO PROTECT WATER QUALITY .

4. SET UP STEEL OR HDPE PIPE AS SHOWN, OR USE PRACTICAL ALTERNATIVES. PIPE (OR PIPES) MUST BE SIZED TO HAVE TWICE THE CAPACITY OF ANTICIPATED FLOW. DEPENDING ON STREAM FLOW, DIG SUMP HOLE TO CONCENTRATE WATER AT INTAKE.

5. INSTALL UPSTREAM DAM COMPOSED OF SANDBAGS, METAL PLATING OR A COMBINATION OF BOTH. INSTALL DOWNSTREAM DAM, IF REQUIRED, TO KEEP STREAM BED DRY.

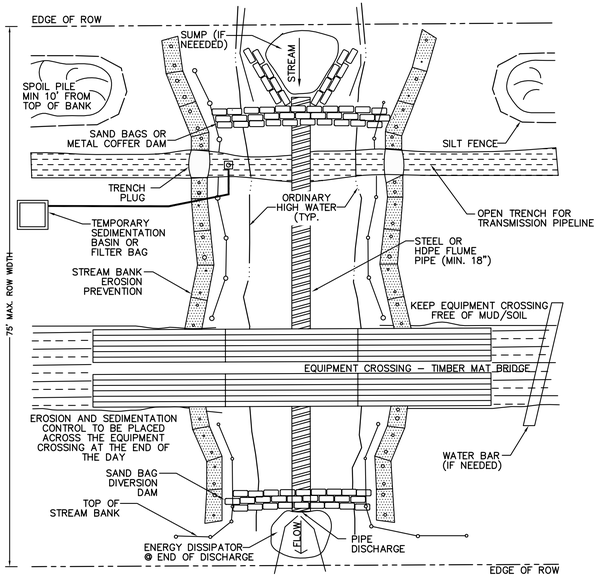
6. AFTER DAMS ARE IN PLACE, IT MAY BE NECESSARY TO USE A SUMP PUMP AND DEWATERING FILTER BAG TO KEEP WORK AREA DRY.

7. ALL MECHANIZED EQUIPMENT TO PERFORM WORK FROM ADJACENT TOP OF BANK AREAS. MAT STREAM IF WORK TO OCCUR IN STREAM CHANNEL.

8. EXCAVATE TRENCH AND LOWER IN PIPE UNDER DIVERSION FLUME. MOVE FLUME AS REQUIRED OR DISCONNECT IF TEMPORARY FLOW BLOCKAGE IS ACCEPTABLE. BACKFILL TRENCH.

9. DISMANTLE DOWNSTREAM DAM, THEN UPSTREAM DAM.

10. RESTORE DISTURBED CHANNEL, STREAM BANKS AND APPROACHES FOR A MINIMUM DISTANCE OF AT LEAST 50 FT. FROM THE STREAM EDGES AND PERMANENTLY STABILIZE WITHIN 1 DAY OF INITIAL RESTORATION. REFER TO THE STREAMBANK RESTORATION DETAIL FOR RESTORATION REQUIREMENTS.



1 Diversion Flume Stream Crossing

12/12

N.T.S.

Source: VHB

LD_

NOTES:

1. USE DAM AND PUMP METHOD ON WATER COURSES WITH LIMITED STREAM FLOW TO PREVENT SEDIMENTATION AND INTERRUPTION OF STREAM FLOW DURING CONSTRUCTION.

2. SCHEDULE CONSTRUCTION DURING LOW FLOW PERIOD, IF POSSIBLE.

3. THIS DETAIL REPRESENTS ONE POSSIBLE CONFIGURATION OF CONSTRUCTION ELEMENTS WITHIN THE TEMPORARY AND PERMANENT ROW. ALTERNATE CONFIGURATIONS OF CONSTRUCTION ELEMENTS BETWEEN THE UPSTREAM AND DOWNSTREAM DIVERSION STRUCTURES ARE ALLOWABLE SO LONG AS APPROPRIATE MEASURES ARE MAINTAINED TO PROTECT WATER QUALITY .

4. SET UP PUMP AND HOSE AS SHOWN, OR USE PRACTICAL ALTERNATIVES. PUMP SHOULD HAVE TWICE THE PUMPING CAPACITY OF ANTICIPATED FLOW. HAVE STANDBY PUMP ON SITE. DEPENDING ON STREAM FLOW, DIG SUMP HOLE TO CONCENTRATE WATER AT INTAKE.

5. USE TEMPORARY SEDIMENTATION BASIN OR FILTER BAG PRIOR TO DISCHARGING WATER BACK TO STREAM.

6. INSTALL UPSTREAM DAM COMPOSED OF SANDBAGS, METAL PLATING OR A COMBINATION OF BOTH, INSTALL DOWNSTREAM DAM, IF REQUIRED, TO KEEP STREAM BED DRY.

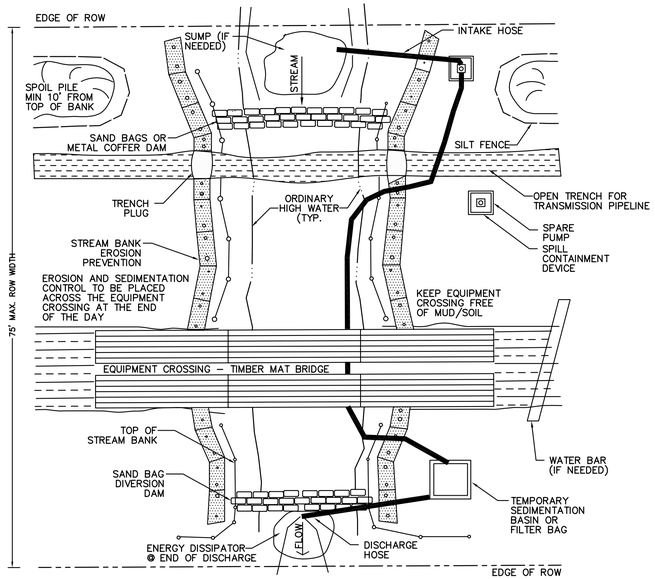
7. AFTER DAMS ARE IN PLACE, IT MAY BE NECESSARY TO USE ADDITIONAL PUMPS TO HANDLE STREAM FLOW.

8. EXCAVATE TRENCH AND LOWER IN PIPE UNDER HOSE. BACKFILL TRENCH.

9. ALL MECHANIZED EQUIPMENT TO PERFORM WORK FROM TEMPORARY BRIDGE OR ADJACENT TOP OF BANK AREAS. USE TIMBER MATS IS TO OCCUR IN STREAM CHANNEL.

10. DISMANTLE DOWNSTREAM DAM, THEN UPSTREAM DAM.

11. RESTORE DISTURBED CHANNEL, STREAM BANKS AND APPROACHES FOR A MINIMUM DISTANCE OF AT LEAST 50 FT. FROM THE STREAM EDGES AND PERMANENTLY STABILIZE WITHIN 1 DAY OF INITIAL RESTORATION. REFER TO THE STREAMBANK RESTORATION DETAIL FOR RESTORATION REQUIREMENTS.



2 Open Trench Stream Crossing - Dam and Pump Around

12/12

N.T.S.

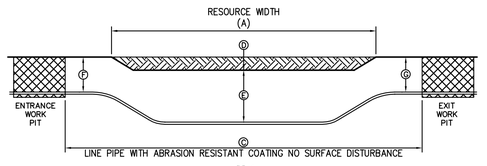
Source: VHB

LD_

MILEPOST	RESOURCE NAME	RESOURCE AREA WIDTH (A)	HDD LENGTH (C)	DEPTH OF RESOURCE AREA. (D)	ELEV. BELOW RESOURCE (E)	ENTRY ELEV. (F)	EXIT ELEV. (G)
28.2	VT-AD-1560 VT-AD-1561	300	775	400	< 393	396	396
28.57	VT-AD-1562	200	375	406	<399	412	412
35.77	VT-AD-806	160	950	310	< 303	323	323

1

MILEPOST	WETLAND ID	WETLAND WIDTH (A)	BUFFER WIDTH (B)	HDD LENGTH (C)	UNCON. MATERIAL ELEV. (D)	CONSOL. MATERIAL ELEV. (E)	ENTRY ELEV. (F)	EXIT ELEV. (G)
22.1	2012-CM-84 2012-PW-85	1,110	1,520	1,600	398	< 391	424	404
27.3	2012-PW-67 RTE-PS-045	2,300	2,450	2,270	358	< 356	< 376	< 400



Notes:

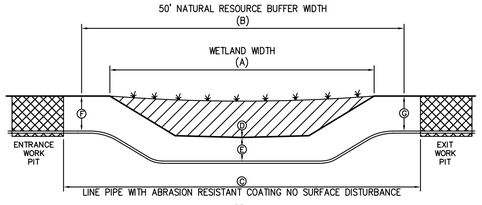
1. THIS CONFIGURATION IS FOR HORIZONTAL DIRECTIONAL DRILL OF UPLAND NATURAL AND CULTURAL (ARCHAEOLOGICAL) RESOURCE SITES AS SHOWN ON PROJECT PLANS. SEE ALIGNMENT SHEETS FOR LOCATIONS OF THIS CONFIGURATION.
2. MINIMUM SEPARATION BETWEEN THE TOP OF PIPELINE AND THE CHANNEL RESOURCE BOTTOM (DIMENSION E) MUST BE AT LEAST 2 FEET.
3. ELEVATIONS PROVIDED ARE BASED ON APPROXIMATE NAVD 88 DATUM AND MUST BE FIELD VERIFIED PRIOR TO INSTALLATION OF PIPELINE.

3 Horizontal Directional Drill (HDD) Upland Natural / Cultural Resource - Typical Section

04/13

N.T.S.

Source: VHB



Notes:

1. THIS CONFIGURATION IS FOR HORIZONTAL DIRECTIONAL DRILL OF WETLAND CROSSINGS AS SHOWN ON PROJECT PLANS. SEE ALIGNMENT SHEETS FOR LOCATIONS OF THIS CONFIGURATION.
2. TOP OF PIPELINE MUST BE BELOW THE DEPTH OF PEAT OR OTHER UNCONSOLIDATED ORGANIC MATERIALS (DIMENSION D) THROUGHOUT THE LENGTH OF THE DRILL.
3. MINIMUM SEPARATION BETWEEN THE UNCONSOLIDATED MATERIAL AND THE TOP OF PIPELINE (DIMENSION E) MUST BE AT LEAST 2 FEET.
4. ELEVATIONS PROVIDED ARE BASED ON APPROXIMATE NAVD 88 DATUM AND MUST BE FIELD VERIFIED PRIOR TO INSTALLATION OF PIPELINE.

4 Horizontal Directional Drill (HDD) Wetland Crossing - Typical Section

04/13

N.T.S.

Source: VHB

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SPACE INTENTIONALLY LEFT BLANK

STATE OF VERMONT
ROBERT E. HOLLINGSHEAD
NO. 97764
CIVIL
LICENSED
PROFESSIONAL ENGINEER

VHB Vanasse Hangen Brustlin, Inc.

							BID		CONSTRUCTION	
						ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
						DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
						DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
						DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
		1	BCK	TDB		ADDED ARCH. SITE (6/08/15)	DESIGN MANAGER	SAB	06/28/13	JEO	05/2016
DWG. NO.	REFERENCE DWG.	REV	DSN	CK		DESCRIPTION		INITIALS	DATE	INITIALS	DATE

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
CONSTRUCTION DETAILS

LOC. CHITTENDEN & ADDISON COUNTIES

YEAR: 2016 | W.O. | SCALE: NOTED | DWG. ANGP-T-G-020 | REV. 1

Vermont Gas

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 - www.chacompanies.com

Begin Station	End Station	Min. Depth (ft.)	Reason	Notes
553+00	584+87	4		
584+87	585+08	5	STREAM 2012-SC-CM-34 (I)	
585+08	587+96	4		
587+96	590+46	5	STREAMS 2012-TB-CM-35 (P) and 2012-TB/SC-CM-36 (P)	
590+46	596+50	4		
596+50	605+25	N/A	I-89 HDD	Refer to VTRANS Permit plans for depth of cover in this area
605+25	606+00	5	Paved/Travelled Way	
606+00	606+60	5	Paved Road/Driveway	
606+60	614+00	5	Paved/Travelled Way	
614+00	616+25	4	Paved Crossing/VELCO	Includes VELCO access point
616+25	617+22	4		
617+22	618+06	5	STREAMS 2013-SC-CM-3 (E) and 2013-SC-CM-2 (E)	
618+06	628+00	4		
628+00	645+00	4	VELCO Access	
645+00	651+25	4		
651+25	653+50	4	VELCO	
653+50	655+25	4	Agriculture	
655+25	656+25	N/A	State Road Crossing - St. George Road (Route 2A)	Refer to VTRANS Permit plans for depth of cover in this area
656+25	659+75	4		
659+75	662+25	4	VELCO	
662+25	673+00	4		
673+00	692+25	4		
692+25	712+75	4	VELCO	
712+75	718+25	4		
718+25	719+75	4	VELCO/VELCO Access	
719+75	723+43	4	Agriculture	
723+43	728+63	Varies	FEH STREAM 2012-TB-SB-01 (P) - Sucker Brook	See Detail - DWG. ANGP-T-C-028A
728+63	732+00	4	VELCO Access / Agriculture	
732+00	755+50	4		
755+50	756+25	4, 5	Road Crossing - Lincoln Road	4' in ditch line, 5' under road
756+25	767+75	4		
767+75	787+75	4	VTRANS/Agriculture/VELCO Access	
787+75	788+25	4, 5	Road Crossing - Breezy Valley Drive	4' in ditch line, 5' under road
788+25	792+25	4	Agricultural	
792+25	795+75	4	VTRANS	Along Route 2A
795+75	798+75	4		
798+75	832+81	4	VELCO/Agriculture	
832+81	832+91	5	STREAM 2012-DITCH-CM-40 (D)	
832+91	838+25	4	VELCO / Agriculture	
838+25	853+75	4		
853+75	855+50	4	VELCO	
855+50	863+75	4		
863+75	884+30	4	VELCO Access / VTRANS	See VTRANS Permit plans for details
884+30	887+00	5	Landowner Condition - Peet (LL #86)	
887+00	887+75	N/A	State Road Crossing - St. George Road (Route 2A)	Refer to VTRANS Permit plans for depth of cover in this area
887+75	892+75	4		
892+75	893+75	N/A	State Road Crossing - Hinesburg Road (Route 116)	Refer to VTRANS Permit plans for depth of cover in this area
893+75	900+75	4		
900+75	902+50	4	VELCO	
902+50	904+67	4		
904+67	904+83	5	STREAM 2012-SC-PW-42 (P)	
904+83	910+25	4		
910+25	911+25	4	Agricultural	
911+25	915+50	4		
915+50	927+25	4	Agricultural / Landowner Condition - Garvey (LL #97)	
927+25	943+25	4	VELCO / Agriculture	
943+25	947+75	4		
947+75	948+25	4,5	Road Crossing - Hickory Place	4' in ditch line, 5' under road
948+25	957+50	4		
957+50	979+50	4	Agricultural	
979+50	997+93	4		
997+93	999+01	Varies	FEH STREAM 2012-SC-JB-10 (P) - Unnamed tributary to Laplatte River	See Detail - DWG. ANGP-T-C-039A
999+01	999+25			
999+25	1000+25	4,5	Road Crossing - Shelburne Falls Road	4' in ditch line, 5' under road
1000+25	1004+50	4	Landowner Condition - Fortin (LL #106)	

Begin Station	End Station	Min. Depth (ft.)	Reason	Notes
1004+50	1010+50	4	VELCO Access / Landowner Condition - Fortin (LL #106)	Station Equation in area - 1004+50 is adjacent to LL111/LL112 Boundary
1010+50	1015+50	4	Landowner Condition - Fortin (LL #106)	
1015+50	1023+00	4	VELCO/Agriculture	
1023+00	1025+75	4	VELCO / Agriculture / Landowner Condition - Clark (LL #108)	
1025+75	1032+50	Varies	HDD - LaPlatte River	
1032+50	1047+75	4	VELCO / Agriculture / Landowner Condition - Clark (LL #108)	
1047+75	1048+50	4,5	Road Crossing - Charlotte Road	4' in ditch line, 5' under road
1048+50	1079+38	4	VELCO/Agriculture	
1079+38	1080+53	Varies	FEH STREAM 2015-SC-1 (P)	See Detail - DWG. ANGP-T-C-042A
1080+53	1104+80	4	VELCO/Agriculture	
1104+80	1113+00	4	VELCO / Agriculture / Landowner Condition - UVM and State Ag. College (LL #112)	
1113+00	1114+00	4	Landowner Condition - UVM and State Ag. College (LL #112)	
1114+00	1114+75	4,5	Road Crossing - Baldwin Road	4' in ditch line, 5' under road
1114+75	1117+25	4	Landowner Condition - Thibault (LL #116)	
1117+25	1123+25	4	VELCO / Landowner Condition - Thibault (LL #116)	
1123+25	1175+25	4	Landowner Condition - Thibault (LL #116)	
1125+75	1167+75	4	VELCO / Agriculture / Landowner Condition - Baldwin (LL #117) and Baldwin (LL #118)	
1167+75	1180+20	Varies	HDD - Drinkwater Road Complex / Landowner Condition - Baldwin (LL #117) and Baldwin (LL #118)	
1180+20	1185+97	4	VELCO/Agriculture	
1185+97	1186+20	5	STREAM 2012-SC-PW-38 (P)	
1186+20	1195+15	4	VELCO/Agriculture	
1195+15	1221+30	Varies	HDD - Lewis Creek / Landowner Condition - Mobbs (LL #121)	
1221+30	1268+45	4	VELCO / Agriculture / Landowner Condition - Ames (LL #124)	
1268+45	1268+55	5	STREAM 2012-DITCH-PW-30 (D)	
1268+55	1270+74	4	VELCO/Agriculture	
1270+74	1271+88	5	STREAM 2012-SC-PW-29 (I)	
1271+88	1287+63	4	Agriculture	
1287+63	1288+71	Varies	STREAM 2012/2015-TB/SC-PW-28 (P)	See Detail - DWG. ANGP-T-C-051A
1288+71	1293+50	4	Agriculture	
1293+50	1294+25	4,5	Road Crossing - Rotax Road	4' in ditch line, 5' under road
1294+25	1320+00	4	Agriculture	
1320+00	1329+50	4		
1329+50	1340+25	4	Agriculture	
1340+25	1343+00	4		
1343+00	1357+75	4	VELCO / Agriculture	
1357+75	1361+30	4	VELCO / Agriculture / Landowner Condition - Mejia and Lauer (LL #151)	
1361+30	1378+25	4	VELCO / Agriculture	
1378+25	1378+75	4,5	Road Crossing - Stilson Road (Paper Street)	4' in ditch line, 5' under road
1378+75	1397+25	4	VELCO/Agriculture	
1397+25	1397+75	4,5	Road Crossing - Hollow Road	4' in ditch line, 5' under road
1397+75	1405+24	4	VELCO/Agriculture	
1405+24	1406+63	5	STREAM 2012-TB/SC-RS-3 (P)	
1406+63	1424+00	4	VELCO/Agriculture	
1424+00	1424+50	4,5	Road Crossing - Post Road	4' in ditch line, 5' under road
1424+50	1427+96	4	VELCO/Agriculture	
1427+96	1429+06	5	STREAM 2012-SC-RS-2 (I)	
1429+06	1433+51	4	VELCO/Agriculture	
1433+51	1434+92	5	STREAM 2012-TB/SC-RS-1 (P)	
1434+92	1439+50	4	VELCO/Agriculture	
1439+50	1468+75	Varies	HDD - Monkton Swamp / Landowner Condition -Boisse (LL #178.02, 178.04, 178.05)	
1468+75	1490+25	4	VELCO / Agriculture / Landowner Condition - Boisse (LL #178.02, 178.04, 178.05)	
1490+25	1497+75	Varies	HDD - Archaeology Site VT-AD-1560 and Monkton Road / Landowner Condition - Huizenga (LL #176)	
1497+75	1503+45	4	VELCO / Agriculture / Landowner Condition - Huizenga (LL #176)	
1503+45	1503+61	5	STREAM 2012-DITCH-PW-26 (D)	
1503+61	1508+75	4	VELCO / Agriculture / Landowner Condition - Huizenga (LL #176)	
1508+75	1512+04	Varies	HDD - Archaeology Site VT-AD-1562 / Landowner Condition - Huizenga (LL #176)	
1512+04	1514+82	4	VELCO / Agriculture / Landowner Condition - Huizenga (LL #176)	
1514+82	1525+50	5	VELCO / Agriculture / Landowner Condition - Hurlburt (LL #181)	
1525+50	1536+14	5	Landowner Condition - Hurlburt (LL #181)	

Begin Station	End Station	Min. Depth (ft.)	Reason	Notes
1536+14	1537+40	Varies	STREAM 2012-TB-JB-7 (P)	See Detail - DWG. ANGP-T-C-061AA, Minimum 5 feet deep
1537+40	1547+25	5	Landowner Condition - Hurlburt (LL #181)	
1547+25	1547+75	5	Road Crossing - Old Stage Road	
1547+75	1553+25	5	Landowner Condition - Hurlburt (LL #181)	
1553+25	1553+75	5	Road Crossing - Old Stage Road	
1553+75	1565+26	5	Landowner Condition - Hurlburt (LL #181)	
1565+26	1565+50	5	STREAM 2013-AS-SC-RS-1 (I)	
1565+50	1566+00	5	Road Crossing - Old Stage Road	
1566+00	1580+32	5	VELCO / Agriculture / Landowner Condition - Hurlburt (LL #192)	
1580+32	1588+00	5	VELCO / Agriculture / Landowner Condition - Hurlburt (LL #196)	
1588+00	1588+75	5	Road Crossing - Parks-Hurlburt Road	
1588+75	1633+35	5	VELCO/Agriculture / Landowner Condition - Hurlburt (LL #196)	
1633+35	1635+35	Varies	FEH Stream 2012-SC-RS-5a (P) and 2012-SC-RS-5 (P)	See Detail - DWG. ANGP-T-C-065A
1635+35	1642+50	5	VELCO/Agriculture / Landowner Condition - Hurlburt (LL #196)	
1642+50	1696+00	4	VELCO / Agriculture / Landowner Condition - Choiniere (LL #213)	
1696+00	1712+80	Varies	HDD - Little Otter Creek and Plank Road, VELCO	Landowner Condition - Smith (LL #215) and Four Hill Farms (LL #216) Minimum 4 feet
1712+80	1768+00	4	VELCO Access/Agriculture	
1768+00	1768+75	4,5	Road Crossing - Quary Road	4' in ditch line, 5' under road
1768+75	1775+00	4	Agriculture	
1775+00	1780+20	4		
1780+20	1784+00	4	Landowner Condition - Smith (LL #222)	
1784+00	1786+25	4	Agriculture / Landowner Condition - Smith (LL #222)	
1786+25	1787+25	4	Landowner Condition - Smith (LL #222)	
1787+25	1793+00	4	Agriculture / Landowner Condition - Smith (LL #222)	
1793+00	1794+25	4	Landowner Condition - Smith (LL #222)	
1794+25	1798+50	4	Agriculture / Landowner Condition - Smith (LL #222)	
1798+50	1799+50	4	Landowner Condition - Smith (LL #223)	
1799+50	1841+75	4	Agriculture / Landowner Condition - Smith (LL #223) and Four Hills Farm (LL #225)	
1841+75	1842+75	N/A	Road Crossing - VT State Route 117	Refer to VTRANS Permit plans for depth of cover in this area
1842+75	1863+47	4	VELCO/VELCO Access/Agricultural	
1863+47	1865+48	5	STREAM 2012-SC-CM-63 (I)	
1865+48	1881+50	4	VELCO/VELCO Access/Agricultural	
1881+50	1882+25	4,5	Road Crossing - Town Hill Road	4' in ditch line, 5' under road
1882+25	1888+85	4	VELCO/Agriculture	
1888+85	1899+25	Varies	HDD - Archaeology Site VT-AD-806	Need to be 5 feet under STREAM 2012-TB-CM-62 (P), Need to be 5 feet deep Landowner Condition - Independent Explosives (LL #236)
1899+25	1930+25	4	VELCO / VELCO Access / Agricultural / Landowner Condition - Independent Explosives (LL #236) and Palmer (LL #237)	
1930+25	1939+30	4	Landowner Condition - Middlebury Area Land Trust (LL #238)	
1939+30	1957+50	4		
1957+50	2001+92	4	Agriculture/VELCO Access	
2001+92	2001+98	5	STREAM 2012-SC-CM-61 (E)	
2001+98	2010+50	4	Agriculture/VELCO Access	
2010+50	2012+75	4,5	Road Crossing - Hunt Road	4' in ditch line, 5' under road
2012+75	2020+97	4	VELCO / Agriculture / Landowner Condition - Sturtevant (LL #248)	
2020+97	2029+49	5	VELCO / Agriculture / Landowner Condition - Four Hill Farms (LL #249)	
2029+49	2047+50	5	VELCO / Agriculture / Landowner Condition - Four Hill Farms (LL #252)	
2047+50	2058+00	4	VELCO / Agriculture	
2058+00	2058+69	4	Landowner Condition - Miller and Burke (LL #254)	
2058+69	2058+81	5	STREAM 2012-SC-CM-59 (E)	
2058+81	2059+00	4	Landowner Condition - Miller and Burke (LL #254)	
2059+00	2068+00	4	Agriculture / Landowner Condition - Miller and Burke (LL #254)	
2068+00	2069+50	4	Landowner Condition - Miller and Burke (LL #254)	
2069+50	2070+50	4	Agriculture / Landowner Condition - Miller and Burke (LL #254)	
2070+50	2071+75	4	Landowner Condition - Miller and Burke (LL #254)	

Begin Station	End Station	Min. Depth (ft.)	Reason	Notes
2071+75	2074+80	4	Agriculture / Landowner Condition - Miller and Burke (LL #254)	
2074+80	2080+10	Varies	HDD - New Haven River	Minimum 4 feet of cover Landowner Condition - Miller and Burke (LL #254), Minimum 5 feet of cover Landowner Condition - Four Hill Farms (LL #255)
2080+10	2087+50	5	Agriculture / Landowner Condition - Four Hill Farms (LL #255)	
2087+50	2091+85	5	Landowner Condition - Four Hill Farms (LL #255)	
2091+85	2092+15	5	STREAM 2012-TB/SC-PW-7 (P)	
2092+15	2096+35	5	Landowner Condition - Four Hill Farms (LL #255)	
2096+35	2096+65	5	STREAM 2012-TB/SC-PW-6 (P)	
2096+65	2105+28	5	Landowner Condition - Four Hill Farms (LL #255)	
2105+28	2109+10	4		
2109+10	2109+40	5	STREAM 2012-SC-PW-5 (I)	
2109+40	2113+00	5	Landowner Condition - Four Hill Farms (LL #255)	
2113+00	2113+30	5	STREAM 2012-TB-PW-4 (I)	
2113+30	2126+75	4		
2126+75	2179+88	N/A	Along Vermont State Road	Refer to VTRANS Permit plans for depth of cover in this area, 5 feet under streams

1 DEPTH OF COVER TABLE

N.T.S.

SOURCE: CHA/VHB/VGS

05/2016

VHB Vanasse Hangen Brustlin, Inc.

							BID			CONSTRUCTION	
						ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
						DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
						DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
						DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
		1	GJM	BCK	IFC PLAN EDITS (05/2016)	DESIGN MANAGER	SAB	06/28/13	JEO	05/2016
DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION		INITIALS	DATE	INITIALS	DATE

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
CONSTRUCTION DETAILS

LOC. CHITTENDEN & ADDISON COUNTIES

Vermont Gas

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 • www.chacompanies.com

YEAR: 2016 | W.O. | SCALE: NOTED | DWG. ANGP-T-G-020A | REV. 1

Station	Type	Comments
556+65	SAND	
558+16	SAND	
559+66	SAND	
560+63	SAND	
562+30	BENTONITE	
563+35	BENTONITE	
571+00	BENTONITE	
582+92	BENTONITE	
584+80	BENTONITE	
585+25	BENTONITE	
586+21	BENTONITE	
587+27	BENTONITE	
588+37	BENTONITE	
588+78	BENTONITE	
589+18	SAND	
590+00	BENTONITE	
590+39	BENTONITE	
591+87	SAND	
594+06	BENTONITE	
594+97	BENTONITE	
616+31	SAND	
617+76	SAND	
619+31	SAND	
620+81	SAND	
622+31	SAND	
623+79	SAND	
625+30	SAND	
626+80	SAND	
628+30	SAND	
629+81	SAND	
631+26	BENTONITE	
631+55	BENTONITE	
632+81	SAND	
634+30	SAND	
635+81	SAND	
637+31	SAND	
638+81	SAND	
640+57	SAND	
640+94	SAND	
641+95	SAND	
642+93	SAND	
643+94	SAND	
644+94	SAND	
646+17	SAND	
647+66	SAND	
649+17	SAND	
651+07	SAND	
652+52	BENTONITE	
653+16	BENTONITE	
654+84	SAND	
660+29	SAND	
661+29	SAND	
662+30	SAND	
683+77	SAND	
685+27	SAND	
686+78	SAND	
688+28	SAND	
689+79	SAND	
691+29	SAND	
692+77	SAND	
694+29	SAND	
695+77	SAND	
697+27	SAND	
698+78	SAND	
700+28	SAND	
701+78	SAND	
703+27	SAND	
704+27	SAND	
706+20	BENTONITE	
707+00	BENTONITE	
707+91	SAND	
709+27	SAND	
710+32	SAND	
726+82	BENTONITE	
728+11	BENTONITE	
731+39	SAND	
753+49	BENTONITE	
754+68	BENTONITE	
763+13	SAND	
765+50	BENTONITE	

Station	Type	Comments
766+70	BENTONITE	
779+19	BENTONITE	
780+18	BENTONITE	
787+68	SAND	
799+53	BENTONITE	
799+86	BENTONITE	
800+91	SAND	
802+40	SAND	
803+91	SAND	
805+41	SAND	
806+34	SAND	
810+67	SAND	
811+47	SAND	
812+25	SAND	
813+06	SAND	
813+86	SAND	
814+83	SAND	
815+41	SAND	
816+26	SAND	
832+77	BENTONITE	
833+64	BENTONITE	
838+50	BENTONITE	
840+36	BENTONITE	
843+67	BENTONITE	
844+20	BENTONITE	
854+78	BENTONITE	
855+66	BENTONITE	
866+91	SAND	
870+39	SAND	
871+95	SAND	
878+41	SAND	
879+93	SAND	
881+42	SAND	
882+92	SAND	
884+41	SAND	
885+90	SAND	
887+42	SAND	
888+96	SAND	
890+49	SAND	
893+44	SAND	
894+93	SAND	
896+45	SAND	
898+05	SAND	
899+56	SAND	
901+04	SAND	
902+55	BENTONITE	
905+65	BENTONITE	
945+26	SAND	
946+79	SAND	
948+29	SAND	
949+81	SAND	
951+30	SAND	
952+78	SAND	
955+18	SAND	
956+00	SAND	
957+03	SAND	
958+04	SAND	
959+01	SAND	
960+05	SAND	
961+02	SAND	
995+65	BENTONITE	
1004+23	BENTONITE	
1005+00	BENTONITE	
1014+16	BENTONITE	
1023+10	BENTONITE	
1078+51	BENTONITE	
1080+19	BENTONITE	
1087+77	BENTONITE	
1088+03	BENTONITE	
1100+77	BENTONITE	
1101+68	BENTONITE	
1102+05	BENTONITE	
1103+05	BENTONITE	
1103+88	SAND	
1104+68	SAND	
1105+50	SAND	
1106+30	SAND	
1107+14	SAND	
1107+91	SAND	
1108+70	SAND	

Station	Type	Comments
1109+50	SAND	
1110+32	SAND	
1111+14	SAND	
1111+92	SAND	
1112+71	SAND	
1113+22	SAND	
1114+02	SAND	
1114+82	SAND	
1116+37	BENTONITE	
1118+41	BENTONITE	
1119+95	SAND	
1121+44	SAND	
1122+93	SAND	
1124+44	SAND	
1124+89	SAND	
1126+58	SAND	
1128+12	SAND	
1129+08	SAND	
1130+59	SAND	
1131+70	SAND	
1135+40	SAND	
1136+43	SAND	
1137+41	SAND	
1138+40	SAND	
1139+39	SAND	
1140+40	SAND	
1141+41	SAND	
1142+41	SAND	
1143+55	BENTONITE	
1143+85	BENTONITE	
1149+73	SAND	
1150+57	SAND	
1158+77	SAND	
1159+93	SAND	
1161+19	SAND	
1162+42	SAND	
1163+68	SAND	
1164+93	SAND	
1166+20	SAND	
1167+12	SAND	
1180+41	BENTONITE	
1184+61	SAND	
1185+86	SAND	
1188+55	SAND	
1189+97	SAND	
1191+49	SAND	
1192+98	SAND	
1222+24	SAND	
1223+70	SAND	
1225+21	SAND	
1226+68	SAND	
1227+82	SAND	
1233+97	BENTONITE	
1234+25	BENTONITE	
1238+67	BENTONITE	
1240+03	BENTONITE	
1243+93	BENTONITE	
1246+28	BENTONITE	
1247+72	BENTONITE	
1249+97	BENTONITE	
1258+54	BENTONITE	
1260+25	BENTONITE	
1263+17	BENTONITE	
1263+93	BENTONITE	
1271+13	BENTONITE	ELEVATION DATA IS SPORADIC IN THIS LOCATION. VGS CONSTRUCTION MANAGEMENT TO DETERMINE LOCATION OF SAND TRENCH BREAKERS IN FIELD.
1271+45	BENTONITE	
1288+00	BENTONITE	
1288+29	BENTONITE	
1297+30	BENTONITE	
1301+00	BENTONITE	
1301+77	BENTONITE	
1302+70	BENTONITE	
1303+78	BENTONITE	
1306+46	BENTONITE	
1307+81	BENTONITE	
1308+77	BENTONITE	
1310+74	BENTONITE	
1313+38	BENTONITE	
1314+20	BENTONITE	
1314+92	BENTONITE	

Station	Type	Comments
1356+97	BENTONITE	
1357+42	BENTONITE	
1359+49	BENTONITE	
1360+35	BENTONITE	
1372+82	SAND	
1374+31	SAND	
1380+74	SAND	
1381+62	SAND	
1382+54	SAND	
1383+45	SAND	
1384+33	SAND	
1385+45	SAND	
1386+93	SAND	
1388+41	SAND	
1389+94	SAND	
1391+45	SAND	
1392+93	SAND	
1394+59	SAND	
1395+56	SAND	
1396+62	SAND	
1398+16	BENTONITE	
1399+18	BENTONITE	
1399+93	SAND	
1402+65	SAND	
1403+90	SAND	
1405+15	SAND	
1405+71	BENTONITE	
1405+95	BENTONITE	
1406+30	SAND	
1406+82	SAND	
1407+62	SAND	
1408+41	SAND	
1409+20	SAND	
1410+05	SAND	
1410+79	SAND	
1411+60	SAND	
1412+43	SAND	
1413+21	SAND	
1414+01	SAND	
1414+85	SAND	
1415+64	SAND	
1416+25	SAND	
1417+78	SAND	
1418+08	SAND	
1418+93	SAND	
1419+86	SAND	
1420+75	SAND	
1421+68	SAND	
1422+56	SAND	
1423+43	SAND	
1424+36	SAND	
1425+27	SAND	
1426+14	SAND	
1427+07	SAND	
1427+96	SAND	
1428+85	SAND	
1429+64	BENTONITE	
1433+85	BENTONITE	
1436+41	BENTONITE	
1439+00-1463+00	ELEVATION DATA IS SPORADIC IN THIS LOCATION. VGS CONSTRUCTION MANAGEMENT TO DETERMINE LOCATION OF SAND TRENCH BREAKERS IN FIELD.	
1472+42	BENTONITE	
1473+74	BENTONITE	
1503+85	BENTONITE	
1506+89	BENTONITE	
1536+26	BENTONITE	ELEVATION DATA IS SPORADIC IN THIS LOCATION. VGS CONSTRUCTION MANAGEMENT TO DETERMINE LOCATION OF SAND TRENCH BREAKERS IN FIELD.
1537+46	BENTONITE	
1538+20	SAND	
1539+73	SAND	
1541+20	SAND	
1541+95	SAND	
1544+02	SAND	
1545+51	SAND	
1547+05	SAND	
1548+52	SAND	
1549+35	SAND	
1550+87	SAND	
1552+35	SAND	
1553+86	SAND	
1555+35	SAND	

(1) TRENCH BREAKER LOCATION

05/2016

N.T.S.

SOURCE: CHA

NOTE: THE FOLLOWING APPROXIMATE STATIONS ARE THE MINIMUM LOCATIONS FOR BOTH SAND AND BENTONITE TRENCH BREAKERS FOR SEGMENT 2 & 3 OF THE ADDISON NATURAL GAS PROJECT. THIS LIST WAS CREATED USING INFORMATION FROM DETAILS #2 AND #5 ON DRAWING ANGP–T–G–015 REV. 2 FROM THE PLAN SET TITLED "ADDISON NATURAL GAS PROJECT TRANSMISSION MAINLINE" DATED 04–02–15. THE CONSTRUCTION MANAGEMENT TEAM/INSPECTORS SHOULD REVIEW ACTUAL FIELD CONDITIONS AND DIRECT THE CONTRACTOR TO INSTALL ADDITIONAL TRENCH BREAKERS AS NECESSARY TO SUPPLEMENT THE LISTED AREAS.

STATE OF VERMONT
NO. 97764
CIVIL
LICENSED
PROFESSIONAL ENGINEER

VHB Vanasse Hangen Brustlin, Inc.

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

Vermont Gas

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
		1	GJM	BCK	IFC PLAN EDITS (05/2016)

	BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
CONSTRUCTION DETAILS

LOC. CHITTENDEN & ADDISON COUNTIES

YEAR: 2016 | W.O. | SCALE: NOTED | DWG. ANGP–T–G–020B | REV. 1

Station	Type	Comments
1579+24	BENTONITE	
1579+89	BENTONITE	
1581+19	BENTONITE	
1581+45	BENTONITE	
1601+39	BENTONITE	
1610+06	BENTONITE	
1633+54	BENTONITE	
1635+00	BENTONITE	
1640+39	BENTONITE	
1667+50	BENTONITE	
1669+58	BENTONITE	
1670+48	BENTONITE	
1680+37	BENTONITE	
1680+71	BENTONITE	
1685+24	BENTONITE	
1685+61	BENTONITE	
1719+44	BENTONITE	
1720+47	SAND	
1721+33	BENTONITE	
1722+07	SAND	
1722+86	SAND	
1723+67	SAND	
1724+48	SAND	
1725+29	SAND	
1726+10	SAND	
1726+86	SAND	
1775+00	BENTONITE	
1776+08	BENTONITE	
1778+63	BENTONITE	
1779+70	BENTONITE	
1781+32	BENTONITE	
1782+58	BENTONITE	
1786+17	BENTONITE	
1787+25	BENTONITE	
1793+44	BENTONITE	
1794+12	BENTONITE	
1846+53	SAND	
1847+97	SAND	
1849+50	SAND	
1851+02	SAND	
1852+26	BENTONITE	
1852+79	BENTONITE	
1854+01	SAND	
1855+52	SAND	
1857+01	SAND	
1863+63	SAND	
1864+40	BENTONITE	
1864+56	BENTONITE	
1865+10	SAND	
1868+50	SAND	
1869+29	SAND	
1871+64	BENTONITE	
1872+00	BENTONITE	
1884+00-1919+29	ELEVATION DATA IS SPORADIC IN THIS LOCATION. VGS CONSTRUCTION MANAGEMENT TO DETERMINE LOCATION OF SAND TRENCH BREAKERS IN FIELD.	
1917+27	BENTONITE	
1923+24	BENTONITE	
1928+39	BENTONITE	
1965+95	BENTONITE	
1971+79	BENTONITE	
1973+50	BENTONITE	
1998+48	SAND	
1999+22	SAND	
2001+41	SAND	
2002+92	SAND	
2004+39	SAND	
2005+85	BENTONITE	
2006+22	BENTONITE	
2009+41	BENTONITE	
2010+30	BENTONITE	
2010+98	SAND	
2012+51	SAND	
2014+06	SAND	
2015+53	SAND	
2017+06	SAND	
2018+55	SAND	
2058+50	BENTONITE	
2058+75	BENTONITE	
2068+30	BENTONITE	

Station	Type	Comments
2069+16	BENTONITE	
2070+23	BENTONITE	
2072+87	BENTONITE	
2091+82	BENTONITE	ELEVATION DATA IS SPORADIC IN THIS LOCATION. VGS CONSTRUCTION MANAGEMENT TO DETERMINE LOCATION OF SAND TRENCH BREAKERS IN FIELD.
2092+18	BENTONITE	
2096+25	BENTONITE	
2096+48	SAND	
2096+67	BENTONITE	
2097+93	SAND	
2099+44	SAND	
2100+90	SAND	
2102+46	SAND	
2103+94	SAND	
2105+43	SAND	
2106+96	SAND	
2108+43	SAND	
2109+14	BENTONITE	
2109+39	BENTONITE	
2109+93	SAND	
2111+42	SAND	
2113+00	BENTONITE	
2113+24	BENTONITE	
2120+77	BENTONITE	
2121+38	BENTONITE	
2142+22	BENTONITE	
2144+64	BENTONITE	
2162+30	BENTONITE	
2162+48	BENTONITE	
2174+62	SAND	

1 TRENCH BREAKER LOCATION

N.T.S.

05/2016

SOURCE: CHA

NOTE: THE FOLLOWING APPROXIMATE STATIONS ARE THE MINIMUM LOCATIONS FOR BOTH SAND AND BENTONITE TRENCH BREAKERS FOR SEGMENT 2 & 3 OF THE ADDISON NATURAL GAS PROJECT. THIS LIST WAS CREATED USING INFORMATION FROM DETAILS #2 AND #5 ON DRAWING ANGP-T-G-015 REV. 2 FROM THE PLAN SET TITLED "ADDISON NATURAL GAS PROJECT TRANSMISSION MAINLINE" DATED 04-02-15. THE CONSTRUCTION MANAGEMENT TEAM/INSPECTORS SHOULD REVIEW ACTUAL FIELD CONDITIONS AND DIRECT THE CONTRACTOR TO INSTALL ADDITIONAL TRENCH BREAKERS AS NECESSARY TO SUPPLEMENT THE LISTED AREAS.

STATE OF VERMONT — REGISTERED PROFESSIONAL ENGINEER — NO. 97764 — CIVIL

VHB Vanasse Hangen Brustlin, Inc.

DWG. NO.	REFERENCE DWG.	REV	DSN	CK		DESCRIPTION		BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
							ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
							DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
							DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
							DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
		1	GJM	BCK		IFC PLAN EDITS (05/2016)	DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
CONSTRUCTION DETAILS

LOC. CHITTENDEN & ADDISON COUNTIES

Vermont Gas

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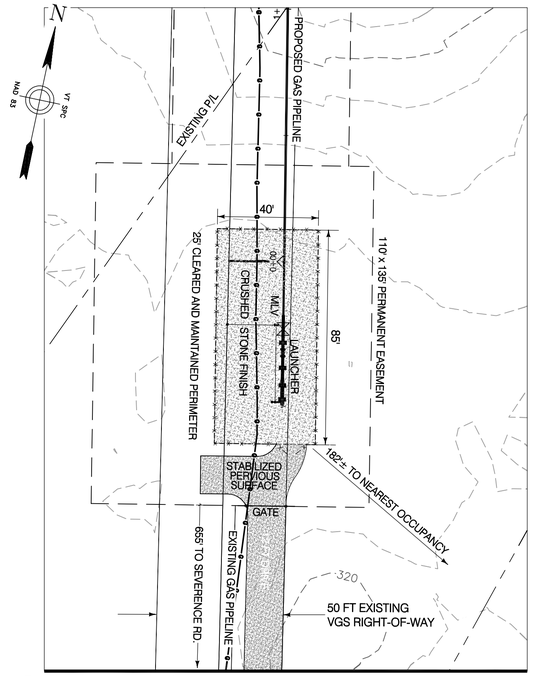
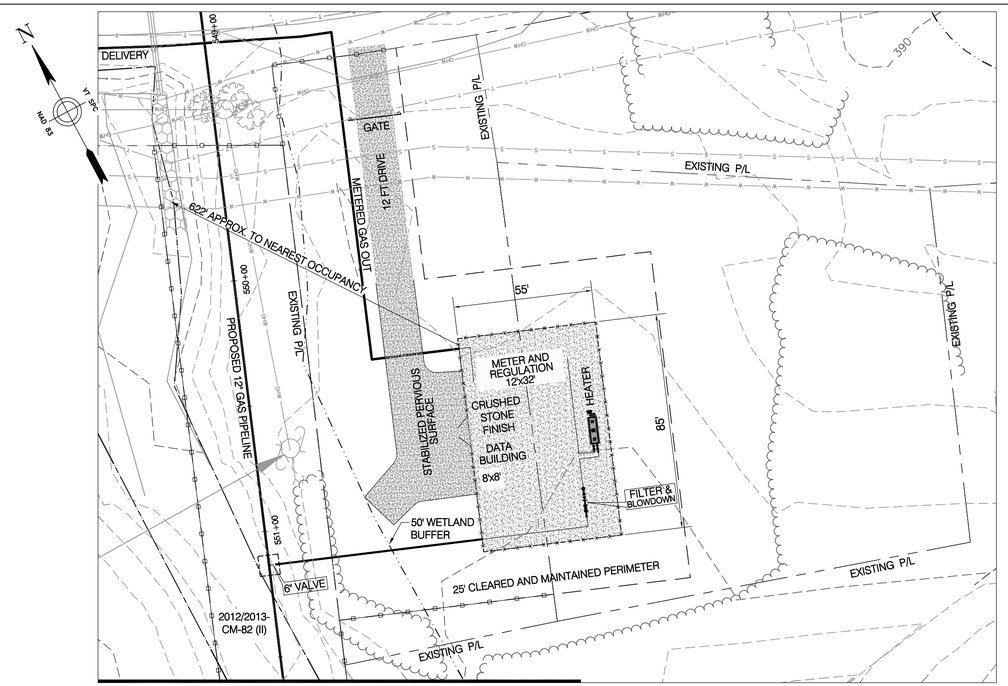
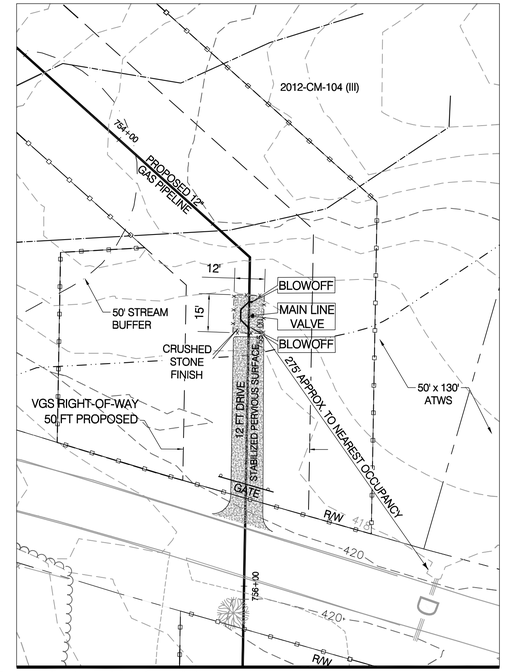
YEAR: 2016 | W.O. | SCALE: NOTED | DWG. ANGP-T-G-020C | REV. 1



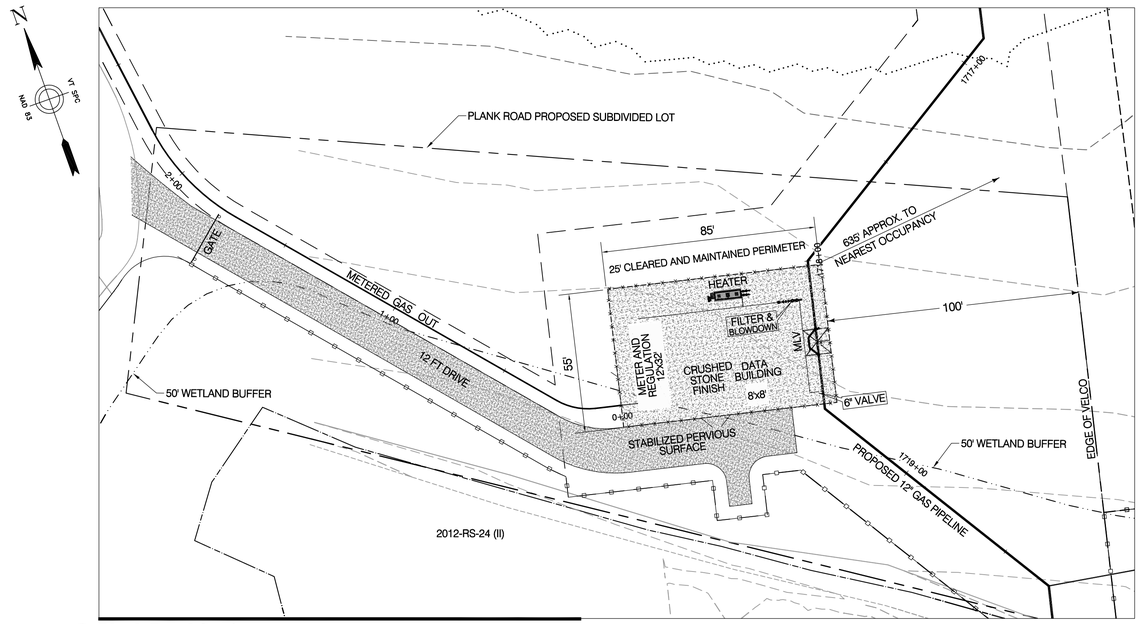
1 Colchester Tie-In 4/30
Scale: 1"=30'



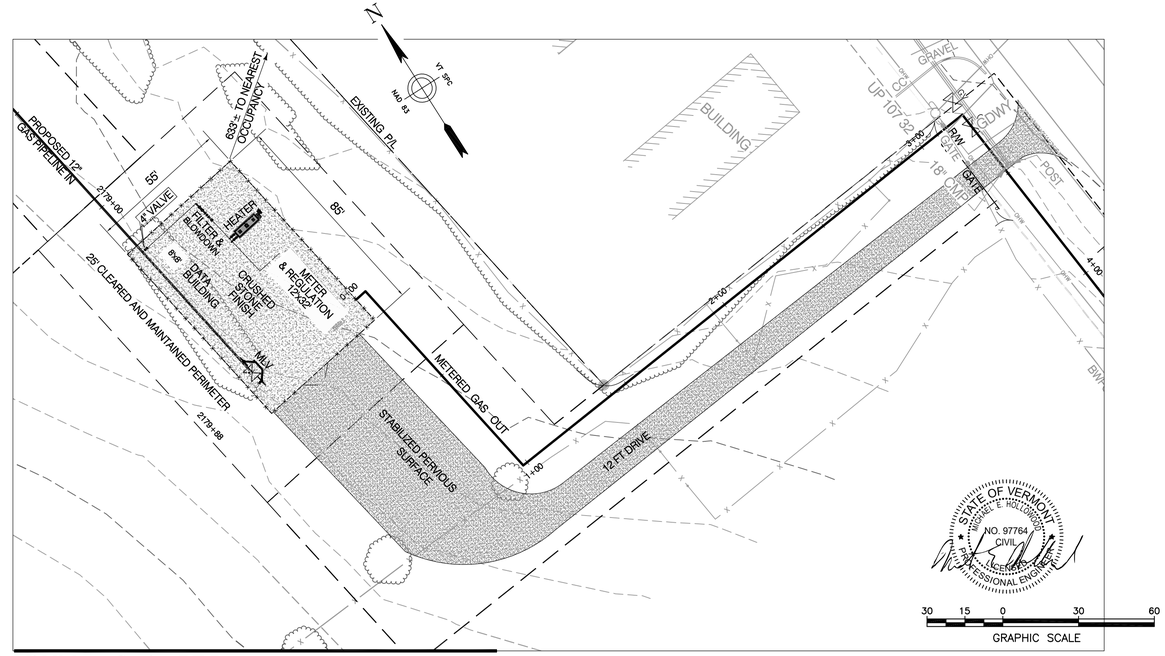
2 Williston Road Station 4/30
1"=30'



3 Typical Main Line Valve 4/30
1"=30' LD_



4 Plank Road Station 4/30
Scale: 1"=30' LD_



5 Middlebury Station RT 7 4/30
Scale: 1"=30' LD_

DWG. NO.	REFERENCE DWG.	REV	DSN	CK		DESCRIPTION
15-713-G-500	TYPICAL MAIN LINE VALVE					
15-713-G-400	COLCHESTER TIE IN					
15-713-G-300	MIDDLEBURY STATION RT 7					
15-713-G-200	PLANK ROAD STATION					
15-713-G-100	WILLISTON ROAD STATION					

	BID		CONSTRUCTION	
	INITIALS	DATE	INITIALS	DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
STATION AND VALVE DETAILS

LOC. CHITTENDEN & ADDISON COUNTIES

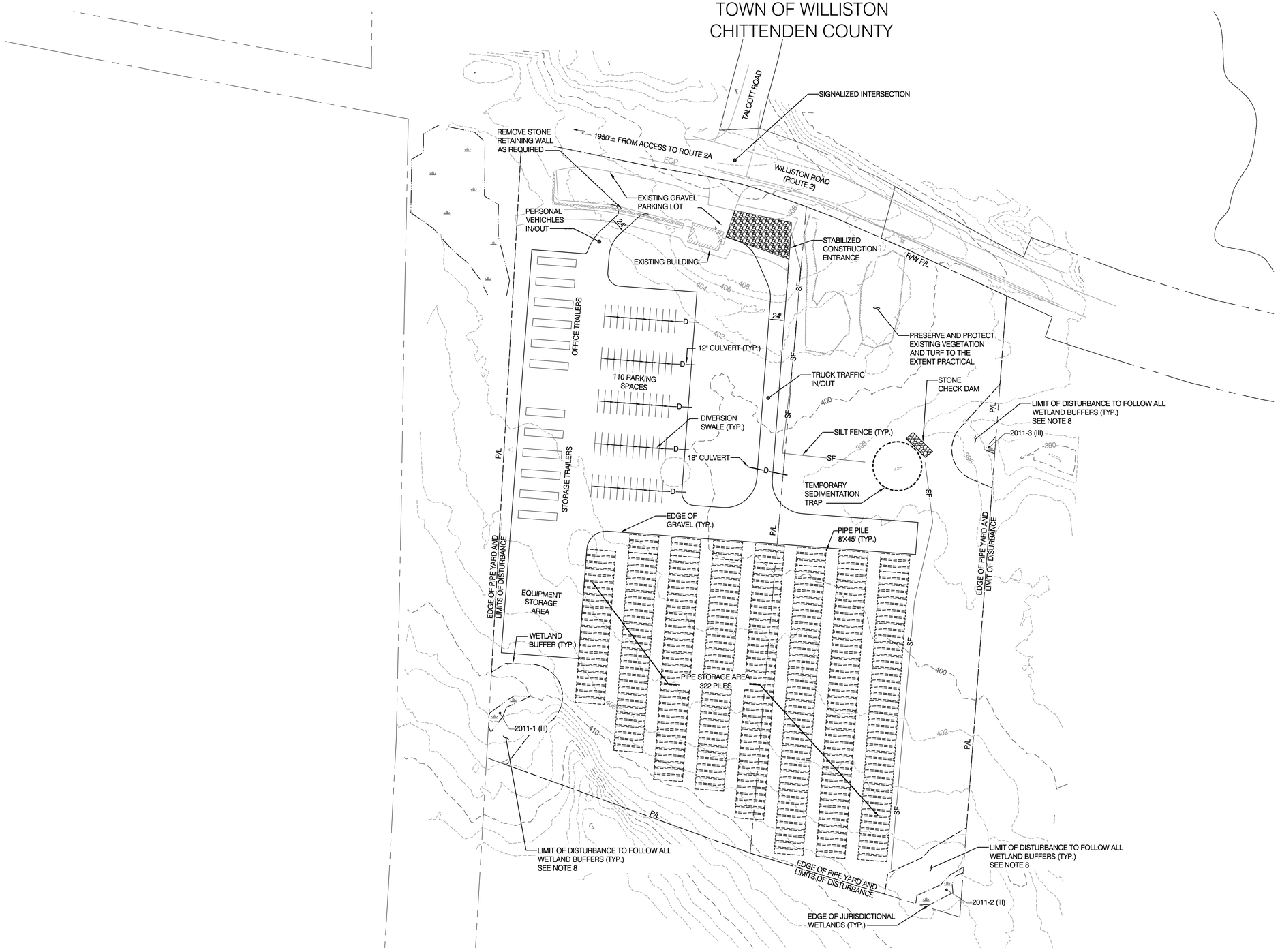
YEAR: 2016 | W.O. | SCALE: AS NOTED | DWG. ANGP-T-G-021 | REV. 0

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 ~ www.chacompanies.com

TOWN OF WILLISTON
CHITTENDEN COUNTY



N

NOTES:

1. PURPOSE OF PLAN: TO SHOW A GENERAL LAYOUT CONFIGURATION OF A CONSTRUCTION LAYDOWN AREA (PIPE YARD) ON THE SHOWN PARCELS.

2. THE CONTRACTOR SHALL BE REPSPONSIBLE FOR SITE SECURITY AND JOB SAFETY, CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH OSHA AND LOCAL REQUIREMENTS.

3. THIS PROJECT FALLS WITHIN THE INDIVIDUAL NPDES CONSTRUCTION STORMWATER PERMIT PROGRAM. THE CONTRACTOR SHALL FOLLOW THE CONDITIONS OF THE INDIVIDUAL PERMIT AND EROSION AND SEDIMENT CONTROL PLAN (EPSC).

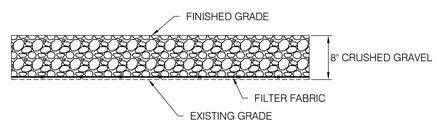
4. THE CONTRACTOR SHALL NOTIFY DIG-SAFE (1-888-344-7233) AT LEAST 72 HOURS BEFORE ANY EXCAVATION.

5. STORMWATER SHALL BE DIRECTED TO THE TEMPORARY SEDIMENT TRAP THROUGH THE USE OF DIVERSION SWALES, PIPES, WATERS, OR BY OTHER APPROVED METHODS AND MEANS.

6. LIMIT OF DISTURBANCE (LOD) TAPE AND/OR FENCE AND/OR FLAGGING SHALL BE INSTALLED PER DETAILS 1 AND 3-5, AS INDICATED ON EPSC PLAN SHEET ANGP-T-G-012.

7. LOD TAPE, FENCE, OR FLAGGING SHALL NOT CROSS ACTIVE ENTRANCE/EXITS OR IMPEDE DRAINAGE FLOW PATHS (E.G. SEDIMENT TRAP OUTFALL).

8. LOD SHALL BE EXTERNAL TO ANY JURISDICTIONAL WETLAND, WETLAND BUFFER, AND/OR OTHER NATURAL RESOURCE AREAS. THE CONTRACTOR SHALL PRESERVE AND PROTECT SAID AREAS TO THE EXTENT NECESSARY.



TYPICAL SECTION
(NTS)

80 40 0 80 160
GRAPHIC SCALE

STATE OF VERMONT
JONATHAN E. HOLLOWAY
NO. 97764
CIVIL
PROFESSIONAL ENGINEER

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION	BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
					ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
					DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
					DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
					DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
					DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
WILLISTON PIPEYARD

LOC. CHITTENDEN COUNTY

YEAR: 2016 | W.O. | SCALE: 1"=80' | DWG. ANGP-T-G-022 | REV. 0

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

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South Burlington, VT 05403
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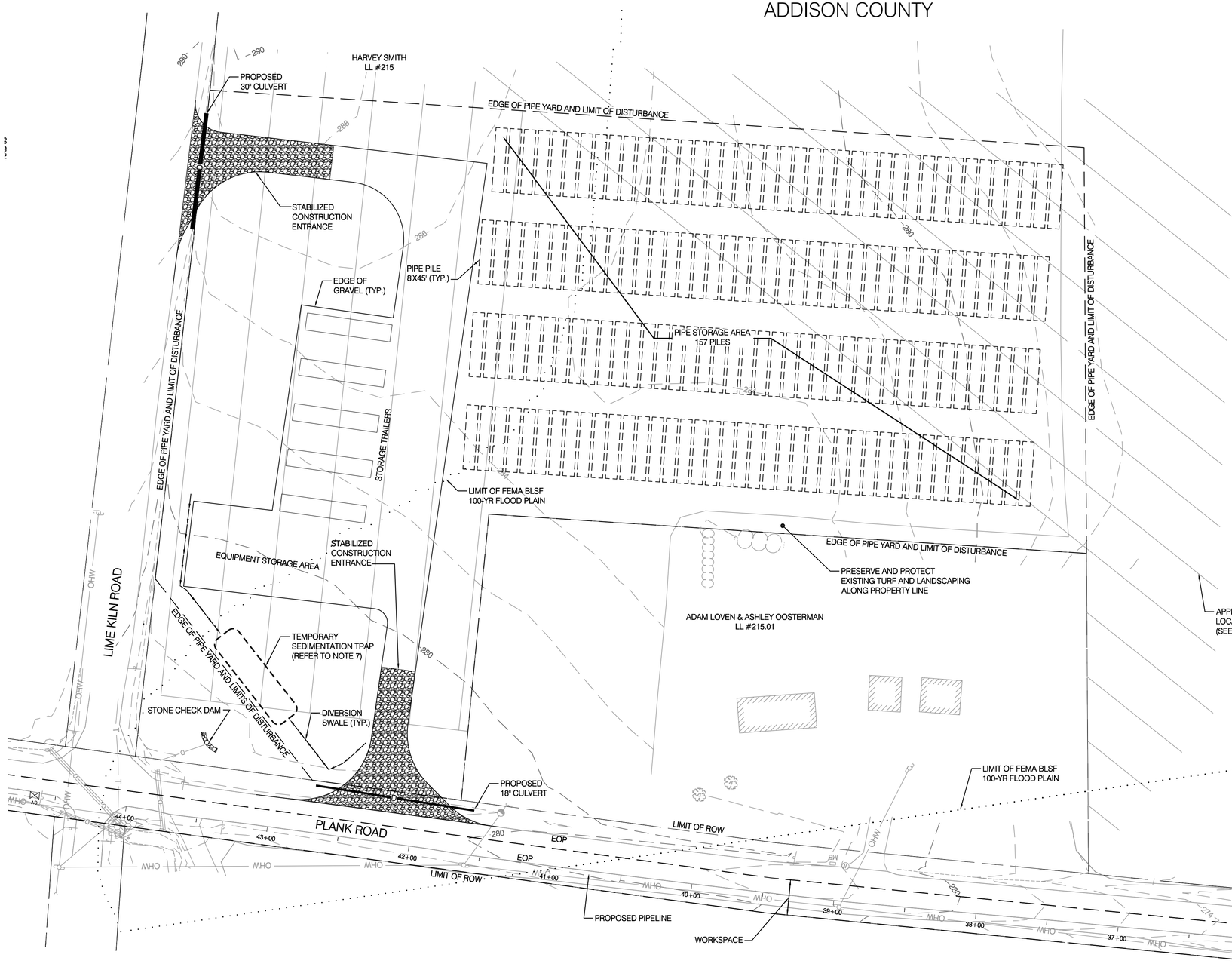
TOWN OF NEW HAVEN
ADDISON COUNTY



NOTES:

1. PURPOSE OF PLAN: TO SHOW A GENERAL LAYOUT CONFIGURATION OF A CONSTRUCTION LAYDOWN AREA (PIPE YARD) ON THE SHOWN PARCELS.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY, CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH OSHA AND LOCAL REQUIREMENTS.

3. THIS PROJECT FALLS WITHIN THE INDIVIDUAL NPDES CONSTRUCTION STORMWATER PERMIT PROGRAM. THE CONTRACTOR SHALL FOLLOW THE CONDITIONS OF THE INDIVIDUAL PERMIT AND EROSION PREVENTION AND SEDIMENT CONTROL PLAN (EPSC).

4. THE CONTRACTOR SHALL NOTIFY DIG-SAFE (1-888-344-7233) AT LEAST 72 HOURS BEFORE ANY EXCAVATION.

5. TOPSOIL IN ALL DISTURBED AREAS SHALL BE RESTORED TO IT'S ORIGINAL CONDITION UPON DECOMMISSIONING OF SITE, PER STABILIZATION NOTES ON EPSC PLAN SHEET ANGP-T-G-011.

6. THE EXISTING FIELD, CONTAINS UNDERDRAINAGE/DRAINAGE TILE WHICH SHALL BE PROTECTED DURING CONSTRUCTION, IF UNDERDRAINAGE SYSTEM IS DAMAGED, IT SHALL BE REPLACED UPON DECOMMISSIONING OF SITE.

7. THE TEMPORARY SEDIMENT TRAP SHALL BE A 'STONE OUTLET SEDIMENT TRAP' AS INDICATED ON EPSC PLAN SHEET ANGP-T-G-016. THE TRAP SHALL BE INSTALLED SUCH THAT THE BOTTOM ELEVATION OF THE TRAP IS NO LOWER, THAN THE BOTTOM ELEVATION OF THE EXISTING TOP SOIL, TO PREVENT DAMAGE TO THE EXISTING UNDERDRAINAGE SYSTEM.

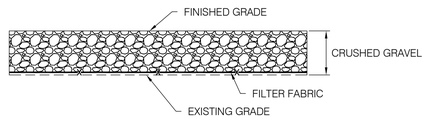
8. STORMWATER SHALL BE DIRECTED TO THE TEMPORARY SEDIMENT TRAP THROUGH THE USE OF DIVERSION SWALES, PIPES, WATER BARS OR BY OTHER APPROVED METHODS AND MEANS.

9. LIMIT OF DISTURBANCE (LOD) TAPE, AND/OR FENCE, AND/OR FLAGGING SHALL BE INSTALLED PER DETAILS 1 AND 3-5 AS INDICATED ON EPSC PLAN SHEET ANGP-T-G-012.

10. LOD TAPE, FENCE, OR FLAGGING SHALL NOT CROSS ACTIVE ENTRANCES/EXITS OR IMPEDE DRAINAGE FLOWPATHS (E.G. SEDIMENT TRAP OUTFALL).

11. DRAINAGE TILE LOCATIONS SHOWN HEREON ARE APPROXIMATE AND BASED ON INFORMATION PROVIDED BY THE LAND OWNER AND CONTRACTOR THAT INSTALLED THE DRAINAGE INFRASTRUCTURE.

12. DEPTH OF CRUSHED GRAVEL SHALL BE DETERMINED BY CONTRACTOR BASED ON EXISTING SOIL CONDITIONS AND PIPE YARD MEANS AND METHODS.



TYPICAL SECTION
(NTS)

STATE OF VERMONT
MICHAEL E. HOLLINGSWORTH
NO. 97764
CIVIL
LICENSED
PROFESSIONAL ENGINEER

VHB Vanasse Hangen Brustlin, Inc.

DWG. NO.	REFERENCE DWG.	REV	DSN	CK		DESCRIPTION	BID		CONSTRUCTION	
							INITIALS	DATE	INITIALS	DATE
						ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
						DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
						DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
						DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
						DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
PLANK ROAD PIPEYARD

LOC. ADDISON COUNTY

Vermont Gas

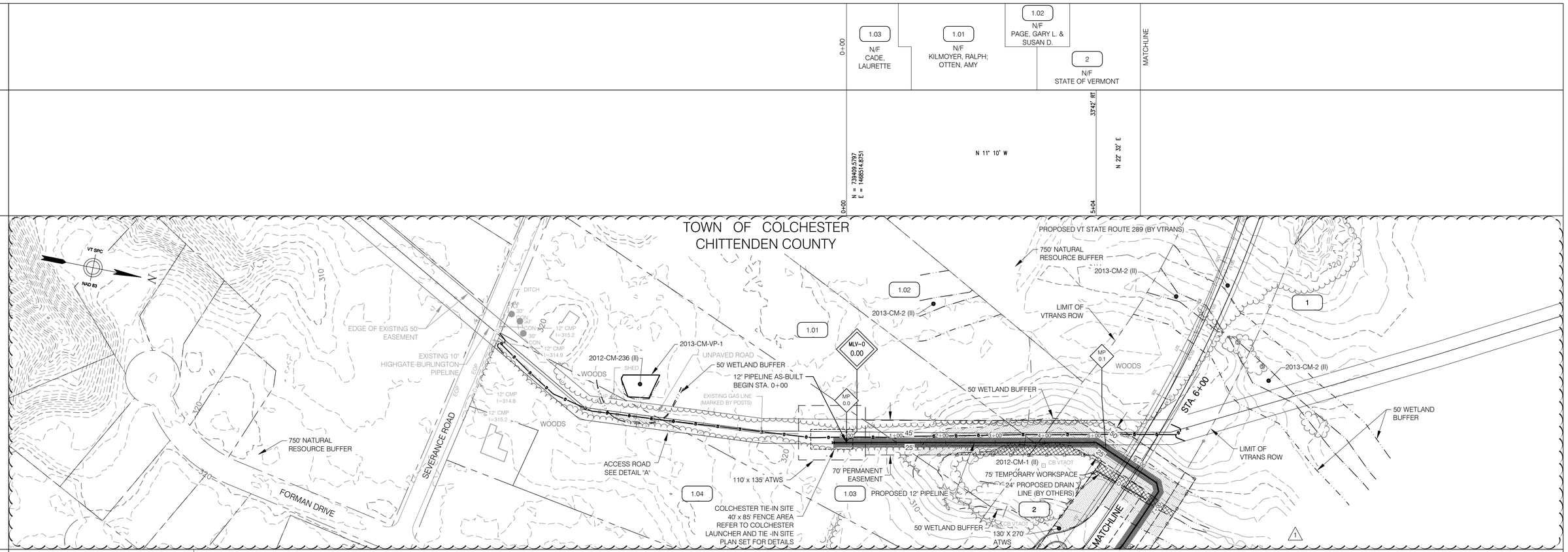
CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

YEAR: 2016 | W.O. | SCALE: 1"=40' | DWG. ANGP-T-G-023 | REV. 0

RIGHT-OF-WAY

SURVEY DATA

ALIGNMENT DETAIL



EROSION PREVENTION & SEDIMENT CONTROL

LEGEND

- PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- CENTERLINE OF STREAM
- TEMPORARY STREAM CROSSING
- WETLAND
- 50' WETLAND BUFFER
- TEMPORARY WETLAND MATTING
- WETLAND BUFFER WITHIN PROJECT AREA
- REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL

INSTALL CONSTRUCTION DEMARCATION:
STA. 0+00 TO 0+38 RT - 35' FROM NEW 12" PIPE ℄
STA. 0+38 TO 5+19 RT - 25' FROM NEW 12" PIPE ℄
STA. 0+00 TO 0+38 LT - 75' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 5+19 TO 6+00 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 0+38 TO 5+04 LT - 45' FROM NEW 12" PIPE ℄
STA. 5+04 TO 6+00 LT - 50' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 1+45 TO 5+19 RT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 5+19 TO 6+00 RT - WIDTH VARIES FROM NEW 12" PIPE ℄

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
STA. 0+00

INSTALL MATTING:
STA. 2+07 TO 4+86

INSTALL MATTING:
STA. 5+19 TO 6+00

HORIZONTAL SCALE
100 50 0 100 200 300 feet
VERTICAL SCALE
100 50 0 100 200 300 feet

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.
2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.

CONST. TYPE	1A W	1G W	
SOIL TYPE	MyC (PAS) ScB	ScA MyC	
LC/LU	GRASS / RESIDENTIAL		
STREAMS			
WETLANDS		WETLAND 2012-CM-1 - STATION 1+45 TO 6+00 CLASS II	
VERNAL POOLS	2012-CM-VP-1		
SIGNIFICANT NATURAL COMMUNITIES			
RTE SPECIES			
NRC WILDLIFE HABITAT			
ARCHAEOLOGY SITES			

0+00 — MATCH LINE

VHB Vanasse Hangen Brustlin, Inc.

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
ANGP-T-G-007-010	ACCESS ROAD DETAILS				
ANGP-T-G-021	STATION AND VALVE DETAILS				
ANGP-T-C-001A	ALIGNMENT SHEET	1	GJM	BCK	IFC 2016 EDITS (05/2016)

	BID		CONSTRUCTION	
	INITIALS	DATE	INITIALS	DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
EPSC PLAN

LOC. CHITTENDEN COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP-EPSC-001A | REV. 1

Vermont Gas

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

RIGHT-OF-WAY

MATCHLINE

1
N/F
THIBAULT, JO ANN

2
N/F
STATE OF VERMONT

MATCHLINE

SURVEY DATA

Station	Bearing	Deflection
6+51	N 22° 33' E	43°40' RT
6+69	N 66° 12' E	45°31' RT
7+08	S 68° 16' E	00°52' RT
7+49	S 67° 24' E	00°52' RT
7+89	S 66° 32' E	00°52' RT
8+29	S 65° 40' E	00°52' RT
8+69	S 64° 48' E	00°52' RT
9+09	S 63° 57' E	00°52' RT
9+49	S 63° 05' E	00°48' RT
9+83	S 62° 16' E	00°48' RT
10+29	S 61° 24' E	00°55' RT
10+69	S 60° 29' E	00°55' RT
11+09	S 59° 37' E	00°55' RT
11+49	S 58° 45' E	00°52' RT
11+89	S 57° 53' E	00°52' RT
12+29	S 57° 01' E	00°52' RT
12+69	S 56° 09' E	00°52' RT
12+98	S 55° 24' E	00°19' RT
	S 55° 05' E	
21+28		00°33' RT
	S 55° 38' E	
22+34		01°59' RT
	S 57° 37' E	

ALIGNMENT DETAIL

EROSION PREVENTION & SEDIMENT CONTROL

LEGEND

PERMANENT EASEMENT	— — — —
TEMPORARY WORKSPACE	— — — — — —
CENTERLINE OF STREAM	— - — - —
TEMPORARY STREAM CROSSING	▨
WETLAND	— · · —
50' WETLAND BUFFER	— · — · —
TEMPORARY WETLAND MATTING	▩
WETLAND BUFFER WITHIN PROJECT AREA	░
REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL	—o—o—o—

INSTALL CONSTRUCTION DEMARCATION:
STA. 6+00 TO 9+61 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 6+00 TO 6+93 LT - WIDTH VARIES FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 9+61 TO 14+37 RT - 50' FROM NEW 12" PIPE ℄
STA. 6+93 TO 8+26 LT - 50' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 14+37 TO 15+91 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 15+91 TO 25+00 RT - 50' FROM NEW 12" PIPE ℄
STA. 8+26 TO 25+00 RT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 6+00 TO 9+20 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 6+51 TO 6+93 LT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 6+93 TO 7+95 LT - 50' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 13+94 TO 14+37 RT - 50' FROM NEW 12" PIPE ℄
STA. 14+37 TO 15+91 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 15+91 TO 16+42 RT - 50' FROM NEW 12" PIPE ℄
STA. 13+70 TO 15+93 LT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 12+38 TO 13+68 RT - 25' FROM NEW 12" PIPE ℄
STA. 13+68 TO 14+34 RT - 50' FROM NEW 12" PIPE ℄

INSTALL MATTING:
STA. 6+00 TO 7+02

INSTALL MATTING:
STA. 14+77 TO 15+00

HORIZONTAL SCALE
100 50 0 100 200 300 feet

100 50 0 100 200 300 feet
VERTICAL SCALE

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.
2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.

MATCH LINE

CONST. TYPE	(W) (1G) (1B) (W)—● (2C) (1B)
SOIL TYPE	MyC; ScB; MyC; HnA (PAS); HnC; AdA (PAS); AdB (PAS)
LC/LU	GRASS RESIDENTIAL; TRAVEL; RESIDENTIAL
STREAMS	
WETLANDS	WETLAND 2012-CM-1 - STATION 6+00 TO 7+53 CLASS II WETLAND 2012-CM-02 - STATION 14+23 TO 15+55 CLASS II
VERNAL POOLS	
SIGNIFICANT NATURAL COMMUNITIES	
RTE SPECIES	
NRC WILDLIFE HABITAT	
ARCHAEOLOGY SITES	

MATCH LINE

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
ANGP-T-C-001B	ALIGNMENT SHEET	1	GJM	BCK	IFC 2016 EDITS (05/2016)

	BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
EPSC PLAN

LOC. CHITTENDEN COUNTY, VERMONT

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP-EPSC-001B | REV. 1

RIGHT-OF-WAY

MATCHLINE

- 2.01 — N/F LINCKS, MICHEAL & ELIZABETH
- 2 — N/F STATE OF VERMONT
- 2.02 — MILL POND ROAD
- 3.01 — N/F ROBERT H. SHANGRAW; MARION SHANGRAW LIFE ESTATE
- 3.01 — N/F ROBERT H. SHANGRAW; MARION SHANGRAW LIFE ESTATE
- 3 — N/F STATE OF VERMONT
- 3.01 — N/F ROBERT H. SHANGRAW; MARION SHANGRAW LIFE ESTATE
- 3.02 — N/F GAUTHIER, THERESA LEO & KEVIN
- 3.02 — N/F GAUTHIER, THERESA, LEO & KEVIN

MATCHLINE

SURVEY DATA

Station	Deflection	Bearing
25+67	08°37' LT	S 57° 37' E
27+76	17°25' RT	S 66° 13' E
29+40	21°26' LT	S 48° 49' E
30+71	13°48' LT	S 70° 14' E
32+34	17°49' RT	S 84° 02' E
33+23	07°52' LT	S 66° 13' E
35+51	29°20' RT	S 74° 05' E
36+85	37°33' LT	S 44° 45' E
38+87	24°36' RT	S 82° 18' E
42+36	14°19' LT	S 57° 42' E
42+83	23°28' RT	S 72° 01' E
44+11	10°18' LT	S 48° 53' E
Bck: 46+18 Ahd: 44+19 199 ft.	10°18' RT	S 59° 12' E
45+98	08°20' RT	S 59° 21' E
49+08	04°19' RT	S 51° 01' E
		S 46° 42' E

ALIGNMENT DETAIL

EROSION PREVENTION & SEDIMENT CONTROL

LEGEND

- PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- CENTERLINE OF STREAM
- TEMPORARY STREAM CROSSING
- WETLAND
- 50' WETLAND BUFFER
- TEMPORARY WETLAND MATTING
- WETLAND BUFFER WITHIN PROJECT AREA
- REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL

INSTALL CONSTRUCTION DEMARCATION:
STA. 25+00 TO 25+14 RT - 50' FROM NEW 12" PIPE ℄
STA. 25+00 TO 25+67 LT - 25' FROM NEW 12" PIPE ℄
STA. 25+14 TO 26+22 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 25+67 TO 25+94 LT - WIDTH VARIES FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 26+91 TO 42+26 RT - 50' FROM NEW 12" PIPE ℄
STA. 26+76 TO 27+76 LT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 26+76 TO 41+37 LT - 25' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 41+37 TO 45+00 LT - WIDTH VARIES FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 42+26 TO 45+03 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 45+00 TO 52+50 LT - 25' FROM NEW 12" PIPE ℄
STA. 45+03 TO 52+50 RT - 50' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 25+82 TO 26+22 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 25+41 TO 25+67 LT - 25' FROM NEW 12" PIPE ℄
STA. 25+67 TO 25+94 LT - WIDTH VARIES FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 26+91 TO 27+41 RT - 50' FROM NEW 12" PIPE ℄
STA. 26+76 TO 27+26 LT - 35' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 28+53 TO 36+26 RT - 50' FROM NEW 12" PIPE ℄
STA. 28+44 TO 35+60 LT - 25' FROM NEW 12" PIPE ℄

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
STA. 26+00 & 26+83

INSTALL MATTING:
STA. 29+40 TO 34+43

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
STA. 37+65

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.
2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.

HORIZONTAL SCALE: 100 50 0 100 200 300 feet
VERTICAL SCALE: 100 50 0 100 200 300 feet

CONST. TYPE	1B, 9, 1C, 1B, W, W, 1C, 1B, 1C, 8
SOIL TYPE	AdA, AdB, Bo, HlD, AdE, AdA, AdE, HnD, HnE, HlE, AdD
LC/LU	GRASS, PAVE, GRASS, FOREST; TRAVEL, AGRICULTURE, TRAVEL, AGRICULTURE, TRAVEL
STREAMS	STREAM 2012-SC-CM-1 (P) - STATION 32+84 TO 33+83; STREAM 2012-SC-CM-3 (P) - STATION 51+70 TO 52+15
WETLANDS	WETLAND 2012-CM-4 - STATION 28+91 TO 35+25 CLASS II; WETLAND 2012-CM-5 - STATION 50+58 TO 52+50 CLASS II
VERNAL POOLS	
SIGNIFICANT NATURAL COMMUNITIES	PINE-OAK-HEATH SANDPLAIN FOREST
RTE SPECIES	
NRC WILDLIFE HABITAT	
ARCHAEOLOGY SITES	

MATCH LINE | MATCH LINE

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
ANGP-T-G-007-010	ACCESS ROAD DETAILS	3	GJM	BCK	IFC 2016 EDITS (05/2016)
ANGP-T-C-002	ALIGNMENT SHEET	2	BCK	TDB	CP TEST LEAD EDIT (9/14/15)
		1	BCK	TDB	VHB EDITS (6/09/15)

	BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
EPSC PLAN

LOC. CHITTENDEN COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP-EPSC-002 | REV. 3

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
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RIGHT-OF-WAY

MATCHLINE

Parcel	Owner
3	N/F STATE OF VERMONT
3.02	N/F GAUTHIER, THERESA, LEO & KEVIN
4	N/F GAUTHIER, THERESA, LEO & KEVIN
5	N/F STATE OF VERMONT

TOWN OF COLCHESTER / TOWN OF ESSEX

SURVEY DATA

Bearing	Deflection	Station
S 46° 42' E	03°32' LT	56+51
S 50° 14' E	07°01' LT	58+27
S 57° 16' E	04°52' RT	60+04
S 52° 24' E	04°15' LT	62+72
S 56° 39' E	02°31' LT	64+34
S 59° 10' E	11°58' RT	65+00
S 47° 11' E	15°59' LT	67+01
S 63° 11' E	11°34' LT	68+04
S 74° 46' E	2.4 ft.	Bck. 68+04 / Ahd. 68+02
S 74° 46' E	03°21' LT	73+39
S 78° 06' E		

ALIGNMENT DETAIL

EROSION PREVENTION & SEDIMENT CONTROL

LEGEND

- PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- CENTERLINE OF STREAM
- TEMPORARY STREAM CROSSING
- WETLAND
- 50' WETLAND BUFFER
- TEMPORARY WETLAND MATTING
- WETLAND BUFFER WITHIN PROJECT AREA
- REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL

INSTALL CONSTRUCTION DEMARCATION:
STA. 52+50 TO 67+00 RT - 25' FROM NEW 12" PIPE ℄
STA. 52+50 TO 60+00 LT - 25' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 60+00 TO 64+00 LT - WIDTH VARIES FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 67+00 TO 69+25 RT - 25' FROM NEW 12" PIPE ℄
STA. 64+00 TO 67+00 LT - 25' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 67+00 TO 68+00 LT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 69+25 TO 79+50 RT - 25' FROM NEW 12" PIPE ℄
STA. 68+00 TO 79+50 LT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 64+67 TO 65+17 RT - 25' FROM NEW 12" PIPE ℄
STA. 65+17 TO 65+67 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 65+67 TO 65+86 RT - 25' FROM NEW 12" PIPE ℄
STA. 66+25 TO 68+47 LT - WIDTH VARIES FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 65+86 TO 66+00 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 68+02 TO 69+52 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 69+90 TO 71+11 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 69+72 TO 71+79 LT - 25' FROM NEW 12" PIPE ℄

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
STA. 70+00

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.
2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.

HORIZONTAL SCALE: 100 50 0 100 200 300 feet
VERTICAL SCALE: 100 50 0 100 200 300 feet

Item	Data
CONST. TYPE	8; 2C; 8
SOIL TYPE	AdD; AgA; AdD; AdA; AgE; AdA; AgE
LC/LU	FOREST; TRAVEL; AGRICULTURE; TRAVEL
STREAMS	
WETLANDS	WETLAND 2012-CM-5 - STATION 52+50 TO 53+72 CLASS II; WETLAND 2012-CM-133 - STATION 70+22 TO 71+29 CLASS II; WETLAND 2012-CM-7 - STATION 79+37 TO 79+50 CLASS II
VERNAL POOLS	VERNAL POOL 2012-CM-VP-1
SIGNIFICANT NATURAL COMMUNITIES	PINE-OAK-HEATH SANDPLAIN FOREST; PINE-OAK-HEATH SANDPLAIN FOREST
RTE SPECIES	2012-RTE-NT-017; 2012-RTE-NT-019, 020
NRC WILDLIFE HABITAT	
ARCHAEOLOGY SITES	

MATCH LINE

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
ANGP-T-G-007-010	ACCESS ROAD DETAILS	2	GJM	BCK	IFC 2016 EDITS (05/2016)
ANGP-T-C-003	ALIGNMENT SHEET	1	BCK	TDB	VHB EDITS (6/09/15)

	BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
EPSC PLAN

LOC. CHITTENDEN COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP-EPSC-003 | REV. 2

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

RIGHT-OF-WAY

MATCHLINE

4.01
N/F
TOWN OF ESSEX

5
N/F
STATE OF VERMONT

MATCHLINE

SURVEY DATA

Bearing	Angle / Station
S 78° 06' E	16°14' LT — 84+97
N 85° 40' E	13°16' RT — 88+48
S 81° 03' E	07°08' LT — 91+50
S 88° 12' E	21°49' LT — 93+00
N 69° 59' E	24°06' RT, 2 ft — Bck. 99+25, Ahd. 99+23
S 85° 55' E	18°15' RT — 103+75
S 67° 40' E	

ALIGNMENT DETAIL

EROSION PREVENTION & SEDIMENT CONTROL

LEGEND

- PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- CENTERLINE OF STREAM
- TEMPORARY STREAM CROSSING
- WETLAND
- 50' WETLAND BUFFER
- TEMPORARY WETLAND MATTING
- WETLAND BUFFER WITHIN PROJECT AREA
- REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL

INSTALL CONSTRUCTION DEMARCATION:
STA. 79+50 TO 84+97 RT - 25' FROM NEW 12" PIPE ℄
STA. 79+50 TO 83+96 LT - 25' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 84+97 TO 93+29 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 83+96 TO 84+97 LT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 84+97 TO 106+50 LT - 25' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 93+29 TO 96+00 RT - 50' FROM NEW 12" PIPE ℄
STA. 96+00 TO 103+40 RT - 25' FROM NEW 12" PIPE ℄
STA. 103+40 to 106+50 RT - 50' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 91+21 TO 93+58 LT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 95+66 TO 96+00 RT - 50' FROM NEW 12" PIPE ℄
STA. 96+00 TO 97+50 RT - 25' FROM NEW 12" PIPE ℄
ON ACCESS ROAD "AV" AS SHOWN ON PLAN

INSTALL MATTING:
STA. 92+47 TO 92+95

INSTALL MATTING:
STA. 95+25 TO 95+71

INSTALL STABALIZED CONSTRUCTION ENTRANCE:
STA. 100+25

HORIZONTAL SCALE: 100 50 0 100 200 300 feet
VERTICAL SCALE: 100 50 0 100 200 300 feet

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.
2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.

Category	Data (MATCH LINE to MATCH LINE)
CONST. TYPE	8; 2E; 1C; W; 1B
SOIL TYPE	AgE; Wo; AgE; AdA; AgE; AdD; Br; MyC; AdE; AdB; AdA
LC/LU	FOREST; OPEN WATER; FOREST; TRAVEL
STREAMS	STREAM 2012-TB-IB-01 (P) - STATION 79+94 TO 81+14; STREAM 2012-SC-CM-6 (I) - STATION 92+46 TO 92+47
WETLANDS	WETLAND 2012-CM-7 - STATION 79+50 TO 82+06 CLASS II; WETLAND 2012-CM-14 - STATION 91+92 TO 93+05 CLASS III; WETLAND 2012-CM-13 - STATION 95+25 TO 95+71 CLASS III
VERNAL POOLS	
SIGNIFICANT NATURAL COMMUNITIES	PINE-OAK-HEATH SANDPLAIN FOREST
RTE SPECIES	2012-RTE-LH-027
NRC WILDLIFE HABITAT	
ARCHAEOLOGY SITES	

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
ANGP-T-C-004	ALIGNMENT SHEET	1	GJM	BCK	IFC 2016 EDITS (05/2016)

	BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
EPSC PLAN

LOC. CHITTENDEN COUNTY, VERMONT

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

CHA
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South Burlington, VT 05403
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YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP-EPSC-004 | REV. 1

RIGHT-OF-WAY

Parcel	Owner
5	N/F STATE OF VERMONT
5.01	COLCHESTER ROAD VT STATE ROUTE 2A
6.01	N/F SISTERS AND BROTHERS INVEST GROUP LLC
6	N/F STATE OF VERMONT
7	N/F NEW ENGLAND CENTRAL RAILROAD
8	N/F LECLERC, LINDA & ARMAND A.
9	N/F STATE OF VERMONT

MATCHLINE

SURVEY DATA

Station	Bearing	Deflection
107+40	S 67° 40' E	18°31' LT
111+02	S 86° 11' E	08°53' LT
112+02	N 84° 55' E	29°31' LT
Bck: 112+58 Ahd: 112+50	N 55° 23' E	7.6 ft.; 25°14' RT
114+78	N 80° 38' E	14°06' RT
116+92	N 85° 15' E	55°21' RT
118+26	S 29° 55' E	52°00' LT
123+47	S 81° 56' E	12°51' LT
123+69	S 82° 41' E	01°21' RT
123+98	S 81° 20' E	00°56' LT
124+40	S 82° 16' E	00°17' RT
124+72	S 81° 58' E	00°41' LT
124+99	S 82° 39' E	00°56' RT
125+18	S 81° 43' E	00°25' LT
125+47	S 82° 09' E	00°11' RT
125+73	S 81° 58' E	00°17' LT
125+98	S 82° 16' E	00°52' RT
126+23	S 81° 23' E	00°19' LT
126+48	S 81° 43' E	00°19' LT
126+77	S 82° 03' E	00°11' LT
127+06	S 82° 14' E	00°51' RT
127+34	S 81° 23' E	00°03' LT
127+70	S 81° 20' E	00°16' RT
128+04	S 81° 03' E	00°03' LT
128+34	S 81° 07' E	00°00' RT
128+57	S 81° 06' E	01°12' RT
131+17	S 79° 54' E	03°04' RT
	S 76° 49' E	

ALIGNMENT DETAIL

EROSION PREVENTION & SEDIMENT CONTROL

LEGEND

- PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- CENTERLINE OF STREAM
- TEMPORARY STREAM CROSSING
- WETLAND
- 50' WETLAND BUFFER
- TEMPORARY WETLAND MATTING
- WETLAND BUFFER WITHIN PROJECT AREA
- REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL

INSTALL CONSTRUCTION DEMARCATION:
STA. 106+50 TO 107+40 RT - 50' FROM NEW 12" PIPE ℄
STA. 106+50 TO 109+29 LT - 25' FROM NEW 12" PIPE ℄
STA. 106+53 TO 109+31 RT-WIDTH VARIES FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 110+36 TO 112+85 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 110+31 TO 112+71 LT - WIDTH VARIES FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 113+85 TO 133+00 RT - 30' FROM NEW 12" PIPE ℄
STA. 113+77 TO 116+90 LT - 25' FROM NEW 12" PIPE ℄
STA. 116+90 TO 119+36 LT - 15' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 119+36 TO 120+86 LT - WIDTH VARIES FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 120+86 TO 133+00 LT - 15' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 108+81 TO 109+31 RT - 125' FROM NEW 12" PIPE ℄
STA. 108+79 TO 109+29 LT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 110+36 TO 110+80 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 110+31 TO 110+91 LT - WIDTH VARIES FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 112+35 TO 112+85 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 112+21 TO 112+71 LT - WIDTH VARIES FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 113+85 TO 114+35 RT - 30' FROM NEW 12" PIPE ℄
STA. 113+77 TO 113+80 LT - WIDTH VARIES FROM NEW 12" PIPE ℄

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
STA. 109+31

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
STA. 116+17

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
STA. 120+11

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.
2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.

HORIZONTAL SCALE: 100 50 0 100 200 300 feet

VERTICAL SCALE: 100 50 0 100 200 300 feet

CONST. TYPE	1B; 8; 2E 3; 3
SOIL TYPE	AdA; EwB; AdA; MyB (PAS); LyE; LyD; PeC; PsE; LyE; LyD; ScB
LC/LU	GRASS; PAVED; GRASS; RAILROAD; GRASS; OUTCROP / TRAVEL; RESIDENTIAL; TRAVEL
STREAMS	
WETLANDS	
VERNAL POOLS	
SIGNIFICANT NATURAL COMMUNITIES	
RTE SPECIES	
NRC WILDLIFE HABITAT	
ARCHAEOLOGY SITES	

MATCH LINE

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
ANGP-T-C-005A	RAILROAD CROSSING DETAIL	3	GJM	BCK	IFC 2016 EDITS (05/2016)
ANGP-T-G-007-010	ACCESS ROAD DETAILS	2	BCK	TDB	CP TEST LEAD EDIT (9/14/15)
ANGP-T-C-005	ALIGNMENT SHEET	1	BCK	TDB	VHB EDITS (6/09/15)

	BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
EPSC PLAN

LOC. CHITTENDEN COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP-EPSC-005 | REV. 3

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

RIGHT-OF-WAY

MATCHLINE

9
N/F
STATE OF VERMONT

MATCHLINE

SURVEY DATA

Station	Bearing	Angle
133+10	S 76° 49' E	02'01" RT
135+03	S 74° 48' E	02'01" RT
136+97	S 72° 46' E	02'01" RT
138+90	S 70° 45' E	02'01" RT
140+83	S 68° 44' E	02'01" RT
142+76	S 66° 42' E	01'51" RT
146+49	S 64° 50' E	00'11" RT
147+54	S 64° 39' E	45'00" LT
147+66	S 19° 39' E	45'00" LT
148+26	S 64° 39' E	45'00" LT
Bck: 148+39 Ahd: 148+31 45'00" RT	N 70° 21' E	7.3 ft.
149+22	S 64° 39' E	00'43" LT
153+27	S 65° 22' E	01'08" RT
155+46	S 64° 14' E	00'57" LT
155+77	S 65° 11' E	00'15" LT
156+22	S 65° 26' E	01'24" RT
156+72	S 64° 02' E	00'00" RT
158+43	S 64° 02' E	18'51" LT
159+22	S 82° 53' E	10'09" LT
159+88	N 86° 57' E	00'00" RT
159+98	N 86° 57' E	00'00" LT
161+04	N 86° 57' E	25'25" RT
	S 67° 38' E	

ALIGNMENT DETAIL

EROSION PREVENTION & SEDIMENT CONTROL

LEGEND
- PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- CENTERLINE OF STREAM
- TEMPORARY STREAM CROSSING
- WETLAND
- 50' WETLAND BUFFER
- TEMPORARY WETLAND MATTING
- WETLAND BUFFER WITHIN PROJECT AREA
- REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL

INSTALL CONSTRUCTION DEMARCATION:
STA. 133+00 TO 147+54 RT - 30' FROM NEW 12" PIPE ℄
STA. 133+00 TO 147+54 LT - 15' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 147+54 TO 148+31 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 148+31 TO 156+46 RT - 30' FROM NEW 12" PIPE ℄
STA. 147+54 TO 148+31 LT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 148+31 TO 161+04 LT - 15' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 155+46 TO 158+53 RT - WIDTH VARIES FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 158+53 TO 161+04 RT - 25' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 161+04 TO 161+50 RT - 25' FROM NEW 12" PIPE ℄
STA. 161+04 TO 161+22 LT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 161+22 TO 161+50 LT - 25' FROM NEW 12" PIPE ℄

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
STA. 137+25

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
STA. 147+50

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
STA. 156+25

HORIZONTAL SCALE: 100 50 0 100 200 300 feet
VERTICAL SCALE: 100 50 0 100 200 300 feet

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CONSTRUCTION ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.
2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.

CONST. TYPE	3; 2A; 2C
SOIL TYPE	LyD; ScB; LyD; CbD; LyD; MyC
LC/LU	OUTCROP; TRAVEL
STREAMS	
WETLANDS	
VERNAL POOLS	
SIGNIFICANT NATURAL COMMUNITIES	
RTE SPECIES	
NRC WILDLIFE HABITAT	
ARCHAEOLOGY SITES	

MATCH LINE

MATCH LINE

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
ANGP-T-C-006	ALIGNMENT SHEET	1	GJM	BCK	IFC 2016 EDITS (05/2016)

	BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
EPSC PLAN

LOC. CHITTENDEN COUNTY, VERMONT

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

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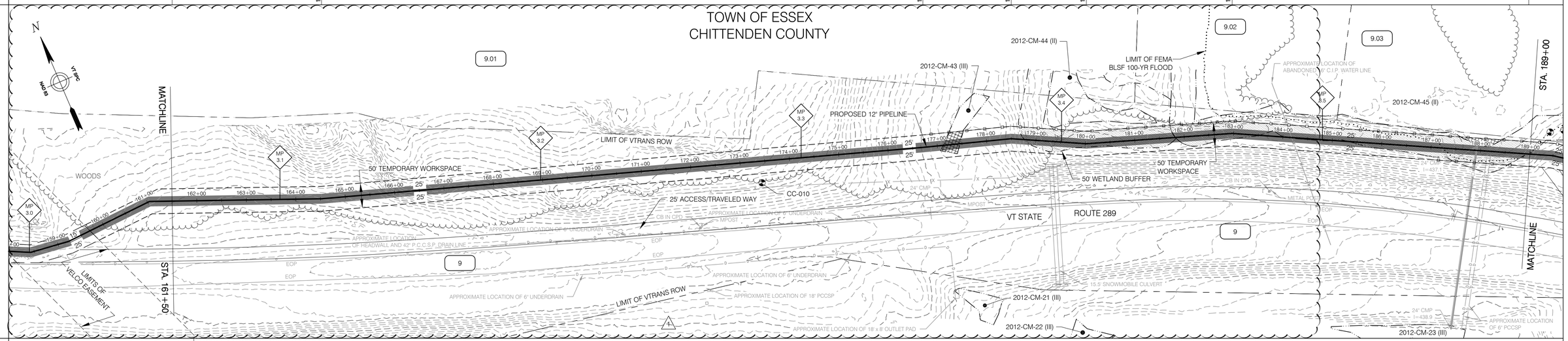
YEAR: 2016	W.O.	SCALE: 1" = 100'	DWG. ANGP-EPSC-006	REV. 1

RIGHT–OF–WAY	MATCHLINE	9 N/F STATE OF VERMONT	MATCHLINE
SURVEY DATA		S 67° 38' E; 00°00' LT 164+52; S 71° 38' E; 00°43' LT 176+71; S 71° 38' E; 09°28' RT 179+50; S 62° 53' E; 7°54' LT 180+02; S 70° 47' E; 08°02' RT 182+97; S 62° 46' E	

ALIGNMENT DETAIL



EROSION PREVENTION & SEDIMENT CONTROL

LEGEND

- PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- CENTERLINE OF STREAM
- TEMPORARY STREAM CROSSING
- WETLAND
- 50' WETLAND BUFFER
- TEMPORARY WETLAND MATTING
- WETLAND BUFFER WITHIN PROJECT AREA
- REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL

INSTALL CONSTRUCTION DEMARCATION:
STA. 161+50 TO 189+00 RT - 25' FROM NEW 12" PIPE ℄
STA. 161+50 TO 189+00 LT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 176+76 TO 189+00 LT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 187+00 TO 189+00 RT - 25' FROM FROM NEW 12" PIPE ℄

INSTALL MATTING:
STA. 177+06 TO 177+55

INSTALL MATTING:
STA. 187+59 TO 188+44

HORIZONTAL SCALE
100 50 0 100 200 300 feet
100 50 0 100 200 300 feet
VERTICAL SCALE

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.
2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.

CONST. TYPE					2C		W				W	
SOIL TYPE	MyC	LyD				PsC		ScB	MyB	ScA	Lf	ScA	MyB
LC/LU	FOREST								GRASS			
	TRAVEL											
STREAMS												
WETLANDS						WETLAND 2012-CM-43 - STATION 177+06 TO 177+55 CLASS III			WETLAND 2012-CM-45 - STATION 187+59 TO 188+44 CLASS II				
VERNAL POOLS												
SIGNIFICANT NATURAL COMMUNITIES												
RTE SPECIES												
NRC WILDLIFE HABITAT												
ARCHAEOLOGY SITES												

MATCH LINE

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
ANGP–T–C–007	ALIGNMENT SHEET	1	GJM	BCK	IFC 2016 EDITS (05/2016)

	BID		CONSTRUCTION	
	INITIALS	DATE	INITIALS	DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
EPSC PLAN

LOC. CHITTENDEN COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP–EPSC–007 | REV. 1

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

EROSION PREVENTION & SEDIMENT CONTROL

LEGEND

- PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- CENTERLINE OF STREAM
- TEMPORARY STREAM CROSSING
- WETLAND
- 50' WETLAND BUFFER
- TEMPORARY WETLAND MATTING
- WETLAND BUFFER WITHIN PROJECT AREA
- REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL

INSTALL CONSTRUCTION DEMARCATION:
STA. 189+00 TO 210+25 RT - 25' FROM NEW 12" PIPE ℄
STA. 189+00 TO 214+42 LT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 189+00 TO 189+26 RT - 25' FROM NEW 12" PIPE ℄
STA. 189+68 TO 192+12 RT - 25' FROM NEW 12" PIPE ℄
STA. 189+00 TO 189+14 LT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 189+14 TO 191+74 LT - 25' FROM NEW 12" PIPE ℄

INSTALL MATTING:
STA. 190+56 TO 192+07

INSTALL MATTING:
STA. 192+01 TO 193+14

INSTALL REINFORCED PERIMETER CONTROL:
STA. 192+36 TO 194+09 RT - 25' FROM NEW 12" PIPE ℄
STA. 191+99 TO 194+20 LT - 25' FROM NEW 12" PIPE ℄

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
STA. 203+16

INSTALL CONSTRUCTION DEMARCATION:
STA. 210+25 TO 214+30 RT - WIDTH VARIES FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 215+46 TO 216+00 LT - 25' FROM NEW 12" PIPE ℄
STA. 215+74 TO 216+00 RT - WIDTH VARIES FROM NEW 12" PIPE ℄

HORIZONTAL SCALE: 100 50 0 100 200 300 feet
VERTICAL SCALE: 100 50 0 100 200 300 feet

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.
2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.

CONST. TYPE	W; 7; 2C; 4E; 9
SOIL TYPE	MyB; Le; MyB; MyC; MyB; ScA; PeB; MyB; LmB
LC/LU	GRASS; OPEN WATER; GRASS; PAVED; GRASS / TRAVEL; AGRICULTURE; BUSINESS; TRAVEL
STREAMS	STREAM 2012-TB-IB-2 (P) - STATION 191+76 TO 192+46
WETLANDS	WETLAND 2012-CM-45 - STATION 189+00 TO 189+25 & STA. 190+03 TO 193+68 CLASS II
VERNAL POOLS	
SIGNIFICANT NATURAL COMMUNITIES	
RTE SPECIES	
NRC WILDLIFE HABITAT	
ARCHAEOLOGY SITES	

MATCH LINE

DWG. NO.	REFERENCE DWG.
ANGP-T-G-007-010	ACCESS ROAD DETAILS
ANGP-T-C-008	ALIGNMENT SHEET

REV	DSN	CK	DESCRIPTION
1	GJM	BCK	IFC 2016 EDITS (05/2016)

	BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
EPSC PLAN

LOC. CHITTENDEN COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP-EPSC-008 | REV. 1

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
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RIGHT-OF-WAY

9.07 N/F NAPOLI GROUP

9.08 N/F HANNAFORD BROS. CO.

9.09 N/F EUROWEST RETAIL PARTNERS LTD.

9.10 N/F SAYBROOK HOMEOWNERS ASSOCIATION

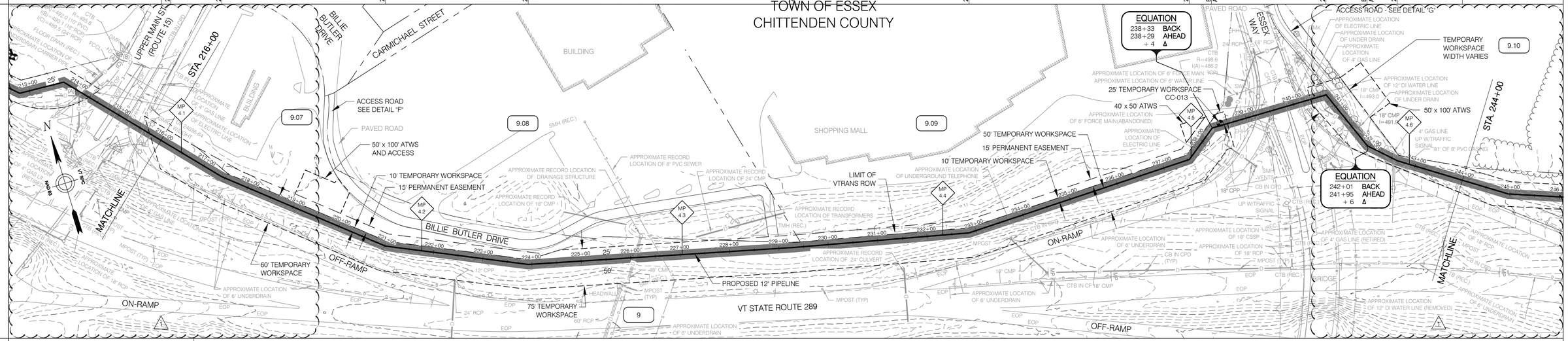
9 N/F STATE OF VERMONT

MATCHLINE

SURVEY DATA

216+21	217+43	221+92	223+92	229+31	232+85	237+54	238+33 Back 238+29 Ahead 4 ft.	240+69	242+01 Back 241+95 Ahead 24.96' LT	242+63
S 42° 15' E	S 42° 12' E	S 50° 09' E	S 65° 47' E	S 76° 44' E	S 77° 51' E	N 88° 31' E	N 52° 58' E	S 89° 18' E	S 22° 06' E	S 46° 43' E	S 56° 26' E
00°04' RT	07°57' LT	15°38' LT	10°58' LT	01°07' LT	13°38' LT	35°33' LT	37°45' RT	67°11' RT	5.7 ft.	09°43' LT	

ALIGNMENT DETAIL



EROSION PREVENTION & SEDIMENT CONTROL

LEGEND

- PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- CENTERLINE OF STREAM
- TEMPORARY STREAM CROSSING
- WETLAND
- 50' WETLAND BUFFER
- TEMPORARY WETLAND MATTING
- WETLAND BUFFER WITHIN PROJECT AREA
- REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL

INSTALL CONSTRUCTION DEMARCATION:
STA. 216+00 TO 216+28 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 216+00 TO 218+93 LT - 25' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 216+28 TO 238+61 RT - 50' FROM NEW 12" PIPE ℄
STA. 218+93 TO 219+93 LT - WIDTH VARIES FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 219+93 TO 223+78 LT - 25' FROM NEW 12" PIPE ℄
STA. 223+78 TO 224+58 LT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 224+58 TO 237+78 LT - 25' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 237+78 TO 238+29 LT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 238+29 TO 238+61 LT - 25' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 240+36 TO 244+00 RT -WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 240+35 TO 244+00 LT -WIDTH VARIES FROM NEW 12" PIPE ℄

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
STA. 219+76

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
STA. 228+91

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
STA. 240+69

HORIZONTAL SCALE
100 50 0 100 200 300 feet

VERTICAL SCALE
100 50 0 100 200 300 feet

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.
2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.

CONST. TYPE	1F				1B	1F					9	2C		
SOIL TYPE	LmB	CaA	MyB	ScB	ScB	MyB	ScB	MyB	ScB		ScA		ScB	
LC/LU	GRASS										ROADWAY	GRASS		
STREAMS	TRAVEL													
WETLANDS														
VERNAL POOLS														
SIGNIFICANT NATURAL COMMUNITIES														
RTE SPECIES														
NRC WILDLIFE HABITAT														
ARCHAEOLOGY SITES														

MATCH LINE

MATCH LINE

VHB Vanasse Hangen Brustlin, Inc.

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
ANGP-T-G-007-010	ACCESS ROAD DETAILS				
ANGP-T-C-009	ALIGNMENT SHEET	1	GJM	BCK	IFC 2016 EDITS (05/2016)

	BID		CONSTRUCTION	
	INITIALS	DATE	INITIALS	DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
EPSC PLAN

LOC. CHITTENDEN COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP-EPSC-009 | REV. 1

Vermont Gas

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

RIGHT-OF-WAY

MATCHLINE

9
N/F
STATE OF VERMONT

9.10
N/F
SAYBROOK HOMEOWNERS ASSOCIATION

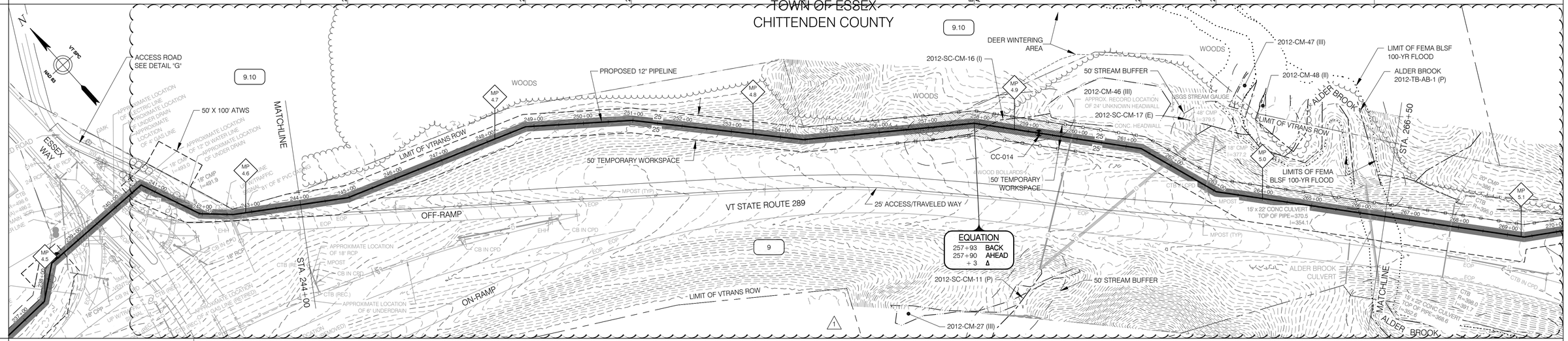
MATCHLINE

SURVEY DATA

S 56° 26" E | 13°22" LT | S 69° 49" E | 18°17" RT | S 51° 31" E | 09°48" RT | S 41° 42" E | 11°49" LT | S 53° 32" E | 14°04" RT | S 39° 28" E | 21°11" RT | S 18° 17" E | 21°26" LT | S 39° 43" E

244+96 | 245+83 | 250+97 | 254+35 | BOC: 257+93 AHD: 257+90 3 FL | 261+31 | 263+96

ALIGNMENT DETAIL



EROSION PREVENTION & SEDIMENT CONTROL

LEGEND

- PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- CENTERLINE OF STREAM
- TEMPORARY STREAM CROSSING
- WETLAND
- 50' WETLAND BUFFER
- TEMPORARY WETLAND MATTING
- WETLAND BUFFER WITHIN PROJECT AREA
- REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL

INSTALL CONSTRUCTION DEMARCATION:
STA. 244+00 TO 245+97 RT - WIDTH VARIES' FROM NEW 12" PIPE ℄
STA. 244+00 TO 266+50 LT - 25' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 245+97 TO 263+06 RT - 25' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 263+06 TO 263+64 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 263+64 TO 266+50 RT - 50' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 255+99 TO 260+12 RT - 25' FROM NEW 12" PIPE ℄
STA. 256+13 TO 266+50 LT - 25' FROM NEW 12" PIPE ℄

HORIZONTAL SCALE
100 50 0 100 200 300 feet
VERTICAL SCALE
100 50 0 100 200 300 feet

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.
2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.

CONST. TYPE	2C				1B	
SOIL TYPE	ScB	DdA	HIE	DdA	AgE	Au
LC/LU	GRASS / TRAVEL					
STREAMS			STREAM 2012-SC-CM-16 (I) - STATION 256+49 TO 259+85		STREAM 2012-TB-AB-1 (P) - STATION 265+40 TO 266+50	
WETLANDS						
VERNAL POOLS						
SIGNIFICANT NATURAL COMMUNITIES						
RTE SPECIES						
NRC WILDLIFE HABITAT			DEER WINTERING AREA			
ARCHAEOLOGY SITES						

MATCH LINE

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
ANGP-T-C-010	ALIGNMENT SHEET	1	GJM	BCK	IFC 2016 EDITS (05/2016)

	BID		CONSTRUCTION	
	INITIALS	DATE	INITIALS	DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
EPSC PLAN

LOC. CHITTENDEN COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP-EPSC-010 | REV. 1

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

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38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

RIGHT-OF-WAY

MATCHLINE

9.13
N/F
BIRCHWOOD LAND
COMPANY C/O
OWEN JENKINS

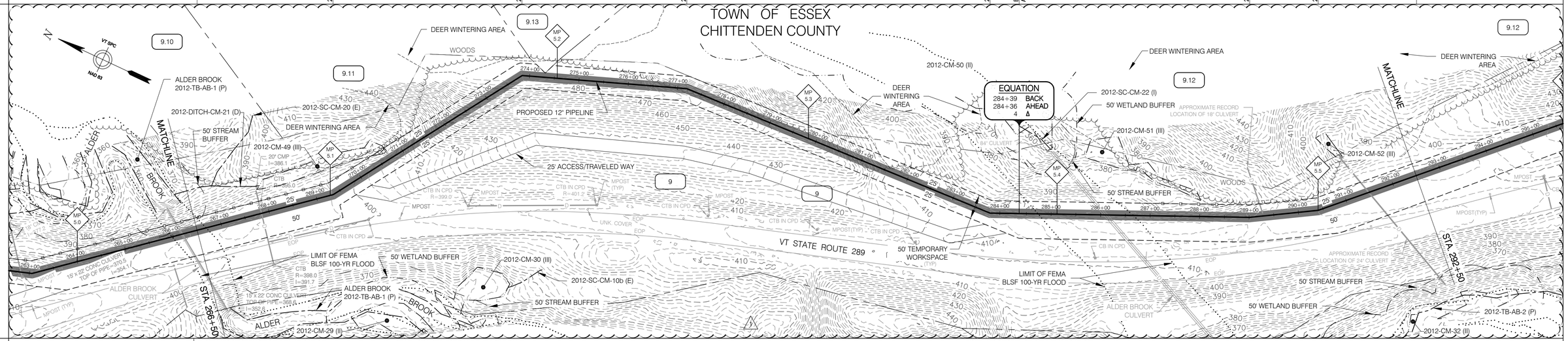
9
N/F
STATE OF VERMONT

MATCHLINE

SURVEY DATA

17'31" LT	36'43" RT	17'44" RT	21'21" LT	05'48" LT	13'37" LT
S 39° 42' E	S 57° 13' E	S 20° 30' E	S 02° 46' E	S 24° 07' E	S 30° 55' E	S 44° 32' E
269+34	273+85	277+19	283+80	Bck: 284+39 Ahd: 284+36 4 ft.	289+01	290+40

ALIGNMENT DETAIL



EROSION PREVENTION & SEDIMENT CONTROL

LEGEND

- PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- CENTERLINE OF STREAM
- TEMPORARY STREAM CROSSING
- WETLAND
- 50' WETLAND BUFFER
- TEMPORARY WETLAND MATTING
- WETLAND BUFFER WITHIN PROJECT AREA
- REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL

INSTALL CONSTRUCTION DEMARCATION:
STA. 266+50 TO 269+85 RT - 50' FROM NEW 12" PIPE ℄
STA. 266+50 TO 274+11 LT - 25' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 269+85 TO 284+36 RT - 25' FROM NEW 12" PIPE ℄
STA. 274+11 TO 274+46 LT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 274+46 TO 292+50 LT - 25' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 284+36 TO 292+50 RT - 50' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 266+50 TO 271+21 LT - 25' FROM NEW 12" PIPE ℄

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
STA. 284+75

INSTALL REINFORCED PERIMETER CONTROL:
STA. 286+83 TO 288+51 LT - 25' FROM NEW 12" PIPE ℄

INSTALL MATTING:
STA. 270+40 TO 270+73

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.
2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.

HORIZONTAL SCALE
100 50 0 100 200 300 feet
VERTICAL SCALE
100 50 0 100 200 300 feet

CONST. TYPE	1B	W	2C		1B	
SOIL TYPE	Au	AgE	AdA	AgE	AdA	AgE	DdB	AgE
LC/LU	GRASS TRAVEL					
STREAMS	STREAM 2012-TB-AB-1 (P) - STATION 266+50 TO 266+67					
WETLANDS	WETLAND 2012-CM-49 STATION 270+40 TO 270+73 CLASS III					
VERNAL POOLS						
SIGNIFICANT NATURAL COMMUNITIES						
RTE SPECIES						
NRC WILDLIFE HABITAT			DEER WINTERING AREA		DEER WINTERING AREA	
ARCHAEOLOGY SITES						

MATCH LINE

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
ANGP-T-C-011	ALIGNMENT SHEET	1	GJM	BCK	IFC 2016 EDITS (05/2016)

		BID		CONSTRUCTION	
	INITIALS	DATE	INITIALS	DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
EPSC PLAN

LOC. CHITTENDEN COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP-EPSC-011 | REV. 1

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

RIGHT-OF-WAY

MATCHLINE

9
N/F
STATE OF VERMONT

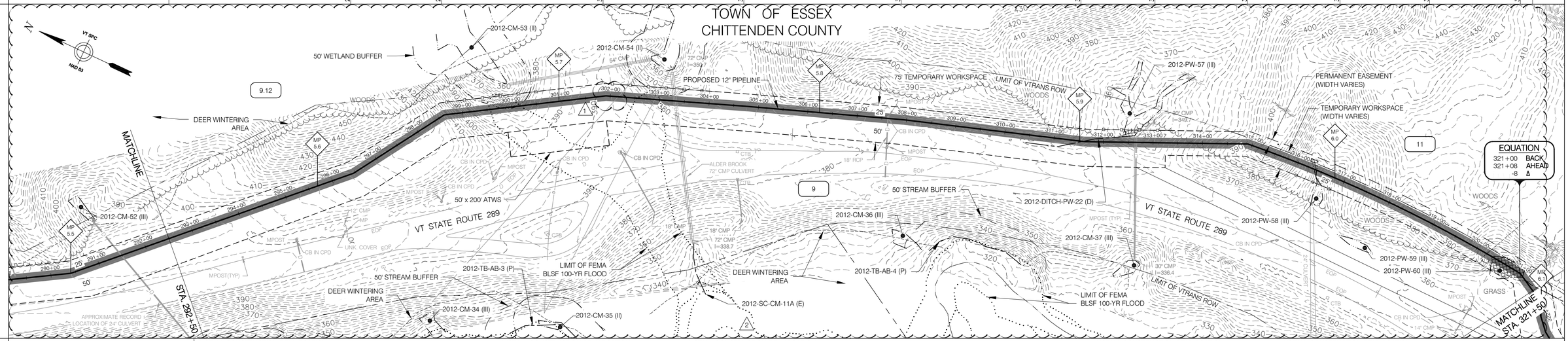
11
N/F
FORESTDALE GROUP, LLC

MATCHLINE

SURVEY DATA

298+45	298+83	301+91	304+76	307+95	311+60	313+10	314+91	316+91	318+91	321+08
S 44° 32' E	13'19" LT	S 57° 48' E	29'03" RT	S 31° 45' E	10'56" RT	S 20° 48' E	00'37" RT	S 20° 10' E	02'00" RT	S 18° 10' E	05'54" LT	S 24° 05' E	04'15" LT	S 24° 20' E	19'05" RT	S 02° 53' E	00'47" RT	S 00° 15' W	01'01" RT	S 05° 01' W	23'01" RT	S 25° 19' 18" W

ALIGNMENT DETAIL



EROSION PREVENTION & SEDIMENT CONTROL

LEGEND

- PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- CENTERLINE OF STREAM
- TEMPORARY STREAM CROSSING
- WETLAND
- 50' WETLAND BUFFER
- TEMPORARY WETLAND MATTING
- WETLAND BUFFER WITHIN PROJECT AREA
- REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL

INSTALL CONSTRUCTION DEMARCATION:
STA. 292+50 TO 299+87 RT - 50' FROM NEW 12" PIPE ℄
STA. 292+50 TO 314+55 LT - 25' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 299+87 TO 301+88 RT - 100' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 301+88 TO 313+25 RT - 50' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 313+25 TO 314+95 RT - 25' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 314+95 TO 321+50 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 314+55 TO 321+50 LT - WIDTH VARIES FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 298+77 TO 300+89 LT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 301+95 TO 304+17 LT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 311+92 TO 313+42 LT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 315+90 TO 317+18 RT - 25' FROM NEW 12" PIPE ℄

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
STA. 293+50

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
STA. 311+50

INSTALL MATTING:
STA. 316+25 TO 316+49
STA. 320+40 TO 321+16

HORIZONTAL SCALE
100 50 0 100 200 300 feet

VERTICAL SCALE
100 50 0 100 200 300 feet

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.
2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.

CONST. TYPE	1B													7	1B	W		2C			W	1D								W
SOIL TYPE	AgE											DdB								HIE									
LC/LU	GRASS																												
	TRAVEL																												
STREAMS																			STREAM 2012-DITCH-PW-22 - (D) STATION 310+44 TO 312+38									
WETLANDS										WETLAND 2012-CM-53 - STATION 299+27 TO 300+39 CLASS II			WETLAND 2012-CM-54 - STATION 302+71 TO 303+56 CLASS II								WETLAND 2012-PW-57 - STATION 312+38 TO 312+72 CLASS III			WETLAND 2012-PW-58 - STATION 316+25 TO 316+60 CLASS III			WETLAND 2012-PW-60 - STATION 320+34 TO 321+15 CLASS III		
VERNAL POOLS																													
SIGNIFICANT NATURAL COMMUNITIES																													
RTE SPECIES																													
NRC WILDLIFE HABITAT																												DEER WINTERING AREA	
ARCHAEOLOGY SITES																													

MATCH LINE

MATCH LINE

VHB Vanasse Hangen Brustlin, Inc.

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
		2	GJM	BCK	IFC 2016 EDITS (05/2016)
ANGP-T-C-012	ALIGNMENT SHEET	1	BCK	TDB	CP TEST LEAD EDIT (9/14/15)

	BID		CONSTRUCTION	
	INITIALS	DATE	INITIALS	DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
EPSC PLAN

LOC. CHITTENDEN COUNTY, VERMONT

Vermont Gas

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP-EPSC-012 | REV. 2

RIGHT-OF-WAY

MATCHLINE

11
N/F
FORESTDALE GROUP, LLC

9
N/F
STATE OF VERMONT

14.02
N/F
RAYMOND, FRANCIS E.
& ELAINE B.

14.03
N/F
RAYMOND,
FRANCIS E.,
ELAINE B. &
PETER W.

14.02
N/F
RAYMOND, FRANCIS E.
& ELAINE B.

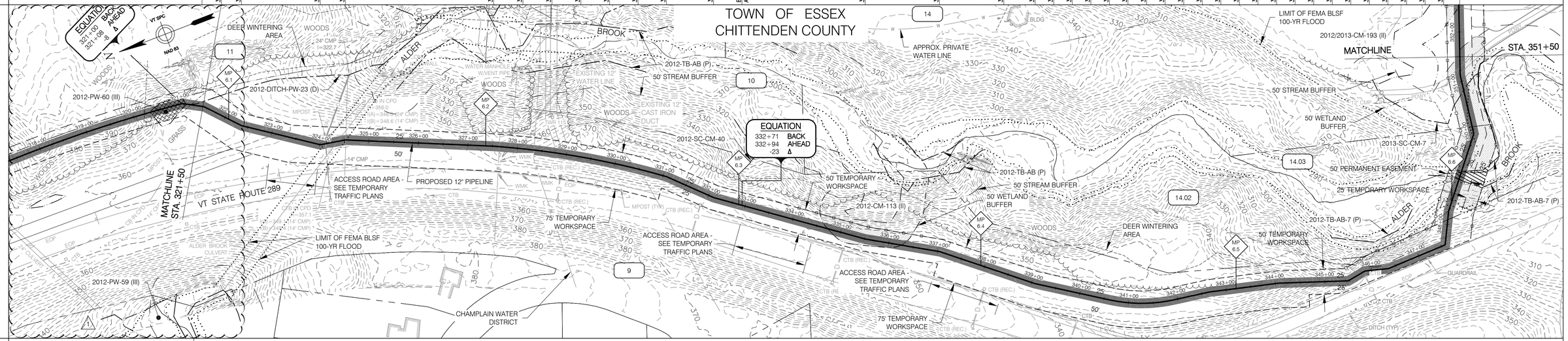
14
N/F
STEINER,
PAUL M.

MATCHLINE

SURVEY DATA

S 29° 18' W	321+52	18°40' RT
S 47° 59' W	322+37	13°20' LT
S 34° 38' W	324+01	24°10' LT
S 10° 27' W	324+52	13°01' RT
S 23° 29' W	327+52	02°38' RT
S 26° 08' W	328+12	01°58' RT
S 28° 06' W	328+71	01°58' RT
S 30° 05' W	329+30	01°58' RT
S 32° 03' W	329+89	01°58' RT
S 34° 02' W	330+48	01°58' RT
S 36° 00' W	331+07	09°00' RT
S 45° 01' W	332+11	08°38' LT
S 36° 23' W	Bck: 332+71 Ahd: 332+94	−23.1 ft.
S 36° 23' W	335+52	05°44' LT
S 30° 39' W	337+04	09°00' RT
S 39° 40' W	339+07	06°15' LT
S 33° 24' W	340+62	00°57' LT
S 32° 27' W	340+72	01°54' LT
S 30° 32' W	340+82	01°54' LT
S 28° 38' W	340+92	01°54' LT
S 26° 43' W	341+02	01°54' LT
S 24° 49' W	341+12	01°54' LT
S 22° 55' W	341+22	01°54' LT
S 21° 00' W	341+32	01°54' LT
S 19° 06' W	341+42	01°54' LT
S 17° 11' W	341+52	01°54' LT
S 15° 17' W	341+62	01°54' LT
S 13° 23' W	341+72	01°54' LT
S 11° 28' W	341+82	01°54' LT
S 09° 34' W	341+92	00°57' LT
S 08° 37' W	342+66	05°15' RT
S 13° 52' W	344+07	05°19' RT
S 19° 12' W	345+48	28°44' LT
S 09° 33' E	345+86	24°40' RT
S 15° 08' W	346+34	16°44' LT
S 01° 36' E	347+58	61°21' LT
S 62° 58' E	348+27	12°03' RT
S 50° 55' E	349+91	31°10' LT
S 82° 05' E	351+13	12°02' RT
S 70° 03' E		

ALIGNMENT DETAIL



EROSION PREVENTION & SEDIMENT CONTROL

LEGEND

PERMANENT EASEMENT	— — — —
TEMPORARY WORKSPACE	— — — — — —
CENTERLINE OF STREAM	—— - —— - ——
TEMPORARY STREAM CROSSING	▨
WETLAND	—··—··—
50' WETLAND BUFFER	—·—·—·—
TEMPORARY WETLAND MATTING	▩
WETLAND BUFFER WITHIN PROJECT AREA	░
REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL	—□—□—□—□—

INSTALL CONSTRUCTION DEMARCATION:
STA. 321+50 TO 324+52 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 321+50 TO 324+52 LT - WIDTH VARIES FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 324+52 TO 331+04 RT - 50' FROM NEW 12" PIPE ℄
STA. 324+52 TO 345+86 LT - 25' FROM NEW 12" PIPE ℄
STA. 331+04 TO 337+04 RT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMTER CONTROL:
STA. 334+00 TO 336+94 LT - 25' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 337+04 TO 344+68 RT - 50' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 344+68 TO 345+34 RT - 25' FROM NEW 12" PIPE ℄
STA. 345+34 TO 347+74 RT - WIDTH VARIES FROM FROM NEW 12" PIPE ℄
STA. 345+86 TO 347+95 LT - WIDTH VARIES FROM FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 347+83 TO 348+90 RT - 50' FROM NEW 12" PIPE ℄
STA. 345+07 TO 347+95 LT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 347+95 TO 348+95 LT - 25' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 347+74 TO 349+83 RT - 50' FROM NEW 12" PIPE ℄
STA. 347+95 TO 351+50 LT - 25' FROM NEW 12" PIPE ℄
STA. 349+83 TO 351+50 RT - WIDTH VARIES FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 349+40 TO 351+41 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 351+41 TO 351+50 RT - 50' FROM NEW 12" PIPE ℄
STA. 349+10 TO 351+50 LT - 25' FROM NEW 12" PIPE ℄

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.
2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.

HORIZONTAL SCALE
100 50 0 100 200 300 feet
100 50 0 100 200 300 feet
VERTICAL SCALE

CONST. TYPE	1D · 1B · 2C · 1B · 2C · 1E · 7 · 1E
SOIL TYPE	HIE · DdB (PAS) · AdE · AdB (PAS) · AdE · AdB (PAS) · HIE · AgA · HIE · Le (PAS)
LC/LU	GRASS / TRAVEL · BROOK / NOT CLASSIFIED · GRASS / UNKNOWN · GRASS/STREAM / RESIDENTIAL
STREAMS	2012-DITCH-PW-23 (D) - STATION 321+50 TO 321+72 · BROOK 2012-TB-AB-7 (P)- STATION 348+90 TO 349+20
WETLANDS	WETLAND 2012-CM-113 - STATION 334+50 TO 336+44 CLASS II · STREAM 2013-SC-CM-7- STATION 350+55 TO 351+10
VERNAL POOLS	
SIGNIFICANT NATURAL COMMUNITIES	
RTE SPECIES	
NRC WILDLIFE HABITAT	DEER WINTERING AREA · DEER WINTERING AREA · DEER WINTERING AREA
ARCHAEOLOGY SITES	

MATCH LINE

MATCH LINE

ANGP-T-C-013	ALIGNMENT SHEET	1	GJM	BCK	IFC 2016 EDITS (05/2016)
DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION

	BID		CONSTRUCTION	
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016
	INITIALS	DATE	INITIALS	DATE

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
EPSC PLAN

LOC. CHITTENDEN COUNTY, VERMONT

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

YEAR: 2016	W.O.	SCALE: 1" = 100'	DWG. ANGP-EPSC-013	REV. 1

RIGHT-OF-WAY

MATCHLINE

15 N/F ESSEX GREEN COMMON LAND

14.01 N/F MIKALONIS, DONNA & BESSIE

14 N/F STEINER, PAUL M.

16 RIVER ROAD ROUTE 117

17 N/F ESSEX GREEN COMMON LAND

17.01 N/F RAYMOND, FRANCIS E., ELAINE B., PETER W. & LINDA

18 WINOOSKI RIVER
TOWN OF ESSEX | TOWN OF WILLISTON

19 N/F BABCOCK, JAMES

20 N/F NEW ENGLAND CENTRAL RAILROAD

MATCHLINE

SURVEY DATA

354+13 S 70° 03' E 00°10' LT
354+89 S 70° 13' E 45°00' RT
S 25° 13' E
Bck: 355+29 Ahd: 352+34 44°59' RT 295.4 ft.
S 19° 47' W
356+22 09°32' LT
S 10° 15' W
365+89 29°12' RT
S 39° 27' W
366+08 32°27' RT
S 71° 55' W
Bck: 369+22 Ahd: 369+07 14.70 ft.
N 55° 32' W

ALIGNMENT DETAIL

EROSION PREVENTION & SEDIMENT CONTROL

LEGEND

PERMANENT EASEMENT	— — —
TEMPORARY WORKSPACE	— — —
CENTERLINE OF STREAM	— - —
TEMPORARY STREAM CROSSING	▨
WETLAND	
50' WETLAND BUFFER	
TEMPORARY WETLAND MATTING	▩
WETLAND BUFFER WITHIN PROJECT AREA	░
REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL	○—○—○

INSTALL CONSTRUCTION DEMARCATION:
STA. 351+50 TO 354+43 RT - 50' FROM NEW 12" PIPE ℄
STA. 351+50 TO 354+89 LT - 25' FROM NEW 12" PIPE ℄
STA. 354+89 TO 355+29 LT - WIDTH VARIES FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 351+50 TO 352+45 RT - 50' FROM NEW 12" PIPE ℄
STA. 351+50 TO 353+75 LT - 25' FROM NEW 12" PIPE ℄
STA. 354+89 TO 355+29 LT - WIDTH VARIES FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 354+43 TO 352+56 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 352+56 TO 356+20 RT - 75' FROM NEW 12" PIPE ℄
STA. 356+20 TO 356+50 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 355+29 TO 356+47 LT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 356+22 TO 356+50 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 355+93 TO 356+27 LT - 50' FROM NEW 12" PIPE ℄
STA. 356+27 TO 356+47 LT - WIDTH VARIES FROM NEW 12" PIPE ℄

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
STA. 356+48 & STA. 357+74

INSTALL CONSTRUCTION DEMARCATION:
STA. 357+74 TO 359+64 RT - 25' FROM NEW 12" PIPE ℄
STA. 357+71 TO 359+42 LT - 25' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 363+38 TO 365+22 RT - 25' FROM NEW 12" PIPE ℄
STA. 362+89 TO 365+22 LT - 25' FROM NEW 12" PIPE ℄

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
STA. 365+70

INSTALL CONSTRUCTION DEMARCATION:
STA. 365+22 TO 365+89 RT - 50' FROM NEW 12" PIPE ℄
STA. 365+22 TO 366+68 LT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 365+89 TO 366+41 RT - WIDTH VARIES FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 365+22 TO 365+89 RT - 50' FROM NEW 12" PIPE ℄
STA. 365+22 TO 366+68 LT - WIDTH VARIES FROM NEW 12" PIPE ℄

INSTALL MATTING:
STA. 367+20 TO 369+23

INSTALL CONSTRUCTION DEMARCATION:
STA. 366+41 TO 370+00 RT - 25' FROM NEW 12" PIPE ℄
STA. 366+68 TO 370+00 LT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 366+41 TO 370+00 RT - 25' FROM NEW 12" PIPE ℄
STA. 366+68 TO 370+00 LT - 25' FROM NEW 12" PIPE ℄

HORIZONTAL SCALE
100 50 0 100 200 300 feet
100 50 0 100 200 300 feet
VERTICAL SCALE

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.
2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.

MATCH LINE

CONST. TYPE	1E; 8; 2A; W
SOIL TYPE	Le (PAS); Hf (PAS); W; Wo (PAS); Lf; Au (PAS)
LC/LU	AGRIGULTURAL FIELD / RESIDENTIAL; ROAD / TRAVEL; FORESTED / LEISURE; RIVER / NOT CLASSIFIED; AGRICULTURAL FIELD / NOT CLASSIFIED
STREAMS	STREAM 2012-TB-WR (P) - STATION 358+34 TO 364+85 STREAM 2012-SC-CM-84 (I) STATION 366+78 TO 366+92
WETLANDS	WETLAND 2012/2013-CM-193 - STATION 352+16 TO 353+24 CLASS II WETLAND 2012-CM-194 - STATION 366+70 TO 370+00 CLASS II
VERNAL POOLS	VERNAL POOL BUFFER 2013-CM-VP-2 STATION 359+68 TO 370+00
SIGNIFICANT NATURAL COMMUNITIES	SILVER MAPLE-OSTRICH FERN RIVERINE FLOODPLAIN FOREST
RTE SPECIES	2012-RTE-LV-029 2012-RTE-CT-030 2012-RTE-CT-031
NRC WILDLIFE HABITAT	
ARCHAEOLOGY SITES	

MATCH LINE

VHB Vanasse Hangen Brustlin, Inc.

		BID		CONSTRUCTION	
ENVIRONMENTAL		JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER		GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR		BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER		MDF	06/28/13	GEW	05/2016
DESIGN MANAGER		SAB	06/28/13	JEO	05/2016
		INITIALS	DATE	INITIALS	DATE

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
ANGP-T-G-07-010	ACCESS ROAD DETAILS	2	BCK	TDB	CP TEST LEAD EDIT (9/14/15)
ANGP-T-C-014	ALIGNMENT SHEET	1	BCK	TDB	MLV 1 RELOCATION (6/09/15)

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
EPSC PLAN

LOC. CHITTENDEN COUNTY, VERMONT

Vermont Gas

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38 Eastwood Drive, Suite 105
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Main: (802) 735-0372 · www.chacompanies.com

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP-EPSC-014 | REV. 2

RIGHT-OF-WAY

Parcel	Owner
19	N/F BABCOCK, JAMES
20	N/F NEW ENGLAND CENTRAL RAILROAD
21	N/F CHITTENDEN SOLID WASTE DISTRICT
22	N/F STATE OF VERMONT; AGENCY OF TRANSPORTATION
23	N/F CHITTENDEN SOLID WASTE DISTRICT
23.01	N/F BURLINGTON TRANSFER STATION
23.01	N/F BURLINGTON TRANSFER STATION
23	N/F CHITTENDEN SOLID WASTE DISTRICT

MATCHLINE

SURVEY DATA

Bearing	Deflection	Station
N 55° 32' W	81°05' LT	372+41
S 43° 23' W	80°47' RT	374+04
N 55° 50' W	06°56' LT	381+57
N 62° 46' W	45°42' LT	386+73
S 71° 31' W		

ALIGNMENT DETAIL

EROSION PREVENTION & SEDIMENT CONTROL

LEGEND

- PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- CENTERLINE OF STREAM
- TEMPORARY STREAM CROSSING
- WETLAND
- 50' WETLAND BUFFER
- TEMPORARY WETLAND MATTING
- WETLAND BUFFER WITHIN PROJECT AREA
- REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL

INSTALL CONSTRUCTION DEMARCATION:
STA. 370+00 TO 371+88 RT - 25' FROM NEW 12" PIPE ℄
STA. 370+00 TO 372+20 LT - 25' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 371+88 TO 372+74 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 373+64 TO 380+47 LT - 50' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 373+76 TO 386+73 RT - 25' FROM NEW 12" PIPE ℄
STA. 380+47 TO 385+40 LT - 25' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 386+73 TO 396+50 RT - 50' FROM NEW 12" PIPE ℄
STA. 396+50 TO 397+50 RT - 25' FROM NEW 12" PIPE ℄
STA. 385+40 TO 386+98 LT - 50' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 386+98 TO 397+50 LT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 370+00 TO 371+88 RT - 25' FROM NEW 12" PIPE ℄
STA. 370+00 TO 372+20 LT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 371+88 TO 372+41 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 373+76 TO 374+70 RT - 25' FROM NEW 12" PIPE ℄
STA. 373+64 TO 374+04 LT - 50' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 379+80 TO 386+43 RT - 25' FROM NEW 12" PIPE ℄
STA. 380+22 TO 380+47 LT - 50' FROM NEW 12" PIPE ℄
STA. 380+47 TO 385+40 LT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 385+40 TO 385+90 LT - 50' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 396+14 TO 396+16 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 396+16 TO 396+50 RT - 50' FROM NEW 12" PIPE ℄
STA. 396+50 TO 397+50 RT - 25' FROM NEW 12" PIPE ℄
STA. 396+04 TO 397+50 LT - 25' FROM NEW 12" PIPE ℄

INSTALL MATTING:
STA. 370+44 TO 371+32

INSTALL MATTING:
STA. 380+80 TO 382+09

INSTALL MATTING:
STA. 382+48 TO 384+04

INSTALL MATTING:
STA. 384+67 TO 385+20

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
STA. 396+07

INSTALL MATTING:
STA. 396+94 TO 397+50

HORIZONTAL SCALE: 100 50 0 100 200 300 feet

VERTICAL SCALE: 100 50 0 100 200 300 feet

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.
2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.

PROFILE DATA

Item	Entries
CONST. TYPE	W, 2A, 10, 1A, W, 2A, W, W, 1A, 1E, 7, W
SOIL TYPE	Au, AgD, AdA (PAS), AgD
LC/LU	AGRICULTURAL FIELD / NOT CLASSIFIED; RAILROAD / TRAVEL; FORESTED; INDUSTRIAL; TRAVEL; INDUSTRIAL; ROAD; FORESTED; ROAD; FORESTED
STREAMS	STREAM 2012-SC-CM-85 (E) - STATION 370+73 TO 370+85; STREAM 2012-TB/SC-CM-54 (P) - STATION 397+10 TO 397+47
WETLANDS	WETLAND 2012-CM-195 - STATION 370+00 TO 371+82 CLASS II; WETLAND 2012-CM-59 - STATION 380+30 TO 385+93 CLASS II; WETLAND 2012-CM-134 - STATION 396+44 TO 397+50 CLASS II
VERNAL POOLS	VERNAL POOL BUFFER 2012-CM-PVP2 STATION 370+00 TO 378+37
SIGNIFICANT NATURAL COMMUNITIES	
RTE SPECIES	
NRC WILDLIFE HABITAT	
ARCHAEOLOGY SITES	

MATCH LINE

TITLE BLOCK

DWG. NO.	REFERENCE DWG.
ANGP-T-C-015A	RAILROAD CROSSING DETAIL
ANGP-T-C-015	ALIGNMENT SHEET

REV	DSN	CK	DESCRIPTION
3	GJM	BCK	IFC 2016 EDITS (05/2016)
2	BCK	TDB	CP TEST LEAD EDIT (9/14/15)
1	BCK	TDB	MLV 1 RELOC., PROP. LN. ADJ., CONST. TYPE CHNG. (6/09/15)

	BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
EPSC PLAN

LOC. CHITTENDEN COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP-EPSC-015 | REV. 3

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

RIGHT-OF-WAY

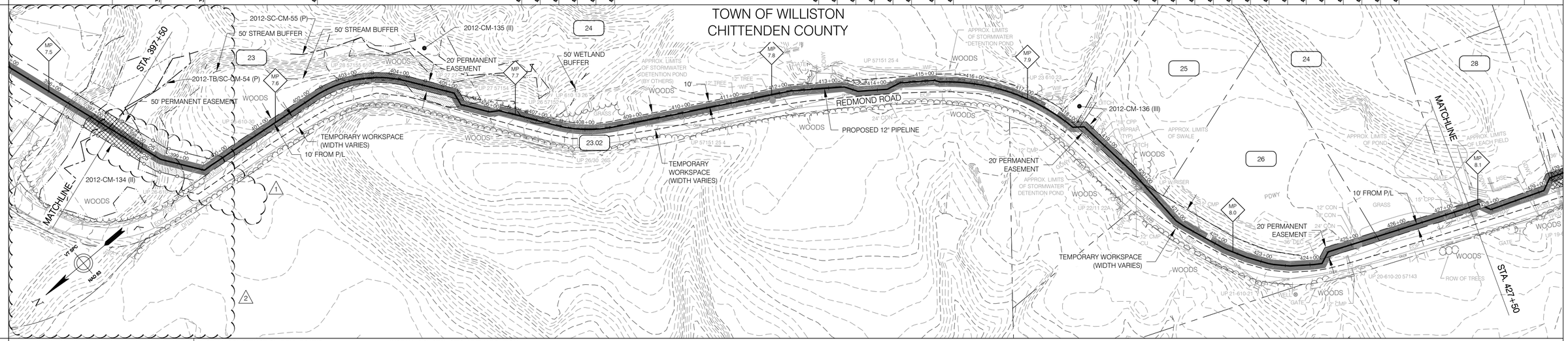
MATCHLINE | 23 N/F CHITTENDEN SOLID WASTE DISTRICT | 24 N/F CHITTENDEN SOLID WASTE DISTRICT | 25 N/F CHITTENDEN SOLID WASTE DISTRICT | 26 N/F CHITTENDEN SOLID WASTE DISTRICT | 24 N/F CHITTENDEN SOLID WASTE DISTRICT | 28 N/F CHITTENDEN SOLID WASTE DISTRICT | MATCH LINE

23.02 REDMOND ROAD

SURVEY DATA

398+64	399+55	402+29	404+09	405+16	405+43	406+03	406+22	407+50	408+51	412+24	413+32	413+60	414+20	414+49	415+19	415+30	418+06	418+20	418+43	419+75	421+09	421+29	422+24	422+69	423+15	423+26	423+60	424+08	424+24	424+51	425+57
N 44° 43' E 170'38" LT	S 54° 04' W 47°40" LT	S 06° 24' W 04°05" RT	S 54° 23' W 03°55" RT	N 80° 32' W 45°04" RT	S 54° 28' W 45°00" LT	S 31° 58' W 22°29" RT	S 54° 34' W 22°35" RT	02°52" LT	S 28° 41' W 02°58" LT	S 35° 58' W 07°16" RT	S 58° 28' W 22°29" LT	S 35° 58' W 22°29" LT	S 13° 28' W 22°30" LT	S 35° 58' W 22°30" RT	S 58° 28' W 22°20" RT	18°00" LT	S 36° 49' W 02°58" RT	S 36° 20' W 04°29" LT	S 83° 20' W 05°05" RT	S 88° 24' W 05°04" RT	S 74° 13' W 14°11" LT	S 69° 03' W 05°00" LT	S 61° 44' W 07°19" LT	S 56° 03' W 05°00" LT	S 50° 40' W 05°53" LT	S 45° 20' W 05°19" LT	S 39° 50' W 05°08" LT	S 34° 26' W 05°05" LT	S 32° 32' W 05°45" LT	S 22° 39' E 14°13" LT	S 22° 25' W 44°56" RT	S 22° 39' W 1°01" LT

ALIGNMENT DETAIL



EROSION PREVENTION & SEDIMENT CONTROL

LEGEND

- PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- CENTERLINE OF STREAM
- TEMPORARY STREAM CROSSING
- WETLAND
- 50' WETLAND BUFFER
- TEMPORARY WETLAND MATTING
- WETLAND BUFFER WITHIN PROJECT AREA
- REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL

INSTALL CONSTRUCTION DEMARCATION:
STA. 397+50 TO 399+24 RT - 25' FROM NEW 12" PIPE ℄
STA. 397+50 TO 399+80 LT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 397+50 TO 399+24 RT - 25' FROM NEW 12" PIPE ℄
STA. 397+50 TO 399+21 LT - 25' FROM NEW 12" PIPE ℄

INSTALL MATTING:
STA. 397+50 TO 398+70

INSTALL CONSTRUCTION DEMARCATION:
STA. 399+80 TO 405+26 LT - 10' FROM NEW 12" PIPE ℄
STA. 405+26 TO 418+33 LT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 418+33 TO 420+39 LT - 10' FROM NEW 12" PIPE ℄
STA. 420+39 TO 424+30 LT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 424+30 TO 427+50 LT - 10' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 402+34 TO 405+26 LT - 10' FROM NEW 12" PIPE ℄
STA. 405+26 TO 407+85 LT - WIDTH VARIES FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 417+43 TO 418+33 LT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 418+33 TO 418+72 LT - 10' FROM NEW 12" PIPE ℄

INSTALL MATTING:
STA. 417+84 TO 418+14

HORIZONTAL SCALE
100 50 0 100 200 300 feet
VERTICAL SCALE
100 50 0 100 200 300 feet

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.
2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.

CONST. TYPE	W	7	4A	4C	W	4A	4C	4A																							
SOIL TYPE	AgD	Lf	AdA	AgE	AdA	HIE	AdA	AdD																							
LC/LU	WETLAND	FORESTED	WETLAND	FORESTED	WETLAND	FORESTED	WETLAND	ACCESS	GRASS																						
	INDUSTRIAL	AGRICULTURAL	RESIDENTIAL	INDUSTRIAL	AGRICULTURAL	RESIDENTIAL																									
STREAMS																															
WETLANDS	WETLAND 2012-CM-134- STATION 397+50 TO 399+15 CLASS II	WETLAND 2012-CM-135- STATION 402+82 TO 407+32 CLASS II	WETLAND 2012-CM-136- STATION 417+78 TO 418+14 CLASS III																												
VERNAL POOLS																															
SIGNIFICANT NATURAL COMMUNITIES																															
RTE SPECIES																															
NRC WILDLIFE HABITAT																															
ARCHAEOLOGY SITES																															

MATCH LINE | MATCH LINE

VHB Vanasse Hangen Brustlin, Inc.

DWG. NO.	REFERENCE DWG.	REV	DSN	CK		DESCRIPTION		BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
							ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
							DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
							DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
ANGP-T-G-021	STATION AND VALVE DETAILS	2	GJM	BCK		IFC 2016 EDITS (05/2016)	DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
ANGP-T-C-016	ALIGNMENT SHEET	1	BCK	TDB		CONSTRUCTION TYPE CHANGE (6/09/15)	DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
EPSC PLAN

LOC. CHITTENDEN COUNTY, VERMONT

Vermont Gas

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP-EPSC-016 | REV. 2

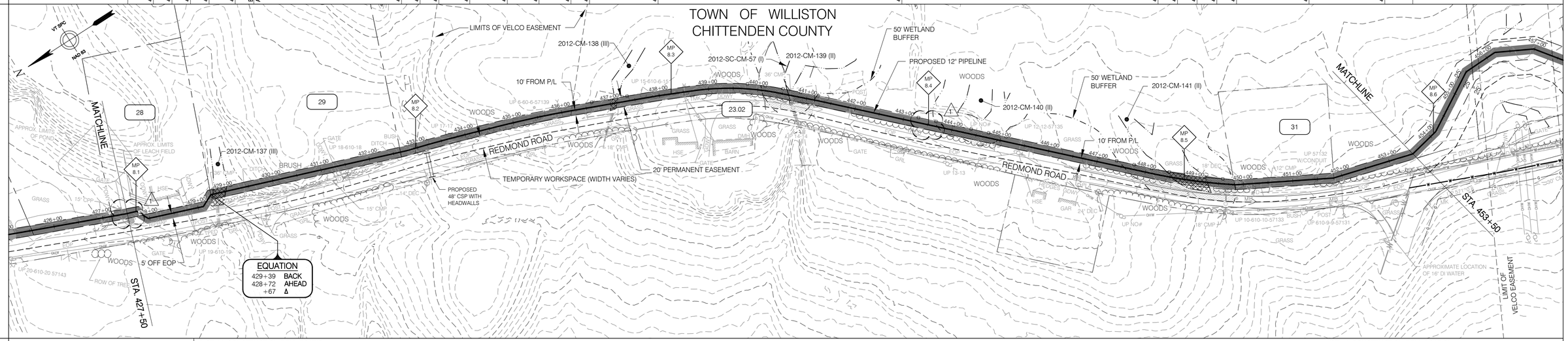
RIGHT–OF–WAY

MATCHLINE | 28 N/F CHITTENDEN SOLID WASTE DISTRICT | 29 N/F CHITTENDEN SOLID WASTE DISTRICT | 30 N/F CSWD | 33 N/F VERMONT TRANSCO., LLC | 30 N/F CHITTENDEN SOLID WASTE DISTRICT | 23.02 REDMOND ROAD | 31 N/F CHITTENDEN SOLID WASTE DISTRICT | 30 N/F CHITTENDEN SOLID WASTE DISTRICT | MATCH LINE

SURVEY DATA

427+18	427+46	427+70	427+97	429+11	Bck: 429+39 Ahd: 428+72	432+64	432+78	433+43	434+07	434+85	435+51	436+17	436+38	437+95	441+23	448+24	448+64	449+04	449+44	449+84	451+82	453+50
S 22° 39" W 00°00" LT	S 22° 38" W 02°35" LT	S 20° 03" W 45°00" RT	S 65° 03" W 44°38" LT	S 20° 24" W 45°21" LT	S 24° 57" E 67.2 ft. 45°00" RT	S 20° 03" W		S 20° 03" W 00°00" RT	S 03°12" LT	S 16° 50" W 01°16" RT	S 18° 07" W 00°38" RT	S 18° 45" W 00°58" RT	S 19° 44" W 01°57" RT	S 21° 42" W 01°17" RT	S 22° 59" W 00°03" LT	S 22° 56" W 01°40" RT	S 44° 58" W 01°13" RT	S 43° 03" W 01°55" LT	S 41° 03" W 01°59" LT	S 39° 03" W 01°59" LT	S 37° 03" W 01°59" LT	S 28° 47" W 08°16" LT	S 15° 46" W 13°00" LT	S 11° 33" E 27°18" LT

ALIGNMENT DETAIL



EROSION PREVENTION & SEDIMENT CONTROL

LEGEND

- PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- CENTERLINE OF STREAM
- TEMPORARY STREAM CROSSING
- WETLAND
- 50' WETLAND BUFFER
- TEMPORARY WETLAND MATTING
- WETLAND BUFFER WITHIN PROJECT AREA
- REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL

INSTALL CONSTRUCTION DEMARCATION:
STA. 427+00 TO 453+13 LT - 10' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 453+13 TO 453+50 LT - WIDTH VARIES' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 428+93 TO 429+57 LT - 10' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 436+56 TO 437+68 LT - 10' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 439+56 TO 441+69 LT - 10' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 443+12 TO 445+52 LT - 10' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA 446+93 TO 450+29 LT - 10' FROM NEW 12" PIPE ℄

INSTALL MATTING:
STA.428+68 TO 429+07

INSTALL MATTING:
STA.436+97 TO 437+18

INSTALL MATTING:
STA. 448+41 TO 449+37

HORIZONTAL SCALE
100 50 0 100 200 300 feet
VERTICAL SCALE
100 50 0 100 200 300 feet

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.
2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.

CONST. TYPE		W			4A			W				7			4A					W		
SOIL TYPE	AdD	DdC	AdD		ScB	AdA											AdB	ScB	DdB			
LC/LU	GRASS	WETLAND	FORESTED	ACCESS	FORESTED	GRASS	FORESTED	GRASS	WETLAND	FORESTED	ACCESS	FORESTED	WETLAND	GRASS	FORESTED	WETLAND	GRASS	FORESTED	WETLAND	ACCESS	GRASS	FORESTED
	RESIDENTIAL	NOT CLASSIFIED				NOT CLASSIFIED														RESIDENTIAL	NOT CLASSIFIED	
STREAMS												STREAM 2012-SC-CM-57 (I) - STATION 440+58 TO 440+67											
WETLANDS		WETLAND 2012-CM-137- STATION 428+68 TO 429+07 CLASS III							WETLAND 2012-CM-138- STATION 436+97 TO 437+18 CLASS III				WETLAND 2012-CM-139 STATION 440+03 TO 441+20 CLASS II			WETLAND 2012-CM-140- STATION 443+62 TO 445+02 CLASS II			WETLAND 2012-CM-141- STATION 447+43 TO 449+84 CLASS II				
VERNAL POOLS																						
SIGNIFICANT NATURAL COMMUNITIES																						
RTE SPECIES																						
NRC WILDLIFE HABITAT																						
ARCHAEOLOGY SITES																						

MATCH LINE

Vanasse Hangen Brustlin, Inc.

								BID		CONSTRUCTION	
							ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
							DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
							DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
							DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
							DESIGN MANAGER	SAB	06/28/13	JEO	05/2016
ANGP–T–C–017	ALIGNMENT SHEET	1	BCK	TDB		CP TEST LEAD EDIT (9/14/15)		INITIALS	DATE	INITIALS	DATE
DWG. NO.	REFERENCE DWG.	REV	DSN	CK		DESCRIPTION					

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
EPSC PLAN

LOC. CHITTENDEN COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP–EPSC–017 | REV. 1

Vermont Gas

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

RIGHT-OF-WAY

MATCHLINE

30 N/F CHITTENDEN SOLID WASTE DISTRICT	33 N/F VERMONT TRANSCO., LLC	22 N/F STATE OF VERMONT	35 N/F STATE OF VERMONT	36 MOUNTAIN VIEW ROAD
23.02 REDMOND ROAD	23.02 REDMOND ROAD	23.02 REDMOND ROAD		

MATCH LINE

SURVEY DATA

Station	Angle	Bearing
454+14	18°44' LT	S 11° 33' E
455+49	28°56' RT	S 30° 17' E
456+19	28°56' RT	S 01° 21' E
456+99	25°51' RT	S 27° 36' W
457+71	25°51' RT	S 53° 27' W
458+65	29°59' LT	S 79° 18' W
459+35	29°59' LT	S 49° 19' W
461+43	10°55' LT	S 19° 19' W
463+07	10°35' RT	S 08° 24' W
463+44	04°25' RT	S 19° 00' W
473+96	30°13' LT	S 23° 25' W
Bck: 474+16 Ahd: 474+21	−5.1 ft.	S 06° 48' E
475+00	45°00' LT 09°46' LT	S 51° 48' E
		S 61° 35' E

ALIGNMENT DETAIL

EROSION PREVENTION & SEDIMENT CONTROL

LEGEND

PERMANENT EASEMENT	— — —
TEMPORARY WORKSPACE	– – – –
CENTERLINE OF STREAM	— · —
TEMPORARY STREAM CROSSING	▨
WETLAND	
50' WETLAND BUFFER	— · · —
TEMPORARY WETLAND MATTING	▩
WETLAND BUFFER WITHIN PROJECT AREA	░
REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL	—□—

INSTALL CONSTRUCTION DEMARCATION:
STA. 453+50 TO 458+60 RT - 50' FROM NEW 12" PIPE ℄
STA. 453+50 TO 458+62 LT - 25' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 458+60 TO 459+00 RT - 40' FROM NEW 12" PIPE ℄
STA. 459+00 TO 460+57 RT - 15' FROM NEW 12" PIPE ℄
STA. 458+62 TO 458+98 LT - WIDTH VARIES' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 460+57 TO 462+73 RT - 40' FROM NEW 12" PIPE ℄
STA. 458+98 TO 473+96 LT - 10' FROM NEW 12" PIPE ℄
STA. 462+73 TO 463+06 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 463+06 TO 465+47 RT - 45' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 465+47 TO 467+15 RT - 25' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 467+15 TO 468+20 RT - 45' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 468+20 TO 469+66 RT - 25' FROM NEW 12" PIPE ℄
STA. 469+66 TO 473+96 RT - 45' FROM NEW 12" PIPE ℄
STA. 473+96 TO 475+50 LT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 474+21 TO 478+50 LT - 10' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 458+65 TO 459+00 RT - 40' FROM NEW 12" PIPE ℄
STA. 459+00 TO 460+57 RT - 15' FROM NEW 12" PIPE ℄
STA. 460+57 TO 461+02 RT - 40' FROM NEW 12" PIPE ℄
STA. 458+20 TO 458+65 LT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 464+97 TO 465+47 RT - 45' FROM NEW 12" PIPE ℄
STA. 458+65 TO 458+98 LT - WIDTH VARIES' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 465+47 TO 467+15 RT - 25' FROM NEW 12" PIPE ℄
STA. 458+98 TO 461+13 LT - 10' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 467+15 TO 467+65 RT - 45' FROM NEW 12" PIPE ℄
STA. 465+15 TO 467+51 LT - 10' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 468+20 TO 469+66 RT - 25' FROM NEW 12" PIPE ℄
STA. 468+30 TO 469+94 LT - 10' FROM NEW 12" PIPE ℄

INSTALL MATTING:
STA. 459+43 TO 460+11

INSTALL MATTING:
STA. 466+05 TO 466+50

INSTALL MATTING:
STA. 468+76 TO 469+21

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.
2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.

HORIZONTAL SCALE
100 50 0 100 200 300 feet
100 50 0 100 200 300 feet
VERTICAL SCALE

CONST. TYPE	(1E) (1J) (1E) (W) (4C) (4A) (W) (W)(7) (W) (4A)
SOIL TYPE	DdB (PAS) | BIB (PAS) | Au (PAS) | BIB | BIB (PAS) | ScB (PAS) | ScB | ScB (PAS) | ScB | ScB (PAS) | BIB (PAS) | PeB (PAS) | PeA (PAS)
LC/LU	FORESTED | WETLAND | FORESTED | WETLAND | FORESTED | WETLAND | FORESTED | WETLAND | FORESTED | GRASS NOT CLASSIFIED | NOT CLASSIFIED | NOT CLASSIFIED | NOT CLASSIFIED
STREAMS	STREAM 2012-SC-CM-100 (I)
WETLANDS	WETLAND 2012-CM-55- STATION 458+82 TO 460+63 CLASS II WETLAND 2012-CM-143- STATION 456+51 TO 467+09 CLASS II WETLAND 2012-CM-144- STATION 468+76 TO 469+21 CLASS II
VERNAL POOLS	VERNAL POOL BUFFER 2012-CM-VP-4- STATION 475+35 TO 478+50
SIGNIFICANT NATURAL COMMUNITIES	
RTE SPECIES	
NRC WILDLIFE HABITAT	
ARCHAEOLOGY SITES	

MATCH LINE

MATCH LINE

		BID		CONSTRUCTION	
	ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
	DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
	DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
	DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
ANGP-T-C-018	ALIGNMENT SHEET				
	DESIGN MANAGER	SAB	06/28/13	JEO	05/2016
DWG. NO.	REFERENCE DWG.	INITIALS	DATE	INITIALS	DATE

REV | DSN | CK | DESCRIPTION

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
EPSC PLAN

LOC. CHITTENDEN COUNTY, VERMONT

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP-EPSC-018 | REV. 0

RIGHT-OF-WAY		
	35 N/F STATE OF VERMONT; 36 MOUNTAIN VIEW ROAD	MATCHLINE
	37 N/F BRENNAN WOODS HOMEOWNERS ASSOCIATION	
	38.01 N/F THE BIG THREE; 38 N/F STATE OF VERMONT	MATCH LINE

SURVEY DATA					
	S 61° 35' E (481+21, 89°59' RT)	S 28° 25' W	S 03° 08' E (482+70, 31°32' LT)	S 67° 02' E (489+23, 63°54' LT; 490+75, 89°59' RT)	S 22° 57' W

ALIGNMENT DETAIL

EROSION PREVENTION & SEDIMENT CONTROL

LEGEND

- PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- CENTERLINE OF STREAM
- TEMPORARY STREAM CROSSING
- WETLAND
- 50' WETLAND BUFFER
- TEMPORARY WETLAND MATTING
- WETLAND BUFFER WITHIN PROJECT AREA
- REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL

INSTALL CONSTRUCTION DEMARCATION:
STA. 478+50 TO 480+96 LT - 10' FROM NEW 12" PIPE ℄
STA. 480+96 TO 481+21 LT - WIDTH VARIES' FROM NEW 12" PIPE ℄
STA. 481+21 TO 481+31 LT - 25' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 481+88 TO 490+24 RT - 25' FROM NEW 12" PIPE ℄
STA. 482+43 TO 485+23 LT - 50' FROM NEW 12" PIPE ℄
STA. 485+20 TO 486+56 LT - 25' FROM NEW 12" PIPE ℄
STA. 486+50 TO 490+74 LT - 50' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 490+24 TO 506+01 RT - 50' FROM NEW 12" PIPE ℄
STA. 490+74 TO 506+50 LT - 25' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 506+01 TO 506+50 RT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 480+96 TO 481+32 LT - WIDTH VARIES' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 481+88 TO 482+41 RT - 25' FROM NEW 12" PIPE ℄
STA. 482+15 TO 482+43 LT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 482+43 TO 483+23 LT - 50' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 484+30 TO 485+23 LT - 50' FROM NEW 12" PIPE ℄
STA. 485+23 TO 486+56 LT - 25' FROM NEW 12" PIPE ℄
STA. 486+56 TO 487+08 LT - 50' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 501+63 TO 505+16 RT - 50' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 505+52 TO 506+01 RT - 50' FROM NEW 12" PIPE ℄
STA. 506+01 TO 506+50 RT - 25' FROM NEW 12" PIPE ℄

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
STA. 482+03

HORIZONTAL SCALE: 100 50 0 100 200 300 feet
VERTICAL SCALE: 100 50 0 100 200 300 feet

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.
2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.

CONST. TYPE	4A; 9; 1A; 2A; 1A; 1G; 1B; 2C
SOIL TYPE	ScA (PAS); PeA (PAS); LyD; PeB (PAS); Br; LyD; PeB (PAS); MyB (PAS); ScA (PAS)
LC/LU	GRASS / NOT CLASSIFIED; PAVEMENT / TRAVEL; FORESTED / NOT CLASSIFIED; NOT CLASSIFIED; WETLAND
STREAMS	
WETLANDS	WETLAND 2012-CM-74- STATION 485+23 TO 486+55 CLASS II; WETLAND 2012-CM-75 - STATION 502+85 TO 503+52 CLASS II; WETLAND 2012-CM-75 - STATION 506+01 TO 506+50 CLASS II
VERNAL POOLS	VERNAL POOL BUFFER 2012-CM-VP-3, 2012-CM-VP-4, & 2012-CM-VP-5- STATION 478+50 TO 492+83
SIGNIFICANT NATURAL COMMUNITIES	
RTE SPECIES	
NRC WILDLIFE HABITAT	
ARCHAEOLOGY SITES	

MATCH LINE

	BID		CONSTRUCTION	
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016
	INITIALS	DATE	INITIALS	DATE

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
ANGP-T-C-019	ALIGNMENT SHEET				

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
EPSC PLAN

LOC. CHITTENDEN COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP-EPSC-019 | REV. 0

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

RIGHT-OF-WAY

MATCHLINE

36.01
N/F
THE BIG THREE

36.02
N/F
JEFFREY S. &
AMANDA E. BOLIBA

36.03
N/F
NGUYEN V. NGUYEN &
LE T. HONG

36.04
N/F
TONG & WINNY
NGUYEN

36.05
N/F
JAMIE K. &
ALYSSA K. CHASE

36.06
N/F
DAVID & MANDY
BOISJOLI

36.07
N/F
COMMON
LAND

38
N/F
STATE OF VERMONT; AGENCY OF TRANSPORTATION

MATCH LINE

SURVEY DATA

S 22° 57' W
511+97 00°00' RT
S 22° 57' W
513+30 00°13' RT
S 22° 44' W
515+19 00°42' LT
S 22° 02' W
516+38 00°41' LT
S 21° 21' W
518+04 00°33' LT
S 20° 48' W
518+52 29°48' RT
S 50° 36' W
518+97 30°16' LT
S 20° 20' W
519+95 00°22' LT
S 00° 00' W
520+18 30°30' LT
S 10° 29' E
520+63 30°39' RT
S 19° 40' W
521+03 00°12' LT
S 19° 28' W
521+43 00°12' LT
S 19° 17' W
521+83 00°12' LT
S 19° 05' W
522+23 00°12' LT
S 18° 54' W
522+63 00°12' LT
S 18° 42' W
523+03 00°12' LT
S 18° 31' W
523+43 00°12' LT
S 18° 19' W
523+83 00°12' LT
S 18° 08' W
524+23 00°12' LT
S 17° 56' W
524+63 00°12' LT
S 17° 45' W
525+03 00°11' LT
S 17° 34' W
Bck: 525+40 00°58' LT
Ahd: 525+43
-3 ft.
S 18° 32' W
529+87 21°59' RT
S 40° 31' W
530+05 21°59' LT
S 18° 31' W

ALIGNMENT DETAIL

EROSION PREVENTION & SEDIMENT CONTROL

LEGEND

PERMANENT EASEMENT	— — — —
TEMPORARY WORKSPACE	- - - - - -
CENTERLINE OF STREAM	—— - —— -
TEMPORARY STREAM CROSSING	▨
WETLAND	— ·· — ·· —
50' WETLAND BUFFER	— · · — · · —
TEMPORARY WETLAND MATTING	▩
WETLAND BUFFER WITHIN PROJECT AREA	░
REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL	—□——□——□—

INSTALL CONSTRUCTION DEMARCATION:
STA. 506+50 TO 512+62 RT - 25' FROM NEW 12" PIPE ℄
STA. 506+50 TO 518+51 LT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 506+50 TO 512+62 RT - 25' FROM NEW 12" PIPE ℄
STA. 512+62 TO 513+14 RT - 50' FROM NEW 12" PIPE ℄
STA. 506+50 TO 512+78 LT - 25' FROM NEW 12" PIPE ℄

INSTALL MATTING:
STA. 506+51 TO 507+50

INSTALL MATTING:
STA. 509+88 TO 511+92

INSTALL CONSTRUCTION DEMARCATION:
STA. 512+62 TO 514+97 RT - 50' FROM NEW 12" PIPE ℄
STA. 514+97 TO 515+62 RT - 25' FROM NEW 12" PIPE ℄
STA. 515+62 TO 518+51 RT - 50' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 514+47 TO 514+98 RT - 50' FROM NEW 12" PIPE ℄
STA. 514+98 TO 515+62 RT - 25' FROM NEW 12" PIPE ℄
STA. 515+62 TO 516+11 RT - 50' FROM NEW 12" PIPE ℄

INSTALL MATTING:
STA. 514+77 TO 515+61

INSTALL CONSTRUCTION DEMARCATION:
STA. 518+51 TO 520+63 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 520+63 TO 529+87 RT - 50' FROM NEW 12" PIPE ℄
STA. 518+51 TO 520+63 LT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 520+63 TO 529+87 LT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 518+97 TO 520+63 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 520+63 TO 529+87 RT - 50' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 529+87 TO 530+84 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 530+84 TO 532+00 RT - 50' FROM NEW 12" PIPE ℄
STA. 529+87 TO 530+84 LT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 530+84 TO 532+00 LT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 529+87 TO 530+84 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 530+84 TO 532+00 RT - 50' FROM NEW 12" PIPE ℄

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.
2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.

HORIZONTAL SCALE
100 50 0 100 200 300 feet
100 50 0 100 200 300 feet
VERTICAL SCALE

CONST. TYPE	(W) (2C) (W) (1B) (2C) (W) (1B)
SOIL TYPE	ScA (PAS); ScB (PAS); MyB (PAS)
LC/LU	WETLAND; GRASS; WETLAND; GRASS; WETLAND NOT CLASSIFIED
STREAMS	
WETLANDS	WETLAND 2012-CM-75- STATION 506+50 TO 59+09 CLASS II WETLAND 2012-CM-76- STATION 509+38 TO 512+50 CLASS II WETLAND 2012-CM-77- STATION 514+77 TO 515+61 CLASS III
VERNAL POOLS	
SIGNIFICANT NATURAL COMMUNITIES	
RTE SPECIES	
NRC WILDLIFE HABITAT	
ARCHAEOLOGY SITES	

MATCH LINE

MATCH LINE

DWG. NO.	REFERENCE DWG.	REV	DSN	CK		DESCRIPTION
ANGP-T-C-020	ALIGNMENT SHEET	1	BCK	TDB		CP TEST LEAD EDIT (9/14/15)

	BID		CONSTRUCTION	
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016
	INITIALS	DATE	INITIALS	DATE

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
EPSC PLAN

LOC. CHITTENDEN COUNTY, VERMONT

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

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South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP-EPSC-020 | REV. 1

RIGHT-OF-WAY

MATCHLINE

38.01 — N/F COMMON LAND

37.01 — N/F TOWN OF WILLISTON

38 — N/F STATE OF VERMONT

39 — WILLISTON ROAD ROUTE 2

41.01 — N/F ARMS, STEVEN & LISA

41 — N/F TOWN OF WILLISTON

MATCH LINE

SURVEY DATA

Station	Bearing	Deflection
530+65	S 18° 31' W	22°00' LT
530+84	S 03° 29' E	22°00' RT
531+14	S 18° 31' W	01°40' LT
537+24	S 16° 51' W	89°51' RT
538+99	N 73° 17' W	64°04' LT
538+99 / Bck. 540+45 / Ahd. 537+22 / 324 ft.	S 42° 39' W	64°01' LT
539+29	S 58° 40' W	16°05' LT
541+82	S 42° 34' W	06°22' RT
544+60	S 48° 56' W	09°17' LT
545+38	S 39° 39' W	18°42' LT
551+13	S 20° 57' W	00°00' RT
553+38	S 20° 57' W	26°00' RT
	S 46° 58' W	

ALIGNMENT DETAIL

EROSION PREVENTION & SEDIMENT CONTROL

LEGEND

- PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- CENTERLINE OF STREAM
- TEMPORARY STREAM CROSSING
- WETLAND
- 50' WETLAND BUFFER
- TEMPORARY WETLAND MATTING
- WETLAND BUFFER WITHIN PROJECT AREA
- REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL

INSTALL CONSTRUCTION DEMARCATION:
STA. 532+00 TO 538+99 RT - 50' FROM NEW 12" PIPE ℄
STA. 532+00 TO 538+55 LT - 25' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 538+99 TO 548+69 RT - 25' FROM NEW 12" PIPE ℄
STA. 538+55 TO 540+01 LT - 50' FROM NEW 12" PIPE ℄
STA. 540+01 TO 538+65 LT - 25' FROM NEW 12" PIPE ℄
STA. 538+65 TO 548+72 LT - 50' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 536+06 TO 538+39 RT - 25' FROM NEW 12" PIPE ℄
STA. 539+59 TO 540+01 LT - 50' FROM NEW 12" PIPE ℄
STA. 540+01 TO 538+65 LT - 25' FROM NEW 12" PIPE ℄
STA. 538+65 TO 539+17 LT - 50' FROM NEW 12" PIPE ℄

INSTALL MATTING:
STA. 540+30 TO 537+61

INSTALL REINFORCED PERIMETER CONTROL:
STA. 545+45 TO 546+57 RT - 25' FROM NEW 12" PIPE ℄
STA. 543+79 TO 546+66 LT - 50' FROM NEW 12" PIPE ℄

INSTALL MATTING:
STA. 546+24 TO 546+66
STA. 546+92 TO 548+46

INSTALL REINFORCED PERIMETER CONTROL:
STA. 546+86 TO 548+69 RT - 25' FROM NEW 12" PIPE ℄
STA. 547+05 TO 548+72 LT - 50' FROM NEW 12" PIPE ℄

INSTALL STABILIZED CONSTRUCTION ENTRANCE
STA. 548+70 & STA. 549+46

INSTALL CONSTRUCTION DEMARCATION:
STA. 549+43 TO 558+00 RT - 25' FROM NEW 12" PIPE ℄
STA. 549+17 TO 549+49 LT - 25' FROM NEW 12" PIPE ℄
STA. 549+17 TO 550+09 LT - 75' FROM NEW 12" PIPE ℄
STA. 550+09 TO 551+39 LT - 165' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 549+43 TO 554+36 RT - 25' FROM NEW 12" PIPE ℄
STA. 549+17 TO 549+49 LT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 551+39 TO 551+39 LT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 551+39 TO 554+20 LT - 25' FROM NEW 12" PIPE ℄

INSTALL MATTING:
STA. 549+35 TO 550+23
STA. 550+47 TO 552+94

INSTALL CONSTRUCTION DEMARCATION:
STA. 551+39 TO 554+20 LT - 25' FROM NEW 12" PIPE ℄
STA. 554+20 TO 558+00 LT - 50' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 554+20 TO 554+86 LT - 50' FROM NEW 12" PIPE ℄

HORIZONTAL SCALE: 100 50 0 100 200 300 feet
VERTICAL SCALE: 100 50 0 100 200 300 feet

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.
2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.

CONST. TYPE	1B, 1G, W, 2C, 1G, W, 7, W, 9, W, 2A, W, 1A
SOIL TYPE	MyB (PAS); ScA (PAS); MuD; MyB (PAS); MyC (PAS); MyB (PAS); MyB (PAS)
LC/LU	GRASS; NOT CLASSIFIED; WATER; GRASS; TRAVEL; PAVED; PASTURE; NOT CLASSIFIED
STREAMS	STREAM 2012-TB-ALB-01 - (P) STATION 545+89 TO 548+91
WETLANDS	WETLAND 2012-CM-79 - STATION 539+80 TO 538+49 CLASS II; WETLAND 2012-CM-79 - STATION 545+89 TO 548+91 CLASS II; WETLAND 2012/2013-CM-82 - STATION 548+63 TO 554+46 CLASS II
VERNAL POOLS	
SIGNIFICANT NATURAL COMMUNITIES	
RTE SPECIES	
NRC WILDLIFE HABITAT	
ARCHAEOLOGY SITES	

MATCH LINE / MATCH LINE

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
ANGP-T-G-021	STATION AND VALVE DETAILS				
ANGP-T-C-021	ALIGNMENT SHEET	1	BCK	TDB	CP TEST LEAD EDIT (9/14/15)

	BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
EPSC PLAN

LOC. CHITTENDEN COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP-EPSC-021 | REV. 1

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

RIGHT-OF-WAY

MATCHLINE	41 N/F TOWN OF WILLISTON	47 N/F ALLEN BROOK DEVELOPMENT INC.	MATCH LINE

SURVEY DATA

S 46° 58' W — 23°01' LT — 568+56 — S 23° 56' W — 28°16' RT — 570+79 — S 52° 12' W — -1112.20 ft. — Bck: 571+38 Ahd: 582+50 43°00' RT — N 82° 48' W

ALIGNMENT DETAIL

EROSION PREVENTION & SEDIMENT CONTROL

LEGEND

- PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- CENTERLINE OF STREAM
- TEMPORARY STREAM CROSSING
- WETLAND
- 50' WETLAND BUFFER
- TEMPORARY WETLAND MATTING
- WETLAND BUFFER WITHIN PROJECT AREA
- REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL

INSTALL CONSTRUCTION DEMARCATION:
STA. 558+00 TO 583+27 RT - 25' FROM NEW 12" PIPE ℄
STA. 558+00 TO 561+94 LT - 50' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 561+94 TO 564+71 LT - 25' FROM NEW 12" PIPE ℄
STA. 564+71 TO 570+62 LT - 50' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 583+27 TO 585+02 RT - 50' FROM NEW 12" PIPE ℄
STA. 570+62 TO 593+50 LT - 25' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 585+02 TO 587+57 RT - 25' FROM NEW 12" PIPE ℄
STA. 587+57 TO 593+50 RT - 50' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 561+11 TO 565+03 RT - 25' FROM NEW 12" PIPE ℄
STA. 561+50 TO 561+94 LT - 50' FROM NEW 12" PIPE ℄
STA. 561+94 TO 564+71 LT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 564+71 TO 565+21 LT - 50' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 568+11 TO 583+27 RT - 25' FROM NEW 12" PIPE ℄
STA. 570+19 TO 570+62 LT - 50' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 583+27 TO 585+02 RT - 50' FROM NEW 12" PIPE ℄
STA. 570+62 TO 588+66 LT - 25' FROM NEW 12" PIPE ℄
STA. 588+80 TO 590+36 LT - 25' FROM NEW 12" PIPE ℄
STA. 590+46 TO 592+25 LT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 585+02 TO 587+57 RT - 25' FROM NEW 12" PIPE ℄
STA. 587+57 TO 587+96 RT - 50' FROM NEW 12" PIPE ℄
STA. 588+23 TO 588+64 RT - 50' FROM NEW 12" PIPE ℄
STA. 589+20 TO 590+93 RT - 50' FROM NEW 12" PIPE ℄
STA. 592+39 TO 592+89 RT - 50' FROM NEW 12" PIPE ℄
STA. 592+89 TO 593+50 RT - 25' FROM NEW 12" PIPE ℄
STA. 593+24 TO 593+50 LT - 25' FROM NEW 12" PIPE ℄

INSTALL MATTING:
STA. 562+20 TO 563+49

INSTALL MATTING:
STA. 570+67 TO 582+96
STA. 585+97 TO 587+16

HORIZONTAL SCALE: 100 50 0 100 200 300 feet
VERTICAL SCALE: 100 50 0 100 200 300 feet

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.
2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.

CONST. TYPE	1A — W — 2A — 1A — 2A W — 1E — 2A — W — 1E — 2A
SOIL TYPE	MyB (PAS) — MyC (PAS) — MyB (PAS) — ScA (PAS) — EwA (PAS) — CbD — ScB
LC/LU	PASTURE — FORESTED — NOT CLASSIFIED
STREAMS	STREAM 2012-SC-CM-34-(I) STATION 584+87 TO 585+08 — STREAM 2012-TB-CM-35-(P) STATION 587+96 TO 588+80 — STREAM 2012-TB/SC-CM-36-(P) STATION 588+64 TO 590+46
WETLANDS	WETLAND 2012/2013-CM-97/98 - STATION 561+61 TO 564+49 CLASS II — WETLAND 2012/2013-CM-97/98 - STATION 569+33 TO 583+49 CLASS II — WETLAND 2012-CM-175 - STATION 585+22 TO 587+67 CLASS II — WETLAND 2012-CM-99 - STATION 592+89 TO 593+50 CLASS II
VERNAL POOLS	
SIGNIFICANT NATURAL COMMUNITIES	
RTE SPECIES	2012-RTE-CT-084
NRC WILDLIFE HABITAT	
ARCHAEOLOGY SITES	

MATCH LINE

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
ANGP-T-G-021	STATION AND VALVE DETAILS				
ANGP-T-C-022	ALIGNMENT SHEET				

	BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
EPSC PLAN

LOC. CHITTENDEN COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP-EPSC-022 | REV. 0

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

RIGHT-OF-WAY

MATCHLINE	47	44	50.02 / 50.01	54.03	54.02	54.01	MATCHLINE
	N/F ALLEN BROOK DEVELOPMENT INC.	N/F STATE OF VERMONT	50.02 N/F 291 HURRICANE LANE, LLC 50.01 N/F DUNN, WILLIAM	N/F DUNN, WILLIAM	N/F HILLSIDE EAST CO.	N/F DUNN, WILLIAM	
				53 HURRICANE LANE			

SURVEY DATA

595+58		605+29	Bck: 605+49 Ahd: 605+45 606+29	607+28	608+00	608+80
N 82° 48' W	S 11° 24' W	S 67° 25' W	N 67° 35' W	N 69° 54' W	N 73° 46' W	N 79° 27' W N 85° 56' W
85°48' LT		56°01' RT	4.1 ft. 44°59' RT	02°19' LT	03°52' LT	05°40' LT 06°29' LT

ALIGNMENT DETAIL

EROSION PREVENTION & SEDIMENT CONTROL

LEGEND

PERMANENT EASEMENT	— — — —
TEMPORARY WORKSPACE	– – – – – –
CENTERLINE OF STREAM	—— – —— –
TEMPORARY STREAM CROSSING	▨
WETLAND	–·–·–
50' WETLAND BUFFER	—··—··—
TEMPORARY WETLAND MATTING	▩
WETLAND BUFFER WITHIN PROJECT AREA	░
REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL	–□–□–□–

INSTALL CONSTRUCTION DEMARCATION:
STA. 593+50 TO 595+19 RT - 25' FROM NEW 12" PIPE ℄
STA. 593+50 TO 596+61 LT - 25' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 595+19 TO 595+58 RT - WIDTH VARIES' FROM NEW 12" PIPE ℄
STA. 595+58 TO 596+64 RT - 25' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 600+13 TO 604+91 RT - 25' FROM NEW 12" PIPE ℄
STA. 600+08 TO 604+96 LT - 25' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 605+42 TO 609+50 LT - WIDTH VARIES' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 593+50 TO 595+19 RT - 25' FROM NEW 12" PIPE ℄
STA. 593+50 TO 596+61 LT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 596+14 TO 596+64 RT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 600+13 TO 600+63 RT - 25' FROM NEW 12" PIPE ℄
STA. 600+10 TO 600+60 LT - 25' FROM NEW 12" PIPE ℄

INSTALL MATTING:
STA. 593+78 TO 594+94

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
STA. 595+58 & 596+63

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
STA. 600+12

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
STA. 604+91

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
STA. 606+26

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.
2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.

HORIZONTAL SCALE
100 50 0 100 200 300 feet
100 50 0 100 200 300 feet
VERTICAL SCALE

CONST. TYPE	(2A) (1E) (W)	(2A)	(8)		(4C)
SOIL TYPE	ScB (PAS)	CaC (PAS)	CbD		
LC/LU	FORESTED NOT CLASSIFIED	PAVED TRAVEL	GRASS/FORESTED INDUSTRIAL		PAVED TRAVEL
STREAMS					
WETLANDS	WETLAND 2012-CM-99 - STATION 593+50 TO 596+64 CLASS II				
VERNAL POOLS					
SIGNIFICANT NATURAL COMMUNITIES					
RTE SPECIES					
NRC WILDLIFE HABITAT					
ARCHAEOLOGY SITES					

MATCH LINE

MATCH LINE

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
ANGP-T-G-07-010	ACCESS ROAD DETAILS				
ANGP-T-C-023B	ALIGNMENT SHEET	1	GJM	BCK	IFC 2016 EDITS (05/2016)

	BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
EPSC PLAN

LOC. CHITTENDON COUNTY, VERMONT

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP-ESPC-023B | REV. 1

RIGHT-OF-WAY

MATCHLINE

54.01
DUNN, WILLIAM

54
N/F
HURRICANE HOLDINGS, LLC

53
HURRICANE LANE

55
N/F
SIDELINE PROPERTIES LLC;
WILLIAM DUNN

56
N/F
BOSS, BRADLEY

MATCH LINE

SURVEY DATA

Station	Deflection	Bearing
		N 85° 56' W
609+86	06°55' LT	S 87° 09' W
610+37	02°52' LT	S 84° 16' W
610+85	00°56' LT	S 83° 20' W
611+36	00°20' RT	S 83° 40' W
611+93	00°50' RT	S 84° 30' W
612+34	00°47' LT	S 83° 43' W
612+84	00°09' RT	S 83° 52' W
613+33	00°40' LT	S 83° 11' W
613+81	01°27' LT	S 81° 44' W
614+41	05°48' RT	S 87° 33' W
614+79	02°26' LT	S 85° 06' W
615+36	00°04' LT	S 85° 02' W
615+92	43°40' LT	S 41° 21' W
617+15	17°03' LT	S 24° 18' W
619+27	00°05' RT	S 24° 24' W
623+66	00°15' LT	S 24° 08' W
627+70	44°40' LT	S 20° 31' E
628+02	44°44' RT	S 24° 17' W

ALIGNMENT DETAIL

EROSION PREVENTION & SEDIMENT CONTROL

LEGEND

PERMANENT EASEMENT	— — — —
TEMPORARY WORKSPACE	- - - - - -
CENTERLINE OF STREAM	—·—·—
TEMPORARY STREAM CROSSING	▨
WETLAND	·· ··
50' WETLAND BUFFER	—··—··—
TEMPORARY WETLAND MATTING	▩
WETLAND BUFFER WITHIN PROJECT AREA	░
REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL	—□—□—□—

INSTALL CONSTRUCTION DEMARCATION:
STA. 616+00 TO 616+52 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 609+50 TO 615+69 LT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 615+69 TO 617+15 LT - 20' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 616+52 TO 616+98 RT - 10' FROM NEW 12" PIPE ℄
STA. 616+98 TO 633+00 RT - 50' FROM NEW 12" PIPE ℄
STA. 617+15 TO 633+00 LT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 616+40 TO 617+49 LT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 616+45 TO 617+25 LT - WIDTH VARIES FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 616+98 TO 617+11 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 617+11 TO 618+04 RT - 50' FROM NEW 12" PIPE ℄
STA. 617+49 TO 633+00 LT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 631+05 TO 631+59 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 631+78 TO 632+04 RT - WIDTH VARIES FROM NEW 12" PIPE ℄

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
STA. 615+27 & 617+35

INSTALL MATTING:
STA. 616+53 TO 616+79

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
STA. 631+52

INSTALL MATTING:
STA. 631+22 TO 631+53

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.
2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.

HORIZONTAL SCALE
100 50 0 100 200 300 feet
100 50 0 100 200 300 feet
VERTICAL SCALE

CONST. TYPE	(4C) (3A) (1E)
SOIL TYPE	CbD; PsC
LC/LU	ROAD EDGE; FORESTED/POWERLINES; GRASS; UNPAVED; GRASS TRAVEL; RESIDENTIAL; TRAVEL; INDUSTRIAL; UNCLASSIFIED; TRAVEL; UNCLASSIFIED
STREAMS	STREAM 2013-SC-CM-3 (E) STATION 617+22 TO 618+06 STREAM 2013-SC-CM-2 (E) STATION 617+53 TO 617+92
WETLANDS	WETLAND 2012-CM-88 - STATION 619+00 TO 622+99 CLASS II WETLAND 2012-CM-88 - STATION 623+67 TO 626+49 CLASS II WETLAND 2012-CM-88 - STATION 626+59 TO 630+34 CLASS II WETLAND 2012-CM-89 - STATION 630+67 TO 633+00 CLASS II
VERNAL POOLS	
SIGNIFICANT NATURAL COMMUNITIES	
RTE SPECIES	
NRC WILDLIFE HABITAT	
ARCHAEOLOGY SITES	

MATCH LINE

MATCH LINE

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
ANGP-T-G-07-010	ACCESS ROAD DETAILS				
ANGP-T-C-024	ALIGNMENT SHEET	1	GJM	BCK	IFC 2016 EDITS (05/2016)

	BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
EPSC PLAN

LOC. CHITTENDEN COUNTY, VERMONT

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP-EPSC-024 | REV. 1

RIGHT-OF-WAY

MATCHLINE

56
N/F
BOSS, BRADLEY

57
N/F
OAK HILL ESTATES ASSOCIATION

58
ST. GEORGE ROAD
VT STATE ROUTE 2A

62.01
N/F
PALMER, DAVID

61
N/F
BLACKBERRY RIDGE
HOMEOWNERS ASSOCIATION

62
N/F
LUNNA, STEPHEN R.
& JENNIFER J.

MATCH LINE

SURVEY DATA

Bearing	Station	Deflection
S 24° 29' W	637+40	00°29' RT
S 24° 00' W	638+26	00°11' RT
S 23° 49' W	639+78	43°39' RT
S 67° 28' E	Bck: 640+12 Ahd: 640+38	-26 ft.
S 67° 28' E	640+93	44°09' RT
N 68° 23' W	644+91	45°10' LT
S 66° 26' W	645+47	44°46' LT
S 21° 39' W	645+93	00°28' LT
S 21° 10' W	646+79	00°21' LT
S 20° 49' W	648+48	00°42' RT
S 21° 31' W	651+91	00°15' RT
S 21° 46' W	655+19	44°59' RT
S 66° 46' W	Bck: 655+39 Ahd: 655+47	-8.1 ft.
N 68° 45' W	44°28' RT 656+50	48°36' LT
S 62° 38' W	661+71	22°59' LT
S 39° 38' W	662+84	22°07' LT
S 17° 31' W		

ALIGNMENT DETAIL

EROSION PREVENTION & SEDIMENT CONTROL

LEGEND

PERMANENT EASEMENT	— — — —
TEMPORARY WORKSPACE	– – – – –
CENTERLINE OF STREAM	—— – —— –
TEMPORARY STREAM CROSSING	▨
WETLAND	
50' WETLAND BUFFER	— · — · —
TEMPORARY WETLAND MATTING	▩
WETLAND BUFFER WITHIN PROJECT AREA	░
REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL	—□—□—□—

INSTALL CONSTRUCTION DEMARCATION:
STA. 633+00 TO 640+48 RT - 50' FROM NEW 12" PIPE ℄
STA. 640+48 TO 641+04 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 633+00 TO 641+06 LT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 633+00 TO 633+45 LT - 25' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 641+04 TO 644+91 RT - 25' FROM NEW 12" PIPE ℄
STA. 644+91 TO 645+45 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 645+45 TO 655+19 RT - 25' FROM NEW 12" PIPE ℄
STA. 641+06 TO 650+70 LT - 50' FROM NEW 12" PIPE ℄
STA. 650+70 TO 653+70 LT - 25' FROM NEW 12" PIPE ℄
STA. 653+70 TO 655+19 LT - 50' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 655+19 TO 655+58 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 655+19 TO 655+47 LT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 655+47 TO 655+58 LT - 50' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 656+24 TO 663+00 RT - 25' FROM NEW 12" PIPE ℄
STA. 656+24 TO 663+00 LT - 50' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 650+38 TO 655+33 RT - 25' FROM NEW 12" PIPE ℄
STA. 650+28 TO 650+70 LT - 50' FROM NEW 12" PIPE ℄
STA. 650+70 TO 653+70 LT - 25' FROM NEW 12" PIPE ℄
STA. 653+70 TO 654+15 LT - 50' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 656+24 TO 656+55 RT - 25' FROM NEW 12" PIPE ℄
STA. 655+33 TO 655+58 LT - 50' FROM NEW 12" PIPE ℄
STA. 656+24 TO 657+20 LT - 50' FROM NEW 12" PIPE ℄

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
STA. 645+24

INSTALL MATTING:
STA. 651+16 TO 653+20

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
STA. 655+58

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
STA. 656+24

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.
2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.

HORIZONTAL SCALE
100 50 0 100 200 300 feet
100 50 0 100 200 300 feet
VERTICAL SCALE

CONST. TYPE	1E 2A 1A 2A W 1H W 1A 9 1A 1H 1A
SOIL TYPE	PsC LyD PsC GrB (PAS) PeB (PAS) CaC (PAS) LmB (PAS) LyD
LC/LU	GRASS FORESTED/POWERLINE UNCLASSIFIED FORESTED UNCLASSIFIED PAVED TRAVEL FORESTED/POWERLINE RESIDENTIAL UNCLASSIFIED RESIDENTIAL
STREAMS	
WETLANDS	WETLAND 2012-CM-91 - STATION 650+66 TO 653+70 CLASS II
VERNAL POOLS	
SIGNIFICANT NATURAL COMMUNITIES	
RTE SPECIES	
NRC WILDLIFE HABITAT	
ARCHAEOLOGY SITES	

MATCH LINE

MATCH LINE

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
ANGP-T-C-025	ALIGNMENT SHEET	1	GJM	BCK	IFC 2016 EDITS (05/2016)

	BID		CONSTRUCTION	
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016
	INITIALS	DATE	INITIALS	DATE

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
EPSC PLAN

LOC. CHITTENDEN COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP-EPSC-025 | REV. 1

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

RIGHT-OF-WAY

MATCHLINE	61 N/F BLACKBERRY RIDGE HOMEOWNERS ASSOCIATION; 62 N/F LUNNA, STEPHEN R. & JENNIFER J.	61.01 N/F POODIACK, ROBERT & JUNE	63 N/F MARCOTTE, NORMAN & RITA A.	64 N/F BRODERICK, CLAUDE R.	65 N/F ROBEAR, LEONARD P. & MARY D.	63 N/F MARCOTTE, NORMAN & RITA A.	MATCH LINE

SURVEY DATA

S 17° 31' W	S 17° 56' W	S 18° 02' W	S 17° 54' W	S 17° 52' W	S 17° 39' W	S 18° 08' W	S 17° 42' W	S 27° 17' E
665+47 00°25' RT	670+61 00°06' RT	673+98 00°07' LT	679+46 00°02' LT	684+37 00°13' LT	687+53 00°29' RT	691+35 00°26' LT	692+00 44°59' LT	

ALIGNMENT DETAIL

EROSION PREVENTION & SEDIMENT CONTROL

LEGEND

- PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- CENTERLINE OF STREAM
- TEMPORARY STREAM CROSSING
- WETLAND
- 50' WETLAND BUFFER
- TEMPORARY WETLAND MATTING
- WETLAND BUFFER WITHIN PROJECT AREA
- REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL

INSTALL CONSTRUCTION DEMARCATION:
STA. 663+00 TO 692+00 RT - 25' FROM NEW 12" PIPE ℄
STA. 663+00 TO 683+02 LT - 50' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 683+02 TO 684+48 LT - 25' FROM NEW 12" PIPE ℄
STA. 684+48 TO 692+00 LT - 50' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 683+02 TO 684+48 LT - 25' FROM NEW 12" PIPE ℄

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.
2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.

HORIZONTAL SCALE: 100 50 0 100 200 300 feet
VERTICAL SCALE: 100 50 0 100 200 300 feet

CONST. TYPE	1A		2A	1A	
SOIL TYPE	LyD	CaC (PAS)	LmB (PAS)	LmC	PeC (PAS)
LC/LU	FORESTED/POWERLINES: RESIDENTIAL / NOT CLASSIFIED / RESIDENTIAL / RESIDENTIAL / NOT CLASSIFIED				
STREAMS					
WETLANDS					
VERNAL POOLS					
SIGNIFICANT NATURAL COMMUNITIES					
RTE SPECIES					
NRC WILDLIFE HABITAT					
ARCHAEOLOGY SITES					

MATCH LINE

	BID		CONSTRUCTION	
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016
	INITIALS	DATE	INITIALS	DATE

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
ANGP-T-C-026	ALIGNMENT SHEET				

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
EPSC PLAN

LOC. CHITTENDEN COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP-EPSC-026 | REV. 0

Vermont Gas

Vanasse Hangen Brustlin, Inc.

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

RIGHT-OF-WAY

MATCHLINE

63 N/F MARCOTTE, NORMAN & RITA A.

67 N/F SPENCER, REBECCA

68 N/F TANDAN, RUP & PATRICIA

69 N/F MORIN, JOHN M.; PELKEY-MORIN, LAUREL

69.01 N/F REINDEL, HAROLD & HALL, ADELENE

70 N/F SPERONI, ALDO E. & MARY L.

71 N/F VERMONT TRANSCO LLC

72 N/F LACLAIR, KERMIT E., DIANE D. & RANDALL

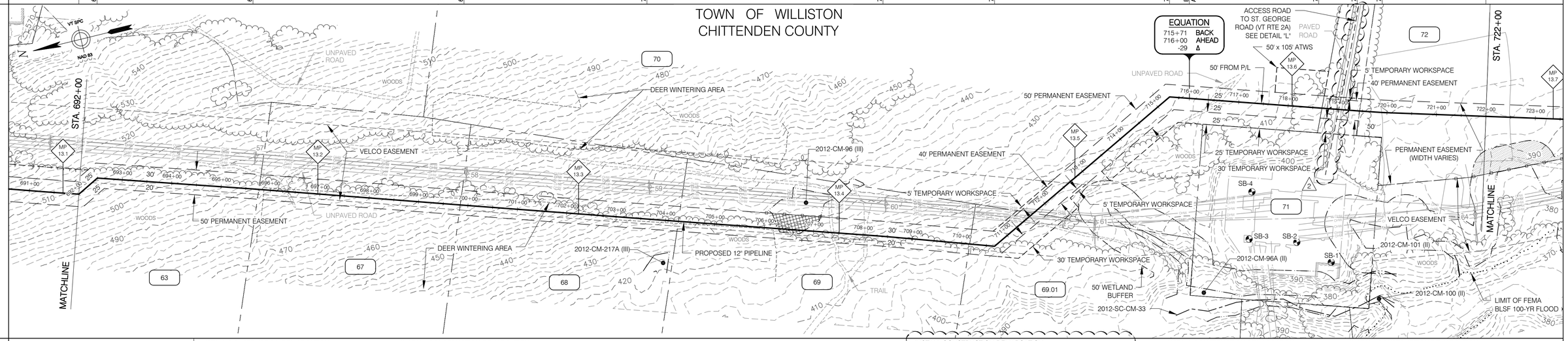
MATCH LINE

SURVEY DATA

692+50	693+93	703+63	708+41	710+67	715+31	718+63	719+41	719+92
S 27° 17' E	S 17° 42' W	S 18° 08' W	S 18° 01' W	S 17° 53' W	S 18° 49' W	S 26° 42' E	S 17° 57' W	S 17° 57' W	S 17° 27' W	S 15° 51' W
44°59' RT	00°26' RT	00°07' LT	00°07' LT	00°55' RT	45°31' LT	44°39' RT	00°00' LT	00°30' LT	01°35' LT

Bal.: 715+71
Ahd.: 716+00
-29.0 ft.

ALIGNMENT DETAIL



EROSION PREVENTION & SEDIMENT CONTROL

LEGEND

- PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- CENTERLINE OF STREAM
- TEMPORARY STREAM CROSSING
- WETLAND
- 50' WETLAND BUFFER
- TEMPORARY WETLAND MATTING
- WETLAND BUFFER WITHIN PROJECT AREA
- REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL

INSTALL CONSTRUCTION DEMARCATION:
STA. 692+00 TO 692+55 RT - 25' FROM NEW 12" PIPE ℄
STA. 692+00 TO 692+46 LT - 25' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 692+55 TO 710+67 RT - 20' FROM NEW 12" PIPE ℄
STA. 692+46 TO 710+84 LT - 30' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 705+63 TO 707+62 LT - 30' FROM NEW 12" PIPE ℄

INSTALL MATTING:
STA. 706+13 TO 707+12

1 INSTALL CONSTRUCTION DEMARCATION:
STA. 710+67 TO 710+88 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 710+88 TO 712+46 RT - 50' FROM NEW 12" PIPE ℄
STA. 710+84 TO 717+72 LT - 25' FROM NEW 12" PIPE ℄
STA. 712+46 TO 713+30 RT - 25' FROM NEW 12" PIPE ℄
STA. 713+30 TO 719+92 RT - 50' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 717+72 TO 718+77 LT - 75' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 719+92 TO 722+00 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 718+71 TO 722+00 LT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 721+26 TO 722+00 LT - WIDTH VARIES FROM NEW 12" PIPE ℄

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
STA. 719+06

HORIZONTAL SCALE
100 50 0 100 200 300 feet
VERTICAL SCALE
100 50 0 100 200 300 feet

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.
2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.

CONST. TYPE	1A	2A	2D			W		1J	2A	1E		1J	1E	
SOIL TYPE	PsC (PAS)		PsC (PAS)		GrB (PAS)			MyC (PAS)					MuD	
LC/LU	NOT CLASSIFIED		RESIDENTIAL		RESIDENTIAL	FORESTED/POWERLINES		RESIDENTIAL	RESIDENTIAL	RESIDENTIAL		PAVED TRAVEL	GRASS AGRICULTURE	
STREAMS														
WETLANDS						WETLAND 2012-CM-96 - STATION 706+13 TO 707+12 CLASS III							WETLAND 2012-CM-101 - STATION 706+13 TO 707+12 CLASS II	
VERNAL POOLS														
SIGNIFICANT NATURAL COMMUNITIES														
RTE SPECIES														
NRC WILDLIFE HABITAT						DEER WINTERING AREA								
ARCHAEOLOGY SITES														

MATCH LINE

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION		BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
						ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
						DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
						DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
ANGP-T-G-07-010	ACCESS ROAD DETAILS	2	GJM	BCK	IFC 2016 EDITS (05/2016)	DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
ANGP-T-C-027	ALIGNMENT SHEET	1	BCK	TDB	VHB EDITS (6/09/15)	DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
EPSC PLAN

LOC. CHITTENDEN COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP-EPSC-027 | REV. 2

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

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South Burlington, VT 05403
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RIGHT-OF-WAY

MATCHLINE

72
N/F
LACLAIR, KERMIT E., DIANE D. & RANDALL

72.01
N/F
LACLAIR, STEPHEN D. & JUDY

73
N/F
CUNEO, TERRENCE & KARI

74
N/F
THERESE M. CARBINO REVOCABLE TRUST; C/O CARBINO, THERESE M.

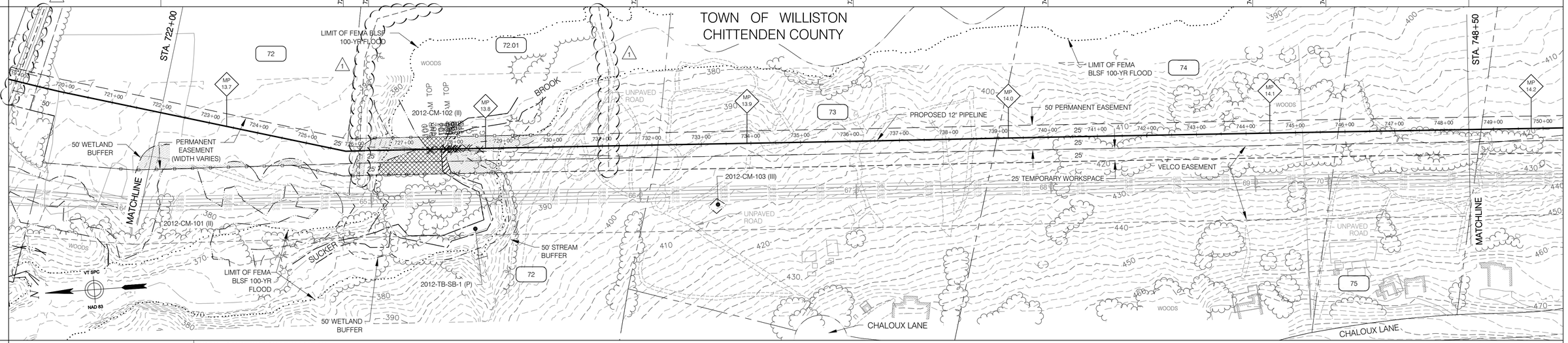
75
N/F
TOWERS, LEE R. & JUDITH A.

MATCH LINE

SURVEY DATA

13'30" LT	38'00" RT	00'01" LT	38'00" LT	38'00" RT	00'01" RT	00'20" RT
S 15° 51' W	S 02° 21' W	S 02° 59' W	S 03° 00' W	S 02° 51' W	S 03° 00' W	S 03° 02' W	S 03° 04' W
725+82	726+32	731+75	735+12	740+05	744+19	745+67	

ALIGNMENT DETAIL



EROSION PREVENTION & SEDIMENT CONTROL

LEGEND

- PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- CENTERLINE OF STREAM
- TEMPORARY STREAM CROSSING
- WETLAND
- 50' WETLAND BUFFER
- TEMPORARY WETLAND MATTING
- WETLAND BUFFER WITHIN PROJECT AREA
- REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL

INSTALL CONSTRUCTION DEMARCATION:
STA. 722+00 TO 725+82 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 725+82 TO 748+50 RT - 50' FROM NEW 12" PIPE ℄
STA. 722+00 TO 748+50 LT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 722+00 TO 725+82 RT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 725+82 TO 727+84 RT - 50' FROM NEW 12" PIPE ℄
STA. 725+93 TO 727+87 LT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 728+00 TO 729+46 RT - 50' FROM NEW 12" PIPE ℄
STA. 728+04 TO 730+22 LT - 25' FROM NEW 12" PIPE ℄

INSTALL MATTING:
STA. 726+42 TO 727+87

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
STA. 734+68

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
STA. 744+68

HORIZONTAL SCALE
100 50 0 100 200 300 feet
VERTICAL SCALE
100 50 0 100 200 300 feet

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.
2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.

CONST. TYPE		1E	W	W	7	1E				
SOIL TYPE		MyC (PAS)	MuD	MyC (PAS)	PsC	PsC (PAS)	MyC (PAS)			
LC/LU		GRASS	FORESTED	GRASS						
		AGRICULTURE		RESIDENTIAL		RESIDENTIAL	RESIDENTIAL			
STREAMS				STREAM 2012-TB-SB-01(P) - STATION 727+74 TO 728+04						
WETLANDS	MATCH LINE		WETLAND 2012-CM-102 - STATION 725+92 TO +729+72 CLASS II							MATCH LINE
VERNAL POOLS		WETLAND 2012-CM-101 - STATION 723+99 TO 723+16 CLASS II	WETLAND 2012-CM-101 - STATION 724+39 TO 725+12 CLASS II							
SIGNIFICANT NATURAL COMMUNITIES										
RTE SPECIES										
NRC WILDLIFE HABITAT										
ARCHAEOLOGY SITES										

VHB Vanasse Hangen Brustlin, Inc.

							BID		CONSTRUCTION	
						ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
						DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
						DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
						DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
ANGP-T-C-028	ALIGNMENT SHEET	1	GJM	BCK	IFC 2016 EDITS (05/2016)	DESIGN MANAGER	SAB	06/28/13	JEO	05/2016
DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION		INITIALS	DATE	INITIALS	DATE

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
EPSC PLAN

LOC. CHITTENDEN COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP-EPSC-028 | REV. 1

Vermont Gas

CHA
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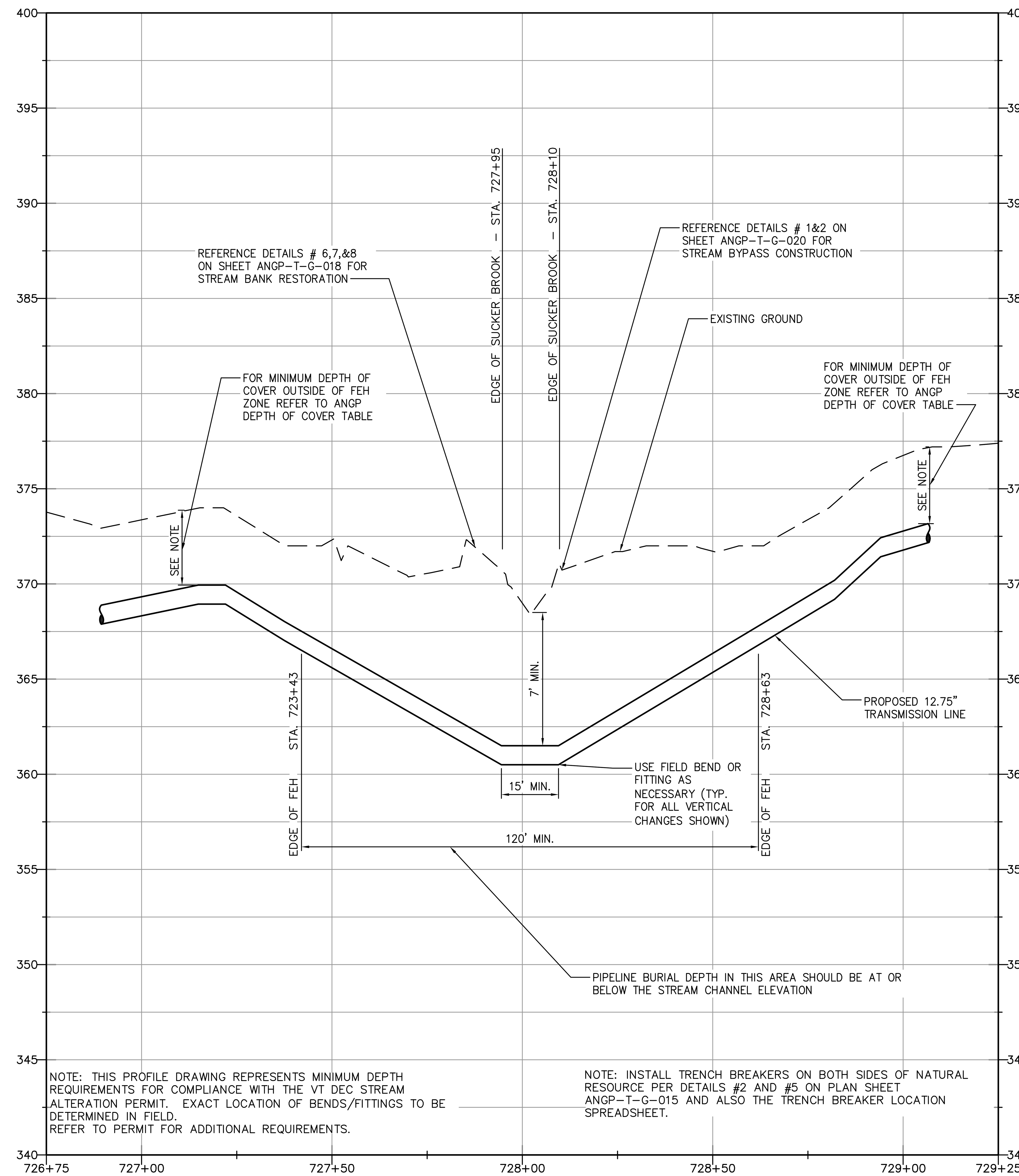
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

PROFILE



STREAM CROSSING PROFILE
SUCKER BROOK
STATION 728+02±
MILE POST 13.79

SCALE: HORIZ. 1"=20'
VERT. 1"=4'

NOTE: STREAM CROSSING MUST BE CONSTRUCTED BETWEEN JUNE 1 AND OCTOBER 1

HORIZONTAL SCALE 20 10 0 20 40 60 feet
4 2 0 4 8 12 feet VERTICAL SCALE

	BID		CONSTRUCTION	
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016
	INITIALS	DATE	INITIALS	DATE

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
OPEN TRENCH STREAM CROSSING PROFILE

LOC. CHITTENDEN COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: AS NOTED | DWG. ANGP–T–C–028A | REV. 0

Vermont Gas

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South Burlington, VT 05403
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STATE OF VERMONT MICHAEL E. HOLLOBOSKI NO. 97764 CIVIL LICENSED PROFESSIONAL ENGINEER

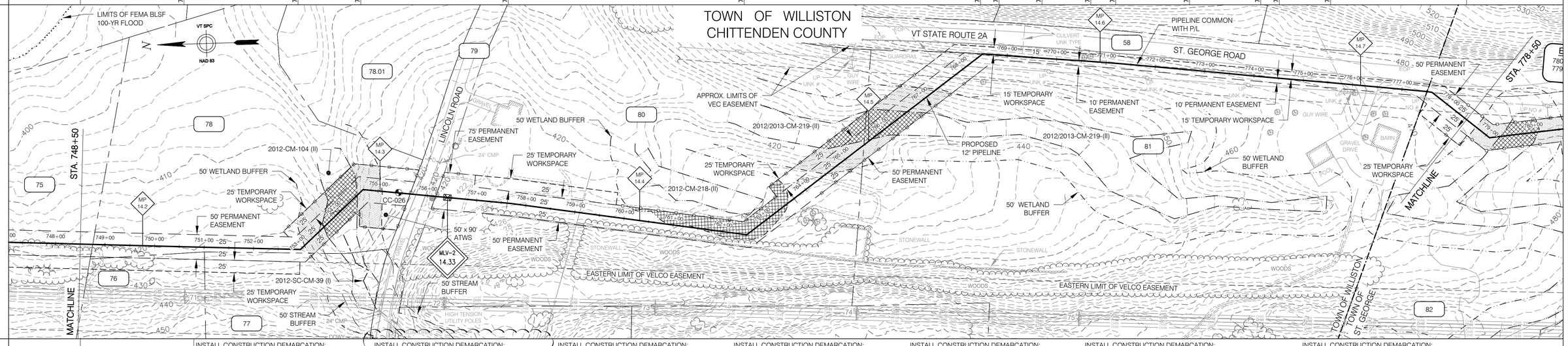
RIGHT–OF–WAY

MATCHLINE | 75 N/F TOWERS, LEE R. & JUDTH A. | 76 N/F HAKIZIMANA, SEBASTIAN; MUKANDORI, MARTHA | 78 N/F CHALOUX, YVETTE C/O FRENCH, MARY | 77 N/F CAMPBELL, ELLEN | 79 LINCOLN ROAD | 80 N/F CAVANAUGH, WILLIAM F. & CHRISTINE | 58 ST. GEORGE ROAD (RTE. 2A) | 81 N/F ARMSTRONG, KEVIN & PHILLANE | TOWN OF WILLISTON / TOWN OF ST. GEORGE | 82 N/F PILLSBURY, DANIEL | MATCH LINE

SURVEY DATA

50.00' LT	45.02' LT	49.04' RT	02.10' RT	45.00' LT	41.04' RT	40.42' LT	00.34' LT	00.34' RT	39.46' RT	39.16' RT	00.00' LT	00.28' LT	00.20' RT
S 03° 04' W	S 02° 59' W	S 42° 04' E	S 07° 00' W	S 09° 11' W	S 35° 49' E	S 05° 15' W	S 05° 58' W	S 05° 24' W	S 05° 58' W	S 06° 45' W	S 07° 02' W	S 07° 02' W	S 06° 33' W	S 06° 53' W
750+84	752+95	754+70	757+89	762+50	768+50	768+72	769+75	770+74	771+24	772+74	774+18	774+24	775+60	

ALIGNMENT DETAIL



EROSION PREVENTION & SEDIMENT CONTROL

LEGEND

- PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- CENTERLINE OF STREAM
- TEMPORARY STREAM CROSSING
- WETLAND
- 50' WETLAND BUFFER
- TEMPORARY WETLAND MATTING
- WETLAND BUFFER WITHIN PROJECT AREA
- REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL

INSTALL CONSTRUCTION DEMARCATION:
STA. 748+50 TO 752+94 RT - 50' FROM NEW 12" PIPE ℄
STA. 748+50 TO 752+60 LT - 25' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 752+94 TO 754+54 RT - 25' FROM NEW 12" PIPE ℄
STA. 752+60 TO 755+65 LT - 50' FROM NEW 12" PIPE ℄
STA. 754+54 TO 755+65 RT - 75' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 756+10 TO 768+78 RT - 25' FROM NEW 12" PIPE ℄
STA. 756+30 TO 759+81 LT - 50' FROM NEW 12" PIPE ℄
1

INSTALL CONSTRUCTION DEMARCATION:
STA. 759+81 TO 763+45 LT - 25' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 763+45 TO 768+00 LT - 50' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 768+78 TO 777+30 RT - 10' FROM NEW 12" PIPE ℄
STA. 777+30 TO 777+70 RT - WIDTH VARIES FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 777+70 TO 778+50 RT - 50' FROM NEW 12" PIPE ℄
STA. 778+00 TO 778+50 LT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 752+94 TO 754+37 RT - 25' FROM NEW 12" PIPE ℄
STA. 753+61 TO 755+78 LT - 50' FROM NEW 12" PIPE ℄
STA. 754+13 TO 755+44 RT - 75' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 756+10 TO 756+60 RT - 25' FROM NEW 12" PIPE ℄
STA. 756+30 TO 756+80 LT - 50' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 759+81 TO 763+45 LT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 764+06 TO 768+24 RT - 25' FROM NEW 12" PIPE ℄
STA. 763+45 TO 767+53 LT - 50' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 778+19 TO 778+50 RT - 50' FROM NEW 12" PIPE ℄
STA. 778+24 TO 778+50 LT - 25' FROM NEW 12" PIPE ℄

INSTALL MATTING:
STA. 753+52 TO 754+77

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
STA. 755+72 & STA. 756+30

INSTALL MATTING:
STA. 760+06 TO 763+70

INSTALL MATTING:
STA. 765+68 TO 766+59

HORIZONTAL SCALE
100 50 0 100 200 300 feet
VERTICAL SCALE
100 50 0 100 200 300 feet

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.
2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.

CONST. TYPE	1E	1A	W	7	W	1A	11	1A	2A	W	1A	4H	1E	
SOIL TYPE	PsC (PAS)	LyD	MuD	LyD	MyC (PAS)	LyD	LyD	CaC (PAS)						
LC/LU	GRASS			UNPAVED	GRASS									
	NOT CLASSIFIED			TRAVEL	RESIDENTIAL			RESIDENTIAL				AGRICULTURE		
STREAMS														
WETLANDS				WETLAND 2012-CM-104 - STATION 753+52 TO 754+77 CLASS II				WETLAND 2012-CM-218 - STATION 764+06 TO 767+54 CLASS II			WETLAND 2012/2013-CM-219 - STATION 764+06 TO 767+54 CLASS II			
VERNAL POOLS														
SIGNIFICANT NATURAL COMMUNITIES														
RTE SPECIES														
NRC WILDLIFE HABITAT														
ARCHAEOLOGY SITES														

MATCH LINE | MATCH LINE

Vanasse Hangen Brustlin, Inc.

DWG. NO.	REFERENCE DWG.	REV	DSN	CK		DESCRIPTION		BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
							ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
							DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
ANGP–T–G–07–10	ACCESS ROAD DETAILS						DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
ANGP–T–G–021	STATION AND VALVE DETAILS						DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
ANGP–T–C–029	ALIGNMENT SHEET	1	BCK	TDB		VHB EDITS (6/09/15)	DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
EPSC PLAN

LOC. CHITTENDEN COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP–EPSC–029 | REV. 1

Vermont Gas

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South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

RIGHT-OF-WAY

MATCHLINE	82 N/F PILLSBURY, DANIEL	ACCESS RIGHT OF WAY	82 N/F PILLSBURY, DANIEL	58.01 ST. GEORGE ROAD VT STATE ROUTE 2A	82.08 N/F PILLSBURY, LARRY & CAROLYN	82.09 N/F PILLSBURY, DANIEL	MATCHLINE

SURVEY DATA

Bearing	Angle	Station
S 06° 53' W	03°17' RT	777+51
S 10° 11' W	00°09' LT	777+54
S 10° 01' W	00°09' LT	777+56
S 09° 51' W	00°09' LT	777+59
S 09° 41' W	30°11' RT	777+61
S 39° 53' W	44°59' LT	779+09
S 05° 07' E	86.6 ft.	Bck: 780+79 Ahd: 779+92
S 05° 07' E	00°01' LT	781+57
S 05° 08' E	00°08' LT	783+63
S 05° 16' E	00°13' LT	785+58
S 05° 30' E	13°56' RT	787+36
S 08° 27' W	00°11' RT	789+13
S 08° 38' W	38°27' LT	791+18
S 29° 50' E	34°20' RT	792+37
S 04° 31' W	00°54' LT	792+86
S 03° 36' W	01°48' LT	793+43
S 01° 48' W	01°48' LT	794+00
S 00° 00' W	01°48' LT	794+57
S 01° 49' E	01°48' LT	795+14
S 03° 37' E	27°49' RT	795+71
S 24° 12' W	38°52' RT	797+02
S 63° 04' W	14°44' LT	798+46
S 48° 20' W		

ALIGNMENT DETAIL

EROSION PREVENTION & SEDIMENT CONTROL

LEGEND

PERMANENT EASEMENT	— — — —
TEMPORARY WORKSPACE	– – – – – –
CENTERLINE OF STREAM	—— – —— –
TEMPORARY STREAM CROSSING	▨
WETLAND	—··—··—
50' WETLAND BUFFER	—·—··—·—
TEMPORARY WETLAND MATTING	▩
WETLAND BUFFER WITHIN PROJECT AREA	░
REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL	—□—□—□—

INSTALL CONSTRUCTION DEMARCATION:
STA. 778+50 TO 778+70 RT - 50' FROM NEW 12" PIPE ℄
STA. 778+50 TO 780+51 RT - 25' FROM NEW 12" PIPE ℄
STA. 778+50 TO 800+20 LT - 25' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 780+51 TO 781+05 RT - 50' FROM NEW 12" PIPE ℄
STA. 781+05 TO 782+50 RT - 25' FROM NEW 12" PIPE ℄
STA. 782+50 TO 796+84 RT - 50' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 796+84 TO 797+49 RT - 25' FROM NEW 12" PIPE ℄
STA. 797+49 TO 798+70 RT - 50' FROM NEW 12" PIPE ℄
STA. 798+70 TO 802+00 RT - 25' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 800+20 TO 802+00 LT - 50' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 778+50 TO 778+70 RT - 50' FROM NEW 12" PIPE ℄
STA. 778+70 TO 778+51 RT - 25' FROM NEW 12" PIPE ℄
STA. 778+50 TO 780+21 LT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 780+53 TO 781+05 RT - 50' FROM NEW 12" PIPE ℄
STA. 781+05 TO 781+50 RT - 25' FROM NEW 12" PIPE ℄
STA. 781+50 TO 783+02 RT - 50' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 798+37 TO 798+70 RT - 50' FROM NEW 12" PIPE ℄
STA. 798+76 TO 800+20 LT - 25' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 798+70 TO 801+21 RT - 25' FROM NEW 12" PIPE ℄
STA. 800+20 TO 800+56 LT - 50' FROM NEW 12" PIPE ℄

INSTALL MATTING:
STA. 779+09 TO 780+11

INSTALL MATTING:
STA. 781+58 TO 781+98

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
STA. 788+00

INSTALL MATTING:
STA. 799+50 TO 799+98

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.
2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.

HORIZONTAL SCALE
100 50 0 100 200 300 feet
100 50 0 100 200 300 feet
VERTICAL SCALE

CONST. TYPE	1E	W 2A	1E	2A	W	1E	11	1E	2A	1E	2A W	1A
SOIL TYPE	CaC (PAS)	LmB (PAS)	LyD	LmC	FsC	FsB (PAS)	FaE					
LC/LU	GRASS AGRICULTURAL	UNPAVED TRAVEL	GRASS AGRICULTURAL	RESIDENTIAL	AGRICULTURAL							
STREAMS												
WETLANDS	WETLAND 2012-CM-220 - STATION 777+50 TO 779+84 CLASS II	WETLAND 2012/2013-CM-106 STATION 781+05 TO 782+52 CLASS II	WETLAND 2012-CM-221 - STATION 798+75 TO 800+71 CLASS II									
VERNAL POOLS												
SIGNIFICANT NATURAL COMMUNITIES												
RTE SPECIES												
NRC WILDLIFE HABITAT												
ARCHAEOLOGY SITES												

MATCH LINE

MATCH LINE

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
ANGP-T-G-07-10	ACCESS ROAD DETAILS				
ANGP-T-C-030	ALIGNMENT SHEET				

	BID		CONSTRUCTION	
	INITIALS	DATE	INITIALS	DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
EPSC PLAN

LOC. CHITTENDEN COUNTY, VERMONT

Vermont Gas

VHB Vanasse Hangen Brustlin, Inc.

CHA
38 Eastwood Drive, Suite 105
South Burlington, VT 05403
Main: (802) 735-0372 · www.chacompanies.com

YEAR: 2016	W.O.	SCALE: 1" = 100'	DWG. ANGP-EPSC-030	REV. 0

RIGHT-OF-WAY

MATCH LINE

82.09
N/F
PILLSBURY, DANIEL & JUDITH

1

83
N/F
BELIVEAU, PHILIP
& JALBERT, CAROLINE

MATCH LINE

SURVEY DATA

805+31 — 44°41' LT
S 48° 20' W
S 03° 38' W
809+50 — 24°33' RT
S 28° 11' W
810+35 — 28°11' LT
S 0° 0' W
810+91 — 27°57' LT
S 27° 56' E
812+76 — 27°57' RT
S 1° 51' E
Bck: 821+88 Ahd: 822+08 — -20.0 ft.
S 01° 41' E
824+99 — 00°01' LT
S 01° 43' E
829+87 — 00°04' RT
S 01° 38' E

ALIGNMENT DETAIL

EROSION PREVENTION & SEDIMENT CONTROL

LEGEND

- PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- CENTERLINE OF STREAM
- TEMPORARY STREAM CROSSING
- WETLAND
- 50' WETLAND BUFFER
- TEMPORARY WETLAND MATTING
- WETLAND BUFFER WITHIN PROJECT AREA
- REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL

INSTALL CONSTRUCTION DEMARCATION:
STA. 802+00 TO 812+21 RT - 25' FROM NEW 12" PIPE ℄
STA. 802+00 TO 812+45 LT - 50' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 812+21 TO 812+89 RT- WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 812+89 TO 818+52 RT- 45' FROM NEW 12" PIPE ℄
STA. 812+45 TO 812+80 LT - WIDTH VARIES FROM NEW 12" PIPE ℄
STA. 812+80 TO 831+00 LT - 30' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 818+52 TO 831+00 RT - 20' FROM NEW 12" PIPE ℄

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
STA. 818+60

INSTALL STABILIZED CONSTRUCTION ENTRANCE:
STA. 827+38

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.
2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.

HORIZONTAL SCALE
100 50 0 100 200 300 feet
100 50 0 100 200 300 feet
VERTICAL SCALE

CONST. TYPE	(1A) (1H) (1A) (2D)
SOIL TYPE	FaE / FsC / FaC / FaE / ScA (PAS) / MyB (PAS) / GrB (PAS)
LC/LU	FORESTED/POWERLINE / PASTURE; AGRICULTURE / NOT CLASSIFIED
STREAMS	
WETLANDS	
VERNAL POOLS	
SIGNIFICANT NATURAL COMMUNITIES	
RTE SPECIES	
NRC WILDLIFE HABITAT	
ARCHAEOLOGY SITES	

MATCH LINE

MATCH LINE

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
ANGP-T-G-07-010	ACCESS ROAD DETAILS				
ANGP-T-C-031	ALIGNMENT SHEET	1	BCK	TDB	PILLSBURY REROUTE (6/05/15)

	BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

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LOC. CHITTENDEN COUNTY, VERMONT

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YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP-EPSC-031 | REV. 1

RIGHT-OF-WAY

MATCHLINE

83
N/F
BELIVEAU, PHILIP

84
N/F
TOWN OF ST. GEORGE

MATCH LINE

SURVEY DATA

S 01° 38' E	S 01° 41' E	S 28° 30' W	S 01° 41' E	S 01° 43' E	S 01° 45' E	S 01° 41' E

834+21 00°03' LT · 838+09 30°10' RT · 838+79 30°10' LT · 838+92 00°02' LT · 843+33 00°01' LT · 848+36 00°03' RT

ALIGNMENT DETAIL

EROSION PREVENTION & SEDIMENT CONTROL

LEGEND

- PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- CENTERLINE OF STREAM
- TEMPORARY STREAM CROSSING
- WETLAND
- 50' WETLAND BUFFER
- TEMPORARY WETLAND MATTING
- WETLAND BUFFER WITHIN PROJECT AREA
- REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROL

INSTALL CONSTRUCTION DEMARCATION:
STA. 831+00 TO 837+90 RT - 20' FROM NEW 12" PIPE ℄
STA. 831+00 TO 838+09 LT - 30' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 837+90 TO 850+50 RT - 25' FROM NEW 12" PIPE ℄
STA. 838+09 TO 840+90 LT - 25' FROM NEW 12" PIPE ℄

INSTALL CONSTRUCTION DEMARCATION:
STA. 840+90 TO 843+70 LT - 50' FROM NEW 12" PIPE ℄
STA. 843+70 TO 844+25 LT - 25' FROM NEW 12" PIPE ℄
STA. 844+25 TO 850+50 LT - 50' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 832+33 TO 833+90 RT - 20' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 836+70 TO 837+90 RT - 20' FROM NEW 12" PIPE ℄
STA. 837+90 TO 842+22 RT - 25' FROM NEW 12" PIPE ℄
STA. 836+05 TO 838+09 LT - 30' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 838+09 TO 840+90 LT - 25' FROM NEW 12" PIPE ℄
STA. 840+90 TO 841+30 LT - 50' FROM NEW 12" PIPE ℄

INSTALL REINFORCED PERIMETER CONTROL:
STA. 843+18 TO 844+47 RT - 25' FROM NEW 12" PIPE ℄
STA. 843+27 TO 843+70 LT - 50' FROM NEW 12" PIPE ℄
STA. 843+70 TO 844+25 LT - 25' FROM NEW 12" PIPE ℄
STA. 844+25 TO 844+75 LT - 50' FROM NEW 12" PIPE ℄

INSTALL MATTING:
STA. 832+83 TO 832+91
STA. 833+13 TO 833+40

INSTALL MATTING:
STA. 837+69 TO 840+44

INSTALL MATTING:
STA. 843+68 TO 844+27

1. REINFORCED CONSTRUCTION DEMARCATION AND REINFORCED PERIMETER CONTROLS ARE ONLY SHOWN WITHIN 50 FT. OF WATER RESOURCE AREAS AND AT CONSTRUCTION ENTRANCES - SEE "CONSTRUCTION EPSC NOTES" - NOTE #6. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS ARE NOT TO CROSS ACCESS WAYS OR ACTIVE FLOW PATHS. FOR AREAS THAT ARE > 50 FT. FROM WATER RESOURCE AREAS, CONSTRUCTION DEMARCATION IS TO BE INSTALLED ALONG PERIMETER OF PROJECT AREA / LIMITS OF DISTURBANCE AND PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF - SEE NOTE #6.
2. FOR AREAS DESIGNATED AS PRIME AGRICULTURAL SOILS (PAS), SEE "CONSTRUCTION WITHIN PRIME AGRICULTURAL SOILS (PAS) AREAS" (ANGP-T-G-011), FOR SOIL SEGREGATION AND ASSOCIATED CONSTRUCTION PROCEDURES.

HORIZONTAL SCALE: 100 50 0 100 200 300 feet
VERTICAL SCALE: 100 50 0 100 200 300 feet

CONST. TYPE	W · 2D · W 2A · W · 1A
SOIL TYPE	HnB · MyB (PAS) · GrB (PAS) · ScB (PAS) · MyB (PAS) · PeB (PAS) · FaC
LC/LU	PASTURE · FORESTED / NOT CLASSIFIED · NOT CLASSIFIED
STREAMS	STREAM 2012-DITCH-CM-40 (D) - STATION 832+86
WETLANDS	WETLAND 2012-CM-108 & WETLAND 2012-CM-109 - STATION 832+83 TO 833+40 CLASS III · WETLAND 2012-CM-111 - STATION 836+78 TO 841+60 CLASS II · WETLAND 2012-CM-112 - STATION 843+68 TO 844+27 CLASS III
VERNAL POOLS	
SIGNIFICANT NATURAL COMMUNITIES	
RTE SPECIES	
NRC WILDLIFE HABITAT	
ARCHAEOLOGY SITES	

MATCH LINE

DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
ANGP-T-G-07-010	ACCESS ROAD DETAILS	2	GJM	BCK	IFC 2016 EDITS (05/2016)
ANGP-T-C-032	ALIGNMENT SHEET	1	BCK	TDB	VHB EDITS (6/09/15)

	BID INITIALS	BID DATE	CONSTRUCTION INITIALS	CONSTRUCTION DATE
ENVIRONMENTAL	JLS	06/28/13	JLS	05/2016
DRAFTING DESIGNER	GIL	06/28/13	GJM	05/2016
DRAFTING SUPERVISOR	BZD	06/28/13	BCK	05/2016
DESIGN ENGINEER	MDF	06/28/13	GEW	05/2016
DESIGN MANAGER	SAB	06/28/13	JEO	05/2016

VERMONT GAS
PROPOSED 12" PIPELINE
ADDISON NATURAL GAS PROJECT
EPSC PLAN

LOC. CHITTENDEN COUNTY, VERMONT

YEAR: 2016 | W.O. | SCALE: 1" = 100' | DWG. ANGP-EPSC-032 | REV. 2

Vermont Gas

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