STATE OF VERMONT
AGENCY OF TRANSPORTATION

R. O. W. PLANS

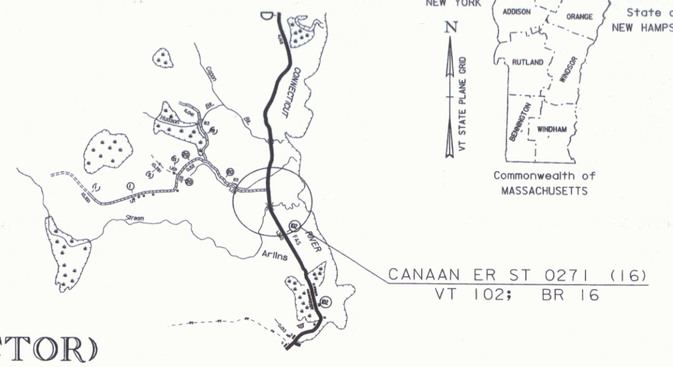
PROPOSED IMPROVEMENT
BRIDGE PROJECT
TOWN OF CANAAN
COUNTY OF ESSEX
VT. ROUTE 102 (MAJOR COLLECTOR)
BRIDGE #16

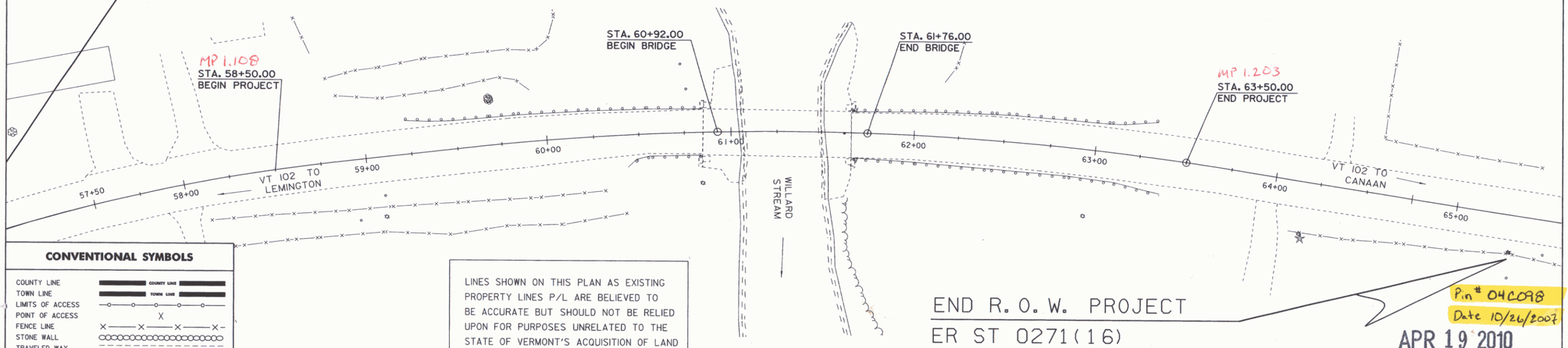
PROJECT LOCATION : BEGINNING AT A POINT ON VT 102 APPROXIMATELY 2.0 MILES NORTH OF ITS JUNCTION WITH VT 26 AND PROCEEDING NORTHERLY APPROXIMATELY .1 MILES ALONG VT 102.

PROJECT DESCRIPTION : REPLACEMENT OF EXISTING BRIDGE WITH A NEW STRUCTURE, INCLUDING RELATED CHANNEL AND ROADWAY APPROACH WORK.

LENGTH OF STRUCTURE : 84 FEET.
LENGTH OF ROADWAY : 416 FEET.
LENGTH OF PROJECT : 500 FEET.
LENGTH OF ROW PROJECT : 909.83 FEET.

BEGIN R. O. W. PROJECT
ER ST 0271(16)
STA. 56+21.00 33.44' RT.





CONVENTIONAL SYMBOLS

COUNTY LINE
TOWN LINE
LIMITS OF ACCESS
POINT OF ACCESS
FENCE LINE
STONE WALL
TRAVELED WAY
GUARD RAIL
RAILROAD
SURVEY LINE
CULVERT
POWER POLE
TELEPHONE POLE
TREES
CONTROL OF ACCESS
PROPERTY LINE
R.O.W. TAKING LINE
SLOPE RIGHTS
TOP OF CUT
TOE OF SLOPE

SURVEYED BY :
SURVEYED DATE :

DATUM
VERTICAL
HORIZONTAL

LINES SHOWN ON THIS PLAN AS EXISTING PROPERTY LINES P/L ARE BELIEVED TO BE ACCURATE BUT SHOULD NOT BE RELIED UPON FOR PURPOSES UNRELATED TO THE STATE OF VERMONT'S ACQUISITION OF LAND AND RIGHTS FOR THIS PROJECT.

ALL DRIVES AS INDICATED ON PLANS ARE SUBJECT TO PERMITS PURSUANT TO TITLE 19 SECTION 1111, V.S.A

END R. O. W. PROJECT
ER ST 0271(16)
STA. 65+30.83 24.32' RT.

SCALE 1"=25'-0
25 0 25

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JUNE 15, 2006 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

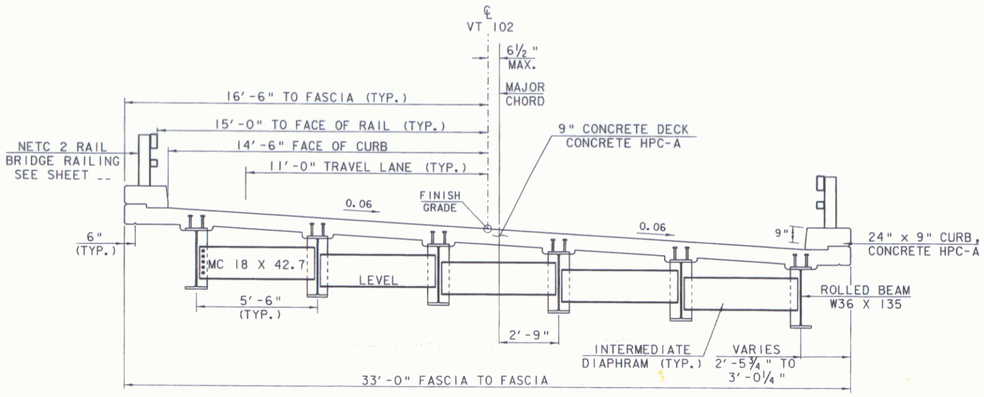
Pin # 04C098
Date 10/26/2007

APR 19 2010

APPROVED _____ DATE 10/26/07
Director of Program Development

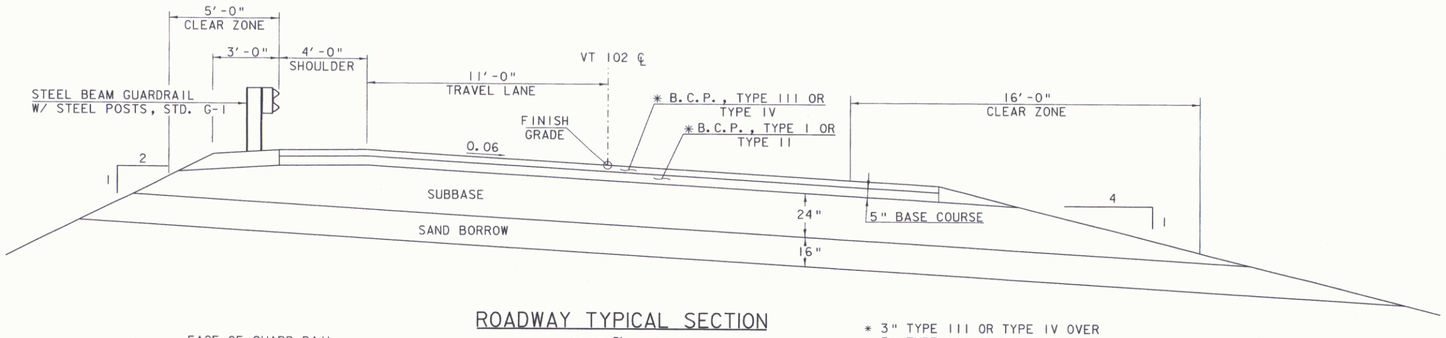
APPROVED _____ DATE 10/25/07
Chief of Right of Way

CANAAN
ER ST 0271(16)
R.O.W. SHEET 1 OF 15 SHEETS



BRIDGE TYPICAL

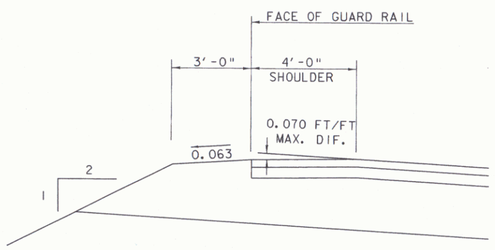
SCALE ⅜"= 1'-0



ROADWAY TYPICAL SECTION

SCALE ⅜"= 1'-0

* 3" TYPE III OR TYPE IV OVER
5" TYPE III OR TYPE IV



DETAIL OF GUARD RAIL ON HIGH SIDE OF BANKED SECTION

SEEDING FORMULA
RURAL AREAS

% WT.	LBS./A.	NAME	PUR %	GERM %
37.5	22.5	CREEPING RED FESCUE	98	85
37.5	22.5	TALL FESCUE	95	90
5.0	3.0	RED TOP	95	90
15.0	9.0	BIRDSFOOT TREFOIL	98	85
5.0	3.0	ANNUAL RYEGRASS	95	85
100.0	60.0			

GENERAL NOTES

SEED MIXTURE: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.

SEED: TO BE APPLIED PER SEEDING FORMULAS OR AS DIRECTED BY THE ENGINEER.

FERTILIZER: FORMULA 10-20-10, TO BE USED WITH SEED, APPLIED AT THE RATE OF 500 LBS./ACRE. (HYDRO SEEDERS MAY USE 19-19-19 FORMULA).

AGRICULTURAL LIMESTONE: TO BE APPLIED AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.

HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.

TOPSOIL: TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

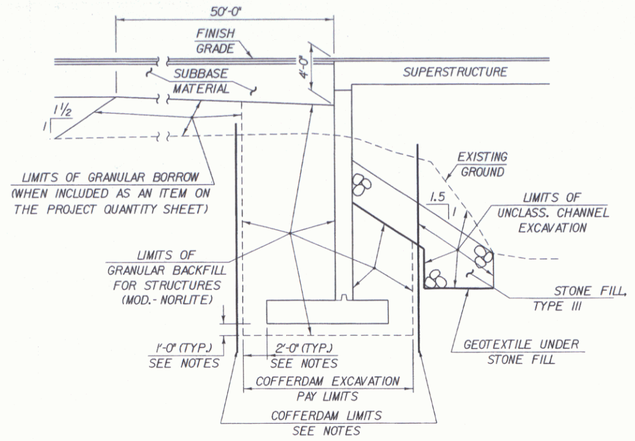
MATERIAL ITEM	TOLERANCE
PAVEMENT	±¼" TOTAL THICKNESS
AGGREGATE SURFACE COURSE	±½"
BASE COURSE	±½"
SUBBASE	± 1"
SAND BORROW	± 1"
GRANULAR BORROW	± 1"

APR 19 2010

TYPICAL SECTIONS (1)

PROJECT NAME: Canaan
PROJECT NUMBER: ER ST 0271(16)

FILE NAME: Structures\x04c098typ.dgn
PROJECT LEADER: M. Evans-Mongeon
DESIGNED BY: S. Scribner
x04c098typ1.1
PLOT DATE: 03-AUG-2007
DRAWN BY: T. Husk
CHECKED BY:
ROW SHEET 2 OF 15 SHEETS

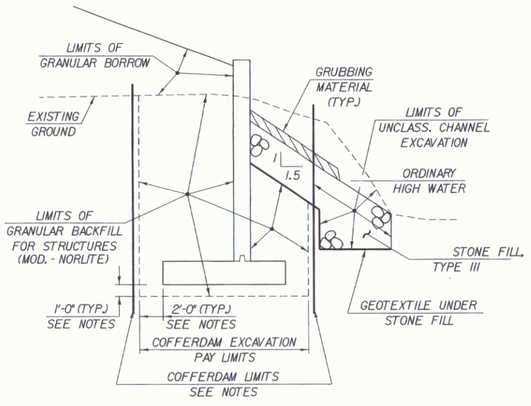


TYPICAL ABUTMENT SECTION

(NOT TO SCALE)

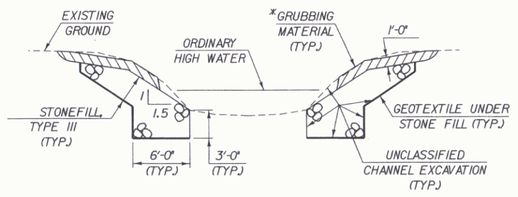
NOTES

1. COFFERDAM LIMITS TO BE DETERMINED BY THE CONTRACTOR.
2. THE PAY LIMITS OF "COFFERDAM EXCAVATION, EARTH" AND "COFFERDAM EXCAVATION, ROCK" SHALL BE 2'-0" OUTSIDE THE PERIMETER OF THE FOOTING, UP TO EXISTING GROUND OR BOTTOM OF SUBBASE, WHICHEVER IS LOWER.
3. ONE FOOT UNDERCUT AS DETERMINED NECESSARY BY THE RESIDENT ENGINEER.
4. IF A COFFERDAM IS CONSTRUCTED WHICH IS LARGER THAN THE INDICATED COFFERDAM EXCAVATION PAY LIMITS, PAYMENT FOR ALL UNCLASSIFIED CHANNEL EXCAVATION, INCLUDING THAT PORTION WHICH IS INSIDE THE COFFERDAM BUT OUTSIDE THE COFFERDAM EXCAVATION PAY LIMITS, WILL BE MADE AT THE CONTRACT UNIT PRICE FOR UNCLASSIFIED CHANNEL EXCAVATION.



TYPICAL WINGWALL SECTION

(NOT TO SCALE)



TYPICAL CHANNEL SECTION

(NOT TO SCALE)

*GRUBBING MATERIAL SHALL NOT BE PLACED ON THE STONE FILL IN THE AREA UNDER THE BRIDGE. WHENEVER CHANNEL SLOPE INTERSECTS ROADWAY SUBBASE, GRUBBING MATERIAL SHALL BEGIN AT THE BOTTOM OF SUBBASE.

APR 19 2010

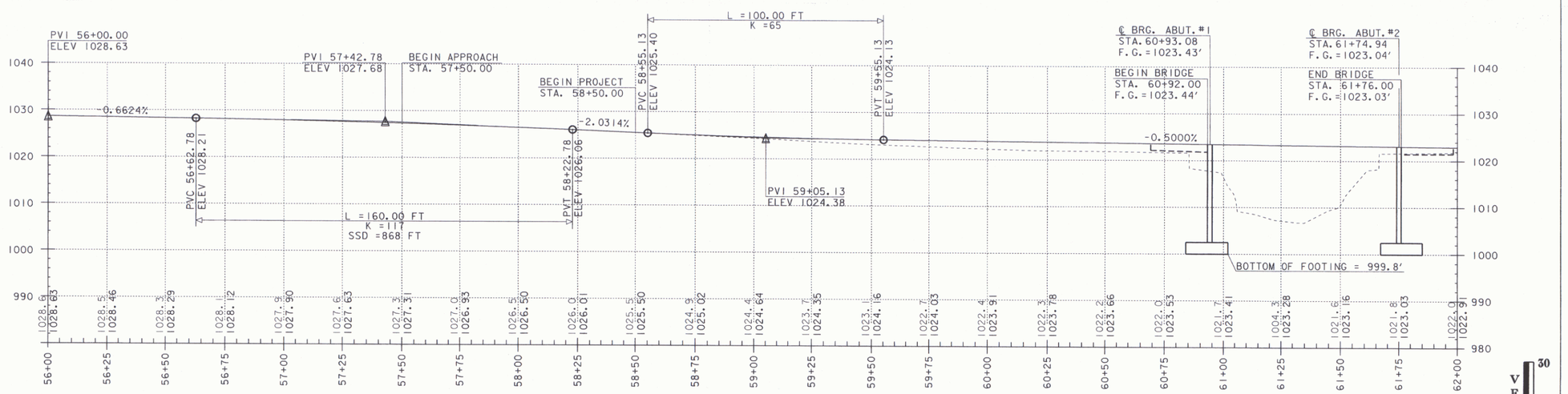
TYPICAL SECTIONS (2)

PROJECT NAME: Canaan
PROJECT NUMBER: ER ST 0271(16)

FILE NAME: Structures\x04c098typ.dgn
PROJECT LEADER: M. Evans-Mongeon
DESIGNED BY: S. Scribner
x04c098typ2.1

PLOT DATE: 03-AUG-2007
DRAWN BY: T. Husk
CHECKED BY:
ROW SHEET 3 OF 15 SHEETS

PROFILE ALONG CENTERLINE VT 102



APR 19 2010

NOTE: ELEVATIONS SHOWN TO THE TENTH ARE EXISTING GROUND
ELEVATIONS SHOWN TO THE HUNDRED ARE FINISH GRADE

PROFILE SHEET #1

PROJECT NAME: Canaan	
PROJECT NUMBER: ER ST 0271(16)	
FILE NAME: Structures\x04c098xs.dgn	PLOT DATE: 03-AUG-2007
PROJECT LEADER: M. Evans-Mongeon	DRAWN BY: T. Husk
DESIGNED BY: S. Scribner	CHECKED BY:
x04c098pfl.i	ROW SHEET 4 OF 15 SHEETS

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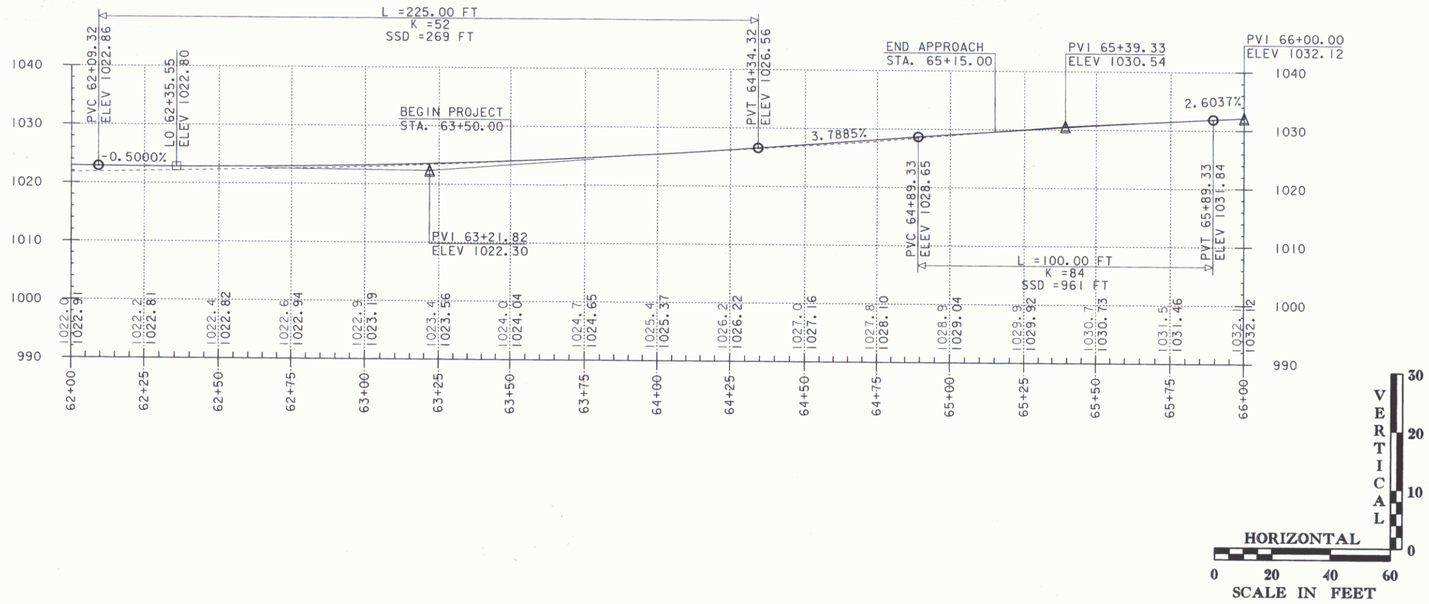
PROFILE ALONG CENTERLINE VT 102



NOTE: ELEVATIONS SHOWN TO THE TENTH ARE EXISTING GROUND
ELEVATIONS SHOWN TO THE HUNDRED ARE FINISH GRADE

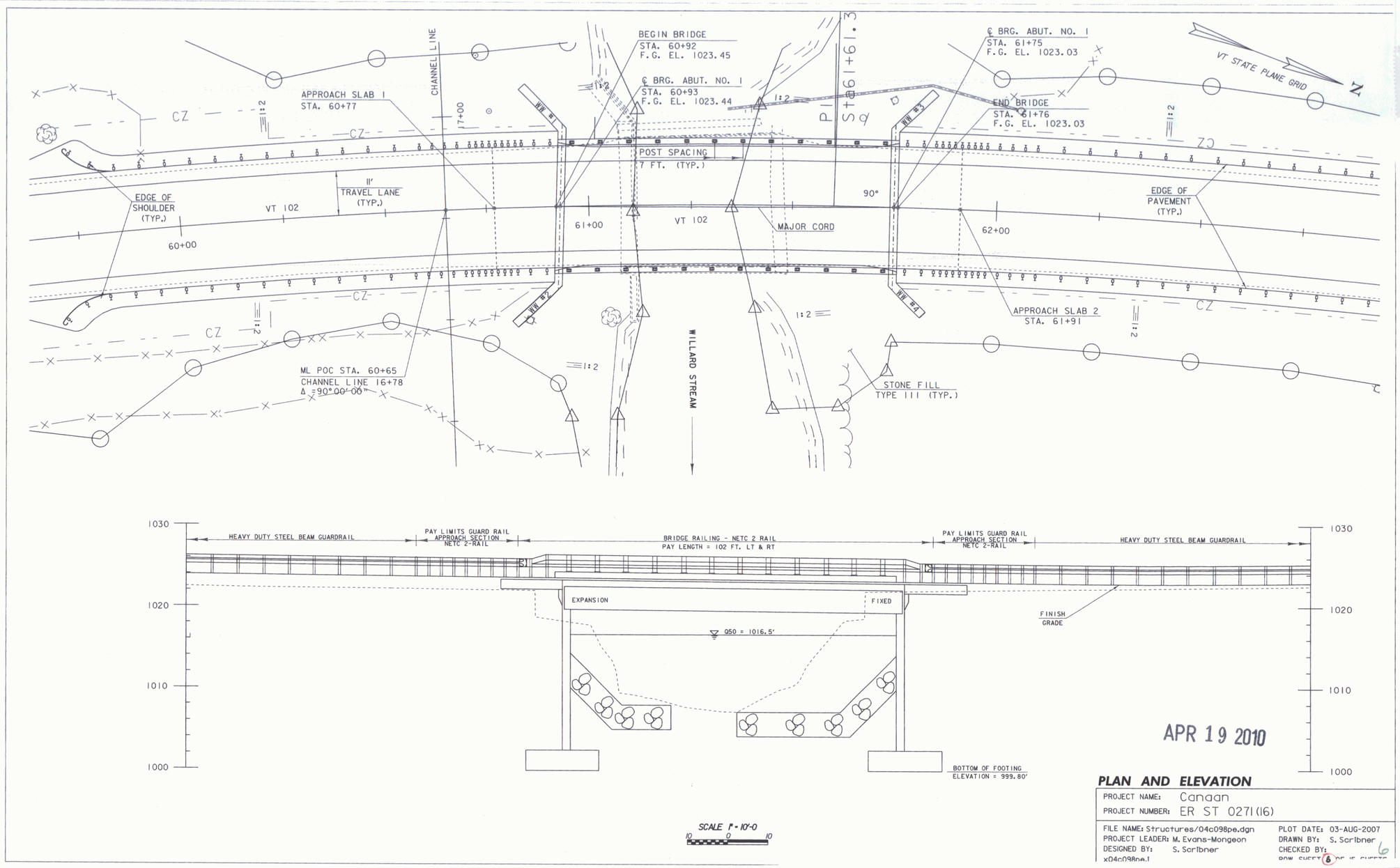
APR 19 2010

PROFILE SHEET #2

PROJECT NAME:	Canaan
PROJECT NUMBER:	ER ST 0271(16)

FILE NAME: Structures\x04c098xs.dgn	PLOT DATE: 03-AUG-2007
PROJECT LEADER: M. Evans-Mongeon	DRAWN BY: T. Husk
DESIGNED BY: S. Scribner	CHECKED BY:
x04c098pf2.1	ROW SHEET 5 OF 15 SHEETS

5



SCALE 1" = 10'-0

APR 19 2010

PLAN AND ELEVATION

PROJECT NAME: Canaan
PROJECT NUMBER: ER ST 0271(16)

FILE NAME: Structures/04c098pe.dgn
PROJECT LEADER: M. Evans-Mongeon
DESIGNED BY: S. Scribner
x04c098pe.l

PLOT DATE: 03-AUG-2007
DRAWN BY: S. Scribner
CHECKED BY:

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

PRELIMINARY INFORMATION SHEET

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	TIE SHEET
	LAYOUT SHEET 1
	LAYOUT SHEET 2
	VT 102 PROFILE
	VT 102 PROFILE CONT'D
	EROSION CONTROL NARRATIVE
	EXISTING CONDITIONS SITE PLAN 1
	EXISTING CONDITIONS SITE PLAN 2
	EROSION AND SEDIMENT CONTROL PLAN 1
	EROSION AND SEDIMENT CONTROL PLAN 2
	FINAL CONDITIONS SITE PLAN 1
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	FRAMING PLAN
	BEARING DETAIL ABUT. 1
	BEARING DETAIL ABUT. 2
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	APPROACH SLAB DETAILS
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	ABUT. 2 DETAILS
	FOOTING DETAILS
	WING WALL DETAILS
2 PAGES	NETC RAIL DETAILS
	REINFORCING STEEL SCHEDULE
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	BANKING DIAGRAM AND MATERIAL TRANSITION
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E-102	CONSTRUCTION SIGN DETAILS	6/30/2003
E-102A	CONSTRUCTION SIGN DETAILS	5/01/2004
E-121	STANDARD SIGN PLACEMENT	8/8/1995
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E-192	PAVEMENT MARKING DETAILS	10/12/2000
G-1	HEAVY DUTY STEEL BEAM GUARDRAIL	1/3/2000
G-1D	HEAVY DUTY STEEL BEAM GUARDRAIL	1/3/2001

FINAL HYDRAULIC REPORT

HYDROLOGIC DATA

Date: Nov. 2006

DRAINAGE AREA : 15.4 sq. mi.
CHARACTER OF TERRAIN : Hilly to Mountainous
STREAM CHARACTERISTICS : Meandering, alluvial channel with some eroding stream banks.
NATURE OF STREAMBED : Silt, sand, gravel and cobbles

PEAK FLOW DATA

Q 2.33 =	1,000 cfs	Q 50 =	2,160 cfs
Q 10 =	1,500 cfs	Q 100 =	2,500 cfs
Q 25 =	1,850 cfs	Q 500 =	3,340 cfs

DATE OF FLOOD OF RECORD : Unknown
ESTIMATED DISCHARGE: Unknown
WATER SURFACE ELEV. : Unknown
NATURAL STREAM VELOCITY : @ Q50 = 2.8 fps
ICE CONDITIONS : Moderate
DEBRIS: Moderate
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? Yes
IS ORDINARY RISE RAPID? Yes
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? No
IF YES, DESCRIBE:

WATERSHED STORAGE: <1%
HEADWATERS:
UNIFORM: X
IMMEDIATELY ABOVE SITE:

EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE: A concrete arch was damaged in a flood in 2004 and removed.
YEAR BUILT: Built in 1900. Widened in 1973.
CLEAR SPAN(NORMAL TO STREAM): 35'
VERTICAL CLEARANCE ABOVE STREAMBED: 10'
WATERWAY OF FULL OPENING: 250 sq. ft.
DISPOSITION OF STRUCTURE: It has been removed.
TYPE OF MATERIAL UNDER SUBSTRUCTURE: See boring logs.

WATER SURFACE ELEVATIONS AT:

Q2.33 =	See note 1.	VELOCITY =	See note 1.
Q10 =	1015.7'	"	
Q25 =		"	
Q50 =	1017.6'	"	
Q100 =	1018.5'	"	

LONG TERM STREAMBED CHANGES: There is scour through the bridge area.
The stream is latterally unstable with areas of stream bank erosion.

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: Above Q100
RELIEF ELEVATION: 1021.7'
DISCHARGE OVER ROAD @Q100: None

UPSTREAM STRUCTURE

TOWN: N.A. - The stream divides
HIGHWAY # :
CLEAR SPAN:
YEAR BUILT:
STRUCTURE TYPE:
DISTANCE:
STRUCTURE #:
CLEAR HEIGHT:
FULL WATERWAY:

DOWNSTREAM STRUCTURE

TOWN: N.A. - Confluence with Connecticut River
HIGHWAY # :
CLEAR SPAN:
YEAR BUILT:
STRUCTURE TYPE:
DISTANCE: 4,000'
STRUCTURE #:
CLEAR HEIGHT:
FULL WATERWAY:

XXXX- LOAD RATING (TONS)

LOADING LEVELS	TRUCK						
	H	HS	3S2	6 AXLE	3A. STR.	4A. STR.	5A. SEMI
INVENTORY							
POSTED							
OPERATING							

COMMENTS:

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2005	610	220	51	6	40
2025	790	240	51	10	80

20 year ESAL for flexible pavement from 2005 to 2025 : 320,000
40 year ESAL for flexible pavement from 2005 to 2045 : 787,000
Design Speed : 50 mph

PROPOSED STRUCTURE

STRUCTURE TYPE: Single span steel beam bridge.

CLEAR SPAN(NORMAL TO STREAM): 60'
VERTICAL CLEARANCE ABOVE STREAMBED: 11' maximum
WATERWAY OF FULL OPENING: 660 sq. ft.

WATER SURFACE ELEVATIONS AT:

Q2.33 =	1014.7'	VELOCITY=	2.7 fps
Q10 =	1015.5'	"	3.6 fps
Q25 =	1016.0'	"	4.0 fps
Q50 =	1016.5'	"	4.4 fps
Q100 =	1017.0'	"	4.7 fps

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: Above Q100
RELIEF ELEVATION: 1022.8'
DISCHARGE OVER ROAD @Q100: None

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 1018.3
VERTICAL CLEARANCE: @ Q100 1.3'

SCOUR: Estimate 4' of contraction scour up to Q500, based on the fact that the scour hole under the bridge has been at least 4' deeper than when the project was surveyed.
REQUIRED CHANNEL PROTECTION: Stone Fill, Type III

PERMIT INFORMATION

AVERAGE DAILY FLOW:	30 cfs	DEPTH OR ELEVATION:
ORDINARY LOW WATER:	15 cfs	Elevation 1011'
ORDINARY HIGH WATER:	150 cfs	Elevation 1013'

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: Temporary bridge already in use. It will be moved to a new alingment.
CLEAR SPAN (NORMAL TO STREAM): 80'
VERTICAL CLEARANCE ABOVE STREAMBED: Minimum low beam elev. 1017.0'
WATERWAY AREA OF FULL OPENING: Approximately 500 sq. ft.

ADDITIONAL INFORMATION

Note 1 - There is not enough information available for the previous arch and preflood conditions to do an accurate hydraulic analysis of that structure. Information shown for the existing bridge is from records and the 1980 Flood Insurance Study. The new bridge has a larger span, so it will result in lower upstream water surface elevations and lower velocities than the previous arch.

DESIGN CRITERIA

1. DESIGN LIVE LOAD AASHTO ML-93
2. DESIGN SPAN 82 Feet centerline to centerline of bearing
3. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL 2.5 ksf
   ON LEDGE not applicable
4. ALLOWABLE LOAD FOR PILING not applicable
   TYPE
   ESTIMATED LENGTH
5. STRUCTURAL STEEL AASHTO GRADE 50
6. REINFORCING STEEL GRADE 60
7. CONCRETE CLASS A (HPC-A) f'c : 4000 psi
   CONCRETE CLASS B (HPC-B) f'c : 3500 psi
   CONCRETE CLASS AA 4000 psi
8. SOIL UNIT WEIGHT 140 pcf
9. DESIGN LOAD FOR SPREAD FOOTINGS ON SOIL

TRAFFIC MAINTENANCE

1. IS TRAFFIC TO BE MAINTAINED? yes
   IF YES, ON EXISTING STRUCTURE? not applicable
   OR ON TEMPORARY BRIDGE? yes
   ONE OR TWO-WAY TRAVEL? two - way
2. TRAFFIC CONTROL SIGNALS REQUIRED? no
3. ARE SIDEWALKS REQUIRED? no
   IF SO, ON WHAT SIDE? not applicable

APR 19 2010

PROJECT NAME: CANAAN
PROJECT NUMBER: ER ST 0271(16)

FILE NAME: \04c098\x04c098excel.xls
PROJECT MANAGER: Evans-Mongeon
DESIGNED BY: S. SCRIBNER
PRELIMINARY INFORMATION SHEET
PLOT DATE: 7/26/2007
DRAWN BY: L. DUQUETTE
CHECKED BY: S. SCRIBNER
SHEET 7 OF 15 7

GPS CONTROL POINTS

HVCTRL #1

DESIGNATION

"VT/NH BRM 78"

** N = 892289.6500
E = 1892838.4500
ELEV. = 1021.0900

GENERAL LOCATION, CANAAN, VT. OWNERSHIP, BILL JOHNSON, 3603 VT ROUTE 102, CANAAN, VT 05903. TO REACH FROM THE INTERSECTION OF VT ROUTES 114, 102, AND 253 GO SOUTHWEST ALONG VT ROUTE 102 FOR 4.3 MI TO THE INTERSECTION OF A FIELD DRIVE LEFT, JUST NORTH OF HOUSE NO 2566. PARK VEHICLE AND WALK EAST ALONG THE FIELD DRIVE FOR ABOUT 120 M TO THE SITE OF THE MARK AT THE SOUTH EDGE OF A LARGE FIELD. THE MARK IS A 12.5 CM DIAMETER UNITED STATES SUPREME COURT REFERENCE MARK DISK SET IN THE TOP OF A 30 CM SQUARE GRANITE MONUMENT WHICH PROJECTS 50 CM ABOVE GROUND SURFACE. IT IS 19.2 M WEST NORTHWEST OF A 30 CM ELM, 23.9 M EAST OF A 25 CM WHITE BIRCH, 7.4 M NORTH NORTHWEST OF THE TOP OF A SMALL BANK, 38.0 M SOUTHEAST OF A CLUMP OF FOUR 15 CM BIRCHES, AND 0.3 M NORTH OF A FIBERGLASS WITNESS POST.

HVCTRL #2

DESIGNATION

"VT/NH BRM 77"

** N = 890752.1900
E = 1893251.0900
ELEV. = 1022.7000

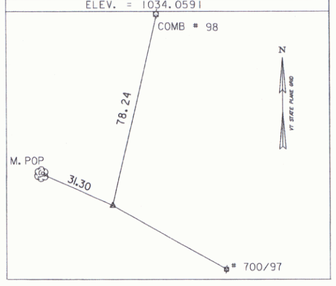
GENERAL LOCATION, CANAAN, VT. OWNERSHIP, BILL JOHNSON, 3603 VT ROUTE 102, CANAAN, VT 05903. TO REACH FROM THE INTERSECTION OF VT ROUTES 114, 102, AND 253 GO SOUTHWEST ALONG VT ROUTE 102 FOR 4.6 MI TO A LARGE WHITE FARM HOUSE ON THE RIGHT AND AN L-SHAPED BARN ON THE LEFT. PARK VEHICLE AND WALK EAST FOR ABOUT 150 M TO THE SITE OF THE MARK AT THE NORTH EDGE OF A LARGE FIELD. THE MARK IS A 12.5 CM DIAMETER UNITED STATES SUPREME COURT REFERENCE MARK DISK SET IN THE TOP OF A 30 CM SQUARE GRANITE MONUMENT WHICH PROJECTS 40 CM ABOVE GROUND SURFACE. IT IS ABOUT ON AN EAST BEARING WITH THE HOUSE. IT IS ABOUT 95 M EAST SOUTHEAST OF THE SOUTHEAST CORNER OF A FALLING DOWN BARN ELL, 18.0 M SOUTH OF THE NORTH EDGE OF A STEEP EMBANKMENT, AND 0.3 M SOUTHEAST OF A FIBERGLASS WITNESS POST.

* DESCRIPTION PROVIDED BY VERMONT AGENCY OF TRANSPORTATION GEODETIC SURVEY UNIT

TRAVERSE TIES

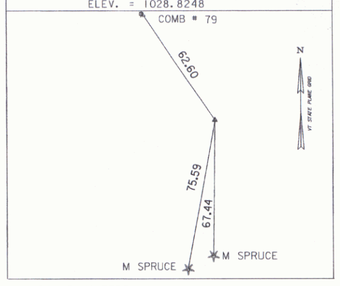
HVCTRL #5

NORTH = 885726.5391
EAST = 1893603.2064
ELEV. = 1034.0591



HVCTRL #6

NORTH = 884399.6010
EAST = 1894274.0068
ELEV. = 1028.8248



NORTH =
EAST =
ELEV. =

* MAIN TRAVERSE COMPLETED: AUGUST 11, 2004 BY R.GILMAN PC, P.WINTERS

ALIGNMENT TIES

POB 56+00.00

NORTH = 884626.29
EAST = 1894047.57

NOT TIED

ALIGNMENT TIES

PC 56+32.80

NORTH = 884650.81
EAST = 1894025.78

NOT TIED

PT 58+82.39

NORTH = 884856.04
EAST = 1893884.88

NOT TIED

PC 59+49.64

NORTH = 884915.7988
EAST = 1893854.01

NOT TIED

PT 63+70.43

NORTH = 885311.11
EAST = 1893713.68

NOT TIED

POE 66+00.00

NORTH = 885535.87
EAST = 1893666.87

NOT TIED

APR 19 2010

* Alignment as of 12/7/06

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83(96)
ADJUSTMENT COMPASS

PROJECT NAME: CANAAN
PROJECT NUMBER: ST 027(116)

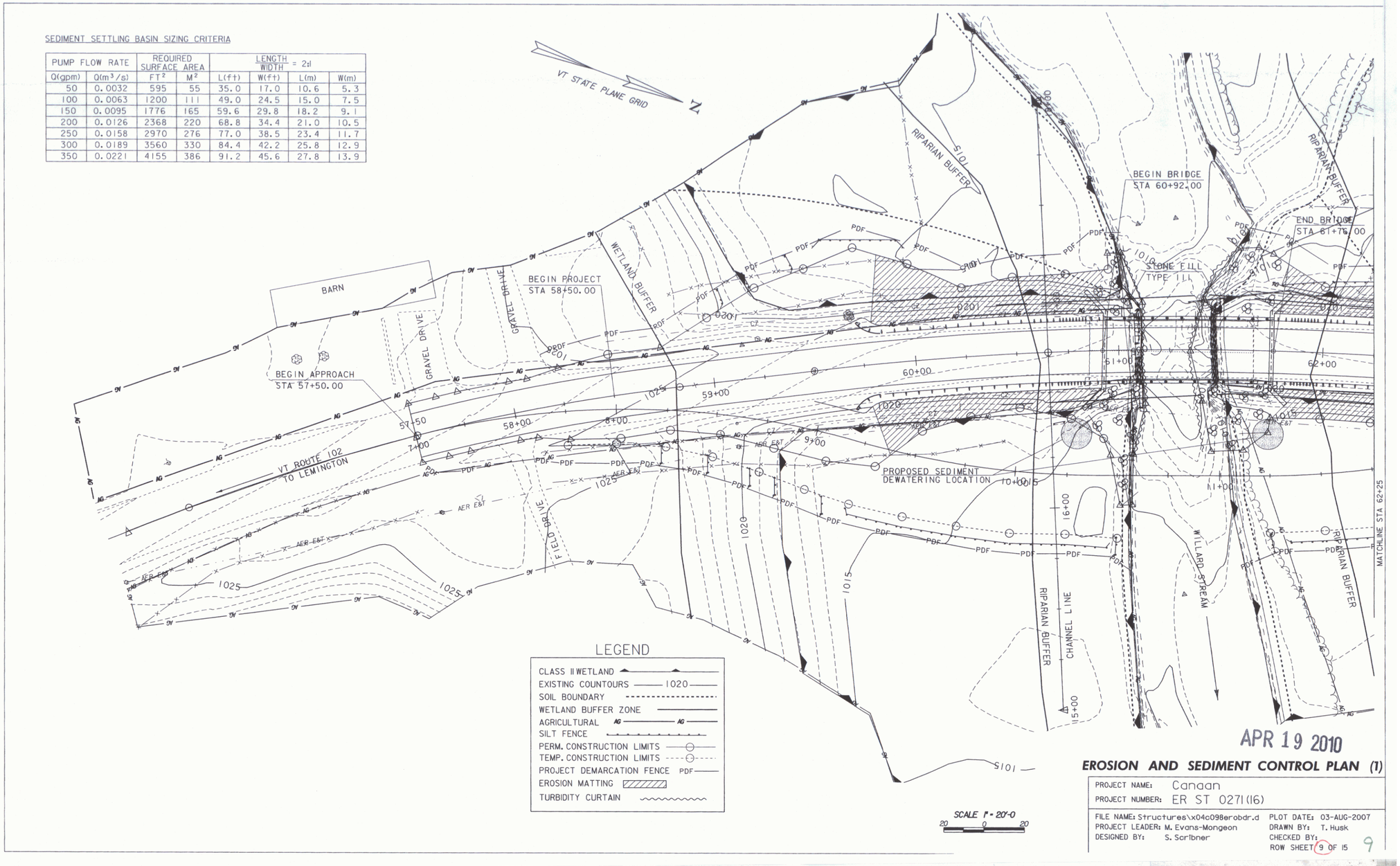
FILE NAME: x04c098ti.dgn
PROJECT LEADER:
DESIGNED BY:

PLOT DATE: 03-AUG-2007
DRAWN BY: J.HULETT
CHECKED BY: P.HODGE
ROW SHEET 8 OF 15

8

SEDIMENT SETTLING BASIN SIZING CRITERIA

PUMP FLOW RATE		REQUIRED SURFACE AREA		LENGTH / WIDTH = 2:1			
Q(gpm)	Q(m^3/s)	FT^2	M^2	L(ft)	W(ft)	L(m)	W(m)
50	0.0032	595	55	35.0	17.0	10.6	5.3
100	0.0063	1200	111	49.0	24.5	15.0	7.5
150	0.0095	1776	165	59.6	29.8	18.2	9.1
200	0.0126	2368	220	68.8	34.4	21.0	10.5
250	0.0158	2970	276	77.0	38.5	23.4	11.7
300	0.0189	3560	330	84.4	42.2	25.8	12.9
350	0.0221	4155	386	91.2	45.6	27.8	13.9



LEGEND

- CLASS II WETLAND
- EXISTING COUNTOURS — 1020
- SOIL BOUNDARY
- WETLAND BUFFER ZONE
- AGRICULTURAL — AG
- SILT FENCE
- PERM. CONSTRUCTION LIMITS
- TEMP. CONSTRUCTION LIMITS
- PROJECT DEMARCATION FENCE — PDF
- EROSION MATTING
- TURBIDITY CURTAIN

SCALE 1" = 20'-0

20 0 20

APR 19 2010

EROSION AND SEDIMENT CONTROL PLAN (1)

PROJECT NAME: Canaan
PROJECT NUMBER: ER ST 0271(16)

FILE NAME: Structures\x04c098erobdr.d
PROJECT LEADER: M. Evans-Mongeon
DESIGNED BY: S. Scribner
PLOT DATE: 03-AUG-2007
DRAWN BY: T. Husk
CHECKED BY:
ROW SHEET 9 OF 15

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LEGEND

- CLASS II WETLAND
- EXISTING COUNTOURS — 1020
- SOIL BOUNDARY
- WETLAND BUFFER ZONE
- AGRICULTURAL AG
- SILT FENCE
- PERM. CONSTRUCTION LIMITS
- TEMP. CONSTRUCTION LIMITS
- PROJECT DEMARCATION FENCE PDF
- EROSION MATTING

SCALE 1" = 20'-0"
20 0 20

APR 19 2010

EROSION AND SEDIMENT CONTROL PLAN (2)

PROJECT NAME: Canaan
PROJECT NUMBER: ER ST 0271(16)

FILE NAME: Structures\x04c098erobdr.d
PROJECT LEADER: M. Evans-Mongeon
DESIGNED BY: S. Scribner
PLOT DATE: 06-AUG-2007
DRAWN BY: T. Husk
CHECKED BY:

VT STATE PLANE GRID

N

SOIL INFORMATION
RUMNEY VERY FINE SANDY LOAM, 0-2% SLOPES
HYDROLOGIC SOILGROUP C
LAND IS HIGHLY ERODIBLE

SOIL INFORMATION
COMBINED W/32C COLTON-DUXBURY COMPLEX, 8-15% SLOPES, HYDROLOGIC SOIL-GROUP A, HIGHLY ERODIBLE

BARN

BEGIN PROJECT
STA 58+50.00

BEGIN APPROACH
STA 57+50.00

BEGIN BRIDGE
STA 60+92.00

END BRIDGE
STA 61+75.00

STONE FILL
TYPE III

GRAVEL DRIVE

FIELD DRIVE

WETLAND BUFFER

RIPARIAN BUFFER

CHANNEL LINE

WILLARD STREAM

VT ROUTE 102
TO LEMINGTON

MATCHLINE STA 62+25

LEGEND

CLASS II WETLAND
EXISTING COUNTOURS — 1020
SOIL BOUNDARY
WETLAND BUFFER ZONE
AGRICULTURAL AG

SCALE 1" = 20'-0
20 0 20

CONTOURS SHOWN ARE EXISTING CONTOURS,
SEE CROSS SECTIONS FOR PROPOSED CONTOURS.

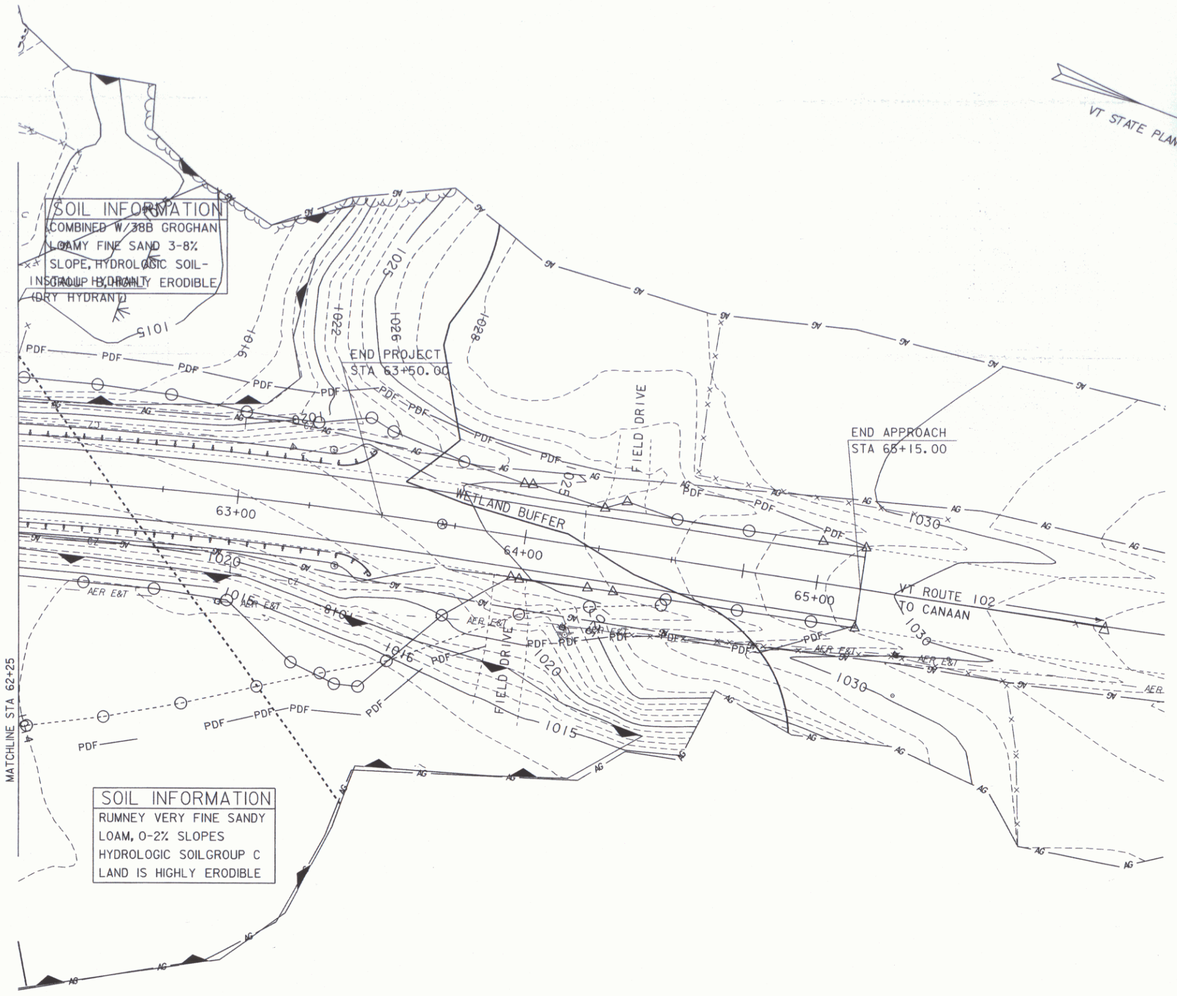
APR 19 2010

FINAL CONDITIONS SITE PLAN (1)

PROJECT NAME: Canaan
PROJECT NUMBER: ER ST 0271(16)

FILE NAME: Structures\x04c098erobdr.d
PROJECT LEADER: M. Evans-Mongeon
DESIGNED BY: S. Scribner
PLOT DATE: 03-AUG-2007
DRAWN BY: T. Husk
CHECKED BY:
ROW SHEET 11 OF 15

11



LEGEND

CLASS II WETLAND	
EXISTING COUNTOURS	1020
SOIL BOUNDARY	
WETLAND BUFFER ZONE	
AGRICULTURAL	AG

SCALE 1" = 20'-0

20 0 20

ROW SHEET 11 OF 15

CONTOURS SHOWN ARE EXISTING CONTOURS, SEE CROSS SECTIONS FOR PROPOSED CONTOURS.

APR 19 2010

FINAL CONDITIONS SITE PLAN (2)

PROJECT NAME: Canaan
PROJECT NUMBER: ER ST 0271(16)

FILE NAME: Structures\x04c098erobdr.d
PROJECT LEADER: M. Evans-Mongeon
DESIGNED BY: S. Scribner
PLOT DATE: 03-AUG-2007
DRAWN BY: T. Husk
CHECKED BY:
ROW SHEET 12 OF 15 12

STATE OF VERMONT
AGENCY OF TRANSPORTATION

RIGHT - OF - WAY DETAIL SHEET

TABLE OF PROPERTY ACQUISITION

PARCEL NO.	PROPERTY OWNER	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKE	REMAINDER	RIGHT			RECORDING DATA					REMARKS
					AREA±	AREA±	TYPE	(T)/(P)	AREA ±	TITLE	DATE	TOWN / CITY	BOOK	PAGE	
1A	RICHARDS, DENNIS B. & LISA G.	14,15	58+50.00 LT.	62+14.82 LT.	4,113 S.F.					WD	05/21/08	CANAAN	55	623	
1B		14,15	60+74.00 RT.	61+99.99 RT.	3493 S.F.										
1C		14,15	56+21.00 RT.	64+55.24 LT.	.95A		ALL R.T. & I.								VT. RTE. 102 HWY. EASEMENT
			56+21 RT.	64+52 RT.			UE	(P)	.23 A						9932 S.F.±
			56+21 RT.	64+50 RT.			UE	(T)							
			56+21 RT.	57+44 RT.			REMOVE	(T)							FENCE
			57+97 RT.				DRIVE	(T)							12' DRIVE GRAVEL MM 0109
			58+47 RT.	61+03 RT.			CONST.	(T)	2,294 S.F.						INCLUDES EROSION CONTROL & PDF
			58+11 RT.	60+98 RT.			REMOVE	(T)							FENCE
			58+61 RT.	60+98 RT.			REMOVE	(T)							FENCE
			58+87 RT.	63+89 RT.			DETOUR	(T)	.46 A						19,837 S.F.±
			59+17 RT.	60+07 RT.			SLOPE	(T)	776 S.F.						
			61+58 RT.	64+20 RT.			CONST.	(T)	2,404 S.F.						INCLUDES EROSION CONTROL & PDF
			62+75 RT.	62+99 RT.			SLOPE	(P)	19 S.F.						
			62+99 RT.	63+72 RT.			SLOPE	(T)	1135 S.F.						
			64+10 RT.	64+50 RT.			REMOVE	(T)							FENCE
			57+58 LT.				DRIVE	(T)							19' DRIVE GRAVEL MM 0109
			58+11 LT.				DRIVE	(T)							12' DRIVE GRAVEL MM 0110
			58+17 LT.	61+07 LT.			CONST.	(T)	2,335 S.F.						INCLUDES EROSION CONTROL & PDF
			58+82 LT.	59+92 LT.			REMOVE	(T)							FENCE
			58+87 LT.	60+04 LT.			REMOVE	(T)							FENCE
			58+90 LT.	60+49 LT.			SLOPE	(P)	2,686 S.F.						
			61+56 LT.	64+38 LT.			CONST.	(T)	2,556 S.F.						INCLUDES EROSION CONTROL & PDF
			62+00 LT.	63+69 LT.			SLOPE	(P)	1,233 S.F.						
			62+03 LT.	62+23 LT.			REMOVE	(T)							FENCE
			63+04 LT	63+30 LT.			REMOVE	(T)							FENCE
			63+98 RT.				DRIVE	(T)							14' DRIVE FIELD MM 0120
			64+33 LT.				DRIVE	(T)							12' DRIVE FIELD MM 0120
2	SARACO, MICHAEL D. III	15	64+50 RT.	64+89 RT.			INSTALL	(T)	106 S.F.	WD	11/26/08	CANAAN	56	371	PDF
	MAGUIRE, KEVIN C.		64+50 RT.	65+12 RT			UE	(T)							
			64+51 RT.	65+30.83 RT.			UE	(P)	918 S.F.						
			64+50.61 RT.	65+30.83 RT.	3857 S.F.		ALL R.T.& I.								VT. RTE. 102 HWY EASEMENT
3	WHITE MOUNTAIN CABLEVISION														UTILITY
4	VERMONT ELECTRIC COOPERATIVE INC.														UTILITY
5	VERIZON NEW ENGLAND INC.														UTILITY

TABLE OF REVISIONS

REVISION NO.	SHEET NO.	DESCRIPTION	DATE
1	13,14	PARCEL NO. 1 RICHARDS. CHANGE THE EIGHT RIGHTS	11/30/07
	15	FROM REMOVE & RESET FENCE TO REMOVE FENCE.	
		CHANGE BEGINNING STATION OF DRIVE (T) FROM 63+98 LT.	
		TO STA. 63+98 RT. PER C.O. 9502	
		MADE BY: MR APPROVED BY: HP	
2	13	PARCEL NO. 1 RICHARDS. CHANGE THE ENDING STATION	01/10/08
		FOR REMOVE (T) FENCE FROM 57+24 TO 57+44	
		PER C.O. 9508	
		MADE BY: JAB APPROVED BY: HP	
3	13	PARCEL NO. 1C RICHARDS. CHANGE THE AREA FOR THE	01/14/08
		SLOPE (P) AT STA. 62+00 LT. ~ 63+69 LT. FROM 581 SF±	
		TO 1,233 S.F.± PER C.O. 9509	
		MADE BY: MR APPROVED BY: HP	
		PRE-FINAL PLANS NUMBERED FOR LEAD DIVISION	05/07/08

PLOT DATE 12/08/08

PLAN LEGEND

- EXISTING RIGHT-OF-WAY
- TAKING WITH ACCESS
- TAKING WITHOUT ACCESS
- CLEAR ZONE (CZ)
- PROPERTY LINE (P / L)
- TOE OF SLOPE
- TOP OF CUT
- SLOPE RIGHT (SR (P))
- CONSTRUCTION RIGHT (CONST. (T))
- PROJECT DEMARCATION FENCE (PDF — PDF)

EC	-EROSION CONTROL
(P)	-PERMANENT
(T)	-TEMPORARY
DR.	-DRAINAGE RIGHT
DIT.	-DITCHING RIGHT
CH.	-CHANNEL RIGHT
DRIVE	-DRIVE RIGHT
CUL.	-CULVERT RIGHT
C&T	-CLEARING & TRIMMING RIGHT
SR	-SLOPE RIGHT
UE	-UTILITY EASEMENT

APPROVED: HARRY PETROVS DATE: 10-25-07
CHIEF, PLANS & TITLES

PROJECT NAME: CANAAN
PROJECT NUMBER: ER ST 0271(16)

FILE NAME: RC098DET.XLS
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY:
R.O.W. DETAIL SHEET #1

PLOT DATE:
DRAWN BY: MR
CHECKED BY: BF
SHEET 8 OF 66

SHEET 13

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INSTALL HYDRANT (DRY HYDRANT)
STA. 61+34.00 - 62+04.92 LT

DELINEATOR WITH STEEL POST (TYPE I)
STA. 59+84 LT (GREEN)
STA. 59+81 RT (BLUE)

REMOVAL AND DISPOSAL OF GUARDRAIL
STA. 60+43.09 - 60+84.28 RT
STA. 59+22.82 - 60+85.48 LT
STA. 61+50.29 - 63+37.35 RT
STA. 61+49.41 - 62+25.00 LT

4" YELLOW LINE (DOUBLE)
STA. 57+50 - 62+25

4" WHITE LINE
STA. 57+50 - 62+25 LT
STA. 57+50 - 62+25 RT

HEAVY DUTY STEEL BEAM GUARDRAIL, GALVANIZED
STA. 59+69.40 - 60+58.90 LT
STA. 59+61.67 - 60+57.17 RT
STA. 62+09.73 - 62+25.00 LT
STA. 62+10.04 - 62+25.00 RT

ANCHORS FOR HEAVY DUTY STEEL BEAM GUARD RAIL
STA. 59+78.90 LT
STA. 59+75.00 RT

CONSTRUCT DRIVE
STA. 57+58 LT, 19' - GRAVEL
STA. 58+11 LT, 14' - GRAVEL
STA. 57+97 RT, 12' - GRAVEL

REMOVAL OF EXISTING FENCE
STA. 58+50 - STA. 61+00 RT
STA. 59+00 - STA. 60+00 LT
STA. 62+15 - STA. 62+20 LT

VT STATE PLANE GRID N

BEGIN R.O.W. PROJECT
ER ST 0271(16)
STA. 56+21.00
33.44 RT.

RICHARDS, DENNIS B. & LISA G.

POE
Sta 18+01.92

STA. 60+65.00 MAINLINE
STA. 16+77.00 CHANNEL
Δ = 90° TO TANGENT

60+48.48
37.94 LT.
TO BE REMOVED BY VT ELEC. CO-OP.
60+49.82
28.53 LT.

BEGIN BRIDGE
STA 60+92.00

END BRIDGE
STA 61+76.00

SPECIAL PROVISION
(DRY HYDRANT)

60+95.73
48.17 LT.

61+68.04
51.16 LT.

62+14.82
24.75' LT.

74.68'
STONE FILL
TYPE III

1A

54.98'

BARN

PERMANENT CONST. LIMITS

BEGIN PROJECT
STA 58+50.00
30' R (TYP)

58+50
28.36 LT.

58+50
24.36 LT.

199.62'

355.11'

VT ROUTE 102

1C

60+74.00
32.99 RT.

N27° 19' 14.96"W

BEGIN APPROACH
STA 57+50.00
DETOUR STATION
7+00

233.96'

20' R (TYP)

GRAVEL DRIVE

DRIVE (T)

REMOVE (T)

CONST. (T)

SR (P)

SR (T)

UE (P)

UE (T)

STATE OF VERMONT

P

L

AER E&T

PDF

56+21.00
24.75' LT.

49.50'

EXISTING ROW

VT 102
TO LEMINGTON

56+21.00
24.75' RT.

EXISTING POLE

8.69'

20' R (TYP)

41.54'

TO BE REMOVED BY VT ELEC. CO-OP.

TEMPORARY POLE

60+91.27
43.50 RT.

8.93'

60+94.50
51.86 RT.
℄ TEMP.

6.00' DETOUR
93.35'

60+98.75
76.74 RT.

61+05.06
76.62 RT.

TEMPORARY POLE

61+99.99
33.48 RT.

61+99.77
52.30 RT.

8.82'

[247.

MATCHLINE STA. 62+25

WILLARD STREAM

CHANNEL LINE

POB
Sta 15+00.00

GUARDRAIL APPROACH SECTION, GALVANIZED NETC 2 RAIL
STA. 60+58.90 - STA. 60+83.90 LT
STA. 60+57.17 - STA. 60+82.17 RT
STA. 61+84.73 - STA. 62+09.73 LT
STA. 61+85.04 - STA. 62+10.04 RT

CURVE #1
Delta = 14°18'01.25"
D = 5°43'46.48"
R = 1000.00'
T = 125.45'
L = 249.59'
E = 7.84'

CURVE #2
Delta = 15°33'11.32"
D = 3°41'47.74"
R = 1550.00'
T = 211.69'
L = 420.78'
E = 14.39'

APPROXIMATE AERIAL UTILITY RELOCATION
ROUTE BY VERMONT ELECTRIC COOPERATIVE,
INC., VERIZON NEW ENGLAND, INC.
TWINSTATE CABLE T.V., INC.

BRIDGE RAILING, GALVANIZED NETC 2 RAIL
STA. 60+83.90 - STA. 61+84.73 LT
STA. 60+82.17 - STA. 61+85.04 RT

TRAFFIC SIGNS, TYPE A
STA. 60+50.00 21' RT
STA. 62+25.00 21' LT

RICHARDS, DENNIS B. & LISA G.

PREVIOUS BRIDGE DATA
SINGLE SPAN OPEN BOTTOM CONCRETE ARCH - DESTROYED IN 2004 FLOOD
CLEAR SPAN (NORMAL TO STREAM): 31FEET MIN.
OVERALL LENGTH: 34.5 FEET BACK TO BACK OF ABUTMENTS
VERTICAL CLEARANCE: 7 FEET
BRIDGE WIDTH: +/- 34.5 FEET FACE OF RAIL TO FACE OF RAIL

CURRENT STRUCTURE
WIDTH: 24
LENGTH: 80

SCALE 1" = 20'-0
20 0 20

LINES SHOWN ON THIS PLAN AS EXISTING PROPERTY LINES P/L ARE BELIEVED TO BE ACCURATE BUT SHOULD NOT BE RELIED UPON FOR PURPOSES UNRELATED TO THE STATE OF VERMONT'S ACQUISITION OF LAND AND RIGHTS FOR THIS PROJECT.

ROW LAYOUT SHEET #1

PROJECT NAME: Canaan
PROJECT NUMBER: ER ST 0271(16)

FILE NAME: 04c098\struc\x04c098bdr
PROJECT LEADER: M. Evans-Mongeon
DESIGNED BY: S. Scribner
ROW SHEET 14 OF 15

PLOT DATE: 22-JUL-2008
DRAWN BY: L. DUQUETTE
CHECKED BY: S. SCRIBNER.
SHEET 9 OF 66

4" YELLOW LINE (DOUBLE)
STA. 62+25 - 65+15

4" WHITE LINE
STA. 62+25 - 65+15 LT
STA. 62+25 - 65+15 RT

DELINEATOR WITH STEEL POST (TYPE I)
STA. 63+33.50 LT (BLUE)
STA. 63+36.50 RT (GREEN)

HEAVY DUTY STEEL BEAM GUARDRAIL, GALVANIZED
STA. 62+25.00 - 63+49.23 LT
STA. 62+25.00 - 63+49.54 RT

ANCHORS FOR HEAVY DUTY STEEL BEAM GUARD RAIL
STA. 63+39.00 LT
STA. 63+43.00 RT

REMOVAL AND DISPOSAL OF GUARDRAIL
STA. 62+25.00 - 63+37.35 RT
STA. 62+25.00 - 63+32.51 LT

CONSTRUCT DRIVE
STA. 64+33 LT, 12' - GRAVEL
STA. 63+98 RT, 14' - GRAVEL

VT STATE PLANE GRID N

END R.O.W. PROJECT
ER ST 0271(16)
STA. 65+30.83
24.32' RT.

RICHARDS, DENNIS B. & LISA G.

SARACO, MICHAEL D. III & MAGUIRE, KEVIN C.

REMOVE (T)
CONST. (T)
PERMANENT CONST. LIMITS
SR (P)
END PROJECT STA 63+50.00
242.91'
20' R (TYP)
DRIVE (T)
64+55.24
24.75' LT.
END APPROACH
STA 65+15.00
65+30.83
25.18 LT.
75.59'
54+50.61 CL.
4.62'
64+55.23 CL.
S 45° 59' 63" W
24.75'
49.50'
VT 102 TO CANAAN
63+00
64+00
65+00
14+00
14+27
12+00 UE (P) TO BE REMOVED BY VT ELEC. CO-OP.
AER E&T
TEMPORARY POLE
DETOUR (T)
CONST. (T)
TEMPORARY CONST. LIMITS
[247.11]
FIELD DR
8.25'
UE (T)
UE (P)
64+50.82
33.00 RT.
64+50.61
24.75' RT.
INSTALL (T)
80.21'
EXISTING POLE
PDE
PDF
PBF
1C
2

ADDITIONAL ROW ACQUIRED
2/9/73 BK. X PG. 332
CANAAN LAND RECORDS
FROM ROLAND & EUNICE RICHARDS

LINES SHOWN ON THIS PLAN AS EXISTING PROPERTY LINES P/L ARE BELIEVED TO BE ACCURATE BUT SHOULD NOT BE RELIED UPON FOR PURPOSES UNRELATED TO THE STATE OF VERMONT'S ACQUISITION OF LAND AND RIGHTS FOR THIS PROJECT.

SCALE 1" = 20'-0
20 0 20

ROW LAYOUT SHEET #2

PROJECT NAME: Canaan
PROJECT NUMBER: ER ST 0271(16)

FILE NAME: 04c098\struc\x04c098bdr
PROJECT LEADER: M. Evans-Mongeon
DESIGNED BY: S. SCRIBNER
ROW SHEET 15 OF 15
PLOT DATE: 22-JUL-2008
DRAWN BY: L. DUQUETTE
CHECKED BY: S. SCRIBNER
SHEET 10 OF 66

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