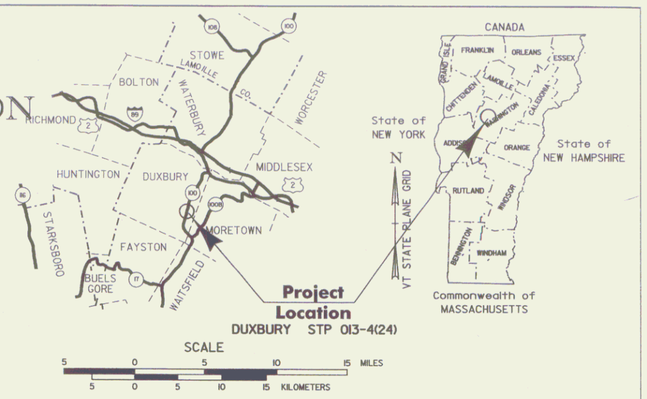
R.O.W. PLANS

STATE OF VERMONT
AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT
BRIDGE PROJECT
TOWN OF DUXBURY
COUNTY OF WASHINGTON
VT. ROUTE 100 - MINOR ARTERIAL

Project Location

Beginning at a point on Vt. Route 100 approximately 0.217 kilometers northerly of the Moretown-Duxbury Town Line and extending northerly along Vt. Route 100 for 0.060 kilometers.

Project Description

Work to be performed under this project includes replacement of Bridge # 187 over Dowsville Brook with necessary roadway and channel work.

Length of Bridge 20.9 meters 0.0209 Kilometers
Length of Roadway 39.1 meters 0.0391 Kilometers
Length of Project 60 meters 0.060 Kilometers
Length of R.O.W. Project 175.3 meters 0.175 Kilometers (575.1')

END MAINTENANCE AGREEMENT ZONE #1

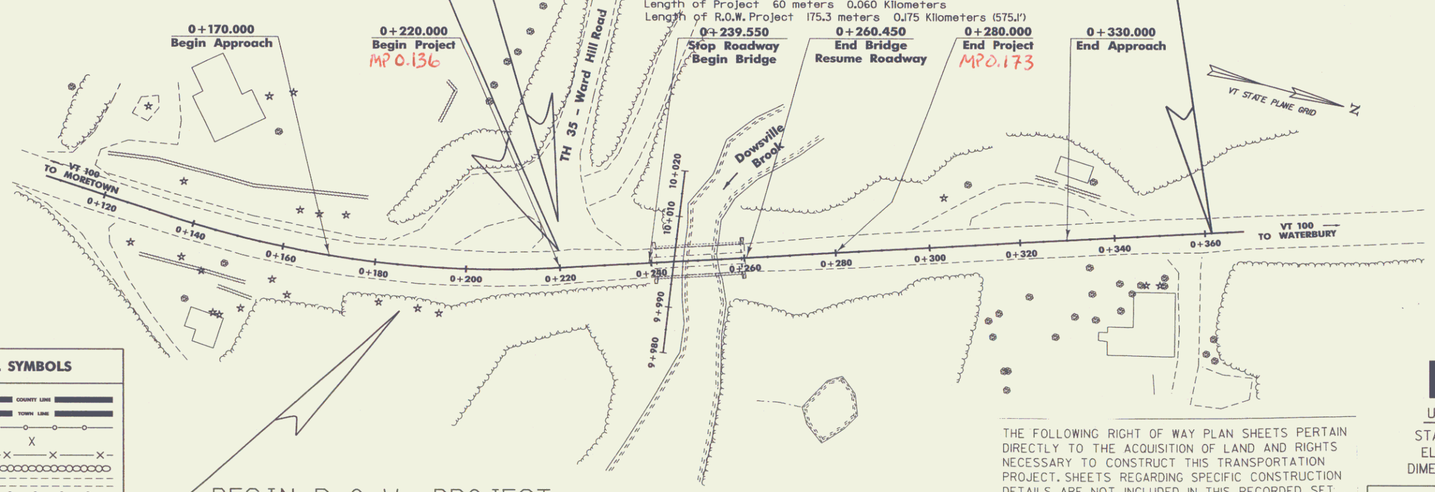
STA. 0+220 10.1M (33') LT.

BEGIN MAINTENANCE AGREEMENT ZONE #1

STA. 0+220 3.6M (12') LT. [LENGTH 6.5M (21')]

END R.O.W. PROJECT

STP 013-4(24) STA. 0+361.6
0.2M (66') RT.



BEGIN R.O.W. PROJECT

STP 013-4(24) STA. 0+186.3 10.1M (33') RT.

CONVENTIONAL SYMBOLS

COUNTY LINE	COUNTY LINE
TOWN LINE	TOWN LINE
LIMITS OF ACCESS	
POINT OF ACCESS	X
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	SR SR SR
TOP OF CUT	
TOE OF SLOPE	

SURVEYED BY :
SURVEYED DATE :

DATUM
VERTICAL NAVD88
HORIZONTAL NAD 83 (1992)

0 10 20 30
SCALE IN METERS

THE FOLLOWING RIGHT OF WAY PLAN SHEETS PERTAIN DIRECTLY TO THE ACQUISITION OF LAND AND RIGHTS NECESSARY TO CONSTRUCT THIS TRANSPORTATION PROJECT. SHEETS REGARDING SPECIFIC CONSTRUCTION DETAILS ARE NOT INCLUDED IN THIS RECORDED SET.

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

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 1995, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON AUGUST 21, 1995 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

se059111.1
16-JUL-2003

Pin # 86E059

Metric

UNLESS NOTED OTHERWISE
STATIONS ARE IN KILOMETERS
ELEVATIONS ARE IN METERS
DIMENSIONS ARE IN MILLIMETERS

APPROVED: SAMUEL B. LEWIS DATE: 11/30/01
Director of Project Development

APPROVED: ALLEN N. BLAKE DATE: 11/30/01
Chief, Right of Way

PROJECT MANAGER : C. Keller

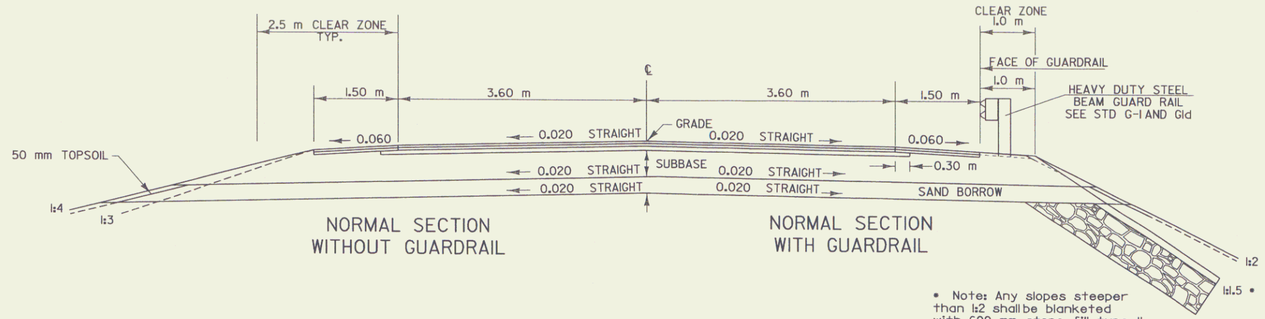
DUXBURY
STP 013-4(24)
R.O.W. SHEET 1 OF 13 SHEETS

1

TYPICAL SECTIONS

45 mm		BITUMINOUS CONCRETE PAVEMENT TYPE III
70 mm		BITUMINOUS CONCRETE PAVEMENT TYPE II
90 mm		BITUMINOUS CONCRETE PAVEMENT TYPE I
530 mm		SUBBASE OF DENSE GRADED CRUSHED STONE
380 mm		SAND BORROW
SHOULDERS: 115 mm		BITUMINOUS CONCRETE PAVEMENT (45mm TYPE III OVER 70mm TYPE II)
WARD HILL ROAD: 115 mm		BITUMINOUS CONCRETE PAVEMENT

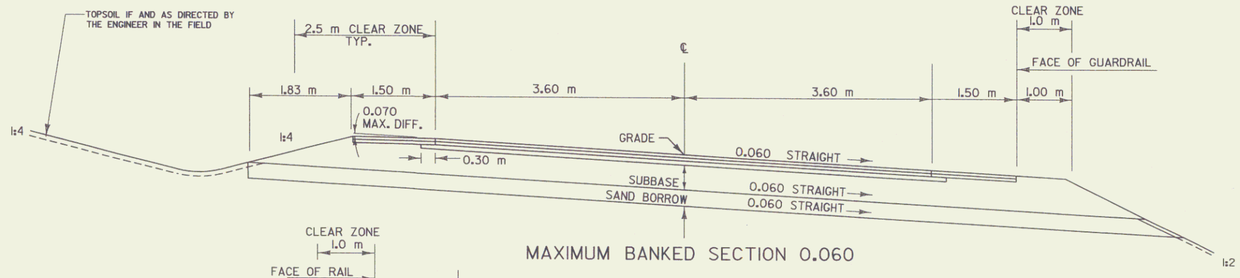
MATERIAL ITEM	TOLERANCE
PAVEMENT	±5 mm TOTAL THICKNESS
SUBBASE	±30 mm
SAND BORROW	±30 mm



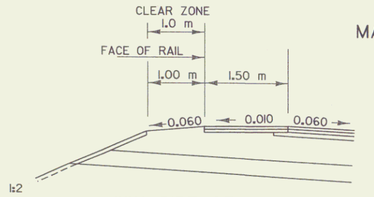
NORMAL SECTION WITHOUT GUARDRAIL

NORMAL SECTION WITH GUARDRAIL

• Note: Any slopes steeper than 1:2 shall be blanketed with 600 mm stone fill, type II. The stone slope shall be covered with 300 mm of suitable excavated earth, seeded, fertilized, and mulched as directed by the resident engineer.



MAXIMUM BANKED SECTION 0.060



HIGH SIDE OF MAX. BANK WITH GUARDRAIL

NOT TO SCALE

SEEDING FORMULA
RURAL AREAS

% WT.	kg/ha	NAME	PUR %	GERM %
37.5	26.0	CREEPING RED FESCUE	98	85
37.5	26.0	TALL FESCUE	95	90
5.0	4.0	RED TOP	95	90
15.0	10.0	BIRDSFOOT TREFOIL	98	85
5.0	4.0	ANNUAL RYE GRASS	95	85
100.0	70.0			

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 560 kg/ha. (HYDRO SEEDERS MAY USE 19-19-19 FORMULA).

AGRICULTURAL LIMESTONE: TO BE APPLIED AT THE RATE OF 4500 kg/ha, OR AS DIRECTED BY THE ENGINEER.

HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 4500 kg/ha, OR AS DIRECTED BY THE ENGINEER.

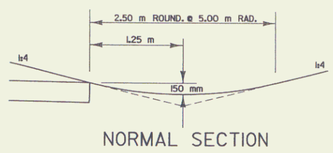
TOPSOIL: TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

MARKER POSTS: TO BE PLACED AS INDICATED OR AS DIRECTED BY THE ENGINEER.

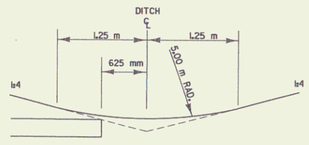
SLOPE ROUNDING: ALL CUT SLOPES TO BE ROUNDED IN ACCORDANCE WITH STANDARD SHEET B-5.

PAY LIMITS OF SAND BORROW: WHEN USED IN CONJUCTION WITH UNDERDRAIN - SEE STANDARD SHEET D-2.

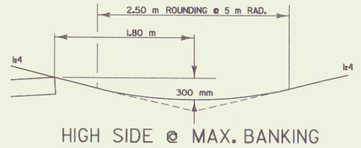
TACK COAT: EMULSIFIED ASPHALT IS TO BE APPLIED AT THE RATE OF 0.07 L/m2 BETWEEN SUCCESSIVE COURSES OF PAVEMENT AS DIRECTED BY THE ENGINEER.



NORMAL SECTION



DETAILS OF DITCH AND BACKSLOPE FOR LOW SIDE OF BANK ≥ 0.042



HIGH SIDE @ MAX. BANKING

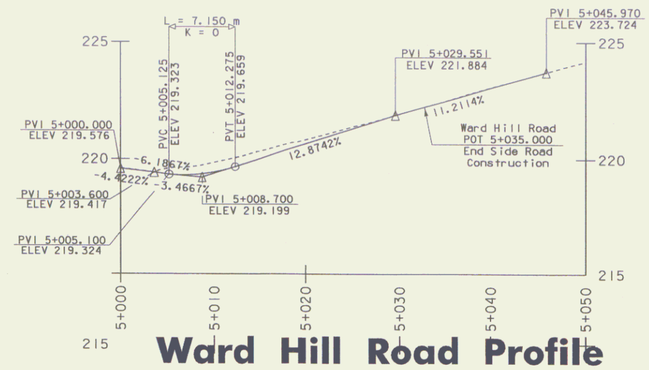
DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (1992)

ROADWAY TYPICAL SHEET

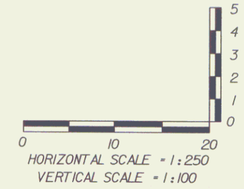
PROJECT:	PROJECT NO.:
DUXBURY	STP 013-4(24)

DESIGN FILE NAME: /str5/86e059/se059typ.dgn
IPARM FILE NAME: se059typ.i
SURVEYED BY: L. ORVIS — PLOT DATE: 15-JUL-2003
SQUAD LEADER: C. KELLER — SURVEY DATE: 5/9/97
DRAWN BY: Graw
R.O.W. SHEET 2 OF 13 SHEETS

Metric

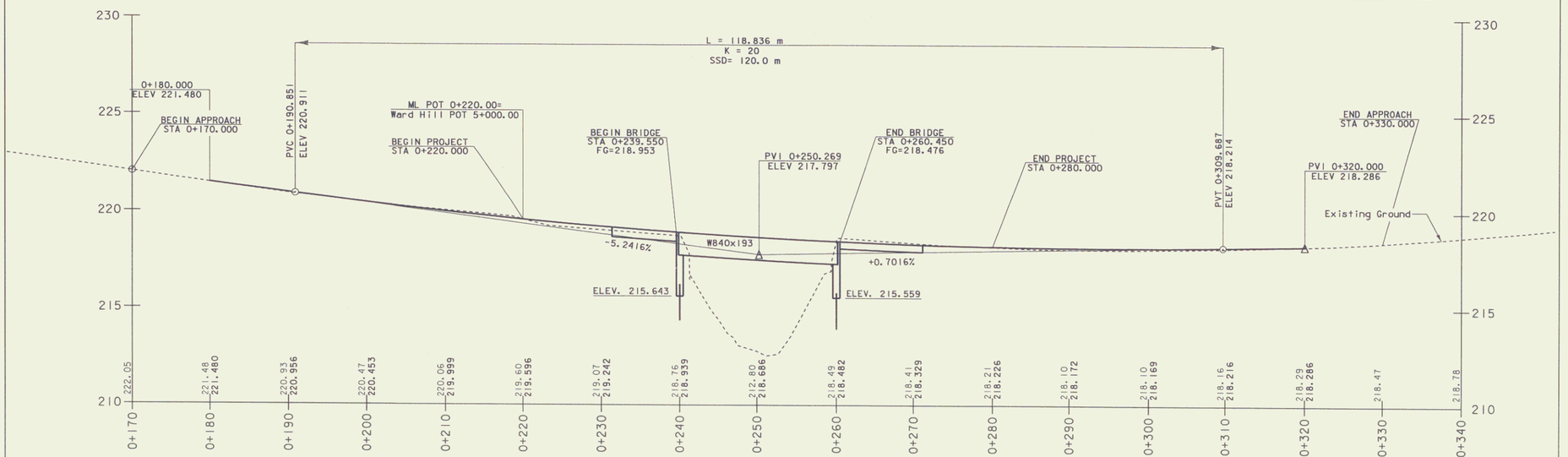


Ward Hill Road Profile



HORIZONTAL SCALE = 1:250
VERTICAL SCALE = 1:100

THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE ORIGINAL GROUND ELEVATIONS ALONG THE PROPOSED ALIGNMENT. THE GRADES SHOWN TO THE NEAREST THOUSANDTH ARE THE PROPOSED GRADES FOR THE NEW ALIGNMENT.



Mainline Profile

Mainline & Sideline Profiles

DATUM

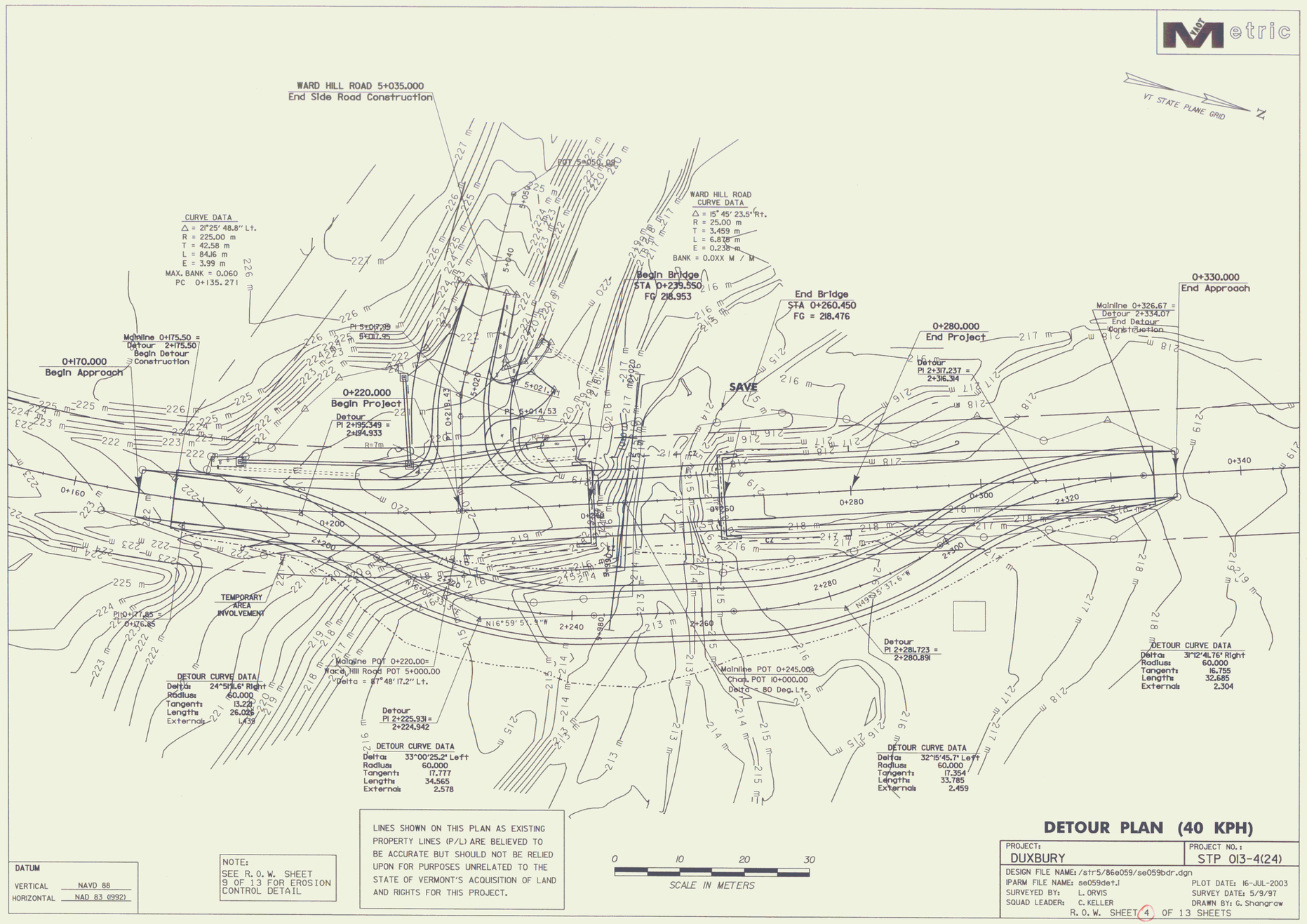
VERTICAL	NAVD 88
HORIZONTAL	NAD 83 (1992)

PROJECT: DUXBURY	PROJECT NO.: STP 013-4(24)
DESIGN FILE NAME: /str5/86e059/se059xsl.dgn	
IPARM FILE NAME: se059pro.i	PLOT DATE: 15-JUL-2003
SURVEYED BY: L. ORVIS	SURVEY DATE: 5/9/97
SQUAD LEADER: C. Keller	DRAWN BY: Graw

R.O.W. SHEET 3 OF 13 SHEETS

3

Metric



DATUM

VERTICAL NAVD 88

HORIZONTAL NAD 83 (1992)

NOTE:
SEE R.O.W. SHEET 9 OF 13 FOR EROSION CONTROL DETAIL

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.

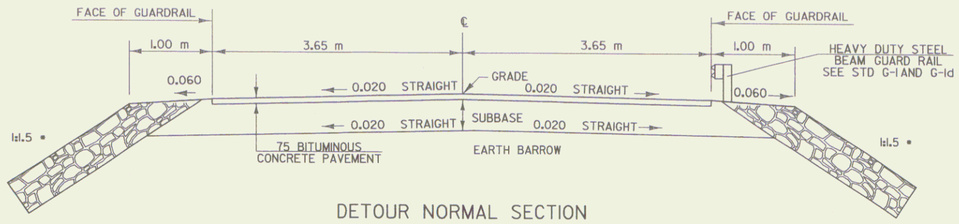
DETOUR PLAN (40 KPH)

PROJECT:	PROJECT NO.:
DUXBURY	STP 013-4(24)

DESIGN FILE NAME: /str5/86e059/se059bdr.dgn
IPARM FILE NAME: se059det.i
SURVEYED BY: L. ORVIS — SURVEY DATE: 5/9/97
SQUAD LEADER: C. KELLER — DRAWN BY: G. Shangraw
PLOT DATE: 16-JUL-2003

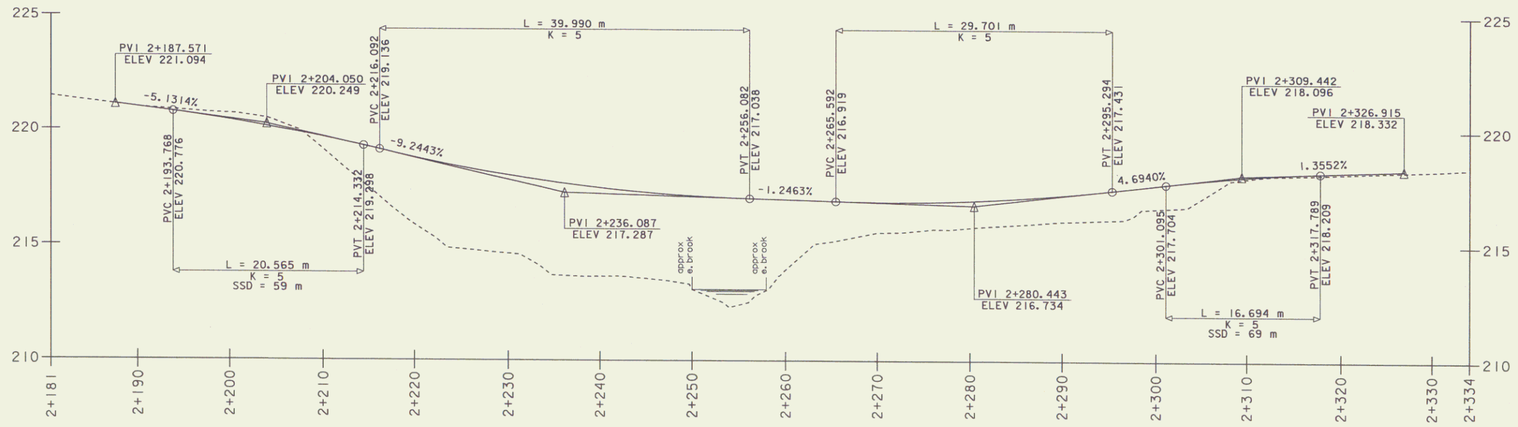
R.O.W. SHEET 4 OF 13 SHEETS

3" - BITUMINOUS CONCRETE PAVEMENT
15" - SUBBASE OF CRUSHED GRAVEL (COARSE GRADED)



DETOUR NORMAL SECTION
WITH GUARDRAIL

• Note: Any slopes steeper than 1:2 shall be blanketed with 600 mm stone fill, type II.



Detour Profile
(40 kph)

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (1992)

PROJECT: DUXBURY	PROJECT NO.: STP 013-4(24)
DESIGN FILE NAME: /str5/86e059/se059xs1.dgn	
IPARM FILE NAME: se059dpr.i	PLOT DATE: 15-JUL-2003
SURVEYED BY: L. ORVIS	SURVEY DATE: 5/9/97
SQUAD LEADER: C. KELLER	DRAWN BY: Graw
R.O.W. SHEET 5 OF 13 SHEETS	

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

PRELIMINARY INFORMATION SHEET

Metric

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		6/13/97

FINAL HYDRAULIC REPORT

HYDROLOGIC DATA

Date: March, 2000

DRAINAGE AREA : 18.62 sq. km
CHARACTER OF TERRAIN : Forested, hilly to mountainous
STREAM CHARACTERISTICS : Small to med., stable, perenial, straight
NATURE OF STREAMBED : Cobbles to large boulders

PEAK FLOW DATA

Q 2.33 =	11 cms	Q 50 =	45 cms
Q 10 =	25 cms	Q 100 =	57 cms
Q 25 =	37 cms	Q 500 =	78 cms

DATE OF FLOOD RECORD : Unknown
ESTIMATED DISCHARGE: Unknown
WATER SURFACE ELEV.: Unknown
NATURAL STREAM VELOCITY : @Q50 = 4.0mps
ICE CONDITIONS : Slight
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: N/A

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

EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE: Single Span Rolled Beam
YEAR BUILT: 1937
CLEAR SPAN(NORMAL TO STREAM): 16.3m
VERTICAL CLEARANCE ABOVE STREAMBED: 4.6 m
WATERWAY OF FULL OPENING: 50 sq m
DISPOSITION OF STRUCTURE: Remove
TYPE OF MATERIAL UNDER SUBSTRUCTURE: Unknown

WATER SURFACE ELEVATIONS AT:

Q2.33 =	214.7 m	VELOCITY =	2.9 mps
Q10 =	215.3 m	"	4.6 mps
Q25 =	215.6 m	"	4.9 mps
Q50 =	215.8 m	"	5.0 mps
Q100 =	216.2 m	"	3.7 mps*

LONG TERM STREAMBED CHANGES: none

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: N/A
RELIEF ELEVATION: N/A
DISCHARGE OVER ROAD @Q100: None

UPSTREAM STRUCTURE

TOWN: Duxbury — DISTANCE: 4 km
HIGHWAY # : TH 35 — STRUCTURE #: B25
CLEAR SPAN: 2.4 m — CLEAR HEIGHT: 2.4 m
YEAR BUILT: Unknown — FULL WATERWAY: 4.5 sq m
STRUCTURE TYPE: Steel Boller Tube

DOWNSTREAM STRUCTURE

TOWN: Moretown — DISTANCE: 1.6 km
HIGHWAY # : VT 100B — STRUCTURE #: 1
CLEAR SPAN: 8.2 m — CLEAR HEIGHT: 1.8 m
YEAR BUILT: 1927 — FULL WATERWAY: 15.0 sq m
STRUCTURE TYPE: Concrete T-Beam Bridge

LOAD FACTOI LOAD RATING (TONS)

LOADING LEVELS	TRUCK						
	H	HS	3S2	6 AXLE	3A STR.	4A STR.	5A SEMI
INVENTORY	0	0					
POSTED	0	0	0		0	0	0
OPERATING		0	0	0	0	0	

COMMENTS: 0

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2003	3700	510	55	6	230
2023	4900	670	55	6	290

20 year ESAL for flexible pavement from 18KIP to 0 : 2,884,000
20 year ESAL for flexible pavement from 18KIP to 0 : 6,987,00
Design Speed : 80 kmh

PROPOSED STRUCTURE

STRUCTURE TYPE: Single Span Steel Girder w/ Integral Abutments

CLEAR SPAN(NORMAL TO STREAM): 16.6 m
VERTICAL CLEARANCE ABOVE STREAMBED: 4.4 m
WATERWAY OF FULL OPENING: 51 sq m

WATER SURFACE ELEVATIONS AT:

Q2.33 =	214.6 m	VELOCITY=	3.2 mps
Q10 =	215.2 m	"	3.5 mps
Q25 =	215.5 m	"	5.0 mps
Q50 =	215.7 m	"	5.3 mps
Q100 =	216.1 m	"	3.6 mps*

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: N/A
RELIEF ELEVATION: N/A
DISCHARGE OVER ROAD @Q100: None

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 217.5 m ave
VERTICAL CLEARANCE: @Q100 1.4 m ave

SCOUR: 0.3 m contraction scour @ Q500

REQUIRED CHANNEL PROTECTION: Type IV Stone

PERMIT INFORMATION

AVERAGE DAILY FLOW:	0.4cms	DEPTH OR ELEVATION:
ORDINARY LOW WATER:	0.2cms	0.1m
ORDINARY HIGH WATER:	4.9cms	0.5m

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: Two-Way Single Span
CLEAR SPAN (NORMAL TO STREAM): 11.2 m (minimum)
VERTICAL CLEARANCE ABOVE STREAMBED: 2.0 m (minimum)
WATERWAY AREA OF FULL OPENING: 20.0 sq m (minimum)

ADDITIONAL INFORMATION

* Velocities for both existing and proposed structures were reported from the downstream fascia of the bridges. The Q100 velocities through the bridges drop off as there is no longer a hydraulic jump induced; as is the case with all other flow regimes.

DESIGN CRITERIA

1. DESIGN LIVE LOAD AASHTO MS-22.5
2. DESIGN SPAN 16.4 M
3. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL ON LEDGE
4. ALLOWABLE LOAD FOR PILING
   TYPE
   ESTIMATED LENGTH
5. STRUCTURAL STEEL AASHTO GRADE
6. REINFORCING STEEL GRADE 420
7. CONCRETE CLASS A f'c : 30 Mpa
   CONCRETE CLASS B f'c : 25 Mpa
   SILICA - FUME CONCRETE f'c : 35 Mpa
8. SOIL UNIT WEIGHT 140 kcm
9. DESIGN LOAD FOR SPREAD FOOTINGS ON SOIL

TRAFFIC MAINTENANCE

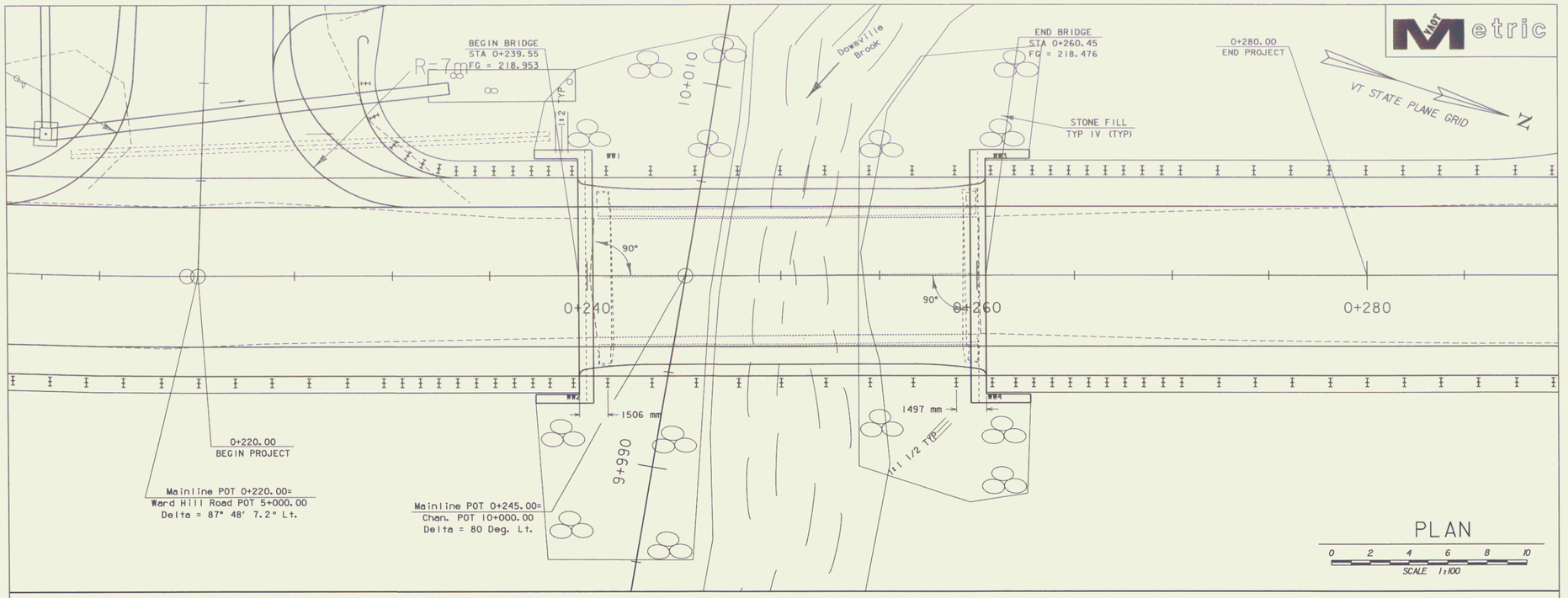
1. IS TRAFFIC TO BE MAINTAINED? YES
   IF YES, ON EXISTING STRUCTURE OR ON TEMPORARY BRIDGE TEMPORARY BRIDGE
2. TEMPORARY BRIDGE REQUIREMENTS: ONE OF TWO WAY TWO-WAY
   TRAFFIC CONTROL SIGNALS REQUIRED NO
   MINIMUM CLEAR SPAN (NORMAL TO STREAM):
   WATERWAY OF FULL OPENING:
   VERTICAL CLEARANCE ABOVE STREAMBED:
   ARE SIDEWALKS REQUIRED? NO
   IF SO, ON WHAT SIDE?
   STRUCTURE TYPE:

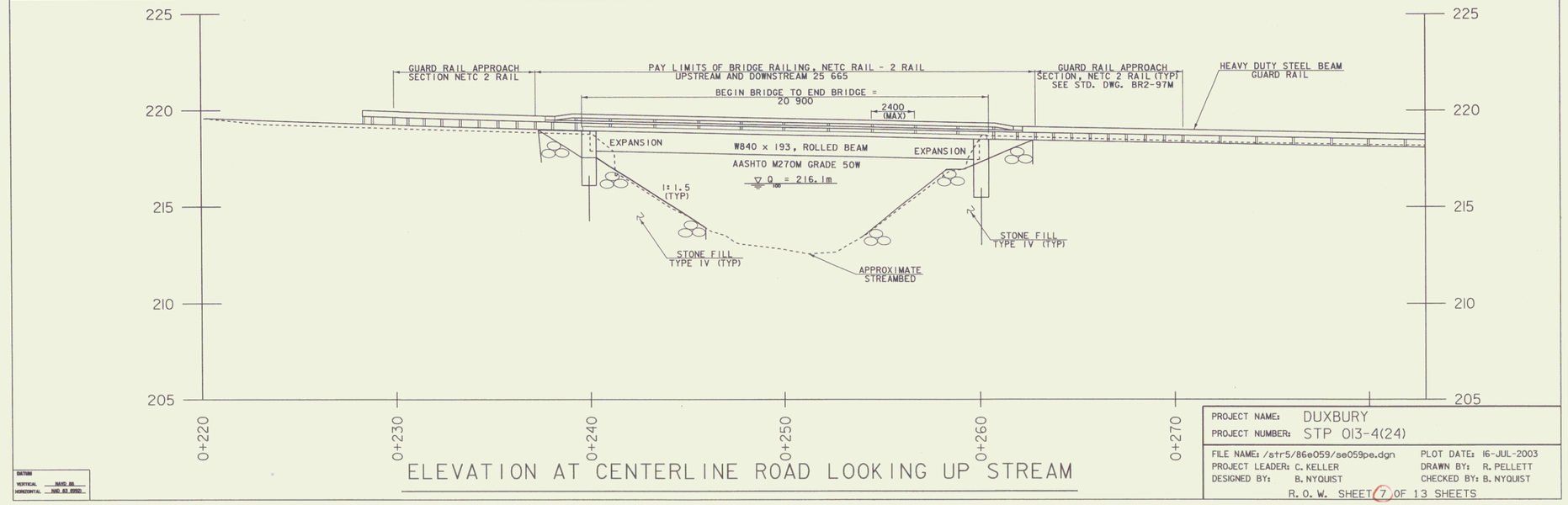
PROJECT NAME: DUXBURY
PROJECT NUMBER: STP 013-4(24)

FILE NAME: /str5/35e059/se059PLxls — PLOT DATE: 8/17/00
PROJECT LEADER: C. KELLER — DRAWN BY: R. PELLETT
DESIGNED BY: B. NYQUIST — CHECKED BY: M.E.M.

R.O.W. SHEET 6 OF 13 SHEETS

6





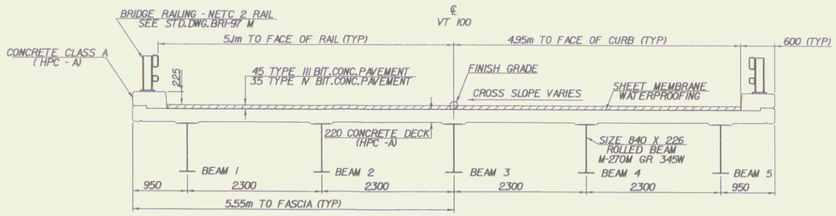
ELEVATION AT CENTERLINE ROAD LOOKING UP STREAM

PROJECT NAME: DUXBURY
PROJECT NUMBER: STP 013-4(24)

FILE NAME: /str5/86e059/se059pe.dgn
PROJECT LEADER: C. KELLER
DESIGNED BY: B. NYQUIST
PLOT DATE: 16-JUL-2003
DRAWN BY: R. PELLETT
CHECKED BY: B. NYQUIST

R. O. W. SHEET 7 OF 13 SHEETS

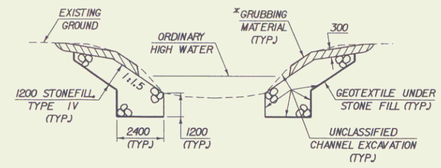
7



BRIDGE TYPICAL SECTION

0 1 2 3 4

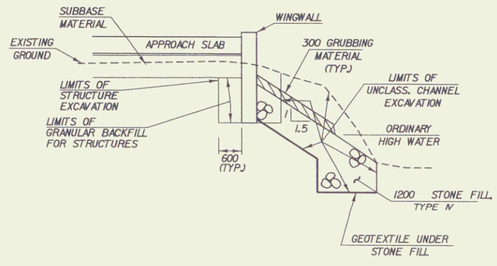
SCALE - 1:40



TYPICAL CHANNEL SECTION

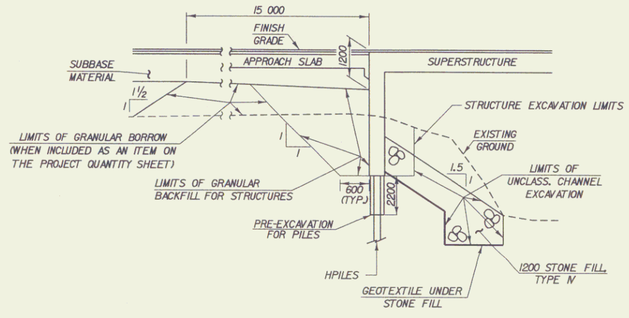
(NOT TO SCALE)

*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.



TYPICAL WINGWALL SECTION

(NOT TO SCALE)



TYPICAL ABUTMENT SECTION

(NOT TO SCALE)

NOTE: 300 UNDERCUT AS DETERMINED NECESSARY BY THE RESIDENT ENGINEER.

PROJECT NAME:	DUXBURY
PROJECT NUMBER:	STP 013-4(24)
FILE NAME: /str5/86e059/se059pl.dgn	PLOT DATE: 15-JUL-2003
PROJECT LEADER: C. KELLER	DRAWN BY: R. H. PELLETT
DESIGNED BY: B. NYQUIST	CHECKED BY: B. NYQUIST

R. O. W. SHEET 8 OF 13 SHEETS

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NOTES:

1. AN ALTERNATE TEMPORARY CONTROL PLAN MAY BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL BY THE RESIDENT ENGINEER.
2. SPECIAL CONSIDERATION MUST BE GIVEN TO THE FIRST PUMP-DOWN OF THE EXCAVATIONS. THIS WILL CONTAIN THE GREATEST VOLUME OF WATER WITH A HIGH SEDIMENT LOAD. THE CONTRACTOR MAY PROVIDE ADDITIONAL SEDIMENT TRAPS WITHIN THE RIGHT-OF-WAY IF REQUIRED OR CONTROL THE RATE OF DRAW-DOWN. ADDITIONAL SEDIMENT TRAPS MUST BE APPROVED BY THE RESIDENT ENGINEER.
3. AFTER COMPLETION OF THE SUBSTRUCTURE, THE SEDIMENT IN THE TRAPS SHALL BE REMOVED AND THE GROUND RESTORED TO ITS ORIGINAL SLOPES OR GRADED AS SHOWN ON THE CONSTRUCTION DRAWINGS.
4. THE CONTRACTOR WILL USE OTHER TEMPORARY OR PERMANENT EROSION CONTROL MEASURES AS NECESSITATED BY THE SEQUENCE OF CONSTRUCTION AND AS DIRECTED BY THE RESIDENT ENGINEER. SEE SECTION 105.23 OF THE VERMONT AOT STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 1990.

CURVE DATA
Δ = 21°25' 48.8" Lt.
R = 225.00 m
T = 42.58 m
L = 84.16 m
E = 3.99 m
MAX. BANK = 0.060
PC 0+135.271

WARD HILL ROAD 5+035.000
End Side Road Construction

POT 5+050.09

APPROXIMATE LOCATION TO CONSTRUCT SEDIMENT BASIN OR STACK HAY BALES TWO HIGH TO TRAP SEDIMENT PUMPED FROM EXCAVATIONS.

5'x5' INLET BASIN - TYPE I STONE FILL

WARD HILL ROAD
CURVE DATA
Δ = 15° 45' 23.5" Rt.
R = 25.00 m
T = 3.459 m
L = 6.875 m
E = 0.238 m
BANK = 0.0XX M / M

Begin Bridge
STA 0+239.550
FG 218.953

End Bridge
STA 0+260.450
FG = 218.476

0+330.000
End Approach

0+280.000
End Project

Dowsville Brook

SAVE

0+170.000
Begin Approach

0+220.000
Begin Project

PI 5+017.99 = 5+017.95

PT 0+219.43

PC 5+014.68

PI 5+021.91

R=7m

R=7m

5+050

5+040

5+020

10+020

10+010

CZ

0+160

0+200

0+240

0+250

0+280

0+300

0+340

CZ 9+966

089+9

PI 0+177.85 = 0+176.85

Mainline POT 0+220.00=
Ward Hill Road POT 5+000.00
Delta = 87° 48' 17.2" Lt.

Mainline POT 0+245.00=
Chan. POT 10+000.00
Delta = 80 Deg. Lt.

SEEDING FORMULA
RURAL AREAS

% MASS	kg/ha	NAME	PUR %	GERM %
37.5	26.0	CREEPING RED FESCUE	98	85
37.5	26.0	TALL FESCUE	95	90
5.0	4.0	RED TOP	95	90
15.0	10.0	BIRDSFOOT TREFOIL	98	85
5.0	4.0	ANNUAL RYE GRASS	95	85
100.0	70.0			

GENERAL NOTES

SEED MIXTURE: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY MASS 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 560 kg/ha. HYDRO SEEDERS MAY USE 19-19-19 FORMULA.

AGRICULTURAL LIMESTONE: TO BE APPLIED AT THE RATE OF 4500 kg/ha, OR AS DIRECTED BY THE ENGINEER.

HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 4500 kg/ha, OR AS DIRECTED BY THE ENGINEER.

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

MARKER POSTS: TO BE PLACED AS INDICATED OR AS DIRECTED BY THE ENGINEER.

SLOPE ROUNDING: ALL CUT SLOPES TO BE ROUNDED IN ACCORDANCE WITH STANDARD SHEET B-5M.

PAY LIMITS OF SAND BORROW: WHEN USED IN CONJUCTION WITH UNDERDRAIN - SEE STANDARD SHEET D-2M.

TACK COAT: EMULSIFIED ASPHALT IS TO BE APPLIED AT THE RATE OF 0.07 L/m2 BETWEEN SUCCESSIVE COURSES OF PAVEMENT AS DIRECTED BY THE ENGINEER.

VT STATE PLANE GRID N

0 10 20 30
SCALE IN METERS
1:250 (1:250)

LEGEND
FABRIC CURTAIN
SILT FENCE
HAY BALES

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (1992)

TEMPORARY EROSION CONTROL

PROJECT: DUXBURY
PROJECT NO.: STP 013-4(24)
DESIGN FILE NAME: /str5/86e059/se059bdr.dgn
IPARM FILE NAME: se059dee.i
PLOT DATE: 16-JUL-2003
SURVEYED BY: L. ORVIS
SURVEY DATE: 5/9/97
SQUAD LEADER: C. KELLER
DRAWN BY: G. Shangraw
R. O. W. SHEET 9 OF 13 SHEETS

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Metric

STATE OF VERMONT
AGENCY OF TRANSPORTATION
RIGHT OF WAY PLANS
DETAIL SHEET

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
1	HARDIN, SUSAN G. &	12	0+206.8 LT.	0+214.4 LT.			CONST. (T) 8 SM±	WDOE	08-08-03	DUXBURY	89	18-	86.1 S.F.±
	BAUER, ERIC C.		0+209.2 LT.	0+210.8 LT.			SLOPE (T) 1.3 SM±					19	14.0 S.F.±
			0+210.3 LT.	0+214.5 LT.			DITCH & DRAINAGE (P) 5.0 SM±						53.8 S.F.±
2A	STARCK, JOAN B.	12	0+190.6 LT.	0+210.3 LT.			SLOPE (T) 186.2 SM±	WD	08-08-03	DUXBURY	89	20-	2,004.8 S.F.±
			0+210.3 LT.	0+213.0 LT.			DITCH & DRAINAGE (P) 1.5 SM±					22	16.1 S.F.±
			0+212.0 LT.				CULVERT (P)						INCL. DI
2B			0+199.2 RT.	0+250.2 RT.			DETOUR (T) 0.07 HA±						TWO WAY VEHICULAR 0.17A±; INCLUDES EROSION CONTROL
			0+213.0 RT.	0+237.0 RT.			SLOPE (P) 88.4 SM±						951.6 S.F.±
			0+237.0 RT.	0+245.6 RT.			CHANNEL (P) 35 SM±						376.7 S.F.±
2C			0+186.3 RT.	0+250.2 RT.	0.11HA±		ALL R.T. & I.						HWY. EASE. VT. RTE. 100 & T.H. #35 (0.27A±)
3A	ADAMS, ROBERT D.	12	0+228.0 LT.	0+239.3 LT.			SLOPE (T) 39.9 SM±	WD	05-12-04	DUXBURY	92	24-25	429.5 S.F.±
			0+228.3 LT.				INSTALL (P)						GUARDRAIL
			0+232.0 LT.	0+232.8 LT.			CULVERT (P)						
			0+239.3 LT.	0+248.0 LT.			CHANNEL (P) 14.4 SM±						155.0 S.F.±
			0+229.0 LT.	0+239.3 LT.			DITCH & DRAINAGE (P) 14.0 SM±						150.7 S.F.±
			T.H. #35 5+017.4 RT.				DRIVE (T)						GRAVEL 5.6M
			0+238.0 LT.	0+249.6 LT.			INSTALL (T) 91.2 SM±						EROSION CONTROL
													982.2 S.F.±
			0+231.0 LT.	0+239.3 LT.			DITCH & DRAINAGE (P) 4.5 SM±						48.4 S.F.±
3B		12	0+212.5 LT.	0+252.6 LT.	378.7 SM±		ALL R.T. & I.						HWY. EASE. VT. RTE. 100 & T.H. #35 (4,076 S.F.±)

REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
1	12	PARCEL NO. 1 HARDIN & BAUER. CHANGE THE DIT. (P) ON THE LAYOUT TO A DITCH & DRAINAGE (P). PER C.O. 9234.	05-08-02	M.J.R.	R.P.D.
2	10,12	PARCEL NO. 2 STARCK. CHANGE THE DITCH (P) TO DITCH & DRAINAGE (P) ON BOTH THE DETAIL SHEET AND LAYOUT. PER C.O. 9235.	05-08-02	M.J.R.	R.P.D.
3	12	PARCEL NO. 3 ADAMS. CHANGE THE DITCH (P) TO A DITCH & DRAINAGE (P) ON THE DETAIL SHEET ONLY. PER C.O. 9236.	05-08-02	M.J.R.	R.P.D.
4	10,12	PARCEL NO. 2 STARK. REMOVE HEBERT FROM TITLE. PER C.O. 9278.	02-11-03	M.J.R.	R.P.D.
5	12,13	PARCEL NO. 4C PIAZZA. EXTEND PARCEL 4C TO INCLUDE ALL R.T.& I. OF PROPERTY OWNER IN AND TO THE REMAINING PORTION OF HIS PROPERTY LYING WITHIN THE EXISTING HIGHWAY RIGHT-OF-WAY. SHOW APPROXIMATE LOCATION OF SLEEVE TO BE INSTALLED WITHIN THE EXISTING HIGHWAY RIGHT-OF-WAY. PER C.O. 9304.	07-15-03	G.J.F.	R.P.D.
		ELECTRONIC FILES TO STRUCTURES 08-06-04			

ACCT.gfunk
IP_PWPdma04933\re059d.dgn
DATE PLOTTED 06-AUG-2004

DR. (P)- DRAINAGE RIGHT
DIT. (P)- DITCHING RIGHT
CH. (P)- CHANNEL RT.
DRIVE (T)- DRIVE RIGHT
CUL. (P)- CULVERT RIGHT
[W]- WATER SOURCES

PRESENT R.O.W.
TAKING WITHOUT ACCESS
TAKING WITHOUT ACCESS ALONG PROPERTY LINE
TAKING WITH ACCESS
PERMANENT EASEMENT
TEMPORARY EASEMENT

LEGEND
C&T (P) CLEARING & TRIMMING
CZ (P) CLEAR ZONE
CONST.(T) CONSTRUCTION EASEMENT
SR SLOPE RIGHTS
PROPERTY LINE
TOP OF CUT
TOE OF SLOPE
UE (P) PERMANENT UTILITY EASEMENT

APPROVED: ROGER P. DUMAS DATE: 11-30-01
CHIEF, PLANS & TITLES

R.O.W. PLANS
DUXBURY
STP 013-4(24)
R.O.W. SHEET 10 OF 13 SHEETS
SHEET 7 OF 58

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Metric

STATE OF VERMONT
AGENCY OF TRANSPORTATION
RIGHT OF WAY PLANS
DETAIL SHEET

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
4A	PIAZZA, FRANK	12,13	0+256.6 LT.	0+263.3 LT.			CHANNEL (P)✓ 9.0 SM±	OPT	6-1-04	DUXBURY	92	106-	96.9 S.F.±
			0+260.0 LT.	0+313.0 LT.			INSTALL (T)✓ 104.4 SM±					109	EROSION CONTROL DEVICES
													1,123.5 S.F.±
			0+263.3 LT.	0+282.3 LT.			SLOPE (P)✓ 28.8 SM±						309.5 S.F.±
			0+298.6 LT.	0+301.3 LT.			SLOPE (T)✓ 0.6 SM±						6.5 S.F.±
4B			0+246.0 RT.	0+307.7 RT.			DETOUR (T)✓ 0.07 HA±						TWO WAY VEHICULAR 0.17A±; INCLUDES EROSION CONTROL
			0+255.3 RT.	0+262.6 RT.			CHANNEL (P)✓ 6.3 SM±						67.3 S.F.±
			0+262.6 RT.	0+270.0 RT.			SLOPE (P) 4.8 SM±						51.7 S.F.±
			0+328.0 RT.				ALL R.T. & I.						LEACHFIELD ONLY
4C			0+250.2 RT.	0+361.6 RT.	0.21 HA±		ALL R. T. & I.						HWY. EASE. VT. RTE. 100 (0.51A±)
5A	TOWN OF DUXBURY	12	0+220 LT.				APPROACH (T)	QCD	07-31-03	DUXBURY	88	520-521	T.H. #35
5B		12	0+212.5 LT.	0+228.0 LT.	156.6 SM± ✓		ALL R. T. & I.						HWY. EASE. VT. RTE. 100 (1,685.1 S.F.±)
6	WAITSFIELD & CHAMPLAIN VALLEY TELECOM												UTILITY
7	WASHINGTON ELECTRIC CO-OP												UTILITY
	MAINTENANCE AGREEMENT ZONE NO. 1	12	T.H. #35 5+003.6 CL	T.H. #35 5+010.1 CL									LENGTH 6.5M (21') T.H. 35

Area of take doesn't match option (see special agreement)

REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY

ACCT.gfunk
IP_PWPrdms04933\re059d.dgn
DATE PLOTTED 06-AUG-2004

DR. (P)- DRAINAGE RIGHT
DIT. (P)- DITCHING RIGHT
CH. (P)- CHANNEL RT.
DRIVE (T)- DRIVE RIGHT
CUL. (P)- CULVERT RIGHT
[W]- WATER SOURCES

PRESENT R.O.W.
TAKING WITHOUT ACCESS
TAKING WITHOUT ACCESS ALONG PROPERTY LINE
TAKING WITH ACCESS
PERMANENT EASEMENT
TEMPORARY EASEMENT

LEGEND
C&T (P) — CLEARING & TRIMMING
CZ (P) — CLEAR ZONE
CONST. (T) — CONSTRUCTION EASEMENT
SR SR — SLOPE RIGHTS
PROPERTY LINE
TOP OF CUT
TOE OF SLOPE
UE (P) — PERMANENT UTILITY EASEMENT

APPROVED: ROGER P. DUMAS DATE: 11-30-01
CHIEF, PLANS & TITLES

R. O. W. PLANS
DUXBURY
STP 013-4(24)
R.O.W. SHEET 11 OF 13 SHEETS
SHEET 8 OF 58

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END MAINTENANCE AGREEMENT ZONE NO. 1

T. H. #35 5+010.1 CL.

BEGIN MAINTENANCE AGREEMENT ZONE NO. 1

T. H. #35 5+003.6 CL

[LENGTH 6.5M (21')]

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.

VT STATE PLANE GRID N

WARD HILL ROAD 5+035.000
END SIDE ROAD CONSTRUCTION

TOWN OF DUXBURY

Ward Hill Road

APPROACH (T)

POT 5+050.09

TH #35

CONSTRUCT DRIVE
WARD HILL 5+017.400 RT

N/F PRATT

CURVE DATA
Δ = 21°25' 48.8" Lt.
R = 225.00 m
T = 42.58 m
L = 84.16 m
E = 3.99 m
MAX. BANK = 0.060
PC 0+135.271

WARD HILL ROAD CURVE DATA
Δ = 15° 45' 23.5" Rt.
R = 25.00 m
T = 3.459 m
L = 6.875 m
E = 0.238 m
VARIES

ADAMS, ROBERT D.

PT 5+021.41
PC 5+014.53
BEGIN BRIDGE
STA 0+239.550
FG 218.953

PIAZZA, FRANK

END BRIDGE
STA 0+260.450
FG = 218.476

0+340.000
END APPROACH

0+280.000
END PROJECT

HARDIN, SUSAN G. & BAUER, ERIC C.

0+170.000
BEGIN APPROACH

0+186.3
10.1M (33') LT.

PI 5+017.95 =
5+017.95

HARDIN, SUSAN C. & BAUER, ERIC G.
R=7000

0+252.6
10.1M (33') LT.

0+228.0
10.1M (33') LT.

INSTALL (T)

DITCH & DRAINAGE (P)

GRAVEL SCHOOL BUS TURN AROUND

STARCK, JOAN B.

25.1M (82.3')

15.5M (51.0')

24.6M (80.7')

[98.3M] (322.5')

0+212.5
10.1M (33')

0+212.5

15.5M (51')

0+228.0

0+250.2

[109.7M] (359.9')

0+250.2
10.1M (33') RT.

20.2M (66')

85.3M (216')

PI 0+177.85 =
0+176.85

PT 0+219.43

0+220.000
BEGIN PROJECT
Mainline POT 0+220.00=
Ward Hill Road POT 5+000.00
Delta = 87°48' 17.2" Lt.

Mainline POT 0+245.00=
Chan. POT 10+000.00
Delta = 80 Deg. Lt.

LIMITS OF TEMPORARY DETOUR

STARCK, JOAN B.

REMNANTS OF BUILDING

PROPOSED LEACHFIELD

EXISTING LEACHFIELD & SEPTIC TANK

ALL RT&I

SOUTH DUXBURY CEMETERY

MATCH TO ROW SHEET 13 OF 13

BEGIN R. O. W. PROJECT

STP 013-4(24) STA. 0+186.3 10.1M (33') RT.

Existing Bridge Data
Bridge Width = 20'-0"
Roadway Width = 17'-0"
Bridge Length = 63'
Clear Span = 58'

The existing structure is a concrete deck on rolled beam stringers. The existing abutments are poured in-place concrete.

NOTE:
SEE R. O. W. SHEET 9 OF 13 FOR EROSION CONTROL DETAIL

ALL UTILITIES CURRENTLY ON THE EXISTING BRIDGE WILL BE ABANDONED. THESE UTILITIES WILL BE MOVED TO THE EXISTING AERIAL UTILITY LINE JUST WEST OF THE BRIDGE.

0 10 20 30
SCALE (1:250) IN METERS

FOR R.O.W. USE ONLY

PLAN SHEET

PROJECT NAME: DUXBURY
PROJECT NUMBER: STP 013-4(24)

FILE NAME: /str5/86e059/se059tle.dgn
PROJECT LEADER: C. KELLER
DESIGNED BY: B. NYQUIST
R. O. W. SHEET 12 OF 13

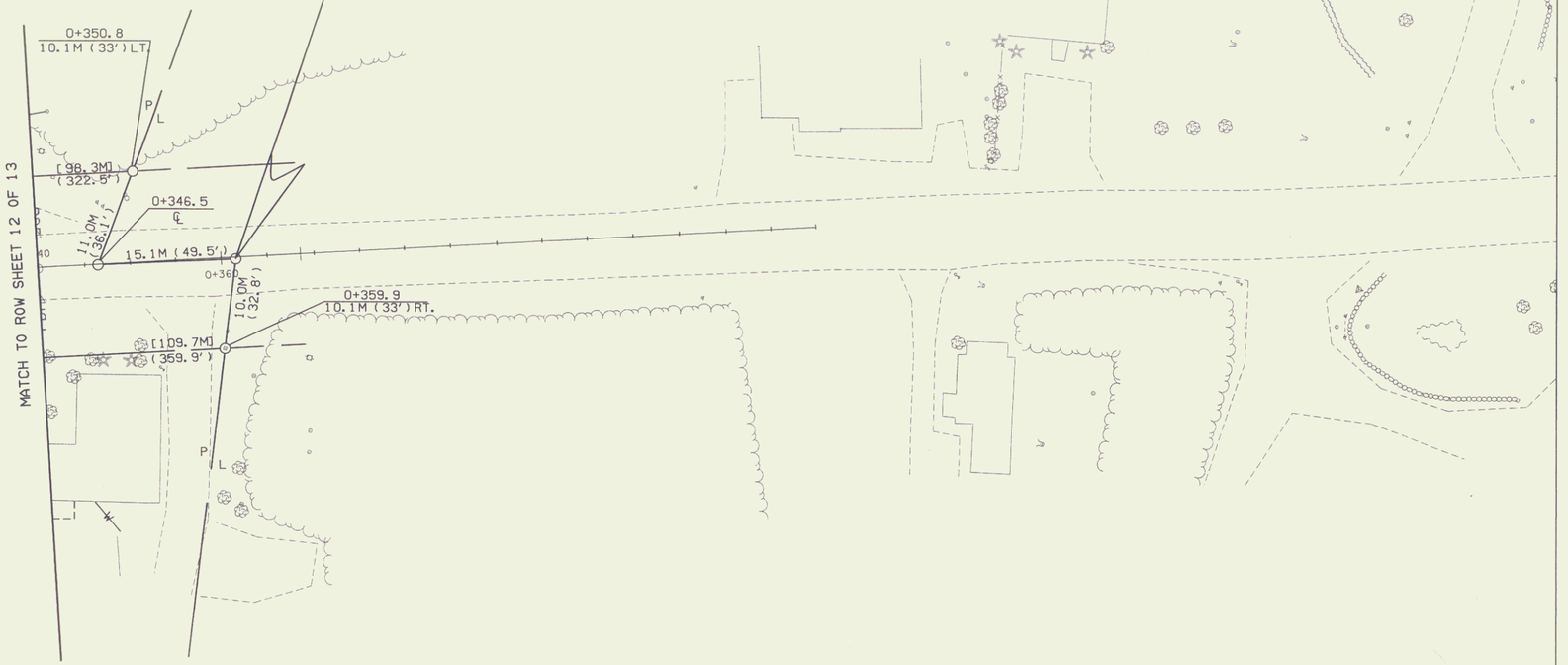
PLOT DATE: 09-AUG-2004
DRAWN BY: Graw
CHECKED BY: T. SUMNER
SHEET 9 OF 58

12

VT STATE PLANE GRID

N

END R.O.W. PROJECT
STP 013-4(24) STA. 0+361.6 0.2M (0.66') RT.



NOTE:
SEE R.O.W. SHEET 9 OF 13 FOR EROSION CONTROL DETAIL

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.

FOR R.O.W. USE ONLY

PLAN SHEET

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (1992)

PROJECT: DUXBURY	PROJECT NO.: STP 013-4(24)
DESIGN FILE NAME: /str5/86e059/se059bdr.dgn	
IPARM FILE NAME: se059LL1	PLOT DATE: 09-AUG-2004
SURVEYED BY: L. ORVIS	SURVEY DATE: 5/9/97
SQUAD LEADER: C. KELLER	DRAWN BY: G. Shangraw
R.O.W. SHEET 13 OF 13	SHEET 10 OF 58

13