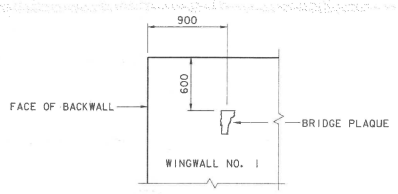
INDEX OF SHEETS

STANDARDS

A-62M	6-13-97	D-20M	6-13-97	E-142M	6-13-97
B-5M	1-3-00	D-22M	6-13-97	E-143M	6-13-97
B-11M	6-13-97	E-100AM	2-2-98	E-144M	3-29-99
B-71M	3-1-01	E-100M	6-13-97	E-150M	6-13-97
C-1M	1-3-00	E-101M	6-13-97	E-160M	6-13-97
C-2AM	1-3-00	E-102AM	6-13-97	E-191M	2-1-99
C-3M	1-3-00	E-102M	6-13-97	E-192M	12-28-98
D-2M	6-13-97	E-106M	6-13-97	E-193M	6-13-97
D-3M	6-13-97	E-107M	6-13-97	G-1DM	1-3-00
D-4M	6-13-97	E-107AM	6-13-97	G-1M	1-3-00
D-11M	6-13-97	E-108M	6-13-97	G-18M	6-13-97
D-13M	1-3-00	E-110M	6-13-97	T-1M	6-13-97
D-15M	6-13-97	E-121M	6-13-97	T-2M	6-13-97
D-16M	6-13-97	E-124M	6-13-97		
D-17M	6-13-97	E-141M	6-13-97		



VIEW A-A

THE BRIDGE PLAQUE SHALL BE SUPPLIED BY THE AGENCY OF TRANSPORTATION AND INSTALLED BY THE CONTRACTOR AT WINGWALL NO. 1 AS SHOWN OR AS DIRECTED BY THE ENGINEER.

BRIDGE PLAQUE LOCATION

NOT TO SCALE

FINAL HYDRAULICS REPORT

Metric

HYDROLOGIC DATA *

DRAINAGE AREA=
CHARACTER OF TERRAIN=
CHARACTER & TYPE OF STREAM=

NATURE OF STREAMBED=

Q2.33= Q50=
Q10= Q100=
Q25= Q500=

DATE OF FLOOD OF RECORD=
WATER SURFACE ELEV.= ESTIMATED DISCHARGE=
NATURAL STREAM VELOCITY @ Q=
ICE CONDITIONS= DEBRIS=
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEVATION RAPIDLY?
IS ORDINARY RISE RAPID?
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS?
IF YES, DESCRIBE.

WATERSHED STORAGE ___ HEADWATERS ___ UNIFORM THROUGHOUT WATERSHED ___ IMMEDIATELY ABOVE SITE

EXISTING STRUCTURE *

STRUCTURE TYPE= REINFORCED CONCRETE ARCH YEAR BUILT= 1913
CLEAR SPAN (NORMAL TO STREAM) = 28.5 m
VERTICAL CLEARANCE ABOVE STREAMBED= 29.6 m
WATERWAY OF FULL OPENING= N/A
DISPOSITION OF STRUCTURE= HISTORICAL ARCH OVER ROCK GORGE TO BE REPLACED

TYPE OF MATERIAL UNDER SUBSTRUCTURE= ROCK (PRIMARILY LIMESTONE AND DOLOMITIC MARBLE OF THE SHELBURNE FORMATION)
WATER SURFACE ELEV. @ Q2.33= VELOCITY=
Q10= 62.1 m "
Q25= "
Q50= 63.5 m "
Q100= 64.5 m "

LONG TERM STREAM BED CHANGES= UNKNOWN

IS THE ROADWAY OVERTOPPED BELOW THE Q100? NO FREQUENCY=
RELIEF ELEVATION= UNKNOWN DISCHARGE OVER ROAD @ Q100= UNKNOWN

UPSTREAM STRUCTURE= TOWN= DISTANCE=
HIGHWAY NO.= STRUCTURE NO.=
STRUCTURE TYPE=
CLEAR SPAN= CLEAR HEIGHT=
YEAR BUILT= FULL WATERWAY=

DOWNSTREAM STRUCTURE= TOWN= DISTANCE=
HIGHWAY NO.= STRUCTURE NO.=
STRUCTURE TYPE=
CLEAR SPAN= CLEAR HEIGHT=
YEAR BUILT= FULL WATERWAY=

PROPOSED STRUCTURE *

STRUCTURE TYPE= REINFORCED CONCRETE ARCH (SEE NOTE 2)

CLEAR SPAN (NORMAL TO STREAM) =
VERTICAL CLEARANCE ABOVE STREAMBED=
WATERWAY OF FULL OPENING=

WATER SURFACE ELEV. @ Q2.33= VELOCITY=
Q10= " =
Q25= " =
Q50= " =
Q100= " =

IS THE ROADWAY OVERTOPPED BELOW THE Q100? FREQUENCY=
RELIEF ELEVATION= DISCHARGE OVER ROAD @ Q100=

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE=
VERTICAL CLEARANCE @ Q

SCOUR: ALL PILES AND ABUTMENTS TO BE FOUNDED ON BEDROCK.
REQUIRED CHANNEL PROTECTION=

PERMIT INFORMATION

AVERAGE DAILY FLOW=
ORDINARY LOW WATER= DEPTH=
ORDINARY HIGH WATER= DEPTH=

ADDITIONAL COMMENTS *

1. HYDRAULIC AND HYDROLOGIC INFORMATION IS FROM THE FEMA FLOOD INSURANCE STUDY FOR THE TOWN OF COLCHESTER, SEPTEMBER 1, 1981 AND THE CITY OF SOUTH BURLINGTON, SEPTEMBER 16, 1980. ADDITIONAL ANALYSES WERE NOT CONDUCTED AT THIS SITE.

2. HYDRAULIC CONDITIONS WILL NOT CHANGE FOR THE NEW STRUCTURE.

Metric

DESIGN CRITERIA:
1. DESIGN LIVE LOAD AASHTO MS 22.5
2. DESIGN SPAN 18 m, 40.5 m, 31.26 m
3. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL 190 KPa ON LEDGE 500 KPa
4. ALLOWABLE LOAD FOR PILING N/A TYPE ESTIMATED LENGTH
5. STRUCTURAL STEEL N/A
6. REINFORCING STEEL GRADE 420
7. CONCRETE CLASS A f'_c 30 MPa
   CLASS B f'_c 25 MPa
   SILICA FUME f'_c 35 MPa

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

LOAD FACTOR LOAD RATING (METRIC TONNES)

LOADING LEVELS (LOAD FACTOR)	TRUCK M	MS	3S2	6 AXLE	3A. STR.	4A. STR.	5A. SEMI
INVENTORY A = 2.17 B=1.00	---	---					
POSTED A = 1.55 B=1.40	---	---	---		---	---	---
OPERATING A = 1.30 B=1.67		---	---	---	---	---	

STRENGTH RF = $\frac{\phi M_n - 1.3\,M_{DL}}{A \times M_{LL+I}}$ SERVICEABILITY RF = $\frac{95F_y S_{LL+I} - M_{DL}\frac{S_{LL+I}}{S_{tc}} - M_{SDL}\frac{S_{LL+I}}{S_{sc}}}{1.67\,M_{LL+I}}$

TRAFFIC DATA - TH 4/3

2004 ADT = 7500 2024 ADT = 10,000 2004-2024 ESAL'S 1,554,000
2004 DHV = 940 2024 DHV = 1115 2004-2044 ESAL'S 3,645,000
2004 ADTT = 225 2024 ADTT = 300 DESIGN SPEED = 50 KM/H
2024 %D = 65
2024 %T = 3

VANASSE HANGEN BRUSTLIN, INC.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta.
	Surv. Sta.

TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.

PRELIMINARY INFORMATION SHEET

Designed By M. A. COLGAN	Drawn By B. J. MASSE
Checked By S. M. GUNN Date 6/03	Bridge Design Supervisor S. M. GUNN Date 6/03
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6) S C/2
I.G.C. Info.	
Bridge Sheet No. ZD1391	R.O.W. SHEET 2 OF 21

MAY 12 2010