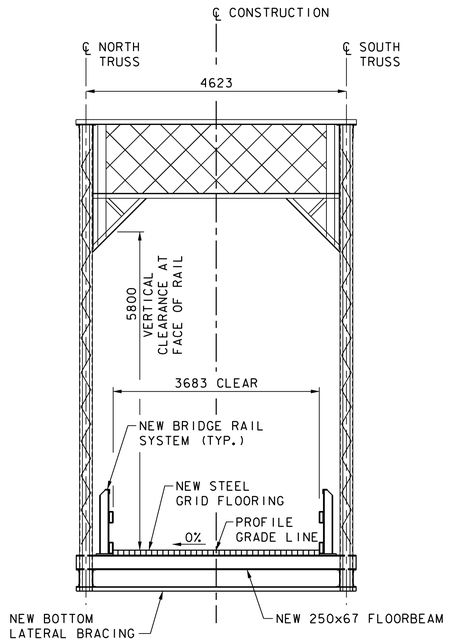


BRIDGE TYPICAL SECTION

SCALE: 1:50

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 FORMULA 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).

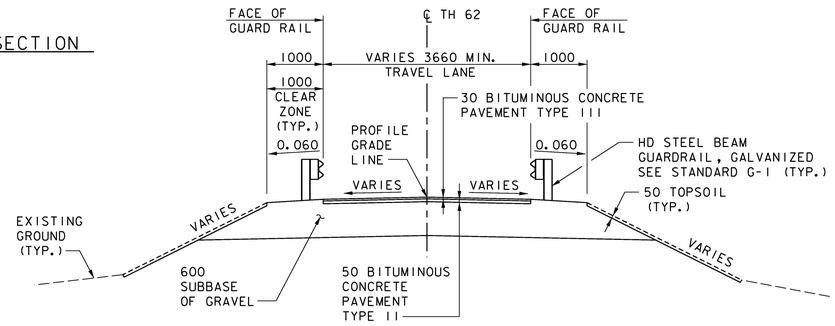
AGRICULTURAL LIMESTONE: TO BE APPLIED AT THE RATE OF 4500 kg/ha, OR AS DIRECTED BY THE ENGINEER.

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.

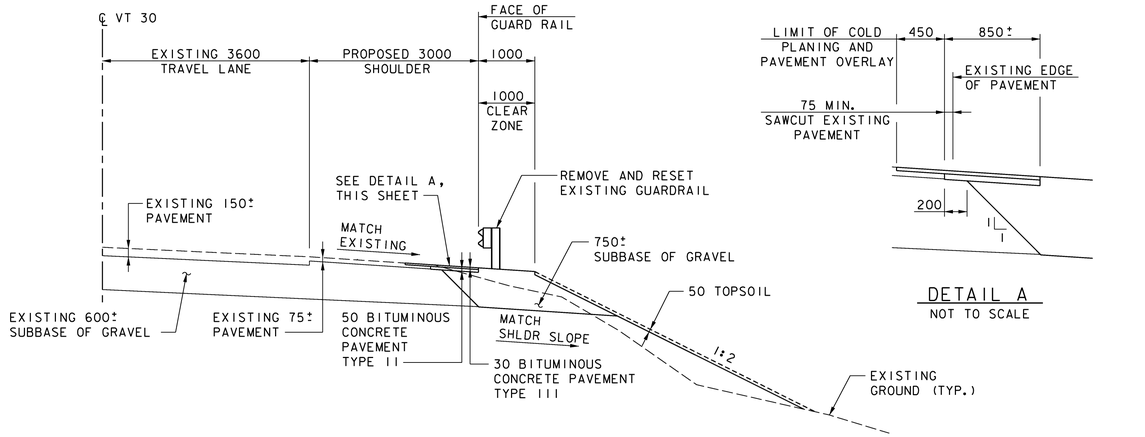
SLOPE ROUNDING: ALL CUT SLOPES TO BE ROUNDED IN ACCORDANCE WITH STANDARD SHEET B-5.

MATERIAL ITEM	THICKNESS TOLERANCES (mm)
PAVEMENT	+/- 5 (TOTAL DEPTH)
SUBBASE	+/- 30



TH 62 TYPICAL SECTION

SCALE: 1:50



VT 30 TYPICAL SECTION

SCALE: 1:50

DETAIL A

NOT TO SCALE

0 1000 2000 3000 4000 5000

FINAL HYDRAULICS REPORT

VAOT Metric

HYDROLOGIC DATA

DRAINAGE AREA= 1050 KM²
CHARACTER OF TERRAIN: ROLLING STEEP-SIDED VALLEYS
CHARACTER & TYPE OF STREAM: GRAVEL AND COBBLE BOTTOM

NATURE OF STREAMBED:

Q2.33= Q50= 566 CMS
Q10= 340 CMS Q100= 849 CMS
Q25= Q500= 1500 CMS

DATE OF FLOOD OF RECORD: SEPTEMBER 1938
WATER SURFACE ELEV.: ESTIMATED DISCHARGE:
NATURAL STREAM VELOCITY @ Q
ICE CONDITIONS: UNKNOWN DEBRIS: UNKNOWN
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEVATION RAPIDLY? UNKNOWN
IS ORDINARY RISE RAPID? UNKNOWN
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? NO
IF YES, DESCRIBE.

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

EXISTING STRUCTURE

STRUCTURE TYPE: QUADRUPLE WARREN TRUSS (THROUGH) YEAR BUILT: CIRCA 1892
CLEAR SPAN (NORMAL TO STREAM): 59.63 m
VERTICAL CLEARANCE ABOVE STREAMBED: 7.92 m
WATERWAY OF FULL OPENING:
DISPOSITION OF STRUCTURE: REHABILITATE

TYPE OF MATERIAL UNDER SUBSTRUCTURE: UNKNOWN

WATER SURFACE ELEV. @ Q2.33= VELOCITY=
Q10= 83.6 "
Q25= "
Q50= 84.4 "
Q100= 85.4 "

LONG TERM STREAM BED CHANGES: UNKNOWN

IS THE ROADWAY OVERTOPPED BELOW THE Q100? NO FREQUENCY: -
RELIEF ELEVATION: - DISCHARGE OVER ROAD @ Q100: -

UPSTREAM STRUCTURE: TOWN: DUMMERSTON DISTANCE:
HIGHWAY NO.: TH 1 STRUCTURE NO.: CB 35
STRUCTURE TYPE: TIMBER COVERED BRIDGE
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: 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:
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 TOWN OF DUMMERSTON FLOOD INSURANCE STUDY, JUNE 1991. ELEVATIONS WERE CALCULATED USING THE SURVEYED STREAMBED ELEVATION AND THE WATER DEPTHS FROM THE FEMA REPORT. ADDITIONAL ANALYSES WERE NOT CONDUCTED FOR THIS SITE.

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

VAOT Metric

DESIGN CRITERIA:
1. DESIGN LIVE LOAD AASHTO M9 (WITH 10% IMPACT ALLOWANCE)
2. DESIGN SPAN 60.490 m
3. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL N/A ON LEDGE N/A
4. ALLOWABLE LOAD FOR PILING N/A TYPE - ESTIMATED LENGTH -
5. STRUCTURAL STEEL NEW STEEL AASHTO M 270M GRADE 345 (PAINTED) 6. EXISTING STEEL UNKNOWN Fy = 179 MPa (ASSUMED)
7. REINFORCING STEEL GRADE 420 Fu = 358 MPa (ASSUMED)
8. CONCRETE HIGH PERFORMANCE CLASS AA f'c 30 MPa
CLASS A f'c
CLASS B f'c 25 MPa

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

WORKING STRESS LOAD RATING (METRIC TONNES)

LANE LOADING:
INVENTORY STRESS LEVEL = M7.6
OPERATING STRESS LEVEL = M9.5

SINGLE UNIT:
INVENTORY STRESS LEVEL = M11.1
POSTED STRESS LEVEL = M13.5
OPERATING STRESS LEVEL = M15.1

TOP CHORD MEMBER U7-U9 COMPRESSION GOVERNS LANE LOADING
VERTICAL MEMBERS L1-U1 & L15-U15 TENSION GOVERN SINGLE UNIT LOADING

TRAFFIC DATA - TH 62

2004 ADT = 230 2024 ADT = 270 DESIGN SPEED = N/A
2004 DHV = 32 2024 DHV = 38
2004 ADTT = N/A 2024 ADTT = N/A
2004 %D = N/A 2024 %D = N/A
2004 %T = N/A 2024 %T = N/A

VANASSE HANGEN BRUSTLIN, INC.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of DUMMERSTON	Bridge No. 37
Highway No. TH 62	Log Sta. / Surv. Sta.

TH 62 OVER WEST RIVER

PRELIMINARY INFORMATION SHEET

Designed By T.S. BRYANT	Drawn By C.L. CILLEY
Checked By S.M. HODGDON Date 4/09	Bridge Design Supervisor S.M. HODGDON Date 4/09
PROJECT DUMMERSTON	PROJECT NO. BHO 1442(28)
I.G.C. Info.	
Bridge Sheet No. ZJ080P1	Sheet 2 of 49

VHB NO. 51192 plot date: 4/3/2009