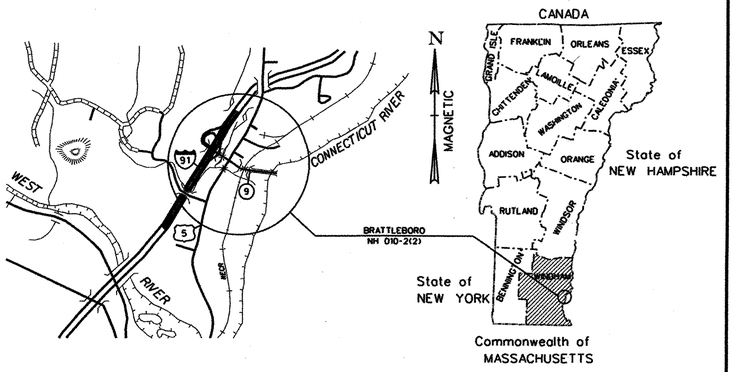
STATE OF VERMONT
AGENCY OF TRANSPORTATION

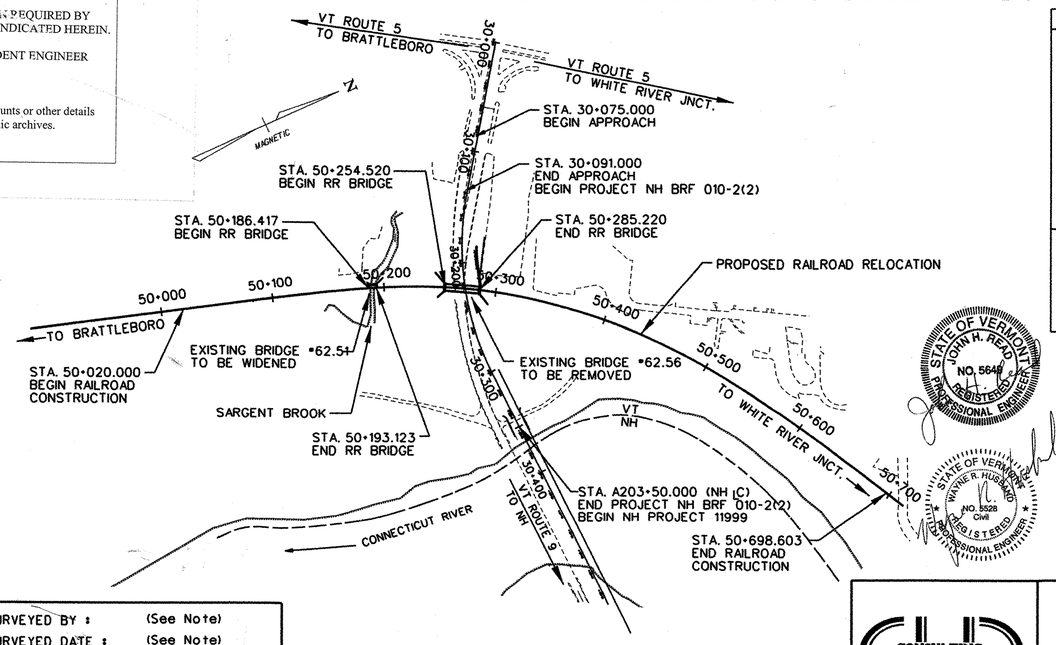


PROPOSED IMPROVEMENT
TOWN OF BRATTLEBORO
COUNTY OF WINDHAM
VT ROUTE 9 (PRINCIPAL ARTERIAL)
RR BRIDGE #62.56

BEGINNING AT A POINT IN THE TOWN OF BRATTLEBORO APPROXIMATELY 85 METERS FROM THE INTERSECTION OF VT ROUTES 5 AND 9, EXTENDING EASTERLY ALONG ROUTE 9 TO THE CONNECTICUT RIVER A DISTANCE OF 270 METERS.

LENGTH OF ROADWAY = 270.00m
LENGTH OF RAILWAY = 678.6m
LENGTH OF VT ROUTE 9 BRIDGE = 32m
LENGTH OF SARGENT BROOK BRIDGE = 8m
LENGTH OF PROJECT = 973.53m

WORK TO BE PERFORMED UNDER THIS PROJECT CONSISTS OF REALIGNING AND WIDENING ROUTE 9, THE REPLACEMENT OF EXISTING RAILROAD BRIDGE #62.56 OVER VT ROUTE 9, THE WIDENING OF EXISTING RAILROAD BRIDGE #62.51 OVER SARGENT BROOK, AND THE ASSOCIATED SUBGRADE RAILWAY APPROACH WORK. RAILROAD SUBBALLAST, BALLAST, AND TRACK REHABILITATION AND CONSTRUCTION WILL BE PERFORMED BY OTHERS UNDER A RAILROAD FORCE ACCOUNT.



SURVEY INFORMATION OBTAINED BY NHDOT, ELECTRONICALLY TRANSLATED FROM MOSS TO MICROSTATION, AND SUPPLEMENTED BY VTRANS ADDITIONAL SURVEY.

SURVEYED BY :	(See Note)
SURVEYED DATE :	(See Note)
DATUM	
VERTICAL	NGVD 1929
HORIZONTAL	NAD 1983

TRAFFIC DATA

VEHICLE:	RAILROAD:
2000 ADT = 15,000	1998 ADT FREIGHT = 6 TRAINS
2020 ADT = 19,200	V = 64 KmH (40 MPH)
2020 DHV = 1,925	1998 ADT PASSENGER = 2 TRAINS
2020 ADTT = 1,555	$V_{exist.}$ = 95 KmH (59 MPH)
2020 %T = 4%	V_{design} = 88 KmH (55 MPH)
POSTED SPEED = 40 KmH (25MPH)	
DESIGN SPEED = 60 KmH (35 MPH)	
20 yr 18-KIP ESAL'S = 13,836,000	
40 yr 18-KIP ESAL'S = 45,693,000	

BITUMINOUS CONCRETE PAVEMENT
SUPERPAVE MIXTURE DESIGN CRITERIA

DESIGN LANE / DESIGN FILE ESAL	8,301,600
DESIGN NUMBER OF GYRATIONS	75
PERFORMANCE GRADED ASPHALT BINDER	PC 70-28

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 2001, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JANUARY 4, 2001 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

STATE OF VERMONT — JOHN H. READ — NO. 5649 — REGISTERED PROFESSIONAL ENGINEER

STATE OF VERMONT — WAYNE R. HUSKINS — NO. 5528 Civil — REGISTERED PROFESSIONAL ENGINEER

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

RECORD PLANS

CONTRACTOR: J. A. MCDONALD, INC. – LYNDON CTR., VT
RESIDENT ENGINEER: DARREL BASSETT
CONSTRUCTION BEGAN: MARCH 3, 2003
CONSTRUCTION COMPLETE: NOVEMBER 8, 2004
RECORD PLANS BY: D. BASSETT & E. FOSTER

I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.

BY /s/ Darrel Bassett for Darrel Bassett RESIDENT ENGINEER
DATE April 3 2006

NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found at Central Files in the electronic archives.

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 SR SR SR
TOP OF CUT
TOE OF SLOPE

CONSULTING ENGINEERS
540 Commercial Street Manchester, NH 03101
(603) 668-8223 Fax (603) 668-8902
email: cld@cldengineers.com www.cldengineers.com
Maine · New Hampshire · Vermont

GORDON, BUA & READ, INC.
A DIVISION OF TRANSYSTEMS CORPORATION
34 SALEM STREET
READING, MASSACHUSETTS 01867

DIRECTOR OF PROJECT DEVELOPMENT
APPROVED /s/ DATE 10/17/02
PROJECT MANAGER : A. PORTALUPI
PROJECT NAME : BRATTLEBORO
PROJECT NUMBER : NH 010-2(2)
SHEET 1 OF 145 SHEETS

VAOT Metric

STANDARDS LIST

A-60M	Typical for Slopes in Solid Rock	6/13/97
B-5M	Slope Grading, Ebankments	6/13/97
B-11M	Methods of Slope Stabilization	6/13/97
B-71M	Residential & Commercial Drives	6/13/97
C-1M	Vertical Granite Curb	6/13/97
C-2AM	Portland Cement Concrete Sidewalk	6/13/97
C-3M	Sidewalk Ramps	6/13/97
D-2M	Underdrain & Carrier Pipe Details	6/13/97
D-3M	Treated Gutters	6/13/97
D-4M	Flushing Basins, Pipe Elbows	6/13/97
D-11M	Cast Iron Grate Type A	6/13/97
D-15M	Precast R.C. CB W/ Cast Iron Grate W/Frame, Type D & E	6/13/97
E-100M	Construction Approach Signs	6/13/97
E-100AM	Side Road Construction Approach Signs	6/13/97
E-101M	Construction Sign Details	6/13/97
E-102M	Construction Sign Details	6/13/97
E-102AM	Construction Sign Details	6/13/97
E-103M	Traffic Control Details	9/24/98
E-106M	Traffic Control Details	6/13/97
E-107AM	Breakaway Barricade Details	6/13/97
E-108M	Construction Zone Longitudinal Drop Offs	6/13/97
E-121M	Standard Sign Placement	6/13/97
E-123M	Guide Sign Placement-Miscellaneous Details	6/13/97
E-125M	Travel Information Signs	6/13/97
E-141M	Regulatory Sign Details	6/13/97
E-142M	Regulatory Sign Details	6/13/97
E-143M	Regulatory Sign Details	6/13/97
E-151M	Warning Sign Details	6/13/97
E-160M	Flanged Channel Steel Sign Post	6/13/97
E-163M	Tubular Steel Sign Post	6/13/97
E-191M	Pavement Marking Details	6/13/97
E-192M	Pavement Marking Details	12/28/98
E-193M	Pavement Marking Details	6/13/97
F-2M	Drive Gate for Chain Link Fence	6/13/97
G-1M	Steel Beam Guardrail	6/13/97
G-1dM	Anchor for Steel Beam Guardrail	1/3/00
G-4M	Plank Rail & Yielding Marker Posts	6/13/97
G-19M	Generic Grading Plans for Guardrail End Terminals	10/21/98
T-1M	Temporary Erosion Control Details	6/13/97
T-2M	Temporary Erosion Control Detail	6/13/97

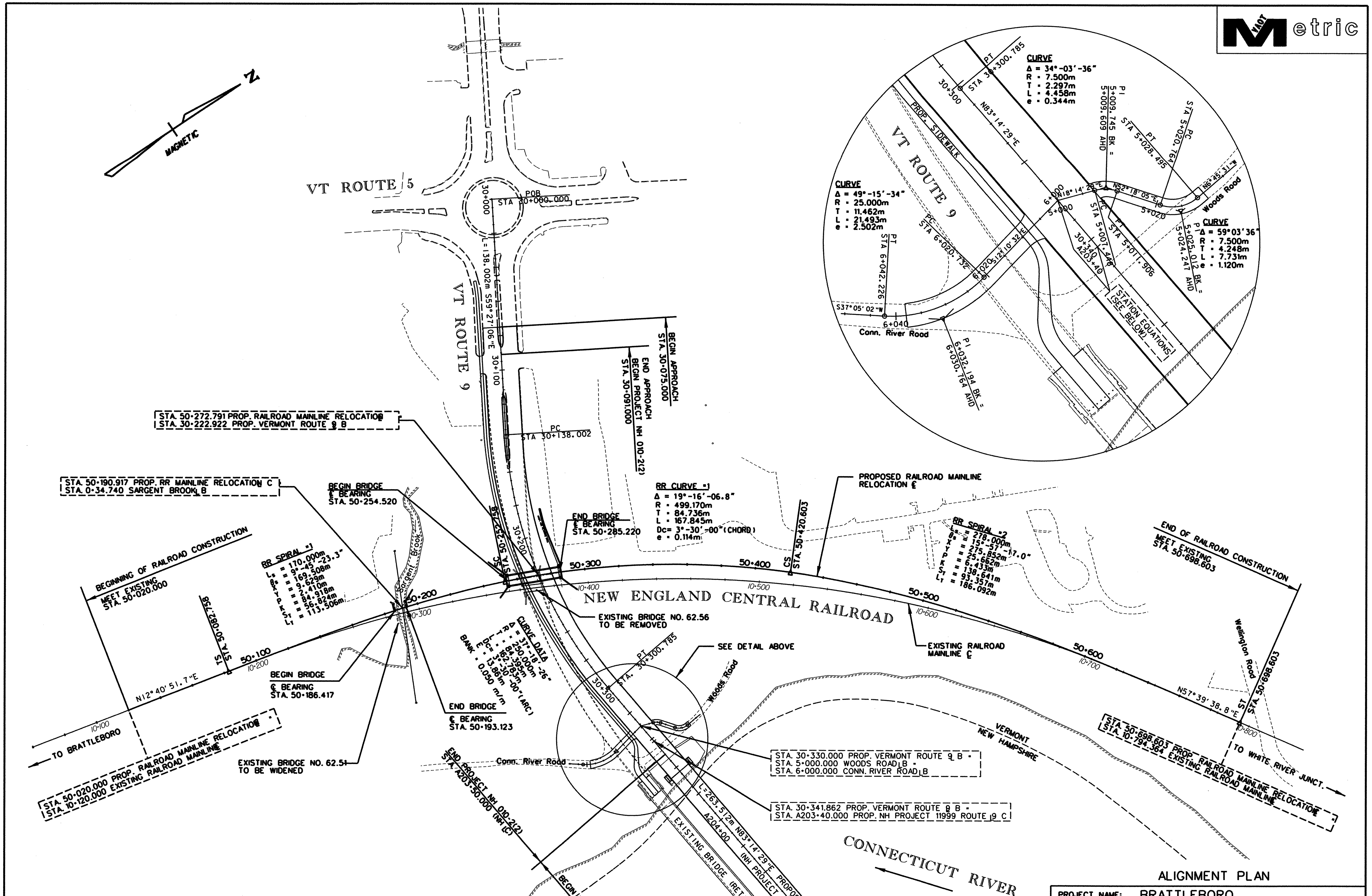
INDEX OF SHEETS

2 Addendum Two, Excavation Limits Dec 6, 2002

Plot Date: 10-02-2002
File: index.dgn

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BRATTLEBORO	Bridge No. 62.56
	Log Sta.
Highway No. VT. ROUTE 9	Surv. Sta.
BRIDGE NO. 62.56	
INDEX SHEET	
Designed By	Drawn By GJB
Checked By JHR Date .	Bridge Design Supervisor JHR Date
PROJECT BRATTLEBORO	PROJECT NO. NH 010-2(2)
I.G.C. Info.	
Bridge Sheet No.	Sheet 2 of 145

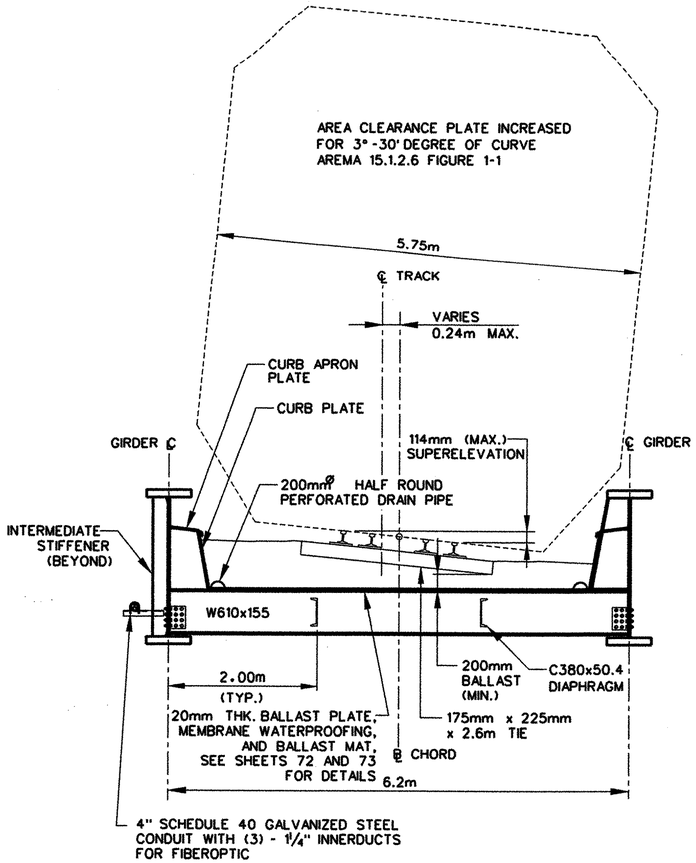


DATUM	
VERTICAL	NGVD 1929
HORIZONTAL	NAD 1983

ALIGNMENT PLAN

PROJECT NAME:	BRATTLEBORO
PROJECT NUMBER:	NH 010-2(2)

FILE NAME:	Z8270BD3	PLOT DATE:	10-01-2002
PROJECT LEADER:	JHR	DRAWN BY:	LB/LRD
DESIGNED BY:	GJB	CHECKED BY:	TEM/JHR
		SHEET 3 OF 145	

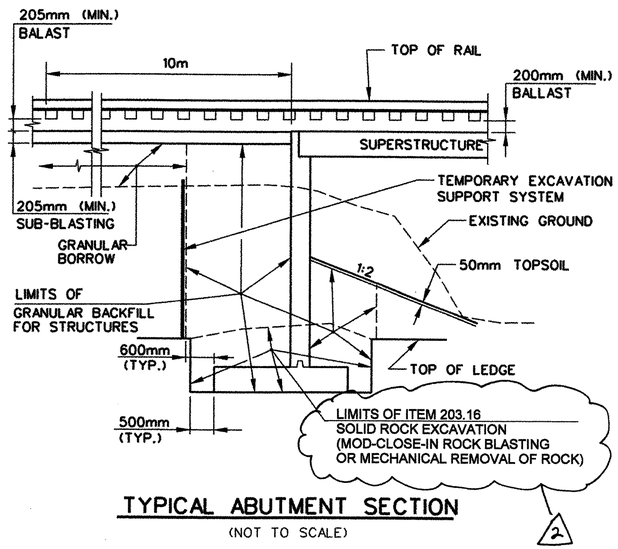


TRANSVERSE BRIDGE SECTION

SCALE 1:40

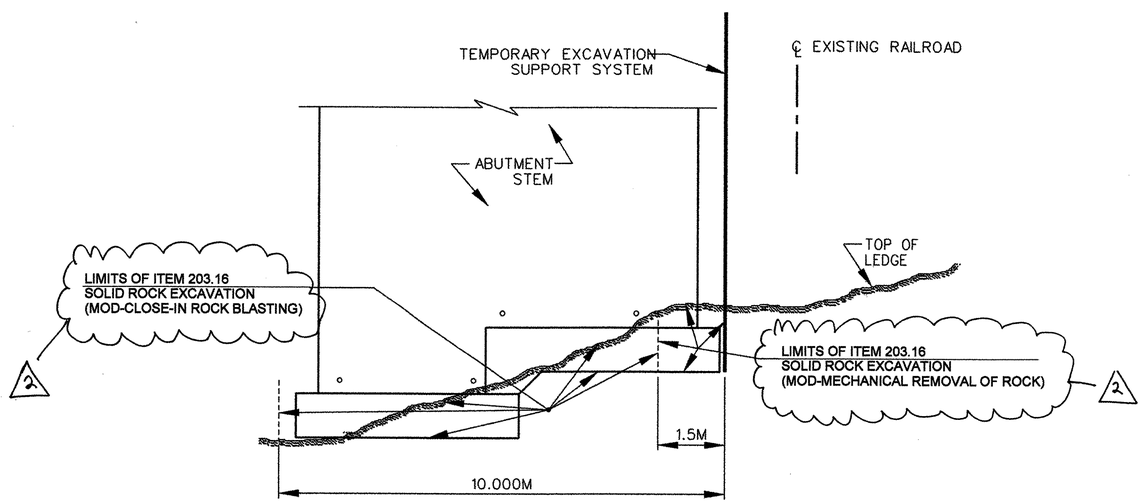
SEE PAGE 53 FOR EXCAVATION LIMITS
ITEM 203.15 COMMON EXCAVATION
ITEM 204.25 STRUCTURE EXCAVATION, AND
ITEM 529.15 REMOVAL OF STRUCTURE

2



TYPICAL ABUTMENT SECTION

(NOT TO SCALE)



TYPICAL TRANSVERSE ABUTMENT SECTION

(NOT TO SCALE)

2 Addendum two, Excavation notes Dec 6, 2002

Plot Date: 10-10-2002
File: rt9br302

VAOT Metric

STRESS TABLE — GIRDER — SPAN 30.7 meters

	SHEARS (END OF BEAM)	MOMENTS (MIDSPAN)
DL	871 kN	7,327 kN-m
LL (E80)	1,344 kN	6,585 kN-m
IMP (40%)	537 kN	3,582 kN-m
CENTRIFUGAL	45 kN	343 kN-m
TOTAL	2,797 kN	17,837 kN-m

PROPERTIES

A_{web} = 47,625 mm²
$I_{x(gross)}$ = 1.394×10^{1} mm⁴
$I_{x(trans)}$ = 1.384×10^{1} mm⁴
$S_{x(gross)}$ = 1.323×10^{0} mm³
$S_{x(trans)}$ = 1.323×10^{0} mm³

STRESS

SHEAR	BENDING (TENSION IN BOT. FLANGE)	DEFLECTION (LL+I)
fs = 58,730 kPa	fb = 164,870 kPa	Δ max = 45 mm
ALL fs = 120,000 kPa	ALL fb = 189,000 kPa	ALL Δ = 48 mm

BENDING (COMPRESSION IN TOP FLANGE)
fbc = 163,580 kPa
ALL fbc = 187,900 kPa

FATIGUE (FRACTURE CRITICAL)

(BASE METAL & WELD METAL FLANGE TO WEB CONNECTION)	BENDING
Max LL, IMP (mean) =	79,833 kPa
STRESS RANGE	79,833 kPa
STRESS CATEGORY	B
ALLOW. STRESS RANGE	110,000 kPa

STRESS TABLE — FLOOR BEAM — SPAN 6.2m

	SHEARS (END OF BEAM)	MOMENTS (MIDSPAN)
DL	26.3 kN	41.7 kN-m
LL (E80)	132.6 kN	309.9 kN-m
IMP (51%)	68.0 kN	159.0 kN-m
CENTRIFUGAL	7.0 kN	n/a kN-m
TOTAL	234 kN	510.7 kN-m

PROPERTIES

A_{web} = 6780 mm²
I_x = 1.29×10^{9} mm⁴
S_x = 4.220×10^{6} mm³

STRESS

SHEAR	BENDING (TENSION IN BOT. FLANGE)	DEFLECTION (LL+I)
fs = 34,760 kPa	fb = 153,900 kPa	Δ max = 7 mm
ALL fs = 120,000 kPa	ALL fb = 189,000 kPa	ALL Δ = 9 mm

BENDING (COMPRESSION IN TOP FLANGE)
fbc = 120,870 kPa
ALL fbc = 162,300 kPa

FATIGUE

(BASE METAL BOT. FLANGE)	BENDING
Max LL, IMP (mean) =	151,300 kPa
STRESS RANGE	151,300 kPa
STRESS CATEGORY	A
ALLOW. STRESS RANGE	165,500 kPa

PROPOSED STRUCTURE

STRUCTURE GEOMETRY:

1. STRUCTURE TYPE: SINGLE SPAN HALF-THRU GIRDER
2. CLEAR SPAN LENGTH(S): 29.5 meters
3. VERTICAL CLEARANCE ABOVE ROADWAY: 4.95 meters
4. ARE PROVISIONS TO BE MADE FOR PUBLIC UTILITIES? N/A

EXISTING STRUCTURE

1. STRUCTURE TYPE: SINGLE SPAN STEEL DECK GIRDER YEAR BUILT: 1937
2. CLEAR SPAN (NORMAL TO ROADWAY): 9.9 meters
3. VERTICAL CLEARANCE ABOVE ROADWAY: 4.35 meters

DESIGN CRITERIA

1. DESIGN LIVE LOAD AREMA: COOPERS E80
2. DESIGN SPAN: ℄ TO ℄ BRG. 30.7m
3. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL: 70 - 88 kPa ON LEDGE: 950 kPa
4. ALLOWABLE LOAD FOR PILING: N/A TYPE: N/A ESTIMATED LENGTH: N/A
5. ALLOWABLE STRESS FOR STRUCTURAL STEEL AASHTO: M270M GR 345 WEATHERING STEEL TENSION: 186 MPa
6. ALLOWABLE STRESS FOR REINFORCING STEEL AASHTO M31M GRADE 400 TENSION: 165 MPa COMPRESSION: 138 MPa
7. ALLOWABLE STRESS FOR CONCRETE HIGH PERFORMANCE CLASS A f'_c: 30 MPa f_c: N/A

	DESCRIPTION	

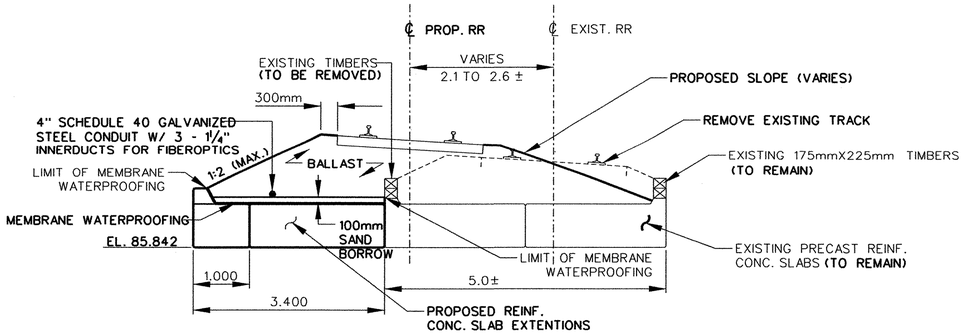
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BRATTLEBORO	Bridge No. 62.56
Highway No. VT. ROUTE 9	Log Sta. / Surv. Sta.

NEW ENGLAND CENTRAL RAILROAD OVER VT. ROUTE 9

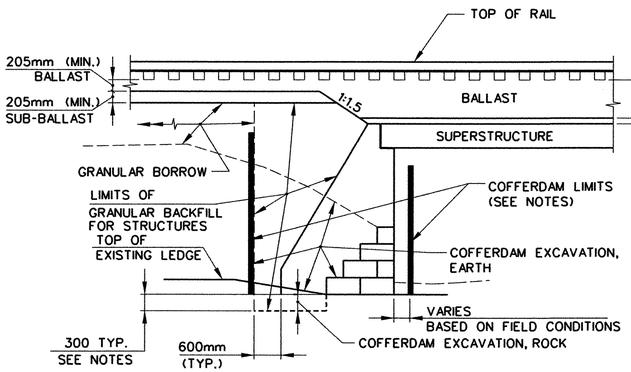
PRELIMINARY INFORMATION

Designed By LM	Drawn By DHL/LB
Checked By GJB Date	Bridge Design Supervisor JHR Date
PROJECT BRATTLEBORO	PROJECT NO. NH 010-2(2)
I.G.C. Info.	
Bridge Sheet No.	Sheet 4 of 145



TYPICAL BRIDGE SECTION SARGENT BROOK

SCALE 1:50

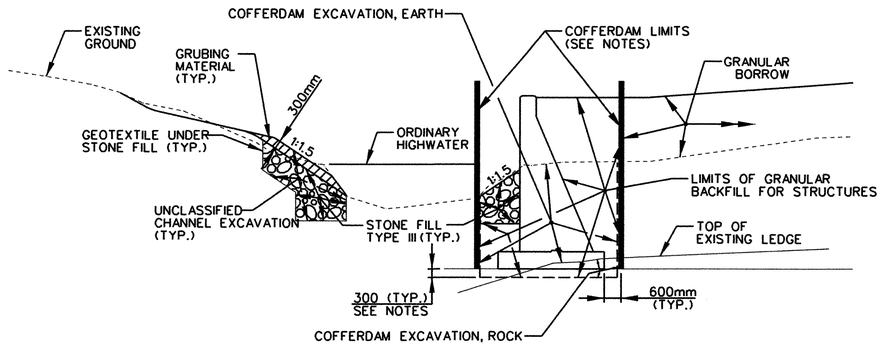


TYPICAL ABUTMENT SECTION

(NOT TO SCALE)

NOTES

1. COFFERDAM LIMITS TO BE DETERMINED NY THE CONTRACTOR.
2. THE PAY LIMITS OF "COFFEDAM EXCAVATION, EARTH" AND "COFFERDAM EXCAVATION, ROCK" SHALL BE 600 OUTSIDE THE PERMETER OF THE FOOTING, UP TO EXISTING GROUND OR BOTTOM OF SUBBASE, WHICHEVER IS LOWER.
3. 300 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 THE 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/CHANNEL SECTION

(NOT TO SCALE)

Plot Date: 10-03-2002
File: sgtbr302

HYDRAULICS REPORT

VAOT Metric

HYDRAULIC DATA

1. DRAINAGE AREA 14.2 km²
2. CHARACTER OF TERRAIN SMALL MOUNTAINS
3. CHARACTER AND TYPE OF STREAM ALLUVIAL RANDOM VARIATION IN WIDTH
4. NATURE OF STREAMBED SAND/GRAVEL BOTTOM

Q2.33	6 m³/s	Q50	30.5 m³/s
Q10	18 m³/s	Q100	35.5 m³/s
Q25	25.5 m³/s	Q500	48 m³/s

5. DATE OF FLOOD OF RECORD UNKNOWN
6. WATER SURFACE ELEVATION NA ESTIMATED DISCHARGE NA m³/s
7. NATURAL STREAM VELOCITY @ Q 50 2.33 • 1.70 m/s
8. ICE CONDITIONS LIGHT DEBRIS MODERATE TO HEAVY
9. DOES THE STREAM REACH MAX. HIGHWATER ELEVATION RAPIDLY? YES, STREAM IS CONSIDERED FLASHY
10. IS ORDINARY RISE RAPID? YES
11. IS STAGE AFFECTED BY UPSTREAM/DOWNSTREAM CONDITIONS? YES
    IF YES, DESCRIBE: AT GREATER THAN Q2.33 THE WATER OVER FLOWS STREAM BANKS AND TRAVELS ACROSS WETLANDS TO ADJACENT ROUTE 9
12. WATERSHED STORAGE < 1% HEADWATERS ____ UNIFORM THROUGHOUT WATERSHED ✓ IMMEDIATELY ABOVE SITE ____

EXISTING STRUCTURE

1. STRUCTURE TYPE: REINFORCED CONCRETE CAPPED STONE ABUTMENT w/CONCRETE DECK YEAR BUILT: UNKNOWN
2. CLEAR SPAN (NORMAL TO STREAM): 5.6 m
3. VERTICAL CLEARANCE ABOVE STREAMBED: 3.14 m
4. WATERWAY OF FULL OPENING: 18.0 m²
5. DISPOSITION OF STRUCTURE: EXTEND CONCRETE CAP OVER SLOPED STONE ABUTMENT WALLS
6. TYPE OF MATERIAL UNDER SUBSTRUCTURE: BEDROCK (HARDPAN)
7. WATER SURFACE ELEVATION @ Q2.33• 83.77 m VELOCITY• 1.70 m/s
   Q10• 84.77 m • 2.52 m/s
   Q25• 85.29 m • 3.66 m/s
   Q50• 85.49 m • 3.90 m/s
   Q100• 85.68 m • 4.11 m/s
8. LONG TERM STREAM BED CHANGES: SEDIMENT DESPOSITS ON DOWNSTREAM CROSS SECTIONS NEAR SHARP CURVE IN STREAM
9. IS THE ROADWAY OVERTOPPED BELOW THE Q100? YES FREQUENCY: Q2.9
10. RELIEF ELEVATION: 84.25 m DISCHARGE OVER ROAD @ Q 100: 27 m³/s
11. UPSTREAM STRUCTURE: TOWN: BRATTLEBORO DISTANCE: 0.25km
    HIGHWAY NO.: 5 STRUCTURE NO.: 10
    STRUCTURE TYPE: WIDE-FLANGE BEAMS WITH CONCRETE DECK
    CLEAR SPAN: 9.14 m CLEAR HEIGHT: 1.83 m
    YEAR BUILT: 1959 FULL WATERWAY: 16.73 m²
12. DOWNSTREAM STRUCTURE: TOWN: NONE DISTANCE: ____
    HIGHWAY NO.: ____ STRUCTURE NO.: ____
    STRUCTURE TYPE: ____
    CLEAR SPAN: ____ CLEAR HEIGHT: ____
    YEAR BUILT: ____ FULL WATERWAY: ____

PROPOSED STRUCTURE

STRUCTURE GEOMETRY:

1. STRUCTURE TYPE EXISTING BRIDGE WITH DECK AND ABUTMENT CAP EXTENSION
2. CLEAR SPAN LENGTH(S): 5.6 m
3. VERTICAL CLEARANCE ABOVE STREAMBED: 3.14 m
4. ARE PROVISIONS TO BE MADE FOR PUBLIC UTILITIES? NO

HYDRAULIC DATA:

1. WATERWAY AREA OF FULL OPENING (NORMAL TO STREAM): 18 m² NA m³/s
2. WATER SURFACE ELEVATION @ Q 2.33 • 83.77 m VELOCITY• 1.70 m/s
   Q 10 • 84.68 m • 2.68 m/s
   Q 25 • 85.07 m • 3.66 m/s
   Q 50 • 85.32 m • 3.90 m/s
   Q 100 • 85.55 m • 4.11 m/s
3. IS THE ROADWAY OVERTOPPED BELOW THE Q100? YES FREQUENCY: Q2.9
4. RELIEF ELEVATION: 84.25m DISCHARGE OVER ROAD @ Q 100: 27 m³/s
5. AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 85.83 m
6. VERTICAL CLEARANCE @ Q 50 • 0.73 m
7. SCOUR: Q 100: CONTRACTION SCOUR • 5.88m, ABUTMENT 1 • 11.57m, ABUTMENT 2 • 0.67
8. REQUIRED CHANNEL PROTECTION: STONE FILL TYPE III

PERMIT INFORMATION

AVERAGE DAILY FLOW: NA
ORDINARY LOW WATER: NA DEPTH: NA
ORDINARY HIGH WATER: NA DEPTH: NA
NA • NOT AVAULABLE

TRAFFIC DATA

FUNCTIONAL CLASSIFICATION MINOR ARTERIAL

2002 ADT •	N/A
2022 ADT •	N/A
2022 ADTT •	N/A
2002 DHV •	N/A
2022 DHV •	N/A
D •	N/A
T •	N/A
V •	N/A
2002-2022 18 KIP ESAL •	N/A
2002-2042 18 KIP ESAL •	N/A

TEMPORARY BRIDGE REQUIREMENTS

1. STRUCTURE TYPE NO TEMPORARY STRUCTURE
2. CLEAR SPAN LENGTH(S) NORMAL TO STREAM: N/A
3. VERTICAL CLEARANCE ABOVE STREAMBED: N/A
4. WATERWAY AREA OF FULL OPENING (NORMAL TO STREAM): N/A

NA • NOT APPICABLE

NOTE: ____

TRAFFIC MAINTENANCE:

1. IS TRAFFIC TO BE MAINTAINED? YES IF YES, ON EXISTING STRUCTURE X OR ON TEMPORARY BRIDGE ____
2. TEMPORARY BRIDGE REQUIREMENTS: ONE OR TWO WAY N/A
   TRAFFIC CONTROL SIGNALS REQUIRED ____
   ARE SIDEWALKS REQUIRED? ____ IF SO, ON WHAT SIDE? ____
   STRUCTURE TYPE: ____

DESIGN CRITERIA

1. DESIGN LIVE LOAD AREA 1936 E70 B&M STATNDARD PLAN B8 "REINFORCED CONCRETE SLAB"
2. DESIGN SPAN 6m
3. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL N/A ON LEDGE 950kPa
4. ALLOWABLE LOAD FOR PILING N/A TYPE N/A ESTIMATED LENGTH N/A
5. ALLOWABLE STRESS FOR STRUCTURAL STEEL AASHTO M270M GR 345 WEATHERING STEEL TENSION 186 MPa
6. ALLOWABLE STRESS FOR REINFORCING STEEL AASHTO M31M GRADE 400 TENSION 165 MPa COMPRESSION 138 MPa
7. ALLOWABLE STRESS FOR CONCRETE HIGH PERFORMANCE CLASS A f_c 30 MPa f_c N/A

LOAD RATING (TONS)(LOAD FACTOR)

RATING							
INVENTORY							
POSTED							
OPERATING							

	DESCRIPTION	

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BRATTLEBORO	Bridge No. 62.51
	Log Sta.
Highway No. VT. ROUTE 9	Surv. Sta.

NEW ENGLAND CENTRAL RAILROAD OVER SARGENT BROOK

PRELIMINARY INFORMATION

Designed By LM	Drawn By DHL
Checked By GJB Date	Bridge Design Supervisor JHR Date
PROJECT BRATTLEBORO	PROJECT NO. NH 010-2(2)
I.G.C. Info.	
Bridge Sheet No.	Sheet 5 of 145

STATE OF VERMONT
AGENCY OF TRANSPORTATION

GENERAL NOTES

Metric

GENERAL ITEMS

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2001, AND ITS LATEST REVISIONS: AREMA'S "MANUAL FOR RAILWAY ENGINEERING", LATEST EDITION: THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SIXTEENTH EDITION, AND ITS LATEST REVISIONS: AASHTO'S "A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS" (AASHTO GREEN BOOK), THE 1994 METRIC VERSION; THE AASHTO "ROADSIDE DESIGN GUIDE"; THE 1988 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), AS AMENDED; THE FHWA PUBLICATION "FLEXIBILITY IN HIGHWAY DESIGN"; AND THE LATEST AMENDED EDITION OF "THE AMERICAN STANDARD FOR NURSERY STOCK". THE CONTRACTOR SHALL ALSO COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS AND SAFETY CODES, ENVIRONMENTAL AND HEALTH STATUTES AND REGULATIONS, ETC. IN THE CONSTRUCTION OF ALL IMPROVEMENTS. THE ORDER OF PRECEDENCE SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2001.
2. SURVEY INFORMATION OBTAINED BY NHDOT, ELECTRONICALLY TRANSLATED FROM MOSS TO MICROSTATION, AND SUPPLEMENTED BY VTRANS ADDITIONAL SURVEY.
3. ELEVATIONS ARE REFERENCED TO NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29). ALL SURVEY POINTS HAVE BEEN DETERMINED WITH RESPECT TO THE NEW HAMPSHIRE STATE PLANE COORDINATE SYSTEM AS REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD83).
4. THE EXISTING DETAIL AND TOPOGRAPHY DEPICTED ON THESE PLANS REPRESENT A COMPILATION OF DATA OBTAINED FROM VARIOUS PLANS AND RECORDS, AND A FIELD SURVEY. THE CONTRACTOR IS REQUIRED TO VERIFY ALL CONDITIONS IN THE FIELD PRIOR TO COMMENCING WORK, AND SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER.
5. CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE WORK OF THIS CONTRACT WITH THE WORK OF ADJACENT CONTRACTS AND THE RAILROAD PERFORMING TRACK WORK UNDER RAILROAD FORCE ACCOUNT. IT IS ANTICIPATED THAT THE NHDOT CONTRACT FOR THE PROPOSED BRIDGE OVER THE CONNECTICUT RIVER WILL BE ONGOING SIMULTANEOUSLY WITH THIS CONTRACT. SAID NHDOT CONTRACT INVOLVES WORK WITHIN THE VERMONT PROJECT AREA, INCLUDING ROCK REMOVAL AND ABUTMENT CONSTRUCTION ON THE NORTH SIDE OF ROUTE 9 BETWEEN APPROXIMATE STA. 30+285 AND THE CONNECTICUT RIVER.
6. FOR CENTERLINE AND BASELINE ALIGNMENT DATA, REFER TO THE ALIGNMENT PLAN.
7. FOR SUBSURFACE EXPLORATION DATA, REFER TO BORING LOGS AND PROBE DATA.
8. SAFETY MEASURES, DAY TO DAY CONTROL OF THE WORK, AND CONSTRUCTION METHODS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
9. CONTRACTOR WILL MAINTAIN ROUTE 9 TRAFFIC AT ALL TIMES, AND MODIFY CONSTRUCTION PROCEDURES AND SCHEDULE ACCORDINGLY AS DIRECTED BY THE ENGINEER. CONSTRUCTION SEQUENCE SHALL BE COORDINATED TO MINIMIZE DISTURBANCE OF ROUTE 9 VEHICULAR TRAFFIC OPERATIONS.
10. THE CONTRACTOR SHALL TAKE ADEQUATE PRECAUTIONS TO PROTECT ALL WALKS, STREETS, PAVEMENTS, HIGHWAY GUARD, CURBING, EDGING, TREES AND PLANTINGS ON OR OFF THE PREMISES, AND SHALL REPAIR AND REPLACE OR OTHERWISE MAKE GOOD AT HIS OWN EXPENSE AS DIRECTED BY THE ENGINEER ANY ITEMS DAMAGED AS A RESULT OF THE CONTRACTOR'S WORK.
11. CONSULT ALL THE DRAWINGS AND SPECIFICATIONS FOR COORDINATION REQUIREMENTS BETWEEN ALL TRADES PRIOR TO COMMENCING BLASTING, TEMPORARY SHORING AND BRACING, DEMOLITION, SITE CLEARING, AND BRIDGE CONSTRUCTION.
12. ANY ALTERATIONS TO THESE DRAWINGS MADE IN THE FIELD SHALL BE PROMPTLY REPORTED BY THE CONTRACTOR TO THE ENGINEER AND RECORDED ON "AS-BUILT" DRAWINGS.
13. CONTRACTOR SHALL SUBMIT PROPOSED LOCATION OF STAGING AREA FOR APPROVAL BY THE ENGINEER PRIOR TO BEGINNING WORK OR BRINGING EQUIPMENT TO THE SITE.
14. CONTRACTOR SHALL COORDINATE ALL SITE IMPROVEMENTS IN AREAS ADJACENT TO PRIVATE PROPERTY WITH THE PROPERTY OWNERS.
15. THE CONTRACTOR SHALL MAINTAIN SAFE AUTOMOBILE AND PEDESTRIAN ACCESS ON ALL ADJACENT STREETS, WALKS AND DRIVEWAYS AT ALL TIMES. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ANY TRAFFIC CONTROL DEVICES, BARRICADES, AND FLAGGERS AS NECESSARY OR REQUIRED BY STATE, RAILROAD AND LOCAL REGULATIONS.
16. THE MSE WALL SUPPLIED BY TENSAR EARTH TECHNOLOGIES SHALL BE A CATEGORY II EXPERMENTAL FEATURE. THE CONTRACTOR WILL COORDINATE WITH THE AGENCY'S MATERIALS RESEARCH SECTION WHO WILL BE DOCUMENTING CONSTRUCTION OF THIS WALL SYSTEM. SEE SHEETS 138 THRU 144

RAILROAD REQUIREMENTS

1. RAILROAD PROPERTY LINE INFORMATION OBTAINED FROM PLAN ENTITLED "RIGHT-OF-WAY AND TRACK MAP, VERMONT VALLEY RAILROAD, STATION 3264+60 TO STATION 3317+40", DATED JUNE 30, 1914 (VALUATION PLAN 46, MAP 4).
2. WHEN WATER IS KNOWN OR EXPECTED TO BE ENCOUNTERED, PUMPS OF SUFFICIENT CAPACITY T HANDLE THE FLOW SHALL BE MAINTAINED AT THE SITE, AND UPON APPROVAL OF THE ENGINEER TO OPERATE THEM, THEY SHALL BE IN CONSTANTLY ATTENDED OPERATION ON A 24-HOUR BASIS UNTIL, IN THE SOLE JUDGEMENT OF THE ENGINEER, THEIR OPERATION CAN BE SAFELY HALTED. WHEN DEWATERING, CLOSE OBSERVATION SHALL BE MAINTAINED TO DETECT ANY SETTLEMENT OR DISPLACEMENT OF RAILROAD EMBANKMENT, TRACKS, AND FACILITIES.
3. ALL OPERATIONS SHALL BE CONDUCTED SO AS NOT TO INTERFERE WITH, INTERRUPT, OR ENDANGER THE OPERATION OF TRAINS NOR DAMAGE, DESTROY, OR ENDANGER THE INTEGRITY OF RAILROAD FACILITIES. ALL WORK ON AND NEAR RAILROAD PROPERTY SHALL BE CONDUCTED IN ACCORDANCE WITH RAILROAD SAFETY RULES AND REGULATIONS. THE CONTRACTOR SHALL SECURE AND COMPLY WITH THE RAILROAD SAFETY RULES AND SHALL GIVE WRITTEN ACKNOWLEDGMENT TO THE RAILROAD THAT THEY HAVE BEEN RECEIVED, READ AND UNDERSTOOD BY THE CONTRACTOR AND HIS EMPLOYEES. OPERATIONS WILL BE SUBJECT TO RAILROAD INSPECTION AND FLAG PROTECTION AT ANY AND ALL TIMES.
4. AT ALL TIMES WHEN THE WORK IS BEING PROGRESSED, A FIELD SUPERVISOR FOR THE WORK WITH NO LESS THAN 12 MONTHS' EXPERIENCE IN THE OPERATION OF THE EQUIPMENT BEING USED SHALL BE PRESENT.
5. THE CONTRACTOR MUST SUBMIT A BLASTING PLAN FOR REVIEW AND APPROVAL BY THE ENGINEER PRIOR TO THE PERFORMANCE OF ANY BLASTING OPERATION. CONTROLLED BLASTING WITHIN CLOSE PROXIMITY TO THE RAILROAD IS NOT TO BE PERFORMED UNLESS APPROVED BY THE ENGINEER.

RAILROAD REQUIREMENTS (CONTINUED)

6. WHENEVER EQUIPMENT OR PERSONNEL ARE WORKING CLOSER THAN 15 FEET TO THE CENTERLINE OF AN ADJACENT TRACK, THAT TRACK SHALL BE CONSIDERED AS BEING OBSTRUCTED. INSOFAR AS POSSIBLE, ALL OPERATIONS SHALL BE CONDUCTED OUTSIDE THIS DISTANCE. ALL OPERATIONS CLOSER THAN 15 FEET TO THE CENTERLINE OF A TRACK SHALL BE CONDUCTED ONLY WITH THE PERMISSION OF, AND AS DIRECTED BY, A DULY QUALIFIED RAILROAD EMPLOYEE PRESENT AT THE SITE OF THE WORK. CROSSING OF TRACKS AT GRADE WITH EQUIPMENT OR VEHICLES IS PROHIBITED EXCEPT BY PRIOR ARRANGEMENT WITH, AND AS DIRECTED BY, THE RAILROAD.
7. THE CONTRACTOR SHALL PROVIDE ADEQUATE BRACING AND SHORING OF ALL EXCAVATIONS IN ACCORDANCE WITH REQUIREMENTS OF GOVERNING CODES AND REGULATIONS. ANY TEMPORARY TRACK SUPPORTING STRUCTURES TO BE INSTALLED MUST BE APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL PREPARE AND SUBMIT A TEMPORARY SHORING AND BRACING PLAN FOR REVIEW AND APPROVAL BY THE ENGINEER PRIOR TO THE PERFORMANCE OF ANY SHORING OR BRACING WORK. THE TEMPORARY SHORING AND BRACING PLAN SHALL INCLUDE AN INSTRUMENTATION MONITORING PROGRAM TO MONITOR THE TEMPORARY SHORING AND BRACING STRUCTURE AND TRACK SURFACE THROUGHOUT CONSTRUCTION. THE PLAN SHALL BE PREPARED AND STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF VERMONT.
8. ANY ELEMENT OF THE TEMPORARY TRACK SUPPORTING STRUCTURES WITHIN 3M OF THE CENTERLINE OF TRACK THAT CAN NOT BE REMOVED DURING BACKFILL OPERATIONS (SUCH AS SOLDIER PILES) SHALL BE CUT OFF 1M BELOW THE PROPOSED TOP OF RAIL AND LEFT IN PLACE.
9. THE CONTRACTOR SHALL PROVIDE GENERAL LIABILITY AND RAILROAD PROTECTIVE LIABILITY INSURANCE POLICIES, COVERING THE WORK OF THE CONTRACTOR AND ALL SUBCONTRACTORS. FOR COMPLETE RAILROAD INSURANCE REQUIREMENTS, REFER TO DOCUMENT ENTITLED "CONTRACTOR'S INSURANCE REQUIREMENTS FOR NEW ENGLAND CENTRAL RAILROAD, INC.", LATEST ISSUE.
10. FOR ADDITIONAL RAILROAD REQUIREMENTS, REFER TO DOCUMENT ENTITLED "SPECIFICATION FOR PIPELINE OCCUPANCY OF NEW ENGLAND CENTRAL RAILROAD, INC.".
11. UNLESS OTHERWISE AGREED, ALL WORK INVOLVING RAIL, TIES AND OTHER TRACK MATERIAL WILL BE PERFORMED BY THE RAILROAD UNDER A SEPARATE RAILROAD FORCE ACCOUNT AGREEMENT.
12. ALL VEGETATIVE GROWTH, INCLUDING BRUSH AND TREE LIMBS WHICH OVERHANG THE RAILROAD CLEAR ZONE (3 METERS EACH SIDE OF RAILROAD C) ARE TO BE REMOVED.

UTILITIES

1. SOME UTILITIES MAY NOT BE SHOWN ON THE PLANS, AND OTHERS MAY NOT BE PROPERLY LOCATED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE SIZE AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION, AND APPROPRIATE REMEDIAL ACTION SHALL BE TAKEN BEFORE PROCEEDING WITH THE WORK.
2. FIBER OPTIC DATA OBTAINED FROM SIGNS ON SITE AND US SPRINT PLANS DATED 09-02-86, NUMBERED NTWRK 127-880-064 AND 065, AND ENTITLED "FIBER OPTIC ROUTE RCD DWG, CABLE ROUTE DETAIL, SPRINGFIELD, MA-MONTREAL, CANADA".
3. FIBER OPTIC CABLE AND ASSOCIATED FACILITIES SUCH AS SIGNS WILL BE RELOCATED BY THE OWNER, INCLUDING THE TEMPORARY RELOCATION TO AN OVERHEAD SYSTEM ON THE EAST SIDE OF THE TRACK. HOWEVER, CONTRACTOR IS TO INSTALL CONDUIT AND THREE HAND HOLES FOR NEW FIBER OPTIC SYSTEM (PVC, EXCEPT FOR BRIDGE LOCATIONS WHICH WILL BE GALVANIZED IRON PIPE). OWNER WILL INSTALL JUNCTION BOXES AT EACH END OF PROJECT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL WORK.
4. THE CONTRACTOR SHALL EXERCISE EXTREME CARE WHEN EXCAVATING NEAR AND BACKFILLING IN THE VICINITY OF EXISTING UTILITIES, AND SHALL USE HAND EXCAVATION WHERE APPROPRIATE. CONTRACTOR SHALL REPAIR ANY DAMAGE INCURRED DURING CONSTRUCTION TO EXISTING UTILITIES SCHEDULED TO REMAIN AT NO COST TO THE OWNER.
5. ALL EXISTING PIPING AND STRUCTURES EXPOSED DURING EXCAVATION SHALL BE ADEQUATELY SUPPORTED, BRACED OR OTHERWISE PROTECTED DURING CONSTRUCTION ACTIVITIES.
6. UNLESS OTHERWISE NOTED OR APPROVED BY THE ENGINEER, THE CONTRACTOR SHALL MAINTAIN ALL EXISTING UTILITIES IN SERVICE AT ALL TIMES.
7. EXISTING BURIED CABLE MARKERS FOR FIBER OPTIC OR OTHER UTILITIES WILL BE PROTECTED AND RESTORED OR REPLACED AS DETERMINED BY THE ENGINEER.
8. PRIVATE UTILITY FACILITIES, SUCH AS ELECTRIC, TELEPHONE, FIBER OPTICS, AND CABLE TV ARE TO BE DESIGNED AND INSTALLED BY THE RESPECTIVE UTILITY COMPANY UNLESS OTHERWISE NOTED.
9. RETAIN ALL EXISTING UNDERGROUND UTILITIES UNLESS OTHERWISE NOTED OR DIRECTED BY THE ENGINEER
10. NO ADDITIONAL PAYMENT SHALL BE MADE FOR ABANDONING AND PLUGGING EXISTING PIPES WHERE DIRECTED BY THE ENGINEER. NO EXISTING PIPES SHALL BE ABANDONED, REMOVED OR PLUGGED WITHOUT PRIOR APPROVAL OF THE ENGINEER.

EROSION CONTROL

1. THE CONTRACTOR SHALL PROVIDE EROSION CONTROL MEASURES AS INDICATED, SPECIFIED AND DIRECTED BY THE ENGINEER. TEMPORARY EROSION CONTROL MEASURES SHALL BE MAINTAINED AS DIRECTED BY THE ENGINEER. ALL EROSION CONTROL GEOTEXTILE SHALL BE CLASS A WOVEN OR UNWOVEN. TEMPORARY EROSION CONTROL BLANKET SHALL BE INSTALLED IN ALL DITCHES AND SWALES. LOAM AND SEED SHALL BE PLACED PRIOR TO THE INSTALLATION OF THE EROSION CONTROL BLANKET.
2. IN-STREAM CONSTRUCTION SHALL BE RESTRICTED TO JUNE 1 TO OCTOBER 1, UNLESS THE CONTRACTOR OBTAINS WRITTEN PERMISSION FROM THE AGENCY OF NATURAL RESOURCES TO DO WORK OUTSIDE OF THAT TIME FRAME.
3. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT SILTATION OR POLLUTION, ESPECIALLY THE DISCHARGE OF RAW CONCRETE, INTO ANY BROOK, STREAM OR RIVER.

EROSION CONTROL (CONTINUED)

4. THE CONTRACTOR SHALL PROVIDE EROSION PROTECTION AND SILTATION BARRIERS TO PROTECT ALL WORK IN WETLANDS AND IN THE 100 FEET WETLAND BUFFER ZONES. BARRIERS ARE TO BE PLACED 1.8 METERS FROM THE BOTTOM OR TOP OF SLOPE AND/OR AS REQUIRED BY THE SPECIFICATIONS OR DIRECTED BY THE ENGINEER.
5. FOR CONSTRUCTION OF THE SARGENT BROOK BRIDGE WIDENING, THE TEMPORARY EROSION CONTROL MEASURES INDICATED ARE SUGGESTED. CONTRACTOR MUST PREPARE AN EROSION CONTROL PLAN FOR APPROVAL IN ACCORDANCE WITH STANDARD SPECIFICATIONS SECTION 105.22 ENVIRONMENTAL PROTECTION.

SUGGESTED CONSTRUCTION SEQUENCE

1. THE CONTRACTOR SHALL FOLLOW THE PROJECT SEQUENCE PROVIDED BELOW OR DEVELOP ONE THAT MUST BE APPROVED BY THE ENGINEER. AN APPROVED COPY MUST BE SENT TO THE STRUCTURES SECTION FOR REFERENCE ONLY.
   - A. TEMPORARILY RELOCATE FIBER OPTICS ONTO AN OVERHEAD POLE LINE ON THE EAST SIDE OF THE TRACK (WORK BY OTHERS).
   - B. INSTALL TEMPORARY SUPPORT SYSTEM.
   - C. BUILD ABUTMENTS AND WESTERLY WING WALLS FOR BRIDGE NO.'S 62.51 AND 62.56. THEN CONSTRUCT EACH BRIDGE, EMBANKMENT AND FIBER OPTIC CONDUIT.
   - D. INSTALL BALLAST AND CONSTRUCT TRACK. (WORK BY OTHERS)
   - E. CUT TRACK, THROW, RECONNECT AND RELOCATE SIGNS. (WORK BY OTHERS)
   - F. DEMOLISH EXISTING BRIDGE NO. 62.56 (SUPERSTRUCTURE AND SUBSTRUCTURE). CONTRACTOR TO COORDINATE DEMOLITION WITH UTILITY RELOCATIONS. EXISTING TRACK TO BE REMOVED BY OTHERS
   - G. RELOCATE PRIVATE UTILITY FACILITIES IN ROUTE 9.
   - H. CONSTRUCT EASTERLY WING WALLS OF BRIDGE NO. 62.56.
   - I. PERFORM REMAINING BLASTING AND ROCK REMOVAL ON THE NORTH SIDE OF EXISTING ROUTE 9.
   - J. PERFORM ROADWAY CONSTRUCTION.
   - K. INSTALL FIBER OPTICS IN THEIR PERMANENT UNDERGROUND LOCATION (WORK BY OTHERS).

BRIDGE DEMOLITION AND ERECTION

1. CONTRACTOR MUST SUBMIT A DEMOLITION AND DISPOSITION PLAN AND AN ERECTION PROCEDURES PLAN THAT MEET THE REQUIREMENTS OF THE SPECIAL PROVISIONS. THESE PLANS MUST BE APPROVED BY THE ENGINEER.
2. CONTRACTOR SHALL COORDINATE PROTECTION OF EXISTING AND PROPOSED UTILITY FACILITIES DURING DEMOLITION OF THE SOUTH ABUTMENT OF THE ROUTE 9 RAILROAD BRIDGE.
3. CONTRACTOR SHALL VERIFY ALL ITEMS TO BE REMOVED AND PROTECTED BEFORE COMMENCING ANY DEMOLITION WORK. EXISTING STRUCTURES, IMPROVEMENTS AND THEIR APPURTENANCES, AND VEGETATION TO REMAIN SHALL BE PROTECTED FROM DAMAGE.
4. ALL MATERIALS TO BE REMOVED AND DISPOSED SHALL BE DISPOSED IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS.
5. THE EXISTING STRUCTURAL STEEL ON THIS PROJECT WAS PAINTED WITH A MATERIAL WHICH MAY CONTAIN LEAD. THE REMOVED STRUCTURAL STEEL IS TO BECOME THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE STATE, ITS OFFICERS, AND EMPLOYEES HARMLESS CONCERNING THE CONTRACTOR'S USE OR DISPOSITION OF THE STRUCTURAL STEEL.

RAILROAD FORCE ACCOUNT TRACK WORK

1. THE CONTRACTOR WILL CONSTRUCT THE RAILROAD EMBANKMENT SECTION TO THE TOP OF SUBGRADE OR BOTTOM OF SUBBALLAST.
2. THE RAILROAD FORCE ACCOUNT WILL INSTALL THE SUBBALLAST, BALLAST, AND REHABILITATE AND CONSTRUCT TRACK FROM STATION 50+020.000 TO STATION 50+698.603. CLOSE COORDINATION WILL BE REQUIRED AT THOSE LOCATIONS WHERE THE SUBBALLAST/BALLAST ARE SHOWN TO BE BOXED, AND WHERE THE EXISTING BALLAST AND EMBANKMENT ARE TO BE REMOVED.
3. AT THE ROUTE 9 BRIDGE THE GENERAL CONTRACTOR WILL INSTALL THE WATERPROOFING, BALLAST MAT AND DRAINAGE PIPES (HALF ROUNDS AND ASSOCIATED PIPING). THE RAILROAD FORCE ACCOUNT WILL FLOOD THE BRIDGE WITH BALLAST AND INSTALL THE TRACK (INCLUDING THE TRANSITIONAL APPROACH TIMBER PACKAGE).
4. AT THE SARGENT BROOK BRIDGE THE GENERAL CONTRACTOR WILL INSTALL THE WATERPROOFING, AND 100mm OF SAND. THE RAILROAD FORCE ACCOUNT WILL FLOOD THE BRIDGE WITH BALLAST, REHABILITATE AND RELOCATE THE EXISTING TRACK TO ITS PERMANENT ALIGNMENT.
5. EXISTING RAIL, TIES AND OTHER TRACK MATERIALS TO BE REMOVED WILL BE STOCKPILED AS DIRECTED BY THE ENGINEER.
6. FOR ALL RAILROAD SIGNS INDICATED AS R&R, THE SIGN IS TO BE SALVAGED, CLEANED AND INSTALLED ON A NEW POST AND FOUNDATION. NEW POSTS MUST BE INSTALLED PRIOR TO THE RAILROAD OPERATING ON THE NEW TRACK. THE NEW TRACK SHALL NOT BE PLACED INTO OPERATION WITHOUT THE SIGNS BEING RELOCATED ON THE NEW POSTS.

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	SHEET: 6 OF 145

STATE OF VERMONT
AGENCY OF TRANSTRANSPORTATION

GENERAL NOTES

Metric

CONSTRUCTION

1. AT LEAST 72 HOURS PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR MUST NOTIFY THE DIG SAFE CENTER AT 1-888-344-7233 OR 1-888-DIG-SAFE AND PROCURE A DIG SAFE NUMBER FOR EACH LOCATION PRIOR TO DISTURBING THE EXISTING GROUND IN ANY WAY.
2. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL PERMITS, LICENSES, SAFETY CODES, LEGAL REQUIREMENTS, ETC. IN THE CONSTRUCTION OF ALL IMPROVEMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL CONSTRUCTION PERMITS AND LICENSES FROM THE NEW ENGLAND CENTRAL RAILROAD, TOWN OF BRATTLEBORO, VERMONT AGENCY OF TRANSPORTATION OR ANY OTHER LOCAL, STATE OR FEDERAL AGENCIES TO CONSTRUCT THE PROJECT. ALL NECESSARY FEES AND PERMITS SHALL BE PAID FOR BY THE CONTRACTOR.
3. ALL SIGNS AND PAVEMENT MARKINGS SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES; THE LETTERING GUIDE OF THE U.S. D.O.T. F.H.W.A., THE VAOT TRAFFIC DESIGN MANUAL AND THE VAOT STANDARD DRAWINGS.
4. ALL TREES AND STUMPS WITHIN THE LIMITS OF PROPOSED CONSTRUCTION ARE TO BE REMOVED UNLESS OTHERWISE INDICATED ON THE PLANS OR DIRECTED BY THE ENGINEER.
5. ALL SURFACES DISTURBED BY THIS WORK SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AS DETAILED OR AS SPECIFIED BY THE ENGINEER.
6. REMOVE ENTIRELY ALL PAVEMENT, EDGES, WALLS AND OTHER MATERIALS INDICATED TO BE REMOVED. PAVEMENT SHALL BE SAW CUT AND PROTECTED FROM DAMAGE UNTIL NEW PAVEMENT IS PLACED AGAINST IT.
7. STRIPPED TOPSOIL SHALL BE STOCKPILED ON THE SITE AS DIRECTED BY THE ENGINEER. NO STRIPPING OF TOPSOIL WILL BE ALLOWED IN ANY AREA WHERE THE GRADES ARE NOT TO BE ALTERED.
8. PITCH EVENLY BETWEEN SPOT GRADES. ALL PAVING AREAS MUST PITCH TO DRAIN AT MIN. PITCH OF $\frac{1}{8}$" PER FOOT UNLESS OTHERWISE SHOWN. REPORT ANY DISCREPANCIES BETWEEN EXISTING AND PROPOSED GRADES THAT DO NOT PITCH ACCORDINGLY TO THE ENGINEER BEFORE COMMENCING WORK.
9. ALL EXISTING MANHOLES AND DRAINAGE STRUCTURES WITHIN THE PROJECT WORK AREA SHALL BE ADJUSTED TO GRADE OR REMODELED UNLESS OTHERWISE NOTED.
10. THE MAXIMUM SIDE SLOPE SHALL BE 1:2 EXCEPT IN STONE FILL AND ROCK CUT AREAS.
11. IT IS THE INTENT OF THIS CONTRACT THAT ALL EXISTING FEATURES LOCATED OUTSIDE OF SLOPE LIMIT LINES ARE TO REMAIN IN PLACE UNLESS OTHERWISE NOTED.
12. IF ROCK IS ENCOUNTERED AT AN ELEVATION HIGHER THAN THE PROPOSED FOOTING THEN IT SHALL BE REMOVED TO A DEPTH THAT WILL ALLOW THE MINIMUM FOOTING THICKNESS SHOWN ON THE PLANS. IF ROCK IS ENCOUNTERED LOWER THAN PROPOSED BOTTOM OF FOOTING, THE CONTRACTOR SHALL FILL THE AREA WITH CONCRETE AS DIRECTED BY ENGINEER.

SOLID ROCK REMOVAL BY VARIOUS METHODS

1. CONTROLLED BLASTING FOR SOLID ROCK EXCAVATION AND CLOSE-IN EXCAVATION INCLUDING MECHANICAL ROCK REMOVAL ADJACENT TO SENSITIVE STRUCTRUES ASSOCIATED WITH THE RAILWAY BRIDGE REPLACEMENT AND ROADWAY CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND CONTRACTORS MEANS AND METHODS APPROVED BY THE ENGINEER.
2. ROCK REMOVAL WITHIN 1.5 METERS OF SENSITIVE STRUCTURES IDENTIFIED BY THE ENGINEER SHALL BE COMPLETED USING NON-BLASTING METHODS ONLY.
3. ROCK REMOVAL WITHIN 10 METERS OF SENSITIVE STRUCTURES SHALL BE COMPLETED IN ACCORDANCE WITH THE SPECIFICATIONS AND CONTRACTORS APPROVED PLAN FOR CLOSE-IN BLASING METHODS ONLY.
4. THE BLASTING SUB-CONTRACTOR SHALL SUBMIT THE FOLLOWING DOCUMENTS IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS: PLANNED ROCK EXCAVATION METHOD, BLASTER AND DRILLER EXPERIENCE, WORKING DRAWINGS AND SCHEDULE, AND BLASTING PLAN.
5. AS OUTLINED IN THE SPECIFICATIONS A PREBLASTING MEETING WILL BE HELD PRIOR TO THE COMMENCEMENT OF BLASTING.
6. ALL BLASTING OPERATIONS, INCLUDING DRILLING WITHIN THE RAILROAD RIGHT-OF-WAY, WILL BE COORDINATED WITH THE RAILROAD. NO BLASTING OPERATIONS WILL BE ALLOWED DURING THE PASSAGE OF EITHER A FREIGHT OR PASSENGER TRAIN.

STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE AMERICAN RAILWAY ENGINEERING AND MAINTENANCE-OF-WAY ASSOCIATION (AREMA).
2. ANY CONNECTIONS THAT ARE NOT DETAILED ON THE PLANS SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE STRUCTURES ENGINEER FOR APPROVAL.
3. ALL STRUCTURAL STEEL SHALL CONFORM TO AASHTO M270M/M 270M-93 GRADE 345 W UNLESS OTHERWISE NOTED ON THE PLANS. ALL BOLTS SHALL BE 22MM DIAMETER AASHTO M164M-93 TYPE 3 (7/8 " DIAM. ASTM A325 TYPE 3) IN 24MM HOLES UNLESS OTHERWISE NOTED. ANCHOR BOLTS FOR BRIDGEBEARINGS SHALL CONFORM TO AASHTO M164M93 (ASTM A325). NUTS SHALL BE AASHTO M291M-93, GRADE 1053 (ASTM A563 C3 AND CH3), HEAVY HEX NUTS. WASHERS SHALL BE AASHTO M 293M (ASTM F436) WEATHERING STEEL UNLESS NOTED.
4. ALL WELDING SHALL CONFORM TO ANSI/AASHTO/AWS D1.5.
5. FLOOR BEAMS SHALL BE FABRICATED WITH THEIR NATURAL CAMBER UP.
6. ALL GIRDERS ARE FRACTURE CRITICAL MEMBERS (FCM) AND WILL REQUIRE THE FABRICATOR TO FOLLOW THE FRACTURE CONTROL PLAN AS DESCRIBED IN AREMA CHAPTER 15. THE TEST REPORTS AND SPECIMENS SHALL BE DELIVERED TO THE ENGINEER FOR EXAMINATION. ALL CERTIFICATION AND TESTING REQUIREMENTS OF AREMA SHALL BE FOLLOWED AND REPORTS AND DOCUMENTATION SHALL BE PROVIDED TO THE ENGINEER.
7. A NAME PLATE SHALL BE ATTACHED, IN A VISIBLE LOCATION, AT THE SOUTH END OF THE EAST GIRDER. THE NAME PLATE SHALL SHOW THE NAME OF THE MANUFACTURER AND THE YEAR OF CONSTRUCTION.
8. THE FLOOR PLATE SHALL BE SPLICED AS NECESSARY ALONG THE CENTERLINE OF THE TRANSVERSE FLOOR BEAMS.
9. THE CURB PLATES SHALL BE SPLICED AS NECESSARY ALONG THE CENTERLINE OF THE KNEE BRACES.
10. AFTER FIELD WELDING THE FLOOR AND CURB PLATES THE 100mm DIAMETER HOLES SHALL BE FILLED WITH NON SHRINK GROUT BEFORE APPLICATION OF THE WATERPROOF MEMBRANE. THE NON SHRINK SHALL BE TYPED IV PER VAOT STANDARD SPECIFICATION 707.03.
11. THE FOLLOWING ELEMENTS ARE INCLUDED IN THE STRUCTURAL STEEL BID ITEMS:

506.50 STRUCTURAL STEEL (ROLLED BEAM):	FLOORBEAMS, DIAPHRAMS, STIFFINER PLATES
506.55 STRUCTURAL STEEL (PLATE GIRDER):	GIRDER W/KNEEBRACE, INTERMEDIATE STIFFENERS, BEARING STIFFENERS, CONNECTION PLATE, END PLATE, CURB APRON PLATE CONNECTION ANGLE, STIFFENER PLATES.
506.60 STRUCTURAL STEEL	CONNECTION ANGLES, BALLAST PLATE, CURB PLATE, CURB APRON PLATE, SEAL PLATE, STIFFENING ANGLE FOR BALLAST END PLATE, BOLTS, UTITLITY SUPPORTS, PARAPET PLATE, GALVANIZED DRAIN PIPE W/CAPS FITTINGS AND U-BOLTS.
531.10 BEARING DEVICE ASSEMBLY:	FIXED BEARINGS, EXPANSION BEARINGS, BEARING PADS, AND ANCHOR BOLTS.

12. TEFLON BEARING MATERIALS SHALL BE ""LUBRITE F" AS MANUFACTURED BY MERRIMAN INC. 100 INDUSTRIAL PARK ROAD, WINGHAM, MA 02043, OR APPROVED EQUAL.
13. BEARING SHALL BE SHOP FITTED TO GIRDER, MATCHMARKED. THEN ASSEMBLED IN UNITS FOR SHIPMENT.

CONCRETE

1. NO LIVE LOAD SHALL BE ALLOWED ON NEW CONCRETE UNTIL THE CURE PERIOD IS UP AND THE 28-DAY DESIGN STRENGTH IS ATTAINED, AS EVIDENCED BY TEST CYLINDERS CURED UNDER FIELD CONDITIONS.
2. THE KEY IN CONCRETE CONSTRUCTION JOINTS SHALL BE MONOLITHIC AND CONTINUOUS FOR THE FULL LENGTH OF THE JOINT; ANY UPWARD KEY SHALL BE PLACED INTEGRALLY WITH THE CONCRETE BELOW THE JOINT.
3. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 25mm BY 25mm OR AS OTHERWISE INDICATED ON THE PLANS.
4. JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
5. ALL CONCRETE REINFORCING STEEL SHALL BE AASHTO M31/M 31 GRADE 420 BILLET STEEL BARS.
6. ALL REINFORCING STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI).
7. REINFORCING PLACEMENT TOLERANCES SHALL BE:
   SPACING ±20mm
   CLEARANCE ±5mm
8. MINIMUM COVER FOR REINFORCING STEEL SHALL BE 50mm ALONG THE BACK FACE OF WALLS AGAINST EARTH, 65mm ALONG THE TOP SURFACE OF THE DECK, 40mm ALONG THE BOTTOM SURFACE OF THE DECK AND 80mm ELSEWHERE, UNLESS OTHERWISE NOTED.
9. WATER REPELLENT SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES EXCEPT THE UNDERSIDE OF THE DECK BETWEEN THE DRIP BEADS.
10. ALL CONCRETE SHALL BE CONSTRUCTED WITH CONCRETE,HIGH PERFORMANCE CLASS A. USE A 20mm STONE AGGRAGATE FOR BACKWALL AND BRIDGE SEATS.
11. AT LOCATIONS SHOWN ON THE PLANS, MECHANICAL SPLICES SHALL BE INSTALLED PER MANUFACTURES RECOMMENDATIONS TO ALLOW FOR THE STAGED CONSTRUCTION OF THE ROUTE 9 BRIDGE ABUTMENTS.
12. ELASTOMERIC BEARINGS FOR THE PRECAST CONCRETE SLABS AT THE SARGENT BROOK BRIDGE SHALL BE PROVIDED AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH AREMA, CHAPTER 19. THE DESIGN LIVE LOAD AND IMPACT PER BEARING IS 743KN (167K), AND THE DESIGN DEAD LOAD PER BEARING IS 347KN (78K).

TRACK MONITORING

1. THE CONTRACTOR SHALL PREPARE AND INSTITUTE AN INSTRUMENTATION MONITORING PROGRAM TO MONITOR THE TIE BACK LOAD CELLS AND TRACK SURFACE AND ALIGNMENT THROUGHOUT THE SOLID ROCK REMOVAL, AND INSTALL AND REMOVAL OF THE TEMPORARY EXCAVATION SUPPORT OF TRACK AND EMBANKMENT STRUCTURES. TWO LOAD CELLS SHALL BE INSTALLED FOR EACH WALER LEVEL (TYPICAL EACH ABUTMENT).
2. THE RAILROAD HAS IDENTIFIED THE FOLLOWING INSTRUMENTATION AND MONITORING SCHEDULE:

DESCRIPTION	TIEBACK LOAD CELLS	SURFACE SURVEY POINTS	COMMENTS
INSTRUMENT INSTALLATION	X	X	SEE NOTE 3
IMMEDIATELY FOLLOWING EACH BLAST WITHIN 30m (100 feet) OF TRACK	X	X	PRIOR TO PASSING OF TRAIN
AFTER EACH EXCAVATION STAGE	X	X	PRIOR TO PASSING OF TRAIN
JUST PRIOR TO TIEBACK INSTALLATION	X	X	
JUST AFTER TIEBACK INSTALLATION	X	X	
AS DIRECTED BY THE ENGINEER	X	X	
WEEKLY UNTIL LOAD CELLS ARE REMOVED	X	X	
WEEKLY UNTIL EXCAVATION IS BACKFILLED	X	X	

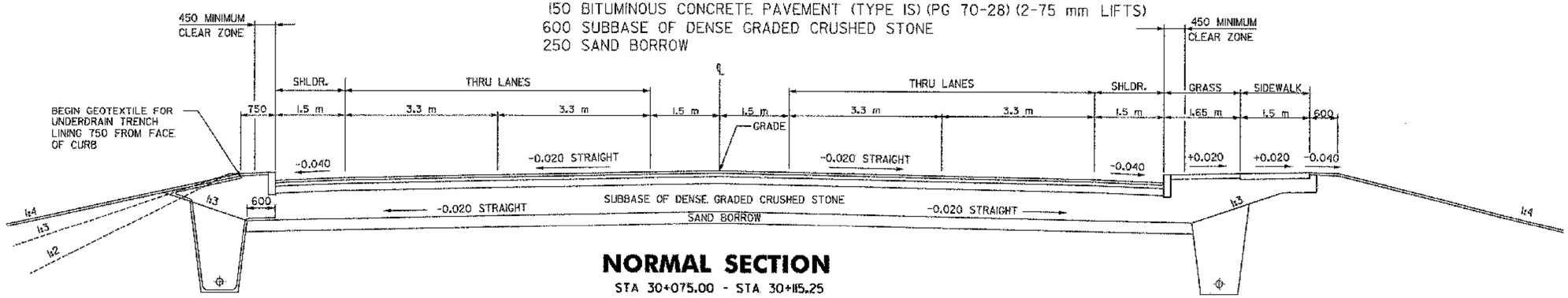
3. THE CONTRACTOR SHALL SUBMIT DETAILS OF AN INITIAL READING PROGRAM TO ASSURE ACCURATE READINGS FOR INITIAL ZERO MEASUREMENTS. THE CONTRACTOR SHALL PERFORM THE INITIAL READING PROGRAM IN THE PRESENCE OF THE ENGINEER AND THE RAILROAD. THE INITIAL READINGS SHALL INCLUDE LOAD CELL CALLIBRATION CERTIFICATES FOR EACH LOAD CELL PRIOR TO START OF CONSTRUCTION TO SHOW ACCURACY OF THE INITIAL READINGS AND RELIABILITY OF THE INSTRUMENTS.
4. THE CONTRACTOR SHALL ESTABLISH A SERIES OF SURVEY STATIONS ON 5 METER STATIONS ON THE TOP OF EACH RAIL ADJACENT TO EXCAVATION LOCATIONS AS SHOWN ON THE CONTRACT DOCUMENTS. (SEE SHEETS 85, 86, 93 & 94) SIMILARLY, SURVEY STATIONS SHALL ALSO BE ESTABLISHED ALONG THE TOP OF THE EXCAVATION SUPPORT ON 3-METER CENTERS OR ON EACH SOLDIER PILE FOR SOLDIER PILE AND LAGGING WALLS. AT THE BEGINNING AND END OF EACH DAY, THE STATIONS SHALL BE SURVEYED FOR ELEVATION AND PLAN LOCATIONS. ANY EXCAVATION SUPPORT SYSTEM OR RAIL DISPLACEMENT CAUSED BY ADVANCEMENT OF THE EXCAVATIONS OR OTHER CONSTRUCTION ACTIVITY SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER. RAIL DISPLACEMENT OF 8 MM OR MORE SHALL BE REPORTED TO THE ENGINEER AND RAILROAD IMMEDIATELY SO REPAIR OF THE RAILWAY CAN BE INITIATED AND RAIL TRAFFIC CAN RESUME AS QUICKLY AS POSSIBLE. DISPLACEMENT OF RAILS OF 8 MM OR MORE WILL REQUIRE REPAIR OF THE RAILS AT CONTRACTORS SOLE COST. CHARGES FOR DELAY OF NORMAL TRAIN SERVICE WILL BE ASSESSED IN ACCORDANCE WITH THE RIGHT-OF-WAY FINANCE AND MAINTENANCE AGREEMENT, ATTACHMENT *3 GENERAL STATEMENT OF CONDITIONS CAUSING RAILROAD HAZARDS, IF THE RAILROAD IS NOT ABLE TO OPERATE TRAINS DUE TO RAIL DISPLACEMENT VARYING FROM PRE-CONSTRUCTION CONDITIONS.

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: U:\99123-Brattleboro\dgn\BrtRR500.dgn	
IPARM FILE NAME:	PLOT DATE: 10-03-2002
	SHEET: 7 OF 145

TYPICAL ROADWAY SECTIONS

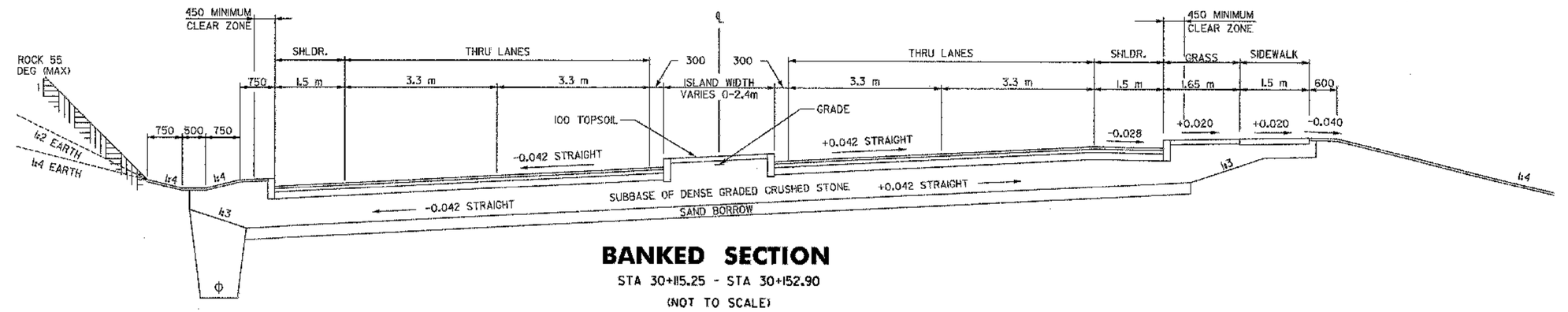
MATERIAL ITEM	THICKNESS TOLERANCE
PAVEMENT (TOTAL DEPTH ALL LAYERS)	+/- 5
SUBBASE	+/- 30
SAND BORROW	+/- 30

50 BITUMINOUS CONCRETE PAVEMENT (TYPE IIIS) (PG 70-28)
75 BITUMINOUS CONCRETE PAVEMENT (TYPE IIS) (PG 70-28)
150 BITUMINOUS CONCRETE PAVEMENT (TYPE IS) (PG 70-28) (2-75 mm LIFTS)
600 SUBBASE OF DENSE GRADED CRUSHED STONE
250 SAND BORROW



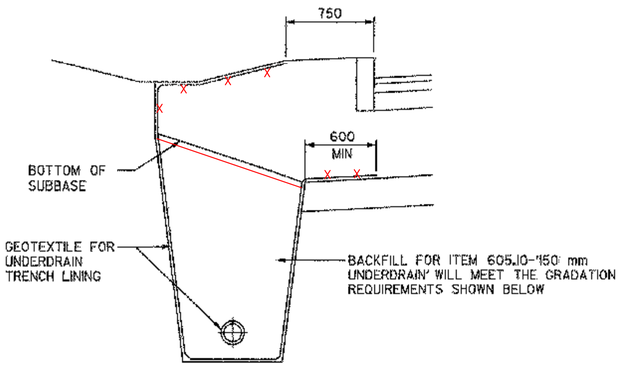
NORMAL SECTION

STA 30+075.00 - STA 30+115.25
(NOT TO SCALE)



BANKED SECTION

STA 30+115.25 - STA 30+152.90
(NOT TO SCALE)



UNDERDRAIN DETAIL

(NOT TO SCALE)

NOTE: REFER TO STANDARD D-2M FOR ADDITIONAL INFORMATION.

SIEVE SIZE (mm)	PERCENT BY WEIGHT PASSING THE SQUARE MESH SIEVE
37.5	100
25.0	95-100
12.5	60-80
4.75	40-55
2.36	5-25
1.18	0-12
300 µm	0-5

DATUM	
VERTICAL	NGVD 1929
HORIZONTAL	NAD 1983

SEEDING FORMULA
URBAN AREAS

% MASS	kg/ha	NAME	PUR %	GERM %
42.5	38.0	CREEPING RED FESCUE	98	85
10.0	9.0	PERENNIAL RYE GRASS	95	90
42.5	38.0	KENTUCKY BLUE GRASS	85	85
5.0	5.0	ANNUAL RYE GRASS	95	85
100.0	90.0			

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.

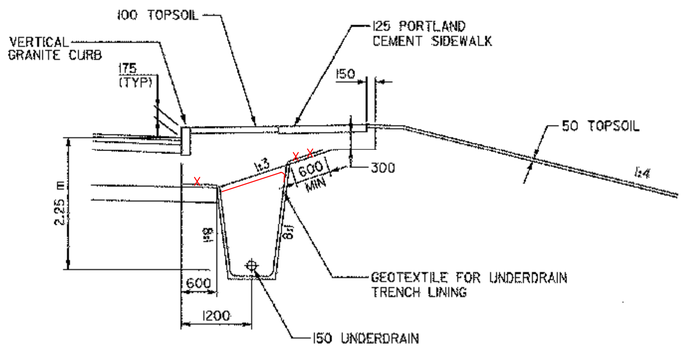
TOPSOIL: TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

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

SLOPE ROUNDING: ALL CUT SLOPES TO BE ROUNDED IN ACCORDANCE WITH STD SHEET B-5M. SLOPE LINES SHOWN ON THE PLANS AND CROSS SECTIONS DO NOT SHOW THE SLOPE ROUNDING.

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.



SIDEWALK CONSTRUCTION UNDERDRAIN PLACEMENT DETAIL

(NOT TO SCALE)

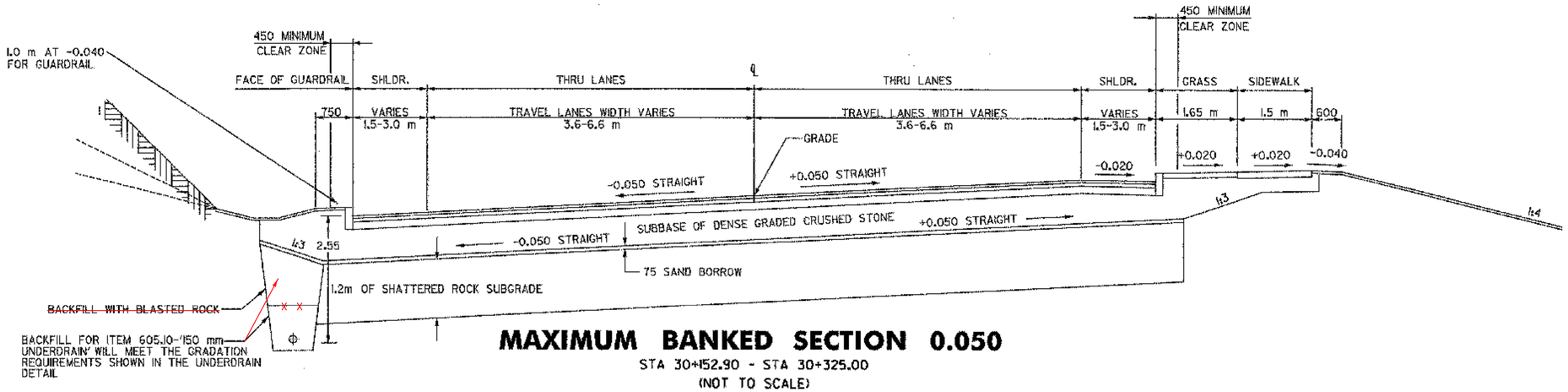
NOTE: UNLESS OTHERWISE NOTED IN THESE PLANS, ALL ELEVATIONS ARE IN METERS AND ALL DIMENSIONS ARE IN MILLIMETERS

PROJECT:	PROJECT NO.:
BRATTLEBORO	NH 010-2(2)
DESIGN FILE NAME: ...\zb270typ.dgn	
IPARM FILE NAME:	PLOT DATE: 09/20/2002
SURVEYED BY:	SURVEY DATE:
SQUAD LEADER: W HUSBAND	DRAWN BY: P SHEDD
CLD REF NO. 00-0358	SHEET: 8 OF 145

TYPICAL ROADWAY SECTIONS

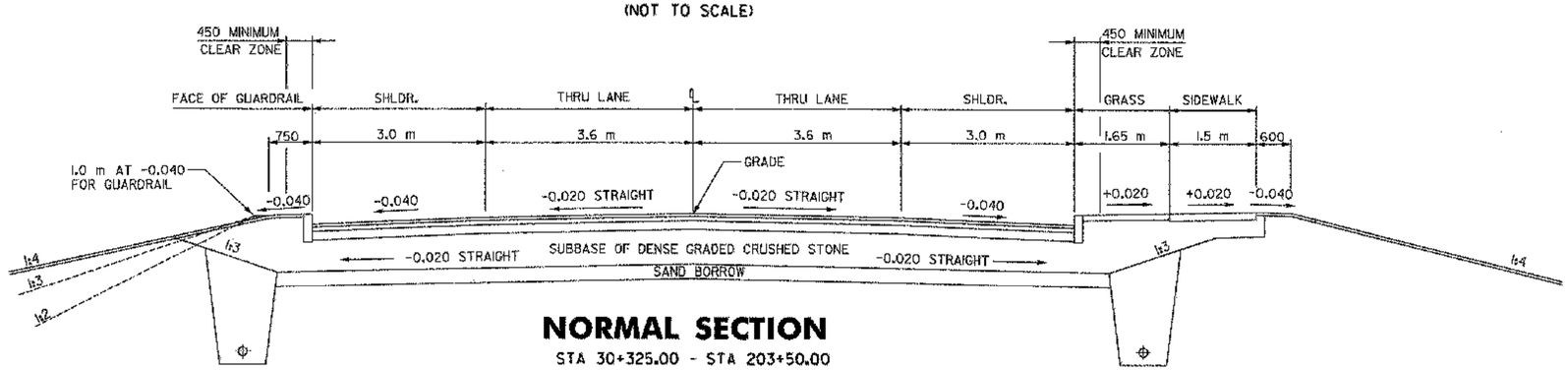
MATERIAL ITEM	THICKNESS TOLERANCE
PAVEMENT (TOTAL DEPTH ALL LAYERS)	+/- 5
SUBBASE	+/- 30
SAND BORROW	+/- 30

50 BITUMINOUS CONCRETE PAVEMENT (TYPE IIIS) (PG 70-28)
75 BITUMINOUS CONCRETE PAVEMENT (TYPE IIS) (PG 70-28)
150 BITUMINOUS CONCRETE PAVEMENT (TYPE IS) (PG 70-28) (2-75mm LIFTS)
600 SUBBASE OF DENSE GRADED CRUSHED STONE
250 SAND BORROW (IN EARTH AREAS)
75 SAND BORROW (IN ROCK AREAS)



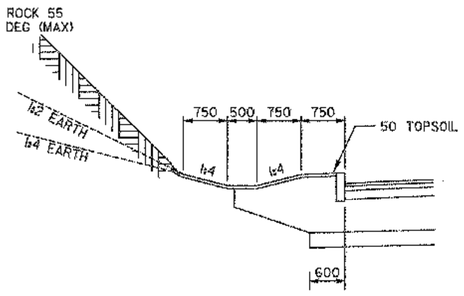
MAXIMUM BANKED SECTION 0.050

STA 30+152.90 - STA 30+325.00
(NOT TO SCALE)



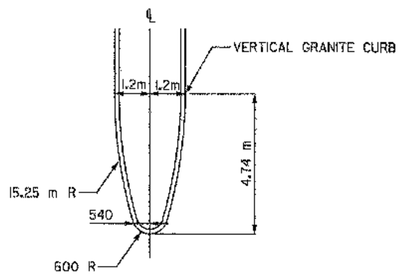
NORMAL SECTION

STA 30+325.00 - STA 203+50.00
(NOT TO SCALE)



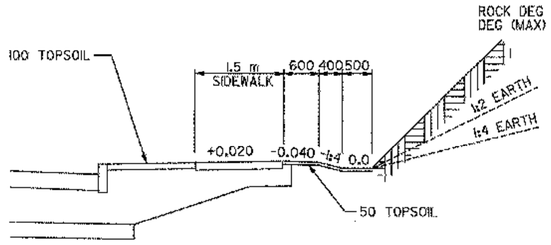
DITCH & BACKSLOPE DETAIL

(NOT TO SCALE)



MEDIAN TERMINI DETAIL

(NOT TO SCALE)



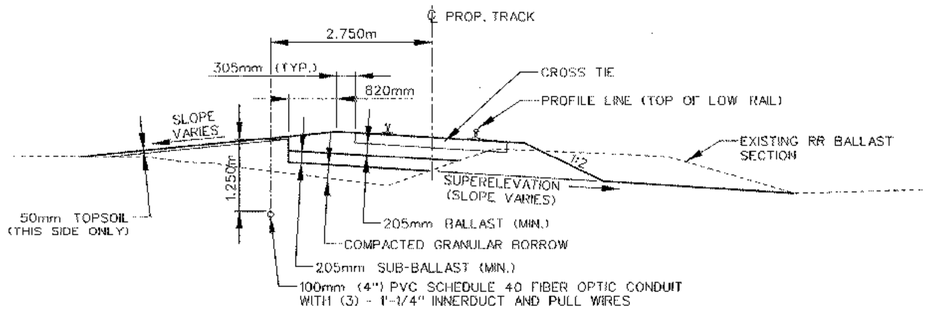
DITCH AND BACKSLOPE DETAIL FOR SIDEWALK

(NOT TO SCALE)

NOTE: UNLESS OTHERWISE NOTED IN THESE PLANS, ALL ELEVATIONS ARE IN METERS AND ALL DIMENSIONS ARE IN MILLIMETERS

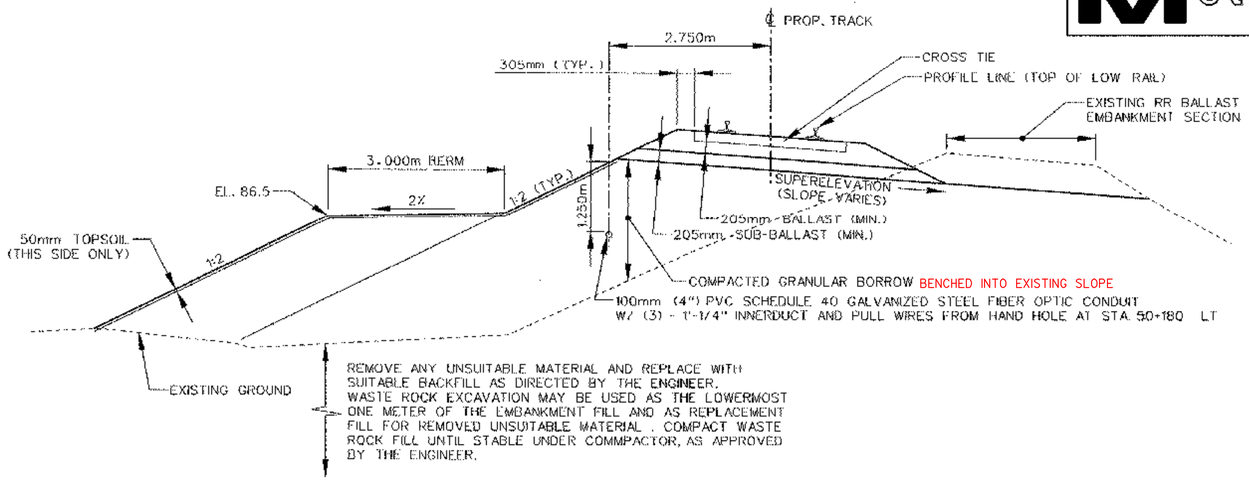
DATUM	
VERTICAL	NGVD 1929
HORIZONTAL	NAD 1983

PROJECT:	PROJECT NO.:
BRATTLEBORO	NH 010-2(2)
DESIGN FILE NAME: ...\zb270typ.dgn	
IPARM FILE NAME:	PLOT DATE: 09/20/2002
SURVEYED BY:	SURVEY DATE:
SQUAD LEADER: W HUSBAND	DRAWN BY: P SHEDD
CLD REF NO. 00-0358	SHEET: 9 OF 145



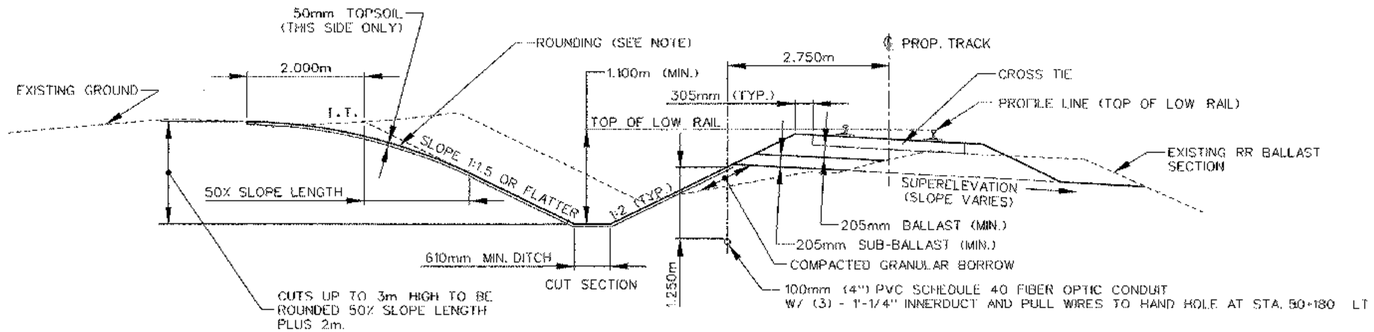
TYPICAL TRACK TRANSITION SECTION
STA. 50+500 TO STA. 50+580

SCALE 1:50



TYPICAL BERM SECTION
FULL DEPTH CONSTRUCTION
STA. 50+193.123 TO STA. 50+254.520
(SARGENT BROOK TO VT ROUTE 9)

SCALE 1:50

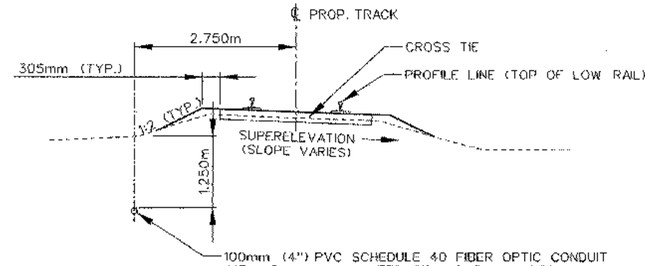


NOTE:

WHEN STEEPNESS OF EXISTING GROUND, SHALLOWNESS OF CUT OR PRESENCE OF EXISTING VEGETATION OR BUILDINGS IS CONSIDERED A FACTOR PREVENTING NORMAL ROUNDING, THE EXTENT OF THE ROUNDING SHOULD BE MODIFIED TO MEET CONDITIONS. SEE NOTE 3.

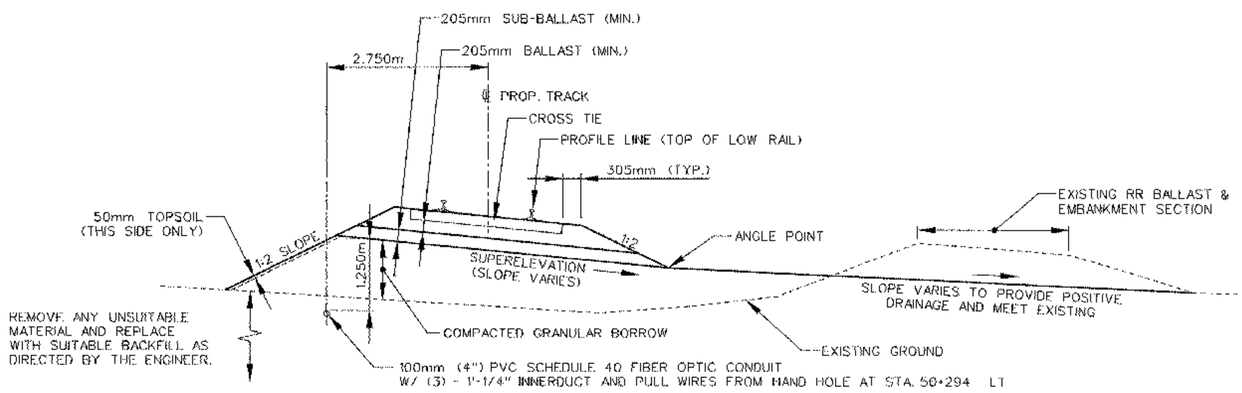
TYPICAL TRACK TRANSITION SECTION
STA. 50+120 TO STA. 50+186.417

SCALE 1:50



TYPICAL TRACK REHABILITATION SECTION
STA. 50+020 TO STA. 50+120
STA. 50+580 TO STA. 50+698.603

SCALE 1:50



TYPICAL SUPERELEVATED TRACK SECTION - (ON CURVE)
FULL DEPTH CONSTRUCTION
STA. 50+285.220 TO STA. 50+500

SCALE 1:50

NOTES:

1. REFER TO ROADWAY TYPICAL SECTIONS FOR "GENERAL NOTES FOR ROADWAY TYPICALS", AND UTILIZE AS APPLICABLE TO RAILROAD TYPICAL SECTIONS. NOTE THAT TOPSOIL AND/OR SEED IS NEVER TO BE APPLIED ABOVE RAILROAD SUBGRADE ELEVATION.
2. RAIL TO BE 115 POUND CONTINUOUS WELDED RAIL. CROSS TIES TO BE 7"X9"X8'-6" TIMBER. BALLAST TO BE STONE BALLAST, SIZE #4. SUB-BALLAST TO BE SCREENED GRAVEL. ALL ABOVE MATERIALS MUST MEET THE REQUIREMENTS OF AREMA. (WORK BY OTHERS)
3. ALLOWANCE FOR ROUNDING HAS NOT BEEN INDICATED ON RAILROAD PLANS AND CROSS SECTIONS. DUE TO UNTYPICAL CONDITIONS IN CUT, ROUNDINGS WILL BE AS DIRECTED BY THE ENGINEER.

DATUM
VERTICAL NGVD 1929
HORIZONTAL NAD 1983

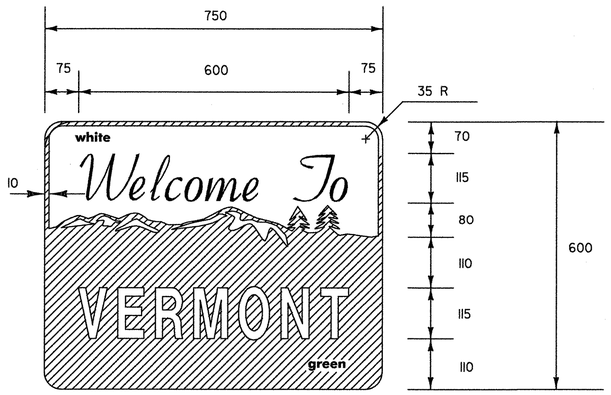
RAILROAD TYPICAL SECTIONS

PROJECT NAME: BRATTLEBORO
PROJECT NUMBER: NH 010-2(2)

FILE NAME: track sections
PROJECT LEADER: JHR
DESIGNED BY: GJB
PLOT DATE: 10-01-2002
DRAWN BY: DHL
CHECKED BY: TEM
SHEET 10 OF 145

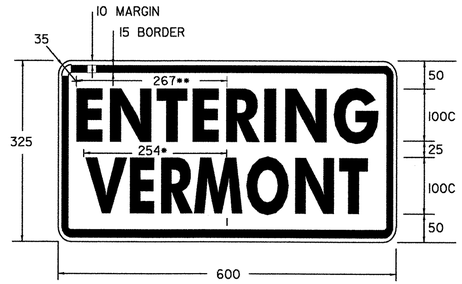
MISCELLANEOUS DETAILS

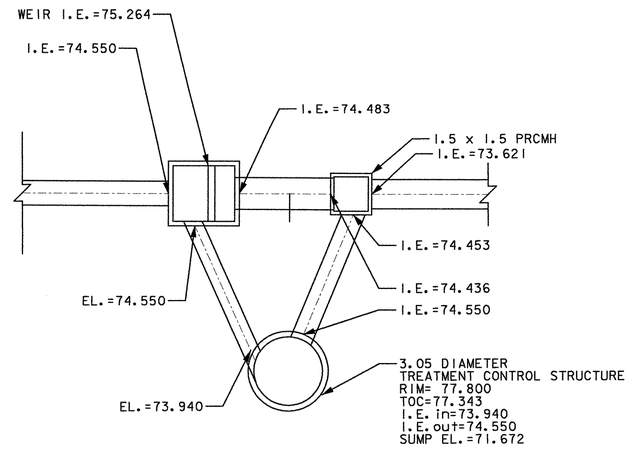
Metric



NOTE:
FOR THE WORDS "WELCOME TO" USE GERBER FONT MURRAY HILL BOLD OR EQUIVALENT. TEXT COLOR IS GREEN. ALL OTHER TEXT USE GERBER FONT SOUVENIR DEMI BOLD OR EQUIVALENT. TEXT COLOR IS WHITE. REFER TO STD. E-131M FOR COLORS.

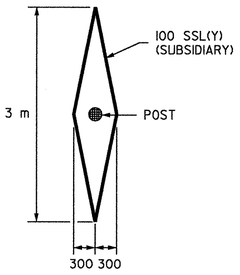
MATERIALS:
SEE STD. E-136M FOR MATERIALS



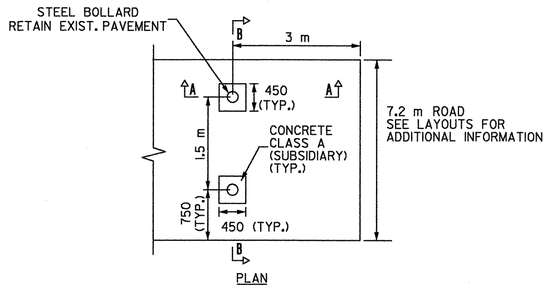


SEDIMENTATION CONTROL STRUCTURE DETAIL

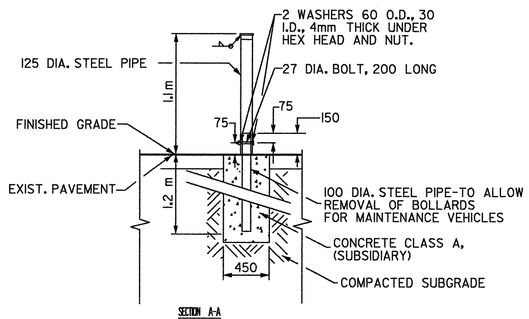
(NOT TO SCALE)



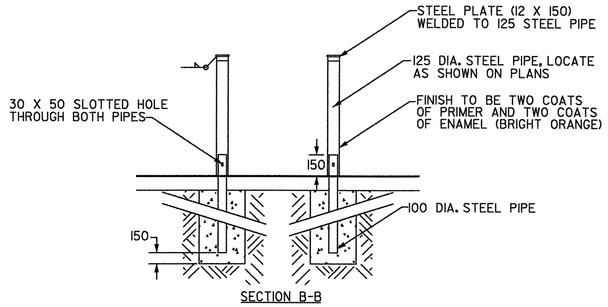
STRIPING DETAIL FOR BOLLARD



PLAN



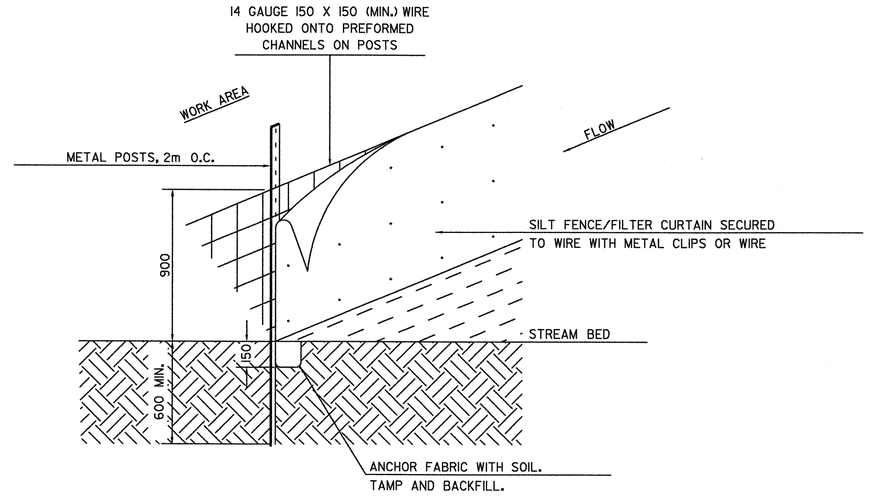
SECTION A-A



SECTION B-B

STEEL BOLLARD DETAIL (REMOVABLE)

ITEM 619.16 - STEEL MARKER POSTS (MOD)
(NOT TO SCALE)



PLACEMENT OF SILT FENCE/FILTER CURTAIN IN STREAM

NOT TO SCALE

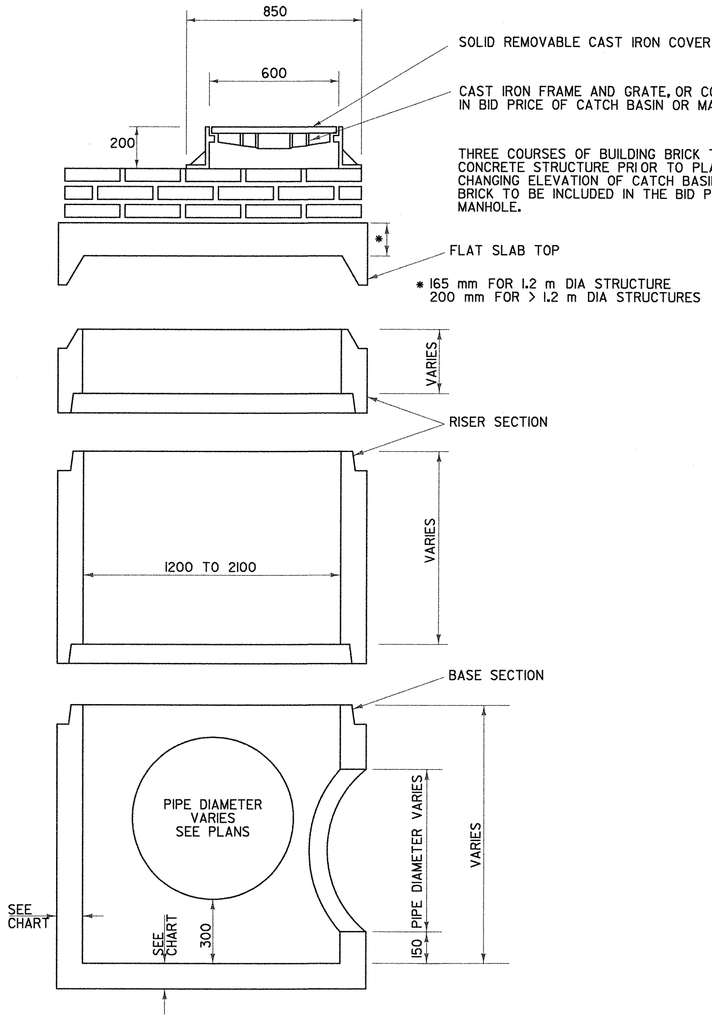
NOTE: UNLESS OTHERWISE NOTED IN THESE PLANS, ALL ELEVATIONS ARE IN METERS AND ALL DIMENSIONS ARE IN MILLIMETERS

DATUM	
VERTICAL	NGVD 1929
HORIZONTAL	NAD 1983

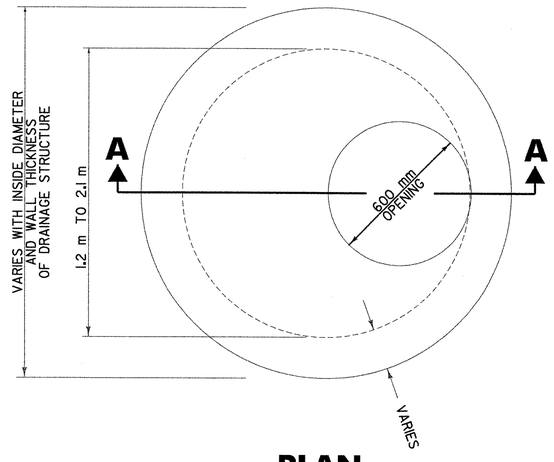
PROJECT:	PROJECT NO.:
BRATTLEBORO	NH 010-2(2)
DESIGN FILE NAME: ...\zb270typ.dgn	
IPARM FILE NAME:	PLOT DATE: 09/20/2002
SURVEYED BY:	SURVEY DATE:
SQUAD LEADER: W HUSBAND	DRAWN BY: P SHEDD
CLD REF NO. 00-0358	SHEET: 11 OF 145

MISCELLANEOUS DETAILS

VAOT Metric



SECTION A–A



PLAN

GENERAL NOTES

1. ALL CATCH BASINS SHALL BE CONSTRUCTED WITH PRECAST CONCRETE BASE SECTIONS, RISER SECTIONS AND FLAT SLAB TOPS CONFORMING TO SECTION 705.04 OF THE VERMONT STANDARD SPECIFICATIONS FOR CONSTRUCTION.
2. PRECAST CONCRETE BASE SECTIONS AS SHOWN ON THIS SHEET SHALL BE USED FOR EACH CATCH BASIN. FOOTINGS (CAST-IN-PLACE OR PRECAST) FOR CATCH BASINS ARE NOT ALLOWED.
3. PRECAST SECTIONS SHALL HAVE A TONGUE AND GROOVE JOINT 100 mm HIGH AT AN 11° ANGLE CENTERED IN THE WIDTH OF THE WALL AND SHALL BE ASSEMBLED USING AN APPROVED FLEXIBLE SEALANT IN JOINTS.
4. ALL STRUCTURES WITH MULTIPLE PIPES SHALL HAVE A MINIMUM OF 300 mm OF OUTSIDE SURFACE BETWEEN HOLES, NO MORE THAN 75% OF A HORIZONTAL CROSS-SECTION SHALL BE HOLES, AND THERE SHALL BE NO HOLES CLOSER THAN 75 mm TO JOINTS.

DIAMETER	WALL THICKNESS (MIN.)	FLOOR THICKNESS (MIN.)
1.2 m	125 mm	150 mm
1.5 m	150 mm	200 mm
1.8 m	175 mm	200 mm
2.1 m	200 mm	250 mm

PRECAST REINFORCED CONCRETE CATCH BASIN DETAIL

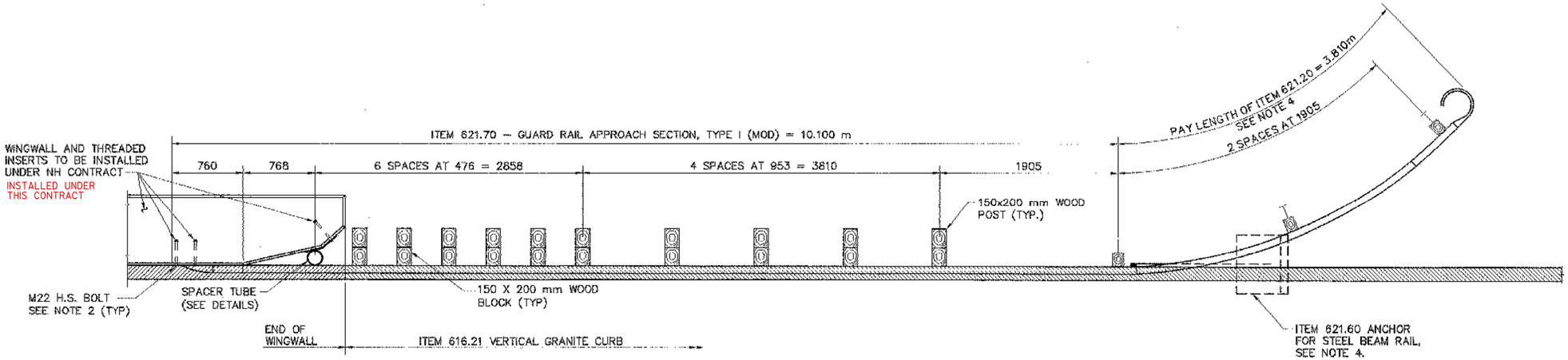
(NOT TO SCALE)

NOTE: UNLESS OTHERWISE NOTED IN THESE PLANS, ALL ELEVATIONS ARE IN METERS AND ALL DIMENSIONS ARE IN MILLIMETERS

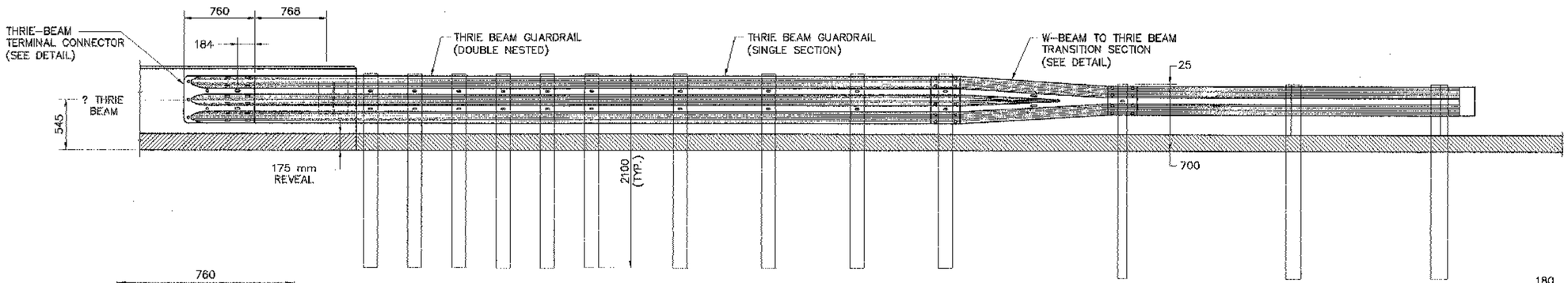
DATUM	
VERTICAL	NGVD 1929
HORIZONTAL	NAD 1983

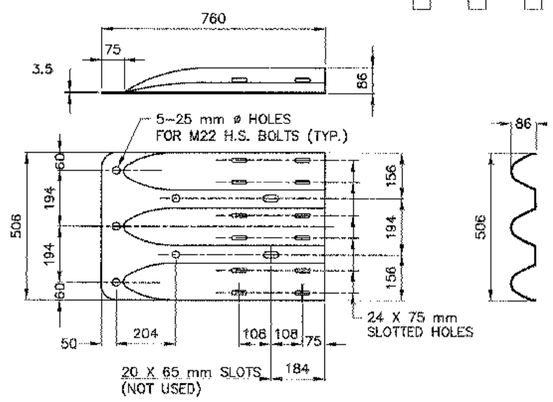
PROJECT:	PROJECT NO.:
BRATTLEBORO	NH 010-2(2)
DESIGN FILE NAME: ...\zb270typ.dgn	
IPARM FILE NAME:	PLOT DATE: 09/25/2002
SURVEYED BY:	SURVEY DATE:
SQUAD LEADER: W HUSBAND	DRAWN BY: P SHEDD
CLD REF NO. 00-0358	SHEET: IIA OF 145

Metric



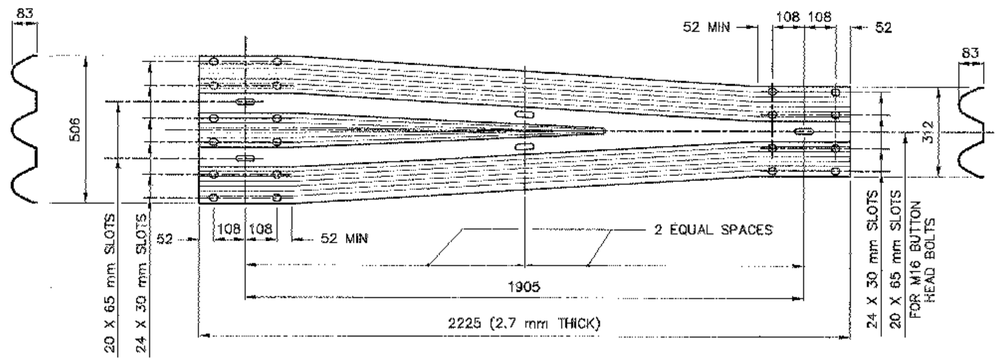
PLAN
SCALE 1:25



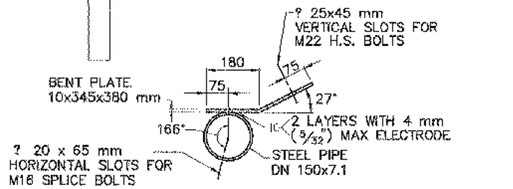


THRIE-BEAM TERMINAL CONNECTOR
(ARTBA RTE01b)
SCALE 1:10

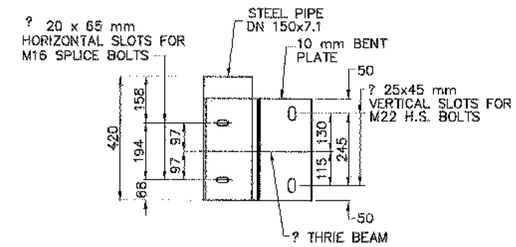
ELEVATION
SCALE 1:25



THRIE-BEAM TO W-BEAM TRANSITION SECTION
(ARTBA RWT01a)
SCALE 1:10



SECTION



ELEVATION

NOTE: STEEL PIPE (ASTM A53 GRADE B)/ BENT PLATE (ASTM A36) ASSEMBLY SHALL BE HOT DIPPED GALVANIZED

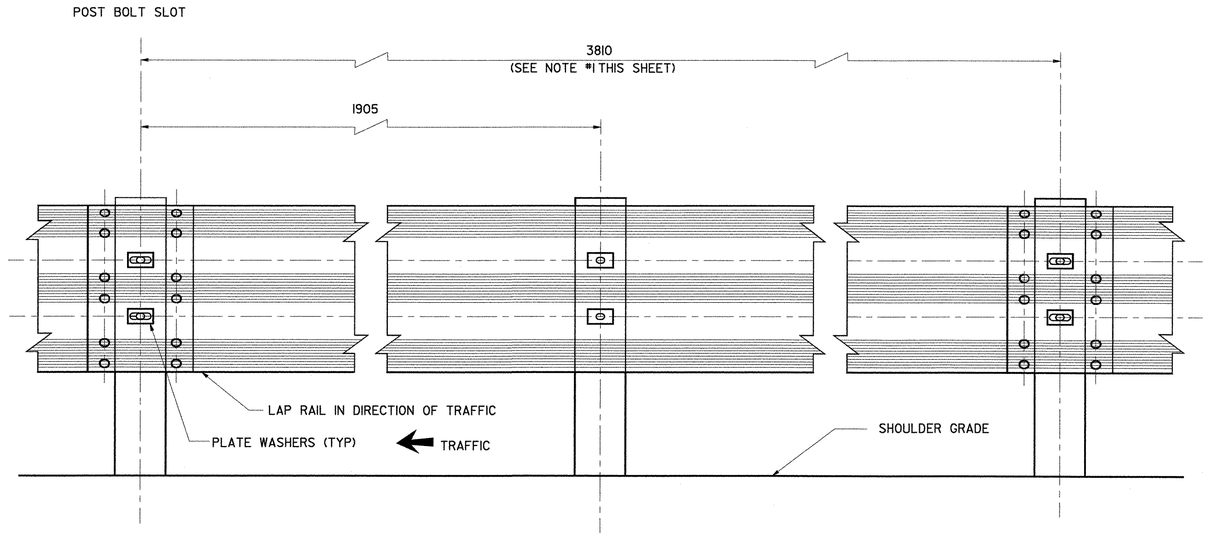
SPACER TUBE ASSEMBLY DETAILS
SCALE N.T.S.

NOTES:

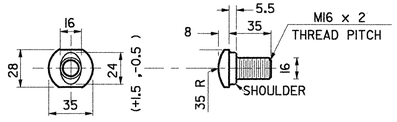
1. ALL THRIE BEAM RAIL, INCLUDING TRANSITION SECTION, SHALL BE GALVANIZED 2.7 mm. ALL TERMINAL CONNECTORS SHALL BE GALVANIZED 3.5 mm.
2. H.S. BOLTS SHALL CONFORM TO ASTM A 325M TYPE 1, GALVANIZED.
3. ALL CONNECTIONS FOR THE THRIE BEAM RAIL AND TERMINAL CONNECTOR SHALL LAP IN THE DIRECTION OF TRAFFIC.
4. SEE VAOT STANDARD G-1dM FOR GUARDRAIL TERMINAL AND ANCHOR DETAILS.
5. SEE SHEET 12A OF 145 FOR ADDITIONAL THRIE-BEAM STANDARD DETAILS.
6. FOR DESCRIPTION AND SPECIFICATION OF PARTS IDENTIFIED BY "(ARTBA ...)" AND OTHER DETAILS OF POSTS, POST ACCESSORIES, FASTENERS, AND RAIL ELEMENTS, SEE AASHTO-AGC-ARTBA JOINT TASK FORCE NO. 13 TITLED "A GUIDE TO STANDARDIZED HIGHWAY BARRIER HARDWARE," LATEST EDITION.

DATUM
VERTICAL _____
HORIZONTAL _____

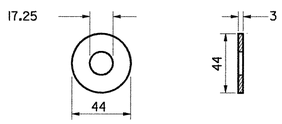
PROJECT: BRATTLEBORO
PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME:
IPARM FILE NAME:
SURVEYED BY:
SQUAD LEADER: W. HUSBAND
PLOT DATE: 1/2002
SURVEY DATE:
DRAWN BY: PHL
SHEET: 12 OF 145



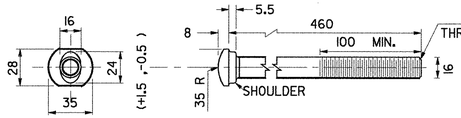
ELEVATION VIEW



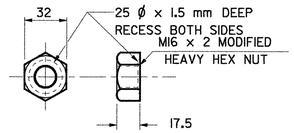
SPLICE BOLT [ARTBA FBB01]
(12 REQ'D PER SPLICE)



ROUND WASHER FOR M16 BOLT
[ARTBA FWC16a]

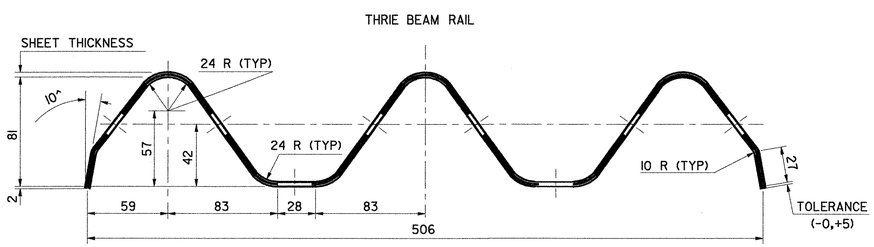


POST BOLT [ARTBA FBB04]
(2 REQ'D PER POST)

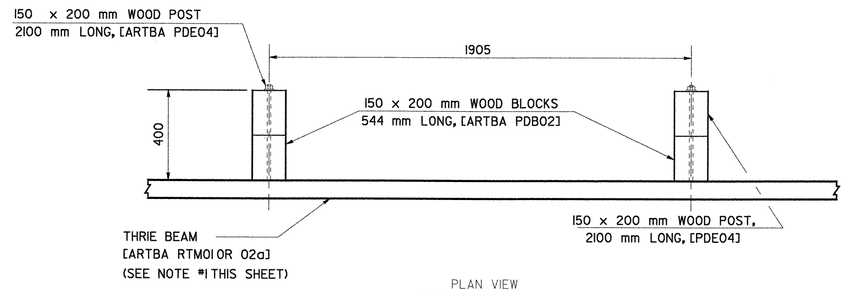


NUT FOR SPLICE & POST BOLTS
[ARTBA FBB01 & 05]

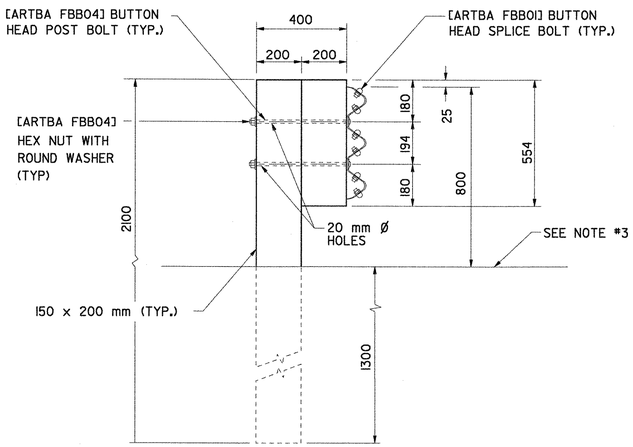
NOTE: LONGER ERECTION BOLTS MAY BE REQUIRED



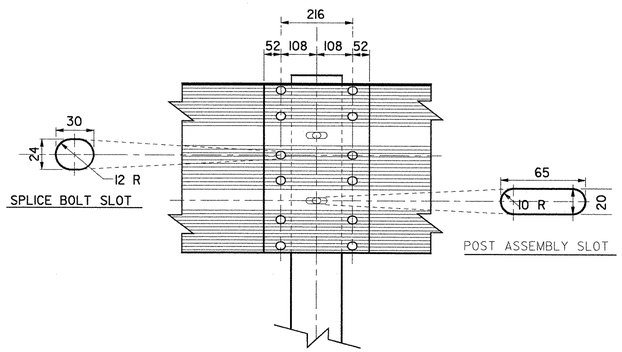
THRIE BEAM RAIL SECTION
[ARTBA RTM01a & RTM02a]



PLAN VIEW



SIDE VIEW AT SPLICE POST



BEAM SPLICE

GENERAL NOTES

(1) 7.6 m RAIL PANELS MAY BE USED IN PLACE OF 3.8 m PANELS, EXCEPT ON CURVES WITH A RADIUS OF LESS THAN 100 M.

(2) ALL DIMENSIONS SUBJECT TO MANUFACTURER'S TOLERANCES.

(3) GUARDRAIL HEIGHT SHALL BE SET FROM THE GRADE AT THE FACE OF RAIL.

(4) FOR DESCRIPTION AND SPECIFICATION OF PARTS IDENTIFIED BY "[ARTBA....]" AND OTHER DETAILS OF POSTS, POST ACCESSORIES, FASTENERS, AND RAIL ELEMENTS, SEE AASHTO-AGC-ARTBA JOINT TASK FORCE NO. 13 TITLED "A GUIDE TO STANDARDIZED HIGHWAY BARRIER HARDWARE," LATEST EDITION.

DATUM

VERTICAL _____

HORIZONTAL _____

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: ...\guardrail.dgn	
IPARM FILE NAME:	PLOT DATE: 09/23/2002
SURVEYED BY:	SURVEY DATE:
SQUAD LEADER: W HUSBAND	DRAWN BY: PHL
CLD REF NO. 00-0358	SHEET: 12A OF 145

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET

LAST Metric

SUMMARY OF ESTIMATED QUANTITIES

PART. UTILITY	NONPART. UTILITY	TRACK SUBGRADE	RT 9 RR BRG	RT 9 SO ABUT	RT 9 NO ABUT	SGT BK BRIDGE	SGT BK SO ABUT	SGT BK NO ABUT	SGT BK CHANNEL	ROADWAY	EROSION	TEMP EROSION	E & C ITEMS
		0.06								0.4			
		4											
		1											
		0.5											
		798								11033			
										1228			
				452	254								
				28	4								
										50			
										50			
										130			
										290			
									138				
										45			
										819			
		2345			160					13			
										3914			
	240	50								1793		55	
										1612			
				532	2560					560			
				475	1625		100	200		143			
										1538			
							231	266					
							2	2					
							1						
								1					
										320			

TOTALS

ROUND	GRAND TOTAL	FINAL
	0.46	
	4	
EST	1	
	0.5	
	11831	
	1228	
	706	
	32	
EST	50	
EST	50	
	130	
	290	
	138	
	45	
	819	
	2518	
	3914	
	2138	
	1612	
	3652	
	2543	
	1538	
	497	
EST.	4	
	1	
	1	
	320	

DESCRIPTIONS

UNIT	ITEMS	
HA	Clearing and Grubbing	201.11
Each	Removing Medium Trees	201.15
Each	Removing Large Trees	201.16
HA	Thinning and Trimming (MOD)	201.30
CM	Common Excavation	203.15
CM	Solid Rock Excavation	203.16
CM	Solid Rock Excavation (MOD - Close-in Rock Blasting)	203.16
CM	Solid Rock Excavation (MOD - Mechanical Removal of Rock)	203.16
CM	Unclassified Excavation	203.17
CM	Muck Excavation	203.20
CM	Channel Excavation of Earth	203.25
CM	Channel Excavation of Rock	203.26
CM	Unclassified Channel Excavation	203.27
CM	Excavation of Surfaces and Pavements	203.28
CM	Sand Borrow	203.31
CM	Granular Borrow	203.32
SM	Fine Grading - Subgrade	203.40
CM	Trench Excavation of Earth	204.20
CM	Trench Excavation of Rock	204.21
CM	Structure Excavation	204.25
CM	Granular Backfill for Structures	204.30
SM	Drilling and Blasting of Solid Rock Subgrade	205.20
CM	Cofferdam Excavation, Earth	208.30
CM	Cofferdam Excavation, Rock	208.35
LS	Cofferdam (Sta. 50+185.50)	208.40
LS	Cofferdam (Sta. 50+194.00)	208.40
SM	Cold Planing - Bituminous Pavement	210.10

DETAILED SUMMARY OF QUANTITIES

QUANTITIES		ITEMS

PROJECT NAME : BRATTLEBORO

PROJECT NO. : NH 010-2(2)

DESIGN FILE NAME: sf270qty.dgn
IPARM FILE NAME:
SURVEYED BY:
SQUAD LEADER: JHR

PLOT DATE: 10-03-2002
SURVEY DATE:
DRAWN BY: LB/LD/TT
SHEET: 13 OF 145

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET

Metric

SUMMARY OF ESTIMATED QUANTITIES

PART. UTILITY	NONPART. UTILITY	TRACK SUBGRADE	RT 9 RR BRG	RT 9 SO ABUT	RT 9 NO ABUT	SGT BK BRIDGE	SGT BK SO ABUT	SGT BK NO ABUT	SGT BK CHANNEL	ROADWAY	EROSION	TEMP EROSION	E & C ITEMS
										3338		274	
										5			
										573			
										1			
										2630			
				263	247		63	119					
			42496										
			89924										
			41335										
				13955	12838		463	946					
							26	26					
						1							
						1							
										1			
			215			26							
			216										
					35								
					216								
			1										
				220	220		15	15					
			4										
	1												
										7			
										7			
										7			
										7			
										85			
										85			
										85			
										85			

TOTALS

ROUND	GRAND TOTAL	FINAL
	3612	
	5	
	573	
	1	
	2630	
	692	
	42496	
	89924	
	41335	
	28202	
	52	
	1	
	1	
	241	
	216	
	35	
	216	
	1	
	470	
	4	
	1	
	7	
	7	
	7	
	7	
	85	
	85	
	85	
	85	

DESCRIPTIONS

UNIT	ITEMS	
CM	Subbase of Dense Graded Crushed Stone	301.35
CM	Aggregate Surface Course	401.10
Kg	Emulsified Asphalt	404.65
LU	Price Adjustment Asphalt Cement	406.50
MT	Superpave Bituminous Concrete Pavement (PG 70-28)	490.30
CM	Concrete, High Performance Class A	501.33
Kg	Structural Steel (Rolled Beam)	506.50
Kg	Structural Steel (Plate Girder)	506.55
Kg	Structural Steel	506.60
Kg	Reinforcing Steel	507.15
M	Drilling and Grouting Dowels	507.16
Each	Prestressed Concrete Member (MOD1-Precast Slab, 1.0M)	510.20
Each	Prestressed Concrete Member (MOD2-Precast Slab, 2.4M)	510.20
Each	Corrugated Gal. Metal Plate Pipe (MOD)	511.15
SM	Sheet Membrane Waterproofing (MOD 1)	519.20
SM	Sheet Membrane Waterproofing (MOD 2)	519.20
M	Metal Hand Railing (MOD)	525.15
SM	Mechanically Stabilized Earth (MSE) Wall	526.30
Each	Removal of Structure	529.15
CM	Removal of Concrete or Masonry	529.25
Each	Bearing Device Assembly	531.10
Each	Concrete Vault, Type 1 (3.6m x 1.8m x 2.1m)	540.21
	BEGIN PIPE OPTIONS	
M	300mm CAAP 1.52 mm (68mm x 12mm)	601.0205
M	300mm PCCSP 1.63 mm (68mm x 12mm)	601.0405
M	300mm RCP Class III	601.0805
M	300mm CPEP (SL)	601.2605
M	450mm CAAP 1.52 mm (68mm x 12mm)	601.0215
M	450mm PCCSP 1.63 mm (68mm x 12mm)	601.0415
M	450mm RCP Class III	601.0815
M	450mm CPEP (SL)	601.2615

DETAILED SUMMARY OF QUANTITIES

QUANTITIES		ITEMS

PROJECT NAME :
BRATTLEBORO

PROJECT NO. :
NH 010-2(2)

DESIGN FILE NAME: sf270qty.dgn
IPARM FILE NAME:
SURVEYED BY:
SQUAD LEADER: JHR

PLOT DATE: 10-10-2002
SURVEY DATE:
DRAWN BY: LB/LD/TT
SHEET: 14 OF 145

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET

VAOT Metric

SUMMARY OF ESTIMATED QUANTITIES

	PART. UTILITY	NONPART. UTILITY	TRACK SUBGRADE	RT 9 RR BRG	RT 9 SO ABUT	RT 9 NO ABUT	SGT BK BRIDGE	SGT BK SO ABUT	SGT BK NO ABUT	SGT BK CHANNEL	ROADWAY	EROSION	TEMP EROSION	E & C ITEMS	
											206				
											206				
											34				
											34				
											61				
											61				
											6				
											6				
											128				
											128				
											86				
											86				
											1				
											1				
											1				
											1				
											14				
											2				
											4				
											1				
											1				
											1				
											5				
											1				
											3				
											311				
											7				
											9				
											1				
											1				
											1				
											1				

TOTALS

ROUND	GRAND TOTAL	FINAL
	206	
	206	
	34	
	34	
	61	
	61	
	6	
	6	
	128	
	128	
	86	
	86	
	1	
	1	
	1	
	1	
	14	
	2	
	4	
	1	
	1	
	1	
	5	
	1	
	3	
	311	
	7	
	9	
	1	
	1	
	1	
	1	

DESCRIPTIONS

UNIT	ITEMS	
M	750mm CAAP 1.52 mm (75mm x 25mm)	601.0305
M	750mm PCCSP 2.01mm (68mm x 12mm)	601.0436
M	900mm CAAP 1.52 mm (75mm x 25mm)	601.0310
M	900mm PCCSP 2.01mm (68mm x 12mm)	601.0446
M	450mm RCP Class III	601.0815
M	450mm CPEP (SL)	601.2615
M	600mm RCP Class III	601.0825
M	600mm CPEP (SL)	601.2620
M	750mm RCP Class III	601.0835
M	750mm CPEP (SL)	601.2625
M	900mm RCP Class III	601.0845
M	900mm CPEP (SL)	601.2630
Each	750mm RCPES Class III	601.6835
Each	750mm CPEPES	601.7025
Each	900mm RCPES Class III	601.6845
Each	900mm CPEPES	601.7030
	END PIPE OPTIONS	
Each	Precast Reinf. Conc. Catch Basin w/ CIG	604.20
Each	Precast Reinf. Conc. Catch Basin w/ CIG (1.5m)	604.20
Each	Precast Reinf. Conc. Catch Basin w/ CIG (1.8m)	604.20
Each	Precast Reinf. Conc. Catch Basin w/ CIG (2.1m)	604.20
Each	Precast Reinf. Conc. C.B. w/CIG 2.7m x 2.4m)	604.20
Each	Precast Reinf. Conc. C.B. w/ CIG (1.5m x 1.5m)	604.20
Each	Precast Reinf. Conc. Manhole w/ CIC (1.5m)	604.21
Each	Precast Reinf. Conc. Manhole w/ CIC (1.8m)	604.21
Each	"Changing Elev. of D.I., C. B. or M.H."	604.40
M	150mm Underdrain	605.10
M	150mm Underdrain Carrier Pipe	605.20
Each	Underdrain Flushing Basins	605.95
Hour	"Bulldozer Rental, Type I"	608.10
Hour	Power Grader Rental	608.15
Hour	"All Purpose Excavator Rental, Type I"	608.25
Hour	Power Broom Rental	608.30

DETAILED SUMMARY OF QUANTITIES

QUANTITIES		ITEMS

PROJECT NAME :
BRATTLEBORO

PROJECT NO. :
NH 010-2(2)

DESIGN FILE NAME: sf270qty.dgn
IPARM FILE NAME:
SURVEYED BY:
SQUAD LEADER: JHR

PLOT DATE: 10-01-2002
SURVEY DATE:
DRAWN BY: LB/LD/TT
SHEET: 15 OF 145

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET

VAOT Metric

SUMMARY OF ESTIMATED QUANTITIES

PART. UTILITY	NONPART. UTILITY	TRACK SUBGRADE	RT 9 RR BRG	RT 9 SO ABUT	RT 9 NO ABUT	SGT BK BRIDGE	SGT BK SO ABUT	SGT BK NO ABUT	SGT BK CHANNEL	ROADWAY	EROSION	TEMP EROSION	E & C ITEMS
										1			
										1			
										1			
			249							662			
										212		27	
					14					112			
									107				
										120			
										568			
										2			
										469			
										22			
										5			
										22			
										3			
			1										
										26			
										8			
										6			
		52								7			
		191								105			
										35			
										8			
										2			
										2			
										13			
				0.45	0.45					260			
	200												
	40												

TOTALS

ROUND	GRAND TOTAL	FINAL
	1	
	1	
	1	
	911	
	239	
	126	
	107	
	120	
	568	
	2	
	469	
	22	
	5	
	22	
	3	
	1	
	26	
	8	
	6	
	59	
	296	
	35	
	8	
	2	
	2	
	13	
	260	
	0.90	
	200	
	40	

DESCRIPTIONS

UNIT	ITEMS	
Hour	"Power Broom Rental, Type II"	608.31
Hour	Truck Rental	608.37
Hour	"Loader Rental, Type I"	608.40
CM	Dust Control with Water	609.10
CM	"Stone Fill, Type I"	613.10
CM	"Stone Fill, Type II"	613.11
CM	"Stone Fill, Type III"	613.12
CM	"Stone Fill, Type IV"	613.13
M	Vertical Granite Curb	616.21
M	Removing and Resetting Curb	616.40
SM	"Portland Cement Concrete Sidewalk, 125mm"	618.10
SM	"Portland Cement Concrete Sidewalk, 200mm"	618.11
Each	Steel Marker Posts (MOD)	619.16
Each	Yielding Marker Posts	619.17
EACH	Removing and Resetting Property Markers	619.20
Each	Removing and Resetting Property Markers (MOD)	619.20
M	Chain Link Fence, 1.8M	620.12
M	"Gate for Chain-Link Fence, 1.8m"	620.16
Each	"Bracing Assembly for Chain-Link Fence, 1.8m"	620.21
M	Removal of Existing Fence	620.55
M	Snow Fence (MOD)	620.70
M	Plank Rail	621.15
M	Steel Beam Guard Rail	621.20
Each	Anchor for Steel Beam Rail	621.60
Each	Guardrail Approach Section, Type 1 (MOD)	621.70
M	Removal and Disposal of Guard Rail	621.80
M	Temporary trafic Barrier	621.90
M	Ducts, Concrete Encased	624.20
M	Ducts, Concrete Encased (6-100mm PVC, Type C)	624.20
M	Ducts, Concrete Encased (4-100mm PVC, Type C)	624.20

DETAILED SUMMARY OF QUANTITIES

QUANTITIES		ITEMS
		(2) Addendum two, New Item Added Dec 6, 2002

PROJECT NAME : BRATTLEBORO

PROJECT NO. : NH 010-2(2)

DESIGN FILE NAME: sf270qty.dgn
IPARM FILE NAME:
SURVEYED BY:
SQUAD LEADER: JHR

PLOT DATE: 10-03-2002
SURVEY DATE:
DRAWN BY: LB/LD/TT
SHEET: 16 OF 145

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET

VAOT Metric

SUMMARY OF ESTIMATED QUANTITIES

	PART. UTILITY	NONPART. UTILITY	TRACK SUBGRADE	RT 9 RR BRG	RT 9 SO ABUT	RT 9 NO ABUT	SGT BK BRIDGE	SGT BK SO ABUT	SGT BK NO ABUT	SGT BK CHANNEL	ROADWAY	EROSION	TEMP EROSION	E & C ITEMS	
											1				
											1041				
											1727				
			1360												
														1	
														1	
														1	
														1	
											1040				
											1				
											1				
											2				
											617				
											606				
											28				
											10				
											617				
											606				
											10				
											99				
						66			48		1364				
											3053				
			583									36	227		
								36	38		36				
											24	15			
													48		
											150	89			

TOTALS

ROUND	GRAND TOTAL	FINAL
	1	
	1041	
	1727	
	1360	
	1	
	1	
	1	
	1	
	1040	
	1	
	1	
	2	
	617	
	606	
	28	
	10	
	617	
	606	
	10	
	99	
	1478	
	3053	
	846	
	110	
	39	
	48	
	239	

DESCRIPTIONS

UNIT	ITEMS	
Each	Adjust Elevation of Valve Box	629.20
Hour	Uniformed Traffic Officers	630.10
Hour	Flaggers	630.15
Hour	Flaggers (MOD-Railroad)	630.15
LS	Field Office - Engineers	631.10
LS	Testing Equipment - Concrete	631.16
LS	Testing Equipment - Bituminous	631.17
LU	Field Office Telephone (NABI)	631.25
Hour	Employee Traineeship	634.10
LS	Mobilization	635.10
LS	Traffic Control	641.10
Each	Portable Changeable Message Sign	641.15
M	Durable 100mm White Line	646.40
M	Durable 100mm Yellow Line	646.41
M	Durable 200mm Yellow Line	646.43
Each	Durable Letter or Symbol	646.50
M	Temporary 100mm White Line	646.60
M	Temporary 100mm Yellow Line	646.61
Each	Temporary Letters or Symbols	646.70
Each	Line Striping Targets	646.76
SM	Geotextile Under Stone Fill	649.31
SM	Geotextile for Underdrain Trench Lining	649.41
SM	Geotextile for Silt Fence	649.51
SM	Geotextile for Filter Curtains	649.61
Kg	Seed	651.15
Kg	Seed - Winter Rye	651.17
Kg	Fertilizer	651.18

DETAILED SUMMARY OF QUANTITIES

QUANTITIES		ITEMS

PROJECT NAME :
BRATTLEBORO

PROJECT NO. :
NH 010-2(2)

DESIGN FILE NAME: sf270qty.dgn
IPARM FILE NAME:
SURVEYED BY:
SQUAD LEADER: JHR

PLOT DATE: 10-11-2002
SURVEY DATE:
DRAWN BY: LB/LD/TT
SHEET: 17 OF 145

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET

VAOT Metric

SUMMARY OF ESTIMATED QUANTITIES

PART. UTILITY	NONPART. UTILITY	TRACK SUBGRADE	RT 9 RR BRG	RT 9 SO ABUT	RT 9 NO ABUT	SGT BK BRIDGE	SGT BK SO ABUT	SGT BK NO ABUT	SGT BK CHANNEL	ROADWAY	EROSION	TEMP EROSION	E & C ITEMS
										2	1	1	
										2	1	1	
												747	
										150	80		
								50		200			
											185	270	
										6			
										4			
		15								245			
										61			
										2			
										49			
										32			
	640												
										1			
			1										
						1							

TOTALS

ROUND	GRAND TOTAL	FINAL
	4	
	4	
	747	
	230	
	250	
	455	
	6	
	4	
	260	
	61	
	2	
	49	
	32	
	640	
	1	
	1	
	1	

DESCRIPTIONS

UNIT	ITEMS	ITEM #
MT	Agricultural Limestone	651.20
MT	Hay Mulch	651.25
Each	Hay Bales for Erosion Control	651.26
CM	Topsoil	651.35
SM	Grubbing Material	651.40
SM	Erosion Matting	654.10
Each	Transplanting Trees	656.45
SM	Traffic Signs, Type A	675.20
M	Flanged Channel Sign Post	675.301
Kg	Tubular Steel Sign Posts	675.33
Each	Foundation for Tubular Steel Posts	675.43
Each	Removing Signs	675.50
Each	Erecting Salvaged Signs	675.60
M	Electrical Conduit (MOD-Fiber Optic)	678.21
SM	Travel Information Signs	680.20
LS	Maintenance of Rail Traffic (Temporary Excavation Support of Track and Embankment - Route 9)	960.10
LS	Maintenance of Rail Traffic (Temporary Excavation Support of Track and Embankment - Sargent Brook)	960.10

DETAILED SUMMARY OF QUANTITIES

QUANTITIES		ITEMS

PROJECT NAME : BRATTLEBORO

PROJECT NO. : NH 010-2(2)

DESIGN FILE NAME: sf270qty.dgn
IPARM FILE NAME:
SURVEYED BY:
SQUAD LEADER: JHR

PLOT DATE: 10-01-2002
SURVEY DATE:
DRAWN BY: LB/LD/TT
SHEET: 18 OF 145

STATE OF VERMONT
AGENCY OF TRANSPORTATION

ITEM DETAIL SHEET

Metric

CURB

BEGIN STATION km + m	END STATION km + m	POSITION LEFT m	POSITION RIGHT m	REMARKS
30+099.7	30+331.5	231.8		
30+101.5	30+327.9		226.4	
30+115.3	30+152.8	37.5	37.5	ISLAND
30+334.0	A 203+50.0		17.9	
30+335.1	A 203+50.0	16.8		
TOTAL		286.1 +	281.8 =	567.9

SIDEWALK

BEGIN STATION km + m	END STATION km + m	POSITION LEFT m^2	POSITION RIGHT m^2	REMARKS
30+047.2	30+091.5		66.4	125 mm
30+091.5	30+101.5		15	200 mm
30+101.5	30+328.6		340.6	125 mm
30+328.6	30+333.1		6.8	200 mm
30+333.1	A 203+64.1		92.9	125 mm Width Varies
TOTAL			521.7 =	521.7

GUARD RAIL

BEGIN STATION km + m	END STATION km + m	POSITION LEFT m	POSITION RIGHT m	END TREATMENT BEGIN ea	END TREATMENT END ea
30+175.9	30+210.6	34.7			
30+340.1	A 203+42.2	3.9		G1-d	
30+340.1	A 203+42.1		3.8	G1-d	
A 203+42.1	A 203+52.2	1			
A 203+42.1	A 203+52.2		1		
TOTAL	PLANK	34.7 +	0.0 =	34.7	
TOTAL	STEEL BEAM	3.9 +	3.8 =	7.7	
TOTAL	APPR RAIL SECT TYPE I (MOD)	1. +	1. =	2	

UNDERDRAIN

BEGIN STATION km + m	END STATION km + m	TYPE	POSITION	DIA. mm	LENGTH m	TRENCH EARTH m^3	TRENCH ROCK m^3	GRAN BKFILL m^3	FB ea	MKR PST ea
30+089	30+151	U	LT	150	62	123			1	1
30+089	30+144	U	RT	150	55	111			1	1
30+144	30+151	C	RT	150	7	9				
30+154	30+180	U	LT	150	26	47			1	1
30+182	30+250	U	LT	150	68	77	26		1	1
30+252	30+285	U	LT	150	33		71		1	1
30+287	30+326	U	LT	150	39		85		1	1
30+310	30+326	U	RT	150	16		33		1	1
30+326	A 203+50	U	LT	150	6	9	39		1	1
30+326	A 203+50	U	RT	150	6	9	42		1	1
TOTAL	UNDERDRAIN				311	376	296	0	9	9
TOTAL	CARRIER PIPE				7	9	0	0		

PROJECT NAME: **BRATTLEBORO**
PROJECT NUMBER: **NH 010-2(2)**

FILE NAME: **zb270ids.xls**
PROJECT LEADER: **W HUSBAND**
DESIGNED BY: **P SHEDD**
ITEM DETAIL SHEET #1

PLOT DATE: **1/17/2002**
DRAWN BY: **P SHEDD**
CHECKED BY: **J WARNER**
SHEET **19** OF **145**

STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE DETAIL SHEET

Metric

STATION km + m	STATION km + m	POS.	ASKEW no. deg.	INLET/OUTLET TYPE INLET	OUTLET	DITCH IN	OUT	PIPE ARCH SPAN mm	RISE mm	L m	PIPE D mm	L m	ALLOWABLE OPTIONS PCCSP mm	CAAP mm	RCP CL	CSP mm	CPEP SL mm	PCCSP PI mm	PIPE ELBOW no. deg.	ES ea	PRCC size	PRCMH size	DEPTH DI mm	CONC CLASS B m³	REINF STEEL kg	DI GRATE type	CHAN ELEV ea	CRM m³	TRENCH EXCAVATION EARTH m³	ROCK m³	CHAN EXC m³	CHAN EXC ROCK m³	STRUCT EXCAV m³	GRAN BKFILL STRUCT m³	GRAN BORR m³	EROS MATT m²	STONE FILL m³	type	MARKER POSTS LT ea	RT ea	RELAY PIPE m		REMARKS
30+089	30+089	RT/LT		1.2m CB	1.2m CB						450	17.0	X	X	III		X				1.2					D			69.95					3.43										
30+089	30+151	LT		1.2m CB	1.8m CB						450	60.9			III		X				1.2					D			250.65					12.85							2.4			RELAY 2.4m x 450 mm RCP, NEW PRCCB TO
30+151	30+151	RT/LT		1.2m CB	1.8m CB						450	8.5	X	X	III		X				1.2					E			14.89					1.46										INTERCEPT EXIST CULVERT FROM STA 30+045 LT
30+151		LT		1.2m CB	1.8m CB						450	1.5	X	X	III		X				1.2					A			12.02											1				
30+147		LT																											4.80								4.80	I					DITCH
30+148	30+148	LT		1.5m MH	1.5m MH						750	2.4			III		X					1.5							5.99				37.42	0.31					1		2.4		RELAY 2.4m x 525 mm RCP, NEW PRCMH TO
30+148	30+148	RT/LT		1.5m MH	1.8m MH						750	21.7			III		X					1.5							99.18				34.02	5.09									INTERCEPT EXIST CULVERT FROM STA 30+148 LT
30+148	30+210	RT		1.8m MH	1.5m MH						750	60.4			III		X					1.8							465.00				54.10	15.24						1			
30+151	30+180	LT		1.8m CB	1.5m CB						750	27	X	X							1.8					E			62.62				21.64	6.48									
30+180	30+180	RT/LT		1.2m CB	1.5m CB						450	14.7	X	X	III		X				1.2					E			26.28					2.81										
30+180	30+180	RT		1.2m CB	1.2m CB						300	3.5	X	X	III		X				1.2					A			12.55					0.44							1			
30+180		LT		1.2m CB	1.5m CB						450	1.5	X	X	III		X				1.2					A			9.90											1				
30+180	30+250	LT		1.5m CB	1.8m CB						750	68.5	X	X							1.5					E			107.95	59.97			20.41	17.37									
30+210	30+265	RT		1.5m MH	1.5m MH						750	53.8	X	X								1.5							55.30	66.36			20.41	13.51						1			
30+250	30+250	RT		1.2m CB	1.2m CB						300	3.5	X	X	III		X				1.2					A			4.47	12.24				0.44						1			
30+250	30+250	RT/LT		1.2m CB	1.8m CB						450	11.2	X	X	III		X				1.2					E				26.18				2.04									
30+250		LT		1.2m CB	1.8m CB						450	1.5	X	X	III		X				1.2					A				11.31										1			
30+250	30+285	LT		1.8m CB	1.5m CB						900	33.5	X	X							1.8					E				91.81			27.05	8.88									
30+265	30+323	RT		1.5m MH	1.5m MH						750	56.5	X	X								1.5								128.10			23.82	14.23						1			
30+285	30+326	LT		1.5m CB	2.1m CB						900	39.3			III		X				1.5					D				131.64			23.82	10.53									
30+323	A 203+52	RT		1.5m MH	DITCH						750	38.6			III		X			1		1.5								339.20			40.83	9.83						1			
30+326		LT		1.2m CB	2.1m CB						450	1.5	X	X	III		X				1.2					A				13.43										1			
30+326	30+326	LT/RT		2.1m CB	1.8m CB						900	9.2			III		X				2.1					D				28.21			33.40	1.95									
30+326		RT		1.8m CB	1.8m CB						900	14.4			III		X				1.8					D			13.74	70.40			31.11	3.43						1			
30+337	5+016	LT		1.2m CB	1.2m CB						450	8.8	X	X	III		X				1.2					A			23.97					1.64										
30+326	30+337	LT		1.2m CB	2.1m CB						450	9.0	X	X	III		X				1.2					D				21.98				1.58										
30+326	30+337	RT		1.2m CB	1.8m CB						450	9.2	X	X	III		X				1.2					D				22.36				1.62										
30+326	30+338	RT		1.8m CB	2.7x2.4						900	9.7			III		X				1.8					A			5.59	54.11			45.99	2.09						1			
30+338	30+339	RT		2.7x2.4	DSD						600	5.1			III		X												6.00	54.32				1.80										
30+338	A 203+43	RT		2.7x2.4	1.5x1.5						900	3.4			III		X					X							2.72	24.58				0.82										PRCMH AT INLET (2.7mx2.4m) WITH CI COVER
30+339	A 203+43	RT		DSD	1.5x1.5						750	4.8			III		X												8.68	38.84			106.4	1.30										INSTALL DOWNSTREAM DEFENDER AT INLET
A 203+43	A 203+52	RT		1.5x1.5	DITCH						900	9.7			III		X			1		X							14.23	63.67			39.49	2.13										PRCMH AT INLET (1.5mx1.5m) WITH CI COVER
30+180	30+220	LT																																		18.60	I					DITCH
A 203+53.5	A 203+72	RT																												129.3	289.3					119.10	IV					DITCH
30+130	30+300	RT/LT																											131.4	57.00							188.40	I					EXCAV FOR STONE FILL CL I IN DITCHES
				14	1.2m CB																																						
				2	1.5m CB						300	7.0	X	X	III		X																											
				4	1.8m CB						450	84.4	X	X	III		X																											
				1	2.1m CB						450	60.9			III		X																											
				5	1.5m MH						600	5.1			III		X																											
				1	1.8m MH						750	205.8	X	X																														
				1	1.5x1.5						750	127.9			III		X																											
				1	2.7x2.4						900	33.5	X	X																														
				1	DSD						900	85.7			III		X			2									1407.9	1315.7	129.3	289.3	559.9	143.3			211.8	I					
																																					119.1	IV	5	8	4.8		

PROJECT NAME:	BRATTLEBORO
PROJECT NUMBER:	NH 010-2(2)
FILE NAME:	zb270dds.xls
PROJECT LEADER:	W HUSBAND
DESIGNED BY:	P SHEDD
DRAINAGE DETAIL SHEET #1	
PLOT DATE:	1/17/2002
DRAWN BY:	P SHEDD
CHECKED BY:	J WARNER
SHEET	20 OF 145

STATE OF VERMONT
AGENCY OF TRANSPORTATION

EARTHWORKS

Not Metric

		TOTAL EXCAVATION EARTH AND ROCK		ROCK EXCAVATION		EMBANKMENT			
STATION	DIST	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME
km + m	m	m^2	m^3	m^2	m^3	m^2	m^3	m^2	m^3
WORK PERFORMED BY VTrans									
30+091		28.94		0.00					
	9		260.5		0.0				
30+100		28.94		0.00					
	10		295.9		0.0				
30+110		30.23		0.00					
	10		310.2		0.0				
30+120		31.81		0.00					
	10		325.6		0.0				
30+130		33.31		0.00					
	10		348.3		0.0				
30+140		36.35		0.00					
	10		374.2		0.0				
30+150		38.49		0.00					
	10		395.8		0.0				
30+160		40.67		0.00					
	10		427.5		0.0				
30+170		44.83		0.00					
	10		495.9		0.0				
30+180		54.35		0.00					
	10		588.0		0.0				
30+190		63.25		0.00					
	10		649.5		0.0				
30+200		66.65		0.00					
	10		741.2		0.0				
30+210		81.58		0.00					
	10		1049.4		0.0				
30+220		128.30		0.00					
	10		1379.7		20.2			CUT	11803
30+230		147.63		4.03				ROCK	1028
	10		1390.2		168.4			R.FAC	0.495
30+240		130.41		29.64				FILL	11
	10		1472.7		293.6			F.FAC	1.15
30+250		164.12		29.07				EX. C	12299
	10		1034.0		340.3				
30+260		42.68		38.98					
	10		229.4		200.4				
30+270		3.19		1.10					
	10		19.9		5.5				
30+280		0.79		0.00		0			
	10		5.4		0.0		0		
30+290		0.29		0.00		0			
	10		1.4		0.0		1		
30+300		0.00		0.00		1			
	10		0.0		0.0		2		
30+310		0.00		0.00		1			
	10		0.0		0.0		2		
30+320		0.00		0.00		1			
	10		0.0		0.0		2		
30+330		0.00		0.00		1			
	10		4.4		0.0		2		
30+340		0.88		0.00		1			
	2		1.6		0.0		0		
30+342		0.88		0.00		1			
Station Eq.									
20+340		0.48		0.00		1			
	10		2.4		0.0		2		
20+350		0.00		0.00		1			
COLUMN TOTAL			11803.0		1028.0		11		

		TOTAL EXCAVATION EARTH AND ROCK		ROCK EXCAVATION		EMBANKMENT			
STATION	DIST	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME
km + m	m	m^2	m^3	m^2	m^3	m^2	m^3	m^2	m^3
WORK PERFORMED BY VTrans									
DRIVE									
30094.9 LT			17.0						
DRIVE @ 30+330 LT									
5+009		0.00		0.00					
	0		0.0		0.0				
5+009		0.00		0.00					
	2		0.0		0.0				
5+010		0.00		0.00					
	10		0.0		0.0				
5+020		0.00		0.00					
	10		0.0		0.0				
5+030		0.00		0.00					
DRIVE @ 30+330 RT									
6+000		0.00		0.00					
	10		0.0		0.0				
6+010		0.00		0.00					
	0		0.0		0.0				
6+010		45.78		38.04					
	10		270.2		194.8				
6+020		8.26		0.91					
	10		113.0		4.6				
6+030		14.34		0.00					
	8		57.4		0.0				
6+038		0		0					
COLUMN TOTAL			457.6		199.4				
CARRIED FORWARD			11803.0		1028.0		11		
TOTAL			12260.6		1227.4		11		

		TOTAL EXCAVATION EARTH AND ROCK		ROCK EXCAVATION		EMBANKMENT			
STATION	DIST	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME
km + m	m	m^2	m^3	m^2	m^3	m^2	m^3	m^2	m^3
WORK PERFORMED BY NHDOT									
30+091		0.00		0.00					
	9		0.0		0.0				
30+100		0.00		0.00					
	10		0.0		0.0				
30+110		0.00		0.00					
	10		0.0		0.0				
30+120		0.00		0.00					
	10		0.0		0.0				
30+130		0.00		0.00					
	10		0.0		0.0				
30+140		0.00		0.00					
	10		0.0		0.0				
30+150		0.00		0.00					
	10		0.0		0.0				
30+160		0.00		0.00					
	10		0.0		0.0				
30+170		0.00		0.00					
	10		0.0		0.0				
30+180		0.00		0.00					
	10		0.0		0.0				
30+190		0.00		0.00					
	10		0.0		0.0				
30+200		0.00		0.00					
	10		0.0		0.0				
30+210		0.00		0.00					
	10		0.0		0.0				
30+220		0.00		0.00					
	10		0.0		0.0			CUT	22532
30+230		0.00		0.00				ROCK	12748
	10		0.0		0.0			R.FAC	0.495
30+240		0.00		0.00				FILL	0
	10		0.0		0.0			F.FAC	1.15
30+250		0.00		0.00				EX. C	28842
	10		752.5		254.4				
30+260		150.50		50.87					
	10		1939.2		968.1				
30+270		237.33		142.74					
	10		2628.1		1800.0				
30+280		288.29		217.26		0			
	10		2985.4		2186.6		0		
30+290		308.78		220.05		0			
	10		3089.4		2067.5		0		
30+300		309.09		193.45		0			
	10		3161.4		1834.5		0		
30+310		323.18		173.45		0			
	10		3174.0		1559.7		0		
30+320		311.61		138.48		0			
	10		2816.7		1192.7		0		
30+330		251.73		100.05		0			
	10		1630.4		689.9		0		
30+340		74.34		37.93		0			
	2		138.3		70.5		0		
30+342		74.34		37.93		0			
Station Eq.									
20+340		40.45		24.72		0			
	10		216.8		123.6		0		
20+350		2.90		0.00		0			
DRIVE @ 30+330 LT									
5+009		0.00		0.00					
	0		0.0		0.0			CUT	184
5+009		0.00		0.00				ROCK	14
	2		2.0		2.0			R.FAC	0.495
5+010		2.45		2.45				FILL	0
	10		97.0		12.0			F.FAC	1.15
5+020		16.92		0.00				EX. C	191
	10		85.0		0.0				
5+030		0.00		0.00					
COLUMN TOTAL			22716.0		12762.0		0		

SUMMARY AND BALANCES

STATION TO STATION		TOT EXC. EARTH & ROCK	ROCK EXCAV	EMBANK	EXCESSES		ACUMULATIVE EXCESSES	
km + m	km + m	m^3	m^3	m^3	CUT	FILL	CUT	FILL
WORK PERFORMED BY VTrans								
30+091	20+350	11803	1028	11	12299		12299	
DRIVES		458	200		557		12856	
Subtotal		12261	1228	11			12856	
WORK PERFORMED BY NHDOT								
30+091	20+350	22532	12748		28842		41698	
DRIVES		184	14		191		41889	
Subtotal		22716	12762					
TOTAL		34977	13990	11			41889	

REMARKS

SEE RAILROAD EARTHWORKS SHEET FOR COMBINED REMARKS
EARTHWORKS DOES NOT INCLUDE WORK PERFORMED BY NHDOT

EARTH AND ROCK EXCAVATION
SOLID ROCK EXCAVATION
EARTH EXCAVATION

PLANIMETERED FILL
LESS FACTORED SOLID ROCK
LESS DISPLACEMENT OF ANY LARGE STRUCTURES
NET PLANIMETERED FILL
FACTOR
PLANIMETERED FILL INCLUDING FACTOR

MATERIALS AVAILABLE FOR FILLS
EARTH EXCAVATION
CHANNEL EXCAVATION (60%)
CHANNEL EXCAVATION ROCK (100%)
UNDERDRAIN EXCAVATION (60%)
STRUCTURE EXCAVATION (60%)

TOTAL MATERIAL AVAILABLE FOR FILL

TOTAL FILL INCLUDING FACTOR
TOTAL MATERIAL FOR FILL
BORROW
EXCESS EXCAVATION

PROJECT NAME: **BRATTLEBORO**
PROJECT NUMBER: **NH 010-2(2)**

FILE NAME: **EARTHWORK.xls**
PROJECT LEADER: **W HUSBAND**
DESIGNED BY: **P SHEDD**
EARTHWORK SHEET #1

PLOT DATE: **1/21/2002**
DRAWN BY: **P SHEDD**
CHECKED BY: **J WARNER**
SHEET **21** OF **145**

STATE OF VERMONT
AGENCY OF TRANSPORTATION

RAILROAD EARTHWORKS

VAOT Metric

STATION km + m	DIST m	TOT. EXCAVATION EARTH AND ROCK AREA m²	TOT. EXCAVATION EARTH AND ROCK VOLUME m³	ROCK EXCAVATION AREA m²	ROCK EXCAVATION VOLUME m³	EMBANKMENT AREA m²	EMBANKMENT VOLUME m³		
50+120.00		0.00		0.00		0.10			0.10
	20		18.9		0.0		2.0		
50+140.00		1.89		0.00		0.10			
	20		38.2		0.0		1.9	CUT	109.8
50+160.00		1.93		0.00		0.09		ROCK	0.0
	20		39.4		0.0		4.7	R.FAC	0.495
50+180.00		2.01		0.00		0.39		FILL	11.2
	7		13.3		0.0		2.6	F.FAC	1.15
50+187.00		2.01		0.00		0.39		EX.C	96.9
50+193.00		1.30		0.00		18.37			
	7		11.6		0.0		65.7	CUT	121.4
50+200.00		1.30		0.00		18.37		ROCK	0.0
	20		32.7		0.0		391.4	R.FAC	0.495
50+220.00		1.97		0.00		20.77		FILL	1297.2
	20		43.6		0.0		485.8	F.FAC	1.15
50+240.00		2.39		0.00		27.81		EX.F	1370.4
	14		33.5		0.0		354.3		
50+254.00		2.39		0.00		22.81			
50+286.00		0.65		0.00		1.75			
	14		9.1		0.0		24.5		
50+300.00		0.65		0.00		1.75			
	20		49.8		0.0		42.2		
50+320.00		4.33		0.00		2.47			
	20		68.0		0.0		107.2		
50+340.00		2.47		0.00		8.25			
	20		49.1		0.0		137.7		
50+360.00		2.44		0.00		5.52			
	20		59.7		0.0		150.5		
50+380.00		3.53		0.00		9.53		CUT	554.3
	20		64.9		0.0		123.9	ROCK	0.0
50+400.00		2.96		0.00		2.86		R.FAC	0.495
	20		52.7		0.0		39.2	FILL	728.7
50+420.00		2.31		0.00		1.06		F.FAC	1.15
	20		41.6		0.0		17.2	EX.F	283.7
50+440.00		1.85		0.00		0.66			
	20		31.4		0.0		15.0		
50+460.00		1.29		0.00		0.84			
	20		31.5		0.0		13.9		
50+480.00		1.86		0.00		0.55			
	20		33.8		0.0		9.70		
50+500.00		1.52		0.00		0.42			
	20		28.1		0.0		20.4		
50+520.00		1.29		0.00		1.62			
	20		21.5		0.0		21.3		
50+540.00		0.86		0.00		0.51			
	20		13.1		0.0		6.0		
50+560.00		0.45		0.00		0.09			
COLUMN TOTAL		785.5		0.0		2037.1			

SUMMARY AND BALANCES

STATION TO STATION km + m		TOTAL EXC. EARTH+ROCK m³	ROCK EXCAVATION m³	EMBANKMENT m³	EXCESSES CUT	EXCESSES FILL	ACCUMULATIVE EXCESSES CUT	ACCUMULATIVE EXCESSES FILL
WORK PERFORMED - RAILROAD								
50+120.00	50+187.00	110	0	11	97		97	
50+193.00	50+254.00	121	0	1297		1370		1273
50+286.00	50+560.00	554	0	729		284		1557
SUBTOTAL		785	0	2037				1557
WORK PERFORMED - ROADWAY (SEE SHEET 21 OF 145)								
30+091.00	20+350.00	11803	1028	11	12299		12299	
DRIVES		458	200	0	557		12856	
SUBTOTAL		12261	1228	11			12856	
TOTAL		13046	1228	2048			12299	

REMARKS

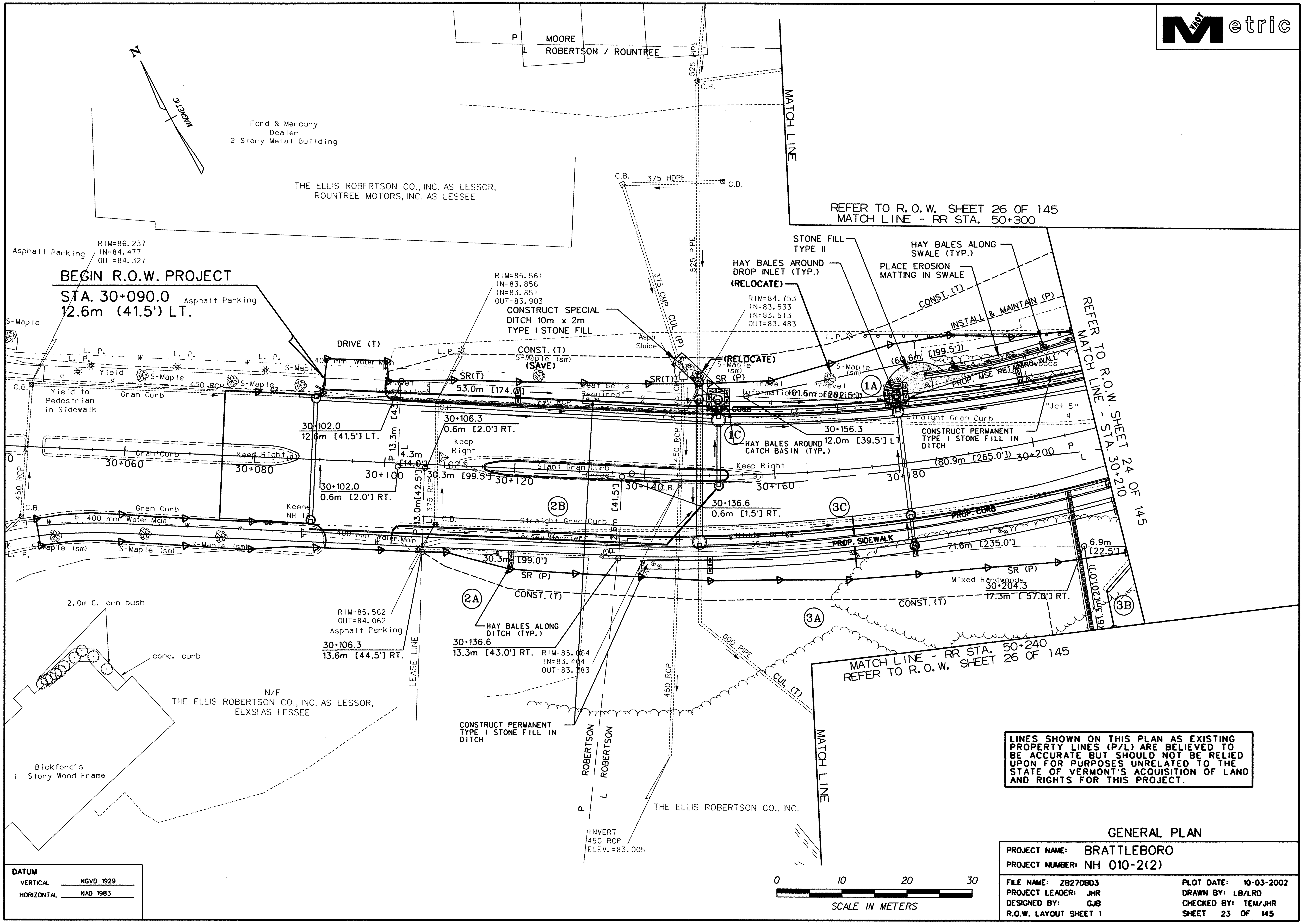
	RAILROAD	ROADWAY	TOTAL
EARTH AND ROCK EXCAVATION	785	12261	13048
SOLID ROCK EXCAVATION	0	1228	1228
EARTH EXCAVATION	785	11033	11820
PLANIMETERED FILL	2037	11	2050
LESS FACTORED SOLID ROCK	0	0	1596
LESS DISPLACEMENT OF ANY LARGE STRUCTURES	0	0	0
NET PLANIMETERED FILL	2037	11	454
FACTOR	305	2	68
PLANIMETERED FILL INCLUDING FACTOR	2342	13	522
MATERIALS AVAILABLE FOR FILLS			
EARTH EXCAVATION	785	11033	11820
CHANNEL EXCAVATION	138	77	215
CHANNEL EXCAVATION ROCK		289	289
UNDERDRAIN EXCAVATION		403	403
STRUCTURE EXCAVATION	3589	336	3924
TOTAL MATERIAL AVAILABLE FOR FILL	4511	12138	16651
TOTAL FILL INCLUDING FACTOR			522
TOTAL MATERIAL FOR FILL			16651
BORROW			
EXCESS EXCAVATION			16129
NOTE: VALUES SHOWN ABOVE ARE FOR VTrans WORK ONLY.			

PROJECT NAME : BRATTLEBORO

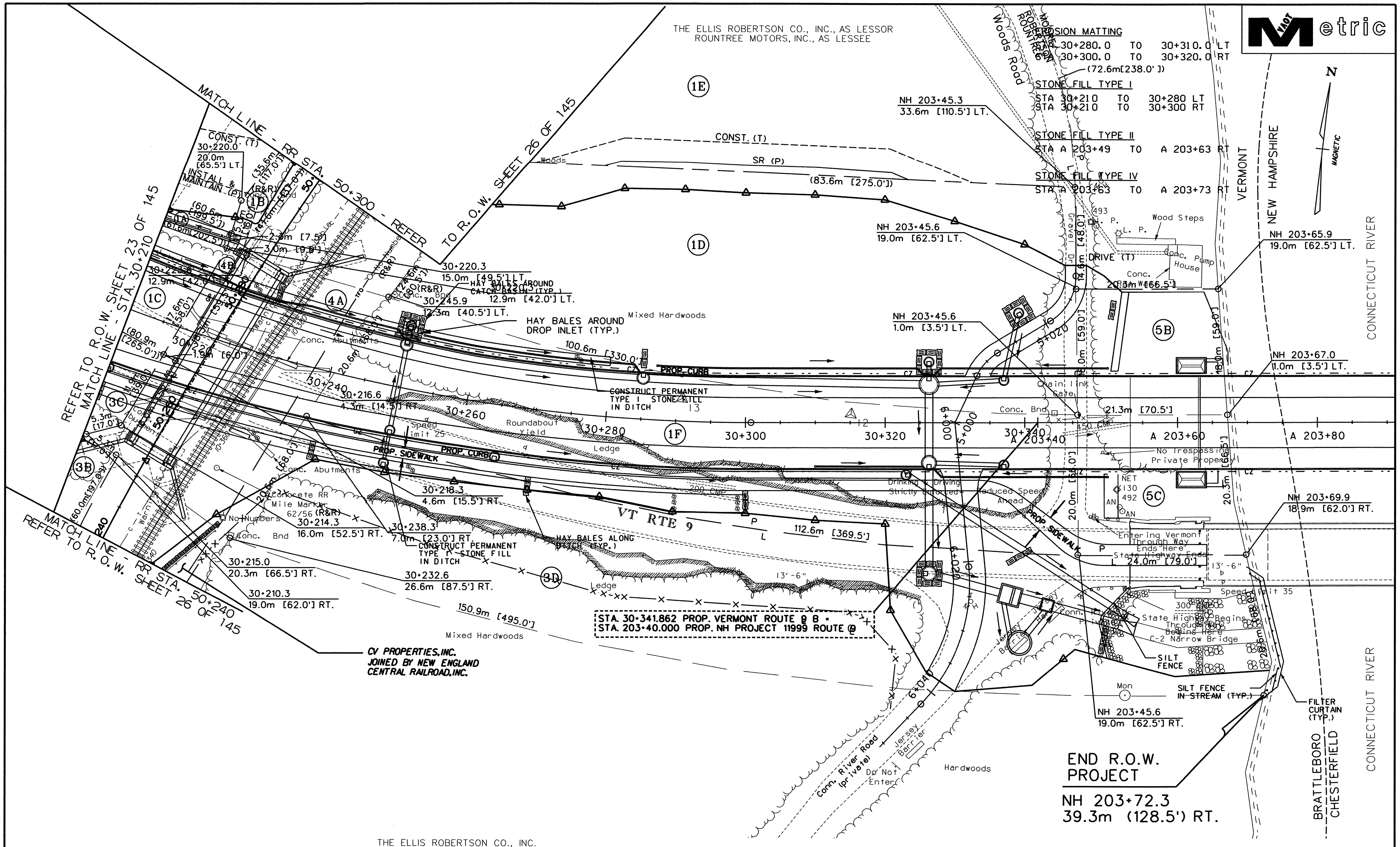
PROJECT NO. : NH 010-2(2)

DESIGN FILE NAME: RR_earthworks.dgn
IPARM FILE NAME:
DESIGNED BY: GJB/TJM
PROJECT LEADER: J H READ

PLOT DATE: 10-01-2002
DRAWN BY: DHL
CHECKED BY: TTT
SHEET: 22 OF 145



Metric
MOORE
ROBERTSON / ROUNTREE
N
MAGNETIC
Ford & Mercury
Dealer
2 Story Metal Building
THE ELLIS ROBERTSON CO., INC. AS LESSOR,
ROUNTREE MOTORS, INC. AS LESSEE
MATCH LINE
REFER TO R.O.W. SHEET 26 OF 145
MATCH LINE - RR STA. 50+300
375 HDPE
C.B.
525 PIPE
375 CMP CUL (P)
Asphalt Parking
RIM=86.237
IN=84.477
OUT=84.327
BEGIN R.O.W. PROJECT
STA. 30+090.0
12.6m (41.5') LT.
RIM=85.561
IN=83.856
IN=83.851
OUT=83.903
CONSTRUCT SPECIAL
DITCH 10m x 2m
TYPE I STONE FILL
(RELOCATE)
RIM=84.753
IN=83.533
IN=83.513
OUT=83.483
STONE FILL
TYPE II
HAY BALES AROUND
DROP INLET (TYP.)
HAY BALES ALONG
SWALE (TYP.)
PLACE EROSION
MATTING IN SWALE
CONST. (T)
INSTALL & MAINTAIN (P)
REFER TO R.O.W. SHEET 24 OF 145
MATCH LINE - STA. 30+210
DRIVE (T)
400 mm Water Main
SR (T)
53.0m [174.0']
(SAVE)
SR (P)
(61.6m [202.5'])
(60.6m [199.5'])
PROP. MSE RETAINING WALL
1A
1C
PROP. CURB
30+102.0
12.6m [41.5'] LT.
30+106.3
0.6m [2.0'] RT.
30+156.3
12.0m [39.5'] LT.
HAY BALES AROUND
CATCH BASIN (TYP.)
CONSTRUCT PERMANENT
TYPE I STONE FILL IN
DITCH
Straight Gran Curb
"Jct 5"
Keep Right
30+060
30+080
30+100
30+120
30+140
30+160
30+180
30+200
4.3m
[14.0']
30.3m [99.5']
(80.9m [265.0'])
30+102.0
0.6m [2.0'] RT.
30+136.6
0.6m [1.5'] RT.
2B
3C
PROP. SIDEWALK
71.6m [235.0']
6.9m
[22.5']
400 mm Water Main
S-Maple (sm)
30.3m [99.0']
SR (P)
CONST. (T)
2A
3A
3B
Mixed Hardwoods
30+204.3
17.3m [57.0'] RT.
2.0m C. orn bush
RIM=85.562
OUT=84.062
Asphalt Parking
30+106.3
13.6m [44.5'] RT.
HAY BALES ALONG
DITCH (TYP.)
30+136.6
13.3m [43.0'] RT.
RIM=85.064
IN=83.404
OUT=83.383
conc. curb
N/F
THE ELLIS ROBERTSON CO., INC. AS LESSOR,
ELXSIAS LESSEE
LEASE LINE
CONSTRUCT PERMANENT
TYPE I STONE FILL IN
DITCH
ROBERTSON
ROBERTSON
600 PIPE
CUL (T)
450 RCP
MATCH LINE - RR STA. 50+240
REFER TO R.O.W. SHEET 26 OF 145
MATCH LINE
Bickford's
1 Story Wood Frame
THE ELLIS ROBERTSON CO., INC.
INVERT
450 RCP
ELEV. =83.005
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.
DATUM
VERTICAL NGVD 1929
HORIZONTAL NAD 1983
0 10 20 30
SCALE IN METERS
GENERAL PLAN
PROJECT NAME: BRATTLEBORO
PROJECT NUMBER: NH 010-2(2)
FILE NAME: ZB270BD3
PROJECT LEADER: JHR
DESIGNED BY: GJB
R.O.W. LAYOUT SHEET 1
PLOT DATE: 10-03-2002
DRAWN BY: LB/LRD
CHECKED BY: TEM/JHR
SHEET 23 OF 145


Metric
THE ELLIS ROBERTSON CO., INC., AS LESSOR
ROUNTREE MOTORS, INC., AS LESSEE
EROSION MATTING
STA 30+280.0 TO 30+310.0 LT
STA 30+300.0 TO 30+320.0 RT
(72.6m[238.0'])
STONE FILL TYPE I
STA 30+210 TO 30+280 LT
STA 30+210 TO 30+300 RT
STONE FILL TYPE II
STA A 203+49 TO A 203+63 RT
STONE FILL TYPE IV
STA A 203+63 TO A 203+73 RT
Woods Road
NH 203+45.3
33.6m [110.5'] LT.
MATCH LINE - RR STA. 50+300 - REFER TO R.O.W. SHEET 26 OF 145
REFER TO R.O.W. SHEET 23 OF 145
MATCH LINE - STA. 30+210
MATCH LINE - RR STA. 50+240
REFER TO R.O.W. SHEET 26 OF 145
CONST. (T)
SR (P)
(83.6m [275.0'])
1E
1D
1B
1C
1A
4B
4A
3C
3B
3D
1F
5B
5C
30+220.0
20.0m
[65.5'] LT.
INSTALL & MAINTAIN (P)
30+220.3
15.0m [49.5'] LT.
HAY BALES AROUND CATCH BASIN (TYP.)
12.9m [42.0'] LT.
30+245.9
12.3m [40.5'] LT.
HAY BALES AROUND DROP INLET (TYP.)
Mixed Hardwoods
100.6m [330.0']
PROP. CURB
CONSTRUCT PERMANENT TYPE I STONE FILL IN DITCH
30+216.6
4.3m [14.5'] RT.
30+240
30+260
30+280
30+300
30+320
30+340
A 203+40
A 203+60
A 203+80
Roundabout Yield
Speed limit 25
Ledge
Conc. Abutments
PROP. SIDEWALK
PROP. CURB
30+218.3
4.6m [15.5'] RT.
VT RTE 9
112.6m [369.5']
Concrete RR Mile Marker 62/56 (R&R)
30+214.3
16.0m [52.5'] RT.
30+238.3
7.0m [23.0'] RT.
CONSTRUCT PERMANENT TYPE I STONE FILL IN DITCH
HAY BALES ALONG DITCH (TYP.)
30+215.0
20.3m [66.5'] RT.
30+232.6
26.6m [87.5'] RT.
30+210.3
19.0m [62.0'] RT.
150.9m [495.0']
Mixed Hardwoods
STA. 30+341.862 PROP. VERMONT ROUTE 9 B =
STA. 203+40.000 PROP. NH PROJECT 11999 ROUTE 9
CV PROPERTIES, INC.
JOINED BY NEW ENGLAND CENTRAL RAILROAD, INC.
NH 203+45.6
19.0m [62.5'] LT.
NH 203+45.6
1.0m [3.5'] LT.
DRIVE (T)
Wood Steps
Conc. Pump House
NH 203+65.9
19.0m [62.5'] LT.
NH 203+67.0
1.0m [3.5'] LT.
Chain link Gate
21.3m [70.5']
No Trespassing Private Property
NH 203+69.9
18.9m [62.0'] RT.
Drinking & Driving Strictly Enforced
Reduced Speed Ahead
PROP. SIDEWALK
Entering Vermont Through Way Ends Here
State Highway Ends
24.0m [79.0']
Speed Limit 35
State Highway Begins Through Way Begins Here
C-2 Narrow Bridge
SILT FENCE
SILT FENCE IN STREAM (TYP.)
FILTER CURTAIN (TYP.)
Mon
NH 203+45.6
19.0m [62.5'] RT.
Conn. River Road (private)
Jersey Barrier
Do Not Enter
Hardwoods
END R.O.W. PROJECT
NH 203+72.3
39.3m (128.5') RT.
VERMONT
NEW HAMPSHIRE
CONNECTICUT RIVER
BRATTLEBORO
CHESTERFIELD
N
MAGNETIC
THE ELLIS ROBERTSON CO., INC.

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.

0 10 20 30
SCALE IN METERS

DATUM	
VERTICAL	NGVD 1929
HORIZONTAL	NAD 1983

GENERAL PLAN

PROJECT NAME: BRATTLEBORO
PROJECT NUMBER: NH 010-2(2)

FILE NAME: ZB270BD3	PLOT DATE: 10-03-2002
PROJECT LEADER: JHR	DRAWN BY: LB/LRD
DESIGNED BY: GJB	CHECKED BY: TEM/JHR
R.O.W. LAYOUT SHEET 2	SHEET 24 OF 145

VAOT Metric

JACK TARMEY REVOCABLE TRUST

MAGNETIC N

2 Story Wood Warehouse

2 Story Sheet Metal Building (Kiln)

BRADFORD DRIVE (Private)

TEMPORARY CONSTRUCTION ACCESS

MATCH LINE - RR STA. 50+180 - REFER TO R.O.W. SHEET 26 OF 145

Saw Dust Silo

Gravel Parking Area

Tarmey Lumber Co. 1 Story Conc. Block Building

BEGINNING OF RAILROAD CONSTRUCTION (BY OTHERS)

MEET EXISTING STA. 50+020.000

PROPOSED 100mm FIBER OPTIC CONDUIT (SEE NOTE 8 ON RAILROAD LAYOUT SHEET 2)

HAND HOLE (60"x36"x18") SUPPLIED BY FIBEROPTIC COMPANY AND INSTALLED BY CONTRACTOR AT STA. 50+180 +/- LT.

ACCESS (T)

CONST.(T)

P/L TARMEY CV PROPERTIES

PROP. HAND HOLE (BY OTHERS)

NEW ENGLAND CENTRAL RAILROAD

PROPOSED RAILROAD MAINLINE RELOCATION ℄

HAY BALES ALONG DITCH (TYP.)

EXISTING RAILROAD MAINLINE ℄

Landing

West Rail

East Rail

Fiber Optic Cable (U S Sprint)

50+020 50+040 50+060 50+080 50+100 50+120 50+140 50+160 50+180

10-100 10-120 10-140 10-160 10-180 10-200 10-220 10-240 10-260

TO BRATTLEBORO

CONST.(T)

No Numbers

4A

P/L CV PROPERTIES L THOMAS

CONST.(T)

TO WHITE RIVER JNCT.

TEMPORARY UNDERGROUND FIBER OPTIC (BY OTHERS)

TEMPORARY AERIAL FIBER OPTIC SYSTEM (BY OTHERS - SEE NOTE 9 ON RAILROAD LAYOUT SHEET 2)

CV PROPERTIES, INC. JOINED BY NEW ENGLAND CENTRAL RAILROAD, INC.

N/F THOMAS, FREIDA

DON'T DISTURB AREA

TEMPORARY PROTECTIVE FENCING

PLACE EROSION MATTING IN DITCH (TYP.)

HAY BALES & SILT FENCE

SARGENT BROOK

NOTES:

1. RAILROAD PROPERTY LINE INFORMATION OBTAINED FROM PLAN ENTITLED "RIGHT-OF-WAY AND TRACK MAP, VERMONT VALLEY RAILROAD, STATION 3264+60 TO STATION 3317+40", DATED JUNE 30, 1914 (VALUATION PLAN 46, MAP 4)
2. BOND WIRE BETWEEN RAILS AT APPROX. STA. 50+051 PROP. RAILROAD MAINLINE RELOCATION ℄.
3. FIBER OPTIC DATA OBTAINED FROM SIGNS ON SITE AND U S SPRINT PLANS DATED 09-02-86, NUMBERED NTWRK 127-880-064 AND 065, AND ENTITLED "FIBER OPTIC ROUTE RCD DWG, CABLE ROUTE DETAIL, SPRINGFIELD, MA - MONTREAL, CANADA."
4. SURVEY INFORMATION OBTAINED BY NHDOT, ELECTRONICALLY TRANSLATED FROM MOSS TO MICROSTATION, AND SUPPLEMENTED BY VTRANS ADDITIONAL SURVEY.
5. SEE VAOT STANDARD DRAWINGS T-1M AND T-2M FOR TEMPORARY EROSION CONTROL DETAILS.

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.

DATUM
VERTICAL NGVD 1929
HORIZONTAL NAD 1983

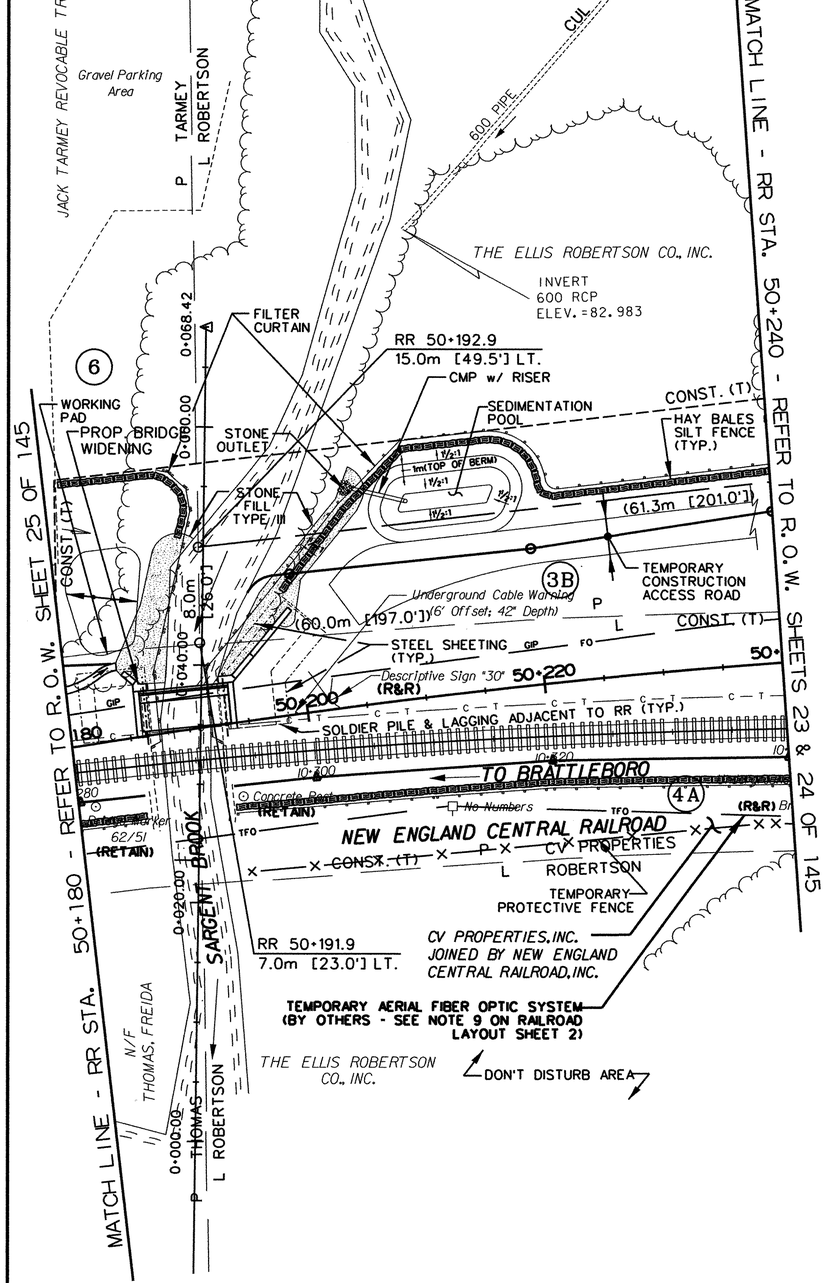
0 10 20 30
SCALE IN METERS

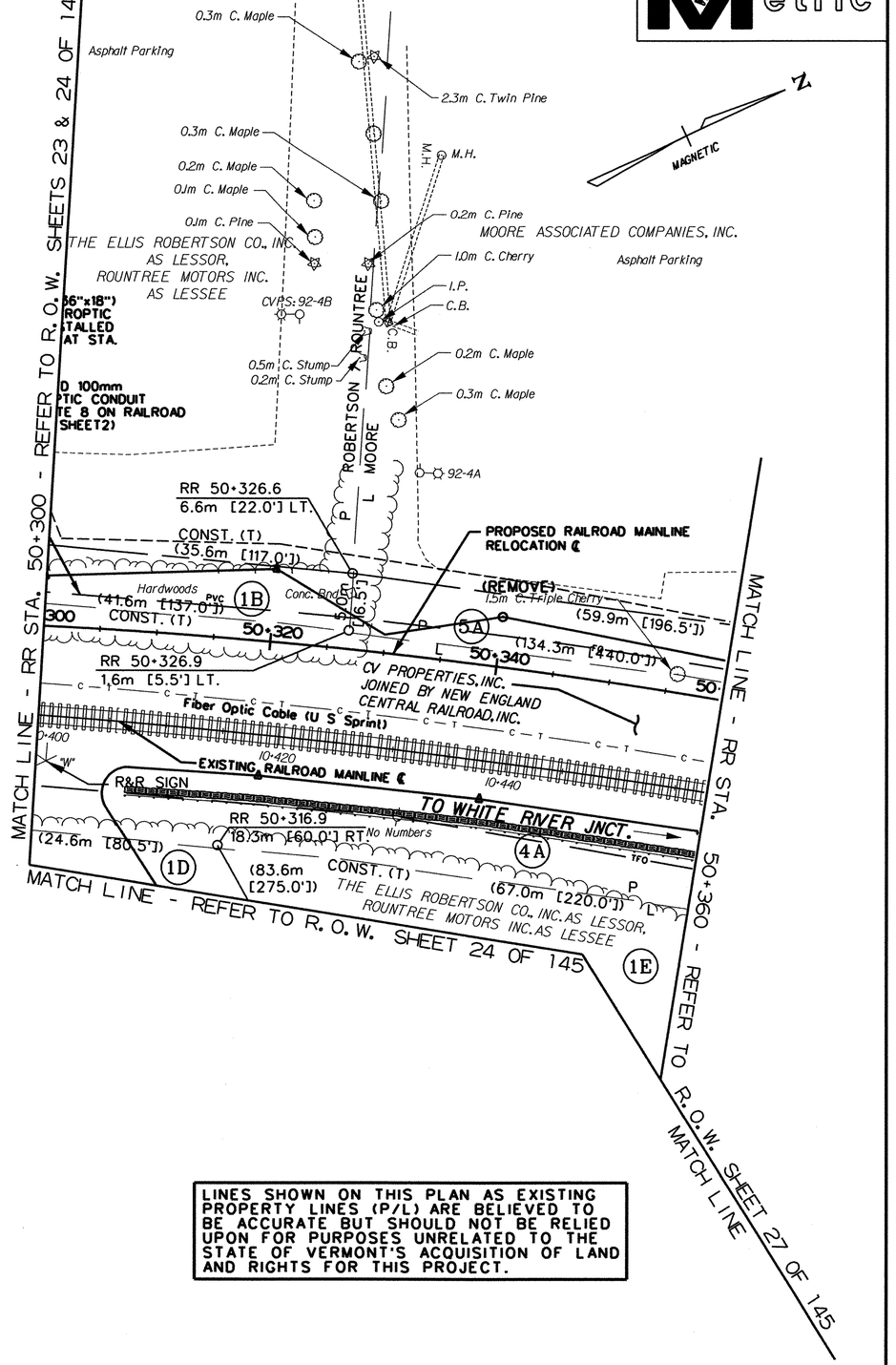
GENERAL PLAN

PROJECT NAME: BRATTLEBORO
PROJECT NUMBER: NH 010-2(2)

FILE NAME: ZB270803
PROJECT LEADER: JHR
DESIGNED BY: GJB
R.O.W. LAYOUT SHEET 3

PLOT DATE: 10-04-2002
DRAWN BY: LB/LRD
CHECKED BY: TEM/JHR
SHEET 25 OF 145





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.

DATUM

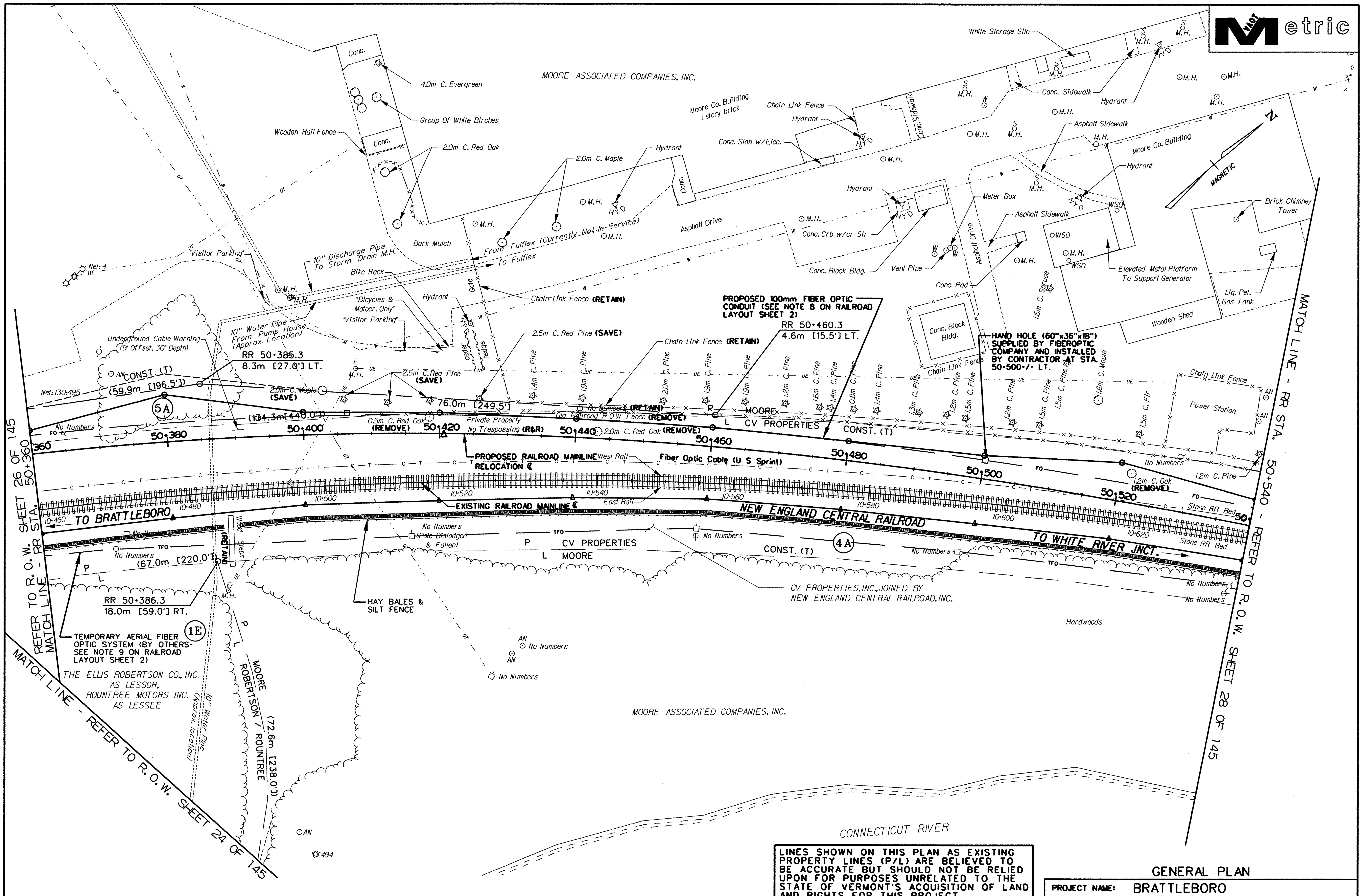
VERTICAL	NGVD 1929
HORIZONTAL	NAD 1983

0 10 20 30

SCALE IN METERS

GENERAL PLAN

PROJECT NAME:	BRATTLEBORO
PROJECT NUMBER:	NH 010-2(2)
FILE NAME:	Z8270B03
PROJECT LEADER:	JHR
DESIGNED BY:	GJB
R.O.W. LAYOUT SHEET	4
PLOT DATE:	10-04-2002
DRAWN BY:	LB/LRD
CHECKED BY:	TEM/JHR
SHEET	26 OF 145


Metric
MOORE ASSOCIATED COMPANIES, INC.
4.0m C. Evergreen
Group Of White Birches
Wooden Rail Fence
2.0m C. Red Oak
2.0m C. Maple
Hydrant
Bark Mulch
From Fulflex (Currently Not In-Service)
To Fulflex
10" Discharge Pipe To Storm Drain M.H.
Visitor Parking
Bike Rack
"Bicycles & Motoer. Only"
"Visitor Parking"
10" Water Pipe From Pump House (Approx. Location)
Underground Cable Warning (3' Offset, 30" Depth)
Chain Link Fence (RETAIN)
2.5m C. Red Pine (SAVE)
Moore Co. Building 1 story brick
Chain Link Fence
Conc. Slab w/Elec.
Asphalt Drive
Conc. Crb w/cr Str
Conc. Block Bldg.
Vent Pipe
Meter Box
Asphalt Sidewalk
Conc. Pad
White Storage Silo
Conc. Sidewalk
Moore Co. Building
Brick Chimney Tower
Elevated Metal Platform To Support Generator
Liq. Pet. Gas Tank
Wooden Shed
MAGNETIC
N
PROPOSED 100mm FIBER OPTIC CONDUIT (SEE NOTE 8 ON RAILROAD LAYOUT SHEET 2)
RR 50+460.3
4.6m [15.5'] LT.
HAND HOLE (60"x36"x18") SUPPLIED BY FIBEROPTIC COMPANY AND INSTALLED BY CONTRACTOR AT STA. 50+500+/- LT.
Power Station
RR 50+385.3
8.3m [27.0'] LT.
CONST. (T)
(59.9m [196.5'])
5A
76.0m [249.5']
(134.3m [440.0'])
No Numbers (RETAIN)
Old Railroad R-O-W Fence (REMOVE)
Private Property No Trespassing (R&R)
0.5m C. Red Oak (REMOVE)
2.0m C. Red Oak (REMOVE)
P MOORE
L CV PROPERTIES
CONST. (T)
1.2m C. Oak (REMOVE)
1.2m C. Pine
Stone RR Bed
PROPOSED RAILROAD MAINLINE RELOCATION ℄
West Rail
Fiber Optic Cable (U S Sprint)
EXISTING RAILROAD MAINLINE ℄
East Rail
TO BRATTLEBORO
NEW ENGLAND CENTRAL RAILROAD
TO WHITE RIVER JNCT.
No Numbers (Pole Dislodged & Fallen)
P CV PROPERTIES
L MOORE
CONST. (T)
4A
CV PROPERTIES, INC., JOINED BY NEW ENGLAND CENTRAL RAILROAD, INC.
(67.0m [220.0'])
RR 50+386.3
18.0m [59.0'] RT.
HAY BALES & SILT FENCE
TEMPORARY AERIAL FIBER OPTIC SYSTEM (BY OTHERS-SEE NOTE 9 ON RAILROAD LAYOUT SHEET 2)
1E
THE ELLIS ROBERTSON CO., INC. AS LESSOR, ROUNTREE MOTORS INC. AS LESSEE
MOORE
ROBERTSON / ROUNTREE
(72.6m [238.0'])
10" Water Pipe (Approx. location)
Hardwoods
MOORE ASSOCIATED COMPANIES, INC.
CONNECTICUT RIVER
MATCH LINE - RR STA. 50+360
REFER TO R.O.W. SHEET 26 OF 145
MATCH LINE - REFER TO R.O.W. SHEET 24 OF 145
MATCH LINE - RR STA. 50+540 - REFER TO R.O.W. SHEET 28 OF 145
0 10 20 30
SCALE IN METERS

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.

DATUM	
VERTICAL	NGVD 1929
HORIZONTAL	NAD 1983

GENERAL PLAN

PROJECT NAME: BRATTLEBORO
PROJECT NUMBER: NH 010-2(2)

FILE NAME: ZB270BD3	PLOT DATE: 10-04-2002
PROJECT LEADER: JHR	DRAWN BY: LB/LRD
DESIGNED BY: GJB	CHECKED BY: TEM/JHR
R.O.W. LAYOUT SHEET 5	SHEET 27 OF 145

VAOT Metric

N
MAGNETIC

END OF RAILROAD CONSTRUCTION (BY OTHERS)
MEET EXISTING
STA. 50+698.603

Steel cover
M.H.
Conc. Crb w/Cr Stn
Hydrant
Asphalt Sidewalk
Filler Cap
Building For Pumping Oil
M.H.
Filler Cap
Conc. Slab
Conc. rw w/metal fence
landing area
M.H.
Chain Link w/ Barbed Wire Fence
Gate
E
M.H.
M.H.
Asphalt Drive
MOORE ASSOCIATED COMPANIES, INC.
AN
AN
AN
6' Chain Link & Barbed Wire Fence (RETAIN)
Suburban Propane Building
1 Story Cinder Block
Propane Tank
Chain Link & Barbed Wire Fence
Center Line Of Railroad Spur
Gravel Parking Lot
WELLINGTON ROAD
(Asphalt Pavement)
Storage Yard For
Propane Tanks
High Volt.
Tel. Poles
1.1m C. Pine
0.8m C. Pine
1.1m C. Pine
1.2m C. Pine
0.8m C. Pine
1.4m C. Pine
1.0m C. Pine
1.0m C. Pine
1.2m C. Pine
3.6m C. Pine
PROPOSED 100mm FIBER OPTIC CONDUIT
(SEE NOTE 8 ON RAILROAD LAYOUT
SHEET 2)
Small Trees & Brush
I.P.
P
L CV PROPERTIES
Hardwoods
CONST. (T)
Underground Cable Warning
(6' Offset, 42" Depth)
Net 7
(4) RR Rails
P
L CV PROPERTIES Old Railroad R-O-W Fence (RETAIN)
Private Property
No Trespassing (RETAIN)
PROPOSED RAILROAD MAINLINE
RELOCATION ℄
Fiber Optic Cable (U S Sprint)
PROPOSED HAND HOLE
(BY OTHERS)
FO
C — T
50+540
50+560
50+580
50+600
50+620
50+640
50+660
50+680
10+640
10+660
10+680
10+700
10+720
10+740
10+760
10+780
10+800
10+820
4A
NEW ENGLAND CENTRAL RAILROAD
TO WHITE RIVER JNCT.
TO BRATTLEBORO
Concrete Standard
Flush With Ground
TFO
No Numbers
P
L CV PROPERTIES
MOORE
Telegraph Pole
Granite Post
Telegraph Pole
AN
C.C.
No Numbers
CONST. (T)
EXISTING RAILROAD MAINLINE ℄
HAY BALES &
SILT FENCE
TEMPORARY AERIAL FIBER OPTIC SYSTEM
(BY OTHERS - SEE NOTE 9 ON RAILROAD
LAYOUT SHEET 2)
TEMPORARY UNDERGROUND
FIBER OPTIC (BY OTHERS)
Hardwoods
Hardwoods
MOORE ASSOCIATED COMPANIES, INC.
50+540 - REFER TO R.O.W. SHEET 27 OF 145
MATCH LINE - RR STA. 50+540
CONNECTICUT RIVER

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.

DATUM
VERTICAL NGVD 1929
HORIZONTAL NAD 1983

0 10 20 30
SCALE IN METERS

GENERAL PLAN

PROJECT NAME: BRATTLEBORO
PROJECT NUMBER: NH 010-2(2)

FILE NAME: ZB270BD3
PROJECT LEADER: JHR
DESIGNED BY: GJB
R.O.W. LAYOUT SHEET 6
PLOT DATE: 10-04-2002
DRAWN BY: LB/LRD
CHECKED BY: TEM/JHR
SHEET 28 OF 145

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
1A	THE ELLIS ROBERTSON COMPANY INC.-	22, 23	30+156.3 LT.	30+220.3 LT.	191.5 SM±							BRATTLEBORO			2,061.4 S.F.±
	LESSOR		30+095.0 LT.				DRIVE	(T)							9.3M (31') PAVED MM 0711
	ROUNTREE MOTORS INC.-		30+100.0 LT.	RR 50+326.6 LT.			CONST.	(T)	0.05HA±						INCLUDES EROSION CONTROL &
	D/B/A/ ROUNTREE FORD-MERCURY -														GUARDRAIL 0.12A±
	LESSEE		30+100.0 LT.	30+145.0 LT.			SLOPE	(T)	34.4 SM±						370.3 S.F.±
			30+100.0 LT.	30+220.0 LT.			LANDSCAPING	(T)							INCLUDES TRANSPLANTING TREES
			30+143.6 LT.	30+152.6 LT.			DITCH	(P)							
			30+145.0 LT.	30+220.3 LT.			SLOPE	(P)	136.2SM±						1,466.1 S.F.±
			30+184.0 LT.	30+220.6 LT.			INSTALL & MAINT.	(P)	108.1SM±						1,164 S.F.± RETAINING WALL &
															APPURTENANCE
			30+145.5 LT.				REMOVE	(T)							CULVERT, D.I. & ASPHALT
															SLUICE
			30+148.6 LT.				CULVERT	(T)							CONNECT TO EXISTING CULVERT
			30+152.5 LT.				CULVERT	(P)							
1B		23, 25	30+220.0 LT.	RR 50+326.9 LT.	199.4SM±										2,146.4 S.F.± TO BE CONVEYED
															TO PARCEL #4 RR AFTER
															PROJECT COMPLETION
1C		22, 23	30+102.0 RT.	30+223.6 LT.	0.16HA±		ALL R. T. & I.								VT. RTE. 9 HWY. EASE. 0.40A±
			30+145.5 LT. & RT.				ALL R. T. & I.								CULVERT, CAP PIPE RIGHT
1D		23, 25	30+245.9 LT.	NH 203+45.6 LT.	0.27HA±										0.67A±
			30+332.3 LT.				DRIVE	(T)							3.0M (30') GRAVEL MM 0725
															IN COMMON/PARCEL #5B
			30+263.5 LT.	30+332.3 LT.			CONST.	(T)	156.6SM±						1,685.7 S.F.±
			30+276.9 LT.	30+324.0 LT.			SLOPE	(P)	35.6 SM±						383.2 S.F.±
			NH 203+44.2 LT.	NH 203+45.3 LT.			EXCEPT & RESERVE								APPROXIMATE LOCATION OF
															WATERLINE
1E		23, 25	RR 50+316.9 RT.	NH 203+45.3 LT.	0.27HA±										BY OPTION ONLY 0.67A±
		26	NH 203+44.2 LT.	RR 50+386.3 RT.			EXCEPT & RESERVE								APPROXIMATE LOCATION OF
															WATERLINE
1F		23	30+238.3 RT.	NH 203+45.6 RT.	0.21HA±		ALL R. T. & I.								VT. RTE.9 HWY. EASE. 0.52A±
2A	THE ELLIS ROBERTSON COMPANY INC.	22	30+106.3 RT.	30+136.3 RT.			CONST.	(T)	80.0 SM±			BRATTLEBORO			861.1 S.F.±
			30+106.3 RT.	30+136.6 RT.			SLOPE	(P)	50.0 SM±						538.1 S.F.±
2B		22	30+106.3 RT.	30+136.6 RT.	0.04HA±		ALL R. T. & I.								VT. RTE. 9 HWY EASE. 0.10A±
3A	THE ELLIS ROBERTSON COMPANY INC.	22	30+135.0 RT.	RR 50+192.9 LT.			CONST.	(T)	0.06HA±			BRATTLEBORO			INCLUDES EROSION CONTROL
															0.15A±
			30+136.3 RT.	30+204.3 RT.			SLOPE	(P)	214.4SM±						INCLUDES EROSION CONTROL
															2,307.8 S.F.±
			30+140.0 RT.	30+172.0 RT.			DITCH	(P)							
			30+148.6 RT.				EASEMENT	(T)							REMOVE PORTION OF CULVERT
															& CAP.
3B		22, 23, 25	30+204.3 RT.	RR 50+191.9 LT.	0.06HA±										0.15A± TO BE CONVEYED BACK
															TO PARCEL #4 RR AFTER
															PROJECT COMPLETION

REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
1	19, 23	PARCEL NO. 1 ROBERTSON & ROUNDTREE. ADD EXCEPT AND RESERVE FOR WATERLINE AT THE FOLLOWING STATIONS: NH 203+44.2 LT. ~ NH 203+45.3 LT. AND NH 203+44.2 LT. ~ RR 50+386.3 RT. PER C.O. 9206.	08-27-01	M. J. R.	R. P. D.
2	20, 26	PARCEL NO. 5 MOORE ASSOCIATED COMPANIES, INC. ADD EXCEPT AND RESERVE FOR WATERLINE AT THE FOLLOWING STATIONS: RR 50+386.4 LT. ~ RR 50+386.9 LT. PER C.O. 9207.	08-27-01	M. J. R.	R. P. D.
3	19	PARCEL NO. 1C ELLIS ROBERTSON COMPANY, INC. CHANGE THE BEGINNING STATION OF THE ALL R.T.& I. IN THE RTE. 9 HWY. EASE. FROM 30+120.0 RT. TO 30+102.0 RT. PER C.O. 9209.	10-05-01	M. J. R.	R. P. D.

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
(P) PERMANENT EASEMENT
(T) TEMPORARY EASEMENT

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

APPROVED: ROGER P. DUMAS DATE: 02-02-01
CHIEF, PLANS & TITLES

R. O. W. PLANS
BRATTLEBORO
NH BRF 010-2(2)
SHEET 29 OF 145

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
3C		22, 23	30+136.6 RT.	30+218.3 RT.	0.11HA±		ALL R. T. & I.						VT. RTE. 9 HWY. EASE 0.27A±
3D		23	30+232.6 RT.	NH 203+72.3 RT.	0.30HA±		ALL R. T. & I.						VT. RTE. 9 HWY. EASE. 0.74A±
			30+330.0 RT.										DRIVE 4.6M (15') MM 0725
4	CV PROPERTIES, INC. JOINED	23, 24	RR 50+017.0 CL.	RR 50+701.6 CL.			CONST. (T) 1.37HA±			BRATTLEBORO			REALIGN RR TRACKS AND NEW
	BY NEW ENGLAND CENTRAL	25, 26,											OVERPASS. 3.39A±
	RAILROAD, INC.	27	30+214.3 RT.	30+223.6 LT.									CROSSING EASE OVER VT RTE. 9
													9,888 S.F.± TO BE CONVEYED
													TO RR AFTER PROJECT
													COMPLETION
5A	MOORE ASSOCIATED COMPANIES	25, 26	RR 50+326.6 LT.	RR 50+460.3 LT.	0.05HA±					BRATTLEBORO			0.12A± TO BE CONVEYED BACK
	INC. (A/K/A THE MOORE COMPANY)												TO PARCEL #4 RR
	(D/B/A/ FULFLEX, INC.)		RR 50+326.6 LT.	RR 50+403.0 LT.			CONST. (T) 76.2 SM±						820.2 S.F.±
			RR 50+386.4 LT.	RR 50+386.9 LT.			EXCEPT & RESERVE						APPROXIMATE LOCATION OF
													WATERLINE
5B		23	NH 203+45.6 LT.	NH 203+67.0 LT.	374.4 SM±								4,030.1 S.F.±
			30+332.3 LT.				DRIVE (T)						3.0M (30') GRAVEL MM 0725
													IN COMMON PARCEL 1D
5C		23	NH 203+45.6 RT.	NH 203+69.9 RT.	0.04HA±		ALL R. T. & I.						RTE. 9 HWY. EASE. 0.10A±
5D		22	30+148.6 LT. & RT.				ALL R. T. & I.						CULVERT, CAP PIPE RT.
			30+148.6 LT.				CULVERT (T)						CONNECT TO EXISTING CULVERT
6	JACK TARMY REVOCABLE TRUST,	24, 25	RR 50+177.0 LT.	RR 50+180.0 LT.			ACCESS (T)						FROM RTE. 5 FOR EQUIPMENT
	JONATHAN BUMP, TRUSTEE, LESSOR AND		RR 50+179.5 LT.	RR 50+193.6 LT.			CONST. (T) 165.0 SM±						INCLUDES EROSION CONTROL
	ETTA E. TARMY REVOCABLE TRUST,												1808.4 S.F.±
	JONATHAN BUMP, TRUSTEE, LESSOR AND												
	JACK TARMY LUMBER COMPANY, INC. -												
	LESSEE												

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

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
(P) PERMANENT EASEMENT
(T) TEMPORARY EASEMENT

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

APPROVED: ROGER P. DUMAS DATE: 02-02-01
CHIEF, PLANS & TITLES

R. O. W. PLANS
BRATTLEBORO
NH BRF 010-2(2)
SHEET 30 OF 145

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
7	VERIZON NEW ENGLAND, INC.												UTILITY
8	ADELPHIA CABLE COMMUNICATIONS												UTILITY
9	SPRINT COMMUNICATIONS COMPANY L.P.												UTILITY

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

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
P PROPERTY LINE
L
TOP OF CUT
TOE OF SLOPE
UE (P) PERMANENT UTILITY EASEMENT

APPROVED: ROGER P. DUMAS DATE: 02-02-01
CHIEF, PLANS & TITLES

R. O. W. PLANS

BRATTLEBORO
NH BRF 010-2(2)

SHEET 31 OF 145

GPS CONTROL POINTS

* NO GPS POINTS USED

BENCHMARKS

BM-CHS1 ELEV 111.862
THE STATION IS LOCATED IN CHESTERFIELD, NH

TO REACH THE STATION FROM THE NEW HAMPSHIRE/VERMONT STATE LINE AT THE WEST END OF THE STATE ROUTE 9 BRIDGE OVER THE CONNECTICUT RIVER, GO EAST FOR 0.89 km (0.55 mi) ON ROUTE 9 TO THE STATION ON THE LEFT IN THE NORTHWEST CORNER OF AN ASPHALT APRON.

THE STATION IS A STANDARD CENTER-PUNCHED RAILROAD SPIKE DRIVEN FLUSH WITH THE PAVEMENT. LOCATED 10.5 m (34.5 ft) NORTH FROM THE CENTER OF ROUTE 9 AT THE NORTHERN YELLOW LINE, 28.3 m (93.0 ft) EAST FROM POWER POLE 9.5-1/PSNH/101/156X-1, 12.8 m (42.0 ft) WEST FROM THE END OF A 12-INCH METAL PIPE, 3.0 m (10.0 ft) NORTHEAST FROM THE END OF A 12-INCH METAL PIPE, 0.5 m (1.5 ft) SOUTH FROM THE NORTH EDGE OF PAVEMENT.

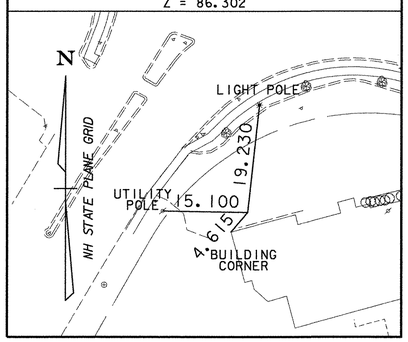
BM-CHS2 ELEV 117.426
THE STATION IS LOCATED IN CHESTERFIELD, NH

TO REACH THE STATION FROM THE NEW HAMPSHIRE/VERMONT STATE LINE AT THE WEST END OF THE STATE ROUTE 9 BRIDGE OVER THE CONNECTICUT RIVER, GO EAST FOR 1.05 km (0.65 mi) ON ROUTE 9 TO SPAULDING HILL ROAD AND THE STATION ON THE RIGHT.

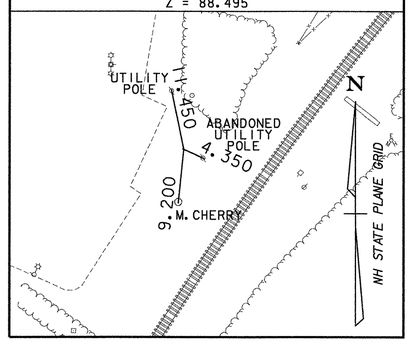
THE STATION IS A STANDARD NHDOT DISK STAMPED ---087 0340 ---, SET INTO THE TOP OF A 5-INCH SQUARE GRANITE MONUMENT PROJECTING 0.1 ft ABOVE GROUND AND 0.1 ft ABOVE THE LEVEL OF THE HIGHWAY. LOCATED 6.7 m (22.0 ft) SOUTH FROM THE SOUTH EDGE OF PAVEMENT OF ROUTE 9, 57.3 m (188 ft) EAST FROM THE CENTER OF SPAULDING HILL ROAD, 10.4 m (34.0 ft) WEST FROM POLE 2/15T/PSNH/101/154, 0.8 m (2.5 ft) NORTH FROM A DELINEATOR POST.

TRAVERSE TIES

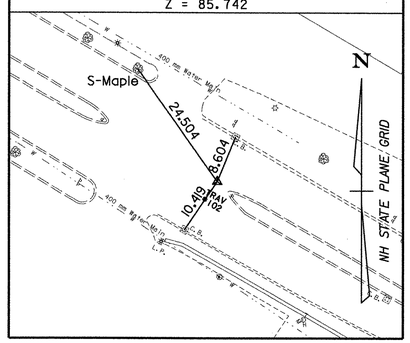
TRAV #1289
N = 43088.955
E = 227289.541
Z = 86.302



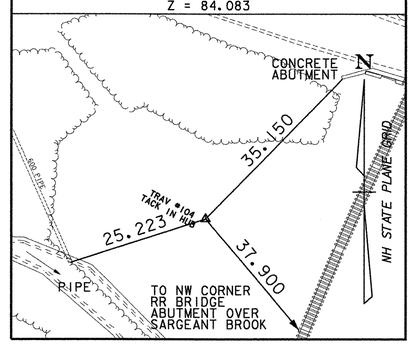
TRAV #101
N = 43129.154
E = 227525.111
Z = 88.495



TRAV # 102
N = 43092.516
E = 227381.149
Z = 85.742

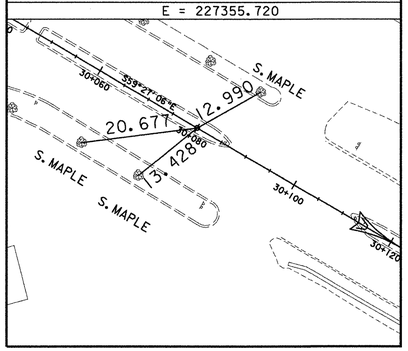


TRAV # 104
N = 43010.912
E = 227449.439
Z = 84.083

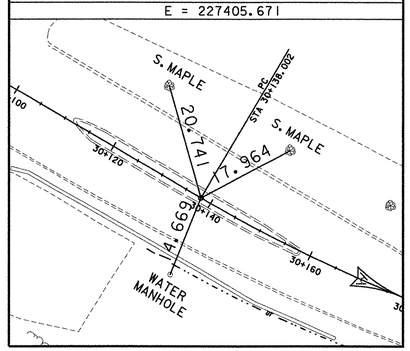


ALIGNMENT TIES

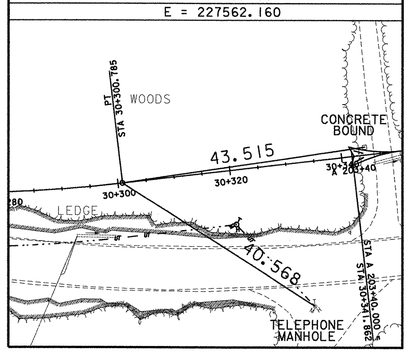
POT 30+080.000
N = 43106.152
E = 227355.720



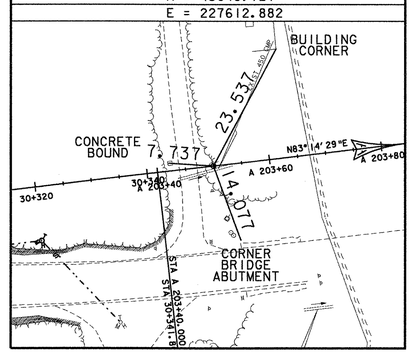
PC 30+138.002
N = 43076.672
E = 227405.671



PT 30+300.785
N = 43043.710
E = 227562.160



POT A 203+50.000
N = 43049.721
E = 227612.882



DATUM

VERTICAL NGVD 1929
HORIZONTAL NAD 1983

PROJECT NAME: BRATTLEBORO
PROJECT NUMBER: NH 010-2(2)

FILE NAME: ...\zb270tie.dgn
PROJECT LEADER: W HUSBAND
DESIGNED BY: P SHEDD
CLD REF NO. 00-0358

PLOT DATE: 09/20/2002
DRAWN BY: S COHEN
CHECKED BY: J WARNER
SHEET 32 OF 145

NOTE:
CONTRACTOR SHALL CONTACT VTRANS' MAINTENANCE DISTRICT #2 FOR REMOVAL OF PORTABLE CONCRETE BARRIER

COLD PLANING - BIT PAVEMENT
STA 30+075 TO 30+091

125 mm PORTLAND CEMENT CONCRETE SIDEWALK
STA 30+047.2 TO 30+~~091.5~~ 090.0 RT
105.3 STA 30+~~101.5~~ TO 30+210.0 RT

200 mm PORTLAND CEMENT CONCRETE SIDEWALK
090.0 STA 30+~~091.5~~ TO 30+~~101.5~~ 105.3 RT

VERTICAL GRANITE CURB
STA 30+099.7 TO 30+210.0 LT
STA 30+101.5 TO 30+210.0 RT
STA 30+115.3 TO 30+152.8 CL

REMOVING AND RESETTING CURB
STA 30+089 TO 30+091 LT

CONSTRUCT DRIVE
STA 30+094.9 LT (10M WIDE PAVED)
STA 30+096.5 RT (10M WIDE PAVED)

ADJUST ELEVATION OF VALVE BOX
STA 30+117 RT

CHANGING ELEVATION OF CB'S, DI'S OR MANHOLES
STA 30+135 RT
STA 30+140 RT

DUCTS, CONCRETE ENCASED 6-100 mm (4") PVC TYPE C DUCT
STA 30+135 TO 30+210 RT

PLANK RAIL
STA 30+175.9 TO 30+210.6 LT

TRANSPLANTING TREES
FROM STA 30+049.8 RT 13.6 TO 30+050, RT 14.0
STA 30+063.7 RT 12.7 TO 30+065, RT 13.5
STA 30+075.3 RT 12.6 TO 30+075, RT 13.5
STA 30+123.0 LT 14.3 TO 30+120, LT 14.7
STA 30+147.8 LT 15.2 TO 30+150, LT 14.5
STA 30+169.4 LT 14.0 TO 30+170, LT 14.0

LEGEND
⊕ ROADWAY BORING

FOR RAILROAD BRIDGE DETAILS, SEE SHEETS 35 TO 38

TRAV #104 TACK IN HUB

SCALE IN METERS (0 10 20 30)

ROADWAY LAYOUT SHEET 1

DATUM	
VERTICAL	NGVD 1929
HORIZONTAL	NAD 1983

PROJECT: BRATTLEBORO
PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: ...\zb270bd2.dgn
IPARM FILE NAME:
SURVEYED BY:
SQUAD LEADER: W HUSBAND
CLD REF NO. 00-0358
PLOT DATE: 09/20/2002
SURVEY DATE:
DRAWN BY: P SHEDD
SHEET: 33 OF 145

ROADWAY LAYOUT SHEET 2

VAST Metric

DUCTS, CONCRETE ENCASED
6-100 mm (4") PVC TYPE C DUCT
STA 30+210 TO 30+320 RT

DUCTS, CONCRETE ENCASED
4-100 mm (4") PVC TYPE C DUCT
STA 30+320 TO 6+026 LT

CONCRETE VAULT, TYPE I
3.6x1.8x2.1 (12'x6'x7')
STA 30+320 RT

DRIVE 30+330 LT
CURVE DATA #1
Δ = 34°03'36" RT
R = 7.500 m
T = 2.297 m
L = 4.458 m
E = 0.344 m
BANK = NC
BRG BK = N18°14'29"E
BRG AHD = N52°18'05"E

DRIVE 30+330 LT
CURVE DATA #2
Δ = 59°03'36" LT
R = 7.500 m
T = 4.248 m
L = 7.731 m
E = 1.120 m
BANK = NC
BRG BK = N52°18'05"E
BRG AHD = N06°45'31"W

STA 30+222.922 VT RTE 9 =
STA 50+272.791 RAILROAD

CURVE DATA
Δ = 37°18'26" LT
R = 250.000 m
T = 84.395 m
L = 162.783 m
E = 13.861 m
BANK = 0.050 m/m

FOR RAILROAD BRIDGE DETAILS, SEE SHEETS 35 TO 38

PROPOSED 1.8m CHAIN LINK GATE

PC STA 5+020.764
PI 5+009.745 BK = 5+009.609 AHD
PT STA 5+028.495
PI 5+025.012 BK = 5+024.247 AHD
PT STA 5+011.906
PC STA 5+001.478
PT STA 30+300.785
PC STA 6+020.732
PT STA 6+042.326
STA 30+330.000 VT RTE 9 =
STA 5+000.000 DRIVEWAY
STA 6+000.000 DRIVEWAY

STEEL MARKER POSTS (MOD)
STA A 203+63 RT (5)

125 mm PORTLAND CEMENT CONCRETE SIDEWALK
STA 30+210.0 TO 30+328.6 RT
3.7 STA 30+333.1 TO A 203+64.1 RT 352.0

200 mm PORTLAND CEMENT CONCRETE SIDEWALK
8.7 STA 30+328.6 TO 30+333.1 RT 3.7

VERTICAL GRANITE CURB
STA 30+210.0 TO 30+327.9 RT
STA 30+210.0 TO 30+331.5 LT
STA 30+334.0 TO A 203+50.0 RT
STA 30+335.1 TO A 203+50.0 LT

EXCAVATION OF SURFACES & PAVEMENTS
STA 30+250.9 TO 30+321.9 RT

STEEL BEAM GUARDRAIL
STA 30+340.1 TO A 203+42.1 LT
TERMINATE W/5M RADIUS PER STD G1-DM
STA 30+340.1 TO A 203+42.1 RT
TERMINATE W/5M RADIUS PER STD G1-DM

GUARDRAIL APPROACH SECTION, TYPE I (MOD)
STA A 203+42.1 TO A 203+52.2 LT
STA A 203+42.1 TO A 203+52.2 RT

ANCHOR FOR STEEL BEAM GUARDRAIL
STA 30+341 LT
STA 30+341 RT

SNOW FENCE (MOD)
STA 30+236 RT TO 6+050 RT

SNOW FENCE (MOD) TO PROTECT ARCH. SENSITIVE AREA

CONNECT TO EXIST CONDUIT. REMOVE FRAME AND COVER AND RETURN TO VERIZON. BACKFILL MH WITH GRAVEL.

REMOVAL AND DISP OF GUARDRAIL
STA A 203+45.2 TO A 203+52.7 RT
STA A 203+47.3 TO A 203+52.7 RT
STA 6+025.2 TO 6+030.8 LT

CHANGING ELEVATION OF CB'S, DI'S OR MANHOLES
STA 30+332 RT

REMOVING & RESETTING PROPERTY MARKERS
STA 30+226 LT
STA 30+247 LT
STA A 203+42 LT

REMOVAL OF EXISTING FENCE
STA A 203+43 TO A 203+50 LT

GATE FOR CHAIN-LINK FENCE, 1.8 m
STA 30+336.5 TO 30+338.4 LT
(4.0 M SKEWED)

CONSTRUCT DRIVE
STA 30+330.0 RT (4.6M WIDE PAVED)
STA 30+330.0 LT (3.0 M WIDE GRAVEL)

DRIVE 30+330 RT
CURVE DATA
Δ = 49°15'34" RT
R = 25.000 m
T = 11.462 m
L = 21.493 m
E = 2.502 m
BANK = NC
BRG BK = S12°10'32"E
BRG AHD = S37°05'02"W

STA A203+50.000
END PROJECT
NH 010-2(2)
BEGIN NH PROJECT 11999

LEGEND
ROADWAY BORING
EXCAVATION OF SURFACES AND PAVEMENTS

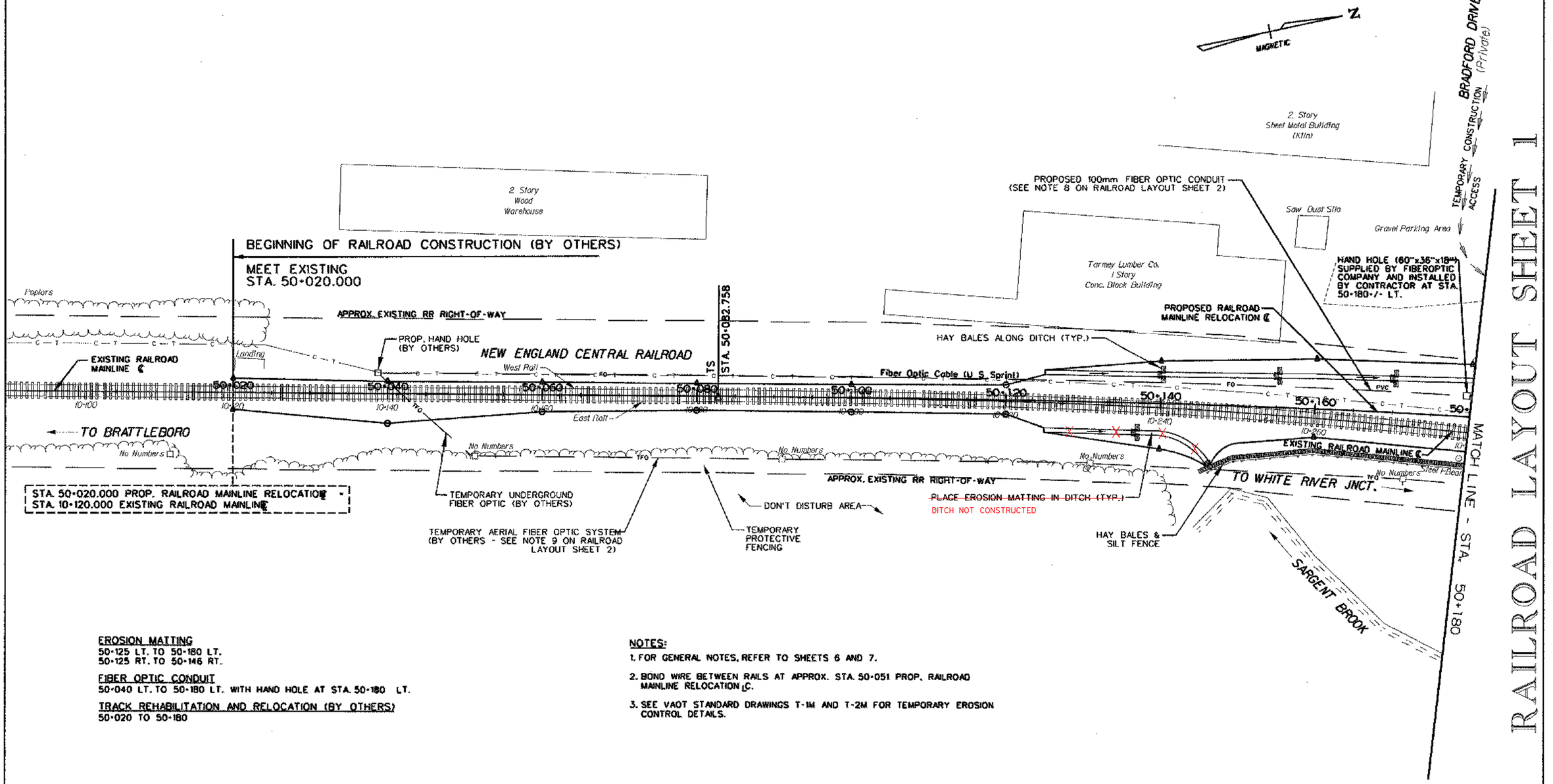
0 10 20 30
SCALE IN METERS

DATUM
VERTICAL NGVD 1929
HORIZONTAL NAD 1983

PROJECT:	PROJECT NO.:
BRATTLEBORO	NH 010-2(2)
DESIGN FILE NAME: ...\zb2T0bd2.dgn	
IPARM FILE NAME:	PLOT DATE: 09/20/2002
SURVEYED BY:	SURVEY DATE:
SQUAD LEADER: W HUSBAND	DRAWN BY: P SHEDD
CLD REF NO. 00-0358	SHEET: 34 OF 145

Metric

RAILROAD LAYOUT SHEET 1



EROSION MATTING
50+125 LT. TO 50+180 LT.
50+125 RT. TO 50+146 RT.

FIBER OPTIC CONDUIT
50+040 LT. TO 50+180 LT. WITH HAND HOLE AT STA. 50+180 LT.

TRACK REHABILITATION AND RELOCATION (BY OTHERS)
50+020 TO 50+180

NOTES:

1. FOR GENERAL NOTES, REFER TO SHEETS 6 AND 7.
2. BOND WIRE BETWEEN RAILS AT APPROX. STA. 50+051 PROP. RAILROAD MAINLINE RELOCATION ℄.
3. SEE VAOT STANDARD DRAWINGS T-1M AND T-2M FOR TEMPORARY EROSION CONTROL DETAILS.

0 10 20 30
SCALE IN METERS

PROJECT NAME:	BRATTLEBORO
PROJECT NUMBER:	NH 010-2(2)
FILE NAME:	zb270bdr.dgn
PROJECT LEADER:	JHR
DESIGNED BY:	GJB
PLOT DATE:	10-02-2002
DRAWN BY:	DHL/LB/LRD
CHECKED BY:	TEM
SHEET	35 OF 145

LAYOUT SHEET 2

RAILROAD LAYOUT

Metric

NOTES:

1. REFER TO ROADWAY LAYOUT SHEETS 1& 2 FOR ALL DATA PERTAINING TO PROPOSED CONSTRUCTION ON VT. ROUTE 9.
2. REFER TO SHEETS 90 TO 95 SERIES FOR WIDENING OF RAILROAD BRIDGE NO. 62.51, AND SHEETS 69 TO 88 FOR REPLACEMENT OF RAILROAD BRIDGE NO. 62.56.
3. FOR BORING LOGS AND PROBE DATA, REFER TO SHEETS 59 TO 68.
4. WHISTLE POST AND SPEED SIGNS MUST REMAIN IN SERVICE ADJACENT TO OPERATED TRACK AT ALL TIMES FOR USE BY RAILROAD OPERATIONS.
5. CONTRACTOR'S ATTENTION IS BROUGHT TO THE FACT THAT THERE IS A CONSTANT FLOW OF STORM DRAINAGE WATER ALONG THE GUTTERS AND UNDERDRAIN SYSTEM OF VT. ROUTE 9.
6. FOR GENERAL NOTES, REFER TO SHEETS 6 AND 7.
7. SEE VAOT STANDARD DRAWINGS T-1M AND T-2M FOR TEMPORARY EROSION CONTROL DETAILS.
8. CONTRACTOR TO FURNISH AND INSTALL UNDERGROUND FIBER OPTIC CONDUIT SYSTEM FROM HAND HOLE AT APPROX. STA. 50+040 TO HAND HOLE AT APPROX. STA. 50+660. FIBER OPTIC COMPANY WILL SUPPLY THREE HAND HOLE (PULL BOXES) TO BE INSTALLED BY CONTRACTOR AT STATIONS 50+180± , 50+296 AND 50+506 . THE FIBER OPTIC CONDUIT WILL BE 100mm (4") PVC OR GALVANIZED IRON PIPE (SCHEDULE 40) WITH 3 - 1/4" INNERDUCT WITH PULL WIRES. THE PVC CONDUIT WILL BE INSTALLED FROM STATION 50+040 TO 50+180 AND FROM STATION 50+296± TO 50+660± . THE GALVANIZED IRON PIPE (GIP) WILL BE INSTALLED FROM STATION 50+180 TO 50+296 . CONDUIT HANGERS (3.06m O.C.) WILL BE UTILIZED AT BRIDGE NO. 62.56, WHILE CONDUIT IS BEING INSTALLED WITHIN THE BALLAST SECTION AT BRIDGE NO. 62.51. EXCEPT FOR BRIDGE LOCATIONS, CONDUIT SHALL BE INSTALLED AT A DEPTH NO LESS THAN 1.25M BELOW FINISH GRADE. OWNER TO INSTALL HAND HOLES (AT APPROX. STATIONS 50+040 AND 50+660), TEMPORARILY RELOCATE TO AERIAL SYSTEM, SPLICE ALL CABLE, PERMANENTLY RELOCATE CABLE TO NEW UNDERGROUND CONDUIT SYSTEM, AND RELOCATE FIBER OPTIC WARNING SIGNS WHERE NECESSARY.
9. ACTUAL LOCATION TO BE ESTABLISHED BY OWNER, WHO WILL INSTALL NEW SEPARATE POLE LINE AT A MIN. DISTANCE OF 4.5M EAST OF℄ FOR EXISTING TRACK.

TRANSITIONAL APPROACH TIMBER TIES (BY OTHERS)
50+243.158 TO 50+253.318
50+286.423 TO 50+296.583

REMOVING AND RESETTING SIGNS (BY OTHERS)
50+202, 1.0m LT. TO 50+202, 4.0m LT.
50+257, 9.5m RT. TO 50+245, 3.5m RT.
50+301, 12.0m RT. TO 50+301, 4.0m RT.

REMOVING MEDIUM TREES
50+356, 1.5m LT.

EROSION MATTING
50+180 LT. TO 50+185 LT.

FIBER OPTIC CONDUIT
50+180 LT. TO 50+360 LT. WITH HAND HOLE AT STA. 50+296+/- LT.

TRACK INSTALLATION (BY OTHERS)
50+186.417 TO 50+360

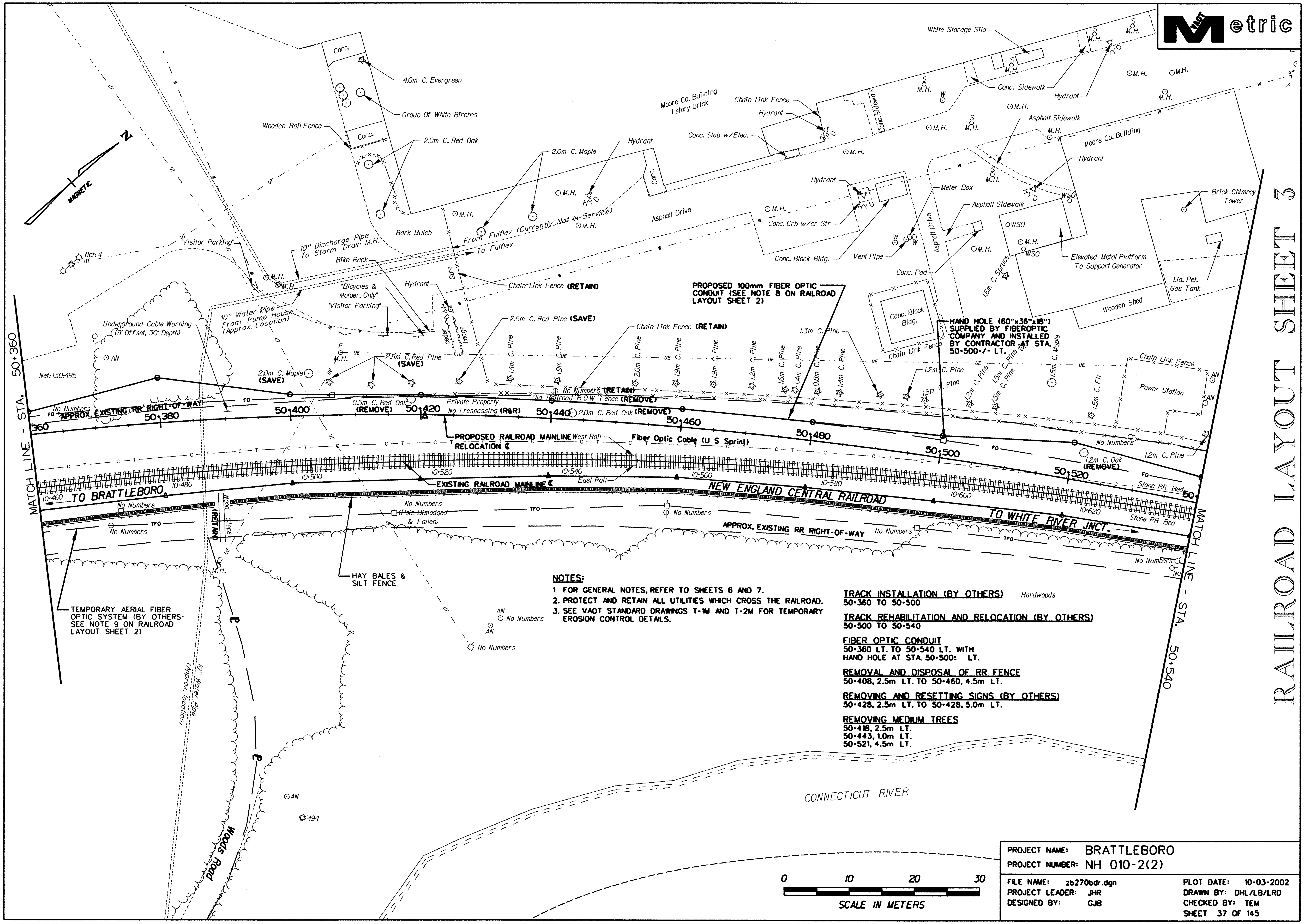
REMOVING AND RESETTING BRIDGE MARKER 62/56
REMOVE FROM 10+356 RT
AND RESET TO 50+247.5 RT

TRACK REHABILITATION AND RELOCATION (BY OTHERS)
50+180 TO 50+186.417

RAILROAD GUARD RAIL (BY OTHERS)
50+241.470 TO 50+298.271

0 10 20 30
SCALE IN METERS

PROJECT NAME:	BRATTLEBORO
PROJECT NUMBER:	NH 010-2(2)
FILE NAME:	zb270bdr.dgn
PROJECT LEADER:	JHR
DESIGNED BY:	GJB
PLOT DATE:	10-03-2002
DRAWN BY:	DHL/LB/LRD
CHECKED BY:	TEM
SHEET 36 OF 145	


RAILROAD LAYOUT SHEET 3
VAOT Metric
MATCH LINE - STA. 50+360
MATCH LINE - STA. 50+540
MAGNETIC
N
TO BRATTLEBORO
NEW ENGLAND CENTRAL RAILROAD
TO WHITE RIVER JNCT.
EXISTING RAILROAD MAINLINE ℄
PROPOSED RAILROAD MAINLINE RELOCATION ℄
APPROX. EXISTING RR RIGHT-OF-WAY
Fiber Optic Cable (U S Sprint)
PROPOSED 100mm FIBER OPTIC CONDUIT (SEE NOTE 8 ON RAILROAD LAYOUT SHEET 2)
HAND HOLE (60"x36"x18") SUPPLIED BY FIBEROPTIC COMPANY AND INSTALLED BY CONTRACTOR AT STA. 50+500+/- LT.
TEMPORARY AERIAL FIBER OPTIC SYSTEM (BY OTHERS- SEE NOTE 9 ON RAILROAD LAYOUT SHEET 2)
HAY BALES & SILT FENCE
Chain Link Fence (RETAIN)
Old Railroad R-O-W Fence (REMOVE)
Underground Cable Warning (9' Offset, 30" Depth)
10" Water Pipe From Pump House (Approx. Location)
10" Discharge Pipe To Storm Drain M.H.
Moore Co. Building 1 story brick
Moore Co. Building
White Storage Silo
Power Station
Concrete Block Bldg.
Wooden Shed
Elevated Metal Platform To Support Generator
Brick Chimney Tower
Liq. Pet. Gas Tank
Asphalt Drive
Bark Mulch
Bike Rack
Visitor Parking
Woods Road
CONNECTICUT RIVER
Private Property No Trespassing (R&R)
2.5m C. Red Pine (SAVE)
2.0m C. Maple (SAVE)
0.5m C. Red Oak (REMOVE)
2.0m C. Red Oak (REMOVE)
1.2m C. Oak (REMOVE)
50+380
50+400
50+420
50+440
50+460
50+480
50+500
50+520
NOTES:
1. FOR GENERAL NOTES, REFER TO SHEETS 6 AND 7.
2. PROTECT AND RETAIN ALL UTILITIES WHICH CROSS THE RAILROAD.
3. SEE VAOT STANDARD DRAWINGS T-1M AND T-2M FOR TEMPORARY EROSION CONTROL DETAILS.
TRACK INSTALLATION (BY OTHERS)
50+360 TO 50+500
TRACK REHABILITATION AND RELOCATION (BY OTHERS)
50+500 TO 50+540
FIBER OPTIC CONDUIT
50+360 LT. TO 50+540 LT. WITH HAND HOLE AT STA. 50+500: LT.
REMOVAL AND DISPOSAL OF RR FENCE
50+408, 2.5m LT. TO 50+460, 4.5m LT.
REMOVING AND RESETTING SIGNS (BY OTHERS)
50+428, 2.5m LT. TO 50+428, 5.0m LT.
REMOVING MEDIUM TREES
50+418, 2.5m LT.
50+443, 1.0m LT.
50+521, 4.5m LT.
0 10 20 30
SCALE IN METERS
PROJECT NAME: BRATTLEBORO
PROJECT NUMBER: NH 010-2(2)
FILE NAME: zb270bdr.dgn
PROJECT LEADER: JHR
DESIGNED BY: GJB
PLOT DATE: 10-03-2002
DRAWN BY: DHL/LB/LRD
CHECKED BY: TEM
SHEET 37 OF 145

Metric

RAILROAD LAYOUT SHEET 4

N

MAGNETIC

END OF RAILROAD CONSTRUCTION (BY OTHERS)

MEET EXISTING
STA. 50+698.603

MATCH LINE - STA. 50+540

Steel cover
M.H.
Conc. Crb w/Cr Stn
Hydrant
Asphalt Sidewalk
Filler Cap
Building For Pumping Oil
M.H.
Filler Cap
Conc. Slab
E
M.H.
Asphalt Drive
Conc. rw w/metal fence
landing area
M.H.
Chain Link w/Barbed Wire Fence
Gate
M.H.
AN
6' Chain Link & Barbed Wire Fence (RETAIN)
AN
AN
High Volt. Tel. Poles
11.3m C. Pine
0.8m C. Pine
11.3m C. Pine
12m C. Pine
0.8m C. Pine
1.4m C. Pine
10m C. Pine
10m C. Pine
12m C. Pine
3.6m C. Pine
Old Railroad R-O-W Fence (RETAIN)
Private Property No Trespassing (RETAIN)
PROPOSED 100mm FIBER OPTIC CONDUIT (SEE NOTE 8 ON RAILROAD LAYOUT SHEET 2)
Small Trees & Brush
I.P.
APPROX. EXISTING RR RIGHT-OF-WAY
Hardwoods
PROPOSED RAILROAD MAINLINE RELOCATION ℄
Fiber Optic Cable (U S Sprint)
PROPOSED HAND HOLE (BY OTHERS)
FO
50+540
50+560
50+580
50+600
50+620
50+640
50+660
50+680
10+640
10+660
10+680
10+700
10+720
10+740
10+760
10+780
10+800
10+820
NEW ENGLAND CENTRAL RAILROAD
TO BRATTLEBORO
TO WHITE RIVER JNCT.
Concrete Standard Flush With Ground
TFO
No Numbers
APPROX. EXISTING RR RIGHT-OF-WAY
EXISTING RAILROAD MAINLINE ℄
HAY BALES & SILT FENCE
TEMPORARY AERIAL FIBER OPTIC SYSTEM (BY OTHERS - SEE NOTE 9 ON RAILROAD LAYOUT SHEET 2)
TEMPORARY UNDERGROUND FIBER OPTIC (BY OTHERS)
Hardwoods
Hardwoods
Telegraph Pole
Telegraph Pole
Granite Post
AN
No Numbers
C.C.
Suburban Propane Building 1 Story Cinder Block
Propane Tank
Gravel Parking Lot
Chain Link & Barbed Wire Fence
Center Line Of Railroad Spur
WELLINGTON ROAD (Asphalt Pavement)
Storage Yard For Propane Tanks
Underground Cable Warning (6' Offset, 42" Depth)
Net 7
(4) RR Rails
AN
STA. 50+698.603 PROP. RAILROAD MAINLINE RELOCATION ℄
STA. 10+794.364 EXISTING RAILROAD MAINLINE ℄
CONNECTICUT RIVER

TRACK REHABILITATION AND RELOCATION (BY OTHERS)
50+540 TO 50+698.603

FIBER OPTIC CONDUIT
50+540 LT. TO 50+660 LT.

NOTES:
1. FOR GENERAL NOTES, REFER TO SHEETS 6 AND 7.
2. SEE VAOT STANDARD DRAWINGS T-1M AND T-2M FOR TEMPORARY EROSION CONTROL DETAILS.

0 10 20 30
SCALE IN METERS

PROJECT NAME:	BRATTLEBORO		
PROJECT NUMBER:	NH 010-2(2)		
FILE NAME:	zb270bdr.dgn	PLOT DATE:	10-02-2002
PROJECT LEADER:	JHR	DRAWN BY:	DHL/LB/LRD
DESIGNED BY:	GJB	CHECKED BY:	TEM
		SHEET	38 OF 145

PROFILE – VT ROUTE 9

Metric

STA 30+075.000
BEGIN APPROACH

STA 30+091.000
END APPROACH
BEGIN PROJECT NH 010-2(2)

PVI STA = 30+075.000
PVI ELEV = 86.144

PVI STA = 30+140.000
PVI ELEV = 85.182

PVC STA = 30+105.000
PVC ELEV = 85.700

PVT STA = 30+175.000
PVT ELEV = 83.420

-1.4800%

-5.0333%

EXISTING GROUND

L = 70 m
K = 20
SSD = 92 m

30+060	30+070	30+080	30+090	30+100	30+110	30+120	30+130	30+140	30+150	30+160	30+170	30+180	30+190	30+200	30+210	30+220
86.27	86.19	86.07	85.97	85.87	85.86	85.69	85.55	85.40	85.18	84.77	84.32	83.87	83.37	82.83	82.29	81.76
86.070	85.922	85.774	85.620	85.421	85.171	84.871	84.520	84.118	83.666	83.169	82.665	82.162	81.659	81.155		

90 85 80 75 70 65 60

0 10 20
SCALE IN METERS

DATUM

VERTICAL NGVD 1929
HORIZONTAL NAD 1983

PROJECT:	PROJECT NO.:
BRATTLEBORO	NH 010-2(2)
DESIGN FILE NAME: ...\zb270xs2.dgn	
IPARM FILE NAME:	PLOT DATE: 09/20/2002
SURVEYED BY:	SURVEY DATE:
SQUAD LEADER: W HUSBAND	DRAWN BY: P SHEDD
CLD REF NO. 00-0358	SHEET: 39 OF 145

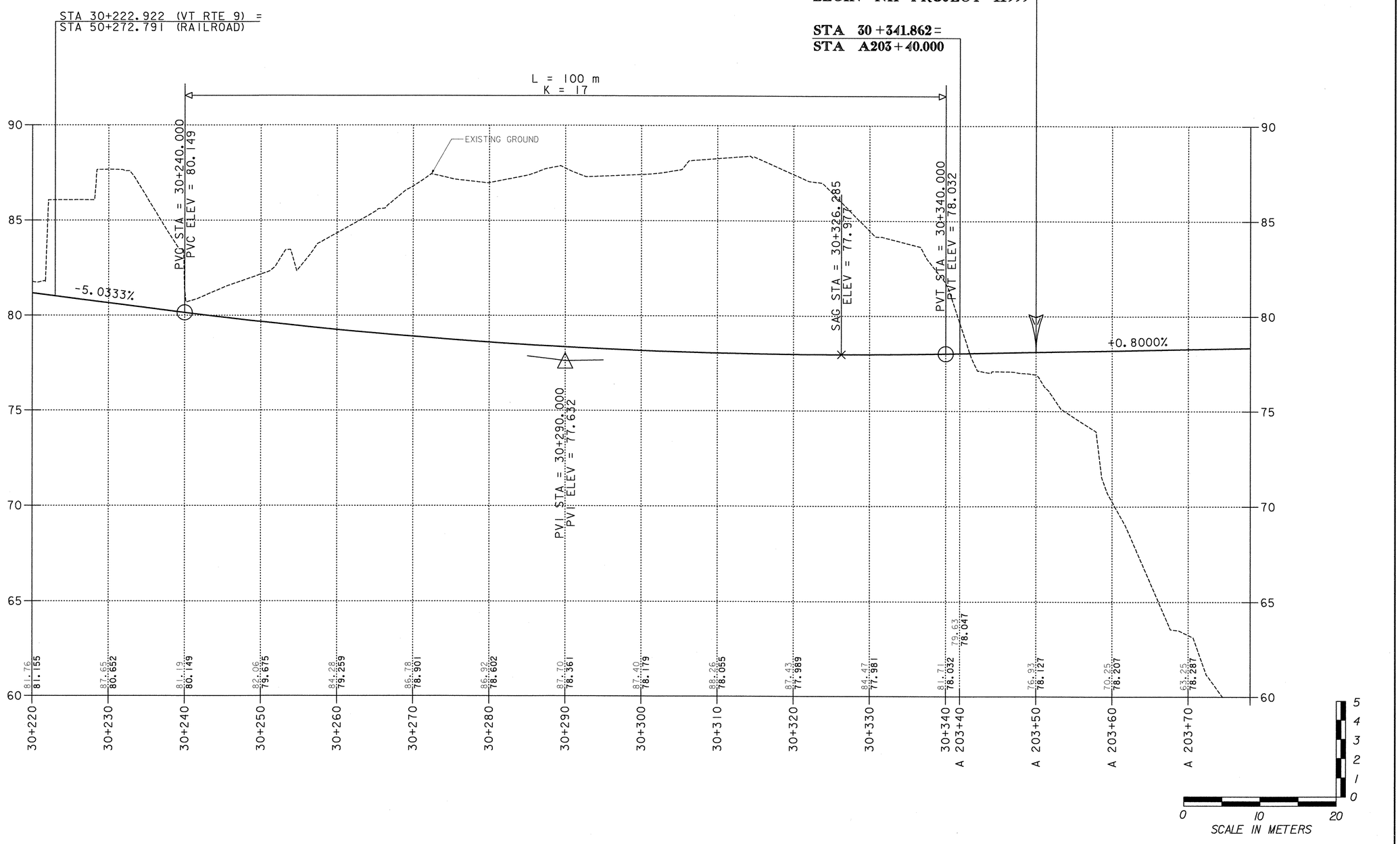
PROFILE – VT ROUTE 9

Metric

STA A203+50.000
END PROJECT
NH 010-2(2)
BEGIN NH PROJECT 11999

STA 30+341.862 =
STA A203+40.000

STA 30+222.922 (VT RTE 9) =
STA 50+272.791 (RAILROAD)



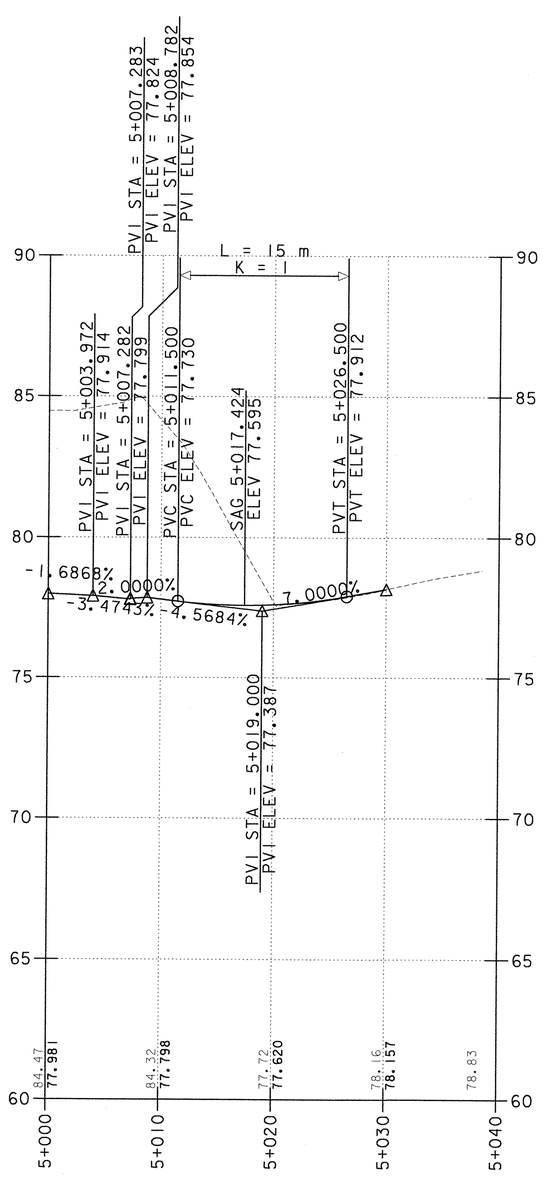
DATUM

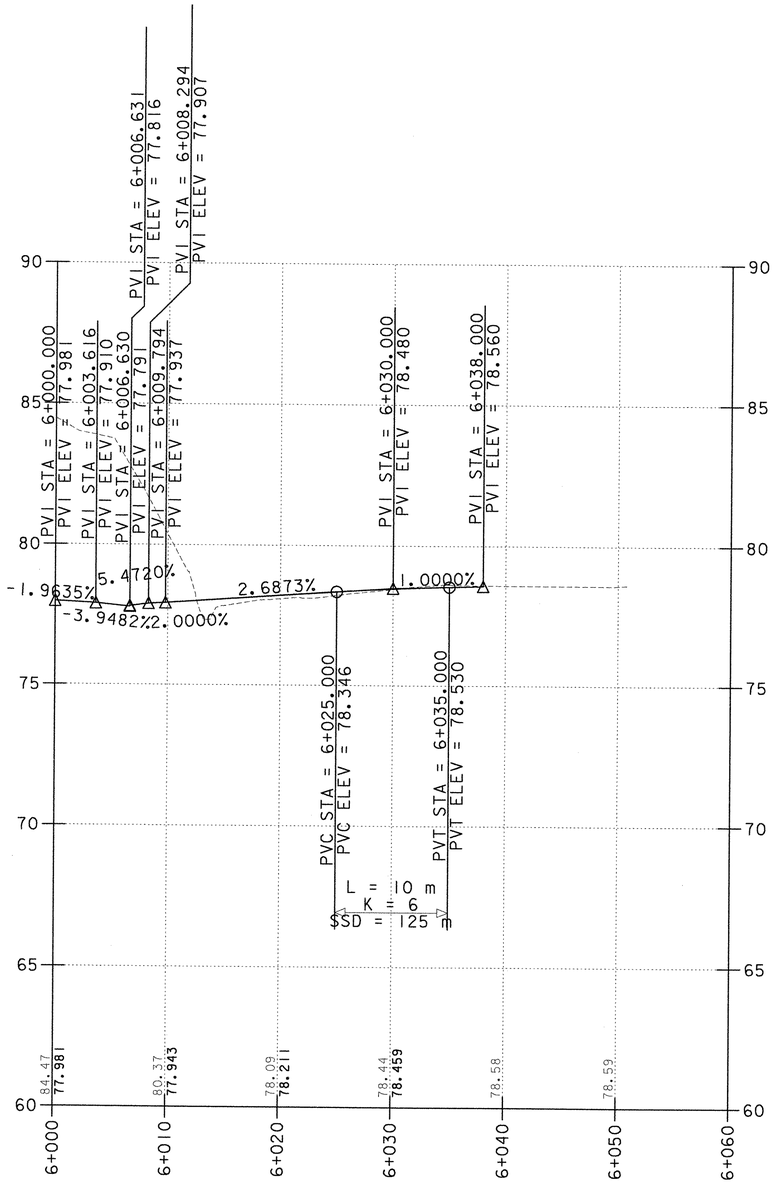
VERTICAL	NGVD 1929
HORIZONTAL	NAD 1983

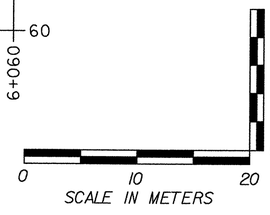
PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: ...\zb270xs2.dgn	
IPARM FILE NAME:	PLOT DATE: 09/20/2002
SURVEYED BY:	SURVEY DATE:
SQUAD LEADER: W HUSBAND	DRAWN BY: P SHEDD
CLD REF NO. 00-0358	SHEET: 40 OF 145

PROFILE – DRIVEWAY

Metric







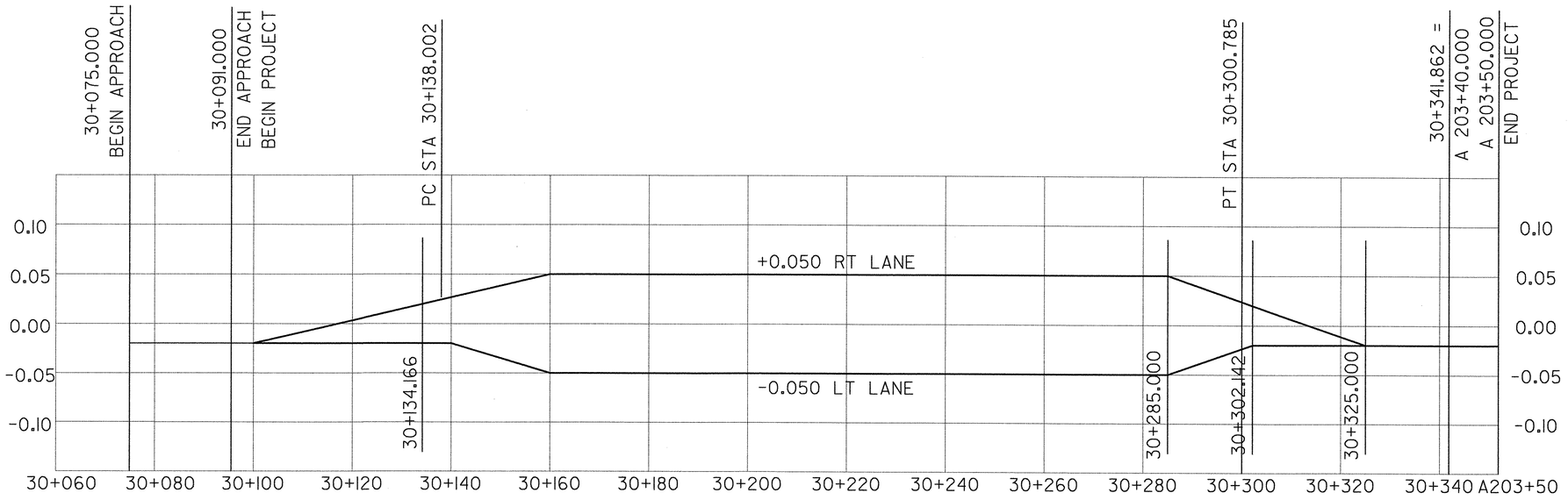
DATUM

VERTICAL NGVD 1929
HORIZONTAL NAD 1983

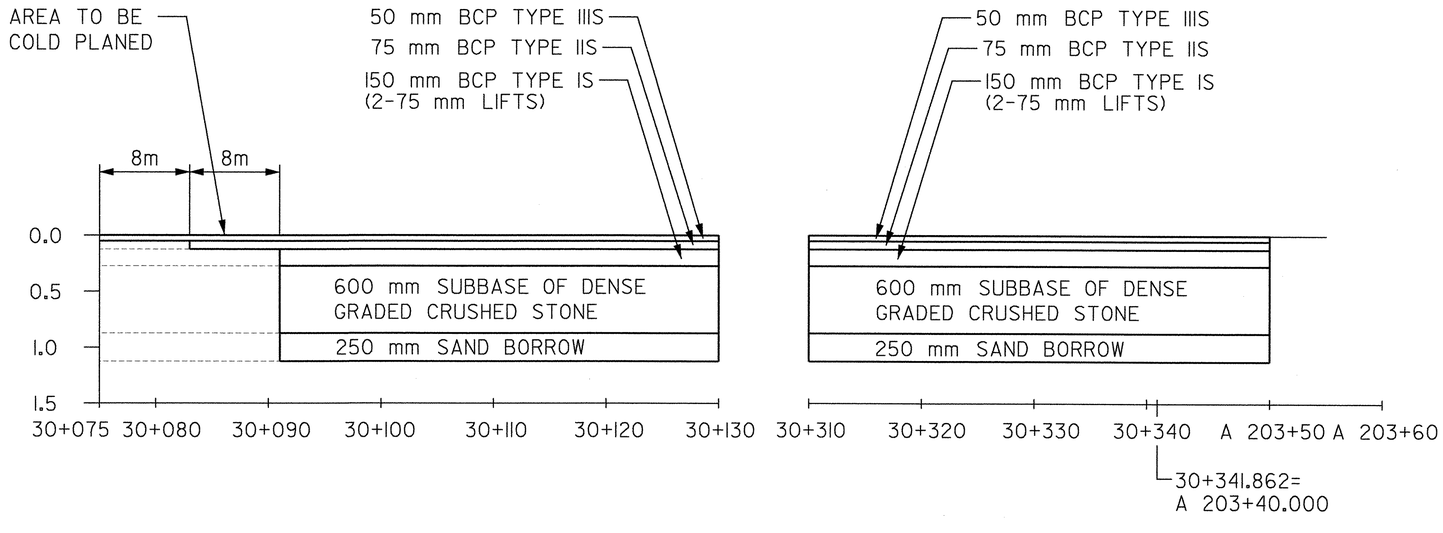
PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: ...\zb270xs2.dgn	
IPARM FILE NAME:	PLOT DATE: 09/20/2002
SURVEYED BY:	SURVEY DATE:
SQUAD LEADER: W HUSBAND	DRAWN BY: P SHEDD
CLD REF NO. 00-0358	SHEET: 41 OF 145

BANKING DIAGRAM

Metric



MATERIAL TRANSITION DETAIL



DATUM	
VERTICAL	NGVD 1929
HORIZONTAL	NAD 1983

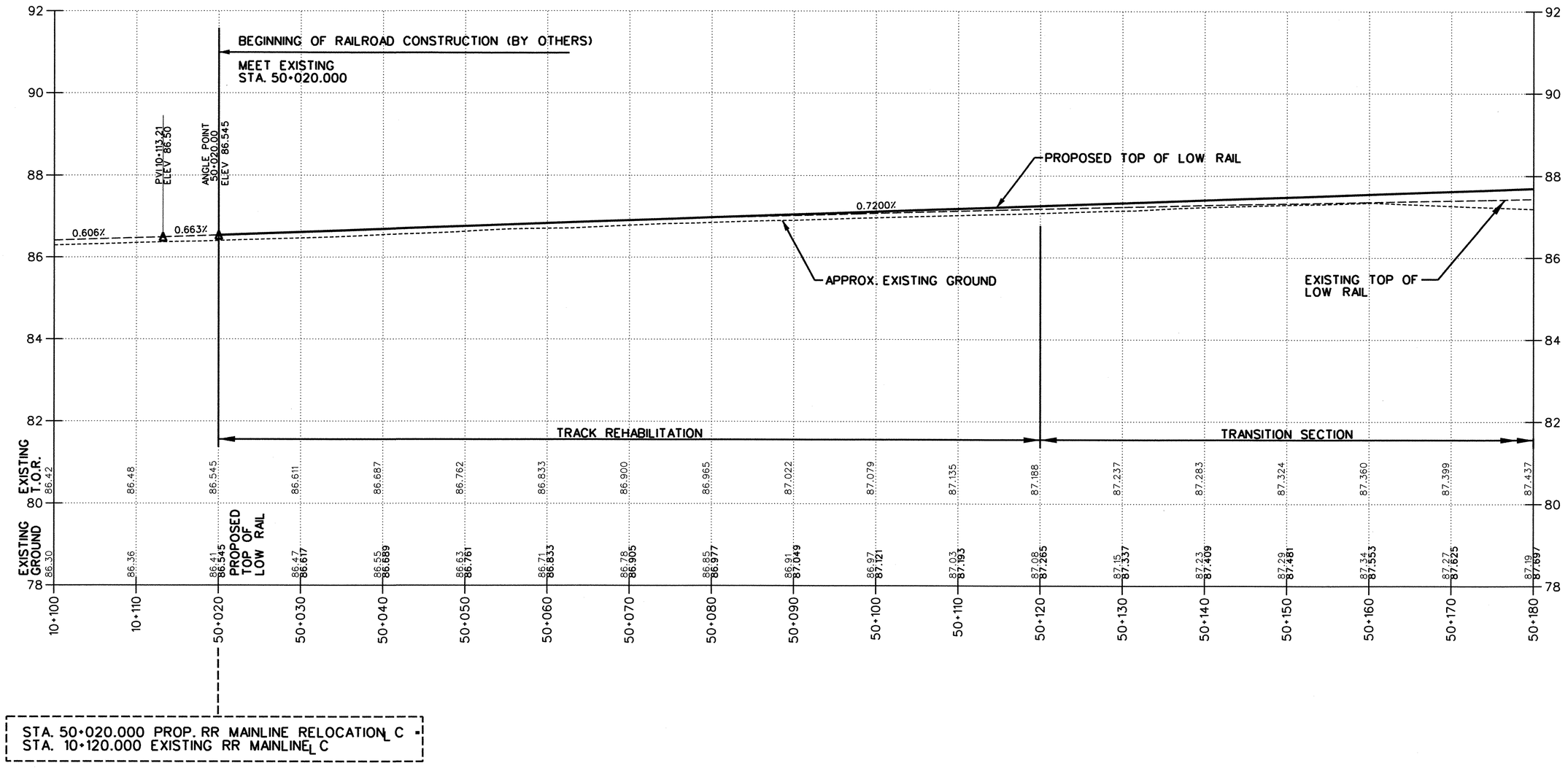
PROJECT:	PROJECT NO.:
BRATTLEBORO	NH 010-2(2)

DESIGN FILE NAME: ...\zb270xs2.dgn
IPARM FILE NAME:
SURVEYED BY:
SQUAD LEADER: W HUSBAND
CLD REF NO. 00-0358

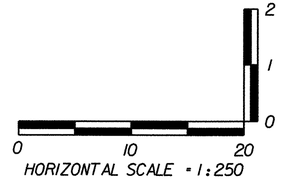
PLOT DATE: 09/20/2002
SURVEY DATE:
DRAWN BY: N LEMAY
SHEET: 42 OF 145

RAILROAD PROFILE

Metric



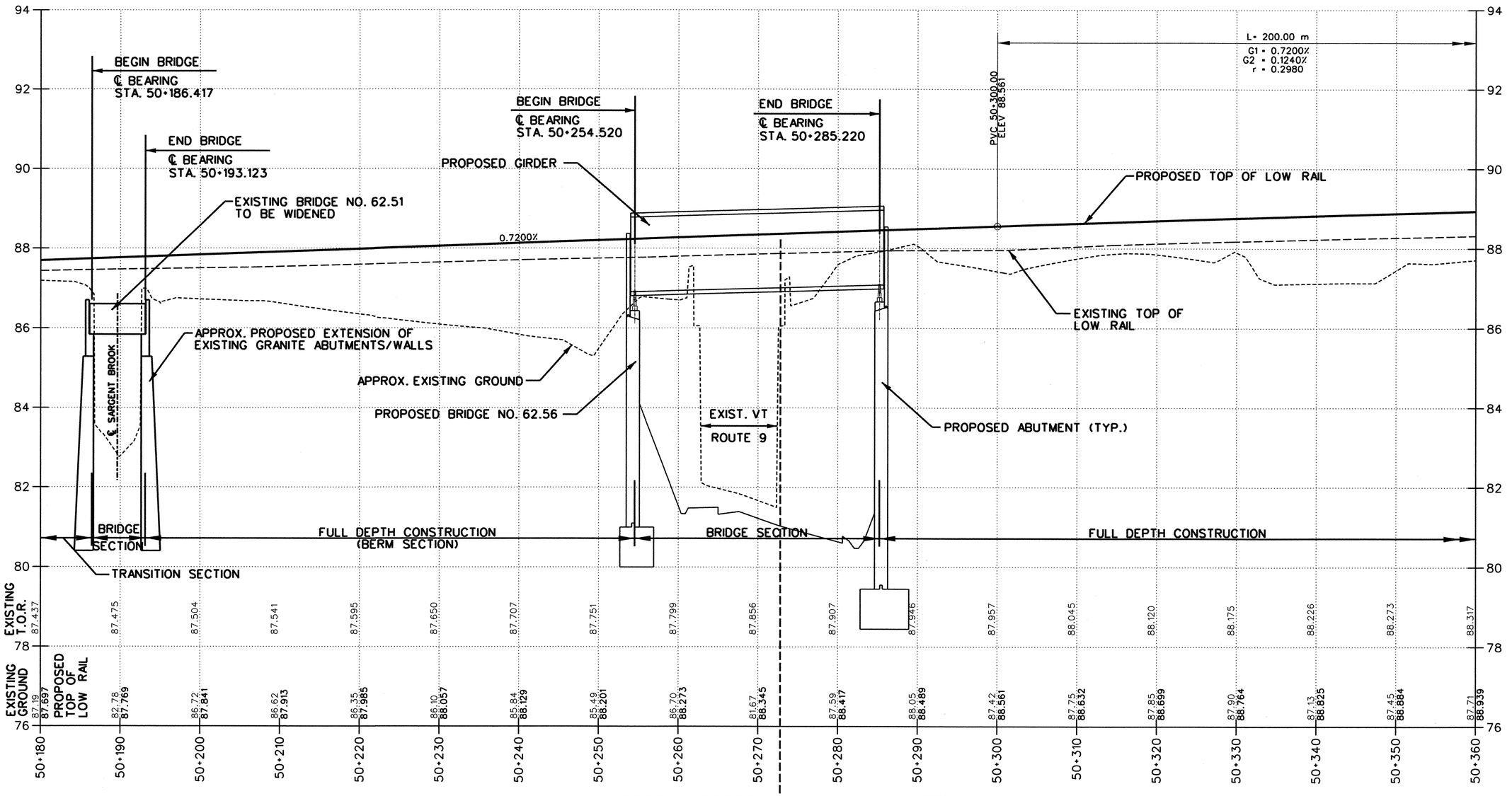
STA. 50+020.000 PROP. RR MAINLINE RELOCATION ℄ C
STA. 10+120.000 EXISTING RR MAINLINE ℄ C



PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: U:\99123-Brattleboro\dgn\zb270xs1.dgn IPARM FILE NAME:	PLOT DATE: 10-02-2002
NEW ENGLAND CENTRAL RAILROAD	
FROM STA: 50+020.000 TO STA: 50+180.000	SHEET: 43 OF 145

RAILROAD PROFILE

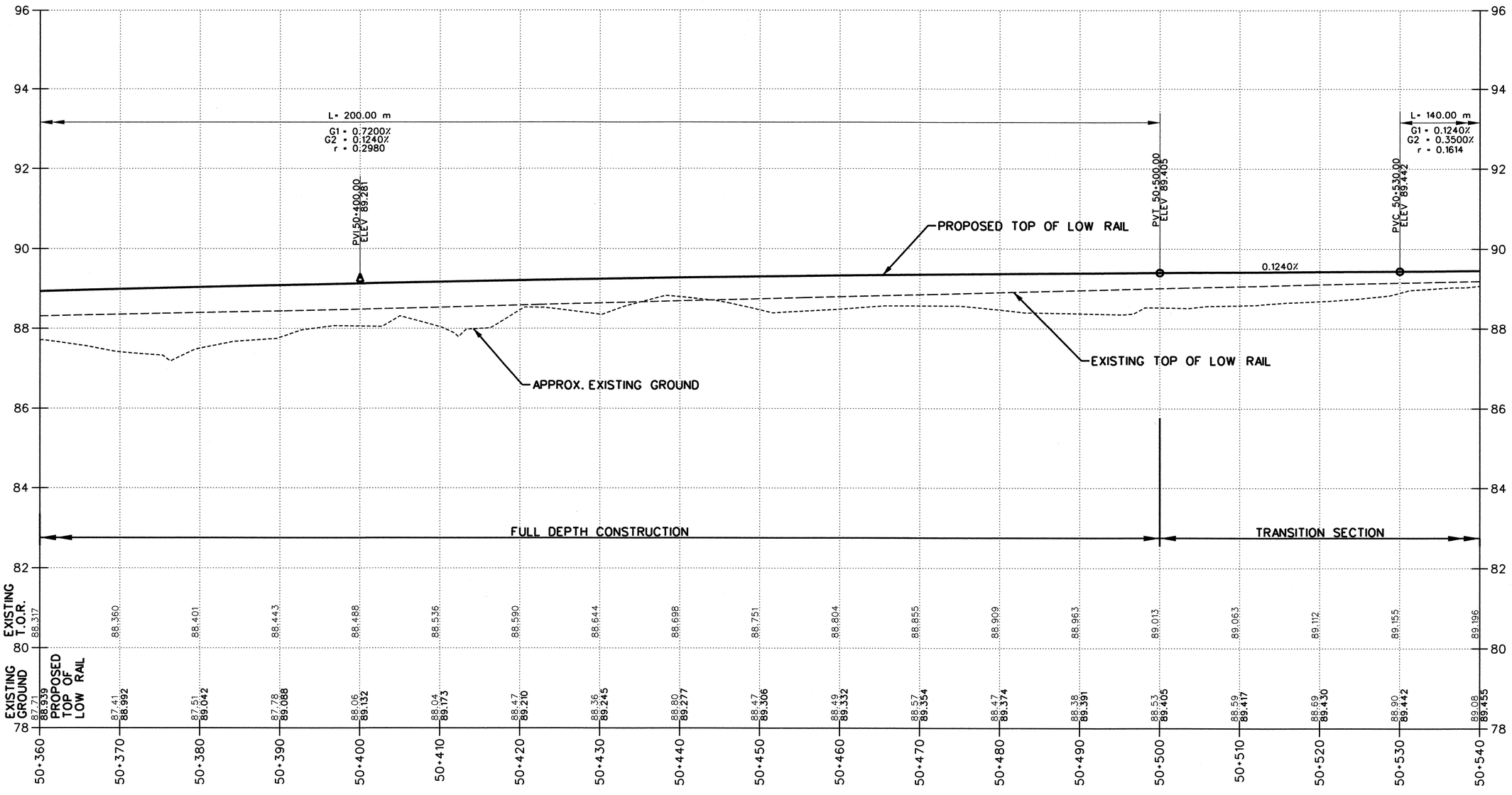
Metric

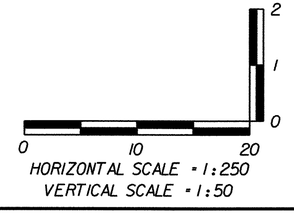


PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: U:\99123-Brattleboro\dgn\zb270xs1.dgn IPARM FILE NAME:	PLOT DATE: 10-02-2002
NEW ENGLAND CENTRAL RAILROAD	
FROM STA: 50+180.000 TO STA: 50+360.000 SHEET: 44 OF 145	

RAILROAD PROFILE

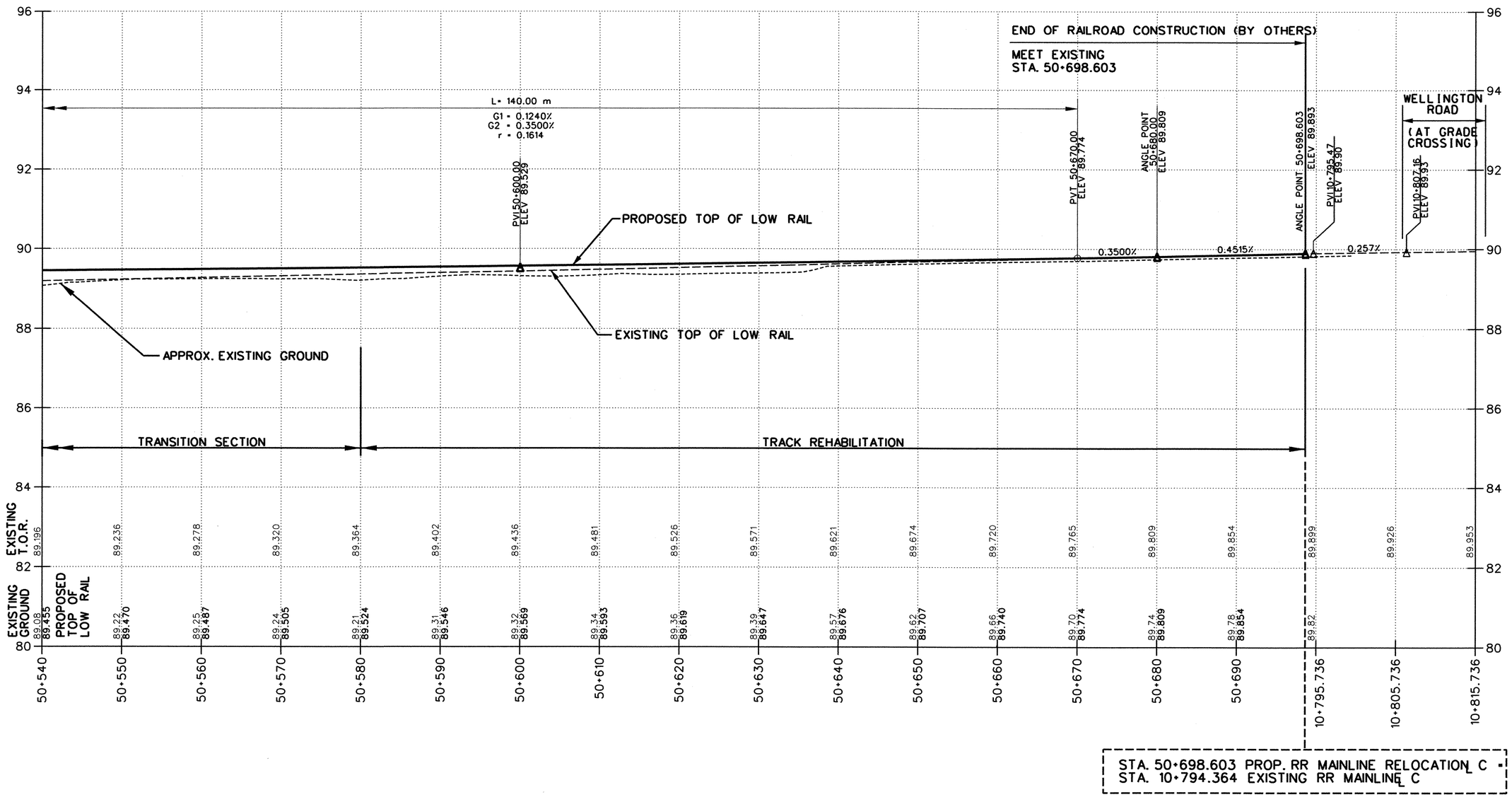
VAOT Metric



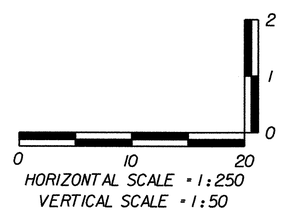


PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: U:\99123-Brattleboro\dgn\zb270xs1.dgn IPARM FILE NAME:	PLOT DATE: 10-02-2002
NEW ENGLAND CENTRAL RAILROAD	
FROM STA: 50+360.000 TO STA: 50+540.000 SHEET: 45 OF 145	

RAILROAD PROFILE



STA. 50+698.603 PROP. RR MAINLINE RELOCATION ℄ =
STA. 10+794.364 EXISTING RR MAINLINE ℄



HORIZONTAL SCALE = 1:250
VERTICAL SCALE = 1:50

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: U:\99123-Brattleboro\dgn\zb270xs1.dgn IPARM FILE NAME:	PLOT DATE: 10-02-2002
NEW ENGLAND CENTRAL RAILROAD	
FROM STA: 50+540.000 TO STA: 50+698.603 SHEET: 46 OF 145	

DRAINAGE LAYOUT & EROSION CONTROL SHEET 1

VAST Metric

D1 STA. 30+147 LT
CONST SPECIAL DITCH
8 m x 2 m TYPE I STONE FILL

D2 STA. 30+180 TO STA. 30+220 LT
CONST SPECIAL DITCH
TYPE I STONE FILL

P8 STA. 30+180 LT TO STA. 30+250 LT
NEW 750 mm x 68.5 m PCCSP (1.65) OR CAAP (1.52)
NEW PRCCB AT INLET (1.5 m DIA.)
W/ CI GRATE TYPE E

P32 STA. 30+148 RT TO STA. 30+148 LT
NEW 750 mm x 21.7 m RCP (CLASS III) OR CPEP (SL)
NEW PRCMH AT INLET (1.5 m DIA.)
W/ CI COVER

P7 STA. 30+180 LT
NEW 450 mm x 1.5 m RCP (CLASS III) OR CPEP (SL)
OR PCCSP (1.63) OR CAAP (1.52)
NEW PRCCB AT INLET (1.2 m DIA.)
W/ CI GRATE TYPE A

U5 STA. 30+182 LT TO STA. 30+250 LT
NEW 150 mm UD w/ FLUSHING BASIN AT STA 30+182

P33 STA. 30+148 LT TO STA. 30+148 LT
NEW 750 mm x 2.4 m RCP (CLASS III) OR CPEP (SL)
RELAYING PIPE CULVERT 525 mm x 2.4 m RCP
NEW PRCMH AT INLET (1.5 m DIA.)
PRCMH IS TO BE PLACED TO INTERCEPT EXISTING
CULVERT FROM STA 30+148 LT
W/ CI COVER

STA 30+075.000
BEGIN APPROACH

STA 30+091.000
END APPROACH
BEGIN PROJECT
NH 010-2(2)

REVISED LOCATION OF 450 mm CPEP (SL)

NOT INSTALLED

NOT INSTALLED

150 mm U.D. W/FB TO P31

HAY BALES ALONG DITCH (TYP.)

HAY BALES AROUND CATCH BASIN (TYP.)

CONSTRUCT PERMANENT TYPE I STONE FILL IN DITCH

CONSTRUCT PERMANENT TYPE I STONE FILL IN DITCH

RETAINING WALL CONST. LIMITS

PROP. MSE RETAINING WALL

MATCH LINE STA 30+210

VT ROUTE 9

EXIST 450 RCP RETAIN

STA 30+045 TO 30+087 RETAIN

EXIST 375 CMP RETAIN

EXIST 525 PIPE RETAIN

PIPE UNKNOWN RETAIN

EXIST 525 PIPE RETAIN

EXIST 375 CMP

EXIST 450 RCP REMOVE CB AND PIPE

EXIST 450 RCP REMOVE CB AND PIPE

EXIST 375 RCP REMOVE CB AND PIPE

EXIST 450 RCP REMOVE CB AND PIPE

EXIST 450 RCP REMOVE CB AND PIPE

EXIST 600 RCP REMOVE PIPE TO 14 m RT PLUG AND ABANDON REMAINING PIPE

EXIST 450 RCP REMOVE CB AND PIPE TO 14 m RT PLUG AND ABANDON REMAINING PIPE

STA 30+089 RT TO STA 30+144 RT
NEW 150 mm UD w/ FLUSHING BASIN AT STA 30+089

STA 30+089 LT TO STA 30+151 LT
NEW 450 mm x 60.9 m RCP (CLASS III) OR CPEP (SL)
RELAYING PIPE CULVERT 450 mm x 2.4 m RCP
NEW PRCCB AT INLET (1.2 m DIA.)
PRCCB IS TO BE PLACED TO INTERCEPT EXISTING
CULVERT FROM STA 30+045 LT
W/ CI GRATE TYPE D

STA 30+089 LT TO STA 30+151 LT
NEW 150 mm UD w/ FLUSHING BASIN AT STA 30+089

STA 30+151 LT
NEW 450 mm x 1.5 m RCP (CLASS III) OR CPEP (SL)
OR PCCSP (1.63) OR CAAP (1.52)
NEW PRCCB AT INLET (1.2 m DIA.)
W/ CI GRATE TYPE A

STA 30+151 LT TO STA 30+180 LT
NEW 150 mm UD w/ FLUSHING BASIN AT STA 30+154

STA 30+151 LT TO STA 30+180 LT
NEW 450 mm x 27.0 m PCCSP (1.63) OR CAAP (1.52)
NEW PRCCB AT INLET (1.8 m DIA.)
W/ CI GRATE TYPE E

STA 30+180 RT TO STA 30+210 RT
NEW 450 mm x 30.5 m RCP (CLASS III) OR CPEP (SL)
NEW PRCCB AT INLET (1.8 m DIA.)
W/ CI GRATE TYPE A

STA 30+180 LT TO STA 30+210 LT
NEW 450 mm x 30.5 m RCP (CLASS III) OR CPEP (SL)
OR PCCSP (1.63) OR CAAP (1.52)
NEW PRCCB AT INLET (1.2 m DIA.)
W/ CI GRATE TYPE A

STA 30+180 RT TO STA 30+210 RT
NEW 450 mm x 30.5 m RCP (CLASS III) OR CPEP (SL)
OR PCCSP (1.63) OR CAAP (1.52)
NEW PRCCB AT INLET (1.2 m DIA.)
W/ CI GRATE TYPE A

STA 30+180 RT TO STA 30+210 RT
NEW 450 mm x 30.5 m RCP (CLASS III) OR CPEP (SL)
OR PCCSP (1.63) OR CAAP (1.52)
NEW PRCCB AT INLET (1.2 m DIA.)
W/ CI GRATE TYPE A

STA 30+144 RT TO STA 30+151 LT
NEW 150 mm UD CARRIER PIPE

STA 30+148 RT TO STA 30+151 LT
NEW 750 mm x 21.7 m RCP (CLASS III) OR CPEP (SL)
NEW PRCMH AT INLET (1.5 m DIA.)
W/ CI COVER

STA 30+089 RT TO STA 30+151 LT
NEW 450 mm x 17 m RCP (CLASS III) OR CPEP (SL)
OR PCCSP (1.63) OR CAAP (1.52)
NEW PRCCB AT INLET (1.2 m DIA.)
W/ CI GRATE TYPE D

P1 P2 P3 P4 P5 P6 P7 P8 P30 P31 P32 U1 U2 U3 U4 U5 D1 D2

30+060 30+080 30+100 30+120 30+140 30+160 30+180 30+200

0 10 20 30
SCALE IN METERS

EROSION MATTING
STA 30+100 TO 30+130 LT
STA 30+110 TO 30+140 RT

STONE FILL TYPE I
STA 30+130 TO 30+210 LT
STA 30+140 TO 30+210 RT

DATUM
VERTICAL NGVD 1929
HORIZONTAL NAD 1983

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: ...\zb270bd2.dgn	
IPARM FILE NAME:	PLOT DATE: 09/20/2002
SURVEYED BY:	SURVEY DATE:
SQUAD LEADER: W HUSBAND	DRAWN BY: P SHEDD
CLD REF NO. 00-0358	SHEET: 47 OF 145

DRAINAGE LAYOUT & EROSION CONTROL SHEET 2

Metric

P8 RETAINING WALL CONST. LIMITS

U5 STA. 30+182 LT TO STA. 30+250 LT NEW 150 mm UD w/ FLUSHING BASIN AT STA 30+182 (RETAIN 50+320)

U6 STA. 30+252 LT TO STA. 30+285 LT NEW 150 mm UD w/ FLUSHING BASIN AT STA 30+252

U7 STA. 30+287 LT TO STA. 30+326 LT NEW 150 mm UD w/ FLUSHING BASIN AT STA 30+287

U8 STA. 30+310 RT TO STA. 30+326 RT NEW 150 mm UD w/ FLUSHING BASIN AT STA 30+310

U9 STA. 30+326 LT TO STA. A203+50 LT NEW 150 mm UD w/ FLUSHING BASIN AT STA A203+50

U10 STA. 30+326 RT TO STA. A203+50 RT NEW 150 mm UD w/ FLUSHING BASIN AT STA A203+50

STA 30+222.922 VT RTE 9 = STA 50+272.791 RAILROAD

P9 STA. 30+250 RT TO STA. 30+250 LT
NEW 450 mm x 11.2 m RCP (CLASS III) OR CPEP (SL) OR PCCSP (1.63) OR CAAP (1.52)
NEW PRCCB AT INLET (1.2 m DIA.)
W/ CI GRATE TYPE E

P10 STA. 30+250 LT
NEW 450 mm x 1.5 m RCP (CLASS III) OR CPEP (SL) OR PCCSP (1.63) OR CAAP (1.52)
NEW PRCCB AT INLET (1.2 m DIA.)
W/ CI GRATE TYPE A

P11 STA. 30+250 LT TO STA. 30+285 LT
NEW 900 mm x 33.5 m PCCSP (1.63) OR CAAP (1.52)
NEW PRCCB AT INLET (1.8 m DIA.)
W/ CI GRATE TYPE E

P12 STA. 30+285 LT TO STA. 30+326 LT
NEW 900 mm x 39.3 m RCP (CLASS III) OR CPEP (SL)
NEW PRCCB AT INLET (1.5 m DIA.)
W/ CI GRATE TYPE D

P13 STA. 30+326 LT
NEW 450 mm x 1.5 m RCP (CLASS III) OR CPEP (SL) OR PCCSP (1.63) OR CAAP (1.52)
NEW PRCCB AT INLET (1.2 m DIA.)
W/ CI GRATE TYPE A

EROSION MATTING
STA 30+280.0 TO 30+310.0 LT
STA 30+300.0 TO 30+320.0 RT

STONE FILL TYPE I
STA 30+210 TO 30+280 LT
STA 30+210 TO 30+300 RT

STONE FILL TYPE II
STA A 203+49 TO A 203+63 RT

STONE FILL TYPE IV
STA A 203+63 TO A 203+73 RT

P14 STA. 30+326 LT TO STA. 30+326 RT
NEW 900 mm x 9.2 m RCP (CLASS III) OR CPEP (SL)
NEW PRCCB AT INLET (2.1 m DIA.)
W/ CI GRATE TYPE D

P15 STA. 30+326 RT
NEW 900 mm x 14.4 m RCP (CLASS III) OR CPEP (SL)
NEW PRCCB AT INLET (1.8 m DIA.)
W/ CI GRATE TYPE D

P16 STA. 30+337 LT TO STA. 5+016 LT
NEW 450 mm x 8.8 m RCP (CLASS III) OR CPEP (SL) OR PCCSP (1.63) OR CAAP (1.52)
NEW PRCCB AT INLET (1.2 m DIA.)
W/ CI GRATE TYPE A

P17 STA. 30+326 LT TO STA. 30+337 LT
NEW 450 mm x 9.0 m RCP (CLASS III) OR CPEP (SL) OR PCCSP (1.63) OR CAAP (1.52)
NEW PRCCB AT INLET (1.2 m DIA.)
W/ CI GRATE TYPE D

P18 STA. 30+326 RT TO STA. 30+337 RT
NEW 450 mm x 9.2 m RCP (CLASS III) OR CPEP (SL) OR PCCSP (1.63) OR CAAP (1.52)
NEW PRCCB AT INLET (1.2 m DIA.)
W/ CI GRATE TYPE D

P19 STA. 30+326 RT TO STA. 30+338 RT
NEW 900 mm x 9.7 m RCP (CLASS III) OR CPEP (SL)
NEW PRCCB AT INLET (1.8 m DIA.)
W/ CI GRATE TYPE A

P20 INTENTIONALLY LEFT BLANK

P21 STA. 30+338 RT TO STA. 30+339 RT
NEW 600 mm x 5.1 m RCP (CLASS III) OR CPEP (SL)

P22 STA. 30+338 RT TO STA. A203+43 RT
NEW 900 mm x 3.4 m RCP (CLASS III) OR CPEP (SL)
NEW PRCMH AT INLET (2.7 m x 2.4 m)
W/ CI COVER

P23 INTENTIONALLY LEFT BLANK

P24 STA. 30+339 RT TO STA. A203+43 RT
NEW 750 mm x 4.8 m RCP (CLASS III) OR CPEP (SL)
INSTALL TREATMENT CONTROL STRUCTURE AT INLET

P25 STA. A203+43 RT TO STA. A203+52 RT
NEW 900 mm x 9.7 m RCP (CLASS III) OR CPEP (SL)
w/ RCPES (CLASS III) OR CPEPES AT OUTLET
NEW PRCMH AT INLET (1.5 m x 1.5 m)
W/ CI COVER

P26 STA. 30+323 RT TO STA. A203+52 RT
NEW 750 mm x 38.6 m RCP (CLASS III) OR CPEP (SL)
w/ RCPES (CLASS III) OR CPEPES AT OUTLET
NEW PRCMH AT INLET (1.5 m)
W/ CI COVER

P27 STA. 30+265 RT TO STA. 30+323 RT
NEW 750 mm x 56.5 m PCCSP (1.63) OR CAAP (1.52)
NEW PRCMH AT INLET (1.5 m DIA.)
W/ CI COVER

P28 STA. 30+210 RT TO STA. 30+265 RT
NEW 750 mm x 53.8 m PCCSP (1.63) OR CAAP (1.52)
NEW PRCMH AT INLET (1.5 m DIA.)
W/ CI COVER

P29 STA. 30+250 RT TO STA. 30+250 RT
NEW 300 mm x 3.5 m RCP (CLASS III) OR CPEP (SL) OR PCCSP (1.63) OR CAAP (1.52)
NEW PRCCB AT INLET (1.2 m DIA.)
W/ CI GRATE TYPE A

D3 STA. A203+53.5 TO A203+72 RT
CONST SPECIAL DITCH TO RIVER.
EXCAVATE TO LEDGE. IF LEDGE IS NOT FOUND, CONST. DITCH TO RIVER w/ TYPE IV STONE FILL

MATCH LINE STA 30+210

ADDITIONAL FLUSHING BASIN 30+220

150mm CPEP(SL) U.D. ADDITIONAL

HAY BALES AROUND CATCH BASIN (TYP.)

CONSTRUCT PERMANENT TYPE I STONE FILL IN DITCH

VT ROUTE 9

EXIST 200 CMP REMOVE

EXIST 450 CMP REMOVE

STA 30+330.000 VT RTE 9 = STA 5+000.000 DRIVEWAY STA 6+000.000 DRIVEWAY

SILT FENCE

SILT FENCE IN STREAM (TYP.)

FILTER CURTAIN (TYP.)

STA A203+50.000
END PROJECT
NH 010-2(2)
BEGIN NH PROJECT 11999

NEW HAMPSHIRE VERMONT

N

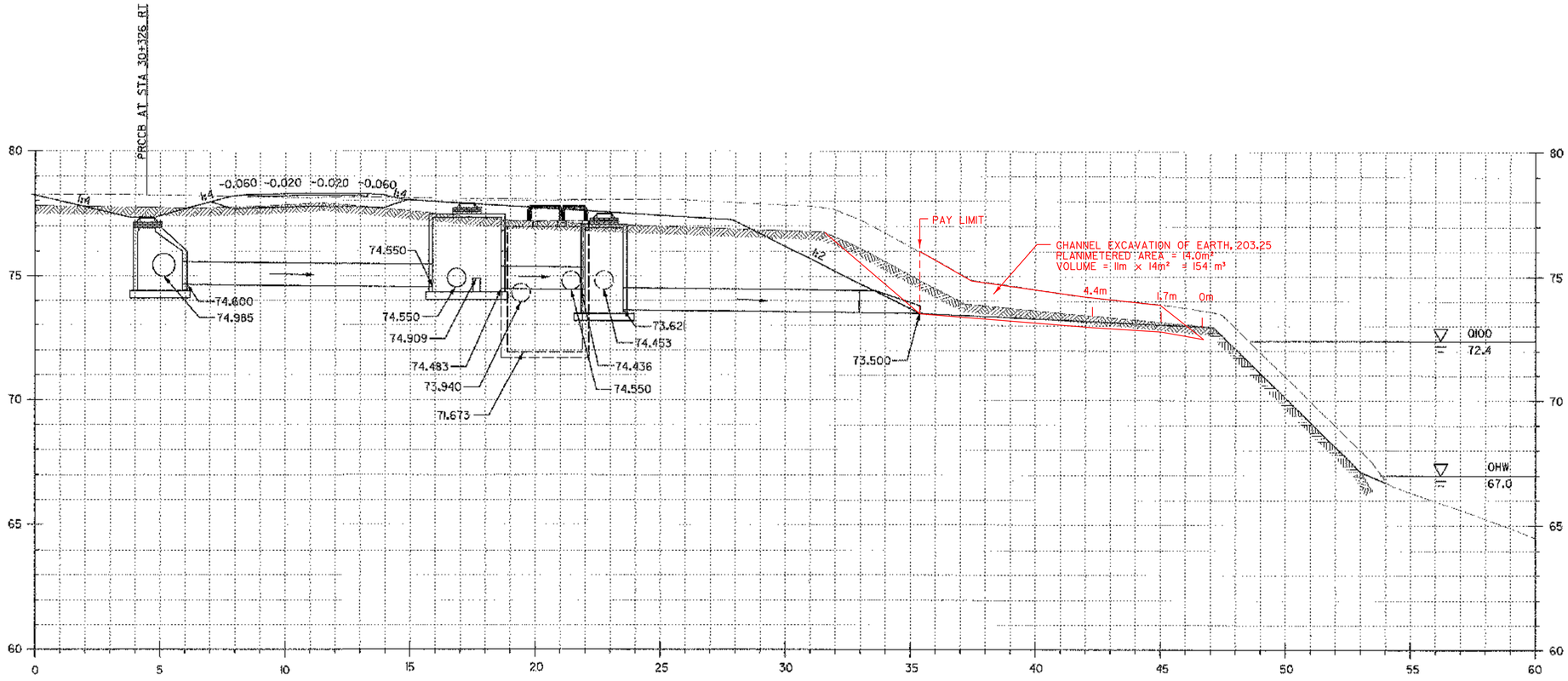
NH STATE PLANE GRID

0 10 20 30
SCALE IN METERS

DATUM
VERTICAL NGVD 1929
HORIZONTAL NAD 1983

PROJECT: BRATTLEBORO
PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: ...\ZB270802.DGN
IPARM FILE NAME:
SURVEYED BY:
SQUAD LEADER: W HUSBAND
CLD REF NO. 00-0358
PLOT DATE: 09/20/2002
SURVEY DATE:
DRAWN BY: P SHEDD
SHEET: 48 OF 145

SECTION A–A



DATUM	
VERTICAL	NGVD 1929
HORIZONTAL	NAD 1983

PROJECT:	PROJECT NO.:
BRATTLEBORO	NH 010-2(2)
DESIGN FILE NAME: ...\zb270xs2.dgn	
IPARM FILE NAME:	PLOT DATE: 09/20/2002
SURVEYED BY:	SURVEY DATE:
SQUAD LEADER: W HUSBAND	DRAWN BY: JAC
CLD REF NO. 00-0358	SHEET: 49 OF 145

GRADING PLAN

NH STATE PLANE GRID

N

30+341.862 =
A 203+40.000

DATUM	
VERTICAL	NGVD 1929
HORIZONTAL	NAD 1983

0 2 4 6 8 10
SCALE IN METERS

PROJECT:	PROJECT NO.:
BRATTLEBORO	NH 010-2(2)
DESIGN FILE NAME: ...\zb270grd.dgn	
IPARM FILE NAME:	PLOT DATE: 09/23/2002
SURVEYED BY:	SURVEY DATE:
SQUAD LEADER: W HUSBAND	DRAWN BY: P SHEDD
CLD REF NO. 00-0358	SHEET: 50 OF 145

Metric

PAVEMENT MARKING & SIGNING SHEET 1

30+050 LT
EXISTING SIGN
TO
RET
RET

30+058 LT
EXISTING SIGN
YIELD
RET
RET

STA 30+075.000
BEGIN APPROACH

STA 30+091.000
END APPROACH
BEGIN PROJECT
NH 010-2(2)

30+105 LT
SALVAGE
ALL SIGNS (12)
TO
WEST
INTERSTATE 91
VERMONT 9
SOUTH
NORTH
5
5
N
N

30+106 LT EXISTING SIGNS
TO
WEST
NORTH
SOUTH
INTERSTATE 91
VERMONT 9
5
5
R
REMOVE & SALVAGE
ALL SIGNS (12)
R

30+175 LT
JCT
5
S
S
N

30+139 LT
EXISTING SIGN
SAFETY BELTS
REQUIRED
R&S
R
R

30+170 LT
EXISTING SIGN
MASSACHUSETTS 12
BELLOWS FALLS 20
T.I.S.
R
R&S(4)
R

30+206 LT
EXISTING SIGN
JCT
5
R&S
R&S
R

30+205 LT
S
S
ROUNDABOUT
S
N
N

30+135 LT
T.I.S.
S N
N

30+155 LT
MASSACHUSETTS 12
BELLOWS FALLS 20
T.I.S.
S(4)12
N
N
N
N

30+160 LT
EXISTING SIGN
T.I.S.
R&S
R

PROP. MSE RETAINING WALL

MATCH LINE 30+210

STA 30+194.1

4.00

1.5
3.3
0.3
3.3
2.3
3.3
0.3
3.3
3.3
1.5

0
30+060
30+080
R 185
30+100
R 150
30+120
30+140
30+160
30+180
30+200
30+210

VT ROUTE 9

SIDEWALK

SIDEWALK

30+053 RT
EAST
VERMONT
9
S
S
N

30+053 RT
EXISTING SIGN
EAST
VERMONT
9
R&S
R&S
R

30+088 RT
EXISTING SIGN
KEENE NH 15
R&S
R
R

30+088 RT
11
N
N
N

30+086 CL
EXISTING SIGN
RET
RET
RET

30+113 CL
EXISTING SIGN
R&S
R&S
R

30+117 CL
S
S
N

30+125 RT
KEENE NH 15
S N
N
N

30+152 CL
S
S
N

30+154 RT
EXISTING SIGN
HIDDEN
DRIVE
RIGHT
R
35
M.P.H.
R

30+157 CL
EXISTING SIGN
R&S
R&S
R

SIGN LEGEND

RET = RETAIN
R = REMOVE
R&S = REMOVE & SALVAGE
S = SALVAGE
N = NEW
B&B = BACK TO BACK
T&T = THINNING & TRIMMING
——— = PROPOSED SIGN
----- = EXISTING SIGN

DATUM
VERTICAL NGVD 1929
HORIZONTAL NAD 1983

NH STATE PLANE GRID N

REMOVING SIGNS
AS SHOWN - 29

ERECTING SALVAGED SIGNS
AS SHOWN - 26

TEMPORARY AND DURABLE 200 mm YELLOW LINE
STA 30+085 TO 30+089 CL DIAGONAL (ISLAND)
STA 30+112 TO 30+120 CL DIAGONAL (ISLAND)
STA 30+153 TO 30+194 CL DIAGONAL (TAPER)

TEMPORARY AND DURABLE 100 mm YELLOW LINE
STA 30+075 TO 30+085 RT & LT SINGLE SOLID
STA 30+085 TO 30+089 RT & LT DOUBLE SOLID
STA 30+089 TO 30+112 RT & LT SOLID/BROKEN
STA 30+112 TO 30+120 RT & LT DOUBLE SOLID
STA 30+120 TO 30+152 RT & LT SINGLE SOLID
STA 30+152 TO 30+188 RT & LT DOUBLE SOLID
STA 30+188 TO 30+210 CL DOUBLE SOLID

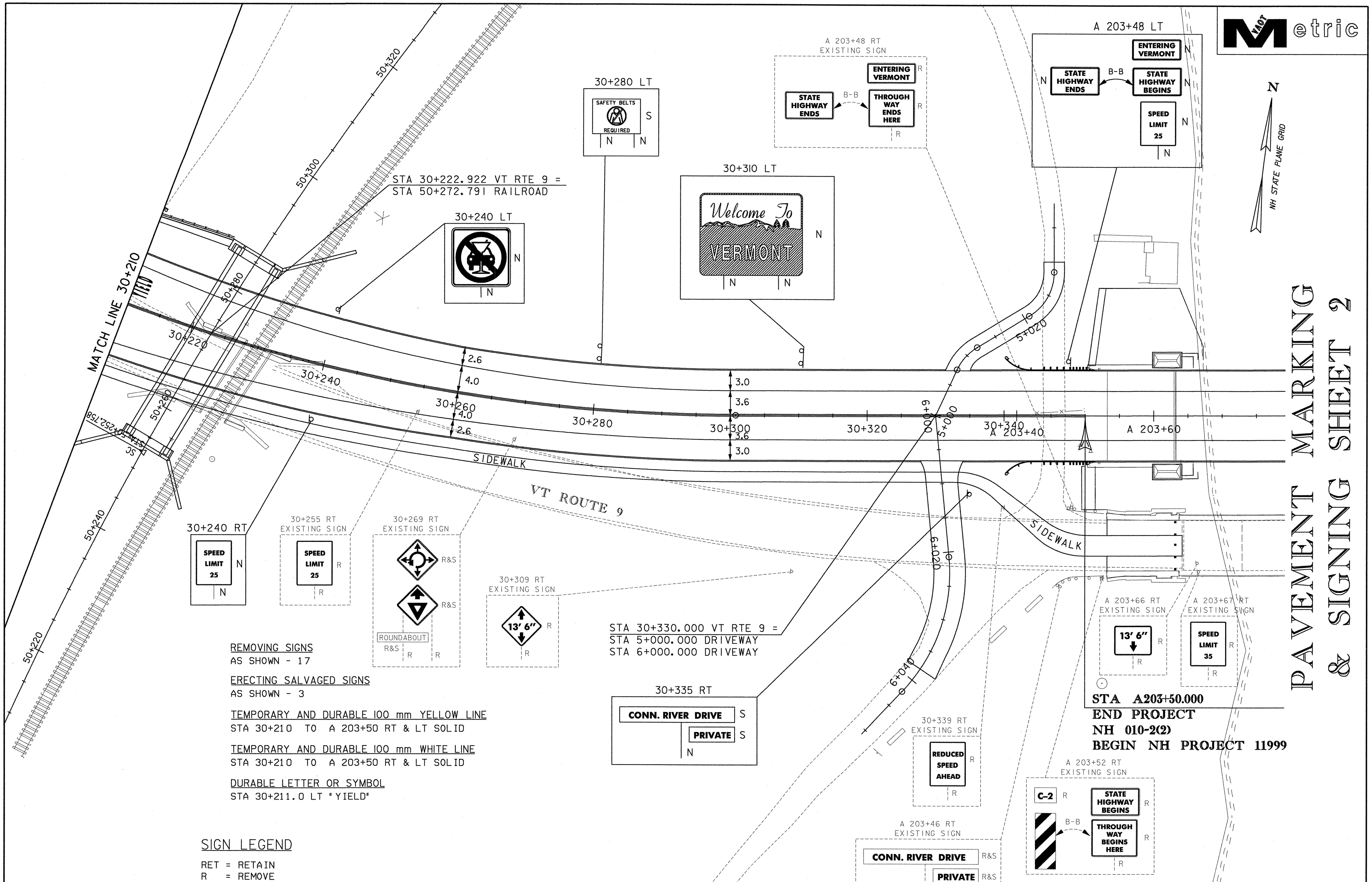
TEMPORARY AND DURABLE 100 mm WHITE LINE
STA 30+075 TO 30+210 RT & LT SOLID (EDGE)
STA 30+075 TO 30+160 RT DASHED
STA 30+075 TO 30+200 LT DASHED

DURABLE LETTER OR SYMBOL
STA 30+199.0 LT "AHEAD"

TRAVEL INFORMATION SIGNS
STA 30+155 LT - 2
STA 30+135 LT - 1

0 10 20 30
SCALE IN METERS

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: ...\zb270bd2.dgn	
IPARM FILE NAME:	PLOT DATE: 09/23/2002
SURVEYED BY:	SURVEY DATE:
SQUAD LEADER: W HUSBAND	DRAWN BY: P SHEDD
CLD REF NO. 00-0358	SHEET: 51 OF 145



REMOVING SIGNS
AS SHOWN - 17

ERECTING SALVAGED SIGNS
AS SHOWN - 3

TEMPORARY AND DURABLE 100 mm YELLOW LINE
STA 30+210 TO A 203+50 RT & LT SOLID

TEMPORARY AND DURABLE 100 mm WHITE LINE
STA 30+210 TO A 203+50 RT & LT SOLID

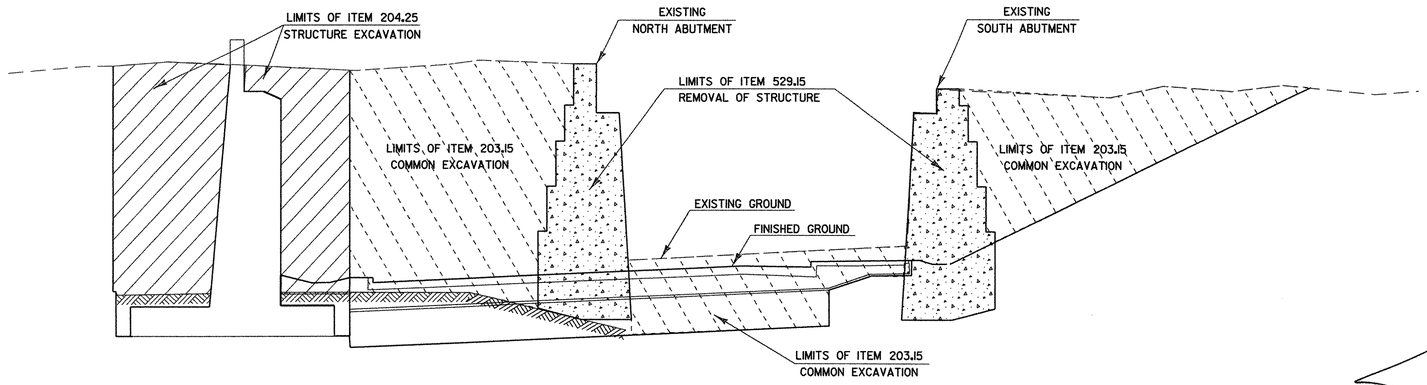
DURABLE LETTER OR SYMBOL
STA 30+211.0 LT 'YIELD'

SIGN LEGEND

RET = RETAIN
R = REMOVE
R&S = REMOVE & SALVAGE
S = SALVAGE
N = NEW
B&B = BACK TO BACK
T&T = THINNING & TRIMMING
—— = PROPOSED SIGN
- - - = EXISTING SIGN

DATUM	
VERTICAL	NGVD 1929
HORIZONTAL	NAD 1983

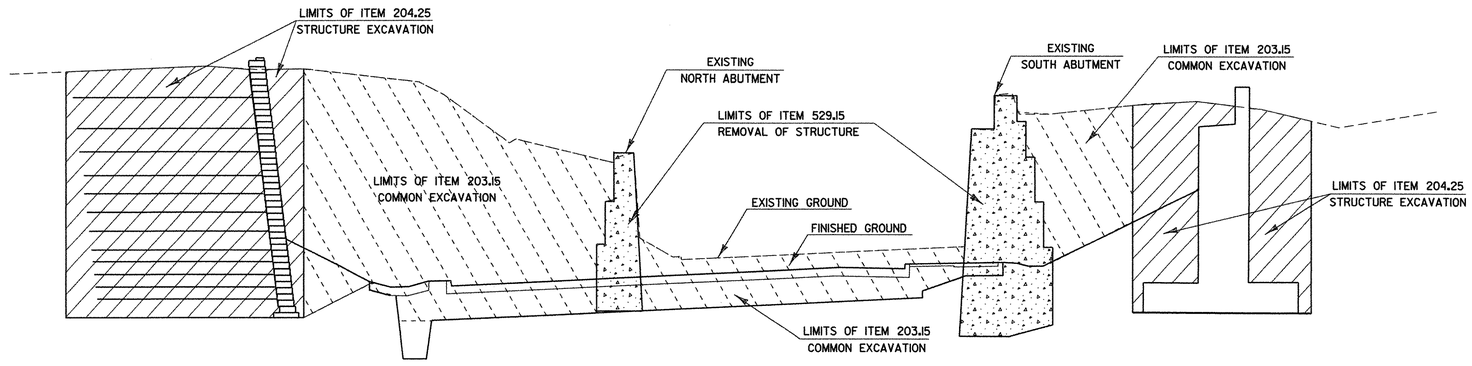
PROJECT: BRATTLEBORO
PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: ...\zb270bd2.dgn
IPARM FILE NAME:
SURVEYED BY:
SQUAD LEADER: W HUSBAND
CLD REF NO. 00-0358
PLOT DATE: 09/25/2002
SURVEY DATE:
DRAWN BY: P SHEDD
SHEET: 52 OF 145



2

TYPICAL EXCAVATION LIMITS

NOT TO SCALE



2 Addendum Two, New Sheet, Removal/Excavation Limits Dec 6, 2002

PROJECT NAME: BRATTLEBORO
PROJECT NUMBER: NH BRF 012-1(33)

FILE NAME: \BRAT_CHANGES.DGN
PROJECT MANAGER:
DESIGNED BY:
PLOT DATE: 04-DEC-2002
DRAWN BY: G.BOKES
CHECKED BY:
SHEET 53 OF 145

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

Metric

KILOMETER MARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (mm)	HEIGHT (mm)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NO. OF POSTS	NEW SIGN POSTS: FLANGED CHANNEL kg/m 1.7	3.0	4.5	SQUARE STEEL (mm) kg/m 44 3.4	50 3.9	63 5.0	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (mm) kg/m 75 1.9	100 2.5	100 MOD 2.5	TUBULAR STEEL Ø (mm) FOUNDATION	kg/m 75 11.3	89 13.4	100 16.1	125 21.7	W-SHAPE STEEL FTG. SIZE 600 mm	750 mm	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL: DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												OPTION ITEMS																								
30+053 RT	EAST						1				1			X 3.66																				SEE STD E-123M		
	VERMONT 9						1																													
30+086 CL		1	600	750	0.45									X 4.27																						
		1	450	450	0.20																															
30+088 RT		1	900	900	0.81						2			X 7.32																					E-151M
30+~~105~~ 125 LT	TO WEST						2				2												2	X										SEE STD E-123M		
	INTERSTATE 91 VERMONT 9						2																													
							2																													
	SOUTH NORTH						2																													
	5 5						2																													
							2																													
30+117 CL							1				1			X 4.27																						
							1																													
30+125 RT	KEENE NH 15	1	1350	190	0.26		~~1~~ 0				2			X 7.32																				SEE STD E-123M		
												m	m 19.8	m 44.7	m	m	m		EA	kg	kg	kg		kg	kg	kg	kg								
SHEET TOTALS			m² ~~0.81~~ 1.72		m²		EA. ~~17~~ 16	m²				m ~~64.5~~ 26.84			m					kg			EA. 2	kg 61.0							EA.	EA.	kg			

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

PROJECT : BRATTLEBORO	PROJECT NO. : NH 010-2(2)
DESIGN FILE NAME: ...\zb270frm.dgn	
IPARM FILE NAME: -	PLOT DATE: 09/20/2002
SURVEYED BY:	SURVEY DATE:
SQUAD LEADER: W HUSBAND	DRAWN BY: P SHEDD
CLD REF NO. 00-0358	SHEET: 54 OF 145

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

VAOT Metric

KILOMETER MARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (mm)	HEIGHT (mm)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL kg/m 1.7	3.0	4.5	SQUARE STEEL (mm) 44 kg/m 3.4	50 kg/m 3.9	63 kg/m 5.0	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (mm) 75 kg/m 1.9	100 kg/m 2.5	100 MOD. kg/m 2.5	TUBULAR STEEL Ø (mm) FOUNDATION	75 kg/m 11.3	89 kg/m 13.4	100 kg/m 16.1	125 kg/m 21.7	W-SHAPE STEEL FTG. SIZE 600 mm	750 mm	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												OPTION ITEMS																									
30+135 LT	T.I.S.	1	1800	200	PAID UNDER 680.20 0.36			~~0.36~~						X 8.54																				SEE STD E-125M		
	1																																		
30+152 CL							1				1			X 4.27																						
							1																													
30+155 LT	MASSACHUSETTS 12	1	1524	190	0.29		~~1~~				2			X 7.32																				SEE STD E-123M		
	BELLOWS FALLS 20	1	1524	190	0.29		~~1~~																											SEE STD E-123M		
	T.I.S.						1	~~0.36~~																										SEE STD E-125M		
							1	~~0.09~~																										SEE STD E-125M		
30+175 LT	JCT						1				1			X 3.66																				SEE STD E-123M		
	5						1																													
30+205 LT							1				2			X 8.54																						
							1																													
	ROUNDABOUT						1																													
												m	m	m 82.4	m	m	m		EA	kg	kg	kg		kg	kg	kg	kg								
	SHEET TOTALS		m² 0.94 ~~0~~	m²	EA. 9	m² 0.81						m 32.33 ~~82.4~~			m					kg			EA.	kg				EA.	EA.	kg					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

PROJECT :	PROJECT NO. :
BRATTLEBORO	NH 010-2(2)

DESIGN FILE NAME: ...\zb270frm.dgn
IPARM FILE NAME: -
SURVEYED BY:
SQUAD LEADER: W HUSBAND
CLD REF NO. 00-0358
PLOT DATE: 09/20/2002
SURVEY DATES:
DRAWN BY: P SHEDD
SHEET: 55 OF 145

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

Metric

KILOMETER MARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (mm)	HEIGHT (mm)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NO. OF POSTS	NEW SIGN POSTS: FLANGED CHANNEL kg/m 1.7	3.0	4.5	SQUARE STEEL (mm) kg/m 44 3.4	50 3.9	63 5.0	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (mm) kg/m 75 1.9	100 2.5	100 MOD 2.5	TUBULAR STEEL Ø (mm) FOUNDATION	75 11.3	89 13.4	100 16.1	125 21.7	W-SHAPE STEEL FTG. SIZE 600 mm	750 mm	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												OPTION ITEMS																									
30+240 LT		1	600	600	0.36						1			X 3.66																						E-143M
30+240 RT	SPEED LIMIT 25	1	600	750	0.45						1			X 3.66																						E-142M
30+280 LT	SAFETY BELTS REQUIRED						1				2		X 7.32																								
30+310 LT	Welcome To	1	750	600	0.45						2		X 7.32																						11	
30+335 RT	CONN. RIVER DRIVE						1				1			X 3.66																							
	PRIVATE						1																													
A 203+48 LT	ENTERING VERMONT	1	600	325	0.20						1			X 4.27																				BACK TO BACK	11	
	STATE HIGHWAY BEGINS / STATE HIGHWAY ENDS	1 1	600 600	450 450	0.27 0.27																														E-141M
	SPEED LIMIT 25	1	600	750	0.45																														E-142M
	SUBTOTAL THIS SHEET				2.45		3	--					39.6	58.2									--	--											
	SUBTOTAL SHEET 54				~~0.81~~		~~17~~ 16	--					19.8	44.7									2	61.0											
	SUBTOTAL SHEET 55				1.72 0.94		9	~~0.81~~					--	82.4									--	--											
												m	m	m	m	m	m		EA	kg	kg	kg		kg	kg	kg	kg							
													~~59.4~~	~~185.3~~ 29.89										61.0										
	PROJECT TOTALS	m² 5.11 3.26	m²		EA. ~~28~~ 29	m² ~~0.81~~						m ~~244.7~~ 89.06			m					kg			EA. 2	kg 61.0				EA.	EA.	kg				

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

PROJECT : BRATTLEBORO

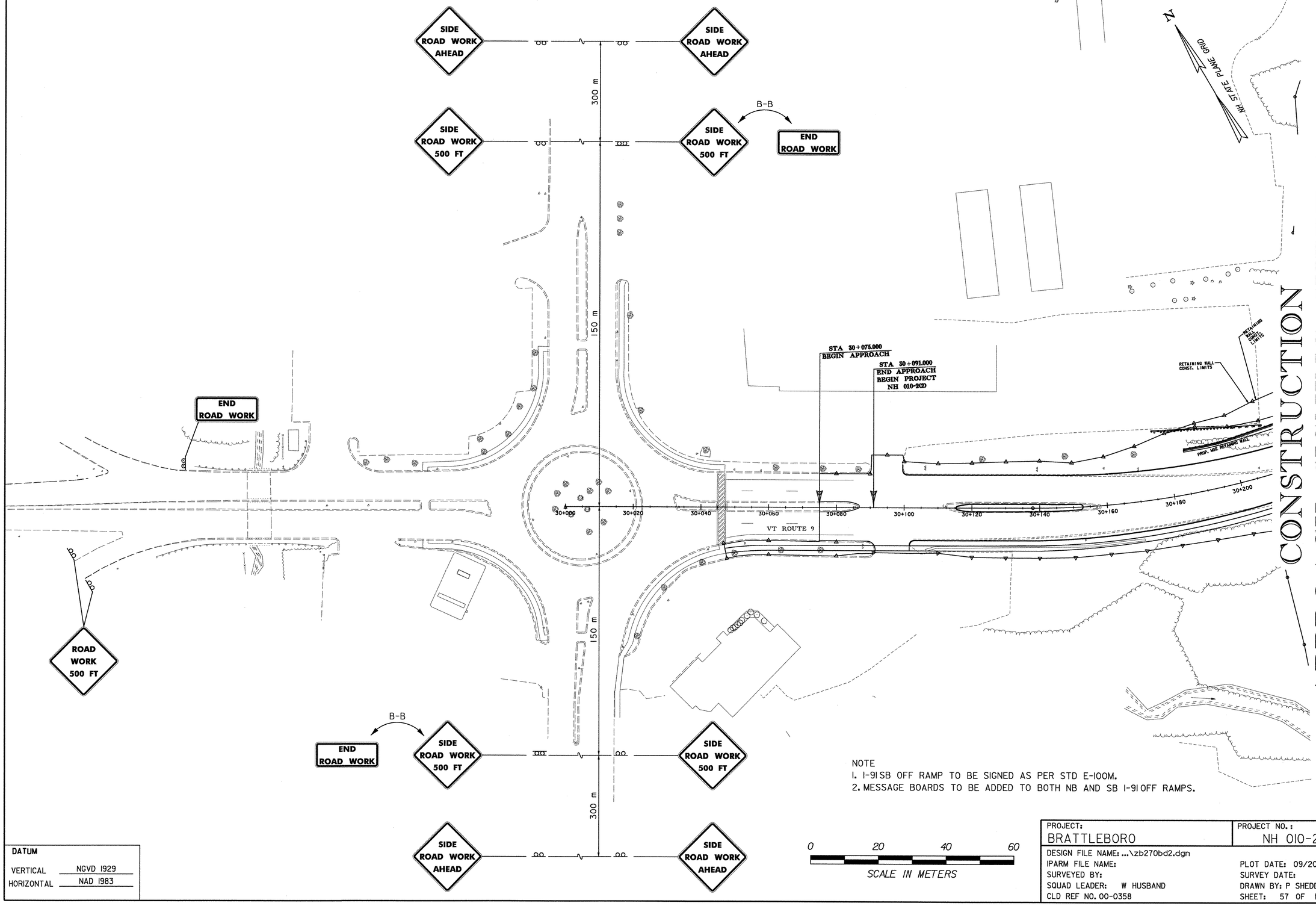
PROJECT NO. : NH 010-2(2)

DESIGN FILE NAME: ...\zb270frm.dgn
IPARM FILE NAME: -
SURVEYED BY:
SQUAD LEADER: W HUSBAND
CLD REF NO. 00-0358

PLOT DATE: 09/20/2002
SURVEY DATE:
DRAWN BY: P SHEDD
SHEET: 56 OF 145

Metric

CONSTRUCTION SIGNING SHEET 1
APPROACH SIGNING



NOTE
1. I-91 SB OFF RAMP TO BE SIGNED AS PER STD E-100M.
2. MESSAGE BOARDS TO BE ADDED TO BOTH NB AND SB I-91 OFF RAMPS.

0 20 40 60
SCALE IN METERS

DATUM	
VERTICAL	NGVD 1929
HORIZONTAL	NAD 1983

PROJECT:	PROJECT NO.:
BRATTLEBORO	NH 010-2(2)
DESIGN FILE NAME: ...\zb270bd2.dgn	
IPARM FILE NAME:	PLOT DATE: 09/20/2002
SURVEYED BY:	SURVEY DATE:
SQUAD LEADER: W HUSBAND	DRAWN BY: P SHEDD
CLD REF NO. 00-0358	SHEET: 57 OF 145

CONSTRUCTION APPROACH SIGNING SHEET 2

VTRANS Metric

N

NH STATE PLANE GRID

STA A 205+40 RT

ROAD WORK 500 FT

STA A 208+70 RT

ROAD WORK AHEAD

A 203+60 A 203+80 A 204+00 A 204+20 A 204+40 A 204+60 A 204+80 A 205+00 A 205+20 A 205+40 A 205+60 A 205+80 A 206+00 A 206+20 A 206+40 A 206+60 A 206+80 A 207+00 A 2

STA A203+50.000
END PROJECT
NH 010-2(2)
BEGIN NH PROJECT 11999

STA A 208+70 RT
B-B

END ROAD WORK

ROAD WORK AHEAD

ROAD WORK 500 FT

STA A 205+40 RT

0 20 40 60

SCALE IN METERS

DATUM

VERTICAL	NGVD 1929
HORIZONTAL	NAD 1983

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: ...\zb270bd2.dgn	
IPARM FILE NAME:	PLOT DATE: 09/20/2002
SURVEYED BY:	SURVEY DATE:
SQUAD LEADER: W HUSBAND	DRAWN BY: P SHEDD
CLD REF NO. 00-0358	SHEET: 58 OF 145

SOIL CLASSIFICATION

AASHTO

A1	Gravel and Sand
A3	Fine Sand
A2	Silty or Clayey Gravel and Sand
A4	Silty Soil - Low Compressibility
A5	Silty Soil - Highly Compressible
A6	Clayey Soil - Low Compressibility
A7	Clayey Soil - Highly Compressible

ROCK QUALITY DESIGNATION

R.Q.D. (%)	ROCK DESCRIPTION
<25	Very Poor
25 to 50	Poor
51 to 75	Fair
76 to 90	Good
>90	Excellent

SHEAR STRENGTH

UNDRAINED SHEAR STRENGTH IN kPa	CONSISTENCY
<12	Very Soft
12-24	Soft
24-48	Med. Stiff
48-96	Stiff
96-192	Very Stiff
>192	Hard

CORRELATION GUIDE OF "N" TO DENSITY/CONSISTENCY

DENSITY (GRANULAR SOILS) N	DESCRIPTIVE TERM	CONSISTENCY (COHESIVE SOILS) N	DESCRIPTIVE TERM
<5	Very Loose	<2	Very Soft
5-10	Loose	2-4	Soft
11-24	Med. Dense	5-8	Med. Stiff
25-50	Dense	9-15	Stiff
>50	Very Dense	16-30	Very Stiff
		31-60	Hard
		>60	Very Hard

COMMONLY USED SYMBOLS

▼	Water Elevation
	Standard Penetration Boring
⊕	Auger Boring
⊙	Rod Sounding
S	Sample
N	Standard Penetration Test Blow Count Per 300 mm For: 50.8 mm O. D. Sampler 35.0 mm I. D. Sampler Hammer Weight Of 63.5 kg. Hammer Fall Of 762 mm
VS	Field Vane Shear Test
US	Undisturbed Soil Sample
B	Blast
DC	Diamond Core
MD	Mud Drill
WA	Wash Ahead
HSA	Hollow Stem Auger
AX	Core Size 30.1 mm
BX	Core Size 42.0 mm
NX	Core Size 54.7 mm
M	Double Tube Core Barrel Used
LL	Liquid Limit
PL	Plastic Limit
PI	Plasticity Index
NP	Non Plastic
w	Moisture Content (Dry Wgt. Basis)
D	Dry
M	Moist
MTW	Moist To Wet
W	Wet
Sat	Saturated
Bo	Boulder
Gr	Gravel
Sa	Sand
Si	Silt
Cl	Clay
HP	Hardpan
Le	Ledge
NLTD	No Ledge To Depth
CNPF	Can Not Penetrate Further
TLOB	To Ledge Or Boulder
NR	No Recovery
Rec.	Recovery
%Rec.	Percent Recovery
RQD	Rock Quality Designation
CBR	California Bearing Ratio
<	Less Than
>	Greater Than
R	Refusal (N > 100)

COLOR

blk	Black	pnk	Pink
bl	Blue	pu	Purple
brn	Brown	rd	Red
dk	Dark	tn	Tan
gry	Gray	wh	White
gn	Green	yel	Yellow
lt	Light	mltc	Multicolored
or	Orange		

DEFINITIONS (AASHTO)

BEDROCK (LEDGE) Rock in its native location of indefinite thickness.

BOULDER - A rock fragment with an average dimension > 304.8 mm.

COBBLE - Rock fragments with an average dimension between 76.2 and 304.8 mm.

GRAVEL - Rounded particles of rock < 76.2 mm and > 2 mm (#10 sieve).

SAND - Particles of rock < 2 mm (#10 sieve) and > 75 μm (#200 sieve).

SILT - Soil < 75 μm (#200 sieve), non or slightly plastic and exhibits no strength when air-dried.

CLAY - Fine grained soil, exhibits plasticity when moist and considerable strength when air-dried.

VARVED - Alternate layers of silt and clay.

HARDPAN - Extremely dense soil, cemented layer, not softened when wet.

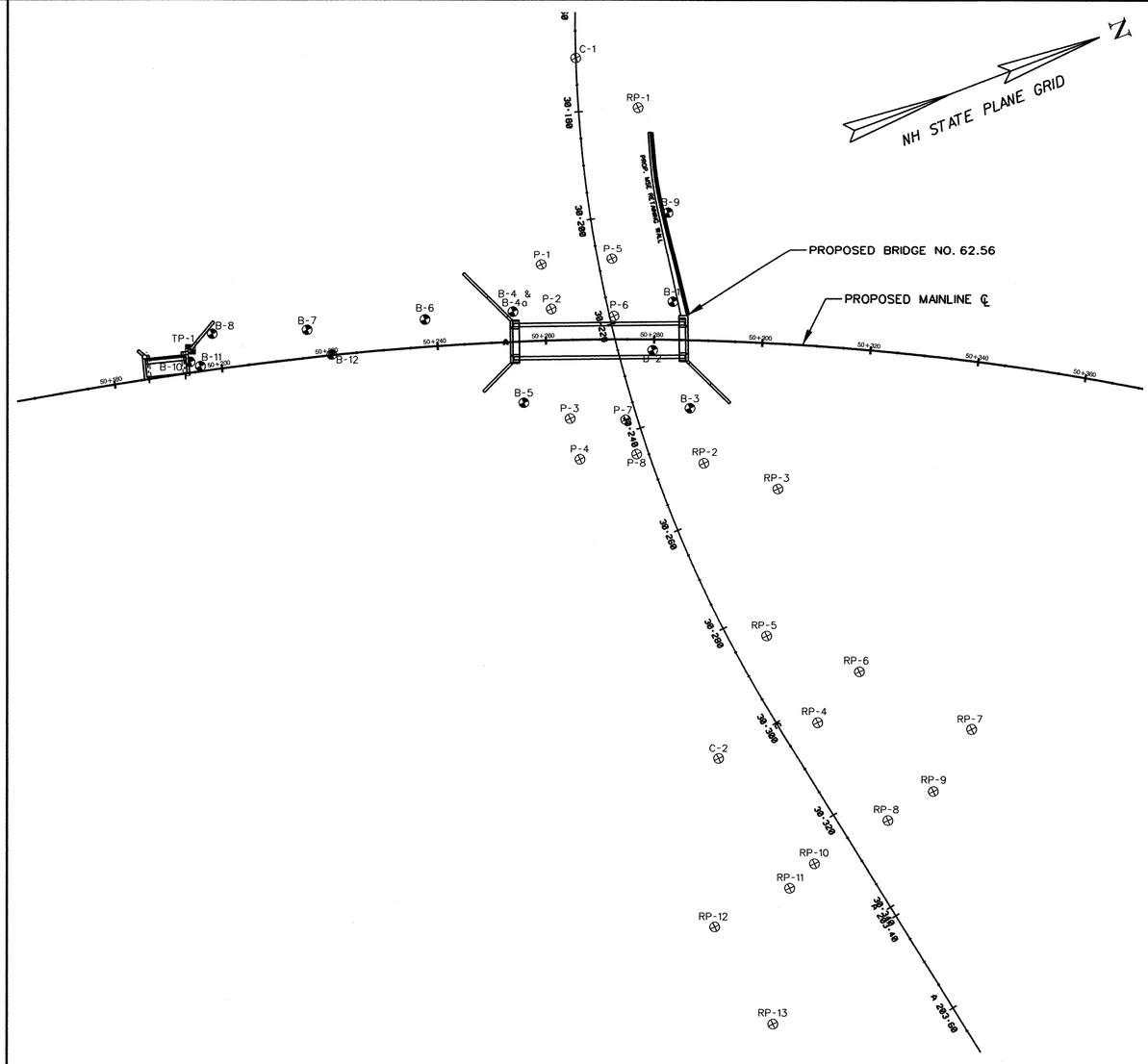
MUCK - Soft organic soil (containing > 10% organic material.

MOISTURE CONTENT - Weight of water divided by dry weight of soil.

FLOWING SAND - Granular soil so saturated (loose) that it flows into drill casing during extraction of wash rod.

STRIKE - Angle from magnetic north to line of intersection of bed with a horizontal plane.

DIP - Inclination of bed with a horizontal plane.



BORING LAYOUT

0 10 20 30

SCALE 1:500

BORING CHART

HOLE NO.	STATION	OFFSET (M)	GROUND ELEV.
B-1	RR 50+283.34	7.02 LT	87.866
B-2	RR 50+279.71	1.95 RT	87.878
B-3	RR 50+286.84	12.59 RT	87.554
B-4	RR 50+254.16	5.72 LT	84.774
B-4A	RR 50+254.16	5.72 LT	84.774
B-5	RR 50+255.41	11.22 RT	86.720
B-6	RR 50+238.02	5.27 LT	83.876
B-7	RR 50+216.39	5.43 LT	84.213
B-8	RR 50+199.06	6.87 LT	84.106
B-9	RR 50+282.28	23.79 LT	87.180
B-10	RR 50+194.35	2.00 LT	85.1
B-11	RR 50+196.10	0.95 LT	86.1
B-12	RR 50+220.42	0.12 LT	86.0
P-1	30+206.85	10.44 RT	83.254
P-2	30+214.99	10.22 RT	82.726
P-3	30+214.61	11.88 RT	81.141
P-4	30+241.92	12.38 RT	80.675
P-5	30+208.07	2.59 LT	82.550
P-6	30+218.63	0.78 LT	81.934
P-7	30+237.73	2.12 RT	80.492
P-8	30+244.28	2.16 RT	80.010
TP-1	RR 50+194.72	4.46 LT	84.009
RP-1	30+180.00	11.00 LT	84.945
RP-2	30+250.05	9.00 LT	88.275
RP-3	30+260.00	20.00 LT	88.317
RP-4	30+304	6.5 LT	90.486
RP-5	30+285.02	6.49 LT	89.972
RP-6	30+300.01	18.01 LT	90.037
RP-7	30+320.01	30.01 LT	89.175
RP-8	30+326.18	8.01 LT	87.409
RP-9	30+326.00	17.98 LT	88.964
RP-10	30+325.82	7.72 RT	83.114
RP-11	30+327.25	14.00 RT	77.856
RP-12	30+326.00	29.50 RT	80.005
RP-13	30+345.01	29.80 RT	77.875
C-1	30+170	0.0	84.284
C-2	30+300	12.5 RT	78.250

GENERAL NOTES

1. The subsurface explorations shown herein were made between 11/10/99 and 6/6/00 .
2. Soil and rock classifications, properties and descriptions are based on engineering interpretation from available subsurface information and may not necessarily reflect actual variations in subsurface conditions that may be encountered between individual boring or sample locations.
3. Observed water levels and/or conditions indicated are as recorded at the time of exploration and may vary according to the prevailing rainfall, methods of exploration and other factors.
4. Engineering judgement was exercised in preparing the subsurface information presented herein. Analysis and interpretation of subsurface data was performed and interpreted for Agency design and estimating purposes. Presentation of the information in the Contract is intended to provide the Contractor access to the same data available to the Agency. The subsurface information is presented in good faith and is not intended as a substitute for personal investigation, independent interpretation, independent analysis or judgement by the Contractor.
5. Pictorial structure details shown on the boring plan layout or soils profile are for illustrative purposes only and may not accurately portray final contract details.
6. Terminology used on boring logs to describe the hardness, degree of weathering, and spacing of fractures, joints and other discontinuities in the bedrock is defined in the AASHTO Manual on Subsurface Investigations, 1988.

Metric

PROJECT: BRATTLEBORO

PROJECT NO.: NH 010-2(2)

DESIGN FILE NAME: U:\ 99123-Brattleboro\dgn\ZB270bdr.dgn

PLOT DATE: 10-02-2002

12 BORING LOCATIONS

SHEET: 59 OF 145

RECORD OF BOREHOLE B-1

PROJECT NAME: RT.9 ROAD IMPROVEMENT
SITE NAME: BRATTLEBORO VT
STATION: 50+283.34
GROUND EL.: 87.866

PROJECT NUMBER: 993-6874
SITE NO.:
OFFSET: LT 7.02
G.W. DEPTH: 21'

HOLE NO.: B-1
SHEET 1 OF 1
DATE STARTED: 1430/11-12-99
DATE COMPLETED: 1615/11-15-99

BORING CREW:
CREW CHIEF:
DRILLER: B. BOURASSA
LOGGER: MRT CHECKED: TKA
ADDITIONAL CREW:

BORING RIG: MOBILE B-47
BORING TYPE:
SAMPLE TYPE:
WEIGHT OF HAMMER: 140 lbs
DROP: 30 inches

Boring method: WASH AND DRILL

SOIL PROFILE	ELEVATION	NUMBER	TYPE	BLOWS / 6 INCHES	N	REC.\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0.0-4.0 Loose, light brown, m-f SAND.	87.9	S1	D.O.	1-1-6-8	7	8/24	Loose, light brown, m-f SAND, little silt.
	87.3						4" casing advanced to 4' bgs and washed
4.0-19.0 Loose to compact, grayish brown, m-f SAND, trace silt.	86.6	S2	D.O.	7-6-4-5	10	14/24	Grayish brown, loose, m-f SAND some silt.
	86.0						4" casing advanced to 9' bgs and washed
	85.1	S3	D.O.	5-6-5-6	11	8/24	Grayish brown, compact, m-f SAND, trace silt
	84.5						4" casing advanced to 14' bgs and washed
	83.6	S4	D.O.	6-5-6-5	11	6/24	Grayish brown, compact, m-f SAND some silt.
	83.0						4" casing advanced to 19' bgs and washed
19.0-23.0 Compact, light brown, m-f SAND, trace gravel.	82.1	S5	D.O.	13-11-10-9	21	6/24	Compact, light brown, m-f SAND, trace gravel
	81.5						4" casing advanced to 24' bgs and washed
23.0-38.0 Compact, light brown, SAND, some silt, trace gravel.	80.9						
	80.6	S6	D.O.	11-8-9-9	17	8/24	Compact light brown m-f SAND trace gravel
	79.9						4" casing advanced to 29' bgs and washed
	79.0	S7	D.O.	12-10-11-11	21	8/24	Compact light brown m-f SAND trace gravel
	78.4						4" casing advanced to 34' bgs and washed
	77.5	S8	D.O.	13-11-13-15	24	16/24	Compact, light brown m-f SAND, some silt
TOP OF FOOTING	76.9						4" casing advanced to 38' bgs and washed
38.0 BEDROCK	76.3						Rollerconed from 38'-39' bgs
	76.0						Coring from 39'-54' bgs

RECORD OF ROCK COREHOLE B-1

ABBREVIATIONS:
B - BEDDING, S - SLICKENSIDED, W - WAVEY
FO - FOLIATION, SM - SMOOTH, C - CURVED
CA - CALCITE, R - ROUGH / RIDGED, LI - LIMONITE
CL - CORE LOSS, ST - STEPPED, CH - CHLORITE
CO - CONTACT, M - MANY, FE - IRON
F - FAULT, PL - PLANAR, CL - CLAY
J - JOINT, FL - FLEXURED, ME - MECH FRACTURE
P - POLISHED, UE - UNEVEN, CL - CORE LOSS

RUN INFORMATION

RUN	1	2	3
FROM	39	44	49
TO	44	49	54
TCR	98	98	95
RQD.	65	80	30

Boring method: NX Coring

CORE DESCRIPTION: 39'-54' Fresh to slightly weathered, very closely jointed, gray, very fine grained PHYLLITE with several near vertical joints.

RUN	ELEVATION	% FLUSH RET. FRACTURE	FRACTURE INDEX (1ft INT)	DISCONTINUITIES
Run No. 1	76.0	0%, 0%, 0%, 0%, 0%	2, 2, 1, 2, 2	39.2 5 J/ST 39.4 30 J/FO 40.2 0 J/ST 40.7 33 MF 41.4 30 MF 42.1 45 MF 42.5 68 J/ST 43.0 68 MF/ST 43.5 26 J/R
Run No. 2	74.5	0%, 0%, 0%, 0%, 0%	2, 3, 1, 4, 1	44.1 24 J/R 44.3 12 J/R 45.2 65 MF/R 45.8 72 J/R 45.9 53 MF/R 46.2 80 J/R 47.0 18 MF/R 47.0 22 J/R 47.2 71 J/R 47.3 71 J/R 48.3 25 MF/R
Run No. 3	72.9	0%, 0%, 0%, 0%, 0%	M, 1, M, M, M	49.0 13 J/R 49-54 Core jamed and resulted in many pieces with vertical joints
	71.4			

DRILL RIG: CME-550
DRILLING CONTRACTOR: Con-Tec INC.
DRILLER: B. BOURASSA
TOTAL LENGTH CORED: 15'
BITS USED: 1
SHEET 1 OF 1
LOGGED: MRT
CHECKED: TKA
DATE:

RECORD OF BOREHOLE B-2

PROJECT NAME: RT.9 ROAD IMPROVEMENT
SITE NAME: BRATTLEBORO VT
STATION: 50+279.71
GROUND EL.: 87.878

PROJECT NUMBER: 993-6874
SITE NO.:
OFFSET: RT 1.95
G.W. DEPTH: 20'

HOLE NO.: B-2
SHEET 1 OF 1
DATE STARTED: 1540/11-16-99
DATE COMPLETED: 1610/11-17-99

BORING CREW:
CREW CHIEF:
DRILLER: B. BOURASSA
LOGGER: MRT CHECKED: TKA
ADDITIONAL CREW:

BORING RIG: MOBILE B-47
BORING TYPE:
SAMPLE TYPE:
WEIGHT OF HAMMER: 140 lbs
DROP: 30 inches

Boring method: WASH AND DRIVE

SOIL PROFILE	ELEVATION	NUMBER	TYPE	BLOWS / 6 INCHES	N	REC.\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0.0-11.0 Very loose to compact, light brown, m-f SAND, trace silt.	87.9	S1	D.O.	4-5-5-8	10	8/24	Dark brown compact SAND, little silt and organics
	87.3						4" casing advanced to 4' bgs and washed
	86.7	S2	D.O.	3-2-2-2	4	12/24	Light brown, very loose M-F SAND trace silt
	86.0						4" casing advanced to 9' bgs
	85.1	S3	D.O.	2-2-3-3	5	8/24	Light brown, very loose M-F SAND trace silt
11.0-25.0 Compact, grayish brown, m-f SAND, trace silt.	84.5						4" casing advanced to 14' bgs
	83.6	S4	D.O.	10-9-10-9	19	10/24	Grayish brown, compact M-F SAND trace silt
	83.0						4" casing advanced to 19' bgs
	82.1	S5	D.O.	14-10-9-9	19	10/24	Compact light brown M-F SAND, trace gravel
	81.5						4" casing advanced to 24' bgs
	80.6	S6	D.O.	26-25/3-50/0	>50	8/24	4" Dense grayish brown C-M-F SAND trace rock chips Casing was advanced to 24'9" Refusal at 24'9"
24.75 BEDROCK	80.3						
TOP OF FOOTING	80.2						Rollerconed 6" to 25'3" Coring from 25'3"-50' bgs

RECORD OF ROCK COREHOLE B-2

ABBREVIATIONS:
B - BEDDING, S - SLICKENSIDED, W - WAVEY
FO - FOLIATION, SM - SMOOTH, C - CURVED
CA - CALCITE, R - ROUGH / RIDGED, LI - LIMONITE
CL - CORE LOSS, ST - STEPPED, CH - CHLORITE
CO - CONTACT, M - MANY, FE - IRON
F - FAULT, PL - PLANAR, CL - CLAY
J - JOINT, FL - FLEXURED, ME - MECH FRACTURE
P - POLISHED, UE - UNEVEN, CL - CORE LOSS

RUN INFORMATION

RUN	1	2	3	4	5
FROM	25	30	35	40	45
TO	30	35	40	45	50
TCR	96	100	100	93	100
RQD.	75	100	100	90	86

Boring method: NX Coring

CORE DESCRIPTION: 25.25'-50' Fresh to slightly weathered, very closely jointed, gray, very fine grained PHYLLITE.

RUN	ELEVATION	FRACTURE INDEX (1ft INT)	DISCONTINUITIES
Run No. 1	80.3	1, 3, 1, 1, 2	25.4 7 J/SM 26.3 35 MF/ST 26.5 35 J/ST 26.9 78 MF/ST 27.6 88 MF/ST 28.6 12 J/SM 29.4 35 J/R 29.9 90 J/R
Run No. 2	78.7	0, 2, 2, 2, 1	31.3 68 MF/ST 31.6 75 J/ST 32.2 36 J/R 32.7 85 J/R 33.5 80 MF/ST 33.7 18 J/R 34.2 0 MF/R
Run No. 3	77.2	1, 1, 1, 1, 0	35.0 90 MF/R 36.6 75 J/R 37.2 74 J/R 38.8 0 MF/SM
Run No. 4	75.7	1, 1, 0, 2, 1	40.0 36 MF/R 40.8 90 J/SM 41.9 58 MF/ST 43.0 22 J/SM 43.7 72 MF/ST 44.8 65 MF/R
Run No. 5	74.2	0, 0, 1, 4, 2	47.6 45 J/ST 48.0 35 J/SM 48.1 30 J/SM 48.3 30 J/SM 48.4 20 MF/R 49.4 83 MF/R 49.6 85 J/R
	72.6		

DRILL RIG: MOBILE B-47
DRILLING CONTRACTOR: Con-Tec INC.
DRILLER: B. BOURASSA
TOTAL LENGTH CORED: 24.75'
BITS USED: 1
SHEET 1 OF 1
LOGGED: MRT
CHECKED: TKA
DATE:

RECORD OF BOREHOLE B-3

PROJECT NAME: RT.9 ROAD IMPROVEMENT
SITE NAME: BRATTLEBORO VT
STATION: 50+286.84
GROUND EL.: 87.554

PROJECT NUMBER: 993-6874
SITE NO.:
OFFSET: RT 12.59
G.W. DEPTH: 20 '

HOLE NO.: B-3
SHEET 1 OF 1
DATE STARTED: 1000/11-18-99
DATE COMPLETED: 1000/11-19-99

BORING CREW:
CREW CHIEF:
DRILLER: B. BOURASSA
LOGGER: MRT CHECKED: TKA
ADDITIONAL CREW:

BORING RIG: MOBILE B-47
BORING TYPE:
SAMPLE TYPE:
WEIGHT OF HAMMER: 140 lbs
DROP: 30 inches

Boring method: WASH AND DRIVE

SOIL PROFILE	ELEVATION	NUMBER	TYPE	BLOWS / 6 INCHES	N	REC.\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0.0-5.0 Compact, light brown, f-SAND, some silt.	87.6	S1	D.O.	6-4-5-4	9	20/24	Compact, yellowish brown, FINE SAND, some silt
	86.9						4" casing advanced to 4' bgs and washed
	86.3	S2	D.O.	7-5-7-6	12	18/24	6" Light brown compact FINE SAND, some silt 3" Black compact FINE SAND 9" Grayish brown M-F SAND
5.0-18.0 Compact, grayish brown, m-f SAND.	86.0						
	85.7						4" casing advanced to 9' bgs and washed
	84.8	S3	D.O.	7-8-7-8	15	12/24	Grayish brown compact M-F SAND
	84.2						4" casing advanced to 14' bgs and washed
	83.3	S4	D.O.	11-13-14-14	27	12/24	Grayish brown compact M-F SAND
	82.7						Refusal at 18' bgs 4" casing advanced to 18' bgs and washed Rollerconed 6" to 18'6" bgs
18.0 BEDROCK	81.9						Coring from 18'6"-51' bgs

RECORD OF ROCK COREHOLE B-3

ABBREVIATIONS:
B - BEDDING, S - SLICKENSIDED, W - WAVEY
FO - FOLIATION, SM - SMOOTH, C - CURVED
CA - CALCITE, R - ROUGH / RIDGED, LI - LIMONITE
CL - CORE LOSS, ST - STEPPED, CH - CHLORITE
CO - CONTACT, M - MANY, FE - IRON
F - FAULT, PL - PLANAR, CL - CLAY
J - JOINT, FL - FLEXURED, ME - MECH FRACTURE
P - POLISHED, UE - UNEVEN, CL - CORE LOSS

RUN INFORMATION

RUN	1	2	3	4	5	6	7
FROM	18.5	23.5	28.5	33.5	38.5	43.5	48.5
TO	23.5	28.5	33.5	38.5	43.5	48.5	51
TCR	95	100	100	100	95	95	96
RQD.	85	95	80	98	80	80	82

Boring method: NX Coring

CORE DESCRIPTION: 18.5'-51' Fresh to slightly weathered, very closely jointed, gray, very fine grained PHYLLITE with few vertical joints.

TOP OF FOOTING

RUN	DEPTH (FT)	ELEVATION	FRACTURE INDEX (1ft INT)	DISCONTINUITIES
Run No. 1	18.5	81.9	2, 3, 3, 1, 1	18.8 52 MF/R 19.3 51 MF/R 19.8 28 MF/R 20.1 40 MF/R 20.4 26 MF/R 20.8 88 J/R 21.3 55 MF/R 21.5 60 MF/R 22.3 20 MF/R
Run No. 2	23.5	80.4	2, 2, 3, 0, 1	23.5 80 MF/R 24.0 29 MF/SM 24.4 24 J/R 24.6 24 J/R 25.3 90 MF/R 25.4 34 MF/SM 27.2 20 J/ST 28.1 21 MF/SM
Run No. 3	28.5	78.9	2, 2, 1, 2, 4	28.5 0 J/R 28.8 10 J/R 29.4 15 MF/SM 29.7 0 MF/R 32.2 37 J/R 32.4 36 MF/R 32.8 36 MF/SM 33.0 90 J/UE 33.1 42 J/UE 33.2 43 MF/ST
Run No. 4	33.5	77.3	1, 0, 2, 1, 1	34.3 70 MF/R 35.7 65 MF/R 35.8 12 MF/ST 36.4 27 MF/R 37.4 30 MF/R
Run No. 5	38.5	75.8	2, 0, 5, 2, 1	38.1 28 MF/ST 39.2 24 J/R 39.3 21 MF/R 40.6 80 MF/R 40.8 78 J/R 40.9 75 J/R 41.3 30 J/ST 41.5 30 J/R 42.1 27 J/SM 42.5 25 J/ST 43.0 25 MF/R
Run No. 6	43.5	74.3	2, 4, 0, 2, 2	44.0 35 MF/ST 44.3 48 J/R 44.9 29 J/SM 45.0 70 MF/R 45.2 19 J/SM 45.4 29 MF/R 46.6 25 J/SM 47.2 26 J/SM 47.6 24 J/SM
Run No. 7	48.5	72.8	1, 2, 1	48.5 90 J/R 49.0 24 J/SM 49.7 58 J/ST 50.0 27 MF/SM 50.7 75 J/R 50.9 77 J/R
	53.5	72.0		

DRILL RIG: MOBILE B-47
DRILLING CONTRACTOR: Con-Tec INC.
DRILLER: B. BOURASSA
TOTAL LENGTH CORED: 32.5'
BITS USED: 1
SHEET 1 OF 1
LOGGED: MRT
CHECKED: TKA
DATE:

PROJECT: BRATTLEBORO
PROJECT NO.: NH 010-2 (2)
DESIGN FILE NAME: U:\99123-Brattleboro\dgn\rt9br500.dgn
PLOT DATE: 10-02-2002
DRAWN BY: DHL
SQUAD LEADER: JHR
DATE: 02/29/00
SHEET: 60 OF 145

RECORD OF BOREHOLE B-4

PROJECT NAME: RT.9 ROAD IMPROVEMENT
SITE NAME: BRATTLEBORO VT
STATION: 50-254.16
GROUND EL.: 84.774

PROJECT NUMBER: 993-6874
SITE NO.:
OFFSET: LT 5.72
C.W. DEPTH:

HOLE NO.: B-4
SHEET 1 OF 1
DATE STARTED: 0845/11-10-99
DATE COMPLETED: 1330/11-10-99

BORING CREW:
CREW CHIEF:
DRILLER: B.BOURASSA
LOGGER: MRT CHECKED: TKA
ADDITIONAL CREW:

BORING RIG: MOBILE B-47
BORING TYPE:
SAMPLE TYPE:
WEIGHT OF HAMMER: 140 lbs
DROP: 30 inches

DEPTH SCALE METERS	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE USCS	GRAPHIC LOG	ELEVATION	SAMPLES NUMBER	TYPE	BLOWS / 6 INCHES	N	REC.\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0	0				84.8	S1	D.O.	1-2-3-1	5	5/24	Loose. light brown. M-F SAND some roots
1					84.2						4" casing advanced to 5' bgs and washed
2	5				83.3	S2	D.O.	7-7-7-7	14	18/24	Compact. greyish brown FINE SAND. trace gravel and silt
3	10	WASH AND DRILL			82.6						4" casing advanced to 9' bgs and washed Gravel observed in wash water
4					82.0	S3	D.O.	5-6-5-7	11	12/24	Compact. greyish brown M-F SAND. trace silt
5	15				81.4						4" casing advanced to 14' bgs and washed Bottom appears to be hard.
6	20				80.5			50/0"	>50	0/24	Possible bedrock at 14' bgs Attempted sampling but had refusal at 14' bgs Coring from 14'-24' bgs

TOP OF FOOTING

RECORD OF ROCK COREHOLE B-4

CORE DESCRIPTION

ABBREVIATIONS:
B - BEDDING S - SLICKENSIDED W - WAVEY
FO - FOLIATION SM - SMOOTH C - CURVED
CA - CALCITE R - ROUGH / RIDGED LI - LIMONITE
CL - CORE LOSS ST - STEPPED CH - CHLORITE
CO - CONTACT PL - PLANAR IRON
F - FAULT FL - FLEXURED CLAY
J - JOINT UE - UNEVEN MECH FRACTURE
P - POLISHED CORE LOSS

RUN INFORMATION

RUN	1	2
FROM	14	19
TO	19	24
TCR	100	100
RQD.	100	100

DISCONTINUITIES

DEPTH SCALE METERS	DEPTH SCALE FEET	BORING METHOD	GRAPHIC LOG	ELEVATION	RUN	Penetration Rate MIN. / FT	RUN TIME START / STOP	WATER USAGE	% FLUSH RET. FRACTURE	FRACTURE INDEX	INT	DISCONTINUITIES
14	14			80.5						0		14'-24' Fresh to slightly weathered. close to moderately closely jointed. gray. very fine grained PHYLLITE.
5					Run No. 1					1		15.5 80 R
19	19									0		17.5 38 J/ST
6										2		17.8 20 J/ST
										0		18.5 0 MF/P
7										1		
				79.0						1		
24	24				Run No. 2					0		19.5 22 J/ST
8										0		20.6 31 DE/ME
										1		22.5 26 ME/ST
29										1		23.2 6 MF/P
9		NX Coring		77.5								

DRILL RIG: MOBILE B-47
DRILLING CONTRACTOR: Con-Tec INC.
DRILLER: B. BOURASSA

TOTAL LENGTH CORED: 10'
BITS USED: 1
SHEET 1 OF 1

LOGGED: MRT
CHECKED: TKA
DATE:

RECORD OF BOREHOLE B-4A

PROJECT NAME: RT.9 ROAD IMPROVEMENT
SITE NAME: BRATTLEBORO VT
STATION: 50-254.16
GROUND EL.: 84.774

PROJECT NUMBER: 993-6874
SITE NO.:
OFFSET: 5.72 LT
C.W. DEPTH: 8'

HOLE NO.: B-4A
SHEET 1 OF 1
DATE STARTED: 0850/11-23-99
DATE COMPLETED: 1135/11-23-99

BORING CREW:
CREW CHIEF:
DRILLER: B.BOURASSA
LOGGER: MZ CHECKED: TKA
ADDITIONAL CREW:

BORING RIG: MOBILE B-47
BORING TYPE:
SAMPLE TYPE:
WEIGHT OF HAMMER: 140 lbs
DROP: 30 inches

DEPTH SCALE METERS	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE USCS	GRAPHIC LOG	ELEVATION	SAMPLES NUMBER	TYPE	BLOWS / 6 INCHES	N	REC.\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0	0										Borehole advanced to 14' bgs without split spoon sampling. See borehole log B-4 for soils description. Coring from 14'-34' bgs
1											
2	5										
3	10	4" DIA. DRIVE + WASH									
4											
5	15										
6	20										

TOP OF FOOTING

RECORD OF ROCK COREHOLE B-4A

CORE DESCRIPTION

ABBREVIATIONS:
B - BEDDING S - SLICKENSIDED W - WAVEY
FO - FOLIATION SM - SMOOTH C - CURVED
CA - CALCITE R - ROUGH / RIDGED LI - LIMONITE
CL - CORE LOSS ST - STEPPED CH - CHLORITE
CO - CONTACT PL - PLANAR IRON
F - FAULT FL - FLEXURED CLAY
J - JOINT UE - UNEVEN MECH FRACTURE
P - POLISHED CORE LOSS

RUN INFORMATION

RUN	1	2	3	4
FROM	14	19	24	29
TO	19	24	29	34
TCR	100	100	100	100
RQD.	50	44	26	26

DISCONTINUITIES

DEPTH SCALE METERS	DEPTH SCALE FEET	BORING METHOD	GRAPHIC LOG	ELEVATION	RUN	Penetration Rate MIN. / FT	RUN TIME START / STOP	WATER USAGE	% FLUSH RET. FRACTURE	FRACTURE INDEX	INT	DISCONTINUITIES
14	14			80.5					90	1		14'-34' Fresh to slightly weathered. close to very closely foliated. Close to moderately closely jointed. black to gray (with vitreous luster). very fine grained PHYLLITE. with several near vertical joints and slight oxidation on some joint surfaces.
5					Run No. 1				90	2		14.7 30 ST/FO
19	19								90	1		15.2 68 MF
6									80	2		15.3 70 MF/UE
									80	3		16.1
7				79.0					80	3		16.7 75 ST/FO
24	24				Run No. 2				80	1		17.3 45 MF/UE
8									80	0		17.8 ~90 MF/UE
									80	2		17.9
									80	1		18.3 4 J/SM
29				77.5					80	2		18.2
9		NX Coring			Run No. 3				80	1		18.6 15 J/SM
									80	1		19.0 90 MF/UE
									80	1		19.5
									80	0		20.9 15 J/SM
									80	2		21.6 90 MF/UE
									80	1		22.3 90 MF/UE
				75.9					80	2		22.5 79 J/UE
									80	1		23.7
									80	2		24.3 10 J/SM
									80	1		24.2 90 MF/UE
									80	1		24.2
									80	3		25.0 10 J/SM
									80	1		26.7 85 MF
									80	3		27.1
									80	1		27.8 25 J/SM
									80	2		27.2
									80	1		27.5 0 J/CURVED
									80	2		28.7 40 FO/ST
									80	1		29.1 42 FO/ST
									80	1		29.6
									80	3		30.6 5 J/UE
									80	1		30.4 30 J/ST
									80	1		31.2 90 MF
												31.6
												32.4 10 J/SM
												31.8 10 J
												32.9 25 J
												33.1 5 J/SM
												33.5
				74.4								

DRILL RIG: MOBILE B-47
DRILLING CONTRACTOR: Con-Tec INC.
DRILLER: B. BOURASSA

TOTAL LENGTH CORED: 20'
BITS USED: 1
SHEET 1 OF 1

LOGGED: MZ
CHECKED: TKA
DATE:

RECORD OF BOREHOLE B-5

PROJECT NAME: RT.9 ROAD IMPROVEMENT
SITE NAME: BRATTLEBORO VT
STATION: 50-255.41
GROUND EL.: 86.720

PROJECT NUMBER: 993-6874
SITE NO.:
OFFSET: RT 11.22
C.W. DEPTH:

HOLE NO.: B-5
SHEET 1 OF 1
DATE STARTED: 1100/11-11-99
DATE COMPLETED: 1310/11-12-99

BORING CREW:
CREW CHIEF:
DRILLER: B.BOURASSA
LOGGER: MRT CHECKED: TKA
ADDITIONAL CREW:

BORING RIG: MOBILE B-47
BORING TYPE:
SAMPLE TYPE:
WEIGHT OF HAMMER: 140 lbs
DROP: 30 inches

DEPTH SCALE METERS	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE USCS	GRAPHIC LOG	ELEVATION	SAMPLES NUMBER	TYPE	BLOWS / 6 INCHES	N	REC.\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0	0				86.7	S1	D.O.	1-1-2-3	3	8/24	4" Black topsoil. followed by very loose. light brown SAND trace silt
1					86.1						4" casing advanced to 4' bgs and washed
2	5	WASH AND DRILL			85.5	S2	D.O.	5-3-2-2	5	6/24	Loose. light brown SAND. some silt trace organics
3	10				84.9						4" casing advanced to 9' bgs and washed
4					84.0	S3	D.O.	50/4"	>50	4"	Loose. light brown SAND. some silt trace organics
5	15				83.7						Refusal at 9'-4" Rollerconed to 10' bgs Coring from 10'-30' bgs (Core barrel bent at 10'6" bgs and coring continued with new barrel.)

9.3 BEDROCK

TOP OF FOOTING

RECORD OF ROCK COREHOLE B-5

CORE DESCRIPTION

ABBREVIATIONS:
B - BEDDING S - SLICKENSIDED W - WAVEY
FO - FOLIATION SM - SMOOTH C - CURVED
CA - CALCITE R - ROUGH / RIDGED LI - LIMONITE
CL - CORE LOSS ST - STEPPED CH - CHLORITE
CO - CONTACT PL - PLANAR IRON
F - FAULT FL - FLEXURED CLAY
J - JOINT UE - UNEVEN MECH FRACTURE
P - POLISHED CORE LOSS

RUN INFORMATION

RUN	1	2	3	4
FROM	10	15	20	25
TO	15	20	25	30
TCR	100	100	96	95
RQD.	90	85	80	80

DISCONTINUITIES

DEPTH SCALE METERS	DEPTH SCALE FEET	BORING METHOD	GRAPHIC LOG	ELEVATION	RUN	Penetration Rate MIN. / FT	RUN TIME START / STOP	WATER USAGE	% FLUSH RET. FRACTURE	FRACTURE INDEX	INT	DISCONTINUITIES
3	10			83.7						1		10'-30' Fresh to slightly weathered. close to moderately close jointed gray. very fine grained PHYLLITE
4					Run No. 1					3		10.4 40 MF/R
15	15									1		11.1 33 MF/R
5										-1		11.3 25 MF/R
										0		11.9 90 MF/R
6										1		12.9 35 J/R
				82.1								14.6 36 MF/R
20	20				Run No. 2					1		15.0 60 MF/R
7										1		17.1 80 J/R
										0		17.5 20 MF/R
										3		17.6 80 MF/R
8										2		18.1 20 MF/SM
										1		18.5 20 MF/SM
												19.4 10 MF/SM
				80.6						2		20.5 28 J/R
										1		20.8 60 J/R
										1		21.5 55 J/R
										1		22.4 60 J/R
										5		22.6 50 J/R
										2		22.6 5 J/R
										1		22.8 90 J/R
										2		22.9 13 MF/SM
										1		23.3 25 MF/SM
										1		24.0 24 MF/SM
												24.4 65 J/R
				79.1						1		25.5 25 MF/SM
										2		26.0 5 MF/SM
										1		26.9 25 MF/SM
										0		27.8 10 MF/SM
										1		29.5 6 MF/SM
				77.6								

DRILL RIG: MOBILE B-47
DRILLING CONTRACTOR: Con-Tec INC.
DRILLER: B. BOURASSA

TOTAL LENGTH CORED: 20'
BITS USED: 1
SHEET 1 OF 1

LOGGED: MRT
CHECKED: TKA
DATE:

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2 (2)
DESIGN FILE NAME: U:\99123-Brattleboro\dgn\rt9br500.dgn	PLOT DATE: 10-02-2002
DRAWN BY: DHL	SQUAD LEADER: JHR
DATE: 02/29/00	SHEET: 61 OF 145

RECORD OF BOREHOLE B-6

PROJECT NAME: RT.9 ROAD IMPROVEMENT
SITE NAME: BRATTLEBORO VT
STATION: 50-238.02
GROUND EL.: 83.876

PROJECT NUMBER: 993-6874
SITE NO.:
OFFSET: LT 5.27
C.W. DEPTH:

HOLE NO.: B-6
SHEET 1 OF 1
DATE STARTED: 1310/11-10-99
DATE COMPLETED: 1610/11-10-99

BORING CREW:
CREW CHIEF:
DRILLER: B. BOURASSA
LOGGER: MRT CHECKED: TKA
ADDITIONAL CREW:

BORING RIG: MOBILE B-47
BORING TYPE:
SAMPLE TYPE:
WEIGHT OF HAMMER: 140 lbs
DROP: 30 inches

DEPTH SCALE METERS	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEVATION	SAMPLES NUMBER	TYPE	BLOWS / 6 INCHES	N	REC.\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0	0	WASH AND DRILL	0.0-4.0 Loose. greenish brown f-SAND. some silt.			83.9	S1	D.O.	1-2-3-1	5	12/24	Loose. grayish brown SAND. some silt and organics 4" casing advanced to 3'2" Refusal at 3'2" 3" coring from 3'2"-4'
1						83.3						Greenish brown. fine SAND. some silt
2	5		4.0 BEDROCK			82.7			65/6"	>65		Hole was moved 3' south of original location Augered to refusal at 3'6" Hole was moved 3' north of original location 4" casing was advanced to 4' bgs and washed Split spoon driven from 4'-4'6" Refusal at 4'6"
3	10											
4												
5	15											
6	20											

DRILL RIG: MOBILE B-47
DRILLING CONTRACTOR: Con-Tec INC.
DRILLER: B. BOURASSA

SHEET 1 OF 1

LOGGED: MRT
CHECKED: TKA
DATE:

RECORD OF BOREHOLE B-7

PROJECT NAME: RT.9 ROAD IMPROVEMENT
SITE NAME: BRATTLEBORO VT
STATION: 50-216.39
GROUND EL.: 84.213

PROJECT NUMBER: 993-6874
SITE NO.:
OFFSET: LT 5.43
C.W. DEPTH: 4'6"

HOLE NO.: B-7
SHEET 1 OF 1
DATE STARTED: 0845/11-12-99
DATE COMPLETED: 0930/11-12-99

BORING CREW:
CREW CHIEF:
DRILLER: B. BOURASSA
LOGGER: MRT CHECKED: TKA
ADDITIONAL CREW:

BORING RIG: MOBILE B-47
BORING TYPE:
SAMPLE TYPE:
WEIGHT OF HAMMER: 140 lbs
DROP: 30 inches

DEPTH SCALE METERS	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEVATION	SAMPLES NUMBER	TYPE	BLOWS / 6 INCHES	N	REC.\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0	0	AUGER/DRIVE AND WASH	0.0-10.25 Loose. brown. SAND. little silt. trace clay.			84.2	S1	D.O.	1-2-2-1	4	12/24	Loose. light brown F-M SAND. little silt. trace organics
1						83.6						4" casing advanced to 5' bgs. and washed Water table encountered at 4'5" bgs Measured at end of drilling
2	5					82.7	S2	D.O.	1-1-1-1	2	0/24	No recovery in split spoon
3	10					82.1						4" casing advanced to 10' bgs. and washed
4			10.25 BEDROCK			81.1	S3	D.O.	3-50/0"		6/24	Grayish brown m-f SAND and SILT. trace clay and gravel Possible bedrock at 10.2' bgs Tried Auger to comfirm bedrock Refusal at 10'3"
5	15											
6	20											

DRILL RIG: MOBILE B-47
DRILLING CONTRACTOR: Con-Tec INC.
DRILLER: B. BOURASSA

SHEET 1 OF 1

LOGGED: MRT
CHECKED: TKA
DATE:

RECORD OF BOREHOLE B-8

PROJECT NAME: RT.9 ROAD IMPROVEMENT
SITE NAME: BRATTLEBORO VT
STATION: 50-261.86
GROUND EL.: 84.213

PROJECT NUMBER: 993-6874
SITE NO.:
OFFSET: LT 7.89
C.W. DEPTH: 3'-8"

HOLE NO.: B-8
SHEET 1 OF 1
DATE STARTED: 1445/11-22-99
DATE COMPLETED: 1540/11-22-99

BORING CREW:
CREW CHIEF:
DRILLER: B. BOURASSA
LOGGER: MZ CHECKED: TKA
ADDITIONAL CREW:

BORING RIG: MOBILE B-47
BORING TYPE:
SAMPLE TYPE:
WEIGHT OF HAMMER: 140 lbs
DROP: 30 inches

DEPTH SCALE METERS	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEVATION	SAMPLES NUMBER	TYPE	BLOWS / 6 INCHES	N	REC.\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0	0	4" DRIVE AND WASH	0.0-3.0 Soft. dark brown. SILT. little organic matter. trace to little sand. moist.			84.2	S1	D.O.	1-1-2-1	3	18/24	Soft dark brown SILT little organic matter, trace to little sand. Moist casing blows 0'-5' - Pushed casing - No "N"
1						83.6						
2	5		3.0-7.0 Loose. dark brown. f-SAND. little to some m-sand. trace wood fragements. ▼			83.0	S2	D.O.	3-1-1-2	2	18/24	Possible formation change at approximately 3' bgs Loose dark brown fine SAND little to some medium sand. trace wood frags. 4'-9' Casing blows = 14-12-10-21-24
3	10					82.4						
4			7.0-10.8 Compact. gray brown. m-f SAND. trace to little silt.			81.5	S3	D.O.	4-4-6-2	10	12/24	Compact grayish-brown c-f SAND. trace-little silt and gravel 2" of gray SILTY CLAY in spoon tip 9'-14' Casing blows = 20-20-50/6" Casing refusal at 11.5 bgs
5	15		TOP OF FOOTING									
6	20		10.8-11.5 Gray. silty. CLAY.			80.9						
7	25		Boring terminated at 11.5' bgs.			80.7						
8												
9	30											
10												
11	35											
12	40											

DRILL RIG: MOBILE B-47
DRILLING CONTRACTOR: Con-Tec INC.
DRILLER: B. BOURASSA

SHEET 1 OF 1

LOGGED: MZ
CHECKED: TKA
DATE:

RECORD OF BOREHOLE B-9

PROJECT NAME: RT.9 ROAD IMPROVEMENT
SITE NAME: BRATTLEBORO VT
STATION: 50-282.28
GROUND EL.: 87.180

PROJECT NUMBER: 993-6874
SITE NO.:
OFFSET: LT 23.79
C.W. DEPTH:

HOLE NO.: B-9
SHEET 1 OF 1
DATE STARTED: 0847/11-22-99
DATE COMPLETED: 1330/11-22-99

BORING CREW:
CREW CHIEF:
DRILLER: B. BOURASSA
LOGGER: MZ CHECKED: TKA
ADDITIONAL CREW:

BORING RIG: MOBILE B-47
BORING TYPE:
SAMPLE TYPE:
WEIGHT OF HAMMER: 140 lbs
DROP: 30 inches

DEPTH SCALE METERS	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEVATION	SAMPLES NUMBER	TYPE	BLOWS / 6 INCHES	N	REC.\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0	0	4" DRIVE AND WASH	0.0-1.3 Soft. tan to brown. SILT. trace sand and organics.			87.2	S1	D.O.	4-3-4-7	7	18/24	0.0-1.3 Soft. tan to brown. SILT. trace fine sand. trace organic matter in upper 0.5'. moist 1.3-1.5 Loose. brown. med-fine SAND. little to some silt. moist Casing blows = 33 for 5'
1			1.3-32.5 Loose to compact. brown to dark brown. m-f then c-f SAND. little to trace silt. little to trace gravel.			86.6						
2	5					86.0	S2	D.O.	7-9-9-10	18	12/24	4.0-6.0 Compact brown med-fine SAND little trace silt. 4'-9' casing blows = 12-20-25-29-24
3	10					85.4						
4						84.4	S3	D.O.	6-6-7-8	13	9.6/24	Compact. dark brown. med-fine SAND. little silt. trace coarse sand 9'-14' casing blows = 15-32-27-38-40
5	15					83.8						
6	20		TOP OF LEVELING PAD MSE WALL (VARIES)			82.9	S4	D.O.	10-12-13-13	25	12/24	Compact. dark brown. med-fine SAND. trace coarse sand. trace silt. 14'-19' casing blows = 22-42-50-54-53
7	25					82.3						
8						81.4	S5	D.O.	9-8-8-9	16	12/24	Compact. dark brown. C-M-F SAND. little trace silt. 19'-24' casing blows = 30-39-32-41-51
9	30					80.8						
10						79.9	S6	D.O.	8-6-8-8	14	12/24	Compact. dark brown. m-f SAND. trace gravel. trace silt. 24'-29' casing blows = 40-40-51-53-59
11	35					79.3						
12	40		32.5-49.5 Stiff. dark brown to gray. SILT. interbedded with compact. c-f SAND. From 44'-49.5 bgs deep red oxidized zones along steep partings.			78.3	S7	D.O.	8-7-8-10	15	10.8/24	Compact. dark brown. medium SAND. trace silt. trace fine sand. 29'-34' casing blows = 48-62-81-92-91
13						77.7						Formation change at aproximately 32.5 ft. bgs.
14	45					76.8	S8	D.O.	9-8-10-12	18	12/24	Stiff. dark brown to gray. SILT. trace fine sand Very bottom 2" of spoon is C\F SAND and fine GRAVEL
15						76.2						34'-39' casing blows aproximately 40-78-72-82-99
16	50					75.3						39'-39.2' Compact. gray. fine SAND. little silt 39.2'-41.0' Stiff. gray. SILT. some fine sand. trace clay.
55						75.0	S9	D.O.	10-7-6-6	13	18/24	39'-44' casing blows N/A (open hole)
						74.7						
						73.8	S10	D.O.	9-7-10-9	17	14.4/24	Compact. brown. fine SAND. interbedded with stiff. gray. SILT. with large amounts of deep red oxidized zones along steep partings.
						73.2						
						72.2	S11	D.O.	10-50/1	350	6/24	49'-49.5' Stiff. gray. SILT. trace fine sand
			49.5 BEDROCK			72.1						49.5' Casing refusal on bedrock

DRILL RIG: MOBILE B-47
DRILLING CONTRACTOR: Con-Tec INC.
DRILLER: B. BOURASSA

SHEET 1 OF 1

LOGGED: MZ
CHECKED: TKA
DATE:

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2 (2)
DESIGN FILE NAME: U:\99123-Brattleboro\dgn\rt9br500.dgn	PLOT DATE: 10-02-2002
DRAWN BY: DHL	SQUAD LEADER: JHR
DATE: 02/29/00	SHEET: 62 OF 145

RECORD OF ABUTMENT CORE B-10

PROJECT NAME: RT.9 ROAD IMPROVEMENT
SITE NAME: BRATTLEBORO VT
STATION: 50+94.35
GROUND EL.: 85.1 (APPROX.)

PROJECT NUMBER: 993-6874
SITE NO.:
OFFSET: 2.0 LT
C.W. DEPTH:

HOLE NO.: B-10
SHEET 1 OF 1
DATE STARTED: 1230/5-31-00
DATE COMPLETED: 1100/6-2-00

BORING CREW:
CREW CHIEF:
DRILLER: B. BOURASSA & B. McGLASHAN
LOGGER: TKA CHECKED: TKA
ADDITIONAL CREW:

BORING RIG:
BORING TYPE:
SAMPLE TYPE:
WEIGHT OF HAMMER: 140 lbs
DROP: 30"

DEPTH SCALE METERS	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: USCS	SOIL PROFILE: GRAPHIC LOG	SOIL PROFILE: ELEVATION	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS / 6 INCHES	SAMPLES: N	SAMPLES: REC\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0	0				85.1	S1	D.O.	2-2-6-25/0"	8	0/18	0.0-1.5 loose, c-f SAND trace f-gravel and silt (EMBANKMENT FILL)
			SOIL								
					84.6	Run No. 1					1.5-7.7 GRANITE BLOCKS
1	5		ABUTMENT								
					82.8	Run No. 2					7.7-11.0 ZERO RECOVERY AND DRILLER REPORTS THAT AT THE TIME OF DRILLING HE THOUGHT THAT HE MAY HAVE WENT THROUGH SOIL
2			SOIL								
	10										
					81.7	RECORE					11.0-13.0 GRANITE BLOCKS
3			ABUTMENT								
			TOP OF FOOTING								13.0-14.5 ZERO RECOVERY AND DRILLER REPORTS THAT AT THE TIME OF DRILLING HE THOUGHT THAT HE MAY HAVE DRILLED THROUGH SOIL
			SOIL		81.1						
4					80.7	Run No. 3					14.5-14.7 PIECE OF BEDROCK
	15		PIECE OF BEDROCK		80.6						
			ABUTMENT								14.7-15.3 GRANITE BLOCK (PARTIAL - HOLE LEFT BY SPLITTING DEVICE VISIBLE IN WEDGE)
			BEDROCK - PHYLLITE		80.4						
5											15.3-16.8 BEDROCK: PHYLLITE
			BOTTOM OF BORING @ 16.8		80.0						
											NOTE: RUN NO. 3 STARTED AT 11.0 BECAUSE CORE BARREL REDRILLED A NEW PATH.
6	20										
7											
	25										
8											
9	30										
10											
	35										
11											
12	40										

DRILL RIG: SKID RIG
DRILLING CONTRACTOR: Con-Tec Inc.
DRILLER: B. BOURASSA & B. McGLASHAN

SHEET 1 OF 1

LOGGED: TKA
CHECKED: TKA
DATE:

RECORD OF BOREHOLE B-11

PROJECT NAME: RT.9 ROAD IMPROVEMENT
SITE NAME: BRATTLEBORO VT
STATION: 50+96.93
GROUND EL.: 86.1 (APPROX.)

PROJECT NUMBER: 993-6874
SITE NO.:
OFFSET: 0.95 LT
C.W. DEPTH: 6' (APPROX.)

HOLE NO.: B-11
SHEET 1 OF 1
DATE STARTED: 0830/6-5-00
DATE COMPLETED: 1410/6-5-00

BORING CREW:
CREW CHIEF:
DRILLER: B. BOURASSA
LOGGER: TKA CHECKED: TKA
ADDITIONAL CREW:

BORING RIG:
BORING TYPE:
SAMPLE TYPE:
WEIGHT OF HAMMER: 140 lbs
DROP: 30"

DEPTH SCALE METERS	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: USCS	SOIL PROFILE: GRAPHIC LOG	SOIL PROFILE: ELEVATION	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS / 6 INCHES	SAMPLES: N	SAMPLES: REC\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0	0				86.1	S1	D.O.	1-1-1-1	2	8/24	0.0-2.0 Loose, mottled dark brown and yellow brown, c-f SAND, some f-gravel and silt, f-rootlets, si. moist to moist
			0.0-4.0 Very loose, mottled dark brown and yellow brown, c-f SAND, some f-gravel and silt, trace organics, slightly moist to moist								
					85.5	S2	D.O.	2-2-1-1	3	2/24	2.0-4.0 Loose, mottled dark brown and yellow brown, f-SAND and GRAVEL, trace to little m-SAND, trace c-SAND and SILT, si. moist to moist
1	5	DRIVE AND WASH									4.0-5.0 Loose, mottled, c-f SAND, v. moist
			4.0-10.0 Loose, gray brown and yellow brown, c-f SAND to f-SAND, trace to some gravel and silt, very moist above water table and very wet to saturated below the water table		84.9	S3	D.O.	4-3-4-4	7	10/24	5.0-6.0 Loose, gray brown, m-f SAND, trace to little gravel, trace silt, v. moist
											6.0-7.0 Loose, mottled gray, c-f SAND, little gravel, wet
2					84.3	S4	D.O.	4-3-4-4	7	8/24	7.0-8.0 Loose, yellow brown m-f SAND, some silt, wet
	10				83.7	S5	D.O.	5-4-3-3	7	10/24	8.0-9.0 Loose, yellow brown f-SAND, trace to little silt, v. moist
											9.0-10.0 Loose, mottled gray, c-f SAND, trace to little gravel, v. wet
			10.0-14.0 Very loose to loose, gray brown to gray, c-f SAND to f-SAND, trace to little gravel and silt, very wet to saturated		83.1	S6	D.O.	3-2-2-2	4	8/24	10.0-11.0 Loose, mottled gray brown, c-f SAND, trace to little gravel, v. wet to sat.
3											11.0-12.0 Loose, gray, f-SAND, trace to little silt, v. wet to sat.
			Encountered a 3-4" piece of wood at approx. 13.5' bgs		82.4	S7	D.O.	2-2-2-3	4	15/24	12.0-14.0 Loose, gray brown to gray m-f SAND, little silt, trace c-sand and gravel, 3-4" piece of wood, v. wet to sat.
	15										
4			14.0-16.0 Loose, gray, c-f SAND, little gravel and silt, piece of wood, very wet to saturated — TOP OF FOOTING		81.8	S8	D.O.	5-4-2-6	6	9/24	14.0-16.0 Loose, gray c-f SAND, little gravel and silt, pieces of wood, v. wet to saturated
			16.0-18.0 Compact gray brown, c-f SAND, trace to little gravel, trace silt, very wet to saturated		81.2	S9	D.O.	8-9-16-14	25	21/24	16.0-18.0 Compact gray brown, c-f SAND, trace to little gravel, trace silt, v. wet to sat.
5			18.0-18.7 BEDROCK (WEATHERED)		80.6		D.O.	9-50/2.5"	>50	0/8.5"	18.0-18.7 BEDROCK (WEATHERED): Phyllite
			18.7-23.7 BEDROCK - Phyllite		80.4	RUN NO. 1				48/60	Coring from 18.7-23.7 bgs
6	20										
			Bottom of Borring @ 23.7		78.9						
7											
	25										
8											
9	30										
10											
	35										
11											
12	40										

DRILL RIG: SKID RIG
DRILLING CONTRACTOR: Con-Tec Inc.
DRILLER: B. BOURASSA

SHEET 1 OF 1

LOGGED: TKA
CHECKED: TKA
DATE:

RECORD OF BOREHOLE B-12

PROJECT NAME: RT.9 ROAD IMPROVEMENT
SITE NAME: BRATTLEBORO VT
STATION: 50+220.42
GROUND EL.: 86.0

PROJECT NUMBER: 993-6874
SITE NO.:
OFFSET: 0.02 LT
C.W. DEPTH: 6' (APPROX.)

HOLE NO.: B-12
SHEET 1 OF 1
DATE STARTED: 0900/6-6-00
DATE COMPLETED: 1200/6-6-00

BORING CREW:
CREW CHIEF:
DRILLER: B. BOURASSA
LOGGER: TKA CHECKED: TKA
ADDITIONAL CREW:

BORING RIG:
BORING TYPE:
SAMPLE TYPE:
WEIGHT OF HAMMER: 140 lbs
DROP: 30"

DEPTH SCALE METERS	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: USCS	SOIL PROFILE: GRAPHIC LOG	SOIL PROFILE: ELEVATION	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS / 6 INCHES	SAMPLES: N	SAMPLES: REC\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0	0				86.0						0.0-2.0 No recovery due to ballast in shoe
			0.0-2.0 Very loose, mottled dark brown and yellow brown, c-f SAND, some f-gravel and silt, si. moist to moist					$^1/_2$ -$^1/_2$-1 - 1 $1^1/_2$		0/24	
			2.0-9.5 Loose, mottled dark brown and yellow brown, c-f SAND to f-SAND and GRAVEL, trace silt to c-f SAND and SILT, trace gravel, very moist to very wet		85.4	S1	D.O.	1-3-3-4	6	6/24	2.0-4.0 Loose, mottled dark brown and yellow brown, f-SAND, little m-sand, trace c-sand, gravel and silt, organics, moist
1	5	DRIVE AND WASH									4.0-5.0 Loose, mottled, c-f SAND and GRAVEL trace silt and organics v. moist to wet
					84.8	S2	D.O.	9-4-2-2	6	3/24	5.0-6.75 Loose, yellow brown, m-f SAND and SILT, trace c-sand and gravel, v. moist to wet
					84.2	S3	D.O.	3-2-4-4	6	6/24	6.75-7.50 Loose, mottled, c-f SAND, little to some gravel, wet to v. wet
2											7.5-8.0 Loose, yellow brown, m-f SAND and SILT, trace c-sand and gravel, v. moist to wet
	10				83.6			12-13-13-7	26*	0/24	8.0-10.0 No recovery - Driller reports that it is likely due to a piece of gravel
			9.5-11.0 Compact, gray brown c-f SAND, little to some gravel, trace to little silt, very wet to saturated		83.0	S4	D.O.	7-6-2-2	8	9/24	10.0-12.0 Loose, yellow brown, f-SAND and SILT, trace c-m sand and gravel, very wet to saturated.
3			11.0-13.0 Very loose to loose, yellow brown to gray brown, f-SAND and SILT, trace c-m sand and gravel, very wet to saturated		82.3	S5	D.O.	3-3-6-7	9	15/24	12.0-14.0 Loose, gray brown to yellow brown, f-SAND, little to some m-sand, and silt, v. wet to sat.
	15		13.0-15.0 Compact, gray, m-f SAND, little c-sand, gravel and silt, very wet to saturated		81.7	S6	D.O.	11-12-3-25	15	14/24	14.0-16.0 Compact, gray, m-f SAND, little c-sand gravel and silt, v. wet to sat. (piece of weathered bedrock in shoe)
4			15.0-15.5 Possible clay lens (not observed								
			15.5-16.25 BEDROCK (weathered)		81.1	S7	D.O.	50/3"	>50	2/3	16.0-16.25 BEDROCK (weathered) phyllite
			Bottom of boring @ 16.25		81.0						* DRILLER REPORTS THAT ELEVATED BLOW COUNTS PROBABLY DUE TO ENCOUNTER WITH A LARGE PIECE OF GRAVEL.
5	20										
6											
	25										
7											
8	30										
9											
	35										
10											
11											
12	40										

DRILL RIG: SKID RIG
DRILLING CONTRACTOR: Con-Tec Inc.
DRILLER: B. BOURASSA

SHEET 1 OF 1

LOGGED: TKA
CHECKED: TKA
DATE:

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2 (2)
DESIGN FILE NAME: U:\99123-Brattleboro\dgn\rt9br500.dgn	PLOT DATE: 10-02-2002
DRAWN BY: LRD	SQUAD LEADER: JHR
DATE: 06/28/00	SHEET: 63 OF 145

RECORD OF PROBEHOLE P-1

PROJECT NAME: RT.9 ROAD IMPROVEMENT
SITE NAME: BRATTLEBORO VT
STATION: 50+259.70
GROUND EL.: 83.254

PROJECT NUMBER: 993-6874
SITE NO.:
OFFSET: LT 14.25
G.W. DEPTH:

HOLE NO.: P-1
SHEET 1 OF 1
DATE STARTED: 1000/11-16-99
DATE COMPLETED: 1010/11-16-99

BORING CREW:
CREW CHIEF:
DRILLER: B. BOURASSA
LOGGER: MRT CHECKED: TKA
ADDITIONAL CREW:

BORING RIG: MOBILE B-47
BORING TYPE:
SAMPLE TYPE:
WEIGHT OF HAMMER: N/A
DROP: N/A

DEPTH SCALE METERS	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEVATION	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES BLOWS / 6 INCHES	SAMPLES N	SAMPLES REC.\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0	0	4" AUGER	0.0-6.0 Light brown. m-SAND.			83.3						
1	5											
2			6.0-10.0 Grayish brown. m-SAND. wet.			81.4						Water appears to be approximately 6'-7' bgs. Hole caved in therefore exact water level was not measured.
3	10					80.2						Augering terminated at 10' bgs.
4												
	15											

DRILL RIG: MOBILE B-47
DRILLING CONTRACTOR: Con-Tec INC.
DRILLER: B. BOURASSA

SHEET 1 OF 1

LOGGED: MRT
CHECKED: TKA
DATE:

RECORD OF PROBEHOLE P-3

PROJECT NAME: RT.9 ROAD IMPROVEMENT
SITE NAME: BRATTLEBORO VT
STATION: 50+263.99
GROUND EL.: 81.141

PROJECT NUMBER: 993-6874
SITE NO.:
OFFSET: RT 14.49
G.W. DEPTH: ?

HOLE NO.: P-3
SHEET 1 OF 1
DATE STARTED: 1030/11-16-99
DATE COMPLETED: 1036/11-16-99

BORING CREW:
CREW CHIEF:
DRILLER: B. BOURASSA
LOGGER: MRT CHECKED: TKA
ADDITIONAL CREW:

BORING RIG: MOBILE B-47
BORING TYPE:
SAMPLE TYPE:
WEIGHT OF HAMMER: N/A
DROP: N/A

DEPTH SCALE METERS	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEVATION	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES BLOWS / 6 INCHES	SAMPLES N	SAMPLES REC.\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0	0	4" AUGER	0.0-4.5 Dark brown. c-m SAND. ▼ water			81.1						
1	5											
2			4.5 BEDROCK			79.8						Refusal at 4'6"
3	10											
4												
	15											

DRILL RIG: MOBILE B-47
DRILLING CONTRACTOR: Con-Tec INC.
DRILLER: B. BOURASSA

SHEET 1 OF 1

LOGGED: MRT
CHECKED: TKA
DATE:

RECORD OF PROBEHOLE P-2

PROJECT NAME: RT.9 ROAD IMPROVEMENT
SITE NAME: BRATTLEBORO VT
STATION: 50+261.17
GROUND EL.: 82.726

PROJECT NUMBER: 993-6874
SITE NO.:
OFFSET: LT 5.89
G.W. DEPTH:

HOLE NO.: P-2
SHEET 1 OF 1
DATE STARTED: 1020/11-16-99
DATE COMPLETED: 1025/11-16-99

BORING CREW:
CREW CHIEF:
DRILLER: B. BOURASSA
LOGGER: MRT CHECKED: TKA
ADDITIONAL CREW:

BORING RIG: MOBILE B-47
BORING TYPE:
SAMPLE TYPE:
WEIGHT OF HAMMER: N/A
DROP: N/A

DEPTH SCALE METERS	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEVATION	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES BLOWS / 6 INCHES	SAMPLES N	SAMPLES REC.\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0	0	4" AUGER	0.0-10.0 Grayish brown. m-SAND. wet. trace silt.			82.7						
1	5											No soil cuttings observed down to 5' bgs.
2												Water appears to be approximately 5'-6' bgs. Hole caved in therefore exact water level was not measured.
3	10					79.7						Augering terminated at 10' bgs.
4												
	15											

DRILL RIG: MOBILE B-47
DRILLING CONTRACTOR: Con-Tec INC.
DRILLER: B. BOURASSA

SHEET 1 OF 1

LOGGED: MRT
CHECKED: TKA
DATE:

RECORD OF PROBEHOLE P-4

PROJECT NAME: RT.9 ROAD IMPROVEMENT
SITE NAME: BRATTLEBORO VT
STATION: 50+265.75
GROUND EL.: 80.675

PROJECT NUMBER: 993-6874
SITE NO.:
OFFSET: RT 21.97
G.W. DEPTH: 2'5"

HOLE NO.: P-4
SHEET 1 OF 1
DATE STARTED: 1043/11-10-99
DATE COMPLETED: 1055/11-10-99

BORING CREW:
CREW CHIEF:
DRILLER: B. BOURASSA
LOGGER: MRT CHECKED: TKA
ADDITIONAL CREW:

BORING RIG: MOBILE B-47
BORING TYPE:
SAMPLE TYPE:
WEIGHT OF HAMMER: N/A
DROP: N/A

DEPTH SCALE METERS	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEVATION	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES BLOWS / 6 INCHES	SAMPLES N	SAMPLES REC.\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0	0	4" AUGER	0.0-5.8 Dark brown. c-m SAND. some gravel. ▼ water			80.7						
1	5											Water at 2'5"
2			5.8 BEDROCK			78.9						Refusal at 5'10"
3	10											
4												
	15											

DRILL RIG: MOBILE B-47
DRILLING CONTRACTOR: Con-Tec INC.
DRILLER: B. BOURASSA

SHEET 1 OF 1

LOGGED: MRT
CHECKED: TKA
DATE:

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: U:\99123-Brattleboro\dgn\rt9br500.dgn	PLOT DATE: 10-02-2002
DRAWN BY: DHL	SQUAD LEADER: JHR
DATE: 02/29/00	SHEET: 64 OF 145

RECORD OF PROBEHOLE P-5

PROJECT NAME: RT.9 ROAD IMPROVEMENT
SITE NAME: BRATTLEBORO VT
STATION: 50-272.28
OFFSET: LT 14.98
GROUND EL.: 82.550

PROJECT NUMBER: 993-6874
SITE NO.:
OFFSET: LT 14.98
G.W. DEPTH: 3'

HOLE NO.: P-5
SHEET 1 OF 1
DATE STARTED: 1230/11-10-99
DATE COMPLETED: 1255/11-10-99

BORING CREW:
CREW CHIEF:
DRILLER: B. BOURASSA
LOGGER: MRT CHECKED: TKA
ADDITIONAL CREW:

BORING RIG: MOBILE B-47
BORING TYPE:
SAMPLE TYPE:
WEIGHT OF HAMMER: N/A
DROP: N/A

DEPTH SCALE METERS	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEVATION	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES BLOWS / 6 INCHES	SAMPLES N	SAMPLES REC./ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0	0	4" AUGER / SPLIT SPOON	0.0-5.0 Light brown. m-f SAND.			82.6						Light brown M-F SAND
1	5		5.0-10.0 Light brown. f-SAND.			81.0						Light brown. wet F-SAND
2	10		10.0-15.0 Grayish brown. m-SAND.			79.5						Augered to 10' bgs 10'-15' Driven split spoon sampler Grayish brown M-SAND in split spoon
3	15					78.0						Augering terminated at 15' bgs
4												

DRILL RIG: MOBILE B-47
DRILLING CONTRACTOR: Con-Tec INC.
DRILLER: B. BOURASSA

SHEET 1 OF 1

LOGGED: MRT
CHECKED: TKA
DATE:

RECORD OF PROBEHOLE P-7

PROJECT NAME: RT.9 ROAD IMPROVEMENT
SITE NAME: BRATTLEBORO VT
STATION: 50-274.65
GROUND EL.: 80.492

PROJECT NUMBER: 993-6874
SITE NO.:
OFFSET: RT 14.84
G.W. DEPTH:

HOLE NO.: P-7
SHEET 1 OF 1
DATE STARTED: 1110/11-15-99
DATE COMPLETED: 1117/11-16-99

BORING CREW:
CREW CHIEF:
DRILLER: B. BOURASSA
LOGGER: MRT CHECKED: TKA
ADDITIONAL CREW:

BORING RIG: MOBILE B-47
BORING TYPE:
SAMPLE TYPE:
WEIGHT OF HAMMER: N/A
DROP: N/A

DEPTH SCALE METERS	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEVATION	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES BLOWS / 6 INCHES	SAMPLES N	SAMPLES REC./ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0	0	4" AUGER	0.0-4.6 SAND AND GRAVEL (Fill)			80.5						Limited soil cuttings observed Possible water table at 1'6" bgs Hole caved in therefore water level not measured
1	5		4.6 BEDROCK			79.1						Refusal at 4'7" bgs
2	10											
3	15											
4												

DRILL RIG: MOBILE B-47
DRILLING CONTRACTOR: Con-Tec INC.
DRILLER: B. BOURASSA

SHEET 1 OF 1

LOGGED: MRT
CHECKED: TKA
DATE:

RECORD OF PROBEHOLE P-6

PROJECT NAME: RT.9 ROAD IMPROVEMENT
SITE NAME: BRATTLEBORO VT
STATION: 50-272.57
GROUND EL.: 81.934

PROJECT NUMBER: 993-6874
SITE NO.:
OFFSET: LT 4.36
G.W. DEPTH: 9.5'

HOLE NO.: P-6
SHEET 1 OF 1
DATE STARTED: 1127/11-16-99
DATE COMPLETED: 1217/11-16-99

BORING CREW:
CREW CHIEF:
DRILLER: B. BOURASSA
LOGGER: MRT CHECKED: TKA
ADDITIONAL CREW:

BORING RIG: MOBILE B-47
BORING TYPE:
SAMPLE TYPE:
WEIGHT OF HAMMER: N/A
DROP: N/A

DEPTH SCALE METERS	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEVATION	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES BLOWS / 6 INCHES	SAMPLES N	SAMPLES REC./ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0	0	4" AUGER / 8" AUGER	0.0-5.0 Dark brown. silty. SAND.			81.9						4" Auger 0'-5'
1	5		5.0-12.5 Grayish brown. m-f SAND.			80.4						4" Auger 5'-10'
2	10											8" Auger 0'-12.5' (Driller does not have 3rd 4" auger piece therefore had to redrill hole with 8" auger)
3	15		12.5 BEDROCK			78.1						Refusal at 12'6"
4												

DRILL RIG: MOBILE B-47
DRILLING CONTRACTOR: Con-Tec INC.
DRILLER: B. BOURASSA

SHEET 1 OF 1

LOGGED: MRT
CHECKED: TKA
DATE:

RECORD OF PROBEHOLE P-8

PROJECT NAME: RT.9 ROAD IMPROVEMENT
SITE NAME: BRATTLEBORO VT
STATION: 50-276.72
GROUND EL.: 80.010

PROJECT NUMBER: 993-6874
SITE NO.:
OFFSET: RT 21.14
G.W. DEPTH: ?

HOLE NO.: P-8
SHEET 1 OF 1
DATE STARTED: 1100/11-10-99
DATE COMPLETED: 1105/11-10-99

BORING CREW:
CREW CHIEF:
DRILLER: B. BOURASSA
LOGGER: MRT CHECKED: TKA
ADDITIONAL CREW:

BORING RIG: MOBILE B-47
BORING TYPE:
SAMPLE TYPE:
WEIGHT OF HAMMER: N/A
DROP: N/A

DEPTH SCALE METERS	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEVATION	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES BLOWS / 6 INCHES	SAMPLES N	SAMPLES REC./ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0	0	4" AUGER	0.0-2.25 Dark brown C-M SAND			80.0						Encountered water at 1' bgs
1	5		2.25 BEDROCK			79.3						Refusal at 2'3"
2	10											
3	15											
4												

DRILL RIG: MOBILE B-47
DRILLING CONTRACTOR: Con-Tec INC.
DRILLER: B. BOURASSA

SHEET 1 OF 1

LOGGED: MRT
CHECKED: TKA
DATE:

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2 (2)
DESIGN FILE NAME: U:\99123-Brattleboro\dgn\rt9br500.dgn	PLOT DATE: 10-02-2002
DRAWN BY: DHL	SQUAD LEADER: JHR
DATE: 02/29/00	SHEET: 65 OF 145

RECORD OF PROBEHOLE RP-1

PROJECT NAME: RT.9 ROAD IMPROVEMENT
SITE NAME: BRATTLEBORO VT
STATION: 30+150.00
GROUND EL.: 84.945

PROJECT NUMBER: 993-6874
SITE NO.:
OFFSET: 11.00 LT
G.W. DEPTH: 15' (APPROX.)

HOLE NO.: RP-1
SHEET 1 OF 1
DATE STARTED: 1000/5-3-00
DATE COMPLETED: 1010/5-3-00

BORING CREW:
CREW CHIEF:
DRILLER: B. BOURASSA
LOGGER: MZ CHECKED: TKA
ADDITIONAL CREW:

BORING RIG:
BORING TYPE: AUGER
SAMPLE TYPE:
WEIGHT OF HAMMER: N/A
DROP: N/A

DEPTH SCALE METERS	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEVATION	SAMPLES NUMBER	TYPE	BLOWS / FOOT	N	REC.\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0	0	4" O.D. SOLID STEM AUGER	0.0-20.0 Brown m-f SAND. little to some silt.			84.9		AS	N/A	N/A	N/A	0.0-20.0 Brown fine-Medium SAND. little to some silt. Saturated at approximately 15' bgs
5	15		▼									
6	20					78.8						End boring @ 20' bgs
7	25											
8	30											
9	35											
10	40											
11												
12												

DRILL RIG: DIEDRICH D-50
DRILLING CONTRACTOR: Con-Tec Inc.
DRILLER: B. BOURASSA

SHEET 1 OF 1

LOGGED: MZ
CHECKED: TKA
DATE:

RECORD OF PROBEHOLE RP-2

PROJECT NAME: RT.9 ROAD IMPROVEMENT
SITE NAME: BRATTLEBORO VT
STATION: 30+250.05
GROUND EL.: 88.275

PROJECT NUMBER: 993-6874
SITE NO.:
OFFSET: 9.00 LT
G.W. DEPTH:

HOLE NO.: RP-2
SHEET 1 OF 1
DATE STARTED: 1520/5-2-00
DATE COMPLETED: 1600/5-2-00

BORING CREW:
CREW CHIEF:
DRILLER: B. BOURASSA
LOGGER: MZ CHECKED: TKA
ADDITIONAL CREW:

BORING RIG:
BORING TYPE: AW ROD
SAMPLE TYPE:
WEIGHT OF HAMMER: 140 lbs
DROP: 30"

DEPTH SCALE METERS	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEVATION	SAMPLES NUMBER	TYPE	BLOWS / FOOT	N	REC.\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0	0	AW ROCK PROBE - TRI POD	0.0-26.2 Brown SAND or silty SAND			88.3	1	AW	4 19 19 15 11	N/A	N/A	0.0-26.2 Brown SAND or silty SAND
5	15						2	AW	11 13 11 10 12	N/A	N/A	
10	35						3	AW	12 16 17 19 19	N/A	N/A	
11							4	AW	16 19 26 29 30	N/A	N/A	
12	40						5	AW	N/A 16 19 20 19	N/A	N/A	
							6	AW	N/A N/A	N/A	N/A	
			26.2 BEDROCK			80.3						AW Rod refusal @ 26.2' bgs

DRILL RIG: TRI-POD
DRILLING CONTRACTOR: Con-Tec Inc.
DRILLER: B. BOURASSA

SHEET 1 OF 1

LOGGED: MZ
CHECKED: TKA
DATE:

RECORD OF PROBEHOLE RP-3

PROJECT NAME: RT.9 ROAD IMPROVEMENT
SITE NAME: BRATTLEBORO VT
STATION: 30+260.00
GROUND EL.: 88.317

PROJECT NUMBER: 993-6874
SITE NO.:
OFFSET: 20.00 LT
G.W. DEPTH:

HOLE NO.: RP-3
SHEET 1 OF 1
DATE STARTED: 1244/5-3-00
DATE COMPLETED: 1255/5-3-00

BORING CREW:
CREW CHIEF:
DRILLER: B. BOURASSA
LOGGER: MZ CHECKED: TKA
ADDITIONAL CREW:

BORING RIG:
BORING TYPE: AW ROD
SAMPLE TYPE:
WEIGHT OF HAMMER: 140lb
DROP: 30"

DEPTH SCALE METERS	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEVATION	SAMPLES NUMBER	TYPE	BLOWS / FOOT	N	REC.\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0	0	AW ROCK PROBE - TRI POD	0.0-17.5 Brown SAND and silty SAND			88.3	1	AW	4 5 2 3 5	N/A	N/A	0.0-17.5 Brown SAND and silty SAND
5	15						2	AW	6 9 11 9 10	N/A	N/A	
10	35						3	AW	10 18 18 21 23	N/A	N/A	
11							4	AW	N/A 18 -	N/A	N/A	
12	40		17.5 BEDROCK			83.0						Rod refusal @ 17.5' bgs

DRILL RIG: TRI-POD
DRILLING CONTRACTOR: Con-Tec Inc.
DRILLER: B. BOURASSA

SHEET 1 OF 1

LOGGED: MZ
CHECKED: TKA
DATE:

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2 (2)
DESIGN FILE NAME: U:\99123-Brattleboro\dgn\rt9br500.dgn	PLOT DATE: 10-02-2002
DRAWN BY: LRD	SQUAD LEADER: JHR
DATE: 5/19/00	SHEET: 66 OF 145

RECORD OF PROBEHOLE RP-4

PROJECT NAME: RT.9 ROAD IMPROVEMENT
SITE NAME: BRATTLEBORO VT
STATION: 30-324
GROUND EL.: 90.486
PROJECT NUMBER: 993-6874
SITE NO.:
OFFSET: 8.5 LT
G.W. DEPTH:

HOLE NO.: RP-4
SHEET 1 OF 1
DATE STARTED: 0920/5-2-00
DATE COMPLETED: 0925/5-2-00
BORING CREW:
CREW CHIEF:
DRILLER: W. ZARENSKI
LOGGER: MZ CHECKED: TKA
ADDITIONAL CREW:
BORING RIG:
BORING TYPE: HAND AUGER
SAMPLE TYPE:
WEIGHT OF HAMMER: N/A
DROP: N/A

DEPTH SCALE METERS	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEVATION	SAMPLES NUMBER	TYPE	BLOWS / FOOT	N	REC.\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0	0	HAND AUGER	0.0-0.25 Brown, silty fine SAND, moist, little to some organic matter			90.5	N/A	N/A	N/A	N/A	N/A	0.0-0.25 Moist brown, silty fine SAND, little to some organic matter
			0.25 BEDROCK			90.4						Auger refusal @ 0.25' bgs
1	5											
2	10											
3	15											
4												
5												
6	20											

DRILL RIG: HAND AUGER
DRILLING CONTRACTOR: Golder Associates
DRILLER: W. ZARENSKI
SHEET 1 OF 1
LOGGED: MZ
CHECKED: TKA
DATE:

RECORD OF PROBEHOLE RP-5

PROJECT NAME: RT.9 ROAD IMPROVEMENT
SITE NAME: BRATTLEBORO VT
STATION: 30-285.02
GROUND EL.: 89.972
PROJECT NUMBER: 993-6874
SITE NO.:
OFFSET: 8.49 LT
G.W. DEPTH:

HOLE NO.: RP-5
SHEET 1 OF 1
DATE STARTED: 1420/5-2-00
DATE COMPLETED: 1430/5-2-00
BORING CREW:
CREW CHIEF:
DRILLER: B. BOURASSA
LOGGER: MZ CHECKED: TKA
ADDITIONAL CREW:
BORING RIG:
BORING TYPE: AW ROD
SAMPLE TYPE:
WEIGHT OF HAMMER: 140 lbs
DROP: 30"

DEPTH SCALE METERS	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEVATION	SAMPLES NUMBER	TYPE	BLOWS / FOOT	N	REC.\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0	0	AW ROCK PROBE - TRI POD	0.0-11.6 Brown SAND			90.0	1	AW	1 7 12 8 8	N/A	N/A	0.0-11.6 Brown SAND
1	5						2	AW	10 10 12 15 21	N/A	N/A	
2	10						3	AW	20 –	N/A	N/A	
3	15		11.6 BEDROCK			86.4						Rod refusal at 11.6' bgs
4												
5												
6	20											

DRILL RIG: TRI-POD
DRILLING CONTRACTOR: Con-Tec Inc.
DRILLER: B. BOURASSA
SHEET 1 OF 1
LOGGED: MZ
CHECKED: TKA
DATE:

RECORD OF PROBEHOLE RP-6

PROJECT NAME: RT.9 ROAD IMPROVEMENT
SITE NAME: BRATTLEBORO VT
STATION: 30-300.01
GROUND EL.: 90.037
PROJECT NUMBER: 993-6874
SITE NO.:
OFFSET: 18.01
G.W. DEPTH:

HOLE NO.: RP-6
SHEET 1 OF 1
DATE STARTED: 1345/5-2-00
DATE COMPLETED: 1350/5-2-00
BORING CREW:
CREW CHIEF:
DRILLER: G. DEAN
LOGGER: MZ CHECKED: TKA
ADDITIONAL CREW:
BORING RIG:
BORING TYPE: AW ROD
SAMPLE TYPE:
WEIGHT OF HAMMER: 140lb
DROP: 30"

DEPTH SCALE METERS	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEVATION	SAMPLES NUMBER	TYPE	BLOWS / FOOT	N	REC.\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0	0	AW ROCK PROBE/HAND AUGER	0.0-0.25 Black, silty SAND, moist, some organic matter			90.0	1	AW	6 8 9 8 10	N/A	N/A	0.0-0.25 Moist black silty SAND some organic matter
1			0.25-4.5 Olive green to gray, m-f SAND, trace silt									0.25-4.5' Olive green to gray medium to fine SAND trace silt
2	5											
3	10		4.5-9.5 Brown SAND			88.7	2	AW	10 8 14 14 –	N/A	N/A	4.5'-9.5' Brown SAND
4	15		9.5 BEDROCK			87.1						Rod refusal @ 9.5' bgs NOTE: Descriptions from 0.0 to 4.5 from hand auger observations
5												
6	20											

DRILL RIG: TRI-POD
DRILLING CONTRACTOR: Con-Tec Inc.
DRILLER: G. DEAN
SHEET 1 OF 1
LOGGED: MZ
CHECKED: TKA
DATE:

RECORD OF BOREHOLE RP-7

PROJECT NAME: RT.9 ROAD IMPROVEMENT
SITE NAME: BRATTLEBORO VT
STATION:
GROUND EL.: 89.175
PROJECT NUMBER: 993-6874
SITE NO.:
OFFSET:
G.W. DEPTH:

HOLE NO.: RP-7
SHEET 1 OF 1
DATE STARTED: 1010/5/2/2000
DATE COMPLETED: 1029/5/2/2000
BORING CREW:
CREW CHIEF:
DRILLER: G. DEAN
LOGGER: MZ CHECKED: TKA
ADDITIONAL CREW:
BORING RIG:
BORING TYPE: AW ROD
SAMPLE TYPE:
WEIGHT OF HAMMER: 140lbs
DROP: 30"

DEPTH SCALE METERS	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEVATION	SAMPLES NUMBER	TYPE	BLOWS / FOOT	N	REC.\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0	0	AW ROCK PROBE - TRI POD	0.0-16.7' Brown SAND			89.2	1	AW	4 6 7 8 10	N/A	N/A	0.0-16.7' Brown SAND
1	5						2	AW	8 8 9 10 11	N/A	N/A	
2	10						3	AW	15 15 17 18 21	N/A	N/A	
3	15						4	AW	15 –	N/A	N/A	
4			16.7 BEDROCK			84.1						Rod refusal @ 16.7' bgs.
5												
6	20											
7												
	25											

DRILL RIG: TRI-POD
DRILLING CONTRACTOR: Con-Tec. Inc.
DRILLER: G. DEAN
SHEET 1 OF 1
LOGGED: MZ
CHECKED: TKA
DATE:

RECORD OF PROBEHOLE RP-8

PROJECT NAME: RT.9 ROAD IMPROVEMENT
SITE NAME: BRATTLEBORO VT
STATION: 30-326.18
GROUND EL.: 87.409
PROJECT NUMBER: 993-6874
SITE NO.:
OFFSET: 8.01
G.W. DEPTH:

HOLE NO.: RP-8
SHEET 1 OF 1
DATE STARTED: 1200/5-2-00
DATE COMPLETED: 1210/5-2-00
BORING CREW:
CREW CHIEF:
DRILLER: G. DEAN
LOGGER: MZ CHECKED: TKA
ADDITIONAL CREW:
BORING RIG:
BORING TYPE: AW ROD
SAMPLE TYPE:
WEIGHT OF HAMMER: 140 lbs
DROP: 30"

DEPTH SCALE METERS	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEVATION	SAMPLES NUMBER	TYPE	BLOWS / FOOT	N	REC.\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0	0	AW ROCK PROBE - TRI POD	0.0-18.75 Black to brown SAND			87.4	1	AW	3 6 5 7 10	N/A	N/A	0.0-18.75' Black to brown SAND
1	5						2	AW	10 7 11 14 14	N/A	N/A	
2	10						3	AW	N/A 12 17 18 25	N/A	N/A	
3	15						4	AW	N/A 23 31 –	N/A	N/A	
4			18.75' BEDROCK			81.7						Rod refusal @ 18.75' bgs. NOTE: This rockprobe was drilled 5' North of survey location. New elevation is approx. 1.5 ft. higher than survey location
5												
6	20											
7												
	25											

DRILL RIG: TRI-POD
DRILLING CONTRACTOR: Con-Tec Inc.
DRILLER: G. DEAN
SHEET 1 OF 1
LOGGED: MZ
CHECKED: TKA
DATE:

RECORD OF PROBEHOLE RP-9

PROJECT NAME: RT.9 ROAD IMPROVEMENT
SITE NAME: BRATTLEBORO VT
STATION: 30-326.00
GROUND EL.: 88.964
PROJECT NUMBER: 993-6874
SITE NO.:
OFFSET: 88.964
G.W. DEPTH:

HOLE NO.: RP-9
SHEET 1 OF 1
DATE STARTED: 0940/5-2-00
DATE COMPLETED: 1025/5-2-00
BORING CREW:
CREW CHIEF:
DRILLER: G. DEAN
LOGGER: MZ CHECKED: TKA
ADDITIONAL CREW:
BORING RIG:
BORING TYPE: HAND AUGER AND AW ROD
SAMPLE TYPE:
WEIGHT OF HAMMER: 140 lbs
DROP: 30"

DEPTH SCALE METERS	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEVATION	SAMPLES NUMBER	TYPE	BLOWS / FOOT	N	REC.\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0	0	AW ROCK PROBE/HAND AUGER	0.0-0.25 Black, silty SAND, moist, some organics			89.0	1	HAND AUGER	N/A	N/A	N/A	0.0-0.25 Black, moist silty SAND some organics
1			0.25-4.5 Olive green to gray m-f SAND, trace to some silt			88.9						0.0-4.5' Olive green to Gray medium - fine SAND trace to some silt
2	5		4.5-19.5 Brown to gray SAND			87.6	2	AW	N/A	N/A	N/A	4.5'-19.5' Brown to Gray SAND
3	10						3	AW	7 7 12 12 15	N/A	N/A	
4	15						4	AW	15 11 13 12 13	N/A	N/A	
5							5	AW	15 15 15 21 –	N/A	N/A	
6	20		19.5 BEDROCK			83.0						Rod refusal at 19.5' bgs.

DRILL RIG: TRI-POD/HAND AUGER
DRILLING CONTRACTOR: Con-Tec Inc.
DRILLER: G. DEAN
SHEET 1 OF 1
LOGGED: MZ
CHECKED: TKA
DATE:

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2 (2)
DESIGN FILE NAME: U:\99123-Brattleboro\dgn\rt9br500.dgn	PLOT DATE: 10-02-2002
DRAWN BY: LRD	SQUAD LEADER: JHR
DATE: 5/19/00	SHEET: 67 OF 145

RECORD OF PROBEHOLE RP-10

PROJECT NAME: RT.9 ROAD IMPROVEMENT
SITE NAME: BRATTLEBORO VT
STATION: 30-325.82
GROUND EL.: 83.94

PROJECT NUMBER: 993-6874
SITE NO.:
OFFSET: 7.72 RT
G.W. DEPTH:

HOLE NO.: RP-10
SHEET 1 OF 1
DATE STARTED: 1040/5-2-00
DATE COMPLETED: 1055/5-2-00

BORING CREW:
CREW CHIEF:
DRILLER: M. ZARENSKI
LOGGER: MZ CHECKED: TKA
ADDITIONAL CREW:

BORING RIG:
BORING TYPE: HAND AUGER
SAMPLE TYPE:
WEIGHT OF HAMMER: NONE
DROP: NONE

DEPTH SCALE METERS	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEVATION	SAMPLES NUMBER	TYPE	BLOWS / FOOT	N	REC.\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0	0	HAND AUGER	0.0-0.25 Black. silty SAND. some organics			83.1						0.0-0.25' Moist black silty SAND some organics
1	5		0.25-4.5 Olive green to tan. f-SAND. trace to little silt. moist to saturated.			83.0						0.25-4.0' - Olive green fine SAND trace to little silt. moist 4.0-4.5' - Olive green to tan fine SAND with red oxidized zones wet - saturated
2			4.5 BEDROCK			81.7						Auger refusal @ 4.5' bgs
3	10											NOTE: THIS ROCKPROBE LOCATED APPROX. 4 FEET SOUTH OF SURVEY LOCATION (APPROX. 1 FOOT LOWER IN ELEVATION) DUE TO HEAVY VEGETATION.
4												
15												
5												
6	20											

DRILL RIG: HAND AUGER
DRILLING CONTRACTOR: GOLDER ASSOCIATES
DRILLER: W. ZARENSKI

SHEET 1 OF 1

LOGGED: MZ
CHECKED: TKA
DATE:

RECORD OF PROBEHOLE RP-11

PROJECT NAME: RT.9 ROAD IMPROVEMENT
SITE NAME: BRATTLEBORO VT
STATION: 30-327.25
GROUND EL.: 77.856

PROJECT NUMBER: 993-6874
SITE NO.:
OFFSET: 14.00 RT
G.W. DEPTH: 2'(APPROX.)

HOLE NO.: RP-11
SHEET 1 OF 1
DATE STARTED: 1055/5-3-00
DATE COMPLETED: 1100/5-3-00

BORING CREW:
CREW CHIEF:
DRILLER: B. BOURASSA
LOGGER: MZ CHECKED: TKA
ADDITIONAL CREW:

BORING RIG:
BORING TYPE: AUGER
SAMPLE TYPE:
WEIGHT OF HAMMER: N/A
DROP: N/A

DEPTH SCALE METERS	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEVATION	SAMPLES NUMBER	TYPE	BLOWS / FOOT	N	REC.\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0	0	4" O.D. SOLID STEM AUGER	0.0-2.5 Fill material - ¾ inch stone with sand and silt			77.9	1	AS	N/A	N/A	N/A	0.0-2.5' Fill material - ¾ inch stone with sand and silt saturated @ 2' bgs.
1	5		2.5-3.0 Bedrock (weathered)			77.1	2	AS	N/A	N/A	N/A	2.5'-3.0 weathered Bedrock
2						76.9						End boring at 3' bgs
3	10											NOTE: This rockprobe drilled at edge of pavement on Route 9 west bound lane.
4												
15												
5												
6	20											

DRILL RIG: DIEDRICH D-50
DRILLING CONTRACTOR: Con-Tec Inc.
DRILLER: B. BOURASSA

SHEET 1 OF 1

LOGGED: MZ
CHECKED: TKA
DATE:

RECORD OF PROBEHOLE RP-12

PROJECT NAME: RT.9 ROAD IMPROVEMENT
SITE NAME: BRATTLEBORO VT
STATION: 30-326.00
GROUND EL.: 80.005

PROJECT NUMBER: 993-6874
SITE NO.:
OFFSET: 29.50 RT
G.W. DEPTH:

HOLE NO.: RP-12
SHEET 1 OF 1
DATE STARTED: 1400/5-3-00
DATE COMPLETED: 1410/5-3-00

BORING CREW:
CREW CHIEF:
DRILLER: B. BOURASSA
LOGGER: MZ CHECKED: TKA
ADDITIONAL CREW:

BORING RIG:
BORING TYPE: AW ROD
SAMPLE TYPE:
WEIGHT OF HAMMER: 140lb
DROP: 30"

DEPTH SCALE METERS	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEVATION	SAMPLES NUMBER	TYPE	BLOWS / FOOT	N	REC.\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0	0	AW ROCK PROBE - TRI POD	0.0-7.5 Black and brown SAND			80.0	1	AW	3 2 5 10 14	N/A	N/A	0.0-7.5' Black and Brown SAND
1	5						2	AW	20 26 -	N/A	N/A	
2			7.5 Bedrock			77.7						Rod Refusal @ 7.5' bgs
3	10											
4												
15												
5												
6	20											

DRILL RIG: TRI-POD
DRILLING CONTRACTOR: Con-Tec Inc.
DRILLER: B. BOURASSA

SHEET 1 OF 1

LOGGED: MZ
CHECKED: TKA
DATE:

RECORD OF PROBEHOLE RP-13

PROJECT NAME: RT.9 ROAD IMPROVEMENT
SITE NAME: BRATTLEBORO VT
STATION: 30-345.01
GROUND EL.: 77.875

PROJECT NUMBER: 993-6874
SITE NO.:
OFFSET: 29.80 RT
G.W. DEPTH:

HOLE NO.: RP-13
SHEET 1 OF 1
DATE STARTED: 1445/5-3-00
DATE COMPLETED: 1450/5-3-00

BORING CREW:
CREW CHIEF:
DRILLER: B. BOURASSA
LOGGER: MZ CHECKED: TKA
ADDITIONAL CREW:

BORING RIG:
BORING TYPE: AW ROD
SAMPLE TYPE:
WEIGHT OF HAMMER: 140 lb
DROP: 30"

DEPTH SCALE METERS	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEVATION	SAMPLES NUMBER	TYPE	BLOWS / FOOT	N	REC.\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0	0	AW ROCK PROBE - TRI POD	0.0-3.5 Black silty SAND and Stone (fill Material)			77.9						0.0-3.5 Black silty SAND and Stone- fill mat'l.
1	5		3.5 Bedrock			76.8						Rod Refusal @ 3.5' bgs
2												
3	10											
4												
15												
5												
6	20											

DRILL RIG: TRI-POD
DRILLING CONTRACTOR: Con-Tec Inc.
DRILLER: B. BOURASSA

SHEET 1 OF 1

LOGGED: MZ
CHECKED: TKA
DATE:

RECORD OF PAVEMENT CORE C-1

PROJECT NAME: RT.9 ROAD IMPROVEMENT
SITE NAME: BRATTLEBORO VT
STATION: 30-170
GROUND EL.: 84.284

PROJECT NUMBER: 993-6874
SITE NO.:
OFFSET: 0.0 RT
G.W. DEPTH:

HOLE NO.: C-1
SHEET 1 OF 1
DATE STARTED: 0945/5-3-00
DATE COMPLETED: 0950/5-3-00

BORING CREW:
CREW CHIEF:
DRILLER: B. BOURASSA
LOGGER: MZ CHECKED: TKA
ADDITIONAL CREW:

BORING RIG:
BORING TYPE: AUGER
SAMPLE TYPE:
WEIGHT OF HAMMER: N/A
DROP: N/A

DEPTH SCALE METERS	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEVATION	SAMPLES NUMBER	TYPE	BLOWS / FOOT	N	REC.\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0	0	6" O.D. SOLID STEM AUGERS	0.0-0.5 - Asphalt			84.3						0.0-0.5 - Asphalt
1	5		0.5-2.5 - Subbase			84.1						0.5-2.5 Subbase - ¾ inch stone with silt and sand
2			2.5-3.0 Brown, silty SAND (Native Material)			83.5 83.4						2.5'-3.0 Native Material - brown silty SAND End boring @ 3' bgs
3	10											
4												
15												
5												
6	20											

DRILL RIG: DIEDRICH D-50
DRILLING CONTRACTOR: Con-Tec Inc.
DRILLER: B. BOURASSA

SHEET 1 OF 1

LOGGED: MZ
CHECKED: TKA
DATE:

RECORD OF PAVEMENT CORE C-2

PROJECT NAME: RT.9 ROAD IMPROVEMENT
SITE NAME: BRATTLEBORO VT
STATION: 30-300
GROUND EL.: 78.250

PROJECT NUMBER: 993-6874
SITE NO.:
OFFSET: 12.5 RT
G.W. DEPTH: 2'(APPROX.)

HOLE NO.: C-2
SHEET 1 OF 1
DATE STARTED: 1040/5-3-00
DATE COMPLETED: 1045/5-3-00

BORING CREW:
CREW CHIEF:
DRILLER: B. BOURASSA
LOGGER: MZ CHECKED: TKA
ADDITIONAL CREW:

BORING RIG:
BORING TYPE: AUGER
SAMPLE TYPE:
WEIGHT OF HAMMER: N/A
DROP: N/A

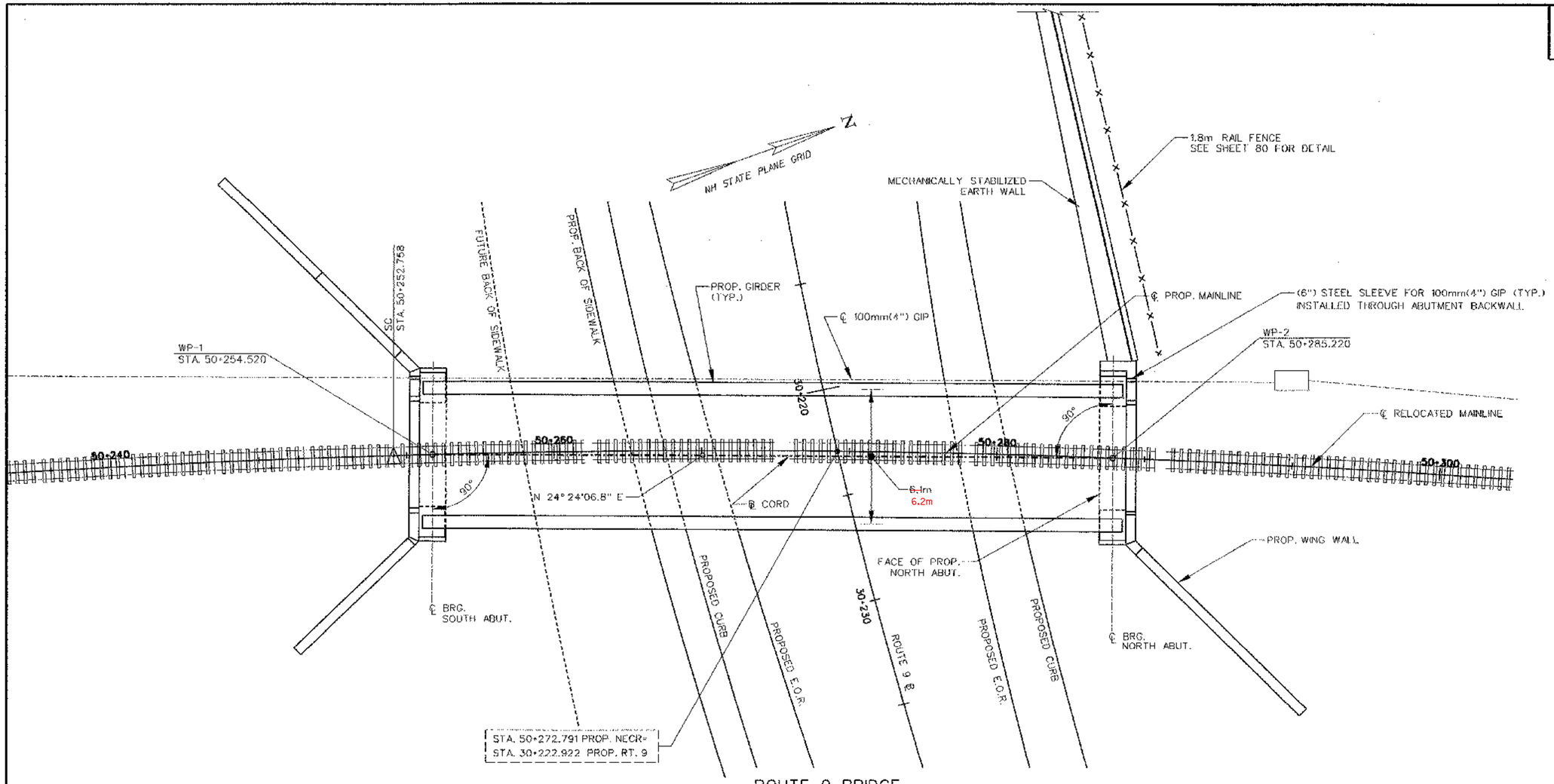
DEPTH SCALE METERS	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEVATION	SAMPLES NUMBER	TYPE	BLOWS / FOOT	N	REC.\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0	0	6" O.D. SOLID STEM AUGERS	0.0-0.5 Asphalt			78.3						0.0-0.5 Asphalt
1	5		0.5-2.0 Subbase			78.1						0.5-3.0 Subbase - ¾ inch stone with silt and sand - Saturated @ 2' bgs. possibly natural material below 2'.
2			2.0-3.0 Possibly native material			77.6 77.3						End boring at 3' bgs
3	10											
4												
15												
5												
6	20											

DRILL RIG: DIEDRICH D-50
DRILLING CONTRACTOR: Con-Tec Inc.
DRILLER: B. BOURASSA

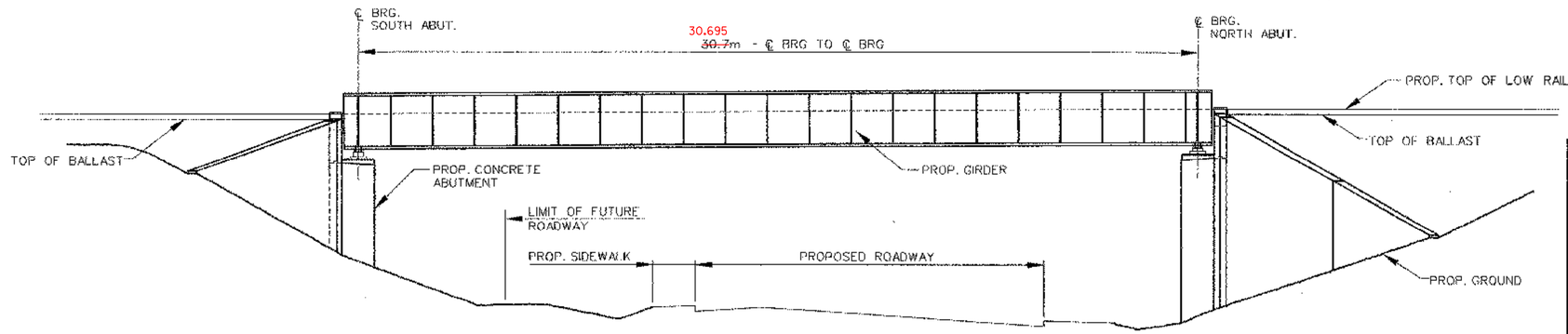
SHEET 1 OF 1

LOGGED: MZ
CHECKED: TKA
DATE:

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2 (2)
DESIGN FILE NAME: U:\99123-Brattleboro\dgn\rt9br500.dgn	PLOT DATE: 10-02-2002
DRAWN BY: LRD	SQUAD LEADER: JHR
DATE: 6/6/2000	SHEET: 68 OF 145



ROUTE 9 BRIDGE
PLAN
SCALE 1:100



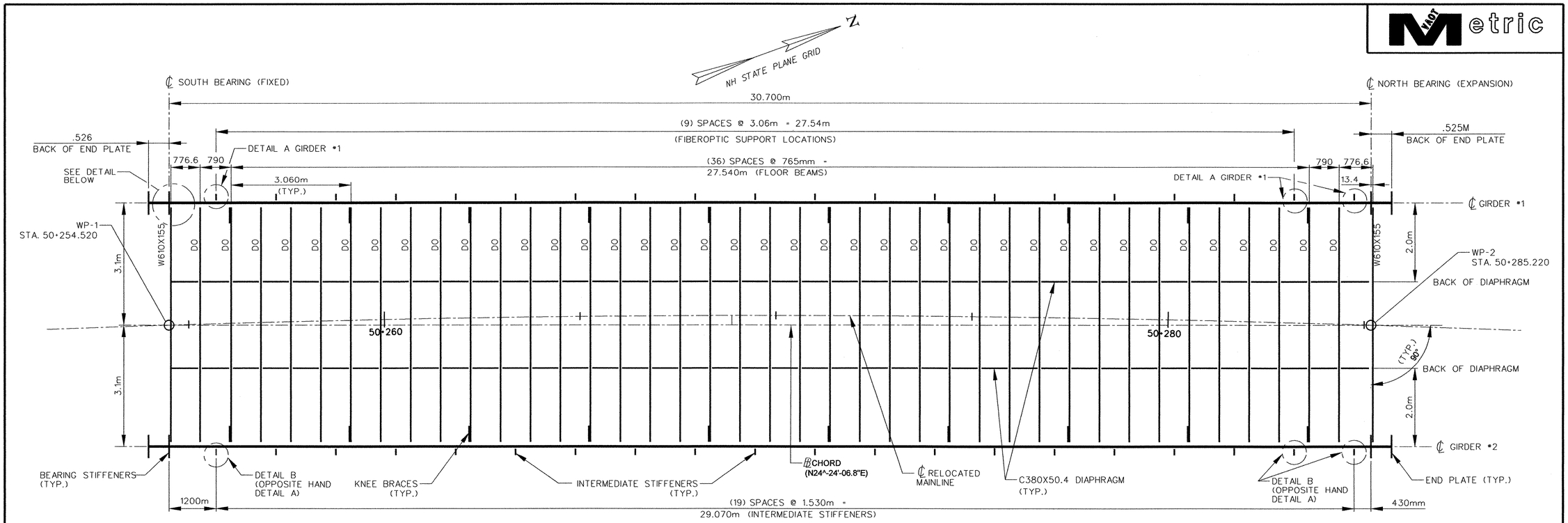
ROUTE 9 BRIDGE
ELEVATION
SCALE 1:100

Plot Date: 10-03-2002
File: rt9br100.dgn

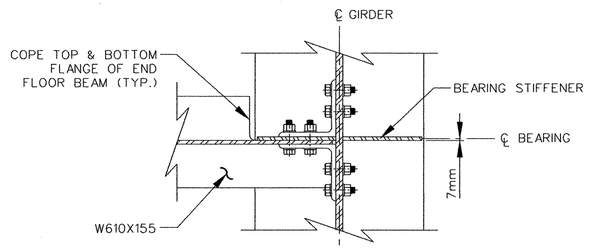
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BRATTLEBORO	Bridge No. 62.56
Highway No. VT. ROUTE 9	Log Sta. / Surv. Sta.
ROUTE 9 BRIDGE	
BRIDGE PLAN & ELEVATION	
Designed By LM	Drawn By DHL
Checked By GJB Date	Bridge Design Supervisor JHR Date
PROJECT BRATTLEBORO	PROJECT NO. NH BRF 012-1(33)
I.G.C. Info.	
Bridge Sheet No. 1	Sheet 69 of 145

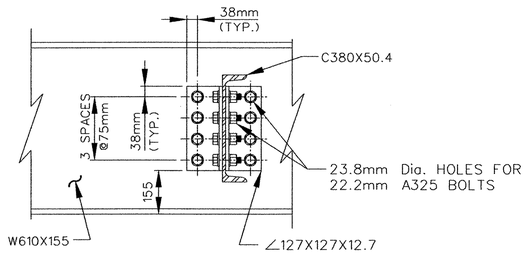
VAOT Metric



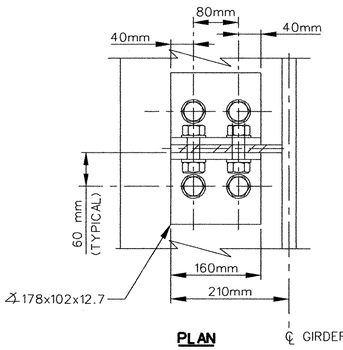
FRAMING PLAN
SCALE: 1:50



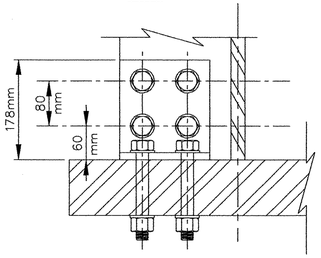
SECTION 2-2
SCALE: 1:10



DIAPHRAGM CONNECTION DETAIL
SCALE: 1:10

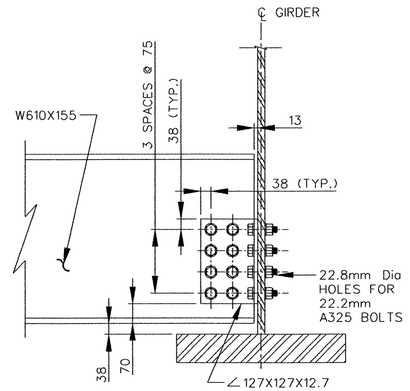


PLAN

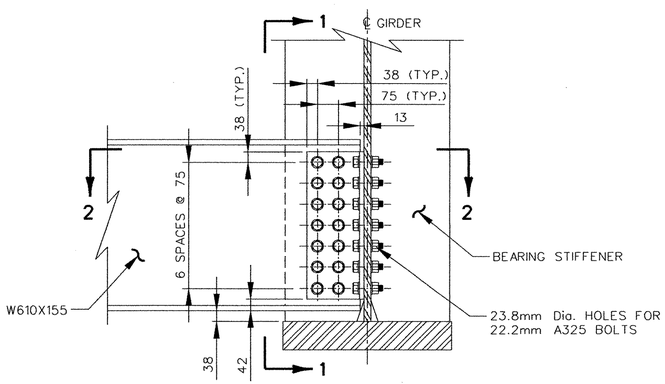


ELEVATION

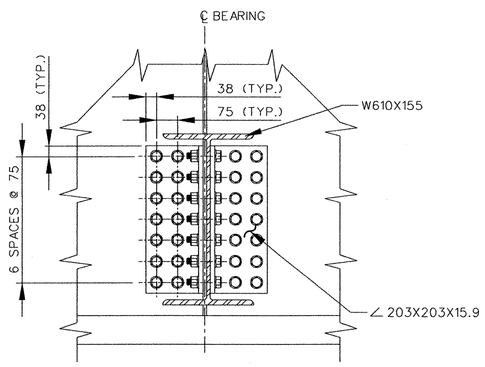
DETAIL A
BOLTING OF INTERMEDIATE STIFFENER NEAR BEARING
SCALE 1:5



FLOOR BEAM CONNECTION DETAIL
SCALE 1:10



END FLOOR BEAM CONNECTION DETAIL
SCALE 1:10



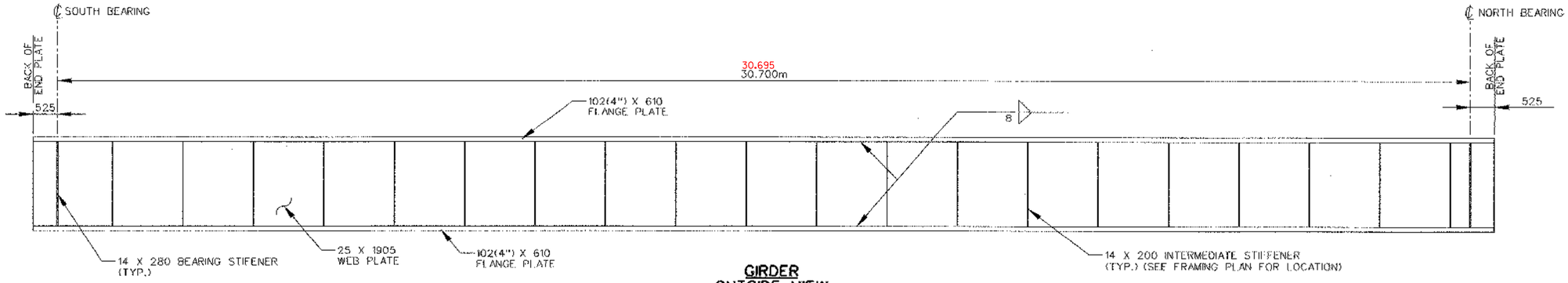
SECTION 1-1
SCALE: 1:10

NOTE: DETAIL B (OPPOSITE HAND)

Plot Date: 10-28-2002
File: rt9br150

STATE OF VERMONT
AGENCY OF TRANSPORTATION

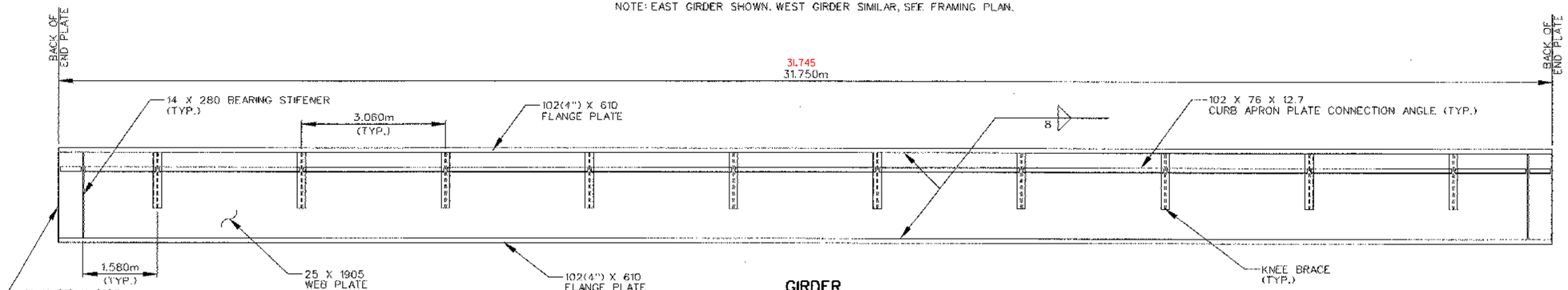
Town Of BRATTLEBORO	Bridge No. 62.56
Highway No. VT. ROUTE 9	Log Sta. / Surv. Sta.
ROUTE 9 BRIDGE	
FRAMING PLAN & CONNECTION DETAILS	
Designed By LM	Drawn By DHL/LRD
Checked By GJB Date	Bridge Design Supervisor JHR Date
PROJECT BRATTLEBORO	PROJECT NO. NH 010-2(2)
I.G.C. Info.	
Bridge Sheet No. 2	Sheet 70 of 145



GIRDER OUTSIDE VIEW

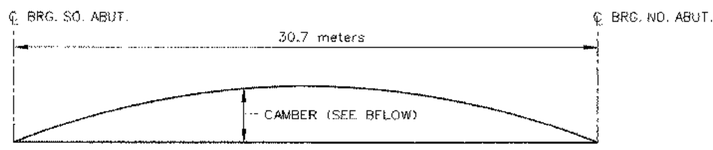
SCALE: 1:50

NOTE: EAST GIRDER SHOWN, WEST GIRDER SIMILAR, SEE FRAMING PLAN.



GIRDER INSIDE VIEW

SCALE: 1:50

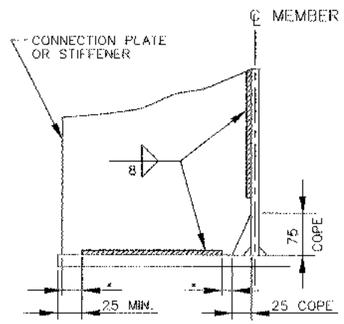


GIRDER CAMBER									
GIRDER	SO. BRG.	1/8 PT.	1/4 PT.	3/8 PT.	1/2 PT.	5/8 PT.	3/4 PT.	7/8 PT.	NO. BRG.
EAST	0	10	19	24	26	24	19	10	0
WEST	0	10	19	24	26	24	19	10	0

* CAMBER SHOWN IN mm

GIRDER CAMBER TABLE

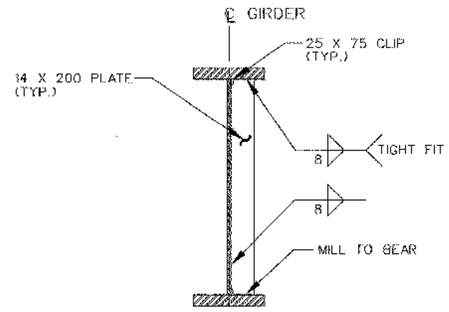
SCALE: 1:50



* NO WELD FOR 6 MIN. 12 MAX. (EXCEPT MUST MAINTAIN 25 MINIMUM FROM EDGE OF FLANGE)

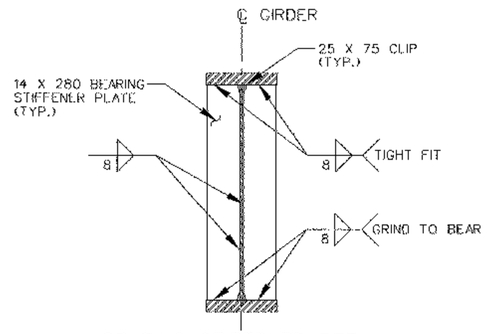
WELD TERMINATION DETAIL

N.T.S.



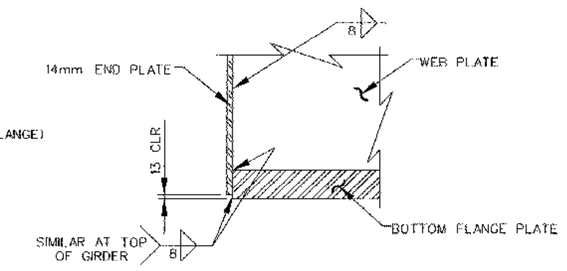
INTERMEDIATE STIFFENER DETAIL

SCALE: 1:25



BEARING STIFFENER DETAIL

SCALE: 1:25



GIRDER END PLATE DETAIL

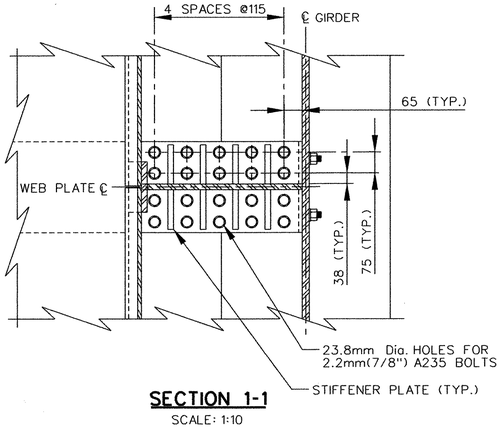
SCALE: 1:10

STATE OF VERMONT
AGENCY OF TRANSPORTATION

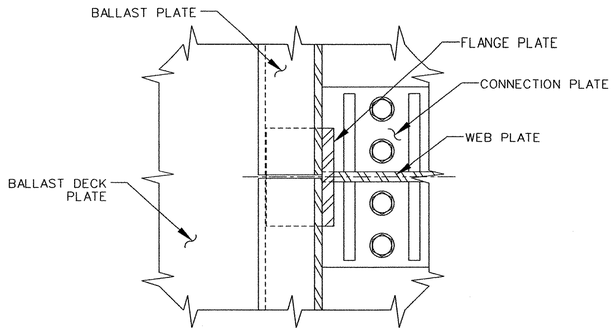
Town Of BRATTLEBORO	Bridge No. 62.56
Highway No. VT. ROUTE 9	Log Sta. / Surv. Sta.
ROUTE 9 BRIDGE	
GIRDER ELEVATION, CAMBER & DETAILS	
Designed By LM	Drawn By DHL
Checked By GJB Date	Bridge Design Supervisor JHR Date
PROJECT BRATTLEBORO	PROJECT NO. NH 010-2(2)
I.G.C. Info.	
Bridge Sheet No. 3	Sheet 71 of 145

Plot Date: 10-02-2002
File: rt9br151

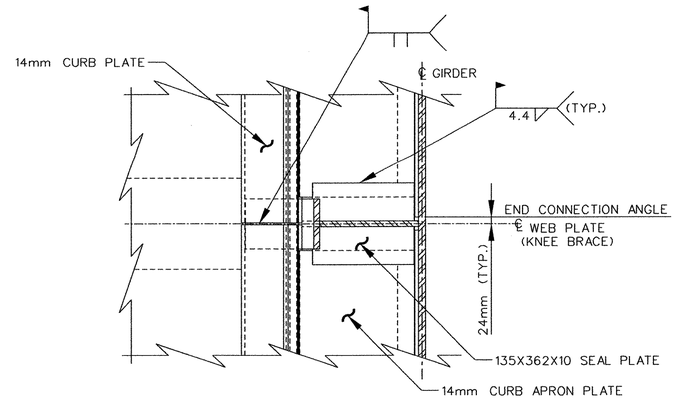
Metric



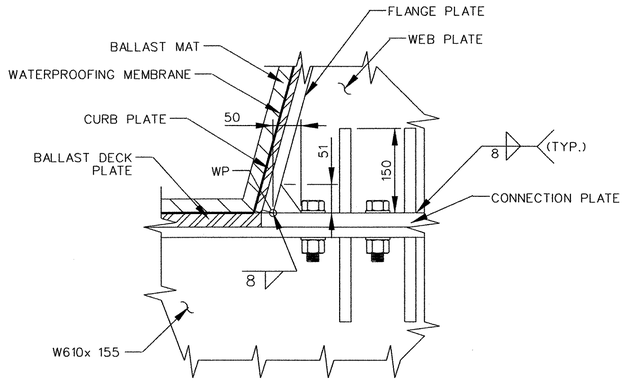
SECTION 1-1
SCALE: 1:10



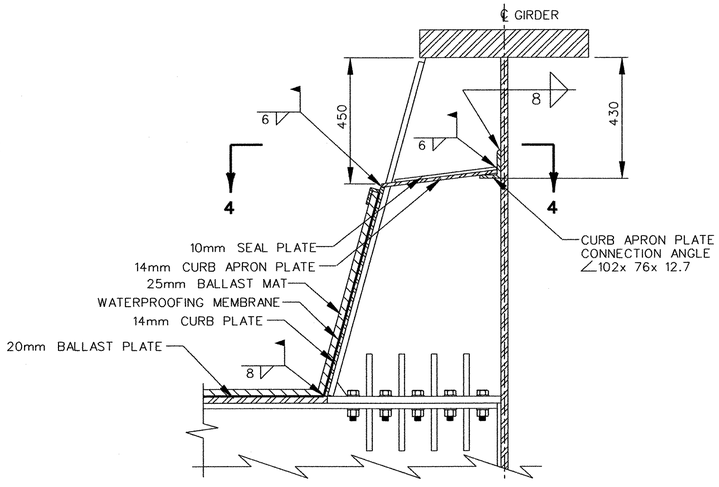
SECTION 3-3
SCALE: 1:5



SECTION 4-4
SCALE: 1:10

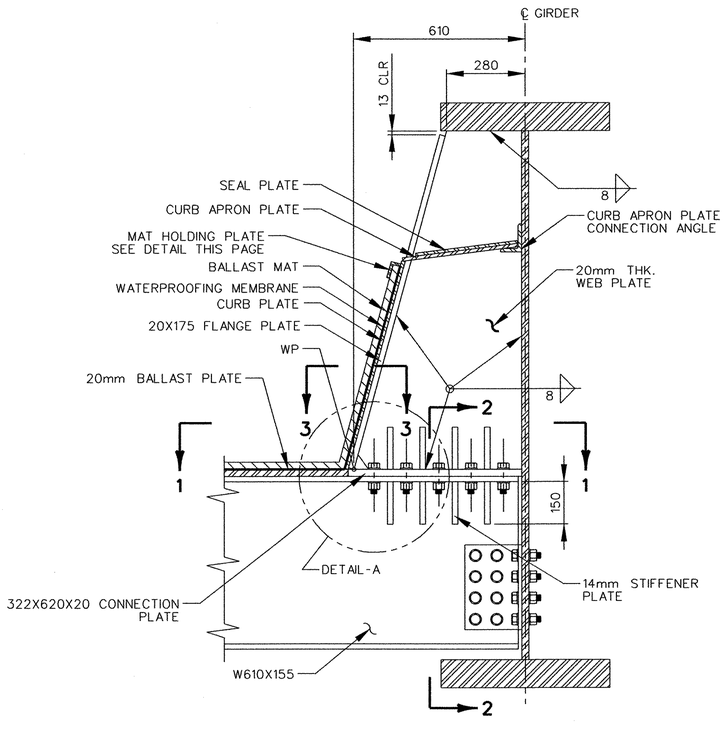


DETAIL-A
SCALE: 1:5

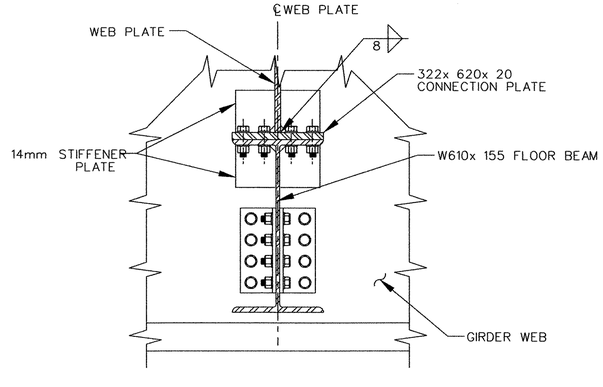


CURB PLATE CONNECTION DETAIL
SCALE: 1:10

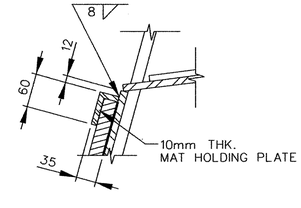
NOTE:
FOR FASTENERS SEE NOTE 3 ON SHEET 7 OF 145



KNEE BRACE CONNECTION DETAIL
SCALE: 1:10



SECTION 2-2
SCALE: 1:10

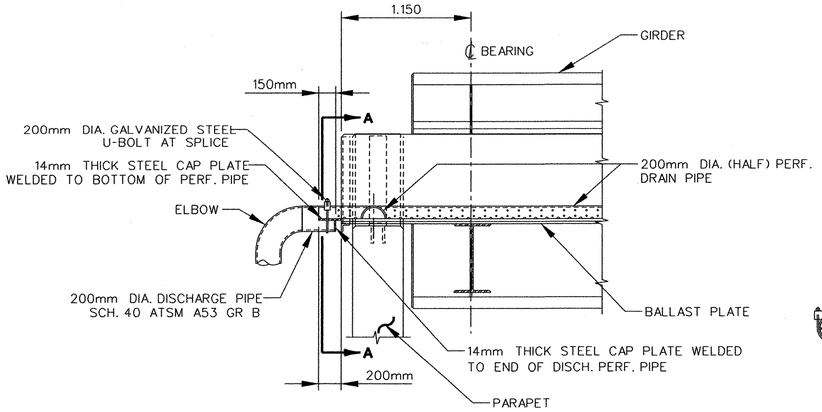


MAT HOLDING PLATE DETAIL
SCALE: 1:5

Plot Date: 10-10-2002
File: rt9br152

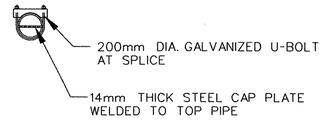
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BRATTLEBORO	Bridge No. 62.56
Highway No. VT. ROUTE 9	Log Sta. / Surv. Sta.
ROUTE 9 BRIDGE	
KNEEBRACE CONNECTION & DETAILS	
Designed By LM	Drawn By DHL/MER
Checked By GJB Date	Bridge Design Supervisor JHR Date
PROJECT BRATTLEBORO	PROJECT NO. NH 010-2(2)
I.G.C. Info.	
Bridge Sheet No. 4	Sheet 72 of 145

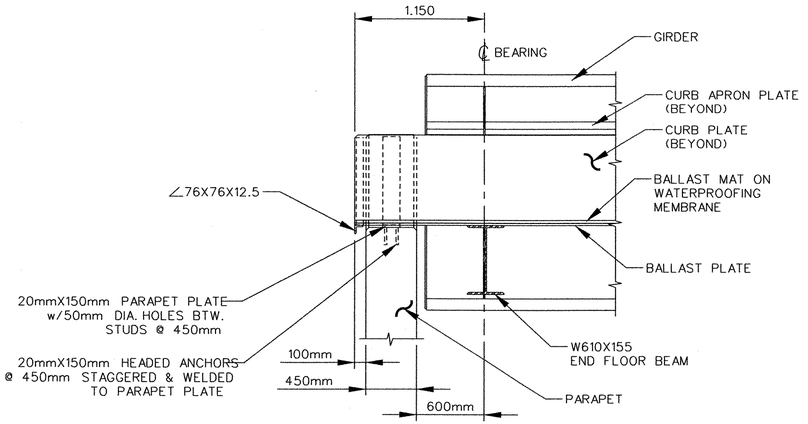


PARAPET DISCHARGE PIPE CONNECTION DETAIL

SCALE: 1:25

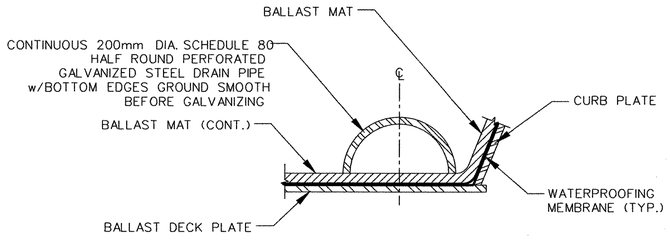


SECTION A-A



PARAPET DETAIL

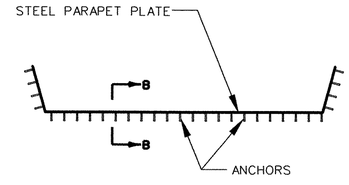
SCALE: 1:25



DRAIN PIPE DETAIL

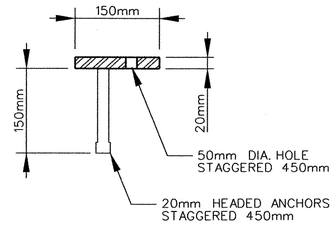
SCALE: 1:5

SEE PARAPET DETAIL FOR EXTENSION OF PIPE.

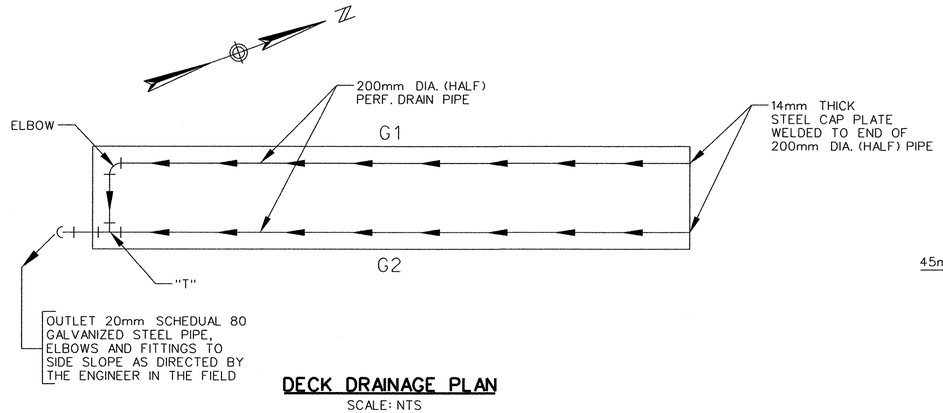


PARAPET PLATE DETAIL

SCALE 1:50

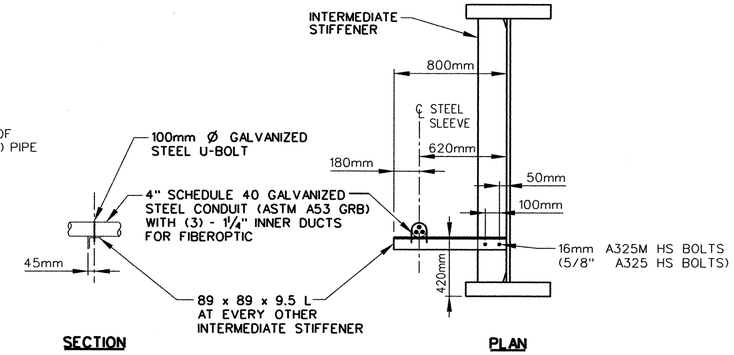


SECTION B-B



DECK DRAINAGE PLAN

SCALE: NTS



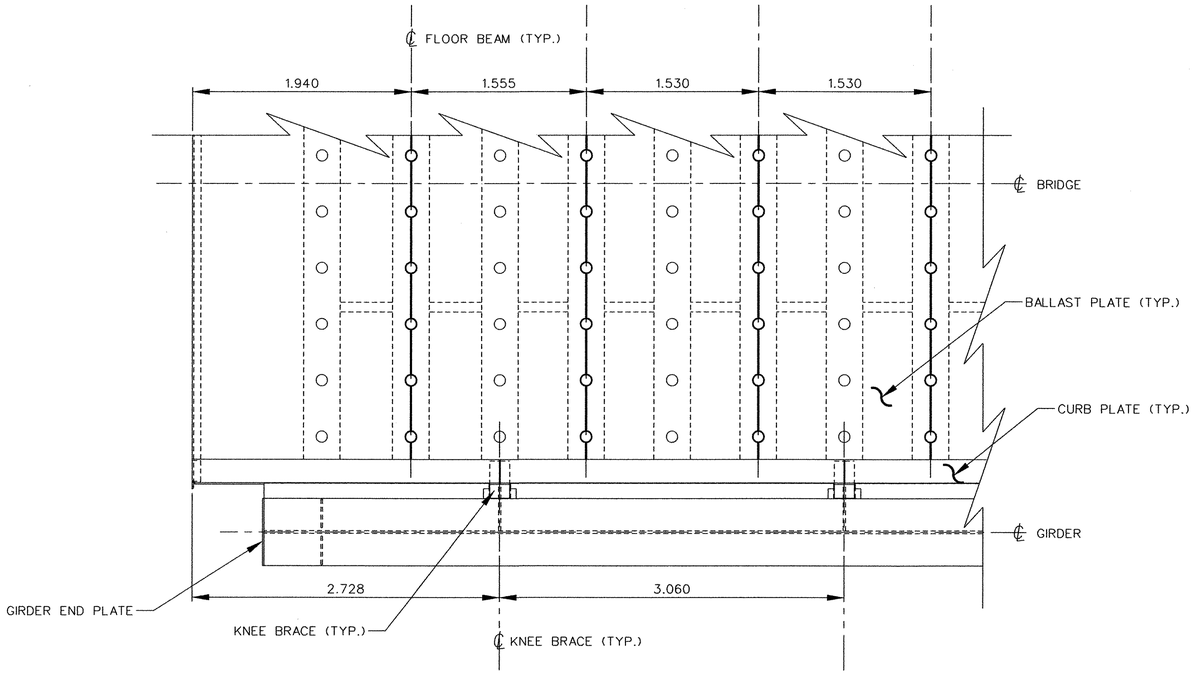
FIBEROPTIC CONDUIT SUPPORT DETAIL

SCALE 1:20

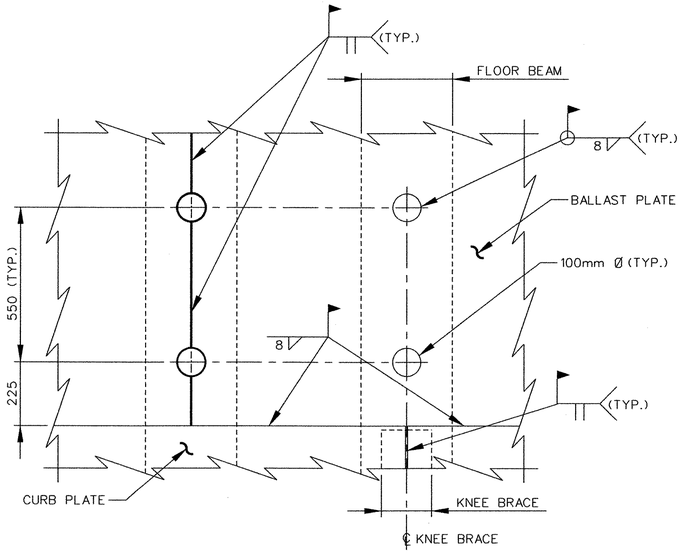
Plot Date: 10-03-2002
File: rt9br153

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BRATTLEBORO	Bridge No. 62.56
	Log Sta.
Highway No. VT. ROUTE 9	Surv. Sta.
ROUTE 9 BRIDGE	
SUPERSTRUCTURE DETAILS	
Designed By	Drawn By DHL/LB
Checked By GJB Date	Bridge Design Supervisor JHR Date
PROJECT BRATTLEBORO	PROJECT NO. NH 010-2(2)
I.G.C. Info.	
Bridge Sheet No. 5	Sheet 73 of 145



BALLAST PLATE LAYOUT
SCALE: 1:25

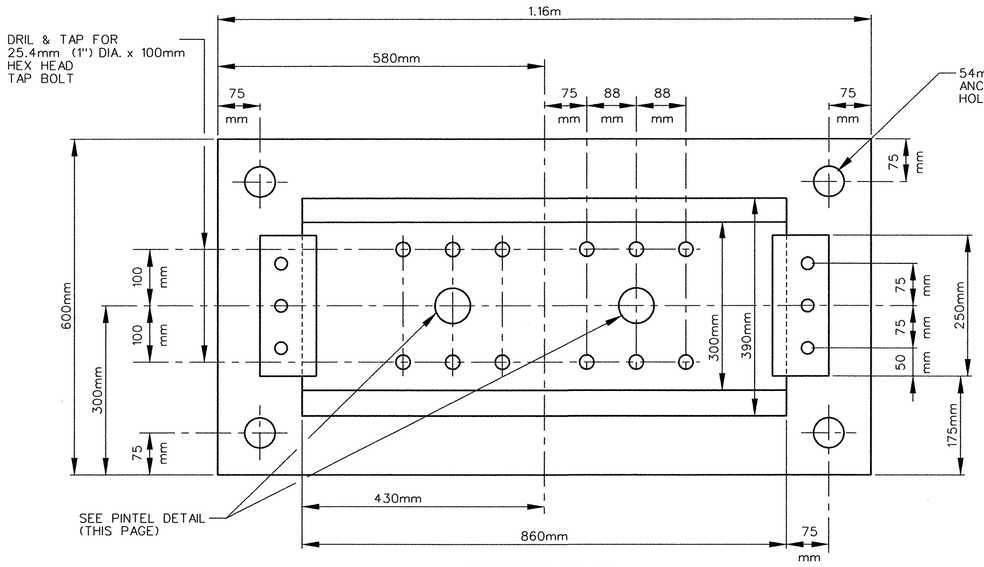


BALLAST PLATE CONNECTION
SCALE: 1:10

STATE OF VERMONT
AGENCY OF TRANSPORTATION

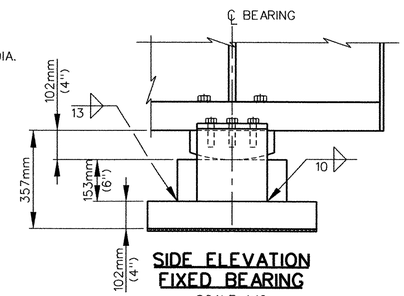
Town Of BRATTLEBORO	Bridge No. 62.56
	Log Sta.
Highway No. VT. ROUTE 9	Surv. Sta.
ROUTE 9 BRIDGE	
SUPERSTRUCTURE DETAILS	
Designed By	Drawn By DHL
Checked By GJB Date	Bridge Design Supervisor JHR Date
PROJECT BRATTLEBORO	PROJECT NO. NH BRF 010-2(2)
I.G.C. Info.	
Bridge Sheet No. 6	Sheet 74 of 145

Plot Date: 10-02-2002
File: rt9br161



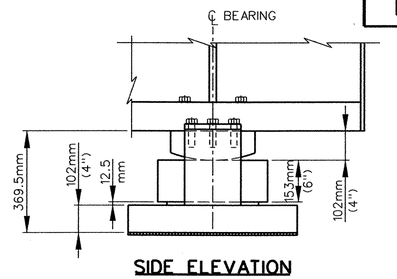
BEARING PLAN EXPANSION AND FIXED

SCALE: 1:5



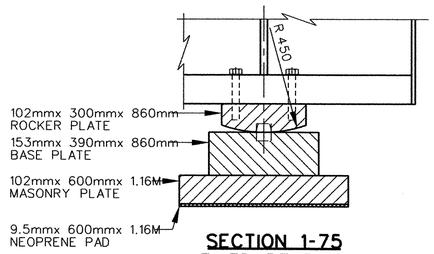
SIDE ELEVATION FIXED BEARING

SCALE: 1:10



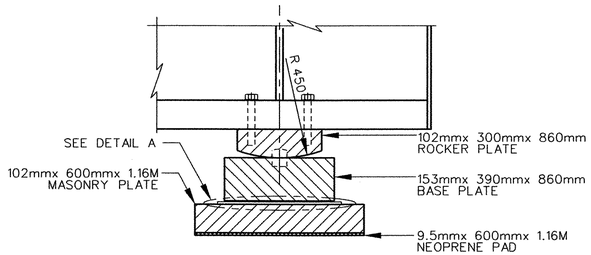
SIDE ELEVATION EXPANSION BEARING

SCALE: 1:10



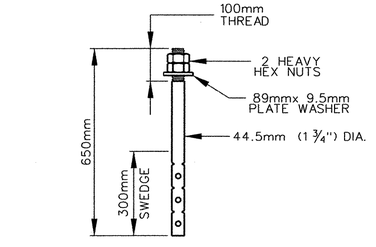
SECTION 1-75 FIXED BEARING

SCALE: 1:10



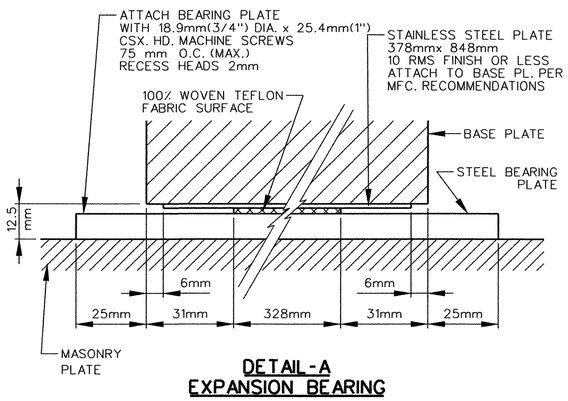
SECTION 2-75 EXPANSION BEARING

SCALE: 1:10



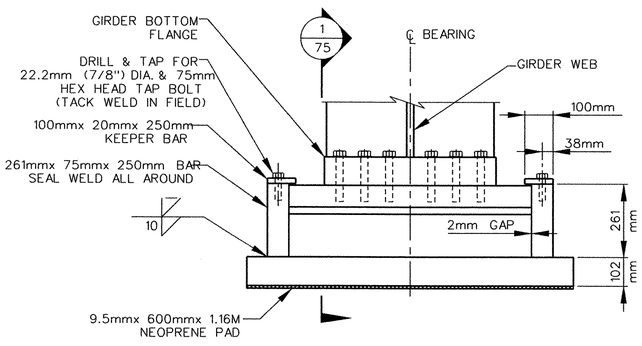
BEARING ANCHOR BOLT DETAIL

SCALE: 1:10



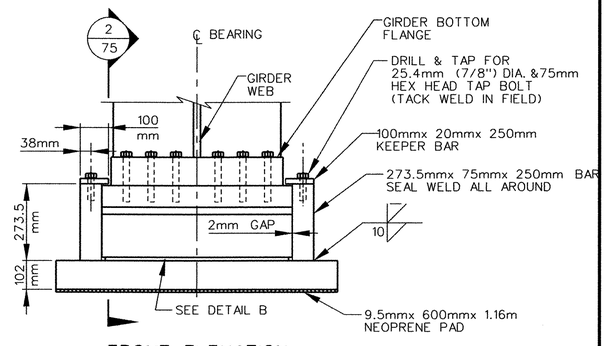
DETAIL-A EXPANSION BEARING

SCALE: 1:1



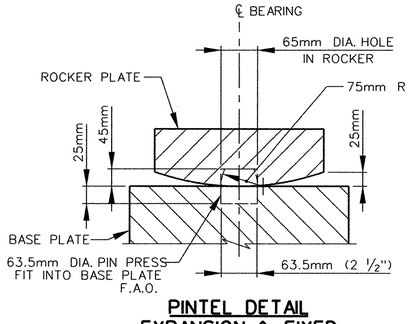
FRONT ELEVATION FIXED BEARING

SCALE: 1:10



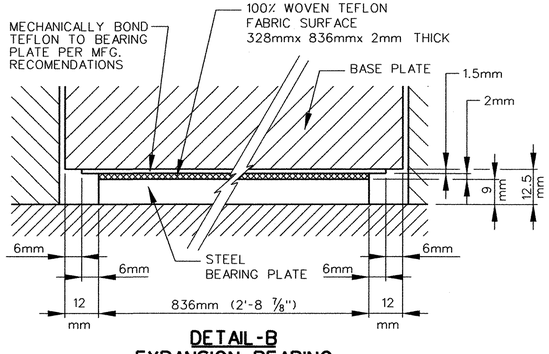
FRONT ELEVATION EXPANSION BEARING

SCALE: 1:10



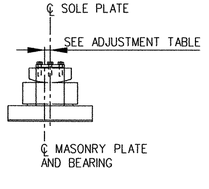
PINTEL DETAIL EXPANSION & FIXED

SCALE: 1:5



DETAIL-B EXPANSION BEARING

SCALE: 1:1



BEARING LOAD TABLE			
BEARING	VERTICAL LOAD	HORIZONTAL LOAD	
		TRANSVERSE	LONGITUDINAL
EXPANSION	2970KN (668 Kips)	209KN (47 Kips)	---
FIXED	2970KN (668 Kips)	182KN (41 Kips)	676KN (152 Kips)

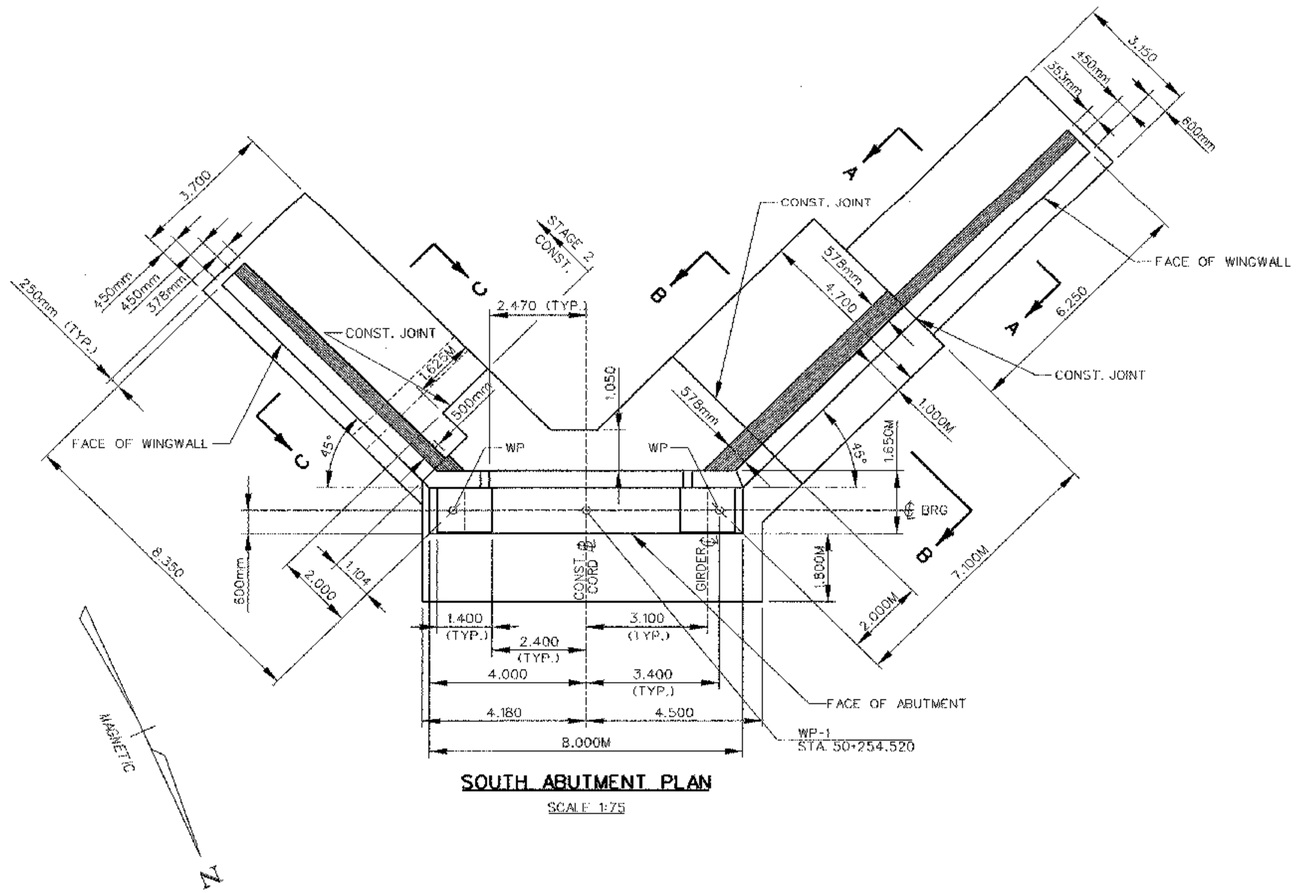
ADJUSTMENT FOR 10° TEMP. CHANGE
MOVE TOP PLATE 3mm (0.01") TOWARD CENTER OF SPAN FOR TEMP. FALL AND 3mm (0.01") AWAY FOR TEMP. RISE.

NOTE:
BEARINGS ARE TO BE CENTERED AT 45°F SO THAT THE CENTERLINE OF THE SOLE PLATE IS OVER THE CENTERLINE OF THE MASONRY PLATE.

Plot Date: 10-02-2002
File: rt9br157

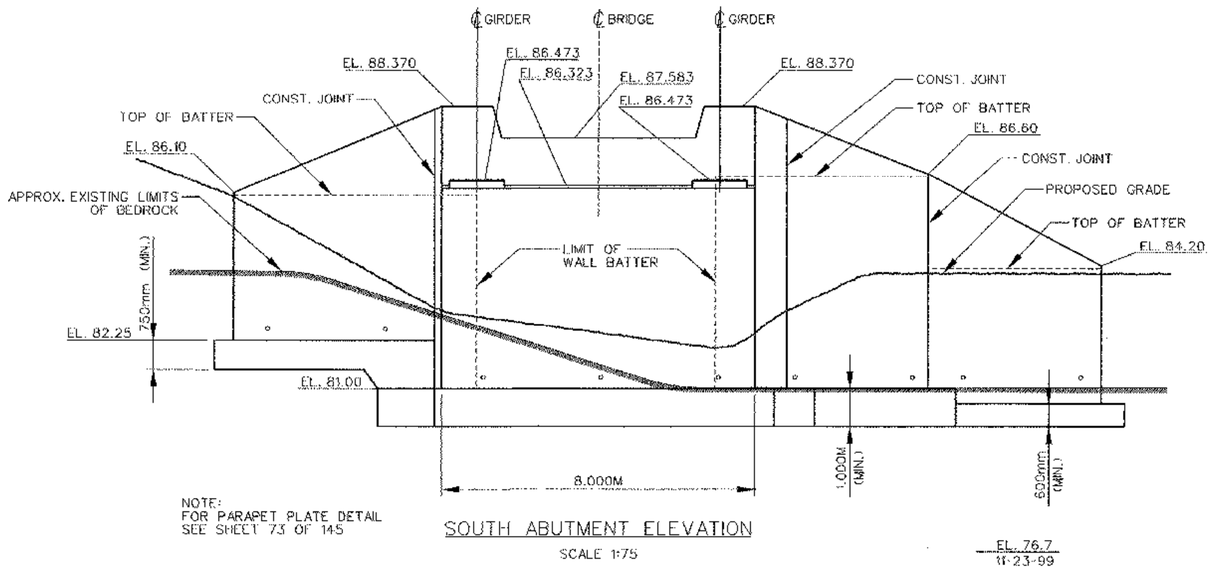
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BRATTLEBORO	Bridge No. 62.56
Highway No. VT. ROUTE 9	Log Sta. / Surv. Sta.
ROUTE 9 BRIDGE	
BEARING DETAILS	
Designed By LM	Drawn By LRD/DL
Checked By GJB — Date	Bridge Design Supervisor JHR — Date
PROJECT BRATTLEBORO	PROJECT NO. NH 010-2(2)
I.G.C. Info.	
Bridge Sheet No. 7	Sheet 75 of 145



SOUTH ABUTMENT PLAN

SCALE 1:75

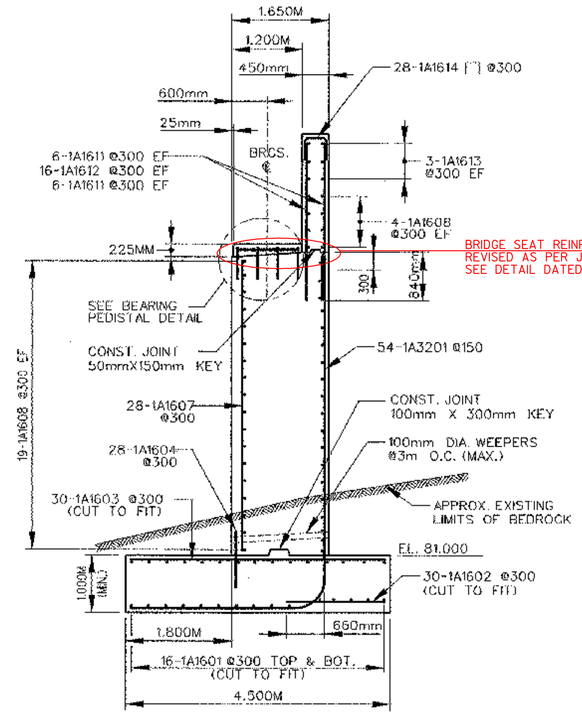


NOTE:
FOR PARAPET PLATE DETAIL
SEE SHEET 73 OF 145

SOUTH ABUTMENT ELEVATION

SCALE 1:75

EL. 76.7
11-23-99



TYPICAL SOUTH ABUTMENT SECTION

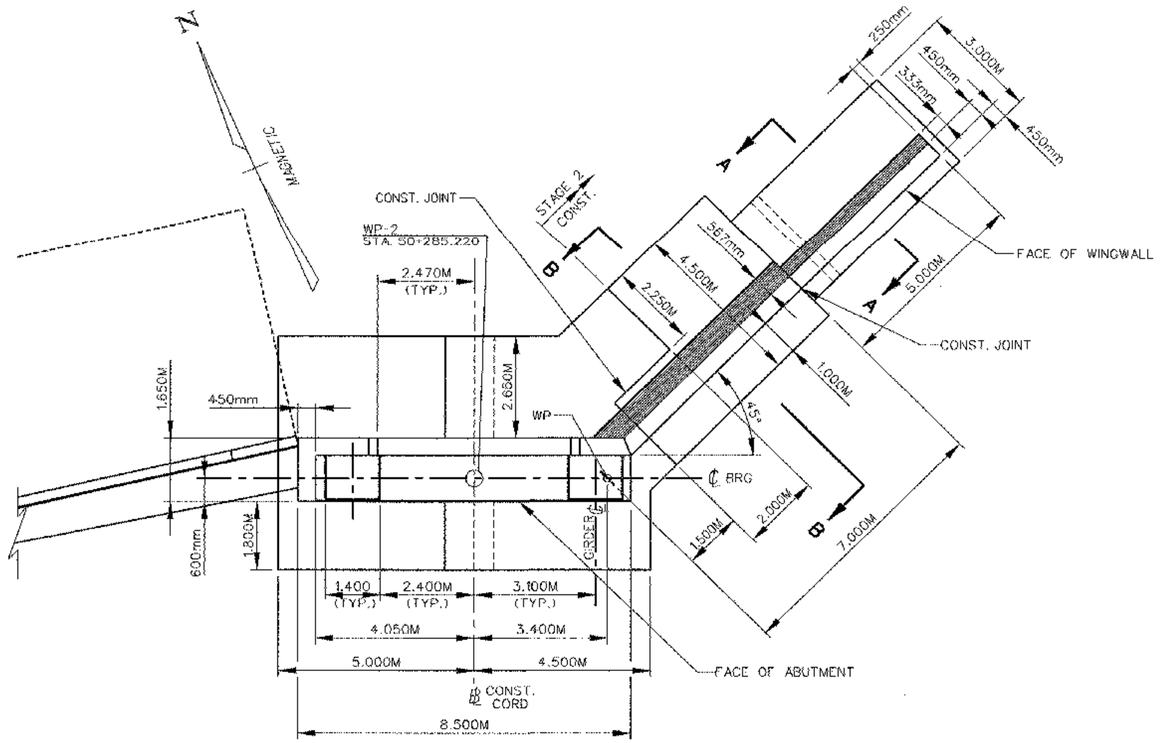
SCALE 1:50

STATE OF VERMONT
AGENCY OF TRANSPORTATION

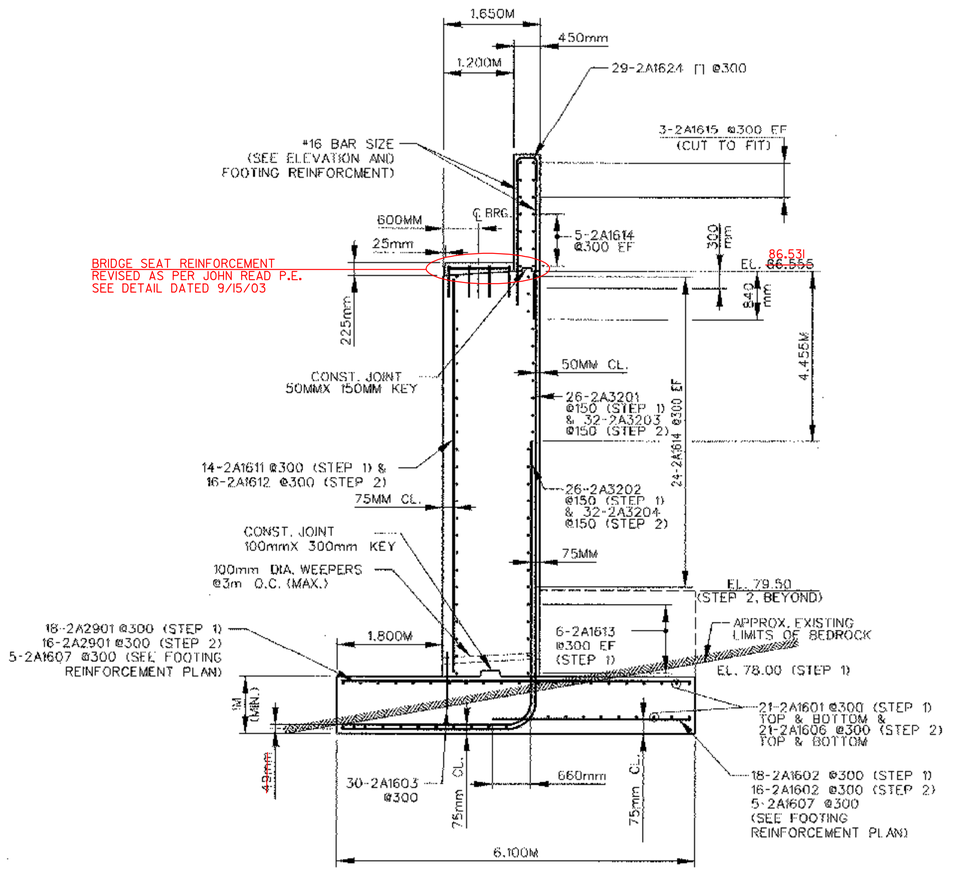
Town Of BRATTLEBORO	Bridge No. 62.56
Highway No. VT. ROUTE 9	Log Sta. / Surv. Sta.
ROUTE 9 BRIDGE	
SOUTH ABUTMENT PLAN, ELEVATION & SECTIONS	
Designed By LM	Drawn By DHL
Checked By GJB Date	Bridge Design Supervisor JHR Date
PROJECT BRATTLEBORO	PROJECT NO. NH 010-2(2)
I.G.C. Info.	
Bridge Sheet No. 8	Sheet 76 of 145

Plot Date: 10-03-2002
File: r19br154

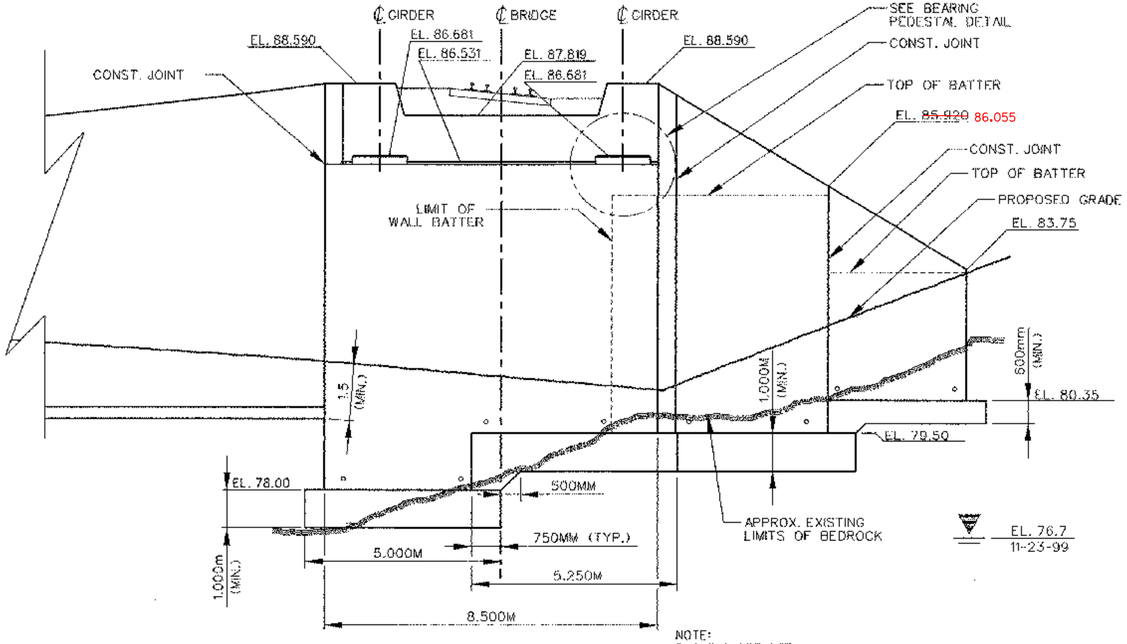
Metric



NORTH ABUTMENT PLAN
SCALE 1:75

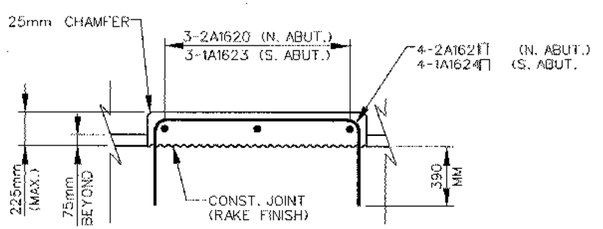


TYPICAL NORTH ABUTMENT SECTION
SCALE 1:50



NORTH ABUTMENT ELEVATION
SCALE 1:75

NOTE:
FOR PARAPET DETAIL
SEE SHEET 73 OF 145

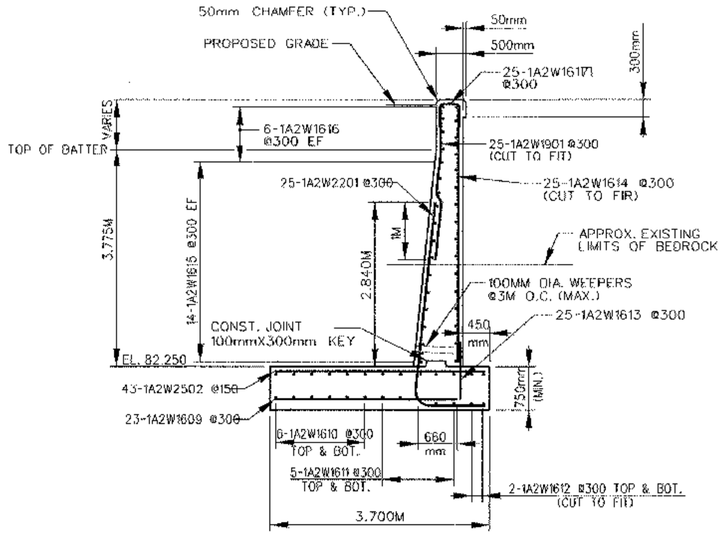


BEARING PEDESTAL DETAIL
SCALE 1:20

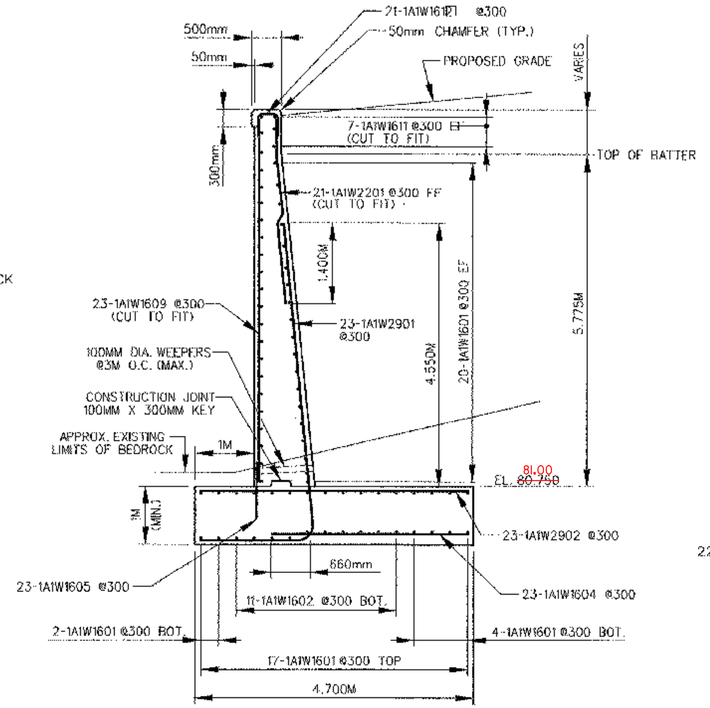
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BRATTLEBORO	Bridge No. 62.56
Highway No. VT. ROUTE 9	Log Sta. / Surv. Sta.
ROUTE 9 BRIDGE	
NORTH ABUTMENT PLAN, ELEVATION & SECTIONS	
Designed By LM	Drawn By DHL/LRD
Checked By GJB Date	Bridge Design Supervisor JHR Date
PROJECT BRATTLEBORO	PROJECT NO. NH 010-2(2)
I.G.C. Info.	
Bridge Sheet No. 9	Sheet 77 of 145

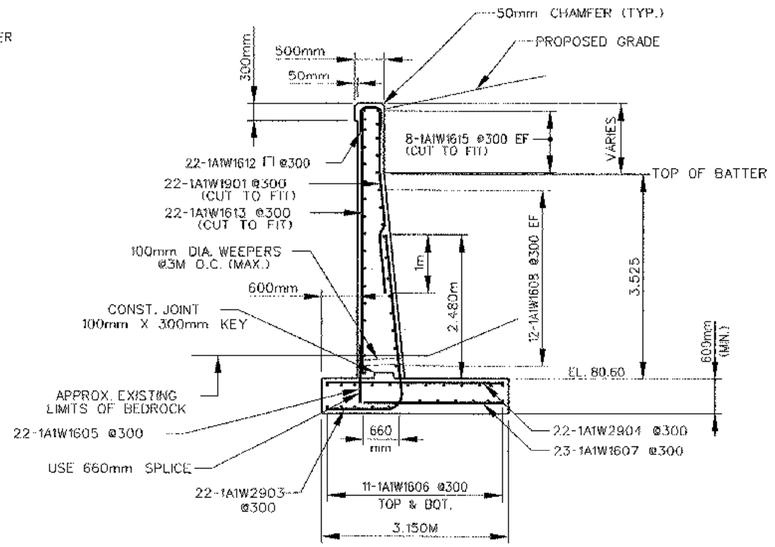
Plot Date: 10-03-2002
File: rt9br156



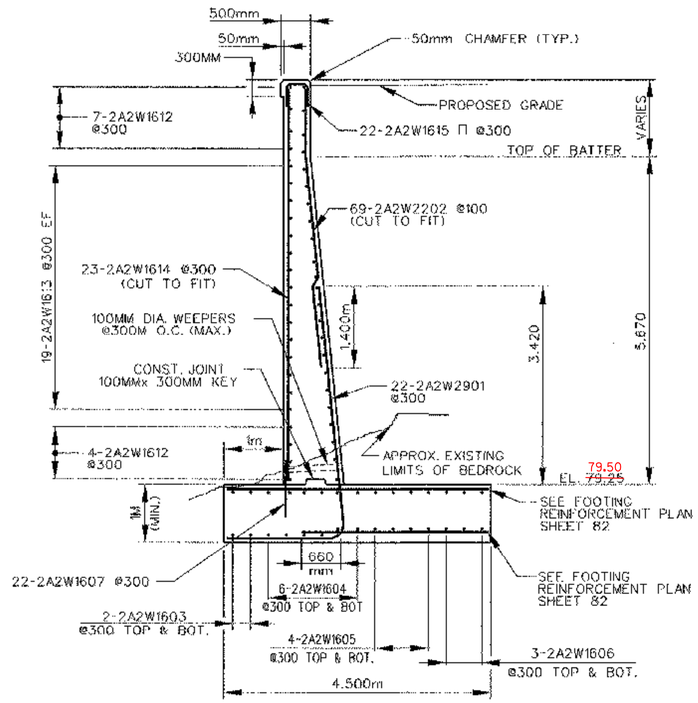
TYPICAL SOUTHEAST WINGWALL
SECTION C-C
SCALE 1:50



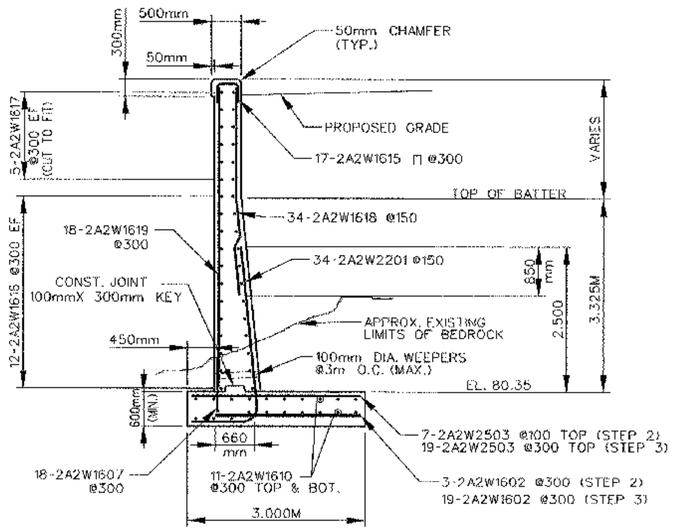
TYPICAL SOUTHWEST WINGWALL
SECTION B-B
SCALE 1:50



TYPICAL SOUTHWEST WINGWALL
SECTION A-A
SCALE 1:50



TYPICAL NORTHEAST WINGWALL
SECTION B-B
SCALE 1:50

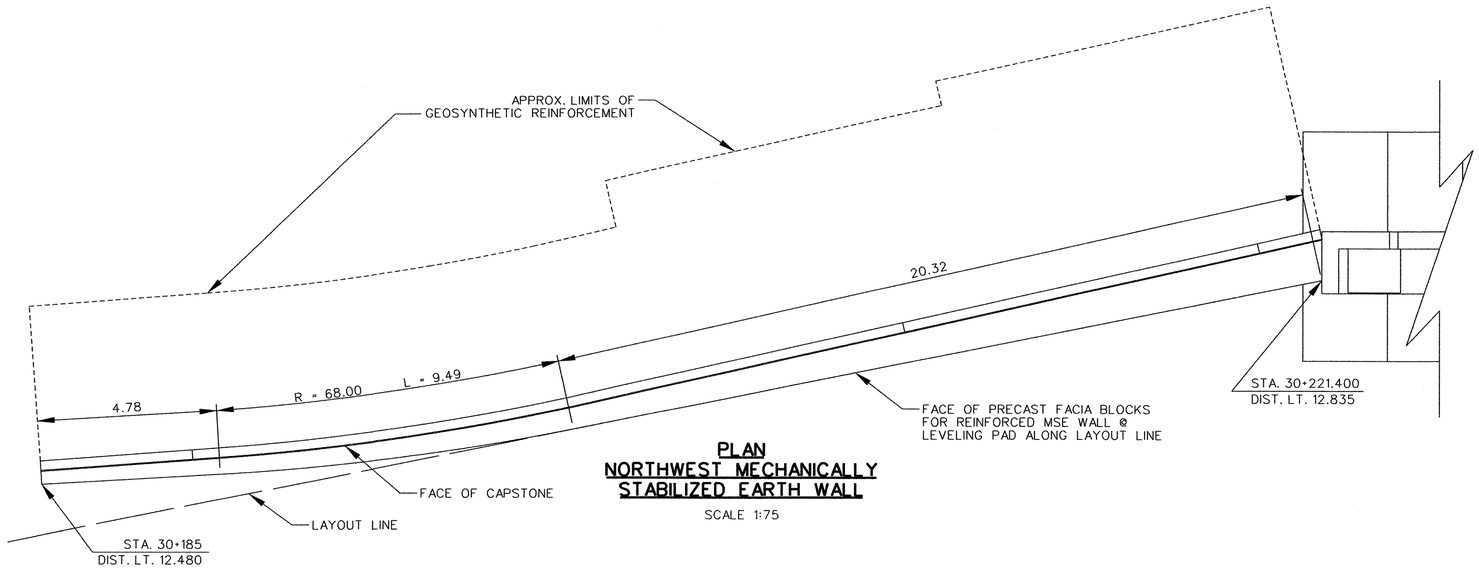


TYPICAL NORTHEAST WINGWALL
SECTION A-A
SCALE 1:50

STATE OF VERMONT
AGENCY OF TRANSPORTATION

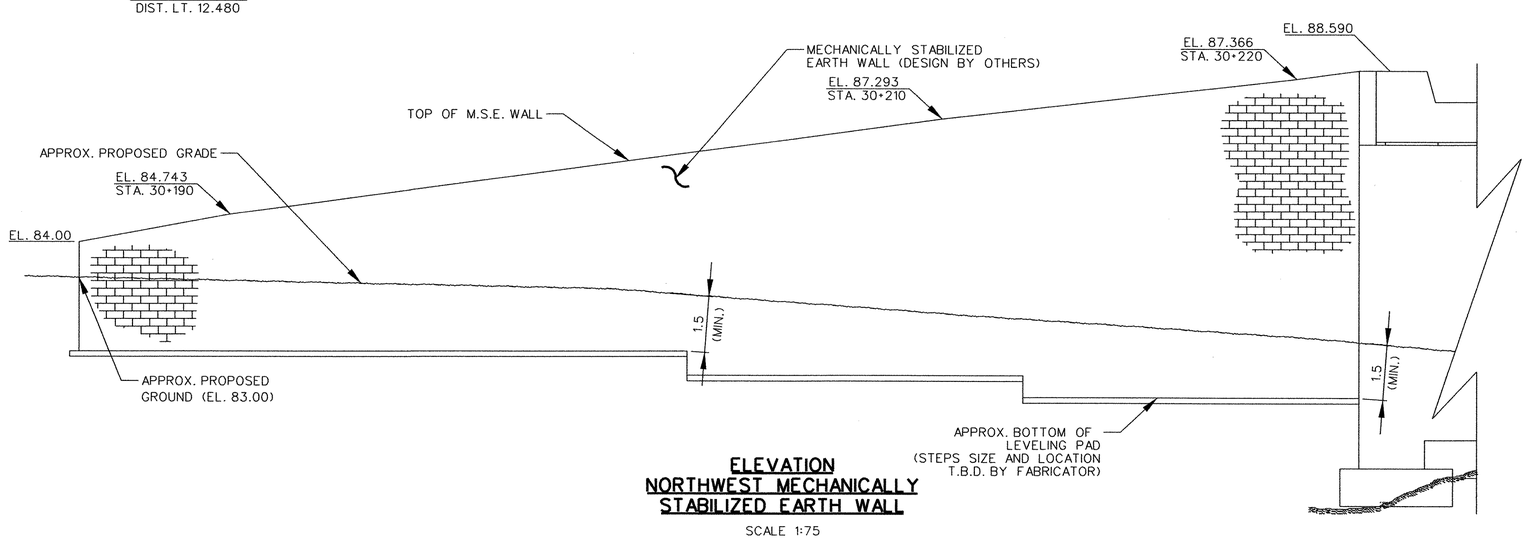
Town Of BRATTLEBORO	Bridge No. 62.56
Highway No. VT. ROUTE 9	Log Sta. / Surv. Sta.
ROUTE 9 BRIDGE	
CONCRETE WINGWALL SECTIONS	
Designed By TTTT	Drawn By DHL
Checked By GJB Date	Bridge Design Supervisor JHR Date
PROJECT BRATTLEBORO	PROJECT NO. NH 010-2(2)
I.G.C. info.	
Bridge Sheet No. 10	Sheet 78 of 145

Plot Date: 10-02-2002
File: rt9br158



PLAN
NORTHWEST MECHANICALLY STABILIZED EARTH WALL

SCALE 1:75



ELEVATION
NORTHWEST MECHANICALLY STABILIZED EARTH WALL

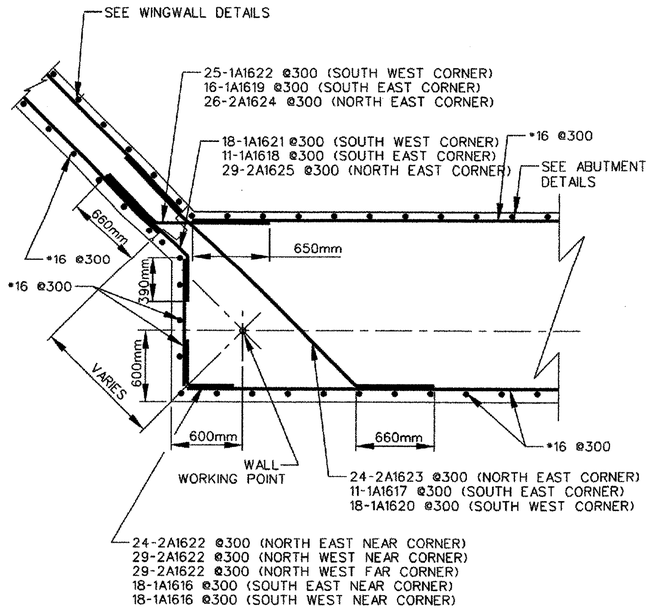
SCALE 1:75

NOTE:
FOR MECHANICALLY STABALIZED EARTH (MSE) WALL DESIGN SEE SHEETS 138 TO 144 OF 145.

Plot Date: 10-02-2002
File: rt9br160

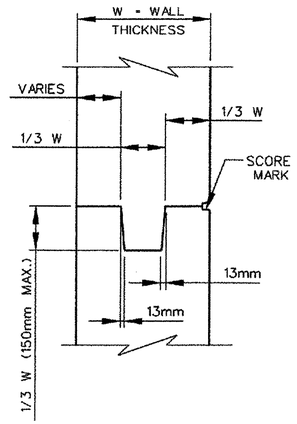
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BRATTLEBORO	Bridge No. 62.56
	Log Sta.
Highway No. VT. ROUTE 9	Surv. Sta.
ROUTE 9 BRIDGE	
NORTHWEST M.S.E. WALL PLAN & ELEVATION	
Designed By	Drawn By DHL
Checked By GJB Date	Bridge Design Supervisor JHR Date
PROJECT BRATTLEBORO	PROJECT NO. NH BRF 012-1(33)
I.G.C. Info.	
Bridge Sheet No. 11	Sheet 79 of 145



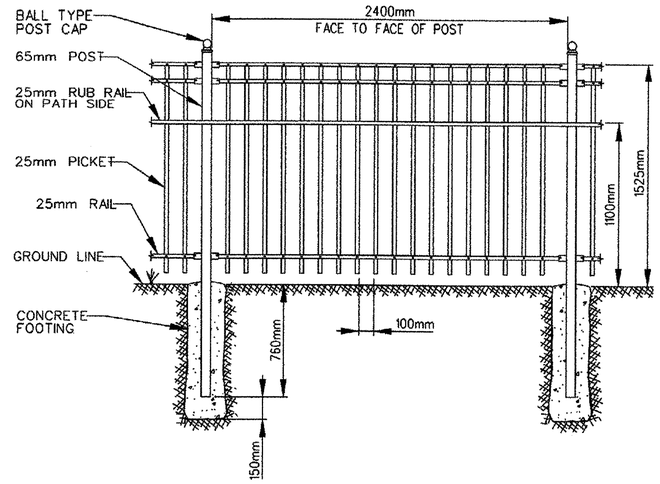
WINGWALL CORNER REINFORCEMENT DETAIL

SCALE 1:25



TYPICAL CONCRETE CONSTRUCTION JOINT

SCALE 1:10



RAIL FENCE DETAIL

SCALE 1:60

FENCE SPECIFICATIONS

1. MATERIALS

A. PICKETS SHALL BE MADE OF HOT-ROLLED STRUCTURAL STEEL. THE WALL THICKNESS SHALL BE 1.6 mm. TUBE SHALL BE HOT-DIPPED GALVANIZED PER AASHTO M111. SPACE BETWEEN PICKETS SHALL BE 100 FACE TO FACE.

SIZE	WALL THICKNESS	WGT. PER m	TENSILE STRENGTH
25 mm^2	1.6 mm	0.94 kg	3 140 kg/cm^2

B. RAILS SHALL BE MADE OF HOT ROLLED STRUCTURAL STEEL, ROLLED INTO "U" CHANNEL MEASURING 35 WIDE X 38 DEEP X 3 WALL THICKNESS. RAILS SHALL BE MANUFACTURED PER AASHTO M183 AND HOT-DIPPED GALVANIZED PER AASHTO M111.

C. POSTS SHALL BE MADE OF HOT ROLLED STRUCTURAL STEEL. THE WALL THICKNESS SHALL BE 2 mm. TUBE SHALL BE MANUFACTORED PER AASHTO M183. TUBE SHALL BE HOT-DIPPED GALVANIZED PER AASHTO M111.

SIZE	WALL THICKNESS	WGT. PER m	TENSILE STRENGTH
64 mm^2	2.0 mm	4.0 kg	3 140 kg/cm^2

D. RAIL ATTACHMENT BRACKETS SHALL BE CAST OF MALLEABLE IRON PER AASHTO M105 AND HOT-DIPPED GALVANIZED PER AASHTO M232.

2. ASSEMBLY

A. SECTIONS SHALL BE ASSEMBLED USING 2,3 OR 4 RAILS THAT ARE PUNCHED OUT TO INSERT PICKETS THROUGH THEM. PICKETS SHALL BE RIVETED TO RAILS USING A 6 mm INDUSTRIAL DRIVE RIVET.

B. RAILS ARE ATTACHED TO POSTS BY MEANS OF RAIL BRACKETS. RAIL BRACKETS SHALL BE ATTACHED TO POSTS USING A 6 mm BOLT AND LOCK NUT. BRACKETS SHALL BE ATTACHED TO RAILS USING A 6 mm INDUSTRIAL DRIVE RIVETS.

3. COATING

EVERY FENCE SHALL HAVE A GALVANIZED UNDERCOAT INSIDE AND OUTSIDE ALL MEMBERS TO ASSURE MAXIMUM CORROSION RESISTANCE. ALL FENCE COMPONENTS SHALL THEN BE GIVEN A 4 STAGE "POWER WASH" PRETREATMENT PROCESS THAT CLEANS AND PREPARES THE GALVANIZED SURFACE TO ASSURE COMPLETE ADHESION OF THE FINISH COAT.

STAGE 1 - ALL METAL SHALL BE CLEANED AND PHOSPHATE TREATED SIMULTANEOUSLY TO FORM A AMPORPHOUS STRUCTURE ON THE GALVANIZED SURFACE FOR SUPERIOR POWDER COATING ADHESION.

STAGE 2 - ALL METAL SHALL THEN BE GIVEN A THOROUGH WATER RINSE TO PREPARE THE PHOSPHATE COATED SURFACE FOR STAGE 3.

STAGE 3 - ALL METAL SHALL THEN BE GIVEN A NON-CHROMATED SEAL RINSE, WHICH WILL FURTHER IMPROVE THE CORROSION RESISTANCE.

STAGE 4 - ALL METAL SHALL THEN BE BAKED DRY, PRIOR TO THE POWDER COATING BEING APPLIED.

ALL METAL SHALL THEN BE GIVEN A BLACK POLYESTER RESIN BASED POWDER COATING APPLIED BY A ELECTROSTATIC SPRAY PROCESS, TO A THICKNESS OF 0.06 mm. THE FINISH SHALL THEN BE BAKED IN A 232$^{3}/_{4}$C OVEN FOR 20 MINUT

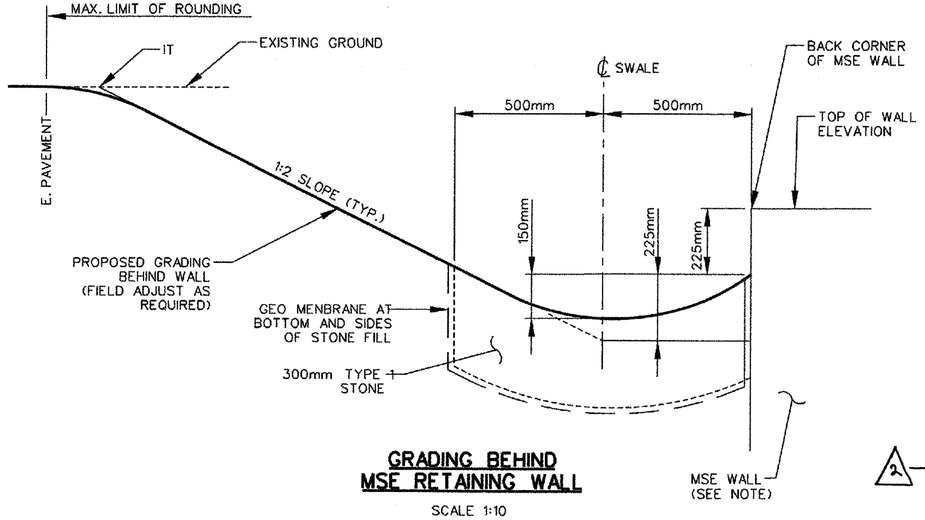
4. INSTALLATION

A. FENCE AND ACCESSORIES SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE PLANS AND SPECIFICATIONS IN A WORKMANLIKE MANNER.

B. LINE POSTS SHALL BE SPACED NO MORE THAN 2.4 m ON CENTER IN LINE OF THE FENCE. POSTS SHALL BE PLUMB WITH THE TOPS PROPERLY ALIGNED.

C. CONCRETE FOOTINGS

1. DRILL HOLES IN FIRM, UNDISTURBED COMPACTED SOIL. FOOTINGS SHALL NOT BE LESS THAN 250 mm IN DIAMATER AND SHALL BE 150 mm DEEPER THAN THE POST BOTTOM.
2. PLACE CONCRETE AROUND THE POST IN A CONTINUOUS POUR. TROWEL FINISH TOPS OF FOOTINGS AND SLOPE OR DOME TO DIRECT WATER AWAY FROM THE POSTS.
3. CONCRETE SHALL BE CLASS C.

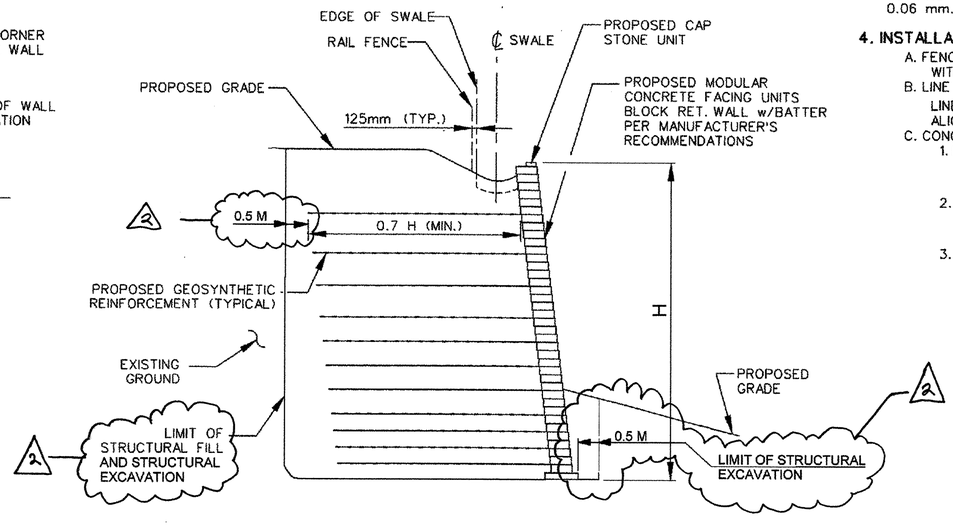


GRADING BEHIND MSE RETAINING WALL

SCALE 1:10

NOTE:

WALL AS SHOWN ON THIS DETAIL AND ON CROSS SECTIONS IS A GRAPHICAL REPRESENTATION ONLY, NUMEROUS MSE WALL TYPES ARE AVAILABLE. ACTUAL WALL DIMENSIONS AND BATTER OF WALL FACE WILL VARY DEPENDING ON THE OPTION SELECTED. SLOPE LIMITS BEHIND THE WALL WILL ALSO VARY DEPENDING ON WALL THICKNESS AND THE LOCATION OF BACK OF WALL. IN ANY EVENT, THE SLOPE LIMIT WITH ROUNDING MUST NOT EXTEND BEYOND THE CURRENT EDGE OF BITUMINOUS PAVEMENT.



MSE RETAINING WALL SECTION

SCALE 1:75

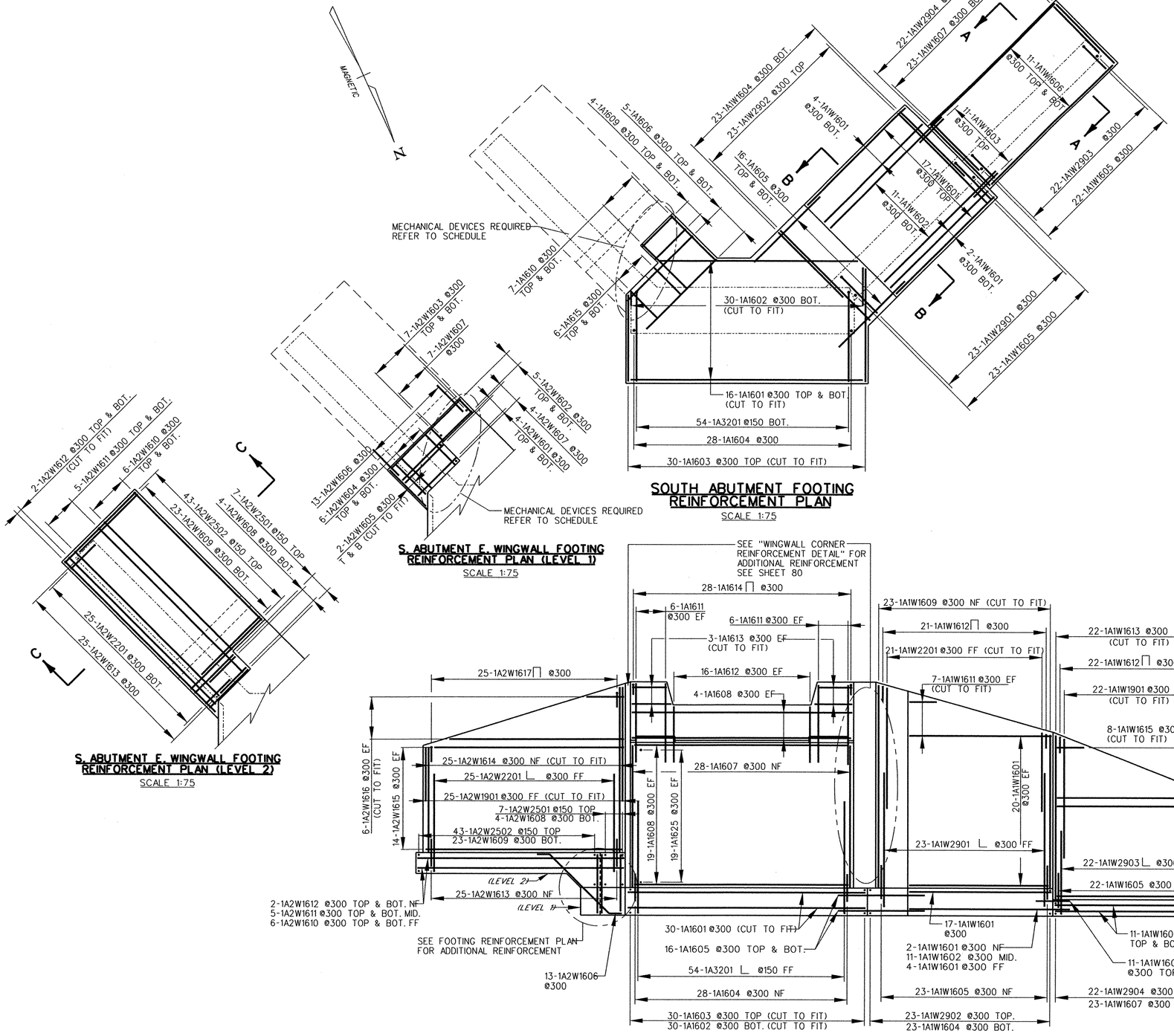
SEE SHEETS 138 TO 144 FOR THE MSE WALL DESIGN PERFORMED BY TENSAR FOR THIS LOCATION.

2 Addendum Two, Fill/Excavation Limits Dec 6, 2002

Plot Date: 10-03-2002
File: rt9br159

STATE OF VERMONT
AGENCY OF TRANSPORTATION

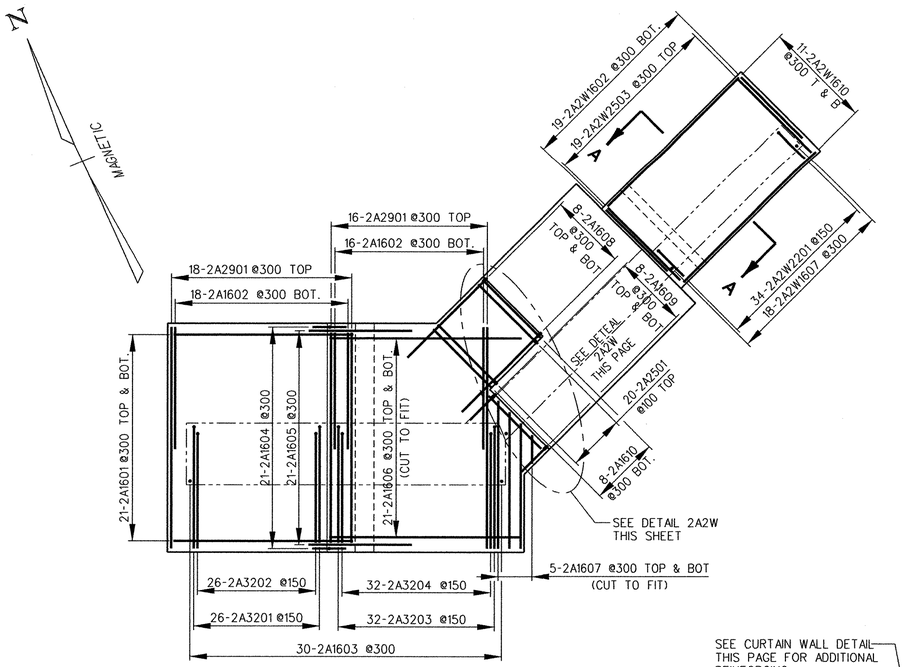
Town Of BRATTLEBORO	Bridge No. 62.56
Highway No. VT. ROUTE 9	Log Sta. / Surv. Sta.
ROUTE 9 BRIDGE	
SUBSTRUCTURE DETAILS	
Designed By	Drawn By DHL
Checked By Date	Bridge Design Supervisor Date
PROJECT BRATTLEBORO	PROJECT NO. NH 010-2(2)
I.G.C. Info.	
Bridge Sheet No. 12	Sheet 80 of 145



Plot Date: 10-03-2002
File: rt9br163

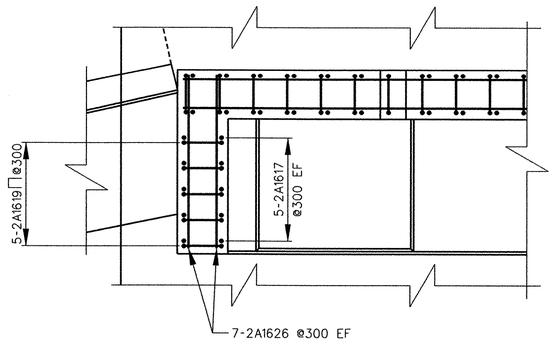
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BRATTLEBORO	Bridge No. 62.56
Highway No. VT. ROUTE 9	Log Sta. / Surv. Sta.
ROUTE 9 BRIDGE	
SOUTH ABUTMENT REINFORCEMENT PLAN & ELEVATION	
Designed By	Drawn By LRD
Checked By Date	Bridge Design Supervisor Date
PROJECT BRATTLEBORO	PROJECT NO. NH 010-2(2)
I.G.C. Info.	
Bridge Sheet No.	Sheet 81 of 145



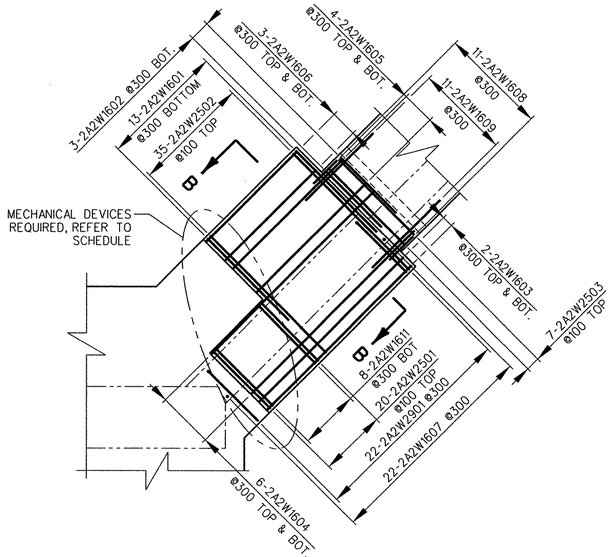
NORTH ABUTMENT FOOTING REINFORCEMENT PLAN

SCALE 1:75



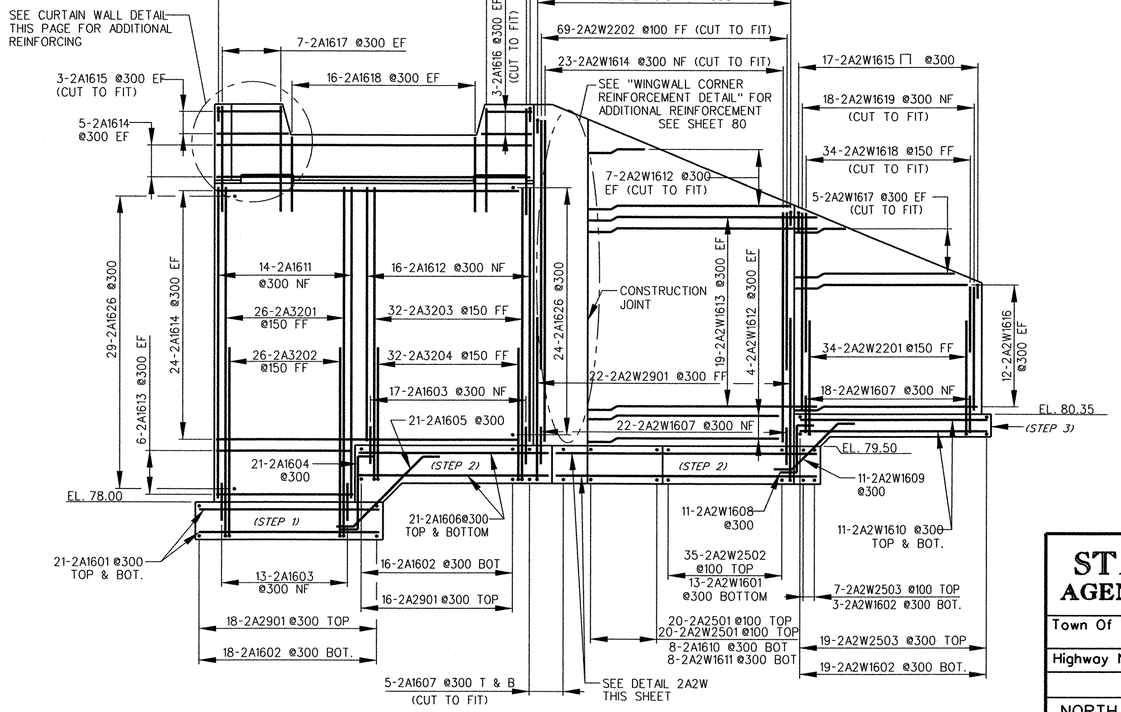
No. ABUTMENT CURTAIN WALL DETAIL

SCALE: 1:25



DETAIL 2A2W

SCALE 1:75



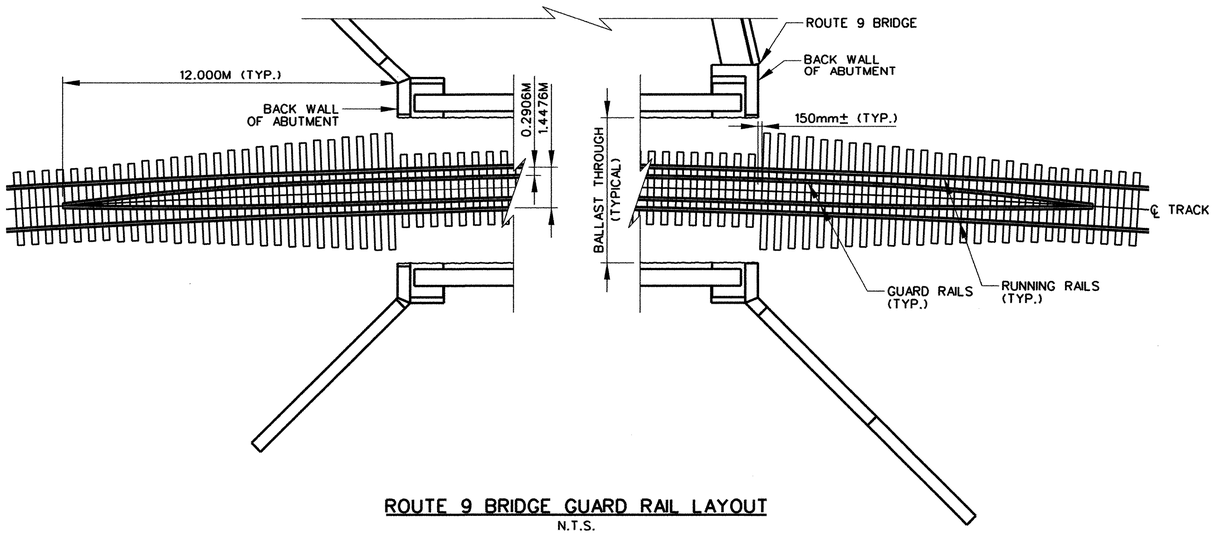
NORTH ABUTMENT REINFORCEMENT ELEVATION

SCALE 1:75

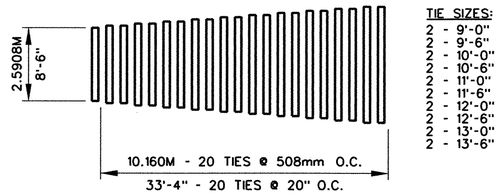
Plot Date: 10-02-2002
File: rt9br164

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BRATTLEBORO	Bridge No. 62.56
Highway No. VT. ROUTE 9	Log Sta. / Surv. Sta.
ROUTE 9 BRIDGE	
NORTH ABUTMENT FOOTING PLAN & ELEVATION	
Designed By	Drawn By LRD
Checked By Date	Bridge Design Supervisor Date
PROJECT BRATTLEBORO	PROJECT NO. NH BRF 012-1(33)
I.G.C. Info.	
Bridge Sheet No. 14	Sheet 82 of 145

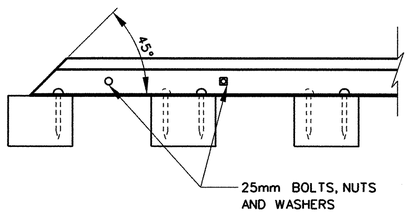


ROUTE 9 BRIDGE GUARD RAIL LAYOUT
N.T.S.

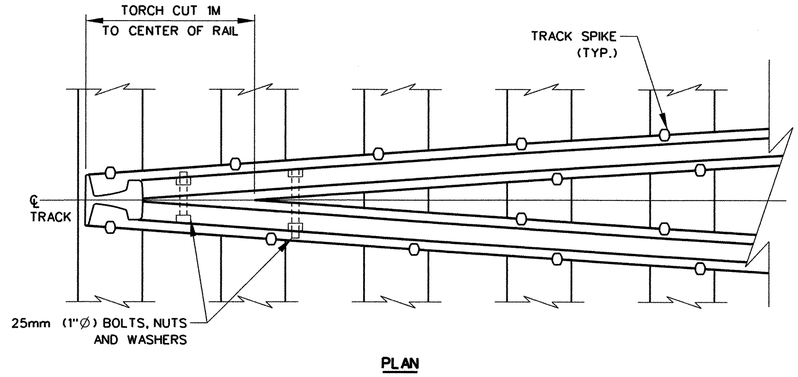


TIE SIZES:
2 - 9'-0"
2 - 9'-6"
2 - 10'-0"
2 - 10'-6"
2 - 11'-0"
2 - 11'-6"
2 - 12'-0"
2 - 12'-6"
2 - 13'-0"
2 - 13'-6"

BRIDGE APPROACH TIES
N.T.S.



ELEVATION



PLAN

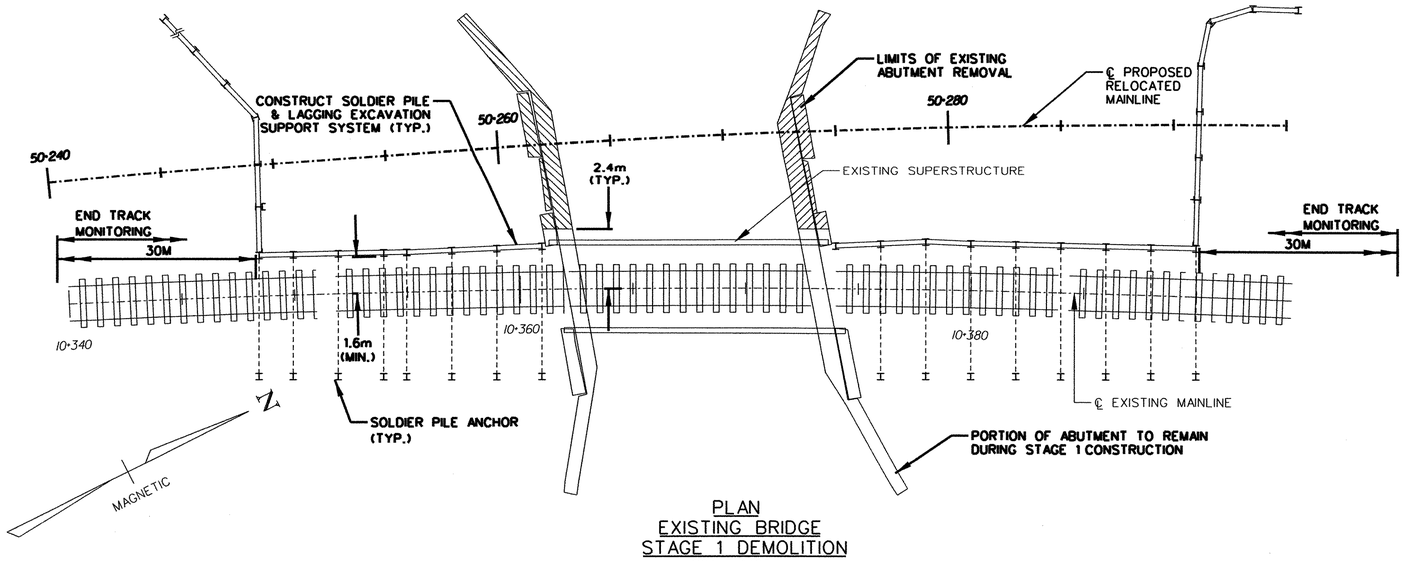
GUARD RAIL SPIKING ARRANGEMENT AND SUPPORTED END TIE
N.T.S.

NOTE: WORK SHOWN HERE IS TO BE PERFORMED BY OTHERS UNDER RAILROAD FORCE ACCOUNT.

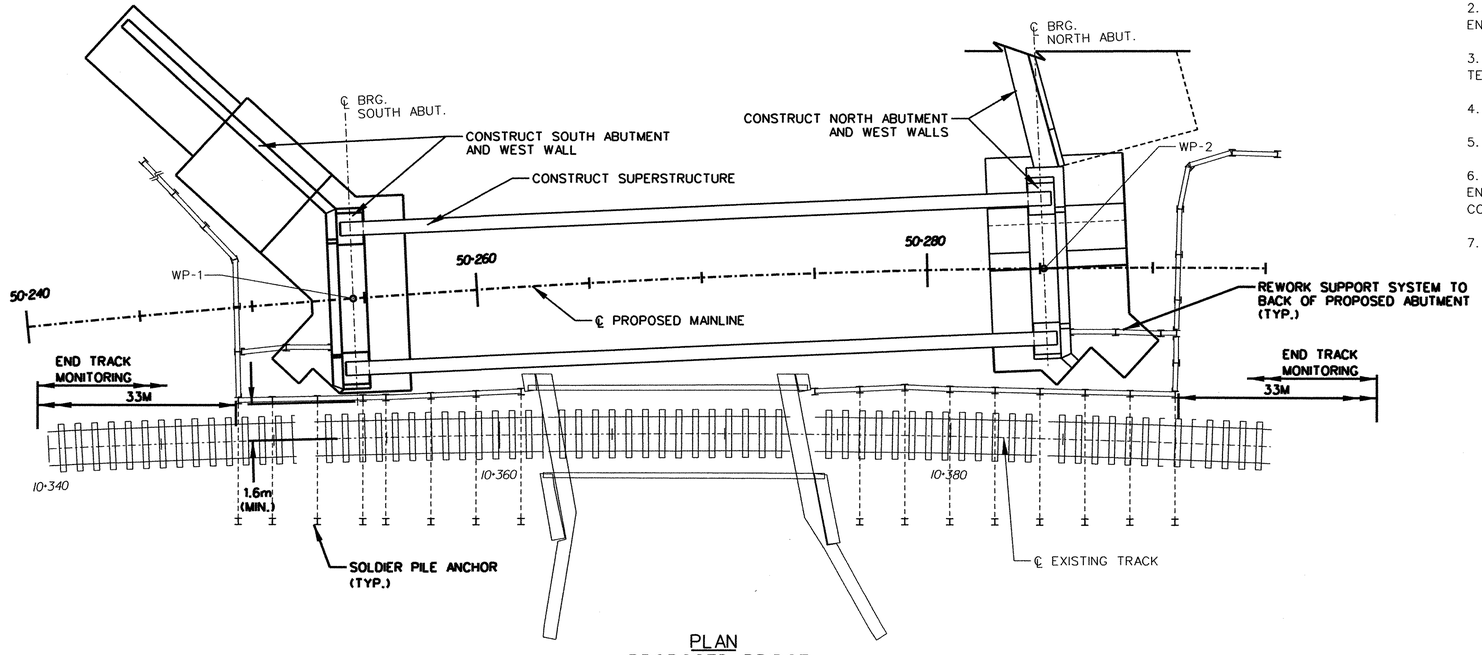
Plot Date: 10-02-2002
File: rt9br162

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BRATTLEBORO	Bridge No. 62.56
Highway No. VT. ROUTE 9	Log Sta. / Surv. Sta.
ROUTE 9 BRIDGE	
BRIDGE APPROACH TIMBERS & GUARD RAIL	
Designed By JHR	Drawn By LRD
Checked By JHR Date .	Bridge Design Supervisor JHR Date
PROJECT BRATTLEBORO	PROJECT NO. NH 010-2(2)
I.G.C. Info.	
Bridge Sheet No. 16	Sheet 84 of 145



PLAN
EXISTING BRIDGE
STAGE 1 DEMOLITION
SCALE 1:125



PLAN
PROPOSED BRIDGE
STAGE 1 CONSTRUCTION
SCALE 1:125

NOTES:

THE SEQUENCE OF CONSTRUCTION TO FOLLOW IS ONLY A SUGGESTED SEQUENCE. THE CONTRACTOR MAY MODIFY CONSTRUCTION STAGING SUBJECT TO THE APPROVAL OF THE ENGINEER.

SUGGESTED SEQUENCE OF CONSTRUCTION

STAGE 1 - DEMOLITION

1. INSTALL SOLDIER PILES ADJACENT TO THE EXISTING TRACK AND BRIDGE ABUTMENTS. THE SOLDIER PILES SHALL BE INSTALLED IN A LEDGE SOCKET AT LEAST 1.5m BELOW THE ADJACENT PROPOSED BOTTOM OF FOOTING.

2. EXCAVATE AND INSTALL LAGGING BETWEEN THE SOLDIER PILES DOWN TO THE FIRST LEVEL WALER. INSTALL WALERS AND TIE BACKS AS NECESSARY AND THEN CONTINUE EXCAVATION TO NEXT LEVEL OF WALERS.

3. AT THE LEDGE INTERFACE PROVIDE SUITABLE SUPPORT TO RETAIN THE SOIL.

4. CONTINUE LEDGE EXCAVATION USING CONTROLLED BLASTING TECHNIQUES, OR OTHER APPROVED MATERIALS, TO THE PROPOSED BOTTOM OF ABUTMENT FOOTING. THE CONTROLLED BLASTING PROCEDURES MUST BE APPROVED BY THE NEW ENGLAND CENTRAL RAILROAD (NECR) PRIOR TO THE PERFORMANCE OF ANY BLASTING ADJACENT THE RAILROAD. (SEE GENERAL NOTES FOR ADDITIONAL INFORMATION)

5. DEMOLISH THE PORTION OF THE EXISTING CONCRETE ABUTMENT IN PREPARATION FOR THE CONSTRUCTION OF THE PROPOSED RAILROAD BRIDGE. (SEE STAGING PLANS AND ELEVATIONS FOR SUGGESTED LIMITS)

STAGE 1 - CONSTRUCTION

1. CONSTRUCT THE PROPOSED BRIDGE ABUTMENTS AND WESTERLY WING WALLS.

2. ERECT THE BRIDGE SUPERSTRUCTURE USING AN ERECTION PLAN APPROVED BY THE ENGINEER AND THE NECR.

3. INSTALL SOLDIER PILE AND LAGGING CUT OFF BETWEEN THE NEW ABUTMENT AND THE TEMPORARY SUPPORT WALL, BRACE AS NECESSARY.

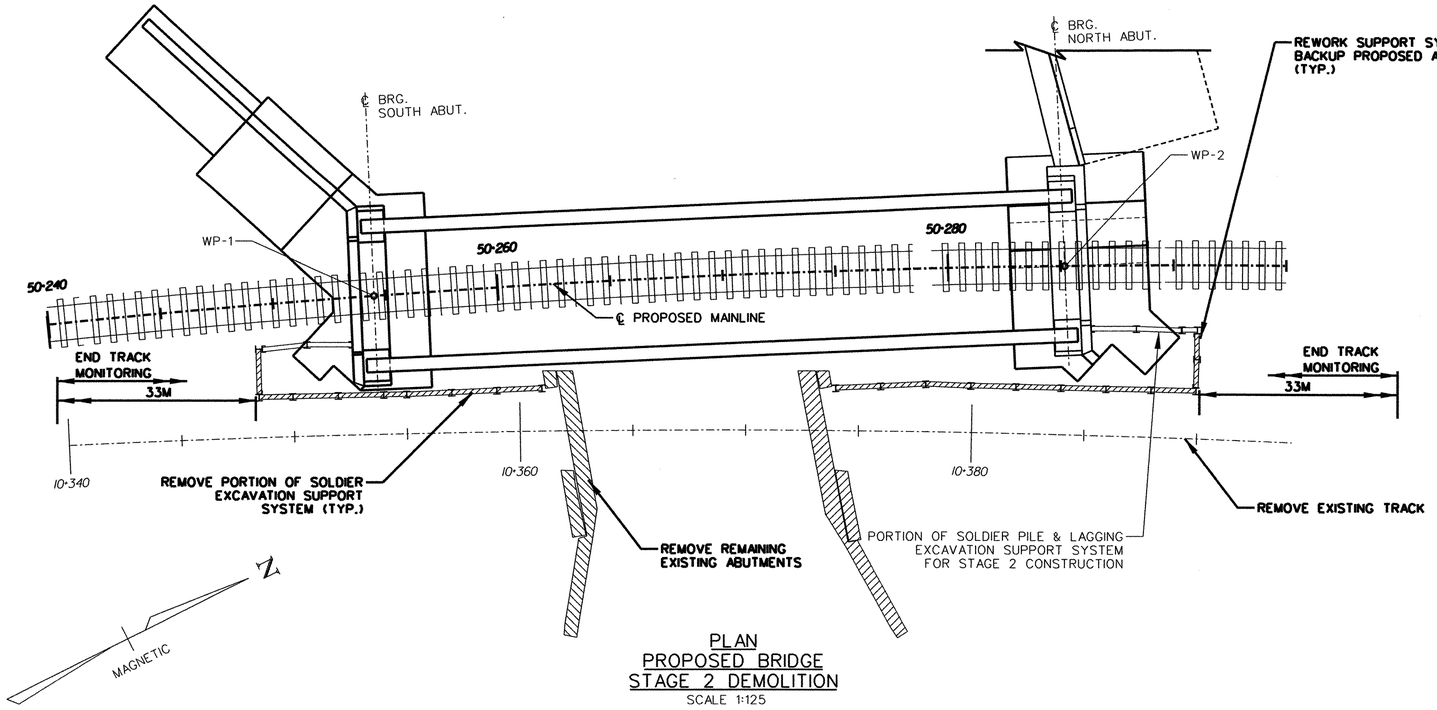
4. BACKFILL BEHIND THE NEW ABUTMENT TO SUBGRADE.

5. PERFORM FULL DEPTH TRACK CONSTRUCTION FROM RAILROAD STATION 50+200 TO 50+500.

6. CONSTRUCT SUBGRADE, AND BALLAST TO CUT AND THROW TRACK AT SOUTH AND NORTH ENDS IN TRANSITION SECTIONS ONTO NEW PROPOSED ALIGNMENT DURING A PREARRANGED CONSTRUCTION WINDOW WITH THE NECR.

7. INITIATE RAILROAD OPERATIONS ON THE NEW TRACK ALIGNMENT.

PROJECT NAME:	BRATTLEBORO
PROJECT NUMBER:	NH 010-2(2)
FILE NAME: rt9br101	PLOT DATE: 10-02-2002
PROJECT LEADER: JHR	DRAWN BY: DHL
DESIGNED BY: GHB	CHECKED BY: TEM
	SHEET 85 OF 145



PLAN
PROPOSED BRIDGE
STAGE 2 DEMOLITION
SCALE 1:125

STAGE 2 - DEMOLITION

1. REMOVE EXISTING TRACK, SOLDIER PILE, AND LAGGING AS NECESSARY.

2. PROCEED WITH EXCAVATION ON THE EAST SIDE OF THE TEMPORARY SOLDIER PILE AND LAGGING WALL, SUPPORT LAGGING AS NECESSARY.

3. INSTALL WALERS AND TIE BACKS AND THEN CONTINUE EXCAVATION TO THE NEXT LEVEL OF WALERS.

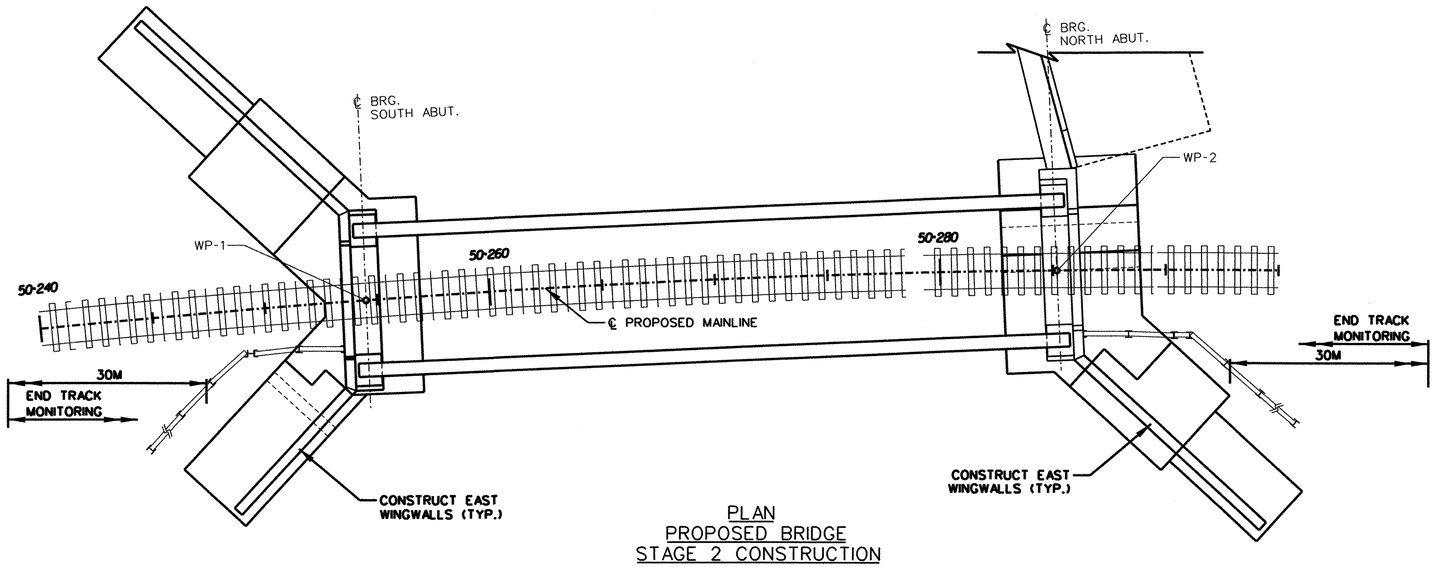
4. COMPLETE EXCAVATION TO BOTTOM OF ABUTMENT WINGWALL AND FOOTING TO INCLUDE DEMOLITION OF THE REMAINING PORTION OF THE EXISTING ABUTMENT.

STAGE 2 - CONSTRUCTION

1. CONSTRUCT REMAINING PORTION OF THE ABUTMENT AND WINGWALL.

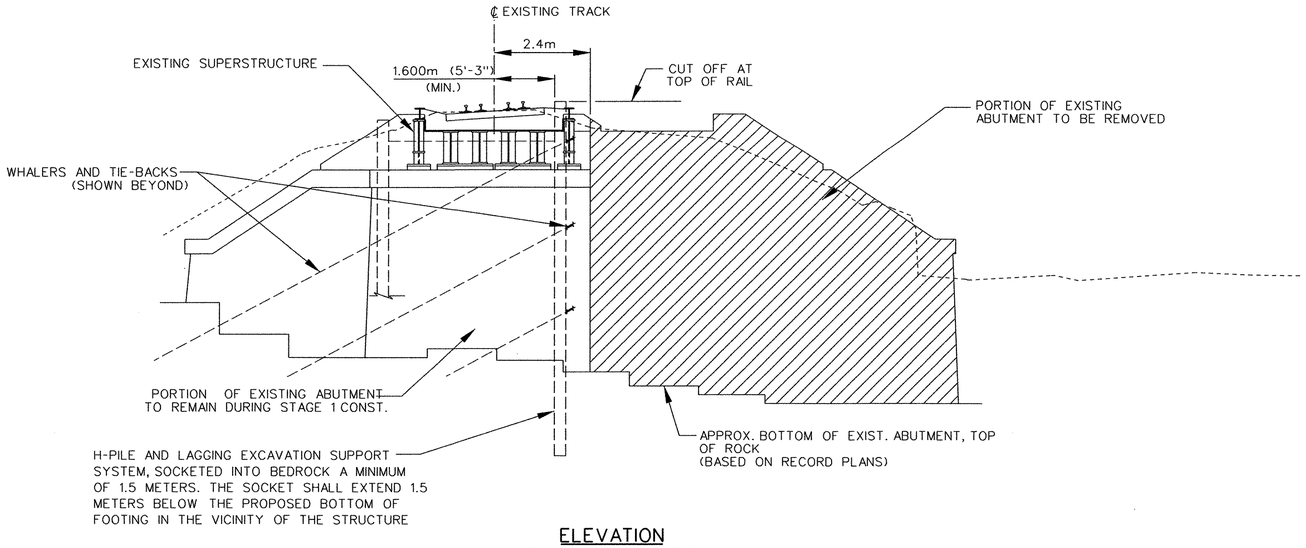
2. BACKFILL BEHIND ABUTMENT AND WINGWALL REMOVING LAGGING AND WALERS DURING BACKFILLING OPERATION.

3. CUT OFF SOLDIER PILES AT 1M BELOW TOP OF RAIL AND COMPLETE BACKFILL.



PLAN
PROPOSED BRIDGE
STAGE 2 CONSTRUCTION
SCALE 1:125

PROJECT NAME:	BRATTLEBORO
PROJECT NUMBER:	NH 010-2(2)
FILE NAME: rt9br101	PLOT DATE: 10-02-2002
PROJECT LEADER: JHR	DRAWN BY: DHL
DESIGNED BY: GHB	CHECKED BY: TEM
	SHEET 86 OF 145

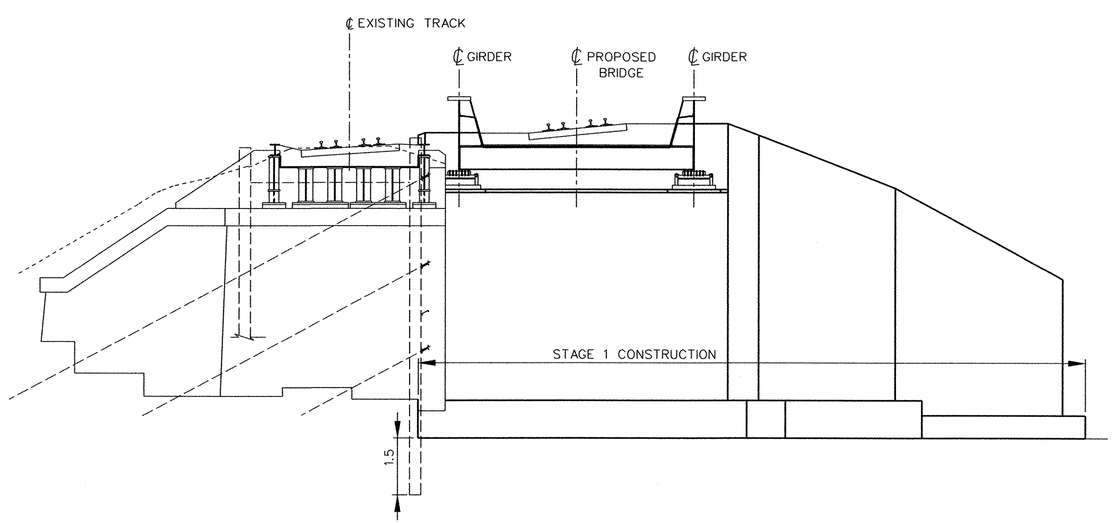


ELEVATION
EXISTING BRIDGE
STAGE 1 - SOUTH ABUTMENT DEMOLITION

SCALE 1:75

NOTES:

1. Excavation support system shown in schematic. H-Piles with lagging and walers are shown. The contractor is responsible for the design and configuration of the support system. The design and configuration should be submitted for approval.
2. H-Piles and lagging shall be located no closer than 1.6 meters from the existing mainline track center.
3. Special attention will need to be given to the removal of rock adjacent to the excavation support system in the vicinity of the proposed abutments. Controlled blasting, hydraulic splitting, or other acceptable methods of rock removal shall be used.



ELEVATION
PROPOSED BRIDGE
STAGE 1 - SOUTH ABUTMENT CONSTRUCTION

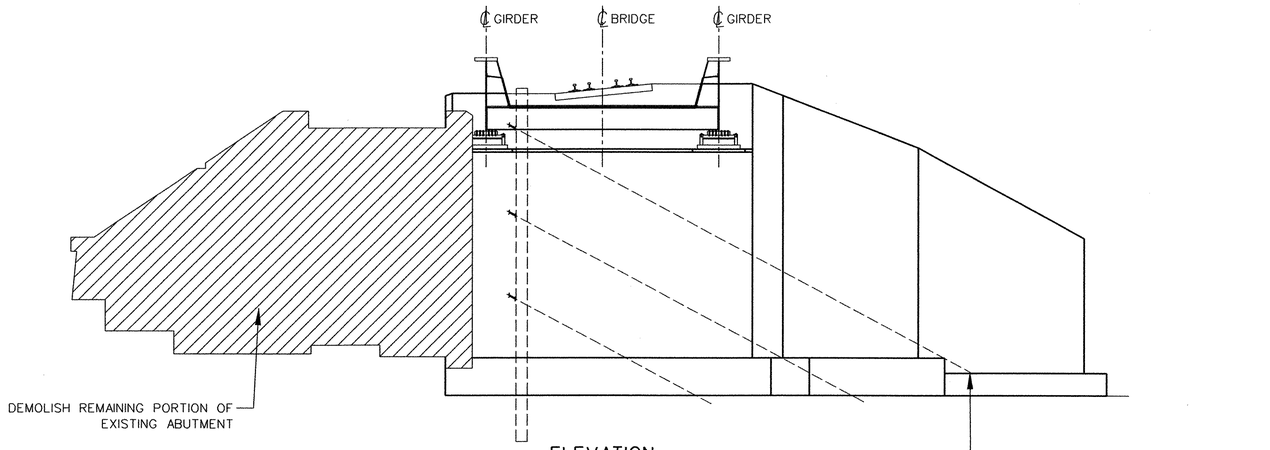
SCALE 1:75

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BRATTLEBORO	Bridge No. 62.56
Highway No. VT. ROUTE 9	Log Sta. / Surv. Sta.
ROUTE 9 BRIDGE	
CONSTRUCTION STAGING ELEVATIONS	
Designed By GJB	Drawn By DHL
Checked By GJB Date	Bridge Design Supervisor JHR Date
PROJECT BRATTLEBORO	PROJECT NO. NH 010-2(2)
I.G.C. Info.	
Bridge Sheet No. 19	Sheet 87 of 145

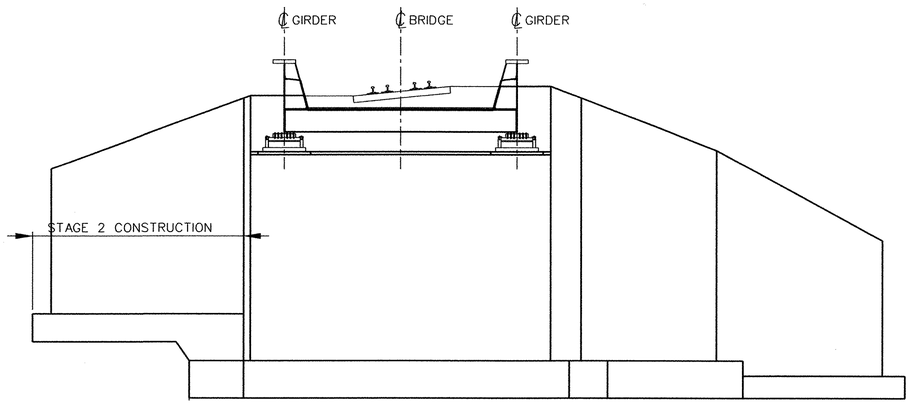
Plot Date: 10-02-2002
File: rt9br300

Metric



ELEVATION
EXISTING BRIDGE
STAGE 2 - SOUTH ABUTMENT DEMOLITION

SCALE 1:75



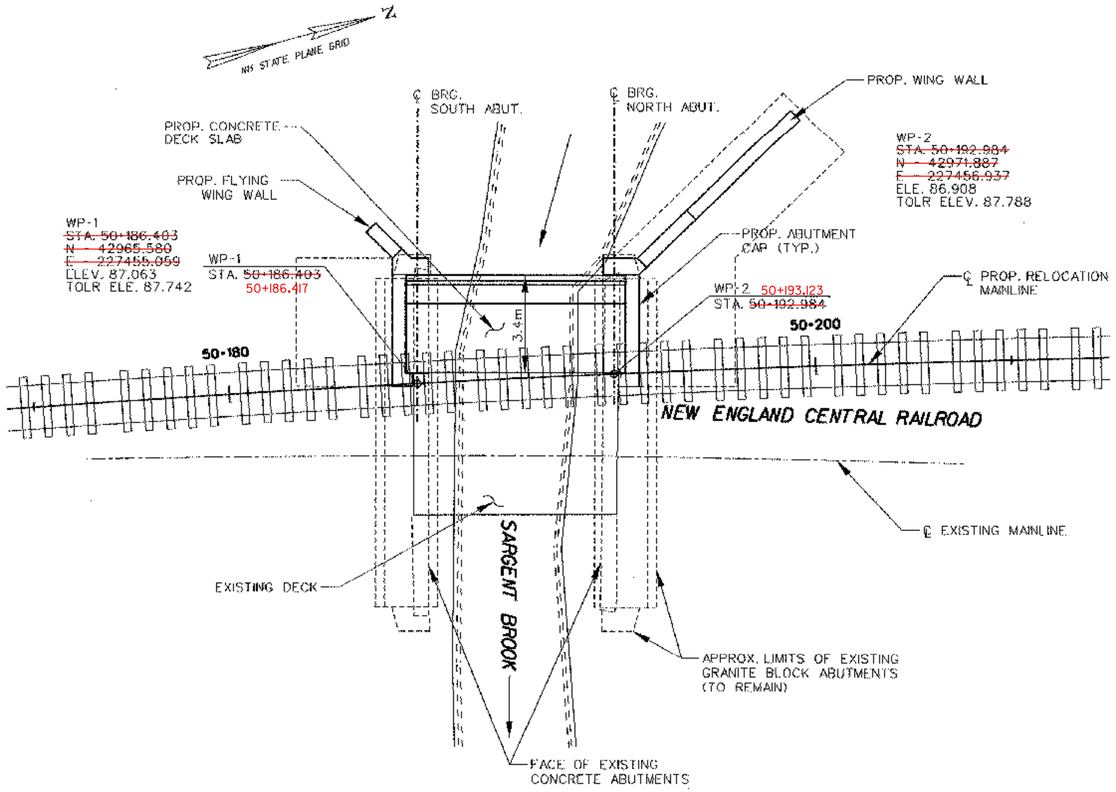
ELEVATION
PROPOSED BRIDGE
STAGE 2 - SOUTH ABUTMENT CONSTRUCTION

SCALE 1:75

STATE OF VERMONT
AGENCY OF TRANSPORTATION

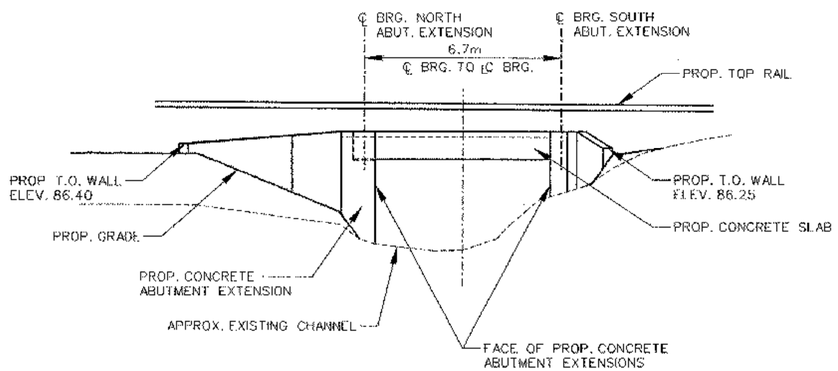
Town Of BRATTLEBORO	Bridge No. 62.56
Highway No. VT. ROUTE 9	Log Sta. / Surv. Sta.
ROUTE 9 BRIDGE	
CONSTRUCTION STAGING ELEVATIONS	
Designed By GJB	Drawn By DHL
Checked By GJB Date	Bridge Design Supervisor JHR Date
PROJECT BRATTLEBORO	PROJECT NO. NH 010-2(2)
I.G.C. Info.	
Bridge Sheet No. 20	Sheet 88 of 145

Plot Date: 10-02-2002
File: rt9br300



PLAN

SCALE 1:100



ELEVATION
(LOOKING EAST)

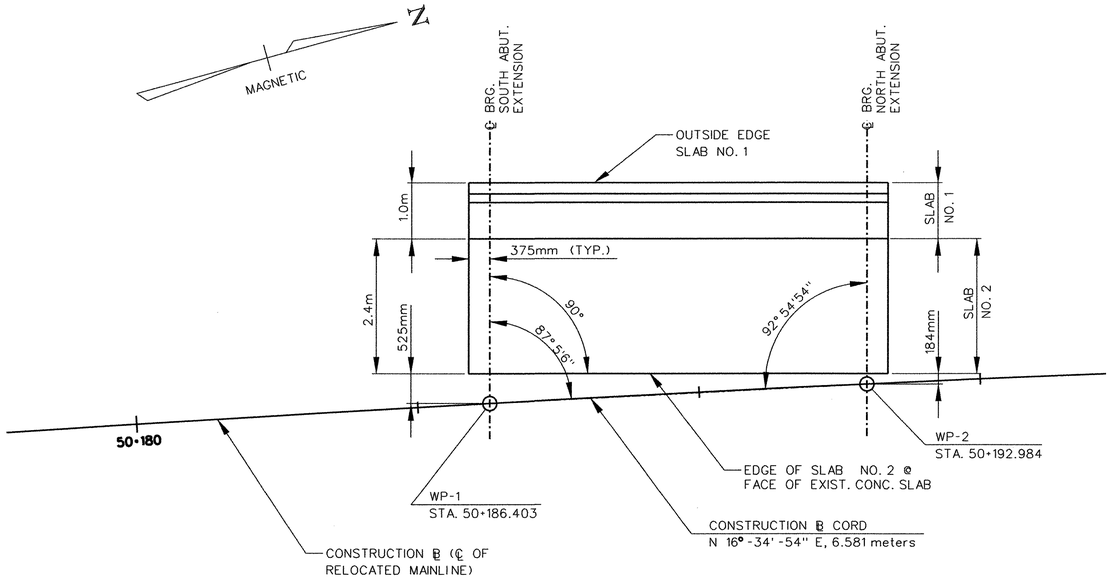
SCALE 1:100

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BRATTLEBORO	Bridge No. 62.51
Highway No. VT. ROUTE 9	Log Sta. / Surv. Sta.
SARGENT BROOK	
PLAN & ELEVATION	
Designed By GJB	Drawn By DHL
Checked By GJB Date	Bridge Design Supervisor JHR Date
PROJECT BRATTLEBORO	PROJECT NO. NH BRF 012-1(33)
I.G.C. Info.	
Bridge Sheet No. 1	Sheet 90 of 145

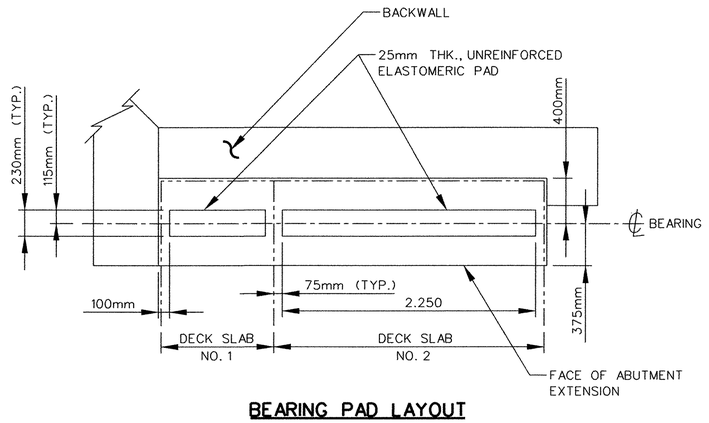
Plot Date: 10-02-2002
File: sgtbr100

Metric



FRAMING PLAN

SCALE 1:50



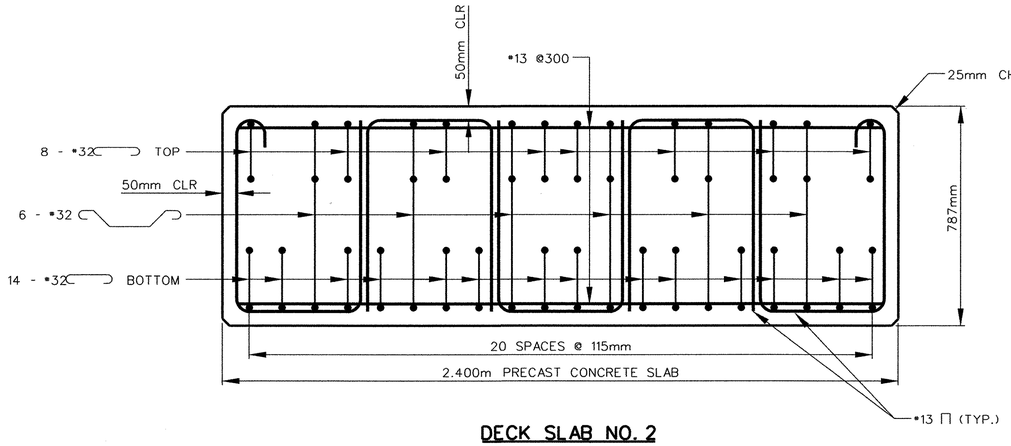
BEARING PAD LAYOUT

SCALE 1:25

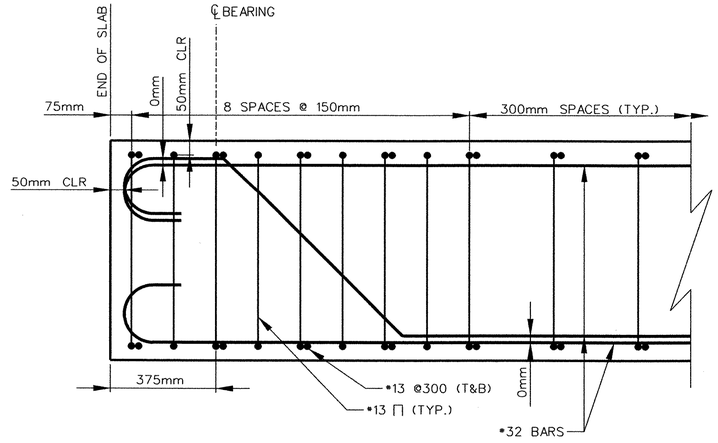
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BRATTLEBORO	Bridge No. 62.51
	Log Sta.
Highway No. VT. ROUTE 9	Surv. Sta.
SARGENT BROOK	
FRAMING PLAN & BEARING LAYOUT	
Designed By LM	Drawn By DHL
Checked By GJB Date	Bridge Design Supervisor JHR Date
PROJECT BRATTLEBORO	PROJECT NO. NH 010-2(2)
I.G.C. Info.	
Bridge Sheet No. 2	Sheet 91 of 145

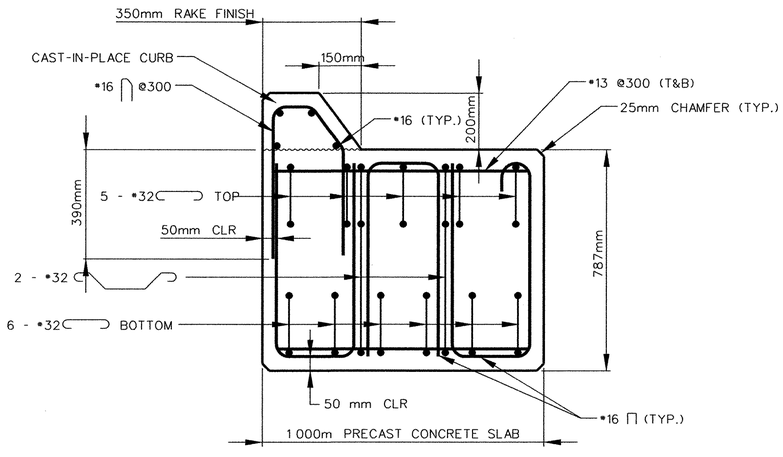
Plot Date: 10-02-2002
File: sgtbr153



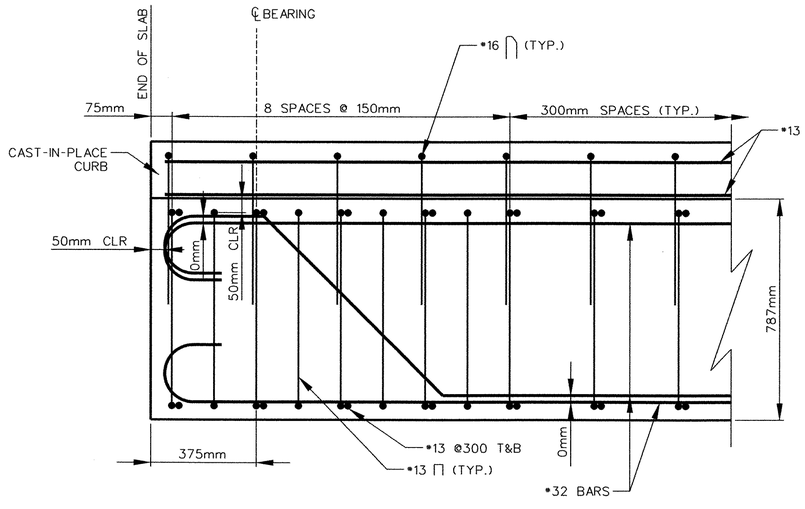
DECK SLAB NO. 2
SCALE 1:10



END OF SLAB NO. 2 SECTION
SCALE 1:10



DECK SLAB NO. 1
SCALE 1:10



END OF SLAB NO. 1 SECTION
SCALE 1:10

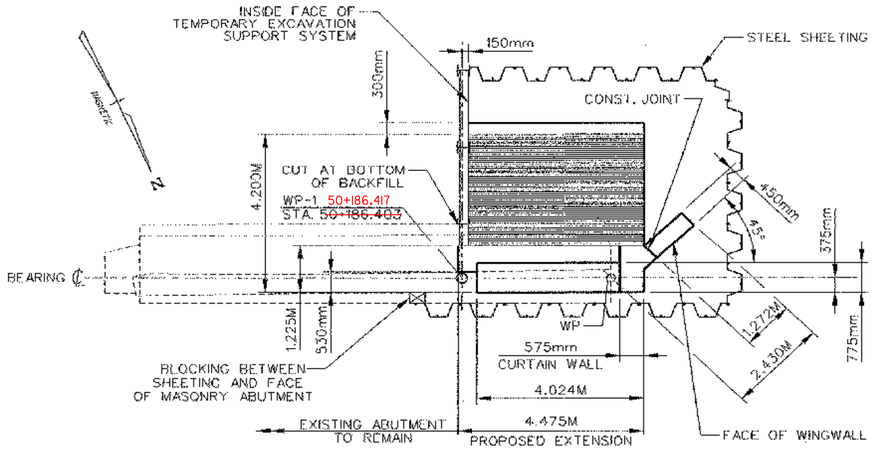
PRECAST CONCRETE NOTES

1. MEMBERS SHOWN ARE SIMILAR, IN SIZE AND REINFORCEMNT LAYOUT, TO THE BOSTON AND MAINE RAILROAD'S STANDARD REINFORCED CONCRETE SLAB WHICH WAS USED IN THE ORIGNIAL CONSTRUCTION.
2. MEMBERS ARE TO BE PRECAST CONCRETE. THE FABRICATION OF THESE BEAMS SHALL CONFORM TO AREMA AND VTRANS STANDARD PROCEDURES FOR PRECAST CONCRETE.
3. PRECAST CONCRETE MEMBERS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 35 MPa.
4. TOP OF ALL BEAMS SHALL BE GIVEN A SMOOTH FINISH EXCEPT UNDER AREA OF CAST-IN-PLACE CURB. AREAS UNDER THE CURB SHALL HAVE A RAKE FINISH WITH AN AMPLITUDE OF 6 mm.
5. THE FABRICATOR IS RESPONSIBLE FOR THE DESIGN AND LOCATION OF LIFTING DEVICES. THE DEVICES SHALL BE DESIGNED FOR FACTORS OF SAFETY REQUIRED BY THE ERECTION PROCEDURE.
6. ALL REINFORCEMENT SHALL BE EPOXY COATED, GRADE 420, AASHTO M 31M/m 31 (ASTM A-615-S1) BILLET STEEL BARS.

Plot Date: 10-02-2002
File: sgtbr150

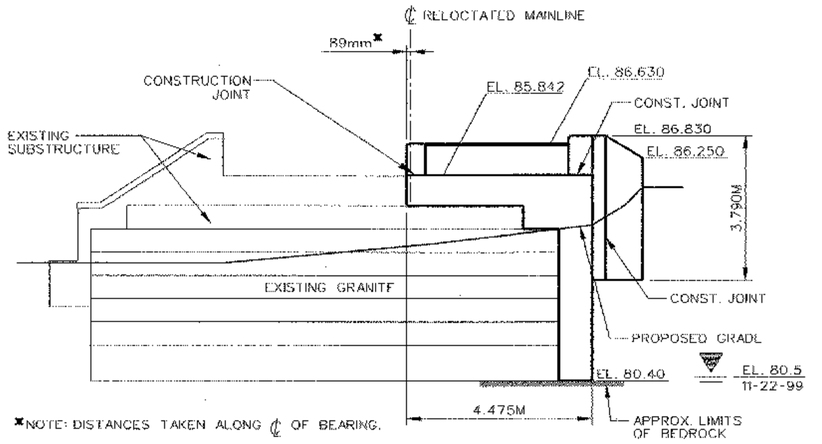
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BRATTLEBORO	Bridge No. 62.51
Highway No. VT. ROUTE 9	Log Sta. / Surv. Sta.
SARGENT BROOK	
CONCRETE DECK SLAB	
Designed By LM	Drawn By DHL
Checked By GJB Date	Bridge Design Supervisor JHR Date
PROJECT BRATTLEBORO	PROJECT NO. NH 010-2(2)
I.G.C. Info.	
Bridge Sheet No. 3	Sheet 92 of 145



PLAN
SOUTH ABUTMENT
SARGENT BROOK BRIDGE

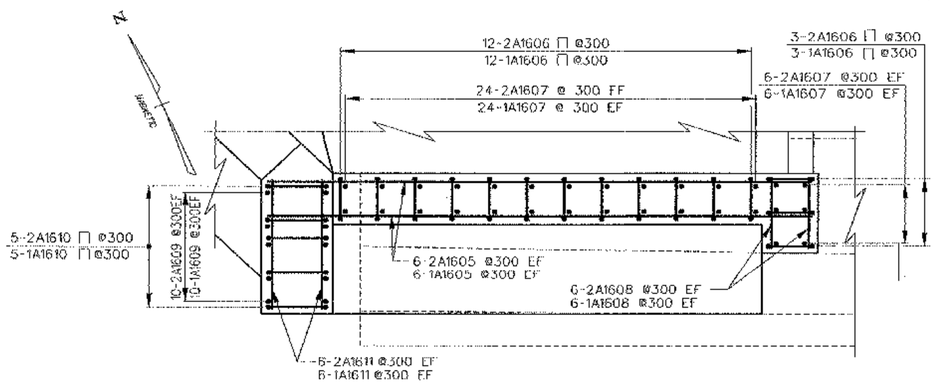
SCALE 1:75



*NOTE: DISTANCES TAKEN ALONG ℄ OF BEARING.

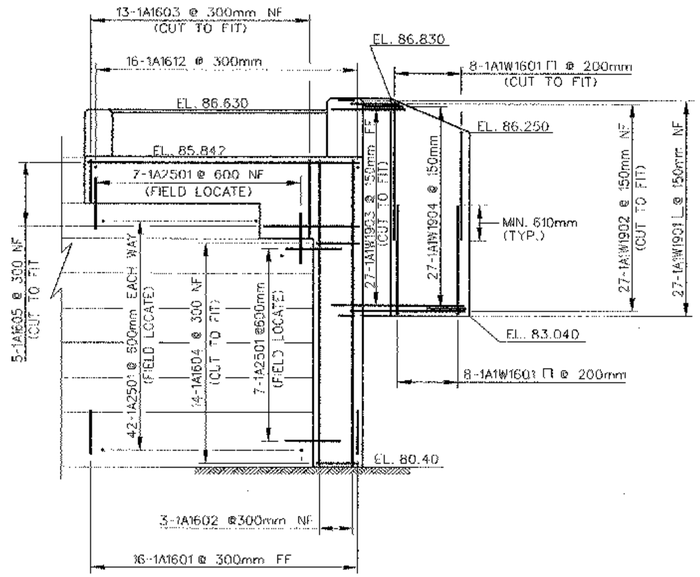
SOUTH ABUTMENT ELEVATION
SARGENT BROOK BRIDGE

SCALE 1:75



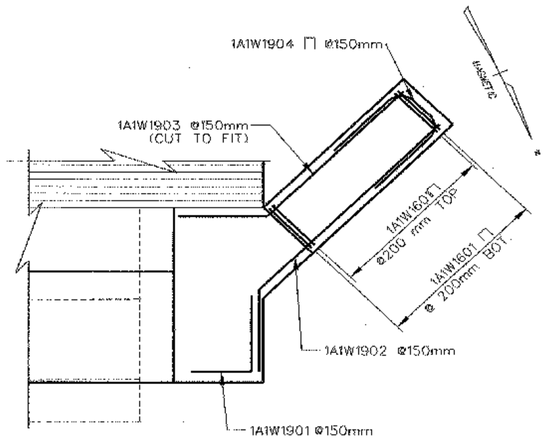
NORTH ABUTMENT
CURTAINWALL & BACKWALL REINFORCEMENT PLAN
(SOUTH ABUTMENT - OPPOSITE HAND)

SCALE: 1:25



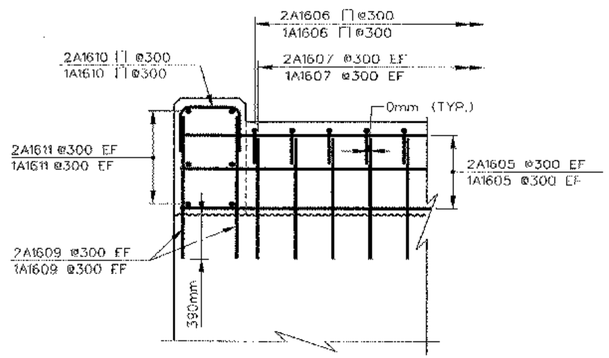
SARGENT BROOK BRIDGE
SOUTH ABUTMENT REINFORCEMENT ELEVATION

SCALE 1:50



SOUTH WEST WINGWALL REINFORCEMENT PLAN

SCALE 1:20



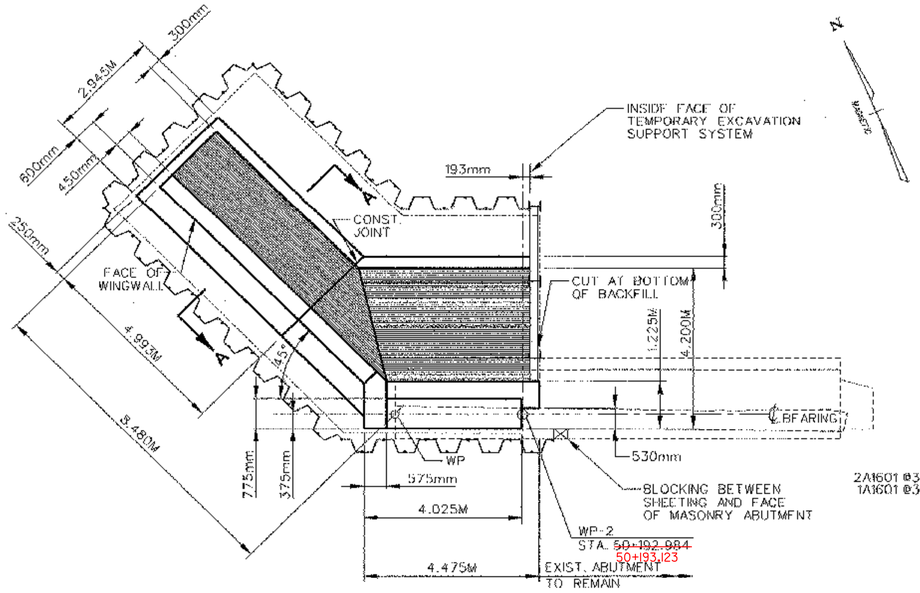
CURTAIN WALL REINFORCEMENT SECTION

SCALE 1:25

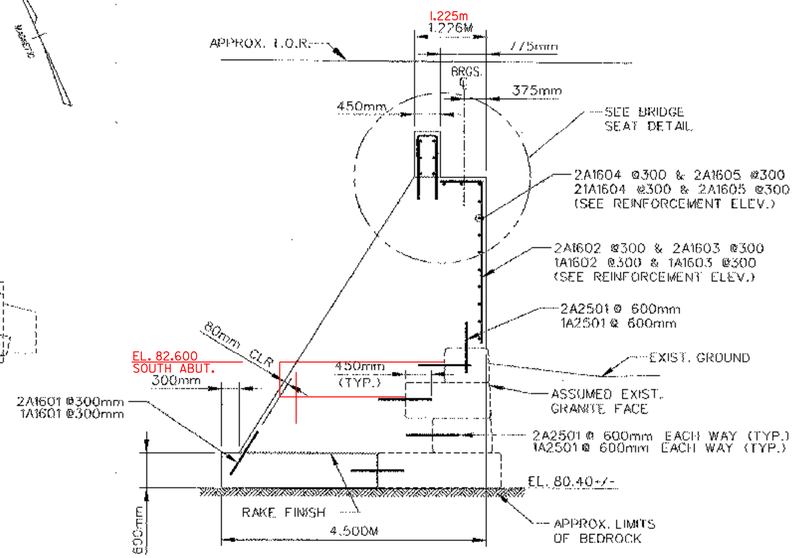
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BRATTLEBORO	Bridge No. 62.51
Highway No. VT. ROUTE 9	Log Sta. / Surv. Sta.
SARGENT BROOK	
SOUTH ABUTMENT PLAN, ELEVATION AND DETAILS	
Designed By LM	Drawn By LRD/DHL
Checked By GJB Date	Bridge Design Supervisor JHR Date
PROJECT BRATTLEBORO	PROJECT NO. NH 010-2(2)
I.G.C. Info.	
Bridge Sheet No. 4	Sheet 93 of 145

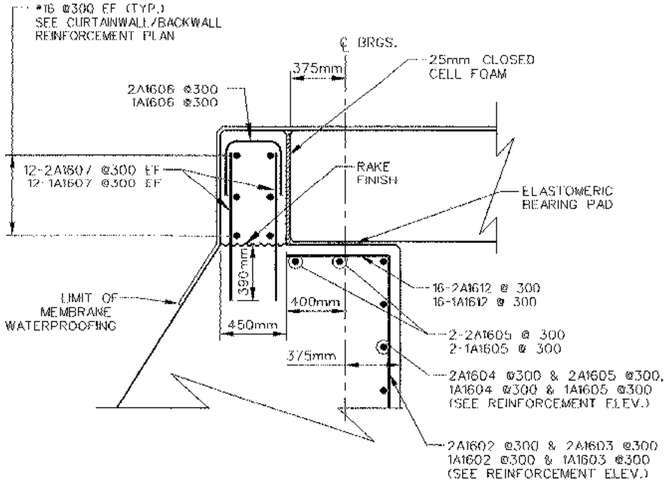
Plot Date: 10-02-2002
File: sgtbr151



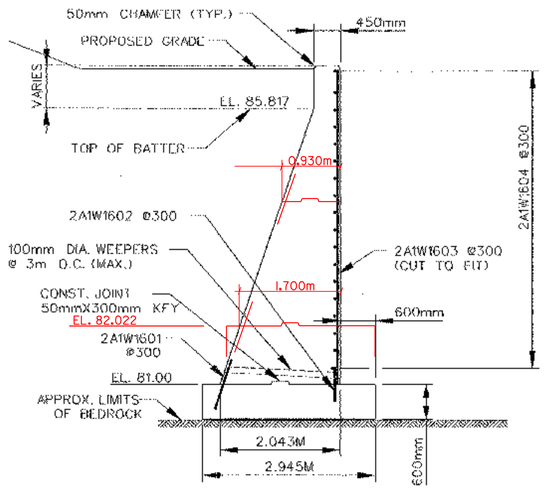
PLAN
NORTH ABUTMENT
SARGENT BROOK BRIDGE
SCALE 1:75



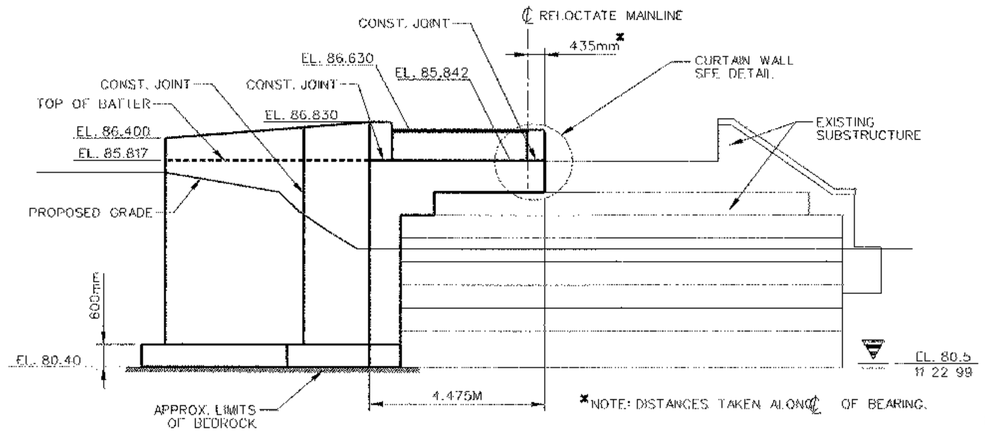
TYPICAL ABUTMENT SECTION
SCALE 1:50



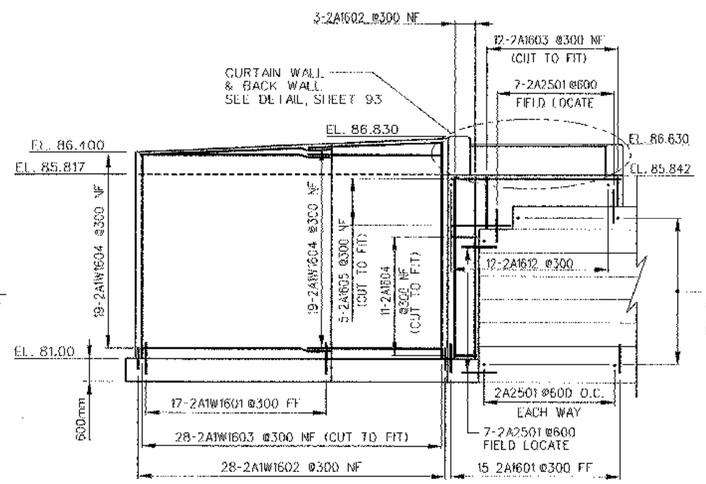
BRIDGE SEAT DETAIL
SCALE 1:20



TYPICAL NORTHWEST WINGWALL - SECTION A-A
SARGENT BROOK BRIDGE
SCALE 1:50



ELEVATION
NORTH ABUTMENT
SARGENT BROOK BRIDGE
SCALE 1:75



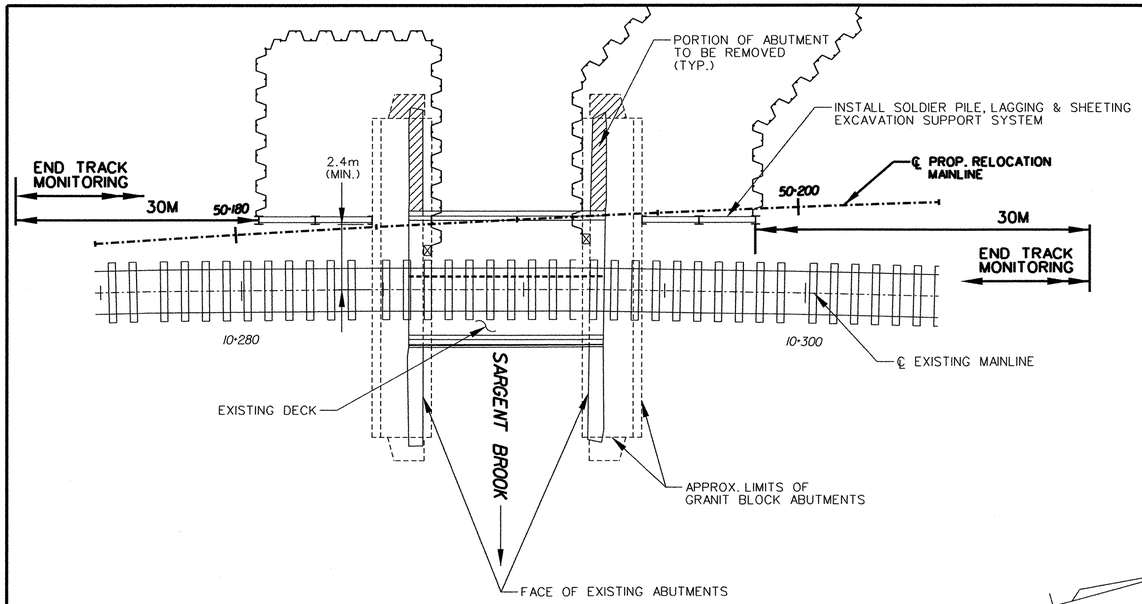
SARGENT BROOK BRIDGE
NORTH ABUTMENT REINFORCEMENT ELEVATION
SCALE 1:75

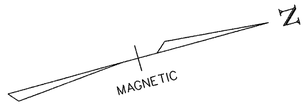
Plot Date: 10-03-2002
File: sgtbr152

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BRATTLEBORO	Bridge No. 62.51
Highway No. VT. ROUTE 9	Log Sta. / Surv. Sta.
SARGENT BROOK	
NORTH ABUTMENT PLAN, ELEVATION AND DETAILS	
Designed By LM	Drawn By LRD/DHL
Checked By GJB Date	Bridge Design Supervisor JHR Date
PROJECT BRATTLEBORO	PROJECT NO. NH 010-2(2)
I.G.C. Info.	
Bridge Sheet No. 5	Sheet 94 of 145

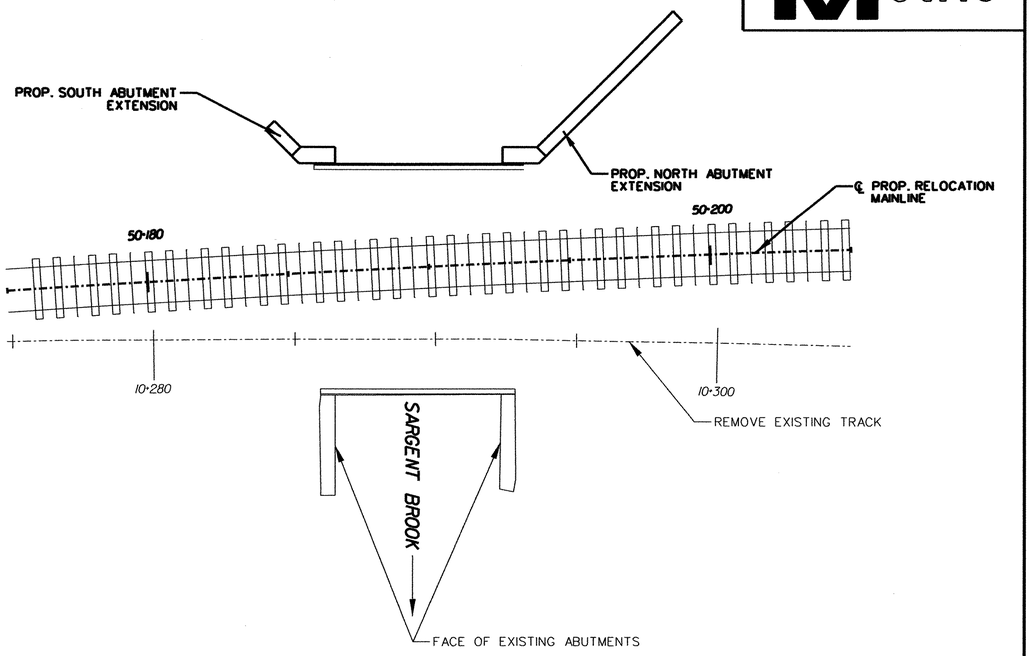
Metric





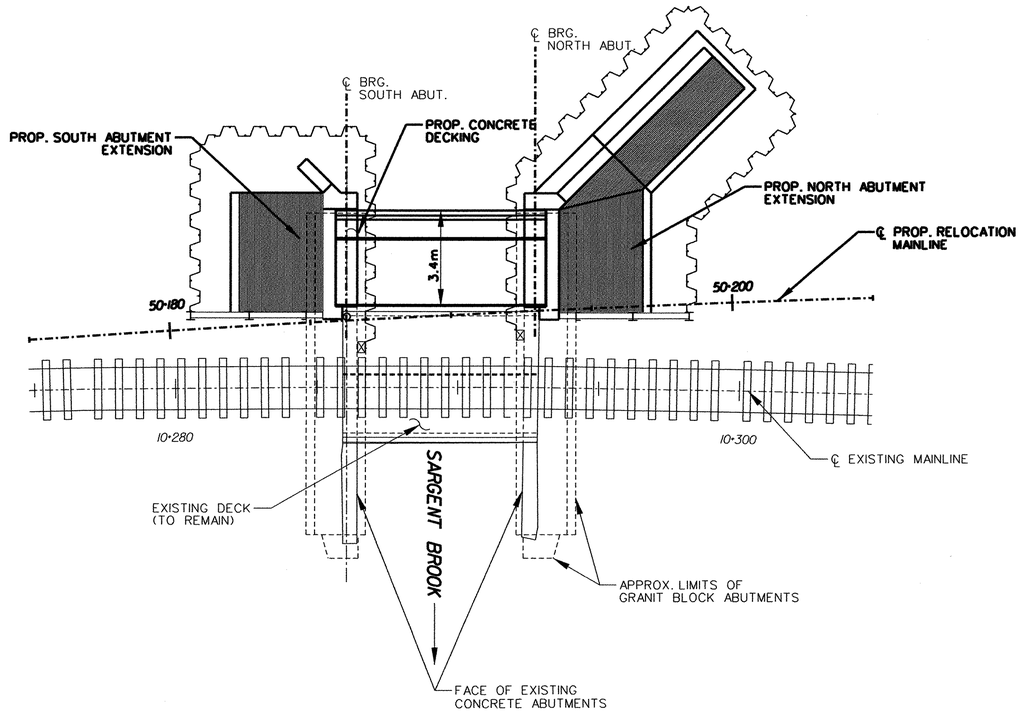
PLAN
EXISTING BRIDGE DEMOLITION

SCALE 1=100



PLAN
FINAL CONDITION

SCALE 1=100



PLAN
PROP. BRIDGE EXTENSION CONSTRUCTION

SCALE 1=100

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BRATTLEBORO	Bridge No. 62.51
	Log Sta.
Highway No. VT. ROUTE 9	Surv. Sta.
SARGENT BROOK	
CONSTRUCTION STAGING	
Designed By GJB	Drawn By DHL
Checked By TEM Date	Bridge Design Supervisor JHR Date
PROJECT BRATTLEBORO	PROJECT NO. NH 010-2(2)
I.G.C. Info.	
Bridge Sheet No. 6	Sheet 95 of 145

Plot Date: 10-02-2002
File: sgtbr101

STATE OF VERMONT
AGENCY OF TRANSPORTATION

REINFORCING STEEL SCHEDULE

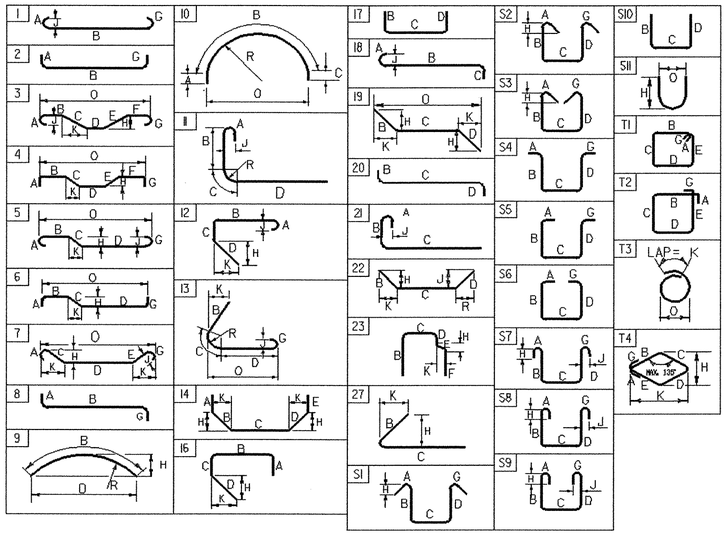
Metric

EACH	SIZE	LENGTH (meters)	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
Route 9 Bridge - Abutment 1A (South Abutment)																
32	16	8.520	♦ 1A1601	STR												
30	16	1.700	♦ 1A1602	STR												
32	16	4.340	♦ 1A1603	STR												
28	16	1.000	1A1604	STR												
32	16	3.350	1A1605	STR												
10	16	3.540	1A1606	STR												
28	16	4.938	1A1607	STR												
46	16	7.840	1A1608	STR												
8	16	1.545	1A1609	STR								MECHANICAL DEVICES REQUIRED				
14	16	2.300	1A1610	STR								MECHANICAL DEVICES REQUIRED				
24	16	2.900	1A1611	STR												
32	16	2.100	1A1612	STR												
12	16	1.370	♦ 1A1613	STR												
28	16	0.920	1A1614	17		0.300	0.320	0.300								
12	16	1.390	1A1615	STR								MECHANICAL DEVICES REQUIRED				
36	16	0.800	1A1616	17		0.400	0.400	0.000								
11	16	3.575	1A1617	19		0.650	2.925	0.000					0.450	0.460		3.385
11	16	1.340	1A1618	19		0.400	0.940	0.000					0.275	0.280		1.220
16	16	1.560	1A1619	19		0.450	1.110	0.000					0.315	0.320		1.430
18	16	4.420	1A1620	19		0.645	3.775	0.000					0.455	0.460		4.235
18	16	2.240	1A1621	19		0.405	1.835	0.000					0.280	0.285		2.120
25	16	2.415	1A1622	19		1.070	1.345	0.000					0.755	0.755		2.100
6	16	1.300	1A1623	STR												
8	16	1.840	1A1624	17		0.300	1.240	0.300								
38	16	1.490	1A1625	STR												
54	32	9.410	1A3201	11	0.000	3.060	0.455	5.895					0.000		0.260	
Route 9 Bridge - Wingwall 1A1W (So. Abutment West Wingwall)																
63	16	4.940	1A1W1601	STR												
11	16	5.660	1A1W1602	STR												
11	16	1.500	1A1W1603	STR												
23	16	3.767	1A1W1604	STR												
45	16	1.330	1A1W1605	STR												
22	16	6.340	1A1W1606	STR												
23	16	2.587	1A1W1607	STR												
24	16	6.090	1A1W1608	STR												
23	16	7.210	♦ 1A1W1609	STR												
0			1A1W1610													
7	16	4.940	♦ 1A1W1611	STR												
43	16	0.890	1A1W1612	17		0.300	0.290	0.300								
22	16	5.400	♦ 1A1W1613	STR												
0			1A1W1614													
16	16	5.900	♦ 1A1W1615	STR												
22	19	4.200	♦ 1A1W1901	STR												
21	22	1.860	♦ 1A1W2201	STR												
23	29	7.363	1A1W2901	13		5.243	0.384	1.736			0.000		0.000	0.522	0.230	1.966
23	29	4.540	1A1W2902	STR												
22	29	4.216	1A1W2903	13		2.761	0.384	1.071			0.000		0.000	0.275	0.230	1.301
22	29	2.99	1A1W2904	STR												
Route 9 Bridge - Wingwall 1A2W (So. Abutment East Wingwall)																
8	16	1.995	1A2W1601	STR								MECHANICAL DEVICES REQUIRED				
10	16	3.540	1A2W1602	STR												
14	16	0.650	1A2W1603	STR								MECHANICAL DEVICES REQUIRED				
12	16	1.950	1A2W1604	STR								MECHANICAL DEVICES REQUIRED				
4	16	1.880	♦ 1A2W1605	STR												
13	16	3.920	1A2W1606	19		0.450	3.020	0.450				0.320		0.320		3.655
11	16	2.200	1A2W1607	STR												
4	16	1.325	1A2W1608	STR												
23	16	3.060	1A2W1609	STR												
12	16	6.440	1A2W1610	STR												
10	16	7.336	1A2W1611	STR												
4	16	7.710	1A2W1612	STR												
25	16	1.000	1A2W1613	STR												
25	16	6.020	♦ 1A2W1614	STR												
28	16	7.086	1A2W1615	STR												
12	16	6.300	♦ 1A2W1616	STR												
25	16	0.920	1A2W1617	17		0.300	0.350	0.300								
25	19	4.280	♦ 1A2W1901	STR												
25	22	4.671	1A2W2201	13		3.381	0.222	1.068			0.000		0.000	0.337	0.133	1.201
7	25	1.915	1A2W2501	STR												
43	25	3.540	1A2W2502	STR												

ITEM	EACH	SIZE	LENGTH (meters)	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
Route 9 Bridge - Abutment 2A (North Abutment)																	
	42	16	4.840	2A1601	STR												
	34	16	3.300	2A1602	STR												
	30	16	1.000	2A1603	STR												
	21	16	3.175	2A1604	19		0.450	2.310	0.450					0.450		0.000	2.325
	21	16	4.140	2A1605	19		0.450	3.265	0.450					0.315		0.315	3.910
	42	16	5.090	2A1606	STR												
	10	16	4.250	♦ 2A1607	STR												
	16	16	3.000	2A1608	STR									MECHANICAL DEVICES REQUIRED			
	16	16	1.000	2A1609	STR									MECHANICAL DEVICES REQUIRED			
	8	16	2.170	2A1610	STR									MECHANICAL DEVICES REQUIRED			
	14	16	8.200	2A1611	STR												
	16	16	6.726	2A1612	STR												
	12	16	3.630	2A1613	STR												
	58	16	8.340	2A1614	STR												
	6	16	1.870	♦ 2A1615	STR												
	6	16	1.370	2A1616	STR												
	36	16	2.825	2A1617	STR												
	32	16	2.000	2A1618	STR												
	34	16	0.890	2A1619	17		0.300	0.290	0.300								
	6	16	1.300	2A1620	STR												
	8	16	1.840	2A1621	17		0.300	1.240	0.300								
	82	16	0.800	2A1622	17		0.400	0.400									
	24	16	3.925	2A1623	19		0.650	3.275	0.000					0.455		0.460	3.735
	26	16	1.960	2A1624	19		0.850	1.110	0.000					0.595		0.600	1.710
	29	16	1.725	2A1625	19		0.390	1.335	0.000					0.270		0.275	1.610
	120	16	1.490	2A1626	STR												
	20	25	2.170	2A2501	STR									MECHANICAL DEVICES REQUIRED			
	34	29	5.940	2A2901	STR												
	26	32	11.180	2A3201	11	0.000	3.060	0.455	7.665						0.000	0.260	
	26	32	8.195	2A3202	11	0.000	3.030	0.455	4.710						0.000	0.260	
	32	32	10.180	2A3203	11	0.000	3.060	0.455	6.665						0.000	0.260	
	32	32	7.195	2A3204	11	0.000	3.030	0.455	3.710						0.000	0.260	
Route 9 Bridge -Wingwall 2A2W (No. Abutment East Wingwall)																	
	13	16	3.100	2A2W1601	STR												
	22	16	2.840	2A2W1602	STR												
	4	16	5.450	2A2W1603	STR									MECHANICAL DEVICES REQUIRED			
	12	16	6.155	2A2W1604	STR									MECHANICAL DEVICES REQUIRED			
	8	16	4.200	2A2W1605	STR									MECHANICAL DEVICES REQUIRED			
	6	16	3.570	2A2W1606	STR									MECHANICAL DEVICES REQUIRED			
	40	16	1.000	2A2W1607	STR												
	11	16	4.140	2A2W1608	19		0.450	1.680	0.450					0.450		0.000	1.695
	11	16	3.175	2A2W1609	19		0.450	2.375	0.450					0.315		0.315	3.020
	22	16	5.120	2A2W1610	STR												
	8	16	2.170	2A2W1611	STR									MECHANICAL DEVICES REQUIRED			
	22	16	5.400	♦ 2A2W1612	STR												
	38	16	6.110	2A2W1613	STR												
	23	16	8.960	♦ 2A2W1614	STR												
	39	16	0.920	2A2W1615	17		0.300	0.320	0.300								
	24	16	4.870	2A2W1616	STR												
	10	16	4.450	♦ 2A2W1617	STR												
	34	16	3.870	♦ 2A2W1618	STR												
	18	16	5.430	♦ 2A2W1619	STR												
	34	22	4.118	2A2W2201	13		2.888	0.222	1.008			0.000		0.000	0.288	0.133	1.141
	69	22	6.925	♦ 2A2W2202	STR												
	20	25	2.170	2A2W2501	STR									MECHANICAL DEVICES REQUIRED			
	35	25	4.340	2A2W2502	STR												
	26	25	2.840	2A2W2503	STR												
	22	29	6.216	2A2W2901	13		4.108	0.384	1.725			0.000		0.000	0.409	0.230	1.955

~ NOTES ~

1. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING 55M SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31M (ASTM A 615M-SI). ALL BARS SHALL BE GRADE 420, UNLESS OTHERWISE DESIGNATED.
2. FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS, AND OTHER STANDARD PRACTICE, SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE".
3. BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS.
5. "J" DIMENSION ON 180 DEGREE HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
6. "H" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
7. WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.
8. ♦ DENOTES BARS TO BE CUT IN FIELD.
9. ♦ DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
10. ② DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
11. "E" IN PREFIX DENOTES EPOXY COATED REINFORCING STEEL.



ASTM STANDARD REINFORCING BARS

BAR SIZE	NOMINAL MASS (Kg/m)	NOMINAL DIMENSIONS ROUND SECTION		
		DIAMETER (mm)	CROSS SECTIONAL AREA (mm^2)	PERIMETER (mm)
#10	0.560	9.5	71	29.84
#13	0.994	12.7	129	39.90
#16	1.552	15.9	199	49.95
#19	2.235	19.1	284	60.00
#22	3.042	22.2	387	69.74
#25	3.973	25.4	510	79.80
#29	5.060	28.7	645	90.16
#32	6.404	32.3	819	101.47
#36	7.907	35.8	1006	112.47
#43	11.380	43.0	1452	135.09
#57	20.240	57.3	2581	180.01

PROJECT NAME: **BRATTLEBORO**
PROJECT NUMBER: **NH 010-2(2)**

FILE NAME: **7010100100**
PROJECT LEADER: **JHR**
DESIGNED BY: **GJB**
REINFORCING STEEL SCHEDULE - ROUTE 9

PLOT DATE: **10-02-2002**
DRAWN BY: **LRD/MER**
CHECKED BY: **JHR**
SHEET **96** OF **145**

STATE OF VERMONT
AGENCY OF TRANSPORTATION

REINFORCING STEEL SCHEDULE

Metric

Sargent Brook Bridge - Abutment 1A (South Abutment)

EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
16	16	0.900	1A1601	STR												
3	16	5.390	1A1602	STR												
13	16	2.000	♦ 1A1603	STR												
14	16	0.700	♦ 1A1604	STR												
13	16	4.375	1A1605	STR												
30	16	0.890	1A1606	17		0.300	0.290	0.300								
30	16	1.098	1A1607	STR												
6	16	0.595	1A1608	STR												
10	16	1.298	1A1609	STR												
5	16	1.000	1A1610	17		0.300	0.400	0.300								
6	16	1.125	1A1611	STR												
16	16	0.725	1A1612	STR												
56	25	0.900	1A2501	STR												

Sargent Brook Bridge - Wingwall 1A1W (South Abutment)

EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
16	16	4.675	♦ 1A1W1601	17		2.120	0.435	2.120								
27	19	0.800	1A1W1901	17		0.400	0.400	0.000								
27	19	3.110	♦ 1A1W1902	27		0.565	1.745					0.400		0.400		
27	19	2.600	♦ 1A1W1903	27		0.550	1.270					0.390		0.390		
27	19	1.658	1A1W1904	17		0.610	0.438	0.610								

Sargent Brook Bridge - Abutment 2A (North Abutment)

EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
16	16	0.900	2A1601	STR												
3	16	4.792	2A1602	STR												
12	16	1.250	♦ 2A1603	STR												
11	16	0.750	♦ 2A1604	STR												
13	16	4.375	♦ 2A1605	STR												
30	16	0.890	2A1606	17		0.300	0.290	0.300								
30	16	1.098	2A1607	STR												
6	16	0.595	2A1608	STR												
10	16	1.298	2A1609	STR												
5	16	1.000	2A1610	17		0.300	0.400	0.300								
6	16	1.125	2A1611	STR												
16	16	0.725	2A1612	STR												
50	25	0.900	2A2501	STR												

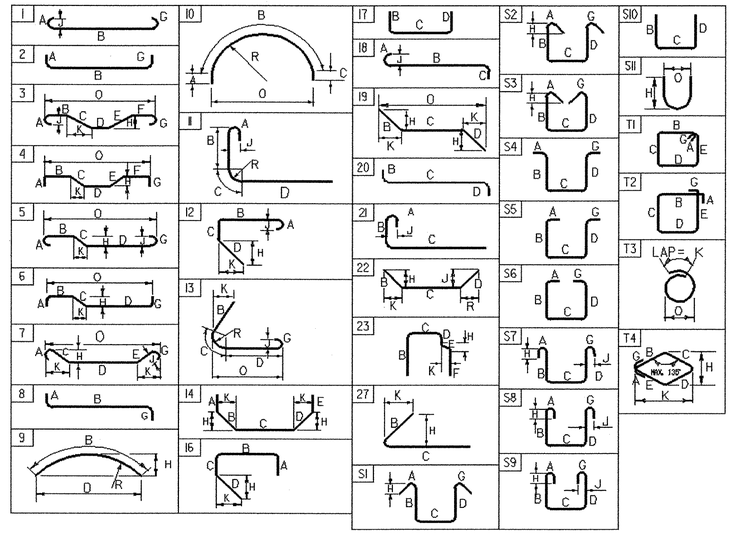
Sargent Brook Bridge - Wingwall 2A2W (North Abutment)

EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
17	16	0.900	2A1W1601	STR												
28	16	0.600	2A1W1602	STR												
28	16	5.780	♦ 2A1W1603	STR												
19	16	3.500	2A1W1604	STR												
19	16	4.950	2A1W1605	STR												

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O

~ NOTES ~

1. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING 55M SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31M (ASTM A 615M-SI). ALL BARS SHALL BE GRADE 420, UNLESS OTHERWISE DESIGNATED.
2. FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS, AND OTHER STANDARD PRACTICE, SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE".
3. BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS.
5. "J" DIMENSION ON 180 DEGREE HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
6. "H" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
7. WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.
8. • DENOTES BARS TO BE CUT IN FIELD.
9. ♦ DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
10. ③ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
11. "E" IN PREFIX DENOTES EPOXY COATED REINFORCING STEEL.



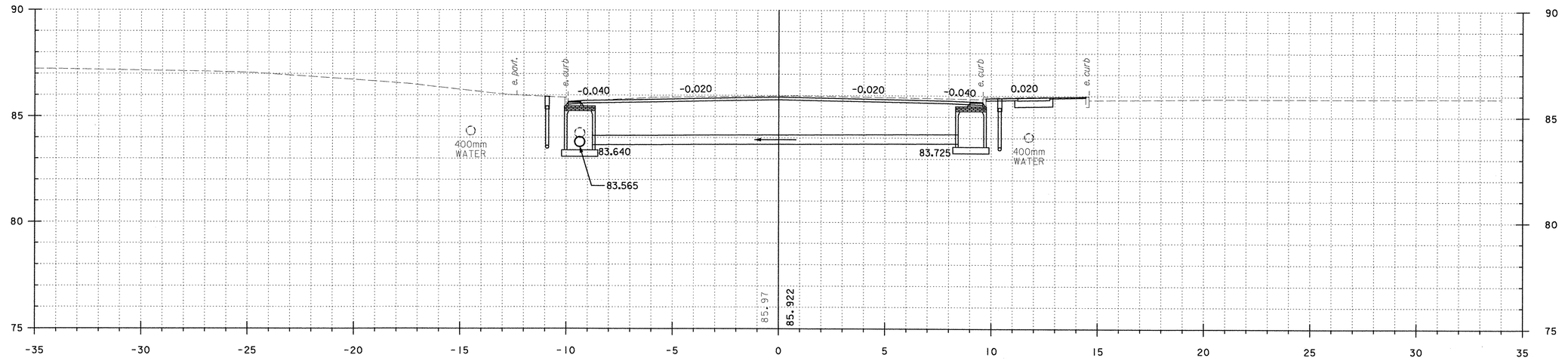
ASTM STANDARD REINFORCING BARS

BAR SIZE	NOMINAL MASS (Kg/m)	NOMINAL DIMENSIONS ROUND SECTION		
		DIAMETER (mm)	CROSS SECTIONAL AREA (mm^2)	PERIMETER (mm)
#10	0.560	9.5	71	29.84
#13	0.994	12.7	129	39.90
#16	1.552	15.9	199	49.95
#19	2.235	19.1	284	60.00
#22	3.042	22.2	387	69.74
#25	3.973	25.4	510	79.80
#29	5.060	28.7	645	90.16
#32	6.404	32.3	819	101.47
#36	7.907	35.8	1006	112.47
#43	11.380	43.0	1452	135.09
#57	20.240	57.3	2581	180.01

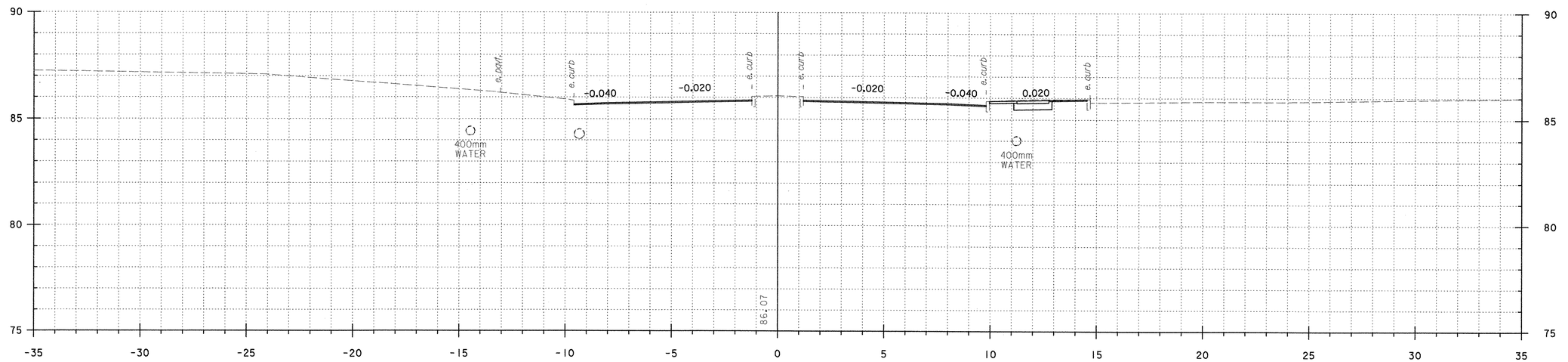
PROJECT NAME: **BRATTLEBORO**
PROJECT NUMBER: **NH 010-2(2)**

FILE NAME: **7010100100**
PROJECT LEADER: **JHR**
DESIGNED BY: **GJB**
REINFORCING STEEL SCHEDULE - SARGENT

PLOT DATE: **10-02-2002**
DRAWN BY: **LRD**
CHECKED BY: **JHR**
SHEET **97** OF **145**

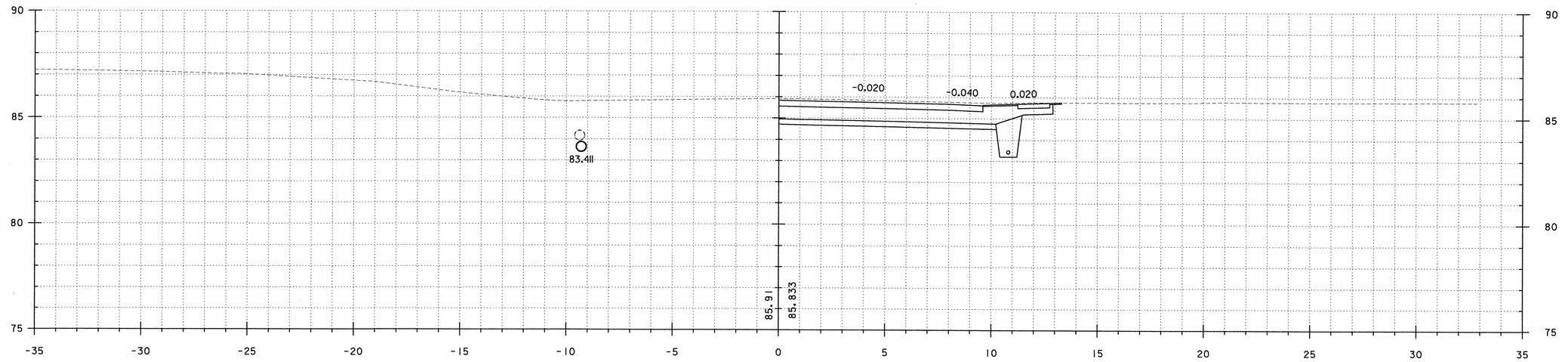


30+090.000

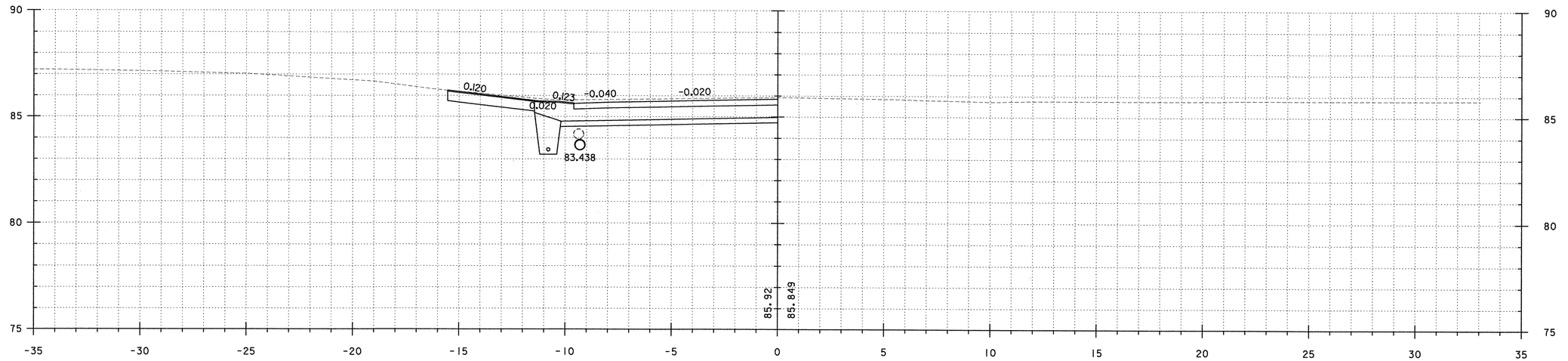


30+080.000

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: ...\zb270xs2.dgn IPARM FILE NAME:	PLOT DATE: 09/23/2002
VT ROUTE 9	
FROM STA: 30+080.000 TO STA: 30+090.000	SHEET: 98 OF 145

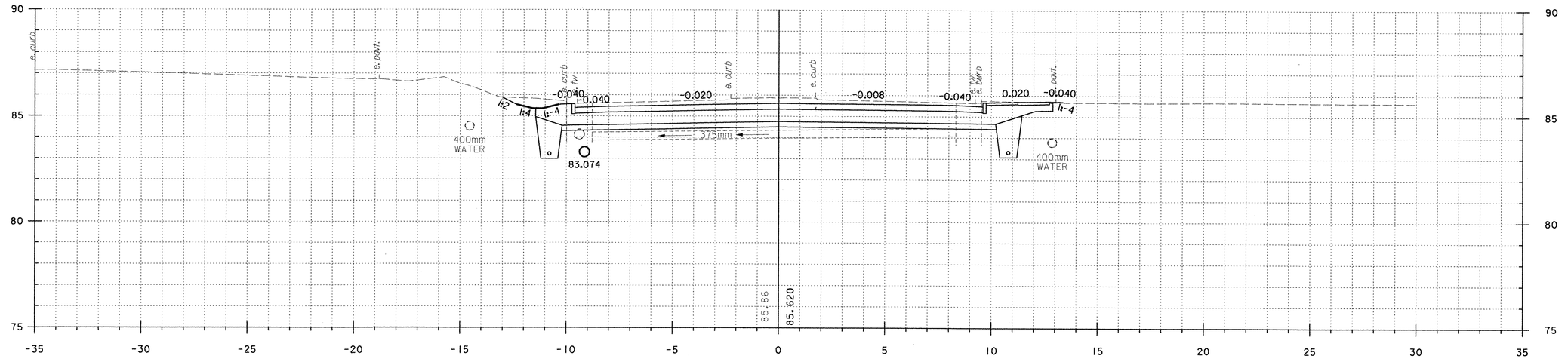


30+096.000

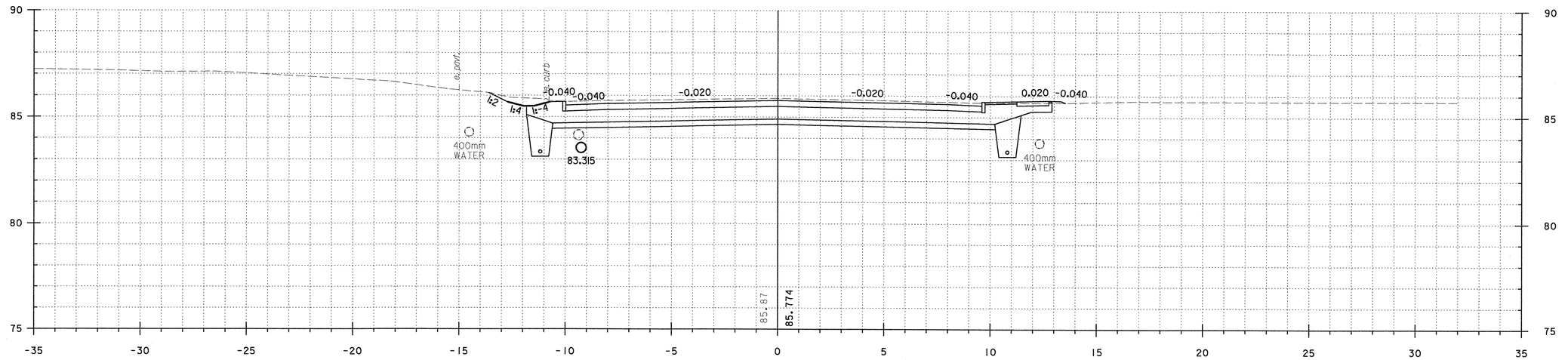


30+094.900

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: ...\zb270xs2.dgn IPARM FILE NAME:	PLOT DATE: 09/23/2002
VT ROUTE 9	
FROM STA: 30+094.900 TO STA: 30+096.000 SHEET: 99 OF 145	

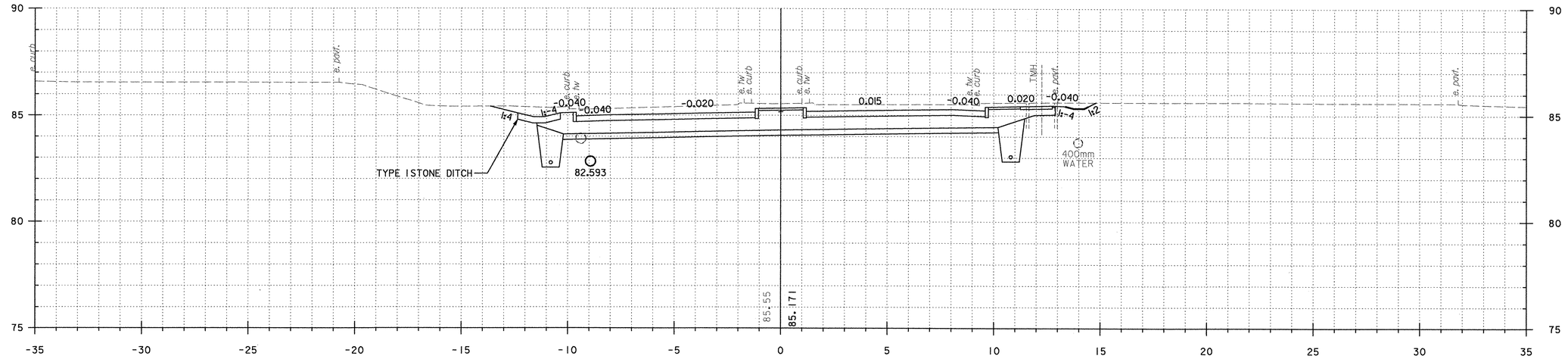


30+110.000

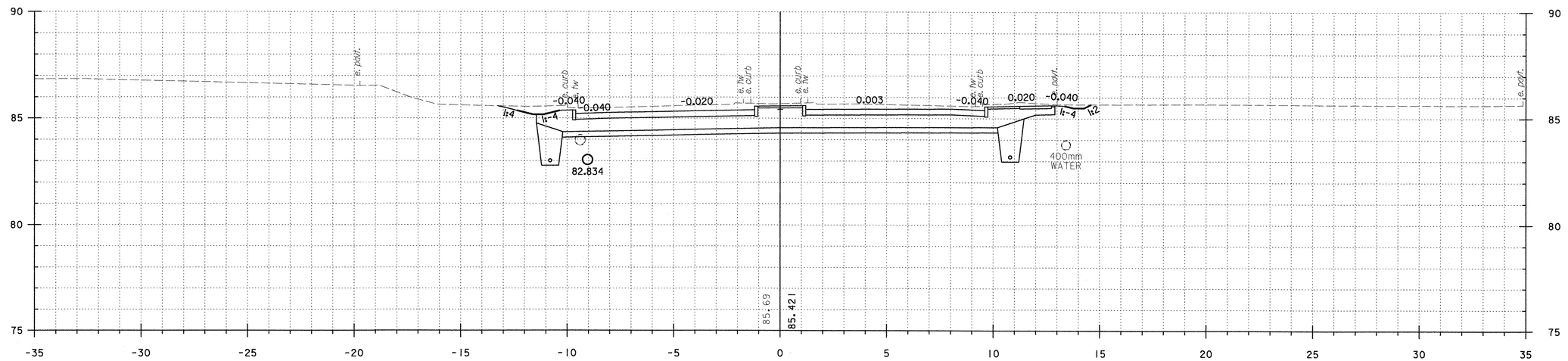


30+100.000

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: ...\zb270xs2.dgn IPARM FILE NAME:	PLOT DATE: 09/23/2002
VT ROUTE 9	
FROM STA: 30+100.000 TO STA: 30+110.000	SHEET: 100 OF 145

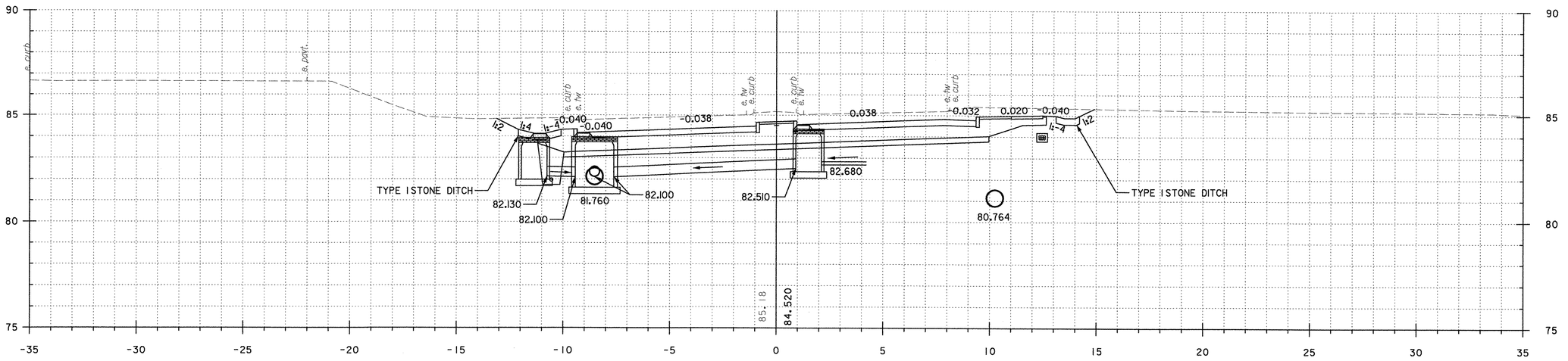


30+130.000

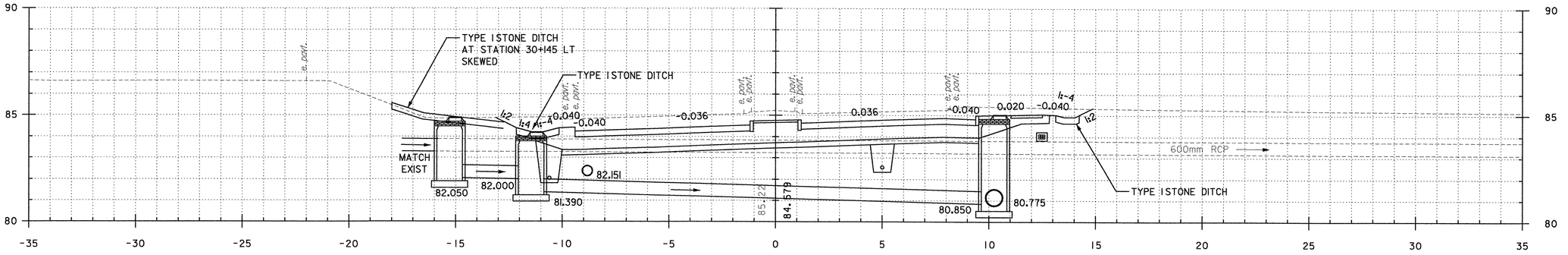


30+120.000

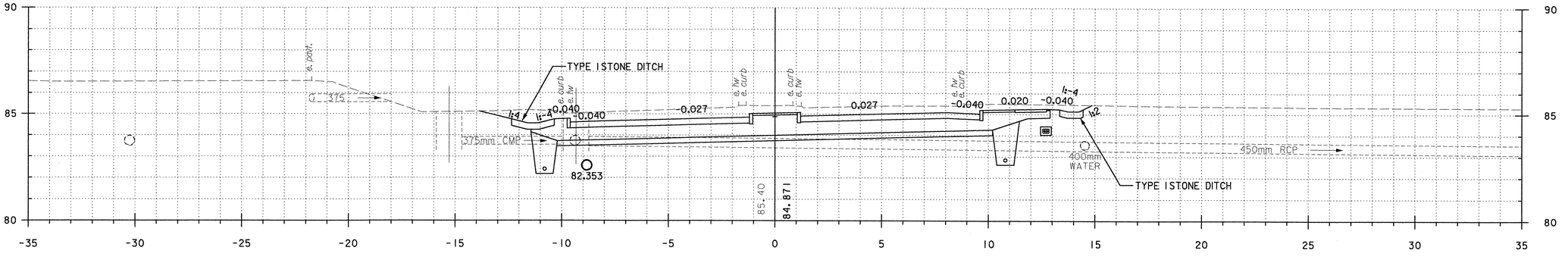
PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: ...\zb270xs2.dgn IPARM FILE NAME:	PLOT DATE: 09/23/2002
VT ROUTE 9	
FROM STA: 30+120.000 TO STA: 30+130.000 SHEET: 101 OF 145	



30+150.000

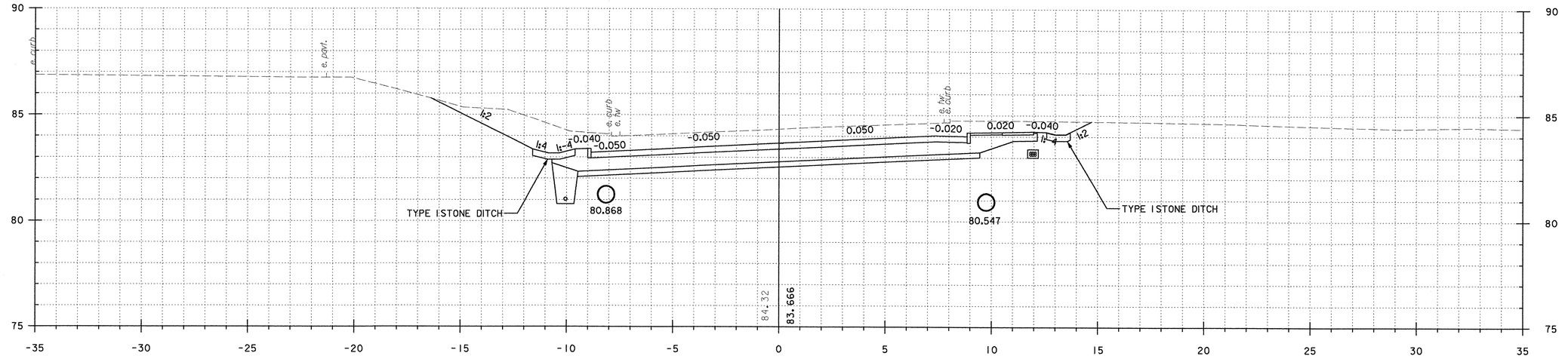


30+148.400

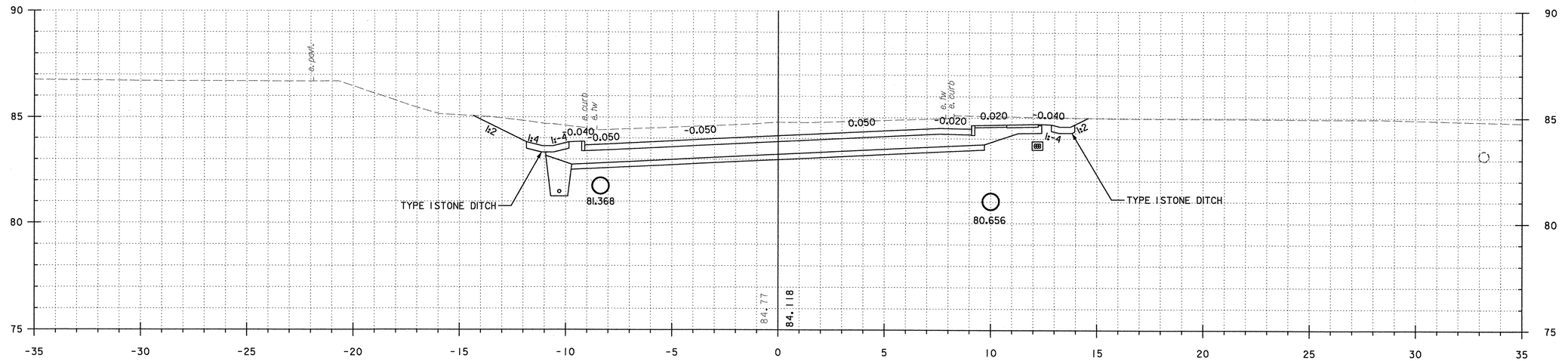


30+140.000

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: ...\zb270xs2.dgn IPARM FILE NAME:	PLOT DATE: 09/23/2002
VT ROUTE 9	
FROM STA: 30+140.000 TO STA: 30+150.000	SHEET: 102 OF 145

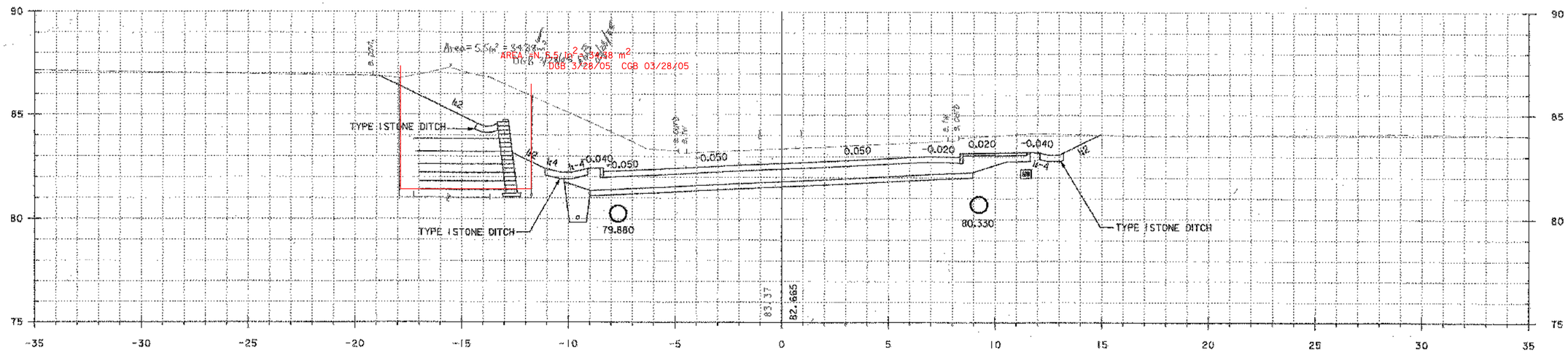


30+170.000

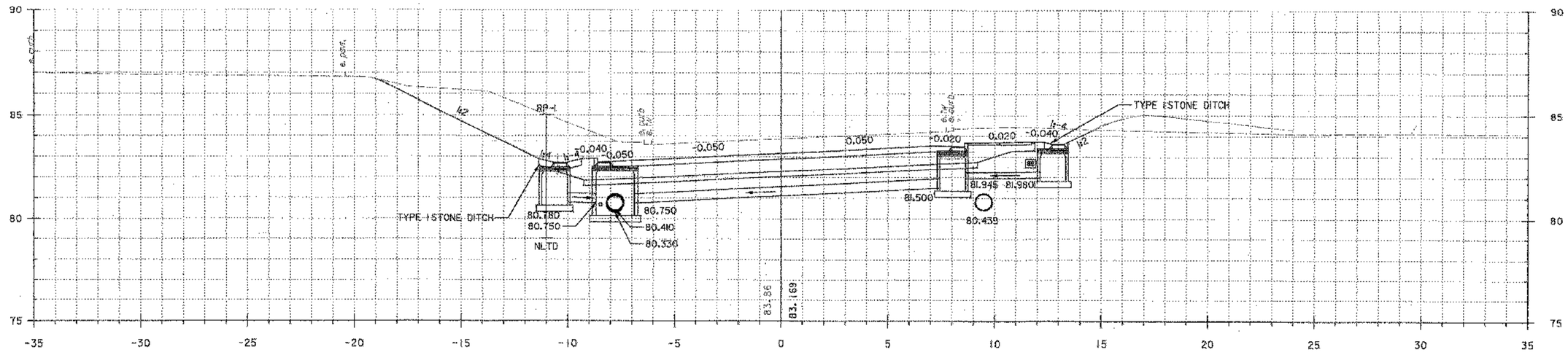


30+160.000

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: ...\zb270xs2.dgn IPARM FILE NAME:	PLOT DATE: 09/23/2002
VT ROUTE 9	
FROM STA: 30+160.000 TO STA: 30+170.000 SHEET: 103 OF 145	

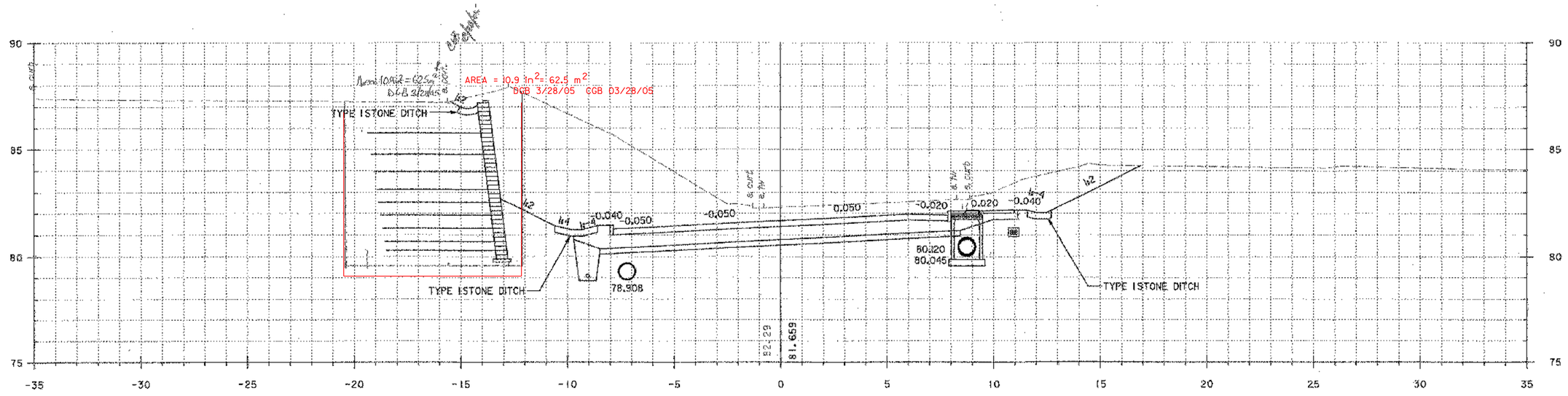


30+190.000

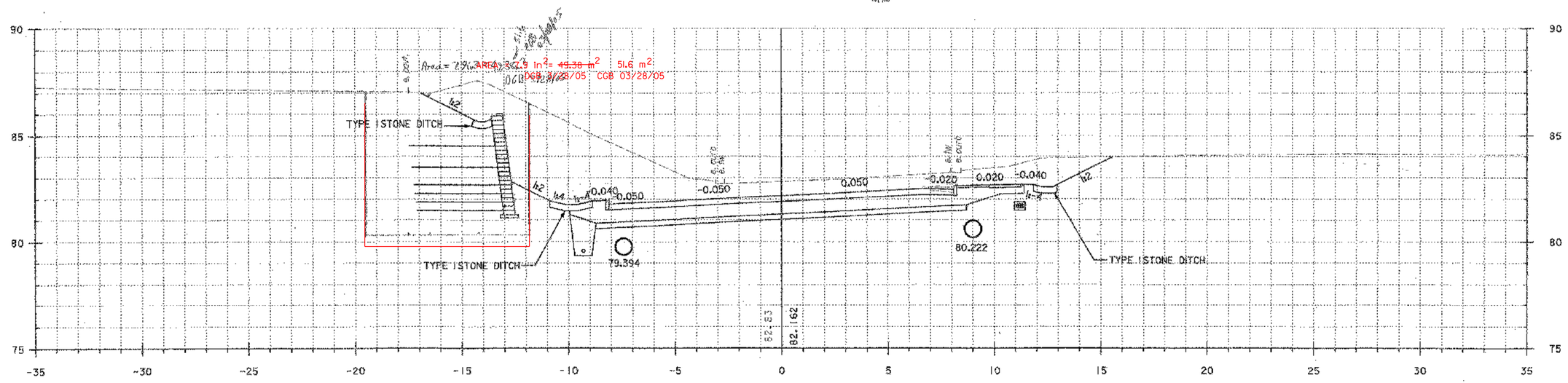


30+180.000

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: ...\zb270xs2.dgn IPARM FILE NAME:	PLOT DATE: 09/23/2002
VT ROUTE 9	
FROM STA: 30+180.000 TO STA: 30+190.000 SHEET: 104 OF 145	



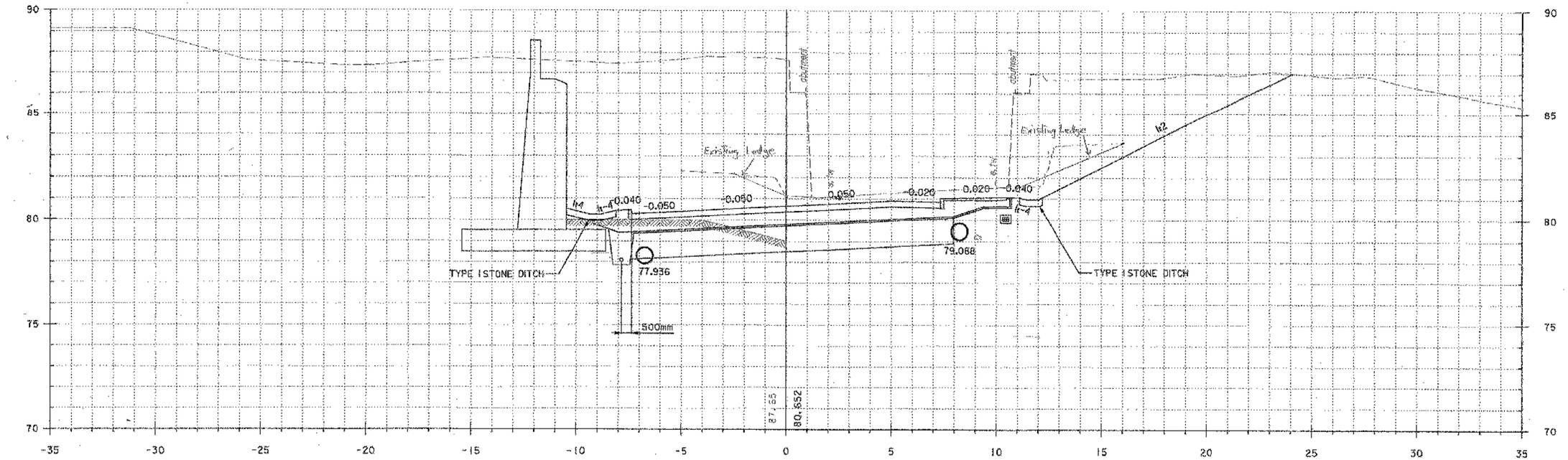
30+210.000



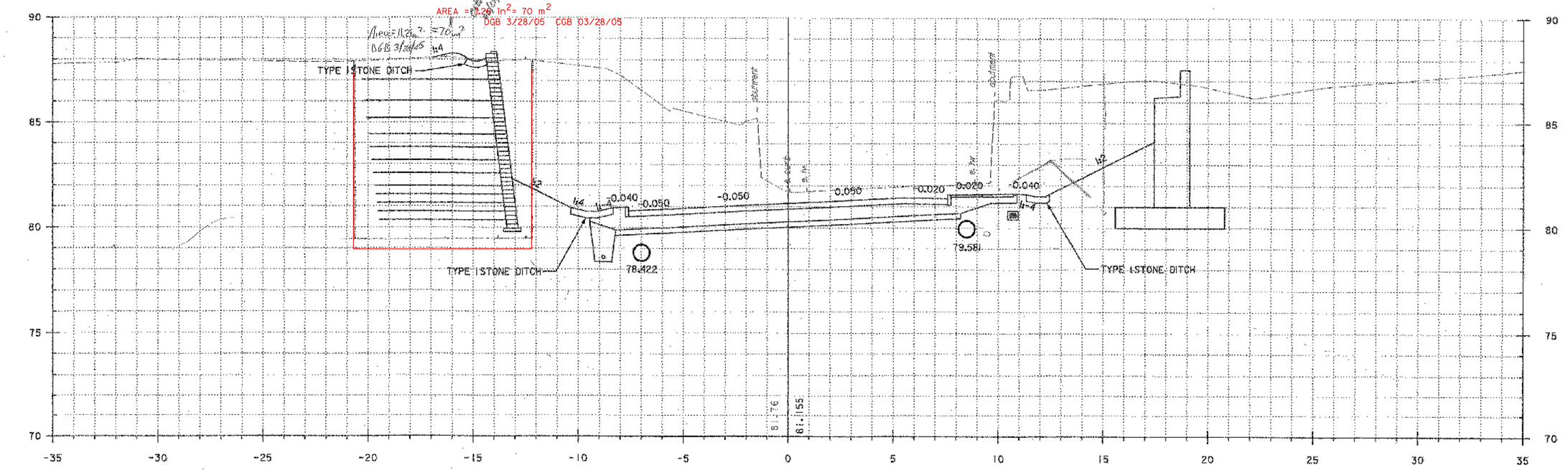
30+200.000

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: ...\zb270xs2.dgn IPARM FILE NAME:	PLOT DATE: 09/23/2002
VT ROUTE 9	
FROM STA: 30+200.000 TO STA: 30+210.000 SHEET: 105 OF 145	

Metric

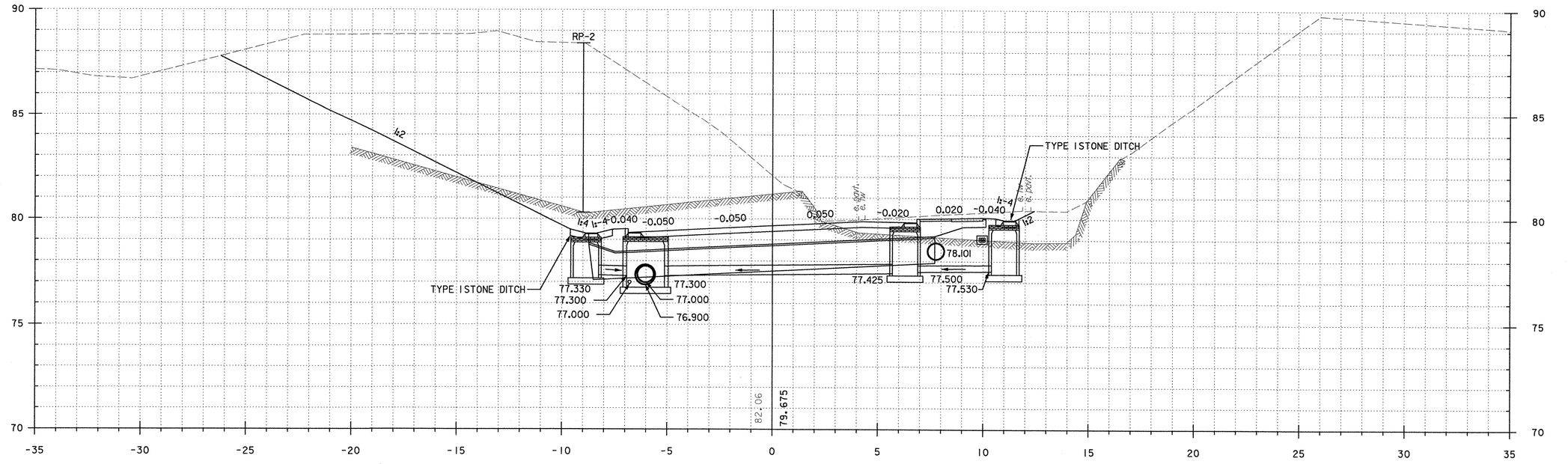


30+230.000

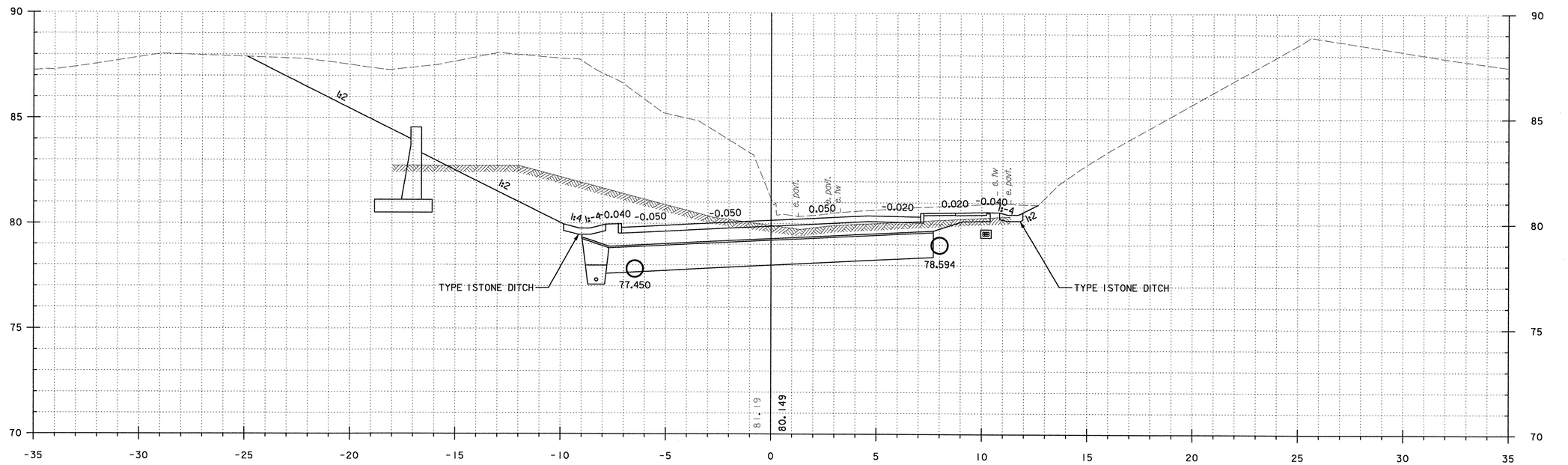


30+220.000

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: ...\zb270xs2.dgn PARM FILE NAME:	PLOT DATE: 09/23/2002
VT ROUTE 9	
FROM STA: 30+220.000 TO STA: 30+230.000 SHEET: 106 OF 145	

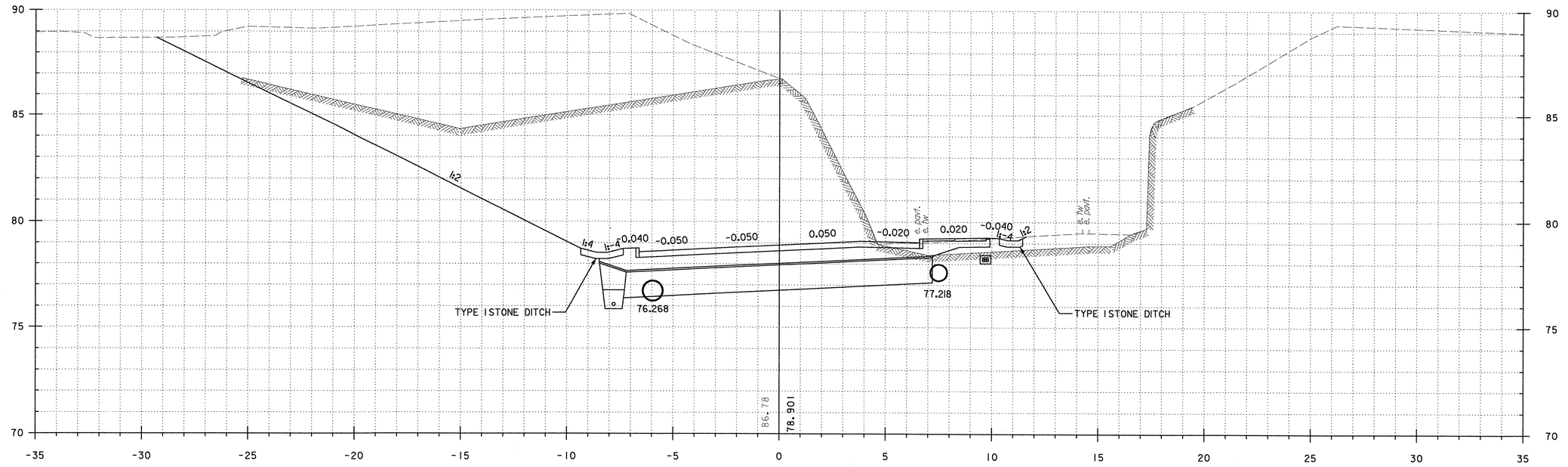


30+250.000

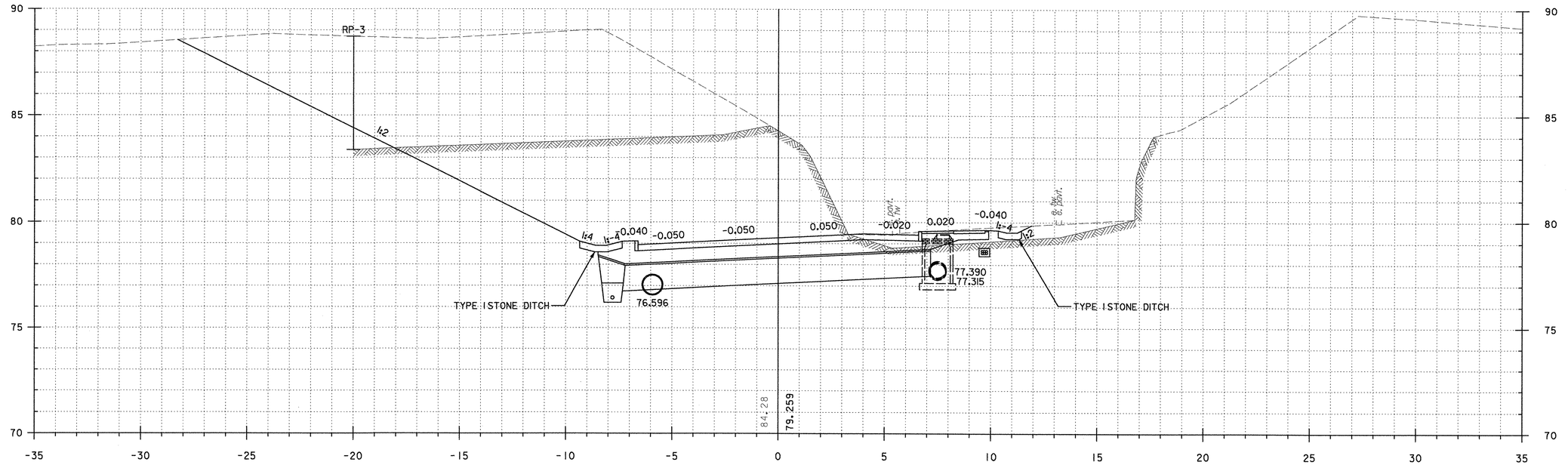


30+240.000

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: ...\zb270xs2.dgn IPARM FILE NAME:	PLOT DATE: 09/23/2002
VT ROUTE 9	
FROM STA: 30+240.000 TO STA: 30+250.000	SHEET: 107 OF 145



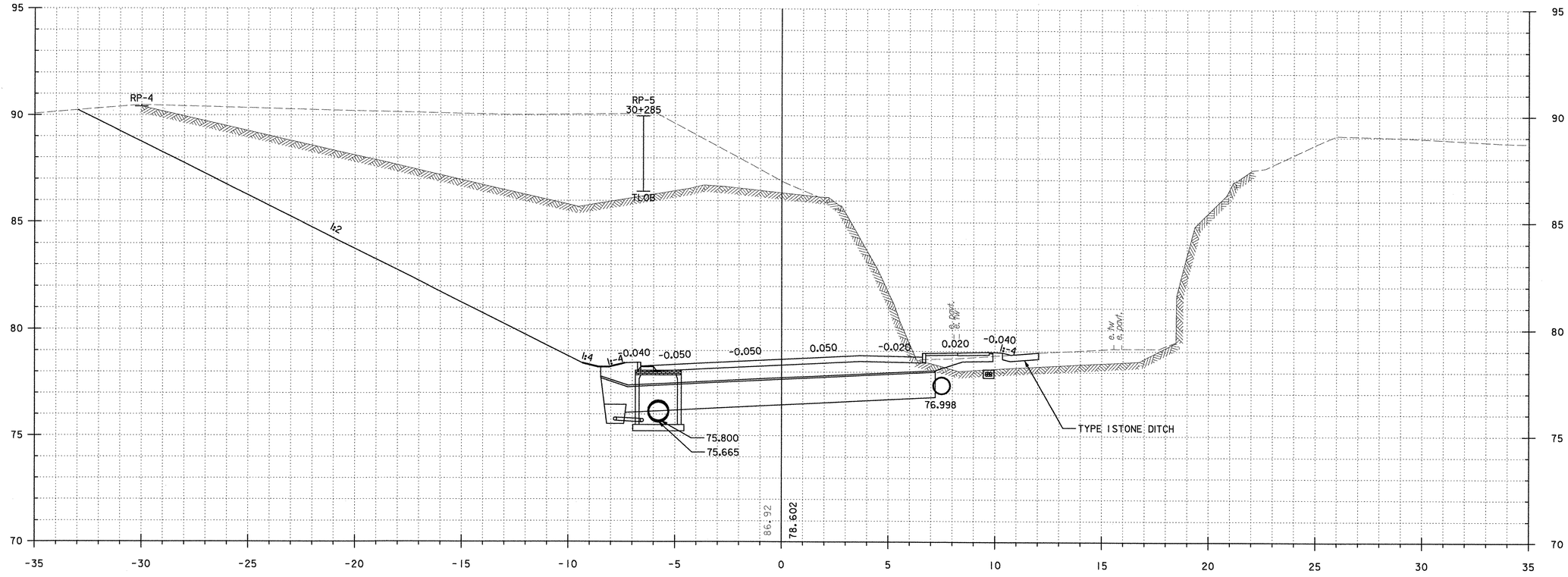
30+270.000



30+260.000

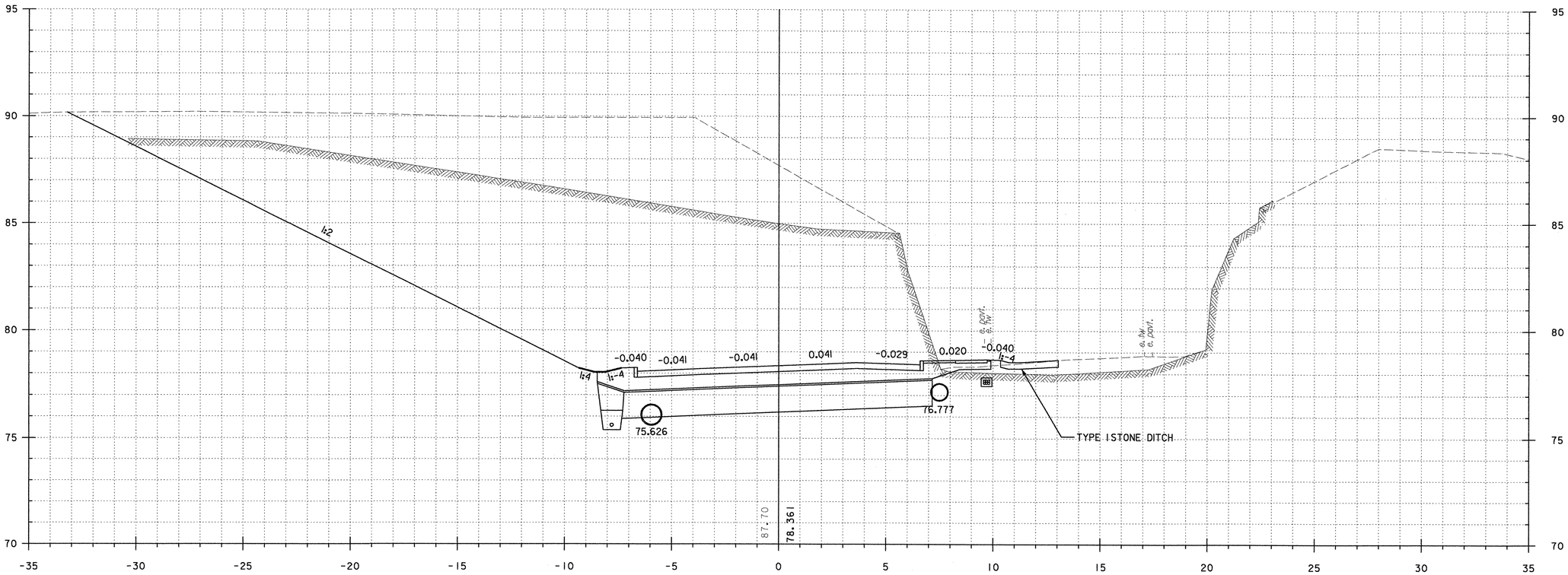
PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: ...\zb270xs2.dgn IPARM FILE NAME:	PLOT DATE: 09/23/2002
VT ROUTE 9	
FROM STA: 30+260.000 TO STA: 30+270.000	SHEET: 108 OF 145

Metric



30+280.000

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: ...\zb270xs2.dgn IPARM FILE NAME:	PLOT DATE: 09/23/2002
VT ROUTE 9	
FROM STA: 30+280.000 TO STA: 30+280.000	SHEET: 109 OF 145



30+290.000

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
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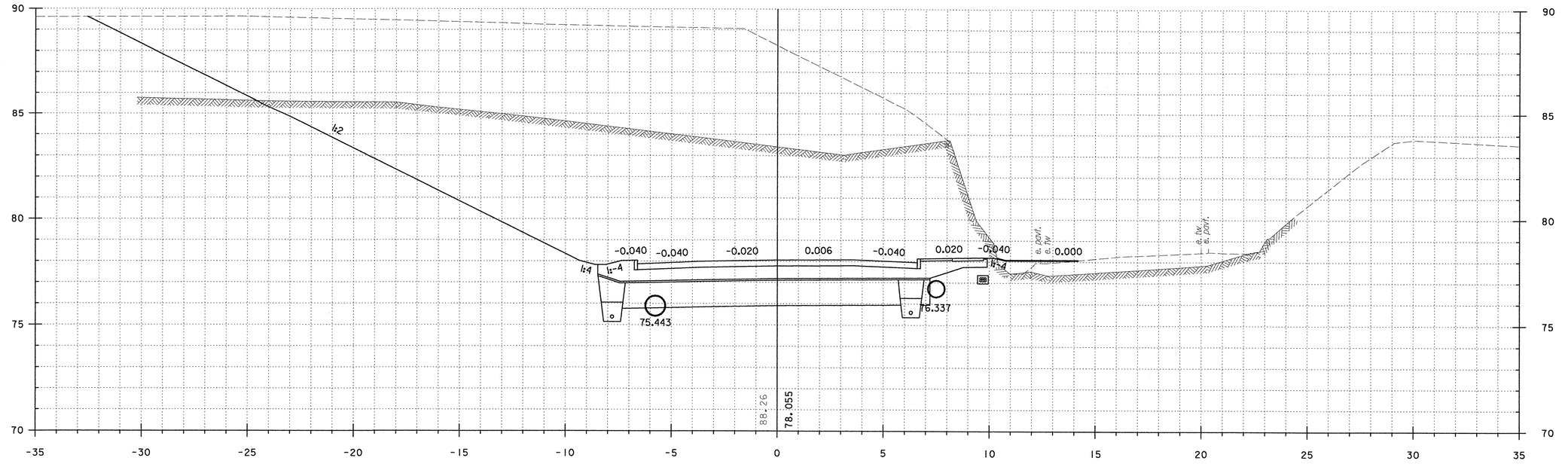
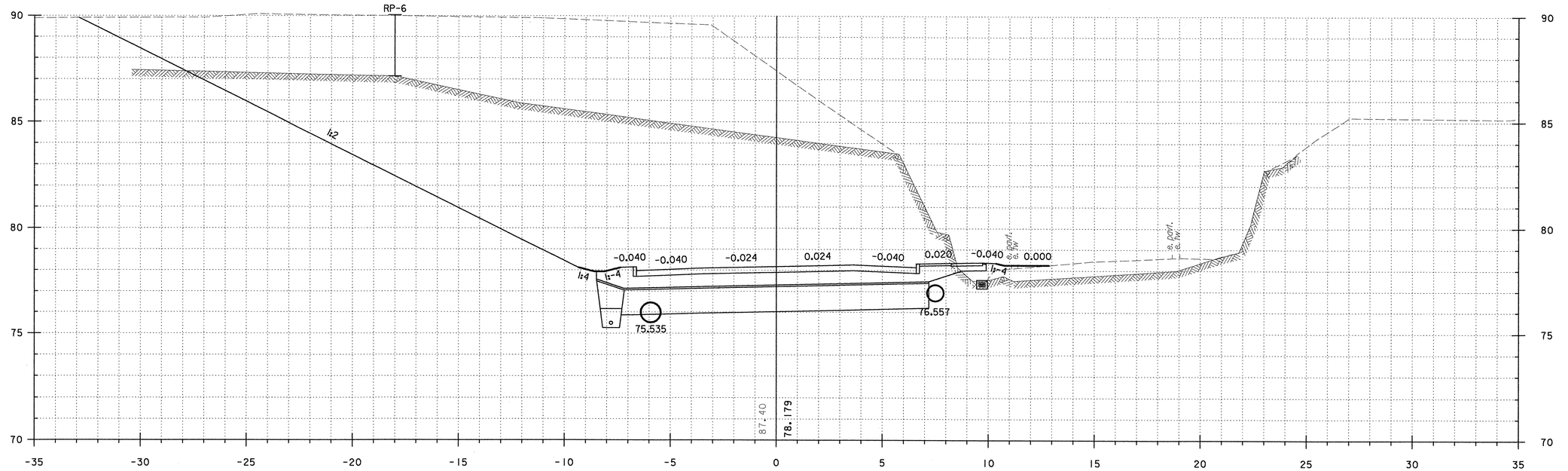
VT ROUTE 9	
FROM STA: 30+290.000 TO STA: 30+290.000 SHEET: 110 OF 145	

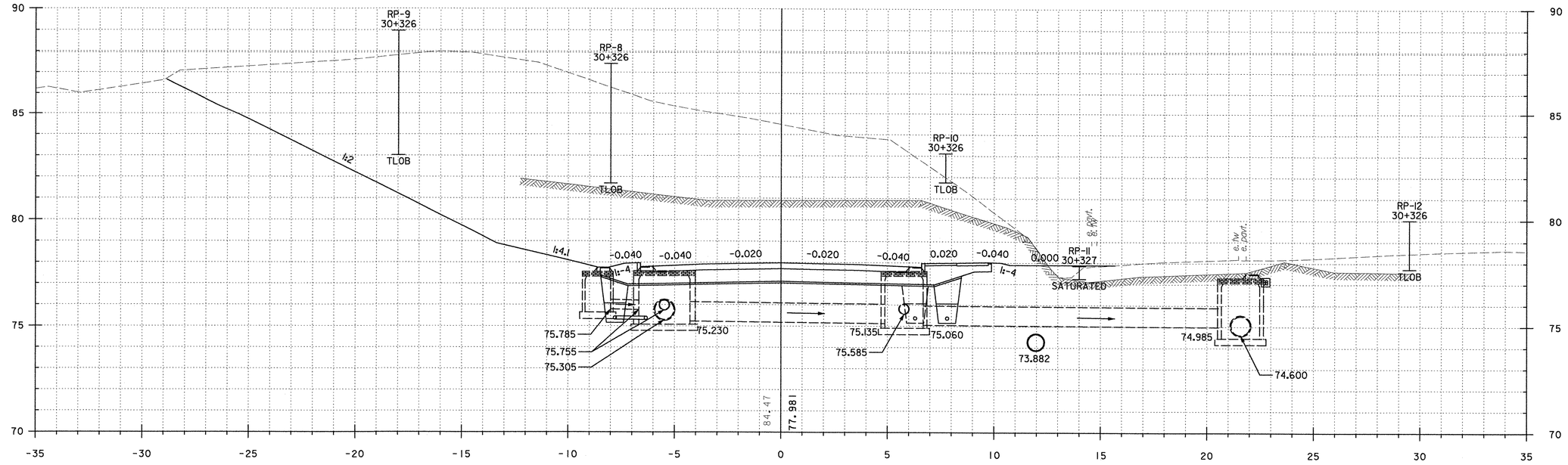


30+310.000

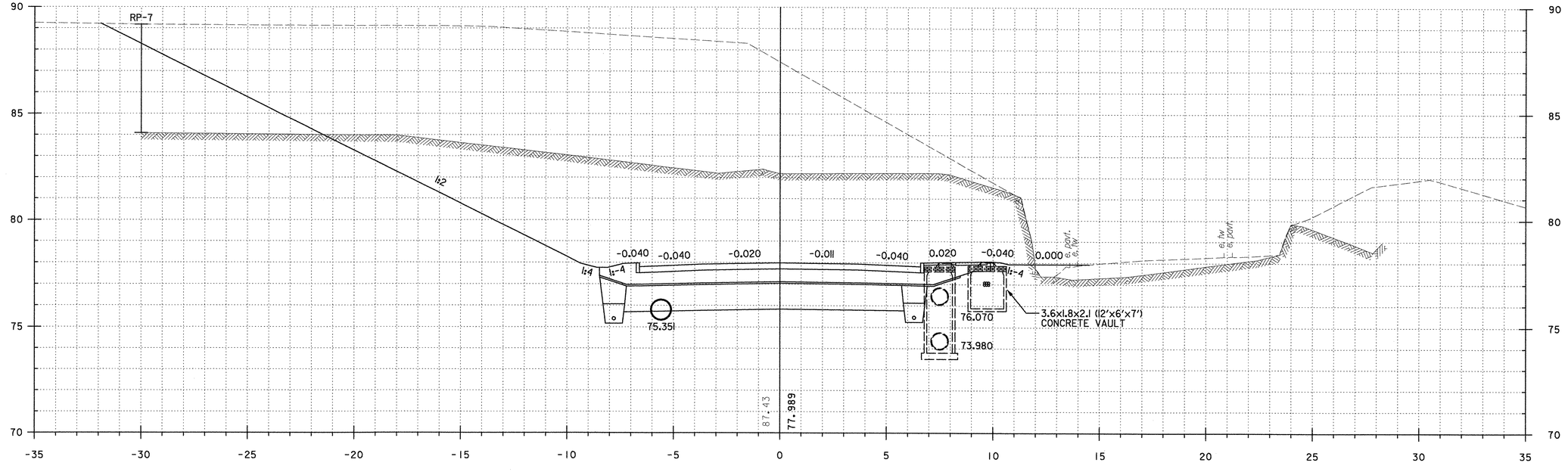


30+300.000

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: ...\zb270xs2.dgn IPARM FILE NAME:	PLOT DATE: 09/23/2002
VT ROUTE 9	
FROM STA: 30+300.000 TO STA: 30+310.000 SHEET: 111	OF 145

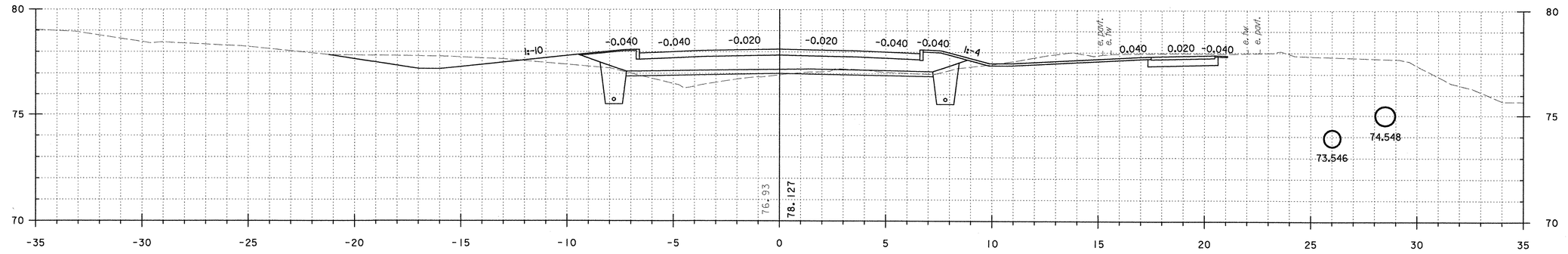


30+330.000

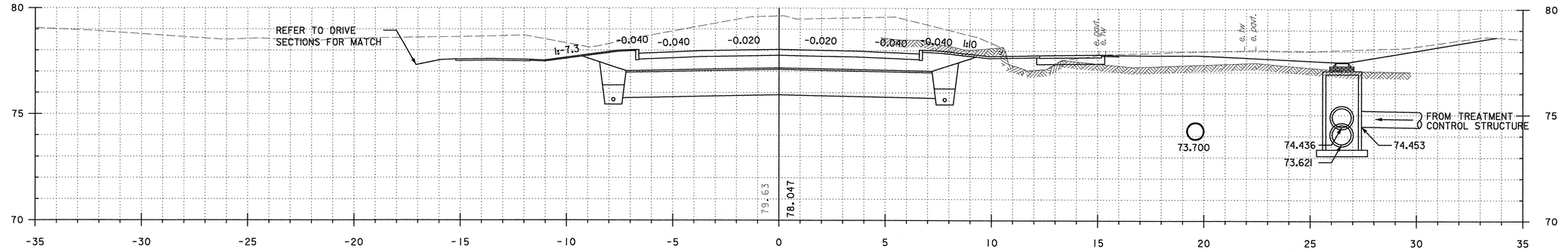


30+320.000

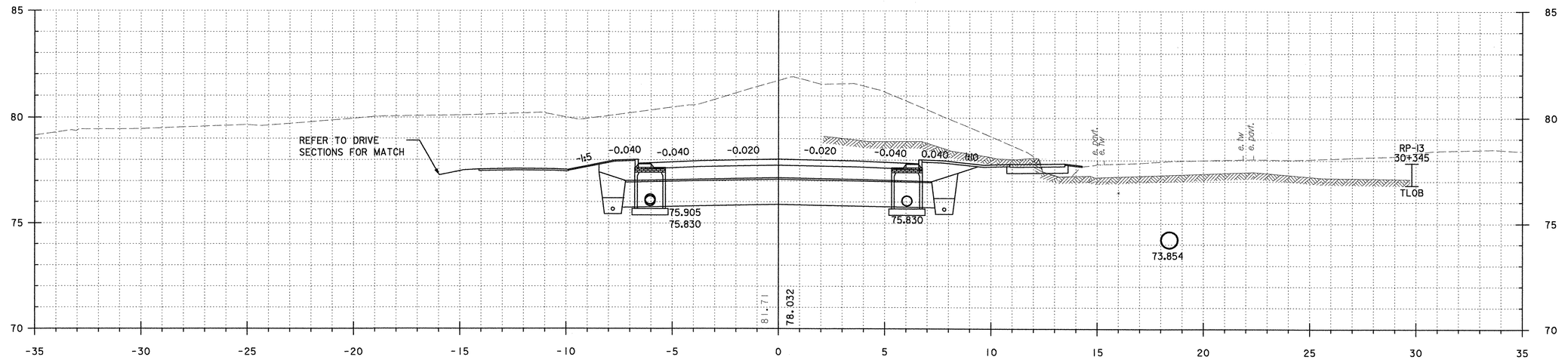
PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: ...\zb270xs2.dgn IPARM FILE NAME:	PLOT DATE: 09/23/2002
VT ROUTE 9	
FROM STA: 30+320.000 TO STA: 30+330.000	SHEET: 112 OF 145



A 203+50.000

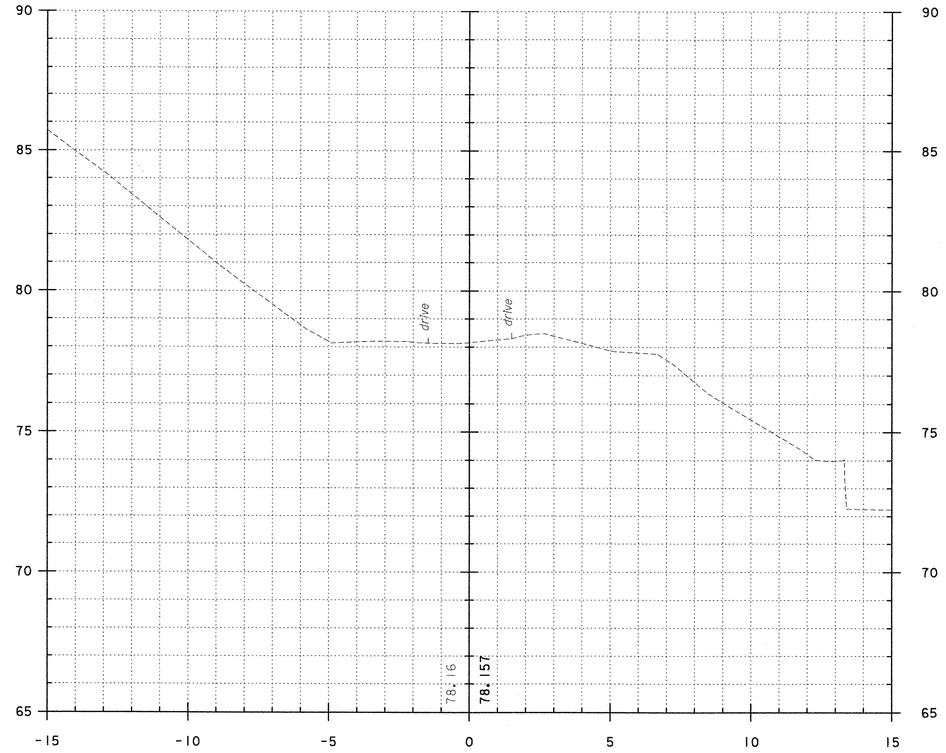


A 203+40.000

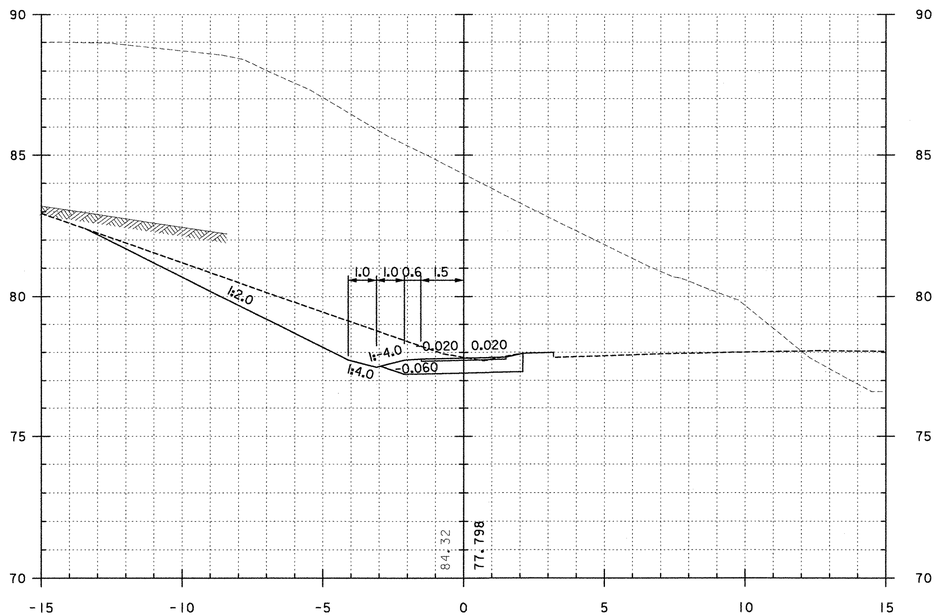


30+340.000

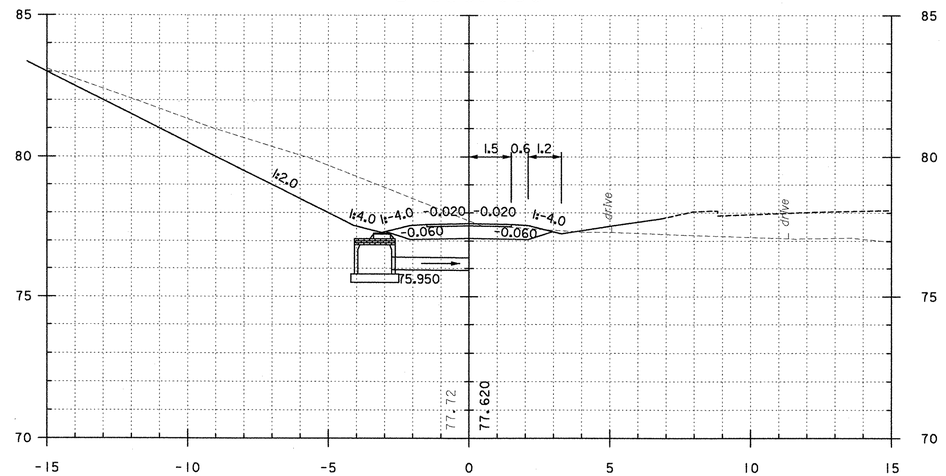
PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: ...\zb270xs2.dgn IPARM FILE NAME:	PLOT DATE: 09/23/2002
VT ROUTE 9	
FROM STA: 30+340.000 TO STA: A203+50.000 SHEET: 113 OF 145	



5+030.000

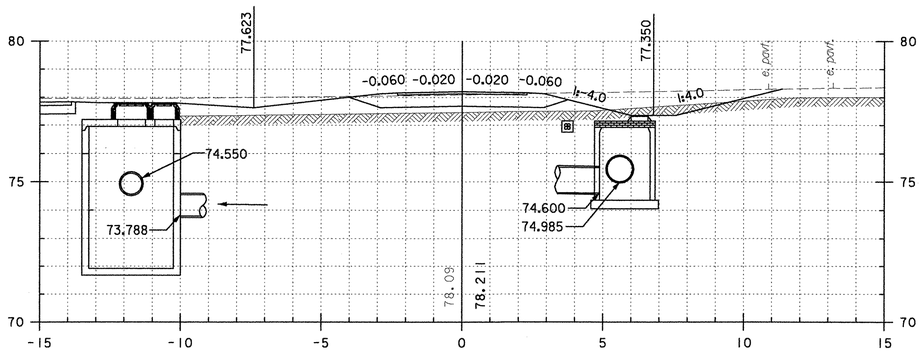


5+010.000

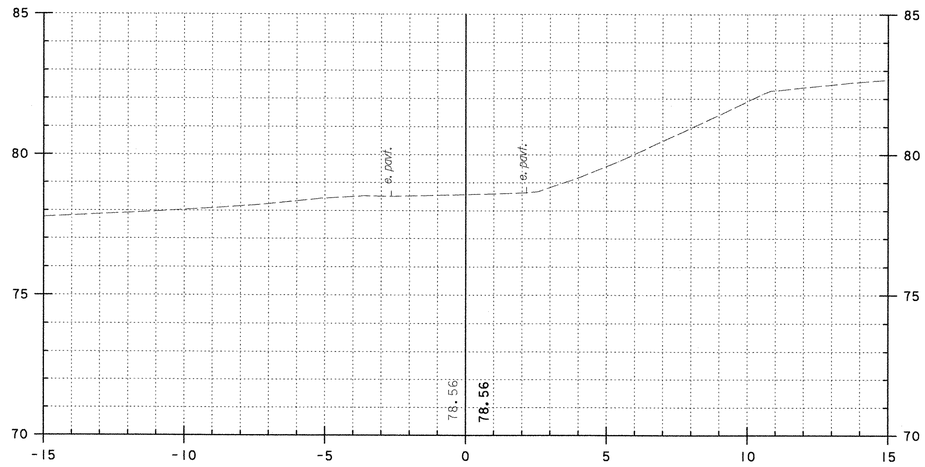


5+020.000

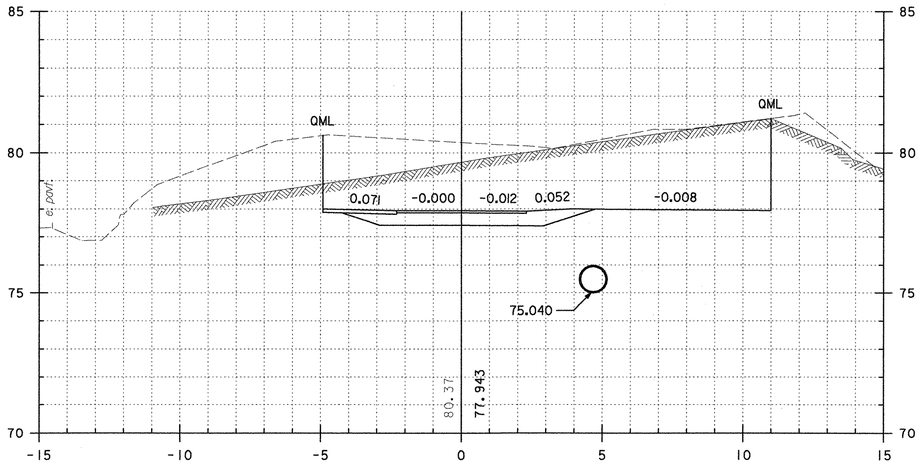
PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: ...\zb270xs2.dgn IPARM FILE NAME:	PLOT DATE: 09/23/2002
DRIVEWAY STA 30+330 LT	
FROM STA: 5+000.000 TO STA: 5+030.000	SHEET: 114 OF 145



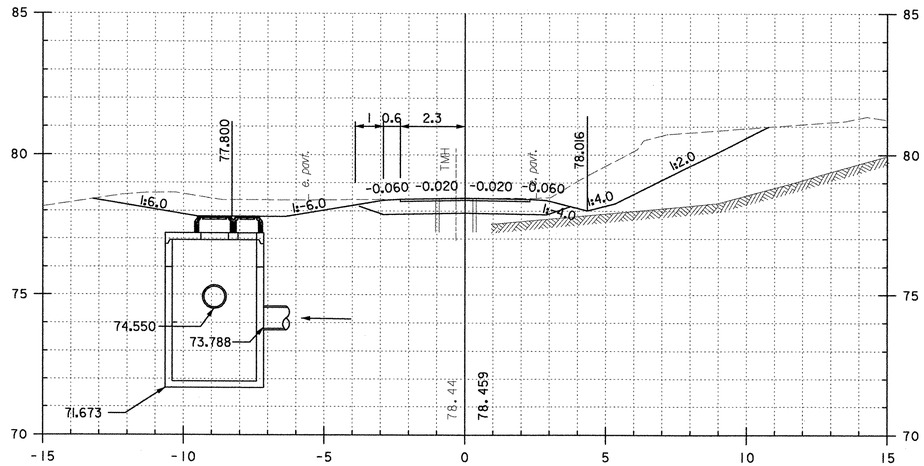
6+020.000



6+038.000



6+010.000

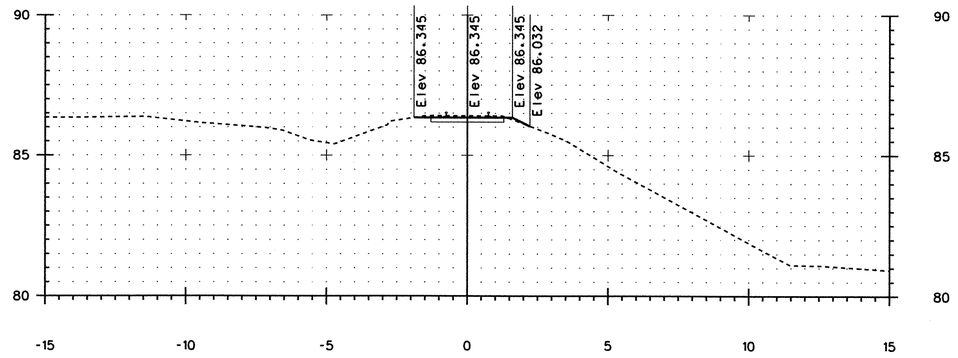


6+030.000

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: ...\zb270xs2.dgn IPARM FILE NAME:	PLOT DATE: 09/23/2002
DRIVEWAY STA 30+330 RT	
FROM STA: 6+010.000 TO STA: 6+038.000	SHEET: 115 OF 145

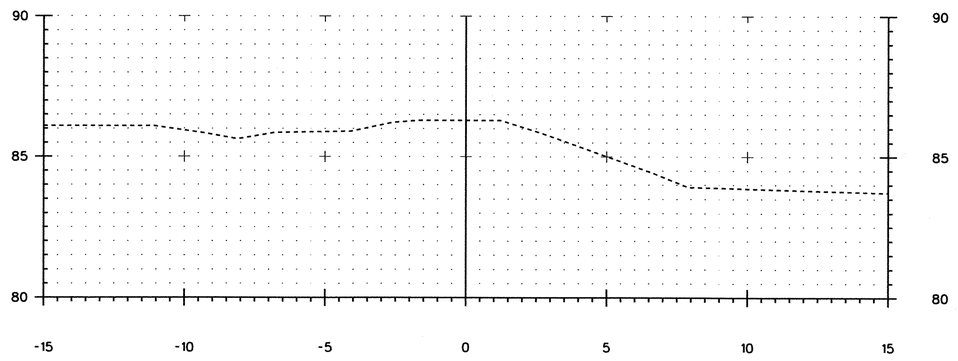
RAILROAD CROSS SECTIONS

Metric



50+020.000

BEGINNING OF RAILROAD CONSTRUCTION
MEET EXISTINGAT STA. 50+020.000
BEGIN TRACK REHABILITATION

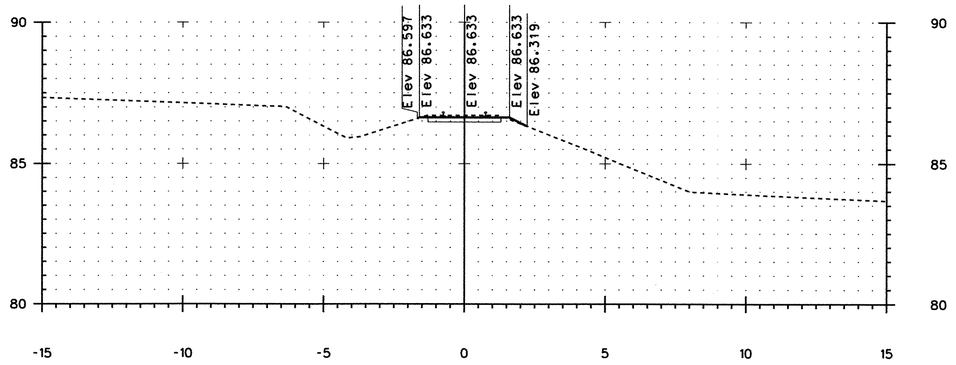


50+000.000

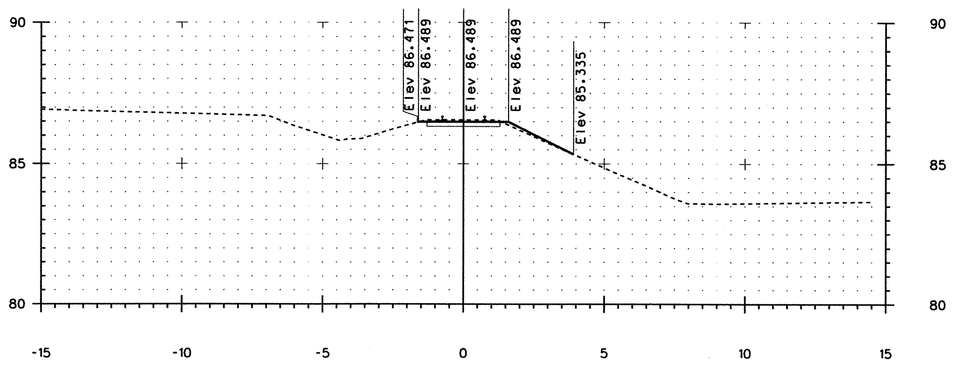
0 2 4 6 8 10
SCALE 1:100

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: U:\99123-Brattleboro\dgn\zb270xs1.dgn IPARM FILE NAME:	PLOT DATE: 10-02-2002
FROM STA: 50+000.000 TO STA: 50+020.000	SHEET: 116 OF 145

RAILROAD CROSS SECTIONS



50+060.000



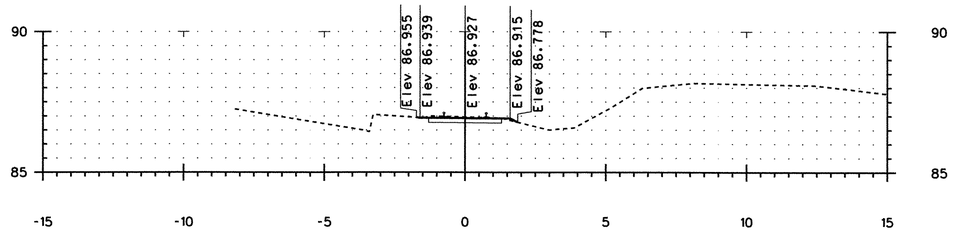
50+040.000

0 2 4 6 8 10
SCALE 1:100

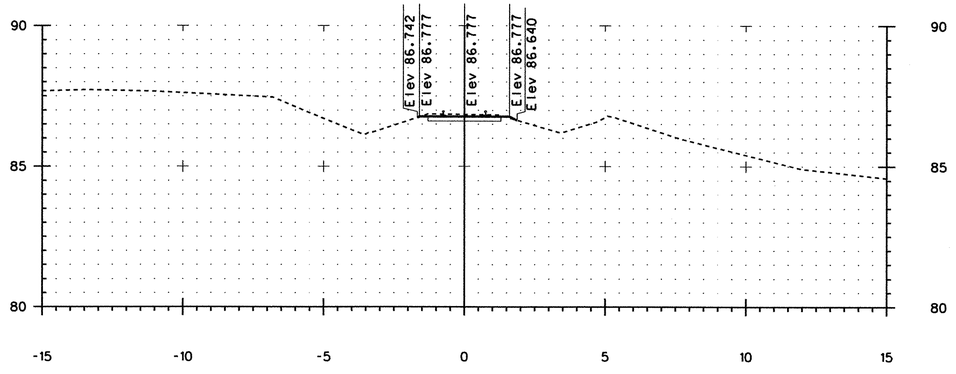
PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: U:\99123-Brattleboro\dgn\zb270xs1.dgn IPARM FILE NAME:	PLOT DATE: 10-02-2002
FROM STA: 50+040.000 TO STA: 50+060.000	SHEET: 117 OF 145

RAILROAD CROSS SECTIONS

Metric



50+100.000

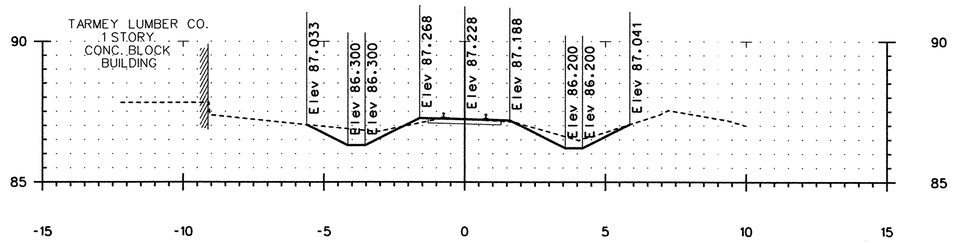


50+080.000

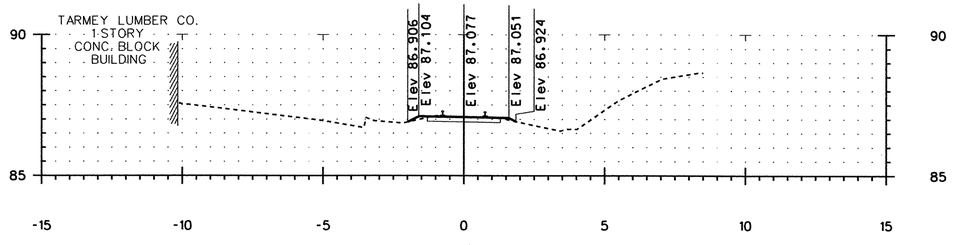
0 2 4 6 8 10
SCALE 1:100

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: U:\99123-Brattleboro\dgn\zb270xs1.dgn IPARM FILE NAME:	PLOT DATE: 10-02-2002
FROM STA: 50+080.000 TO STA: 50+100.000	SHEET: 118 OF 145

RAILROAD CROSS SECTIONS



50+140.000



50+120.000

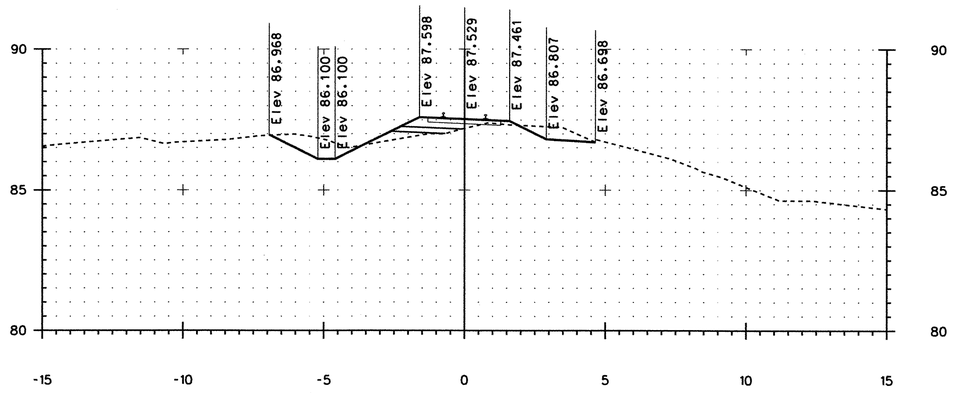
END TRACK REHABILITATION
BEGIN TRANSITION SECTION

0 2 4 6 8 10
SCALE 1:100

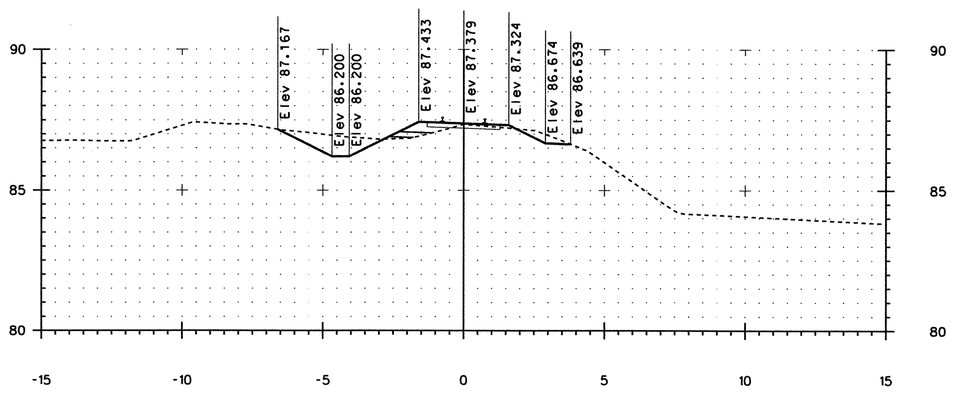
PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: U:\99123-Brattleboro\dgn\zb270xs1.dgn IPARM FILE NAME:	PLOT DATE: 7 AUG 2000
FROM STA: 50+120.000 TO STA: 50+140.000	SHEET: 119 OF 145

RAILROAD CROSS SECTIONS

Metric



50+180.000



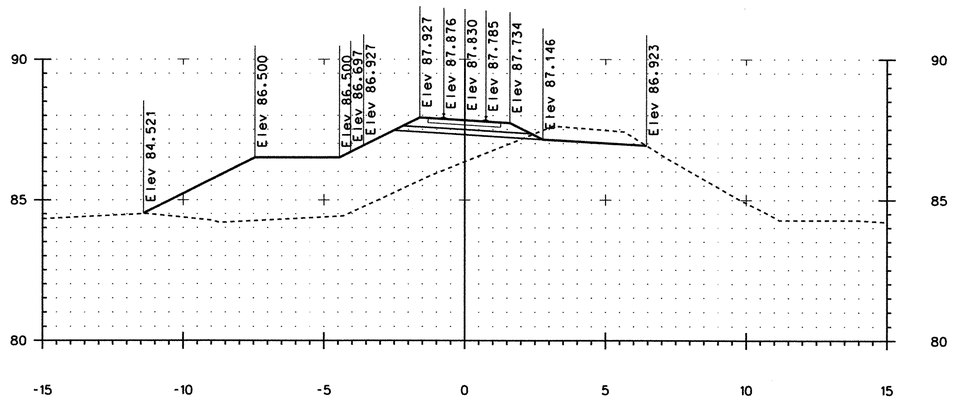
50+160.000

0 2 4 6 8 10
SCALE 1:100

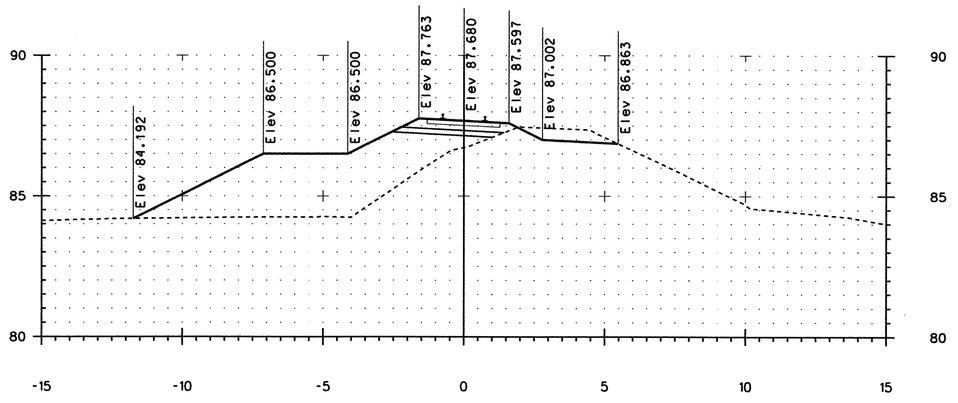
PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: U:\99123-Brattleboro\dgn\zb270xs1.dgn IPARM FILE NAME:	PLOT DATE: 7 AUG 2000
FROM STA: 50+160.000 TO STA: 50+180.000	SHEET: 120 OF 145

RAILROAD CROSS SECTIONS

VAOT Metric



50+220.000



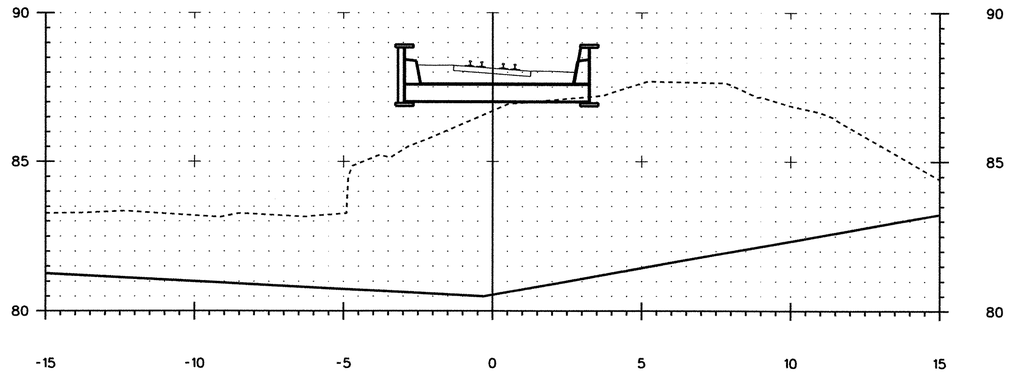
50+200.000

END TRANSITION SECTION
BEGIN FULL DEPTH CONSTRUCTION

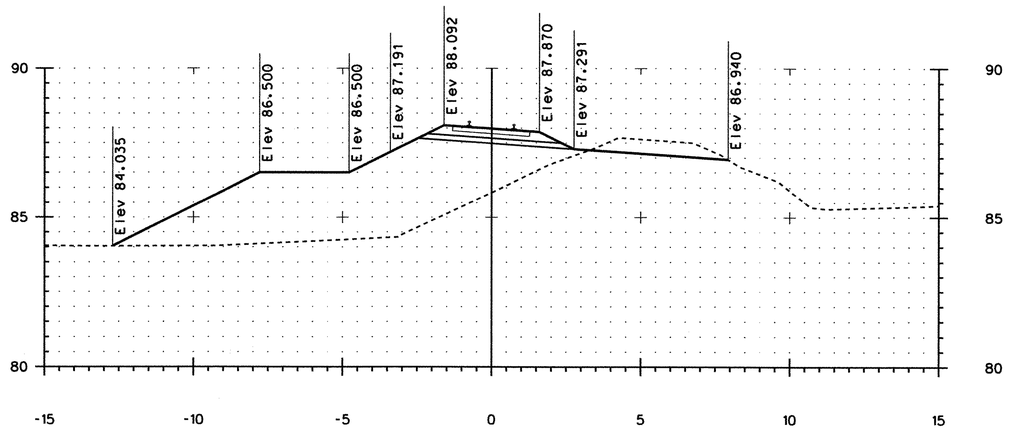
0 2 4 6 8 10
SCALE 1:100

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: U:\99123-Brattleboro\dgn\zb270xs1.dgn IPARM FILE NAME:	PLOT DATE: 10-02-2002
FROM STA: 50+200.000 TO STA: 50+220.000	SHEET: 121 OF 145

RAILROAD CROSS SECTIONS



50+260.000



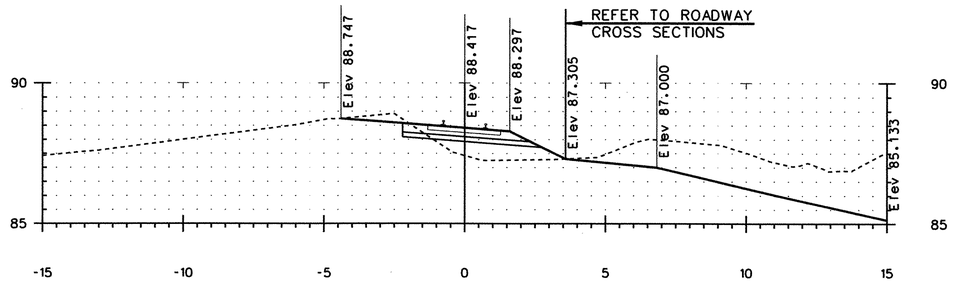
50+240.000

0 2 4 6 8 10
SCALE 1:100

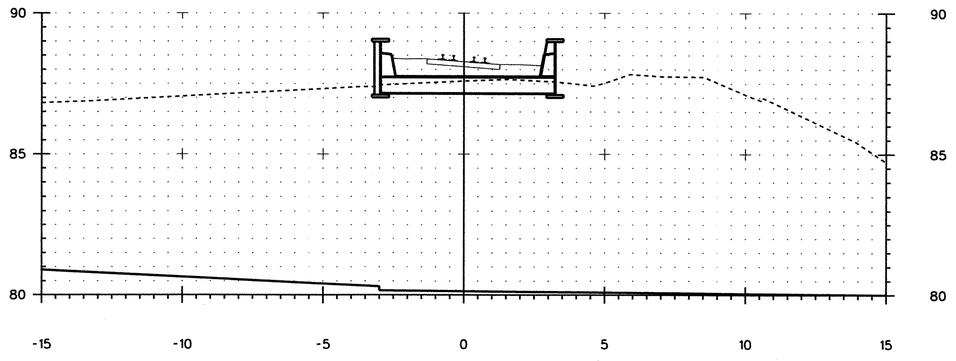
PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: U:\99123-Brattleboro\dgn\zb270xs1.dgn IPARM FILE NAME:	PLOT DATE: 10-02-2002
FROM STA: 50+240.000 TO STA: 50+260.000	SHEET: 122 OF 145

RAILROAD CROSS SECTIONS

Metric



50+300.000

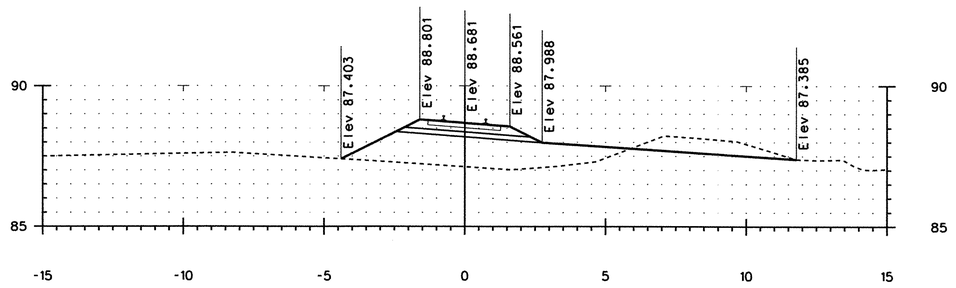


50+280.000

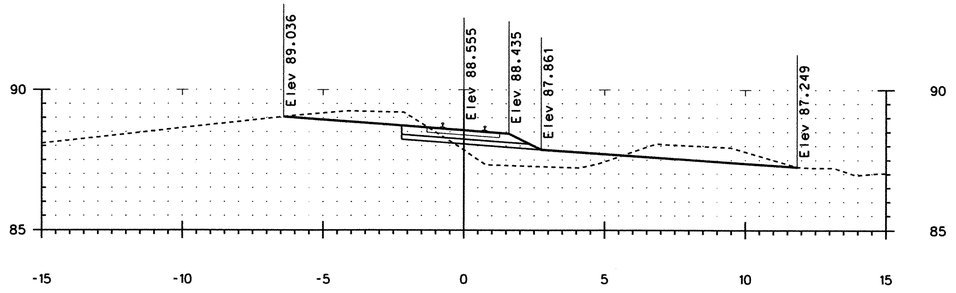
0 2 4 6 8 10
SCALE 1:100

PROJECT: BRATTLEBORO	PROJECT NO. : NH 010-2(2)
DESIGN FILE NAME: U:\99123-Brattleboro\dgn\zb270xs1.dgn IPARM FILE NAME:	PLOT DATE: 10-02-2002
FROM STA: 50+280.000 TO STA: 50+300.000	SHEET: 123 OF 145

RAILROAD CROSS SECTIONS



50+340.000

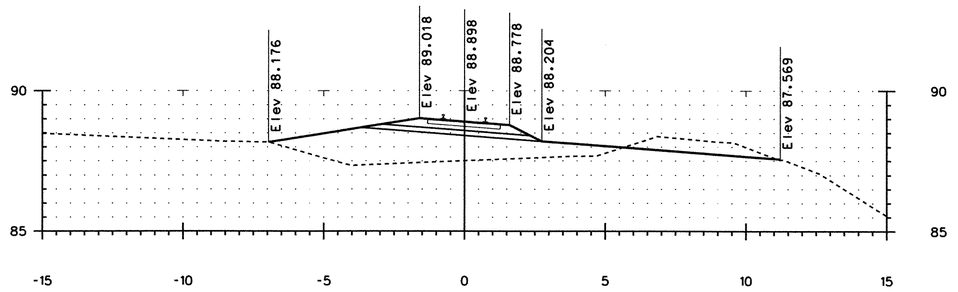


50+320.000

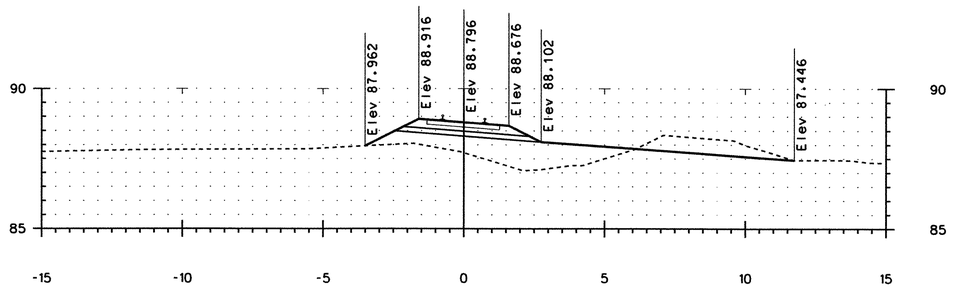
0 2 4 6 8 10
SCALE 1:100

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: U:\99123-Brattleboro\dgn\zb270xs1.dgn IPARM FILE NAME:	PLOT DATE: 10-02-2002
FROM STA: 50+320.000 TO STA: 50+340.000	SHEET: 124 OF 145

RAILROAD CROSS SECTIONS



50+380.000



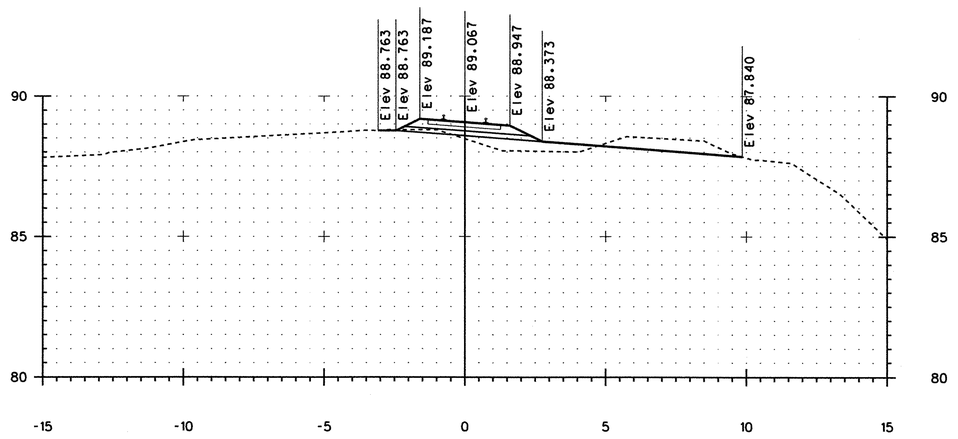
50+360.000

0 2 4 6 8 10
SCALE 1:100

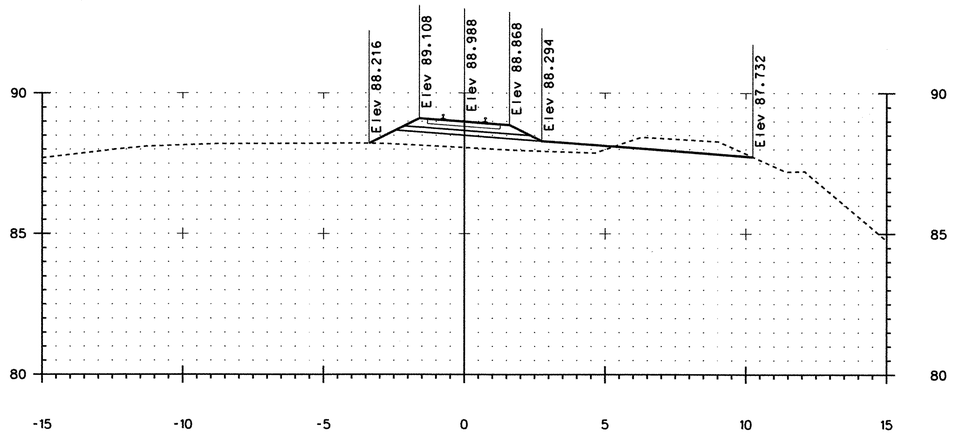
PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: U:\99123-Brattleboro\dgn\zb270xs1.dgn IPARM FILE NAME:	PLOT DATE: 10-02-2002
FROM STA: 50+360.000 TO STA: 50+380.000	SHEET: 125 OF 145

RAILROAD CROSS SECTIONS

METRIC



50+420.000



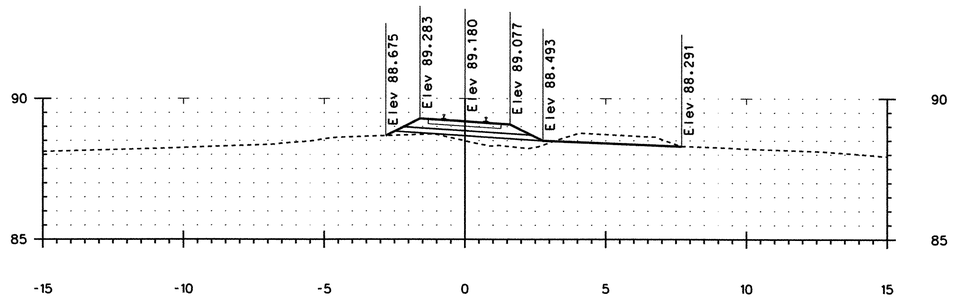
50+400.000

0 2 4 6 8 10
SCALE 1:100

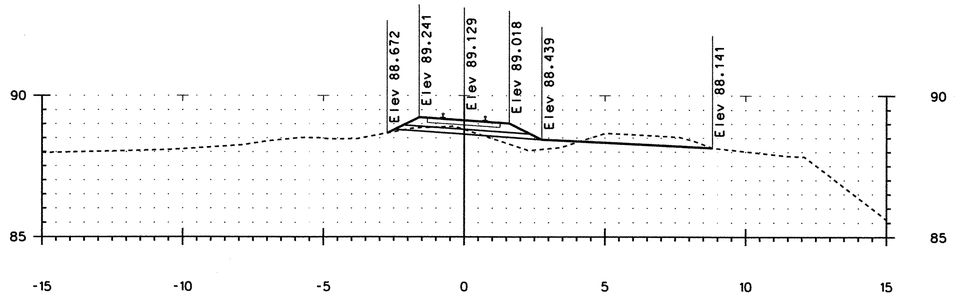
PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: U:\99123-Brattleboro\dgn\zb270xs1.dgn IPARM FILE NAME:	PLOT DATE: 10-02-2002
FROM STA: 50+400.000 TO STA: 50+420.000	SHEET: 126 OF 145

RAILROAD CROSS SECTIONS

VAOT Metric



50+460.000



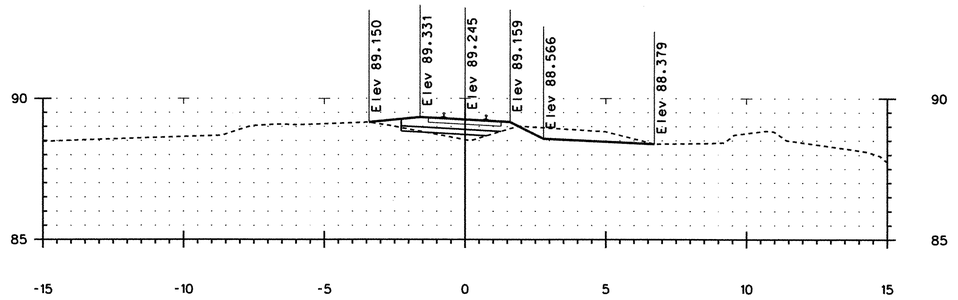
50+440.000

0 2 4 6 8 10
SCALE 1:100

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: U:\99123-Brattleboro\dgn\zb270xs1.dgn IPARM FILE NAME:	PLOT DATE: 10-02-2002
FROM STA: 50+440.000 TO STA: 50+460.000	SHEET: 127 OF 145

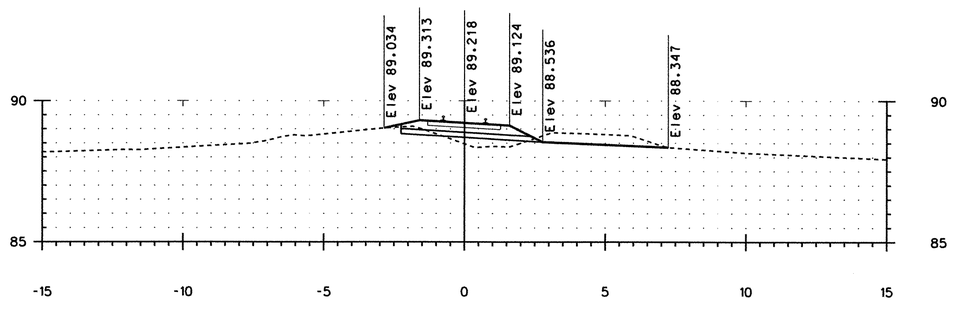
RAILROAD CROSS SECTIONS

Metric



50+500.000

END FULL DEPTH CONSTRUCTION
BEGIN TRANSITION SECTION



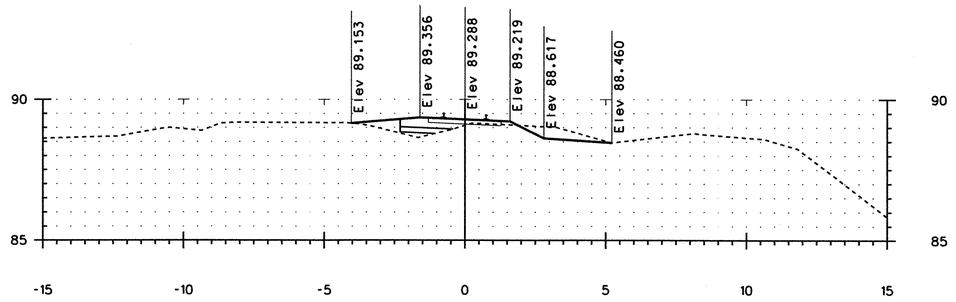
50+480.000

0 2 4 6 8 10
SCALE 1:100

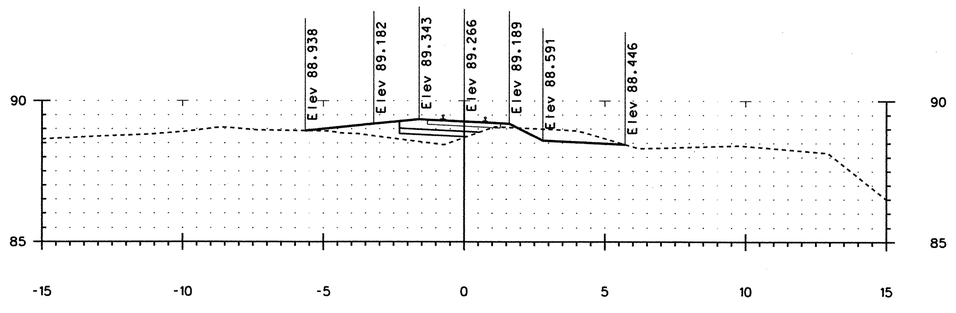
PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: U:\99123-Brattleboro\dgn\zb270xs1.dgn IPARM FILE NAME:	PLOT DATE: 10-02-2002
FROM STA: 50+480.000 TO STA: 50+500.000	SHEET: 128 OF 145

RAILROAD CROSS SECTIONS

VDOT Metric



50+540.000



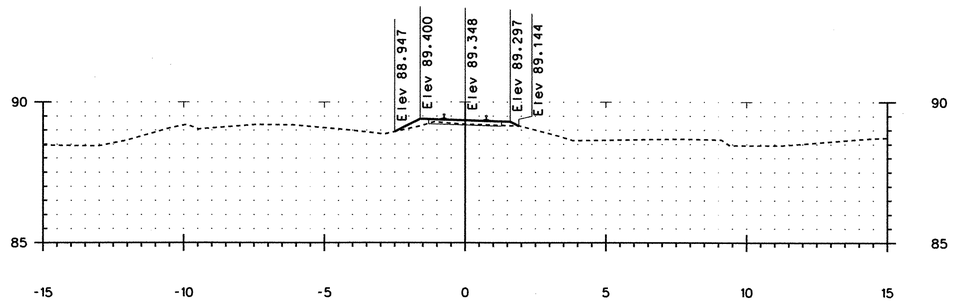
50+520.000

0 2 4 6 8 10
SCALE 1:100

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: U:\99123-Brattleboro\dgn\zb270xs1.dgn IPARM FILE NAME:	PLOT DATE: 10-02-2002
FROM STA: 50+520.000 TO STA: 50+540.000	SHEET: 129 OF 145

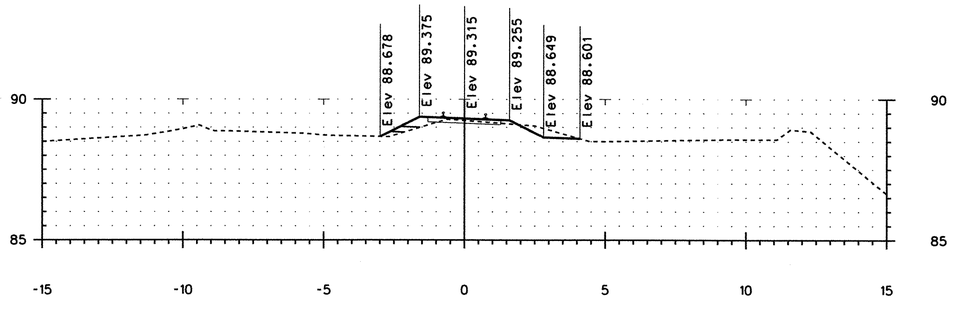
RAILROAD CROSS SECTIONS

NHDOT Metric



50+580.000

END TRANSITION SECTION
BEGIN TRACK REHABILITATION



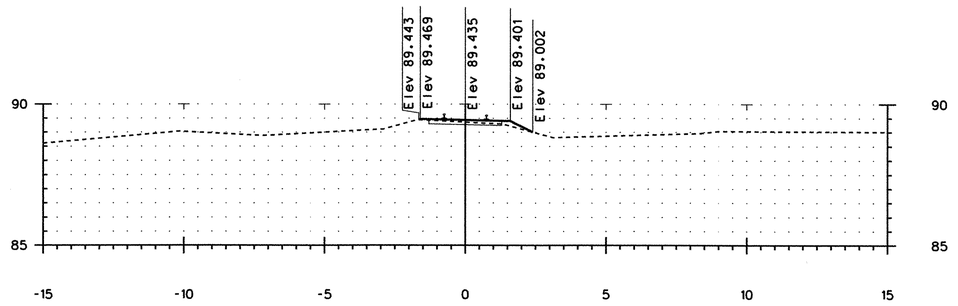
50+560.000

0 2 4 6 8 10
SCALE 1:100

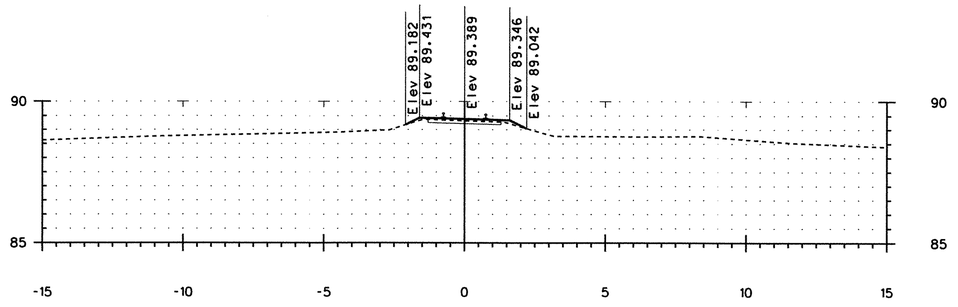
PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: U:\99123-Brattleboro\dgn\zb270xs1.dgn IPARM FILE NAME:	PLOT DATE: 10-02-2002
FROM STA: 50+560.000 TO STA: 50+580.000	SHEET: 130 OF 145

RAILROAD CROSS SECTIONS

VDOT Metric



50+620.000



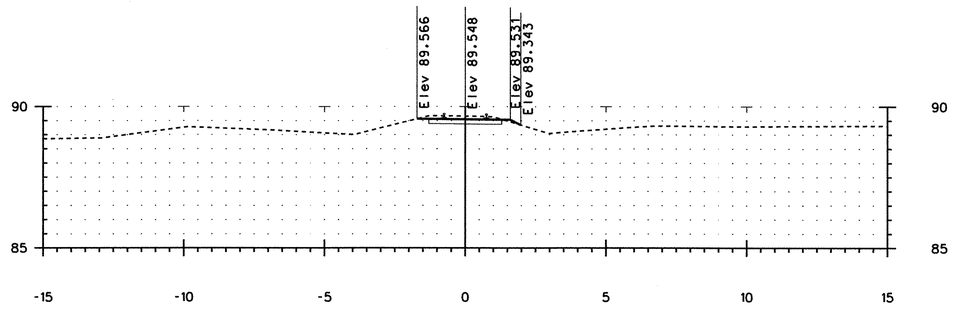
50+600.000

0 2 4 6 8 10
SCALE 1:100

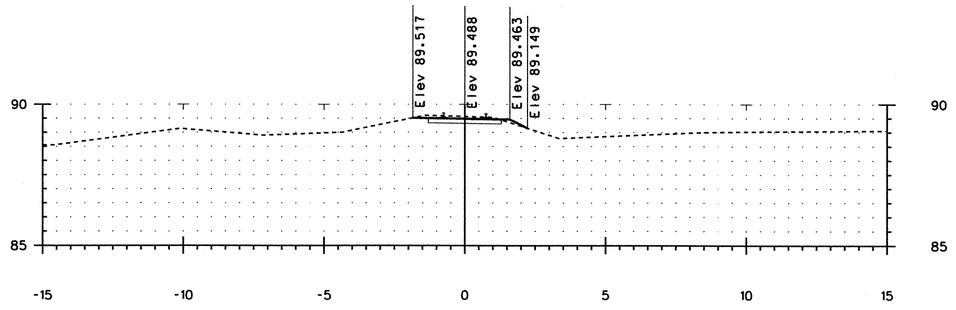
PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: U:\99123-Brattleboro\dgn\zb270xs1.dgn IPARM FILE NAME:	PLOT DATE: 10-02-2002
FROM STA: 50+600.000 TO STA: 50+620.000	SHEET: 131 OF 145

RAILROAD CROSS SECTIONS

Metric



50+660.000



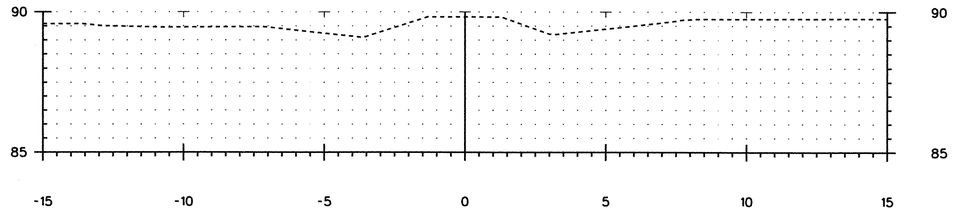
50+640.000

0 2 4 6 8 10
SCALE 1:100

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: U:\99123-Brattleboro\dgn\zb270xs1.dgn IPARM FILE NAME:	PLOT DATE: 10-02-2002
FROM STA: 50+640.000 TO STA: 50+660.000	SHEET: 132 OF 145

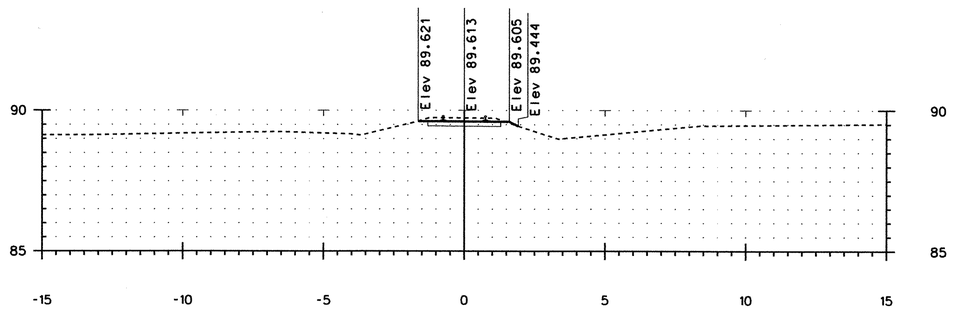
RAILROAD CROSS SECTIONS

Metric



50+700.000

END OF RAILROAD CONSTRUCTION
MEET EXISTING AT STA. 50+698.603
END TRACK REHABILITATION

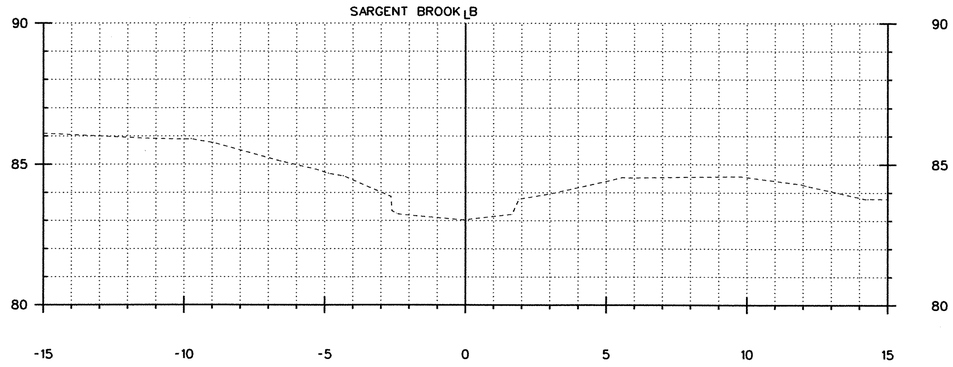


50+680.000

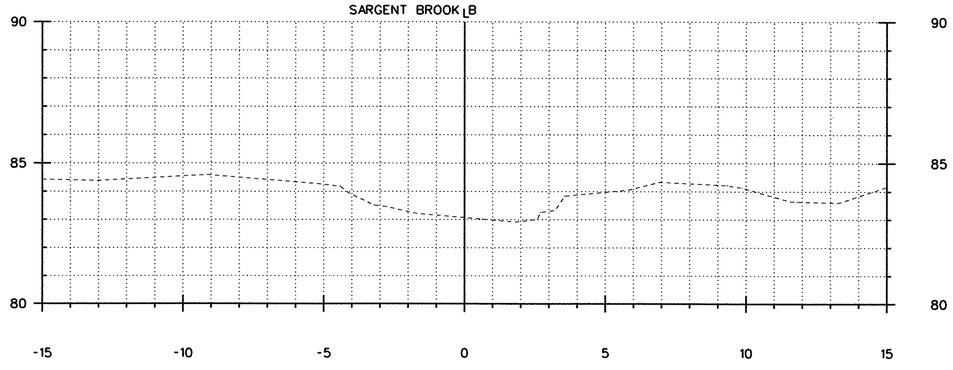
0 2 4 6 8 10
SCALE 1:100

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: U:\99123-Brattleboro\dgn\zb270xs1.dgn IPARM FILE NAME:	PLOT DATE: 10-02-2002
FROM STA: 50+680.000 TO STA: 50+700.000	SHEET: 133 OF 145

SARGENT BROOK CROSS SECTIONS



0+025.000



0+020.000

0 2 4 6 8 10
SCALE 1:100

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
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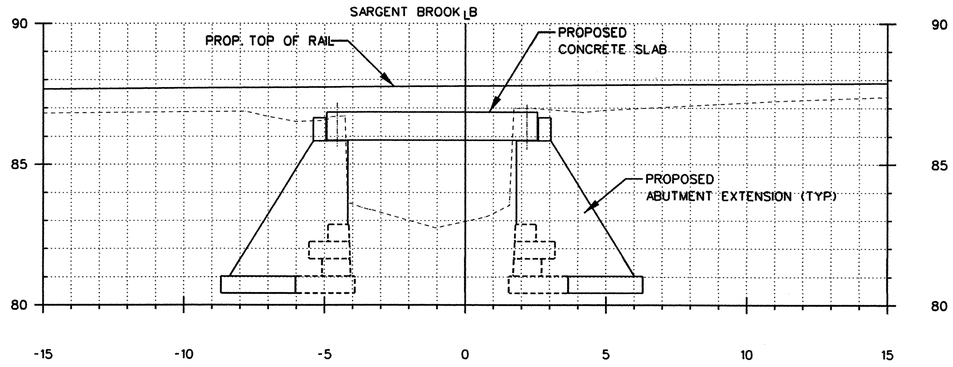
FROM STA: 0+020.000 TO STA: 0+025.000	SHEET: 134 OF 145

SARGENT BROOK CROSS SECTIONS

Metric



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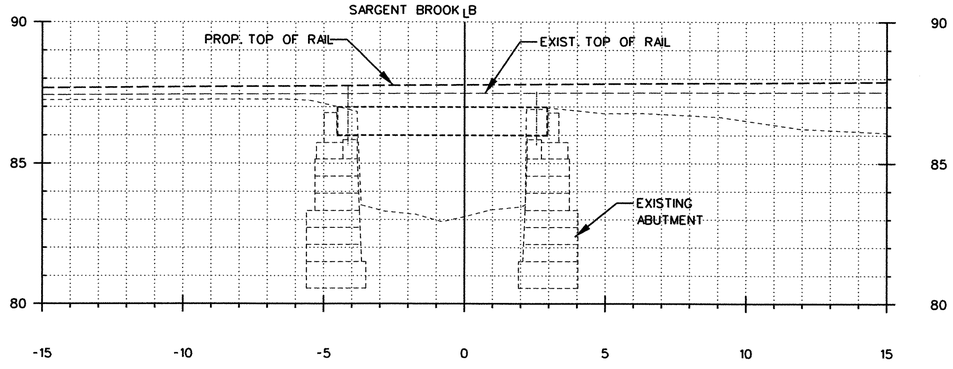

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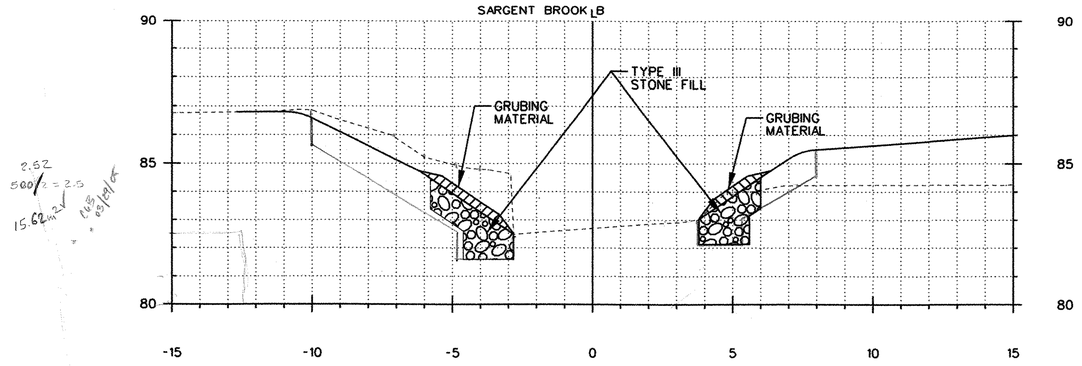
PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: U:\99123-Brattleboro\dgn\zb270xs1.dgn IPARM FILE NAME:	PLOT DATE: 10-02-2002
FROM STA: 0+030.000 TO STA: 0+035.000	SHEET: 135 OF 145

SARGENT BROOK CROSS SECTIONS



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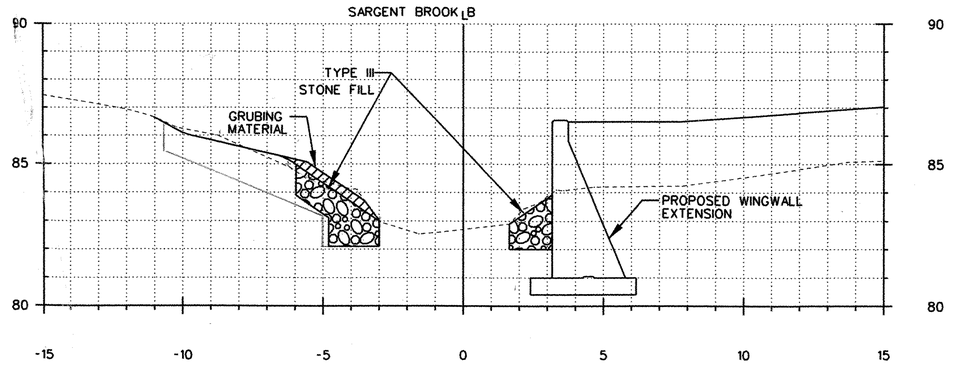

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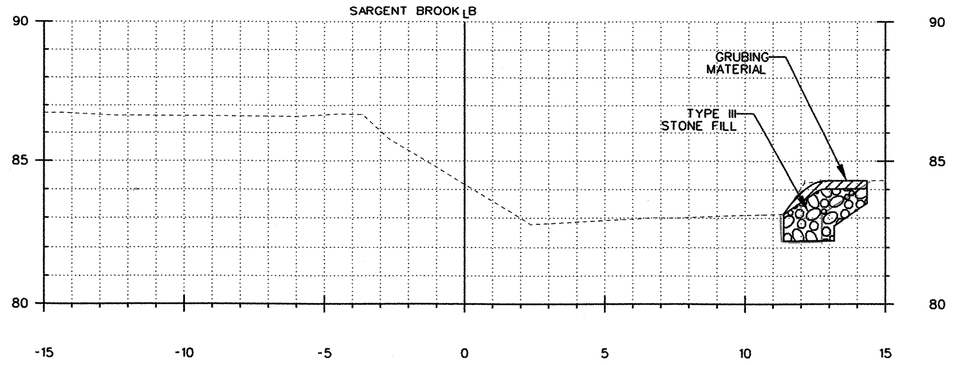
DESIGN FILE NAME: U:\99123-Brattleboro\dgn\zb270xs1.dgn IPARM FILE NAME:	PLOT DATE: 10-02-2002
FROM STA: 0+040.000 TO STA: 0+045.000	SHEET: 136 OF 145

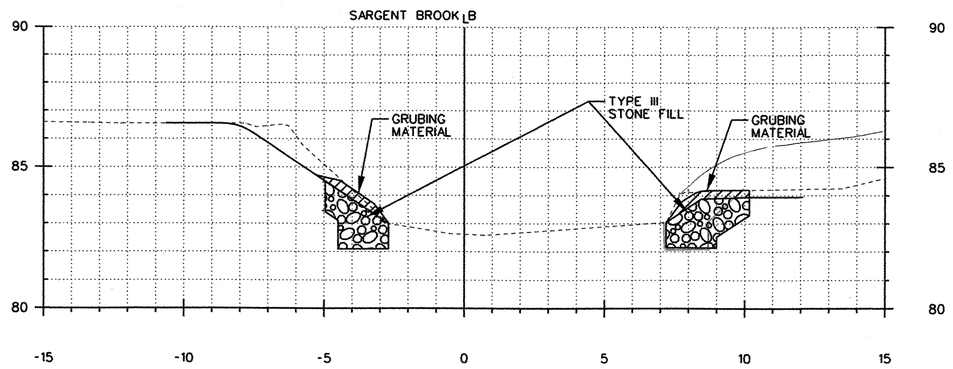
SARGENT BROOK CROSS SECTIONS

Metric



0.51
1.03/2
3.20m² ✓ 1.8 cy/ft

0+055.000



0.50
1.02/2
3.19m² / 1.8 cy/ft

0+050.000

0 2 4 6 8 10
SCALE 1:100

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: U:\99123-Brattleboro\dgn\zb270xs1.dgn IPARM FILE NAME:	PLOT DATE: 10-02-2002
FROM STA: 0+050.000 TO STA: 0+055.000	SHEET: 137 OF 145

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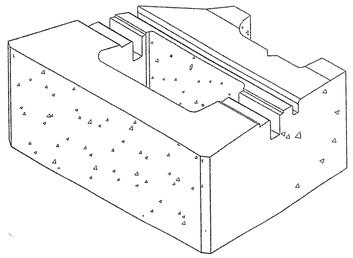
Earth Technologies, Inc.

CONSTRUCTION DRAWINGS
Prepared For



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VERMONT ROUTE – 9

BRATTLEBORO, VERMONT

INDEX

SHEET	DESCRIPTION
1.	Title Sheet
2.	Construction Notes
3.	Plan View
4.	Elevation View
5.	Typical Cross–Section
6.	Typical Details
7.	Typical Details

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STATE OF VERMONT
VERNON R. KOZOSA
No. 5709
REGISTERED PROFESSIONAL ENGINEER
1-9-02
{ SEAL }

REVISIONS \ ISSUE			
0	10/19/01	ISSUED FOR BID	
1	12/3/01	ISSUED FOR REVIEW	
2	1/7/02	ISSUED FOR BID	av

Project Number	M10875
Date Drawn	10/19/01
Scale	As Shown
Designed by	WL
Drawn by	KJK
Checked by	av

VERMONT ROUTE – 9
BRATTLEBORO, VERMONT
TITLE SHEET
Sheet Number 1 of 7

CONSTRUCTION NOTES FOR PLACEMENT OF TENSAR GEOGRIDS AND BACKFILL SOILS FOR TENSAR / MESA REINFORCED WALLS

1.0 MATERIAL

1.1 BACKFILL SOILS

1.1.1 REINFORCED BACKFILL SHALL CONSIST OF FREE-DRAINING GRANULAR MATERIAL FREE FROM LOAM, SILT, CLAY, ORGANIC OR FROZON MATERIAL THAT MEETS THE REQUIREMENTS FOR ITEM 704.08, GRANULAR BACKFILL FOR STRUCTURES AS SPECIFIED IN THE STATE OF VERMONT AGENCY OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR CONSTRUCTION, LATEST EDITION. THE GRADATION REQUIREMENTS ARE REPRODUCED AS FOLLOWS:

SIEVE SIZE	PERCENT PASSING
76mm (3-inch)	100
63mm (2 1/2-inch)	90 - 100
#40	50 - 75
#100	0 - 12
#200	0 - 6

1.1.2 GRANULAR BACKFILL SHALL CONSIST OF BANK RUN SAND AND/OR GRAVEL FREE FROM LOAM, SILT, CLAY, ORGANIC, FROZEN, OR OTHER DELETERIOUS MATERIAL THAT MEETS THE REQUIREMENTS FOR ITEM 703.04, GRANULAR BORROW AS SPECIFIED IN THE STATE OF VERMONT AGENCY OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR CONSTRUCTION, LATEST EDITION THE GRADUATION REQUIREMENTS ARE REPRODUCED AS FOLLOWS:

SIEVE SIZE	PERCENT PASSING
#4	20 - 100
#200	0 - 12

1.1.3 FURTHERMORE, REINFORCED BACKFILL, GRANULAR BACKFILL AND RETAINED SOIL/FILL MATERIALS SHALL BE FREE OF EXCESS MOISTURE, ROOTS, MUCK, SOD, SNOW, FROZEN LUMPS, ORGANIC MATTER OR OTHER DELETERIOUS MATERIALS. ALL ROCK PARTICLES AND HARD EARTH CLODS SHALL BE LESS THAT 75mm IN THE LONGEST DIMENSION REINFORCED BACKFILL MATERIALS WHICH DO NOT MEET THIS CRITERIA SHALL BE CONSIDERED UNSUITABLE AND SHALL BE REMOVED.

1.2 GEOGRID REINFORCEMENT SHALL BE TENSAR UNIAXIAL GEOGRIDS MANUFACTURED BY TENSAR CORPORATION, MORROW, GEORGIA.

1.3 BODKIN BARS SHALL BE 38mm x 6.4mm HDPE BARS MANUFACTURED BY TENSAR CORPORATION, MORROW, GEOGRIA.

1.4 CONNECTORS SHALL BE SUPPLIED BY THE TENSAR CORPORATION, MORROW, GEORGIA.

1.5 DRAINAGE MATERIALS

1.5.1 DRAINAGE STONE SHALL BE VT ÅOT ITEM 704.02B COARSE AGGREGATE AND GEOTEXTILE WRAP AROUND DRAIN SHALL MEET VT ÅOT ITEM 649.41 REQUIREMENTS.

2.0 TECHNICAL REQUIREMENTS

2.1 THE OWNER OR OWNER'S REPRESENTATIVE SHALL SUBMIT TO TENSAR EARTH TECHNOLOGIES, INC. THE GRADATION AND STRENGTH PARAMETERS OF THE REINFORCED BACKFILL MATERIAL, RETAINED SOIL/FILL AND FOUNDATION SOIL, FOR APPROVAL, PRIOR TO PROCEEDING WITH CONSTRUCTION.

2.2 PRIOR TO CONSTRUCTION OF THE TENSAR REINFORCED WALL, THE CONTRACTOR SHALL CLEAR AND GRUB THE REINFORCED BACKFILL ZONE AREA, REMOVING TOP SOIL, BRUSH, SOD OR OTHER ORGANIC OR DELETERIOUS MATERIAL. ANY UNSUITABLE SOILS SHALL BE OVER-EXCAVATED, REPLACED AND COMPACTED WITH REINFORCED BACKFILL MATERIAL TO PROJECT SPECIFICATIONS OR OTHERWISE DIRECTED BY THE OWNER OR OWNER'S REPRESENTATIVE.

2.3 FOUNDATION SHALL BE PROOF ROLL INSPECTED USING A LOADED TRUCK WITH 18 KIP AXLE LOADS OR PER PROJECT SPECIFICATIONS, THE OWNER OR OWNER'S REPRESENTATIVE SHALL CONFIRM THAT THE SITE HAS BEEN PROPERLY PREPARED AND THE DESIGN PARAMETERS IN SECTION 7.0 ARE APPROPRIATE PRIOR TO FILL PLACEMENT.

2.4 FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT EXCEEDING 200mm IN UNCOMPACTED THICKNESS FOR HEAVY COMPACTION EQUIPMENT. FOR ZONES WHERE COMPACTION IS ACCOMPLISHED WITH HAND OPERATED EQUIPMENT, FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT EXCEEDING 150mm IN UNCOMPACTED THICKNESS. ONLY HAND-OPERATED EQUIPMENT SHALL BE ALLOWED WITHIN ONE METER OF THE BACK FACE OF WALL.

2.5 FILL MATERIALS SHALL BE PLACED FROM THE BACK OF THE MESA FACING UNITS TOWARDS THE ENDS OF THE GEOGRID TO ENSURE FURTHER TENSIONING.

2.6 FILL SHALL BE COMPACTED AS SPECIFIED BY PROJECT SPECIFICATIONS OR TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED IN ACCORDANCE WITH AASHTO T-99 (STANDARD PROCTOR), AT A MOISTURE CONTENT NO GREATER THAN 2 PERCENTAGE POINTS WET AND NO LESS THAN 1 PERCENTAGE POINT DRY OF OPTIMUM.

2.7 TESTING METHODS AND FREQUENCY, AND VERIFICATION OF MATERIAL SPECIFICATIONS AND COMPACTION SHALL BE THE RESPONSIBILITY OF THE OWNER OR OWNER'S REPRESENTATIVE.

2.8 MESA CAP UNITS SHALL BE PERMANENTLY SECURED TO THE MESA STANDARD UNITS USING AN APPROVED CONSTRUCTION ADHESIVE PER BLOCK MANUFACTURER'S RECOMMENDATIONS.

2.9 A COMPLETE SET OF APPROVED CONSTRUCTION DRAWINGS AND CONTRACT SPECIFICATIONS SHALL BE ON-SITE AT ALL TIMES, DURING CONSTRUCTION OF THE TENSAR REINFORCED RETAINING WALL.

3.0 TENSAR GEOGRID PLACEMENT

3.1 TENSAR GEOGRIDS SHALL BE PLACED AT THE LOCATIONS AND ELEVATIONS SHOWN ON THE DRAWINGS.

3.2 TENSAR GEOGRID LENGTHS SHALL BE AS SHOWN ON THE CONSTRUCTION DRAWINGS. REINFORCED FILL ZONES LENGTH IS MEASURED FROM THE FRONT FACE OF THE WALL, EXTENDING TO THE TAIL OF THE GEOGRIDS.

3.2.1 TENSAR GEOGRID REINFORCEMENT SHALL BE CONTINUOUS THROUGHOUT THEIR EMBEDMENT LENGTH(S). BODKIN CONNECTION SHALL NOT BE UTILIZED UNLESS PRE-APPROVED BY THE OWNER OR OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION.

3.2.2 IF PRE-APPROVED, TENSAR UNIAXIAL GEOGRIDS MAY BE SPLICED UTILIZING THE BODKIN CONNECTION DETAIL. NO MORE THAN ONE SPLICE SHALL BE ALLOWED IN ANY ONE LENGTH OF REINFORCEMENT AND NO SPICE SHALL BE ALLOWED FOR GEOGRIDS LESS THAN 1.80m IN LENGTH (EACH). THE BODKIN CONNECTION SHALL NOT BE PLACED LESS THAN 1.80m BELOW PLANNED FINISHED GRADE. THE BODKIN CONNECTION SHALL NOT BE PLACED HORIZONTALLY OR VERTICALLY ADJACENT TO ANOTHER BODKIN CONNECTION.

3.3 PRIOR TO PLACING FILL, THE GEOGRID MATERIALS SHALL BE PLACED OVER THE SLOT IN THE TOP OF THE MESA BLOCK. DRIVE CONNECTOR BAR FINGERS THROUGH THE GEOGRID APERTURES BEHIND THE FIRST TRANSVERSE BAR. REMOVE SLACK AND ANCHOR.

3.4 TRACKED CONSTRUCTION EQUIPMENT SHALL NOT BE OPERATED DIRECTLY ON THE GEOGRID. A MINIMUM BACKFILL THICKNESS OF SIX INCHES IS REQUIRED FOR OPERATION OF TRACKED VEHICLES OVER THE GEOGRID. TURNING OF TRACKED VEHICLES SHOULD BE KEPT TO A MINIMUM TO PREVENT CRACKS FROM DISPLACING THE FILL AND/OR THE GEOGRID.

3.5 RUBBER-TIRED VEHICLES MAY PASS OVER THE GEOGRID REINFORCEMENT AT SLOW SPEEDS, LESS THAN 16 km/h. SUDDEN BRAKING AND SHARP TURNING SHALL BE AVOIDED.

3.6 TENSAR UNIAXIAL GEOGRID SHALL BE ROLLED OUT WITH THE LONG AXIS OF THE APERTURES (MACHINE DIRECTION) PERPENDICULAR TO THE WALL FACE.

3.7 UNIAXIAL GEOGRIDS SHALL BE CUT NEXT TO THE CROSS MACHINE DIRECTION BAR. THE CROSS MACHINE DIRECTION BAR SHALL BE PLACED AS OUTLINED IN SECTION 3.3 AND PULLED TAUT PRIOR TO FILL PLACEMENT.

3.8 A MINIMUM OF 75mm OF FILL MATERIAL SHALL BE REQUIRED BETWEEN LAYERS OF UNIAXIAL GEOGRIDS, UNLESS OTHERWISE SHOWN.

4.0 CHANGES TO GEOGRID LAYOUT OR PLACEMENT

4.1 NO CHANGES TO THE TENSAR GEOGRID LAYOUT, INCLUDING, BUT NOT LIMITED TO, LENGTH, GEOGRID TYPE, OR ELEVATION, SHALL BE MADE WITHOUT THE EXPRESSED PRIOR TO WRITTEN CONSENT OF TENSAR EARTH TECHNOLOGIES, INC.

5.0 DRAINAGE

5.1 AT THE END OF EACH WORK DAY, BACKFILL SURFACE SHALL BE GRADED AWAY FROM THE SLOPE FACE A MINIMUM OF 2 PERCENT SLOPE AND A TEMPORARY SOIL BERM SHALL BE CONSTRUCTED NEAR THE WALL CREST TO PREVENT SURFACE WATER RUNOFF FROM OVERTOPPING THE WALL.

5.2 AT THE END OF EACH WORK DAY, BACKFILL SURFACE SHALL BE COMPACTED WITH A SMOOTH WHEEL ROLLER TO MINIMIZE PONDING OF WATER AND SATURATION OF THE BACKFILL.

5.3 THE ENGINEERING, DESIGN, ANALYSIS, DETAILING AND MITIGATION OF BOTH SURFACE DRAINAGE AND SEEPAGE OF GROUNDWATER SHALL BE THE RESPONSIBILITY OF THE OWNER OR OWNER'S REPRESENTATIVE.

5.4 PERMANENT SURFACE WATER DIVERSION SHALL BE REQUIRES AND PROVIDED BY THE OWNER OR OWNER'S REPRESENTATIVE.

5.5 THE TENSAR REINFORCED WALL HAS BEEN DESIGNED ON THE ASSUMPTION THAT THE REINFORCED BACKFILL MATERIAL SHALL BE FREE OF SUBSURFACE DRAINAGE OF WATER (SEEPAGE). PERMANENT SUBSURFACE WATER (SEEPAGE) COLLECTION AND DIVERSION SHALL BE THE RESPONSIBILITY OF THE OWNER OR OWNER'S REPRESENTATIVE

6.0 METHOD OF PAYMENT

SEE CONTRACT DOCUMENTS.

7.0 DESIGN PARAMETERS

7.1 DESIGN OF THE REINFORCED SOIL STRUCTURE IS BASED ON THE FOLLOWING PARAMETERS.

	EFFECTIVE FRICTION ANGLE	EFFECTIVE COHESION	MOIST UNIT WT.
REINFORCED FILL	34°	0 kPa	22.0 kN/m^3
RETAINED SOIL	30°	0 kPa	22.0 kN/m^3
FOUNDATION SOIL	30°	0 kPa	22.0 kN/m^3

7.2 FACTORS OF SAFETY:

7.2.1 INTERNAL STABILITY

	STATIC	SEISMIC
MINIMUM FACTORS OF SAFETY FOR UNCERTAINTIES	= 1.5	= N/A
MINIMUM FACTORS OF SAFETY FOR GEOGRID PULLOUT	= 1.5	= N/A
MINIMUM FACTORS OF SAFETY FOR SLIDING AT GEOGRID	= 1.5	= N/A

SOIL-GEOGRID INTERACTION COEFFICIENT = 0.8
PERCENT COVERAGE OF GEOGRID = 100%

7.2.2 EXTERNAL STABILITY

MINIMUM FACTORS OF SAFETY FOR SLIDING AT BASE = 1.5
MINIMUM FACTORS OF SAFETY FOR OVERTURNING = 2.0

7.2.3 GLOBAL STABILITY:

GLOBAL STABILTY HAS NOT BEEN CONSIDERED IN THIS DESIGN.

7.3 SURCHARGE LOADING = 13.2 kPa

7.4 HYDROSTATIC DESIGN = NONE

GROUNDWATER/PHREATIC SURFACES NOT CONSIDERED IN WALL DESIGN. WATER SURFACE ASSUMED TO BE SUFFICIENTLY BELOW BOTTOM OF WALL AS NOT TO INFLUENCE INTERNAL AND EXTERNAL STABILITY.

7.5 SEISMIC DESIGN = NONE

7.6 MAXIMUM APPLIED BEARING PRESSURE = 281 kPa

8.0 SPECIAL PROVISIONS

8.1 THE DESIGN PRESENTED HEREIN IS BASED ON SOIL PARAMETERS. FOUNDATION CONDITIONS, GROUNDWATER CONDITIONS, AND LOADINGS STATED IN SECTION 7.0.

8.2 WALL ELEVATION VIEWS AND LOCATIONS AND GEOMETRY OF EXISTING STRUCTURES SHALL BE VERIFIED BY THE OWNER OR OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION.

8.3 TENSAR EARTH TECHNOLOGIES, INC. ASSUMES NO LIABILITY FOR INTERPRETATION OR VERIFICATION OF SUBSURFACE CONDITIONS, SUITABILITY OF SOIL DESIGN PARAMETERS AND INTERPRETATION OF SUBSURFACE GROUNDWATER CONDITIONS.

8.4 THE OWNER OR OWNER'S REPRESENTATIVE IS RESPONSIBLE FOR REVIEWING AND VERIFYING THAT THE ACTUAL SITE CONDITIONS ARE AS DESCRIBED IN SECTION 7.0 PRIOR TO CONSTRUCTION. THE OWNER OR OWNER'S REPRESENTATIVE SHALL BE ON-SITE TO ASSURE THE PROVISIONS OF THE CONSTRUCTION NOTES ARE FOLLOWED.

8.5 IT IS THE RESPONSIBILITY OF THE OWNER OR OWNER'S REPRESENTATIVE TO PROVIDE SOIL THAT MEETS THE GRADATION LISTED IN SECTION 1.1.1 AND PARAMETERS LISTED IN SECTION 7.1.

8.6 IF ANY ROCK FORMATIONS AND/OR GROUNDWATER ARE ENCOUNTERED DURING CONSTRUCTION, IMMEDIATELY CONTACT TENSAR EARTH TECHNOLOGIES, INC. AT 404-250-1290 AND THE OWNER'S REPRESENTATIVE.

8.7 ANY REVISIONS TO DESIGN PARAMETERS STATED IN SECTION 7.0 OR STRUCTURE GEOMETRY SHALL REQUIRE DESIGN MODIFICATIONS PRIOR TO PROCEEDING WITH CONSTRUCTION.

8.8 THIS DESIGN IS ONLY VALID FOR THE PROPOSED TENSAR RETAINING WALL(S) AS SHOWN HEREIN.

8.9 TOTAL SETTLEMENT AND DIFFERENTIAL SETTLEMENT IN EXCESS OF 1/100 AND ITS EFFECTS ON THE TENSAR RETAINING WALL SYSTEM SHALL BE THE RESPONSIBILITY OF THE OWNER OR OWNER'S RESPRESENTATIVE.

8.10 GLOBAL STABILITY AND BEARING CAPACITY SHALL BE THE RESPONSIBILITY OF THE OWNER OR OWNER'S REPRESENTATIVE.

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VERNON R. KORGES
No. 5709
REGISTERED
PROFESSIONAL ENGINEER
1-9-02
{ SEAL }

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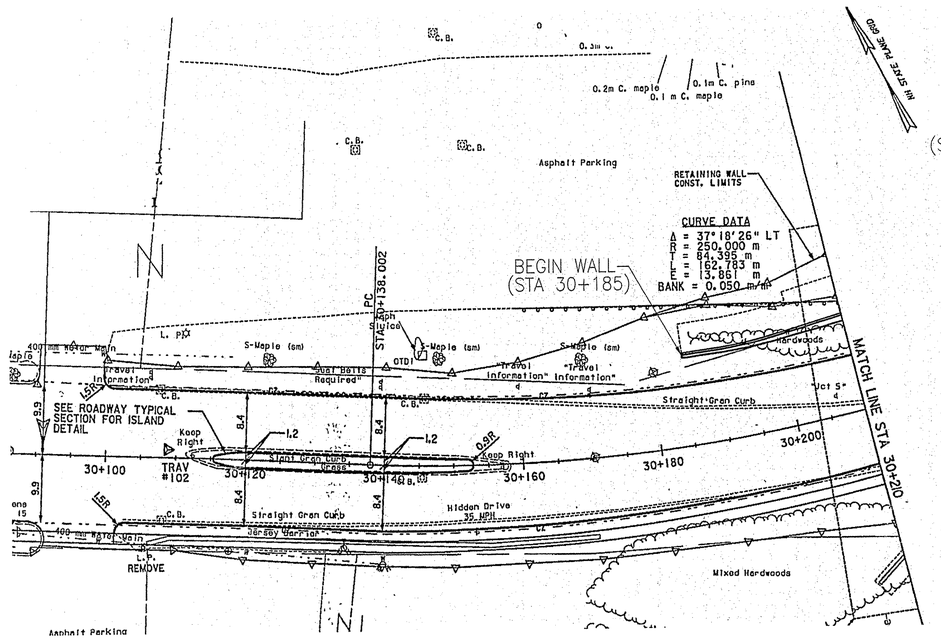
2	1/7/02	ISSUED FOR BID	av

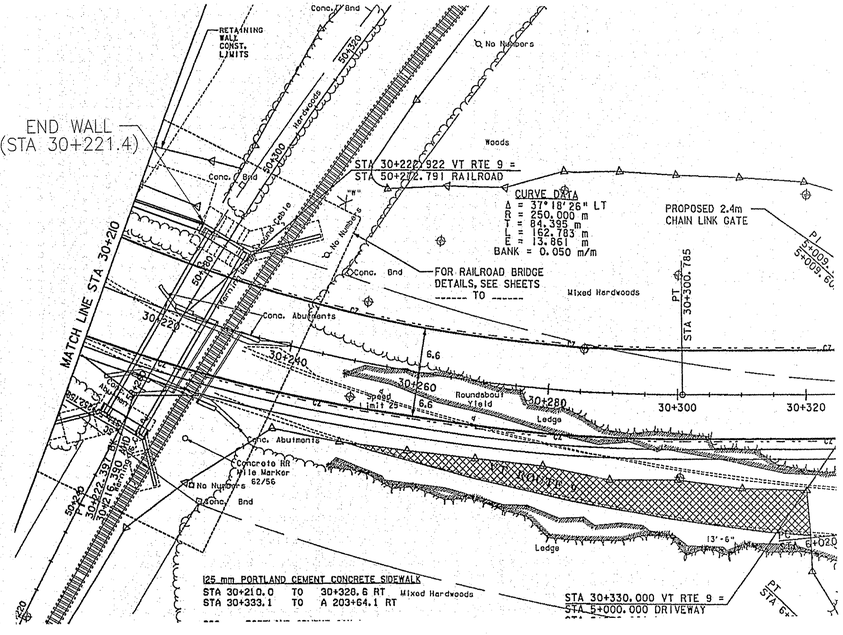
Project Number M10875
Date Drawn 10/19/01
Scale As Shown
Designed by WL
Drawn by KJK
Checked by av

VERMONT ROUTE - 9
BRATTLEBORO, VERMONT

CONSTRUCTION NOTES

Sheet Number 2 of 7





NOTE:
PLAN VIEW IS SHOWN FOR ILLUSTRATIVE PURPOSE ONLY.
PLAN VIEW IS REPRODUCED FROM CONTRACT DRAWINGS PROVIDED BY VERMONT STATE DOT, DATED 8/28/00.
REFER TO CONTRACT DRAWINGS FOR EXACT WALL LOCATION.

PLAN VIEW
NOT TO SCALE

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No. 5709
REGISTERED PROFESSIONAL ENGINEER
1-9-02
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Drawn by	KJK
Checked by	CV

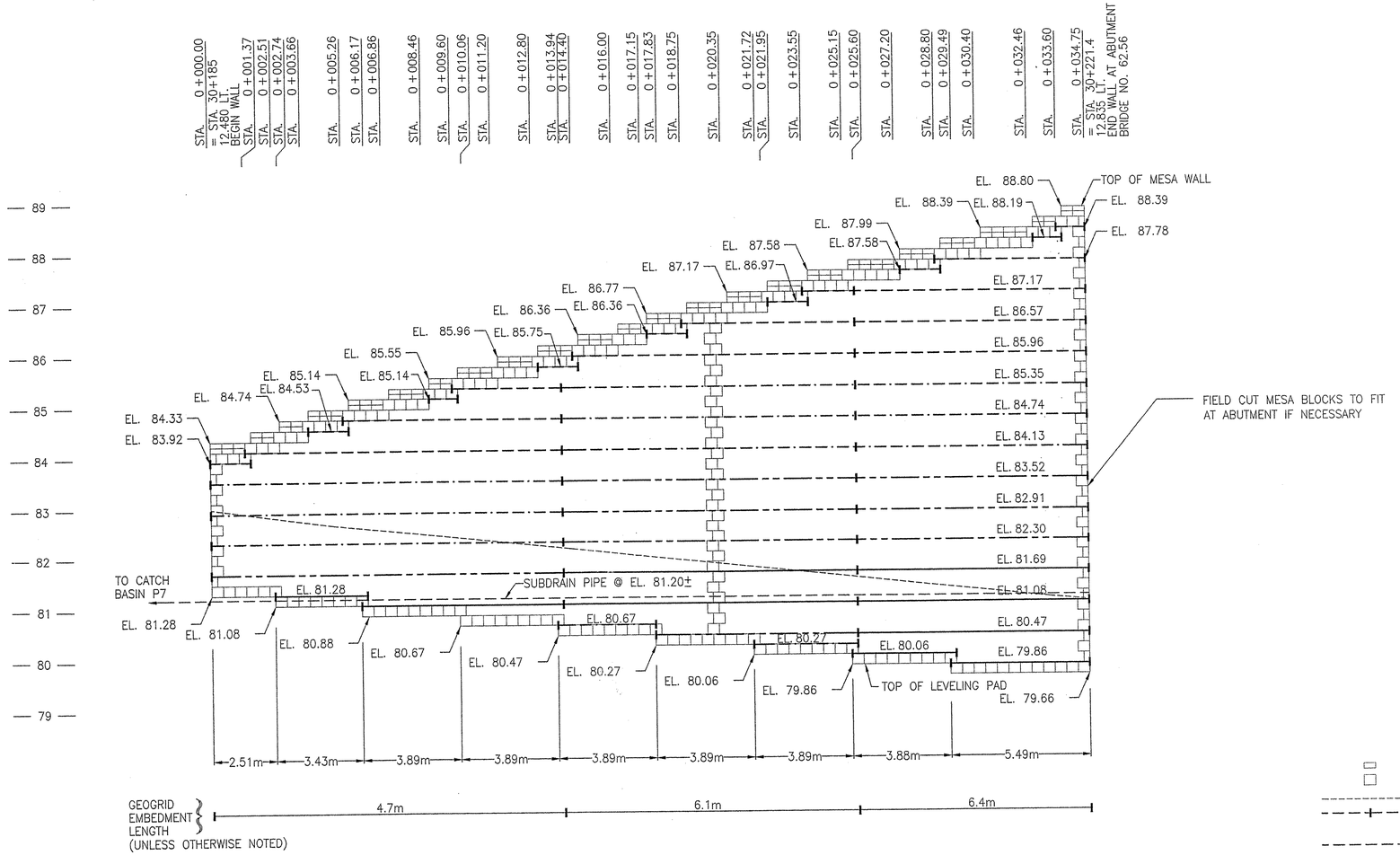
VERMONT ROUTE - 9

BRATTLEBORO, VERMONT

PLAN VIEW

Sheet Number 3 of 7

PROJECT NO. NH BRF 012-1(33) Sheet 140 of 145



FRONT FACE ELEVATION VIEW

LEGEND

- MESA CAP UNIT
- MESA STANDARD UNIT
- PROPOSED GRADE
- CHANGE IN EMBEDMENT LENGTH OR GEOGRID TERMINATION
- TENSAR MESA3 GEOGRID
- TENSAR MESA4 GEOGRID
- TENSAR MESA5 GEOGRID
- TENSAR MESA6 GEOGRID
- EL. XXX.X — APPROX. GEOGRID ELEVATION
- (X.Xm) — GEOGRID EMBEDMENT LENGTH
- (XX%) — GEOGRID PERCENT COVERAGE

0 HORIZONTAL 5

0 VERTICAL 2.5

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Drawn by	KJK
Checked by	

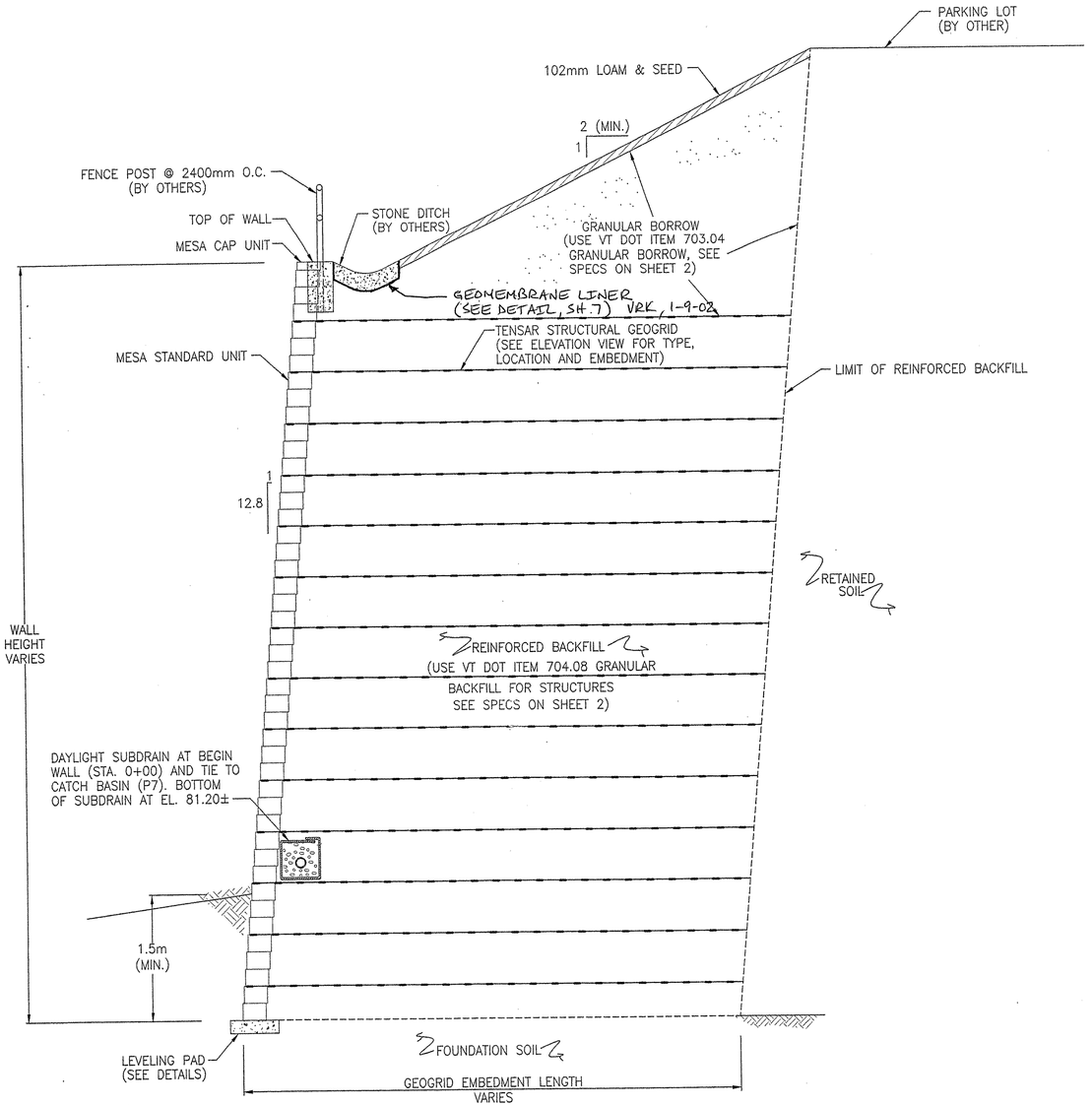
VERMONT ROUTE - 9

BRATTLEBORO, VERMONT

ELEVATION VIEW

Sheet Number 4 of 7

PROJECT NO. NH BRF 012-1(33) Sheet 141 of 145



TYPICAL CROSS-SECTION

0 1 METER
SCALE

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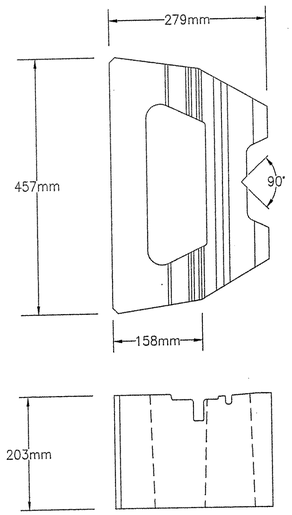
BRATTLEBORO, VERMONT

TYPICAL CROSS-SECTION

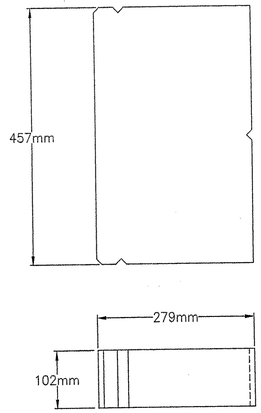
Sheet Number 5 of 7

PROJECT NO. NH BRF 012-1(33) Sheet 142 of 145



MESA STANDARD BLOCK

NOT TO SCALE



MESA STRAIGHT SIDED CAP UNIT

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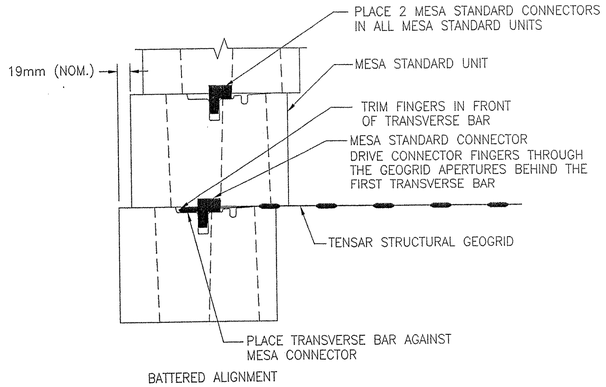
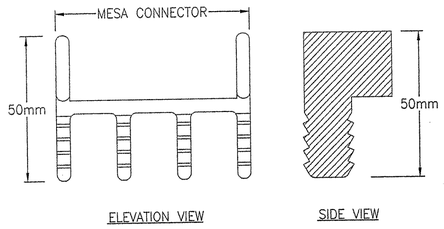


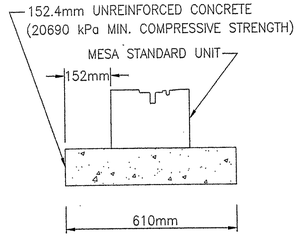
MESA STANDARD UNIT AND GEOGRID CONNECTION DETAIL

NOT TO SCALE



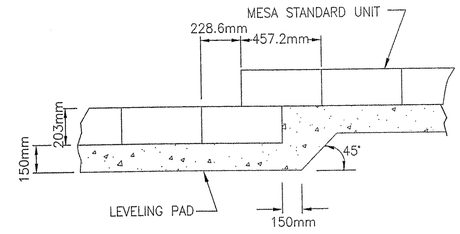
MESA STANDARD CONNECTOR

NOT TO SCALE



LEVELING PAD DETAIL

NOT TO SCALE



TYPICAL LEVELING PAD STEP DETAIL

NOT TO SCALE

M1087506.DWG

TENSAR
EARTH TECHNOLOGIES, INC.
5883 Glenridge Drive
Suite 200
Atlanta, Georgia 30328
(404) 250-1290

mesa™

STATE OF VERMONT
KEVIN R. KOROSEC
No. 6709
REGISTERED
PROFESSIONAL ENGINEER
1-9-02
{ SEAL }

REVISIONS \ ISSUE			
0	10/19/01	ISSUED FOR BID	
1	12/3/01	ISSUED FOR REVIEW	
2	1/7/02	ISSUED FOR BID	CV

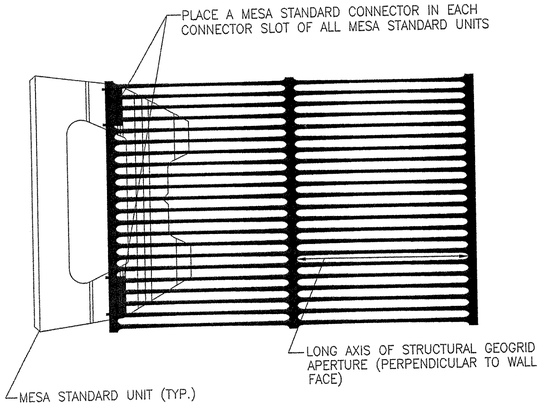
Project Number	M10875
Date Drawn	10/19/01
Scale	As Shown
Designed by	WL
Drawn by	KJK
Checked by	CV

VERMONT ROUTE - 9

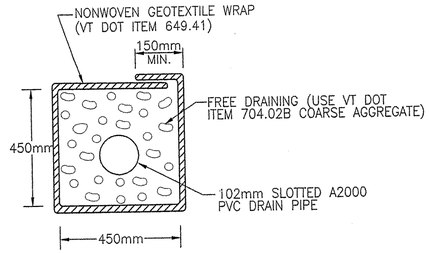
BRATTLEBORO, VERMONT

TYPICAL DETAILS

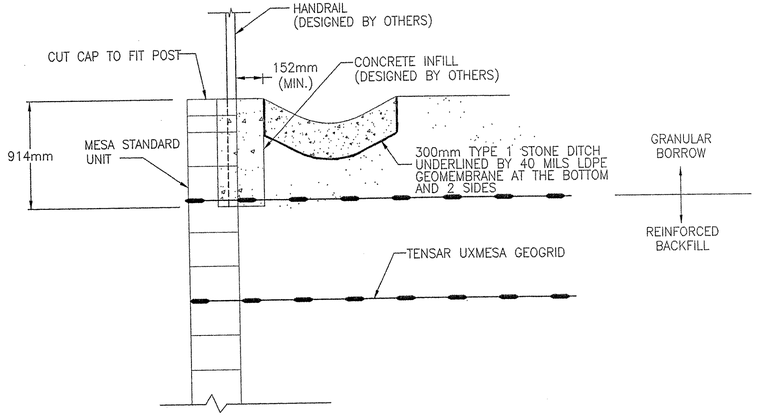
Sheet Number 6 of 7



GEOGRID ORIENTATION
NOT TO SCALE



SUBDRAIN DETAIL
NOT TO SCALE

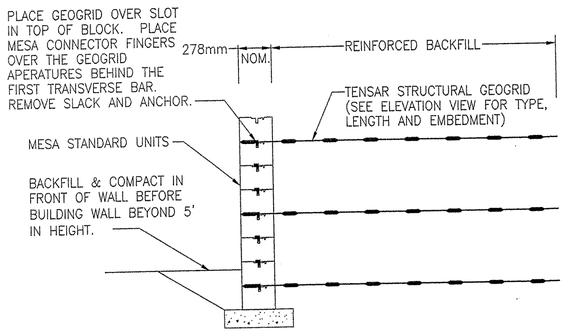


STEP 1: PLACE AND COMPACT REINFORCED BACKFILL TO BOTTOM OF HANDRAIL.

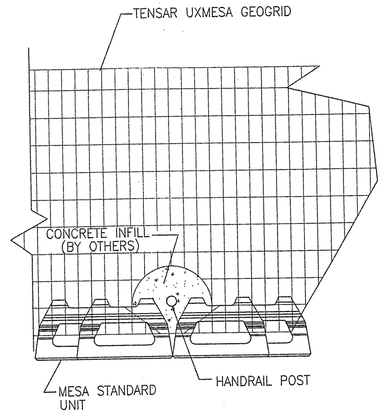
STEP 2: PLACE TOP LAYER OF TENSAR UXMESA GEOGRID AND REMAINING MESA STANDARD UNITS ABOVE IT.

STEP 3: CUT TENSAR UXMESA GEOGRID AND THEN SET HANDRAIL POST. FORM AND POUR CONCRETE INFILL AT TAIL OF MESA STANDARD UNITS.

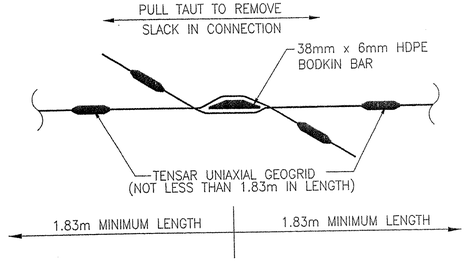
HANDRAIL ON TOP OF WALL DETAIL
NOT TO SCALE



GEOGRID ATTACHMENT DETAIL
NOT TO SCALE



PLAN VIEW
DETAIL OF HANDRAIL ON TOP OF WALL
NOT TO SCALE



BODKIN CONNECTION
NOT TO SCALE

M1087507.DWG

TENSAR
EARTH TECHNOLOGIES, INC.
5883 Glenridge Drive
Suite 200
Atlanta, Georgia 30328
(404) 250-1290

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STATE OF VERMONT — STEVEN R. KOSTOS — No. 5709 — REGISTERED PROFESSIONAL ENGINEER
1-9-02
{ SEAL }

REVISIONS \ ISSUE			
0	10/19/01	ISSUED FOR BID	
1	12/3/01	ISSUED FOR REVIEW	CV
2	1/7/02	ISSUED FOR BID	

Project Number M10875
Date Drawn 10/19/01
Scale As Shown
Designed by WL
Drawn by KJK
Checked by CV

VERMONT ROUTE - 9
BRATTLEBORO, VERMONT

TYPICAL DETAILS

Sheet Number 7 of 7

PROJECT NO. NH BRF 012-1(33) Sheet 144 of 145

WORK ORDER

Notice: Not for Use/disclosure outside of VERIZON without written agreement

VERIZON

N	SAFETY NOTES: TRAFFIC, ROAD CONSTRUCTION	MOD/REV NO.	DATE	EWO NO.
				PRINT 1 OF
				PREPARED BY:
				C.O. /EXCHANGE NAME:
	SIGNATURE	TYPE	RECORD REF:	BRATTLEBORO
	DATE 3/1/2001	AERIAL	1-4E	C.O. /EXCHANGE CODE:
	PRE CT YES ☐ NO ☒	UNDERGROUND	—	4731
	PRIMARY VOLTAGE TO GROUND	BLOCK (NYT)	—	MUNICIPALITY:
	7.2 KV MGN SYSTEM	CONDUIT	—	BRATTLEBORO
CABLE PRESS.	UNDER PRESS. YES ☐ NO ☒	BUFFER YES ☐ NO ☒		MANHOLE LOCATION MH# NA
TRANSMISSION	26GA LIMIT YES ☐ NO ☒	AMT. BRIDGE TAP	INPUT	KF

PROJECT # 131104

Place pull ropes in 5 ducts
Place measuring tape in 1 duct

TO HWY # 5

Ducts - 1.7 m +/- below gutter grade

1.5M

4C - Place 6 - 4" PC "C"= 189.4 Meters
MH#27 to MH27A
concrete encased

TO NEW HAMPSHIRE

SEE PLAN #2

Ducts - 1 m below gutter grade

SEE PLAN #?
FOR DETAILS FOR DUCT TERMINATIONS

Vt Hwy # 9

30 + 200

30 + 180

30 + 160

30 + 140

2 M back of Face of Curb

Existing concrete encased ducts approx. .5m behind existing curb **abandon in place**

CAUTION 9-4" PC"B" CONCRETE ENCASED DUCTS

TOP

3.1M

10M

10M

Proposed concrete ducts 3.1 m back of Face of new curb

4C - Place 6 - 4" PC "C"= 622' V
MH#27 to MH27A
W - W = 622' V

MH# 27
12'L X 6'W X 7'H
(interior dimensions)
504 cu ft.

50 cm - exist cover

12 - 4" PC "B" concrete encased

Break out existing concrete encased ducts entering manhole Leave 18" of conduit from MH to join new ducts to

30"
76cm

ADELPHIA
(2) 4 PVC DUCT
CONCRETE ENCASED
TO EXISTING M.H.

Proposed swk grade

Proposed concrete ducts 3.1M back of Face of new curb

caution 2 - 4" PC"C" sand encased (temporary relocated cable)

56"

6 - 4" PC"B"

30"
76 cm

maintain min 12" (31cm) separation from other utilities

3/8/2001

NOT TO Scale

145 A

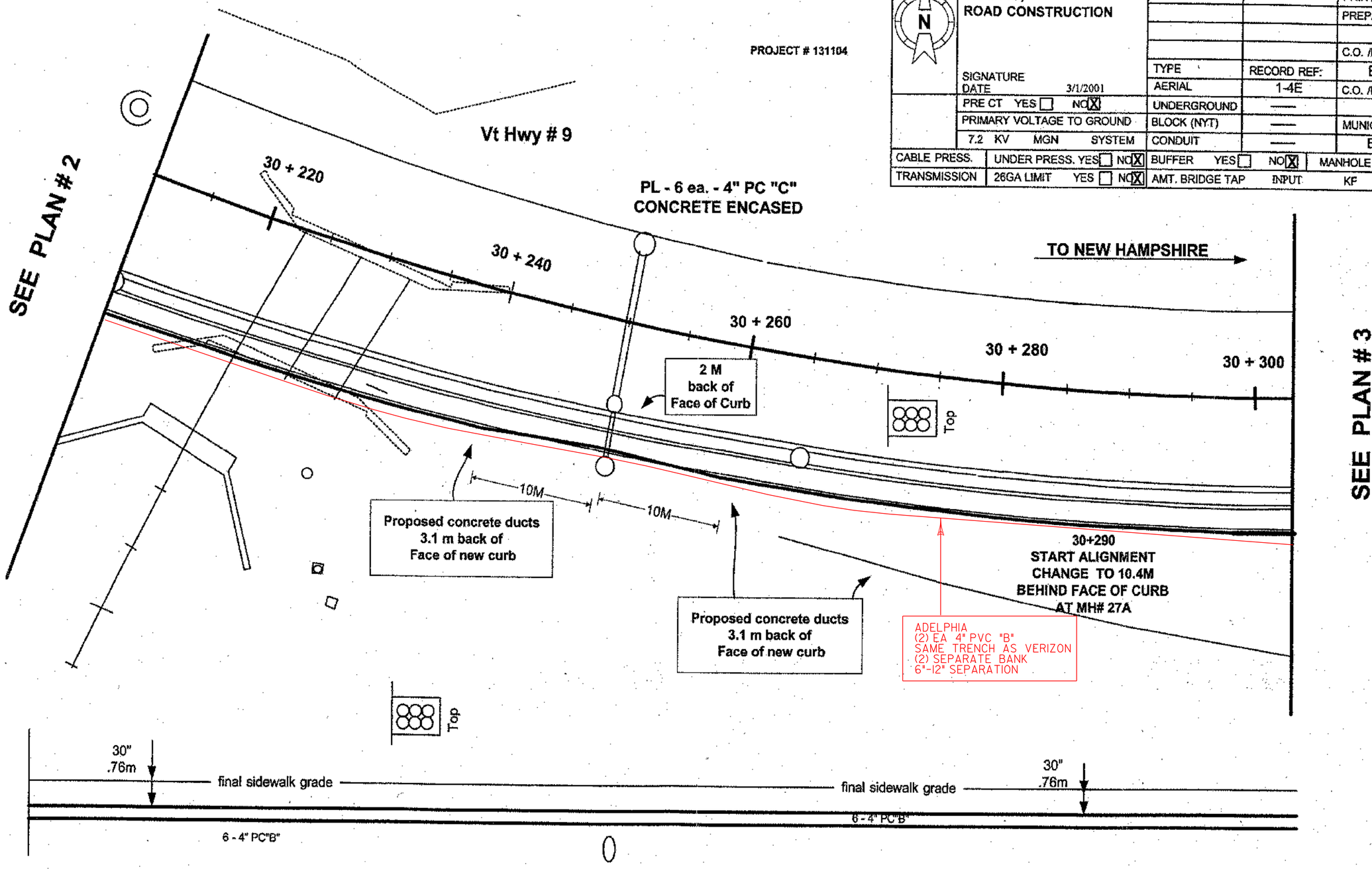
WORK ORDER

Notice: Not for Use/disclosure outside of VERIZON without written agreement

VERIZON

N	SAFETY NOTES: TRAFFIC, ROAD CONSTRUCTION	MOD/REV NO.	DATE	EWO NO.
				PRINT 2 OF
				PREPARED BY:
				C.O. /EXCHANGE NAME:
	SIGNATURE	TYPE	RECORD REF:	BRATTLEBORO
	DATE 3/1/2001	AERIAL	1-4E	C.O. /EXCHANGE CODE:
	PRE CT YES ☐ NO ☒	UNDERGROUND	—	4731
	PRIMARY VOLTAGE TO GROUND	BLOCK (NYT)	—	MUNICIPALITY:
	7.2 KV MGN SYSTEM	CONDUIT	—	BRATTLEBORO
CABLE PRESS.	UNDER PRESS. YES ☐ NO ☒	BUFFER YES ☐	NO ☒	MANHOLE LOCATION MH# NA
TRANSMISSION	26GA LIMIT YES ☐ NO ☒	AMT. BRIDGE TAP	INPUT	KF

PROJECT # 131104



3/8/2001

NOT TO Scale

145B

WORK ORDER

Notice: Not for Use/disclosure outside of VERIZON without written agreement

VERIZON

N	SAFETY NOTES: TRAFFIC, ROAD CONSTRUCTION	MOD/REV NO.	DATE	EWO NO.
				PRINT 3 OF
				PREPARED BY:
				C.O. /EXCHANGE NAME:
	SIGNATURE DATE 3/1/2001	TYPE	RECORD REF:	BRATTLEBORO
		AERIAL	1-4E	C.O. /EXCHANGE CODE:
	PRE CT YES ☐ NO ☒	UNDERGROUND	——	4731
	PRIMARY VOLTAGE TO GROUND	BLOCK (NYT)	——	MUNICIPALITY:
	7.2 KV MGN SYSTEM	CONDUIT	——	BRATTLEBORO
CABLE PRESS.	UNDER PRESS. YES ☐ NO ☒	BUFFER YES ☐ NO ☒		MANHOLE LOCATION MH# NA
TRANSMISSION	26GA LIMIT YES ☐ NO ☒	AMT. BRIDGE TAP	INPUT	KF

Project # 131104

10.4 M FROM C/L
STA 30+320

MH#27A
MH COVER BESIDE SWK
4C - Pl - 1 ez - 12'L x 6" W x 7' H
3.66 m LX1.83m W X 2.13m H
E/W 30" (76cm)Frame And Cover
2 - Ladder steps
1 - 8'(2.44 m) hooked ladder - galvanized

4X - ABIP - 12'x6'x7' MH - (1982)
MH# 27A old
4X - ABIP -MH27A to Pt"A"
- 4 - 4"PC"B" -76'
Verify (1982)

Construction to verify
Wall - Wall distance
MH 27A to MH 27B
=793' V

VERMONT 4731

NEW HAMPSHIRE 9825

SEE PLAN # 2

3/8/2001

30+300 30+320 30+340 A 203+60

A 203+40

5+020

6 - 4" PC"C"
Concrete encased

30+329
Place - 4 ea. - 22 1/2 degree bends - 15' R (4.57 m)

504 cu ft
12'X6'X7'

existing conduit
6ea. - 4" PC "B"
ABANDON in Place

ADELPHIA
(2) EA 4" PVC "B"
CONCRETE ENCASED

Pt. "A"

2m

old MH# 27A
Remove Frame and cover and return them to Verizon
Fill Manhole with gravel
Abandon in place

ADELPPHIA HAND HOLE

Break into existing duct bank
Place - 4ea. 22 1/2 degree bends
15'Radius (4.57m rad.)

Temporary Aerial cable

TOP

30" cover
78 cm min cover

20m
66' +/-

30" cover
78 cm min cover

break into existing ducts
join new ducts to existing

exist 4 - 4" PC"B"
concrete encased

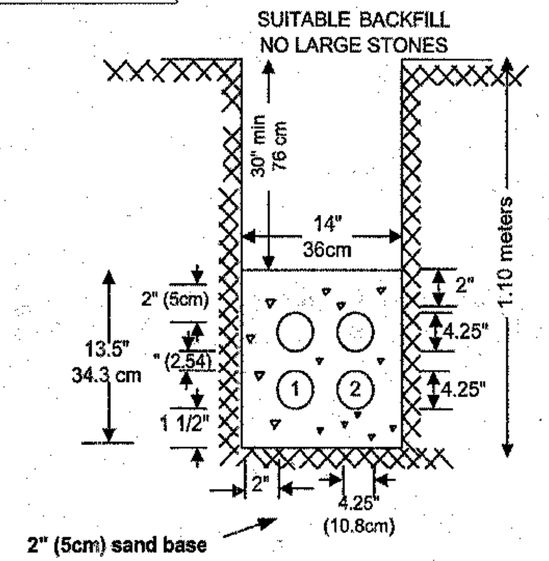
Place 6 ducts

Place 4 ducts

newMH #27A

4C - Mh# 27A to Pt "A"
Pl - 4 ea. - 4" PC"B
34.6 m - Verify
114' - verify

CONNECTICUT RIVER



NO TO Scale

145C

WORK ORDER

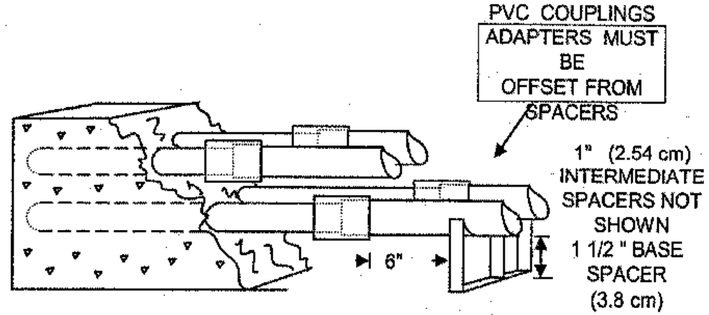
Notice: Not for Use/disclosure outside of Verizon without written agreement

VERIZON

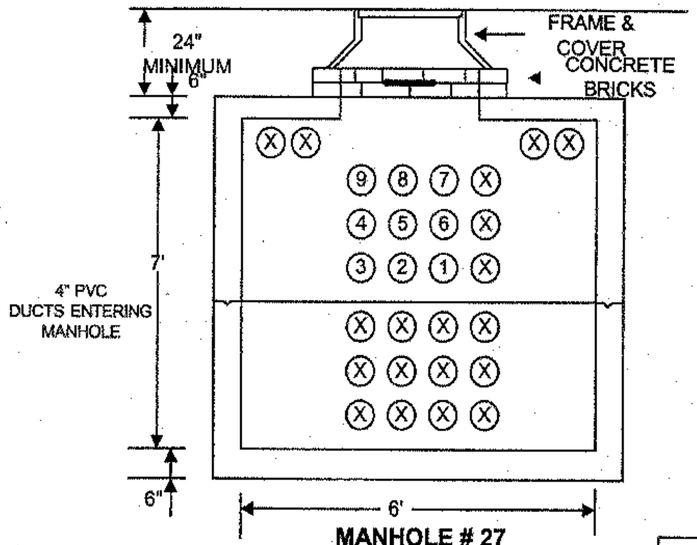
NOTE - Pr#131104

CONCRETE - MIN 2500 psi WITH 1/4" TO 3/8" AGGREGATE WITH MAX 9" SLUMP.
DO NOT DROP THE CONCRETE MORE THAN 3 FEET - CAN BE BACKFILLED IN APPROX. 1 1/2 HOURS
PLACE CONDUIT SPACERS EVERY 5'
CONTRACTOR TO PLACE PULL ROPE IN ALL DUCTS
CONTRACTOR TO PLACE MEASURING TAPE IN ONE DUCT

SAFETY NOTES: Road construction traffic		MOD/REV NO.	DATE	EWO NO.
				PRINT 4 OF
				PREPARED BY: J. BRIAN GRESL
				C.O. /EXCHANGE NAME:
SIGNATURE DATE March 30, 2000		TYPE	RECORD REF:	Brattleboro
		AERIAL	1-4E	C.O. /EXCHANGE CODE:
PRE CT YES ☐ NO ☒		UNDERGROUND	—	4731
PRIMARY VOLTAGE TO GROUND		BLOCK (NYT)	—	MUNICIPALITY:
7.2 KV MGN SYSTEM		CONDUIT	45-1, 45-3	Brattleboro
CABLE PRESS.	UNDER PRESS. YES ☐ NO ☒	BUFFER YES ☐ NO ☒	MANHOLE LOCATION MH# NA	
TRANSMISSION	26GA LIMIT YES ☐ NO ☒	AMT. BRIDGE TAP	INPUT KF	



TYPICAL CONCRETE ENCASED DUCTS



MANHOLE # 27
12' L x 6' W x 7' H
FACING NORTH
FROM INSIDE MANHOLE

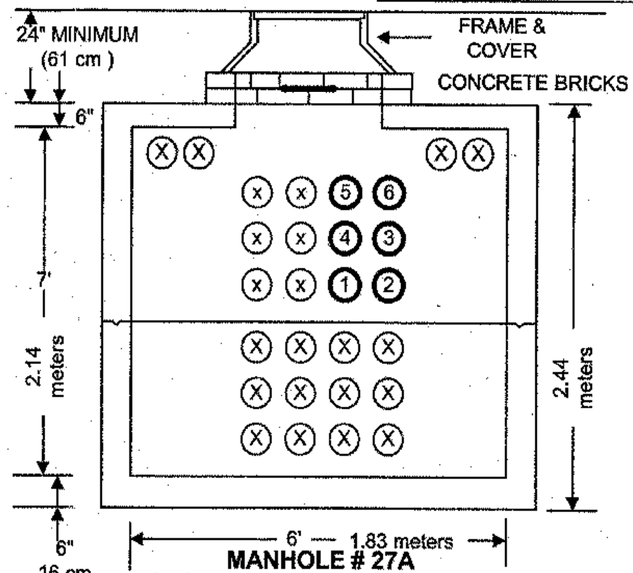
Place - 2ea. MH steps in collar

Place 2ea. - Manhole steps in collar of manhole spaced - 12" (30cm) apart

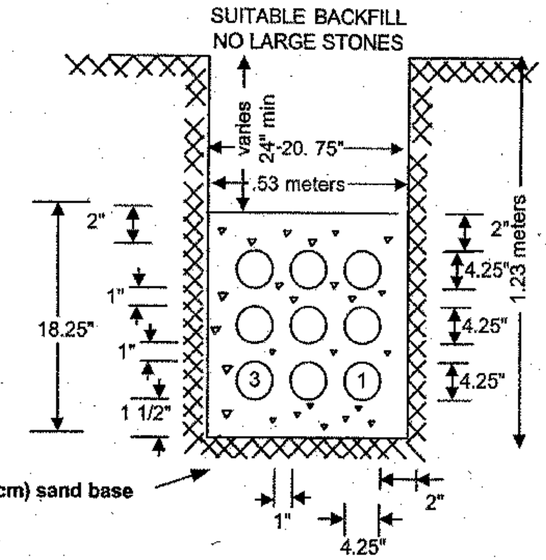
Place standard Verizon 30" (76 cm) frame and cover

Place standard 8' (2.4m) galvanized MH ladder with hooks.

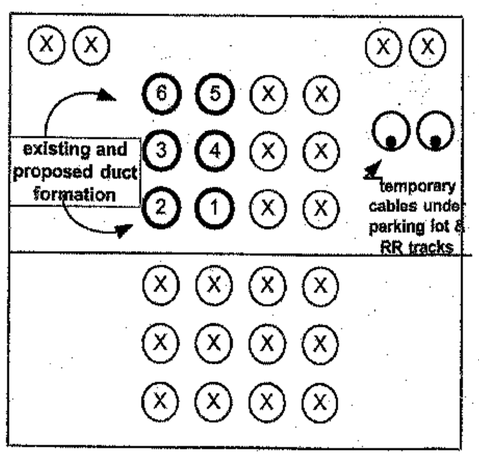
3/8/2001



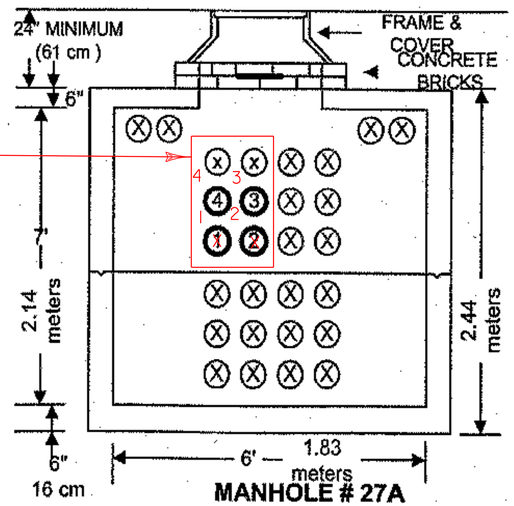
MANHOLE # 27A
12' L x 6' W x 7'H
FACING WEST
FROM INSIDE MANHOLE



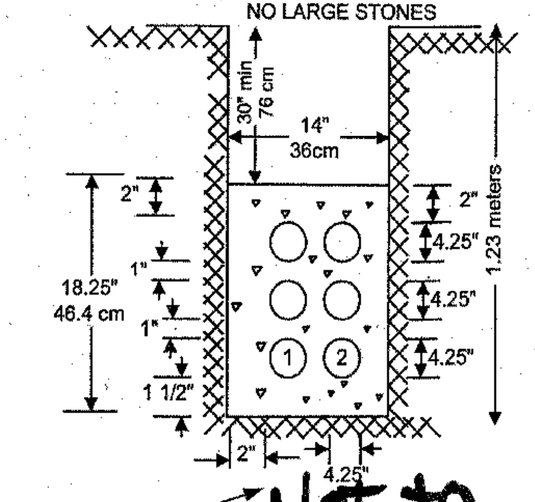
TOP 4 HOLES USED AS PER STEVE ATKINS ORDER ON SITE 06/04/04



MANHOLE # 27
FACING EAST
FROM INSIDE MANHOLE



MANHOLE # 27A
FACING EAST TOWARD NH
FROM INSIDE MANHOLE



Not to scale

145D

WORK ORDER

Notice: Not for Use/disclosure outside of VERIZON without written agreement

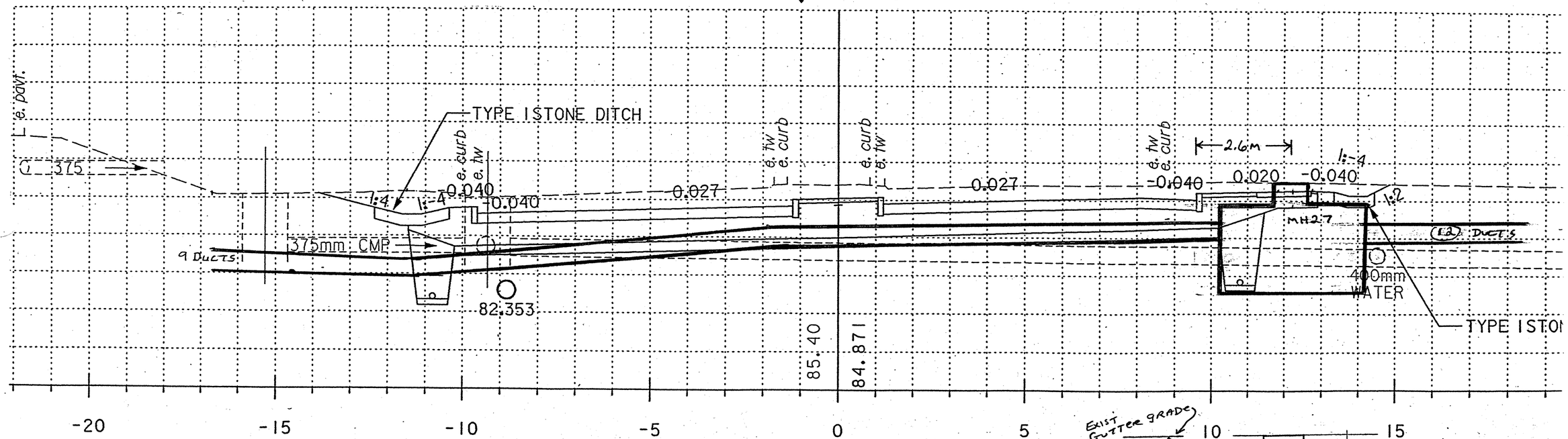
VERIZON

SAFETY NOTES: **TRAFFIC, ROAD CONSTRUCTION**		MOD/REV NO.	DATE	EWO NO.
				PRINT 5 OF
				PREPARED BY:
				C.O. /EXCHANGE NAME:
SIGNATURE DATE 3/1/2001		TYPE	RECORD REF:	BRATTLEBORO
		AERIAL	1-4E	C.O. /EXCHANGE CODE:
	PRE CT YES ☐ NO ☒	UNDERGROUND	—	4731
	PRIMARY VOLTAGE TO GROUND	BLOCK (NYT)	—	MUNICIPALITY:
	7.2 KV MGN SYSTEM	CONDUIT	—	BRATTLEBORO
CABLE PRESS.	UNDER PRESS. YES ☐ NO ☒	BUFFER YES ☐	NO ☒	MANHOLE LOCATION MH# NA
TRANSMISSION	26GA LIMIT YES ☐ NO ☒	AMT. BRIDGE TAP	INPUT	KF

PROJ # 131104

EXISTING CONDUIT

CAUTION



3/2/2001

5' BACK OF CURB (EXIST)

APPROX 6' (1.8 M) COVER EXISTING GRADE

NOT to Scale

30+140.000

38" (96cm) +/- COVER BELOW EXIST. GUTTER

48" (122cm) ± COVER FROM EXISTING GRADE IN CENTER OF ISLAND

EXIST GUTTER GRADE

38" (96cm) APPROX

9-4" PC "B" CONCRETE ENCASED

APPROX 20"x20"W 51cm X 51cm

EXIST MH#27 12'x6'x7' (INSIDE)

APPROX 20" (50cm) COVER OVER MANHOLE

MH - 2.6m± BEHIND NEW CURB

MH#27 13'L x 7'W x 8'H. OUTSIDE DIMENSIONS

12-4" PC "B" CONCRETE ENCASE 20" x 25"W

51cm x 64cm

3.96m x 2.133m W x 2.438m H

145E

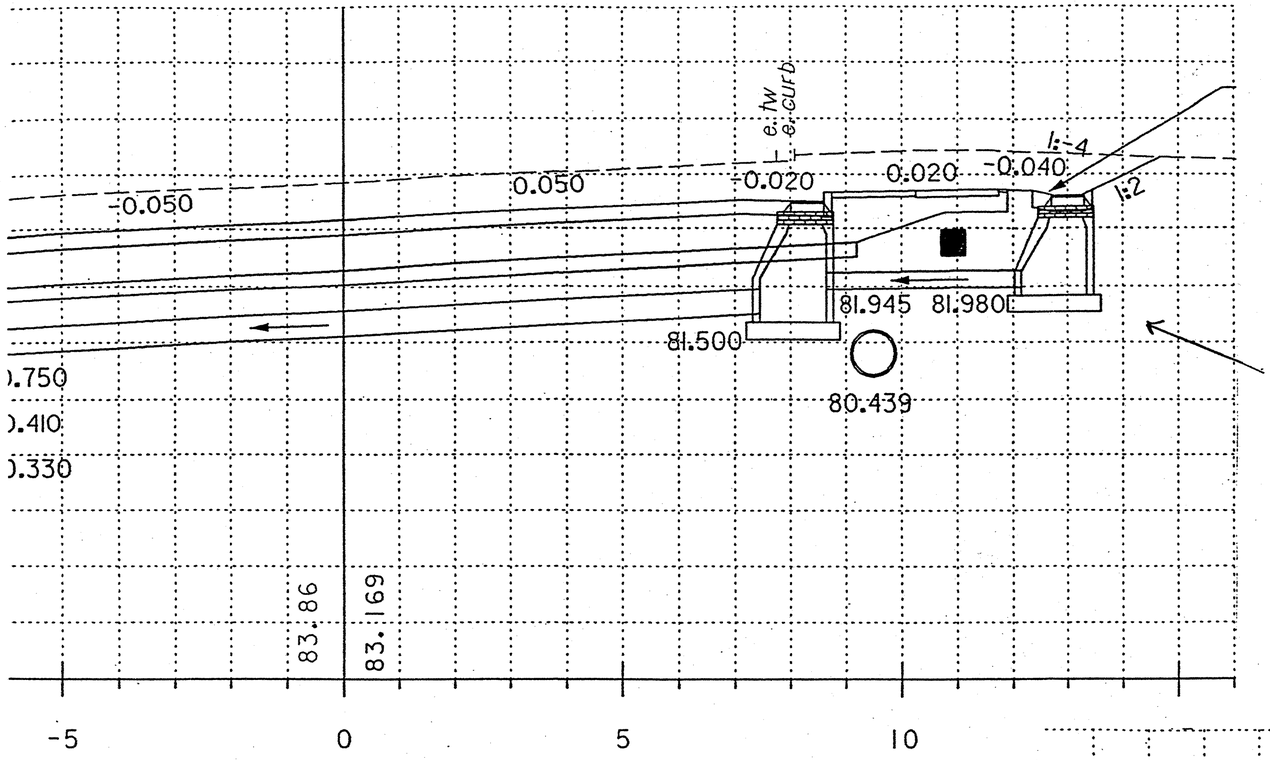
WORK ORDER

Notice: Not for Use/disclosure outside of VERIZON without written agreement

VERIZON

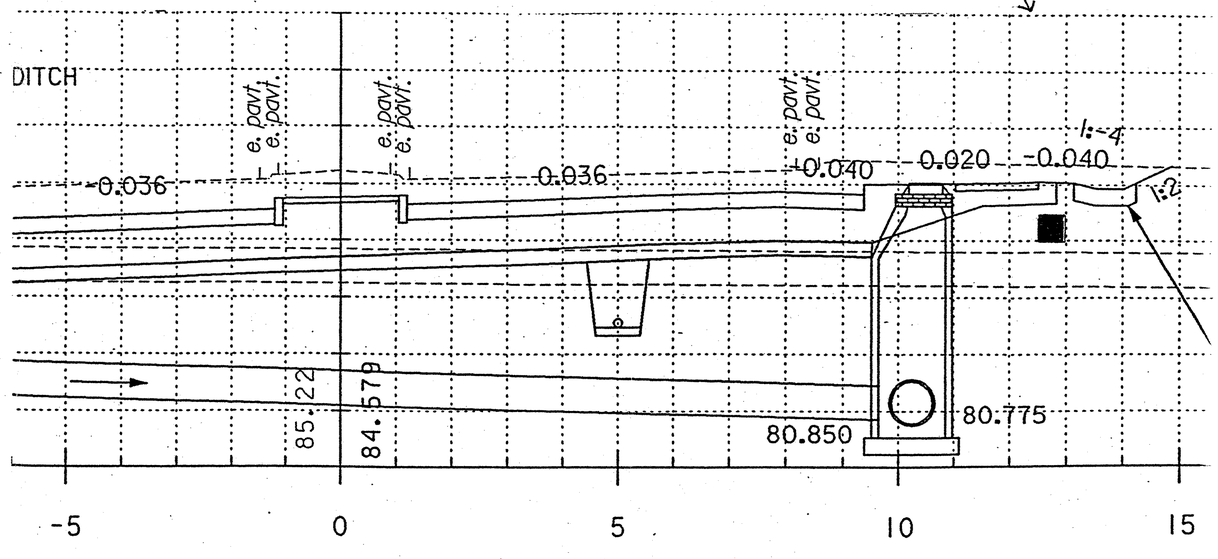
N	SAFETY NOTES: TRAFFIC, ROAD CONSTRUCTION		MOD/REV NO.	DATE	EWO NO.
					PRINT 6 OF
					PREPARED BY:
					C.O. /EXCHANGE NAME:
	SIGNATURE		TYPE	RECORD REF:	BRATTLEBORO
	DATE	3/1/2001	AERIAL	1-4E	C.O. /EXCHANGE CODE:
	PRE CT YES ☐ NO ☒		UNDERGROUND	——	4731
	PRIMARY VOLTAGE TO GROUND		BLOCK (NYT)	——	MUNICIPALITY:
	7.2 KV MGN SYSTEM		CONDUIT	——	BRATTLEBORO
CABLE PRESS.	UNDER PRESS. YES ☐ NO ☒		BUFFER YES ☐ NO ☒		MANHOLE LOCATION MH# NA
TRANSMISSION	26GA LIMIT YES ☐ NO ☒		AMT. BRIDGE TAP	INPUT	KF

PROJECT #131104



PROPOSED TELCO DUCTS

30+180.000



PROPOSED TELCO DUCT

30+148.400

3/2/2001

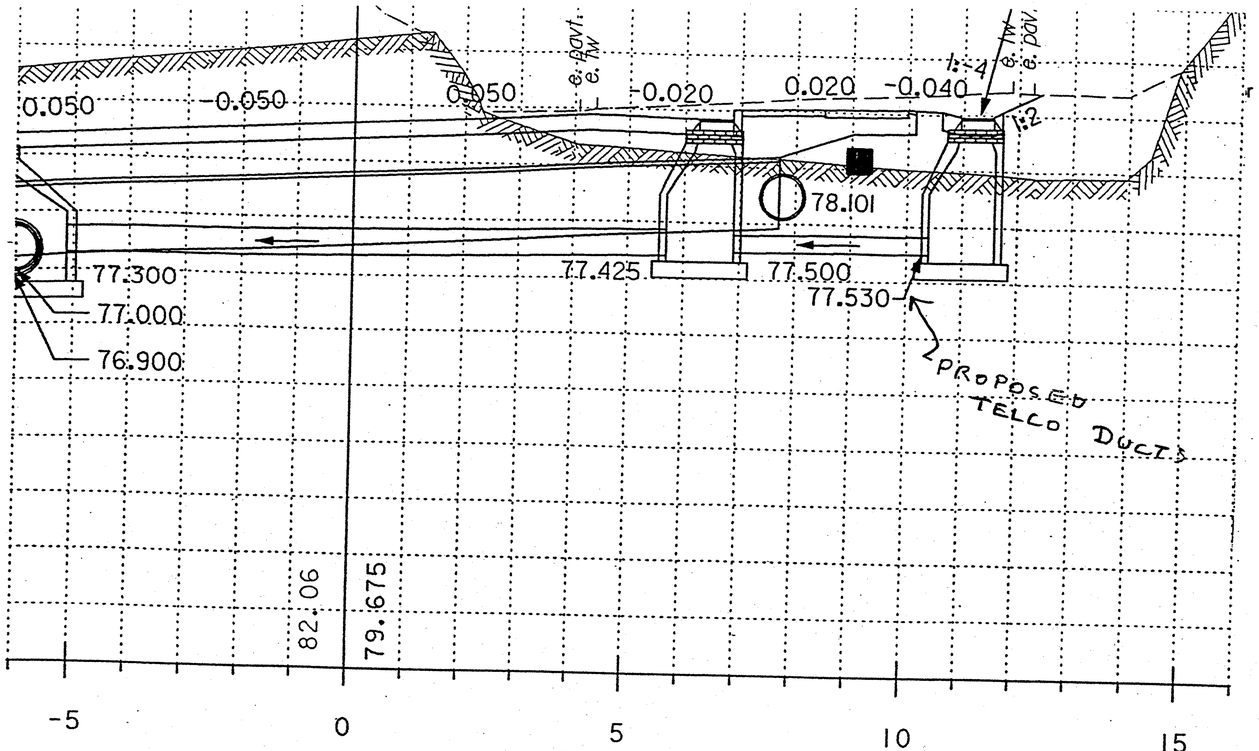
NOT to scale

145F

VERIZON

N	SAFETY NOTES: TRAFFIC, ROAD CONSTRUCTION	MOD/REV NO.	DATE	EWO NO.
				PRINT 7 OF
				PREPARED BY:
				C.O. /EXCHANGE NAME:
	SIGNATURE DATE 3/1/2001	TYPE	RECORD REF:	BRATTLEBORO
		AERIAL	1-4E	C.O. /EXCHANGE CODE:
	PRE CT YES ☐ NO ☒	UNDERGROUND	—	4731
	PRIMARY VOLTAGE TO GROUND	BLOCK (NYT)	—	MUNICIPALITY:
	7.2 KV MGN SYSTEM	CONDUIT	—	BRATTLEBORO
CABLE PRESS.	UNDER PRESS. YES ☐ NO ☒	BUFFER YES ☐ NO ☒		MANHOLE LOCATION MH# NA
TRANSMISSION	26GA LIMIT YES ☐ NO ☒	AMT. BRIDGE TAP	INPUT	KF

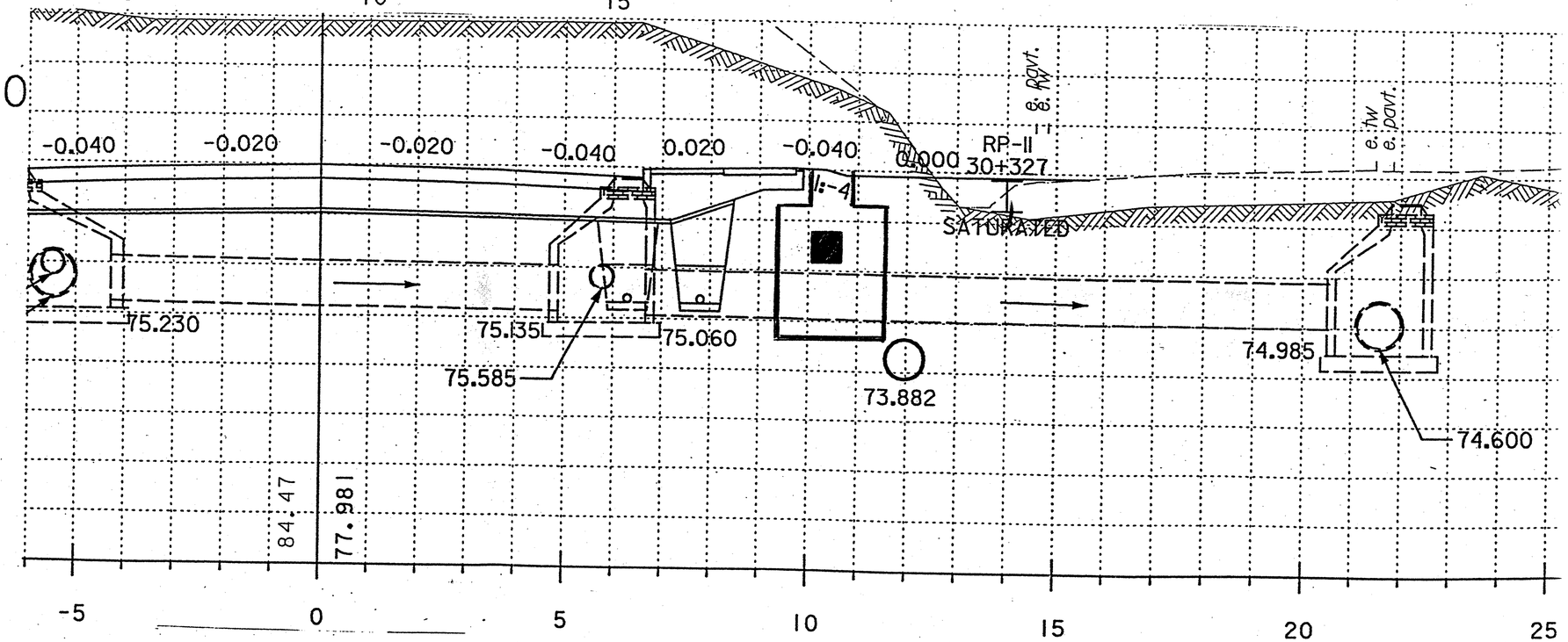
PROJ. # 131104



Not to Scale

PROPOSED MH#27H

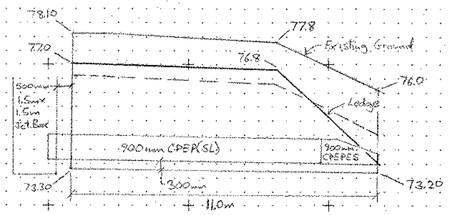
30+250.000



30+330.000

3/2/2001

145 G



A202+93 - A203+52 RT
Jct. Box to Outfall

Areas from planimeter

Trench width = 1.90m

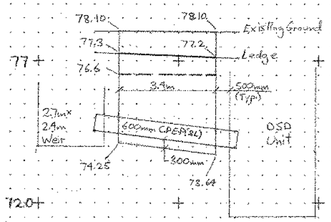
Trench Earth @ 1 = 12.03m² · 1.90m = 22.86m³

Trench Earth @ 1.5 = 1.30m² · 1.90m = 2.47m³

Trench Rock @ 1 = 4.0m² · 1.90m = 7.60m³

Trench Rock @ 1.5 = 29.9m² · 1.90m = 56.81m³

D&B 3/10/05



Trench width = 1.60m

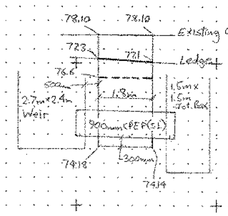
Trench Earth = $\frac{0.8m+0.9m}{2}$ · 1.60m · 3.4m = 4.62m³

Trench Rock = $\frac{0.7m+0.6m}{2}$ · 1.60m · 3.4m = 3.54m³

Trench Rock = $\frac{2.35m+3.56m}{2}$ · 1.60m · 3.9m · 1.5 = 29.11m³

D&B 3/10/05

30+338 - 30+339 RT
Weir to DSD Unit



Trench width = 1.90m

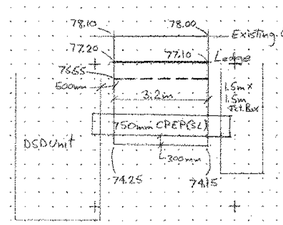
Trench Earth = $\frac{0.8m+1.0m}{2}$ · 1.90m · 1.8m = 3.08m³

Trench Rock = $\frac{2.7m+2.5m}{2}$ · 1.90m · 1.8m = 2.05m³

Trench Rock = $\frac{2.12m+2.96m}{2}$ · 1.90m · 1.8m · 1.5 = 12.52m³

D&B 3/10/05

30+338 - A203+93 RT
Weir to Jct. Box



Trench width = 1.75m

Trench Earth = 0.9m · 1.75m · 3.2m = 5.04m³

Trench Rock = $\frac{0.65m+0.55m}{2}$ · 1.75m · 3.2m = 3.36m³

Trench Rock = $\frac{2.3m+2.9m}{2}$ · 1.75m · 3.2m · 1.5 = 19.74m³

D&B 3/10/05

30+339 - A203+93 RT
DSD Unit to Jct. Box

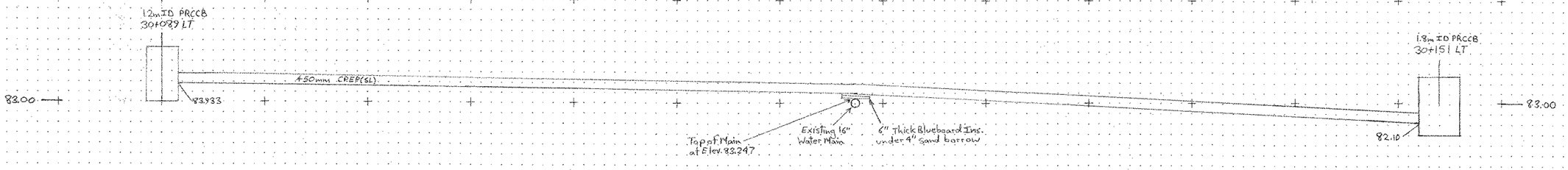
Scale 1:100

1.5m depth limit

Existing Ledge

Pay Limits Authorized

PROJECT: Brattleboro	PROJECT NO.: NH010-2(2)
DESIGN FILE NAME:	
IPARM FILE NAME: Daryl Bassett	PLOT DATE: 01-MAY-1996
	SHEET: 150 OF 158



ML Sta. 30+089 - 30+151 LT Revised Profile

Scale = 1:100

PROJECT: Brattleboro	PROJECT NO.: NH 010-2(2)
DESIGN FILE NAME: IPARM FILE NAME: D. Bassett	PLOT DATE: 2/16/05 ~~01 MAY 1996~~
	SHEET: 15 OF 15

ITEM DETAIL AND DRAINAGE SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE STRUCTURES

STA.	STA.	POSITION	ASKEW	TYPE IN/OUT	DITCH IN	DITCH OUT	PIPE ARCH S IN	PIPE ARCH R IN	PIPE ARCH L FT	PIPE D	PIPE L	ALLOWABLE OPTIONS PCCSP TH	CAAP TH	RCP CL	CSP TH	CPEP SL	PCCSP FI TH	PIPE ELBOW NO-DEG	ES EA	CB	PRCCDT	DEPTH DI	CONC CL B	REIN STEEL	DI GRATE TYPE	CHAN ELEV	STRUC No.	TR EXCAV EARTH CM	TR EXCAV ROCK CM	COMM EXC	UNC CHAN EXC	STRUC EXCAV CM	GRAN BKF STRUC CM	GRAN BORR	EROS MATT	STONE FILL TYPE	MRKR POSTS LT	MRKR POSTS RT	REMARKS
30+089	30+089	RT/LT								450	18.0					X					X				D		P1	11.19	77.70										
30+089	30+151	LT								450	61.1					X					X				D		P2	11.00	26.66										
30+151	30+151	RT/LT								450	8.5					X					X				E		P3	6.08	7.82										
30+151		LT								450	1.5					X					X				A		P4	7.39											
30+147		LT																																					
30+148	30+148	LT								750	2.4					X					X				COV.		P33		93.22			16.32							
30+148	30+148	RT/LT								750	19.35					X					X				COV.		P32		23.21			16.69							
30+198	30+210	RT								750	57.63					X					X				COV.		P31		68.10			31.94							
30+151	30+180	LT								750	26.63	X									X				E		P5		16.60			12.39							
30+180	30+180	RT/LT								450	15.0					X					X				E		P6	5.65	2.59										
30+180	30+180	RT								300	3.5					X					X				A		P30	6.92											
30+180		LT								450	1.5					X					X				A		P7	8.57											
30+180	30+250	LT								750	68.98	X									X				E		P8	123.7	72.56			13.01	41.89						
30+210	30+265	RT								750	54.1	X									X				COV.		P28	56.7	60.8			12.32	60.14						
30+250	30+250	RT								300	3.5					X					X				A		P29	4.52	8.34										
30+250		LT								450	1.5					X					X				A		P10		9.42										
30+250	30+285	LT								900	34.0	X									X				E		P11		84.25			10.13	65.96						
30+285	30+326	LT								900	39.3					X					X				D		P12		154.0			13.93	77.97						
30+323	A203+52	RT								750	37.5					X					X				COV.		P26		260.9			21.07	53.67						
30+326		LT								450	1.5					X					X				A		P13		9.23										
30+326	30+326	RT/LT								900	10.0					X					X				D		P14		23.14			22.22	17.16						
30+326		RT								900	14.9					X					X				D		P15		58.0			18.23	26.47						
30+337	5+016	LT								450	2.8					X					X				A		P16		16.31				9.19						
30+326	30+337	LT								450	9.7					X					X				D		P17		6.36										
30+326	30+337	RT								450	9.8					X					X				D		P18		23.2				10.12						
30+326	30+338	RT								900	9.7					X					X				A		P19		6.22										
30+338	30+339	RT								600	5.1					X					X				A		P20		21.3				10.33						
30+338	A203+43	RT								900	3.9					X					X				A		P21		7.16										
30+339	A203+43	RT								750	4.8					X					X				A		P22		54.26				16.89						
A203+43	A203+52	RT								900	9.7					X					X				A		P19	4.62	27.65			31.94	5.17						
30+180	30+220	LT																									P22	3.08	19.57				4.12						
A203+53.5	A203+72	RT																			X				COV.		P22		23.1			50.93	5.55						
30+130	30+300	RT/LT																			X			2	COV.		P24	25.33	64.41			103.76	18.23						
30+250	30+250	RT/LT								450	11.5					X					X				COV.		P25		29.6			42.57							
30+265	30+323	RT								750	55.5	X									X				E		P9	2.47	10.36										
30+326	30+357.4	RT								900	36.4	DETOUR				X					X				COV.		P27		14.29			10.60	98.81						
TOTALS																													117.6										
																												1098.24	1303.03			427.55	572.02						

GUARD RAIL

STA.	STA.	LT.	RT.	END TREATMENT
TOTALS				

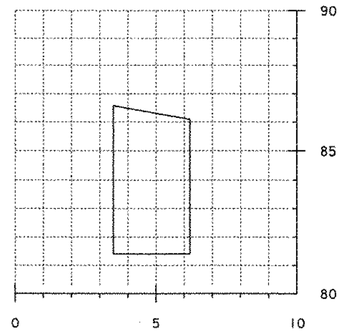
UNDERDRAIN

STA.	STA.	TYPE	POS.	D mm	L m	TRENCH E	TRENCH R	GRAN BKF	FB	MKR PST
30+089	30+151		LT	150	63.0	73.39			1	
30+125	30+148		RT	150	25.3	40.23			1	
30+154	30+180		LT	150	24.9	44.25			1	
30+182	30+250		LT	150	68.0	87.98	45.15		1	
30+252	30+285		LT	150	33.0		72.23		1	
30+287	30+326		LT	150	39.3		35.68		1	
30+212	30+250		RT	150	40.0	3.20	73.78		1	
30+310	30+326		RT	150	16.0		32.78		1	
30+326	30+352		LT	150	27.0		40.64		1	
30+326	30+352		RT	150	26.0		38.56		1	
TOTALS					362	251.1	388.87		10	

PROJECT NAME: Brattleboro
PROJECT NUMBER: NH 010-2(2)

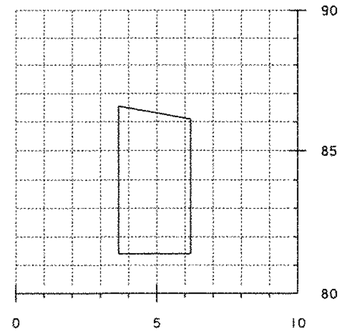
FILE NAME:
PROJECT LEADER:
DESIGNED BY:
PLOT DATE: 24-SEP-2001
DRAWN BY: D. Bassett
CHECKED BY:
SHEET 1 OF 1

152 KS



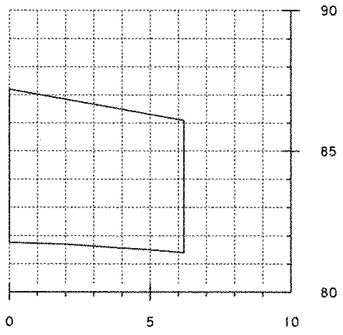
FRONT1 OF ABUTMENT FOOTING

AREA = 13.406m2



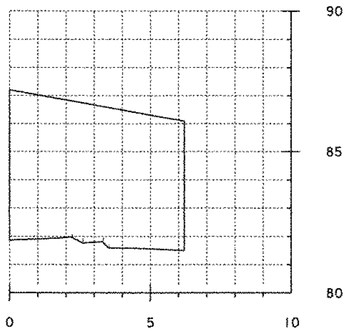
FRONT2 OF ABUTMENT FOOTING

AREA = 12.581m2



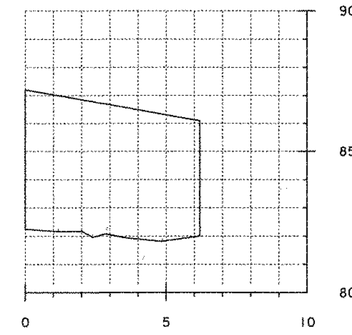
FRONT3 OF ABUTMENT FOOTING

AREA = 31.237m2



MIDDLE OF ABUTMENT FOOTING

AREA = 30.459m2



BACK OF ABUTMENT FOOTING

AREA = 28.666m2

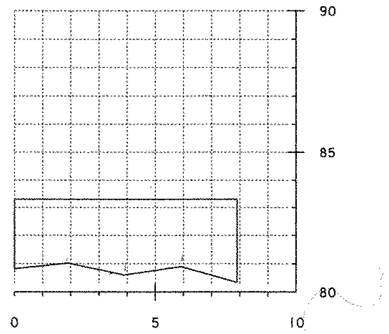
SARGENT BROOK SOUTH

COFFERDAM EXCAVATION EARTH

0 1 2 4 6 8 10

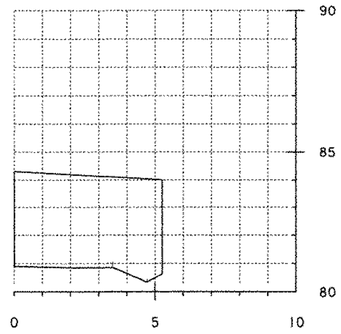
SCALE = 1:100

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
	PLOT DATE: 25-MAR-2005
LEDGE SECTIONS 1534	



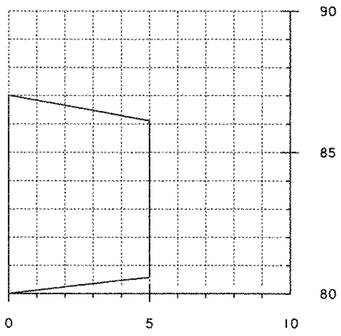
FRONT OF WINGWALL TWO FOOTING

AREA = 19.992m2



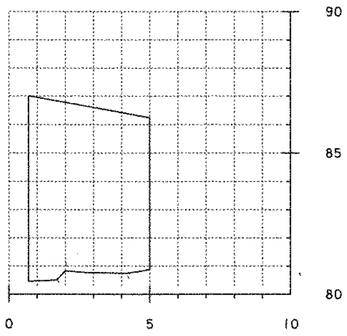
BACK OF WINGWALL TWO FOOTING

AREA = 17.785m2



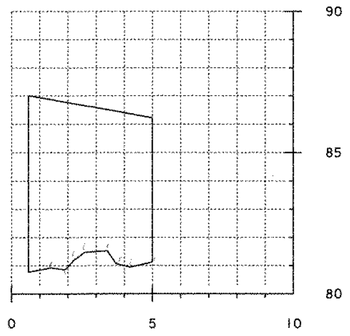
FRONT OF ABUTMENT FOOTING

AREA = 31.280m2



MIDDLE OF ABUTMENT FOOTING

AREA = 25.425m2



BACK OF ABUTMENT FOOTING

AREA = 24.194m2

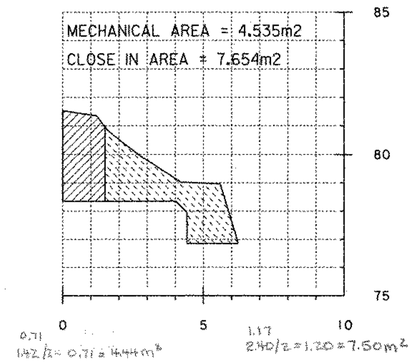
SARGENT BROOK NORTH

COFFERDAM EXCAVATION EARTH

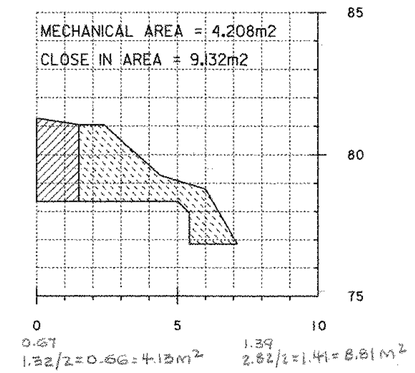
0 1 2 4 6 8 10

SCALE = 1:100

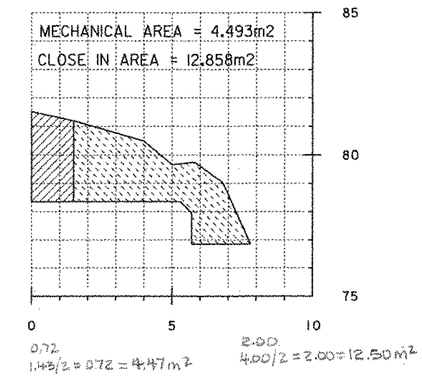
PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
	PLOT DATE: 25-MAR-2005
LEDGE SECTIONS 1S4+S	



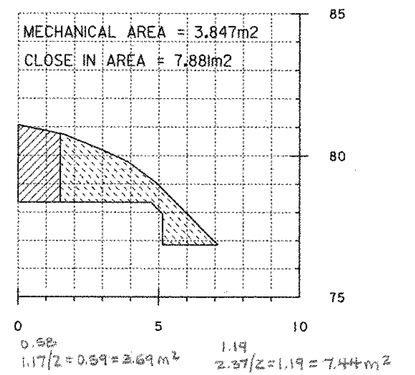
FRONT OF ABUTMENT FOOTING



MIDDLE OF ABUTMENT FOOTING



BACK OF ABUTMENT FOOTING



BACK OF ABUTMENT FOOTING

LEGEND

= MECHANICAL REMOVAL ZONE

= CLOSE IN REMOVAL ZONE

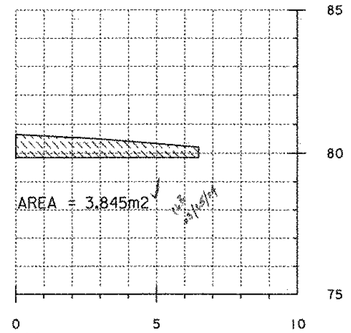
ROUTE 9 BRIDGE NORTH ABUTMENT
PHASE ONE LEDGE SECTIONS

0 1 2 4 6 8 10

SCALE = 1:100

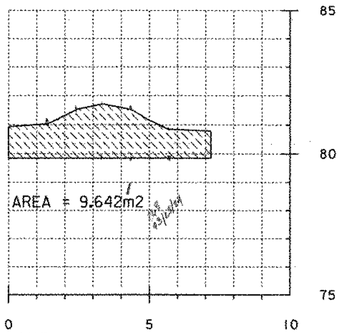
VTD 1/27/05

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
	PLOT DATE: 10-MAR-2004
LEDGE SECTIONS 155 xs	



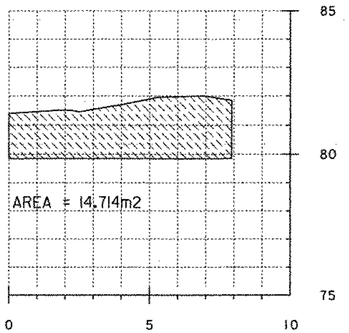
0.60
1.20/2 = 0.60 = 3.75 m²

FRONT OF WWIA



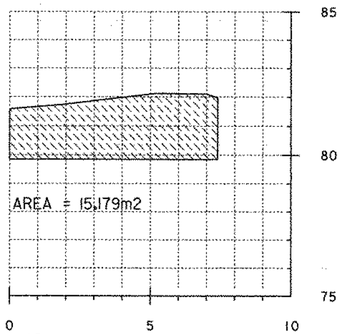
1.43
2.91/2 = 1.46 = 9.13m²

MIDDLE OF WWIA



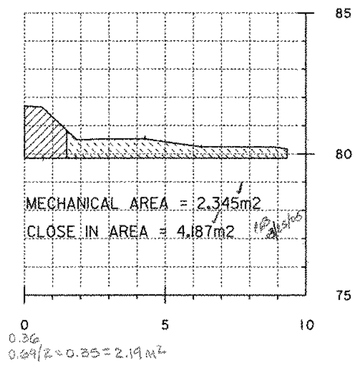
2.32
4.64/2 = 2.32 = 14.50 m²

1.5M LINE OF WWIA



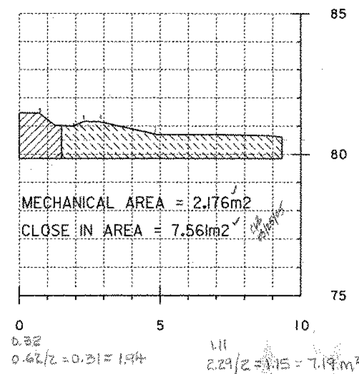
2.35
4.73/2 = 2.37 = 14.81 m²

BACK OF WWIA



0.36
0.69/2 = 0.35 = 2.19 m²

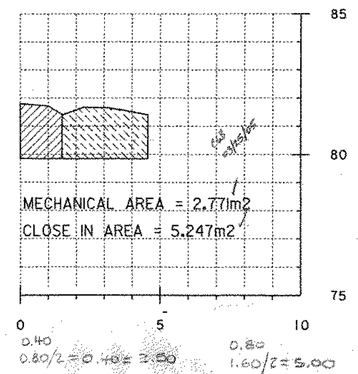
FRONT OF ABUTMENT FOOTING



0.32
0.62/2 = 0.31 = 1.94

2.29/2 = 1.15 = 7.19 m²

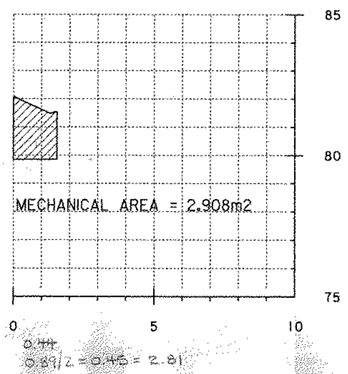
MIDDLE OF ABUTMENT FOOTING



0.40
0.80/2 = 0.40 = 2.50

0.80
1.60/2 = 5.00

BACK OF ABUTMENT FOOTING



0.44
0.89/2 = 0.45 = 2.81

BACK OF ABUTMENT FOOTING

LEGEND

= MECHANICAL REMOVAL ZONE

= CLOSE IN REMOVAL ZONE

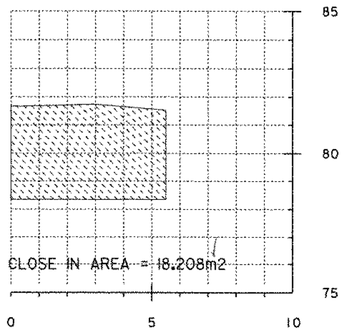
ROUTE 9 BRIDGE SOUTH ABUTMENT
PHASE ONE LEDGE SECTIONS

0 1 2 4 6 8 10

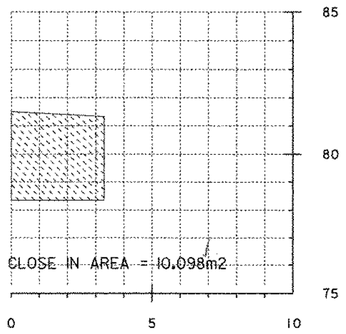
SCALE = 1: 100

JPD 1/27/05

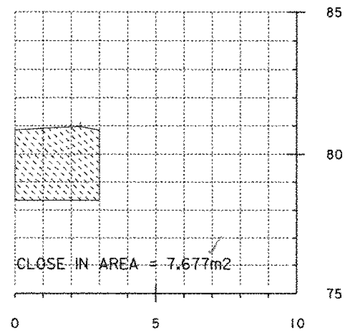
PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
PLOT DATE: 10-MAR-2004	
LEDGE SECTIONS 156 XS	



FRONT OF WINGWALL 4 FOOTING

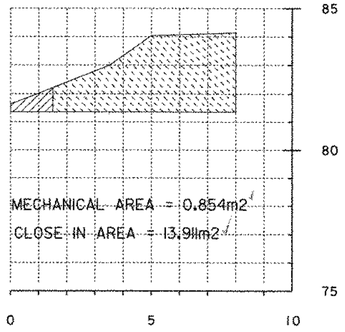


MIDDLE OF WINGWALL 4 FOOTING

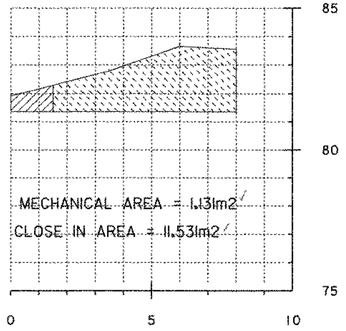


BACK OF WINGWALL 4 FOOTING

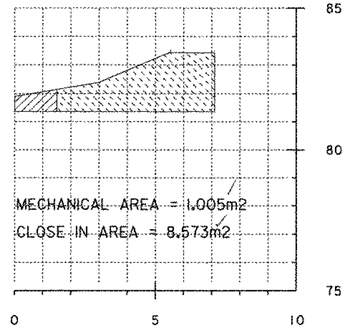
ROUTE 9 BRIDGE NORTH ABUTMENT
PHASE TWO LEDGE SECTIONS



FRONT OF WINGWALL 2A FOOTING



MIDDLE OF WINGWALL 2A FOOTING



BACK OF WINGWALL 2A FOOTING

LEGEND

= MECHANICAL REMOVAL ZONE

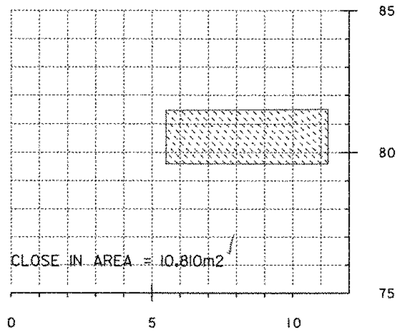
= CLOSE IN REMOVAL ZONE

ROUTE 9 BRIDGE SOUTH ABUTMENT
PHASE TWO LEDGE SECTIONS

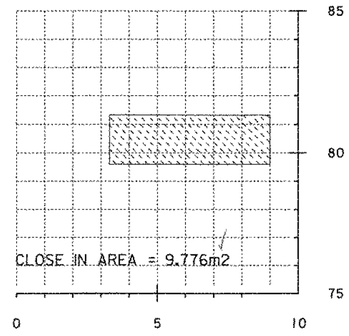
0 1 2 4 6 8 10

SCALE = 1:100

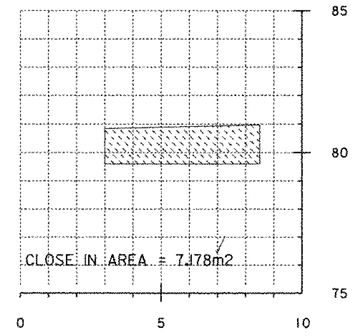
PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
	PLOT DATE: 25-MAR-2005
LEDGE SECTIONS 157+S	



FRONT OF WINGWALL 4A FOOTING



MIDDLE OF WINGWALL 4A FOOTING



BACK OF WINGWALL 4A FOOTING

CLS 03/28/05

LEGEND

= MECHANICAL REMOVAL ZONE

= CLOSE IN REMOVAL ZONE

ROUTE 9 BRIDGE NORTH ABUTMENT
PHASE TWO LEDGE SECTIONS

0 1 2 4 6 8 10

SCALE = 1:100

PROJECT: BRATTLEBORO	PROJECT NO.: NH 010-2(2)
PLOT DATE: 25-MAR-2005	
LEDGE SECTIONS 158+S	

TYPICAL ROADWAY SECTIONS

MATERIAL ITEM	THICKNESS TOLERANCE
PAVEMENT (TOTAL DEPTH ALL LAYERS)	+/- 5
SUBBASE	+/- 30
SAND BORROW	+/- 30

SEEDING FORMULA URBAN AREAS

% MASS	kg/ha	NAME	PUR %	GERM %
42.5	38.0	CREEPING RED FESCUE	98	85
10.0	9.0	PERENNIAL RYE GRASS	95	90
42.5	38.0	KENTUCKY BLUE GRASS	85	85
5.0	5.0	ANNUAL RYE GRASS	95	85
100.0	90.0			

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.

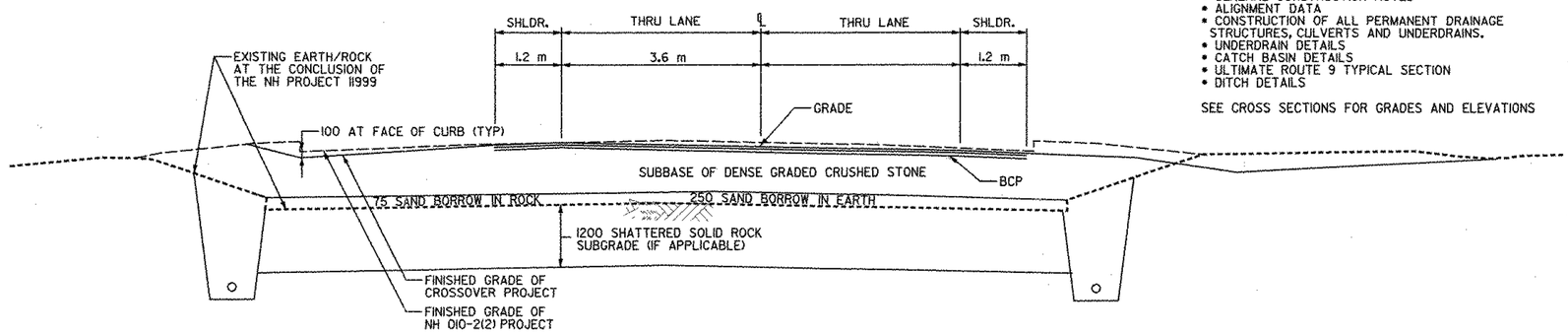
MARKER POSTS: TO BE PLACED AS INDICATED OR AS DIRECTED BY THE ENGINEER.

SLOPE ROUNDING: ALL CUT SLOPES TO BE ROUNDED IN ACCORDANCE WITH STD SHEET B-5M. SLOPE LINES SHOWN ON THE PLANS AND CROSS SECTIONS DO NOT SHOW THE SLOPE ROUNDING.

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.

40 BITUMINOUS CONCRETE PAVEMENT (TYPE III)
50 BITUMINOUS CONCRETE PAVEMENT (TYPE II)
450 SUBBASE OF DENSE GRADED CRUSHED STONE (MINIMUM)



APPROACH TO BRIDGE SECTION STA 1+330 - STA 1+360

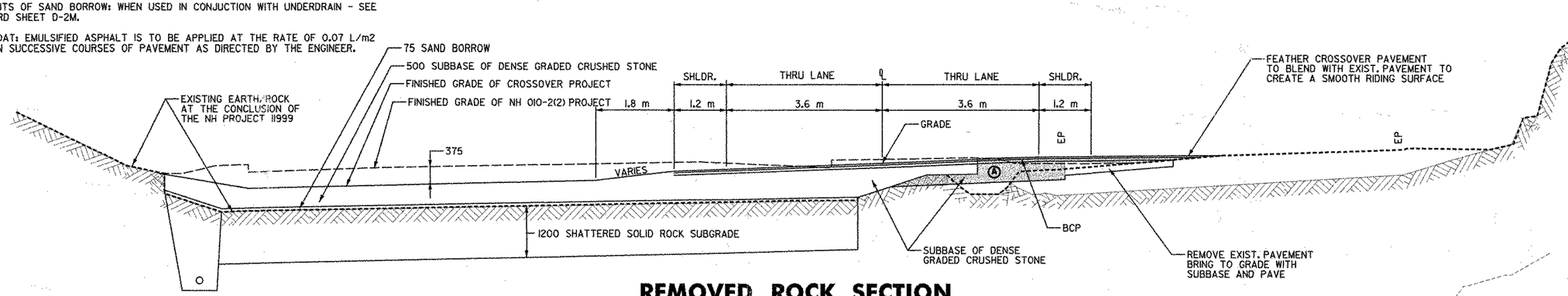
(NOT TO SCALE)

THESE PLANS ARE TO BE USED TOGETHER WITH THE NH 010-2(2) PLANS DATED 10/17/02. SEE THE NH 010-2(2) PLANS FOR ADDITIONAL DETAILS INCLUDING BUT NOT LIMITED TO:

- GENERAL CONSTRUCTION NOTES
- ALIGNMENT DATA
- CONSTRUCTION OF ALL PERMANENT DRAINAGE STRUCTURES, CULVERTS AND UNDERDRAINS.
- UNDERDRAIN DETAILS
- CATCH BASIN DETAILS
- ULTIMATE ROUTE 9 TYPICAL SECTION
- DITCH DETAILS

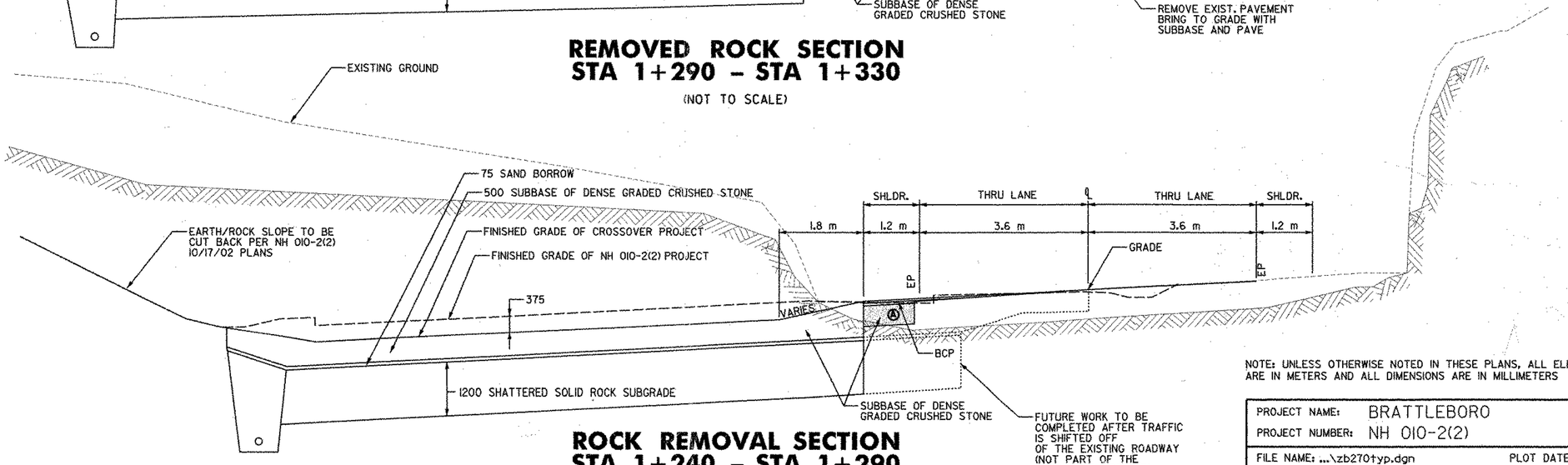
SEE CROSS SECTIONS FOR GRADES AND ELEVATIONS

Ⓐ AS A MINIMUM, IN CROSSOVER AREAS BEYOND THE LIMIT OF THE EXISTING ROADWAY, THE CONTRACTOR WILL PROVIDE:
40 BITUMINOUS CONCRETE PAVEMENT
60 BITUMINOUS CONCRETE PAVEMENT
450 SUBASE OF DENSE GRADED CRUSHED STONE



REMOVED ROCK SECTION STA 1+290 - STA 1+330

(NOT TO SCALE)



ROCK REMOVAL SECTION STA 1+240 - STA 1+290

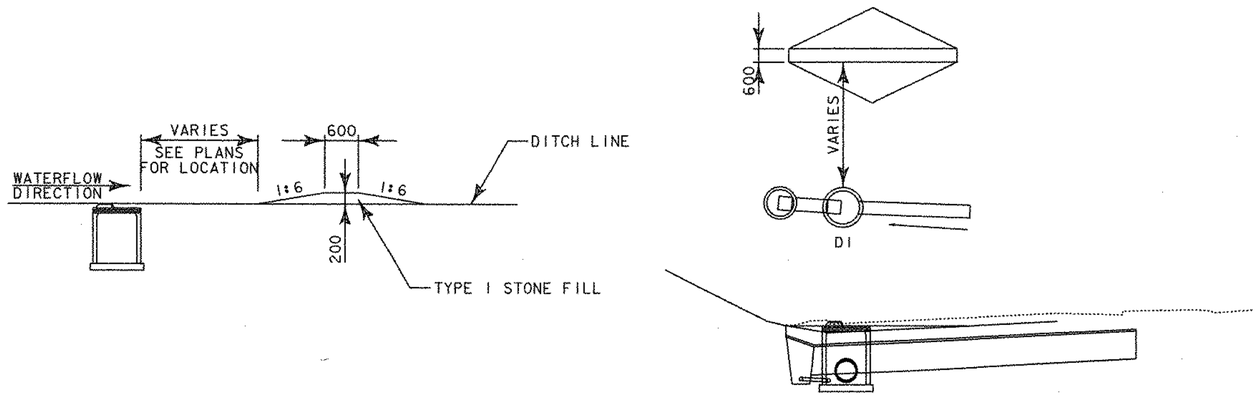
(NOT TO SCALE)

NOTE: UNLESS OTHERWISE NOTED IN THESE PLANS, ALL ELEVATIONS ARE IN METERS AND ALL DIMENSIONS ARE IN MILLIMETERS

PROJECT NAME:	BRATTLEBORO
PROJECT NUMBER:	NH 010-2(2)

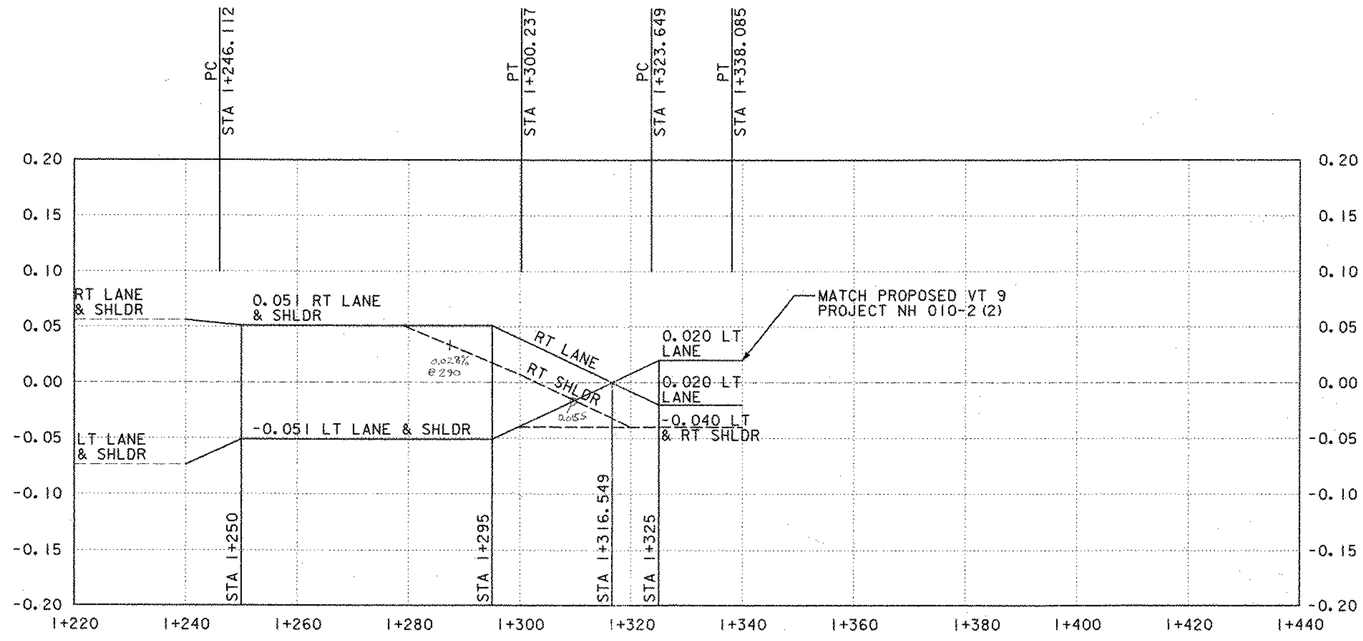
FILE NAME: ...\zb270typ.dgn	PLOT DATE: 03/28/2003
PROJECT LEADER: WRH	DRAWN BY: PTS
DESIGNED BY: PTS	CHECKED BY: JAW
CLD REF NO. 02-0439	SHEET 1 OF 13

168 Rock

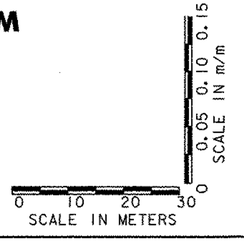


TYPICAL DITCH CHECK DAM DETAIL

(NOT TO SCALE)



BANKING DIAGRAM



MISCELLANEOUS DETAILS

PROJECT NAME:	BRATTLEBORO
PROJECT NUMBER:	NH 010-2(2)
FILE NAME: ...\zb270frm.dgn	PLOT DATE: 03/28/2003
PROJECT LEADER: WRH	DRAWN BY: PTS
DESIGNED BY: PTS	CHECKED BY: JAW
CLD REF NO. 02-0439	SHEET 2 OF 13

161 Pages

STATE OF VERMONT
AGENCY OF TRANSPORTATION

ITEM DETAIL SHEET

NOT Metric

CURB

BEGIN STATION	END STATION	POSITION		REMARKS
		LEFT	RIGHT	
km + m	km + m	m	m	

SIDEWALK

BEGIN STATION	END STATION	POSITION		REMARKS
		LEFT	RIGHT	
km + m	km + m	m^2	m^2	

GUARD RAIL

BEGIN STATION	END STATION	POSITION		END TREATMENT	
		LEFT	RIGHT	BEGIN	END
km + m	km + m	m	m	ea	ea

UNDERDRAIN

BEGIN STATION	END STATION	TYPE	POSITION	DIA.	LENGTH	TRENCH		GRAN BKFILL	FB	MKR PST
						EARTH	ROCK			
km + m	km + m			mm	m	m^3	m^3	m^3	ea	ea
30+265	30+285	U	LT	150	20		43			
30+287	30+326	U	LT	150	39		85		1	
30+310	30+326	U	RT	150	16		33		1	
30+326	A203+50	U	LT	150	6	9	39		1	
30+326	A203+50	U	RT	150	6	9	42		1	
TOTAL	UNDERDRAIN				87	18	242		4	

PROJECT NAME: **BRATTLEBORO**
PROJECT NUMBER: **NH 010-2(2)**

FILE NAME: **zb270ids.xls**
PROJECT LEADER: **W HUSBAND**
DESIGNED BY: **P SHEDD**
ITEM DETAIL SHEET #1

PLOT DATE: **3/27/03**
DRAWN BY: **P SHEDD**
CHECKED BY: **J WARNER**
SHEET **3** OF **13**

162 Pages

STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE DETAIL SHEET

Metric

STATION	STATION	POS.	NOTE NO.	INLET/OUTLET TYPE		DITCH		PIPE ARCH			PIPE		ALLOWABLE OPTIONS						PIPE ELBOW	ES	PRCC size	PRCCM size	DEPTH DI	CONC CLASS B	REINF STEEL	DI GRATE	CHAN ELEV	CRM	TRENCH EXCAVATION		CHAN EXC	CHAN EXC ROCK	STRUCT EXCAV	GRAN BKFILL STRUCT	GRAN BORR	EROS MATT	STONE FILL		MARKER POSTS		RELAY PIPE		REMARKS
																												EARTH	ROCK									LT	RT		
km + m	km + m			INLET	OUTLET	IN	OUT	SPAN mm	RISE mm	L m	D mm	L m	PCCSP mm	CAAP mm	RCP CL	CSP mm	CPEP SL mm	PCCSP PI mm	no. deg.	ea	size	size	mm	m^3	kg	type	ea	m^3	m^3	m^3	m^3	m^3	m^3	m^3	m^3	m^2	m^3	type	ea	ea	m		
30+265	30+285	LT	P11	CAP	1.5m CB						900	18.5	2.01	1.52															50.70				5.27								CAP INLET FOR FUTURE USE
30+290	30+323	RT	P27	CAP	1.5m MH						750	32.8	2.01	1.52															74.40				8.60								CAP INLET FOR FUTURE USE
30+285	30+326	LT	P12	1.5m CB	2.1m CB						900	39.3			III		X				1.5				D				131.64			23.82	10.53							
30+323	30+328	RT	P26	1.5m MH	CAP						750	5.4			III		X					1.5							22.90			40.83	1.40							CAP OUTLET FOR FUTURE USE
30+326		LT	P13	1.2m CB	2.1m CB						450	1.5	1.63	1.52	III		X				1.2				A				13.43												
30+326	30+326	LT/RT	P14	2.1m CB	1.8m CB						900	9.2			III		X				2.1				D				28.21			33.40	1.95							
30+326		RT	P15	1.8m CB	1.8m CB						900	4.8			III		X				1.8				D				14.70			31.11	1.00							
30+337	5+016	LT	P16	1.2m CB	1.2m CB						450	8.8	1.63	1.52	III		X				1.2				A			23.97					1.64							
30+326	30+337	LT	P17	1.2m CB	2.1m CB						450	9.0	1.63	1.52	III		X				1.2				D				21.98				1.58							
30+326	30+337	RT	P18	1.2m CB	1.8m CB						450	9.2	1.63	1.52	III		X				1.2				D				22.36				1.62							
30+326	A 203+57	RT	P30	1.8m CB	SF						900	31.5			III		X				1.8				A				205.00			45.99	9.00							THE INTENT IS TO TEMPORARILY USE THE PRCCB INTENDED FOR STA 30+326 RT AT THIS LOCATION
				4	1.2m CB						450	28.5	1.63	1.52	III		X																							
				1	1.5m CB						750	32.8	2.01	1.52																											
				2	1.8m CB						750	5.4			III		X																								
				1	2.1m CB						900	18.5	2.01	1.52																											
				1	1.5m MH						900	84.8			III		X											24.0	585.3			175.2	42.6							

PROJECT NAME:	**BRATTLEBORO**
PROJECT NUMBER:	**NH 010-2(2)**
FILE NAME:	**zb270dds.xls**
PROJECT LEADER:	**W HUSBAND**
DESIGNED BY:	**P SHEDD**
DRAINAGE DETAIL SHEET #1	
PLOT DATE:	**3/28/03**
DRAWN BY:	**P SHEDD**
CHECKED BY:	**J WARNER**
SHEET **4** OF **13**	

163 Rock

STATE OF VERMONT
AGENCY OF TRANSPORTATION

EARTHWORKS

Metric

STATION	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK VOLUME	ROCK EXCAVATION AREA	ROCK EXCAVATION VOLUME	EMBANKMENT AREA	EMBANKMENT VOLUME		
km + m	m	m^2	m^3	m^2	m^3	m^2	m^3	m^2	m^3
Crossover									
1+240		0		0					
	20		2160		1130				
1+260		216		113					
	20		5090		2830				
1+280		293		170					
	10		1550		930				
1+290		17		16				CUT	8930
	10		90		80			ROCK	4970
1+300		1		0				R.FAC	0.495
	20		10		0			FILL	0
1+320		0		0				F.FAC	1.15
	20		20		0			EX_C	11390
1+340		2		0					
	10		10		0				
1+350		0		0					
	COLUMN TOTAL		8930		4970				

STATION	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK VOLUME	ROCK EXCAVATION AREA	ROCK EXCAVATION VOLUME	EMBANKMENT AREA	EMBANKMENT VOLUME		
km + m	m	m^2	m^3	m^2	m^3	m^2	m^3	m^2	m^3

STATION	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK VOLUME	ROCK EXCAVATION AREA	ROCK EXCAVATION VOLUME	EMBANKMENT AREA	EMBANKMENT VOLUME		
km + m	m	m^2	m^3	m^2	m^3	m^2	m^3	m^2	m^3

SUMMARY AND BALANCES

STATION TO STATION		TOT EXC. EARTH & ROCK	ROCK EXCAV	EMBANK	EXCESSES		ACUMULATIVE EXCESSES	
km + m	km + m	m^3	m^3	m^3	CUT	FILL	CUT	FILL
CROSSOVER								
1+240	1+350	8930	4970	0	11390		11390	

REMARKS

EARTH AND ROCK EXCAVATION	8930
SOLID ROCK EXCAVATION	4970
EARTH EXCAVATION	3960
PLANIMETERED FILL	0
LESS FACTORED SOLID ROCK	0
LESS DISPLACEMENT OF ANY LARGE STRUCTURES	0
NET PLANIMETERED FILL	0
FACTOR	0
PLANIMETERED FILL INCLUDING FACTOR	0
MATERIALS AVAILABLE FOR FILLS	
EARTH EXCAVATION	3960
CHANNEL EXCAVATION	0
UNDERDRAIN EXCAVATION	260
STRUCTURE EXCAVATION	175
TOTAL MATERIAL AVAILABLE FOR FILL	4395
TOTAL FILL INCLUDING FACTOR	0
TOTAL MATERIAL FOR FILL	4395
BORROW	
EXCESS EXCAVATION (VTRANS CASE II CRITERIA)	10856

PROJECT NAME: **Brattleboro**
PROJECT NUMBER: **NH 010-2(2)**

FILE NAME: **zb270earth.xls**
PROJECT LEADER: **WRH**
DESIGNED BY: **JAW**
EARTHWORK SHEET #1

PLOT DATE: **3/28/2003**
DRAWN BY: **JAW**
CHECKED BY: **PTS**
SHEET **5** OF **13**

164 Rock

MDOT Metric

EXCAVATION OF SURFACES AND PAVEMENTS
STA 1+272 TO 1+352 RT

100 mm WHITE LINE
STA 1+240 TO 1+363 LT & RT

100 mm YELLOW LINE
STA 1+240 TO 1+363 LT & RT

ENERGY ABSORPTION ATTENUATOR
STA 1+338 RT

TEMPORARY TRAFFIC BARRIER
STA 1+338 TO STA 1+350 RT 12
STA 1+336 TO STA 1+351 LT 15
STA 1+352 RT

TEMPORARY 100 mm WHITE LINE
STA 1+363 TO 1+428 LT & RT

TEMPORARY 100 mm YELLOW LINE
STA 1+363 TO 1+428 LT & RT

CONSTRUCT DRIVE
STA 30+330.0 RT (4.6 m WIDE GRAVEL)
STA 30+330.0 LT (3.0 m WIDE GRAVEL)

STA 1+240.000
BEGIN TEMPORARY CROSSOVER

STA 1+428.000
END TEMPORARY CROSSOVER

CURVE #1 DATA
Δ = 3°00'39.3" LT
R = 100.000
T = 27.743 m
L = 54.124 m
E = 3.777 m
BANK = 0.051 m/m

CURVE #2 DATA
Δ = 8°16'16.4" RT
R = 100.000 m
T = 7.231 m
L = 14.436 m
E = 0.261 m
BANK = 0.020 m/m

STA 30+330.000 VT RTE 9 =
STA 5+000.000 DRIVEWAY
STA 6+000.000 DRIVEWAY

STA A203+50.000
END PROJECT
NH 010-2(2)
BEGIN NH PROJECT 11999

STA 1+383.042 NH 010-2 (2)
STA A203+83.042 NH PROJECT 11999
ANGLE = 177°42'34.8"

USE FOR ALIGNMENT POINTS 30—35

STA 1+420 LT
25 M.P.H. W1-3L

STA 30+205 RT
25 M.P.H. W1-3L

ROAD CLOSED R11-2

STA 1+240 BEGIN LANE & SHLDR TAPER LT & RT
STA 1+250 END LANE TAPER LT & RT
STA 1+260 END SHLDR TAPER LT & RT
STA 1+383 BEGIN SHLDR TAPER LT & RT
STA 1+428 END SHLDR TAPER LT & RT

PC STA 1+246.112
PT STA 1+300.237
PI STA 1+330.880
PI STA 1+273.855
STA 1+323.649 PC
STA 1+338.085 PT

177°42'34.8"
N80°57'02"E
N72°40'46"E
S76°18'35"E
N83°14'29"E

Woods Road
Gravel Dr.
VERMONT
NEW HAMPSHIRE
NH STATE PLANE GRID
Conc. Pump House
Conc. Ret-Wall
Wood Steps
Conc. Bnd
Conc. Abutments
Underground Cable
No Numbers
Hardwoods
Woods
Mixed Hardwoods
Ledge
Roundabout Yield
Reduced Speed Ahead
No Trespassing Private Property
Entering Vermont Through Way Ends Here
State Highway Ends
State Highway Begins Through Way Begins Here C-2 Narrow Bridge
Jersey Barrier
Conn. River Dr. Private
Conn. River Road (Private) Do Not Enter
Concrete RR Tie Marker 62/56
13'-6"
Speed Limit 35

0 10 20 30
SCALE 1:250

ROADWAY LAYOUT PLAN

PROJECT NAME: BRATTLEBORO
PROJECT NUMBER: NH 010-2(2)

FILE NAME: ...\zb270ts3.dgn
PROJECT LEADER: WRH
DESIGNED BY: PTS
CLD REF NO. 02-0439
PLOT DATE: 03/31/2003
DRAWN BY: PTS
CHECKED BY: JAW
SHEET 6 OF 13

165 Pock

Metric

STA 1+240.000 MATCH EXIST

STA 1+350.026 NH 010-2(2) =
STA A203 50.000, LT 1.300 NH PROJECT 11999

STA 1+383.042 = STA A203+83.042

L = 80 m
K = 14

PVI STA = 1+240.000
PVI ELEV = 80.500

SAG 1+326.686
ELEV 77.951

PVT STA = 1+339.000
PVT ELEV = 78.005

PVI STA = 1+383.042
PVI ELEV = 78.391

PVI STA = 1+299.000
PVI ELEV = 77.654

-4.8242%

0.8777%

0.8000%

SEE TYPICAL SECTION
FOR DEPTHS AND MATERIALS

EXIST GROUND UPON
COMPLETION OF
NH PROJECT 11999

SEE TYPICAL SECTION
FOR DEPTHS AND MATERIALS

81.04
80.50
79.54 79.536
78.65 78.727
77.60 78.205
76.97 77.967
76.97 78.014
70.54 78.189
57.39 78.365
52.05 78.527
54.37 78.687

95 90 85 80 75 70 65 60 55 50

1+230 1+240 1+250 1+260 1+270 1+280 1+290 1+300 1+310 1+320 1+330 1+340 1+350 1+360 1+370 1+380 1+390 1+400 1+410 1+420

0 10 20
SCALE IN METERS

5 4 3 2 1 0

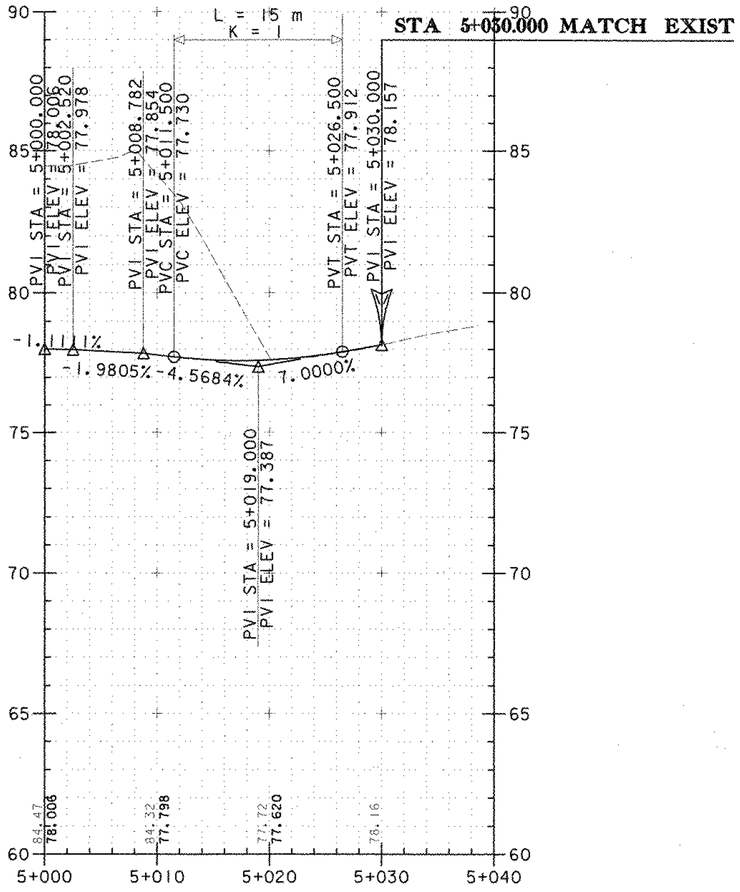
PROFILE - VT ROUTE 9

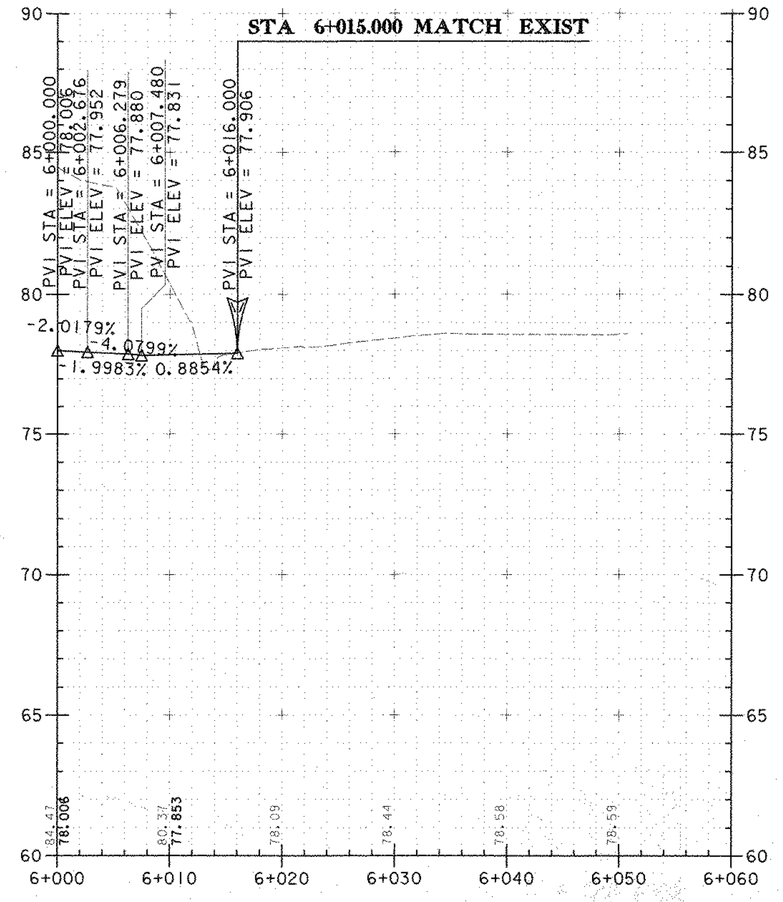
PROJECT NAME: BRATTLEBORO
PROJECT NUMBER: NH 010-2(2)

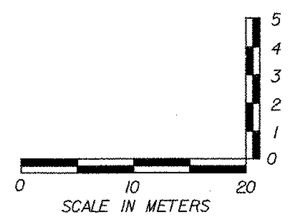
FILE NAME: ...\zb270pro.dgn
PROJECT LEADER: WRH
DESIGNED BY: PTS
CLD REF NO. 02-0439

PLOT DATE: 03/28/2003
DRAWN BY: PTS
CHECKED BY: JAW
SHEET 7 OF 13

166 Pack







PROFILE - DRIVES

PROJECT NAME: BRATTLEBORO
PROJECT NUMBER: NH 010-2(2)

FILE NAME: ...\zb270pro.dgn
PROJECT LEADER: WRH
DESIGNED BY: PTS
CLD REF NO. 02-0439

PLOT DATE: 03/28/2003
DRAWN BY: PTS
CHECKED BY: JAW
SHEET 8 OF 13

MDOT Metric

EROSION MATTING
STA 1+244 - 1+282 LT

STONE FILL, TYPE I
STA 1+255 LT
STA 1+270 LT
STA 1+295 LT
STA 1+310 LT

CHANGING ELEV. OF DROP INLETS, CATCH BASINS OR MANHOLES
STA 30+250 LT
STA 30+285 LT
STA 30+323 RT
STA 30+326 LT & RT
STA 30+337 LT & RT

N
NH STATE PLANE GRID

STA 1+240.000
BEGIN TEMPORARY CROSSOVER

STA 1+428.000
END TEMPORARY CROSSOVER

CHECK DAM, TYP
HAY BALES, TYP
EXIST 450 CMP REMOVE
EXIST 200 CMP REMOVE
EXIST 300 CMP
VERMONT
NEW HAMPSHIRE
VT ROUTE 9
STA 30+330.000 VT RTE 9 =
STA 5+000.000 DRIVEWAY
STA 6+000.000 DRIVEWAY
STA A203+50.000
END PROJECT
NH 010-2(2)
BEGIN NH PROJECT 11999

P11 STA. 30+265 LT TO STA. 30+285 LT
NEW 900 mm x 18.5 m PCCSP (2.01) OR CAAP (1.52)
CAP FOR FUTURE USE

P12 STA. 30+285 LT TO STA. 30+326 LT
NEW 900 mm x 39.3 m RCP (CLASS III) OR CPEP (SL)
NEW PRCCB AT INLET (1.5 m DIA.)
W/ CI GRATE TYPE D

P13 STA. 30+326 LT
NEW 450 mm x 1.5 m RCP (CLASS III) OR CPEP (SL)
OR PCCSP (1.63) OR CAAP (1.52)
NEW PRCCB AT INLET (1.2 m DIA.)
W/ CI GRATE TYPE A

P14 STA. 30+326 LT TO STA. 30+326 RT
NEW 900 mm x 9.2 m RCP (CLASS III) OR CPEP (SL)
NEW PRCCB AT INLET (2.1 m DIA.)
W/ CI GRATE TYPE D

P15 STA. 30+326 RT
NEW 900 mm x 4.8 m RCP (CLASS III) OR CPEP (SL)
NEW PRCCB AT INLET (1.8 m DIA.)
W/ CI GRATE TYPE D

P16 STA. 30+337 LT TO STA. 5+016 LT
NEW 450 mm x 8.8 m RCP (CLASS III) OR CPEP (SL)
OR PCCSP (1.63) OR CAAP (1.52)
NEW PRCCB AT INLET (1.2 m DIA.)
W/ CI GRATE TYPE A

P17 STA. 30+326 LT TO STA. 30+337 LT
NEW 450 mm x 9.0 m RCP (CLASS III) OR CPEP (SL)
OR PCCSP (1.63) OR CAAP (1.52)
NEW PRCCB AT INLET (1.2 m DIA.)
W/ CI GRATE TYPE D

P18 STA. 30+326 RT TO STA. 30+337 RT
NEW 450 mm x 9.2 m RCP (CLASS III) OR CPEP (SL)
OR PCCSP (1.63) OR CAAP (1.52)
NEW PRCCB AT INLET (1.2 m DIA.)
W/ CI GRATE TYPE D

P26 STA. 30+323 RT TO STA. 30+328 RT
NEW 750 mm x 5.4 m RCP (CLASS III) OR CPEP (SL)
CAP FOR FUTURE USE
NEW PRCMH AT INLET (1.5 m)
W/ CI COVER

P27 STA. 30+290 RT TO STA. 30+323 RT
NEW 750 mm x 32.8 m PCCSP (2.01) OR CAAP (1.52)
CAP FOR FUTURE USE

P30 STA. 30+326 RT TO STA A203+57 RT
NEW 900 mm x 31.5 m RCP (CLASS III) OR CPEP (SL)
OUTLET ONTO STONE FILL BETWEEN ABUTMENTS
NEW PRCCB AT INLET (1.8 m DIA.)
W/ CI GRATE TYPE A
THE INTENT IS TO TEMPORARILY USE THE PRCCB INTENDED FOR STA 30+326 RT AT THIS LOCATION

U6 STA. 30+265 LT TO STA. 30+285 LT
NEW 150 mm UD CAP FOR FUTURE USE

U7 STA. 30+287 LT TO STA. 30+326 LT
NEW 150 mm UD w/ FLUSHING BASIN AT STA 30+287

U8 STA. 30+310 RT TO STA. 30+326 RT
NEW 150 mm UD w/ FLUSHING BASIN AT STA 30+310

U9 STA. 30+326 LT TO STA. A203+50 LT
NEW 150 mm UD w/ FLUSHING BASIN AT STA A203+50

U10 STA. 30+326 RT TO STA. A203+50 RT
NEW 150 mm UD w/ FLUSHING BASIN AT STA A203+50

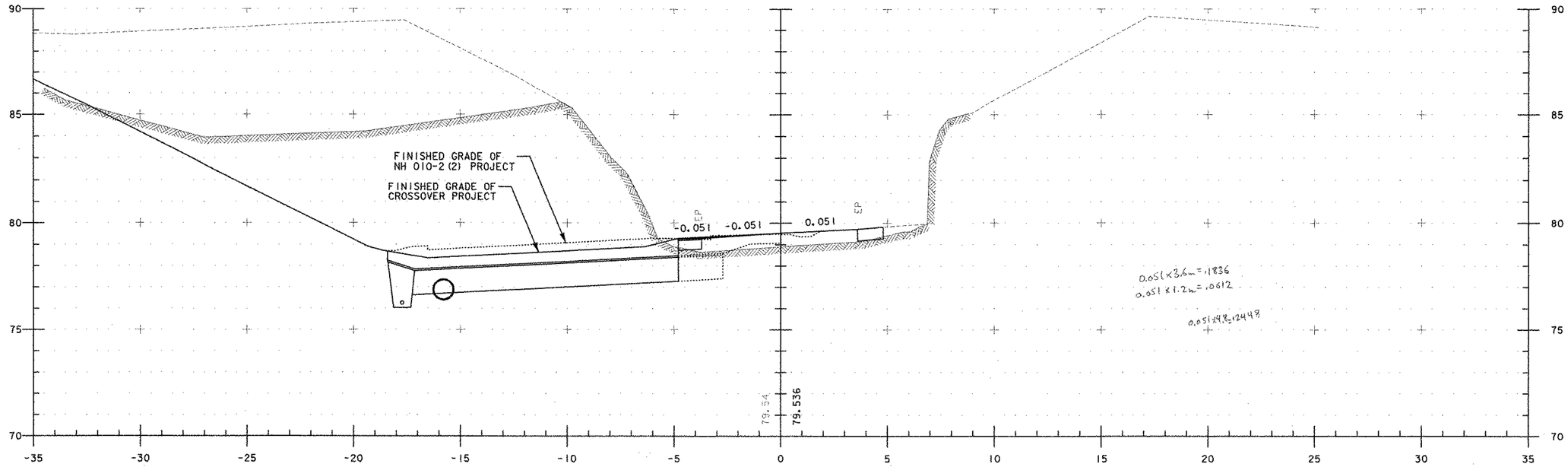
0 10 20 30
SCALE 1:250

DRAINAGE & EROSION CONTROL PLAN

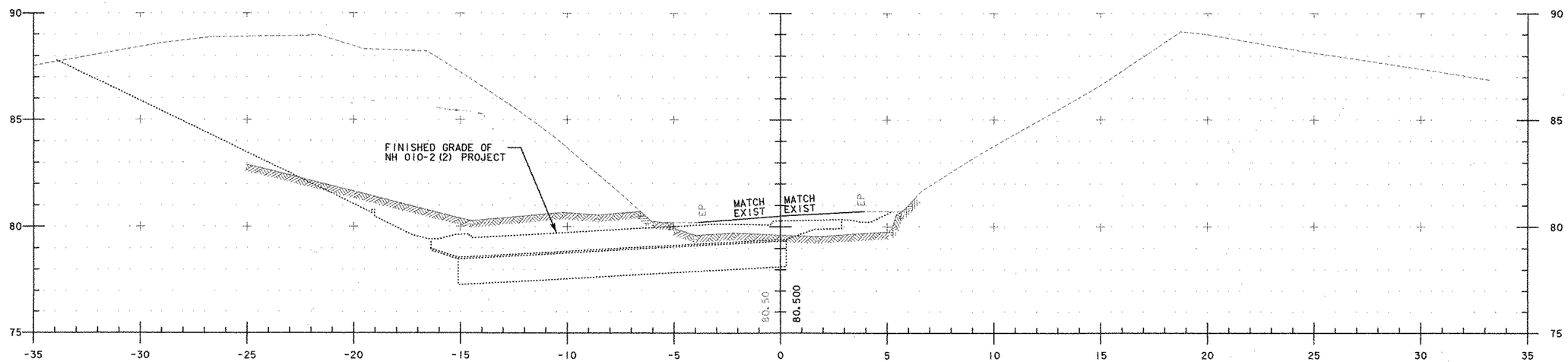
PROJECT NAME: BRATTLEBORO
PROJECT NUMBER: NH 010-2(2)

FILE NAME: ...\zb270drn.dgn
PROJECT LEADER: WRH
DESIGNED BY:
CLD REF NO. 02-0439
PLOT DATE: 03/31/2003
DRAWN BY: PTS
CHECKED BY: JAW
SHEET 9 OF 13

168 Rock



1+260



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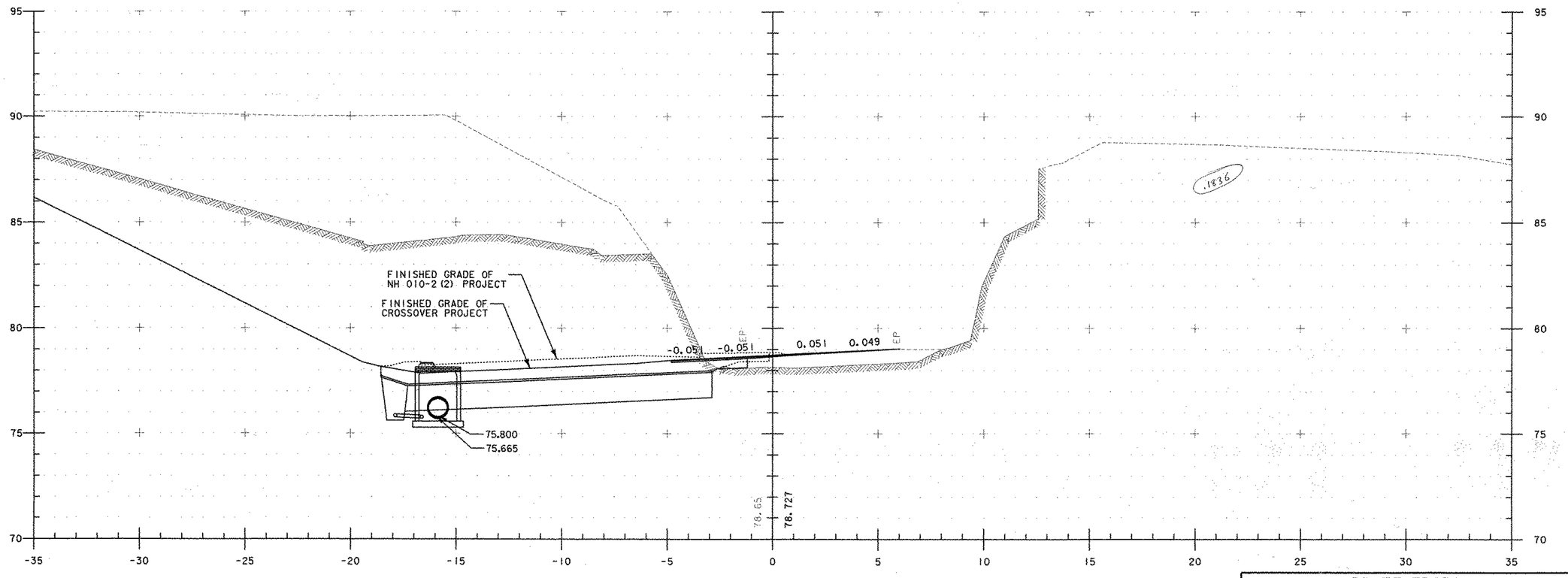
FILE NAME: ...\zb270xs.dgn	PLOT DATE: 03/28/2003
PROJECT LEADER: WRH	DRAWN BY: PTS
DESIGNED BY: PTS	CHECKED BY: JAW
CLD REF NO. 02-0439	SHEET 10 OF 13

169 ROCK

Metric



1+280

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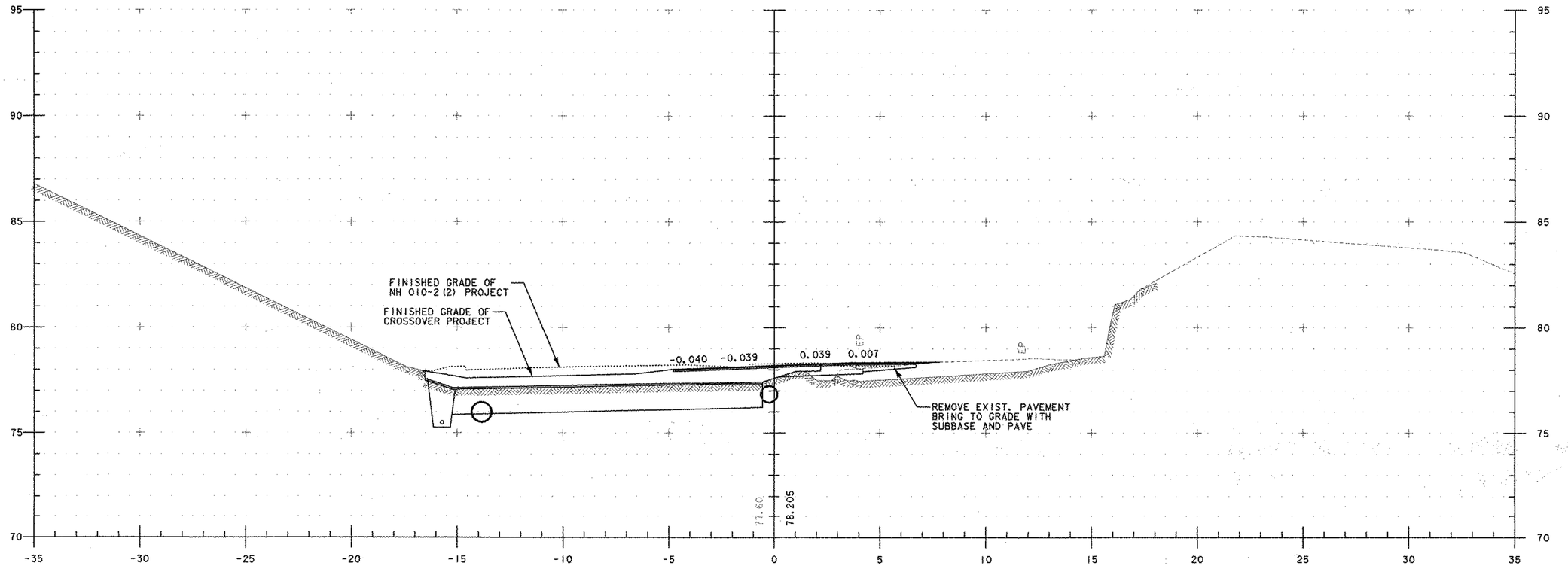
PROJECT NUMBER:	NH 010-2(2)
FILE NAME: ...\zb270xs.dgn	PLOT DATE: 03/28/2003
PROJECT LEADER: WRH	DRAWN BY: PTS
DESIGNED BY: PTS	CHECKED BY: JAW
CLD REF NO. 02-0439	SHEET 11 OF 13

170 Peck



1+300

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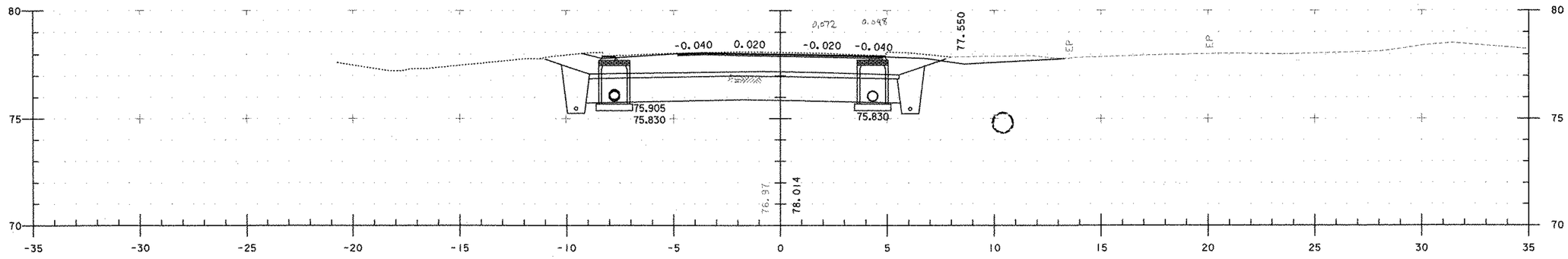
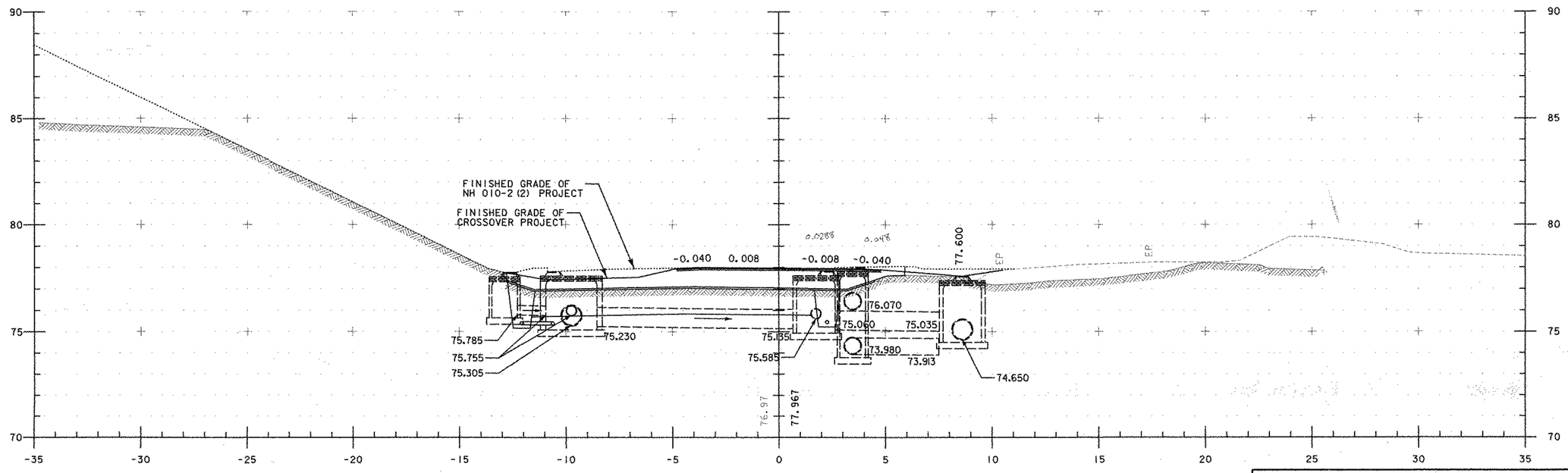
PROJECT NUMBER:	NH 010-2(2)
FILE NAME: ...\zb270xs.dgn	PLOT DATE: 03/28/2003
PROJECT LEADER: WRH	DRAWN BY: PTS
DESIGNED BY: PTS	CHECKED BY: JAW
CLD REF NO. 02-0439	SHEET 12 OF 13

171 Rock



1+340



1+320

PROJECT NAME:	BRATTLEBORO
PROJECT NUMBER:	NH 010-2(2)
FILE NAME: ...\zb270xs.dgn	PLOT DATE: 03/28/2003
PROJECT LEADER: WRH	DRAWN BY: PTS
DESIGNED BY: PTS	CHECKED BY: JAW
CLD REF NO. 02-0439	SHEET 13 OF 13

172 Rock

TEMPORARY EXCAVATION SUPPORT
ROUTE 9 IMPROVEMENTS
BRATTLEBORO, VERMONT

GENERAL NOTES

THIS PLAN SHOWS THE EXCAVATION SHORING SYSTEM FOR THE CONSTRUCTION OF THE RAILROAD BRIDGE ABUTMENTS OVER ROUTE 9 AND SARGENT BROOK IN BRATTLEBORO, VERMONT. THE EXCAVATION SHORING SYSTEM WILL CONSIST OF DRILLED IN OR DRIVEN SOLDIER PILES AND LAGGING OR STEEL SHEET PILES. LATERAL SUPPORT WILL BE PROVIDED BY TIEBACKS, INTERNAL BRACING, OR BY DESIGNING THE SOLDIER PILES TO CANTILEVER.

1. DESIGN OF THE EXCAVATION SHORING SYSTEM MAY BE ADJUSTED IN THE FIELD TO ACCOUNT FOR ACTUAL FIELD CONDITIONS. EQUIVALENT MEMBERS MAY BE SUBSTITUTED FOR ANY SHOWN.
2. ONLY THOSE PORTIONS OF THE WORK NECESSARY TO CLARIFY THE WORK OF SCHNABEL FOUNDATION COMPANY (SFC) ARE SHOWN. THESE DRAWINGS ARE INTENDED FOR THE EXCLUSIVE USE OF SCHNABEL FOUNDATION COMPANY IN CONSTRUCTING THE EXCAVATION SHORING SYSTEM AND SHOULD NOT BE USED BY THE CONTRACTOR OR ANY OTHER SUBCONTRACTOR(S) FOR ANY OTHER REASON.
3. ESTABLISH VERTICAL SURVEY STATIONS AT 15-FOOT ON CENTER ON EACH RAIL OF THE EXISTING (PHASE I) OR PROPOSED (PHASE 2) RAILS (BY OTHERS). SURVEY STATIONS SHOULD EXTEND AT LEAST 30 FEET BEYOND THE LAST PILE IN THE EXCAVATION SUPPORT SYSTEM. MONITORING SHOULD BE PERFORMED ON A DAILY BASIS DURING EXCAVATION (BY OTHERS). ESTABLISH VERTICAL AND LATERAL MONITORING POINTS ON ALL PILES. MONITORING SHOULD BE PERFORMED ON A WEEKLY BASIS OR WHENEVER EXCAVATION TAKES PLACE IN FRONT OF THE PILES. NOTIFY SCHNABEL FOUNDATION COMPANY IMMEDIATELY OF ANY VERTICAL SETTLEMENT OR LATERAL MOVEMENT. ALL MONITORING RESULTS SHOULD BE SENT TO SFC WITHIN THREE (3) DAYS OF THE READINGS.
4. ALL SLOPING SHALL BE IN ACCORDANCE WITH OSHA STANDARDS.
5. CALL DIGSAFE (1-888-344-7233 – SFC CONTRACTOR NUMBER 34520) TO MARK THE LOCATION OF ALL EXISTING UTILITIES AT LEAST 72 HOURS PRIOR TO INSTALLATION OF SOLDIER BEAMS AND TIEBACKS AND MONTHLY THEREAFTER. FIELD VERIFY THE LOCATION OF ALL UTILITIES WITH CONTRACTOR PRIOR TO STARTING ANY WORK. VERIFICATION SHALL CONSIST AT A MINIMUM OF EXPOSING ANY UTILITIES WITHIN 5-FEET OF ALL PILES AND PULLING MANHOLES TO MEASURE UTILITY DEPTHS.
6. COORDINATE ALL WORK WITH NEW ENGLAND CENTRAL RAILROAD PERSONEL.

EXCAVATION SUPPORT SYSTEM PROCEDURE

1. REMOVE AND/OR CAP OFF EXISTING UTILITIES THAT EXTEND INTO THE EXCAVATION (BY OTHERS). UTILITIES SHOULD BE CAPPED OFF AT LEAST 2-FEET BEHIND SHORING LINE TO PREVENT CONTAMINATION OF EXISTING LINES. VERIFY DEPTH AND LOCATION OF UTILITIES THAT REMAIN IN PLACE (BY OTHERS).
2. PRE-TRENCH AREA OF PILE INSTALLATION TO REMOVE OBSTRUCTIONS (BY OTHERS). PRE-TRENCHING IS NOT PERMITTED ADJACENT TO THE TRACKS.
3. SLOPE GRADE TO TOP OF PILE ELEVATION (BY OTHERS).
4. DRILL HOLES TO THE DEPTHS AND AT THE LOCATIONS SHOWN ON THE PLANS AND INSTALL PILES. ALTERNATELY, DRIVE PILES THAT ARE NOT ADJACENT TO TRACKS. INSTALL STEEL SHEET PILES AT THE LOCATIONS SHOWN. IF TOP OF ROCK IS ENCOUNTERED AT A DEPTH MORE THAN 1-FOOT DEEPER OR SHALLOWER THAN SHOWN ON THE PLAN, RECORD TOE ELEVATION AND NOTIFY SFC ENGINEER. SFC WILL DETERMINE IF REDESIGN IS REQUIRED.
5. EXCAVATE A MAXIMUM 5-FOOT HIGH LIFT IN THE AREA TO BE SHORED (BY CONTRACTOR). LIFT HEIGHT SHOULD BE REDUCED IF SOIL WILL NOT STAND VERTICAL AS DIRECTED BY SCHNABEL FOUNDATION COMPANY'S FOREMAN. INSTALL TIMBER LAGGING BETWEEN THE SOLDIER BEAMS. LAGGING MAY EITHER BE PLACED ON THE FACE OF THE SOLDIER BEAM OR BEHIND THE FLANGE.
6. CONTINUE EXCAVATION AND LAGGING TO AROUND TWO (2) FOOT BELOW TIEBACK ELEVATION AT TIEDBACK PILES.
7. INSTALL TIEBACKS IN ACCORDANCE WITH THE TIEBACK INSTALLATION PROCEDURE TO THE LENGTHS AND AT THE LOCATIONS SHOWN ON THE PLANS.
8. TEST TIEBACKS IN ACCORDANCE WITH THE TIEBACK TESTING PROCEDURE. AT COMPLETION OF TESTING LOCK-OFF THE TIEBACKS.
9. REPEAT STEPS 5 TO 8 FOR SECOND ROW OF TIEBACKS IF REQUIRED.
10. CONTINUE EXCAVATION AND LAGGING TO WITHIN 4-FOOT OF TOP OF ROCK IN LOCATION OF TOE TIES OR ROCK DOWELS.
11. INSTALL TOE TIES AND/OR ROCK DOWELS.
12. CONTINUE EXCAVATION TO SUBGRADE, LAGGING TO TOP OF ROCK.

TIEBACK INSTALLATION PROCEDURE

1. INSTALL TIEBACKS TO THE LENGTH AND AT THE LOCATIONS SHOWN ON THE PLANS. SFC MAY INSTALL TIEBACK TENDONS WITH REGROUT TUBES TO ALLOW ANCHORS TO BE REGROUTED. TIEBACK INSTALLATION PROCEDURE SHALL BE AS FOLLOWS:
   A. INSTALL TIEBACKS USING CONCENTRIC ROTARY DUPLEX DRILLING METHODS WITH AIR OR WATER FLUSHING OR DRIVEN CASING WITH A KNOCK-OFF POINT. USE OF A POLYMER OR SLURRY TO FACILITATE REMOVAL OF DRILL CUTTINGS IS ALSO PERMITTED. CASING IS NOT REQUIRED WHEN DRILLING BEDROCK.
   B. INSERT TIEBACK TENDON INTO CASING. TENDON MAY BE INSTALLED BEFORE OR AFTER CASING IS FILLED WITH GROUT.
   C. FILL CASING WITH GROUT USING TREMIE METHOD.
   D. EXTRACT CASING MAKING SURE TO KEEP CASING FILLED WITH GROUT. ALTERNATELY, ANCHORS MAY BE PRESSURE GROUTED.
   E. ALLOW ANCHORS TO CURE A MINIMUM OF FIVE (5) DAYS BEFORE TESTING AND LOCKING OFF.

   INSTALLATION METHOD MAY BE ALTERED BASED ON ACTUAL CONDITIONS ENCOUNTERED.
2. TEST TIEBACKS ACCORDING TO TIEBACK TESTING PROCEDURE. AT COMPLETION OF TESTING, LOCK-OFF THE TIEBACKS.

TIEBACK TESTING

1. A TOTAL OF 10% OF THE TIEBACKS WILL BE PERFORMANCE TESTED. PERFORMANCE TESTS WILL BE PERFORMED ON THE FIRST THREE (3) TIEBACKS INSTALLED, WHENEVER THE SOIL /ROCK CONDITIONS CHANGE, AND AT THE ENGINEER'S DISCRETION. ALL REMAINING ANCHORS SHALL BE PROOF TESTED.

   THE SEQUENCE OF LOAD APPLICATION FOR THE PERFORMANCE TEST SHALL BE AS FOLLOWS:

   (AL) 0.25P
   (AL) 0.25P 0.50P
   (AL) 0.25P 0.50P 0.75P
   (AL) 0.25P 0.50P 0.75P 1.00P
   (AL) 0.25P 0.50P 0.75P 1.00P 1.20P
   (AL) 0.25P 0.50P 0.75P 1.00P 1.20P 1.33P (MAX. TEST LOAD, HOLD FOR 60 MINUTES)
   (AL) ADJUST TO LOCK-OFF LOAD (0.75 P)
   LIFT OFF TO VERIFY LOCK-OFF LOAD.

   THE SEQUENCE OF LOAD APPLICATION FOR THE PROOF TEST SHALL BE AS FOLLOWS:

   (AL) 0.25P 0.50P 0.75P 1.00P 1.20P (MAX. TEST LOAD, HOLD FOR 10 MINUTES)
   (AL) ADJUST TO LOCK-OFF LOAD (0.75 P)
   LIFT OFF TO VERIFY LOCK-OFF LOAD

   AL = ALIGNMENT LOAD
   P = DESIGN LOAD

   EACH LOAD INCREMENT, EXCEPT THE MAXIMUM TEST LOAD, SHALL BE HELD LONG ENOUGH TO OBTAIN A MOVEMENT READING.
2. THE TIEBACKS SHALL BE TESTED USING A CENTER HOLE JACK WITH A CALIBRATED PRESSURE GAUGE CAPABLE OF READING TO AN ACCURACY OF 100 PSI. LOAD CELLS SHOULD BE INSTALLED ON TWO TIEBACKS IN EACH ROW OF TIES TO MONITOR TIEBACK LOADS DURING EXCAVATION. LOAD CELL READINGS SHALL TAKE PLACE ON A DAILY BASIS (MINIMUM), WHENEVER EXCAVATION CHANGES ARE MADE WITHIN VICTINITY OF EACH LOAD CELL, OR AS DIRECTED BY THE ENGINEER.
3. MOVEMENT MEASUREMENTS SHALL BE TAKEN AT THE ALIGNMENT LOAD (AL), USED TO SEAT THE ANCHOR AND JACKING CHAIR ASSEMBLY (NOT TO EXCEED 5 PERCENT OF THE DESIGN LOAD (P)), AND AT EACH LOAD INCREMENT. MOVEMENT READINGS SHALL BE TAKEN USING AN AMES DIAL GAUGE CAPABLE OF READING TO .001". THE PRESSURE IN THE TEST JACK SHALL BE MAINTAINED DURING ALL LOAD HOLDS.
4. THE MAXIMUM TEST LOAD SHALL BE HELD FOR TEN (10) MINUTES. THE MOVEMENT SHALL BE RECORDED AT 1,2,3,4,5,6 AND 10 MINUTES. IF THE TOTAL MOVEMENT BETWEEN THE 1 AND 10 MINUTE READING EXCEEDS 0.04", THE TEST LOAD SHALL BE HELD FOR AN ADDITIONAL 50 MINUTES. TOTAL MOVEMENTS SHALL BE RECORDED AT 15,20,25,30,45 AND 60 MINUTES.
5. AN ANCHOR SHALL BE CONSIDERED ACCEPTABLE IF IT MEETS OR EXCEEDS THE FOLLOWING CRITERIA:
   A. THE TIEBACK DEVELOPS THE MAXIMUM TEST LOAD WITHOUT CONTINUOUS LOSS OF JACK PRESSURE.
   B. THE TOTAL ELASTIC MOVEMENT OBTAINED FROM A PERFORMANCE TEST EXCEEDS 80 PERCENT OF THE THEORETICAL ELASTIC ELONGATION OF THE FREE STRESSING AND UNBONDED ANCHOR LENGTHS.
   THE TOTAL MOVEMENT OBTAINED FROM A PROOF TEST, MEASURED BETWEEN 50 PERCENT OF THE DESIGN LOAD AND THE MAXIMUM TEST LOAD EXCEEDS 80 PERCENT OF THE THEORETICAL ELASTIC ELONGATION OF THE FREE STRESSING AND UNBONDED ANCHOR LENGTHS FOR THE RESPECTIVE LOAD RANGE.

LIST OF DRAWINGS

MATERIALS

1. CENTRALIZERS: CENTRALIZERS, WHERE REQUIRED, SHALL BE FABRICATED FROM ANY MATERIAL EXCEPT WOOD WHICH IS NON-DETRIMENTAL TO THE PRE-STRESSED STEEL BAR. THE CENTRALIZER SHALL POSITION THE ANCHOR IN THE DRILL HOLE SO A MINIMUM OF 0.5 INCH OF GROUT OR CONCRETE COVER IS PROVIDED. SPACE CENTRALIZERS AT MAXIMUM 10-FOOT INTERVALS.
2. GROUT: GROUT SHALL BE NEAT CEMENT, WITH A MAXIMUM WATER/CEMENT RATIO OF AROUND 0.5 (5 TO 6 GALLONS OF WATER TO ONE 94 LB SACK OF CEMENT) BY WEIGHT. FX-32 ADMIXTURE MAY BE USED TO INCREASE STRENGTH AND REDUCE SHRINKAGE. OTHER ADMIXTURES MAY ALSO BE USED. CEMENT SHALL BE ASTM C-150, TYPE I, II, OR III.
3. TIEBACK TENDONS: TIEBACKS SHALL BE:
   A) GRADE 270 7-WIRE STRANDS CONFORMING TO ASTM A-416.
   B) GRADE 150 ALL-THREAD BARS CONFORMING TO ASTM A-722.
4. TIMBER LAGGING: TIMBER LAGGING MAY CONSIST OF ANY SPECIES, ROUGH CUT, MIXED HARDWOOD, UNLESS OTHERWISE INDICATED. A GAP SHALL BE PROVIDED BETWEEN LIFTS OF LAGGING TO REDUCE HYDROSTATIC PRESSURES AND ALLOW BOARDS TO BE BACKFILLED. TIMBER LAGGING SHALL BE 3-INCH NOMINAL THICKNESS.
5. BEARING PLATE AND WEDGE PLATE OR HEXAGONAL NUT: STEEL BEARING PLATE AND WEDGE PLATE SHALL CONFORM TO ASTM A-36. HEXAGONAL NUT SHALL CONFORM TO ASTM A-325 OR BAR MANUFACTURER'S SPECIFICATIONS.
6. SOLDIER PILES: SOLDIER PILES SHALL BE GRADE 50 STEEL OR EQUIVALENT GRADE 36 (ASTM A-36). NEW OR USED STEEL MAY BE USED.
7. STEEL SHEET PILES: STEEL SHEET PILES SHALL CONFORM TO ASTM A-36.
8. TOE TIES AND ROCK DOWELS: TOE TIES AND ROCK DOWELS SHALL BE GRADE 75 ALL THREAD BARS CONFORMING TO ASTM A615.

STATE OF VERMONT HARRY W. SCHNABEL #7291 REGISTERED PROFESSIONAL ENGINEER

Harry W. Schnabel, P.E.
Vermont P.E. No. 7291

REVISIONS

NO	DATE	DESCRIPTION
1	4/21/03	REVIEW COMMENTS/GEN. REVISIONS

Excavation Support Notes

Route 9 Improvements

Brattleboro, Vermont

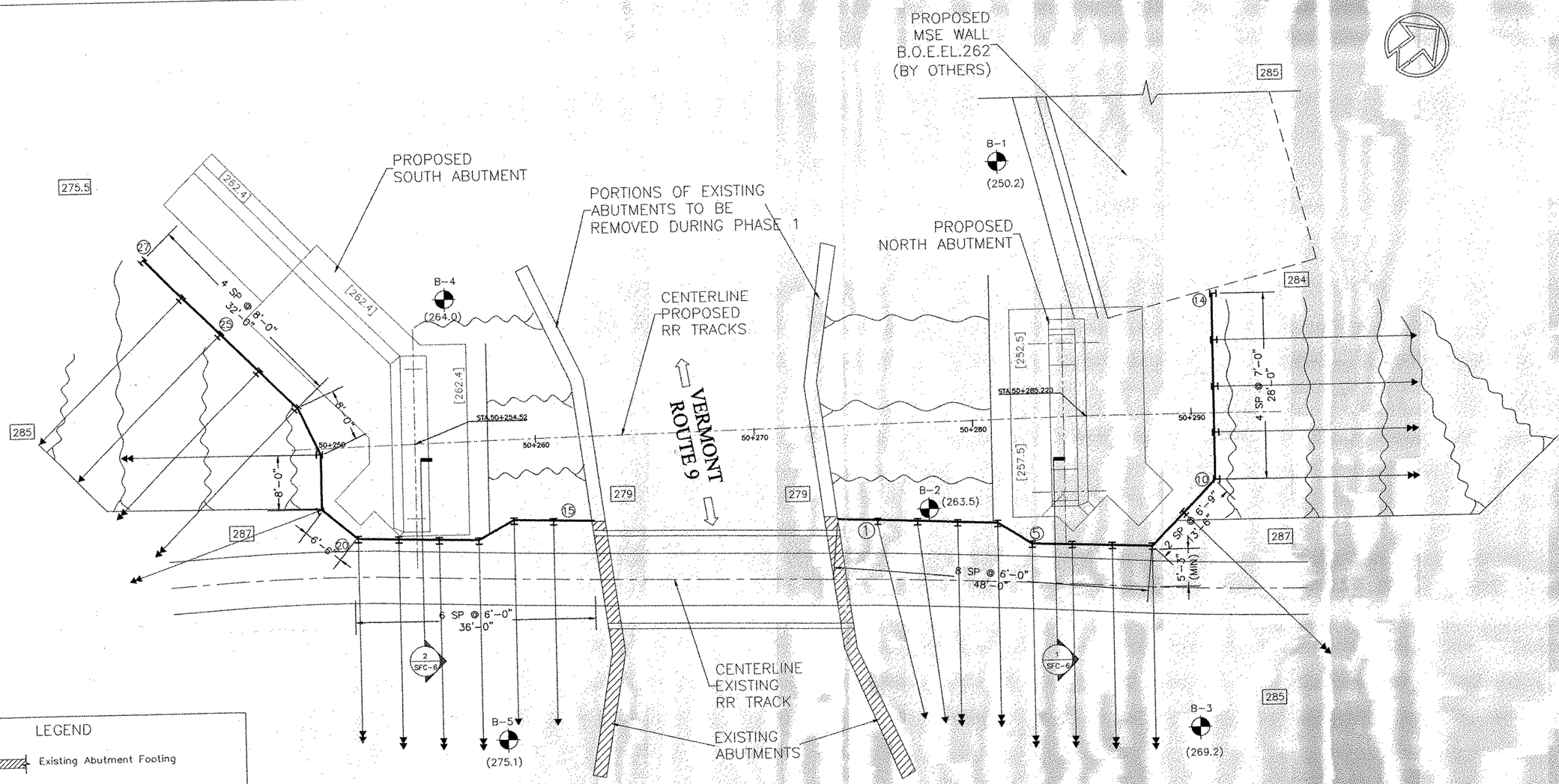
Schnabel Foundation Company

Engineers and Contractors
200 Turnpike Road
Southborough, Massachusetts
Atlanta o Denver o Chicago
Houston o Los Angeles o Philadelphia
San Francisco o Washington D.C.

Date: 02/27/03 | Job Number: 06-3392

Scale: N.T.S. | Drawing No: SFC-1

175 E7C



LEGEND

- Existing Abutment Footing
- Proposed Abutment Footing
- [262.4] Bottom of proposed footing elevation
- 289 Existing Grade Elevation
- Soldier Beam
- Lagging
- 15 Soldier Beam Number
- Tieback. Number of arrows indicates the number of tiers.
- B-4 Boring Number
- Approximate Boring Location
- (264.0) Approximate Top of Bedrock Elevation

NOTE: FACE OF SOLDIER PILES SHALL NOT BE CLOSER THAN 5'3" FROM THE CENTERLINE OF THE TRACKS.

STATE OF VERMONT
HARRY W. SCHNABEL
#7291
PROFESSIONAL ENGINEER

Harry W. Schnabel, P.E.
Vermont P.E. No. 7291

REVISIONS

NO	DATE	DESCRIPTION
1	4/21/03	REVIEW COMMENTS/GEN. REVISIONS

Schnabel Foundation Company

Engineers and Contractors
200 Turnpike Road
Southborough, Massachusetts
Atlanta ○ Denver ○ Chicago
Houston ○ Los Angeles ○ Philadelphia
San Francisco ○ Washington D.C.

Excavation Support Phase 1 – Plan View

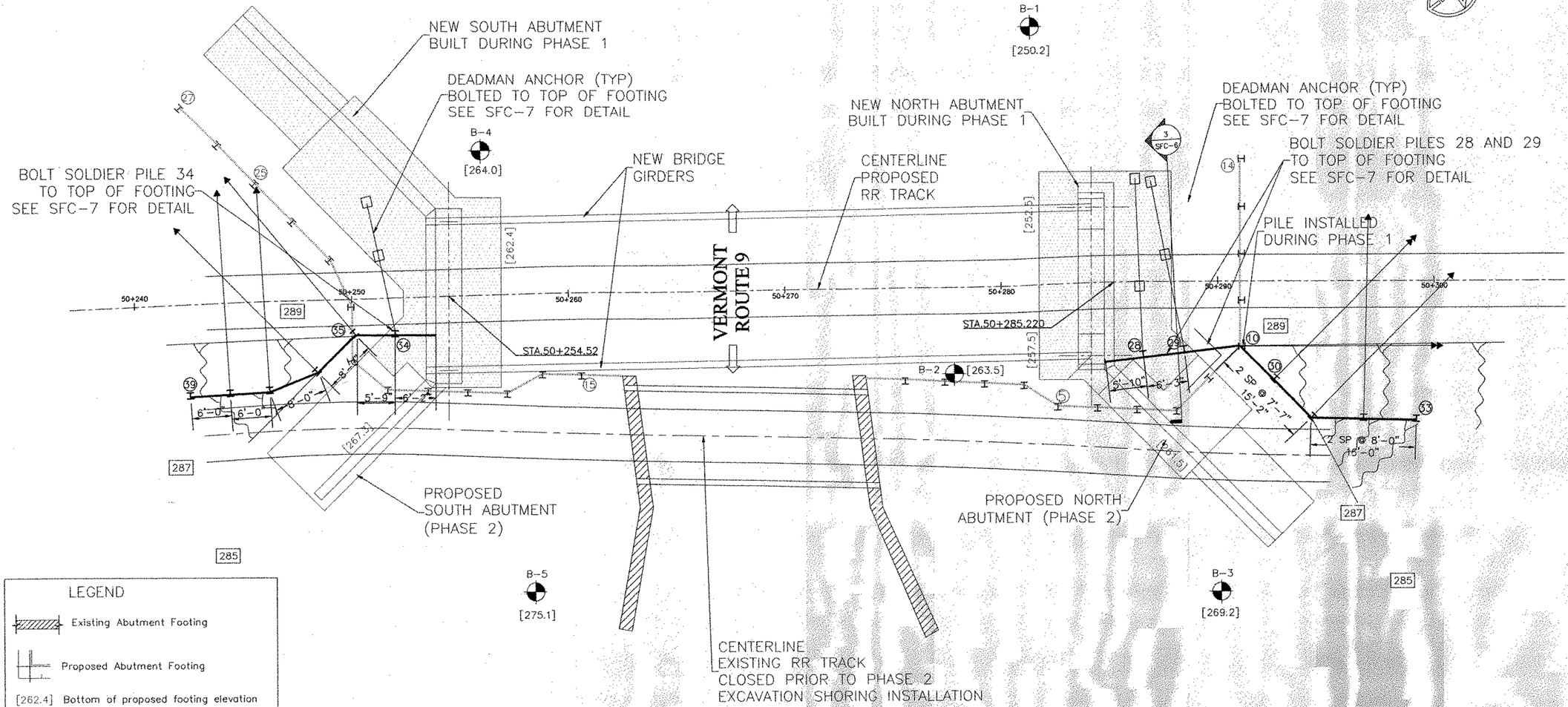
Route 9 Improvements

Brattleboro, Vermont

Date: 02/27/03 | Job Number: 06-3392

Scale: 1/8"=1'-0" | Drawing No: SFC-2

176 67c



LEGEND

- Existing Abutment Footing
- Proposed Abutment Footing
- [262.4] Bottom of proposed footing elevation
- 289 Existing Grade Elevation
- Soldier Pile
- Lagging
- (35) Soldier Pile Number
- Tieback. Number of arrows indicates the number of tiers.
- Phase I Soldier Piles and Lagging
- B-4 Boring Number
- Approximate Boring Location
- [264.0] Approximate Top of Bedrock Elevation

NOTE: PILES 28, 29, 34 WILL BE BOLTED TO TOP OF ABUTMENT FOOTING AFTER PHASE I IS COMPLETE.

NOTE: FACE OF SOLDIER PILES SHALL NOT BE CLOSER THAN 5'3" FROM THE CENTERLINE OF THE TRACKS.

STATE OF VERMONT
HARRY W. SCHNABEL
#7291
PROFESSIONAL ENGINEER

Harry W. Schnabel, P.E.
Vermont P.E. No. 7291

REVISIONS

NO	DATE	DESCRIPTION
1	03/28/03	ENGINEER'S REVIEW REVISION

Schnabel Foundation Company

Engineers and Contractors
200 Turnpike Road
Southborough, Massachusetts
Atlanta ○ Denver ○ Chicago
Houston ○ Los Angeles ○ Philadelphia
San Francisco ○ Washington D.C.

Excavation Support Phase 2 - Plan View

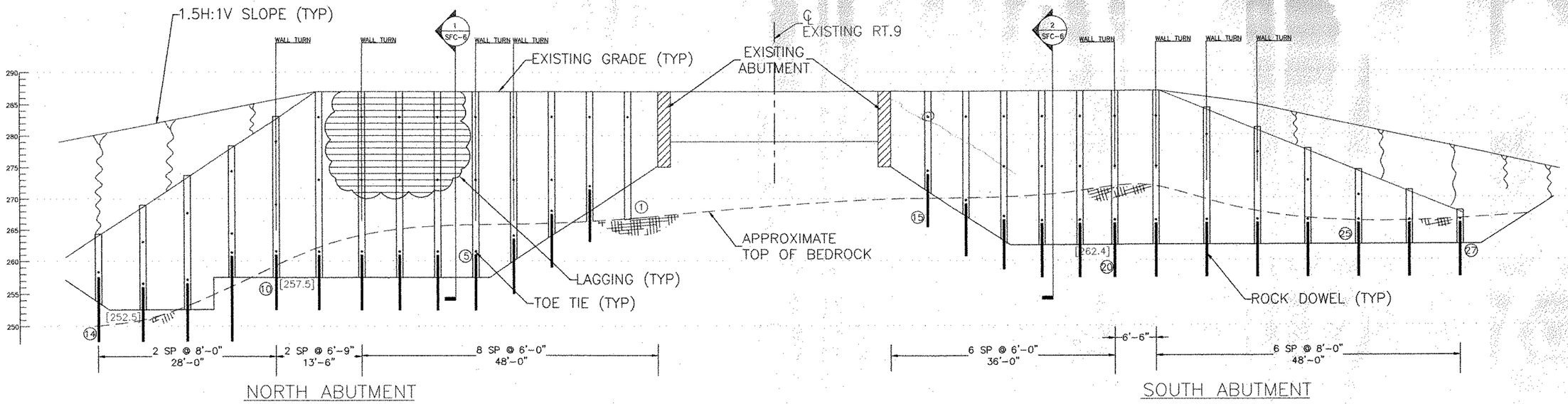
Route 9 Improvements

Brattleboro, Vermont

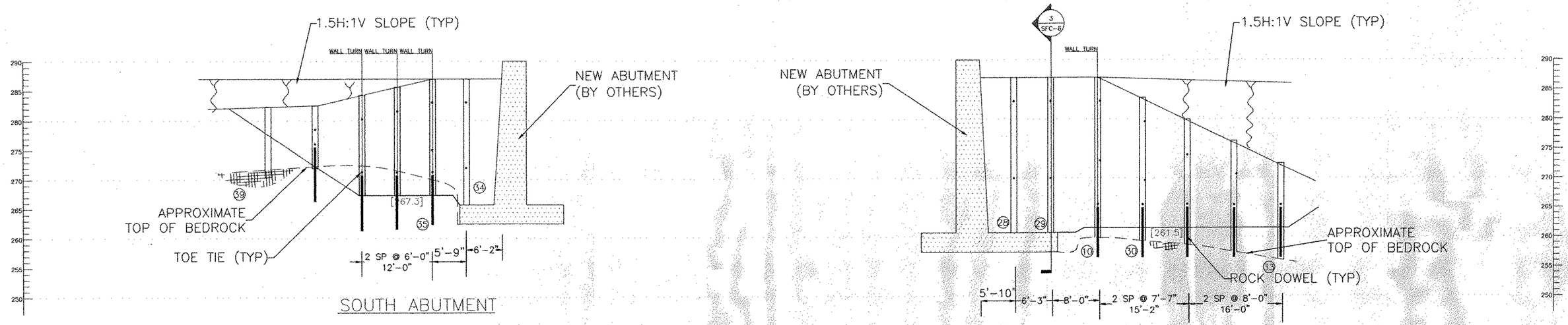
Date: 02/27/03 | Job Number: 06-3392

Scale: 1/8"=1'-0" | Drawing No: SFC-3

17266



PHASE 1 EXCAVATION SUPPORT ELEVATION



PHASE 2 EXCAVATION SUPPORT ELEVATION

NOTE:
- ELEVATION VIEW SHOWS PILES IN WORST CASE SITUATION WHERE TOP OF ROCK IS LOCATED AT OR BELOW BOTTOM OF FOOTING. ACTUAL PILE WILL BE DRILLED TO TOP OF COMPETENT ROCK OR 5FT BELOW BOTTOM OF EXCAVATION, WHICHEVER IS HIGHER.
- ROCK DOWEL AND TOE TIE ARE NOT REQUIRED IF BOTTOM OF PILE IS INSTALLED TO 5FT BELOW BOTTOM OF EXCAVATION.
- ROCK DOWEL IS NOT REQUIRED IF BOTTOM OF PILE IS INSTALLED WITHIN 2FT OF BOTTOM OF EXCAVATION.
- COORDINATE INSTALLATION OF LAGGING TO MINIMIZE OPEN CUT FACE AT TIME OF TRAIN PASSING.

STATE OF VERMONT HARRY W. SCHNABEL #7291 PROFESSIONAL ENGINEER

Harry W. Schnabel, P.E.
Vermont P.E. No. 7291

REVISIONS

NO	DATE	DESCRIPTION
1	4/21/03	REVIEW COMMENTS/GEN. REVISIONS

Schnabel Foundation Company
Engineers and Contractors
200 Turnpike Road
Southborough, Massachusetts
Atlanta ○ Denver ○ Chicago
Houston ○ Los Angeles ○ Philadelphia
San Francisco ○ Washington D.C.

Excavation Support Phase I, 2 – Elevations

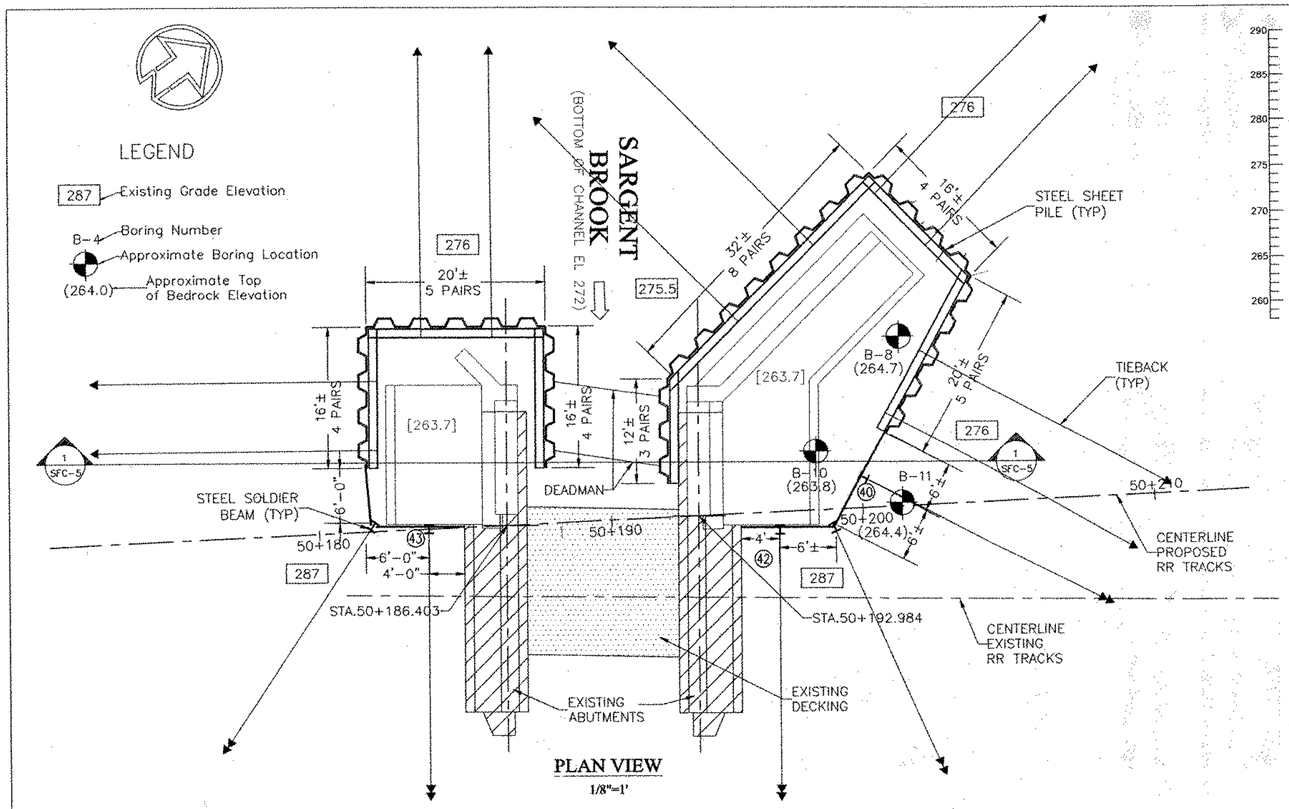
Route 9 Improvements

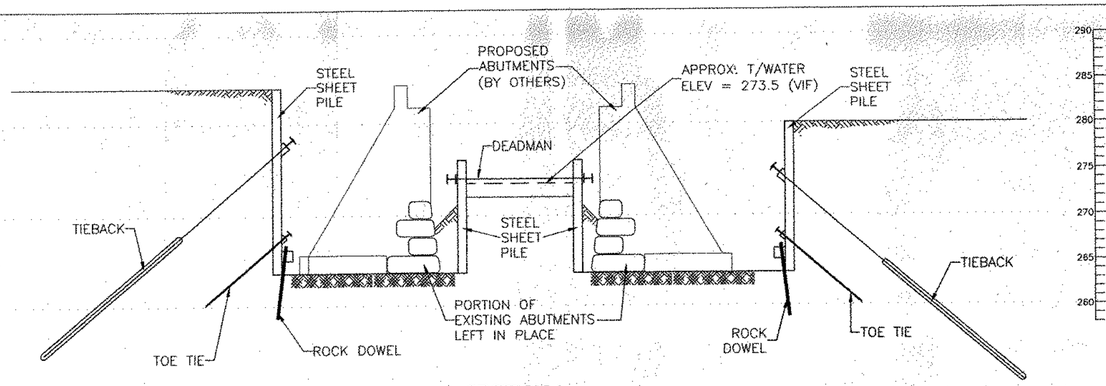
Brattleboro, Vermont

Date: 02/27/03 | Job Number: 06-3392

Scale: 1/8"=1'-0" | Drawing No: SFC-4

178 C+C



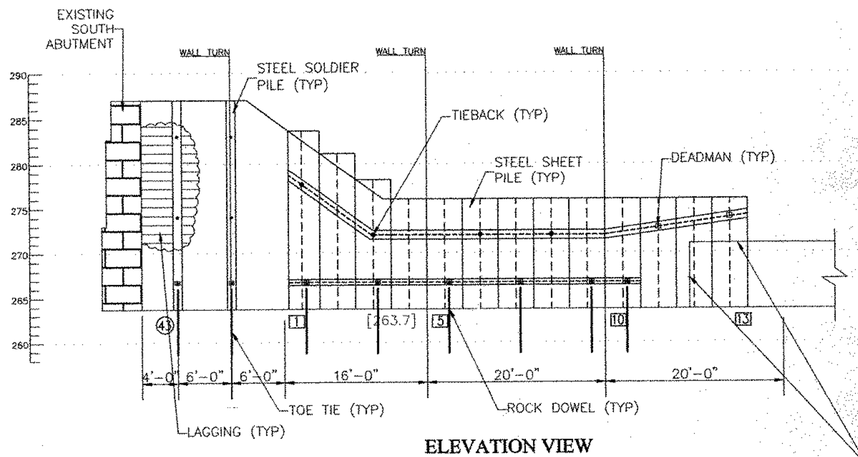


SECTION 1
1/8"=1'

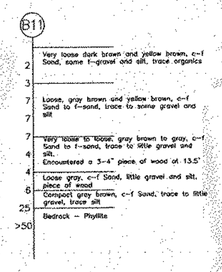
SOLDIER BEAM/SHEET PILES/TIEBACK/TOE TIE SCHEDULE

PILE NUMBER	NUMBER OF PILES	TOP ELEVATION	SUBGRADE ELEVATION	PILE [1] LENGTH	PILE [2] SIZE	H_1	H_2	TIEBACK ANGLE	TIEBACK LOAD	UNBONDED LENGTH	BOND [3] LENGTH	BAR SIZE	NUMBER OF 0.6"ø STRANDS
		(FT)	(FT)	(FT)		(FT)	(FT)	(DEG)	(KIPS)	(FT)	(FT)		
40	1	284.8	263.7	21	2C15X33.9	4		40	50	15	10	1"	2
							7	40	70	15	10	1"	2
41-44	4	287	263.7	23	2C15X33.9	4		40	102	15	12	1 1/4"	3
							9	40	73	15	10	1"	3
SH 1-4	16 LF	282 - 276	263.7	12 - 19	PZ-22	4		40	73 (2 TIES)	15	10	1"	3
SH 5-9	20 LF	276	263.7	13	PZ-22	4		40	37 (2 TIES)	15	10	1"	2
SH 10-16	28 LF	276	263.7	13	PZ-22	4		DEADMAN	30 (2 TIES)			1"	
SH 17-28	48 LF	276	263.7	13	PZ-22	4		40	45 (4 TIES)	15	10	1"	2
SH 29-33	20 LF	282 - 276	263.7	12 - 19	PZ-22	4		40	91 (2 TIES)	15	10	1 1/4"	3

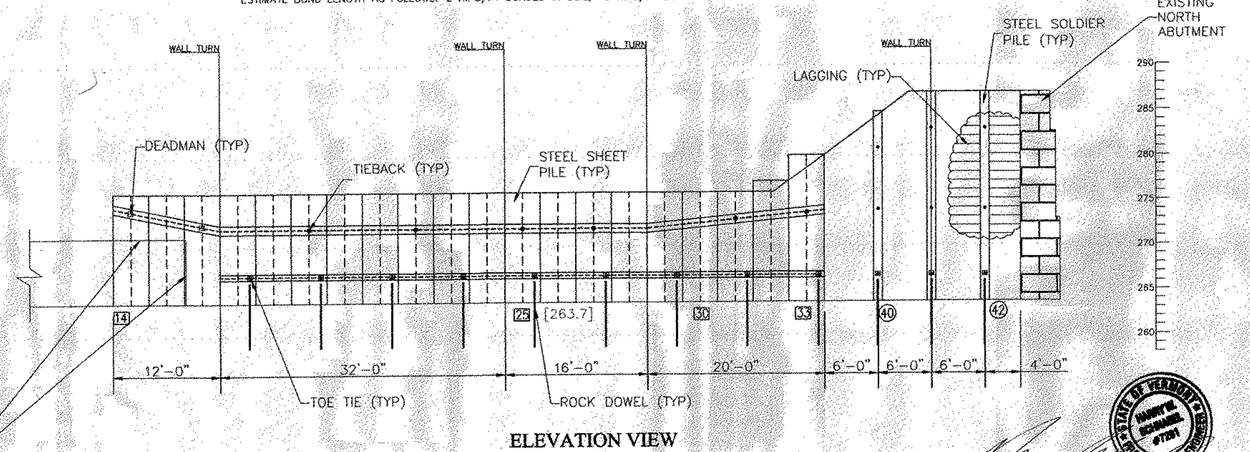
1. PILE LENGTH SHOWN IS FOR PLANNING PURPOSES ONLY. INSTALL PILES TO TOP OF BEDROCK OR 5FT BELOW BOTTOM OF EXCAVATION, WHICHEVER IS HIGHER.
2. SFC RESERVES THE RIGHT TO SUBSTITUTE ANY BEAM SIZE PROVIDED IT MEETS THE DESIGN REQUIREMENTS.
3. BOND LENGTH SHOWN IS FOR PLANNING PURPOSES ONLY. ACTUAL BOND LENGTH WILL BE DETERMINED IN FIELD BASED ON ACTUAL SOIL/ROCK CONDITIONS. ESTIMATE BOND LENGTH AS FOLLOWS: 2 KIPS/FT BONDED IN SOIL; 10 KIPS/FT BONDED IN ROCK. VERIFY WITH SFC ENGINEER PRIOR TO INSTALLING TENDON.



ELEVATION VIEW SOUTH ABUTMENT
1/8"=1'



APPROXIMATE LIMITS OF EXISTING ABUTMENT LEFT IN PLACE IN FRONT OF SHORING



ELEVATION VIEW NORTH ABUTMENT
1/8"=1'

NOTE: FACE OF SOLDIER PILES SHALL NOT BE CLOSER THAN 5'3" FROM THE CENTERLINE OF THE TRACKS.

STATE OF VERMONT HARRY W. SCHNABEL 7291 PROFESSIONAL ENGINEER

Harry W. Schnabel, P.E.
Vermont P.E. No. 7291

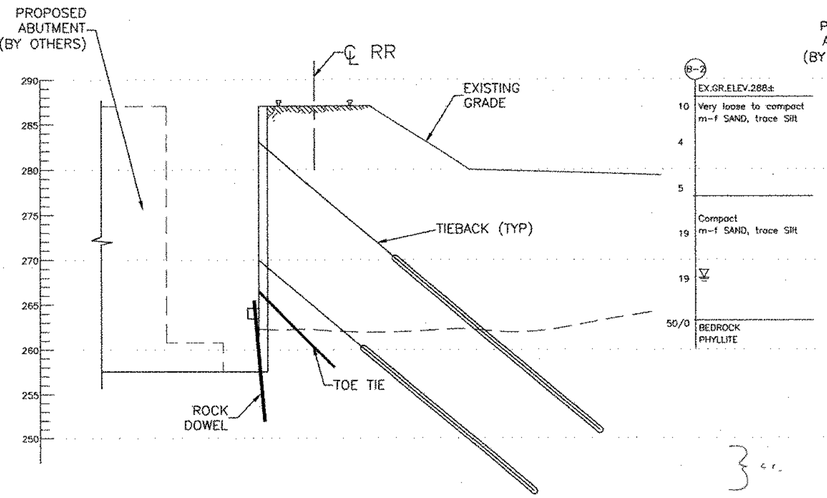
REVISIONS

NO	DATE	DESCRIPTION
1	4/21/03	REVIEW COMMENTS/GEN. REVISIONS

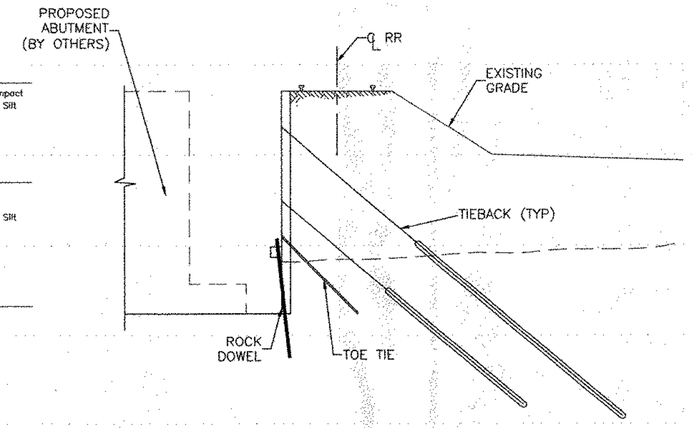
Schnabel Foundation Company
Engineers and Contractors
200 Turnpike Road
Southborough, Massachusetts
Atlanta o Denver o Chicago
Houston o Los Angeles o Philadelphia
San Francisco o Washington D.C.

Excavation Support at Sargent Brook
Route 9 Improvements
Brattleboro, Vermont
Date: 02/27/03 | Job Number: 06-3392
Scale: 1/8"=1'-0" | Drawing No: SFC-5

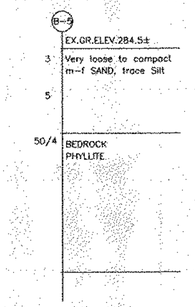
179 E+C

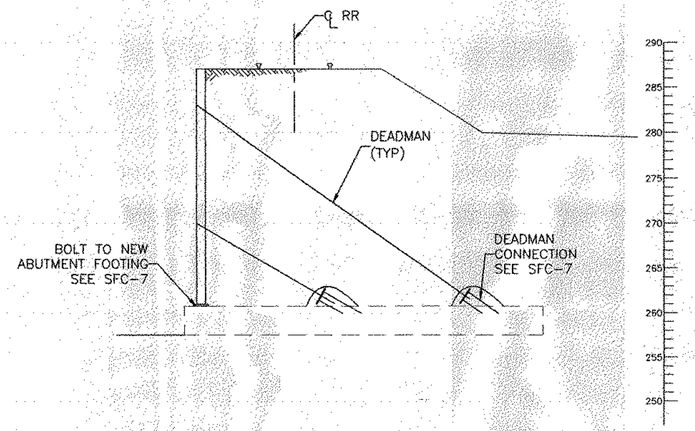


SECTION 1



SECTION 2





SECTION 3

SOLDIER BEAM/TIEBACK/TOE TIE SCHEDULE

PILE NUMBER	NUMBER OF PILES	TOP ELEVATION	SUBGRADE ELEVATION	PILE [1] LENGTH	PILE [2] SIZE	H_1	H_2	TIEBACK ANGLE	TIEBACK LOAD	UNBONDED LENGTH	BOND [3] LENGTH	BAR SIZE	NUMBER OF 0.6"ϕ STRANDS
		(FT)	(FT)	(FT)		(FT)	(FT)	(DEG)	(KIPS)	(FT)	(FT)		
1–2	2	287.1	267.4	20	2C15X33.9	4		40	126	15	25	1 3/8"	4
3–4	2	287.1	260.2	27	2C15X33.9	4		40	125	15	25	1 3/8"	4
							10	40	77	15	10	1 1/4"	3
5–8	4	287.1	257.5	30	2C15X33.9	4		40	160	15	30		5
							10	40	82	15	10	1 1/4"	3
9	1	287.1	257.5	30	2C15X33.9	4		40	160	15	30		5
							10	40	82	15	10	1 1/4"	3
10–11	2	283.1	257.5	27	2C10X20	4		40	47	15	15	1"	2
							10	40	64	15	10	1"	2
12–13	2	274.3	252.6	22	2C10X20	6		40	78	15	20	1 1/4"	3
14	1	265.1	253.3	12	2C10X20								
15–16	2	287.1	269.0	19	2C15X33.9	4		40	124	15	25	1 3/8"	4
17–21	5	287.1	262.4	25	2C15X33.9	4		40	119	15	25	1 3/8"	4
							8	40	56	15	15	1"	2
22	1	286.1	262.4	24	2C10X20	4		40	61	15	15	1"	2
23	1	282.2	262.4	20	2C10X20	4		40	44	15	15	1"	2
24–25	2	282.2	262.4	20	2C10X20	4		40	28	15	15	1"	2
26	1	278.9	262.4	17	2C10X20			40	31	15	15	1"	2
27	1	269.1	262.4	7	2C10X20								
28–29	2	287	260.6	27	HP12x53	4		35	143	39	deadman		5
							13	30	64	18	deadman	1"	2
30	1	283.8	261.4	23		4		40	40	15	15	1"	2
							10	40	43	15	15	1"	2
31–32	2	280.6	261.4	20		4		40	49	15	15	1"	2
33	1	272.4	261.4	11									
34	1	287	260.6	27	HP12x53	4		35	143	39	deadman		5
							13	30	64	18	deadman	1"	2
35	1	287.1	267.4	20		4		30	133	15	25		4
							10	30	38	15	15	1"	2
36–37	2	285.5	267.3	19		4		40	28	15	15	1"	2
38	1	285.5	267.3	19		4		40	18	15	15	1"	2
39	1	281.2	275.5	6									

1. PILE LENGTH SHOWN IS FOR PLANNING PURPOSES ONLY. INSTALL PILES TO TOP OF BEDROCK OR 5FT BELOW BOTTOM OF EXCAVATION, WHICHEVER IS HIGHER.
2. SFC RESERVES THE RIGHT TO SUBSTITUTE ANY BEAM SIZE PROVIDED IT MEETS THE DESIGN REQUIREMENTS.
3. BOND LENGTH SHOWN IS FOR PLANNING PURPOSES ONLY. ACTUAL BOND LENGTH WILL BE DETERMINED IN FIELD BASED ON ACTUAL SOIL/ROCK CONDITIONS. ESTIMATE BOND LENGTH AS FOLLOWS: 2 KIPS/FT BONDED IN SOIL; 10 KIPS/FT BONDED IN ROCK. VERIFY WITH SFC ENGINEER PRIOR TO INSTALLING TENDON.

Harry W. Schnabel, P.E.
Vermont P.E. No. 7291

REVISIONS

NO	DATE	DESCRIPTION
1	4/21/03	REVIEW COMMENTS/GEN. REVISIONS

Excavation Support Sections

Route 9 Improvements

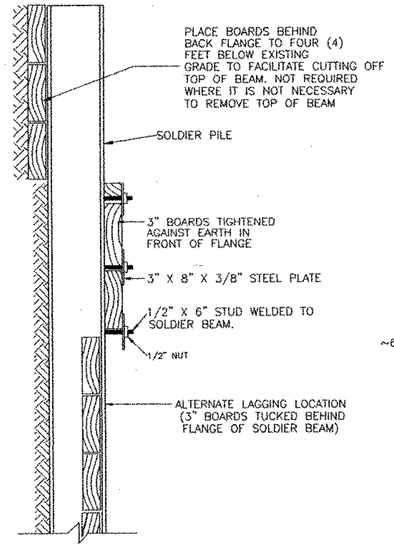
Brattleboro, Vermont

Schnabel Foundation Company
Engineers and Contractors
200 Turnpike Road
Southborough, Massachusetts
Atlanta ○ Denver ○ Chicago
Houston ○ Los Angeles ○ Philadelphia
San Francisco ○ Washington, D.C.

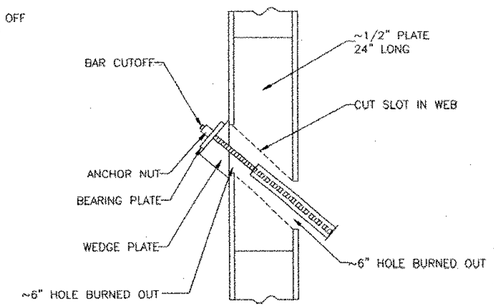
Date: 02/27/03 | Job Number: 06-3392

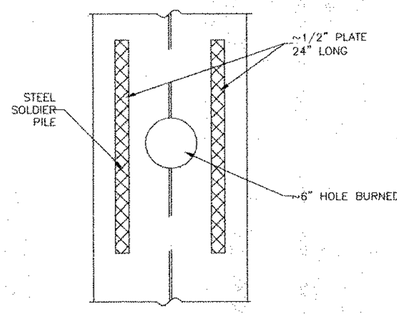
Scale: 1/8"=1'-0" | Drawing No: SFC-6

180 GE

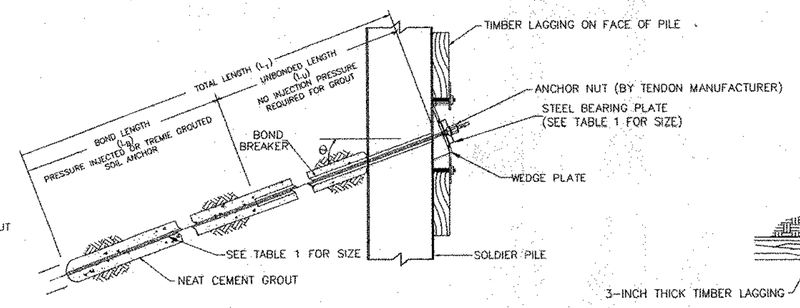


LAGGING DETAIL
N.T.S.

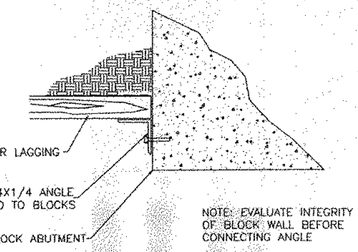




THRU BEAM CONNECTION DETAIL FOR HP PILE
N.T.S.



TIEBACK DETAIL
N.T.S.



LAGGING CONNECTION TO ABUTMENT DETAIL
N.T.S.

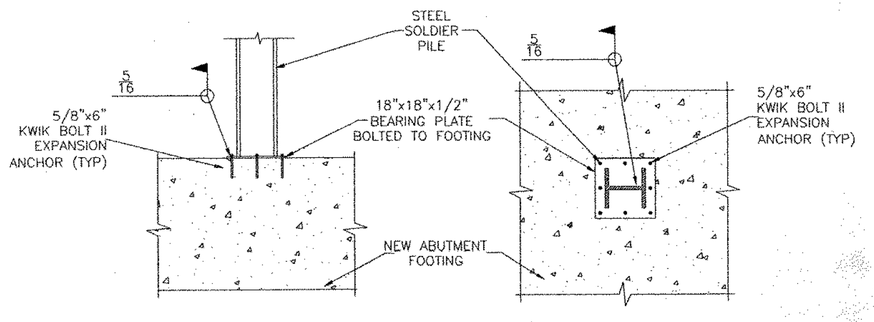
TABLE 1
TIEBACK SIZES

GRADE 150 BARS (ASTM A722)

SIZE	MAXIMUM LOAD (KIP)	PLATE SIZE
1"	76	5x5x1.25 4x6.5x1.25
1-1/4"	112	6x7x1.5 5x8x1.5
1-3/8"	142	7x7.5x1.75 5x9.5x1.75

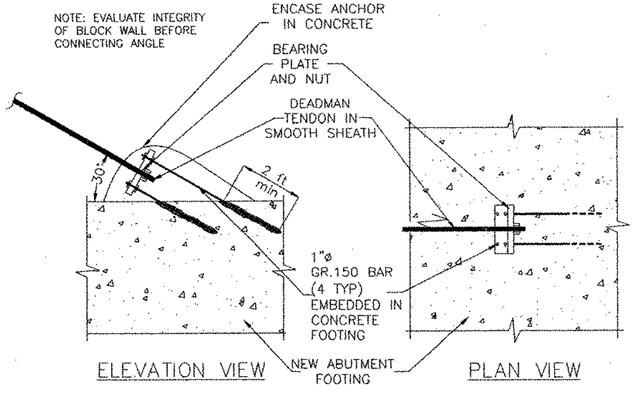
SEVEN WIRE STRANDS (ASTM A416)

SIZE	MAXIMUM LOAD (KIP)	PLATE SIZE
3	105	6x6x1.5 5x8x1.5
4	140	7x7x1.75 5x9x1.75
5	175	8x8x2.0 6x10x2.0



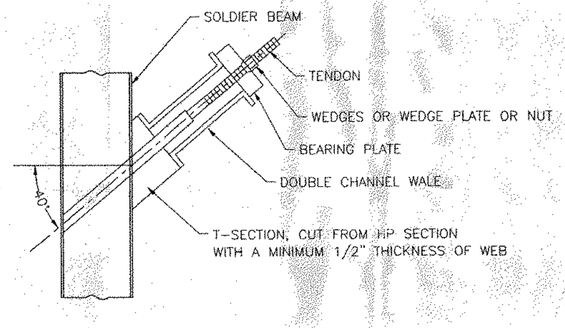
ELEVATION VIEW PLAN VIEW

SOLDIER BEAM TO FOOTING CONNECTION DETAIL
N.T.S.

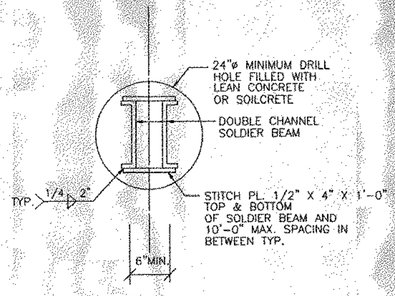


ELEVATION VIEW PLAN VIEW

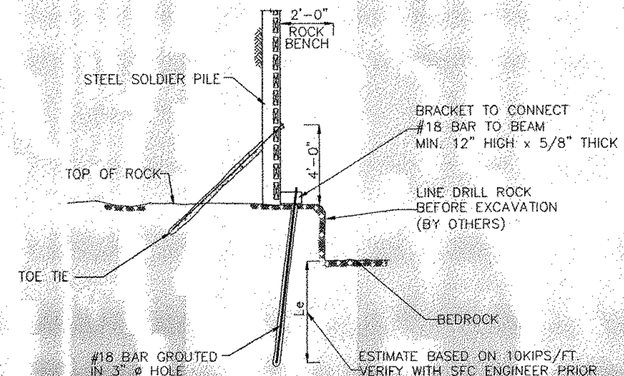
DEADMAN DETAIL
N.T.S.



DOUBLE CHANNEL WALE DETAIL
N.T.S.



DOUBLE CHANNEL BEAM DETAIL
N.T.S.



TOE TIE AND ROCK DOWEL DETAIL
N.T.S.

Harry W. Schnabel, P.E.
Vermont P.E. No. 7291

REVISIONS		
NO	DATE	DESCRIPTION
1	4/21/03	REVIEW COMMENTS/GEN. REVISIONS

Schnabel Foundation Company
Engineers and Contractors
200 Turnpike Road
Southborough, Massachusetts
Atlanta ○ Denver ○ Chicago
Houston ○ Los Angeles ○ Philadelphia
San Francisco ○ Washington D.C.

Excavation Support Details
Route 9 Improvements
Brattleboro, Vermont
Date: 02/25/03 | Job Number: 06-3392
Scale: N.T.S. | Drawing No: SFC-7

181 c2c

GENERAL NOTES:

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2001, AND ITS LATEST REVISIONS; AREMA'S "MANUAL FOR RAILWAY ENGINEERING", LATEST EDITION , AND ITS LATEST REVISIONS.

2. THESE SHOP DRAWINGS WERE PREPARED IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS. THE D.S. BROWN COMPANY DOES NOT ACCEPT LIABILITY FOR THE DESIGN OF THE PRODUCTS DETAILED IN THESE SHOP DRAWINGS.

3. THE D.S. BROWN COMPANY IS TO ONLY SUPPLY THE PARTS SHOWN ON THESE DRAWINGS.

4. MATCH MARKS SHALL BE PLACED AT CENTER LINE ON PLATE EDGES TO INSURE CORRECT ASSEMBLY AT THE JOB SITE. THE MARKS SHALL BE MADE IN INDELIBLE INK AND SHALL BE BE VISIBLE AFTER BEARING INSTALLATION.

⚠1 5. BEARING SHALL BE GALVANIZED IN ACCORDANCE WITH VADOT 2001 STANDARD SPECIFICATIONS.

PROJECT NH010-2(2)
4/30/03
☒
By: J. Reed Date: 5/8/03

REV.	DESCRIPTION	DATE	DET.	CKD.
1	ADDED GENERAL NOTE 5	4/23/03	BC	EK

D.S. BROWN
300 E. CHERRY STREET
NORTH BALTIMORE, OHIO 45872
419.257.3561
FAX: 419.257.0332

4201 NOREX DRIVE
CHASKA, MINNESOTA 55318
952.368.3000
FAX: 952.448.7000

DSBROWN.COM

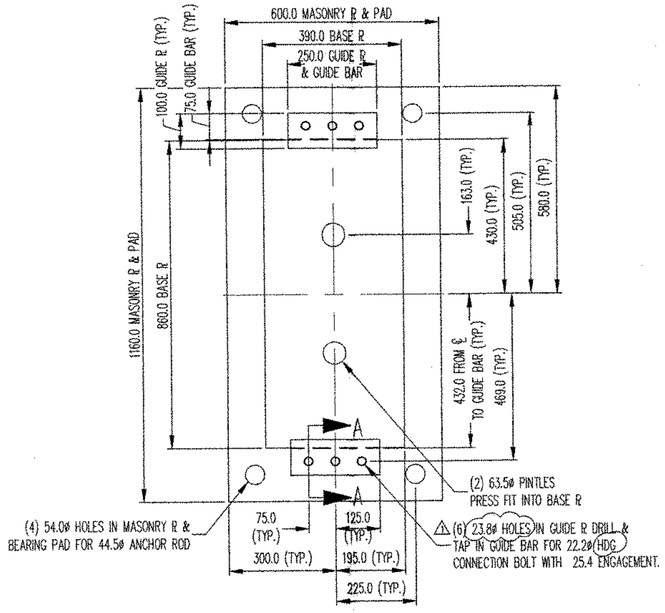
LOCATION — VT ROUTE 9
BRIDGE — 62.56
PROJECT — NH 010-2(2)
—
—
DESIGNER — CONSULTING ENGINEERS
CUSTOMER — JA MCDONALD

ITEM	QUANTITY
—	—
—	—
—	—
—	—
—	—
—	—
—	—
—	—
—	—

DESCRIPTION: GENERAL NOTES
WINDHAM COUNTY, VERMONT

SCALE	DRAWN BY	CHECKED BY	DATE	
N.T.S.	B.COPPUS	E.KELLEY	3/20/03	—

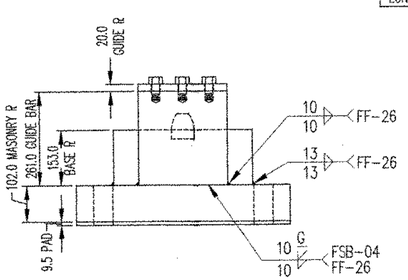
PROJECT NUMBER	PRODUCT CODE	RELEASE	SHEET
7657	1121	1	GN



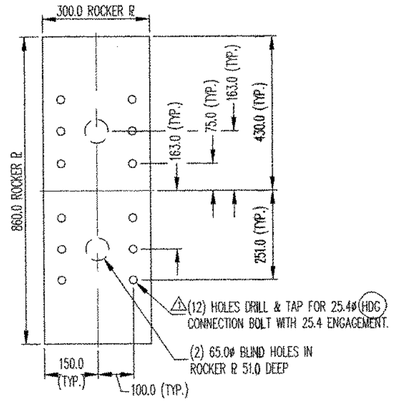
⚠2–MASONRY PLATE ASSEMBLY

LOAD TABLE

LOAD DATA	7657–1121–1
VERTICAL LOAD (kN)	2970
HORIZONTAL LOAD TRANSVERSE (kN)	182
HORIZONTAL LOAD LONGITUDINAL (kN)	676

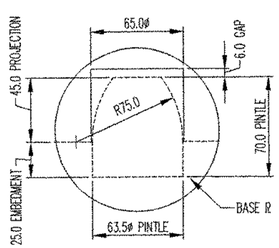


SIDE VIEW

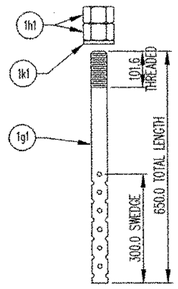


⚠2–ROCKER PLATE

SIDE VIEW



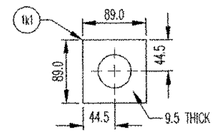
PINTLE DETAIL



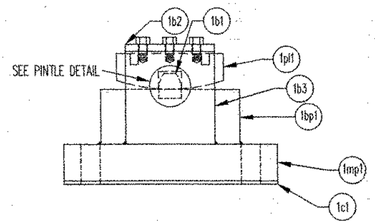
SWEDGE ANCHOR ROD DETAIL

MK	QTY.	DESCRIPTION	MATERIAL	LENGTH	REMARKS	PART NO.
1A	2	ROCKER PLATE				
⚠ 1pl1	2	102.0 X 860.0	A709 GR 50W	300.0	450.0 RADIUS, GALV. A123	
1B	2	MASONRY PLATE ASSEMBLY				
⚠ 1b1	4	63.5ø	A709 GR 50W	70.0	PRESS FIT, GALV. A123	
⚠ 1b2	4	20.0 X 100.0	A709 GR 50W	250.0	HOLES, GALV. A123	
⚠ 1b3	4	261.0 X 75.0	A709 GR 50W	250.0	HOLES, GALV. A123	
⚠ 1bp1	2	153.0 X 860.0	A709 GR 50W	390.0	HOLES, GALV. A123	
⚠ 1mp1	2	102.0 X 1160.0	A709 GR 50W	600.0	HOLES, GALV. A123	
1C	2	BEARING PAD				
1c1	2	9.5 X 1160.0	NEOPRENE	600.0	HOLES, SHIPPED LOOSE, 50±5 DURO	
1D	12	CONNECTION BOLT				
⚠ 1d1	12	22.2ø	A325	44.5	GALV. A153	
1F	24	CONNECTION BOLT				
⚠ 1f1	24	25.4ø	A325	127.0	GALV. A153	
1G	8	SWEDGE ANCHOR ROD				
1g1	8	44.5ø	A449	650.0	101.6 THREADED, 300.0 SWEDGE, GALV. A153	
1H	16	HEAVY HEX NUT				
1h1	16	44.5ø	A563–DH	–	GALV. A153	
1K	8	WASHER PLATE				
1k1	8	9.5 X 89.0	A36	89.0	GALV. A123	

NOTE: ALL MATERIALS SPECIFICATION DESCRIPTIONS ARE ASTM, UNLESS OTHERWISE NOTED.



WASHER PLATE DETAIL

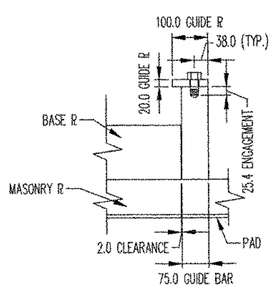


ASSEMBLY VIEW

STEEL FIXED BEARING
(2) REQ'D @ SOUTH ABUTMENT
(2) REQ'D TOTAL

PROJECT NH 010-2(2) 4/30/03
Jackard DATE 5/6/03

FOR GENERAL NOTES SEE SHEET GN



SECTION 'A–A'

REV.	DESCRIPTION	DATE	DET.	CKD.
⚠	ADDED GALVANIZING TO HARDWARE AND PLATES	4/23/03	BC	EK

D.S. BROWN
300 E. CHERRY STREET
NORTH BALTIMORE, OHIO 45872
419.257.3561
FAX: 419.257.0332
4201 NOREX DRIVE
CHASKA, MINNESOTA 55318
952.368.3000
FAX: 952.448.7000
DSBROWN.COM

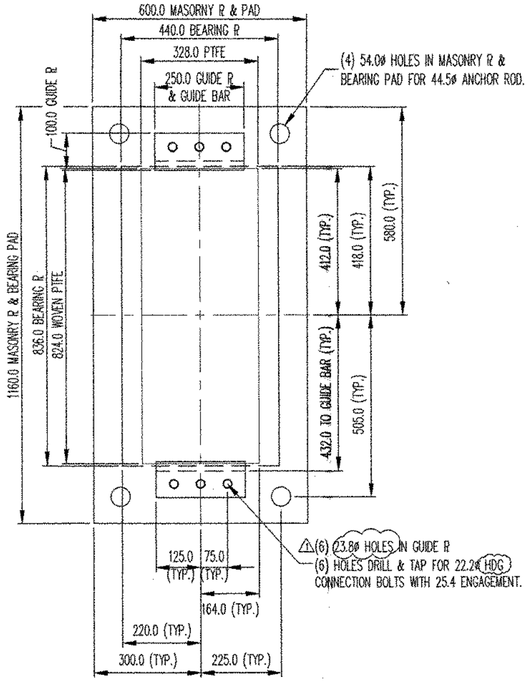
LOCATION — VT ROUTE 9
BRIDGE — 62.56
PROJECT — NH 010–2(2)
—
—
DESIGNER — CONSULTING ENGINEERS
CUSTOMER — JA MCDONALD

ITEM	QUANTITY
7652–1121–1	2 OF 2

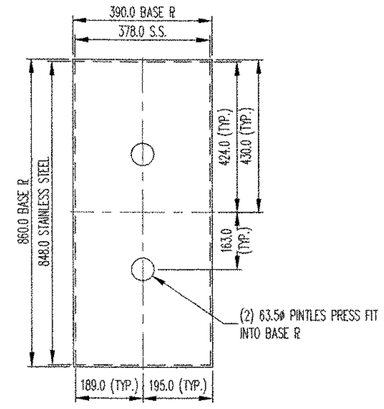
DESCRIPTION:
STEEL ROCKER BEARING
WINDHAM COUNTY, VERMONT

SCALE:	DRAWN BY:	CHECKED BY:	DATE:	
N.T.S.	B.COPPUSE	E.KELLEY	3/20/03	–
PROJECT NUMBER	PRODUCT CODE	RELEASE	SHEET	
7657	1121	1	1	

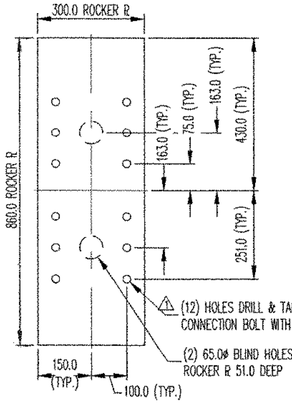
183 BB



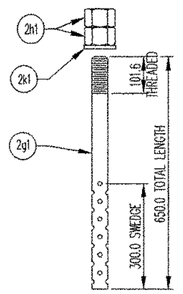
⚠2–MASONRY PLATE ASSEMBLY



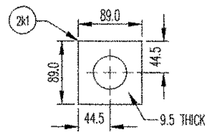
⚠2–BASE PLATE ASSEMBLY



⚠2–ROCKER PLATE



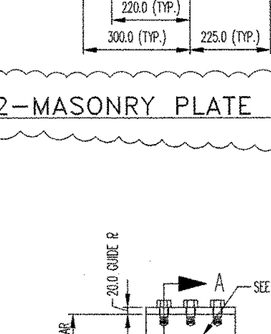
SWEDGE ANCHOR ROD DETAIL



WASHER PLATE DETAIL

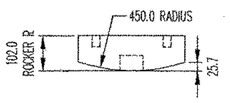
MK	QTY.	DESCRIPTION	MATERIAL	LENGTH	REMARKS	PART NO.
2A	2	ROCKER PLATE				
⚠ 2pl1	2	102.0 X 860.0	A709 GR 50W	300.0	450.0 RADIUS, GALV. A123	
2B	2	MASONRY PLATE ASSEMBLY				
⚠ 2b1	4	63.5ø	A709 GR 50W	70.0	PRESS FIT, GALV. A123	
⚠ 2b2	4	20.0 X 100.0	A709 GR 50W	250.0	HOLES, GALV. A123	
⚠ 2b3	4	273.5 X 75.0	A709 GR 50W	250.0	HOLES, GALV. A123	
2b4	2	2.0 X 824.0	D4441	328.0	VIRGIN PTFE MULTIFILAMENT & OTHER FIBERS	
2b5	2	16 GA X 848.0	A240 TYPE 304	378.0	#8 MIRROR FINISH	
⚠ 2bp1	2	153.0 X 860.0	A709 GR 50W	390.0	HOLES, GALV. A123	
⚠ 2mp1	2	102.0 X 1160.0	A709 GR 50W	600.0	HOLES, GALV. A123	
⚠ 2pl2	2	9.0 X 836.0	A709 GR 50W	440.0	GALV. A123	
2C	2	BEARING PAD				
2c1	2	9.5 X 1160.0	NEOPRENE	600.0	HOLES, SHIPPED LOOSE, 50±5 DURO	
2D	12	CONNECTION BOLT				
⚠ 2d1	12	22.2ø	A325	44.5	GALV. A153	
2F	24	CONNECTION BOLT				
⚠ 2f1	24	25.4ø	A325	127.0	GALV. A153	
2G	8	SWEDGE ANCHOR ROD				
2g1	8	44.5ø	A449	650.0	101.6 THREADED, 300.0 SWEDGE, GALV. A153	
2H	16	HEAVY HEX NUT				
2h1	16	44.5ø	A563-DH	–	GALV. A153	
2K	8	WASHER PLATE				
2k1	8	9.5 X 89.0	A36	89.0	GALV. A123	

NOTE: ALL MATERIALS SPECIFICATION DESCRIPTIONS ARE ASTM, UNLESS OTHERWISE NOTED.
ALL DIMENSIONS ARE IN MILLIMETERS, UNLESS OTHERWISE NOTED.



SIDE VIEW

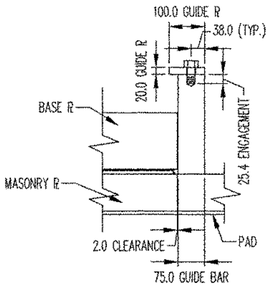
SIDE VIEW



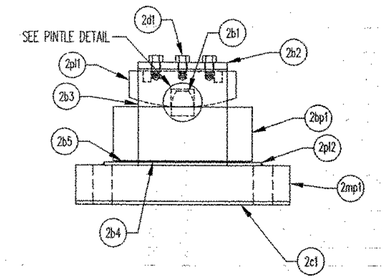
SIDE VIEW

LOAD TABLE

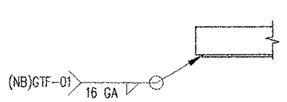
LOAD DATA	7657-1121-2
VERTICAL LOAD (kN)	2970
HORIZONTAL LOAD TRANSVERSE (kN)	209
HORIZONTAL LOAD LONGITUDINAL (kN)	---



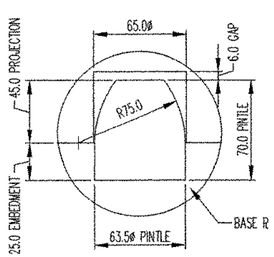
SECTION 'A–A'



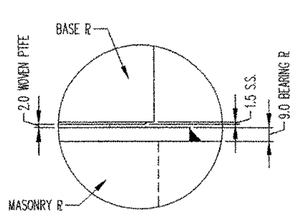
ASSEMBLY VIEW
STEEL EXPANSION BEARING
(2) REQ'D. @ SOUTH ABUTMENT
(2) REQ'D TOTAL



STAINLESS STEEL WELD DETAIL



PINTLE DETAIL



DETAIL 'A'

FOR GENERAL NOTES SEE SHEET GN

REV.	DESCRIPTION	DATE	DET.	CKD.

D.S. BROWN
300 E. CHERRY STREET
NORTH BALTIMORE, OHIO 45872
419.257.3561
FAX: 419.257.0332
4201 NOREX DRIVE
CHASKA, MINNESOTA 55318
952.368.3000
FAX: 952.448.7000
DSBROWN.COM

LOCATION — VT ROUTE 9
BRIDGE — 62.56
PROJECT — NH 010-2(2)
—
—
DESIGNER — CONSULTING ENGINEERS
CUSTOMER — JA MCDONALD

PROJECT NH 010-2(2)
DATE 4/30/03
5/9/03

ITEM	QUANTITY
7652-1121-2	2 OF 2

DESCRIPTION: STEEL ROCKER BEARING
WINDHAM COUNTY, VERMONT

SCALE:	DRAWN BY:	CHECKED BY:	DATE:
N.T.S.	B.COPPUS	E.KELLEY	3/20/03

PROJECT NUMBER	PRODUCT CODE	RELEASE	SHEET
7657	1121	1	2

184 BB

GENERAL SHOP NOTES

PROPOSED IMPROVEMENT TO RR BRIDGE #62.56
OVER VT ROUTE 9 (PRINCIPAL ARTERIAL)
IN THE TOWN OF BRATTLEBORO

WINDHAM COUNTY, VT

1 SPECIFICATIONS

ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2001, AND ITS LATEST REVISIONS; AREMA'S "MANUAL FOR RAILWAY ENGINEERING", LATEST EDITION; THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SIXTEENTH EDITION, AND ITS LATEST REVISION.

2 MATERIAL

ALL STRUCTURAL STEEL SHALL BE AASHTO M270M/M270M-93 GRADE 345W
ALL BOLTS SHALL BE 22MM DIAMETER AASHTO M164M-93 TYPE 3
NUTS SHALL BE AASHTO M291M-93, GRADE 1053 HVY. HEX NUTS
WASHERS SHALL BE AASHTO M293M (WEATHERING)

MEMBERS MARKED GR345WT2 SHALL CONFORM TO CHARPY V-NOTCH TESTING IN ACCORDANCE WITH AASHTO T243 FREQUENCY "H", ZONE 2
20 J. @ 4°C UP TO 2"(INCL)
27 J. @ 4°C UP TO 2" TO 4"

MEMBERS MARKED GR345WF2 ARE FRACTURE CRITICAL AND SHALL CONFORM TO CHARPY V-NOTCH TESTING IN ACCORDANCE WITH ASSHTO T243, FREQUENCY "PP", ZONE 2.
25 J. @ 4°C UP TO 2"(INCL)
30 J. @ 4°C UP TO 2" TO 4"

3 FABRICATION AND WORKMANSHIP

△ ALL REENTRANT CUTS TO HAVE A MINIMUM 50MM RADIUS U.N.O.
FLOOR BEAMS SHALL BE FABRICATED WITH THEIR NATURAL CAMBER UP

ALL GIRDERS ARE FRACTURE CRITICAL MEMBERS AND REQUIRE THE FRACTURE CRITICAL CONTROL PLAN PER AREMA CHAPTER 15. TEST REPORTS AND SPECIMENS SHALL BE DELIVERED TO THE ENGINEER FOR EXAMINATION. ALL CERTIFICATION AND REQUIREMENTS OF AREMA SHALL BE FOLLOWED AND REPORTS AND DOCUMENTATION SHALL BE PROVIDED TO THE ENGINEER.

ALL STRUCTURAL STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE AMERICAN RAILWAY ENGINEERING AND MAINTENANCE-OF-WAY ASSOCIATION (AREMA).

4 SHOP WELDING AND TESTING NOTES

ALL WELDING AND INSPECTION OF WELDS SHALL CONFORM TO ANSI/AASHTO/AWS D1.5

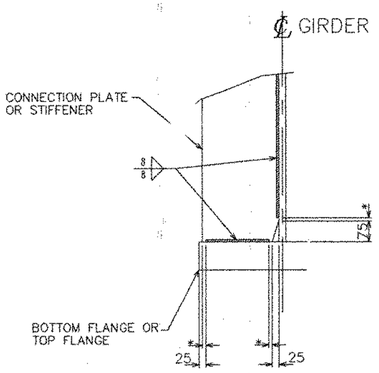
5 SHOP CLEANING AND PAINTING

THE STRUCTURAL STEEL OF THIS BRIDGE SHALL NOT BE PAINTED

IN THE FABRICATION SHOP THE OUTSIDE SURFACE OF THE FASCIA GIRDER SHALL BE CLEANED OF ALL DIRT, GREASE, PAINT, MILL SCALE OR OTHER FOREIGN MATERIAL PRIOR TO SHIPPING. THE PURPOSE OF THE CLEANING IS TO PRODUCE FASCIA SURFACES WHICH WILL WEATHER UNIFORMLY

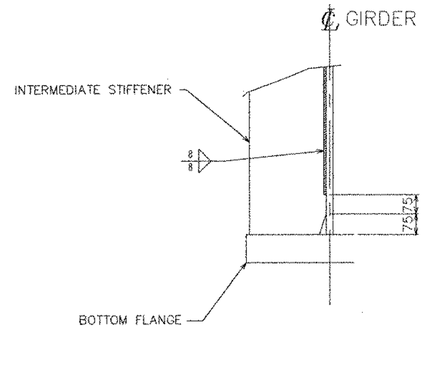
6 MISC.

A NAMEPLATE BEARING THE NAME OF THE MANUFACTURER AND THE DATE OF MANUFACTURE SHALL BE ATTACHED IN A VISIBLE LOCATION AT THE SOUTH END OF 2G2A.



TYPICAL WELD DETAIL (EXCEPT INTERMEDIATE STIFFENERS)** △

* = NO WELD FOR 6 MIN. 12 MAX.
(EXCEPT MUST MAINTAIN 25 MIN. FROM EDGE OF FLANGE)
** EXCEPT AT INTERMEDIATE STIFFENER AT BOTTOM FLANGE (TENSION FLANGE)



TYPICAL WELD DETAIL FOR INTERMEDIATE STIFFENERS △

AT BOTTOM FLANGE (TENSION FLANGE) ONLY

STEEL-ART, INCORPORATED
40 WEST MAIN STREET
GALETON, PA 16922
(814) 435-6997

EASTERN BRIDGE LLC
RURAL RTE 2, BOX 302
CLAREMONT, NH 03743
603-542-5202

REVISIONS		
NO.	DATE	DESCRIPTION
1	5/14/03	PER APPROVAL
△	6/24/03	PER APPROVAL
	8/4/03	Approval

STATE OF VERMONT
AGENCY OF TRANSPORTATION

CONTRACT : PIN :

PROPOSED IMPROVEMENT TO RR BRIDGE #62.56
OVER VT ROUTE 9 (PRINCIPAL ARTERIAL)
WINDHAM COUNTY, TOWN OF BRATTLEBORO

TITLE :

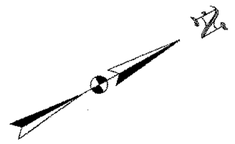
GENERAL NOTES

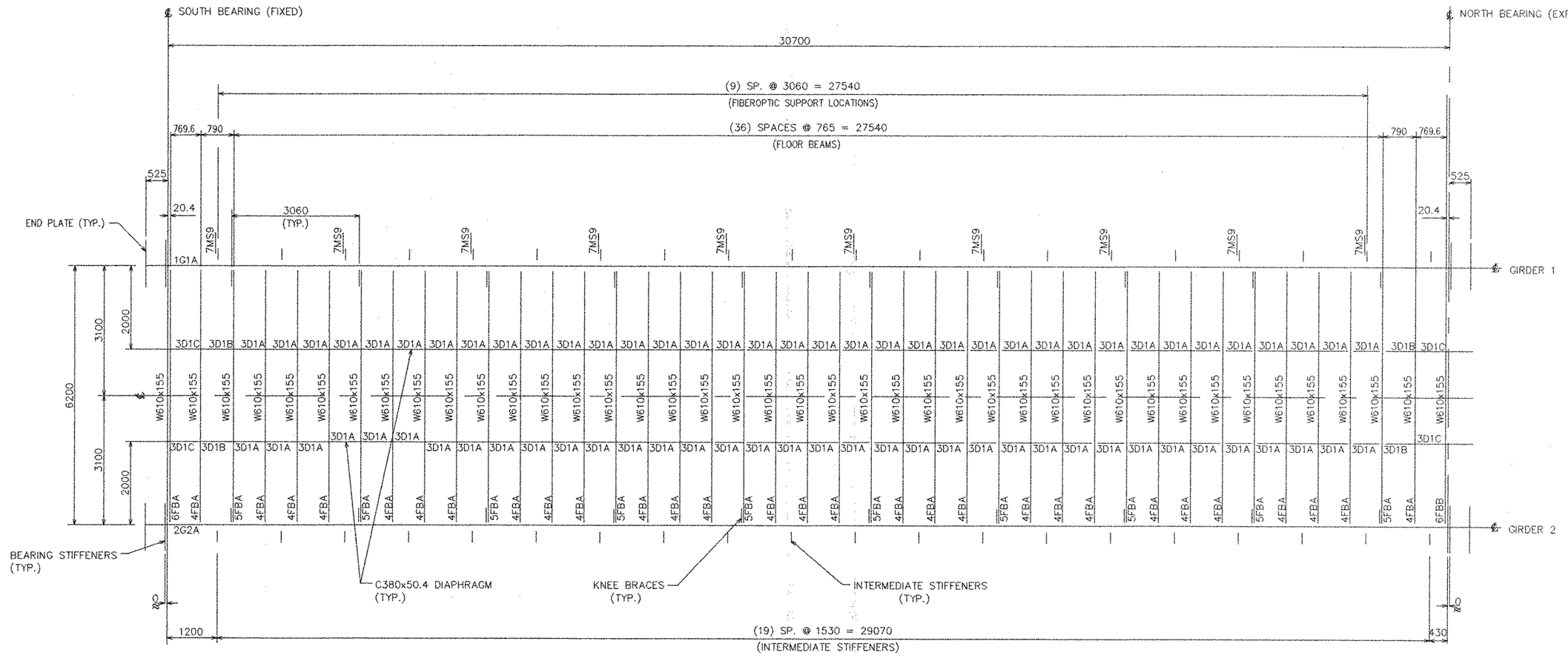
DRAWN BY	SHOP ORDER	DWG. NO.
TJS 3/24/03	4015	GN1
CKD BY RGY 4/14/03	BLOCK NO.	SHEET NO. 1 / 20

18555

No.		Mark	Mark		Type	Material	Size	Length	Finish	Wgt.	Notes	Item
				1904	H.S. BOLTS	⅞ø	A325 TYPE 3	70				
				1904	H. HEX NUTS	⅞ø	A563 GR. C3					
				1904	STD. WASH.	⅞ø	F436					
				512	H.S. BOLTS	⅞ø	A325 TYPE 3	76				
				512	H. HEX NUTS	⅞ø	A563 GR. C3					
				512	STD. WASH.	⅞ø	F436					
				56	H.S. BOLTS	⅞ø	A325 TYPE 3	95				
				56	H. HEX NUTS	⅞ø	A563 GR. C3					
				56	STD. WASH.	⅞ø	F436					
				40	H.S. BOLTS	⅝ø	A325 TYPE 3	40				
				40	H. HEX NUTS	⅝ø	A563 GR. C3					
				40	STD. WASH.	⅝ø	F436					

CONCRETE PAD ELEVATIONS		
GIRDER	℄ SOUTH ABUT. FIXED	℄ NORTH ABUT. EXP.
1G1A	86.473	86.681
2G2A	86.473	86.681





FRAMING PLAN

NOTE:
LIFTING WEIGHT OF GIRDERS
IS 112,000 POUNDS.

REVISIONS		
NO.	DATE	DESCRIPTION
	7/14/03	APPROVAL

STEEL-ART, INCORPORATED
40 WEST MAIN STREET
GALETON, PA 16922
(814) 435-6997

EASTERN BRIDGE LLC
RURAL RTE. 2, BOX 302
CLAREMONT, NH 03743
603-542-5202

STATE OF VERMONT
AGENCY OF TRANSPORTATION

CONTRACT : PIN :

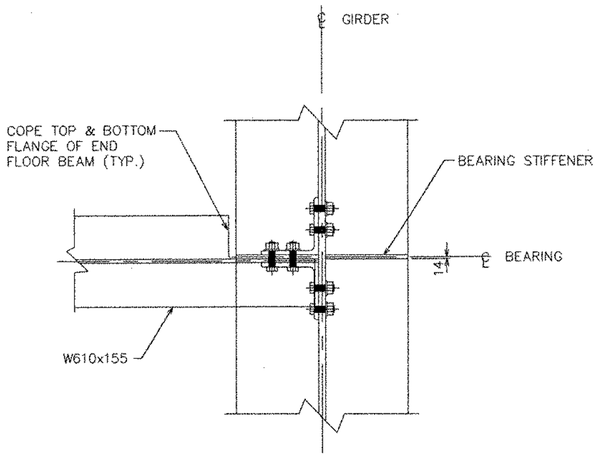
PROPOSED IMPROVEMENT TO RR BRIDGE #62.56
OVER VT ROUTE 9 (PRINCIPAL ARTERIAL)
WINDHAM COUNTY, TOWN OF BRATTLEBORO

TITLE :

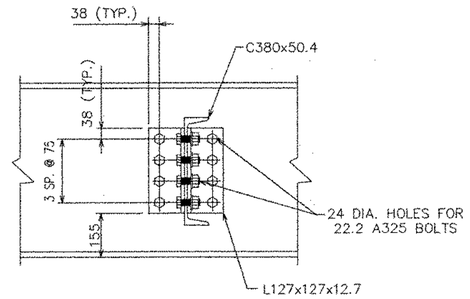
FRAMING PLAN

DRAWN BY DAN 3/17/03	SHOP ORDER 4015	DWG. NO. E1
CKD BY RJS 4/14/03	BLOCK NO.	SHEET NO. 2 / 20

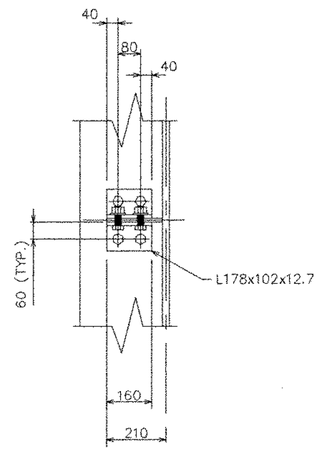
18655



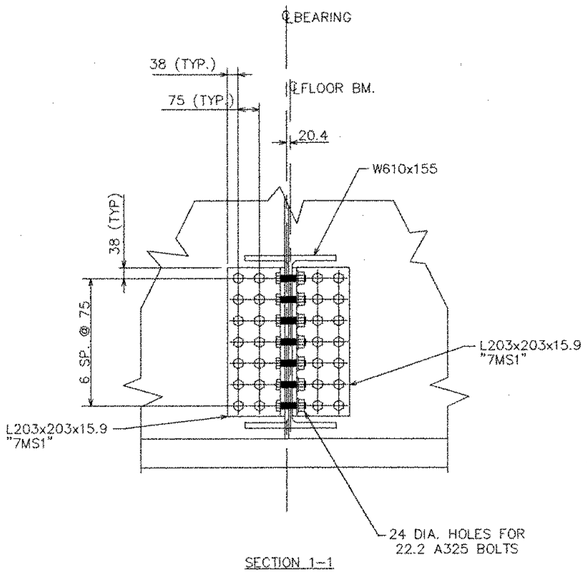
SECTION 2-2



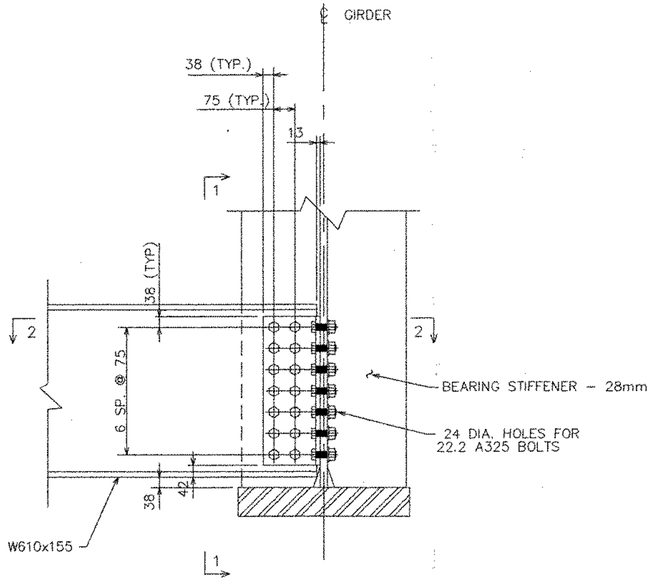
DIAPHRAGM CONNECTION DETAIL



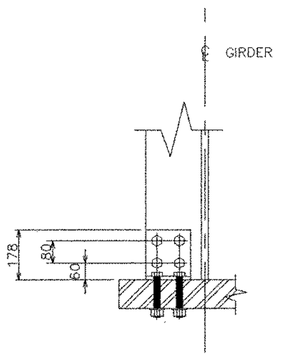
PLAN



SECTION 1-1

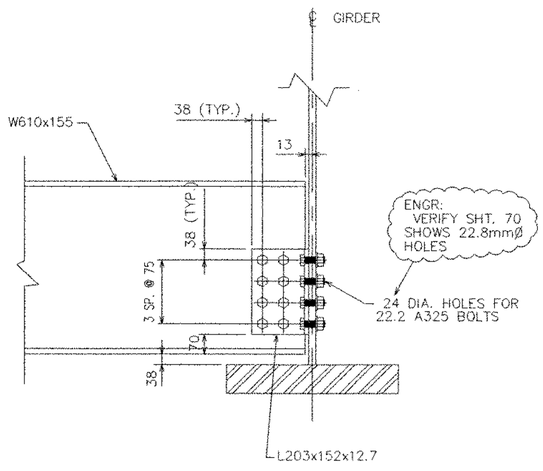


END FLOOR BEAM CONNECTION DETAIL



ELEVATION

DETAIL A
BOLTING OF INTERMEDIATE STIFFENER NEAR BEARING



FLOOR BEAM CONNECTION DETAIL

STEEL-ART, INCORPORATED
40 WEST MAIN STREET
GALETON, PA 16922
(814) 435-6997

EASTERN BRIDGE LLC
RURAL RTE 2, BOX 302
CLAREMONT, NH 03743
603-542-5202

REVISIONS		
NO.	DATE	DESCRIPTION
	8/14/03	APPROVAL

STATE OF VERMONT
AGENCY OF TRANSPORTATION

CONTRACT : PIN :

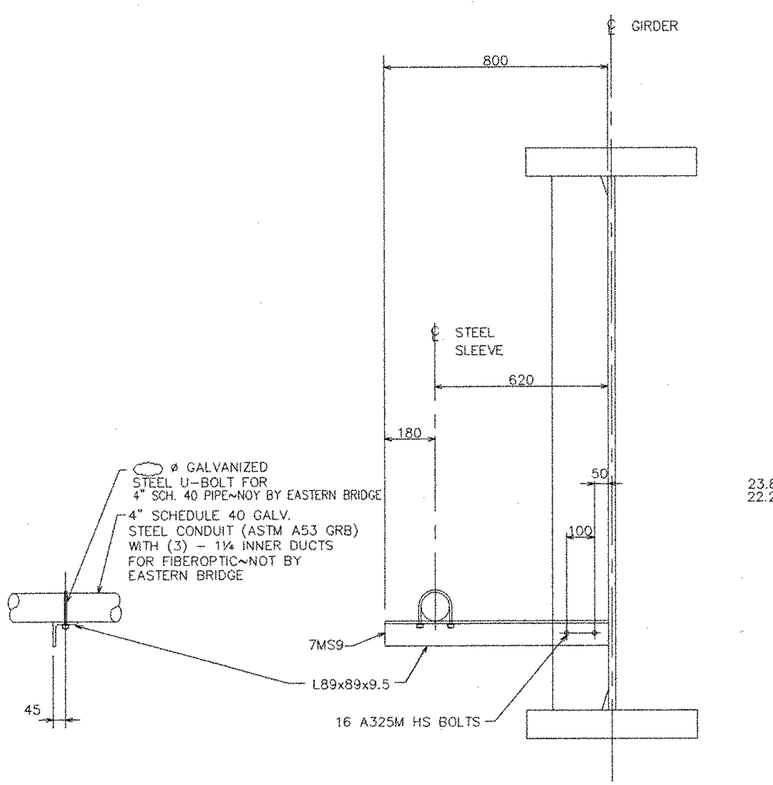
PROPOSED IMPROVEMENT TO RR BRIDGE #62.56 OVER VT ROUTE 9 (PRINCIPAL ARTERIAL) WINDHAM COUNTY, TOWN OF BRATTLEBORO

TITLE :

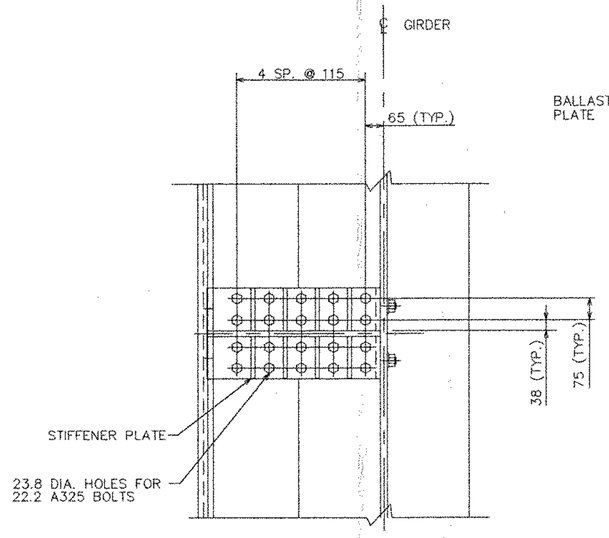
SECTIONS & DETAILS

DRAWN BY	SHOP ORDER	DWG. NO.
DAN 3/19/03	4015	E2
CKD BY	BLOCK NO.	SHEET NO.
RJS 4/14/03		3 / 20

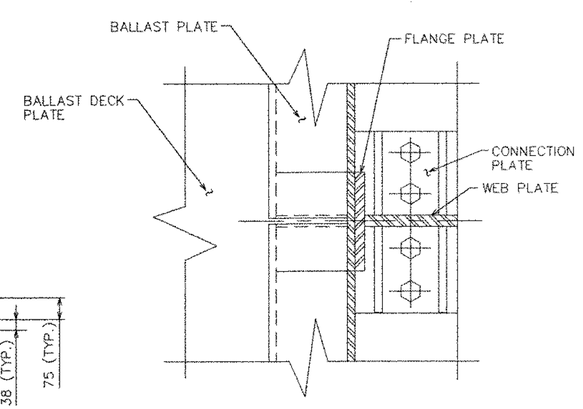
1 of 55



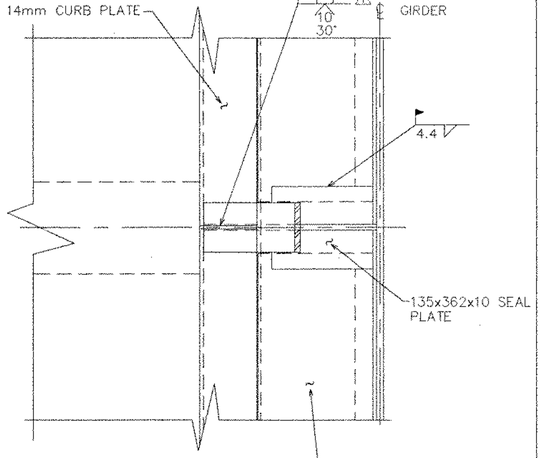
FIBEROPTIC CONDUIT SUPPORT DETAIL



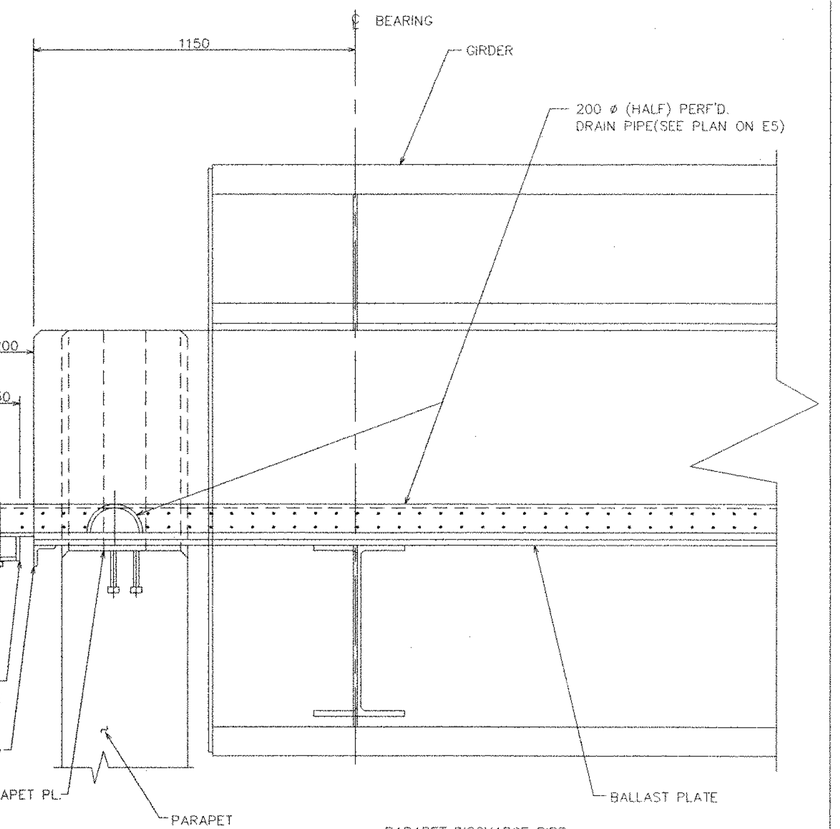
SECTION 1--1



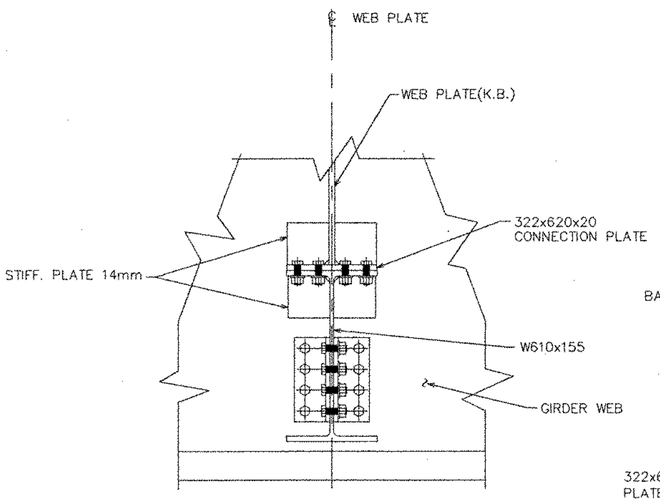
SECTION 3-3



SECTION 4-4



PARAPET DISCHARGE PIPE CONNECTION DETAIL



SECTION 2-2

KNEE BRACE CONNECTION DETAIL

REVISIONS		
NO.	DATE	DESCRIPTION
1	6/24/03	PER APPROVAL
	8/4/03	Approval

STEEL-ART, INCORPORATED
40 WEST MAIN STREET
GALETON, PA 16922
(814) 435-6997

EASTERN BRIDGE LLC
RURAL RTE 2, BOX 302
CLAREMONT, NH 03743
603-542-5202

STATE OF VERMONT
AGENCY OF TRANSPORTATION

CONTRACT : PIN :

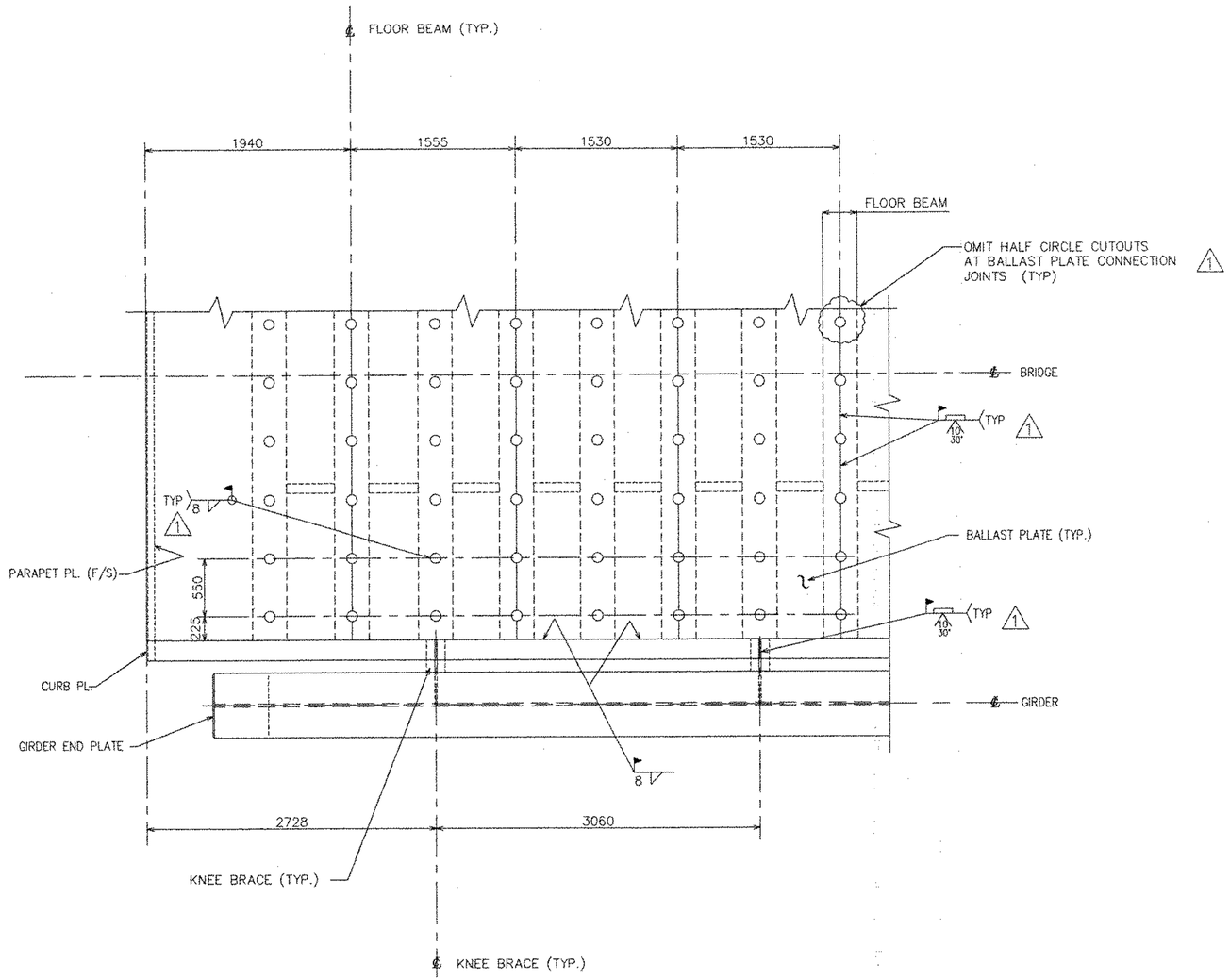
PROPOSED IMPROVEMENT TO RR BRIDGE #62.56 OVER VT ROUTE 9 (PRINCIPAL ARTERIAL) WINDHAM COUNTY, TOWN OF BRATTLEBORO

TITLE

SECTIONS & DETAILS

DRAWN BY	SHOP ORDER	DWG. NO.
DAN 3/19/03	4015	E3
CK'D BY RJS 4/14/03	BLOCK NO.	SHEET NO 4 / 20

18855



BALLAST PLATE LAYOUT

STEEL-ART, INCORPORATED
40 WEST MAIN STREET
GALETON, PA 16922
(814) 435-6997

EASTERN BRIDGE LLC
RURAL RTE 2, BOX 302
CLAREMONT, NH 03743
508-542-5202

REVISIONS		
NO.	DATE	DESCRIPTION
1	6/24/03	PER APPROVAL
	8/4/03	Approval

STATE OF VERMONT
AGENCY OF TRANSPORTATION

CONTRACT : PIN :

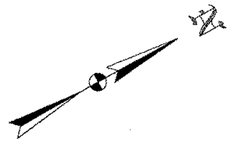
PROPOSED IMPROVEMENT TO RR BRIDGE #62.56
OVER VT ROUTE 9 (PRINCIPAL ARTERIAL)
WINDHAM COUNTY, TOWN OF BRATTLEBORO

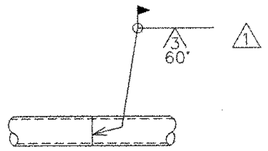
TITLE :

BALLAST PLATE

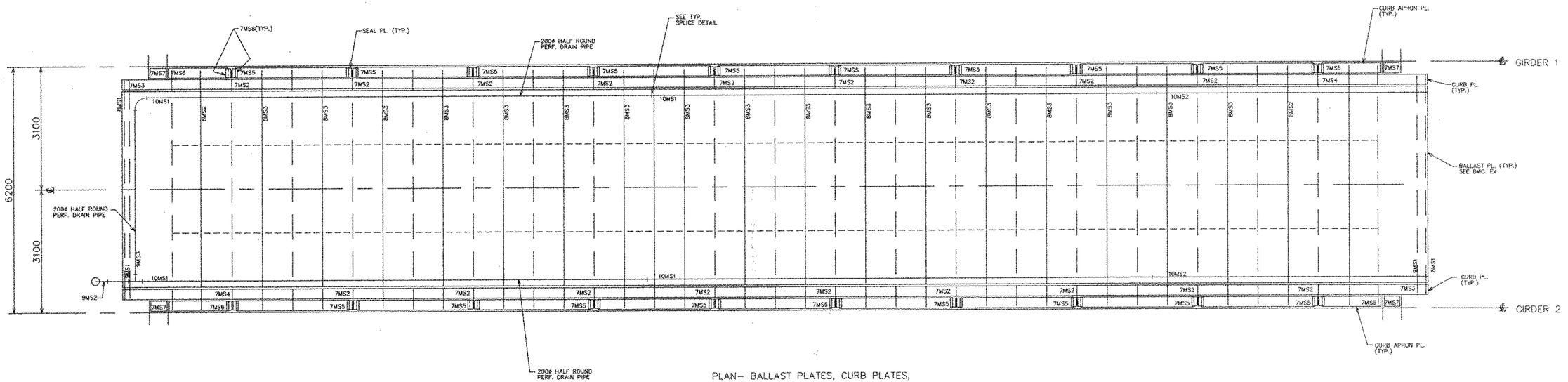
DRAWN BY	SHOP ORDER	DWG. NO.
DAN 3/20/03	4015	E4
CKD BY	BLOCK NO.	SHEET NO.
DAN 4/14/03		5 / 20

18955



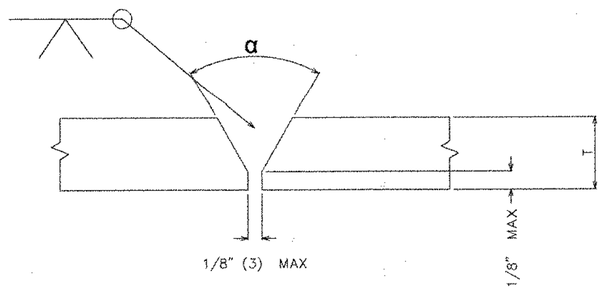


TYP. SPLICE @ DRAIN PIPE



PLAN– BALLAST PLATES, CURB PLATES, SEAL PLATES AND DRAIN PIPE

α = PRODUCTION GROOVE ANGLE
(60° RECOMMENDED)



STEEL-ART, INCORPORATED
40 WEST MAIN STREET
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EASTERN BRIDGE LLC
RURAL RTE 2, BOX 302
CLAREMONT, NH 03743
608-542-5202

REVISIONS		
NO.	DATE	DESCRIPTION
1	6/24/03	PER APPROVAL
	8/4/03	Approval

STATE OF VERMONT
AGENCY OF TRANSPORTATION

CONTRACT : PIN :

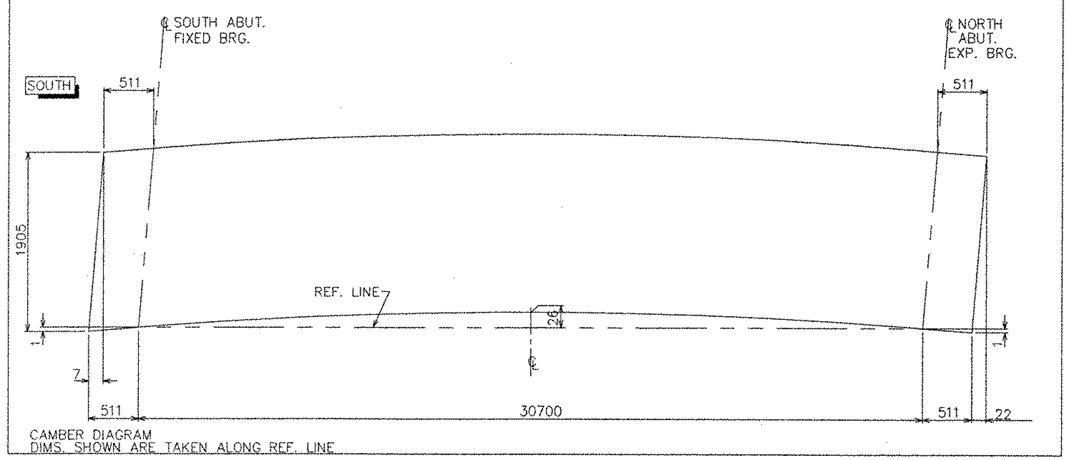
PROPOSED IMPROVEMENT TO RR BRIDGE #62.56
OVER VT ROUTE 9 (PRINCIPAL ARTERIAL)
WINDHAM COUNTY, TOWN OF BRATTLEBORO

TITLE :

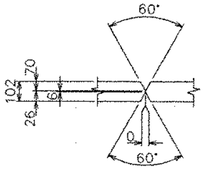
PLAN – MISCELLANEOUS

DRAWN BY	SHOP ORDER	DWG. NO.
DAN 3/17/03	4015	E5
CHD BY RJS 4/14/03	BLOCK NO.	SHEET NO. 6 / 20

19055



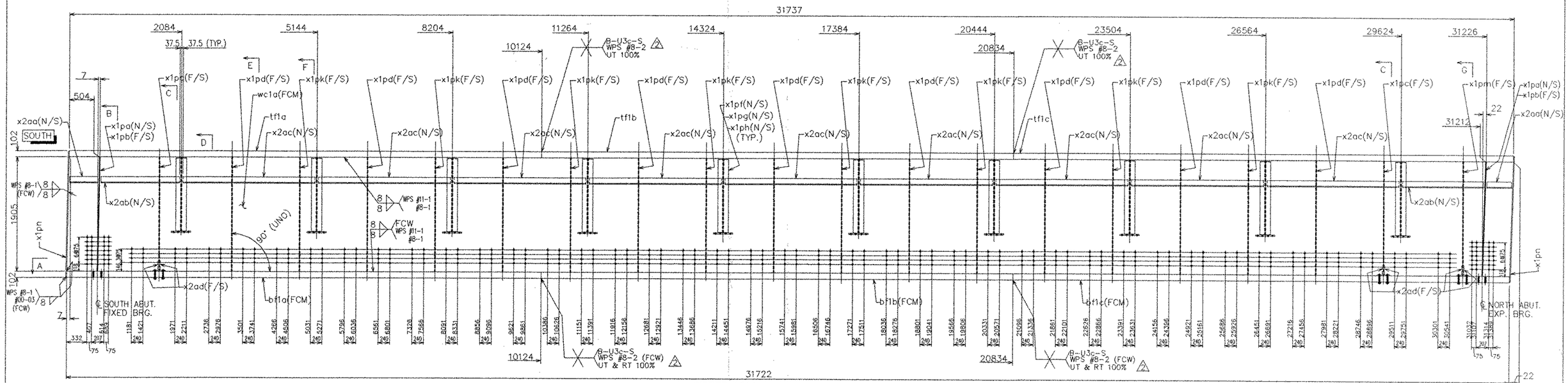
CAMBER DIAGRAM
DIMS. SHOWN ARE TAKEN ALONG REF. LINE



TOP & BOTTOM FLANGE SPLICE
B-U3c-S
WPS #8-2 ⚠2
BOTTOM FLANGE SPLICE (FCW)

Piece No.	Rev.	Mark	Mark	Qty	Type	Material	Grade	Length	Finish	Wgt./Lbs.	Notes	Item
1		1G1A		1	GIRDER					111563		
			tf1a	1	PL	102x610	M270M-345WT2	10124				1-A
			tf1b	1	PL	102x610	M270M-345WT2	10710				1-AA
			tf1c	1	PL	102x610	M270M-345WT2	10903				
			bf1a	1	PL	102x610	M270M-345WF2	10124			FCM	1-B
			bf1b	1	PL	102x610	M270M-345WF2	10710			FCM	1-AB
			bf1c	1	PL	102x610	M270M-345WF2	10888			FCM	
			wc1a	1	PL	25x1905	M270M-345WF2	31744		26554	FCM	1-C
			x1pa	2	PL	28x280	M270M-345W	1905		528		1-D
			x1pb	2	PL	28x280	M270M-345W	1905		528		1-D
			x1pc	2	PL	14x200	M270M-345W	1905		264		1-E
			x1pd	9	PL	14x200	M270M-345W	1905		1186		1-E
			x1pf	10	PL	20x175	M270M-345W	1260		786		1-F
			x1pg	10	PL	20x584	M270M-345W	1236		2584		1-G
			x1ph	10	PL	20x322	M270M-345W	620		8612		1-H
			x1pk	8	PL	14x200	M270M-345W	1905		752		1-E
			x1pm	1	PL	14x200	M270M-345W	1905		94		1-E
			x1pn	2	PL	14x610	M270M-345W	2083		629		1-I
			x2ad	6	L	178x102x12.7	M270M-345W	160		56		1-J
			x2ac	9	L	102x76x12.7	M270M-345W	2985		978		1-K
			x2ab	2	L	102x76x12.7	M270M-345W	1491		109		1-L
			x2aa	2	L	102x76x12.7	M270M-345W	436		32		1-M
			x2pa	80	PL	14x150	M270M-345W	150		440		1-N
				12	H.S BOLTS	7/8ø	A325 TYPE 3	146		10		1-O
				4	H.S BOLTS	7/8ø	A325 TYPE 3	76				
				16	H. HEX NUTS	7/8ø	A563GR C3					1-P
				16	STD. WASHERS	7/8ø	F346					1-Q

NOTE:
GENERAL NOTES SEE DWG. GN1
HOLES : 24mm U.N.O.
FOR WEB CUTTING DIAGRAM SEE WC-1



REVISIONS		
NO.	DATE	DESCRIPTION
1	5/14/03	PER APPROVAL
⚠2	6/24/03	PER APPROVAL
	8/4/03	Approval

STEEL-ART, INCORPORATED
40 WEST MAIN STREET
GALETON, PA 16922
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EASTERN BRIDGE LLC
RURAL RTE 2, BOX 302
CLAREMONT, NH 03743
608-542-5202

STATE OF VERMONT
AGENCY OF TRANSPORTATION

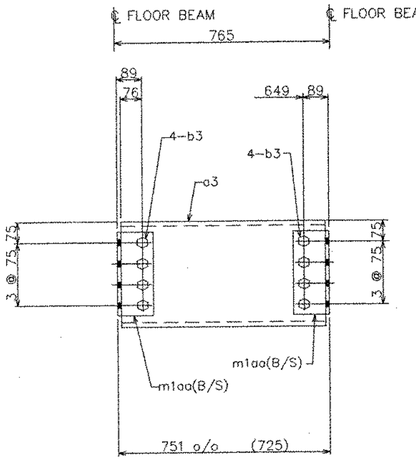
CONTRACT : PIN :

PROPOSED IMPROVEMENT TO RR BRIDGE #62.56
OVER VT ROUTE 9 (PRINCIPAL ARTERIAL)
WINDHAM COUNTY, TOWN OF BRATTLEBORO

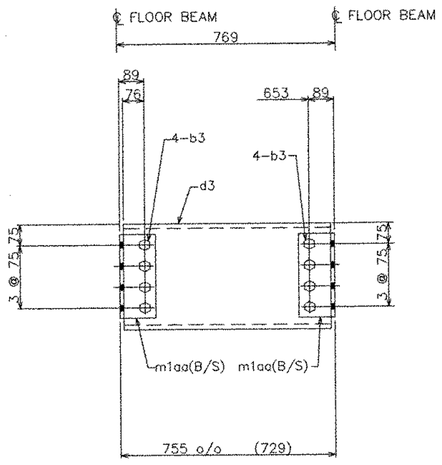
TITLE :
GIRDER 1G1A

DRAWN BY	SHOP ORDER	DWG. NO.
TJS 3/20/03	4015	1
CKD BY	BLOCK NO.	SHEET NO.
RJS 4/14/03		7 / 20

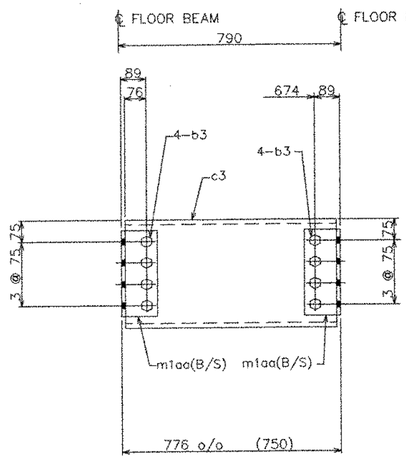
19155



ITEM 3D1A (72 REQ'D)
SCALE 1:10



ITEM 3D1C (4 REQ'D)
SCALE 1:10



ITEM 3D1B (4 REQ'D)
SCALE 1:10

Dwg. No.	Rev.	Ship Mark	Piece Mark	Qty	Type	Size of Material	Grade	Length	Finish	Wgt./Lbs.	Notes	ABM
3		3D1A		72	DIAPHRAM					10790		
			a3	72	C	380x50.4	M270M-345W	725		5793		1-R
			m1aa	288	L	127x127x12.7	M270M-345W	301		4617		1-S
			b3	576	H.S. BOLTS	22.2	A325 TYPE 3	70		380		1-T
				576	HEX NUT	22.2						1-P
				576	STD. WASH	22.2						1-Q
3		3D1B		4	DIAPHRAM					610		
			c3	4	C	380x50.4	M270M-345W	750		333		1-U
			m1aa	16	L	127x127x12.7	M270M-345W	301		256		1-S
			b3	32	H.S. BOLTS	22.2	A325 TYPE 3	70		21		1-T
				32	HEX NUT	22.2						1-P
				32	STD. WASH	22.2						1-Q
3		3D1C		4	DIAPHRAM					604		
			d3	4	C	380x50.4	M270M-345W	729		327		1-V
			m1aa	16	L	127x127x12.7	M270M-345W	301		256		1-S
			b3	32	H.S. BOLTS	22.2	A325 TYPE 3	70		21		1-T
				32	HEX NUT	22.2						1-P
				32	STD. WASH	22.2						1-Q

NOTES:
1 - GENERAL NOTES: SEE DRAWING GN1
2 - HOLES: 24ø (U.N.O.)
3 - SHOP BOLT - BOLT TO SHIP ONLY

STEEL-ART, INCORPORATED
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608-542-5202

REVISIONS		
NO.	DATE	DESCRIPTION
	8/4/03	APPROVAL

STATE OF VERMONT
AGENCY OF TRANSPORTATION

CONTRACT : PIN :

PROPOSED IMPROVEMENT TO RR BRIDGE #62.56
OVER VT ROUTE 9 (PRINCIPAL ARTERIAL)
WINDHAM COUNTY, TOWN OF BRATTLEBORO

TITLE :

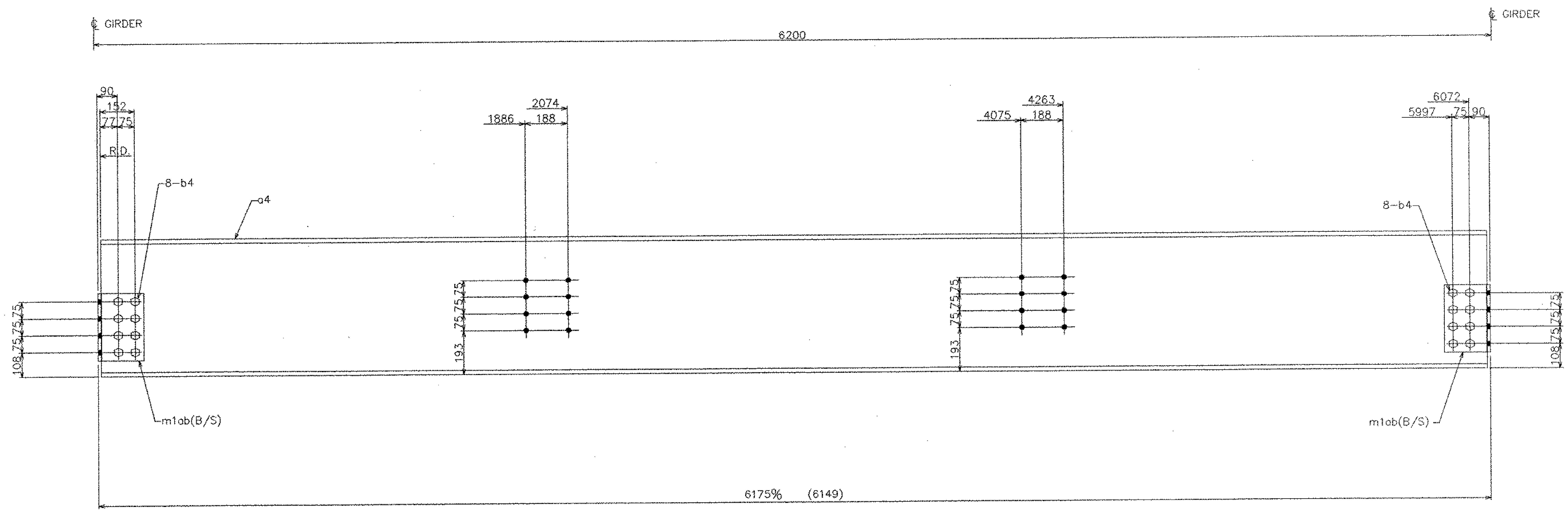
DIAPHRAGM D1

DRAWN BY	SHOP ORDER	DWG. NO.
TJS 3/17/03	4015	3
CKD BY RGY 4/7/03	BLOCK NO.	SHEET NO. 9 / 20

19255

No.		Mark	Mark			Material						
4		4FBA		29	FLOOR BEAM					63788		
4			a4	29	W	610x155	M270M-345W	6149		60844		1-W
			m1ab	116	L	203x152x12.7	M270M-345W	301		2635		1-X
			b4	464	H.S. BOLTS	22.2	A325 TYPE 3	76		309		1-Y
				464	HEX NUT	22.2						1-P
				464	STD. WASH.	22.2						1-Q

NOTES:
1 - GENERAL NOTES: SEE DRAWING GN1
2 - HOLES: 24⌀ (U.N.O.)
3 - SHOP BOLT - BOLT TO SHIP ONLY



ITEM 4FBA (29 REQ'D)
SCALE 1:10

REVISIONS		
NO.	DATE	DESCRIPTION
	8/4/03	APPROVAL

STEEL-ART, INCORPORATED
40 WEST MAIN STREET
GALETON, PA 16922
(814) 435-6997

EASTERN BRIDGE LLC
RURAL RTE 2, BOX 302
CLAREMONT, NH 03743
603-542-5202

STATE OF VERMONT
AGENCY OF TRANSPORTATION

CONTRACT : PIN :

PROPOSED IMPROVEMENT TO RR BRIDGE #62.56 OVER VT ROUTE 9 (PRINCIPAL ARTERIAL) WINDHAM COUNTY, TOWN OF BRATTLEBORO

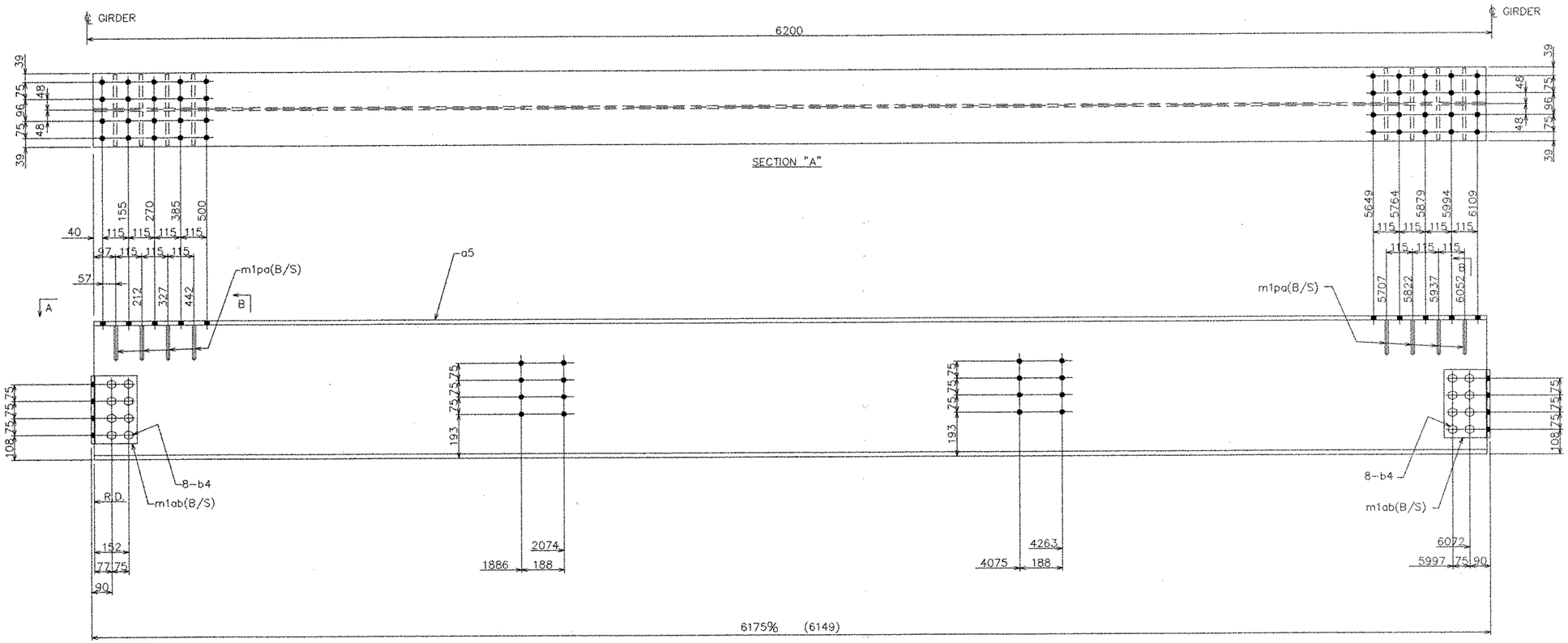
TITLE : FLOOR BEAM

DRAWN BY TJS 3/17/03	SHOP ORDER 4015	DWG. NO. 4
CKD BY RGY 4/7/03	BLOCK NO.	SHEET NO. 10 / 20

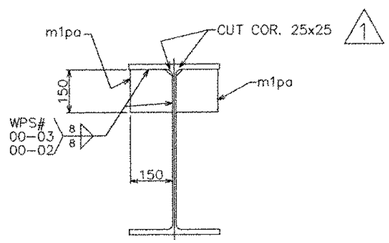
19355

Dwg. No.	Rev.	Ship Mark	Piece Mark	Qty	Type	Size of Material	Grade	Length	Finish	Wgt./Lbs.	Notes	ABM
5		5FBA		10	FLOOR BEAM					22881		
			a5	10	W	610x155	M270M-345W	6149		20981		1-W
			m1pa	160	PL	14x150	M270M-345W	150		885		1-Z
			m1ab	40	L	203x152x12.7	M270M-345W	301		908		1-X
			b4	160	H.S. BOLTS	22.2	A325 TYPE 3	76		107		1-Y
				160	HEX NUTS	22.2						1-P
				160	STD. WASH	22.2						1-Q

NOTES:
1 - GENERAL NOTES: SEE DRAWING GN1
2 - HOLES: 24ø (U.N.O.)
3 - SHOP BOLT - BOLT TO SHIP ONLY



ITEM 5FBA (10 REQ'D)
SCALE 1:10



SECTION "B"

REVISIONS		
NO.	DATE	DESCRIPTION
1	6/24/03	PER APPROVAL
	8/4/03	Approval

STEEL-ART, INCORPORATED
40 WEST MAIN STREET
GALETON, PA 16922
(814) 435-6997

EASTERN BRIDGE LLC
RURAL RTE 2, BOX 302
CLAREMONT, NH 03743
608-542-5202

STATE OF VERMONT
AGENCY OF TRANSPORTATION

CONTRACT : PIN :

PROPOSED IMPROVEMENT TO RR BRIDGE #62.56
OVER VT ROUTE 9 (PRINCIPAL ARTERIAL)
WINDHAM COUNTY, TOWN OF BRATTLEBORO

TITLE :

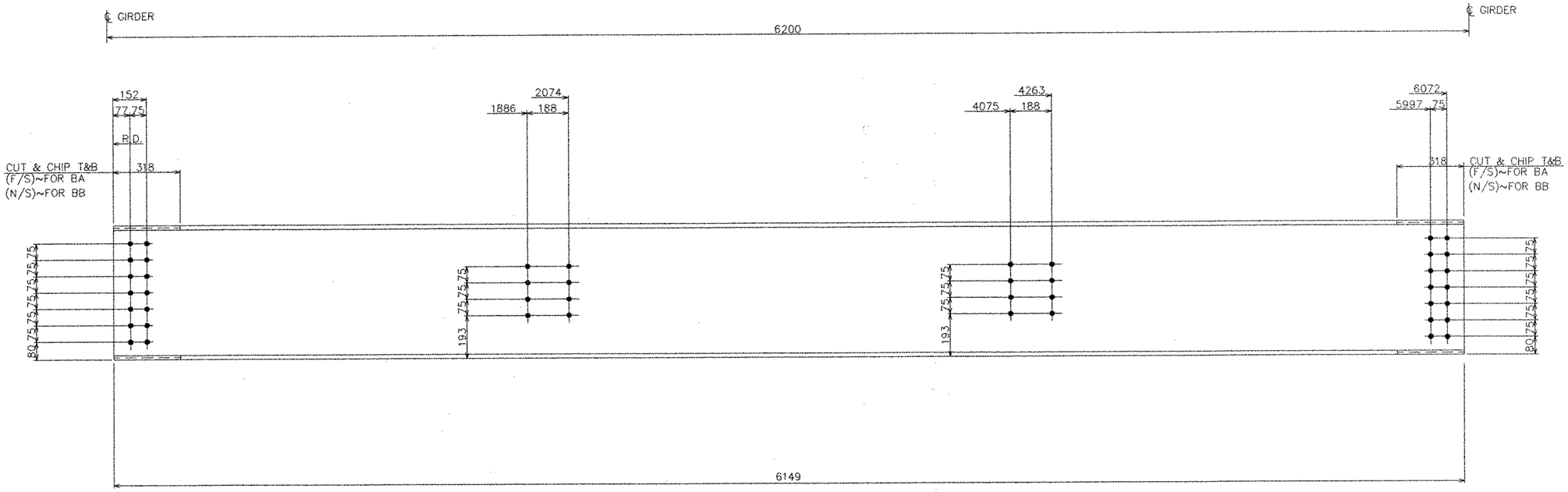
FLOOR BEAM

DRAWN BY	SHOP ORDER	DWG. NO.
TJS 3/17/03	4015	5
CKD BY RGY 4/8/03	BLOCK NO.	SHEET NO. 11 / 20

19455

Dwg. No.	Rev.	Ship Mark	Piece Mark	Qty	Type	Size of Material	Grade	Length	Finish	Wgt./Lbs.	Notes	ABM
6		6FBA		ONE	W	610x155	M270M-345W	6149		2098		1-W
6		6FBB		ONE	W	610x155	M270M-345W	6149		2098		1-W

NOTES:
1 - GENERAL NOTES: SEE DRAWING GN1
2 - HOLES: 24Ø (U.N.O.)



ITEM 6FBA (ONE REQ'D)
SCALE 1:10

ITEM 6FBB (ONE REQ'D)
SCALE 1:10

STEEL-ART, INCORPORATED
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CLAREMONT, NH 03743
603-542-5202

REVISIONS		
NO.	DATE	DESCRIPTION
	8/1/03	APPROVAL

STATE OF VERMONT
AGENCY OF TRANSPORTATION

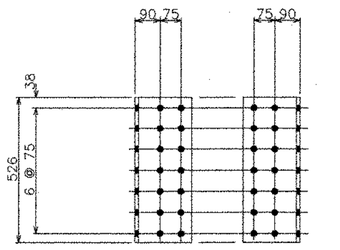
CONTRACT : PIN :

PROPOSED IMPROVEMENT TO RR BRIDGE #62.56
OVER VT ROUTE 9 (PRINCIPAL ARTERIAL)
WINDHAM COUNTY, TOWN OF BRATTLEBORO

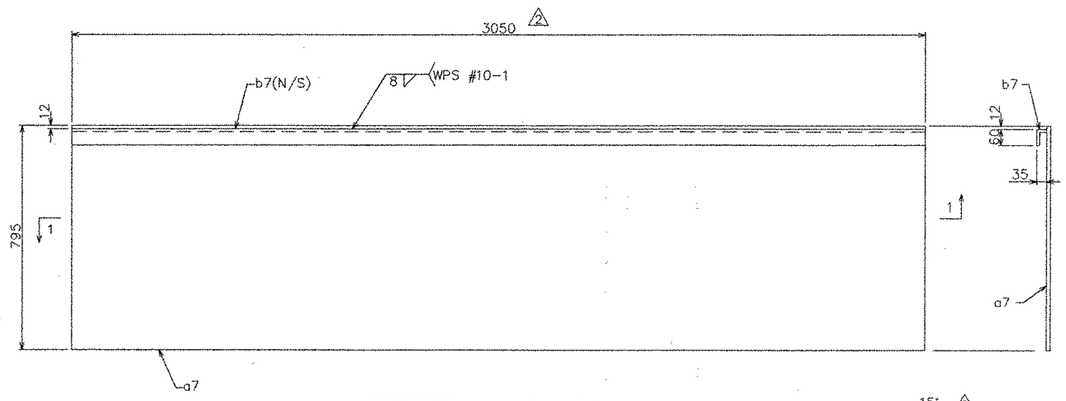
TITLE :
FLOOR BEAM

DRAWN BY	SHOP ORDER	DWG. NO.
TJS 3/18/03	4015	6
CKD BY RGY 4/8/03	BLOCK NO.	SHEET NO. 12 / 20

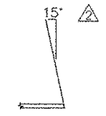
195 ss



ITEM 7MS1 (8 REQ'D)
SCALE 1:10



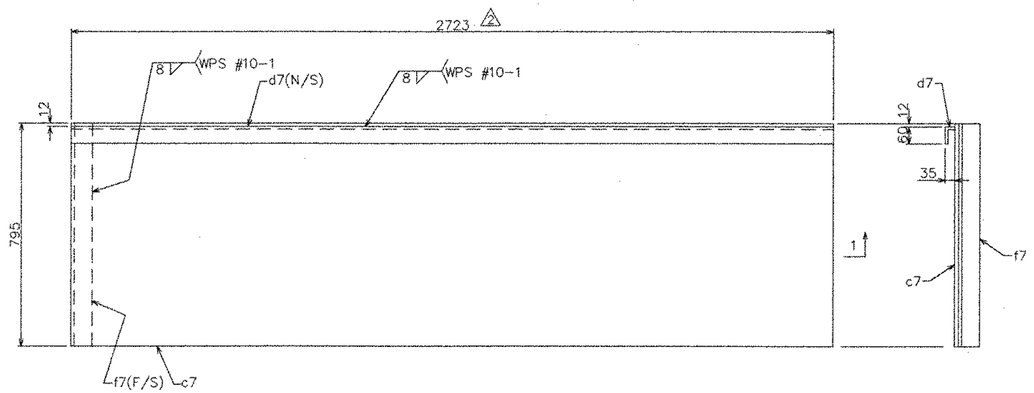
ITEM 7MS2 (18 REQ'D)
SCALE 1:10



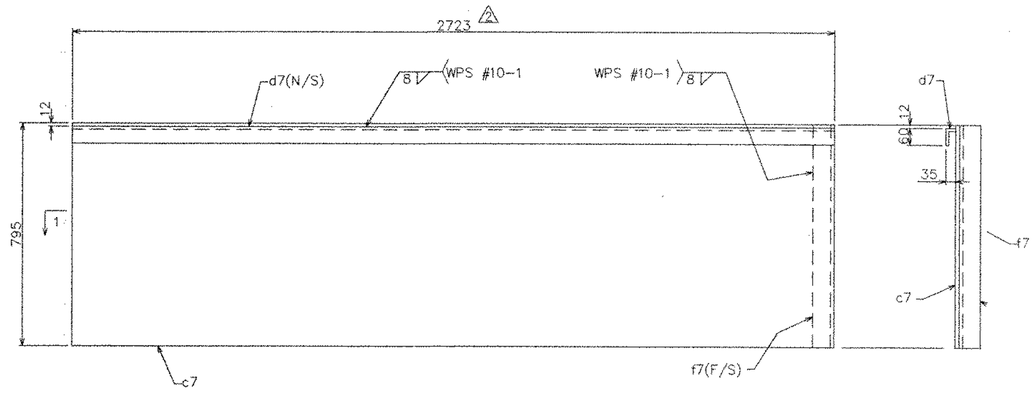
SECTION "1"

Dwg. No.	Rev.	Ship Mark	Piece Mark	Qty	Type	Size of Material	Grade	Length	Finish	Wgt./Lbs.	Notes	ABM
7		7MS1		8	L	203x203x15.9	M270M-345W	526		451		2-A
7		7MS2		18	ASSY.					11255		
			a7	18	PL	14x795	M270M-345W	3050		10821		2-B
			b7	18	PL	10x85	M270M-345W	3050		434	BENT	2-C
7		7MS3		2	ASSY.					1200		
			c7	2	PL	14x795	M270M-345W	2723		1074		2-D
			d7	2	PL	10x85	M270M-345W	2723		77	BENT	2-E
			f7	2	L	76x76x12.5	M270M-345W	795		49		2-F
7		7MS4		2	ASSY.					1200		
			c7	2	PL	14x795	M270M-345W	2723		1074		2-D
			d7	2	PL	10x85	M270M-345W	2723		77	BENT	2-E
			f7	2	L	76x76x12.5	M270M-345W	795		49		2-F
7		7MS5		18	PL	14x413	M270M-345W	2879		5296		2-G
7		7MS6		4	PL	14x413	M270M-345W	1479		604		2-H
7		7MS7		4	PL	14x413	M270M-345W	498		203		2-I
7		7MS8		40	PL	10x135	M270M-345W	362		322		2-J
7		7MS9		10	L	89x89x9.5	M270M-345W	800		223		2-K

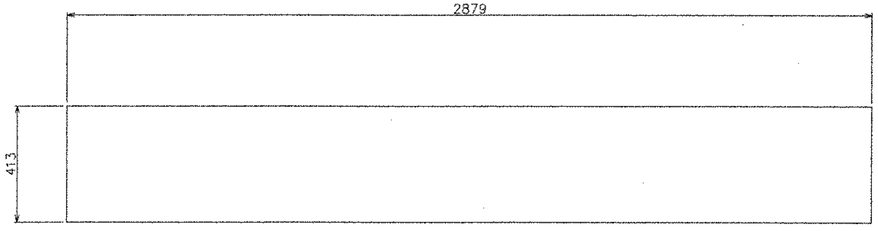
NOTES:
1 - GENERAL NOTES: SEE DRAWING GN1
2 - HOLES: 24ø (U.N.O.)



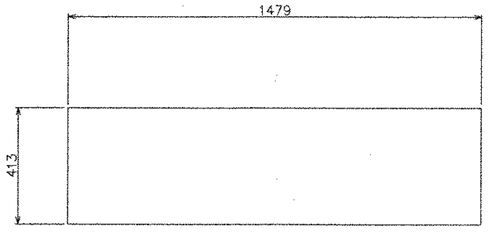
ITEM 7MS3 (2 REQ'D)
SCALE 1:10



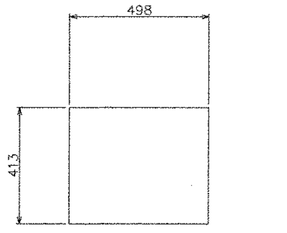
ITEM 7MS4 (2 REQ'D)
SCALE 1:10



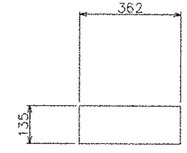
ITEM 7MS5 (18 REQ'D)
SCALE 1:10



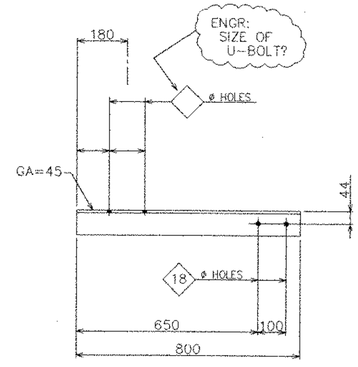
ITEM 7MS6 (4 REQ'D)
SCALE 1:10



ITEM 7MS7 (4 REQ'D)
SCALE 1:10



ITEM 7MS8 (40 REQ'D)
SCALE 1:10



ITEM 7MS9 (10 REQ'D)
SCALE 1:10

REVISIONS		
NO.	DATE	DESCRIPTION
1	5/14/03	PER APPROVAL
2	6/24/03	PER APPROVAL
	8/4/03	Approval

STEEL-ART, INCORPORATED
40 WEST MAIN STREET
GALETON, PA 16922
(814) 435-6997

EASTERN BRIDGE LLC
RURAL RTE 2, BOX 302
CLAREMONT, NH 03743
608-542-5002

STATE OF VERMONT
AGENCY OF TRANSPORTATION

CONTRACT : PIN :

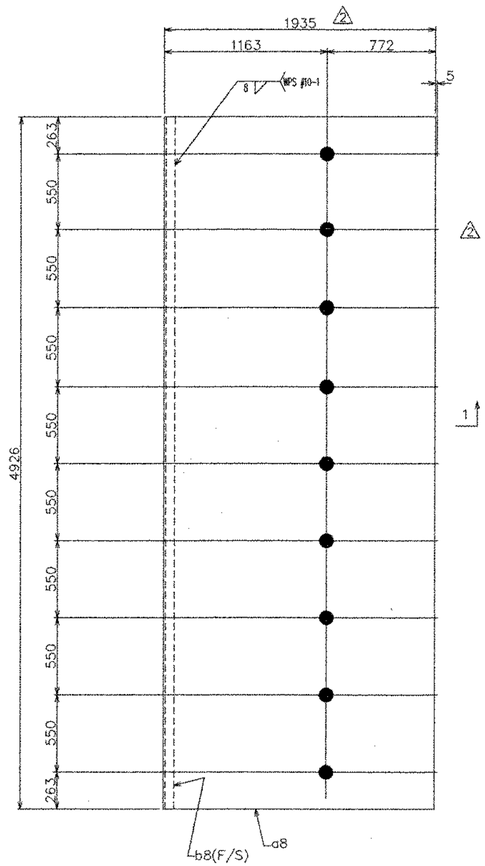
PROPOSED IMPROVEMENT TO RR BRIDGE #62.56
OVER VT ROUTE 9 (PRINCIPAL ARTERIAL)
WINDHAM COUNTY, TOWN OF BRATTLEBORO

TITLE :

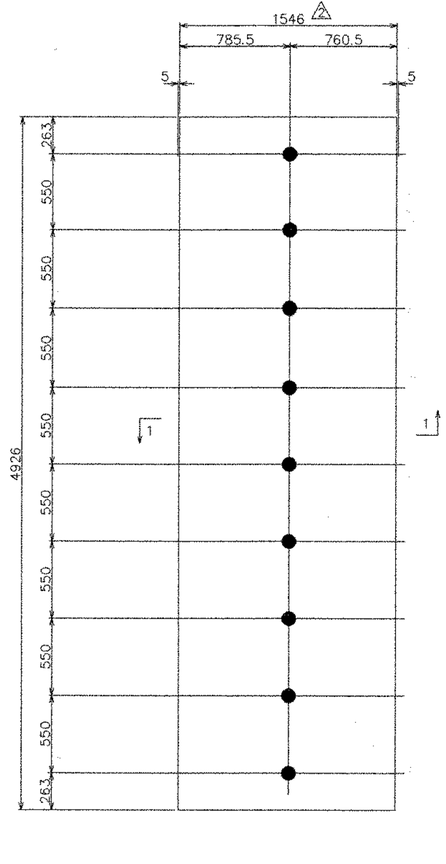
MISC. DETAILS

DRAWN BY TJS	SHOP ORDER	DWG. NO.	
3/25/03	4015	7	
CKD BY RGY	BLOCK NO.	SHEET NO.	
4/8/03		13 / 20	

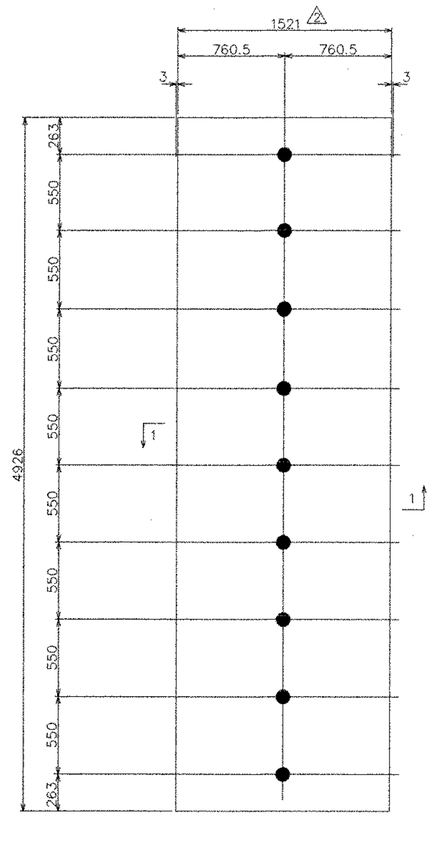
1955



ITEM 8MS1 (2 REQ'D)
SCALE 1:20



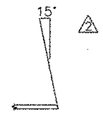
ITEM 8MS2 (2 REQ'D)
SCALE 1:20



ITEM 8MS3 (17 REQ'D)
SCALE 1:20

Dwg. No.	Rev.	Ship Mark	Piece Mark	Qty	Type	Size of Material	Grade	Length	Finish	Wgt./Lbs.	Notes	ABM
8		8MS1		2	ASSY.					7126		
			a8	2	PL	20x1935	M270M-345W	4926		6822		2-L
			b8	2	L	76x76x12.5	M270M-345W	4926		304		2-M
8		8MS2		2	PL	20x1546	M270M-345W	4926		5463		2-N
8		8MS3		17	PL	20x1521	M270M-345W	4926		45679		2-O

NOTES:
1 - GENERAL NOTES: SEE DRAWING GN1
2 - HOLES: 100mm



SECTION "1"

STEEL-ART, INCORPORATED
40 WEST MAIN STREET
GALETON, PA 16922
(814) 435-6997

EASTERN BRIDGE LLC
RURAL RTE 2, BOX 302
CLAREMONT, NH 03743
608-542-5202

REVISIONS		
NO.	DATE	DESCRIPTION
1	5/14/03	PER APPROVAL
2	6/24/03	PER APPROVAL
	8/4/03	Approval

STATE OF VERMONT
AGENCY OF TRANSPORTATION

CONTRACT : PIN :

PROPOSED IMPROVEMENT TO RR BRIDGE #62.56
OVER VT ROUTE 9 (PRINCIPAL ARTERIAL)
WINDHAM COUNTY, TOWN OF BRATTLEBORO

TITLE :

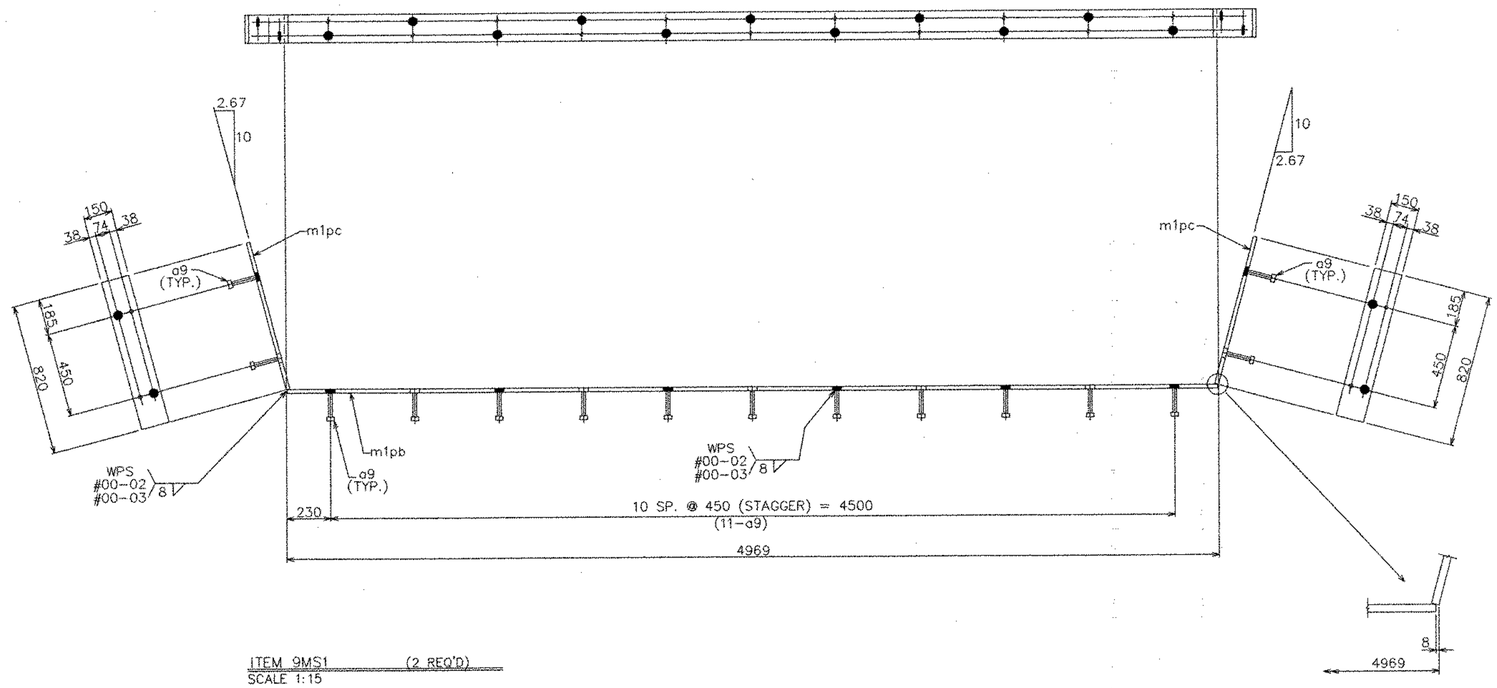
BALLAST PLATES

DRAWN BY	SHOP ORDER	DWG. NO.
TJS 3/25/03	4015	8
CKD BY	BLOCK NO.	SHEET NO.
RGY 4/8/03		14 / 20

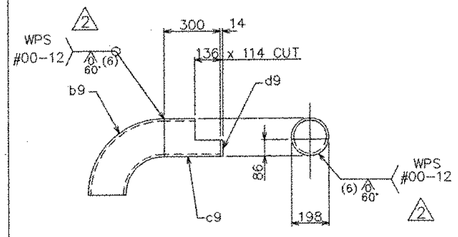
19755

Dwg. No.	Rev.	Ship Mark	Piece Mark	Qty	Type	Size or Material	Grade	Length	Finish	Wgt./Lbs.	Notes	ASM
9		9MS1		2	ASSY.					765		
			m1pb	2	PL	20x150	M270M-345W	4953		540		2-P
			m1pc	4	PL	20x150	M270M-345W	820		180		2-Q
			a9	30	HEADED ANCH.	20ø		150		45		2-R
9		9MS2		1	ASSY.					78		
			b9	1	PIPE	200ø SCH. 40	A53 GR B	90° ELBOW	GALV.	46		2-S
			c9	1	PIPE	200ø SCH. 40	A53 GR B	300	GALV.	28		2-T
			d9	1	PL	14x86	M270M-345W	198	GALV.	4		2-U
9		9MS3		1	ASSY.					375		
			f9	1	½ PIPE	200ø SCH. 80	A53 GR B	347	GALV.	10		2-V
			g9	1	PLATE	14x200	M270M-345W	200	GALV.	37		2-W
			k9	1	½ PIPE	200ø SCH. 80	A53 GR B	STRAIGHT TEE	GALV.	294		2-X
			m9	1	½ PIPE	200ø SCH. 80	A53 GR B	4128	GALV.	34	PERF.	2-Y
			n9	1	½ PIPE	200ø SCH. 80	A53 GR B	90° ELBOW	GALV.			2-Z

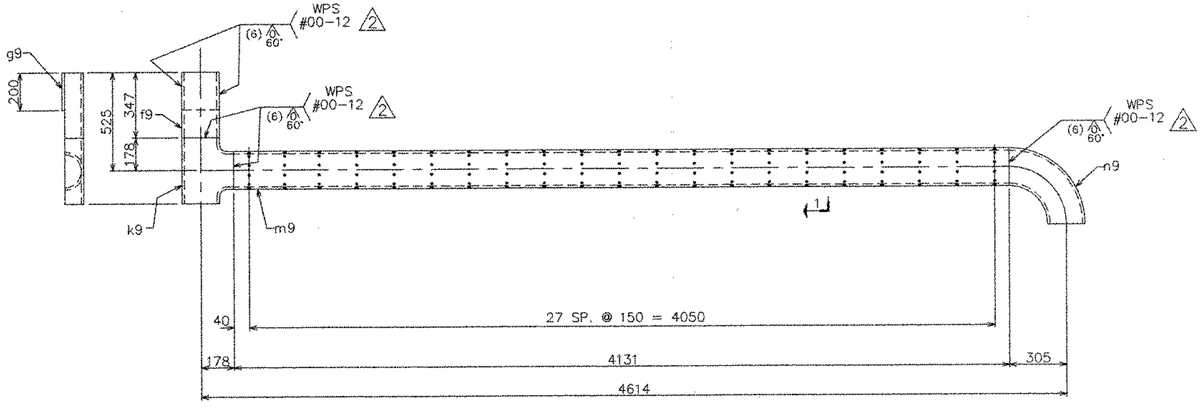
NOTES:
1 – GENERAL NOTES: SEE DRAWING GN1
2 – HOLES: 50mm (U.N.O.)



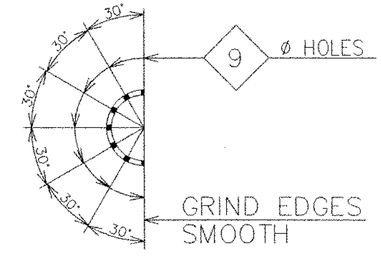
ITEM 9MS1 (2 REQ'D)
SCALE 1:15



ITEM 9MS2 (1 REQ'D)
SCALE 1:15



ITEM 9MS3 (1 REQ'D)
SCALE 1:15



SECTION "1"

REVISIONS		
NO.	DATE	DESCRIPTION
1	5/14/03	PER APPROVAL
2	6/24/03	PER APPROVAL
	7/4/03	Approval

STEEL-ART, INCORPORATED
40 WEST MAIN STREET
GALETON, PA 16922
(814) 435-6997

EASTERN BRIDGE LLC
RURAL RTE 2, BOX 302
CLAREMONT, NH 03743
608-542-5202

STATE OF VERMONT
AGENCY OF TRANSPORTATION

CONTRACT : PIN :

PROPOSED IMPROVEMENT TO RR BRIDGE #62.56 OVER VT ROUTE 9 (PRINCIPAL ARTERIAL) WINDHAM COUNTY, TOWN OF BRATTLEBORO

TITLE :

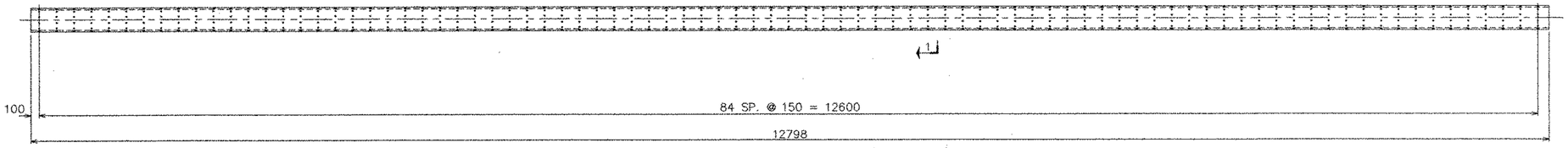
MISC. DETAILS

DRAWN BY	SHOP ORDER	DWG. NO.
TJS 3/25/03	4015	9
CKD BY RJS 4/16/03	BLOCK NO.	SHEET NO. 15 / 20

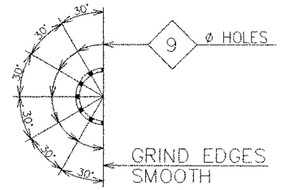
19855

Dwg. No.	Rev.	Ship Mark	Piece Mark	Qty	Type	Size of Material	Grade	Length	Finish	Wgt./Lbs.	Notes	ABM
10		10MS1		4	½ PIPE	200ø SCH. 80	A53 GR. B	12798	GALV.	3645	PERF.	3-A
10		10MS2		2	ASSY.					984		
			a10	2	½ PIPE	200ø SCH. 80	A53 GR. B	6881	GALV.	979	PERF.	3-B
			b10	2	PL	14x100	M270M--345W	200	GALV.	5		3-C
10		10MS3		ONE	U-BOLT							
			c10	1	ROD	ø	A36		GALV.			
				2			HEX NUT		GALV.			
				2			WASHER		GALV.			
			d10	1	PL		A36		GALV.			

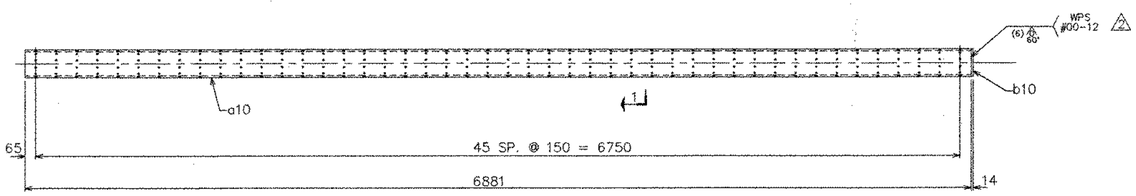
NOTES:
1 - GENERAL NOTES: SEE DRAWING GN1
2 - HOLES: 24ø (U.N.O.)



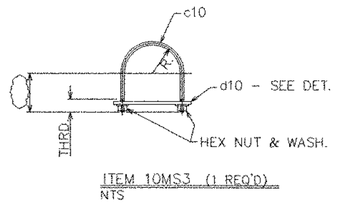
ITEM 10MS1 (4 REQ'D)
SCALE 1:20



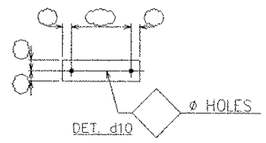
SECTION "1"



ITEM 10MS2 (2 REQ'D)
SCALE 1:20



ITEM 10MS3 (1 REQ'D)
NTS



STEEL-ART, INCORPORATED
40 WEST MAIN STREET
GALETON, PA 16922
(814) 435-6997

EASTERN BRIDGE LLC
RURAL RTE 2, BOX 302
CLAREMONT, NH 03743
608-542-5202

REVISIONS		
NO.	DATE	DESCRIPTION
1	5/14/03	PER APPROVAL
2	6/24/03	PER APPROVAL
	8/4/03	Approval

STATE OF VERMONT
AGENCY OF TRANSPORTATION

CONTRACT : PIN :

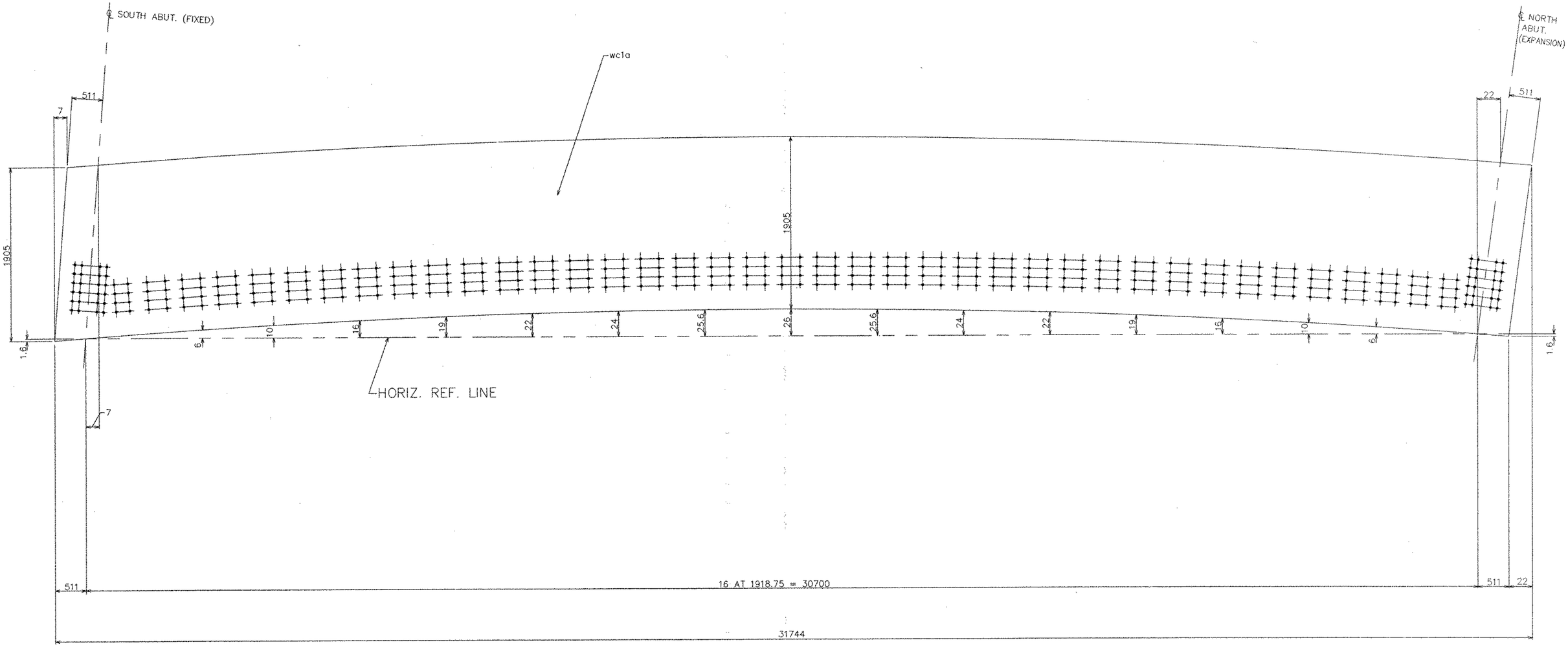
PROPOSED IMPROVEMENT TO RR BRIDGE #62.56
OVER VT ROUTE 9 (PRINCIPAL ARTERIAL)
WINDHAM COUNTY, TOWN OF BRATTLEBORO

TITLE :

MISC. DETAILS

DRAWN BY	SHOP ORDER	DWG. NO.
TJS 3/26/03	4015	10
CKD BY RGY 4/9/03	BLOCK NO.	SHEET NO. 16 / 20

19955



WEB CUTTING FOR 1G1A, 2G2A (FCM)
NTS (wc1a, PL25x1905 x 31744)

STEEL-ART, INCORPORATED
40 WEST MAIN STREET
GALETON, PA 16922
(814) 435-6997

EASTERN BRIDGE LLC
RURAL RTE 2, BOX 302
CLAREMONT, NH 03743
603-542-5202

REVISIONS		
NO.	DATE	DESCRIPTION
1	5/14/03	PER APPROVAL
	8/4/03	APPROVAL

STATE OF VERMONT
AGENCY OF TRANSPORTATION

CONTRACT : PIN :

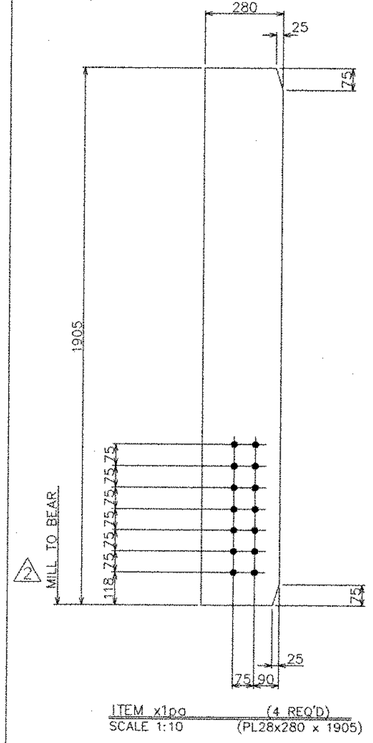
PROPOSED IMPROVEMENT TO RR BRIDGE #62.56
OVER VT ROUTE 9 (PRINCIPAL ARTERIAL)
WINDHAM COUNTY, TOWN OF BRATTLEBORO

TITLE :

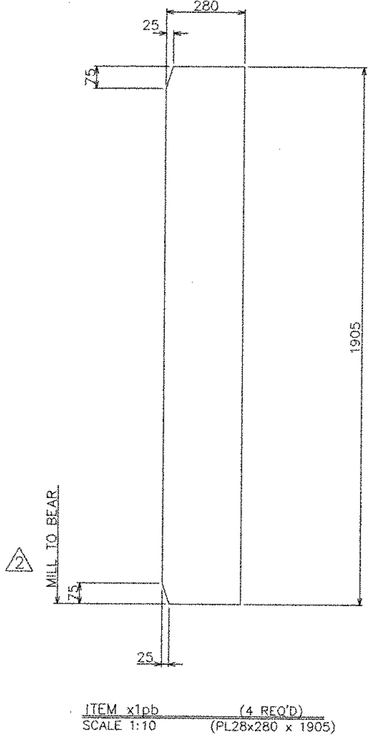
WEB CUTTING DIAGRAM

DRAWN BY	SHOP ORDER	DWG. NO.
TJS 3/26/03	4015	WC1
CKD BY RJS 4/14/03	BLOCK NO.	SHEET NO. 17 / 20

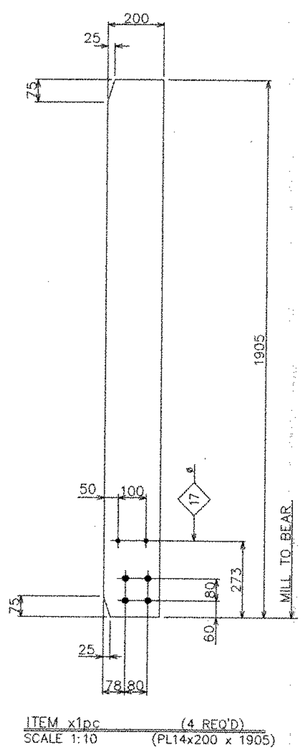
20055



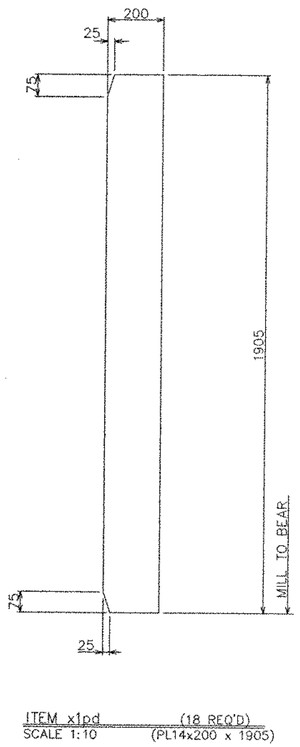
ITEM x1pa (4 REQ'D)
SCALE 1:10 (PL28x280 x 1905)



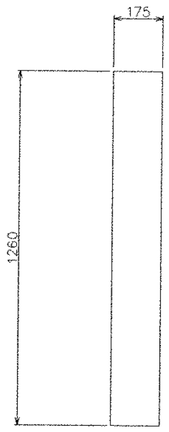
ITEM x1pb (4 REQ'D)
SCALE 1:10 (PL28x280 x 1905)



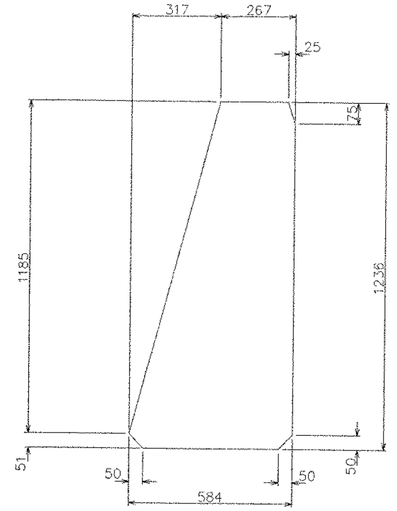
ITEM x1pc (4 REQ'D)
SCALE 1:10 (PL14x200 x 1905)



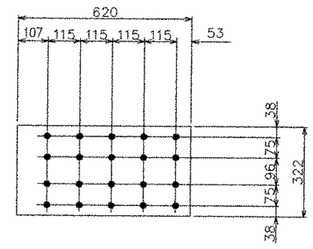
ITEM x1pd (18 REQ'D)
SCALE 1:10 (PL14x200 x 1905)



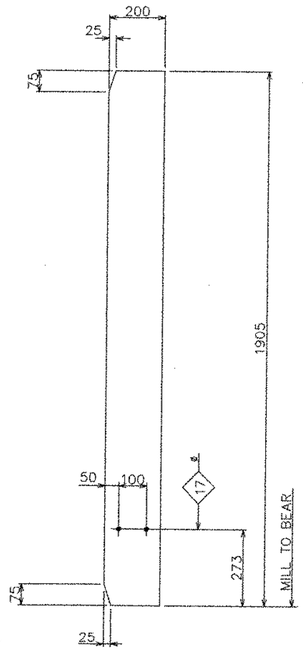
ITEM x1pf (20 REQ'D)
SCALE 1:10 (PL20x175 x 1260)



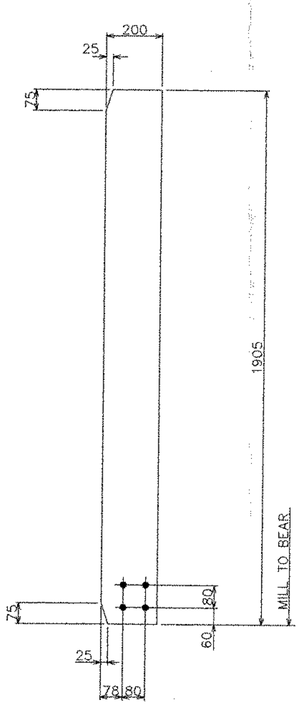
ITEM x1pg (20 REQ'D)
SCALE 1:10 (PL20x584 x 1236)



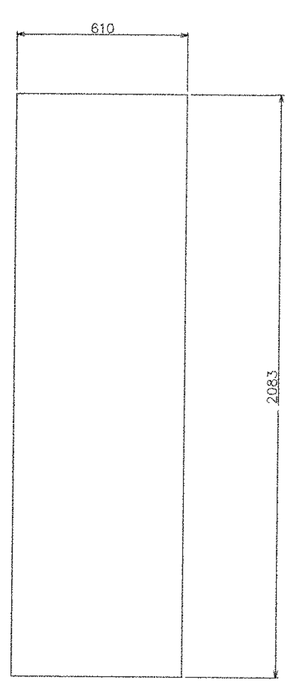
ITEM x1ph (20 REQ'D)
SCALE 1:10 (PL20x322 x 620)



ITEM x1pk (16 REQ'D)
SCALE 1:10 (PL14x200 x 1905)



ITEM x1pm (2 REQ'D)
SCALE 1:10 (PL14x200 x 1905)



ITEM x1pn (4 REQ'D)
SCALE 1:10 (PL14x610 x 2083)

NOTES:
ALL HOLES 24mm (U.N.O)

STEEL-ART, INCORPORATED
40 WEST MAIN STREET
GALETON, PA 16922
(814) 435-6997

EASTERN BRIDGE LLC
RURAL RTE 2, BOX 302
CLAREMONT, NH 03743
603-542-9202

REVISIONS		
NO.	DATE	DESCRIPTION
1	5/14/03	PER APPROVAL
2	6/24/03	PER APPROVAL
	8/4/03	Approval

STATE OF VERMONT
AGENCY OF TRANSPORTATION

CONTRACT : PIN :

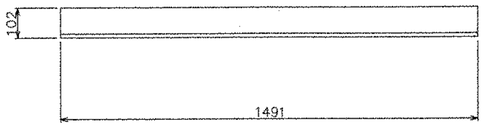
PROPOSED IMPROVEMENT TO RR BRIDGE #62.56
OVER VT ROUTE 9 (PRINCIPAL ARTERIAL)
WINDHAM COUNTY, TOWN OF BRATTLEBORO

TITLE :

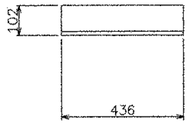
GIRDER PLATES

DRAWN BY	SHOP ORDER	DWG. NO.
TJS 3/19/03	4015	X1
CKD BY RGY 4/9/03	BLOCK NO.	SHEET NO. 18 / 20

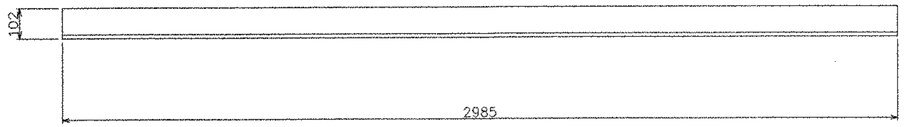
201 ss



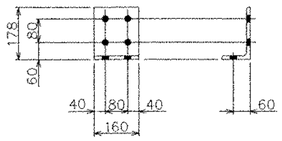
ITEM x2ab (4 REQ'D)
SCALE 1:10 (L102x76x12.7 x 1491)



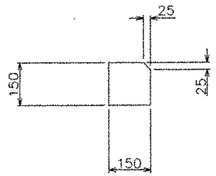
ITEM x2aa (4 REQ'D)
SCALE 1:10 (L102x76x12.7 x 436)



ITEM x2ac (18 REQ'D)
SCALE 1:10 (L102x76x12.7 x 2985)



ITEM x2ad (12 REQ'D)
SCALE 1:10 (L178x102 x 12.7)



ITEM x2pa (160 REQ'D)
SCALE 1:10 (PL14x150 x 150)

NOTES:
ALL HOLES 24mm (U.N.O)

REVISIONS		
NO.	DATE	DESCRIPTION
	8/4/03	APPROVAL

STEEL-ART, INCORPORATED
40 WEST MAIN STREET
GALETON, PA 16922
(814) 435-6997

EASTERN BRIDGE LLC
RURAL RTE 2, BOX 302
CLAREMONT, NH 03743
603-542-5202

STATE OF VERMONT
AGENCY OF TRANSPORTATION

CONTRACT : PIN :

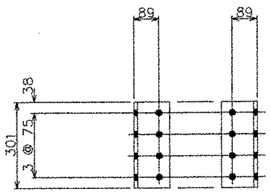
PROPOSED IMPROVEMENT TO RR BRIDGE #62.56
OVER VT ROUTE 9 (PRINCIPAL ARTERIAL)
WINDHAM COUNTY, TOWN OF BRATTLEBORO

TITLE :

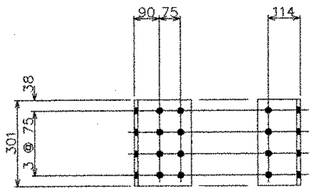
GIRDER FITTINGS

DRAWN BY	SHOP ORDER	DWG. NO.
TJS 3/19/03	4015	X2
CKD BY	BLOCK NO.	SHEET NO.
RGY 4/9/03		19 / 20

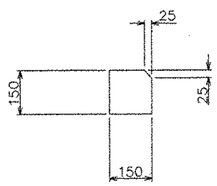
20255



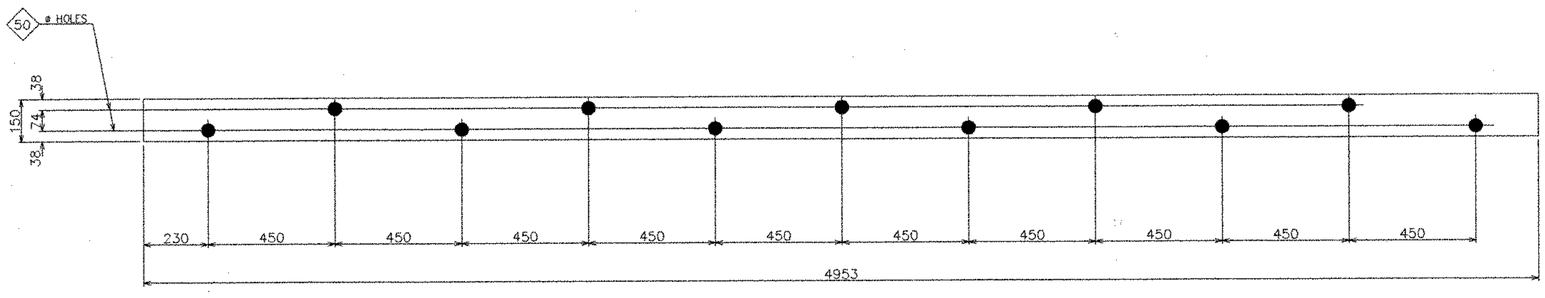
ITEM m1qa (320 REQ'D)
SCALE 1:10 (L127x127x12.7 x 301)



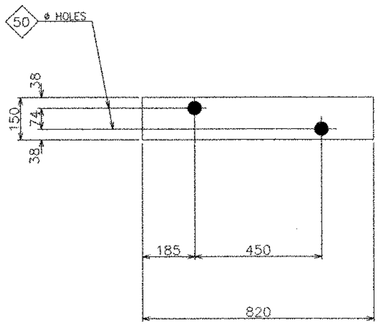
ITEM m1qb (156 REQ'D)
SCALE 1:10 (L203x152x12.7 x 301)



ITEM m1pa (160 REQ'D)
SCALE 1:10 (PL14x150 x 150)



ITEM m1pb (2 REQ'D)
SCALE 1:10 (PL20x150 x 4953)



ITEM m1pc (4 REQ'D)
SCALE 1:10 (PL20x150 x 820)

NOTES:
ALL HOLES 24mm (U.N.O.)

STEEL-ART, INCORPORATED
40 WEST MAIN STREET
GALETON, PA 16922
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EASTERN BRIDGE LLC
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608-542-5202

REVISIONS		
NO.	DATE	DESCRIPTION
	2/4/03	APPROVAL

STATE OF VERMONT
AGENCY OF TRANSPORTATION

CONTRACT : PIN :

PROPOSED IMPROVEMENT TO RR BRIDGE #62.56
OVER VT ROUTE 9 (PRINCIPAL ARTERIAL)
WINDHAM COUNTY, TOWN OF BRATTLEBORO

TITLE :

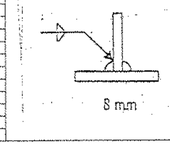
MISC. PLATES

DRAWN BY	SHOP ORDER	DWG. NO.
TJS 3/17/03	4015	M1
CKD BY RGY 4/09/03	BLOCK NO.	SHEET NO. 20 / 20

20355

EASTERN BRIDGE, LLC
WELDING PROCEDURE SPECIFICATION FCM WELDS

WPS NUMBER:SAW PL#6-1	ISSUE DATE:5/9/03
PROJECT:VT AOT NO.NH-010-2 (2)	EB JOB NO.:4015
BASE METAL:ASTM A709 GR36,50,50W	
WELDING PROCESS:SUBMERGED ARC WELDING	
FILLER METAL SPEC.:AWS A5.13 LINCOLN LA75	
FLUX / SHIELDING GAS:LINCOLN 960	
CURRENT AND POLARITY:DCEP	ELEC STICKOUT:1" +/- 1/4"
WELDING POSITION:2F	
PREHEAT AND INTERPASS TEMP.: AWS D1.5 TABLE 12.4	WPS QUALIFICATION:AWS D1.5 5.13
HEAT INPUT:50.68 - 73.92 KILOJOULES	SUPPORTING PQR#:SAW A332-3 PL#8

ELECTRODE SIZE	WELDING AMPS	CURRENT VOLTS	TRAVEL SPEED	JOINT DETAIL AND AWS NUMBER FILLET
3/32"	396-440	28.8-31.5	11.25-13.5	

NOTES:

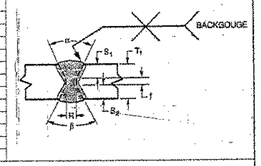
MIMUM PREHEAT AND INTERPASS TEMPERATURES SHALL BE AS FOLLOWS:
MAXIMUM INTERPASS TEMPERATURE SHALL BE 450F

THICKNESS OF THICKEST PART AT POINT OF WELDING	TEMPERATURE, F ASTM A709 STEEL
UP TO 3/4"	125F
3/4" TO 1 1/2"	200F
1 1/2" TO 2 1/2"	300F
OVER 2 1/2"	350F

THIS PROCEDURE MAY VARY DUE TO FABRICATION SEQUENCE, FIT UP, PASS SIZE, ETC. WITHIN THE LIMITS PROVIDED IN APPLICABLE AWS CODES AND CONTRACT SPECIFICATIONS.

EASTERN BRIDGE, LLC
WELDING PROCEDURE SPECIFICATION FCM WELDS

WPS NUMBER:SAW PL#8-2	ISSUE DATE:5/9/03
PROJECT:VT AOT NO.NH-010-2 (2)	EB JOB NO.:4015
BASE METAL:ASTM A709 GR36,50,50W	
WELDING PROCESS:SUBMERGED ARC WELDING	
FILLER METAL SPEC.:AWS A5.13 LINCOLN LA75	
FLUX / SHIELDING GAS:LINCOLN 960	
CURRENT AND POLARITY:DCEP	ELEC STICKOUT:1" +/- 1/4"
WELDING POSITION:1G	
PREHEAT AND INTERPASS TEMP.: AWS D1.5 TABLE 12.4	WPS QUALIFICATION:AWS D1.5 5.13
HEAT INPUT:50.68 - 73.92 KILOJOULES	SUPPORTING PQR#:SAW A332-3 PL#8

ELECTRODE SIZE	WELDING AMPS	CURRENT VOLTS	TRAVEL SPEED	JOINT DETAIL AND AWS NUMBER: B-U3c-S
3/32"	396-440	28.8-31.5	11.25-13.5	

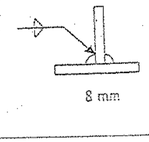
NOTES:
T1 = 102 MM
R = 0 BACKGOUGE ROOT TO SOUND METAL BEFORE WELDING SECOND SIDE
F = 6 MM -12MM
a-b = 60 degrees
S1 = 70 MM
S2 = 26MM

MIMUM PREHEAT AND INTERPASS TEMPERATURES SHALL BE AS FOLLOWS:
MAXIMUM INTERPASS TEMPERATURE SHALL BE 450F

THICKNESS OF THICKEST PART AT POINT OF WELDING	TEMPERATURE, F ASTM A709 STEEL
UP TO 3/4"	125F
3/4" TO 1 1/2"	200F
1 1/2" TO 2 1/2"	300F
OVER 2 1/2"	350F

THIS PROCEDURE MAY VARY DUE TO FABRICATION SEQUENCE, FIT UP, PASS SIZE, ETC. WITHIN THE LIMITS PROVIDED IN APPLICABLE AWS CODES AND CONTRACT SPECIFICATIONS.

WPS NUMBER:SAW PL#8-3	ISSUE DATE:5/9/03
PROJECT:VT AOT NO.NH-010-2 (2)	EB JOB NO.:4015
BASE METAL:ASTM A709 GR36,50,50W	
WELDING PROCESS:SUBMERGED ARC WELDING	
FILLER METAL SPEC.:AWS A5.13 LINCOLN LA75	
FLUX / SHIELDING GAS:LINCOLN 960	
CURRENT AND POLARITY:DCEP	ELEC STICKOUT:1" +/- 1/4"
WELDING POSITION:2F	
PREHEAT AND INTERPASS TEMP.: AWS D1.5 TABLE 4.4	WPS QUALIFICATION:AWS D1.5 5.13
HEAT INPUT:50.68 - 73.92 KILOJOULES	SUPPORTING PQR#:SAW A332-3 PL#8

ELECTRODE SIZE	WELDING AMPS	CURRENT VOLTS	TRAVEL SPEED	JOINT DETAIL AND AWS NUMBER FILLET
3/32"	396-440	28.8-31.5	11.25-13.5	

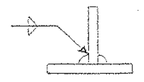
NOTES:

MIMUM PREHEAT AND INTERPASS TEMPERATURES SHALL BE AS FOLLOWS:
MAXIMUM INTERPASS TEMPERATURE SHALL BE 450F

THICKNESS OF THICKEST PART AT POINT OF WELDING	TEMPERATURE, F ASTM A709 STEEL
UP TO 3/4"	50F
3/4" TO 1 1/2"	70F
1 1/2" TO 2 1/2"	150F
OVER 2 1/2"	225F

THIS PROCEDURE MAY VARY DUE TO FABRICATION SEQUENCE, FIT UP, PASS SIZE, ETC. WITHIN THE LIMITS PROVIDED IN APPLICABLE AWS CODES AND CONTRACT SPECIFICATIONS.

WPS NUMBER:FCAW PL#10-1	ISSUE DATE:5-9-03
PROJECT:VT AOT NO.NH-010-2 (2)	EB JOB NO.:4015
BASE METAL:ASTM A709 GR36,50,50W	
WELDING PROCESS:FCAW	
FILLER METAL SPEC.:A5.29 ESAB 80-NI1 DUAL SHIELD	
FLUX / SHIELDING GAS:75% ARGON / 25% CO2	
CURRENT AND POLARITY:DCEP	ELEC STICKOUT:1" +/- 1/4"
WELDING POSITION:2F	
PREHEAT AND INTERPASS TEMP.:AWS D1.5 TABLE 4.4	WPS QUALIFICATION:AWS D1.5 5.13
HEAT INPUT:35 - 44.2 KILOJOULES	SUPPORTING PQR#:FCAW-SA116-1 PL#10

ELECTRODE SIZE	WELDING AMPS	CURRENT VOLTS	TRAVEL SPEED	JOINT DETAIL AND AWS NUMBER: FILLET
1/16"	290-320	24-26	11.3-12.0	

NOTES:

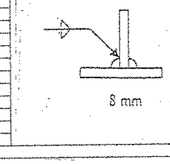
MIMUM PREHEAT AND INTERPASS TEMPERATURES SHALL BE AS FOLLOWS:
MAXIMUM INTERPASS TEMPERATURE SHALL BE 450F

THICKNESS OF THICKEST PART AT POINT OF WELDING	TEMPERATURE, F ASTM A709 STEEL
UP TO 3/4"	50F
3/4" TO 1 1/2"	70F
1 1/2" TO 2 1/2"	150F
OVER 2 1/2"	225F

THIS PROCEDURE MAY VARY DUE TO FABRICATION SEQUENCE, FIT UP, PASS SIZE, ETC. WITHIN THE LIMITS PROVIDED IN APPLICABLE AWS CODES AND CONTRACT DOCUMENTS.

EASTERN BRIDGE, LLC
WELDING PROCEDURE SPECIFICATION
FCM WELDS

WPS NUMBER:SAW PL#11-1	ISSUE DATE: 5-9-03
PROJECT: VT AOT NO. NH-010-2 (2)	EB JOB NO.: 4015
BASE METAL:ASTM A709 GR36,50,50W	
WELDING PROCESS:SUBMERGED ARC WELDING	
FILLER METAL SPEC.:AWS A5.23 LINCOLN LA75	
FLUX / SHIELDING GAS:LINCOLN 960	
CURRENT AND POLARITY:DCEN	ELEC STICKOUT:1" +/- 1/4"
WELDING POSITION:2F	
PREHEAT AND INTERPASS TEMP.:AWS D1.5 TABLE 12.4	WPS QUALIFICATION:AWS D1.5 5.13
HEAT INPUT:50.5 - 73.2 KILOJOULES	SUPPORTING PQR#:SAW LA75H-3 PL#11

ELECTRODE SIZE	WELDING AMPS	CURRENT VOLTS	TRAVEL SPEED	JOINT DETAIL AND AWS NUMBER FILLET
3/32"	550-610	37-40	20-24.2	

NOTES:

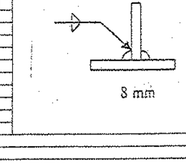
MIMUM PREHEAT AND INTERPASS TEMPERATURES SHALL BE AS FOLLOWS:
MAXIMUM INTERPASS TEMPERATURE SHALL BE 450F

THICKNESS OF THICKEST PART AT POINT OF WELDING	TEMPERATURE, F ASTM A709 STEEL
UP TO 3/4"	125F
3/4" TO 1 1/2"	200F
1 1/2" TO 2 1/2"	300F
OVER 2 1/2"	350F

THIS PROCEDURE MAY VARY DUE TO FABRICATION SEQUENCE, FIT UP, PASS SIZE, ETC. WITHIN THE LIMITS PROVIDED IN APPLICABLE AWS CODES AND CONTRACT SPECIFICATIONS.

EASTERN BRIDGE, LLC
WELDING PROCEDURE SPECIFICATION

WPS NUMBER:SMAW PL#00-02	ISSUE DATE:5/9/03
PROJECT:VT AOT NO.NH-010-2 (2)	EB JOB NO.:4015
BASE METAL:A709 GR36,50,50W	
WELDING PROCESS:SMAW	
FILLER METAL SPEC.:A5.1 E7018	
FLUX / SHIELDING GAS:N/A	
CURRENT AND POLARITY:DCEP	ELEC STICKOUT:N/A
WELDING POSITION:2F	
PREHEAT AND INTERPASS TEMP.:AWS D1.5 TABLE 4.4	WPS QUALIFICATION:PREQUALIFIED
HEAT INPUT:38 - 130 KILOJOULES	SUPPORTING PQR#:N/A

ELECTRODE SIZE	WELDING AMPS	CURRENT VOLTS	TRAVEL SPEED	JOINT DETAIL AND AWS NUMBER:FILLET 2F
1/8"	125-150	23-26	3-4.5 IPM	
5/32"	140-190	23-26	3-4.5 IPM	
3/16"	180-250	23-26	3-4.5 IPM	

NOTES:
SINGLE PASS FILLET WELDS

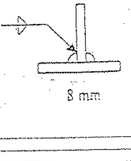
MIMUM PREHEAT AND INTERPASS TEMPERATURES SHALL BE AS FOLLOWS:
MAXIMUM INTERPASS TEMPERATURE SHALL BE 450F

THICKNESS OF THICKEST PART AT POINT OF WELDING	TEMPERATURE, F ASTM A709 STEEL
UP TO 3/4"	50F
3/4" TO 1 1/2"	70F
1 1/2" TO 2 1/2"	150F
OVER 2 1/2"	225F

THIS PROCEDURE MAY VARY DUE TO FABRICATION SEQUENCE, FIT UP, PASS SIZE, ETC. WITHIN THE LIMITS PROVIDED IN APPLICABLE AWS CODES AND CONTRACT DOCUMENTS.

EASTERN BRIDGE, LLC
WELDING PROCEDURE SPECIFICATION
FCM WELDS

WPS NUMBER:SMAW PL#00-03	ISSUE DATE:5/9/03
PROJECT:VT AOT NO.NH-010-2 (2)	EB JOB NO.:4015
BASE METAL:A709 GR36,50,50W	
WELDING PROCESS:SMAW	
FILLER METAL SPEC.:A 5.5 E8018 C3	
FLUX / SHIELDING GAS:N/A	
CURRENT AND POLARITY:DCEP	ELEC STICKOUT:N/A
WELDING POSITION:2F	
PREHEAT AND INTERPASS TEMP.:AWS D1.5 TABLE 12.4	WPS QUALIFICATION:PREQUALIFIED
HEAT INPUT:38 - 130 KILOJOULES	SUPPORTING PQR#:N/A

ELECTRODE SIZE	WELDING AMPS	CURRENT VOLTS	TRAVEL SPEED	JOINT DETAIL AND AWS NUMBER:FILLET 2F
1/8"	125-150	23-26	3-4.5 IPM	
5/32"	140-190	23-26	3-4.5 IPM	
3/16"	180-250	23-26	3-4.5 IPM	

NOTES:

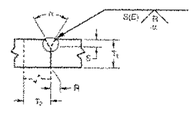
MIMUM PREHEAT AND INTERPASS TEMPERATURES SHALL BE AS FOLLOWS:
MAXIMUM INTERPASS TEMPERATURE SHALL BE 450F

THICKNESS OF THICKEST PART AT POINT OF WELDING	TEMPERATURE, F ASTM A709 STEEL
UP TO 3/4"	125F
3/4" TO 1 1/2"	200F
1 1/2" TO 2 1/2"	300F
OVER 2 1/2"	350F

THIS PROCEDURE MAY VARY DUE TO FABRICATION SEQUENCE, FIT UP, PASS SIZE, ETC. WITHIN THE LIMITS PROVIDED IN APPLICABLE AWS CODES AND CONTRACT DOCUMENTS.

EASTERN BRIDGE, LLC
WELDING PROCEDURE SPECIFICATION

WPS NUMBER:SMAW PL#00-12	ISSUE DATE:6/26/03
PROJECT:VT AOT NO.NH-010-2 (2)	EB JOB NO.:4015
BASE METAL:A709 GR36,50,50W	
WELDING PROCESS:SMAW	
FILLER METAL SPEC.:A 5.1 E7018	
FLUX / SHIELDING GAS:N/A	
CURRENT AND POLARITY:DCEP	ELEC STICKOUT:N/A
WELDING POSITION 1G	
PREHEAT AND INTERPASS TEMP.:AWS D1.5 TABLE 4.4	WPS QUALIFICATION:PREQUALIFIED
HEAT INPUT:38 - 130 KILOJOULES	SUPPORTING PQR# N/A

ELECTRODE SIZE	WELDING AMPS	CURRENT VOLTS	TRAVEL SPEED	JOINT DETAIL AND AWS NUMBER:C-P2
1/8"	125-150	23-26	3-4.5 IPM	
5/32"	140-190	23-26	3-4.5 IPM	
3/16"	180-250	23-26	3-4.5 IPM	

NOTES:
T1=1/2" WELD SIZE S=1/4"
T2=1/2"
R=0
f=1/4"
a=60 Degrees
SINGLE-V-GROOVE (drain pipe)

MIMUM PREHEAT AND INTERPASS TEMPERATURES SHALL BE AS FOLLOWS:
MAXIMUM INTERPASS TEMPERATURE SHALL BE 450F

THICKNESS OF THICKEST PART AT POINT OF WELDING	TEMPERATURE, F ASTM A709 STEEL
UP TO 3/4"	50F
3/4" TO 1 1/2"	70F
1 1/2" TO 2 1/2"	150F
OVER 2 1/2"	225F

THIS PROCEDURE MAY VARY DUE TO FABRICATION SEQUENCE, FIT UP, PASS SIZE, ETC. WITHIN THE LIMITS PROVIDED IN APPLICABLE AWS CODES AND CONTRACT DOCUMENTS.

STEEL-ART, INCORPORATED
40 WEST MAIN STREET
GALETON, PA 16922
(814) 435-6997

EASTERN BRIDGE LLC
RURAL RTE 2, BOX 302
CLAREMONT, NH 03743
603-542-5202

REVISIONS		
NO.	DATE	DESCRIPTION
1	6-24-03	PER APPROVAL
	8/4/03	Approval

STATE OF VERMONT
AGENCY OF TRANSPORTATION

CONTRACT : PIN :

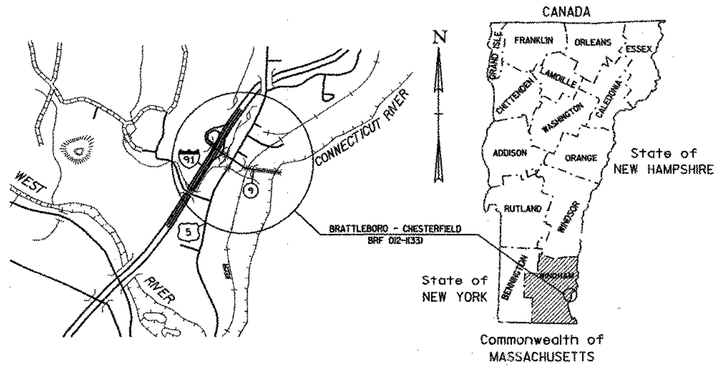
PROPOSED IMPROVEMENT TO RR BRIDGE #6
OVER VT ROUTE 9 (PRINCIPAL ARTERI
WINDHAM COUNTY, TOWN OF BRATTLEBO

TITLE : WELD PROCEDURES

DRAWN BY	SHOP ORDER	DWG. NO.
RK	4015	WPS
CKD BY JH	BLOCK NO.	SHEET NO. WPS 1

20455

STATE OF VERMONT
AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT

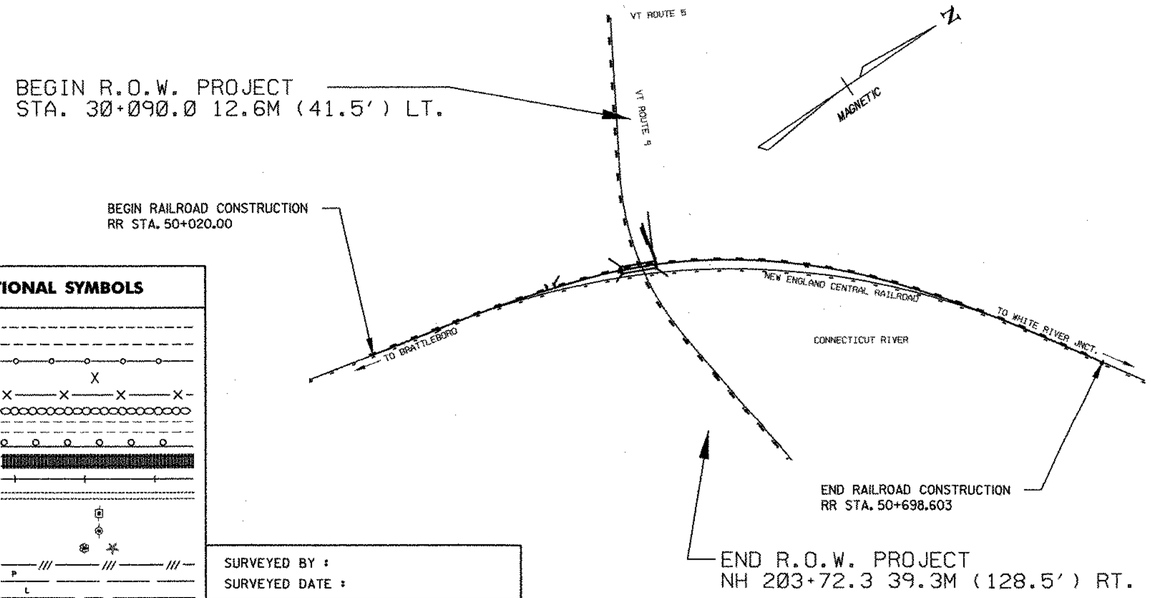
R.O.W. PLANS

TOWN OF BRATTLEBORO
COUNTY OF WINDHAM
VT ROUTE 9, RR BRIDGE #62.56

BEGINNING AT A POINT IN THE TOWN OF BRATTLEBORO APPROXIMATELY 90 METERS FROM THE INTERSECTION OF VT ROUTES 5 AND 9, EXTENDING EASTERLY ALONG ROUTE 9 TO THE CONNECTICUT RIVER A DISTANCE OF 270 METERS.

LENGTH OF ROADWAY = 270m
LENGTH OF RAILWAY = 678.6m
LENGTH OF VT ROUTE 9 BRIDGE = 32m
LENGTH OF SARGENT BROOK BRIDGE = 8m
LENGTH OF R.O.W. PROJECT = 284.3m (932.0 ft)

WORK TO BE PERFORMED UNDER THIS PROJECT CONSISTS OF REALIGNING AND WIDENING ROUTE 9, THE REPLACEMENT OF EXISTING RAILROAD BRIDGE #62.56 OVER VT ROUTE 9, THE WIDENING OF EXISTING RAILROAD BRIDGE # 62.51 OVER SARGENT BROOK, AND THE ASSOCIATED RAILWAY APPROACH WORK.



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. LINE
R.O.W. TAKING LINE
SLOPE RIGHTS
TOP OF CUT
TOE OF SLOPE

SURVEYED BY :
SURVEYED DATE :

DATUM
VERTICAL
HORIZONTAL

SURVEY INFORMATION OBTAINED BY NHDOT, ELECTRONICALLY TRANSLATED FROM MOSS TO MICROSTATION, AND SUPPLEMENTED BY VTRANS ADDITIONAL SURVEY.

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

LINES SHOWN ON THESE PLANS 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.

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.

FEB 05 2003

VAOT Metric

APPROVED _____ DATE 2/2/01
Director of Project Development

APPROVED _____ DATE 2/2/01
Chief, Right of Way

GORDON, BUA & READ, INC.
CIVIL, STRUCTURAL & TRANSPORTATION ENGINEERS
34 SALEM STREET
READING, MASSACHUSETTS 01867

BRATTLEBORO
NH BRF 012-1(33)

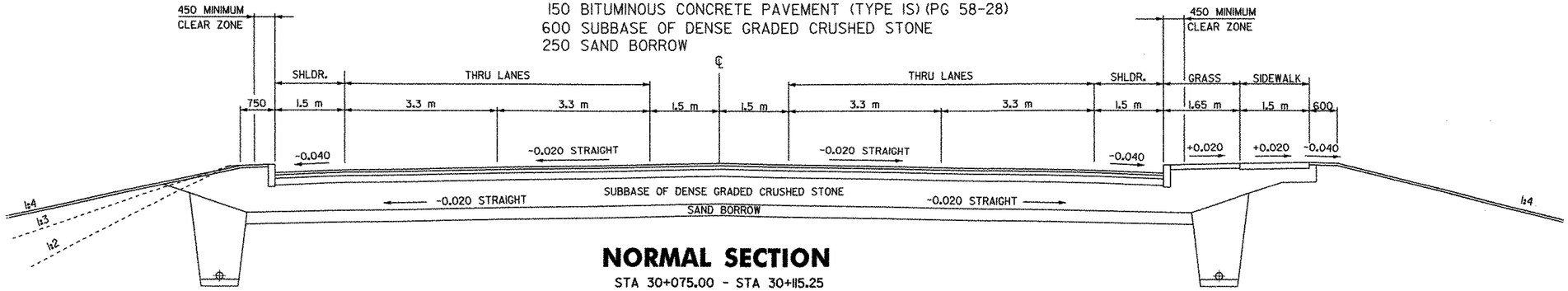
R.O.W. SHEET 1 OF 27 SHEETS

810 R.O.W.

TYPICAL ROADWAY SECTIONS

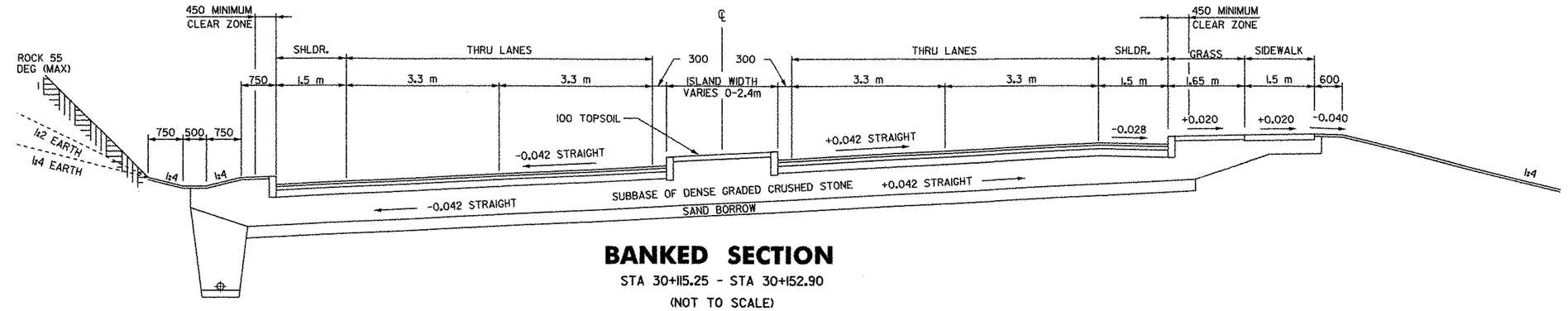
MATERIAL ITEM	THICKNESS TOLERANCE
PAVEMENT (TOTAL DEPTH ALL LAYERS)	+/- 5
SUBBASE	+/- 30
SAND BORROW	+/- 30

50 BITUMINOUS CONCRETE PAVEMENT (TYPE IIIS) (PG 58-28)
75 BITUMINOUS CONCRETE PAVEMENT (TYPE IIS) (PG 58-28)
150 BITUMINOUS CONCRETE PAVEMENT (TYPE IS) (PG 58-28)
600 SUBBASE OF DENSE GRADED CRUSHED STONE
250 SAND BORROW



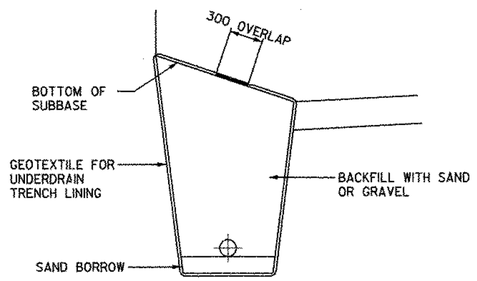
NORMAL SECTION

STA 30+075.00 - STA 30+115.25
(NOT TO SCALE)



BANKED SECTION

STA 30+115.25 - STA 30+152.90
(NOT TO SCALE)



UNDERDRAIN DETAIL

(NOT TO SCALE)

SEEDING FORMULA
URBAN AREAS

% MASS	Kg/ha	NAME	PUR %	GERM %
42.5	38.0	CREEPING RED FESCUE	98	85
10.0	9.0	PERENNIAL RYE GRASS	95	90
42.5	38.0	KENTUCKY BLUE GRASS	85	85
5.0	5.0	ANNUAL RYE GRASS	95	85
100.0	90.0			

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.

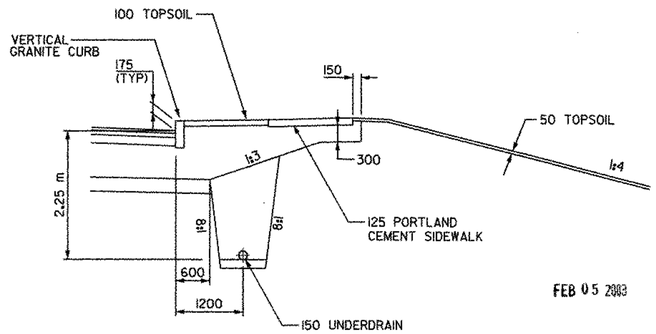
TOPSOIL: TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

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

SLOPE ROUNDING: ALL CUT SLOPES TO BE ROUNDED IN ACCORDANCE WITH STD SHEET B-5M. SLOPE LINES SHOWN ON THE PLANS AND CROSS SECTIONS DO NOT SHOW THE SLOPE ROUNDING.

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.



SIDEWALK CONSTRUCTION UNDERDRAIN PLACEMENT DETAIL

(NOT TO SCALE)

NOTE: UNLESS OTHERWISE NOTED IN THESE PLANS, ALL ELEVATIONS ARE IN METERS AND ALL DIMENSIONS ARE IN MILLIMETERS

DATUM	
VERTICAL	NGVD 1929
HORIZONTAL	NAD 1983

PROJECT:	PROJECT NO.:
BRATTLEBORO	NH BRF 012-1(33)

DESIGN FILE NAME: 95b270\structures\sb270typ.dgn
IPARM FILE NAME: sb270typ1.I — PLOT DATE: 09-MAR-2001
SURVEYED BY: — SURVEY DATE:
SQUAD LEADER: W HUSBAND — DRAWN BY: P SHEDD

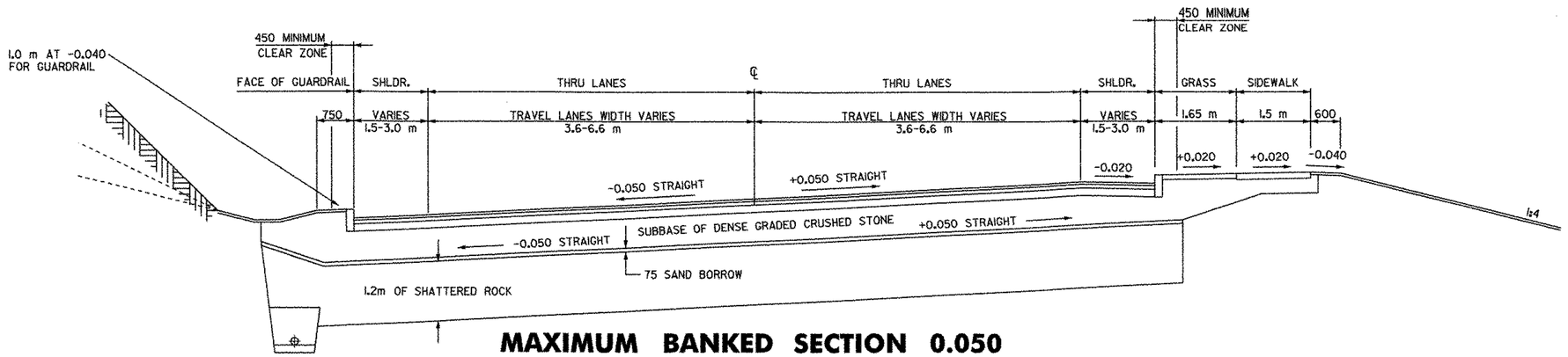
R.O.W. SHEET 2 OF 27 SHEETS

211 R.O.W.

MATERIAL ITEM	THICKNESS TOLERANCE
PAVEMENT (TOTAL DEPTH ALL LAYERS)	+/- 5
SUBBASE	+/- 30
SAND BORROW	+/- 30

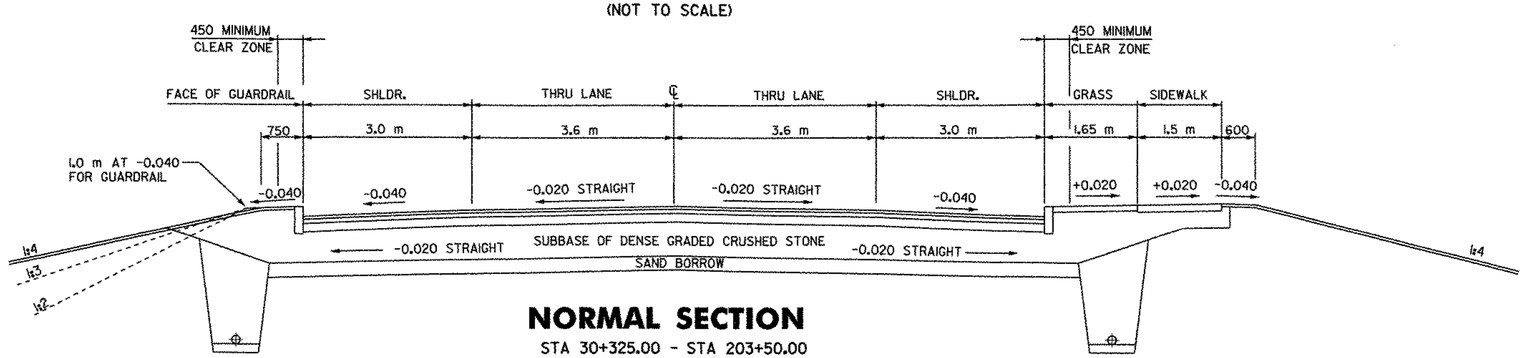
TYPICAL ROADWAY SECTIONS

50 BITUMINOUS CONCRETE PAVEMENT (TYPE IIIS) (PG 58-28)
75 BITUMINOUS CONCRETE PAVEMENT (TYPE IIS) (PG 58-28)
150 BITUMINOUS CONCRETE PAVEMENT (TYPE IS) (PG 58-28)
600 SUBBASE OF DENSE GRADED CRUSHED STONE
250 SAND BORROW



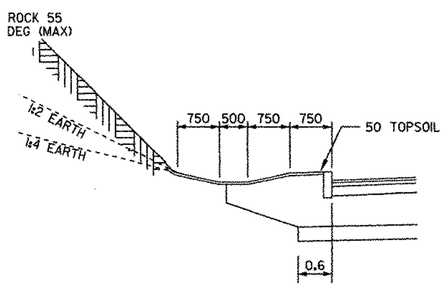
MAXIMUM BANKED SECTION 0.050

STA 30+152.90 - STA 30+325.00
(NOT TO SCALE)



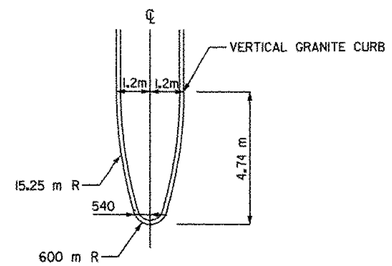
NORMAL SECTION

STA 30+325.00 - STA 203+50.00
(NOT TO SCALE)



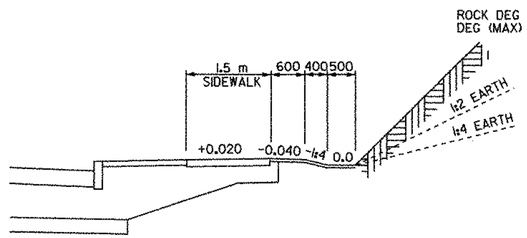
DITCH & BACKSLIDE DETAIL

(NOT TO SCALE)



MEDIAN TERMINI DETAIL

(NOT TO SCALE)



DITCH AND BACKSLOPE DETAIL FOR SIDEWALK

(NOT TO SCALE)

FEB 05 2003

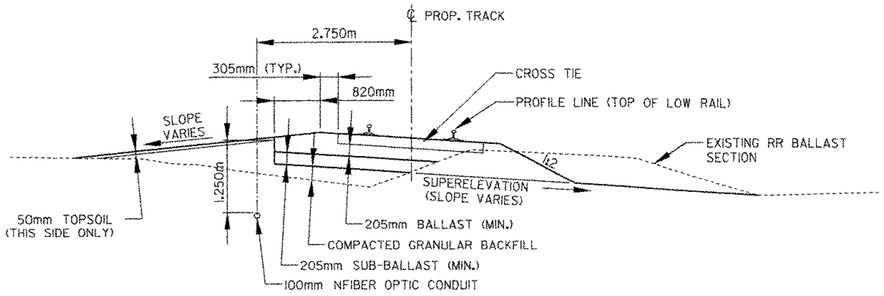
NOTE: UNLESS OTHERWISE NOTED IN THESE PLANS, ALL ELEVATIONS ARE IN METERS AND ALL DIMENSIONS ARE IN MILLIMETERS

DATUM	
VERTICAL	NGVD 1929
HORIZONTAL	NAD 1983

PROJECT:	PROJECT NO.:
BRATTLEBORO	NH BRF 012-1(33)

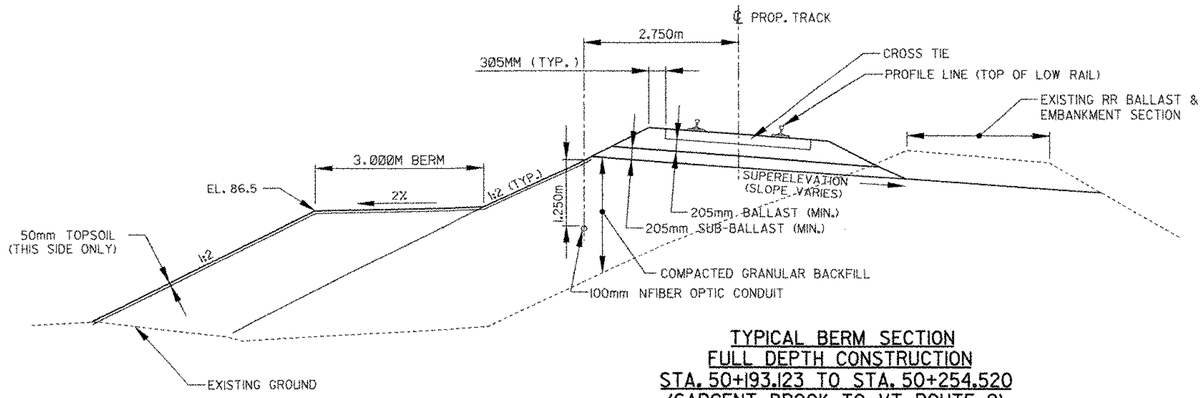
DESIGN FILE NAME: 95b270\structures\sb270typ.dgn
IPARM FILE NAME: sb270typ2.I — PLOT DATE: 09-MAR-2001
SURVEYED BY: — SURVEY DATE:
SQUAD LEADER: W HUSBAND — DRAWN BY: P SHEDD
R.O.W. SHEET 3 OF 27 SHEETS

212 R.O.W.



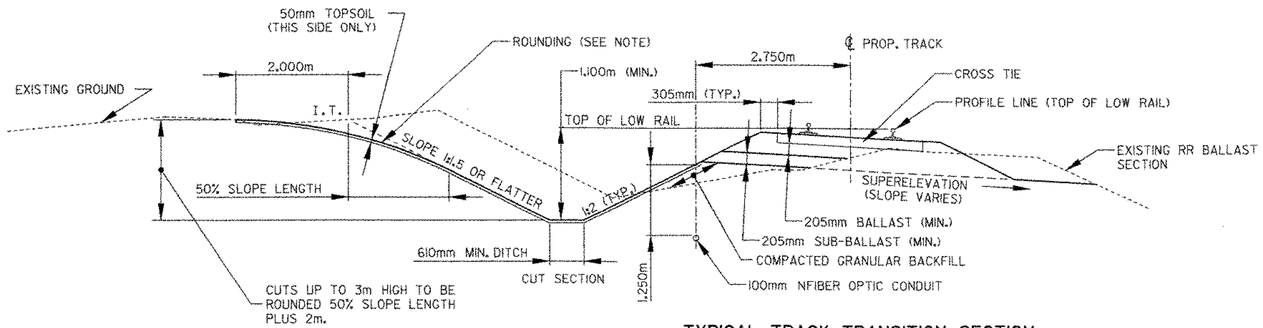
TYPICAL TRACK TRANSITION SECTION
STA. 50+500 TO STA. 50+580

SCALE 1:50



TYPICAL BERM SECTION
FULL DEPTH CONSTRUCTION
STA. 50+193.123 TO STA. 50+254.520
(SARGENT BROOK TO VT ROUTE 9)

SCALE 1:50

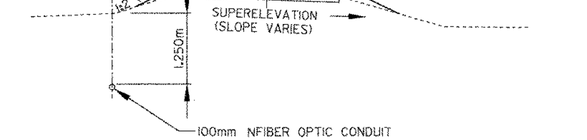


NOTE:

WHEN STEEPNESS OF EXISTING GROUND, SHALLOWNESS OF CUT OR PRESENCE OF EXISTING VEGETATION OR BUILDINGS IS CONSIDERED A FACTOR PREVENTING NORMAL ROUNDING, THE EXTENT OF THE ROUNDING SHOULD BE MODIFIED TO MEET CONDITIONS. SEE NOTE 3.

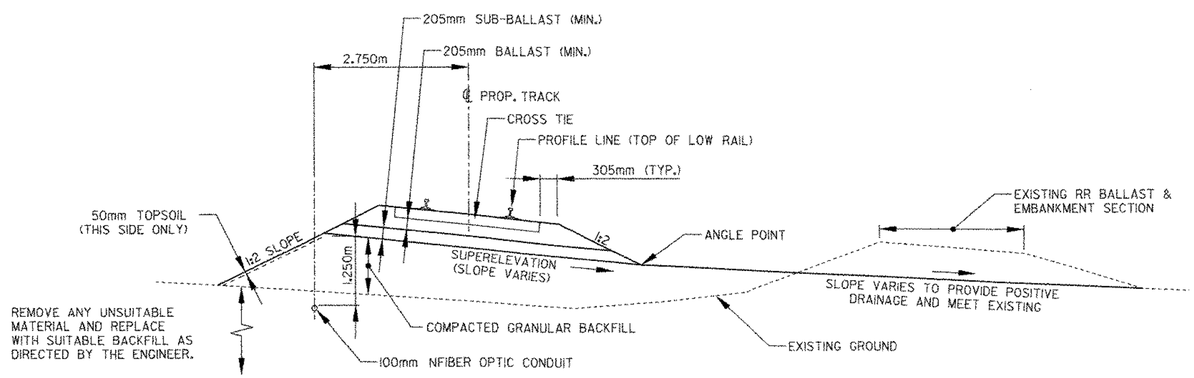
TYPICAL TRACK TRANSITION SECTION
STA. 50+120 TO STA. 50+186.417

SCALE 1:50



TYPICAL TRACK REHABILITATION SECTION
STA. 50+020 TO STA. 50+120
STA. 50+580 TO STA. 50+698.603

SCALE 1:50



TYPICAL SUPERELEVATED TRACK SECTION - (ON CURVE)
FULL DEPTH CONSTRUCTION
STA. 50+285.220 TO STA. 50+500

SCALE 1:50

FEB 05 2003

NOTES:

1. REFER TO ROADWAY TYPICAL SECTIONS FOR 'GENERAL NOTES FOR ROADWAY TYPICALS', AND UTILIZE AS APPLICABLE TO RAILROAD TYPICAL SECTIONS. NOTE THAT TOPSOIL AND/OR SEED IS NEVER TO BE APPLIED ABOVE RAILROAD SUBGRADE ELEVATION.
2. RAIL TO BE 115 POUND CONTINUOUS WELDED RAIL. CROSS TIES TO BE 7"X9"X8'-6" TIMBER. BALLAST TO BE STONE BALLAST, SIZE #4. SUB-BALLAST TO BE SCREENED GRAVEL. ALL ABOVE MATERIALS MUST MEET THE REQUIREMENTS OF AREMA.
3. ALLOWANCE FOR ROUNDING HAS NOT BEEN INDICATED ON RAILROAD PLANS AND CROSS SECTIONS. DUE TO UNTYPICAL CONDITIONS IN CUT, ROUNDINGS WILL BE AS DIRECTED BY THE ENGINEER.

DATUM
VERTICAL _____
HORIZONTAL _____

RAILROAD TYPICAL SECTIONS

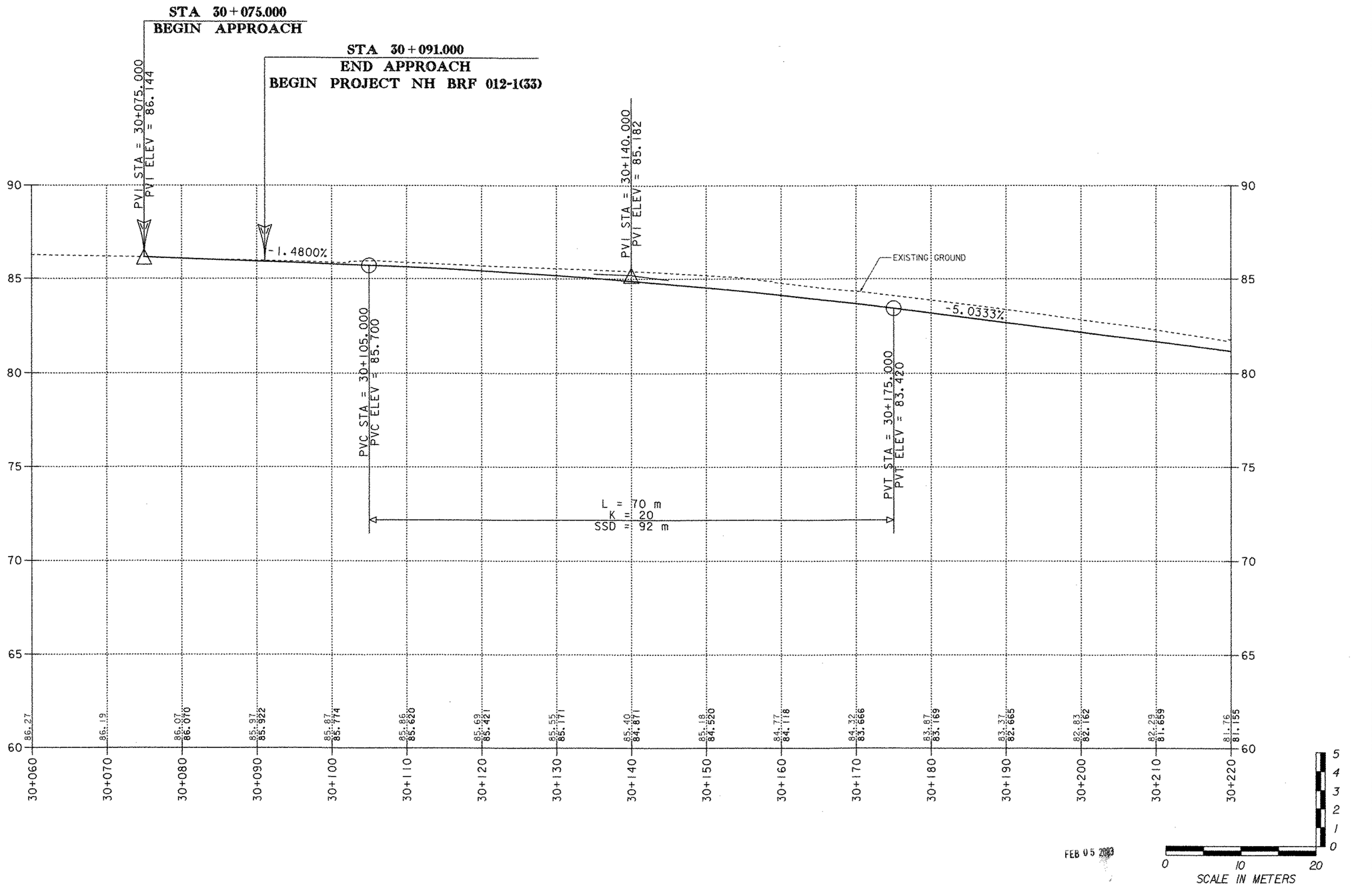
SURVEYED BY	N/A	DATE	N/A
DRAWN BY	DHL	DATE	
SQUAD LEADER	JHR		
DESIGN FILE NO.	95b270\structures\track_sect.dgn		
IPARM FILE	sb270trxs.i	DATE PLOTTED	09-MAR-2001

BRATTLEBORO
NH BRF 012-1(33)

R.O.W. SHEET 4 OF 27 SHEETS

PROFILE – VT ROUTE 9

VAOT Metric



DATUM	
VERTICAL	NGVD 1929
HORIZONTAL	NAD 1983

PROJECT:	PROJECT NO.:
BRATTLEBORO	NH BRF 012-1(33)

DESIGN FILE NAME: 95b270\structures\sb270xs2.dgn
IPARM FILE NAME: sb270pri.i
PLOT DATE: 09-MAR-2001
SURVEYED BY:
SURVEY DATE:
SQUAD LEADER: W HUSBAND
DRAWN BY: P SHEDD

R.O.W. SHEET 5 OF 27 SHEETS

ROW

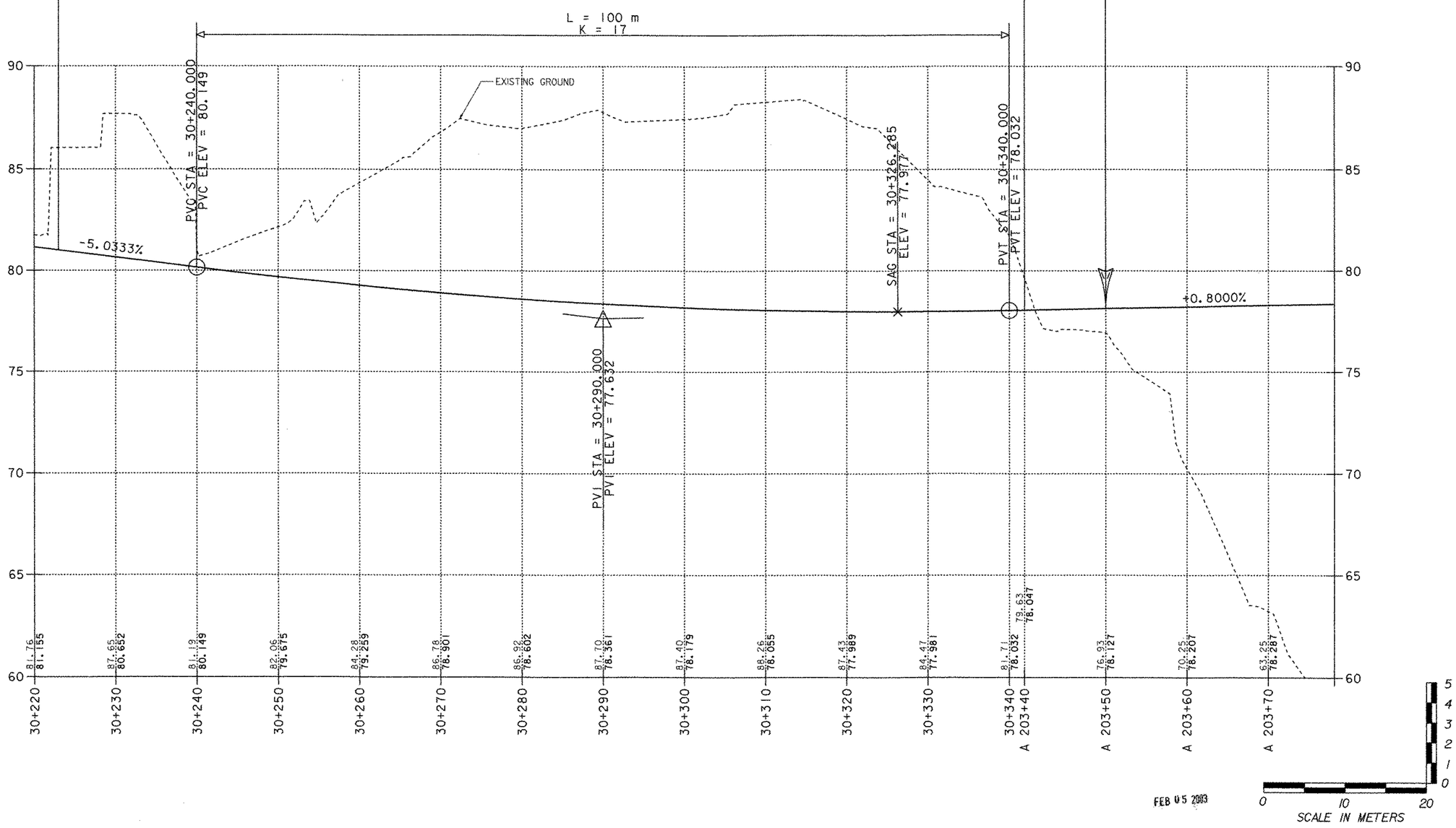
PROFILE – VT ROUTE 9

Metric

STA A203+50.000
END PROJECT
NH BRF 012-1(33)
BEGIN NH PROJECT 11999

STA 30+341.862 =
STA A203+40.000

STA 30+222.922 (VT RTE 9) =
STA 50+272.791 (RAILROAD)



FEB 05 2003

DATUM	
VERTICAL	NGVD 1929
HORIZONTAL	NAD 1983

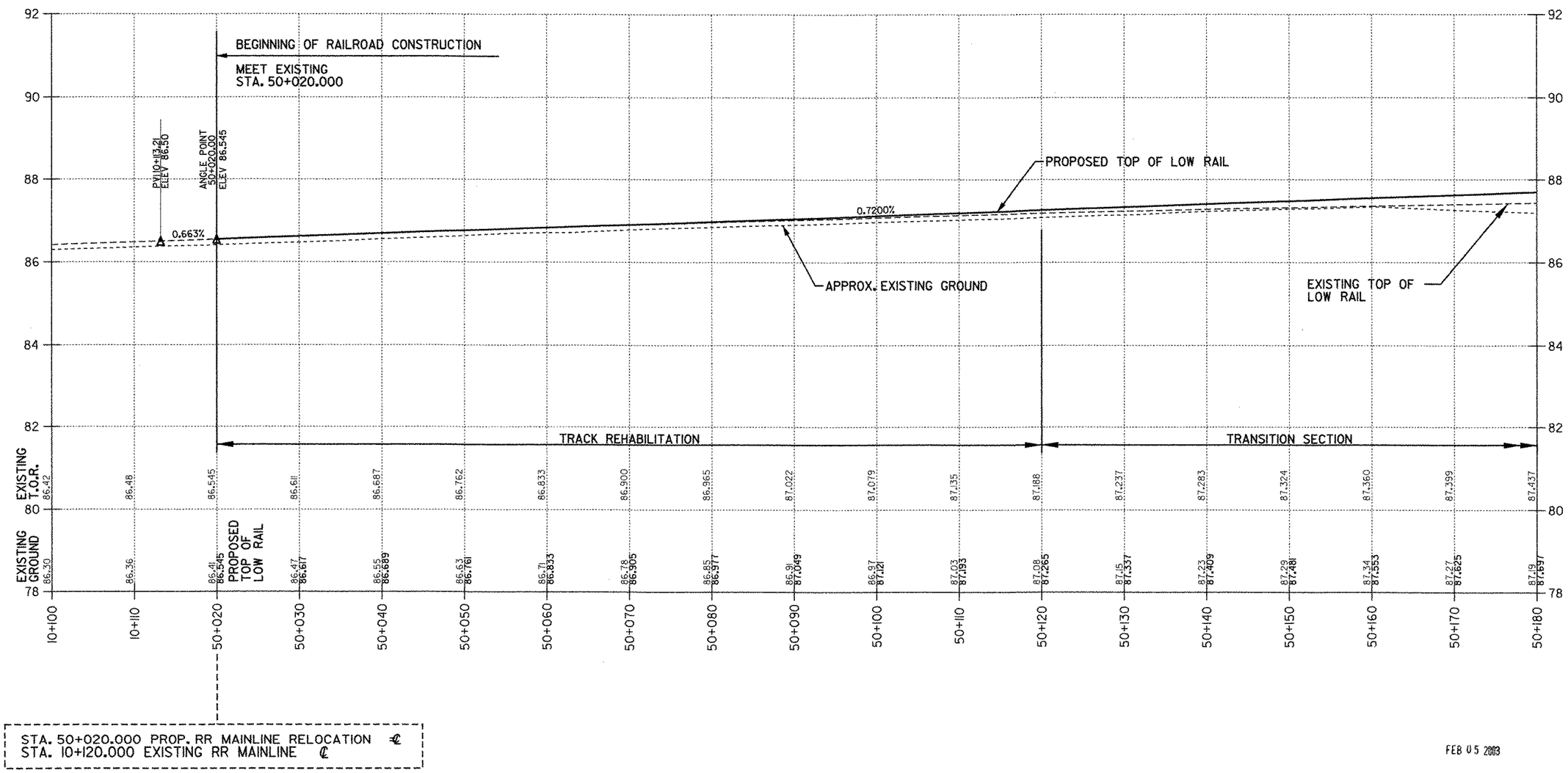
PROJECT:	PROJECT NO.:
BRATTLEBORO	NH BRF 012-1(33)

DESIGN FILE NAME: 95b270\structures\sb270xs2.dgn
IPARM FILE NAME: sb270pr2.i — PLOT DATE: 09-MAR-2001
SURVEYED BY: — SURVEY DATE:
SQUAD LEADER: W HUSBAND — DRAWN BY: P SHEDD

R.O.W. SHEET 6 OF 27 SHEETS

RAILROAD PROFILE

Metric



STA. 50+020.000 PROP. RR MAINLINE RELOCATION ℄
STA. 10+120.000 EXISTING RR MAINLINE ℄

FEB 05 2003

DATUM
VERTICAL _____
HORIZONTAL _____

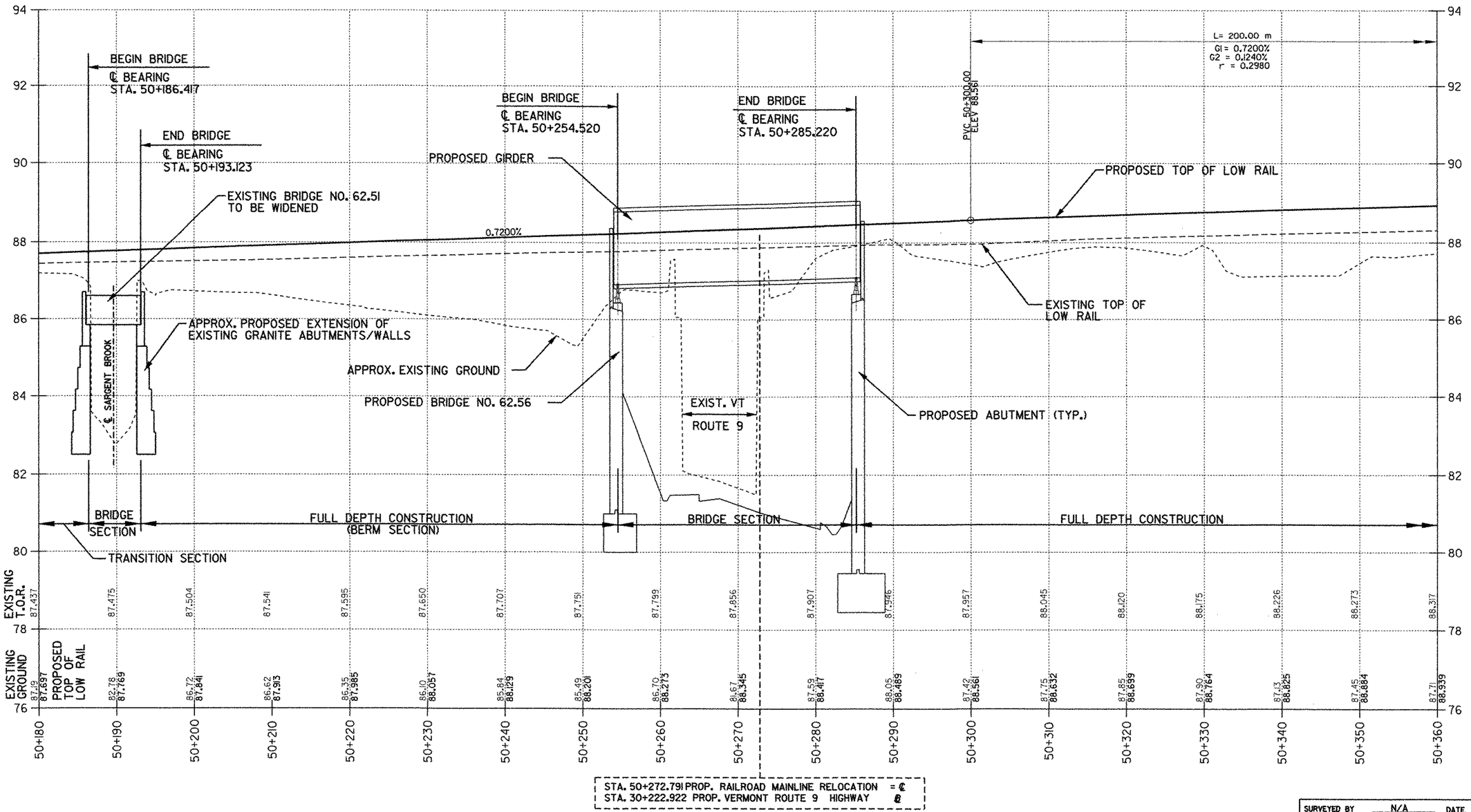
SURVEYED BY N/A DATE N/A
DRAWN BY LB/LRD DATE
SQUAD LEADER JHR
DESIGN FILE NO. 95b270\structures\sb270xsl.dgn
IPARM FILE sb270rrpl.i DATE PLOTTED 09-MAR-2001

BRATTLEBORO
NH BRF 012-1(33)

R.O.W. SHEET 7 OF 27 SHEETS

216 ROW

RAILROAD PROFILE



STA. 50+272.791 PROP. RAILROAD MAINLINE RELOCATION = ℄
STA. 30+222.922 PROP. VERMONT ROUTE 9 HIGHWAY ℄

FEB 05 2003

DATUM
VERTICAL
HORIZONTAL

SURVEYED BY N/A DATE N/A
DRAWN BY LB/LRD DATE
SQUAD LEADER JHR
DESIGN FILE NO. 95b270\structures\sb270xsl.dgn
IPARM FILE sb270rrp2.i DATE PLOTTED 09-MAR-2001

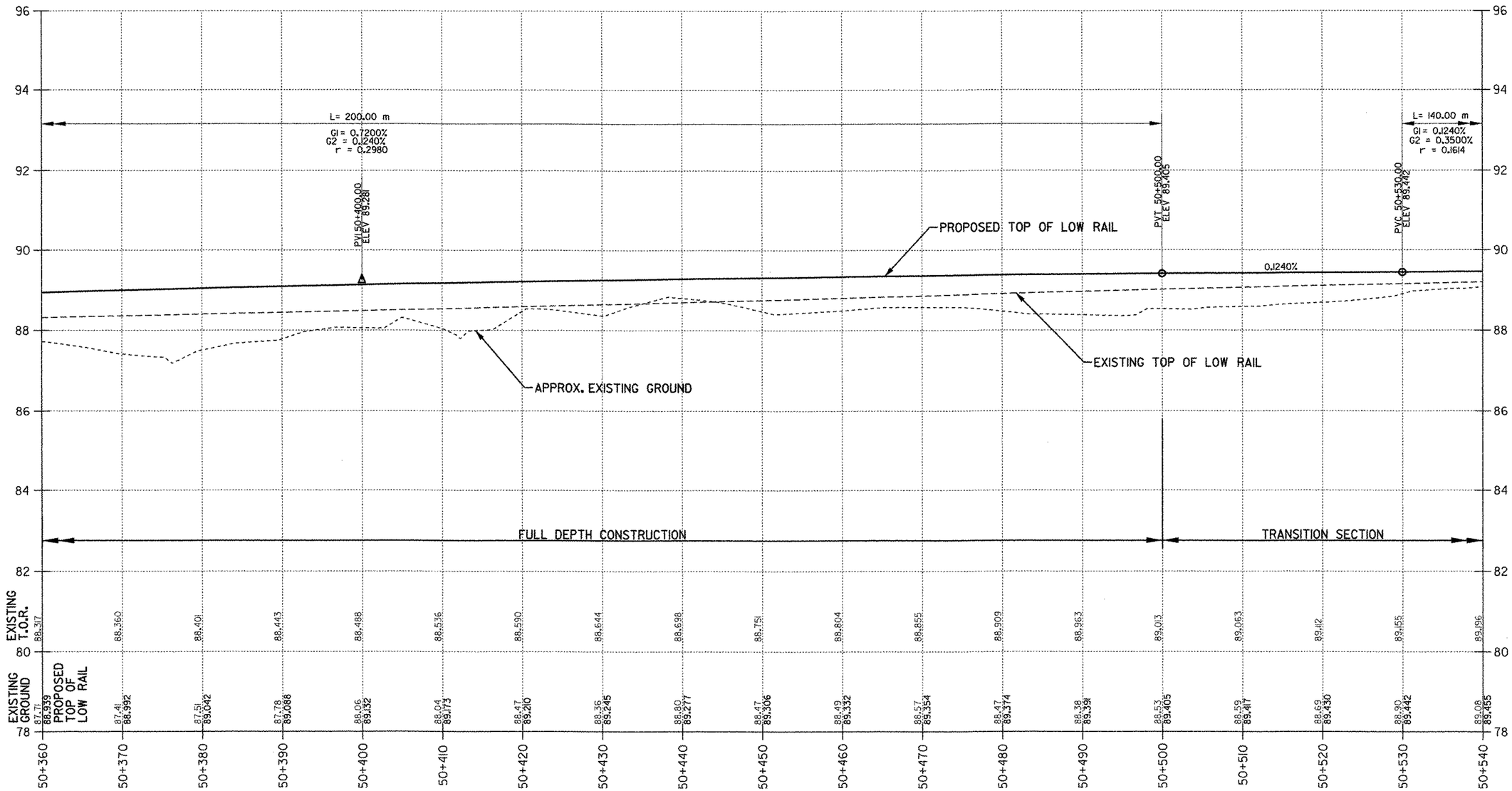
BRATTLEBORO
NH BRF 012-1(33)

R.O.W. SHEET 8 OF 27 SHEETS

7.17 ROW

RAILROAD PROFILE

Metric



FEB 05 2003

DATUM
VERTICAL _____
HORIZONTAL _____

SURVEYED BY N/A DATE N/A
DRAWN BY LB/LRD DATE _____
SQUAD LEADER JHR
DESIGN FILE NO. 95b270\structures\sb270xsl.dgn
IPARM FILE sb270rrp3.i DATE PLOTTED 09-MAR-2001

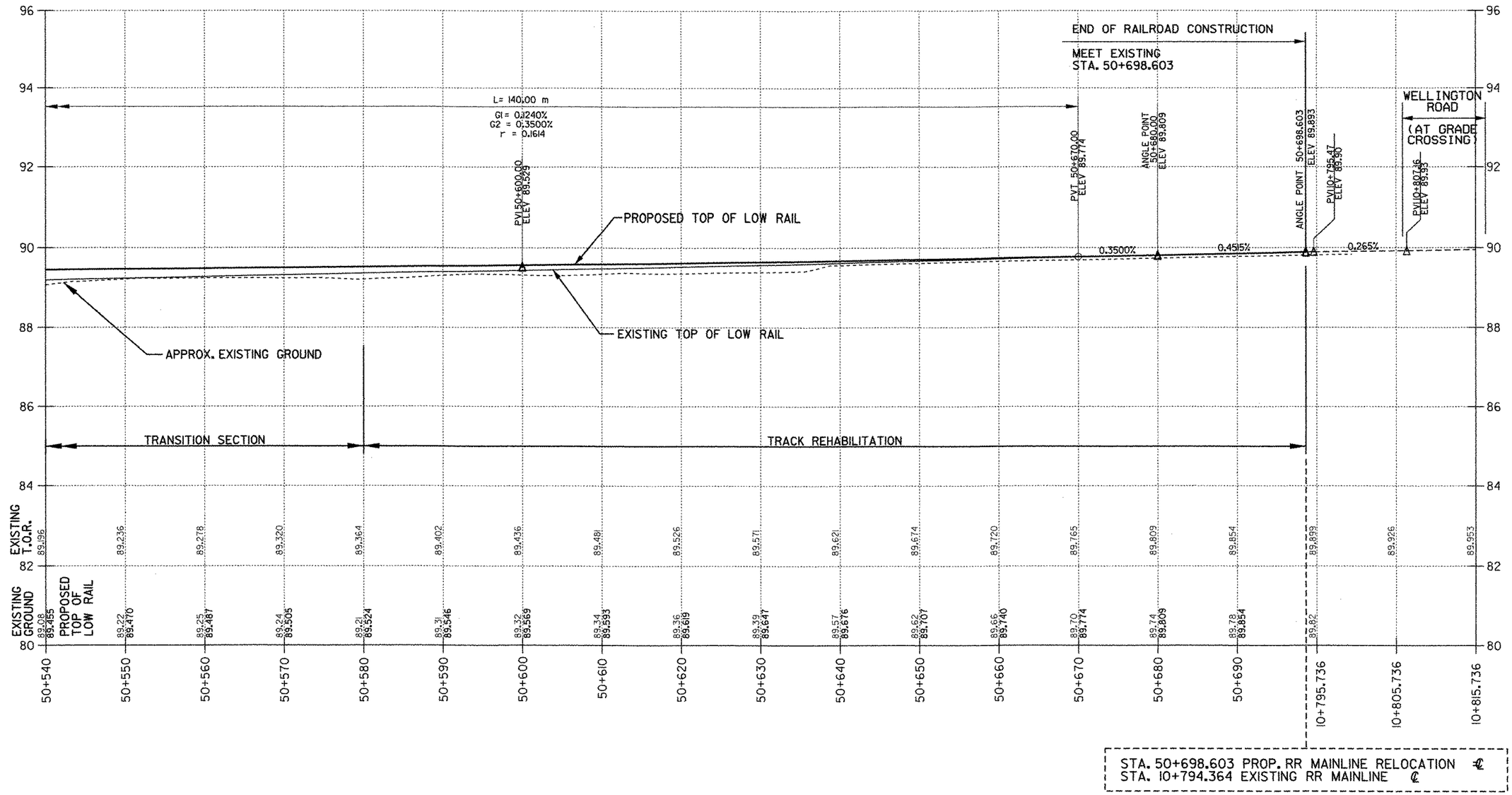
BRATTLEBORO
NH BRF 012-1(33)

R.O.W. SHEET 9 OF 27 SHEETS

218 ROW

RAILROAD PROFILE

Metric



STA. 50+698.603 PROP. RR MAINLINE RELOCATION ℄
STA. 10+794.364 EXISTING RR MAINLINE ℄

DATUM
VERTICAL _____
HORIZONTAL _____

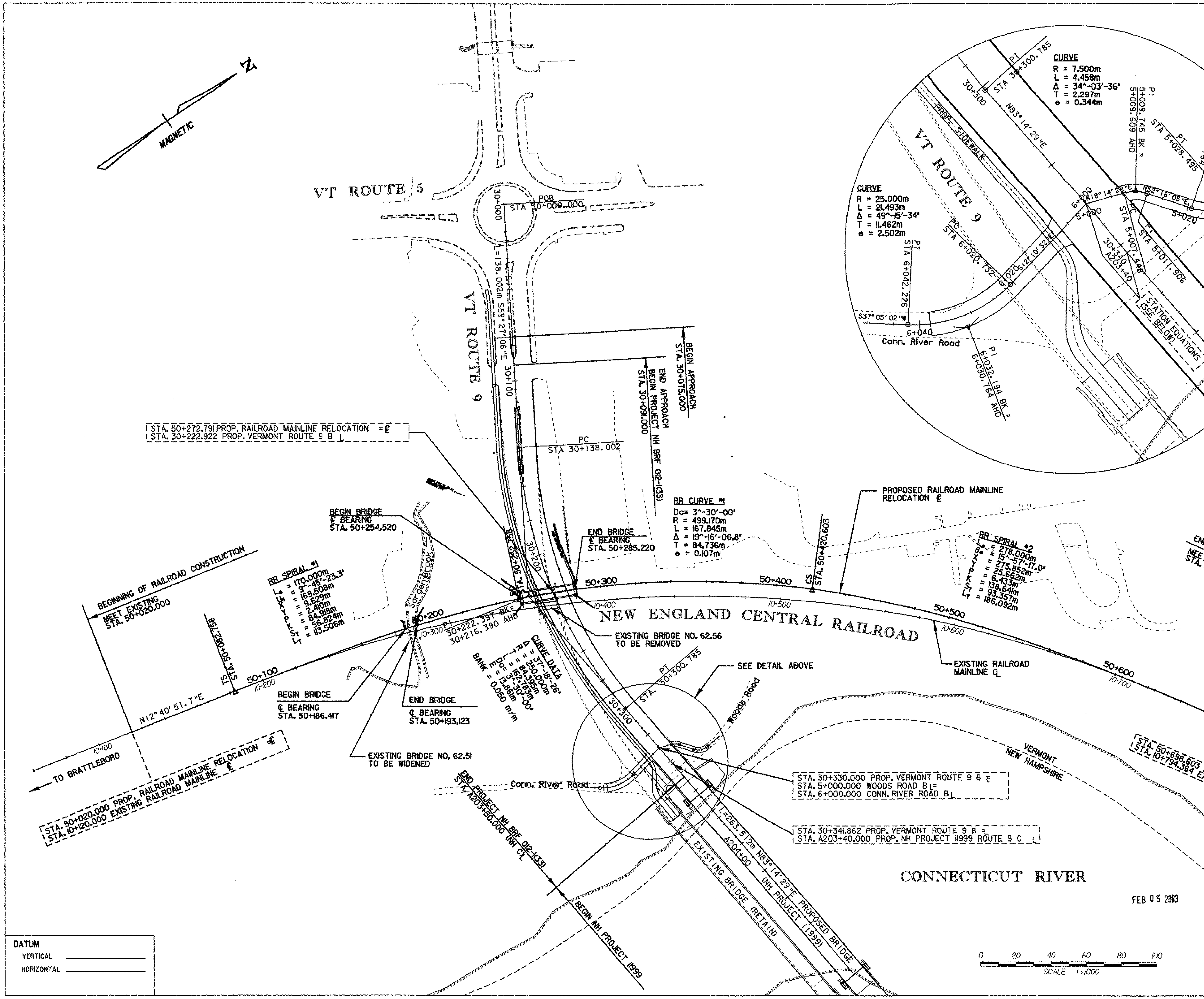
FEB 05 2003

SURVEYED BY N/A DATE N/A
DRAWN BY LB/LRD DATE _____
SQUAD LEADER JHR
DESIGN FILE NO. 95b270\structures\sb270xsl.dgn
PARM FILE sb270rrp4.1 DATE PLOTTED 09-MAR-2001

BRATTLEBORO
NH BRF 012-1(33)

R.O.W. SHEET 10 OF 27 SHEETS

2/9 ROW



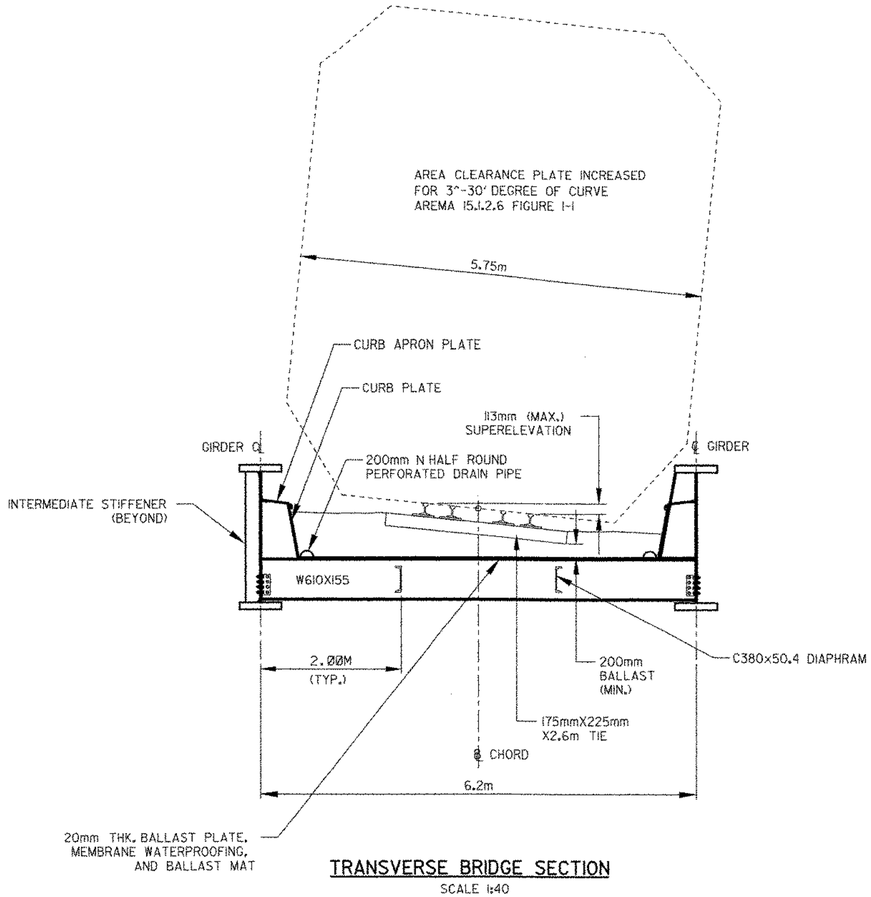
ALIGNMENT PLAN

SURVEYED BY N/A	DATE N/A
DRAWN BY LB/LRD	DATE
SQUAD LEADER JHR	
DESIGN FILE NO. 95b270\structures\sb270bd3.dgn	
IPARM FILE sb270cp.1	DATE PLOTTED 09-MAR-2001

BRATTLEBORO
NH BRF 012-1(33)

R.O.W. SHEET 11 OF 27 SHEETS

220 ROW



TRANSVERSE BRIDGE SECTION

SCALE 1:40

Metric

STRESS TABLE

GIRDER SPAN 30.7 meters

	SHEARS (END OF BEAM)	MOMENTS (MIDSPAN)
DL	871 kN	7,327 kN-m
LL (E80)	1,344 kN	6,585 kN-m
IMP (40%)	537 kN	3,582 kN-m
CENTRIFUGAL	45 kN	343 kN-m
TOTAL	2,797 kN	17,837 kN-m

PROPERTIES

A_{web} = 47,625 mm²
$I_{bXgross}$ = 4,394x10⁸ mm⁴
I_{bXnet} = 4,384x10⁸ mm⁴
$S_{bXgross}$ = 1.323x10⁶ mm³
S_{bXnet} = 1.323x10⁶ mm³

STRESS

SHEAR	BENDING (TENSION IN BOT. FLANGE)	DEFLECTION (LL+I)
fs = 58,730 kPa	fb = 164,870 kPa	Δ max = 45 mm
ALL fs = 120,000 kPa	ALL fb = 189,000 kPa	ALL Δ = 48 mm

BENDING (COMPRESSION IN TOP FLANGE)
fbc = 163,580 kPa
ALL fbc = 187,900 kPa

FATIGUE (FRACTURE CRITICAL)

(BASE METAL & WELD METAL FLANGE TO WEB CONNECTION)	BENDING
Max LL, IMP (mean) =	79,833 kPa
STRESS RANGE	79,833 kPa
STRESS CATEGORY	B
ALLOW. STRESS RANGE	110,000 kPa

STRESS TABLE

FLOOR BEAM SPAN 6.2m

	SHEARS (END OF BEAM)	MOMENTS (MIDSPAN)
DL	26.3 kN	41.7 kN-m
LL (E80)	132.6 kN	309.9 kN-m
IMP (51%)	68.0 kN	159.0 kN-m
CENTRIFUGAL	7.0 kN	n/a kN-m
TOTAL	234 kN	510.7 kN-m

PROPERTIES

A_{web} = 6780 mm²
I_X = 1.29x10⁹ mm²
S_X = 4.220x10⁶ mm³

STRESS

SHEAR	BENDING (TENSION IN BOT. FLANGE)	DEFLECTION (LL+I)
fs = 34,760 kPa	fb = 153,900 kPa	Δ max = 7 mm
ALL fs = 120,000 kPa	ALL fb = 189,000 kPa	ALL Δ = 9 mm

BENDING (COMPRESSION IN TOP FLANGE)
fbc = 120,870 kPa
ALL fbc = 162,300 kPa

FATIGUE

(BASE METAL BOT. FLANGE)	BENDING
Max LL, IMP (mean) =	154,300 kPa
STRESS RANGE	154,300 kPa
STRESS CATEGORY	A
ALLOW. STRESS RANGE	165,500 kPa

PROPOSED STRUCTURE

STRUCTURE GEOMETRY:

1. STRUCTURE TYPE: SINGLE SPAN HALF-THRU GIRDER
2. CLEAR SPAN LENGTHS: 29.5 meters
3. VERTICAL CLEARANCE ABOVE ROADWAY. 4.95 meters
4. ARE PROVISIONS TO BE MADE FOR PUBLIC UTILITIES? N/A

EXISTING STRUCTURE

1. STRUCTURE TYPE: SINGLE SPAN STEEL DECK GIRDER YEAR BUILT: 1937
2. CLEAR SPAN (NORMAL TO ROADWAY): 9.9 meters
3. VERTICAL CLEARANCE ABOVE ROADWAY: 4.35 meters

DESIGN CRITERIA:

1. DESIGN LIVE LOAD AREA: E80
2. DESIGN SPAN: ℄ TO ℄ BRG. 30.7m
3. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL: 70 - 88 kPa ON LEDGE 950 kPa
4. ALLOWABLE LOAD FOR PILING: N/A TYPE N/A ESTIMATED LENGTH N/A
5. ALLOWABLE STRESS FOR STRUCTURAL STEEL AASHTO M270M GR 345 WEATHERING STEEL TENSION 186 MPa
6. ALLOWABLE STRESS FOR REINFORCING STEEL AASHTO M31M GRADE 400 TENSION 165 MPa COMPRESSION 138 MPa
7. ALLOWABLE STRESS FOR CONCRETE CLASS A f'_b 30 MPa f'_c NA
   CLASS B f'_b 25 MPa f'_c NA
   SILICA FUME f'_b 35 MPa f'_c NA

FEB 05 2003

DESCRIPTION

95b270\structures\rt9br302.dgn
rt9br302.1 09-MAR-2001

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BRATTLEBORO	Bridge No. 62.56
Highway No. VT. ROUTE 9	Log Sta. / Surv. Sta.

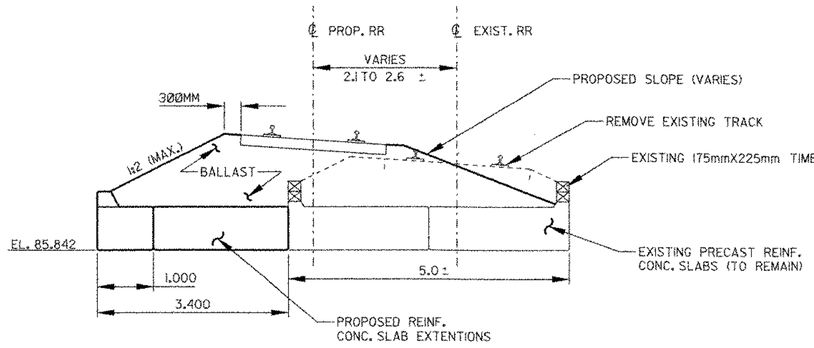
NEW ENGLAND CENTRAL RAILROAD OVER VT. ROUTE 9

PRELIMINARY INFORMATION

Designed By LM	Drawn By DHL
Checked By GJB Date	Bridge Design Supervisor JHR Date
PROJECT BRATTLEBORO	PROJECT NO. NH BRF 012-1(33)
I.G.C. Info.	

R.O.W. SHEET 12 OF 27 SHEETS

221 ROW



TYPICAL BRIDGE SECTION
SARGENT BROOK

SCALE 1:50

HYDRAULICS REPORT

VAOT Metric

HYDRAULIC DATA

1. DRAINAGE AREA 14.2 km²
2. CHARACTER OF TERRAIN SMALL MOUNTAINS
3. CHARACTER AND TYPE OF STREAM ALLUVIAL RANDOM VARIATION IN WIDTH
4. NATURE OF STREAMBED SAND/GRAVEL BOTTOM

Q2.33	6 m³/s	Q50	30.5 m³/s
Q10	18 m³/s	Q100	35.5 m³/s
Q25	25.5 m³/s	Q500	48 m³/s

5. DATE OF FLOOD OF RECORD UNKNOWN
6. WATER SURFACE ELEVATION NA ESTIMATED DISCHARGE NA m³/s
7. NATURAL STREAM VELOCITY @ Q 2.33 = 1.70 m/s
8. ICE CONDITIONS LIGHT DEBRIS MODERATE TO HEAVY
9. DOES THE STREAM REACH MAX. HIGHWATER ELEVATION RAPIDLY? YES, STREAM IS CONSIDERED FLASHY
10. IS ORDINARY RISE RAPID?
11. IS STAGE AFFECTED BY UPSTREAM/DOWNSTREAM CONDITIONS? YES
    IF YES, DESCRIBE: AT GREATER THAN Q2.33 THE WATER OVER FLOWS STREAM BANKS AND TRAVELS ACCROSS WETLANDS TO ADJACENT ROUTE 9
12. WATERSHED STORAGE <1% HEADWATERS ____ UNIFORM THROUGHOUT WATERSHED ____ IMMEDIATELY ABOVE SITE ✓

EXISTING STRUCTURE

1. STRUCTURE TYPE: REINFORCED CONCRETE CAPPED STONE ABUTMENT w/CONCRETE DECK — YEAR BUILT: UNKNOWN
2. CLEAR SPAN (NORMAL TO STREAM): 5.6 m
3. VERTICAL CLEARANCE ABOVE STREAMBED: 3.14 m
4. WATERWAY OF FULL OPENING: 18.0 m²
5. DISPOSITION OF STRUCTURE: EXTEND CONCRETE CAP OVER SLOPED STONE ABUTMENT WALLS
6. TYPE OF MATERIAL UNDER SUBSTRUCTURE: BEDROCK (HARDPAN)
7. WATER SURFACE ELEVATION @ Q2.33= 83.77 m VELOCITY= 1.70 m/s
   Q10= 84.77 m = 2.52 m/s
   Q25= 85.29 m = 3.66 m/s
   Q50= 85.49 m = 3.90 m/s
   Q100= 85.68 m = 4.11 m/s
8. LONG TERM STREAM BED CHANGES: SEDIMENT DESPOSITS ON DOWNSTREAM CROSS SECTIONS NEAR SHARP CURVE IN STREAM
9. IS THE ROADWAY OVERTOPPED BELOW THE Q100? YES FREQUENCY: Q2.9
10. RELIEF ELEVATION: 84.25 m 27 m³/s
11. UPSTREAM STRUCTURE: TOWN: BRATTLEBORO DISTANCE: 0.25km
    HIGHWAY NO.: 5 STRUCTURE NO.: 10
    STRUCTURE TYPE: WIDE-FLANGE BEAMS WITH CONCRETE DECK
    CLEAR SPAN: 9.14 m CLEAR HEIGHT: 1.83 m
    YEAR BUILT: 1959 FULL WATERWAY: 16.73 m²
12. DOWNSTREAM STRUCTURE: TOWN: NONE DISTANCE:
    HIGHWAY NO.: STRUCTURE NO.:
    STRUCTURE TYPE:
    CLEAR SPAN: CLEAR HEIGHT:
    YEAR BUILT: FULL WATERWAY:

PROPOSED STRUCTURE

STRUCTURE GEOMETRY:
1. STRUCTURE TYPE EXISTING BRIDGE WITH DECK AND ABUTMENT CAP EXTENSION
2. CLEAR SPAN LENGTH(S): 5.6 m
3. VERTICAL CLEARANCE ABOVE STREAMBED: 3.14 m
4. ARE PROVISIONS TO BE MADE FOR PUBLIC UTILITIES? NO

HYDRAULIC DATA:
1. WATERWAY AREA OF FULL OPENING (NORMAL TO STREAM): 18 m² NA m³/s
2. WATER SURFACE ELEVATION @ Q 2.33 = 83.77 m VELOCITY= 1.70 m/s
   Q 10 = 84.68 m = 2.68 m/s
   Q 25 = 85.07 m = 3.66 m/s
   Q 50 = 85.32 m = 3.90 m/s
   Q 100 = 85.55 m = 4.11 m/s
3. IS THE ROADWAY OVERTOPPED BELOW THE Q100? YES FREQUENCY: Q2.9
4. RELIEF ELEVATION: 84.25 DISCHARGE OVER ROAD @Q100: 27 m³/s
5. AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 85.83 m
6. VERTICAL CLEARANCE @Q 50 = 0.73 m
7. SCOUR: TO BE ADDRESSED IN FINAL HYDRAULIC REPORT
8. REQUIRED CHANNEL PROTECTION: TO BE ADDRESSED IN FINAL HYDRAULIC REPORT. ANTISIPATED STONE FILL.

PERMIT INFORMATION

AVERAGE DAILY FLOW: NA
ORDINARY LOW WATER: NA DEPTH: NA
ORDINARY HIGH WATER: NA DEPTH: NA
NA = NOT AVAILABLE

TRAFFIC DATA

FUNCTIONAL CLASSIFICATION MINOR ARTERIAL

2002 ADT =	N/A
2022 ADT =	N/A
2022 ADTT =	N/A
2002 DHV =	N/A
2022 DHV =	N/A
D =	N/A
T =	N/A
V =	N/A
2002-2022 18 KIP ESAL =	N/A
2002-2042 18 KIP ESAL =	N/A

TEMPORARY BRIDGE REQUIREMENTS

1. STRUCTURE TYPE NO TEMPORARY STRUCTURE
2. CLEAR SPAN LENGTH(S) NORMAL TO STREAM: N/A
3. VERTICAL CLEARANCE ABOVE STREAMBED: N/A
4. WATERWAY AREA OF FULL OPENING (NORMAL TO STREAM): N/A

NA = NOT APPICABLE

NOTE:

TRAFFIC MAINTENANCE:
1. IS TRAFFIC TO BE MAINTAINED? YES IF YES, ON EXISTING STRUCTURE X OR ON TEMPORARY BRIDGE
2. TEMPORARY BRIDGE REQUIREMENTS: ONE OR TWO WAY
   TRAFFIC CONTROL SIGNALS REQUIRED
   ARE SIDEWALKS REQUIRED? IF SO, ON WHAT SIDE?
   STRUCTURE TYPE:

DESIGN CRITERIA:
1. DESIGN LIVE LOAD AREA E80
2. DESIGN SPAN 6m
3. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL NA ON LEDGE 950kPa
4. ALLOWABLE LOAD FOR PILING NA TYPE NA ESTIMATED LENGTH NA
5. ALLOWABLE STRESS FOR STRUCTURAL STEEL AASHTO M270M GR 345 WEATHERING STEEL TENSION 186 MPa
6. ALLOWABLE STRESS FOR REINFORCING STEEL AASHTO M31M GRADE 400 TENSION 165 MPa COMPRESSION 138 MPa
7. ALLOWABLE STRESS FOR CONCRETE CLASS A f'_c 30 MPa f_c NA
   CLASS B f'_c 25 MPa f_c NA
   SILICA FUME f'_c 35 MPa f_c NA

FEB 05 2003

LOAD RATING (TONS)(LOAD FACTOR)

RATING								
INVENTORY								
POSTED								
OPERATING								

	DESCRIPTION	

95b270\structures\sgtbr302.dgn
sgtbr302.1 09-MAR-2001

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BRATTLEBORO	Bridge No. 62.51
Highway No. VT. ROUTE 9	Log Sta. / Surv. Sta.
NEW ENGLAND CENTRAL RAILROAD OVER SARGENT BROOK	

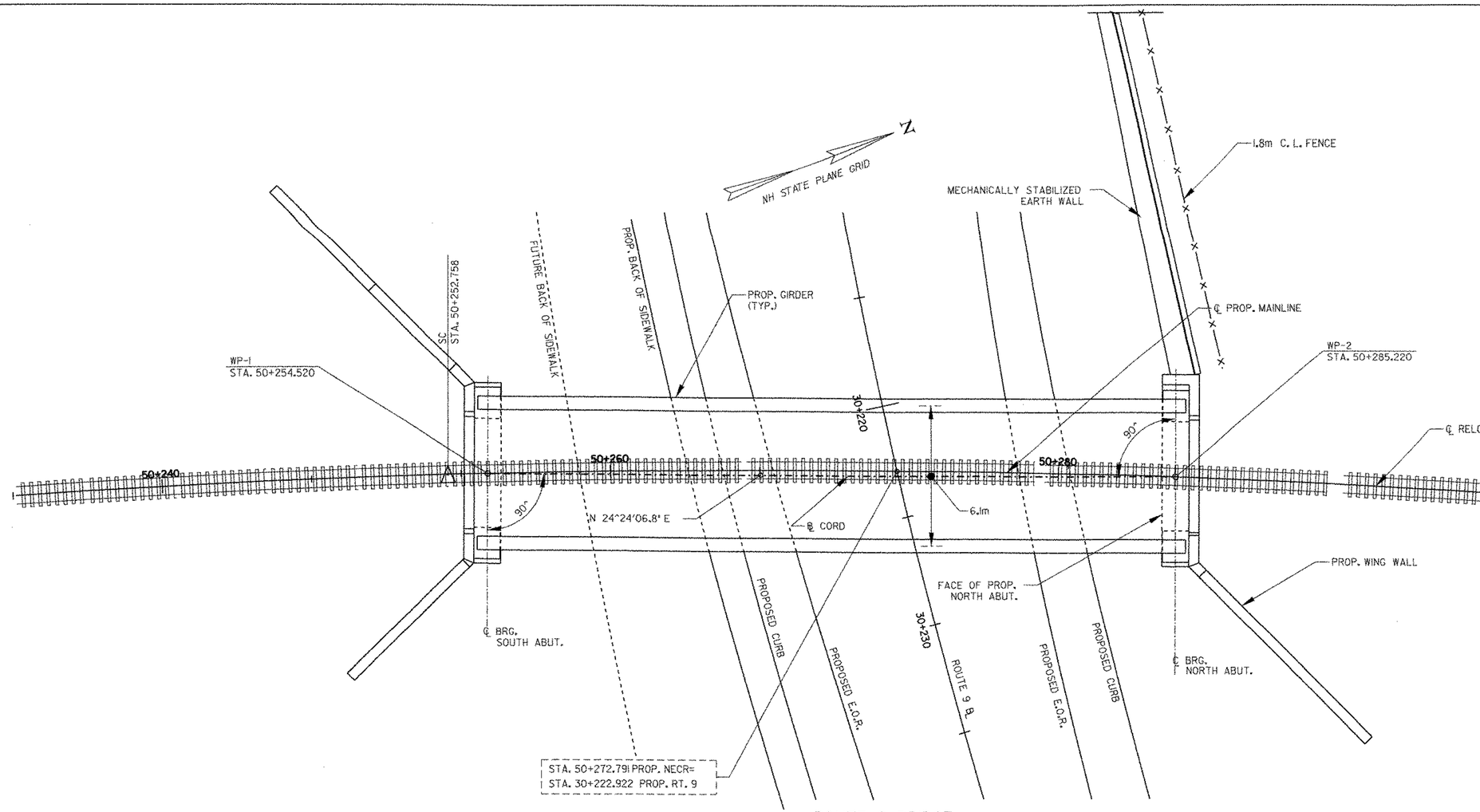
PRELIMINARY INFORMATION

Designed By LM	Drawn By DHL
Checked By GJB Date	Bridge Design Supervisor JHR Date
PROJECT BRATTLEBORO	PROJECT NO. NH BRF 012-1(33)
L.G.C. Info.	

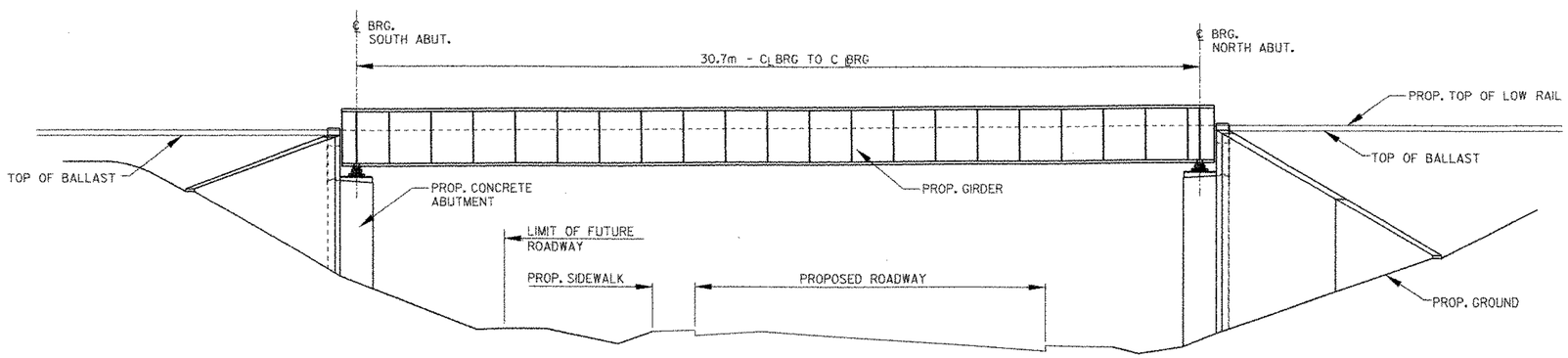
R.O.W. SHEET 13 OF 27 SHEETS

227 ROW

Metric



ROUTE 9 BRIDGE
PLAN
SCALE 1:100



ROUTE 9 BRIDGE
ELEVATION
SCALE 1:100

FEB 05 2003

DATUM
VERTICAL _____
HORIZONTAL _____

VT. ROUTE 9 BRIDGE
PLAN AND ELEVATION

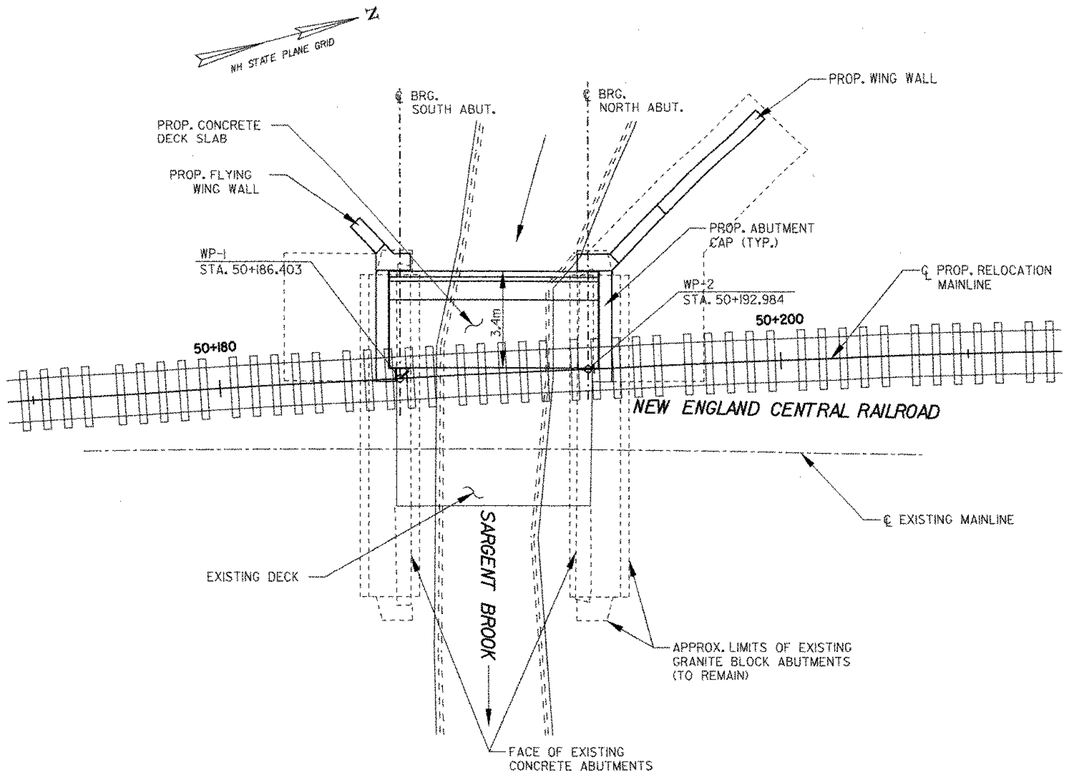
SURVEYED BY	N/A	DATE	N/A
DRAWN BY	DHL	DATE	
SQUAD LEADER	JHR		

DESIGN FILE NO. 95b270\structures\rt9br100.dgn
IPARM FILE rt9br100pe.i DATE PLOTTED 09-MAR-2001

BRATTLEBORO
NH BRF 012-1(33)

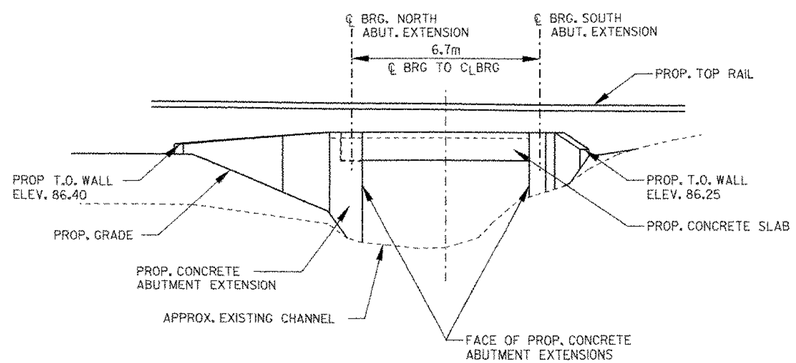
R.O.W. SHEET 14 OF 27 SHEETS

223 ROW



PLAN

SCALE 1:100



ELEVATION
(LOOKING EAST)

SCALE 1:100

DATUM
VERTICAL _____
HORIZONTAL _____

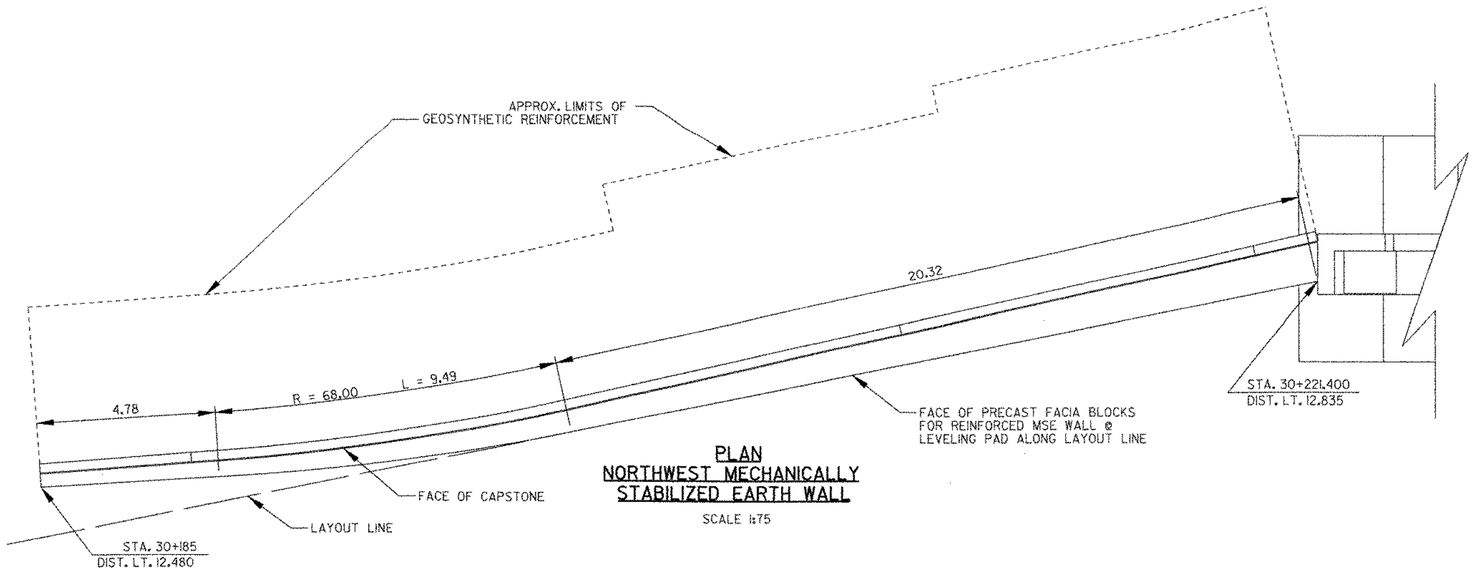
FEB 05 2003

SARGENT BROOK BRIDGE
PLAN AND ELEVATION

SURVEYED BY	N/A	DATE	N/A
DRAWN BY	DHL	DATE	
SQUAD LEADER	JHR		
DESIGN FILE NO.	95b270\structures\sgtbr100.dgn		
IPARM FILE	sgtbr100pe.i	DATE PLOTTED	09-MAR-2001

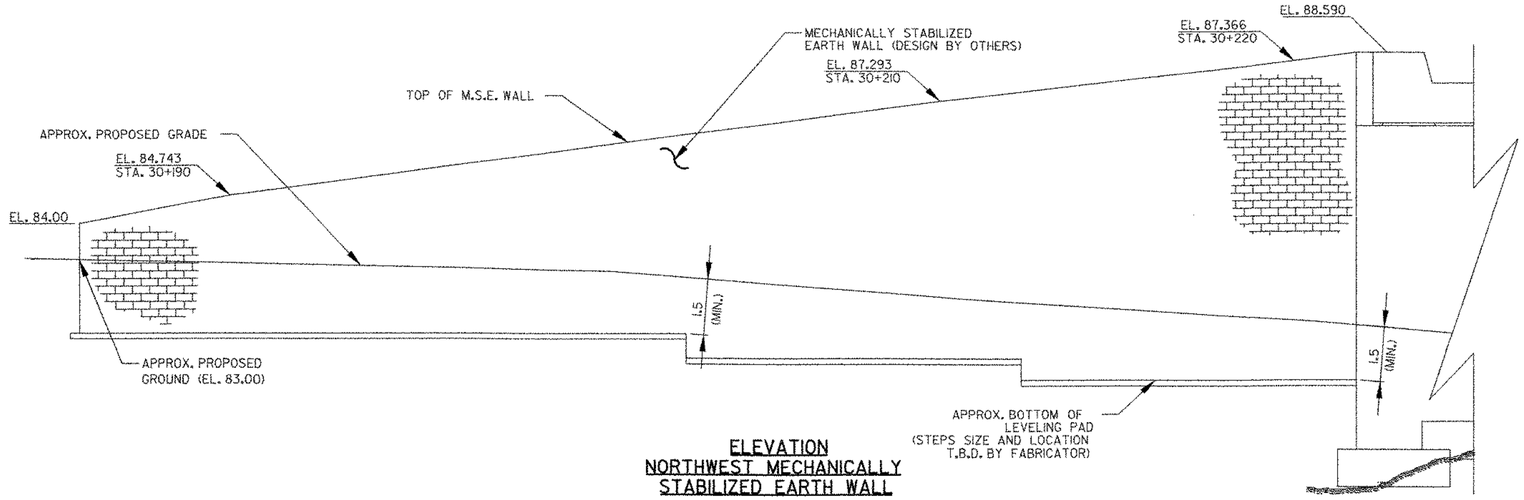
BRATTLEBORO
NH BRF 012-1(33)

R.O.W. SHEET 15 OF 27 SHEETS



PLAN
NORTHWEST MECHANICALLY
STABILIZED EARTH WALL

SCALE 1:75



ELEVATION
NORTHWEST MECHANICALLY
STABILIZED EARTH WALL

SCALE 1:75

FEB 05 2003

NORTHWEST M.S.E. WALL
PLAN AND ELEVATION

SURVEYED BY	N/A	DATE	N/A
DRAWN BY	DHL	DATE	
SQUAD LEADER	JHR		
DESIGN FILE NO.	95b270\structures\rt9br160.dgn		
IPARM FILE	rt9br160pe.i	DATE PLOTTED	09-MAR-2001

BRATTLEBORO
NH BRF 012-1(33)

R.O.W. SHEET 16 OF 27 SHEETS

DATUM
VERTICAL
HORIZONTAL

275 Row

DRAINAGE LAYOUT & EROSION CONTROL SHEET 1

Metric

D1 STA. 30+147 LT
CONST SPECIAL DITCH
8 m x 2 m TYPE I STONE FILL

D2 STA. 30+180 TO STA. 30+220 LT
CONST SPECIAL DITCH
TYPE I STONE FILL

U5 STA. 30+182 LT TO STA. 30+250 LT
NEW 150 mm UD w/ FLUSHING BASIN
AT STA 30+182

P4 STA. 30+151 LT
NEW 600 mm x 1.5 m RCP (CLASS III) OR CPEP (SL)
RELAYING PIPE CULVERT 525 mm x 2.4 m RCP
NEW PRCCB AT INLET (1.2 m DIA.)
PRCCB IS TO BE PLACED TO INTERCEPT EXISTING
CULVERT FROM STA 30+147 LT
W/ CI GRATE TYPE A

P7 STA. 30+180 LT
NEW 450 mm x 1.5 m RCP (CLASS III) OR CPEP (SL)
OR PCCSP (1.63) OR CAAP (1.52)
NEW PRCCB AT INLET (1.2 m DIA.)
W/ CI GRATE TYPE A

P8 STA. 30+180 LT TO STA. 30+250 LT
NEW 750 mm x 68.5 m PCCSP (1.63) OR CAAP (1.52)
NEW PRCCB AT INLET (1.5 m DIA.)
W/ CI GRATE TYPE E

STA 30+075.000
BEGIN APPROACH

STA 30+091.000
END APPROACH
BEGIN PROJECT
NH BRF 012-1(33)

RIM=86.237
IN=84.477
OUT=84.327

EXIST 450 RCP RETAIN

EXIST 450 RCP STA 30+045 TO 30+085 RETAIN

EXIST 375 HDPE RETAIN

EXIST 375 CMP RETAIN

EXIST 525 PIPE RETAIN

PIPE UNKNOWN RETAIN

RIM=84.753
IN=83.533
IN=83.513
OUT=83.483

STA 30+083 LT TO STA 30+147 LT
NEW 450 mm x 56.5 m RCP (CLASS III) OR CPEP (SL)
RELAYING PIPE CULVERT 450 mm x 2.4 m RCP
NEW PRCCB AT INLET (1.2 m DIA.)
PRCCB IS TO BE PLACED TO INTERCEPT EXISTING
W/ CI GRATE TYPE D

EXIST 450 RCP REMOVE CB AND PIPE

STA 30+083 LT TO STA 30+147 LT
NEW 150 mm UD w/ FLUSHING BASIN
AT STA 30+089

EXIST 375 CMP REMOVE DI AND PIPE

EXIST 450 RCP REMOVE CB AND PIPE

STA 30+149 LT TO STA 30+180 LT
NEW 150 mm UD w/ FLUSHING BASIN AT STA 30+149

STA 30+147 LT TO STA 30+180 LT
NEW 750 mm x 31.4 m PRCCB (CLASS III) OR CAAP (1.52)
W/ CI GRATE TYPE E (1.8 m DIA.)

PROP. MSE RETAINING WALL

Asph Sluice

400 mm Water Main

450 RCP

600 PIPE

HAY BALES AROUND CATCH BLOCK (TYP.)

VT ROUTE 9

30+060 30+080 30+100 30+120 30+140 30+160 30+180 30+200

RIM=85.561
IN=83.856
IN=83.851
OUT=83.903

EXIST 375 RCP REMOVE CB AND PIPE

STA 30+089 RT TO STA 30+138 RT
NEW 450 mm x 17 m RCP (CLASS III) OR CPEP (SL)
OR PCCSP (1.63) OR CAAP (1.52)
NEW PRCCB AT INLET (1.2 m DIA.)
W/ CI GRATE TYPE D

RIM=85.562
OUT=84.062

STA 30+089 RT TO STA 30+138 RT
NEW 150 mm UD w/ FLUSHING BASIN AT STA 30+089

HAY BALES ALONG DITCH (TYP.)

RIM=85.064
IN=83.404
OUT=83.383

CONSTRUCT PERMANENT TYPE I STONE FILL IN DITCH

EXIST 450 RCP REMOVE CB AND PLUG AND ABANDON REMAINING PIPE

STA 30+144 RT TO STA 30+151 RT
NEW 150 mm UD CARRIER PIPE

STA 30+148 RT TO STA 30+180 RT
NEW 600 mm x 22.4 m RCP (CLASS III) OR CPEP (SL)
PCCSP (1.63) OR CAAP (1.52)
NEW PRCCB AT INLET (1.2 m DIA.)
W/ CI GRATE TYPE E

STA 30+180 RT TO STA 30+180 LT
NEW 450 mm x 31.4 m RCP (CLASS III) OR CAAP (1.52)
W/ CI PRCCB AT INLET (1.8 m DIA.)
GRATE TYPE E

CONSTRUCT PERMANENT TYPE I STONE FILL IN DITCH

INVERT
600 RCP
ELEV. =82.983

EXIST 600 RCP REMOVE PIPE TO 14m RT PLUG AND ABANDON REMAINING PIPE

INVERT
450 RCP
ELEV. =83.005

M.H.

C.B.

NH STATE PLANE GRID N

FEB 05 2003

0 10 20 30
SCALE IN METERS

STONE FILL TYPE I
STA 30+130 TO 30+210 LT
STA 30+140 TO 30+210 RT

EROSION MATTING
STA 30+100 TO 30+130 LT
STA 30+110 TO 30+140 RT

DATUM	
VERTICAL	NGVD 1929
HORIZONTAL	NAD 1983

PROJECT: BRATTLEBORO	PROJECT NO.: NH BRF 012-1(33)
DESIGN FILE NAME: 95b270\structures\sb270bd2.dgn	
IPARM FILE NAME: sb270ecll.i	PLOT DATE: 09-MAR-2001
SURVEYED BY:	SURVEY DATE:
SQUAD LEADER: W_HUSBAND	DRAWN BY: P_SHEDD
R.O.W. SHEET 17 OF 27 SHEETS	

7.76 RAW

Metric

DRAINAGE LAYOUT & EROSION CONTROL SHEET 2

N

NH STATE PLANE GRID

EROSION MATTING
STA 30+280.0 TO 30+310.0 LT
STA 30+300.0 TO 30+320.0 RT

STONE FILL TYPE I
STA 30+210 TO 30+280 LT
STA 30+210 TO 30+300 RT

STONE FILL TYPE II
STA A 203+49 TO A 203+63 RT

STONE FILL TYPE IV
STA A 203+63 TO A 203+73 RT

P8 STA. 30+180 LT TO STA. 30+250 LT
NEW 750 mm x 68.5 m PCCSP (1.63) OR CAAP (1.52)
NEW PRCCB AT INLET (1.5 m DIA.)
W/ CI GRATE TYPE E

U5 STA. 30+182 LT TO STA. 30+250 LT
NEW 150 mm UD w/ FLUSHING BASIN AT STA 30+182

U6 STA. 30+252 LT TO STA. 30+285 LT
NEW 150 mm UD w/ FLUSHING BASIN AT STA 30+252

U7 STA. 30+287 LT TO STA. 30+326 LT
NEW 150 mm UD w/ FLUSHING BASIN AT STA 30+287

U8 STA. 30+310 RT TO STA. 30+326 RT
NEW 150 mm UD w/ FLUSHING BASIN AT STA 30+310

U9 STA. 30+326 LT TO STA. A203+50 LT
NEW 150 mm UD w/ FLUSHING BASIN AT STA A203+50

U10 STA. 30+326 RT TO STA. A203+50 RT
NEW 150 mm UD w/ FLUSHING BASIN AT STA A203+50

P9 STA. 30+250 RT TO STA. 30+250 LT
NEW 450 mm x 11.2 m RCP (CLASS III) OR CPEP (SL)
OR PCCSP (1.63) OR CAAP (1.52)
NEW PRCCB AT INLET (1.2 m DIA.)
W/ CI GRATE TYPE E

P10 STA. 30+250 LT
NEW 450 mm x 1.5 m RCP (CLASS III) OR CPEP (SL)
OR PCCSP (1.63) OR CAAP (1.52)
NEW PRCCB AT INLET (1.2 m DIA.)
W/ CI GRATE TYPE A

P11 STA. 30+250 LT TO STA. 30+285 LT
NEW 900 mm x 33.5 m PCCSP (1.63) OR CAAP (1.52)
NEW PRCCB AT INLET (1.8 m DIA.)
W/ CI GRATE TYPE E

P12 STA. 30+285 LT TO STA. 30+326 LT
NEW 900 mm x 39.3 m RCP (CLASS III) OR CPEP (SL)
NEW PRCCB AT INLET (1.5 m DIA.)

P13 STA. 30+326 LT
NEW 450 mm x 1.5 m RCP (CLASS III) OR CPEP (SL)
OR PCCSP (1.63) OR CAAP (1.52)
NEW PRCCB AT INLET (1.2 m DIA.)
W/ CI GRATE TYPE A

STA 30+222.922 VT RTE 9 =
STA 50+272.791 RAILROAD

MATCH LINE STA 30+210

HAY BALES AROUND CATCH BASIN (TYP.)

CONSTRUCT PERMANENT TYPE I STONE FILL IN DITCH

VT ROUTE 9

HAY BALES ALONG DITCH (TYP.)

CONSTRUCT PERMANENT TYPE I STONE FILL IN DITCH

EXIST 200 CMP REMOVE

EXIST 450 CMP REMOVE

EXIST 300 CMP REMOVE

P14 STA. 30+326 LT TO STA. 30+326 RT
NEW 900 mm x 9.2 m RCP (CLASS III) OR CPEP (SL)
NEW PRCCB AT INLET (2.1 m DIA.)
W/ CI GRATE TYPE D

P15 STA. 30+326 RT
NEW 900 mm x 14.4 m RCP (CLASS III) OR CPEP (SL)
NEW PRCCB AT INLET (1.8 m DIA.)
W/ CI GRATE TYPE D

STA 30+330.000 VT RTE 9 =
STA 5+000.000 DRIVEWAY
STA 6+000.000 DRIVEWAY

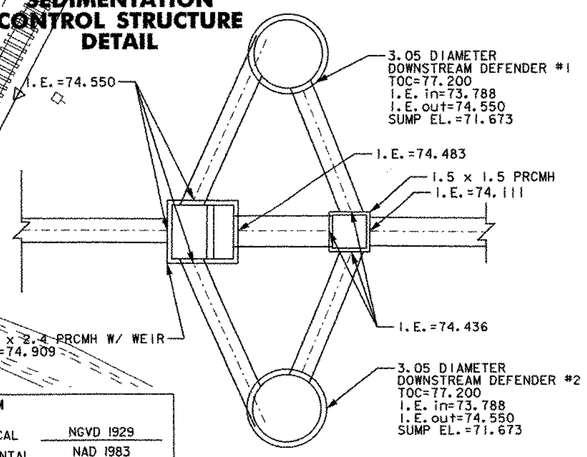
SILT FENCE

SILT FENCE IN STREAM (TYP.)

FILTER CURTAIN (TYP.)

STA A203+50.000
END PROJECT
NH BRF 012-1(33)
BEGIN NH PROJECT 11999

SEDIMENTATION CONTROL STRUCTURE DETAIL



P16 STA. 30+337 LT TO STA. 5+016 LT
NEW 450 mm x 8.8 m RCP (CLASS III) OR CPEP (SL)
OR PCCSP (1.63) OR CAAP (1.52)
NEW PRCCB AT INLET (1.2 m DIA.)
W/ CI GRATE TYPE A

P17 STA. 30+326 LT TO STA. 30+337 LT
NEW 450 mm x 9.0 m RCP (CLASS III) OR CPEP (SL)
OR PCCSP (1.63) OR CAAP (1.52)
NEW PRCCB AT INLET (1.2 m DIA.)
W/ CI GRATE TYPE D

P18 STA. 30+326 RT TO STA. 30+337 RT
NEW 450 mm x 9.2 m RCP (CLASS III) OR CPEP (SL)
OR PCCSP (1.63) OR CAAP (1.52)
NEW PRCCB AT INLET (1.2 m DIA.)
W/ CI GRATE TYPE D

P19 STA. 30+326 RT TO STA. 30+338 RT
NEW 900 mm x 9.7 m RCP (CLASS III) OR CPEP (SL)
NEW PRCCB AT INLET (1.8 m DIA.)
W/ CI GRATE TYPE A

P20 STA. 30+338 RT TO STA. A203+42 RT
NEW 750 mm x 8.2 m RCP (CLASS III) OR CPEP (SL)

P21 STA. 30+338 RT TO STA. 30+339 RT
NEW 750 mm x 8.2 m RCP (CLASS III) OR CPEP (SL)

P22 STA. 30+338 RT TO STA. A203+43 RT
NEW 900 mm x 4.2 m RCP (CLASS III) OR CPEP (SL)
NEW PRCMH AT INLET (2.7 m x 2.4 m)
W/ CI COVER

P23 STA. A203+42 RT TO STA. A203+43 RT
NEW 750 mm x 6.3 m RCP (CLASS III) OR CPEP (SL)
INSTALL DOWNSTREAM DEFENDER AT INLET

P24 STA. 30+339 RT TO STA. A203+43 RT
NEW 750 mm x 6.3 m RCP (CLASS III) OR CPEP (SL)
INSTALL DOWNSTREAM DEFENDER AT INLET

P25 STA. A203+43 RT TO STA. A203+52 RT
NEW 750 mm x 8.8 m RCP (CLASS III) OR CPEP (SL)
W/ RCPES (CLASS III) OR CPEPES AT OUTLET
NEW PRCMH AT INLET (1.5 m x 1.5 m)
W/ CI COVER

D3 STA. A203+53.5 TO A203+72 RT
CONST SPECIAL DITCH TO RIVER.
EXCAVATE TO LEDGE. IF LEDGE
IS NOT FOUND, CONSTRUCT DITCH
TO RIVER W/ TYPE IV STONE FILL

0 10 20 30
SCALE IN METERS

FEB 05 2003

DATUM	
VERTICAL	NGVD 1929
HORIZONTAL	NAD 1983

PROJECT:	PROJECT NO.:
BRATTLEBORO	NH BRF 012-1(33)

DESIGN FILE NAME: 95b270\structures\sb270bd2.dgn
IPARM FILE NAME: sb270eol2.i PLOT DATE: 09-MAR-2001
SURVEYED BY: SURVEY DATE:
SQUAD LEADER: W HUSBAND DRAWN BY: P SHEDD

R.O.W. SHEET 18 OF 27 SHEETS

227 ROW

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
1A	THE ELLIS ROBERTSON COMPANY INC.-	22, 23	30+156.3 LT.	30+220.3 LT.	191.5 SM±					BRATTLEBORO			2,061.4 S.F.±
	LESSOR		30+095.0 LT.				DRIVE (T)						9.3M (31') PAVED MM 0711
	ROUNTREE MOTORS INC.-		30+100.0 LT.	RR 50+326.6 LT.			CONST. (T) 0.05HA±						INCLUDES EROSION CONTROL &
	D/B/A/ ROUNTREE FORD-MERCURY -												GUARDRAIL 0.12A±
	LESSEE		30+100.0 LT.	30+145.0 LT.			SLOPE (T) 34.4 SM±						370.3 S.F.±
			30+100.0 LT.	30+220.0 LT.			LANDSCAPING (T)						INCLUDES TRANSPLANTING TREES
			30+143.6 LT.	30+152.6 LT.			DITCH (P)						
			30+145.0 LT.	30+220.3 LT.			SLOPE (P) 136.2 SM±						1,466.1 S.F.±
			30+184.0 LT.	30+220.6 LT.			INSTALL & MAINT. (P) 108.1 SM±						1,164 S.F.± RETAINING WALL &
													APPURTENANCE
			30+145.5 LT.				REMOVE (T)						CULVERT, D.I. & ASPHALT
													SLUICE
			30+148.6 LT.				CULVERT (T)						CONNECT TO EXISTING CULVERT
			30+152.5 LT.				CULVERT (P)						
1B		23, 25	30+220.0 LT.	RR 50+326.9 LT.	199.4SM±								2,146.4 S.F.± TO BE CONVEYED
													TO PARCEL #4 RR AFTER
													PROJECT COMPLETION
1C		22, 23	30+102.0 RT.	30+223.6 LT.	0.16HA±		ALL R. T. & I.						VT. RTE. 9 HWY. EASE. 0.40A±
			30+145.5 LT. & RT.				ALL R. T. & I.						CULVERT, CAP PIPE RIGHT
1D		23, 25	30+245.9 LT.	NH 203+45.6 LT.	0.27HA±								0.67A±
			30+332.3 LT.				DRIVE (T)						3.0M (30') GRAVEL MM 0725
													IN COMMON/PARCEL #5B
			30+263.5 LT.	30+332.3 LT.			CONST. (T) 156.6 SM±						1,685.7 S.F.±
			30+276.9 LT.	30+324.0 LT.			SLOPE (P) 35.6 SM±						383.2 S.F.±
			NH 203+44.2 LT.	NH 203+45.3 LT.			EXCEPT & RESERVE						APPROXIMATE LOCATION OF
													WATERLINE
1E		23, 25	RR 50+316.9 RT.	NH 203+45.3 LT.	0.27HA±								BY OPTION ONLY 0.67A±
		26	NH 203+44.2 LT.	RR 50+386.3 RT.			EXCEPT & RESERVE						APPROXIMATE LOCATION OF
													WATERLINE
1F		23	30+238.3 RT.	NH 203+45.6 RT.	0.21HA±		ALL R. T. & I.						VT. RTE.9 HWY. EASE. 0.52A±
2A	THE ELLIS ROBERTSON COMPANY INC.	22	30+106.3 RT.	30+136.3 RT.			CONST. (T) 80.0 SM±			BRATTLEBORO			861.1 S.F.±
			30+106.3 RT.	30+136.6 RT.			SLOPE (P) 50.0 SM±						538.1 S.F.±
2B		22	30+106.3 RT.	30+136.6 RT.	0.04HA±		ALL R. T. & I.						VT. RTE. 9 HWY EASE. 0.10A±
3A	THE ELLIS ROBERTSON COMPANY INC.	22	30+135.0 RT.	RR 50+192.9 LT.			CONST. (T) 0.06HA±			BRATTLEBORO			INCLUDES EROSION CONTROL
													0.15A±
			30+136.3 RT.	30+204.3 RT.			SLOPE (P) 214.4 SM±						INCLUDES EROSION CONTROL
													2,307.8 S.F.±
			30+140.0 RT.	30+172.0 RT.			DITCH (P)						
			30+148.6 RT.				EASMENT (T)						REMOVE PORTION OF CULVERT
													& CAP.
3B		22, 23, 25	30+204.3 RT.	RR 50+191.9 LT.	0.06HA±								0.15A± TO BE CONVEYED BACK
													TO PARCEL #4 RR AFTER
													PROJECT COMPLETION

REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
1	19, 23	PARCEL NO. 1 ROBERTSON & ROUNDTREE. ADD EXCEPT AND RESERVE FOR WATERLINE AT THE FOLLOWING STATIONS: NH 203+44.2 LT. ~ NH 203+45.3 LT. AND NH 203+44.2 LT. ~ RR 50+386.3 RT. PER C.O. 9206.	08-27-01	M. J. R.	R. P. D.
2	20, 26	PARCEL NO. 5 MOORE ASSOCIATED COMPANIES, INC. ADD EXCEPT AND RESERVE FOR WATERLINE AT THE FOLLOWING STATIONS: RR 50+386.4 LT. ~ RR 50+386.9 LT. PER C.O. 9207.	08-27-01	M. J. R.	R. P. D.
3	19	PARCEL NO. 1C ELLIS ROBERTSON COMPANY, INC. CHANGE THE BEGINNING STATION OF THE ALL R.T.& I. IN THE RTE. 9 HWY. EASE. FROM 30+120.0 RT. TO 30+102.0 RT. PER C.O. 9209.	10-05-01	M. J. R.	R. P. D.

FEB 05 2003

ACCT. GFunk
\\vaot_cadd\filingcabinet$\95b270\RightOfWay\95b270d.dgn
DATE PLOTTED 07-OCT-2002

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
(P) PERMANENT EASEMENT
(T) TEMPORARY EASEMENT

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

APPROVED: ROGER P. DUMAS DATE: 02-02-01
CHIEF, PLANS & TITLES

R. O. W. PLANS

BRATTLEBORO
NH BRF 012-1(33)

SHEET 19 OF 27

278 ROW

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
3C		22, 23	30+136.6 RT.	30+218.3 RT.	0.11HA±		ALL R. T. & I.						VT. RTE. 9 HWY. EASE 0.27A±
3D		23	30+232.6 RT.	NH 203+72.3 RT.	0.30HA±		ALL R. T. & I.						VT. RTE. 9 HWY. EASE. 0.74A±
			30+330.0 RT.										DRIVE 4.6M (15') MM 0725
4	CV PROPERTIES, INC. JOINED	23, 24	RR 50+017.0 CL.	RR 50+701.6 CL.			CONST. (T) 1.37HA±			BRATTLEBORO			REALIGN RR TRACKS AND NEW
	BY NEW ENGLAND CENTRAL	25, 26,											OVERPASS. 3.39A±
	RAILROAD, INC.	27	30+214.3 RT.	30+223.6 LT.									CROSSING EASE OVER VT RTE. 9
													9,888 S.F.± TO BE CONVEYED
													TO RR AFTER PROJECT
													COMPLETION
5A	MOORE ASSOCIATED COMPANIES	25, 26	RR 50+326.6 LT.	RR 50+460.3 LT.	0.05HA±					BRATTLEBORO			0.12A± TO BE CONVEYED BACK
	INC. (A/K/A THE MOORE COMPANY)												TO PARCEL #4 RR
	(D/B/A/ FULFLEX, INC.)		RR 50+326.6 LT.	RR 50+403.0 LT.			CONST. (T) 76.2 SM±						820.2 S.F.±
			RR 50+386.4 LT.	RR 50+386.9 LT.			EXCEPT & RESERVE						APPROXIMATE LOCATION OF
													WATERLINE
5B		23	NH 203+45.6 LT.	NH 203+67.0 LT.	374.4 SM±								4,030.1 S.F.±
			30+332.3 LT.				DRIVE (T)						3.0M (30') GRAVEL MM 0725
													IN COMMON PARCEL 10
5C		23	NH 203+45.6 RT.	NH 203+69.9 RT.	0.04HA±		ALL R. T. & I.						RTE. 9 HWY. EASE. 0.10A±
5D		22	30+148.6 LT. & RT.				ALL R. T. & I.						CULVERT, CAP PIPE RT.
			30+148.6 LT.				CULVERT (T)						CONNECT TO EXISTING CULVERT
6	JACK TARMY REVOCABLE TRUST,	24, 25	RR 50+177.0 LT.	RR 50+180.0 LT.			ACCESS (T)	TEMP.	01-18-02	BRATTLEBORO	294	450	FROM RTE. 5 FOR EQUIPMENT
	JONATHAN BUMP, TRUSTEE, LESSOR AND		RR 50+179.5 LT.	RR 50+193.6 LT.			CONST. (T) 165.0 SM±	USE					INCLUDES EROSION CONTROL
	ETTA E. TARMY REVOCABLE TRUST,							PERMIT					1808.4 S.F.±
	JONATHAN BUMP, TRUSTEE, LESSOR AND												
	JACK TARMY LUMBER COMPANY, INC. -												
	LESSEE												

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

FEB 05 2003

ACCT.GFunk
\\vaof_cadd\filingcabinet$\95b270\RightOfWay\95b270d.dgn
DATE PLOTTED 07-OCT-2002

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
(P) PERMANENT EASEMENT
(T) TEMPORARY EASEMENT

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

APPROVED: ROGER P. DUMAS DATE: 02-02-01
CHIEF, PLANS & TITLES

R. O. W. PLANS
BRATTLEBORO
NH BRF 012-1(33)
SHEET 20 OF 27

229 ROW

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
7	VERIZON NEW ENGLAND, INC.												UTILITY
8	ADELPHIA CABLE COMMUNICATIONS												UTILITY
9	SPRINT COMMUNICATIONS COMPANY L.P.												UTILITY

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

FEB 05 2003

ACCT. GFunk
\\vaot_cadd\filingcabinet$\95b270\RightOfWay\95b270d.dgn
DATE PLOTTED 07-OCT-2002

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
(P) PERMANENT EASEMENT
(T) TEMPORARY EASEMENT

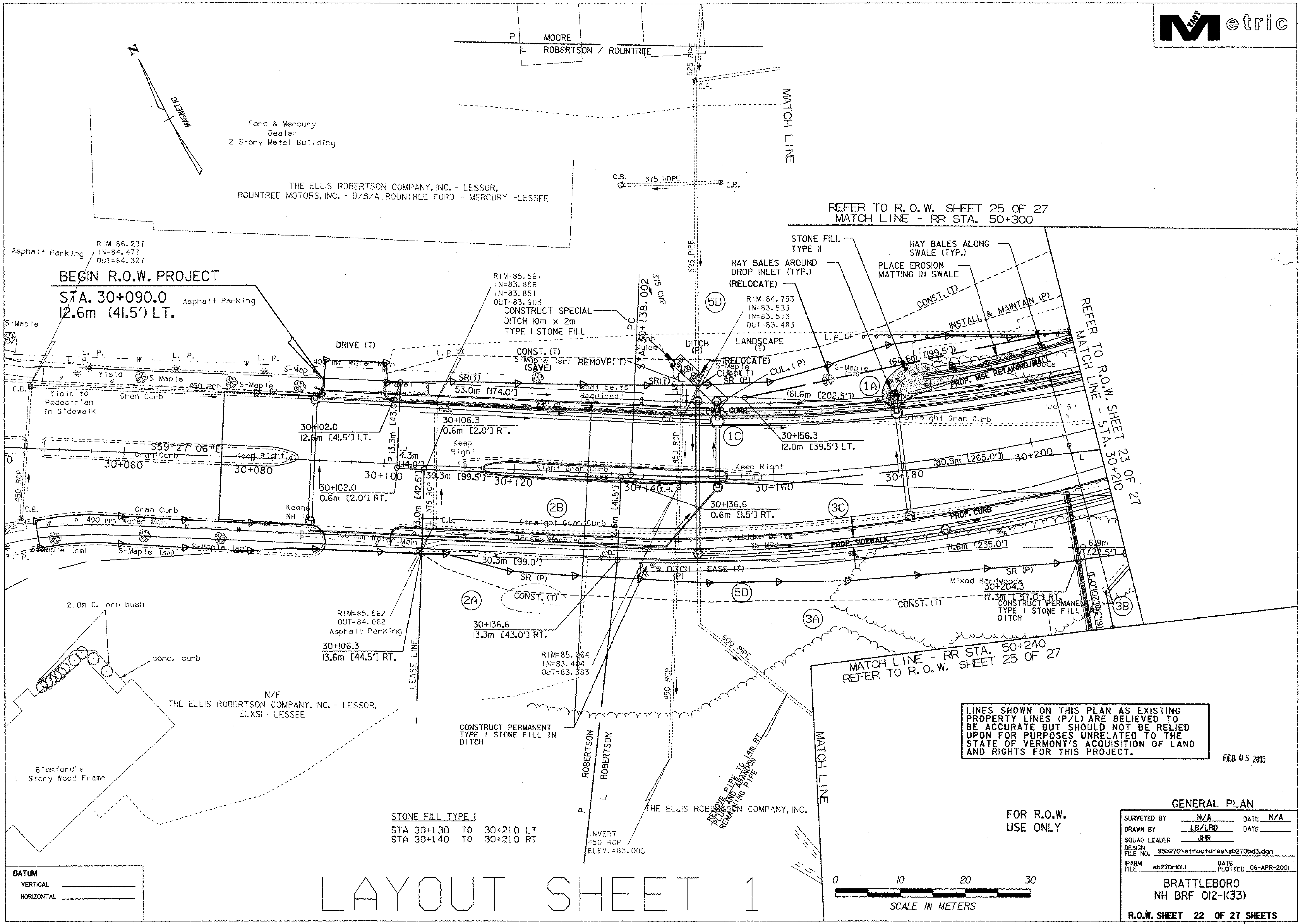
LEGEND
C&T (P) CLEARING & TRIMMING
CZ (P) CLEAR ZONE
CONST. (T) CONSTRUCTION EASEMENT
SR SR SLOPE RIGHTS
P L PROPERTY LINE
TOP OF CUT
TOE OF SLOPE
UE (P) PERMANENT UTILITY EASEMENT

APPROVED: ROGER P. DUMAS DATE: 02-02-01
CHIEF, PLANS & TITLES

R. O. W. PLANS

BRATTLEBORO
NH BRF 012-1(33)
SHEET 21 OF 27

230 ROW


Metric
MOORE
ROBERTSON / ROUNTREE
N
MAGNETIC
Ford & Mercury Dealer 2 Story Metal Building
THE ELLIS ROBERTSON COMPANY, INC. - LESSOR, ROUNTREE MOTORS, INC. - D/B/A ROUNTREE FORD - MERCURY -LESSEE
MATCH LINE
525 PIPE
C.B.
375 HDPE
REFER TO R. O. W. SHEET 25 OF 27
MATCH LINE - RR STA. 50+300
Asphalt Parking
RIM=86.237
IN=84.477
OUT=84.327
BEGIN R.O.W. PROJECT
STA. 30+090.0
12.6m (41.5') LT.
Asphalt Parking
RIM=85.561
IN=83.856
IN=83.851
OUT=83.903
CONSTRUCT SPECIAL DITCH 10m x 2m TYPE I STONE FILL
STONE FILL TYPE II
HAY BALES AROUND DROP INLET (TYP.)
(RELOCATE)
RIM=84.753
IN=83.533
IN=83.513
OUT=83.483
HAY BALES ALONG SWALE (TYP.)
PLACE EROSION MATTING IN SWALE
CONST. (T)
INSTALL & MAINTAIN (P)
REFER TO R.O.W. SHEET 23 OF 27
MATCH LINE - STA. 30+210
DRIVE (T)
CONST. (T)
(SAVE)
REMOVE (T)
DITCH (P)
LANDSCAPE (T)
CUL. (P)
PROP. MSE RETAINING WALL
PROP. CURB
SR (T)
53.0m [174.0']
30+102.0
12.6m [41.5'] LT.
30+106.3
0.6m [2.0'] RT.
30+156.3
12.0m [39.5'] LT.
(61.6m [202.5'])
(60.6m [199.5'])
S59°27'06"E
30+060
30+080
30+100
30+120
30+140
30+160
30+180
30+200
Keep Right
Straight Gran Curb
(80.9m [265.0'])
30+102.0
0.6m [2.0'] RT.
30.3m [99.5']
30+136.6
0.6m [1.5'] RT.
Gran Curb
400 mm Water Main
Slant Gran Curb
Straight Gran Curb
PROP. SIDEWALK
71.6m [235.0']
6.9m [22.5']
30.3m [99.0']
SR (P)
DITCH (P)
EASE. (T)
Mixed Hardwoods
30+204.3
17.3m [57.0'] RT.
CONSTRUCT PERMANENT TYPE I STONE FILL DITCH
CONST. (T)
1A 1C 2A 2B 3A 3B 3C 5D
2.0m C. orn bush
conc. curb
RIM=85.562
OUT=84.062
Asphalt Parking
30+106.3
13.6m [44.5'] RT.
30+136.6
13.3m [43.0'] RT.
RIM=85.064
IN=83.404
OUT=83.383
LEASE LINE
600 PIPE
MATCH LINE - RR STA. 50+240
REFER TO R. O. W. SHEET 25 OF 27
N/F
THE ELLIS ROBERTSON COMPANY, INC. - LESSOR, ELXSI - LESSEE
CONSTRUCT PERMANENT TYPE I STONE FILL IN DITCH
ROBERTSON
ROBERTSON
Bickford's 1 Story Wood Frame
THE ELLIS ROBERTSON COMPANY, INC.
REMOVE PIPE TO 14m RT PLUG AND ABANDON REMAINING PIPE
INVERT 450 RCP ELEV. =83.005
MATCH LINE
0 10 20 30
SCALE IN METERS

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.

FEB 05 2003

STONE FILL TYPE I
STA 30+130 TO 30+210 LT
STA 30+140 TO 30+210 RT

DATUM
VERTICAL
HORIZONTAL

LAYOUT SHEET 1

FOR R.O.W. USE ONLY

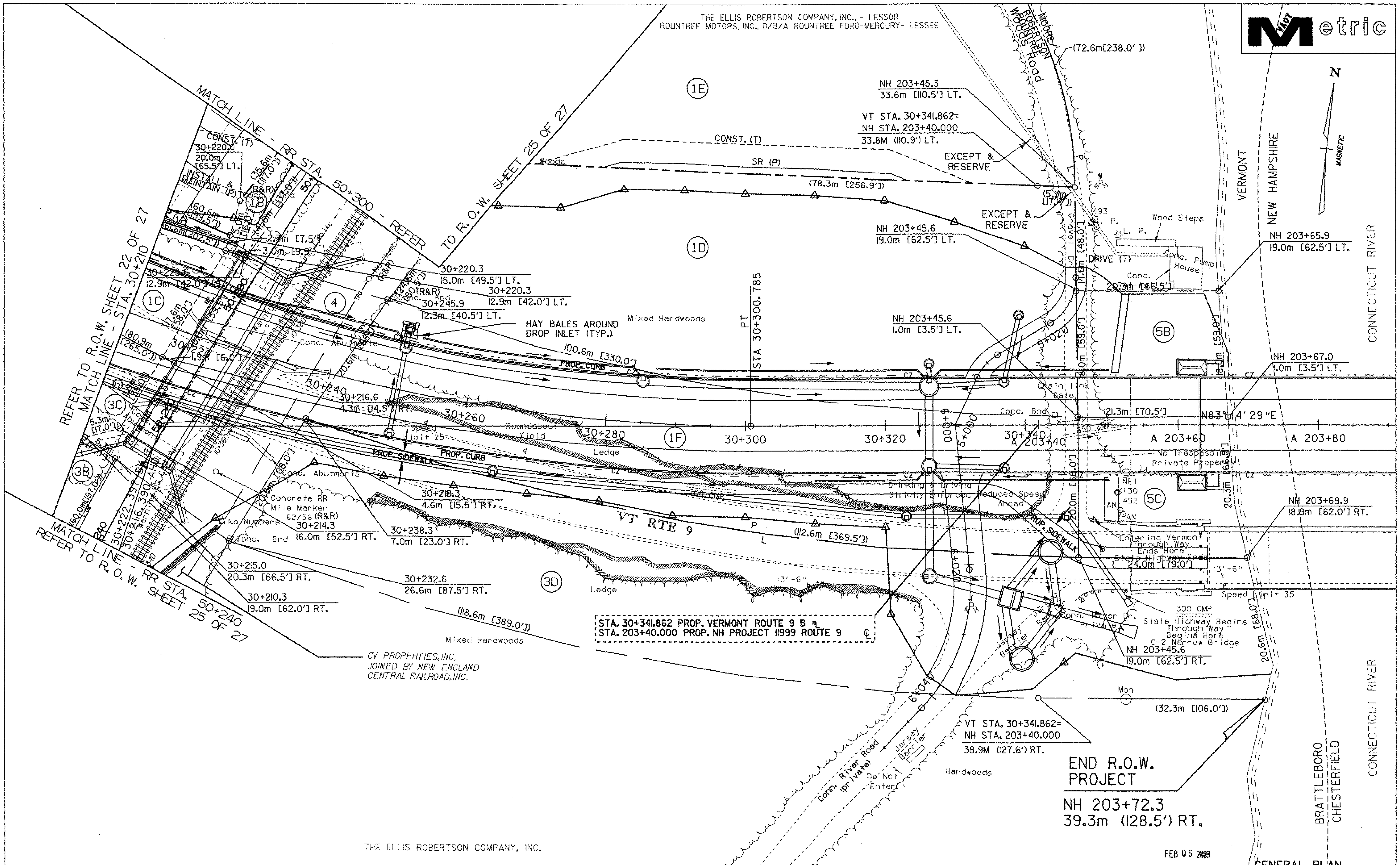
GENERAL PLAN

SURVEYED BY N/A DATE N/A
DRAWN BY LB/LRD DATE
SQUAD LEADER JHR
DESIGN FILE NO. 95b270\structures\sb270bd3.dgn
PARM FILE sb270r101.l DATE PLOTTED 06-APR-2001

BRATTLEBORO
NH BRF 012-1(33)

R.O.W. SHEET 22 OF 27 SHEETS

731 Row


Metric
THE ELLIS ROBERTSON COMPANY, INC., - LESSOR
ROUNTREE MOTORS, INC., D/B/A ROUNTREE FORD-MERCURY- LESSEE
MATCH LINE - RR STA. 50+300 - REFER TO R.O.W. SHEET 25 OF 27
REFER TO R.O.W. SHEET 22 OF 27
MATCH LINE - STA. 30+210
MATCH LINE - RR STA. 50+240
REFER TO R.O.W. SHEET 25 OF 27
Robertson Woods Road
(72.6m[238.0'])
NH 203+45.3
33.6m [110.5'] LT.
VT STA. 30+341.862=
NH STA. 203+40.000
33.8M (110.9') LT.
CONST. (T)
SR (P)
EXCEPT & RESERVE
(78.3m [256.9'])
NH 203+45.6
19.0m [62.5'] LT.
Wood Steps
Conc. Pump House
DRIVE (T)
NH 203+65.9
19.0m [62.5'] LT.
VERMONT
NEW HAMPSHIRE
CONNECTICUT RIVER
30+220.3
15.0m [49.5'] LT.
30+220.3
12.9m [42.0'] LT.
30+245.9
12.3m [40.5'] LT.
HAY BALES AROUND DROP INLET (TYP.)
Mixed Hardwoods
PT STA 30+300.785
NH 203+45.6
1.0m [3.5'] LT.
NH 203+67.0
1.0m [3.5'] LT.
100.6m [330.0']
PROP. CURB
Conc. Abutments
30+216.6
4.3m [14.5'] RT.
Speed Limit 25
Roundabout Yield
Ledge
30+260
30+280
30+300
30+320
30+340
A 203+40
21.3m [70.5']
N83°14'29"E
A 203+60
A 203+80
No Trespassing Private Property
PROP. SIDEWALK
PROP. CURB
Concrete RR Mile Marker 62/56 (R&R)
No Numbers
30+218.3
4.6m [15.5'] RT.
30+214.3
16.0m [52.5'] RT.
30+238.3
7.0m [23.0'] RT.
VT RTE 9
(112.6m [369.5'])
Drinking & Driving Strictly Enforced
Reduced Speed Ahead
NH 203+69.9
18.9m [62.0'] RT.
Entering Vermont
Through Way Ends Here
State Highway Ends
24.0m [79.0']
30+215.0
20.3m [66.5'] RT.
30+232.6
26.6m [87.5'] RT.
30+210.3
19.0m [62.0'] RT.
(118.6m [389.0'])
STA. 30+341.862 PROP. VERMONT ROUTE 9 B
STA. 203+40.000 PROP. NH PROJECT 11999 ROUTE 9
Speed Limit 35
300 CMP
State Highway Begins
Through Way Begins Here
C-2 Narrow Bridge
NH 203+45.6
19.0m [62.5'] RT.
CV PROPERTIES, INC.
JOINED BY NEW ENGLAND CENTRAL RAILROAD, INC.
Mixed Hardwoods
Jersey Barrier
Mon
(32.3m [106.0'])
VT STA. 30+341.862=
NH STA. 203+40.000
38.9M (127.6') RT.
END R.O.W. PROJECT
NH 203+72.3
39.3m (128.5') RT.
Conn. River Road (private)
Do Not Enter
Hardwoods
BRATTLEBORO
CHESTERFIELD
THE ELLIS ROBERTSON COMPANY, INC.
mixed woods

FEB 05 2003

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

DATUM
VERTICAL ______
HORIZONTAL ______

LAYOUT SHEET 2

0 10 20 30
SCALE IN METERS

GENERAL PLAN

SURVEYED BY N/A	DATE N/A
DRAWN BY LB/LRD	DATE
SQUAD LEADER JHR	
DESIGN FILE NO. 95b270\structures\sb270bd3.dgn	
IPARM FILE sb270r102.i	DATE PLOTTED 28-AUG-2001

BRATTLEBORO
NH BRF 012-1(33)

R.O.W. SHEET 23 OF 27 SHEETS

237 ROW

VAOT Metric

N

MAGNETIC

JACK TARMY REVOCABLE TRUST, JONATHAN BUMP, TRUSTEE, LESSOR AND ETTA E. TARMY REVOCABLE TRUST, JONATHAN BUMP TRUSTEE, LESSOR AND JACK TARMY LUMBER COMPANY, INC. - LESSEE

BRADFORD DRIVE (Private)

TEMPORARY CONSTRUCTION ACCESS

2 Story Sheet Metal Building (Kiln)

2 Story Wood Warehouse

PROPOSED 100mm FIBER OPTIC CONDUIT (SEE NOTE 8 ON RAILROAD LAYOUT SHEET 2)

Saw Dust Silo

Gravel Parking Area

Tarmy Lumber Co. 1 Story Conc. Block Building

ACCESS (T)

PROPOSED RAILROAD MAINLINE RELOCATION ℄

BEGINNING OF RAILROAD CONSTRUCTION

MEET EXISTING STA. 50+020.000

Poplars

CONST.(T)

P/L TARMY / CV PROPERTIES

HAY BALES ALONG DITCH (TYP.)

PROP. HAND HOLE (BY OTHERS)

NEW ENGLAND CENTRAL RAILROAD

EXISTING RAILROAD MAINLINE ℄

Landing

West Rail

Fiber Optic Cable (U S Sprint)

50+020 50+040 50+060 50+080 50+100 50+120 50+140 50+160 50+

10+100 10+120 10+140 10+160 10+180 10+200 10+220 10+240 10+260

East Rail

TFO

TO BRATTLEBORO

No Numbers

CONST.(T)

4

No Numbers P/L CV PROPERTIES / THOMAS

TFO

No Numbers CONST. (T)

No Numbers

EXISTING RAILROAD MAINLINE ℄

TO WHITE RIVER JNCT.

TFO No Numbers

TEMPORARY UNDERGROUND FIBER OPTIC (BY OTHERS)

PLACE EROSION MATTING IN DITCH (TYP.)

CV PROPERTIES, INC., JOINED BY NEW ENGLAND CENTRAL RAILROAD, INC.

TEMPORARY AERIAL FIBER OPTIC SYSTEM (BY OTHERS - SEE NOTE 9 ON RAILROAD LAYOUT SHEET 2)

HAY BALES & SILT FENCE

SARGENT BROOK

N/F THOMAS, FREIDA

MATCH LINE - RR STA. 50+180 - REFER TO R.O.W. SHEET 25 OF 27

FEB 05 2003

NOTES:

1. RAILROAD PROPERTY LINE INFORMATION OBTAINED FROM PLAN ENTITLED "RIGHT-OF-WAY AND TRACK MAP, VERMONT VALLEY RAILROAD, STATION 3264+60 TO STATION 3317+40", DATED JUNE 30, 1914 (VALUATION PLAN 46, MAP 4)
2. BOND WIRE BETWEEN RAILS AT APPROX. STA. 50+051 PROP. RAILROAD MAINLINE RELOCATION ℄
3. FIBER OPTIC DATA OBTAINED FROM SIGNS ON SITE AND U S SPRINT PLANS DATED 09-02-86, NUMBERED NTWRK 127-880-064 AND 065, AND ENTITLED "FIBER OPTIC ROUTE RCD DWG, CABLE ROUTE DETAIL, SPRINGFIELD, MA - MONTREAL, CANADA."
4. SURVEY INFORMATION OBTAINED BY NHDOT, ELECTRONICALLY TRANSLATED FROM MOSS TO MICROSTATION, AND SUPPLEMENTED BY VTRANS ADDITIONAL SURVEY.
5. SEE VAOT STANDARD DRAWINGS T-1M AND T-2M FOR TEMPORARY EROSION CONTROL DETAILS.

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

GENERAL PLAN

SURVEYED BY	N/A	DATE	N/A
DRAWN BY	LB/LRD	DATE	
SQUAD LEADER	JHR		
DESIGN FILE NO.	95b270\structures\sb270bd3.dgn		
IPARM FILE	sb270r103.i	DATE PLOTTED	06-APR-2001

BRATTLEBORO
NH BRF 012-1(33)

R.O.W. SHEET 24 OF 27 SHEETS

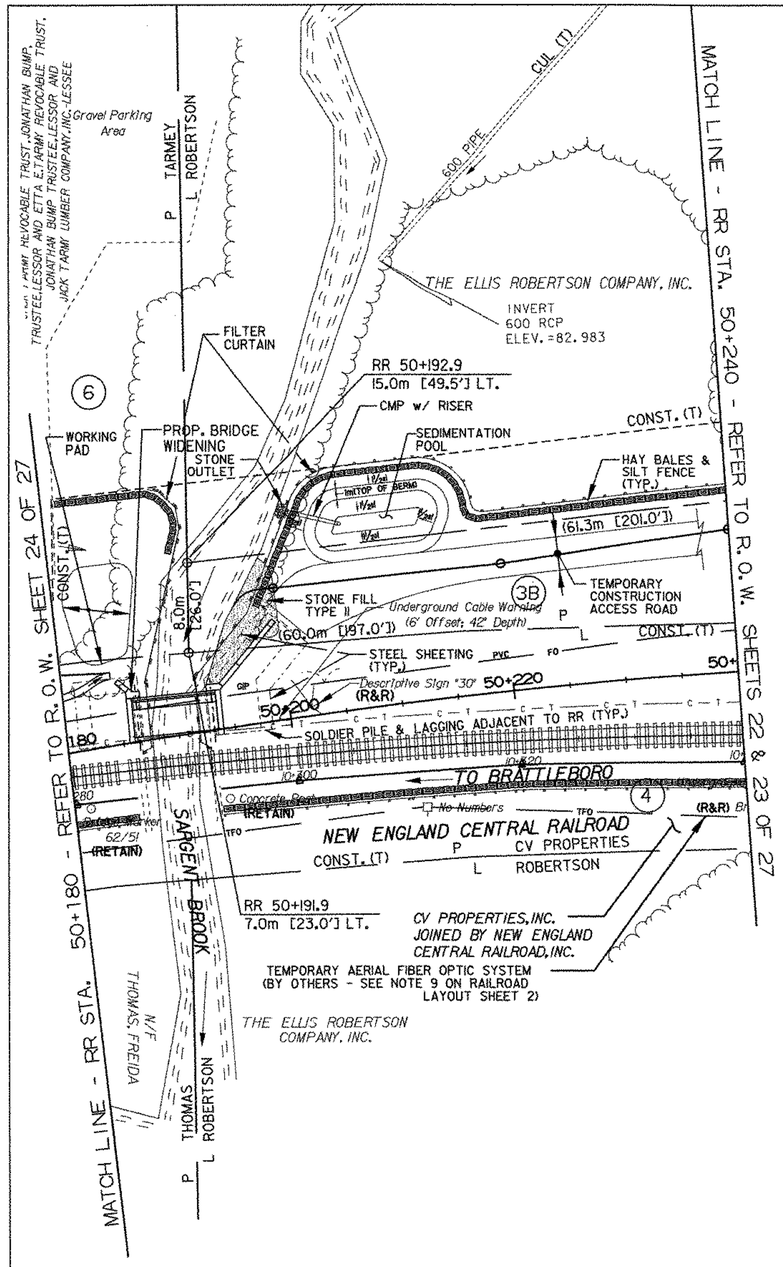
DATUM
VERTICAL
HORIZONTAL

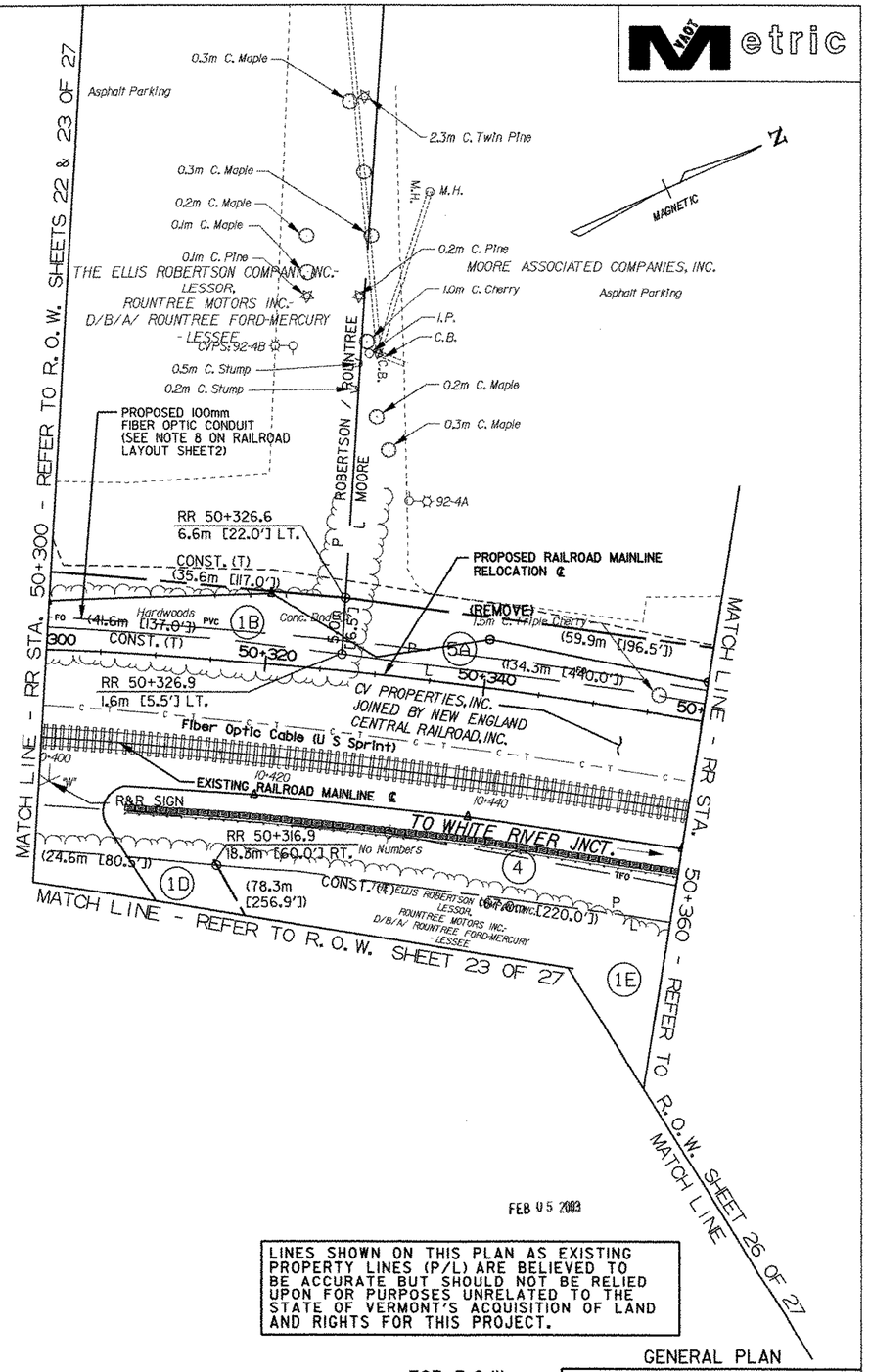
LAYOUT SHEET 3

0 10 20
SCALE 1:250

233 ROW

Metric





FEB 05 2003

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

GENERAL PLAN

SURVEYED BY	N/A	DATE	N/A
DRAWN BY	LB/LRD	DATE	
SQUAD LEADER	JHR		
DESIGN FILE NO.	95b270\structures\sb270bd3.dgn		
IPARM FILE	sb270ri04.i	DATE PLOTTED	06-APR-2001

BRATTLEBORO
NH BRF 012-1(33)

R.O.W. SHEET 25 OF 27 SHEETS

DATUM
VERTICAL
HORIZONTAL

LAYOUT SHEET 4

0 10 20
SCALE 1:250

734 RAIL

VAOT Metric

MOORE ASSOCIATED COMPANIES, INC.

White Storage Silo
Conc. Sidewalk
Hydrant
Chain Link Fence
Hydrant
Conc. Slab w/Elec.
Moore Co. Building 1 story brick
Asphalt Sidewalk
Moore Co. Building
Hydrant
Brick Chimney Tower
Meter Box
Asphalt Sidewalk
Asphalt Drive
Conc. Crb w/cr Str
Conc. Block Bldg.
Vent Pipe
Conc. Pad
Conc. Block Bldg.
Elevated Metal Platform To Support Generator
Liq. Pet. Gas Tank
Wooden Shed
Chain Link Fence
Power Station
MAGNETIC
MATCH LINE - RR STA. 50+540 - REFER TO R.O.W. SHEET 27 OF 27

Conc.
4.0m C. Evergreen
Group Of White Birches
Wooden Rail Fence
Conc.
2.0m C. Red Oak
2.0m C. Maple
Hydrant
Bark Mulch
10" Water Pipe (Approx. location)
Chain Link Fence (RETAIN)
Asphalt Drive
Net: 4
Visitor Parking
Bike Path
"Bicycles & Motocr. Only"
Hydrant
Gate
"Visitor Parking"
Underground Cable Warning (9' Offset, 30' Depth)
Cedar Hedge
2.5m C. Red Pine (SAVE)
Chain Link Fence (RETAIN)
RR 50+460.3
4.6m [15.5'] LT.
EXCEPT & RESERVE
RR 50+385.3
8.3m [27.0'] LT.
CONST. (T)
(59.9m [196.5'])
Net: 130,495
5A
2.2m C. Maple (SAVE)
(134.3m [440.8'])
76.0m [249.5']
No Numbers (RETAIN)
Old Railroad R-O-W Fence (REMOVE)
0.5m C. Red Oak (REMOVE)
Private Property No Trespassing (R&R)
2.0m C. Red Oak (REMOVE)
MOORE
L
CV PROPERTIES
CONST. (T)
PROPOSED RAILROAD MAINLINE RELOCATION ℄
No Numbers
1.2m C. Oak (REMOVE)
1.2m C. Pine
50+360
50+380
50+400
50+420
50+440
50+460
50+480
50+500
50+520
50+540
SHEET 25 OF 27 - REFER TO R.O.W. STA. 50+360 - MATCH LINE
West Rail
Fiber Optic Cable (U S Sprint)
East Rail
EXISTING RAILROAD MAINLINE ℄
NEW ENGLAND CENTRAL RAILROAD
TO BRATTLEBORO
TO WHITE RIVER JNCT.
10+460
10+480
10+500
10+520
10+540
10+560
10+580
10+600
10+620
Stone RR Bed
No Numbers
TFO
(REMAIN)
Steps
No Numbers
Pole Dislodged & Fallen (REPLACE)
P
L
CV PROPERTIES
MOORE
CONST. (T)
4
No Numbers
No Numbers
No Numbers
(67.0m [220.0'])
RR 50+386.3
18.0m [59.0'] RT.
CV PROPERTIES, INC., JOINED BY NEW ENGLAND CENTRAL RAILROAD, INC.
Hardwoods
THE ELLIS ROBERTSON COMPANY, INC.- LESSOR,
ROUNTREE MOTORS INC.- D/B/A/ ROUNTREE FORD-MERCURY - LESSEE
AN
No Numbers
AN
No Numbers
MOORE ASSOCIATED COMPANIES, INC.
1E
EXCEPT & RESERVE
10" Water Pipe (Approx. location)
MOORE ROBERTSON / ROUNTREE
(72.6m [238.0'])
MATCH LINE - REFER TO R.O.W. SHEET 23 OF 27
AN
494
CONNECTICUT RIVER
FEB 05 2003
FOR R.O.W. USE ONLY

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.

DATUM
VERTICAL
HORIZONTAL

0 10 20
SCALE 1:250

LAYOUT SHEET 5

GENERAL PLAN

SURVEYED BY	N/A	DATE	N/A
DRAWN BY	LB/LRD	DATE	
SQUAD LEADER	JHR		
DESIGN FILE NO.	95b270\structures\sb270bd3.dgn		
IPARM FILE	sb270r105.i	DATE PLOTTED	28-AUG-2001

BRATTLEBORO
NH BRF 012-1(33)

R.O.W. SHEET 26 OF 27 SHEETS

235 ROW

NHDOT Metric

END OF RAILROAD CONSTRUCTION

MEET EXISTING
STA. 50+698.603

REFER TO R.O.W. SHEET 26 OF 27

MATCH LINE - RR STA. 50+540

MOORE ASSOCIATED COMPANIES, INC.

CV PROPERTIES

MOORE

Asphalt Drive

Asphalt Sidewalk

Conc. Crb w/Cr Stn

Conc. rw w/metal fence

Loading area

Chain Link w/Barbed Wire Fence

Gate

Hydrant

Filler Cap

Building For Pumping Oil

Conc. Slab

M.H.

Suburban Propane Building
1 Story Cinder Block

Propane Tank

Gravel Parking Lot

Chain Link & Barbed Wire Fence

Center Line Of Railroad Spur

WELLINGTON ROAD
(Asphalt Pavement)

Storage Yard For Propane Tanks

Net 7
(4) RR Rails

High Volt. Tel. Poles

1.1m C. Pine
0.8m C. Pine
1.1m C. Pine
1.2m C. Pine
0.8m C. Pine
1.4m C. Pine
1.0m C. Pine
1.0m C. Pine
1.2m C. Pine
3.6m C. Pine

6' Chain Link & Barbed Wire Fence (RETAIN)

Old Railroad R-O-W Fence (RETAIN)

Private Property
No Trespassing (RETAIN)

PROPOSED 100mm FIBER OPTIC CONDUIT
(SEE NOTE 8 ON RAILROAD LAYOUT SHEET 2)

Small Trees & Brush

I.P.

CONST. (T)

Hardwoods

Underground Cable Warning
(6' Offset, 42" Depth)

PROPOSED HAND HOLE
(BY OTHERS)

Fiber Optic Cable (U S Sprint)

PROPOSED RAILROAD MAINLINE
RELOCATION ℄

EXISTING RAILROAD MAINLINE ℄

50+540 50+560 50+580 50+600 50+620 50+640 50+660 50+680

10+640 10+660 10+680 10+700 10+720 10+740 10+760 10+780 10+800 10+820

4 NEW ENGLAND CENTRAL RAILROAD

TO BRATTLEBORO

TO WHITE RIVER JNCT.

Concrete Standard
Flush With Ground

No Numbers

Telegraph Pole

Granite Post

C.C.

HAY BALES &
SILT FENCE

TEMPORARY AERIAL FIBER OPTIC SYSTEM
(BY OTHERS - SEE NOTE 9 ON RAILROAD
LAYOUT SHEET 2)

TEMPORARY UNDERGROUND
FIBER OPTIC (BY OTHERS)

CONNECTICUT RIVER

MAGNETIC

FEB 05 2003

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

DATUM
VERTICAL
HORIZONTAL

LAYOUT SHEET 6

0 10 20
SCALE 1:250

GENERAL PLAN

SURVEYED BY	N/A	DATE	N/A
DRAWN BY	LB, LRD	DATE	
SQUAD LEADER	JHR		
DESIGN FILE NO.	95b270\structures\sb270bd3.dgn		
IPARM FILE	sb270rl06.i	DATE PLOTTED	09-MAR-2001

BRATTLEBORO
NH BRF 012-1(33)

R.O.W. SHEET 27 OF 27 SHEETS

235 ROW