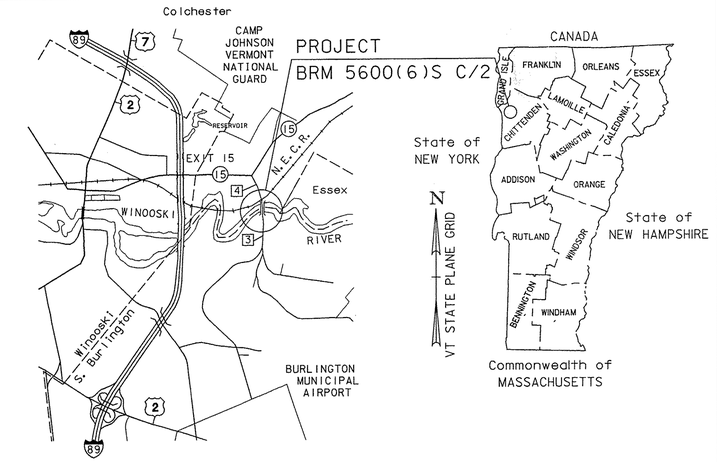
STATE OF VERMONT
AGENCY OF TRANSPORTATION

INDEX OF SHEETS

(SEE SHEET 2)



LOCATION MAP

0 1000 2000 3000

SCALE IN METERS

PROPOSED IMPROVEMENT
BRIDGE PROJECT

TOWN OF COLCHESTER AND CITY OF SOUTH BURLINGTON
COUNTY OF CHITTENDEN
TH 4/3 (URBAN MINOR ARTERIAL), BRIDGE NO. 6
LIME KILN BRIDGE

PROJECT LOCATION: BEGINNING AT A POINT ON TH 3, 0.635 km SOUTH OF VT 15/TH 4 INTERSECTION AND EXTENDING NORTHERLY 0.570 km.

PROJECT DESCRIPTION: CONSTRUCTION OF A NEW CONCRETE ARCH BRIDGE WITH RELATED ROADWAY WORK AND REMOVAL OF AN EXISTING CONCRETE ARCH BRIDGE.

LENGTH OF STRUCTURE: 90.96 m

LENGTH OF ROADWAY: 479.04 m

LENGTH OF PROJECT: 570.00 m

RECORD PLANS

CONTRACTOR: KUBRICKY CONSTURCTION CORP.- GLENS FALLS, NY

RESIDENT ENGINEER: JOE KNIPES

CONSTRUCTION BEGAN: SEPTEMBER 8, 2005

CONSTRUCTION COMPLETE: JULY 3, 2009

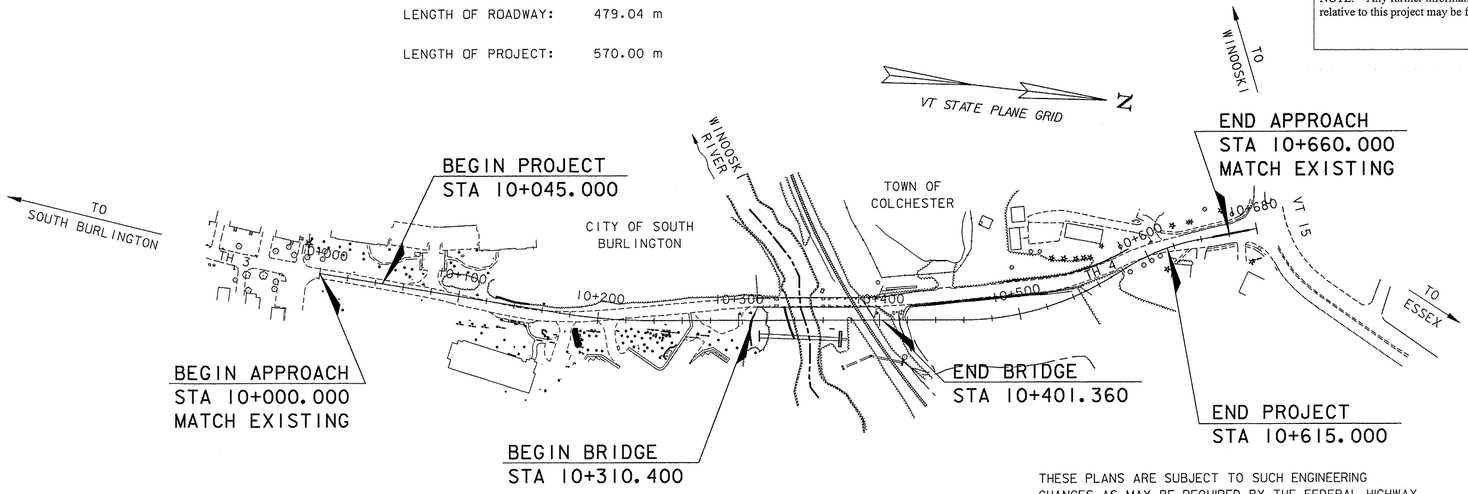
RECORD PLANS BY: JOE KNIPES & AMOS KEMPTON

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

BY _____ RESIDENT ENGINEER

DATE 11-16-11

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.



PLAN

SCALE: 1:2000

0 40 80 120

SCALE IN METERS

CONVENTIONAL SYMBOLS

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

SURVEYED BY : EIV TECHNICAL SERVICES, LLC
VERMONT AGENCY OF TRANSPORTATION

SURVEYED DATE : 6/97, 11/02
2/02, 11/02

DATUM

VERTICAL NAVD 88

HORIZONTAL NAD 83 (1992)

STATE OF VERMONT SALLY M. GUNN No. 7496 REGISTERED PROFESSIONAL ENGINEER

STATE OF VERMONT MARK A. COLGAN NO. 8015 Structural I LICENSED PROFESSIONAL ENGINEER

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT. CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 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.

VHB *Vanasse Hangen Brustlin, Inc.*

DIRECTOR OF PROGRAM DEVELOPMENT

APPROVED _____ DATE 5-16-05

PROJECT MANAGER : SHERWARD G. FARNSWORTH

PROJECT NAME : COLCHESTER-SOUTH BURLINGTON

PROJECT NUMBER : BRM 5600(6)S C/2

SHEET 1 OF 124 SHEETS

MOT Metric

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

INDEX OF SHEETS

1	TITLE SHEET
2	PRELIMINARY INFORMATION SHEET
3	QUANTITY SHEET (1 OF 6)
4	QUANTITY SHEET (2 OF 6)
5	QUANTITY SHEET (3 OF 6)
6	QUANTITY SHEET (4 OF 6)
6A	QUANTITY SHEET (5 OF 6)
6B	QUANTITY SHEET (6 OF 6)
6C	DRAINAGE DETAIL SHEET (1 OF 4)
6D	DRAINAGE DETAIL SHEET (2 OF 4)
6E	DRAINAGE DETAIL SHEET (3 OF 4)
6F	DRAINAGE DETAIL SHEET (4 OF 4)
7-14	RIGHT-OF-WAY SHEETS
15	ROADWAY TYPICAL SECTIONS - SOUTH
16	ROADWAY TYPICAL SECTIONS - NORTH
17	TYPICAL EARTHWORK DETAILS
18	TIE SHEET
19	PLAN (1 OF 5)
20	PLAN (2 OF 5)
21	PLAN (3 OF 5)
22	PLAN (4 OF 5)
23	PLAN (5 OF 5)
24	PARKING AREA PLAN
25	PATH & LOOKOUT PLAN & TYPICALS
26	LOOKOUT DETAILS (1 OF 2)
26A	LOOKOUT DETAILS (2 OF 2)
27	DRAINAGE & SEWER NOTES/DETAILS (1 OF 2)
28	DRAINAGE & SEWER NOTES/DETAILS (2 OF 2)
29	PROFILE & BANKING (1 OF 5)
30	PROFILE & BANKING (2 OF 5)
31	PROFILE & BANKING (3 OF 5)
32	PROFILE & BANKING (4 OF 5)
33	PROFILE & BANKING (5 OF 5)
34	TRAFFIC SIGN SUMMARY (1 OF 2)
34A	TRAFFIC SIGN SUMMARY (2 OF 2)
35	TRAFFIC CONTROL PLAN
36	BORING INFORMATION SHEET
37-45	BORING LOGS
46	BRIDGE PLAN & ELEVATION
46A	ABUTMENT & ARCH LAYOUT PLAN
47	EROSION CONTROL NARRATIVE
47A	EXISTING CONDITIONS PLAN (1 OF 3)
47B	EXISTING CONDITIONS PLAN (2 OF 3)
47C	EXISTING CONDITIONS PLAN (3 OF 3)
48	EROSION PREVENTION & SEDIMENT CONTROL (EPSC) PLAN (1 OF 3)
48A	EROSION PREVENTION & SEDIMENT CONTROL (EPSC) PLAN (2 OF 3)
48B	EROSION PREVENTION & SEDIMENT CONTROL (EPSC) PLAN (3 OF 3)
49	FINAL CONDITIONS SITE PLAN (1 OF 3)
49A	FINAL CONDITIONS SITE PLAN (2 OF 3)
49B	FINAL CONDITIONS SITE PLAN (3 OF 3)
50	EROSION CONTROL DETAILS
50A	PROPOSED CONTRACTORS CONSTRUCTION STEPS
50B	EPSC-1M
50C	EPSC-1M
50D	EPSC-3M
50E	EPSC-4M
50F	EPSC-5M
50G	EPSC-6M
51	GENERAL NOTES (1 OF 2)
52	GENERAL NOTES (2 OF 2)
53	MISCELLANEOUS DETAILS (1 OF 2)
54	MISCELLANEOUS DETAILS (2 OF 2)
55	BRIDGE TYPICAL SECTIONS
56	DECK OVERLAY DETAILS (1 OF 2)
57	DECK OVERLAY DETAILS (2 OF 2)
58	SPAN 1 FRAMING PLAN
59	SPANS 2-7 FRAMING PLAN
60	SPAN 8 FRAMING PLAN
61	BOX BEAM DETAILS
62	BOX BEAM & SOLID SLAB DETAILS
63	BEARING DETAILS
64	APPROACH SLABS
65	ABUTMENT NO. 1 FOOTING
66	ABUTMENT NO. 1
67	ABUTMENT NO. 1 WINGWALLS
68	ABUTMENT NO. 2 FOOTING
69	ABUTMENT NO. 2
70	ABUTMENT NO. 2 WINGWALLS
71	PIER BENTS 1 & 7 PLAN AND ELEVATION
72	PIER BENTS 2-6 PLAN AND ELEVATION
73	ARCH MASONRY
74	ARCH REINFORCING
75	ARCH FOUNDATION MASONRY
75A	EXISTING GROUND PROFILES
76	ARCH FOUNDATION REINFORCING
77	MSE WALL DETAILS (1 OF 2)
78	MSE WALL DETAILS (2 OF 2)
79	CONCRETE BRIDGE RAIL (1 OF 3)
80	CONCRETE BRIDGE RAIL (2 OF 3)
81	CONCRETE BRIDGE RAIL (3 OF 3)
82	REINFORCING STEEL SCHEDULE (1 OF 2)
83	REINFORCING STEEL SCHEDULE (2 OF 2)
84	VERMONT GAS SYSTEMS DETAILS
85	BRIDGE GAS LINE SUPPORTS (1 OF 4)
86	BRIDGE GAS LINE SUPPORTS (2 OF 4)
87	BRIDGE GAS LINE SUPPORTS (3 OF 4)
88	BRIDGE GAS LINE SUPPORTS (4 OF 4)
89	LIGHTING DETAILS (1 OF 2)
90	LIGHTING DETAILS (2 OF 2)
91-117	ROADWAY CROSS SECTIONS
118-124	EXISTING BRIDGE PLANS

STANDARDS

A-62M	6-13-97	E-100A*	1-2-04	E-153*	5-01-04
B-5M	1-3-00	E-101*	5-30-03	E-154*	5-01-04
B-11M	6-13-97	E-102*	6-30-03	E-155*	5-01-04
B-71M	2-1-04	E-102A*	5-1-04	E-160*	5-20-99
C-1M	1-3-00	E-106*	3-1-04	E-164*	5-20-99
C-2AM	1-3-00	E-107*	6-30-03	E-173*	8-9-95
C-3AM	9-1-04	E-107A*	8-8-95	E-175*	11-17-93
C-3BM	9-1-04	E-108*	8-18-95	E-180A*	8-9-95
D-2M	6-13-97	E-110*	8-8-95	E-180B*	8-9-95
D-3M	6-13-97	E-119*	3-01-04	E-181*	8-9-95
D-4M	6-13-97	E-121*	8-8-95	E-191*	2-1-99
D-6M	6-13-97	E-123*	3-16-04	E-192*	10-12-00
D-11M	6-13-97	E-124*	8-8-95	E-193*	8-18-95
D-13M	1-3-00	E-141*	9-20-95	F-2M	1-3-00
D-15M	6-13-97	E-142*	9-20-95	G-1M	1-3-00
D-16M	6-13-97	E-143*	6-15-04	G-1DM	1-3-00
D-17M	6-13-97	E-144*	3-29-99	G-4M	6-13-97
D-20*	3-3-03	E-146*	9-20-95	G-16M	6-13-97
D-22M	6-13-97	E-150*	5-01-04	G-18M	6-13-97
E-100*	1-2-04				

* INDICATES ENGLISH STANDARD USED.

LOAD FACTOR LOAD RATING (TONNES)

LOAD LEVELS (LOAD FACTOR)	TRUCK (TONNES)						
	M (a)	MS	3S2	6 AXLE	3A.STR.	4A.STR.	5A.SEMI
INVENTORY A1 = 1.3, A2 = 2.17	38	54					
POSTED A1 = 1.3, A2 = 1.55	52	75	87		58	60	75
OPERATING A1 = 1.3, A2 = 1.3		84	96	111	65	68	

RF = $\frac{C - A1\,DL}{A2\,(LL+I)}$ C = ϕMn FLEXURE, C = ϕVn SHEAR

WORKING STRESS LOAD RATING (TONNES)

STRESS LEVELS	TRUCK (TONNES)						
	M (a)	MS	3S2	6 AXLE	3A.STR.	4A.STR.	5A.SEMI
INVENTORY *	37	55					
POSTED **	39	59	67		55	56	63
OPERATING ***		60	68	81	56	57	

* INVENTORY STRESSES
- BOX BEAM TENSION 3.34 MPa
- BOX BEAM COMPRESSION 17.9 MPa
- OVERLAY COMPRESSION 11.0 MPa

** POSTED STRESSES
- BOX BEAM TENSION 3.72 MPa
- BOX BEAM COMPRESSION 22.0 MPa
- OVERLAY COMPRESSION 13.5 MPa

*** OPERATING STRESSES
- BOX BEAM TENSION 4.17 MPa
- BOX BEAM COMPRESSION 24.6 MPa
- OVERLAY COMPRESSION 15.2 MPa

(a) LANE LOADING CONTROLS

RATING NOTES:
1. ALL VALUES REPRESENT MULTIPLE LANE LOADING.
2. SPAN 8 BOX BEAMS CONTROL WORKING STRESS RATING FOR ALL TRUCKS.
3. SPANS 2-7 SOLID SLABS CONTROL LOAD FACTOR RATING FOR ALL TRUCKS EXCEPT 6 AXLE, FOR WHICH SPAN 8 BOX BEAMS CONTROL.

FINAL HYDRAULICS REPORT

VAOT Metric

HYDROLOGIC DATA *

DRAINAGE AREA=
CHARACTER OF TERRAIN=
CHARACTER & TYPE OF STREAM=
NATURE OF STREAMBED= ROCK GORGE

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

DATE OF FLOOD OF RECORD= NOVEMBER 1927 (Q500)
WATER SURFACE ELEV.= ESTIMATED DISCHARGE=
NATURAL STREAM VELOCITY @ Q
ICE CONDITIONS= DEBRIS=
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEVATION RAPIDLY?
IS ORDINARY RISE RAPID?
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? YES
IF YES, DESCRIBE. UPSTREAM: WINOOSKI GORGE;
DOWNSTREAM: DAM
WATERSHED STORAGE HEADWATERS UNIFORM THROUGHOUT WATERSHED
IMMEDIATELY ABOVE SITE

EXISTING STRUCTURE *

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

TYPE OF MATERIAL UNDER SUBSTRUCTURE: LEDGE

WATER SURFACE ELEV. @ Q2.33= VELOCITY=
Q10= 62.2 m "
Q25= "
Q50= 63.6 m "
Q100= 64.6 m "

LONG TERM STREAM BED CHANGES: UNKNOWN

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

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

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

PROPOSED STRUCTURE

STRUCTURE TYPE: REINFORCED CONCRETE ARCH

CLEAR SPAN (NORMAL TO STREAM): 35.7 m BETWEEN ARCH FOUNDATIONS
VERTICAL CLEARANCE ABOVE STREAMBED:
WATERWAY OF FULL OPENING:

WATER SURFACE ELEV. @ Q2.33= VELOCITY=
Q10= 62.2 m " =
Q25= " =
Q50= 63.6 m " =
Q100= 64.6 m " =

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

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: BOTTOM ARCH FOOTING 65.5 m
VERTICAL CLEARANCE @ Q

SCOUR: ARCH PIER FOUNDATIONS ON LEDGE
REQUIRED CHANNEL PROTECTION:

PERMIT INFORMATION

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

* ADDITIONAL COMMENTS

1. HYDRAULIC AND HYDROLOGIC INFORMATION IS FROM THE FEMA FLOOD INSURANCE STUDY FOR THE TOWN OF COLCHESTER, SEPTEMBER 1, 1981 AND THE CITY OF SOUTH BURLINGTON, SEPTEMBER 16, 1980. ADDITIONAL ANALYSES WERE NOT CONDUCTED AT THIS SITE.
2. ALL WATER SURFACE ELEVATIONS ARE BASED ON NGVD 1929 WHICH IS 0.13 m HIGHER THAN NAVD 88.

VAOT Metric

DESIGN CRITERIA:
1. DESIGN LIVE LOAD AASHTO MS 22.5
2. DESIGN SPAN 17.835 m, 6 @ 6.250 m, 31.095 m
3. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL 190 KPa ON LEDGE 950 KPa
4. ALLOWABLE LOAD FOR PILING 356 kN TYPE HP 310 x 110 ESTIMATED LENGTH 10.0 m
5. STRUCTURAL STEEL N/A
6. REINFORCING STEEL GRADE 420
7. CONCRETE CLASS AA f'c 30 MPa — CONCRETE HIGH PERFORMANCE CLASS AA f'c 30 MPa
   CLASS A f'c 30 MPa — HIGH PERFORMANCE CLASS A f'c 30 MPa
   CLASS B f'c 25 MPa — HIGH PERFORMANCE CLASS B f'c 25 MPa

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

TRAFFIC DATA - TH 4/3

2004 ADT = 7500 2024 ADT = 10,000 2004-2024 ESAL'S 1,554,000
2004 DHV = 940 2024 DHV = 1115 2004-2044 ESAL'S 3,645,000
2004 ADTT = 225 2024 ADTT = 300 DESIGN SPEED = 50 KM/H
2024 %D = 65
2024 %T = 3
POSTED SPEED = 40 km/hr

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

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

PRELIMINARY INFORMATION SHEET

Designed By M.A. COLGAN	Drawn By B.J. MASSE
Checked By S.M. GUNN Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139P1	Sheet 2 of 124

VHB NO. 50735 plot date: 5/16/2005

SUMMARY OF ESTIMATED QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNIT	SUPER-STRUCTURE	APPROACH SLAB #1	APPROACH SLAB #2	ABUTMENT 1	ABUTMENT 2	PIER BENTS	ARCHES	BRIDGE SUBTOTAL	LOOKOUT	COLCHESTER APPROACH	SOUTH BURLINGTON APPROACH	EROSION CONTROL	FULL E & C	UTILITIES	NON PARTICIPATING	TRAINING	TOTAL	REMARKS
201.10	CLEARING AND GRUBBING (INCL. INDIV. TREES & STUMPS)	LS										0.5	0.5						1	
203.15	COMMON EXCAVATION	CM										1770	3550						5320	
203.16	SOLID ROCK EXCAVATION	CM										100	900						1000	ESTIMATED
* 203.16	SOLID ROCK EXCAVATION (MOD. - CLOSE-IN BLASTING)	CM						143*		143*									143*	ESTIMATED
* 203.16	SOLID ROCK EXCAVATION (MOD. - MECHANICAL SPLITTING)	CM						47*		47*									47*	ESTIMATED
203.30	EARTH BORROW	CM										15,820							15,820	
203.31	SAND BORROW	CM										2200	1900						4100	
203.32	GRANULAR BORROW	CM										493	98						591	
203.40	FINE GRADING - SUBGRADE	SM										2650	3050						5700	
204.20	TRENCH EXCAVATION OF EARTH	CM										1020	1080	30					2130	ESTIMATED
204.21	TRENCH EXCAVATION OF ROCK	CM										180	470						650	ESTIMATED
204.25	STRUCTURE EXCAVATION	CM				153	1107	300		1560	380								1940	
204.30	GRANULAR BACKFILL FOR STRUCTURES	CM				148				148	310	10	20						488	
205.20	DRILLING AND BLASTING OF SOLID ROCK SUBGRADE	SM											500						500	ESTIMATED
210.10	COLD PLANING - BITUMINOUS PAVEMENT	SM										190	50						240	
301.26	SUBBASE OF CRUSHED GRAVEL (FINE GRADED)	CM											385						385	
301.35	SUBBASE OF DENSE GRADED CRUSHED STONE	CM					140					2250	2425	160					4975	
404.65	EMULSIFIED ASPHALT	KG										350	460						810	
406.25	BITUMINOUS CONCRETE PAVEMENT (PG 58-28)	T	195							195		1000	1380						2575	
501.25	CONCRETE, CLASS B	CM										2							2	
501.31	CONCRETE CLASS D (MOD. - FLOWABLE FILL)	CM										10							10	
501.32	CONCRETE, HIGH PERFORMANCE CLASS AA	CM	228							228									228	
501.33	CONCRETE, HIGH PERFORMANCE CLASS A	CM	80							80									80	
501.34	CONCRETE, HIGH PERFORMANCE CLASS B	CM		24	24	75	73		272	468	93								561	
501.34	CONCRETE, HIGH PERFORMANCE CLASS B (ARCH RIBS & PIERS)	CM						170	125	295									295	
504.10	FURNISHING EQUIPMENT FOR DRIVING PILING	LS				1				1									1	
505.16	STEEL PILING (HP 310 X 110)	M				225				225									225	
505.36	TEMPORARY STEEL SHEET PILING	SM				45	140			185									185	
505.45	DYNAMIC PILE LOADING TEST	EA				1				1									1	
507.15	REINFORCING STEEL	KG				3156	3820			6976	8113	6							15 095	
507.16	DRILLING AND GROUTING DOWELS	M									21								21	

N. A. B. I. = NOT A BID ITEM

* QUANTITIES FOR SOLID ROCK EXCAVATION AT PIER BENTS ARE DISTRIBUTED FOR ESTIMATING PURPOSED AS FOLLOWS:

75% TO SOLID ROCK EXCAVATION (MOD. - CLOSE-IN BLASTING)
25% TO SOLID ROCK EXCAVATION (MOD. - MECHANICAL SPLITTING)

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta. / Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
QUANTITY SHEET (1 OF 6)	
Designed By M. A. COLGAN	Drawn By B. J. MASSE
Checked By J. T. KLEIN Date 4/05	Bridge Design Supervisor S. M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139QNTI	Sheet 3 of 124

VHB NO. 50735 plot date: 4/27/2005

SUMMARY OF ESTIMATED QUANTITIES

Metric

ITEM NO.	ITEM DESCRIPTION	UNIT	SUPER-STRUCTURE	APPROACH SLAB #1	APPROACH SLAB #2	ABUTMENT 1	ABUTMENT 2	PIER BENTS	ARCHES	BRIDGE SUBTOTAL	LOOKOUT	COLCHESTER APPROACH	SOUTH BURLINGTON APPROACH	EROSION CONTROL	FULL E & C	UTILITIES	NON PARTICIPATING	TRAINING	TOTAL	REMARKS
507.16	DRILLING AND GROUTING DOWELS (MOD. I - ROCK DOWELING)	M						280		280									280	ESTIMATED
507.16	DRILLING AND GROUTING DOWELS (MOD. II - DIAMOND CORING)	M						36		36									36	
507.17	EPOXY COATED REINFORCING STEEL	KG	16 336	1665	1665	390	555	31 009	19 345	70 965									70 965	
507.19	MECHANICAL BAR CONNECTOR (NO. 29 BAR)	EA							363	363									363	SEE NOTE 1
510.21	PRESTRESSED CONCRETE BOX BEAMS (1220 mm X 1070 mm)	M	499							499									499	
510.22	PRESTRESSED CONCRETE VOIDED SLABS (MOD.-SOLID SLABS) (1220 mm X 300 mm)	M	393							393									393	
510.24	GROUTING SHEAR KEYS	M	803							803									803	
514.10	WATER REPELLENT (MOD.-SILANE)	L	276			24	98	220	205	823	11								834	
516.10	BRIDGE EXPANSION JOINT (ASPHALTIC PLUG TYPE)	M	41							41									41	
519.20	SHEET MEMBRANE WATERPROOFING (MOD.-SPRAY APPLIED)	SM	930							930									930	
	** BEGIN JOINT SEALER OPTIONS A **																			
524.11	JOINT SEALER, HOT POURED	M	8							8									8	
524.13	JOINT SEALER, COLD POURED	M	8							8									8	
	** END JOINT SEALER OPTIONS A **																			
525.50	CAST-IN-PLACE CONCRETE BRIDGE RAIL (TEXAS)	M	202							202	17								219	
526.30	MECHANICALLY STABILIZED EARTH (MSE) WALL (METALLIC REINFORCEMENT)	SM					321			321									321	
527.10	MAINTENANCE OF TRAFFIC FOR BRIDGE PROJECTS (MOD.)	LS										0.5	0.5						1	
529.10	REMOVAL OF BRIDGE PAVEMENT	SM								600									600	
529.15	REMOVAL OF STRUCTURE	EA								1									1	
531.10	BEARING DEVICE ASSEMBLY (ELASTOMERIC)	EA	120							120									120	
531.10	BEARING DEVICE ASSEMBLY (STEEL REINFORCED ELASTOMERIC)	EA	80							80									80	
	** BEGIN PIPE OPTIONS AA **																			
601.0210	375 mm CAAP 1.52 (68 mm X 12 mm)	M											15						15	
601.0410	375 mm PCCSP 1.63 (68 mm X 12 mm)	M											15						15	
601.0910	375 mm CPEP	M											15						15	
	** END PIPE OPTIONS AA **																			
	** BEGIN PIPE OPTIONS BB **																			
601.0215	450 mm CAAP 1.52 (68 mm X 12 mm)	M										73.3	322.5						395.8	
601.0415	450 mm PCCSP 1.63 (68 mm X 12 mm)	M										73.3	322.5						395.8	
601.0817	450 mm RCP CLASS V	M										73.3	322.5						395.8	
601.2615	450 mm CPEP (SL)	M										73.3	322.5						395.8	
	** END PIPE OPTIONS BB **																			
	** BEGIN PIPE OPTIONS CC **																			
601.0817	450 mm RCP CLASS V (MOD. - ENCASED)	M											15.6						15.6	
601.2615	450 mm CPEP (SL) (MOD. - HEAVY DUTY)	M											15.6						15.6	
	** END PIPE OPTIONS CC **																			
	** BEGIN PIPE OPTIONS DD **																			
601.0215	450 mm CAAP 1.52 (68 mm X 12 mm)	M										5.3	224.7						230	
601.0415	450 mm PCCSP 1.63 (68 mm X 12 mm)	M										5.3	224.7						230	
601.0915	450 mm CPEP	M										5.3	224.7						230	
	** END PIPE OPTIONS DD **																			

N. A. B. I. = NOT A BID ITEM

NOTE:

1. THREE ADDITIONAL MECHANICAL BAR CONNECTORS (ITEM 507.19) HAVE BEEN ADDED FOR TESTING PER SECTION 713.02 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

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

QUANTITY SHEET (2 OF 6)

Designed By M. A. COLGAN	Drawn By B. J. MASSE
Checked By J. T. KLEIN Date 4/05	Bridge Design Supervisor S. M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139QNT2	Sheet 4 of 124

VHB NO. 50735 plot date: 4/28/2005

Metric

SUMMARY OF ESTIMATED QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNIT	SUPER-STRUCTURE	APPROACH SLAB #1	APPROACH SLAB #2	ABUTMENT 1	ABUTMENT 2	PIER BENTS	ARCHES	BRIDGE SUBTOTAL	LOOKOUT	COLCHESTER APPROACH	SOUTH BURLINGTON APPROACH	EROSION CONTROL	FULL E & C	UTILITIES	NON PARTICIPATING	TRAINING	TOTAL	REMARKS
	** BEGIN PIPE OPTIONS EE **																			
601.0225	600 mm CAAP 1.52 (68 mm X 12 mm)	M											16.1						16.1	
601.0425	600 mm PCCSP 1.63 (68 mm X 12 mm)	M											16.1						16.1	
601.0827	600 mm RCP CLASS V	M											16.1						16.1	
601.2620	600 mm CPEP (SL)	M											16.1						16.1	
	** END PIPE OPTIONS EE **																			
601.0825	600 mm RCP CLASS III (MOD. - ELLIPTICAL)	M											9						9	
601.0827	600 mm RCP CLASS V	M											25.6						25.6	
	** BEGIN PIPE END SECTION OPTIONS AAA **																			
601.6010	375 mm CSPES 1.63 (68 mm X 12 mm)	EA											2						2	
601.6210	375 mm CAAPES 1.52 (68 mm X 12 mm)	EA											2						2	
601.7010	375 mm CPEPES	EA											2						2	
	** END PIPE END SECTION OPTIONS AAA **																			
	** BEGIN PIPE END SECTION OPTIONS BBB **																			
601.6015	450 mm CSPES 1.63 (68 mm X 12 mm)	EA										1	1						2	
601.6215	450 mm CAAPES 1.52 (68 mm X 12 mm)	EA										1	1						2	
601.7015	450 mm CPEPES	EA										1	1						2	
	** END PIPE END SECTION OPTIONS BBB **																			
604.11	CONCRETE MANHOLE W/ CAST IRON COVER (MOD. - STC1800)	EA										1							1	
604.11	CONCRETE MANHOLE W/ CAST IRON COVER (MOD. - STC2400)	EA											1						1	
604.20	PRECAST REINFORCED CONCRETE CATCH BASIN W/ CAST IRON GRATE (MOD.)	EA										3	4						7	
604.21	PRECAST REINFORCED CONCRETE MANHOLE W/ CAST IRON COVER (MOD.)	EA										1	1						2	
604.22	SANITARY SEWER MANHOLE	EA										5							5	
604.30	PRECAST REINFORCED CONCRETE DROP INLET W/ CAST IRON GRATE (MOD.)	EA										7	12						19	
604.42	CHANGING ELEVATION OF SEWER MANHOLE	EA											1						1	
604.43	REHABILITATION OF SEWER MANHOLES	EA										1							1	STA 10+608 LT
605.10	150 mm UNDERDRAIN (MOD.)	M										104	459						563	
605.95	UNDERDRAIN FLUSHING BASINS	EA										2	10						12	
608.25	ALL PURPOSE EXCAVATOR RENTAL, TYPE I	HR												4					4	
609.10	DUST CONTROL WITH WATER	CM										470	520						990	
609.15	DUST AND ICE CONTROL WITH CALCIUM CHLORIDE	T										1	1						2	
613.10	STONE FILL, TYPE I	CM										95							95	
613.10	STONE FILL, TYPE I (MOD. I - CHECK DAMS)	CM												40					40	
613.10	STONE FILL, TYPE I (MOD. II - TRACKING PAD)	CM												50					50	
613.10	STONE FILL, TYPE I (MOD. III - INLET PROTECTION)	CM												10					10	
613.10	STONE FILL, TYPE I (MOD. IV - CRUSHED STONE BERM)	CM												25					25	
613.11	STONE FILL, TYPE II	CM				200	175			375		220							595	

N.A.B.I. = NOT A BID ITEM

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

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

QUANTITY SHEET (3 OF 6)

Designed By M.A. COLGAN	Drawn By B.J. MASSE
Checked By J.T. KLEIN Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD1390NT3	Sheet 5 of 124

VHB NO. 50735 plot date: 4/27/2005

Metric

SUMMARY OF ESTIMATED QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNIT	SUPER-STRUCTURE	APPROACH SLAB #1	APPROACH SLAB #2	ABUTMENT 1	ABUTMENT 2	PIER BENTS	ARCHES	BRIDGE SUBTOTAL	LOOKOUT	COLCHESTER APPROACH	SOUTH BURLINGTON APPROACH	EROSION CONTROL	FULL E & C	UTILITIES	NON PARTICIPATING	TRAINING	TOTAL	REMARKS
616.28	CAST-IN-PLACE CONCRETE CURB, TYPE B	M										480	640						1120	
616.40	REMOVING AND RESETTING CURB	M										10							10	
616.41	REMOVAL OF EXISTING CURB	M											40						40	
618.10	PORTLAND CEMENT CONCRETE SIDEWALK, 125 mm	SM										390	430						820	
618.30	DETECTABLE WARNING SURFACE	SM										2	9						11	
619.17	YIELDING MARKER POSTS	EA										2	5						7	
620.11	CHAIN-LINK FENCE, 1.2 m (MOD.-BLACK VINYL)	M										17	18						35	
620.20	BRACING ASSEMBLY FOR CHAIN-LINK FENCE, 1.2 m (MOD.-BLACK VINYL)	EA										4	6						10	
620.55	REMOVAL OF EXISTING FENCE	M										160	6						166	
620.70	SNOW FENCE (MOD. - PDF)	M										690	775						1465	
621.20	STEEL BEAM GUARDRAIL (GALVANIZED)	M										185	50						235	
621.60	ANCHOR FOR STEEL BEAM RAIL	EA										2	2						4	
621.70	GUARDRAIL APPROACH SECTION, TYPE I	EA										2	2						4	
621.80	REMOVAL AND DISPOSAL OF GUARD RAIL	M										200	10						210	
621.90	TEMPORARY TRAFFIC BARRIER	M										230	150						380	
622.10	INSULATION BOARD	CM											1						1	ESTIMATED
625.10	SLEEVES FOR UTILITIES (MOD.)	M										15							15	
628.35	PVC SEWER PIPE (MOD. - SDR26 - 200 mm)	M										125							125	
628.35	PVC SEWER PIPE (MOD. - SDR35 - 150 mm)	M										20							20	
628.35	PVC SEWER PIPE (MOD. - SDR35 - 200 mm)	M										75							75	
629.60	RELOCATE WATERLINE ON BRIDGE (MOD.)	LS															1		1	
630.10	UNIFORMED TRAFFIC OFFICERS	HR										100	100						200	
630.15	FLAGGERS	HR										1000	1000						2000	
630.15	FLAGGERS (MOD. - RAILROAD)	HR								2000									2000	
631.10	FIELD OFFICE - ENGINEERS (MOD.)	LS													1				1	
631.16	TESTING EQUIPMENT - CONCRETE	LS													1				1	
631.17	TESTING EQUIPMENT - BITUMINOUS	LS													1				1	
631.25	FIELD OFFICE - TELEPHONE (N.A.B.I.)	LU													1				1	
634.10	EMPLOYEE TRAINEESHIP	HR																2080	2080	
635.11	MOBILIZATION / DEMOBILIZATION	LS								1									1	

N.A.B.I. = NOT A BID ITEM

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

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

QUANTITY SHEET (4 OF 6)

Designed By M.A. COLGAN	Drawn By B.J. MASSE
Checked By Date J.T. KLEIN 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139QNT4	Sheet 6 of 124

VHB NO. 50735 plot date: 4/27/2005

Metric

SUMMARY OF ESTIMATED QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNIT	SUPER-STRUCTURE	APPROACH SLAB #1	APPROACH SLAB #2	ABUTMENT 1	ABUTMENT 2	PIER BENTS	ARCHES	BRIDGE SUBTOTAL	LOOKOUT	COLCHESTER APPROACH	SOUTH BURLINGTON APPROACH	EROSION CONTROL	FULL E & C	UTILITIES	NON PARTICIPATING	TRAINING	TOTAL	REMARKS
641.10	TRAFFIC CONTROL	LS										0.5	0.5						1	
641.12	PUBLIC RELATIONS OFFICER	LS										0.5	0.5						1	
641.15	PORTABLE CHANGEABLE MESSAGE SIGN	EA										1	1						2	
646.40	DURABLE 100 mm WHITE LINE	M										640	810						1450	
646.41	DURABLE 100 mm YELLOW LINE	M										670	700						1370	
646.42	DURABLE 200 mm WHITE LINE	M											100						100	
646.43	DURABLE 200 mm YELLOW LINE	M										10							10	
646.50	DURABLE LETTER OR SYMBOL	EA										2	1						3	
646.60	TEMPORARY 100 mm WHITE LINE	M										570	630						1200	
646.61	TEMPORARY 100 mm YELLOW LINE	M										570	630						1200	
646.76	LINE STRIPING TARGETS	EA										95	95						190	
646.85	REMOVAL OF EXISTING PAVEMENT MARKINGS	SM										55	65						120	
649.31	GEOTEXTILE UNDER STONE FILL	SM				325	288			613		650							1263	
649.51	GEOTEXTILE FOR SILT FENCE	SM												1110					1110	
649.61	GEOTEXTILE FOR FILTER CURTAINS	SM												25					25	ESTIMATED
651.15	SEED	KG										40	30	5					75	
651.18	FERTILIZER	KG										250	200						450	
651.20	AGRICULTURAL LIMESTONE	T										2	2						4	
651.25	HAY MULCH	T										2	2						4	
651.26	HAY BALES FOR EROSION CONTROL	EA												50					50	
651.35	TOPSOIL	CM										440	395						835	
652.10	EROSION PREVENTION & SEDIMENT CONTROL PLAN	LS												1					1	
652.20	MONITORING EROSION PREVENTION & SEDIMENT CONTROL PLAN	HR												250					250	ESTIMATED
652.30	MAINTENANCE OF EROSION PREVENTION & SEDIMENT CONTROL PLAN (N.A.B.I.)	LU												1					1	
654.10	EROSION MATTING	SM												5030					5030	
656.50	TRANSPLANTING SHRUBS	EA											17						17	
675.20	TRAFFIC SIGNS, TYPE A	SM										2.43	4.85						7.28	
675.301	FLANGED CHANNEL SIGN POST	M										30	75						105	
675.40	FOUNDATION FOR W-SHAPE STEEL POSTS, 450 mm DIAMETER (MOD.)	EA											2						2	
690.50	**PRICE ADJUSTMENT, FUEL (N.A.B.I.)**	LU	1							1									1	

N.A.B.I. = NOT A BID ITEM

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

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

QUANTITY SHEET (5 OF 6)

Designed By M.A. COLGAN	Drawn By B.J. MASSE
Checked By Date J.T. KLEIN 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139QNT5	Sheet 6A of 124

VHB NO. 50735 plot date: 5/17/2005

Metric

SUMMARY OF ESTIMATED QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNIT	SUPER-STRUCTURE	APPROACH SLAB #1	APPROACH SLAB #2	ABUTMENT 1	ABUTMENT 2	PIER BENTS	ARCHES	BRIDGE SUBTOTAL	LOOKOUT	COLCHESTER APPROACH	SOUTH BURLINGTON APPROACH	EROSION CONTROL	FULL E & C	UTILITIES	NON PARTICIPATING	TRAINING	TOTAL	REMARKS
675.50	REMOVING SIGNS	EA										4	4						8	
675.60	ERECTING SALVAGED SIGNS	EA										2							2	
678.23	WIRED CONDUIT (50 mm)	M								200		275	285						760	ESTIMATED
678.25	PULL BOX - STANDARD	EA										1	1						2	ESTIMATED
678.26	JUNCTION BOX	EA										16	17						33	ESTIMATED
678.30	ELECTRICAL CONDUIT SLEEVE (50 mm X 13 m)	M										13	13						26	ESTIMATED
679.21	LIGHT POLE BASE (MOD. - DECORATIVE)	EA								16		13	14						43	
679.25	REMOVING AND RESETTING LIGHT POLE	EA											2						2	
679.45	LIGHT POLE (MOD.-DECORATIVE, ROADWAY)	EA										13	14						27	
679.45	LIGHT POLE (MOD.-DECORATIVE, BRIDGE)	EA								16									16	
679.50	LUMINAIRE (MOD.-DECORATIVE FIXTURE)	EA								16		13	14						43	
680.40	RELOCATE INFORMATION PLAZA, TYPE A (MOD.)	EA											1						1	

EARTHWORK SUMMARY

DESCRIPTION	UNIT	SOUTH BURLINGTON	COLCHESTER
FILL REQUIRED:			
PLANIMETERED FILL	CM	397	15 385
LESS FACTORED SOLID ROCK EXCAVATION (x 1.3)	CM	0	0
NET PLANIMETERED FILL	CM	397	15 385
FILL FACTOR (0.15)	CM	60	2308
FACTORED FILL	CM	457	17 693
MATERIAL AVAILABLE FOR FILL:			
COMMON EXCAVATION (x 0.9)	CM	5320	5320
TRENCH EXCAVATION (x 0.9)	CM	971	280
STRUCTURE EXCAVATION (x 0.9)	CM	0	0
TOTAL MATERIAL AVAILABLE FOR FILL	CM	4166	1873
LESS FACTORED FILL	CM	457	17 693
BORROW	CM	0	15 820
EXCESS FILL	CM	3709	0

TEMPORARY EROSION CONTROL
(INCLUDED UNDER EROSION CONTROL)

ITEM NO.	ITEM DESCRIPTION	UNIT	TOTAL
204.20	TRENCH EXCAVATION OF EARTH	CM	30
301.35	SUBBASE OF DENSE GRADED CRUSHED STONE	CM	160
608.25	ALL PURPOSE EXCAVATOR RENTAL, TYPE I	HR	4
613.10	STONE FILL, TYPE I (MOD. I - CHECK DAMS)	CM	40
613.10	STONE FILL, TYPE I (MOD. II - TRACKING PAD)	CM	50
613.10	STONE FILL, TYPE I (MOD. III - INLET PROTECTION)	CM	10
613.10	STONE FILL, TYPE I (MOD. IV - CRUSHED STONE BERM)	CM	25
649.51	GEOTEXTILE FOR SILT FENCE	SM	1110
649.61	GEOTEXTILE FOR FILTER CURTAINS	SM	25
651.15	SEED	KG	5
651.26	HAY BALES FOR EROSION CONTROL	EA	50
654.10	EROSION MATTING	SM	5030

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

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

QUANTITY SHEET (6 OF 6)

Designed By M.A. COLGAN	Drawn By B.J. MASSE
Checked By J.T. KLEIN Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139QNT6	Sheet 6B of 124

VHB NO. 50735 plot date: 4/27/2005

VAOT Metric

STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE DETAIL SHEET

DRAINAGE STRUCTURES

STATION	STATION	POS.	DRAINAGE NOTE	INLET/OUTLET TYPE		DITCH		ELLIPTICAL PIPE			ROUND PIPE		ALLOWABLE OPTIONS						MH	ES	CB	PRCCDI	DI	CONC CL B	REINF STEEL	GRATE	CHAN ELEV	CRM	TRENCH EXCAVATION		COMM EXC	UNC CHAN EXC	STRUCT EXCAV	GRAN BKFILL STRUCT	GRAN BORR	EROS MATT	STONE FILL		MARKER POSTS		REMARKS
				INLET	OUTLET	IN	OUT	SPAN mm	RISE mm	L m	D mm	L m	PCCSP mm	CAAP mm	RCP CL	CSP mm	CPEP SL	CPEP	EA	EA	EA		EA	m^3	kg	TYPE	EA	m^3	EARTH m^3	ROCK m^3	m^3	m^3	m^3	m^3	m^3	m^3	m^2	m^3	TYPE	LT ea	RT ea	
SOUTH BURLINGTON TH 3																																								
10+055	10+100	LT	1								150	45.9	(UNDERDRAIN)																41.3												WITH FLUSHING BASIN
10+055	10+100	RT	2								150	45.3	(UNDERDRAIN)																20.4												WITH FLUSHING BASIN
069 10+~~072~~	10+087	LT	3	ES	ES	X	X				375	18.22 ~~15.0~~	1.63	1.52				X		2									15.09 ~~7.6~~										2		DRIVE CULVERT (SEE DRAINAGE NOTE)
10+100	10+100	LT	4	ES	DI	X					450	4.9 ~~5.3~~	1.63	1.52				X		1									8.12 ~~7.7~~										1		(SEE DRAINAGE NOTE)
10+100	10+100	RT-LT	5	DI	DI			575	350	8.56 ~~9.0~~					111							1			E			6.165 ~~8.0~~	4.52			6.27								
10+100	10+168	LT	6	DI	DI						450	67.3 ~~67.4~~	1.63	1.52	V		SL						1			E			12 ~~12.4~~	72.88				72.11							
10+102	10+147	RT	7								150	46.3	(UNDERDRAIN)																24.3												WITH FLUSHING BASIN
10+102	10+168	LT	8								150	66.9	(UNDERDRAIN)																35.6												WITH FLUSHING BASIN
10+168	10+168	RT-LT	9	DI	DI						450	8.05 ~~9.0~~	1.63	1.52	V		SL						1			E			10.34 ~~12.9~~												
10+147	10+168	RT	10	DI	DI						450	20.2 ~~20.4~~	1.63	1.52	V		SL						1			E			16.81 ~~22.3~~												
10+178	10+220	LT	11								150	41.3	(UNDERDRAIN)																18.9												WITH FLUSHING BASIN
10+170	10+220	RT	12								150	51.1	(UNDERDRAIN)																27												WITH FLUSHING BASIN
10+145	10+184	RT	12A								375	40																													ABANDON PIPE, ~~FILL W/ FLOWABLE FILL~~
10+186	10+233	RT	12B								375	~~48~~ 9.0					SL						1																		~~ABANDON PIPE, FILL W/ FLOWABLE FILL~~ PIPE MODIFIED
10+168	10+196	LT	13	DI	CB						450	27.2 ~~27.1~~	1.63	1.52	V		SL						1			E			51.03 ~~61.5~~	5.84											
10+196	10+211	LT	14	CB	CB	X					450	13.5 ~~13.4~~	1.63	1.52	V		SL				+		1			A			44.7 ~~38.3~~	0 ~~8~~									1		
10+211	10+272	LT	15	CB	MH						450	59.0	1.63	1.52	V		SL				1					D			137.2	40											
10+193	10+220	LT	16	DI	DI						450	25.3 ~~25.7~~	1.63	1.52	V		SL						1			E			41.72 ~~32.9~~												
SHEET SUBTOTAL											150	296.8	(UNDERDRAIN)																619.9	48									4		6 FLUSHING BASINS
											375	15.0	1.63	1.52				X		2																			
											450	222.0	1.63	1.52	V		SL				2		5																	
								575	350	9.0					111								1																	
											450	5.3	1.63	1.52				X		1																					

NOTE:

1. ALL PRECAST REINFORCED CONCRETE DROP INLETS, CATCH BASINS, AND MANHOLES SHALL HAVE AN INSIDE DIAMETER OF 1.5 m UNLESS OTHERWISE NOTED.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta. / Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
DRAINAGE DETAIL SHEET (1 OF 4)	
Designed By S.W. BEKIER	Drawn By B.J. MASSE
Checked By S.M. HODGDON Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139DR1	Sheet 6C of 124

VHB NO. 50735 plot date: 4/25/2005

STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE DETAIL SHEET

DRAINAGE STRUCTURES

STATION	STATION	POS.	DRAINAGE NOTE	INLET/OUTLET TYPE		DITCH		ELLIPTICAL PIPE			ROUND PIPE		ALLOWABLE OPTIONS						MH	ES	CB	PRCCDI	DI	CONC CL B	REINF STEEL	GRATE	CHAN ELEV	CRM	TRENCH EXCAVATION		COMM EXC	UNC CHAN EXC	STRUCT EXCAV	GRAN BKFILL STRUCT	GRAN BORR	EROS MATT	STONE FILL		MARKER POSTS		REMARKS
				INLET	OUTLET	IN	OUT	SPAN mm	RISE mm	L m	D mm	L m	PCCSP mm	CAAP mm	RCP CL	CSP mm	CPEP SL	CPEP	EA	EA	EA		EA	m^3	kg	TYPE	EA	m^3	EARTH m^3	ROCK m^3	m^3	m^3	m^3	m^3	m^3	m^3	m^2	m^3	TYPE	LT ea	RT ea	
SOUTH BURLINGTON TH 3 CONTINUED																																								
10+270	10+220	LT	17								150	53.6	(UNDERDRAIN)																24.1												WITH FLUSHING BASIN
												8.1																13.6												
10+220	10+220	RT-LT	18	DI	DI						450	~~9.0~~	1.63	1.52	V		SL					I			D			~~15~~												
10+270	10+220	RT	19								150	50.2	(UNDERDRAIN)																27.1												WITH FLUSHING BASIN
												35.35																79.42	29.33				26.62							
10+220	10+256.2	LT	20	DI	CB						450	~~35.1~~	1.63	1.52	V		SL					I			D			~~83~~	~~23~~											
10+301	10+272	RT	21								150	29.3	(UNDERDRAIN)																22.3												WITH FLUSHING BASIN
												29.7																24.15												
10+303	10+272	RT	22	DI	CB						450	~~30.1~~	1.63	1.52	V		SL					I			E			~~40~~												
												8.3																4.13												
10+303	10+303	LT-RT	23	DI	DI						450	~~9.0~~	1.63	1.52	V		SL					I			E			~~8.6~~												
												8.46																16.25												
10+272	10+272	RT-LT	24	CB	DI						450	~~8.9~~	1.63	1.52	V		SL				I				E			~~19.2~~												
10+301	10+272	LT	25								150	29.0	(UNDERDRAIN)																26.1												WITH FLUSHING BASIN
												15.1																												
10+256.2	10+272	LT	26	CB	MH						450	~~15.6~~			V		SL				I				D			43.1	77											CONC. ENCASED RCP OR "HEAVY DUTY" CPEP
10+272	10+272	LT	27	DI	MH						450	8.4	1.63	1.52	V		SL					I			E			26.6												
												2.87																0	22.32											
10+272	10+276	LT	28	MH	*						600	~~2.8~~	1.63	1.52	V		SL		I									~~16~~	~~38~~											
10+276	10+296	LT	29	*	DI						600	13.3	1.63	1.52	V		SL											49.4	139											*PC-STORMCEPTOR UNIT (STC2400) OR EQUAL
10+296	10+322	LT	30	DI		X					600	25.6			V							I			A			58.6	145									I		(SEE DRAINAGE NOTE FOR OUTLET TREATMENT)
SHEET SUBTOTAL											150	162.1	(UNDERDRAIN)																459.1	422									I		4 FLUSHING BASINS
											450	100.5	1.63	1.52	V		SL				I		5																
											450	15.6			V		SL				I																			CONC. ENCASED RCP OR "HEAVY DUTY" CPEP
											600	16.1	1.63	1.52	V		SL		I																					
											600	25.6			V							I																			
SOUTH BURLINGTON TH 3 TOTAL											150	458.9	(UNDERDRAIN)																1079	470									5		10 FLUSHING BASINS
											375	15.0	1.63	1.52				X		2																				
											450	322.5	1.63	1.52	V		SL				3		10																		
											450	5.3	1.63	1.52				X		1																				
								575	350	9.0					III							I																			
											450	15.6			V		SL				I																			1 PC-STORMCEPTOR UNIT (STC2400) OR EQUAL
											600	16.1	1.63	1.52	V		SL		I																					
											600	25.6			V							I																			

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

NOTE:

1. ALL PRECAST REINFORCED CONCRETE DROP INLETS, CATCH BASINS, AND MANHOLES SHALL HAVE AN INSIDE DIAMETER OF 1.5 m UNLESS OTHERWISE NOTED.

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

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

DRAINAGE DETAIL SHEET (2 OF 4)

Designed By S.W. BEKIER	Drawn By B.J. MASSE
Checked By S.M. HODGDON Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139DR2	Sheet 6D of 124

VHB NO. 50735 plot date: 4/25/2005

VAOT Metric

STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE DETAIL SHEET

DRAINAGE STRUCTURES

STATION	STATION	POS.	DRAINAGE NOTE	INLET/OUTLET TYPE		DITCH		ELLIPTICAL PIPE			ROUND PIPE		ALLOWABLE OPTIONS						MH	ES	CB	PRCCDI	DI	CONC CL B	REINF STEEL	GRATE	CHAN ELEV	CRM	TRENCH EXCAVATION		COMM EXC	UNC CHAN EXC	STRUCT EXCAV	GRAN BKFILL STRUCT	GRAN BORR	EROS MATT	STONE FILL		MARKER POSTS		REMARKS
				INLET	OUTLET	IN	OUT	SPAN mm	RISE mm	L m	D mm	L m	PCCSP mm	CAAP mm	RCP CL	CSP mm	CPEP SL	CPEP	EA	EA	EA	I	EA	m^3	kg	TYPE	EA	m^3	EARTH m^3	ROCK m^3	m^3	m^3	m^3	m^3	m^3	m^2	m^3	TYPE	LT ea	RT ea	
COLCHESTER TH 3												26.58											1.9	5.59															
10+423	10+423	LT-RT	31	HW	MH	X					450	~~26.4~~	1.63	1.52				X					~~1.3~~	~~6~~				24.9									1		RC HEADWALL AT INLET (SEE DRAINAGE NOTE)
																																		62.43					
10+540	10+416	LT	32																															~~75~~	1			STONE FILL LINED DITCH
																																		18.61					
10+590	10+540	LT	33																															~~20~~	1			STONE FILL LINED DITCH
10+423	10+420	RT	34	MH	ES		X				450	13.9	1.63	1.52				X	1	1								35								76	11		1	(SEE DRAINAGE NOTE)
10+425	10+423	RT	35	*	MH						450	5.2	1.63	1.52				X										1.4												*PC-STORMCEPTOR UNIT (STC1800) OR EQUAL
												1.7																											
10+428	10+425	RT	36	CB	*						450	~~2.1~~	1.63	1.52				X			1					E														
												8.2																											
10+428	10+428	LT-RT	37	CB	CB						450	~~8.4~~	1.63	1.52				X			1					E														
												17.6																											
10+409	10+428	LT	38	DI	CB						450	~~18.1~~	1.63	1.52				X				1				E														
												8.3																											
10+409	10+409	RT-LT	39	DI	DI						450	~~9.0~~	1.63	1.52				X				1				E														
												69.9																											
10+500	10+428	LT	40	CB	CB						450	~~69.6~~	1.63	1.52				X			1					E														
												8.4																											
10+500	10+500	RT-LT	41	DI	CB						450	~~8.7~~	1.63	1.52				X				1				E														
10+474	10+474	LT	42																										0.90										REMOVE EXISTING CB. REMOVE EXISTING PIPE (305mm x 2.4m)
												62.26																											
10+566	10+500	LT	43	DI	CB						450	~~63.3~~	1.63	1.52				X				1				E		30.6												
10+541	10+543	LT	44																										0.90										REMOVE EXISTING CB. REMOVE EXISTING PIPE (305mm x 2.2m)
												8.1																											
10+566	10+566	RT-LT	45	DI	DI						450	~~9.0~~	1.63	1.52	V		SL					1				E		16.3												
												54.36																											
10+620	10+566	LT	46	DI	DI						450	~~54.4~~	1.63	1.52	V		SL					1				E		95												
SHEET SUBTOTAL											450	224.7	1.63	1.52				X	1	1	3		4	1.3	6			203.2									1	1	
											450	63.4	1.63	1.52	V		SL						2															
																																			95	1				
																																			76	11				

NOTE:

1. ALL PRECAST REINFORCED CONCRETE DROP INLETS, CATCH BASINS, AND MANHOLES SHALL HAVE AN INSIDE DIAMETER OF 1.5 m UNLESS OTHERWISE NOTED.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

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

DRAINAGE DETAIL SHEET (3 OF 4)

Designed By S.W. BEKIER	Drawn By B.J. MASSE
Checked By S.M. HODGDON Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139DR3	Sheet 6E of 124

VHB NO. 50735

plot date: 4/25/2005

STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE DETAIL SHEET

DRAINAGE STRUCTURES

STATION	STATION	POS.	DRAINAGE NOTE	INLET/OUTLET TYPE		DITCH		ELLIPTICAL PIPE			ROUND PIPE		ALLOWABLE OPTIONS						MH	ES	CB	PRCD DI	DI	CONC CL B	REINF STEEL	GRATE	CHAN ELEV	CRM	TRENCH EXCAVATION		COMM EXC	UNC CHAN EXC	STRUCT EXCAV	GRAN BKFILL STRUCT	GRAN BORR	EROS MATT	STONE FILL		MARKER POSTS		REMARKS
				INLET	OUTLET	IN	OUT	SPAN mm	RISE mm	L m	D mm	L m	PCCSP mm	CAAP mm	RCP CL	CSP mm	CPEP SL	CPEP	EA	EA	EA	I	EA	m^3	kg	TYPE	EA	m^3	EARTH m^3	ROCK m^3	m^3	m^3	m^3	m^3	m^3	m^2	m^3	TYPE	LT ea	RT ea	
COLCHESTER TH 4 CONTINUED																																							
10+615	10+566	LT	47								150	49.9	(UNDERDRAIN)															44.9											WITH FLUSHING BASIN
10+620	10+566	RT	48								150	53.9	(UNDERDRAIN)															44.9											WITH FLUSHING BASIN
10+622	10+620	RT-LT	49	DI	DI						450	~~9.9~~ 10.2	1.63	1.52	V		SL					1			E		18											
SHEET SUBTOTAL																												107.8											
											150	103.8	(UNDERDRAIN)																											2 FLUSHING BASINS
											450	9.9	1.63	1.52	V		SL					1																	
COLCHESTER TH 4 TOTAL																												311										1	1	
											150	103.8	(UNDERDRAIN)																											2 FLUSHING BASINS
											450	73.3	1.63	1.52	V		SL					3																	
											450	224.7	1.63	1.52				X	1	1	3		4	1.3	6																1 PC-STORMCEPTOR UNIT (STC1800) OR EQUAL
GRAND TOTAL																												1390	470									6	1	7 TOTAL MARKER POSTS
											150	562.7	(UNDERDRAIN)																											12 FLUSHING BASINS
											375	15.0	1.63	1.52				X		2																				2 ES FOR 375 mm PIPE
											450	395.8	1.63	1.52	V		SL																							2 ES FOR 450 mm PIPE
											450	230.0	1.63	1.52				X		2				1.3	6																
								575	350	9.0					111																											
											450	15.6			V		SL																									
											600	16.1	1.63	1.52	V		SL																									
											600	25.6			V																											
																			2																					2 PC MANHOLES
																				7																				7 PC CATCH BASINS
																						19																		19 PC DROP INLETS
																																					95	1		
																																					76	11		
																									A															2 TOTAL
																									D															4 TOTAL
																									E															20 TOTAL
																																								2 PC-STROMCEPTOR UNITS OR EQUAL

NOTE:

1. ALL PRECAST REINFORCED CONCRETE DROP INLETS, CATCH BASINS, AND MANHOLES SHALL HAVE AN INSIDE DIAMETER OF 1.5 m UNLESS OTHERWISE NOTED.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

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

DRAINAGE DETAIL SHEET (4 OF 4)

Designed By S. W. BEKIER	Drawn By B. J. MASSE
Checked By S. M. HODGDON Date 4/05	Bridge Design Supervisor S. M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139DR4	Sheet 6F of 124

VHB NO. 50735 plot date: 4/25/2005

STATE OF VERMONT
AGENCY OF TRANSPORTATION

RIGHT - OF - WAY DETAIL SHEET

Metric

TABLE OF PROPERTY ACQUISITION

PARCEL NO.	PROPERTY OWNER	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKE	REMAINDER	RIGHT			RECORDING DATA					REMARKS
					AREA ±	AREA ±	TYPE	(T)/(P)	AREA ±	TITLE	DATE	TOWN / CITY	BOOK	PAGE	
1A	ST. MICHAEL'S COLLEGE	19	10+354.6 LT.	10+361.5 LT.			UTILITY EASE.	(P)	23 SM	WDOE	7/14/2004	COLCHESTER	494	571-574	248 S.F.±
1B		19-21	10+607.38 LT.	10+667.42 LT.	70 SM										753 S.F.±
			10+391.6 LT.	10+525.5 LT.			UTILITY EASE.	(P)	739 SM						0.18A±
			10+459.1 LT.				INSTALL & MAINTAIN	(P)							GUY ANCHOR & WIRE
			10+566.0 LT.	10+664.9 LT.			UTILITY EASE.	(P)	263 SM						2,723 S.F.±
			10+600.6 LT.	10+604.4 LT.			INSTALL	(T)	10 SM						EROSION CONTROL, 108 S.F.±
			10+608 LT.				DRIVE	(T)							
			10+614.2 LT.	10+619.8 LT.			REMOVE	(T)							SIDEWALK
			10+616.0 LT.				INSTALL & MAINTAIN	(P)							GUY ANCHOR & WIRE
			10+635.3 LT.				REMOVE	(T)							TREE & STUMP
			10+655.5 LT.				INSTALL & MAINTAIN	(P)							GUY ANCHOR & WIRE
1C		19	10+353.23 LT.	10+377.59 RT.	227 SM										2,443 S.F.±
			10+373.3 RT.	10+390.5 RT.			CULVERT & DR. (P)								INCLUDES HEADWALL
			10+408.7 RT.				INSTALL & MAINTAIN	(P)							GUY ANCHOR & WIRE
			10+411.6 RT.				INSTALL & MAINTAIN	(P)							GUY ANCHOR & WIRE
1D		19-21	10+404.77 LT.	10+615.26 RT.	0.28HA±										2,756 SM± (0.68A±)
			10+417.59 RT.	10+560.0 RT.			SLOPE	(P)	0.30HA						3,000 SM± (0.74A±);
															INCLUDES TEMP. EROSION CONTROL
			10+419.5 RT.	10+462.9 RT.			INSTALL & MAINTAIN	(P)							SEWER LINE
			10+421.0 RT.	10+422.5 RT.			CULVERT	(P)							
			10+425.3 RT.	10+444.3 RT.			UTILITY EASE.	(P)	218 SM						2,347 S.F.±
			10+436.2 RT.	10+580.2 RT.			CONST.	(T)	0.16HA						1,560 SM± (0.39A±);
															INCLUDES EROSION CONTROL
			10+559.1 RT.	10+570.1 RT.			UTILITY EASE.	(P)	50 SM						538 S.F.±;INCLUDES GAS LINE
			10+560.0 RT.	10+615.7 RT.			SLOPE	(T)	80 SM						861 S.F.±
2	LIME KILN ALLOCATED HOUSING	17-18	10+021.87 LT.	10+151.74 LT.	211 SM±							SOUTH BURLINGTON			2,271 S.F.±
	LIMITED PARTNERSHIP;		10+029.5 LT.	10+074.8 LT.			INSTALL	(T)	73 SM						EROSION CONTROL, 786 S.F.±
	LIME KILN BOND HOUSING LIMITED		10+039.7 LT.	10+074.9 LT.			SLOPE	(T)	63 SM						678 S.F.±
	PARTNERSHIP;		10+061 LT.				REMOVE & RESET	(T)							SHRUB
	THE LIME KILN OWNERS ASSOCIATION		10+071.4 LT.	10+088.0 LT.			CULVERT	(T)							
			10+079 LT.				DRIVE	(T)							
			10+082.9 LT.	10+140.0 LT.			SLOPE	(T)	90 SM						969 S.F.±
			10+085.0 LT.	10+151.55 LT.			DITCH & DRAINAGE	(P)	108 SM						1,163 S.F.±
			10+100.0 LT.				CULVERT	(P)							
			10+140.0 LT.	10+151.5 LT.			SLOPE	(P)	38 SM						409 S.F.±
			10+151.55 LT.				INSTALL	(T)							SET NEW I.P. 9.14M (30.0') LT.
3	WINOOSKI VALLEY PARK DISTRICT	18,19	10+151.55 LT.	10+172.66 LT.	41 SM±					WDOE	8/11/2004	SOUTH BURLINGTON	678	431-433	441 S.F.±
			10+151.4 LT.	10+191.3 LT.			SLOPE	(P)	131 SM						1,410 S.F.±
			10+151.5 LT.	10+180.5 LT.			DITCH & DRAINAGE	(P)	36 SM						388 S.F.±
			10+151.55 LT.				INSTALL	(T)							NEW IRON PIN AT 9.14M (30.0') LT.
			10+178.9 LT.	10+330.9 LT.			UTILITY EASE.	(P)	913 SM						0.22A±
			10+196.5 LT.	10+267.0 LT.			SLOPE	(P)	256 SM						2,756 S.F.±
			10+197.0 LT.	10+260.0 LT.			DITCH & DRAINAGE	(P)	119 SM						1,281 S.F.±
			10+197.7 LT.				INSTALL & MAINTAIN	(P)							GUY ANCHOR & WIRE
			10+200.6 LT.	10+264.5 LT.			CONST. & MAINTAIN	(P)	405 SM						PARKING AREA; INCL. CONC. CURB 0.10A±
			10+261.3 LT.	10+269.5 LT.			INSTALL	(T)	20 SM						EROSION CONTROL, 215 S.F.±
			10+266.5 LT.				INSTALL & MAINTAIN	(P)							GUY ANCHOR & WIRE
			10+310.0 LT.	10+320.0 LT.			SLOPE	(P)	3 SM						32 S.F.±
			10+313 LT.				REMOVE	(T)							FENCE

TABLE OF REVISIONS

REVISION NO.	SHEET NO.	DESCRIPTION	DATE
1	15, 16	PARCEL NO. 4 CEDAR BLUFF CONDOMINIUM HOMEOWNERS	2/19/2004
	17, 18, 19	ASSOCIATION, INC. & FARWATER, LIMITED.	
		REVISE PARCEL 4 AND CREATE NEW PARCEL 12	
		PARCEL 4 = FARWATER, LIMITED	
		PARCEL 12 = CEDAR BLUFF CONDOMINIUM HOMEOWNERS	
		ASSOCIATION, INC. & FARWATER, LIMITED.	
		PER C.O. 9338	
		DONE BY: G.J.F. APPROVED BY: R.P.D.	
2	15,18	PARCEL NO. 4 FARWATER, LIMITED.	3/30/2004
		RELOCATE PROPERTY LINE BETWEEN	
		PARCEL NO. 4 AND PARCEL 12 AND ADJUST ALL DRIVE,	
		SLOPE, EROSION CONTROL AND ANY OTHER RIGHTS AS	
		NECESSARY. PER C.O. 9343.	
		DONE BY: M.R. APPROVED BY: R.P.D.	
3	16,18	PARCEL NO. 12 CEDAR BLUFF CONDOMINIUMS	3/30/2004
		HOMEOWNERS ASSOCIATION, INC. AND FARWATER, LIMITED.	
		RELOCATE PROPERTY LINE BETWEEN	
		PARCEL NO. 12 AND PARCEL 4 AND ADJUST ALL DRIVE,	
		SLOPE, EROSION CONTROL AND ANY OTHER RIGHTS AS	
		NECESSARY. PER C.O. 9344.	
		DONE BY: M.R. APPROVED BY: R.P.D.	
4	14,17,18	PARCEL NO. 2 LAKE CHAMPLAIN HOUSING DEVELOPMENT	6/7/2004
		CORPORATION, ET. AL.	
		REVISE NAME OF OWNERS ASSOCIATION TO READ	
		"THE LIME KILN OWNERS ASSOCIATION" ON THE DETAIL	
		SHEET. REVISE PARCEL 2 LABEL TO READ "LIME KILN	
		ALLOCATED HOUSING LIMITED PARTNERSHIP, ET. AL."	
		ON LAYOUT SHEETS. PER C.O. 9354	
		DONE BY: G.J.F. APPROVED BY: R.P.D.	
5	18	PARCEL NO. 3 WINOOSKI VALLEY PARK DISTRICT.	6/7/2004
		AT STATION 10+151.74 LT., DELETE THE TEXT	
		"REPLACE (T) (I.P.)" PER C.O. 9355	
		DONE BY: G.J.F. APPROVED BY: R.P.D.	
6	14,19	PARCEL NO. 1 ST. MICHAEL'S COLLEGE.	6/14/2004
	20,21	MAKE CHANGES TO THE PERMANENT SLOPE & ADDITION	
		OF SLOPE AT TOE. ADD REMOVE AND STUMP CEDAR.	
		PER C.O. 9356	
		DONE BY: G.J.F. APPROVED BY: R.P.D.	

PLAN LEGEND

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

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

APPROVED: ROGER P. DUMAS DATE: 09-15-03
CHIEF, PLANS & TITLES

PROJECT NAME: **COLCHESTER - SOUTH BURLINGTON**
PROJECT NUMBER: **BRM 5600(6)S C/2**

FILE NAME: 87D139D.XLS
PROJECT LEADER: SGF
DESIGNED BY: VHB, INC.
R.O.W. DETAIL SHEET 14 OF 21

PLOT DATE: 06/07/04
DRAWN BY: MR
CHECKED BY: EP
SHEET 7 OF 124

2/24/2005

STATE OF VERMONT
AGENCY OF TRANSPORTATION

RIGHT - OF - WAY DETAIL SHEET

Metric

TABLE OF PROPERTY ACQUISITION

PARCEL NO.	PROPERTY OWNER	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKE	REMAINDER	RIGHT			RECORDING DATA					REMARKS
					AREA ±	AREA ±	TYPE	(T)/(P)	AREA ±	TITLE	DATE	TOWN / CITY	BOOK	PAGE	
4	FARWATER, LIMITED	17-18	10+149.5 RT.	10+151.3 RT.			INSTALL	(T)		WDOE	10/21/2004	SOUTH BURLINGTON	685	562-4	EROSION CONTROL
			10+151.3 RT.	10+152.8 RT.			CONST.	(T)	0.4 SM						SIDEWALK 4 S.F.±
			10+157.8 RT.				INSTALL & MAINTAIN	(P)							GUY ANCHOR & WIRE
			10+165.7 RT.	10+168.9 RT.			INSTALL	(T)	16 SM						EROSION CONTROL 172 S.F.±
			10+170.5 RT.	10+172 RT.			REMOVE & RESET	(T)							LIGHT POLE
			10+177.0 RT.				DRIVE	(T)							INCLUDES CONCRETE CURB
			10+143.7 RT.												EXCEPT & RESERVE LIGHT POLE
			10+182.0 RT.	10+190.7 RT.			INSTALL	(T)	33 SM						EROSION CONTROL 353 S.F.±
			10+184.7 RT.	10+190.7 RT.			SLOPE	(T)	2.7 SM						29 S.F.±
			10+189.0 RT.				REMOVE & RESET	(T)							SHRUB
5A	CV PROPERTIES, INC.; JOINED BY	19	10+369.98 LT.	10+417.59 RT.	670 SM		HWY. EASE.	(P)				COLCHESTER			0.17A±;INCLUDES BRIDGE, ABUTMENT
	NEW ENGLAND CENTRAL RAILROAD,														MSE WALL AND RELATED ITEMS
	INC.		10+341 LT. ±	10+400 LT. ±			ALL R.T. & I.								EXISTING BRIDGE & APPURTENANCES
			10+357.8 LT.	10+396.0 LT.			UTILITY EASE.	(P)	253 SM						2,723 S.F.±
			10+381.41 RT.	10+404.0 RT.			CONST.	(T)	190 SM						INCL. EROSION CONTROL 2,045 S.F.±
			10+386.8 RT.	10+419.5 RT.			INSTALL & MAINTAIN	(P)							SEWER SYSTEM INCL. SLEEVES AND
															JUNCTIONS
			10+389.9 RT.	10+417.4 RT.			CULVERT	(P)							INCLUDES HEADWALL & D.I.
			10+400.0 RT.	10+426.0 RT.			CONST.	(T)	95 SM						INCL. EROSION CONTROL 1,022 S.F.±
			10+400.9 RT.	10+438.3 RT.			SLOPE	(P)	334 SM						3,595 S.F.±; INCL. TEMP. EROSION CONTROL
			10+410.0 RT.	10+431.4 RT.			UTILITY EASE.	(P)	307 SM						3,305 S.F.±
			10+415.2 RT.	10+421.4 RT.			CUL., DIT. & DR.	(P)	64 SM						INCLUDES STONE FILL PAD, 689 S.F.±
5B		19	10+310 LT. ±	10+343 LT. ±			ALL R.T. & I.					SOUTH BURLINGTON			EXISTING BRIDGE & APPURTENANCES
6	STATE OF VERMONT	21	10+625.75 LT.	10+667.42 RT.	302 SM										QUIT CLAIM TO TOWN OF COLCHESTER
															(3,251 S.F.±)
7	VERIZON NEW ENGLAND, INC.														UTILITY
8	GREEN MOUNTAIN POWER														UTILITY
	CORPORATION														
9	CHAMPLAIN WATER DISTRICT														UTILITY
10	VERMONT GAS SYSTEMS, INC.														UTILITY
11	ADELPHIA CABLE COMMUNICATIONS														UTILITY

TABLE OF REVISIONS

REVISION NO.	SHEET NO.	DESCRIPTION	DATE

PLAN LEGEND

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

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

APPROVED: ROGER P. DUMAS DATE: 09-15-03
CHIEF, PLANS & TITLES

PROJECT NAME: **COLCHESTER - SOUTH BURLINGTON**
PROJECT NUMBER: **BRM 5600(6)S C/2**

FILE NAME: 87D139D.XLS
PROJECT LEADER: SGF
DESIGNED BY: VHB, INC.
R.O.W. DETAIL SHEET 15 OF 21

PLOT DATE: 04/08/04
DRAWN BY: MR
CHECKED BY: EP
SHEET 8 OF 124

2/24/2005

STATE OF VERMONT
AGENCY OF TRANSPORTATION

RIGHT - OF - WAY DETAIL SHEET

Metric

TABLE OF PROPERTY ACQUISITION

PARCEL NO.	PROPERTY OWNER	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKE	REMAINDER	RIGHT			RECORDING DATA					REMARKS
					AREA ±	AREA ±	TYPE	(T)(P)	AREA ±	TITLE	DATE	TOWN / CITY	BOOK	PAGE	
12	CEDAR BLUFF CONDOMINIUMS	18-19	10+195.39 RT.	10+340.65 RT.	900 SM					WDOE	8/25/2004	SOUTH BURLINGTON	680	72-	0.22A±
	HOMEOWNERS ASSOCIATION, INC.		10+190.7 RT.	10+207.9 RT.			INSTALL	(T)	37 SM					76	EROSION CONTROL, 398 S.F.±
	AND FARWATER, LIMITED		10+190.7 RT.	10+207.3 RT.			SLOPE	(T)	44 SM						474 S.F.±
			10+191.7 RT.				REMOVE & RESET	(T)							SHRUB
			10+197.6 RT.				INSTALL & MAINTAIN	(P)							GUY ANCHOR
			10+210 RT.				DRIVE	(T)							INCLUDES CONCRETE CURB
			10+214 RT.	10+215 RT.			REMOVE & RESET	(T)							LIGHT POLE
			10+213.6 RT.	10+221.5 RT.			SLOPE	(T)	37 SM						398 S.F.±
			10+214.1 RT.	10+221.3 RT.			INSTALL	(T)	29 SM						EROSION CONTROL, 312 S.F.±
			10+217.7 RT.				REMOVE & RESET	(T)							SHRUB
			10+218.9 RT.				REMOVE & RESET	(T)							SHRUB
			10+220.4 RT.				REMOVE & RESET	(T)							SHRUB
			10+221.3 RT.	10+223.1 RT.			CONST.	(T)	19 SM						SIDEWALK, 205 S.F.±
			10+221.8 RT.				REMOVE & RESET	(T)							SHRUB
			10+222.8 RT.	10+230.8 RT.			SLOPE	(T)	18 SM						194 S.F.±
			10+223.1 RT.	10+260.8 RT.			INSTALL	(T)	79 SM						EROSION CONTROL, 850 S.F.±
			10+224.1 RT.				REMOVE & RESET	(T)							SHRUB
			10+229.2 RT.				REMOVE & RESET	(T)							SHRUB
			10+234.0 RT.				REMOVE & RESET	(T)							SHRUB
			10+235.5 RT.				REMOVE & RESET	(T)							SHRUB
			10+237.5 RT.				REMOVE & RESET	(T)							SHRUB
			10+241.5 RT.				REMOVE & RESET	(T)							SHRUB
			10+240 RT.				REMOVE & RESET	(T)							SMH FRAME AND COVER
			10+249.9 RT.	10+279.5 RT.			SLOPE	(T)	38 SM						409 S.F.±
			10+250.8 RT.				REMOVE & RESET	(T)							SHRUB
			10+252.3 RT.	10+260.2 RT.			UTILITY EASE.	(P)	40 SM						431 S.F.±
			10+257.4 RT.				REMOVE & RESET	(T)							SHRUB
			10+260.4 RT.	10+265.2 RT.			REMOVE	(T)							SIDEWALK
			10+262.4 RT.	10+321.8 RT.			INSTALL	(T)	100 SM						EROSION CONTROL, 1,076 S.F.±
			10+267 RT.				REMOVE & RESET	(T)							BOULDER
			10+271.3 RT.				REMOVE & RESET	(T)							SHRUB
			10+274 RT.				REMOVE & RESET	(T)							BOULDER
			10+279.3 RT.				REMOVE & RESET	(T)							SHRUB
			10+283.5 RT.	10+313.4 RT.			SLOPE	(T)	10 SM						108 S.F.±
			10+308.2 RT.				REMOVE	(T)							HEDGE
			10+316.9 RT.	10+319.6 RT.			SLOPE	(T)	1 SM						11 S.F.±
			10+244 RT.												EXCEPT & RESERVE PUMP STATION
	MAINTENANCE AGREEMENT ZONE NO. 1	21	10+667.4 CL	10+679.5 CL											LENGTH 12.1M (39.7')
	NOTE: TOWN OF COLCHESTER	21	10+667.42 RT.	10+688.55 RT.											340 SM± (3,660 S.F.±)
	EXISTING TH4 HWY. EASEMENT AT JCT.														TO BE TRANSFERRED TO STATE
	WITH VT. RTE. 15														OF VERMONT

TABLE OF REVISIONS

REVISION NO.	SHEET NO.	DESCRIPTION	DATE

PLAN LEGEND

EXISTING RIGHT-OF-WAY
TAKING WITH ACCESS
TAKING WITHOUT ACCESS
CZ — CLEAR ZONE
P L — PROPERTY LINE

TOE OF SLOPE
TOP OF CUT
SR (P) — SLOPE RIGHT
CONST. (T) — CONSTRUCTION RIGHT

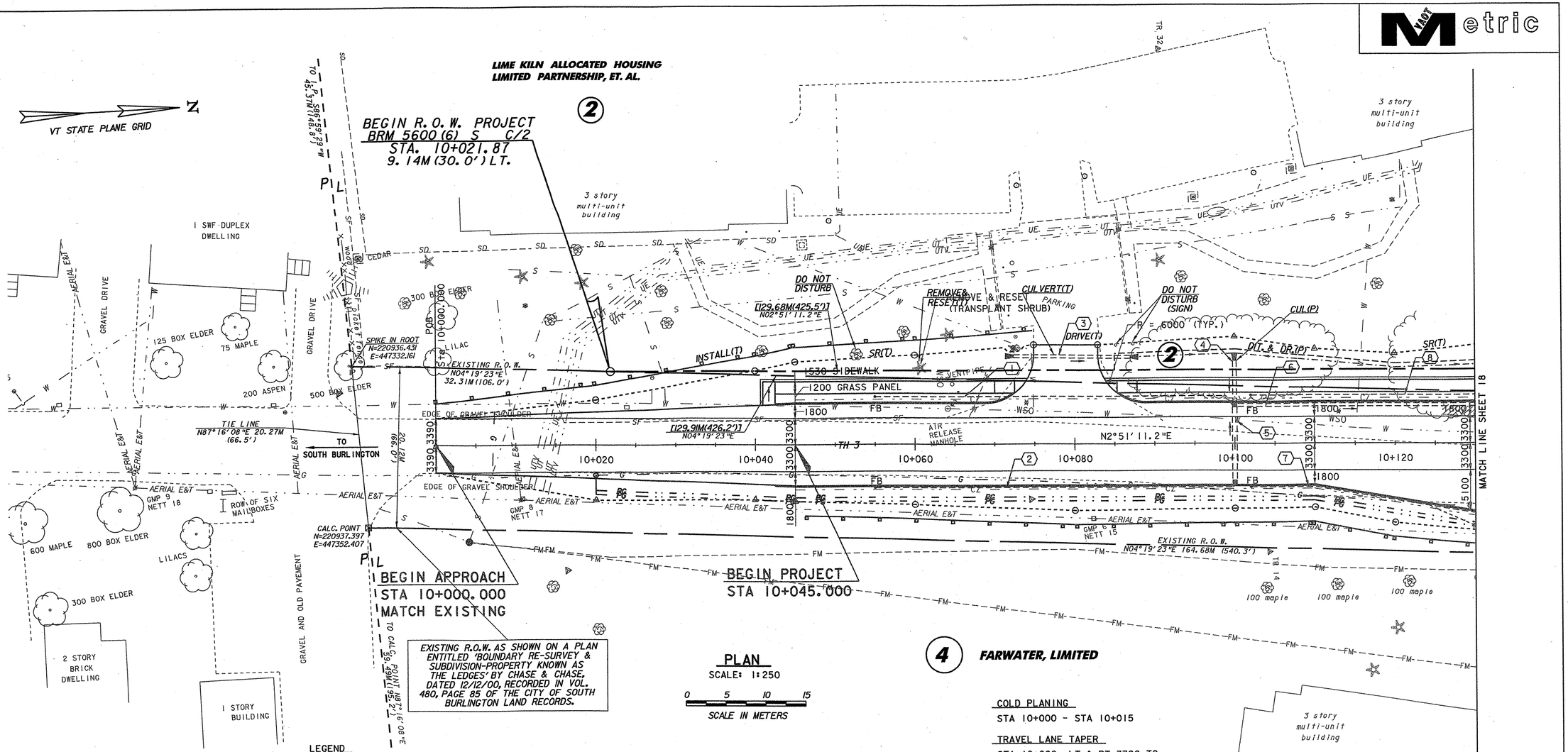
(P) -PERMANENT
(T) -TEMPORARY
DR. -DRAINAGE RIGHT
DIT. -DITCHING RIGHT
CH. -CHANNEL RIGHT
DRIVE -DRIVE RIGHT
CUL. -CULVERT RIGHT
C&T -CLEARING & TRIMMING RIGHT
SR -SLOPE RIGHT
UE -UTILITY EASEMENT

APPROVED: ROGER P. DUMAS DATE: 09-15-03
CHIEF, PLANS & TITLES

PROJECT NAME: COLCHESTER - SOUTH BURLINGTON
PROJECT NUMBER: BRM 5600(6)S C/2

FILE NAME: 87D139D.XLS
PROJECT LEADER: SGF
DESIGNED BY: VHB, INC.
R.O.W. DETAIL SHEET 16 OF 21
PLOT DATE: 02/19/04
DRAWN BY: MR
CHECKED BY: EP
SHEET 9 OF 124

2/24/2005



LEGEND

— UT — ··	EXISTING UNDERGROUND TELEPHONE LINE
— W — ··	EXISTING UNDERGROUND WATER LINE
— G — ··	EXISTING UNDERGROUND GAS LINE
— S — ··	EXISTING UNDERGROUND SEWER LINE
— AERIAL E&T —	EXISTING OVERHEAD ELECTRIC & TELEPHONE LINE
--- FM ---	EXISTING FORCED MAIN SEWER LINE
--- SD ---	EXISTING STORM DRAIN
	LEDGE
HYD	HYDRANT
	VALVE
	MANHOLE
	MAILBOX
	SIGNS
	UTILITY POLE GUY WIRE
	GAS SHUTOFF
lp	LIGHT POLE

— P E&T — ·	PROPOSED OVERHEAD ELECTRIC & TELEPHONE BY OTHERS
— PS — ··	PROPOSED SEWER LINE
— PG — ··	PROPOSED GAS LINE BY OTHERS
— PW — ··	PROPOSED WATER LINE BY OTHERS
■ PB	PROPOSED PULL BOX BY OTHERS
■ FB	PROPOSED FLUSHING BASIN
--△---△--	TOP OF CUT TO MATCH EXISTING
--⊖---⊖--	TOE OF SLOPE TO MATCH EXISTING

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

SIGN LEGEND

N = NEW
R = REMOVE
B-B = BACK-TO-BACK
RET = RETAIN
R & S = REMOVE AND RESET
R & N = REMOVE AND NEW
(1) RETURN TO CITY OF SO. BURLINGTON

FOR R.O.W. USE ONLY

SEE DRAINAGE AND SEWER NOTES & DETAILS ON SHEETS 13 & 14
(R.O.W. SHEETS 5 & 6)

CONSTRUCTION NOTES

CONSTRUCT CONCRETE CURB
STA 10+042.5 - STA 10+130.0, RT
STA 10+042.5 - STA 10+072.5, LT
STA 10+085.3 - STA 10+130.0, LT

DURABLE 100 mm WHITE LINE
STA 10+000 - STA 10+130, LT & RT

DURABLE 100 mm YELLOW LINE (DOUBLE CENTER LINE)
STA 10+000 - STA 10+130

CONSTRUCT BUS PULLOUT
STA 10+110, RT 5.1 m - STA 10+130, RT 8.4 m

COLD PLANING
STA 10+000 - STA 10+015

TRAVEL LANE TAPER
STA 10+000, LT & RT 3390 TO
STA 10+045, LT & RT 3300

PAVED SHOULDER TAPER
STA 10+000, LT & RT 0 TO
STA 10+045, LT & RT 1800

CONSTRUCT SIDEWALK
STA 10+041.0 - STA 10+073.2, LT
STA 10+084.6 - STA 10+130.0, LT

CONSTRUCT SIDEWALK RAMP, TYPE I
(SEE STD. C-3M)
STA 10+070.0 - STA 10+073.2, LT
STA 10+084.6 - STA 10+087.8, LT

CONSTRUCT SIDEWALK RAMP, TYPE 6
(SEE STD. C-3M)
STA 10+041.0 - STA 10+045.0, LT

CONSTRUCT DRIVE
STA 10+079, LT
50 BCP TYPE III, 7200 WIDE

REMOVE EXISTING CURB
STA 10+123 - 10+130, RT

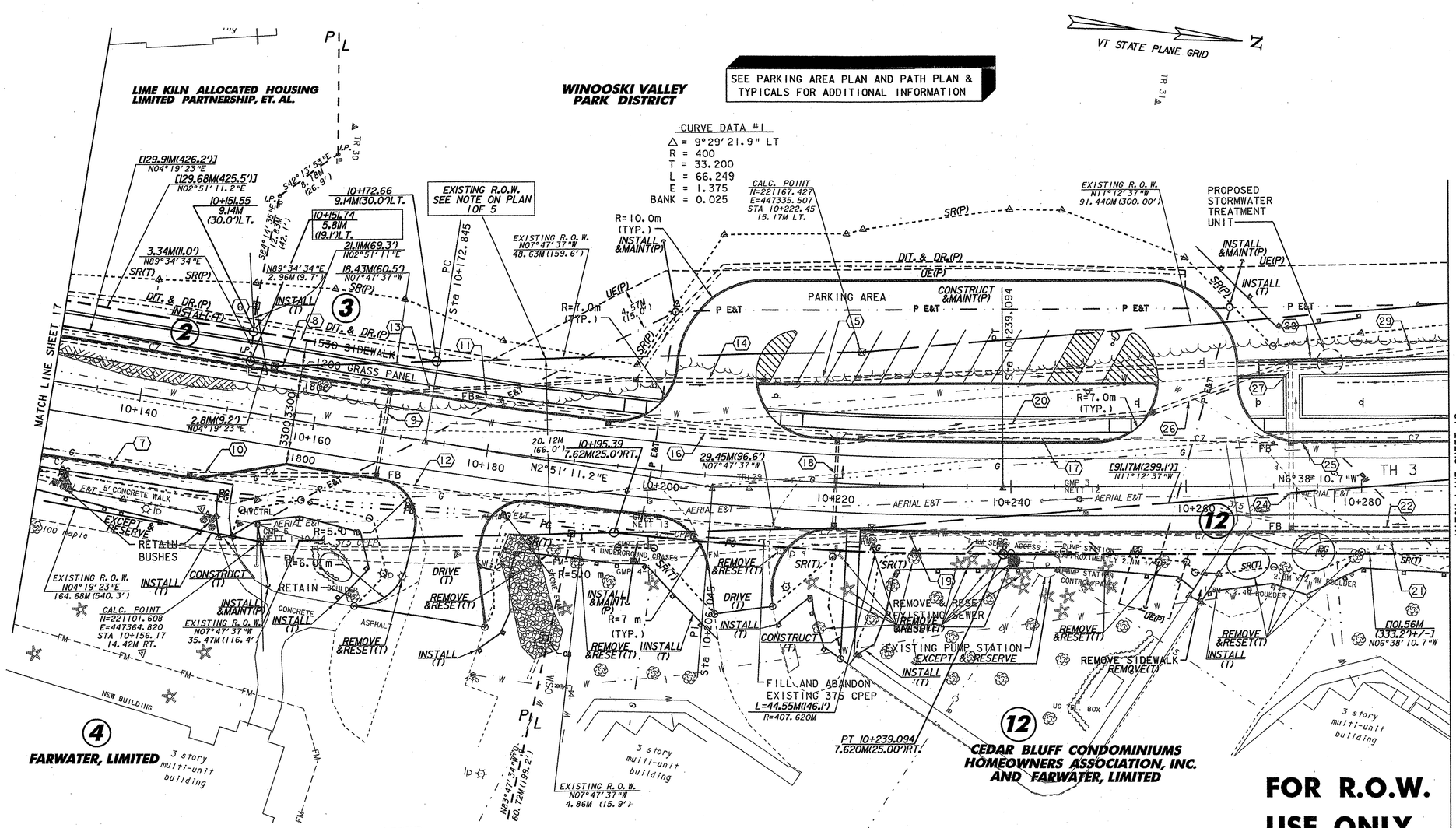
REMOVE AND RESET SHRUB
STA 10+061, LT

VANASSE HANGEN BRUSTLIN, INC.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta. / Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
PLAN (1 OF 5)	
Designed By A.J. CRAWFORD	Drawn By C.S. MERCER
Checked By J.A. MERCER Date 6/03	Bridge Design Supervisor S.M. GUNN Date 6/03
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6) S C/2
I.G.C. Info.	
R.O.W. SHEET 17 OF 21	SHEET 10 OF 124

VAOT Metric



LEGEND

UT	EXISTING UNDERGROUND TELEPHONE LINE
W	EXISTING UNDERGROUND WATER LINE
G	EXISTING UNDERGROUND GAS LINE
S	EXISTING UNDERGROUND SEWER LINE
AERIAL E&T	EXISTING OVERHEAD ELECTRIC & TELEPHONE LINE
FM	EXISTING FORCED MAIN SEWER LINE
SD	EXISTING STORM DRAIN
	LEDGE
HYD	HYDRANT
	VALVE
	MANHOLE
	MAILBOX
	SIGNS
	UTILITY POLE GUY WIRE
	GAS SHUTOFF
lp	LIGHT POLE
P E&T	PROPOSED OVERHEAD ELECTRIC & TELEPHONE BY OTHERS
PS	PROPOSED SEWER LINE
PG	PROPOSED GAS LINE BY OTHERS
PW	PROPOSED WATER LINE BY OTHERS
PB	PROPOSED PULL BOX BY OTHERS
FB	PROPOSED FLUSHING BASIN
	TOP OF CUT TO MATCH EXISTING
	TOE OF SLOPE TO MATCH EXISTING
	PROPOSED LIGHT POLE

PLAN
SCALE: 1:250
0 5 10 15
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 CITY OF S. BURLINGTON'S ACQUISITION OF LAND AND RIGHTS FOR THIS PROJECT.

SIGN LEGEND
N = NEW
R = REMOVE
B-B = BACK-TO-BACK
RET = RETAIN
R & S = REMOVE AND RESET
R & N = REMOVE AND NEW
(1) RETURN TO CITY OF SO. BURLINGTON

SEE DRAINAGE AND SEWER NOTES & DETAILS ON SHEETS 13 & 14

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

CONSTRUCTION NOTES

CONSTRUCT SIDEWALK
STA 10+130.0 - STA 10+197.6, LT
STA 10+130.0 - STA 10+151.0, RT
STA 10+222.0 - STA 10+222.8, RT
STA 10+212.4 - STA 10+254.6, LT
STA 10+268.2 - STA 10+290.0, LT

CONSTRUCT DRIVE
STA 10+177, RT
50 BCP TYPE III, 7500 WIDE

STA 10+205, LT
40 BCP TYPE III,
50 BCP TYPE II, 9000 WIDE

STA 10+210, RT
50 BCP TYPE III, 7600 WIDE

STA 10+261, LT
40 BCP TYPE III,
50 BCP TYPE II, 9000 WIDE

CONSTRUCT CONCRETE CURB
STA 10+130 - STA 10+173, RT
STA 10+130 - STA 10+198, LT
STA 10+182 - STA 10+206, RT
STA 10+213 - STA 10+222, RT
STA 10+213 - STA 10+254, LT
STA 10+223 - STA 10+290, RT
STA 10+269 - STA 10+290, LT

CONSTRUCT SIDEWALK RAMP, TYPE I (SEE STD. C-3M)
STA 10+195.0 - STA 10+198.4, LT
STA 10+212.4 - STA 10+215.8, LT
STA 10+222, RT
STA 10+251.3 - STA 10+254.6, RT
STA 10+268.2 - STA 10+271.5, RT
STA 10+265.9 - STA 10+268.4, LT

STEEL BEAM GUARDRAIL
STA 10+268.3 - STA 10+290.0, RT

ANCHOR FOR STEEL BEAM GUARDRAIL
STA 10+270.3, RT

DURABLE 100 mm WHITE LINE
STA 10+130 - STA 10+290, LT & RT

DURABLE 100 mm YELLOW LINE (DOUBLE CENTER LINE)
STA 10+130 - STA 10+290

CONSTRUCT BUS PULLOUT
STA 10+130 - STA 10+147.8, RT 8.4 m
STA 10+147.8, RT 8.4 m -
STA 10+157.7, RT 5.1 m

REMOVE EXISTING CURB
STA 10+130 - STA 10+160, RT

REMOVE & RESET BOULDERS
STA 10+267, RT
STA 10+274, RT

REMOVE & RESET FRAME & COVER OF EXIST. SMH
STA 10+240, RT

28-FEB-2005

REMOVE & RESET SHRUBS
STA 10+189.0, RT 10.4 m
STA 10+191.7, RT 11.3 m
STA 10+217.7, RT 11.3 m
STA 10+218.9, RT 16.4 m
STA 10+220.4, RT 7.9 m
STA 10+221.8, RT 11.8 m
STA 10+224.1, RT 6.3 m
STA 10+229.2, RT 8.1 m
STA 10+234.0, RT 8.8 m
STA 10+235.5, RT 8.2 m
STA 10+237.5, RT 9.0 m
STA 10+241.5, RT 9.8 m
STA 10+250.8, RT 9.2 m
STA 10+257.4, RT 8.3 m
STA 10+271.3, RT 9.3 m
STA 10+279.3, RT 7.9 m

REMOVE & RESET LIGHT POLES
STA 10+172, RT TO 10+170.5, RT 15.5
STA 10+214, RT TO 10+215, RT 12.0

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta. / Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
PLAN (2 OF 5)	
Designed By A. J. CRAWFORD	Drawn By C. S. MERCER
Checked By J. A. MERCER Date 6/03	Bridge Design Supervisor S. M. GUNN Date 6/03
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600 (6) S C/2
I.G.C. Info.	
R.O.W. SHEET 18 OF 21	SHEET 11 OF 124

VANASSE HANGEN BRUSTLIN, INC.

VT STATE PLANE GRID N

VAOT Metric

WINOOSKI VALLEY PARK DISTRICT 3

TOWN OF COLCHESTER CITY OF SOUTH BURLINGTON

WINOOSKI RIVER

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

ST. MICHAEL'S COLLEGE 1A

ST. MICHAEL'S COLLEGE 1B

SEE PATH & LOOKOUT PLAN & TYPICALS FOR ADDITIONAL INFORMATION

EXISTING R.O.W (SO. BURL.). SEE NOTE ON PLAN 1OF 5

EXISTING R.O.W. AS SHOWN ON A PLAN ENTITLED 'BOUNDARY SURVEY-PROPERTY CONVEYED FROM GREENMOUNT LUMBER CORPORATION TO LIME ROCK LIMITED' BY KREBS & LANSING CONSULTING ENGINEERS, INC., REVISED 1/6/1992, NOT RECORDED

EXISTING BRIDGE DATA

OPEN SPANDREL CONCRETE ARCH MAIN SPAN
CONCRETE T-BEAM APPROACH SPANS
OVERALL LENGTH = 84.7 m
BRIDGE WIDTH CURB TO CURB = 6.1 m
BUILT IN 1913

CALC. POINT N=221257.122 E=447317.730

EXISTING R.O.W. N11°12'37"W 91.44M(300.0')

EXISTING R.O.W. N06°15'37"W 16.10M(52.8')+/-

EXISTING R.O.W. N12°23'12"W 136.66M(448.4')

EXISTING R.O.W. N06°35'14"W 41.43M(135.9')+/-

EXISTING R.O.W. N06°26'32"W 1.49M(4.9')

REMOVE (T)

BENCHMARK SURVEY PLAQUE BRASS DISK LJD 20 NAVD 88 ELEV. 78.267

TR 28

22M+/- ALONG RIVER BANK

APPROX. LOCATION OF EXISTING 450 CULVERT

STONE WALL END

SEE NOTE 1

EXISTING BOUND N=221338.675 E=447310.837 STA 10+396.04, 20.22M LT.

EXISTING BOUND N=221340.154 E=447310.670 STA 10+397.53, 20.22M LT.

MONITORING WELL

TEMPORARY R.O.W. IMPACTS FOR BRIDGE REMOVAL AND CONSTRUCTION

TEMPORARY R.O.W. IMPACTS FOR BRIDGE REMOVAL AND CONSTRUCTION

TEMPORARY SHEET PILING

1220 HIGH MORTARED STONE WALL

APPROXIMATE LOCATION OF 10 m LEDGE OVERHANG

2100 CHAINLINK FENCE

EXTSTING 200 WATER (RETAIN)

600 ASPEN

GATE CONCRETE & STONE WALL 750 HIGH

CHAIN LINK FENCE, 1.2 m

LOOKOUT

5B

ALL R.,T.&I. 22.91M(75.2')+/- N06°15'37"W

FACE OF 1000 HIGH CUT TERM. POLE

GAS LINE

TAPER

METER VAULT

ELECTRIC PANEL & PUMP STATION

LIGHT POLE GMP 1

CHAIN LINK FENCE, 1.2 m

152 STEEL SCOTCH KOTE GAS LINE

CONC. STRUCTURE WITH METAL TRACKS 3000 DEEP

ALL R.,T.&I. 28.36M(93.0') N06°35'14"W

STONE FILL, TYPE II

SINGLE TUBE METAL G. RAIL

DOUBLE TUBE METAL G. RAIL

TEMP. GAS LINE

EXISTING RETAINING WALL

1530 SIDEWALK

6.48M(21.3') EXISTING R.O.W. N13°16'35"W

9:1 TAPER

TOP OF QUARRY

200 GRASS PANEL

CONC. BLOCKS

TUNNEL BE

[132.40M(434.4')]

23.36M (76.6')

[29.10M (95.5')]

INSTALL&MAINT(P)

6.10M (20.0')

7.62M(25.0')RT.

10+430.00 13.72M(45.0')RT.

10+417.59 13.72M(45.0')RT.

PROPOSED STORMWATER TREATMENT UNIT

450 STEEL SLEEVE AT QUARRY WALL SEE SEWER NOTES

380 POPLAR

APPROX. JACKING PIT LOCATION

SEE SWALE DETAIL "B" (SHEET 28)

450 STEEL SLEEVE SEE SEWER NOTES

CUL,DIT &DR(P)

EXISTING SEWER EASEMENT 40'

10+314.97 2.68M(8.8')LT.

10+353.23+/- 5.10M(16.7')LT.

10+369.98 5.09M(16.7')LT.

10+404.77 5.81M(19.1')LT.

10+337.88+/- 2.53M(8.3')LT.

13.58M (44.6')+/- N6°38'10.7"W

16.75M(55.0')+/-

14.81M (48.6')

10.52M (34.5')+/-

10+340.65+/- 7.620M(25.00')RT.

10+357.73+/- 7.62M(25.0')RT.

19.86M(65.2')+/-

10+377.59 7.62M(25.0')RT. 7.19M(23.6')

10+381.41 13.72M(45.0')RT.

1050 CMP

1050 CMP

1800 SIDEWALK

GMP 8

GMP 8 NETT 8

GMP 7 NETT 7

GMP 1/01

GMP 2

AERIAL E&T

HWY. EASE. (P)

36.18M (118.7')

PROPOSED MSE WALL

INSTALL& MAINT(P)

CHAIN LINK FENCE, 2 m

STONE FILL, TYPE II

CUL(P)

TOP OF QUARRY

12.41M (40.7')

TOE OF QUARRY

SR(P)

CONST(T)

EDGE OF RIVER

TOWN LINE

P/L

610 WATER MAIN BRIDGE

BEGIN BRIDGE STA 10+310.400 F.G. EL 80.218

END BRIDGE STA 10+401.360 F.G. EL 84.311

[91.17M(299.1')] N11°12'37"W

REMOVE (T)

INSTALL TEMPORARY SHEET PILING

[101.56M (333.2')+/-]

STONE FILL TYPE II

HVCTRL

MATCH LINE SHEET 18

MATCH LINE SHEET 20

CONSTRUCTION NOTES

CONSTRUCT CONCRETE CURB
STA 10+290 - STA 10+301.5, LT & RT
STA 10+301.5 - STA 10+306.5, LT & RT (175 TO 225 REVEAL)
STA 10+407.3 - STA 10+412.3, LT & RT (225 TO 175 REVEAL)
STA 10+412.3 - STA 10+450, LT & RT

CONSTRUCT SIDEWALK
STA 10+290 - STA 10+310.4, LT
STA 10+401.4 - STA 10+450, LT

BRIDGE RAILING
CONCRETE TEXAS RAIL
STA 10+306.5 - STA 10+407.3, LT & RT

STEEL BEAM GUARD RAIL
STA 10+290 - STA 10+306.5, RT
STA 10+295 - STA 10+306.5, LT
STA 10+407.3 - STA 10+428, LT
STA 10+407.3 - STA 10+450, RT

ANCHOR FOR STEEL BEAM GUARD RAIL
STA 10+297, LT
STA 10+426, LT

DURABLE 100 mm WHITE LINE
STA 10+290 - STA 10+450, LT & RT

DURABLE 100 mm YELLOW LINE (DOUBLE CENTER LINE)
STA 10+290 - STA 10+450

REMOVE EXISTING GUARD RAIL
STA 10+309 - STA 10+313, LT
STA 10+311 - STA 10+313, LT
STA 10+400 - STA 10+403, LT
STA 10+400 - STA 10+408, LT
STA 10+400 - STA 10+441, LT
STA 10+416, RT - STA 10+450, LT

REMOVE EXISTING FENCE
STA 10+313, LT
STA 10+417, RT - STA 10+450, LT

CONSTRUCT CHAIN LINK FENCE
STA 10+406 - STA 10+419, RT

CONSTRUCT 3 RAIL TUBULAR FENCE
STA 10+313, LT

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 TOWN OF COLCHESTER'S AND THE CITY OF BURLINGTON'S ACQUISITION OF LAND AND RIGHTS FOR THIS PROJECT.

FOR R.O.W. USE ONLY

EXISTING LEGEND

- UT — EXISTING UNDERGROUND TELEPHONE LINE
- W — EXISTING UNDERGROUND WATER LINE
- G — EXISTING UNDERGROUND GAS LINE
- S — EXISTING UNDERGROUND SEWER LINE
- AERIAL E&T — EXISTING OVERHEAD ELECTRIC & TELEPHONE LINE
- FM — EXISTING FORCED MAIN SEWER LINE
- SD — EXISTING STORM DRAIN
- LEDGE
- HYD HYDRANT
- VALVE
- MANHOLE
- MAILBOX
- SIGNS
- UTILITY POLE GUY WIRE
- GAS SHUTOFF
- LP LIGHT POLE

PROPOSED LEGEND

- P E&T — PROPOSED OVERHEAD ELECTRIC & TELEPHONE BY OTHERS
- PS — PROPOSED SEWER LINE
- PG — PROPOSED GAS LINE BY OTHERS
- PW — PROPOSED WATER LINE BY OTHERS
- PB — PROPOSED PULL BOX BY OTHERS
- FB — PROPOSED FLUSHING BASIN
- PROPOSED CHAIN LINK FENCE
- TOP OF CUT TO MATCH EXISTING
- TOE OF SLOPE TO MATCH EXISTING

SIGN LEGEND

N = NEW
R = REMOVE
B-B = BACK-TO-BACK
RET = RETAIN
R & S = REMOVE AND RESET
R & N = REMOVE AND NEW
(1) RETURN TO CITY OF SO. BURLINGTON

12 CEDAR BLUFF CONDOMINIUMS HOMEOWNERS ASSOCIATION, INC. AND FARWATER, LIMITED

ST. MICHAEL'S COLLEGE

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

PLAN

SCALE: 1:250

0 5 10 15

SCALE IN METERS

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VANASSE HANGEN BRUSTLIN, INC.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

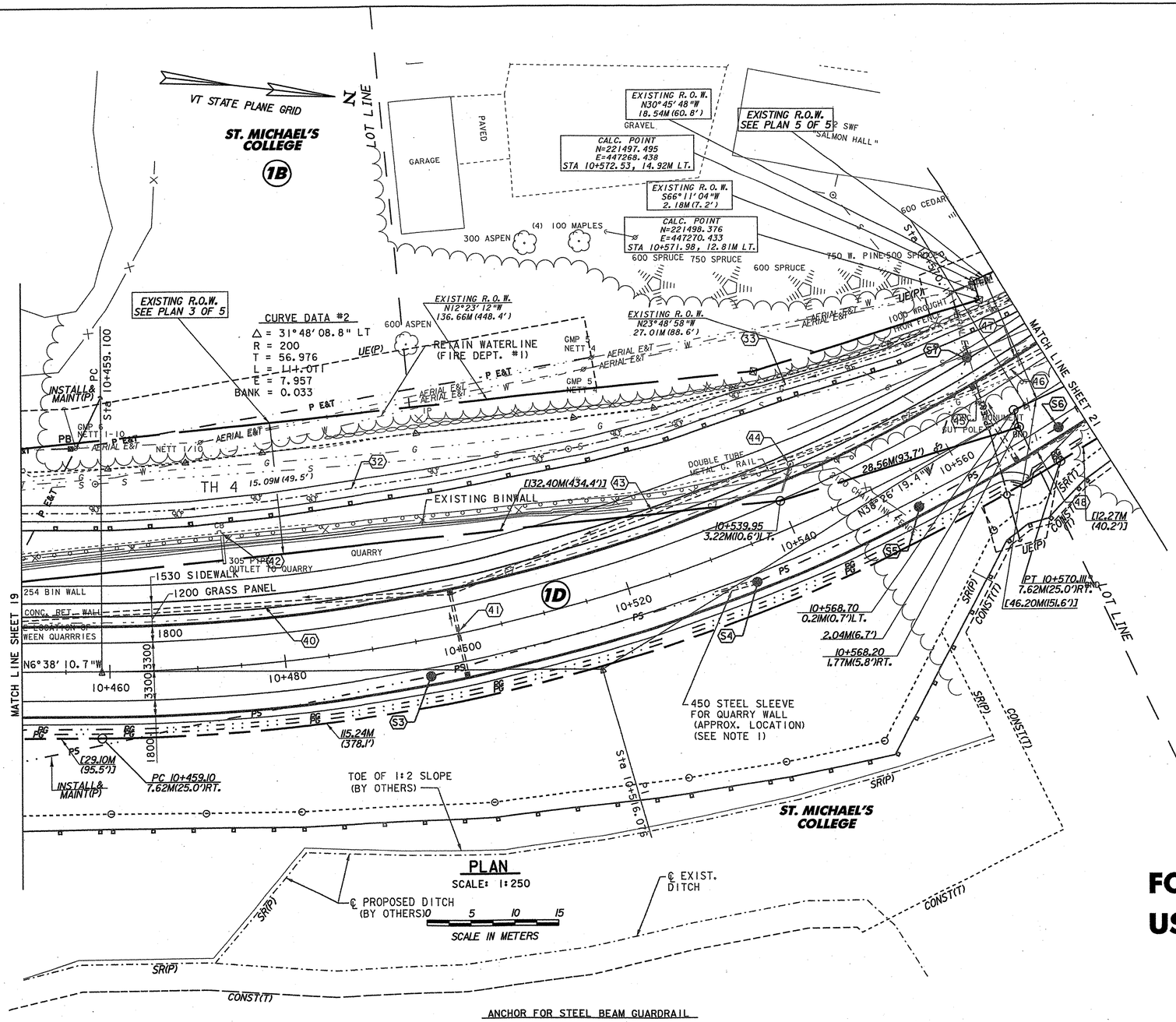
Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta. / Surv. Sta.

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

PLAN (3 OF 5)

Designed By A. J. CRAWFORD	Drawn By C. S. MERCER
Checked By J. A. MERCER Date 6/03	Bridge Design Supervisor S. M. GUNN Date 6/03
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6) S C/2
I.G.C. Info.	
R. O. W. SHEET 19 OF 21	SHEET 12 OF 124

VAOT Metric



LEGEND

- EXISTING UNDERGROUND TELEPHONE LINE
- EXISTING UNDERGROUND WATER LINE
- EXISTING UNDERGROUND GAS LINE
- EXISTING UNDERGROUND SEWER LINE
- EXISTING OVERHEAD ELECTRIC & TELEPHONE LINE
- EXISTING FORCED MAIN SEWER LINE
- EXISTING STORM DRAIN
- HYDRANT
- VALVE
- MANHOLE
- MAILBOX
- SIGNS
- UTILITY POLE GUY WIRE
- GAS SHUTOFF
- LIGHT POLE

- PROPOSED OVERHEAD ELECTRIC & TELEPHONE BY OTHERS
- PROPOSED SEWER LINE
- PROPOSED GAS LINE BY OTHERS
- PROPOSED WATER LINE BY OTHERS
- PROPOSED PULL BOX BY OTHERS
- PROPOSED FLUSHING BASIN
- TOP OF CUT TO MATCH EXISTING
- TOE OF SLOPE TO MATCH EXISTING

SIGN LEGEND

N = NEW
R = REMOVE
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R & S = REMOVE AND RESET
R & N = REMOVE AND NEW
(1) RETURN TO CITY OF SO. BURLINGTON

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 TOWN OF COLCHESTER'S ACQUISITION OF LAND AND RIGHTS FOR THIS PROJECT.

CONSTRUCTION NOTES

CONSTRUCT SIDEWALK
STA 10+450 - STA 10+575, LT

CONSTRUCT CONCRETE CURB
STA 10+450 - STA 10+575, RT
STA 10+450 - STA 10+575, LT

STEEL BEAM GUARDRAIL
STA 10+450 - STA 10+567, RT

ANCHOR FOR STEEL BEAM GUARDRAIL
STA 10+565, RT

DURABLE 100 mm WHITE LINE
STA 10+450 - STA 10+575, LT & RT

DURABLE 100 mm YELLOW LINE (DOUBLE CENTER LINE)
STA 10+450 - STA 10+575

REMOVE EXISTING GUARD RAIL
STA 10+450 - STA 10+550, LT

REMOVE EXISTING FENCE
STA 10+450 - STA 10+550, LT

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

SEE DRAINAGE AND SEWER NOTES & DETAILS ON SHEETS 13 & 14

(R.O.W. SHEETS 5 & 6)

VANASSE HANGEN BRUSTLIN, INC.

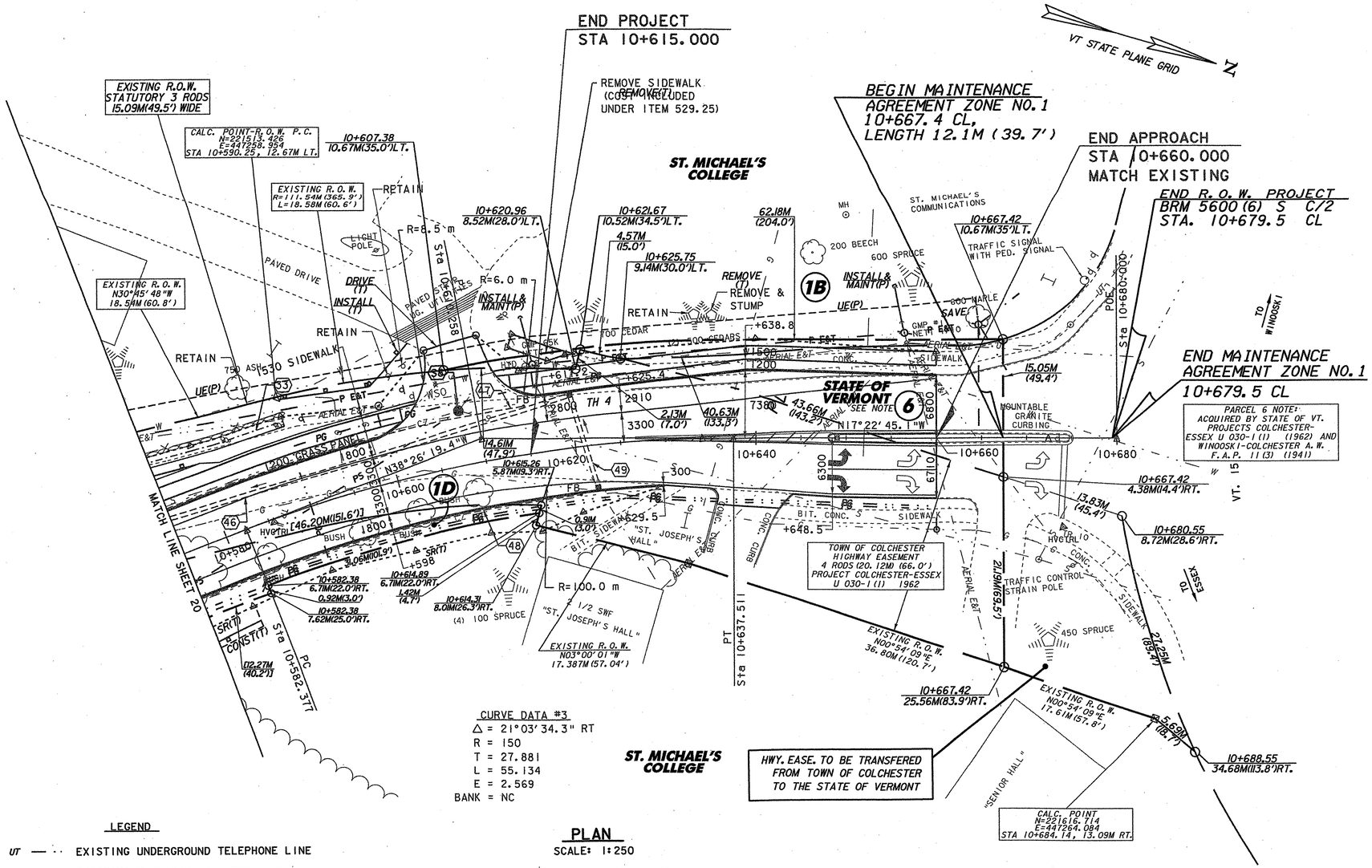
STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

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

PLAN (4 OF 5)

Designed By A.J. CRAWFORD	Drawn By C.S. MERCER
Checked By J.A. MERCER Date 6/03	Bridge Design Supervisor S.M. GUNN Date 6/03
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
R.O.W. SHEET 20 OF 21	SHEET 13 OF 124



CURVE DATA #3
Δ = 21°03'34.3" RT
R = 150
T = 27.881
L = 55.134
E = 2.569
BANK = NC

ST. MICHAEL'S COLLEGE

PLAN
SCALE: 1:250

0 5 10 15
SCALE IN METERS

LEGEND

— UT — ··	EXISTING UNDERGROUND TELEPHONE LINE
— W — ··	EXISTING UNDERGROUND WATER LINE
— G — ··	EXISTING UNDERGROUND GAS LINE
— S — ··	EXISTING UNDERGROUND SEWER LINE
— AERIAL E&T —	EXISTING OVERHEAD ELECTRIC & TELEPHONE LINE
--- FM ---	EXISTING FORCED MAIN SEWER LINE
--- SD ---	EXISTING STORM DRAIN
HYD	HYDRANT
	VALVE
	MANHOLE
	MAILBOX
	SIGNS
	UTILITY POLE GUY WIRE
	GAS SHUTOFF
lp	LIGHT POLE
— P E&T — ··	PROPOSED OVERHEAD ELECTRIC & TELEPHONE BY OTHERS
— PS — ··	PROPOSED SEWER LINE
— PG — ··	PROPOSED GAS LINE BY OTHERS
— PW — ··	PROPOSED WATER LINE BY OTHERS
PB	PROPOSED PULL BOX BY OTHERS
FB	PROPOSED FLUSHING BASIN
	TOP OF CUT TO MATCH EXISTING
	TOE OF SLOPE TO MATCH EXISTING

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

SIGN LEGEND
N = NEW
R = REMOVE
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R & S = REMOVE AND RESET
R & N = REMOVE AND NEW
(1) RETURN TO CITY OF SO. BURLINGTON

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 TOWN OF COLCHESTER'S ACQUISITION OF LAND AND RIGHTS FOR THIS PROJECT.

SEE DRAINAGE AND SEWER NOTES & DETAILS ON SHEETS 13 & 14
(R.O.W. SHEETS 5 & 6)

VANASSE HANGEN BRUSTLIN, INC.

CONSTRUCTION NOTES

CONSTRUCT SIDEWALK
STA 10+575.0 - STA 10+603.0, LT
STA 10+613.3 - STA 10+660.0, LT

CONSTRUCT SIDEWALK RAMP, TYPE I
(SEE STD. C-3M)
STA 10+599.7 - STA 10+603.0, LT
STA 10+613.3 - STA 10+616.3, LT

CONSTRUCT CONCRETE CURB
STA 10+575 - STA 10+629.5, RT
STA 10+575 - STA 10+602.1, LT
STA 10+613.9 - STA 10+660, LT

DURABLE 100 mm WHITE LINE
STA 10+575 - STA 10+660, LT & RT
STA 10+648 - STA 10+660, RT TURNING LANE

DURABLE 100 mm YELLOW LINE (DOUBLE CENTER LINE)
STA 10+575 - STA 10+627.5

DURABLE 100 mm YELLOW LINE (SINGLE CENTER LINE)
STA 10+627.5 - STA 10+660, LT & RT
STA 10+627.5 - STA 10+648.5, LT & RT

DURABLE 200 mm DIAGONAL YELLOW LINE
STA 10+627.5 - STA 10+648

DURABLE SYMBOL
STA 10+653, RT ARROW-LEFT TURN
STA 10+653, RT ARROW-RIGHT TURN

CONSTRUCT DRIVE
STA 10+608, LT
50 BCP TYPE III, 6000 WIDE

STA 10+639, RT
COLD PLANE, 2000 APRON
50 BCP TYPE III, 2000 APRON

TRAVEL LANE TAPER
STA 10+625.4, LT (3300) TO
STA 10+660, LT (5660)

STA 10+598, RT (3300) TO
STA 10+648.5, RT (6300)

PAVED SHOULDER TAPER
STA 10+598, LT (1800) TO
STA 10+617.2, LT (2800) TO
STA 10+625.4, LT (2910) TO
STA 10+638.8, LT (3110) TO
STA 10+660, LT (300)

STA 10+598, RT (1800) TO
STA 10+630, RT (300)

COLD PLANING
STA 10+645 - STA 10+660

FOR R.O.W. USE ONLY

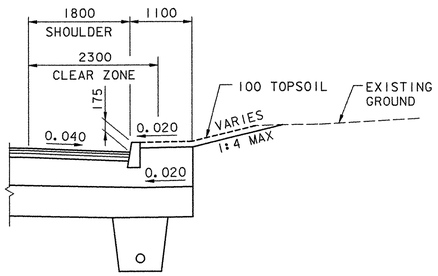
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta.
	Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
PLAN (5 OF 5)	
Designed By A.J. CRAWFORD	Drawn By C.S. MERCER
Checked By J.A. MERCER Date 6/03	Bridge Design Supervisor S.M. GUNN Date 6/03
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6) S C/2
I.G.C. Info.	
R.O.W. SHEET 21 OF 21	SHEET 14 OF 124

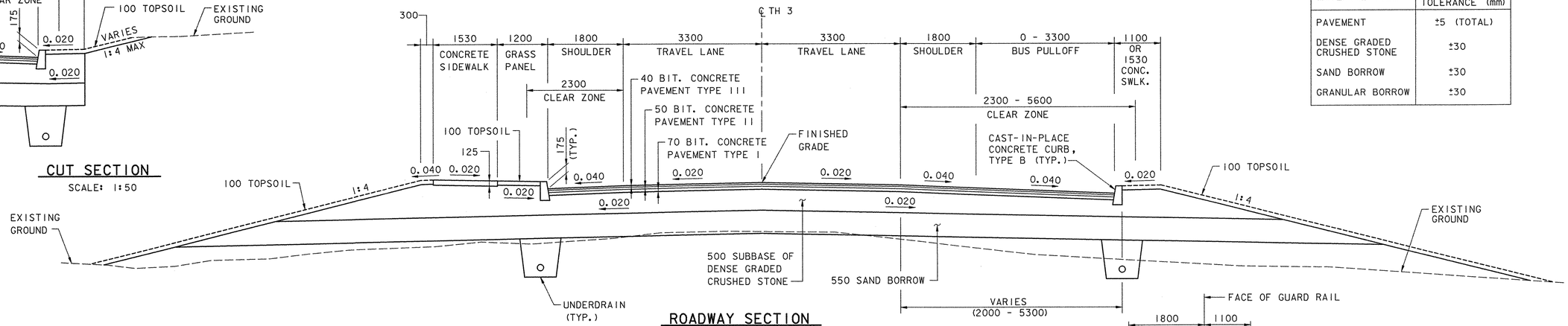
SOUTH APPROACH
(SOUTH BURLINGTON)

Metric

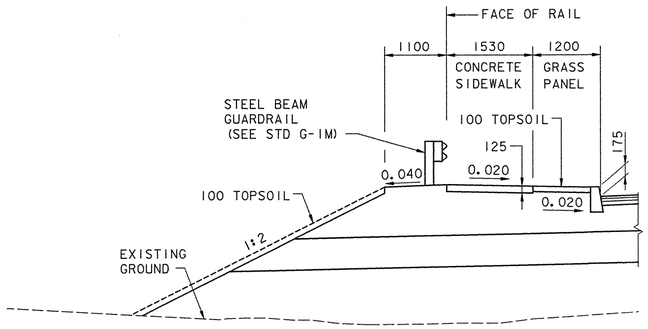
MATERIAL ITEM	THICKNESS TOLERANCE (mm)
PAVEMENT	±5 (TOTAL)
DENSE GRADED CRUSHED STONE	±30
SAND BORROW	±30
GRANULAR BORROW	±30



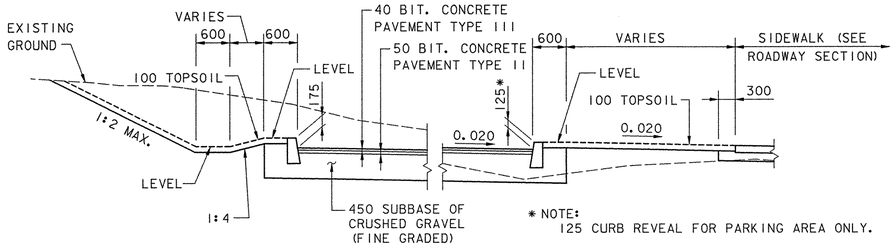
CUT SECTION
SCALE: 1:50



ROADWAY SECTION
SCALE: 1:50

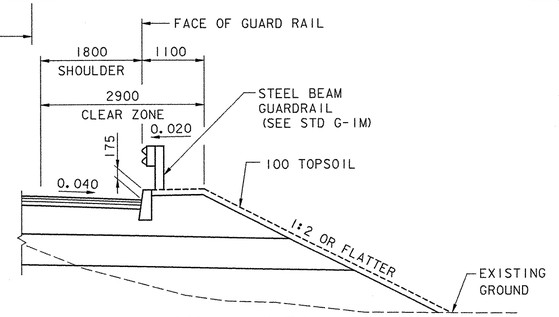


FILL SECTION WITH GUARD RAIL
SCALE: 1:50

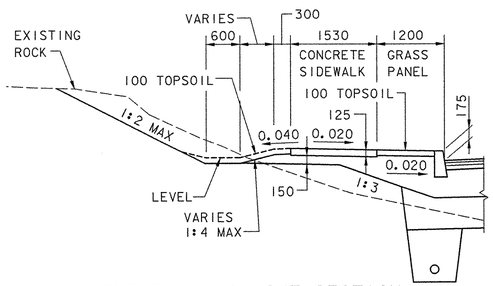


CUT SECTION - PARKING AREA
SCALE: 1:50

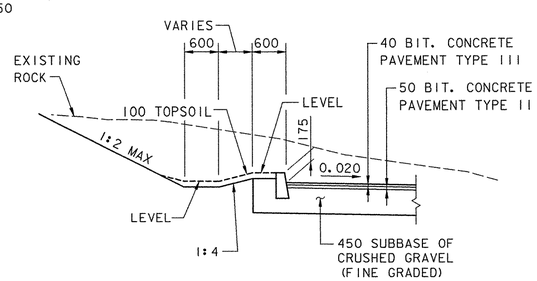
* NOTE:
125 CURB REVEAL FOR PARKING AREA ONLY.



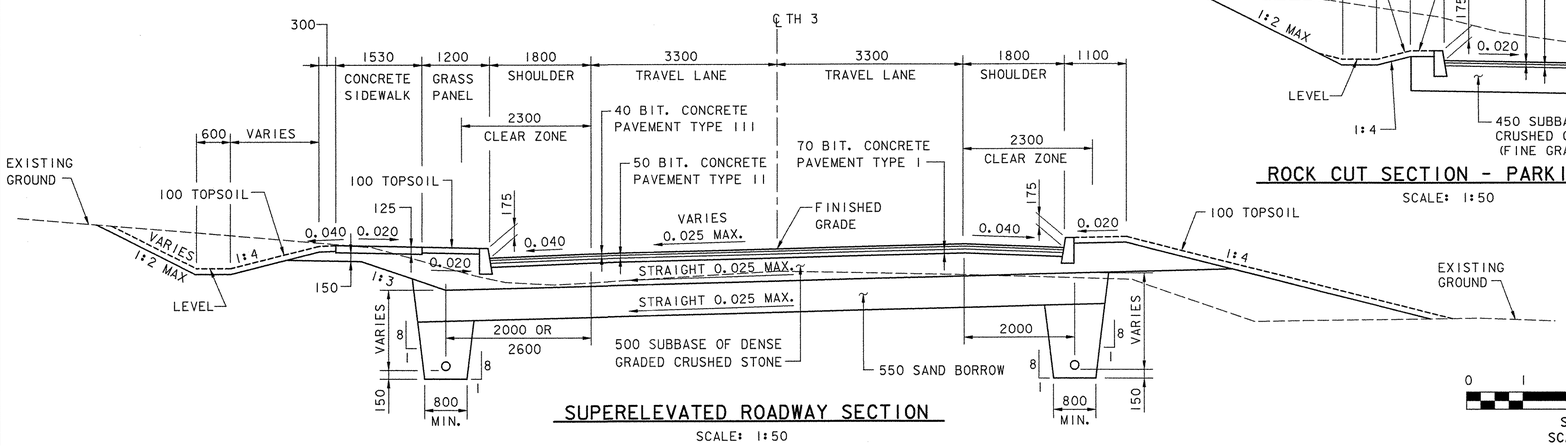
FILL SECTION WITH GUARD RAIL
SCALE: 1:50



TYPICAL ROCK CUT SECTION
SCALE: 1:50



ROCK CUT SECTION - PARKING AREA
SCALE: 1:50



SUPERELEVATED ROADWAY SECTION
SCALE: 1:50

0 1 2 3 4 5
SCALE = 1:50
SCALE IN METERS

NOTE:
1. SEE SHEET 16 FOR TYPICAL UNDERDRAIN DETAIL.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

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

ROADWAY TYPICAL SECTIONS - SOUTH

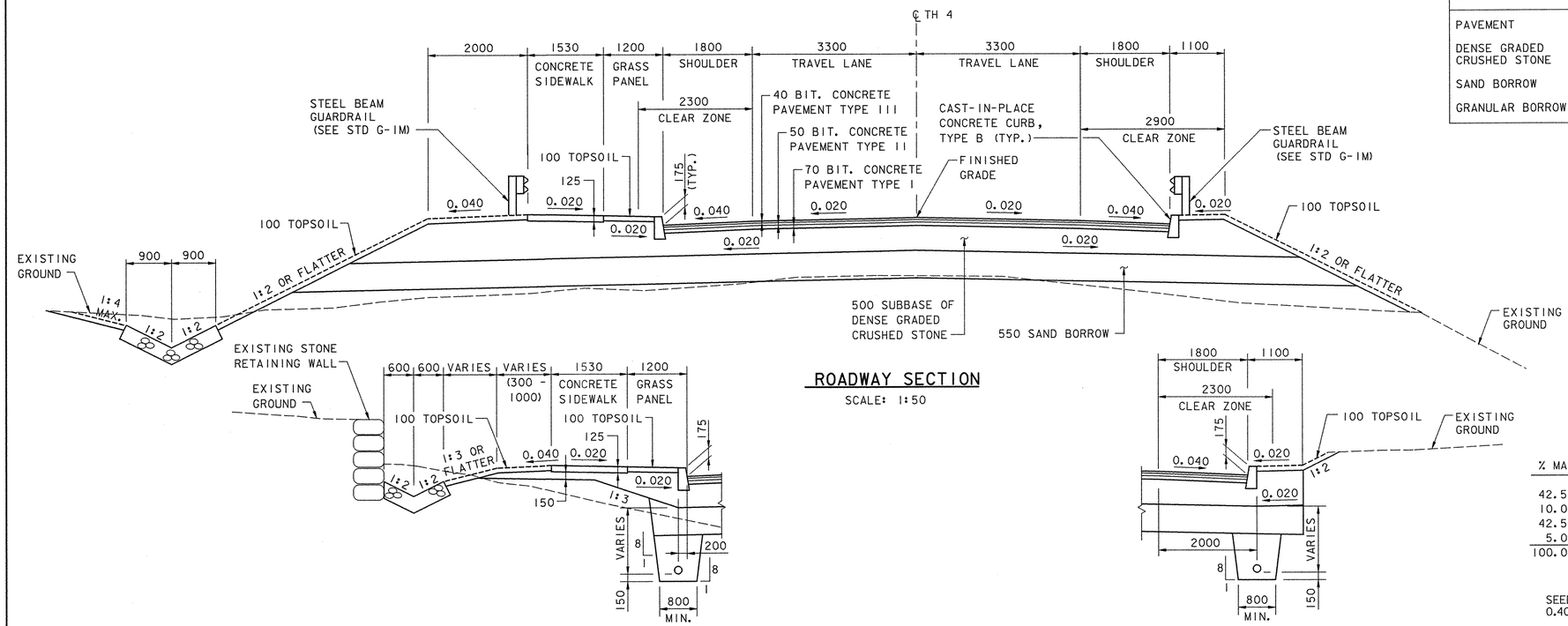
Designed By A.J. CRAWFORD	Drawn By R. J. TESTER
Checked By S.M. GUNN Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139TYP1	Sheet 15 of 124

VHB NO. 50735 plot date: 4/25/2005

NORTH APPROACH
(COLCHESTER)

Metric

MATERIAL ITEM	THICKNESS TOLERANCE (mm)
PAVEMENT	±5 (TOTAL)
DENSE GRADED CRUSHED STONE	±30
SAND BORROW	±30
GRANULAR BORROW	±30



ROADWAY SECTION

SCALE: 1:50

CUT SECTION

SCALE: 1:50

CUT SECTION

SCALE: 1:50

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.

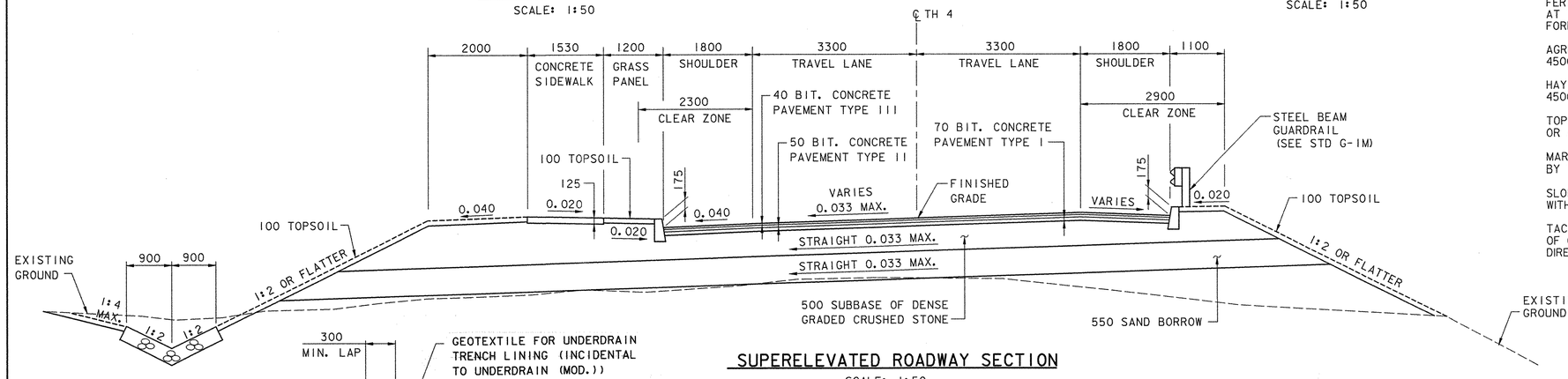
HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 4500 kg/ha, OR AS DIRECTED BY THE ENGINEER.

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.

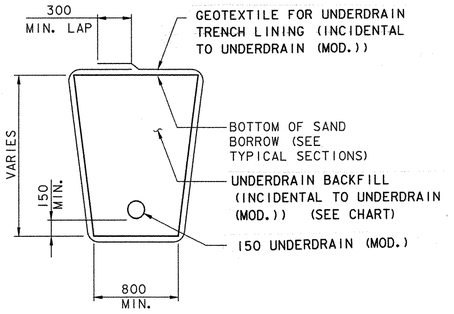
SLOPE ROUNDING: ALL CUT SLOPES TO BE ROUNDED IN ACCORDANCE WITH STANDARD SHEET B-5M.

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.



SUPERELEVATED ROADWAY SECTION

SCALE: 1:50



UNDERDRAIN DETAIL

NOT TO SCALE

CHART FOR UNDERDRAIN BACKFILL

BACKFILL FOR UNDERDRAIN SHALL MEET THE FOLLOWING GRADATION REQUIREMENTS:

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

0 1 2 3 4 5

SCALE = 1:50
SCALE IN METERS

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

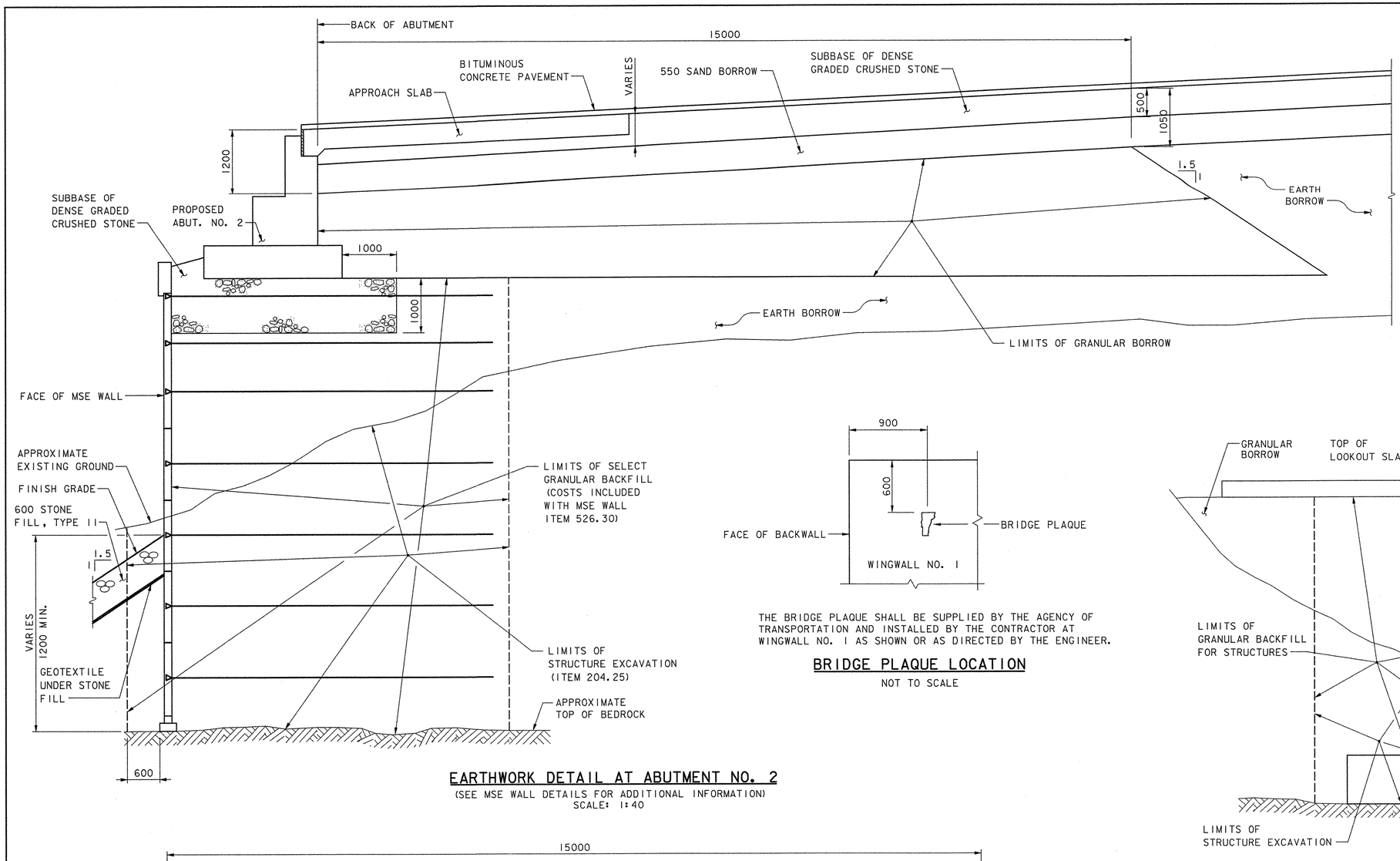
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.

ROADWAY TYPICAL SECTIONS - NORTH

Designed By A. J. CRAWFORD	Drawn By R. J. TESTER
Checked By S. M. GUNN Date 4/05	Bridge Design Supervisor S. M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139TYP2	Sheet 16 of 124

VHB NO. 50735

plot date: 4/25/2005



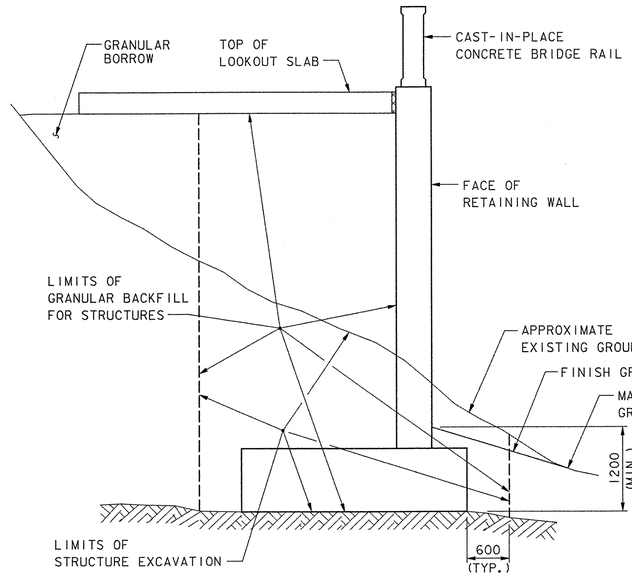
EARTHWORK DETAIL AT ABUTMENT NO. 2

(SEE MSE WALL DETAILS FOR ADDITIONAL INFORMATION)
SCALE: 1:40

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

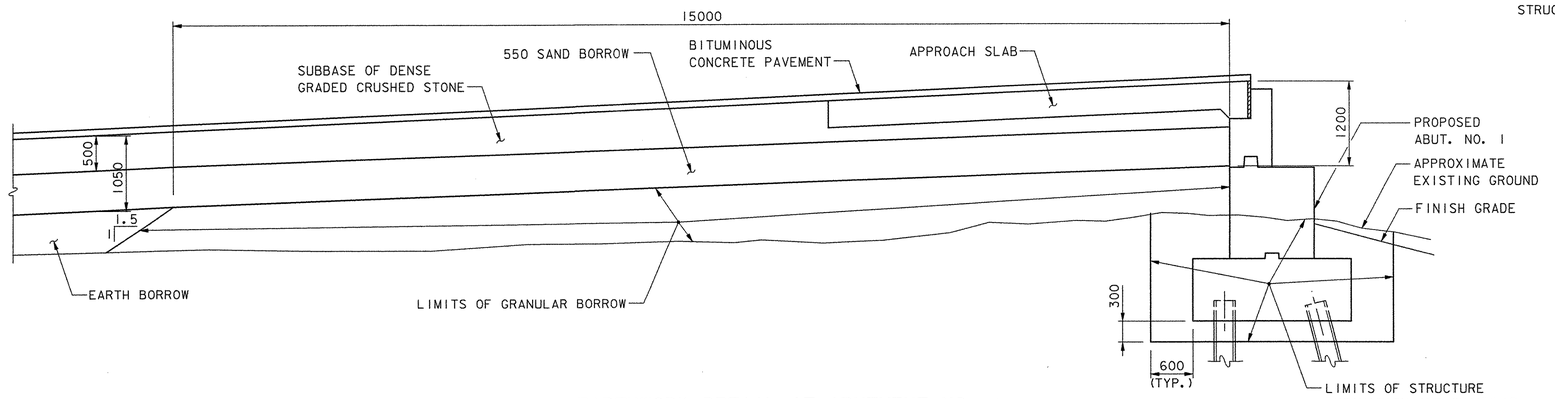
BRIDGE PLAQUE LOCATION

NOT TO SCALE



EARTHWORK DETAIL AT LOOKOUT

(SEE SHEETS 25-26A FOR ADDITIONAL INFORMATION)
SCALE: 1:40



EARTHWORK DETAIL AT ABUTMENT NO. 1

SCALE: 1:40

0 1000 2000 3000
SCALE IN MILLIMETERS

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta. / Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
TYPICAL EARTHWORK DETAILS	
Designed By M.A. COLGAN	Drawn By B.J. MASSE
Checked By M.A. COLGAN Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139ADT	Sheet 17 of 124

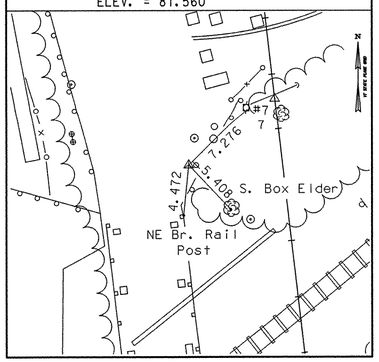
VHB NO. 50735 plot date: 4/25/2005

VAOT Metric

TRAVERSE TIES

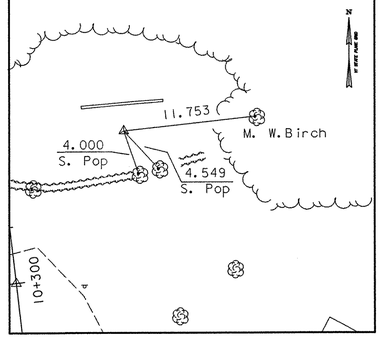
HVCTRL # 40

NORTH = 221346.688
EAST = 447321.916
ELEV. = 81.560



HVCTRL # 41

NORTH = 221259.097
EAST = 447351.569
ELEV. = 80.103



HVCTRL # 42

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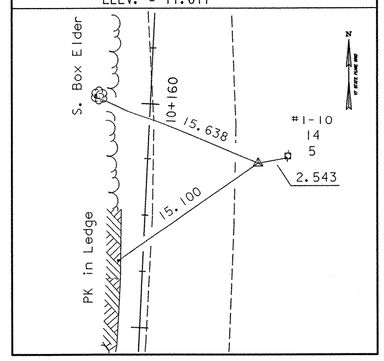
EAST = 447360.155
ELEV. = 77.617



HVCTRL # 43

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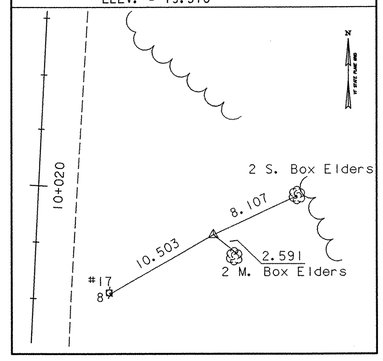
EAST = 447359.139
ELEV. = 79.570

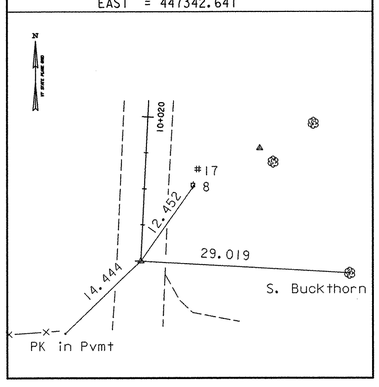


* Main Traverse Completed 04/03/91 by J. Sheridan P.C. & R. Bullock reviseded 01/30/02 by L. Orvis P.C. & T. Wilson

ALIGNMENT TIES

POB 10+000.000

NORTH = 220946.350
EAST = 447342.641



PC 10+172.845

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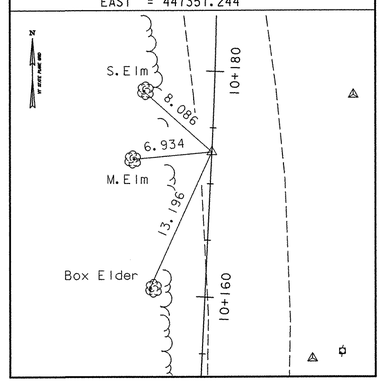
EAST = 447351.244



PT 10+239.094

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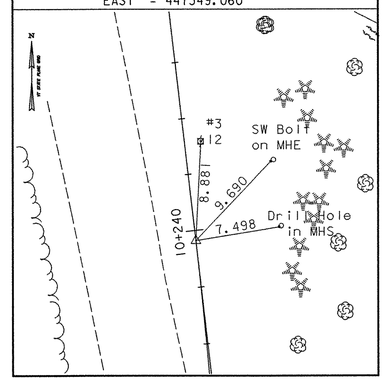
EAST = 447349.060



POT 10+308.000

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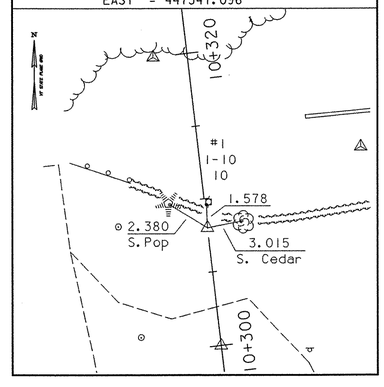
EAST = 447341.096



POT 10+380.000

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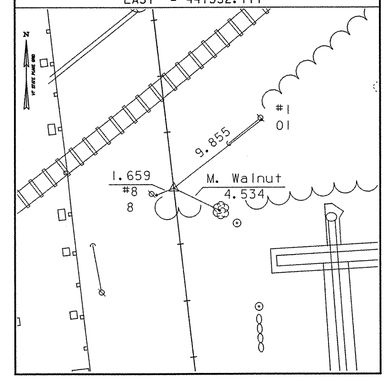
EAST = 447332.777



* Alignment Staked 04/03/91 by L. Orvis P.C. & T. Wilson

ALIGNMENT TIES

POT 10+407.800

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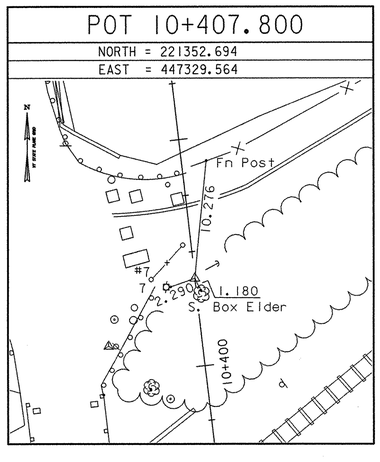
EAST = 447329.564



PT 10+570.111

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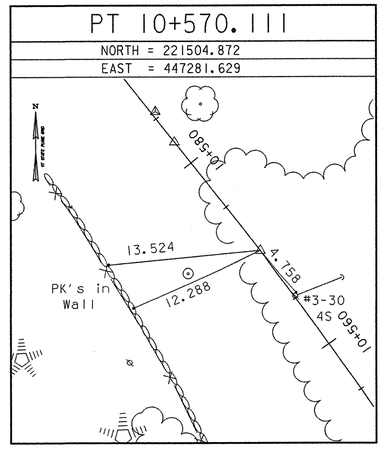
EAST = 447281.629



PC 10+582.377

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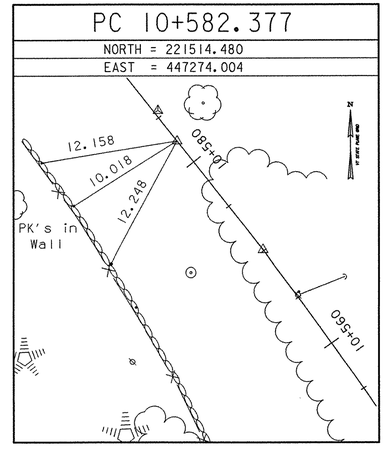
EAST = 447274.004



PT 10+637.511

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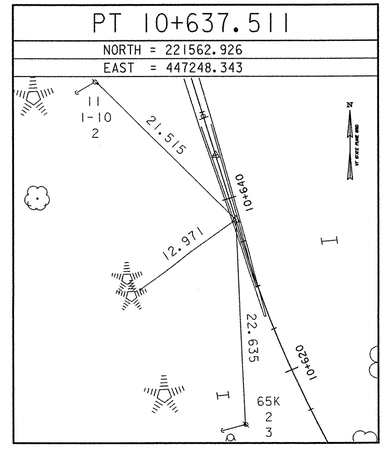
EAST = 447248.343



DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83 (92)

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

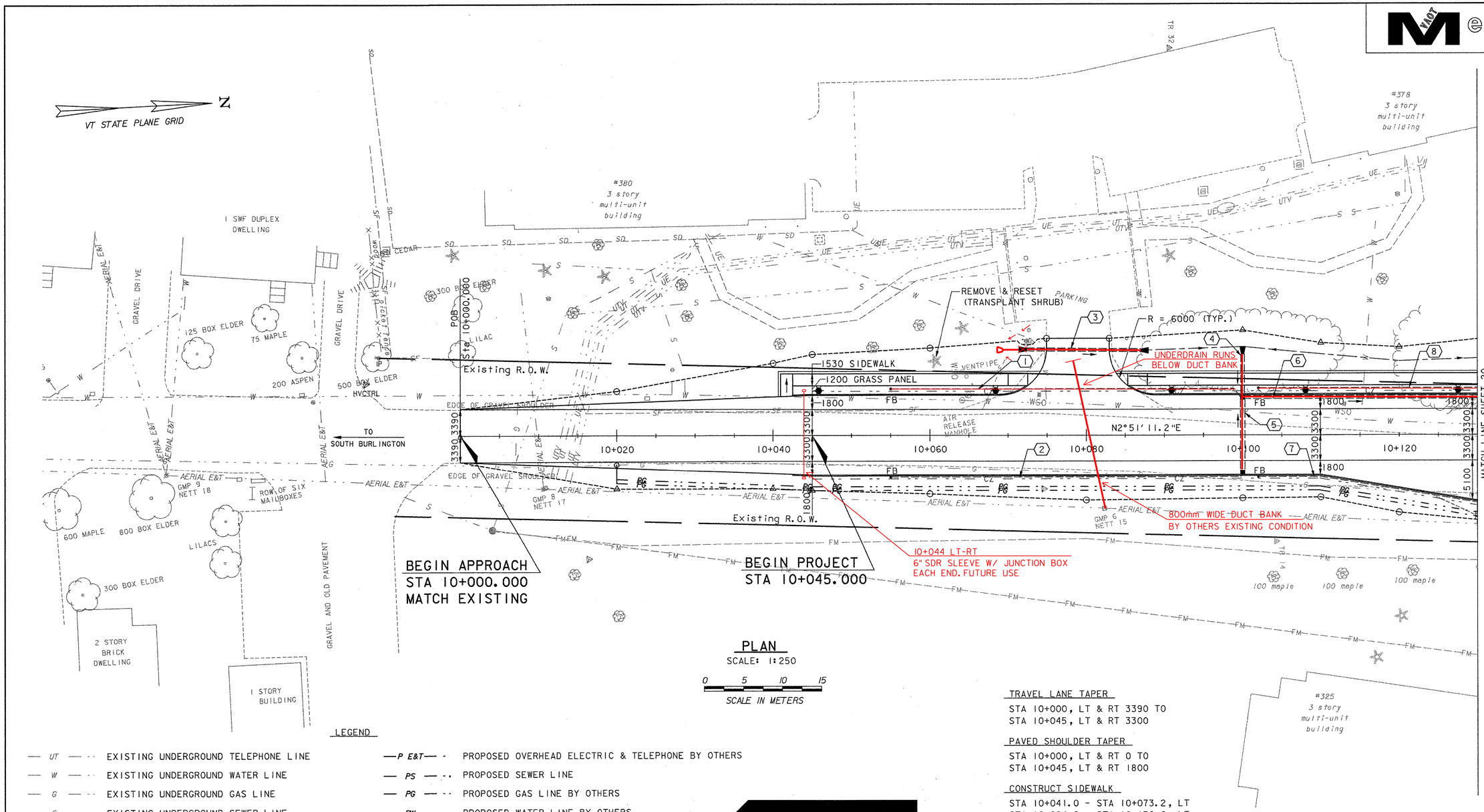
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.

TIE SHEET

Designed By VTRANS	Drawn By VTRANS
Checked By VTRANS Date 4/05	Bridge Design Supervisor VTRANS Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139TIE	Sheet 18 of 124

VHB Vanasse Hangen Brustlin, Inc.

VHB NO. 50735 plot date: 4/21/2005



PLAN

SCALE: 1:250

0 5 10 15

SCALE IN METERS

LEGEND

UT	EXISTING UNDERGROUND TELEPHONE LINE
W	EXISTING UNDERGROUND WATER LINE
G	EXISTING UNDERGROUND GAS LINE
S	EXISTING UNDERGROUND SEWER LINE
AERIAL E&T	EXISTING OVERHEAD ELECTRIC & TELEPHONE LINE
FM	EXISTING FORCED MAIN SEWER LINE
SD	EXISTING STORM DRAIN
	LEDGE
HYD	HYDRANT
	VALVE
	MANHOLE
	MAILBOX
	SIGNS
	UTILITY POLE GUY WIRE
	GAS SHUTOFF
lp	LIGHT POLE
P E&T	PROPOSED OVERHEAD ELECTRIC & TELEPHONE BY OTHERS
PS	PROPOSED SEWER LINE
PG	PROPOSED GAS LINE BY OTHERS
PW	PROPOSED WATER LINE BY OTHERS
PB	PROPOSED PULL BOX BY OTHERS
FB	PROPOSED FLUSHING BASIN
	PROPOSED CATCH BASIN OR DROP INLET
	PROPOSED UNDERDRAIN
	TOP OF CUT TO MATCH EXISTING
	TOE OF SLOPE TO MATCH EXISTING
	PROPOSED LIGHT POLE

SEE DRAINAGE AND SEWER NOTES & DETAILS ON SHEETS 27 & 28

SIGN LEGEND

N = NEW
R = REMOVE
B-B = BACK-TO-BACK
RET = RETAIN
R & S = REMOVE AND RESET
R & N = REMOVE AND NEW
(1) RETURN TO CITY OF SO. BURLINGTON
(2) RETURN TO TOWN OF COLCHESTER

CONSTRUCTION NOTES

CONSTRUCT CONCRETE CURB

STA 10+042.50 - STA 10+130.00, RT
STA 10+042.50 - STA 10+072.50, LT
STA 10+085.30 - STA 10+130.00, LT

DURABLE 100 mm WHITE LINE

STA 10+000 - STA 10+130, LT & RT

DURABLE 100 mm YELLOW LINE (DOUBLE CENTER LINE)

STA 10+000 - STA 10+130

CONSTRUCT BUS PULLOUT

STA 10+110, RT 5.1 m - STA 10+130, RT 8.4 m

COLD PLANING - BITUMINOUS PAVEMENT

STA 10+000 - STA 10+015

TRAVEL LANE TAPER

STA 10+000, LT & RT 3390 TO
STA 10+045, LT & RT 3300

PAVED SHOULDER TAPER

STA 10+000, LT & RT 0 TO
STA 10+045, LT & RT 1800

CONSTRUCT SIDEWALK

STA 10+041.0 - STA 10+073.2, LT
STA 10+084.6 - STA 10+130.0, LT

CONSTRUCT SIDEWALK RAMP, TYPE 1

(SEE STD. C-3M)
STA 10+070.0 - STA 10+073.2, LT
STA 10+084.6 - STA 10+087.8, LT

CONSTRUCT SIDEWALK RAMP, TYPE 6

(SEE STD. C-3M)
STA 10+041.7, LT 5.0 - LT 7.8

CONSTRUCT DRIVE

STA 10+079, LT
50 BCP TYPE III, 7200 WIDE

REMOVE EXISTING CURB

STA 10+123 - 10+130, RT

TRANSPLANTING SHRUBS

STA 10+061, LT
ALL TRANSPLANTING OF SHRUBS SHALL BE COORDINATED WITH PROPERTY OWNER AND THE RESIDENT ENGINEER

NOTE:

1. LIGHTING CONDUITS AND CONDUIT SLEEVES NOT SHOWN FOR CLARITY.

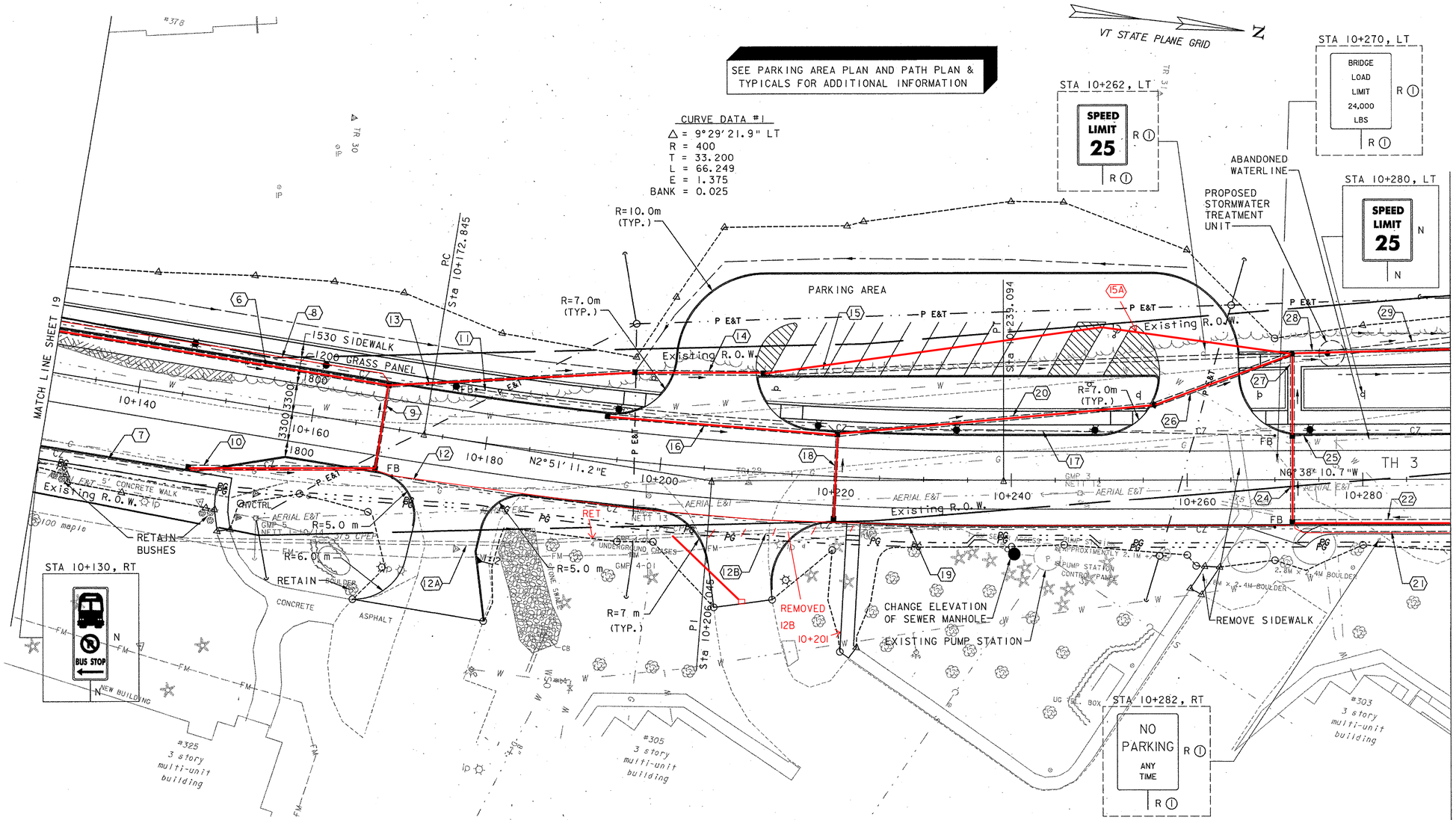
DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta. / Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
PLAN (1 OF 5)	
Designed By A. J. CRAWFORD	Drawn By C. S. MERCER
Checked By J. A. MERCER Date 4/05	Bridge Design Supervisor S. M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600 (6) S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139PNI	Sheet 19 of 124

VHB NO. 50735 plot date: 4/25/2005



LEGEND

UT	EXISTING UNDERGROUND TELEPHONE LINE
W	EXISTING UNDERGROUND WATER LINE
G	EXISTING UNDERGROUND GAS LINE
S	EXISTING UNDERGROUND SEWER LINE
AERIAL E&T	EXISTING OVERHEAD ELECTRIC & TELEPHONE LINE
FM	EXISTING FORCED MAIN SEWER LINE
SD	EXISTING STORM DRAIN
	LEDGE
HYD	HYDRANT
	VALVE
	MANHOLE
	MAILBOX
	SIGNS
	UTILITY POLE GUY WIRE
	GAS SHUTOFF
	LIGHT POLE
P E&T	PROPOSED OVERHEAD ELECTRIC & TELEPHONE BY OTHERS
PS	PROPOSED SEWER LINE
PG	PROPOSED GAS LINE BY OTHERS
PW	PROPOSED WATER LINE BY OTHERS
PB	PROPOSED PULL BOX BY OTHERS
FB	PROPOSED FLUSHING BASIN
	PROPOSED CATCH BASIN OR DROP INLET
	PROPOSED UNDERDRAIN
	TOP OF CUT TO MATCH EXISTING
	TOE OF SLOPE TO MATCH EXISTING
	REMOVE & RESET LIGHT POLE
	PROPOSED LIGHT POLE

SIGN LEGEND

N = NEW
R = REMOVE
B-B = BACK-TO-BACK
RET = RETAIN
R & S = REMOVE AND RESET
R & N = REMOVE AND NEW
(1) RETURN TO CITY OF SO. BURLINGTON
(2) RETURN TO TOWN OF COLCHESTER

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

PLAN
SCALE: 1:250
0 5 10 15
SCALE IN METERS

SEE DRAINAGE AND SEWER NOTES & DETAILS ON SHEETS 27 & 28

TRANSPLANTING SHRUBS

STA 10+189.0, RT 10.4 m
STA 10+191.7, RT 11.3 m
STA 10+217.7, RT 11.3 m
STA 10+218.9, RT 16.4 m
STA 10+220.4, RT 7.9 m
STA 10+221.8, RT 11.8 m
STA 10+224.1, RT 6.3 m
STA 10+229.2, RT 8.1 m
STA 10+234.0, RT 8.8 m
STA 10+235.5, RT 8.2 m
STA 10+237.5, RT 9.0 m
STA 10+241.5, RT 9.8 m
STA 10+250.8, RT 9.2 m
STA 10+257.4, RT 8.3 m
STA 10+271.3, RT 9.3 m
STA 10+279.3, RT 7.9 m

ALL TRANSPLANTING OF SHRUBS SHALL BE COORDINATED WITH PROPERTY OWNER AND THE RESIDENT ENGINEER

REMOVE & RESET LIGHT POLES

STA 10+172, RT TO 10+170.5, RT 15.5
STA 10+214, RT TO 10+215, RT 12.0

VHB Vanasse Hangen Brustlin, Inc.

Metric

CONSTRUCTION NOTES

CONSTRUCT SIDEWALK
STA 10+130.00 - STA 10+197.60, LT
STA 10+130.00 - STA 10+151.00, RT
STA 10+222.00 - STA 10+222.80, RT
STA 10+212.40 - STA 10+254.60, LT
STA 10+268.20 - STA 10+290.00, LT

CONSTRUCT DRIVE
STA 10+177, RT
50 BCP TYPE III, 7500 WIDE
STA 10+205, LT
40 BCP TYPE III,
50 BCP TYPE II, 9000 WIDE
STA 10+210, RT
50 BCP TYPE III, 7600 WIDE
STA 10+261, LT
40 BCP TYPE III,
50 BCP TYPE II, 9000 WIDE

CONSTRUCT CONCRETE CURB
STA 10+130 - STA 10+173, RT
STA 10+130 - STA 10+198, LT
STA 10+182 - STA 10+206, RT
STA 10+213 - STA 10+222, RT
STA 10+213 - STA 10+254, LT
STA 10+223 - STA 10+290, RT
STA 10+269 - STA 10+290, LT

CONSTRUCT SIDEWALK RAMP, TYPE I (SEE STD. C-3M)
STA 10+195.0 - STA 10+198.4, LT
STA 10+212.4 - STA 10+215.8, LT
STA 10+222, RT
STA 10+251.3 - STA 10+254.6, LT
STA 10+268.2 - STA 10+271.5, LT
STA 10+265.9 - STA 10+268.4, LT

STEEL BEAM GUARDRAIL
STA 10+268.3 - STA 10+290.0, RT

ANCHOR FOR STEEL BEAM GUARDRAIL
STA 10+270.3, RT

DURABLE 100 mm WHITE LINE
STA 10+130 - STA 10+290, LT & RT

DURABLE 100 mm YELLOW LINE (DOUBLE CENTER LINE)
STA 10+130 - STA 10+290

CONSTRUCT BUS PULLOUT
STA 10+130.00 - STA 10+147.80, RT 8.4 m
STA 10+147.80, RT 8.4 m - STA 10+157.70, RT 5.1 m

REMOVE EXISTING CURB
STA 10+130 - STA 10+160, RT

REMOVE & RESET BOULDERS
STA 10+267, RT
STA 10+274, RT
(ALL COST INCIDENTAL TO ITEM 203.16)
BOULDERS SHALL BE PLACED IN A NEW LOCATION AS APPROVED BY PROPERTY OWNER AND THE RESIDENT ENGINEER

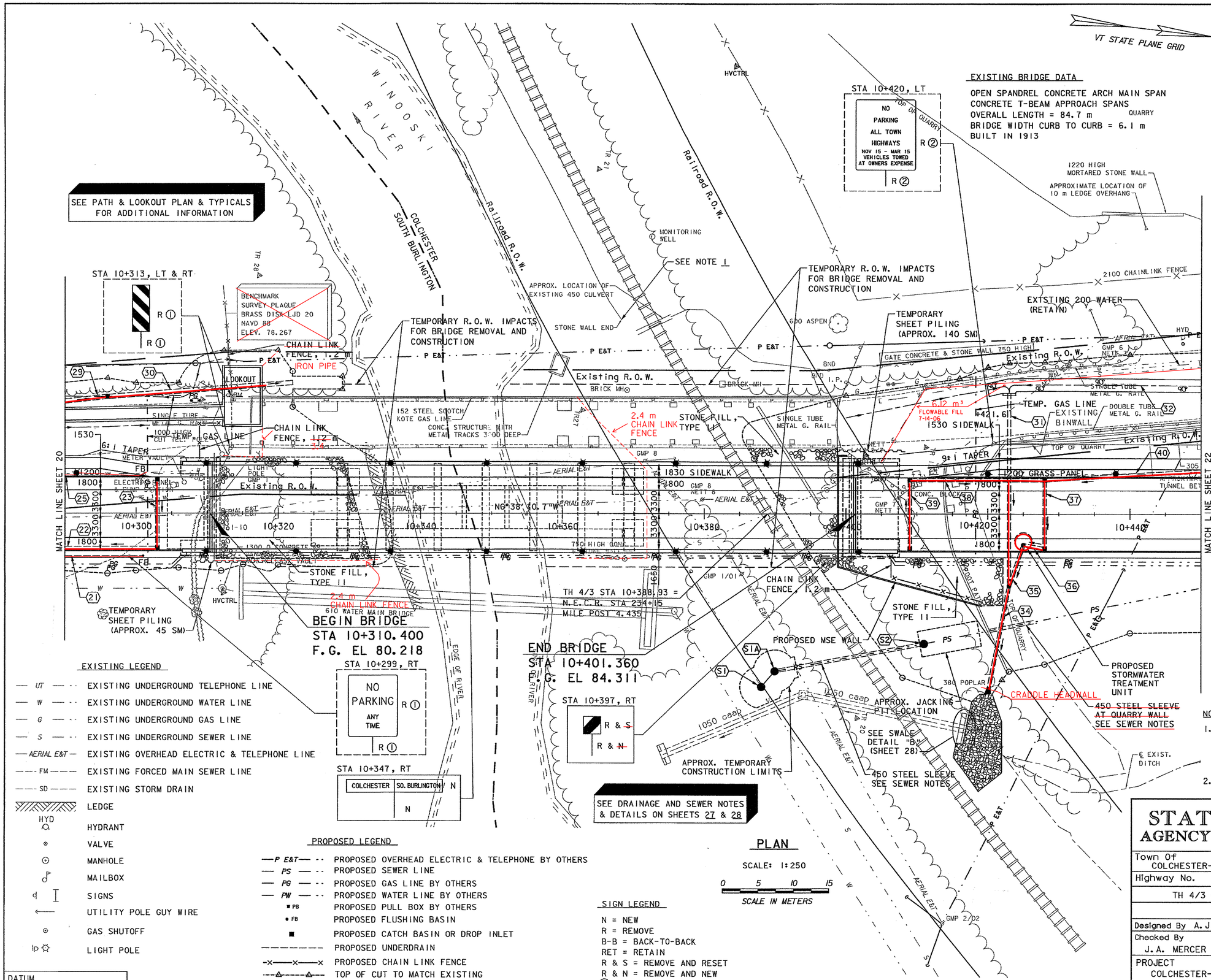
CHANGING ELEVATION OF SEWER MANHOLE
STA 10+240, RT

NOTE:
1. LIGHTING CONDUITS AND CONDUIT SLEEVES NOT SHOWN FOR CLARITY.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta.
	Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
PLAN (2 OF 5)	
Designed By A. J. CRAWFORD	Drawn By C. S. MERCER
Checked By J. A. MERCER Date 4/05	Bridge Design Supervisor S. M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139PN2	Sheet 20 of 124

VHB NO. 50735 plot date: 4/25/2005



EXISTING LEGEND

- UT — EXISTING UNDERGROUND TELEPHONE LINE
- W — EXISTING UNDERGROUND WATER LINE
- G — EXISTING UNDERGROUND GAS LINE
- S — EXISTING UNDERGROUND SEWER LINE
- AERIAL E&T — EXISTING OVERHEAD ELECTRIC & TELEPHONE LINE
- FM — EXISTING FORCED MAIN SEWER LINE
- SD — EXISTING STORM DRAIN
- LEDGE
- HYD HYDRANT
- VALVE
- MANHOLE
- MAILBOX
- SIGNS
- UTILITY POLE GUY WIRE
- GAS SHUTOFF
- lp LIGHT POLE

PROPOSED LEGEND

- P E&T — PROPOSED OVERHEAD ELECTRIC & TELEPHONE BY OTHERS
- PS — PROPOSED SEWER LINE
- PG — PROPOSED GAS LINE BY OTHERS
- PW — PROPOSED WATER LINE BY OTHERS
- PB — PROPOSED PULL BOX BY OTHERS
- FB — PROPOSED FLUSHING BASIN
- PROPOSED CATCH BASIN OR DROP INLET
- PROPOSED UNDERDRAIN
- PROPOSED CHAIN LINK FENCE
- TOP OF CUT TO MATCH EXISTING
- TOE OF SLOPE TO MATCH EXISTING
- PROPOSED LIGHT POLE

SIGN LEGEND

N = NEW
R = REMOVE
B-B = BACK-TO-BACK
RET = RETAIN
R & S = REMOVE AND RESET
R & N = REMOVE AND NEW
(1) RETURN TO CITY OF SO. BURLINGTON
(2) RETURN TO TOWN OF COLCHESTER

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

PLAN

SCALE: 1:250

0 5 10 15

SCALE IN METERS

CONSTRUCTION NOTES

CONSTRUCT CONCRETE CURB

STA 10+290.00 - STA 10+301.50, LT & RT
STA 10+301.50 - STA 10+306.50, LT & RT
(175 TO 225 REVEAL)
STA 10+407.30 - STA 10+412.30, LT & RT
(225 TO 175 REVEAL)
STA 10+412.30 - STA 10+450.00, LT & RT

CONSTRUCT SIDEWALK

STA 10+290 - STA 10+310.4, LT
STA 10+401.4 - STA 10+450, LT

CAST-IN-PLACE CONCRETE BRIDGE RAIL

STA 10+306.5 - STA 10+407.3, LT & RT
STA 10+312.1 - STA 10+317.2, LT

STEEL BEAM GUARD RAIL

STA 10+290 - STA 10+306.5, RT
STA 10+295 - STA 10+306.5, LT
STA 10+407.3 - STA 10+428, LT
STA 10+407.3 - STA 10+450, RT

ANCHOR FOR STEEL BEAM GUARD RAIL

STA 10+297, LT
STA 10+426, LT

DURABLE 100 mm WHITE LINE

STA 10+290 - STA 10+450, LT & RT

DURABLE 100 mm YELLOW LINE (DOUBLE CENTER LINE)

STA 10+290 - STA 10+450

REMOVE EXISTING GUARD RAIL

STA 10+309 - STA 10+313, LT
STA 10+311 - STA 10+313, LT
STA 10+400 - STA 10+403, LT
STA 10+400 - STA 10+408, LT
STA 10+400 - STA 10+441, LT
STA 10+416, RT - STA 10+450, LT

REMOVE EXISTING FENCE

STA 10+313, LT
STA 10+417, RT - STA 10+450, LT

CONSTRUCT CHAIN LINK FENCE, 1.2 m

STA 10+309.0, LT 7.3 m - LT 12.7 m
STA 10+309.0, LT 12.7 m -
STA 10+312.0, LT 12.7 m
STA 10+313, LT 20.5 m - LT 24.2 m
STA 10+406.0, RT 5.5 m - RT 9.2 m
STA 10+406.0, RT 9.2 m -
STA 10+419, RT 12.6 m

CONSTRUCT BRACING ASSEMLY FOR CHAIN LINK FENCE

STA 10+309.9, LT

NOTES:

1. SEE CONSTRUCTION NOTE 14, SHEET 51 FOR INFORMATION REGARDING RETAINING WALL ALONG RAILROAD AT STA 10+368.6 LT. 27.0 (+/-).
2. LIGHTING CONDUITS AND CONDUIT SLEEVES NOT SHOWN FOR CLARITY.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

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

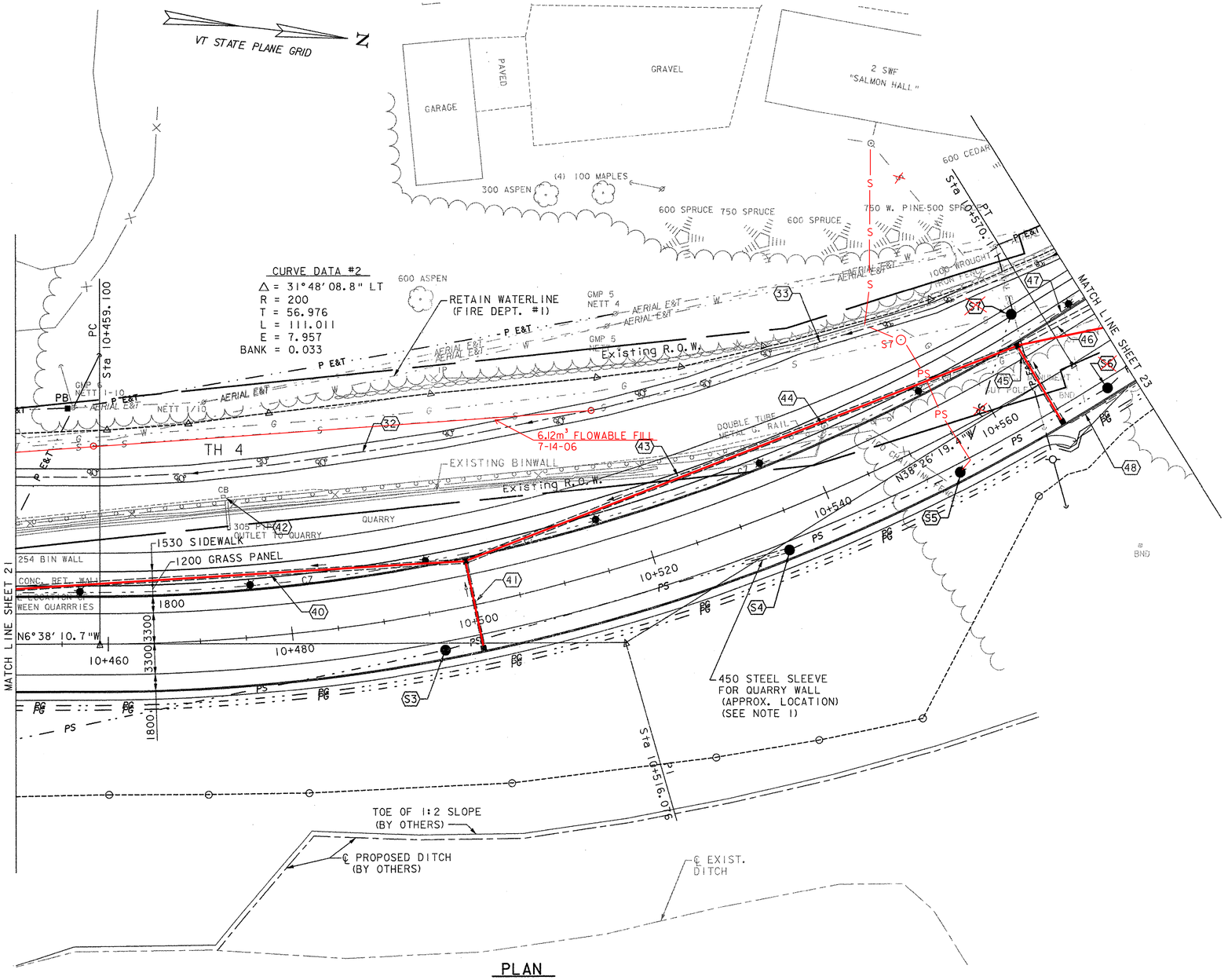
PLAN (3 OF 5)

Designed By A. J. CRAWFORD	Drawn By C. S. MERCER
Checked By J. A. MERCER Date 4/05	Bridge Design Supervisor S. M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600 (6) S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139PN3	Sheet 21 of 124

VHB Vanasse Hangen Brustlin, Inc.

VHB NO. 50735

plot date: 5/24/2005



PLAN
SCALE: 1:250

0 5 10 15
SCALE IN METERS

LEGEND

- UT — EXISTING UNDERGROUND TELEPHONE LINE
- W — EXISTING UNDERGROUND WATER LINE
- G — EXISTING UNDERGROUND GAS LINE
- S — EXISTING UNDERGROUND SEWER LINE
- AERIAL E&T — EXISTING OVERHEAD ELECTRIC & TELEPHONE LINE
- FM — EXISTING FORCED MAIN SEWER LINE
- SD — EXISTING STORM DRAIN
- HYD — HYDRANT
- VALVE
- MANHOLE
- MAILBOX
- SIGNS
- UTILITY POLE GUY WIRE
- GAS SHUTOFF
- LP — LIGHT POLE
- P E&T — PROPOSED OVERHEAD ELECTRIC & TELEPHONE BY OTHERS
- PS — PROPOSED SEWER LINE
- PG — PROPOSED GAS LINE BY OTHERS
- PW — PROPOSED WATER LINE BY OTHERS
- PB — PROPOSED PULL BOX BY OTHERS
- FB — PROPOSED FLUSHING BASIN
- PROPOSED CATCH BASIN OR DROP INLET
- PROPOSED UNDERDRAIN
- TOP OF CUT TO MATCH EXISTING
- TOE OF SLOPE TO MATCH EXISTING
- PROPOSED LIGHT POLE

SIGN LEGEND

N = NEW
R = REMOVE
B-B = BACK-TO-BACK
RET = RETAIN
R & S = REMOVE AND RESET
R & N = REMOVE AND NEW
(1) RETURN TO CITY OF SO. BURLINGTON
(2) RETURN TO TOWN OF COLCHESTER

NOTES:

1. PRIOR TO THE INSTALLATION OF THE STEEL SLEEVE, THE CONTRACTOR SHALL VERFIY THE LOCATION OF THE QUARRY WALL. ACTUAL WALL LOCATION HAS NOT BEEN SURVEYED.
2. LIGHTING CONDUITS AND CONDUIT SLEEVES NOT SHOWN FOR CLARITY.

CONSTRUCTION NOTES

CONSTRUCT SIDEWALK
STA 10+450 - STA 10+575, LT

CONSTRUCT CONCRETE CURB
STA 10+450.00 - STA 10+575.00, RT
STA 10+450.00 - STA 10+575.00, LT

STEEL BEAM GUARDRAIL
STA 10+450 - STA 10+567, RT

ANCHOR FOR STEEL BEAM GUARDRAIL
STA 10+565, RT

DURABLE 100 mm WHITE LINE
STA 10+450 - STA 10+575, LT & RT

DURABLE 100 mm YELLOW LINE (DOUBLE CENTER LINE)
STA 10+450 - STA 10+575

REMOVE EXISTING GUARD RAIL
STA 10+450 - STA 10+550, LT

REMOVE EXISTING FENCE
STA 10+450 - STA 10+550, LT

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

SEE DRAINAGE AND SEWER NOTES & DETAILS ON SHEETS 27 & 28

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

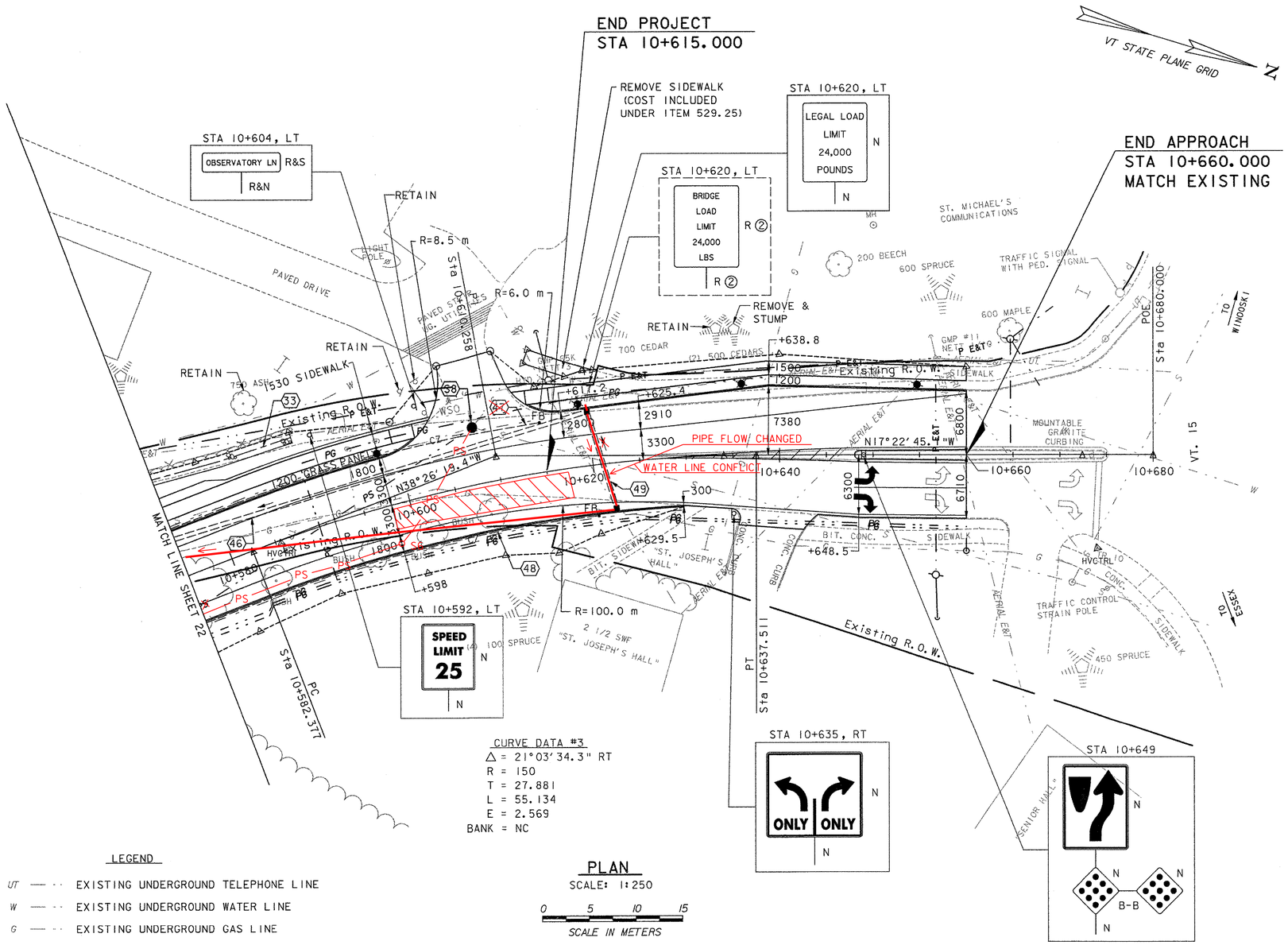
Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta.
	Surv. Sta.

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

PLAN (4 OF 5)

Designed By A.J. CRAWFORD	Drawn By C.S. MERCER
Checked By J.A. MERCER Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139PN4	Sheet 22 of 124

VHB NO. 50735 plot date: 4/25/2005



CURVE DATA #3
△ = 21°03'34.3" RT
R = 150
T = 27.881
L = 55.134
E = 2.569
BANK = NC

PLAN
SCALE: 1:250
0 5 10 15
SCALE IN METERS

LEGEND

UT	EXISTING UNDERGROUND TELEPHONE LINE
W	EXISTING UNDERGROUND WATER LINE
G	EXISTING UNDERGROUND GAS LINE
S	EXISTING UNDERGROUND SEWER LINE
AERIAL E&T	EXISTING OVERHEAD ELECTRIC & TELEPHONE LINE
FM	EXISTING FORCED MAIN SEWER LINE
SD	EXISTING STORM DRAIN
HYD	HYDRANT
	VALVE
	MANHOLE
	MAILBOX
	SIGNS
	UTILITY POLE GUY WIRE
	GAS SHUTOFF
lp	LIGHT POLE
P E&T	PROPOSED OVERHEAD ELECTRIC & TELEPHONE BY OTHERS
PS	PROPOSED SEWER LINE
PG	PROPOSED GAS LINE BY OTHERS
PW	PROPOSED WATER LINE BY OTHERS
PB	PROPOSED PULL BOX BY OTHERS
FB	PROPOSED FLUSHING BASIN
	PROPOSED CATCH BASIN OR DROP INLET
	PROPOSED UNDERDRAIN
	TOP OF CUT TO MATCH EXISTING
	TOE OF SLOPE TO MATCH EXISTING
	PROPOSED LIGHT POLE

SIGN LEGEND

N = NEW
R = REMOVE
B-B = BACK-TO-BACK
RET = RETAIN
R & S = REMOVE AND RESET
R & N = REMOVE AND NEW
(1) RETURN TO CITY OF SO. BURLINGTON
(2) RETURN TO TOWN OF COLCHESTER

SEE DRAINAGE AND SEWER NOTES & DETAILS ON SHEETS 27 & 28

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

Metric

CONSTRUCTION NOTES

CONSTRUCT SIDEWALK
STA 10+575.0 - STA 10+603.0, LT
STA 10+613.3 - STA 10+660.0, LT

CONSTRUCT SIDEWALK RAMP, TYPE I
(SEE STD. C-3M)
STA 10+599.7 - STA 10+603.0, LT
STA 10+613.3 - STA 10+616.3, LT

CONSTRUCT CONCRETE CURB
STA 10+575.00 - STA 10+629.50, RT
STA 10+575.00 - STA 10+602.10, LT
STA 10+613.90 - STA 10+660.00, LT

DURABLE 100 mm WHITE LINE
STA 10+575 - STA 10+660, LT & RT
STA 10+648 - STA 10+660, RT TURNING LANE

DURABLE 100 mm YELLOW LINE (DOUBLE CENTER LINE)
STA 10+575 - STA 10+627.5

DURABLE 100 mm YELLOW LINE (SINGLE CENTER LINE)
STA 10+627.5 - STA 10+660, LT & RT
STA 10+627.5 - STA 10+648.5, LT & RT

DURABLE 200 mm DIAGONAL YELLOW LINE
STA 10+627.5 - STA 10+648

DURABLE SYMBOL
STA 10+653, RT ARROW-LEFT TURN
STA 10+653, RT ARROW-RIGHT TURN

CONSTRUCT DRIVE

STA 10+608, LT
50 BCP TYPE III, 6000 WIDE

STA 10+639, RT
COLD PLANE, 2000 APRON
50 BCP TYPE III, 2000 APRON

TRAVEL LANE TAPER
STA 10+625.4, LT (3300) TO
STA 10+660, LT (5660)

STA 10+598, RT (3300) TO
STA 10+648.5, RT (6300)

PAVED SHOULDER TAPER
STA 10+598, LT (1800) TO
STA 10+617.2, LT (2800) TO
STA 10+625.4, LT (2910) TO
STA 10+638.8, LT (3110) TO
STA 10+660, LT (300)

STA 10+598, RT (1800) TO
STA 10+630, RT (300)

COLD PLANING - BITUMINOUS PAVEMENT
STA 10+645 - STA 10+660

NOTE:
1. LIGHTING CONDUITS AND CONDUIT SLEEVES NOT SHOWN FOR CLARITY.

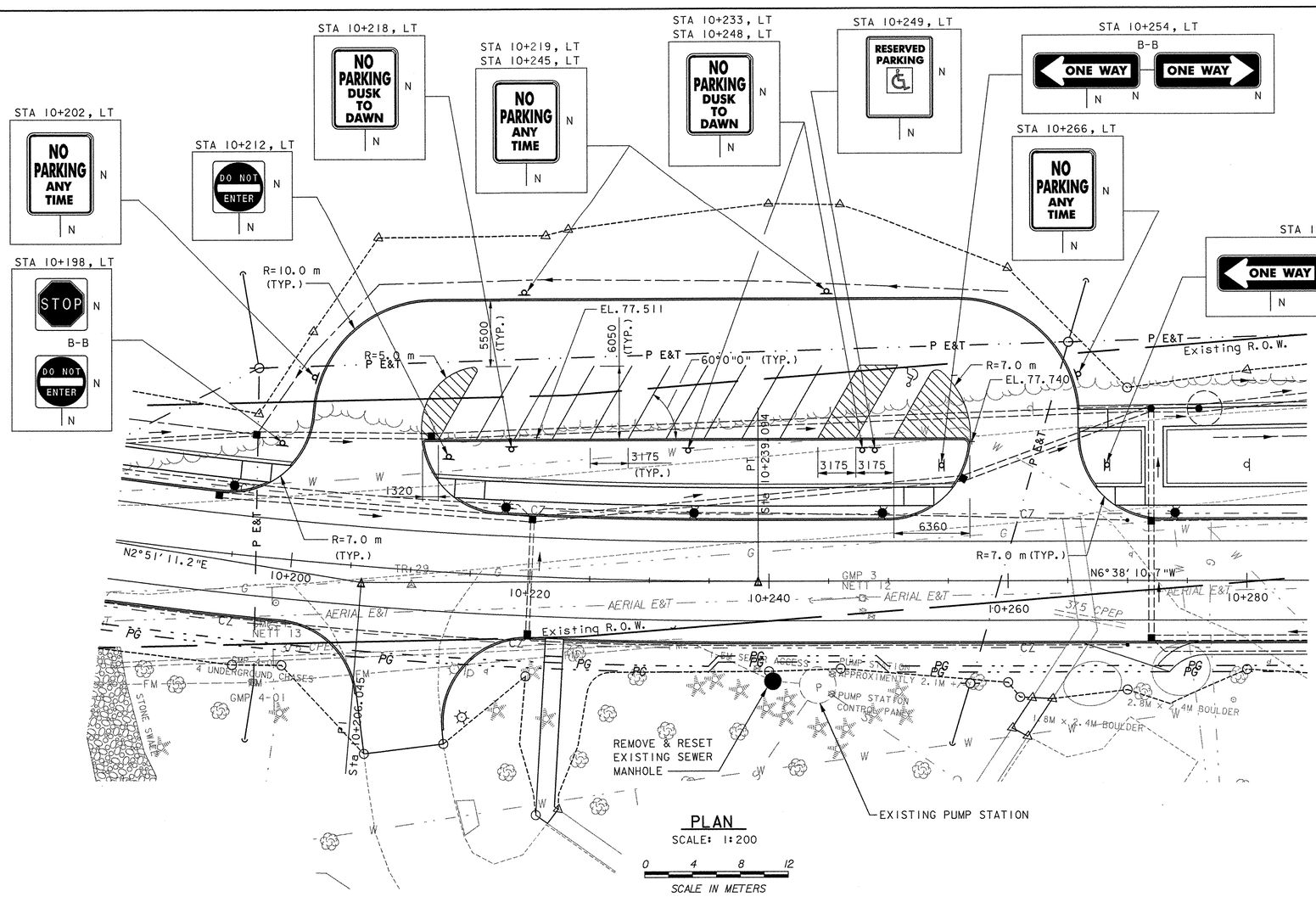
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
	Log Sta.
Highway No. TH 4/3	Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
PLAN (5 OF 5)	
Designed By A.J. CRAWFORD	Drawn By C.S. MERCER
Checked By J.A. MERCER Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600 (6) S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139PN5	Sheet 23 of 124

VHB Vanasse Hangen Brustlin, Inc.

VHB NO. 50735

plot date: 4/25/2005



CONSTRUCTION NOTES

CONSTRUCT CONCRETE CURB
STA 10+199 - STA 10+268, LT
STA 10+210 - STA 10+213, LT
STA 10+210 - STA 10+257, LT
STA 10+254 - STA 10+257, LT

DURABLE LETTER OR SYMBOL
STA 10+252, LT HANDICAPPED MARKING

CONSTRUCT PARKING AREA
40 BCP TYPE III, 50 BCP TYPE II
STA 10+200 - STA 10+266, LT

DURABLE DIAGONAL 100 mm WHITE LINE (PARKING SPACES)
STA 10+215 - STA 10+241, LT

DURABLE DIAGONAL 100 mm WHITE LINES (HANDICAPPED PARKING SPACE)
STA 10+244 - STA 10+250, LT

DURABLE DIAGONAL 200 mm WHITE LINES (PAINTED ISLAND)
STA 10+210 - STA 10+215, LT
STA 10+250 - STA 10+257, LT

EXISTING LEGEND

UT	EXISTING UNDERGROUND TELEPHONE LINE
W	EXISTING UNDERGROUND WATER LINE
G	EXISTING UNDERGROUND GAS LINE
S	EXISTING UNDERGROUND SEWER LINE
AERIAL E&T	EXISTING OVERHEAD ELECTRIC & TELEPHONE LINE
FM	EXISTING FORCED MAIN SEWER LINE
SD	EXISTING STORM DRAIN
HYD	HYDRANT
	VALVE
	MANHOLE
	MAILBOX
	SIGNS
	UTILITY POLE GUY WIRE
	GAS SHUTOFF
lp	LIGHT POLE

PROPOSED LEGEND

P E&T	PROPOSED OVERHEAD ELECTRIC & TELEPHONE BY OTHERS
PG	PROPOSED GAS LINE BY OTHERS
	PROPOSED UTILITY POLE
	PROPOSED SIGN
##.###	PROPOSED PAVEMENT OR SIDEWALK ELEVATION
	TOP OF CUT TO MATCH EXISTING
	TOE OF SLOPE TO MATCH EXISTING
	REMOVE & RESET LIGHT POLE
	PROPOSED LIGHT POLE

SIGN LEGEND

N = NEW
R = REMOVE
B-B = BACK-TO-BACK
RET = RETAIN
R & S = REMOVE AND RESET
R & N = REMOVE AND NEW
(1) RETURN TO CITY OF SO. BURLINGTON

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

NOTE:
1. SPOT ELEVATIONS SHOWN ARE PAVEMENT GRADES AT FACE OF CURB.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

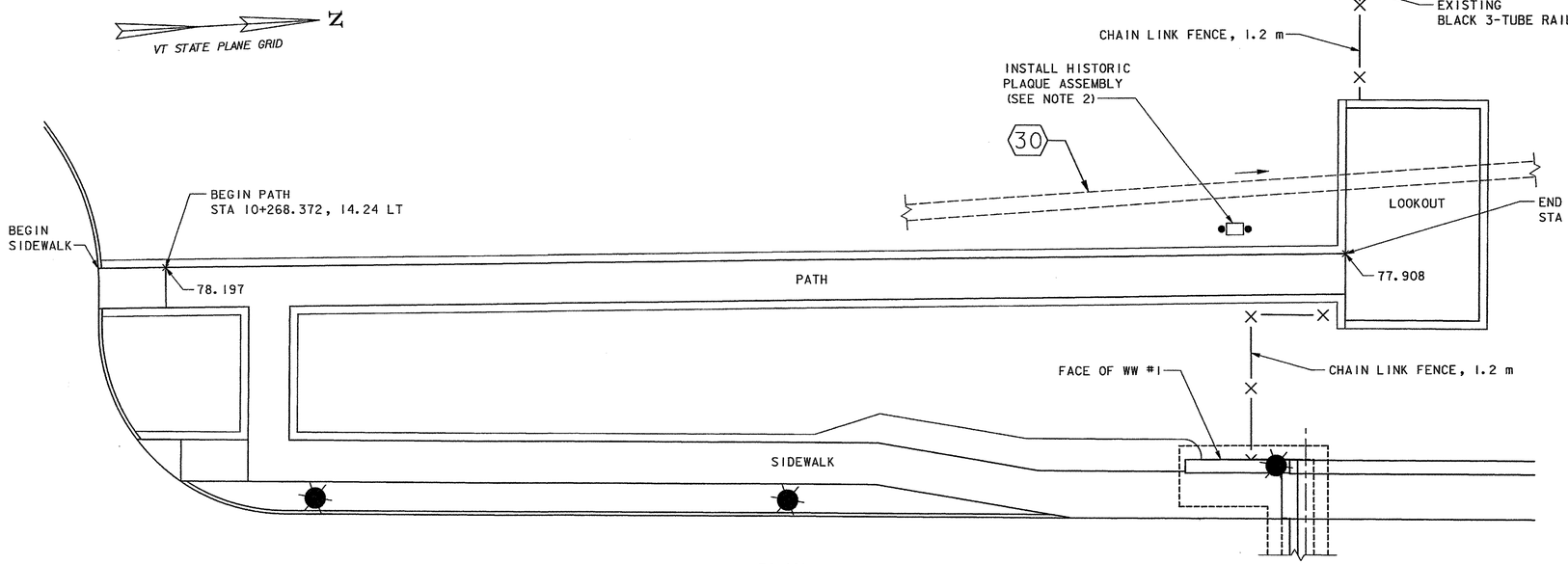
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.

PARKING AREA PLAN

Designed By C.L. CILLEY	Drawn By C.S. MERCER
Checked By J.A. MERCER Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139PV1	Sheet 24 of 124

VHB Vanasse Hangen Brustlin, Inc.

VHB NO. 50735 plot date: 4/25/2005

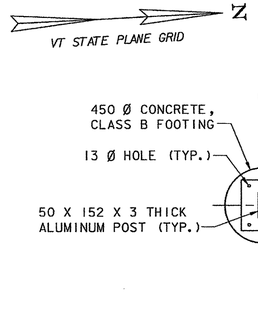


PLAN

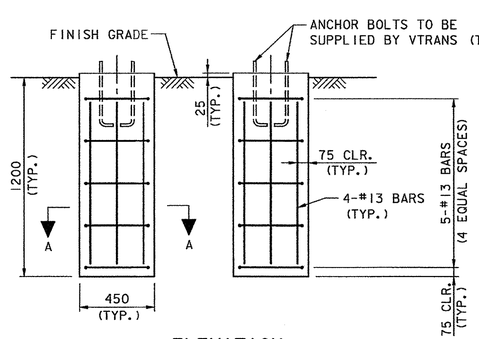
SCALE: 1:100

0 2 4 6

SCALE IN METERS



PLAN

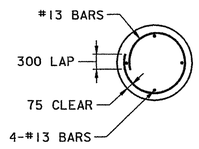


ELEVATION

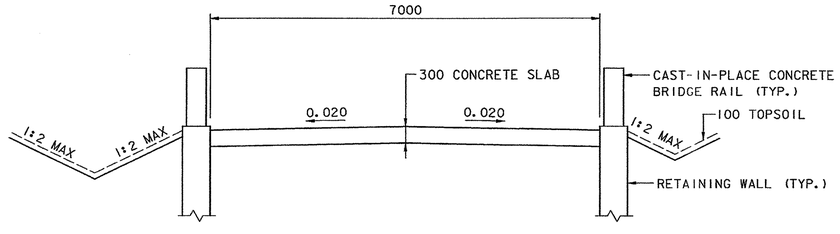
IF BEDROCK IS ENCOUNTERED PRIOR TO REACHING THE 1200 MILLIMETER HISTORIC PLAQUE ASSEMBLY FOOTING DEPTH, THE CONTRACTOR SHALL DOWEL TWO #13 BARS FOR EACH FOOTING A MINIMUM OF 300 MILLIMETERS INTO BEDROCK. DOWELS SHALL EXTEND 450 MILLIMETERS (MIN.) INTO FOOTINGS. ALL COST SHALL BE INCLUDED UNDER ITEM 675.40, FOUNDATION FOR W-SHAPE STEEL POSTS, 450 mm DIAMTER (MOD.).

HISTORIC PLAQUE ASSEMBLY FOOTINGS

NOT TO SCALE

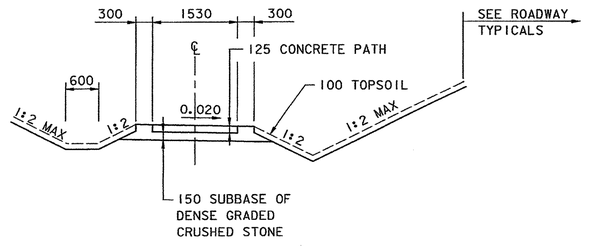


SECTION A-A



LOOKOUT SECTION (LOOKING NORTH)

SCALE: 1:50



PATH SECTION (LOOKING NORTH)

SCALE: 1:50

0 1000 2000 3000

SCALE IN MILLIMETERS

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

VHB NO. 50735

plot date: 5/24/2005

Metric

CONSTRUCTION NOTES (SEE NOTE 1)

CONSTRUCT CONCRETE SIDEWALK (PATH)

STA 10+268.4 - STA. 10+312.4, LT

CONSTRUCT SIDEWALK RAMP, TYPE I

STA 10+266 - STA 10+268.4, LT

NOTES:

1. SEE SHEETS 20-21 FOR ADDITIONAL CONSTRUCTION NOTES.
2. HISTORIC PLAQUE ASSEMBLY SHALL BE SUPPLIED BY THE AGENCY OF TRANSPORTATION AND INSTALLED BY THE CONTRACTOR AT STA 10+309.0, 16 m LT OR IN AN ALTERNATE LOCATION AS CHOSEN BY THE RESIDENT ENGINEER. THE CONTRACTOR SHALL TRANSPORT THE ASSEMBLY FROM THE VTRANS DISTRICT 5 MAINTENANCE BUILDING AT 5 BARNES AVENUE IN COLCHESTER TO THE SITE. THE CONTRACTOR SHALL CONSTRUCT THE HISTORIC PLAQUE FOOTINGS AS SHOWN ON THIS SHEET. THE CONTRACTOR SHALL VERIFY THAT THE FOOTINGS DETAILED ON THIS SHEET ARE COMPATIBLE WITH THE HISTORIC PLAQUE MOUNTING POSTS BEFORE CONSTRUCTING THE FOUNDATIONS. ALL COSTS FOR HISTORIC PLAQUE ASSEMBLY, TRANSPORTING AND INSTALLATION SHALL BE INCLUDED UNDER ITEM 680.40, RELOCATE INFORMATION PLAZA, TYPE A (MOD.). ALL COSTS FOR FOOTINGS SHALL BE INCLUDED UNDER ITEM 675.40, FOUNDATION FOR W-SHAPE STEEL POSTS, 450 mm DIAMETER (MOD.).
3. PROPOSED LOOKOUT FOUNDATIONS SHALL BEAR ON COMPETENT BEDROCK. THE BOTTOM OF FOOTING ELEVATIONS SHOWN ON SHEET 26 WERE BASED UPON LIMITED SUBSURFACE INFORMATION AND ARE PROVIDED FOR BIDDING PURPOSES ONLY. THE ACTUAL ELEVATION OF COMPETENT BEDROCK SHALL BE MEASURED JOINTLY BY THE VTRANS GEOLOGIST AND THE CONTRACTOR AND THAT INFORMATION GIVEN TO THE ENGINEER. THE ENGINEER WILL DETERMINE THE NEED FOR ANY REDESIGN, AND WILL PROVIDE THAT REDESIGN TO THE CONTRACTOR BEFORE ANY FURTHER WORK IS DONE ON THE LOOKOUT FOOTING. NO REINFORCEMENT SHALL BE ORDERED OR DELIVERED PRIOR TO THE FIELD VERIFICATION.
4. CHAIN LINK FENCE SHALL BE INSTALLED AS SHOWN ON THESE PLANS. NEW CHAIN LINK TO THE WEST OF LOOKOUT SHALL MEET EXISTING BLACK 3-TUBE RAILING. EXISTING RAILING SHALL BE REMOVED AND RESET AS NECESSARY AND RELOCATION SHALL BE INCIDENTAL TO OTHER LOOKOUT ITEMS.
5. FINAL PAYMENT WILL BE MADE BASED UPON THE ACTUAL QUANTITIES MEASURED IN THE FIELD FOR THE FOLLOWING LOOKOUT ITEMS:

204.25	STRUCTURE EXCAVATION
204.30	GRANULAR BACKFILL FOR STRUCTURES
501.34	CONCRETE, HIGH PERFORMANCE CLASS B
507.15	REINFORCING STEEL
514.10	WATER REPELLENT (MOD.-SILANE)

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

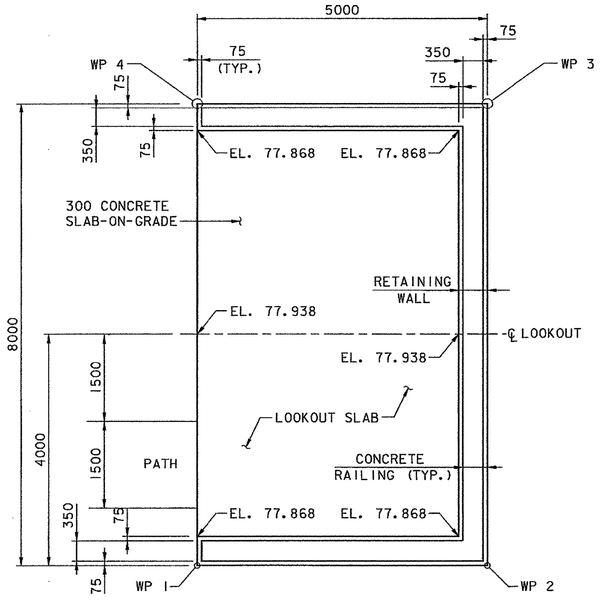
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.

PATH & LOOKOUT PLAN & TYPICALS

Designed By A.J. CRAWFORD	Drawn By C.S. MERCER
Checked By J.A.M./M.A.C. Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139PN6	Sheet 25 of 124

VT STATE PLANE GRID

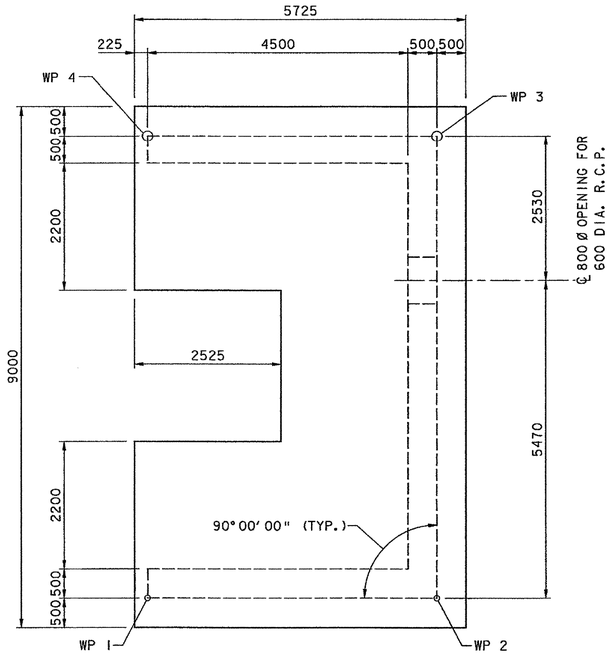
N



LOOKOUT PLAN

(ELEVATIONS SHOWN AT TOP OF SLAB)
SCALE: 1:50

WP	STATION	OFFSET (m)
1	10+312.446	12.500 LT.
2	10+317.446	12.500 LT.
3	10+312.446	20.500 LT.
4	10+317.446	20.500 LT.

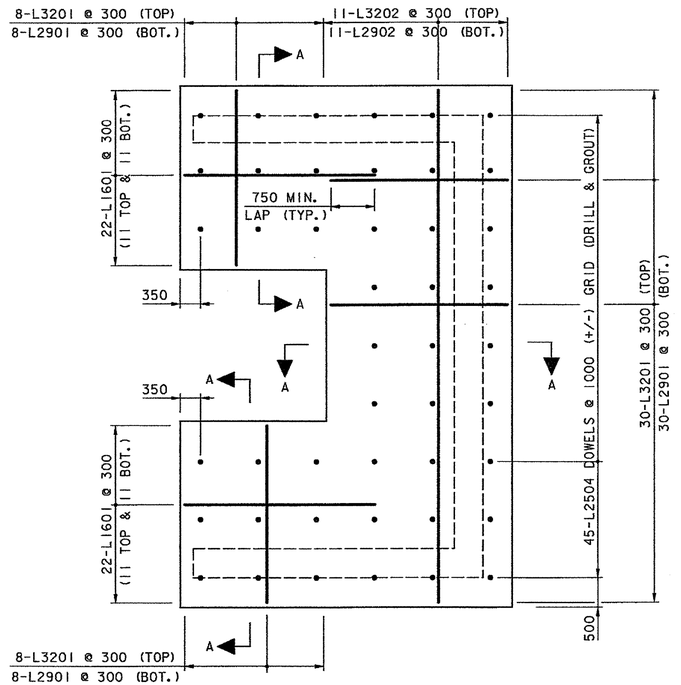


FOOTING MASONRY

SCALE: 1:50

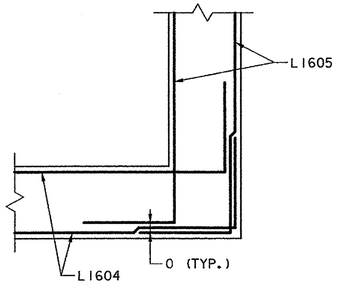
0 1000 2000 3000

SCALE IN MILLIMETERS



FOOTING REINFORCING

SCALE: 1:50

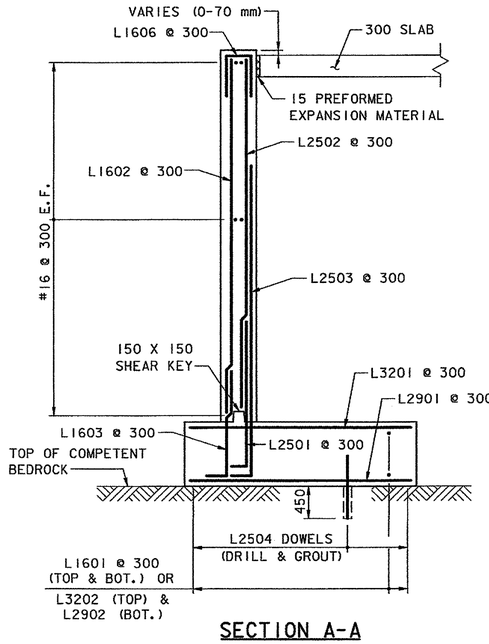


SECTION B-B

SCALE: 1:20

0 400 800 1200

SCALE IN MILLIMETERS



SECTION A-A

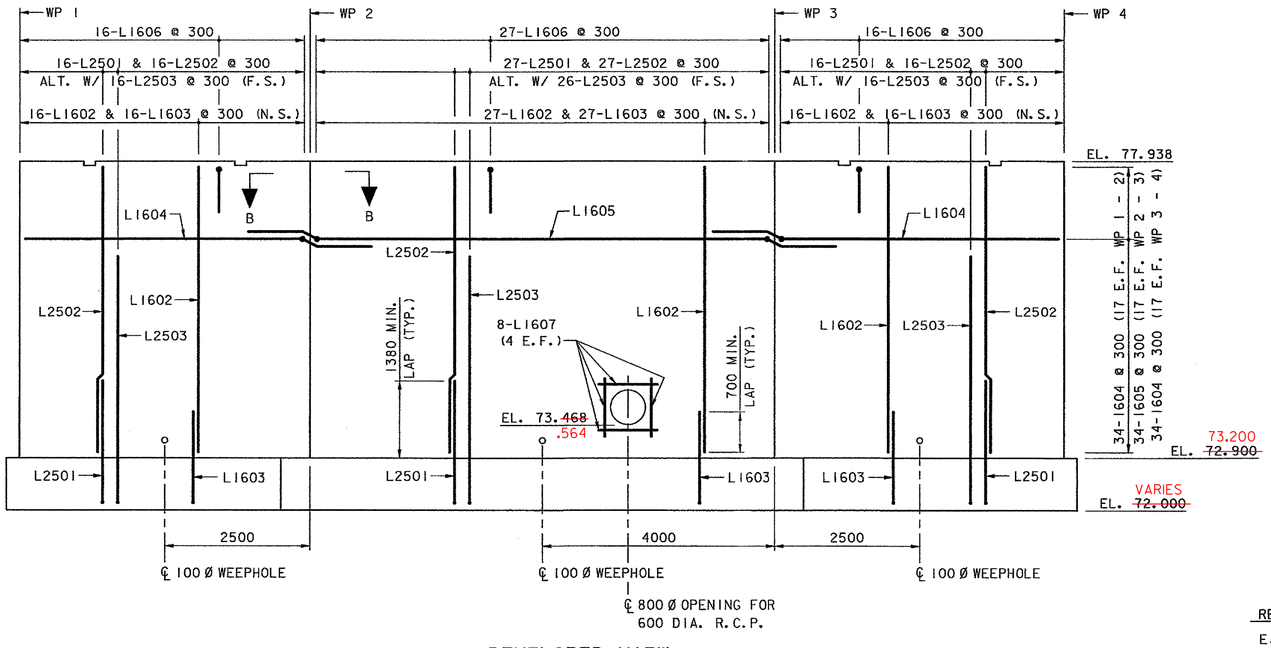
SCALE: 1:40

0 800 1600 2400

SCALE IN MILLIMETERS

NOTES:

1. SEE SHEET 66 FOR WEEPHOLE DETAIL.
2. DOWELS SHALL EXTEND INTO FOOTING A MINIMUM OF 450 mm.



DEVELOPED VIEW

(ALL FOOTING REINFORCING NOT SHOWN FOR CLARITY)
SCALE: 1:50

REINFORCING KEY

E.F. = EACH FACE
N.S. = NEAR SIDE
F.S. = FAR SIDE

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

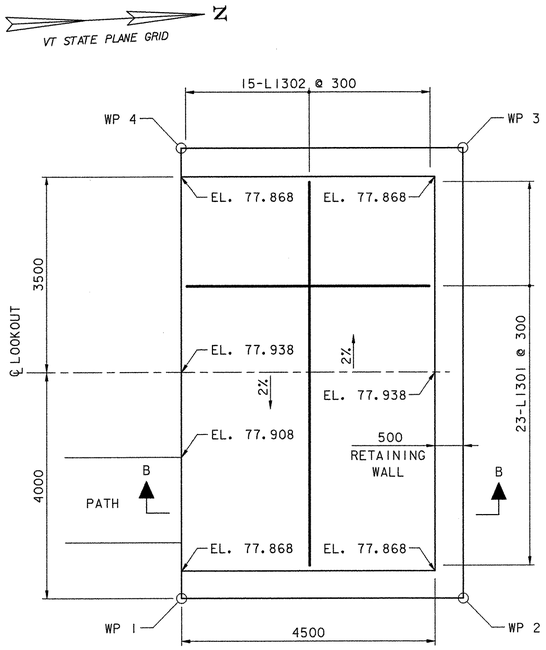
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.

LOOKOUT DETAILS (1 OF 2)

Designed By K.G. KRETSCH	Drawn By B.J. MASSE
Checked By M.A. COLGAN Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139LD1	Sheet 26 of 124

VHB NO. 50735

plot date: 5/24/2005

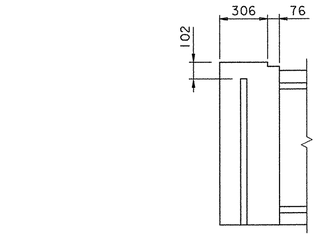


SLAB PLAN & REINFORCING

SCALE: 1:50

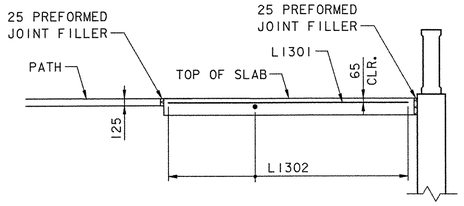
0 1000 2000 3000

SCALE IN MILLIMETERS



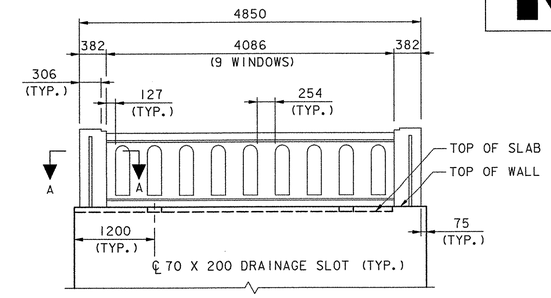
PILASTER ELEVATION

NOT TO SCALE



SECTION B-B

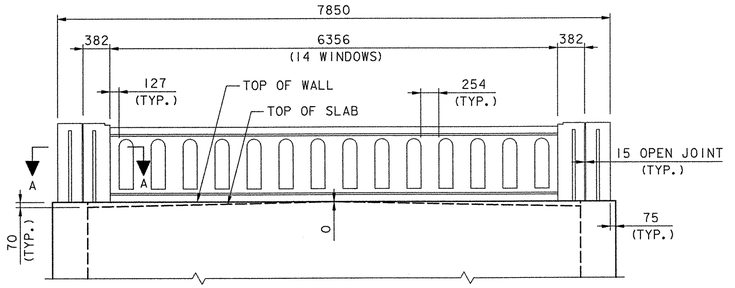
SCALE: 1:50



WP 1-2 WALL ELEVATION

(WP 3-4 WALL SIMILAR)

SCALE: 1:40

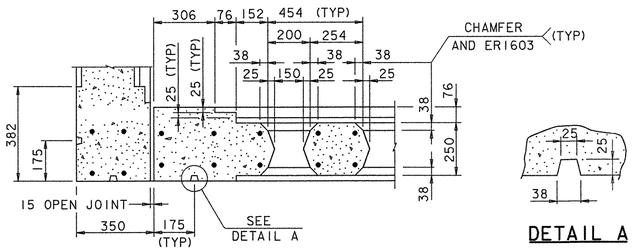


WP 2-3 WALL ELEVATION

SCALE: 1:40

0 800 1600 2400

SCALE IN MILLIMETERS

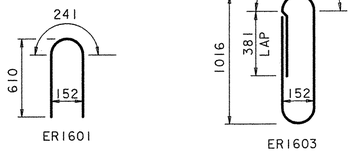


SECTION A-A

NOT TO SCALE

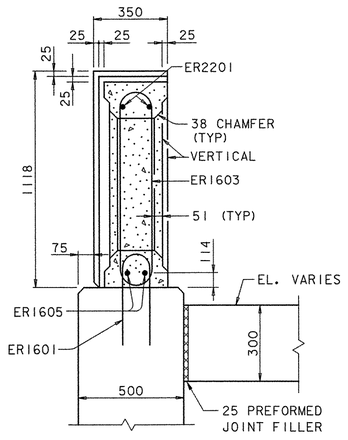
DETAIL A

NOT TO SCALE



NOTE: THESE ARE IN ADDITION TO THOSE FOUND ON THE REINFORCING STEEL SCHEDULE (SEE NOTE 2). ALL COSTS FOR RAILING REINFORCING BARS SHALL BE INCLUDED IN ITEM 525.50, CAST-IN-PLACE CONCRETE BRIDGE RAIL.

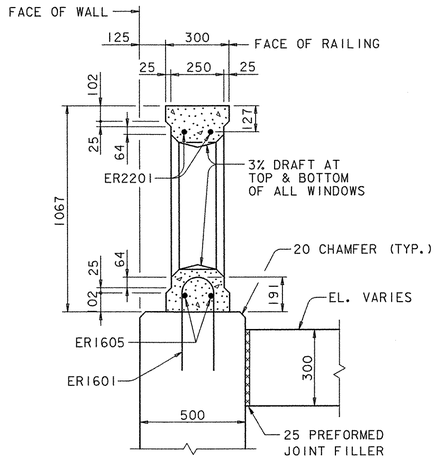
BAR TYPES



SECTION THRU POST

(SHOWING PILASTER BEYOND)

NOT TO SCALE



SECTION THRU WINDOW

NOT TO SCALE

NOTES:

1. SEE SHEETS 79-80 FOR ADDITIONAL BRIDGE RAIL DETAILS AND NOTES.
2. SEE SHEETS 82-83 FOR REINFORCING STEEL SCHEDULE.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta.
	Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
LOOKOUT DETAILS (2 OF 2)	
Designed By K.G. KRETSCH	Drawn By B.J. MASSE
Checked By M.A. COLGAN Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6) S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139LD2	Sheet 26A of 124

VHB NO. 50735

plot date: 4/25/2005

VAOT Metric

DRAINAGE NOTES

1. STA 10+055, LT 5.9 m - STA 10+100, LT 4.8 m
150 x 45.9 m UNDERDRAIN
INV. AT STA 10+055 = 77.457
FLUSHING BASIN, +055, LT 5.9 m

2. STA 10+055, RT 5.3 m - STA 10+100, RT 4.8 m
150 x 45.3 m UNDERDRAIN
INV. AT STA 10+055 = 77.865
FLUSHING BASIN, +055, RT 5.3 m

3. DRIVE CULVERT
STA 10+072, LT 10.8 m - STA 10+087, LT 10.9 m
375 x 15.0 m PCCSP, CAAP, OR CPEP
CSP, CPEP OR CAAP END SECTION AT STA 10+072, LT 10.8 m
INV. AT STA 10+072 = 78.500
CSP, CPEP OR CAAP END SECTION AT STA 10+087, LT 10.9 m
INV. AT STA 10+087 = 78.394

4. INLET PIPE
STA 10+100, LT 10.4 m - LT 4.8 m
450 x 5.3 m PCCSP, CAAP, OR CPEP
CSP, CPEP OR CAAP END SECTION AT STA 10+100, LT 10.4 m
INV. AT STA. 10+100 = 78.170

5. STA 10+100, RT 4.8 m - LT 4.8 m
350 x 575 x 9.0 m RCP (III) ELLIPTICAL PIPE (NO OPTION)
PC - DI WITH GRATE, TYPE E AT STA 10+100, RT 4.8 m
RIM EL. = 79.012
INV. IN (S) = 77.640 (150 UND)
INV. OUT (W) = 77.564

6. STA 10+100, LT 4.8 m - STA 10+168, LT 4.8 m
450 x 67.4 m RCP (V), CAAP, PCCSP, OR CPEP(SL)
PC - DI WITH GRATE, TYPE E AT STA 10+100, LT 4.8 m
RIM EL. = 79.012
INV. IN (S) = 77.158 (150 UND)
INV. IN (W) = 77.610
INV. IN (E) = 77.480
INV. OUT (N) = 76.966

7. STA 10+102, RT 5.3 m - STA 10+147, RT 8.1 m
150 x 46.3 m UNDERDRAIN
INV. AT STA 10+102 = 76.982
FLUSHING BASIN, +102, RT 5.3 m

8. STA 10+102, LT 5.9 m - STA 10+168, LT 4.8 m
150 x 66.9 m UNDERDRAIN
INV. AT STA 10+102 = 77.109
FLUSHING BASIN, +102, LT 5.9 m

9. STA 10+168, RT 4.8 m - LT 4.8 m
450 x 9.0 m RCP (V), CAAP, PCCSP, OR CPEP(SL)
PC - DI WITH GRATE, TYPE E AT STA 10+168, RT 4.8 m
RIM EL. = 78.045
INV. IN (S) = 76.552
INV. OUT (W) = 76.521

10. STA 10+147, RT 8.1 m - STA 10+168, RT 4.8 m
450 x 20.4 m RCP (V), CAAP, PCCSP, OR CPEP(SL)
PC - DI WITH GRATE, TYPE E AT STA 10+147, RT 8.1 m
RIM EL. = 78.175
INV. IN (S) = 76.876 (150 UND)
INV. OUT (N) = 76.803

11. STA 10+178, LT 5.9 m - STA 10+220, LT 4.8 m
150 x 41.3 m UNDERDRAIN
INV. AT STA 10+178 = 76.199
FLUSHING BASIN, +178, LT 5.9 m

12. STA 10+170, RT 5.3 m - STA 10+220, RT 4.8 m
150 x 51.1 m UNDERDRAIN
INV. AT STA 10+170 = 76.233
FLUSHING BASIN, +170, RT 5.3 m

12A. STA 10+145, RT 17.0 m - STA 10+184, RT 11.0 m
ABANDON EXISTING CPEP AND FILL WITH
CONCRETE CLASS D (MOD. FLOWABLE FILL)

12B. STA 10+186, RT 10.5 m - STA 10+~~233~~ 210.5, RT ~~5.0~~ 14.5 m
~~ABANDON EXISTING CPEP AND FILL WITH~~
~~CONCRETE CLASS D (MOD. FLOWABLE FILL)~~
NEW 300 x 9m CPEP W/CPEP ELBOW
TIE INTO EXISTING SYSTEM

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

13. STA 10+168, LT 4.8 m - STA 10+196, LT 10.1 m
450 x 27.1 m RCP (V), CAAP, PCCSP, OR CPEP(SL)
PC - DI WITH GRATE, TYPE E AT STA 10+168, LT 4.8 m
RIM EL. = 77.992
INV. IN (W) = 76.529 (150 UND.)
INV. IN (S) = 76.364
INV. IN (E) = 76.364
INV. OUT (N) = 76.288

14. STA 10+196, LT 10.1 m - STA 10+211, LT 11.2 m
450 x 13.4 m RCP (V), CAAP, PCCSP, OR CPEP(SL)
PC - CB WITH GRATE, TYPE A AT
STA 10+196, LT 10.1 m
RIM EL. = 77.333
INV. IN (S) = 75.806
INV. OUT (N) = 75.775

15. STA 10+211, LT 11.2 m - STA 10+~~272~~ 250, LT ~~14.3~~ 17.5 m
38.0 450 x ~~59.~~ 0 m RCP (V), CAAP, PCCSP, OR CPEP(SL)
PC - CB WITH GRATE, TYPE D AT
STA 10+211, LT 11.2 m
RIM EL. = 77.159
INV. IN (S) = 75.641
INV. OUT (N) = 75.610

15A. SEE BELOW

16. STA 10+193.4, LT 4.8 m - STA 10+220, LT 4.8 m
25.2 450 x ~~25.7~~ m RCP (V), CAAP, PCCSP, OR CPEP(SL)
PC - DI WITH GRATE, TYPE E AT
STA 10+193.4, LT 4.8 m
RIM EL. = 77.606
INV. OUT (N) = 75.742

17. STA 10+270, LT 5.3 m - STA 10+220, LT 4.8 m
150 x 53.6 m UNDERDRAIN
INV. AT STA 10+270 = 76.471
FLUSHING BASIN, +270, LT 5.3 m

18. STA 10+220, RT 4.8 m - LT 4.8 m
450 x 9.0 m RCP (V), CAAP, PCCSP, OR CPEP(SL)
PC - DI WITH GRATE, TYPE D AT
STA 10+220, RT 4.8 m
RIM EL. = 77.510
INV. IN (N) = 75.966 (150 UND)
INV. IN (S) = 75.966 (150 UND)
INV. OUT (W) = 75.681

19. STA 10+270, RT 5.3 m - STA 10+220, RT 4.8 m
150 x 50.2 m UNDERDRAIN
INV. AT STA 10+270 = 76.300
FLUSHING BASIN, +270, RT 5.3 m

20. STA 10+220, LT 4.8 m - STA 10+256.2, LT 8.5 m
450 x 35.1 m RCP (V), CAAP, PCCSP, OR CPEP(SL)
PC - DI WITH GRATE, TYPE D AT
STA 10+220, LT 4.8 m
RIM EL. = 77.354
INV. IN (S) = 75.498
INV. IN (SW) = 75.776 (150 UND.)
INV. IN (NW) = 75.776 (150 UND.)
INV. IN (E) = 75.597
INV. OUT (N) = 75.467

21. STA 10+301, RT 5.9 m - STA 10+272, RT 4.8 m
150 x 29.3 m UNDERDRAIN
INV. AT STA 10+301 = 77.657
FLUSHING BASIN, +301, RT 5.9 m

22. STA 10+303, RT 4.8 m - STA 10+272, RT 4.8 m
29.7 450 x ~~30.1~~ m RCP (V), CAAP, PCCSP, OR CPEP(SL)
PC - DI WITH GRATE, TYPE E AT
STA 10+303, RT 4.8 m
RIM EL. = 79.747
INV. IN (W) = ~~77.750~~ 77.755
INV. OUT (S) = ~~77.719~~ 77.725

23. STA 10+303, LT 4.8 m - RT 4.8 m
8.3m 450 x ~~9.0m~~ RCP (V), CAAP, PCCSP, OR CPEP(SL)
PC - DI WITH GRATE, TYPE E AT STA 10+303, LT 4.8 m
RIM EL. = 79.747
INV. OUT (E) = 77.918

15A. STA 10+250, LT 17.5m - STA 10+272, LT 14.3m
450 x 23m CPEP(SL)
PC - MH W/ COVER @ 10+255, LT 17.5m
RIM EL. = 77.985
INV. IN(S) = 75.180
INV. OUT(N) = 75.180

24. STA 10+272, RT 4.8 m - LT 5.0 m
450 x 8.9 m RCP (V), CAAP, PCCSP, OR CPEP(SL)
PC - CB WITH GRATE, TYPE E AT STA 10+272, RT 4.8 m
RIM EL. = 78.376
INV. IN (E) = 76.652 (150 UND.)
INV. IN (N) = 76.527
INV. OUT (W) = 76.310

25. STA 10+301, LT 5.3 m - STA 10+272, LT 5.0 m
150 x 29.0 m UNDERDRAIN
INV. AT STA 10+301 = 77.657
FLUSHING BASIN, +301, LT 5.3 m

26. STA 10+256.2, LT 8.5 m - STA 10+272, LT 14.3 m
450 x 15.6 m CONCRETE ENCASED RCP (V),
OR "HEAVY DUTY" CPEP (SL)
PC - CB WITH GRATE, TYPE D AT STA 10+256.2, LT 8.5 m
RIM EL. = 77.710
INV. IN (S) = 75.119
INV. OUT (N) = 74.357

27. STA 10+272, LT 5.0 m - LT 14.3 m
450 x 8.4 m RCP (V), CAAP, PCCSP, OR CPEP (SL)
PC - DI WITH GRATE, TYPE E AT STA 10+272, LT 5.0 m
RIM EL. = 78.368
INV. IN (E) = 76.226
INV. IN (N) = 76.519 (150 UND.)
INV. OUT (W) = 76.195

28. STA 10+272, LT 14.3 m - STA 10+276, LT 14.3 m
600 x 2.8 m RCP (V), CAAP, PCCSP, OR CPEP (SL)
PC - MH WITH COVER AT STA 10+272, LT 14.3 m
RIM EL. = 78.190
INV. IN (S) = 75.020
INV. IN (SE) = 74.170
INV. IN (E) = 76.114
INV. OUT (N) = 74.094

29. STA 10+276, LT 14.3 m - STA 10+296, LT 16.4 m
600 x 13.3 m RCP (V), CAAP, PCCSP, OR CPEP (SL)
PC - STORMCEPTOR UNIT (STC2400) OR EQUAL AT
STA 10+276, LT 14.3 m
RIM EL. = 78.160
INV. IN (S) = 74.038
INV. OUT (N) = 74.007

30. STA 10+296, LT 16.4 m - STA 10+322, LT 18.3 m
600 x 25.6 m RCP (V) (NO PIPE OPTION)
PC - DI WITH GRATE, TYPE A AT
STA 10+296, LT 16.4 m
RIM EL. = 77.372
INV. IN (S) = 73.851
INV. OUT (N) = 73.820
INV. AT STA. 10+322 = 73.515
IF OUTLET IS IN BEDROCK, CONST. 1200 WIDE CHANNEL WITH
4V:1H SIDESLOPES TO POINT WHERE LEDGE DROPS OFF TO RIVER.

IF OUTLET IS ABOVE BEDROCK, CONST. 3600 WIDE X 1200 DEEP
STONE FILLED PAD, TYPE II AT OUTLET AND CONST. 1800 WIDE
CHANNEL WITH 1:2 SIDESLOPES TO POINT WHERE CHANNEL
DROPS OFF TO RIVER.

31. STA 10+423, LT 17.0 m - RT 10.0 m
450 x 26.4 m PCCSP, CAAP OR CPEP
PROPOSED PIPE SHALL BE PLACED THROUGH EXISTING
BINWALL AT LT 10.1 m. ALL COSTS INCIDENTAL TO PIPE.
THE INSTALLED PIPE SHALL HAVE NO CONTACT WITH THE BIN WALL
RC - HEADWALL AT STA 10+423, LT 17.0 m
INV. IN AT STA 10+423, LT = 81.025

GENERAL DRAINAGE NOTES

1. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES PRIOR TO STORM DRAIN CONSTRUCTION. ANY CONFLICTS BETWEEN THE ACTUAL LOCATION AND DESIGN SHALL BE REPORTED TO THE RESIDENT ENGINEER FOR RESOLUTION.

2. EXTRUDED POLYSTYRENE INSULATION BOARD (50 mm MIN.) SHALL BE INSTALLED BETWEEN STORM DRAIN AND WATERLINE IF CLEARANCE IS LESS THAN 450 mm. ALL COSTS SHALL BE PAID AS ITEM 622.10, INSULATION BOARD.

32. STA 10+540, LT 16.4 m - STA 10+416, LT 16.7 m
1800 WIDE X 300 DEEP STONE FILL DITCH, TYPE I
EL. AT STA 10+416 = 81.265
LOW POINT IN DITCH AT STA 10+423, LT 18.2 m
EL. AT STA 10+423 = 81.133

33. STA 10+590, LT 10.1 m - STA 10+540, LT 16.4 m
1200 WIDE x 300 DEEP STONE FILL DITCH, TYPE I
EL. AT STA 10+590 = 95.711
EL. AT STA 10+540 = 90.547

34. STA 10+423, RT 10.0 m - STA 10+420, RT 24.2 m
450 x 13.9 m PCCSP, CAAP, OR CPEP
PC - 2.8 m DROP MH WITH COVER AT STA 10+423, RT 10.0 m
RIM EL. = 83.444
INV. IN (W) = 78.643
INV. IN (N) = 81.488
INV. OUT (E) = 78.567
CSP, CPEP OR CAAP END SECTION AT STA 10+420, RT 24.2 m
INV. AT STA 10+420 = 75.793
5000 WIDE x 1200 DEEP STONE FILL PAD, TYPE II AT OUTLET
(SEE SWALE DETAIL "B")

35. STA 10+425, RT 4.3 m - STA 10+423, RT 10.0 m
4.84 450 x ~~5.2~~ m PCCSP, CAAP, OR CPEP
PC - STORMCEPTOR UNIT (STC1800) OR EQUAL AT
STA 10+425, RT 3.7 m
RIM EL. = 85.273
INV. IN (N) = ~~81.778~~ 81.749
INV. OUT (E) = ~~81.748~~ 81.718

36. STA 10+428, RT 4.8 m - STA 10+425, RT 4.3 m
450 x 1.7 m PCCSP, CAAP, OR CPEP
PC - CB WITH GRATE, TYPE E AT STA 10+428, RT 4.8 m
RIM EL. = 85.372
INV. IN (W) = 81.939
INV. OUT (S) = ~~81.863~~ 81.921

37. STA 10+428, LT 4.8 m - RT 4.8 m
8.2 450 x ~~8.4~~ m PCCSP, CAAP, OR CPEP
PC - CB WITH GRATE, TYPE E AT STA 10+428, LT 4.8 m
RIM EL. = 85.372
INV. IN (S) = 82.267
INV. IN (N) = ~~83.105~~ 82.605
INV. OUT (E) = ~~82.191~~ 82.20

38. STA 10+409, LT 4.8 m - STA 10+428, LT 4.8 m
450 x 18.1 m PCCSP, CAAP, OR CPEP
PC - DI WITH GRATE, TYPE E AT STA 10+409, LT 4.8 m
RIM EL. = 84.517
INV. IN (E) = 82.719
INV. OUT (N) = 82.668

39. STA 10+409, RT 4.8 m - LT 4.8 m
450 x 9.0 m PCCSP, CAAP, OR CPEP
PC - DI WITH GRATE, TYPE E AT STA 10+409, RT 4.8 m
RIM EL. = 84.517
INV. OUT (W) = 82.884

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta. / Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	

DRAINAGE & SEWER NOTES/DETAILS (1 OF 2)

Designed By S.W. BEKIER	Drawn By C.S. MERCER
Checked By D.M. PECK Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6) S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139DS1	Sheet 27 of 124

VHB Vanasse Hangen Brustlin, Inc.

VHB NO. 50735 plot date: 4/25/2005

DRAINAGE NOTES (CONT'D)

(40) STA 10+500, LT 4.8 m - STA 10+428, LT 4.8 m
450 x 69.6 m PCCSP, CAAP, OR CPEP
PC - CB WITH GRATE, TYPE E AT STA 10+500, LT 4.8 m
RIM EL. = 89.969
INV. IN (E) = ~~88.111~~ 87.651
INV. IN (N) = 88.111
INV. OUT (S) = ~~88.~~035
87

(41) STA 10+500, RT 4.8 m - LT 4.8 m
450 x 8.7 m PCCSP, CAAP, OR CPEP
PC - DI WITH GRATE, TYPE E AT
STA 10+500, RT 4.8 m
RIM EL. = 90.192
INV. OUT (W) = ~~88.363~~
88.377

(42) STA 10+474, LT 12.6 m - LT 15.6 m
REMOVE EXISTING CB
REMOVE EXISTING 305 x 2.4 m PIPE
(INCIDENTAL TO TRENCH EXCAVATION OF ROCK)

(43) STA 10+566, LT 4.8 m - STA 10+500, LT 4.8 m
450 x 63.3 m PCCSP, CAAP, OR CPEP
PC - DI WITH GRATE, TYPE E AT STA 10+566, LT 4.8 m
RIM EL. = 94.987
INV. IN (N) = 92.987 (150 UND)
INV. IN (N) = 92.930
INV. IN (E) = 92.627
INV. OUT (S) = 92.551

(44) STA 10+541, LT 4.7 m - STA 10+543, LT 6.7 m
REMOVE EXISTING CB
REMOVE EXISTING 305 x 2.2 m PIPE
(INCIDENTAL TO TRENCH EXCAVATION OF ROCK)

(45) STA 10+566, RT 4.8 m - LT 4.8 m
450 x 9.0 m RCP (V), CAAP, PCCSP OR CPEP(SL)
PC - DI WITH GRATE, TYPE E AT STA 10+566, RT 4.8 m
RIM EL. = 94.955
INV. IN (N) = 92.955 (150 UND)
INV. OUT (W) = ~~92.879~~
92.884

(46) STA 10+620, LT 5.5 m - STA 10+566, LT 4.8 m
450 x 54.4 m RCP (V), CAAP, PCCSP, OR CPEP(SL)
PC - DI WITH GRATE, TYPE E AT STA 10+620, LT 5.5 m
RIM EL. = 96.440
INV. IN (E) = 94.626
INV. OUT (S) = 94.550

(47) STA 10+615, LT 5.3 m - STA 10+566, LT 4.8 m
150 x 49.9 m UNDERDRAIN
INV. AT STA 10+615 = 94.418
FLUSHING BASIN, +615, RT 5.3 m

(48) STA 10+620, RT 5.3 m - STA 10+566, RT 4.8 m
150 x 53.9 m UNDERDRAIN
INV. AT STA 10+620 = 94.468
FLUSHING BASIN, +620, RT 5.3 m

(49) STA 10+622, RT 4.8 m - 10+620, LT 5.5 m
450 x 9.9 m RCP (V), CAAP, PCCSP, OR CPEP(SL)
PC - DI WITH GRATE, TYPE E AT STA 10+622, RT 4.8 m
RIM EL. = 96.488
INV. OUT (W) = 94.812

SEWER NOTES

(S1) STA 10+388, RT 24.3 m
PRC - SMH WITH COVER, CONST. OVER EXISTING SEWER
RIM EL. = 73.90 +/-
EXIST. INV. IN (W) = 71.54 +/-
INV. IN (N) = 71.641
EXIST. INV. OUT (E) = 71.52 +/-
CONTRACTOR TO VERIFY INVERT OF EXISTING SEWER

(S1A) STA 10+390, RT 22.1 m - STA 10+388, RT 24.3 m
200 x 1.8 m PVC SDR26
PRC - SMH WITH COVER AT STA 10+390, RT 22.1 m
RIM EL. = 74.60+/-
INV. IN (N) = 71.802
INV. OUT (SE) = 71.772

(S2) STA 10+411, RT 18.2 m - STA 10+390, RT 22.1 m
200 x 20.1 m DI PIPE WITH 450 x 17.7 m STEEL SLEEVE
(STEEL SLEEVE INSTALLED BY OTHERS)
PRC - DROP SMH WITH COVER AT STA 10+411, RT 18.2 m (SEE NOTE 5)
RIM EL. = 76.00 +/-
INV. AT DROP (N) = 74.727
INV. IN (N) = 72.898
INV. OUT = 72.867

(S3) STA 10+496, RT 4.2 m - STA 10+411, RT 18.2 m
200 x 86.1 m PVC SDR26 WITH 450 x 6.1 m STEEL SLEEVE
AT QUARRY WALL
PRC - SMH WITH COVER AT STA 10+496, RT 4.2 m
RIM EL. = 89.906
INV. IN (N) = 86.056
INV. OUT (S) = 86.025

(S4) STA 10+534, RT 4.2 m - STA 10+496, RT 4.2 m
200 x 37.6 m PVC SDR26 WITH 450 x 6.1 m STEEL SLEEVE
AT QUARRY WALL
PRC - SMH WITH COVER AT STA 10+534, RT 4.2 m
RIM EL. = 92.946
INV. IN (N) = 88.834
INV. OUT (S) = 88.803

(S5) STA 10+553.9, RT 4.2 m - STA 10+534, RT 4.2 m
200 x 19.1 m PVC SDR35
PRC - SMH WITH COVER AT STA 10+553.9, RT 4.2 m
RIM EL. = 94.384
INV. IN (N) = 89.803
INV. IN (W) = 89.803
INV. OUT (S) = 89.772

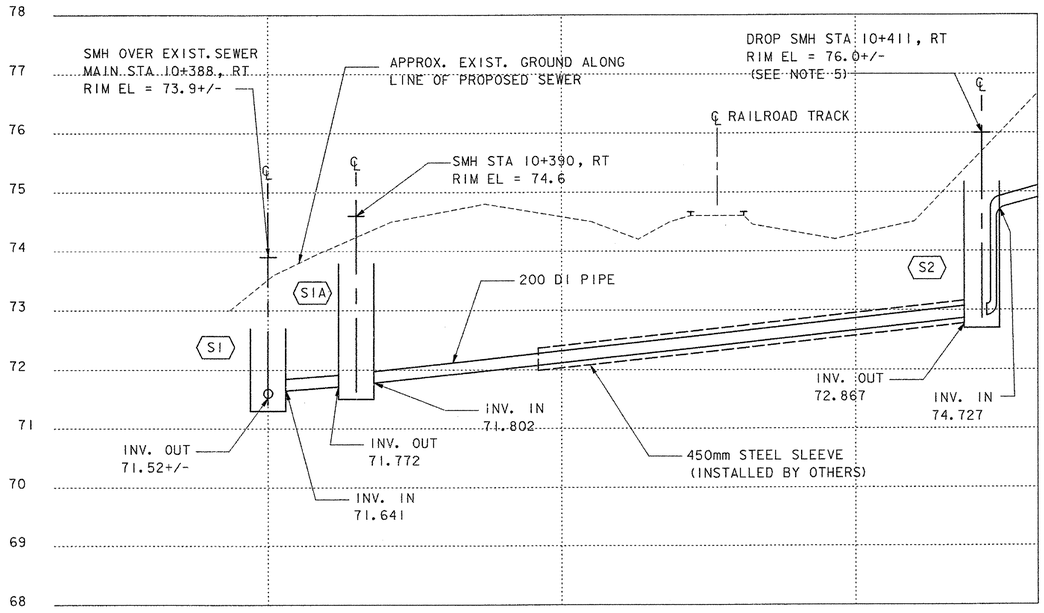
(S6) STA 10+572, RT 4.2 m - STA 10+553.9, RT 4.2 m
200 x 17.2 m PVC SDR35
PRC - SMH WITH COVER AT STA 10+572, RT 4.2 m
RIM EL. = 95.297
INV. IN (N) = 90.588
INV. OUT (S) = 90.557

(S7) STA 10+567.2, LT 8.0 m - STA 10+553.9, RT 4.2 m
150 x 16.7 m PVC SDR35
PRC-SMH WITH COVER AT STA 10+567.2, LT 8.0 m
RIM EL. = 94.890
INV. IN (W) = 90.603
INV. OUT (E) = 90.572

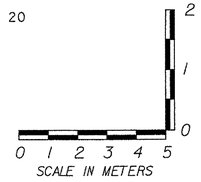
(S8) STA 10+608, LT 6.0 m - STA 10+572, RT 4.2 m
200 x 36.5 m PVC SDR35
INV. OUT (S) = 90.953
REMOVE AND RESET FRAME AND COVER OF EXISTING SEWER MANHOLE
AT STA. 10+608, LT 6.0 m
RIM EL. = 96.322
REMOVE AND RESET BRICK CHANNEL TO PROPOSED OUTLET PIPE LOCATION.

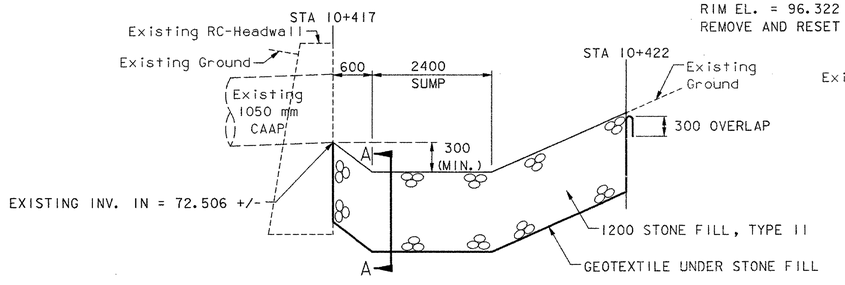
GENERAL SEWER NOTES:

1. THE STEEL SLEEVE UNDER THE RAILROAD TRACK SHALL BE INSTALLED BY OTHERS. THE CONTRACTOR SHALL INSTALL PIPES AND MANHOLES AS DESCRIBED IN SEWER NOTES.
2. PRIOR TO THE INSTALLATION OF THE STEEL SLEEVES, THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE EXISTING VERTICAL FACES OF QUARRY.
3. THE CONTRACTOR SHALL VERIFY THE LOCATION AND INVERT ELEVATION OF THE EXISTING SEWER LATERAL FROM SALMON HALL AND THE SEWER ON THE RAILROAD PROPERTY AND SHALL BE RESPONSIBLE FOR FURNISHING ALL EQUIPMENT, MATERIALS AND LABOR NECESSARY TO MAKE A SECURE WATER-TIGHT CONNECTION TO THE EXISTING SEWER LATERAL. ANY CONFLICTS BETWEEN THE ACTUAL LOCATION AND DESIGN SHALL BE REPORTED TO THE RESIDENT ENGINEER FOR RESOLUTION.
4. THE CONTRACTOR SHALL CORE THROUGH THE EXISTING SEWER MANHOLE WALL SECURING THE PROPOSED OUTLET PIPE TO THE MANHOLE USING NON-SHRINK GROUT. AFTER COMPLETING WORK ON THE EXISTING SEWER MANHOLE, THE CONTRACTOR SHALL PLUG AND ABANDON THE EXISTING OUTLET PIPE USING BRICK AND MORTAR. (NO ADDITIONAL PAYMENT SHALL BE MADE PER STANDARD D-22M).
5. OMIT UPPER CONE SECTION AT SMH (STA 10+411, RT 18.2 m) AND PROVIDE FLAT SLAB TOP.
6. STEEL SLEEVES SHALL CONFORM TO ASTM A53, GRADE B OR AN APPROVED EQUIVALENT.



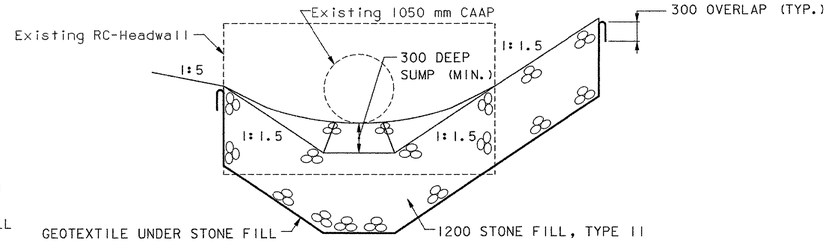
SEWER PROFILE AT RAILROAD TRACK





SWALE DETAIL "B"
NOT TO SCALE
STA 10+417, RT - STA 10+422, RT

NOTE: CONTRACTOR SHALL ENSURE THAT PLACEMENT OF STONE FILL WILL NOT UNDERMINE EXISTING HEADWALL.



SECTION A-A
NOT TO SCALE

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

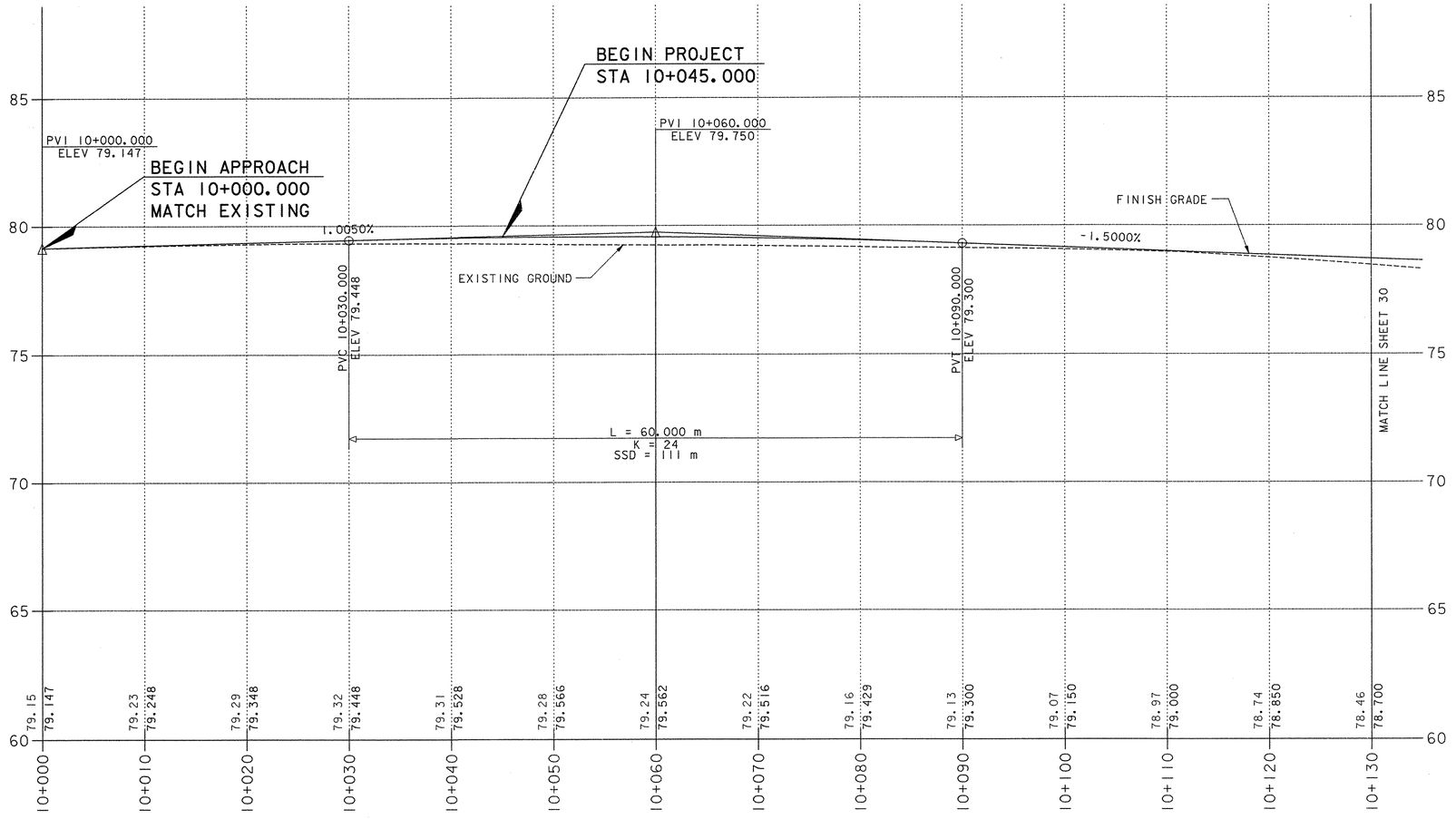
Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta.
	Surv. Sta.

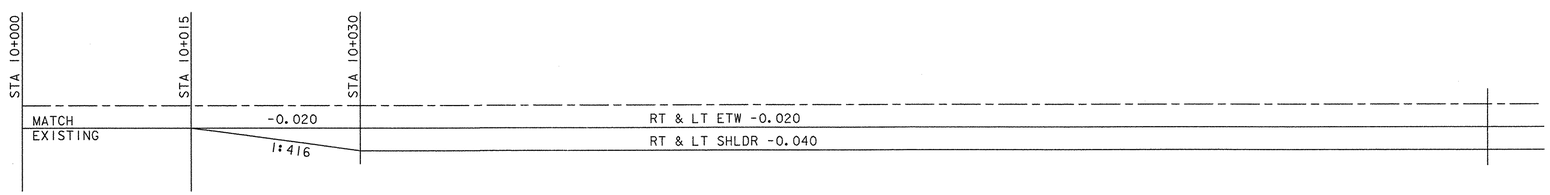
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.

DRAINAGE & SEWER NOTES/DETAILS (2 OF 2)

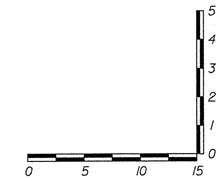
Designed By S.W. BEKIER	Drawn By C.S. MERCER
Checked By Date	Bridge Design Supervisor
D.M. PECK 4/05	S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139DS2	Sheet 28 of 124

VHB NO. 50735 plot date: 4/25/2005





PROFILE & BANKING DIAGRAM



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

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

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

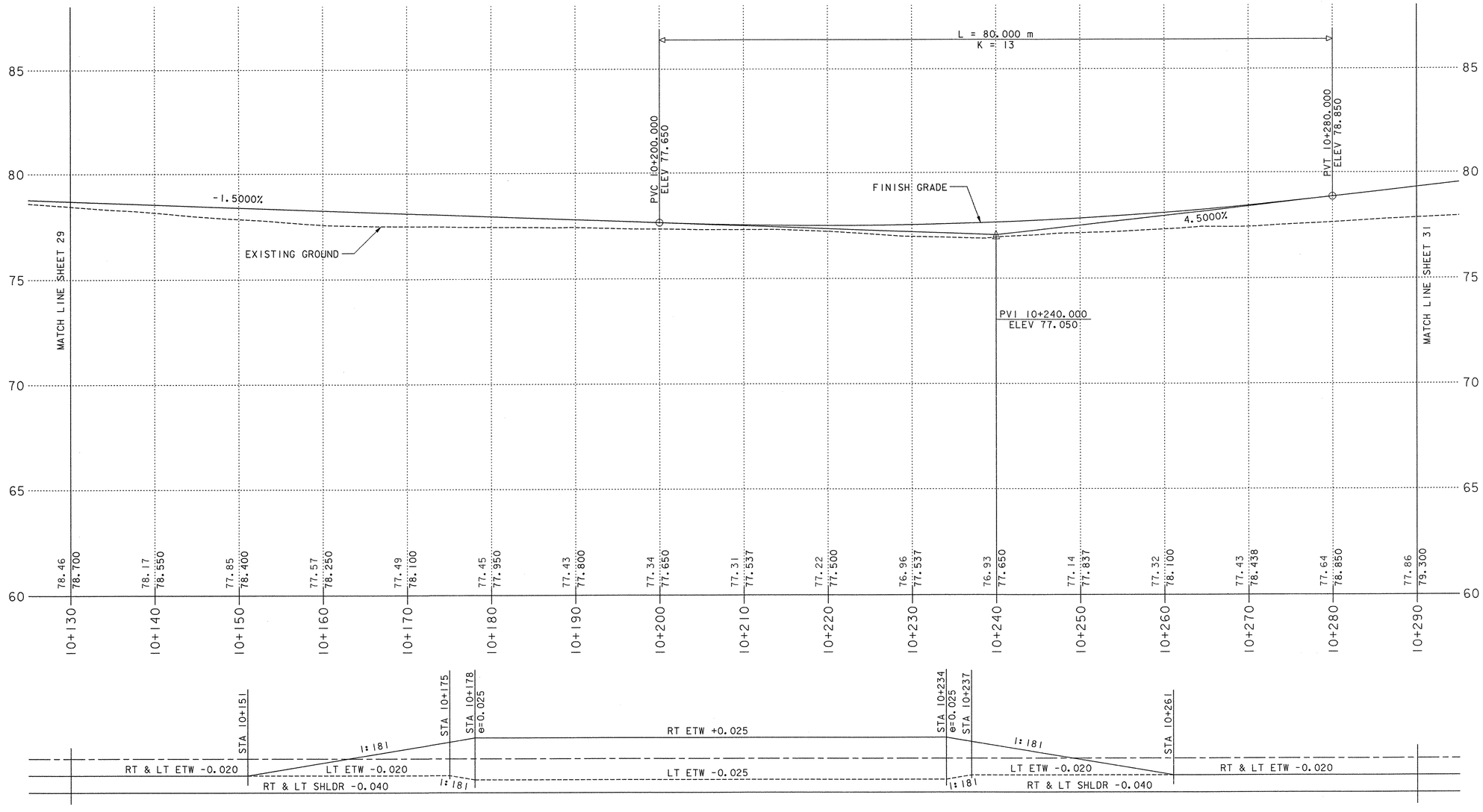
PROFILE & BANKING (1 OF 5)

Designed By A.J. CRAWFORD	Drawn By C.L. CILLEY
Checked By S.M. GUNN Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139PRI	Sheet 29 of 124

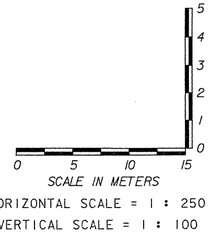
VHB NO. 50735

plot date: 4/25/2005

Metric



PROFILE & BANKING DIAGRAM



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

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

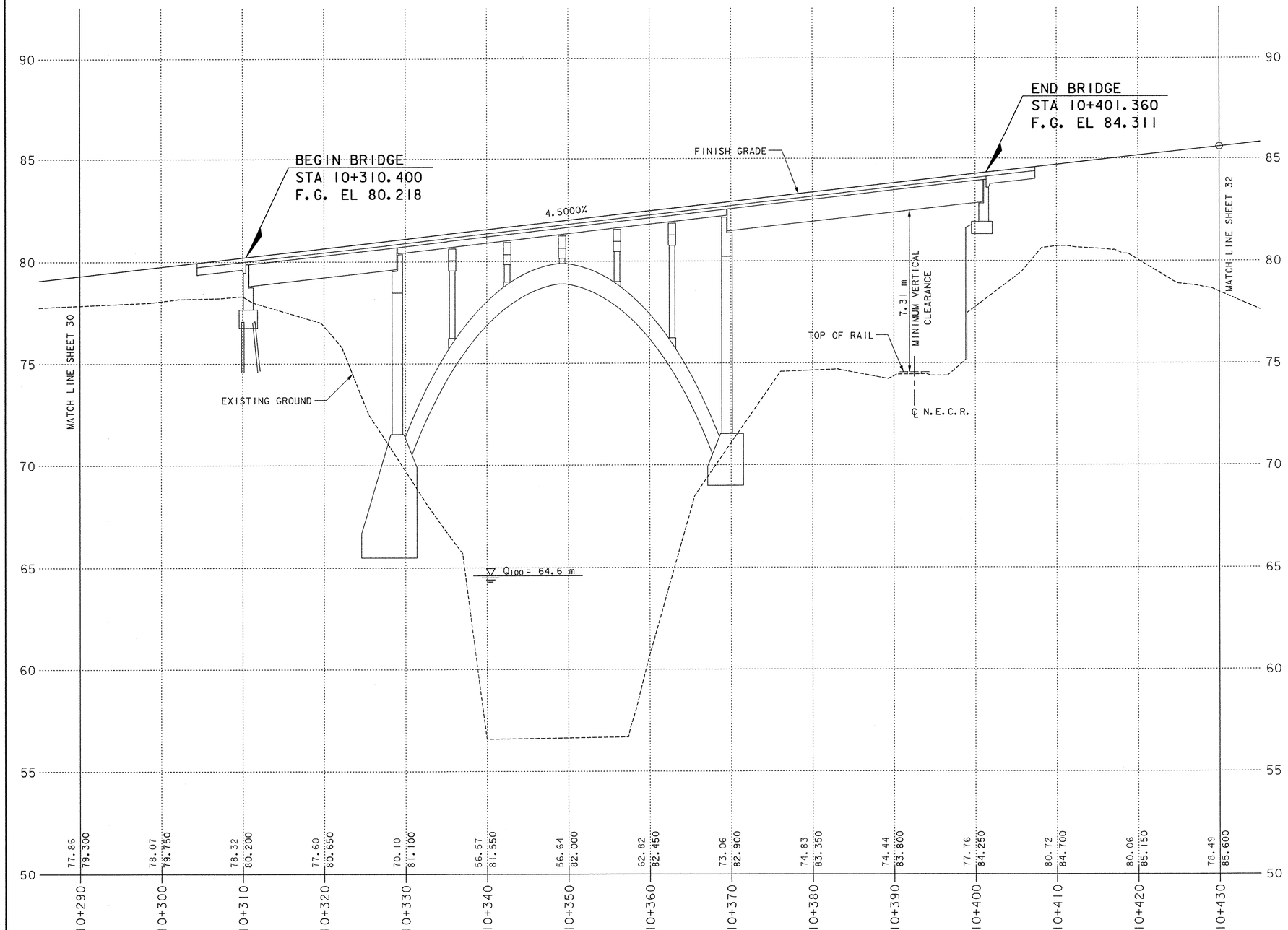
VHB Vanasse Hangen Brustlin, Inc.

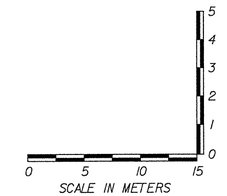
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta. / Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
PROFILE & BANKING (2 OF 5)	
Designed By A. J. CRAWFORD	Drawn By C.L. CILLEY
Checked By S. M. GUNN Date 4/05	Bridge Design Supervisor S. M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139PR2	Sheet 30 of 124

VHB NO. 50735 plot date: 4/25/2005

Metric





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

RT & LT ETW -0.020
RT & LT SHLDR -0.040

PROFILE & BANKING DIAGRAM

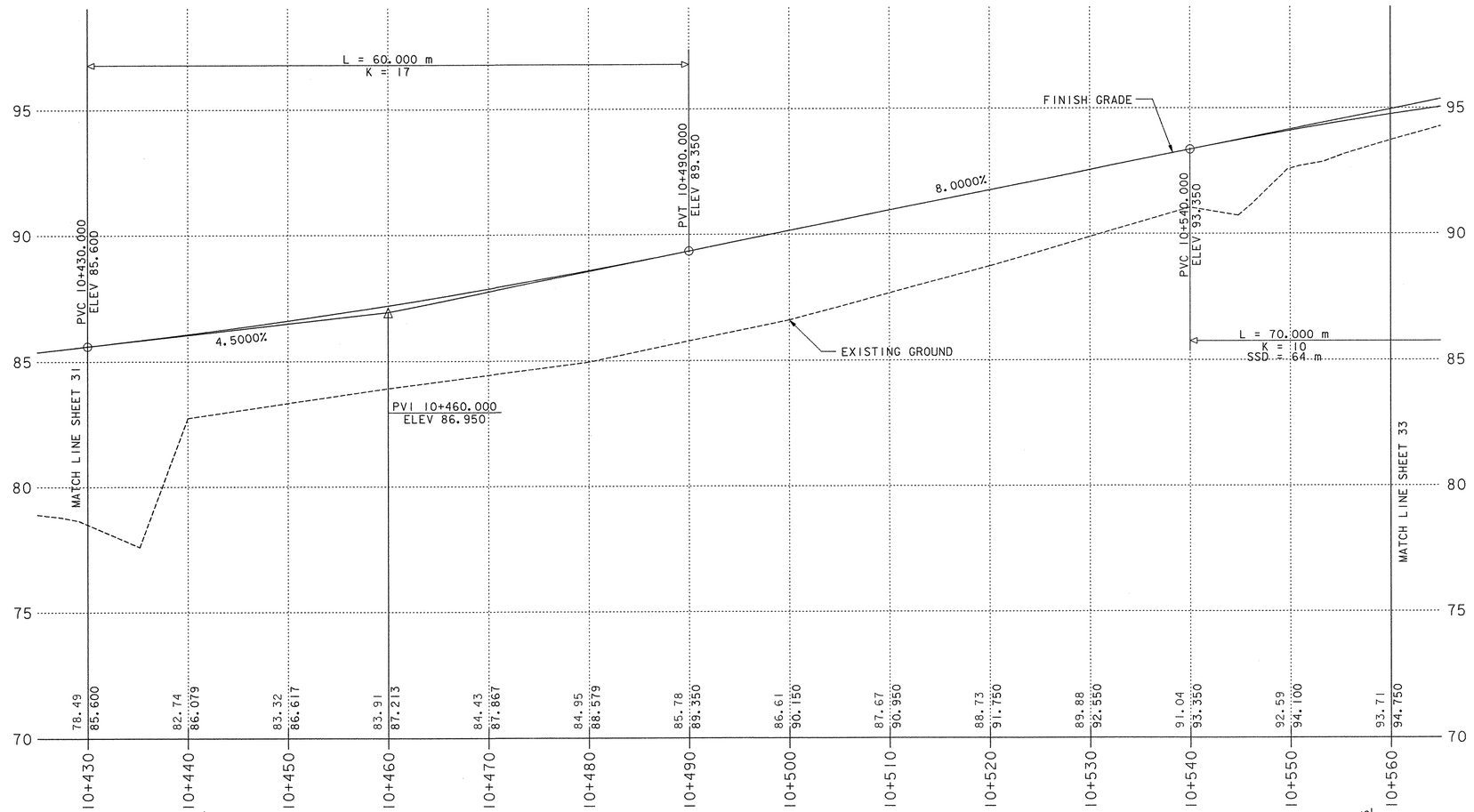
DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

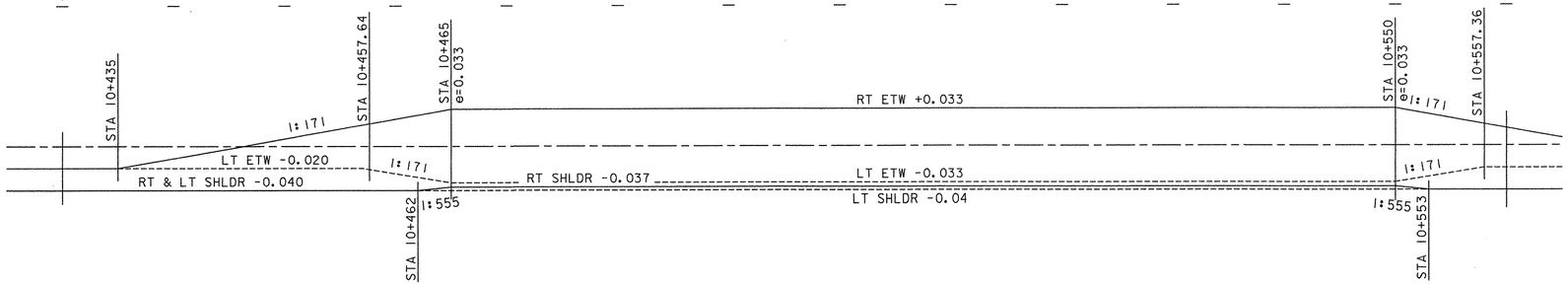
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta. / Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
PROFILE & BANKING (3 OF 5)	
Designed By A. J. CRAWFORD	Drawn By C. L. CILLEY
Checked By S. M. GUNN Date 4/05	Bridge Design Supervisor S. M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139PR3	Sheet 31 of 124

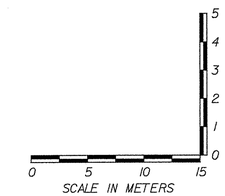
VHB Vanasse Hangen Brustlin, Inc.

VHB NO. 50735 plot date: 4/25/2005





PROFILE & BANKING DIAGRAM



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

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

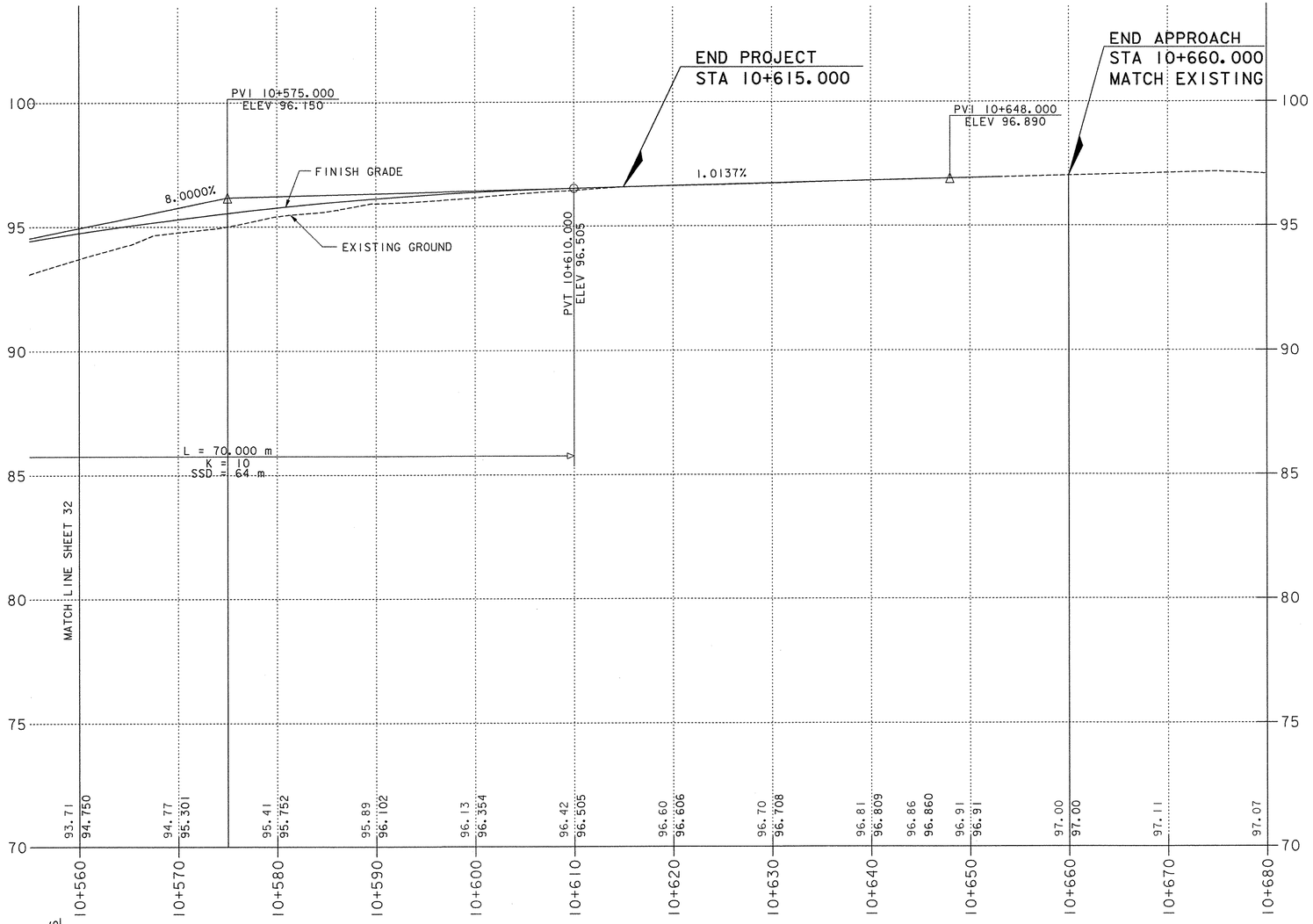
VHB Vanasse Hangen Brustlin, Inc.

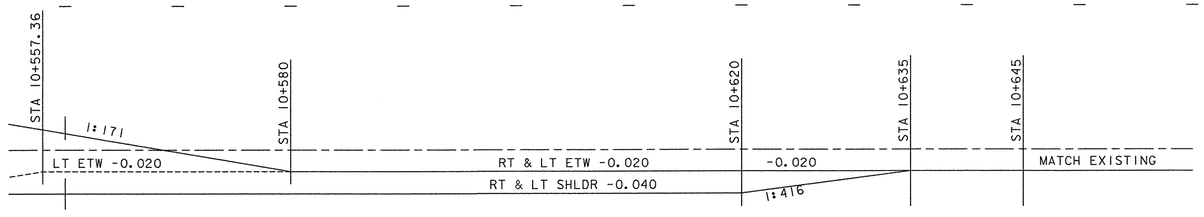
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
	Log Sta.
Highway No. TH 4/3	Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
PROFILE & BANKING (4 OF 5)	
Designed By A. J. CRAWFORD	Drawn By C. L. CILLEY
Checked By S. M. GUNN Date 4/05	Bridge Design Supervisor S. M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6) S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139PR4	Sheet 32 of 124

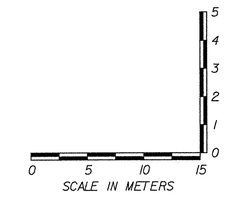
VHB NO. 50735 plot date: 4/25/2005

Metric





PROFILE & BANKING DIAGRAM



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

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

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

PROFILE & BANKING (5 OF 5)

Designed By A. J. CRAWFORD	Drawn By C. L. CILLEY
Checked By S. M. GUNN Date 4/05	Bridge Design Supervisor S. M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139PR5	Sheet 33 of 124

VHB NO. 50735

plot date: 4/25/2005

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MAUT 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			X																							
10+130 RT	BUS STOP	1	300	750	0.23						1			X																				MUTCD R7-107a		-
10+198 LT	DO NOT ENTER / STOP	1 1	750 750	750 750	0.56 0.56						1			X																				TEXT = "DO NOT ENTER" BACK-TO-BACK		E-143M
10+202 LT 10+219 LT 10+245 LT 10+266 LT	NO PARKING ANY TIME	4	300	450	0.56						4			X																				TEXT = "NO PARKING ANY TIME"		
10+212 LT	DO NOT ENTER	1	750	750	0.56						1			X																				TEXT = "DO NOT ENTER"		E-143M
10+218 LT 10+233 LT 10+248 LT	NO PARKING DUSK TO DAWN	3	300	450	0.42						3			X																				TEXT = "NO PARKING DUSK TO DAWN"		
10+249 LT	RESERVED PARKING	1	300	450	0.14						1			X																				MUTCD R7-8		-
10+254 LT	ONE WAY / ONE WAY	1 1	900 900	300 300	0.27 0.27						1			X																				BACK-TO-BACK		E-142M
10+268 LT	ONE WAY / ONE WAY	1 1	900 900	300 300	0.27 0.27						1			X																				BACK-TO-BACK		E-142M
10+280 LT	SPEED LIMIT 25	1	600	750	0.45						1			X																						E-142M
10+309 LT	HISTORIC PLAQUE ASSEMBLY																																SIGN BY OTHERS SEE SHEET 25, NOTE 2 & "HISTORIC PLAQUE ASSEMBLY FOOTINGS" DETAIL		
10+347 RT	COLCHESTER | SO. BURLINGTON	1	1500	190	0.29						1			X																				CONNECT TO CONCRETE BRIDGE RAIL AS DIRECTED BY THE RESIDENT ENGINEER		E-124M
10+397 RT							X				1			X																						
10+592 LT	SPEED LIMIT 25	1	600	750	0.45						1			X																						E-142M
	SUBTOTAL:				5.30									85.0																						
												m	m	m 85.0	m	m	m		EA	kg	kg	kg		kg	kg	kg	kg								
	TOTALS				m^2 5.30	m^2	EA. 1	m^2				m 85.0			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."

AVERAGE POST LENGTH 5.0 m

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta. / Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
TRAFFIC SIGN SUMMARY (1 OF 2)	
Designed By A.J. CRAWFORD	Drawn By R.J. TESTER
Checked By J.A. MERCER Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZDI39TSI	Sheet 34 of 124

VHB NO. 50735 plot date: 4/25/2005

STATE OF VERMONT
AGENCY OF TRANSPORTATION

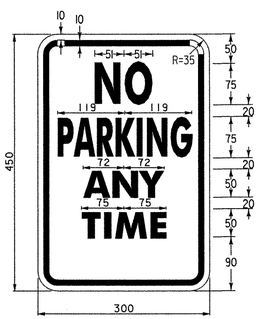
TRAFFIC SIGN SUMMARY SHEET

VAOT Metric

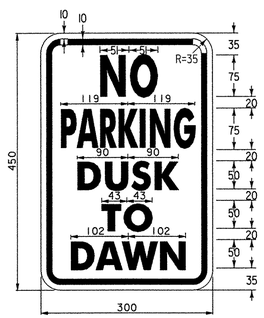
KILOMETER MARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (mm)	HEIGHT (mm)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL kg/m 1.7	3.0	4.5	SQUARE STEEL (mm) kg/m 44 3.4	50 3.9	63 5.0	ANCHOR	SLEEVE	TUBULAR 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																									
10+604 LT	OBSERVATORY LN						X				1			X																					
10+620 LT	LEGAL LOAD LIMIT 24,000 POUNDS	1	600	750	0.45						1			X																				E-141M
10+635 RT	ONLY ONLY	1	900	750	0.68						1			X																			VR-925		E-145AM
10+649		1	600	750	0.45						1			X																					E-144M
		2	450	450	0.40																													E-150M
	SUBTOTAL:				1.98									20.0																					
												m	m	m 20.0	m	m	m		EA	kg	kg	kg		kg	kg	kg	kg								
	TOTALS				m² 1.98	m²	EA. 1	m²				m			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."

AVERAGE POST LENGTH 5.0 m



COLORS
LEGEND - RED (REFL.)
BACKGROUND - WHITE (REFL.)



COLORS
LEGEND - RED (REFL.)
BACKGROUND - WHITE (REFL.)

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

REFER TO STANDARD E-146M
FOR MATERIALS & SPECIFICATIONS

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

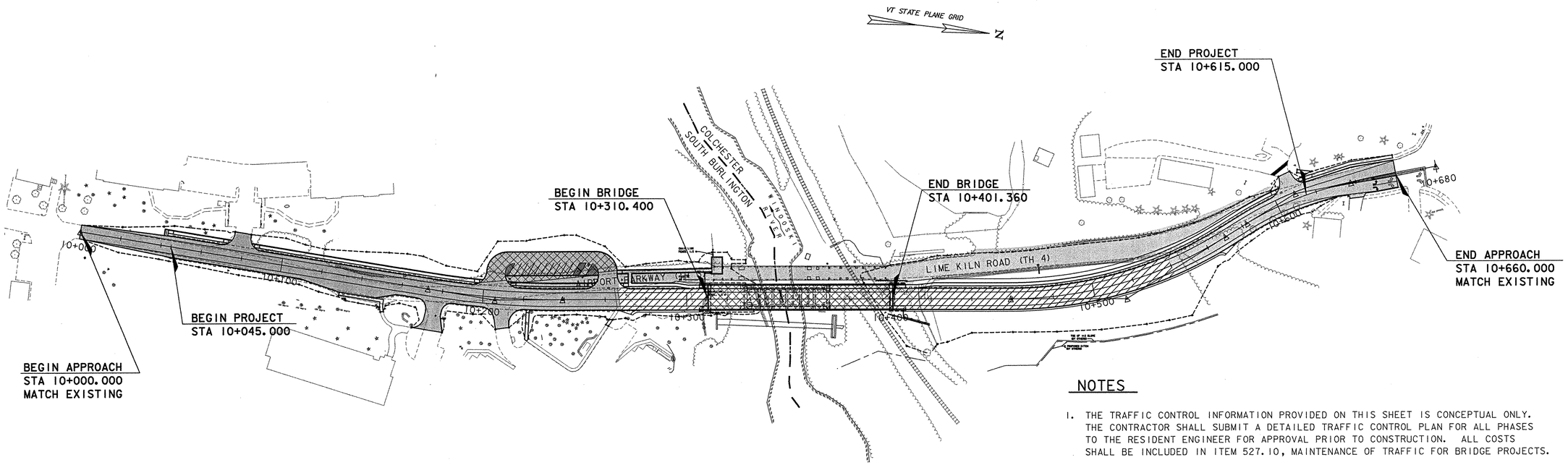
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.

TRAFFIC SIGN SUMMARY (2 OF 2)

Designed By A.J. CRAWFORD	Drawn By R. J. TESTER
Checked By J.A. MERCER Date 4/05	Bridge Design Supervisor S. M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZDI39TS2	Sheet 34A of 124

VHB NO. 50735

plot date: 4/25/2005



PLAN

SCALE: 1:1000

0 20 40 60

SCALE IN METERS

PHASE I

PROPOSED BRIDGE AND TEMPORARY TURNAROUND CONSTRUCTION

1. TWO-WAY TRAFFIC SHALL BE MAINTAINED USING EXISTING BRIDGE AND ROADWAY.
2. CONTRACTOR SHALL CONSTRUCT A GENERALLY FLAT AREA (SLIGHTLY SLOPED TO ALLOW PROPER DRAINAGE) WITH A GRAVEL SURFACE, FROM THE EDGE OF THE EXISTING ROADWAY TO THE LIMITS OF CONSTRUCTION OF THE PARKING AREA, AS A TEMPORARY TURN AROUND FOR THE CITY OF SOUTH BURLINGTON AND THE TOWN OF COLCHESTER MAINTENANCE VEHICLES AND SCHOOL BUSES FROM STA 10+200 TO STA 10+270. TEMPORARY TURN AROUND SHALL BE MAINTAINED AND KEPT CLEAR AT ALL TIMES.
3. RAILROAD TRAFFIC SHALL BE MAINTAINED AT ALL TIMES. ALL WORK SHALL BE COORDINATED WITH NEW ENGLAND CENTRAL RAILROAD. SEE SPECIAL PROVISIONS FOR ADDITIONAL RAILROAD WORK ZONE REQUIREMENTS.
4. THE CONTRACTOR SHALL NOT EXCEED EXISTING BRIDGE POSTED WEIGHT LIMIT WITH ANY VEHICLES OR EQUIPMENT.

PHASE II

ROADWAY APPROACH CONSTRUCTION (STA 10+270± TO BEGIN BRIDGE AND END BRIDGE TO STA 10+540±)

1. TWO-WAY TRAFFIC SHALL BE MAINTAINED ON THE EXISTING BRIDGE AND ROADWAY.
2. TEMPORARY SLOPES WITH TRAFFIC BARRIERS SHALL BE USED TO CONSTRUCT APPROACHES. ITEM 505.36, TEMPORARY STEEL SHEET PILING IS INCLUDED AS TEMPORARY EXCAVATION SUPPORT TO SAFELY SEPARATE THE WORK AREA FROM TRAFFIC. SEE SHEET 21 FOR APPROXIMATE LIMITS.
3. CONTRACTOR SHALL PROVIDE TEMPORARY DRAINAGE METHODS IN ACCORDANCE WITH THE SPECIAL PROVISIONS AND TO THE SATISFACTION OF THE RESIDENT ENGINEER.

PHASE III

PARKING LOT, PATH, LOOKOUT, FINAL SLOPES, AND ALL OTHER ROADWAY APPROACH CONSTRUCTION. REMOVAL OF EXISTING BRIDGE AND ROADWAY.

1. ALTERNATING ONE-WAY TRAFFIC SHALL BE USED FOR ROADWAY CONSTRUCTION WITH TRAFFIC ON THE PROPOSED ROADWAY AND BRIDGE, AS NEEDED.
2. TWO-WAY TRAFFIC SHALL BE MAINTAINED DURING ALL NON-CONSTRUCTION WORK TIMES.
3. ALL DRIVES SHALL BE MAINTAINED AT ALL TIMES. FLAGGERS ARE REQUIRED FOR ALL DRIVES DURING ONE-WAY TRAFFIC OPERATIONS.
4. CONTRACTOR SHALL PROVIDE TEMPORARY DRAINAGE METHODS IN ACCORDANCE WITH THE SPECIAL PROVISIONS AND TO THE SATISFACTION OF THE RESIDENT ENGINEER.

NOTES

1. THE TRAFFIC CONTROL INFORMATION PROVIDED ON THIS SHEET IS CONCEPTUAL ONLY. THE CONTRACTOR SHALL SUBMIT A DETAILED TRAFFIC CONTROL PLAN FOR ALL PHASES TO THE RESIDENT ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION. ALL COSTS SHALL BE INCLUDED IN ITEM 527.10, MAINTENANCE OF TRAFFIC FOR BRIDGE PROJECTS.
2. CONTRACTOR SHALL SUPPLY A MINIMUM LANE WIDTH OF 3300 WITH A 600 SHOULDER. TRAFFIC LANES ON THE EXISTING BRIDGE ARE 3000.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL ADDITIONAL PERMITS RELATED TO HIS PROPOSED TRAFFIC CONTROL PLAN.
4. THE CONTRACTOR SHALL COORDINATE PROPOSED WORK WITH NEW ENGLAND CENTRAL RAILROAD. ITEM 630.15 FLAGGERS (MOD. - RAILROAD) SHALL BE REQUIRED FOR THE PROTECTION OF RAILROAD TRAFFIC FOR ALL CONSTRUCTION AND CONSTRUCTION METHODS WITHIN FOULING DISTANCE OF THE TRACK.
5. NIGHT WORK SHALL NOT BE PERMITTED UNLESS OTHERWISE APPROVED BY THE RESIDENT ENGINEER UNDER SPECIAL CIRCUMSTANCES. ANY NIGHT WORK ON THE SOUTH BURLINGTON APPROACH WILL ALSO REQUIRE APPROVAL FROM THE CITY OF SOUTH BURLINGTON.
6. TRAFFIC CONTROL WARNING SIGNS SHALL BE PROVIDED PER STANDARD E-100M, E-101M, E-102M, AND E-102AM. ADDITIONAL PROJECT CONSTRUCTION SIGNS SHALL BE INSTALLED AS REQUIRED BY THE RESIDENT ENGINEER. PAYMENT FOR THESE SIGNS SHALL BE INCLUDED IN ITEM 527.10, MAINTENANCE OF TRAFFIC FOR BRIDGE PROJECTS.
7. CONTRACTOR SHALL INCLUDE ITEM 641.12 PUBLIC RELATIONS OFFICER FOR THE COORDINATION OF DETOUR INFORMATION AND TRAFFIC DELAYS FOR THE PUBLIC.
8. ACCESS TO ALL EXISTING DRIVES SHALL BE MAINTAINED AT ALL TIMES DURING ALL PHASES OF CONSTRUCTION.
9. TRAFFIC CAN BE MAINTAINED ON A GRAVEL SURFACE FOR A TEMPORARY PERIOD OF TIME AS APPROVED BY THE RESIDENT ENGINEER. CONTRACTOR SHALL ENSURE GRAVEL SURFACE IS SUFFICIENTLY GRADED AND DUST CONTROL MEASURES ARE USED TO THE SATISFACTION OF THE RESIDENT ENGINEER.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

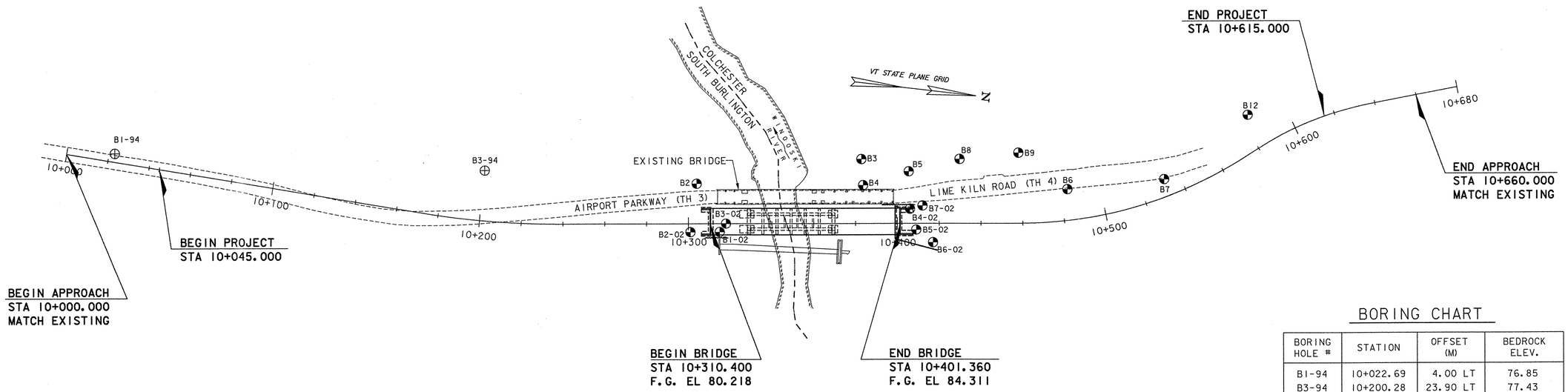
Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta.
	Surv. Sta.

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

TRAFFIC CONTROL PLAN

Designed By S.M. GUNN	Drawn By K.D. WENTWORTH
Checked By Date G.L. BAKOS 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139tcp	Sheet 35 of 124

VHB NO. 50735 plot date: 4/25/2005



B1-9X⊕ INDICATES BORING TAKEN DECEMBER 1993 BY H&A OF NEW YORK

BX● INDICATES BORING TAKEN JUNE 1999 BY GOLDER ASSOCIATES

BX-02● INDICATES BORING TAKEN MARCH 2002 BY GOLDER ASSOCIATES

PLAN

SCALE: 1:1000

0 20 40 60

SCALE IN METERS

BORING CHART

BORING HOLE #	STATION	OFFSET (M)	BEDROCK ELEV.
B1-94	10+022.69	4.00 LT	76.85
B3-94	10+200.28	23.90 LT	77.43
B2	10+304.03	18.99 LT	78.05
B3	10+382.77	30.68 LT	75.00
B4	10+383.59	18.19 LT	73.12
B5	10+405.42	24.73 LT	77.92
B6	10+483.18	14.77 LT	82.88
B7	10+532.17	8.13 LT	87.23
B8	10+429.76	30.62 LT	79.74
B9	10+457.90	33.56 LT	83.52
B12	10+583.84	16.37 LT	86.22
B1-02	10+315.00	4.00 RT	68.64
B2-02	10+301.00	4.00 RT	69.71
B3-02	10+318.00	3.00 LT	70.78
B4-02	10+406.00	7.00 LT	75.18
B5-02	10+409.00	3.00 RT	72.92
B6-02	10+417.00	9.00 RT	73.46
B7-02	10+412.00	8.50 LT	76.21

BORING NOTES:

1. 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.
2. 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.
3. ENGINEERING JUDGEMENT WAS EXERCISED IN PREPARING THE SUBSURFACE INFORMATION PRESENTED HEREIN. ANALYSIS AND INTERPRETATION OF SUBSURFACE DATA WAS PERFORMED AND INTERPRETED BY H&A OF NEW YORK AND GOLDER ASSOCIATES FOR DESIGN AND ESTIMATING PURPOSES. PRESENTATION OF THE INFORMATION IN THE CONTRACT IS INTENDED TO PROVIDE THE CONTRACTOR ACCESS TO THE SAME DATA. 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.
4. PICTORIAL STRUCTURE DETAILS SHOWN ON THE BORING PLAN LAYOUT OR SOIL PROFILES ARE FOR ILLUSTRATIVE PURPOSES ONLY AND MAY NOT ACCURATELY PORTRAY FINAL CONTRACT DETAILS.
5. 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.
6. BEDROCK HAS BEEN OBSERVED NEAR THE SURFACE OR EXPOSED BETWEEN STATIONS 10+180 LT AND 10+315 LT. AFTER BEDROCK HAS BEEN EXPOSED WITHIN THE EXCAVATION LIMITS, THE ENGINEER WILL TAKE CROSS-SECTIONS AT 8 m INTERVALS FOR ESTIMATING QUANTITIES.
7. WHERE INDICATED, "% FLUSH RET." IS THE PERCENT FLUSH RETURNED. THE PERCENT FLUSH RETURNED IS A MEASURE OF DRILLING FLUID RECIRCULATION.
8. WHERE INDICATED, "FRACTURE INDEX" IS THE MEASURE OF FREQUENCY OF FRACTURES, MEASURED IN FRACTURES PER FOOT.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

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

BORING INFORMATION SHEET

Designed By M.M. LANDREY	Drawn By M.M. LANDREY
Checked By M.A. COLGAN Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6) S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139BR1	Sheet 36 of 124

VHB NO. 50735 plot date: 5/2/2005

H&A OF NEW YORK, ROCHESTER, NEW YORK Consulting Geotechnical Engineers, Geologists and Hydrogeologists	TEST BORING REPORT	BORING NO. B1-94

PROJECT: LIME KILN BRIDGE
CLIENT: DONALD L. HAMLIN CONSULTING ENGINEERS, INC.
CONTRACTOR: GREEN MOUNTAIN BORING COMPANY, INC.

FILE NO. 70446-00
SHEET NO. 1 OF 1
LOCATION: See Plan
ELEVATION: 259 +/-
DATUM: NGVD
START: 14 Dec. 1993
FINISH: 14 Dec. 1993
DRILLER: G. Stables
H&A REP: E. Reckentine

ITEM	CASING	DRIVE SAMPLER	CORE BARREL
TYPE	Auger	SS	---
INSIDE DIAMETER (IN)	3-1/4	1-3/8	---
HAMMER WEIGHT (LB)	---	140	---
HAMMER FALL (IN)	---	30	---

DRILLING EQUIPMENT & PROCEDURES
RIG TYPE: Mobil Drill Truck Mounted

DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA CHANGE (FT)	VISUAL CLASSIFICATION AND REMARKS
		2 5 4 3	S1 8"/24"	0.0 2.0		Stiff brown clayey SILT, little medium to fine SAND, trace organic material, moist.
		2 3 5 8	S2 6"/24"	2.0 4.0		Stiff brown gravelly SILT, some clay, little medium to fine sand, moist.
5		10 8 5 6	S3 6"/24"	4.0 6.0		Stiff brown clayey SILT, little medium to fine SAND, with cobbles, moist. -LACUSTRINE-
		5 2 11 100/5	S4A,B 18"/24"	6.0 7.9	7.3	Stiff brown clayey SILT, trace organic material, wet. Very dense gray GRAVEL, horizontally bedded, moist.
10						Apparent Top of Rock at 7.3 ft. Bottom of Boring at 7.9 ft.
15						
20						
25						

WATER LEVEL DATA						SAMPLE IDENTIFICATION	SUMMARY	
DATE	TIME	ELAPSED TIME (HR)	DEPTH (FT) TO: BOTTOM OF CASING	DEPTH (FT) TO: BOTTOM OF HOLE	DEPTH (FT) TO: WATER	O Open End Rod T Thin Wall Tube U Undisturbed Sample S Split Spoon	OVERBURDEN (LIN FT): 7.3 ROCK CORED (LIN FT): --- SAMPLES: 4S BORING NO. B1	

H&A OF NEW YORK, ROCHESTER, NEW YORK Consulting Geotechnical Engineers, Geologists and Hydrogeologists	TEST BORING REPORT	BORING NO. B3-94

PROJECT: LIME KILN BRIDGE
CLIENT: DONALD L. HAMLIN CONSULTING ENGINEERS, INC.
CONTRACTOR: GREEN MOUNTAIN BORING COMPANY, INC.

FILE NO. 70446-00
SHEET NO. 1 OF 1
LOCATION: See Plan
ELEVATION: 259 +/-
DATUM: NGVD
START: 14 Dec. 1993
FINISH: 14 Dec. 1993
DRILLER: G. Stables
H&A REP: E. Reckentine

ITEM	CASING	DRIVE SAMPLER	CORE BARREL
TYPE	Auger	SS	---
INSIDE DIAMETER (IN)	3-1/4	1-3/8	---
HAMMER WEIGHT (LB)	---	140	---
HAMMER FALL (IN)	---	30	---

DRILLING EQUIPMENT & PROCEDURES
RIG TYPE: Mobil Drill Truck Mounted

DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA CHANGE (FT)	VISUAL CLASSIFICATION AND REMARKS
		2 1 2 2	S1 6"/24"	0.0 2.0	2.0	Very loose brown, red, white brick and concrete fragments. -FILL-
		3 4 7 9	S2 18"/24"	2.0 4.0		Medium dense brown fine SAND, little fine gravel, trace coarse to medium sand and silt, moist.
5		5 9 100/5	S3 12"/17"	4.0 5.4	5.0	Medium dense brown coarse to fine sandy SILT, trace clay, moist. -DELTAIC- Very dense gray angular gravel. Apparent Top of Rock
10						Auger and Split Spoon Refusal at 5.4 ft. Apparent Top of Rock at 5.4 ft. Bottom of Boring at 5.4 ft.
15						
20						
25						

WATER LEVEL DATA						SAMPLE IDENTIFICATION	SUMMARY	
DATE	TIME	ELAPSED TIME (HR)	DEPTH (FT) TO: BOTTOM OF CASING	DEPTH (FT) TO: BOTTOM OF HOLE	DEPTH (FT) TO: WATER	O Open End Rod T Thin Wall Tube U Undisturbed Sample S Split Spoon	OVERBURDEN (LIN FT): 5.4 ROCK CORED (LIN FT): --- SAMPLES: 3S BORING NO. B3	

NOTE:
THE SUBSURFACE EXPLORATIONS SHOWN ON THIS SHEET ARE IN ENGLISH UNITS AS RECORDED BY H&A OF NEW YORK IN 1993.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta. Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
BORING LOGS (1 OF 9)	
Designed By H&A OF NEW YORK	Drawn By M. M. LANDREY
Checked By M. A. COLGAN Date 4/05	Bridge Design Supervisor S. M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139LG1	Sheet 37 of 124

VHB NO. 50735 plot date: 4/18/2005

MAST Metric

RECORD OF BOREHOLE B-2

PROJECT: VHB/ LIMEKILN BRIDGE\VT
PROJECT LOCATION: S.Burlington/Colchester VT
PROJECT NUMBER: 993-6856
BORING TIME: 0730/06-24-99 to 1010/06-24-99
BORING LOCATION: See Figure
DATUM: Local Datum

Golder Associates Manchester, New Hampshire

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEV. / DEPTH	SAMPLES NUMBER	TYPE	BLOWS / 6 INCHES	N	REC.\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0					Elev.						
		0.0 – 1.3 bgs. Dark brown to black SILT, little to some sand and organic matter. compact moist			0.00	NA	NA	NA	NA	NA	0.0 – 1.3' Dark brown to black SILT little to some sand and organic matter. moist.
		1.3–4.0 Bedrock – highly weathered MARBLE.				NA	NA	NA	NA	NA	1.3–4.0 Bedrock – Highly weathered MARBLE.
5	4" Roller bit – NX Rock Coring	See corehole log B-2 for continuation.			4.00						Rollercored from 1.3 to 4.0 bgs then began coring @ 4'bgs See corehole log for continuation.
10											
15											

DRILL RIG: MOBILE B-47
DRILLING CONTRACTOR: Con – Tec Inc.
DRILLER: R. McGlashan
WEIGHT OF HAMMER: 140 lbs
DROP: 30 inches
LOGGED: M. Zarenski
CHECKED: MZ
DATE: 08/11/99
SHEET 1 OF 1

RECORD OF BOREHOLE B-3

PROJECT: VHB/ LIMEKILN BRIDGE\VT
PROJECT LOCATION: S.Burlington/Colchester Vt
PROJECT NUMBER: 993-6856
BORING TIME: 1325/06-22-99 to 1620/06-22-99
BORING LOCATION: See Figure
DATUM: Local Datum

Golder Associates Manchester, New Hampshire

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEV. / DEPTH	SAMPLES NUMBER	TYPE	BLOWS / 6 INCHES	N	REC.\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0					Elev.						
		0.0 – 3.0 bgs. Black SILT, trace sand and gravel. Stiff moist. Fill			0.00	1	D.O.	3–5–5–8	10	.75/2.0	0.0 – 0.75' Stiff FILL consisting of black SILT, trace sand and gravel. moist.
					2.00						0.75 – 2.0' bgs No Recovery
		Bedrock @ 3.0' bgs.			3.00						Refusal @3'bgs (Bedrock).
5	4" Drive & Wash – NX Rock Coring	See corehole log B-3 for continuation									
10											
15											

DRILL RIG: MOBILE B-47
DRILLING CONTRACTOR: Con – Tec Inc.
DRILLER: R. McGlashan
WEIGHT OF HAMMER: 140 lbs
DROP: 30 inches
LOGGED: M. Zarenski
CHECKED: MZ
DATE: 08/11/99
SHEET 1 OF 1

RECORD OF BOREHOLE B-4

PROJECT: VHB/ LIMEKILN BRIDGE/ VT
PROJECT LOCATION: S.Burlington/Colchester VT
PROJECT NUMBER: 993-6856
BORING TIME: 0830 / 06-22-99 to 1150/ 06-22-99
BORING LOCATION: See Figure
DATUM: Local Datum

Golder Associates Manchester, New Hampshire

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEV. / DEPTH	SAMPLES NUMBER	TYPE	BLOWS / 6 INCHES	N	REC.\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0					Elev.						
		0.0 – 4.5' FILL, black silt, some sand and gravel, few cobbles. moist			0.00	1	D.O.	1–2–3–4	5	0/2.0	0–2' No Recovery in split spoon – material is a recently reworked FILL consisting of silt, some sand and gravel, few cobbles.
					2.00						
					4.00						
5		4.5'–8.0' Firm yellow–brown SILT, some very fine sand, trace gravel, trace clay. Moist			4.50	2	D.O.	3–3–3–4	6	1.5/2.0	4.0–4.5' No Recovery, possible FILL.
					0.00						4.5–6.0' Firm yellow brown SILT some fine sand. trace gravel, trace clay. Moist.
	4" Drive & Wash – NX Rock Coring	8.0 Bedrock			8.00						Bedrock @ 8'bgs.
10		See core log B-4 for continuation									
15											

DRILL RIG: MOBILE B-47
DRILLING CONTRACTOR: Con – Tec. Inc.
DRILLER: R. McGlashan
WEIGHT OF HAMMER: 140 lbs
DROP: 30 inches
LOGGED: M. Zarenski
CHECKED: MZ
DATE: 08/11/99
SHEET 1 OF 1

RECORD OF ROCK COREHOLE B-2

PROJECT: VHB/LIMEKILN BRIDGE/VT
PROJECT LOCATION: LIMEKILN, VT
PROJECT NUMBER: 993-6856
BORING TIME: 06-24-99/0730 to 06-24-99/1010
INCLINATION: 90° AZIMUTH: N/A
BORING LOCATION: See Figure
DATUM: Local Datum

Golder Associates Manchester, New Hampshire

DEPTH SCALE FEET	BORING METHOD	CORE DESCRIPTION	GRAPHIC LOG	ELEV. / DEPTH	RUN	Penetration Rate MIN./ FT	RUN TIME START / STOP	WATER USAGE	% FLUSH RET.	FRACTURE INDEX (FI/ 1M)	DISCONTINUITIES
4.0	4" rollercored to 4' bgs then NX coring to 14' bgs.	ABBREVIATIONS: B – BEDDING; FO – FOLIATION; CA – CALCITE; CL – CORE LOSS; CO – CONTACT; F – FAULT; J – JOINT; P – POLISHED; S – SLICKENSIDED; SM – SMOOTH; R – ROUGH / RIDGED; ST – STEPPED; H – HAINT; PL – PLANAR; FL – FLEXURED; UE – UNEVEN; W – WAVEY; C – CURVED; LI – LIMONITE; CHL – CHLORITE; IR – IRON; CL – CLAY; ME – MECH FRACTURE; CL – CORE LOSS		Elev. 4.00						
		4.0'–6.3' Highly weathered very closely jointed pinkish–gray very fine grained, oxidized LIMESTONE or low grade MARBLE. The rockcore is completely fractured with no full diameter core. All fracture surfaces contain iron or manganese staining and show signs of weathering. Many fractures appear near vertical. Some core pieces show signs of reheated fractures. depth of some fractures may be approximate.			Run No. 1	4.5			80%	M	80° J/PL/Mn
6.5						4.8			80%	M	
		6.3'–10.0' Moderately weathered close to very closely jointed pinkish–gray very fine grained partly oxidized LIMESTONE or low grade MARBLE. Most fractures surface contain Fe or Manganese staining and show signs of weatherizing. No signs of vertical fracturing except for from 6.5'–7.0' which may contain vertical fractures. Many reheated fractures throughout core mostly alligned with major joint orientation.		6.30		~5			80%	M	60° J/Mn 60° J/Mn 80° J/Mn
9.0					Run No. 2	5			80%	3	40° J/GRANULAR INFILLING 60° J/GRANULAR INFILLING
						5			90%	3	50° J/UE/Mn 80° J/Mn
						5			90%	M	40° J/MnFe/UE
						5			90%	M	40° J/Mn/PL (CALCITE CRYSTALS)
11.5		10.0–14.0 Highly weathered very closely jointed pinkish gray very fine grained partly oxidized LIMESTONE or low grade MARBLE. The rockcore is almost completely fractured with very few pieces of full diameter core. Most fractures show signs of iron or magnanese staining and weathering. Many fractures are re–healed.		10.0	Run No. 3	5			90%	M	0° J/Fe/Mn
						5			90%	M	55° J
						5			90%	M	0° F/Mn–Slickensides
						5			90%	M	0° J/F/Mn/Fe
					Run No. 4	4			90%	M	Several near vertical joints 60° J 0° J/Fe/Mn 80° J/Fe/Mn 5° J/Fe/Mn
14.0		Depth of some fractures may be approximate									
		End coring @ 14' bgs.		14.0							
16.5											
19.0											Note: TRC could not be determined in run no. 1, 3, or 4 due to highly fractured nature of rocks.

DRILL RIG: MOBILE B-47
DRILLING CONTRACTOR: Con-Tec Inc.
DRILLER: R. McGlashan
TOTAL LENGTH CORED: 10'
BITS USED: 1
LOGGED: M. Zarenski
CHECKED: PCI
DATE: 04/28/05
SHEET 1 OF 1

RECORD OF ROCK COREHOLE B-3

PROJECT: VHB/LIMEKILN BRIDGE/VT
PROJECT LOCATION: S.Bulington/Colchester VT
PROJECT NUMBER: 993-6856
BORING TIME: 06-22-99/1432 to 06-22-99/1620
INCLINATION: 90° AZIMUTH: N/A
BORING LOCATION: See Figure
DATUM: Local Datum

Golder Associates Manchester, New Hampshire

DEPTH SCALE FEET	BORING METHOD	CORE DESCRIPTION	GRAPHIC LOG	ELEV. / DEPTH	RUN	Penetration Rate MIN./ FT	RUN TIME START / STOP	WATER USAGE	% FLUSH RET.	FRACTURE INDEX (FI/ 1M)	DISCONTINUITIES
3.50	4" Drive & Wash to 3.4'bgs then NX coring to 13.4' bgs.	ABBREVIATIONS: B – BEDDING; FO – FOLIATION; CA – CALCITE; CL – CORE LOSS; CO – CONTACT; F – FAULT; J – JOINT; P – POLISHED; S – SLICKENSIDED; SM – SMOOTH; R – ROUGH / RIDGED; ST – STEPPED; H – HAINT; PL – PLANAR; FL – FLEXURED; UE – UNEVEN; W – WAVEY; C – CURVED; LI – LIMONITE; CHL – CHLORITE; IR – IRON; CL – CLAY; ME – MECH FRACTURE; CL – CORE LOSS		Elev. 3.5						
		3.4'–10.5' Faintly to slightly weathered, closely jointed, grayish with pinkish banding very fine grained (crystalline) partly oxidized MARBLE. Reheaded fractures, some nearly vertical occur throughout. Many open fractures contain Fe or Mn staining.			Run No. 1	5			0	2	98° MF/UE 60° J/UE 0° J/M 30° J/PL/ST 30° J/PL/ST
6.0						5			0	M	
						6			0	3	35° J 90° MF 55° Jor/MF/UE 90° MF/UE 70° J/UE/Mn Staining 85° J/UE/Mn
						6			0	2	60° J/UE/Mn
8.50						4			0	2	50° J 70° J
						5			0	3	60° J/UE 60° J/UE/Mn
11.0						4.5			0	4	70° J/Mn 30° J/Mn 80° J/Mn 20° J/Fe/Mn 45° J
		10.5'–13.4' Slightly weathered closely jointed very light gray with yellowish banding, crystalline, partly oxidized MARBLE. Open fractures between 11.4' and 12.4' contain granular calcite and these zones appear more weathered than the rest of the rock mass. No signs of reheaded fractures. Some open fractures contain Fe or Mn staining.		10.5		4			0	2	50° J 85° J OR MF
13.50						3			0	4	61° J/Weathered to granular 30° J/Highly Weathered 0° J or MF/VE
						4			0	3	60° J/UE 60° J/UE 85° MF
16.00		End corehole @ 13.4'bgs.		13.4							
18.50											

DRILL RIG: MOBILE B-47
DRILLING CONTRACTOR: Con-Tec Inc.
DRILLER: R. McGlashan
TOTAL LENGTH CORED: 10'
BITS USED: 1
LOGGED: M. Zarenski
CHECKED: PCI
DATE: 04/28/05
SHEET 1 OF 1

RECORD OF ROCK COREHOLE B-4

PROJECT: VHB/LIMEKILN BRIDGE/VT
PROJECT LOCATION: LIMEKILN, VT
PROJECT NUMBER: 993-6856
BORING TIME: 06-22-99/0955 to 06-22-99/1150
INCLINATION: 90° AZIMUTH: N/A
BORING LOCATION: See Figure
DATUM: Local Datum

Golder Associates Manchester, New Hampshire

DEPTH SCALE FEET	BORING METHOD	CORE DESCRIPTION	GRAPHIC LOG	ELEV. / DEPTH	RUN	Penetration Rate MIN./ FT	RUN TIME START / STOP	WATER USAGE	% FLUSH RET.	FRACTURE INDEX (FI/ 1M)	DISCONTINUITIES
6.50	4" Drive & Wash to 8.4' bgs then NX coring to 18.4' bgs	ABBREVIATIONS: B – BEDDING; FO – FOLIATION; CA – CALCITE; CL – CORE LOSS; CO – CONTACT; F – FAULT; J – JOINT; P – POLISHED; S – SLICKENSIDED; SM – SMOOTH; R – ROUGH / RIDGED; ST – STEPPED; H – HAINT; PL – PLANAR; FL – FLEXURED; UE – UNEVEN; W – WAVEY; C – CURVED; LI – LIMONITE; CHL – CHLORITE; IR – IRON; CL – CLAY; ME – MECH FRACTURE; CL – CORE LOSS		Elev. 8.5						
		8.4'–16.0' Faintly to slightly weathered, close to moderately closely jointed gray crystalline LIMESTONE or lowgrade MARBLE. Minor staining on frature surfaces. Very few reheaded fractures.			Run No. 1	5			0	2	65° J/UE 90° MF
11.0						7			0	1	75° J 60° J/VN Rubble
						4.5			0	M	40° J
						4.5			0	4	90° MF/UE
						4.5			0	2	90° MF/UE 60° J 70° J
13.50						4.5			0	2	65° J/PL 30° J 85° MF
						4.5			0	3	85° MF 20° J/PL
						4.5			0	2	90° MF 45° J
16.0		16'–18.4 Slightly weathered closely jointed pinkish gray crystalline MARBLE. Fe or Mn staining on some open fractures. No evidence of re–healed fractures.		16.0		4.5			0	3	90° MF 70° J/Mn/Staining
						4.5			0	3	90° MF/VE 60° J/C 90° MF 48° J
18.50		End corehole @ 18.4'bgs.		18.4							
21.0											

DRILL RIG: MOBILE B-47
DRILLING CONTRACTOR: Con-Tec Inc.
DRILLER: R. McGlashan
TOTAL LENGTH CORED: 10'
BITS USED: 1
LOGGED: M. Zarenski
CHECKED: PCI
DATE: 04/28/05
SHEET 1 OF 1

NOTE:
THE SUBSURFACE EXPLORATIONS SHOWN ON THIS SHEET ARE IN ENGLISH UNITS AS RECORDED BY GOLDER ASSOCIATES 1999.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

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

BORING LOGS (2 OF 9)

Designed By GOLDER	Drawn By M.M. LANDREY
Checked By M.A. COLGAN Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139LG2	Sheet 38 of 124

VHB NO. 50735 plot date: 4/28/2005

RECORD OF BOREHOLE B-5

PROJECT: VHB/LIMEKILN BRIDGE/VT
PROJECT LOCATION: S.Burlington/Colchester VT
PROJECT NUMBER: 993-6856
BORING TIME: 1555 / 06-29-99 to 0900/ 06-30-99
BORING LOCATION: See Figure
DATUM: Local Datum

Golder Associates Manchester, New Hampshire

DEPTH SCALE FEET	BORING METHOD	USCS	GRAPHIC LOG	ELEV. / DEPTH	NUMBER	TYPE	BLOWS / 6 INCHES	N	REC. \ ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
				Elev.						
0	4" Drive & Wash to 12.7' then NX core			0.00						0.0–0.2 Top soil – dark brown SILT with organic matter. 0.2–0.9 Compact, light brown cmf sand, some silt. Highly weathered limestone. (Fill) 0.9–1.4 Stiff brown to olive brown SILTY CLAY little to some limestone, sand and gravel, moist. Highly to completely weathered bedrock. (Fill) 1.4–2.0' No Recovery
				0.0–0.2 Top soil						
				0.2–0.9 Compact light brown CMF SAND some silt	1	D.O.	10–11–16–28	27	1.4/2.0	
				0.9–1.4 Stiff brown to olive brown silty clay, little to some sand and gravel, firm, moist						
				1.4–5.0 No recovery						
5				2.00						
				5.0–8.0 Stiff greenish gray silty clay some medium coarse sand and fine gravel, firm, moist(ML)	2	D.O.	5–5–10–10	15	1.5/2.0	5.0'–6.5' Stiff greenish grey SILTY CLAY, some sand and fine gravel, consisting of limestone ranging from slightly weathered to highly weathered. 6.5'–7.0' No Recovery
				5.00						
				7.00						formation change @ 8 bgs.
10				8.0–12.7 Firm brown SILT interbedded with brown CLAY						10.0–11.4 Firm interbedded brown silty clay some fine sand, trace fine gravel. (CL) 11.4'–12.0' No Recovery
				10.00	3	D.O.	5–5–5–8	10	1.4/2.0	
				12.00						12.7 Bedrock.
15				12.7 BEDROCK						
				See corehole logs for continuation						

DRILL RIG: MOBILE B-47
DRILLING CONTRACTOR: Con – Tec INC.
DRILLER: R. McGlashan
WEIGHT OF HAMMER: 140 lbs
DROP: 30 inches
LOGGED: M. Zarenski
CHECKED: MZ
DATE: 08/11/99
SHEET 1 OF 1

RECORD OF BOREHOLE B-6

PROJECT: VHB/LIMEKILN BRIDGE/VT
PROJECT LOCATION: S.Burlington/Colchester VT
PROJECT NUMBER: 993-6856
BORING TIME: 0830/ 06-23-99 to 1030/ 06-23-99
BORING LOCATION: See Figure
DATUM: Local Datum

Golder Associates Manchester, New Hampshire

DEPTH SCALE FEET	BORING METHOD	USCS	GRAPHIC LOG	ELEV. / DEPTH	NUMBER	TYPE	BLOWS / 6 INCHES	N	REC. \ ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
				Elev.						
0	3" Drive & Wash			0.00						0.0–0.2 Asphalt concrete 0.2–0.75 FILL, compact brown CMF SAND AND GRAVEL moist
				0.0 – 8.4' FILL – upper 0.2 ft is Asphalt Pavement, then CMF SAND AND GRAVEL to fine-med sand little to some silt, little coarse sand, little gravel, compact, moist	1	D.O.	73–13–11–13	24	.75/2.0	
				2.00						
5				4.00	2	D.O.	14–11–8–7	19	1.3/2.0	4.0–5.3 FILL compact brown fine–med SAND, little to some silt, little coarse sand, little gravel. Slight moist.
				6.00						5.3–6.0 No Recovery
				8.4'–9.0 Bedrock, Fresh to faintly weathered MARBLE.						Bedrock encountered @ 8.4' bgs
10				9.00						
				see corehole log for continuation						
15										

DRILL RIG: MOBILE B-47
DRILLING CONTRACTOR: Con – Tec INC.
DRILLER: R. McGlashan
WEIGHT OF HAMMER: 140 lbs
DROP: 30 inches
LOGGED: M. Zarenski
CHECKED: MZ
DATE: 08/11/99
SHEET 1 OF 1

RECORD OF BOREHOLE B-7

PROJECT: VHB/LIMEKILN BRIDGE/VT
PROJECT LOCATION: S.Burlington/Colchester VT
PROJECT NUMBER: 993-6856
BORING TIME: 0831/ 06-29-99 to 1103/06-29-99
BORING LOCATION: See Figure
DATUM: Local Datum

Golder Associates Manchester, New Hampshire

DEPTH SCALE FEET	BORING METHOD	USCS	GRAPHIC LOG	ELEV. / DEPTH	NUMBER	TYPE	BLOWS / 6 INCHES	N	REC. \ ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
				Elev.						
0	4" Drive & Wash to 3" Spin & Wash to NX core			0.00						0.0–0.2' Asphalt 0.2–0.5' SAND, SILT, GRAVEL. FILL 0.5'–1.8' Compact yellow brown C–M–F SAND AND fine GRAVEL. FILL, moist. 1.8–2.5' No Recovery
				0.0–0.2' Asphalt						
				0.2–4.0' FILL C–M–F SAND, little SILT AND GRAVEL, moist, dense	1	D.O.	6–10–9–14	19	1.3/2.0	
				2.50						Formation change at Aprox 4' bgs.
5				4.0–9.0 Firm greenish brown SILT, some fine sand trace gravel, trace fine sand, moist.	2	D.O.	5–4–4–5	8	1.3/2.0	5.0–6.3 Firm greenish brown SILT, some fine sand trace gravel. 6.3'–7.0' No Recovery. Formation change @ oproximately 9' bgs.
				5.00						
				7.00						
				9.0–10.1 Brown CLAY firm, moist.						
10				10.00						Attempted 10'–12'. Spoon encountered bedrock @ 10.1 bgs 10.0–10.1' Brown CLAY. 10.1 Bedrock
				10.1–10.3' Fresh to faintly weathered fine grained MARBLE.	3	D.O.	N/A	N/A	.1/2.0	
				10.3						See corehole log for continuation of borehole.
				See corehole log B–7 for continuation						
15				12.00						

DRILL RIG: MOBILE B-47
DRILLING CONTRACTOR: Con – Tec INC.
DRILLER: R. McGlashan
WEIGHT OF HAMMER: 140 lbs
DROP: 30 inches
LOGGED: M. Zarenski
CHECKED: MZ
DATE: 08/11/99
SHEET 1 OF 1

RECORD OF ROCK COREHOLE B-5

PROJECT: VHB/LIMEKILN BRIDGE/VT
PROJECT LOCATION: S.Bulington/Colchester VT
PROJECT NUMBER: 993-6856
BORING TIME: 06–24–99/0730 to 06–24–99/1010
INCLINATION: 90° AZIMUTH: N/A
BORING LOCATION: See Figure
DATUM: Local Datum

Golder Associates Manchester, New Hampshire

CORE DESCRIPTION

ABBREVIATIONS: B – BEDDING; CA – CALCITE; CO – CORE LOSS; CON – CONTACT; F – FAULT; J – JOINT; P – POLISHED; S – SLICKENSIDED; SM – SMOOTH; R – ROUGH / RIDGED; ST – STEPPED; M – WAVY; PL – PLANAR; FL – FLEXURED; UE – UNEVEN; V – WAVEY; C – CURVED; LI – LIMONITE; CH – CHLORITE; FE – IRON; CL – CLAY; MF – MECH FRACTURE; CL – CORE LOSS

DEPTH SCALE FEET	BORING METHOD	GRAPHIC LOG	ELEV. / DEPTH	RUN	Penetration Rate MIN. / FT	RUN TIME START / STOP	WATER USAGE	% FLUSH RET.	FRACTURE INDEX (1ft MT)	DISCONTINUITIES
			Elev.							
12.5	4" Drive and Wash to 12.7' bgs then NX coring to 17.7' bgs		12.7							
				Run No. 1	5			0%	5	70° J 65° J 55° J/Fe
					4.5			0%	4	70° J 80° MF
15.0					4			0%	4	~70° J/UE 70° J ~80° J/UE
					3.5			0%	3	65° J ~85° MF ~10° J/Mn or Fe
17.5				Run No. 2	NA			0%	M	80° J/Fe 70° J/ST 90° J
				12.7–17.7' Faintly to slightly weathered, closely jointed gray very fine grained (crystalline), partly oxidized LIMESTONE or low–grade MARBLE. Rock has Fe or Mn Staining on fracture surfaces, especially between 16' and 17' bgs which contains 1 long vertical fracture. Signs of rehealed fractures throughout core.							
20.0										
22.5										
25.0										
				End corehole at 17.7' bgs.						NOTE: TCR COULD NOT BE DETERMINED IN RUN NO. 2 DUE TO HIGHLY FRACTURED NATURE OF ROCK
27.5										

RUN INFORMATION		
RUN	1	2
FROM	12.7	17.3
TO	17.3	17.7
TCR	4.3	NA
RQD.	11%	0%

DRILL RIG: MOBILE B-47
DRILLING CONTRACTOR: Con-Tec Inc.
DRILLER: R. McGlashan
TOTAL LENGTH CORED: 10'
BITS USED: 1
LOGGED: M. Zarenski
CHECKED: PCI
DATE: 04/28/05
SHEET 1 OF 2

RECORD OF ROCK COREHOLE B-6

PROJECT: VHB/LIMEKILN BRIDGE/VT
PROJECT LOCATION: LIMEKILN, VT
PROJECT NUMBER: 993-6856
BORING TIME: 06–23–99/0955 to 06–23–99/1030
INCLINATION: 90° AZIMUTH: N/A
BORING LOCATION: See Figure
DATUM: Local Datum

Golder Associates Manchester, New Hampshire

CORE DESCRIPTION

ABBREVIATIONS: B – BEDDING; FO – FOLIATION; CA – CALCITE; CO – CORE LOSS; CON – CONTACT; J – JOINT; P – POLISHED; S – SLICKENSIDED; SM – SMOOTH; ST – STEPPED; M – WAVY; PL – PLANAR; FL – FLEXURED; UE – UNEVEN; V – WAVEY; C – CURVED; LI – LIMONITE; CH – CHLORITE; FE – IRON; CL – CLAY; MF – MECH FRACTURE; CL – CORE LOSS

DEPTH SCALE FEET	BORING METHOD	GRAPHIC LOG	ELEV. / DEPTH	RUN	Penetration Rate MIN. / FT	RUN TIME START / STOP	WATER USAGE	% FLUSH RET.	FRACTURE INDEX (1ft MT)	DISCONTINUITIES
			Elev.							
11.5	4" Spin & Wash to 9' then NX coring to 14' bgs		9.0							
				Run No. 1	5			75%	0	55° J/PL 70° Mechanical fracture
					5			75%	1	80° J or MF
					6			75%	2	90° J or MF
					5			75%	2	90° MF 75° J/PL
					5			75%	4	80° J/PL 80° J/PL
14.0				9.0–14.0' Fresh faintly weathered, moderately close to closely jointed gray (with white and black stringers) very fine grained (crystalline) MARBLE. Very minor staining and weathering of fractures. No signs of rehealed fractures or vertical fractures.						
16.5										
19.0										
21.5										
24.0				End coring @ 14' bgs.						

RUN INFORMATION		
RUN	1	
FROM	9.0	
TO	14.0	
TCR	100%	
RQD.	81%	

DRILL RIG: MOBILE B-47
DRILLING CONTRACTOR: Con-Tec Inc.
DRILLER: R. McGlashan
TOTAL LENGTH CORED: 10'
BITS USED: 1
LOGGED: M. Zarenski
CHECKED: PCI
DATE: 04/28/05
SHEET 1 OF 1

RECORD OF ROCK COREHOLE B-7

PROJECT: VHB/LIMEKILN BRIDGE/VT
PROJECT LOCATION: S.Burlington/Colchester VT
PROJECT NUMBER: 993-6856
BORING TIME: 06–29–99/1103 to 06–29–99/1300
INCLINATION: 90° AZIMUTH: N/A
BORING LOCATION: See Figure
DATUM: Local Datum

Golder Associates Manchester, New Hampshire

CORE DESCRIPTION

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

DEPTH SCALE FEET	BORING METHOD	GRAPHIC LOG	ELEV. / DEPTH	RUN	Penetration Rate MIN. / FT	RUN TIME START / STOP	WATER USAGE	% FLUSH RET.	FRACTURE INDEX (1ft MT)	DISCONTINUITIES
			Elev.							
10.5	4" Drive and Wash to 10.5' bgs then NX coring		10.5							
				Run No. 1	5.5			75%	M	10° MF ~90° MF 55° J & Core spin
					6			25%	4	90° MF 90° MF
13.0					5.5			25%	3	90° MF 90° MF
			13.7	Run No. 2	5			25%	3	70° J/UE 65° J
15.5					5			25%	2	70° J 80° J or MF
				End coring @ 15.5' bgs.						
18.0			15.5							
20.5										
23.0										

RUN INFORMATION		
RUN	1	2
FROM	10.5	13.7
TO	13.7	15.5
TCR	100%	100%
RQD.	18%	65%

DRILL RIG: MOBILE B-47
DRILLING CONTRACTOR: Con-Tec Inc.
DRILLER: R. McGlashan
TOTAL LENGTH CORED: 5'
BITS USED: 1
LOGGED: M. Zarenski
CHECKED: PCI
DATE: 04/28/05
SHEET 1 OF 1

NOTE:
THE SUBSURFACE EXPLORATIONS SHOWN ON THIS SHEET ARE IN ENGLISH UNITS AS RECORDED BY GOLDER ASSOCIATES IN 1999.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta.
	Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
BORING LOGS (3 OF 9)	
Designed By GOLDER	Drawn By M.M. LANDREY
Checked By M.A. COLGAN Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139LG3	Sheet 39 of 124

VHB NO. 50735 plot date: 4/28/2005

RECORD OF BOREHOLE B-8

PROJECT: VHB/LIMEKILN BRIDGE/VT
PROJECT LOCATION: S.Burlington/Colchester VT
PROJECT NUMBER: 993-6856
BORING LOCATION: See Figure
BORING TIME: 1000/ 6-30-99 to 1035/ 6-30-99
DATUM: Local Datum

Golder Associates Manchester, New Hampshire

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEV. / DEPTH	SAMPLES NUMBER	TYPE	BLOWS / 6 INCHES	N	REC.\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
					Elev.						
0		0.0 – 0.5 TOPSOIL			0.00						0.0–0.5 TOPSOIL – brown SILT with organic matter.
		0.5–2.8 Compact C–M–F SAND AND GRAVEL. (crushed limestone) moist (Fill)				1	D.O.	4–11–11–14	22	1.5/2.0	0.5–2.8 Compact C–M–F SAND AND FINE GRAVEL, little silt moist.
					2.00						2.0–2.8 Compact C–M–F SAND AND GRAVEL. (crushed limestone fill) moist.
		2.8'–9.0' Firm to stiff brown SILT, little to some sand and gravel. (ML) moist				2	D.O.	17–8–7–7	15	1.5'/2.0'	2.8–3.5' Firm brown SILT little to some gravel
5											3.5–4.0 No Recovery
					4.00	3	D.O.	6–6–10–6	16	2.0/2.0	4.0–6.0 Stiff brown SILT, little sand, little Gravel.
					6.00	4	D.O.	14–12–18–19	30	1.0/2.0	6.0–7.0 Stiff brown sandy SILT, little gravel.
											7.0–8.0' No Recovery
					8.00	5	D.O.	36–36–50/0	N/A	0.1/2.0	8.0'–9.0' Hard brown SILT with rock frags.
10	2" Split Spoon	9.0' Bedrock			9.00						9.0' Bedrock
		End boring @ 9'bgs (refusal)									End boring @ 9' bgs.
15											

DRILL RIG: MOBILE B-47
DRILLING CONTRACTOR: Con – Tec INC.
DRILLER: B. McGlashan
WEIGHT OF HAMMER: 140 lbs
DROP: 30 inches
SHEET 1 OF 1
LOGGED: M. Zarenski
CHECKED: MZ
DATE: 08/11/99

RECORD OF BOREHOLE B-12

PROJECT: VHB/LIMEKILN BRIDGE/VT
PROJECT LOCATION: S.Burlington/Colchester VT
PROJECT NUMBER: 993-6856
BORING LOCATION: See Figure
BORING TIME: 0950/06-28-99 to 1525/06-28-99
DATUM: Local Datum

Golder Associates Manchester, New Hampshire

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEV. / DEPTH	SAMPLES NUMBER	TYPE	BLOWS / 6 INCHES	N	REC.\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
					Elev.						
0		0.0–3.0 Stiff brown SILT, little to some fine sand, trace little med–coarse sand, trace gravel organic matter in upper 3". moist			0.00						0.0–1.0 Stiff brown SILT little to some fine sand, trace to little med–coarse sand, trace gravel. Dry. (Root and organic matter in upper 3".)
					2.00	0	D.O.	4–7–5–5	12	1.0/2.0	SAND @ 3 bgs.
		3.0–8.0 Compact gray fine–medium SAND little coarse sand. little gravel. moist			4.00						4.0–5.1 Grayish Fine–Medium SAND little gravel. Dry.
5						2	D.O.	NA	~20	1.1/2.0	5.1–6.0 No Recovery
					6.00						Formation change to silt @ 8' bgs
		8.0–13.5 Stiff brown SILT, little very fine sand.									
10	3" Drive & Wash				10.0	3	D.O.	11–11–12–15	23	1.4/2.0	10.0–11.4 Stiff brown SILT, little very fine sand.
					12.0						13.5 Formation change to gray silt.
		13.5–22.0 Stiff to firm gray SILT, trace fine sand, trace clay, Micaceous. moist to wet.									
15					15.0	4	D.O.	5–6–7–8	13	1.1/2.0	15.0–16.1 Stiff gray SILT little fine sand trace clay. micaceous
					17.0						16.1–17.0 No Recovery.
					20.0	5	D.O.	9–12–11–9	23	1.6/2.0	20–21.6 Firm gray SILT very uniform no other particle sizes micaceous
20					22.0						21.6–22 No Recovery
		22.0–34.5 Very soft to firm gray SILTY CLAY becoming more dense with depth, trace sand, trace fine gravel. moist to wet.									
25					25.0	6	D.O.	WOH–WOH–WOH–WOH	WOH	2.0–2.0	25–27 Very soft gray clay– uniform No intermediate particle sizes.
					27.0						
30					30.0	7	D.O.	5–4–2–3	6	1.3/2.0	30.0–31.3 Firm gray CLAY– very uniform No intermediate particle sizes.
					32.0						31.3–32.0 No Recovery.
		34.5 Bedrock see corehole log for continuation of borehole.									
35					34.5						Bedrock encountered @ 34.5 bgs.
											NOTE: WOH–Weight of hammer
40											

DRILL RIG: MOBILE B-47
DRILLING CONTRACTOR: Con – Tec INC.
DRILLER: B. McGlashan
WEIGHT OF HAMMER: 140 lbs
DROP: 30 inches
SHEET 1 OF 1
LOGGED: M. Zarenski
CHECKED: MZ
DATE: 08/11/99

RECORD OF ROCK COREHOLE B-12

PROJECT: VHB/LIMEKILN BRIDGE/VT
PROJECT LOCATION: S.Burlington/Colchester VT
PROJECT NUMBER: 993-6856
BORING TIME: 06-28-99/1458 to 06-28-99/1525
INCLINATION: 90° AZIMUTH: N/A
BORING LOCATION: See Figure
DATUM: Local Datum

Golder Associates Manchester, New Hampshire

CORE DESCRIPTION

ABBREVIATIONS:
B – BEDDING; FO – FOLIATION; CA – CALCITE; CO – CORE LOSS; CT – CONTACT; FA – FAULT; J – JOINT; P – POLISHED
S – SLICKENSIDED; SM – SMOOTH; R – ROUGH / RIDGED; ST – STEPPED; PL – PLANAR; PL – PLANAR; FL – FLEXURED; UE – UNEVEN
W – WAVEY; C – CURVED; LI – LINNITE; CA – CALCITE; CO – CLAY; FR – CLAY; MEC – MECH FRACTURE; CL – CORE LOSS

DEPTH SCALE FEET	BORING METHOD	CORE DESCRIPTION	GRAPHIC LOG	ELEV. / DEPTH	RUN	Penetration Rate MIN/FT	RUN TIME START / STOP	WATER USAGE	% FLUSH RET.	FRACTURE INDEX (PER FT)	RUN INFORMATION / DISCONTINUITIES
				Elev.							RUN 1
34.5				34.5							FROM 34.5
		34.5'–39.1 Fresh to faintly weathered closely jointed very light gray with yellow and reddish marbling, crystalline MARBLE. Very little sign of staining or weathering on fractures occur throughout.			Run No. 1	4			100%	2	TO 39.5
						4.5			100%	2	TCR 92%
37.0						4			100%	1	SCR 92%
						3.75			100%	2	REC. 68%
39.5		39.1–39.5 No Recovery		39.1		4			100%	1	DISCONTINUITIES
	3"Drive & Wash to 35.1'bgs then NX coreing to 39.5' bgs	End coring @ 39.5' bgs.		39.5							75° J 80° J or M 90° MF 70° J ~90° MF, VE ~80° MF 50° J 80° J
42.0											
44.5											
47.0											
49.5											
53.0											
55.5									54%		

DRILL RIG: MOBILE B-47
DRILLING CONTRACTOR: Con-Tec Inc.
DRILLER: R. McGlashan
TOTAL LENGTH CORED: 5'
BITS USED: 1
SHEET 1 OF 1
LOGGED: M. Zarenski
CHECKED: PCI
DATE: 04/28/05

RECORD OF BOREHOLE B-9

PROJECT: VHB./LIMEKILN BRIDGE/VT
PROJECT LOCATION: S.Borlington/Colchester VT
PROJECT NUMBER: 993-6856
BORING LOCATION: See Figure
BORING TIME: 1055/ 06-30-99 to 1105/ 06-30-99
DATUM: Local Datum

Golder Associates Manchester, New Hampshire

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEV. / DEPTH	SAMPLES NUMBER	TYPE	BLOWS / 6 INCHES	N	REC.\ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
					Elev.						
0		0.0 – 0.5 TOPSOIL			0.00						0.0–0.5 Topsoil– lighht brown SILT. little sand, little organics.
		0.5–2.7 Stiff, light brown SILT, little C–M–F sand moist.				1	D.O.	2–6–11–4	17	1.5/2.0	.5–1.0 Stiff, light brown SILT, little fine–med sand, compact, moist.
					2.00						2.0–2.7 Light brown SILT, little C–M–F SAND, compact, moist.
		2.7' Bedrock			2.70	2	D.O.	6–.2/50	NA	.3/2.0	2.7' Bedrock.
5		End boring @ 2.7' bgs (refusal)									
10	2" Split Spoon										
15											

DRILL RIG: MOBILE B-47
DRILLING CONTRACTOR: Con – Tec INC.
DRILLER: B. McGlashan
WEIGHT OF HAMMER: 140 lbs
DROP: 30 inches
SHEET 1 OF 1
LOGGED: M. Zarenski
CHECKED: MZ
DATE: 08/11/99

NOTE:
THE SUBSURFACE EXPLORATIONS SHOWN ON THIS SHEET ARE IN ENGLISH UNITS AS RECORDED BY GOLDER ASSOCIATES IN 1999.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB *Vanasse Hangen Brustlin, Inc.*

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta. / Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
BORING LOGS (4 OF 9)	
Designed By GOLDER	Drawn By M.M. LANDREY
Checked By M.A. COLGAN Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139LG4	Sheet 40 of 124

VHB NO. 50735
plot date: 4/28/2005

ABUTMENT NO. 1

ABUT. NO. 1 BOTTOM FOOTING EL. 76.75 (METERS)

ESTIMATED PILE TIP EL. 68.64 (METERS)

PROJECT: VHB/ LIMEKILN BRIDGE/VT
PROJECT LOCATION: S.Burlington/Colchester VT
PROJECT NUMBER: 993-6856
BORING TIME: 1115-03/07/02 to 1438-03/07/02

RECORD OF BOREHOLE B1-02

STATION: 10+315
OFFSET: 4 Meters East
ELEVATION: 78.55

Golder Associates Manchester, New Hampshire

DEPTH SCALE METERS	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEV. / DEPTH (ft)	SAMPLES NUMBER	TYPE	BLOWS / 6 INCHES	N	REC./ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0					Elev. 0.00						
		0.0-1.22 Stiff brown SILT mixed with limestone/marble frags (FILL)				1	DO	7-8-9-10	17	0.4/2.0	0.0-0.3 Stiff brown SILT w/ organics, frozen. 0.3-2' Crushed limestone
					2.00	2	DO	7-9-11-12	20	0.4/2.0	2'-4' Poor recovery-Compact brown SILTY SAND AND crushed limestone (gravel sized). Moist.
1.5		1.22-6.59 Stiff to very stiff brown Silty Clay, little to some sand and gravel. (CK) Glaciolacustrine.			4.00	3	DO	5-6-7-10	13	1.0/2.0	4'-6' Stiff brown SILTY CLAY, little to some sand and gravel. Moist
					6.00	4	DO	10-11-8-11	19	0.5/2.0	6'-8' Very stiff brown SILTY CLAY, little to some sand and gravel. Moist.
					8.00	5	DO	8-5-5-11	10	1.8/2.0	8'-10' Stiff brown SILTY CLAY, little to some sand and gravel - 1 sand lense at aprox. 9.0'bgs. Moist.
3.1	2 1/4" HSA TO 8' - HW TO 33' - NX CORE TO 36'				10.0						
4.6					15.0	6	DO	8-9-14-19	23	1.0/2.0	15'-17' Very stiff to hard brown CLAY. Occasional very thin fine sand to coarse silt lenses.
					17.0						
6.1		6.59-9.91 Compact to dense brown fine SAND, trace silt, trace gravel. (SP) (Alluvium)			20.0	7	DO	10-18-14-21	32	1.3/2.0	20'-21.6' Hard brown SILT, little to some sand and gravel. 21.6'-22' Brown fine SAND, trace to little silt.
					22.0						
7.5					25.0	8	DO	6-6-8-15	14	1.1/2.0	25'-27' Compact brown fine SAND.
					27.0						
9.2					30.0	9	DO	8-6-30-31	36	0.8/2.0	30'-31.6' Dense brown fine SAND, little silt trace gravel 31.6'-32.0' Dense brown CMF SAND some to and gravel.
		9.91 BEDROCK - See corehole log for continuation.			32.0						32.5' BEDROCK - Advance borehole to 33'bgs. See corehole log for continuation
10.7											
12.2											

DRILL RIG: MOBILE B-53
DRILLING CONTRACTOR: Con - Tec Inc.
DRILLER: J. STANTON
WEIGHT OF HAMMER: 140 lbs
DROP: 30 inches
SHEET 1 OF 1
LOGGED: M. Zarenski
CHECKED: pbc
DATE: 05/24/02

METRIC METRIC ENGLISH ENGLISH ENGLISH

PROJECT: VHB/LIMEKILN BRIDGE/VT
PROJECT LOCATION: S. Burlington/Colchester, VT
PROJECT NUMBER: 993-6856
BORING TIME: 1425-03/07/02 to 1438-03/07/02

RECORD OF ROCK COREHOLE B1-02

STATION: 10+315
OFFSET: 4 Meters East
ELEVATION: 78.55

Golder Associates Manchester, New Hampshire

CORE DESCRIPTION

ABBREVIATIONS
SHAPE: SM - SMOOTH; IR - IRREGULAR; PL - PLANAR; UN - UNEVEN
ROUGHNESS: S - SLICKENSIDED; SM - SMOOTH; R - ROUGH / RIDGED; ST - STEPPED; M - MIRR; PL - PLANAR; UN - UNEVEN
FILLING: CA - CALCITE; CL - CORE LOSS; CO - CONTACT; K - KAOLIN; J - JOINT; P - POLISHED; PI - PYRITE; C - CURVED; U - UNKNOWN; CH - CHLORITE; FE - IRON; MI - MICA; VE - VEIN; CF - CORE FRACTURE; CL - CORE LOSS

DEPTH SCALE METERS	BORING METHOD	CORE DESCRIPTION	GRAPHIC LOG	ELEV. / DEPTH (ft)	RUN	CORING RATE MIN./FT.	RUN TIME START / STOP	WATER USAGE	% FLUSH RET.	% FRACTURE INDEX (FT/MIN)	RUN INFORMATION / DISCONTINUITIES
10.1				Elev. 33.0							RUN 1
		10.07-11.59 Faintly weathered, closely jointed blue grey, very fine grained slightly oxidized LIMESTONE with several re-healed joints and possible slickensides at Approx. 11.59									FROM 33
											TO 38
		End boring at 11.59									TCR 100%
											RQD. 83%
10.8					RUN #1	3.0			0	3	33.1 25° J, Fe 33.25 80° MF
						3.0			0	3	33.9 80° MF 33.9 35° J, ST, S 34.1 35° J, P, S 34.25 45° J, UE 34.65 30° J
11.6	NX CORING			38.0		2.5			0	2	35.3 35° J, P 35.9 ~90° MF
						2.5			0	1	36.9 ~90° MF
12.4						3.0			0	2	37.3 ~90° MF 37.5 25° J, Fe 37.9 45° J
13.1											
13.9											
14.6											
15.4											
16.2											

DRILL RIG: MOBILE B-53
DRILLING CONTRACTOR: Con-Tec Inc.
DRILLER: J. STANTON
TOTAL LENGTH CORED: 5'
BITS USED: 1
SHEET 1 OF 1
LOGGED: M. Zarenski
CHECKED: pbc
DATE: 05/24/02

METRIC METRIC ENGLISH ENGLISH ENGLISH ENGLISH

ABUTMENT NO. 1

ABUT. NO. 1 BOTTOM FOOTING EL. 76.75 (METERS)

ESTIMATED PILE TIP EL. 68.64 (METERS)

PROJECT: VHB/ LIMEKILN BRIDGE / VT
PROJECT LOCATION: S.Burlington/Colchester VT
PROJECT NUMBER: 993-6856
BORING TIME: 1511-03/07/02 to 0959-03/07/02

RECORD OF BOREHOLE B2-02

STATION: 10+301
OFFSET: 4 Meters East
ELEVATION: 78.10

Golder Associates Manchester, New Hampshire

DEPTH SCALE METERS	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEV. / DEPTH (ft)	SAMPLES NUMBER	TYPE	BLOWS / 6 INCHES	N	REC./ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0					Elev. 0.00						
		0.0-1.83 Stiff to firm brown SILT trace to little sand, trace gravel. (FILL)				1	DO	6-8-8-4	16	0.6/2.0	0.0-2' Stiff brown SILT, little to some sand, trace gravel
					2.00	2	DO	8-7-11-9	18	0.2/2.0	2'-4' Very poor recovery, stiff brown SILT, little to some sand. Moist.
1.5					4.00	3	DO	3-3-3-5	6	1.3/2.0	4'-6' Firm brown SILT, trace little sand and fine gravel and occasional sand lenses. Moist
		1.83-4.58 Loose to compact brown CMF SAND, little to some gravel, trace silt. (FILL)			6.00	4	DO	3-4-4-5	8	0.4/2.0	6'-8' Loose brown CMF SAND, some gravel, trace to little silt. Moist.
						5	DO	5-4-6-8	10	0.4/2.0	8'-10' Compact brown CMF SAND, little to some gravel, trace silt.
3.1	2 1/4" HSA TO 8' - HW TO 28' - NX CORE TO 34'				10.0						
4.6		4.58-6.1 Limestone kiln slaker waste and limestone fragments. (FILL)			15.0	6	DO	8-5-5-9	10	0.2/2.0	Limestone fragments and slaker waste (calcium carbonate). Poor recovery
					17.0						
6.1		6.1-7.5 Compact brown fine SAND. (Alluvium)			20.0	7	DO	7-11-14-20	25	1.0/2.0	20'-22' Compact brown fine SAND
					22.0						
7.5		7.5-8.39 Loose to compact brown fine gravel.			25.0	8	DO	6-2-3-14	5	0.5/2.0	25'-27' Loose brown fine SAND some gravel.
		8.39 BEDROCK See corehole log for continuation.			27.0						27.5' BEDROCK, hole advanced to 29'bgs. see corehole log for continuation.
9.2											
10.7											
12.2											

DRILL RIG: MOBILE B-53
DRILLING CONTRACTOR: Con - Tec Inc.
DRILLER: J. STANTON
WEIGHT OF HAMMER: 140 lbs
DROP: 30 inches
SHEET 1 OF 1
LOGGED: M. Zarenski
CHECKED: pbc
DATE: 05/24/02

NOTE:
THE SUBSURFACE EXPLORATIONS SHOWN ON THIS SHEET USE BOTH METRIC AND ENGLISH UNITS AS LABELED ABOVE AS RECORDED BY GOLDER ASSOCIATES IN 2002.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta. / Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
BORING LOGS (5 OF 9)	
Designed By GOLDER	Drawn By K.D. WENTWORTH
Checked By M.A. COLGAN Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139LG5	Sheet 41 of 124

VHB NO. 50735 plot date: 4/18/2005

ABUTMENT NO. 1

ABUT. NO. 1 BOTTOM FOOTING EL. 76.75 (METERS)

ESTIMATED PILE TIP EL. 68.64 (METERS)

RECORD OF ROCK COREHOLE B2-02

PROJECT: VHB/LIMEKILN BRIDGE/VT
PROJECT LOCATION: S.BURLINGTON/COLCHESTER, VT
PROJECT NUMBER: 993-6856
BORING TIME: 0913-03/08/02 to 0959-03/08/02
STATION: 10+301
OFFSET: 4 Meters East
ELEVATION: 78.10

Golder Associates, Manchester, New Hampshire

CORE DESCRIPTION

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

DEPTH SCALE METERS	BORING METHOD	GRAPHIC LOG	ELEV. DEPTH (ft)	RUN	CORING RATE MIN. / FT	RUN TIME START / STOP	WATER USAGE	% FLUSH RET.	FRACTURE INDEX (1ft INT)	DISCONTINUITIES
8.8			Elev. 29.0							8.85-10.37 Faintly to slightly weathered, closely jointed blue gray, very fine grained slightly oxidized LIMESTONE with major vertical fractures from approx. 6.1-6.4, and from 6.71-7.02. Vertical fractures are highly oxidized and more weathered than majority of rock material. Many rehealed fractures throughout are parallel to major joint orientation at approx. N.38. End boring @ 10.37.
9.6	NX CORING			RUN # 1	4			0	3	29.75 60° J, SM 29.80 60° J, ST, SM 29.90 15° J 29.95 15° J 30.00 ~90° MF, ST
					3.5			0	M	30-21 ~15° J, Fe, S 30-21 Many mechanical fractures
					?			0	4	31.1 15° J 31-21.25 ~15° J 31.25 15° J/Possible MF 31.25 90° MF 31.5 ~15° J
					5.5			0	2	42.0 90° MF 42.3 20° J, Fe 42.75 50° J
10.4			34.0		6			0	2	43.2 80° MF 43.7 80° MF
11.1										
11.9										
12.7										
13.4										
14.2										
14.9										

RUN INFORMATION

RUN	1
FROM	29
TO	34
TCR	4.6
RQD	37%

DRILL RIG: MOBILE B-53
DRILLING CONTRACTOR: Con-Tec Inc.
DRILLER: J. STANTON
TOTAL LENGTH CORED: 5'
BITS USED: 1
SHEET 1 OF 1
LOGGED: M. Zorenski
CHECKED: PSC
DATE: 05/24/02

METRIC

RECORD OF BOREHOLE B3-02

PROJECT: VHB/ LIMEKILN BRIDGE/VT
PROJECT LOCATION: S.Burlington/Colchester VT
PROJECT NUMBER: 993-6856
BORING TIME: 0826-03/07/02 to 1100-03/07/02
STATION: 10+318
OFFSET: 3 Meters West
ELEVATION: 77.80

Golder Associates, Manchester, New Hampshire

DEPTH SCALE METERS	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEV. DEPTH (ft)	SAMPLES NUMBER	TYPE	BLOWS / 6 INCHES	N	REC. \ ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0					Elev. 0.00						
1.5	2 1/4" HSA TO 8' - 4" HW TO 23' - NX CORE TO 28'	0.0-4.73 Loose to dense crushed limestone/marble. (FILL) Fragments with kiln waste comprising slaked limestone (calcium carbonate) Characterized by poor recovery and apparent voids in subsurface material.			2.00	1	DO	8-7-15-10	22	0.4/2.0	0'-0.3' Compact brown SILT, some organics. Frozen. 0.3'-2' Poor recovery-limestone/marble sand-gravel sized. 2'-4' Poor recovery-crushed limestone/marble sand-gravel sized. Matrix material appears to be slaker waste (calcium carbonate)
3.1					4.00	2	DO	12-11-9-8	20	0.2/2.0	4'-6' Poor recovery crushed limestone. Matrix material appears to be slaker waste.
4.6		4.73-7.02 Dense to compact brown fine SAND, little silt. (SP) Alluvium			6.00	3	DO	6-7-7-6	14	0.2/2.0	6'-8' Poor recovery crushed limestone with slaker waste. (calcium carbonate)
6.1					8.00	4	DO	3-4-4-3	8	0.2/2.0	8'-10' No sample recovery.
7.5		7.02 BEDROCK - See corehole log for continuation.			10.00	NA	NA	NA	NA	NA	
9.2					15.0	5	DO	17-35-23-22	58	1.2/2.0	15'-15.5' (Approx.) Dense, highly weathered crushed limestone (FILL) 15.5'-17' (Approx.) Dense brown fine SAND little silt.
10.7					17.0						
12.2					20.0	6	DO	11-8-10-14	18	1.4/2.0	20'-22' Compact brown very fine SAND, little silt.
					22.0						23' BEDROCK see corehole log for B-3 for continuation

DRILL RIG: MOBILE B-53
DRILLING CONTRACTOR: Con - Tec Inc.
DRILLER: J. STANTON
WEIGHT OF HAMMER: 140 lbs
DROP: 30 inches
SHEET 1 OF 1
LOGGED: M. Zorenski
CHECKED: PSC
DATE: 05/24/02

METRIC ENGLISH

RECORD OF ROCK COREHOLE B3-02

PROJECT: VHB/LIMEKILN BRIDGE/VT
PROJECT LOCATION: S.Burlington/Colchester VT
PROJECT NUMBER: 993-6856
BORING TIME: 1016-03/07/02 to 1100-03/07/02
STATION: 10+318
OFFSET: 3 Meters West
ELEVATION: 77.80

Golder Associates, Manchester, New Hampshire

CORE DESCRIPTION

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

DEPTH SCALE METERS	BORING METHOD	GRAPHIC LOG	ELEV. DEPTH (ft)	RUN	CORING RATE MIN. / FT	RUN TIME START / STOP	WATER USAGE	% FLUSH RET.	FRACTURE INDEX (1ft INT)	DISCONTINUITIES
7.0			Elev. 23.0							7.02-8.54 Faintly weathered, closely jointed, blue gray very fine grained LIMESTONE with minor iron staining on fractures and some rehealed joints. Coreloss from 7.63-7.78. End boring @ 7.78.
7.8	NX CORING			RUN # 1	4			0	4	23.3 ~90° MF 23.34 75° J
					5			0	3	23.75 ~80° J/MF 23.9 15° J, Fe, SM TD
					3			0	M	24.3 24.3 ~90° MF 24.25 80° J 25.0 Coreloss (Fracture zone)
8.5			28.0		4			0	3	TD 25.5 25.5 65° J, Fe 25.75 40° J, ST 25.9 70° J 26.3 65° J 26.3 40° J 26.6 70° J 27.2 UE MF 27.7 75° 27.8 15° J, SM
9.3					4			0	3	
10.1										
10.8										
11.6										
12.3										
13.1										
13.8										
14.6										
15.3										

RUN INFORMATION

RUN	1
FROM	23
TO	28
TCR	100%
RQD	29%

DRILL RIG: MOBILE B-53
DRILLING CONTRACTOR: Con-Tec Inc.
DRILLER: J. STANTON
TOTAL LENGTH CORED: 5'
BITS USED: 1
SHEET 1 OF 1
LOGGED: M. Zorenski
CHECKED: PSC
DATE: 05/24/02

METRIC ENGLISH

NOTE:
THE SUBSURFACE EXPLORATIONS SHOWN ON THIS SHEET USE BOTH METRIC AND ENGLISH UNITS AS LABELED ABOVE AS RECORDED BY GOLDER ASSOCIATES IN 2002.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta.
	Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
BORING LOGS (6 OF 9)	
Designed By GOLDER	Drawn By K.D. WENTWORTH
Checked By M.A. COLGAN Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139LG6	Sheet 42 of 124

VHB NO. 50735 plot date: 4/18/2005

ABUTMENT NO. 2

ABUT. NO. 2 BOTTOM FOOTING EL. 81.30 (METERS)

PROJECT: VHB/ LIMEKILN BRIDGE/VT
PROJECT LOCATION: S.Burlington/Colchester VT
PROJECT NUMBER: 993-6856
BORING TIME: 0810-03/06/02 to 1040-03/06/02

RECORD OF BOREHOLE B4-02

STATION: 10+405
OFFSET: 7 Meters West
ELEVATION: 81.68

Golder Associates Manchester, New Hampshire

DEPTH SCALE METERS	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEV. DEPTH (ft)	SAMPLES NUMBER	TYPE	BLOWS / 6 INCHES	N	REC./ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0	2 1/4" HSA TO 8' - 4" HW TO 22' - NX CORE TO 29'	0.0-.98 Frozen ground silty CMF SAND AND GRAVEL, (FILL).			Elev. 0.00						0-1.0' 2" Stone, silt, gravel. Frozen
					1.00	1	DO	8-4-4-3	8	0.2/2.0	1'-3' Loose brown SILTY CMF SAND AND GRAVEL
		2.44-2.75 Soft to hard brown SILTY CLAY some SAND, up to 50% limestone gravel (FILL).			3.00	2	DO	3-4-4-7	8	0.2/2.0	3'-5' Soft brown SILTY CLAY some sand. Very moist. Large limestone fragment in spoon tip.
		Elevated N value @ 5'-7' interval likely due to cobble.			5.00	3	DO	3-8-31-17	39	0.2/2.0	5'-7' Hard brown SILTY CLAY some sand, trace gravel. wet.
					7.00	4	DO	3-6-5-6	11	0.1/2.0	7'-9' Compact brown SILTY CLAY AND GRAVEL (Limestone - gravel). Moist
		2.75-5.19 Loose to dense brown fine to very fine SAND, little to some silt. (SP) (Alluvium)			9.00	5	DO	3-4-4-5	8	0.6/2.0	9'-11' Loose brown very fine SAND little to some silt. Moist.
					11.0						
					15.0	6	DO	8-7-7-11	14	0.8/2.0	15'-17' Compact brown fine to very fine SAND little to some silt.
		5.19-6.50 Dense brown SILTY CMF SAND up to 50% gravel (siltstone and limestone gravel) (SW)			17.0						
					20.0	7	DO	13-17-50/3"	>50	0.6/2.0	20'-21.5' Dense brown SILTY CMF SAND, some to 50% gravel consisting mostly of limestone and siltstone frags. Top of BEDROCK @ 21.3' bgs. Advanced borehole to 24'bgs. then cored. See corehole log for description.
		6.50 Top of BEDROCK - See corehole log for continuation			22.0						

DRILL RIG: MOBILE B-53
DRILLING CONTRACTOR: Con - Tec Inc.
DRILLER: J. STANTON
WEIGHT OF HAMMER: 140 lbs
DROP: 30 Inches
SHEET 1 OF 1
LOGGED: M. Zarenski
CHECKED: JRC
DATE: 05/24/02

METRIC METRIC ENGLISH ENGLISH ENGLISH

PROJECT: VHB/LIMEKILN BRIDGE/VT
PROJECT LOCATION: S.Burlington/Colchester VT
PROJECT NUMBER: 993-6856
BORING TIME: 0935-03/06/02 to 1040-03/06/02

RECORD OF ROCK COREHOLE B4-02

STATION: 10+406
OFFSET: 7 Meters West
ELEVATION:81.68

Golder Associates Manchester, New Hampshire

ABBREVIATIONS
B - BEDDING; FO - FOLIATION; CA - CAVITY; CO - CONTACT; CO - CONTACT; F - FAULT; J - JOINT; P - POLISHED
S - SLICKENSIDED; SM - SMOOTH; R - ROUGH / RIDGED; V - VUGGY; W - WARPY; PL - PLANAR; FL - FLEXURED; UE - UNEVEN
W - WAVEY; C - CURVED; U - UNEVEN; IR - IRREGULAR; FG - FINE GRAIN; CL - CLAY; ME - MECH FRACTURE; CL - CORE LOSS

DEPTH SCALE METERS	BORING METHOD	CORE DESCRIPTION	GRAPHIC LOG	ELEV. DEPTH (ft)	RUN	CORING RATE MIN. / FT.	RUN TIME START / STOP	WATER USAGE	% FLUSH RET.	FRACTURE INDEX (TIL INT)	RUN INFORMATION / DISCONTINUITIES
-7.32	NX CORING	7.32-8.85 Faintly to slightly weathered closely jointed blue gray, very fine grained, LIMESTONE with slight oxidation of major joint surfaces.		Elev. 24.0	RUN # 1	5			40%	3	RUN 1 FROM 24' TO 29' TCR 100% ROD. 38% 24.25 55° J, Fe, S 24.3 35° J, Fe, S 24.35 35° J, Fe, S 24.9 60° J/MF
-8.1		End boring @ 8.85.				5			0	2	25.3 80° MF 25.6 90° MF 25.75 90° J, Fe
-8.8				29.0		4.5			0	3	26.1 55° J 26.5 60° J 26.75 62° J
-9.6						~5			0	5	27.1 65° MF/J 27.25 62° J 27.5 70° J 27.8 72° J, UE, S 27.9 85° J
						~5			0	4	28.1 55° J, Fe 28.6 35° J, UE 28.9 0° J, S

DRILL RIG: MOBILE B-53
DRILLING CONTRACTOR: Con-Tec Inc.
DRILLER: J. STANTON
TOTAL LENGTH CORED: 5'
BITS USED: 1
SHEET 1 OF 1
LOGGED: M. Zarenski
CHECKED: JRC
DATE: 05/24/02

METRIC METRIC ENGLISH ENGLISH ENGLISH ENGLISH

ABUTMENT NO. 2

ABUT. NO. 2 BOTTOM FOOTING EL. 81.30 (METERS)

PROJECT: VHB/ LIMEKILN BRIDGE / VT
PROJECT LOCATION: S.Burlington/Colchester VT
PROJECT NUMBER: 993-6856
BORING TIME: 1101-03/05/02 to 1500-03/05/02

RECORD OF BOREHOLE B5-02

STATION: 10+409
OFFSET: 3 Meters East
ELEVATION: 80.18

Golder Associates Manchester, New Hampshire

DEPTH SCALE METERS	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEV. DEPTH (ft)	SAMPLES NUMBER	TYPE	BLOWS / 6 INCHES	N	REC./ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0	2 1/4" HSA TO 8' - 4" HW TO 24' - NX CORE TO 29'	0.0-5.49 Predominantly limestone or marble frags mixed with sand and silt, small amounts of wood below 3.05. (FILL)			Elev. 0.00	1	DO	5-3-14-12	17	0.8/2.0	0.0-2' Compact dark brown SILTY SAND with organics in upper 4"
					2.00	2	DO	14-23-8-6	31	0.2/2.0	2'-4' Crushed limestone poor recovery
					4.00	3	DO	6-5-5-6	10	0.2/2.0	4'-6' Limestone frags/marble
					6.00	4	DO	5-4-5-4	9	0.2/2.0	6'-8' Limestone or marble frags
					8.00	5	DO	5-6-3-9	9	0.2/2.0	8'-10' Limestone/marble frags
					10.0						
					15.0	6	DO	15-8-10-15	18	0.5/2.0	15'-17' Compact, milky white slaker waste (calcium carbonate) and highly weathered limestone fragments, sand, and wood chunks - Fill material
		5.49-7.26 Loose green brown SILTY fine SAND. (SP) (Alluvium)			17.0						
					20.0	7	DO	8-10-9-8	19	0.8/2.0	20'-22' Compact greenish brown SILTY FINE SAND.
		7.26 Top of BEDROCK - See corehole log for continuation.			22.0						Bedrock @ aprox. 23.8'bgs. Advanced borehole to 24'bgs. and begin coring, see corehole log for B-5 for continuation.

DRILL RIG: MOBILE B-53
DRILLING CONTRACTOR: Con - Tec Inc.
DRILLER: J. STANTON
WEIGHT OF HAMMER: 140 lbs
DROP: 30 Inches
SHEET 1 OF 1
LOGGED: M. Zarenski
CHECKED: JRC
DATE: 05/24/02

NOTE:
THE SUBSURFACE EXPLORATIONS SHOWN ON THIS SHEET USE BOTH METRIC AND ENGLISH UNITS AS LABELED ABOVE AS RECORDED BY GOLDER ASSOCIATES IN 2002.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta. / Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
BORING LOGS (7 OF 9)	
Designed By GOLDER	Drawn By K.D. WENTWORTH
Checked By M.A. COLGAN Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139LG7	Sheet 43 of 124

VHB NO. 50735 plot date: 4/18/2005

RECORD OF ROCK COREHOLE B5-02

PROJECT: VHB/LIMEKILN BRIDGE/VT
PROJECT LOCATION: S.Burlington/Colchester VT
PROJECT NUMBER: 993-6856
BORING TIME: 1415-03/05/02 to 1500-03/05/02
STATION: 10+409
OFFSET: 3 Meters East
ELEVATION: 80.18

Golder Associates, Manchester, New Hampshire

CORE DESCRIPTION

ABBREVIATIONS:
B – BEDDING; FO – FOLIATION; LO – LOSS; CL – CORE LOSS; CO – CONTACT; J – JOINT; P – POLISHED; S – SUCKSMOOTH; SM – SMOOTH; R – ROUGH; V – VARY; M – MANY; PL – PLANAR; FL – FLEXURED; UE – UNEVEN; W – WAVEY; C – CURVED; U – UNDULATE; CH – CHLORITE; IR – IRON; CL – CLAY; MC – MECH FRACTURE; CL – CORE LOSS

DEPTH SCALE METERS	BORING METHOD	CORE DESCRIPTION	GRAPHIC LOG	ELEV. / DEPTH (ft)	RUN	CORING RATE MIN. / FT	RUN TIME START / STOP	WATER USAGE	% FLUSH RET.	FRACTURE INDEX (1ft INT)	DISCONTINUITIES
-7.3		7.32–8.85 Faintly weathered, closely to moderately closely jointed gray to blue gray, very fine grained, LIMESTONE.		Elev 24.0	RUN # 1	10			90%	2	24.5 60° J 24.8 75° J, Fe
		End boring @ 8.85.				8.5			90%	1	25.6 90° MF
-8.1	NX CORING					6			90%	3	26.1 50° J, ST 26.7 80° J 26.9 80° MF
						6			90%	1	27.05 90° MF
-8.8				Elev 29.0		6			90%	1	28.5 42° J
-9.6											

RUN INFORMATION

RUN	1
FROM	24'
TO	29'
TCR	100%
RQD	90%

DRILL RIG: MOBILE B-53
DRILLING CONTRACTOR: Con-Tec Inc.
DRILLER: J. STANTON
TOTAL LENGTH CORED: 5'
BITS USED: 1
SHEET 1 OF 1
LOGGED: M. Zorenski
CHECKED: [illegible]
DATE: 05/24/02

RECORD OF BOREHOLE B6-02

PROJECT: VHB/ LIMEKILN BRIDGE/VT
PROJECT LOCATION: S.Burlington/Colchester VT
PROJECT NUMBER: 993-6856
BORING TIME: 1315-03/04/02 to 0935-03/05/02
STATION: 10+417
OFFSET: 9 Meters East
ELEVATION: 78.95

Golder Associates, Manchester, New Hampshire

DEPTH SCALE METERS	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEV. / DEPTH (ft)	SAMPLES NUMBER	TYPE	BLOWS / 6 INCHES	N	REC. \ ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
0					Elev 0.00	1	DO	11-16-17-14	33	0.4/2.0	0.0–2' FILL – Dense brown to black SILT and cobbles up to 3" diameter. Some slaker waste (calcium carbonate) Very moist.
					2.00	2	DO	13-14-14-16	28	0.4/2.0	2'–4' FILL – Crushed limestone fragments (gravel sized) and SILT
					4.00	3	DO	12-13-13-8	26	0.0/2.0	4'–6' No recovery
					6.00	4	DO			0.0/2.0	6'–9' No recovery
					8.00	5	DO	6-28-5/10"		0.0/2.0	8'–9' No recovery – refusal on boulder @ 9'bgs.
-1.5		0.0–3.05 Predominantly limestone/marble frags mixed with silt slaker waste (calcium carbonate) and sand, 1 .3058 boulder from 2.75–3.05 (FILL)									
-3.1	2 1/4" HSA TO 5' – 4" HW TO 18' – NX CORE TO 24'	3.05–5.49 Compact brown SILTY fine SAND trace to little gravel. (SP) (Alluvium)			Elev 10.0	6	DO	11-7-10-10	17	0.8/2.0	10'–12' Compact brown SILTY fine SAND trace–little gravel sized limestone. Moist.
					12.0						
-4.6					15.0	1	DO	8-9-13-9	22	0.8/2.0	15'–17' Compact yellow brown SILTY fine SAND, trace gravel.
					17.0						
-6.1		5.49 Top of bedrock – See corehole log for continuation.									~18' Weathered Bedrock referenced to 18.8'bgs. then began coring (see corehole log for B-6)
-7.5											
-9.2											
-10.7											
-12.2											

DRILL RIG: MOBILE B-53
DRILLING CONTRACTOR: Con – Tec Inc.
DRILLER: J. STANTON
WEIGHT OF HAMMER: 140 lbs
DROP: 30 inches
SHEET 1 OF 1
LOGGED: M. Zorenski
CHECKED: [illegible]
DATE: 05/24/02

METRIC METRIC ENGLISH ENGLISH ENGLISH

RECORD OF ROCK COREHOLE B6-02

PROJECT: VHB/LIMEKILN BRIDGE/VT
PROJECT LOCATION: S.Burlington/Colchester VT
PROJECT NUMBER: 993-6856
BORING TIME: 1605-03/04/02 to 0935-03/05/02
STATION: 10+417
OFFSET: 9 Meters East
ELEVATION: 78.95

Golder Associates, Manchester, New Hampshire

CORE DESCRIPTION

ABBREVIATIONS:
B – BEDDING; FO – FOLIATION; LO – LOSS; CL – CORE LOSS; CO – CONTACT; J – JOINT; P – POLISHED; S – SUCKSMOOTH; SM – SMOOTH; R – ROUGH; V – VARY; M – MANY; PL – PLANAR; FL – FLEXURED; UE – UNEVEN; W – WAVEY; C – CURVED; U – UNDULATE; CH – CHLORITE; IR – IRON; CL – CLAY; MC – MECH FRACTURE; CL – CORE LOSS

DEPTH SCALE METERS	BORING METHOD	CORE DESCRIPTION	GRAPHIC LOG	ELEV. / DEPTH (ft)	RUN	CORING RATE MIN. / FT	RUN TIME START / STOP	WATER USAGE	% FLUSH RET.	FRACTURE INDEX (1ft INT)	DISCONTINUITIES
-5.7		5.73–7.32 Faintly weathered closely jointed gray with pink veins very fine grained slightly oxidized (major joint surfaces) LIMESTONE.		Elev 18.8	RUN # 1	5.5			0	M	19.4 15° J 19.8
		End borehole at 7.32.				4.5			0	3	19.9 80° MF 20.6 20° J, Fe TD
-6.5	NX CORING					5.0			0	2	21.1 21.2 69° J, SM 21.8 90° MF 21.9 90° J/MF
					RUN # 2	4.5			0	1	22.4 85° J
-7.3				Elev 24.0		5.5			0	2	23 ~85° J, Ue 23.4 75° MF 23.7 89° MF 23.9 25° J, Fe TD
-8.0											24.1 23.95 65° J 24.0 63° J

RUN INFORMATION

RUN	1	2
FROM	18.8	19.8
TO	19.8	24.0
TCR	100%	100%
RQD	42%	44%

DRILL RIG: MOBILE B-53
DRILLING CONTRACTOR: Con-Tec Inc.
DRILLER: J. STANTON
TOTAL LENGTH CORED: 5.2'
BITS USED: 1
SHEET 1 OF 1
LOGGED: M. Zorenski
CHECKED: [illegible]
DATE: 05/24/02

METRIC METRIC ENGLISH ENGLISH ENGLISH ENGLISH

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

NOTE:
THE SUBSURFACE EXPLORATIONS SHOWN ON THIS SHEET USE BOTH METRIC AND ENGLISH UNITS AS LABELED ABOVE AS RECORDED BY GOLDER ASSOCIATES IN 2002.

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta. / Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
BORING LOGS (8 OF 9)	
Designed By GOLDER	Drawn By K.D WENTWORTH
Checked By M.A. COLGAN Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139LG8	Sheet 44 of 124

VHB NO. 50735 plot date: 4/18/2005

VHB Metric

PROJECT: VHB/ LIMEKILN BRIDGE/VT
PROJECT LOCATION: S.Burlington/Colchester VT
PROJECT NUMBER: 993-6856
BORING TIME: 1145-03/06/02 to 1324-03/06/02

RECORD OF BOREHOLE B7-02

STATION: 10+412
OFFSET: 8.5 Meters West
ELEVATION: 81.85

Golder Associates
Manchester, New Hampshire

DEPTH SCALE METERS	BORING METHOD	SOIL PROFILE	USCS	GRAPHIC LOG	ELEV. DEPTH (ft)	SAMPLES NUMBER	TYPE	BLOWS / 6 INCHES	N	REC./ATT.	SAMPLE DESCRIPTIONS AND BORING NOTES
					Elev.						
0	2 1/4" HSA TO 8' - 4" HW TO 19 - NX CORE TO 24'	0-.92 Dense mix of limestone fragments, CMF sand, silt. (FILL)			0.00						0'-1' SILT, SAND, Crushed Limestone
					1.00	1	DD	27-21-23-13	44	0.5/2.0	1'-3' Dense crushed limestone, CMF sand, little silt (FILL MATERIAL)
1.5		.92-3.97 Compact to loose brown fine SAND, little silt, trace gravel. (FILL)			3.00	2	DD	8-5-5-4	10	1.2/2.0	3'-5' Compact brown SILTY fine SAND with limestone frags. Moist.
					5.00	3	DD	2-3-3-2	6	0.8/2.0	5'-7' Loose brown fine SAND, little silt, trace gravel. Moist.
					7.00	4	DD	2-2-3-2	5	0.2/2.0	7'-9' Loose brown fine SAND, little silt. Moist.
					9.00	5	DD	3-2-3-2	5	0.2/2.0	9'-11' Loose brown fine SAND, little silt. Moist.
3.1					11.0						
		3.97-5.64 Compact brown SILTY fine SAND, little medium to coarse sand, little gravel. (SP) (Possible Alluvium)									Formation change estimated @ 13' (Possible bottom of fill)
4.6					15.0	6	DD	17-7-3-2	10	1.5/2.0	15'-17' Compact brown SILTY fine SAND, little med-coarse sand, little gravel.
					17.0						
6.1		5.64 Top of Bedrock - see corehole log for continuation.									Bedrock encountered at aprox. 18.5' Advanced hole to 19' see corehole log for continuation.
7.5											
9.2											
10.7											
12.2											

DRILL RIG: MOBILE B-53
DRILLING CONTRACTOR: Con - Tec Inc.
DRILLER: J. STANTON
WEIGHT OF HAMMER: 140 lbs
DROP: 30 inches
SHEET 1 OF 1
LOGGED: M. Zarenski
CHECKED: DSC
DATE: 05/24/02

METRIC METRIC ENGLISH ENGLISH ENGLISH

PROJECT: VHB/LIMEKILN BRIDGE/VT
PROJECT LOCATION: S.Burlington/Colchester VT
PROJECT NUMBER: 993-6856
BORING TIME: 1305-03/06/02 to 1334-03/06/02

RECORD OF ROCK COREHOLE B7-02

STATION: 10+412
OFFSET: 8.5 Meters West
ELEVATION: 81.85

Golder Associates
Manchester, New Hampshire

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

DEPTH SCALE METERS	BORING METHOD	CORE DESCRIPTION	GRAPHIC LOG	ELEV. DEPTH (ft)	RUN	CORING RATE MIN. / FT	RUN TIME START / STOP	WATER USAGE	% FLUSH RET.	FRACTURE INDEX (1ft INT)	RUN INFORMATION / DISCONTINUITIES
				Elev.							RUN 1
5.8	NX CORING	5.80-7.32 Faintly weathered, closely jointed, bluish gray, very fine grained slightly oxidized LIMESTONE.		19.0	RUN # 1	6			0	3	FROM 19
		End borehole @ 7.32.									TO 24
6.6						6			0	3	TCR 4.7
											RQD 2.8%
						6			0	4	
7.3				24.0		6			0	3	
						6			0	2	
8.1											

DISCONTINUITIES:
19.1 50° J, Fe
19.3 35° J, Fe
19.7 60° J
20.1 90° J, UE, Fe
20.25 50° J, ST
20.75 45° J
21.5 70° J
21.5 45° J
21.8 35° J
21.9 45° J
22 90° MF
22.3 55° J
22.75 40° J
22.8 25° J
23.2 65° J
23.7 80° MF

DRILL RIG: MOBILE B-53
DRILLING CONTRACTOR: Con-Tec Inc.
DRILLER: J. STANTON
TOTAL LENGTH CORED: 5'
BITS USED: 1
SHEET 1 OF 1
LOGGED: M. Zarenski
CHECKED: DSC
DATE: 05/24/02

METRIC METRIC ENGLISH ENGLISH ENGLISH ENGLISH

NOTE:
THE SUBSURFACE EXPLORATIONS SHOWN ON THIS SHEET USE BOTH METRIC AND ENGLISH UNITS AS LABELED ABOVE AS RECORDED BY GOLDER ASSOCIATES IN 2002.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

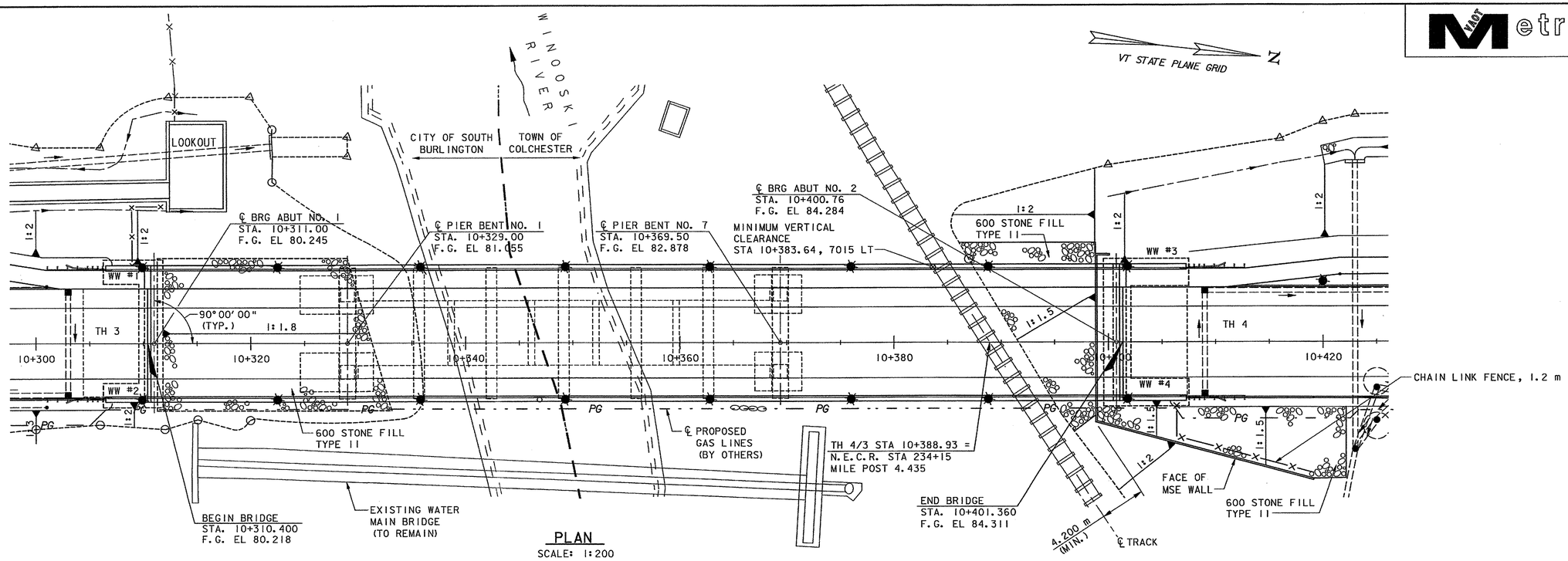
VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta. / Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
BORING LOGS (9 OF 9)	
Designed By GOLDER	Drawn By K.D. WENTWORTH
Checked By M.A. COLGAN Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139LG9	Sheet 45 of 124

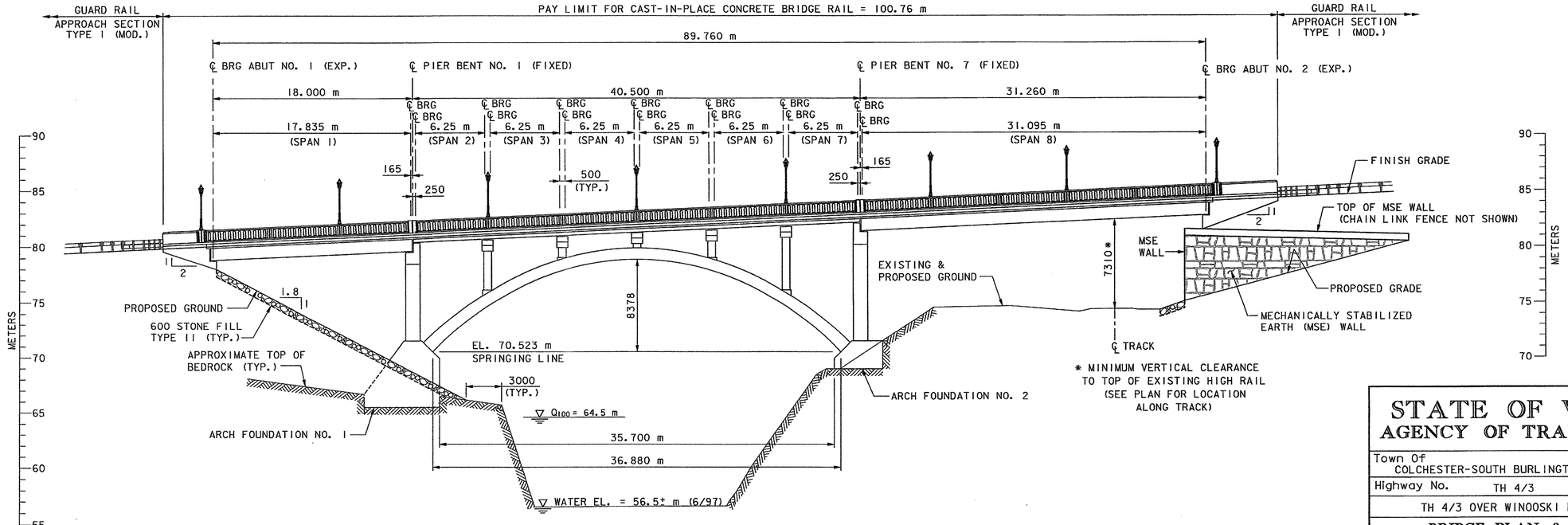
VHB NO. 50735 plot date: 4/18/2005

VAOT Metric



PLAN

SCALE: 1:200



ELEVATION

(FASCIA MOUNTED GAS LINE NOT SHOWN FOR CLARITY)

SCALE: 1:200

0 5 10 15

SCALE IN METERS

* MINIMUM VERTICAL CLEARANCE TO TOP OF EXISTING HIGH RAIL (SEE PLAN FOR LOCATION ALONG TRACK)

NOTE:

1. SEE SHEETS 85-88 FOR BRIDGE GAS LINE SUPPORT DETAILS.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

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

BRIDGE PLAN & ELEVATION

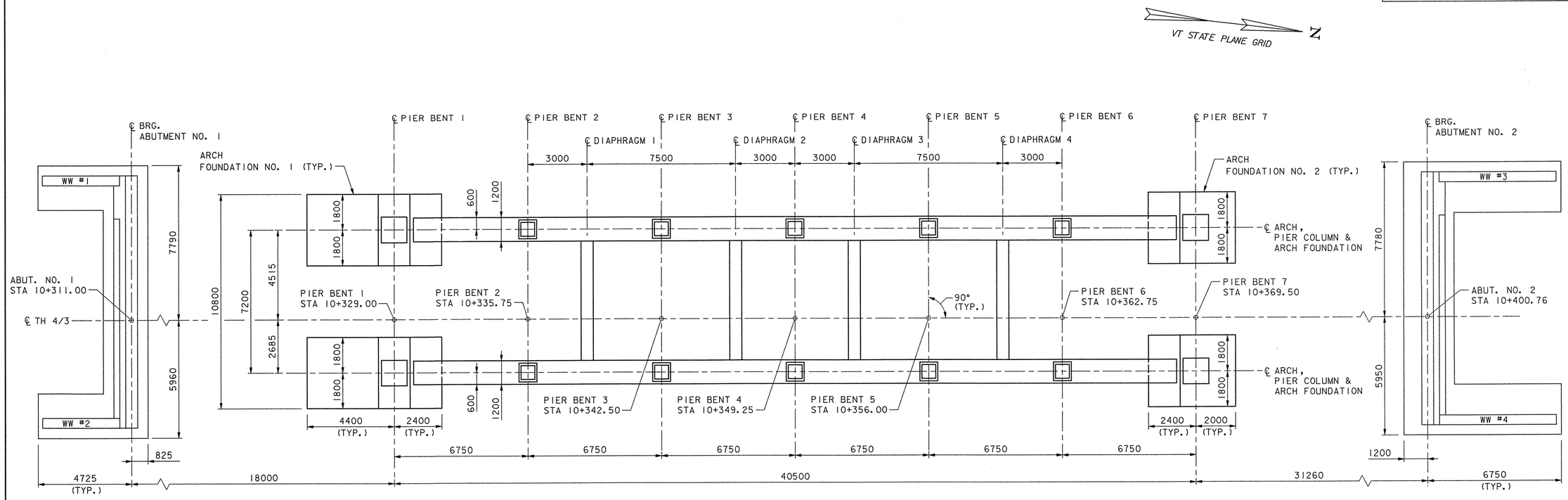
Designed By K.G. KRETSCH	Drawn By B.J. MASSE
Checked By M.A. COLGAN Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139GPE	Sheet 46 of 124

VHB Vanasse Hangen Brustlin, Inc.

VHB NO. 50735

plot date: 5/24/2005

Metric



PLAN

SCALE: 1:100

0 2500 5000 7500

SCALE IN MILLIMETERS

LAYOUT COORDINATES			
LOCATION	STATION	NORTHING	EASTING
℄ BRG ABUT. NO. 1	10+311.00	221256.5422	447340.7498
PIER BENT 1	10+329.00	221274.4216	447338.6696
PIER BENT 2	10+335.75	221281.1264	447337.8895
PIER BENT 3	10+342.50	221287.8311	447337.1095
PIER BENT 4	10+349.25	221294.5359	447336.3294
PIER BENT 5	10+356.00	221301.2407	447335.5493
PIER BENT 6	10+362.75	221307.9455	447334.7692
PIER BENT 7	10+369.50	221314.6502	447333.9892
℄ BRG ABUT. NO. 2	10+400.76	221345.7008	447330.3766

NOTE:

1. SEE SHEETS 65, 66, 68, AND 69 FOR DETAILED LAYOUTS OF ABUTMENT NO. 1 AND ABUTMENT NO. 2.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

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

ABUTMENT & ARCH LAYOUT PLAN

Designed By J.T. KLEIN	Drawn By B.J. MASSE
Checked By M.A. COLGAN Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139AF	Sheet 46A of 124

VHB NO. 50735 plot date: 4/25/2005

STATE OF VERMONT
AGENCY OF TRANSPORTATION

EROSION CONTROL NARRATIVE

VAOT Metric

DESCRIPTION OF PROJECT

This project involves the reconstruction of a bridge over the Winooski River and New England Central Railroad. The project is on TH 4/TH 3, Lime Kiln Road, between the Town of Colchester and the City of South Burlington. A new two lane three span bridge consisting of a reinforced concrete arch with prestressed concrete box beam approach spans, will be constructed upstream of the existing bridge while traffic is maintained on the existing bridge during construction. Following completion of the new bridge, the existing bridge and substructure will be removed. Total roadway approach work, including both approaches, is approximately 479 meters. No Wetlands or Historic Resources have been identified in the project area, other than the existing bridge. The existing bridge structure has been cleared for removal, as it has been photo-documented for Historical purposes. A Cedar/Pine Bluff Community has been identified southeast of the bridge. The site is located, based upon NAD 83/92 at 221253.563 N, 447341.096 E (Sta. 10+308.00).

In addition to the bridge replacement, a concrete path and lookout and paved parking area will be constructed as requirements of the Memorandum of Agreement for mitigation of adverse effect of removal of the historic bridge.

It is anticipated that this project will last two and a half construction seasons.

Total disturbed area (excluding waste, borrow and staging areas): 2.03 ha (5.02 ac.).

SITE INVENTORY & ANALYSIS

OFF SITE DRAINAGE CHARACTERISTICS:
The property surrounding the project site consists of recently constructed condominium developments in the southeast and southwest quadrants. The gradient is relatively flat and there are lawns with the exception of the cedar/pine forest immediately adjacent to the southwest of the bridge. North of the bridge is steeply sloped (existing road has 12% maximum gradient). Above a fill retaining wall in the northwest quadrant are the lawn and buildings of St. Michael's College, and closer to the bridge is an inactive quarry. To the northeast is a newly filled fill section that serves as the subgrade for the proposed road. This fill was from an offsite project that filled an inactive quarry. At the northern extent of the project, grass lawns flank both sides of the road and TH 4/TH 3 intersects VT 15. The proposed roadway is curbed with a closed drainage system with proposed stormwater treatment units near each outlet to the Winooski River. The current roadway ditches are not well defined and are not lined with stone.

DRAINAGE, WATERWAYS, BODIES OF WATER:
The Winooski River is located in the project area. There are no other water bodies or wetlands within the project area. The Winooski River flows through a rock gorge upstream and downstream of the bridge.

TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES:
The topography of the project site is hilled to the north of the bridge up to a plateau at the intersection with VT 15, and relatively flat to the south of the bridge. Development along TH 4/3 road consists of condominium developments to the south of the bridge and college residences and administrative buildings to the north. Utility relocations will be required for the aerial lines east of the existing bridge, the gas line carried by the existing bridge, the sewer line under the north roadway approach, and the waterline to the south of the bridge. The waterline bridge to the east of the existing bridge will not be impacted.

VEGETATION:
A mix of cedar, pine, maple and elm trees exist southwest of the bridge. A Tree Protection Plan will be created and implemented during construction for the trees not designated for removal. The areas in front of the condominiums to the south of the bridge are grass lawns with newly planted trees. Impacts to vegetation will be limited to that which are effected by the construction of the new bridge along a new alignment, the parking area and lookout and the relocated aerial utility lines. Individual trees affected near the condominiums will be replanted or replaced in-kind. The lawns, trees and bushes at the north end of the project will not be affected except the lawn and bushes on the east side of the road in the area of the relocated roadway transition back to existing alignment.

Following construction of the new bridge, the existing bridge and roadway approaches will be removed and vegetation reestablished with standard seed & mulch practices.

SOILS:
The Soil Conservation Service has mapped the soils throughout Chittenden County. A very brief description of the soils from the USDA Soil Survey for Chittenden County follows, along with the Soil Erodibility Coefficient (K-value) for each soil type. Generally, K-values indicate the following: 0.0 - 0.23 = low erodibility; 0.24 - 0.36 = moderate erodibility; 0.37 and higher = higher erodibility. The soil types identified for this project site are:

CoA (Colton gravelly loamy sand, 0-5% slopes) at the top of the hill in Colchester. Colton series soils are deep, very friable, or loose, excessively gravelly throughout the profile. They are very rapidly permeable. Surface runoff is slow and the hazard of erosion is slight except on terrace breaks. Erosion factors range from 0.15 for 0-8"of soil depth up to a high of 0.24 for 8-9" and back down to 0.10 for 22-72" of soil depth.

CsD (Colton-Stetson soils, 20-30% slopes) midway down the hill in Colchester. Colton series soils are deep, very friable, or loose, excessively gravelly throughout the profile. They are very rapidly permeable. Surface runoff is rapid and the erosion hazard is severe in areas not vegetated. Erosion factors range from 0.15 for 0-8" of soil depth up to a high of 0.24 for 8-9" and back down to 0.10 for 22-72" of soil depth.

FaE (Farmington extremely rocky loam, 20-60% slopes) just south of the bridge in South Burlington. Farmington series consists of soils that are shallow to bedrock, rocky or extremely rocky, somewhat excessively drained, and loamy throughout their profile. Water moves through the soil and flows down slope on the top of the bedrock if the bedrock is not fractured or jointed. Surface runoff is rapid, but is reduced by small hummocks or mounds resulting from the tree windthrow. Erosion factors range from 0.32 for 0-8" of soil depth up to 0.37 for 8-18" of soil depth.

Qd (quarries) on the northwest and northeast sides of the bridge as well as one southeast of the bridge (behind the condominiums). Quarries are areas where limestone was close to the surface and after the overlying soil was removed, the rocks were mined. All the quarries in this area are inactive.

FaC (Farmington extremely rocky loam, 5-20% slopes) most of the south roadway approach. Farmington series consists of soils that are shallow to bedrock, rocky or extremely rocky, somewhat excessively drained, and loamy throughout their profile. Water moves through the soil and flows down slope on the top of the bedrock if the bedrock is not fractured or jointed. The hazard of erosion is only slight in protected areas, but in unvegetated areas it is moderate to severe. Erosion factors range from 0.32 for 0-8" of soil depth up to 0.37 for 8-18" of soil depth.

AgA (Agawam fine sandy loam, 0-5% slopes) at the very beginning of the project and to the south in the area of the existing houses in South Burlington. Agawam soils are deep, friable, well-drained and consist of fine sandy loam over sandy material. They have moderately rapid permeability in the moderately coarse upper part of the profile and rapid permeability in the coarse-textured lower part. Surface runoff is slow. The hazard of erosion is slight in cultivated areas or where soil is not vegetated. Erosion factors range from 0.28 for 0-11" of soil depth to a high of 0.37 for 11-16" back down to 0.10 for 55-65" of soil depth.

SENSITIVE RESOURCE AREAS:
No 'Threatened & Endangered Species' have been identified within the project limits. A Cedar/Pine Bluff Community southeast of the bridge has been identified. The existing bridge is an historic resource and its removal is an adverse effect of that resource. The existing bridge structure has been cleared for removal as it has been photo-documented for Historical purposes and the other requirements of the Memorandum of Agreement are being addressed. The Winooski River is an identified resource. There are no wetlands within the vicinity of the project.

PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES:
The pier arch foundations will be constructed above the 100-year recurrence interval flood elevation and will not affect the Winooski River. All removals of existing substructures are above the 100-year recurrence interval flood elevation and will not affect the Winooski River.

TEMPORARY EROSION PREVENTION & SEDIMENT CONTROL

Temporary erosion prevention measures to be utilized include:

"Project Demarcation Fencing," denoted -PDF- on the plans, to delineate the limits the contractor can access with construction equipment. This measure limits the area that can be disturbed and exposed to erosion.

Seeding, mulching and biodegradable erosion control matting, or an equivalent product, will be utilized on all slopes steeper than 3:1 that are not lined with stone fill. These slopes shall be stabilized within 48 hours of reaching final grade or during intermittent phases of construction activity.

Tracking of all exposed slopes, combined with temporary mulching, will also be utilized on a regular basis. Any slopes to be exposed for several days prior to final grading shall be tracked and mulched. The forecast of rainfall events shall also trigger protection of exposed slopes.

Temporary stone check dams will be placed in ditches to reduce flow velocities and thus reduce the potential for erosion. Check dams will be placed along the ditches such that the elevation of the top of each check dam corresponds with the elevation of the toe of the preceding upslope check dam. See 'Erosion Controls Details' sheets. The check dams may be removed once the stone lining of the ditches is complete and the surrounding area stabilized.

When trees are removed within areas that existing ground is not being covered, (example: overhead utilities easement areas), then the trees are to be cut off at 6 inches (150 mm) above existing ground and the trees chipped and spread back over said area.

Temporary measures to control sediment transport include:

Silt fence will be installed a distance of 1800 mm (5.9') from the toe of slopes to prevent sediment transport to down gradient areas. Each line of silt fence will be placed along the contour with ends turned slightly uphill to create a ponding effect should water try to run along the fencing and around the ends. The maximum slope length between separate runs of silt fence is 30 000 mm (100'). Silt fence shall be installed prior to any upslope earthwork.

Sand bags filled with clean, small diameter stone, or an equivalent barrier, will be utilized around the drop inlets to create a temporary ponding area for particles to settle out as water drains through the barrier. Inlet protection shall be installed as soon as there is the possibility of water flowing to the structure. The height of the barrier shall be limited such that the ponding area does not present a hazard to the traveling public. Alternative inlet control measures shall be approved by the Engineer and on site coordinator prior to implementation.

Measures such as temporary stone check dams, silt fence, and sand bags shall be checked regularly for accumulation of sediment. Sediment build-up shall be removed when the level of sediment reaches one-half the height of the control measure. Sediments shall be disposed of in an approved area such that they will not be subject to erosion.

Stabilized construction entrances to the project site, staging areas, as well as to waste and borrow areas shall be established. The minimum size of a stabilized construction entrance is 3700 mm x 15 000 mm (12' x 50'). All surface water flowing to or diverted towards a construction entrance shall be piped under the stone. Pipes shall be appropriately sized for the contributing area; however, no pipes smaller than 150 mm diameter shall be used. See detail on 'Erosion & Sediment Control Detail' sheet for materials and construction method to be utilized when constructing a stabilized entrance.

Not used: [Temporary sediment settling basins may or may not be utilized on this project. If a settling basin is to be used for dewatering a cofferdam, it should be sized based upon the pumping rate and target particle size to be settled out for the project site. The follow sizing criteria is based upon a target particle size of 0.01 mm and is provided as general guidance. (See Sediment Settling Basin Sizing Criteria.)]

PERMANENT EROSION CONTROL MEASURES

Several permanent erosion control measures will be utilized:

Stone lining of roadway ditches with clean, angular Stone Fill, Type I will be used to prevent erosion during storm events. See 'Erosion Control Details' sheet for typical ditch section.

Not used: [Stone lining of the stream banks with Stone Fill, Type II as specified by VTrans Hydraulics personnel is specified. This stone will protect from stream bank erosion during design storm events.]

Closed drainage runoff will be treated by a stormwater treatment unit on each side of the river prior to discharge into the Winooski River.

Stone Fill, Type II will be utilized at culvert outlets to dissipate water velocities and reduce erosion potential.

Grass, or other suitable ground cover will be established outside of the roadway limits where stone lining has not been specified.

GENERAL EROSION & SEDIMENT CONTROL GUIDELINES

The Erosion Control Plans are meant as a guideline for preventing erosion and controlling sediment transport. The work outlined in this narrative consists of applying measures throughout the life of the project to control erosion and minimize the sedimentation of receiving waters. The measures include stabilization and structural practices, stormwater controls and other pollution prevention controls.

Coordinate the installation, use, and removal of erosion and sediment control measures with construction activities to ensure economical, effective and continuous erosion and sediment control. Employ temporary stabilization practices in incremental stages as construction proceeds. The contractor will use additional erosion control measures as necessitated by the sequence of construction and as directed by the Engineer and on site coordinator. See section 105.23 of the Vermont AOT Standard Specifications for Construction, dated 2001.

Install all erosion and sediment control measures as shown in the Erosion Control Plans or as directed by the Engineer and on site coordinator. Do not modify the type, size or location of any control or practice without approval of the Engineer and on site coordinator. Any changes shall be noted on the plans, in the weekly inspection report, and reported to the appropriate authority in a timely manner. Inspect all control measures after each storm event that potentially can discharge settlement and after each rainfall event. Repair measures promptly once damage is discovered.

Preventing initial soil erosion is much more effective than treating eroded sediment. Therefore, stabilize all disturbed areas generally within 48 hours after construction activity has temporarily or permanently ceased. Temporary vegetation shall be established if the area is to be without construction activity for a period of 14 days. Perimeter control measures shall be installed following clearing, but prior to the start of any grubbing or grading activity, install other temporary controls in incremental stages as construction proceeds.

There is no vegetation buffers along the stream banks due to vertical ledge.

Control only sediment-laden runoff generated by the project site. Collect and route all offsite runoff around or through the project site using diversion berms, diversion channels, culverts and/or temporary pipes.

Do not allow construction equipment to operate on the down slope side of perimeter control measures.

SEDIMENT SETTLING BASIN SIZING CRITERIA

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

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta.
	Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
EROSION CONTROL NARRATIVE	
Designed By VTRANS/SMG	Drawn By VTRANS/BJM
Checked By VTRANS/SMG Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139ecnar	Sheet 47 of 124

VHB Vanasse Hangen Brustlin, Inc.

VHB NO. 50735

plot date: 4/25/2005

VT STATE PLANE GRID

N

LAKE CHAMPLAIN HOUSING DEVELOPMENT CORPORATION, ET. AL.

FARWATER, LIMITED

#380 3 story multi-unit building

#378 3 story multi-unit building

3 story multi-unit building

#328 3 story multi-unit building

#325 3 story multi-unit building

PARKING

CEDAR/PINE TREES

GRASS

Existing R.O.W.

PROPOSED ALIGNMENT

N2°51'11.2"E

TO SOUTH BURLINGTON

POB 10+000.000

10+020 10+040 10+060 10+080 10+100 10+120 10+140

TH 4/3

5' CONCRETE WALK

100 maple

MATCH LINE PLAN SHEET 47B

PLAN

SCALE: 1:250

0 5 10 15

SCALE IN METERS

LEGEND

AgA / Qd	EXISTING SOIL TYPE BOUNDARY (APPROX.)
UT	EXISTING UNDERGROUND TELEPHONE LINE
W	EXISTING UNDERGROUND WATER LINE
G	EXISTING UNDERGROUND GAS LINE
S	EXISTING UNDERGROUND SEWER LINE
AERIAL E&T	EXISTING OVERHEAD ELECTRIC & TELEPHONE LINE
FM	EXISTING FORCED MAIN SEWER LINE
SD	EXISTING STORM DRAIN
	LEDGE
HYD	HYDRANT
	MANHOLE
	MAILBOX
	SIGNS
	UTILITY POLE GUY WIRE
	GAS SHUTOFF
lp	LIGHT POLE

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

NOTES:

1. NO SENSITIVE RESOURCES EXIST.
2. SOIL BOUNDARIES ARE APPROXIMATE AND ARE TAKEN FROM CHITTENDEN COUNTY, VT. SOIL SURVEY BOOK DATED JAN. 1974. SEE SHEET 47 FOR SOIL DESCRIPTIONS.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

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

EXISTING CONDITIONS PLAN (1 OF 3)

Designed By S.M. GUNN	Drawn By B.J. MASSE
Checked By S.M. GUNN Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139ERIA	Sheet 47A of 124

VHB Vanasse Hangen Brustlin, Inc.

VHB NO. 50735

plot date: 4/25/2005

VT STATE PLANE GRID

N

MATCH LINE PLAN SHEET 47A

WINOOSKI VALLEY PARK DISTRICT

PC Sta 10+172.845

CEDAR/PINE TREES

"CEDAR/PINE BLUFF COMMUNITY"

FaC

Qd

PT Sta 10+239.094

FaE

Existing R.O.W.

TH 4/3

10+160

10+180

N2°51'11.2"E

10+200

PROPOSED ALIGNMENT

N6°38'10.7"W

10+220

10+240

10+260

10+280

10+300

AERIAL E&T

375 CPEP

FM

SM

4 UNDERGROUND CHASES

7.5M SEWER ACCESS

PUMP STATION APPROXIMENTLY 2.1M +/-

PUMP STATION CONTROL PANEL

1.8M x 2.4M BOULDER

2.8M x 2.4M BOULDER

GRASS

STONE SWALE

BOULDER

CONCRETE

ASPHALT

PL

ID

lp

WSO

FARWATER, LIMITED

CEDAR BLUFF CONDOMINIUMS HOMEOWNERS ASSOCIATION, INC. AND FARWATER, LIMITED

PLAN

SCALE: 1:250

0 5 10 15

SCALE IN METERS

MATCH LINE PLAN BELOW

LEGEND

- AgA / Qd — EXISTING SOIL TYPE BOUNDARY (APPROX.)
- UT — EXISTING UNDERGROUND TELEPHONE LINE
- W — EXISTING UNDERGROUND WATER LINE
- G — EXISTING UNDERGROUND GAS LINE
- S — EXISTING UNDERGROUND SEWER LINE
- AERIAL E&T — EXISTING OVERHEAD ELECTRIC & TELEPHONE LINE
- FM — EXISTING FORCED MAIN SEWER LINE
- SD — EXISTING STORM DRAIN
- LEDGE
- HYD — HYDRANT
- MANHOLE
- MAILBOX
- SIGNS
- UTILITY POLE GUY WIRE
- GAS SHUTOFF
- lp — LIGHT POLE
- RIPARIAN BUFFER

"CEDAR/PINE BLUFF COMMUNITY"

ST. MICHAEL'S COLLEGE

SOUTH BURLINGTON

COLCHESTER

WINOOSKI VALLEY PARK DISTRICT

Existing R.O.W.

TH 4/3

PROPOSED ALIGNMENT

10+320

10+340

10+360

10+380

10+400

10+420

10+440

LIMITS OF RIPARIAN BUFFER

TOWN LINE

WINOOSKI RIVER

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

GRASS STABILIZED FILLED-IN QUARRY

Qd (FILLED)

℄ EXISTING DITCH

CEDAR BLUFF CONDOMINIUMS HOMEOWNERS ASSOCIATION, INC. AND FARWATER, LIMITED

PLAN

SCALE: 1:250

0 5 10 15

SCALE IN METERS

MATCH LINE PLAN ABOVE

MATCH LINE PLAN SHEET 47C

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

NOTES:

1. NO SENSITIVE RESOURCES EXIST.
2. SOIL BOUNDARIES ARE APPROXIMATE AND ARE TAKEN FROM CHITTENDEN COUNTY, VT. SOIL SURVEY BOOK DATED JAN. 1974. SEE SHEET 47 FOR SOIL DESCRIPTIONS.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

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

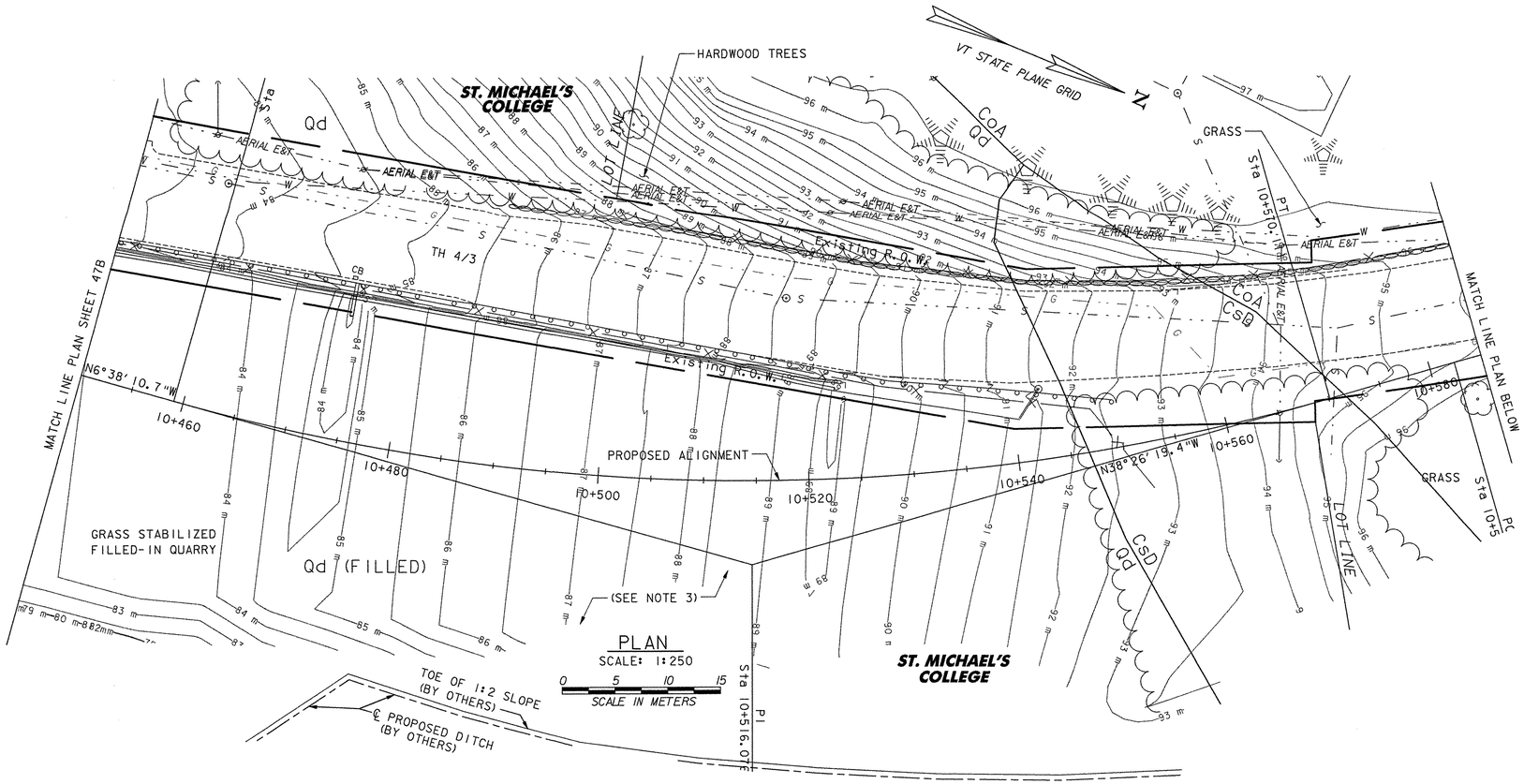
EXISTING CONDITIONS PLAN (2 OF 3)

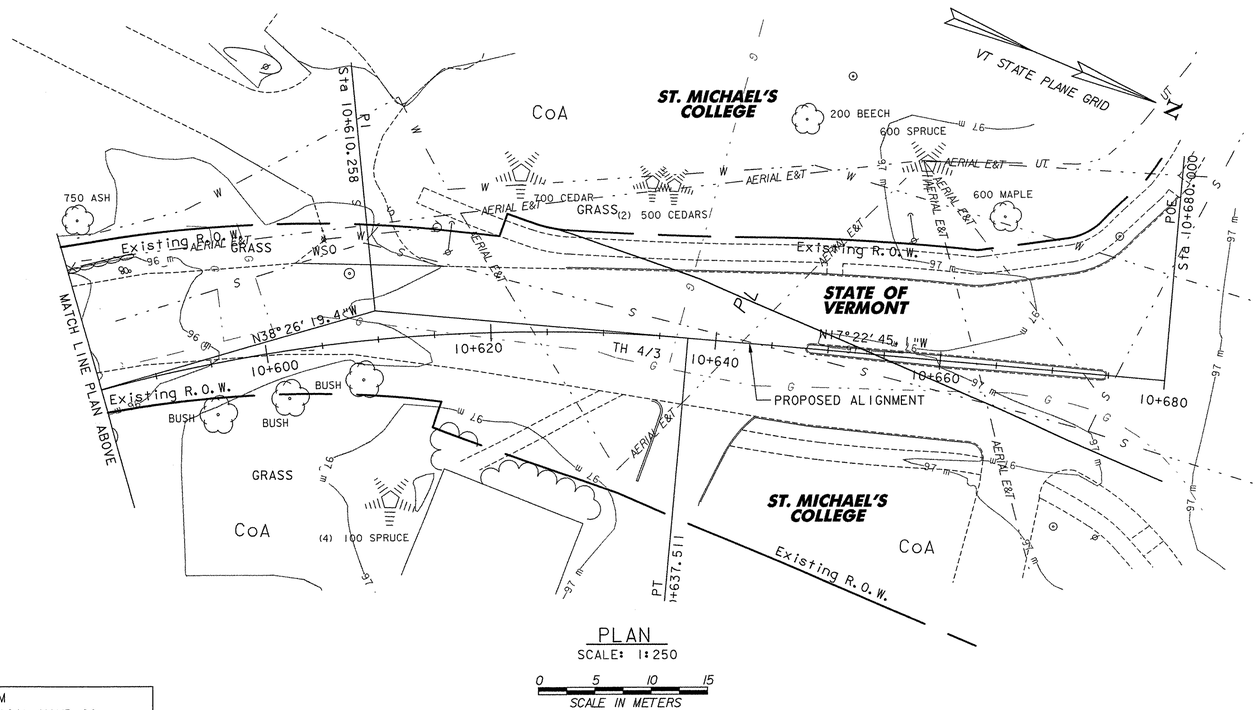
Designed By S.M. GUNN	Drawn By B.J. MASSE
Checked By S.M. GUNN Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139ER2A	Sheet 47B of 124

VHB Vanasse Hangen Brustlin, Inc.

VHB NO. 50735

plot date: 4/25/2005





LEGEND

AgA / Qd	EXISTING SOIL TYPE BOUNDARY (APPROX.)
— UT —	EXISTING UNDERGROUND TELEPHONE LINE
— W —	EXISTING UNDERGROUND WATER LINE
— G —	EXISTING UNDERGROUND GAS LINE
— S —	EXISTING UNDERGROUND SEWER LINE
— AERIAL E&T —	EXISTING OVERHEAD ELECTRIC & TELEPHONE LINE
— FM —	EXISTING FORCED MAIN SEWER LINE
— SD —	EXISTING STORM DRAIN
	LEDGE
HYD	HYDRANT
	MANHOLE
	MAILBOX
	SIGNS
	UTILITY POLE GUY WIRE
	GAS SHUTOFF
	LIGHT POLE

NOTES:

1. NO SENSITIVE RESOURCES EXIST.
2. SOIL BOUNDARIES ARE APPROXIMATE AND ARE TAKEN FROM CHITTENDEN COUNTY, VT. SOIL SURVEY BOOK DATED JAN. 1974. SEE SHEET 47 FOR SOIL DESCRIPTIONS.
3. EXISTING CONTOURS MAY VARY DUE TO PLACEMENT OF FILL BY OTHERS ALREADY IN PLACE FROM STA 10+480 TO STA 10+550 RT.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

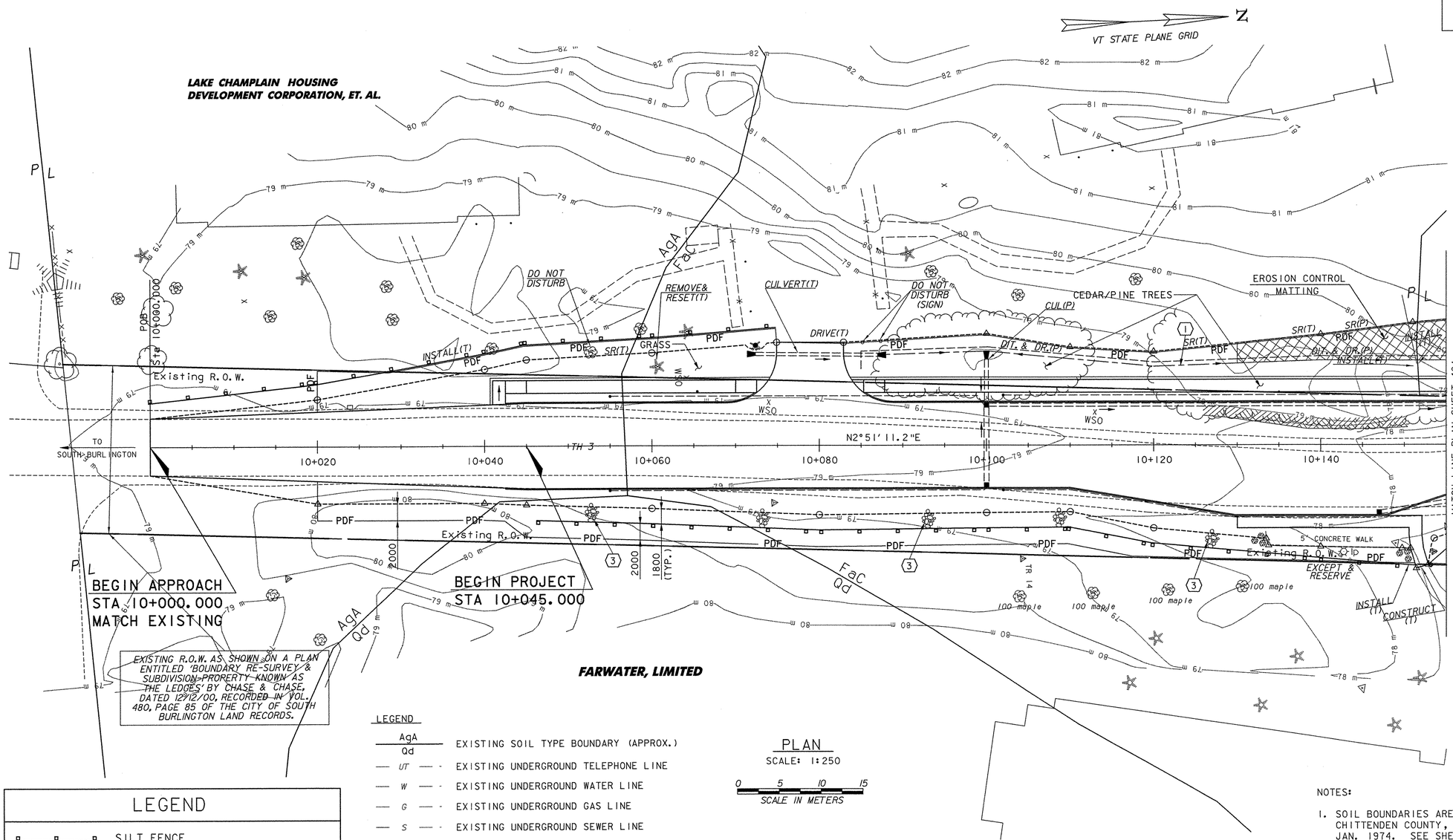
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
	Log Sta.
Highway No. TH 4/3	Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
EXISTING CONDITIONS PLAN (3 OF 3)	
Designed By S. M. GUNN	Drawn By B. J. MASSE
Checked By S. M. GUNN Date 4/05	Bridge Design Supervisor S. M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6) S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139ER3A	Sheet 47C of 124

VHB Vanasse Hangen Brustlin, Inc.

VHB NO. 50735 plot date: 4/25/2005

VAOT Metric



FARWATER, LIMITED

PLAN
SCALE: 1:250
0 5 10 15
SCALE IN METERS

LEGEND

AgA / Qd	EXISTING SOIL TYPE BOUNDARY (APPROX.)
— UT —	EXISTING UNDERGROUND TELEPHONE LINE
— W —	EXISTING UNDERGROUND WATER LINE
— G —	EXISTING UNDERGROUND GAS LINE
— S —	EXISTING UNDERGROUND SEWER LINE
— AERIAL E&T —	EXISTING OVERHEAD ELECTRIC & TELEPHONE LINE
— FM —	EXISTING FORCED MAIN SEWER LINE
— SD —	EXISTING STORM DRAIN
	LEDGE
HYD	HYDRANT
	MANHOLE
	MAILBOX
	SIGNS
	UTILITY POLE GUY WIRE
	GAS SHUTOFF
lp	LIGHT POLE
PB	PROPOSED PULL BOX BY OTHERS
FB	PROPOSED FLUSHING BASIN
	TOP OF CUT TO MATCH EXISTING
	TOE OF SLOPE TO MATCH EXISTING

LEGEND

	SILT FENCE
PDF	PROJECT DEMARCATION FENCE DEFINING LIMITS OF DISTURBANCE SNOW FENCE (MOD. - PDF)
	EROSION CONTROL MATTING

EROSION AND SEDIMENT CONTROL INDEX

NO.	DESCRIPTION
(1)	STONE CHECK DAM (TEMP.), OR EQUIVALENT PRODUCT, (TO BE REMOVED ONCE STONE FILL, TYPE I IN DITCHES HAS BEEN COMPLETED AND/OR VEGETATION ESTABLISHED.)
(2)	GRAVEL BAG DROP INLET PROTECTION, OR EQUIVALENT.
(3)	STONE CHECK DAM PERPENDICULAR TO SILT FENCE (SEE SHEET 50 FOR DETAILS)

NOTE: ALL DISTURBED AREAS WITH SLOPES GREATER THAN 1:3 WILL REQUIRE TEMPORARY EROSION MATTING (SEE EROSION CONTROL DETAILS SHEET)

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

NOTES:

1. THESE PLANS SHOW A CONCEPTUAL EROSION CONTROL PLAN. IN ACCORDANCE WITH ITEMS 652.10, 652.20 AND 652.30, THE CONTRACTOR MUST SUBMIT A TEMPORARY EROSION CONTROL PLAN FOR APPROVAL.
2. SILT FENCE LOCATIONS ARE CONCEPTUALLY SHOWN. THE CONTRACTOR MAY RELOCATE SILT FENCE TO IMPROVE EROSION CONTROL WITH APPROVAL OF THE RESIDENT ENGINEER AND ON SITE COORDINATOR.
3. THE CONTRACTOR SHALL USE OTHER TEMPORARY EROSION CONTROL MEASURES AS NECESSITATED BY THE SEQUENCE OF CONSTRUCTION OR AS DIRECTED BY THE RESIDENT ENGINEER AND ON SITE COORDINATOR. SEE SECTION 105.23.
4. REFER TO TEMPORARY EROSION CONTROL DETAIL SHEETS FOR ADDITIONAL DETAILS.
5. THESE PLANS DO NOT SHOW TEMPORARY DRAINAGE. THE CONTRACTOR MUST DIVERT THE EXISTING COLCHESTER DRAINAGE TO THE 1050 PIPE EAST OF THE BRIDGE DURING CONSTRUCTION.

NOTES:

1. SOIL BOUNDARIES ARE APPROXIMATE AND ARE TAKEN FROM CHITTENDEN COUNTY, VT. SOIL SURVEY BOOK DATED JAN. 1974. SEE SHEET 47 FOR SOIL DESCRIPTIONS.
2. EXISTING AND PROPOSED UTILITIES NOT SHOWN FOR CLARITY.
3. NO SENSITIVE RESOURSES EXIST.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

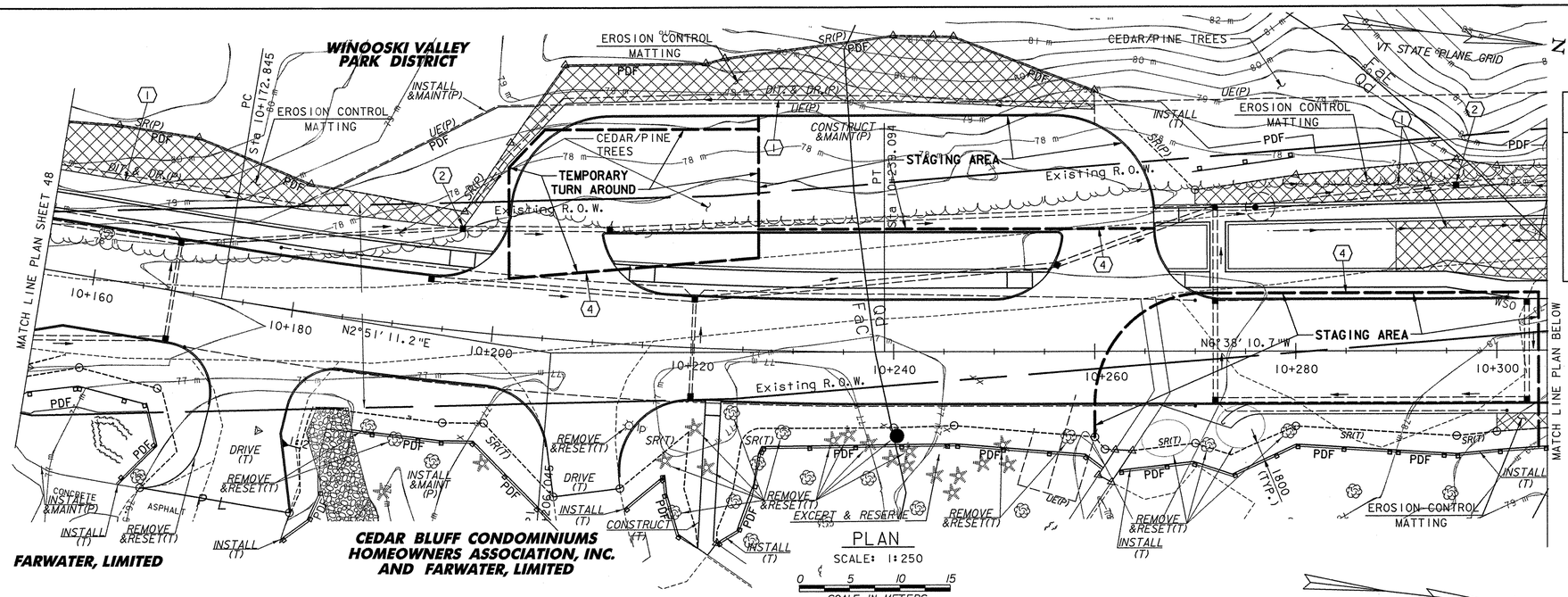
Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta.
	Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
EPSC PLAN (1 OF 3)	
Designed By S.M. GUNN	Drawn By B.J. MASSE
Checked By S.M. GUNN Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6) S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139ER1B	Sheet 48 of 124

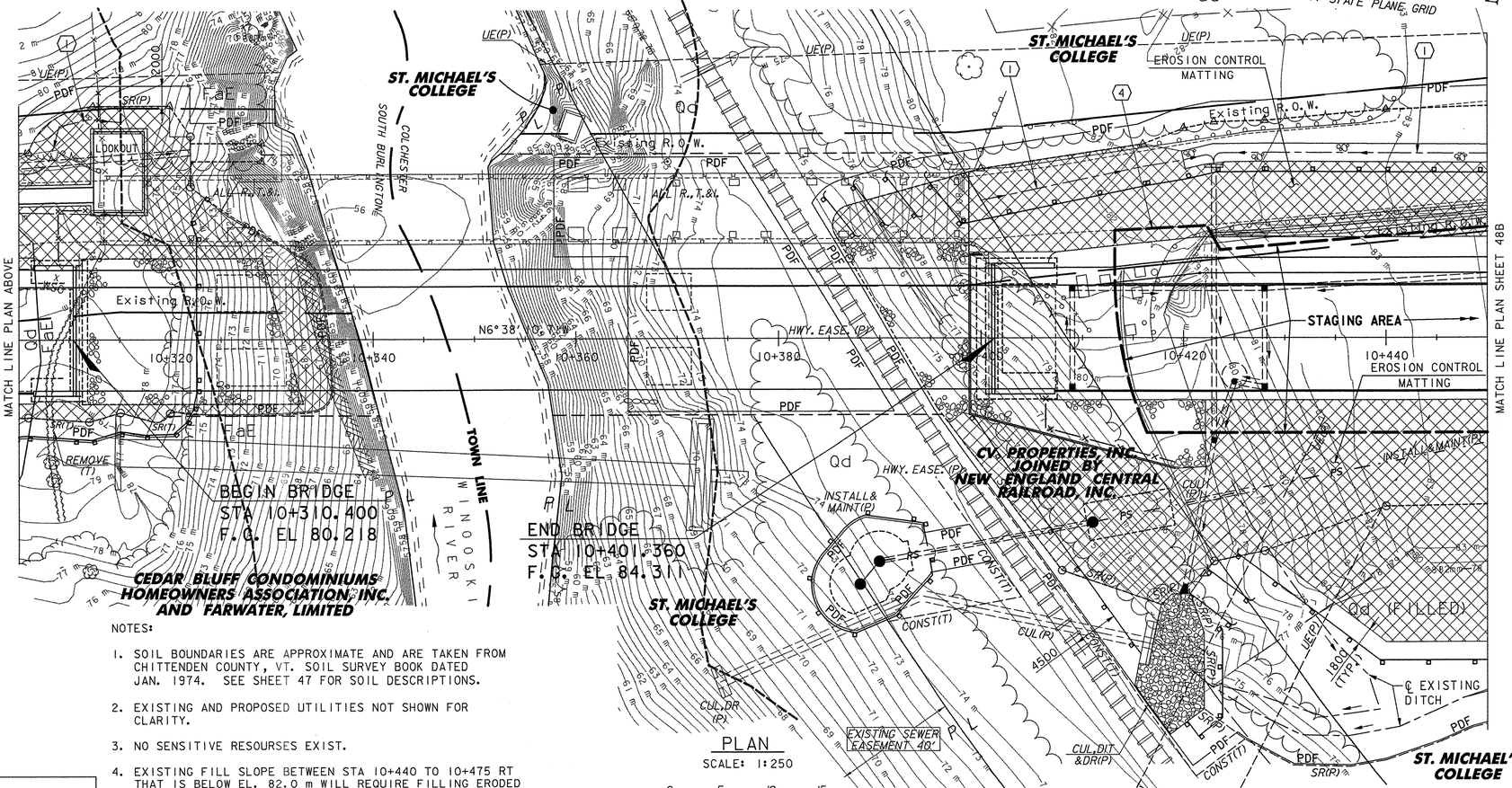
VHB Vanasse Hangen Brustlin, Inc.

VHB NO. 50735

plot date: 4/25/2005

VAOT Metric





LEGEND

- SILT FENCE
- PDF — PROJECT DEMARCATION FENCE DEFINING LIMITS OF DISTURBANCE SNOW FENCE (MOD. - PDF)
- EROSION CONTROL MATTING

EROSION AND SEDIMENT CONTROL INDEX

NO.	DESCRIPTION
(1)	STONE CHECK DAM (TEMP.), OR EQUIVALENT PRODUCT, (TO BE REMOVED ONCE STONE FILL, TYPE I IN DITCHES HAS BEEN COMPLETED AND/OR VEGETATION ESTABLISHED.)
(2)	GRAVEL BAG DROP INLET PROTECTION, OR EQUIVALENT.
(4)	STABILIZED ENTRANCE/VEHICLE TRACKING PAD

NOTE: ALL DISTURBED AREAS WITH SLOPES GREATER THAN 1:3 WILL REQUIRE TEMPORARY EROSION MATTING (SEE EROSION CONTROL DETAILS SHEET)

LEGEND

- AgA / Qd — EXISTING SOIL TYPE BOUNDARY (APPROX.)
- UT — EXISTING UNDERGROUND TELEPHONE LINE
- W — EXISTING UNDERGROUND WATER LINE
- G — EXISTING UNDERGROUND GAS LINE
- S — EXISTING UNDERGROUND SEWER LINE
- AERIAL E&T — EXISTING OVERHEAD ELECTRIC & TELEPHONE LINE
- FM — EXISTING FORCED MAIN SEWER LINE
- SD — EXISTING STORM DRAIN
- LEDGE
- HYD — HYDRANT
- MANHOLE
- MAILBOX
- SIGNS
- UTILITY POLE GUY WIRE
- GAS SHUTOFF
- lp — LIGHT POLE
- PB — PROPOSED PULL BOX BY OTHERS
- FB — PROPOSED FLUSHING BASIN
- TOP OF CUT TO MATCH EXISTING
- TOE OF SLOPE TO MATCH EXISTING
- RIPARIAN BUFFER

NOTES:

1. SOIL BOUNDARIES ARE APPROXIMATE AND ARE TAKEN FROM CHITTENDEN COUNTY, VT. SOIL SURVEY BOOK DATED JAN. 1974. SEE SHEET 47 FOR SOIL DESCRIPTIONS.
2. EXISTING AND PROPOSED UTILITIES NOT SHOWN FOR CLARITY.
3. NO SENSITIVE RESOURSES EXIST.
4. EXISTING FILL SLOPE BETWEEN STA 10+440 TO 10+475 RT THAT IS BELOW EL. 82.0 m WILL REQUIRE FILLING ERODED AREAS, RESHAPING SLOPE, SEEDING, AND ADDITIONAL EROSION MATTING.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

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

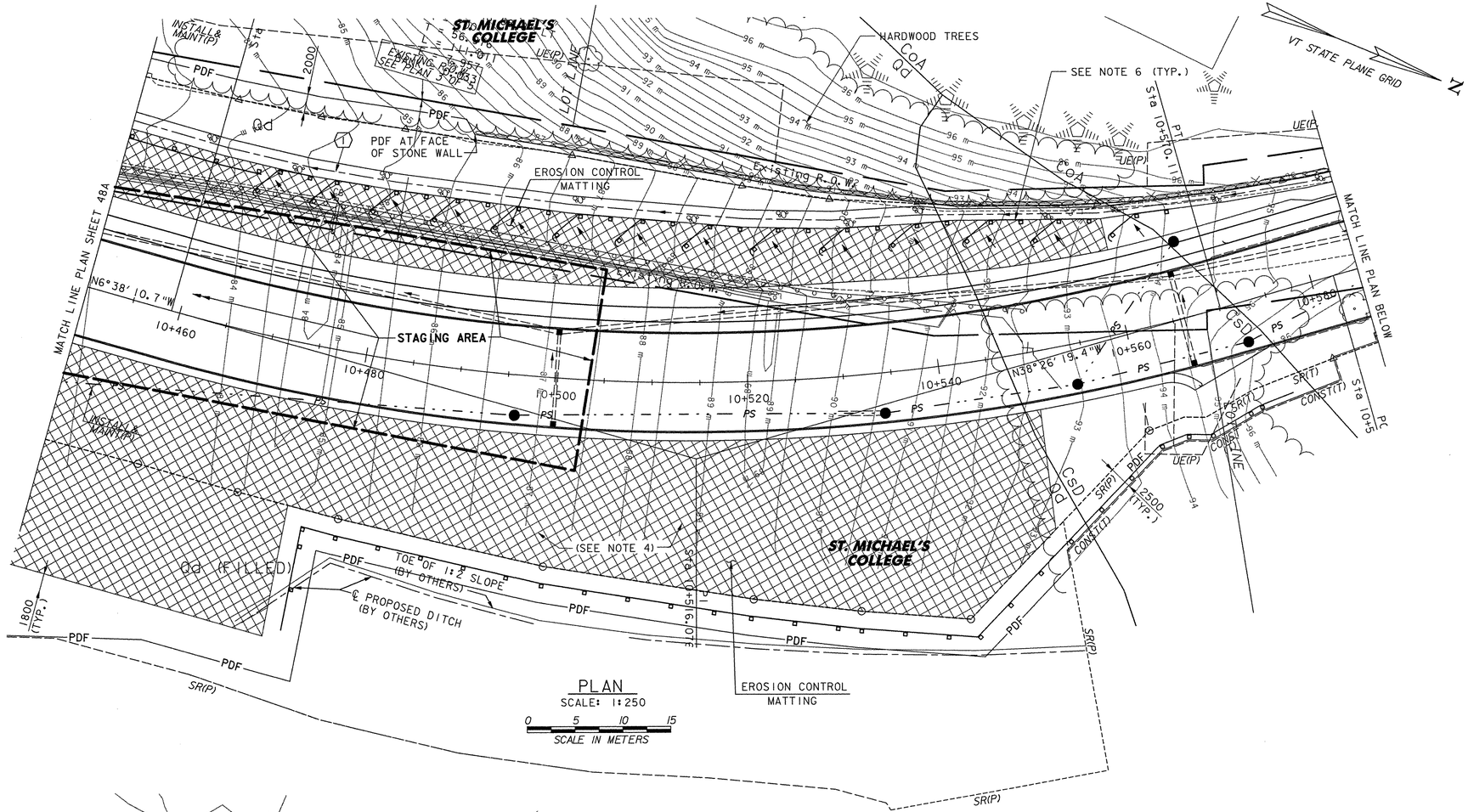
EPSC PLAN (2 OF 3)

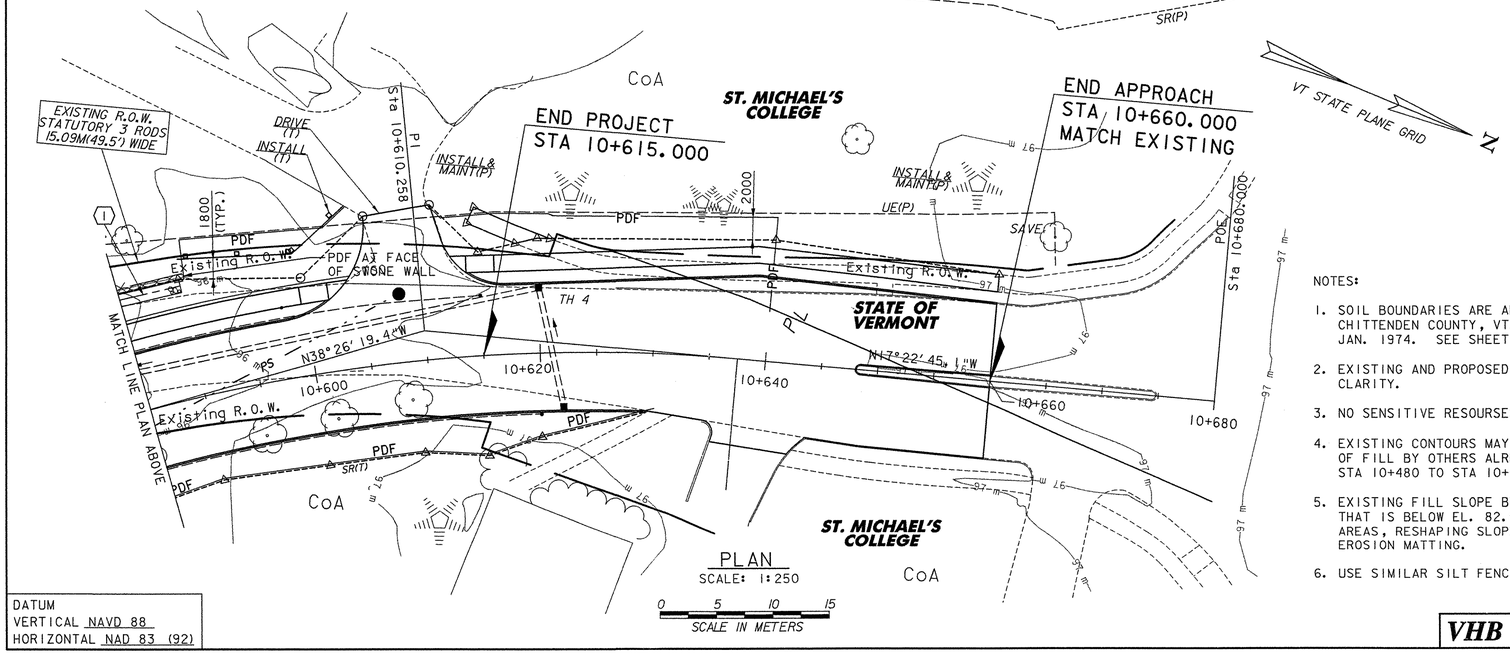
Designed By S.M. GUNN	Drawn By B.J. MASSE
Checked By S.M. GUNN Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139ER2B	Sheet 48A of 124

VHB Vanasse Hangen Brustlin, Inc.

VHB NO. 50735 plot date: 5/2/2005

Metric





LEGEND

- SILT FENCE
- PDF — PROJECT DEMARCATION FENCE DEFINING LIMITS OF DISTURBANCE SNOW FENCE (MOD. - PDF)
- EROSION CONTROL MATTING

EROSION AND SEDIMENT CONTROL INDEX

NO.	DESCRIPTION
(1)	STONE CHECK DAM (TEMP.), OR EQUIVALENT PRODUCT, (TO BE REMOVED ONCE STONE FILL, TYPE I IN DITCHES HAS BEEN COMPLETED AND/OR VEGETATION ESTABLISHED.)
(2)	GRAVEL BAG DROP INLET PROTECTION, OR EQUIVALENT.

NOTE: ALL DISTURBED AREAS WITH SLOPES GREATER THAN 1:3 WILL REQUIRE TEMPORARY EROSION MATTING (SEE EROSION CONTROL DETAILS SHEET)

LEGEND

- AgA / Qd — EXISTING SOIL TYPE BOUNDARY (APPROX.)
- UT — EXISTING UNDERGROUND TELEPHONE LINE
- W — EXISTING UNDERGROUND WATER LINE
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- MANHOLE
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- GAS SHUTOFF
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- PB — PROPOSED PULL BOX BY OTHERS
- FB — PROPOSED FLUSHING BASIN
- TOP OF CUT TO MATCH EXISTING
- TOE OF SLOPE TO MATCH EXISTING

NOTES:

1. SOIL BOUNDARIES ARE APPROXIMATE AND ARE TAKEN FROM CHITTENDEN COUNTY, VT. SOIL SURVEY BOOK DATED JAN. 1974. SEE SHEET 47 FOR SOIL DESCRIPTIONS.
2. EXISTING AND PROPOSED UTILITIES NOT SHOWN FOR CLARITY.
3. NO SENSITIVE RESOURSES EXIST.
4. EXISTING CONTOURS MAY VARY DUE TO PLACEMENT OF FILL BY OTHERS ALREADY IN PLACE FROM STA 10+480 TO STA 10+550 RT.
5. EXISTING FILL SLOPE BETWEEN STA 10+440 TO 10+475 RT THAT IS BELOW EL. 82.0 m WILL REQUIRE FILLING ERODED AREAS, RESHAPING SLOPE, SEEDING, AND ADDITIONAL EROSION MATTING.
6. USE SIMILAR SILT FENCE DETAIL FOR PHASE I CONSTRUCTION.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

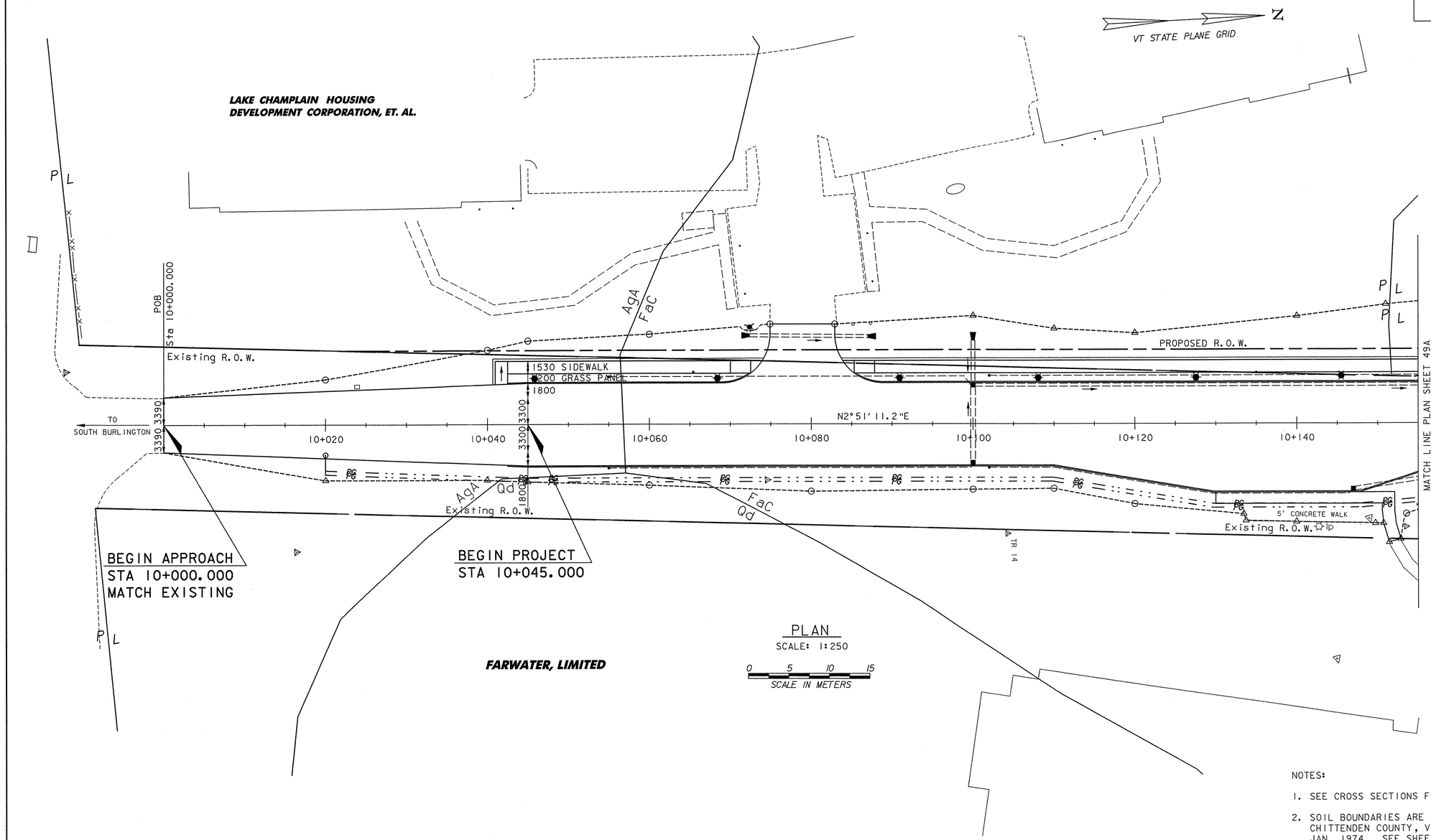
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta. / Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
EPSC PLAN (3 OF 3)	
Designed By S.M. GUNN	Drawn By B.J. MASSE
Checked By S.M. GUNN Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6) S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139ER3B	Sheet 48B of 124

VHB Vanasse Hangen Brustlin, Inc.

VHB NO. 50735 plot date: 4/25/2005

VAOT Metric



PLAN

SCALE: 1:250

0 5 10 15

SCALE IN METERS

FARWATER, LIMITED

LEGEND

AgA / Qd	EXISTING SOIL TYPE BOUNDARY (APPROX.)
—P E&T—	PROPOSED OVERHEAD ELECTRIC & TELEPHONE BY OTHERS
— PS —	PROPOSED SEWER LINE
— PG —	PROPOSED GAS LINE BY OTHERS
— PW —	PROPOSED WATER LINE BY OTHERS
■ PB	PROPOSED PULL BOX BY OTHERS
■ FB	PROPOSED FLUSHING BASIN
--△-----△--	TOP OF CUT TO MATCH EXISTING
--○-----○--	TOE OF SLOPE TO MATCH EXISTING
✸	PROPOSED LIGHT POLE

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

NOTES:

1. SEE CROSS SECTIONS FOR PROPOSED GRADING.
2. SOIL BOUNDARIES ARE APPROXIMATE AND ARE TAKEN FROM CHITTENDEN COUNTY, VT. SOIL SURVEY BOOK DATED JAN. 1974. SEE SHEET 47 FOR SOIL DESCRIPTIONS.
3. NO SENSITIVE RESOURSES EXIST.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta. / Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	

FINAL CONDITIONS SITE PLAN (1 OF 3)

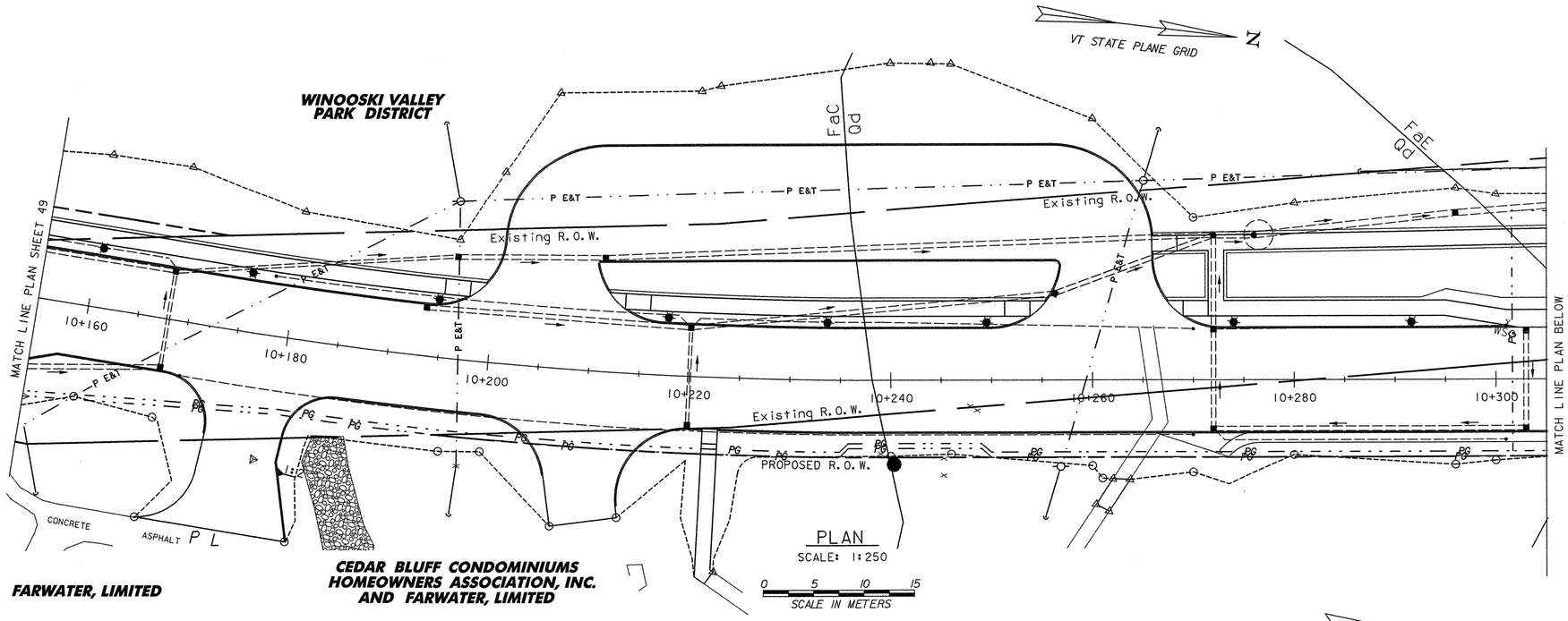
Designed By S.M. GUNN	Drawn By B.J.MASSE
Checked By S.M. GUNN Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139ERIC	Sheet 49 of 124

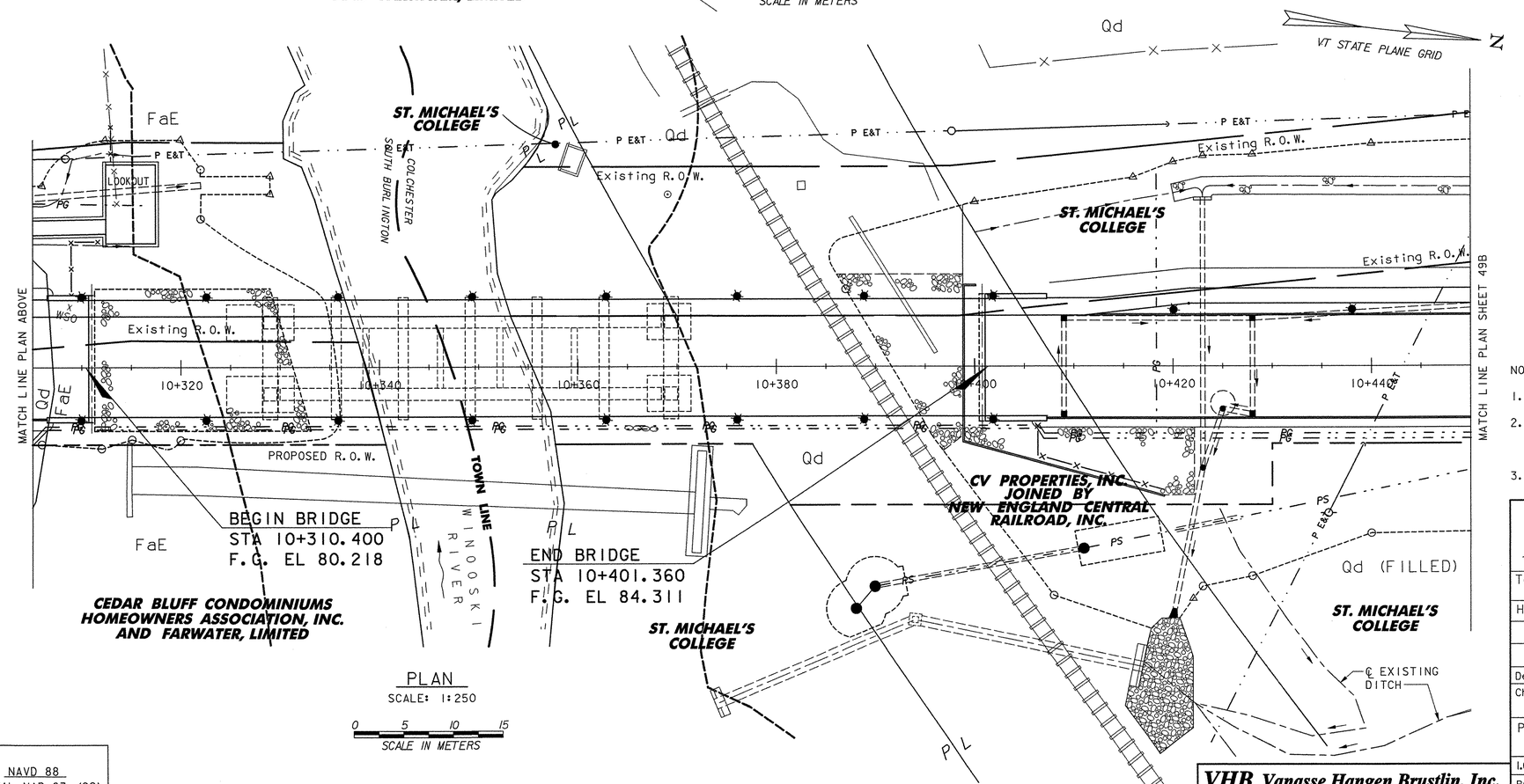
VHB Vanasse Hangen Brustlin, Inc.

VHB NO. 50735

plot date: 4/25/2005

VAOT Metric





LEGEND

AgA / Qd	EXISTING SOIL TYPE BOUNDARY (APPROX.)
P E&T	PROPOSED OVERHEAD ELECTRIC & TELEPHONE BY OTHERS
PS	PROPOSED SEWER LINE
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PW	PROPOSED WATER LINE BY OTHERS
PB	PROPOSED PULL BOX BY OTHERS
FB	PROPOSED FLUSHING BASIN
	TOP OF CUT TO MATCH EXISTING
	TOE OF SLOPE TO MATCH EXISTING
	RIPARIAN BUFFER
	PROPOSED LIGHT POLE

NOTES:

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3. NO SENSITIVE RESOURSES EXIST.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

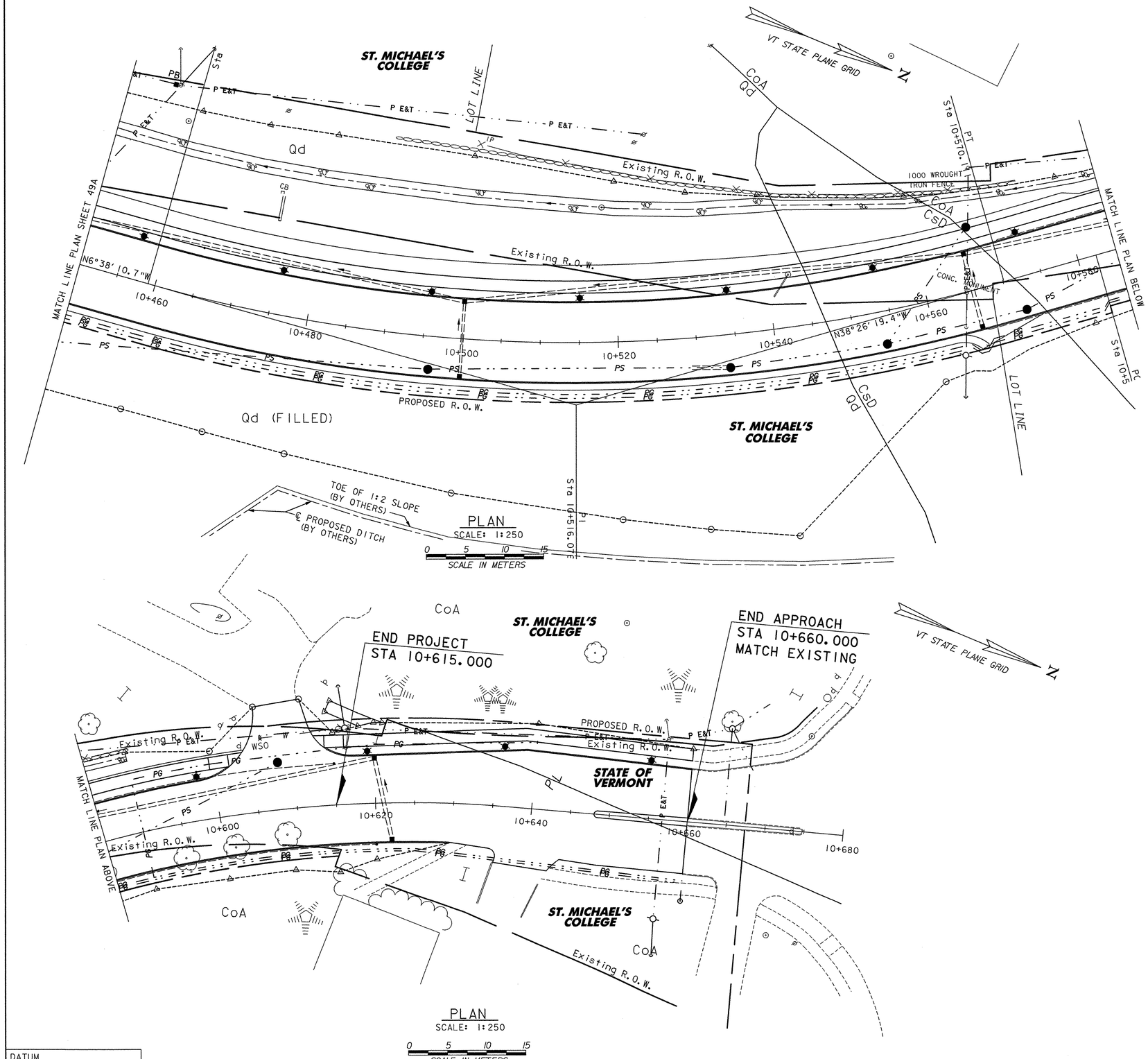
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.

FINAL CONDITIONS SITE PLAN (2 OF 3)

Designed By S.M. GUNN	Drawn By B.J. MASSE
Checked By S.M. GUNN Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139ER2C	Sheet 49A of 124

VHB Vanasse Hangen Brustlin, Inc.

VHB NO. 50735 plot date: 4/25/2005



LEGEND

AgA / Qd	EXISTING SOIL TYPE BOUNDARY (APPROX.)
—P E&T—	PROPOSED OVERHEAD ELECTRIC & TELEPHONE BY OTHERS
— PS —	PROPOSED SEWER LINE
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— PW —	PROPOSED WATER LINE BY OTHERS
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--△-----△--	TOP OF CUT TO MATCH EXISTING
--○-----○--	TOE OF SLOPE TO MATCH EXISTING
✸	PROPOSED LIGHT POLE

NOTES:

1. SEE CROSS SECTIONS FOR PROPOSED GRADING.
2. SOIL BOUNDARIES ARE APPROXIMATE AND ARE TAKEN FROM CHITTENDEN COUNTY, VT. SOIL SURVEY BOOK DATED JAN. 1974. SEE SHEET 47 FOR SOIL DESCRIPTIONS.
3. NO SENSITIVE RESOURSES EXIST.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB *Vanasse Hangen Brustlin, Inc.*

STATE OF VERMONT
AGENCY OF TRANSPORTATION

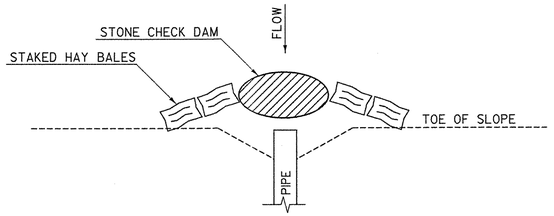
Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta.
	Surv. Sta.

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

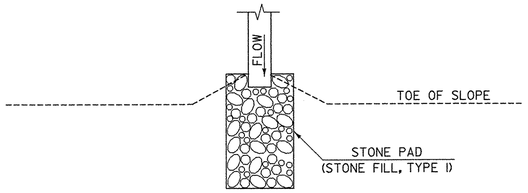
FINAL CONDITIONS SITE PLAN (3 OF 3)

Designed By S.M. GUNN	Drawn By B.J. MASSE
Checked By S.M. GUNN Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139ER3C	Sheet 49B of 124

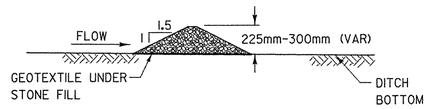
VHB NO. 50735 plot date: 4/25/2005



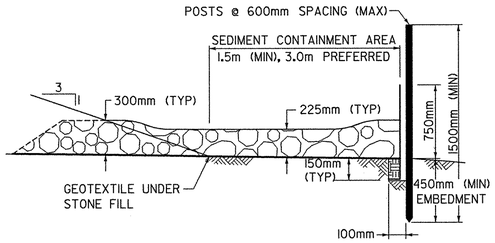
DETAIL "G"
EXISTING PIPE INLET CONTROL



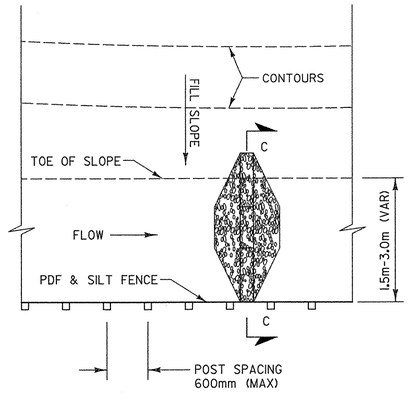
DETAIL "H"
PIPE OUTLET CONTROL



PROFILE



SECTION C-C



PLAN

CHECK DAM - TEMPORARY (STONE)

TO BE USED FOR PLACEMENT OF CHECK DAM UP AGAINST AND PERPENDICULAR TO SILT FENCE.

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 STANDARD SHEET B-5M.

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.

NOTE: ALL DRAWINGS NOT TO SCALE

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

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

EROSION CONTROL DETAILS

Designed By VTRANS	Drawn By VTRANS
Checked By VTRANS Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139erdetl	Sheet 50 of 124

VHB NO. 50735 plot date: 4/25/2005

PROPOSED CONTRACTORS CONSTRUCTION STEPS

PROPOSED CONTRACTORS CONSTRUCTION STEPS

The following is an assumed time table for the "Erosion Prevention and Sediment Control Plans" as presented in the preceeding plan sheets.

Critical Path Operations

1. Build new turnaround area to relocate existing turnaround so work can start at South Burlington Abutment.
2. Relocate sewer main on Colchester side so work can start on Colchester abutment. Representatives of NECR will have installed sleeve under tracks for sewer line.
3. In order to maintain two-way traffic through the project, as defined in the project special provisions, the contractor will only have room enough to construct the fills and sub-base wide enough to place the left curb.
4. After traffic is moved to the new fills and the new bridge, then the fills on both sides of river can be completed, and sidewalks constructed, and street lights placed inside the green strip. Also, the existing arch bridge can then be removed, turnout & parking area completed, and overlook built.

>> Spring and Summer of 2005 <<

1. Erect Project Signs
2. Install project demarcation fence (PDF)
3. Install erosion prevention and sediment control items
   - ... Silt fence
   - ... Stone check dams and inlet protection units
4. Construct small staging areas with vehicle tracking pad

South Burlington Side of Winooski River

1. Dual operations 1
   Station 10+100 Left - Construct turnaround area as needed for temporary turnaround
   - ... Strip over burden
   - ... Drill, blast, and remove ledge
   - ... Install drainage and place crushed stone to sub-grade
   - ... Shape swales, place top soil, shape, seed, fertilize and mulch
   - ... Pave turnaround area

   Start placement of closed drainage at 10+320 left
   - ... Maintain traffic on Lime Kiln Road
   - ... Strip over burden, excavate pipe, backfill, grade, temporary seed, fertilize and mulch
   - ... Continue installing all closed drainage and pave over all cuts within existing Lime Kiln Road and use stone check dams.

2. Dual operations 2 - Once turnaround is built and in use
   Station 10+310 and 10+330 - New abutment and pier footings for arch
   - ... Strip over burden making sure not to let material enter river
   - ... Drive piles at abutment and drill, blast, and remove ledge for arch footings
   - ... Form and place concrete for arch footings
   - ... Form and place concrete for abutment footings and stems
   - ... Continue placing all closed drainage
   - ... Install new stone check dams and maintain all as needed

   .. Place fill to sub-base and then place sub-base of crushed gravel to sub-grade
   Shape fill slopes, top soil, seed, fertilize and mulch
   Fill on left side is restricted to just behind roadway left curb in order to maintain traffic on existing Lime Kiln Road. However, this temporary slope must still be shaped, seeded, fertilized and mulched. Use erosion matting on all slopes greater than 1 on 3.

Colchester Side of Winooski River

1. Station 10+410 Right - Construct relocation of sewer main
   - ... Remove only existing tree stumps as needed and start excavation for new sewer line at manhole S2 near tracks.
   - ... Continue installing sewer main towards Sta 10+455
   - ... Install temporary sewer line to existing manhole at Sta 10+460 left
   - ... Install sewer line in sleeve under tracks, build manholes at S1 and tap into existing sewer line.
   - ... Switch sewer over to new line

2. Station 10+422 Right - Construct bottom drainage
   - ... Excavate and place stone fill at outlet
   - ... Place bottom system pipe to existing Lime Kiln Road, add temporary inlet pan, and inlet protection unit.

3. Multi-Operations 1 – New abutment and pier footings for arch
   Station 10+370 - Pier footings for arch
   - ... Strip over burden making sure not to let material enter river
   - ... Drill, blast, and remove ledge for arch footings
   - ... Form and place concrete for arch footings

   Station 10+400 – New abutment (only after sewer line has switched over)
   - ... Strip over burden, remove tree stumps as needed
   - ... Excavate for MSE wall footing
   - ... Form and pour MSE wall footing
   - ... Install MSE wall units and backfill with selected gravel fill up to bottom of new abutment footing.
   - ... Form abutment footing and place concrete footing
   - ... Form stems and place rebar & concrete
   - ... Backfill to bridge seat with selected granular fill

   Place fill to sub-grade
   - ... Construct temporary ditch on left side of new fill at right edge of existing Lime Kiln Road, and line with stone.
   - ... Shape fill slopes, place top soil seed, fertilize and mulch slopes. Use erosion matting on all slopes greater than 1 on 3.
   - ... Fill on left side is restricted to just behind roadway left curb in order to maintain traffic on existing Lime Kiln Road. However, this temporary slope must still be shaped, seeded, fertilized and mulched. Place erosion matting on all slopes greater than 1 on 3.
   - ... Once fill slope reaches sub-base, place crushed stone material up to sub-grade

   Continue placing all closed drainage and sewer line in roadway fill as fill rises
   - ... Install stone check dams and inlet project units as warranted

4. Review and make sure all slopes are prepared for winter on both sides of the river
   - ... Install erosion matting on slopes that do not have good grass cover for the winter

Bridge Construction – Both sides over Winooski River

>> Summer and Fall 2006 <<

1. Once arch footings have cured on both sides of the river, construct arches
   - ... Place form work, reinforcing steel, and pour arch masonry
   - ... Place form work, reinforcing steel, and pour arch pier columns
   - ... Place form work, reinforcing steel, and pour pier caps
   - ... Place precast box beams and precast slabs

2. Bridge Construction continued
   - ... Place reinforcing steel and pour deck
   - ... Form and pour sidewalk and curb
   - ... Form and pour approach slabs
   - ... Form and pour concrete bridge railing
   - ... Place bridge membrane
   - ... Attach new VT Gas lines to bridge
3. Approach work on both sides of Winooski River
   - ... Complete all top drainage and sewer line connections
   - ... Complete placement of crushed gravel to grade and construct all drives
   - ... Pour concrete curbs
   - ... Install guard rail posts
   - ... Pour bridge railing, cure, strip railing
   - ... Install VT Gas line behind guard rail on Colchester side
   - ... Shape material behind guard rail, seed, fertilize, & mulch

>> Late Summer or Early Fall of 2006 <<

1. Switch traffic over to new bridge
2. Start removing existing arch bridge
   - ... Install temporary enclosure to prevent material from falling into river or on to railroad tracks.
   - ... Remove pavement, superstructure deck, and pier caps & columns
3. Review and make sure all slopes are prepared for winter on both sides of the river
   - ... Install erosion matting on slopes that do not have good grass cover for the winter

>> Spring and Summer of 2007 <<

1. Relocate check dams and construct ditch on left side of Colchester
2. Remove arches and enclosures
3. Install lighting on bridge
4. Complete placement of fill on left side of approaches, both sides of river, to sub-base
   - ... Place crushed stone material up to grade
   - ... Place street lighting conduit
   - ... Form and pour sidewalk
   - ... Install street lights
   - ... Install guardrail on left side
   - ... Remove temporary concrete barrier
5. Excavate for lookout, form and pour walls, pour slab and railing
6. Shape fill slopes, seed, fertilize and place erosion matting as fill slopes are installed
7. Complete turnaround and parking area
   - ... pave, mark lines, and install signs
8. Install historic plaque near overlook
9. Remove staging areas, cover, seed, fertilizer, and mulch
10. Install erosion matting on slopes that do not have good grass cover for the winter
11. Remove stone check dams and inlet protection units if good grass cover exists
12. Remove project signs

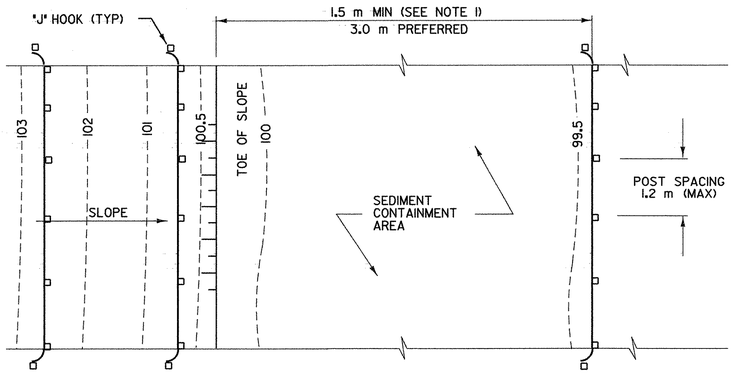
NOTES:

1. **THE USE OF NAMES ARE GENERIC, AND ARE NOT TO BE TAKEN AS CONTRACT PAY ITEMS.**

2. **THE CONSTRUCTION STEPS OUTLINED ABOVE WERE PREPARED FOR PERMITTING PURPOSES ONLY. THE CONTRACTOR SHALL SUBMIT THEIR OWN PROPOSED CONSTRUCTION SEQUENCING AS PART OF THEIR EPSC PLAN. ALL COSTS SHALL BE INCLUDED UNDER ITEM 652.10, EROSION PREVENTION AND SEDIMENT CONTROL PLAN.**

3. **ALL DISTURBED SLOPES SHALL BE SEEDED AND MULCHED BY SEPTEMBER 15. ANY DISTURBED AREAS OR SLOPES THAT HAVE NOT ESTABLISHED GOOD GRASS COVER BY OCTOBER 15 SHALL BE COVERED WITH EROSION MATTING.**

PROJECT NAME:	COLCHESTER-SOUTH BURLINGTON
PROJECT NUMBER:	BRM 5600(6) S
FILE NAME: sdl39epsc.dgn	PLOT DATE: 4-25-05
PROJECT LEADER: Farnsworth	DRAWN BY: Weeber
DESIGNED BY: STR6	CHECKED BY: Farnsworth
sdl39consteps.1	SHEET 50A OF 124



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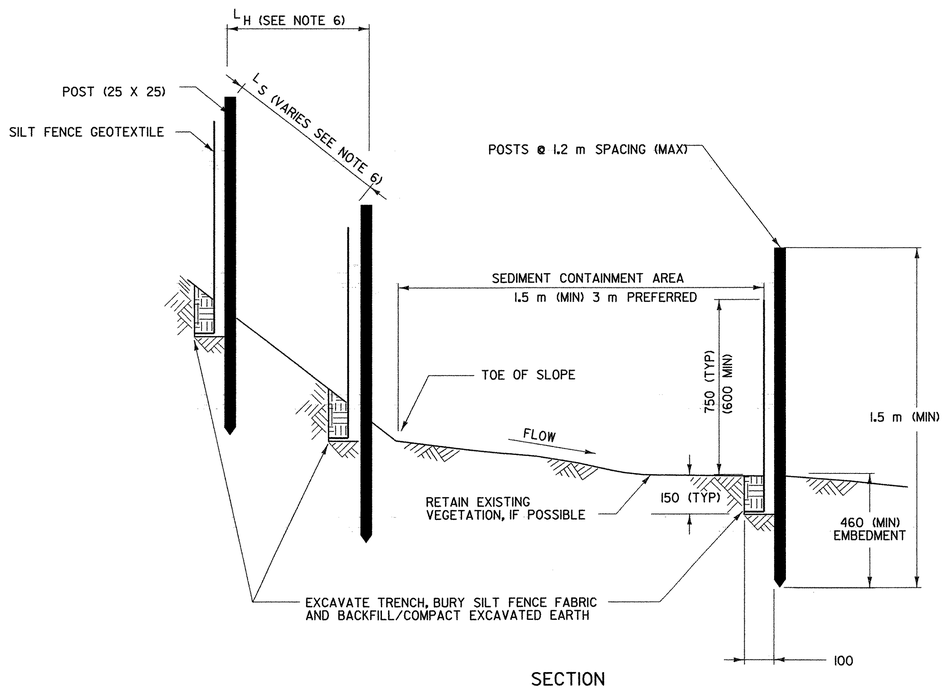


SECTION

SILT FENCE - TEMPORARY

SILT FENCE

APPLICATION NOTES:

A. THE PRIMARY PURPOSE OF SILT FENCE IS TO REDUCE RUNOFF VELOCITY AND TRAP SEDIMENT. VELOCITY IS REDUCED, WATER IS IMPOUNDED BEHIND THE MEASURE, AND SEDIMENT FALLS OUT OF SUSPENSION.

B. SILT FENCE SHALL BE INSTALLED ON A LINE OF EQUAL ELEVATION (CONTOUR). IT MAY BE INSTALLED AT INTERMEDIATE POINTS UP SLOPES AS WELL AS AT THE BOTTOM, AS SHOWN IN THE DETAIL.

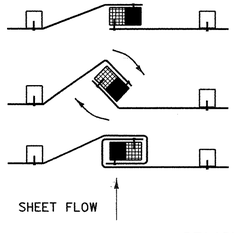
C. SILT FENCE SHALL NOT BE USED ACROSS CONCENTRATED FLOW.

GENERAL NOTES:

1. SILT FENCE SHALL GENERALLY BE PLACED A MINIMUM OF 1.5 m BEYOND TOE OF SLOPE, 3 m PREFERRED, TO PROVIDE ADEQUATE AREA FOR SEDIMENT STORAGE AND FACILITATE MAINTENANCE OF SEDIMENT CONTAINMENT AREA.
2. ALL ENDS SHALL BE "J" HOOKED TO TRAP SEDIMENT.
3. IN AREAS WITH TWO SLOPES, SILT FENCE SHALL BE USED TO ERECT A DAM AND TRAP SEDIMENT AT THE BASE OF THE STEEPER SLOPE.
4. THE BOTTOM EDGE OF SILT FENCE SHALL BE BURIED A MINIMUM OF 150 mm BELOW GROUND, AND KEYED IN 100 mm. THE FENCE SHALL BE INSTALLED WITH THE POSTS ON THE DOWNSTREAM SIDE OF THE FABRIC.
5. MAXIMUM DRAINAGE AREA TRIBUTARY TO 30 m OF SILT FENCE SHALL BE 0.1 Ha.
6. THE FOLLOWING ARE MAXIMUM SLOPE LENGTHS FOR THESE MEASURES:

CONSTRUCTED SLOPE	SLOPE LENGTH (LS) m	HORIZONTAL LENGTH (LH) m
3 : 1	25	24
4 : 1	40	39
5 : 1	60	60
> 5 : 1	80	80

7. MEASURES SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT GREAT ENOUGH TO CAUSE WATER TO LEAVE THE CONSTRUCTION SITE.
8. MEASURES SHALL BE CLEANED AND REPAIRED AS NEEDED. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATION REACHES ONE-HALF OF THE MEASURE HEIGHT. SEDIMENT SHALL BE DISPOSED OF AS UNSUITABLE MATERIAL.
9. SILT FENCE SHALL BE REMOVED WHEN THE AREA HAS BEEN STABILIZED. AT TIME OF REMOVAL OF THE SILT FENCE, THE DISTURBED AREA SHALL BE REPAIRED AND STABILIZED.
10. PAYMENT FOR INSTALLATION AND REMOVAL OF SILT FENCE SHALL BE MADE UNDER THE GEOTEXTILE FOR SILT FENCE ITEM.
11. PAYMENT FOR MONITORING SILT FENCE SHALL BE MADE UNDER THE MONITORING EROSION & SEDIMENT CONTROL PLAN ITEM.
12. PAYMENT FOR MAINTAINING SILT FENCE SHALL BE MADE UNDER THE FIELD MAINTENANCE OF EROSION & SEDIMENT CONTROL PLAN ITEM, UNLESS MAINTENANCE IS REQUIRED DUE TO POOR INSTALLATION PRACTICES.



1. PLACE THE END POST OF ONE FENCE INSIDE THE END POST OF THE OTHER FENCE.
2. ROTATE BOTH POSTS AT LEAST 180 DEGREES IN A CLOCKWISE DIRECTION TO CREATE A TIGHT SEAL WITH THE FABRIC MATERIAL
3. DRIVE BOTH POSTS 18 INCHES INTO THE GROUND AND BURY THE FLAP IN THE TRENCH.

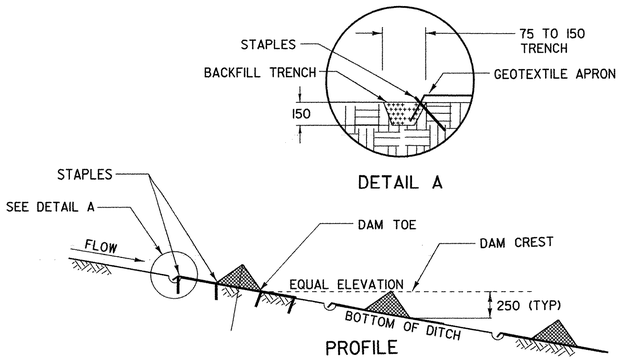
SPLICING DETAIL

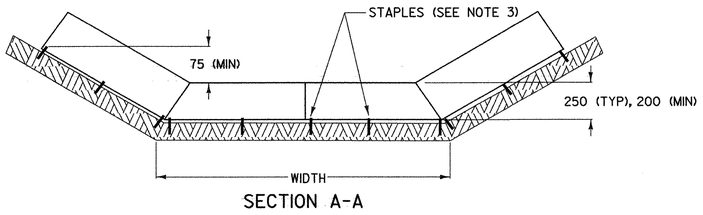
NOTE: ALL DIMENSIONS ARE IN MILLIMETERS (mm) EXCEPT WHERE NOTED.

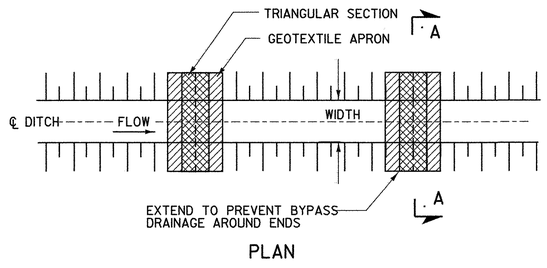
EPSC-1M

EROSION PREVENTION & SEDIMENT CONTROL DETAILS SILT FENCE

PROJECT NAME:	COLCHESTER-SO. BURLINGTON
PROJECT NUMBER:	BRM 5600(6)S C/2
FILE NAME: /str/s87dl39ecnotes.dgn	PLOT DATE: 30-MAR-2005
PROJECT LEADER: SHERWARD FARNSWORTH	DRAWN BY: STR6
DESIGNED BY: STR6	CHECKED BY: STR6
SILT FENCE	SHEET 50B OF 124



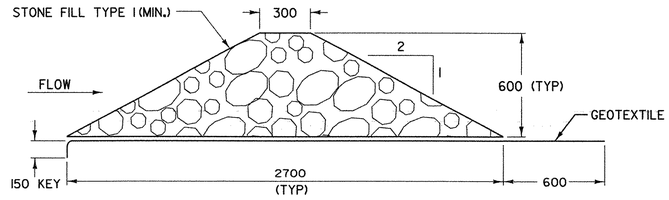


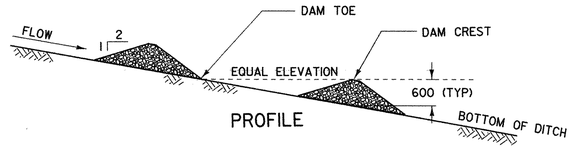


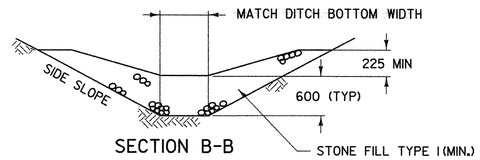
CHECK DAM - TEMPORARY
(PREFABRICATED)

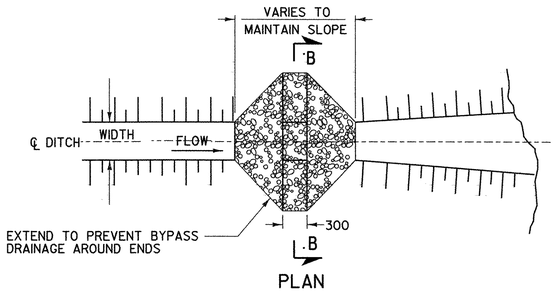
PREFABRICATED CHECK DAM PLACEMENT INTERVAL	
DITCH SLOPE	PLACEMENT INTERVAL ••
1%	15 m
2 %	12 m
3 %	8 m
4 %	6 m
5 %	5 m

•• BASED ON 0.25 m TYPICAL HEIGHT









CHECK DAM - TEMPORARY
(STONE)

STONE CHECK DAM PLACEMENT INTERVAL	
DITCH SLOPE	PLACEMENT INTERVAL ••
1%	60 m
2 %	30 m
3 %	20 m
4 %	15 m
5 %	12 m
6 %	10 m
8 %	7.5 m
10 %	6 m

•• BASED ON 0.6 m TYPICAL HEIGHT

CHECK DAMS

APPLICATION NOTES:

A. THE PRIMARY PURPOSE OF A CHECK DAM IS TO REDUCE EROSION IN A CHANNEL BY REDUCING FLOW VELOCITY.

B. CHECK DAMS WILL CAPTURE SEDIMENT THAT FALLS OUT OF SUSPENSION BEHIND THE CHECK DAM DUE TO DECREASED VELOCITY.

C. CHECK DAMS ARE NOT INTENDED TO FILTER SEDIMENT FROM TURBID WATER.

D. DETAILS SHOWN SHALL BE USED FOR TEMPORARY INSTALLATION ONLY.

E. PREFABRICATED DAMS ARE NOT TO BE USED ON SLOPES GREATER THAN 5% OR PER MANUFACTURER'S SPECIFICATIONS.

F. PREFABRICATED DAM SPECIFICATIONS SHALL BE PROVIDED TO THE ENGINEER FOR APPROVAL PRIOR TO USE.

GENERAL NOTES:

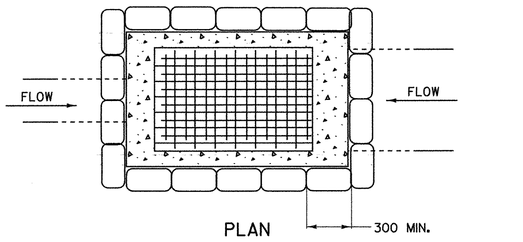
1. GEOTEXTILE SHALL BE INSTALLED UNDER STONE FILL. IT SHALL BE KEYED IN ON THE UP HILL END AND SHALL EXTEND 0.6 m BEYOND THE STONE ON THE DOWN HILL END.
2. CORE MATERIAL FOR THE STONE CHECK DAM SHALL MEET THE GRADATION REQUIREMENTS OF STONE FILL TYPE I (MIN.). STONE SIZE SHOULD BE INCREASED WITH INCREASED SLOPE AND VELOCITY.
3. THE UPHILL END OF THE APRON FOR THE PREFABRICATED CHECK DAM SHALL BE STAPLED AND BURIED AS SHOWN IN DETAIL "A" OR AS RECOMMENDED BY THE MANUFACTURERS LITERATURE.
4. MEASURES SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT GREAT ENOUGH TO CAUSE WATER TO LEAVE THE CONSTRUCTION SITE.
5. MEASURES SHALL BE CLEANED AND REPAIRED AS NEEDED. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATION REACHES ONE-HALF OF THE MEASURE HEIGHT. SEDIMENT SHALL BE DISPOSED OF AS UNSUITABLE MATERIAL.
6. AT TIME OF REMOVAL OF THE CHECK DAMS, THE DISTURBED AREA SHALL BE REPAIRED AND STABILIZED.
7. PAYMENT FOR INSTALLATION AND REMOVAL OF CHECK DAMS SHALL BE MADE UNDER APPLICABLE ITEMS INCLUDED IN THE CONTRACT PLANS OR UNDER THE FIELD MAINTENANCE OF EROSION & SEDIMENT CONTROL PLAN ITEM.
8. PAYMENT FOR MONITORING CHECK DAMS SHALL BE MADE UNDER THE MONITORING EROSION & SEDIMENT CONTROL PLAN ITEM.
9. PAYMENT FOR MAINTAINING CHECK DAMS SHALL BE MADE UNDER THE FIELD MAINTENANCE OF EROSION & SEDIMENT CONTROL PLAN ITEM, UNLESS MAINTENANCE IS REQUIRED DUE TO POOR INSTALLATION PRACTICES.

NOTE: ALL DIMENSIONS ARE IN MILLIMETERS (mm) EXCEPT WHERE NOTED.

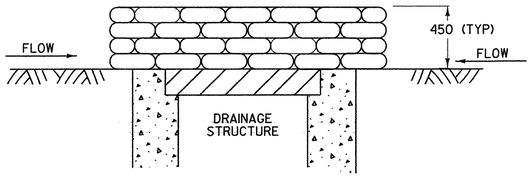
EPSC-2M

EROSION PREVENTION & SEDIMENT CONTROL DETAILS
CHECK DAMS

PROJECT NAME:	COLCHESTER-SO. BURLINGTON
PROJECT NUMBER:	BRM 5600(6)S C/2
FILE NAME: /str/s87dl39ecnotes.dgn	PLOT DATE: 30-MAR-2005
PROJECT LEADER: SHERWARD FARNSWORTH	DRAWN BY: STR6
DESIGNED BY: STR6	CHECKED BY: STR6
CHECK DAMS	SHEET 50C OF 124

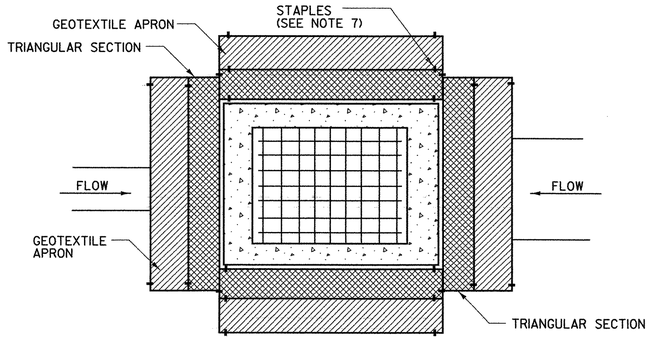


PLAN



SECTION

GRAVEL BAG DROP INLET PROTECTION



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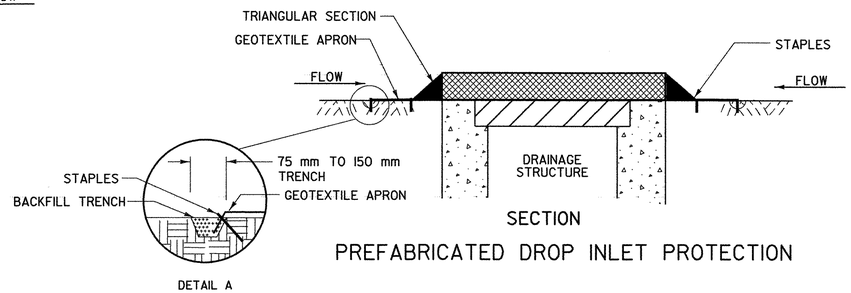
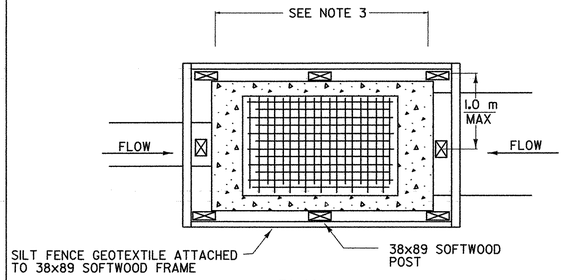


SECTION

PREFABRICATED DROP INLET PROTECTION



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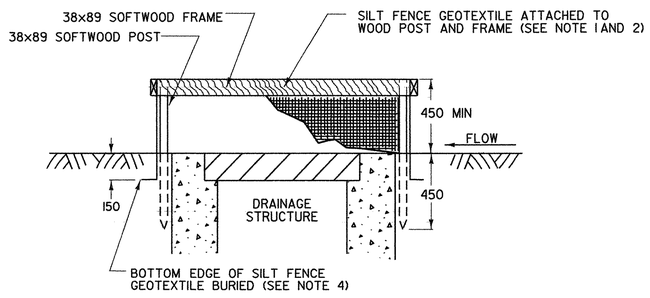
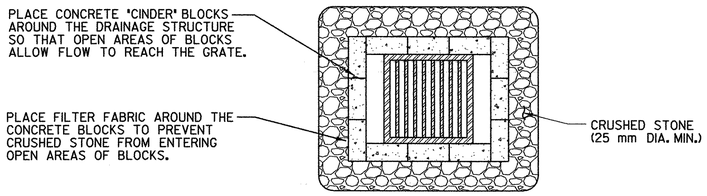


SECTION

SILT FENCE DROP INLET PROTECTION



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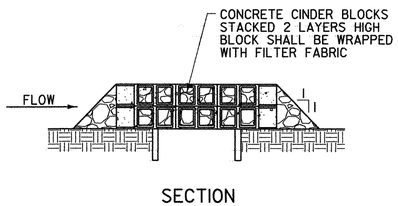
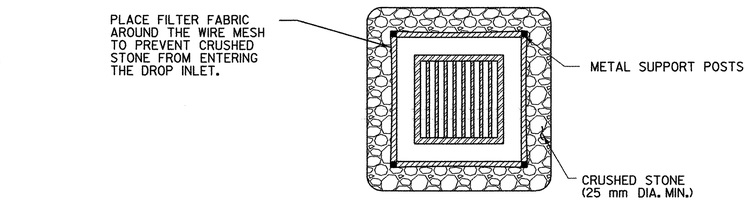


SECTION

ROCK BARRIER DROP INLET PROTECTION TEMPORARY PAVED AREAS



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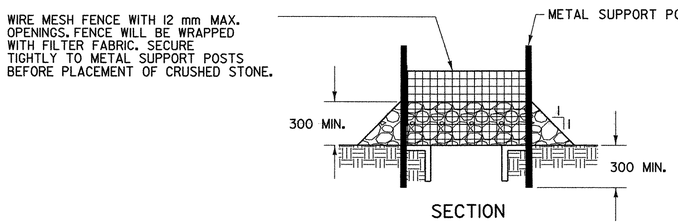


SECTION

ROCK BARRIER INLET PROTECTION TEMPORARY UNPAVED AREAS

DROP INLET PROTECTION

Metric

APPLICATION NOTES:

A. THE PRIMARY PURPOSE OF DRAINAGE STRUCTURE INLET PROTECTION IS TO PREVENT SEDIMENT FROM ENTERING A DRAINAGE SYSTEM BY PONDING WATER WHICH ALLOWS SEDIMENT TO FALL OUT OF SUSPENSION.

B. THESE EXAMPLES OF DROP INLET PROTECTION ARE NOT INTENDED FOR USE ON GRADES. ON GRADE THEY MAY CAUSE WATER TO BYPASS THE STRUCTURE, CREATING ADDITIONAL EROSION OR FLOODING.

C. POSSIBLE MODIFICATIONS FOR USE ON GRADE INCLUDE ADDING A BERM DOWNSTREAM OF THE INLET TO CREATE PONDING. CHECK DAMS MAY ALSO BE USED UPSTREAM OF THE INLET TO SLOW VELOCITIES.

D. PREFABRICATED DROP INLET PROTECTION SPECIFICATIONS SHALL BE PROVIDED TO THE ENGINEER FOR APPROVAL PRIOR TO USE.

GENERAL NOTES:

1. THE TOP OF THE INLET PROTECTION SHALL BE SET AT THE MAXIMUM DESIRED WATER LEVEL, BASED ON FIELD LOCATION AND CONDITIONS.

2. SILT FENCE GEOTEXTILE SHALL BE A SINGLE CONTINUOUS PIECE TO ELIMINATE JOINTS.

3. SPACE SILT FENCE POSTS EVENLY AROUND INLET WITH A MAXIMUM SPACING OF 1.0 m. DRIVE POSTS A MINIMUM OF 450 mm INTO GROUND. WIRE MESH MAY BE REQUIRED BEHIND GEOTEXTILE TO PROVIDE SUPPORT.

4. SILT FENCE GEOTEXTILE SHALL BE EMBEDDED A MINIMUM OF 150 mm AND BACKFILLED. GEOTEXTILE SHALL BE SECURELY FASTENED TO POSTS AND FRAME.

5. GRAVEL BAGS SHALL BE FILLED WITH CLEAN STONE, RATHER THAN SAND, TO PREVENT SEDIMENT FROM ENTERING A DRAINAGE SYSTEM IF BAGS ARE DAMAGED DURING USE.

6. GRAVEL BAGS SHALL BE INDIVIDUALLY TIED, DOUBLE BAGGED AND INVERSELY INSERTED. GRAVEL BAGS SHALL LAP THE JOINTS BETWEEN THE BAGS IN THE LAYER BELOW.

7. SECURE THE ENDS OF THE APRON FOR THE PREFABRICATED DRAINAGE STRUCTURE INLET PROTECTION WITH STAPLES AS DETAILED IN THE PLAN VIEW OR AS RECOMMENDED BY THE MANUFACTURERS LITERATURE.

8. MEASURES SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT GREAT ENOUGH TO CAUSE WATER TO LEAVE THE CONSTRUCTION SITE.

9. MEASURES SHALL BE CLEANED AND REPAIRED AS NEEDED. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATION REACHES ONE-HALF OF THE MEASURE HEIGHT. SEDIMENT SHALL BE DISPOSED OF AS UNSUITABLE MATERIAL.

10. PAYMENT OF INLET PROTECTION SHALL BE MADE UNDER APPLICABLE ITEMS INCLUDED IN THE CONTRACT PLANS OR UNDER THE FIELD MAINTENANCE OF EROSION & SEDIMENT CONTROL PLAN ITEM.

11. PAYMENT FOR MONITORING INLET PROTECTION SHALL BE MADE UNDER THE MONITORING EROSION & SEDIMENT CONTROL PLAN ITEM.

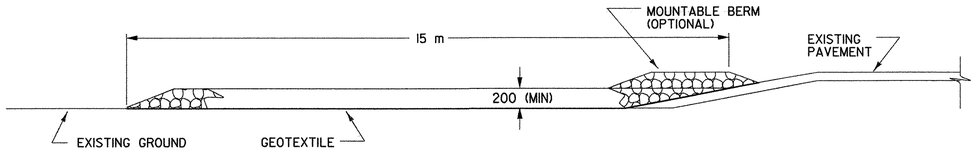
12. PAYMENT FOR MAINTAINING INLET PROTECTION SHALL BE MADE UNDER THE FIELD MAINTENANCE OF EROSION & SEDIMENT CONTROL PLAN ITEM, UNLESS MAINTENANCE IS REQUIRED DUE TO POOR INSTALLATION PRACTICES.

NOTE: ALL DIMENSIONS ARE IN MILLIMETERS (mm) EXCEPT WHERE NOTED.

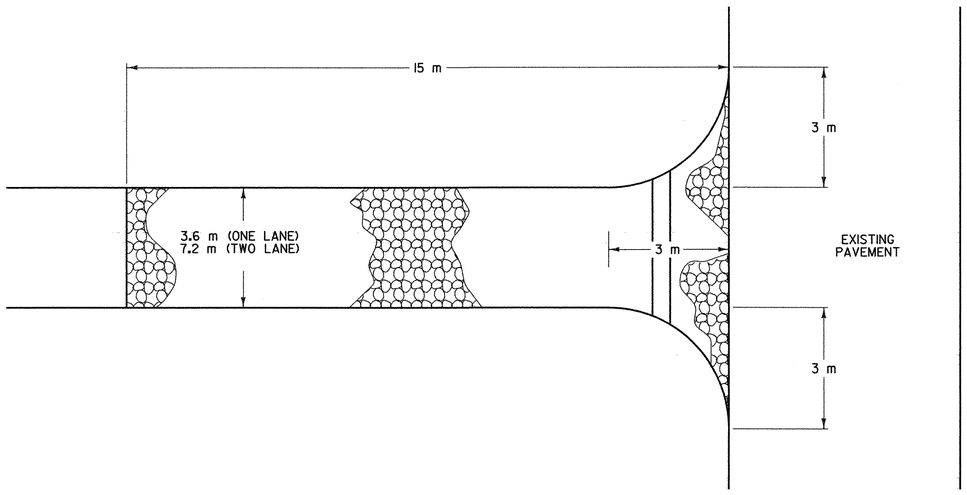
EPSC-3M

EROSION PREVENTION & SEDIMENT CONTROL DETAILS DROP INLET PROTECTION

PROJECT NAME:	COLCHESTER-SO. BURLINGTON
PROJECT NUMBER:	BRM 5600(6)S C/2
FILE NAME: /str/s87dl39ecnotes.dgn	PLOT DATE: 30-MAR-2005
PROJECT LEADER: SHERWARD FARNSWORTH	DRAWN BY: STR6
DESIGNED BY: STR6	CHECKED BY: STR6
DROP INLET PROTECTION	SHEET 50D OF 124



TYPICAL CONSTRUCTION ENTRANCE PROFILE
(CUT AND DITCH SECTIONS)



TYPICAL CONSTRUCTION ENTRANCE PLAN
(CUT/DITCH AND FILL SECTIONS)

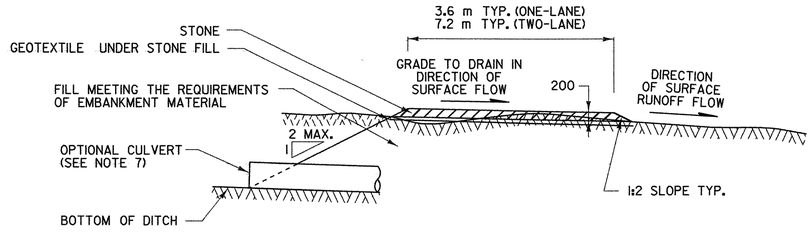
STABILIZED CONSTRUCTION ENTRANCE

APPLICATION NOTES:

A. THE PURPOSE OF A STABILIZED CONSTRUCTION ENTRANCE IS TO REDUCE OR ELIMINATE THE TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS OF WAY OR STREETS.

GENERAL NOTES:

1. STONE SIZE - USE CLEAN STONE WITH GRADATION BETWEEN 50 mm AND 100 mm.
2. LENGTH - 15 m (MIN)
3. THICKNESS - 200 mm (MIN)
4. WIDTH - 3.6 m (MIN)
5. GEOTEXTILE UNDER STONE WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE AS DIRECTED BY THE ENGINEER. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. PROPOSED DRAINAGE PIPES SHALL BE SIZED WITH SUFFICIENT CAPACITY TO CARRY DITCH FLOWS. ALTERNATIVE WAYS OF TRANSPORTING DITCH DRAINAGE ACROSS CONSTRUCTION ENTRANCES MAY BE PROPOSED BY THE CONTRACTOR FOR APPROVAL BY THE ENGINEER.
8. WHEN WASHING OF VEHICLE IS NECESSARY, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. MEASURES SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT GREAT ENOUGH TO CAUSE WATER TO LEAVE THE CONSTRUCTION SITE.
10. MAINTENANCE- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
11. AT THE TIME OF REMOVAL OF THE STABILIZED CONSTRUCTION ENTRANCE THE DISTURBED AREA SHALL BE REPAIRED AND STABILIZED.
12. PAYMENT OF THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE MADE UNDER APPLICABLE ITEMS INCLUDED IN THE CONTRACT PLANS OR UNDER THE FIELD MAINTENANCE OF EROSION & SEDIMENT CONTROL PLAN ITEM.
13. PAYMENT FOR MONITORING STABILIZED CONSTRUCTION ENTRANCES SHALL BE MADE UNDER THE MONITORING EROSION & SEDIMENT CONTROL PLAN ITEM.
14. PAYMENT FOR MAINTAINING STABILIZED CONSTRUCTION ENTRANCES SHALL BE MADE UNDER THE FIELD MAINTENANCE OF EROSION & SEDIMENT CONTROL PLAN ITEM, UNLESS MAINTENANCE IS REQUIRED DUE TO POOR INSTALLATION PRACTICES.



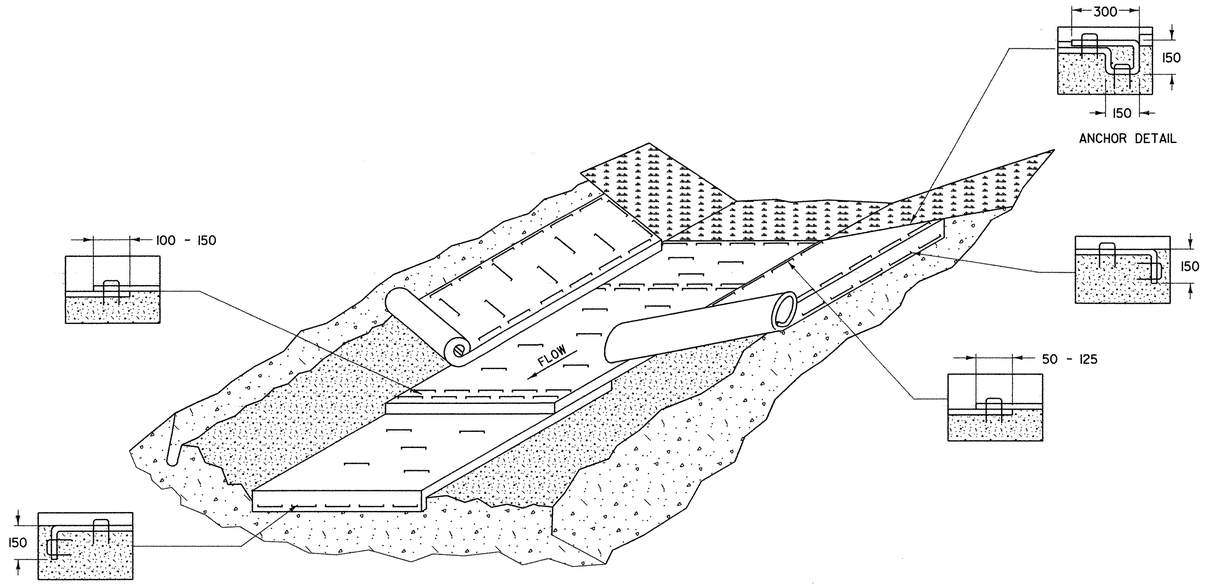
TYPICAL CONSTRUCTION ENTRANCE SECTION

NOTE: ALL DIMENSIONS ARE IN MILLIMETERS (mm) EXCEPT WHERE NOTED.

EPSC-4M

EROSION PREVENTION & SEDIMENT CONTROL DETAILS CONSTRUCTION ENTRANCE

PROJECT NAME:	COLCHESTER-SO. BURLINGTON
PROJECT NUMBER:	BRM 5600(6)S C/2
FILE NAME: /str/s87dl39ecnotes.dgn	PLOT DATE: 30-MAR-2005
PROJECT LEADER: SHERWARD FARNSWORTH	DRAWN BY: STR6
DESIGNED BY: STR6	CHECKED BY: STR6
CONSTRUCTION ENTRANCE	SHEET 50E OF 124



EROSION PROTECTION FOR DITCHES

APPLICATION NOTES:

A. THE PURPOSE OF LINING THE DITCH WITH EROSION MATTING IS TO REDUCE EROSION AND AID THE ESTABLISHMENT OF VEGETATION AT LOW VELOCITIES.

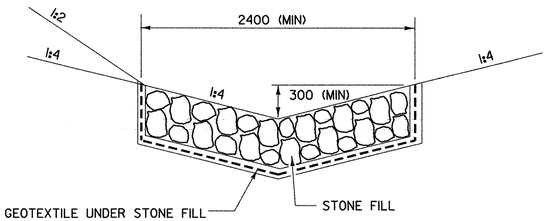
B. THE FOLLOWING CHARTS SHALL BE USED TO DETERMINE THE APPROPRIATE EROSION CONTROL MEASURE:

DITCH AND CHANNEL PROTECTION	
SLOPE	LINING
< 1%	GRASS
1% TO 4 %	EROSION MATTING
4 % TO 10 %	STONE FILL, TYPE I
> 10 %	STONE FILL, TYPE II

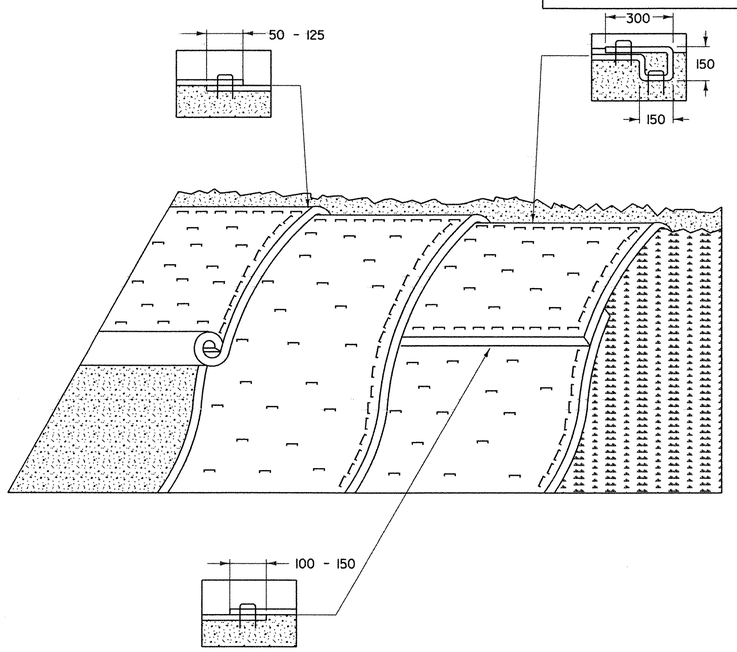
STONE FILL THICKNESS	
STONE FILL TYPE	THICKNESS
TYPE I	0.3 m
TYPE II	0.6 m

GENERAL NOTES:

1. WATER MAY NEED TO BE DIVERTED TO ALLOW PROPER MATTING INSTALLATION.
2. GRADE AND SMOOTH CHANNEL TO PROVIDE GOOD MATTING TO SOIL SURFACE CONTACT.
3. APPLY FERTILIZER, LIME, AND SEED PRIOR TO PLACING MATTING.
4. INSTALL MATTING IN THE CENTER OF THE CHANNEL, IN THE DIRECTION OF THE WATER FLOW.
5. INSTALL MATTING ON THE SIDE SLOPES OF THE CHANNEL, OVERLAPPING THE CENTER MAT.
6. ANCHOR MATTING AS SHOWN, UTILIZING ANCHOR STAPLES. STAPLE PLACEMENT SHALL BE DETERMINED BY THE MANUFACTURER'S INTALLATION INSTRUCTIONS.
7. MEASURES SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT GREAT ENOUGH TO CAUSE WATER TO LEAVE THE CONSTRUCTION SITE.
8. MEASURES SHALL BE REPAIRED AND RESTAPLED AS NECESSARY TO ENSURE PROPER FUNCTION.
9. PAYMENT FOR INSTALLATION OF MATTING SHALL BE MADE UNDER THE EROSION CONTROL WITH MATTING ITEM.
10. PAYMENT FOR MONITORING EROSION CONTROL MATTING SHALL BE MADE UNDER THE MONITORING EROSION & SEDIMENT CONTROL PLAN ITEM.
11. PAYMENT FOR MAINTAINING EROSION CONTROL MATTING SHALL BE MADE UNDER THE FIELD MAINTENANCE OF EROSION & SEDIMENT CONTROL PLAN ITEM, UNLESS MAINTENANCE IS REQUIRED DUE TO POOR INSTALLATION PRACTICES.



TEMPORARY
STONE LINED
DITCH



EROSION PREVENTION FOR SIDE SLOPES

APPLICATION NOTES:

A. THE PURPOSE OF MATTING ON SIDE SLOPES IS TO REDUCE EROSION AND AID THE ESTABLISHMENT OF VEGETATION

B. EROSION CONTROL MATTING SHALL BE USED FOR THE FOLLOWING REASONS:

- SIDE SLOPES > 3:1 (H:V)
- AREAS WHERE SEED AND MULCH WILL NOT STAY IN PLACE ALONE
- WHERE SEEDING IS OUTSIDE THE GROWING SEASON.

GENERAL NOTES:

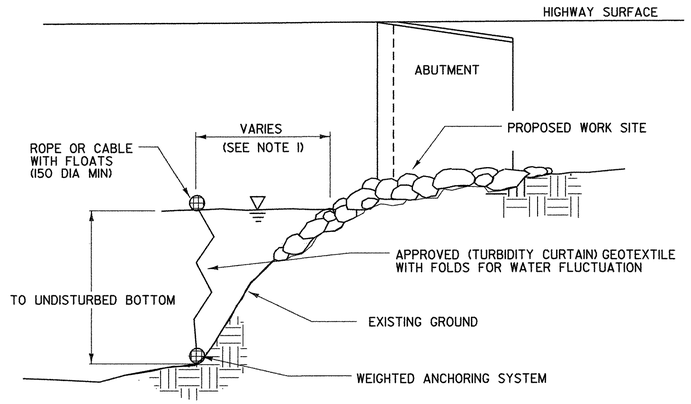
1. GRADE AND SMOOTH THE SLOPE TO PROVIDE GOOD MATTING TO SOIL SURFACE CONTACT.
2. APPLY FERTILIZER, LIME, AND SEED PRIOR TO PLACING MATTING.
3. ANCHOR MATTING AS SHOWN, UTILIZING ANCHOR STAPLES. STAPLE PLACEMENT SHALL BE DETERMINED BY THE MANUFACTURER'S INTALLATION INSTRUCTIONS.
4. UNROLL MATTING VERTICALLY DOWN SLOPE IN THE DIRECTION OF WATER FLOW.
5. OVERLAP UPPER MATTING OVER LOWER MATTING AS SHOWN.
6. OVERLAP ADJACENT MATTING AS SHOWN.
7. CUT EXCESS MATTING AT END OF SLOPE AND ANCHOR THE END.
8. MEASURES SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT GREAT ENOUGH TO CAUSE WATER TO LEAVE THE CONSTRUCTION SITE.
9. MATTING SHALL BE REPAIRED AND RESTAPLED AS NECESSARY TO ENSURE PROPER FUNCTION.
10. PAYMENT FOR INSTALLATION OF MATTING SHALL BE MADE UNDER THE EROSION CONTROL WITH MATTING ITEM.
11. PAYMENT FOR MONITORING EROSION CONTROL MATTING SHALL BE MADE UNDER THE MONITORING EROSION & SEDIMENT CONTROL PLAN ITEM.
12. PAYMENT FOR MAINTAINING EROSION CONTROL MATTING SHALL BE MADE UNDER THE FIELD MAINTENANCE OF EROSION & SEDIMENT CONTROL PLAN ITEM, UNLESS MAINTENANCE IS REQUIRED DUE TO POOR INSTALLATION PRACTICES.

NOTE: ALL DIMENSIONS ARE IN MILLIMETERS (mm) EXCEPT WHERE NOTED.

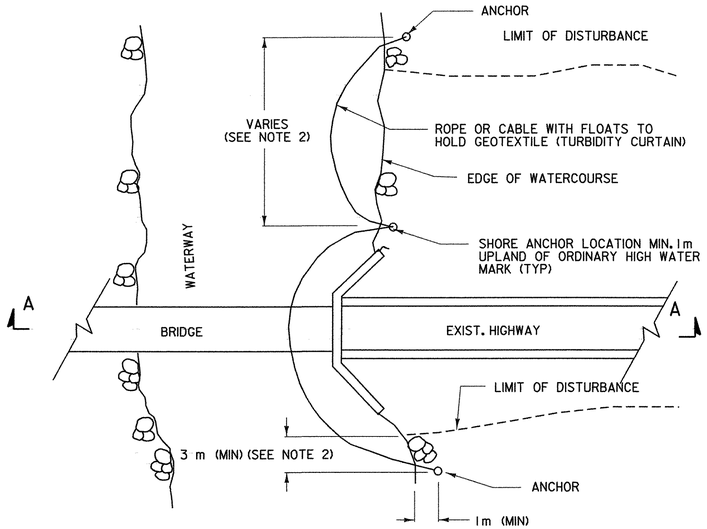
EROSION PREVENTION & SEDIMENT CONTROL DETAILS DITCH & SIDE SLOPE PROTECTION

EPSC-5M

PROJECT NAME:	COLCHESTER-SO. BURLINGTON
PROJECT NUMBER:	BRM 5600(6)S C/2
FILE NAME: /str/s87dl39ecnotes.dgn	PLOT DATE: 30-MAR-2005
PROJECT LEADER: SHERWARD FARNSWORTH	DRAWN BY: STR6
DESIGNED BY: STR6	CHECKED BY: STR6
DITCH & SIDE SLOPE PROTECTION	SHEET 50F OF 124



SECTION A-A



PLAN

TURBIDITY CURTAIN - TEMPORARY

TURBIDITY CURTAIN

APPLICATION NOTES:

A. THE PURPOSE OF A TURBIDITY CURTAIN IS TO SEPARATE WORK AREAS IN OR ADJACENT TO WATERS, TO PREVENT SEDIMENT FROM ENTERING THE WATERS.

B. TURBIDITY CURTAIN SHALL NOT BE PLACED ACROSS A FLOWING WATERWAY, OR IN A WATERWAY WITH STREAM VELOCITIES GREATER THAN 0.5m/SEC.

C. TURBIDITY CURTAIN SHALL NOT BE PLACED AT THE OUTLET OF A CULVERT OR DITCH UNLESS THE VELOCITY DOES NOT EXCEED 0.5 m/SEC.

D. THE DETAIL DEPICTS WORK AT A BRIDGE LOCATION, BUT TURBIDITY CURTAIN MAY BE APPLIED AT OTHER LOCATIONS.

GENERAL NOTES:

1. THE TURBIDITY CURTAIN SHALL BE PLACED AS CLOSE TO THE WORK AS POSSIBLE WITHOUT INTERFERING WITH CONSTRUCTION OPERATIONS.
2. THE TURBIDITY CURTAIN SHALL BE A MAXIMUM OF 30 m LONG BETWEEN ANCHORS. LAST SECTION SHALL TERMINATE A MINIMUM OF 3 m BEYOND THE LIMIT OF DISTURBANCE.
3. THE CONTRACTOR SHALL MONITOR THE TURBIDITY CURTAIN, TAKING INTO ACCOUNT WEATHER PATTERNS AND PREVAILING WIND DIRECTIONS THAT MAY AFFECT WATER LEVELS, VELOCITY AND MOVEMENT OF THE TURBIDITY CURTAIN.
4. THE TURBIDITY CURTAIN SHALL BE REMOVED BY SLOWLY PULLING TOWARD THE SHORE TO MINIMIZE ESCAPE OF SEDIMENTS INTO THE WATERWAY.
5. THE WEIGHTED ANCHOR SYSTEM SHALL BE A TYPE THAT ALLOWS THE CURTAIN TO CONFORM TO THE CONTOUR ON THE BOTTOM OF THE WATERWAY.
6. PAYMENT FOR INSTALLATION AND REMOVAL OF THE TURBIDITY CURTAIN SHALL BE MADE UNDER THE GEOTEXTILE FOR FILTER CURTAIN ITEM.
7. PAYMENT FOR MONITORING TURBIDITY CURTAIN SHALL BE MADE UNDER THE MONITORING EROSION & SEDIMENT CONTROL PLAN ITEM.
8. PAYMENT FOR MAINTAINING TURBIDITY CURTAIN SHALL BE MADE UNDER THE FIELD MAINTENANCE OF EROSION & SEDIMENT CONTROL PLAN ITEM, UNLESS MINTENANCE IS REQUIRED DUE TO POOR INSTALLATION PRACTICES.

NOTE: ALL DIMENSIONS ARE IN MILLIMETERS (mm) EXCEPT WHERE NOTED.

EPSC-6M

EROSION PREVENTION & SEDIMENT CONTROL DETAILS TURBIDITY CURTAIN

PROJECT NAME:	COLCHESTER-SO. BURLINGTON
PROJECT NUMBER:	BRM 5600(6)S C/2
FILE NAME: /str/s87dl39ecnotes.dgn	PLOT DATE: 30-MAR-2005
PROJECT LEADER: SHERWARD FARNSWORTH	DRAWN BY: STR6
DESIGNED BY: STR6	CHECKED BY: STR6
TURBIDITY CURTAIN	SHEET 50G OF 124

Metric

GENERAL NOTES:

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, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH EDITION, DATED 2002, AND ITS LATEST REVISIONS.

2. DESIGN CRITIERIA:
   DESIGN LIVE LOAD FOR NEW SUPERSTRUCTURE: MS22.5
   SEISMIC PERFORMANCE CATEGORY: A

3. THE FOLLOWING MATERIAL CRITERIA, DESIGNATIONS AND UNIT WEIGHTS APPLY TO THESE PLANS FOR DESIGN PURPOSES:

   CONCRETE: HIGH PERFORMANCE CLASS "AA" f'c = 30 MPa
   HIGH PERFORMANCE CLASS "A" f'c = 30 MPa
   HIGH PERFORMANCE CLASS "B" f'c = 25 MPa
   REINFORCING STEEL: AASHTO M 31M GRADE 420
   UNIT WEIGHT OF SOIL: 2243 Kg/m3
   ALLOWABLE BEDROCK BEARING PRESSURE: 950 kPa
   ALLOWABLE SOIL BEARING PRESSURE AT ABUTMENT NO. 2 = 190 kPa

4. FEATURES OF THE EXISTING BRIDGE SHOWN ON THESE PLANS HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND LIMITED FIELD INVESTIGATION AND MAY NOT ACCURATELY REFLECT ACTUAL FIELD CONDITIONS.

5. FULL SIZE COPIES OF THE EXISTING BRIDGE PLANS INCLUDED IN THIS SET ARE AVAILABLE FOR REVIEW DURING THE BIDDING PERIOD AT THE CONTRACT ADMINISTRATION OFFICE OF THE VERMONT AGENCY OF TRANSPORTATION.

6. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 20 DEGREES CELSIUS, UNLESS NOTED OTHERWISE.

7. SEE SHEET 63 FOR BEARING NOTES.

8. SEE SHEET 77 FOR MSE WALL NOTES.

CONSTRUCTION NOTES:

1. AN ESTIMATED QUANTITY FOR ITEM 649.61, GEOTEXTILE FOR FILTER CURTAIN HAS BEEN ADDED TO THE QUANTITY SUMMARY IN THE EVENT IT IS REQUIRED DURING CONSTRUCTION. THIS ITEM IS NOT DETAILED ON THE PLANS.

2. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT SILTATION, POLLUTION, AND DISCHARGE OF RAW CONCRETE INTO THE WINOOSKI RIVER AS DIRECTED BY THE RESIDENT ENGINEER.

3. TRAFFIC WILL BE MAINTAINED DURING CONSTRUCTION BY UTILIZING THE EXISTING BRIDGE WITH TWO LANES OF TRAFFIC, ONE LANE NORTHBOUND AND ONE LANE SOUTHBOUND AT ALL TIMES. ALL WORK REQUIRED TO MAINTAIN TRAFFIC DURING CONSTRUCTION SHALL BE PAID AS ITEM 527.10, MAINTENANCE OF TRAFFIC FOR BRIDGE PROJECTS OR ITEM 641.10, TRAFFIC CONTROL.

4. ITEM 505.36, TEMPORARY STEEL SHEET PILING IS INCLUDED AS TEMPORARY EXCAVATION SUPPORT TO SAFELY SEPARATE THE WORK AREA FROM TRAFFIC.

5. ITEM 204.25, STRUCTURE EXCAVATION SHALL BE USED TO EXCAVATE TO THE LIMITS SHOWN ON THE PLANS. SEE EARTHWORK TYPICALS ON SHEET 17.

6. THE BRIDGE PLAQUE SHALL BE FURNISHED BY THE AGENCY OF TRANSPORTATION AND SHALL BE INSTALLED BY THE CONTRACTOR AS SHOWN ON THE PLANS. ALL COSTS SHALL BE INCIDENTAL TO ITEM 501.34, CONCRETE, HIGH PERFORMANCE CLASS B.

7. THE CONTRACTOR SHALL ERECT, MAINTAIN, REMOVE, AND/OR RESET AS REQUIRED ALL ON-PROJECT SIGNS AND BARRICADES. ALL SIGNS AND BARRICADES SHALL BE INSPECTED AND REPAIRED DAILY. ALL SIGNS AND BARRICADES SHALL BE CLEANED OF DUST AND DEBRIS WEEKLY. THE COST OF ALL CONSTRUCTION SIGNS AND BARRICADES SHALL BE INCIDENTAL TO ITEM 641.10, TRAFFIC CONTROL. ADDITIONAL WORKZONE SIGNAGE WILL BE REQUIRED ON VT 15. THE VT 15 TRAFFIC CONTROL PLAN SHALL BE SUBMITTED AS PER THE REQUIREMENTS OF SECTION 641, AND SHALL BE PAID AS ITEM 641.10, TRAFFIC CONTROL.

8. ANY EXISTING SIGNS NOT REUSED SHALL REMAIN THE PROPERTY OF THE TOWN OF COLCHESTER OR CITY OF SOUTH BURLINGTON. THESE SIGNS SHALL BE REMOVED BY THE CONTRACTOR AND STOCKPILED AS DIRECTED BY THE RESIDENT ENGINEER FOR REMOVAL BY THE TOWN/CITY AND SHALL BE PAID AS ITEM 675.50, REMOVING SIGNS.

9. GRUBBING MATERIAL SHALL NOT BE PLACED ON THE STONE FILL IN THE AREA UNDER THE BRIDGE.

10. FULL ACCESS TO ALL DRIVES WITHIN THE PROJECT/APPROACH LIMITS SHALL BE MAINTAINED AT ALL TIMES.

11. THE STONE FILL TYPE II UNDER THE BRIDGE SHALL BE PLACED BEFORE THE BOX BEAMS ARE SET.

12. CONCRETE PORTIONS OF THE WINGWALLS ABOVE THE ADJACENT BRIDGE SEAT ELEVATIONS SHALL NOT BE PLACED UNTIL THE FINISH GRADE HAS BEEN DETERMINED BY THE RESIDENT ENGINEER.

CONSTRUCTION NOTES CONTINUED:

13. THE NEW ENGLAND CENTRAL RAILROAD (NECR) OR A CONTRACTOR IN THEIR EMPLOY WILL CONSTRUCT A TEMPORARY RAILROAD CROSSING FOR THE BRIDGE CONTRACTOR'S ACCESS TO THE SOUTH SIDE OF THE RAILROAD. THE CONTRACTOR FOR THE BRIDGE REPLACEMENT PROJECT WILL BE REQUIRED TO COORDINATE HIS WORK WITH THE RAILROAD AND WILL NOT BE COMPENSATED DIRECTLY FOR THIS COORDINATION OR FOR ANY WORK THAT MAY BE REQUIRED TO WORK AROUND OR WITH THE RAILROAD CREWS PERFORMING THE CROSSING WORK. ALL COST FOR RAILROAD COORDINATION OR WORK WITH THE RAILROAD CREWS SHALL BE INCLUDED UNDER ITEM 635.11, MOBILIZATION/DEMOBILIZATION. ALL COST FOR NECR FLAGGERS SHALL BE INCLUDED UNDER ITEM 630.15, FLAGGERS (MOD. - RAILROAD). SEE THE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.

14. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO ENSURE THAT THE EXISTING RETAINING WALL ALONG NECR (STA 10+368.6 LT 27 m) IS NOT DAMAGED. ANY DAMAGE TO THE RETAINING WALL SHALL BE REPAIRED TO THE SATISFACTION OF THE RESIDENT ENGINEER AT THE CONTRACTOR'S EXPENSE.

15. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL BURIED AND AERIAL UTILITIES AND POLES PRIOR TO STARTING WORK. SOME UTILITIES WERE RELOCATED DURING PLAN PREPARATION AND THE CONTRACTOR WILL NEED TO COORDINATE WITH ALL UTILITY OWNERS TO CONFIRM ACTUAL LOCATIONS PRIOR TO CONSTRUCTION.

REINFORCING STEEL NOTES:

1. UNLESS SHOWN OTHERWISE ALL REINFORCING STEEL IN THE ABUTMENT WALLS, LOOKOUT, AND FOOTINGS SHALL BE PAID AS ITEM 507.15, REINFORCING STEEL. REINFORCING STEEL MECHANICAL CONNECTORS SHALL BE PAID AS ITEM 507.19, MECHANICAL BAR CONNECTOR. ALL OTHER REINFORCING STEEL SHALL BE EPOXY COATED AND PAID AS ITEM 507.17, EPOXY COATED REINFORCING STEEL.

2. MINIMUM CLEAR COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

ALONG BACK FACES OF WALLS AGAINST EARTH:	50 MILLIMETERS
ALONG TOP SURFACE OF DECK OVERLAY:	65 MILLIMETERS
ALONG BOTTOM SURFACE OF DECK OVERLAY:	40 MILLIMETERS
IN PIERS AND PIER CAPS:	100 MILLIMETERS
IN ARCHES AND ARCH FOUNDATIONS:	100 MILLIMETERS
IN PRECAST SUPERSTRUCTURE COMPONENTS:	50 MILLIMETERS
ELSEWHERE UNLESS OTHERWISE INDICATED:	80 MILLIMETERS

3. REINFORCING STEEL PLACEMENT TOLERANCES SHALL BE:
   SPACING: ±25 MILLIMETERS
   CLEARANCE: ±5 MILLIMETERS

4. ALL REINFORCING STEEL IN THE CONCRETE BRIDGE RAIL SHALL BE EPOXY COATED AND PAID UNDER ITEM 525.50, CAST-IN-PLACE CONCRETE BRIDGE RAIL.

5. ALL REINFORCING STEEL IN THE BOX BEAMS AND SOLID SLABS SHALL BE EPOXY COATED AND PAID UNDER ITEM 510.21, PRESTRESSED CONCRETE BOX BEAMS AND 510.22, PRESTRESSED CONCRETE VOIDED SLABS (MOD. SOLID SLABS).

6. WHEN EPOXY COATED REINFORCING STEEL IS CUT, THE UNCOATED ENDS SHALL BE REPAIRED WITH MATERIALS AND PROCEDURES APPROVED BY THE COATING MANUFACTURER. FLAME CUTTING OF EPOXY COATED REINFORCING STEEL WILL NOT BE PERMITTED.

CONCRETE NOTES:

1. CONCRETE PAYMENT AND CLASSIFICATION SHALL BE AS FOLLOWS:
   ITEM 501.32, CONCRETE, HIGH PERFORMANCE CLASS AA: OVERLAY AND SOLID SLAB CLOSURE POURS
   ITEM 501.33, CONCRETE, HIGH PERFORMANCE CLASS A: CURBS AND SIDEWALK
   ITEM 501.34, CONCRETE, HIGH PERFORMANCE CLASS B (ARCH RIBS AND PIERS): CONCRETE ARCHES AND PIER BENTS
   ITEM 501.34, CONCRETE, HIGH PERFORMANCE CLASS B: LOOKOUT, ARCH FOUNDATION, APPROACH SLABS, AND ALL OTHER BRIDGE CAST-IN-PLACE COMPONENTS UNLESS OTHERWISE NOTED.

2. ITEM 514.10, WATER REPELLENT (MOD - SILANE), SHALL BE APPLIED TO ALL EXPOSED CONCRETE ON BRIDGE SUPERSTRUCTURE EXCEPT THE BOTTOM OF THE BOX BEAMS AND SOLID SLABS. WATER REPELLENT SHALL ALSO BE APPLIED TO THE EXPOSED CONCRETE ON THE ABUTMENTS, PIERS, FLOORBEAMS, ARCHES, MSE WALL, LOOKOUT, AND ARCH FOUNDATIONS TO 300 MILLIMETERS BELOW FINISH GRADE.

3. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 25 MILLIMETERS BY 25 MILLIMETERS, UNLESS OTHERWISE NOTED. A 15 MILLIMETER RADIUS SHALL BE USED ON THE TOP INSIDE CORNER OF CURBS AND SIDEWALKS.

4. JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE RESIDENT ENGINEER.

5. SURFACES OF THE BRIDGE SEATS UNDER THE BEARING DEVICE SHALL BE LEVEL. OTHER BRIDGE SEAT AREAS SHALL BE SLOPED 6 MILLIMETERS PER 300 MILLIMETERS.

6. THE KEY ON CONCRETE CONSTRUCTION JOINTS SHALL BE MONOLITHIC AND CONTINUOUS FOR THE FULL LENGTH OF THE JOINT UNLESS OTHERWISE INDICATED. ANY UPWARD KEY SHALL BE PLACED INTEGRALLY WITH THE CONCRETE BELOW THE JOINT.

REMOVAL NOTES:

1. REMOVAL OF EXISTING BRIDGE PAVEMENT SHALL BE PAID AS ITEM 529.10, REMOVAL OF BRIDGE PAVEMENT. THE MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF PROPERLY AT AN OFF-SITE LOCATION.

2. ITEM 529.15, REMOVAL OF STRUCTURE SHALL INCLUDE:

   A. REMOVAL OF THE EXISTING BRIDGE SUPERSTRUCTURE, ARCH, PIERS AND ABUTMENTS TO A MINIMUM OF 300 mm BELOW FINISH GRADE UNLESS OTHERWISE DIRECTED BY THE RESIDENT ENGINEER.

   B. ERECTION, MAINTENANCE, AND REMOVAL OF TEMPORARY STRUCTURES TO PREVENT DEBRIS FROM FALLING INTO THE WINOOSKI RIVER OR ONTO THE NECR TRACK.

3. THE CONTRACTOR'S METHODS FOR REMOVAL OF THE EXISTING STRUCTURE SHALL BE APPROVED BY THE RESIDENT ENGINEER PRIOR TO ANY REMOVAL WORK.

4. ALL COMPONENTS OF THE THE EXISTING BRIDGE SHALL BECOME THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL SUBMIT A DISPOSAL PLAN TO THE RESIDENT ENGINEER FOR APPROVAL PRIOR TO REMOVAL.

PILE NOTES:

1. THE DESIGN PILE LOAD IS 356 KN. PILES SHALL BE DRIVEN TO AN ULTIMATE CAPACITY OF 979 KN.

2. PILES SHALL BE DRIVEN TO BEDROCK.

3. PILE TIP REINFORCEMENT SHALL CONFORM TO SUBSECTION 505.04 (e).

4. ESTIMATED PILE TIP EL = 68.64.

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

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

GENERAL NOTES (1 OF 2)

Designed By J.T KLEIN	Drawn By B.J. MASSE
Checked By M.A. COLGAN Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139NOT1	Sheet 51 of 124

VHB NO. 50735

plot date: 5/24/2005

AASHTO Metric

PRESTRESSED CONCRETE GENERAL NOTES:

1. ALL BOX BEAMS AND SOLID SLABS SHALL HAVE ENDS OF STRANDS RECESSED AND GROUTED AS PER STANDARD PRACTICE.

2. THE PRICE PER BOX BEAM AND SOLID SLAB UNIT SHALL INCLUDE ALL OF THE MATERIALS, LABOR, AND ANY OTHER COSTS ASSOCIATED WITH THE INSTALLATION OF THE TRANSVERSE TENDONS.

3. ALL OF THE MATERIALS, LABOR, AND ANY OTHER COSTS ASSOCIATED WITH THE GROUTING OF THE SHEAR KEYS WITH MORTAR TYPE IV SHALL BE PAID AS ITEM 510.24, GROUTING SHEAR KEYS.

4. THE PRICE PER BOX BEAM AND SOLID SLAB UNIT SHALL INCLUDE ALL OF THE MATERIALS, LABOR, AND ANY OTHER COSTS ASSOCIATED WITH THE ANCHOR BOLTS AND THEIR INSTALLATION.

5. THE TOP SURFACE OF THE BOX BEAM AND SOLID SLAB UNITS SHALL BE ROUGHENED TO AN AMPLITUDE OF 6 MILLIMETERS.

6. AN ALTERNATE STRAND CONFIGURATION FOR THE BOX BEAM AND/OR SOLID SLAB UNITS MAY BE SUBMITTED FOR APPROVAL TO THE RESIDENT ENGINEER, PROVIDED THE DESIGN IS SIGNED AND STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF VERMONT AND THE DESIGN MEETS ALL THE APPLICABLE DESIGN CRITERIA, LOADINGS AND CODES.

7. THE PRESTRESSED UNITS SHALL BE ALLOWED TO SET ON THE BEARINGS FOR 24 HOURS PRIOR TO STRESSING THE TRANSVERSE TENDONS AND GROUTING THE SHEAR KEYS.

8. AFTER THE PRESTRESSED UNITS HAVE BEEN SET ON THE BEARINGS, ELEVATIONS SHALL BE TAKEN ALONG THE TOP OF EACH BEAM UNDER THE DIRECTION OF THE RESIDENT ENGINEER. THESE ELEVATIONS SHALL BE USED IN DETERMINING THE FINAL GRADE.

9. ALL EXPOSED CORNERS SHALL BE CHAMFERED 20 MILLIMETERS.

10. ENDS OF ALL PRECAST UNITS AND ANCHOR BOLTS SHALL BE VERTICAL IN FINAL ERECTED POSITION.

CONSTRUCTION AND PLACEMENT SEQUENCE:

A. WORKING LINES MEASURED FROM THE WORKING POINTS SHALL BE LAID OUT THE ENTIRE WIDTH OF THE BRIDGE ALONG CENTERLINE OF BEARING. THE WORKING LINES SHALL BE BASED ON THE NORMAL UNIT WIDTHS.

B. THE BRIDGE SEAT ELEVATIONS AT BOTH ABUTMENTS SHALL BE VERIFIED TO BE CORRECT PRIOR TO ERECTING THE PRESTRESSED UNITS. IF NECESSARY THE SEATS SHALL BE GROUND TO THE PROPER ELEVATION. IF NECESSARY THE ELASTOMERIC BEARINGS SHALL BE SHIMMED TO PROVIDE EVEN LOAD DISTRIBUTION TO ALL BEARINGS AND PREVENT THE PRESTRESSED UNITS FROM "ROCKING". PRIOR TO ERECTING THE PRESTRESSED UNITS THE CONTRACTOR SHALL HAVE AN ADEQUATE SUPPLY OF APPROVED SHIMS FOR USE UNDER THE BEARINGS. ALL COSTS ASSOCIATED WITH THE GRINDING AND/OR THE INSTALLATION OF THE SHIMS IS INCIDENTAL TO THE PRESTRESSED CONCRETE ITEMS.

C. ERECT THE PRESTRESSED UNITS TO FIT WITHIN THE WORKING LINES. AS THE WORK PROGRESSES INSTALL HARDWOOD WEDGES TO ENSURE PROPER JOINT OPENING. ONE WEDGE AT EACH TRANSVERSE TIE LOCATION SHALL BE THE MINIMUM.

D. THE OAKUM OR EQUIVALENT BACKER ROD SHALL BE INSTALLED AFTER THE PRESTRESSED UNITS HAVE BEEN ERECTED BUT PRIOR TO INSTALLING THE HARDWOOD WEDGES. THE BACKER ROD DIAMETER SHALL BE 3 mm GREATER THEN THE VOID BETWEEN UNITS AND SHALL BE INSTALLED UNIFORMLY IN THE BOTTOM OF THE SHEAR KEY.

E. DRILL INTO BRIDGE SEATS AND INSTALL ANCHOR BOLTS AT THE ENDS OF THE PRESTRESSED UNITS AFTER BEAMS OR SLABS HAVE BEEN SET.

F. INSTALL TRANSVERSE TIES AND POST TENSION TO 22.25 kN TO REMOVE SAGS AND TO SEAT THE CHUCK.

G. GROUT SHEAR KEYS WITH MORTAR TYPE IV. THE SHEAR KEYS SHALL BE CLEANED WITH OIL FREE COMPRESSED AIR TO REMOVE ANY DEBRIS. THE SHEAR KEYS SHALL BE PRE-WETTED TO A SATURATED SURFACE DRY CONDITION IMMEDIATELY PRIOR TO PLACING THE MORTAR. ALL COSTS FOR GROUTING SHEAR KEYS SHALL BE PAID AS ITEM 510.24, GROUTING SHEAR KEYS.

H. THE FINAL POST TENSIONING OF THE TRANSVERSE TIES TO 134 KN SHALL BE DONE ONCE THE MORTAR HAS ATTAINED 10.34 MPA COMPRESSIVE STRENGTH.

I. THE WEDGES SHALL BE REMOVED AND THE AFFECTED AREAS PATCHED PRIOR TO THE PLACING OF THE COMPOSITE OVERLAY.

SOLID SLAB NOTES:

1. PRESTRESSED, PRECAST SOLID SLAB MEMBERS SHALL:

   A. CONFORM TO SECTION 510A PRESTRESSED CONCRETE.

   B. BE DESIGNED FOR AASHTO MS22.5 LIVE LOAD.

   C. MEET THE FOLLOWING DESIGN CRITERIA

      PRESTRESSED CONCRETE STRENGTH
      RELEASE f'c = 28 MPA
      SERVICE f'c = 45 MPA
      CONTAIN CORROSION INHIBITOR @ 19.8 L/CM

      MAXIMUM SERVICE LOADS - SPAN 2 THRU 7

MEMBER MOMENT	51.0 kN/m
DEAD LOAD ON MEMBER MOMENT	23.0 kN/m
SUPER DEAD LOAD ON MEMBER MOMENT	19.0 kN/m
LIVE LOAD + IMPACT MOMENT	90.0 kN/m
DEAD LOAD REACTION/MEMBER	64.0 kN
LIVE LOAD REACTION/MEMBER	85.0 kN
TOTAL REACTION/MEMBER	149.0 kN

   D. CONTAIN A TOTAL OF 7 - 13 MILLIMETER DIAMETER, 1860 MPa, LOW RELAXATION STRANDS AND CONFORM TO AASHTO M203.

   E. CONTAIN PRESTRESSING STANDS TENSIONED WITH A FORCE OF 138 KN PER STRAND.

2. ELASTOMERIC BEARING PADS SHALL CONFORM TO 731.03. ALL COSTS FOR ELASTOMERIC BEARING PADS SHALL BE INCLUDED UNDER ITEM 531.10 BEARING DEVICE ASSEMBLY (ELASTOMERIC).

3. ALL COSTS FOR SOLID SLABS SHALL BE PAID UNDER ITEM 510.22, PRESTRESSED CONCRETE VOIDED SLABS (MOD.-SOLID SLABS).

BOX BEAM NOTES:

1. PRESTRESSED, PRECAST BOX BEAM MEMBERS SHALL:

   A. CONFORM TO SECTION 510A PRESTRESSED CONCRETE.

   B. BE DESIGNED FOR AASHTO MS22.5 LIVE LOAD.

   C. MEET THE FOLLOWING DESIGN CRITERIA

      PRESTRESSED CONCRETE STRENGTH
      RELEASE f'c = 28 MPa
      SERVICE f'c = 45 MPa
      CONTAIN CORROSION INHIBITOR @ 19.8 L/CM

      MAXIMUM SERVICE LOADS - SPAN 1

MEMBER MOMENT	616.0 kN/m
DEAD LOAD ON MEMBER MOMENT	193.0 kN/m
SUPER DEAD LOAD ON MEMBER MOMENT	215.0 kN/m
LIVE LOAD + IMPACT MOMENT	444.0 kN/m
DEAD LOAD REACTION/MEMBER	240.0 kN
LIVE LOAD REACTION/MEMBER	112.0 kN
TOTAL REACTION/MEMBER	352.0 kN

      MAXIMUM SERVICE LOADS - SPAN 8

MEMBER MOMENT	1817.0 kN/m
DEAD LOAD ON MEMBER MOMENT	580.0 kN/m
SUPER DEAD LOAD ON MEMBER MOMENT	648.0 kN/m
LIVE LOAD + IMPACT MOMENT	826.0 kN/m
DEAD LOAD REACTION/MEMBER	402.0 kN
LIVE LOAD REACTION/MEMBER	113.0 kN
TOTAL REACTION/MEMBER	515.0 kN

   D. CONTAIN 15.24 MILLIMETERS DIAMETER, 1860 MPa LOW RELAXATION PRESTRESSING STRANDS, AND SHALL CONFORM TO AASHTO M203. SPAN 1 BOX BEAMS SHALL CONTAIN 12 STRANDS AND SPAN 8 BOX BEAMS SHALL CONTAIN 28 STRANDS.

   E. CONTAIN BOTTOM PRESTRESSING STRANDS TENSIONED WITH A FORCE OF 196 KN PER STRAND, AND CONTAIN 2 TOP PRESTRESSING STRANDS TENSIONED WITH A FORCE OF 14 KN STRAND.

   F. CONTAIN VOIDS TERMINATING AS SHOWN ON THE PLANS AND SHALL BE CONTINUOUS EXCEPT AT LOCATIONS OF THE TRANSVERSE TIE TENDONS.

2. VOID DRAINS SHALL BE PLACED TO CLEAR STRANDS IN EACH END OF ALL VOIDS. THE VOID SHALL BE 20 mm DIAMETER AND NON-FERROUS. THE DRAINS SHALL BE CLEANED UPON REMOVAL FROM FORMS.

3. CONCRETE SHALL NOT BE PLACED ABOVE THE BRIDGE SEAT UNTIL THE BOX BEAM UNITS HAVE BEEN SET.

4. ALL COSTS FOR BOX BEAMS SHALL BE PAID UNDER ITEM 510.21, PRESTRESSED CONCRETE BOX BEAMS.

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

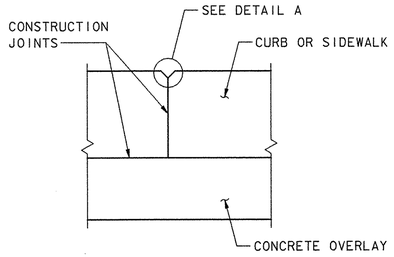
Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta. / Surv. Sta.

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

GENERAL NOTES (2 OF 2)

Designed By J.T. KLEIN	Drawn By B.J. MASSE
Checked By M.A. COLGAN Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139NOT2	Sheet 52 of 124

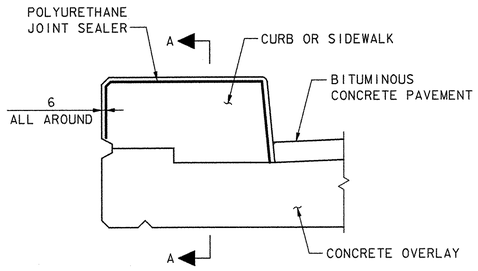
VHB NO. 50735 plot date: 5/2/2005



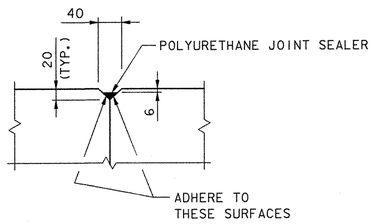
SECTION A-A

CONSTRUCTION JOINT NOTES:

1. CONCRETE CONSTRUCTION JOINTS SHALL BE SPACED TO COINCIDE WITH BRIDGE RAIL PILASTERS (SEE SHEET 81 FOR PILASTER SPACING). CONCRETE SHALL BE PLACED IN ALTERNATING SECTIONS WITH A MINIMUM OF 48 HOURS BETWEEN ADJACENT POURS.
2. LONGITUDINAL REINFORCING SHALL PASS THROUGH CONCRETE CURB CONSTRUCTION JOINTS UNLESS OTHERWISE SHOWN.
3. POLYURETHANE JOINT SEALER, PER SUBSECTION 524.06(d), SHALL MATCH THE CONCRETE COLOR. COST TO BE INCLUDED IN THE UNIT PRICE BID FOR CONCRETE

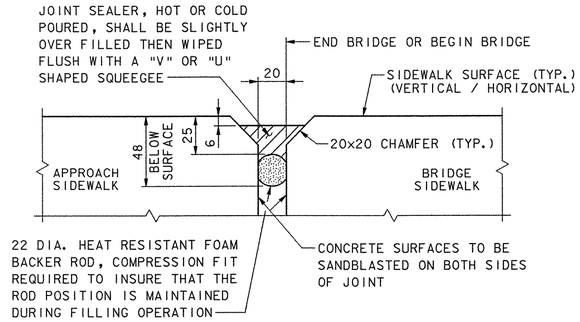


TYPICAL SECTION



DETAIL A

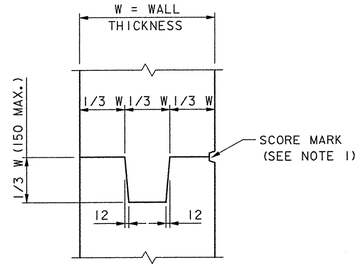
CONCRETE CURB & SIDEWALK CONSTRUCTION JOINT
NOT TO SCALE



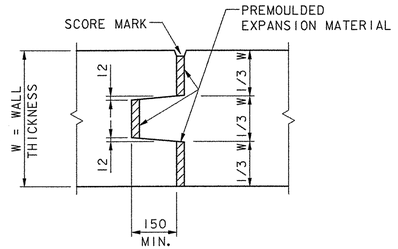
NOTES:

1. JOINT TO BE SEALED 24 HOURS PRIOR TO EXPOSURE TO GENERAL TRAFFIC, AND WITHIN 24 HOURS OF SAND BLASTING JOINT. SEE SPECIFICATION SECTION 524.
2. COST FOR SAND BLASTING AND FOR 22 DIA. BACKER ROD SHALL BE SUBSIDIARY TO UNIT PRICE FOR JOINT SEALER.
3. JOINT DETAIL SHALL APPLY FOR VERTICAL AND HORIZONTAL SURFACES OF JOINT.
4. ALL MATERIALS AND LABOR FOR SIDEWALK JOINT SHALL BE PAID FOR UNDER THE ITEM 524.11, "JOINT SEALER, HOT POURED", OR 524.13, "JOINT SEALER, COLD POURED".

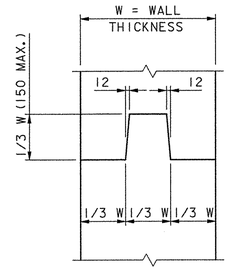
SIDEWALK EXPANSION JOINT DETAIL
NOT TO SCALE



TYPICAL CONCRETE CONSTRUCTION JOINT
NOT TO SCALE



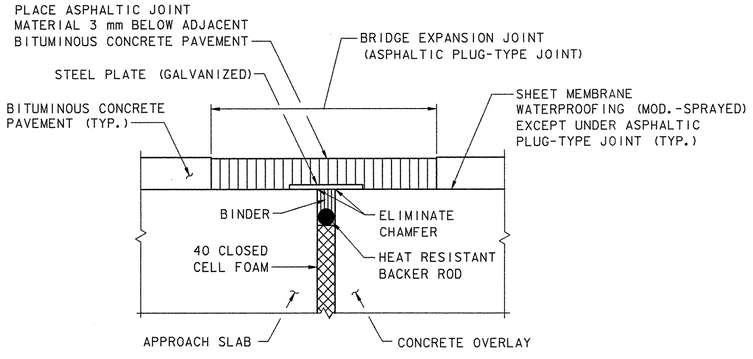
TYPICAL CONCRETE EXPANSION JOINT
NOT TO SCALE



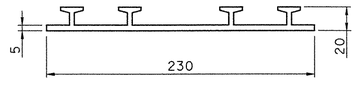
TYPICAL SHEAR KEY
NOT TO SCALE

NOTE:

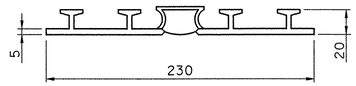
1. SEE SHEET 55 FOR SCORE MARK DETAIL.



ASPHALTIC PLUG TYPE JOINT DETAIL
NOT TO SCALE



P.V.C. WATERSTOP FOR CONSTRUCTION JOINTS
NOT TO SCALE



P.V.C. WATERSTOP FOR EXPANSION JOINTS
NOT TO SCALE

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

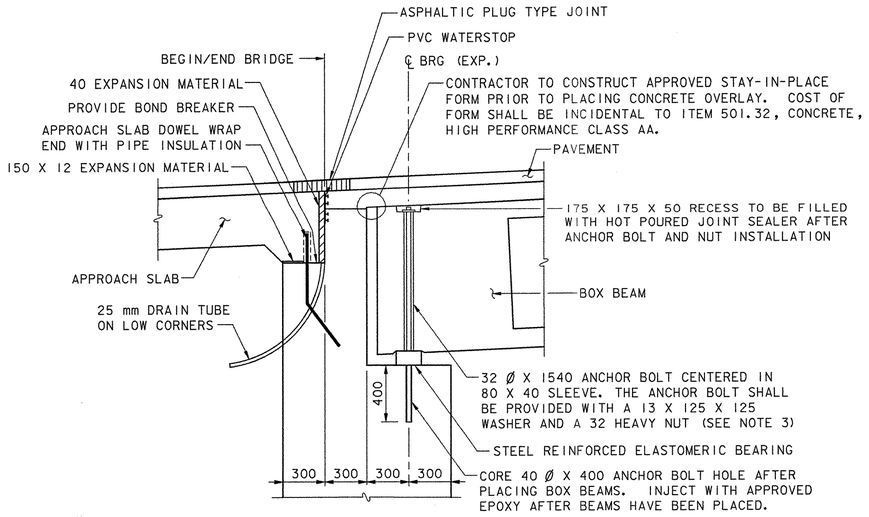
Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta.
	Surv. Sta.

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

MISCELLANEOUS DETAILS (1 OF 2)

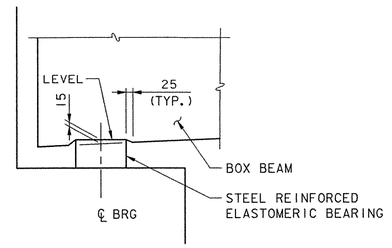
Designed By M.A. COLGAN	Drawn By B.J. MASSE
Checked By Date M.A. COLGAN 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139DT1	Sheet 53 of 124

VHB NO. 50735 plot date: 4/25/2005



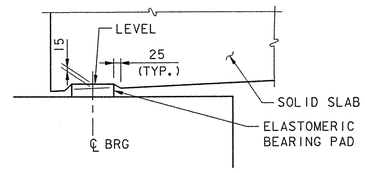
END OF BRIDGE DETAIL

(ABUTMENT NO. 1 SHOWN, ABUTMENT NO. 2 SIMILAR)
SCALE: 1:20



BOX BEAM DAPPING DETAIL

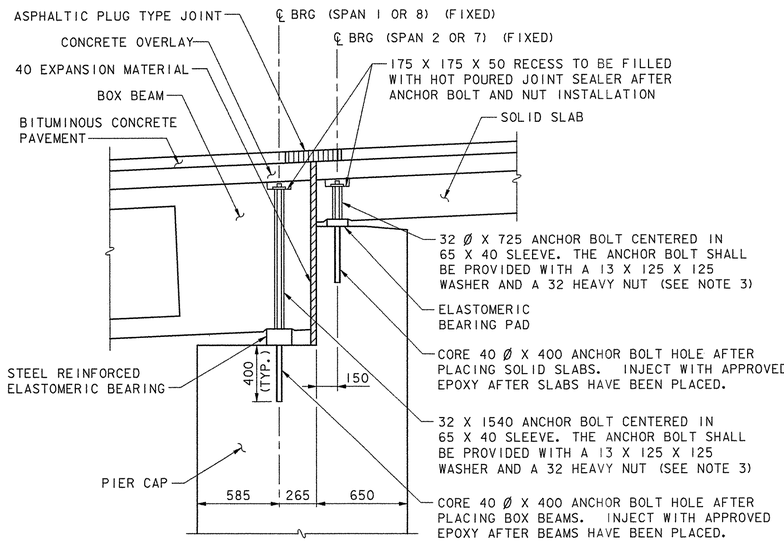
SCALE: 1:10



SOLID SLAB DAPPING DETAIL

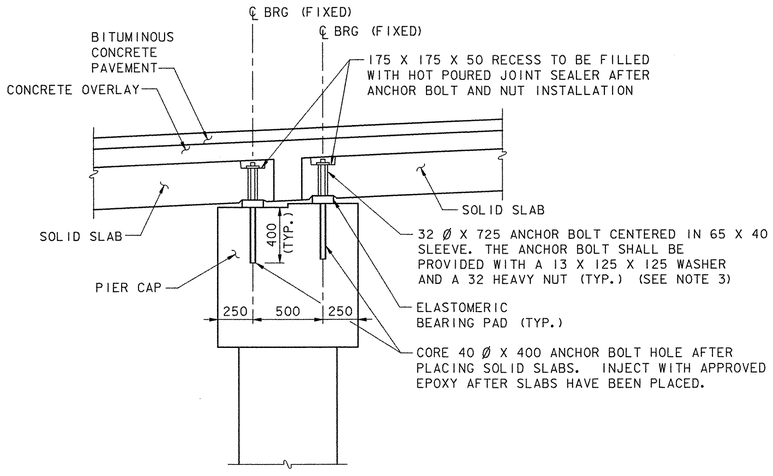
SCALE: 1:10

0 250 500 750
SCALE IN MILLIMETERS



PIER BENT 1 & 7 DETAIL

(BENT 1 SHOWN, BENT 7 SIMILAR)
SCALE: 1:20



PIER BENT 2 - 6 DETAIL

SCALE: 1:20

0 500 1000 1500
SCALE IN MILLIMETERS

NOTES:

1. ALL COSTS FOR DRAIN TUBES, PIPE INSULATION, BOND BREAKER, AND EXPANSION MATERIAL SHALL BE INCLUDED IN ITEM 501.34, CONCRETE, HIGH PERFORMANCE CLASS B.
2. ALL COSTS FOR ANCHOR BOLTS SHALL BE INCLUDED IN ITEM 531.10.
3. CONTRACTOR SHALL SUPPLY A SELF ADHESIVE COMPRESSIBLE SEALER BETWEEN THE BOTTOM OF THE UNITS AND THE BRIDGE SEAT. THIS COMPRESSIBLE SEALER SHALL SURROUND THE 65 X 40 SLEEVE IN THE UNIT. THE PURPOSE OF THE SEALER IS TO FACILITATE PLACEMENT OF THE EPOXY AROUND THE ANCHOR BOLTS. USE TYPE 4 GROUT IN ANCHOR BOLT SLEEVE AT FIXED BEARINGS.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

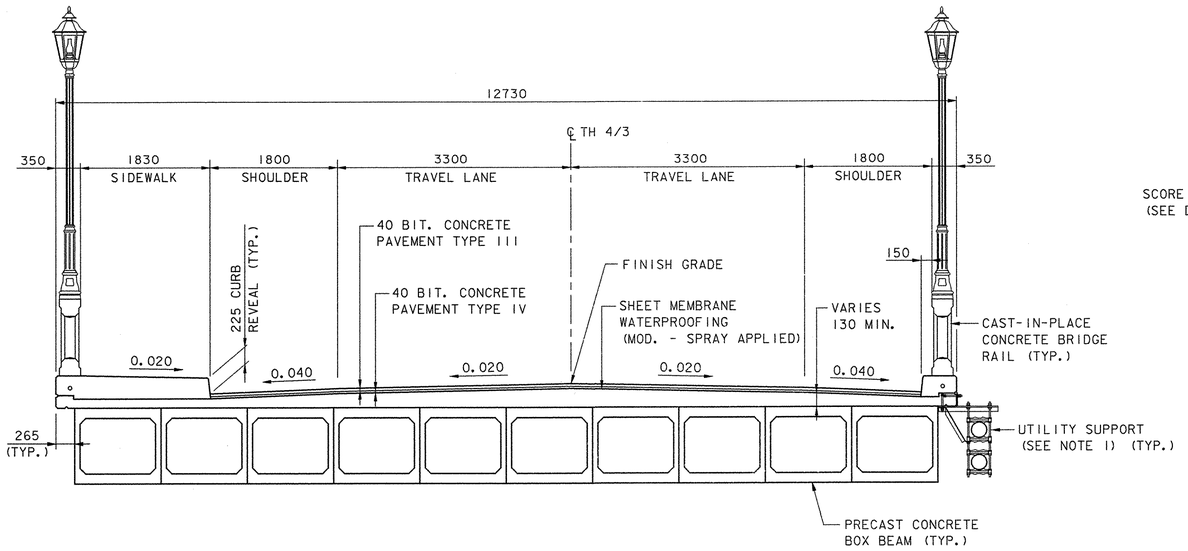
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.

MISCELLANEOUS DETAILS (2 OF 2)

Designed By K.G. KRETSCH	Drawn By B.J. MASSE
Checked By Date M.A. COLGAN 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139DT3	Sheet 54 of 124

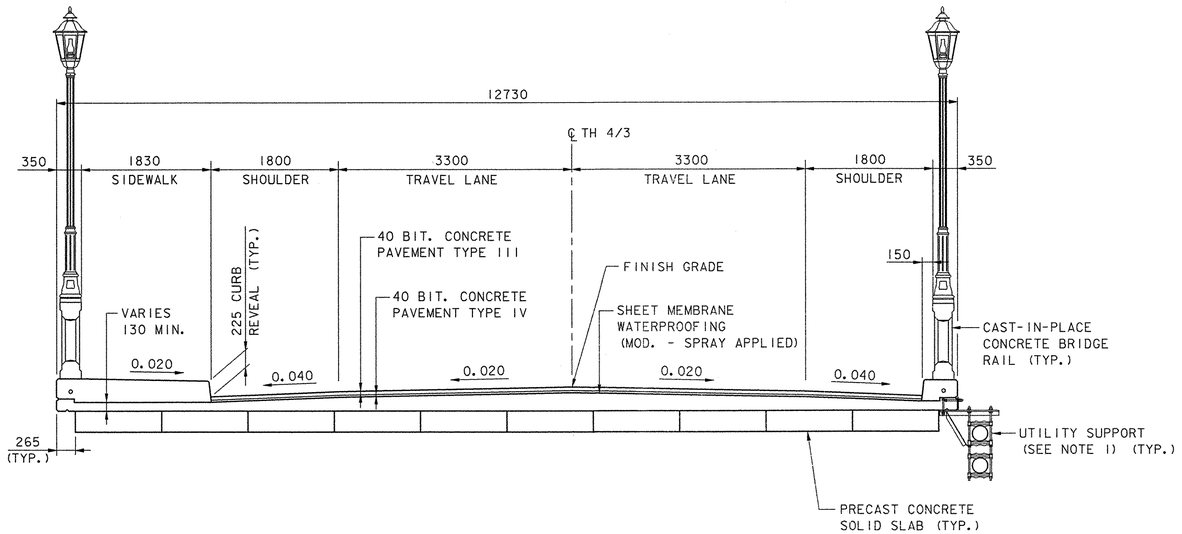
VHB NO. 50735 plot date: 4/25/2005

Metric



TYPICAL SECTION - SPANS 1 & 8

SCALE: 1:40

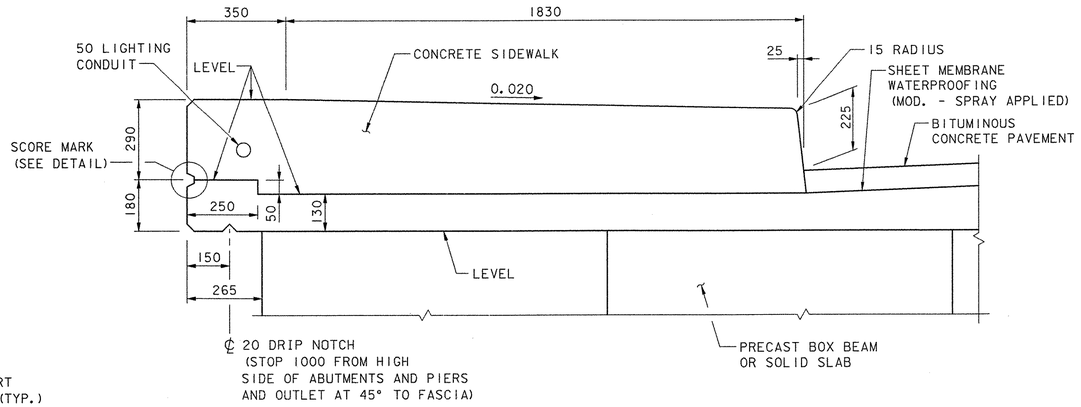


TYPICAL SECTION - SPANS 2-7

SCALE: 1:40

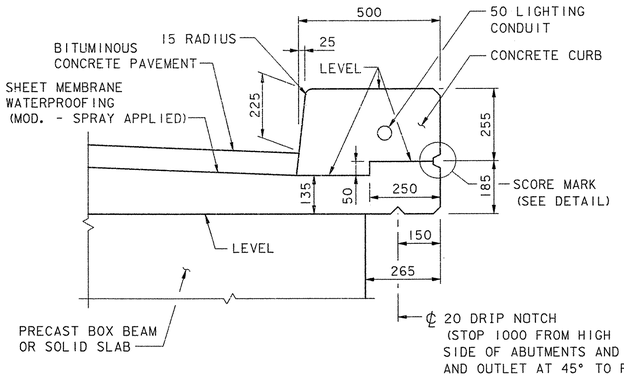
0 1000 2000 3000

SCALE IN MILLIMETERS



TYPICAL SIDEWALK DETAIL

(BRIDGE RAIL NOT SHOWN)
SCALE: 1:10



TYPICAL CURB DETAIL

(BRIDGE RAIL NOT SHOWN)
SCALE: 1:10

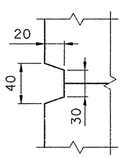
0 250 500 750

SCALE IN MILLIMETERS

NOTE:

1. THE CONTRACTOR SHALL INSTALL THE THREADED RODS AND NUTS FOR THE UTILITY SUPPORTS AS SHOWN ON SHEETS 85-88. VERMONT GAS SYSTEMS, INC. WILL SUPPLY ALL MATERIALS REQUIRED. ALL COSTS FOR INSTALLING THE STAINLESS STEEL ANCHOR BOLTS SHALL BE INCLUDED IN ITEM 629.60. RELOCATE WATERLINE ON BRIDGE (MOD.)

2. SEE SPECIAL PROVISIONS FOR LIGHTING POST DETAILS.



SCORE MARK DETAIL

NOT TO SCALE

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB *Vanasse Hangen Brustlin, Inc.*

STATE OF VERMONT
AGENCY OF TRANSPORTATION

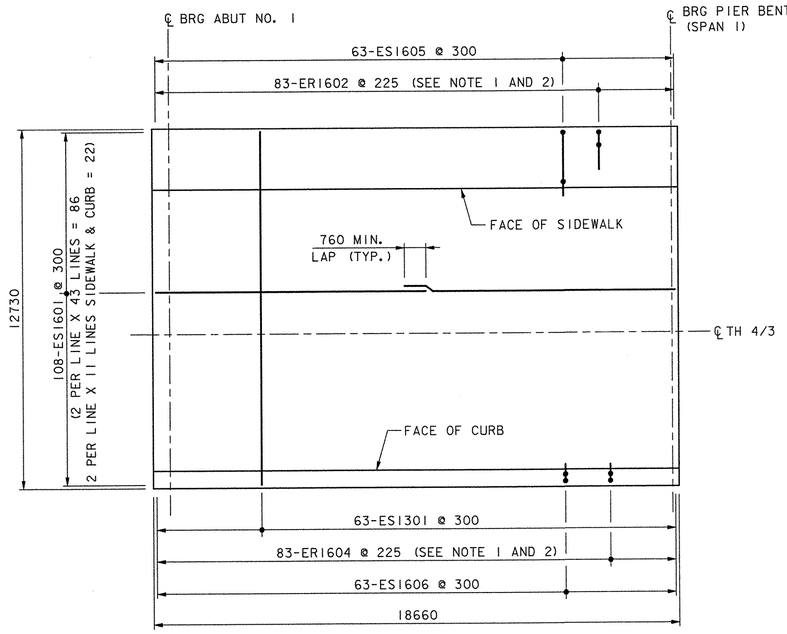
Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta. / Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
BRIDGE TYPICAL SECTIONS	
Designed By K.G. KRETSCH	Drawn By B.J. MASSE
Checked By M.A. COLGAN Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139TS	Sheet 55 of 124

VHB NO. 50735

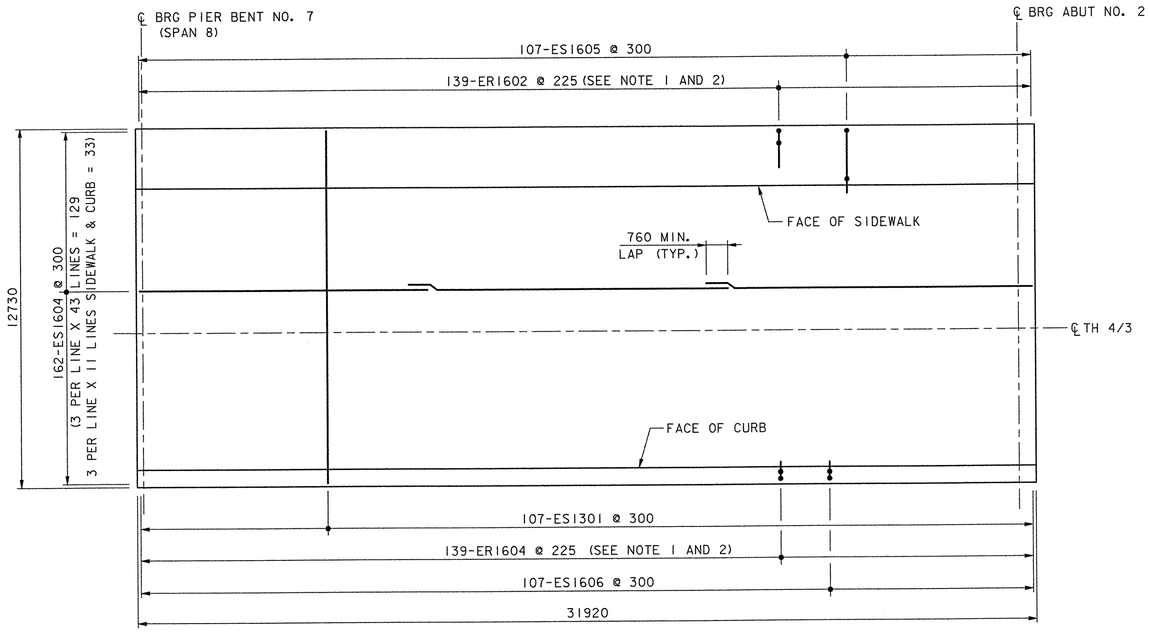
plot date: 4/25/2005

VT STATE PLANE GRID

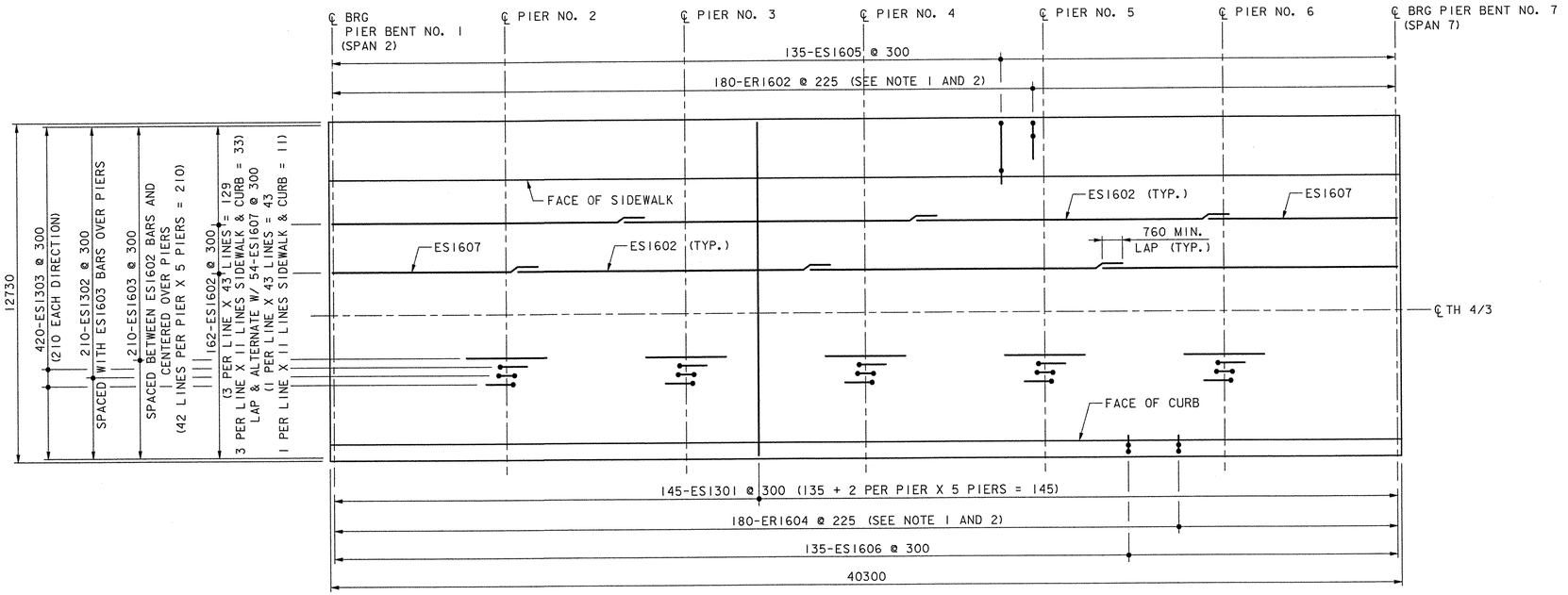
N



SPAN 1
SCALE: 1:100



SPAN 8
SCALE: 1:100



SPANS 2 THRU 7
SCALE: 1:100

0 2500 5000 7500
SCALE IN MILLIMETERS

NOTES:

1. SEE CONCRETE BRIDGE RAIL SHEET 80 FOR BARS ER1602 AND ER1604. ALL COSTS FOR REINFORCING BARS IN CONCRETE BRIDGE RAIL SHALL BE INCLUDED IN ITEM 525.50, CAST-IN-PLACE CONCRETE BRIDGE RAIL.
2. QUANTITIES FOR REINFORCING BARS IN CONCRETE BRIDGE RAIL ARE NOT INCLUDED IN THE REINFORCING STEEL SCHEDULE (SEE NOTE 1).
3. CONCRETE OVERLAY SHALL BE PLACED IN ONE CONTINUOUS OPERATION FROM ONE ABUTMENT TO THE OPPOSITE ABUTMENT, IN ACCORDANCE WITH THE SPECIFICATIONS.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

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

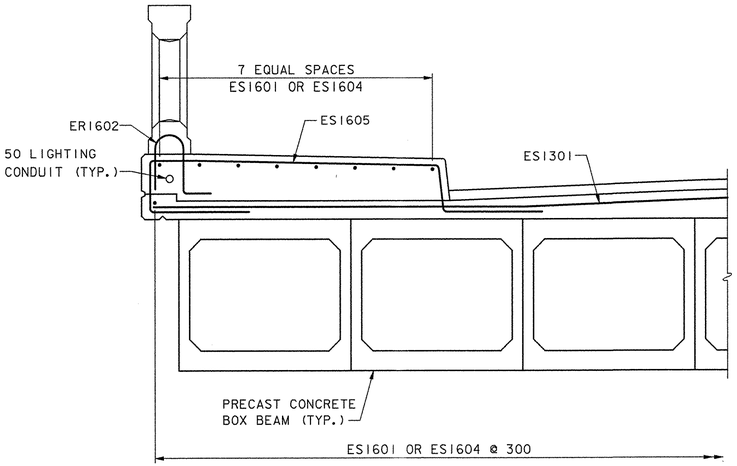
DECK OVERLAY DETAILS (1 OF 2)

Designed By J.T. KLEIN	Drawn By B.J. MASSE
Checked By K.G. KRETSCH Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139DD1	Sheet 56 of 124

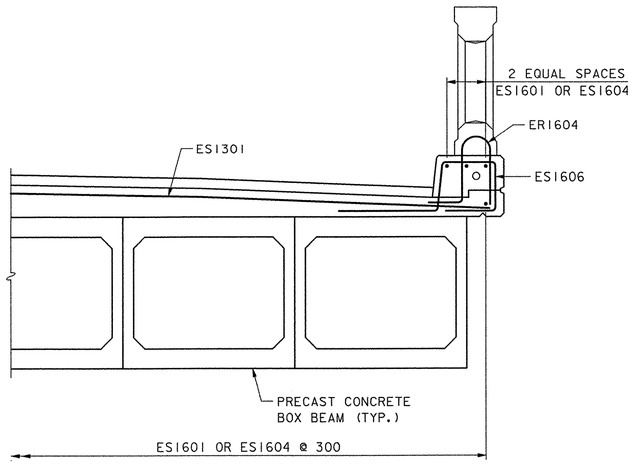
VHB Vanasse Hangen Brustlin, Inc.

VHB NO. 50735

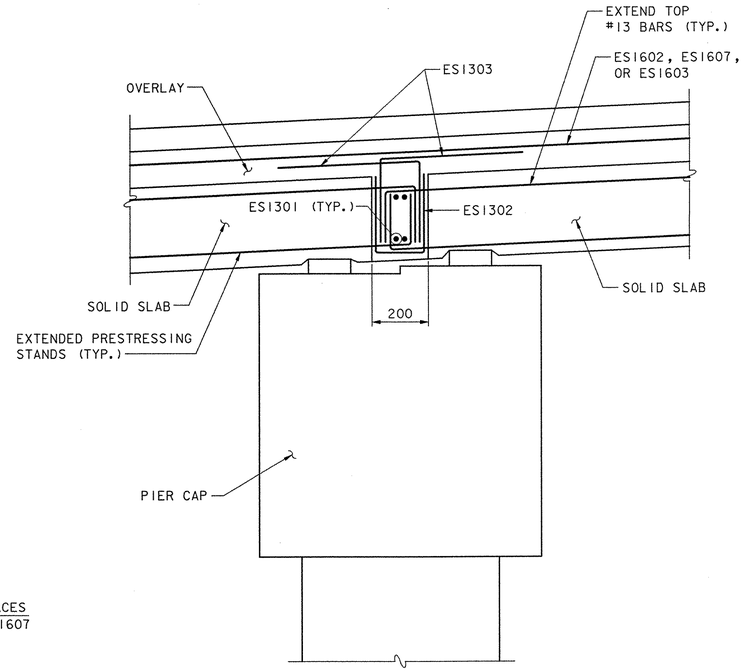
plot date: 4/25/2005



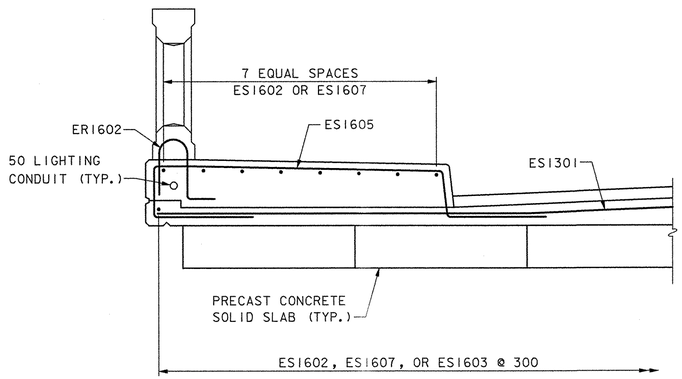
TRANSVERSE SECTION
SPANS 1 & 8 SIDEWALK
SCALE: 1:20



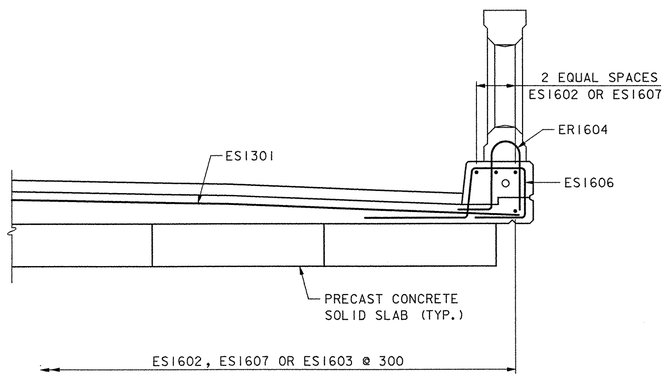
TRANSVERSE SECTION
SPANS 1 & 8 CURB
SCALE: 1:20



TYPICAL LONGITUDINAL SECTION
PIERS 2 - 6
SCALE: 1:10

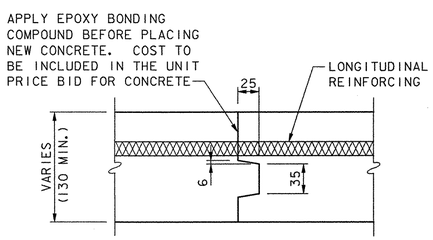


TRANSVERSE SECTION
SPANS 2-7 SIDEWALK
SCALE: 1:20



TRANSVERSE SECTION
SPANS 2-7 CURB
SCALE: 1:20

0 500 1000 1500
SCALE IN MILLIMETERS



TRANSVERSE CONSTRUCTION JOINT DETAIL
NOT TO SCALE

NOTES:

1. STIRRUPS PROJECTING FROM THE PRECAST UNITS INTO THE OVERLAY ARE OMITTED FOR CLARITY.
2. THE CONCRETE OVERLAY SHALL BE PLACED CONTINUOUSLY FROM ONE ABUTMENT TO ANOTHER. IF CONTINUOUS PLACEMENT IS INTERUPTED, THE TRANSVERSE CONSTRUCTION JOINT DETAIL HAS BEEN PROVIDED FOR USE ONLY IF APPROVED BY THE RESIDENT ENGINEER.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

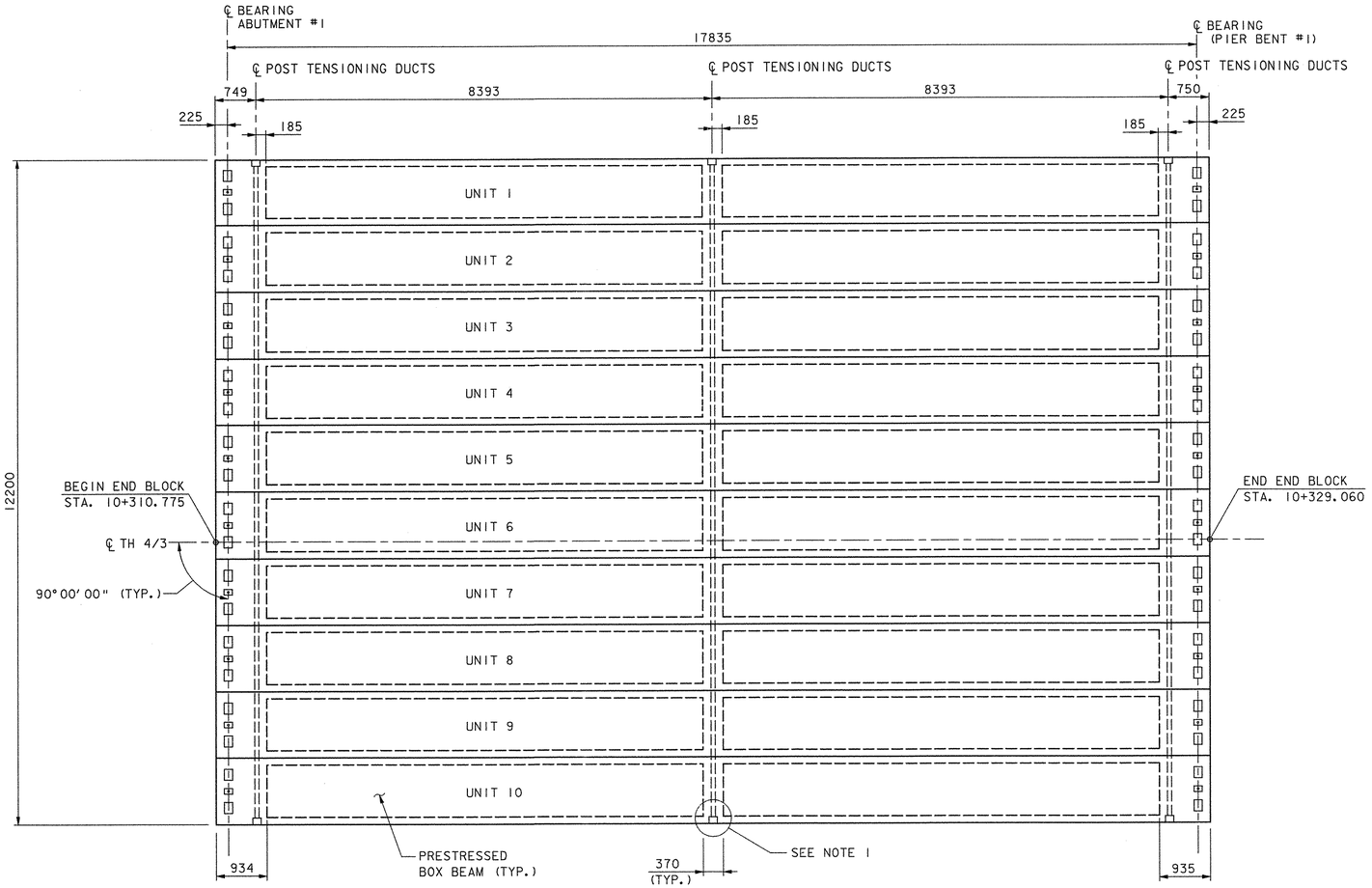
VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
	Log Sta.
Highway No. TH 4/3	Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
DECK OVERLAY DETAILS (2 OF 2)	
Designed By J.T. KLEIN	Drawn By B.J. MASSE
Checked By K.G. KRETSCH Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139DD2	Sheet 57 of 124

VHB NO. 50735 plot date: 5/2/2005

Metric

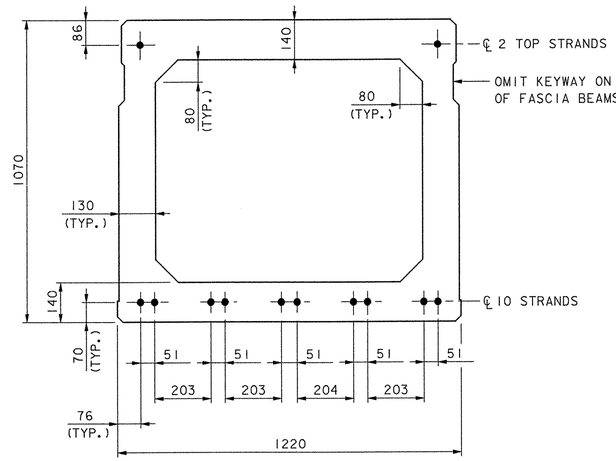


BOX BEAM FRAMING PLAN - SPAN 1

SCALE: 1:50

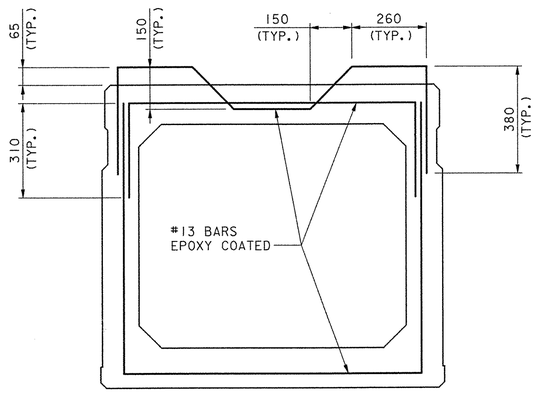
0 1250 2500 3750

SCALE IN MILLIMETERS



TYPICAL SECTION - STRAND LAYOUT

SCALE: 1:10



TYPICAL SECTION - REINFORCING

SCALE: 1:10

0 250 500 750

SCALE IN MILLIMETERS

DEAD LOAD DEFLECTION AT MIDSPAN	
SELF WEIGHT	14
NON-COMPOSITE	-3
COMPOSITE	-2
NET DEFLECTION	9

NOTE:

1. SEE SHEET 62 FOR TRANSVERSE TENDON DETAIL.
2. SEE SHEET 61 AND 62 FOR ADDITIONAL DETAILS.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

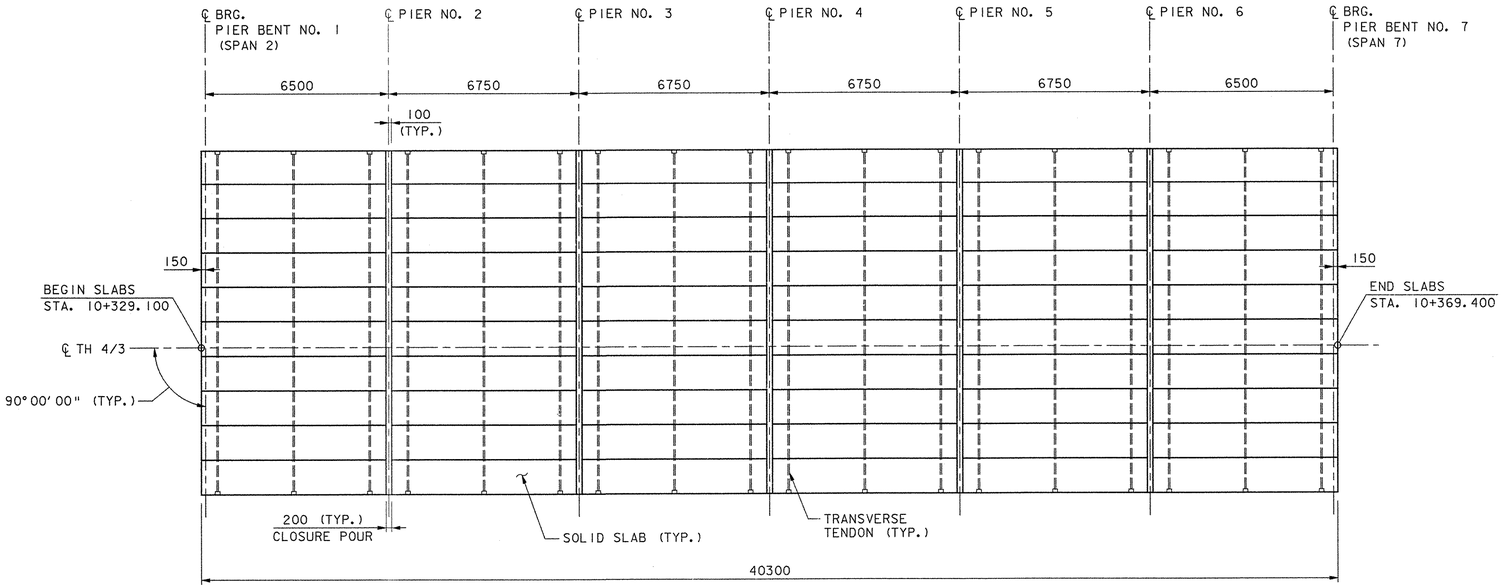
VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta. / Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
SPAN 1 FRAMING PLAN	
Designed By J.T. KLEIN	Drawn By B.J. MASSE
Checked By M.A. COLGAN Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139SS1	Sheet 58 of 124

VHB NO. 50735

plot date: 4/25/2005

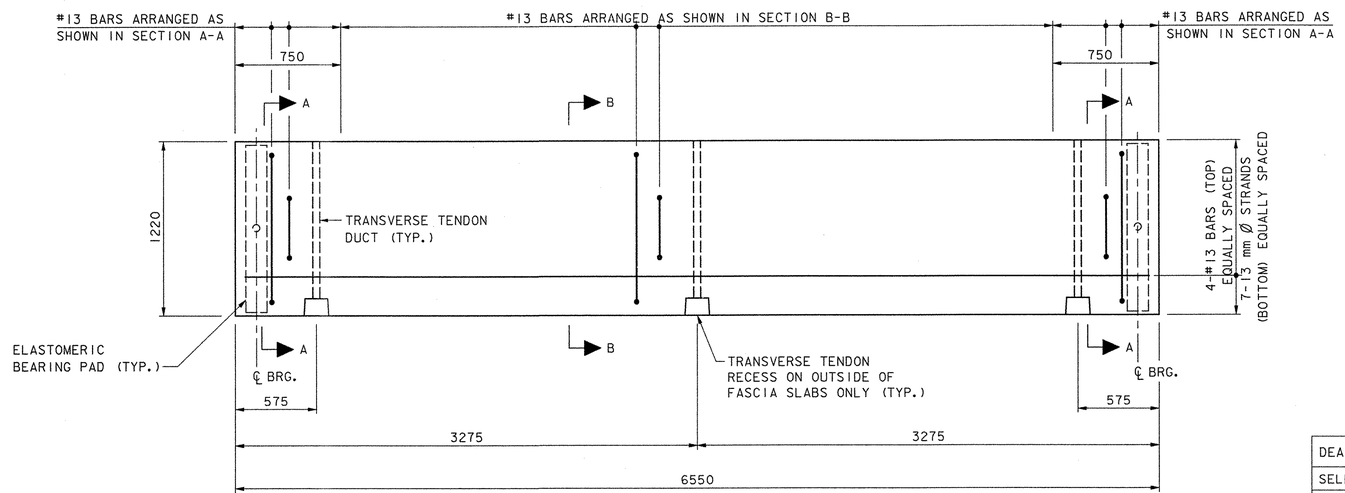


SOLID SLAB FRAMING PLAN - SPAN 2-7

SCALE: 1:100

0 2500 5000 7500

SCALE IN MILLIMETERS



SOLID SLAB PLAN

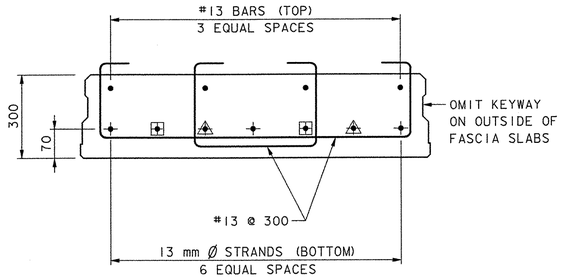
SCALE: 1:20

0 500 1000 1500

SCALE IN MILLIMETERS

DEAD LOAD DEFLECTION AT MIDSPAN	
SELF WEIGHT	5
NON-COMPOSITE	-1
COMPOSITE	0
NET DEFLECTION	4

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

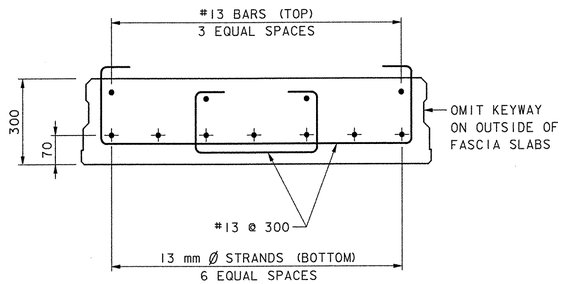


⊞ EXTENDED PRESTRESSED STRAND UPSTATION (SEE NOTE 2)

⊞ EXTENDED PRESTRESSED STRAND DOWNSTATION (SEE NOTE 2)

SECTION A-A

SCALE: 1:10



SECTION B-B

SCALE: 1:10

0 250 500 750

SCALE IN MILLIMETERS

NOTES:

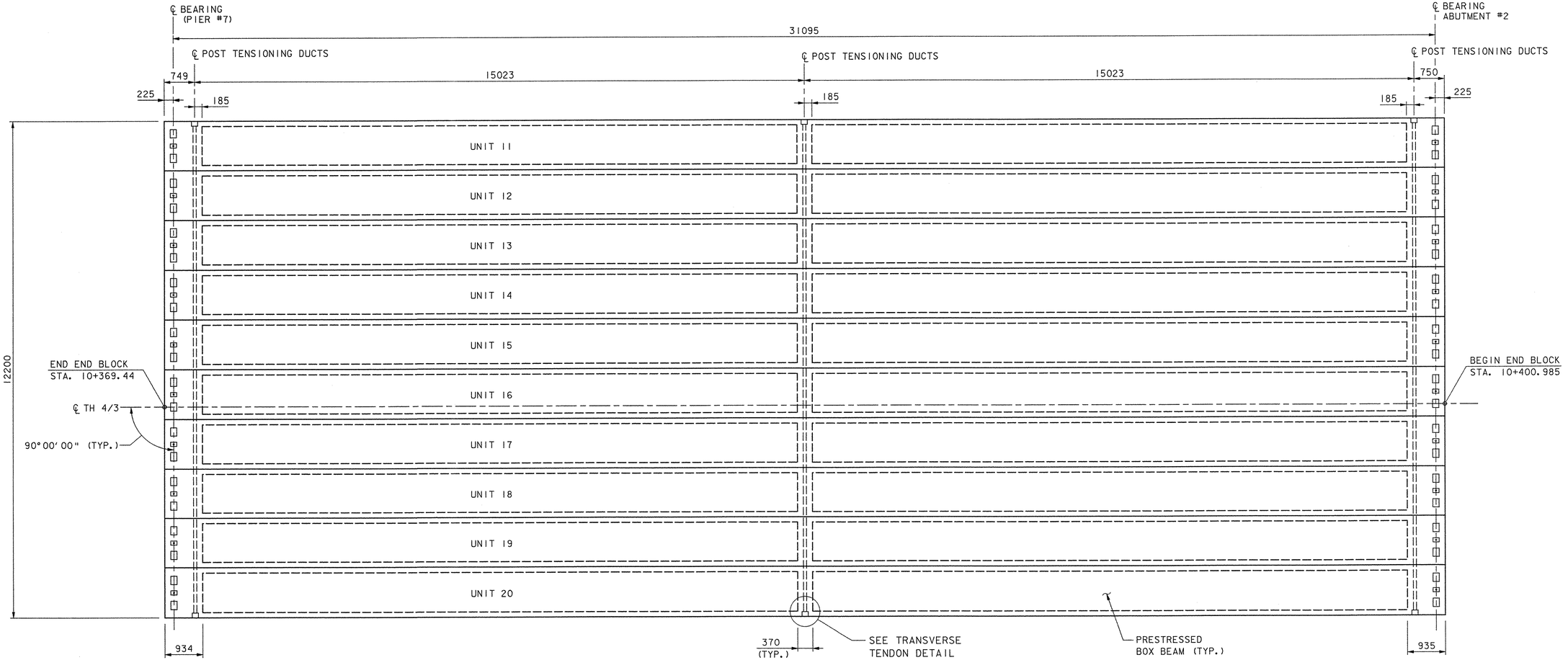
1. SEE SHEET 62 FOR ADDITIONAL DETAILS.
2. EXTEND TOP #13 REINFORCING AND PRESTRESSED STRANDS 150 mm INTO CAST-IN-PLACE DIAPHRAGM AT PIERS 2-6 AND TURN VERTICAL 200 mm AS SHOWN IN TYPICAL LONGITUDINAL SECTION ON SHEET 57.

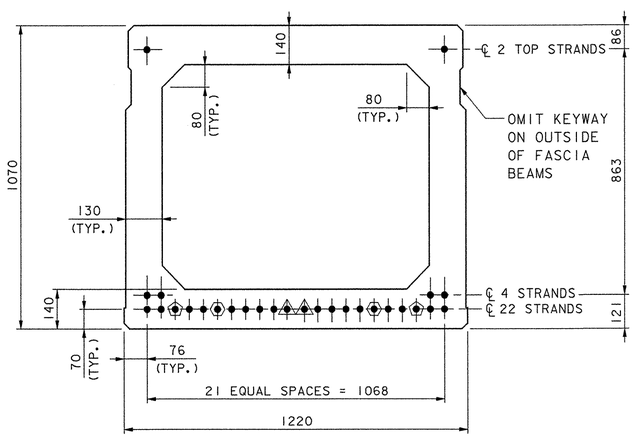
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta. / Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
SPANS 2-7 FRAMING PLAN	
Designed By K.G. KRETSCH	Drawn By B.J. MASSE
Checked By M.A. COLGAN Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139SS2	Sheet 59 of 124

VHB Vanasse Hangen Brustlin, Inc.

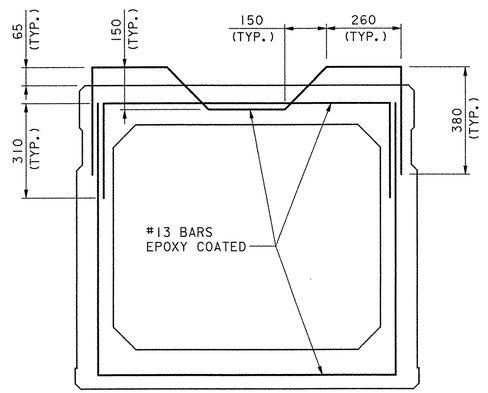
VHB NO. 50735 plot date: 5/2/2005





TYICAL SECTION - STRAND LAYOUT

SCALE: 1:10



TYPICAL SECTION - REINFORCING

SCALE: 1:10

0 250 500 750

SCALE IN MILLIMETERS

BOX BEAM FRAMING PLAN - SPAN 8

SCALE: 1:50

0 1250 2500 3750

SCALE IN MILLIMETERS

DEAD LOAD DEFLECTION AT MIDSPAN		
	EXT. BEAM	INT. BEAM
SELF WEIGHT	73	73
NON-COMPOSITE	-29	-25
COMPOSITE	-16	-16
NET DEFLECTION	28	32

DEBONDING KEY:

△ = DEBOND 1525 mm

⬠ = DEBOND 3050 mm

⬡ = DEBOND 4575 mm

NOTE:

1. SEE SHEET 62 FOR TRANSVERSE TENDON DETAIL
2. SEE SHEETS 61 AND 62 FOR ADDITIONAL DETAILS.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

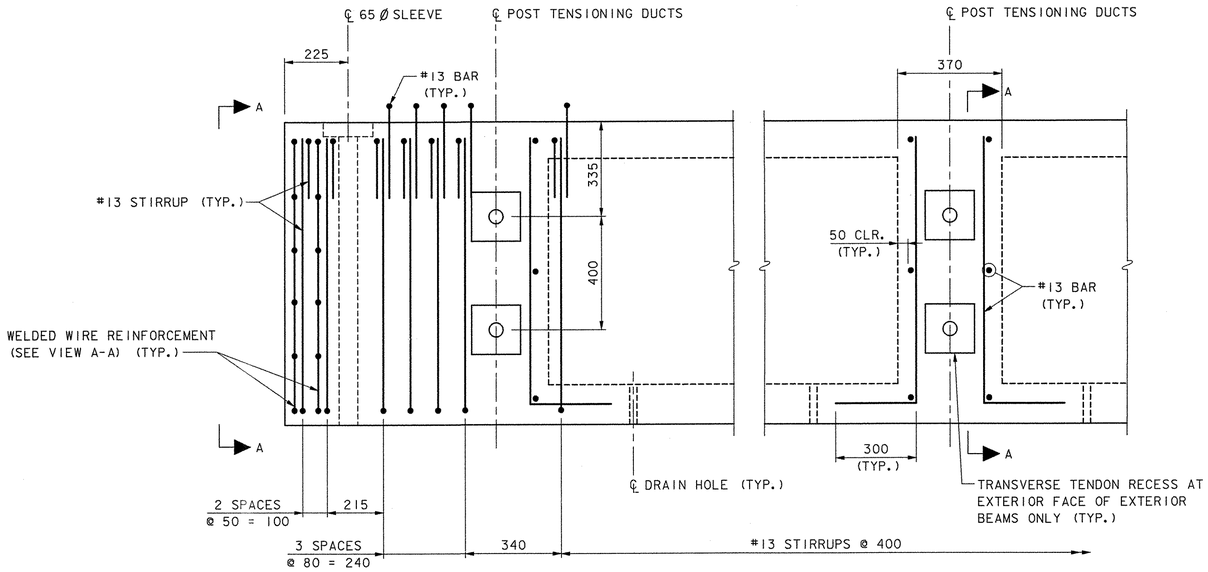
VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta.
	Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
SPAN 8 FRAMING PLAN	
Designed By C.W. COVIELLO	Drawn By B.J. MASSE
Checked By K.G. KRETSCH Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139SS8	Sheet 60 of 124

VHB NO. 50735

plot date: 4/25/2005

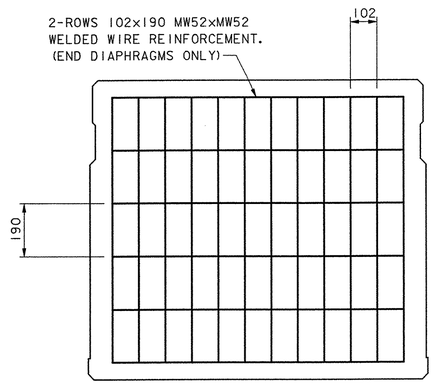


BOX BEAM ELEVATION - SPANS 1 & 8

SCALE: 1:10

0 250 500 750

SCALE IN MILLIMETERS



VIEW A-A - SPAN 1 & 8

SCALE: 1:10

NOTE:

1. ENDS OF BOX BEAMS AND ANCHOR BOLTS SHALL BE VERTICAL IN FINAL ERECTED CONDITION.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

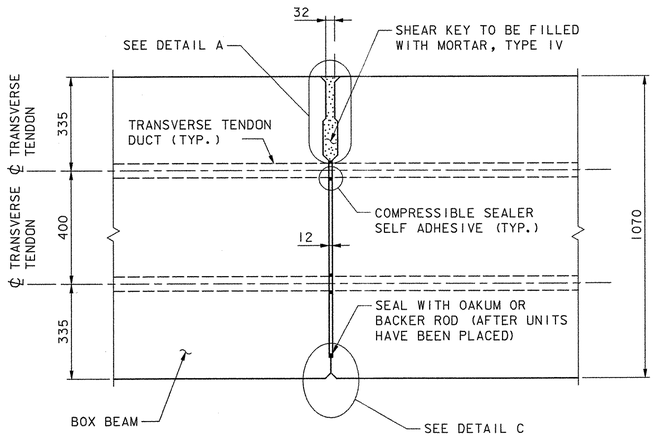
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.

BOX BEAM DETAILS

Designed By C.W. COVIELLO	Drawn By B.J. MASSE
Checked By K.G. KRETSCH Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139BB1	Sheet 61 of 124

VHB NO. 50735

plot date: 5/2/2005

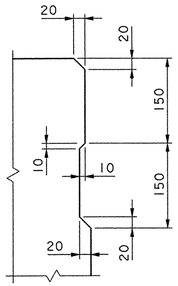


BOX BEAM SHEAR KEY

SCALE 1:10

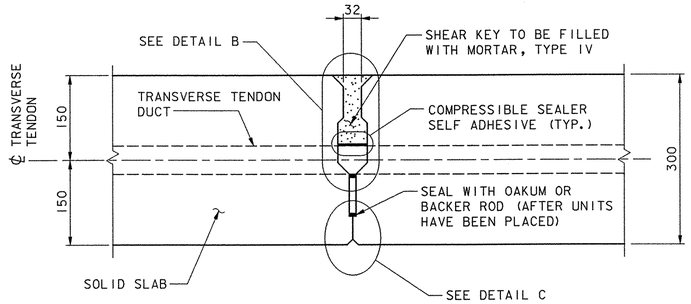
0 250 500 750

SCALE IN MILLIMETERS



DETAIL A

SCALE 1:5

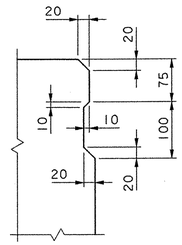


SOLID SLAB SHEAR KEY

(AT INTERIOR FACES OF SLABS ONLY)
SCALE 1:5

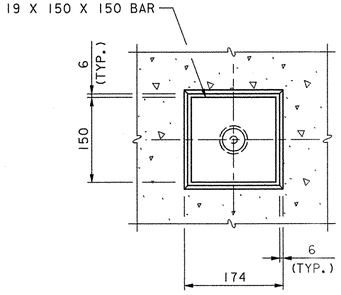
0 125 250 375

SCALE IN MILLIMETERS

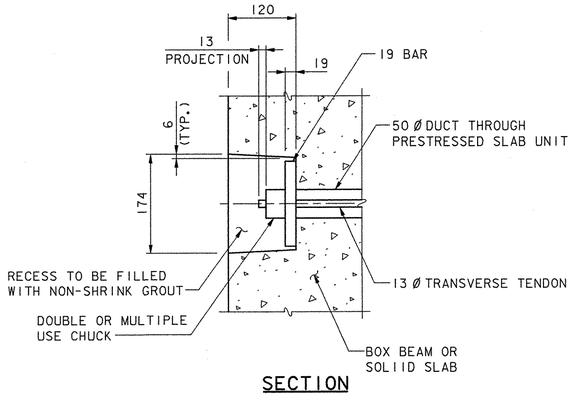


DETAIL B

SCALE 1:5



ELEVATION



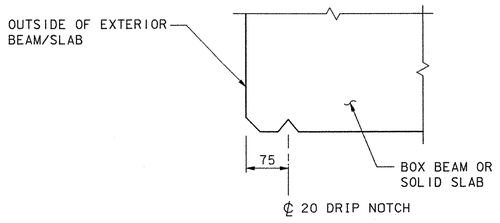
SECTION

TRANSVERSE TENDON DETAIL

SCALE: 1:5

0 125 250 375

SCALE IN MILLIMETERS



DRIP NOTCH DETAIL

SCALE: 1:5

DETAIL C

SCALE: 1:5

NOTE:

1. THE TRANSVERSE TENDON SHALL BE COVERED BY A SEAMLESS POLYPROPYLENE SHEATH WITH CORROSION INHIBITOR GREASE BETWEEN THE SHEATH AND THE STRAND FOR THE LENGTH OF THE STRAND.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

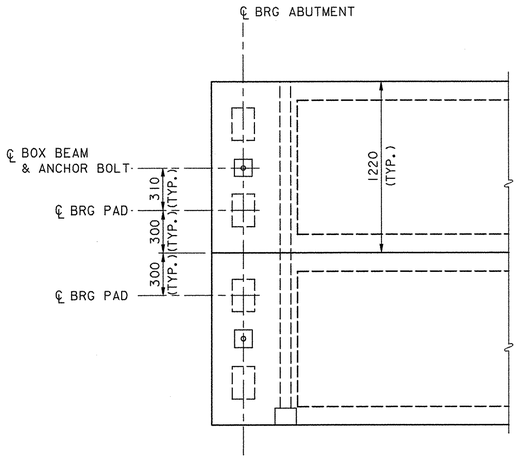
VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta. / Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
BOX BEAM & SOLID SLAB DETAILS	
Designed By M. A. COLGAN	Drawn By B. J. MASSE
Checked By M. A. COLGAN Date 4/05	Bridge Design Supervisor S. M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139DT2	Sheet 62 of 124

VHB NO. 50735

plot date: 5/2/2005

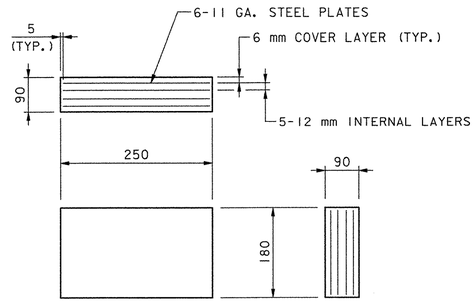


BEARING PLACEMENT PLAN

SCALE: 1:20

0 500 1000 1500

SCALE IN MILLIMETERS



ELASTOMERIC BEARING DETAIL

(TWO EACH PER BOX BEAM)

SCALE: 1:5

0 125 250 375

SCALE IN MILLIMETERS

STEEL REINFORCED ELASTOMERIC BEARINGS

ELASTOMERIC BEARING NOTES:

1. ALL COST FOR BOX BEAM ELASTOMERIC BEARINGS SHALL BE PAID UNDER ITEM 531.10, BEARING DEVICE ASSEMBLY (STEEL REINFORCED ELASTOMERIC) AND ALL COST FOR SOLID SLAB ELASTOMERIC PADS SHALL BE PAID AS ITEM 531.10, BEARING DEVICE ASSEMBLY (ELASTOMERIC).

2. ALTERNATE CONFIGURATIONS FOR ELASTOMERIC BEARINGS MAY BE SUBMITTED FOR APPROVAL IN ACCORDANCE WITH SECTION 105.03. ANY ALTERNATE BEARING SUBMITTED SHALL BE DESIGNED AND CERTIFIED TO MEET THE LOADS AND CRITERIA SHOWN ON THIS SHEET AND MAINTAIN THE ANCHORAGE SYSTEM SHOWN. THE BEARINGS SHALL BE DESIGNED ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" 2002 EDITION AND ITS LATEST REVISIONS.

3. THE BEARING SHAPE FACTOR SHALL BE BETWEEN 4.0 AND 12.0.

4. ALL STEEL PLATES BETWEEN LAYERS OF ELASTOMERIC SHALL CONFORM TO ASTM A570/A570M GR. 250 STEEL. NO FABRIC REINFORCEMENT WILL BE PERMITTED.

5. STEEL REINFORCED ELASTOMERIC BEARINGS SHALL HAVE A 5 mm EDGE SEAL OF ELASTOMERIC INTEGRAL WITH THE BEARING OVER THE STEEL PLATES.

6. ALL MATERIALS AND FABRICATION SHALL BE PER AASHTO DIVISION II SECTION 18.2 AND AASHTO MATERIAL SPECIFICATION M251.

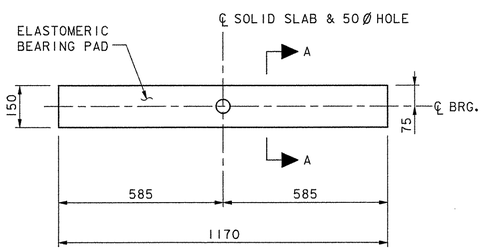
DESIGN CRITERIA:

DUROMETER:	ELASTOMERIC	60
TEMPERATURE RANGE:		27° C
MAXIMUM BEARING STRESS:		7 MPa
DESIGN ROTATION:		0.0101 RAD @ SPAN 1 & 0.0138 RAD @ SPAN 8

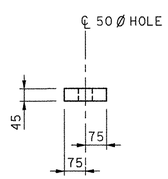
REACTION/BEAM:

	SPAN 1	SPANS 2-7	SPAN 8
DL	240	64	402
LL*	90	65	100

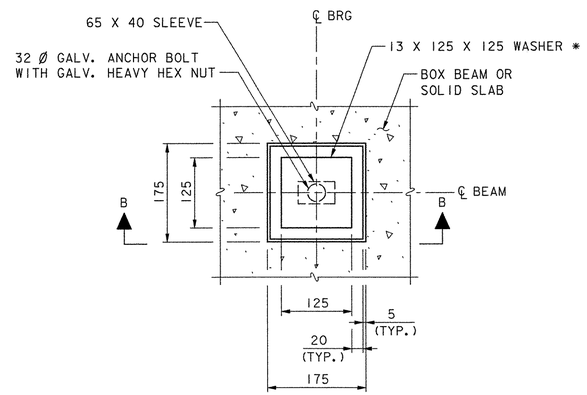
* DOES NOT INCLUDE IMPACT



PLAN

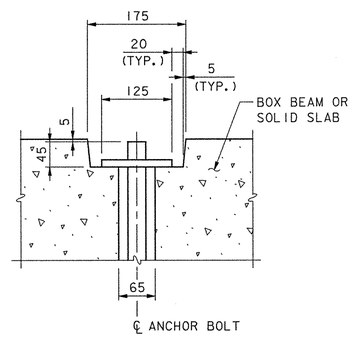


SECTION A-A



* EM-3 13 X 125 X 125 WASHER WITH 38 DIA. HOLE GALVANIZED.

ANCHOR BOLT DETAIL



SECTION B-B

ELASTOMERIC PAD DETAIL

SCALE: 1:10

0 250 500 750

SCALE IN MILLIMETERS

ANCHOR BOLT DETAIL

SCALE: 1:5

0 125 250 375

SCALE IN MILLIMETERS

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

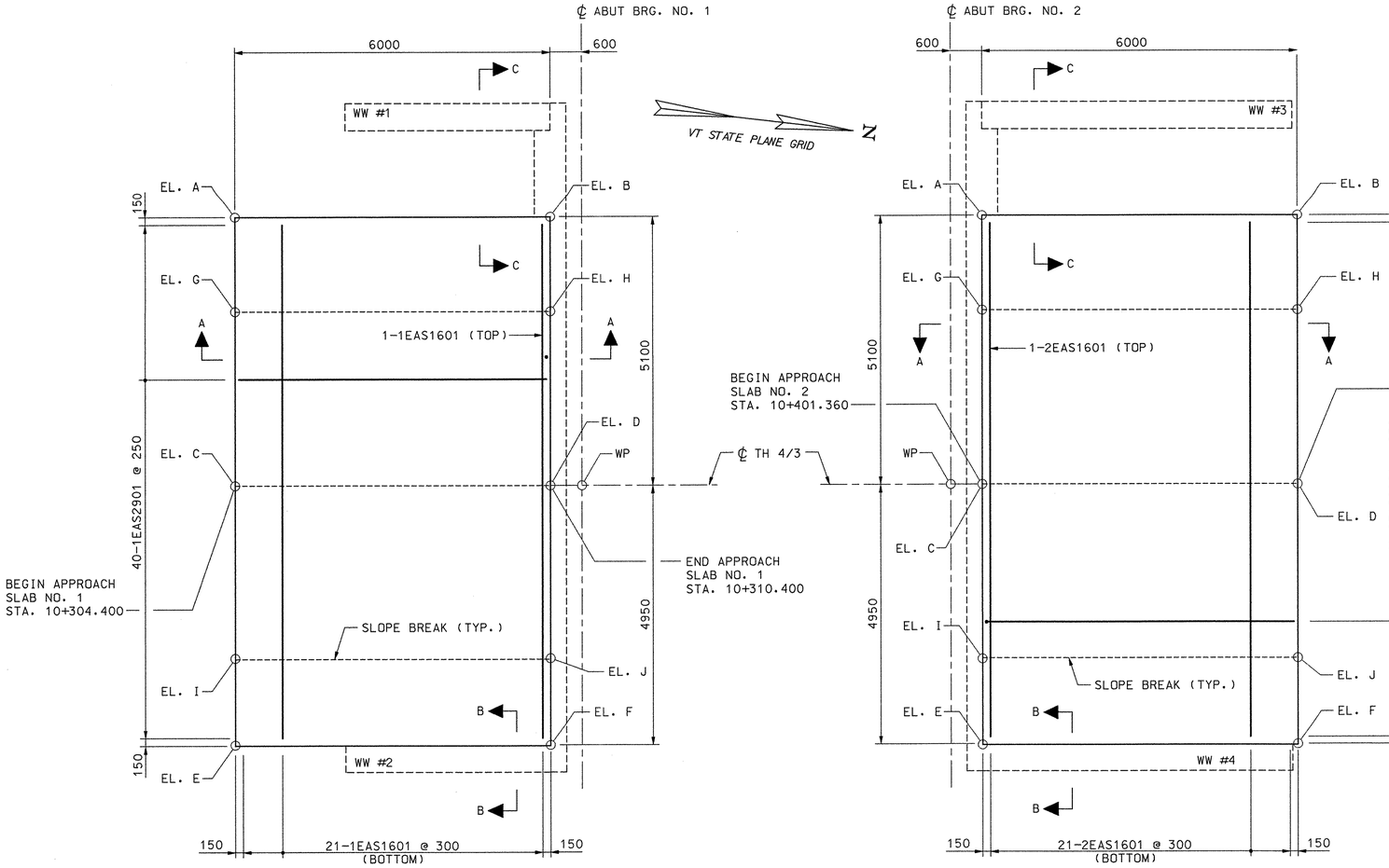
Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta.
	Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
BEARING DETAILS	
Designed By K.G. KRETSCH	Drawn By B.J. MASSE
Checked By M.A. COLGAN Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139BG1	Sheet 63 of 124

VHB NO. 50735

plot date: 4/25/2005

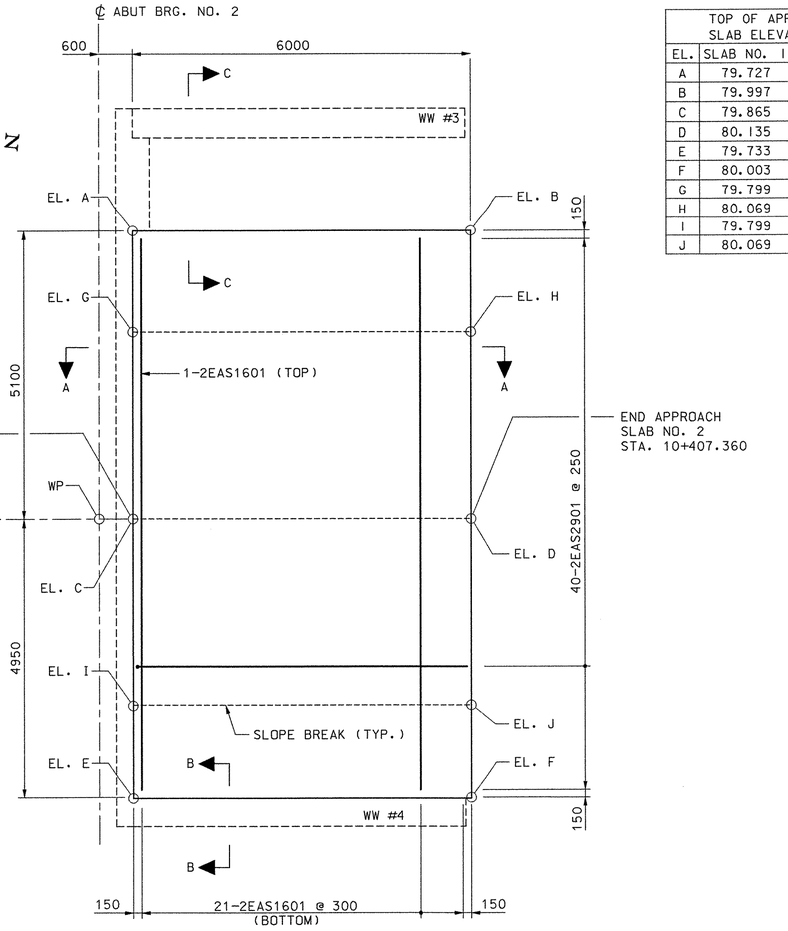
Metric

TOP OF APPROACH SLAB ELEVATIONS		
EL.	SLAB NO. 1	SLAB NO. 2
A	79.727	84.090
B	79.997	84.360
C	79.865	84.228
D	80.135	84.498
E	79.733	84.096
F	80.003	84.366
G	79.799	84.162
H	80.069	84.432
I	79.799	84.162
J	80.069	84.432



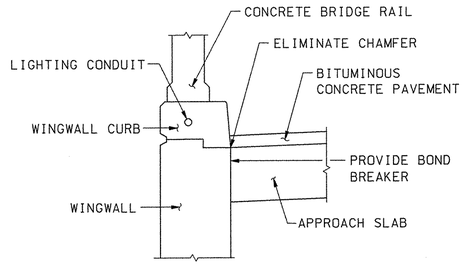
APPROACH SLAB NO. 1

SCALE: 1:50



APPROACH SLAB NO. 2

SCALE: 1:50

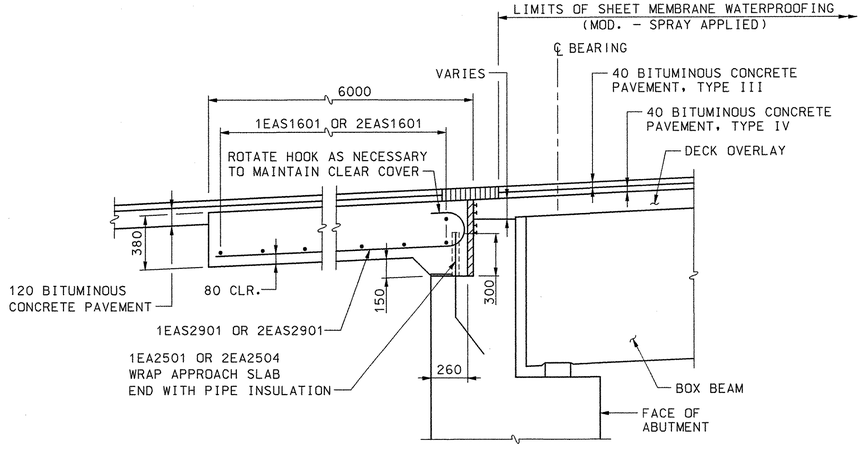


SECTION B-B

SCALE: 1:20

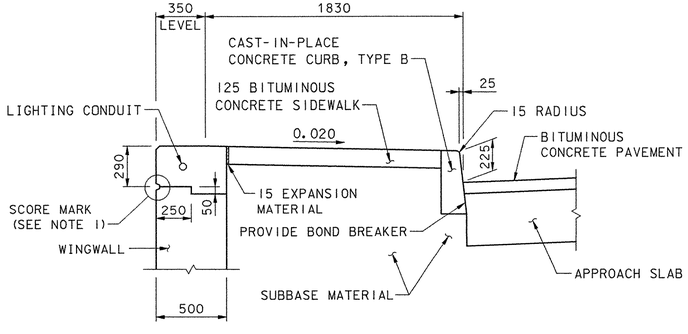
0 1250 2500 3750

SCALE IN MILLIMETERS



SECTION A-A

SCALE: 1:20



SECTION C-C

SCALE: 1:20

0 500 1000 1500

SCALE IN MILLIMETERS

NOTE:

1. SEE SHEET 55 FOR SCORE MARK DETAIL.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta. / Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
APPROACH SLABS	
Designed By J.T. KLEIN	Drawn By K.D. WENTWORTH
Checked By M.A. COLGAN Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139AS1	Sheet 64 of 124

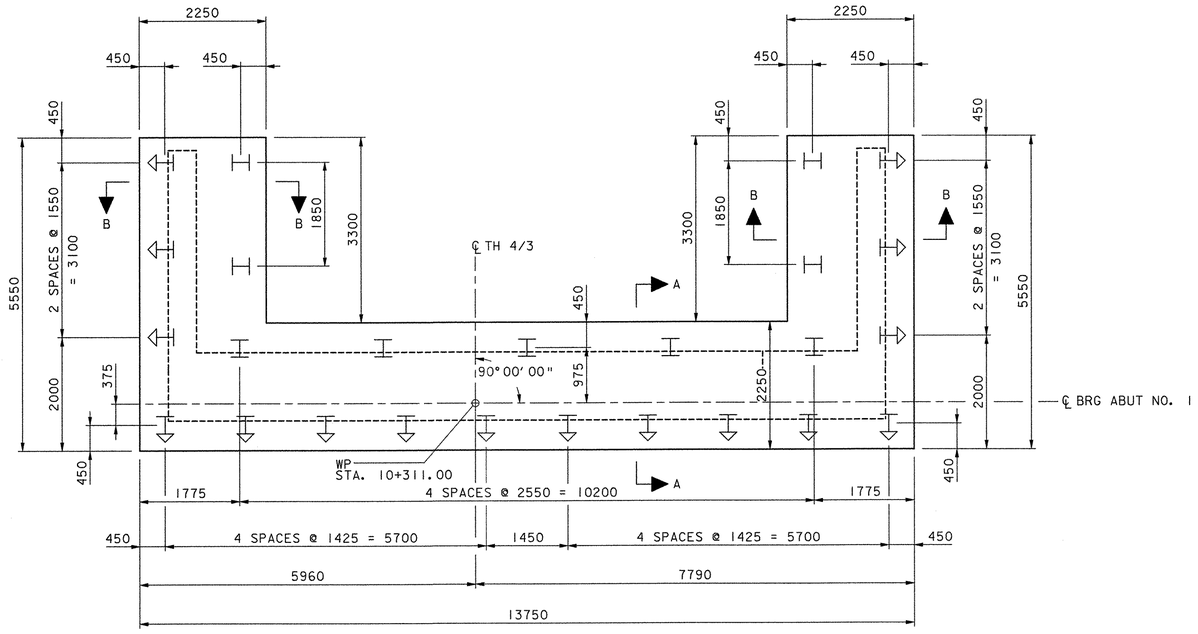
VHB Vanasse Hangen Brustlin, Inc.

VHB NO. 50735

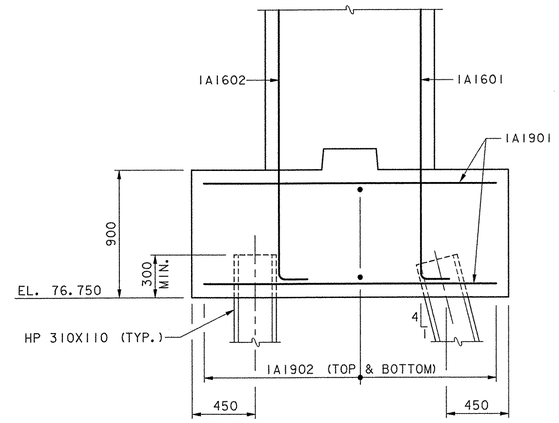
plot date: 4/25/2005

VT STATE PLANE GRID

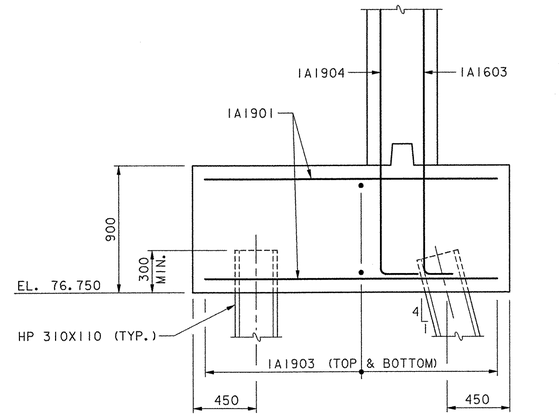
N



MASONRY
SCALE: 1:50

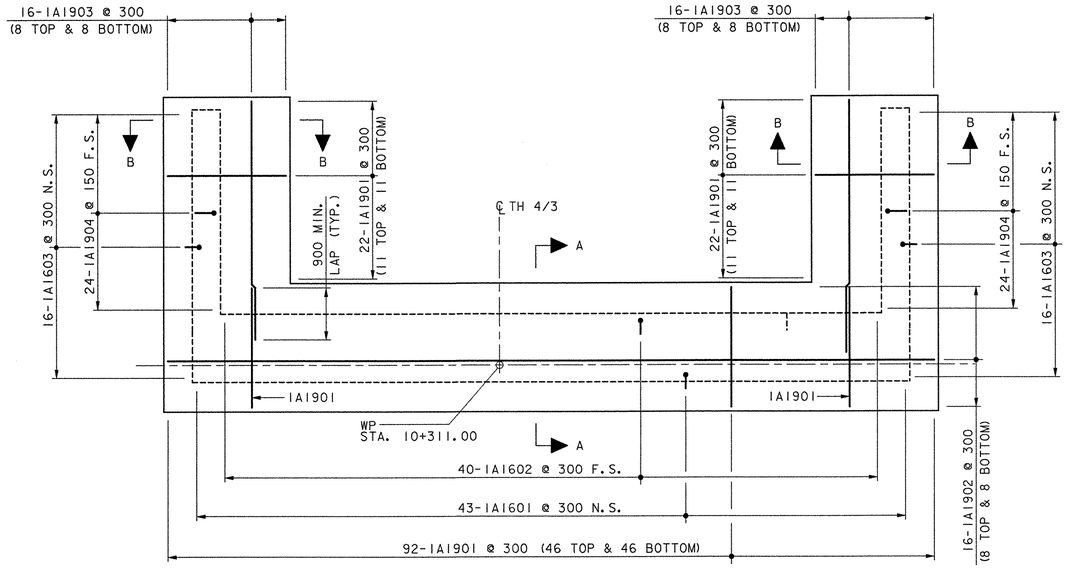


SECTION A-A
SCALE: 1:20



SECTION B-B
SCALE: 1:20

0 500 1000 1500
SCALE IN MILLIMETERS



REINFORCING
SCALE: 1:50

0 1250 2500 3750
SCALE IN MILLIMETERS

PILE KEY

I = VERTICAL PILE

I = PILE BATTERED 1 HORIZ. TO 4 VERT.

REINFORCING KEY

E.F. = EACH FACE
N.S. = NEAR SIDE
F.S. = FAR SIDE

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

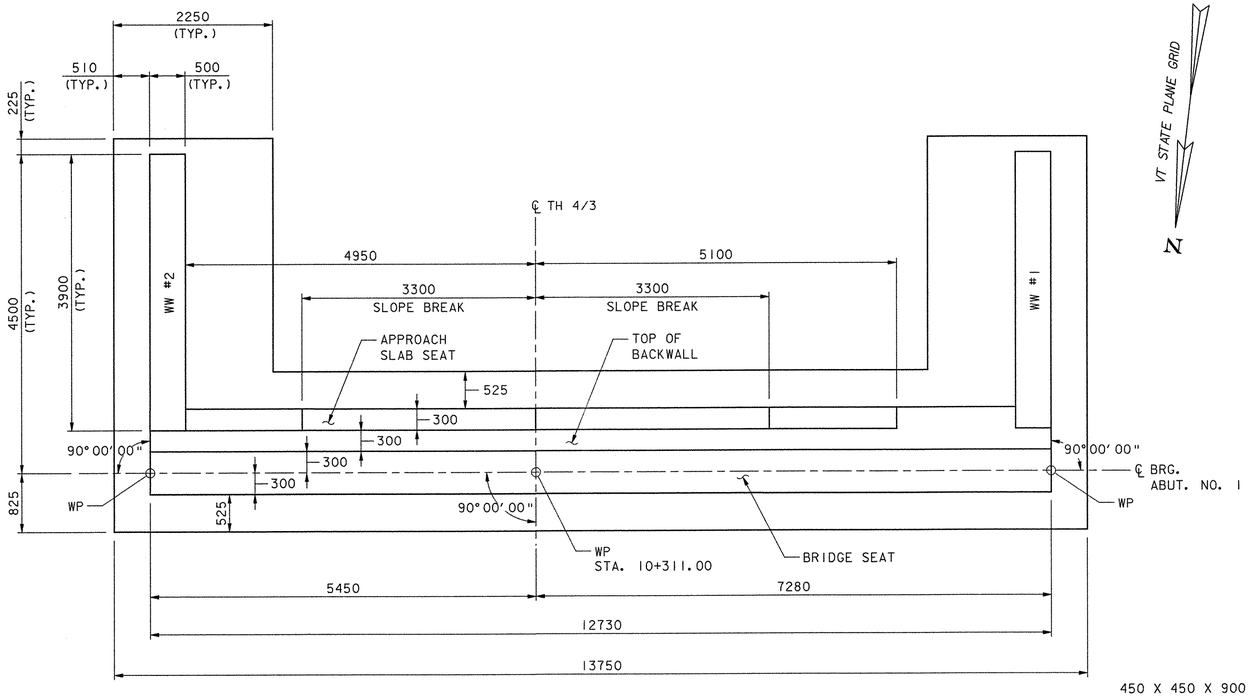
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.

ABUTMENT NO.1 FOOTING

Designed By J.T. KLEIN	Drawn By K.D. WENTWORTH
Checked By K.G. KRETSCH Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139AF1	Sheet 65 of 124

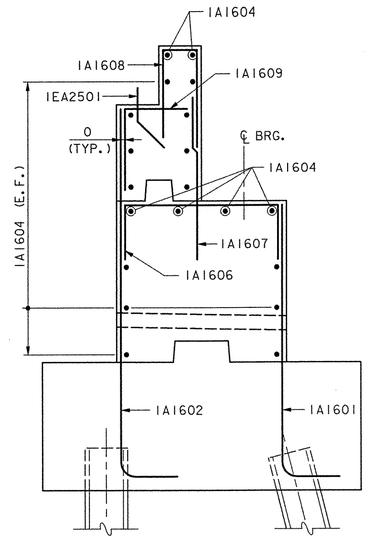
VHB NO. 50735

plot date: 4/25/2005

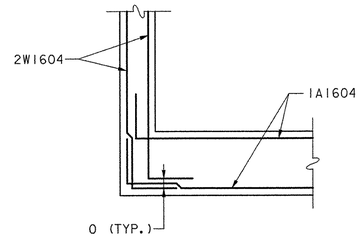


PLAN
SCALE: 1:40

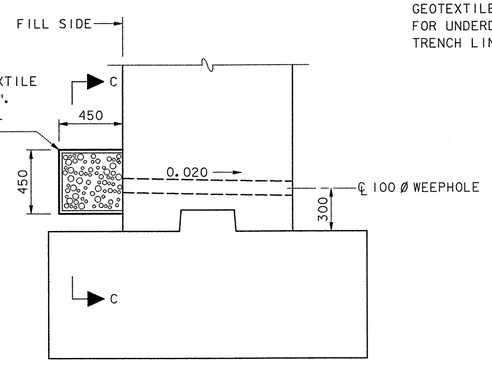
VT STATE PLANE GRID
N



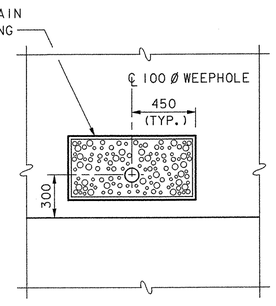
SECTION A-A
SCALE: 1:20



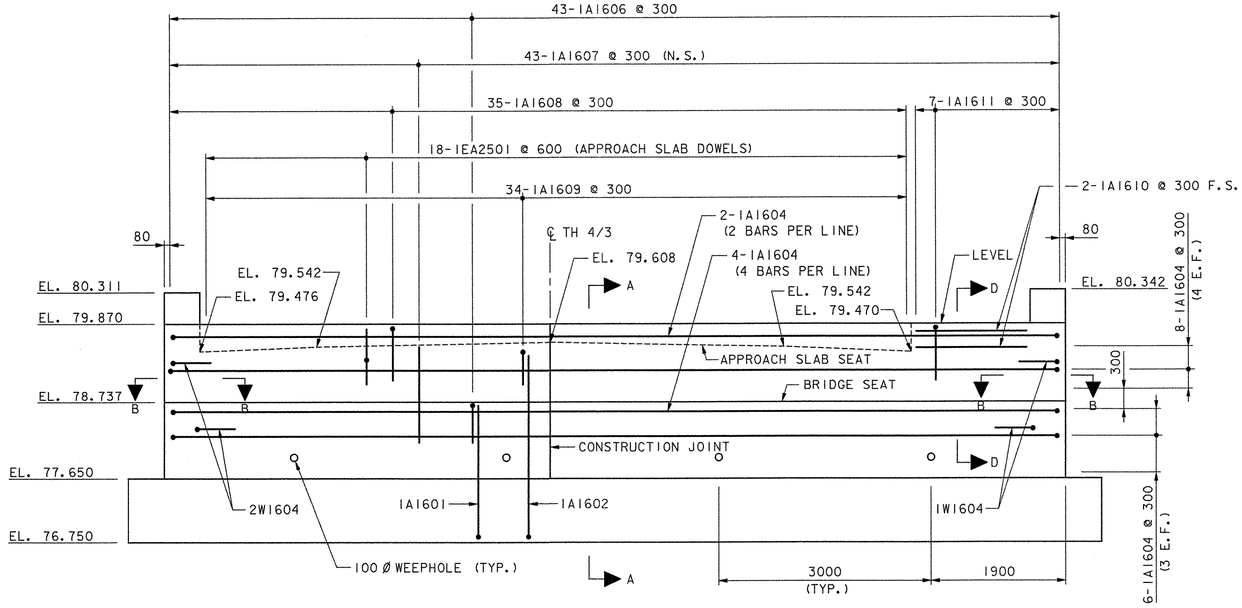
SECTION B-B
(WW #2 SHOWN, WW #1 SIMILAR)
(VERTICAL REINFORCING NOT SHOWN FOR CLARITY)
SCALE: 1:20



TYPICAL WEEPHOLE DETAIL
SCALE: 1:20

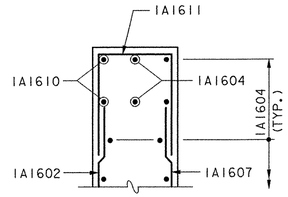


SECTION C-C
SCALE: 1:20



ELEVATION
SCALE: 1:40

0 1000 2000 3000
SCALE IN MILLIMETERS



SECTION D-D
SCALE: 1:20

0 500 1000 1500
SCALE IN MILLIMETERS

NOTE:

1. ALL FOOTING REINFORCING NOT SHOWN FOR CLARITY.
2. SEE SHEET 16 FOR UNDERDRAIN BACKFILL MATERIAL.

REINFORCING KEY

E.F. = EACH FACE
N.S. = NEAR SIDE
F.S. = FAR SIDE

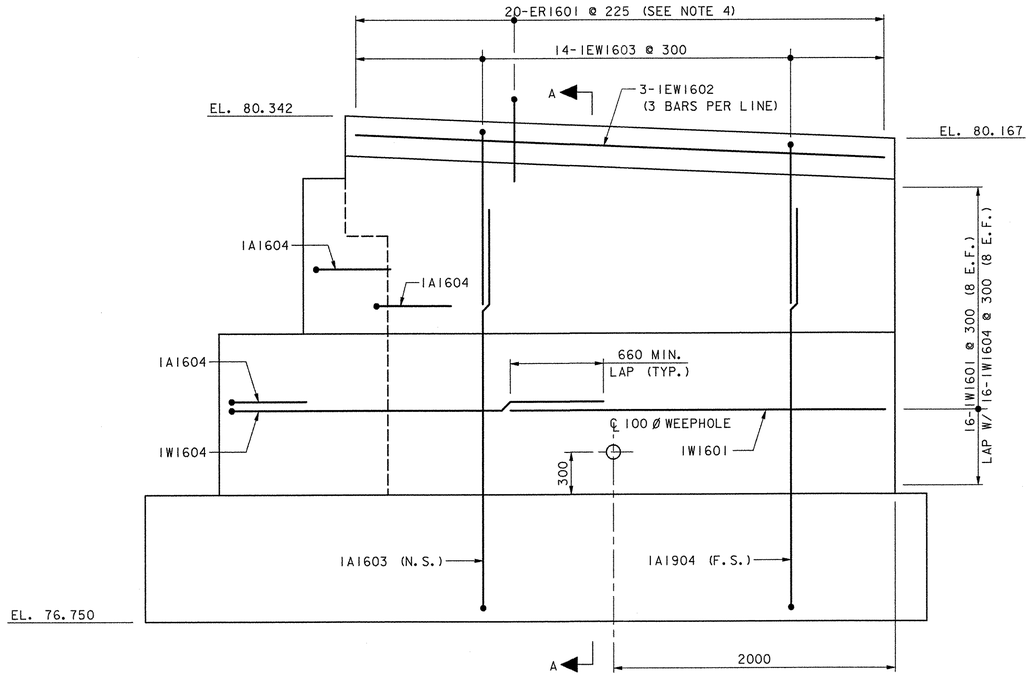
DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

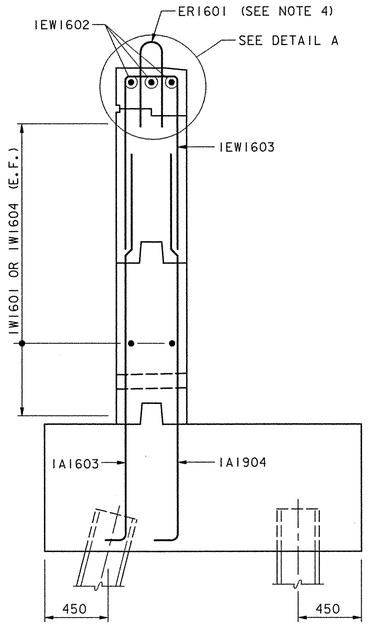
Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta. / Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
ABUTMENT NO.1	
Designed By J.T. KLEIN	Drawn By K.D. WENTWORTH
Checked By K.G. KRETSCH Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139A1	Sheet 66 of 124

VHB NO. 50735 plot date: 4/25/2005



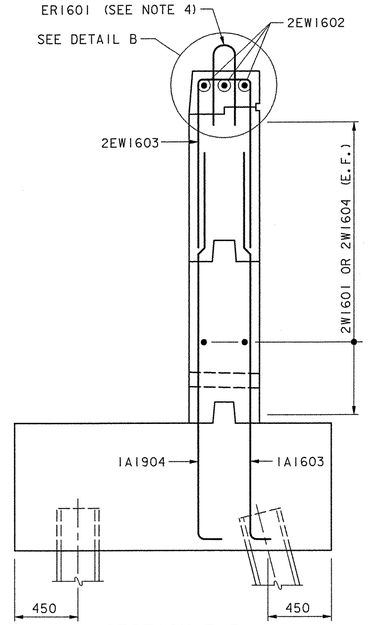
WINGWALL NO. 1 ELEVATION

SCALE: 1:20



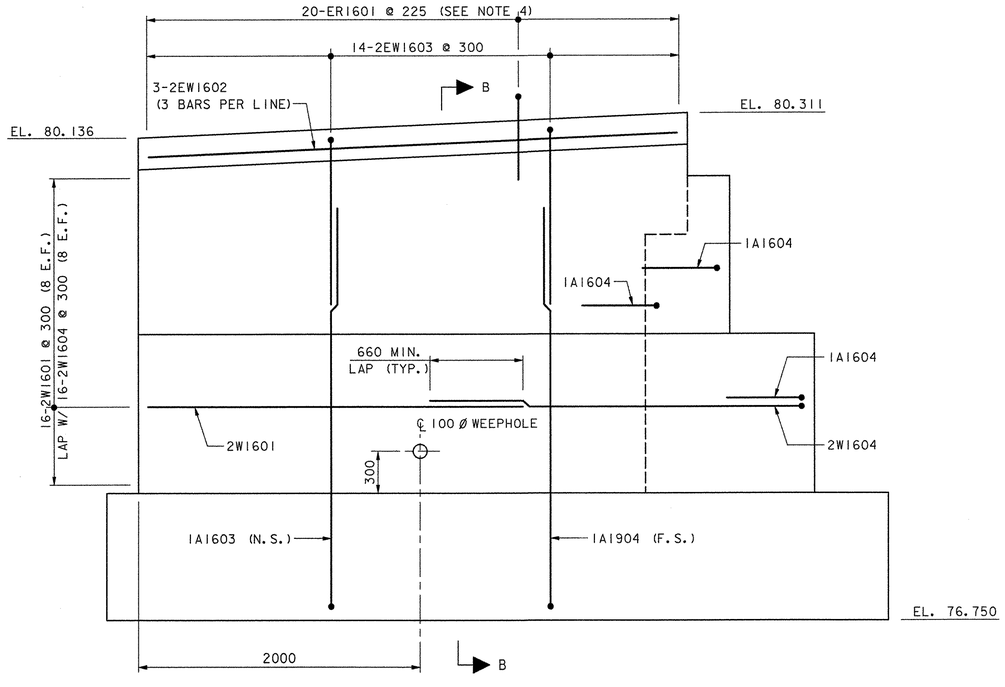
SECTION A-A

SCALE: 1:20



SECTION B-B

SCALE: 1:20

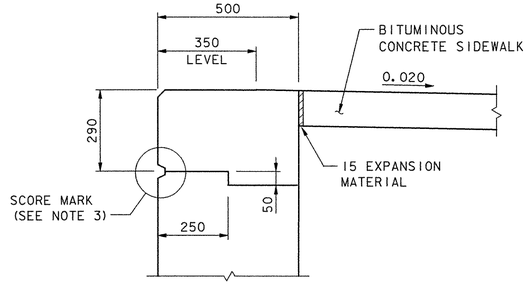


WINGWALL NO. 2 ELEVATION

SCALE: 1:20

0 500 1000 1500

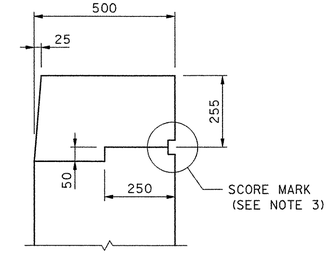
SCALE IN MILLIMETERS



DETAIL A

(REINFORCING NOT SHOWN FOR CLARITY)

SCALE: 1:10



DETAIL B

(REINFORCING NOT SHOWN FOR CLARITY)

SCALE: 1:10

0 250 500 750

SCALE IN MILLIMETERS

REINFORCING KEY

E.F. = EACH FACE
N.S. = NEAR SIDE
F.S. = FAR SIDE

NOTES:

1. ALL FOOTING REINFORCING NOT SHOWN FOR CLARITY.
2. SEE CONCRETE BRIDGE RAIL DETAILS ON SHEETS 79-81 FOR BAR ER1601. ALL COSTS FOR REINFORCING BARS IN CONCRETE BRIDGE RAIL SHALL BE INCLUDED IN ITEM 525.50, CAST-IN-PLACE CONCRETE BRIDGE RAIL.
3. SEE SHEET 55 FOR SCORE MARK DETAIL.
4. QUANTITES FOR REINFORCING BARS IN CONCRETE BRIDGE RAIL ARE NOT INCLUDED IN THE REINFORCING STEEL SCHEDULE (SEE NOTE 2).

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

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

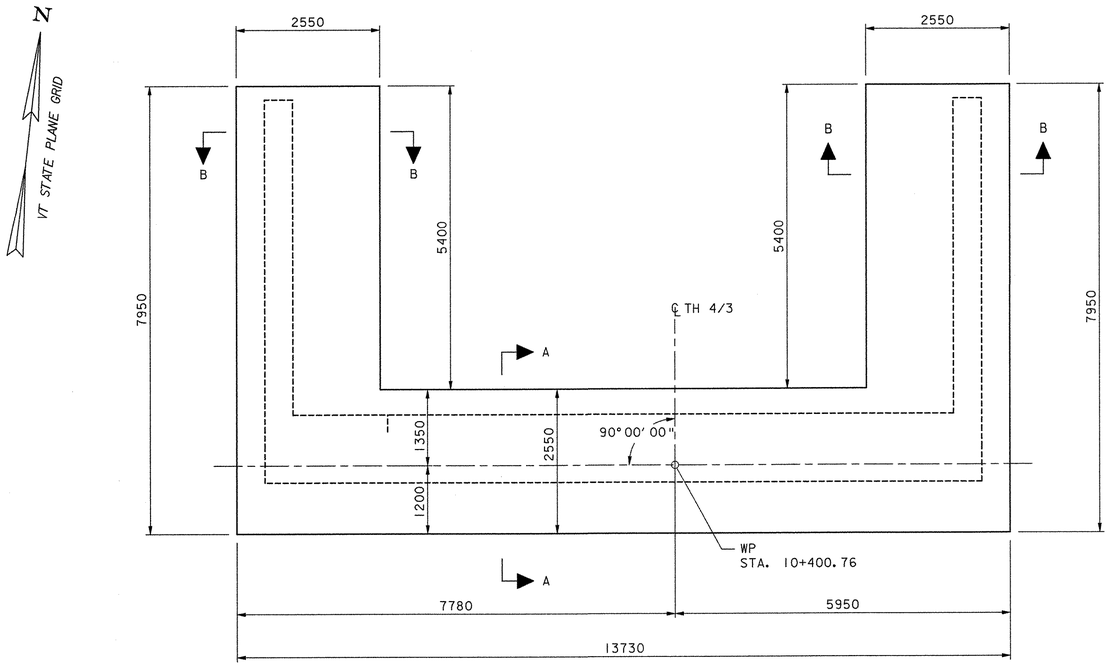
ABUTMENT NO.1 WINGWALLS

Designed By J.T. KLEIN	Drawn By K.D. WENTWORTH
Checked By K.G. KRETSCH Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139WW1	Sheet 67 of 124

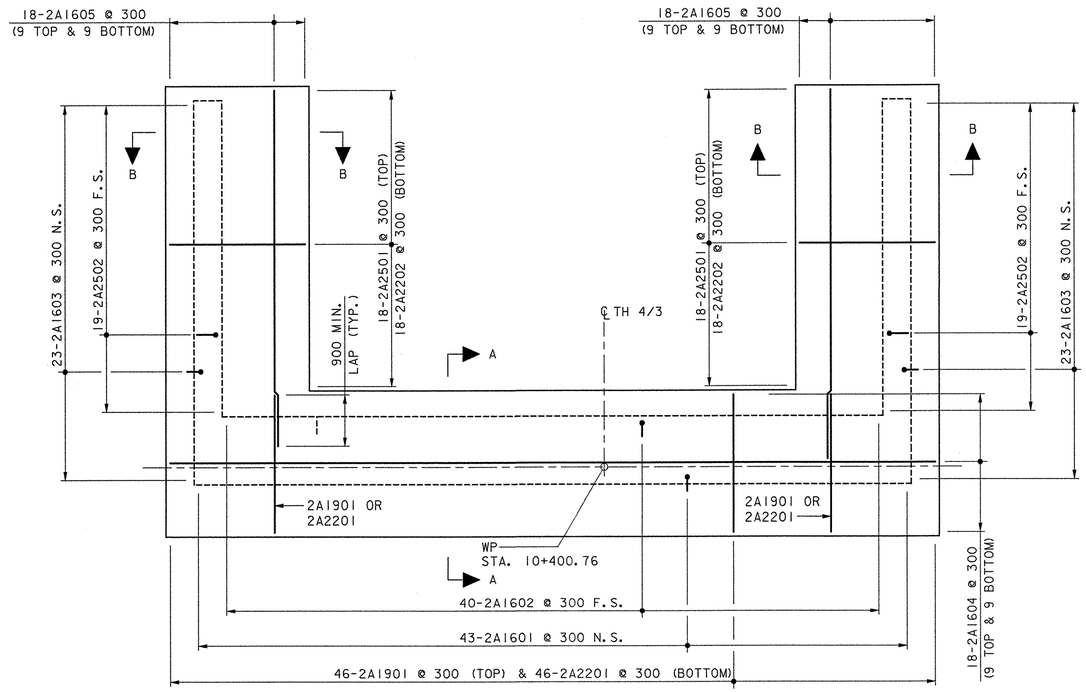
VHB Vanasse Hangen Brustlin, Inc.

VHB NO. 50735

plot date: 4/25/2005

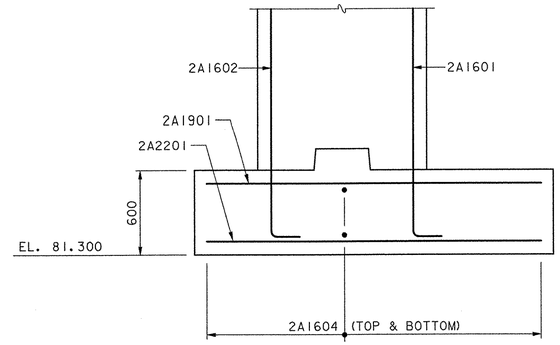


MASONRY
SCALE: 1:50

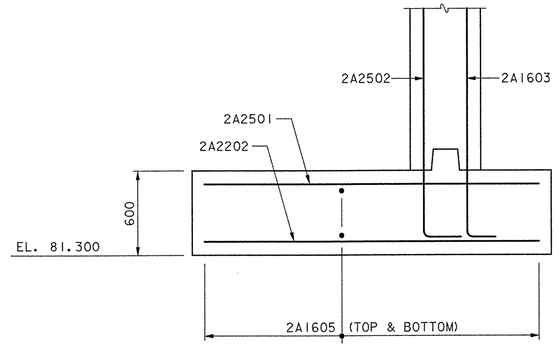


REINFORCING
SCALE: 1:50

0 1250 2500 3750
SCALE IN MILLIMETERS



SECTION A-A
SCALE: 1:20



SECTION B-B
SCALE: 1:20

0 500 1000 1500
SCALE IN MILLIMETERS

REINFORCING KEY

E.F. = EACH FACE
N.S. = NEAR SIDE
F.S. = FAR SIDE

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

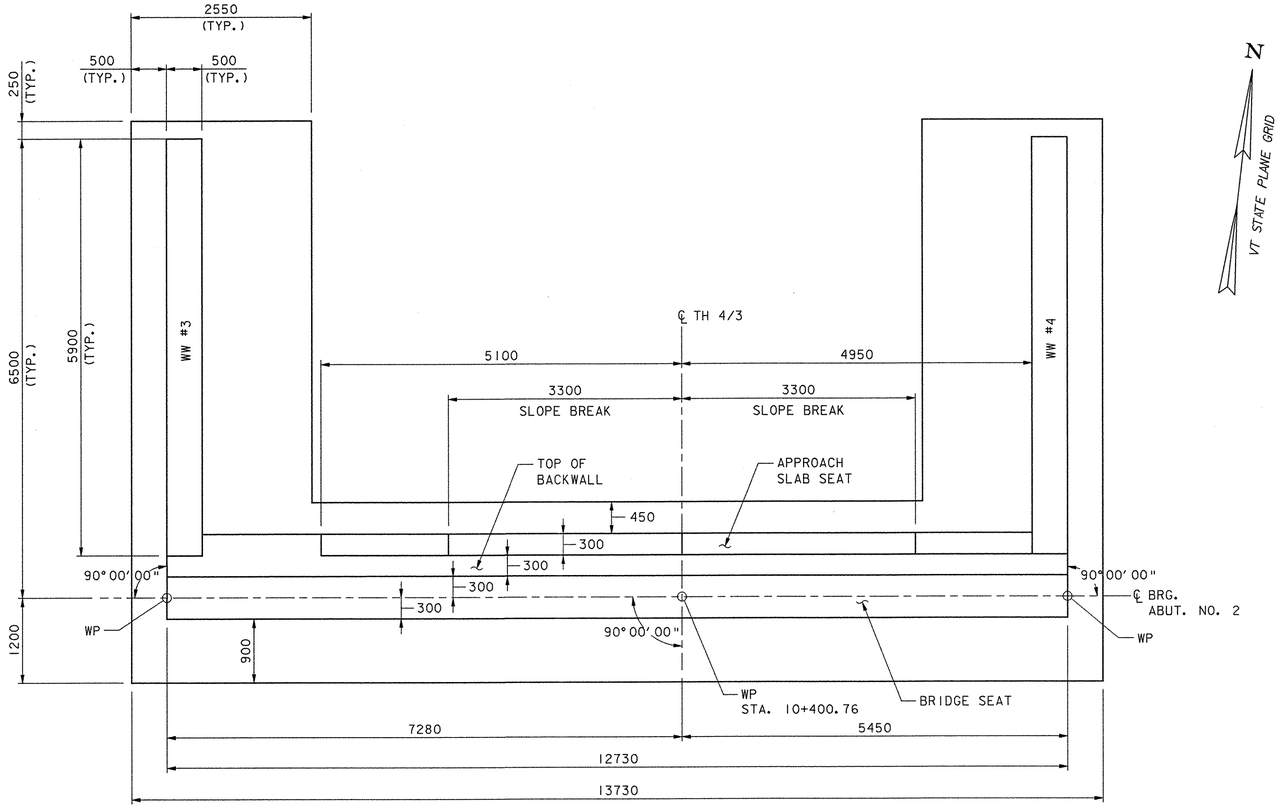
Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta.
	Surv. Sta.

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

ABUTMENT NO. 2 FOOTING

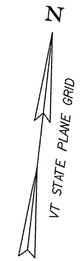
Designed By J.T. KLEIN	Drawn By K.D. WENTWORTH
Checked By K.G. KRETSCH Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139AF2	Sheet 68 of 124

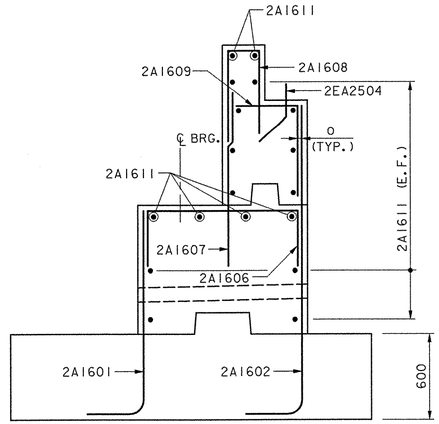
VHB NO. 50735 plot date: 4/25/2005



PLAN

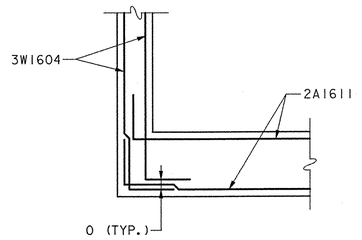
SCALE: 1:40





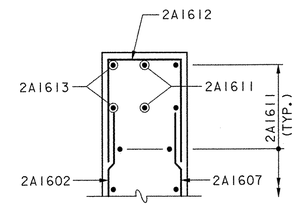
SECTION A-A

SCALE: 1:20



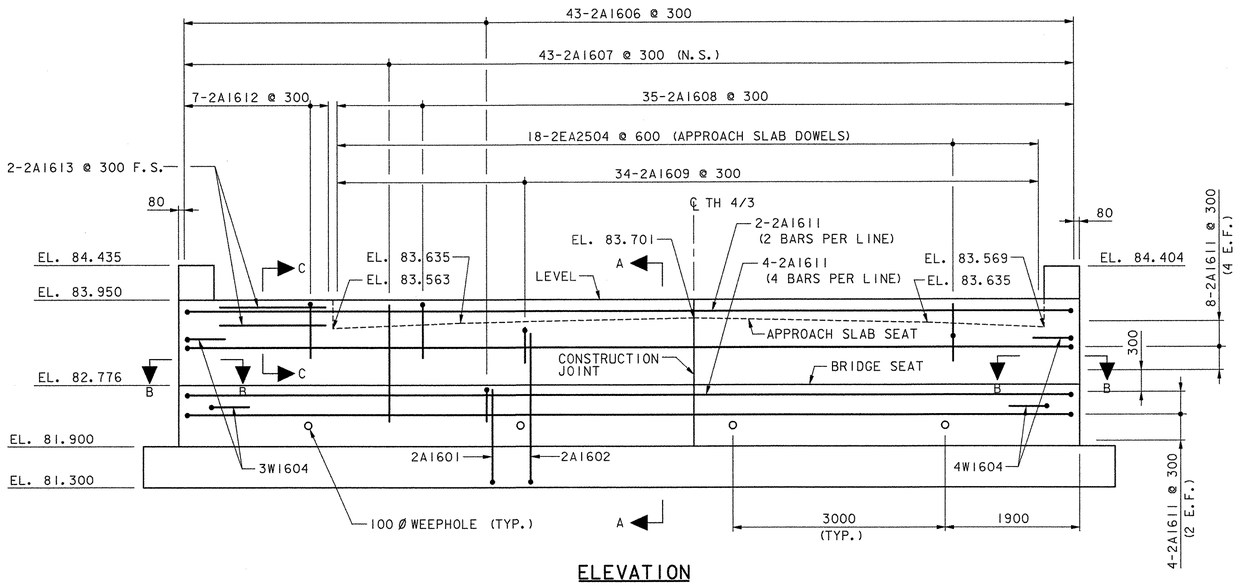
SECTION B-B

(WW #3 SHOWN, WW #4 SIMILAR)
(VERTICAL REINFORCING NOT SHOWN FOR CLARITY)
SCALE: 1:20



SECTION C-C

SCALE: 1:20



ELEVATION

SCALE: 1:40

0 500 1000 1500

SCALE IN MILLIMETERS

0 1000 2000 3000

SCALE IN MILLIMETERS

NOTES:

1. ALL FOOTING REINFORCING NOT SHOWN FOR CLARITY.
2. SEE SHEET 66 FOR WEEPHOLE DETAIL.

REINFORCING KEY

E.F. = EACH FACE
N.S. = NEAR SIDE
F.S. = FAR SIDE

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

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

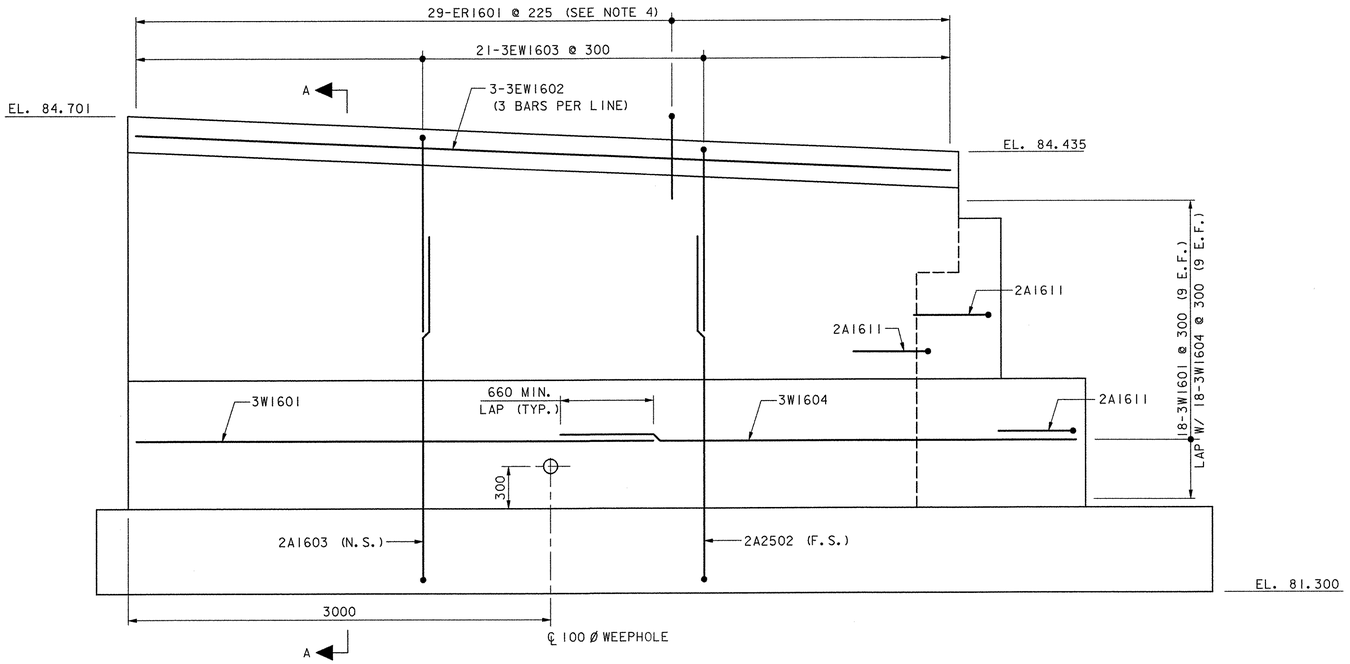
ABUTMENT NO.2

Designed By J.T. KLEIN	Drawn By K.D. WENTWORTH
Checked By K.G. KRETSCH Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139A2	Sheet 69 of 124

VHB NO. 50735

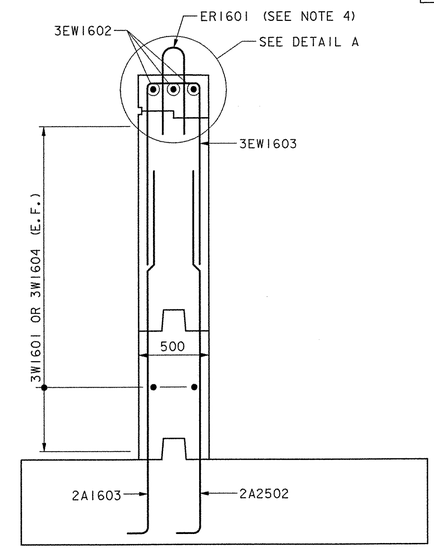
plot date: 4/25/2005

Metric



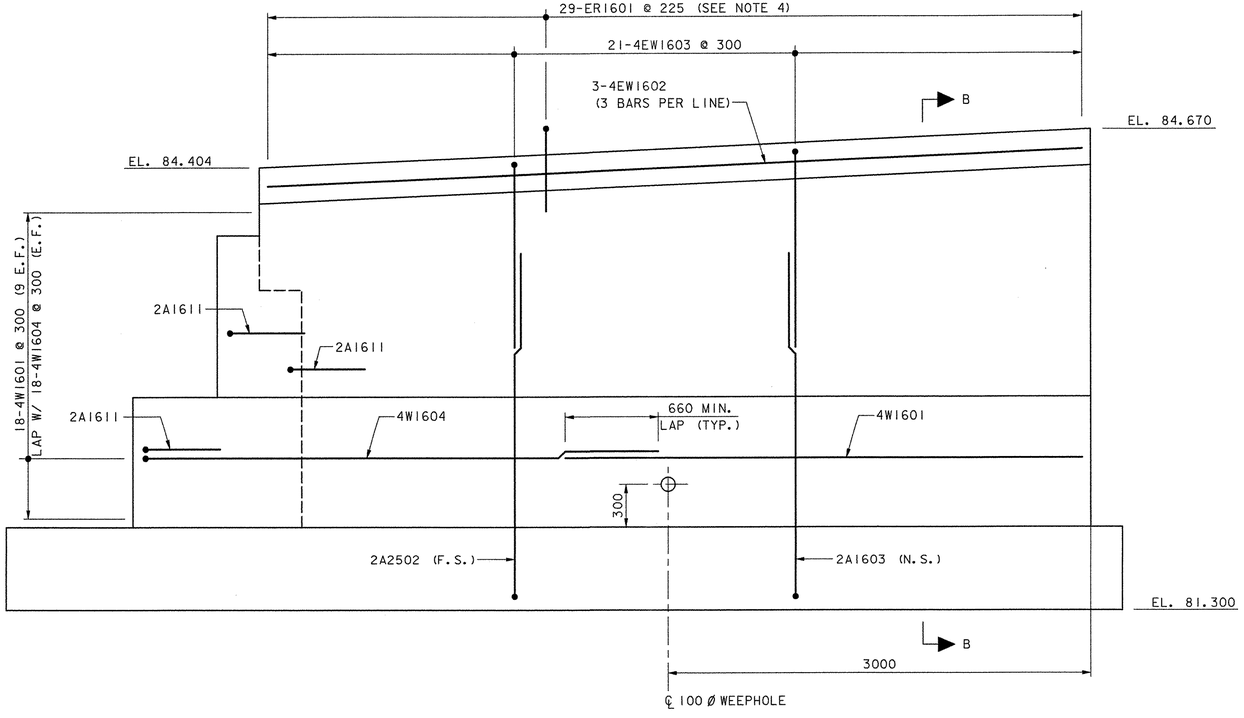
WINGWALL NO. 3 ELEVATION

SCALE: 1:20



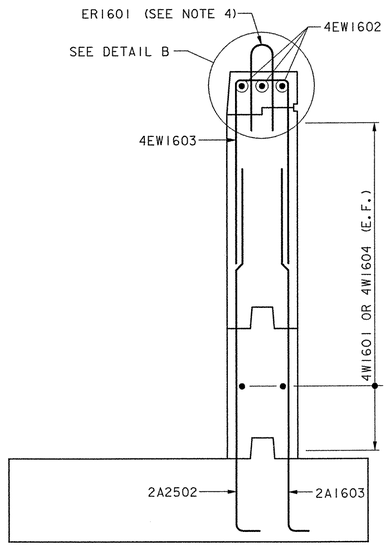
SECTION A-A

SCALE: 1:20



WINGWALL NO. 4 ELEVATION

SCALE: 1:20



SECTION B-B

SCALE: 1:20

REINFORCING KEY

E.F. = EACH FACE
N.S. = NEAR SIDE
F.S. = FAR SIDE

NOTES:

1. ALL FOOTING REINFORCING NOT SHOWN FOR CLARITY.
2. SEE CONCRETE BRIDGE RAIL DETAILS ON SHEETS 79-81 FOR BAR ER1601. ALL COSTS FOR REINFORCING BARS IN CONCRETE BRIDGE RAIL SHALL BE INCLUDED IN ITEM 525.50, CAST-IN-PLACE CONCRETE BRIDGE RAIL.
3. SEE SHEET 67 FOR DETAILS A AND B.
4. QUANTITES FOR REINFORCING BARS IN CONCRETE BRIDGE RAIL ARE NOT INCLUDED IN THE REINFORCING STEEL SCHEDULE (SEE NOTE 2).

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

0 500 1000 1500
SCALE IN MILLIMETERS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

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

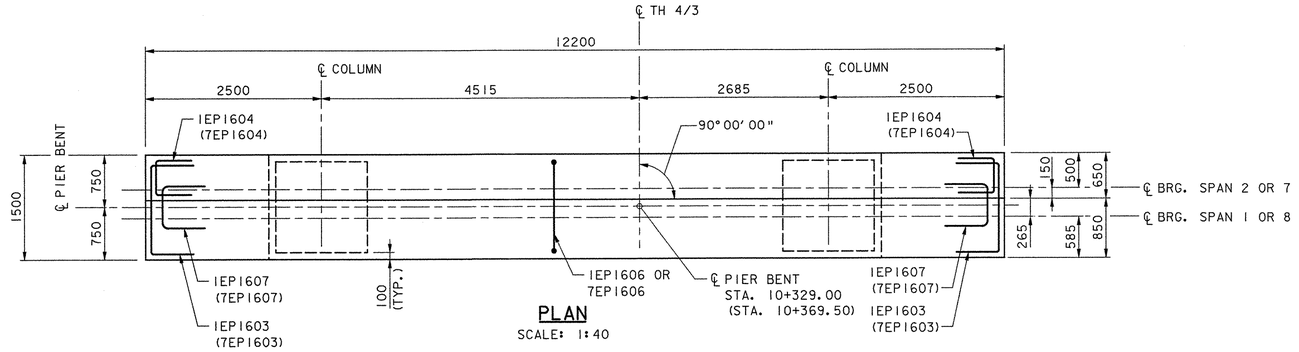
ABUTMENT NO. 2 WINGWALLS

Designed By J.T. KLEIN	Drawn By K.D. WENTWORTH
Checked By K.G. KRETSCH Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139WW2	Sheet 70 of 124

VHB Vanasse Hangen Brustlin, Inc.

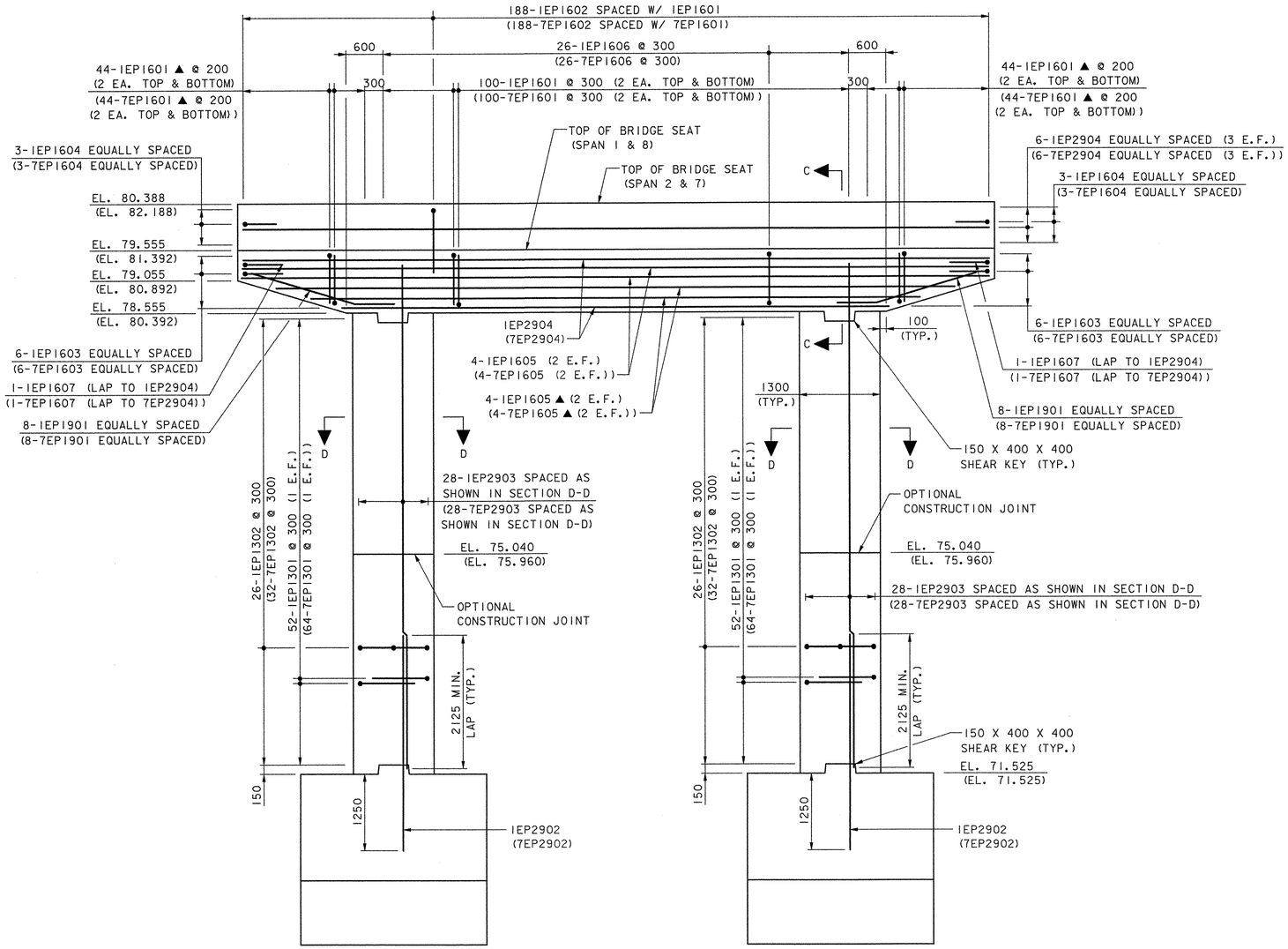
VHB NO. 50735

plot date: 4/25/2005



PLAN

SCALE: 1:40



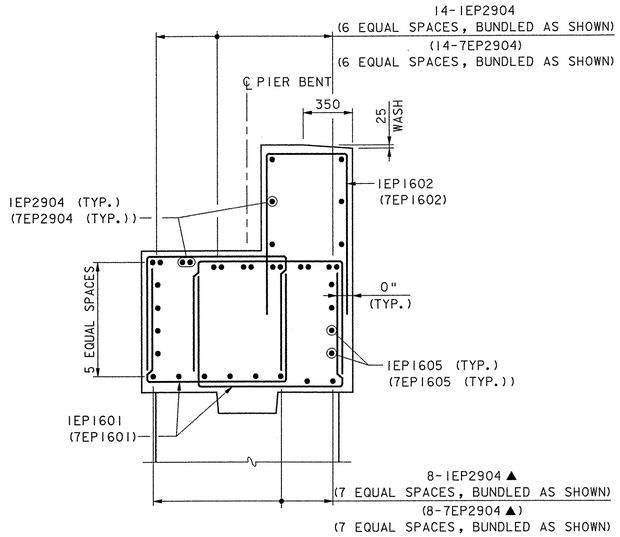
ELEVATION

(VIEW AS SEEN FROM NEAR ABUTMENT)

SCALE: 1:40

0 1000 2000 3000

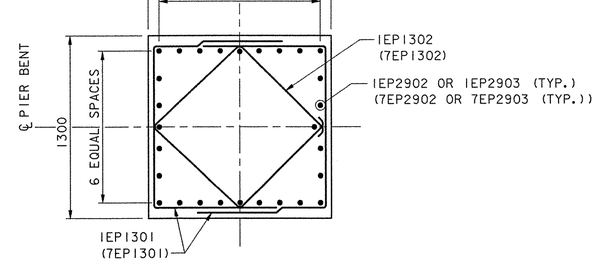
SCALE IN MILLIMETERS



SECTION C-C

1EP2903 (7EP2903) NOT SHOWN FOR CLARITY

SCALE: 1:20



SECTION D-D

SCALE: 1:20

0 500 1000 1500

SCALE IN MILLIMETERS

NOTES:

1. PIER BENT 1 SHOWN, PIER BENT 7 SHOWN IN PARENTHESES.
2. SEE SHEET 76 FOR ARCH FOUNDATION REINFORCING.

REINFORCING KEY

E.F. = EACH FACE
N.S. = NEAR SIDE
F.S. = FAR SIDE
▲ = CUT IN FIELD

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

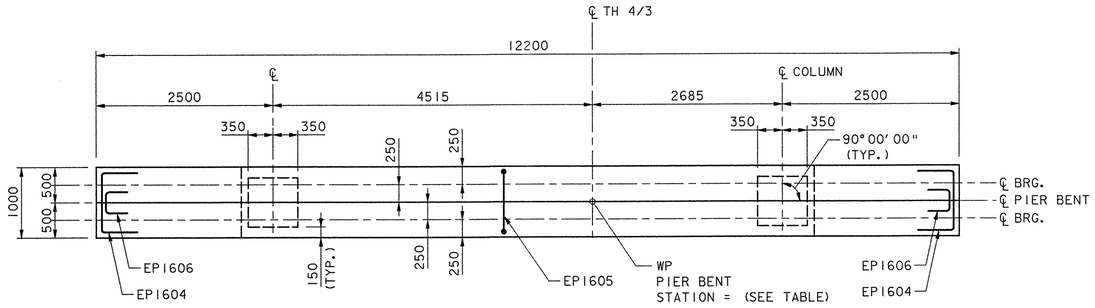
Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta.
	Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	

PIER BENTS 1 & 7 PLAN & ELEVATION

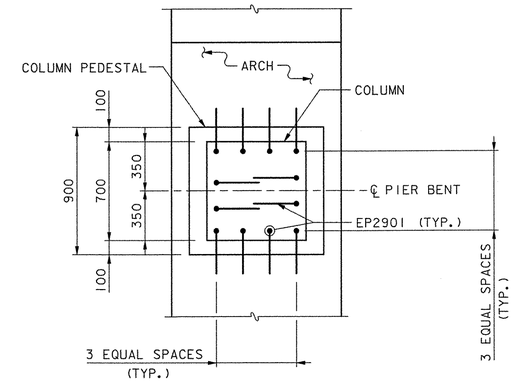
Designed By W.M. MOSHER	Drawn By B.J. MASSE
Checked By K.G. KRETSCH Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139P1&7	Sheet 71 of 124

VHB NO. 50735

plot date: 4/25/2005



PLAN
SCALE: 1:40



SECTION A-A
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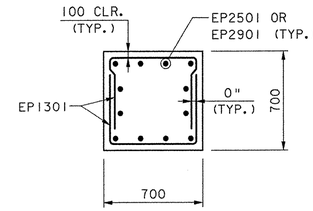
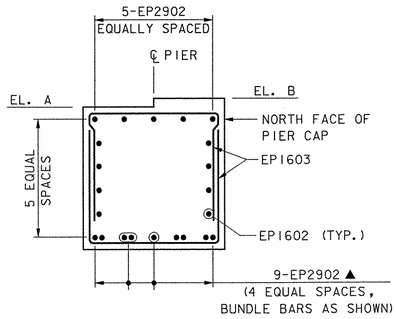
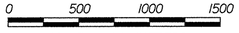
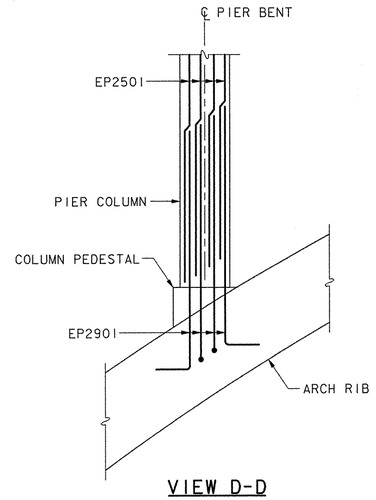


SECTION B-B
SCALE: 1:20

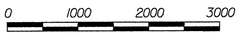


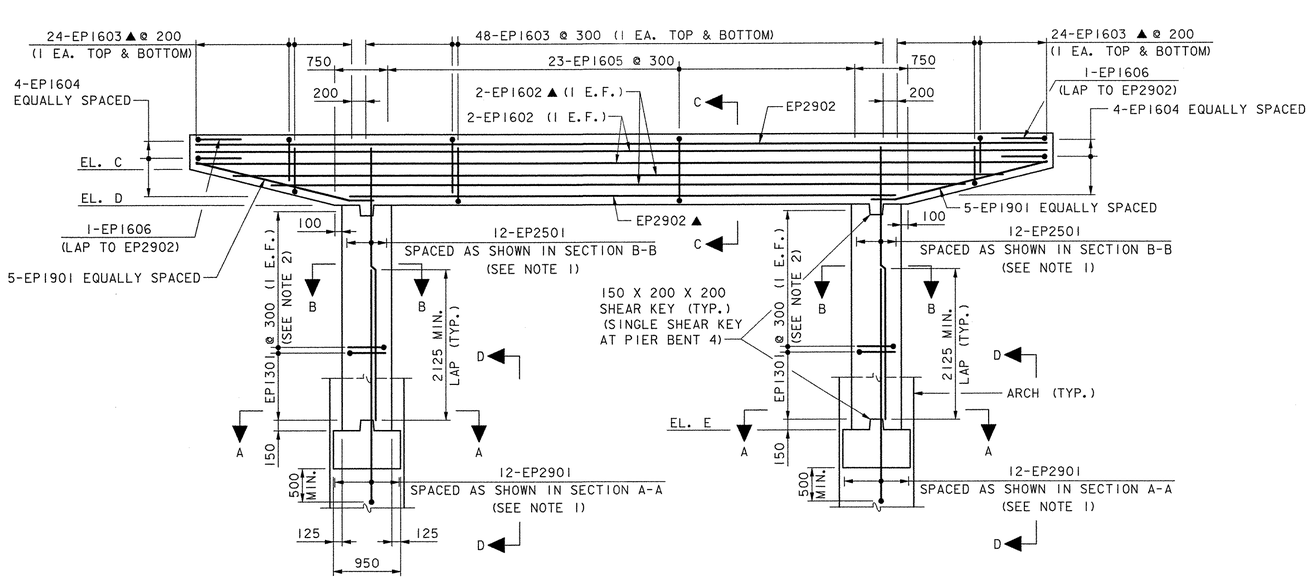
SECTION C-C
SCALE: 1:20



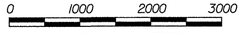


VIEW D-D
PIER COLUMN NO. 2 SHOWN, NOS. 3-6 SIMILAR
SCALE: 1:40





ELEVATION
SCALE: 1:40
(COLUMN HEIGHT N.T.S. SEE TABLE FOR DIMENSIONS)



PIER BENT	STATION	ELEVATIONS				
		A	B	C	D	E
2	10+335.75	80.670	80.692	80.170	79.670	75.997
3	10+342.50	80.973	80.996	80.473	79.973	78.992
4	10+349.25	81.277	81.300	80.777	80.277	80.277
5	10+356.00	81.581	81.603	81.081	80.581	78.992
6	10+362.75	81.885	81.907	81.385	80.885	75.997

REINFORCING KEY

E.F. = EACH FACE
N.S. = NEAR SIDE
F.S. = FAR SIDE
▲ = CUT IN FIELD

NOTES:

1. BAR EP2501 OCCURS AT PIERS 2 AND 6 ONLY. BAR EP2901 EXTENDS INTO PIER CAP AT PIERS 3, 4, & 5.
2. SEE REINFORCING STEEL SCHEDULE, SHEETS 82-83 FOR EP1301 QUANTITIES. ONE HALF OF THE TOTAL QUANTITY OF BARS SHALL BE PLACED IN EACH COLUMN.
3. PIER PREFIX FOR REINFORCING IS OMITTED FOR CLARITY. PREFIX IS CALLED OUT ON REINFORCING STEEL SCHEDULE.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

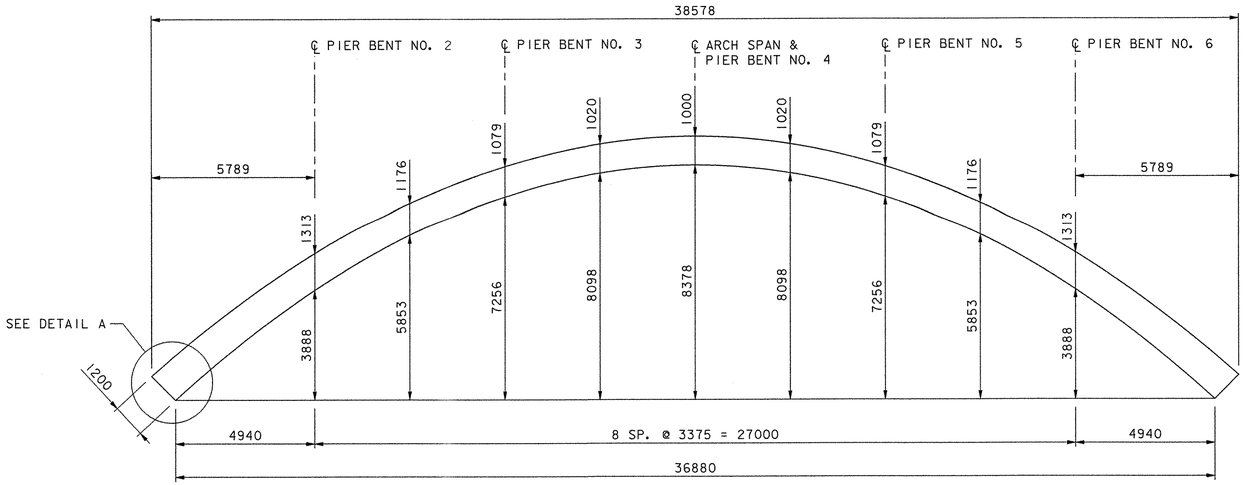
VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta.
	Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
PIER BENTS 2 - 6 PLAN & ELEVATION	
Designed By W.M. MOSHER	Drawn By B.J. MASSE
Checked By K.G. KRETSCH Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139P2-6	Sheet 72 of 124

VHB NO. 50735

plot date: 4/25/2005

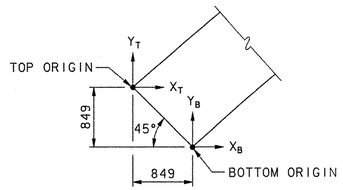


ARCH GEOMETRY DIAGRAM

SCALE: 1:100

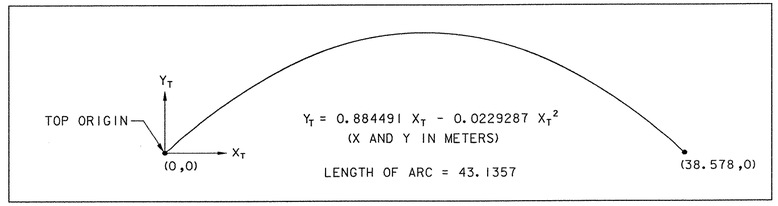
0 2500 5000 7500

SCALE IN MILLIMETERS



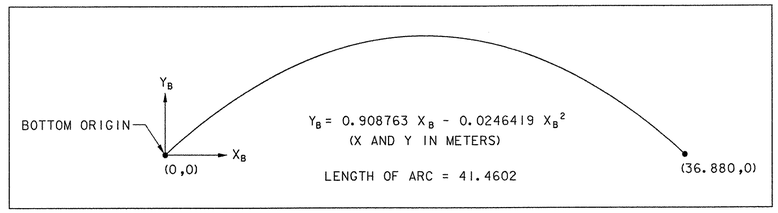
DETAIL A

NOT TO SCALE



TOP OF ARCH LAYOUT

NOT TO SCALE

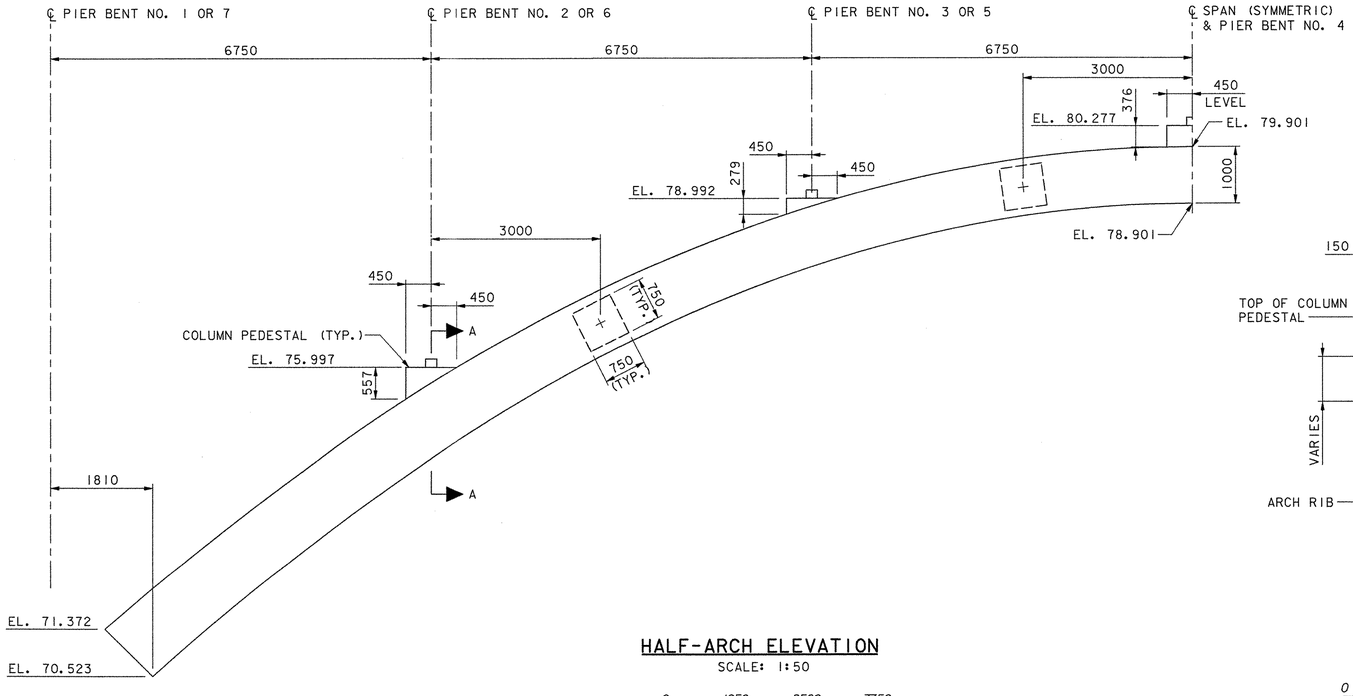


BOTTOM OF ARCH LAYOUT

NOT TO SCALE

NOTES:

1. ARCH FALSEWORK SHALL BE CONSTRUCTED IN STRICT ACCORDANCE WITH SECTION 501.09A OF THE SUPPLEMENTAL SPECIFICATIONS. ALL ARCH FALSEWORK AND FORM WORK SHALL BE SUBMITTED FOR APPROVAL TO THE STRUCTURES ENGINEER IN ACCORDANCE WITH SECTION 105.03 OF THE STANDARD SPECIFICATIONS
2. CONCRETE IN EACH ARCH SHALL BE SIMULTANEOUSLY PLACED FROM BOTH ENDS OF THE ARCH SUCH THAT THE LEVEL OF CONCRETE IS SUBSTANTIALLY EVEN AT ALL TIMES. CONCRETE SHALL BE KEPT PLASTIC UNTIL THE ENTIRE ARCH PLACEMENT IS COMPLETE.
3. ARCH FALSEWORK SHALL REMAIN IN PLACE UNTIL AFTER ERECTION OF ALL BOX BEAMS AND SOLID SLABS.
4. ALL GRADES AND DIMENSIONS HAVE BEEN CALCULATED FOR CONSTRUCTION PURPOSES UNLESS OTHERWISE NOTED. INSTANTANEOUS DEFLECTION OF THE STRUCTURE IS ANTICIPATED TO BE 5 mm AT THE CENTER OF THE ARCH SPAN AFTER CONSTRUCTION OF ALL BENTS (COLUMNS AND FLOORBEAMS). LONG-TERM DEFLECTION IS ANTICIPATED TO BE A TOTAL OF APPROXIMATELY 19 mm. THE CONTRACTOR IS RESPONSIBLE FOR INCORPORATING THE TOTAL CAMBER AND DEFLECTIONS WHEN BUILDING THE FRAMEWORK.
5. PEDESTALS SHALL BE CAST INTEGRALLY WITH THE ARCH RIBS.
6. DIAPHRAGMS SHALL BE ORIENTED IN LINE WITH THE ARCH RIBS.
7. THE ELEVATIONS SHOWN ON THE PLANS ARE DESIGN ELEVATIONS AND DO NOT INCLUDE THE THEORETICAL INSTANTANEOUS AND LONG TERM DEFLECTIONS OF THE ARCH RIBS AND PIER BENTS. THE CONTRACTOR IS RESPONSIBLE FOR INCORPORATING THE INSTANTANEOUS AND LONG TERM DEFLECTIONS WHEN CONSTRUCTING THE ARCH AND PIER BENT FORM WORK. THE CONTRACTOR SHALL PROVIDE ACTUAL SURVEYED ELEVATIONS AFTER EACH PHASE, INCLUDING FALSEWORK ERECTION, FORM WORK CONSTRUCTION, AND EACH CONCRETE PLACEMENT SEQUENCE AND SHALL COMPARE THESE WITH THE PROPOSED DESIGN ELEVATIONS. THIS INFORMATION SHALL BE PROVIDED TO THE RESIDENT ENGINEER FOR REVIEW BEFORE PROCEEDING WITH THE NEXT PHASE OF ARCH OR PIER BENT CONSTRUCTION. THESE SURVEYED ELEVATIONS WILL BE USED BY THE CONTRACTOR TO MAKE MODIFICATIONS IN THE FIELD BASED UPON ACTUAL CONDITIONS. THE CONTRACTOR SHALL ENSURE THAT THE FINAL PROPOSED BRIDGE SEAT ELEVATIONS SHOWN ON THE PLANS ARE ACHIEVED. ALL COST FOR SURVEYS, COORDINATION, AND ELEVATION MOFIFICATIONS SHALL BE INCIDENTAL TO THE APPROPRIATE CONCRETE PAY ITEM FOR THAT COMPONENT OF THE BRIDGE.

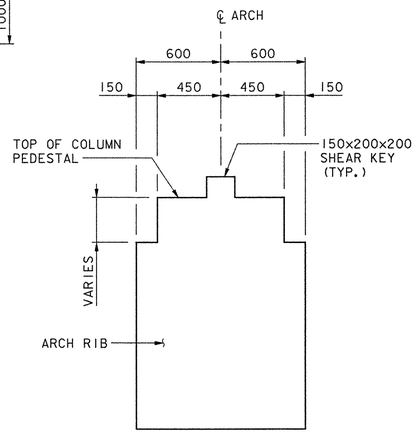


HALF-ARCH ELEVATION

SCALE: 1:50

0 1250 2500 3750

SCALE IN MILLIMETERS



SECTION A-A

SCALE: 1:20

0 500 1000 1500

SCALE IN MILLIMETERS

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB *Vanasse Hangen Brustlin, Inc.*

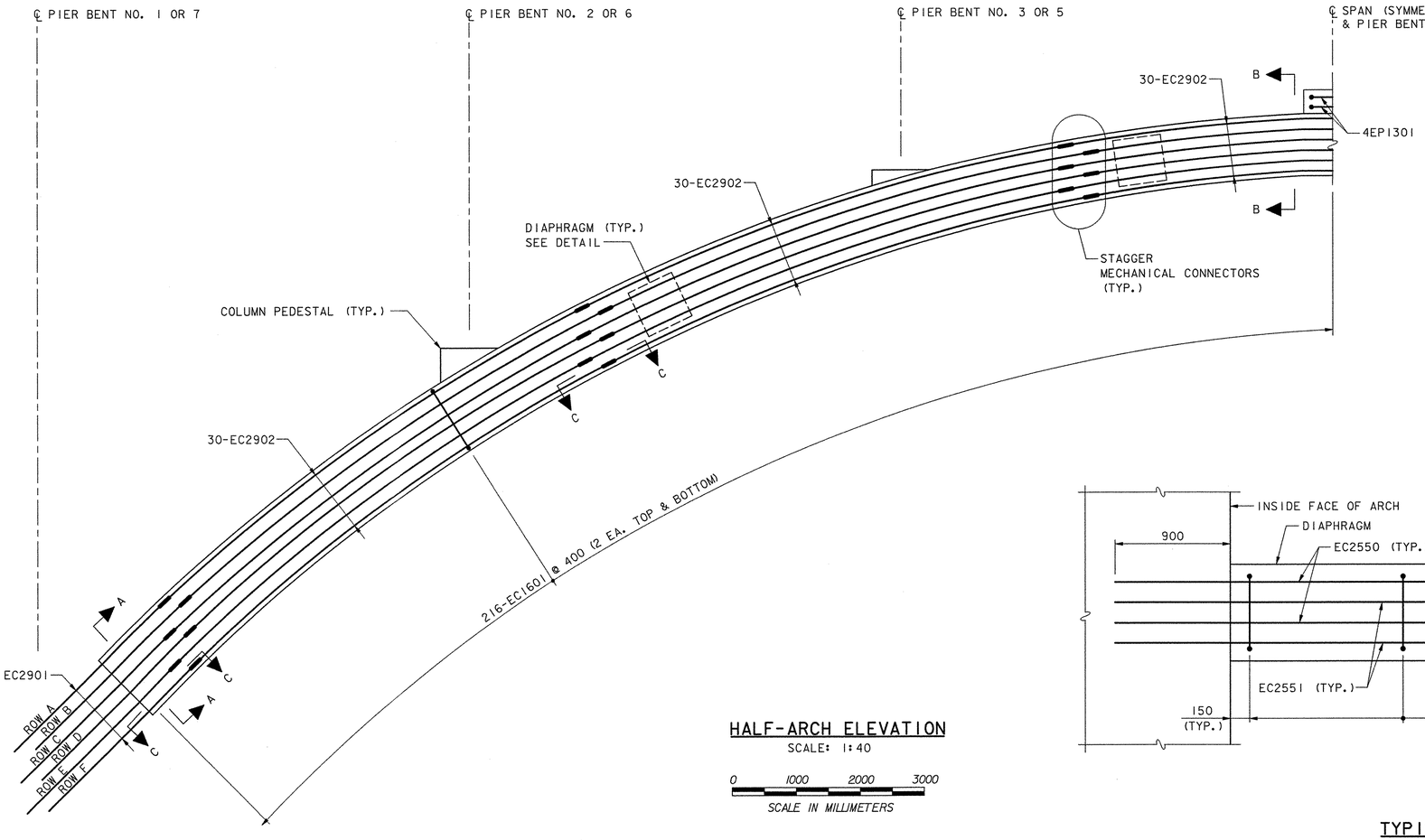
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta. / Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
ARCH MASONRY	
Designed By W.M. MOSHER	Drawn By B.J. MASSE
Checked By K.G. KRETSCH Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139AE	Sheet 73 of 124

VHB NO. 50735

plot date: 5/2/2005

Metric

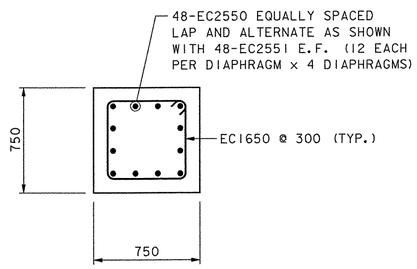


HALF-ARCH ELEVATION

SCALE: 1:40

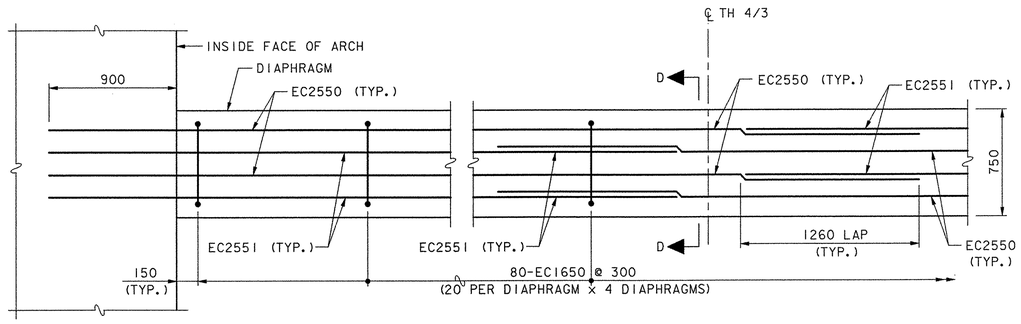
0 1000 2000 3000

SCALE IN MILLIMETERS



SECTION D-D

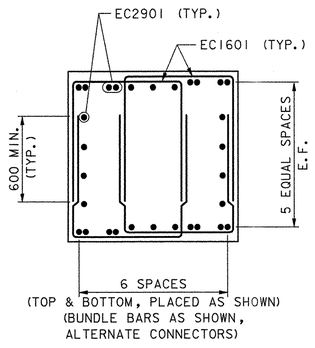
SCALE: 1:20



PARTIAL PLAN

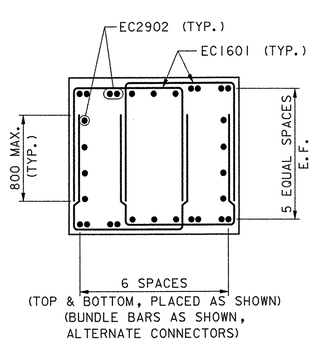
TYPICAL DIAPHRAGM DETAIL

SCALE: 1:20



SECTION A-A

SCALE: 1:20

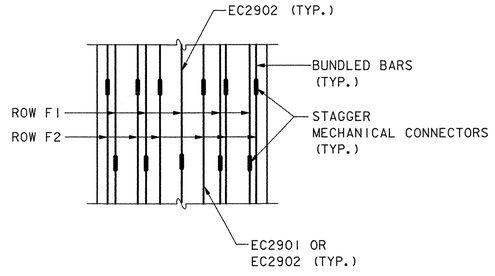


SECTION B-B

SCALE: 1:20

0 500 1000 1500

SCALE IN MILLIMETERS



SECTION C-C

(ROW F SHOWN, ROW A SIMILAR)
SCALE: 1:20

REINFORCING KEY

E.F. = EACH FACE
N.S. = NEAR SIDE
F.S. = FAR SIDE

NOTES:

1. QUANTITIES SHOWN ARE FOR HALF OF ONE ARCH ONLY. SEE REINFORCING SCHEDULE FOR TOTAL QUANTITIES.
2. SEE EMBEDMENT LENGTH TABLE FOR ROW A THRU ROW F ON SHEET 76.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

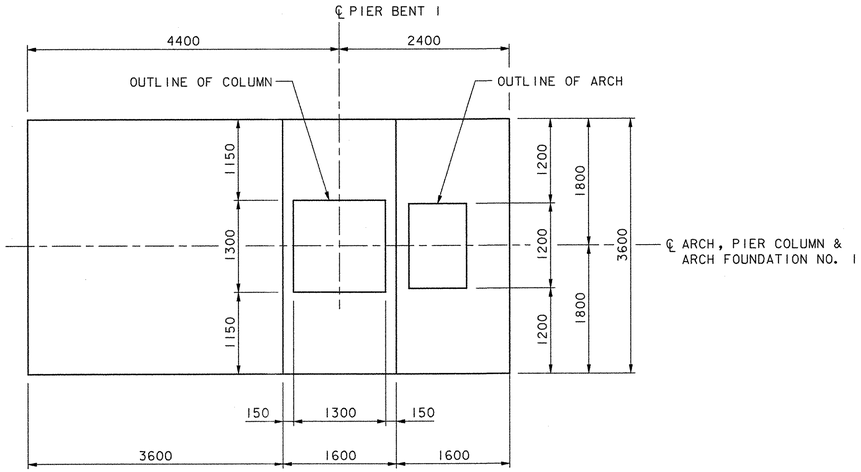
VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

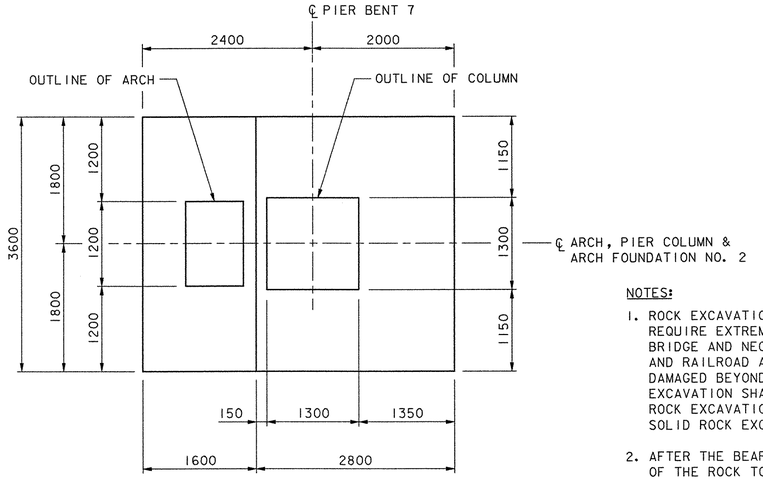
Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
	Log Sta.
Highway No. TH 4/3	Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
ARCH REINFORCING	
Designed By W.M. MOSHER	Drawn By B.J. MASSE
Checked By K.G. KRETSCH Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139AR	Sheet 74 of 124

VHB NO. 50735

plot date: 4/28/2005



PLAN
SCALE: 1:40



PLAN
SCALE: 1:40

NOTES:

1. ROCK EXCAVATION FOR CONSTRUCTION OF FOUNDATIONS WILL REQUIRE EXTREME CARE IN CLOSE PROXIMITY TO THE EXISTING BRIDGE AND NECR TO AVOID DAMAGE TO THE EXISTING BRIDGE AND RAILROAD AND ENSURE THAT ROCK TO REMAIN IS NOT DAMAGED BEYOND BLASTING LIMITS. ALL COST FOR ROCK EXCAVATION SHALL BE INCLUDED UNDER ITEM 203.16, SOLID ROCK EXCAVATION (MOD. - CLOSE-IN BLASTING) AND ITEM 203.16, SOLID ROCK EXCAVATION (MOD. - MECHANICAL SPLITTING).

2. AFTER THE BEARING SURFACE IS EXPOSED, DIAMOND CORING OF THE ROCK TO A DEPTH OF 9.0 m BELOW EACH ARCH FOUNDATION (4 TOTAL) SHALL BE COMPLETED TO VERIFY ROCK MASS SOUNDNESS. CORING SHALL BE CONDUCTED UTILIZING NX SIZE DOUBLE TUBE CORING TECHNIQUES IN ACCORDANCE WITH AASHTO T-225 (DIAMOND CORE DRILLING FOR SITE INVESTIGATION). GEOLOGIC LOGGING SHALL BE PERFORMED BY THE VTRANS GEOLOGIST. AT THE DIRECTION OF THE VTRANS GEOLOGIST, DIAMOND CORE HOLES SHALL BE TREMIE GROUTED WITH NEAT CEMENT GROUT HAVING A MINIMUM UNCONFINED COMPRESSIVE STRENGTH OF 30 MPa. ALL COST FOR DIAMOND CORING AND GROUTING SHALL BE PAID UNDER ITEM 507.16, DRILLING AND GROUTING DOWELS (MOD. 11 - DIAMOND CORING).

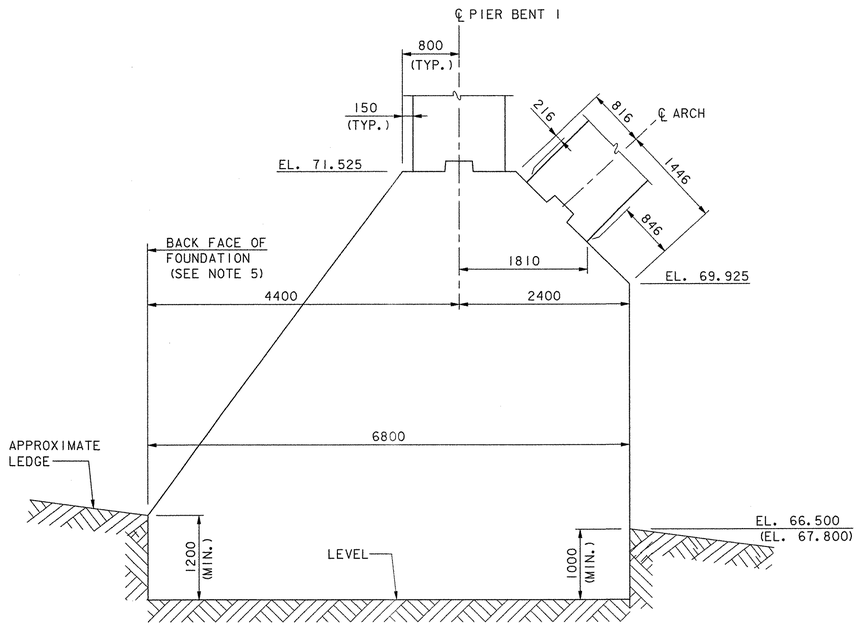
3. FOLLOWING EXPOSURE OF THE ARCH PIER BEARING SURFACE LOCATIONS, THE ENGINEER OR THE VTRANS GEOLOGIST SHALL MAP THE EXPOSED BEARING SURFACES AND ROCK SLOPE ADJACENT TO THE FOUNDATIONS TO ASSESS THE NEED FOR ROCK MASS REINFORCEMENT. REINFORCING SHALL CONSIST OF ROCK DOWELS AS SHOWN ON THIS SHEET. THE NUMBER AND LENGTH OF ROCK DOWELS WILL BE DETERMINED BY THE ENGINEER AND VTRANS GEOLOGIST.

4. THE PREPARED BEARING SURFACE SHOULD BE PRESSURE WASHED PRIOR TO CONCRETE PLACEMENT AND SHOULD NOT HAVE PROJECTIONS GREATER THAN 100 mm THAT REDUCE THE CONCRETE COVER OVER REINFORCING STEEL OR THAT CANNOT BE SPANNED BY THE FOUNDATION REINFORCEMENT. OVER-EXCAVATED AREAS SHOULD BE CLEANED OF ALL BROKEN MATERIAL AND BACKFILLED WITH CLASS A CONCRETE.

5. CONSTRUCT THE BACK VERTICAL FACE OF EACH ARCH FOUNDATION AGAINST SOLID LEDGE. THE BACK SLOPING FACE OF ARCH FOUNDATION #1 SHALL BE A CONSTANT SLOPE BASED UPON THE MINIMUM DEPTH OF LEDGE DETERMINED IN THE FIELD.

ROCK DOWEL INSTALLATION NOTES:

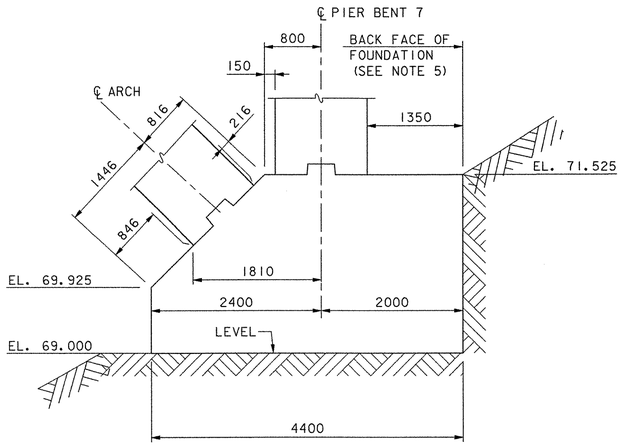
1. DRILL HOLE TO REQUIRED DEPTH.
2. FLUSH HOLE WITH DRILL WATER.
3. TREMIE GROUT TO BASE OF HOLE, WITHDRAWING TREMIE PIPE AS HOLE FILLS WITH GROUT.
4. LEAVE GROUT TO SIT FOR 5 MINUTES.
5. IF HOLE REMAINS FULL OF GROUT, INSERT BAR WITH CENTRALIZERS. IF GROUT LEVEL DROPS BY MORE THAN 100 mm, TOP OFF HOLE WITH GROUT AND REPEAT UNTIL GROUT LEVEL DROP IS LESS THAN 100 mm IN 5 MINUTES, THEN INSTALL DOWEL.
6. ALL COST FOR ROCK DOWEL INSTALLATION SHALL BE INCLUDED UNDER ITEM 507.16, DRILLING AND GROUTING DOWELS (MOD. 1 - ROCK DOWELING).



SECTION
SCALE: 1:40

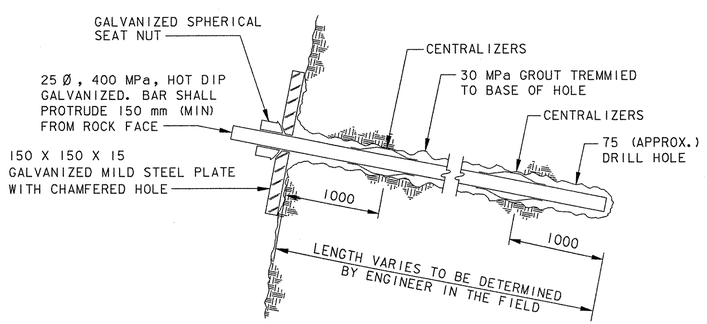
ARCH FOUNDATION NO. 1
(PIER BENT 1)
SOUTHEAST ARCH FOUNDATION SHOWN,
SOUTHWEST ARCH FOUNDATION SHOWN IN PARENTHESES

0 1000 2000 3000
SCALE IN MILLIMETERS



SECTION
SCALE: 1:40

ARCH FOUNDATION NO. 2
(PIER BENT 7)



ROCK DOWEL DETAIL
NOT TO SCALE

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

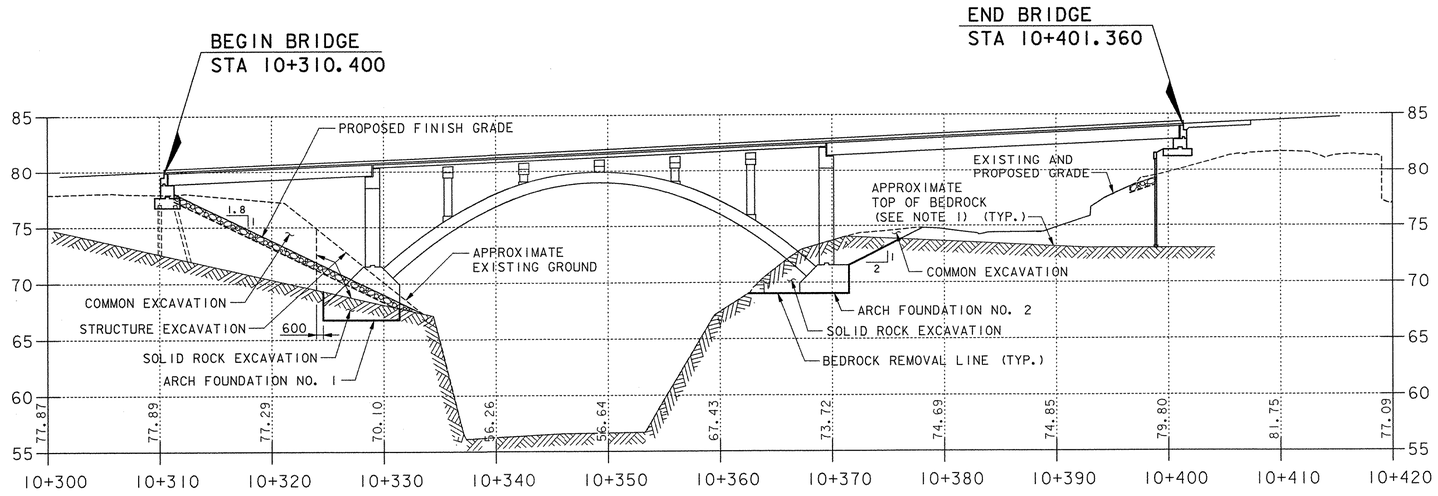
Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta.
	Surv. Sta.

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

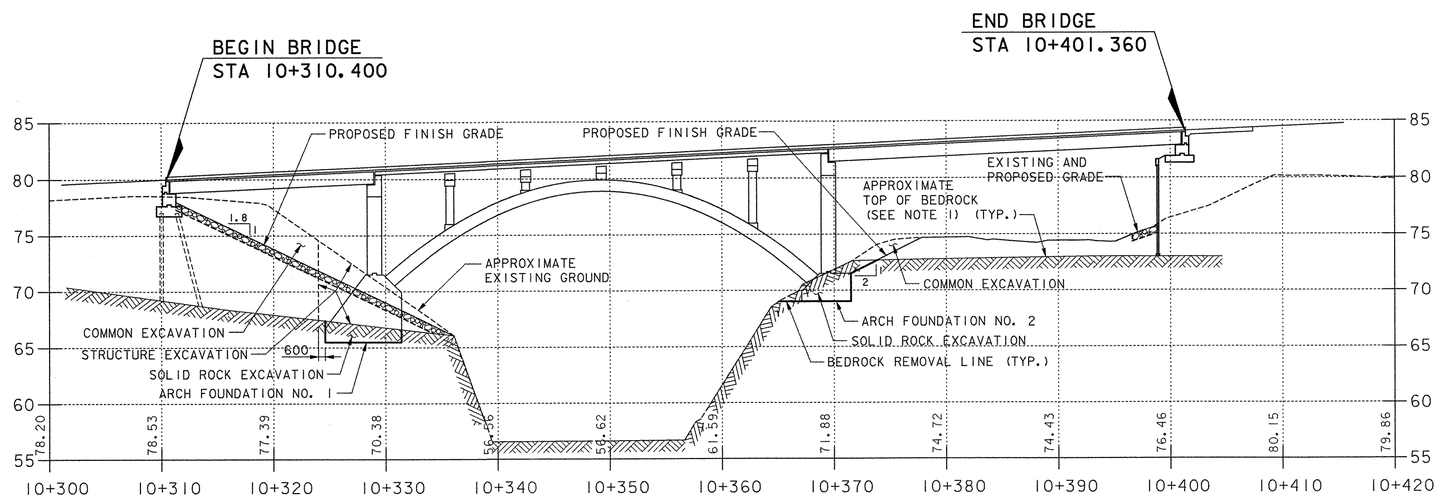
ARCH FOUNDATION MASONRY

Designed By W.M. MOSHER	Drawn By B.J. MASSE
Checked By K.G. KRETSCH Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6) S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139AFM	Sheet 75 of 124

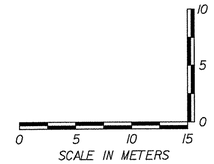
VHB NO. 50735 plot date: 5/2/2005



EXISTING GROUND PROFILE THROUGH WEST ARCH FOOTINGS
(5.0 m LEFT OF ROADWAY CENTERLINE, AT WEST ARCH FASCIA)



EXISTING GROUND PROFILE THROUGH EAST ARCH FOOTINGS
(3.0 m RIGHT OF ROADWAY CENTERLINE, AT EAST ARCH FASCIA)



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

NOTE:

1. EXISTING GROUND AND BEDROCK LOCATIONS ARE BASED ON ENGINEERING INTERPRETATION FROM AVAILABLE SUBSURFACE INFORMATION AND MAY NOT NECESSARILY REFLECT ACTUAL VARIATIONS IN SUBSURFACE CONDITIONS THAT MAY BE ENCOUNTERED.

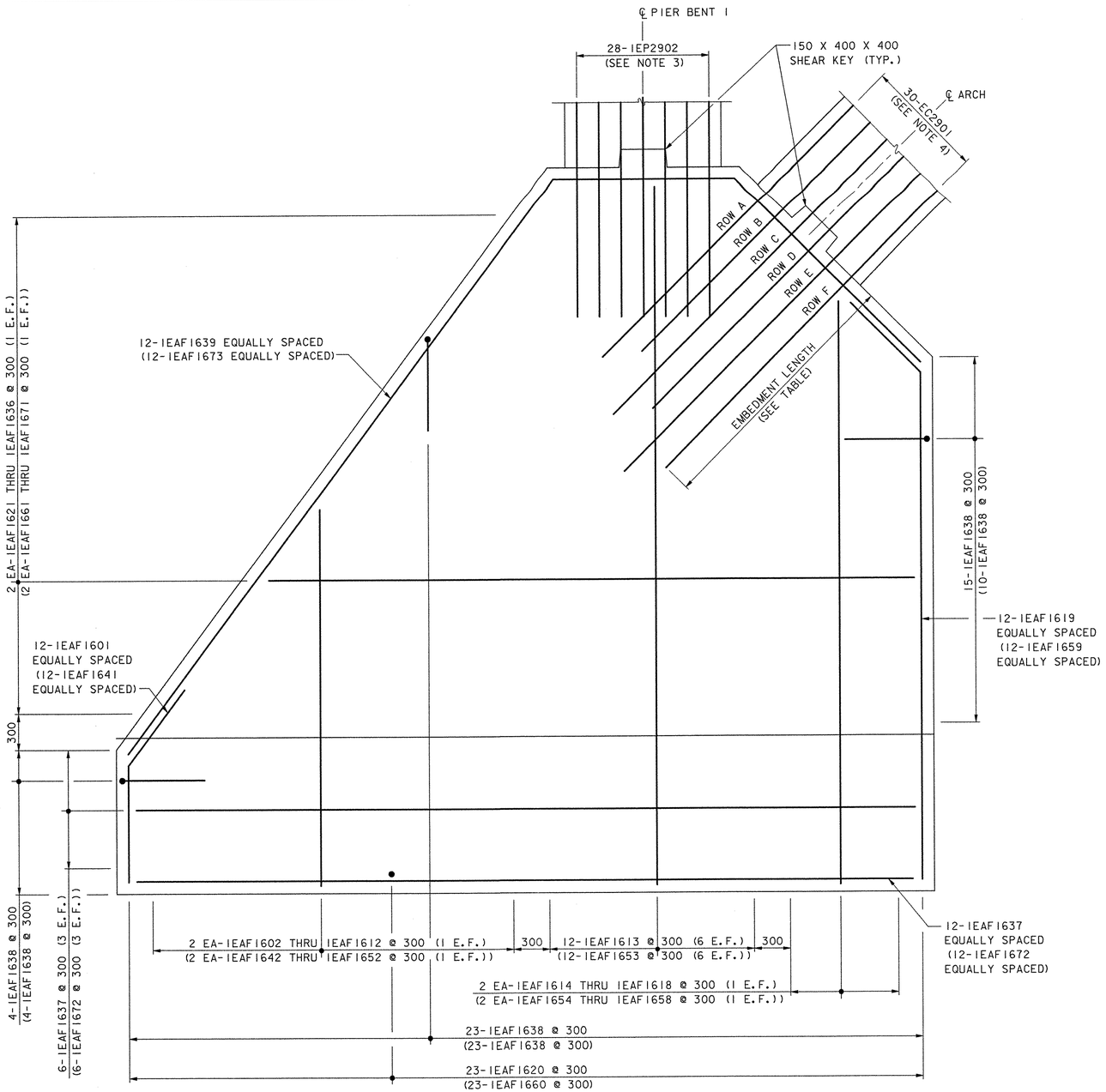
DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB *Vanasse Hangen Brustlin, Inc.*

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
	Log Sta.
Highway No. TH 4/3	Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
EXISTING GROUND PROFILES	
Designed By M. A. COLGAN	Drawn By B. J. MASSE
Checked By W. M. MOSHER Date 4/05	Bridge Design Supervisor S. M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139PR6	Sheet 75A of 124

VHB NO. 50735 plot date: 4/25/2005



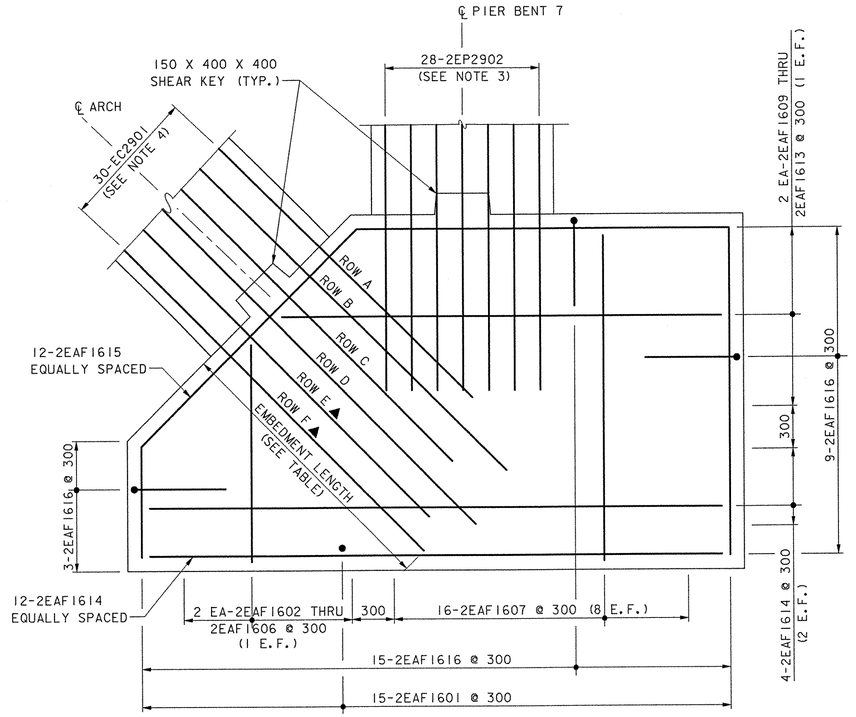
ARCH FOUNDATION NO. 1 ELEVATION

SCALE: 1:20
(PIER BENT 1)
SOUTHEAST ARCH FOUNDATION SHOWN,
SOUTHWEST ARCH FOUNDATION SHOWN IN PARENTHESES

EMBEDMENT LENGTH TABLE		
ROW	AF #1	AF #2
A1	1530	1930
A2	1930	1530
B	1665	2065
C	1800	2200
D	1935	2335
E	2070	2470 ▲
F1	2205	2605 ▲
F2	2605	2205 ▲

ARCH FOUNDATION REINFORCING NOTES:

1. ELEVATION AT THE BOTTOM OF THE FOOTING IS APPROXIMATE. ACTUAL BOTTOM OF FOOTING ELEVATION MAY BE LOWER. ADD #16 BARS @ 300 TO ACCOMODATE FOR DEEPER FOOTING WHERE NECESSARY. ALL COST WILL BE INCLUDED UNDER ITEM 507.17, EPOXY COATED REINFORCING STEEL.
2. QUANTITIES FOR REBAR IN EACH ARCH FOUNDATION ARE LABELED PER FOOTING (2 EACH REQUIRED).
3. SEE SHEET 71, SECTION D-D, FOR SPACING OF 1EP2902 AND 7EP2902 BARS.
4. SEE SHEET 74, SECTIONS A-A AND C-C, FOR STAGGERED ARRANGEMENT OF EC2901 BARS. SEE EMBEDMENT LENGTH TABLE FOR BAR EMBEDMENT INTO ARCH FOUNDATION.



ARCH FOUNDATION NO. 2 ELEVATION

SCALE: 1:20
(PIER BENT 7)

0 500 1000 1500
SCALE IN MILLIMETERS

REINFORCING KEY

E.F. = EACH FACE
▲ = CUT IN FIELD

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

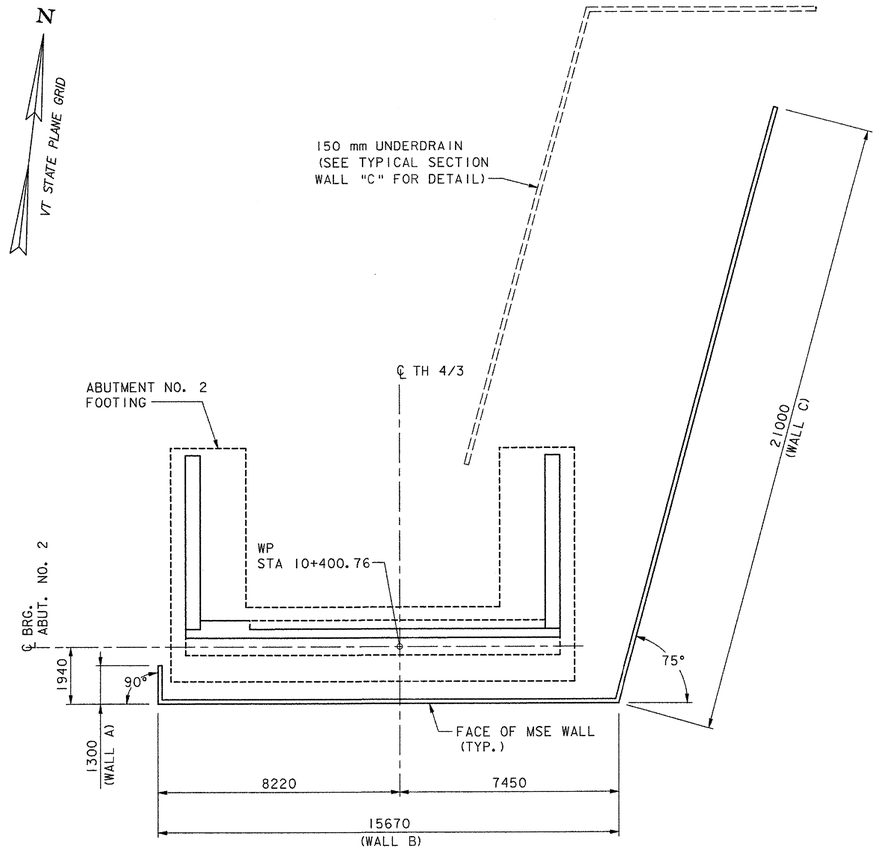
VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
	Log Sta.
Highway No. TH 4/3	Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
ARCH FOUNDATION REINFORCING	
Designed By W.M. MOSHER	Drawn By B.J. MASSE
Checked By K.G. KRETSCH Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139AFR	Sheet 76 of 124

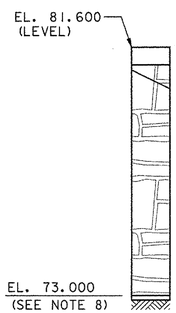
VHB NO. 50735

plot date: 4/25/2005



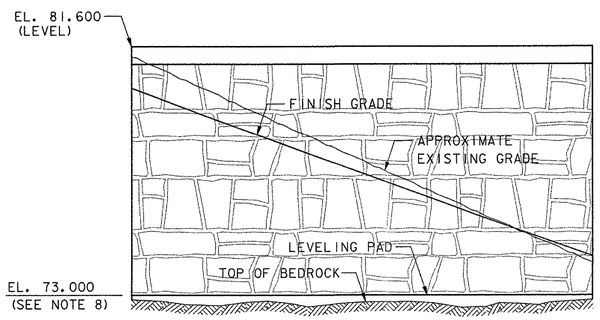
MSE WALL PLAN

SCALE: 1:100



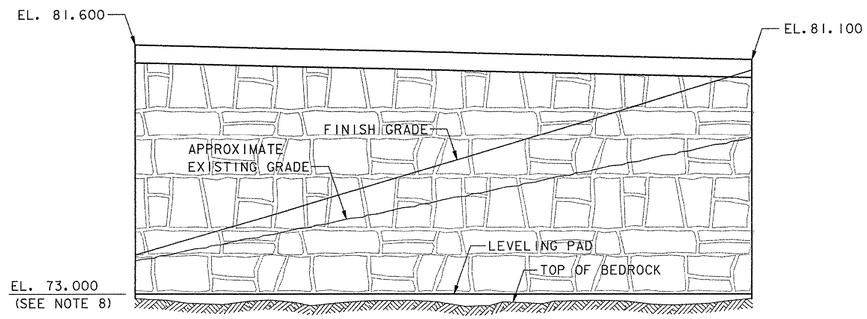
WALL "A" ELEVATION

SCALE: 1:100



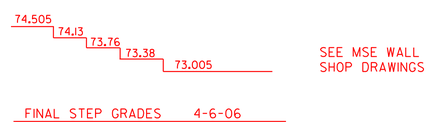
WALL "B" ELEVATION

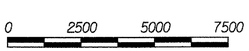
SCALE: 1:100



WALL "C" ELEVATION

SCALE: 1:100





DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

MSE WALL NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INTERNAL AND EXTERNAL STABILITY OF THE SELECTED MSE RETAINING WALL SYSTEM. THE CONTRACTOR SHALL SUBMIT MSE RETAINING WALL PLANS AND DESIGN CALCULATIONS FOR APPROVAL IN ACCORDANCE WITH SECTION 105.03. SEE THE SPECIAL PROVISION FOR APPROVED WALL SYSTEMS AND DESIGN REQUIREMENTS. ALL PLANS AND CALCULATIONS SHALL BE PREPARED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF VERMONT AND SHALL BEAR THE ENGINEER'S SEAL.
2. ALL COSTS ASSOCIATED WITH THE DESIGN, FABRICATION AND CONSTRUCTION OF THE MSE RETAINING WALL, INCLUDING LEVELING PAD, CONCRETE COPING, REINFORCING STEEL, DENSE GRADED CRUSHED STONE, SELECT GRANULAR BACKFILL, GEOMEMBRANE, GEOTEXTILE, UNDERDRAIN PIPE, AND UNDERDRAIN BACKFILL SHALL BE INCLUDED IN ITEM 526.30, MECHANICALLY STABILIZED EARTH (MSE) WALL, UNLESS NOTED OTHERWISE.
3. THE CONTRACTOR MAY SUBSTITUTE A PRECAST WALL CAP FOR THE CAST-IN-PLACE CAP SHOWN ON THE PLANS. TOP OF WALL CAP SHALL FOLLOW A SMOOTH PROFILE. NO STEPS SHALL BE ALLOWED. EXPANSION JOINTS IN THE WALL CAP SHALL BE PROVIDED EVERY TWO MSE PANEL UNITS. NO ADDITIONAL PAYMENT WILL BE MADE FOR OPTIONAL WALL CAP AND ALL CONNECTION DETAILS SHALL BE PROVIDED BY THE CONTRACTOR.
4. UNDERDRAIN BACKFILL AND GEOTEXTILE SHALL BE PLACED ON TOP OF THE GEOMEMBRANE. PRIOR TO PLACING THE GEOMEMBRANE THE SUBGRADE SHALL BE GRADED SMOOTH WITH NO IRREGULARITIES OR STONE PROTRUSIONS. LIMITS OF GEOMEMBRANE AND GEOTEXTILE SHALL EXTEND A MINIMUM OF 1500 mm BEYOND THE END OF THE MSE RETAINING WALL.
5. REINFORCEMENT IN THE MSE WALL CAP SHALL HAVE 65 MINIMUM CLEAR COVER.
6. CONCRETE ARCHITECTURAL TREATMENT ON THE MSE WALL SHALL BE FINISHED WITH AN ASHLAR PATTERN AS SHOWN ON THE PLANS. THE ASHLAR PATTERN SHALL BE ACHIEVED BY THE USE OF FORM LINERS. CONCRETE COLOR SHALL BE LIGHT GRAY. COLOR SAMPLE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. ALL COSTS ASSOCIATED WITH THIS WORK SHALL BE INCLUDED IN ITEM 526.30.
7. THE CEMENT USED FOR ALL EXPOSED MSE WALL SURFACES SHALL BE FROM THE SAME SOURCE.
8. BOTTOM OF LEVELING PAD SHALL BE PLACED ON A SOUND BEDROCK SURFACE. SEE BORING INFORMATION SHEETS FOR APPROXIMATE BEDROCK LOCATIONS.

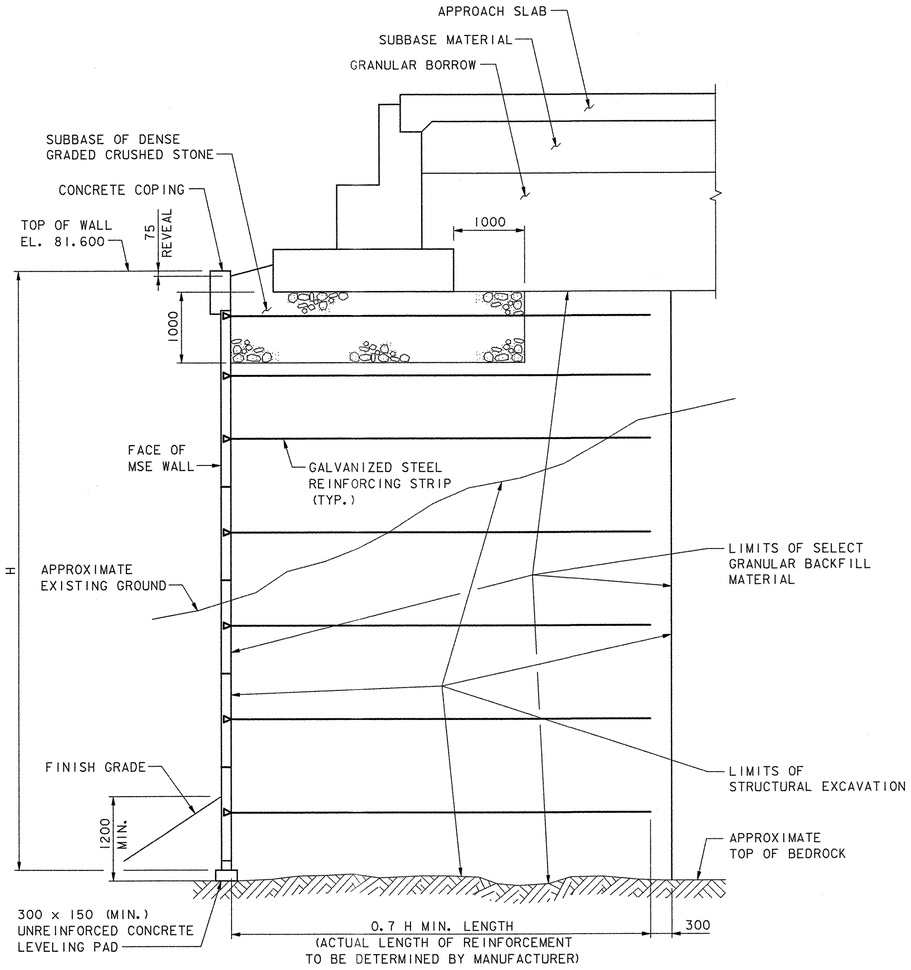
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta. / Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
MSE WALL DETAILS (1 OF 2)	
Designed By M.A. COLGAN	Drawn By B.J. MASSE
Checked By S.M. GUNN Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139RET1	Sheet 77 of 124

VHB Vanasse Hangen Brustlin, Inc.

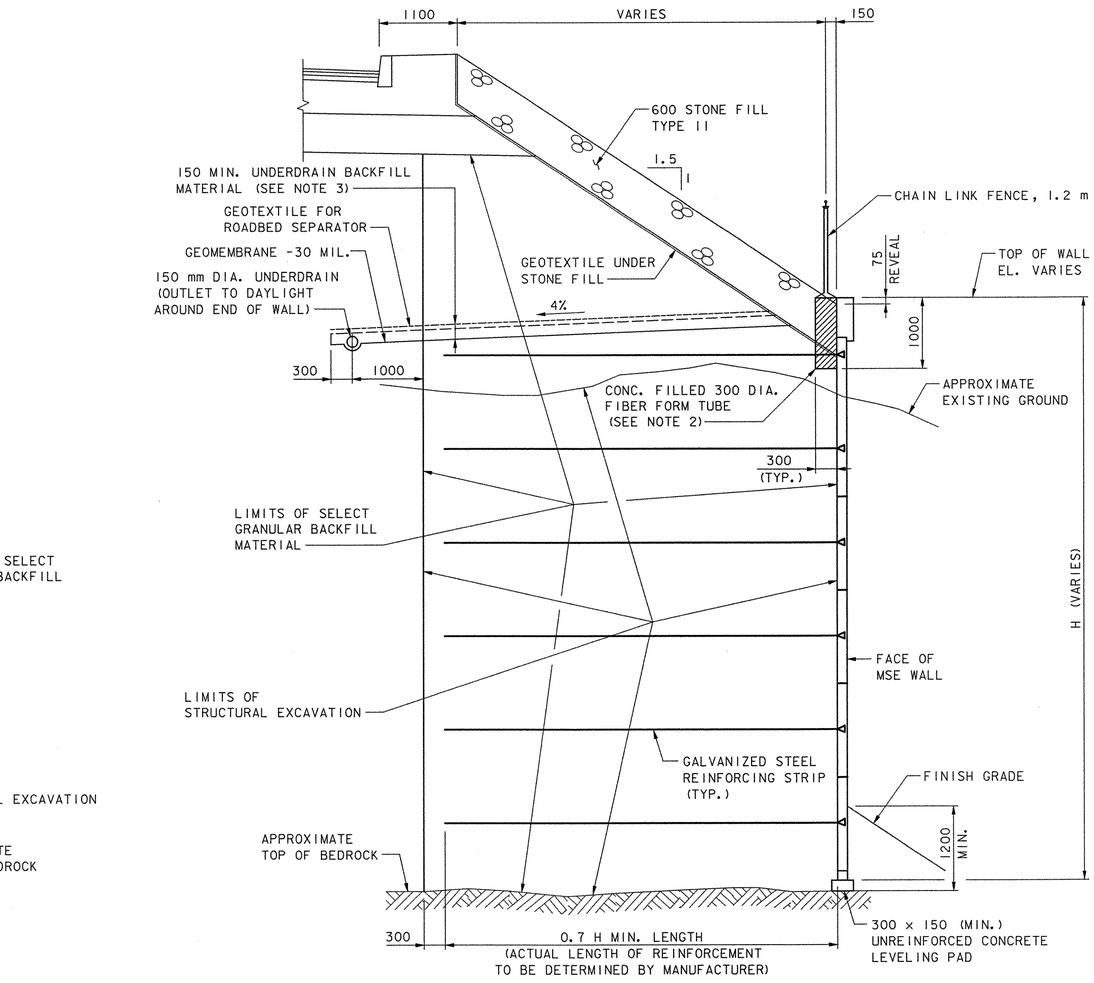
VHB NO. 50735

plot date: 4/25/2005



TYPICAL SECTION - WALL "B"

SCALE: 1:40

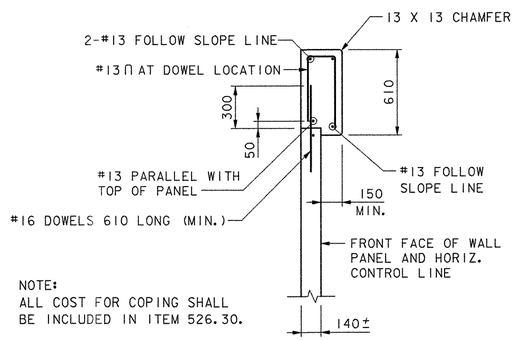


TYPICAL SECTION - WALL "C"

SCALE: 1:40

0 1000 2000 3000

SCALE IN MILLIMETERS

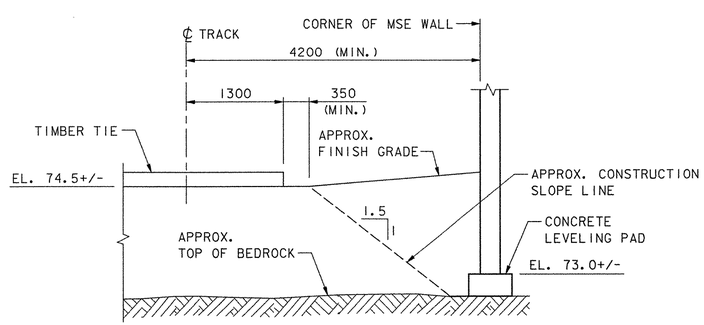


CONCRETE COPING DETAIL

SCALE: 1:20

0 500 1000 1500

SCALE IN MILLIMETERS



MSE WALL/TRACK DETAIL

(AT INTERSECTION OF WALL B AND WALL C)
NOT TO SCALE

NOTES:

1. SEE SHEET 77 FOR MSE WALL NOTES.
2. ALL COST INCLUDED UNDER ITEM 620.11, CHAIN LINK FENCE, 1.2 m (MOD. - BLACK VINYL).
3. SEE CHART FOR UNDERDRAIN BACKFILL MATERIAL ON SHEET 16.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta. / Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
MSE WALL DETAILS (2 OF 2)	
Designed By M.A. COLGAN	Drawn By B.J. MASSE
Checked By K.G. KRETSCH Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139RET2	Sheet 78 of 124

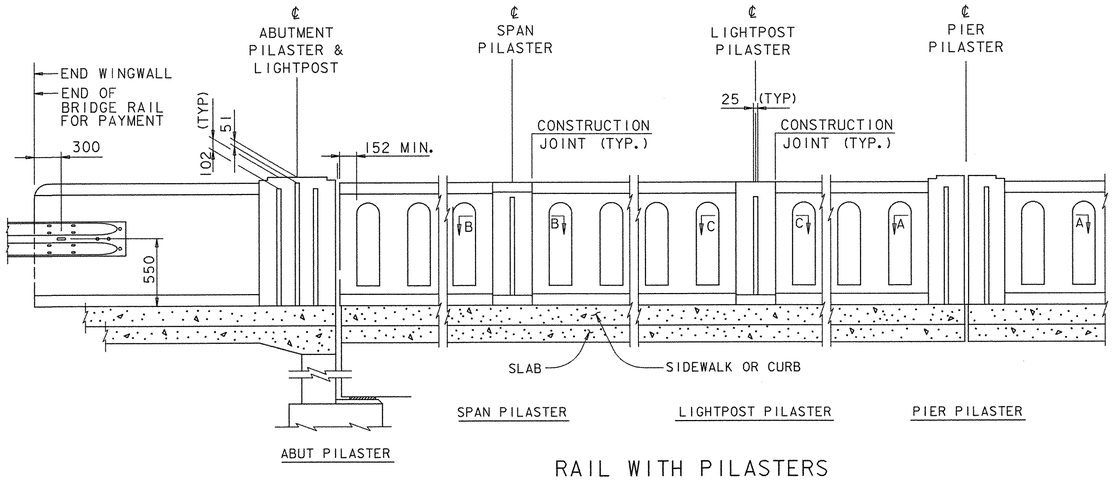
VHB Vanasse Hangen Brustlin, Inc.

VHB NO. 50735

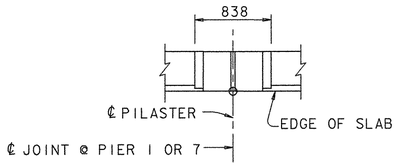
plot date: 5/2/2005

WINDOW PLACEMENT NOTES:

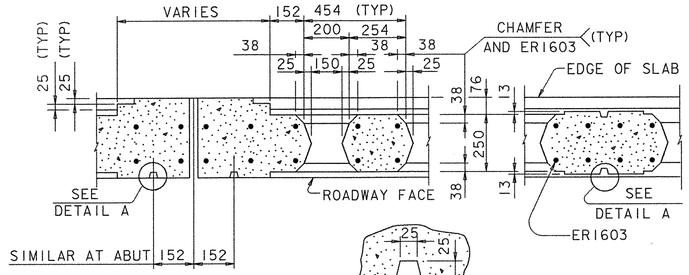
1. THE DISTANCE FROM PILASTER TO THE FIRST WINDOW MAY BE ADJUSTED FROM A MINIMUM OF 76 TO A MAXIMUM OF 191, UNLESS OTHERWISE SHOWN.
2. THE ONLY EXCEPTION TO NOTE # 3 IS AN EXPANSION JOINT. THE MINIMUM DISTANCE FROM THE EDGE OF AN EXPANSION JOINT TO THE FIRST WINDOW IS 152.
3. SHOP DRAWINGS WILL BE REQUIRED FOR THIS RAIL. ADDITIONALLY, PRIOR TO FORMING THE RAILING, THE CONTRACTOR SHALL DEMONSTRATE TO THE SATISFACTION OF THE RESIDENT ENGINEER, THE FORMING TECHNIQUE AND THAT THE WINDOWS WILL BE PLACED CORRECTLY.
4. HOLES AND RECESSES MUST BE FORMED OR CORED. PERCUSSION DRILLING IS NOT PERMITTED.
5. 26-35 DIA. WASHERS ARE REQUIRED UNDER 22 DIA. BOLT HEADS AND NUTS.



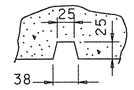
RAIL WITH PILASTERS



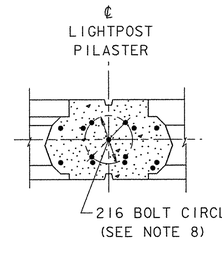
PIER PILASTER JOINT



SECTION A-A



DETAIL A



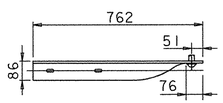
SECTION B-B

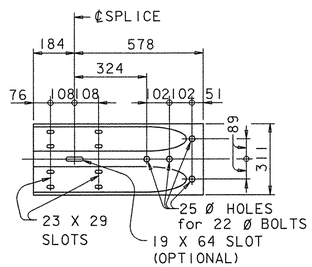
SECTION C-C

(ABUTMENT BOLT CIRCLES SIMILAR)

GENERAL RAILING NOTES:

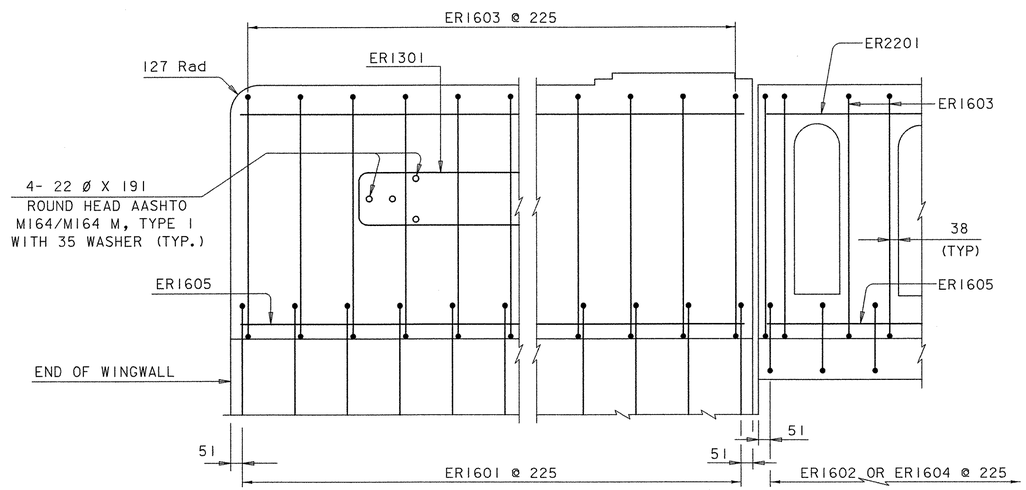
1. ALL PARTS OF THE RAILING INCLUDING REINFORCING STEEL, GUARDRAIL TERMINAL CONNECTOR, BOLTS, NUTS, AND WASHERS ARE INCLUDED IN THE PRICE BID PER L.F. OF BRIDGE RAIL.
2. ALL CONCRETE FOR RAILING SHALL BE CONCRETE HIGH PERFORMANCE CLASS AA.
3. DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTERS OF BARS.
4. ALL REINFORCING STEEL IN THE RAILING SHALL BE EPOXY COATED.
5. LIGHTPOST ANCHOR BOLTS WILL BE SUPPLIED BY THE LIGHTING MANUFACTURER AND SHALL BE PLACED AS PER THE MANUFACTURER'S RECOMMENDATIONS. ALL COSTS FOR ANCHOR BOLT INSTALLATION SHALL BE INCLUDED IN THE PRICE PER L.F. OF BRIDGE RAIL.





TERMINAL CONNECTOR

TERMINAL CONNECTOR SHALL RECEIVE THE SAME PROTECTIVE COATING AS THE ATTACHED METAL BEAM GUARD FENCE



TYPICAL REINFORCING PLACEMENT

NOTES:

1. SEE SHEET 81 FOR PILASTER AND WINDOW LAYOUT.
2. SEE SHEET 81A FOR APPROACH RAIL DETAILS.
3. SEE SHEETS 89-90 FOR ADDITIONAL LIGHTING DETAILS.

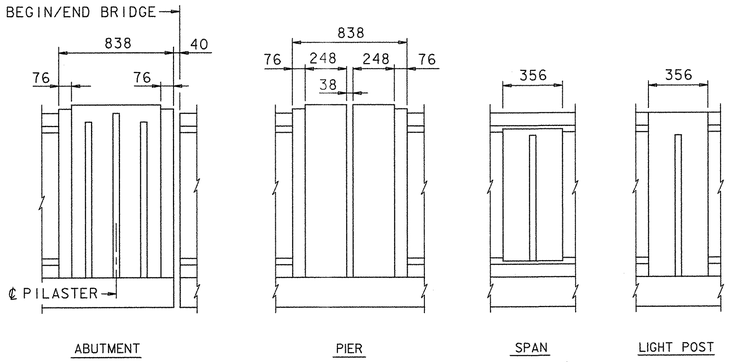
DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

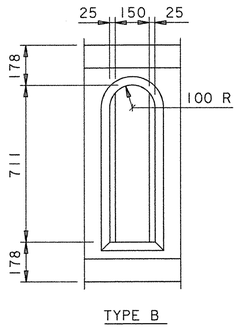
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
	Log Sta.
Highway No. TH 4/3	Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
CONCRETE BRIDGE RAIL (1 OF 3)	
Designed By VTRANS	Drawn By B.J. MASSE
Checked By VTRANS/MAC Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139TEXRAIL Sheet 79 of 124	

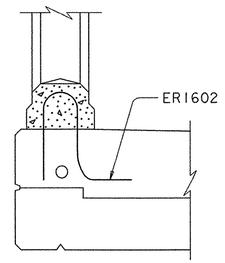
VHB NO. 50735 plot date: 4/25/2005

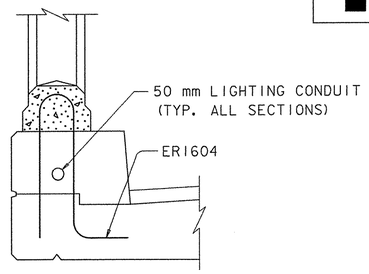


EXTERIOR PILASTER ELEVATIONS

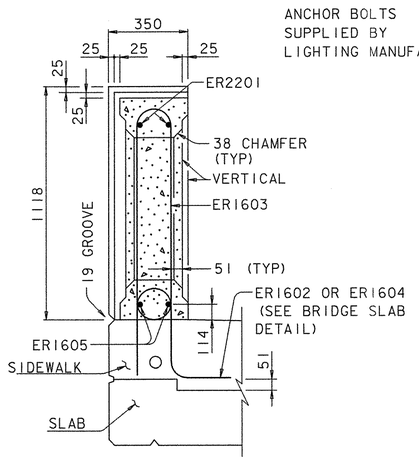


WINDOW DETAIL



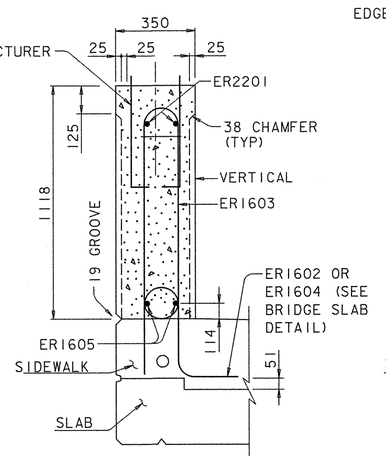


BRIDGE SLAB DETAIL



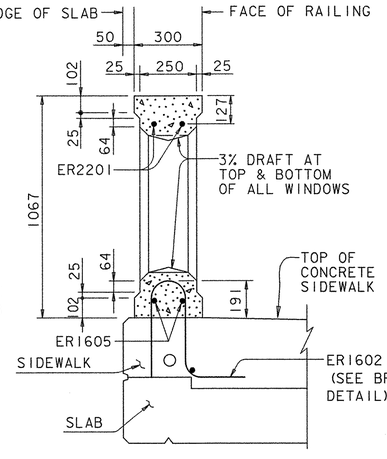
SECTION THRU
POST ON BRIDGE SLAB

(SHOWING PILASTER BEYOND)
(SECTION THRU SIDEWALK SHOWN;
SECTION THRU CURB IS SIMILAR.
SEE BRIDGE SLAB DETAIL)



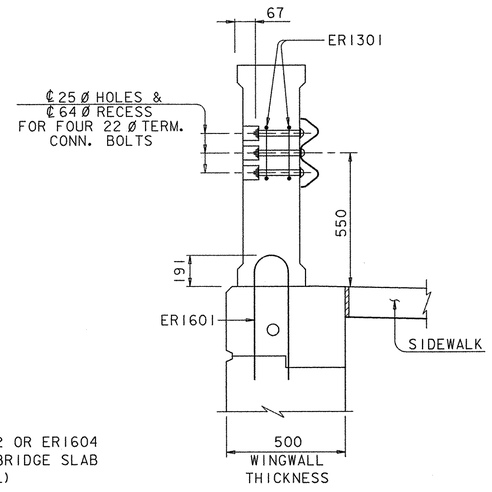
SECTION THRU
LIGHT POST PILASTER

(SECTION THRU SIDEWALK SHOWN;
SECTION THRU CURB IS SIMILAR.
SEE BRIDGE SLAB DETAIL)



SECTION THRU
WINDOW ON BRIDGE SLAB

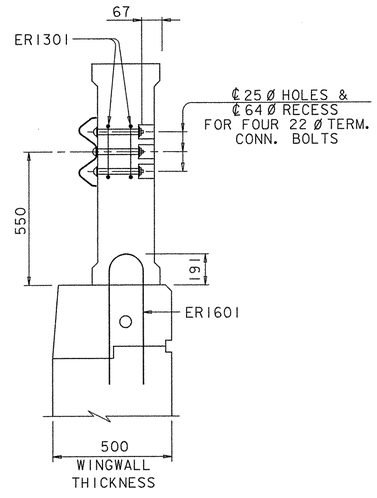
(SECTION THRU SIDEWALK SHOWN;
SECTION THRU CURB IS SIMILAR.
SEE BRIDGE SLAB DETAIL)



NOTE:
THE HOLES AND RECESSES MUST BE FORMED OR
CORED NO PERCUSSION DRILLING WILL BE ALLOWED.

SECTION THRU
WINGWALL #1 & #3

(SHOWING GUARDRAIL CONNECTION)



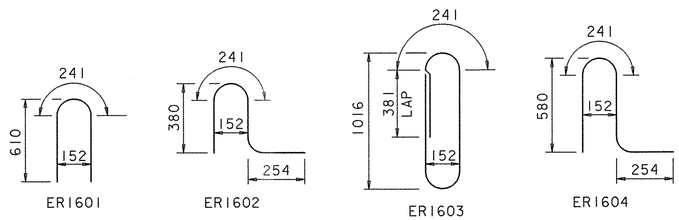
NOTE:
THE HOLES AND RECESSES MUST BE FORMED OR
CORED NO PERCUSSION DRILLING WILL BE ALLOWED.

SECTION THRU
WINGWALL #2 & #4

(SHOWING GUARDRAIL CONNECTION)

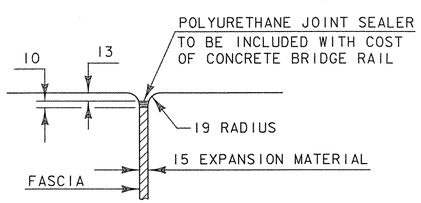
NOTE:

1. SEE SHEETS 82-83 FOR REINFORCING STEEL SCHEDULE.



NOTE: THESE ARE IN ADDITION TO THOSE FOUND ON
THE REINFORCING STEEL SCHEDULE (SEE NOTE 1).

BAR TYPES



JOINT BETWEEN SIDEWALK
AND WINGWALL

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB *Vanasse Hangen Brustlin, Inc.*

STATE OF VERMONT
AGENCY OF TRANSPORTATION

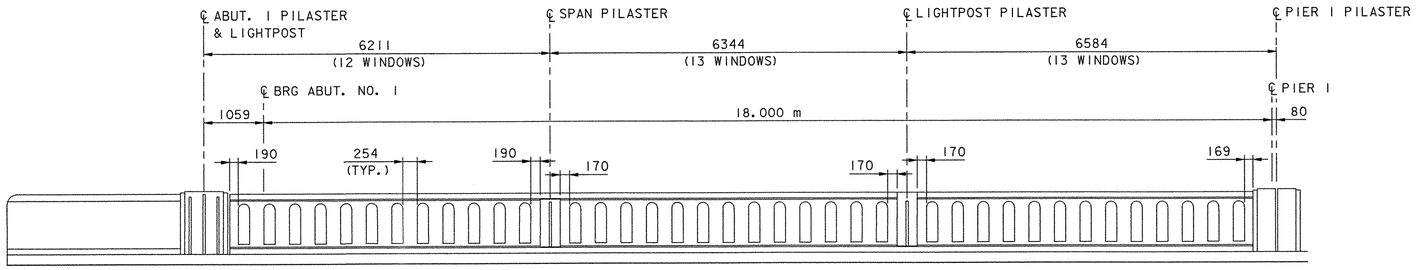
Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta.
	Surv. Sta.

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

CONCRETE BRIDGE RAIL (2 OF 3)

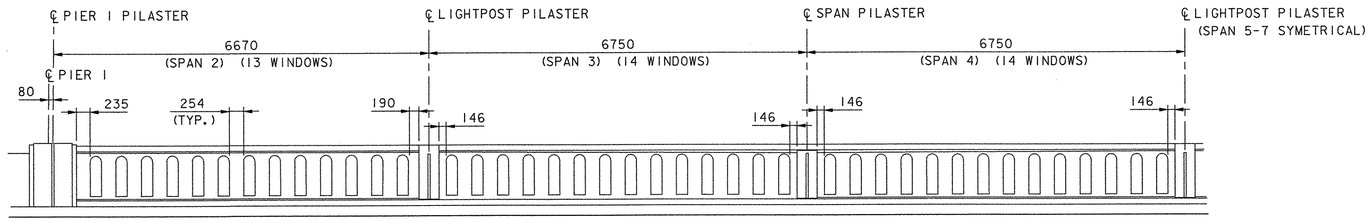
Designed By VTRANS	Drawn By B.J. MASSE
Checked By VTRANS/JTK Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139TEXRAIL Sheet 80 of 124	

VHB NO. 50735 plot date: 5/2/2005



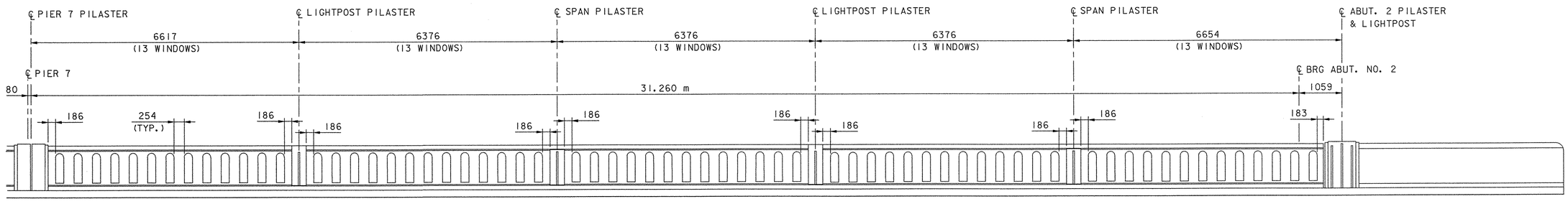
SPAN 1 PILASTER & WINDOW LAYOUT

SCALE: 1:50



SPAN 2-7 PILASTER & WINDOW LAYOUT

SCALE: 1:50



SPAN 8 PILASTER & WINDOW LAYOUT

SCALE: 1:50

0 1250 2500 3750

SCALE IN MILLIMETERS

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

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

CONCRETE BRIDGE RAIL (3 OF 3)

Designed By B. J. MASSE	Drawn By B. J. MASSE
Checked By M. A. COLGAN Date 4/05	Bridge Design Supervisor S. M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139TEXRAIL-LAY Sheet 81 of 124	

VHB Vanasse Hangen Brustlin, Inc.

VHB NO. 50735

plot date: 4/25/2005

	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
				DECK OVERLAY													
△	317	13	12600	ES1301	STR												
	108	16	9650	ES1601	STR												
	162	16	11500	ES1602	STR												
✱	211	16	3100	ES1603	STR												
	162	16	11125	ES1604	STR												
	54	16	7950	ES1607	STR												
	210	13	700	ES1302	17		300	100	300								
	420	13	1950	ES1303	17		300	1650	-								
✱	306	16	4100	ES1605	S5	700	325	2050	325			700					
	305	16	2050	ES1606	S5	700	325	350	325			350					
				APPROACH SLAB NO. 1													
△	23	16	9725	1EAS1601	STR												
△	42	29	6200	1EAS2901	10	125	350					5725				110	220
				APPROACH SLAB NO. 2													
△	23	16	9725	2EAS1601	STR												
△	42	29	6200	2EAS2901	10	125	350					5725				110	220
				ABUTMENT NO. 1													
	43	16	1400	1A1607	STR												
✱	3	16	1750	1A1610	STR												
✱	137	19	2075	1A1901	STR												
	16	19	13575	1A1902	STR												
	32	19	4225	1A1903	STR												
	43	16	2075	1A1601	17		250	1825	-								
	40	16	2800	1A1602	17		250	2550	-								
	32	16	3125	1A1603	17		250	2875	-								
	20	16	13800	1A1604	17		625	12550	625								
	-	-	-	1A1605	-	(NOT	USED)										
	43	16	1625	1A1606	17		300	1025	300								
	35	16	1425	1A1608	17		650	125	650								
	34	16	950	1A1609	17		525	425	-								
	7	16	1725	1A1611	17		650	425	650								
✱	49	19	3175	1A1904	17		300	2875	-								
	18	25	1050	1EA2501	19		450	600	-				318		318		918
				WINGWALL NO. 1													
	16	16	2650	1W1601	STR												
	3	16	3725	1EW1602	STR												
	14	16	2775	1EW1603	17		1225	325	1225								
	16	16	3275	1W1604	17		625	2650	-								
				WINGWALL NO. 2													
✱	17	16	2650	2W1601	STR												
	3	16	3725	2EW1602	STR												
	14	16	2700	2EW1603	S13	975	1200	300	225	-		25		224			
	16	16	3275	2W1604	17		625	2650	-								
				ABUTMENT NO. 2													
	18	16	13550	2A1604	STR												
	36	16	6325	2A1605	STR												
	43	16	1450	2A1607	STR												
✱	3	16	1750	2A1613	STR												
△	48	19	2375	2A1901	STR												
✱	47	22	2375	2A2201	STR												
✱	37	22	2375	2A2202	STR												
✱	37	25	2375	2A2501	STR												
✱	44	16	1550	2A1601	17		250	1300	-								
	40	16	2350	2A1602	17		250	2100	-								
	46	16	2850	2A1603	17		250	2600	-								
	43	16	1625	2A1606	17		300	1025	300								
	35	16	1425	2A1608	17		650	125	650								
	34	16	1025	2A1609	17		600	425	-								
	-	-	-	2A1610	-	(NOT	USED)										
	18	16	13800	2A1611	17		625	12550	625								
	7	16	1725	2A1612	17		650	425	650								
✱	39	25	3025	2A2502	17		425	2600	-								
	-	-	-	2EA2503	-	(NOT	USED)										
	18	25	1050	2EA2504	19		450	600	-				318		318		918

	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
				WINGWALL NO. 3													
	18	16	3650	3W1601	STR												
	3	16	5725	3EW1602	STR												
	21	16	2925	3EW1603	17		1300	325	1300								
	18	16	4275	3W1604	17		625	3650	-								
				WINGWALL NO. 4													
	18	16	3650	4W1601	STR												
	3	16	5725	4EW1602	STR												
	21	16	2850	4EW1603	S13	1050	1275	300	225	-			25		224		
	18	16	4275	4W1604	17		625	3650	-								
				PIER 1													
▲	8	16	12000	1EP1605	STR												
	-	-	-	1EP2901	-	(NOT	USED)										
✱	57	29	3475	1EP2902	STR												
✱	57	29	7825	1EP2903	STR												
▲	28	29	12000	1EP2904	STR												
✱	105	13	2900	1EP1301	17		900	1100	900								●
✱	53	13	3300	1EP1302	T1	100	775	775	775	775		100					●
✱▲	189	16	2500	1EP1601	17		800	900	800								
✱	189	16	2850	1EP1602	17		1200	450	1200								●
	12	16	2500	1EP1603	17		600	1300	600								●
	6	16	1450	1EP1604	17		600	450	600								
	26	16	4600	1EP1606	T2	200	1300	800	1300	800		200					
	2	16	1800	1EP1607	17		600	600	600								
△	18	19	2525	1EP1901	19		1725	800	-						500		1650		2450
				PIER 2													
	-	-	-	2EP1601	-	(NOT	USED)										
▲	8	16	12000	2EP1602	STR												
△	26	25	4450	2EP2501	STR												
✱▲	15	29	12000	2EP2902	STR												
	48	16	1500	2EP1301	17		500	500	500								●
✱▲	97	16	2350	2EP1603	17		775	800	775								●
✱	9	16	1800	2EP1604	17		500	800	500								●
	23	16	3600	2EP1605	T2	200	800	800	800	800		200					
	2	16	1550	2EP1606	17		600	300	600								
△	12	19	3150	2EP1901	19		2350	800	-						500		2300		3100
✱	25	29	3775	2EP2901	17		475	3300	-								
				PIER 3													
	-	-	-	3EP1601	-	(NOT	USED)										
▲	8	16	12000	3EP1602	STR												
	-	-	-	3EP2501	-	(NOT	USED)										
✱▲	15	29	12000	3EP2902	STR												
	16	16	1500	3EP1301	17		500	500	500								●
✱▲	97	16	2350	3EP1603	17		775	800	775								●
✱	9	16	1800	3EP1604	17		500	800	500								●
	23	16	3600	3EP1605	T2	200	800	800	800	800		200					
	2	16	1550	3EP1606	17		600	350	600								
△	12	19	3150	3EP1901	19		2350	800	-						500		2300		3100
✱	25	29	3150	2EP2901	17		475	2675	-								
				PIER 4													
	-	-	-	4EP1601	-	(NOT	USED)										
▲	8	16	12000	4EP1602	STR												
	-	-	-	4EP2501	-	(NOT	USED)										
✱▲	15	29	12000	4EP2902	STR												
	8	16	1700	4EP1301	17		500	700	500								●
✱▲	97	16	2350	4EP1603	17		775	800	775								●
✱	9	16	1800	4EP1604	17		500	800	500								●
	23	16	3600	4EP1605	T2	200	800	800	800	800		200					
	2	16	1550	4EP1606	17		600	350	600								
△	12	19	3150	4EP1901	19		2350	800	-						500		2300		3100
✱	25	29	2250	4EP2901	17		475	1775	-								

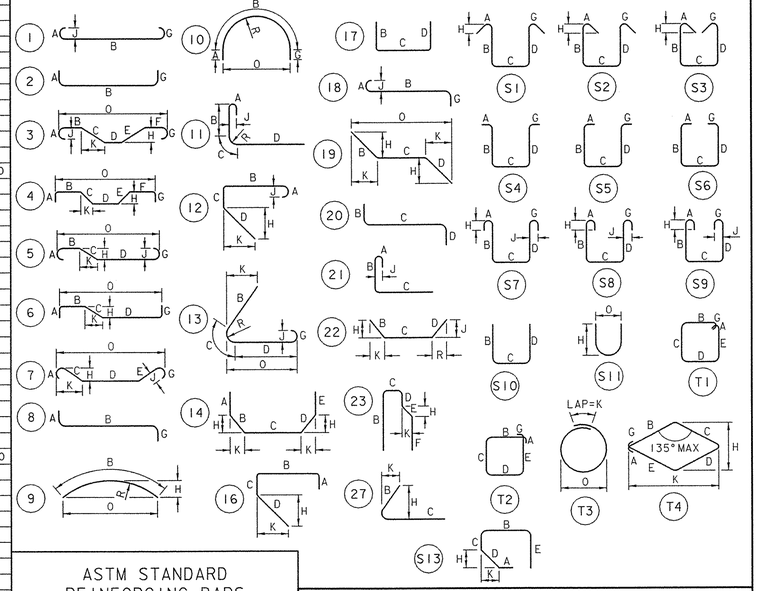
DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

NOTES

1. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING 55M SHALL CONFROM TO THE REQUIREMENT OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31M (ASTM A 615M-SI). ALL BARS SHALL BE GRADE 400, 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 ARE TO BE SHOWN ONLY WHEN NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
6. "H" DIMENSION ON STIRRUPS ARE TO BE SHOWN ONLY WHEN NECCESSARY 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 BARS TO BE MECHANICALLY CONNECTED.
10. ✱ DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
11. △ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
12. "E" IN PREFIX DENOTES EPOXY COATED REINFORCING STEEL.

BENDING NOTE:

THE ● SYMBOL IN THE "R" COLUMN DENOTES BARS THAT SHALL BE BENT TO WITHIN 5 mm OF THE DIMENSIONS PROVIDED TO MAINTAIN MINIMUM CLEAR COVER. BARS NOT MEETING THIS SPECIAL TOLERANCE WILL BE REJECTED AND THE CONTRACTOR SHALL SUPPLY REPLACEMENT BARS AT NO ADDITIONAL COST TO THE PROJECT.



ASTM STANDARD REINFORCING BARS

BAR SIZE DESIGNATION	NOMINAL MASS kg/m	NOMINAL DIMENSIONS ROUND SECTION DIAMETER mm	CROSS SECTIONAL AREA mm²	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

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

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

REINFORCING STEEL SCHEDULE (1 OF 2)

Designed By J.T. KLEIN	Drawn By B.J. MASSE
Checked By K.G. KRETSCH Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139RS1	Sheet 82 of 124

VHB NO. 50735 plot date: 4/28/2005

	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
									PIER 5								
	-	-	-	5EP1601	-	(NOT	USED)										
▲	8	16	12000	5EP1602	STR												
	-	-	-	5EP2501	-	(NOT	USED)										
✳▲	15	29	12000	5EP2902	STR												
	24	16	1500	5EP1301	17		500	500	500							●	
✳▲	97	16	2350	5EP1603	17		775	800	775							●	
✳	9	16	1800	5EP1604	17		500	800	500							●	
	23	16	3600	5EP1605	T2	200	800	800	800	800		200					
	2	16	1550	5EP1606	17		600	350	600								
△	12	19	3150	5EP1901	19		2350	800	-				500		2300		3100
✳	25	29	3725	5EP2901	17		475	3250	-								
									PIER 6								
	-	-	-	6EP1601	-	(NOT	USED)										
▲	8	16	12000	6EP1602	STR												
△	26	25	5700	6EP2501	STR												
✳▲	15	29	12000	6EP2902	STR												
	68	16	1500	6EP1301	17		500	500	500							●	
✳▲	97	16	2350	6EP1603	17		775	800	775							●	
✳	9	16	1800	6EP1604	17		500	800	500							●	
	23	16	3600	6EP1605	T2	200	800	800	800	800		200					
	2	16	1550	6EP1606	17		600	350	600								
△	12	19	3150	6EP1901	19		2350	800	-				500		2300		3100
✳	25	29	3775	6EP2901	17		475	3300	-								
									PIER 7								
▲	8	16	12000	7EP1605	STR												
	-	-	-	7EP2901	-	(NOT	USED)										
✳	57	29	3475	7EP2902	STR												
✳	57	29	9650	7EP2903	STR												
▲	28	29	12000	7EP2904	STR												
✳	129	13	2850	7EP1301	17		875	1100	875							●	
✳	65	13	3300	7EP1302	T1	100	775	775	775	775		100				●	
✳▲	189	16	2400	7EP1601	17		750	900	750								
✳	189	16	2750	7EP1602	17		1150	450	1150							●	
	12	16	2500	7EP1603	17		600	1300	600							●	
	6	16	1450	7EP1604	17		600	450	500								
	26	16	4600	7EP1606	T2	200	1300	800	1300	800		200					
	2	16	1800	7EP1607	17		600	600	600								
△	18	19	2525	7EP1901	19		1725	800	-				500		1650		2450
									ARCH								
✳	49	25	5400	EC2550	STR												
✳	49	25	3700	EC2551	STR												
✳▲■	121	29	3250	EC2901	STR												
△	866	16	2300	EC1601	17		800	700	800								
	80	16	2480	EC1650	T1	140	550	550	550	550		140				●	
									ARCH FOUNDATION NO. 1								
	2	16	1450	1EAF1602	STR												
✳	3	16	1850	1EAF1603	STR												
	2	16	2250	1EAF1604	STR												
	2	16	2650	1EAF1605	STR												
	2	16	3050	1EAF1606	STR												
	2	16	3450	1EAF1607	STR												
	2	16	3850	1EAF1608	STR												
	2	16	4250	1EAF1609	STR												
	2	16	4650	1EAF1610	STR												
	2	16	5050	1EAF1611	STR												
	2	16	5450	1EAF1612	STR												
	12	16	5825	1EAF1613	STR												
	2	16	5775	1EAF1614	STR												
	2	16	5475	1EAF1615	STR												
	2	16	5175	1EAF1616	STR												
	2	16	4875	1EAF1617	STR												
	2	16	4575	1EAF1618	STR												
	23	16	3400	1EAF1620	STR												
	2	16	2025	1EAF1621	STR												
	2	16	2550	1EAF1622	STR												
	2	16	3075	1EAF1623	STR												
	2	16	3600	1EAF1624	STR												
	2	16	4125	1EAF1625	STR												
	2	16	4375	1EAF1626	STR												
	2	16	4600	1EAF1627	STR												

	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
									ARCH FOUNDATION NO. 1 (CONTINUED)								
	2	16	4725	1EAF1628	STR												
	2	16	5050	1EAF1629	STR												
	2	16	5275	1EAF1630	STR												
	2	16	5500	1EAF1631	STR												
	2	16	5725	1EAF1632	STR												
	2	16	5950	1EAF1633	STR												
	2	16	6175	1EAF1634	STR												
	2	16	6400	1EAF1635	STR												
	2	16	6625	1EAF1636	STR												
	18	16	6600	1EAF1637	STR												
	-	-	-	1EAF1640	-	(NOT	USED)										
	2	16	1350	1EAF1642	STR												
	2	16	1625	1EAF1643	STR												
	2	16	1925	1EAF1644	STR												
	2	16	2225	1EAF1645	STR												
	2	16	2500	1EAF1646	STR												
	2	16	2800	1EAF1647	STR												
	2	16	3100	1EAF1648	STR												
	2	16	3400	1EAF1649	STR												
	2	16	3675	1EAF1650	STR												
	2	16	3975	1EAF1651	STR												
	2	16	4275	1EAF1652	STR												
	12	16	4525	1EAF1653	STR												
	2	16	4475	1EAF1654	STR												
	2	16	4175	1EAF1655	STR												
	2	16	3875	1EAF1656	STR												
	2	16	3575	1EAF1657	STR												
	2	16	3275	1EAF1658	STR												
	23	16	3400	1EAF1660	STR												
	2	16	2100	1EAF1661	STR												
	2	16	2725	1EAF1662	STR												
	2	16	3325	1EAF1663	STR												
	2	16	3925	1EAF1664	STR												
	2	16	4525	1EAF1665	STR												
	2	16	4875	1EAF1666	STR												
	2	16	5200	1EAF1667	STR												
	2	16	5500	1EAF1668	STR												
	2	16	5800	1EAF1669	STR												
	2	16	6100	1EAF1670	STR												
	2	16	6400	1EAF1671	STR												
	18	16	6600	1EAF1672	STR												
✳	13	16	1925	1EAF1601	19		875	1050	-				525		700		1750
	12	16	5150	1EAF1619	19		875	4275	-				620		620		4895
	79	16	4300	1EAF1638	17		450	3400	450								
	12	16	9600	1EAF1639	22		5925	1500	2175				4750	1540	3545	1540	
	12	16	1925	1EAF1641	19		875	1050	-				625		615		1665
	12	16	3850	1EAF1659	19		875	2975	-				620		620		3595
	12	16	8625	1EAF1673	22		4950	1500	2175				3465	1540	3535	1540	
									ARCH FOUNDATION NO. 2								
	15	16	3400	2EAF1601	STR												
	4	16	1075	2EAF1602	STR												
	4	16	1375	2EAF1603	STR												
✳	5	16	1675	2EAF1604	STR												
✳	5	16	1975	2EAF1605	STR												
	4	16	2275	2EAF1606	STR												
	32	16	2325	2EAF1607	STR												
	-	-	-	2EAF1608	-	(NOT	USED)										
	4	16	2950	2EAF1609	STR												
	4	16	3250	2EAF1610	STR												
	4	16	3550	2EAF1611	STR												
	4	16	3850	2EAF1612	STR												
	4	16	4150	2EAF1613	STR												
	16	16	4200	2EAF1614	STR												
	24	16	7800	2EAF1615	S13	750	2300	2625	2125	-			1500		1500		
	54	16	4300	2EAF1616	17		450	3400	450								
									LOOKOUT								
✳	24	13	4325	L1301	STR												
✳	16	13	6800	L1302	STR												
✳	23	16	3275	L1601	STR												
	59	16	4875	L1602	STR												
	8	16	1600	L1607	STR												
	59	25	4875	L2502	STR												
	45	25	900	L2504	STR												
✳	47	29	3100	L2901	STR												
✳	12	29	8900	L2902	STR												
✳	47	32	3150	L3201	STR												
✳	12	32	8900	L3202	STR												
✳	60	16	1850	L1603	17		250	1600	-								
	68	16	5465	L1604	17		625	4840	-								
	34	16	9090	L1605	17		625	7840	625								
	59	16	1240	L1606	17		450	340	450								
✳	60	25	2725	L2501	17		425	2300	-								
✳	59	25	4750	L2503	17		425	4325	-								

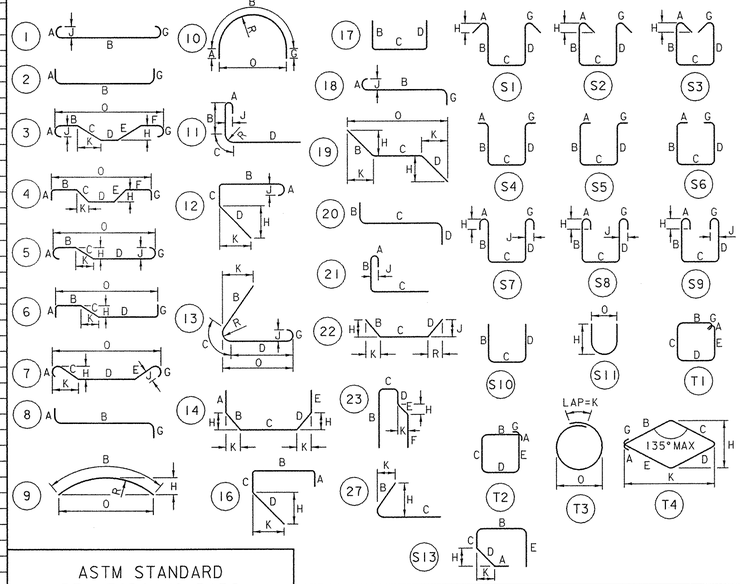
DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

NOTES

1. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING 55M SHALL CONFROM TO THE REQUIREMENT OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31M (ASTM A 615M-SI). ALL BARS SHALL BE GRADE 400, 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 ARE TO BE SHOWN ONLY WHEN NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
6. "H" DIMENSION ON STIRRUPS ARE TO BE SHOWN ONLY WHEN NECCESSARY 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 BARS TO BE MECHANICALLY CONNECTED.
10. ✳ DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
11. △ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
12. "E" IN PREFIX DENOTES EPOXY COATED REINFORCING STEEL.

BENDING NOTE:

THE ● SYMBOL IN THE "R" COLUMN DENOTES BARS THAT SHALL BE BENT TO WITHIN 5 mm OF THE DIMENSIONS PROVIDED TO MAINTAIN MINIMUM CLEAR COVER. BARS NOT MEETING THIS SPECIAL TOLERANCE WILL BE REJECTED AND THE CONTRACTOR SHALL SUPPLY REPLACEMENT BARS AT NO ADDITIONAL COST TO THE PROJECT.



ASTM STANDARD REINFORCING BARS

BAR SIZE DESIGNATION	NOMINAL MASS kg/m	NOMINAL DIMENSIONS ROUND SECTION DIAMETER mm	CROSS SECTIONAL AREA mm²	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

VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

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

REINFORCING STEEL SCHEDULE (2 OF 2)

Designed By J.T. KLEIN	Drawn By B.J. MASSE
Checked By K.G. KRETSCH Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600 (6) S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139RS2	Sheet 83 of 124

VHB NO. 50735 plot date: 4/28/2005

SPECIFICATIONS AND REQUIREMENTS WORKING IN THE VICINITY OF GAS LINES

1.) All damages to VGS gas lines shall be immediately reported to VGS inspectors. The damages shall be repaired by VGS street personnel prior to backfilling.

2.) All coating damage to steel gas lines shall be reported immediately to VGS inspectors. Coating breaks shall be repaired by either VGS street personnel or by contractors via VGS inspection prior to backfilling.

3.) All breaks and damages to tracer wire for plastic pipe shall be reported to VGS inspectors. The breaks and damages shall be repaired by either VGS personnel or by contractors via VGS inspection prior to backfilling.

4.) All damages to VGS cathodic protection facilities and (cathodic protection test facilities) shall be reported to VGS inspectors. The damages shall be repaired and tested by VGS personnel prior to backfilling.

5.) All damages to VGS test, locator, and valve boxes shall be reported to VGS inspectors. The damages shall be repaired by either VGS personnel or contractors via VGS inspection. All VGS test, locator, and valve boxes shall be brought up to grade prior to final paving, sidewalk and topsoil work. No boxes shall be under cover.

6.) Contractors are to conform to VGS separation distances and requirements. No concrete shall be in contact with gas lines. Extra coating required for steel gas lines shall be done by VGS personnel or contractors via VGS inspection prior to backfilling.

7.) All exposed gas lines shall be reported to VGS inspectors. All exposed gas lines shall be supported if necessary in accordance with VGS support standards. Supports shall be inspected by VGS personnel. All exposed gas lines shall be padded with 6 inches minimum of sand prior to backfilling unless otherwise stated by VGS specifications or drawings.

VERMONT GAS SYSTEMS, INC. (VGS)

SEPARATION DISTANCES & REQUIREMENTS FOR UTILITIES & UNDERGROUND STRUCTURES

I. Horizontal Separation:

Three feet minimum separation between gas and utilities/underground structures.

II. Vertical Separation:

A) One foot preferred vertical separation between gas and utilities/underground structures - six inch sand padding around gas. Three inch minimum sand padding around gas when vertical separation is six inches or less from gas and utilities/underground structure.

B) Special provisions required for vertical separation between gas and utility duct system.

C) Double coat and pad steel gas pipe within six inches or less vertical separation from utilities/underground structures. Gas pipe to be padded with three inches minimum of sand. Double coat steel gas pipe only if utility/underground structure is metal, wire, cable, conduit, or concrete.

III. Locator Wire:

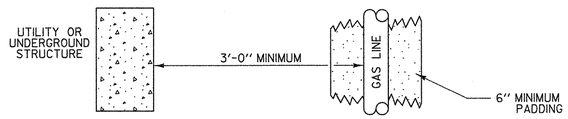
Locator wire for plastic gas lines shall not be in contact with any utility or underground structure.

PIPELINE SUPPORT STANDARDS

Table of Separation Distances Between Supports
Steel and Plastic Pipe Only

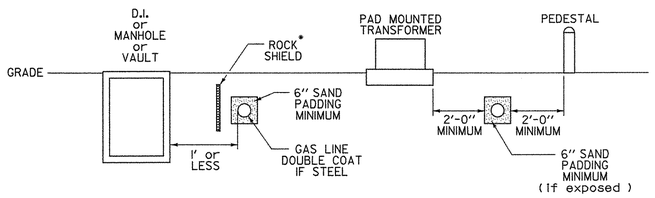
Pipe Size	Maximum Separation Distance
½"	5 '
¾"	6 '
1"	7 '
1½"	8 '
2 "	10 '
4 "	14 '
6 "	17 '
8 "	20 '
10 "	22 '

HORIZONTAL SEPARATION - GAS FROM UTILITIES OR UNDERGROUND STRUCTURES

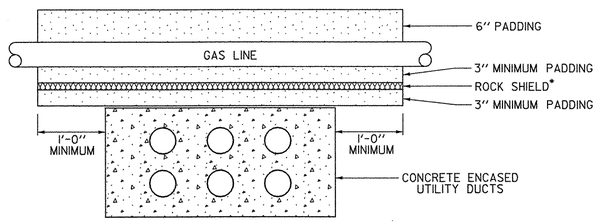


" NOTES "

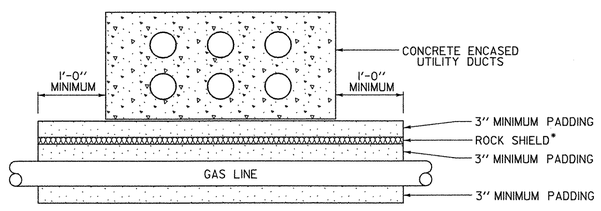
1. No concrete in contact with gas pipe.
2. Padding sand only.
3. Drop inlets, manholes, and vaults can be less than 3' from gas provided gas is not in contact with these structures. Min. 6' sand padding around gas pipe. Rock shield to be placed between these structures and gas when separation distance 1' or less. Steel gas pipe to be double coated when separation distance 1' or less.
4. Pads, pedestals, transformers, etc. cannot be directly over gas lines. Min. 2' horizontal separation from edge of these facilities and gas. Min. 6" sand padding around gas when exposed. (See Below)
5. • Rock shield shall be furnished by VGS.



VERTICAL SEPARATION - GAS FROM UTILITY DUCTS

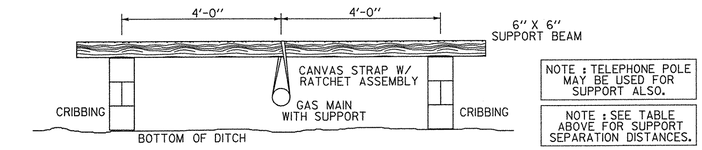


GAS LINE ABOVE DUCT



GAS LINE BELOW DUCT

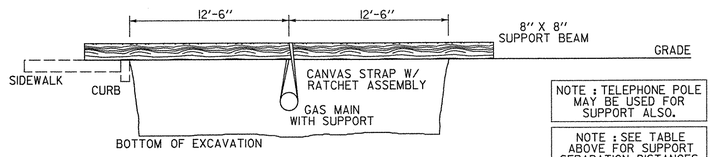
VT. GAS SYSTEMS PIPELINE SUPPORT STANDARDS



NOTE : TELEPHONE POLE MAY BE USED FOR SUPPORT ALSO.

NOTE : SEE TABLE ABOVE FOR SUPPORT SEPARATION DISTANCES.

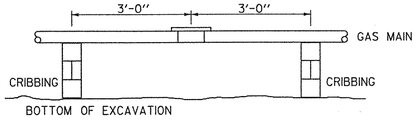
CROSS SECTION - GAS MAIN SUPPORT - OPEN EXCAVATION



NOTE : TELEPHONE POLE MAY BE USED FOR SUPPORT ALSO.

NOTE : SEE TABLE ABOVE FOR SUPPORT SEPARATION DISTANCES.

CROSS SECTION - GAS MAIN SUPPORT W/HALF OF ROAD EXCAVATED. (50' road example)

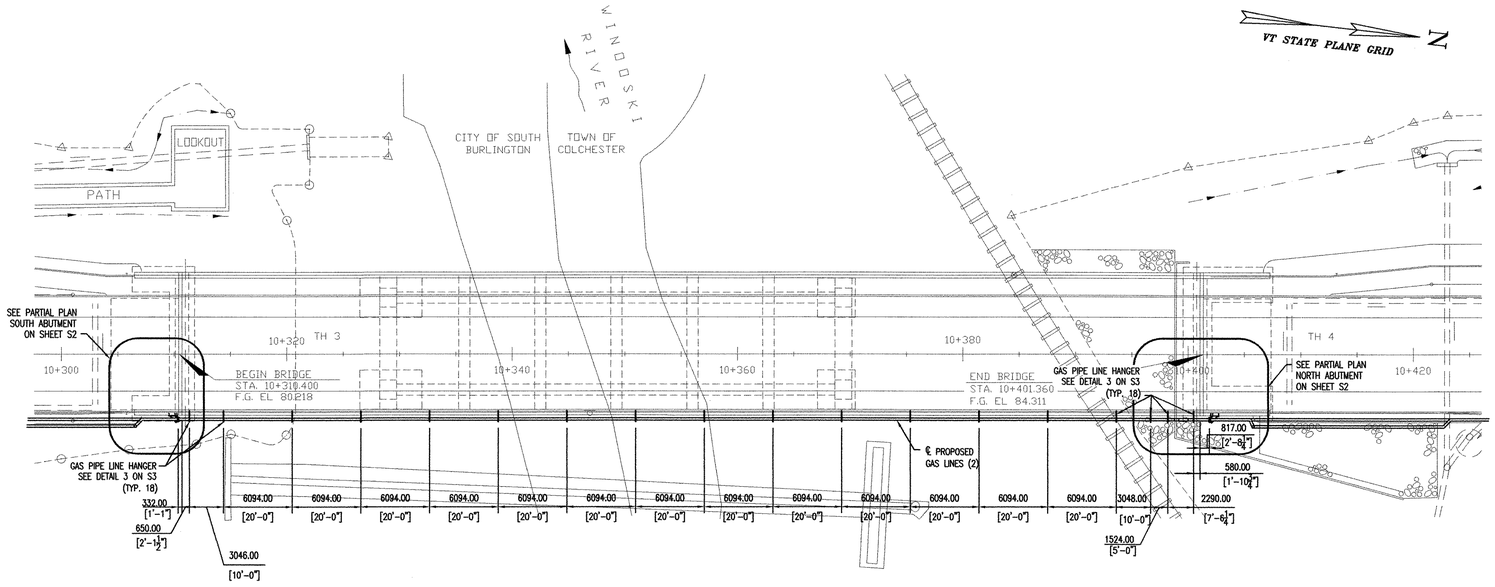


PROFILE - GAS MAIN SUPPORT W/MECHANICAL JOINT

NOT TO SCALE

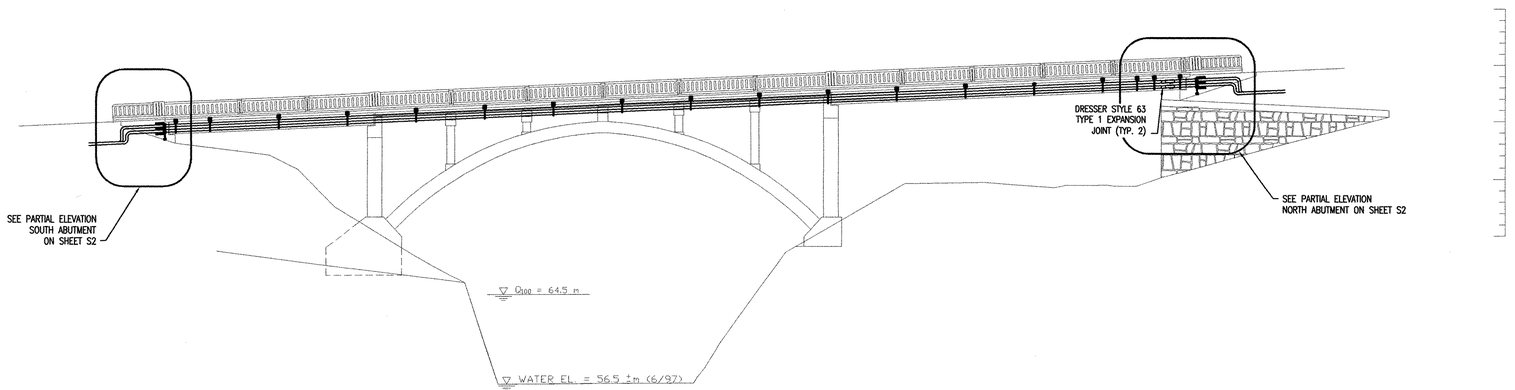
THIS SHEET FOR INFORMATION USE ONLY

DRAWN BY VTRANS DATE JAN.'94
DESIGN FILE NO. /CMU/GRAW/GAS.DGN
IPARM FILE /CMU/GRAW/GAS.I DATE PLOTTED 4-22-05
PROJ. NAME COLCHESTER - S. BURLINGTON
PROJ. NO. BRM 5600 (6) S C/2
SHEET 84 OF 124 SHEETS



NATURAL GAS LINE SUPPORT PLAN

SCALE: 1:250



BRIDGE ELEVATION

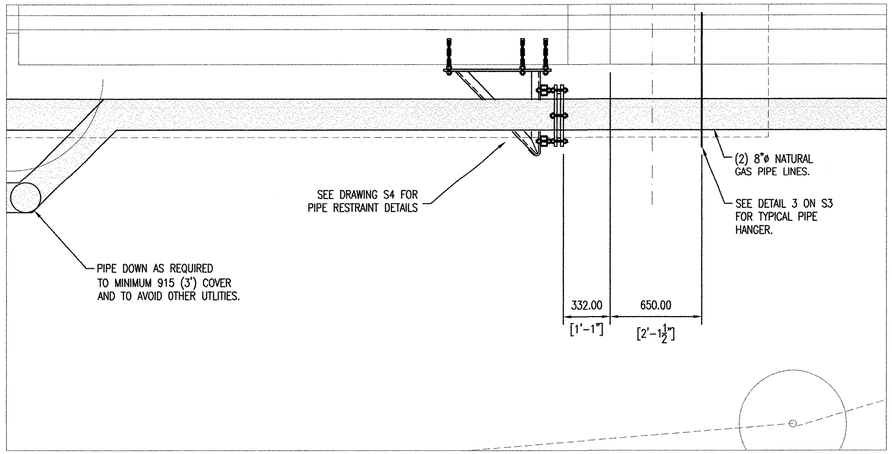
SCALE: 1:250

INFORMATION ON THIS SHEET SHALL ONLY BE USED FOR THE INSTALLATION OF THE NATURAL GAS LINE OVER THE BRIDGE. ALL OTHER INFORMATION SHOULD NOT BE RELIED UPON FOR PURPOSES UNRELATED TO THE GAS LINES.

KCE S:\01271A\S1

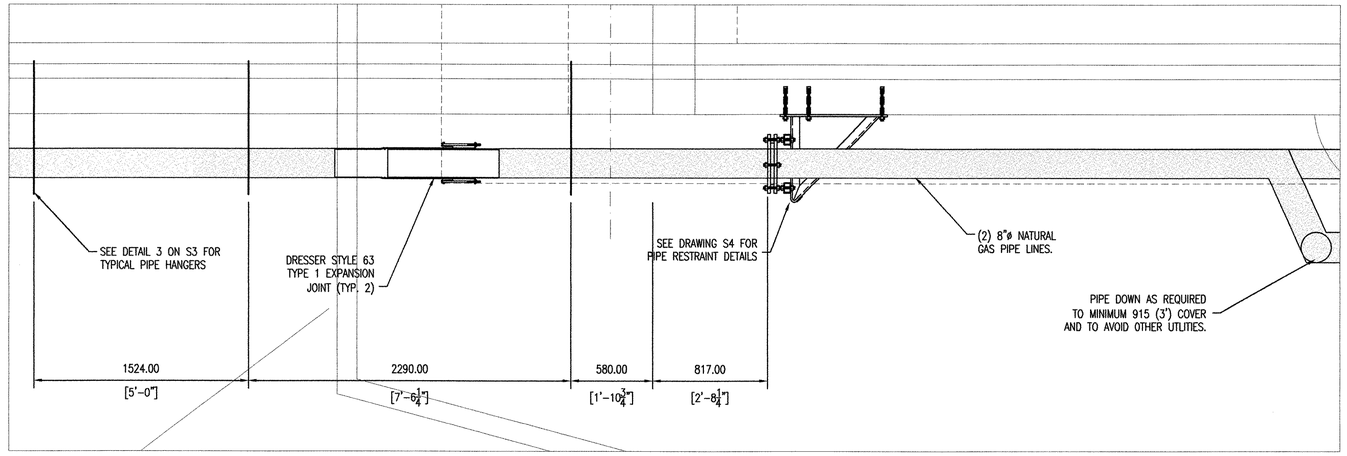
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER–SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta. / Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER AND N.E.C.R.	
BRIDGE GAS LINE SUPPORTS	
Designed By KNIGHT CONSULTING	Drawn By A. RICHER
Checked By E. GODDARD\B. EVANS Date 04/05	Bridge Design Supervisor Date
PROJECT COLCHESTER–SOUTH BURLINGTON	PROJECT NO. BRM 5600 (6) S
I.G.C. Info.	
Bridge Sheet No. GAS LINE SUPPORTS – S1	Sheet 85 of 124



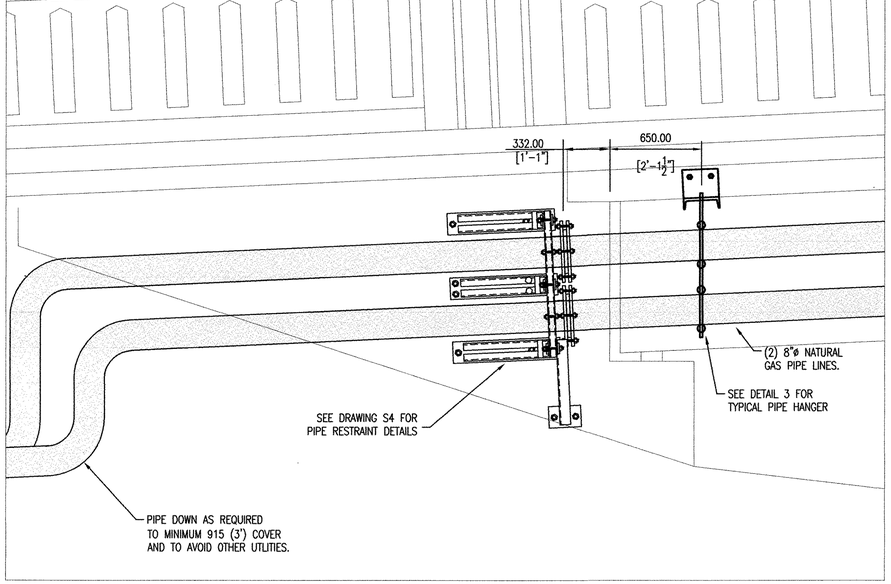
PARTIAL PLAN – SOUTH ABUTMENT

SCALE: 1:20



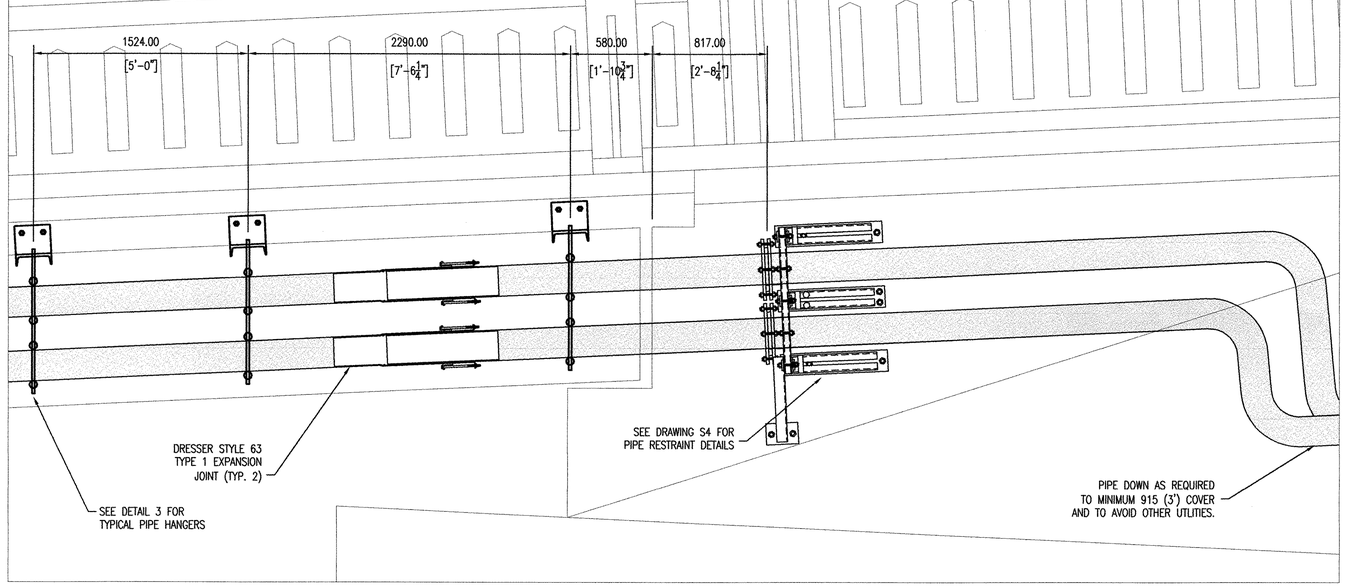
PARTIAL PLAN – NORTH ABUTMENT

SCALE: 1:20



PARTIAL ELEVATION – SOUTH ABUTMENT

SCALE: 1:20



PARTIAL ELEVATION – NORTH ABUTMENT

SCALE: 1:20

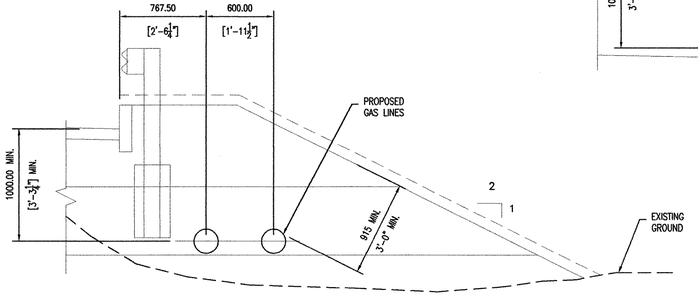
NOTE: EXPANSION JOINT SHALL BE CENTERED IN ITS LIMIT OF TRAVEL WHEN THE PIPE TEMPERATURE IS BETWEEN 15° AND 27° CELSIUS (60° – 80° FAHRENHEIT.) (PREFERABLY DONE IN EARLY MORNING)

INFORMATION ON THIS SHEET SHALL ONLY BE USED FOR THE INSTALLATION OF THE NATURAL GAS LINE OVER THE BRIDGE. ALL OTHER INFORMATION SHOULD NOT BE RELIED UPON FOR PURPOSES UNRELATED TO THE GAS LINES.

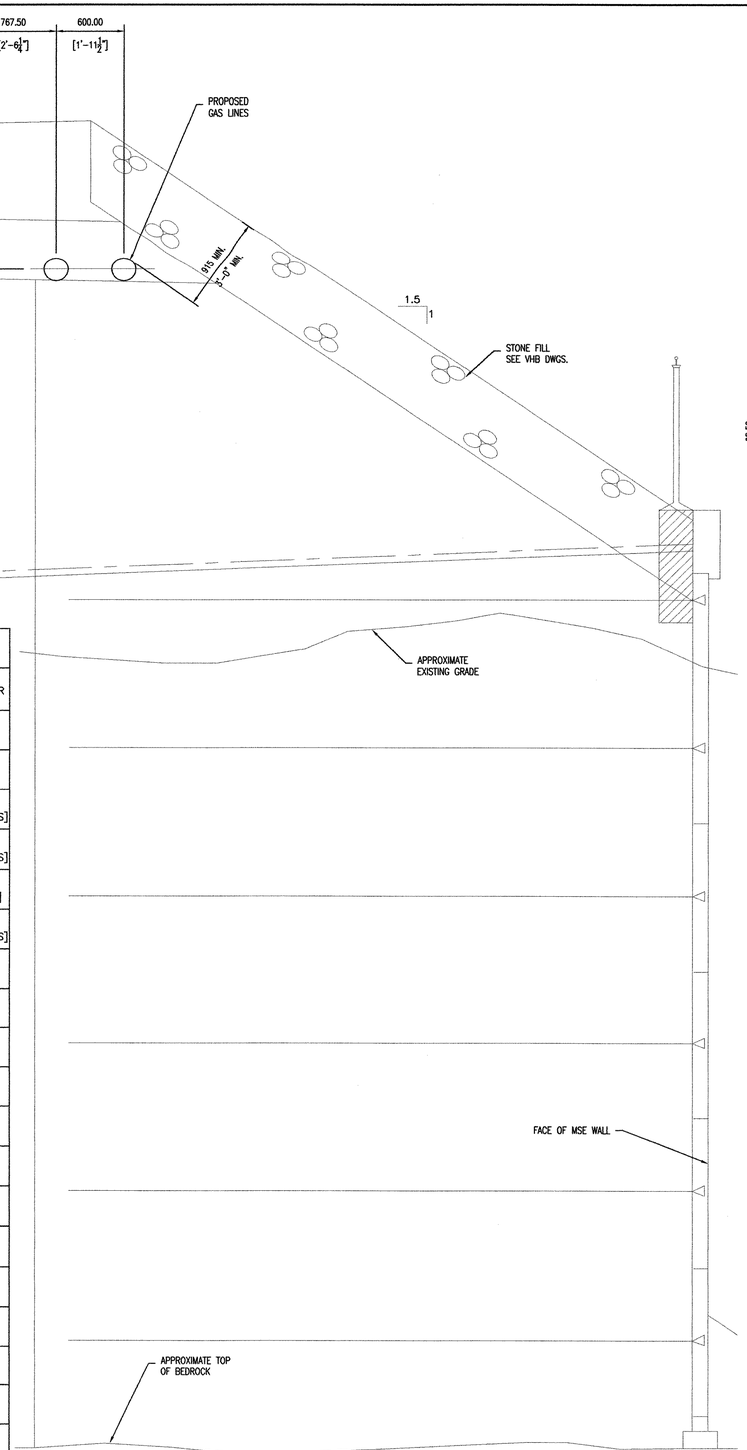
KCE S:\01271A\S1

STATE OF VERMONT
AGENCY OF TRANSPORTATION

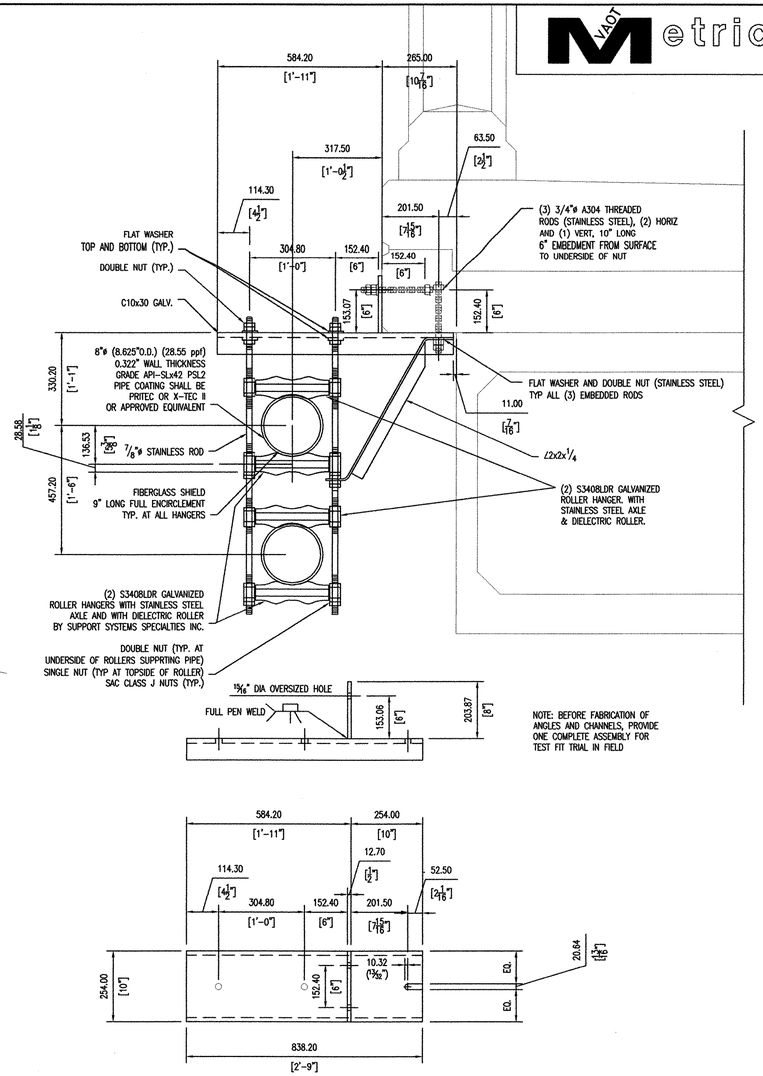
Town Of COLCHESTER–SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta. / Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER AND N.E.C.R.	
BRIDGE GAS LINE SUPPORTS	
Designed By KNIGHT CONSULTING	Drawn By A. RICHER
Checked By E. GODDARD\B. EVANS Date 04/05	Bridge Design Supervisor Date
PROJECT COLCHESTER–SOUTH BURLINGTON	PROJECT NO. BRM 5600 (6) S
I.G.C. Info.	
Bridge Sheet No. GAS LINE SUPPORTS – S2	Sheet 86 of 124



1 S3 SECTION AT GRADE
SCALE: 1:25

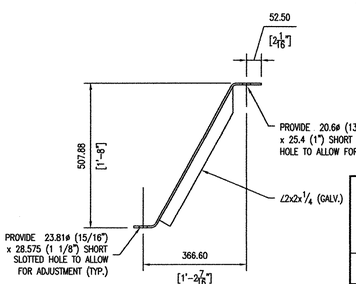


2 S3 SECTION AT MSE WALL
SCALE: 1:25



NOTE: BEFORE FABRICATION OF ANGLES AND CHANNELS, PROVIDE ONE COMPLETE ASSEMBLY FOR TEST FIT TRIAL IN FIELD

CHANNEL DETAIL



BRACE ANGLE DETAIL

3 S3 GAS LINE SUPPORT SECTION
SCALE: 1:10

1.) ALL SUPPORT COMPONENTS TO BE STAINLESS STEEL UNLESS NOTED OTHERWISE.

PARTS LIST

ITEM	DESCRIPTION	# REQUIRED	# TO ORDER
ROLLERS	S3408LDR STAINLESS STEEL ROLLER HANGER. WITH STAINLESS STEEL AXLE AND DIELECTRIC ROLLER BY SUPPORT SYSTEMS SPECIALTIES INC. (SEE DETAIL 3/3A ON S3)	72	80
FIBERGLASS INSULATING SHIELD	8" FULL ENCIRCLEMENT FIBERGLASS INSULATING SLEEVE (9" LENGTH) COMPLETELY SURROUNDING 8" PRITEC STEEL SCH. 40 GAS PIPE. (SEE DETAIL 3 ON THIS SHEET)	36	50
7/8"ø THREADED ROD	7/8"ø A304 STAINLESS STEEL THREADED ROD (20' LENGTHS FIELD CUT TO LENGTH AS REQUIRED) (SEE DETAIL 3 THIS SHEET)	126'	140' [(7) 20' LENGTHS]
3/4"ø THREADED ROD EMBEDDED IN PRECAST	3/4"ø A304 STAINLESS STEEL THREADED ROD (EMBEDDED IN CONCRETE PLANK (20' LENGTHS CUT INTO 10" LONG LENGTHS AS REQUIRED)	54'	60' [(3) 20' LENGTHS]
3/4"ø THREADED ROD	3/4"ø STAINLESS STEEL THREADED ROD (20' LENGTHS FIELD CUT TO LENGTH AS REQUIRED) (SEE DETAIL C ON S4)	11'	20' [(1) 20' LENGTH]
5/8"ø THREADED ROD EMBEDDED IN WINGWALL	5/8"ø STAINLESS STEEL THREADED ROD (20' LENGTHS FIELD CUT TO LENGTH AS REQUIRED) (SEE DETAIL 2 ON S4)	26'	40' [(2) 20' LENGTHS]
7/8"ø NUT	7/8"ø STAINLESS STEEL HEAVY HEX NUT. (SEE DETAIL 3 ON THIS SHEET)	540	600
3/4"ø NUT	3/4"ø STAINLESS STEEL HEAVY HEX NUT. (SEE DETAILS 3ON THIS SHEET, C AND D ON S4)	234	300
5/8"ø NUT	1/2"ø STAINLESS STEEL HEAVY HEX NUT. (SEE DETAIL 2 ON S4)	28	50
7/8"ø WASHER	7/8"ø STAINLESS STEEL FLAT WASHER. (SEE DETAIL 3 ON THIS SHEET)	72	100
3/4"ø WASHER	3/4"ø STAINLESS STEEL FLAT WASHER. (SEE DETAILS 3 ON THIS SHEET, C AND D ON S4)	162	200
1/2"ø WASHER	1/2"ø STAINLESS STEEL FLAT WASHER. (SEE DETAIL 2 ON S4)	28	50
3/4"ø NYLON WASHER	3/4"ø NYLON WASHER (SEE DETAIL C ON S4)	32	60
3/4"ø ISOLATION INSERT	3/4"ø ISOLATION INSERT (APPROXIMATELY 3" LONG CUT TO EXACT LENGTH IN FIELD) (SEE DETAIL C ON S4)	16	60
FABRICATED C10x30 AND PLATE ASSEMBLY	(SEE DETAIL 3 ON THIS SHEET) (GALVANIZED)	18	20
FABRICATED L2x2x1/4	(SEE DETAIL 3 ON THIS SHEET) (GALVANIZED)	18	20
HSS 3x2x1/4	(SEE DETAIL 2 ON S4) (GALVANIZED)	4	4
BRACKET ASSEMBLY 1	(SEE DETAIL A ON S4) (GALVANIZED) INCLUDES MOUNTING PLATE AND CORNER BAR (SHOP WELDED)	4	4
BRACKET ASSEMBLY 2	(SEE DETAIL B ON S4) (GALVANIZED) INCLUDES MOUNTING PLATE AND CORNER BAR (SHOP WELDED)	2	2
PLATE 1/2X3X3	(SEE DETAIL D ON S4) (GALVANIZED)	24	30
PLATE 3/4X17 O.D.	(SEE DETAIL 2 ON S4) (GALVANIZED)	8	10
L3 1/2X3X1/4 BRACE AND PLATE ASSEMBLY	(SEE DETAIL 2 ON S4) (GALVANIZED) INCLUDES 1/2x6x9 MOUNTING PLATE (SHOP WELDED)	2	2

NOTE: ALL QUANTITIES BY VERMONT GAS SYSTEMS.

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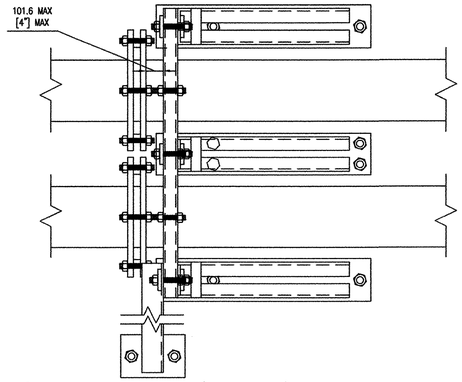
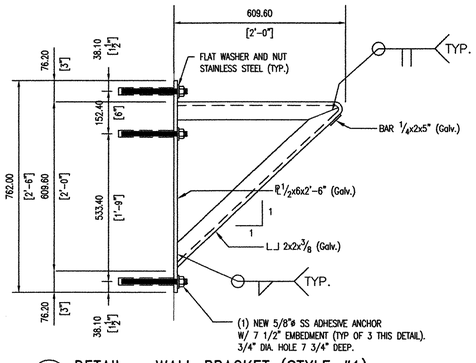
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER–SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta. / Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER AND N.E.C.R.	
BRIDGE GAS LINE SUPPORTS	
Designed By KNIGHT CONSULTING	Drawn By A. RICHER
Checked By E. GODDARD\B. EVANS Date 04/05	Bridge Design Supervisor Date
PROJECT COLCHESTER–SOUTH BURLINGTON	PROJECT NO. BRM 5600 (6) S
I.G.C. Info.	
Bridge Sheet No. GAS LINE SUPPORTS – S3	Sheet 87 of 124

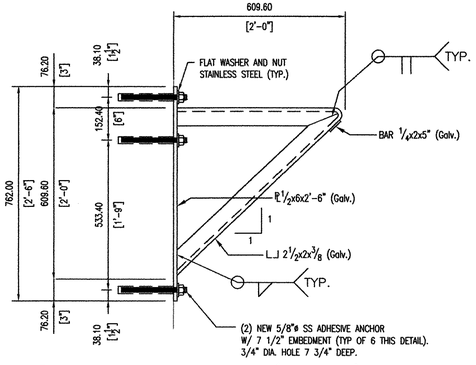


1 / S4 PIPE BRACING (SIDE VIEW) 1:10



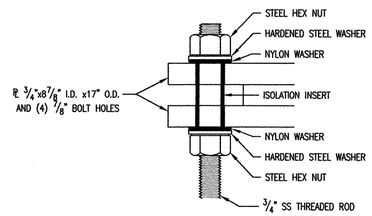
A / S4 DETAIL – WALL BRACKET (STYLE #1) 1:10

1.) ADHESIVE FOR ANCHORS SHALL BE RAWL FOIL FAST EPOXY OR APPROVED EQUIVALENT. INSTALL PER MANUFACTURERS INSTRUCTIONS.

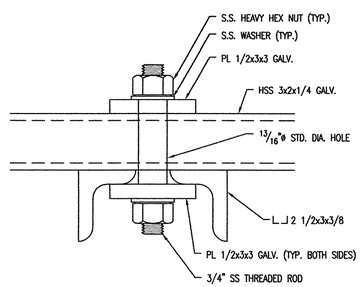


B / S4 DETAIL – WALL BRACKET (STYLE #2) 1:10

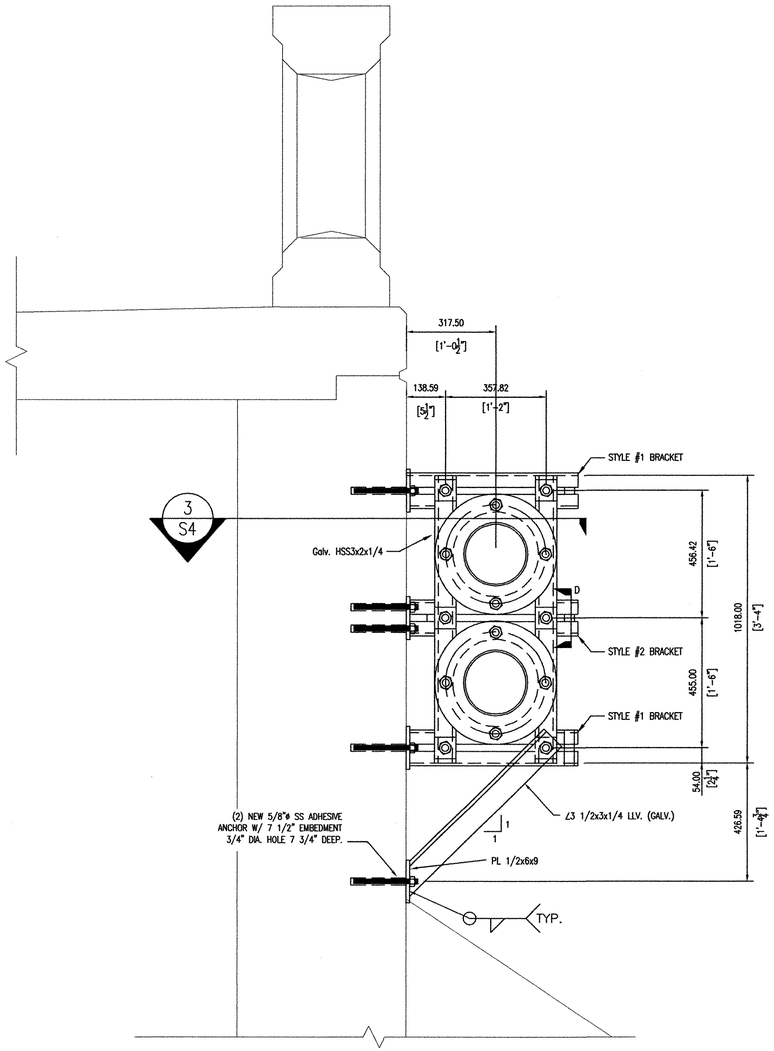
1.) ADHESIVE FOR ANCHORS SHALL BE RAWL FOIL FAST EPOXY OR APPROVED EQUIVALENT. INSTALL PER MANUFACTURERS INSTRUCTIONS.



C / S4 DETAIL – ISOLATION OF THREADED ROD 1:2.5

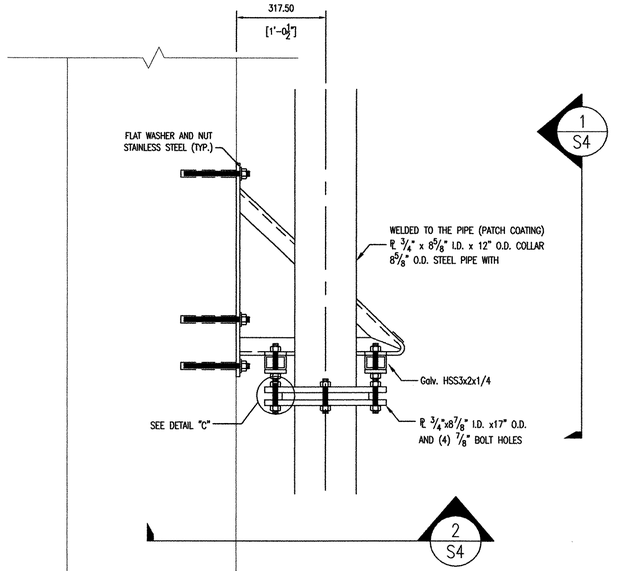


D / S4 SECTION 1:2.5

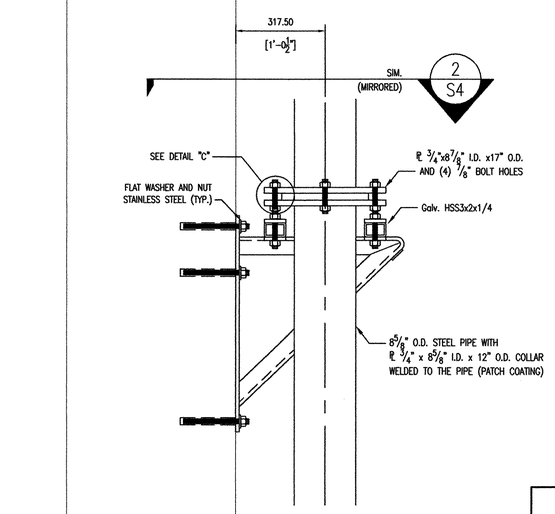


2 / S4 SECTION – NORTHERN PIPE RESTRAINT (LOOKING NORTH) 1:10

1.) ADHESIVE FOR ANCHORS SHALL BE RAWL FOIL FAST EPOXY OR APPROVED EQUIVALENT. INSTALL PER MANUFACTURERS INSTRUCTIONS.



3 / S4 NORTH ABUTMENT (TOP VIEW) 1:10



4 / S4 SOUTH ABUTMENT (TOP VIEW) 1:10

INFORMATION ON THIS SHEET SHALL ONLY BE USED FOR THE INSTALLATION OF THE NATURAL GAS LINE OVER THE BRIDGE. ALL OTHER INFORMATION SHOULD NOT BE RELIED UPON FOR PURPOSES UNRELATED TO THE GAS LINES.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER–SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta. / Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER AND N.E.C.R.	
BRIDGE GAS LINE SUPPORTS	
Designed By KNIGHT CONSULTING	Drawn By A. RICHER
Checked By E. GODDARD\B. EVANS Date 04/05	Bridge Design Supervisor Date
PROJECT COLCHESTER–SOUTH BURLINGTON	PROJECT NO. BRM 5600 (6) S
I.G.C. Info.	
Bridge Sheet No. GAS LINE SUPPORTS – S4	Sheet 88 of 124

KCE S:\01271A\S4

Metric

LIGHTING LOCATIONS

POLE NUMBER	LOCATION (STA) *	OFFSET * (M)	LENGTH POLE (M)	POLE TYPE	LUMINAIRE	TOWN	REMARKS
R1	10+045.8	5.9 LT	4.37	SUGARLAND	MH 175W-D323	SO. BURLINGTON	-
R2	10+068.4	5.9 LT	4.37	SUGARLAND	MH 175W-D323	SO. BURLINGTON	-
R3	10+090.9	5.9 LT	4.37	SUGARLAND	MH 175W-D323	SO. BURLINGTON	-
R4	10+108.0	5.9 LT	4.37	SUGARLAND	MH 175W-D323	SO. BURLINGTON	-
R5	10+127.6	5.9 LT	4.37	SUGARLAND	MH 175W-D323	SO. BURLINGTON	-
R6	10+145.5	5.9 LT	4.37	SUGARLAND	MH 175W-D323	SO. BURLINGTON	-
R7	10+160.6	5.9 LT	4.37	SUGARLAND	MH 175W-D323	SO. BURLINGTON	-
R8	10+175.6	5.9 LT	4.37	SUGARLAND	MH 175W-D323	SO. BURLINGTON	-
R9	10+194.6	5.9 LT	4.37	SUGARLAND	MH 175W-D323	SO. BURLINGTON	-
R10	10+217.7	5.9 LT	4.37	SUGARLAND	MH 175W-D323	SO. BURLINGTON	-
R11	10+233.7	5.9 LT	4.37	SUGARLAND	MH 175W-D323	SO. BURLINGTON	-
R12	10+249.5	5.9 LT	4.37	SUGARLAND	MH 175W-D323	SO. BURLINGTON	-
R13	10+274.0	5.9 LT	4.37	SUGARLAND	MH 175W-D323	SO. BURLINGTON	-
R14	10+291.6	5.9 LT	4.37	SUGARLAND	MH 175W-D323	SO. BURLINGTON	-
B1	10+309.9	7.1 LT	3.15	MANHATTAN	MH 175W-D323	SO. BURLINGTON	MOUNT ON PILASTER
B2	10+309.9	5.3 RT	3.15	MANHATTAN	MH 175W-D323	SO. BURLINGTON	MOUNT ON PILASTER
B3	10+322.5	7.1 LT	3.15	MANHATTAN	MH 175W-D323	SO. BURLINGTON	MOUNT ON PILASTER
B4	10+322.5	5.3 RT	3.15	MANHATTAN	MH 175W-D323	SO. BURLINGTON	MOUNT ON PILASTER
B5	10+335.8	7.1 LT	3.15	MANHATTAN	MH 175W-D323	SO. BURLINGTON	MOUNT ON PILASTER
B6	10+335.8	5.3 RT	3.15	MANHATTAN	MH 175W-D323	SO. BURLINGTON	MOUNT ON PILASTER
B7	10+349.3	7.1 LT	3.15	MANHATTAN	MH 175W-D323	COLCHESTER	MOUNT ON PILASTER
B8	10+349.3	5.3 RT	3.15	MANHATTAN	MH 175W-D323	COLCHESTER	MOUNT ON PILASTER
B9	10+362.8	7.1 LT	3.15	MANHATTAN	MH 175W-D323	COLCHESTER	MOUNT ON PILASTER
B10	10+362.8	5.3 RT	3.15	MANHATTAN	MH 175W-D323	COLCHESTER	MOUNT ON PILASTER
B11	10+376.0	7.1 LT	3.15	MANHATTAN	MH 175W-D323	COLCHESTER	MOUNT ON PILASTER
B12	10+376.0	5.3 RT	3.15	MANHATTAN	MH 175W-D323	COLCHESTER	MOUNT ON PILASTER
B13	10+388.8	7.1 LT	3.15	MANHATTAN	MH 175W-D323	COLCHESTER	MOUNT ON PILASTER
B14	10+388.8	5.3 RT	3.15	MANHATTAN	MH 175W-D323	COLCHESTER	MOUNT ON PILASTER
B15	10+401.8	7.1 LT	3.15	MANHATTAN	MH 175W-D323	COLCHESTER	MOUNT ON PILASTER
B16	10+401.8	5.3 RT	3.15	MANHATTAN	MH 175W-D323	COLCHESTER	MOUNT ON PILASTER
R15	10+420.0	5.9 LT	4.37	SUGARLAND	MH 175W-D323	COLCHESTER	-
R16	10+438.0	5.9 LT	4.37	SUGARLAND	MH 175W-D323	COLCHESTER	-
R17	10+457.0	5.9 LT	4.37	SUGARLAND	MH 175W-D323	COLCHESTER	-
R18	10+475.9	5.9 LT	4.37	SUGARLAND	MH 175W-D323	COLCHESTER	-
R19	10+495.6	5.9 LT	4.37	SUGARLAND	MH 175W-D323	COLCHESTER	-
R20	10+515.1	5.9 LT	4.37	SUGARLAND	MH 175W-D323	COLCHESTER	-
R21	10+534.4	5.9 LT	4.37	SUGARLAND	MH 175W-D323	COLCHESTER	-
R22	10+553.9	5.9 LT	4.37	SUGARLAND	MH 175W-D323	COLCHESTER	-
R23	10+573.2	5.9 LT	4.37	SUGARLAND	MH 175W-D323	COLCHESTER	-
R24	10+597.9	5.9 LT	4.37	SUGARLAND	MH 175W-D323	COLCHESTER	-
R25	10+619.2	6.9 LT	4.37	SUGARLAND	MH 175W-D323	COLCHESTER	-
R26	10+636.0	7.8 LT	4.37	SUGARLAND	MH 175W-D323	COLCHESTER	-
R27	10+654.8	7.7 LT	4.37	SUGARLAND	MH 175W-D323	COLCHESTER	-

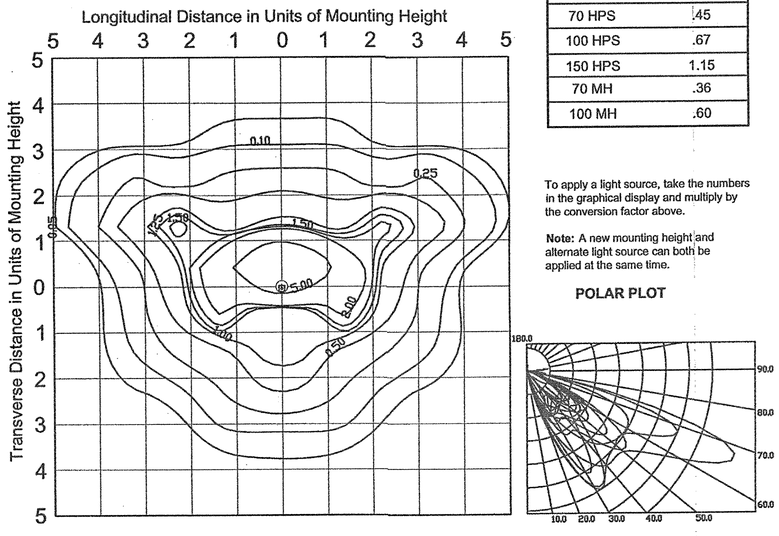
* POLE STATIONS AND OFFSETS ON BRIDGE ARE APPROXIMATE.
ACTUAL LOCATIONS WILL BE CENTERED ON LIGHTPOST PILASTERS.
(SEE NOTE 2)

PHOTOMETRIC DATA

Iso-footcandle Lines of Horizontal Illumination

Catalog #	**D323 (CA) / 175MH / HR3**
Light Source	175w Metal Halide - Clear BD-17
Description	Cast aluminum 8 sided lantern. Clear acrylic lenses, type III horizontal reflector
Lamp Lumens	**14,000**
Mounting Height	**12'**

D323



Conversion Factors for Alternate Height and Lamps

New Mounting Height	Conversion Factor
8 ft.	2.25
10 ft.	1.44
14 ft.	.74

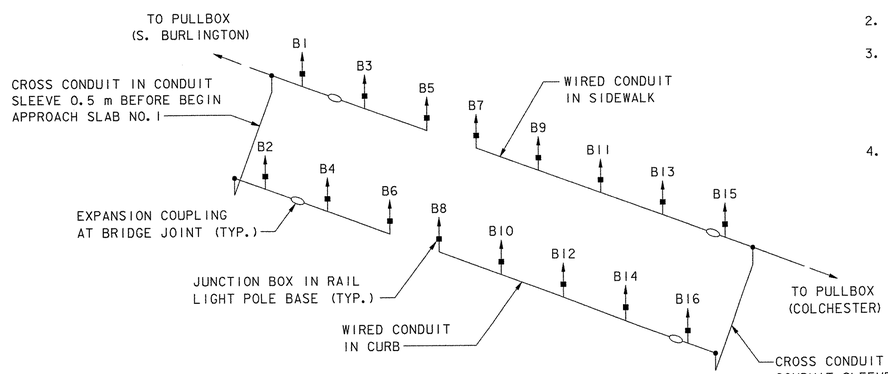
To apply a new mounting height, take the numbers in the graphical display and multiply by the conversion factor above. The grid spacing will now be the same as the new mounting height.

Alternate Light Source	Conversion Factor
70 HPS	.45
100 HPS	.67
150 HPS	1.15
70 MH	.36
100 MH	.60

To apply a light source, take the numbers in the graphical display and multiply by the conversion factor above.

Note: A new mounting height and alternate light source can both be applied at the same time.

POLAR PLOT



LIGHTING CONDUIT SCHEMATIC ON BRIDGE
(ISOMETRIC)
NOT TO SCALE

NOTES:

1. SEE SHEETS 19-23 FOR LIGHTING LOCATIONS IN PLAN VIEW.
2. SEE SHEETS 79-81 FOR LIGHTPOST PILASTER DETAILS ON BRIDGE.
3. CONTRACTOR SHALL VERIFY THAT EXISTING UNDER GROUND UTILITIES DO NOT CONFLICT WITH LIGHTING FOUNDATIONS, PRIOR TO COMMENCEMENT OF LIGHTING AND ELECTRICAL DESIGN. IF A CONFLICT IS FOUND, IT SHALL BE RESOLVED TO THE SATISFACTION OF THE ENGINEER AND INCLUDED IN THE SUBMISSIONS.
4. ALL COSTS FOR EXPANSION JOINT COUPLING SHALL BE INCIDENTAL TO ITEM 678.23, WIRED CONDUIT.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

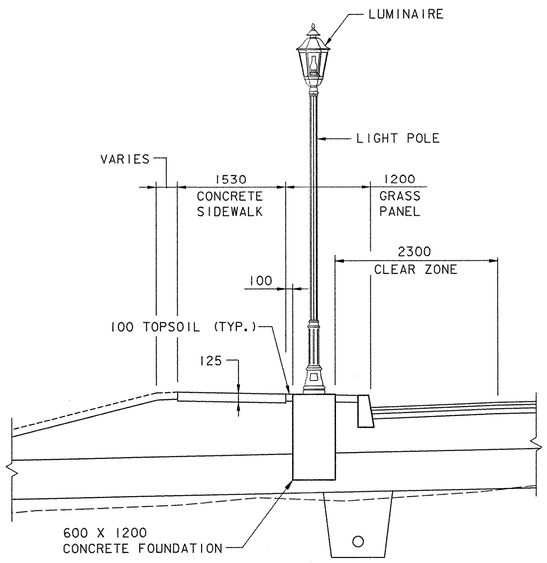
VHB Vanasse Hangen Brustlin, Inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
	Log Sta.
Highway No. TH 4/3	Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
LIGHTING DETAILS (1 OF 2)	
Designed By DYNAMIC/GUNN	Drawn By B. J. MASSE
Checked By M. A. COLGAN Date 4/05	Bridge Design Supervisor S. M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139LT1	Sheet 89 of 124

VHB NO. 50735

plot date: 4/25/2005

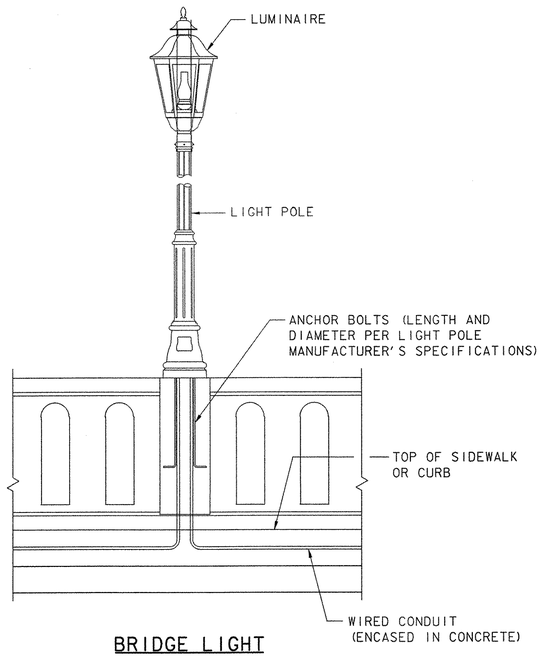


ROADWAY LIGHT

SCALE: 1:40

0 1000 2000 3000

SCALE IN MILLIMETERS



BRIDGE LIGHT

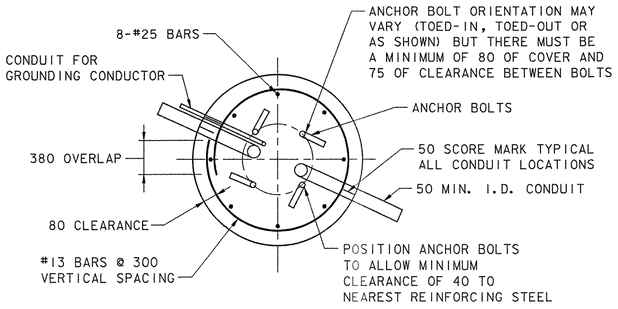
SCALE: 1:20

0 500 1000 1500

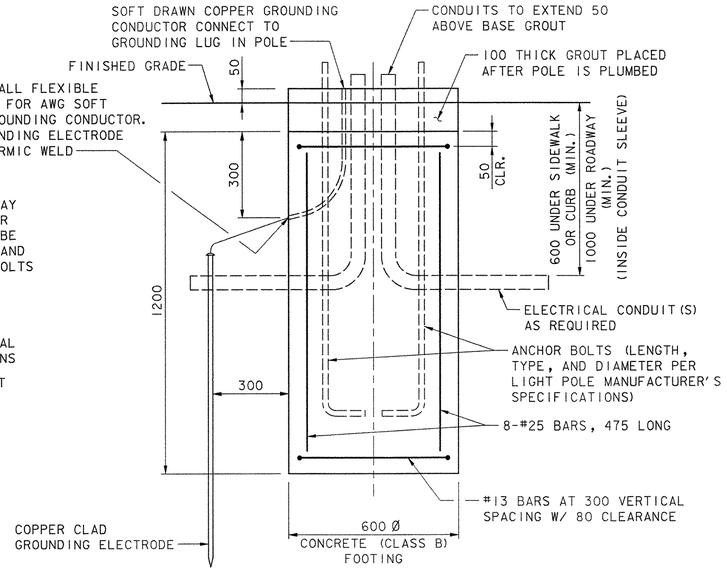
SCALE IN MILLIMETERS

NOTES:

1. THE FOLLOWING ROADWAY AND BRIDGE LIGHTING DESIGN PARAMETERS WERE USED:
   - IESNA RP8-00 STANDARD PRACTICE
   - COLLECTOR ROAD WITH ROAD SURFACE CLASSIFICATION OF R3 AND PEDESTRIAN CLASSIFICATION OF MEDIUM
   - ILLUMINANCE METHOD RECOMMENDED VALUE = 0.9 FC (FOR SIDEWALK ONLY)
   - UNIFORMITY RATIO: 4:1
   - HORIZONTAL ROOF MOUNTED LAMP TO MEET IES CUTOFF REQUIREMENTS
   - THE ACTUAL AVERAGE ILLUMINATION IS 1.32 FC AND THE ACTUAL MAXIMUM ILLUMINATION IS 7.73 FC FOR THE PROPOSED DESIGN
2. THE PHOTOMETRIC DATA AND ISO-FOOTCANDLES OF HORIZONTAL ILLUMINATION DRAWINGS SHOWN ON THE PLANS WERE USED FOR THE DESIGN OF THIS PROJECT. OTHER MANUFACTURER'S PRODUCTS MAY BE SUBMITTED TO THE ENGINEER FOR APPROVAL IF THEY MEET OR EXCEED THE ABOVE CRITERIA AND REQUIREMENTS AND ARE SIMILAR TO THE AESTHETICS PROPERTIES OF THE PROPOSED LUMINAIRES AND POLES. ALTERNATE MANUFACTURER'S PRODUCTS WILL REQUIRE THE CITY OF SOUTH BURLINGTON AND THE TOWN OF COLCHESTER APPROVAL IN WRITING.
3. THE LIGHT POLES ON THE BRIDGE SHALL BE MOUNTED ON THE BRIDGE RAIL PILASTERS AS DETAILED IN THE PLANS. THE LIGHT POLES ON THE ROADWAY SHALL BE MOUNTED ON THE CONCRETE FOUNDATIONS AS DETAILED IN THE PLANS. FOUNDATION CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF SECTION 501, CONCRETE CLASS B. REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF SECTION 507. ALL COSTS FOR CONCRETE FOUNDATIONS, INCLUDING REINFORCING, ANCHOR BOLTS, AND APPURTENANCES SHALL BE INCIDENTAL TO ITEM 679.45, LIGHT POLE (MOD. - DECORATIVE, ROADWAY).
4. THE LUMINAIRES SHALL BE DYNAMIC D323 (OR APPROVED EQUAL) CAST ALUMINUM FIXTURE, COLOR SMOOTH SATIN BLACK, WITH CLEAR ACRYLIC LENSES WITH A HORIZONTAL ROOF-MOUNTED 120-VOLT, 175-WATT METAL HALIDE LAMP WITH TYPE 3 REFRACTOR WITH DECORATIVE GLASS CHIMNEY AND DUSK-TO-DAWN PHOTOCELL.
5. BRIDGE LIGHT POLES SHALL BE DYNAMIC MANHATTAN SERIES (OR APPROVED EQUAL) WITH 100 mm O.D. FLUTED SHAFTS AND BANNER MOUNTS, COLOR SMOOTH SATIN BLACK, 3.05 m LONG. ROADWAY LIGHT POLES SHALL BE DYNAMIC SUGARLAND SERIES (OR APPROVED EQUAL) WITH 100 mm O.D. FLUTED SHAFTS AND BANNER MOUNTS, COLOR SMOOTH SATIN BLACK, 4.26 m LONG. POLES SHALL BE INSTALLED OUTSIDE THE CLEAR ZONE AND A MINIMUM DISTANCE OF 1 m FROM ALL DRIVEWAYS.
6. THE POWER SOURCES FOR THE LIGHTS ON THE BRIDGE AND ROADWAY SHALL BE SEPARATE AND METERED FOR EACH OF COLCHESTER AND SOUTH BURLINGTON. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS AND SHALL PROVIDE A DESIGN IN CONFORMANCE WITH ALL LOCAL AND STATE CODES AND VTRANS STANDARDS E173M, E175M, E180AM, E180BM, E181M TO THE ENGINEER FOR ALL DETAILS NECESSARY FOR THE CONSTRUCTION OF THE POWER SUPPLY, NOT LIMITED TO CONDUITS, SLEEVES, WIRE, GROUNDING, PULL BOXES, AND JUNCTION BOXES. COLCHESTER WILL HAVE METERED SERVICE FROM GREEN MOUNTAIN POWER (GMP) AND SOUTH BURLINGTON SERVICE WILL BE METERED BUT SHALL BE PROVIDED THROUGH AN ENERGY TARIFF PLUS MAINTENANCE AGREEMENT WITH GMP. METER BOXES SHALL BE AS PER GMP STANDARDS. CONTRACTOR SHALL ENSURE POWER SERVICE DESIGN DOES NOT CONFLICT WITH ANY EXISTING OR PROPOSED UTILITIES OR DRAINAGE.
7. THE ACCEPTED QUANTITIES OF STREET LIGHTING SHALL BE PAID FOR AS 678.23 WIRED CONDUIT, 678.25 PULL BOX, 678.26 JUNCTION BOX, 678.30 ELECTRICAL CONDUIT SLEEVE, 679.21 LIGHT POLE BASE (MOD.-DECORATIVE), 679.45 LIGHT POLE (MOD. - DECORATIVE, ROADWAY), 679.45 LIGHT POLE (MOD.-DECORATIVE, BRIDGE), AND 679.50 LUMINAIRE (MOD.-DECORATIVE FIXTURE). PAYMENT UNDER EACH ITEM WILL BE FULL COMPENSATION FOR MATERIAL PREPARATION, SUBMITTALS, MODIFICATIONS, RE-SUBMITTALS AND INSTALLATION, AND FOR FURNISHING ALL LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.



SECTION



ELEVATION

CONCRETE FOUNDATION

SCALE: 1:10

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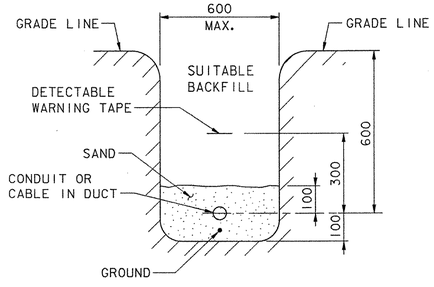
SCALE IN MILLIMETERS



BURIED CONDUIT

NOT TO SCALE

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VHB Vanasse Hangen Brustlin, Inc.

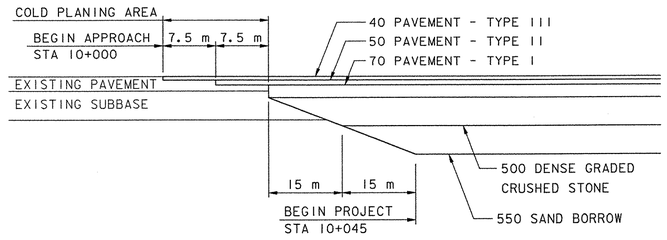
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of COLCHESTER-SOUTH BURLINGTON	Bridge No. 6
Highway No. TH 4/3	Log Sta.
	Surv. Sta.
TH 4/3 OVER WINOOSKI RIVER & N.E.C.R.	
LIGHTING DETAILS (2 OF 2)	
Designed By DYNAMIC/SM GUNN	Drawn By B.J. MASSE
Checked By M.A. COLGAN Date 4/05	Bridge Design Supervisor S.M. GUNN Date 4/05
PROJECT COLCHESTER-SOUTH BURLINGTON	PROJECT NO. BRM 5600(6)S C/2
I.G.C. Info.	
Bridge Sheet No. ZD139LT2	Sheet 90 of 124

VHB NO. 50735

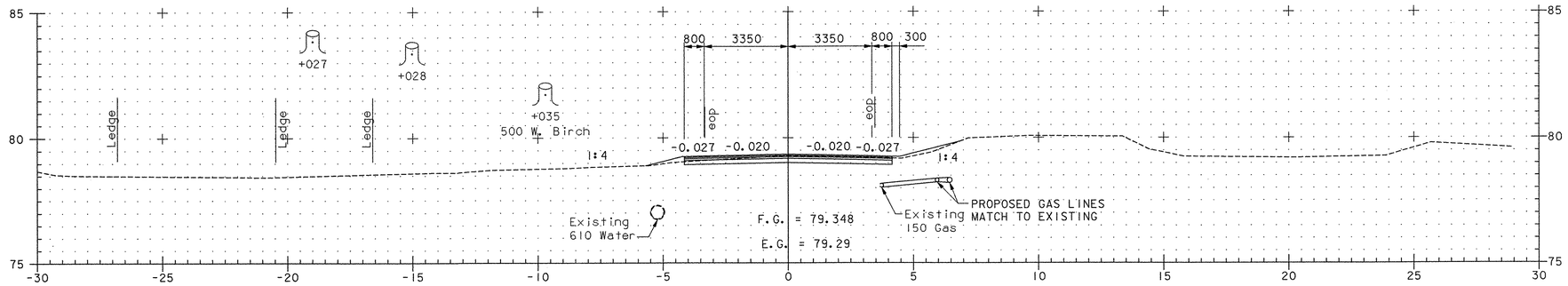
plot date: 4/28/2005

Metric

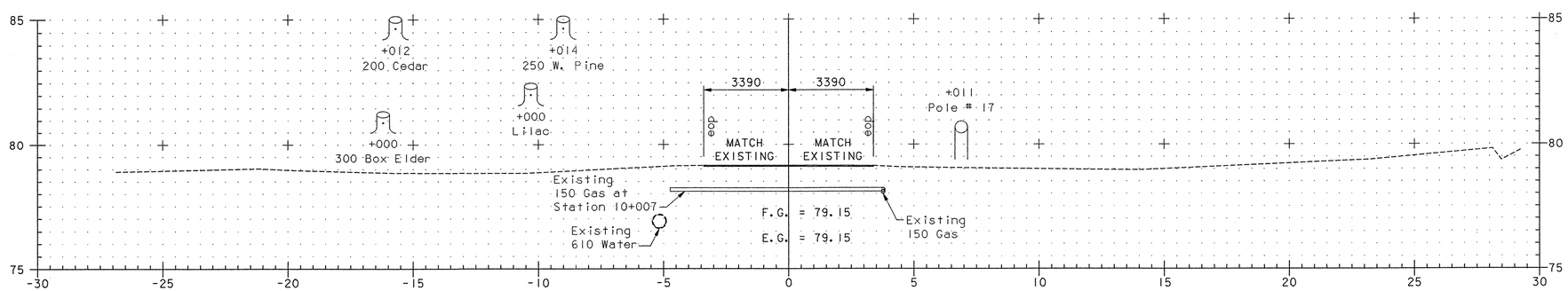


MATERIAL TRANSITION DETAIL

NOT TO SCALE

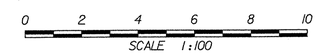


10+020



10+000

BEGIN APPROACH
STA 10+000.000
MATCH EXISTING



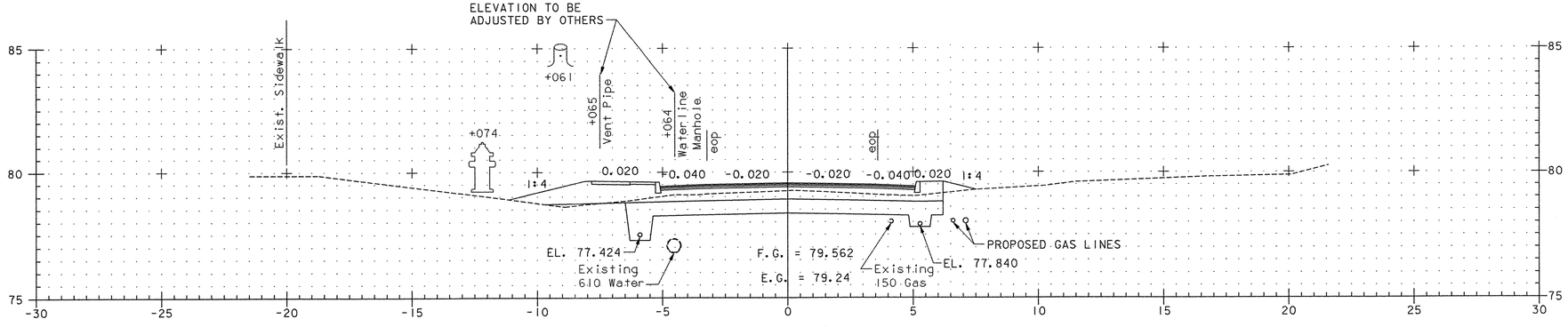
TH 4/3

FROM STA 10+000	TO STA 10+020
PROJECT NAME	COLCHESTER - SOUTH BURLINGTON
PROJECT NO.	BRM 5600(6)S C/2
SURVEYED BY	EIV TECH. SERV. 6/97, 11/02; VTRANS 2/02, 11/02
SHEET 91 OF 124	

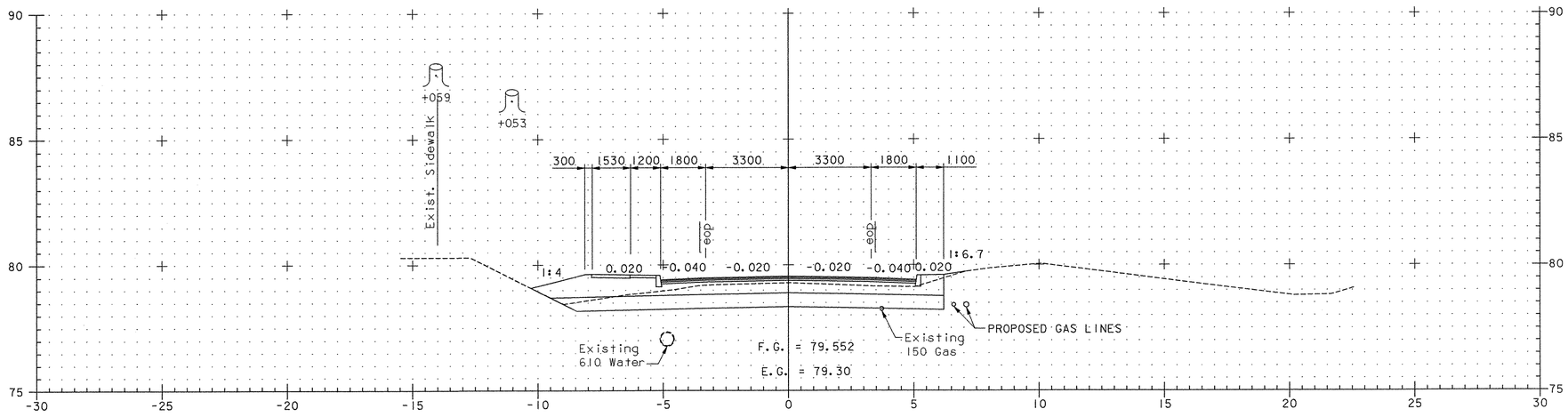
VHB Vanasse Hangen Brustlin, Inc.

VHB NO. 50735

plot date: 4/25/2005

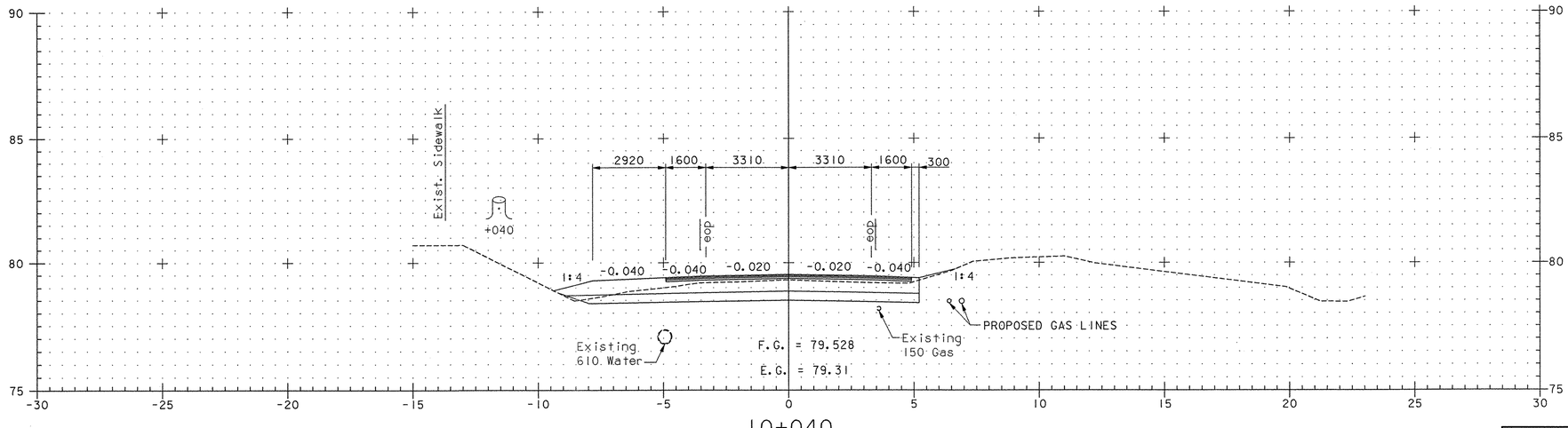


10+060

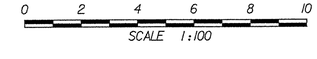


10+045

BEGIN PROJECT
STA 10+045.000



10+040



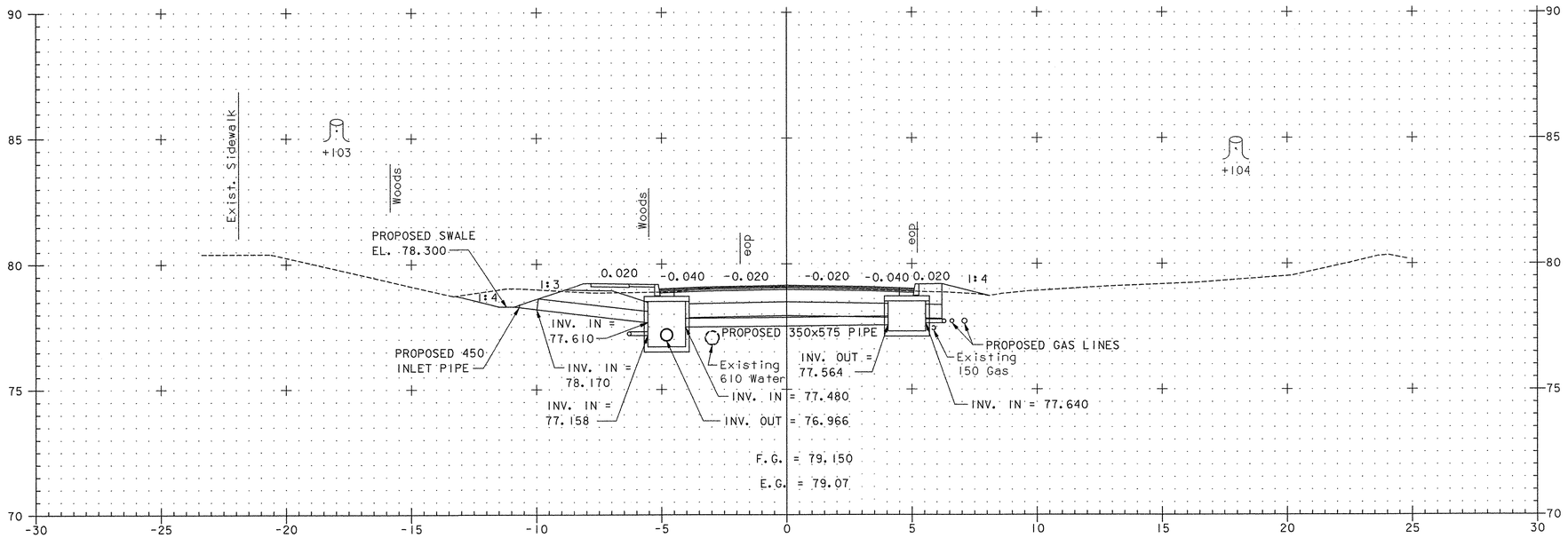
TH 4/3

FROM STA 10+040	TO STA 10+060
PROJECT NAME	COLCHESTER - SOUTH BURLINGTON
PROJECT NO.	BRM 5600(6)S C/2
SURVEYED BY	EIV TECH. SERV. 6/97, 11/02; VTRANS 2/02, 11/02
SHEET 92 OF 124	

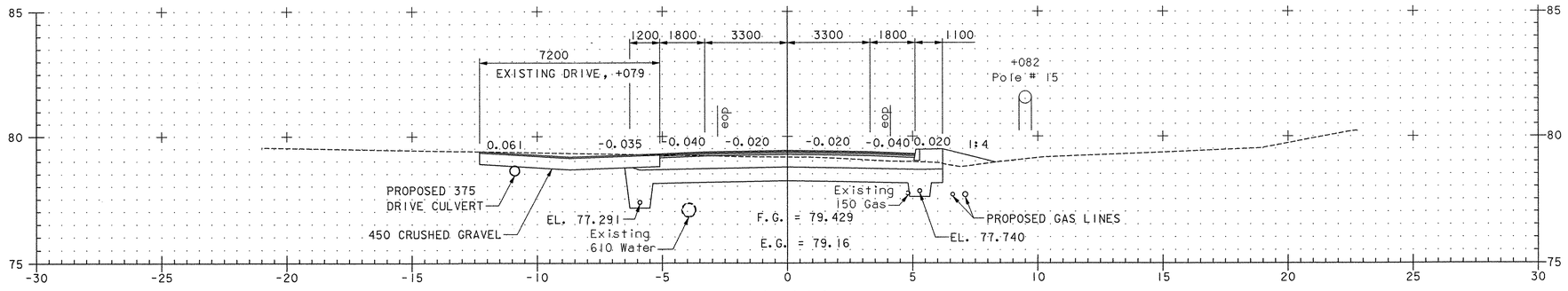
VHB Vanasse Hangen Brustlin, Inc.

VHB NO. 50735

plot date: 4/25/2005



10+100



10+080

0 2 4 6 8 10
SCALE 1:100

TH 4/3

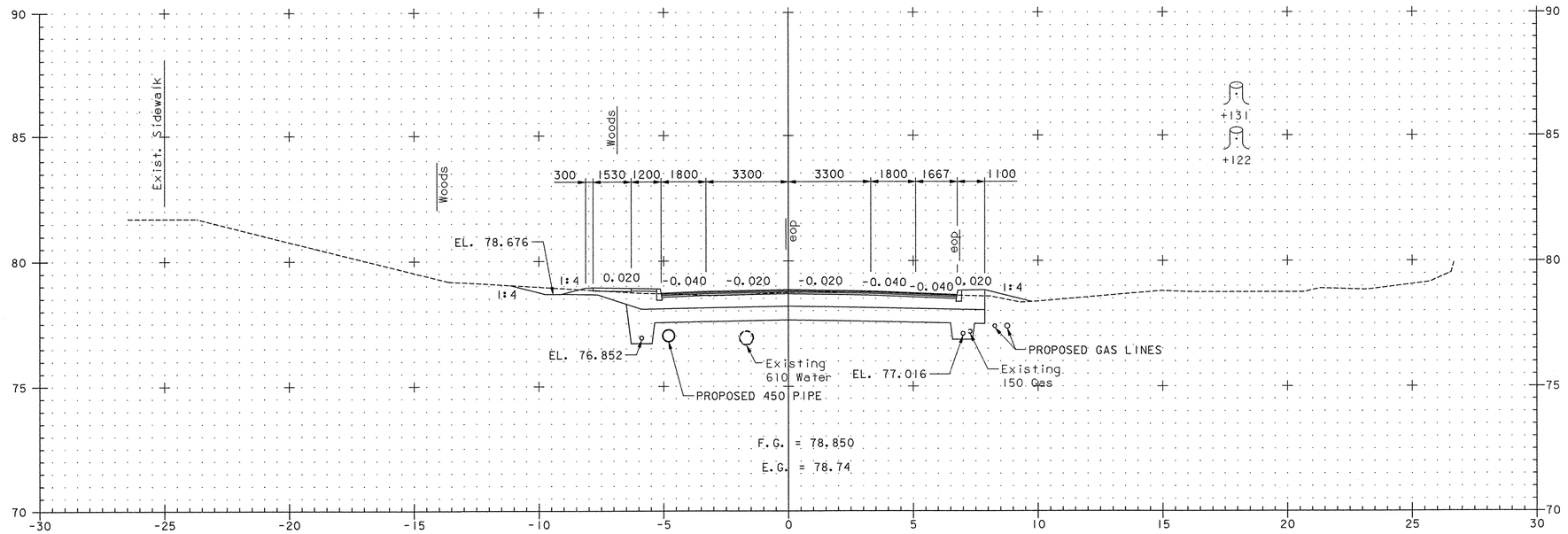
FROM STA 10+080	TO STA 10+100
PROJECT NAME	COLCHESTER - SOUTH BURLINGTON
PROJECT NO.	BRM 5600(6)S C/2
SURVEYED BY	EIV TECH. SERV. 6/97, 11/02; VTRANS 2/02, 11/02
SHEET 93 OF 124	

VHB Vanasse Hangen Brustlin, Inc.

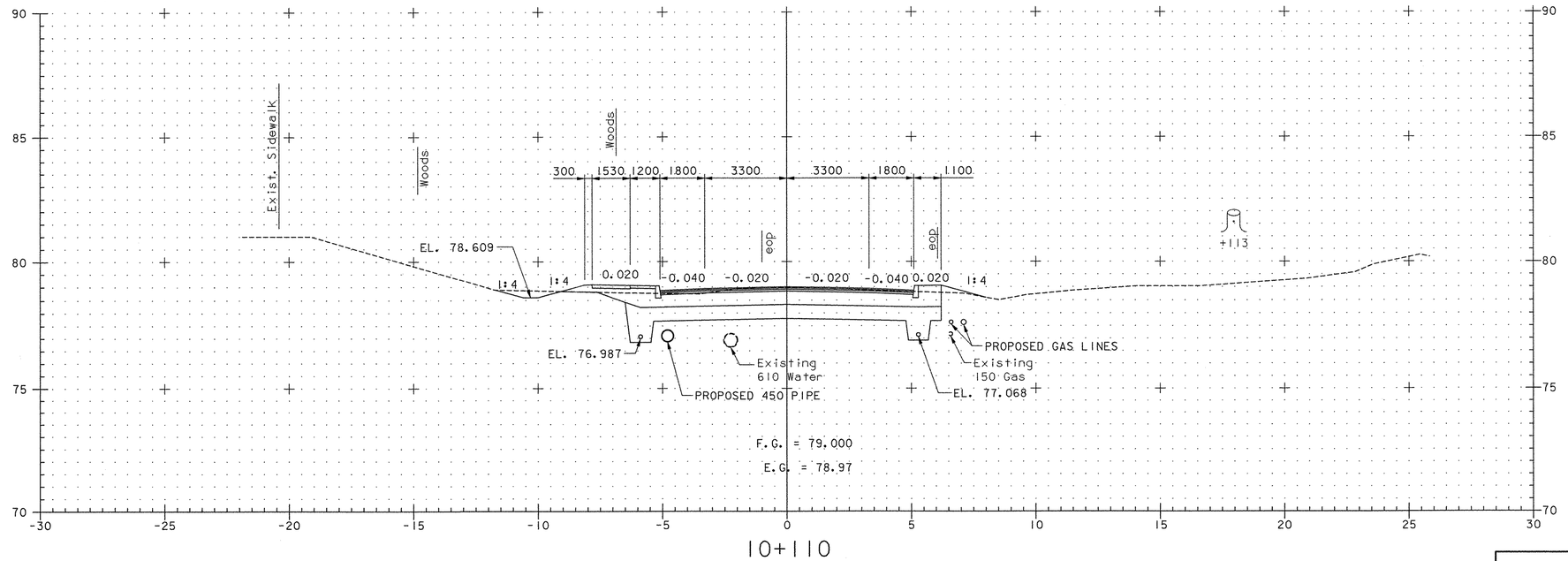
VHB NO. 50735

plot date: 4/25/2005

Metric



10+120



10+110

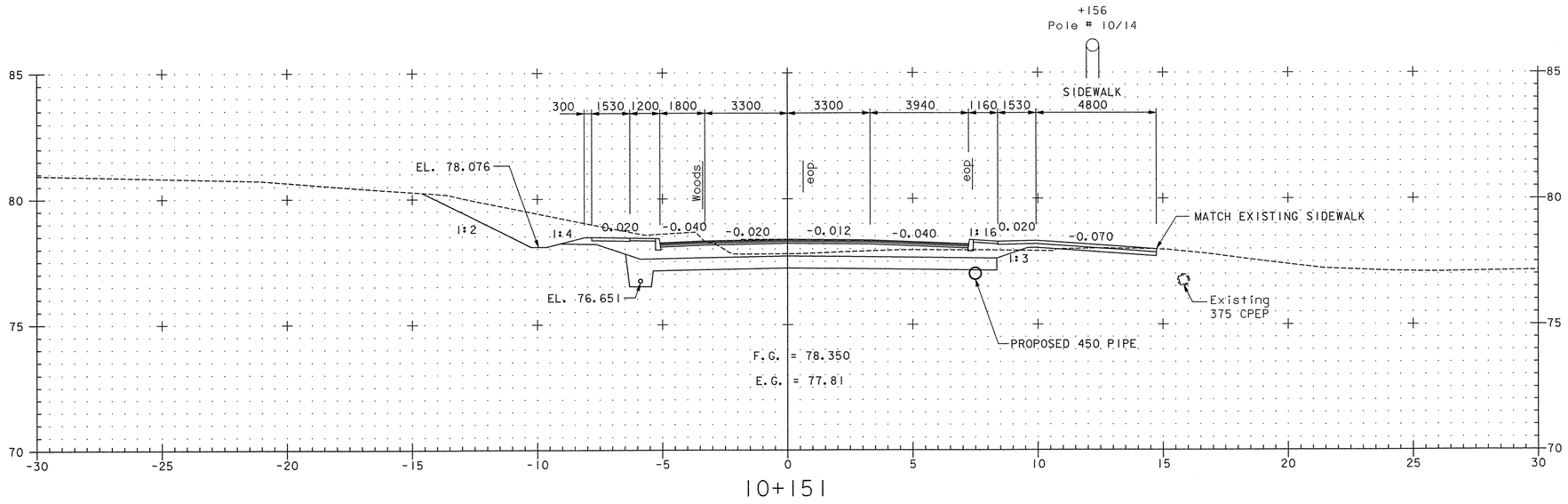
0 2 4 6 8 10
SCALE 1:100

TH 4/3

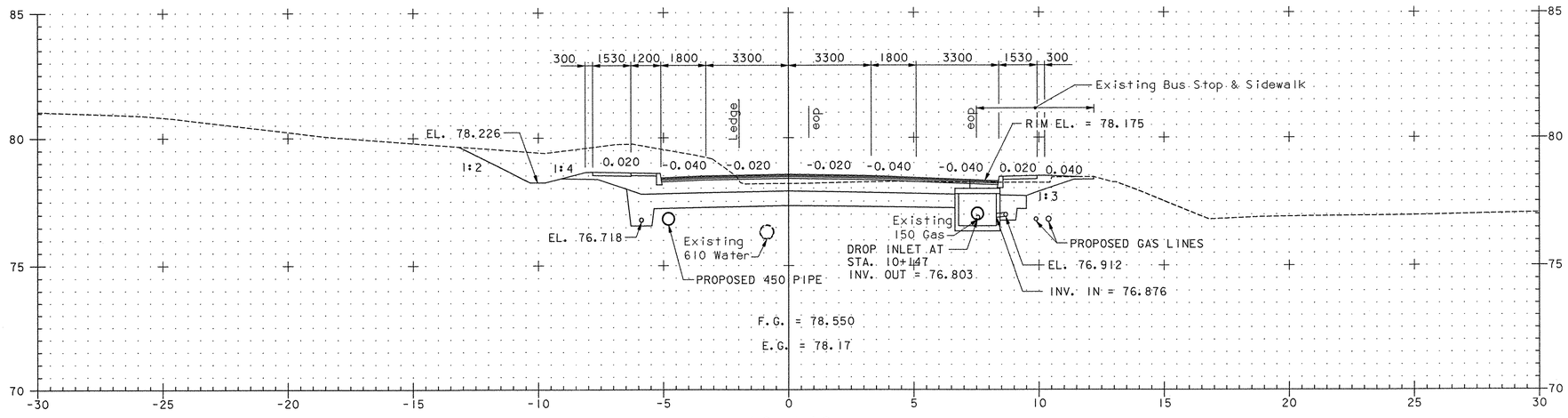
FROM STA 10+110	TO STA 10+120
PROJECT NAME	COLCHESTER - SOUTH BURLINGTON
PROJECT NO.	BRM 5600(6)S C/2
SURVEYED BY	EIV TECH. SERV. 6/97, 11/02; VTRANS 2/02, 11/02
SHEET 94 OF 124	

VHB Vanasse Hangen Brustlin, Inc.

VHB NO. 50735 plot date: 4/25/2005



10+151



10+140

0 2 4 6 8 10
SCALE 1:100

TH 4/3

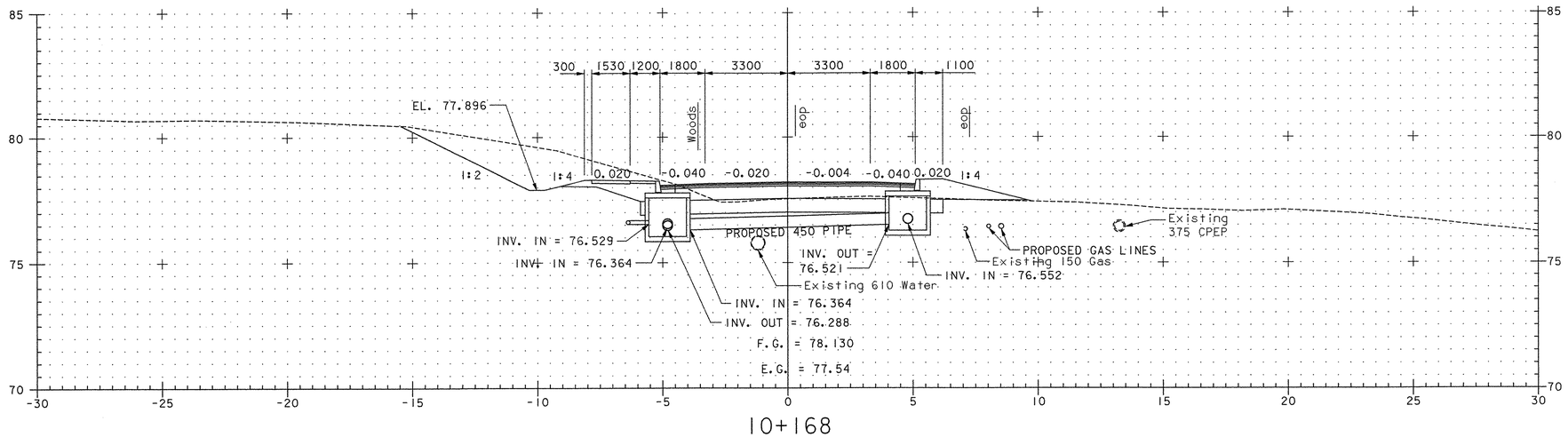
FROM STA 10+140	TO STA 10+151
PROJECT NAME	COLCHESTER - SOUTH BURLINGTON
PROJECT NO.	BRM 5600(6)S C/2
SURVEYED BY	EIV TECH. SERV. 6/97, 11/02; VTRANS 2/02, 11/02
SHEET 95 OF 124	

VHB Vanasse Hangen Brustlin, Inc.

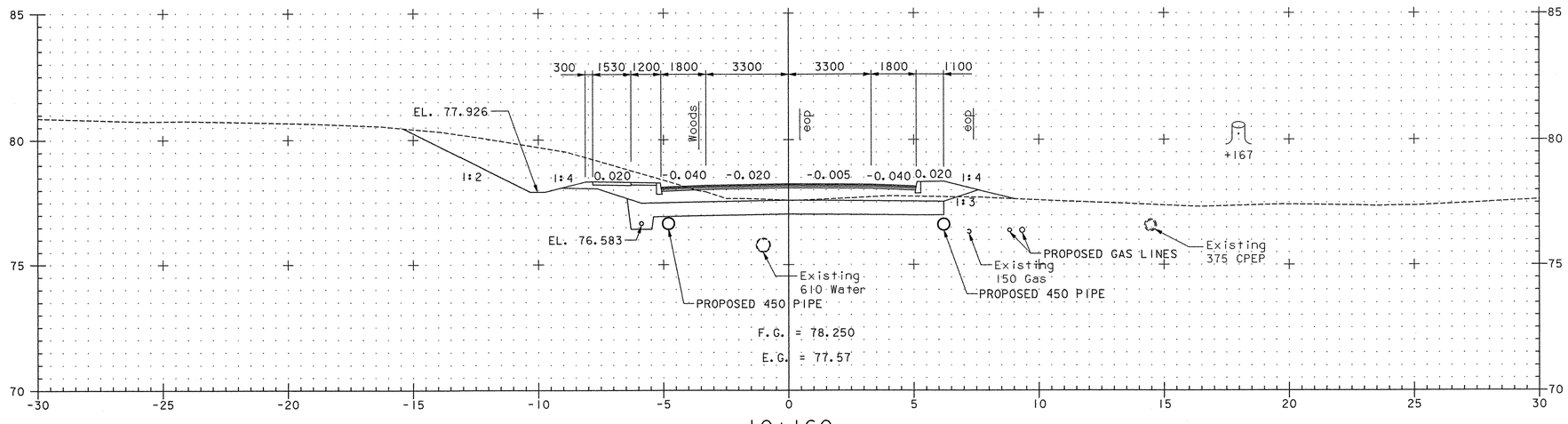
VHB NO. 50735

plot date: 4/25/2005

Metric



10+168



10+160

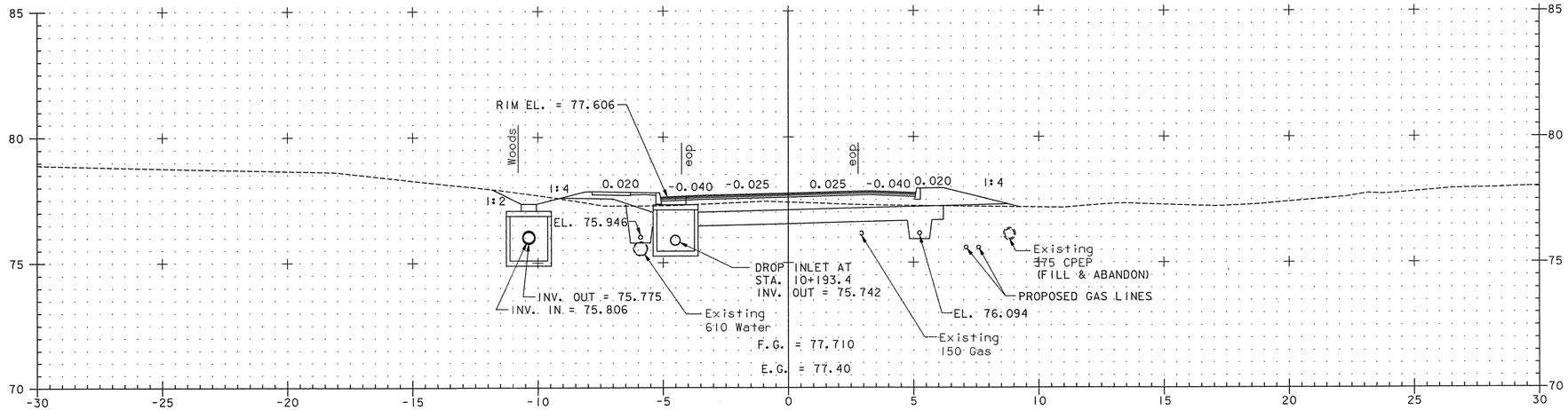
0 2 4 6 8 10
SCALE 1:100

TH 4/3

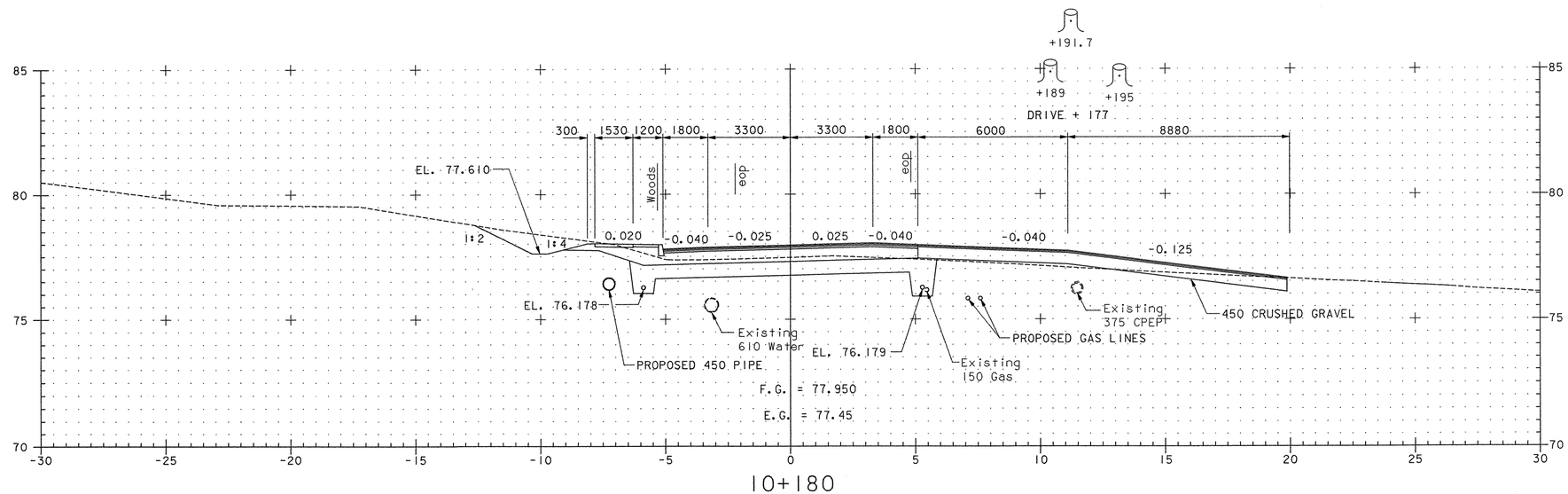
FROM STA 10+160	TO STA 10+168
PROJECT NAME	COLCHESTER - SOUTH BURLINGTON
PROJECT NO.	BRM 5600(6)S C/2
SURVEYED BY	EIV TECH. SERV. 6/97, 11/02; VTRANS 2/02, 11/02
SHEET 96 OF 124	

VHB Vanasse Hangen Brustlin, Inc.

VHB NO. 50735 plot date: 4/25/2005



10+196



10+180

0 2 4 6 8 10
SCALE 1:100

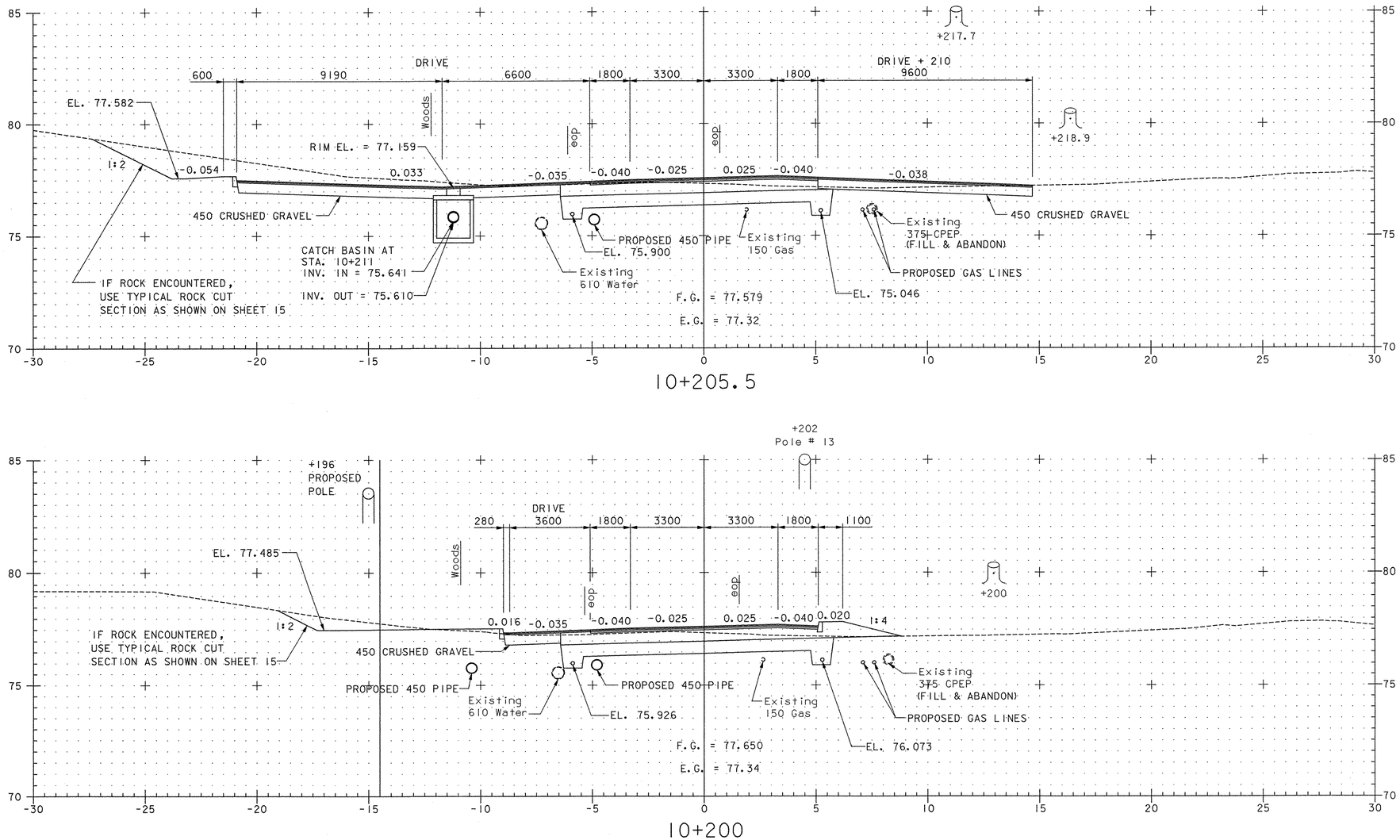
TH 4/3

FROM STA 10+180	TO STA 10+196
PROJECT NAME	COLCHESTER - SOUTH BURLINGTON
PROJECT NO.	BRM 5600(6)S C/2
SURVEYED BY	EIV TECH. SERV. 6/97, 11/02; VTRANS 2/02, 11/02
SHEET 97 OF 124	

VHB Vanasse Hangen Brustlin, Inc.

VHB NO. 50735

plot date: 4/25/2005



10+205.5

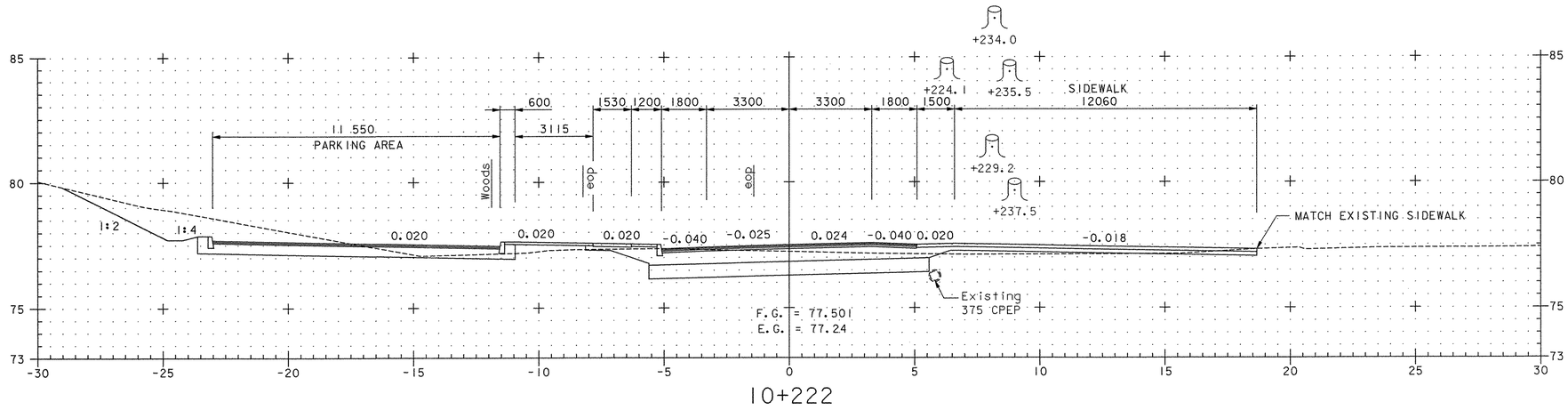
10+200

0 2 4 6 8 10
SCALE 1:100

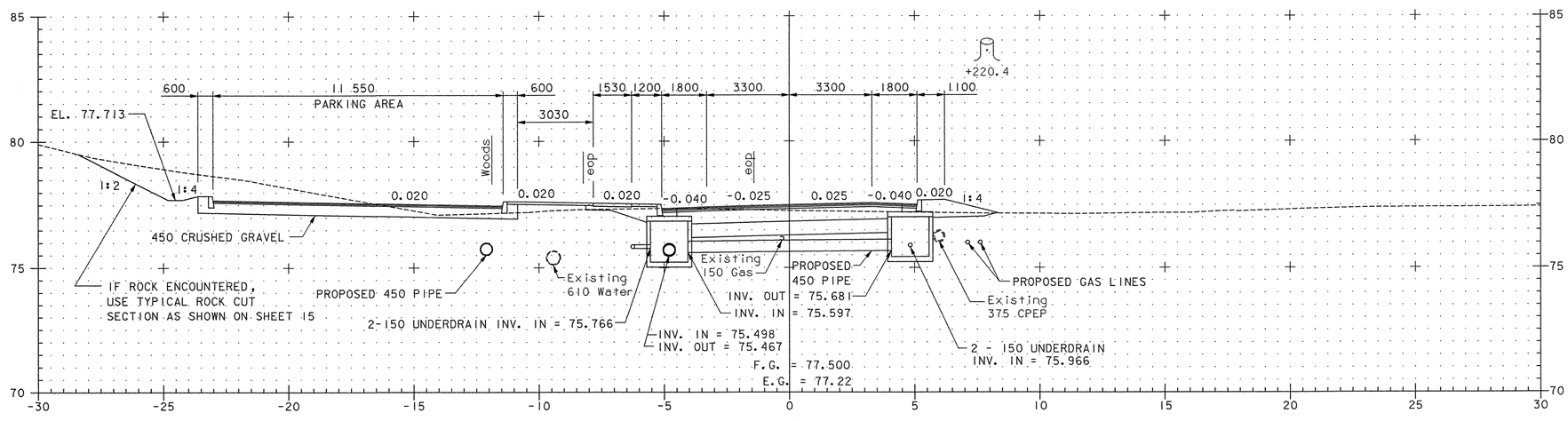
TH 4/3

FROM STA 10+200	TO STA 10+205.5
PROJECT NAME	COLCHESTER - SOUTH BURLINGTON
PROJECT NO.	BRM 5600(6)S C/2
SURVEYED BY	EIV TECH. SERV. 6/97, 11/02; VTRANS 2/02, 11/02
SHEET 98 OF 124	

VHB Vanasse Hangen Brustlin, Inc.



10+222



10+220

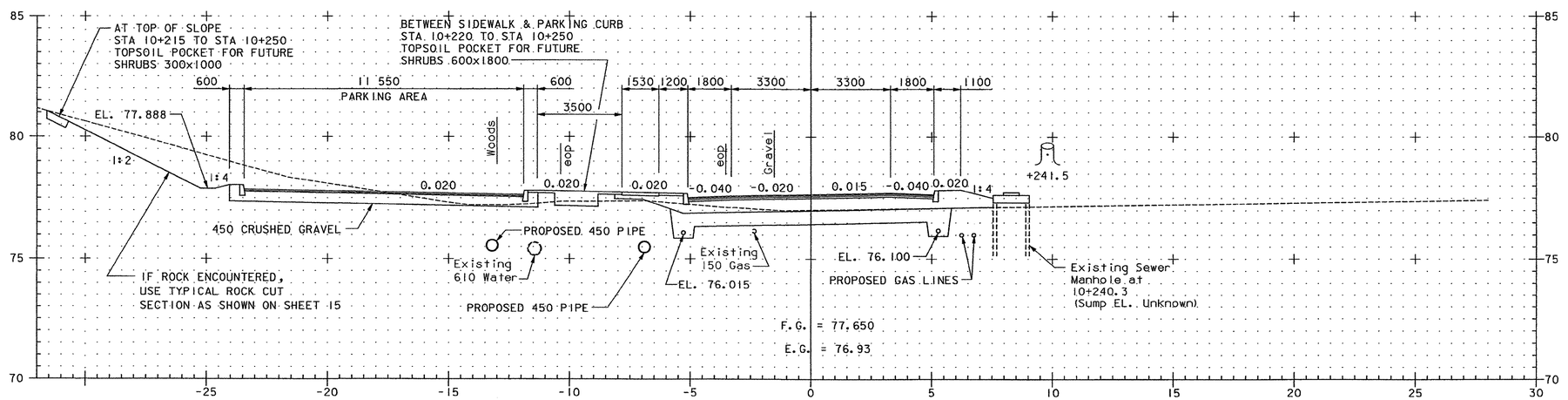
0 2 4 6 8 10
SCALE 1:100

TH 4/3

FROM STA 10+220	TO STA 10+222
PROJECT NAME	COLCHESTER - SOUTH BURLINGTON
PROJECT NO.	BRM 5600(6)S C/2
SURVEYED BY	EIV TECH. SERV. 6/97, 11/02; VTRANS 2/02, 11/02
SHEET 99 OF 124	

VHB Vanasse Hangen Brustlin, Inc.

VHB NO. 50735 plot date: 4/25/2005



10+240

0 2 4 6 8 10
SCALE 1:100

TH 4/3

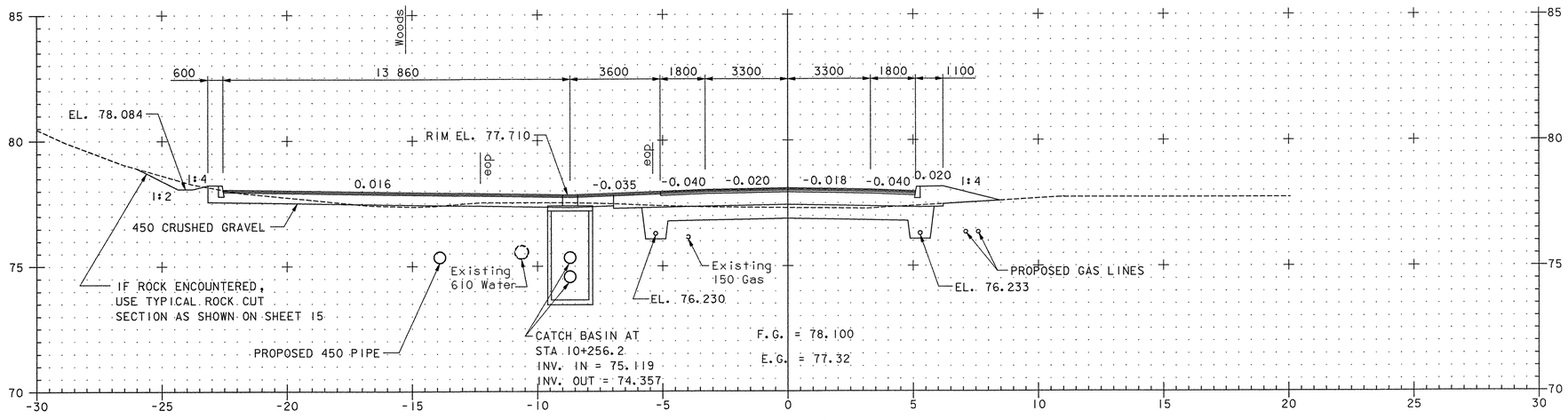
FROM STA 10+240	TO STA 10+240
PROJECT NAME	COLCHESTER - SOUTH BURLINGTON
PROJECT NO.	BRM 5600(6)S C/2
SURVEYED BY	EIV TECH. SERV. 6/97, 11/02; VTRANS 2/02, 11/02
SHEET 100 OF 124	

VHB Vanasse Hangen Brustlin, Inc.

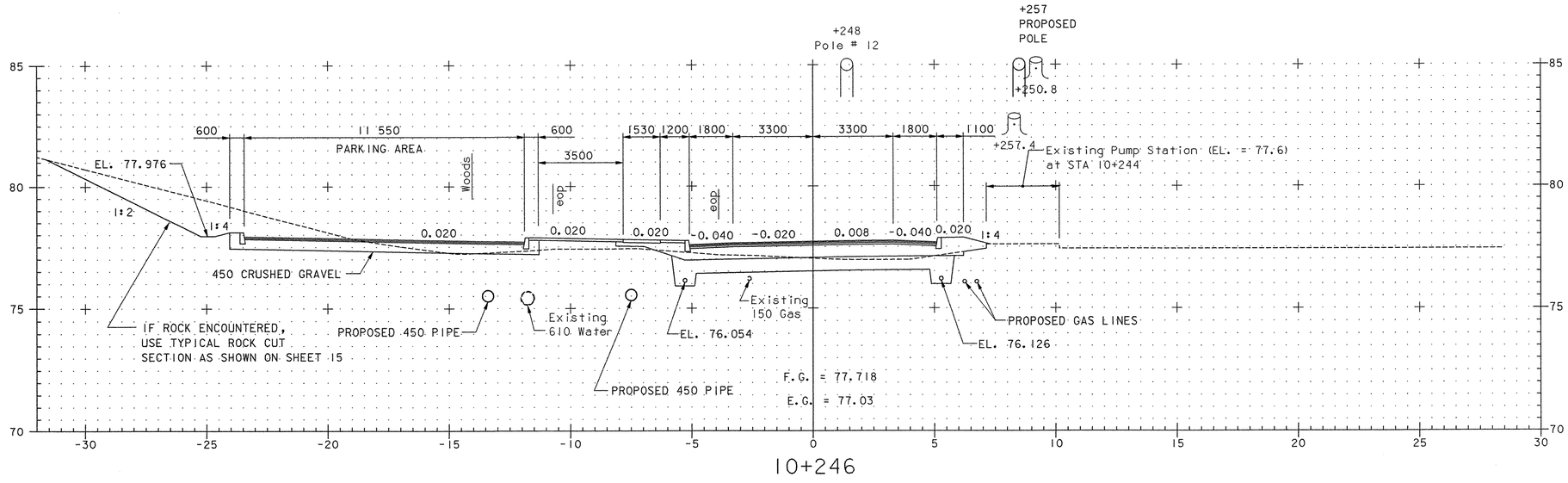
VHB NO. 50735

plot date: 5/17/2005

VAOT Metric



10+260



10+246

0 2 4 6 8 10
SCALE 1:100

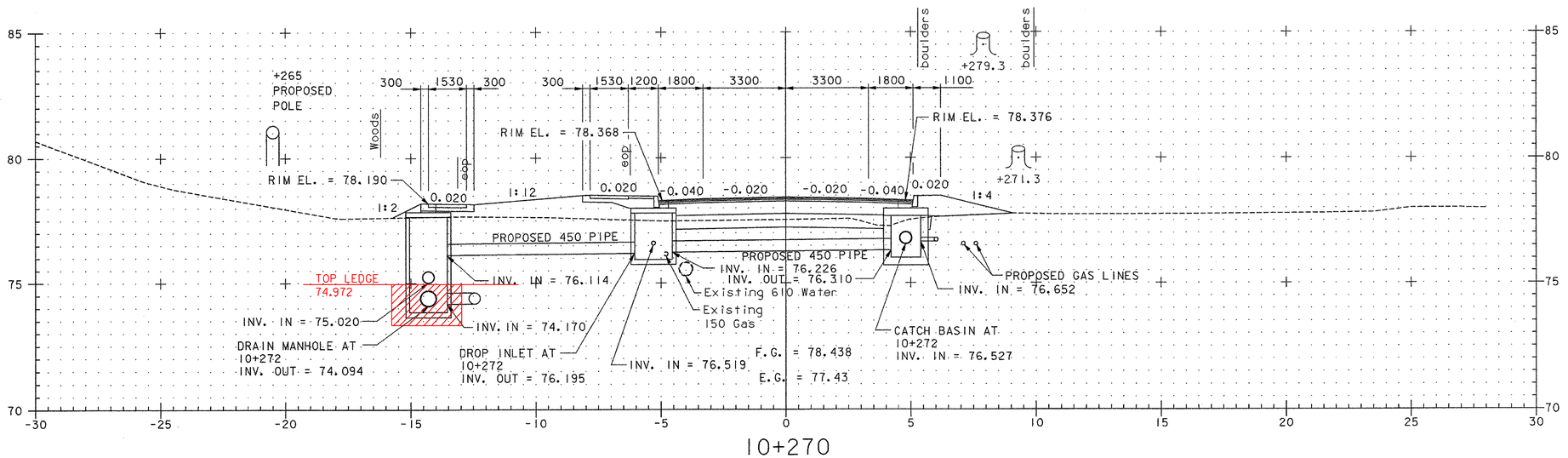
TH 4/3

FROM STA 10+246	TO STA 10+260
PROJECT NAME	COLCHESTER - SOUTH BURLINGTON
PROJECT NO.	BRM 5600(6)S C/2
SURVEYED BY	EIV TECH. SERV. 6/97, 11/02; VTRANS 2/02, 11/02
SHEET 101 OF 124	

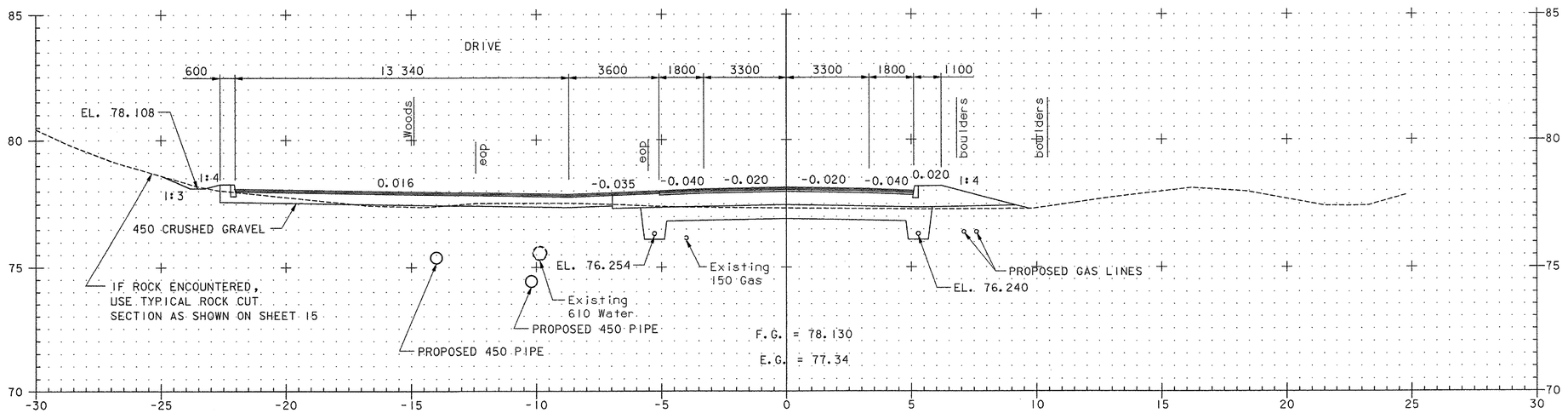
VHB Vanasse Hangen Brustlin, Inc.

VHB NO. 50735

plot date: 4/25/2005



10+270



10+261

0 2 4 6 8 10
SCALE 1:100

TH 4/3

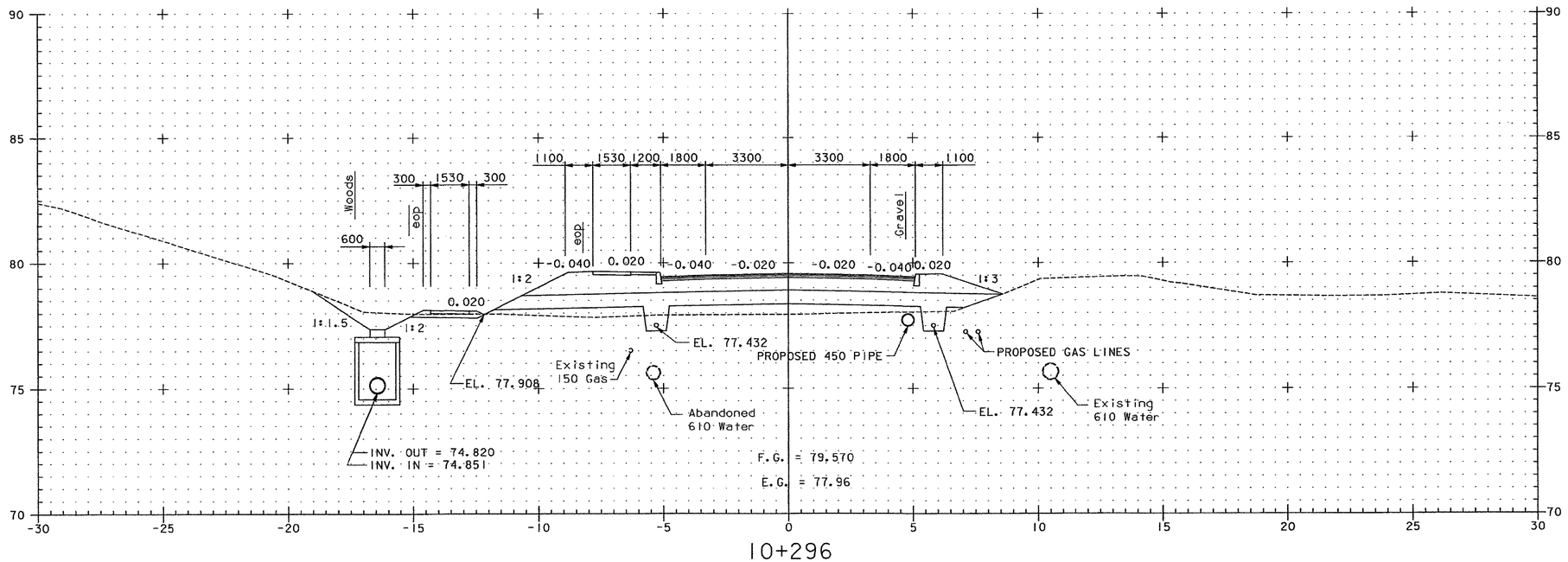
FROM STA 10+261	TO STA 10+270
PROJECT NAME	COLCHESTER - SOUTH BURLINGTON
PROJECT NO.	BRM 5600(6)S C/2
SURVEYED BY	EIV TECH. SERV. 6/97, 11/02; VTRANS 2/02, 11/02
SHEET 102 OF 124	

VHB Vanasse Hangen Brustlin, Inc.

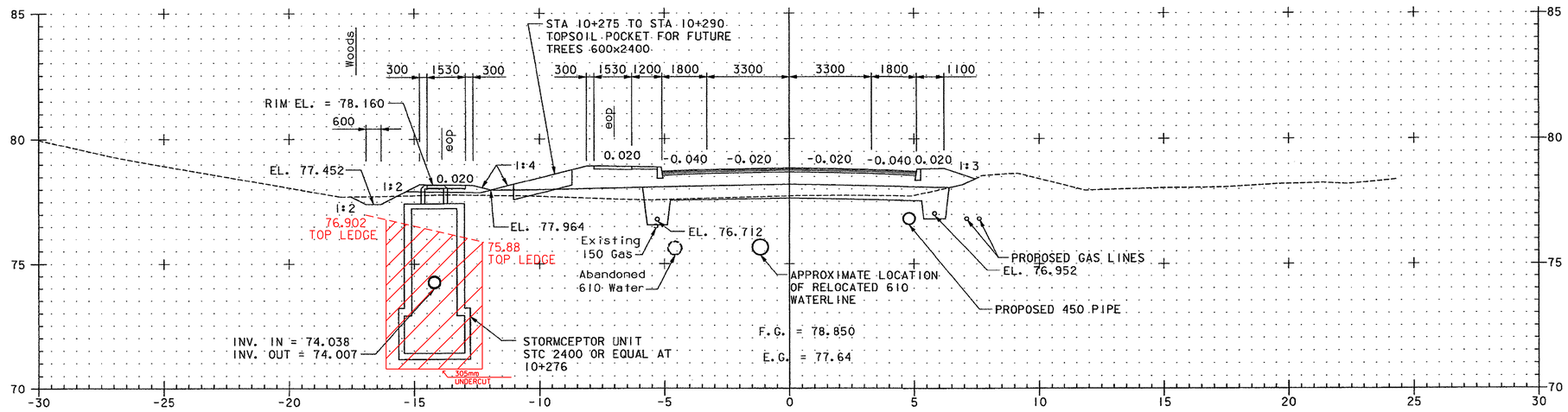
VHB NO. 50735

plot date: 4/25/2005

Metric



10+296



10+280

0 2 4 6 8 10
SCALE 1:100

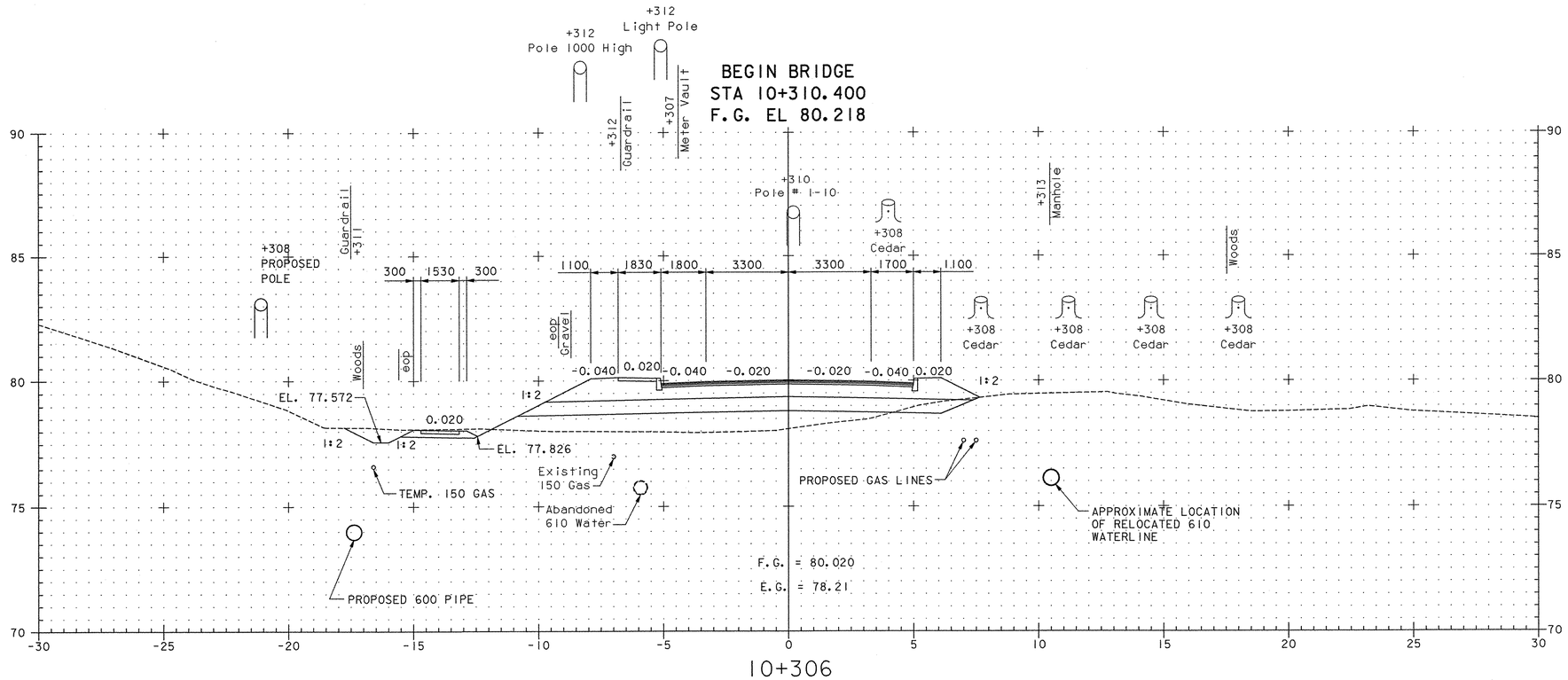
TH 4/3

FROM STA 10+280	TO STA 10+296
PROJECT NAME	COLCHESTER - SOUTH BURLINGTON
PROJECT NO.	BRM 5600(6)S C/2
SURVEYED BY	EIV TECH. SERV. 6/97, 11/02; VTRANS 2/02, 11/02
SHEET 103 OF 124	

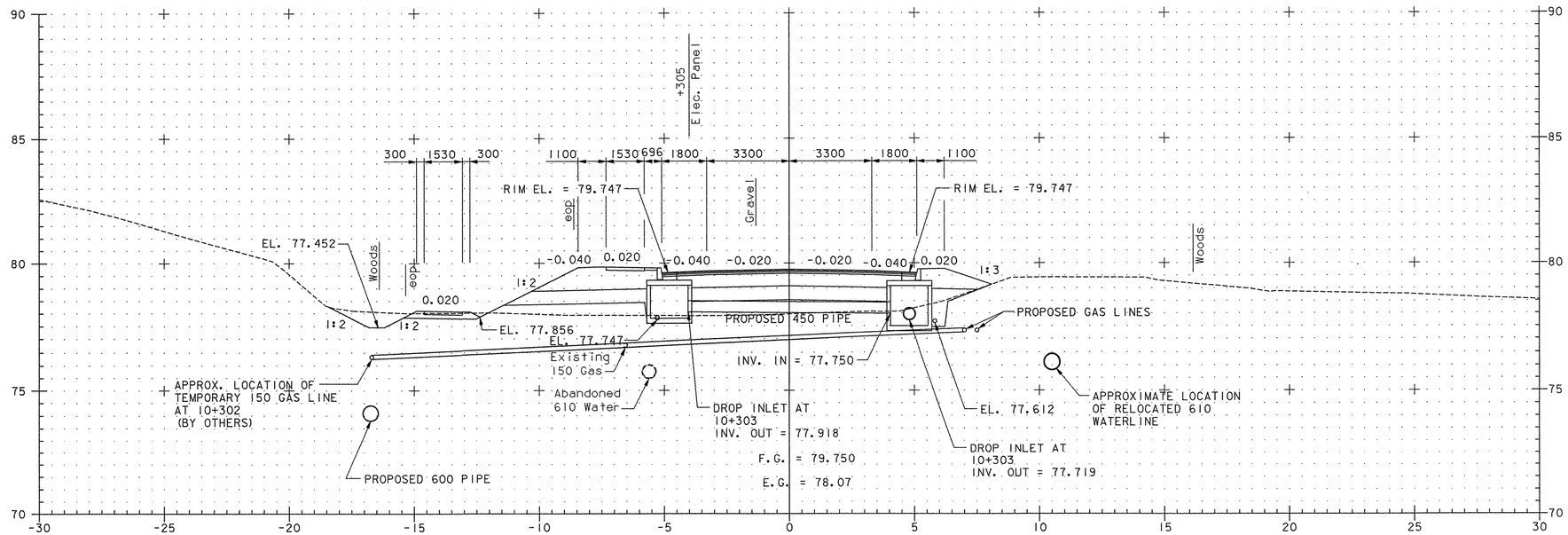
VHB Vanasse Hangen Brustlin, Inc.

VHB NO. 50735

plot date: 5/17/2005



10+306



10+300

0 2 4 6 8 10
SCALE 1:100

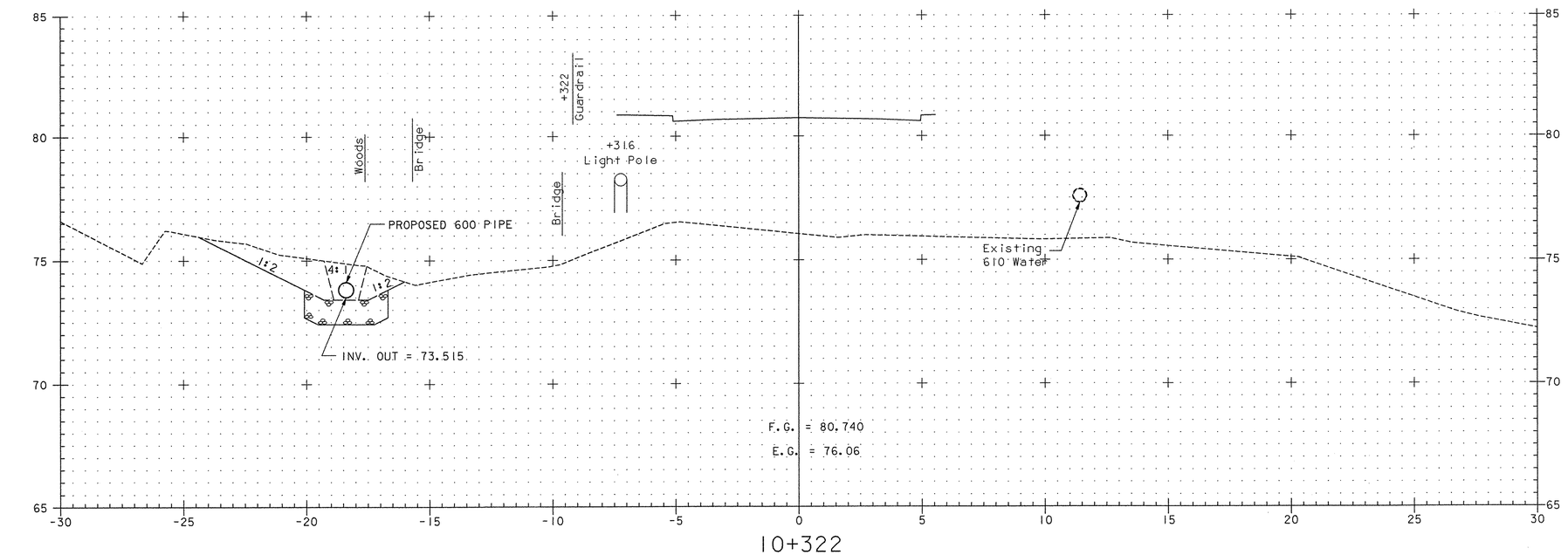
TH 4/3

FROM STA 10+300	TO STA 10+306
PROJECT NAME	COLCHESTER - SOUTH BURLINGTON
PROJECT NO.	BRM 5600(6)S C/2
SURVEYED BY	EIV TECH. SERV. 6/97, 11/02; VTRANS 2/02, 11/02
SHEET 104 OF 124	

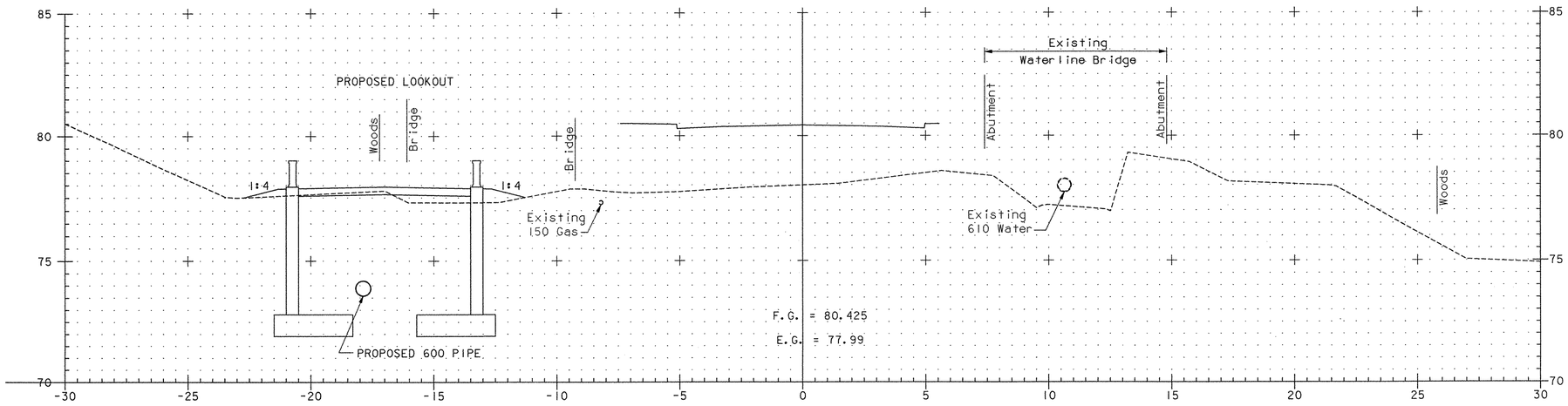
VHB Vanasse Hangen Brustlin, Inc.

VHB NO. 50735

plot date: 4/25/2005



10+322



10+315

0 2 4 6 8 10
SCALE 1:100

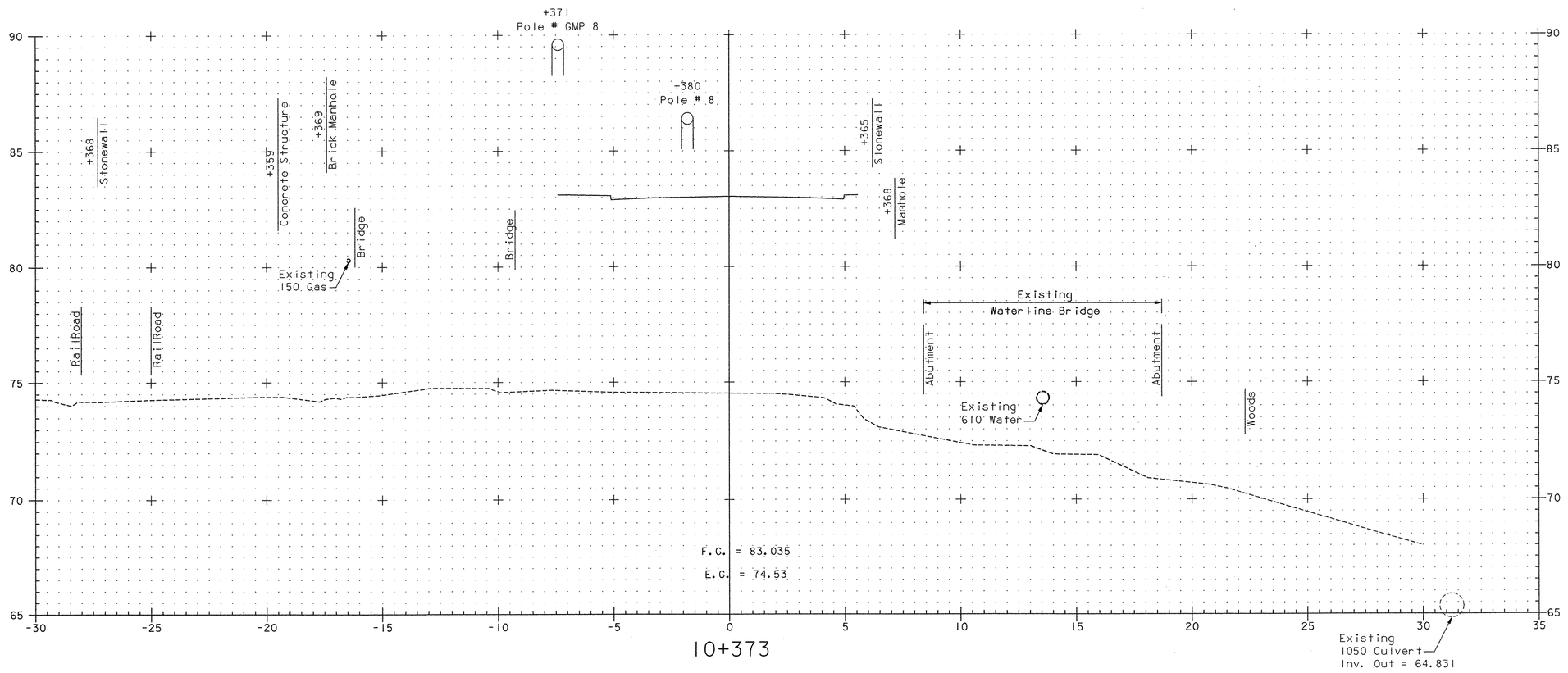
TH 4/3

FROM STA 10+315	TO STA 10+322
PROJECT NAME	COLCHESTER - SOUTH BURLINGTON
PROJECT NO.	BRM 5600(6)S C/2
SURVEYED BY	EIV TECH. SERV. 6/97, 11/02; VTRANS 2/02, 11/02
SHEET 105 OF 124	

VHB Vanasse Hangen Brustlin, Inc.

VHB NO. 50735

plot date: 4/25/2005



0 2 4 6 8 10
SCALE 1:100

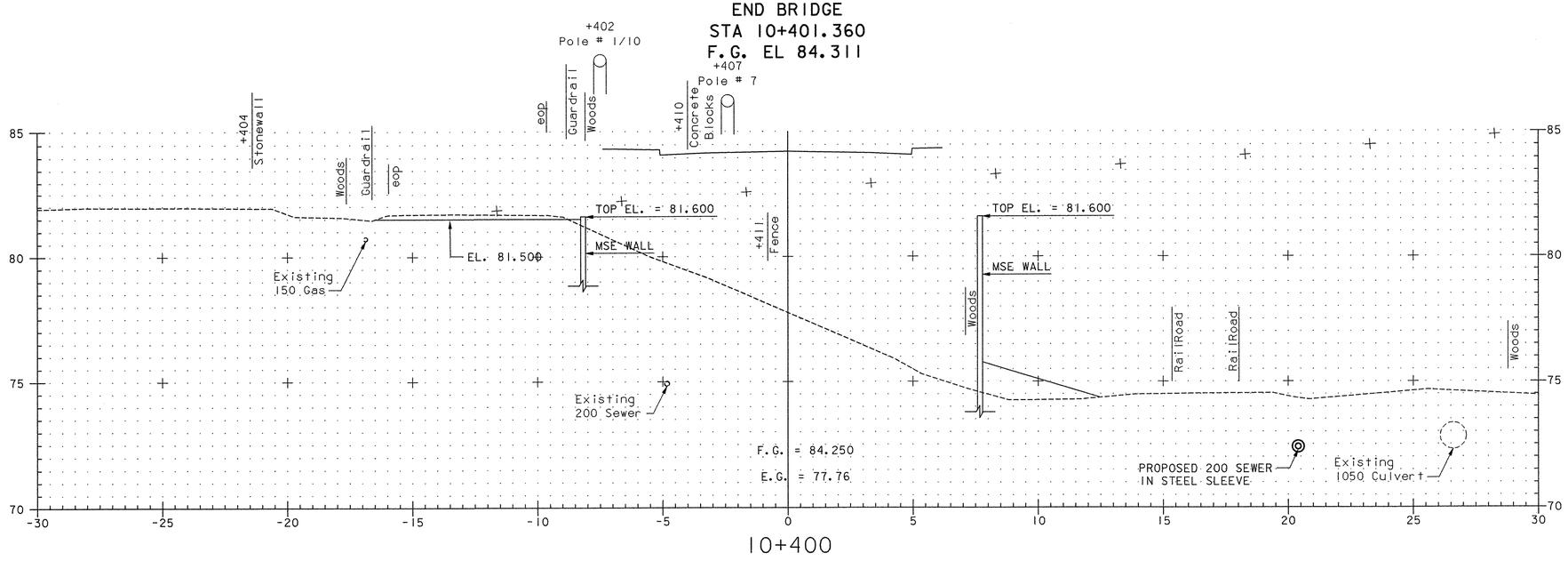
TH 4/3

FROM STA 10+373	TO STA 10+373
PROJECT NAME	COLCHESTER - SOUTH BURLINGTON
PROJECT NO.	BRM 5600(6)S C/2
SURVEYED BY	EIV TECH. SERV. 6/97, 11/02; VTRANS 2/02, 11/02
SHEET 106 OF 124	

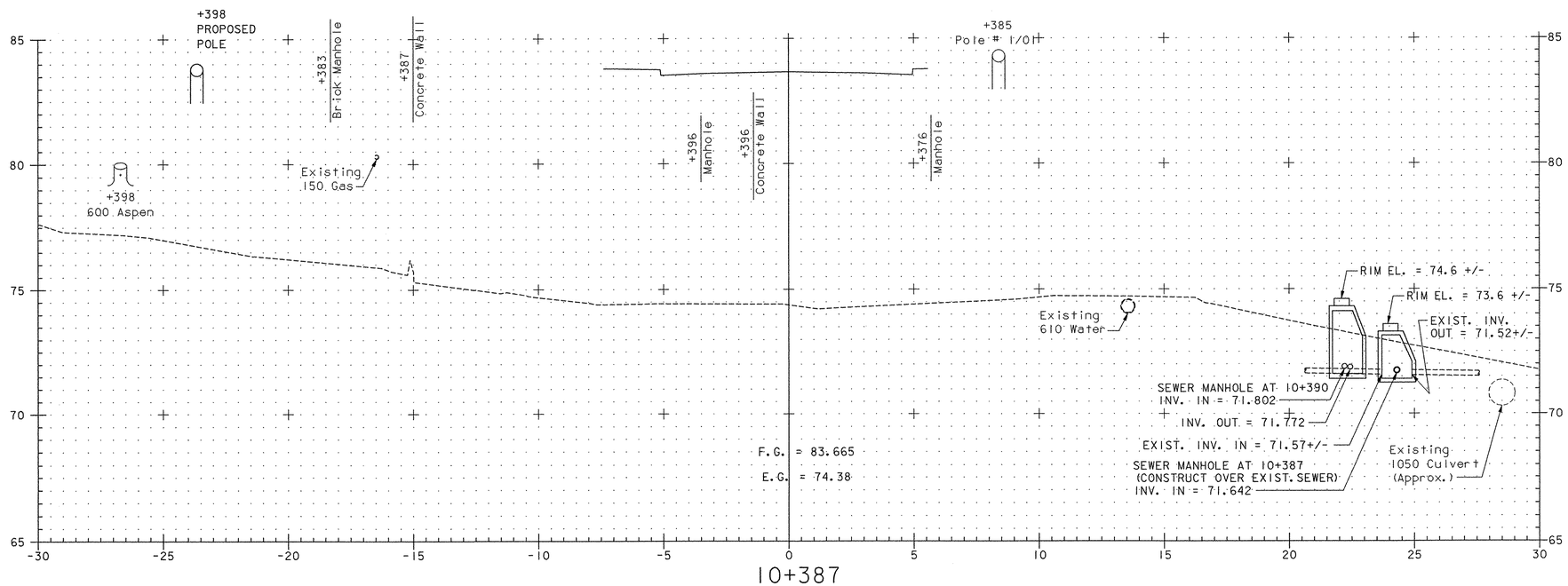
VHB Vanasse Hangen Brustlin, Inc.

Metric

END BRIDGE
STA 10+401.360
F.G. EL 84.311



10+400



10+387

0 2 4 6 8 10
SCALE 1:100

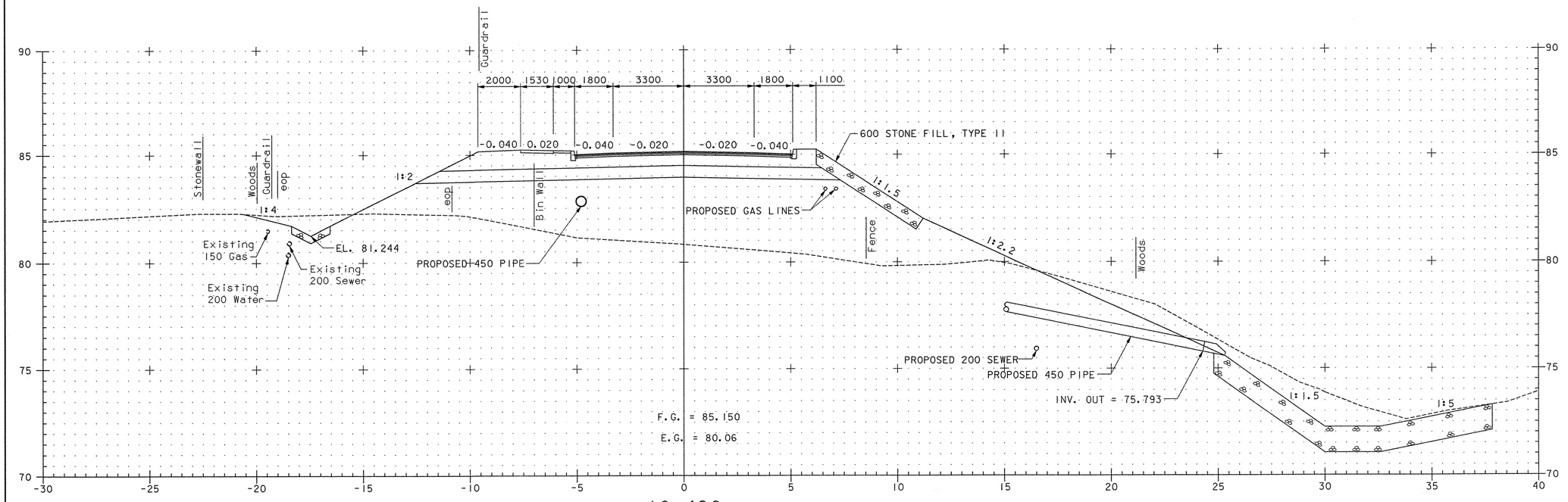
TH 4/3

FROM STA 10+387	TO STA 10+400
PROJECT NAME	COLCHESTER - SOUTH BURLINGTON
PROJECT NO.	BRM 5600(6)S C/2
SURVEYED BY	EIV TECH. SERV. 6/97, 11/02; VTRANS 2/02, 11/02
SHEET 107 OF 124	

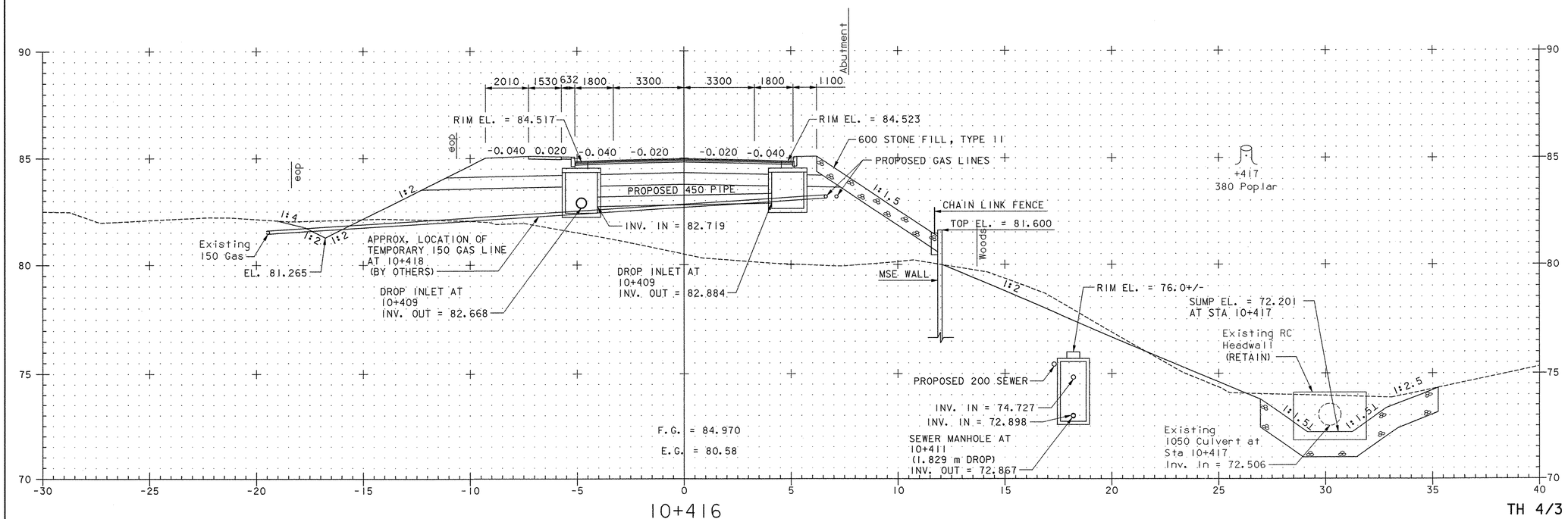
VHB Vanasse Hangen Brustlin, Inc.

VHB NO. 50735

plot date: 4/25/2005



10+420



10+416

TH 4/3

0 2 4 6 8 10
SCALE 1:100

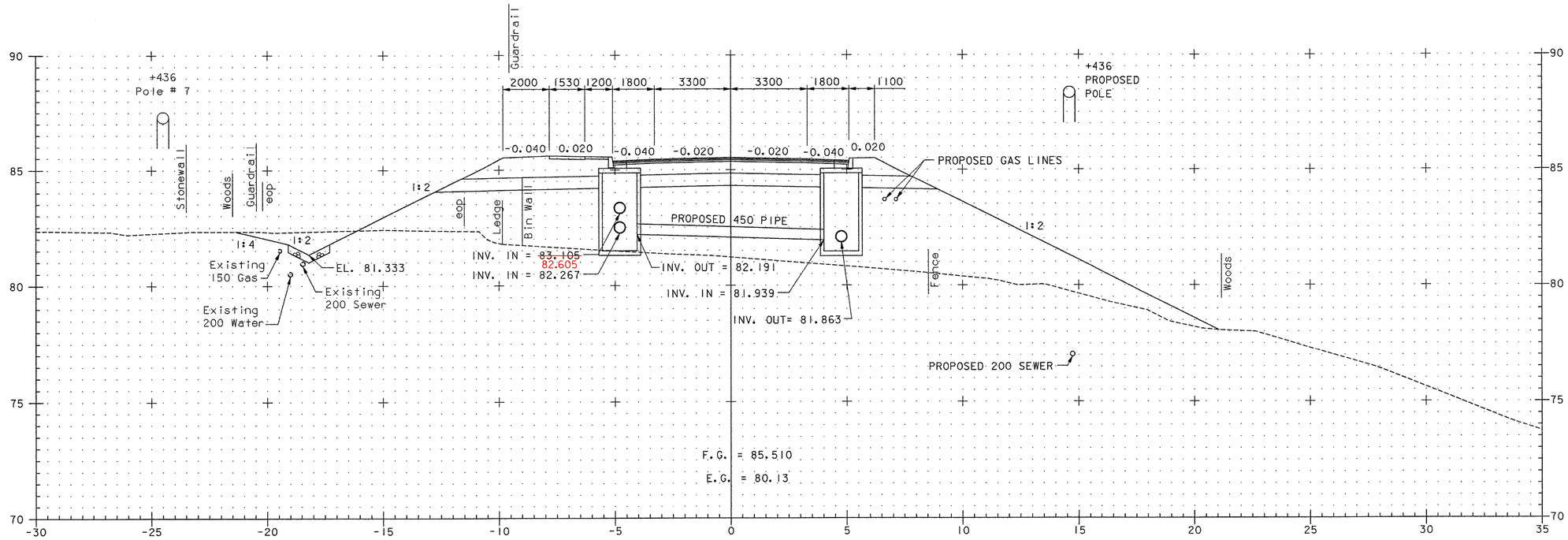
VHB Vanasse Hangen Brustlin, Inc.

FROM STA 10+416	TO STA 10+420
PROJECT NAME	COLCHESTER - SOUTH BURLINGTON
PROJECT NO.	BRM 5600(6)S C/2
SURVEYED BY	EIV TECH. SERV. 6/97, 11/02; VTRANS 2/02, 11/02
SHEET 108 OF 124	

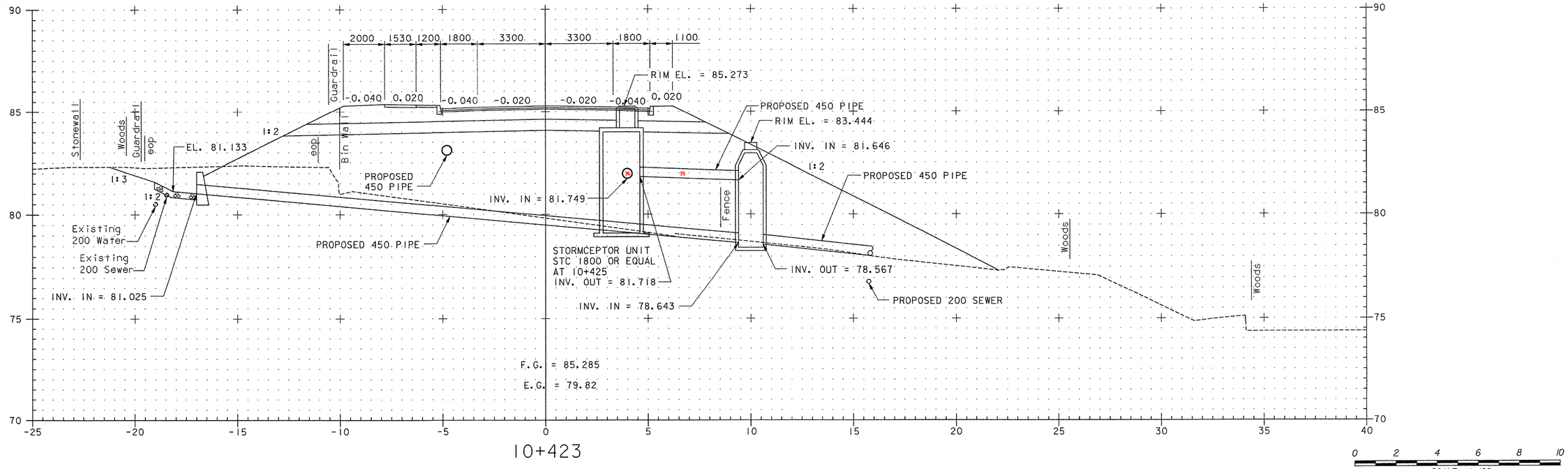
VHB NO. 50735

plot date: 4/25/2005

VAOT Metric



10+428



10+423

0 2 4 6 8 10
SCALE 1:100

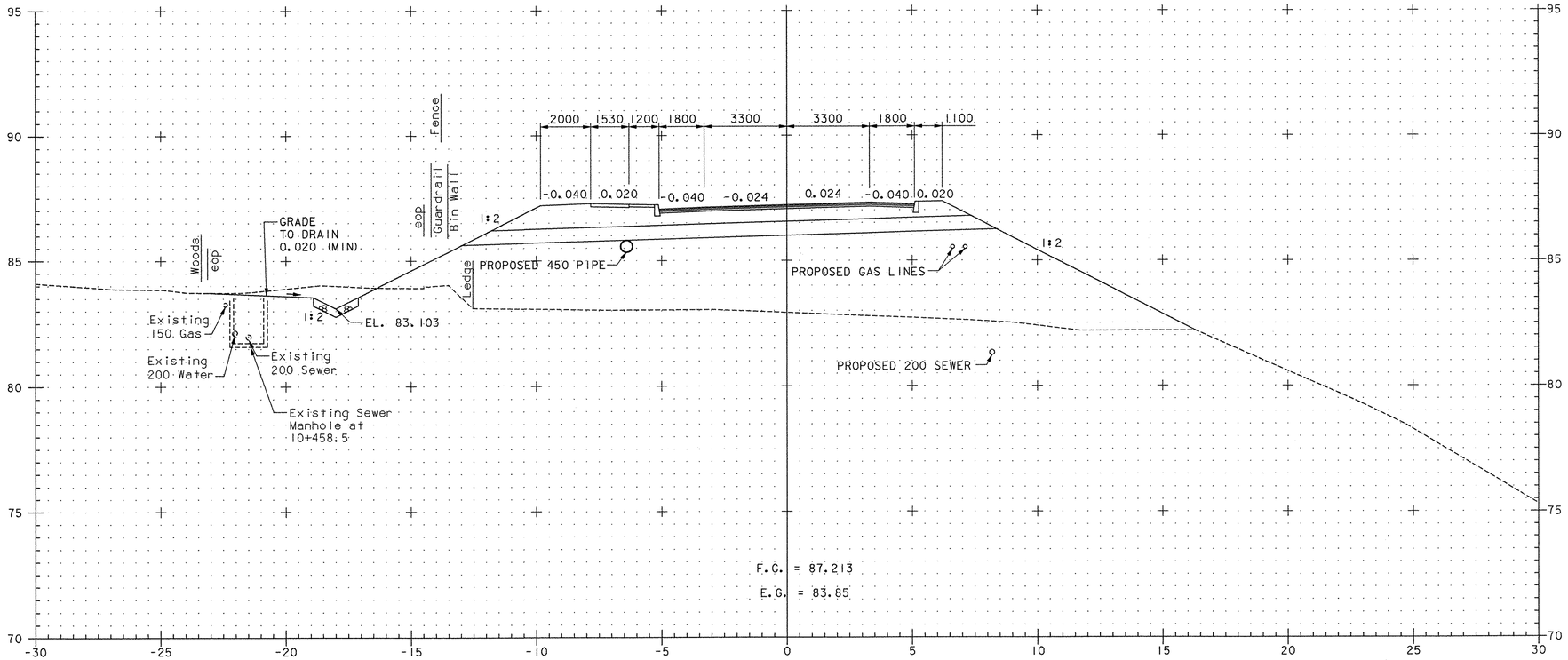
TH 4/3

FROM STA 10+423	TO STA 10+428
PROJECT NAME	COLCHESTER - SOUTH BURLINGTON
PROJECT NO.	BRM 5600(6)S C/2
SURVEYED BY	EIV TECH. SERV. 6/97, 11/02; VTRANS 2/02, 11/02
SHEET 109 OF 124	

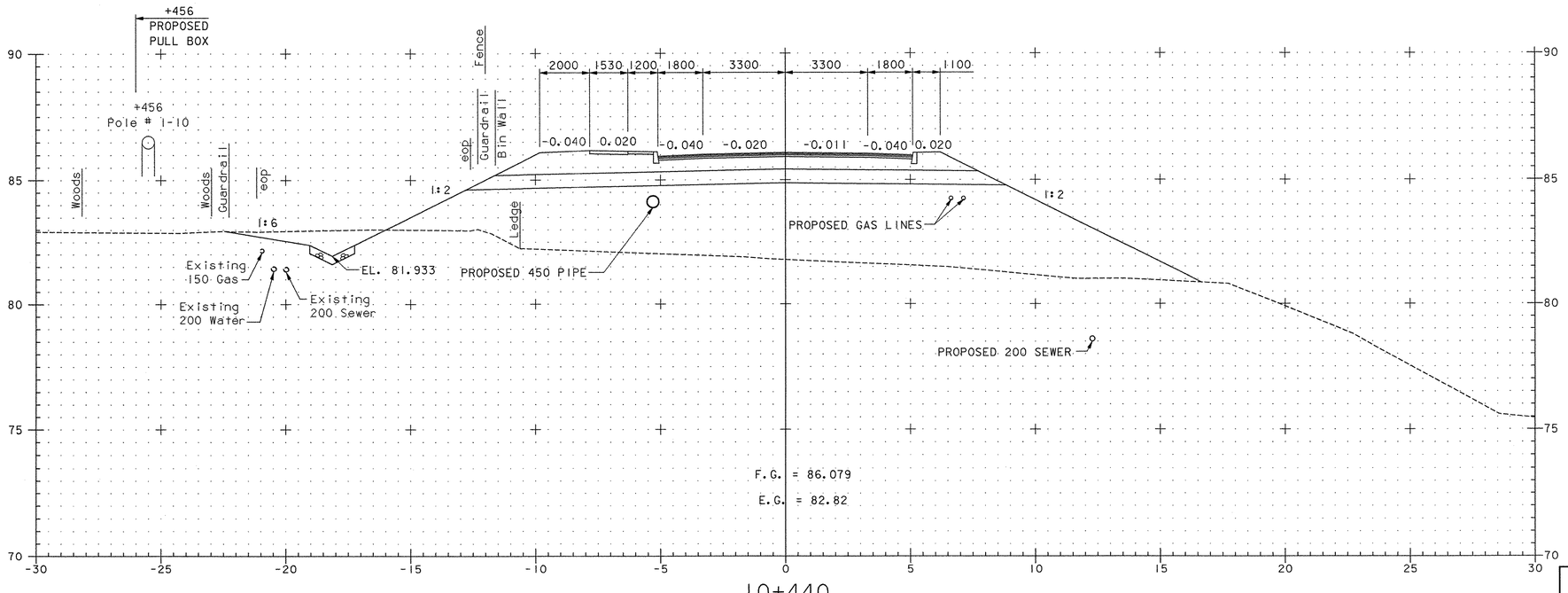
VHB Vanasse Hangen Brustlin, Inc.

VHB NO. 50735

plot date: 4/25/2005



10+460



10+440

0 2 4 6 8 10
SCALE 1:100

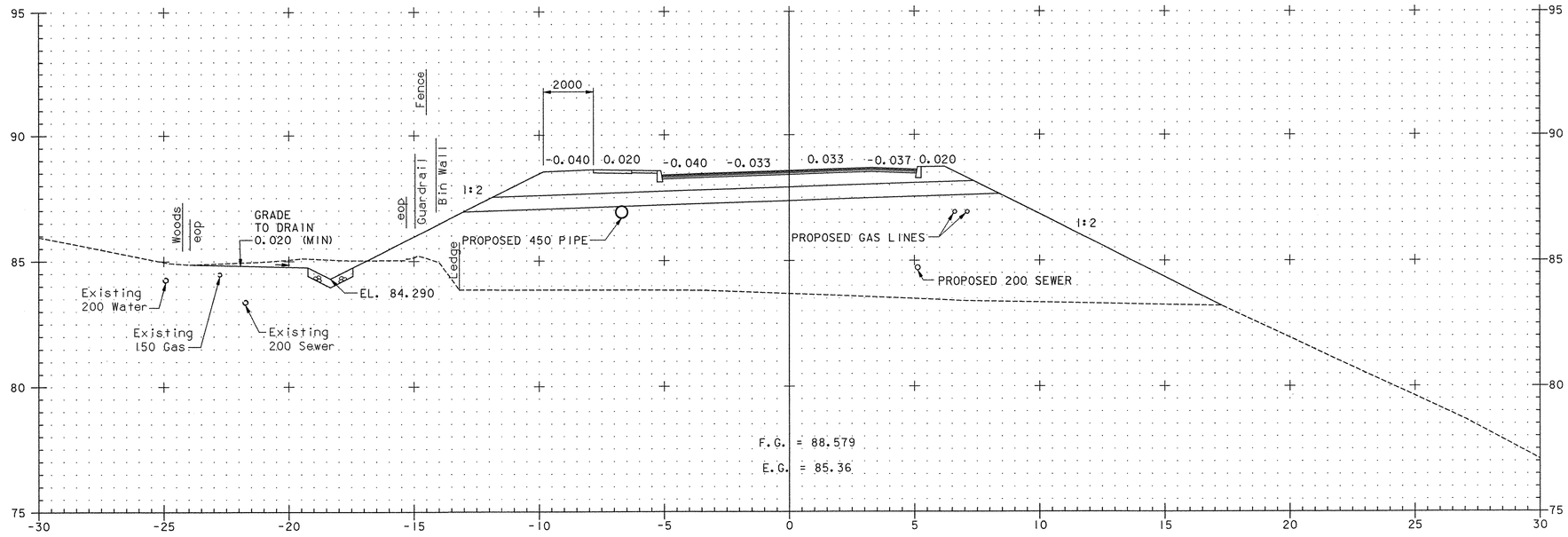
TH 4/3

FROM STA 10+440	TO STA 10+460
PROJECT NAME	COLCHESTER - SOUTH BURLINGTON
PROJECT NO.	BRM 5600(6)S C/2
SURVEYED BY	EIV TECH. SERV. 6/97, 11/02; VTRANS 2/02, 11/02
SHEET 110 OF 124	

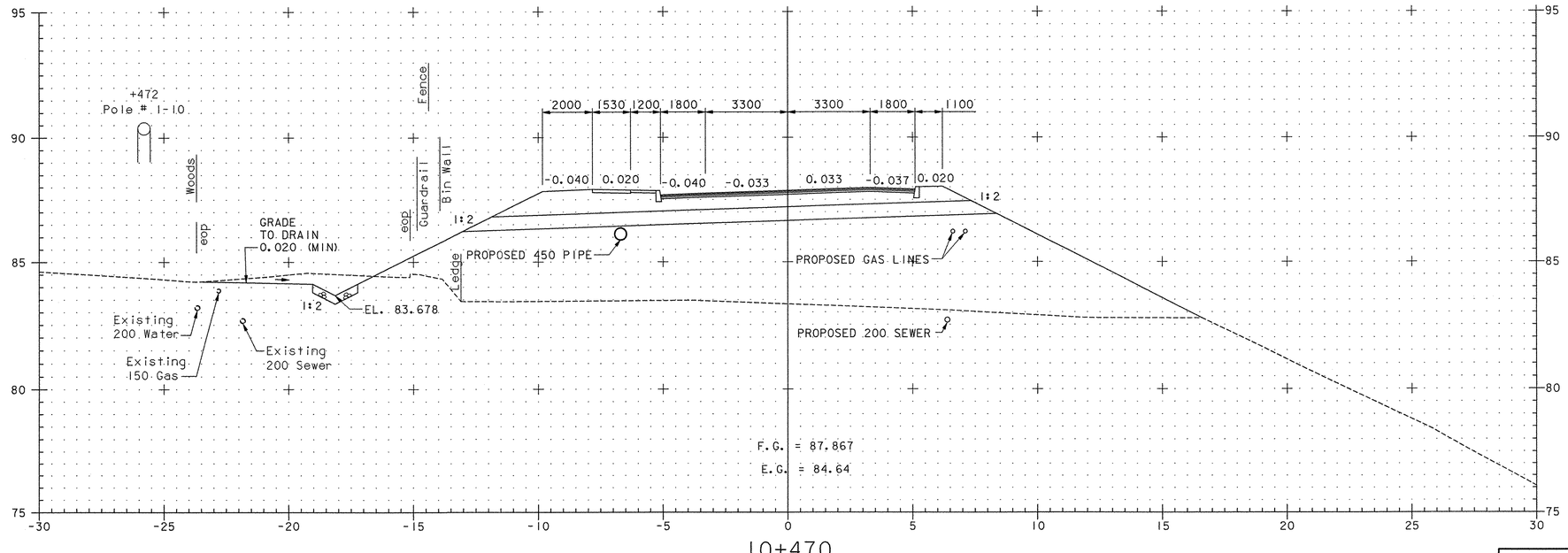
VHB Vanasse Hangen Brustlin, Inc.

VHB NO. 50735

plot date: 4/22/2005



10+480



10+470

0 2 4 6 8 10
SCALE 1:100

TH 4/3

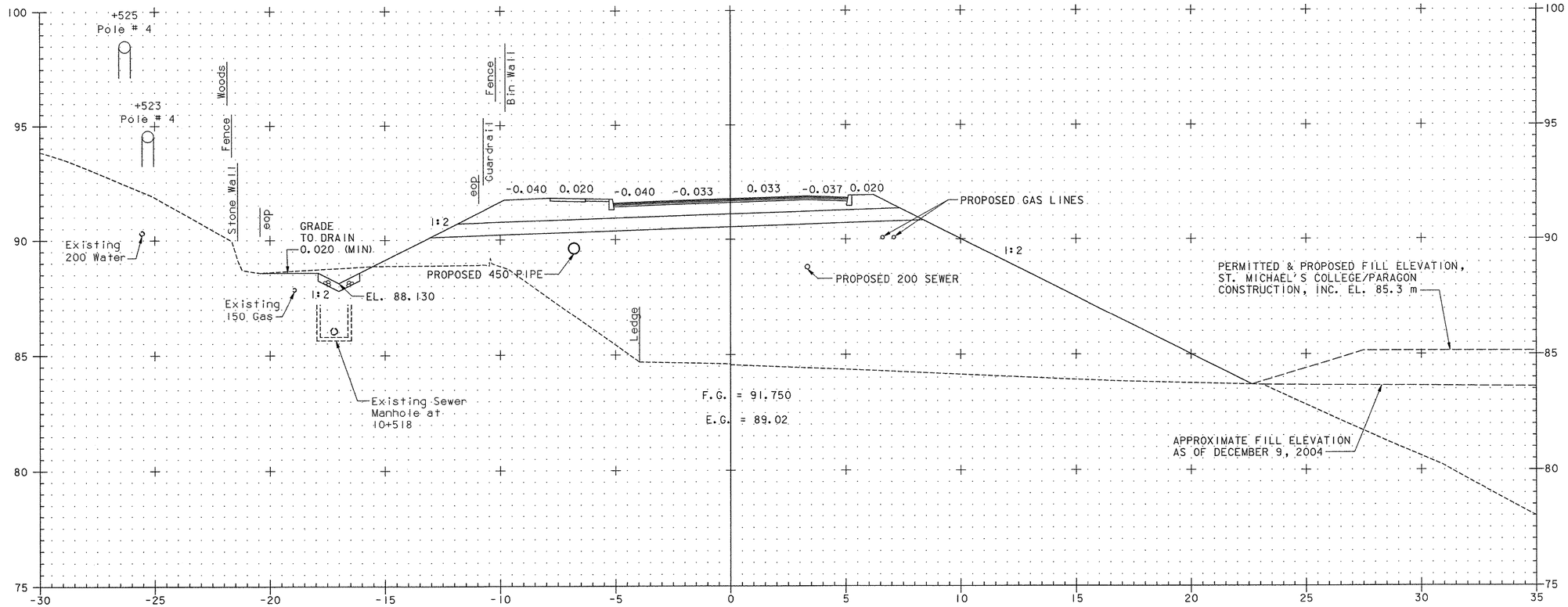
FROM STA 10+470	TO STA 10+480
PROJECT NAME	COLCHESTER - SOUTH BURLINGTON
PROJECT NO.	BRM 5600(6)S C/2
SURVEYED BY	EIV TECH. SERV. 6/97, 11/02; VTRANS 2/02, 11/02
SHEET 111 OF 124	

VHB Vanasse Hangen Brustlin, Inc.

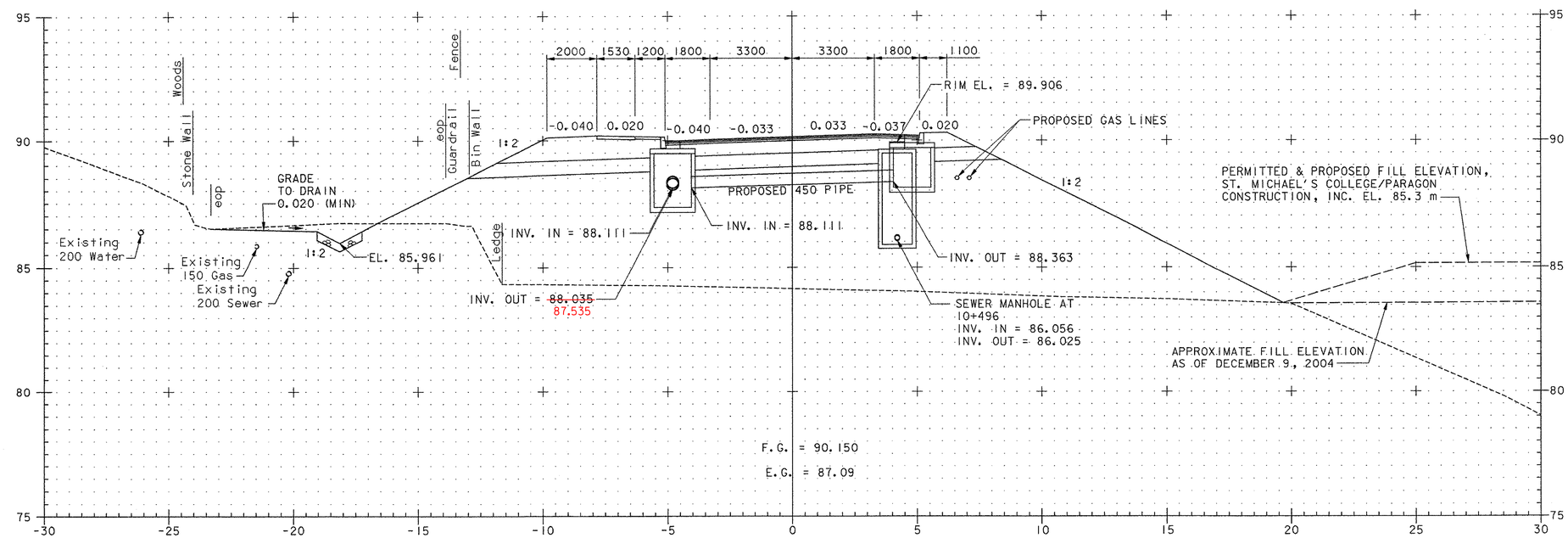
VHB NO. 50735

plot date: 3/29/2005

VAOT Metric



10+520



10+500

0 2 4 6 8 10
SCALE 1:100

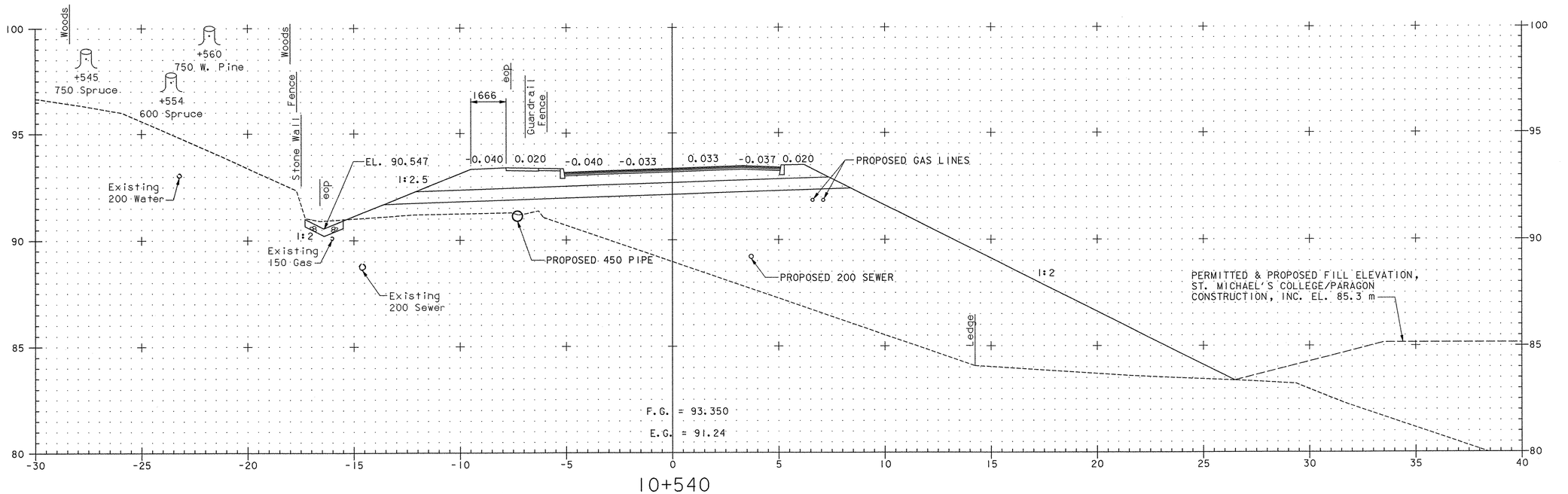
TH 4/3

FROM STA 10+500	TO STA 10+520
PROJECT NAME	COLCHESTER - SOUTH BURLINGTON
PROJECT NO.	BRM 5600(6)S C/2
SURVEYED BY	EIV TECH. SERV. 6/97, 11/02; VTRANS 2/02, 11/02
SHEET 112 OF 124	

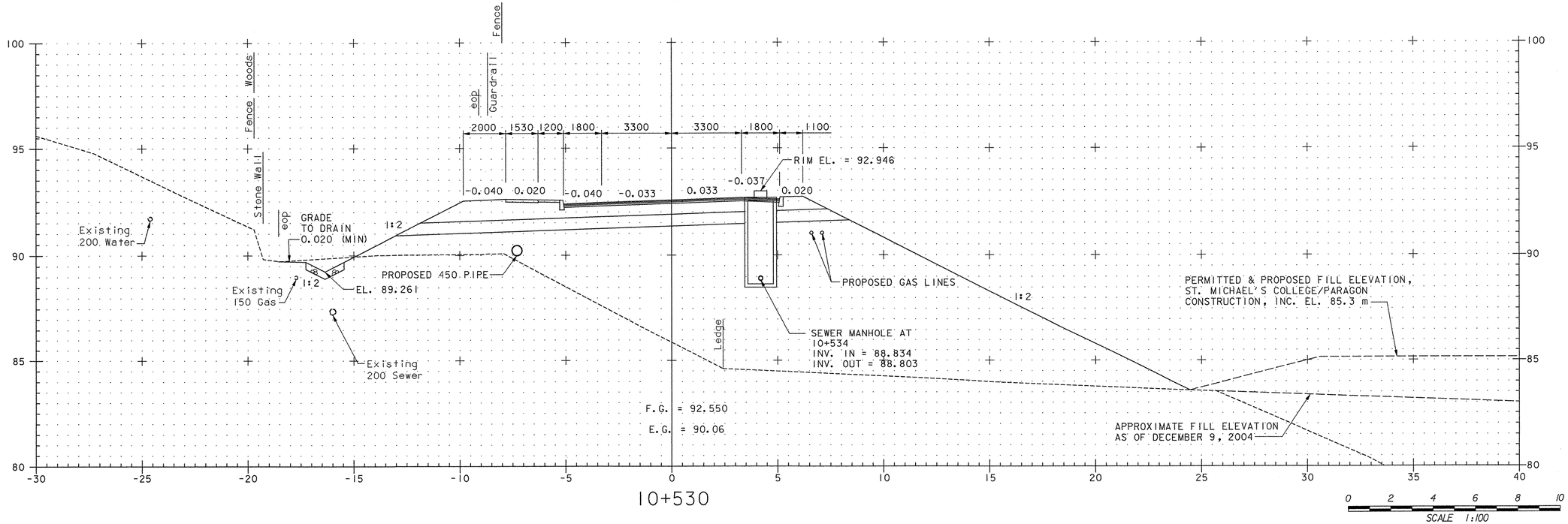
VHB Vanasse Hangen Brustlin, Inc.

VHB NO. 50735

plot date: 4/22/2005



10+540



10+530

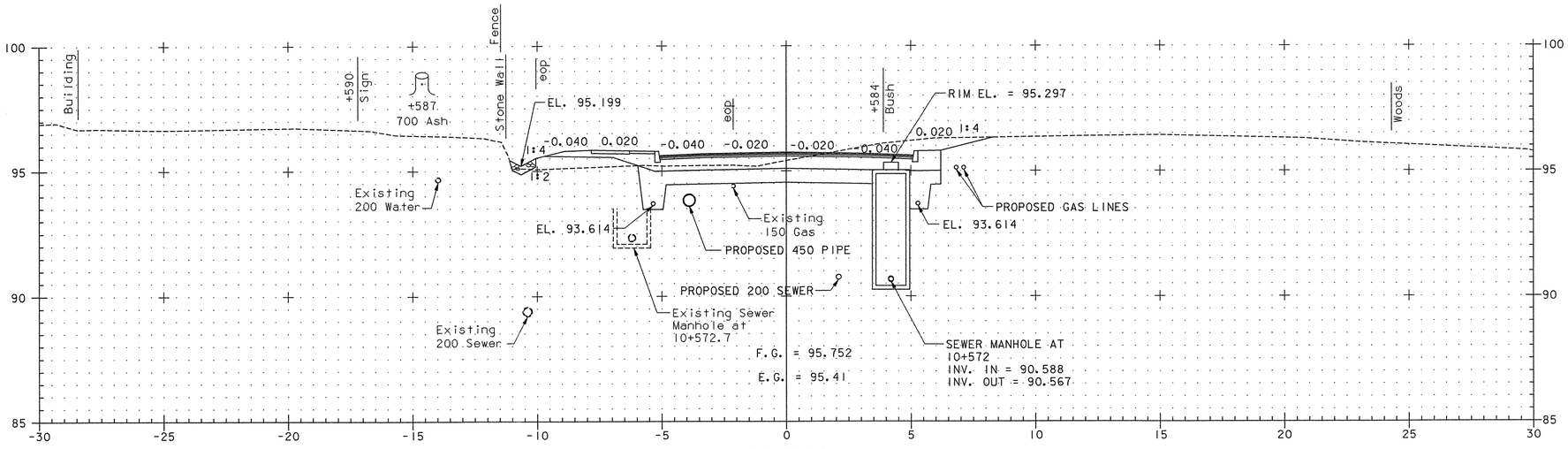
TH 4/3

FROM STA 10+530	TO STA 10+540
PROJECT NAME	COLCHESTER - SOUTH BURLINGTON
PROJECT NO.	BRM 5600(6)S C/2
SURVEYED BY	EIV TECH. SERV. 6/97, 11/02; VTRANS 2/02, 11/02
SHEET 113 OF 124	

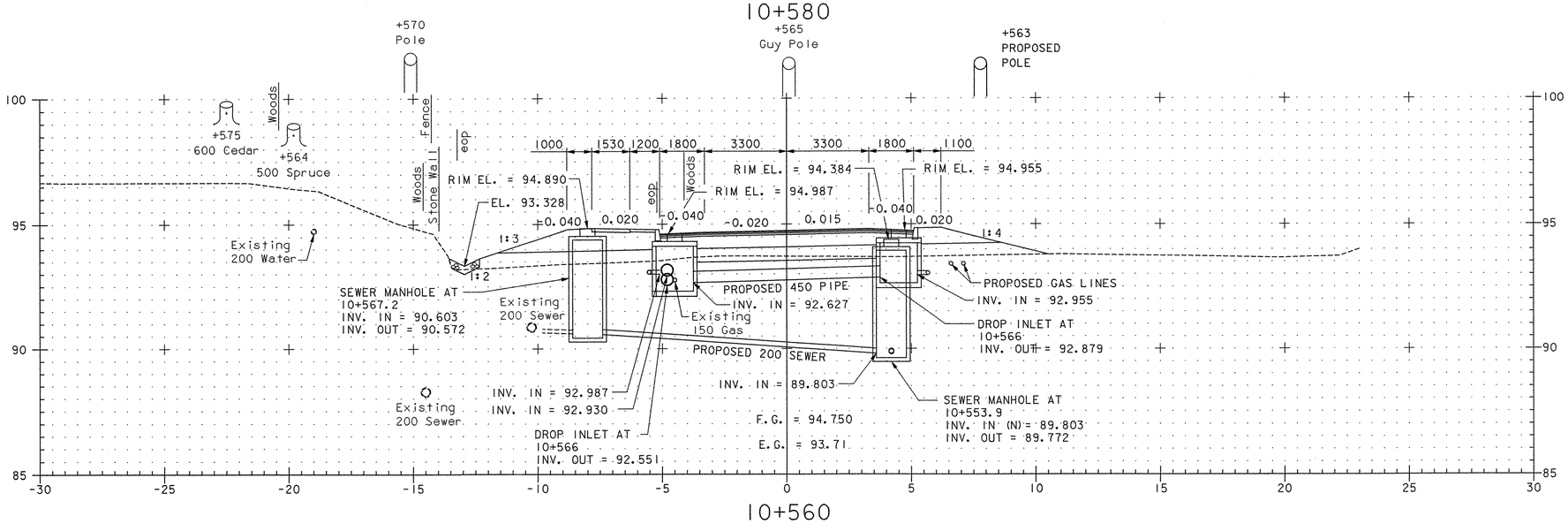
VHB *Vanasse Hangen Brustlin, Inc.*

VHB NO. 50735

plot date: 4/22/2005



10+580



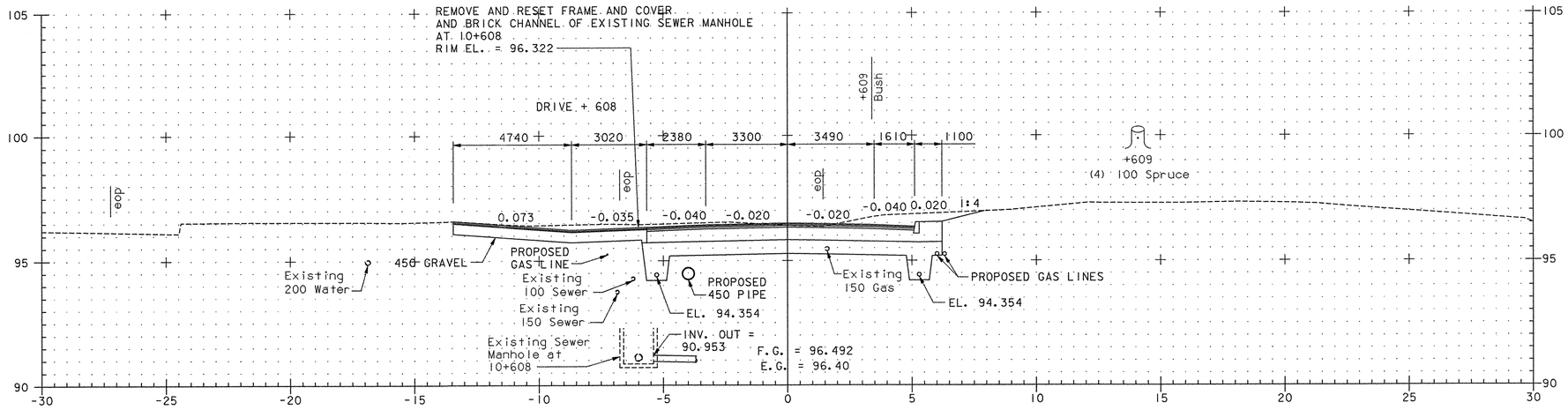
10+560

0 2 4 6 8 10
SCALE 1:100

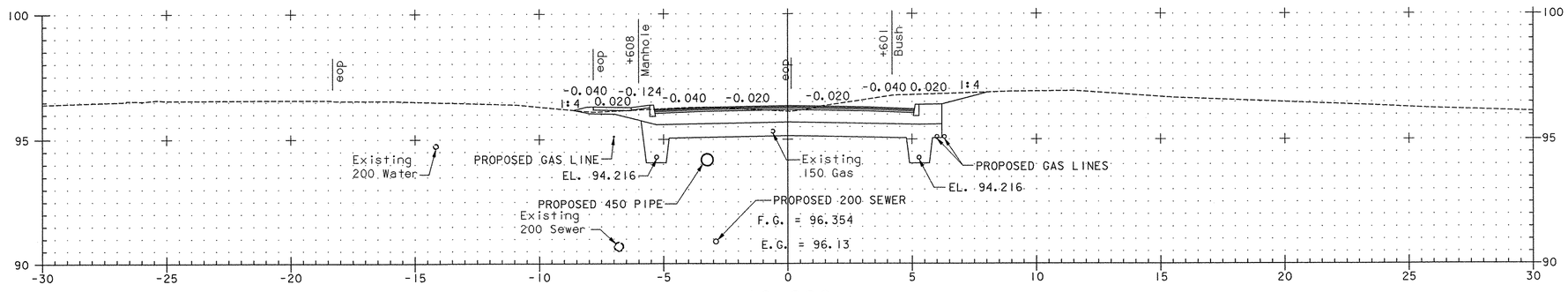
TH 4/3

FROM STA 10+560	TO STA 10+580
PROJECT NAME	COLCHESTER - SOUTH BURLINGTON
PROJECT NO.	BRM 5600(6)S C/2
SURVEYED BY	EIV TECH. SERV. 6/97, 11/02; VTRANS 2/02, 11/02
SHEET 114 OF 124	

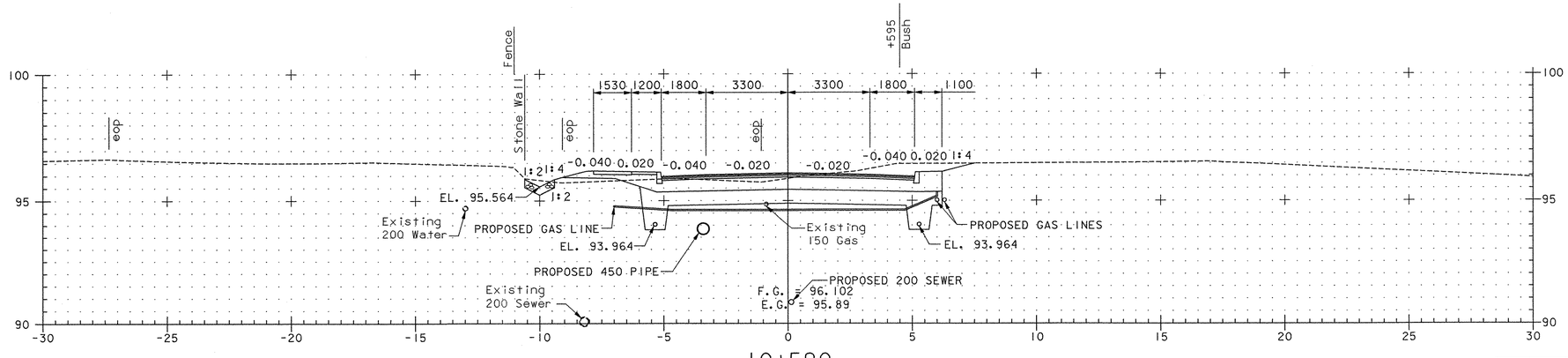
VHB Vanasse Hangen Brustlin, Inc.



10+609



10+600



10+590

0 2 4 6 8 10
SCALE 1:100

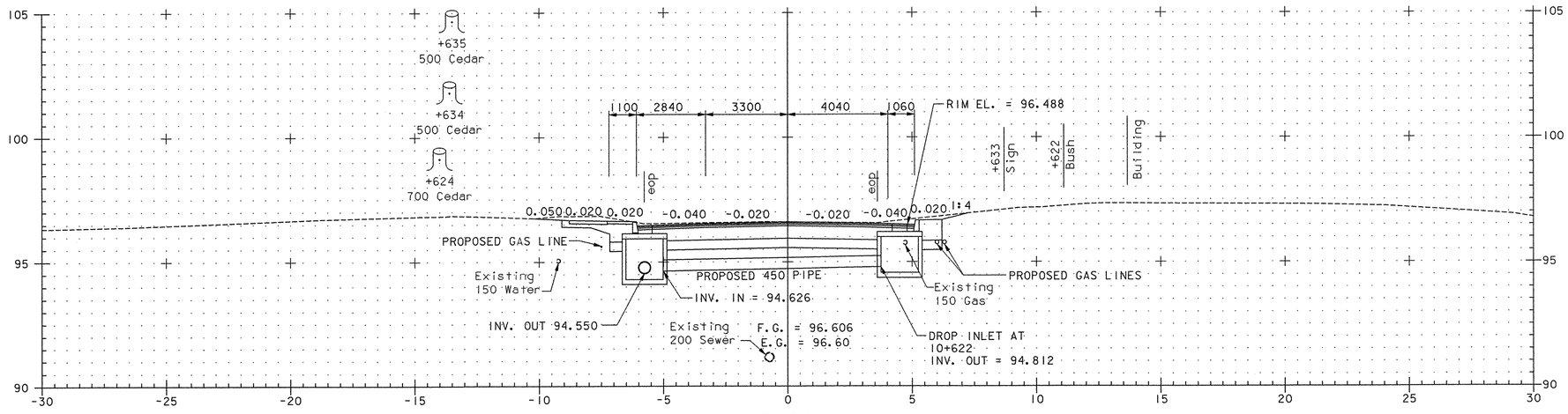
TH 4/3

FROM STA 10+590	TO STA 10+609
PROJECT NAME	COLCHESTER - SOUTH BURLINGTON
PROJECT NO.	BRM 5600(6)S C/2
SURVEYED BY	EIV TECH. SERV. 6/97, 11/02; VTRANS 2/02, 11/02
SHEET 115 OF 124	

VHB Vanasse Hangen Brustlin, Inc.

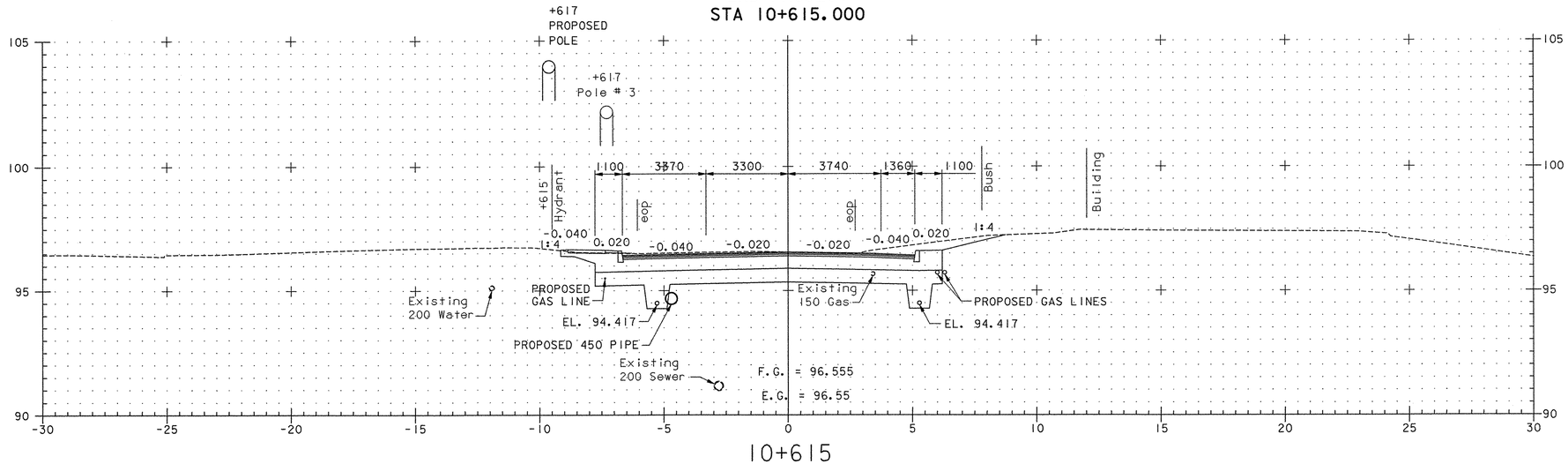
VHB NO. 50735

plot date: 3/29/2005



10+620

END PROJECT
STA 10+615.000



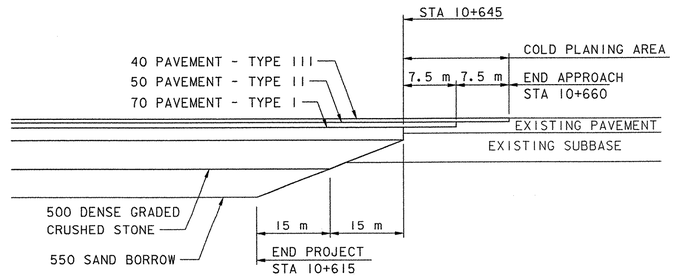
10+615

0 2 4 6 8 10
SCALE 1:100

TH 4/3

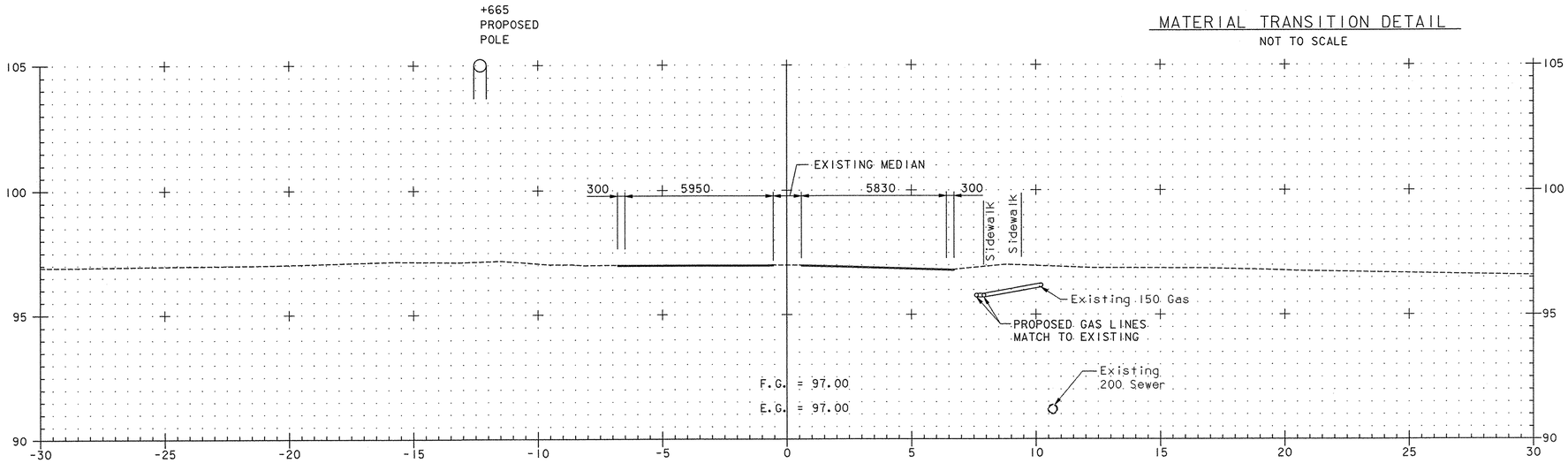
FROM STA 10+615	TO STA 10+620
PROJECT NAME	COLCHESTER - SOUTH BURLINGTON
PROJECT NO.	BRM 5600(6)S C/2
SURVEYED BY	EIV TECH. SERV. 6/97, 11/02; VTRANS 2/02, 11/02
SHEET 116 OF 124	

VHB Vanasse Hangen Brustlin, Inc.



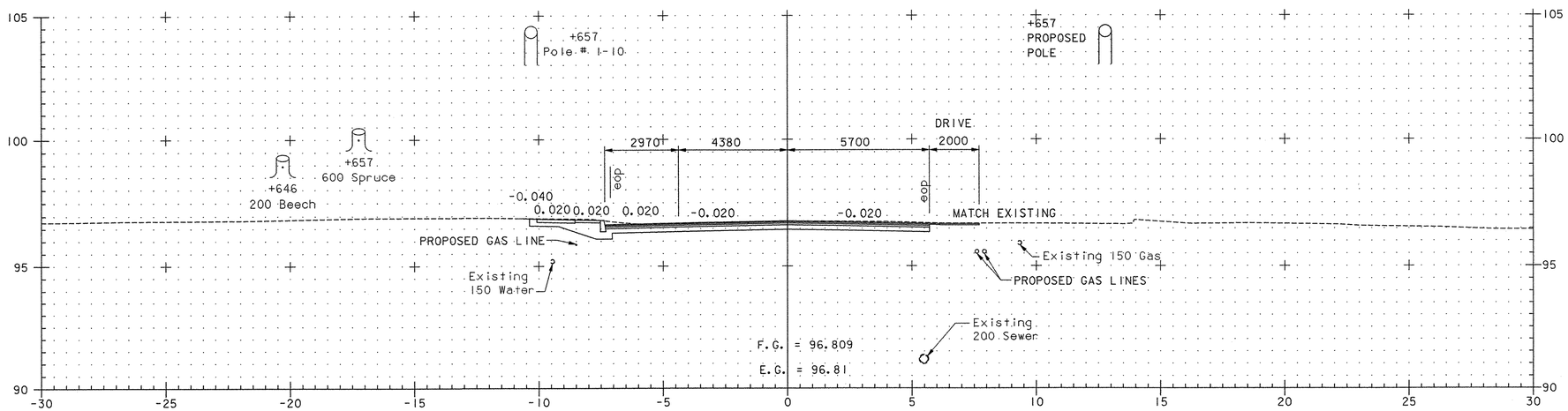
MATERIAL TRANSITION DETAIL

NOT TO SCALE

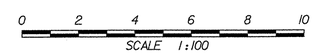


10+660

END APPROACH
STA 10+660.000
MATCH EXISTING



10+640



TH 4/3

FROM STA 10+640	TO STA 10+660
PROJECT NAME	COLCHESTER - SOUTH BURLINGTON
PROJECT NO.	BRM 5600(6)S C/2
SURVEYED BY	EIV TECH. SERV. 6/97, 11/02; VTRANS 2/02, 11/02
SHEET 117 OF 124	

VHB Vanasse Hangen Brustlin, Inc.

VHB NO. 50735

plot date: 4/22/2005

NORTH TRESTLE

Member	No.	Concrete (dimensions)	Reinforcement — Tension: No.	Size	Length	Shear: No.	Size	Length
Floor		4.5" thick + crown	20	⅝" sq.	293 @ 23'6" = 6859'			
			18	⅝" sq.	34 - 16'6" & 4 - 41'6" & 16 - 44'6" (see curtail below)	385.6'		
				Temp. rods				
Stringer	S_1	6	3	¾" sq.	18 - 25'0" / 12 - 39'0" / 12 - 23'6"	1376'	10	⅝" sq. 60 @ 5'0" = 300'
"	S_{1a}	4	5	⅞" sq.	8 - 39'0"	312'	10	⅝" sq. 50 - 5'0" = 200'
"	S_2	9	4	¾" sq.	10 - 27'6" / 10 - 39'0" (10 remove to S_{2a} see sch. below)	675'	10	⅝" sq. 90 - 5'0" = 450'
"	S_{2a}	6	4	⅞" sq.	12 - 21'6" / 8 (remove to S_{2aa} see sch. below)	309'	10	⅝" sq. 60 - 5'0" = 300'
"	S_{2aa}	2	2	26"x12"	(No extra steel — see S_2 & S_{2a})			
"	S_3	2	3	½" sq.	6 - 11'6"	42'		
"	S_{3a}	2	4	½" sq.	8 - 16'0"	80'		
"	S_4	2	2	½" sq.	6 - 14'6"	58'		
"	S_5	2	2	½" sq.	6 - 13'6"	26'		
"	S_6	3	5	⅜" sq.	9 - 30'0" / 6 - 26'0"	348'	12	⅜" sq. 36 - 5'0" = 180'
"	S_7	3	5	⅜" sq.	6 - 26'0" / 6 - 32'0"	1356'	12	⅜" sq. 24 - 5'0" = 120'
"	S_{7a}	2	5	¾" sq.	6 - 26'0" / 6 - 32'0"	1152'	12	⅜" sq. 24 - 6'0" = 144'
Floor Beam	F_1	2	6	⅜" sq.	6 - 22'6" / 6 - 32'6"	1350'	12	⅜" sq. 36 - 7'5" = 267'
"	F_1'	3	6	1" sq.	9 - 22'6" / 6 - 32'6"	2002'6"	12	⅜" sq. 24 - 6'0" = 144'
"	F_2	2	6	⅜" sq.	6 - 22'6" / 6 - 32'6"	1668'6"	12	⅜" sq. 24 - 7'0" = 168'
"	F_3	2	6	⅜" sq.	6 - 22'6" / 6 - 32'6"	1350'		
"	F_4	2	6	⅜" sq.	6 - 18'6" / 6 - 24'6"	1116' / 1152'		
"	F_4'	2	7	⅜" sq.	6 - 28'6" / 6 - 32'6"	1710' / 1920'		
Bracket at	T_1	2	2	⅞" sq.	12"x12"	24'		
"	T_2	2	12	⅞" sq.	12"x12"	36'		
"	T_3	2	12	⅞" sq.	12"x12"	36'		
Column	C_1	2	8	⅞" sq.	10' - 23'6" / 6 - 26'6"	236' / 159'		
Footing	C_1	2	8	⅛" sq.	6 - 5'6"	66'		
Column	C_2	2	8	⅞" sq.	12 - 23'6" / 6 - 26'6"	279' / 159'		
Footing	C_2	2	8	⅛" sq.	12 - 5'6" / 6 - 7'6"	132' / 90'		
Column	C_3	2	8	⅞" sq.	12 - 26'6" / 6 - 29'6"	318' / 177'		
Footing	C_3	2	8	⅛" sq.	12 - 7'6" / 6 - 8'6"	90' / 51'		
Column	C_4	4	10	⅞" sq.	20 - 23'6" / 6 - 26'6"	470' / 159'		
Footing	C_4	4	10	⅛" sq.	20 - 9'6" / 6 - 10'6"	190' / 63'		
Column	C_5	2	10	⅞" sq.	12 - 29'6" / 6 - 32'6"	354' / 192'		
Footing	C_5	2	10	⅛" sq.	12 - 11'6" / 6 - 12'6"	138' / 75'		
Column	C_6	1	10	⅞" sq.	6 - 32'6" / 6 - 35'6"	192' / 213'		
Footing	C_6	1	10	⅛" sq.	10 - 13'6" / 10 - 14'6"	135' / 145'		
Column	C_7	1	10	⅞" sq.	2 - 32'6" / 6 - 35'6" / 2 - 38'6"	65' / 213' / 77'		
Footing	C_7	1	10	⅛" sq.	2 - 15'6" / 6 - 16'6" / 2 - 17'6"	31' / 99' / 35'		
Ties	T_1	4	18'x12"	⅝" sq.	6 - 46'4" / 6 - 38'4" (see note ③)	276' / 230'		
Brackets at	T_1	8	12"x12"	⅞" sq.	16 - 12'0"	192'		
Tie	T_2	2	18'x12"	⅛" sq.	16 - 20'0" (cancelled)	320'		
2 extra rods over	S_2 (see sect. above)			¾" sq.	4 - 18'6"	74'		
"	S_{2a} (")			¾" sq.	4 - 18'6"	74'		

Seating	Total Length	Total Weight
⅝"	11162 feet	5395 lbs
½"	206 "	175 "
¾"	2793 "	3345 "
⅞"	6648 "	16785 "
1"	369 "	1255 "

Note 1. Temperature Rods: total length to expansion joint = 120'0". Each length to be made up of three rods, 2 @ 40'0" & 1 @ 40'0". Allowance to be made in ends of parapet rods for stone from inland railing standards — approx. 2" end. Irrespectively of the number of rods, the total length of each seating shall be as above.

Note 2. The 2,⅞" ... rods which remain continuous over S_{2a} & S_{2aa} respectively can be made up of two continuous rods 39'0" long, stretching from E to F.

Note 3. Sizes of beams and girders given, where omitted, are each end depth of parapet, curb or underside of seating.

Note 4. All steel to be laid with centres 2" from face of forms; except in the floor slab where it shall be ½" and at other places it shall be not less than ¾; unless otherwise particularly noted on plans.

Note 5. The road metal or Macadam is not part of this contract. It will be provided laid and rolled by the Municipality; the lower 6" in thickness consisting of the small of crushing rock and the upper 6" of crushing trap rock for wearing surface.

Examined R. Ridout

Approved T. Cooper

Note: All steel to be square, cold-twisted rods, having an elastic limit after twisting of at least 55,000 lbs per sq in.

① Note: Columns C_1 to C_6 to be braced together by 4" tees as shewn section 18"x12", Steel 6.7⅝" rods, arranged as in sketch below; — also 4,⅞" rods 60' long at each pair of knee brackets

Scale 1"=1'0"

ELEVATION
(Looking East)

PLAN

SECTION CC

SECTION BDDB

SECTION AA

SECTION HH

SECTION FF

SECTION GG

SECTION EE

Drawn by KGC
Traced by
Checked by G.F.H.

— CENTRAL VERMONT RAILWAY —

WINDOSKI VIADUCT

— NORTH TRESTLE —

SCALES: 1"-4' 1"-2'

Office of Chief Engineer, C.V.R., Montreal, April 1913.

THIS SHEET HAS BEEN REPRODUCED FROM ORIGINAL PLANS DATED JUNE 1913, ALL DETAILS HAVE BEEN SCALED DOWN FROM THE ORIGINAL SHEET SIZE AND ARE NO LONGER TO SCALE. THESE PLANS DO NOT INCLUDE THE STEEL SHORING COMPONENTS THAT HAVE BEEN ADDED TO THE STRUCTURE SINCE THE ORGINAL CONSTRUCTION.

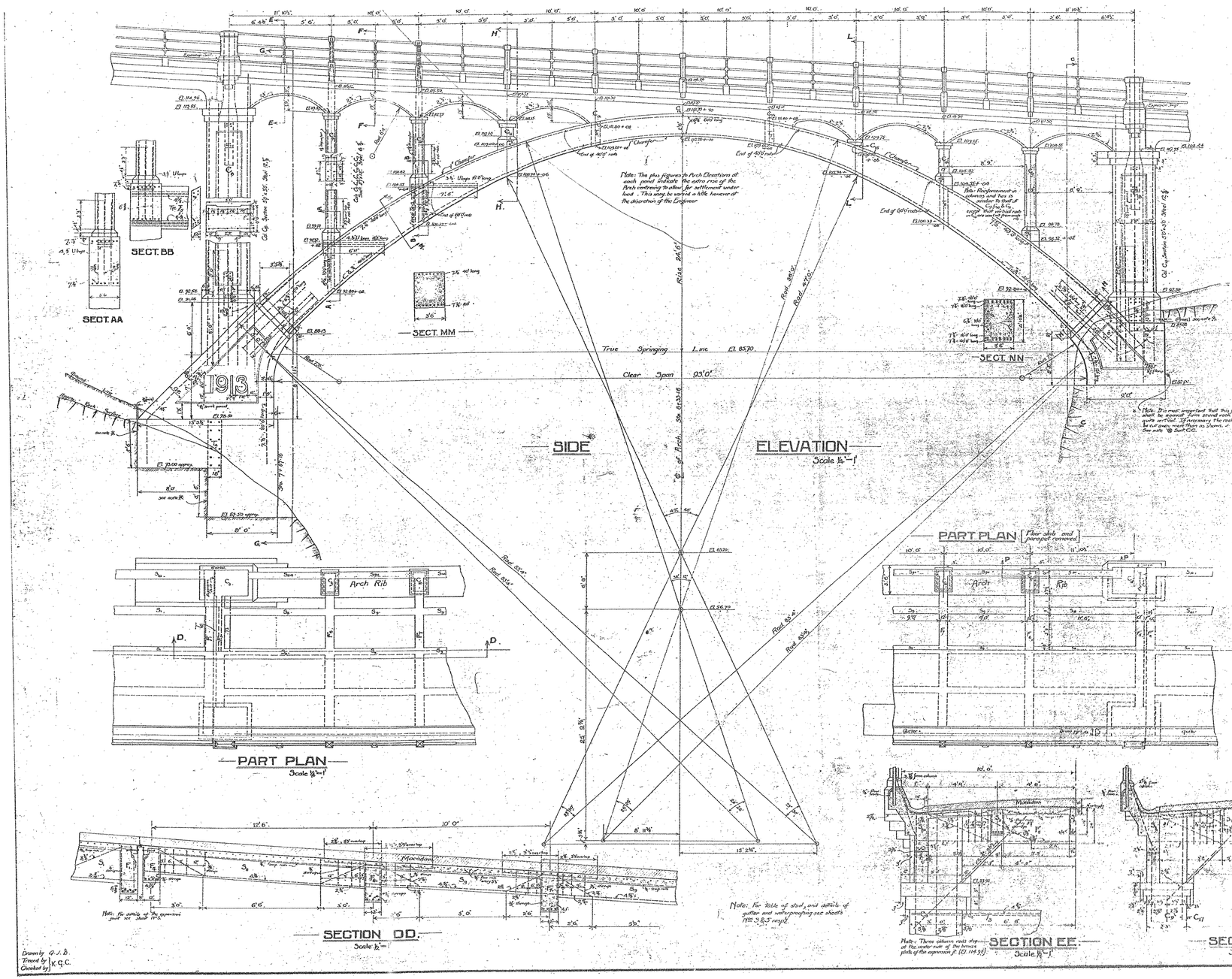
VHB Vanasse Hangen Brustlin, Inc.

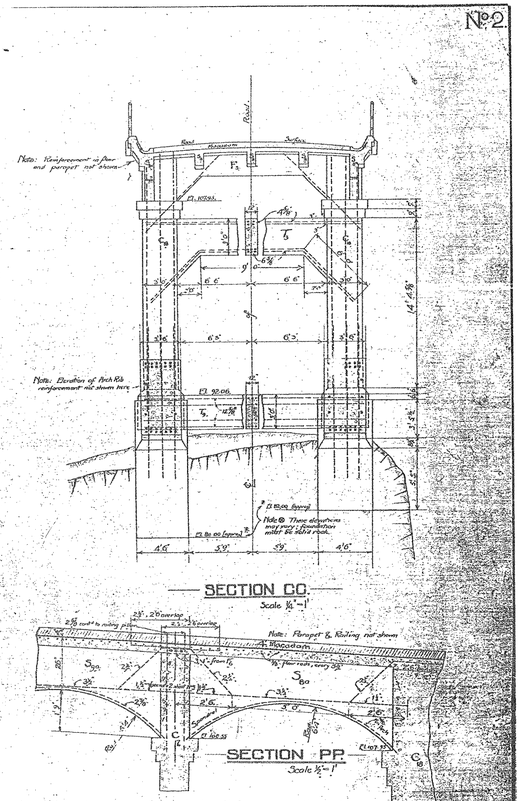
PROJECT NAME: COLCHESTER-SOUTH BURLINGTON
PROJECT NO.: BRM 5600 (6) S C/2
TITLE: EXISTING BRIDGE PLANS
BRIDGE SHEET No. ZDI39-EXI

VHB NO. 50735

plot date: 12/3/2003

No. 2





Examined R. Allmand

Approved

CENTRAL VERMONT RAILWAY.

WINDOSKI VIADUCT.

ARCH & SECTIONS.

SCALES ½"=1' ½"=1'

Office of Chief Engineer,

Montreal, June 1913.

THIS SHEET HAS BEEN REPRODUCED FROM ORIGINAL PLANS DATED JUNE 1913, ALL DETAILS HAVE BEEN SCALED DOWN FROM THE ORIGINAL SHEET SIZE AND ARE NO LONGER TO SCALE. THESE PLANS DO NOT INCLUDE THE STEEL SHORING COMPONENTS THAT HAVE BEEN ADDED TO THE STRUCTURE SINCE THE ORGINAL CONSTRUCTION.

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: COLCHESTER-SOUTH BURLINGTON
PROJECT NO.: BRM 5600 (6) S C/2
TITLE: EXISTING BRIDGE PLANS
BRIDGE SHEET No. ZD139-EX2

VHB NO. 50735

plot date: 12/3/2003

ARCH

Member	№	Concrete (dimensions)	Reinforcement					
			Tension			Shear		
			№	Size	Length	№	Size	Length
Floor (Top Reinf.)	—	4½" thick 4" crown	33 / 18	⅞" ■ / ¾" ■ temp. rods	210 @ 23'6" = 4935' / 36 · 54'6" (varying) = 1944'			
Stringer S_{0a}	4	26"x 9"	3	½" ■	4 · 54'6" (varying) = 216'			
" S_{0b}	16	26"x 9"	3	½" ■	8 · 16'3" = 130' / 4 Alternate to S_{0a} / 32 @ 14'6" = 464'			
" S_0	6	16" x 9"	4	⅞" ■	12 · 15'3" = 183' / 12 · 17'6" = 210'			
" S_3	24	16" x 9"	4	⅝" ■	48 · 16'0" = 768' / 12 · 4'0" (varying) = 192'	6	⅜" ■	144 @ 3'0" = 432'
Floor Beam F_5	2	24"x12"	4	⅞" ■	4 · 22'6" = 90' / 4 · 18'0" = 72'	8	⅜" ■	16 @ 4'6" = 72'
" " F_6	2	27"x12"	5	1" ■	6 · 21'6" = 129' / 4 · 18'0" = 72'	10	⅜" ■	20 @ 5'0" = 100'
" " F_7	7	27"x12"	4	1" ■	14 · 21'6" = 301' / 14 · 18'0" = 252'	10 or 12	⅜" ■	5 @ 10 = 50 @ 3'0" = 2.50' / 2 @ 6 · 12 @ 5'6" = 60'
Spandrel Arches	16	9" thick	2	⅜" ■	32 · 10'6" = 336'			
Column C_9	2	60"x 36"	12	⅞" ■	6 · 21'6" = 172' / 10 · 23'0" = 230' / 6 · 31'0" = 186'	4	⅞" ■ (at base only)	4 @ 90" - 36'
Footing C_0	2		12	⅞" ■	24 · 13'0" = 312'			
Column C_9	2	15" x 27"	6	⅝" ■	4 · 22'5" = 89' / 8 · 17'0" = 136'			
Footing C_9	2		6 / 4	⅝" ■ / ½" loops	6 · 15'0" = 120' / 8 · 15'0" = 123'4"			
Column C_{10}	2	15" x 27"	6	⅝" ■	4 · 15'9" = 63' / 8 · 10'6" = 84'			
Footing C_{10}	2		6 / 3	⅝" ■ / ½" loops	12 · 8'6" = 102' / 5 · 16'8" = 100'			
Column C_{11}	2	15"x27"	6	⅝" ■	4 · 13'0" = 60' / 8 · 10'0" = 80'			
" C_{12}	2	15"x27"	6	⅝" ■	4 · 11'6" = 46' / 6 · 6'3" = 38'			
" C_{13}	2	—"	2	⅝" ■	4 · 9'9" = 39'			
" C_{14}	2	—"	2	⅝" ■	4 · 10'6" = 42'			
" C_{15}	2	15" x 27"	6	⅝" ■	4 · 14'0" = 56' / 8 · 8'6" = 68'			
" C_{16}	2	15" x 27"	6	⅝" ■	4 · 17'3" = 71' / 8 · 12'6" = 100'			
Footing C_{16}	2		3	½" ■ loops	6 · 16'8" = 100'			
Column C_{17}	2	15" x 27"	6	⅝" ■	4 · 18'5" = 73' / 8 · 13'0" = 104'			
Footing C_{17}	2		6 / 4	⅝" ■ / ½" loops	12 · 10'0" = 120' / 8 · 15'8" = 123'4"			
Column C_{18}	2	60"x 36"	12	⅞" ■	8 · 15'6" = 124' / 6 · 25'0" = 150' / 10 · 19'0" = 190'	4	⅞" ■ (at base only)	4 @ 90" - 36'
Footing C_{18}	2		12	1⅛" ■	24 · 13'0" = 312'			
Tie T_5	T_5	36"x 12"	10	⅝" ■	8 · 18'6" = 148' and 22 @ 21'= 462'.			
" T_4	1	66"x 18"	12	⅞" ■	2 · 20'0" = 232'			
" T_2 & T_3	2	39"x 12"	10	⅝" ■	20 · 19'0" = 380'			
" T_4 & T_5	1	33½"x 12"	10	⅝" ■	20 · 19'0" = 380'			
" T_5	1	36"x 18"	12	⅝" ■	12 · 19'0" = 228'			
Arch Ribs	2	Max. 3'0" Min. 2'6" x 3'6"	14	⅞" ■	28 · 60'0" = 1680' / 14 · 40'0" = 1120' / 14 · 28'0" = 112.0' / 14 · 28'0" = 392' / 14 · 20'0" = 281' / 24 · 10'0" = 240' / 14 · 12'0" = 168' / 14 · 18'0" = 252'			→ or also use @ 35'0" giving an overlap of 10'0" at crown, which must not be decreased.

Note: All steel to be square, cold-twisted rods, having an elastic limit after twisting of at least 55000 lbs per sq. inch

Examined R. Amsler

Approved [illegible]

Note: for details of steel arrangement at this point see section EE, plan №2

Note: for arrangement of column steel below this point see Elevation plan №2

SECT. HH. [of Sheet №2] Scale ½"=1'

SECT. LL. Scale ½"=1'

SECT GG [of Sheet №2] Scale ½"=1'

SECT ON ℄ OF C_{12} Scale ½"=1'

SECT ON ℄ OF C_{16}

SECT ON ℄ OF ARCH Scale ½"=1'

ARCH

Section	Total Length	Total Weight
3/8"	8288 feet	3960 lbs.
½"	1260' 0"	1072 "
⅝"	4361 "	3792 "
¾"	369 "	706 "
⅞"	7413 "	19396 "
1"	754 "	2564 "

Note 1. Each temp rod in the Arch portion of the floor and parapet to be made up of two 39' lengths, giving an overlap of 2'0" at the centre.

Note 2. The ½" rod which remains down in S_{0a} and S_0 to be continuous and made up of two lengths of 54'1" giving 2' overlap

Note 3. The 2⅝" rods which remain down in S_3 to be continuous for floor beams F_5 and made up of five 41'0" lengths.

Note 4. Sizes of beams and stringers given above include floor slab; and depth of floor beams is measured at centre of span.

Note 5. Unless otherwise indicated on plan, all steel is to be laid with centres 2" from face of forms; except in floor slab where it shall be 1", and in stirrups where it shall be not less than 1½".

Note 6. The Road-Metal or Macadam is not part of this contract. It will be provided, laid, and rolled by the Municipality; the lower one inch (1") in thickness consisting of a mixture of pea-stone and coal-tar pitch for the protection of the waterproofing.

Drawn by [illegible]
Checked by [illegible]
Traced by [illegible]

CENTRAL VERMONT RAILWAY

WINOOSKI VIADUCT

ARCH DETAILS

SCALES ½" = 1' ¼" = 1'

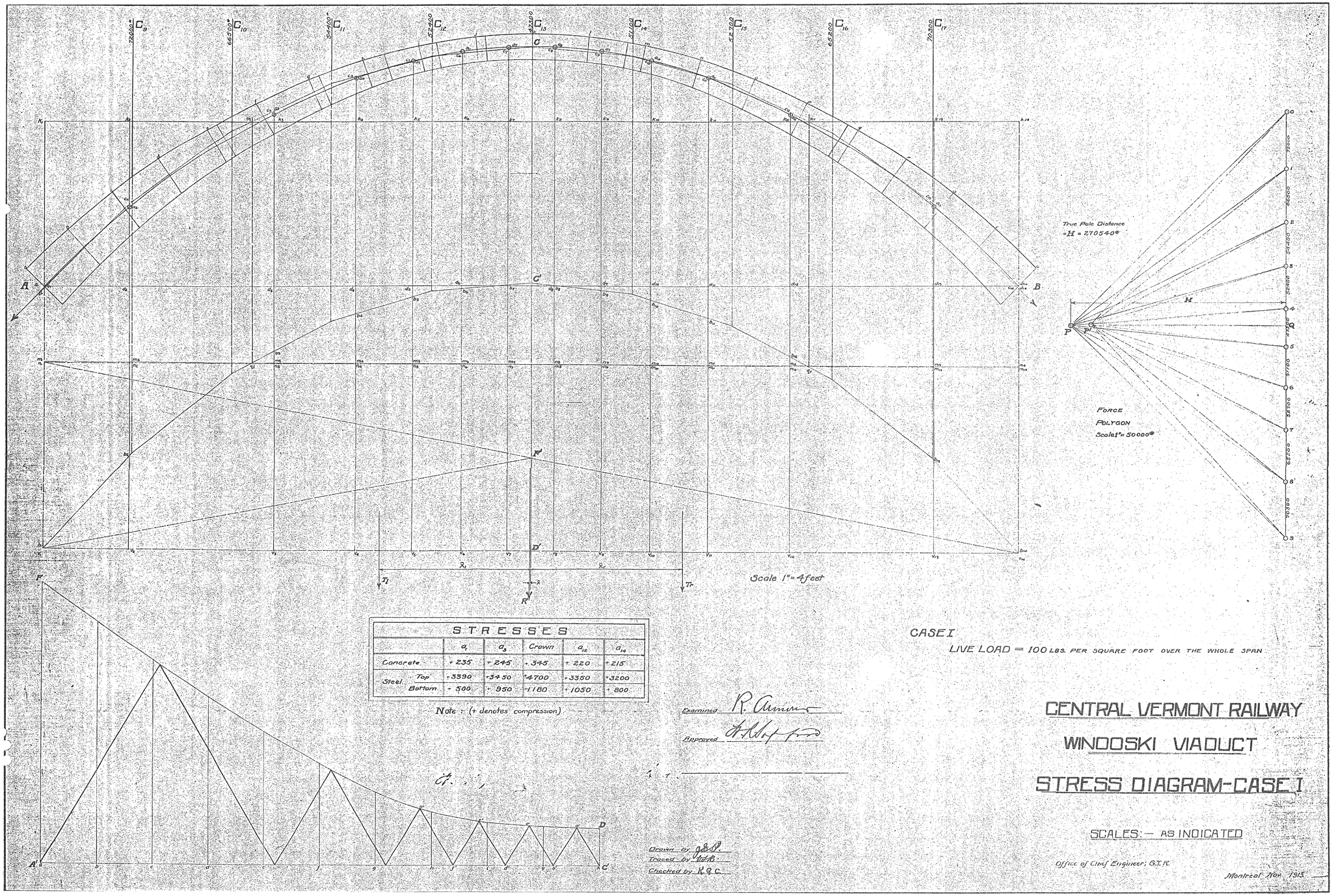
Office of Chief Engineer G.T.R. Montreal, Apr[illegible]

THIS SHEET HAS BEEN REPRODUCED FROM ORIGINAL PLANS DATED JUNE 1913, ALL DETAILS HAVE BEEN SCALED DOWN FROM THE ORIGINAL SHEET SIZE AND ARE NO LONGER TO SCALE. THESE PLANS DO NOT INCLUDE THE STEEL SHORING COMPONENTS THAT HAVE BEEN ADDED TO THE STRUCTURE SINCE THE ORGINAL CONSTRUCTION.

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: COLCHESTER-SOUTH BURLINGTON
PROJECT NO.: BRM 5600 (6) S C/2
TITLE: EXISTING BRIDGE PLANS
BRIDGE SHEET No. ZDI39-EX3 SHEET 120 OF 124

VHB NO. 50735 plot date: 12/3/2003



STRESSES						
		a_1	d_5	Crown	d_{12}	d_{14}
Concrete		+ 235	+ 245	+ 345	+ 220	+ 215
Steel	Top	- 3390	- 3450	- 4700	- 3350	- 3200
	Bottom	- 500	+ 950	+ 1180	+ 1050	+ 800

Note : (+ denotes compression)

CASE I

LIVE LOAD = 100 LBS. PER SQUARE FOOT OVER THE WHOLE SPAN

Examined R. Amm

Approved H. W. Hoff

Drawn by J.S.P.
Traced by J.A.B.
Checked by K.G.C.

CENTRAL VERMONT RAILWAY

WINDOSKI VIADUCT

STRESS DIAGRAM-CASE I.

SCALES:— AS INDICATED

Office of Chief Engineer, G.T.R.

Montreal Nov. 1913.

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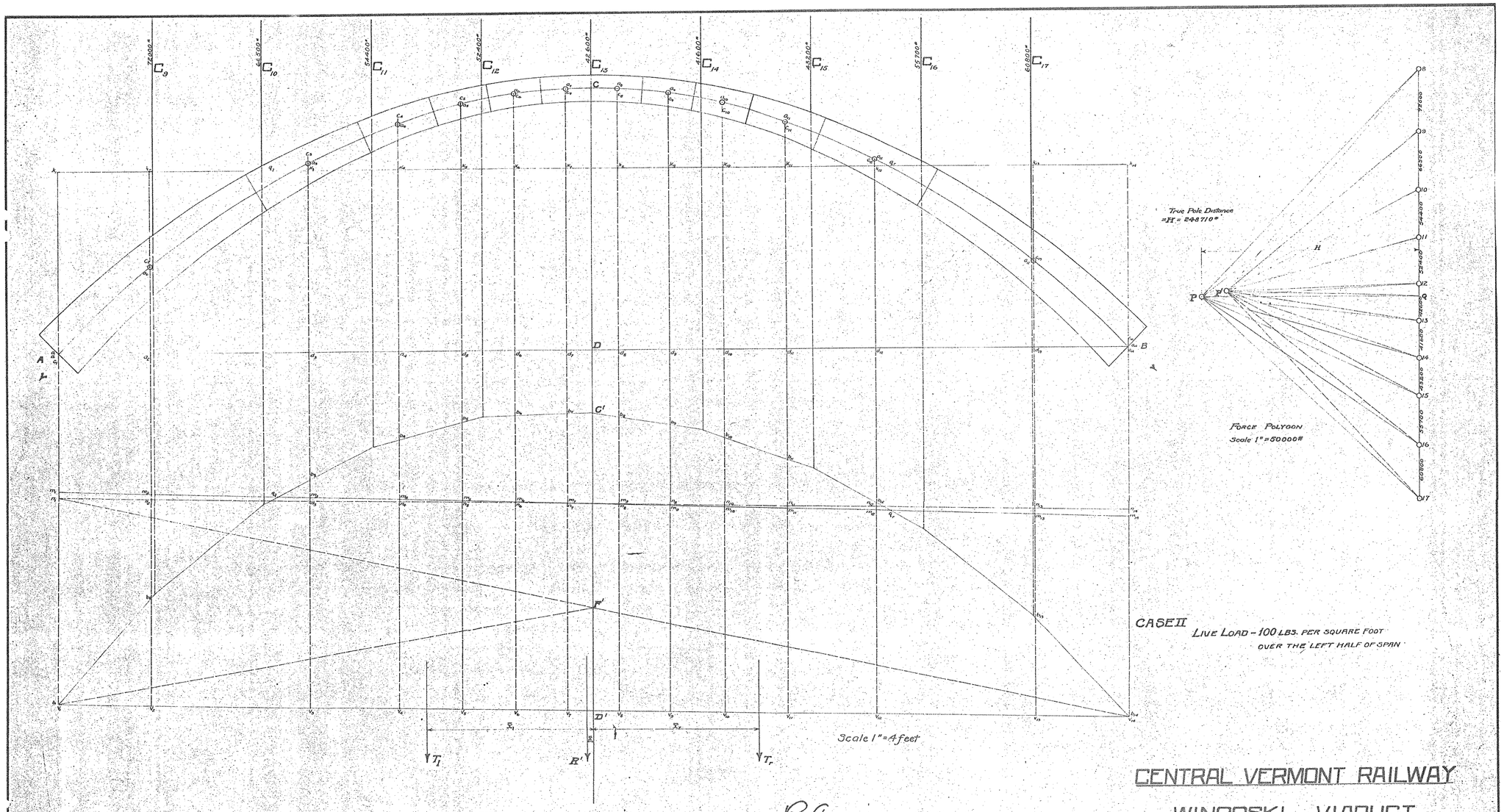
VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: COLCHESTER-SOUTH BURLINGTON
PROJECT NO.: BRM 5600 (6) S C/2
TITLE: EXISTING BRIDGE PLANS
BRIDGE SHEET No. ZDI39-EX4

VHB NO. 50735

plot date: 12/3/2003



CASE II

Live Load - 100 lbs. per square foot over the left half of span

STRESSES		o_1	o_2	Crown	o_{16}	o_{17}
Concrete		+275	+270	+335	+170	+220
Steel	Top	-3900	-3750	-4550	-2560	-3100
	Bottom	+150	+180	+700	+1500	+735

Note: (+) denotes compression.

Examined R. Amsler

Approved H. H. Vaughan

Drawn by J. & P.

Traced by H.H.

Checked by K.G.C.

CENTRAL VERMONT RAILWAY

WINOOSKI VIADUCT

STRESS DIAGRAM - CASE II

SCALES AS INDICATED

Office of Chief Engineer C.V.R.

Montreal: November, 1913.

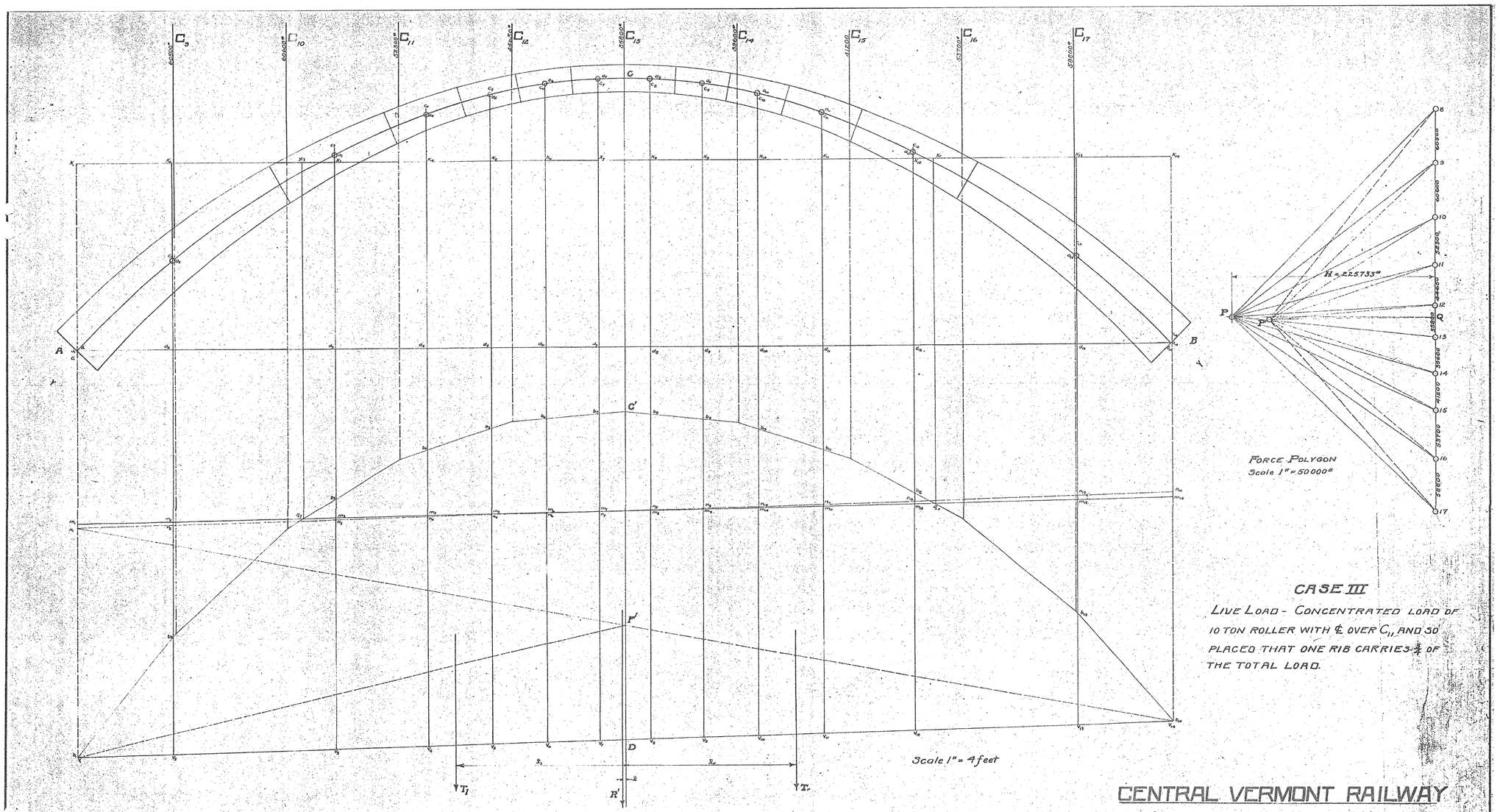
THIS SHEET HAS BEEN REPRODUCED FROM ORIGINAL PLANS DATED JUNE 1913, ALL DETAILS HAVE BEEN SCALED DOWN FROM THE ORIGINAL SHEET SIZE AND ARE NO LONGER TO SCALE. THESE PLANS DO NOT INCLUDE THE STEEL SHORING COMPONENTS THAT HAVE BEEN ADDED TO THE STRUCTURE SINCE THE ORGINAL CONSTRUCTION.

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: COLCHESTER-SOUTH BURLINGTON
PROJECT NO.: BRM 5600 (6) S C/2
TITLE: EXISTING BRIDGE PLANS
BRIDGE SHEET No. ZDI39-EX5

VHB NO. 50735

plot date: 12/3/2003



CASE III

LIVE LOAD - CONCENTRATED LOAD OF 10 TON ROLLER WITH ℄ OVER C_{11}, AND SO PLACED THAT ONE RIB CARRIES ¾ OF THE TOTAL LOAD.

STRESSES

		a_1	a_3	Crown	a_{12}	a_{15}
Concrete		+ 245	+ 260	+ 360	+ 180	+ 215
Steel	Top	+3500	+3640	+4730	+ 2540	+3050
	Bottom	+ 125	+ 155	+ 400	+1120	+ 600

Note :- (+) denotes compression

Examined R. C. Amos

Approved H. H. Wolfford

CENTRAL VERMONT RAILWAY

WINOOSKI VIADUCT

STRESS DIAGRAM - CASE III

SCALES AS INDICATED

Office of Chief Engineer C.V.R.

Montreal, November, 1913.

Drawn by J.E.P.
Traced by D.T.R.
Checked by K&C

THIS SHEET HAS BEEN REPRODUCED FROM ORIGINAL PLANS DATED JUNE 1913, ALL DETAILS HAVE BEEN SCALED DOWN FROM THE ORIGINAL SHEET SIZE AND ARE NO LONGER TO SCALE. THESE PLANS DO NOT INCLUDE THE STEEL SHORING COMPONENTS THAT HAVE BEEN ADDED TO THE STRUCTURE SINCE THE ORGINAL CONSTRUCTION.

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: COLCHESTER-SOUTH BURLINGTON
PROJECT NO.: BRM 5600 (6) S C/2
TITLE: EXISTING BRIDGE PLANS
BRIDGE SHEET No. ZDI39-EX6

VHB NO. 50735

plot date: 12/3/2003

No 2

SOUTH TRESTLE

Member	No	Concrete (dimensions)	Reinforcement					
			Tension			Shear		
			No	Size	Length	No	Size	Length
Floor (1st section)		4½" thick, 2 bents	45	⅞ " square rods	84 @ 23' 6" = 1974"	18	⅝ "	18 - 8'6" (1st bent) = 153' 0"
					18 - 8'6" (2nd bent) = 153' 0"			
Stringer S_{30}	4	28"×12"	4	⅞ "	8 - 19'6" = 156'	6	⅝ "	32 @ 5'0" = 160'
- S_{12}	6	19"×12"	4	⅞ "	12 - 19'6" (1st bent) = 234'	6	⅝ "	23 @ 4'0" = 192'
					12 - 19'6" = 234'			
- S_{30}	2	26"×12"	4	⅞ "	4 common to S_{12}	8	⅝ "	18 @ 5'0" = 90'
					4 @ 22'3" = 89'			
- S_{15}	3	19"×12"	4	⅞ "	6 common to S_{30}	8	⅝ "	24 @ 4'0" = 96'
					6 @ 22'3" = 133'6"			
Floor Beam F_6	2	25"×12"	6	⅞ "	6 - 21'6" 129'	16	⅝ "	16 @ 4'6" = 72'
					6 - 19'6" 117'			Mult. = No. of rods in F_6 at 4'6" ctrs
			4	⅝ "	4 - 19'6" 78'			
- F_5	2	30"×12"	7	⅞ "	8 - 22'0" 176'	16	⅝ "	32 @ 5'6" = 176'
					6 - 18'6" 111'			
Column C_{19}	2	18"×18"	8	⅜ "	12 - 16'0" 192'			
					4 - 21'6" 86'			
Footing C_{19}	2	30"×30"	8	⅝ "	16 - 5'6" 88'			
Column C_{20}	2	18"×18"	6	⅝ "	12 - 15'5" 185'			
					4 - 20'9" 83'			
Footing C_{21}	2	30"×30"	8	⅝ "	16 - 4'3" 68'			
Column C_{22}	2	18"×18"	8	⅝ "	12 - 14'6" 174'			
					4 - 22'6" 90'			
Footing C_{23}	2	30"×30"	8	⅝ "	16 - 4'3" 68'			
Brackets for T_{10}	6	12"×12"	2	⅝ "	12 - 7'6" 90'			
Ties T_{10}	4	15"×12"	6	⅝ "	6 - 34'0" 204			
			6	⅞ "	6 - 32'6" 192'			
Brackets for T_{15}	8	12"×12"	2	⅜ "	16 - 5'9" 92'			
Expansion Jt	2		4	2 bars 3½"×½" & 2 bars 3½"×⅜"	19'6" long on curve			
			40	⅝ " bolts & nuts	9" long			
Bronze Castings	24	as shown on plans						
C.I. drain pipes	6	6" diameter small pipe & bends	(see plans)					

All steel to be square edged rolled steel having an elastic limit of not less than 30,000 lbs per sq. inch.

All steel to be cleaned of rust, grease and mill scale; but not painted.

SOUTH TRESTLE

Section	Total Length	Total Weight
3/0	3497 feet	1672 lbs
5/0	2233 -	2992 -
7/0	1398' 6"	3641
4 Z bars 3½×6×½"×19'6"		2280 -
40 ½" bolts with 9" long 4 bronze castings		25 -
8 C.I. drain pipes		

Greening Wire Mesh — 19#6 wire, 2½" centres
2 @ max. 2 lengths @ 150'0" = 300'0"
2 - 81'6"
2 - 106'6"
Weight = 1437 lbs
⅜ rod for 6 dowels — 270 @ 132 lbs

Note 1: The 10" longs rods, and the 2, ⅞" in 2 sets which overlap on S_{12} & S_{30} or S_{30} & S_{30} respectively, to be made with a coupling in case of one continuous rod extending from support to support.

Note 2: Sizes of beams and stringers given above, indicate the depth of floor slab and depth of beams or stringers below.

Note 3: Unless otherwise indicated on plans, all stirrups to be bent with bends from face of beam, except in floor slab, where bends to be made in stirrups where ⅜" shall be not less than 18".

Note 4: The Road Metal or Macadamy [illegible] 2" will be provided, laid, and rolled by the [illegible] in thickness consisting of a mat of [illegible] and protection of the waterproofing.

Examined A. Edwards
Approved H. Symons

SECTION AA

FRONT ELEVATION

Note: Arrangement of steel at the floor beam, see details of Expansion Jt. below.

Note: Arrangement of steel in floor system:—
(a) All members having T, Y or ⅞" rods, as in above figure.
(b) " " " 6, ⅞" rods, as above with rod (a) omitted.
(c) " " " 5, 1" rods to have same vertical spacing, 3 rods below, 2 on top.

Note: When erecting the parapet upto CD (see Note) sockets, 6 deep and 2¾ diam. must be left to receive the railing standards, which are to be placed in position and grouted before the portion of the parapet above CD is cast.

SECTION BB

SECTION AA

PLAN

ELEVATION

SECTION ON ℄

ELEVATION

PLAN

Note: Each rail is to project 6" into the pillar. Before casting the concrete, this 6" shall be wrapped in well oiled felt, a pad of which shall be left at the inner end.

SECTION ON ℄

DETAILS OF PARAPET AND RAILING
SCALE 1" = 1 FOOT

SIDE ELEVATION

SOUTH APPROACH
SCALE ⅛"-1'

Note 5: Waterproofing to consist of three ply felt and coat the felts overlapping the 1" cement mortar finish of floor slab

Note 6: All steel to be cleaned of rust, grease and mill scale; but not painted.

HALF PLAN, FLOOR SLAB REMOVED

HALF PLAN

SECTION AA
SCALE ½"-1'

DETAIL OF DRAINAGE PIPES & GUTTER

Note 7: (a) Concrete to be cast monolithic with floor system up to last CD, 6 sheets being set as shown (for this note B on this sheet)
(b) Waterproofing to be run to and gutter coat round wire mesh long 1' from waterproofing.
(c) Portions above CD to be cast last, the floor rods, and wire mesh being properly bent in accordance with drawing.

SECTION DD.
Showing detail of floor beams at expansion joint — floor and parapet in place. (for details of expansion joint on this sheet)

Standard 8 bend, Z pipe

Location:
(a) Midway bet. Cols. 3 & 4
(b) Midway bet. Cols. 7 & 8
(c) " " 12 & 13
(d) " " 17 & 18

CAST BRONZE SHOE FOR FLOOR BEAM

CAST BRONZE PLATE FOR COLUMN

SECTION CC

PLAN

SECTION

PLAN

DETAILS OF EXPANSION JOINT
SCALE ½" 1FT

DETAIL SHOWING Z BARS — SECTION BB
SCALE 2"-1'

Drawn by K.C.C.
Checked by J.S.D.
Traced by V.S.R.

CENTRAL VERMONT RAILWAY
WINOOSKI VIADUCT
SOUTH TRESTLE
AND
DETAILS

Office of Chief Engineer C.T.R., Montreal

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VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: COLCHESTER-SOUTH BURLINGTON
PROJECT NO.: BRM 5600 (6) S C/2
TITLE: EXISTING BRIDGE PLANS
BRIDGE SHEET No. ZD139-EX7
SHEET 124 OF 124

VHB NO. 50735 plot date: 12/3/2003

The Reinforced Earth Company

133 PARK STREET, NORTH READING, MA 01864 (978) 664-2830

GENERAL NOTES

DESIGN CRITERIA

1. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE REINFORCED EARTH VOLUME, METHODS OF CONSTRUCTION AND QUALITY OF PREFABRICATED MATERIALS SHALL CONFORM TO THE CONTRACTING AGENCY'S TECHNICAL SPECIFICATIONS FOR REINFORCED EARTH WALLS.

⚠ 2. SOILS CHARACTERISTICS USED FOR DESIGN (PER SPECIAL PROVISION SECTION 526.04A.)

SELECT FILL MATERIAL FOR MSE WALLS
$\emptyset$ = 34 degrees, c = 0 KPa., = 22 KN/m^3

EMBANKMENT BACKFILL (RETAINED SOIL)
$\emptyset$ = 30 degrees, c = 0 KPa., = 22 KN/m^3

FOUNDATION MATERIAL (ALLOWABLE BEARING PRESSURE 950 KPa)
$\emptyset$ = 30 degrees, c = 0 KPa.

3. THE MAXIMUM APPLIED BEARING PRESSURE AT THE FOUNDATION LEVEL IS AS SHOWN ON THE WALL ELEVATIONS FOR EACH DESIGN CASE. IT IS THE RESPONSIBILITY OF THE OWNER TO DETERMINE THAT THIS APPLIED BEARING PRESSURE IS ALLOWABLE FOR THAT LOCATION.

4. ANY UNSUITABLE FOUNDATION MATERIAL BELOW THE REINFORCED EARTH VOLUME, AS DETERMINED BY THE VTRANS RESIDENT ENGINEER, SHALL BE EXCAVATED AND REPLACED WITH GRANULAR BORROW OR OTHERWISE STABILIZED AS DIRECTED BY THE VTRANS RESIDENT ENGINEER.

5. REINFORCING STRIPS SHALL BE 50mm WIDE AND 4mm THICK, AND SHALL CONFORM TO THE PHYSICAL AND MECHANICAL PROPERTIES OF ASTM A-572 GRADE 450. GALVANIZATION SHALL BE APPLIED IN ACCORDANCE WITH ASTM A-123 OR AASHTO M111 (610 g/m^2).

WALL CONSTRUCTION

6. STATIONS SHOWN ARE ALONG TH 4/3 BASELINE.

7. FOR LOCATION AND ALIGNMENT OF REINFORCED EARTH WALL. SEE SHEET NO. 2 OF THESE PLANS AND CONTRACT DRAWINGS.

8. IF MANHOLES OR DROP INLETS ARE PRESENT WITHIN THE REINFORCED EARTH VOLUME AND SPECIFIC DETAILS HAVE NOT BEEN INCLUDED IN THESE PLANS, CONTACT THE REINFORCED EARTH COMPANY FOR APPROPRIATE DETAILS.

9. FOR PILES LOCATED WITHIN THE REINFORCED EARTH VOLUME, THEY SHALL BE DRIVEN PRIOR TO CONSTRUCTION OF THE REINFORCED EARTH WALL UNLESS A METHOD TO PROTECT THE STRUCTURE, WHICH IS ACCEPTABLE TO VTRANS AND THE REINFORCED EARTH COMPANY, AND IS PROPOSED AND APPROVED IN WRITING.

10. BACKFILL MATERIAL SHALL BE COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR REINFORCED EARTH WALLS TO A LEVEL OF 5 cm ± ABOVE THE TIE STRIPS EMBEDDED IN THE PANELS. INSTALLATION OF REINFORCING STRIPS SHALL BE PERMITTED ONLY AFTER PLACEMENT AND COMPACTION OF THE BACKFILL MATERIAL HAS REACHED THE REQUIRED LEVEL.

WALL CONSTRUCTION (CONT.)

11. COMPACTION AND OPERATION EQUIPMENT SHALL BE KEPT A MINIMUM DISTANCE OF 1M FROM THE BACK FACE OF THE REINFORCED EARTH PANELS. COMPACTION WITHIN 1M OF THE REINFORCED EARTH PANELS SHALL BE ACHIEVED WITH AT LEAST THREE (3) PASSES OF A LIGHTWEIGHT MECHANICAL TAMPER, ROLLER OR VIBRATORY SYSTEM. NO COMPACTION DENSITY TESTS SHALL BE TAKEN WITHIN THE 1M . ZONE.

12. IF STRUCTURES IN EXCESS OF 6M IN HEIGHT OCCUR, THE FINISHED GRADE IN FRONT OF THE WALL SHALL BE PLACED AND COMPACTED BEFORE WALL CONSTRUCTION EXCEEDS A HEIGHT OF 6M . FINISHED GRADE BACKFILL SHALL BE COMPACTED TO 95% OF ASTM D-698, METHODS 'C' OR 'D', UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

13. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE LOCATION OF ANY GUIDERAIL AND FENCE POSTS BEHIND THE REINFORCED EARTH PANELS. PRIOR TO PLACEMENT OF THE TOP LAYER OF REINFORCING STRIPS, INDIVIDUAL STRIPS MAY BE SKEWED TO AVOID THE POST LOCATIONS IF AUTHORIZED BY THE REINFORCED EARTH COMPANY. ANY DAMAGE DONE TO THE REINFORCING STRIPS DUE TO THE INSTALLATION OF THE GUARDRAIL SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

14. IF EXISTING OR FUTURE STRUCTURES, PIPES, FOUNDATIONS OR GUARDRAIL POSTS WHICH ARE WITHIN THE REINFORCED EARTH VOLUME INTERFERE WITH THE NORMAL PLACEMENT OF REINFORCING STRIPS AND SPECIFIC DIRECTION HAS NOT BEEN PROVIDED ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE REINFORCED EARTH COMPANY TO DETERMINE WHAT COURSE OF ACTION SHOULD BE TAKEN.

15. ALL DETAILING AND CHECKING OF REINFORCING STEEL FOR ANY C.I.P. CONCRETE WORK IS THE RESPONSIBILITY OF THE CONTRACTOR.

16. TOP PANELS BELOW COPING SHALL EACH HAVE (3) THREE #13 (#4 US) DOWELS.

17. FOR OTHER INFORMATION PERTAINING TO WALL CONSTRUCTION PLEASE REFER TO THE REINFORCED EARTH CONSTRUCTION MANUAL.

18. THE CONTRACTOR IS RESPONSIBLE FOR GRADUALLY DEFLECTING UPPER REINFORCING STRIPS DOWNWARD TO AVOID CONFLICTS WITH PAVING, FOUNDATIONS AND SUBGRADE PREPARATION. THE CONTRACTOR'S ATTENTION IS DIRECTED ESPECIALLY TO SITUATIONS WHERE ROADWAY SUPERELEVATION, IMPERVIOUS MEMBRANES AND/OR SOIL MIXING ARE ANTICIPATED.

19. THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING STORM WATER DRAINAGE IN THE VICINITY OF THE WALL DURING CONSTRUCTION. STORM WATER RUNOFF IS TO BE COLLECTED AND DISCHARGED AWAY FROM THE WALL AND REINFORCED BACKFILL.

MATERIALS NOTES

20. NOMINAL STRIP LENGTHS

THE REINFORCING STRIP LENGTHS SHOWN ON THE PLANS, MEASURED FROM BACK FACE OF PANEL, ARE THE NOMINAL LENGTHS REQUIRED BY CALCULATION. THE ACTUAL FABRICATED STRIP LENGTHS ARE OFTEN LONGER (UP TO 15cm) DUE TO MANUFACTURING TOLERANCES. THE REQUIRED HORIZONTAL LIMIT OF GRANULAR BACKFILL IS EQUAL TO THE NOMINAL STRIP LENGTH. ADDITIONAL GRANULAR BACKFILL BEYOND THE NOMINAL STRIP LENGTH IS NOT REQUIRED BY CALCULATION.

MATERIALS NOTES (CONT.)

21. SELECT BACKFILL QUANTITY

THE SELECT BACKFILL QUANTITY IS CALCULATED BY MULTIPLYING THE NOMINAL STRIP LENGTHS SHOWN ON THE PLANS (PLUS 300mm) BY THEIR TRIBUTARY WALL SURFACE AREA AND CONVERTING THE RESULT TO A NEATLINE CUBIC METER QUANTITY. THE CONTRACTOR MUST CALCULATE HIS OWN EXCAVATION AND BACKFILL QUANTITIES BASED UPON THE SPECIFIC CONDITIONS OF THE PROJECT.

⚠ 22. PANEL FINISH

PRECAST FACING PANELS SHALL HAVE AN ASHLAR STONE FORM LINER FINISH. CORNER ELEMENTS AND COPING UNITS SHALL HAVE A PLAIN STEEL FORM FINISH. CAST-IN-PLACE COPING SHALL MATCH COLOR OF PRECAST COPING.

23. NOTE TO CONTRACTORS

ONLY THE FOLLOWING MATERIALS ARE SUPPLIED BY THE REINFORCED EARTH COMPANY:

- PRECAST CONCRETE FACING PANELS
- REINFORCING STRIPS
- BOLT SETS (FOR ATTACHING REINFORCING STRIPS TO PANELS)
- BEARING BLOKS
- RUBBER SHIMS
- FILTER CLOTH AND ADHESIVE (FOR PANEL JOINTS ONLY)
- PRECAST COPING UNITS

ANY OTHER MATERIALS CALLED FOR IN THE CONTRACT PLANS OR SPECIFICATIONS ARE TO BE SUPPLIED BY THE CONTRACTOR. ANY JOINT MATERIALS SHOWN AT THE INTERFACE OF PRECAST PANELS AND CAST-IN-PLACE CONCRETE STRUCTURES ARE TO BE SUPPLIED BY THE ERECTION CONTRACTOR. ALL SANDBLASTING, PAINTING, SEALERS OR OTHER SPECIAL APPLIED COATINGS ARE ALSO SUPPLIED/INSTALLED BY THE CONTRACTOR IN THE FIELD FOLLOWING PANEL ERECTION.

ALL GEOTEXTILES, GEOGRIDS, IMPERVIOUS MEMBRANES ARE SUPPLIED BY THE CONTRACTOR.

24. THE REINFORCED EARTH COMPANY SUPPLIES PRECAST CONCRETE FACING PANELS AND ACCESSORIES TO BE USED IN CONJUNCTION WITH OTHER MATERIALS IN THE CONSTRUCTION OF THE REINFORCED EARTH® RETAINING WALLS DETAILED HEREIN. THE CONSTRUCTION AND QUALITY CONTROL PROCEDURES MANUAL FURNISHED BY THE REINFORCED EARTH COMPANY IS INTENDED TO PROVIDE A GENERAL EXPLANATION OF THE SYSTEM. IT IS THE CONTRACTOR'S OBLIGATION TO DEVISE AND EXECUTE A PROJECT SPECIFIC ERECTION SEQUENCE, PANEL UNLOADING, HANDLING AND BRACING SYSTEM, AND FALL PROTECTION SYSTEM. THE BRACING SYSTEM SHOWN IN THE CONSTRUCTION AND QUALITY CONTROL PROCEDURES MANUAL IS GENERAL IN NATURE AND DOES NOT ACCOUNT FOR PROJECT SPECIFIC CRITERIA COMPLIANCE WITH THE GUIDELINES IN THIS MANUAL DOES NOT RELIEVE THE CONTRACTOR OF ITS RESPONSIBILITY TO ADHERE TO THE PROJECT PLANS, SPECIFICATIONS AND CONTRACT DOCUMENTS OR COMPLIANCE WITH ALL FALL PROTECTION, SAFETY, LAWS, STANDARDS AND PROCEDURES AT THE JOBSITE. CONTRACTORS SHOULD TAKE SPECIAL PRECAUTIONS TO PREVENT THE PANELS FROM SHIFTING OR FALLING DURING THE ERECTION PROCESS.

25. PROJECT NOTES

SEE CONTRACT DRAWINGS 77 AND 78 OF 124 FOR ADDITIONAL MSE WALL NOTES. SEE PROJECT SPECIAL PROVISIONS SECTION 526 FOR ADDITIONAL REQUIREMENTS.

INDEX

SHEET NO.	CONTENTS
1	GENERAL NOTES
2	WALL ELEV. AND PLAN VIEWS
3	TYPICAL SECTIONS
4	MISC. DETAILS
5	STANDARD PANEL DETAILS

SHOP DRAWING REVIEW

☑ REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.

☐ REJECTED ☐ REVISE AND RESUBMIT ☐ FURNISH AS CORRECTED

CORRECTIONS OR COMMENTS MADE ON THE SHOP DRAWINGS DURING THIS REVIEW DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. THIS CHECK IS ONLY FOR REVIEW OF GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR; CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS; SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION; COORDINATING HIS WORK WITH THAT OF ALL OTHER TRADES; AND PERFORMING HIS WORK IN A SAFE AND SATISFACTORY MANNER.

VHB Vanasse Hangen Brustlin, Inc. Engineers, Planners, and Scientists Six Bedford Farms, Kitton Rd. Bedford, NH 03110 603 644 0888

Job Number: ~~66644~~ 50733
Reviewed By: LSB / MAC
Date: 10/31/05

RECEIVED
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Northwest Regional Construction Office

CERTIFIED WITH RESPECT TO THE INTERNAL STABILITY OF REINFORCED EARTH STRUCTURES ONLY

STATE OF VERMONT PETER L. ANDERSON 6161 PROFESSIONAL ENGINEER
10/24/05

VT AOT PROJ. NO. BRM 5600(6)S C/2

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The design contained on these drawings is based on information provided by the owner. On the basis of this information, The Reinforced Earth Company has designed, and is responsible for the internal stability of the structure only. External stability, including foundation and slope stability, is the responsibility of the owner.

The Reinforced Earth Company
8614 Westwood Center Drive Suite 1100, Vienna, Virginia 22182 (703) 821-1175

"REINFORCED EARTH" is the registered trademark of The Reinforced Earth Company.

DESIGNED BY: JMKC				PROJECT NAME	TH 4/3 LIME KILN BRIDGE — DATE 9/7/2005
PROJECT ENGR: JMKC				LOCATION	TOWN OF COLCHESTER CHITTENDEN COUNTY, VERMONT — CONTRACT NO. 11746
CHECKED BY: KPB	1	10-24-05	REVISED AS PER VHB REVIEW COMMENTS 10-7-05	OWNER	VT AOT — DRAWING NO. 1 OF 5
ENG. MANAGER	REV.	DATE	DESCRIPTION	DRAWING COVERS	GENERAL NOTES - R.E. WALLS — SCALE AS SHOWN

C:\PROJNE\11746\FINAL\11746_COV.DWG

SHOP DRAWING REVIEW

☒ REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.

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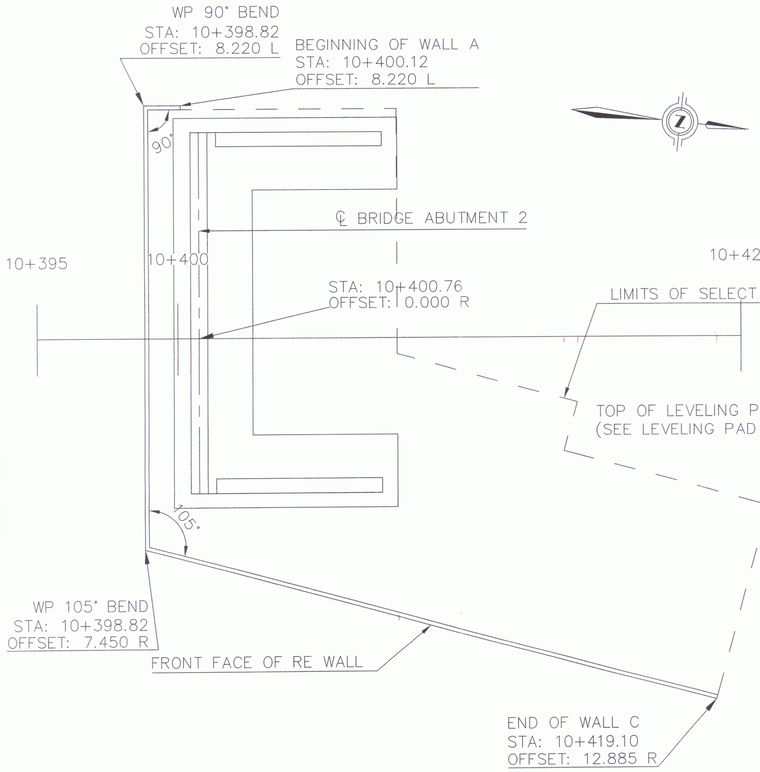
VHB Vanasse Hangen Brustlin, Inc. Engineers, Planners, and Scientists Six Bedford Farms, Kitton Rd. Bedford, NH 03110 603 644 0888

Job Number: 60735
Reviewed By: M.M. COLGAN
Date: 3/31/06

PAY ITEM QUANTITIES
PANEL AREA: 304.5 SM
C.I.P. COPING: 4.5 LM
PRECAST COPING: 33.6 LM

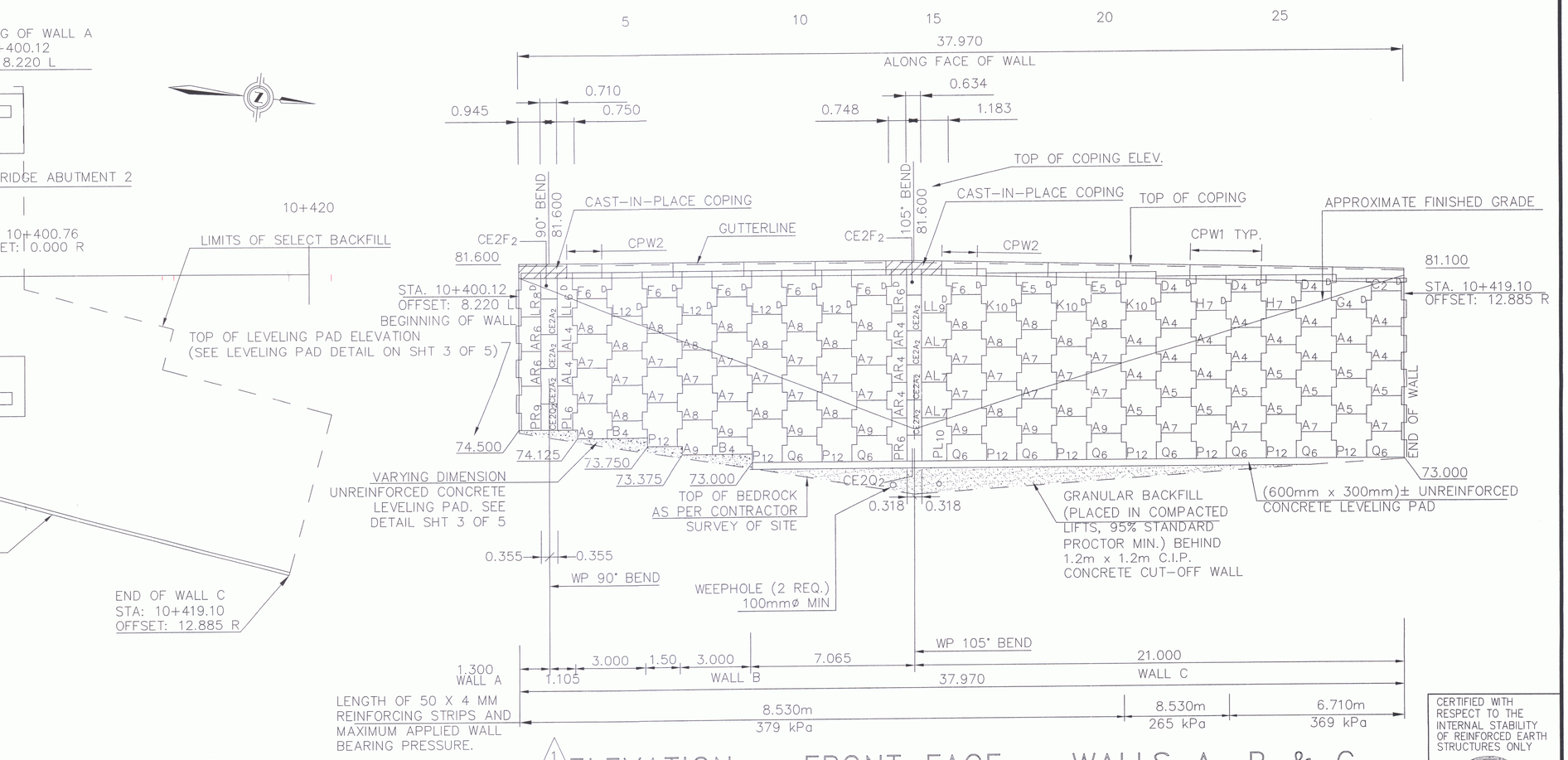
BEDROCK NOTE:
AS PER CONTRACT PLANS – SHEET 77 OF 124
"BOTTOM OF LEVELING PAD SHALL BE PLACED ON A SOUND BEDROCK SURFACE."
SEE LEVELING PAD DETAIL ON SHEET 3 OF 5. ELEVATION 73.00 IS AS PER CONTRACT PLANS.

2 LEVELING PAD ELEVATIONS REVISED AS PER FIELD SURVEY. SEE DETAILS ON SHEET 3 OF 5, AND "LEVELING PAD STEPS ON ROCK" DETAIL DRAWING SK1 DATED 3-28-06.



PLAN VIEW WALLS A, B & C

SCALE = 1 : 100



1 2 ELEVATION – FRONT FACE – WALLS A, B & C

SCALE = 1 : 100

RECEIVED
APR 3 2006
Northwest Regional Construction Office

CERTIFIED WITH RESPECT TO THE INTERNAL STABILITY OF REINFORCED EARTH STRUCTURES ONLY

STATE OF VERMONT PETER L. ANDERSON 6181 PROFESSIONAL ENGINEER
3/28/06

VT AOT PROJ. NO. BRM 5600(6)S C/2

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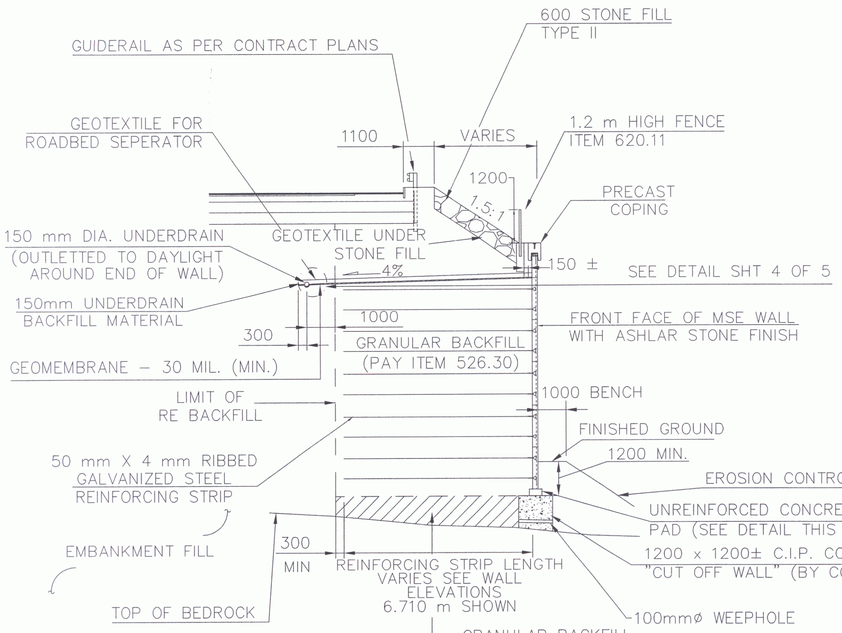
DESIGNED BY:				PROJECT NAME	TH 4/3 LIME KILN BRIDGE	DATE
JMKC						9/7/2005
PROJECT ENGR: JMKC	2	03-27-06	REVISED DUE TO TOP OF BEDROCK ELEVATION	LOCATION	TOWN OF COLCHESTER CHITTENDEN COUNTY, VERMONT	CONTRACT NO. 11746
CHECKED BY: KPB	1	10-24-05	REVISED WALL PANELS	OWNER	VT AOT	DRAWING NO. 2 OF 5
ENG. MANAGER	REV.	DATE	DESCRIPTION	DRAWING COVERS	WALL ELEV. AND PLAN VIEWS	SCALE AS SHOWN

C:\PROJ\NEW\11746\FINAL\11746_WALL_ELEV.DWG

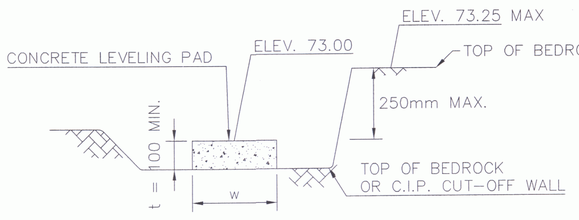


1
2

TYPICAL MSE WALL SECTION

SCALE: 1:100

SEE SHEET 78 OF 124 IN CONTRACT PLANS
FOR FURTHER INFORMATION



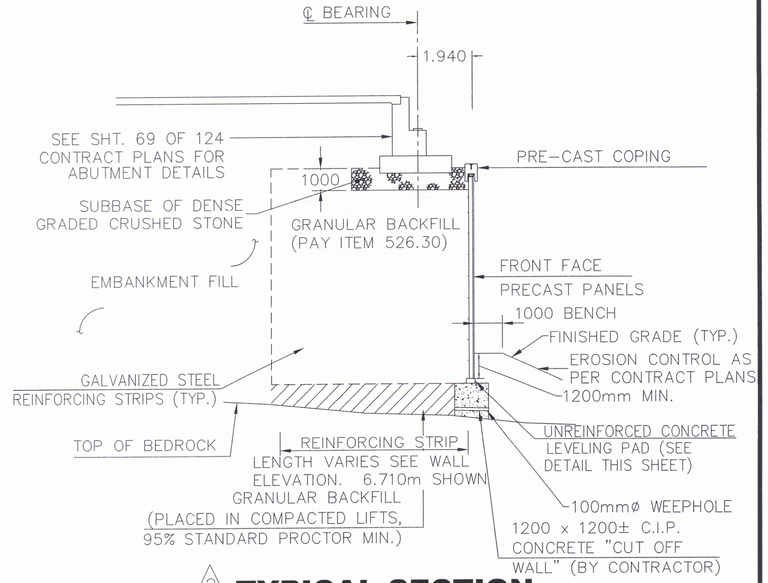
t	w
≤ 150	300
150≤ 225	450
225≤ 450	600
450≤ 900	900

2

LEVELING PAD DETAIL

SCALE: 1:100

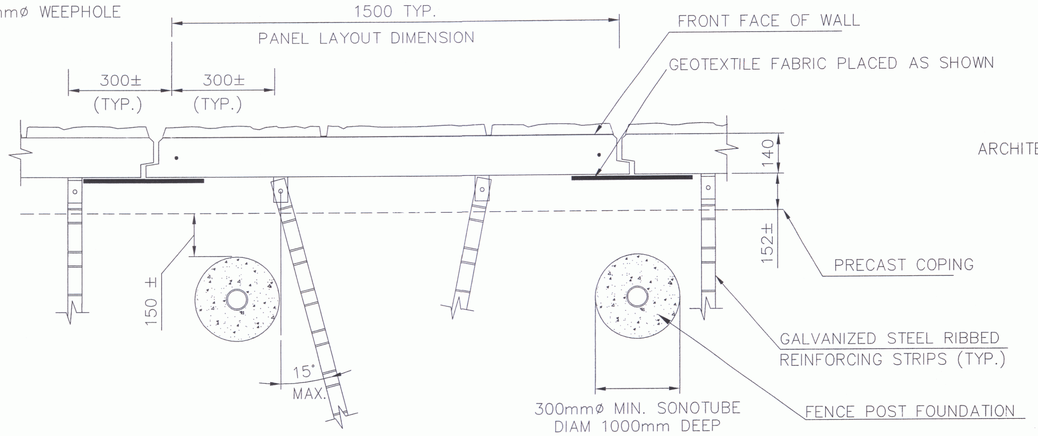
NOTE: LEVELING PAD SHALL BE BACKFILLED ON BOTH SIDES PRIOR TO PLACING FACING PANELS



2

TYPICAL SECTION AT ABUTMENT

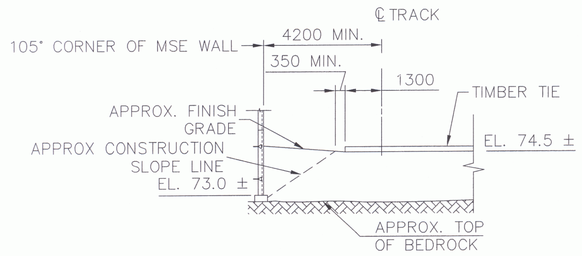
SCALE: 1 : 100



FENCE POST BEHIND WALL

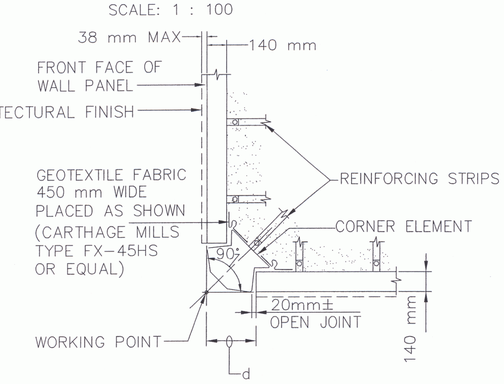
SCALE 1:10

NOTE:
PRIOR TO PLACING FENCE POST AND/OR GUIDERAIL FOUNDATIONS, CONTRACTOR SHALL MARK LOCATION ON BACK–FACE OF WALL AND SKEW REINFORCING STRIPS TO AVOID THE OBSTRUCTION. OR PLACE SONOTUBE PIPE FOR FUTURE GUIDERAIL PLACEMENT, SUCH THAT PLACEMENT OF REINFORCING STRIPS IS NOT OBSTRUCTED.



MSE WALL/TRACK DETAIL @ 105° CORNER

SCALE: 1:100



CORNER ELEMENT DETAIL

SCALE 1:20

CORNER ELEMENT	d
90°	355
105°	317

SHOP DRAWING REVIEW

X REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.

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VHB Vanasse Hangen Brustlin, Inc. Engineers, Planners, and Scientists Six Bedford Farms, Kilton Rd. Bedford, NH 03110 603 644 0888

Job Number: 50735
Reviewed By: M.A. COLGAN
Date: 3/31/06

VT AOT PROJ. NO. BRM 5600(6)S C/2

CERTIFIED WITH RESPECT TO THE INTERNAL STABILITY OF REINFORCED EARTH STRUCTURES ONLY

STATE OF VERMONT PIETER L. ANDERSON 8161 PROFESSIONAL ENGINEER 3/28/06

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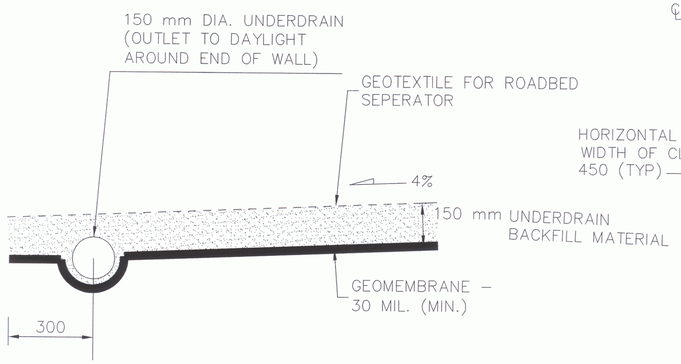
DESIGNED BY:				PROJECT NAME	TH 4/3 LIME KILN BRIDGE	DATE
JMKC						9/7/2005
PROJECT ENGR: JMKC	2	03–27–06	REVISED DUE TO TOP OF BEDROCK ELEVATION	LOCATION	TOWN OF COLCHESTER CHITTENDEN COUNTY, VERMONT	CONTRACT NO. 11746
CHECKED BY: KPB	1	10–24–05	REVISED AS PER VHB REVIEW COMMENTS 10–7–05	OWNER	VT AOT	DRAWING NO. 3 OF 5
ENG. MANAGER	REV.	DATE	DESCRIPTION	DRAWING COVERS	TYPICAL SECTIONS	SCALE AS SHOWN

C:\PROJ\NE\11746\FINAL\11746_TYP_SECT.DWG



⚠ UNDERDRAIN DETAIL

SCALE 1:10

NOTE:

ALL DIMENSIONS IN MILLIMETERS (mm) UNLESS NOTED OTHERWISE

SHOP DRAWING REVIEW

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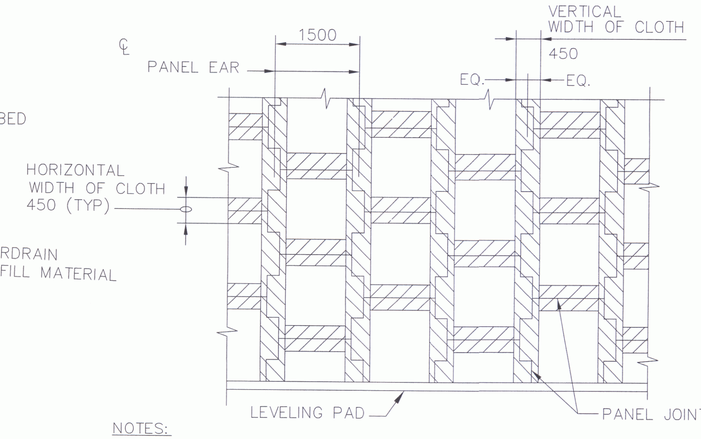
VHB Vanasse Hangen Brustlin, Inc. Engineers, Planners, and Scientists Six Bedford Farms, Kitton Rd. Bedford, NH 03110 603 644 0888

Job Number: _____ Reviewed By: _____ Date: _____



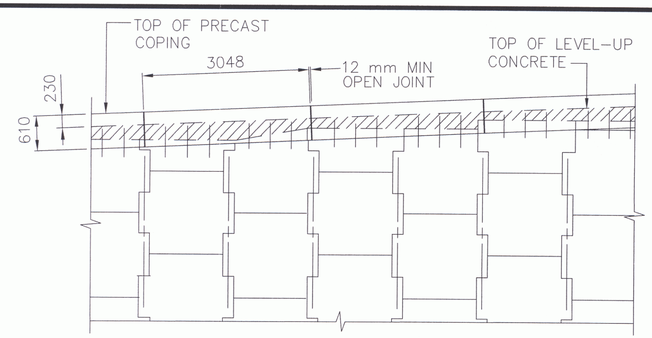
NOTES:

1. STRIPS OF FILTER CLOTH SHALL BE PLACED ON BACK FACE OF PANEL, OVER PANEL JOINTS. FILTER CLOTH SHALL BE ADHERED TO BACK FACE OF PANELS USING AN ADHESIVE COMPOUND SUPPLIED BY THE REINFORCED EARTH COMPANY.
2. THE CONTRACTOR SHALL PROVIDE THE RESIDENT ENGINEER WITH THE MANUFACTURERS TECHNICAL DATA SHEET AND APPLICATION INSTRUCTIONS FOR THE ADHESIVE COMPUND.

FILTER CLOTH DETAIL

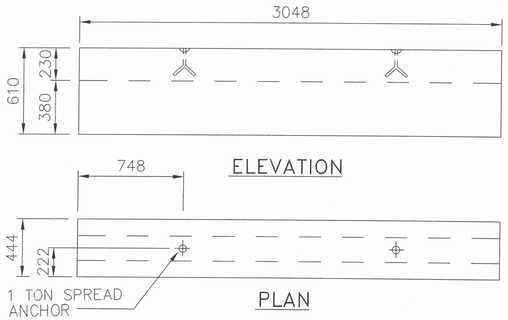
PARTIAL ELEVATION – BACK FACE

SCALE 1:50



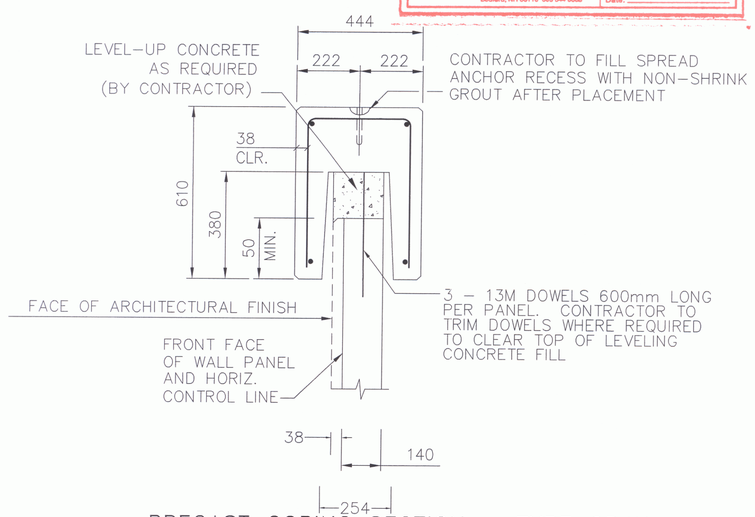
PRECAST COPING – PARTIAL ELEVATION

SCALE 1:50



PRECAST COPING DETAIL

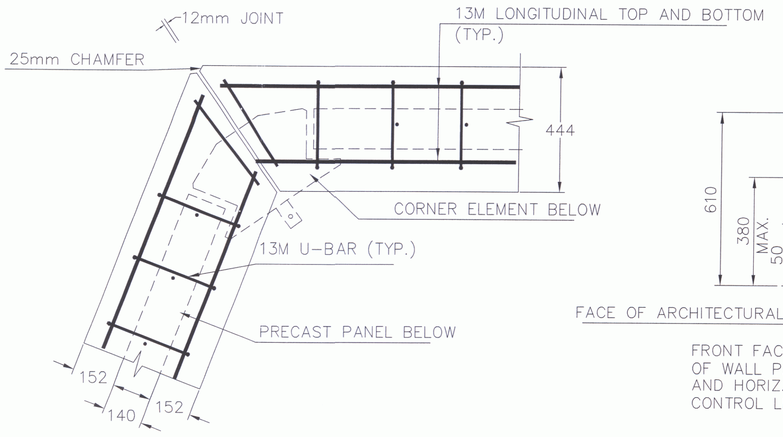
SCALE 1:20



PRECAST COPING SECTION – TYPE CPW1

WIDE THROAT FOR ARCHITECTURAL PANELS

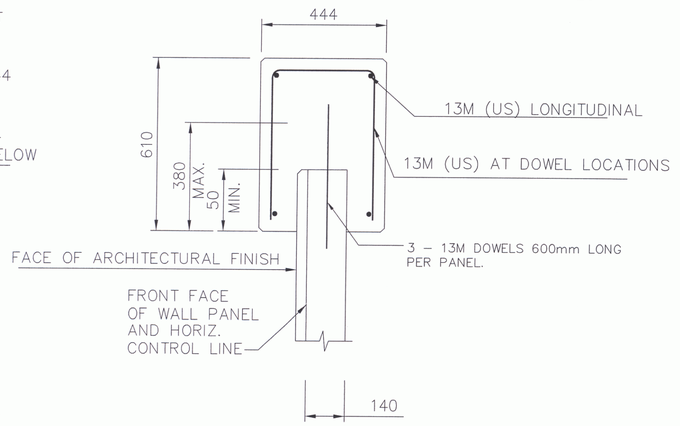
SCALE: 1:100



C.I.P. COPING – PARTIAL PLAN

AT CORNERS

SCALE 1:10



CAST–IN–PLACE COPING TO MATCH WIDE THROAT

PRECAST COPING FOR ARCHITECTURAL PANELS

SCALE: 1:100

VT AOT PROJ. NO. BRM 5600(6)S C/2

CERTIFIED WITH RESPECT TO THE INTERNAL STABILITY OF REINFORCED EARTH STRUCTURES ONLY

STATE OF VERMONT PIETER L. ANDERSON 0161 PROFESSIONAL ENGINEER

12/14/05

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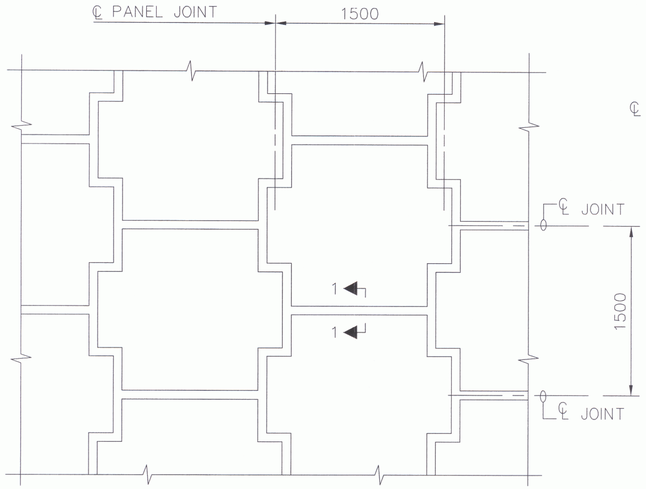
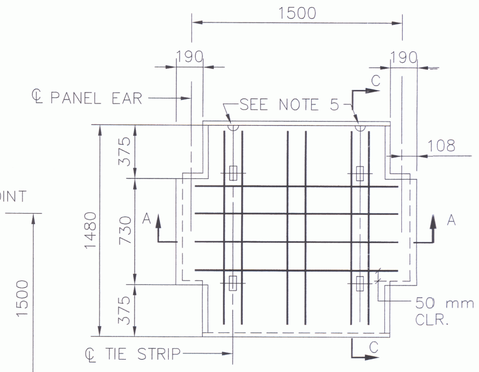
DESIGNED BY: JMKC				PROJECT NAME	TH 4/3 LIME KILN BRIDGE	DATE 9/7/2005
PROJECT ENGR: JMKC				LOCATION	TOWN OF COLCHESTER CHITTENDEN COUNTY, VERMONT	CONTRACT NO. 11746
CHECKED BY: KPB	1	10-24-05	ADDED UNDERDRAIN DETAIL AS PER VHB REVIEW COMMENTS 10-7-05	OWNER	VT AOT	DRAWING NO. 4 OF 5
ENG. MANAGER	REV.	DATE	DESCRIPTION	DRAWING COVERS	MISC. DETAILS	SCALE AS SHOWN

C:\PROJ\NEW\11746_FINAL\11746 MISC_DETAIL.DWG



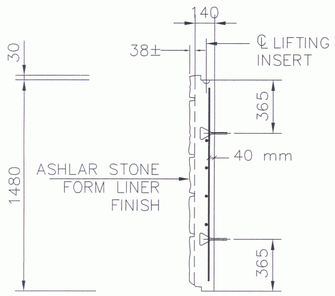
TYPICAL PANEL LAYOUT
PARTIAL ELEVATION - FRONT FACE

SCALE 1:25



PANEL TYPE "A"
WITH R6 REINFORCEMENT
BACK FACE VIEW

SCALE 1:20



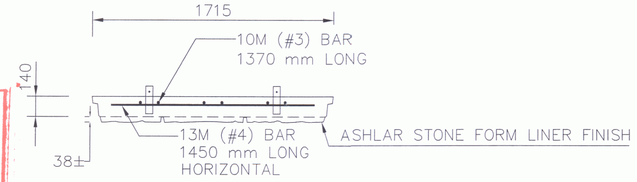
SECTION C-C

SCALE 1:20

PANEL THICKNESS	REINFORCEMENT DESIGNATION	PANEL REINFORCEMENT	MAXIMUM ALLOWABLE HORIZONTAL STRESS AT FACING (KPa)
140+38	R6	6–10M(#3) ø VERT. 4–13M(#4) ø HORIZ.	77 kPa
140+38	R7	6–13M(#4) ø VERT. 4–19M(#6) ø HORIZ.	122 kPa

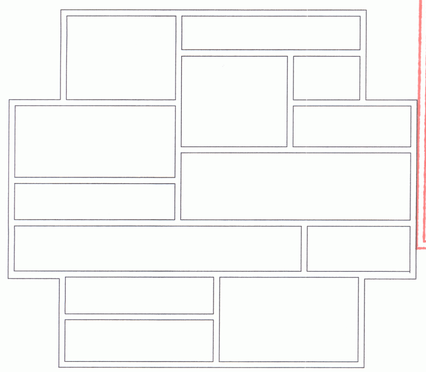
NOTES:

1. REINFORCING STEEL TO BE A615 GRADE 420. EPOXY COATED
2. 28 DAY COMPRESSIVE STRENGTH OF CONCRETE = 27.6 MPa
3. 10 mm x 10 mm CHAMFER SHALL BE PROVIDED ON ALL EXPOSED EDGES (FRONT FACE ONLY).
4. ALL PANEL TYPES AND OTHER RELATED ELEMENTS WILL BE DETAILED ON SHOP DRAWINGS.
5. ALL PANELS SHALL HAVE TWO LIFTING INSERTS OF ONE TON CAPACITY EACH.
6. FACING PANEL FINISH SHALL BE AN ASHLAR STONE FORM LINER FINISH. RECo FORMLINER IS BASED ON SYMONS F/C 30664. CONCRETE COLOR SHALL BE LIGHT GREY.
7. PANEL DESIGN THICKNESS IS 140 mm.
8. BEARING BLOKS SHALL BE EPDM RUBBER PADS WITH DUROMETER HARDNESS OF 80±5, CONFORMING TO ASTM D2000.
9. SHIMS SHALL BE EPDM RUBBER PADS WITH DUROMETER HARDNESS OF 80±5, CONFORMING TO ASTM D2000. NOMINAL DIMENSION OF SHIM IS 50mm X 85mm X 5mm THICK.
10. SEE CONSTRUCTION MANUAL FOR ADDITIONAL INFORMATION.

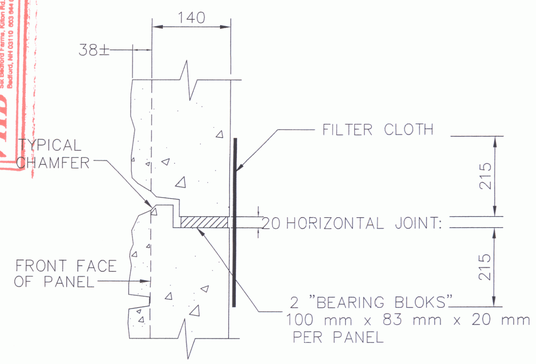


SECTION A-A

SCALE 1:20

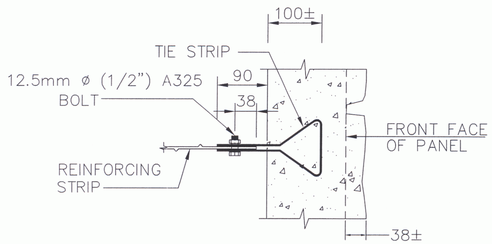


ASHLAR STONE PANEL FINISH
PANEL TYPE A
(LOOKING AT PANEL FACE)



SECTION 1-1

SCALE 1:5



CONNECTION DETAIL

SCALE 1:5

SHOP DRAWING REVIEW
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VHB Vanasse Hangen Brustlin, Inc. Engineers, Planners, and Scientists 8 Bedford Farms, Bldg. Bedford, NH 03110-6556 (603) 644-2800
Job Number:
Reviewed By:
Date:

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE

VT AOT PROJ. NO. BRM 5600(6)S C/2

CERTIFIED WITH RESPECT TO THE INTERNAL STABILITY OF REINFORCED EARTH STRUCTURES ONLY

STATE OF VERMONT
PIETER L. ANDERSON
6161
PROFESSIONAL ENGINEER
10/24/05

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The Reinforced Earth Company
8614 Westwood Center Drive Suite 1100, Vienna, Virginia 22182 (703) 821-1175

"REINFORCED EARTH" is the registered trademark of The Reinforced Earth Company.

DESIGNED BY: JMKC				PROJECT NAME	TH 4/3 LIME KILN BRIDGE
PROJECT ENGR: JMKC				LOCATION	TOWN OF COLCHESTER CHITTENDEN COUNTY, VERMONT
CHECKED BY: KPB	1	10-24-05	REVISED AS PER VHB REVIEW COMMENTS 10-7-05	OWNER	VT AOT
ENG. MANAGER	REV.	DATE	DESCRIPTION	DRAWING COVERS	STANDARD PANELS

DATE	9/7/2005
CONTRACT NO.	11746
DRAWING NO.	5 OF 5
SCALE	AS SHOWN

C:\PROJ\NE\11746\FINAL\11746_STANDARD_PANELS.DWG

The Reinforced Earth Company

133 PARK STREET, NORTH READING, MASSACHUSETTS 01864 (978) 664-2830

PRECAST PANEL SHOP DRAWINGS

PANEL GENERAL NOTES

1. REINFORCING BARS SHALL BE STEEL ASTM A615 GRADE 60. (AASHTO M31) AND BE EPOXY COATED DEFORMED BAR.
2. TIE STRIPS SHALL BE STEEL ASTM A1011 (FORMERLY A570) GRADE 50 (GALVANIZED PER ASTM A-123/ AASHTO M-111).
3. ALL FRONT EDGES OF PANELS, EXCEPT THE BOTTOM EDGE OF THE BOTTOM PANEL COURSE, SHALL HAVE A 10mm CHAMFER.
4. TIE STRIPS SHALL BE PLACED WITHIN 25mm OF THE DIMENSIONS SHOWN ON THE FABRICATION DRAWINGS.
5. PANEL DESIGN THICKNESS IS 140mm. THE 28 DAY COMPRESSIVE STRENGTH OF CONCRETE SHALL BE 27.6 MPa (4000 psi) AND BE IN ACCORDANCE WITH THE SPECIAL PROVISIONS FOR ITEM 526A – MECHANICALLY STABILIZED EARTH WALL.
6. DIMENSIONS SPECIFIED ON INDIVIDUAL FABRICATION DRAWINGS SUPERCEDE THOSE CALLED OUT ON THE STANDARD SECTIONS AND DETAILS.
7. VERTICAL REINFORCING BARS SHALL BE PLACED 38mm MIN. – 50mm (TYP.) CLEAR FROM THE BACK FACE OF THE 140mm PANEL.
8. ALL REINFORCING BARS SHALL BE STOPPED 50mm MIN. CLEAR FROM ANY EDGE OF PANEL UNLESS NOTED ON INDIVIDUAL FABRICATION DRAWING OR AS INDICATED IN NOTE #9.
9. IN ALL SLOPED PANELS THE TWO (2) VERTICAL REINFORCING BARS ADJACENT TO A COMMON TIE STRIP SHALL BE OF THE SAME LENGTH.
10. ALL INDIVIDUAL FABRICATION DRAWINGS ARE SHOWN BACK FACE.
11. PRECAST FACING PANELS FOR R.E WALLS SHALL HAVE AN ASHLAR STONE FORM LINER FINISH. RECo FORMLINER IS BASED ON SYMONS F/C 30664. CONCRETE COLOR SHALL BE LIGHT GRAY.

    CORNER ELEMENTS AND COPING UNITS SHALL HAVE A PLAIN STEEL FORM FINISH FOR ALL WALLS ON THIS PROJECT. CONCRETE SHALL BE LIGHT GRAY IN COLOR.

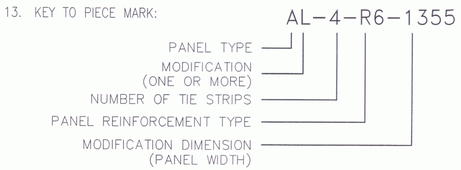
12. REINFORCING BARS IN A STANDARD "A" PANEL SHALL BE AS FOLLOWS:

PANEL REINFORCEMENT

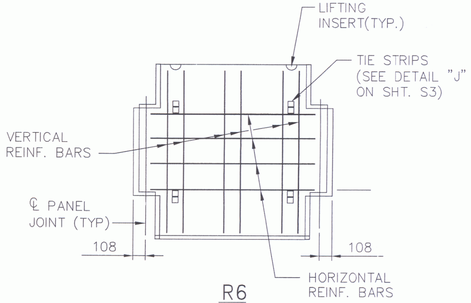
PIECE MARK	HORIZONTAL BARS	VERTICAL BARS
XX-XX-R6	4- 13M (#4)	6-10M (#3)
XX-XX-R7	4- 19M (#6)	6-13M (#4)

HORIZONTAL REINFORCEMENT IN THE OTHER PANEL TYPES IS PROPORTIONAL TO THEIR RELATIVE HEIGHT.

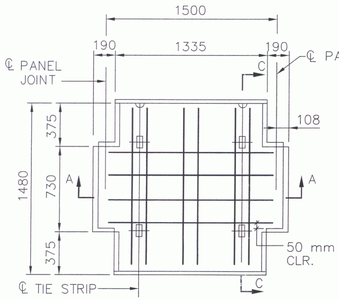
13. KEY TO PIECE MARK:



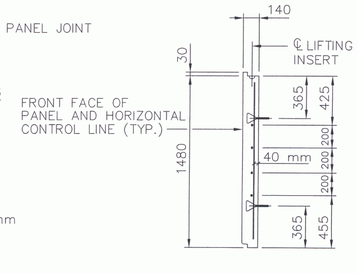
14. KEY TO PANELS:



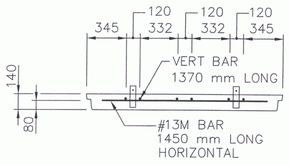
R6
BACK FACE



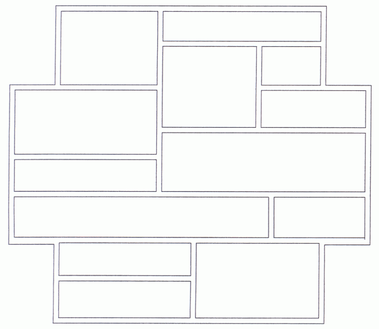
PANEL TYPE "A"
WITH R6 REINFORCEMENT
BACK FACE VIEW
SCALE 1:20



SECTION C-C
SCALE 1:20



SECTION A-A
SCALE 1:20



ASHLAR STONE PANEL FINISH

(LOOKING AT PANEL FACE)

SHOP DRAWING REVIEW

☑ REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.

☐ REJECTED ☐ REVISE AND RESUBMIT ☐ FURNISH AS CORRECTED

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VHB Vanasse Hangen Brustlin, Inc. Engineers, Planners, and Scientists Six Bedford Farms, Kilton Rd. Bedford, NH 03110 603 644 0888

Job Number: 58755
Reviewed By: LSL/MAC
Date: 10/31/05

ALL DIMENSIONS ARE IN (mm) MILLIMETERS

CERTIFIED WITH RESPECT TO THE INTERNAL STABILITY OF REINFORCED EARTH STRUCTURES ONLY

VT AOT PROJ. NO. BRM 5600(6)S C/2

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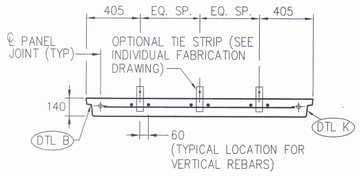
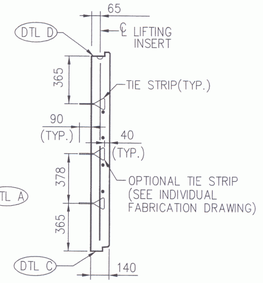
DESIGNED BY:				PROJECT NAME	TH 4/3 LIME KILN BRIDGE	DATE
JMKC						9/7/2005
PROJECT ENGR: JMKC				LOCATION	COLCHESTER CHITTENDEN COUNTY, VT	CONTRACT NO. 11746
CHECKED BY: KPB	1	10-24-05	REVISED AS PER VHB REVIEW COMMENTS 10-7-05	OWNER	VT AOT	DRAWING NO. S1 OF S7
ENG. MANAGER	REV.	DATE	DESCRIPTION	DRAWING COVERS	GENERAL NOTES	SCALE AS SHOWN

C:\PROJ\NE\11746\FINAL\SHOPS\11746 S01.DWG

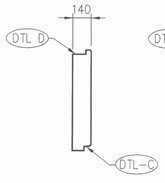


SECTION A–A
SCALE 1:20

SECTION B–B
SCALE 1:20



SECTION C–C
SCALE 1:20



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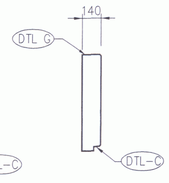

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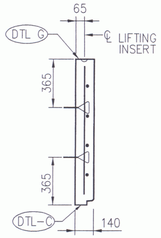
SCALE 1:20



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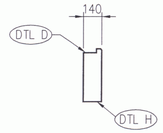

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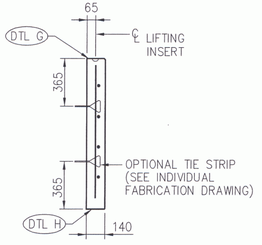
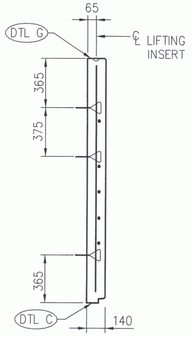
SCALE 1:20



SECTION H–H
SCALE 1:20



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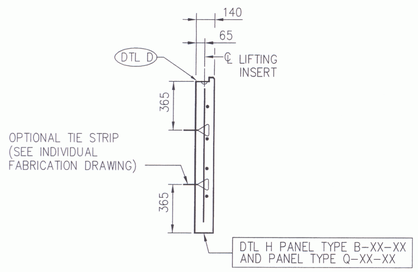

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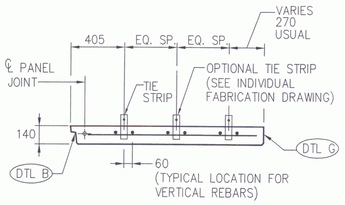

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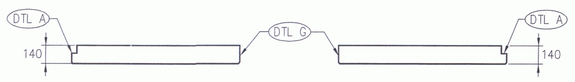
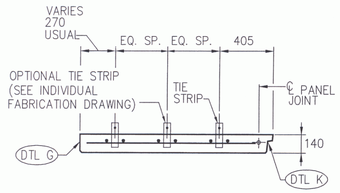


SECTION M–M
SCALE 1:20

SECTION P–P
SCALE 1:20



SECTION R–R
SCALE 1:20

NOTES:
ASHLAR STONE FINISH NOT SHOWN FOR CLARITY

SEE INDIVIDUAL FABRICATION DRAWING FOR PLACEMENT OF REBARS.

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED

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VHB Vanasse Hangen Brustlin, Inc. Engineers, Planners, and Scientists Six Bedford Farms, Kitton Rd. Bedford, NH 03110 603 644 0888

Job Number: 58733
Reviewed By: LSA/MAC
Date: 10/31/05

CERTIFIED WITH RESPECT TO THE INTERNAL STABILITY OF REINFORCED EARTH STRUCTURES ONLY

STATE OF VERMONT PETER L. ANDERSON 8161 PROFESSIONAL ENGINEER
10/24/05

VT AOT PROJ. NO. BRM 5600(6)S C/2

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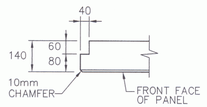
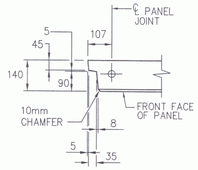
PROJECT ENGR: JMKC				LOCATION	COLCHESTER CHITTENDEN COUNTY, VT	CONTRACT NO.	11746
CHECKED BY: KPB				OWNER	VT AOT	DRAWING NO.	S2 OF S7
ENG. MANAGER	REV.	DATE	DESCRIPTION	DRAWING COVERS	STANDARD SHOP SECTIONS	SCALE	AS SHOWN

C:\PROJ\NEW\11746\FINAL\SHOPS\11746_S02.DWG



DETAIL "A"
SCALE: 1:10



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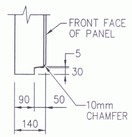

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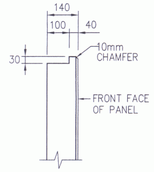

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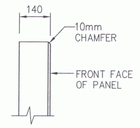

DETAIL "G"
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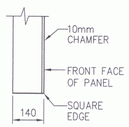

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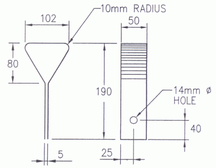
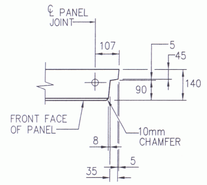


DETAIL "J"
SCALE: NONE
(GENERAL NOTE No. 2)



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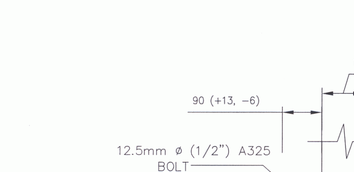
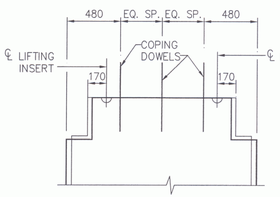
SCALE: 1:10



CONNECTION DETAIL

NOTES:
ASHLAR STONE FINISH NOT SHOWN FOR CLARITY



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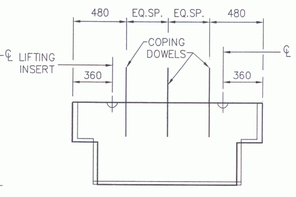

DETAIL "O"
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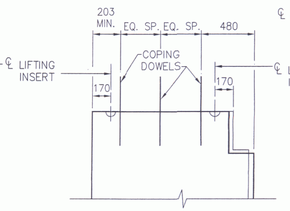

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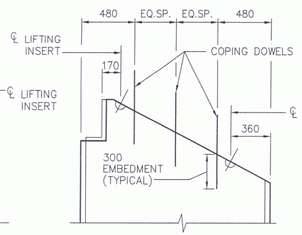

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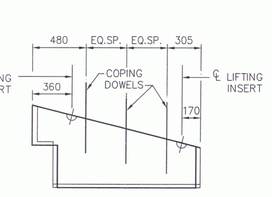
SCALE 1:20



DETAIL "R"
SCALE 1:20

SHOP DRAWING REVIEW

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VHB Vanasse Hangen Brustlin, Inc. Engineers, Planners, and Scientists Six Bedford Farms, Kitton Rd. Bedford, NH 03110 603 644 0888

Job Number: 150735
Reviewed By: LSK 10/14/05
Date: 10/31/05

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED

CERTIFIED WITH RESPECT TO THE INTERNAL STABILITY OF REINFORCED EARTH STRUCTURES ONLY

STATE OF VERMONT — PETER L. ANDERSON 6181 — PROFESSIONAL ENGINEER

10/24/05

VT AOT PROJ. NO. BRM 5600(6)S C/2

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The Reinforced Earth Company
8614 Westwood Center Drive Suite 1100, Vienna, Virginia 22182 (703) 821-1175

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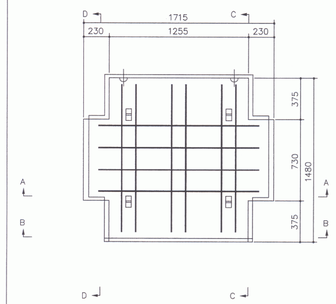
DESIGNED BY: JMKC				PROJECT NAME	TH 4/3 LIME KILN BRIDGE	DATE 9/7/2005
PROJECT ENGR: KPB				LOCATION	COLCHESTER CHITTENDEN COUNTY, VT	CONTRACT NO. RE-11746
CHECKED BY: KPB				OWNER	VT AOT	DRAWING NO. S3 OF S7
ENG. MANAGER	REV.	DATE	DESCRIPTION	DRAWING COVERS	STANDARD SHOP DETAILS	SCALE AS SHOWN

C:\PROJ\NE\11746\FINAL\SHOPS\11746_S03.DWG



A-4-R6

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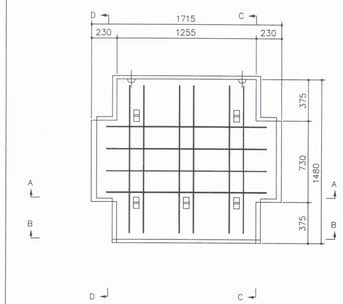

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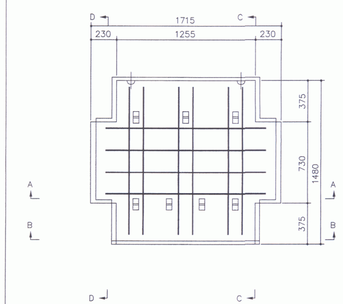

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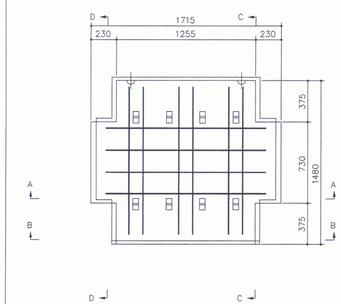

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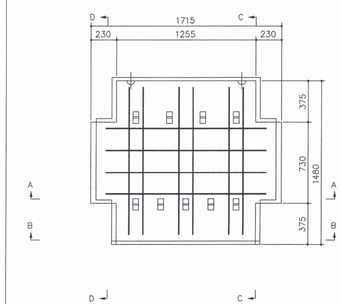

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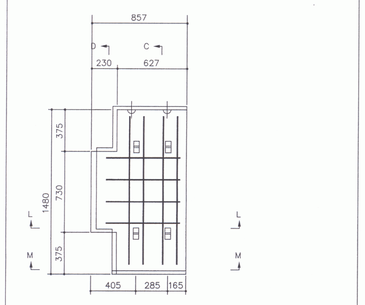

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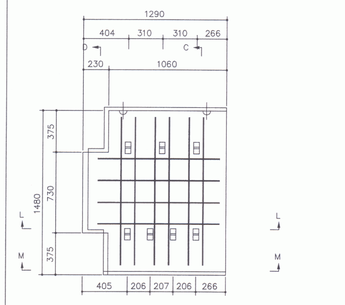

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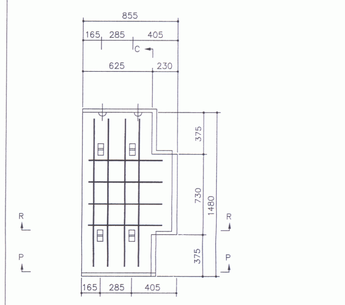

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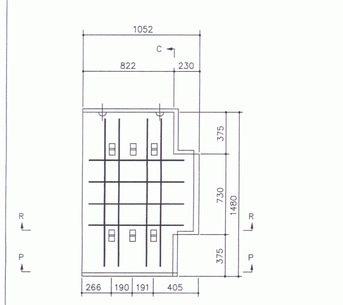

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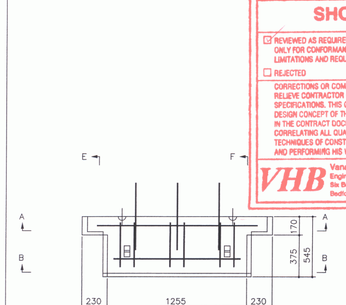

C-2-R6-D

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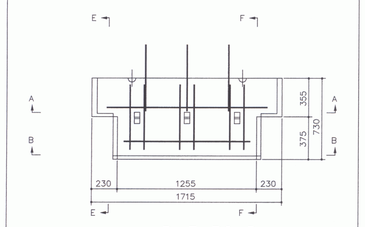

D-3-R6-D

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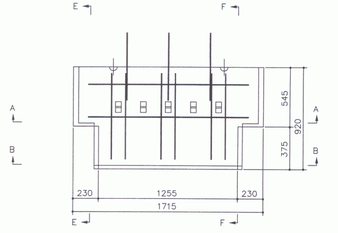

E-5-R7-D

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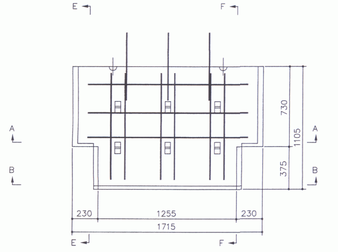

F-6-R7-D

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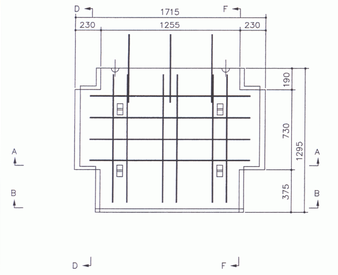

G-4-R6-D

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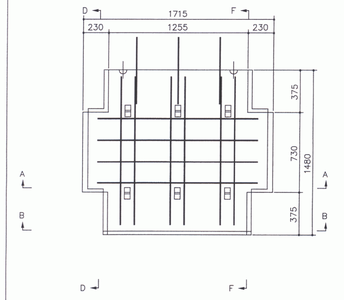

H-6-R6-D

NOTE: FOR LOCATION OF LIFTING INSERTS AND COPING DOWELS SEE DETAIL N

SHOP DRAWING REVIEW

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Job Number: 50735
Reviewed By: LSG/MAC
Date: 10/31/05

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STATE OF VERMONT — PETER L. ANDERSON — 8181 — PROFESSIONAL ENGINEER

10/24/05

VT AOT PROJ. NO. BRM 5600(6)S C/2

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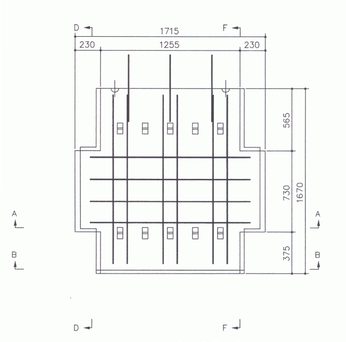
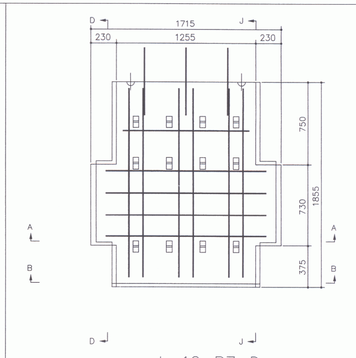
DESIGNED BY: JMKC				PROJECT NAME	TH 4/3 LIME KILN BRIDGE	DATE 9/7/2005
PROJECT ENGR: JMKC				LOCATION	COLCHESTER CHITTENDEN COUNTY, VT	CONTRACT NO. RE-11746
CHECKED BY: KPB	1	10-24-05	REVISED AS REQUIRED	OWNER	VT AOT	DRAWING NO. S4 OF S7
ENG. MANAGER	REV.	DATE	DESCRIPTION	DRAWING COVERS	STANDARD SHOP DRAWINGS	SCALE AS SHOWN

C:\PROJ\NE\11746\FINAL\SHOPS\11746_S04.DWG



K–10–R7–D

NOTE: FOR LOCATION OF LIFTING INSERTS AND COPING DOWELS SEE DETAIL N



L–12–R7–D

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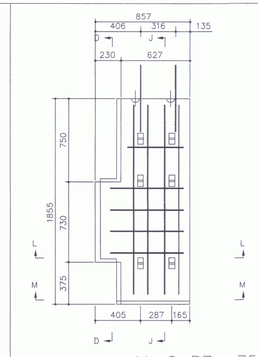

LL–6–R7– 750–D

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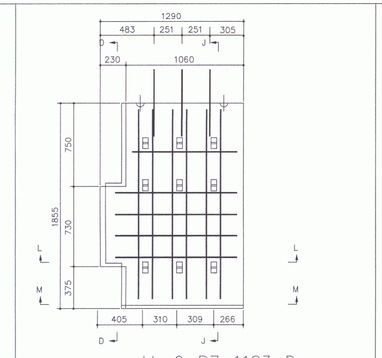

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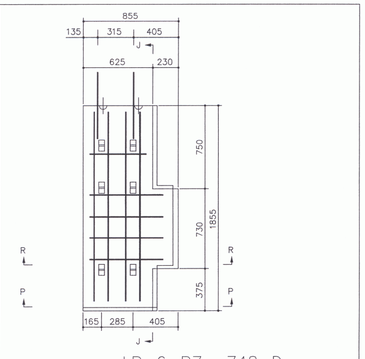

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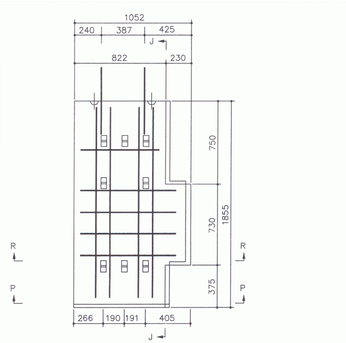

LR–8–R7– 945–D

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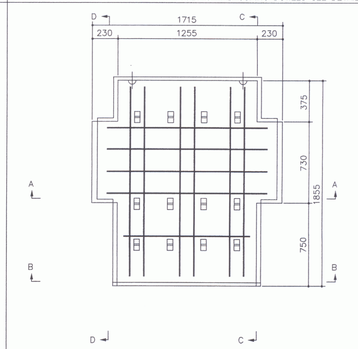

P–12–R7

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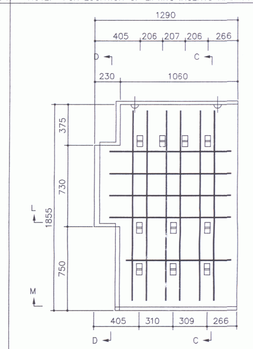

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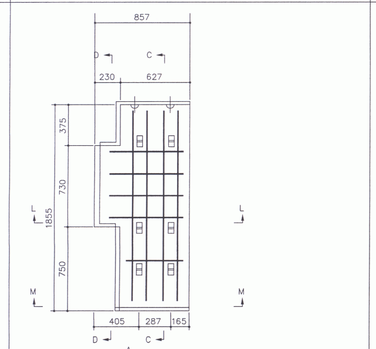

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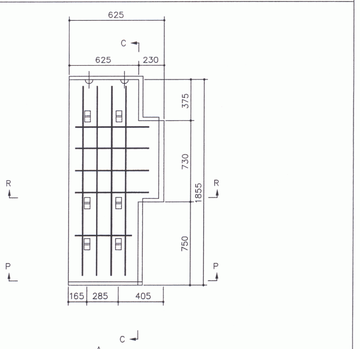

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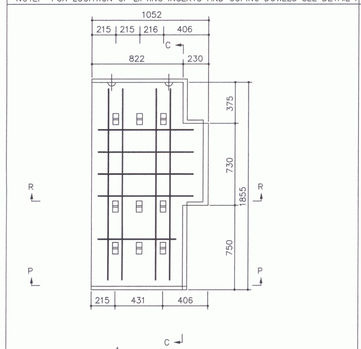

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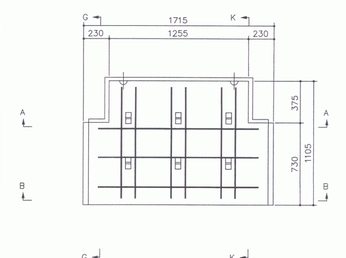

⚠Q–6–R7

NOTE: FOR LOCATION OF LIFTING INSERTS SEE DETAIL N

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VHB Vanasse Hangen Brustlin, Inc. Engineers, Planners, and Scientists Six Bedford Farms, Kilton Rd. Bedford, NH 03110 603 644 0888

Job Number: 58735
Reviewed By: LSS/MAC
Date: 10/21/05

CERTIFIED WITH RESPECT TO THE INTERNAL STABILITY OF REINFORCED EARTH STRUCTURES ONLY

STATE OF VERMONT PIETER L. ANDERSON 0181 PROFESSIONAL ENGINEER
10/24/05

VT AOT PROJ. NO. BRM 5600(6)S C/2

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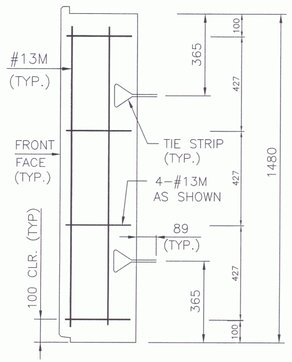
DESIGNED BY: JMKC				PROJECT NAME	TH 4/3 LIME KILN BRIDGE	DATE 9/7/2005
PROJECT ENGR: JMKC				LOCATION	COLCHESTER CHITTENDEN COUNTY, VT	CONTRACT NO. RE–11746
CHECKED BY: KPB	1	10–24–05	REVISED AS PER VHB REVIEW COMMENTS 10–7–05	OWNER	VT AOT	DRAWING NO. S5 OF S7
ENG. MANAGER	REV.	DATE	DESCRIPTION	DRAWING COVERS	STANDARD SHOP DRAWINGS	SCALE AS SHOWN

C:\PROJ\NE\11746\FINAL\SHOPS\11746_S05.DWG



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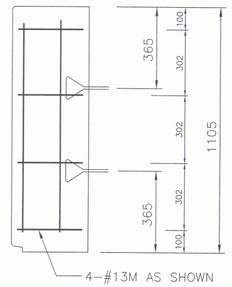

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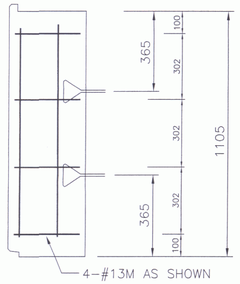

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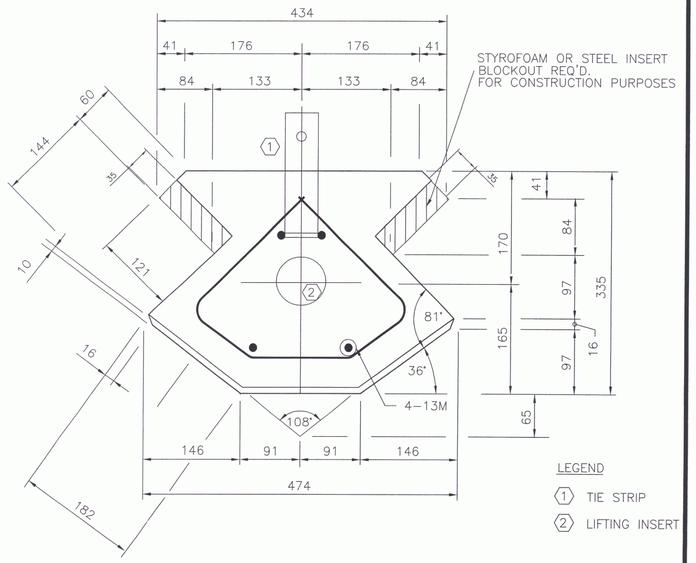
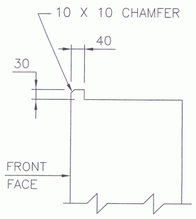


CORNER ELEMENT TYPE 2 90°± – 118°±

SCALE: 1:5

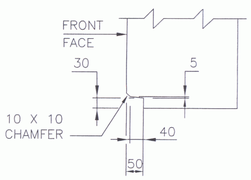
CORNER ELEMENT TYPICAL SECTIONS

SCALE: 1"=1'-0"



DETAIL "A"

SCALE: 1:20



DETAIL "B"

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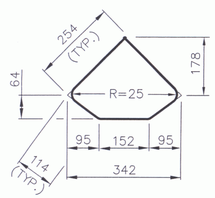

BAR DETAIL

SCALE: 1:20

(DIMENSIONS SHOWN ARE OUT TO OUT)

KEY TO PIECE MARK

CE2A-2-R6

- R — PANEL REINFORCEMENT
- 6 — NO. OF TIE STRIPS
- 2 — PANEL HEIGHT
- A — TYPE
- CE — CORNER ELEMENT

SHOP DRAWING REVIEW

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VHB Vanasse Hangen Brustlin, Inc. Engineers, Planners, and Scientists Six Bedford Farms, Kitton Rd. Bedford, NH 03110 603 644 0800

Job Number: 52765
Reviewed By: LSL/MAC
Date: 10/31/05

CERTIFIED WITH RESPECT TO THE INTERNAL STABILITY OF REINFORCED EARTH STRUCTURES ONLY

STATE OF VERMONT PIETER L. ANDERSON 6161 PROFESSIONAL ENGINEER

10/24/05

VT AOT PROJ. NO. BRM 5600(6)S C/2

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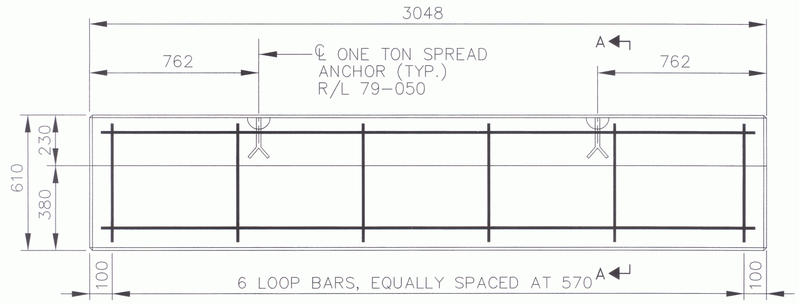
The Reinforced Earth Company
8614 Westwood Center Drive Suite 1100, Vienna, Virginia 22182 (703) 821-1175

"REINFORCED EARTH" is the registered trademark of The Reinforced Earth Company.

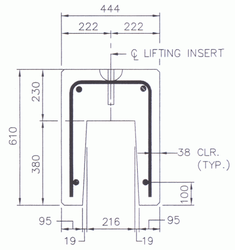
DESIGNED BY: JMKC					PROJECT NAME	TH 4/3 LIME KILN BRIDGE	DATE 9/7/2005
PROJECT ENGR: JMKC					LOCATION	COLCHESTER CHITTENDEN COUNTY, VT	CONTRACT NO. 11746
CHECKED BY: KPB					OWNER	VT AOT	DRAWING NO. S6 OF S7
ENG. MANAGER	REV.	DATE	DESCRIPTION		DRAWING COVERS	CORNER ELEMENT DETAILS	SCALE AS SHOWN

C:\PROJ\NE\11746\FINAL\SHOPS\11746_S06.DWG

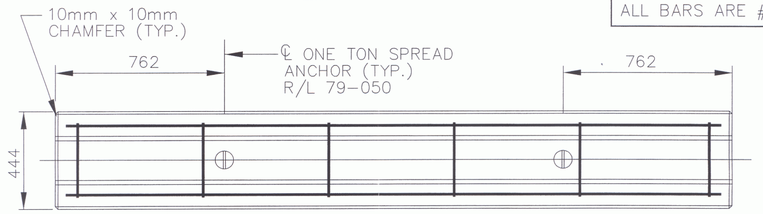


SIDE VIEW

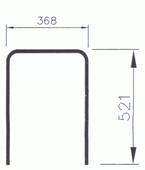
NOTE:
ALL BARS ARE #13M



SECTION A–A

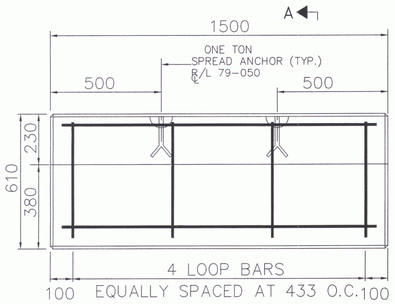


TOP VIEW



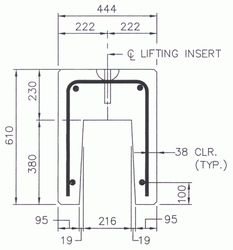
LOOP BAR

PRECAST COPING "CPW1"



SIDE VIEW

FRONT FACE



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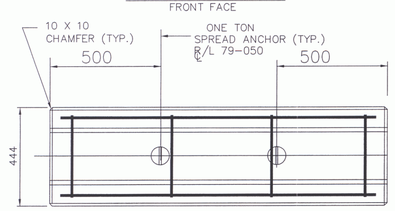
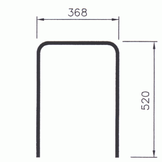


TOP VIEW



LOOP BAR

CPW2 (2000)

NOTE: SPECIAL WIDE THROAT COPING FOR ARCHITECTURAL PANELS

SHOP DRAWING REVIEW

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VHB Vanasse Hangen Brustlin, Inc. Engineers, Planners, and Scientists Six Bedford Farms, Kilton Rd., Bedford, NH 03110 603-644-0888

Job Number: 48735
Reviewed By: LSL / MAC
Date: 10/31/05

CERTIFIED WITH RESPECT TO THE INTERNAL STABILITY OF REINFORCED EARTH STRUCTURES ONLY

STATE OF VERMONT
PIETER L ANDERSON
6181
PROFESSIONAL ENGINEER
10/24/05

VT AOT PROJ. NO. BRM 5600(6)S C/2

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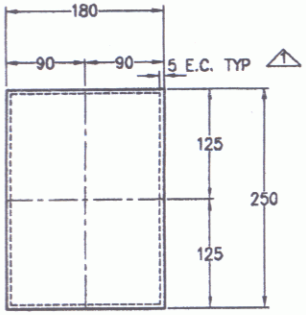
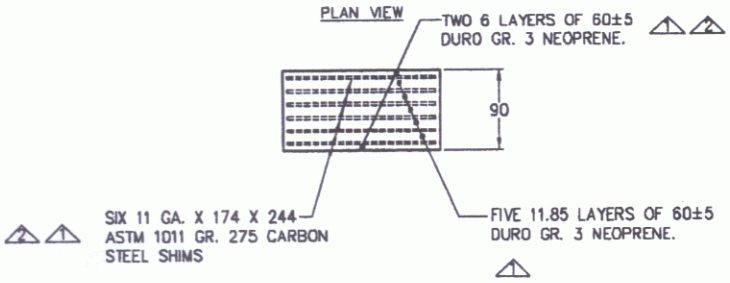
DESIGNED BY: JMKC				PROJECT NAME	TH 4/3 LIME KILN BRIDGE	DATE 9/7/2005
PROJECT ENGR: JMKC				LOCATION	COLCHESTER CHITTENDEN COUNTY, VT	CONTRACT NO. RE–11746
CHECKED BY: KPB				OWNER	VT AOT	DRAWING NO. S7 OF S7
ENG. MANAGER	REV.	DATE	DESCRIPTION	DRAWING COVERS	STANDARD PRECAST COPING	SCALE AS SHOWN

C:\PROJ\NE\11746\FINAL\SHOPS\11746_S07.DWG

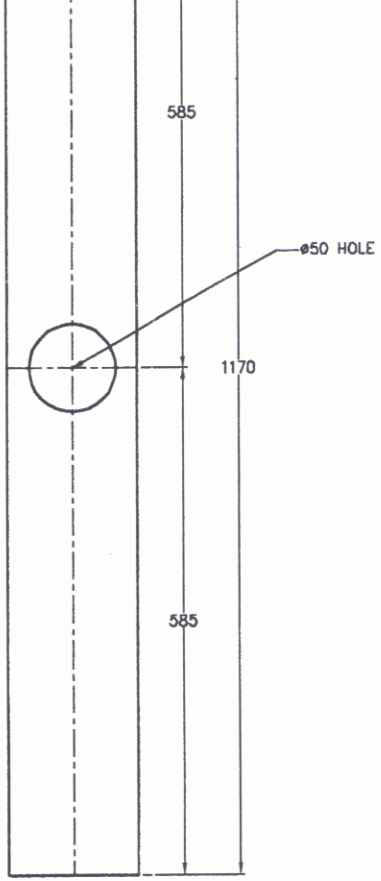


PLAN VIEW

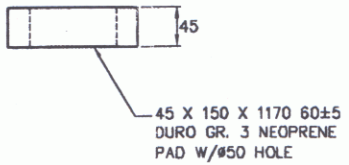


ELEVATION

MK. 01, 80 REQUIRED

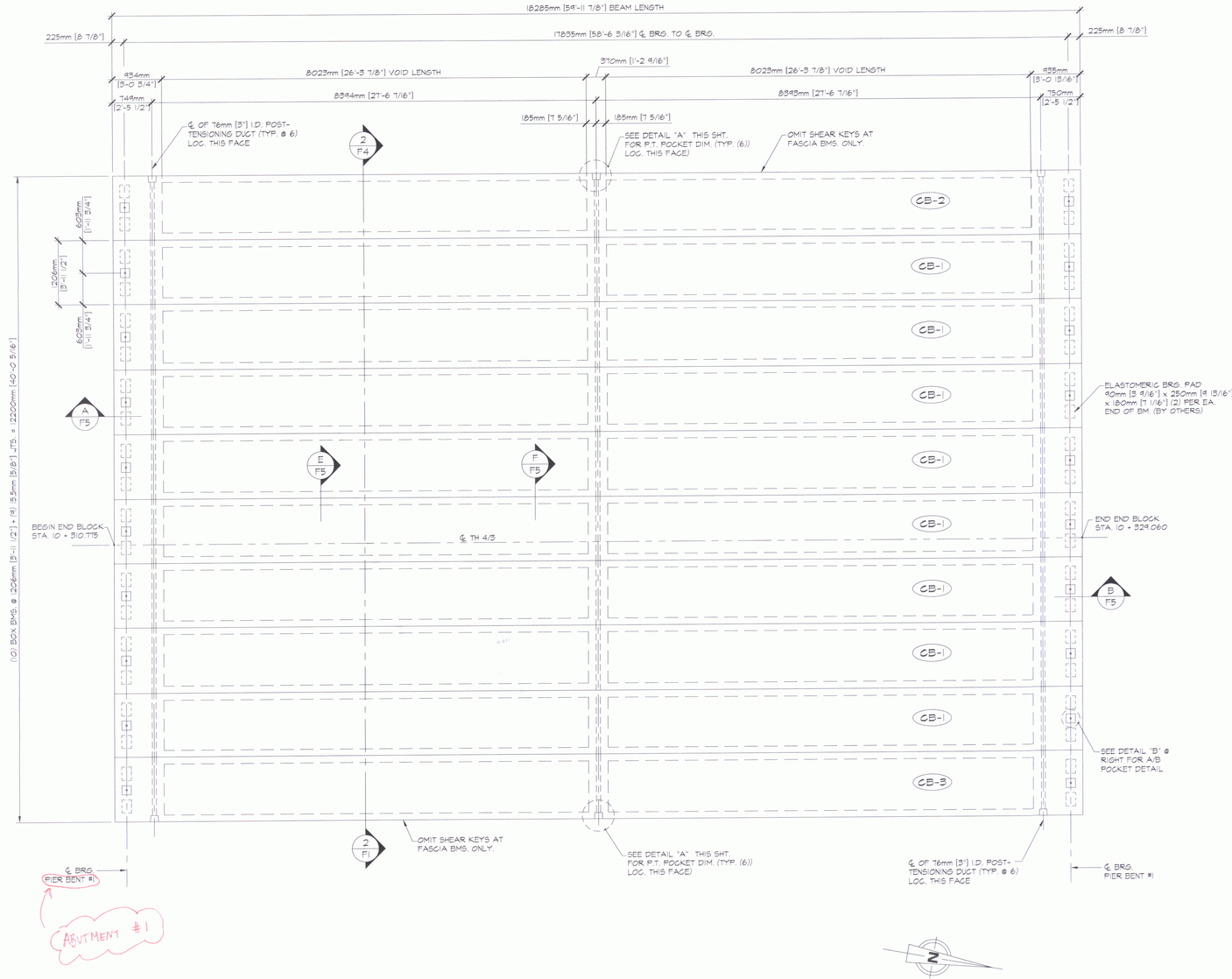


PLAN VIEW



ELEVATION

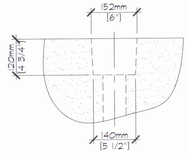
MK. 02, 120 REQUIRED



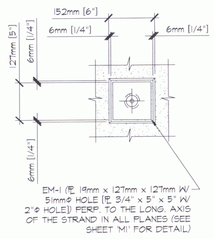
1 / F1 PRESTRESSED BOX BEAM LAYOUT @ SPAN 1

1:50

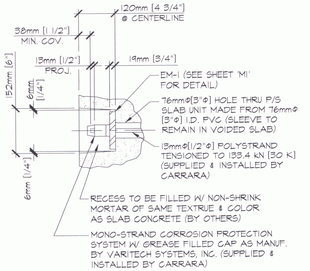
DESIGN LOAD: AASHTO MS-22.5 LIVE LOAD



PLAN OF POCKET



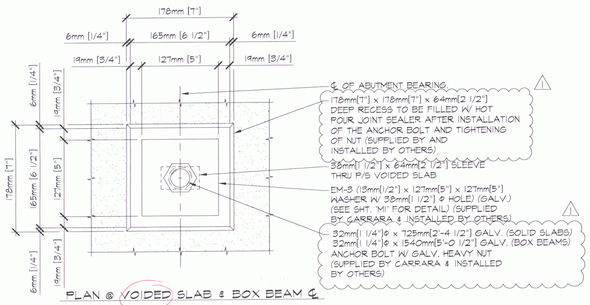
FASCIA ELEVATION



SECTION AT CENTERLINE

DETAIL - "A"

1:10



PLAN @ VOIDED SLAB & BOX BEAM ℄

SECTION @ VOIDED SLAB & BOX BEAM ℄

DETAIL - "B"

1:5

GENERAL NOTES

1. MIN. CONCRETE STRENGTH AT 28 DAYS: f'c = 45 MPa [6,500 PSI]
   MIN. CONCRETE STRENGTH AT STRESS TRANSFER: f'ci = 28 MPa [4,000 PSI]
2. REINFORCING STEEL SHALL BE GR-420 [GR-60], AASHTO M 31M ASTM A-615 AND SHALL BE EPOXY COATED.
3. PRESTRESSING STRANDS SHALL CONFORM TO ASTM A-416 (AASHTO M 203M) AND SHALL CONSIST OF:
   15mm[0.60"]℄ x 1860 MPa [270 KSI] BOX BEAMS
   13mm[1/2"]℄ x 1860 MPa [270 KSI] SOLID SLABS
   7-WIRE LOW RELAXATION STRANDS.
4. PRESTRESSING STRANDS SHALL EACH BE PULLED TO HAVE A NET TENSION OF (BOX BMS.) 195.5 kN [44.0 K] BOT. 14kN [3.14K] TOP STRDS. (SOLID SLABS) 138kN [31.0K]
   AFTER ACCOUNTING FOR CHUCK SLIPPAGE. TENSION SHALL BE VERIFIED BY MEASURING STRAND ELONGATION.
   SEE EXAMPLE ELONGATION CALCULATION AND TENSIONING PROCEDURE, (THIS SHEET).
5. END OF PRESTRESSING STRANDS SHALL BE CUT W/ A TORCH, RECESSED AND PATCHED, WITH AN APPROVED VT. DOT MATERIAL.
6. TOP OF THE BEAMS SHALL RECEIVE A RAKE FINISH ROUGHNESS TO 6mm (1/4") AMPLITUDE (UNLESS NOTED OTHERWISE).
7. SLABS SHALL BE HANDLED AND ERECTED USING THE LIFTING LOOPS ONLY. THE MINIMUM SLING ANGLE FROM THE HORIZONTAL SHALL BE 60°. SLABS SHALL BE STORED AND TRANSPORTED WITH TIMBER SUPPORTS WITHIN 610mm[2'-0"] OF THE SLAB ENDS, UNLESS APPROVED BY J.P. CARRARA & SONS, INC.
8. SHEAR KEY SURFACES SHALL BE BLAST CLEAN.
9. DESIGN MIX: J.P.C. BRIDGE MIX #45IMESCC
   106.8kg [180 LBS] FLY ASH - ISG RESOURCES
   427.2 kg [720 LBS.] TYPE III CEMENT - GLENS FALLS CEMENT
   742 kg [1250 LBS.] FINE AGGREGATE
   860 kg [1450 LBS.] COARSE AGGREGATE
   160.0 L [42.2 GAL.] WATER - 159.2 kg [352 LBS.]
   5% - 9.0% AIR CONTENT (251.42 mL [6.5 OZ.] DAREX II) ADJ. AS REQ.
   618.5 mL MB 3400 PER 100 kg CEMENT, SPREAD 559mm - 711mm [19.5 OZ. MB 3400 PER 100 LBS. CEMENT, SPREAD 22" - 28"]
   14.85 L [3 GAL.] DCI
   195.6 mL DARATARD PER 100 kg CEMENT
   [3.0 OZ. DARATARD PER 100 LBS. CEMENT, SPREAD 22" - 28"]
10. QUALITY CONTROL PROCEDURES ARE IN ACCORDANCE WITH PCI REQUIREMENTS. J.P. CARRARA & SONS, INC. IS A PCI CERTIFIED PLANT.
11. THE ENGINEER OF RECORD WILL BE NOTIFIED (7) WORKING DAYS SO THAT ALL PRECAST OPERATIONS MAY BE WITNESSED.
12. THE VOIDS MUST BE VENTED DURING THE CURING PERIOD.
    CURING METHOD:
13. NATURAL CURE. AS SOON AS THE TOP OF THE BEAM IS FINISHED, COVER WITH POLY UNTIL RELEASE STRENGTH IS ACHIEVED.
14. TRANSVERSE POST-TENSIONING SEQUENCE:
    A. ONCE BOX BEAMS & SOLID SLABS ARE ERECTED, POST-TENSION TENDONS TO APPROXIMATELY 22 kN [4,946 LBS].
    B. GROUT SHEAR KEYS. (BY OTHERS)
    C. ONCE SHEAR KEY GROUT HAS ATTAINED A MINIMUM COMPRESSIVE STRENGTH OF 10.3 MPa [1,500 PSI], POST-TENSION TENDONS TO 133.4 kN [30,000 LBS].
15. POST-TENSIONING STRANDS SHALL CONFORM TO AASHTO M 203M [ASTM A-416] AND SHALL CONSIST OF [13mm[1/2"]℄ x 1860 MPa [270 KSI] POLYSTRAND.
16. NO INSERTS SHALL BE FIELD INSTALLED IN SLABS WITHOUT APPROVAL OF J.P. CARRARA & SONS, INC.

EXAMPLE PRESTRESSING STRAND ELONGATION CALCULATION AND TENSIONING

(NOT TO BE USED FOR CONSTRUCTION)

SIZE & GRADE: 0.60"℄ x 270 KSI

AREA: 0.217 IN^2

TENSION: 44,000 LBS. EACH STRAND

GRIP TO GRIP: 192'-9 3/4" = 192.813'

Es = 28,600,000 PSI (ASSUMED FOR THESE CALCULATIONS; VALUE TO BE OBTAINED FOR STRAND SPOOL ACTUALLY USED)

EXAMPLE: $\Delta = \frac{PL}{AE} = \frac{(44{,}000 - 3{,}000) \times 192.813 \times 12}{0.217 \times 28{,}600{,}000} = 15.29"$

THEREFORE: TOLERANCES: ± 5%
Δ UPPER LIMIT = 1.05 x 15.29" = 16.05" = 16 1/16"
Δ LOWER LIMIT = 0.95 x 15.29" = 14.53" = 14 1/2"

EXTRA FORCE REQUIRED TO COMPENSATE FOR 1/2" CHUCK SLIPPAGE:

$\Delta P = \frac{.5 \times 41{,}000}{15.29} = 1{,}341$ LBS.

TOTAL TENSIONING FORCE = 44,000 + 1,341 = 45,341 LBS. [201.7 kN]

STRAND TENSIONING PROCEDURE

1. PULL EACH STRAND INITIALLY TO 13.34 kN* [3,000 LBS]* & MARK STRAND.
2. THE PULL EACH STRAND TO A TOTAL TENSION OF 201.7 kN* [45,341 LBS]* AND MEASURE ELONGATION AFTER SEATING. IT MUST BE BETWEEN 369mm[14 1/2"] AND 408mm[16 1/16"].

* NOTE: FORCES READ ON STRESSING JACK GAUGES MUST BE MADE TO CORRESPOND TO ABOVE VALUES BASED ON CALIBRATION DATA FOR SPECIFIC JACK USED.

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VHB Vanasse Hangen Brustlin, Inc. Engineers, Planners, and Scientists Six Bedford Farms, Kilton Rd. Bedford, NH 03110 603 644 0888

Job Number: 55735.46
Reviewed By: LSG/MAC
Date: 5/6/06

1 1-6-06 REVISED AS PER ENGINEERS COMM. T.D.

APPROVAL STAMP:

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010

KUBRICKY CONST. CORP.
CONTRACTOR
GLENS FALLS, NEW YORK

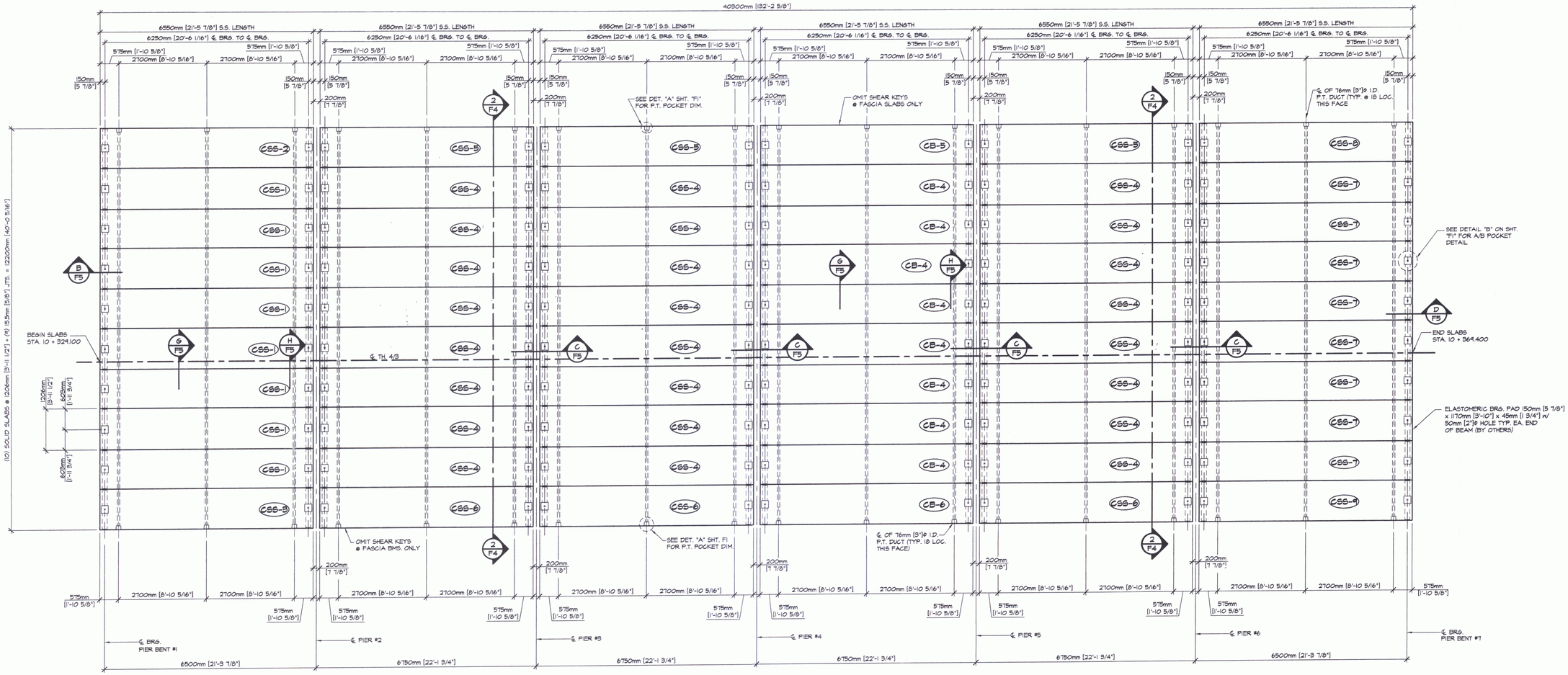
STATE OF VERMONT A.O.T.
COUNTY OF CHITTENDEN

DATE: NOV. 14, 2005
SCALE: NOTED
CHKD: - DFTM: TJD
JOB NO: 23229-05

TOWN OF COLCHESTER - SOUTH BURLINGTON
PROJECT: LIME KILN BRIDGE
TH 4/3 (URBAN MINOR ARTERIAL), BRIDGE NO.6

BOX BEAM LAYOUT AT SPAN NO. 1
P/T PCKT. DETAILS & GENERAL NOTES

DWG. NO: F1



1/F2 PRESTRESSED SOLID SLAB LAYOUT AT SPANS 2 THRU 7

1:40

DESIGN LOAD: AASHTO MS-22.5 LIVE LOAD

SHOP DRAWING REVIEW

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VHB Vanasse Hangen Brustlin, Inc. Engineers, Planners, and Scientists Six Bedford Farms, Kilton Rd. Bedford, NH 03110 603 644 0888

Job Number: 55735.60
Reviewed By: LSL/MAC
Date: 12/6/06

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010

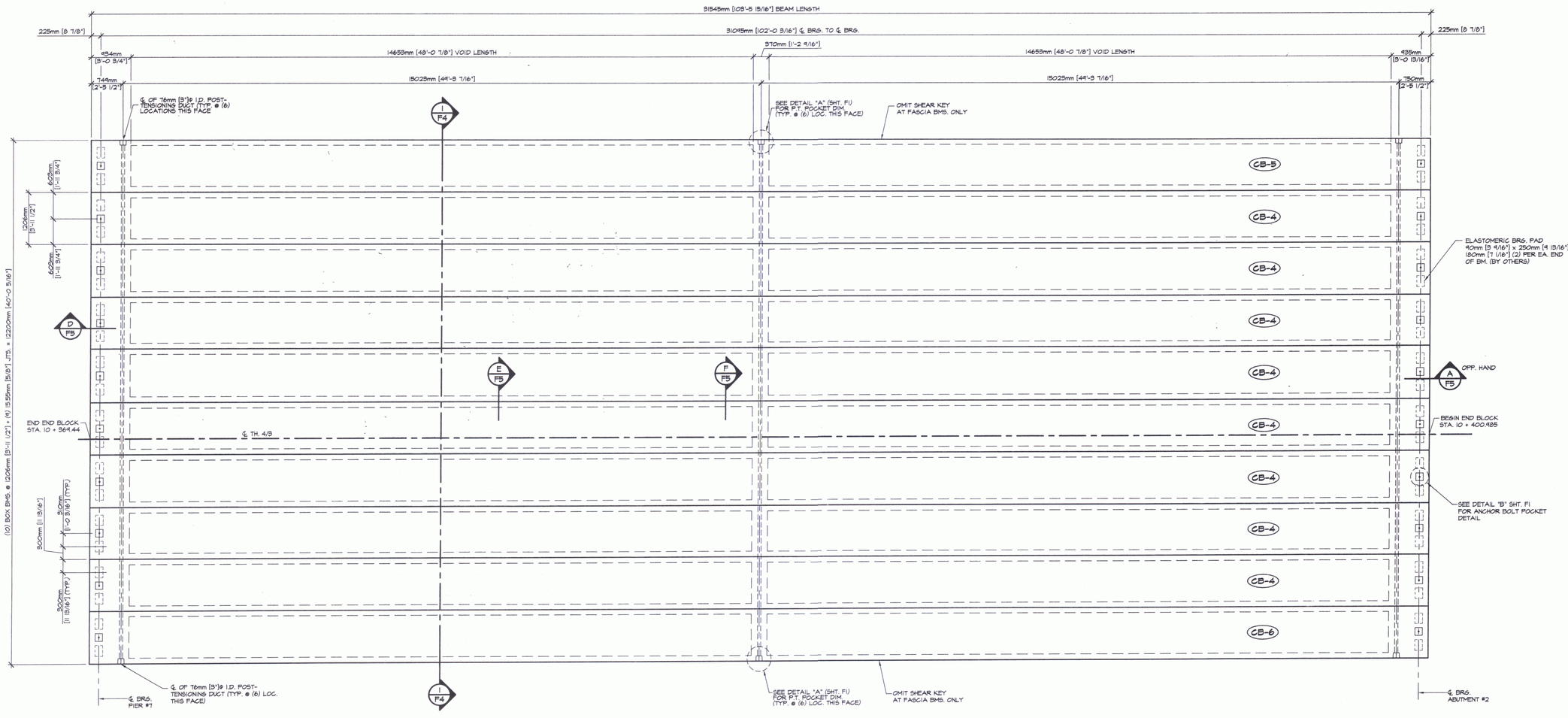
KUBRICKY CONST. CORP.
CONTRACTOR
GLENS FALLS, NEW YORK

STATE OF VERMONT A.O.T.
COUNTY OF CHITTENDEN

TOWN OF COLCHESTER - SOUTH BURLINGTON
PROJECT: LIME KILN BRIDGE
TH 4/3 (URBAN MINOR ARTERIAL), BRIDGE NO.6

SOLID SLAB LAYOUT @ SPAN NO. 2-7

DATE: NOV. 14, 2005
SCALE: NOTED
CHKD: - DFTM: T.J.D.
JOB NO: 23229-05
DWG. NO: F2



1 / F3 PRESTRESSED BOX BEAM LAYOUT @ SPAN 8

1:50

DESIGN LOAD: AASHTO MS-22.5 LIVE LOAD

2

SHOP DRAWING REVIEW

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VHB Vanasse Hangen Brustlin, Inc. Engineers, Planners, and Scientists Six Bedford Farms, Kilton Rd. Bedford, NH 03110 603 644 0888

Job Number: 38135.40
Reviewed By: LSK/MAC
Date: 5/4/06

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010

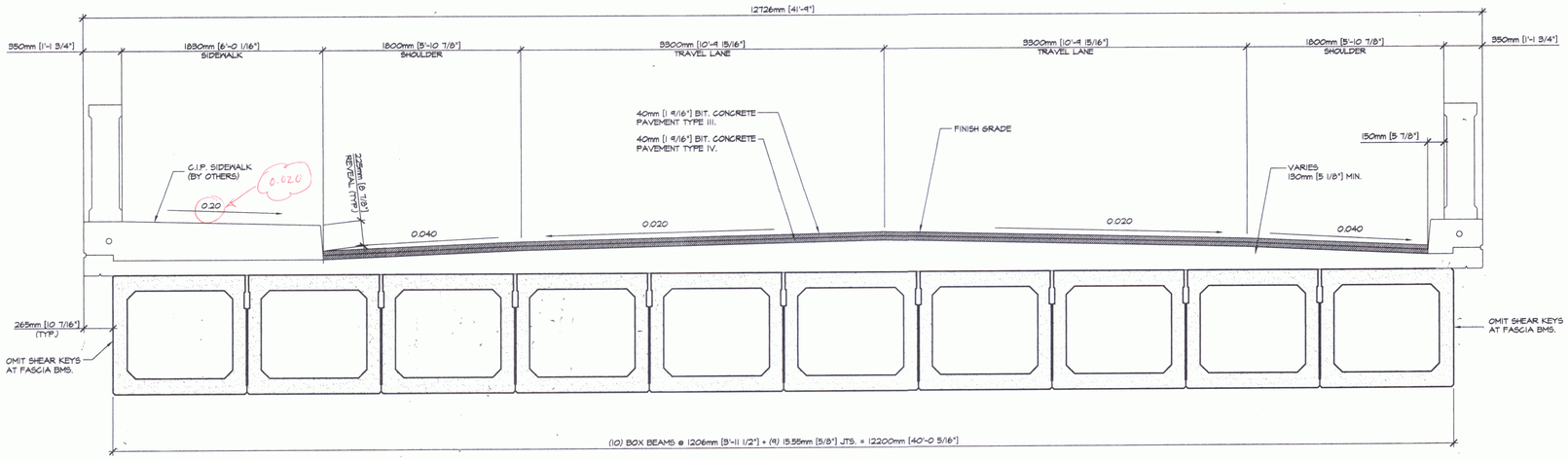
KUBRICKY CONST. CORP.
CONTRACTOR
GLENS FALLS, NEW YORK

STATE OF VERMONT A.O.T.
COUNTY OF CHITTENDEN

TOWN OF COLCHESTER - SOUTH BURLINGTON
PROJECT: LIME KILN BRIDGE
TH 4/3 (URBAN MINOR ARTERIAL), BRIDGE NO.6

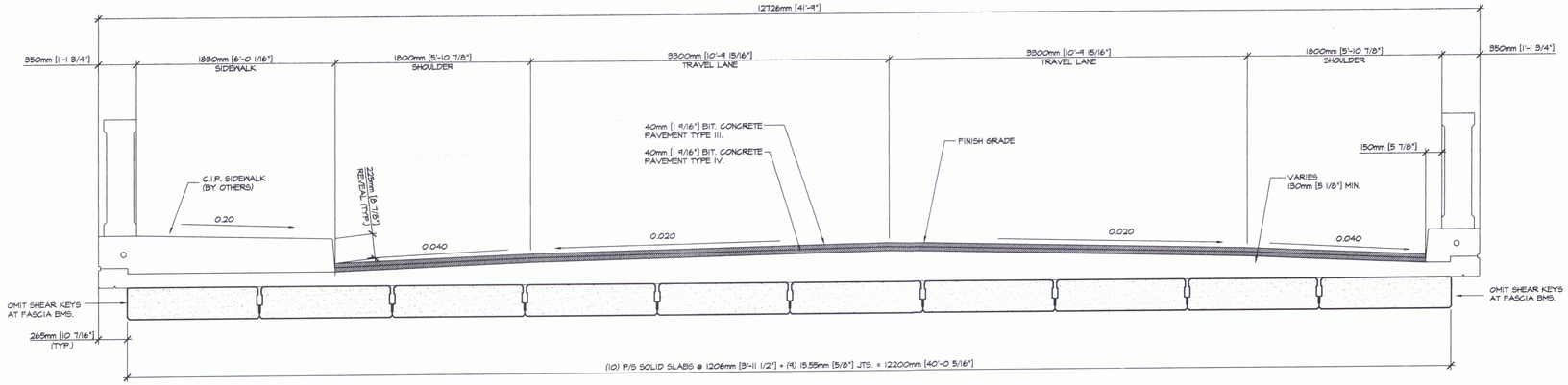
BOX BEAM LAYOUT AT SPAN NO. 8

DATE: NOV. 14, 2005
SCALE: NOTED
CHKD: - DFTM: T.J.D.
JOB NO: 23224-05
DWG. NO: F3



1. / F4 TRANSVERSE SECTION THRU BOX BEAMS @ SPAN 1 & 8

1:25



2 / F4 TRANSVERSE SECTION THRU SOLID SLABS @ SPANS 2 THRU 7

1:25

SHOP DRAWING REVIEW

APPROVAL STAMP:

☐ REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.

☐ REJECTED ☐ REVISE AND RESUBMIT ☑ FURNISH AS CORRECTED

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VHB Vanasse Hangen Brustlin, Inc. Engineers, Planners, and Scientists Six Bedford Farms, Kitton Rd. Bedford, NH 03110 603 644 0888

Job Number: 52755.60
Reviewed By: TSG / MAC
Date: 2/4/04

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010

KUBRICKY CONST. CORP.
CONTRACTOR
GLENS FALLS, NEW YORK

STATE OF VERMONT A.O.T.
COUNTY OF CHITTENDEN

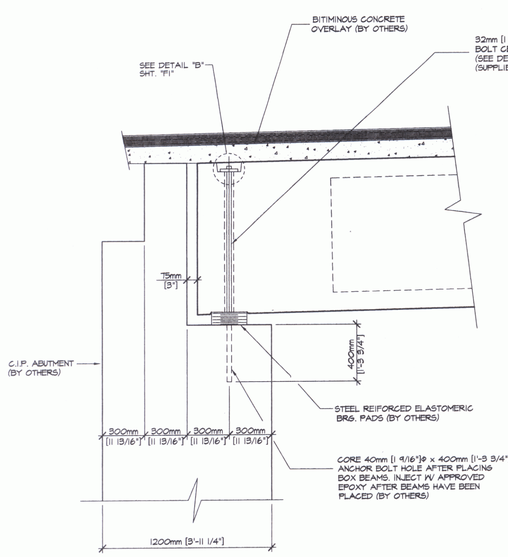
DATE: NOV. 14, 2005
SCALE: NOTED

TOWN OF COLCHESTER - SOUTH BURLINGTON
PROJECT: LIME KILN BRIDGE
TH 4/3 (URBAN MINOR ARTERIAL), BRIDGE NO.6

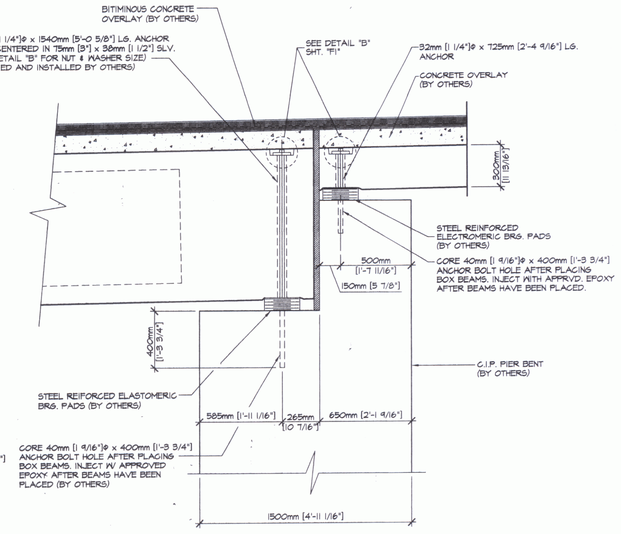
CHKD: - DFTM: T.J.D.
JOB NO: 23229-02

TRANSVERSE SECTIONS

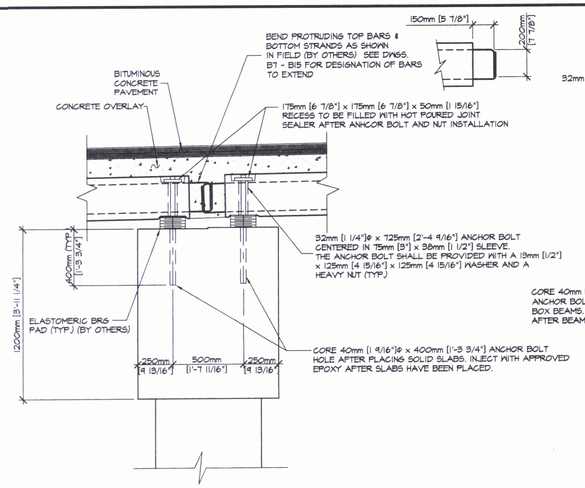
DWG. NO: F4



A F5 BEARING SECTION
1:20



B F5 BEARING SECTION
1:20



C F5 BEARING SECTION
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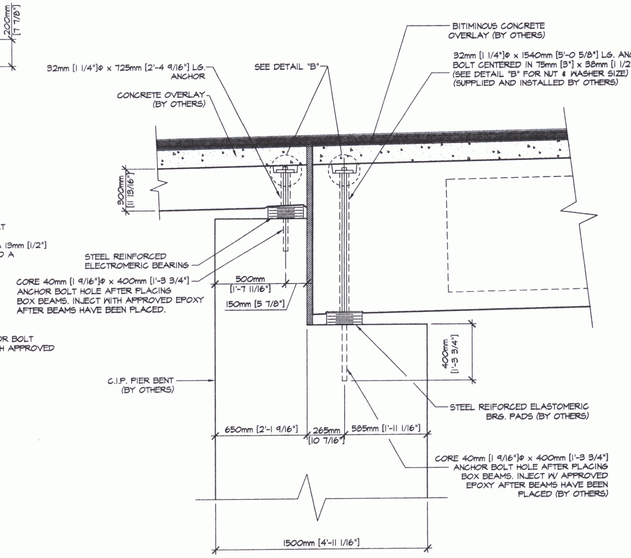
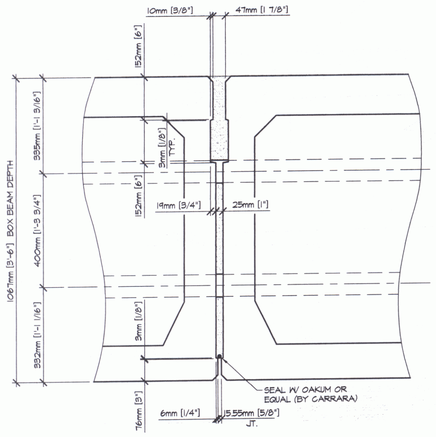
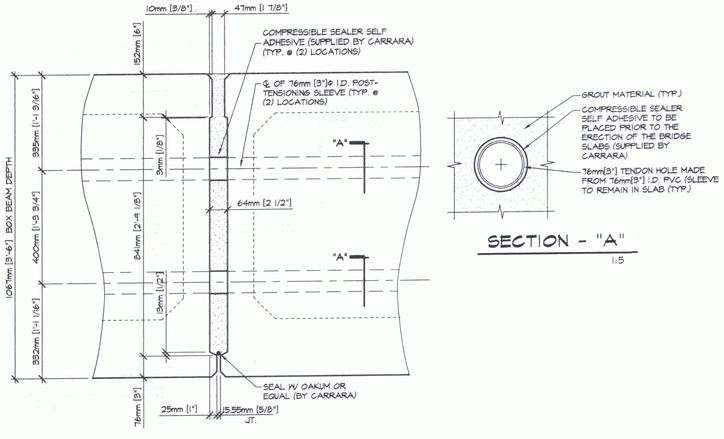


D F5 BEARING SECTION
1:20

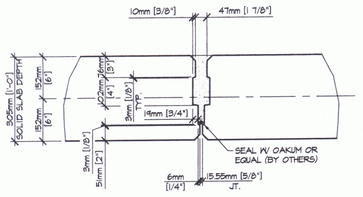


E F5 SHEAR KEY SECTION
1:10

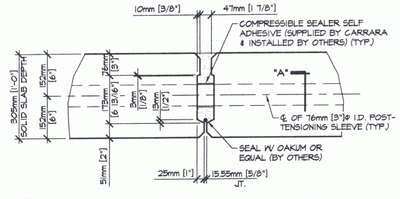


F F5 SHEAR KEY SECTION @ P.T. SLEEVES
1:10

SECTION - "A"
1:5



G F5 SHEAR KEY SECTION
1:10



F F5 SHEAR KEY SECTION @ P.T. SLEEVES
1:10

SHOP DRAWING REVIEW

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VHB Vanasse Hangen Brustlin, Inc. Engineers, Planners, and Scientists Six Bedford Farms, Kitton Rd. Bedford, NH 03110 603 644 0888

Job Number: 50735.00
Reviewed By: CSG/MAC
Date: 2/6/06

J.P. CARRARA & SONS INC.
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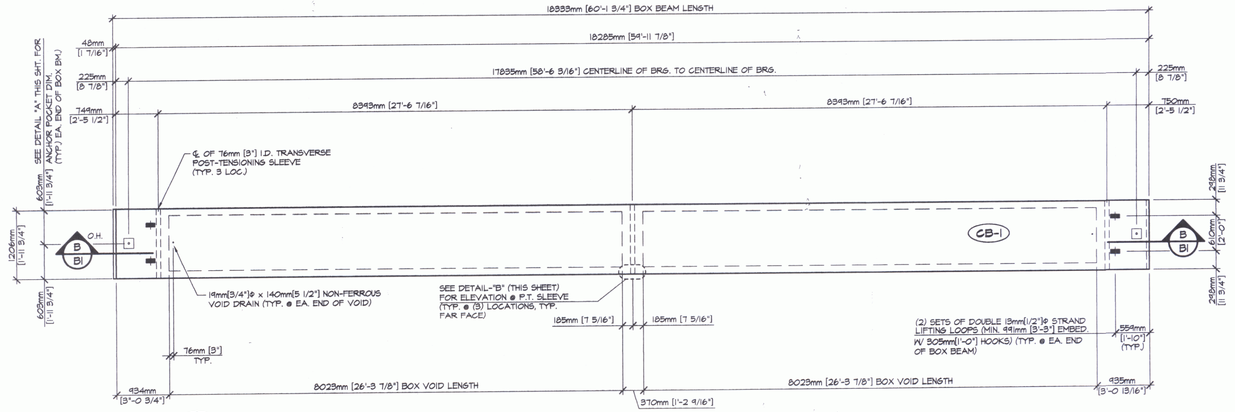
KUBRICKY CONST. CORP.
CONTRACTOR
GLENS FALLS, NEW YORK

STATE OF VERMONT A.O.T.
COUNTY OF CHITTENDEN

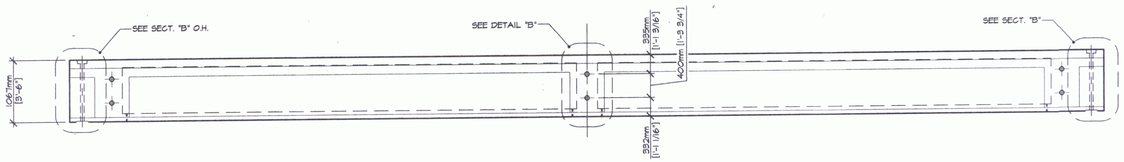
TOWN OF COLCHESTER - SOUTH BURLINGTON
PROJECT: LIME KILN BRIDGE
TH 4/3 (URBAN MINOR ARTERIAL), BRIDGE NO.6

SECTIONS & DETAILS

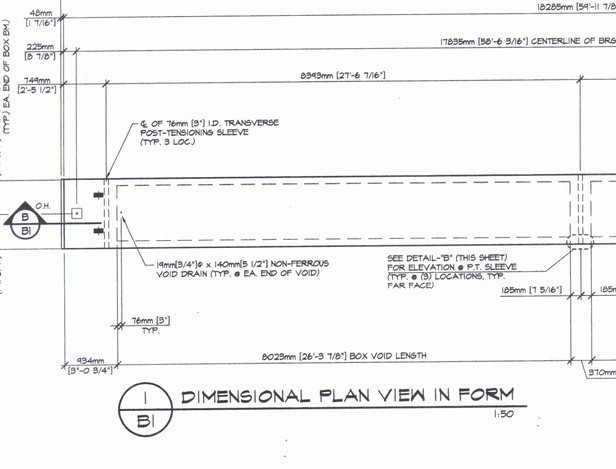
DATE: NOV. 14, 2005
SCALE: NOTED
CHKD: - DFTM: T.J.D
JOB NO: 23229-02
DWG. NO: F5



1/B1 DIMENSIONAL PLAN VIEW IN FORM
1:50



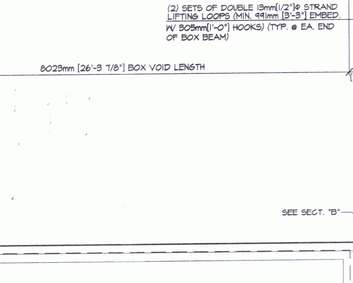
2/B1 DIMENSIONAL ELEVATION VIEW IN FORM
1:50



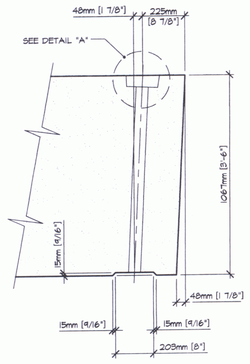
A/B1 DIMENSIONAL SECTION
1:10

DETAIL - "A"
1:5

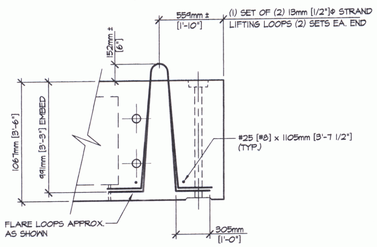
SHOP NOTE: SLEEVE TO BE REMOVED AFTER BEAM IS FABRICATED.



DETAIL - "B"
1:25



SECTION - "B"
1:15



LIFTING LOOP DETAIL
1:25

MARK: CB1	QTY: 8	WT.: 28,286 kg [31.18 T]	VOL.: 11.77 m³ [15.40 cy]

MATERIAL LIST / BEAM

ITEM	MARK	DESCRIPTION	QTY.
1			
2			
3			
4			
5			
6			
7		#25 [#8] x 1105mm [3'-7 1/2"] EPOXY COATED	4
8			
9		947mm [3'-1 1/4"] x 787mm [2'-7"] x 8023mm [26'-3 7/8"] BOX VOID	2
10		19mm [3/4"]ø x 140mm [5 1/2"] NON-FERROUS VOID DRAIN	4
11		Two 13mm [1/2"]ø STRAND LIFTING LOOPS	4
12			

SHOP DRAWING REVIEW
APPROVAL STAMP:
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VHB Vanasse Hangen Brustlin, Inc. Engineers, Planners, and Scientists Six Bedford Farms, Kitton Rd. Bedford, NH 03110 603 644 0888
Job Number: 58755.60
Reviewed By: LSC/MAC
Date: 2/9/04

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
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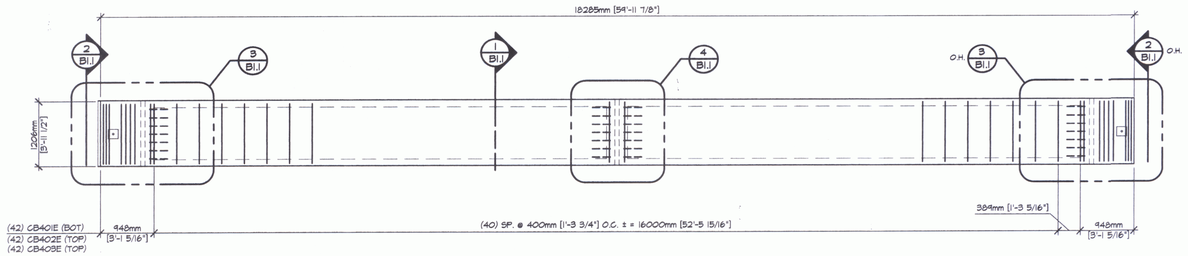
CONTRACTOR
GLENS FALLS, NEW YORK

STATE OF VERMONT A.O.T.
COUNTY OF CHITTENDEN
TOWN OF COLCHESTER - SOUTH BURLINGTON
PROJECT: LIME KILN BRIDGE
TH 4/3 (URBAN MINOR ARTERIAL), BRIDGE NO.6

DATE: NOV. 14, 2005
SCALE: NOTED
CHKD: - DFTM: T.J.D.
JOB NO: 23229-05
DWG. NO: B1

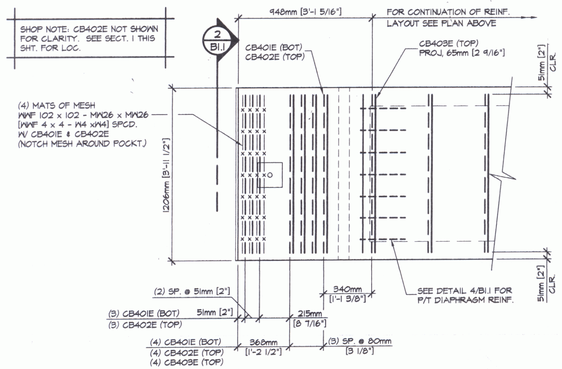
P/S BOX BEAM DETAILS



A / B1.1 REINFORCING PLAN VIEW IN FORM

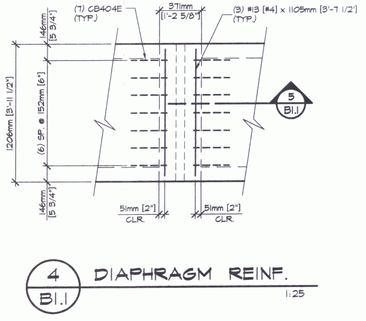
1:50

SHOP NOTE:
ADJUST REINFORCING AS REQUIRED TO CLEAR SLEEVES, POCKETS, ETC.



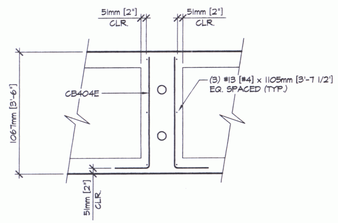
3 / B1.1 END BLOCK REINFORCING PLAN

1:20



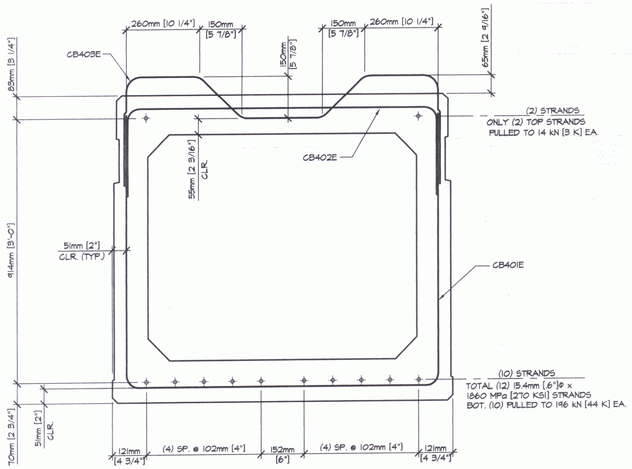
4 / B1.1 DIAPHRAGM REINF.

1:25



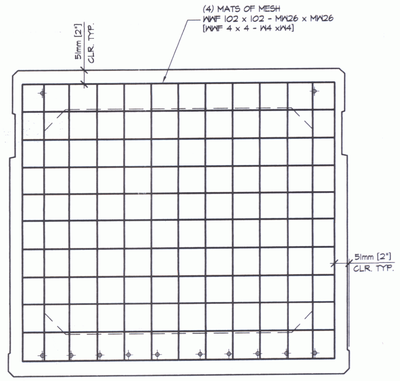
5 / B1.1 DIAPHRAGM SECTION

1:25



1 / B1.1 REINFORCING SECTION

1:10



2 / B1.1 END BLOCK SECTION

1:10

① ②

③ ⑤ ⑦ ⑨ ⑪ ⑫ ⑩ ⑧ ⑥ ④

DETENSIONING SCHEDULE

N.T.S.

MARK: CB1	QTY: 8

MATERIAL LIST / BEAM

ITEM	MARK	DESCRIPTION	QTY.
1	CB401E	#13 [#4] BENT BAR (EPOXY COATED)	56
2	CB402E	#13 [#4] BENT BAR (EPOXY COATED)	56
3	CB403E	#13 [#4] BENT BAR (EPOXY COATED)	50
4	CB404E	#13 [#4] BENT BAR (EPOXY COATED)	28
5			
6		#13 [#4] x 1105mm [3'-7 1/2"] (EPOXY COATED)	12
7			
8		SHEET SIZE 965mm [3'-2"] x 1105mm [3'-7 1/2"] MWF 102 x 102 - MW26 x MW26 [MWF 4 x 4 - W4 xW4]	8
9			
10			
11			
12			

SHOP DRAWING REVIEW

APPROVAL STAMP

☐ REVISE AND RESUBMIT ☑ FURNISH AS CORRECTED

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Job Number: 50735.00
Reviewed By: LSW/MAC
Date: 2/4/06

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KUBRICKY CONST. CORP.
CONTRACTOR
GLENS FALLS, NEW YORK

STATE OF VERMONT A.O.T.
COUNTY OF CHITTENDEN

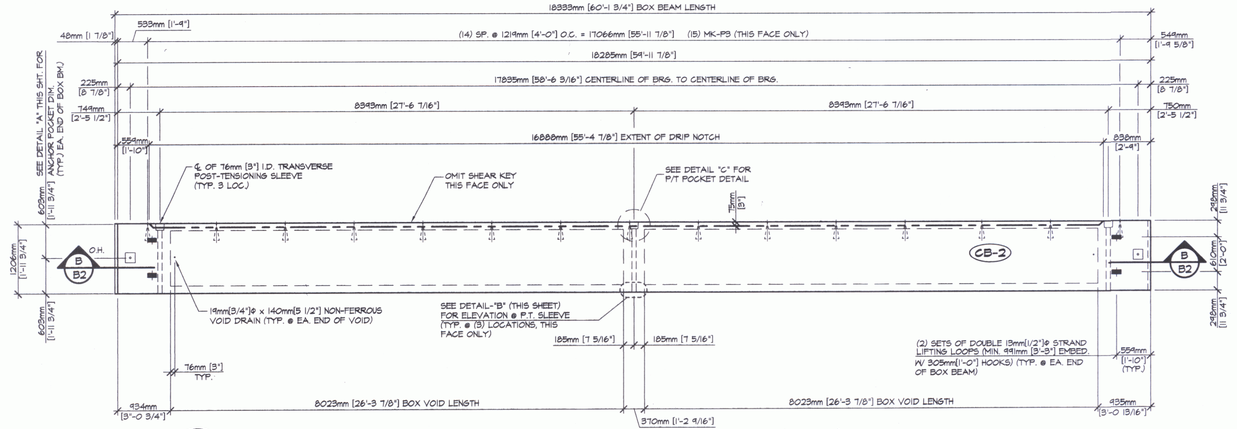
DATE: NOV. 14, 2005
SCALE: NOTED

TOWN OF COLCHESTER - SOUTH BURLINGTON
PROJECT: LIME KILN BRIDGE
TH 4/3 (URBAN MINOR ARTERIAL), BRIDGE NO.6

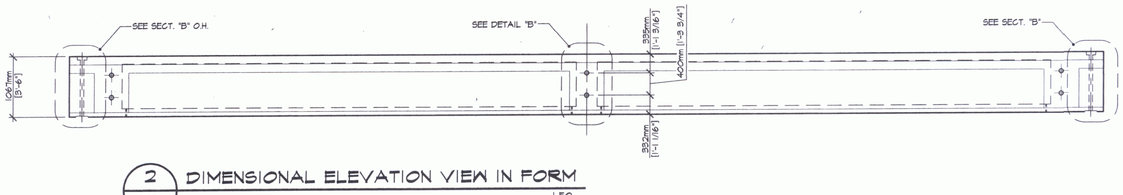
CHKD: - DFTM: T.J.D.
JOB NO: 23229-02

P/S BOX BEAM REINF. DETAILS

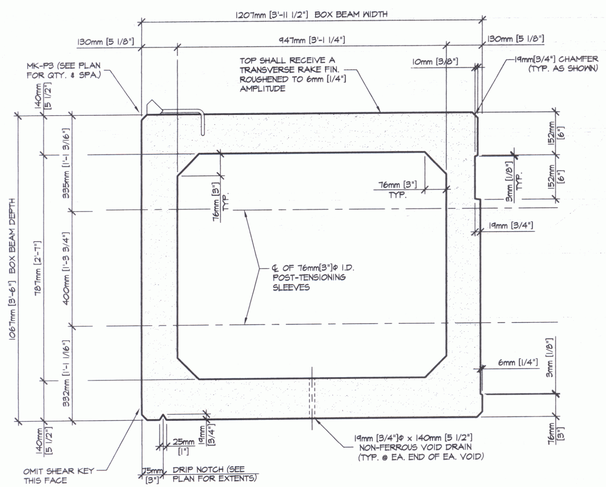
DWG. NO: B1.1



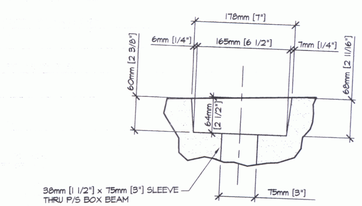
1 / B2 DIMENSIONAL PLAN VIEW IN FORM
1:50



2 / B2 DIMENSIONAL ELEVATION VIEW IN FORM
1:50

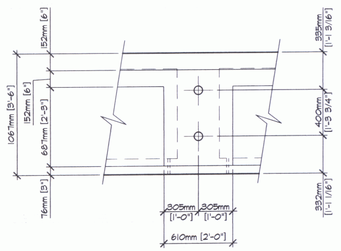


A / B2 DIMENSIONAL SECTION
1:10

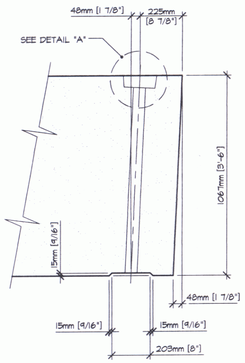


DETAIL - "A"
1:5

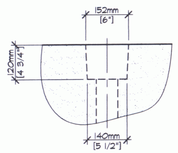
SHOP NOTE: SLEEVE TO BE REMOVED AFTER BEAM IS FABRICATED.



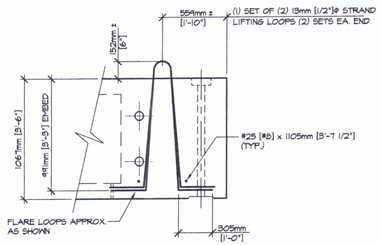
DETAIL - "B"
1:25



SECTION - "B"
1:15



DETAIL - "C"
1:10



LIFTING LOOP DETAIL
1:25

MARK: CB2	QTY: 1	WT.: 28,286 kg [31.18 T]	VOL.: 11.77 m³ [15.40 cy]

MATERIAL LIST / BEAM

ITEM	MARK	DESCRIPTION	QTY.
1			
2			
3			
4			
5	MK-P3	DAYTON C24 TYPE 4-APR PRECAST HALF HANGER	15
6			
7			4
8			
9		947mm [3'-1 1/4"] x 787mm [2'-7"] x 8023mm [26'-3 7/8"] BOX VOID	2
10		19mm [3/4"]ø x 140mm [5 1/2"] NON-FERROUS VOID DRAIN	4
11		TWO 13mm [1/2"]ø STRAND LIFTING LOOPS	4
12			

SHOP DRAWING REVIEW

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VHB Vanasse Hangen Brustlin, Inc. Engineers, Planners, and Scientists Six Bedford Farms, Kitton Rd. Bedford, NH 03110 603 644 0888

Job Number: 53755.60
Reviewed By: KSB/MAC
Date: 2/9/06

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010

KUBRICKY CONST. CORP.
CONTRACTOR
GLENS FALLS, NEW YORK

STATE OF VERMONT A.O.T.
COUNTY OF CHITTENDEN

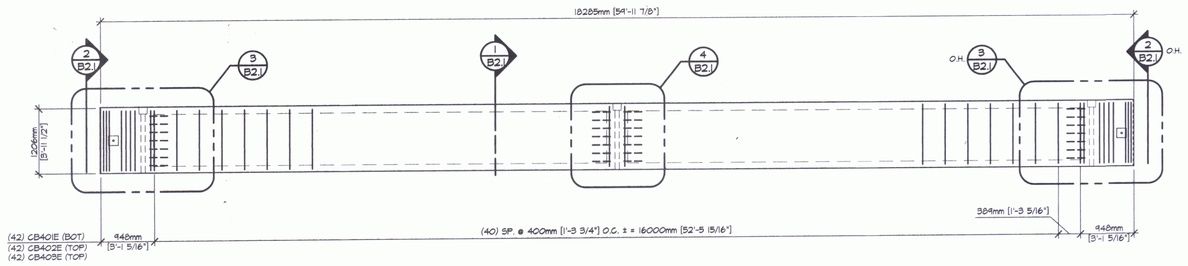
DATE: NOV. 14, 2005
SCALE: NOTED

TOWN OF COLCHESTER - SOUTH BURLINGTON
PROJECT: LIME KILN BRIDGE
TH 4/3 (URBAN MINOR ARTERIAL), BRIDGE NO.6

CHKD: - DFTM: T.J.D.
JOB NO: 23229-05

P/S BOX BEAM DETAILS

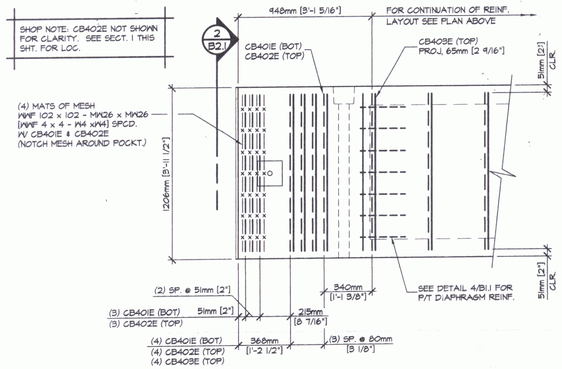
DWG. NO: B2



A / B2.1 REINFORCING PLAN VIEW IN FORM

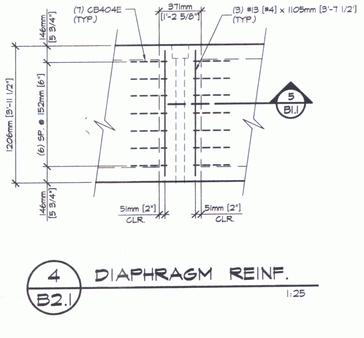
1:50

SHOP NOTE:
ADJUST REINFORCING AS REQUIRED TO CLEAR SLEEVES, POCKETS, ETC.



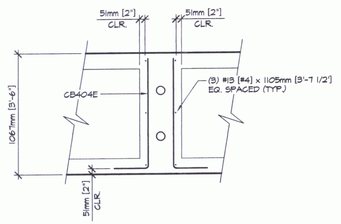
3 / B2.1 END BLOCK REINFORCING PLAN

1:20



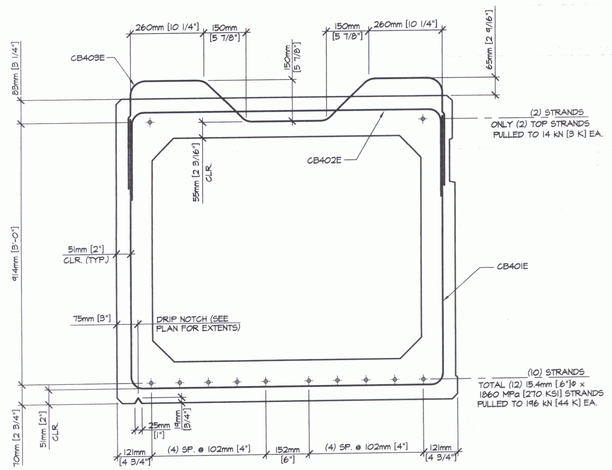
4 / B2.1 DIAPHRAGM REINF.

1:25



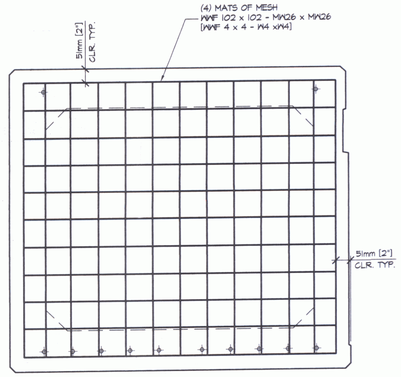
5 / B2.1 DIAPHRAGM SECTION

1:25



1 / B2.1 REINFORCING SECTION

1:10



2 / B2.1 END BLOCK SECTION

1:10

① ②

③ ⑤ ⑦ ⑨ ⑪ ⑫ ⑩ ⑧ ⑥ ④

DETENSIONING SCHEDULE

N.T.S.

SHOP DRAWING REVIEW

APPROVAL STAMP:

☐ REVIEWED AS NOTED ☑ CONSTRUCTION CONTRACT DOCUMENTS ARE APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.

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VHB Vanasse Hangen Brustlin, Inc. Engineers, Planners, and Scientists Six Bedford Farms, Kitton Rd. Bedford, NH 03110 603 644 0888

Job Number: 50755.60
Reviewed By: ESK/MAC
Date: 2/6/06

MARK: CB2	QTY: 1

MATERIAL LIST / BEAM

ITEM	MARK	DESCRIPTION	QTY.
1	CB401E	#13 [#4] BENT BAR (EPOXY COATED)	56
2	CB402E	#13 [#4] BENT BAR (EPOXY COATED)	56
3	CB403E	#13 [#4] BENT BAR (EPOXY COATED)	50
4	CB404E	#13 [#4] BENT BAR (EPOXY COATED)	28
5			
6		#13 [#4] x 1105mm [3'-7 1/2'] (EPOXY COATED)	12
7			
8		SHEET SIZE 965mm [3'-2"] x 1105mm [3'-7 1/2"]	8
9		MWF 102 x 102 - MW26 x MW26 [MWF 4 x 4 - W4 xW4]	
10			
11			
12			

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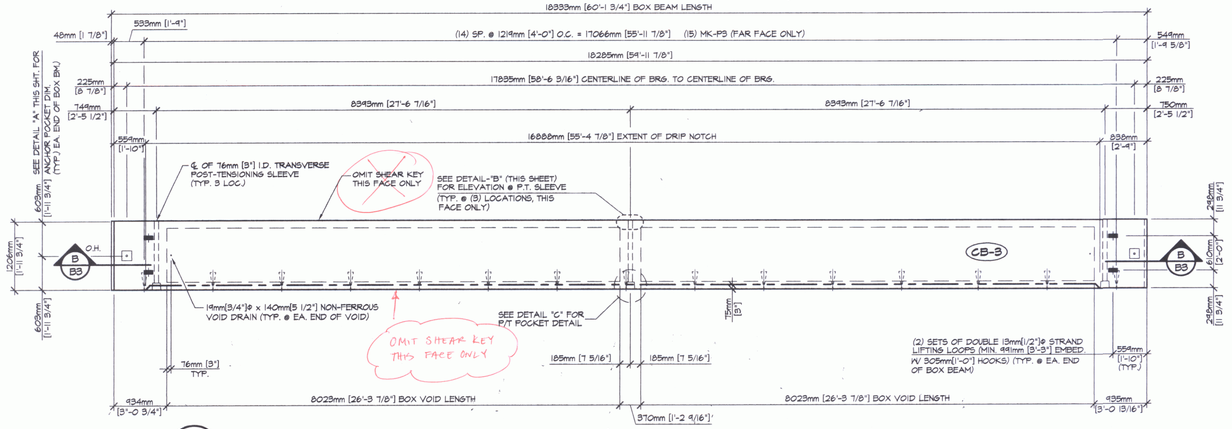
CONTRACTOR
GLENS FALLS, NEW YORK

STATE OF VERMONT A.O.T.
COUNTY OF CHITTENDEN

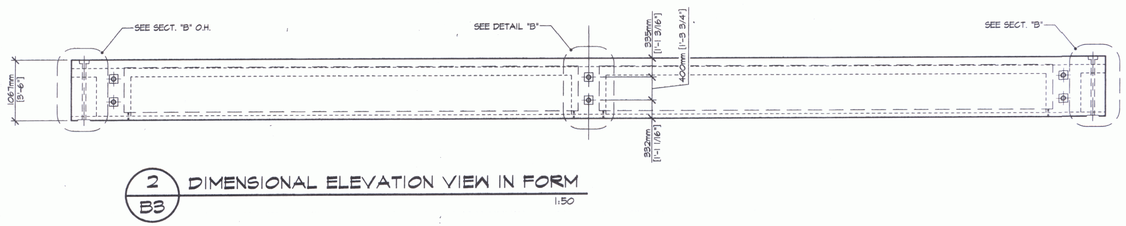
TOWN OF COLCHESTER - SOUTH BURLINGTON
PROJECT: LIME KILN BRIDGE
TH 4/3 (URBAN MINOR ARTERIAL), BRIDGE NO.6

P/S BOX BEAM REINF. DETAILS

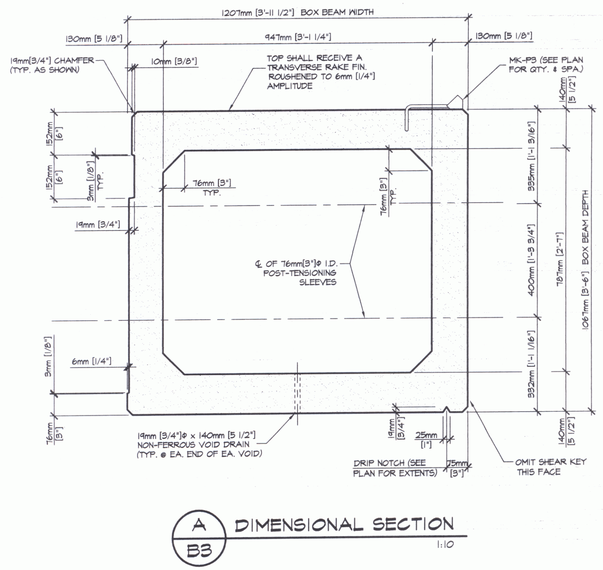
DATE: NOV. 14, 2005
SCALE: NOTED
CHKD: - DFTM: T.J.D.
JOB NO: 23229-05
DWG. NO: B2.1



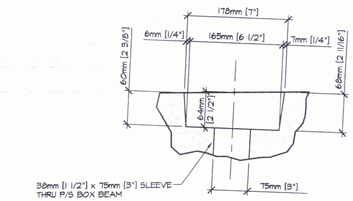
1/B3 DIMENSIONAL PLAN VIEW IN FORM
1:50



2/B3 DIMENSIONAL ELEVATION VIEW IN FORM
1:50

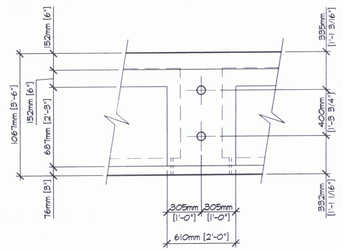


A/B3 DIMENSIONAL SECTION
1:10

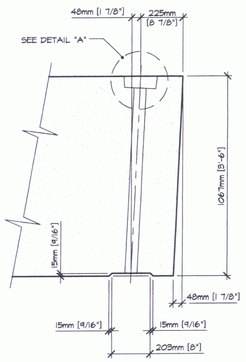


DETAIL - "A"
1:5

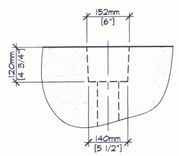
SHOP NOTE: SLEEVE TO BE REMOVED AFTER BEAM IS FABRICATED.



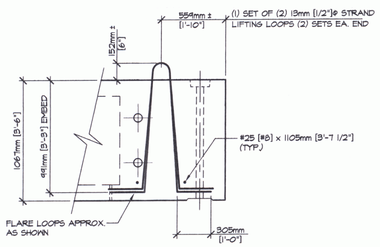
DETAIL - "B"
1:25



SECTION - "B"
1:15



DETAIL - "C"
1:10



LIFTING LOOP DETAIL
1:25

MARK: CB3	QTY: 1	WT.: 28,286 kg [31.18 T]	VOL.: 11.77 m³ [15.40 cy]

MATERIAL LIST / BEAM

ITEM	MARK	DESCRIPTION	QTY.
1			
2			
3			
4			
5	MK-P3	DAYTON C24 TYPE 4-APR PRECAST HALF HANGER	15
6			
7			4
8			
9		947mm [3'-1 1/4"] x 787mm [2'-7"] x 8023mm [26'-3 7/8"] BOX VOID	2
10		19mm [3/4"]ø x 140mm [5 1/2"] NON-FERROUS VOID DRAIN	4
11		TWO 13mm [1/2"]ø STRAND LIFTING LOOPS	4
12			

SHOP DRAWING REVIEW

APPROVAL STAMP:

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VHB Vanasse Hangen Brustlin, Inc. Engineers, Planners, and Scientists Six Bedford Farms, Kitton Rd. Bedford, NH 03110 603 644 0888

Job Number: 50.735.60
Reviewed By: ESL/MAC
Date: 2/16/06

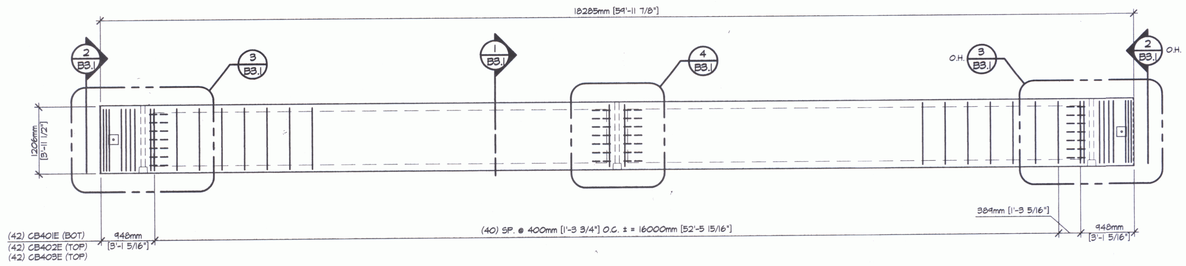
J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 OGE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010

KUBRICKY CONST. CORP.
CONTRACTOR
GLENS FALLS, NEW YORK

STATE OF VERMONT A.O.T.
COUNTY OF CHITTENDEN
TOWN OF COLCHESTER - SOUTH BURLINGTON
PROJECT: LIME KILN BRIDGE
TH 4/3 (URBAN MINOR ARTERIAL), BRIDGE NO.6

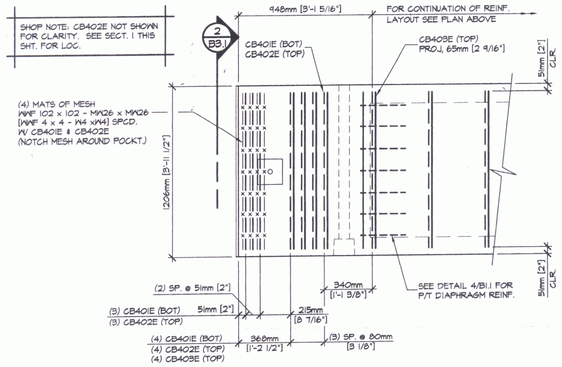
P/S BOX BEAM DETAILS

DATE: NOV. 14, 2005
SCALE: NOTED
CHKD: - DFTM: T.J.D.
JOB NO: 23229-05
DWG. NO: B3

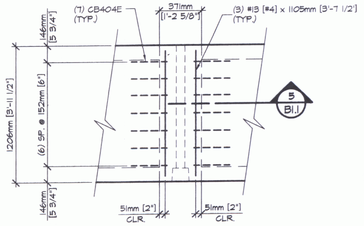


A B3.1 REINFORCING PLAN VIEW IN FORM
1:50

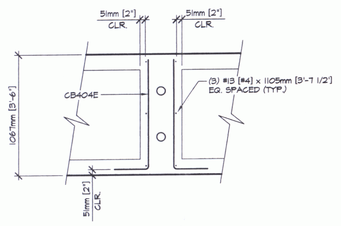
SHOP NOTE:
ADJUST REINFORCING AS REQUIRED TO CLEAR SLEEVES, POCKETS, ETC.



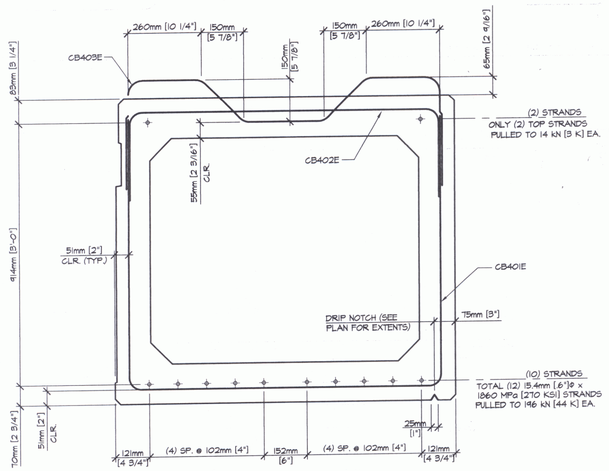
3 B3.1 END BLOCK REINFORCING PLAN
1:20



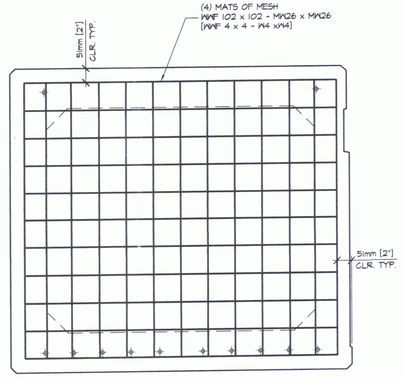
4 B3.1 DIAPHRAGM REINF.
1:25



5 B3.1 DIAPHRAGM SECTION
1:25



1 B3.1 REINFORCING SECTION
1:10



2 B3.1 END BLOCK SECTION
1:10

① ②

③ ⑤ ⑦ ⑨ ⑪ ⑫ ⑩ ⑧ ⑥ ④

DETENSIONING SCHEDULE
N.T.S.

MARK: CB3 | QTY: 1

MATERIAL LIST / BEAM

ITEM	MARK	DESCRIPTION	QTY.
1	CB401E	#13 [#4] BENT BAR (EPOXY COATED)	56
2	CB402E	#13 [#4] BENT BAR (EPOXY COATED)	56
3	CB403E	#13 [#4] BENT BAR (EPOXY COATED)	50
4	CB404E	#13 [#4] BENT BAR (EPOXY COATED)	28
5			
6		#13 [#4] x 1105mm [3'-7 1/2"] (EPOXY COATED)	12
7			
8		SHEET SIZE 965mm [3'-2"] x 1105mm [3'-7 1/2"] MWF 102 x 102 - MW26 x MW26 [MWF 4 x 4 - W4 xW4]	8
9			
10			
11			
12			

SHOP DRAWING REVIEW

APPROVAL STAMP

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VHB Vanasse Hangen Brustlin, Inc. Engineers, Planners, and Scientists Six Bedford Farms, Kitton Rd. Bedford, NH 03110 603 644 0888

Job Number: 58734.00
Reviewed By: ESG/MAC
Date: 2/4/06

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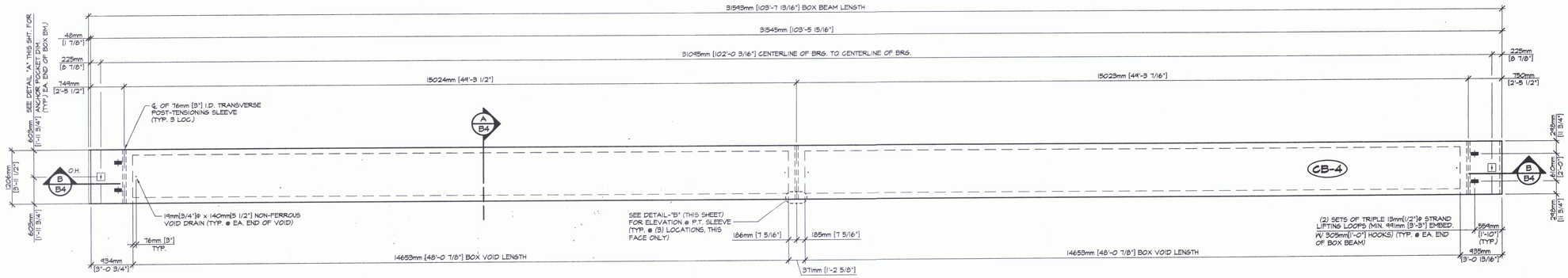
CONTRACTOR
GLENS FALLS, NEW YORK

STATE OF VERMONT A.O.T.
COUNTY OF CHITTENDEN

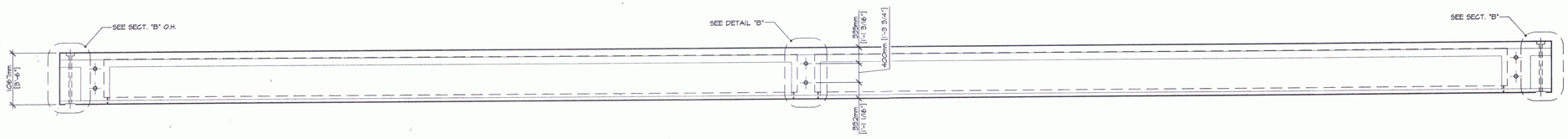
TOWN OF COLCHESTER - SOUTH BURLINGTON
PROJECT: LIME KILN BRIDGE
TH 4/3 (URBAN MINOR ARTERIAL), BRIDGE NO.6

P/S BOX BEAM REINF. DETAILS

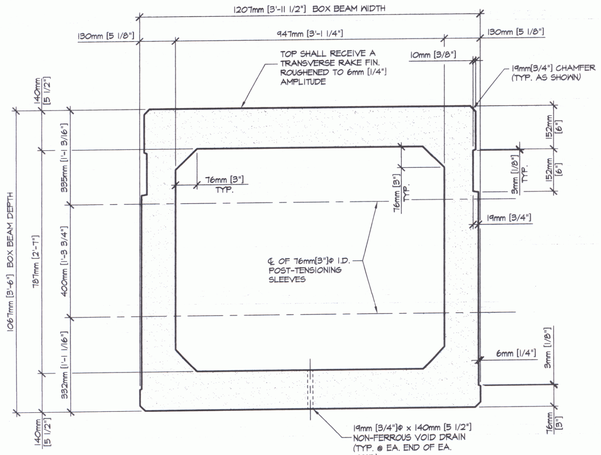
DATE: NOV. 14, 2005
SCALE: NOTED
CHKD: - DFTM: T.J.D.
JOB NO: 23229-05
DWG. NO: B3.1



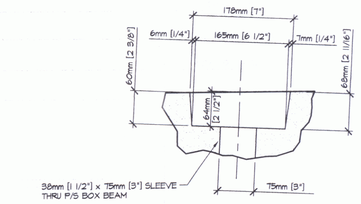
1 / B4 DIMENSIONAL PLAN VIEW IN FORM
1:50



2 / B4 DIMENSIONAL ELEVATION VIEW IN FORM
1:50

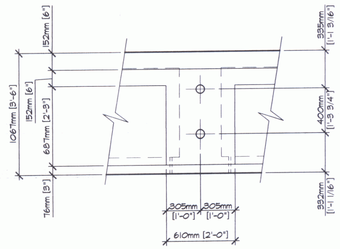


A / B4 DIMENSIONAL SECTION
1:10

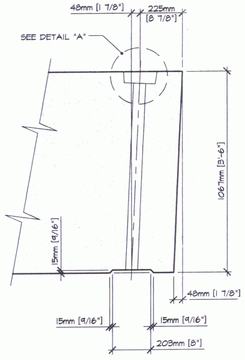


DETAIL - "A"
1:5

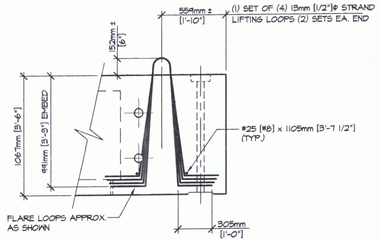
SHOP NOTE: SLEEVE TO BE REMOVED AFTER BEAM IS FABRICATED



DETAIL - "B"
1:25



SECTION - "B"
1:15



LIFTING LOOP DETAIL
1:25

MARK: CB4	QTY: 8	WT.: 45,200 kg [49.83 T]	VOL.: 18.81 m³ [24.60 cy]

MATERIAL LIST / BEAM

ITEM	MARK	DESCRIPTION	QTY.
1			
2			
3			
4			
5			
6			
7		#25 [#8] x 1105mm [3'-7 1/2"] EPOXY COATED	4
8			
9		947mm [3'-1 1/4"] x 787mm [2'-7"] x 14653mm [48'-0 7/8"] BOX VOID	2
10		19mm [3/4"]ø x 140mm [5 1/2"] NON-FERROUS VOID DRAIN	4
11		FOUR 13mm [1/2"]ø STRAND LIFTING LOOPS	4
12			

SHOP DRAWING REVIEW

APPROVAL STAMP

☐ REVIEWED AS NOTED ☐ SUBMIT IN CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.

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Job Number: 59755.60
Reviewed By: LSL/MHC
Date: 2/6/06

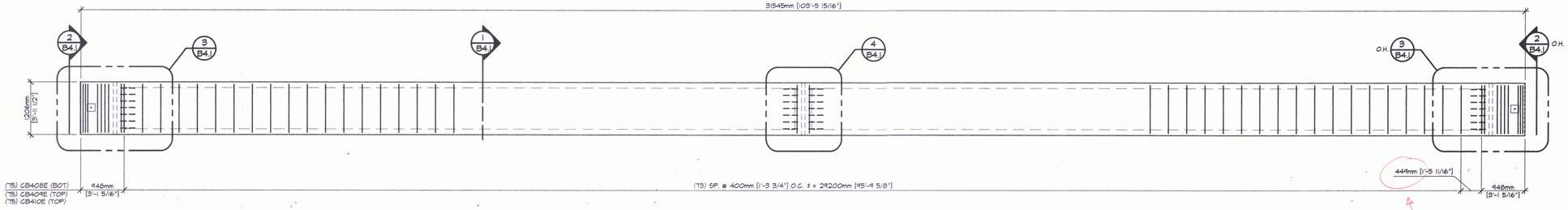
J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010

KUBRICKY CONST. CORP.
CONTRACTOR
GLENS FALLS, NEW YORK

STATE OF VERMONT A.O.T.
COUNTY OF CHITTENDEN
TOWN OF COLCHESTER - SOUTH BURLINGTON
PROJECT: LIME KILN BRIDGE
TH 4/3 (URBAN MINOR ARTERIAL), BRIDGE NO.6

DATE: NOV. 14, 2005
SCALE: NOTED
CHKD: - DFTM: T.J.D.
JOB NO: 23229-02
DWG. NO: B4

P/S BOX BEAM DETAILS

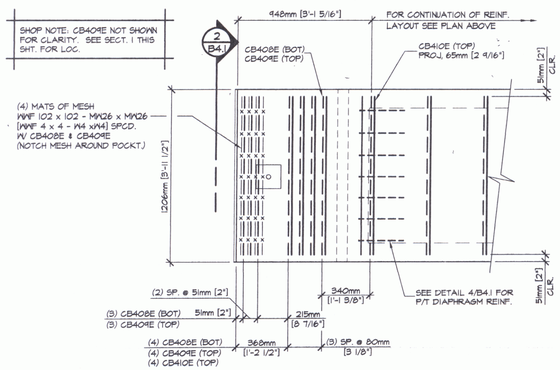


A / B4.1 REINFORCING PLAN VIEW IN FORM

1:50

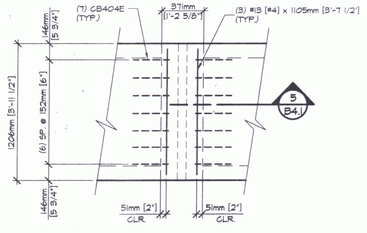
SHOP NOTE:
ADJUST REINFORCING AS REQUIRED TO CLEAR SLEEVES, POCKETS, ETC.

NEED ONE MORE BAR. SPACING NEEDS TO BE ≤ 400 mm



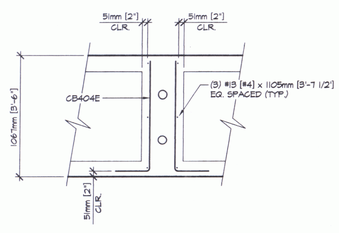
3 / B4.1 END BLOCK REINFORCING PLAN

1:20



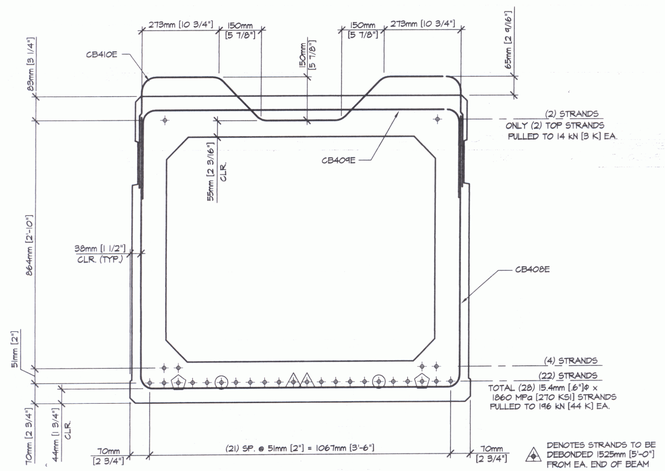
4 / B4.1 DIAPHRAGM REINF.

1:25



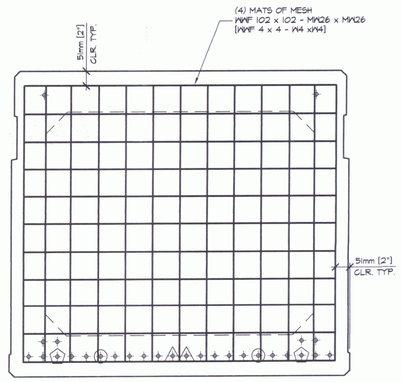
5 / B4.1 DIAPHRAGM SECTION

1:25



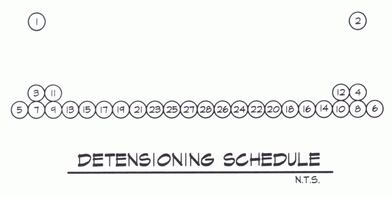
1 / B4.1 REINFORCING SECTION

1:10



2 / B4.1 END BLOCK SECTION

1:10



DETENSIONING SCHEDULE

N.T.S.

CHECK QUANTITY

MARK: CB4 | QTY: 8

MATERIAL LIST / BEAM

ITEM	MARK	DESCRIPTION	QTY.
1	CB40BE	#13 [#4] BENT BAR (EPOXY COATED)	88
2	CB40RE	#13 [#4] BENT BAR (EPOXY COATED)	88
3	CB410E	#13 [#4] BENT BAR (EPOXY COATED)	82
4	CB40AE	#13 [#4] BENT BAR (EPOXY COATED)	28
5			
6		#13 [#4] x 1105mm [3'-7 1/2"] (EPOXY COATED)	12
7			
8		SHEET SIZE 965mm [3'-2"] x 1105mm [3'-7 1/2"] WWF 102 x 102 - MW26 x MW26 [WWF 4 x 4 - W4 xW4]	8
9			
10			
11			
12			

SHOP DRAWING REVIEW

APPROVAL STAMP:

☐ REVIEWED AS NOTED, NO RESUBMITTAL. CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.
☐ REJECTED ☐ REVISE AND RESUBMIT ☑ FURNISH AS CORRECTED

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VHB Vanasse Hangen Brustlin, Inc. Engineers, Planners, and Scientists Six Bedford Farms, Kilton Rd. Bedford, NH 03110 603 644 0888

Job Number: 50755.60
Reviewed By: ESL/MAC
Date: 2/16/06

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
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KUBRICKY CONST. CORP.
CONTRACTOR
GLENS FALLS, NEW YORK

STATE OF VERMONT A.O.T.
COUNTY OF CHITTENDEN

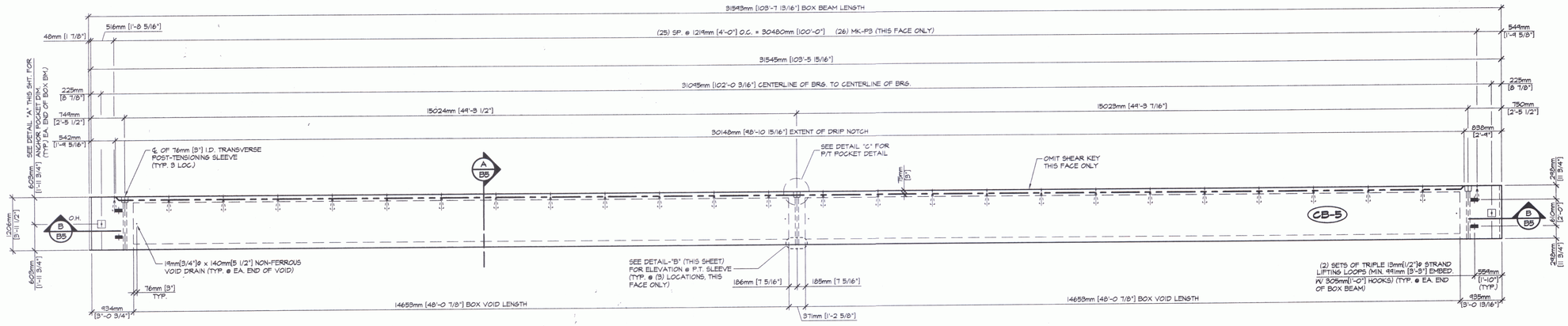
DATE: NOV. 14, 2005
SCALE: NOTED

TOWN OF COLCHESTER - SOUTH BURLINGTON
PROJECT: LIME KILN BRIDGE
TH 4/3 (URBAN MINOR ARTERIAL), BRIDGE NO.6

CHKD: - DFTM: T.J.D.
JOB NO: 23229-02

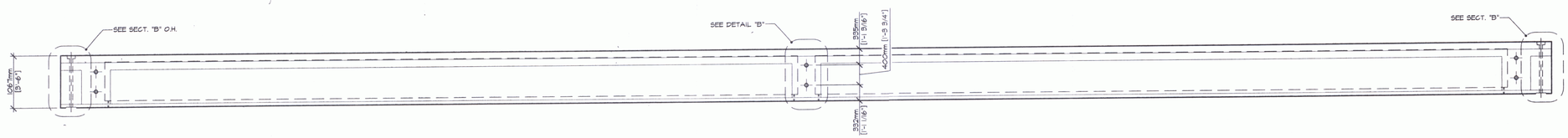
P/S BOX BEAM REINF. DETAILS

DWG. NO: B4.1



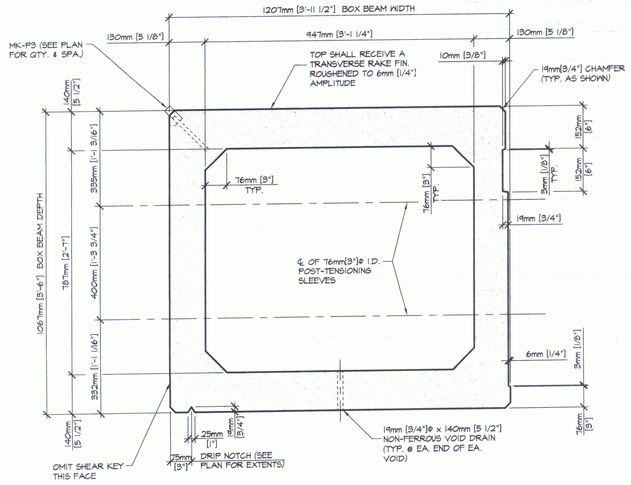
1 / B5 DIMENSIONAL PLAN VIEW IN FORM

1:50



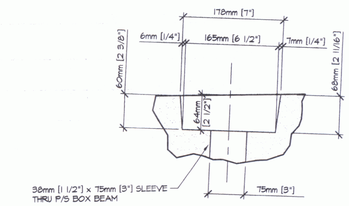
2 / B5 DIMENSIONAL ELEVATION VIEW IN FORM

1:50



A / B5 DIMENSIONAL SECTION

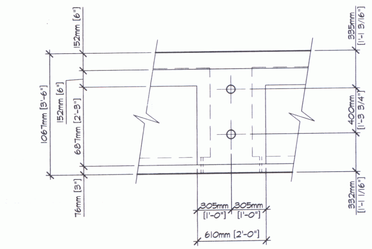
1:10



DETAIL - "A"

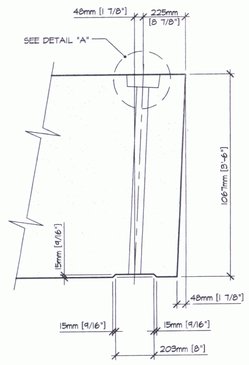
1:5

SHOP NOTE: SLEEVE TO BE REMOVED AFTER BEAM IS FABRICATED.



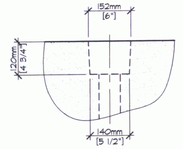
DETAIL - "B"

1:25



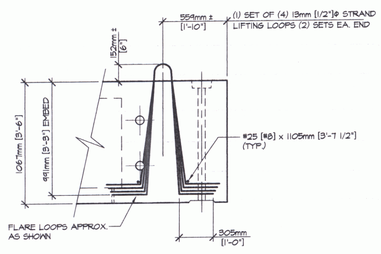
SECTION - "B"

1:15



DETAIL - "C"

1:10



LIFTING LOOP DETAIL

1:25

MARK: CB5	QTY: 1	WT.: 45,200 kg [49.83 T]	VOL.: 18.81 m^3 [24.60 cy]

MATERIAL LIST / BEAM

ITEM	MARK	DESCRIPTION	QTY.
1			
2			
3			
4			
5			
6			
7		#25 [#8] x 1105mm [3'-7 1/2"] EPOXY COATED	4
8			
9		947mm [3'-1 1/4"] x 787mm [2'-7"] x 14653mm [48'-0 7/8"] BOX VOID	2
10		19mm [3/4"]ø x 140mm [5 1/2"] NON-FERROUS VOID DRAIN	4
11		FOUR 13mm [1/2"]ø STRAND LIFTING LOOPS	4
12			

SHOP DRAWING REVIEW

APPROVAL STAMP

☐ REVIEWED ☐ NO EXCEPTION TAKEN ☐ EXCEPTION TAKEN

CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.

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VHB Vanasse Hangen Brustlin, Inc. Engineers, Planners, and Scientists Six Bedford Farms, Kilton Rd. Bedford, NH 03110 603-644-0888

Job Number: 48735.60
Reviewed By: LSL/MAC
Date: 2/6/06

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010

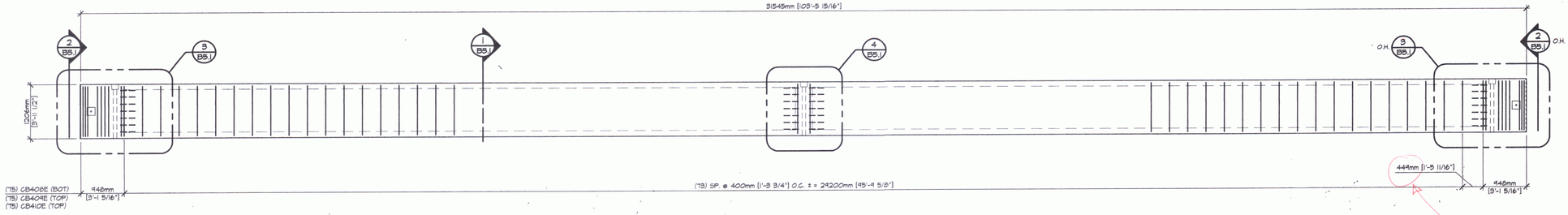
KUBRICKY CONST. CORP.
CONTRACTOR
GLENS FALLS, NEW YORK

STATE OF VERMONT A.O.T.
COUNTY OF CHITTENDEN

TOWN OF COLCHESTER - SOUTH BURLINGTON
PROJECT: LIME KILN BRIDGE
TH 4/3 (URBAN MINOR ARTERIAL), BRIDGE NO.6

P/S BOX BEAM DETAILS

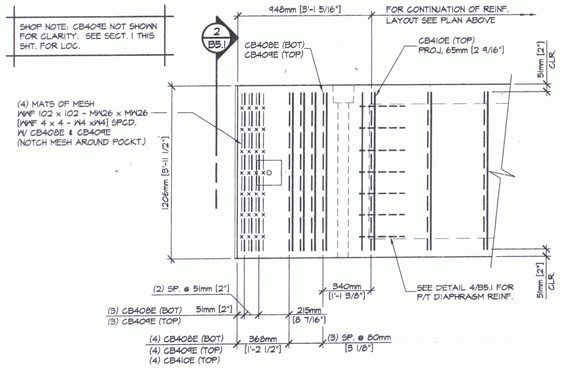
DATE: NOV. 14, 2005
SCALE: NOTED
CHKD: - DFTM: T.J.D.
JOB NO: 23229-02
DWG. NO: B5



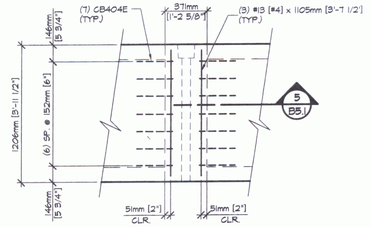
A / B5.1 REINFORCING PLAN VIEW IN FORM
1:50

SHOP NOTE:
ADJUST REINFORCING AS REQUIRED TO CLEAR SLEEVES, POCKETS, ETC.

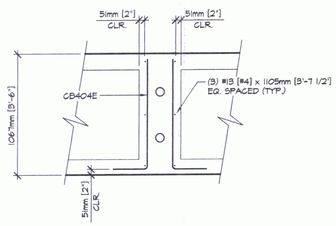
NEED ONE MORE BAR. SPACING NEEDS TO BE ≤ 400 mm



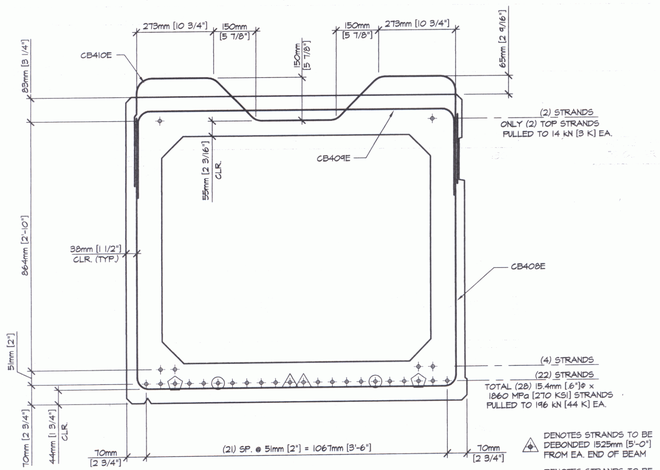
3 / B5.1 END BLOCK REINFORCING PLAN
1:20



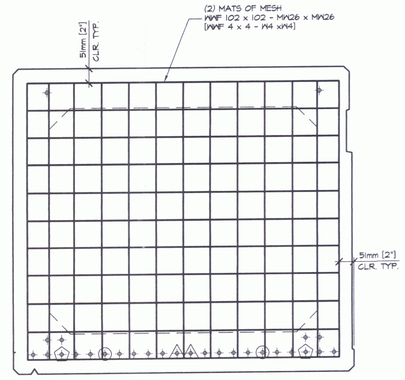
4 / B5.1 DIAPHRAGM REINF.
1:25



5 / B5.1 DIAPHRAGM SECTION
1:25



1 / B5.1 REINFORCING SECTION
1:10



2 / B5.1 END BLOCK SECTION
1:10

DETENSIONING SCHEDULE
N.T.S.

5

CHECK QUANTITY

MARK: CB4 | QTY: 8

MATERIAL LIST / BEAM

ITEM	MARK	DESCRIPTION	QTY.
1	CB40BE	#13 [#4] BENT BAR (EPOXY COATED)	88
2	CB40RE	#13 [#4] BENT BAR (EPOXY COATED)	88
3	CB41OE	#13 [#4] BENT BAR (EPOXY COATED)	82
4	CB40AE	#13 [#4] BENT BAR (EPOXY COATED)	28
5			
6		#13 [#4] x 1105mm [3'-7 1/2'] (EPOXY COATED)	12
7			
8		SHEET SIZE 965mm [3'-2"] x 1105mm [3'-7 1/2"]	8
9		MWF 102 x 102 - MW26 x MW26 [MWF 4 x 4 - W4 xW4]	
10			
11			
12			

SHOP DRAWING REVIEW

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VHB Vanasse Hangen Brustlin, Inc. Engineers, Planners, and Scientists 54 Bedford Farms, Kilton Rd. Bedford, NH 03110 603 644 0888

Job Number: 58735.40
Reviewed By: LSL/MAC
Date: 2/6/06

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
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KUBRICKY CONST. CORP.
CONTRACTOR
GLENS FALLS, NEW YORK

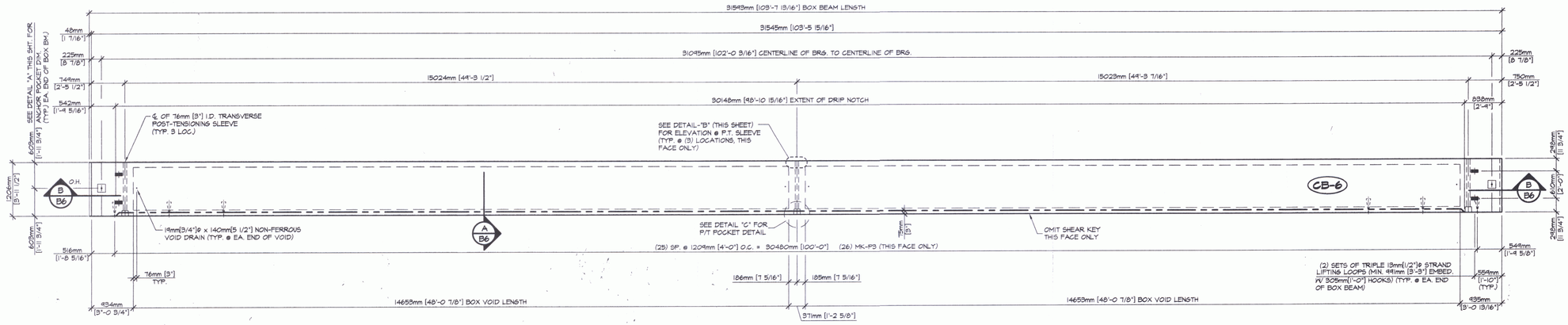
STATE OF VERMONT A.O.T.
COUNTY OF CHITTENDEN

DATE: NOV. 14, 2005
SCALE: NOTED
CHKD: - DFTM: T.J.D.
JOB NO: 23229-05

TOWN OF COLCHESTER - SOUTH BURLINGTON
PROJECT: LIME KILN BRIDGE
TH 4/3 (URBAN MINOR ARTERIAL), BRIDGE NO.6

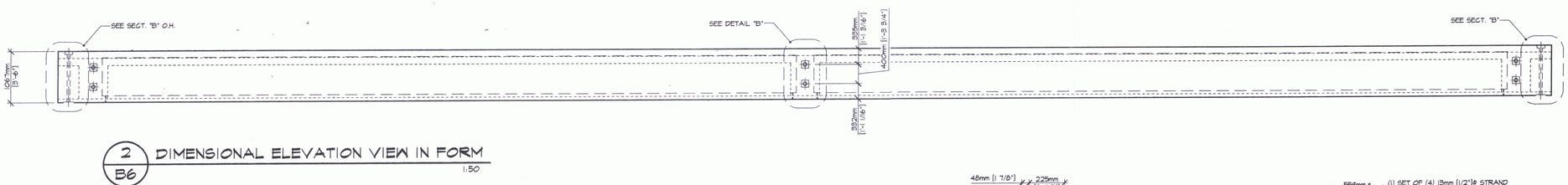
P/S BOX BEAM REINF. DETAILS

DWG. NO: B5.1



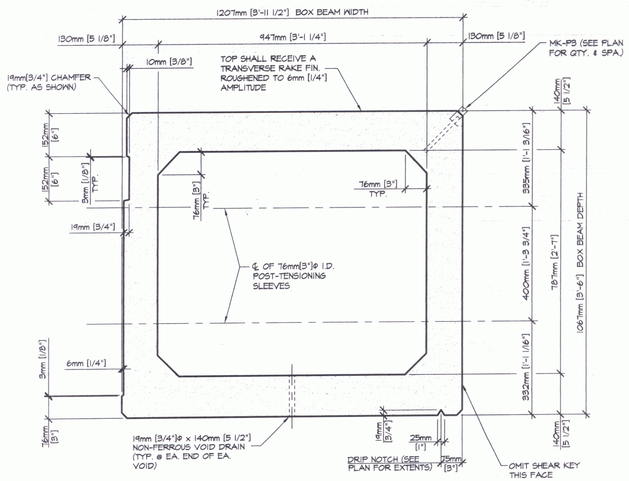
1 / B6 DIMENSIONAL PLAN VIEW IN FORM

1:50



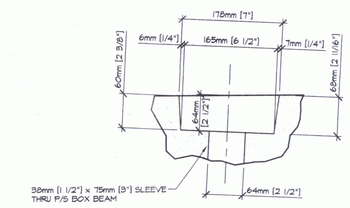
2 / B6 DIMENSIONAL ELEVATION VIEW IN FORM

1:50



A / B6 DIMENSIONAL SECTION

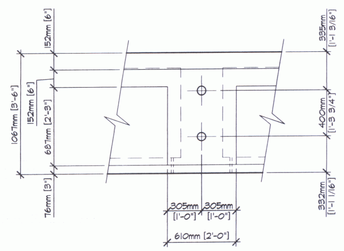
1:10



DETAIL - "A"

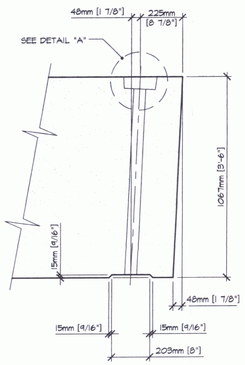
1:5

SHOP NOTE: SLEEVE TO BE REMOVED AFTER BEAM IS FABRICATED



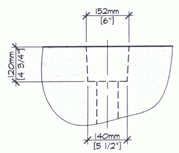
DETAIL - "B"

1:25



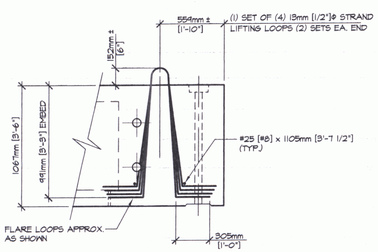
SECTION - "B"

1:15



DETAIL - "C"

1:10



LIFTING LOOP DETAIL

1:25

MARK: CB6	QTY: 1	WT.: 45200 kg [49.83 T]	VOL.: 18.81 m³ [24.60 cy]

MATERIAL LIST / BEAM

ITEM	MARK	DESCRIPTION	QTY.
1			
2			
3			
4			
5			
6			
7		#25 [#8] x 1105mm [3'-7 1/2"] EPOXY COATED	4
8			
9		947mm [3'-1 1/4"] x 787mm [2'-7"] x 14653mm [48'-0 7/8"] BOX VOID	2
10		19mm [3/4"]ø x 140mm [5 1/2"] NON-FERROUS VOID DRAIN	4
11		FOUR 13mm [1/2"]ø STRAND LIFTING LOOPS	4
12			

SHOP DRAWING REVIEW

APPROVAL STAMP

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Job Number: 50735.60
Reviewed By: LSL/MAC
Date: 2/4/06

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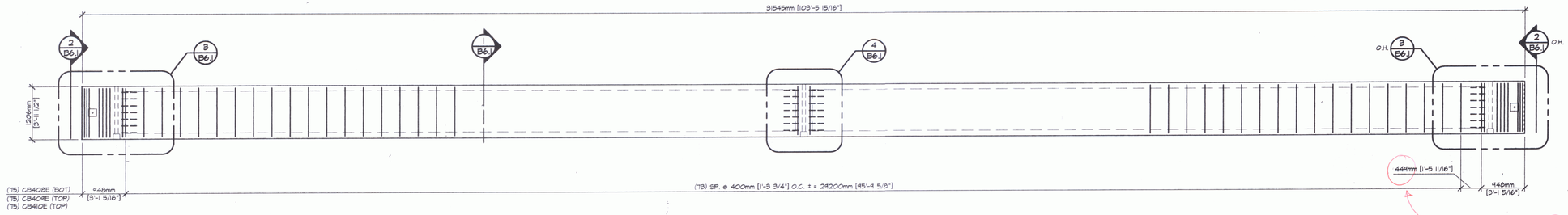
STATE OF VERMONT A.O.T.
COUNTY OF CHITTENDEN
TOWN OF COLCHESTER - SOUTH BURLINGTON
PROJECT: LIME KILN BRIDGE
TH 4/3 (URBAN MINOR ARTERIAL), BRIDGE NO.6

P/S BOX BEAM DETAILS

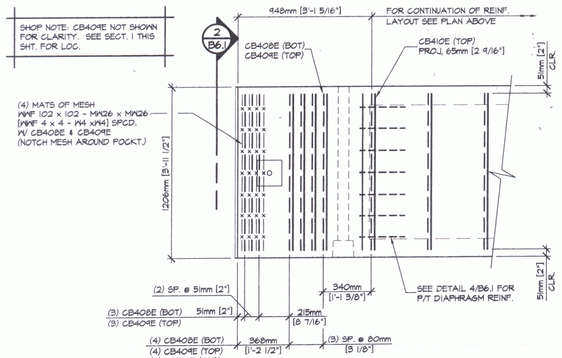
DATE: NOV. 14, 2005
SCALE: NOTED
CHKD: - DFTM: T.J.D.
JOB NO: 23229-05
DWG. NO: B6



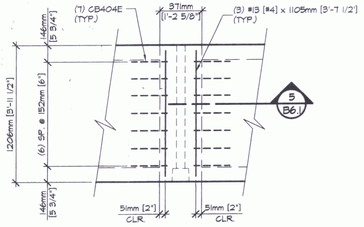
A / B6.1 REINFORCING PLAN VIEW IN FORM
1:50

SHOP NOTE:
ADJUST REINFORCING AS REQUIRED TO CLEAR SLEEVES, POCKETS, ETC.

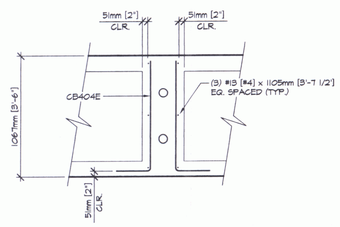
NEED ONE MORE BAR SPACING NEEDS TO BE ≤ 400 mm



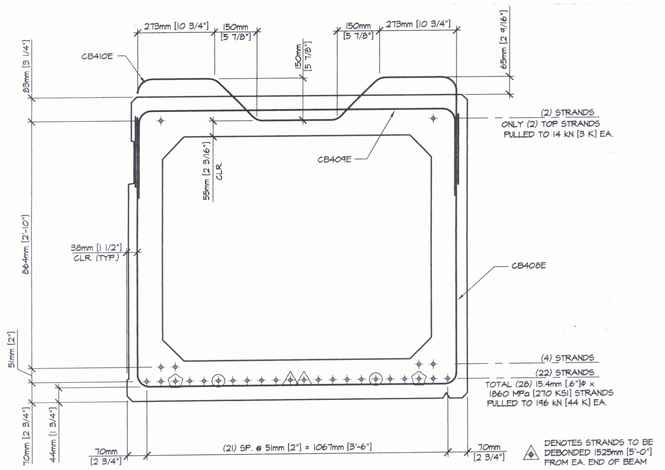
3 / B6.1 END BLOCK REINFORCING PLAN
1:20



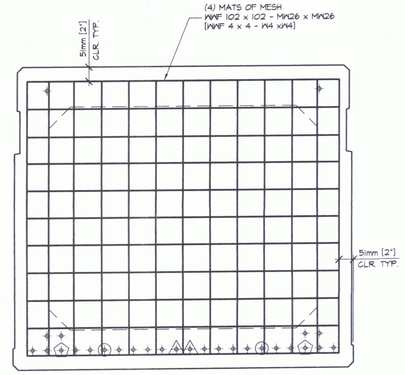
4 / B6.1 DIAPHRAGM REINF.
1:25



5 / B6.1 DIAPHRAGM SECTION
1:25



1 / B6.1 REINFORCING SECTION
1:10



2 / B6.1 END BLOCK SECTION
1:10

DETENSIONING SCHEDULE
N.T.S.

CHECK QUANTITY

MARK: CB6 | QTY: 1

MATERIAL LIST / BEAM

ITEM	MARK	DESCRIPTION	QTY.
1	CB40BE	#13 [#4] BENT BAR (EPOXY COATED)	88
2	CB40AE	#13 [#4] BENT BAR (EPOXY COATED)	88
3	CB41OE	#13 [#4] BENT BAR (EPOXY COATED)	82
4	CB40AE	#13 [#4] BENT BAR (EPOXY COATED)	28
5			
6		#13 [#4] x 1105mm [3'-7 1/2"] (EPOXY COATED)	12
7			
8		SHEET SIZE 965mm [3'-2"] x 1105mm [3'-7 1/2"]	8
9		WWF 102 x 102 - MW26 x MW26 [WWF 4 x 4 - W4 xW4]	
10			
11			
12			

SHOP DRAWING REVIEW

APPROVAL STAMP:

☐ REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.

☐ REJECTED ☐ REMISE AND RESUBMIT ☑ FURNISH AS CORRECTED

CORRECTIONS OR COMMENTS MADE ON THE SHOP DRAWINGS DURING THIS REVIEW DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. THIS CHECK IS ONLY FOR REVIEW OF GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR: CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS; SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION; COORDINATING HIS WORK WITH THAT OF ALL OTHER TRADES; AND PERFORMING HIS WORK IN A SAFE AND SATISFACTORY MANNER.

VHB Vanasse Hangen Brustlin, Inc. Engineers, Planners, and Scientists 54 Bedford Farms, Kilton Rd. Bedford, NH 03110 603 644 0888

Job Number: 50735.00
Reviewed By: LSG/MAC
Date: 2/4/06

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010

KUBRICKY CONST. CORP.
CONTRACTOR
GLENS FALLS, NEW YORK

STATE OF VERMONT A.O.T.
COUNTY OF CHITTENDEN

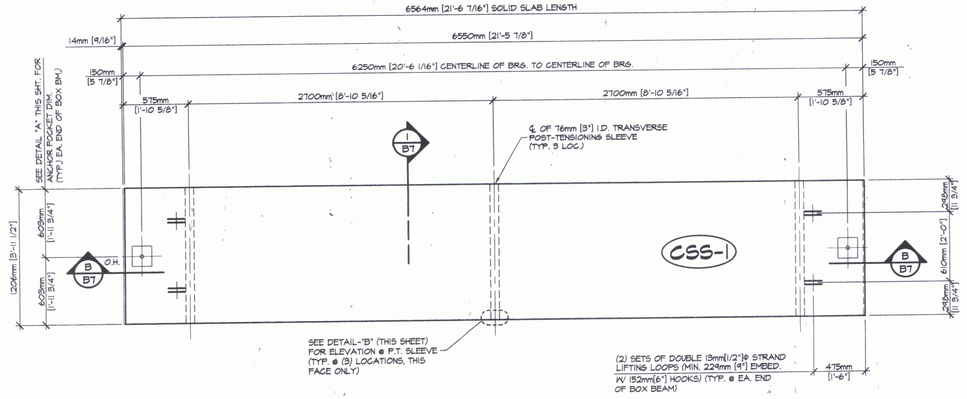
DATE: NOV. 14, 2005
SCALE: NOTED

TOWN OF COLCHESTER - SOUTH BURLINGTON
PROJECT: LIME KILN BRIDGE
TH 4/3 (URBAN MINOR ARTERIAL), BRIDGE NO.6

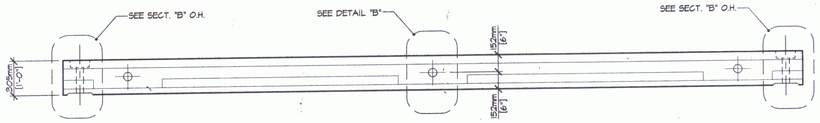
CHKD: - DFTM: T.J.D.
JOB NO: 23229-05

P/S BOX BEAM REINF. DETAILS

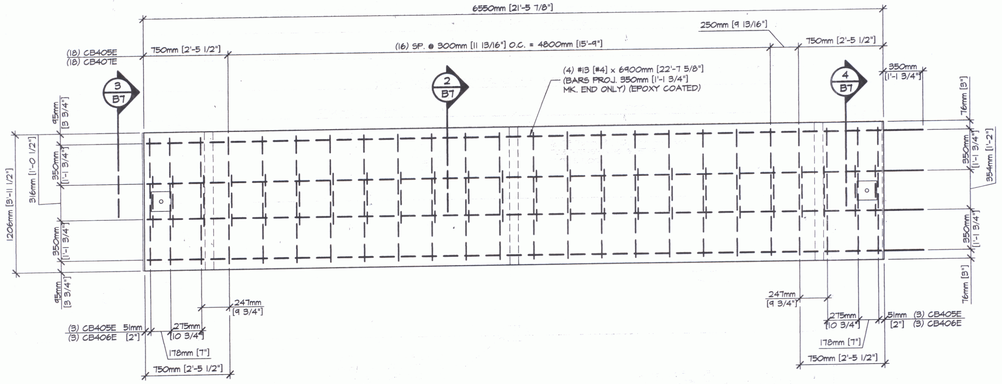
DWG. NO: B6.1



A B7 DIMENSIONAL PLAN VIEW IN FORM
1:25

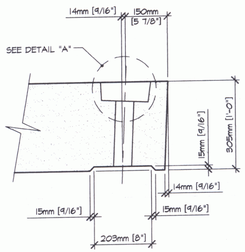


B B7 DIMENSIONAL ELEVATION VIEW IN FORM
1:25

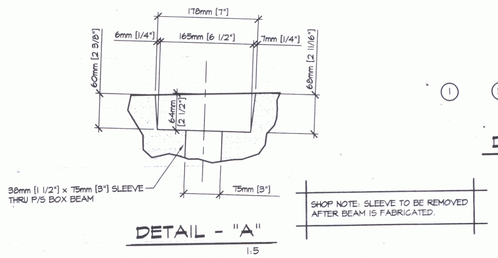


B B7 REINFORCING PLAN VIEW IN FORM
1:25

SHOP NOTE:
ADJUST REINFORCING AS REQUIRED TO CLEAR SLEEVES, POCKETS, ETC.

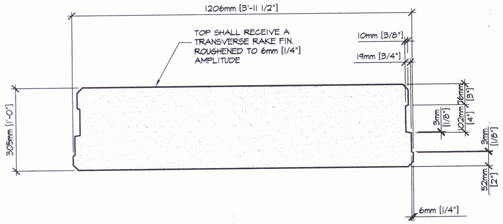


SECTION - "B"
1:10

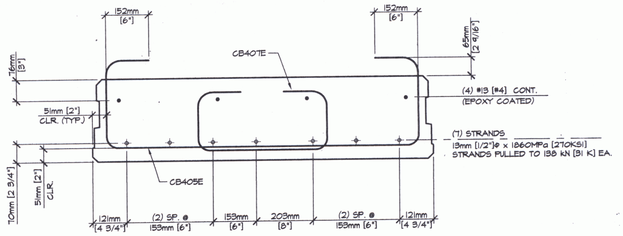


DETAIL - "A"
1:5

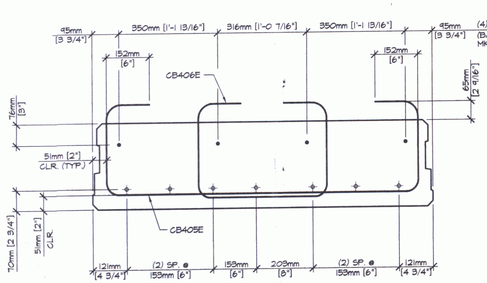
SHOP NOTE: SLEEVE TO BE REMOVED AFTER BEAM IS FABRICATED.



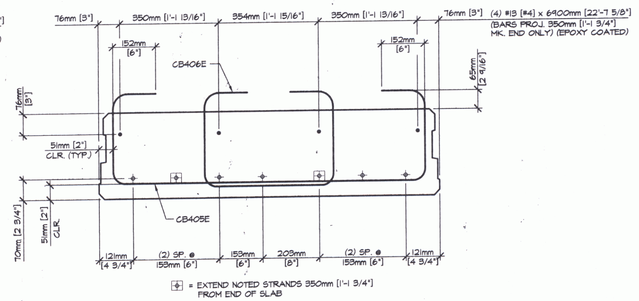
1 B7 DIMENSIONAL SECTION
1:10



2 B7 END BLOCK SECTION
1:10

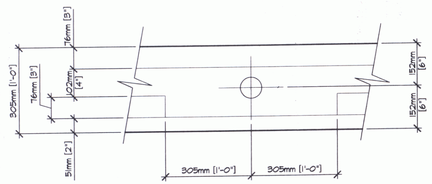


3 B7 END BLOCK SECTION
1:10



⊞ = EXTEND NOTED STRANDS 350mm [1'-1 3/4"] FROM END OF SLAB

4 B7 END BLOCK SECTION
1:10



DETAIL - "B"
1:10

MARK: CSS1	QTY: 8	WT.: 5,788 kg [6.38 T]	VOL.: 2.41 m³ [3.14 cy]

MATERIAL LIST / BEAM

ITEM	MARK	DESCRIPTION	QTY.
1	CB405E	#13 [#4] BENT BAR (EPOXY COATED)	24
2	CB406E	#13 [#4] BENT BAR (EPOXY COATED)	6
3	CB407E	#13 [#4] BENT BAR (EPOXY COATED)	18
4			
5			
6		#13 [#4] x 6400mm [22'-7 5/8"] (EPOXY COATED)	4
7			
8			
9			
10			
11		DOUBLE 13mm [1/2"]ø STRAND LIFTING LOOPS	4
12			

1 3 5 7 6 4 2

DETENSIONING SCHEDULE
N.T.S.

SHOP DRAWING REVIEW
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VHB Vanasse Hangen Brustlin, Inc. Engineers, Planners, and Scientists Six Bedford Farms, Kilton Rd. Bedford, NH 03110 603 644 0808
Job Number: 50755.60
Reviewed By: LSL/MAC
Date: 2/4/16

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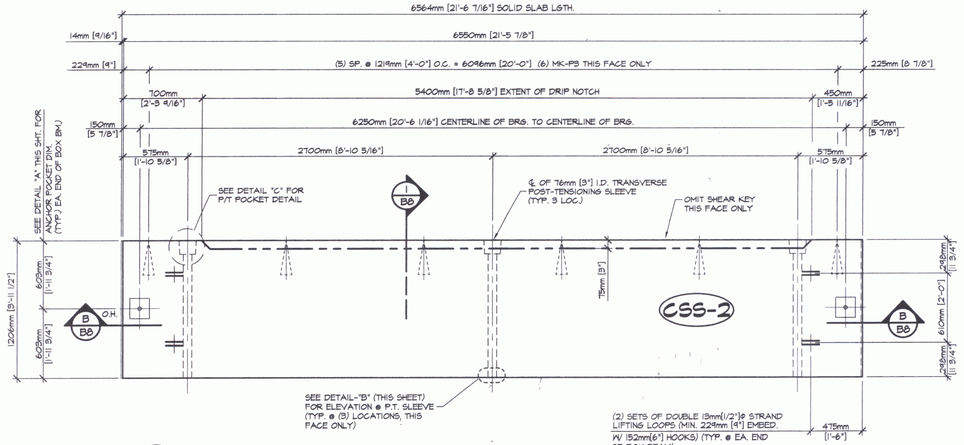
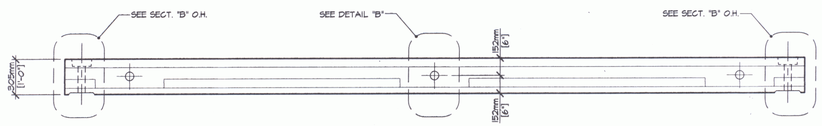
DATE: NOV 14, 2005
SCALE: NOTED
CHKD: - DFTM: T.J.D.
JOB NO: 23229-05
DWG. NO: B7

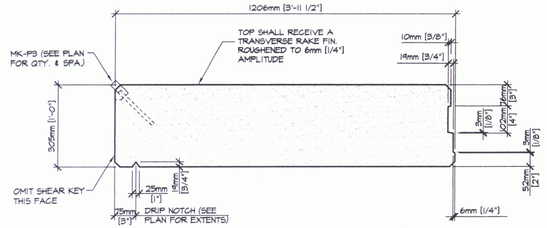
P/S SOLID SLAB DETAILS



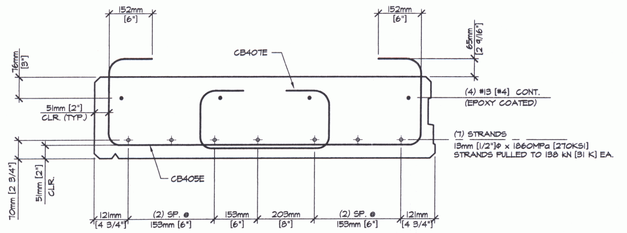
A / B8 DIMENSIONAL PLAN VIEW IN FORM
1:25



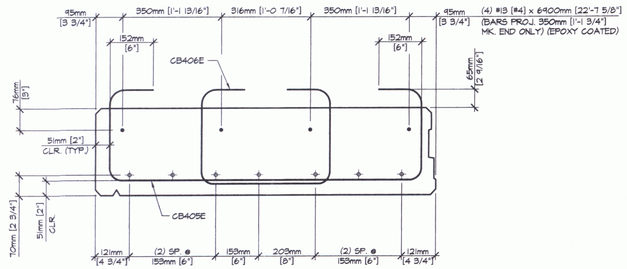
B / B8 DIMENSIONAL ELEVATION VIEW IN FORM
1:25



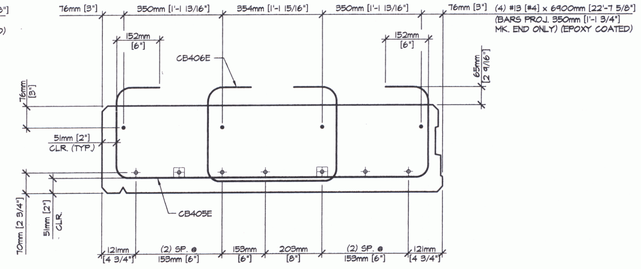
1 / B8 DIMENSIONAL SECTION
1:10



2 / B8 END BLOCK SECTION
1:10

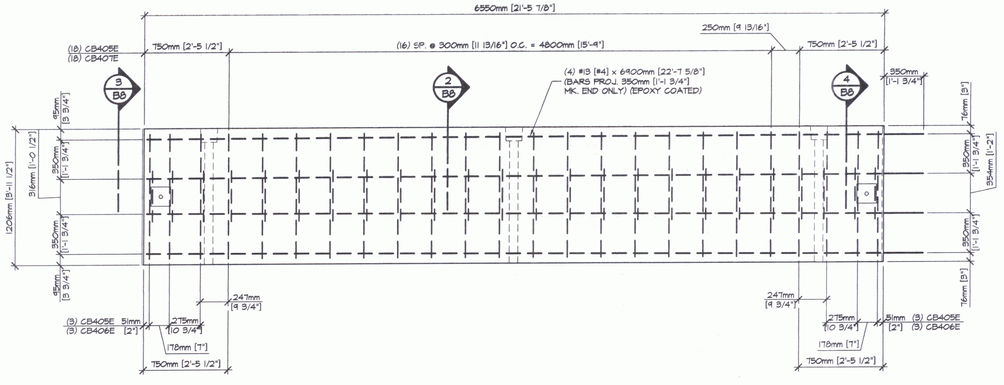


3 / B8 END BLOCK SECTION
1:10



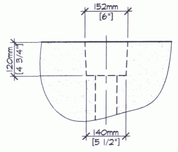
⊞ = EXTEND NOTED STRANDS 350mm [1'-1 3/4"] FROM END OF SLAB

4 / B8 END BLOCK SECTION
1:10

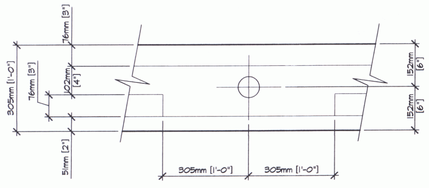


B / B8 REINFORCING PLAN VIEW IN FORM
1:25

SHOP NOTE:
ADJUST REINFORCING AS REQUIRED TO CLEAR SLEEVES, POCKETS, ETC.



DETAIL - "C"
1:10



DETAIL - "B"
1:10

MARK: CSS2	QTY: 1	WT.: 5,788 kg [6.38 T]	VOL.: 2.41 m³ [3.14 cy]

MATERIAL LIST / BEAM

ITEM	MARK	DESCRIPTION	QTY.
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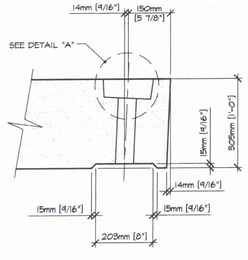
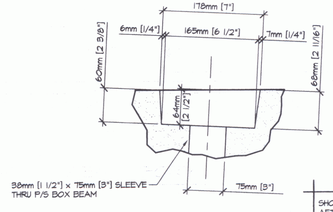
2	CB406E	#13 [#4] BENT BAR (EPOXY COATED)	6
3	CB407E	#13 [#4] BENT BAR (EPOXY COATED)	18
4			
5	MK-P3	DAYTON C24 TYPE 4-APR PRECAST HALF HANGER	6
6		#13 [#4] x 6900mm [22'-7 5/8"] (EPOXY COATED)	4
7			
8			
9			
10			
11		DOUBLE 13mm [1/2"]ø STRAND LIFTING LOOPS	4
12			



SECTION - "B"
1:10



DETAIL - "A"
1:5

SHOP NOTE: SLEEVE TO BE REMOVED AFTER BEAM IS FABRICATED.

① ③ ⑤ ⑦ ⑥ ④ ②

DETENSIONING SCHEDULE
N.T.S.

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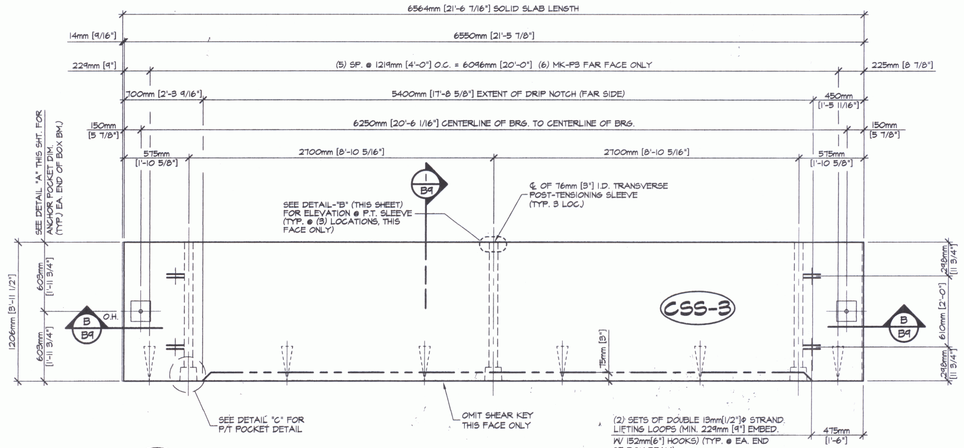
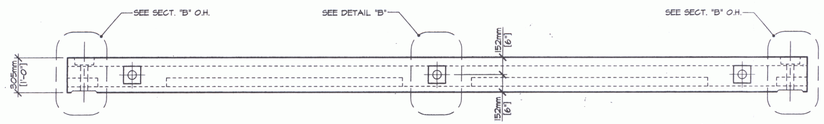
DWG. NO: B8

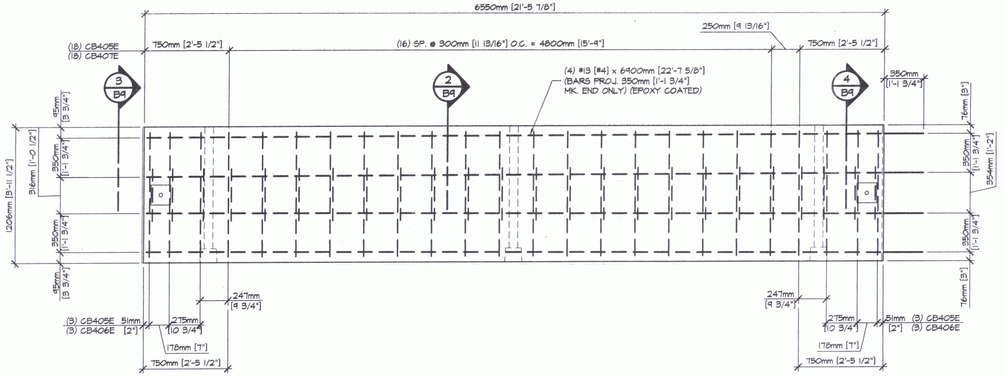
P/S SOLID SLAB DETAILS



A / B9 DIMENSIONAL PLAN VIEW IN FORM
1:25

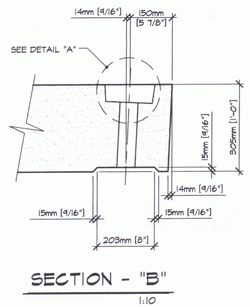


B / B9 DIMENSIONAL ELEVATION VIEW IN FORM
1:25

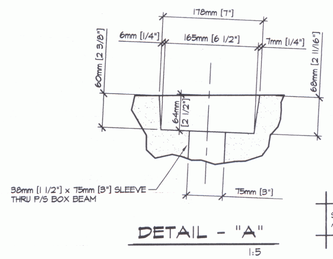


B / B9 REINFORCING PLAN VIEW IN FORM
1:25

SHOP NOTE:
ADJUST REINFORCING AS REQUIRED TO CLEAR SLEEVES, POCKETS, ETC.

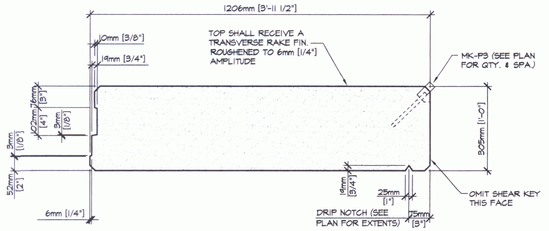


SECTION - "B"
1:10

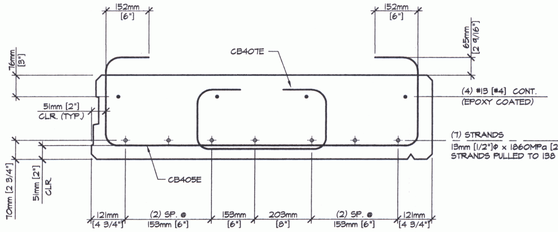


DETAIL - "A"
1:5

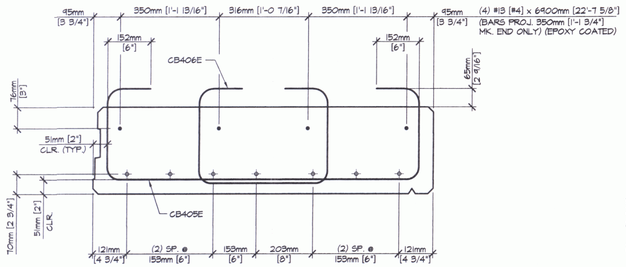
SHOP NOTE: SLEEVE TO BE REMOVED AFTER BEAM IS FABRICATED.



1 / B9 DIMENSIONAL SECTION
1:10



2 / B9 END BLOCK SECTION
1:10



3 / B9 END BLOCK SECTION
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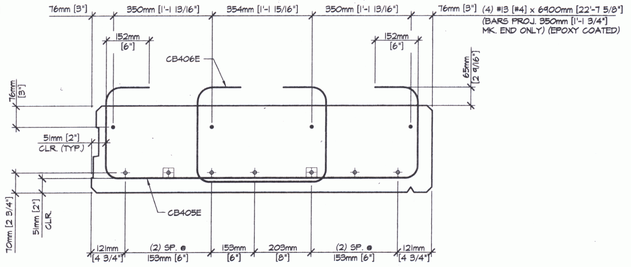
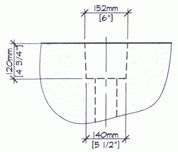
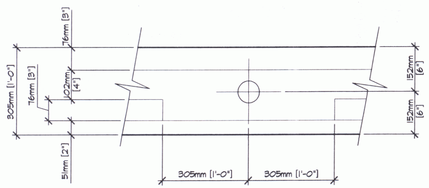


⊞ = EXTEND NOTED STRANDS 350mm [1'-1 3/4"] FROM END OF SLAB

4 / B9 END BLOCK SECTION
1:10



DETAIL - "C"
1:10



DETAIL - "B"
1:10

① ③ ⑤ ⑦ ⑥ ④ ②

DETENSIONING SCHEDULE
N.T.S.

MARK: CSS3	QTY: 1	WT.: 5,788 kg [6.38 T]	VOL.: 2.41 m³ [3.14 cy]

MATERIAL LIST / BEAM

ITEM	MARK	DESCRIPTION	QTY.
1	CB405E	#13 [#4] BENT BAR (EPOXY COATED)	24
2	CB406E	#13 [#4] BENT BAR (EPOXY COATED)	6
3	CB407E	#13 [#4] BENT BAR (EPOXY COATED)	18
4			
5	MK-P3	DAYTON C24 TYPE 4-APR PRECAST HALF HANGER	6
6		#13 [#4] x 6900mm [22'-7 5/8"] (EPOXY COATED)	4
7			
8			
9			
10			
11		DOUBLE 13mm [1/2"]ϕ STRAND LIFTING LOOPS	4
12			

SHOP DRAWING REVIEW

APPROVAL STAMP:

☐ REVIEWED AS NOTED. THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.

☐ REJECTED ☐ REVISE AND RESUBMIT ☑ FURNISH AS CORRECTED

CORRECTIONS OR COMMENTS MADE ON THE SHOP DRAWINGS DURING THIS REVIEW DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. THIS CHECK IS ONLY FOR REVIEW OF GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR: CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS; SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION; COORDINATING HIS WORK WITH THAT OF ALL OTHER TRADES; AND PERFORMING HIS WORK IN A SAFE AND SATISFACTORY MANNER.

VHB Vanasse Hangen Brustlin, Inc. Engineers, Planners, and Scientists Six Bedford Farms, Kitton Rd. Bedford, NH 03110 603 644 0888

Job Number: 50755.60
Reviewed By: ESL/MAC
Date: 7/6/05

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010

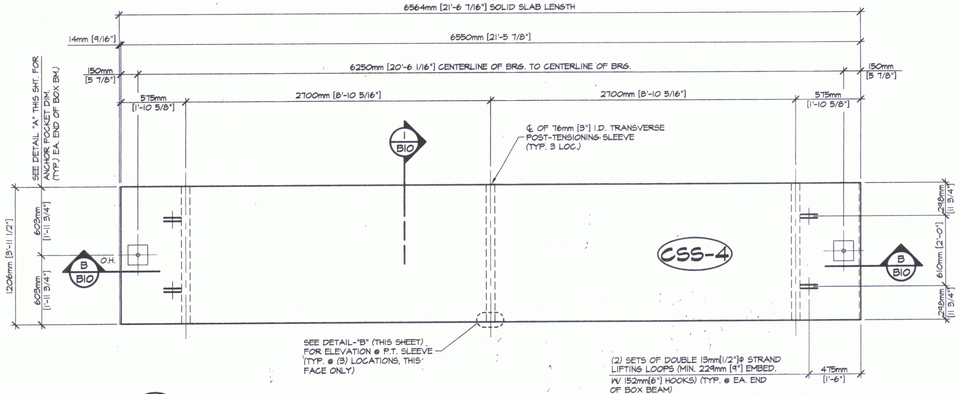
KUBRICKY CONST. CORP.
CONTRACTOR
GLENS FALLS, NEW YORK

STATE OF VERMONT A.O.T.
COUNTY OF CHITTENDEN

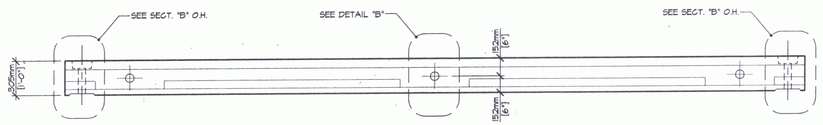
TOWN OF COLCHESTER - SOUTH BURLINGTON
PROJECT: LIME KILN BRIDGE
TH 4/3 (URBAN MINOR ARTERIAL), BRIDGE NO.6

P/S SOLID SLAB DETAILS

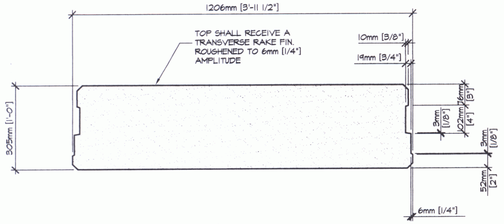
DATE: NOV. 14, 2005
SCALE: NOTED
CHKD: - DFTM: T.J.D.
JOB NO: 23229-05
DWG. NO: B9



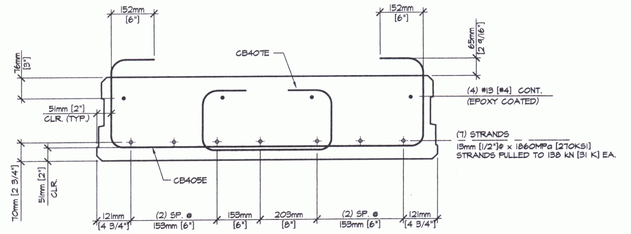
A B10 DIMENSIONAL PLAN VIEW IN FORM
1:25



B B10 DIMENSIONAL ELEVATION VIEW IN FORM
1:25



1 B10 DIMENSIONAL SECTION
1:10



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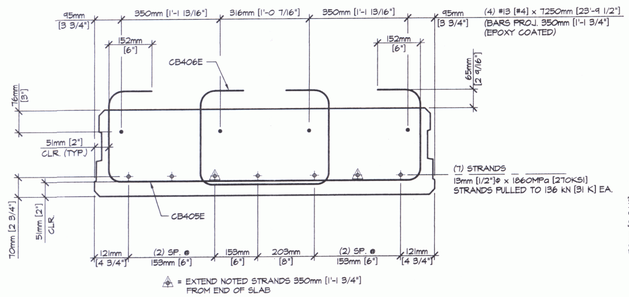

3 B10 END BLOCK SECTION
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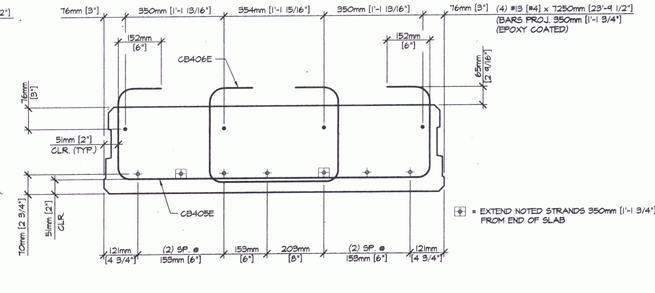

4 B10 END BLOCK SECTION
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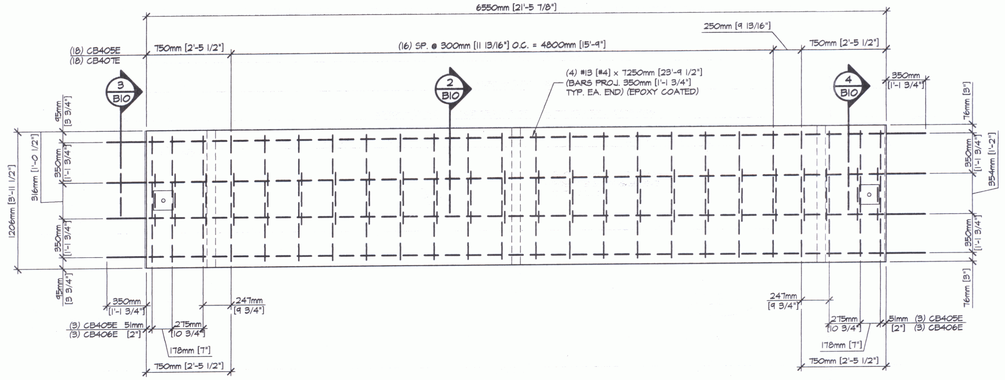
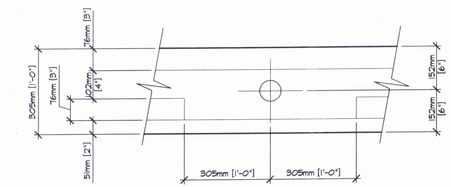


B B10 REINFORCING PLAN VIEW IN FORM
1:25

SHOP NOTE:
ADJUST REINFORCING AS REQUIRED TO CLEAR SLEEVES, POCKETS, ETC.

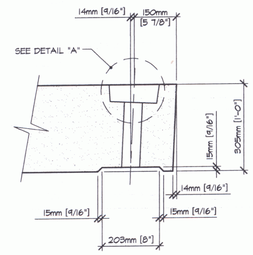


DETAIL - "B"
1:10

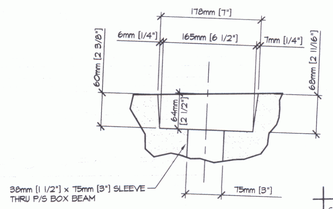
MARK: CSS4	QTY: 32	WT.: 5,788 kg [6.38 T]	VOL.: 2.41 m³ [3.14 cy]

MATERIAL LIST / BEAM

ITEM	MARK	DESCRIPTION	QTY.
1	CB40SE	#13 [#4] BENT BAR (EPOXY COATED)	24
2	CB40TE	#13 [#4] BENT BAR (EPOXY COATED)	6
3	CB40TE	#13 [#4] BENT BAR (EPOXY COATED)	18
4			
5			
6		#13 [#4] x 7250mm [23'-9 1/2"] (EPOXY COATED)	4
7			
8			
9			
10			
11		DOUBLE 13mm [1/2"]ø STRAND LIFTING LOOPS	4
12			



SECTION - "B"
1:10



DETAIL - "A"
1:5

SHOP NOTE: SLEEVE TO BE REMOVED AFTER BEAM IS FABRICATED.

① ③ ⑤ ⑦ ⑥ ④ ②

DETENSIONING SCHEDULE
N.T.S.

SHOP DRAWING REVIEW

APPROVAL STAMP

☐ REVIEWED AS NOTED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY TO CONFIRM GENERAL DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.
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VHB Vanasse Hangen Brustlin, Inc. Engineers, Planners, and Scientists 54 Bedford Farms, Kitton Rd Bedford, NH 03110 603 644 0888

Job Number: 50737.00
Reviewed By: CSL/MAC
Date: 2/6/06

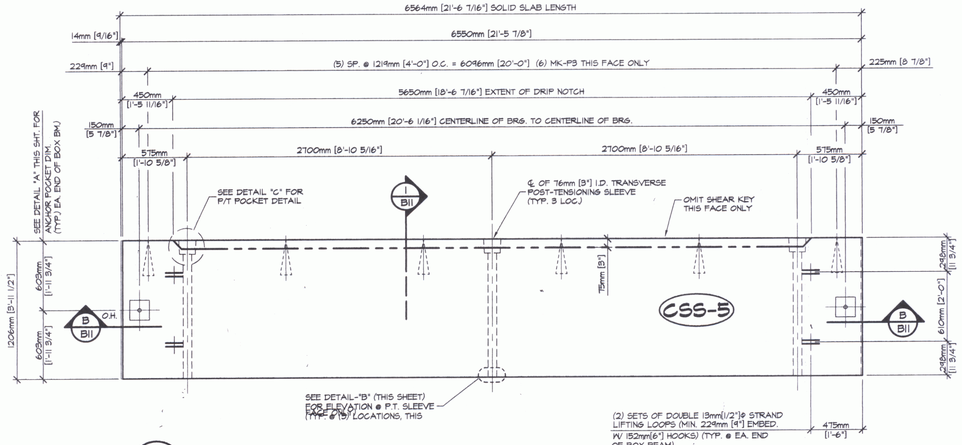
J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010

KUBRICKY CONST. CORP.
CONTRACTOR
GLENS FALLS, NEW YORK

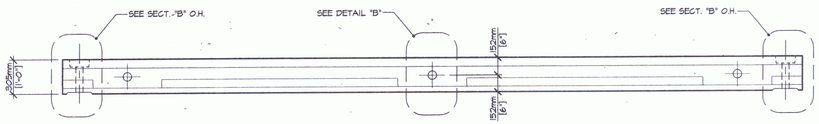
STATE OF VERMONT A.O.T.
COUNTY OF CHITTENDEN
TOWN OF COLCHESTER - SOUTH BURLINGTON
PROJECT: LIME KILN BRIDGE
TH 4/3 (URBAN MINOR ARTERIAL), BRIDGE NO.6

P/S SOLID SLAB DETAILS

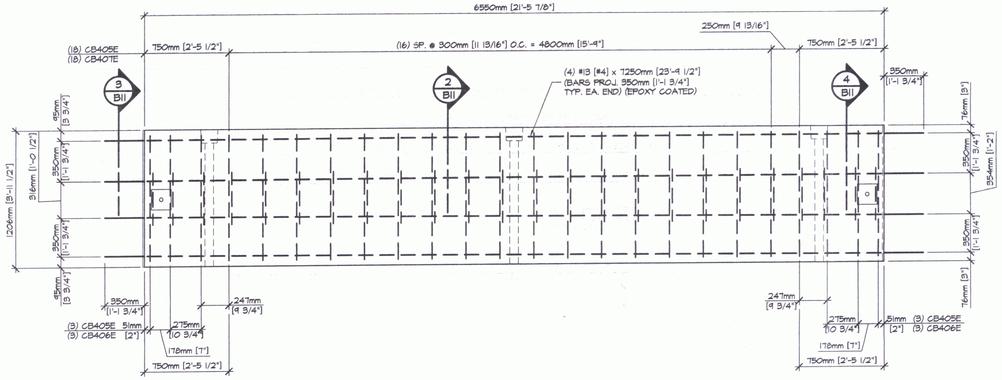
DATE: NOV. 14, 2005
SCALE: NOTED
CHKD: - DFTM: T.J.D.
JOB NO: 23229-05
DWG. NO: B10



A BII DIMENSIONAL PLAN VIEW IN FORM
1:25

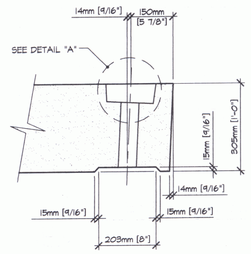


B BII DIMENSIONAL ELEVATION VIEW IN FORM
1:25

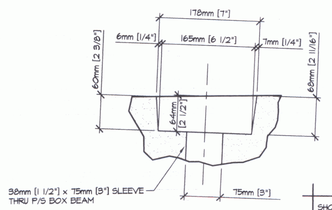


B BII REINFORCING PLAN VIEW IN FORM
1:25

SHOP NOTE:
ADJUST REINFORCING AS REQUIRED TO CLEAR SLEEVES, POCKETS, ETC.

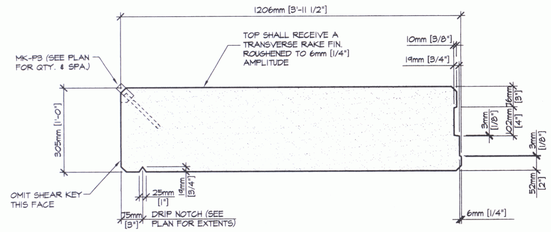


SECTION - "B"
1:10

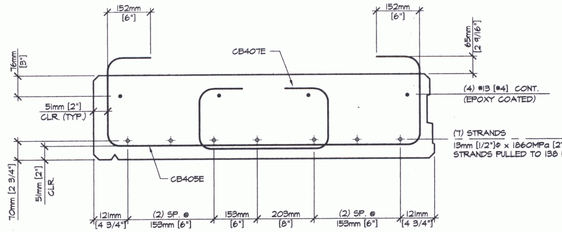


DETAIL - "A"
1:5

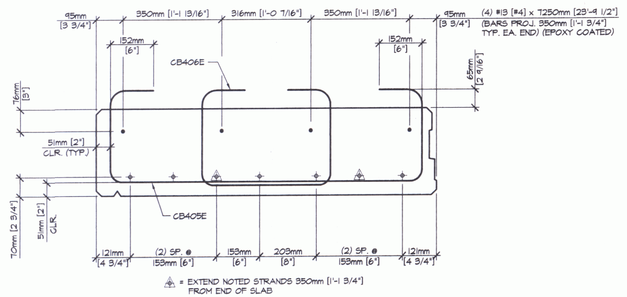
SHOP NOTE: SLEEVE TO BE REMOVED AFTER BEAM IS FABRICATED.



1 BII DIMENSIONAL SECTION
1:10

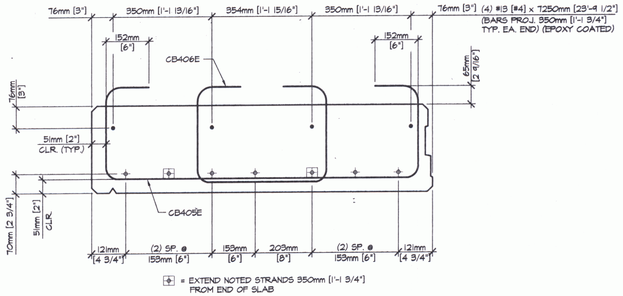


2 BII END BLOCK SECTION
1:10



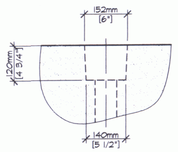
△ = EXTEND NOTED STRANDS 350mm [1'-1 3/4"] FROM END OF SLAB

3 BII END BLOCK SECTION
1:10

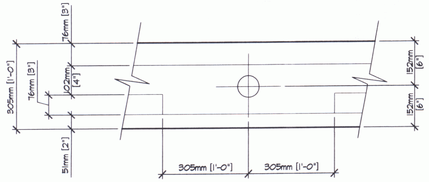


⊕ = EXTEND NOTED STRANDS 350mm [1'-1 3/4"] FROM END OF SLAB

4 BII END BLOCK SECTION
1:10



DETAIL - "C"
1:10



DETAIL - "B"
1:10

1 3 5 7 6 4 2

DETENSIONING SCHEDULE
N.T.S.

MARK: CSS5	QTY: 4	WT.: 5,788 kg [6.38 T]	VOL.: 2.41 m³ [3.14 cy]

MATERIAL LIST / BEAM

ITEM	MARK	DESCRIPTION	QTY.
1	CB405E	#13 [#4] BENT BAR (EPOXY COATED)	24
2	CB406E	#13 [#4] BENT BAR (EPOXY COATED)	6
3	CB407E	#13 [#4] BENT BAR (EPOXY COATED)	18
4			
5	MK-P3	DAYTON C24 TYPE 4-APR PRECAST HALF HANGER	6
6		#13 [#4] x 7250mm [23'-9 7/16"] (EPOXY COATED)	4
7			
8			
9			
10			
11		DOUBLE 13mm [1/2"]ø STRAND LIFTING LOOPS	4
12			

SHOP DRAWING REVIEW
APPROVAL STAMP:
☐ REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.
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VHB Vanasse Hangen Brustlin, Inc. Engineers, Planners, and Scientists Six Bedford Farms, Kitton Rd. Bedford, NH 03110 603 644 0888
Job Number: 59755.60
Reviewed By: LSG/MAC
Date: 7/6/05

J.P. CARRARA & SONS INC.
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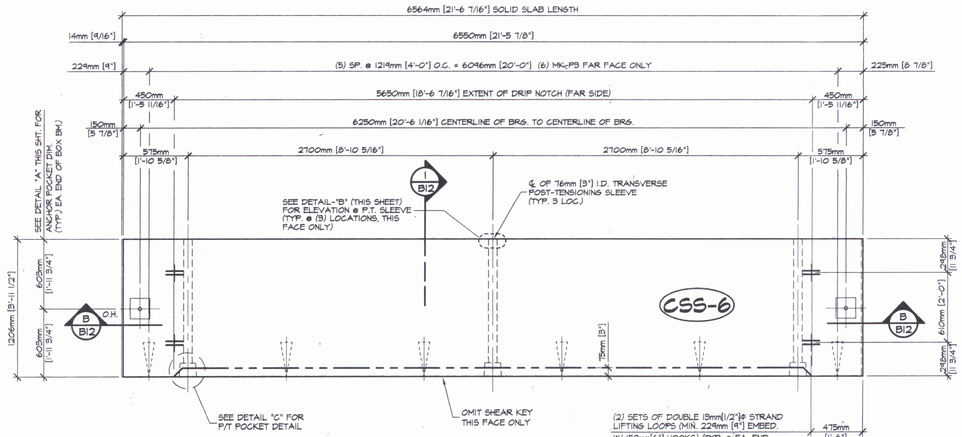
KUBRICKY CONST. CORP.
CONTRACTOR
GLENS FALLS, NEW YORK

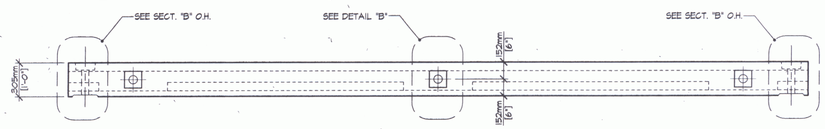
STATE OF VERMONT A.O.T.
COUNTY OF CHITTENDEN
DATE: NOV. 14, 2005
SCALE: NOTED

TOWN OF COLCHESTER - SOUTH BURLINGTON
PROJECT: LIME KILN BRIDGE
TH 4/3 (URBAN MINOR ARTERIAL), BRIDGE NO.6
CHKD: - DFTM: T.J.D.
JOB NO: 23229-05

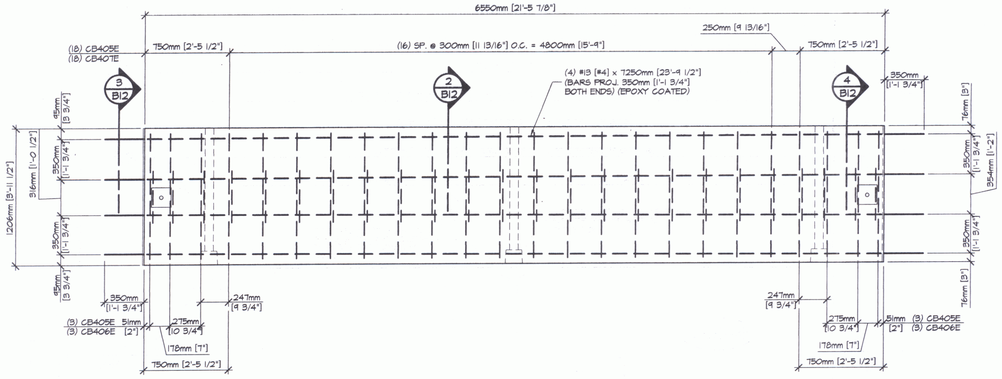
P/S SOLID SLAB DETAILS
DWG. NO: B11



A B12 DIMENSIONAL PLAN VIEW IN FORM
1:25

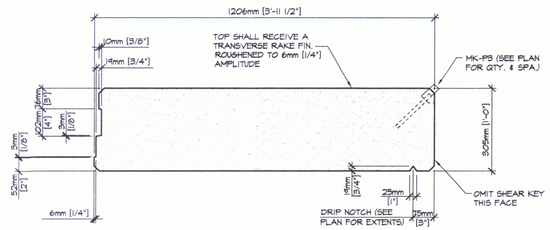


B B12 DIMENSIONAL ELEVATION VIEW IN FORM
1:25

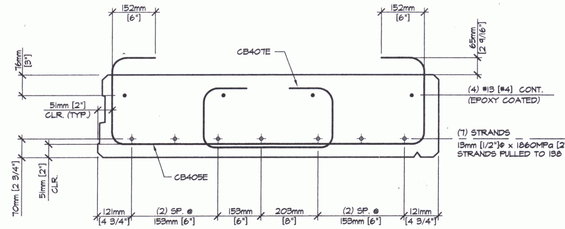


B B12 REINFORCING PLAN VIEW IN FORM
1:25

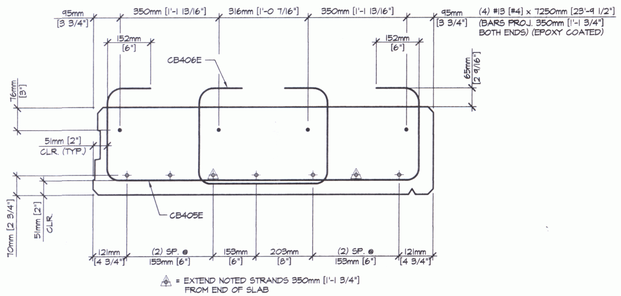
SHOP NOTE:
ADJUST REINFORCING AS REQUIRED TO CLEAR SLEEVES, POCKETS, ETC.



1 B12 DIMENSIONAL SECTION
1:10

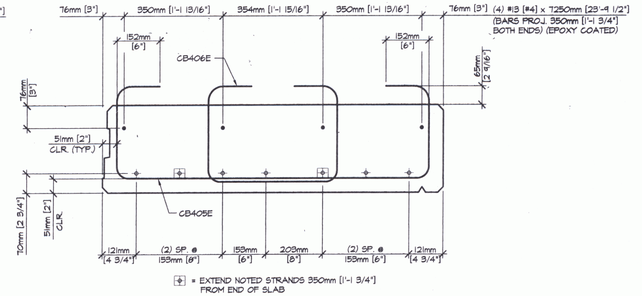


2 B12 END BLOCK SECTION
1:10



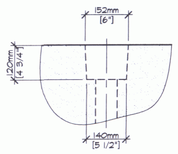
△ = EXTEND NOTED STRANDS 350mm [1'-1 3/4"] FROM END OF SLAB

3 B12 END BLOCK SECTION
1:10

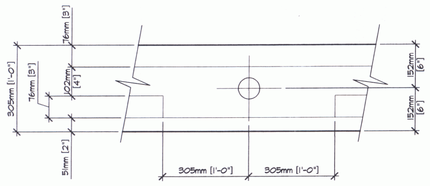


⊞ = EXTEND NOTED STRANDS 350mm [1'-1 3/4"] FROM END OF SLAB

4 B12 END BLOCK SECTION
1:10



DETAIL - "C"
1:10

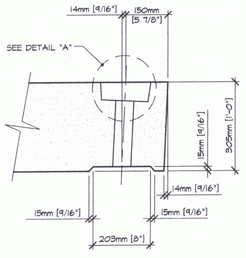


DETAIL - "B"
1:10

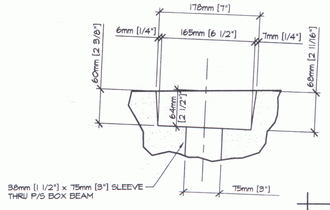
MARK: CSS6	QTY: 4	WT.: 5,788 kg [6.38 T]	VOL.: 2.41 m³ [3.14 cy]

MATERIAL LIST / BEAM

ITEM	MARK	DESCRIPTION	QTY.
1	CB405E	#13 [#4] BENT BAR (EPOXY COATED)	24
2	CB406E	#13 [#4] BENT BAR (EPOXY COATED)	6
3	CB407E	#13 [#4] BENT BAR (EPOXY COATED)	18
4			
5	MK-P3	DAYTON C24 TYPE 4-APR PRECAST HALF HANGER	6
6		#13 [#4] x 7250mm [23'-9 1/2"] (EPOXY COATED)	4
7			
8			
9			
10			
11		DOUBLE 13mm [1/2"]ø STRAND LIFTING LOOPS	4
12			



SECTION - "B"
1:10



DETAIL - "A"
1:5

SHOP NOTE: SLEEVE TO BE REMOVED AFTER BEAM IS FABRICATED.

① ③ ⑤ ⑦ ⑥ ④ ②

DETENSIONING SCHEDULE
N.T.S.

SHOP DRAWING REVIEW

APPROVAL STAMP:

☐ REVIEWED AS NOTED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY TO CONFIRM THE GENERAL DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.

☐ REJECTED ☐ REMISE AND RESUBMIT ☑ FURNISH AS CORRECTED

CORRECTIONS OR COMMENTS MADE ON THE SHOP DRAWINGS DURING THIS REVIEW DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. THIS CHECK IS ONLY FOR REVIEW OF GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR: CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS; SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION; COORDINATING HIS WORK WITH THAT OF ALL OTHER TRADES; AND PERFORMING HIS WORK IN A SAFE AND SATISFACTORY MANNER.

VHB Vanasse Hangen Brustlin, Inc. Engineers, Planners, and Scientists Six Bedford Farms, Kilton Rd. Bedford, NH 03110 603 644 0888

Job Number: 52735.40
Reviewed By: LSH/MAC
Date: 2/4/16

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010

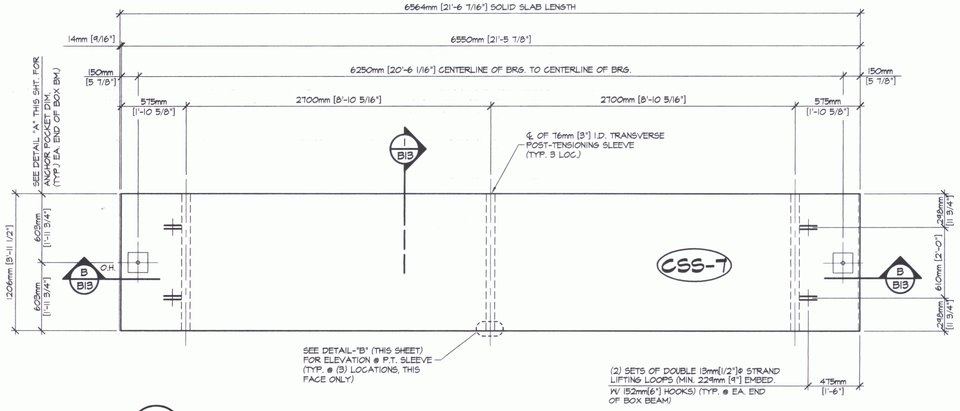
KUBRICKY CONST. CORP.
CONTRACTOR
GLENS FALLS, NEW YORK

STATE OF VERMONT A.O.T.
COUNTY OF CHITTENDEN

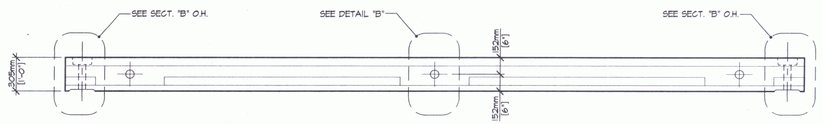
TOWN OF COLCHESTER - SOUTH BURLINGTON
PROJECT: LIME KILN BRIDGE
TH 4/3 (URBAN MINOR ARTERIAL), BRIDGE NO.6

P/S SOLID SLAB DETAILS

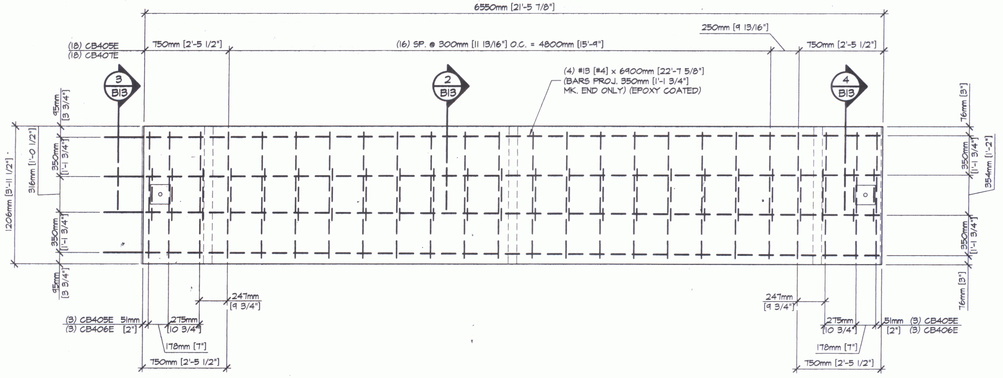
DATE: NOV. 14, 2005
SCALE: NOTED
CHKD: - DFTM: T.J.D.
JOB NO: 23229-05
DWG. NO: B12



A B13 DIMENSIONAL PLAN VIEW IN FORM
1:25

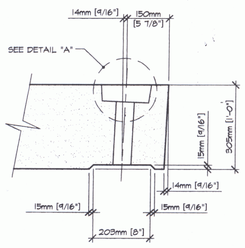


B B13 DIMENSIONAL ELEVATION VIEW IN FORM
1:25

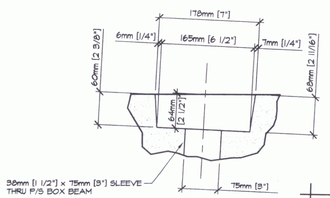


B B13 REINFORCING PLAN VIEW IN FORM
1:25

SHOP NOTE:
ADJUST REINFORCING AS REQUIRED TO CLEAR SLEEVES, POCKETS, ETC.

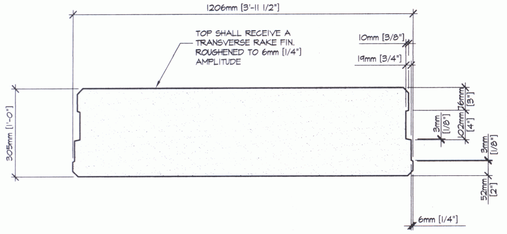


SECTION - "B"
1:10

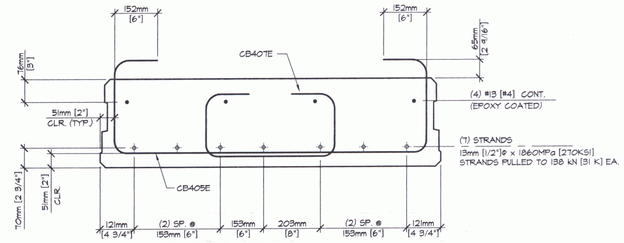


DETAIL - "A"
1:5

SHOP NOTE: SLEEVE TO BE REMOVED AFTER BEAM IS FABRICATED.



1 B13 DIMENSIONAL SECTION
1:10



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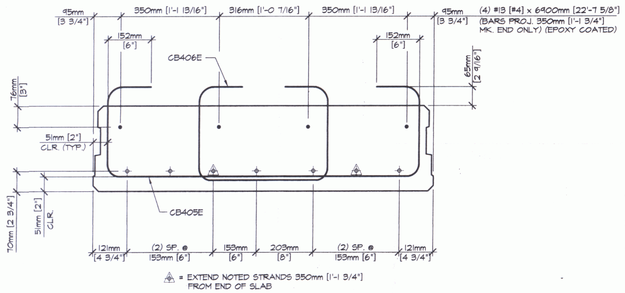
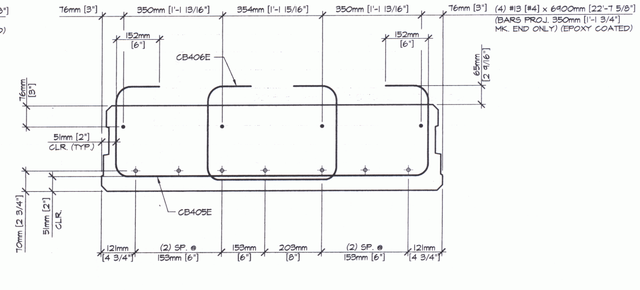
1:10



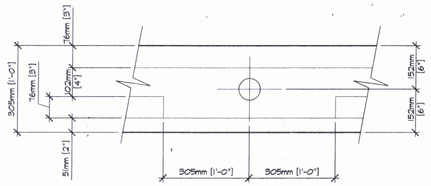
3 B13 END BLOCK SECTION
1:10



4 B13 END BLOCK SECTION
1:10

1 3 5 7 6 4 2

DETENSIONING SCHEDULE
N.T.S.



DETAIL - "B"
1:10

MARK: CSS7	QTY: 8	WT.: 5,788 kg [6.38 T]	VOL.: 2.41 m³ [3.14 cy]

MATERIAL LIST / BEAM

ITEM	MARK	DESCRIPTION	QTY.
1	CB405E	#13 [#4] BENT BAR (EPOXY COATED)	24
2	CB406E	#13 [#4] BENT BAR (EPOXY COATED)	6
3	CB407E	#13 [#4] BENT BAR (EPOXY COATED)	18
4			
5			
6		#13 [#4] x 6900mm [22'-7 5/8"] (EPOXY COATED)	4
7			
8			
9			
10			
11		DOUBLE 13mm [1/2"]ø STRAND LIFTING LOOPS	4
12			

SHOP DRAWING REVIEW

APPROVAL STAMP:

☐ REVIEWED ☐ NOT REVIEWED

☐ REJECTED ☐ REVISE AND RESUBMIT ☑ FURNISH AS CORRECTED

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VHB Vanasse Hangen Brustlin, Inc. Engineers, Planners, and Scientists Six Bedford Farms, Kilton Rd. Bedford, NH 03110 603 644 0888

Job Number: 50755.60
Reviewed By: ASC/MAC
Date: 2/6/06

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010

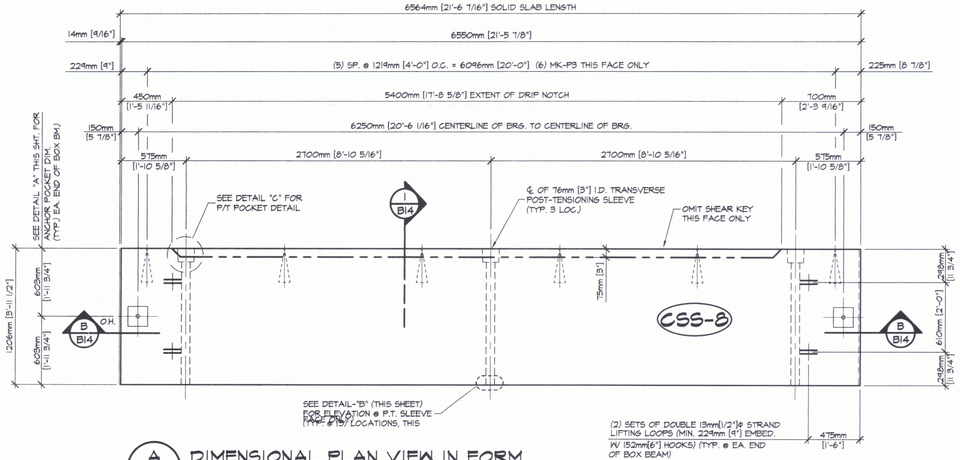
KUBRICKY CONST. CORP.
CONTRACTOR
GLENS FALLS, NEW YORK

STATE OF VERMONT A.O.T.
COUNTY OF CHITTENDEN

TOWN OF COLCHESTER - SOUTH BURLINGTON
PROJECT: LIME KILN BRIDGE
TH 4/3 (URBAN MINOR ARTERIAL), BRIDGE NO.6

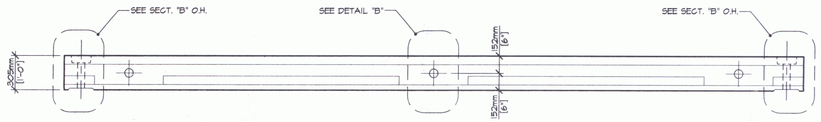
P/S SOLID SLAB DETAILS

DATE: NOV. 14, 2005
SCALE: NOTED
CHKD: - DFTM: T.J.D.
JOB NO: 23229-05
DWG. NO: B13



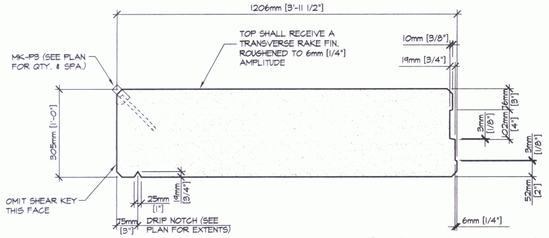
A B14 DIMENSIONAL PLAN VIEW IN FORM

1:25



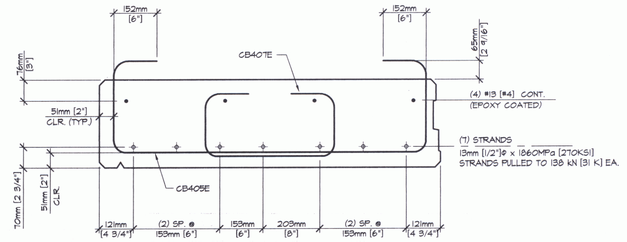
B B11 DIMENSIONAL ELEVATION VIEW IN FORM

1:25



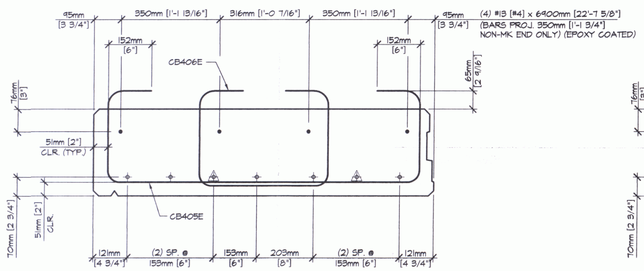
1 B14 DIMENSIONAL SECTION

1:10



2 B14 END BLOCK SECTION

1:10



3 B14 END BLOCK SECTION

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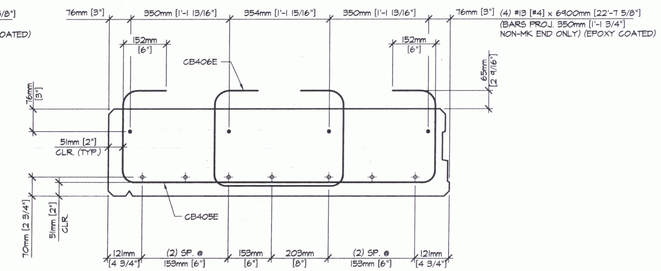

4 B14 END BLOCK SECTION

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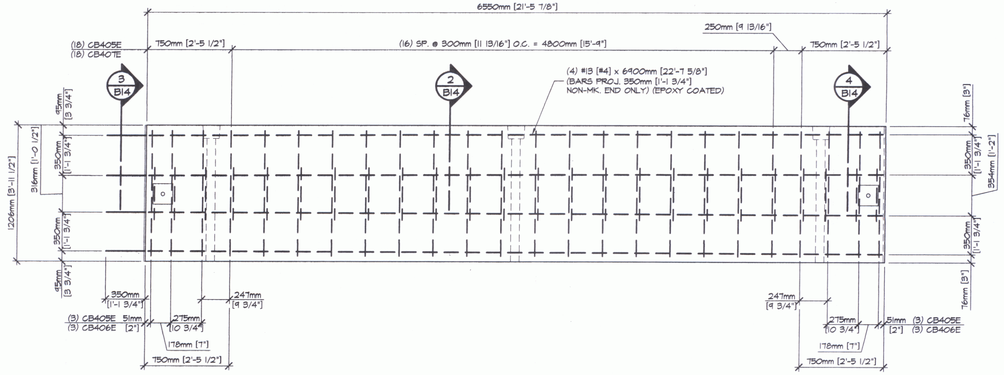
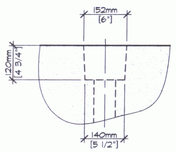


B B14 REINFORCING PLAN VIEW IN FORM

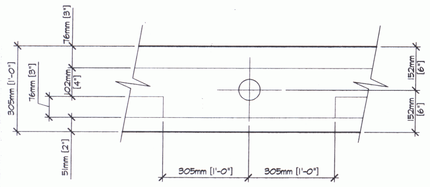
1:25

SHOP NOTE:
ADJUST REINFORCING AS REQUIRED TO CLEAR SLEEVES, POCKETS, ETC.



DETAIL - "C"

1:10



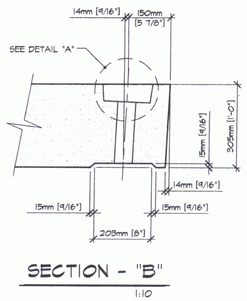
DETAIL - "B"

1:10

MARK: CSS8	QTY: 1	WT.: 5,788 kg [6.38 T]	VOL.: 2.41 m^3 [3.14 cy]

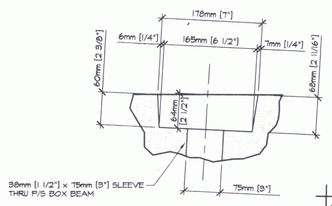
MATERIAL LIST / BEAM

ITEM	MARK	DESCRIPTION	QTY.
1	CB40SE	#13 [#4] BENT BAR (EPOXY COATED)	24
2	CB40GE	#13 [#4] BENT BAR (EPOXY COATED)	6
3	CB40TE	#13 [#4] BENT BAR (EPOXY COATED)	18
4			
5	MK-P3	DAYTON C24 TYPE 4-APR PRECAST HALF HANGER	6
6		#13 [#4] x 6900mm [22'-7 5/8"] (EPOXY COATED)	4
7			
8			
9			
10			
11		DOUBLE 13mm [1/2"]ø STRAND LIFTING LOOPS	4
12			



SECTION - "B"

1:10



DETAIL - "A"

1:5

SHOP NOTE: SLEEVE TO BE REMOVED AFTER BEAM IS FABRICATED.

① ③ ⑤ ⑦ ⑥ ④ ②

DETENSIONING SCHEDULE

N.T.S.

SHOP DRAWING REVIEW

APPROVAL STAMP:

☐ REVIEWED AS NOTED - CONSTRUCTION CONTRACT DOCUMENTS ARE APPROVED, BUT ONLY AS TO CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.

☐ REJECTED ☐ REMISE AND RESUBMIT ☒ FURNISH AS CORRECTED

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VHB Vanasse Hangen Brustlin, Inc. Engineers, Planners, and Scientists Six Bedford Farms, Kitson Rd. Bedford, NH 03110 603 644 0888

Job Number: 58735.00
Reviewed By: LSG / MAC
Date: 2/6/06

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
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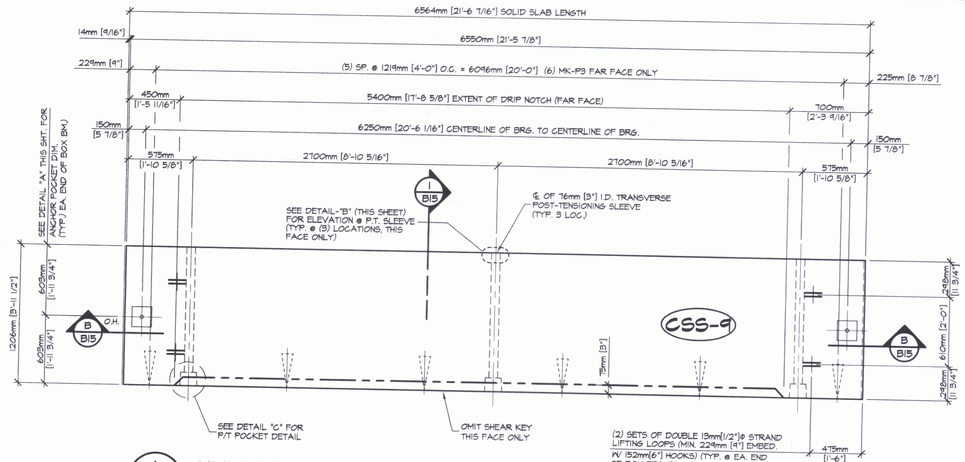
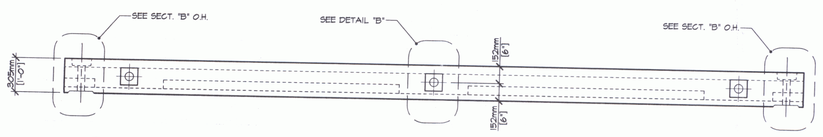
TOWN OF COLCHESTER - SOUTH BURLINGTON
PROJECT: LIME KILN BRIDGE
TH 4/3 (URBAN MINOR ARTERIAL), BRIDGE NO.6

P/S SOLID SLAB DETAILS

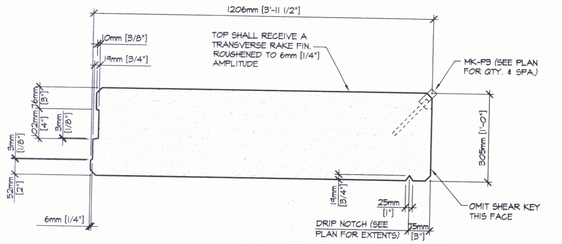
DATE: NOV. 14, 2005
SCALE: NOTED
CHKD: - DFTM: T.J.D.
JOB NO: 23229-05
DWG. NO: B14



A B15 DIMENSIONAL PLAN VIEW IN FORM
1:25



B B15 DIMENSIONAL ELEVATION VIEW IN FORM
1:25



1 B15 DIMENSIONAL SECTION
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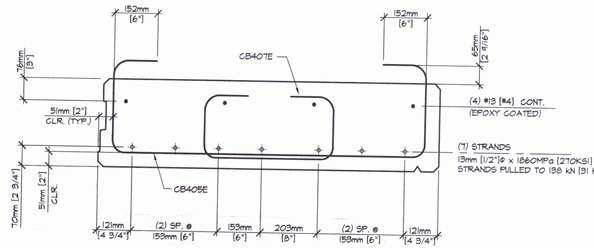

2 B15 END BLOCK SECTION
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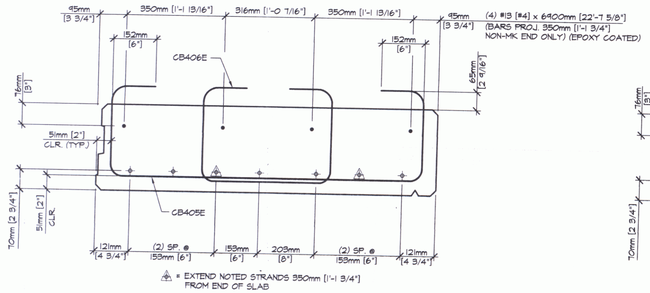

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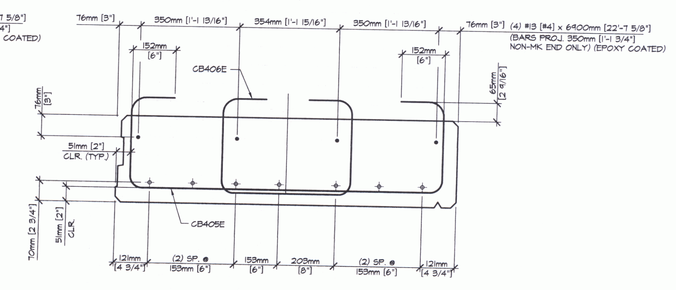

4 B15 END BLOCK SECTION
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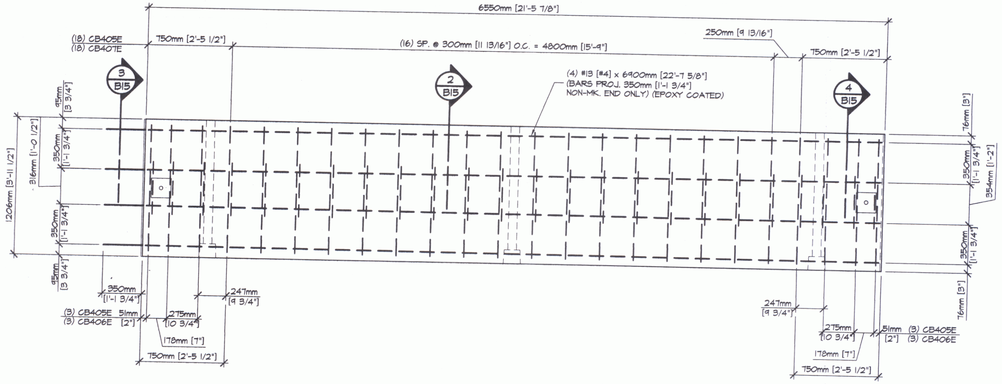
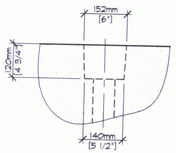
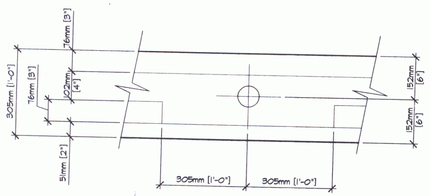


B B15 REINFORCING PLAN VIEW IN FORM
1:25

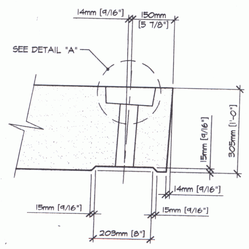
SHOP NOTE:
ADJUST REINFORCING AS REQUIRED TO CLEAR SLEEVES, POCKETS, ETC.



DETAIL - "C"
1:10



DETAIL - "B"
1:10



SECTION - "B"
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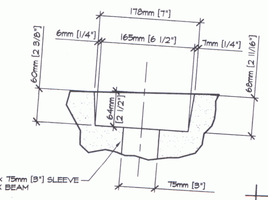

DETAIL - "A"
1:5

SHOP NOTE: SLEEVE TO BE REMOVED AFTER BEAM IS FABRICATED.

① ③ ⑤ ⑦ ⑥ ④ ②

DETENSIONING SCHEDULE
N.T.S.

SHOP DRAWING REVIEW

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APPROVAL STAMP
VHB Vanasse Hangen Brustlin, Inc. Engineers, Planners, and Scientists Six Bedford Farms, Kitton Rd. Bedford, NH 03110 603 644 0888
Job Number: 50737.00
Reviewed By: LSL/MAC
Date: 2/6/06

MARK: CSS9	QTY: 1	WT.: 5,788 kg [6.38 T]	VOL.: 2.41 m³ [3.14 cy]

MATERIAL LIST / BEAM

ITEM	MARK	DESCRIPTION	QTY.
1	CB405E	#13 [#4] BENT BAR (EPOXY COATED)	24
2	CB406E	#13 [#4] BENT BAR (EPOXY COATED)	6
3	CB407E	#13 [#4] BENT BAR (EPOXY COATED)	18
4			
5	MK-P3	DAYTON C24 TYPE 4-APR PRECAST HALF HANGER	6
6		#13 [#4] x 6900mm [22'-7 5/8"] (EPOXY COATED)	4
7			
8			
9			
10			
11		DOUBLE 13mm [1/2"]ø STRAND LIFTING LOOPS	4
12			

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010

KUBRICKY CONST. CORP.
CONTRACTOR
GLENS FALLS, NEW YORK

STATE OF VERMONT A.O.T.
COUNTY OF CHITTENDEN

TOWN OF COLCHESTER - SOUTH BURLINGTON
PROJECT: LIME KILN BRIDGE
TH 4/3 (URBAN MINOR ARTERIAL), BRIDGE NO.6

P/S SOLID SLAB DETAILS

DATE: NOV. 14, 2005
SCALE: NOTED
CHKD: - DFTM: T.J.D.
JOB NO: 23229-05
DWG. NO: B15

BENT BARS, TIES, & STIRRUPS

ITEM	MARK	QTY.	SIZE	LENGTH	TYPE	A	B	C	D	E	F/R	G	H	J	K	O	GRADE	REMARKS
1	401E	560	#13 [#4]	2984mm [9'-9 1/2"]	S10		965mm [3'-2"]	1105mm [3'-7 1/2"]	965mm [3'-2"]								420 [60]	EPOXY COATED
2	402E	560	#13 [#4]	1664mm [5'-5 1/2"]	S10		305mm [1'-0"]	1105mm [3'-7 1/2"]	305mm [1'-0"]								420 [60]	EPOXY COATED
3	403E	500	#13 [#4]	1842mm [6'-0 1/2"]	L4	380mm [1'-3"]	260mm [10 1/4"]	212mm [8 3/8"]	285mm [11 3/16"]	212mm [8 3/8"]	260mm [10 1/4"]	380mm [1'-3"]	150mm [5 7/8"]		150mm [5 7/8"]	1105mm [3'-7 1/2"]	**420 [60]**	EPOXY COATED
4	404E	560	#13 [#4]	1245mm [4'-1"]	S10		305mm [1'-0"]	965mm [3'-2"]									420 [60]	EPOXY COATED
5	405E	1440	#13 [#4]	2045mm [6'-4 1/2"]	S6	152mm [6"]	318mm [1'-0 1/2"]	1105mm [3'-7 1/2"]	318mm [1'-0 1/2"]			152mm [6"]					420 [60]	EPOXY COATED
6	406E	360	#13 [#4]	1295mm [4'-3"]	S6	152mm [6"]	318mm [1'-0 1/2"]	457mm [1'-6"]	318mm [1'-0 1/2"]			152mm [6"]					420 [60]	EPOXY COATED
7	407E	1080	#13 [#4]	1067mm [3'-6"]	S6	152mm [6"]	203mm [8"]	457mm [1'-6"]	203mm [8"]			152mm [6"]					420 [60]	EPOXY COATED
8	408E	880	#13 [#4]	3010mm [9'-10 1/2"]	S10		965mm [3'-2"]	1130mm [3'-8 1/2"]	965mm [3'-2"]								420 [60]	EPOXY COATED
9	409E	880	#13 [#4]	1689mm [5'-6 1/2"]	S10		305mm [1'-0"]	1130mm [3'-8 1/2"]	305mm [1'-0"]								420 [60]	EPOXY COATED
10	410E	820	#13 [#4]	1867mm [6'-1 1/2"]	L4	380mm [1'-3"]	273mm [10 3/4"]	212mm [8 3/8"]	285mm [11 3/16"]	212mm [8 3/8"]	273mm [10 3/4"]	380mm [1'-3"]	150mm [5 7/8"]		150mm [5 7/8"]	1130mm [3'-8 1/2"]	420 [60]	EPOXY COATED
11		240	#13 [#4]	1105mm [3'-7 1/2"]	STR.												420 [60]	EPOXY COATED
12		80	#13 [#4]	6900mm [22'-7 5/8"]	STR.												420 [60]	EPOXY COATED
13		160	#13 [#4]	7250mm [23'-9 1/2"]	STR.												420 [60]	EPOXY COATED
14		80	#25 [#8]	1105mm [3'-7 1/2"]	STR.												420 [60]	EPOXY COATED
15																		

MISCELLANEOUS MATERIAL

ITEM	MARK	QTY.	DESCRIPTION	REMARKS
1	MKP3	154	DAYTON C24 TYPE 4-APR PRECAST HALF HANGER	FOR ERECTION (SEE DETAIL, THIS SHEET)
2		20	BOX VOID 947mm [3'-1 1/4"] x 787mm [2'-7"] x 8023mm [26'-3 7/8"]	
3		20	BOX VOID 947mm [3'-1 1/4"] x 787mm [2'-7"] x 14653mm [48'-0 7/8"]	
4		80	19mm [3/4"]ø x 140mm [5 1/2"] NON-FERROUS VOID DRAINS	
5		560	DOUBLE 13mm [1/2"]ø STRAND LIFTING LOOPS	
6		160	FOUR 13mm [1/2"]ø STRAND LIFTING LOOPS	
7	EM-1	60	PL 19mm [3/4"] x 127mm [5"] x 127mm [5"] W/ (1) 51mm [2"]ø HOLE (GALV.)	FOR ERECTION (SEE DETAIL, THIS SHEET)
8		60	13mm [1/2"]ø x 13259mm [43'-6"] POLYSTRAND	
9		60	SINGLE USE STRESSING CHUCK	
10	EM-3	160	PL 13mm [1/2"] x 127mm [5"] x 127mm [5"] W/ (1) 38mm [1 1/2"]ø HOLE (GALV.)	FOR ERECTION (SEE DETAIL, THIS SHEET)
11		160	WWF 102 x 102 - MW26 x MW26 [WWF 4 x 4 - W4 x W4] / 965mm x 1105mm [3'-2" x 3'-7 1/2"]	
12				
13		40	THREADED ROD 32mm [1 1/4"]ø x 1540mm [5'-0 5/8"] (HOT DIPPED GALV.) (A36)	FOR ERECTION (SEE DETAIL, THIS SHEET)
14		120	THREADED ROD 32mm [1 1/4"]ø x 725mm [2'-4 1/2"] (HOT DIPPED GALV.) (A36)	FOR ERECTION (SEE DETAIL, THIS SHEET)
15		160	32mm [1 1/4"]ø NUT (GALV.)	FOR ERECTION (SEE DETAIL, THIS SHEET)
16		160	STANDARD WASHER (GALV.)	FOR ERECTION (SEE DETAIL, THIS SHEET)
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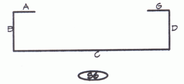
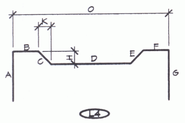
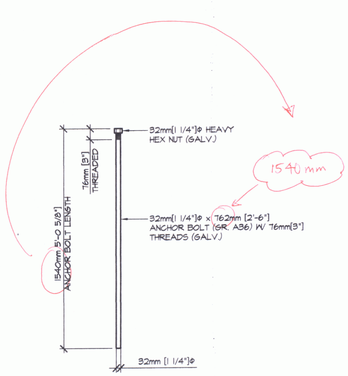
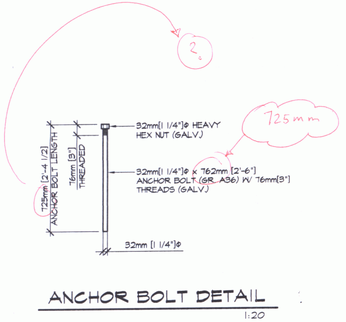






ANCHOR BOLT DETAIL
1:20



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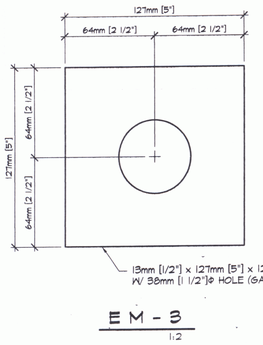
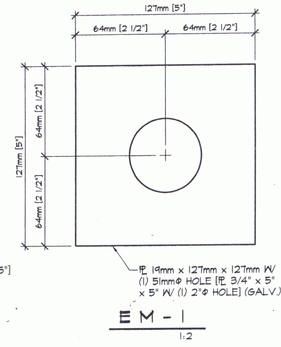


EM - 3
1:2



EM - 1
1:2

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TOWN OF COLCHESTER - SOUTH BURLINGTON
PROJECT: LIME KILN BRIDGE
TH 4/3 (URBAN MINOR ARTERIAL), BRIDGE NO.6

JOB NO: 23229-05

MATERIALS LIST

DWG. NO: M1

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