

# STATE OF VERMONT AGENCY OF TRANSPORTATION



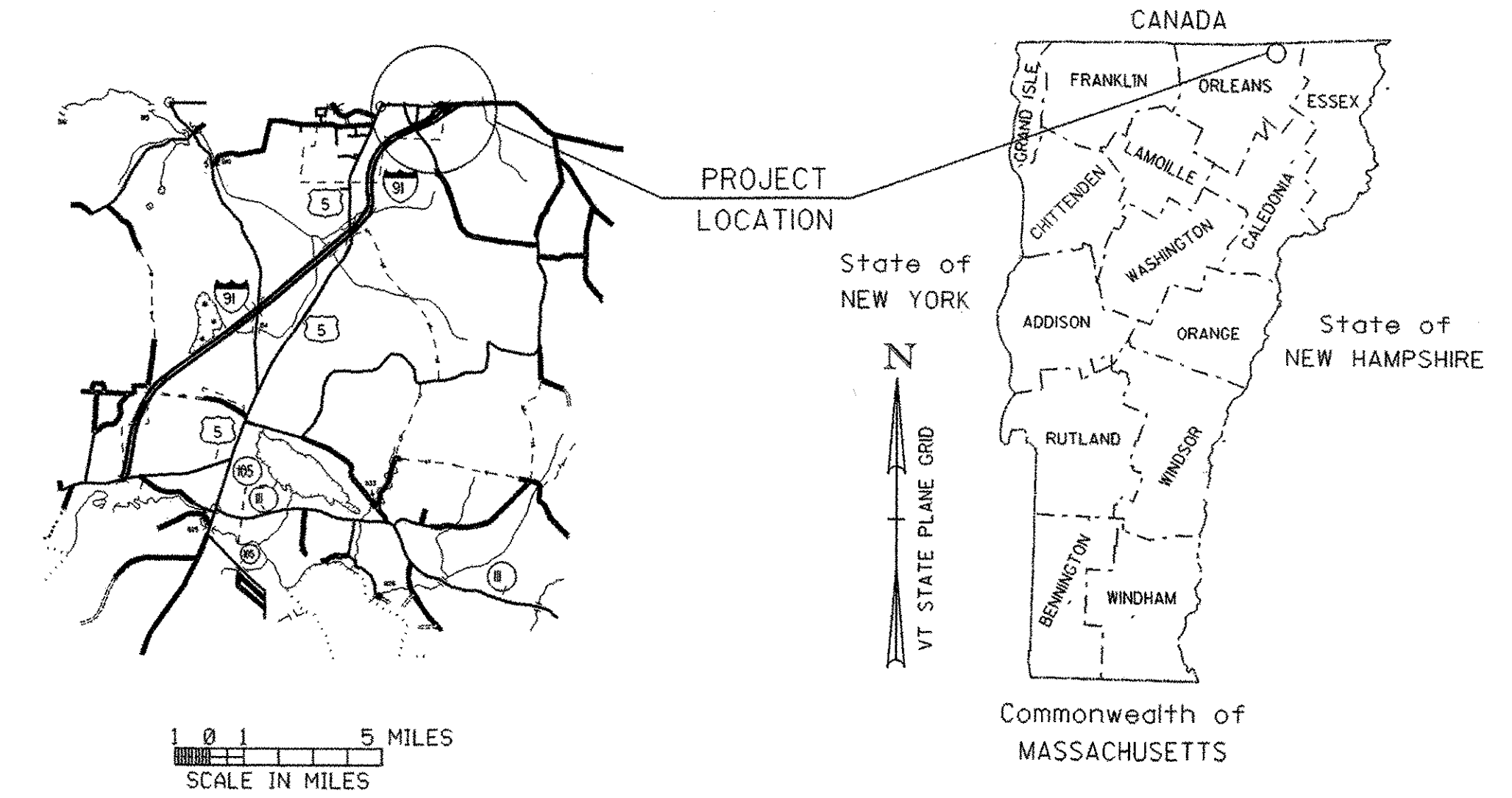
## PROPOSED IMPROVEMENT

### TOWN OF DERBY COUNTY OF ORLEANS INTERSTATE 91

BEGINNING AT A POINT ON I-91 APPROXIMATELY 345 FEET SOUTH OF THE BORDER  
IN THE SOUTHBOUND LANE, AND EXTENDING NORTHERLY 335 FEET

LENGTH OF ROADWAY = 335 FEET = 0.063 MILES  
LENGTH OF PROJECT = 335 FEET = 0.063 MILES

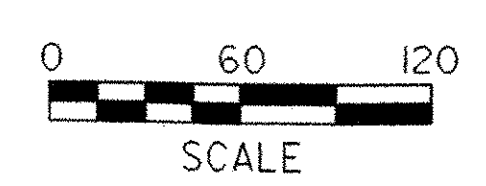
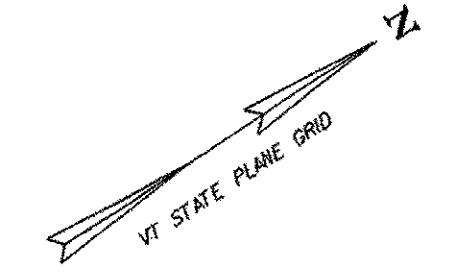
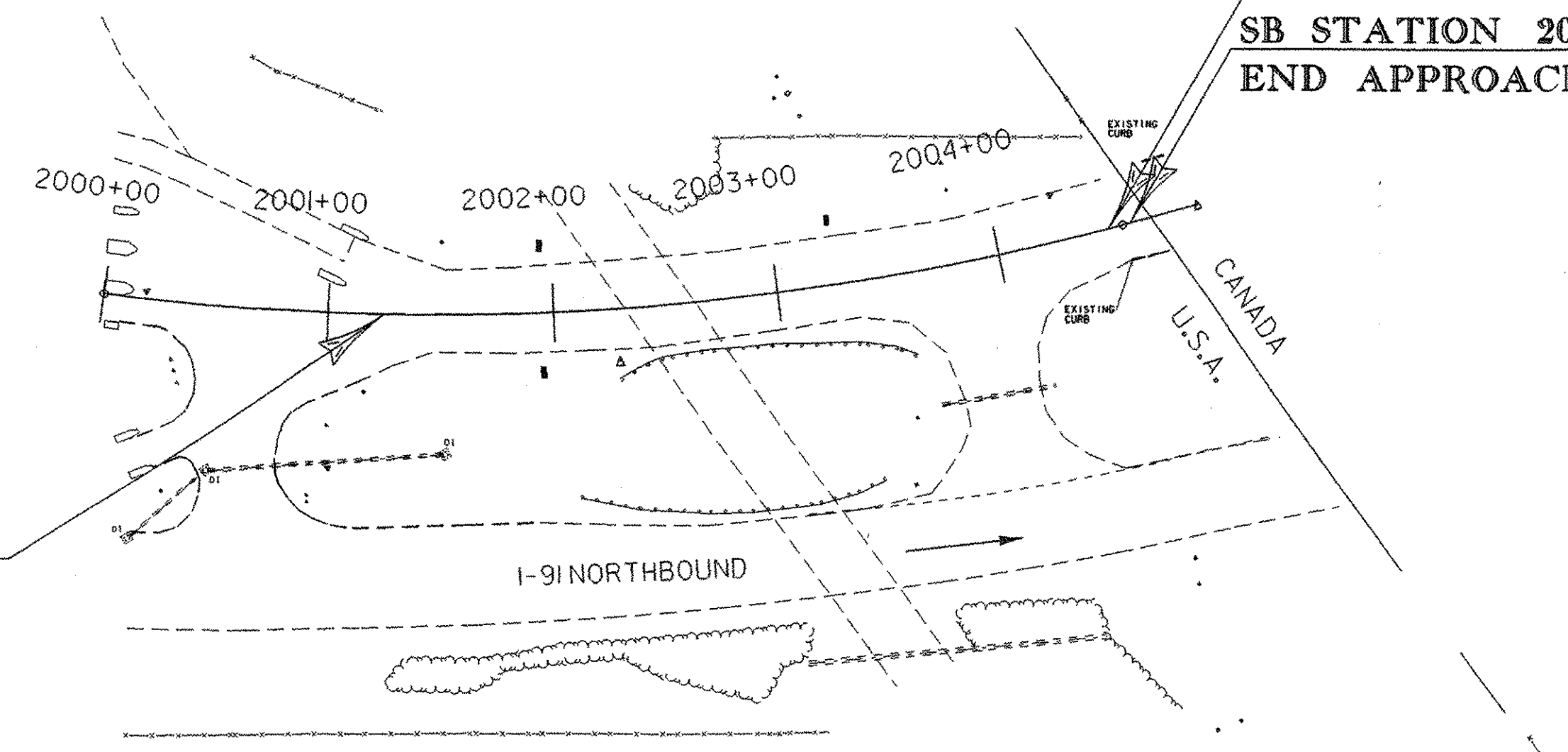
WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES SOUTHBOUND LANE WIDENING  
OF EXISTING 10' SHOULDERS TO NEW 12' TRUCK LANES, AS WELL AS NEW 6' SHOULDERS.  
WORK WILL ALSO INCLUDE SUBBASE, GRADING, GUARDRAIL, AND OTHER ROADWAY RELATED  
ITEMS.



RECORD PLANS	
CONTRACTOR:	CAPITOL EARTHMOVING, INC. - BARRE, VT
RESIDENT ENGINEER:	DOUG BUMP <i>S</i>
CONSTRUCTION BEGAN:	September 21, 2006
CONSTRUCTION COMPLETE:	NOVEMBER 7, 2006
RECORD PLANS BY:	DOUG BUMPS & C. PIERCE
I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.	
BY:	<i>Douglas Bump</i> RESIDENT ENGINEER
DATE:	5/11/07
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.	

**SB STATION 2004+50  
END PROJECT  
BEGIN APPROACH  
SB STATION 2004+60  
END APPROACH**

**SB STATION 2001+25  
BEGIN PROJECT**



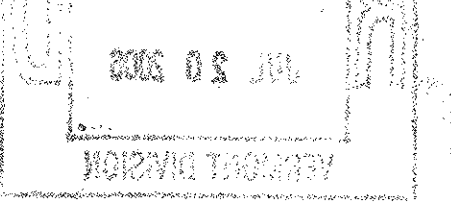
CONVENTIONAL SYMBOLS	
COUNTY LINE	
TOWN LINE	
LIMITS OF ACCESS	
POINT OF ACCESS	
FENCE LINE	
STONE WALL	
TRAVELED WAY	
GUARD RAIL	
RAILROAD	
SURVEY LINE	
CULVERT	
POWER POLE	
TELEPHONE POLE	
TREES	
CONTROL OF ACCESS	
PROPERTY LINE	
R.O.W. TAKING LINE	
SLOPE RIGHTS	
TOP OF CUT	
TOE OF SLOPE	

SURVEYED BY :	R. GILMAN
SURVEYED DATE :	DEC. 2003
DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD-83 (96)

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.

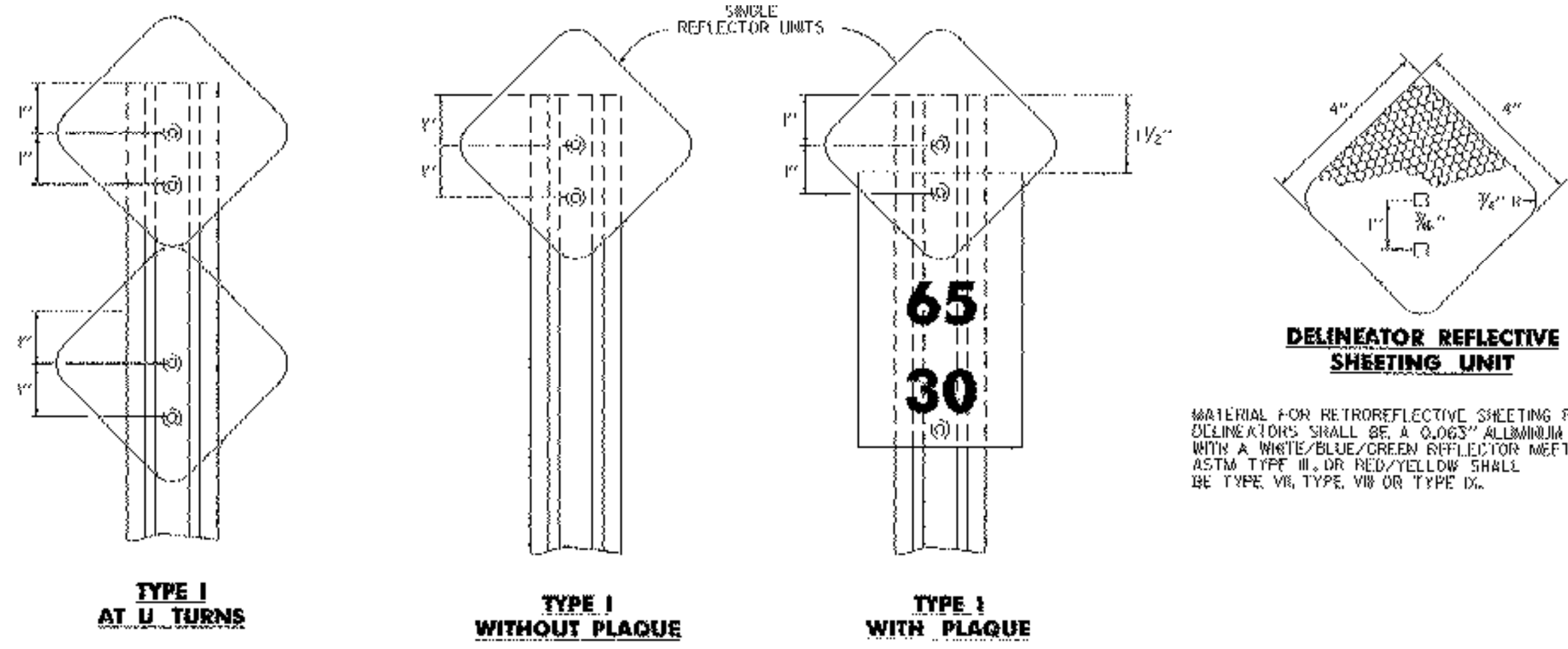
DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION	
APPROVED <i>Mark D. Richter</i>	DATE 7-24-06
DIRECTOR OF PROGRAM DEVELOPMENT	
APPROVED <i>Rita Thibault</i>	DATE 7-13-06
PROJECT MANAGER : S. LEWIS	
PROJECT NAME : DERBY	
PROJECT NUMBER : IM 091-3 (41)	
SHEET 1 OF 20 SHEETS	



# INDEX OF SHEETS

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2	INDEX OF SHEETS		EMBANKMENT ON ROCK SLOPE	
3	TYPICAL SHEET		MUCK EXCAVATION	
4	QUANTITY SHEET		TYPICAL SLOPE ROUNDING	
5	EARTHWORK SHEET	E-100	CONSTRUCTION APPROACH SIGNS	1/2/2004
6	LAYOUT SHEET	E-101	CONSTRUCTION SIGN DETAILS	5/30/2003
7	EROSION CONTROL NARRATIVE	E-102	CONSTRUCTION SIGN DETAILS	6/30/2003
8	EROSION CONTROL LAYOUT SHEET	E-103	MAIN LINE TRAFFIC CONTROL DIVIDED HIGHWAY ONE LANE CLOSED	3/1/2004
9	EROSION CONTROL GENERAL NOTES	E-105	TRAFFIC CONTROL FOR CONSTRUCTION VEHICLE U-TURNS ON DIVIDED HIGHWAY	5/1/2004
10-12	EROSION CONTROL DETAIL SHEETS	E-106	TRAFFIC CONTROL - MISCELLANEOUS DETAILS	3/1/2004
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14	TRAFFIC SIGN SUMMARY SHEET	E-107A	BREAKAWAY BARRICADE DETAILS	8/8/1995
15-20	SB CROSS SECTION SHEETS	E-108	CONSTRUCTION ZONE LONGITUDINAL DROP OFFS	8/18/1995
		E-120	STANDARD SIGN PLACEMENT - EXPRESSWAY & FREEWAY	8/8/1995
		E-150	WARNING SIGN DETAILS	5/1/2004
		E-151	WARNING SIGN DETAILS	5/1/2004
		E-160	FLANGED CHANNEL STEEL SIGN POSTS	5/20/1999
		E-161	W-SHAPED STEEL SIGN POST	8/18/1995
		E-193	PAVEMENT MARKING DETAILS	8/18/1995
		G-1	STEEL BEAM GUARDRAIL (50MPH & OVER) HEAVY DUTY STEEL BEAM GUARDRAIL TWISTED END TERMINAL	1/3/2000
		G-1D	ANCHOR FOR STEEL BEAM RAIL STEEL BEAM GUARDRAIL (40MPH & LESS) HEAVY DUTY STEEL BEAM GUARDRAIL	1/3/2000
		G-19	STEEL BEAM MEDIAN BARRIER ANCHOR FOR STEEL BEAM RAIL GENERIC GRADING PLANS FOR GUARDRAIL END TERMINALS	11/15/2002

PROJECT NAME:	DERBY
PROJECT NUMBER:	IM 091-3(41)
FILE NAME: D03A088/DESIGN/D03A088FRM	PLOT DATE: 17-JUL-2006
PROJECT LEADER: A. J. BOMBARDIER	DRAWN BY: J. L. SCHULTZ
DESIGNED BY: J. L. SCHULTZ	CHECKED BY: A. BOMBARDIER
INDEX OF SHEETS	SHEET 2 OF 20



THE LOCATION OF TYPE I DELINEATORS AND MILEPOSTS ARE TO BE COMPUTED AND MARKED IN THE FIELD BY THE ENGINEER IN ACCORDANCE WITH THE LATEST REVISION OF THE AGENCY'S "POLICY ON LOCATION MARKING FOR VERMONT DIVIDED HIGHWAYS."

TYPE I YELLOW DELINEATORS WITHOUT MILEPOST PLAQUES SHALL BE ERECTED CONTINUOUSLY ALONG THE LEFT OR MEDIUM SIDE OF DIVIDED HIGHWAYS, CONTINUED AT APPROXIMATELY THE SAME SPACING THROUGH INTERCHANGES AND REST AREAS WHERE THERE MAY NOT BE ANY TYPE I DELINEATORS ON THE RIGHT SIDE. PLACEMENT OF TYPE I DELINEATORS SHALL BE FOLLOWED ON THE LEFT AS ON THE RIGHT, THE SAME LATERAL TYPE I DELINEATORS WITHOUT MILEPOST PLAQUE SHALL BE INSTALLED ON INTERSTATE RAMP AS SHOWN ON THE PLANS.

TYPE I DELINEATORS WITHOUT PLAQUE SHALL BE USED AT U-TURNS, AND BE PLACED WHERE THE RADII MEETS THE TANGENT OF THE MAINLINE.

TYPE I DELINEATORS WITHOUT PLAQUE SHALL BE ERECTED AT THE BEGINNING (BLUE) AND AT THE END (GREEN) OF EACH GUARDRAIL RUN.

MATERIAL FOR RETROREFLECTIVE SHEETING FOR DELINEATORS SHALL BE A 0.063" ALUMINUM BACKING WITH A WHITE/BLUE/GREEN REFLECTOR MEETING ASTM TYPE III, OR RED/YELLOW SHALL BE TYPE VII, TYPE VIII OR TYPE IX.

### SEEDING FORMULA URBAN AREAS

% WT.	LBS./A.	NAME	PUR %	CERM %
42.5	34.0	CREEPING RED FESCUE	98	85
10.0	8.0	PERENNIAL RYE GRASS	95	90
42.5	34.0	KENTUCKY BLUE GRASS	85	85
5.0	4.0	ANNUAL RYE GRASS	95	85
100.00	80.0			

### GENERAL NOTES

SEED MIXTURE: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.

SEED: TO BE APPLIED PER SEEDING FORMULAS OR AS DIRECTED BY THE ENGINEER.

FERTILIZER: FORMULA 10-20-10, TO BE USED WITH SEED, APPLIED AT THE RATE OF 500 LBS./ACRE. (HYDRO SEEDERS MAY USE 19-19-19 FORMULA).

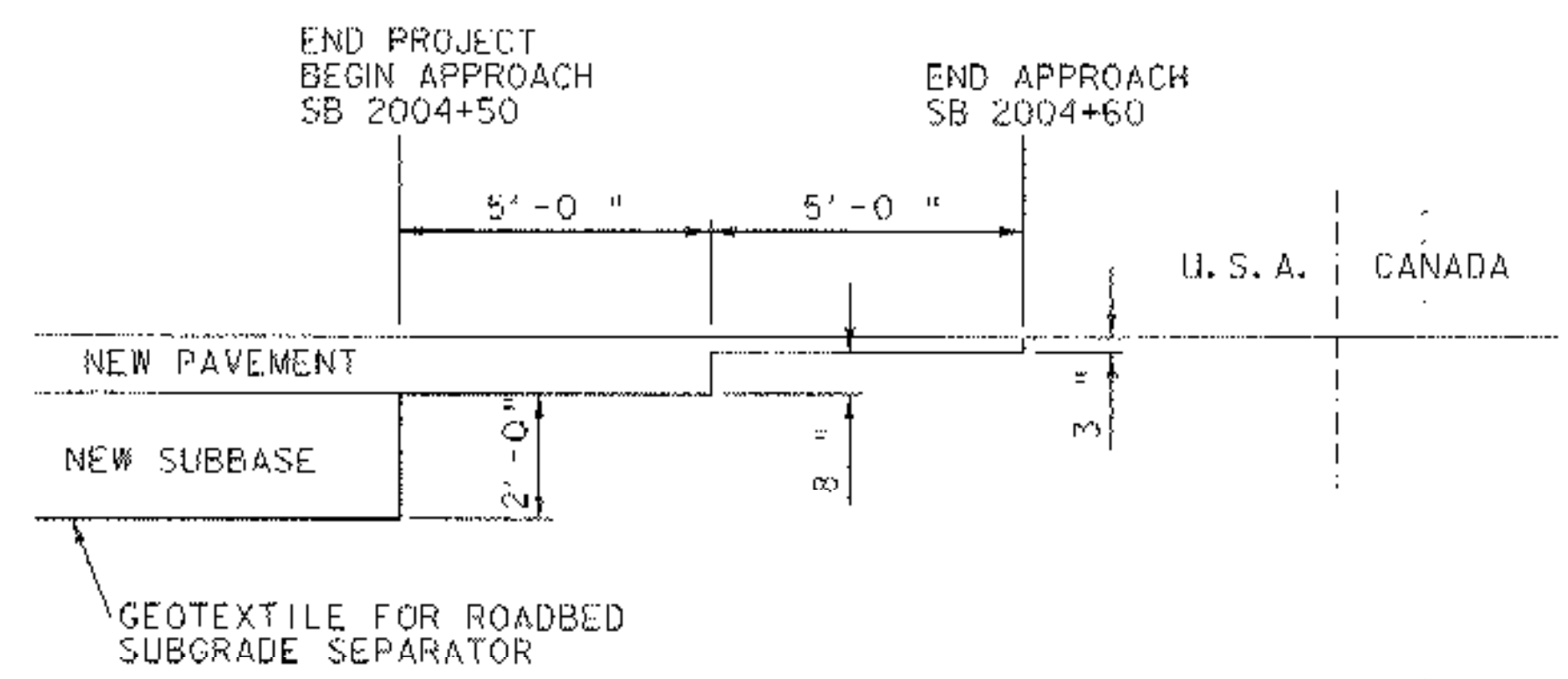
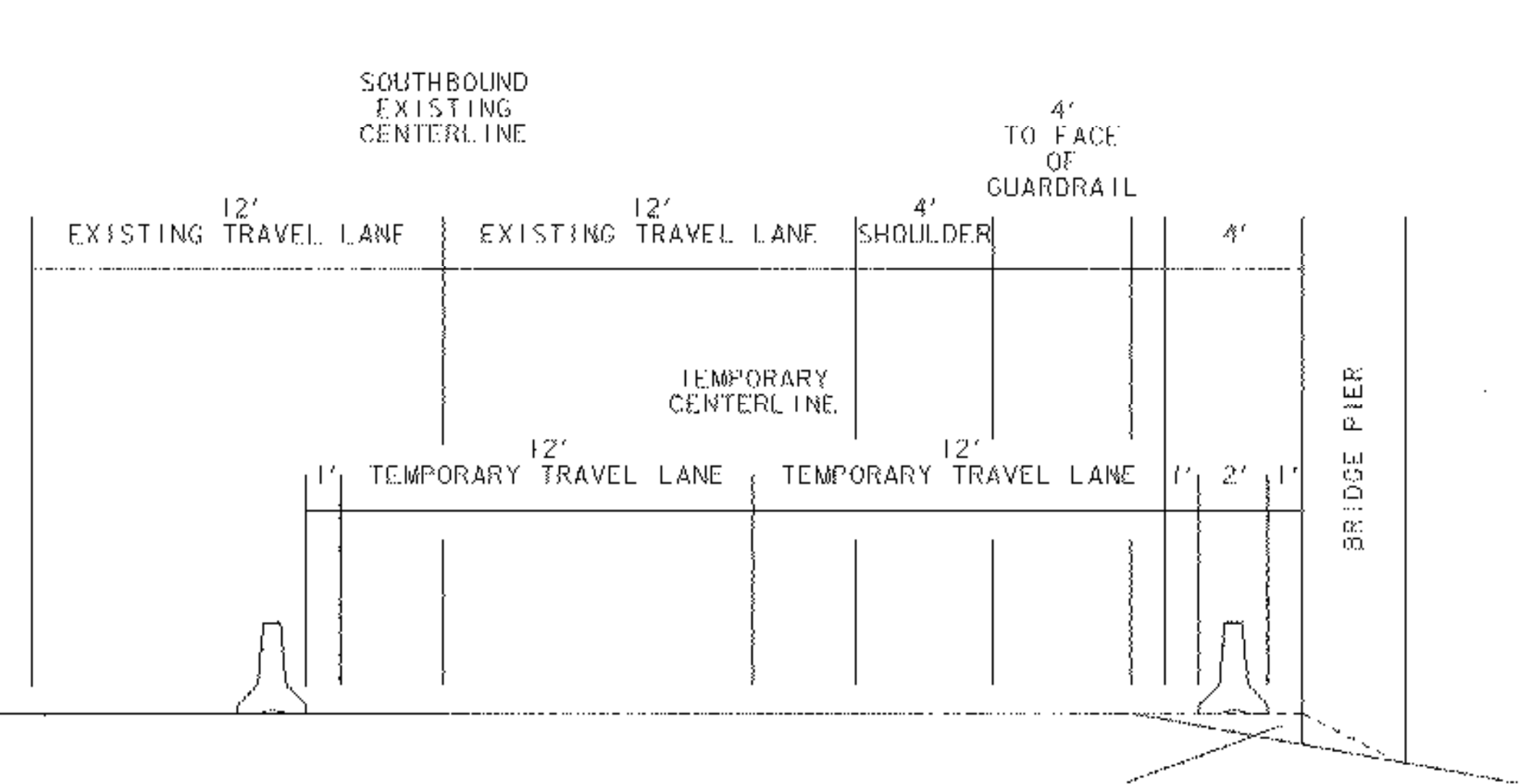
AGRICULTURAL LIMESTONE: TO BE APPLIED AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.

HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.

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

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

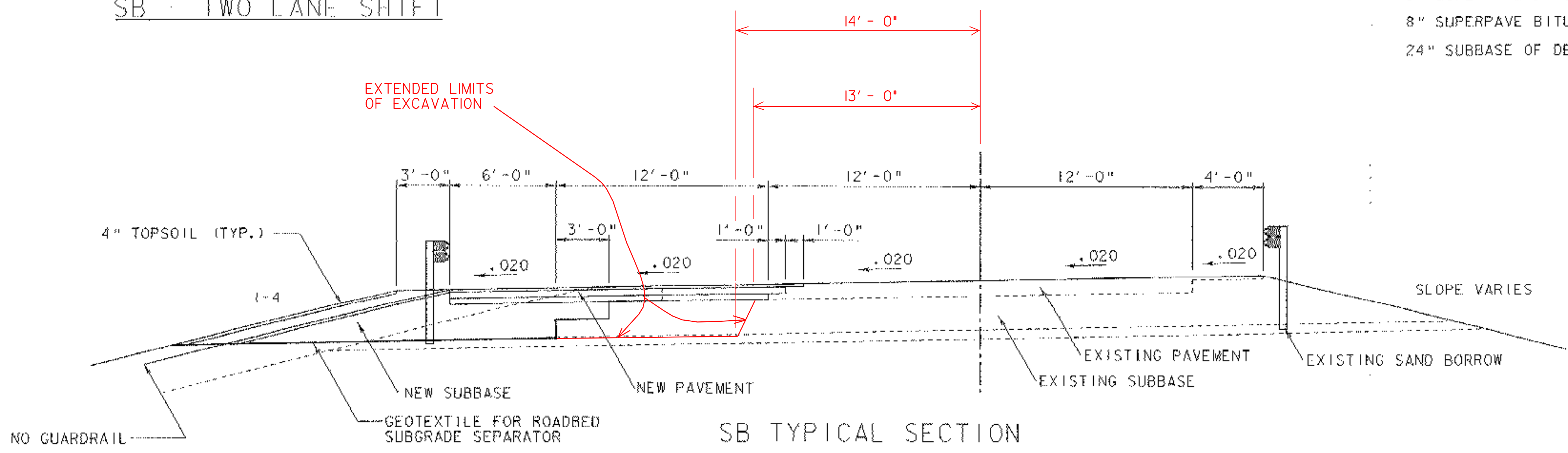
SLOPE ROUNDING: ALL CUT SLOPES TO BE ROUNDED IN ACCORDANCE WITH STANDARD SHEET B - 5.



### TRANSITION AT PROJECT TERMINI

USE AGGREGATE SHOULDER FOR TEMPORARY FILL. REMOVE (BY COMMON EXCAVATION) TEMPORARY FILL MATERIAL AFTER COMPLETION OF TRUCK LANE WIDENING

### SB - TWO LANE SHIFT



### SB TYPICAL SECTION

### NORMAL TYPICAL SECTION

TACK COAT: EMULSIFIED ASPHALT IS TO BE APPLIED AT THE RATE OF 0.015 GAL/SY BETWEEN SUCCESSIVE COURSES OF PAVEMENT AS DIRECTED BY THE ENGINEER.

3" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (TYPE IIS, PG 70-28)

8" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (TYPE IS, PG 70-28) (2 LIFTS - 4" OVER 4")

24" SUBBASE OF DENSE GRADED CRUSHED STONE

MATERIAL ITEM	THICKNESS TOLERANCE (TOTAL DEPTH)
PAVEMENT	± 1/4"
SUBBASE	± 1"

NOT TO SCALE

PROJECT NAME: DERBY	PLOT DATE: 17-JUL-2006
PROJECT NUMBER: IM 091-3(4)	DRAWN BY: J. L. SCHULTZ
FILE NAME: D03A088/DESIGN/DA088TYP	CHECKED BY: A. BOMBARDIER
PROJECT LEADER: A. J. BOMBARDIER	TYPICAL SHEET
DESIGNED BY: J. L. SCHULTZ	SHEET 3 OF 20

# QUANTITY SHEET

SUMMARY OF ESTIMATED QUANTITIES													TOTALS			DESCRIPTIONS			DETAILED SUMMARY OF QUANTITIES				
										E & C	EROSION	ROADWAY	BRIDGE QUANTITY	ROUND	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	QUANTITIES	UNIT	ITEMS	
												451		9	460		CY	COMMON EXCAVATION	203.15				
												450		10	460		SY	FINE GRADING-SUBGRADE	203.40				
												330		20	350		SY	COLD PLANING-BIT.PAVEMENT	210.10				
												497		3	500		CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35				
												100			100		TON	AGGREGATE SHOULDERS	402.12				
												3			3		CWT	EMULSIFIED ASPHALT	404.65				
												445		15	460		TON	SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (PG 70-28)	490.30				
												13		2	15		CY	STONE FILL, TYPE I (MOD. - CHECK DAM)	613.10				
												15		3	18		CY	STONE FILL, TYPE I (MOD. - CONSTRUCTION ENTRANCE)	613.10				
												347		3	350		LF	SNOW FENCE (MOD. - PDF)	620.70				
												253			253		LF	STEEL BEAM GUARD RAIL (GALVANIZED)	621.20				
												2			2		EACH	MANUFACTURED TERMINAL SECTION (FLARED)	621.505				
												2			2		EACH	ANCHOR FOR STEEL BEAM RAIL	621.60				
												130			130		LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80				
												660			660		LF	TEMPORARY TRAFFIC BARRIER	621.90				
												300			300		HR	UNIFORMED TRAFFIC OFFICERS	630.10				
									1						1		LS	TESTING EQUIPMENT - BITUMINOUS	631.17				
												1			1		LS	MOBILIZATION / DEMOBILIZATION	635.11				
												1			1		LS	TRAFFIC CONTROL	641.10				
												1			1		EACH	PORTABLE CHANGEABLE MESSAGE SIGN	641.15				
												331			331		LF	6" WHITE LINE	646.214				
												335			335		LF	6" YELLOW LINE	646.215				
												540			540		LF	TEMPORARY 6" WHITE LINE (TAPE, TYPE II)	646.614				
												210			210		LF	TEMPORARY 6" YELLOW LINE	646.615				
												90			90		LF	TEMPORARY 6" YELLOW LINE (TAPE, TYPE II)	646.615				
												300			300		SF	BLACK PAVEMENT MARKING MASKING TAPE	646.86				
												446		24	470		SY	GEOTEXTILE FOR ROADBED SUBGRADE SEPARATOR	649.11				
											49				1	50		SY	GEOTEXTILE FOR SILT FENCE	649.51			
											7				3	10		LB	SEED	651.15			
											55				5	60		LB	FERTILIZER	651.18			
											0.2				0.3	0.5		TON	AGRICULTURAL LIMESTONE	651.20			
											0.2				0.3	0.5		TON	HAY MULCH	651.25			
												56		4	60		CY	TOPSOIL	651.35				
															15								
											1				1		LS	EROSION PREVENTION & SEDIMENT CONTROL PLAN	652.10				
											15				15		HR	MONITORING EROSION PREVENTION & SEDIMENT CONTROL PLAN	652.20				
											1				1		LU	MAINTENANCE OF EROSION PREVENTION & SEDIMENT CONTROL PLAN (N.A.B.I.)	652.30				
												36			36		SF	TRAFFIC SIGNS, TYPE A	675.20				
												64			64		LF	BEGN OPTION FLANGED CHANNEL SIGN POST	675.301				
												64			64		LF	SQUARE TUBE SIGN POSTS AND ANCHOR END OPTION	675.341				
												6			6		EACH	REMOVING SIGNS	675.50				
												2			2		EACH	ERECTING SALVAGED SIGNS	675.60				
												4			4		EACH	SETTING SALVAGED POSTS	675.61				
												6			6		EACH	DELINEATORS W/STEEL POSTS	676.10				
												4			4		EACH	REMOVAL OF EXIST DELINEATORS	676.12				
												1			1		EACH	REMOVE & RESETING LIGHT POLE (MOD.)	679.25				

PROJECT NAME: **DERBY**  
 PROJECT NUMBER: **IM 091-3(41)**  
 FILE NAME: **d03a088quantity.xls** PLOT DATE: **7/19/06**  
 PROJECT MANAGER: **A. J. BOMBARDIER** DRAWN BY: **J. L. SCHULTZ**  
 DESIGNED BY: **J. L. SCHULTZ** CHECKED BY: **J. L. SCHULTZ**  
 QUANTITY SHEET SHEET **4** OF **20**

STATE OF VERMONT  
AGENCY OF TRANSPORTATION

# EARTHWORKS

		TOTAL EXCAVATION EARTH				EMBANKMENT		SUBBASE		PAVEMENT				TOTAL EXCAVATION EARTH AND ROCK				ROCK EXCAVATION		EMBANKMENT				SUMMARY AND BALANCES										
STATION	DIST	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	STATION TO STATION	TOT EXC. EARTH	ROCK EXCAV	EMBANK	EXCESSES		ACUMULATIVE EXCESSES		
	FT.	S.F.	C.Y.	S.F.	C.Y.	S.F.	C.Y.	S.F.	C.Y.	S.F.	C.Y.	S.F.	C.Y.	S.F.	C.Y.	S.F.	C.Y.	S.F.	C.Y.	S.F.	C.Y.	S.F.	C.Y.	S.F.	C.Y.		C.Y.	C.Y.	C.Y.	CUT	FILL	CUT	FILL	
2001+25		38		0		34		15																	2001+25									
	25		38		2		42		19																2004+50	351		68	273			273		
2001+50		45		4		56		25																										
	25		39		2		45		23																									
2001+75		39		0		41		24																										
	25		32		1		33		20																									
2002+00		30		1		31		19																										
	25		26		2		27		17																									
2002+25		27		3		27		17																										
	25		24		6		25		16																									
2002+50		24		10		27		17																										
	25		23		9		33		16																									
2002+75		26		9		44		17																										
	25		24		8		41		16																									
2003+00		25		8		44		17																										
	25		22		9		48		16																									
2003+25		23		12		60		17																										
	25		23		11		53		16																									
2003+50		26		11		54		17																										
	25		23		9		43		16																									
2003+75		23		9		38		17																										
	25		24		6		35		16																									
2004+00		28		3		38		17																										
	25		26		2		30		16																									
2004+25		28		2		26		17																										
	25		27		1		24		16																									
2004+50		30		1		26		17																										
<b>SUBTOTAL</b>			351		68		479		223																									
<b>TOTAL</b>			351		68		479		223																									
CUT	351																																	
FILL	68																																	
F. FAC	1.15																																	
EX. C	273																																	

REMARKS	
EARTH AND ROCK EXCAVATION	351
SOLID ROCK EXCAVATION	
EARTH EXCAVATION	351
PLANIMETERED FILL	68
LESS FACTORED SOLID ROCK	
LESS DISPLACEMENT OF ANY LARGE STRUCTURES	
NET PLANIMETERED FILL	68
FACTOR	1.15
PLANIMETERED FILL INCLUDING FACTOR	78
MATERIALS AVAILABLE FOR FILLS	351
EARTH EXCAVATION	
CHANNEL EXCAVATION	
UNDERDRAIN EXCAVATION	
STRUCTURE EXCAVATION	
TOTAL MATERIAL AVAILABLE FOR FILL	351
TOTAL FILL INCLUDING FACTOR	78
TOTAL MATERIAL FOR FILL	
BORROW	
EXCESS EXCAVATION	273

PROJECT NAME: **DERBY**  
PROJECT NUMBER: **IM 091-3(41)**  
FILE NAME: d03a088ew.xls PLOT DATE: 7/7/2005  
PROJECT LEADER: **A. J. BOMBARDIER** DRAWN BY: **J. L. SCHULTZ**  
DESIGNED BY: **J. L. SCHULTZ** CHECKED BY: **A. J. BOMBARDIER**  
**EARTHWORK SHEET** SHEET 5 OF 20

REMOVAL OF EXISTING GUARDRAIL

STEEL BEAM GUARDRAIL (GALVANIZED)

MANUFACTURED TERMINAL SECTION (FLARED)

ANCHOR FOR STEEL BEAM RAIL

REMOVE AND RESETTING LIGHT POLE (MOD.)  
REMOVING STREET LIGHT & BASE

STA 2002+25 TO STA 2003+55 RT

STA 2001+41 TO STA 2002+93.5 LT  
STA 2002+25 TO STA 2003+25 RT

STA 2002+93.5 TO STA 2003+31 LT  
STA 2003+25 TO STA 2003+62.5 RT

STA 2001+41 LT  
STA 2002+25 RT

2001+50 LT

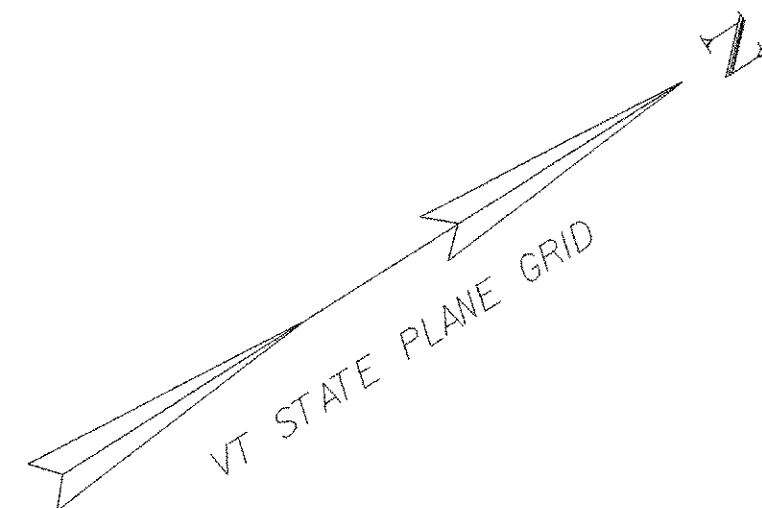
**SB STATION 2004+50  
END PROJECT  
BEGIN APPROACH**

**SB STATION 2004+60  
END APPROACH**

**SB STATION 2001+25  
BEGIN PROJECT**

SB CURVE	
DELTA	= 21° 47' 56" LT
D	= 4° 46' 29"
R	= 1200.00 FT.
T	= 231.07 FT.
L	= 456.56 FT.
E	= 22.05 FT.

PROJECT MARKER  
VT 1962  
1 91  
3 3



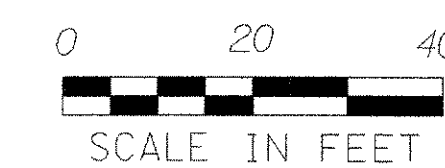
CANADA  
U.S.A.

I-91 NORTHBOUND

CASWELL AVENUE

**LEGEND**

EXISTING RADIATION PORTABLE MONITOR (R.P.M.)



PROJECT NAME:	DERBY	PLOT DATE:	17-JUL-2006
PROJECT NUMBER:	IM 091-3(41)	DRAWN BY:	J. L. SCHULTZ
FILE NAME:	03A088/DESIGN/D03A088BDR	CHECKED BY:	A. BOMBARDIER
PROJECT LEADER:	A. J. BOMBARDIER	LAYOUT SHEET	SHEET 6 OF 20

GUY WIRE  
GUY WIRE  
COMBO  
39  
4  
23

# EROSION PREVENTION AND SEDIMENT CONTROL NARRATIVE

## PROJECT DESCRIPTION

This project involves south bound widening of existing 10 ft shoulders to new 12 ft truck lanes, as well as new 6 ft shoulders in the south bound lane. Work will also include subbase, grading, guardrail, and other roadway related items. There are no historical or archeologically sensitive sites on or near the project site, nor are there any 'Threatened & Endangered Species' on or near the project site.

It is anticipated that this project will last one construction season.

Area of disturbance is approximately 0.60 acres.

## SITE INVENTORY AND ANALYSIS

### **OFF SITE DRAINAGE CHARACTERISTICS**

The property surrounding the project site consists of well established vegetation with minimal slopes at the project site. The property surrounding the project site is mostly grass and brush with some woods to the east of the project site. Due to the nature of the surrounding terrain the project site should not receive any runoff water from off project areas.

### **DRAINAGE, WATERWAYS, BODIES OF WATER:**

The only waterway in the project vicinity is located about 300 ft away west of the project and is an unnamed tributary to the John's River.

### **TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES:**

The topography of the project site is fairly flat the gradient sloping north, into Canada. On the project site, there are the north and south bound lanes of Interstate 91 as well as the Caswell Avenue overpass. There is a small closed drainage system located in the median between the north and south bound lanes of the I-91 which will in no way be affected by work on this project due to the location of the work and the slope of the land around that work. There are boarder crossing buildings near the project to the north (Canadian) and to the south (American).

### **VEGETATION:**

The primary vegetation in the project area is grass and brush. There is a small wooded area located just east of the project site. The impact to vegetation will be limited to that which is affected by the widening of I-91 and the grading of 1:4 side slopes. After the project is finished the slopes will be stabilized with vegetation using standard seed and mulch practices.

### **SOILS:**

Because all disturbed soil is immediately adjacent to I-91, it is highly unlikely that the disturbed earth will consist of the "native" soil shown on the U.S. Department of Agriculture Soil Conservation Service maps. The soil on this project consists of crushed stone with low erosion potential.

### **SENSITIVE RESOURCE AREAS:**

There are no 'Threatened & Endangered Species' living on or near the project site and there are no historical, archeological or archeologically sensitive areas on or near the project site.

## 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.

Temporary check dams will be placed in existing drainage swales with a 1% or steeper slope, or as needed. Check dams are primarily used as an erosion preventative measure. The function of check dams is to reduce the velocities of the stormwater and make it less erosive. There are occasions where check dams serve in the erosion control role as, in these instances, they allow stormwater to pond, thus allowing the sediment within the water to settle out. Temporary check dams will be removed at the end of construction once the soil within the ditch line has been stabilized.

Seeding, mulching will be the primary method of slope stabilization on this project as all disturbed slopes have a slope of 1:4. All 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 when and where necessary, as determined by the On-site Coordinator or Engineer. 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 MEASURES TO CONTROL SEDIMENT TRANSPORT INCLUDE:**

Silt fence will be installed a distance of 5' to 10' 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 100'. Silt fence shall be installed prior to any upslope earthwork.

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 area such that they will not be subject to erosion.

Stabilized construction entrances to the project site, staging areas, as well as waste and borrow areas shall be established. The minimum size of a stabilized construction entrance is 12' X 50'. All surface water flowing to or diverted toward a construction entrance shall be piped under the stone. Pipes shall be appropriately sized for the contributing area, however, no pipe smaller than 6" diameter shall be used. See typical detail on 'Erosion & Sediment Control Plan' sheet for materials and construction method to be utilized when constructing a stabilized entrance.

## PERMANENT EROSION CONTROL MEASURES

### **THE FOLLOWING PERMANENT EROSION CONTROL MEASURES WILL BE UTILIZED:**

Permanent stabilization and final land treatment will consist of pavement on the roadway and established vegetation in the ditch lines and side slopes.

## GENERAL EROSION & SEDIMENT CONTROL GUIDELINES

The Erosion Control Plans are meant as a guideline for preventing erosion and controlling sediment transportation. The work outlined in this narrative consists of applying measures throughout the life of the project to control erosion and minimize the sediment to receiving waters. The measures include stabilization and structural practices, storm water 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. See section 105.23 of the Vermont AOT Standard Specifications for Construction, dated 2001.

Any changes to erosion control measures 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 weekly and after each rainfall event. Repair measures shall be taken as needed.

Preventing initial soil erosion is much more effective than treating eroded sediment. Therefore, stabilize all disturbed areas promptly 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.

Maintaining vegetated buffers along stream banks, wetlands or other sensitive areas is a crucial erosion and sediment control measure that should be established wherever possible.

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

PROJECT NAME: DERBY  
PROJECT NUMBER: IM 091-3(41)

FILE NAME: D03A088ERO	PLOT DATE: 17-JUL-2006
PROJECT LEADER: A. J. BOMBARDIER	DRAWN BY: J. L. SCHULTZ
DESIGNED BY: J. L. SCHULTZ	CHECKED BY: A. BOMBARDIER
EROSION CONTROL NARRATIVE	SHEET 7 OF 20

GEOTEXTILE FOR SILT FENCE

SNOW FENCE (MOD. - PDF)

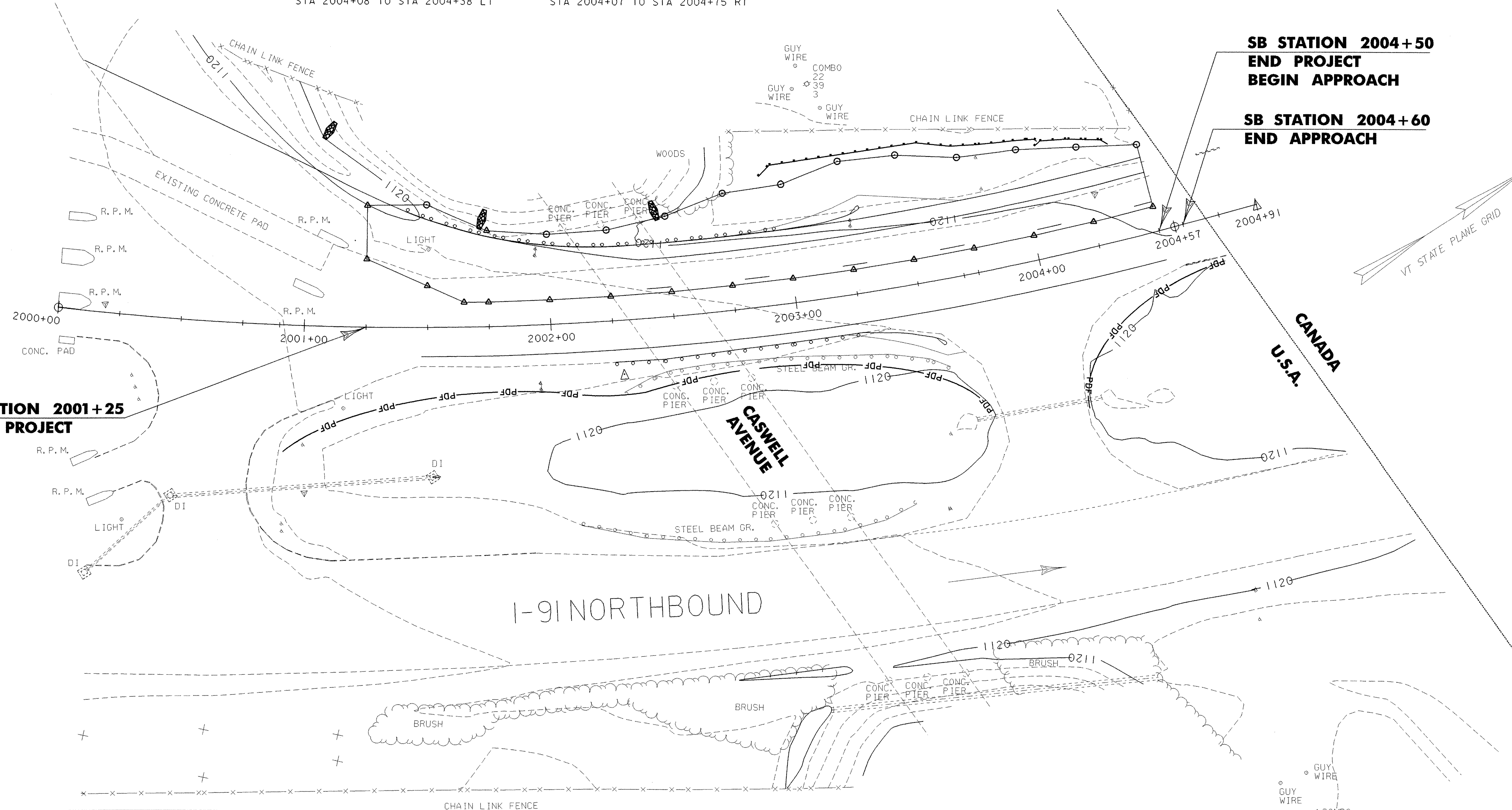
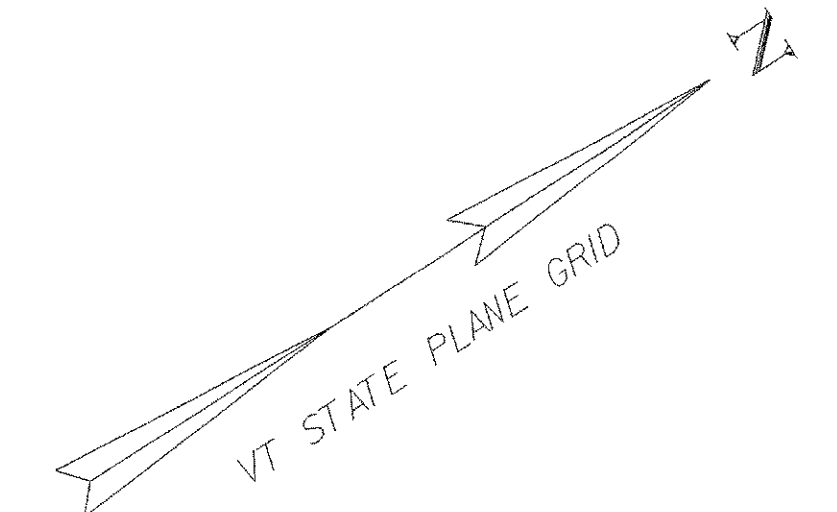
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STA 2004+08 TO STA 2004+38 LT

STA 2000+90 TO STA 2003+69 RT  
STA 2004+07 TO STA 2004+75 RT

**SB STATION 2004+50  
END PROJECT  
BEGIN APPROACH**

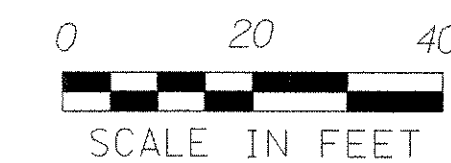
**SB STATION 2004+60  
END APPROACH**

**SB STATION 2001+25  
BEGIN PROJECT**



**LEGEND**

- PERMANENT SLOPE LIMITS
- SILT FENCE
- PROJECT DEMARCATION FENCE
- TEMPORARY STONE CHECK DAM



PROJECT NAME:	DERBY	PLOT DATE:	17-JUL-2006
PROJECT NUMBER:	IM 091-3(41)	DRAWN BY:	J. L. SCHULTZ
FILE NAME:	03A088/DESIGN/D03A088BDR	CHECKED BY:	A. BOMBARDIER
PROJECT LEADER:	A. J. BOMBARDIER	EROSION CONTROL LAYOUT SHEET	SHEET 8 OF 20

## EROSION PREVENTION AND SEDIMENT CONTROL GENERAL NOTES

### I. CONTRACTOR'S RESPONSIBILITIES FOR EROSION PREVENTION AND SEDIMENT CONTROL

- A. PREVENT OR MINIMIZE SOIL EROSION OF DISTURBED LAND AND PREVENT THE DISCHARGE OF SEDIMENT AND OTHER CONSTRUCTION RELATED POLLUTANTS TO WATERS OF THE STATE.
- B. FURNISH, INSTALL, INSPECT AND MAINTAIN EROSION AND SEDIMENT CONTROL MATERIALS IN CONJUNCTION WITH THE GENERAL CLEARING, GRADING AND EXCAVATION OF THE SITE.
- C. ESTABLISH LIMITS OF SOIL DISTURBANCE; LOCATION(S) OF TOPSOIL STOCKPILES; CONSTRUCTION STAGING AREAS; STORAGE AREAS; REFUELING AND MAINTENANCE AREAS.
- D. LOCATE AND MARK BOUNDARIES FOR ANY UNDISTURBED RIPARIAN BUFFER ZONES AND MAINTAIN ALL EXISTING STREAMS AND RIPARIAN BUFFER ZONES IN THEIR NATURAL CONDITION.
- E. LOCATE SITES TO BE USED FOR WASTE, BORROW, STAGING, OR STOCKPILING AND OBTAIN THE NECESSARY APPROVALS FOR EACH SITE THROUGH THE VTRANS ENVIRONMENTAL SECTION. A SEPARATE EROSION PREVENTION AND SEDIMENT CONTROL PLAN MUST BE SUBMITTED FOR APPROVAL PRIOR TO USE OF EACH SITE.
- F. SEQUENCE CONSTRUCTION ACTIVITIES TO MINIMIZE THE EXTENT OF DISTURBED SOILS LEFT OPEN TO EROSION AT ANY GIVEN TIME AS DETAILED IN THE CONSTRUCTION PHASING AND EROSION AND SEDIMENT CONTROL PLANS.
- G. AVOID ALL LAND DISTURBANCES WITHIN 50 FEET OF ALL WATER BODIES, MEASURED FROM THE TOP OF BANK, AND WETLANDS, EXCEPT WHERE NECESSARY FOR THE RECONSTRUCTION OF EXISTING ROADS AND THE CONSTRUCTION OF BRIDGES, STREAM CROSSINGS, AND COMPONENTS OF STORMWATER MANAGEMENT SYSTEMS WHICH BY NECESSITY MUST BE LOCATED IN THIS ZONE.
- H. MAINTAIN AND PRESERVE TO THE EXTENT POSSIBLE THE SITE'S NATURAL DRAINAGE WAYS THAT CONVEY STORMWATER TO STREAMS, RIVERS, LAKES, PONDS AND WETLANDS.
- I. PREVENT OFF-SITE STORMWATER FROM ENTERING AREAS OF DISTURBED SOIL ON-SITE.
- J. PREVENT THE OFF-SITE DISCHARGE OF SEDIMENT MOBILIZED ON THE CONSTRUCTION SITE, INCLUDING OFF-SITE TRACKING OF SEDIMENT ONTO PAVED PUBLIC OR PRIVATE ROADWAYS BY CONSTRUCTION VEHICLES.
- K. THE CONTRACTOR SHALL SUBMIT AN EROSION PREVENTION AND SEDIMENT CONTROL PLAN FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION. REFER TO THE SPECIFICATIONS AND CONTRACTOR'S CHECKLIST FOR ADDITIONAL INFORMATION AND REQUIREMENTS OF THE EROSION PREVENTION AND SEDIMENT CONTROL PLAN.

### 2. LIMITATIONS AND PROHIBITIONS

- A. THE CONTRACTOR SHALL SCHEDULE EARTHWORK COMPLETION, SITE STABILIZATION, ESTABLISHMENT OF PERENNIAL COVER AND INSTALLATION OF NON-VEGETATIVE PROTECTION MEASURES NO LATER THAN OCTOBER 15. TO ASSURE ESTABLISHMENT OF VEGETATED COVER, SEEDING AND MULCHING ACTIVITIES SHALL BE COMPLETED BY SEPTEMBER 15.
- B. FOR PROJECTS EXTENDING BEYOND OCTOBER 15, LIMIT EXPOSURE OF SOILS AND MINIMIZE ADDITIONAL EARTHWORKS. ANY PROPOSED SOIL DISTURBANCE AND EARTHWORKS BETWEEN OCTOBER 15 AND MAY 1 WILL REQUIRE DEVELOPMENT OF A SPECIAL WINTER EROSION AND SEDIMENT CONTROL PLAN ADDRESSING THE SPECIFIC CONCERNS OF WINTER CONSTRUCTION. THIS PLAN MUST BE FILED WITH, AND APPROVED BY, THE PERMITTING AUTHORITY BY SEPTEMBER 15. IF IT IS DETERMINED BY THE ENGINEER OR THE PERMITTING AUTHORITY THAT WINTER CONSTRUCTION WOULD PRESENT A SIGNIFICANT RISK TO WATER QUALITY, THE CONTRACTOR WILL NEED TO REQUEST A WINTER SHUTDOWN IN ACCORDANCE WITH THE PROVISIONS OF THE CONTRACT DOCUMENTS.
- C. DISCHARGES OF ANY MATERIAL OTHER THAN STORMWATER, SUCH AS VEHICLE AND EQUIPMENT MAINTENANCE SPILLS, FUELS, WASH WATER, CONSTRUCTION DEBRIS, OIL, WET CONCRETE (INCLUDING WASHOUT WATER FROM CONCRETE BATCH TRUCKS OR EQUIPMENT USED TO MIX CONCRETE), AND OTHER SUBSTANCES, ARE PROHIBITED.
- D. NO SILT FENCE SHALL BE UTILIZED IN AREAS OF CONCENTRATED FLOWS, SUCH AS CHANNELS OR DITCHES.
- E. DISPOSAL OF SEDIMENT IN A WETLAND OR ANY CORRECTIVE ACTION UNDERTAKEN TO REMOVE SEDIMENT FROM A WETLAND IS PROHIBITED.
- F. THE FAILURE TO PROMPTLY ABATE THE DISCHARGE OF SEDIMENT OR ANY OTHER WASTE WHICH CAUSES A VISIBLE DISCOLORATION OF SURFACE WATERS (INCLUDING WETLANDS), OR IS FOUND TO BE EXCEEDING WATER QUALITY STANDARDS BASED ON MONITORING, IS PROHIBITED.

### 3. GENERAL CONSTRUCTION NOTES

- A. VEHICLE AND EQUIPMENT STORAGE AREAS OR AREAS ADJACENT TO CONSTRUCTION TRAILER OR OTHER HIGH TRAFFIC AREAS SHALL BE COVERED WITH GEOTEXTILE FABRIC AND 12 INCHES OF GRAVEL. FOLLOWING COMPLETION OF CONSTRUCTION, ALL NON-NATIVE MATERIALS SHALL BE REMOVED FROM THE STAGING AREA. COMPACTED, RUTTED, OR OTHERWISE DISTURBED SOILS SHALL BE TILLED, RAKED, SEEDED AND MULCHED.
- B. ERODIBLE MATERIALS STOCKPILED WITHIN THE MATERIAL STORAGE AREAS SHALL BE ISOLATED WITH FILTER FABRIC. SOIL STOCKPILED ON THE SITE SHALL BE SEEDED AND MULCHED.
- C. ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED WITHIN 48 HOURS OF BEING STRIPPED OR BACKFILLED AND GRADED.
- D. STOCKPILES SHALL BE MULCHED IF THEY WILL BE UNDISTURBED FOR MORE THAN 24 HOURS.

### 4. INSPECTION

- A. THE CONTRACTOR SHALL DESIGNATE A QUALIFIED INDIVIDUAL TO ACT AS THE ONSITE COORDINATOR. THIS PERSON IS RESPONSIBLE FOR INSPECTING ALL EROSION PREVENTION AND SEDIMENT CONTROL STRUCTURES AND MEASURES AND FILING REPORTS FOR EACH INSPECTION. REFER TO THE SPECIFICATIONS FOR FURTHER REQUIREMENTS AND FREQUENCY OF INSPECTIONS.
- B. IN ADDITION TO THE REQUIREMENTS SET FORTH BY THE SPECIFICATIONS THE ONSITE COORDINATOR SHALL INSPECT THE FOLLOWING:
  - AREAS THAT HAVE BEEN TEMPORARILY OR FINALLY STABILIZED A MINIMUM OF ONCE A MONTH.
  - DISCHARGE POINTS ON A DAILY BASIS TO VISUALLY ASSESS WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING IMPACTS TO RECEIVING WATERS.
- C. A COPY OF THE ON-SITE COORDINATOR'S REPORT SHALL BE KEPT ON SITE WITH THE CURRENT EROSION PREVENTION AND SEDIMENT CONTROL PLAN. ANY CHANGES TO THE EROSION PREVENTION AND SEDIMENT CONTROL PLAN SHALL BE APPROVED PRIOR TO IMPLEMENTATION.

### 5. MAINTENANCE

- A. THE CONTRACTOR SHALL KEEP ALL SEEDED AREAS WATERED AND IN GOOD CONDITION, RE-SEEDING IF AND WHEN NECESSARY UNTIL A GOOD, HEALTHY, UNIFORM GROWTH IS ESTABLISHED OVER THE ENTIRE AREA SEEDED.
- B. THE CONTRACTOR SHALL REPAIR ALL EROSION AND SEDIMENT CONTROL STRUCTURES AND MEASURES THAT ARE DETERMINED TO BE FAILING, OR NOT FUNCTIONING AS DESIGNED, WITHIN 24 HOURS OF INSPECTION.
- C. THE CONTRACTOR SHALL REMOVE ACCUMULATED SEDIMENT FROM CONTAINMENT SYSTEMS AND OTHER SEDIMENT CONTROL STRUCTURES AS REQUIRED, SUCH THAT PERFORMANCE OF THESE SYSTEMS IS NOT COMPROMISED OR IN ANY WAY IMPAIRED.
- D. THE CONTRACTOR SHALL REMOVE ALL DEBRIS AND REPAIR ALL DAMAGES CAUSED BY SOIL EROSION OR CONSTRUCTION EQUIPMENT AT OR BEFORE THE END OF EACH WORKING DAY.

### 6. CORRECTIVE ACTION

- A. THE CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER AS SOON AS POSSIBLE, BUT WITHIN 24 HOURS, OF ANY EVIDENCE OF MEASURABLE AMOUNTS OF SEDIMENT OR SEDIMENT-LADEN WATER LEAVING THE CONSTRUCTION SITE OR ANY VISIBLE DISCOLORATION OF SURFACE WATERS (INCLUDING WETLANDS).
- B. THE CONTRACTOR SHALL TAKE IMMEDIATE ACTION TO CORRECT THE DISCHARGE, INCLUDING HALTING OR REDUCING CONSTRUCTION ACTIVITIES AS NECESSARY UNTIL THE DISCHARGE AND/OR THE CONDITION IS FULLY CORRECTED.

PROJECT NAME: DERBY  
PROJECT NUMBER: IM 091-3(41)

FILE NAME: PW/03A088/DESIGN/D03A088ER	PLOT DATE: 17-JUL-2006
PROJECT LEADER: A. J. BOMBARDIER	DRAWN BY: J. L. SCHULTZ
DESIGNED BY: J. L. SCHULTZ	CHECKED BY: A. BOMBARDIER
EROSION CONTROL GENERAL NOTES	SHEET 9 OF 20

# SILT FENCE

## APPLICATION NOTES:

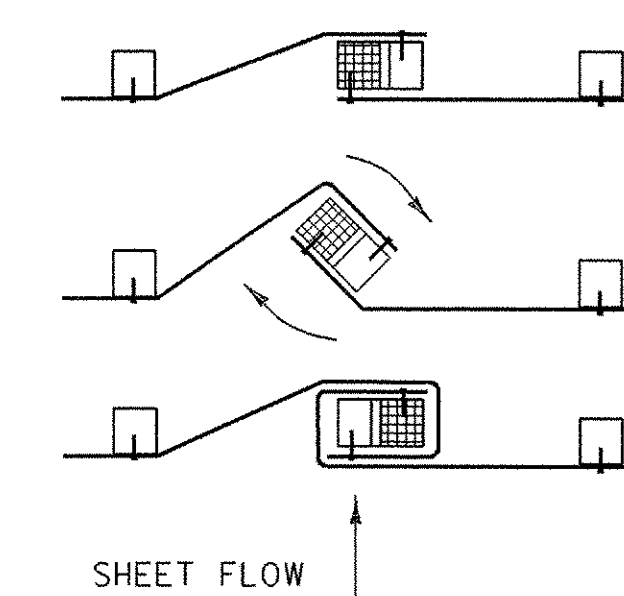
- THE PRIMARY PURPOSE OF SILT FENCE IS TO REDUCE RUNOFF VELOCITY AND TRAP SEDIMENT. VELOCITY IS REDUCED, WATER IS IMPOUNDED BEHIND THE MEASURE, AND SEDIMENT FALLS OUT OF SUSPENSION.
- SILT FENCE SHALL BE INSTALLED ON A LINE OF EQUAL ELEVATION (CONTOUR). IT MAY BE INSTALLED AT INTERMEDIATE POINTS UP SLOPES AS WELL AS AT THE BOTTOM, AS SHOWN IN THE DETAIL.
- SILT FENCE SHALL NOT BE USED ACROSS CONCENTRATED FLOW.

## GENERAL NOTES:

- SILT FENCE SHALL GENERALLY BE PLACED A MINIMUM OF 5 FEET BEYOND TOE OF SLOPE, 10 FEET PREFERRED, TO PROVIDE ADEQUATE AREA FOR SEDIMENT STORAGE AND FACILITATE MAINTENANCE OF SEDIMENT CONTAINMENT AREA.
- ALL ENDS SHALL BE "J" HOOKED TO TRAP SEDIMENT.
- IN AREAS WITH TWO SLOPES, SILT FENCE SHALL BE USED TO ERECT A DAM AND TRAP SEDIMENT AT THE BASE OF THE STEEPER SLOPE.
- THE BOTTOM EDGE OF SILT FENCE SHALL BE BURIED A MINIMUM OF 6 INCHES BELOW GROUND, AND KEYED IN 4 INCHES. THE FENCE SHALL BE INSTALLED WITH THE POSTS ON THE DOWNSTREAM SIDE OF THE FABRIC.
- MAXIMUM DRAINAGE AREA TRIBUTARY TO 100 FEET OF SILT FENCE SHALL BE 0.25 ACRES.
- THE FOLLOWING ARE MAXIMUM SLOPE LENGTHS FOR THESE MEASURES:

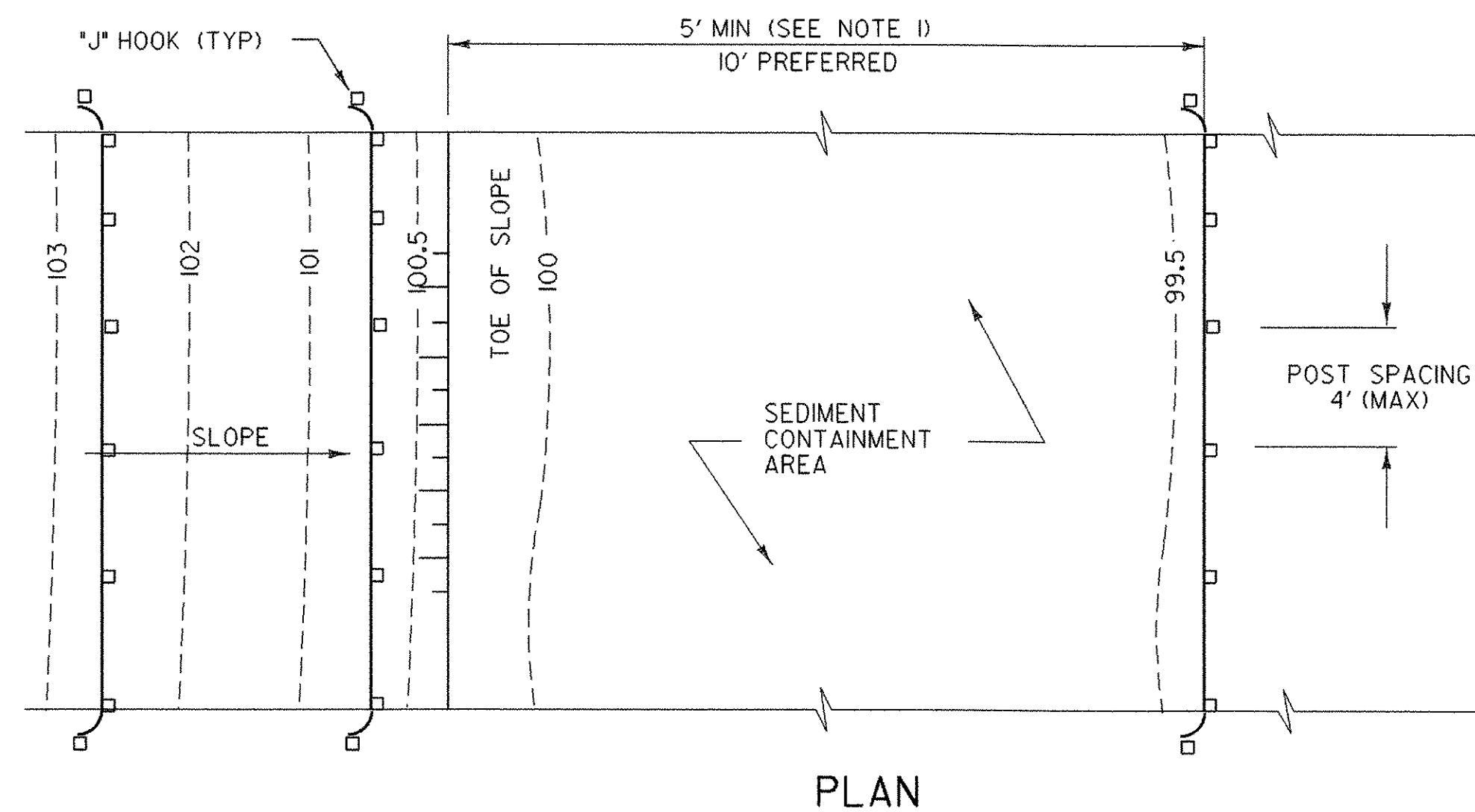
CONSTRUCTED SLOPE	SLOPE LENGTH (LS) FT	HORIZONTAL LENGTH (LH) FT
3 : 1	80	75
4 : 1	130	125
5 : 1	200	200
> 5 : 1	250	250

- 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.
- 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.
- 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.
- PAYMENT FOR INSTALLATION AND REMOVAL OF SILT FENCE SHALL BE MADE UNDER THE GEOTEXTILE FOR SILT FENCE ITEM.
- PAYMENT FOR MONITORING SILT FENCE SHALL BE MADE UNDER THE MONITORING EROSION & SEDIMENT CONTROL PLAN ITEM.
- 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.

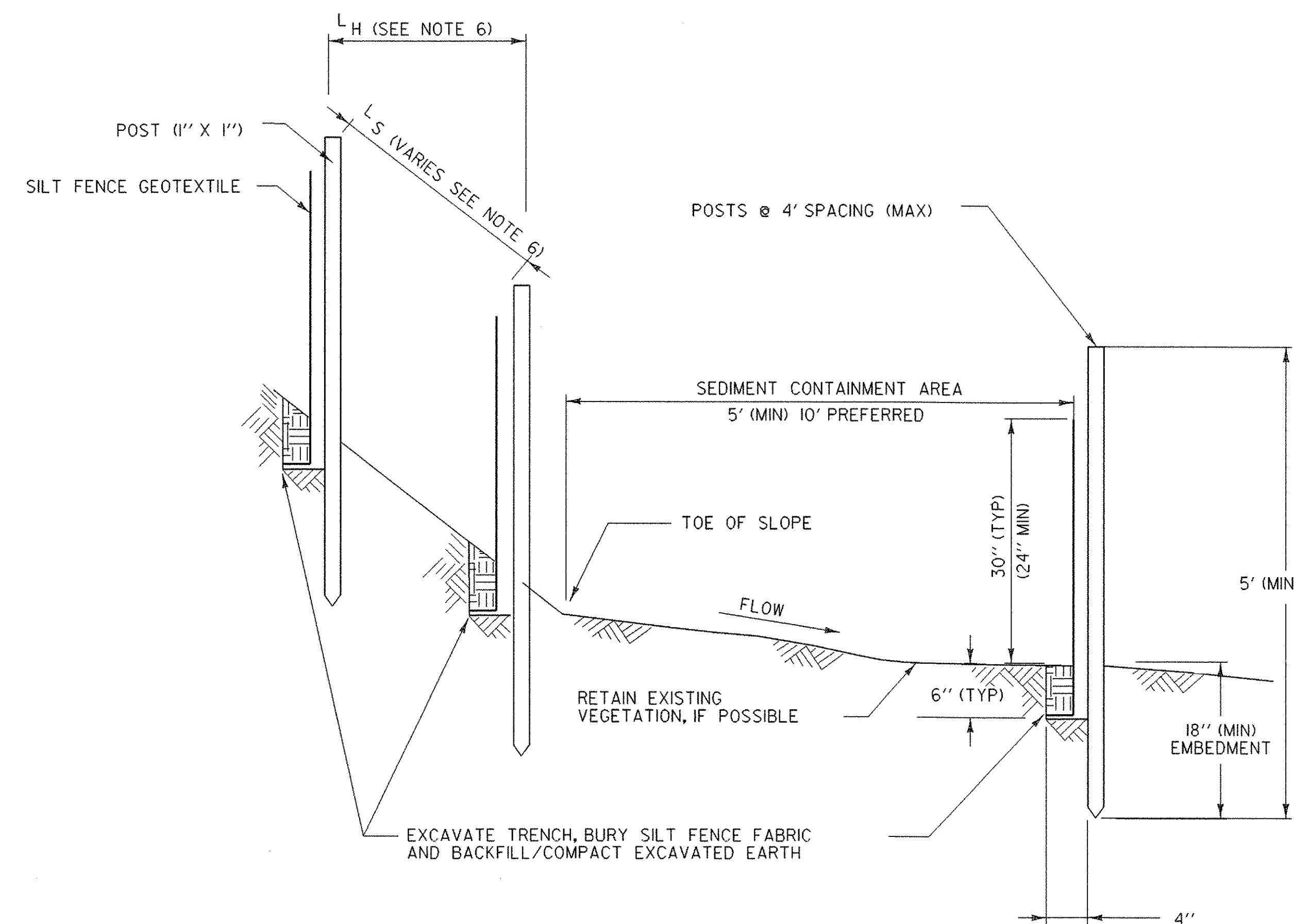


- PLACE THE END POST OF ONE FENCE INSIDE THE END POST OF THE OTHER FENCE.
- ROTATE BOTH POSTS AT LEAST 180 DEGREES IN A CLOCKWISE DIRECTION TO CREATE A TIGHT SEAL WITH THE FABRIC MATERIAL.
- DRIVE BOTH POSTS 18 INCHES INTO THE GROUND AND BURY THE FLAP IN THE TRENCH.

## SPLICING DETAIL



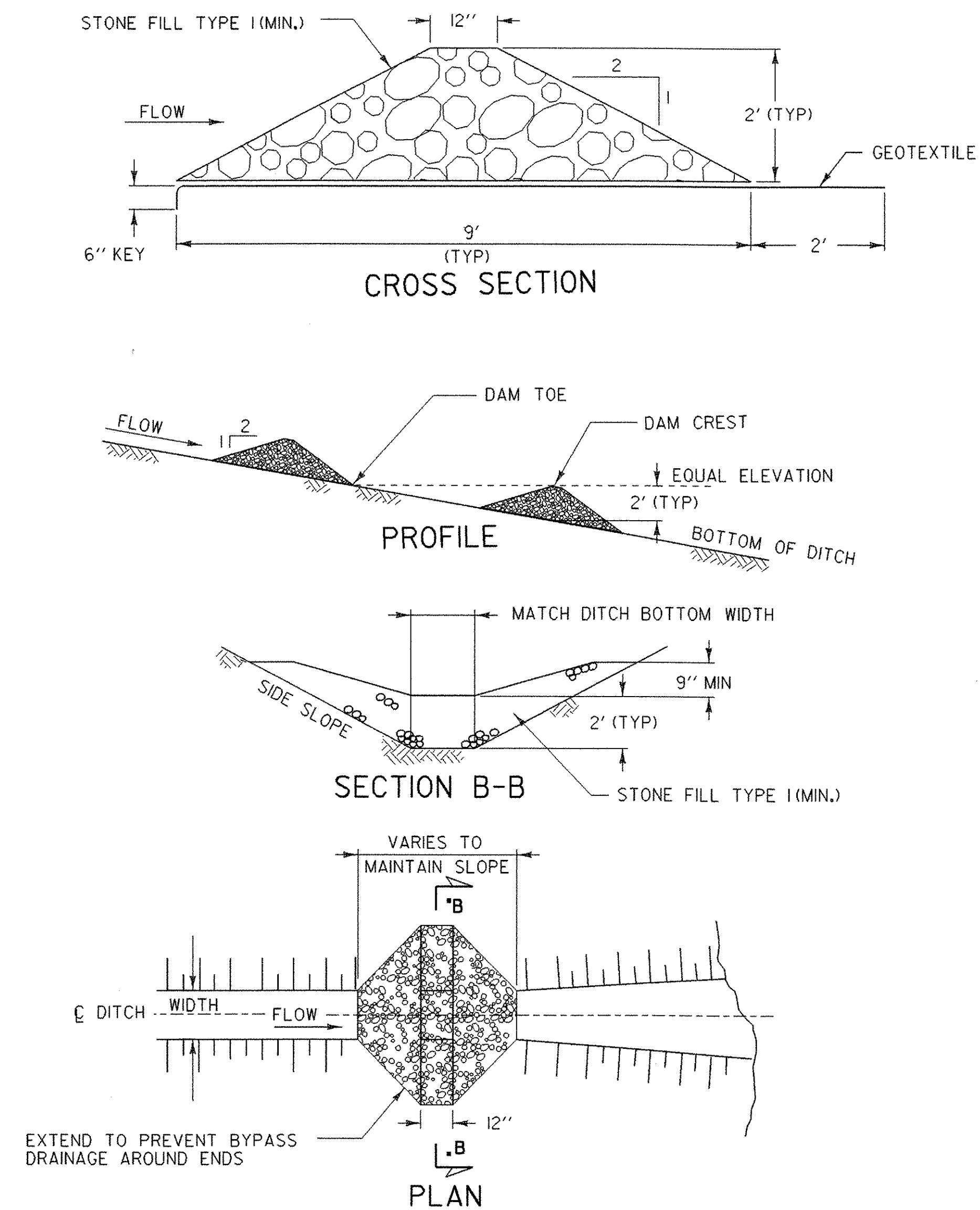
PLAN



SECTION  
SILT FENCE - TEMPORARY

PROJECT NAME: DERBY  
PROJECT NUMBER: IM 091-3(41)

FILE NAME: PW/03A088/DESIGN/D03A088ER PLOT DATE: 17-JUL-2006  
PROJECT LEADER: A. J. BOMBARDIER DRAWN BY: J. L. SCHULTZ  
DESIGNED BY: J. L. SCHULTZ CHECKED BY: A. BOMBARDIER  
EROSION CONTROL DETAIL #1 SHEET 10 OF 20



CHECK DAM - TEMPORARY (STONE)

STONE CHECK DAM PLACEMENT INTERVAL	
DITCH SLOPE	PLACEMENT INTERVAL **
1 %	200 FT
2 %	100 FT
3 %	65 FT
4 %	50 FT
5 %	40 FT
6 %	30 FT
8 %	25 FT
10 %	20 FT

\*\* BASED ON 2' TYPICAL HEIGHT

## CHECK DAMS

### APPLICATION NOTES:

- THE PRIMARY PURPOSE OF A CHECK DAM IS TO REDUCE EROSION IN A CHANNEL BY REDUCING FLOW VELOCITY.
- CHECK DAMS WILL CAPTURE SEDIMENT THAT FALLS OUT OF SUSPENSION BEHIND THE CHECK DAM DUE TO DECREASED VELOCITY.
- CHECK DAMS ARE NOT INTENDED TO FILTER SEDIMENT FROM TURBID WATER.
- DETAILS SHOWN SHALL BE USED FOR TEMPORARY INSTALLATION ONLY.

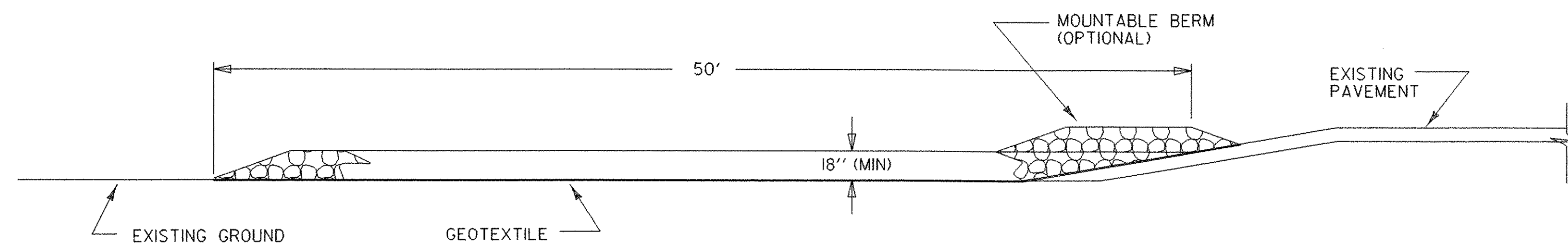
### GENERAL NOTES:

- GEOTEXTILE SHALL BE INSTALLED UNDER STONE FILL. IT SHALL BE KEYED IN ON THE UP HILL END AND SHALL EXTEND 2 FEET BEYOND THE STONE ON THE DOWN HILL END.
- 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.
- 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.
- 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.
- AT TIME OF REMOVAL OF THE CHECK DAMS, THE DISTURBED AREA SHALL BE REPAIRED AND STABILIZED.
- PAYMENT FOR INSTALLATION AND REMOVAL OF CHECK DAMS SHALL BE MADE UNDER STONE FILL, TYPE I(MOD. - CHECK DAMS).
- PAYMENT FOR MONITORING CHECK DAMS SHALL BE MADE UNDER THE MONITORING EROSION & SEDIMENT CONTROL PLAN ITEM.
- 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.

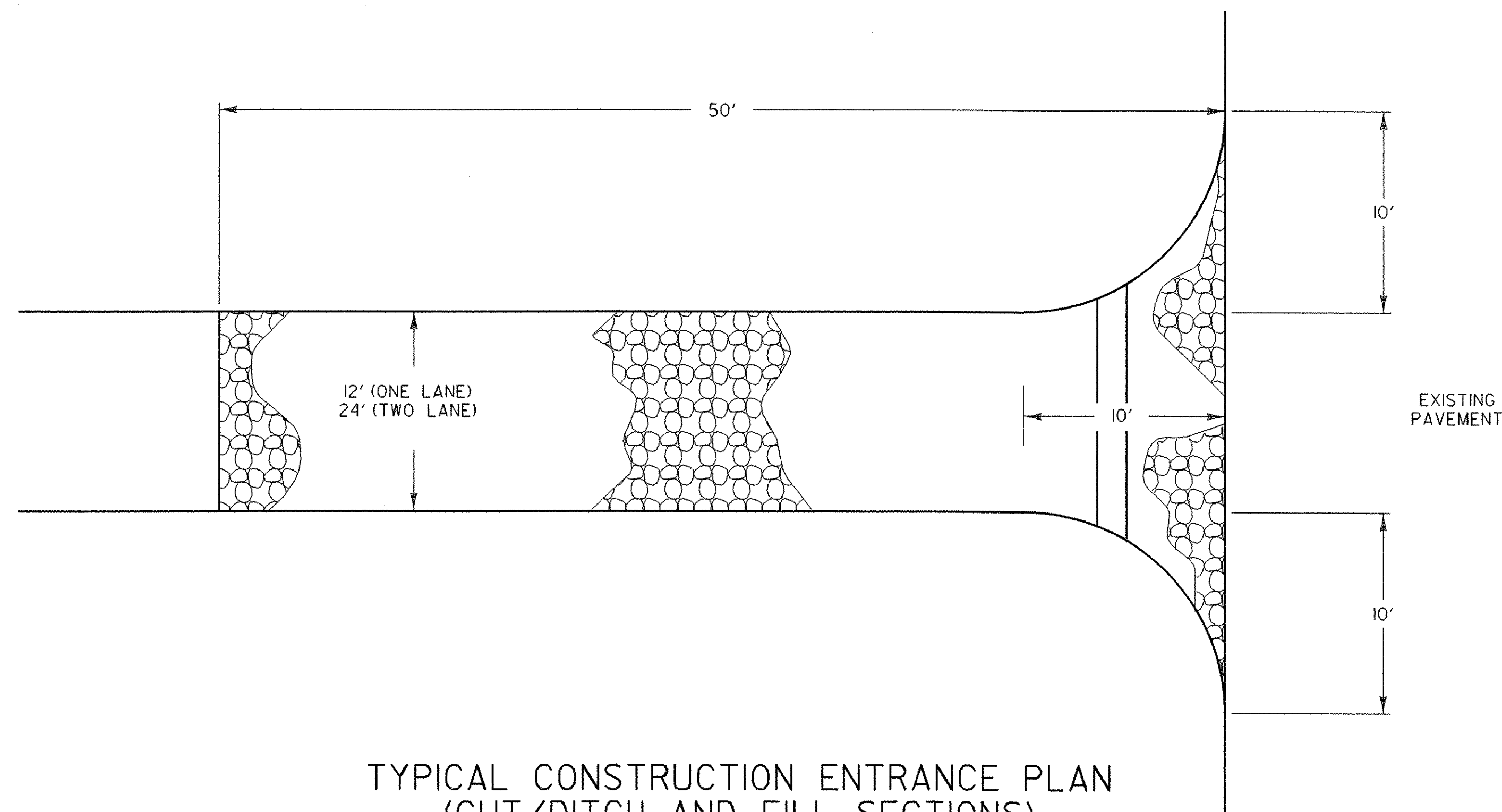
PROJECT NAME: DERBY  
PROJECT NUMBER: IM 091-3(41)

FILE NAME: PW/03A088/DESIGN/D03A088ER PLOT DATE: 17-JUL-2006  
PROJECT LEADER: A. J. BOMBARDIER DRAWN BY: J. L. SCHULTZ  
DESIGNED BY: J. L. SCHULTZ CHECKED BY: A. BOMBARDIER  
EROSION CONTROL DETAIL #2 SHEET II OF 20

## STABILIZED CONSTRUCTION ENTRANCE



TYPICAL CONSTRUCTION ENTRANCE PROFILE  
(CUT AND DITCH SECTIONS)



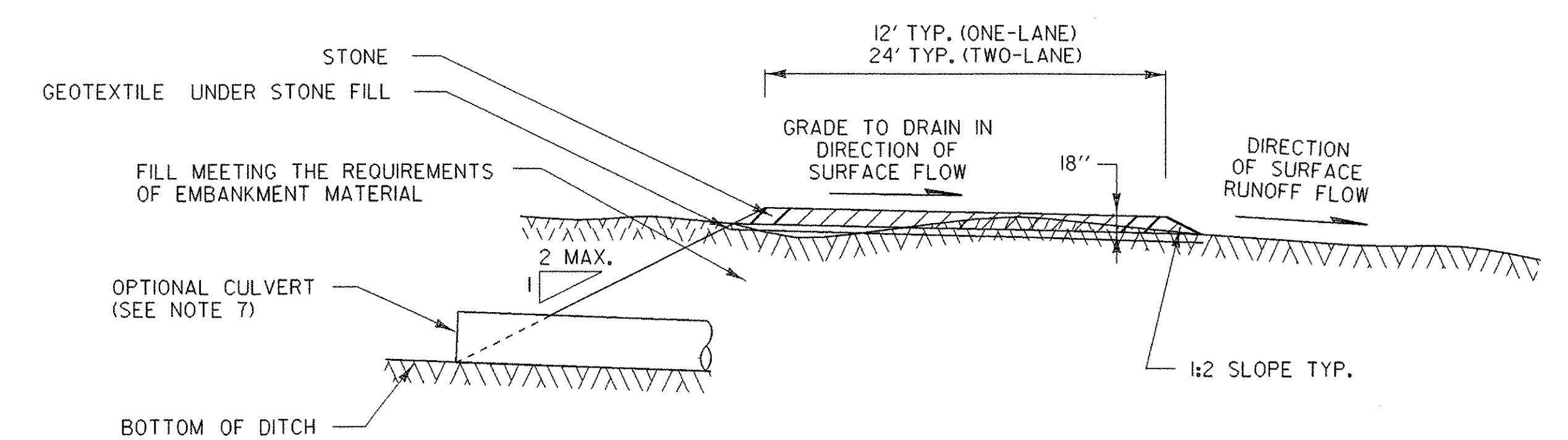
TYPICAL CONSTRUCTION ENTRANCE PLAN  
(CUT/DITCH AND FILL SECTIONS)

### 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 2 INCHES AND 4 INCHES .
2. LENGTH - 50 FEET (MIN)
3. THICKNESS - 18 INCHES (MIN)
4. WIDTH - 12 FEET (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 FOR STABILIZED CONSTRUCTION ENTRANCE SHALL BE MADE UNDER STONE FILL, TYPE I (MOD. - CONSTRUCTION ENTRANCE).
13. PAYMENT FOR MONITORING STABILIZED CONSTRUCTION ENTRANCES SHALL BE MADE UNDER THE MONITORING EROSION & SEDIMENT CONTROL PLAN ITEM.
14. PAYMENT FOR MAINTAINING THE CONSTRUCTION ENTRANCE 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

PROJECT NAME: DERBY

PROJECT NUMBER: IM 091-3(41)

FILE NAME: PW/03A088/DESIGN/D03A088ER

PLOT DATE: 17-JUL-2006

PROJECT LEADER: A. J. BOMBARDIER

DRAWN BY: J. L. SCHULTZ

DESIGNED BY: J. L. SCHULTZ

CHECKED BY: A. BOMBARDIER

EROSION CONTROL DETAIL #3

SHEET 12 OF 20

REMOVED BUT DID NOT RESET

2001+95 LT&RT  
REMOVE & RESET TO  
~~STA. 2003+06 RT &~~  
~~STA. 2004+10 LT~~

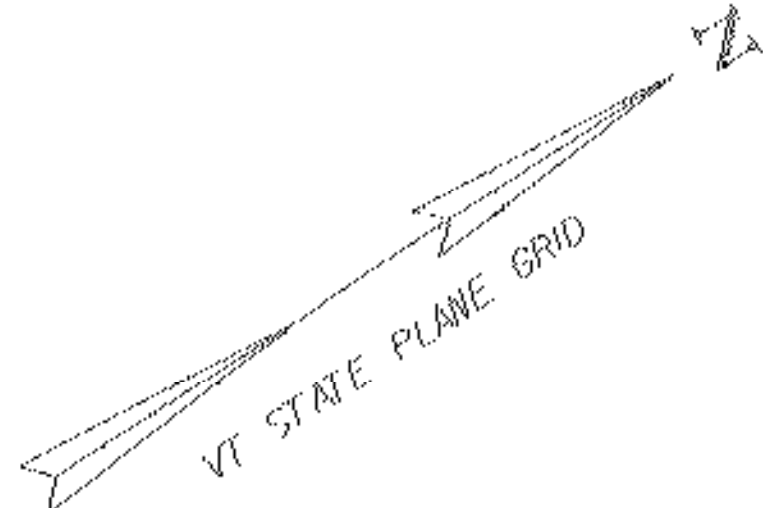
2003+26 LT

~~2003+06 RT &~~  
~~2004+10 LT~~

**SB STATION 2004+50  
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BEGIN APPROACH**

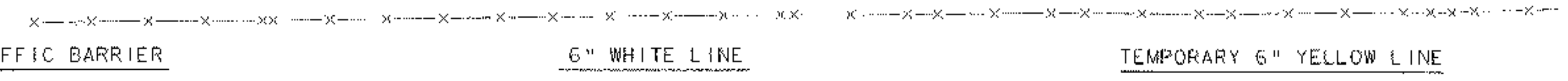
**SB STATION 2004+60  
END APPROACH**

**SB STATION 2001+25  
BEGIN PROJECT**



**LEGEND**

- NEW SIGNS
- EXISTING SIGNS
- R REMOVE
- N NEW
- RET RETAIN
- S SALVAGE
- RR REMOVE & RESET



660' SB (ESTIMATED)

STA 2001+76 TO STA 2004+50 LT (SOLID)  
STA 2002+40 TO STA 2004+50 LT (DASH)  
STA 2002+50 TO STA 2004+60 CL (DASH)

STA 2001+50 TO STA 2003+50 LT (SOLID)

TEMPORARY 6" WHITE LINE (TAPE, TYPE II)

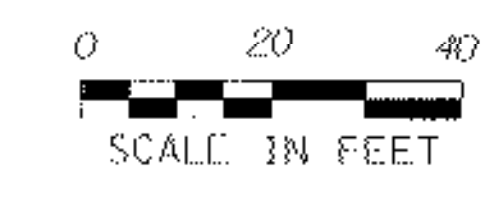
BLACK PAVEMENT MARKING MASKING TAPE

TEMPORARY 6" YELLOW LINE (TAPE, TYPE II)

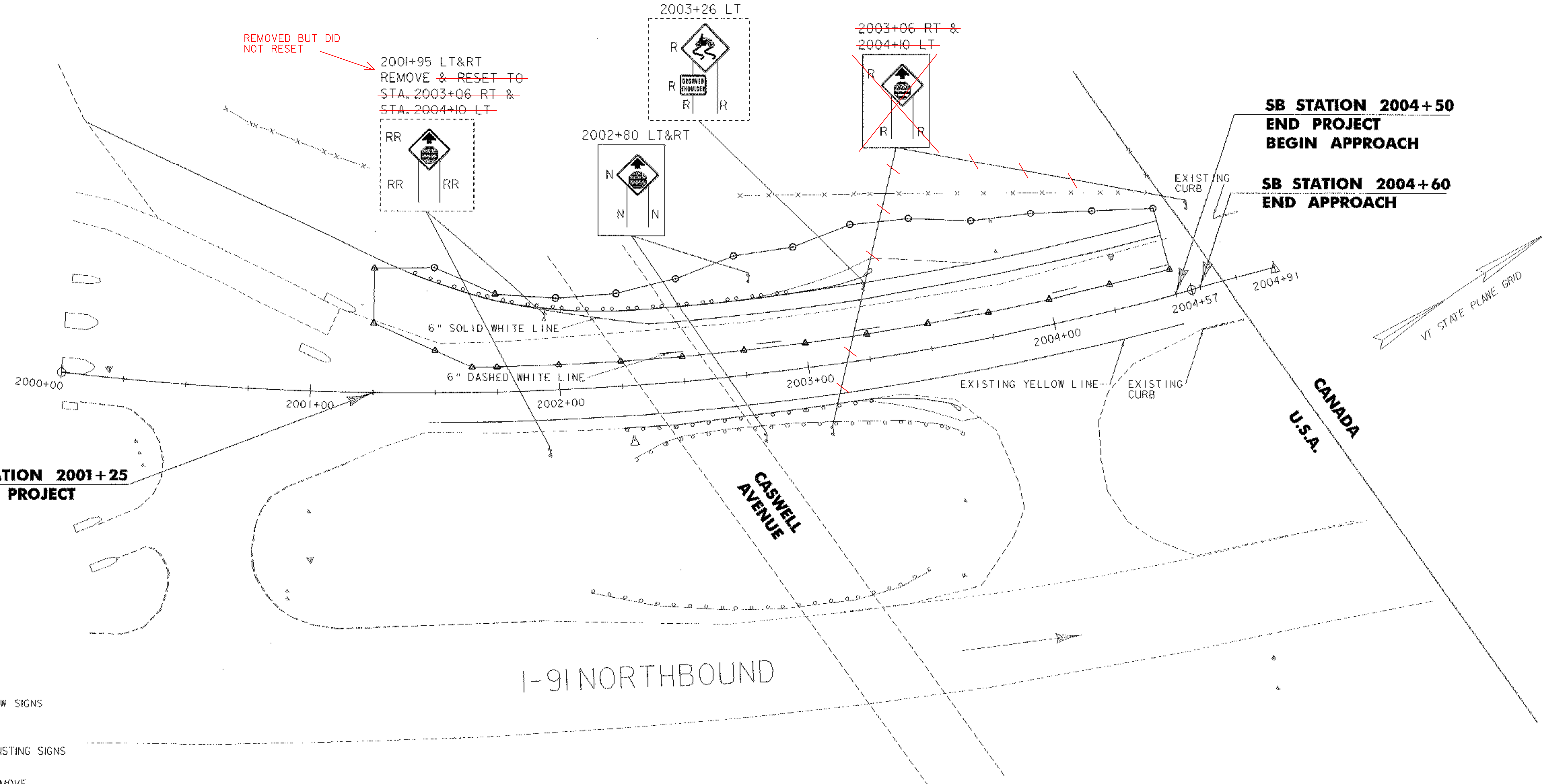
540' SB (ESTIMATED)

STA 2001+50 TO STA 2004+50 RT (SOLID)

STA 2003+60 TO STA 2004+50 RT (SOLID)

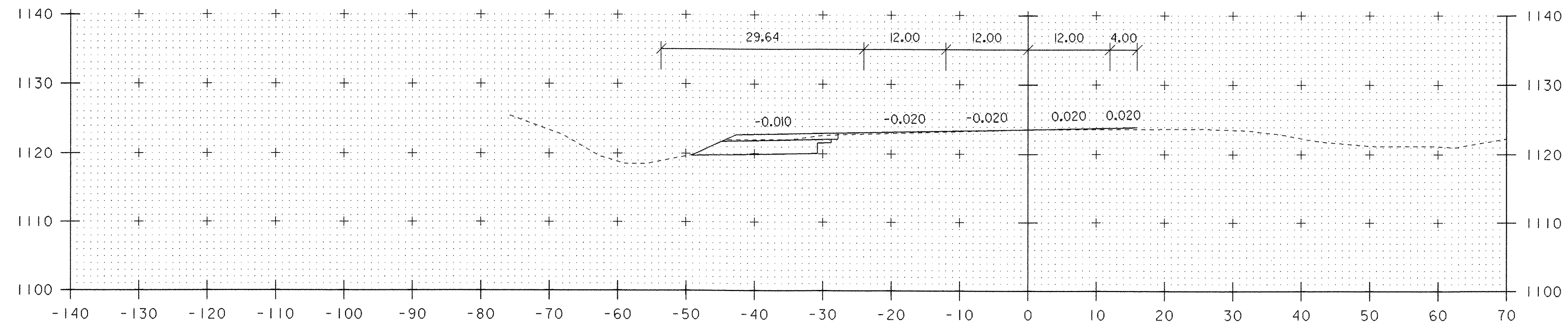


PROJECT NAME: DERBY	
PROJECT NUMBER: IM 091-3(41)	
FILE NAME: 03A088/DESIGN/D03A088BDR	PLOT DATE: 17-JUL-2006
PROJECT LEADER: A. J. BOMBARDIER	DRAWN BY: J. L. SCHULTZ
DESIGNED BY: J. L. SCHULTZ	CHECKED BY: A. BOMBARDIER
SIGN & PAVEMENT MARKINGS SHEET	SHEET 13 OF 20

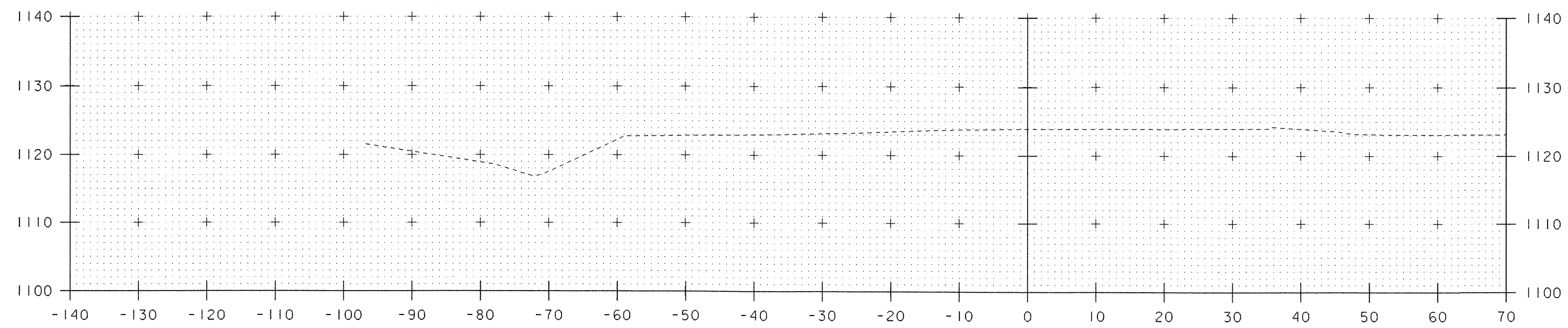




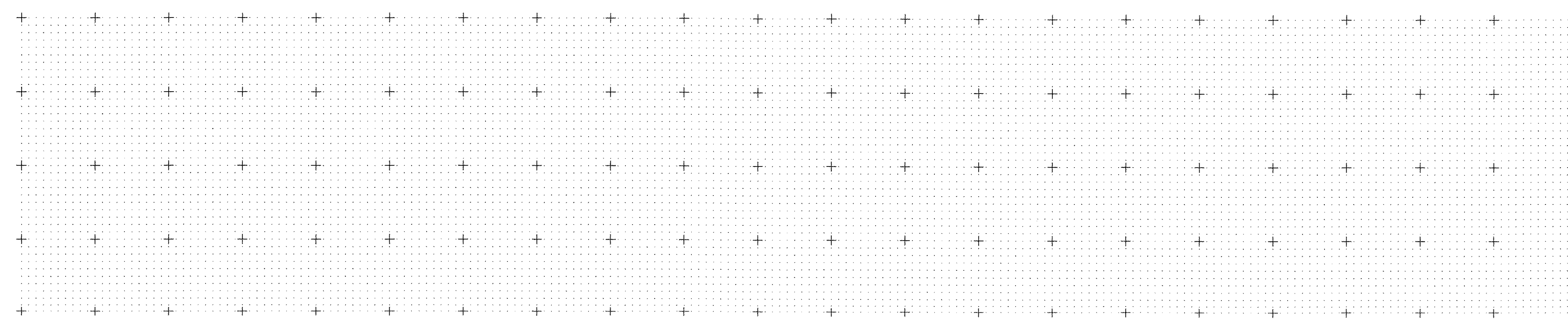
# SB CROSS SECTIONS



2001+25

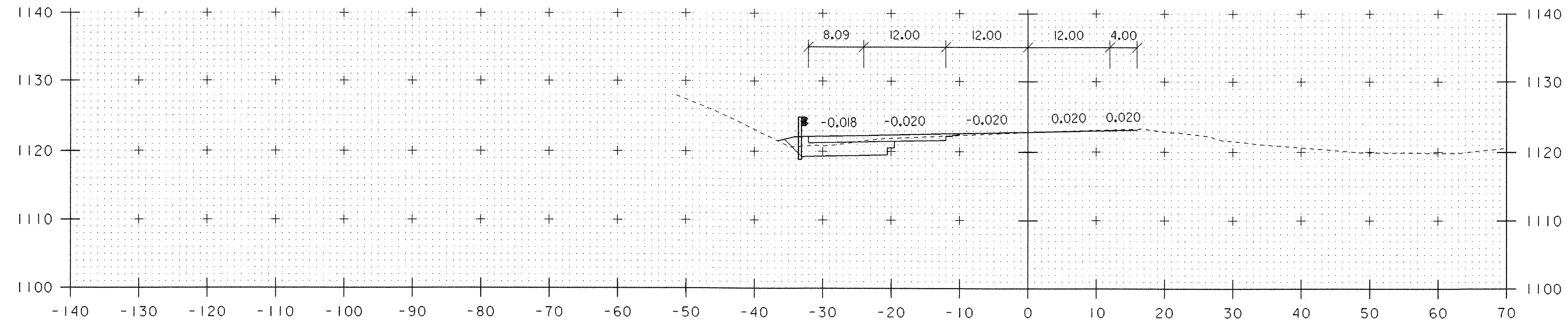


2001+00

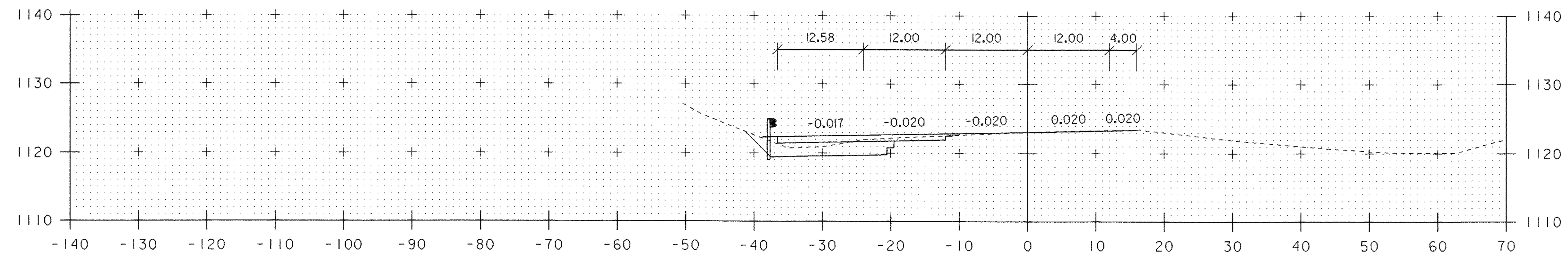


PROJECT NAME: DERBY	
PROJECT NUMBER: IM 09-3(4)	
FILE NAME: 03A088/DESIGN/D03A088XS	PLOT DATE: 17-JUL-2006
PROJECT LEADER: A. J. BOMBARDIER	DRAWN BY: J. L. SCHULTZ
DESIGNED BY: J. L. SCHULTZ	CHECKED BY: A. BOMBARDIER
CROSS SECTION SHEET 1	SHEET 15 OF 20

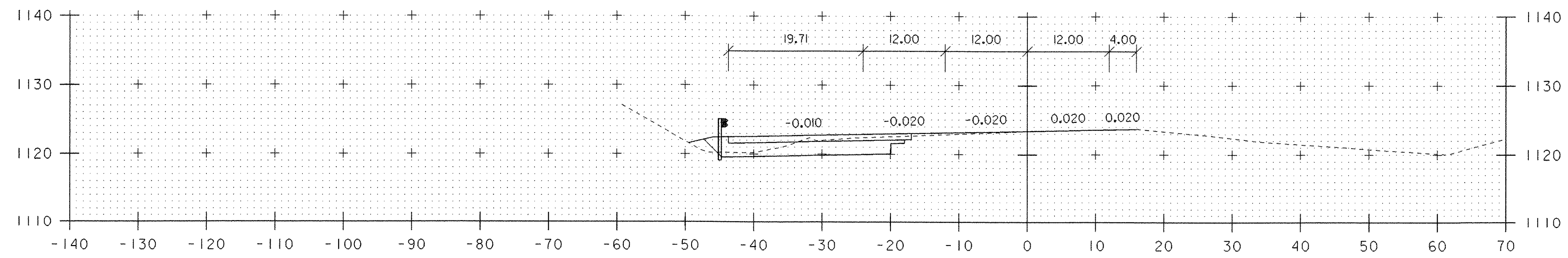
# SB CROSS SECTIONS



2002+00



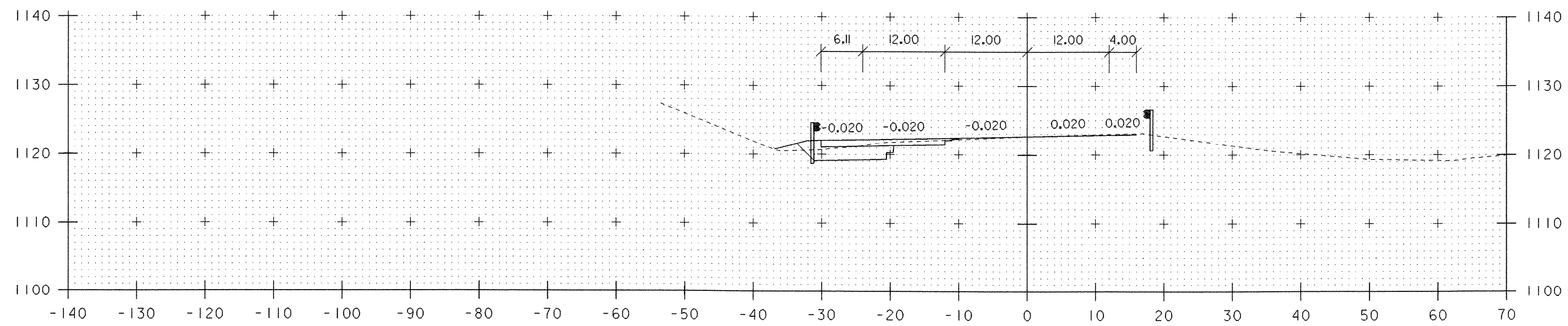
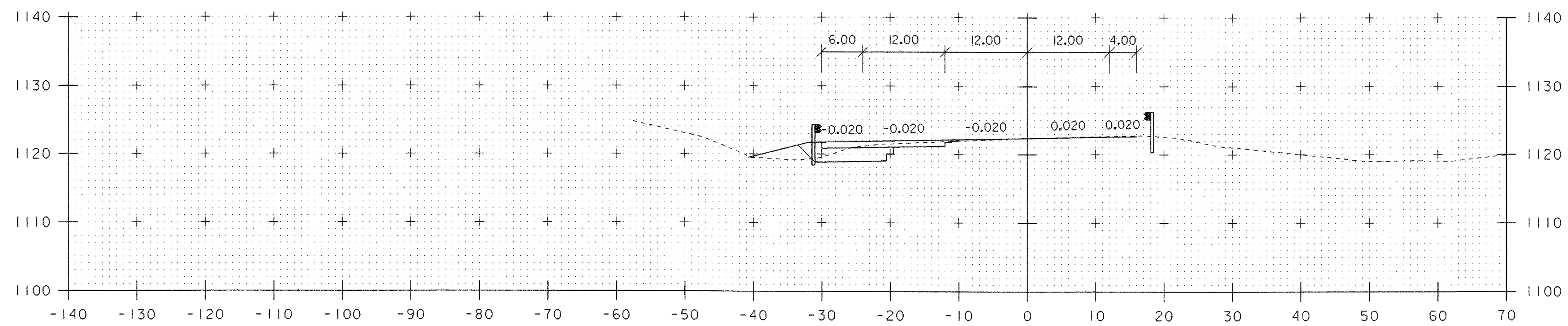
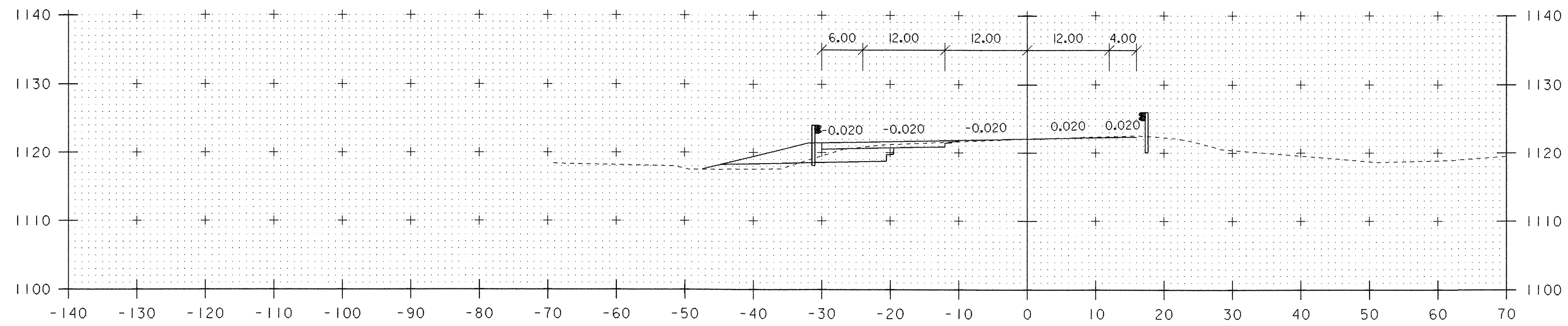
2001+75



2001+50

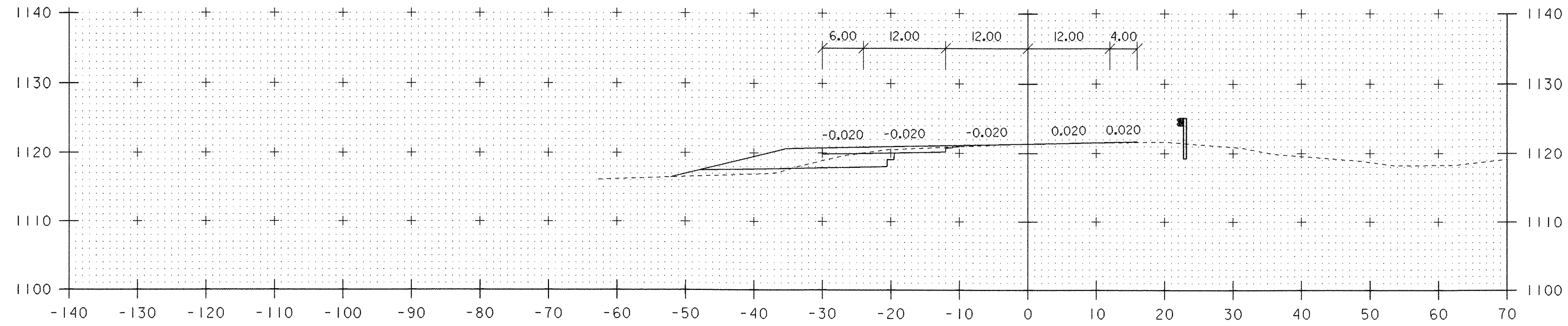
PROJECT NAME: DERBY	
PROJECT NUMBER: IM 091-3(41)	
FILE NAME: 03A088/DESIGN/D03A088XS	PLOT DATE: 17-JUL-2006
PROJECT LEADER: A. J. BOMBARDIER	DRAWN BY: J. L. SCHULTZ
DESIGNED BY: J. L. SCHULTZ	CHECKED BY: A. BOMBARDIER
CROSS SECTION SHEET 2	SHEET 16 OF 20

# SB CROSS SECTIONS

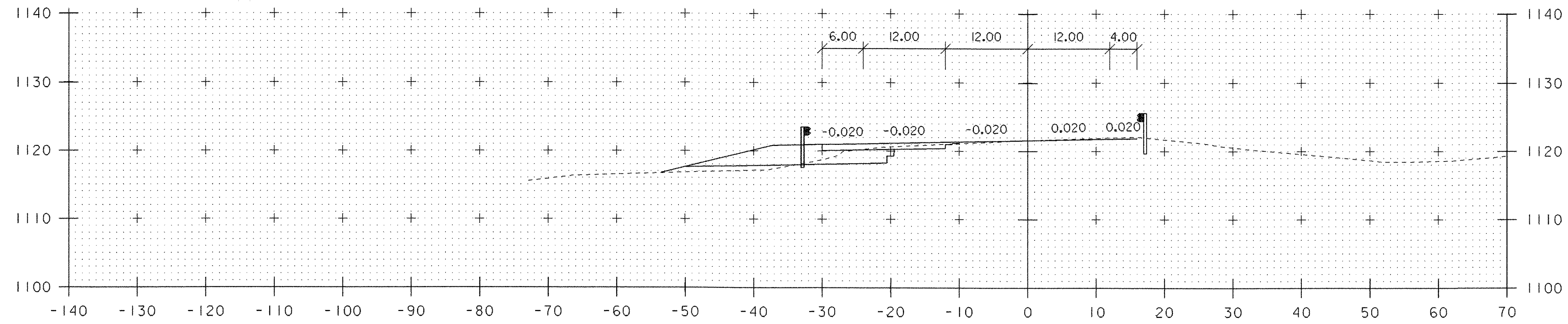


PROJECT NAME:	DERBY	PLOT DATE:	17-JUL-2006
PROJECT NUMBER:	IM 091-3(41)	DRAWN BY:	J. L. SCHULTZ
FILE NAME:	03A088/DESIGN/D03A088XS	CHECKED BY:	A. BOMBARDIER
PROJECT LEADER:	A. J. BOMBARDIER	CROSS SECTION SHEET	3
DESIGNED BY:	J. L. SCHULTZ	SHEET	17 OF 20

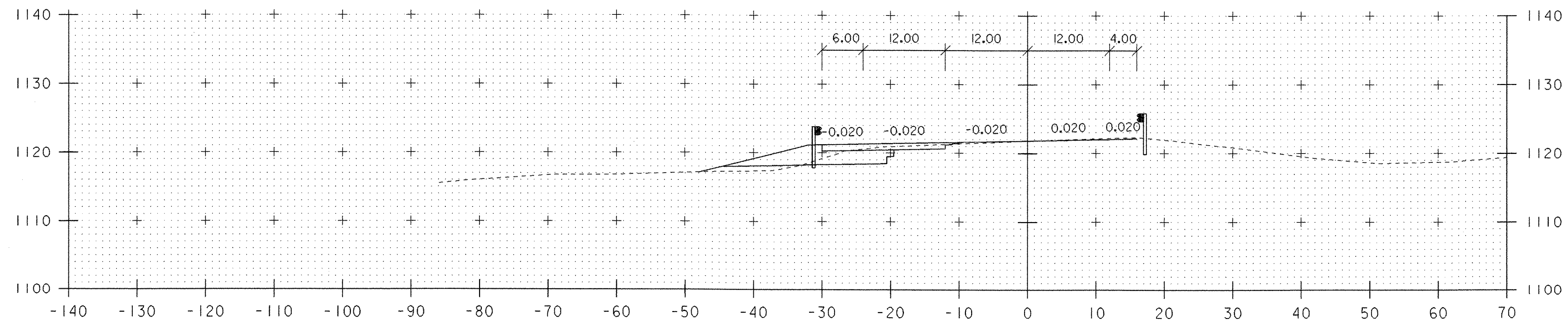
# SB CROSS SECTIONS



2003+50



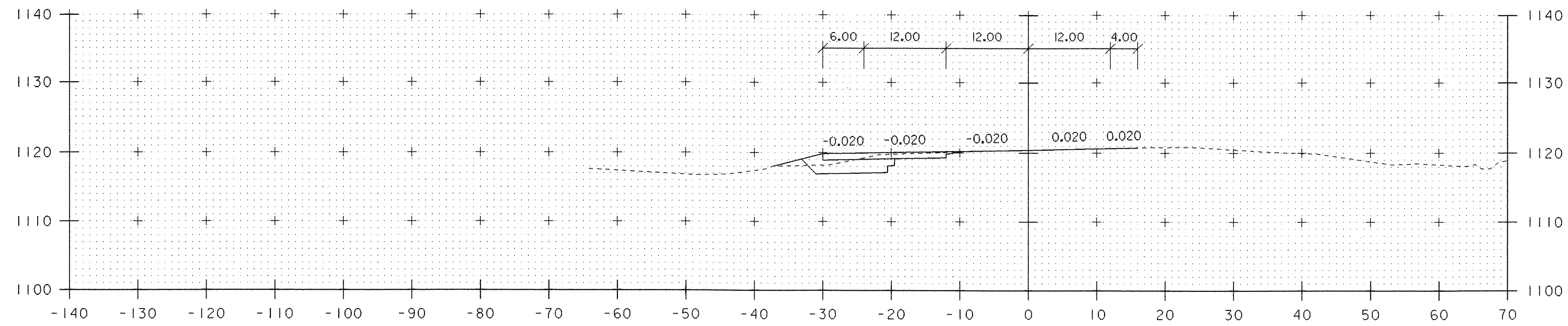
2003+25



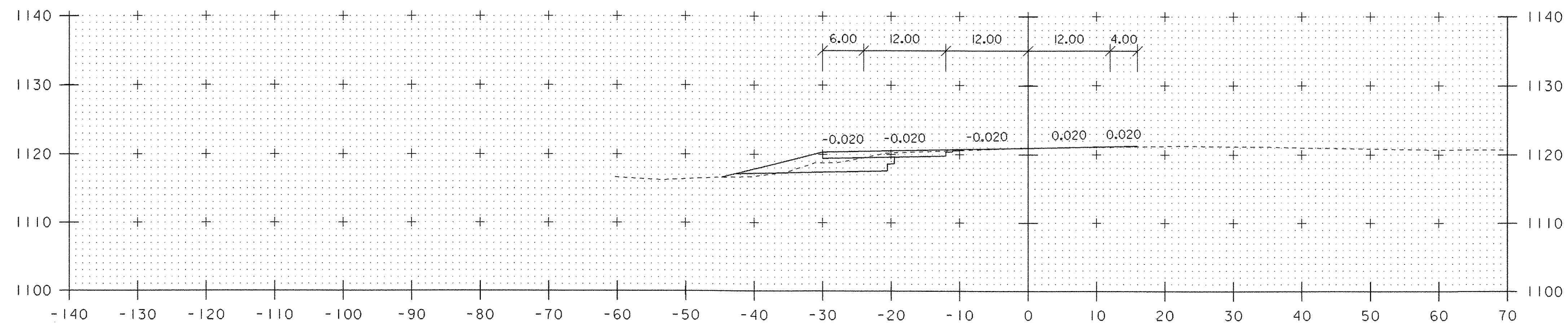
2003+00

PROJECT NAME: DERBY	
PROJECT NUMBER: IM 091-3(41)	
FILE NAME: 03A088/DESIGN/D03A088XS	PLOT DATE: 17-JUL-2006
PROJECT LEADER: A. J. BOMBARDIER	DRAWN BY: J. L. SCHULTZ
DESIGNED BY: J. L. SCHULTZ	CHECKED BY: A. BOMBARDIER
CROSS SECTION SHEET 4	SHEET 18 OF 20

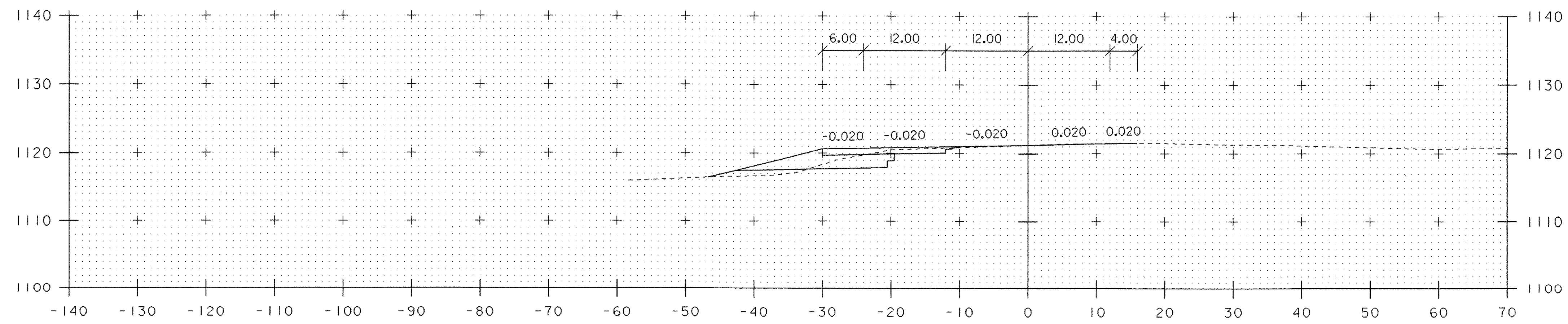
# SB CROSS SECTIONS



2004+25



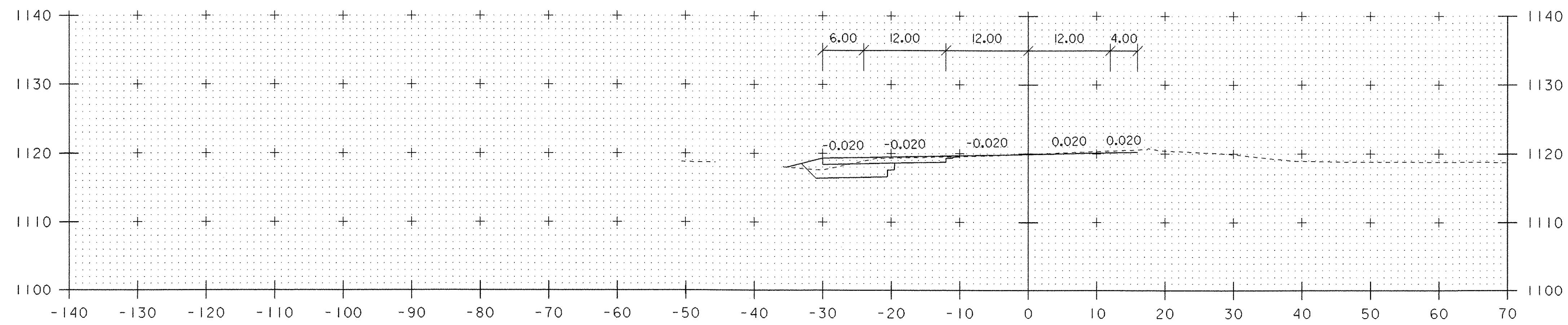
2004+00



2003+75

PROJECT NAME: DERBY	
PROJECT NUMBER: IM 091-3(41)	
FILE NAME: 03A088/DESIGN/D03A088XS	PLOT DATE: 17-JUL-2006
PROJECT LEADER: A. J. BOMBARDIER	DRAWN BY: J. L. SCHULTZ
DESIGNED BY: J. L. SCHULTZ	CHECKED BY: A. BOMBARDIER
CROSS SECTION SHEET 5	SHEET 19 OF 20

SB CROSS SECTIONS



2004+50

PROJECT NAME: DERBY	PLOT DATE: 17-JUL-2006
PROJECT NUMBER: IM 091-3(41)	DRAWN BY: J. L. SCHULTZ
FILE NAME: 03A088/DESIGN/D03A088XS	CHECKED BY: A. BOMBARDIER
PROJECT LEADER: A. J. BOMBARDIER	SHEET 20 OF 20
DESIGNED BY: J. L. SCHULTZ	
CROSS SECTION SHEET 6	