STATE OF VERMONT
AGENCY OF TRANSPORTATION

PRELIMINARY INFORMATION SHEET

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FINAL HYDRAULIC REPORT

HYDROLOGIC DATA

Date: March 2000

DRAINAGE AREA : 3.8 sq. mi.
CHARACTER OF TERRAIN : Hilly with a mixture of open and forested cover.
STREAM CHARACTERISTICS : Small, perenial but flashy, probably incised,and not braided
NATURE OF STREAMBED : Ledge and cobbles upstream, cobbles and gravel downstream

PEAK FLOW DATA

Q 2.33 =	230 cfs	Q 50 =	915 cfs
Q 10 =	520 cfs	Q 100 =	1100 cfs
Q 25 =	730 cfs	Q 500 =	1700 cfs

DATE OF FLOOD RECORD : November 1927 (Based on 1978 Flood Insurance Study)
ESTIMATED DISCHARGE: Unknown
WATER SURFACE ELEV.: Unknown
NATURAL STREAM VELOCITY: @ Q50 = 8.9 fps downstream
ICE CONDITIONS : Moderate
DEBRIS: Moderate
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? Yes
IS ORDINARY RISE RAPID? Yes
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? No
IF YES, DESCRIBE:

WATERSHED STORAGE: 1% HEADWATERS:
UNIFORM: X
IMMEDIATELY ABOVE SITE:

EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE: Concrete slab bridge
YEAR BUILT: 1900
CLEAR SPAN(NORMAL TO STREAM): 12.0 ft.
VERTICAL CLEARANCE ABOVE STREAMBED: 7.0 ft. average at inlet
WATERWAY OF FULL OPENING: 85 sq. ft. at inlet, 105 sq. ft. at outlet
DISPOSITION OF STRUCTURE: Remove and replace with a new structure
TYPE OF MATERIAL UNDER SUBSTRUCTURE: At least partly on ledge.

WATER SURFACE ELEVATIONS AT:

Q2.33 =	869.9	VELOCITY =	9.0 fps
Q10 =	874.7	"	11.2 fps
Q25 =	876.3	"	12.5 fps
Q50 =	877.3	"	12.8 fps **
Q100 =	878.0	"	12.0 fps **

LONG TERM STREAMBED CHANGES: None noted at this time. However, a reference was found indicating there has been 3 ft. of channel degradation in the last 100 years.

IS THE ROADWAY OVERTOPPED BELOW Q100: Yes
FREQUENCY: Q25 +-
RELIEF ELEVATION: 876.3
DISCHARGE OVER ROAD @Q100: 220 cfs

UPSTREAM STRUCTURE

TOWN: Williamstown — DISTANCE: 600 ft.
HIGHWAY# : T.H. 6 — STRUCTURE #: 21
CLEAR SPAN: 15 ft. — CLEAR HEIGHT: 7 ft.
YEAR BUILT: Unknown — FULL WATERWAY: 105 sq. ft.
STRUCTURE TYPE: Single span steel beam bridge

DOWNSTREAM STRUCTURE

TOWN: Williamstown — DISTANCE: 400 ft.
HIGHWAY# : VT 14 — STRUCTURE #: 59
CLEAR SPAN: 16 ft. — CLEAR HEIGHT: 7 ft.
YEAR BUILT: 1958 — FULL WATERWAY: 110 sq. ft.
STRUCTURE TYPE: Concrete slab bridge

LOAD FACTOR- LOAD RATING (TONS)

LOADING LEVELS	TRUCK						
	H	HS	3S2	6 AXLE	3A. STR.	4A. STR.	SA. SEMI
INVENTORY	33	50					
POSTED	46	70	91		54	56	91
OPERATING		84	109	102	64	67	

COMMENTS:

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2004	3000	420	51	7	210
2024	4000	550	-	-	-

20 year ESAL for flexible pavement from 2004 to 2024 : 1,265,000
40 year ESAL for flexible pavement from 2004 to 2044 : 3,044,000
Design Speed : 25 mph

PROPOSED STRUCTURE

STRUCTURE TYPE: Concrete slab bridge

CLEAR SPAN(NORMAL TO STREAM): 16.0 ft.
VERTICAL CLEARANCE ABOVE STREAMBED: 8.0 ft. average
WATERWAY OF FULL OPENING: 137 sq. ft.

WATER SURFACE ELEVATIONS AT:

Q2.33 =	871.8	VELOCITY=	8.3 fps
Q10 =	873.6	"	10.7 fps
Q25 =	875.1	"	11.9 fps
Q50 =	876.2	"	12.8 fps
Q100 =	877.3	"	13.5 fps **

IS THE ROADWAY OVERTOPPED BELOW Q100: Yes
FREQUENCY: Q55
RELIEF ELEVATION: 876.3
DISCHARGE OVER ROAD @Q100: 25 cfs

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 877.6 (876.5 minimum), at inlet
VERTICAL CLEARANCE: @ Q50 = 1.4 ft., average, 0.3 ft. minimum, at inlet

SCOUR: Estimated to be 6.0 ft. at Q100, or to ledge.
Scour will be less with the proposed bridge than with the existing bridge.
REQUIRED CHANNEL PROTECTION: Stone Fill, Type II, as needed

PERMIT INFORMATION

AVERAGE DAILY FLOW:	8 cfs	
ORDINARY LOW WATER:	4 cfs	DEPTH OR ELEVATION: 0.5 ft.
ORDINARY HIGH WATER:	100 cfs	1.5 ft.

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: N/A
CLEAR SPAN (NORMAL TO STREAM): N/A
VERTICAL CLEARANCE ABOVE STREAMBED: N/A
WATERWAY AREA OF FULL OPENING: N/A

ADDITIONAL INFORMATION

* This stream does not have an official name, it was refered to as Brook 2 in the 1978 F.I.S.
** Velocities listed are an average for the total flow (flow through the bridge and over the road), at the outlet. The Q100 velocity is higher for the proposed bridge than the existing bridge, because there is less roadway overflow with the proposed bridge.

DESIGN CRITERIA

1. DESIGN LIVE LOAD AASHTO HS 25
2. DESIGN SPAN 34.5 Feet centerline to centerline of bearing
3. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL N/A
   ON LEDGE 10 KSF
4. ALLOWABLE LOAD FOR PILING N/A
   TYPE N/A
   ESTIMATED LENGTH N/A
5. STRUCTURAL STEEL AASHTO GRADE N/A
6. REINFORCING STEEL GRADE 60
7. CONCRETE CLASS A f'c : 4000 psi
   CONCRETE CLASS B f'c : 3500 psi
8. SOIL UNIT WEIGHT 140 pcf
9. DESIGN LOAD FOR SPREAD FOOTINGS ON SOIL N/A

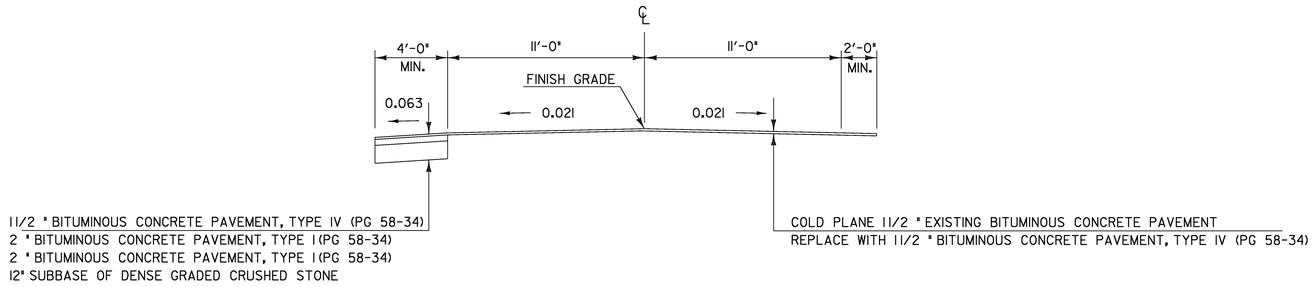
TRAFFIC MAINTENANCE

1. IS TRAFFIC TO BE MAINTAINED? yes
   IF YES, ON EXISTING STRUCTURE? no
   OR ON TEMPORARY BRIDGE? no
   ONE OR TWO-WAY TRAVEL? two-way detour
2. TRAFFIC CONTROL SIGNALS REQUIRED? no
3. ARE SIDEWALKS REQUIRED? no
   IF SO, ON WHAT SIDE? N/A

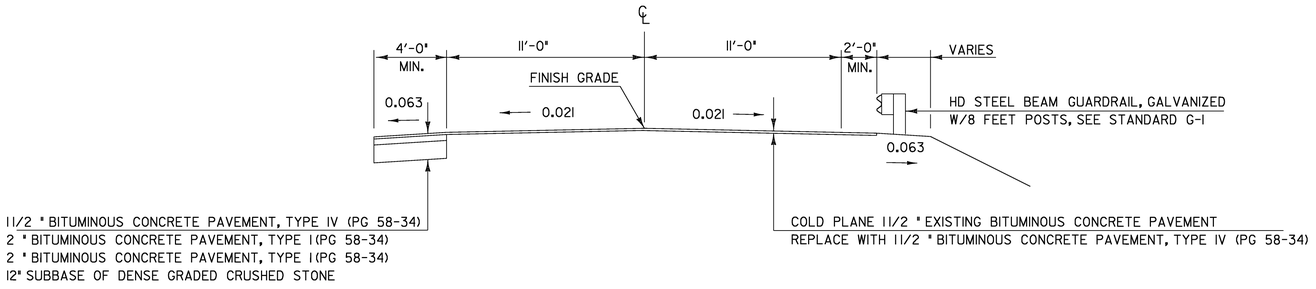
PROJECT NAME: Williamstown
PROJECT NUMBER: BRS 0204 (4)

FILE NAME: \structures\se111excel.dgn — PLOT DATE: 4/2/2008
PROJECT MANAGER: Evans-Mongeon — DRAWN BY: U. STANLEY
DESIGNED BY: U. STANLEY — CHECKED BY: M. EVANS-MONG
PRELIMINARY INFORMATION SHEET — SHEET 2 OF 108

MATERIAL ITEM	THICKNESS TOLERANCE
BIT. CONC. PAVEMENT TYPE IV (PG 58-34)	± 1/4"
BASE COURSE, BIT. CONC. PAVEMENT TYPE I (PG 58-34)	± 1/2"
SUBBASE OF DENSE GRADED CRUSHED STONE	± 1"



NORMAL SECTIONS
NTS
STA 215+00 TO 218+25



NORMAL SECTIONS
NTS
STA 220+25 TO 223+85

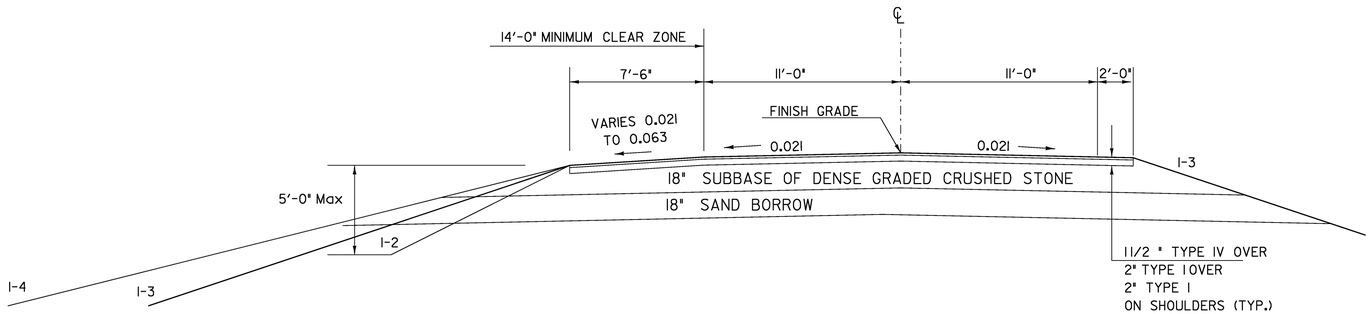
ROADWAY TYPICAL SECTIONS SHEET 1

PROJECT NAME:	WILLIAMSTOWN
PROJECT NUMBER:	BRS 0204 (4)

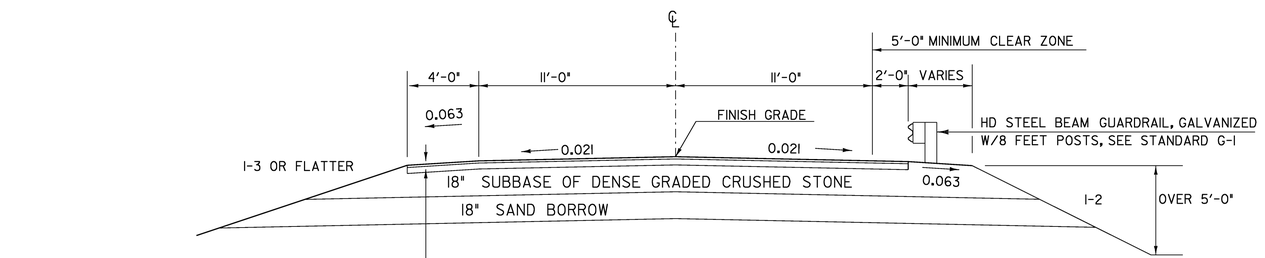
FILE NAME: /structures/sellityp.dgn	PLOT DATE: 07-APR-2008
PROJECT LEADER: EVANS-MONGEON	DRAWN BY: STANLEY
DESIGNED BY: EVANS-MONGEON	CHECKED BY: STANLEY
s83ellityp2.1	SHEET 3 OF 108

MATERIAL ITEM	THICKNESS TOLERANCE
BIT. CONC. PAVEMENT TYPE IV (PG 58-34)	± 1/4"
BASE COURSE, BIT. CONC. PAVEMENT TYPE I (PG 58-34)	± 1/2"
SUBBASE OF DENSE GRADED CRUSHED STONE	± 1"
SAND BORROW	± 1"

11/2 " BITUMINOUS CONCRETE PAVEMENT, TYPE IV (PG 58-34)
2" BITUMINOUS CONCRETE PAVEMENT, TYPE I (PG 58-34)
2" BITUMINOUS CONCRETE PAVEMENT, TYPE I (PG 58-34)
18" SUBBASE OF DENSE GRADED CRUSHED STONE
18" SAND BORROW



TYPICAL SECTION
NTS
STA. 218+25 TO 218+60



TYPICAL SECTION
NTS
STA. 219+60 TO 220+25

SEEDING FORMULA
URBAN AREAS

% WT.	LBS./A.	NAME	PUR %	GERM %
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 FORMULA 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. TOPSOIL THICKNESS IS 6".

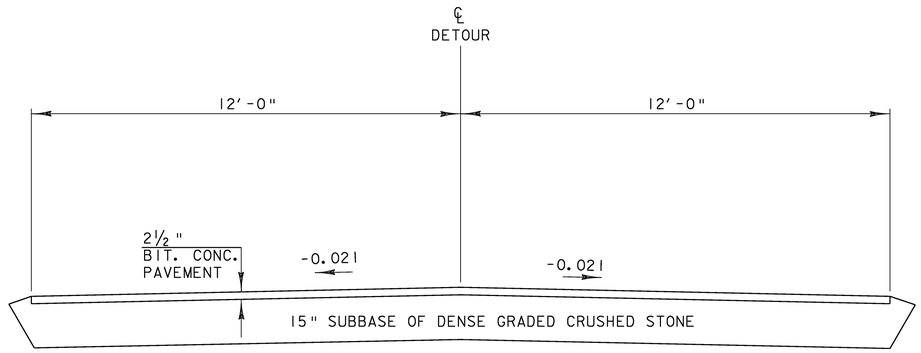
SLOPE ROUNDING: ALL CUT SLOPES TO BE ROUNDED IN ACCORDANCE WITH STANDARD SHEET B - 5.

ROADWAY TYPICAL SECTION SHEET 2

PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204 (4)

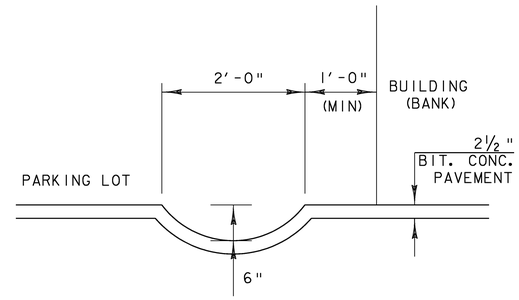
FILE NAME: /structures/sellityp.dgn
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: EVANS-MONGEON
s83ellityp3.1

PLOT DATE: 07-APR-2008
DRAWN BY: STANLEY
CHECKED BY: STANLEY
SHEET 4 OF 108



DETOUR TYPICAL

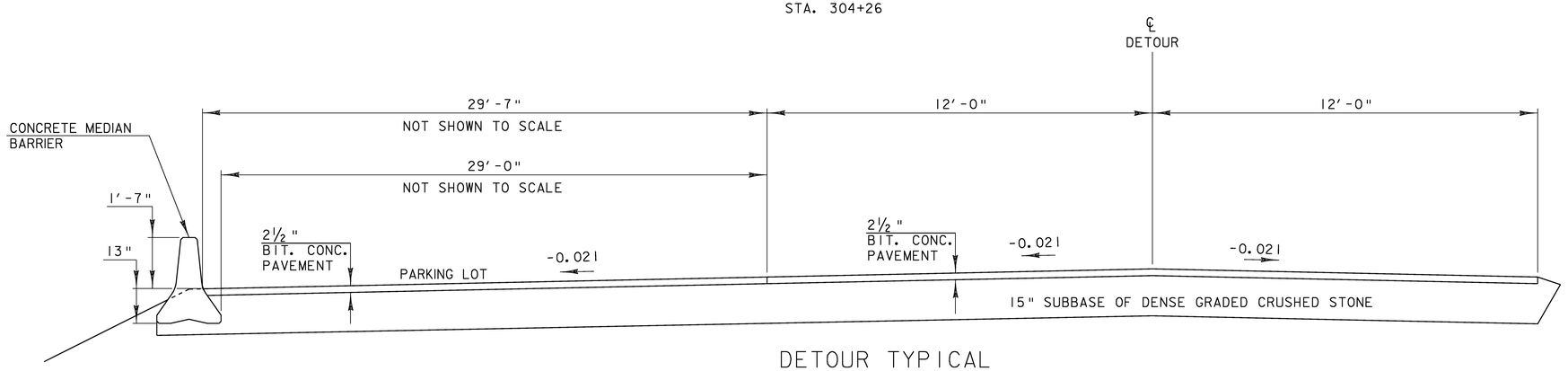
STA. 300+00 TO
STA. 304+26



PAVED DRAINAGE DITCH

STA. 305+23 LT 19.5′ TO
STA. 305+23 LT 38.5′

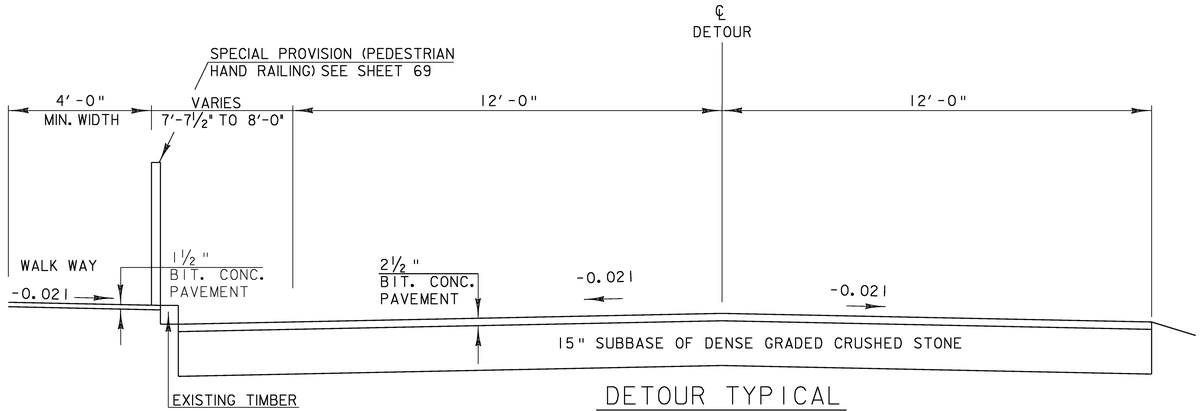
SCALE 1" = 1'-0



DETOUR TYPICAL

STA. 304+26 TO
STA. 305+25

SCALE ½" = 1'-0



DETOUR TYPICAL

STA. 305+25 TO
STA. 305+67

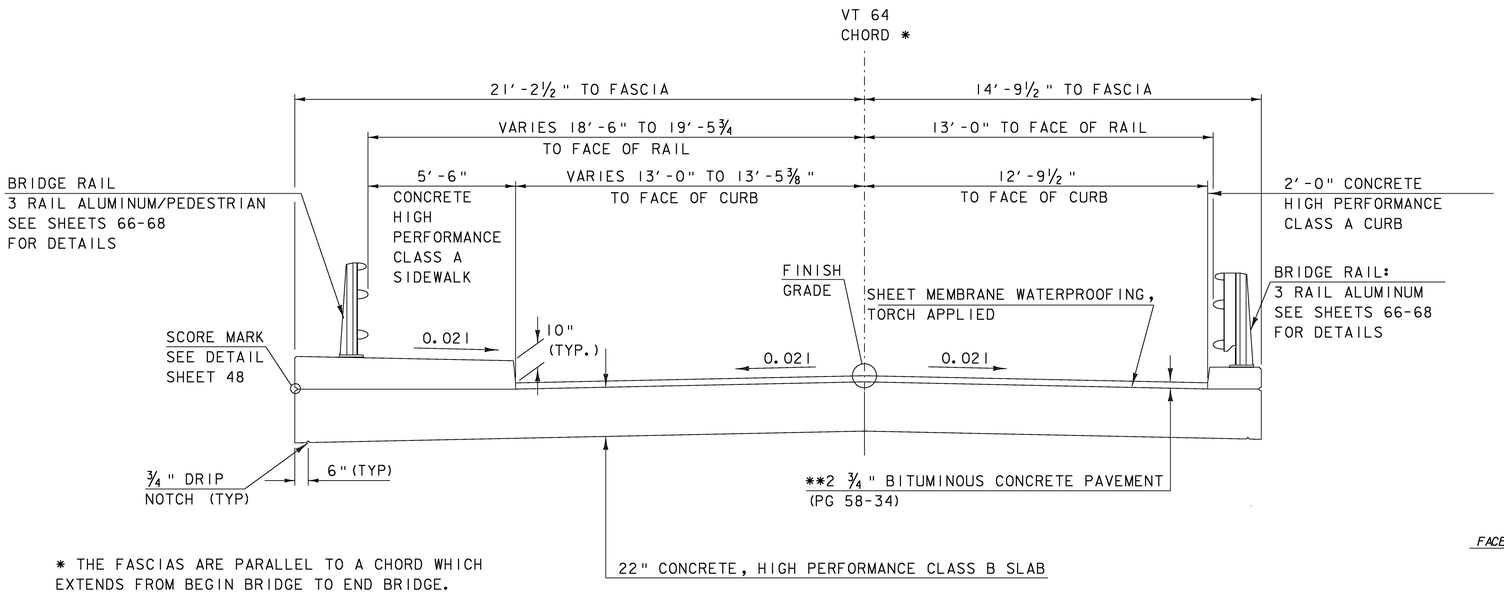
SCALE ½" = 1'-0

DETOUR TYPICAL SECTIONS

PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: /structures/sellltyp
PROJECT LEADER: M. EVANS-MONGEON
DESIGNED BY: U. STANLEY
sellldettyp.i

PLOT DATE: 07-APR-2008
DRAWN BY: L. DUQUETTE
CHECKED BY: EVANS-MONGEON
SHEET 5 OF 108

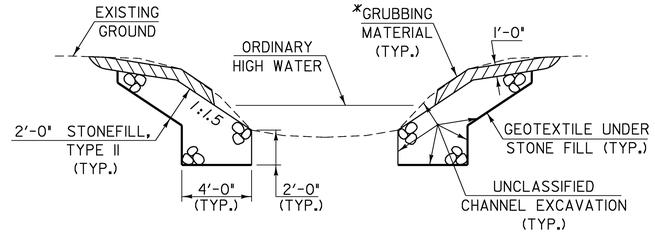


* THE FASCIAS ARE PARALLEL TO A CHORD WHICH EXTENDS FROM BEGIN BRIDGE TO END BRIDGE. THE FACE OF SIDEWALK AND FACE OF BRIDGE RAILING, ALUMINUM/PEDESTRIAN ARE PARALLEL TO THE ℄ OF VT 64.

**1 ½" BIT. CONCRETE PAVEMENT TYPE IV (PG 58-34) OVER
1 ¼" BIT. CONCRETE PAVEMENT TYPE IV (PG 58-34)

BRIDGE TYPICAL SECTION

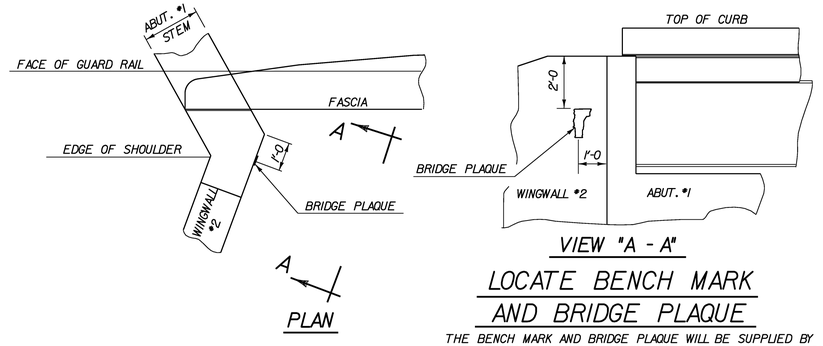
SCALE ⅜" = 1'-0
1 0 1 2 3 4



TYPICAL CHANNEL SECTION

(NOT TO SCALE)

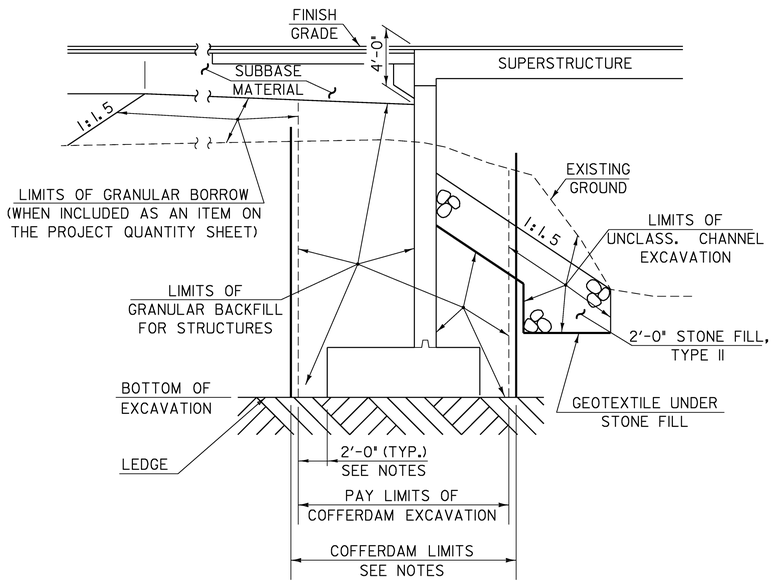
*GRUBBING MATERIAL SHALL NOT BE PLACED ON THE STONE FILL IN THE AREA UNDER THE BRIDGE. WHENEVER CHANNEL SLOPE INTERSECTS ROADWAY SUBBASE, GRUBBING MATERIAL SHALL BEGIN AT THE BOTTOM OF SUBBASE.



VIEW "A - A"

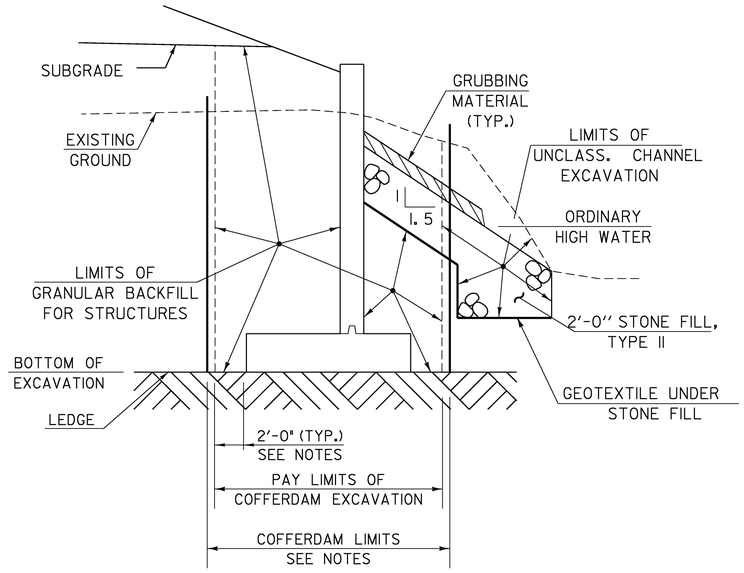
LOCATE BENCH MARK AND BRIDGE PLAQUE

THE BENCH MARK AND BRIDGE PLAQUE WILL BE SUPPLIED BY THE AGENCY OF TRANSPORTATION AND SHALL BE INSTALLED BY THE CONTRACTOR AT ABUTMENT #1 ON THE RIGHT SIDE AS SHOWN OR AS DIRECTED BY THE ENGINEER.



TYPICAL ABUTMENT SECTION

(NOT TO SCALE)



TYPICAL WINGWALL SECTION

(NOT TO SCALE)

NOTES

1. COFFERDAM SIZE TO BE DETERMINED BY THE CONTRACTOR.
2. THE PAY LIMITS OF "COFFERDAM EXCAVATION, EARTH" AND "COFFERDAM EXCAVATION, ROCK" SHALL BE 2'-0" OUTSIDE THE PERIMETER OF THE FOOTING, AND FROM THE BOTTOM OF THE EXCAVATION UP TO EXISTING GROUND OR BOTTOM OF SUBBASE, WHICHEVER IS LOWER.
3. IF A COFFERDAM IS CONSTRUCTED WHICH IS LARGER THAN THE INDICATED COFFERDAM EXCAVATION PAY LIMITS, PAYMENT FOR ALL UNCLASSIFIED CHANNEL EXCAVATION, INCLUDING THAT PORTION WHICH IS INSIDE THE COFFERDAM BUT OUTSIDE THE COFFERDAM EXCAVATION PAY LIMITS, WILL BE MADE AT THE CONTRACT UNIT PRICE FOR UNCLASSIFIED CHANNEL EXCAVATION. NO MEASUREMENT AND PAYMENT WILL BE MADE FOR COFFERDAM EXCAVATION AND GRANULAR BACKFILL FOR STRUCTURES OUTSIDE THE PAY LIMITS DEFINED IN NOTE 2.

BRIDGE TYPICAL SECTIONS

PROJECT NAME:	WILLIAMSTOWN
PROJECT NUMBER:	BRS 0204(4)

FILE NAME: \structures\sellltyp.dgn	PLOT DATE: 07-APR-2008
PROJECT LEADER: M.EVANS-MONGEON	DRAWN BY: U. STANLEY
DESIGNED BY: U. STANLEY	CHECKED BY: EVANS-MONGEON
IPARM s83elllbtypl.I	SHEET 6 OF 108

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES

ROADWAY	TRAINING	EROSION CONTROL	UTILITIES- NON PARTICIPATING	BRIDGE	FULL C. E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND
1						1	1	LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10	
1						1	1	EACH	DEMOLITION AND DISPOSAL OF BUILDING	202.10	
810						810	1192.8	CY	COMMON EXCAVATION	203.15	
				170		170	165	CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27	
220						220	291.4	CY	SAND BORROW	203.31	
70						70	74.5	CY	TRENCH EXCAVATION OF EARTH	204.20	
5						5	0	CY	TRENCH EXCAVATION OF ROCK	204.21	
1						1	5.4	CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	
FINAL=0 ~~65~~			FINAL=1157.1 ~~1155~~			1220	1157.1	CY	GRANULAR BACKFILL FOR STRUCTURES	204.30	
				1650		1650	2058.6	CY	COFFERDAM EXCAVATION,EARTH	208.30	
				300		300	239.18	CY	COFFERDAM EXCAVATION,ROCK	208.35	
				1		1	1	LS	COFFERDAM (@ STA. 218+97)	208.40	
				1		1	1	LS	COFFERDAM (@ STA. 219+34)	208.40	
1670						1670	1407.3	SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10	
520						520	750.2	CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35	
4						4	9.923	CWT	EMULSIFIED ASPHALT	404.65	
FINAL=473.44 ~~369~~			FINAL=45.25 ~~41~~			410	518.69	TON	BITUMINOUS CONCRETE PAVEMENT (PG 58-34)	406.25	
				17		17	15.46	CY	CONCRETE, HIGH PERFORMANCE CLASS A	501.33	
				765		765	707.81	CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34	
				60240		60240	54,684	LB	REINFORCING STEEL	507.15	
				455		455	178	LF	DRILLING AND GROUTING DOWELS	507.16	
				23720		23720	24,951	LB	EPOXY COATED REINFORCING STEEL	507.17	
				40		40	51.28	GAL	WATER REPELLENT, SILANE	514.10	
				107		107	112.25	SY	SHEET MEMBRANE WATERPROOFING, TORCH APPLIED	519.20	
100						100	102.7	LF	JOINT SEALER, HOT POURED	524.11	
				39		39	38.7	LF	BRIDGE RAILING, 3 RAIL ALUMINUM	525.22	
				41		41	40.3	LF	BRIDGE RAILING, ALUMINUM/PEDESTRIAN	525.23	
				60		60	55	SY	REMOVAL OF BRIDGE PAVEMENT	529.10	
				1		1	1	EACH	REMOVAL OF STRUCTURE (475 SF- EST.)	529.15	
				50		50	321.11	CY	CONCRETE, CLASS C	541.30	
									BEGIN OPTION AA		
150						150	—	LF	18" CSP .064 (2-2/3 X 1/2)	601.0015	
150						150	—	LF	18" CAAP .075 (2-2/3 X 1/2)	601.0216	
150						150	150	LF	18" CPEP	601.0915	
									END OPTION AA		
1						1	1	EACH	PRECAST REINFORCED CONCRETE PIPE DI WITH CAST IRON GRATE	604.25	
			3			3	3	EACH	CHANGING ELEVATION OF SEWER MANHOLES	604.42	
		10				10	17	HR	BULLDOZER RENTAL, TYPE I	608.10	
		10				10	14.6	HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I	608.25	
		45				45	0.3	MGAL	DUST CONTROL WITH WATER	609.10	

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		FILL AVAILABLE
810	CY	COMMON EXCAVATION
51	CY	UNCLASSIFIED CHANNEL EXCAVATION 170 X 0.3
19	CY	TRENCH EXCAVATION OF EARTH 70 X 0.3
495	CY	COFFERDAM EXCAVATION, EARTH 1650 X 0.3
1375	CY	SUBTOTAL
5	CY	ROUNDING
1380	CY	TOTAL
	CY	FILL REQUIRED
428	CY	PLANIMETERED FILL: 428
7	CY	TRENCH EXCAVATION OF ROCK 5 X 1.3
390	CY	COFFERDAM EXCAVATION OF ROCK 300 X 1.3
31	CY	NET PLANIMETERED FILL : 428 -7-390
36	CY	FACTORED FILL 1.15 X 31
1344	CY	WASTE 1380 -36
		PLANIMETERED MATERIAL AVAILABLE FOR FILL
		Earth Excavation x 1.0 = (F)
		Channel Excavation x 0.3 = (G)
		Structure Excavation / Cofferdam Excavation x 0.3 = (H)
		Total Material Available for Fill = (F+G+H=I)
		FILL REQUIRED
		Planimetered Fill = (A)
		Less Factored Solid Rock Excavation (Factor is 1.3) = (B)
		Less Displacement of Large Buried Structures (Factor is 1.3) = ©
		Net Planimeter Fill (A-B-C = D)
		BITUMINOUS CONCRETE PAVEMENT (PG 58-34)
		VT 64
152	TON	TYPE I
211	TON	TYPE IV
		BRIDGE
17	TON	TYPE IV
		APPROACH SLABS
24	TON	TYPE IV
404	TON	SUBTOTAL
6	TON	ROUNDING
410	TON	TOTAL

PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: structures/se111excel.dgn
PROJECT MANAGER: M. EVANS-MONGEON
DESIGNED BY: U. STANLEY
QUANTITY SHEET #1

PLOT DATE: 04/07/2008
DRAWN BY: U. STANLEY
CHECKED BY: M. EVANS-MONGE

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES								TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
ROADWAY	TRAINING	EROSION CONTROL	UTILITIES-NON PARTICIPATING	BRIDGE	FULL C. E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
		1				1	0.14	TON	DUST AND ICE CONTROL WITH CALCIUM CHLORIDE	609.15				
				150		150	224.4	CY	STONE FILL, TYPE II	613.11				
100						100	86.9	LF	CAST-IN-PLACE CONCRETE CURB, TYPE B	616.28				
1						1	1	EACH	RELOCATE MAIL BOX, SINGLE SUPPORT	617.10				
30						30	43.04	SY	PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH	618.10				
3						3	3	EACH	STEEL MARKER POSTS	619.16				
2						2	0	EACH	REMOVING AND RESETTING PROPERTY MARKERS	619.20				
14						14	12	LF	REMOVING AND RESETTING FENCE	620.50				
82.5						82.5	91.5	LF	HD STEEL BEAM GUARDRAIL, GALVANIZED	621.21				
362.5						362.5	379.5	LF	HD STEEL BEAM GUARDRAIL, GALVANIZED W/8 FEET POSTS	621.215				
122						122	121.2	LF	CONCRETE MEDIAN BARRIER	621.45				
3						3	3	EACH	ANCHOR FOR STEEL BEAM RAIL	621.60				
100						100	100	LF	ALUMINUM APPROACH RAILING	621.74				
50						50	92	LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80				
360						360	394	LF	TEMPORARY TRAFFIC BARRIER	621.90				
4						4	0	LF	SLEEVES FOR UTILITIES (1 X 18")	625.10				
			1			1	1	EACH	ADJUST ELEVATION OF VALVE BOX	629.20				
50						50	0	HR	UNIFORMED TRAFFIC OFFICERS	630.10				
400						400	1187	HR	FLAGGERS	630.15				
					1	1	1	LS	FIELD OFFICE-ENGINEERS	631.10				
					1	1	1	LS	TESTING EQUIPMENT - CONCRETE	631.16				
					1	1	0	LS	TESTING EQUIPMENT - BITUMINOUS	631.17				
					1	1	0.998	LU	FIELD OFFICE - TELEPHONE (N.A.B.I)	631.25				
	250					250	520	HR	EMPLOYEE TRAINEESHIP	634.10				
1						1	1	LS	MOBILIZATION / DEMOBILIZATION	635.11				
1						1	1	LS	TRAFFIC CONTROL	641.10				
2						2	2	EACH	PORTABLE CHANGEABLE MESSAGE SIGN	641.15				
						0	1848	LF	4" WHITE LINE	646.20				
1770						1770	0	LF	DURABLE 4 INCH WHITE LINE, THERMOPLASTIC	646.402				
						0	1780	LF	4" YELLOW LINE	646.21				
1770						1770	0	LF	DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC	646.412				
						0	12.5	LF	24" STOP BAR	646.26				
12						12	0	LF	DURABLE 24 INCH STOP BAR, THERMOPLASTIC	646.482				
						0	0	EA	LETTER OR SYMBOL	646.30				
4						4	0	EACH	DURABLE LETTER OR SYMBOL, THERMOPLASTIC	646.492				
87						87	117	EACH	LINE STRIPING TARGETS	646.76				
		495				495	353.8	SY	GEOTEXTILE UNDER STONE FILL	649.31				
		310				310	213	SY	GEOTEXTILE FOR SILT FENCE	649.51				
		20				20	30	LB	SEED	651.15				
		10				10	0	LB	SEED-WINTER RYE	651.17				
		80				80	115	LB	FERTILIZER	651.18				
		0.5				0.5	0.186	TON	AGRICULTURAL LIMESTONE	651.20				
		0.5				0.5	1.096	TON	HAYMULCH	651.25				
		120				120	77.13	CY	TOPSOIL	651.35				

PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: structures/se111excel.dgn
PROJECT MANAGER: M. EVANS-MONGEON
DESIGNED BY: U. STANLEY
QUANTITY SHEET #2

PLOT DATE: 04/07/2008
DRAWN BY: U. STANLEY
CHECKED BY: M. EVANS-MONG

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 3

SUMMARY OF ESTIMATED QUANTITIES									TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
				ROADWAY	TRAINING	EROSION CONTROL	UTILITIES-NON PARTICIPATING	BRIDGE	FULL C. E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
						90				90	57.6	SY	GRUBBING MATERIAL	651.40				
						1				1	1	LS	EPSC PLAN	652.10				
						50				50	43	HR	MONITORING EPSC PLAN	652.20				
						1				1	0.324	LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	652.30				
						60				60	0	SY	TEMPORARY EROSION MATTING	653.20				
						10				10	67.95	CY	TEMPORARY STONE CHECK DAM, TYPE I	653.25				
						25				25	0	CY	VEHICLE TRACKING PAD	653.35				
						1				1	0	EACH	INLET PROTECTION DEVICE, TYPE I	653.40				
				1						1	0	EACH	TRANSPLANTING SHRUBS	656.50				
				120						120	122.57	SF	TRAFFIC SIGNS, TYPE A	675.20				
													BEGIN OPTION AB					
				64						64	0	LF	FLANGED CHANNEL SIGN POST	675.301				
				64						64		LF	SQUARE TUBE SIGN POST AND ANCHOR	675.341				
													END OPTION AB					
				112						112	170.92	LF	SQUARE TUBE SIGN POST AND ANCHOR	675.341				
				76						76	82	EACH	REMOVING SIGNS	675.50				
				33						33	36	EACH	ERECTING SALVAGED SIGNS	675.60				
				9						9	14	EACH	SETTING SALVAGED POSTS	675.61				
				40						40	45.742	LF	SPECIAL PROVISION (PEDESTRIAN HAND RAILING)	900.640				
				1						1	1	LS	SPECIAL PROVISION (TEMPORARY ROADWAY)	900.645				

PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: structures/se111excel.dgn
PROJECT MANAGER: M. EVANS-MONGEON
DESIGNED BY: U. STANLEY
QUANTITY SHEET #3

PLOT DATE: 04/07/2008
DRAWN BY: U. STANLEY
CHECKED BY: M. EVANS-MONGE

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 4

SUMMARY OF BRIDGE QUANTITIES / TOTALS / DESCRIPTIONS

SUPER STRUCTURE	APPROACH SLAB #1	APPROACH SLAB #2	ABUTMENT #1	ABUTMENT #2	BRIDGE TOTAL		UNIT	ITEMS	ITEM NUMBER
			100	70	170	165	CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27
			550	605	1155	1157.1	CY	GRANULAR BACKFILL FOR STRUCTURES	204.30
			842	808	1650	2058.6	CY	COFFERDAM EXCAVATION,EARTH	208.30
			150	150	300	239.18	CY	COFFERDAM EXCAVATION,ROCK	208.35
			1		1	1	LS	COFFERDAM (@ STA. 218+97)	208.40
				1	1	1	LS	COFFERDAM (@ STA. 219+34)	208.40
17	12	12			41	45.25	TON	BITUMINOUS CONCRETE PAVEMENT (PG 58-34)	406.25
17					17	15.46	CY	CONCRETE, HIGH PERFORMANCE CLASS A	501.33
91	32	32	280	330	765	707.81	CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34
			27790	32450	60240	54,684	LB	REINFORCING STEEL	507.15
			215	240	455	178	LF	DRILLING AND GROUTING DOWELS	507.16
14840	4440	4440			23720	24,951	LB	EPOXY COATED REINFORCING STEEL	507.17
8			14	18	40	51.28	GAL	WATER REPELLENT, SILANE	514.10
107					107	112.25	SY	SHEET MEMBRANE WATERPROOFING, TORCH APPLIED	519.20
39					39	38.7	LF	BRIDGE RAILING, 3 RAIL ALUMINUM	525.22
41					41	40.3	LF	BRIDGE RAILING, ALUMINUM/PEDESTRIAN	525.23
60					60	55	SY	REMOVAL OF BRIDGE PAVEMENT	529.10
1					1	1	EACH	REMOVAL OF STRUCTURE (475 SF- EST.)	529.15
			25	25	50	321.11	CY	CONCRETE, CLASS C	541.30
			80	70	150	224.4	CY	STONE FILL, TYPE II	613.11

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)
FILE NAME: structures/se111excel.dgn
PLOT DATE: 04/07/2008
PROJECT MANAGER: M. EVANS-MONGEON
DRAWN BY: U. STANLEY
DESIGNED BY: U. STANLEY
CHECKED BY: M. EVANS-MONGI
QUANTITY SHEET #4

STATE OF VERMONT
AGENCY OF TRANSPORTATION

RIGHT - OF - WAY DETAIL SHEET

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	
1	BEATTIE, CONRAD A. & DONAH H.	18,19	217+59.00 LT.				DRIVE	(T)		WD	01/04/08	WILLIAMSTOWN	136	273-275	13' GRAVEL MM 0410
			217+55.46 LT.	217+76.42 LT.			SLOPE	(T)	54.0 SF						
			217+61.94 LT.	217+88.20 LT.			INSTALL	(T)							EROSION CONTROL
			217+76.46 LT.	218+36.75 LT.			CHANNEL	(P)	360.0 SF						
			217+93.97 LT.	218+53.85 LT.			INSTALL	(T)							COFFER DAM
			218+02.63 LT.	218+42.75 LT.			INSTALL	(T)							EROSION CONTROL
			218+10.45 LT.	218+26.96 LT.			CHANNEL	(P)	84.3 SF						
			218+21.39 LT.	218+94.46 LT.			INSTALL & MAINTAIN	(P)	420.7 SF						FOOTING & WINGWALL
			218+26.96 LT.	219+26.81 LT.			SLOPE	(T)	1117.6 SF						
			218+18.12 LT.	218+75.62 LT.			INSTALL	(T)							COFFER DAM
			219+34.00 LT.				DRIVE	(T)							15' GRAVEL MM 0413
			219+81.00 LT.				DRIVE	(T)							14' GRAVEL MM 0414
			220+21.44 LT.	220+40.70 LT.			INSTALL	(T)							EROSION CONTROL
			220+25.20 LT.	220+41.72 LT.			SLOPE	(T)	173.8 SF						
			219+72.02 LT.												MONITOR WELL W-1
			220+38.57 LT.				REMOVE & RESET	(T)							PROPERTY PIN
1B		18,19	216+22.36 LT.	220+38.57 LT.	0.24 A		ALL R.T. & I.								HWY. EASE. VT. RTE. 64
2A	YOUNG, ROSALIE A.	19	218+37.54 RT.	218+60.91 RT.	39.8 SF					WDIF	01/23/08	WILLIAMSTOWN	136	329-330	
			217+66.69 RT.	217+98.15 RT.			SLOPE	(T)	61.3 SF						INCLUDES EROSION CONTROL
			217+98.51 RT.	218+57.71 RT.			INSTALL	(T)							EROSION CONTROL
			217+86.02 RT.	218+57.71 RT.			UTILITY	(T)							INCLUDE POLE & ANCHOR
			218+24.91 RT.	218+60.91 RT.			SLOPE	(T)	217.2 SF						INCLUDES EROSION CONTROL
			218+52.16 RT.				REMOVE	(T)							CULVERT
			217+55.00 RT.												DRIVE 13' PAVED MM 0410
															INCLUDES RIGHT OF WAY IN COMMON / PARCEL # 9
			218+50.00 RT.	218+62.04 RT.			DETOUR	(T)	8.0 SF						
2B		19	217+40.49 RT.	218+60.91 RT.	3006.0 SF		ALL R.T. & I.								HWY. EASE. VT. RTE. 64
3A	FORD, PATRICIA R.	19	218+60.91 RT.	220+01.04 RT.	1322.0 SF							WILLIAMSTOWN			
			218+74.00 RT.				DRIVE	(T)							12' GRAVEL MM 0412; ALSO ROW FOR PARCEL # 6 & # 7
			218+57.71 RT.	DETOUR 303+31.42 RT			UTILITY	(T)							
			218+60.91 RT.				REMOVE & RESET	(T)							PROPERTY PIN
			218+57.71 RT.	218+62.77 RT.			INSTALL	(T)							EROSION CONTROL
			DETOUR 301+00.00 RT.				ACCESS	(T)							15' ALSO ACCESS FOR PARCEL #6&7
			218+80.32 RT.				INSTALL & MAINTAIN	(P)							GUARD RAIL
			218+79.76 RT.	220+15.33 RT.			SLOPE	(T)	1423 SF						INCLUDES EROSION CONTROL
			218+79.76 RT.	220+01.04 RT.			LANDSCAPE	(T)							SHRUBS AND TREES
			218+95.93 RT.	219+00.00 RT.			INSTALL	(T)							GUY WIRE & ANCHOR
			219+11.25 RT.	220+08.54 RT.			CONST.	(T)	0.06 A						
			219+31.66 RT.	219+92.88 RT.			ALL R.T. & I.								HOUSE AND APPURTENANCES
			219+31.66 RT.	219+92.88 RT.			REMOVE	(T)	1580 SF						HOUSE AND APPURTENANCES
			218+60.91 RT.	DETOUR 303+34.25 LT			DETOUR	(T)	0.18 A						2-WAY VEHICULAR
			220+37.94 RT.	220+66.59 RT.			INSTALL	(T)							COFFER DAM
			220+53.82 RT.	220+55.74 RT.			CULVERT	(P)							
			220+40.24 RT.	220+61.34 RT.			SLOPE	(P)	45.1 SF						
			220+76.65 RT.	DETOUR 303+34.55 LT			UTILITY	(T)							
			DETOUR 302+11.97 RT.				ACCESS	(T)							13' WIDE ACCESS FROM DETOUR
			220+01.04 RT.	220+04.84 RT.			INSTALL	(T)							COFFER DAM
			DETOUR 303+29.00 RT.				REMOVE & RESET	(T)							FENCE
			DETOUR 302+41.02 LT.	DETOUR 303+31.07 LT.			INSTALL	(T)							EROSION CONTROL
3B		19	218+60.91 RT.	221+13.55 RT.	0.14 A		ALL R.T. & I.								HWY. EASE. VT. RTE. 64

TABLE OF REVISIONS

REVISION NO.	SHEET NO.	DESCRIPTION	DATE
1	16	PARCEL NO. 2 YOUNG. CHANGE ENDING STATION OF INSTALL (T) FROM 218+66.96 RT. TO 218+57.71 RT. CHANGE TAKE AREA OF PARCEL 2B FROM 2435 SF± TO 3006.0 SF±. PER C.O. 9501. MADE BY:MR APPROVED BY:HP	11/06/07
2	16,17 19,20	PARCEL NO. 14 TRUSTEES OF CENTENARY METHODIST CHURCH-LESSOR, RANDOLPH NATIONAL BANK-LESSEE. ADD SHEET 19 TO SHEET NUMBER ON DETAIL SHEET. ADD ADDITIONAL LEASE AREA TO SHEET 19. CHANGE DETOUR BEGINNING STA. TO +00.79 AND INCREASED AREA TO 0.11A±. CHANGE BEGINNING STA. FOR PAVED AREA TO +00.79 AND INCREASED AREA TO 3167SF±. CHANGE BEGINNING STA FOR UTILITY(T) TO +10.03RT. PER C.O. 9403 MADE BY: JAB APPROVED BY: HP	12/13/07
3	16,17 19,20	PARCEL NO. 5 TRUSTEES OF CENTENARY METHODIST CHURCH. CHANGE AREA OF DETOUR FROM 2950.2 SF TO 2534.2 SF. CHANGE ENDING STA. OF UTILITY (T) FROM 26.73LT TO 10.03RT. CHANGE ENDING STA. INSTALL (T) FROM +25.00LT TO +00.79LT. PER C.O. 9504 MADE BY: JAB APPROVED BY: HP	12/13/07
4	16	PARCEL NO. 1 BEATTIE. CREATED TWO PARCELS ON THE DETAIL SHEET. PARCEL 1 AND 1B. PARCEL 1 WILL SHOW ALL THE (T) AND (P) RIGHTS. PARCEL 1B WILL SHOW ALL R.T.&I. IN HWY EASE. VT RTE 64. RIGHT OF WAY SHEETS 18 AND 19 WILL SHOW THE EXISTING RIGHT OF WAY AS PARCEL 1B. PER C.O. 9506 MADE BY: JAB APPROVED BY: HP	12/28/07

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))
PROJECT DEMARCATION FENCE (PDF — PDF)

EC -EROSION CONTROL
(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: 06-30-2006
CHIEF, PLANS & TITLES

PLOT DATE 03/05/08

PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83E111DET.XLS
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: LACKEY
R.O.W. SHEET 16 of 20

PLOT DATE: Date
DRAWN BY: MR
CHECKED BY: FM
SHEET 11 OF 108

STATE OF VERMONT
AGENCY OF TRANSPORTATION

RIGHT - OF - WAY DETAIL SHEET

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	PEAKE, STANLEY H.	19	220+38.57 LT.	221+09.91 LT.	1863.6 SF		ALL R.T. & I.			WD	12/17/07	WILLIAMSTOWN	136	134-	HWY. EASE. VT. RTE. 64
	PEAKE, DEAN E. ,LIFE ESTATE		220+38.57 LT.	220+53.46 LT.			SLOPE	(T)	308.2 SF					136	
			220+48.40 LT.				REMOVE	(T)							DROP INLET & CULVERT
			220+45.21 LT.				INSTALL & MAINTAIN	(P)							DROP INLET
			220+60.00 LT.				DRIVE	(T)							19' PAVED MM 0415
			220+52.10 LT.				REMOVE & RESET	(T)							BUSH & FENCE
5	TRUSTEES OF CENTENARY	19, 20	221+09.00 RT.	DETOUR 303+84.66 RT.			UTILITY	(T)				WILLIAMSTOWN			INCLUDES POLE & ANCHOR
	METHODIST CHURCH		DETOUR 303+31.42 RT.	DETOUR 303+84.66 RT.			UTILITY	(T)							
			DETOUR 303+31.71 RT.	DETOUR 305+38.50 RT.			DETOUR	(T)	2534.2 SF						2 WAY VEHICULAR
			DETOUR 303+84.66 RT.	221+79.05 RT.			UTILITY	(T)							
			DETOUR 303+84.66 RT.	DETOUR 304+10.03RT.			UTILITY	(T)							
			DETOUR 304+32.63 RT.				ACCESS	(T)							20' ACCESS FROM DETOUR
			DETOUR 305+71.61 RT.				ACCESS	(T)							25' ACCESS FROM DETOUR
			DETOUR 303+36.00 LT.	DETOUR 304+00.79 LT.			INSTALL	(T)							EROSION CONTROL
6	McCARTHY, LEONARD A.	19	218+74.00 RT.				DRIVE	(T)				WILLIAMSTOWN			12' GRAVEL MM 0412
															ROW OVER Parcel 3 in common/#7
			DETOUR 301+00.00 RT..				ACCESS	(T)							15' ROW OVER Parcel 3 in common/#7
7	STROUTSOS, RAYMOND N. & LORI A.	19	218+74.00 RT.				DRIVE	(T)				WILLIAMSTOWN			12' GRAVEL MM 0412
															ROW OVER Parcel 3 in common/#6
			DETOUR 301+00.00 RT..				ACCESS	(T)							15' ROW OVER Parcel 3 in common/#6
8	DELETED														FORMERLY YOUNG, WILLIAM
9	COVEY, ARNOLD R. & LINDA N.	19	217+55 RT.												DRIVE 13' PAVED MM 0410
															OVER PARCEL # 2
10	VERIZON NEW ENGLAND INC.														UTILITY
11	GREEN MOUNTAIN POWER CORPORATION														UTILITY
12	TOWN OF WILLIAMSTOWN														UTILITY
	(WATER & SEWER)														
13	CHARTER COMMUNICATIONS, LLC														UTILITY
14	TRUSTEES OF CENTENARY	19,20	DETOUR 304+00.79 CL.	223+79.23 RT.			DETOUR	(T)	0.11 A			WILLIAMSTOWN			2 WAY VEHICULAR
	METHODIST CHURCH-LESSOR		DETOUR 304+00.79 LT.	DETOUR 305+25.00 LT.			EASE.	(T)	3167SF						TO PAVE PARKING AREA / ACCESS TO
	RANDOLPH NATIONAL BANK-LESSEE														INCLUDE EROSION CONTROL
			DETOUR 304+10.03 RT.	222+84.33 RT.			UTILITY	(T)							
			DETOUR 305+25.00 LT.	DETOUR 305+75.00 LT.			EASE.	(T)							WALKWAY, RAILING & BARRIER
			DETOUR 305+86.34 LT.				ACCESS	(T)							27' WIDTH
			VT. RT14 336+36.23 LT.				ACCESS	(T)							12' WIDTH
			222+66.00 RT.	223+33.00 RT.											RESERVE 3 PARKING SPACES VT. RT. 64

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))
- PROJECT DEMARCATION FENCE (PDF)

EC -EROSION CONTROL
(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 06-30-2006
CHIEF, PLANS & TITLES

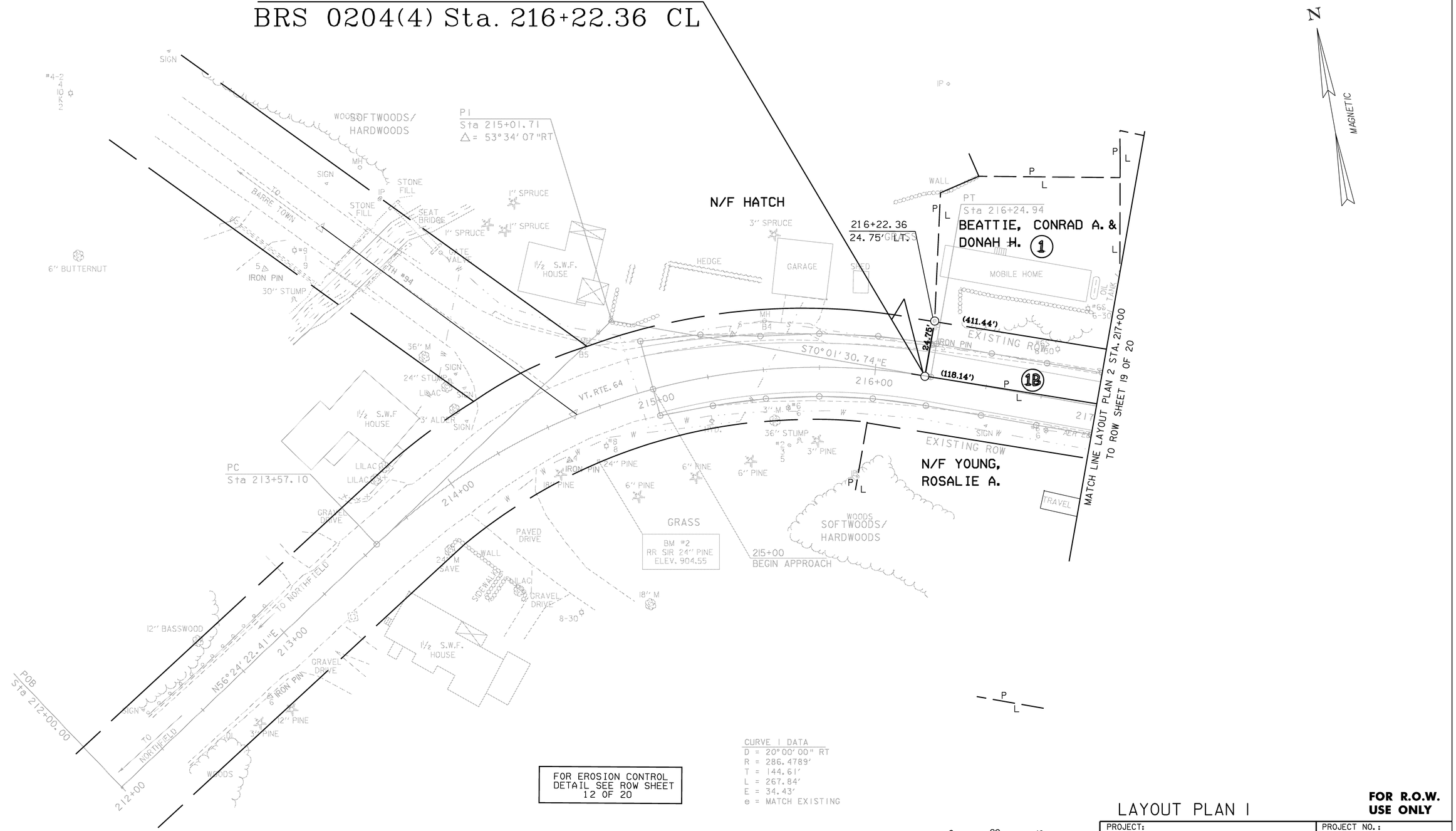
PLOT DATE 03/05/08

PROJECT NAME: **WILLIAMSTOWN**
PROJECT NUMBER: **BRS 0204(4)**

FILE NAME: **83E111DET.XLS**
PROJECT LEADER: **EVANS-MONGEON**
DESIGNED BY: **LACKEY**
R.O.W. Sheet 17 of 20

PLOT DATE: **12/9/98**
DRAWN BY: **MR**
CHECKED BY: **FM**
SHEET **12** OF **108**

BEGIN ROW PROJECT
BRS 0204(4) Sta. 216+22.36 CL



FOR EROSION CONTROL DETAIL SEE ROW SHEET 12 OF 20

CURVE 1 DATA
D = 20°00'00" RT
R = 286.4789'
T = 144.61'
L = 267.84'
E = 34.43'
e = MATCH EXISTING

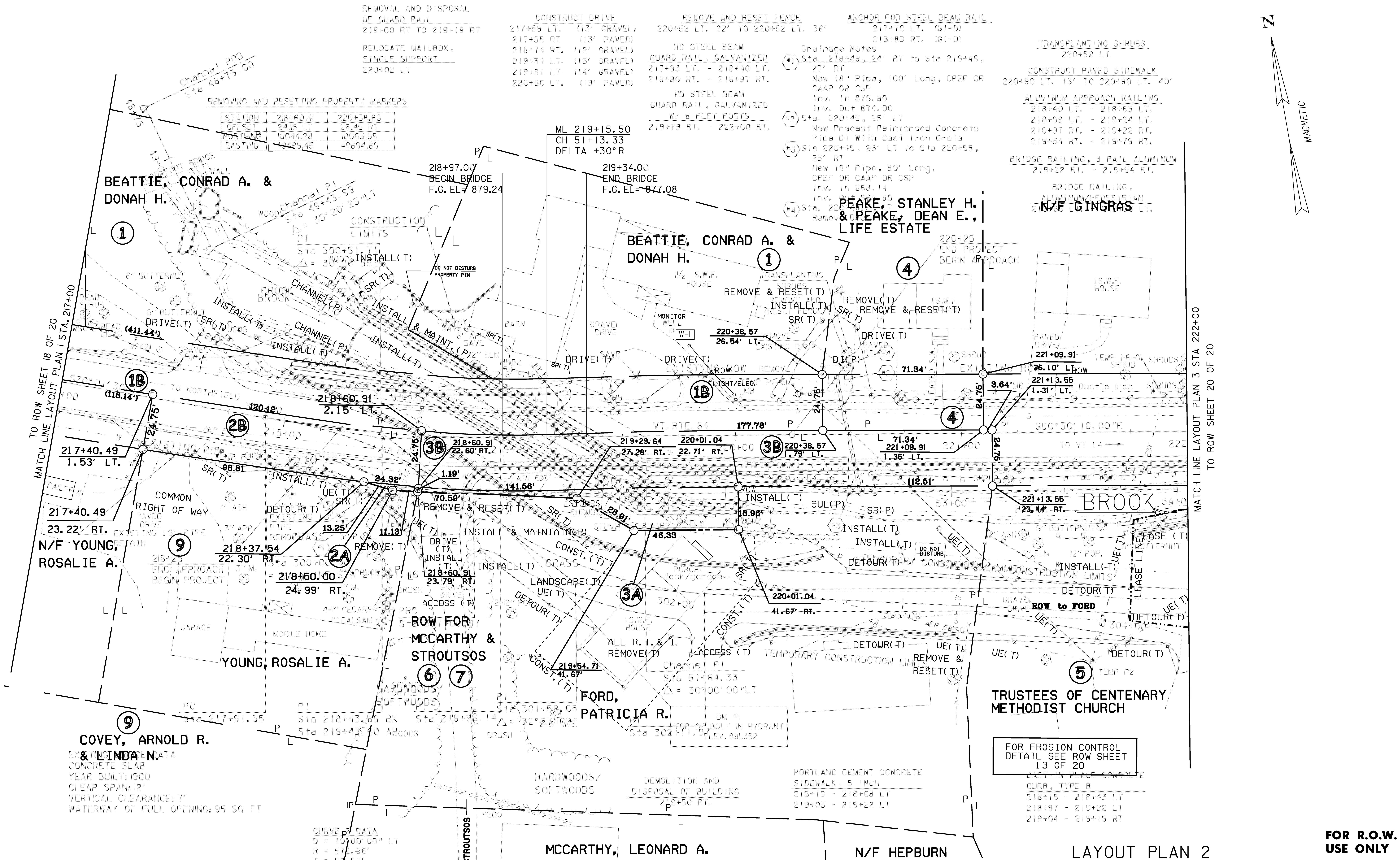
0 20 40
SCALE IN FEET
1"= 20'

DATUM
VERTICAL NGVD 1929
HORIZONTAL

LAYOUT PLAN 1

FOR R.O.W. USE ONLY

PROJECT: WILLIAMSTOWN	PROJECT NO.: BRS 0204(4)
DESIGN FILE NAME: /str2/83ellI/dellIbdr.dgn	
IPARM FILE NAME: dellIpll.I	PLOT DATE: 07-APR-2008
SURVEYED BY: GILMAN	SURVEY DATE: 9/89
SQUAD LEADER: EVANS-MONGEON	DRAWN BY: LACKEY
ROW SHEET 18 OF 20 SHEETS	SHEET 13 OF 108

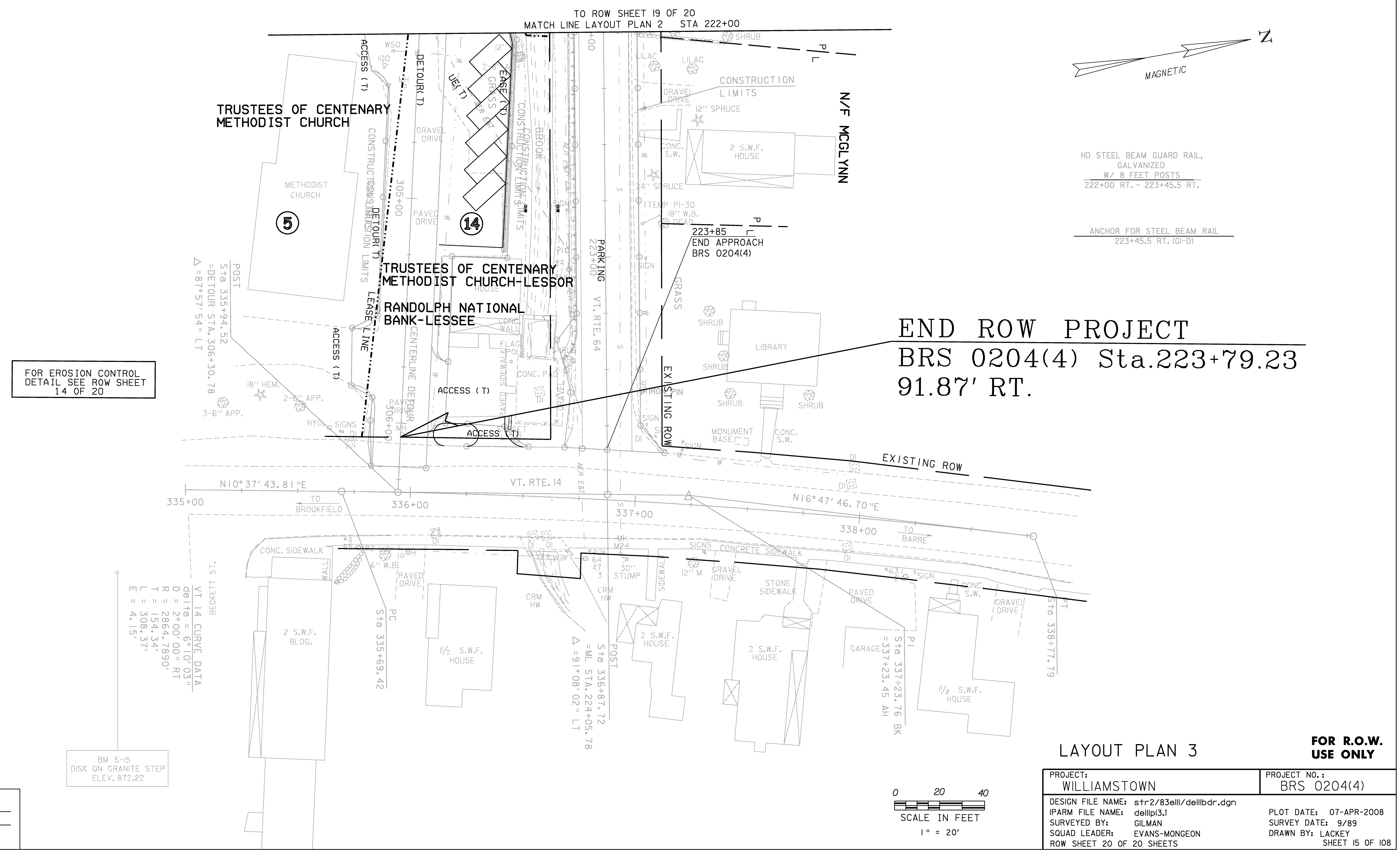


FOR R.O.W. USE ONLY

LAYOUT PLAN 2

PROJECT: WILLIAMSTOWN	PROJECT NO.: BRS 0204(4)
DESIGN FILE NAME: /str2/83elll/delllbdr.dgn	
IPARM FILE NAME: selllpl2.1	PLOT DATE: 07-APR-2008
SURVEYED BY: GILMAN	SURVEY DATE: 9/89
SQUAD LEADER: EVANS-MONGEON	DRAWN BY: LACKEY
ROW SHEET 19 OF 20 SHEETS	SHEET 14 OF 108

DATUM
VERTICAL NGVD 1929
HORIZONTAL



LAYOUT PLAN 3

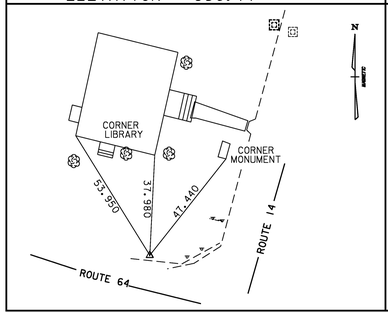
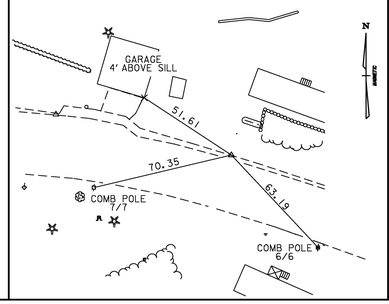
FOR R.O.W. USE ONLY

PROJECT: WILLIAMSTOWN	PROJECT NO.: BRS 0204(4)
DESIGN FILE NAME: str2/83elll/delllbdr.dgn IPARM FILE NAME: delllpl3.l SURVEYED BY: GILMAN SQUAD LEADER: EVANS-MONGEON ROW SHEET 20 OF 20 SHEETS	PLOT DATE: 07-APR-2008 SURVEY DATE: 9/89 DRAWN BY: LACKEY SHEET 15 OF 108

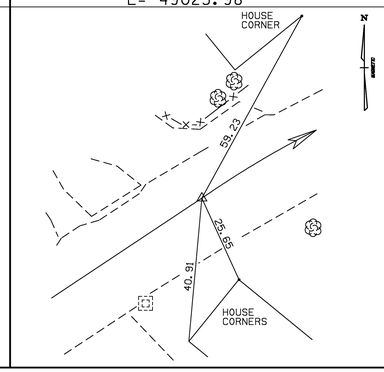
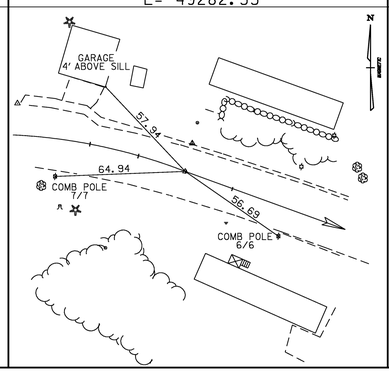
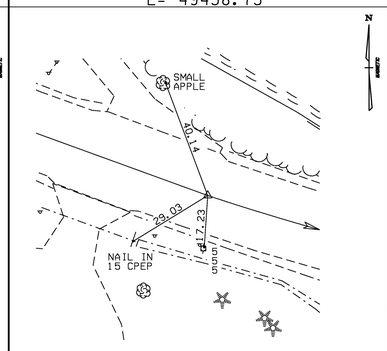
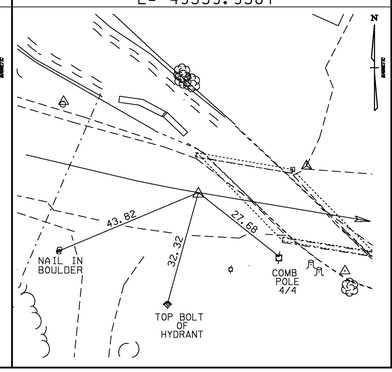
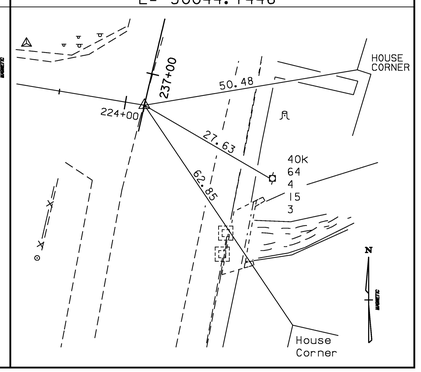
DATUM
VERTICAL NGVD 1929
HORIZONTAL

SCALE IN FEET 0 20 40
1" = 20'

TRAVERSE TIES

TRAV. 1	TRAV. 2	TRAV. 3	TRAV. 4	TRAV. 5	TRAV. 6
N= 10000.0000	N= 10044.4635	N= 10158.4277	N= 10135.8907	N= 10243.4898	N= 10055.4995
E= 50000.0000	E= 49561.8718	E= 49285.8653	E= 49117.2523	E= 48998.1938	E= 48967.1954
ELEVATION= 856.77	ELEVATION= 877.52	ELEVATION= 894.969	ELEVATION= 904.047	ELEVATION= 910.310	ELEVATION= 919.929
	Point was DESTROYED		Point was DESTROYED	Point was DESTROYED	Point was DESTROYED

ALIGNMENT TIES

POB 212+00.00	P.C. 213+57.10	P.T. 216+24.94	P.C. 217+91.35	PT 218+96.14	POT 224+07.94
N= 10026.94	N= 10113.86	N= 10144.47	N= 10087.63	N= 10061.0118	N= 9976.5848
E= 48895.12	E= 49025.98	E= 49282.35	E= 49438.75	E= 49539.9581	E= 50044.7446
POINT WAS NOT TIED					

DATUM

VERTICAL NGVD 1929

HORIZONTAL ASSUMED

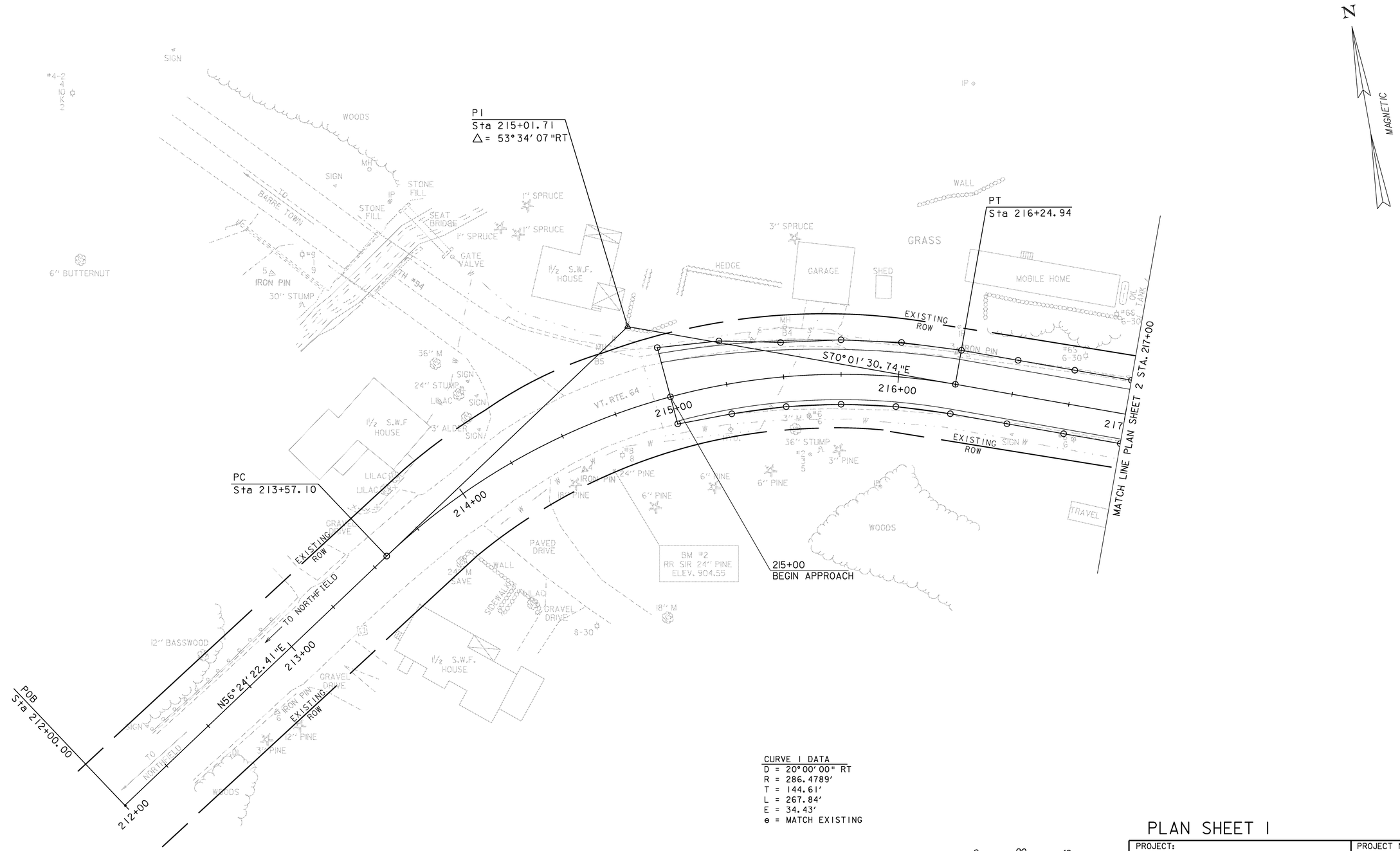
TIE SHEET

PROJECT NAME: WILLIAMSTOWN

PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83elll/survey/x83elllt1.dgn
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: EVANS-MONGEON

PLOT DATE: 07-APR-2008
DRAWN BY: R. Bullock
CHECKED BY: U. STANLEY
SHEET 16 OF 108



CURVE 1 DATA
D = 20°00'00" RT
R = 286.4789'
T = 144.61'
L = 267.84'
E = 34.43'
e = MATCH EXISTING

0 20 40
SCALE IN FEET
1"= 20'

DATUM
VERTICAL NGVD 1929
HORIZONTAL ASSUMED

PLAN SHEET 1

PROJECT: WILLIAMSTOWN	PROJECT NO.: BRS 0204(4)
DESIGN FILE NAME: projects/83elll/structures/sellbdr.dgn	
IPARM FILE NAME: s83ellpll	PLOT DATE: 07-APR-2008
SURVEYED BY: GILMAN	SURVEY DATE: 9/89
SQUAD LEADER: EVANS-MONGEON	DRAWN BY: STANLEY
s83ellpll.i	SHEET: 17 OF 108

REMOVAL AND DISPOSAL
OF GUARD RAIL
219+00 RT TO 219+19 RT

RELOCATE MAILBOX,
SINGLE SUPPORT
220+02 LT

CONSTRUCT DRIVE
217+59 LT. (13' GRAVEL)
217+55 RT (13' PAVED)
218+74 RT. (12' ~~GRAVEL~~ PAVED
219+34 LT. (15' GRAVEL)
219+81 LT. (14' GRAVEL)
220+60 LT. (19' PAVED)

REMOVE AND RESET FENCE
220+52 LT. 22' TO 220+52 LT. 36'

HD STEEL BEAM
GUARD RAIL, GALVANIZED
70 217+~~83~~ LT. - 218+~~40~~ LT. 31
218+80 RT. - 218+97 RT.

HD STEEL BEAM
GUARD RAIL, GALVANIZED
W/ 8 FEET POSTS
219+~~79~~ RT. - 222+00 RT.
85

ANCHOR FOR STEEL BEAM RAIL
75 217+~~70~~ LT. (GI-D)
218+88 RT. (GI-D)

Drainage Notes
#1 Sta. 218+49, ~~24'~~ RT to Sta 219+46, 27' RT
35'
New 18" Pipe, 100' Long, CPEP ~~OR CAAP OR CSP~~ WITH 1-45° ELBOW
Inv. In 876.80
Inv. Out 874.00
#2 Sta. 220+45, ~~25'~~ LT 23'
New Precast Reinforced Concrete Pipe DI With Cast Iron Grate
#3 Sta 220+45, ~~25'~~ LT to Sta 220+55, 24 ~~25'~~ RT 22' 46'
New 18" Pipe, ~~50'~~ Long, CPEP OR CAAP OR CSP
Inv. In ~~868.14~~ 867.93
Inv. Out ~~864.90~~ 866.00
#4 Sta. 220+48.5, LT
Remove Drop Inlet

~~TRANSPLANTING SHRUBS~~
~~220+52 LT.~~

CONSTRUCT PAVED SIDEWALK
220+90 LT. 13' TO 220+90 LT. 40'

ALUMINUM APPROACH RAILING
218+40 LT. - 218+65 LT.
218+99 LT. - 219+24 LT.
218+97 RT. - 219+22 RT.
219+54 RT. - 219+79 RT.

BRIDGE RAILING, 3 RAIL ALUMINUM
219+22 RT. - 219+54 RT.

BRIDGE RAILING,
ALUMINUM/PEDESTRIAN
218+65 LT. - 218+99 LT.

REMOVING AND RESETTING PROPERTY MARKERS

STATION	~~218+60.41~~	~~220+38.66~~
OFFSET	~~24.15~~ LT	~~26.45~~ RT
NORTHING	~~10044.28~~	~~10063.59~~
EASTING	49499.45	49684.89

Channel POB
Sta 48+75.00
48+75
49+00
Channel PI
Sta 49+43.99
Δ = 35° 20' 23" LT
CONSTRUCTION LIMITS
218+97.00
BEGIN BRIDGE
F.G. EL= 879.24
ML 219+15.50
CH 51+13.33
DELTA +30° R
219+34.00
END BRIDGE
F.G. EL= 877.08
220+25
END PROJECT
BEGIN APPROACH
TRANSPLANTING SHRUBS
REMOVE AND RESET FENCE
REMOVE EXISTING DI
REMOVE
SAVE
EXISTING ROW
VT. RTE. 64
TO NORTHFIELD
S70° 01' 30.74"E
S80° 30' 18.00"E
TO VT 14
MATCH LINE PLAN SHEET 1 STA. 217+00
MATCH LINE PLAN SHEET 3 STA 222+00
EXISTING 18" PIPE REMOVE
EXISTING 18" PIPE RETAIN
218+25
END APPROACH
BEGIN PROJECT
TEMPORARY CONSTRUCTION LIMITS
CENTERLINE DETOUR
Channel PI
Sta 51+64.33
Δ = 30° 00' 00"LT
BM #1
TOP OF BOLT IN HYDRANT
ELEV. 881.352
PC
Sta 217+91.35
PI
Sta 218+43.89 BK
Sta 218+43.60 AH
PT
Sta 218+96.14

EXISTING BRIDGE DATA
CONCRETE SLAB
YEAR BUILT: 1900
CLEAR SPAN: 12'
VERTICAL CLEARANCE: 7'
WATERWAY OF FULL OPENING: 95 SQ FT

CURVE 2 DATA
D = 10° 00' 00" LT
R = 572.96'
T = 52.55'
L = 104.80'
E = 2.40'
e = N/C
Δ = 10° 28' 47"

DEMOLITION AND
DISPOSAL OF BUILDING
219+50 RT.

PORTLAND CEMENT CONCRETE
SIDEWALK, 5 INCH
218+11 ~~218+18~~ - ~~218+68~~ LT 218+70
219+~~05~~ 02 - 219+~~22~~ 25 LT
222+45 LT

CAST-IN-PLACE CONCRETE
CURB, TYPE B
218+14 ~~218+18~~ - ~~218+43~~ LT 218+73.5
219+10 ~~218+97~~ - 219+22 LT
219+04 - 219+19 RT

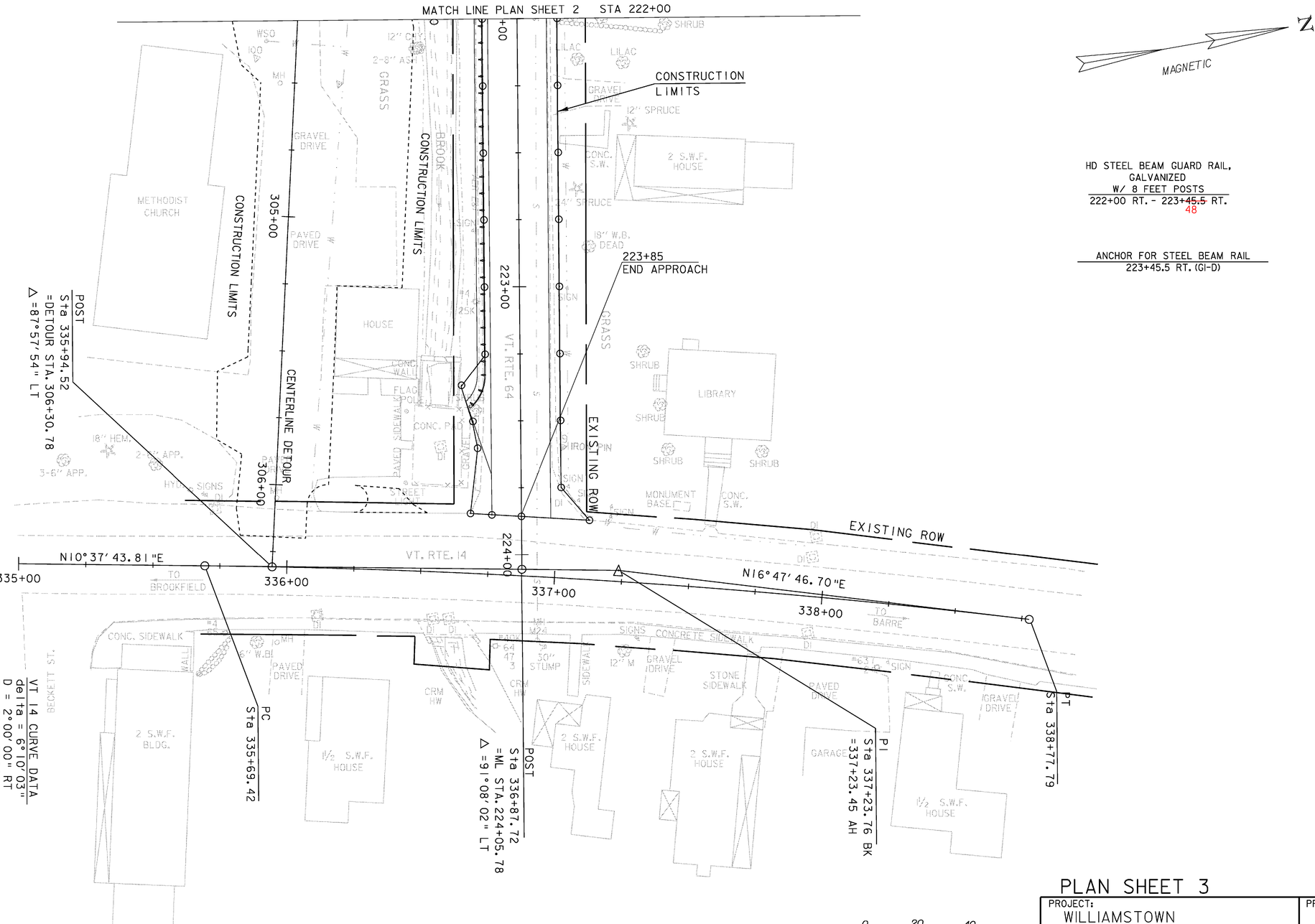
N
MAGNETIC

0 20 40
SCALE IN FEET
1"= 20'

PLAN SHEET 2

DATUM
VERTICAL NGVD 1929
HORIZONTAL ASSUMED

PROJECT: WILLIAMSTOWN	PROJECT NO.: BRS 0204(4)
DESIGN FILE NAME: projects/83elll/structures/sellbdr.dgn	
IPARM FILE NAME: sellpl2.1	PLOT DATE: 07-APR-2008
SURVEYED BY: GILMAN	SURVEY DATE: 9/89
SQUAD LEADER: M. EVANS-MONGEON	DRAWN BY: U. STANLEY
	SHEET: 18 OF 108



HD STEEL BEAM GUARD RAIL,
GALVANIZED
W/ 8 FEET POSTS
222+00 RT. - 223+~~45.5~~ 48 RT.

ANCHOR FOR STEEL BEAM RAIL
223+45.5 RT. (GI-D)

DATUM

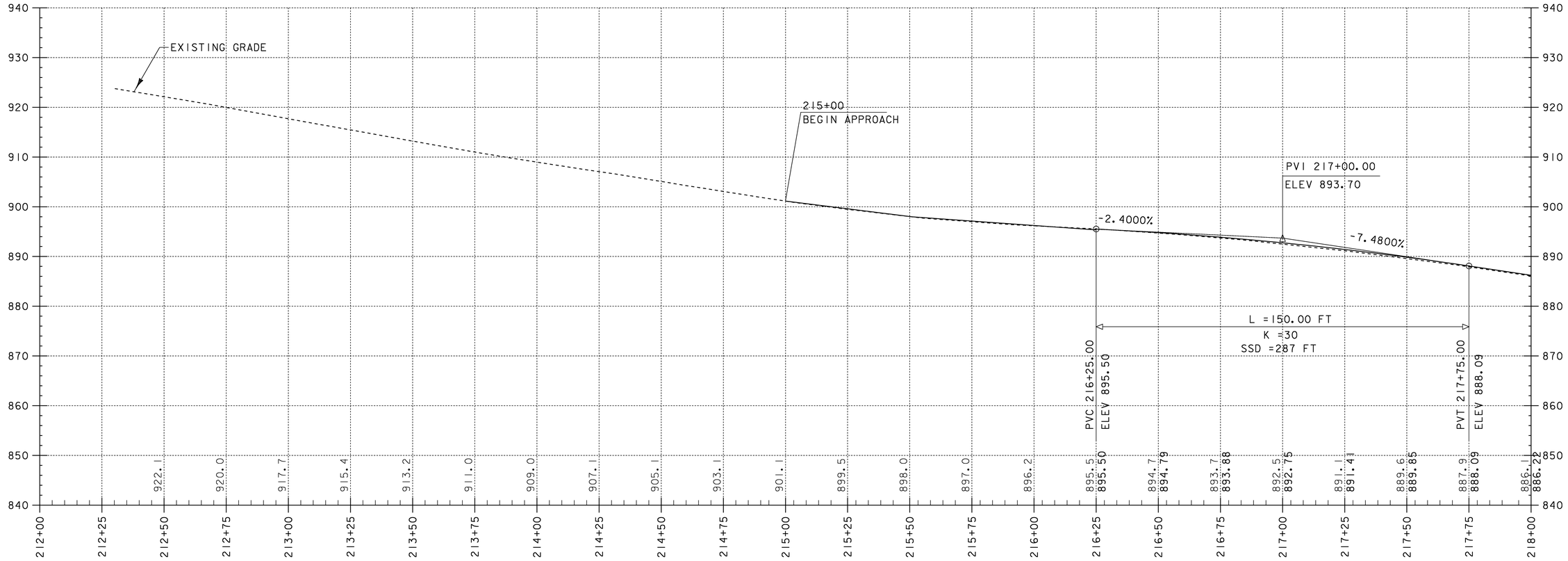
VERTICAL NGVD 1929

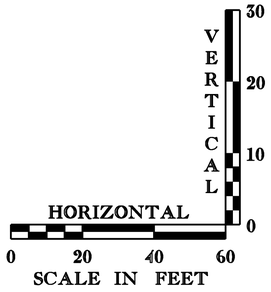
HORIZONTAL ASSUMED

PLAN SHEET 3

PROJECT: WILLIAMSTOWN	PROJECT NO.: BRS 0204(4)
DESIGN FILE NAME: projects/83elll/structures/sellbdr.dgn	
IPARM FILE NAME: s83elllpl3	PLOT DATE: 07-APR-2008
SURVEYED BY: GILMAN	SURVEY DATE: 9/89
SQUAD LEADER: M. EVANS-MONGEON	DRAWN BY: U. STANLEY
s83elllpl3.1	SHEET: 19 OF 108

Profile 1





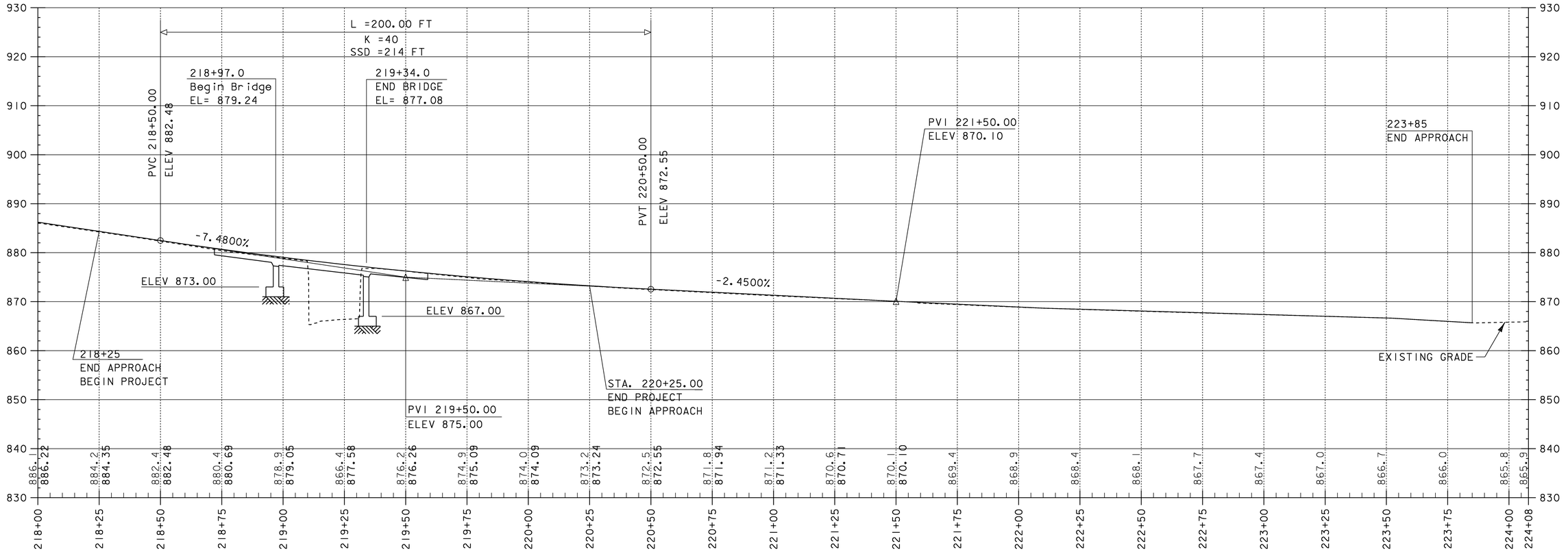
THE GRADES SHOWN TO THE NEAREST TENTH ARE THE ORIGINAL GROUND ELEVATIONS ALONG THE PROPOSED ALIGNMENT. THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE PROPOSED GRADES FOR THE NEW ALIGNMENT.

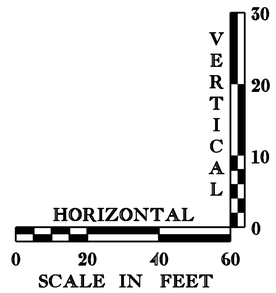
PROFILE SHEET 1

PROJECT NAME:	WILLIAMSTOWN
PROJECT NUMBER:	BRS 0204(4)

FILE NAME: 83elll/structures/sellIxs.dgn	PLOT DATE: 07-APR-2008
PROJECT LEADER: EVANS-MONGEON	DRAWN BY: STANLEY
DESIGNED BY: STANLEY	CHECKED BY: EVANS-MONGEON
s83elllpf1.1	SHEET 20 OF 108

Profile 2





THE GRADES SHOWN TO THE NEAREST TENTH ARE THE ORIGINAL GROUND ELEVATIONS ALONG THE PROPOSED ALIGNMENT. THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE PROPOSED GRADES FOR THE NEW ALIGNMENT.

PROFILE SHEET 2

PROJECT NAME:	WILLIAMSTOWN
PROJECT NUMBER:	BRS 0204(4)

FILE NAME: 83ellI/structures/sellIxs.dgn	PLOT DATE: 07-APR-2008
PROJECT LEADER: EVANS-MONGEON	DRAWN BY: STANLEY
DESIGNED BY: STANLEY	CHECKED BY: EVANS-MONGEON
s83ellIpf2.I	SHEET 21 OF 108

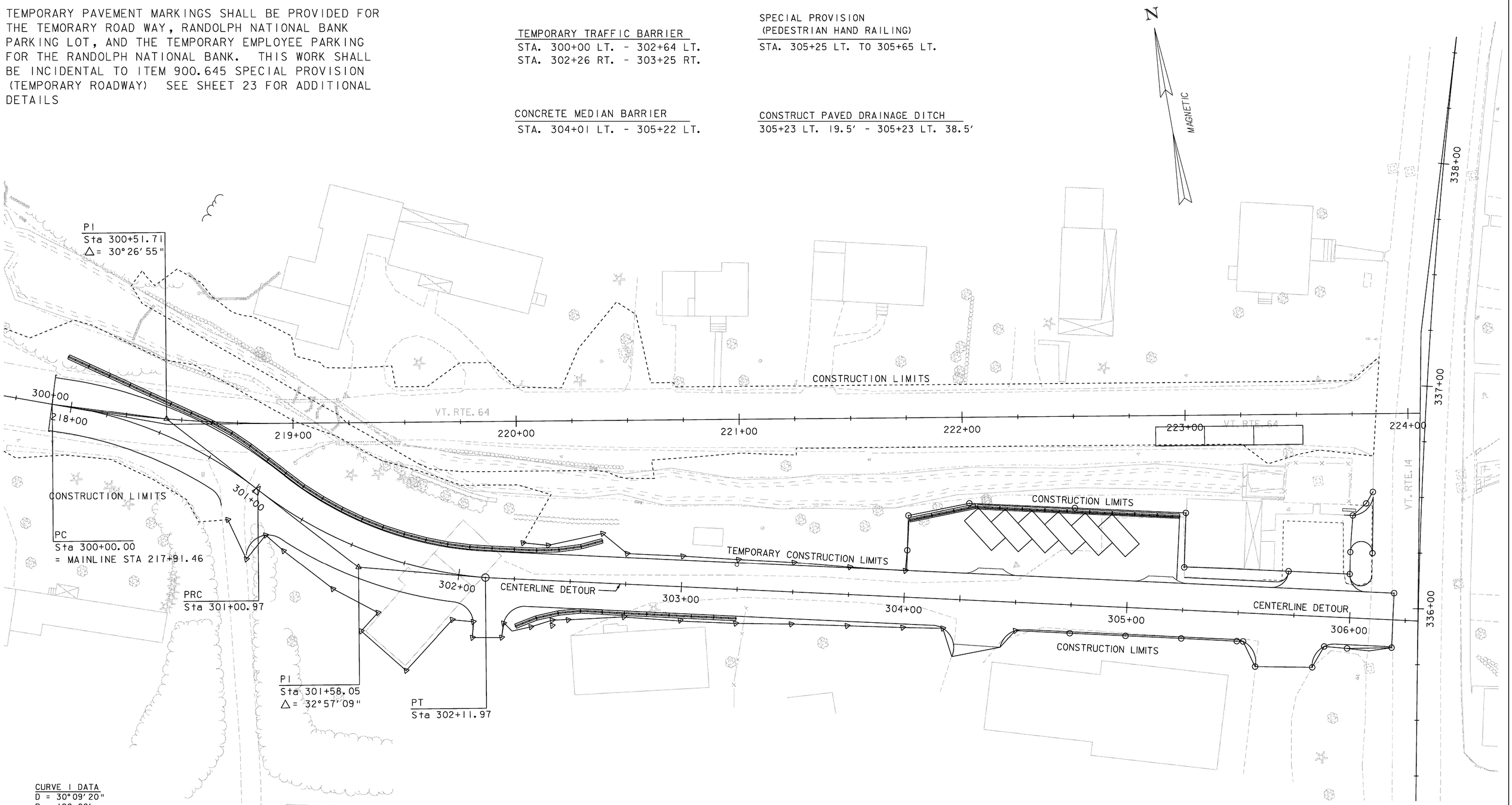
TEMPORARY PAVEMENT MARKINGS SHALL BE PROVIDED FOR THE TEMORARY ROAD WAY, RANDOLPH NATIONAL BANK PARKING LOT, AND THE TEMPORARY EMPLOYEE PARKING FOR THE RANDOLPH NATIONAL BANK. THIS WORK SHALL BE INCIDENTAL TO ITEM 900.645 SPECIAL PROVISION (TEMPORARY ROADWAY) SEE SHEET 23 FOR ADDITIONAL DETAILS

TEMPORARY TRAFFIC BARRIER
STA. 300+00 LT. - 302+64 LT.
STA. 302+26 RT. - 303+25 RT.

CONCRETE MEDIAN BARRIER
STA. 304+01 LT. - 305+22 LT.

SPECIAL PROVISION (PEDESTRIAN HAND RAILING)
STA. 305+25 LT. TO 305+65 LT.

CONSTRUCT PAVED DRAINAGE DITCH
305+23 LT. 19.5' - 305+23 LT. 38.5'



CURVE 1 DATA
D = 30°09'20"
R = 190.00'
T = 51.71'
L = 100.97'
E = 6.91'
e = N/C

CURVE 2 DATA
D = ~~24°41'13"~~ LT 29°41'13"
R = 193.00'
T = 57.08'
L = 111.00'
E = 8.26'
e = N/C

SCALE 1" = 20'-0
20 0 20

DETOUR LAYOUT SHEET

PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83elll/structures/sellldtr.dgn
PROJECT LEADER: M. EVANS-MONGEON
DESIGNED BY: U. STANLEY
IPRAM NAME: s83elllldtr

PLOT DATE: 07-APR-2008
DRAWN BY: U. STANLEY
CHECKED BY: EVANS-MONGEON

(3) PARKING SPACES FOR EMPLOYEES
OF RANDOLPH NATIONAL BANK

4" TEMPORARY WHITE LINE (TYP)

VT. RTE. 64

222+00

223+00

224+00

337+00

VT. RTE. 14

N

MAGNETIC

TEMPORARY CONSTRUCTION LIMITS

3'-0" (MIN.)

2'-0' X 19'-0" PAVED
DRAINAGE DITCH

1'-0" (MIN.)

5'-0" (MIN.)

24'-0"

26'-6" (TYP)

8'-0"
(TYP)

18'-0"

45°

PAVED
TEMPORARY
ENTRANCE
FROM VT 14

10' R

12'-0"

5' R

4'-6"PAVED WALKWAY

SPECIAL PROVISION
(PEDESTRIAN HAND RAILING)

STATION 304+00 BEGIN
PARKING LOT

4" TEMPORARY WHITE
LINE (TYP)

30'-0" X 118'-0"
PAVED PARKING LOT

STATION 305+25 END
PARKING LOT

CENTERLINE DETOUR

304+00

305+00

306+00

336+00

4" TEMPORARY WHITE
LINE (TYP)

24" TEMPORARY
STOP BAR

100

TEMPORARY CONSTRUCTION LIMITS

STOP SIGN
(RELOCATED)

SCALE 1" = 10'-0

10 0 10

PARKING LOT LAYOUT SHEET

PROJECT NAME:	WILLIAMSTOWN
PROJECT NUMBER:	BRS 0204 (4)

FILE NAME: sellbanksite.dgn	PLOT DATE: 07-APR-2008
PROJECT LEADER: M.EVANS-MONGEON	DRAWN BY: EVANS-MONGEON
DESIGNED BY: U. STANLEY	CHECKED BY: EVANS-MONGEON
SITE LAYOUT FOR PARKING LOT	SHEET 23 OF 108

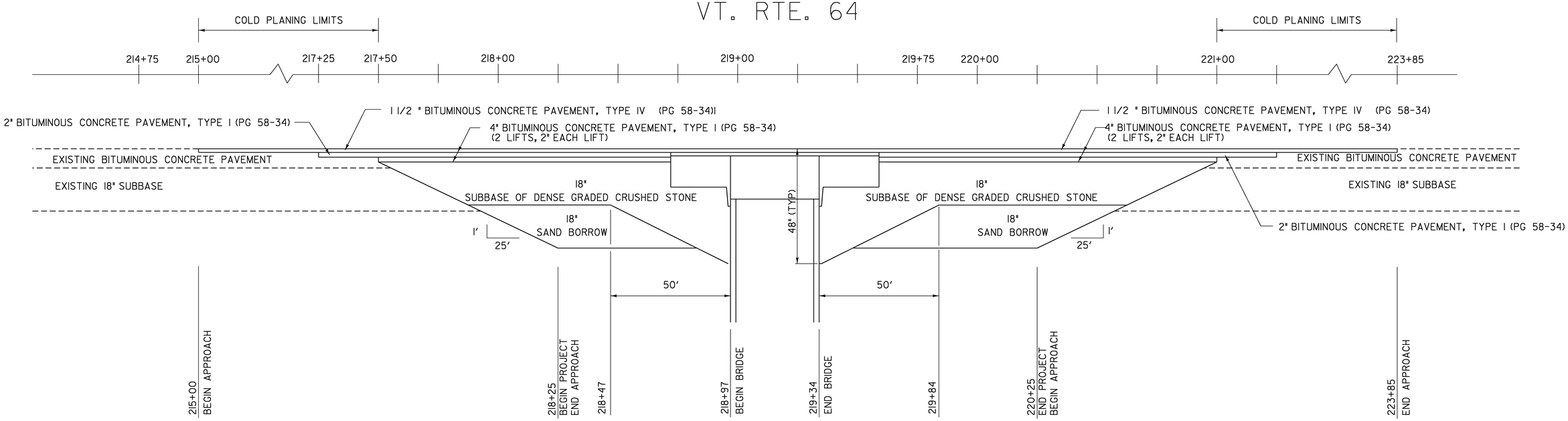
SCALE 1" = 20'-0
20 0 20

DATUM
VERTICAL NGVD 1929
HORIZONTAL ASSUMED

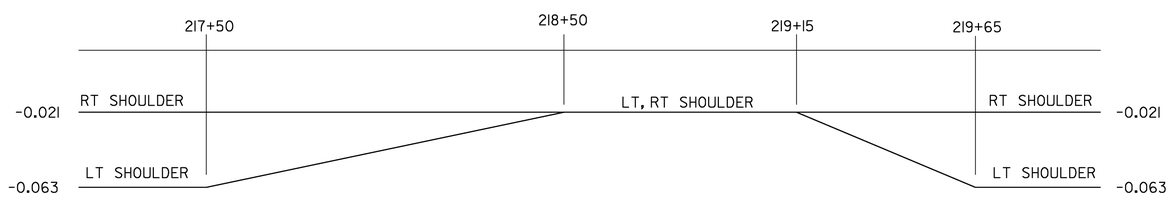
UTILITY LAYOUT SHEET

PROJECT: WILLIAMSTOWN	PROJECT NO.: BRS 0204(4)
DESIGN FILE NAME: /projects/83elll/sellldtr.dgn	
IPARM FILE NAME: s83ellldtrl	PLOT DATE: 07-APR-2008
SURVEYED BY: GILMAN	SURVEY DATE: 9/89
SQUAD LEADER: M. EVANS-MONGEON	DRAWN BY: U. STANLEY
	SHEET: 24 OF 108

VT. RTE. 64



MATERIAL TRANSITION DIAGRAM
NTS



SHOULDER TRANSITION
NTS

DATUM
VERTICAL NGVD 1929
HORIZONTAL ASSUMED

MATERIAL TRANSITION DETAILS

PROJECT NAME: WILLIAMSTOWN
PROJECT NO.: BRS 0204(4)
DESIGN FILE NAME: str2/83elll/sellIxs.dgn
SQUAD LEADER: EVANS-MONGEON
DESIGNED BY: U. STANLEY
IPARM FILE NAME:
PLOT DATE: 07-APR-2008
DRAWN BY: U. STANLEY
CHECKED BY: EVANS-MONGEON
SHEET: 25 OF 108

EROSION CONTROL NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REPLACEMENT OF A BRIDGE OVER AN UNNAMED BROOK. THE PROJECT IS ON VT ROUTE 64, A PAVED, STATE NUMBERED ROUTE, IN THE TOWN OF WILLIAMSTOWN. A NEW, TWO-LANE, CAST-IN-PLACE, CONCRETE SLAB, BRIDGE WILL BECONSTRUCTED ON THE EXSISTING ALIGNEMENT. TRAFFIC WILL BE MAINTAINED ON A TEMPORARY DETOUR DURING CONSTRUCTION. FOLLOWING COMPLETION OF THE NEW BRIDGE, THE TEMPORARY DETOUR WILL BE PARTIALLY REMOVED. TOTAL ROADWAY APPROACH WORK, INCLUDING BOTH APPROACHES, IS APPROXIMATELY 685 FEET.

NOTE: AREA OF DISTURBANCE SHALL INCLUDE LIMITS OF EARTH DISTURBANCE WITHIN THE PROJECT AREA, INCLUDING ANY WASTE, STAGING AND BORROW AREAS WITHIN OR DIRECTLY ADJACENT TO THE PROJECT LIMITS.

TOTAL AREA OF DISTURBANCE IS APPROXIMATELY 0.96 ACRES.

IT IS ANTICIPATED THAT THIS PROJECT WILL LAST TWO CONSTRUCTION SEASONS.

1.2 SITE INVENTORY

1.2.1 OFF SITE DRAINAGE CHARACTERISTICS (UP AND DOWN-GRADIENT)

THE PROPERTY SURROUNDING THE PROJECT SITE CONSISTS OF WELL ESTABLISHED VEGETATION, MODERATE TO STEEPLY SLOPING, MIXED SOFTWOOD AND HARDWOOD FOREST WITH WELL DEFINED DRAINAGE WAYS. DUE TO THE NATURE OF THE SURROUNDING TERRAIN, RUNOFF WATER ENTERING THE PROJECT SITE WILL BE PRIMARILY LIMITED TO THAT WHICH IS CONVEYED ALONG ROADWAY DITCHES, AND THAT WHICH FOLLOWS ROUTE 64 ALONG THE 14% GRADE AT THE BEGINNING OF THE PROJECT LIMITS. THE CURRENT ROADWAY DITCHES ARE NOT WELL DEFINED AND ARE NOT LINED WITH STONE.

1.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER, AND PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES

UNNAMED BROOK IS LOCATED IN THE PROJECT AREA. THERE ARE NO OTHER WATER BODIES OR WETLANDS WITHIN THE PROJECT AREA. THE UNNAMED BROOK IS CLASSIFIED AS HILLY WITH A MIXTURE OF OPEN AND FORESTED COVER CONTAINING A STREAMBED OF MOSTLY LEDGE WITH COBBLE UPSTREAM, COBBLES AND GRAVEL DOWNSTREAM. THE CONTRIBUTING DRAINAGE AREA AT THE BRIDGE CROSSING IS 3.8 SQ. MI. DISTURBANCE OF SOILS NEAR NATURAL OR MAN-MADE WATERWAYS CONSISTS OF THAT WHICH IS NECESSARY TO CONSTRUCT TWO NEW CONCRETE BRIDGE ABUTMENTS AND APPLICABLE ROADWAY APPROACHES AS WELL AS THE REMOVAL OF THE EXISTING CROSSING. STABILIZATION OF DISTURBANCES TO STREAM BANKS WILL BE ACCOMPLISHED WITH STONE FILL, TYPE II.

1.2.3 TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES

THE TOPOGRAPHY OF THE PROJECT SITE IS HILLY AND WOODED WITH ROUTE 64 FOLLOWING PARALLEL TO UNNAMED BROOK WHICH IS CONTAINED BY STEEP STREAM BANKS ALONG EACH SIDE. DEVELOPMENT ALONG ROUTE 64 CONSISTS OF PERMANENT RESIDENCES, TWO OF WHICH EXIST NEAR THE PROJECT LIMITS. OVERHEAD UTILITY SERVICE FOLLOWS ALONG ROUTE 64 WITH THE NEED FOR TEMPORARY RELOCATION DURING CONSTRUCTION.

1.2.4 VEGETATION

A MIX OF HARDWOOD AND SOFTWOOD TREES OF ALL SIZES EXIST ALONG ROUTE 64 THE TWO RESIDENCES NEAR THE BRIDGE SITE HAVE SMALL AREAS OF LAWN AND LANDSCAPE PLANTINGS. NO FIELDS OR OTHER AGRICULTURAL CROPS EXIST NEAR THE PROJECT. IMPACTS TO VEGETATION WILL BE LIMITED TO THAT WHICH ARE AFFECTED BY THE CONSTRUCTION OF THE NEW BRIDGE ALONG A NEW ALIGNMENT. SOME TREES WILL BE REMOVED.

FOLLOWING CONSTRUCTION OF THE NEW BRIDGE, THE STREAM BANKS WILL BE STABILIZED WITH STONE FILL TYPE II AND VEGETATION REESTABLISHED WITH STANDARD SEED & MULCH PRACTICES.

1.2.5 SOILS

THE SOIL CONSERVATION SERVICE HAS MAPPED THE SOILS THROUGHOUT ORANGE COUNTY. THE SOIL TYPE IDENTIFIED FOR THIS PROJECT SITE IS MEC (MERRIMAC FINE SANDY LOAM). THIS SOIL TYPE IS DESCRIBED AS '...LEVEL TO STEEP, DEEP, SOMEWHAT EXCESSIVELY DRAINED SOILS ON TERRACES. IN REPRESENTATIVE PROFILE IN A HAYFIELD...THEY HAVE SURFACE LAYER OF VERY DARK GRAYISH BROWN FINE SANDY LOAM 6 INCHES THICK. THE UPPER 10 INCHES OF SUBSOIL IS BROWN TO DARK BROWN GRADING TO YELLOWISH BROWN FINE SANDY LOAM. THE LOWER 7 INCHES IS BROWN SANDY LOAM. THE UNDERLYING MATERIAL TO A DEPTH OF 60 INCHES IS OLIVE GRAY GRAVELLY SAND...PERMEABILITY IS RAPID...THE HAZARD OF EROSION IS MODERATE. RUNOFF IS MEDIUM.

THE LISTED SOIL ERODIBILITY COEFFICIENT (K-VALUE) FOR THIS SOIL TYPE IS 0.17. GENERALLY, K-VALUES INDICATE THE FOLLOWING: 0.0 - 0.23 = LOW ERODIBILITY; 0.24 - 0.36 = MODERATE ERODIBILITY; 0.37 AND HIGHER = HIGHER ERODIBILITY.

1.2.6 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: NO
HISTORICAL OR ARCHEOLOGICAL AREAS: NO
PRIME AGRICULTURAL LAND: NO
THREATENED AND ENDANGERED SPECIES: NO
WATER RESOURCE: UNNAMED BROOK
WETLANDS: NO

1.3 RISK EVALUATION

THIS PROJECT DOES NOT FALL UNDER THE JURISDICTION OF CONSTRUCTION GENERAL PERMIT 3-9020 BASED ON THE PROJECT IMPACT AREA. SHOULD CHANGES PRIOR TO OR DURING CONSTRUCTION RESULT IN ONE OR MORE ACRES OF EARTH DISTURBANCE OR SHOULD THE PROJECT BECOME PART OF A LARGER PLAN OF DEVELOPMENT, THEN THE SELECTED CONTRACTOR WILL BE RESPONSIBLE FOR ADDITIONAL PERMITTING WITH VANR VIA FILING OF THE APPROPRIATE NOTICE OF INTENT UNDER THE CONSTRUCTION GENERAL PERMIT PROCESS.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

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 MINIMIZING SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLLUTION PREVENTION CONTROLS.

EMPLOY TEMPORARY STABILIZATION PRACTICES IN INCREMENTAL STAGES (PHASING) AS CONSTRUCTION PROCEEDS. ADDITIONAL MEASURES MAY BE NEEDED DUE TO THE PHASING OF THE PROJECT AND AS DIRECTED BY THE ENGINEER.

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. MAINTAINING VEGETATED BUFFERS ALONG STREAM BANKS, WETLANDS OR OTHER SENSITIVE AREAS IS A CRUCIAL EROSION PREVENTION AND SEDIMENT CONTROL MEASURE THAT SHOULD BE ESTABLISHED WHEREVER POSSIBLE.

(REFER TO THE LOW RISK SITE HANDBOOK AND APPROPRIATE DETAIL SHEETS FOR EACH PRACTICE REQUIRED ON THE PROJECT TO INCLUDE BUT NOT LIMITED TO THE FOLLOWING.)

1.4.1 MARK SITE BOUNDARIES
PROJECT DEMARCATION FENCE IS NOT BEING USED BECAUSE OF THE RESIDENTIAL NATURE OF THE PROJECT SITE.

1.4.2 LIMIT DISTURBANCE AREA
SMALL CONSTRUCTION SITE

1.4.3 STABILIZE CONSTRUCTION EXIT
STABILIZED CONSTRUCTION ENTRANCES WILL BE USED AS NECESSARY AND WILL BE PAID FOR UNDER ITEM 653.35 VEHICLE TRACKING PAD, SEE DETAIL ON EROSION & SEDIMENTATION CONTROL DETAIL SHEET 2.

1.4.4 INSTALL SILT FENCE
SILT FENCE WILL BE INSTALLED PRIOR TO ANY UPSLOPE WORK AS SHOWN IN THE PLANS OR AS NECESSARY. IT WILL BE PAID FOR UNDER ITEM 649.51 GEOTEXTILE FOR SILT FENCE. SEE DETAIL ON EROSION & SEDIMENT CONTROL DETAIL SHEET 1.

1.4.5 DIVERT UPLAND RUNOFF
MINIMAL AMOUNT OF OFF-SITE RUNOFF ANTICIAPATED.

1.4.6 SLOW DOWN CHANNELIZED RUNOFF
THE INSTALLATION OF CHECK DAMS WILL BE COVERED BY PAY ITEM 653.25 TEMPOARY STONE CHECK DAM, TYPE 1. CHECK DAMS SHALL BE INSTALLED AS SHOWN ON EPSC PLANS OR AS NEEDED. SEE DETAIL ON EROSION & SEDIMENT CONTROL DETAIL SHEET 2.

1.4.7 CONSTRUCT PERMANENT CONTROLS
STONE FILL, TYPE II SHALL BE USED FOR CHANNEL PROTECTION.
SEED, PAY ITEM 651.15, HAY MULCH, PAY ITEM 651.25, AND TEMPORARY EROSION MATTING, ITEM 653.20, SHALL BE USED TO STABLIZE SOIL AS INDICATED ON THE EPSC PLANS.
DRAINAGE INLETS AND PIPING SHALL BE USED TO CONTROL STORMWATER RUN-OFF.
WINGWALLS ARE UTILIZED TO STABILIZE AND RETAIN SOIL.

1.4.8 STABILIZE EXPOSED SOILS
SEED, PAY ITEM 651.15 AND HAY MULCH, PAY ITEM 651.25, SHALL BE INSTALLED TO STABLIZE SOIL AS INDICATED ON THE EPSC PLANS.
TEMPORARY EROSION MATTING, PAY ITEM 653.20 SHALL BE INSTALLED TO STABLIZE SOIL AS INDICATED ON THE EPSC PLANS, SEE DETAILS ON EROSION PREVENTION & SEDIMENT CONTROL DETAIL SHEET 1.

1.4.9 STABILIZE SOIL AT FINAL GRADE
SEED AND MULCH, EROSION MATTING , PAY ITEM 653.20 SHALL BE INSTALLED TO STABLIZE SOIL AS INDICATED ON THE EPSC PLANS, SEE DETAILS EROSION PREVENTION & SEDIMENT CONTROL DETAIL SHEET 1.

1.4.10DE-WATERING ACTIVITIES
SEDIMENT BASINS FOR ABUTMENT WORK SHALL BE USED AS NECESSARY AND SHALL BE PLACED AS DETERMINED BY THE CONTRACTOR AND APPROVED BY THE RESIDENT ENGINEER.

1.4.11 INSPECT YOUR SITE
INSPECT SITE BASED ON PERMIT AUTHORIZATION REQUIREMENTS

1.5 TEMPORARY EROSION PREVENTION MEASURES TO BE UTILIZED INCLUDE:

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. SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF FORECASTED RAIN.

SEEDING, MULCHING AND BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3. THESE SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE OR DURING INTERMITTENT PHASES OF CONSTRUCTION.

SILT FENCE SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK. INSTALLATION SHALL BE PERFORMED PER INCLUDED DETAIL SHEET.

MEASURES SUCH AS SILT FENCE SHALL BE REGULARLY MAINTAINED AND SHALL BE CHECKED FOR SEDIMENT BUILD-UP. SEDIMENT BUILD-UP SHALL BE REMOVED WHEN THE LEVEL OF SEDIMENT REACHES ONE-HALF THE HEIGHT OF THE CONTROL MEASURE. SEDIMENT SHALL BE DISPOSED AT AN APPPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

1.6 PERMANENT EROSION CONTROL

SEVERAL PERMANENT EROSION CONTROL MEASURES WILL BE UTILIZED

STREAM BANKS WILL BE ARMORED WITH STONE FILL TYPE II AS SPECIFIED BY VTRANS ON THE PROJECT PLANS. THE STONE FILL WILL STABILIZE THE EXISTING BANK IN ORDER TO PROTECT FROM EROSION DURING STORM AND HIGH WATER EVENTS.

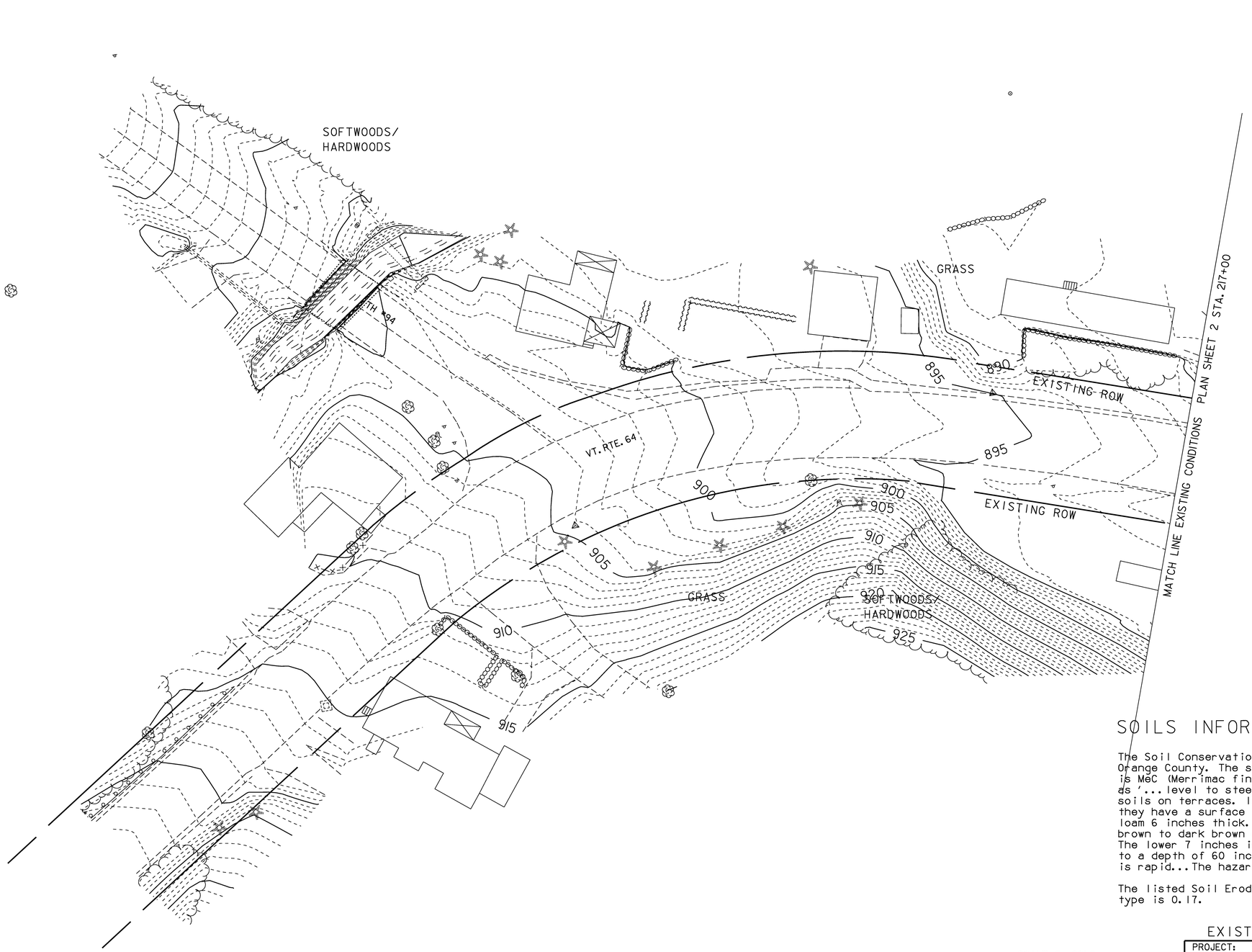
ALL DISTURBED AREAS WILL BE SEEDED AND MULCHED. AREAS WITH SLOPES STEEPER THAN 1:3 SHALL UTILIZE BIODEGRADABLE EROSION CONTROL MATTING.

STREAM BANK VEGETATION WILL BE INTRODUCED IN THE GRUBBING MATERIAL THAT IS TO BE PLACED OVER THE STREAM BANK STONE FILL.

EROSION CONTROL NARRATIVE

PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204 (4)

FILE NAME: S83EIIIERONARR.DGN
PROJECT LEADER: M.EVANS-MONGEON
DESIGNED BY: E-MONGEON
PLOT DATE: 07-APR-2008
DRAWN BY: U. STANLEY
CHECKED BY: E-MONGEON
SHEET 26 OF 108



SOILS INFORMATION:

The Soil Conservation Service has mapped the soils throughout Orange County. The soil type identified for this project site is MeC (Merrimac fine sandy loam). This soil type is described as '... level to steep, deep, somewhat excessively drained soils on terraces. In representative profile in a hayfield... they have a surface layer of very dark grayish brown fine sandy loam 6 inches thick. The upper 10 inches of the subsoil is brown to dark brown grading to yellowish brown fine sandy loam. The lower 7 inches is brown sandy loam. The underlying material to a depth of 60 inches is olive gray gravelly sand....Permeability is rapid...The hazard of erosion is moderate. Runoff is medium.

The listed Soil Erodibility Coefficient (K-value) for this soil type is 0.17.

SCALE 1" - 20'-0

20 0 20

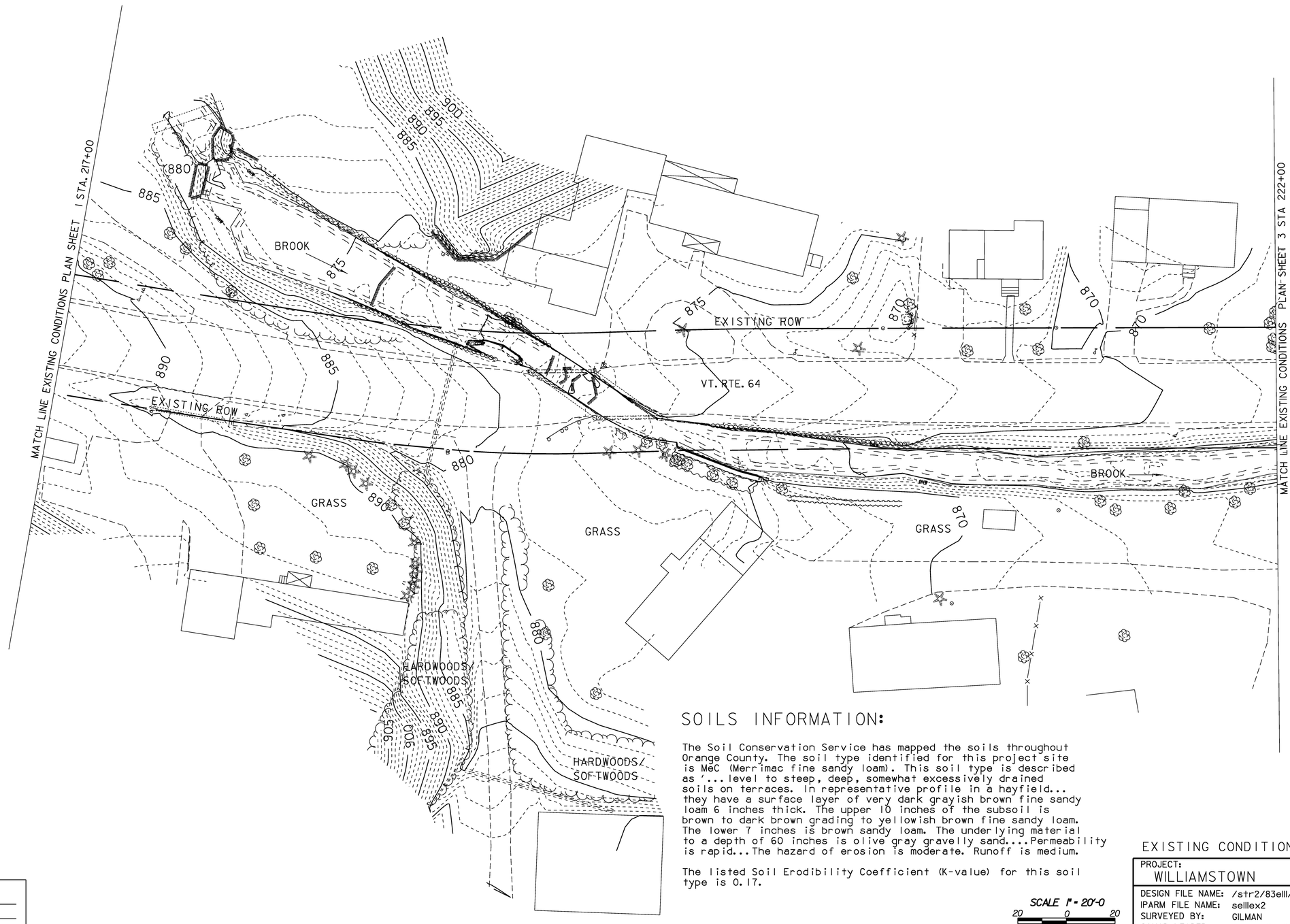
DATUM

VERTICAL NGVD 1929

HORIZONTAL ASSUMED

EXISTING CONDITIONS PLAN SHEET 1

PROJECT: WILLIAMSTOWN	PROJECT NO.: BRS 0204(4)
DESIGN FILE NAME: /str2/83elll/delllero.dgn	
IPARM FILE NAME: dellexl	PLOT DATE: 07-APR-2008
SURVEYED BY: GILMAN	SURVEY DATE: 9/89
SQUAD LEADER: M. EVANS-MONGEON	DRAWN BY: U. STANLEY
	SHEET: 27 OF 108



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SCALE 1" = 20'-0

20 0 20

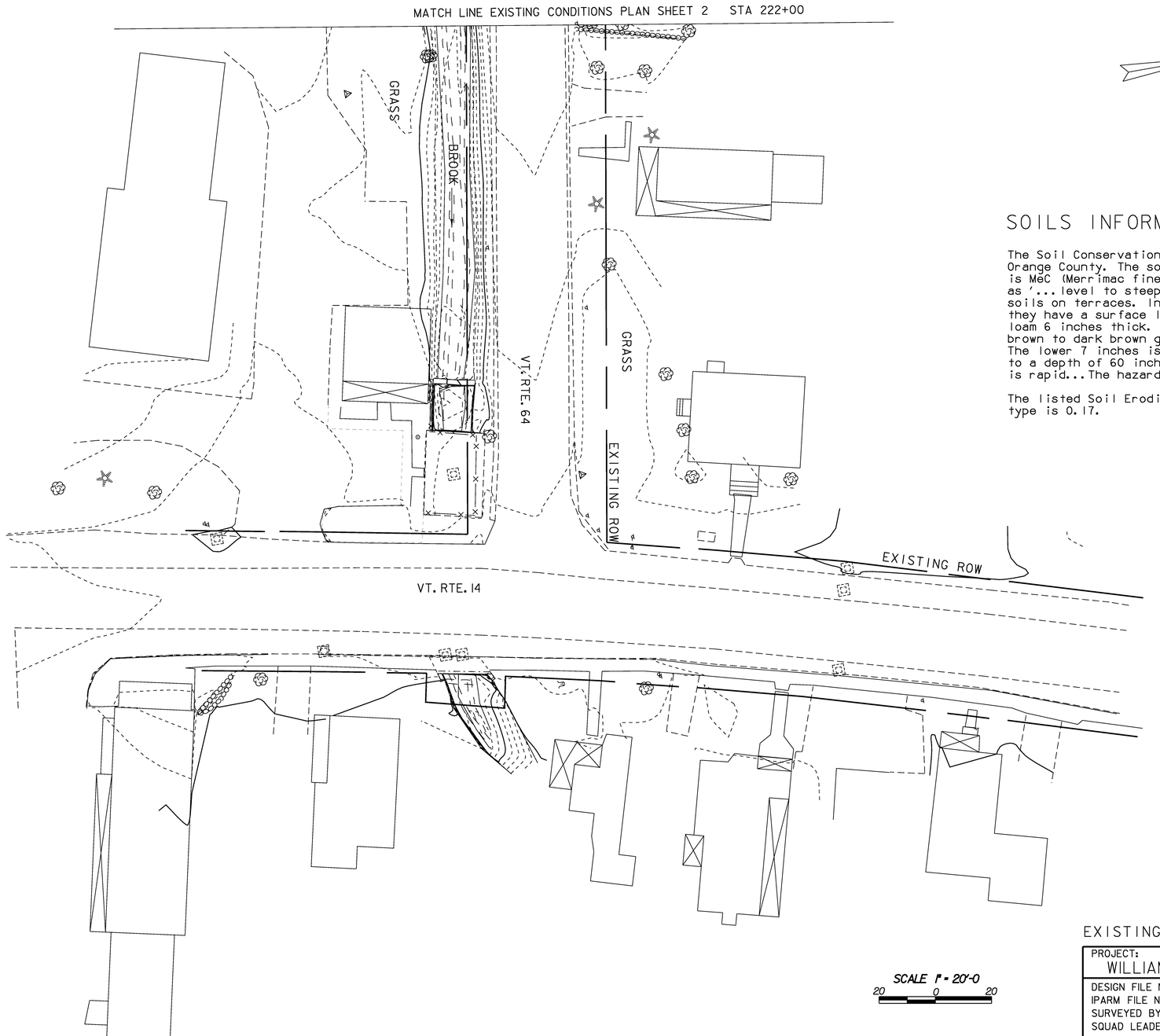
DATUM

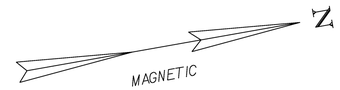
VERTICAL NGVD 1929

HORIZONTAL ASSUMED

EXISTING CONDITIONS PLAN SHEET 2

PROJECT: WILLIAMSTOWN	PROJECT NO.: BRS 0204(4)
DESIGN FILE NAME: /str2/83elll/delllero.dgn	
IPARM FILE NAME: selllex2	PLOT DATE: 07-APR-2008
SURVEYED BY: GILMAN	SURVEY DATE: 9/89
SQUAD LEADER: M. EVANS-MONGEON	DRAWN BY: U. STANLEY
	SHEET: 28 OF 108





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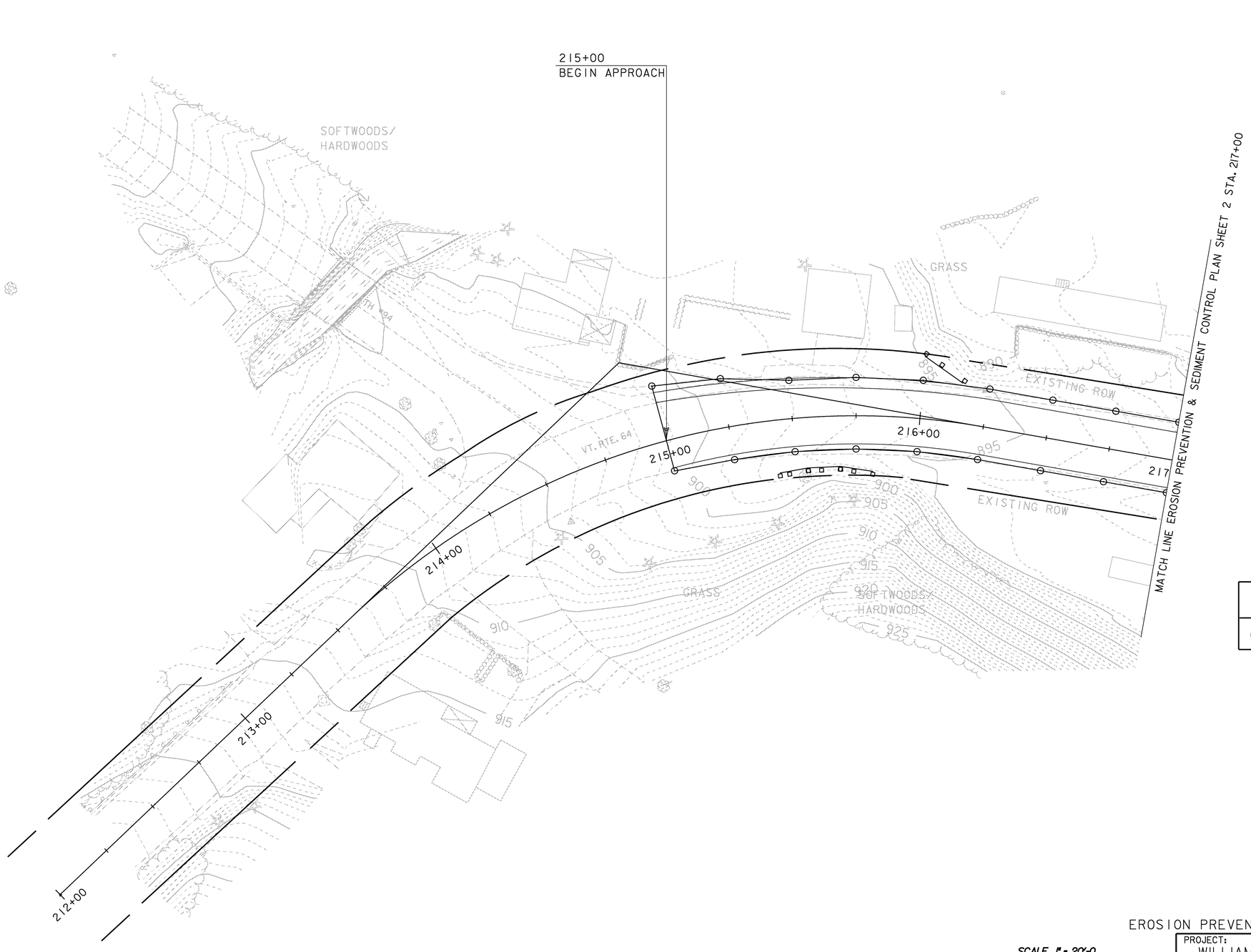
SCALE 1" = 20'-0

20 0 20

EXISTING CONDITIONS PLAN SHEET 3

DATUM
VERTICAL NGVD 1929
HORIZONTAL ASSUMED

PROJECT: WILLIAMSTOWN	PROJECT NO.: BRS 0204(4)
DESIGN FILE NAME: str2/83ell/dellero.dgn	
IPARM FILE NAME: selllex3	PLOT DATE: 07-APR-2008
SURVEYED BY: GILMAN	SURVEY DATE: 9/89
SQUAD LEADER: M. EVANS-MONGEON	DRAWN BY: U. STANLEY
	SHEET: 29 OF 108

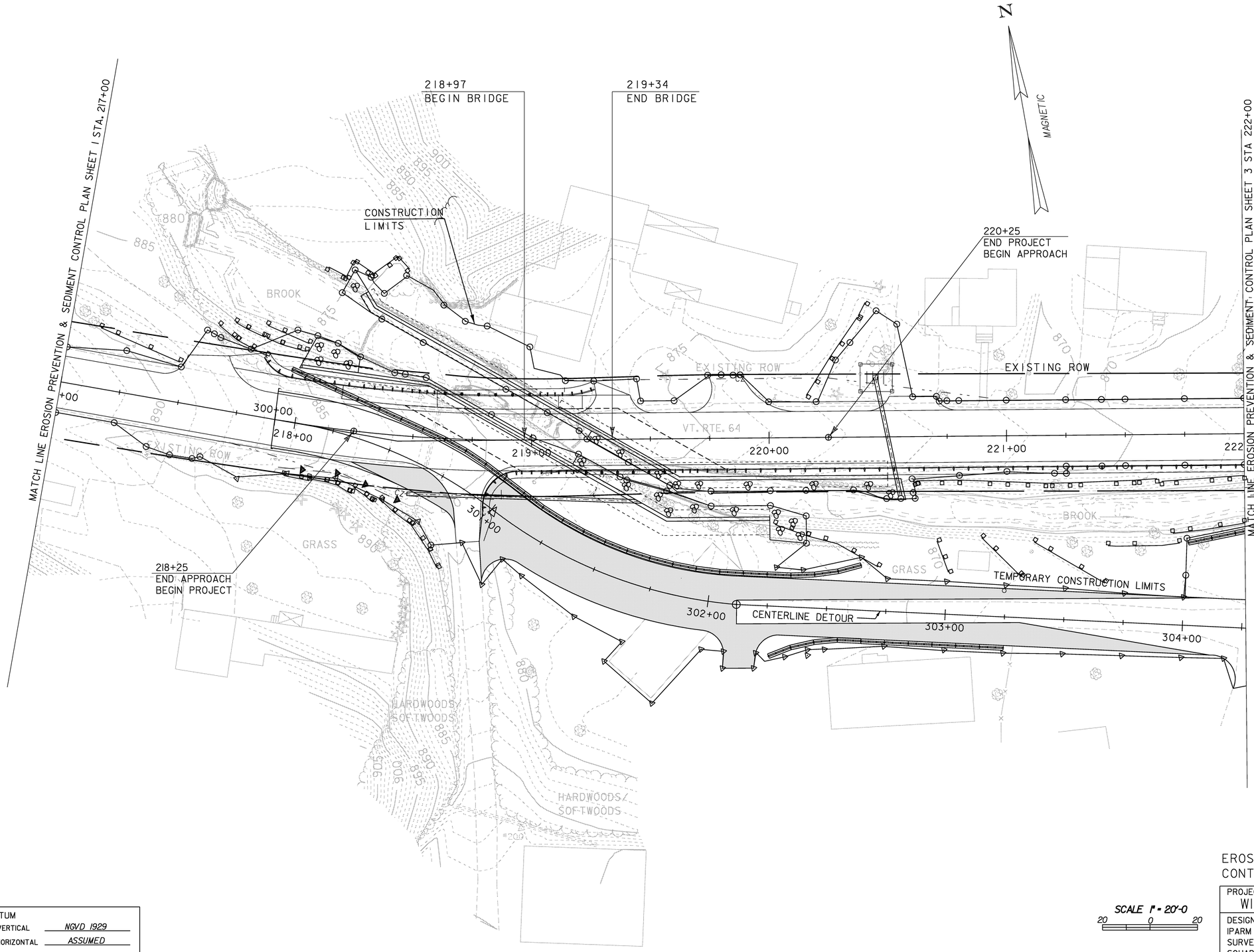


SCALE 1" = 20'-0
20 0 20

EROSION PREVENTION & SEDIMENT CONTROL PLAN SHEET 1

PROJECT: WILLIAMSTOWN	PROJECT NO.: BRS 0204(4)
DESIGN FILE NAME: /str2/83elli/delllero.dgn	
IPARM FILE NAME: sellerol.i	PLOT DATE: 07-APR-2008
SURVEYED BY: GILMAN	SURVEY DATE: 9/89
SQUAD LEADER: M. EVANS-MONGEON	DRAWN BY: U. STANLEY
	SHEET: 30 OF 108

DATUM
VERTICAL NGVD 1929
HORIZONTAL ASSUMED



NOTES

1. AN ALTERNATE TEMPORARY EROSION CONTROL PLAN MAY BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL BY THE RESIDENT ENGINEER.
2. THE CONTRACTOR WILL USE OTHER TEMPORARY OR PERMANENT EROSION CONTROL MEASURES AS NECESSITATED BY THE SEQUENCE OF CONSTRUCTION AND AS DIRECTED BY THE RESIDENT ENGINEER. SEE SECTION 105.23 OF THE VERMONT AOT STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006.
3. USE THE EROSION CONTROL PLAN SHEET IN CONJUNCTION WITH THE ESPC DETAIL SHEETS.
4. THE CONTRACTOR WILL PROPOSE LOCATIONS FOR SEDIMENTATION OF WATER PUMPED FROM THE COFFERDAMS. SPECIAL CONSIDERATION MUST BE GIVEN TO THE FIRST PUMP-DOWN OF THE COFFERDAMS. THIS WILL CONTAIN THE GREATEST VOLUME OF WATER WITH A HIGH SEDIMENT LOAD. THE CONTRACTOR MAY PROVIDE ADDITIONAL SEDIMENT TRAPS WITHIN THE CONSTRUCTION LIMITS IF REQUIRED OR CONTROL THE RATE OF DRAW-DOWN. ALL SEDIMENT TRAP LOCATIONS MUST BE APPROVED BY THE RESIDENT ENGINEER.
5. AFTER COMPLETION OF THE SUBSTRUCTURE, THE SEDIMENT IN THE TRAP SHALL BE REMOVED AND THE GROUND RESTORED TO ITS ORIGINAL SLOPES OR GRADED AS SHOWN ON THE CONSTRUCTION DRAWINGS.

LEGEND

- GEOTEXTILE FOR SILT FENCE
- STONE FILL, TYPE II
- TEMPORARY STONE CHECK DAMS TYPE I
- INLET PROTECTION TYPE I
- REMOVE PAVEMENT, SEED AND MULCH SEE SHEET 48 FOR NOTES

SCALE 1" = 20'-0

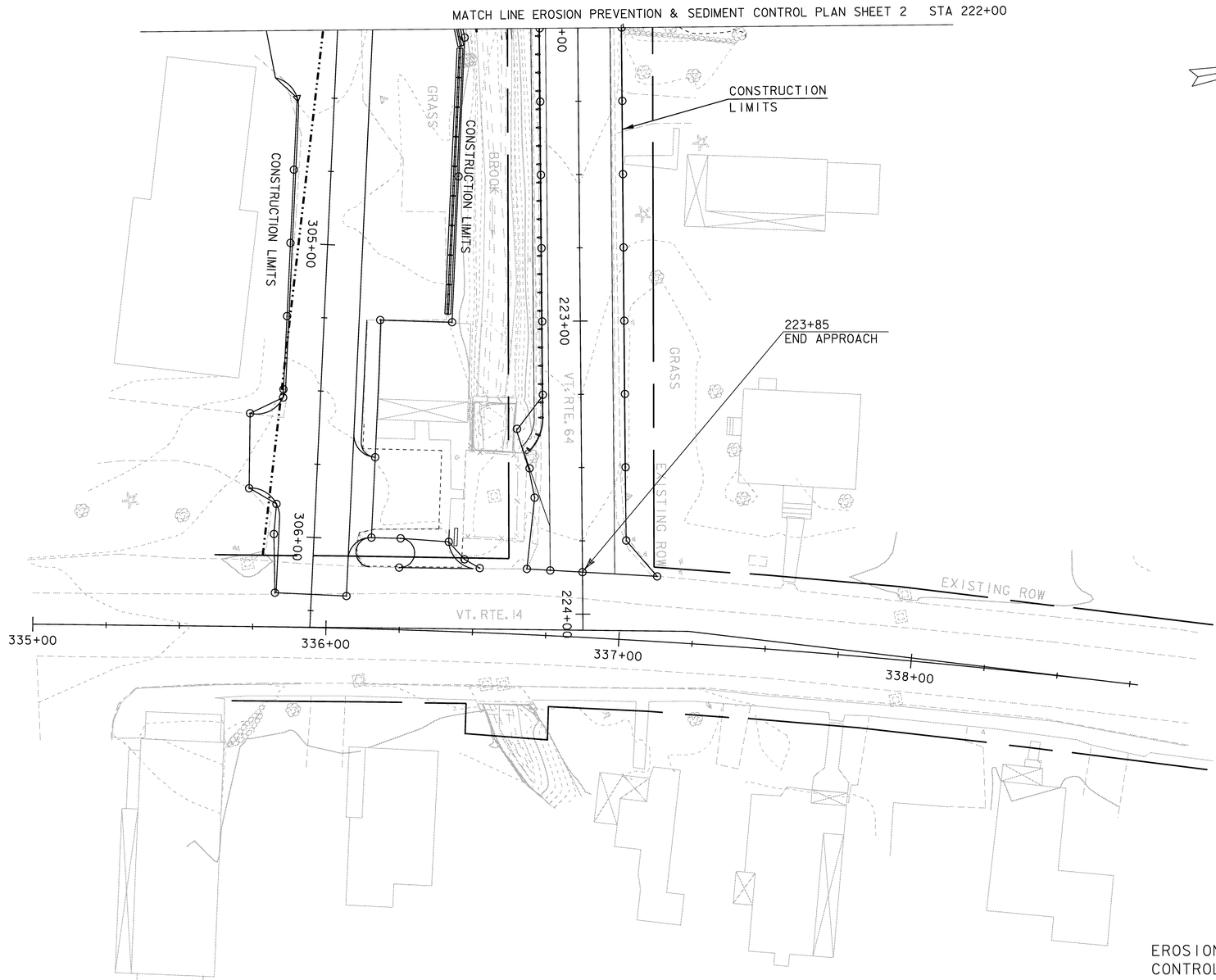
20 0 20

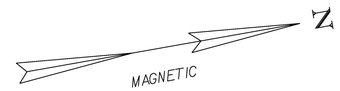
DATUM
VERTICAL NGVD 1929
HORIZONTAL ASSUMED

EROSION PREVENTION & SEDIMENT CONTROL PLAN SHEET 2

PROJECT: WILLIAMSTOWN	PROJECT NO.: BRS 0204(4)
DESIGN FILE NAME: /str2/83ell/dellero.dgn	
IPARM FILE NAME: sellero2	
SURVEYED BY: GILMAN	PLOT DATE: 07-APR-2008
SQUAD LEADER: M. EVANS-MONGEON	SURVEY DATE: 9/89
	DRAWN BY: U. STANLEY
	SHEET: 31 OF 108

MATCH LINE EROSION PREVENTION & SEDIMENT CONTROL PLAN SHEET 2 STA 222+00





SCALE 1" = 20'-0
20 0 20

EROSION PREVENTION & SEDIMENT CONTROL PLAN SHEET 3

DATUM
VERTICAL NGVD 1929
HORIZONTAL ASSUMED

PROJECT: WILLIAMSTOWN	PROJECT NO.: BRS 0204(4)
DESIGN FILE NAME: str2/83elll/delllero.dgn	
IPARM FILE NAME: selllero3	PLOT DATE: 07-APR-2008
SURVEYED BY: GILMAN	SURVEY DATE: 9/89
SQUAD LEADER: M. EVANS-MONGEON	DRAWN BY: U. STANLEY
	SHEET: 32 OF 108

DATUM
VERTICAL NGVD 1929
HORIZONTAL ASSUMED

REFER TO CROSS SECTIONS FOR FINAL GRADING INFORMATION

0 20 40
SCALE IN FEET
1"= 20'

FINAL CONDITIONS PLAN SHEET 1

PROJECT: WILLIAMSTOWN	PROJECT NO.: BRS 0204(4)
DESIGN FILE NAME: /str2/83elli/delllero.dgn	
IPARM FILE NAME: sellfnll.i	PLOT DATE: 07-APR-2008
SURVEYED BY: GILMAN	SURVEY DATE: 9/89
SQUAD LEADER: M. EVANS-MONGEON	DRAWN BY: U. STANLEY
	SHEET: 33 OF 108

REFER TO CROSS SECTIONS FOR FINAL GRADING INFORMATION

SCALE 1" = 20'-0
20 0 20

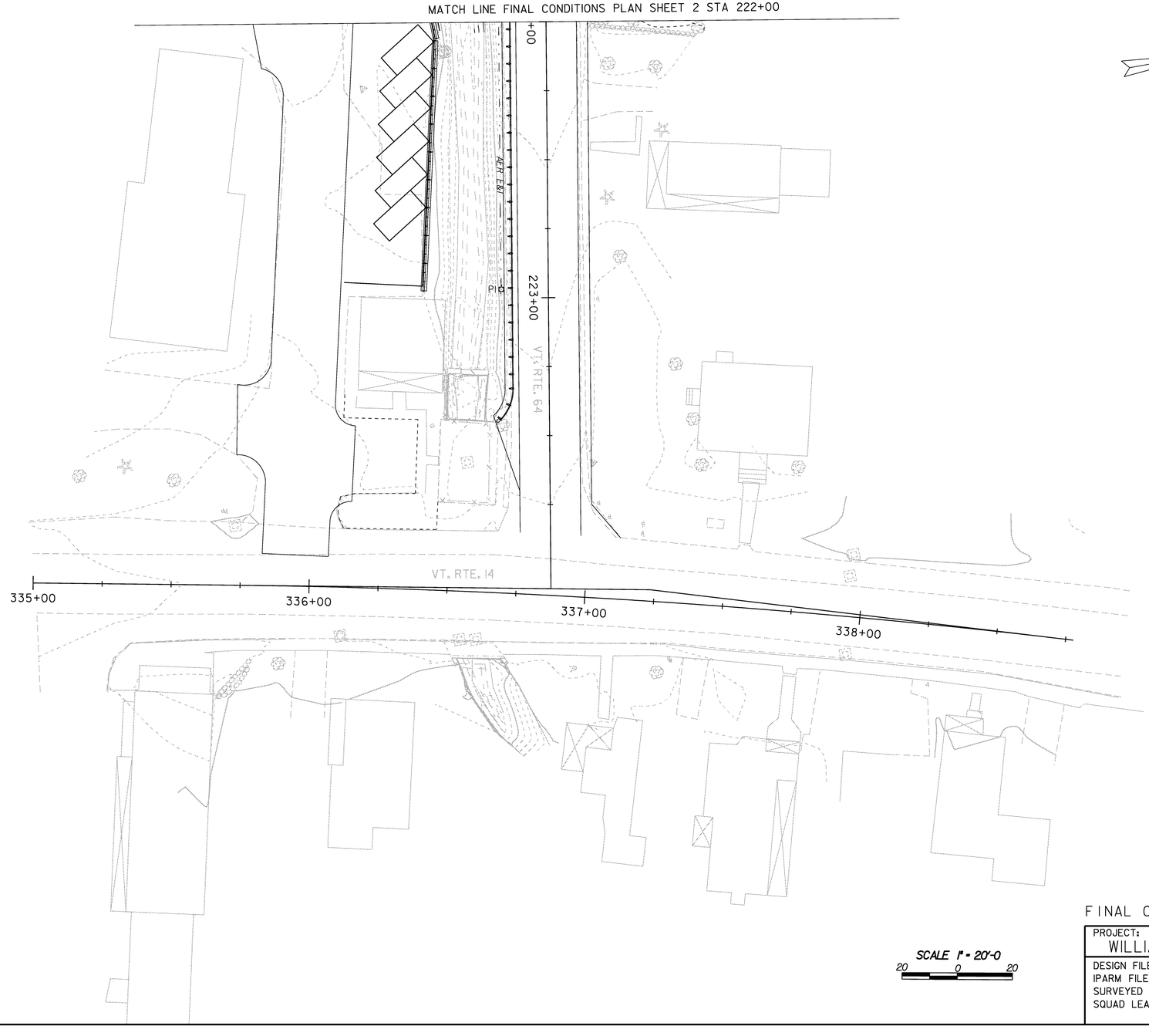
DATUM
VERTICAL NGVD 1929
HORIZONTAL ASSUMED

FINAL CONDITIONS PLAN SHEET 2

PROJECT:	PROJECT NO.:
WILLIAMSTOWN	BRS 0204(4)

DESIGN FILE NAME: /str2/83elll/delllero.dgn
IPARM FILE NAME: sellfnl2
SURVEYED BY: GILMAN
SQUAD LEADER: M. EVANS-MONGEON
PLOT DATE: 07-APR-2008
SURVEY DATE: 9/89
DRAWN BY: U. STANLEY
SHEET: 34 OF 108

MATCH LINE FINAL CONDITIONS PLAN SHEET 2 STA 222+00



N
MAGNETIC

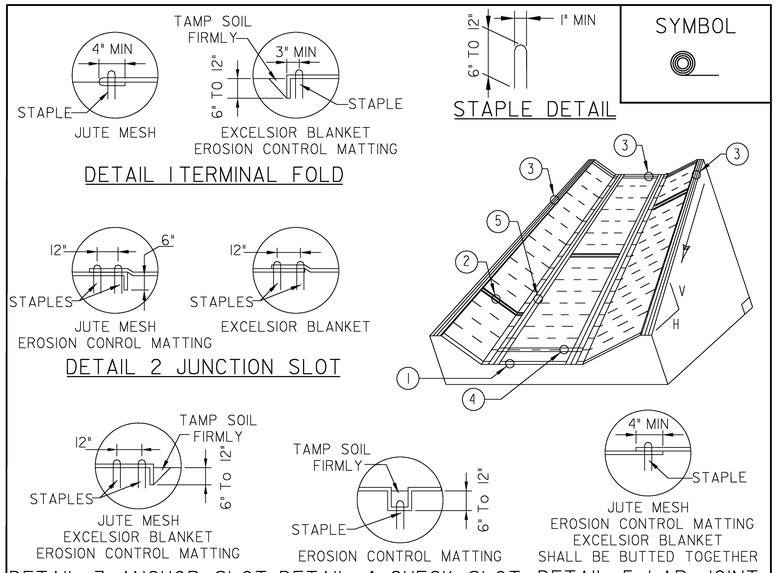
SCALE 1" = 20'-0
20 0 20

FINAL CONDITIONS PLAN SHEET 3

DATUM
VERTICAL NGVD 1929
HORIZONTAL ASSUMED

PROJECT:	PROJECT NO.:
WILLIAMSTOWN	BRS 0204(4)

DESIGN FILE NAME: str2/83elll/dellllero.dgn
IPARM FILE NAME: sellfnl3
SURVEYED BY: GILMAN
SQUAD LEADER: M. EVANS-MONGEON
PLOT DATE: 07-APR-2008
SURVEY DATE: 9/89
DRAWN BY: U. STANLEY
SHEET: 35 OF 108



CONSTRUCTION SPECIFICATIONS

1. EROSION MATTING, CHECK SLOTS, SHALL BE SPACED IN DITCH CHANNEL SO THAT ONE OCCURS WITHIN EACH 50' ON SLOPES OF MORE THAN 4% AND LESS THAN 6%. ON SLOPES OF 6% OR MORE, THEY SHALL BE SPACED SO THAT ONE OCCURS WITHIN EACH 25'.

2. APPLY FERTILIZER, LIME SEED PRIOR TO PLACING MATTING.

3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4'X225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4'X150' ROLL OF MATERIAL.

4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.

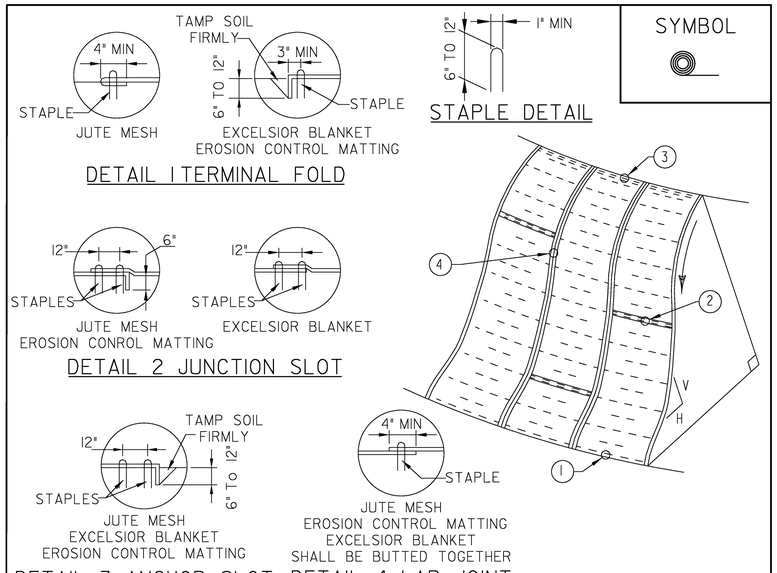
5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

ADAPTED FROM DETAILS PROVIDED BY: ILLINOIS USDA-NRCS ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION	ROLLED EROSION CONTROL PRODUCT (RECP) DITCH

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS ITEM SHALL BE PAID FOR UNDER ITEM
653.20 TEMPORARY EROSION MATTING ~~OR~~
~~653.21 PERMANENT EROSION MATTING~~

REVISIONS	
MARCH 8, 2007	JMF
APRIL 16, 2007	WHF



CONSTRUCTION SPECIFICATIONS

1. APPLY TO SLOPES GREATER THAN 3H:1V OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.

2. APPLY FERTILIZER, LIME AND SEED PRIOR TO PLACING MATTING.

3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4'X225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4'X150' ROLL OF MATERIAL.

4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.

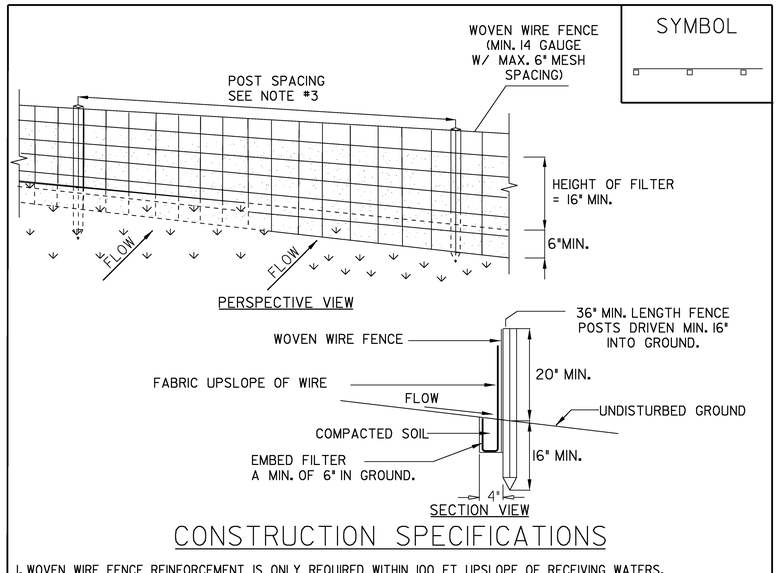
5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

ADAPTED FROM DETAILS PROVIDED BY: ILLINOIS USDA-NRCS ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION	ROLLED EROSION CONTROL PRODUCT (RECP) SIDE SLOPE

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS ITEM SHALL BE PAID FOR UNDER ITEM
653.20 TEMPORARY EROSION MATTING ~~OR~~
~~653.21 PERMANENT EROSION MATTING~~

NEW	
APRIL 16, 2007	WHF
REVISIONS	



CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE REINFORCEMENT IS ONLY REQUIRED WITHIN 100 FT UPSLOPE OF RECEIVING WATERS.

2. WHERE REQUIRED FENCE SHALL BE WOVEN WIRE, MIN. 14 GAUGE WITH A 6" MAXIMUM MESH OPENING. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI100X, STABILINKA T140N OR APPROVED EQUIVALENT.

3. POST SPACING FOR WIRE-BACKED FENCE SHALL BE 10' MAXIMUM. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS >50%, POST SPACING SHALL NOT EXCEED 4'. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS <50%, POST SPACING SHALL NOT EXCEED 6'.

4. WOVEN WIRE FENCE IS TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. FILTER CLOTH IS TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.

5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED.

6. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.

7. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN SEDIMENT REACHES HALF OF FABRIC HEIGHT.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION	SILT FENCE

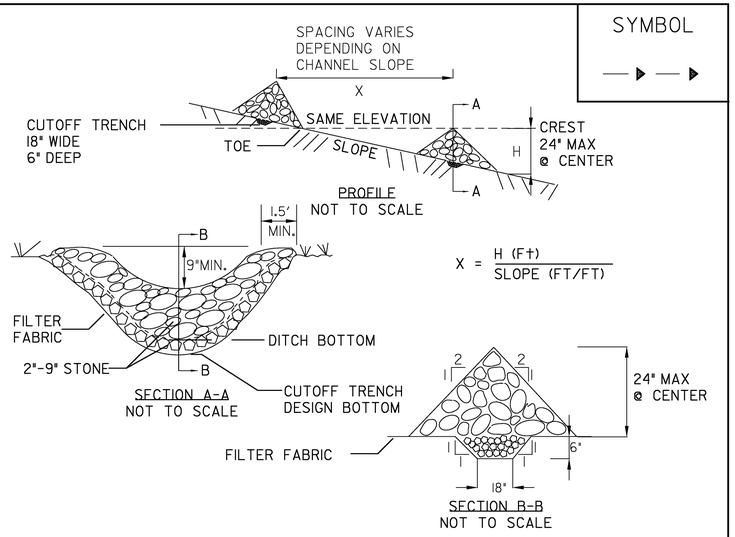
NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS ITEM SHALL BE PAID FOR UNDER ITEM
STANDARD SPECIFICIATION 649.51 GEOTEXTILE FOR SILT FENCE OR
~~SPECIAL PROVISION 900.675 (GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED)~~

EROSION PREVENTION & SEDIMENT CONTROL DETAIL SHEET 1

PROJECT NAME:	WILLIAMSTOWN
PROJECT NUMBER:	BRS 0204(4)
FILE NAME: /structures/selllero.dgn	PLOT DATE: 07-APR-2008
PROJECT LEADER: EVANS-MONGEON	DRAWN BY: U. STANLEY
DESIGNED BY: U. STANLEY	CHECKED BY: EVANS-MONGEON
s83elildetl.i	SHEET 36 OF 108

SYMBOL



CONSTRUCTION SPECIFICATIONS

1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION.
2. SET SPACING OF CHECK DAMS SO THAT THE ELEVATION OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION AS THE TOE OF THE UPSTREAM DAM.
3. EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
4. PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
5. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.

MAXIMUM DRAINAGE AREA 2 ACRES.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DECORIGINALLY DEVELOPED BY USDA-NRCSVERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

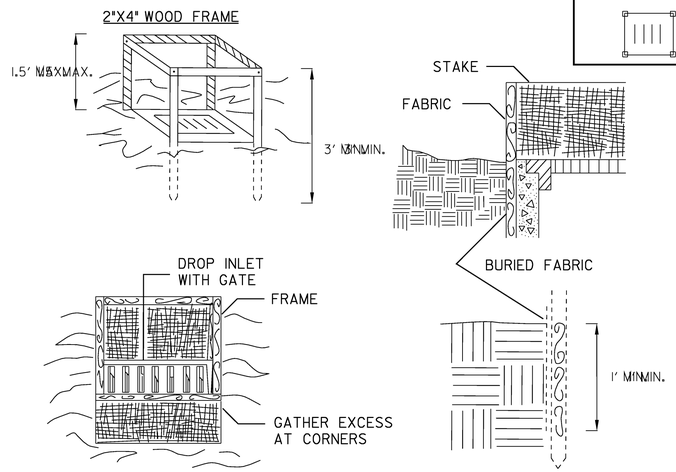
CHECK DAM

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS ITEM SHALL BE PAID FOR UNDER ITEM
653.25 TEMPORARY STONE CHECK DAM, TYPE I

REVISIONS	
MARCH 8, 2007	JMF

SYMBOL



CONSTRUCTION SPECIFICATIONS

1. FILTER FABRIC SHALL HAVE AN EOS OF 40-85. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
3. STAKE MATERIALS WILL BE STANDARD 2" x 4" WOOD OR EQUIVALENT METAL WITH A MINIMUM LENGTH OF 3 FEET.
4. SPACE STAKES EVENLY AROUND INLET 3 FEET APART AND DRIVE A MINIMUM 18 INCHES DEEP. SPANS GREATER THAN 3 FEET MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND THE FILTER FABRIC FOR SUPPORT.
5. FABRIC SHALL BE EMBEDDED 1 FOOT MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
6. A 2" x 4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVER FLOW STABILITY.

MAXIMUM DRAINAGE AREA 1 ACRE

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

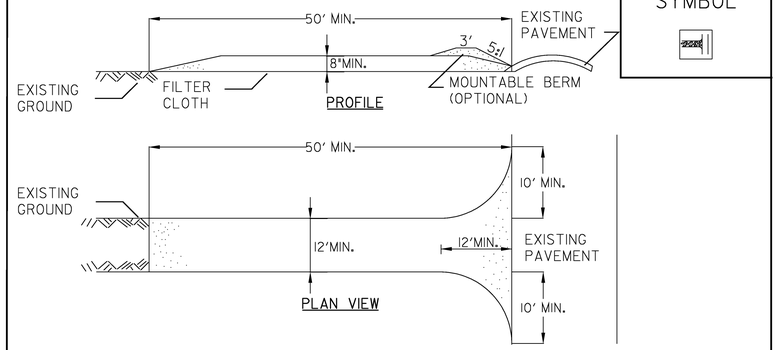
FILTER FABRIC DROP INLET PROTECTION

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS ITEM SHALL BE PAID FOR UNDER ITEM
653.40 INLET PROTECTION DEVICE, TYPE I

REVISIONS	
MARCH 8, 2007	JMF

SYMBOL



CONSTRUCTION SPECIFICATIONS

1. STONE SIZE - USE 1-4" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH APPLIES).
3. THICKNESS - NOT LESS THAN EIGHT (8) INCHES.
4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. GEOTEXTILE MUST BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. 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.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED ACCORDING TO PERMIT REQUIREMENTS.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

STABILIZED CONSTRUCTION ENTRANCE

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS ITEM SHALL BE PAID FOR UNDER ITEM
653.35 VEHICLE TRACKING PAD

REVISIONS	
FEBRUARY 9, 2007	WHF
MARCH 8, 2007	JMF

EROSION PREVENTION & SEDIMENT CONTROL DETAIL SHEET 2

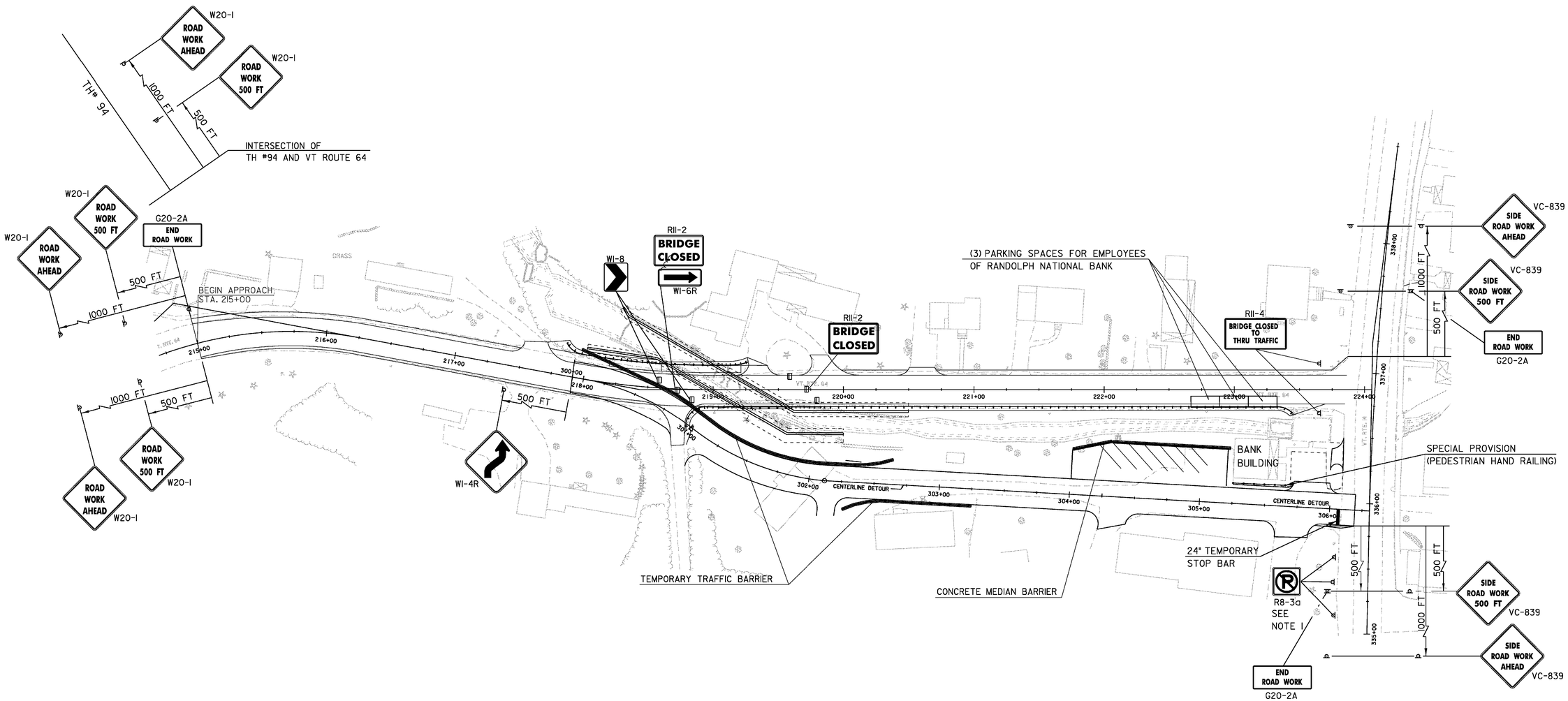
PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: /structures/sellero.dgn
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: U. STANLEY
s83ellldet2.1

PLOT DATE: 07-APR-2008
DRAWN BY: U. STANLEY
CHECKED BY: EVANS-MONGEON
SHEET 37 OF 108

TRAFFIC CONTROL NOTES

1. THE NO PARKING SIGNS, R8-3a, ARE TEMPORARY AND SHALL BE REMOVED AT THE END OF CONSTRUCTION.
2. PORTABLE CHANGABLE MESSGE BOARDS SHALL BE PLACED ON I89 AT THE FOLLOWING LOCATIONS:
   SB I89 @ MM ~~47.2 AT EXISITING TRUCK WARNING SIGN~~ 48.80
   NB I89 @ MM ~~42.2 AT EXISITING TRUCK WARNING SIGN~~ 39.45
3. TEMPORARY 4" WHITE LINES SHALL BE USED TO MARK THE RANDOLF NATIONAL BANK EMPLOYEE PARKING LOCATED ON VT ROUTE 64. THESE MARKING SHALL BE REMOVED PRIOR TO TRAFFIC RETURNING TO VT ROUTE 64, AFTER THE TEMPORARY ROADWAY IS NO LONGER IN USE.



DRAWING NOT TO SCALE

LEGEND
TYPE III BARRICADE

TRAFFIC CONTROL SHEET

PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83eIII\structuresSeIIItcs.dgn
PROJECT LEADER: M. EVANS-MONGEON
DESIGNED BY: U. STANLEY
PLOT DATE: 07-APR-2008
DRAWN BY: U. STANLEY
CHECKED BY: EVANS-MONGEON
SHEET 38 OF 108

REMOVING SIGNS

(NARROW BRIDGE/ 600 FT) ℄ STA 212+75 RT
(NARROW BRIDGE) ℄ STA 216+55 RT
(OBJECT MARKER RIGHT) ℄ STA 219+18 RT
(OBJECT MARKER LEFT) ℄ STA 219+22 LT
(OBJECT MARKER RIGHT) ℄ STA 219+72 RT
(THROUGH WAY BEGINS HERE/ SPEED LIMIT 25) ℄ STA 220+10 LT
(END/ VERMONT 64) ℄ STA 221+60 RT
(NARROW BRIDGE/ 300 FT) ℄ STA 222+00 LT
(WEST/ VERMONT 64) ℄ STA 223+00 LT
(STOP) ℄ STA 223+60 RT (BROOK ST)
(WEST/ VERMONT 64) DETOUR STA 303+09 LT
(END/ VERMONT 64) DETOUR STA 304+00 RT
(STOP) DETOUR STA 306+00 RT /MM PLAQUE
(DIRECTIONAL SIGN 3) VT 14 STA. 335+70 RT
(DIRECTIONAL SIGN 2) VT 14 STA. 336+11 RT
(DIRECTIONAL SIGN 3) VT 14 STA. 336+48 RT
(DIRECTIONAL SIGN 1) VT 14 STA. 336+64 LT
(DIRECTIONAL SIGN 2) VT 14 STA. 336+88 RT
(DIRECTIONAL SIGN 1) VT 14 STA. 337+89 LT

DURABLE 4 INCH YELLOW LINE (DOUBLE)

℄ STA 215+00 TO STA 223+85

DURABLE 4 INCH WHITE LINE

℄ STA 215+00 TO STA 223+85 RT
℄ STA 215+00 TO STA 223+85 LT

DURABLE 24 INCH STOP BAR

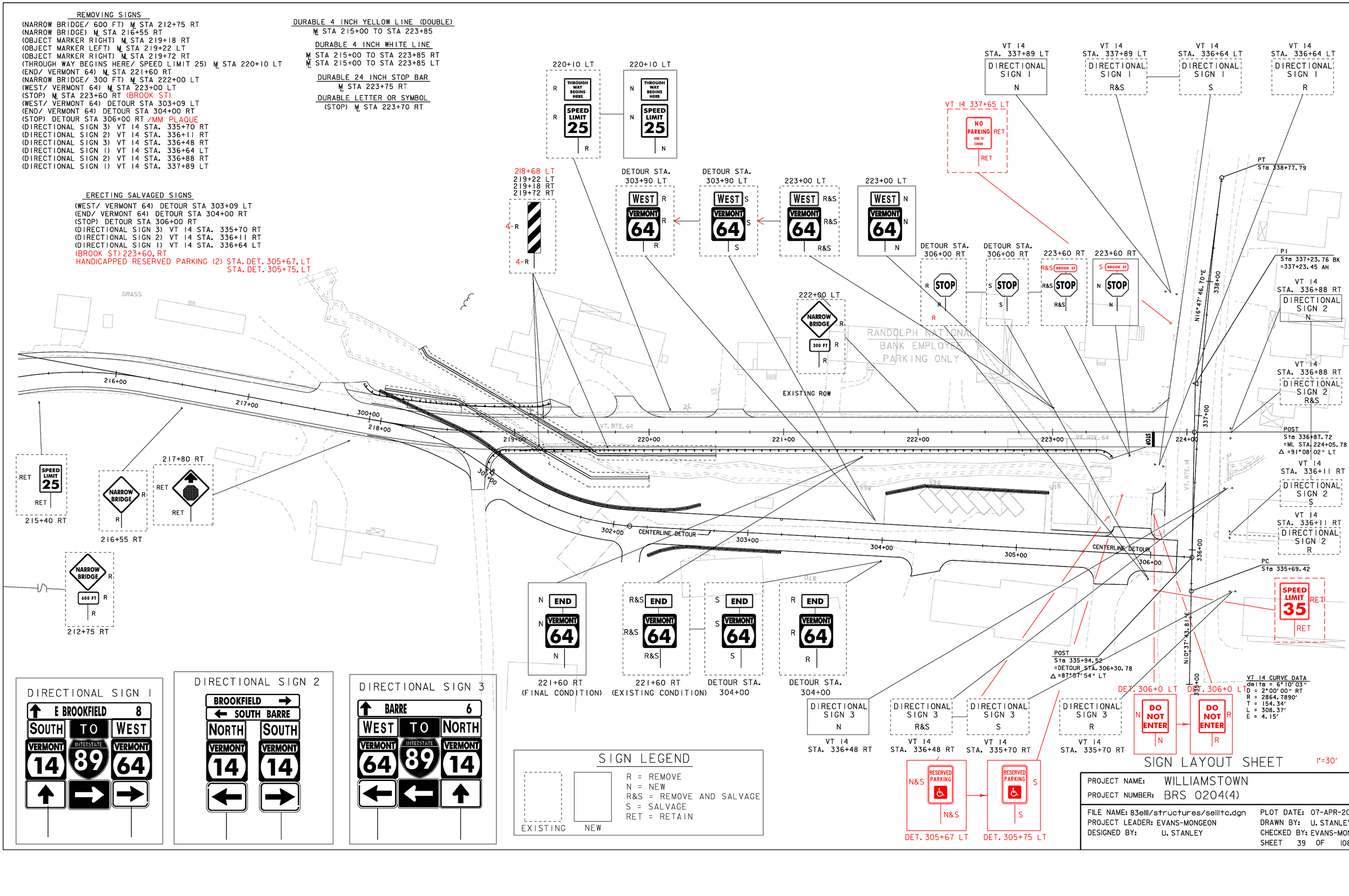
℄ STA 223+75 RT

DURABLE LETTER OR SYMBOL

(STOP) ℄ STA 223+70 RT

ERECTING SALVAGED SIGNS

(WEST/ VERMONT 64) DETOUR STA 303+09 LT
(END/ VERMONT 64) DETOUR STA 304+00 RT
(STOP) DETOUR STA 306+00 RT
(DIRECTIONAL SIGN 3) VT 14 STA. 335+70 RT
(DIRECTIONAL SIGN 2) VT 14 STA. 336+11 RT
(DIRECTIONAL SIGN 1) VT 14 STA. 336+64 LT
(BROOK ST) 223+60, RT
HANDICAPPED RESERVED PARKING (2) STA. DET. 305+67, LT
STA. DET. 305+75, LT



SIGN LEGEND

EXISTING NEW

R = REMOVE
N = NEW
R&S = REMOVE AND SALVAGE
S = SALVAGE
RET = RETAIN

DIRECTIONAL SIGN 1

DIRECTIONAL SIGN 2

DIRECTIONAL SIGN 3

SIGN LAYOUT SHEET 1"=30'

PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83ellI/structures/sellltc.dgn
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: U. STANLEY
PLOT DATE: 07-APR-2008
DRAWN BY: U. STANLEY
CHECKED BY: EVANS-MONGEON
SHEET 39 OF 108

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (in) lb/ft 1.75 1.88	2.0 2.16	2.5 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) lb/ft 3.0 1.3	4.0 1.7	4.0 MOD 1.7	TUBULAR STEEL Ø (in) FOUNDATION	lb/ft 3.0 7.6	3.5 9.0	4.0 10.8	5.0 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN REMOVED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
																																	OPTION ITEMS			
220+~~10~~ 45 LT	SPEED LIMIT 25	1	24	30	~~5.0~~ 5.0						1			17.			17.																R2-1 REMOVE SIGN INSTALL NEW SIGN		E-142
	THROUGH WAY BEGINS HERE	1	24	24	4.0																												VR-041 REMOVE SIGN INSTALL NEW SIGN		E-141
221+60 RT	END	1	24	12	2.0						1			16.	16.																		M4-6 SALVAGE AND RELOCATE SIGN FOR DETOUR NEW SIGN, AND REMOVE OLD SIGN		E-140
	VERMONT 64	1	24	24	4.0																												MI-6 SALVAGE AND RELOCATE SIGN FOR DETOUR NEW SIGN, AND REMOVE OLD SIGN		E-136B
223+00 LT	WEST	1	24	12	2.0						1			16.	16.																		M3-4 SALVAGE AND RELOCATE SIGN FOR DETOUR NEW SIGN, AND REMOVE OLD SIGN		E-136B
	VERMONT 64	1	24	24	4.0																												MI-6 SALVAGE AND RELOCATE SIGN FOR DETOUR NEW SIGN, AND REMOVE OLD SIGN		E-136B
223+60 RT	STOP	1	30	30	6.25						1			15.	15.																		RI-1 SALVAGE AND RELOCATE SIGN FOR DETOUR NEW SIGN, AND REMOVE OLD SIGN		E-143
VT 14 STA. 336+48 RT	BARRE 6	1	72	12	6.0						2						38.	X															DI-1 SALVAGE AND RELOCATE SIGN FOR DETOUR NEW SIGN, AND REMOVE OLD SIGN	X	E-123
	WEST	1	24	12	2.0																												M3-4 SALVAGE AND RELOCATE SIGN FOR DETOUR NEW SIGN, AND REMOVE OLD SIGN		E-136B
	TO	1	24	12	2.0																												M4-5 SALVAGE AND RELOCATE SIGN FOR DETOUR NEW SIGN, AND REMOVE OLD SIGN		E-135
	NORTH	1	24	12	2.0																												M3-1 SALVAGE AND RELOCATE SIGN FOR DETOUR NEW SIGN, AND REMOVE OLD SIGN		E-136B
	VERMONT 64	1	24	24	4.0																												MI-6 SALVAGE AND RELOCATE SIGN FOR DETOUR NEW SIGN, AND REMOVE OLD SIGN		E-136B
	INTERSTATE 89	1	24	24	4.0																												MI-1 SALVAGE AND RELOCATE SIGN FOR DETOUR NEW SIGN, AND REMOVE OLD SIGN		E-135
	VERMONT 14	1	24	24	4.0																												MI-6 SALVAGE AND RELOCATE SIGN FOR DETOUR NEW SIGN, AND REMOVE OLD SIGN		E-136B
		1	21	15	2.19																												M6-1 SALVAGE AND RELOCATE SIGN FOR DETOUR NEW SIGN, AND REMOVE OLD SIGN		E-136B
		1	21	15	2.19																												M6-1 SALVAGE AND RELOCATE SIGN FOR DETOUR NEW SIGN, AND REMOVE OLD SIGN		E-135
		1	21	15	2.19																												M6-3 SALVAGE AND RELOCATE SIGN FOR DETOUR NEW SIGN, AND REMOVE OLD SIGN		E-136B
					57.82							FT	FT	FT 64.	FT 47.	FT	FT 55.	EA 2	EA	LB	LB	LB		LB	LB	LB	LB					2 EA			
SUB TOTALS(1)		SF 57.82	SF	EA.	SF							FT 64.			FT 102.					LB			EA.	LB				EA.	EA.	LB					

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

PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204 (4)

FILE NAME: 83elll/structures/s83elltc.dgn
PROJECT LEADER: M. EVANS-MONGEON
DESIGNED BY: M. EVANS-MONGEON
TRAFFIC SIGN SUMMARY SHEET 1

PLOT DATE: 07-APR-2008
DRAWN BY: M. EVANS-MONG
CHECKED BY: U. STANLEY
SHEET 40 OF 108

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (In)	HEIGHT (In)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (In) lb/ft 1.75 1.88	2.0 2.16	2.5 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (In) lb/ft 3.0 1.3	4.0 1.7	4.0 MOD 1.7	TUBULAR STEEL Ø (In) FOUND-ATION	lb/ft 3.0 7.6	3.5 9.0	4.0 10.8	5.0 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN REMOVED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												OPTION ITEMS																									
VT 14 STA. 336+88 RT	BROOKFIELD →	1	72	12	6.0						2						38.	X														X	DI-1 SALVAGE AND RELOCATE SIGN FOR DETOUR NEW SIGN, AND REMOVE OLD SIGN		E-123
	← SOUTH BARRE	1	72	12	6.0																												DI-1 SALVAGE AND RELOCATE SIGN FOR DETOUR NEW SIGN, AND REMOVE OLD SIGN		E-123
	NORTH	1	24	12	2.0																												M3-1 SALVAGE AND RELOCATE SIGN FOR DETOUR NEW SIGN, AND REMOVE OLD SIGN		E-136B
	SOUTH	1	24	12	2.0																												M3-3 SALVAGE AND RELOCATE SIGN FOR DETOUR NEW SIGN, AND REMOVE OLD SIGN		E-136B
	VERMONT 14	2	24	24	8.0																												MI-6 SALVAGE AND RELOCATE SIGN FOR DETOUR NEW SIGN, AND REMOVE OLD SIGN		E-136B
	←	1	21	15	2.19																												M6-1 SALVAGE AND RELOCATE SIGN FOR DETOUR NEW SIGN, AND REMOVE OLD SIGN		E-136B
	→	1	21	15	2.19																												M6-1 SALVAGE AND RELOCATE SIGN FOR DETOUR NEW SIGN, AND REMOVE OLD SIGN		E-136B
VT 14 STA 337+89 LT	↑ E BROOKFIELD 8	1	72	12	6.0						2						36.	X														X	DI-1 SALVAGE AND RELOCATE SIGN FOR DETOUR NEW SIGN, AND REMOVE OLD SIGN		E-123
	SOUTH	1	24	12	2.0																												M3-3 SALVAGE AND RELOCATE SIGN FOR DETOUR NEW SIGN, AND REMOVE OLD SIGN		E-136B
	TO	1	24	12	2.0																												M4-5 SALVAGE AND RELOCATE SIGN FOR DETOUR NEW SIGN, AND REMOVE OLD SIGN		E-135
	WEST	1	24	12	2.0																												M3-4 SALVAGE AND RELOCATE SIGN FOR DETOUR NEW SIGN, AND REMOVE OLD SIGN		E-136B
	VERMONT 14	1	24	24	4.0																												MI-6 SALVAGE AND RELOCATE SIGN FOR DETOUR NEW SIGN, AND REMOVE OLD SIGN		E-136B
	INTERSTATE 89	1	24	24	4.0																												MI-1 SALVAGE AND RELOCATE SIGN FOR DETOUR NEW SIGN, AND REMOVE OLD SIGN		E-135
	VERMONT 64	1	24	24	4.0																												MI-6 SALVAGE AND RELOCATE SIGN FOR DETOUR NEW SIGN, AND REMOVE OLD SIGN		E-136B
	↑	1	21	15	2.19																												M6-3 SALVAGE AND RELOCATE SIGN FOR DETOUR NEW SIGN, AND REMOVE OLD SIGN		E-136B
	→	1	21	15	2.19																												M6-11R SALVAGE AND RELOCATE SIGN FOR DETOUR NEW SIGN, AND REMOVE OLD SIGN		E-135
	→	1	21	15	2.19																												M6-1 SALVAGE AND RELOCATE SIGN FOR DETOUR NEW SIGN, AND REMOVE OLD SIGN		E-136B
					58.95							FT	FT	FT	FT	FT	FT	EA	EA	LB	LB	LB		LB	LB	LB	LB								
					SF	SF	EA.	SF				FT			FT					LB			EA.	LB				EA.	EA.	LB			4. EA		
	SUBTOTALS(2)				58.95							0.			74.			4.														4.		
	SUBTOTALS(1)				57.82							64.			102.			2.														2.		
	ROUNDING				3.23																														
	TOTALS				120.00							64.			176.			6.														6.		

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

PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204 (4)

FILE NAME: 83elll/structures/sellltc.dgn
PROJECT LEADER: M. EVANS-MONGEON
DESIGNED BY: M. EVANS-MONGEON
TRAFFIC SIGN SUMMARY SHEET 2

PLOT DATE: 07-APR-2008
DRAWN BY: M. EVANS-MONG
CHECKED BY: U. STANLEY
SHEET 41 OF 108

SOIL CLASSIFICATION

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

ROCK QUALITY DESIGNATION

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

SHEAR STRENGTH

UNDRAINED SHEAR STRENGTH IN P.S.F.	CONSISTENCY
<250	Very Soft
250-500	Soft
500-1000	Med. Stiff
1000-2000	Stiff
2000-4000	Very Stiff
>4000	Hard

CORRELATION GUIDE OF "N" TO DENSITY/CONSISTENCY

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

COMMONLY USED SYMBOLS

▼	Water Elevation
⊗	Standard Penetration Boring
⊕	Auger Boring
⊙	Rod Sounding
S	Sample
N	Standard Penetration Test Blow Count Per Foot For: 2" O.D. Sampler 1 3/8" I.D. Sampler Hammer Weight Of 140 Lbs. Hammer Fall Of 30"
VS	Field Vane Shear Test
US	Undisturbed Soil Sample
B	Blast
DC	Diamond Core
MD	Mud Drill
WA	Wash Ahead
HSA	Hollow Stem Auger
AX	Core Size 1 1/8"
BX	Core Size 1 5/8"
NX	Core Size 2 1/8"
M	Double Tube Core Barrel Used
LL	Liquid Limit
PL	Plastic Limit
PI	Plasticity Index
NP	Non Plastic
w	Moisture Content (Dry Wgt. Basis)
D	Dry
M	Moist
MTW	Moist To Wet
W	Wet
Sat	Saturated
Bo	Boulder
Gr	Gravel
Sa	Sand
Si	Silt
Cl	Clay
HP	Hardpan
Le	Ledge
NLTD	No Ledge To Depth
CNPF	Can Not Penetrate Further
TLOB	To Ledge Or Boulder
NR	No Recovery
Rec.	Recovery
%Rec.	Percent Recovery
RQD	Rock Quality Designation
CBR	California Bearing Ratio
<	Less Than
>	Greater Than
R	Refusal (N > 100)

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

DEFINITIONS (AASHTO)

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

BOULDER - A rock fragment with an average dimension > 12 inches.

COBBLE - Rock fragments with an average dimension between 3 and 12 inches.

GRAVEL - Rounded particles of rock < 3" and > 0.0787" (#10 sieve).

SAND - Particles of rock < 0.0787" (#10 sieve) and > 0.0029" (#200 sieve).

SILT - Soil < 0.0029" (#200 sieve), non or slightly plastic and exhibits no strength when air-dried.

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

VARVED - Alternate layers of silt and clay.

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

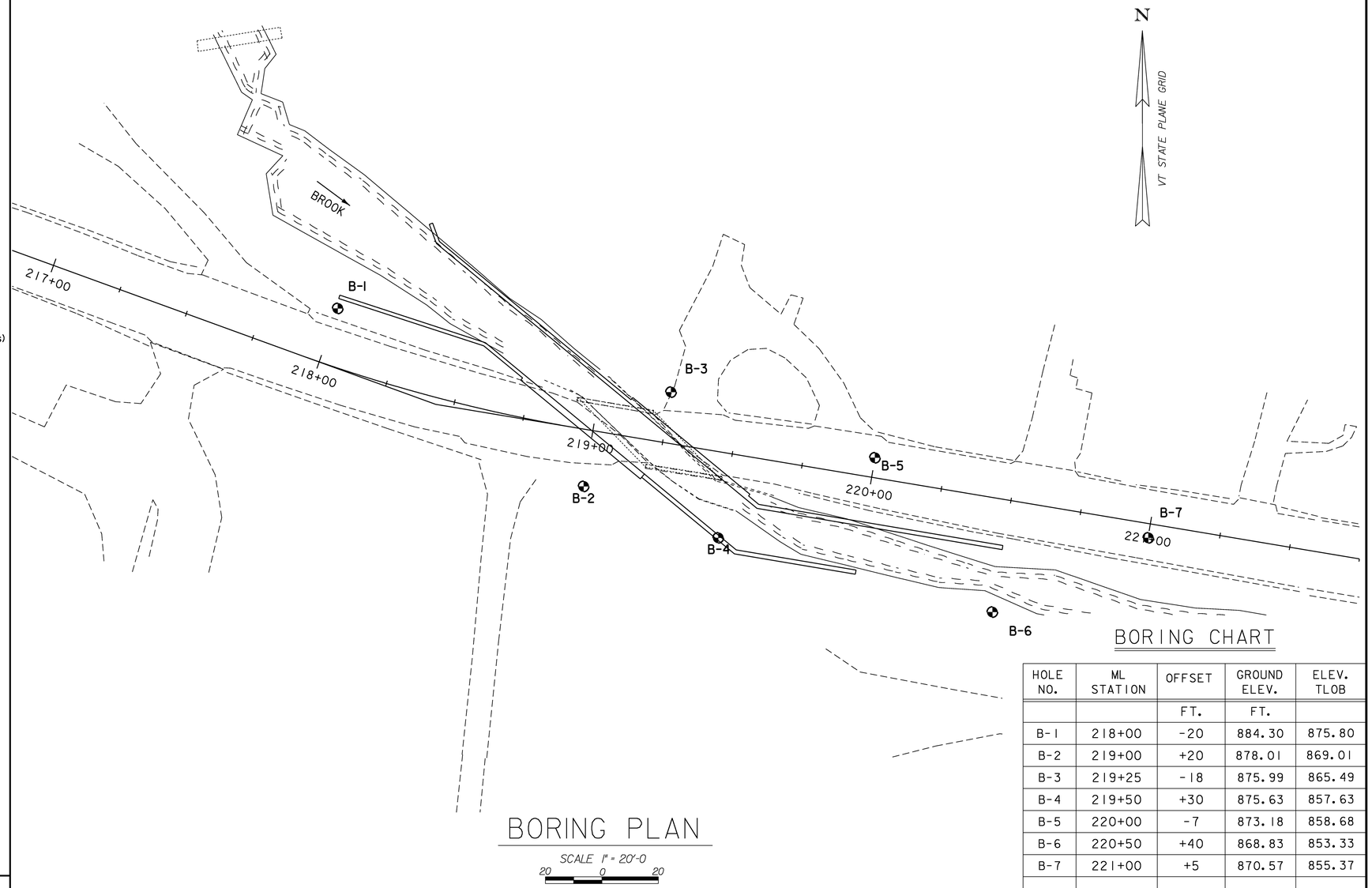
MUCK - Soft organic soil (containing > 10% organic material.

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

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

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

DIP - Inclination of bed with a horizontal plane.



BORING PLAN

SCALE 1" = 20'-0

20 0 20

BORING CHART

HOLE NO.	ML STATION	OFFSET	GROUND ELEV.	ELEV. TLOB
		FT.	FT.	
B-1	218+00	-20	884.30	875.80
B-2	219+00	+20	878.01	869.01
B-3	219+25	-18	875.99	865.49
B-4	219+50	+30	875.63	857.63
B-5	220+00	-7	873.18	858.68
B-6	220+50	+40	868.83	853.33
B-7	221+00	+5	870.57	855.37

GENERAL NOTES

1. The subsurface explorations shown herein were made between 07-26-2000 and 08-03-2000 by the Agency.
2. Soil and rock classifications, properties and descriptions are based on engineering interpretation from available subsurface information by the Agency and may not necessarily reflect actual variations in subsurface conditions that may be encountered between individual boring or sample locations.
3. Observed water levels and/or conditions indicated are as recorded at the time of exploration and may vary according to the prevailing rainfall, methods of exploration and other factors.
4. Engineering judgement was exercised in preparing the subsurface information presented herein. Analysis and interpretation of subsurface data was performed and interpreted for Agency design and estimating purposes. Presentation of the information in the Contract is intended to provide the Contractor access to the same data available to the Agency. The subsurface information is presented in good faith and is not intended as a substitute for personal investigation, independent interpretation, independent analysis or judgement by the Contractor.
5. Pictorial structure details shown on the boring plan layout or soils profile are for illustrative purposes only and may not accurately portray final contract details.
6. Terminology used on boring logs to describe the hardness, degree of weathering, and spacing of fractures, joints and other discontinuities in the bedrock is defined in the AASHTO Manual on Subsurface Investigations, 1988.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WILLIAMSTOWN	Bridge No. 10
Highway No. VT. 64	Log Sta. / Surv. Sta.
BORING PLAN	
Plot Date 07-APR-2008	
Designed By STANLEY	Drawn By STANLEY
Checked By EVANS-MONGEON Date Jan. 08	Bridge Design Supervisor EVANS-MONGEON Date Jan. 08
PROJECT WILLIAMSTOWN	PROJECT NO. BRS 0204(4)
I.G.C. Info. projects\sellt\structures\sellbor.dgn	sellbol.l
Bridge Sheet No.	Sheet 42 of 108

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: B-1
SHEET 1 OF 1
DATE STARTED: 7/26/00
DATE COMPLETED: 7/26/00

PROJECT NAME: WILLIAMSTOWN
SITE NAME: BR 10
STATION: 218+00.00
GROUND EL.: 884.30

PROJECT NUMBER: BRS 0204(4)
SITE NO.: Vt 64
OFFSET: -20.00
G.W. DEPTH: 7.2

BORING CREW
CREW CHIEF: TALLMAN
DRILLER: RUSSELL
LOGGER: DAVIS

BORING RIG: SKID RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

884.30 GROUND EL.

878.00 TOP RET. WALL FOOTING EL.

DEPTH	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
5	A-2-4, SiSa Trace of Organic (1.24%), brn, MTW, Rec. = 0.59'	R	27.6	19.6	52.5	27.9		
	BXDC, 5.9'-7.7', Boulder, No Sample	Top of bedrock @ 8.5'						
		RUN	REC%	RQD%	Dip°			
10	Run#1: BXDC, 8.5'-10.5', Rec. = 2.0' See Geologist's Report.	1	99	35	40			
	Run#2: BXMDC, 10.5'-15.5' Rec. = 4.9' See Geologist's Report.	2	97	40	40			
15	Run#3: BXMDC, 15.5'-18.5' Rec. = 2.8', See Geologist's Report.	3	95	0	40			
20	Hole stopped @ 18.5'							
	Note: Water table 7.2'							

Geologist's Report:

Run #1: Gray silliceous limestone, Hard, Unweathered, Not competent, Near vertical joint runs through most of recovered core.

Run #2: 10.50'-12.50', Same as Run #1 but no joints, Not competent.
12.50'-Bottom of core, Gray phyllite with closely spaced jointing throughout Run, Moderately hard, Rock is unweathered, Staining along joint surfaces.

Run #3: Same as bottom of Run #2, Not competent, Closely spaced joints.

25 30 35 40 45

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: B-2
SHEET 1 OF 1
DATE STARTED: 7/27/00
DATE COMPLETED: 7/27/00

PROJECT NAME: WILLIAMSTOWN
SITE NAME: BR 10
STATION: 219+00.00
GROUND EL.: 878.01

PROJECT NUMBER: BRS 0204(4)
SITE NO.: Vt 64
OFFSET: 20.00
G.W. DEPTH:

BORING CREW
CREW CHIEF: TALLMAN
DRILLER: RUSSELL
LOGGER: DAVIS

BORING RIG: SKID RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

878.01 GROUND EL.

873.00 TOP ABUT. FOOTING EL.

DEPTH	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
5	4.9'-6.9', No Rec., Stone in end of barrel.	8						
		Top of bedrock @ 9.0'						
		RUN	REC%	RQD%	Dip°			
10	Run#1: BXMDC, 9.0'-14.0', Rec. = 3.4', Note: Seam @ 11.1'-12.1' See Geologist's Report.	1	68	48	40			
15	Run#2: BXMDC, 14.0'-19.0', Rec. = 3.9', See Geologist's Report.	2	79	75	40			
20	Hole stopped @ 19.0'							
	Note: Water table not encountered.							

Geologist's Report:

Run #1: 9.00'-11.10', Gray silliceous limestone, Hard, Unweathered, Not competent.
Drillers report seam from 11.10'-12.10'
12.10'- Bottom of core, Gray phyllite with closely spaced joints, Moderately hard, Rock is unweathered, Staining along joint surfaces.

Run #2: Top section= Same as bottom of Run #1 but no jointing, Competent.
Middle section= Gray silliceous limestone, Hard, Unweathered, Competent.
Bottom section= Same as top of Run #2 with some quartz veins, Competent.

25 30 35 40 45

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: B-3
SHEET 1 OF 1
DATE STARTED: 7/31/00
DATE COMPLETED: 7/31/00

PROJECT NAME: WILLIAMSTOWN
SITE NAME: BR 10
STATION: 219+25.00
GROUND EL.: 875.99

PROJECT NUMBER: BRS 0204(4)
SITE NO.: Vt 64
OFFSET: -18.00
G.W. DEPTH: 9.5

BORING CREW
CREW CHIEF: TALLMAN
DRILLER: RUSSELL
LOGGER: DAVIS

BORING RIG: SKID RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

875.99 GROUND EL.

867.00 TOP ABUT. FOOTING EL.

DEPTH	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
5	No Rec., Appears to be sand.	2						
		Top of bedrock @ 10.5'						
		RUN	REC%	RQD%	Dip°			
10	Run#1: BXMDC, 10.5'-15.5' Rec. = 4.0', Small seam 12.5'-13.0', See Geologist's Report.	1	80	50	40			
15	Run#2: BXMDC, 15.5'-20.5' Rec. = 4.45' See Geologist's Report.	2	89	75	40			
20	Hole stopped @ 20.5'							
	Note: Water table 9.5'							

Geologist's Report:

Run #1: 10.50'-12.50', Gray silliceous limestone, Hard, Unweathered, RQD fair, Not competent
Drillers report seam from 12.5'-13.0'.
Bottom section= Gray phyllite, Moderately hard, Unweathered.

Run #2: Top section= Gray phyllite with quartz, Moderately hard, Unweathered, Competent.
Bottom section= Gray silliceous limestone, Hard, Unweathered Competent.

25 30 35 40 45

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: B-4
SHEET 1 OF 1
DATE STARTED: 7/27/00
DATE COMPLETED: 7/28/00

PROJECT NAME: WILLIAMSTOWN
SITE NAME: BR 10
STATION: 219+50.00
GROUND EL.: 875.63

PROJECT NUMBER: BRS 0204(4)
SITE NO.: Vt 64
OFFSET: 30.00
G.W. DEPTH: 14.1

BORING CREW
CREW CHIEF: TALLMAN
DRILLER: RUSSELL
LOGGER: DAVIS

BORING RIG: SKID RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

875.63 GROUND EL.

860.00 TOP ABUT. FOOTING EL.

DEPTH	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
5	A-1-b, SaGr, brn, MTW, Rec. = 0.7'	6	23.5	48.4	32.1	19.5		
10	BXDC, 9.0'-11.0', Boulder, No sample							
	BXDC, 12.0'-14.0', Boulder, No sample							
15	BXDC, 15.0'-17.0', Boulder							
		Top of bedrock @ 18.0'						
		RUN	REC%	RQD%	Dip°			
20	Run#1: BXMDC, 18.0'-23.0' Rec. = 4.83' See Geologist's Report.	1	98	98	40			
25	Run#2: BXMDC, 23.0'-28.0' Rec. = 5.0' See Geologist's Report.	2	100	100	40			
	Hole stopped @ 28.0'							
	Note: Water table 14.1'							

Geologist's Report:

Run #1: Gray silliceous limestone, Hard, Unweathered, Competent.

Run #2: Same as Run #1, Competent.

30 35 40 45

SURVEYED BY _____ DATE _____
DRAWN BY J.TOUCHETTE DATE 08/00
SQUAD LEADER C.C. BENDA

DESIGN FILE NO. /matres/83elli/mellbor.dgn
IPARM FILE sellbo2.1 DATE PLOTTED 07-APR-2008

PROJ. NAME WILLIAMSTOWN
PROJ. NO. BRS 0204(4)

SHEET 43 OF 108 SHEETS

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: B-5
SHEET 1 OF 1
DATE STARTED: 8/3/00
DATE COMPLETED: 8/3/00

PROJECT NAME: WILLIAMSTOWN
SITE NAME: BR 10
STATION: 220+00.00
GROUND EL.: 873.18

PROJECT NUMBER: BRS 0204(4)
SITE NO.: Vt 64
OFFSET: -7.00
G.W. DEPTH:

BORING CREW
CREW CHIEF: TALLMAN
DRILLER: RUSSELL
LOGGER: DAVIS

BORING RIG: SKID RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

873.18 GROUND EL.
859.00 TOP RET. WALL FOOTING EL.

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
		0.0'-0.55', Asphalt							
5		A-1-a, SaGr, brn, Moist, Rec. = 1.0'	26	13	61.1	24.6	14.3		
10		A-2-4, SiGrSa, gry/brn, Moist, Rec. = 0.95'	28	16.4	33	37	30		
		Top of bedrock @ 14.5'							
15		Run#1: BXMDC, 14.5'-19.5' Rec. = 1.75' See Geologist's Report.	RUN 1	REC% 35	RQD% 0	Dip° 20			
20		Hole stopped @ 19.5'							

Geologist's Report:

Run #1: Gray silliceous limestone, Hard, Unweathered, Poor RQD, Not competent.
Drillers reported "Soft spots in rock throughout Run"

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: B-6
SHEET 1 OF 1
DATE STARTED: 8/2/00
DATE COMPLETED: 8/2/00

PROJECT NAME: WILLIAMSTOWN
SITE NAME: BR 10
STATION: 220+50.00
GROUND EL.: 868.83

PROJECT NUMBER: BRS 0204(4)
SITE NO.: Vt 64
OFFSET: 40.00
G.W. DEPTH: 6.23

BORING CREW
CREW CHIEF: TALLMAN
DRILLER: RUSSELL
LOGGER: DAVIS

BORING RIG: SKID RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

868.83 GROUND EL.

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
5		A-1-a, SaGr, gry, Moist, Rec. = 1.0'	8	16.1	66.7	24.6	8.7		
10		A-4, Si, brn, MTW, Rec. = 1.08'	7	23	6.9	9.3	83.8		
15		Visual Classification: Broken Rock, Rec. = 0.33'	R	Top of bedrock @ 15.5'					
			RUN	REC%	RQD%	Dip°			
		Run#1: BXMDC, 15.5'-20.5' Rec. = 5.0', See Geologist's Report.	1	100	100	40			
20		Run#2: BXMDC, 20.5'-25.5' Rec. = 5.0', See Geologist's Report.	2	100	100	40			
25		Hole stopped @ 25.5'							
		Note: Water table 6.23'							

Geologist's Report:

Run #1: Gray silliceous limestone, Hard, Unweathered, Competent.

Run #2: Same as Run #1 but also contains phyllite, Competent.

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: B-7
SHEET 1 OF 1
DATE STARTED: 8/3/00
DATE COMPLETED: 8/3/00

PROJECT NAME: WILLIAMSTOWN
SITE NAME: BR 10
STATION: 221+00.00
GROUND EL.: 870.57

PROJECT NUMBER: BRS 0204(4)
SITE NO.: Vt 64
OFFSET: 5.00
G.W. DEPTH: 7.54

BORING CREW
CREW CHIEF: TALLMAN
DRILLER: RUSSELL
LOGGER: DAVIS

BORING RIG: SKID RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

870.57 GROUND EL.

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
		0.0'-0.5', Asphalt							
5		A-1-b, SaGr, gry-brn, Moist, Rec. = 0.75'	15	14.7	52.5	31.5	16		
10		A-1-b, SiSaGr, Lt/gry, Moist, Rec. = 1.24'	20	13.1	43.2	31.8	25		
15		Top of bedrock @ 15.2'	R						
		No Sample	RUN	REC%	RQD%	Dip°			
		Run#1: BXDC, 15.2'-19.3' Rec. = 1.5', Seam with sand 17.2'-18.8' See Geologist's Report.	1	37	20	40			
20		Run#2: BXDC, 19.3'-23.3' Rec. = 2.0' Soft material or seams 21.0'-23.3' See Geologist's Report.	2	50	38	40			
25		Hole stopped @ 23.3'							
		Note : Water table 7.54'							

Geologist's Report:

Run #1: Gray silliceous limestone, Hard, Unweathered, Poor RQD, Not competent.
Drillers reported seam with sand from 17.2'-18.8'

Run #2 Same as Run #1, Poor to Fair RQD, Not competent.
Drillers reported soft drilling from 21.0'-23.3'

SURVEYED BY _____ DATE _____
DRAWN BY J.TOUCHETTE DATE 08/00
SQUAD LEADER C.C. BENDA
DESIGN FILE NO. /matres/83ellI/mellbor.dgn
IPARM FILE sellbo3.I DATE PLOTTED 07-APR-2008
PROJ. NAME WILLIAMSTOWN
PROJ. NO. BRS 0204(4)
SHEET 44 OF 108 SHEETS

50+00

BROOK

R16'

1:1.5

WW1

WW3

ML 219+15.50
CH 51+13.33
DELTA +30° RT

R39'

219+34.00
END BRIDGE
BEGIN APPROACH SLAB

END APPROACH SLAB
STA 219+59.00

N

ASSUMED

VT. RTE. 64

218+00

219+00

220+00

30° RT

WW4

1:1.5

53+00

52+00

WW2

PC
STA 217+91.35

BEGIN APPROACH SLAB
STA 218+71.08

R15'

218+97.00
END APPROACH SLAB
BEGIN BRIDGE

PT
STA 218+96.14

STONE FILL
TYPE II (TYP)

PLAN

SCALE 1" = 10'-0

10 0 10

PAY LIMIT
HD STEEL BEAM GUARD RAIL, GALVANIZED
25' - 0" RIGHT
(50'-0" LEFT)

PAY LIMIT
ALUMINUM APPROACH RAILING
ITEM 621.74
25' - 0"
(TYP.)

PAY LIMIT
BRIDGE RAILING, 3 RAIL ALUMINUM
ITEM 525.22
38' - 6⅞" RIGHT
BRIDGE RAILING, ALUMINUM/PEDESTRIAN
ITEM 525.23
(40' -2¼" LEFT)

PAY LIMIT
ALUMINUM APPROACH RAILING
ITEM 621.74
25' - 0" (TYP.)

HD STEEL BEAM GUARD RAIL, GALVANIZED W/
8 FEET POSTS

FINISH GRADE

900
890
880
870
860

Q50 = 876.2

LEDGE IN STREAMBED

PLAN AND ELEVATION

ELEVATION

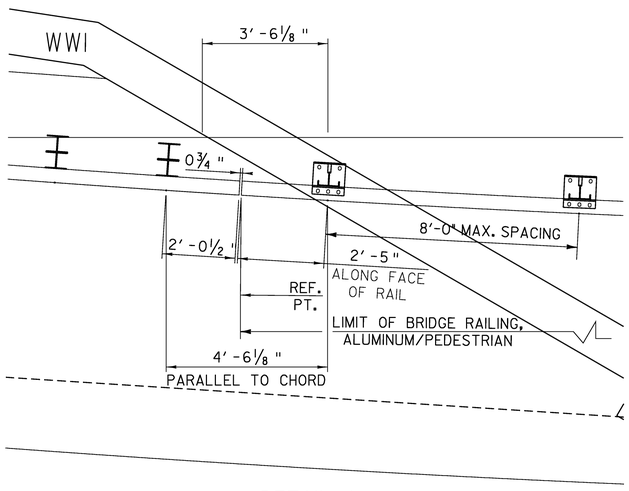
SCALE 1" = 10'-0

10 0 10

PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: /str2/83elll/selllpe.dgn
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: U. STANLEY
selllpe.1

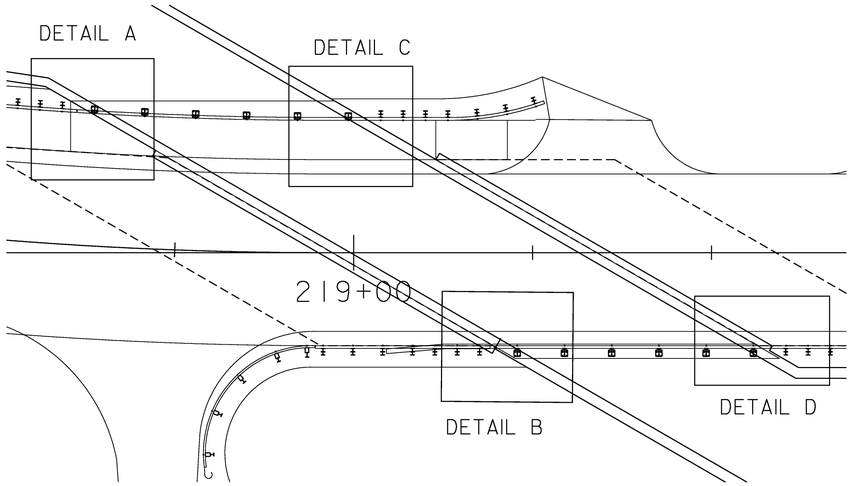
PLOT DATE: 07-APR-2008
DRAWN BY: U. STANLEY
CHECKED BY: EVANS-MONGEON
SHEET 45 OF 108



DETAIL A

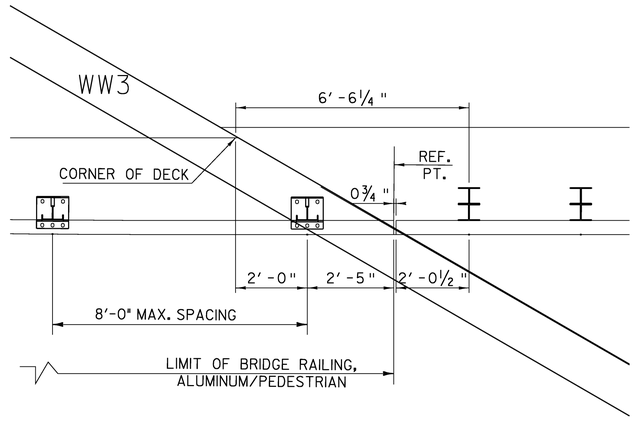
SCALE ½"=1'-0

REF PT = END OF PAY LIMIT FOR BRIDGE RAILING



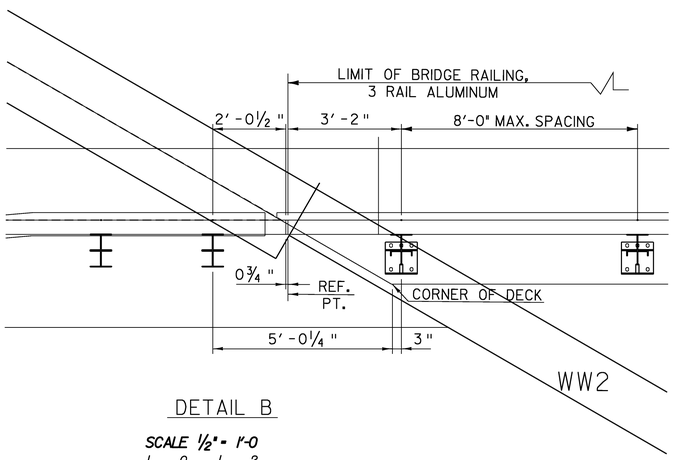
PLAN VIEW

SCALE 1"=10'-0



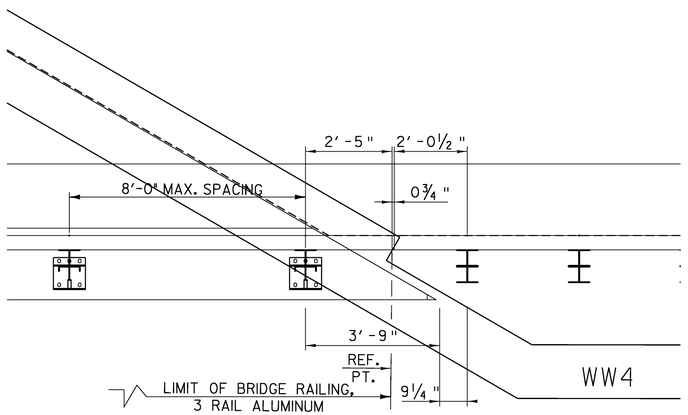
DETAIL C

SCALE ½"=1'-0



DETAIL B

SCALE ½"=1'-0



DETAIL D

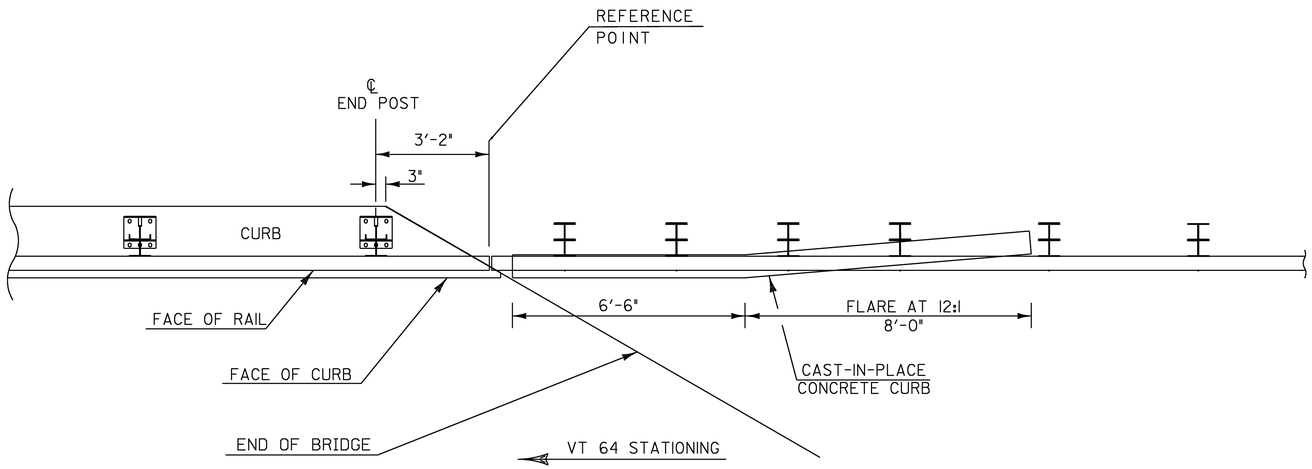
SCALE ½"=1'-0

BRIDGE RAIL LAYOUT SHEET

PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

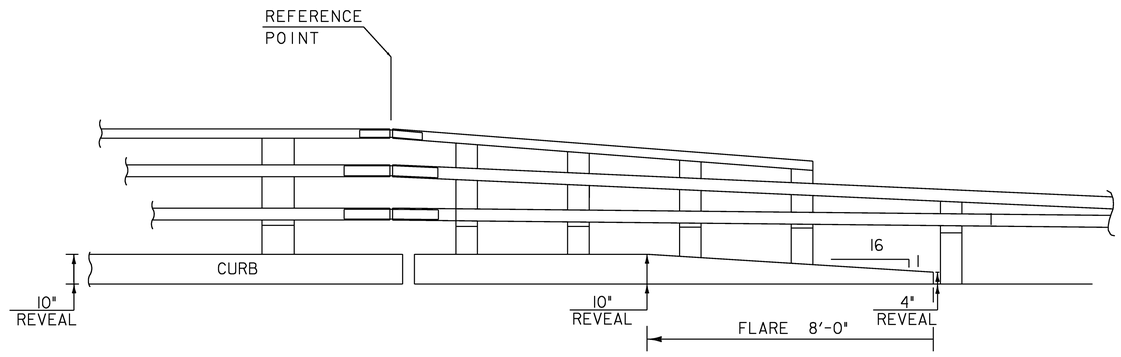
FILE NAME: /83e111/se1111br1dger.a11me
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: U. STANLEY

PLOT DATE: 07-APR-2008
DRAWN BY: L. DUQUETTE
CHECKED BY: EVANS-MONGEON



PLAN

CURB TRANSITION DETAIL
VT ROUTE 64 STA. 219+04.5 TO 219+19.0 RT



ELEVATION

CURB TRANSITION DETAIL
VT ROUTE 64 STA. 219+04.5 TO 219+19.0 RT

ALL DRAWINGS NTS

CURB TRANSITION DETAIL

PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: sellbridgerail.dgn
PROJECT LEADER: M. EVANS-MONGEON
DESIGNED BY: U. STANLEY
IPARM s83ellcurb

PLOT DATE:
DRAWN BY: U. STANLEY
CHECKED BY: EVANS-MONGEON
SHEET 47 OF 108

STATE OF VERMONT
AGENCY OF TRANSPORTATION

GENERAL NOTES

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE AGENCY OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2006, AND ITS LATEST REVISIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SIXTEENTH EDITION, AND ITS LATEST REVISIONS.

2. BRIDGE IS DESIGNED FOR HS 25 LIVE LOAD WITH NO ALLOWANCE FOR FUTURE PAVEMENT.

3. THE EXISTING BRIDGE SUPERSTRUCTURE, AND ANY PART OF THE ASSOCIATED WINGWALLS AND RETAINING WALLS WHICH ARE OUTSIDE OF THE COFFERDAM EXCAVATION LIMITS AND OUTSIDE OF THE UNCLASSIFIED CHANNEL EXCAVATION LIMITS DEFINED IN THE PLANS, WILL BE REMOVED UNDER ITEM 529.15, REMOVAL OF STRUCTURE (475 SF - EST.). PORTIONS OF THE ABUTMENTS, WINGWALLS AND RETAINING WALLS THAT ARE WITHIN THE COFFERDAM LIMITS, WILL BE REMOVED AS EITHER COFFERDAM EXCAVATION EARTH OR COFFERDAM EXCAVATION ROCK, AS APPROPRIATE. PORTIONS OF THE ABUTMENTS, WINGWALLS AND COFFERDAMS THAT ARE WITHIN THE UNCLASSIFED CHANNEL EXCAVATION LIMITS WILL BE REMOVED UNDER ITEM 203.27.

4. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT SILTATION OR POLLUTION, ESPECIALLY THE DISCHARGE OF RAW CONCRETE, INTO ANY BROOK, STREAM OR RIVER.

5. THE STRUCTURE AT STA. 219+75 RIGHT WILL BE REMOVED AND DISPOSED OF. PAYMENT FOR THIS WORK WILL BE MADE UNDER ITEM 202.10, DEMOLITION AND DISPOSAL OF BUILDING.

6. A 5' WIDE PAVED PEDESTRIAN WALKWAY WILL BE PROVIDED FROM DETOUR STA. 305+40 TO STA. 305+65. A 4' HIGH RAILING SHALL SEPARATE THE PEDESTRIAN WALKWAY FROM THE PROPOSED DETOUR. THE RAILING SHALL BE ORNAMENTAL STEEL AS SHOWN ON SHEET 69. PAYMENT FOR MATERIALS, EQUIPMENT, AND LABOR NECESSARY FOR THE INSTALLATION OF THE RAILING WILL BE MADE UNDER ITEM 900.640 SPECIAL PROVISION (PEDESTRIAN HAND RAILING).

7. EMULSIFIED ASPHALT IS TO BE APPLIED AT A RATE OF 0.015 GALLONS PER SQUARE YARD BETWEEN SUCCESSIVE COURSES OF PAVEMENT OR AS DIRECTED BY THE ENGINEER.

8. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL AND GIVEN AT 68 DEGREES FAHRENHEIT UNLESS OTHERWISE NOTED.

9. THE BITUMINOUS CONCRETE SIDEWALK LOCATED AT VT 64 STA. 220+90 LEFT WILL BE RE-PAVED TO A DEPTH OF 1 INCH AS A PART OF THIS PROJECT. THE WORK REQUIRED TO ACCOMPLISH THIS WILL BE PAID FOR UNDER ITEM 406.25, BITUMINOUS CONCRETE PAVEMENT (PG 58-34). TESTING OF BITUMINOUS MATERIAL IS WAIVED FOR THIS SIDEWALK.

10. THE CURB REVEAL WILL VARY FROM 0" AT STA. 218+18 LT TO 10" AT STA. 218+73 LT. THE CURB REVEAL WILL VARY FROM 10" AT STA. 219+11.5 LT TO 0" AT STA. 219+21.5 LT.

11. THE SHRUB TO BE TRANSPLANTED, LOCATED AT STA. 220+52 LT, SHALL BE REPLANTED AT APPROXIMATELY THE SAME LOCATION, OR AS DIRECTED BY THE ENGINEER UPON COMPLETION OF THE REMOVAL OF THE OLD DI AND CONSTRUCTION OF THE NEW DI.

CONCRETE

12. THE KEY IN CONCRETE CONSTRUCTION JOINTS SHALL BE MONOLITHIC AND CONTINUOUS FOR THE FULL LENGTH OF THE JOINT, ANY UPWARD KEY SHALL BE PLACED INTEGRALLY WITH THE CONCRETE BELOW THE JOINT.

13. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1" BY 1".

14. JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

15. REINFORCING PLACEMENT TOLERANCES SHALL BE:
SPACING + - 1"
CLEARANCE + - 1/4"

16. MINIMUM COVER FOR REINFORCING STEEL SHALL BE TWO (2) INCHES ALONG THE BACK FACES OF WALLS AGAINST EARTH, TWO AND ONE-HALF (2 1/2) INCHES ALONG THE TOP SURFACE OF THE DECK, ONE AND ONE-HALF (1 1/2) INCHES ALONG THE BOTTOM SURFACE OF THE DECK AND THREE (3) INCHES ELSEWHERE, UNLESS OTHERWISE NOTED.

17. ALL REINFORCING STEEL USED IN THE SLAB AND THE APPROACH SLABS WILL BE EPOXY COATED AND PAID FOR UNDER ITEMS 507.17. WHEN EPOXY COATED REINFORCING STEEL IS CUT, THE UNCOATED ENDS SHALL BE REPAIRED WITH MATERIALS AND PROCEDURES APPROVED BY THE MANUFACTURER. FLAME CUTTING OF EPOXY COATED REINFORCING WILL NOT BE PERMITTED.

18. NO TRAFFIC SHALL BE ALLOWED ON THE NEW DECK UNTIL THE CURE PERIOD IS UP AND THE 28 DAY DESIGN STRENGTH IS ATTAINED, AS EVIDENCED BY TEST CYLINDERS CURED UNDER FIELD CONDITIONS.

19. WATER REPELLENT, SILANE SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES EXCEPT THE UNDERSIDE OF THE SLAB BETWEEN THE DRIP BEADS.

20. ALL SUBSTRUCTURE CONCRETE SHALL BE CONCRETE HIGH PERFORMANCE CLASS B UNLESS OTHERWISE NOTED.

21. THE CAST-IN-PLACE SLAB AND THE APPROACH SLABS SHALL BE CONCRETE, HIGH PERFORMANCE CLASS B.

22. THE CURBS AND SIDEWALKS SHALL BE CONCRETE, HIGH PERFORMANCE CLASS A.

23. THE CURB AND SIDEWALK ON THE BRIDGE MAY BE PLACED IN ONE CONTINUOUS POUR, WITHOUT CONSTRUCTION JOINTS.

TEMPORARY ROADWAY

24. STATE HIGHWAY 64 IS TO BE CLOSED, BETWEEN HEBERT ROAD AND ROUTE 14, TO THRU TRAFFIC DURING CONSTRUCTION.

25. TRAFFIC WILL BE MAINTAINED ON A TWO-WAY PAVED TEMPORARY DETOUR LOCATED SOUTH OF THE EXISTING ROADWAY. CONSTRUCTION OF THE DETOUR ALSO INCLUDES CONSTRUCTION OF A PAVED PARKING LOT FOR THE RANDOLPH NATIONAL BANK, LOCATED AT STATION 304+25, LEFT OF THE TEMPORARY DETOUR. CONSTRUCTION OF THE DETOUR WILL ALSO INCLUDE INSTALLATION OF A TEMPORARY ENTRANCE FOR THE RANDOLPH NATIONAL BANK ONTO VT 14, (SEE NOTE 25) AND INSTALLATION OF A PEDESTRIAN WALKWAY AS SHOWN ON SHEET 23. ALL OF THIS WORK WILL BE INCLUDED IN THE UNIT PRICE BID FOR 900.645, SPECIAL PROVISIONS (TEMPORARY ROADWAY).

26. THE TEMPORARY ENTRANCE FROM VT 14 INTO THE PARKING LOT IN FRONT OF THE RANDOLPH NATIONAL BANK SHALL CONSIST OF A DRIVE, 12 FEET WIDE, AS SHOWN ON SHEET 23 OF 108. THIS DRIVE WILL HAVE A SUBBASE OF 15" OF SUBBASE OF DENSE GRADED CRUSHED STONE, AND WILL BE PAVED WITH 2 1/2" OF BITUMINOUS CONCRETE PAVEMENT (PG 58-34). THE COST OF THIS WORK WILL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 900.645, SPECIAL PROVISION (TEMPORARY ROADWAY).

27. THE LOCATION OF THE TEMPORARY ROADWAY WILL REQUIRE THAT SOME OF WINGWALL 2 AS DESIGNED, BE CONSTRUCTED AND THE AREA BACKFILLED PRIOR TO INSTALLATION OF THE TEMPORARY ROADWAY, SEE SHEET 60 FOR THE LIMITS OF THIS WORK. IF THE CONTRACTOR PROPOSES TO CHANGE THE DESIGN SO THAT THE TEMPORARY DETOUR CAN BE INSTALLED PRIOR TO CONSTRUCTING ANY OF THE SUBSTRUCURE. THE CONTRACTORS COFFERDAM DESIGN SHALL INDICATE HON THIS WORK WILL BE DONE. NO ADDITIONAL COMPENSATION WILL BE DUE THE CONTRACTOR, FOR THIS ALTERNATE DESIGN.

28. PAYMENT FOR TWO COFFERDAM ITEMS ARE INCLUDED IN THIS CONTRACT. IF THE CONTRACTOR CHOSES TO USE ONE COFFERDAM TO CONTSTRUCT THE PORTION OF WINGWALL 2 DESIGNATED TO BE BUILT PRIOR TO THE INSTALLATION OF THE TEMPORARY ROADWAY AND ANOTHER FOR THE CONSTRUCTION OF THE REMAINDER OF ABUTMENT 1 AND WINGWALL 1, PAYMENT FOR BOTH PORTIONS OF THIS COFFERDAM WILL BE INCLUDED IN THE BID PRICE FOR 208.40 COFFERDAM (@ STA. 218+97).

29. THE CONTRACTOR SHALL NOTIFY MAINTENANCE DISTRICT 6; ~~ERNIE ENGLEHARDT~~,WAYNE GAMMELL DISTRIC TRANSPORTATION ADMINISTRATOR, 802-828-2691 AND THE TOWN OF WILLIAMSTOWN; ED MAGEE, TOWN MANAGER, 802-433-6671 A MINIMUM OF TWO (2) WEEKS PRIOR TO MOVING TRAFFIC TO THE DETOUR LOCATION.

30. WHEN THE TEMPORARY DETOUR IS NO LONGER NEEDED, SOME OF THE PAVEMENT BETWEEN DETOUR STATIONS 300+35 AND 304+25 WILL BE REMOVED, AS SHOWN ON SHEET 31 OF 108. WHERE THE PAVEMENT IS REMOVED, THE AREA WILL BE COVERED WITH A 6 INCH DEPTH OF TOPSOIL, SEEDED AND MULCHED. PAYMENT FOR THIS WORK WILL BE CONSIDERED INCIDENTAL TO ITEM 900.645, SPECIAL PROVISION (TEMPORARY ROADWAY).

31. ACCESS TO ALL DRIVEWAYS SHALL BE MAINTAINED AT ALL TIMES.

32. THE COST OF ALL ON AND OFF PROJECT TRAFFIC CONTROL SIGNS AND BARRICADES REQUIRED WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. PAYMENT WILL BE MADE UNDER ITEM 641.10, TRAFFIC CONTROL.

LEDGE

33. THE FOOTINGS FOR THE SUBSTRUCTURE SHALL BE FOUNDED ON LEDGE, WHICH SHALL BE CLEANED OF ALL LOOSE ROCK AND OTHER DEBRIS. THE LEDGE SHALL BE REMOVED AS REQUIRED TO ENSURE THAT THE FOOTINGS ARE PLACED ON COMPETENT ROCK.

34. UPON COMPLETION OF THE COFFERDAM EXCAVATION AND PRIOR TO PLACING FORMWORK, THE RESIDENT ENGINEER WILL CONTACT THE SOILS AND FOUNDATIONS ENGINEER/ ENGINEERING GEOLOGIST FROM THE VERMONT AGENCY OF TRANSPORTATION TO INSPECT THE LEDGE TO DETERMINE IF IT IS COMPETENT TO SUPPORT THE DESIGN PRESSURES AS SHOWN ON THE PLANS. THE GEOLOGIST SHALL BE ALLOWED 5 WORKING DAYS FROM NOTICE OF EXCAVATION COMPLETION TO MAKE THE INSPECTION AND THE DETERMINATION OF THE COMPETENCY OF THE LEDGE.

35. LEDGE THAT IS EXCAVATED FOR THE PLACEMENT OF FOOTINGS SHALL BE EXCAVATED TO PROVIDE A LEVEL SURFACE OR AS DIRECTED BY THE ENGINEER.

36. A MAXIMUM OF 6" OVERBREAKAGE WILL BE ALLOWED AND WILL BE REPLACED WITH CONCRETE, HIGH PERFORMANCE, CLASS B.OVERBREAKAGE BEYOND THE 6" WILL BE REPLACED WITH CONCRETE, HIGH PERFORMANCE, CLASS B AT THE CONTRACTOR'S EXPENSE.

37. FOR ALL SUBSTRUCTURE UNITS WHERE LEDGE IS 1 FOOT OR LESS BELOW THE BOTTOM OF THE FOOTING AS DESIGNED,THE FOOTING MAY BE POURED TO THE TOP OF THE LEDGE USING CONCRETE, HIGH PERFORMANCE CLASS B.

38. FOR ALL SUBSTRUCTURE UNITS WHERE THE LEDGE IS BELOW THE DESIGNED BOTTOM OF FOOTING ELEVATION BY MORE THAN 1 FOOT, A LEDGE PROFILE SHALL BE PROVIDED TO THE PROJECT MANAGER SO THAT IT MAY BE DETERMINED WHETHER THE FOOTING MAY BE LOWERED OR IF A SUB-FOOTING IS REQUIRED. IF A SUB-FOOTING IS REQUIRED IT WILL BE PAID FOR UNDER THE ITEM 541.30, CONCRETE, CLASS C.

39. IF A SUBFOOTING IS USED, #8 DOWELS WILL BE DRILLED AND GROUTED INTO LEDGE AS SHOWN ON THE SUBFOOTING DETAIL ON SHEET 57, DOWELS WILL ALSO BE USED TO CONNECT THE FOOTING TO THE SUBFOOTING AS SHOWN IN THE DETAIL. THE DOWELS WILL BE SPACED AT 4'-0, AND WILL HAVE AN EMBEDEMENT OF 2'-0" IN THE LEDGE AND A MINIMUM EMBEDMENT OF 1'6" IN BOTH THE SUBFOOTING AND THE FOOTING. THE DRILLING AND GROUTING WILL BE PAID FOR UNDER ITEM 507.16 DRILLING AND GROUTING DOWELS, HOWEVER THE DOWELS WILL BE PAID FOR UNDER 507.15 "REINFORCING STEEL".

40. IF LEDGE IS ABOVE THE DESIGNED BOTTOM OF FOOTING ELEVATION, THE FOOTING ELEVATION MAY BE RAISED. BEFORE ANY ADJUSTMENT IN THE FOOTING ELEVATION IS MADE, THE PROJECT MANAGER WILL BE CONTACTED FOR APPROVAL.

41. THE ABUTMENTS AND WINGWALLS ARE DESIGNED FOR A MAXIMUM FOOTING PRESSURE OF 10 KSF.

STONE FILL

42. THE STONE FILL, TYPE II MAY NOT BE REQUIRED IN AREAS OF EXPOSED LEDGE, AS DETERMINED BY THE ENGINEER.

UTILITIES

43. THE CONTRACTOR IS ALERTED TO THE PRESENCE OF A SEWER MAIN LOCATED ON THE LEFT SIDE OF VT 64. IN THE AREA OF THE EXISTING BRIDGE, THIS SEWER MAIN IS WITHIN A TRENCH EXCAVATED INTO THE LEDGE, AND IS COVERED WITH CONCRETE. THIS SEWER MAIN IS TO REMAIN IN PLACEAND IN SERVICE. A PORTION OF WINGWALL #3 AND ABUTMENT # 1 WILL BE CONSTRUCTED ON TOP OF THE CONCRETE ENCASEMENT. THE CONTRACTOR WILL USE CARE IN WORKING AROUND THIS SEWER MAIN AND IS DUE NO EXTRA COMPENSATION FOR THE INCONVENIENCE OF WORKING AROUND THIS UTILITY. ANY DAMAGE THAT OCCURS TO THIS SEWER MAIN DURING CONSTRUCTION WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE. THE APPROXIMATE LOCATION OF THIS SEWER MAIN IS SHOWN ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATION IN THE FIELD.

44. THE CONTRACTOR IS ALERTED TO THE PRESENCE OF A WATER LINE LOCATED ON THE RIGHT SIDE OF VT 64. THIS WATER LINE RUNS THROUGH THE AREA THAT MUST BE EXCAVATED TO CONSTRUCT WINGWALL #2. THIS WATER LINE IS TO REMAIN IN PLACE, AND IN SERVICE. THE CONTRACTOR WILL USE CARE IN WORKING AROUND THIS WATER LINE AND IS DUE NO EXTRA COMPENSATION FOR THE INCONVENIENCE OF WORKING AROUND THIS UTILITY. ANY DAMAGE THAT OCCURS TO THIS WATER LINE DURING CONSTRUCTION WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE. THE APPROXIMATE LOCATION OF THIS WATER LINE IS SHOWN ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATION IN THE FIELD.

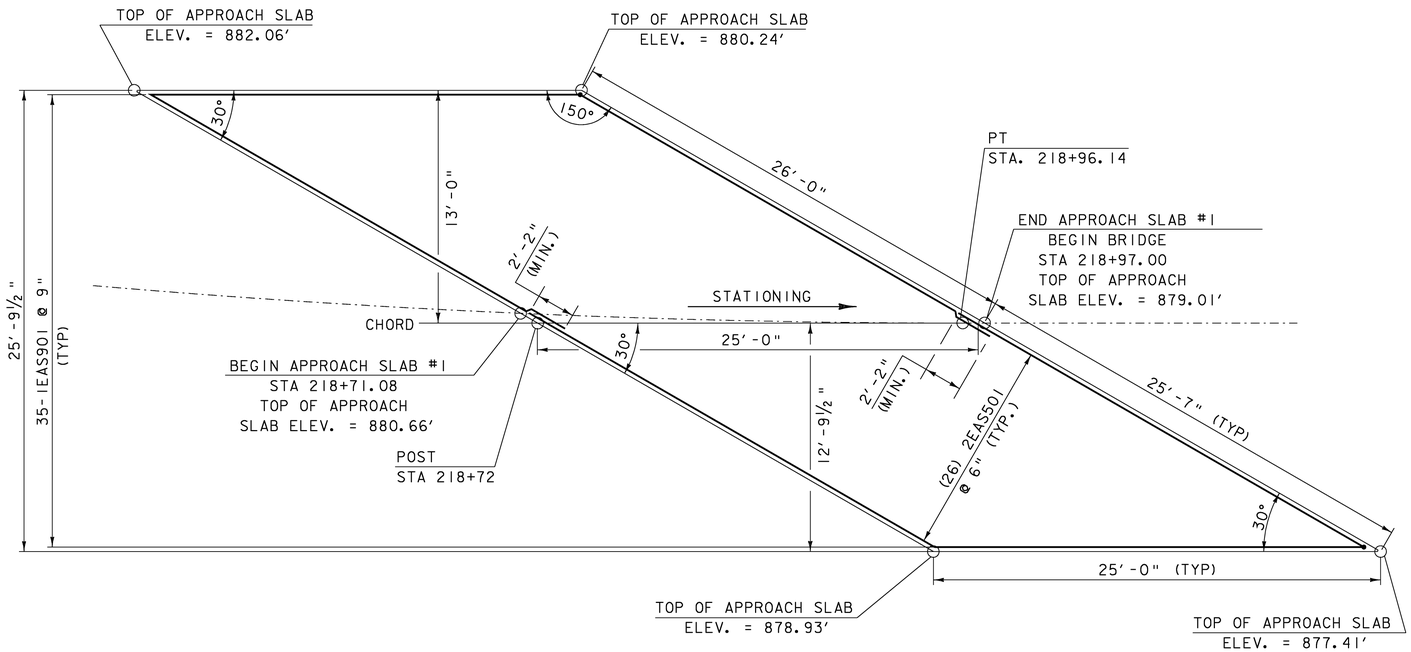
45. THE CONTRACTOR IS ALERTED TO THE PRESENCE OF A WATER LINE LOCATED ON THE LEFT SIDE OF VT 64. THIS WATER LINE RUNS THROUGH THE AREA THAT MUST BE EXCAVATED TO INSTALL THE PIPE AT STATION 220+45. THIS WATER LINE IS TO REMAIN IN PLACE AND IN SERVICE. THE CONTRACTOR WILL USE CARE IN WORKING AROUND THIS WATER LINE AND IS DUE NO EXTRA COMPENSATION FOR THE INCONVENIENCE OF WORKING AROUND THIS UTILITY. ANY DAMAGE THAT OCCURS TO THIS WATER LINE DURING CONSTRUCTION WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE. THE APPROXIMATE LOCATION OF THIS WATER LINE IS SHOWN ON THE PLANS. THE CONTRACTOR SHALL THE VERIFY THE LOCATION IN THE FIELD.

GENERAL NOTES

PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

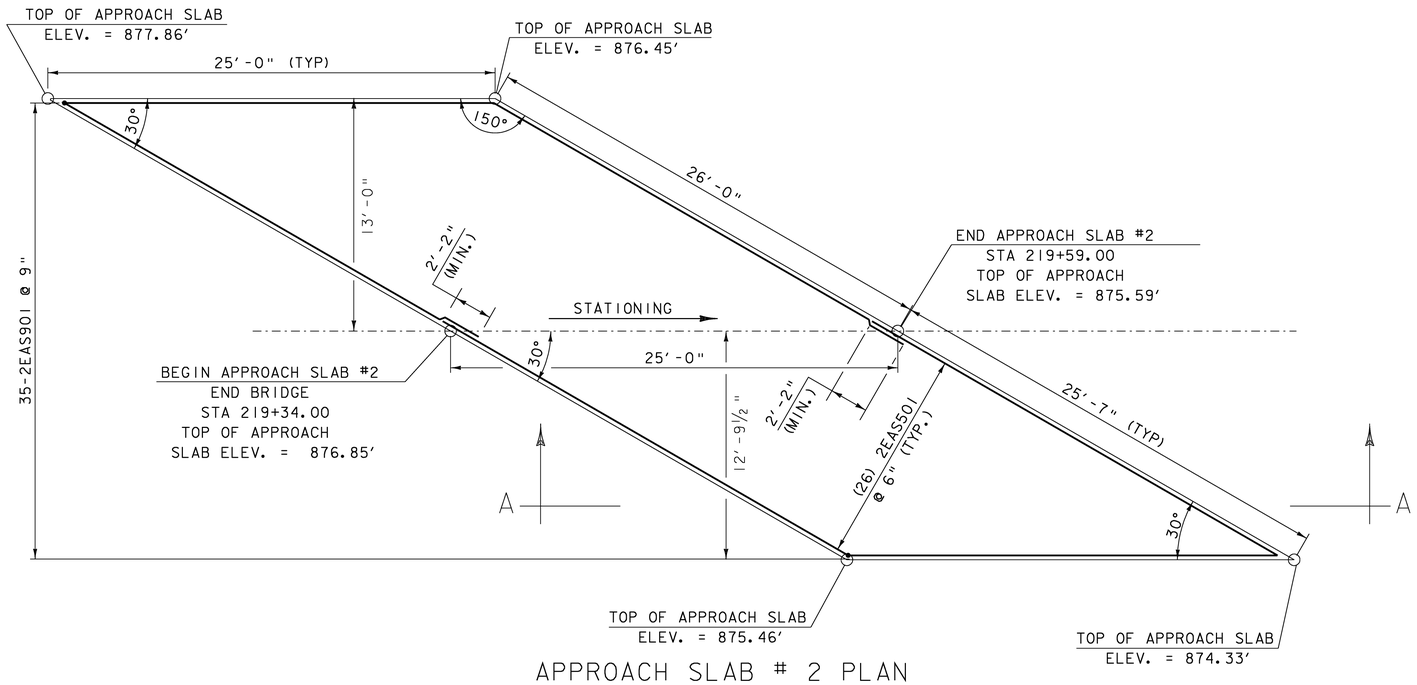
FILE NAME: STRUCTURES\SEIIIEXCEL.DGN
PROJECT LEADER: M. EVANS-MONGEON
DESIGNED BY: U. STANLEY

PLOT DATE: 07-APR-2008
DRAWN BY: M. EVANS-M
CHECKED BY: U. STANLEY
SHEET 48 OF 108



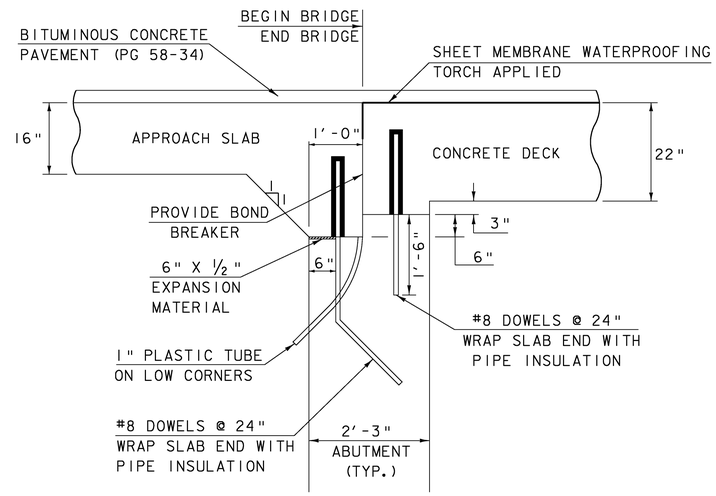
APPROACH SLAB # 1 PLAN

SCALE ¼" = 1'-0



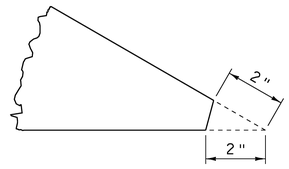
APPROACH SLAB # 2 PLAN

SCALE ¼" = 1'-0



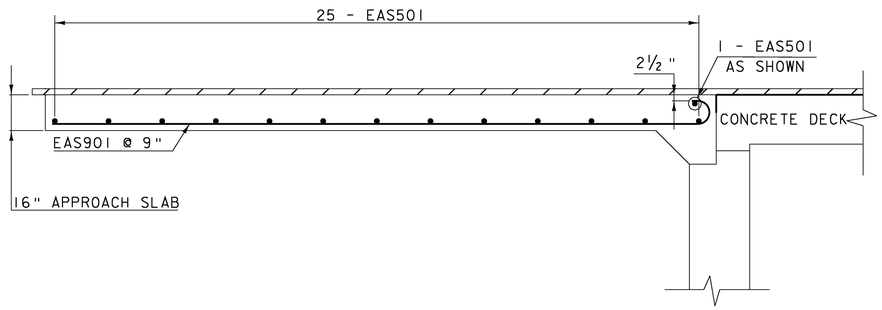
TYPICAL END SECTION

SCALE ¾" = 1'-0



ACUTE CORNER DETAIL

NTS



SECTION A-A

SCALE ⅜" = 1'-0

NOTE:

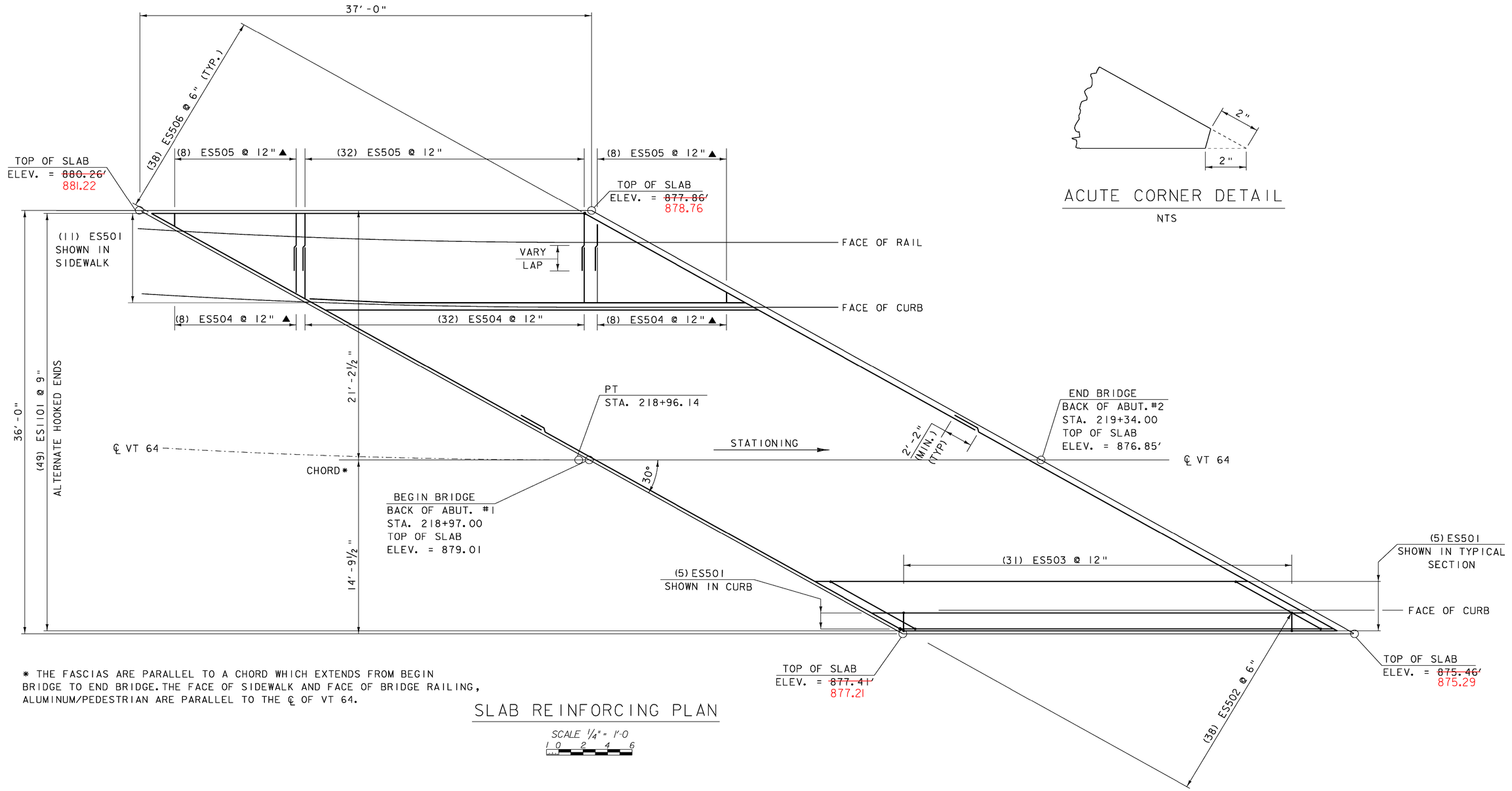
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.

APPROACH SLAB DETAILS

PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83ellI\structures\sellsup.dgn
PROJECT LEADER: M. EVANS-MONGEON
DESIGNED BY: U. STANLEY
IPARM sellIsup.I

PLOT DATE: 07-APR-2008
DRAWN BY: U. STANLEY
CHECKED BY: EVANS-MONGEON
SHEET 49 OF 108



* THE FASCIAS ARE PARALLEL TO A CHORD WHICH EXTENDS FROM BEGIN BRIDGE TO END BRIDGE. THE FACE OF SIDEWALK AND FACE OF BRIDGE RAILING, ALUMINUM/PEDESTRIAN ARE PARALLEL TO THE ℄ OF VT 64.

SLAB REINFORCING PLAN

SCALE 1/4" = 1'-0

1 0 2 4 6

ACUTE CORNER DETAIL

NTS

NOTE:

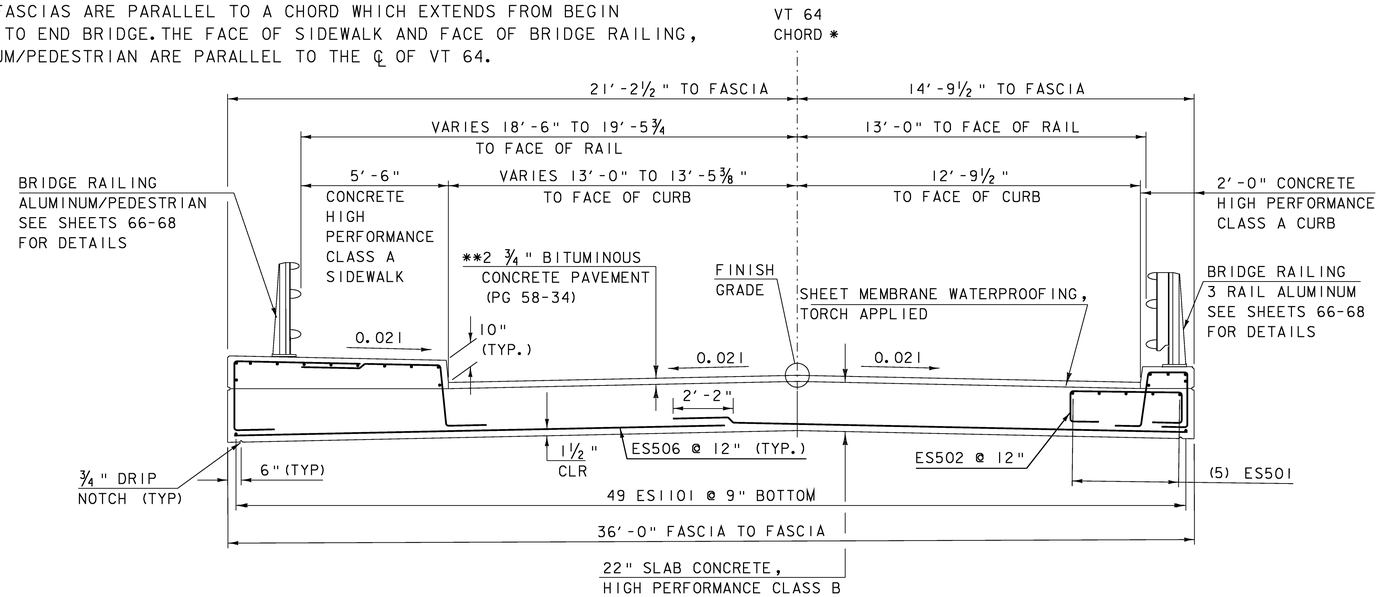
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.

SLAB DETAIL SHEET 1

PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83ell\structures\sellsup.dgn
PROJECT LEADER: M. EVANS-MONGEON
DESIGNED BY: U. STANLEY
IPARM sellsupl.1
PLOT DATE: 07-APR-2008
DRAWN BY: U. STANLEY
CHECKED BY: EVANS-MONGEON
SHEET 50 OF 108

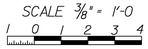
* THE FASCIAS ARE PARALLEL TO A CHORD WHICH EXTENDS FROM BEGIN BRIDGE TO END BRIDGE. THE FACE OF SIDEWALK AND FACE OF BRIDGE RAILING, ALUMINUM/PEDESTRIAN ARE PARALLEL TO THE ℄ OF VT 64.

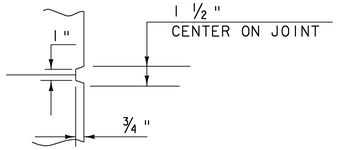


**1 ½" BIT. CONCRETE PAVEMENT TYPE IV (PG 58-34) OVER
1 ¼" BIT. CONCRETE PAVEMENT TYPE IV (PG 58-34)

BRIDGE TYPICAL SECTION

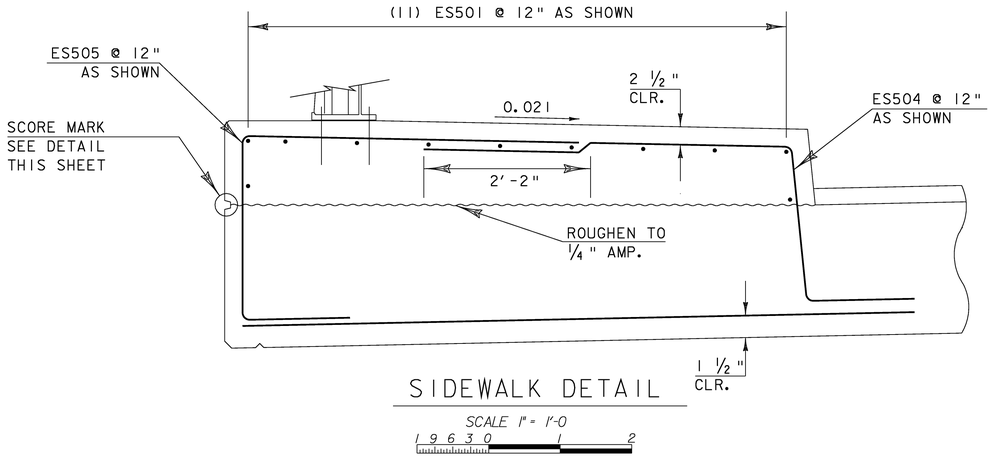
SCALE ⅜" = 1'-0





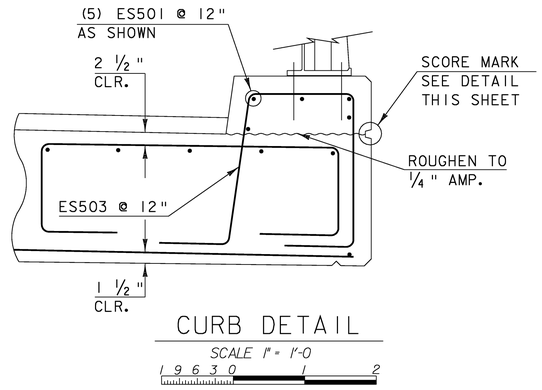
SCORE MARK DETAIL

NTS



SIDEWALK DETAIL

SCALE 1" = 1'-0



CURB DETAIL

SCALE 1" = 1'-0

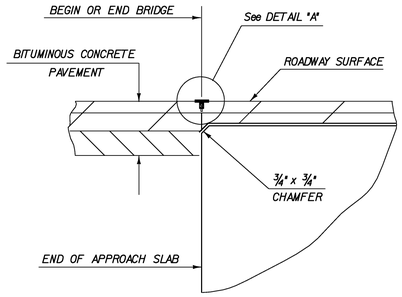
NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.

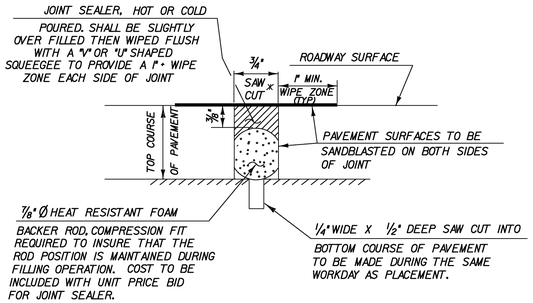
SLAB DETAIL SHEET 2

PROJECT NAME:	WILLIAMSTOWN
PROJECT NUMBER:	BRS 0204(4)

FILE NAME: 83ell\structures\sellsup.dgn	PLOT DATE: 07-APR-2008
PROJECT LEADER: M. EVANS-MONGEON	DRAWN BY: U. STANLEY
DESIGNED BY: U. STANLEY	CHECKED BY: EVANS-MONGEON
IPARM sellsup2.i	SHEET 51 OF 108

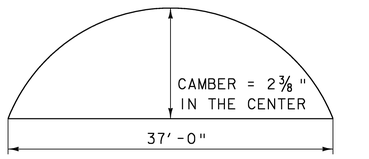


DETAIL FOR JOINT IN PAVEMENT AND SHEET MEMBRANE AT END OF BRIDGE



DETAIL "A"

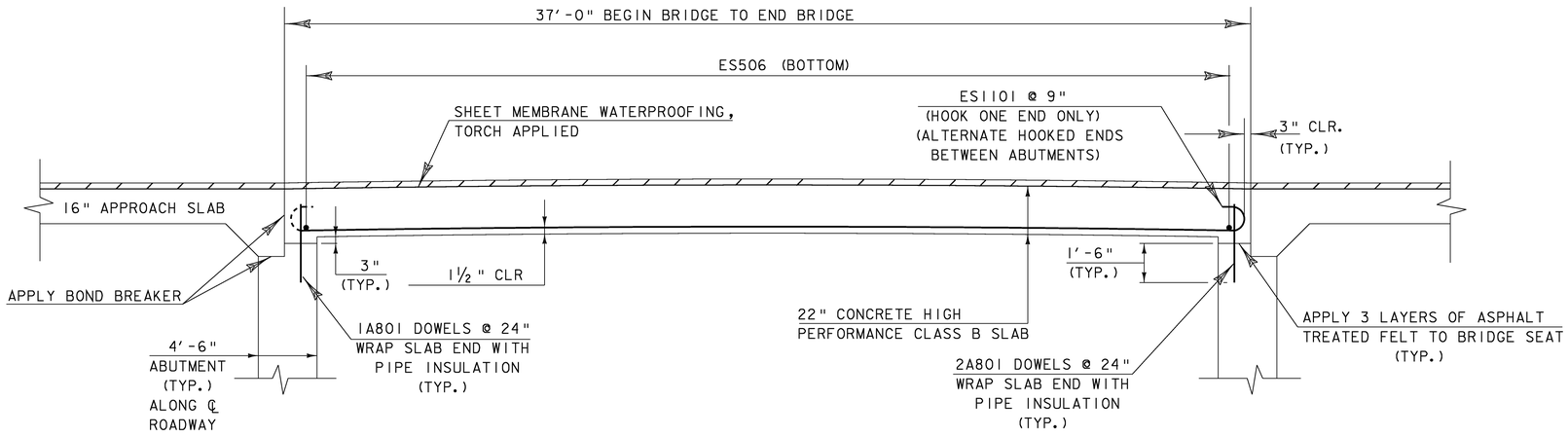
* JOINT IS TO BE LOCATED ACCURATELY BY STRING LINING, OR OTHER MEANS, PRIOR TO PAVING, SO THAT THE SAW CUTS WILL BE MADE DIRECTLY OVER THE END OF CONCRETE DECK. JOINT SHALL BE CUT DRY IN A SINGLE PASS AND BE SEALED WITHIN 24 HOURS OR PRIOR TO EXPOSURE TO TRAFFIC. JOINT SHALL BE CLEANED PRIOR TO APPLYING THE JOINT SEALER. SEE VT. SPECIFICATION 524.



SET CONSTRUCTION FORMS TO THIS CAMBER

CAMBER

NTS



ELEVATION ALONG ℄ OF ROADWAY

SCALE ⅜" = 1'-0

NOTES:

1. THE SLAB SHALL BE CAMBERED A TOTAL OF 2⅜" AT MIDSPAN. THIS CAMBER SHALL APPROXIMATE A CIRCULAR CURVE.

2. COST OF BOND BREAKER, ASPHALT TREATED FELT, PLASTIC TUBING, STEEL WOOL, EXPANSION MATERIAL, AND PIPE INSULATION AND THEIR APPLICATION SHALL BE INCIDENTAL TO CONCRETE HIGH PERFORMANCE CLASS B.

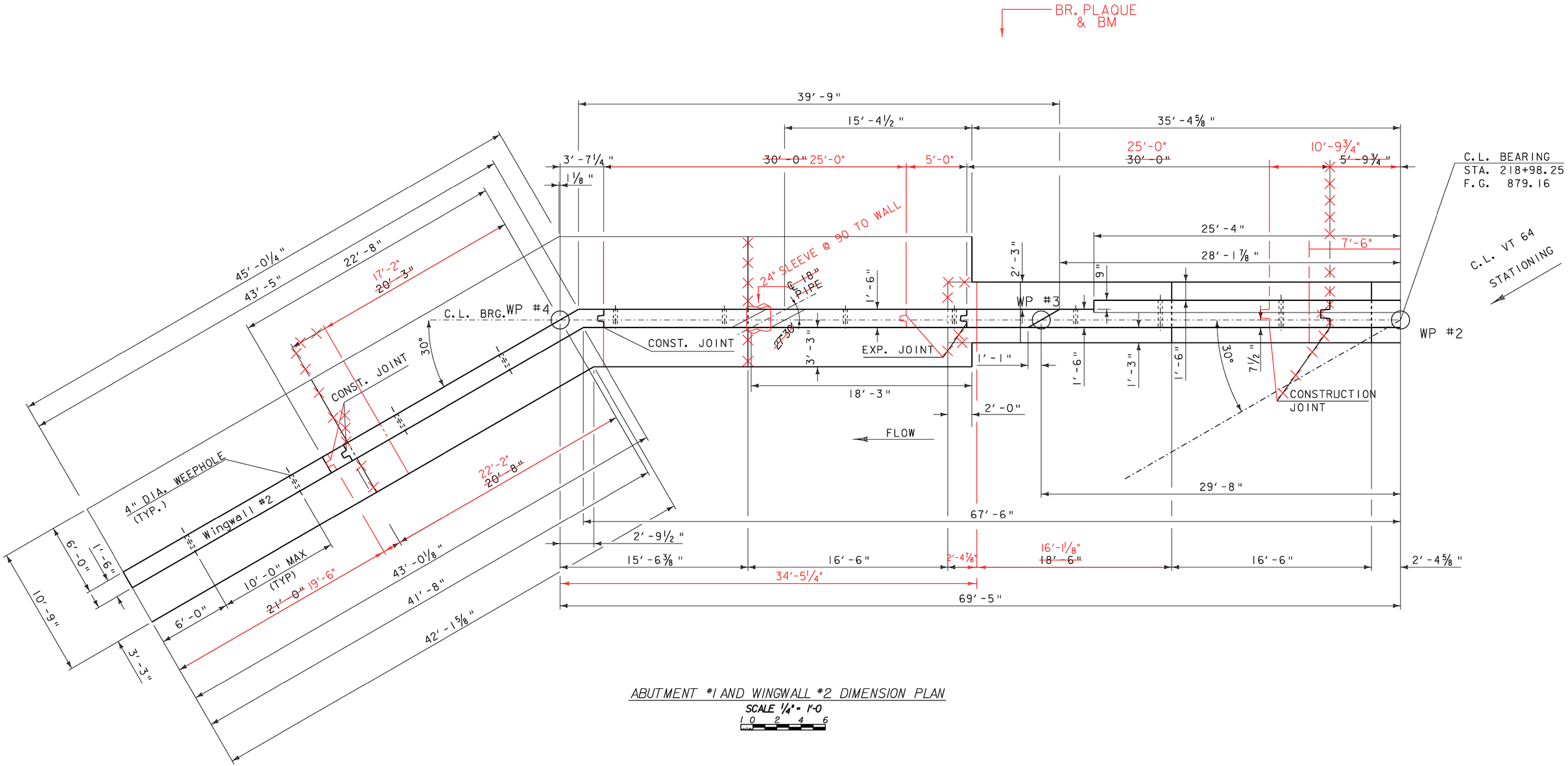
NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.

SLAB DETAIL SHEET 3

PROJECT NAME:	WILLIAMSTOWN
PROJECT NUMBER:	BRS 0204(4)

FILE NAME: 83ell\structures\sellsup.dgn		PLOT DATE:	07-APR-2008
PROJECT LEADER:	M. EVANS-MONGEON	DRAWN BY:	U. STANLEY
DESIGNED BY:	U. STANLEY	CHECKED BY:	EVANS-MONGEON
IPARM sellsup3.i		SHEET	52 OF 108



ABUTMENT #1 AND WINGWALL #2 DIMENSION PLAN

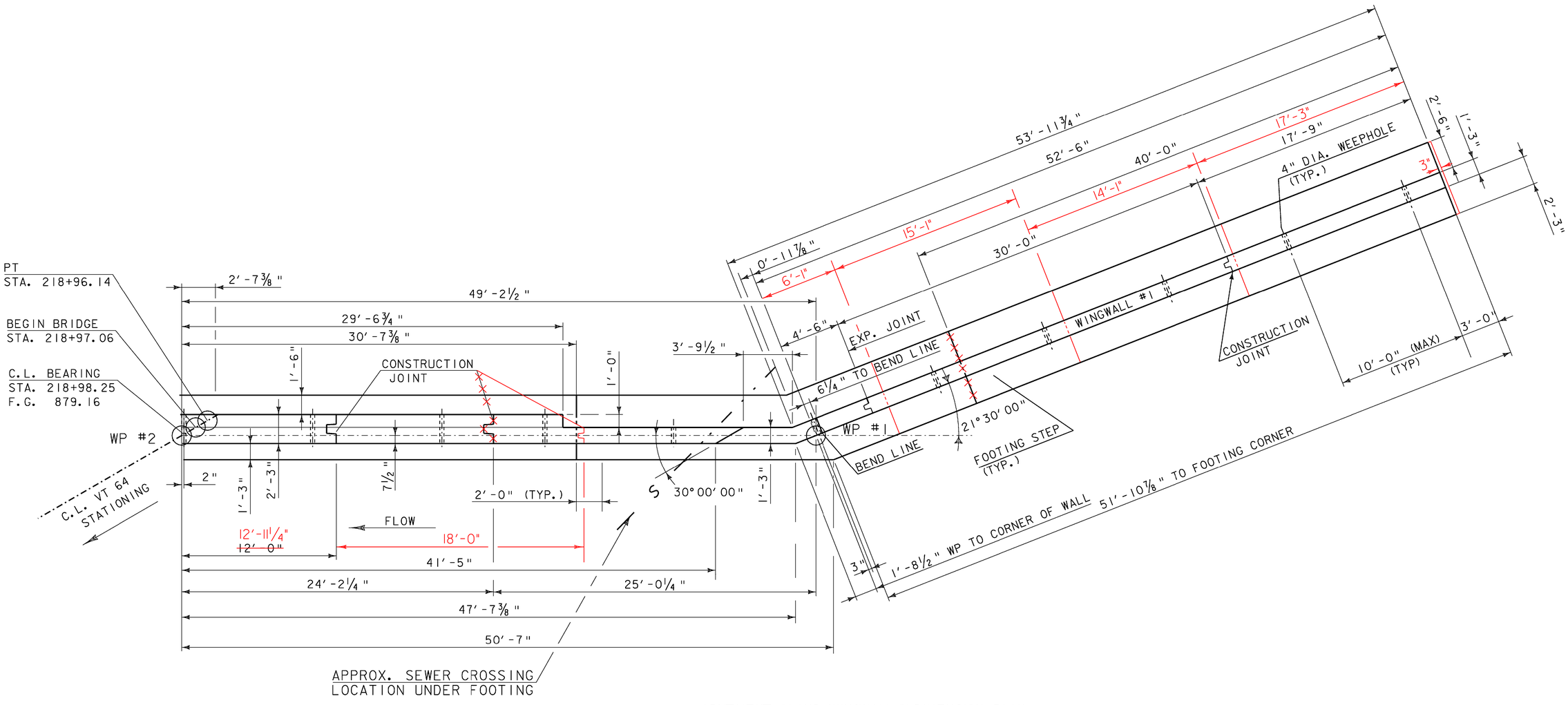
SCALE 1/4" = 1'-0

1 0 2 4 6

ABUTMENT #1 AND WINGWALL #2 LAYOUT

PROJECT NAME:	WILLIAMSTOWN
PROJECT NUMBER:	BRS 0204(4)

FILE NAME: 83elll\str.\sellabut1.dg	PLOT DATE: 07-APR-2008
PROJECT LEADER: M.EVANS.MONGEON	DRAWN BY: G.ROKES
DESIGNED BY: M.EVANS-MONGEON	CHECKED BY: U.STANLEY
IPARM sellsubl.I	SHEET 53 OF 108



ABUTMENT #1 AND WINGWALL #1 DIMENSION PLAN

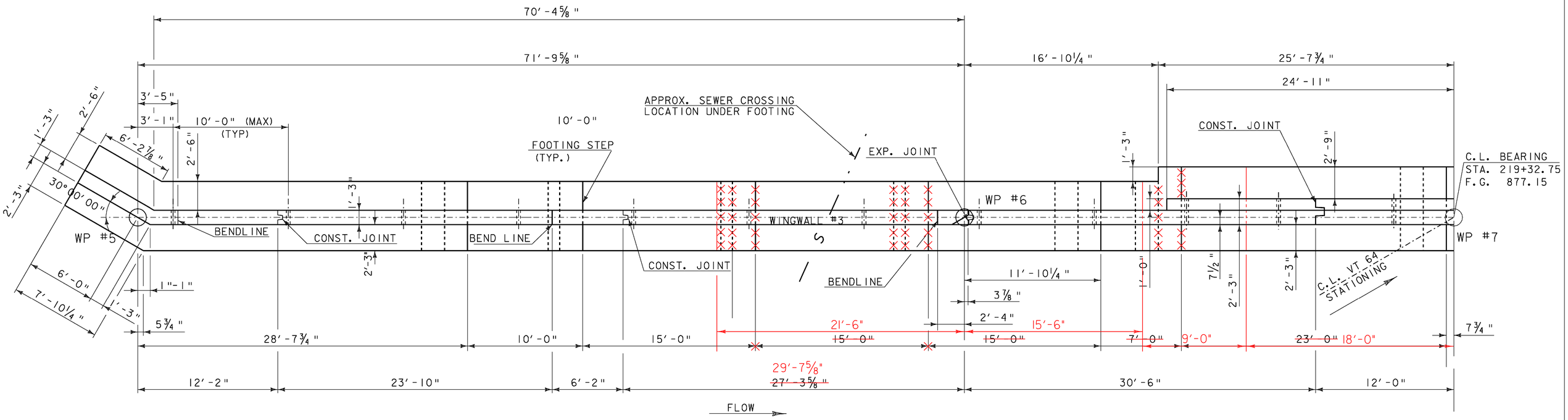
SCALE 1/4" = 1'-0

0 2 4 6

ABUTMENT #1 AND WINGWALL #1 LAYOUT

PROJECT NAME:	WILLIAMSTOWN
PROJECT NUMBER:	BRS 0204(4)

FILE NAME: 83ell\str.\sellabut1.dg		PLOT DATE:	07-APR-2008
PROJECT LEADER:	M.EVANS.MONGEON	DRAWN BY:	G.ROKES
DESIGNED BY:	M.EVANS-MONGEON	CHECKED BY:	U.STANLEY
IPARM sellsub2.1		SHEET	54 OF 108



ABUTMENT #2 AND WINGWALL #3 DIMENSION PLAN

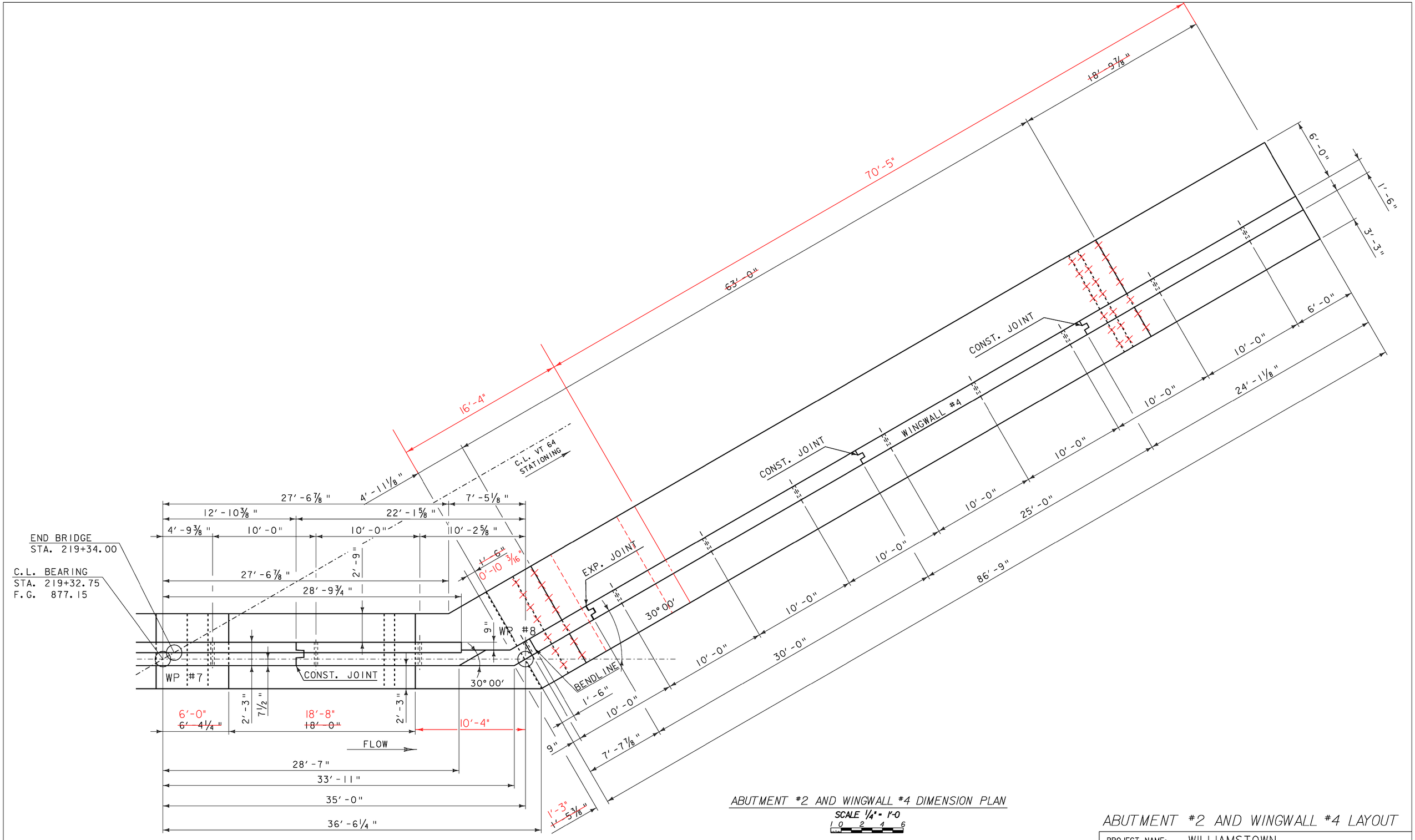
SCALE 1/4" = 1'-0

1 0 2 4 6

ABUTMENT #2 AND WINGWALL #3 LAYOUT

PROJECT NAME:	WILLIAMSTOWN
PROJECT NUMBER:	BRS 0204(4)

FILE NAME: 83ellI\str\sellIabut2.dgn	PLOT DATE: 07-APR-2008
PROJECT LEADER: M.EVANS-MONGEON	DRAWN BY: EVANS-MONGEON
DESIGNED BY: M.EVANS-MONGEON	CHECKED BY: U. STANLEY
IPARM sellIsub3.I	SHEET 55 OF 108



ABUTMENT #2 AND WINGWALL #4 DIMENSION PLAN

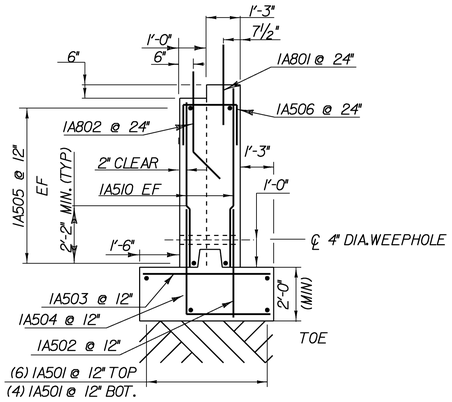
SCALE 1/4" = 1'-0

0 2 4 6

ABUTMENT #2 AND WINGWALL #4 LAYOUT

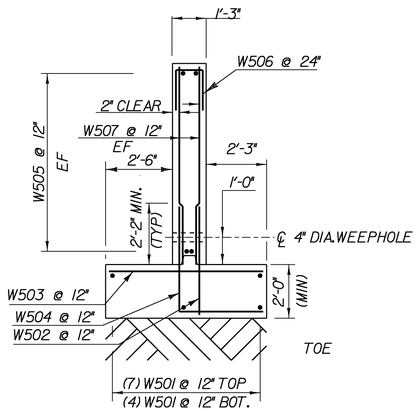
PROJECT NAME:	WILLIAMSTOWN
PROJECT NUMBER:	BRS 0204(4)

FILE NAME: 83ellI\str\sellIabut2.dgn	PLOT DATE: 07-APR-2008
PROJECT LEADER: M.EVANS-MONGEON	DRAWN BY: EVANS-MONGEON
DESIGNED BY: M.EVANS-MONGEON	CHECKED BY: U. STANLEY
IPARM sellIsub4.I	SHEET 56 OF 108



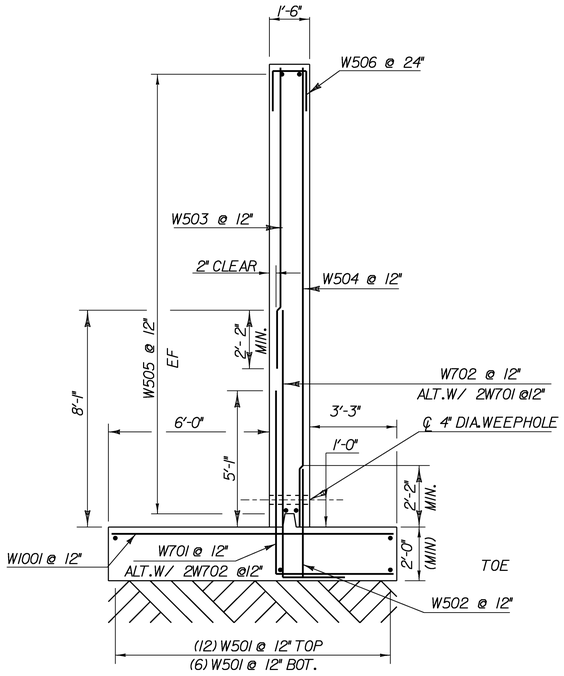
ABUTMENT #1 TYPICAL

SCALE 3/8" = 1'-0



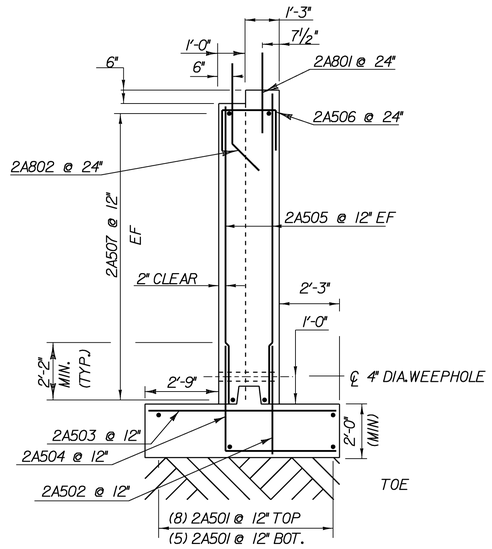
WINGWALLS 1 & 3 TYPICAL

SCALE 3/8" = 1'-0



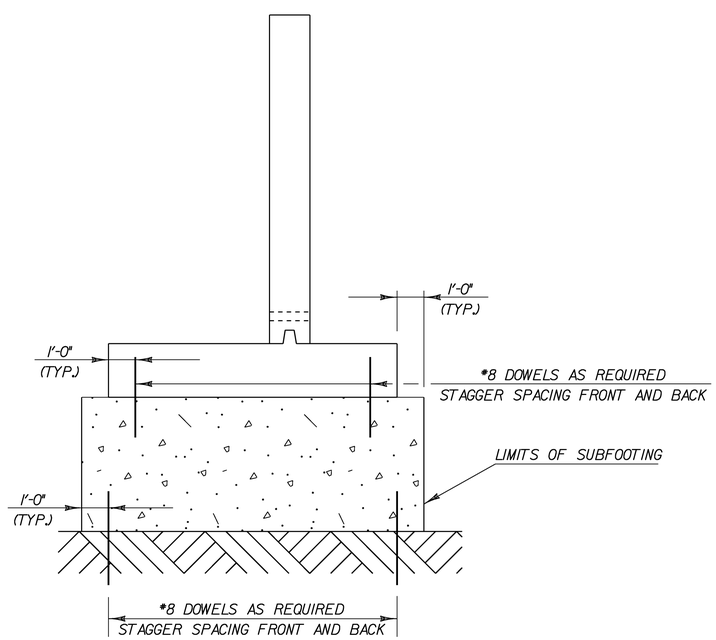
WINGWALLS 2 & 4 TYPICAL

SCALE 3/8" = 1'-0



ABUTMENT # 2 TYPICAL

SCALE 3/8" = 1'-0



SUBFOOTING SECTION

NTS

SEE GENERAL NOTE SHEET FOR ADDITIONAL DETAILS

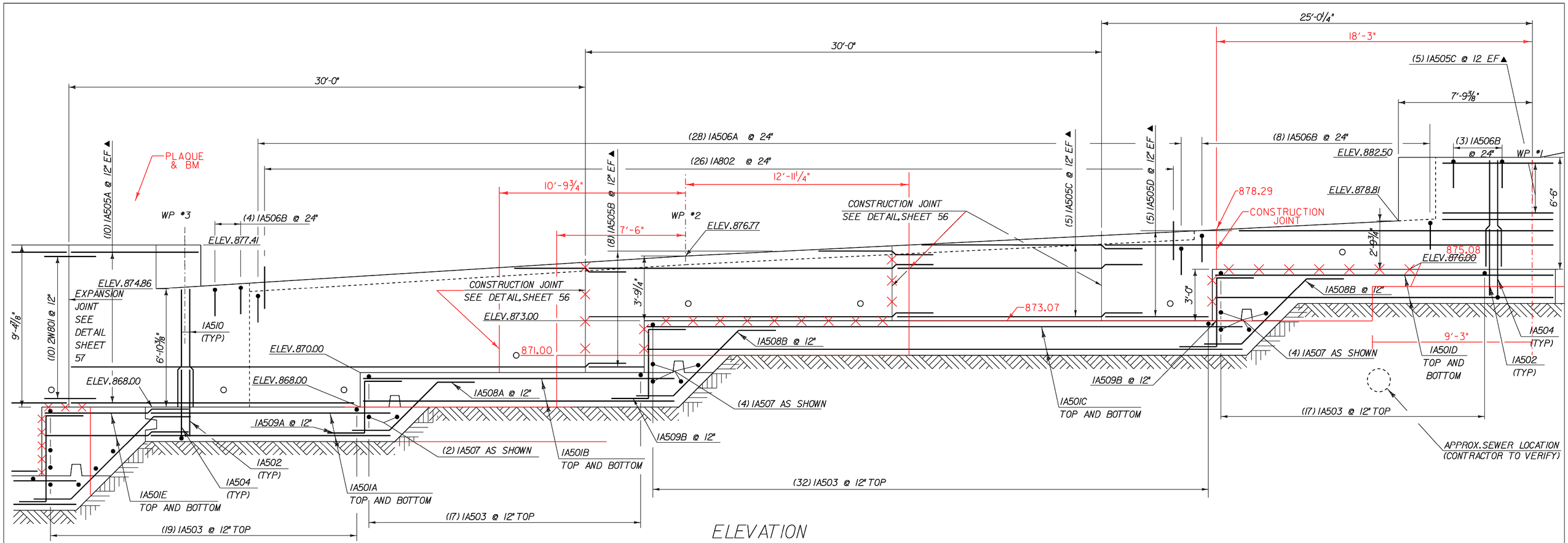
NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.

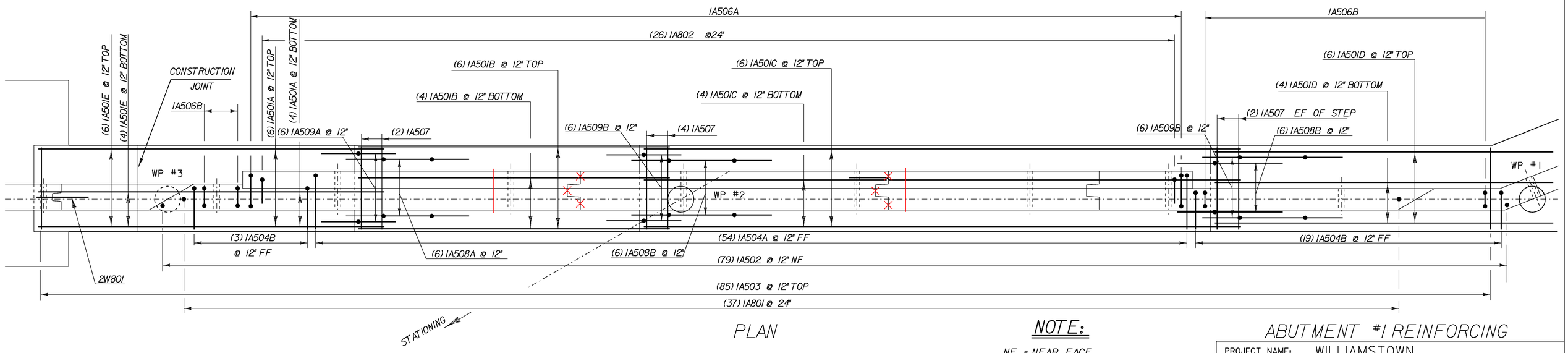
ABUTMENT AND WINGWALL TYPICAL SECTIONS

PROJECT NAME:	WILLIAMSTOWN
PROJECT NUMBER:	BRS 0204(4)

FILE NAME: 83ellI\str.\sellIabut1.dg	PLOT DATE: 07-APR-2008
PROJECT LEADER: M.EVANS.MONGEON	DRAWN BY: G.ROKES
DESIGNED BY: M.EVANS-MONGEON	CHECKED BY: U.STANLEY
IPARM sellIsub5.I	SHEET 57 OF 108



ELEVATION



PLAN

ABUTMENT #1

SCALE 3/8" = 1'-0

1 0 1 2 3 4

NOTE:

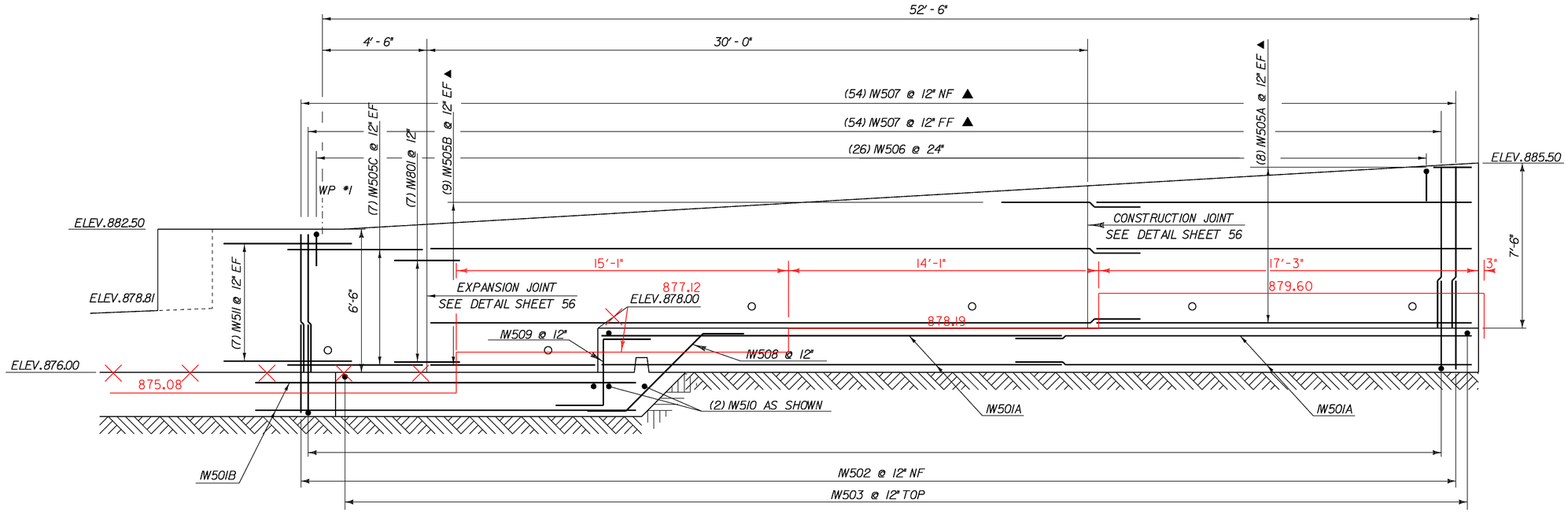
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.

ABUTMENT #1 REINFORCING

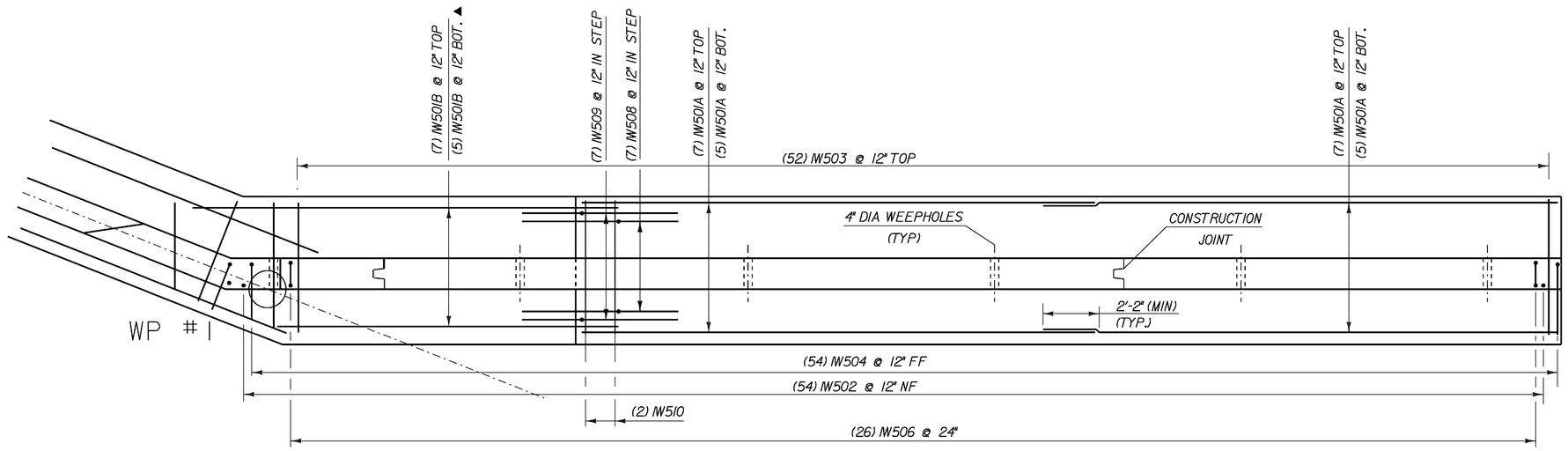
PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83elll\str.\selllabut1.dg
PROJECT LEADER: M.EVANS.MONGEON
DESIGNED BY: M.EVANS-MONGEON
IPARM selllsub6.i

PLOT DATE: 07-APR-2008
DRAWN BY: G.ROKES
CHECKED BY: U. STANLEY
SHEET 58 OF 108



ELEVATION



PLAN

WINGWALL #1

SCALE 3/8" = 1'-0

1 0 1 2 3 4

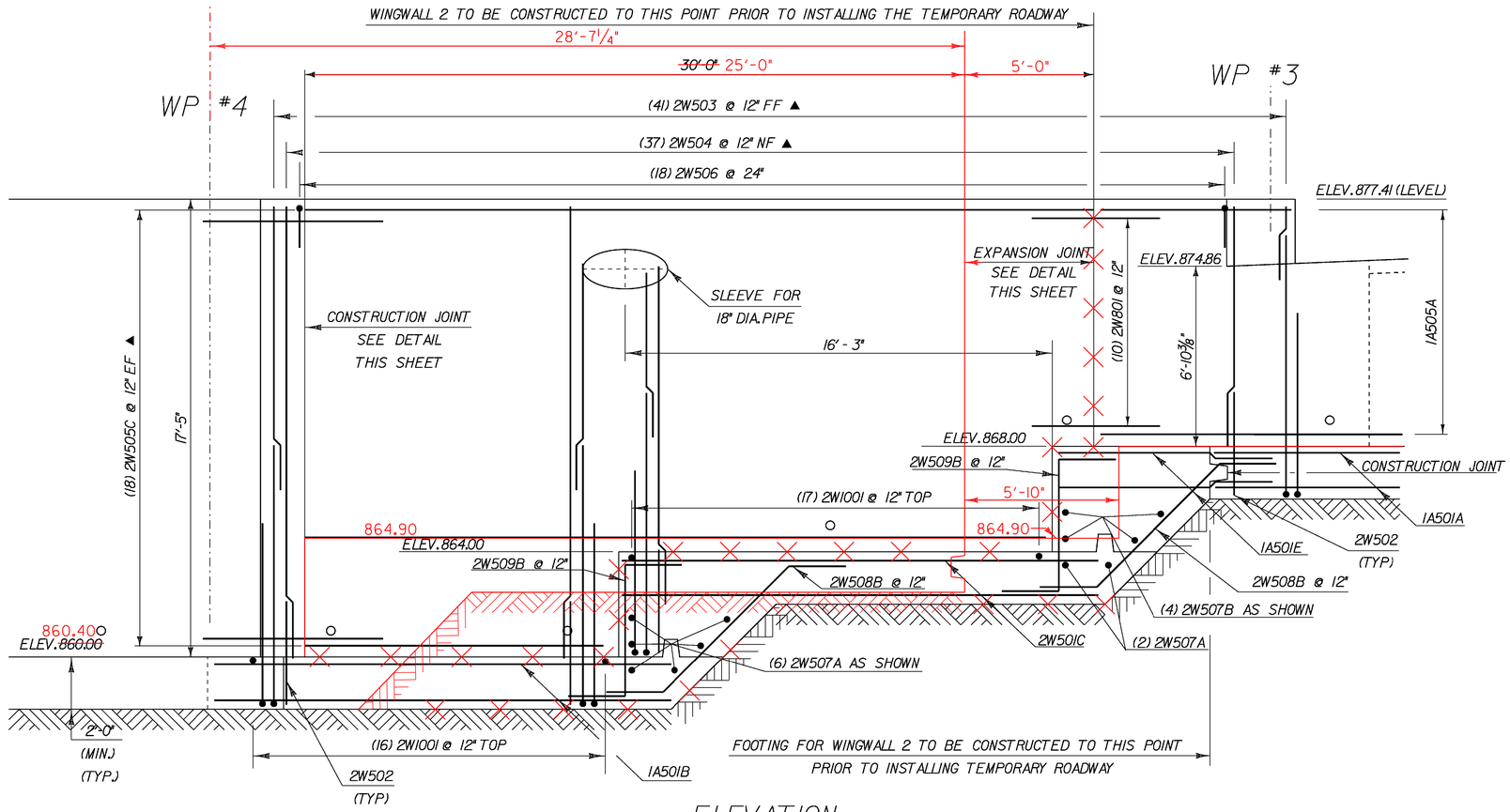
NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.

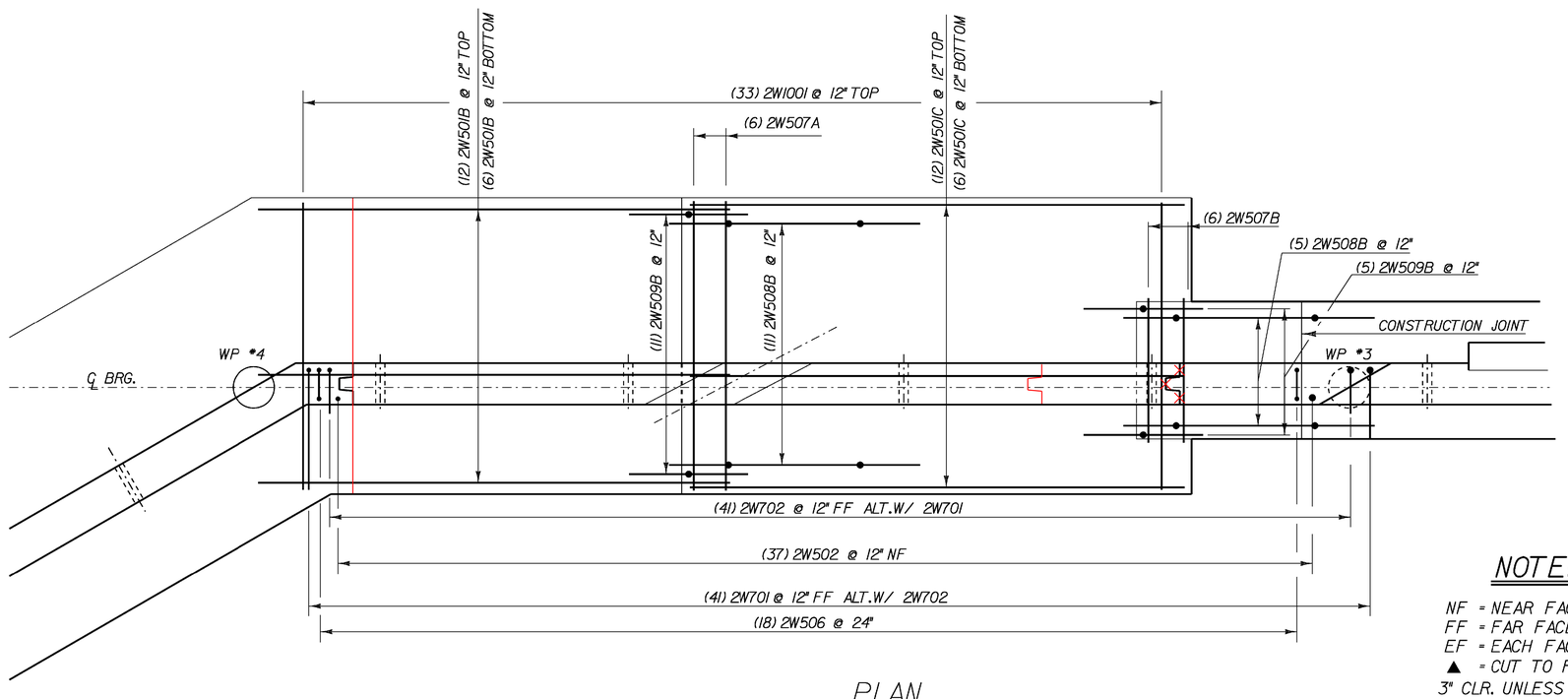
WINGWALL #1 REINFORCING

PROJECT NAME:	WILLIAMSTOWN
PROJECT NUMBER:	BRS 0204(4)

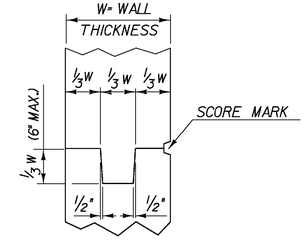
FILE NAME: 83ell\str.\sellabut1.dg		PLOT DATE:	07-APR-2008
PROJECT LEADER:	M.EVANS_MONGEON	DRAWN BY:	G.ROKES
DESIGNED BY:	M.EVANS-MONGEON	CHECKED BY:	U. STANLEY
IPARM sellsub7.1		SHEET	59 OF 108



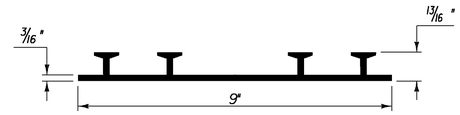
ELEVATION



PLAN

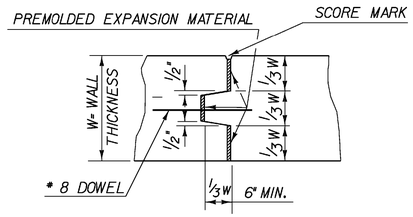


TYPICAL CONCRETE CONSTRUCTION JOINT

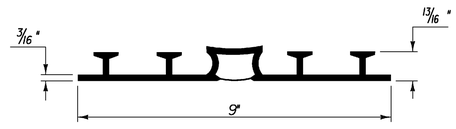


P.V.C. WATERSTOP FOR CONSTRUCTION JOINTS

THE COSTS FOR P.V.C.WATERSTOP SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONCRETE. OTHER CONFIGURATIONS MAY BE USED UPON APPROVAL OF THE STRUCTURES ENGINEER.



TYPICAL CONCRETE EXPANSION JOINT



P.V.C. WATERSTOP FOR EXPANSION JOINTS

THE COSTS FOR P.V.C.WATERSTOP SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONCRETE. OTHER CONFIGURATIONS MAY BE USED UPON APPROVAL OF THE STRUCTURES ENGINEER.

WINGWALL #2

SCALE 3/8" = 1'-0

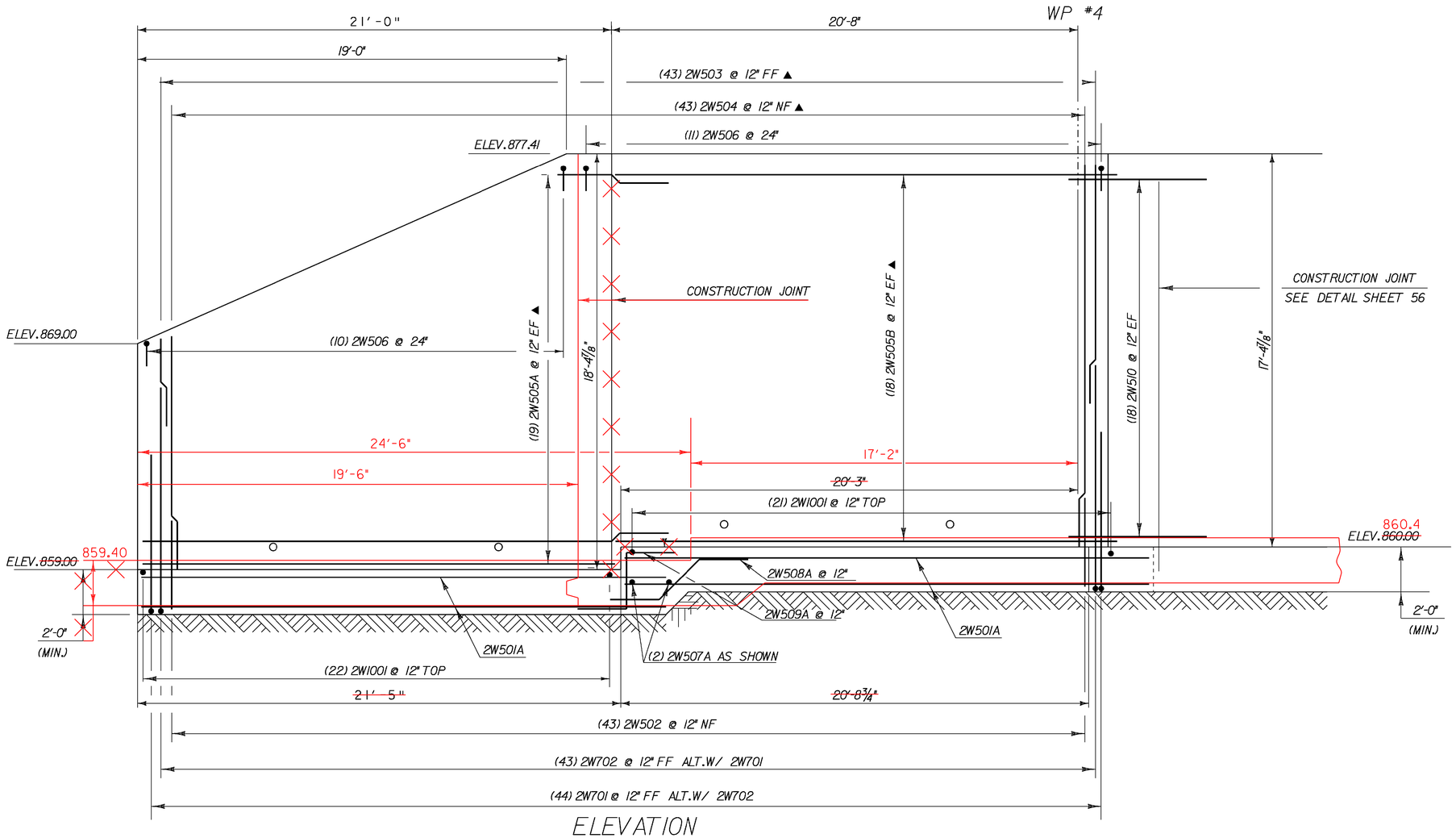
NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.

WINGWALL #2 REINFORCING SHEET 1

PROJECT NAME:	WILLIAMSTOWN
PROJECT NUMBER:	BRS 0204(4)

FILE NAME: 83ellI\str.\sellabutI.dg		PLOT DATE:	07-APR-2008
PROJECT LEADER:	M.EVANS.MONGEON	DRAWN BY:	G.ROKES
DESIGNED BY:	M.EVANS-MONGEON	CHECKED BY:	U. STANLEY
IPARM sellsub8.I		SHEET	60 OF 108



WINGWALL #2

SCALE 3/8" = 1'-0

1 0 1 2 3 4

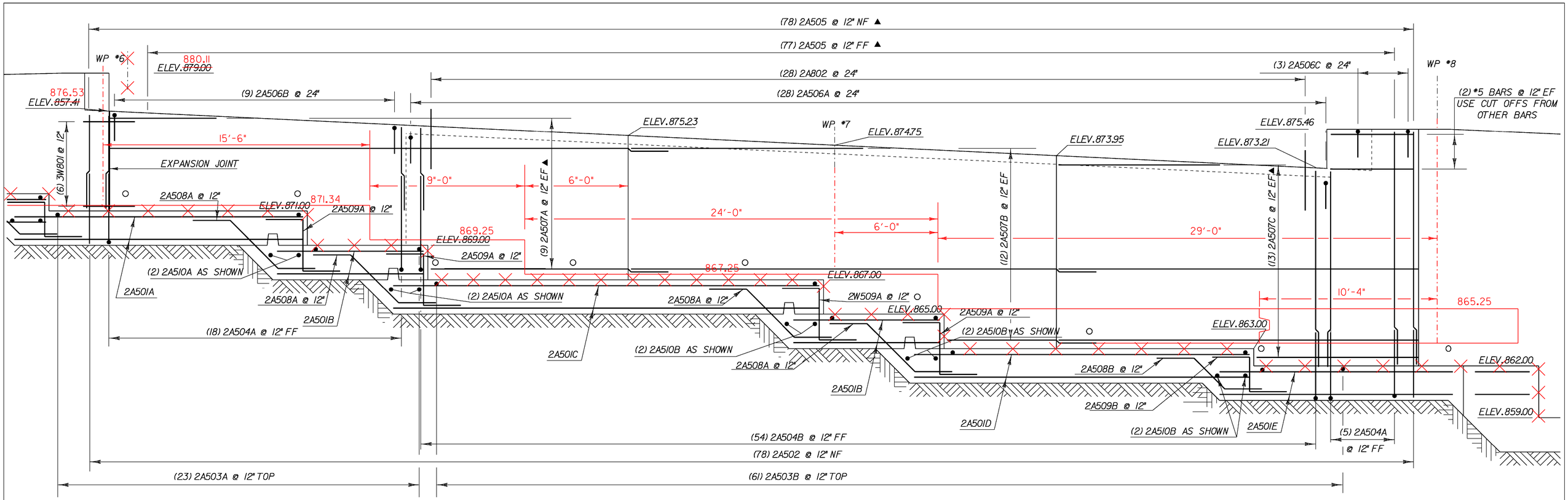
NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.

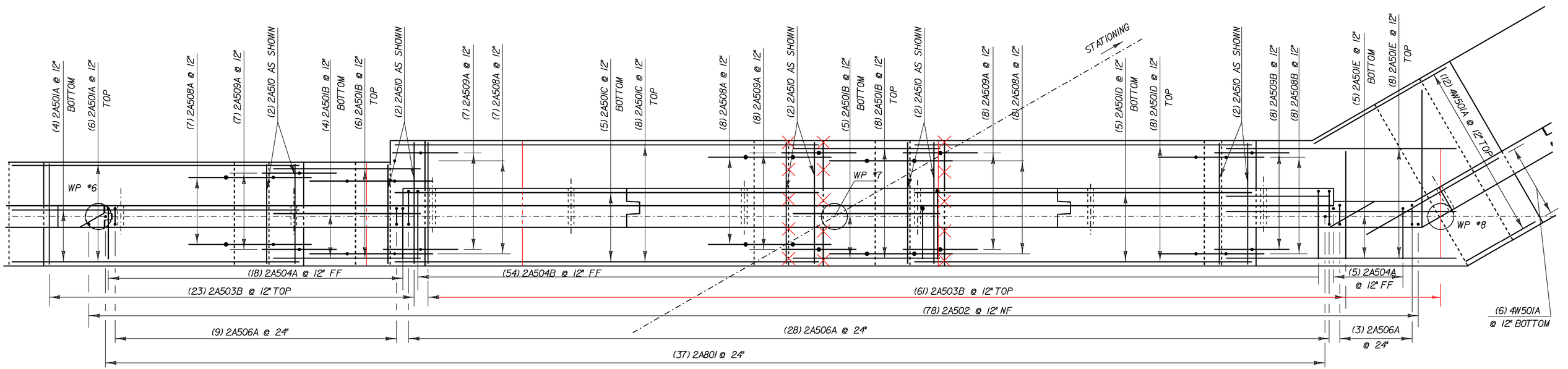
WINGWALL #2 REINFORCING SHEET 2

PROJECT NAME:	WILLIAMSTOWN
PROJECT NUMBER:	BRS 0204(4)

FILE NAME: 83ell\str.\sellabutl.dg		PLOT DATE:	07-APR-2008
PROJECT LEADER:	M.EVANS.MONGEON	DRAWN BY:	G.ROKES
DESIGNED BY:	M.EVANS-MONGEON	CHECKED BY:	U. STANLEY
IPARM sellsub9.1		SHEET	61 OF 108



ELEVATION



PLAN

ABUTMENT #2

SCALE 3/8" = 1'-0

0 1 2 3 4

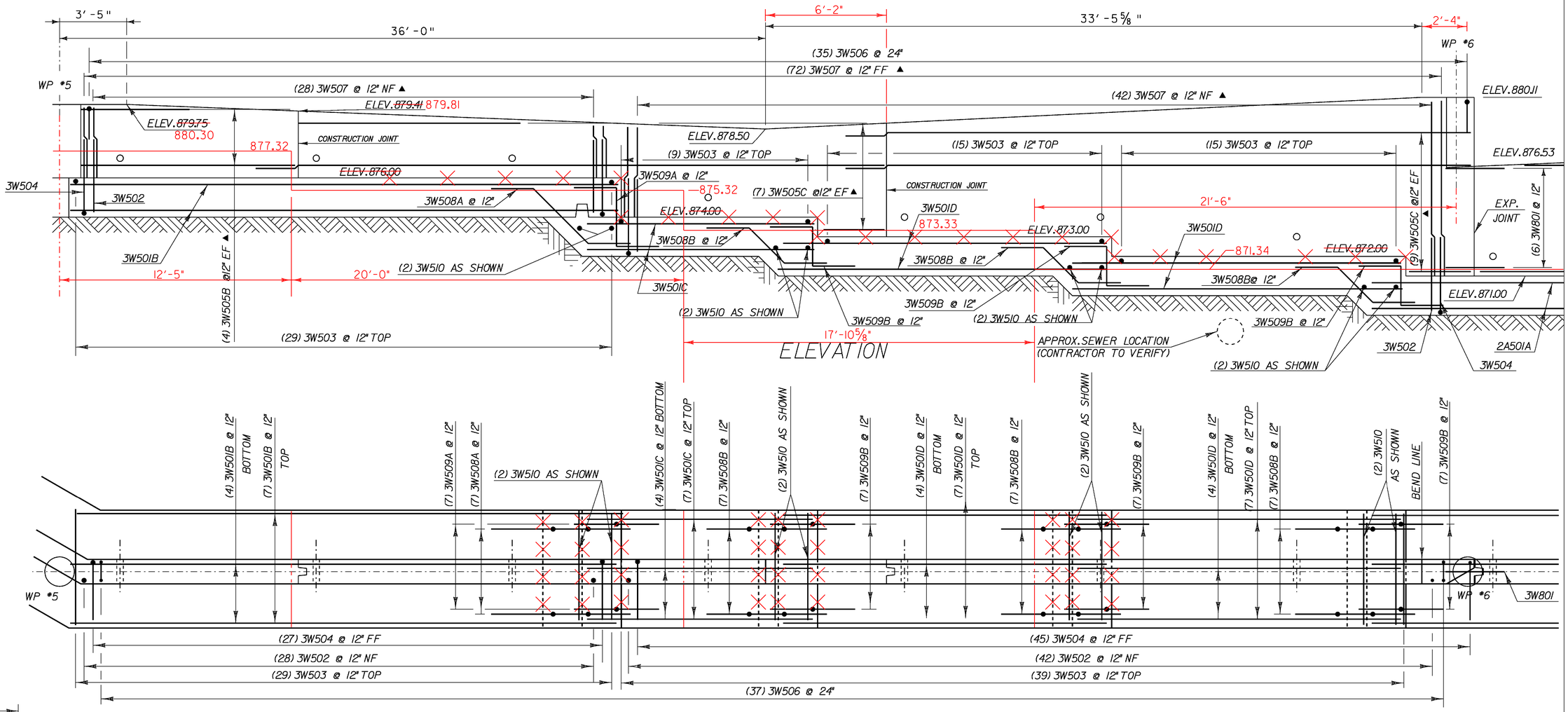
NOTE:

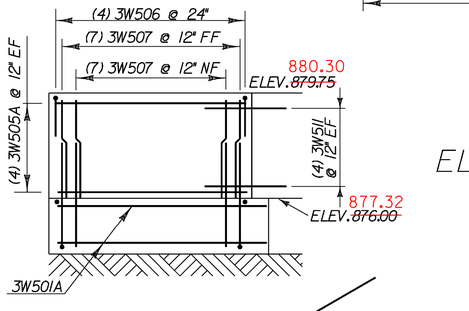
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.

ABUTMENT #2 REINFORCING

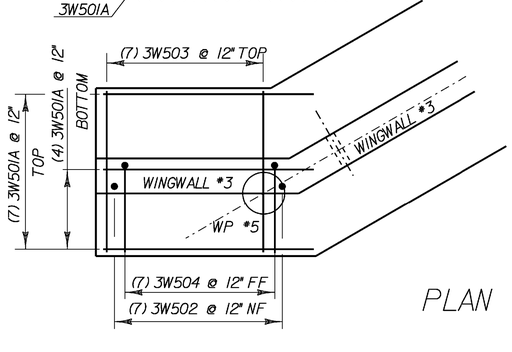
PROJECT NAME:	WILLIAMSTOWN
PROJECT NUMBER:	BRS 0204(4)

FILE NAME: 83ell\str\sellabut2.dgn	PLOT DATE: 07-APR-2008
PROJECT LEADER: M.EVANS-MONGEON	DRAWN BY: EVANS-MONGEON
DESIGNED BY: M.EVANS-MONGEON	CHECKED BY: U. STANLEY
IPARM sellsubl0.i	SHEET 62 OF 108





ELEVATION



PLAN

WINGWALL #3

SCALE 3/8" = 1'-0

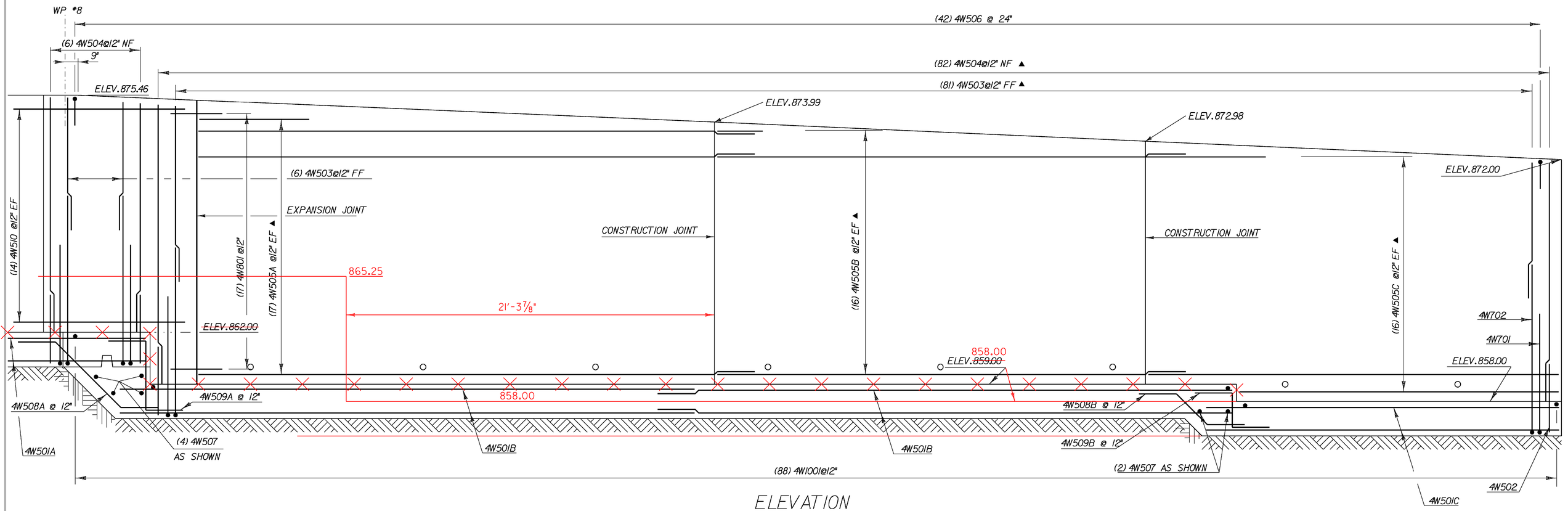
0 1 2 3 4

WINGWALL #3 REINFORCING

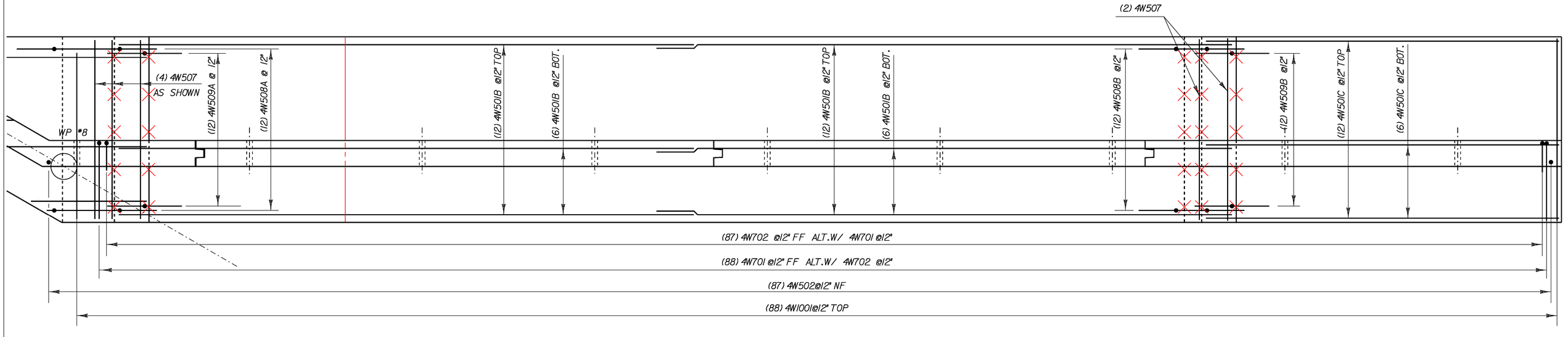
NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PROJECT NAME:	WILLIAMSTOWN
PROJECT NUMBER:	BRS 0204(4)
FILE NAME: 83ell\str\sellabut2.dgn	PLOT DATE: 07-APR-2008
PROJECT LEADER: M.EVANS-MONGEON	DRAWN BY: EVANS-MONGEON
DESIGNED BY: M.EVANS-MONGEON	CHECKED BY: U. STANLEY
IPARM sellsubll.i	SHEET 63 OF 108



ELEVATION



PLAN

WINGWALL #4

SCALE ⅜" = 1'-0

0 1 2 3 4

NOTE:

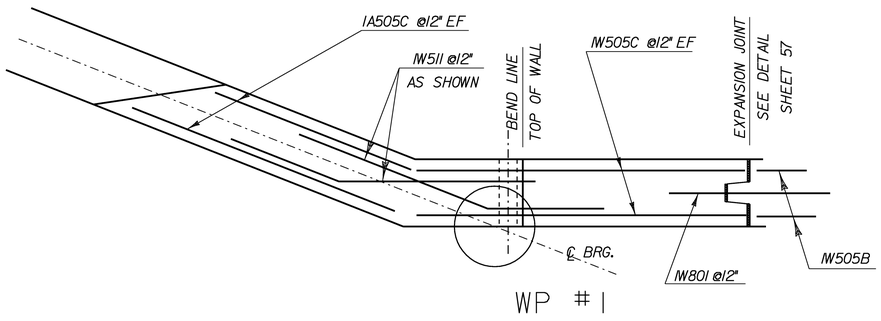
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.

WINGWALL #4 REINFORCING

PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

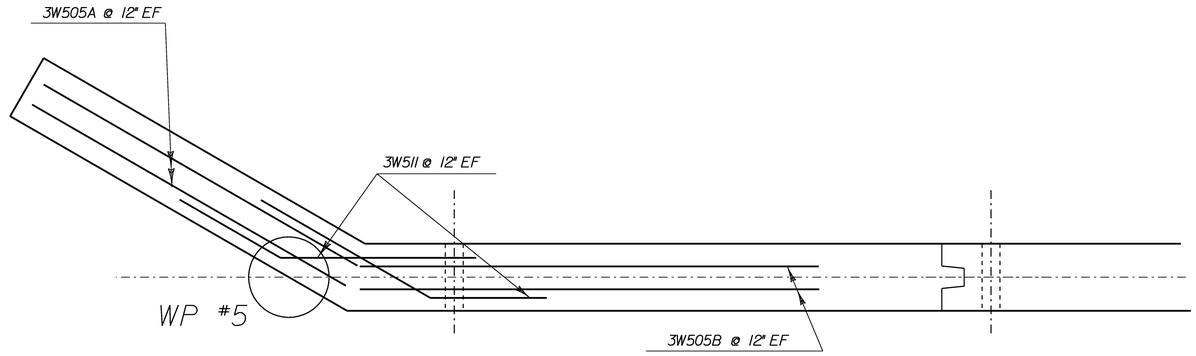
FILE NAME: 83ell\str\sellabut2.dgn
PROJECT LEADER: M.EVANS-MONGEON
DESIGNED BY: M.EVANS-MONGEON
IPARM sellsubl2.1

PLOT DATE: 07-APR-2008
DRAWN BY: EVANS-MONGEON
CHECKED BY: U. STANLEY
SHEET 64 OF 108



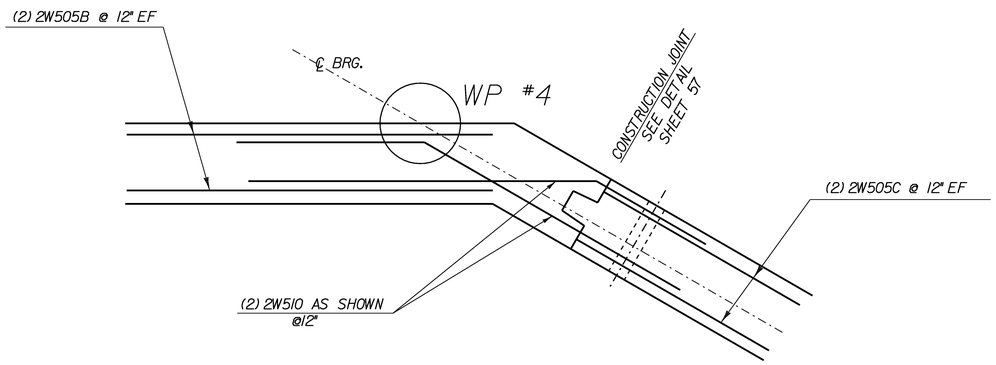
CORNER DETAIL
ABUTMENT #1 AND WINGWALL #1

SCALE 3/4" = 1'-0



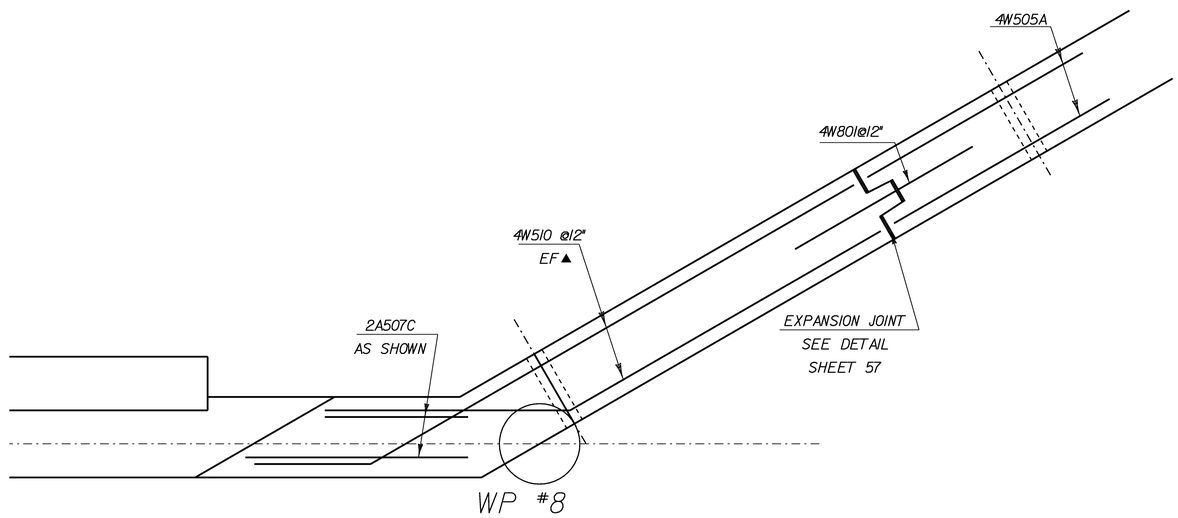
CORNER DETAIL
WINGWALL #3

SCALE 3/4" = 1'-0



CORNER DETAIL
WINGWALL #2

SCALE 3/4" = 1'-0



CORNER DETAIL
ABUTMENT #2 AND WINGWALL #4

SCALE 3/4" = 1'-0

NOTE:

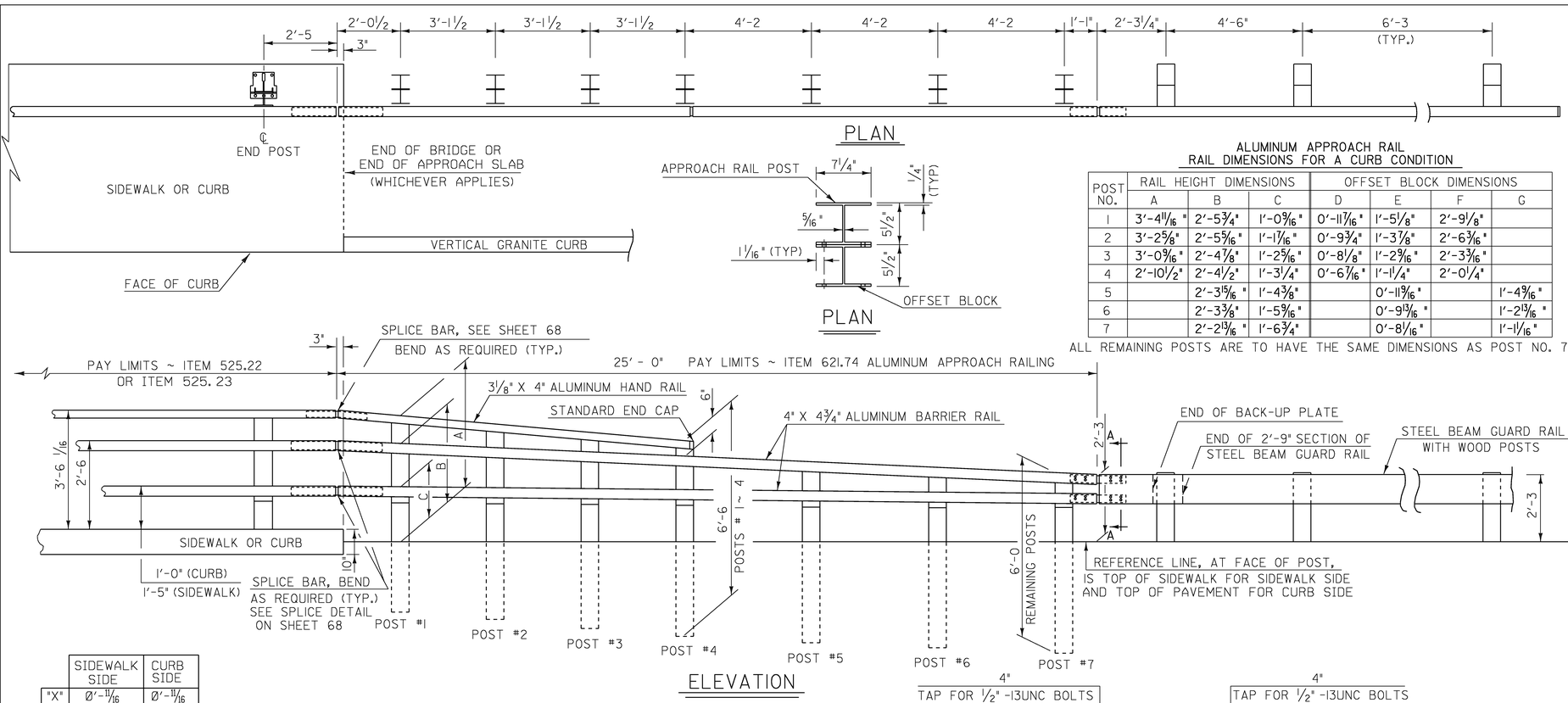
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
= CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.

CORNER REINFORCING DETAILS

PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83ell\str.\sellabut1.dg
PROJECT LEADER: M.EVANS.MONGEON
DESIGNED BY: M.EVANS-MONGEON
IPARM sellsubl3.1

PLOT DATE: 07-APR-2008
DRAWN BY: G.ROKES
CHECKED BY: U.STANLEY
SHEET 65 OF 108



PLAN

PLAN

ALUMINUM APPROACH RAIL
RAIL DIMENSIONS FOR A CURB CONDITION

POST NO.	RAIL HEIGHT DIMENSIONS			OFFSET BLOCK DIMENSIONS			
	A	B	C	D	E	F	G
1	3'-4 11/16"	2'-5 3/4"	1'-0 9/16"	0'-11 7/16"	1'-5 1/8"	2'-9 1/8"	
2	3'-2 5/8"	2'-5 5/16"	1'-1 7/16"	0'-9 3/4"	1'-3 7/8"	2'-6 3/16"	
3	3'-0 9/16"	2'-4 7/8"	1'-2 5/16"	0'-8 1/8"	1'-2 9/16"	2'-3 3/16"	
4	2'-10½"	2'-4½"	1'-3¼"	0'-6 7/16"	1'-1¼"	2'-0¼"	
5		2'-3 15/16"	1'-4 3/8"		0'-11 9/16"		1'-4 9/16"
6		2'-3 3/8"	1'-5 1/16"		0'-9 13/16"		1'-2 13/16"
7		2'-2 1/16"	1'-6 3/4"		0'-8 1/16"		1'-1 1/16"

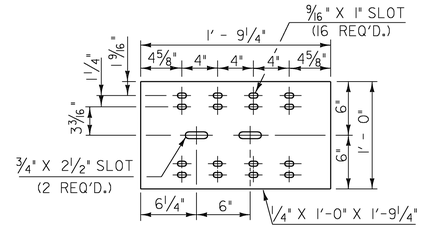
ALL REMAINING POSTS ARE TO HAVE THE SAME DIMENSIONS AS POST NO. 7

ELEVATION

ALUMINUM APPROACH RAIL
RAIL DIMENSIONS FOR A SIDEWALK CONDITION

POST NO.	RAIL HEIGHT DIMENSIONS			OFFSET BLOCK DIMENSIONS			
	A	B	C	D	E	F	G
1	3'-4 11/16"	2'-5 3/4"	1'-5 3/16"	0'-11 7/16"	1'-0 9/16"	2'-4 9/16"	
2	3'-2 5/8"	2'-5 5/16"	1'-5 7/16"	0'-9 3/4"	0'-11 7/8"	2'-2 3/16"	
3	3'-0 9/16"	2'-4 7/8"	1'-5 11/16"	0'-8 1/8"	0'-11 3/16"	1'-11 7/8"	
4	2'-10½"	2'-4½"	1'-5 15/16"	0'-6 7/16"	0'-10 9/16"	1'-9 9/16"	
5		2'-3 15/16"	1'-6 5/16"		0'-9 5/8"		1'-2 5/8"
6		2'-3 3/8"	1'-6 5/8"		0'-8 3/4"		1'-1 3/4"
7		2'-2 13/16"	1'-7"		0'-7 7/8"		1'-0 7/8"

ALL REMAINING POSTS TO HAVE THE SAME DIMENSIONS AS POST NO. 7

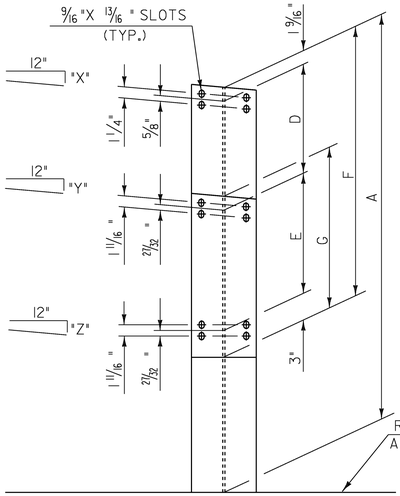


BACK-UP PLATE DETAILS

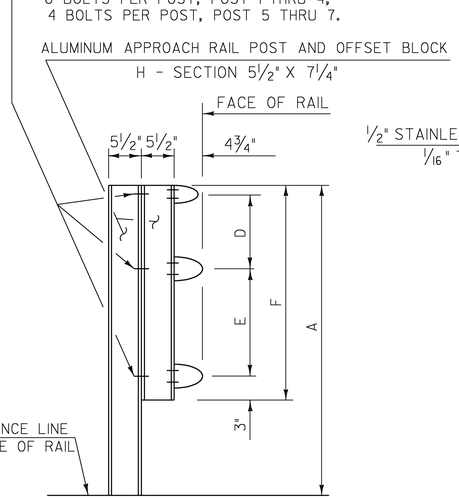
NOTES

1. POST 1 THROUGH 7 SHALL BE EXTRUDED ALUMINUM.
2. ALL STRUCTURAL STEEL SHALL BE AASHTO M270 GRADE 36 GALVANIZED AFTER FABRICATION.
3. ALL ITEMS NOT OTHERWISE INDICATED SHALL MEET THE SPECIFICATION REQUIREMENTS OF THE STANDARD SHEETS ON WHICH THEY ARE DETAILED.
4. SEE STANDARD G-1 FOR STEEL BEAM GUARD RAIL DETAILS. SEE SHEETS 67 AND 68 FOR ALUMINUM BRIDGE RAILING DETAILS.
5. THE COST OF ALL MATERIALS AND LABOR FOR THE SPLICE BETWEEN THE ALUMINUM APPROACH RAILING AND THE STEEL BEAM GUARD RAIL SHALL BE INCIDENTAL TO ITEM 621.74, ALUMINUM APPROACH RAILING.
6. DETAILS ARE SHOWN FOR TRANSITION TO A 3 RAIL ALUMINUM BRIDGE RAILING.
7. DIMENSIONS SHOWN ARE FROM A REFERENCE LINE AT THE FACE OF POST FOR A NORMAL CROWNED SECTION. APPROPRIATE CORRECTIONS SHALL BE MADE FOR CROSS SLOPES OTHER THAN A NORMAL SECTION.

	SIDEWALK SIDE	CURB SIDE
"X"	0'-11/16	0'-11/16
"Y"	0'-1/8"	0'-1/8"
"Z"	0'-1/16"	-0'-5/16"

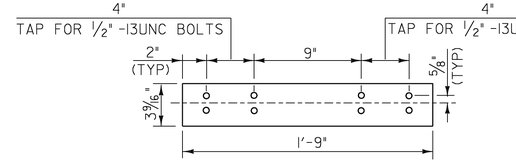


FRONT ELEVATION

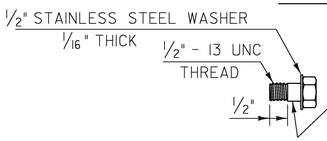


SIDE ELEVATION

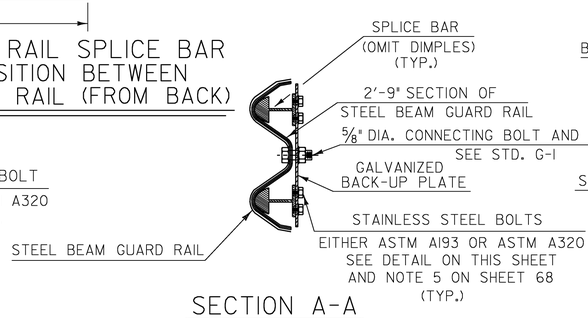
APPROACH RAIL DETAILS



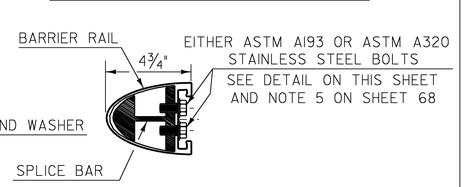
ELEVATION OF BARRIER RAIL SPLICE BAR
TO BE USED AT TRANSITION BETWEEN
APPROACH RAIL & GUARD RAIL (FROM BACK)



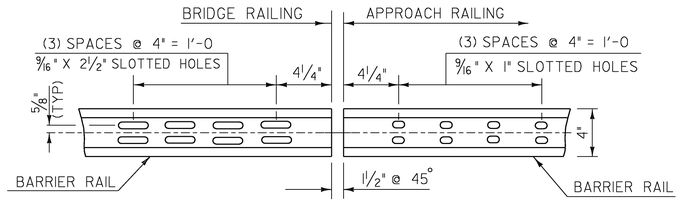
STAINLESS STEEL BOLT DETAILS



SECTION A-A



TYPICAL SECTION THROUGH
BARRIER RAIL SPLICE



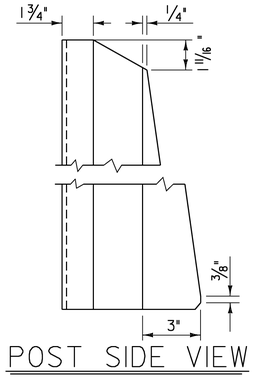
ELEVATION OF BARRIER RAIL (FROM BACK)

ALL DRAWINGS NTS

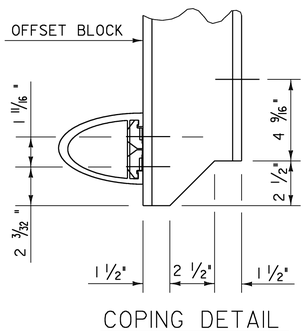
APPROACH RAIL DETAILS

PROJECT NAME:	WILLIAMSTOWN
PROJECT NUMBER:	BRS 0204(4)

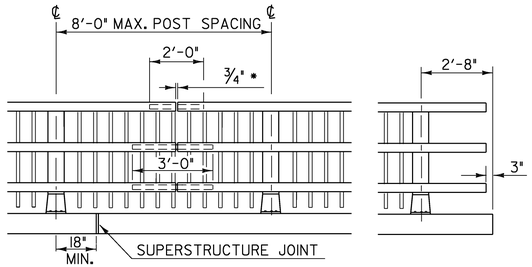
FILE NAME: sellbridgerail.dgn	PLOT DATE: 07-APR-2008
PROJECT LEADER: M. EVANS-MONGEON	DRAWN BY: U. STANLEY
DESIGNED BY: U. STANLEY	CHECKED BY: EVANS-MONGEON
lPARM s83ellrail	SHEET 66 OF 108



POST SIDE VIEW

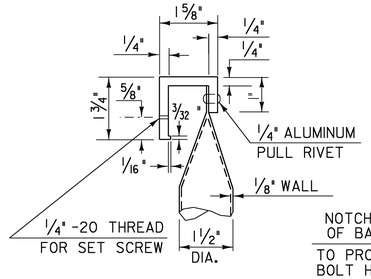


COPING DETAIL

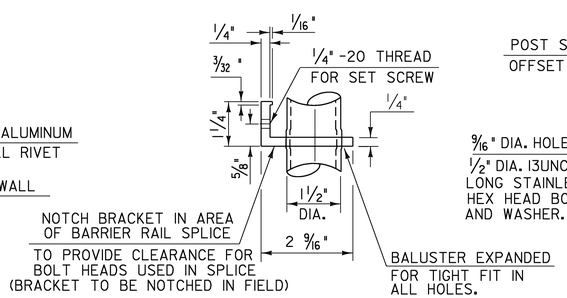


FRONT ELEVATION OF THREE RAIL WITH SPINDLES

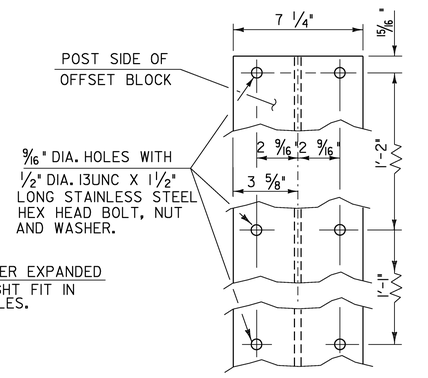
NOTE : RAIL POSTS ARE TO BE SET NORMAL TO GRADE UNLESS OTHERWISE DESIGNATED ON BRIDGE PLANS. ALL DIMENSIONS ARE TYPICAL UNLESS OTHERWISE DESIGNATED ON BRIDGE PLANS.



DETAIL A



DETAIL B



OFFSET BLOCK CONNECTION

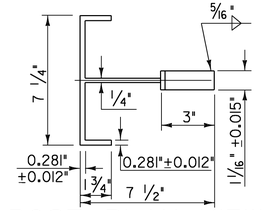
REFLECTORS TO BE ERECTED EVERY 30 FEET (OR CLOSEST POST) WITH 2 NO. 8 X 3/4" SELF-TAPPING SCREWS.

REFLECTORS SHALL MEET SPECIFICATION REQUIREMENTS FOR ASTM B209 ALLOY 5052-H32.

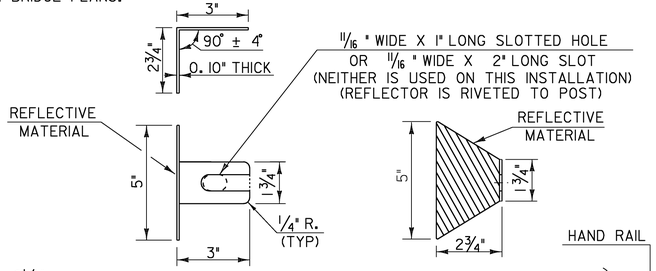
REFLECTIVE MATERIAL SHALL MEET THE REQUIREMENTS OF SUBSECTION 750.08 AND SHALL BE OF ASTM TYPE III SHEETING SILVER OR AMBER. AMBER IS TO BE INSTALLED ON THE DRIVER'S LEFT AND SILVER ON THEIR RIGHT.

ON BRIDGES WITH A SIDEWALK, REFLECTORS ARE NOT TO BE INSTALLED ON THE SIDEWALK SIDE OF THE BRIDGE (I.E. REFLECTORS INSTALLED ONLY ON THE CURB SIDE AND ON THE APPROACH RAIL ON THE CURB SIDE)

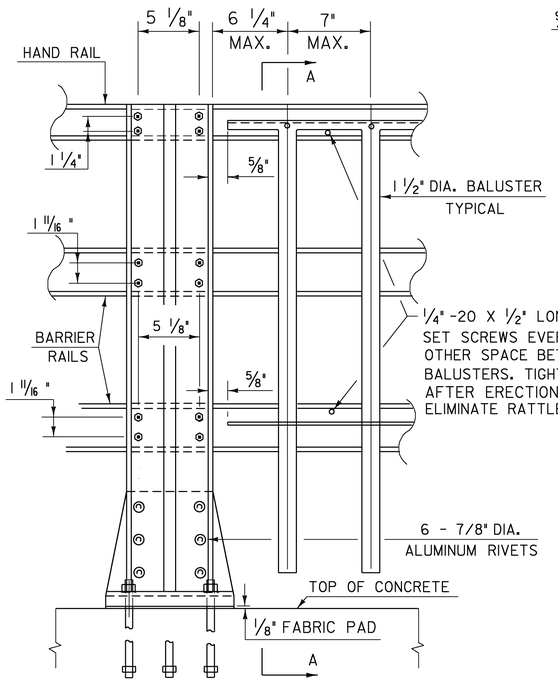
PAYMENT SHALL BE INCIDENTAL TO ALL OTHER ITEMS.



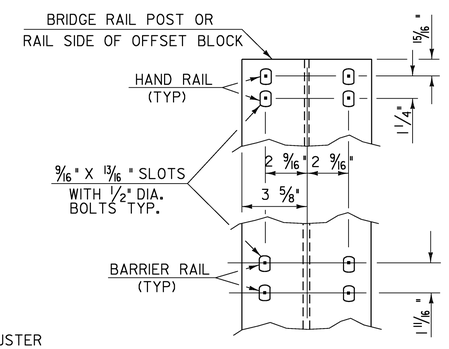
POST PLAN VIEW



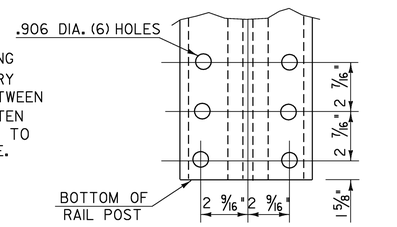
REFLECTOR DETAILS



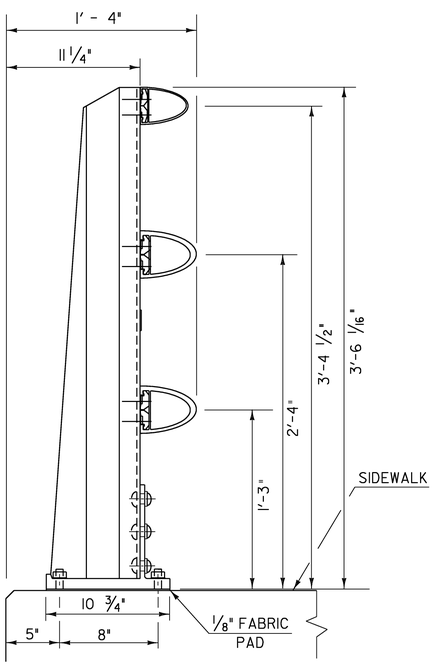
OUTSIDE ELEVATION OF THREE RAIL POST & SPINDLES *



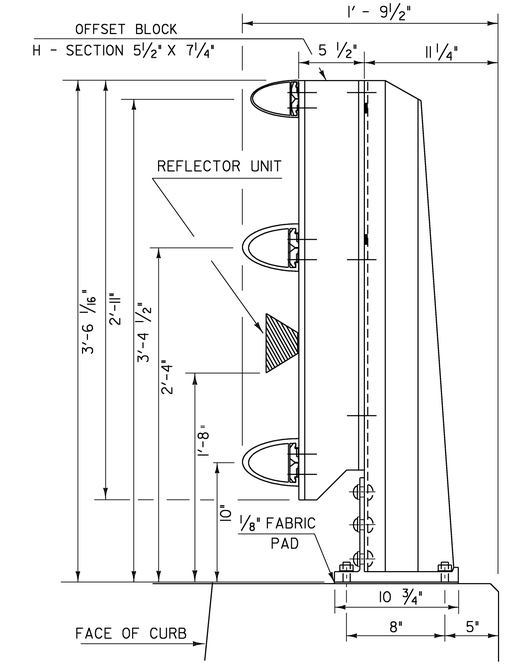
RAIL CONNECTION



POST BASE BOLT HOLE DETAILS

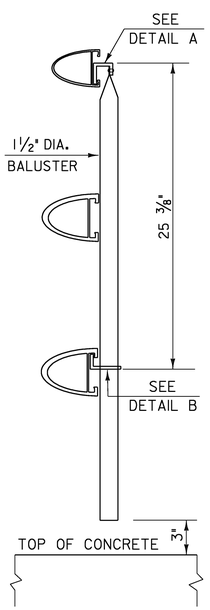


SIDE ELEVATION OF THREE RAIL TO BE USED ON SIDEWALK SIDE



SIDE ELEVATION OF THREE RAIL TO BE USED ON CURB SIDE

RAIL POST DETAILS ON SUPERSTRUCTURE



SECTION AA

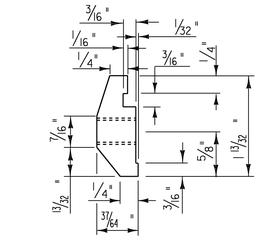
DETAILS OF SPINDLES FOR ALUMINUM RAILING

* NOTE : SPINDLES SHALL BE PROVIDED ON THE SIDEWALK SIDE OF THE BRIDGE, ONLY.

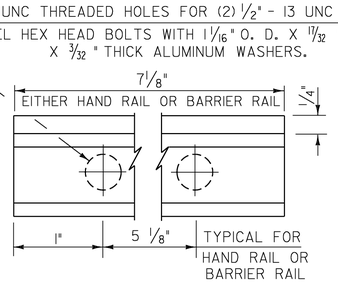
ALL DRAWINGS NTS

BRIDGE RAIL DETAIL SHEET 1 *

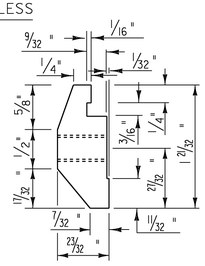
PROJECT NAME:	WILLIAMSTOWN
PROJECT NUMBER:	BRS 0204(4)
FILE NAME: sellbridgerail.dgn	PLOT DATE: 07-APR-2008
PROJECT LEADER: M. EVANS-MONGEON	DRAWN BY: U. STANLEY
DESIGNED BY: U. STANLEY	CHECKED BY: EVANS-MONGEON
IPARM s83ellrail2	SHEET 67 OF 108



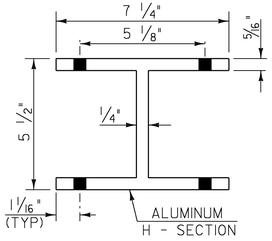
POST CONNECTION HAND RAIL SECTION



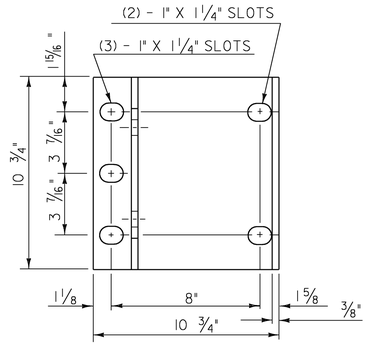
POST CONNECTION ELEVATION



POST CONNECTION BARRIER RAIL SECTION



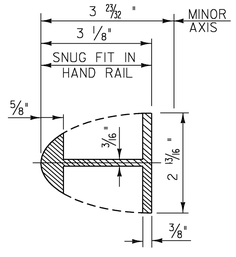
PLAN VIEW OF OFFSET BLOCK (TO BE USED ON SUPERSTRUCTURE ON CURB SIDE)



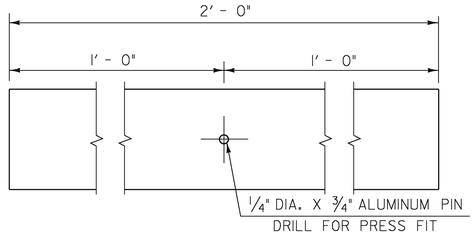
POST BASE PLAN

NOTES

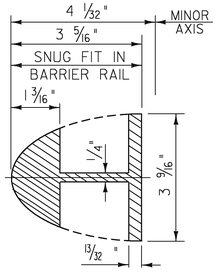
1. ANCHOR BOLTS, WASHERS AND HEAVY HEX NUTS MAY BE ANY OF THE FOLLOWING:
   - A. ASTM A449 GALVANIZED, OR
   - B. AASHTO M164 (ASTM A325) GALVANIZED
   - C. BOLTS AND WASHERS OF STAINLESS STEEL ASTM A276, TYPE 304 (MINIMUM ULTIMATE STRENGTH OF 100,000 PSI) WITH STAINLESS STEEL NUTS OF ASTM A194, GRADE 8NA.
2. ALUMINUM POSTS, POST BASES, SPLICE BARS, CONNECTION BARS, RAILS AND BALUSTER FRAMES SHALL CONFORM TO ASTM B221 ALLOY 6061-T6 OR ALLOY 6351-T5. MINIMUM ALLOWABLE STRESS F_y = 35,000 PSI.
3. ALUMINUM BALUSTER TUBES SHALL CONFORM TO ASTM B210 ALLOY 6061-T5 OR 6063-T5.
4. ALUMINUM RAIL END CAPS SHALL CONFORM TO ASTM B26 ALLOY 356-T6.
5. THE POST, RAIL, AND OFFSET BLOCK CONNECTION BOLTS SHALL BE EITHER ASTM A193 OR ASTM A320. EITHER ONE SHALL BE CLASS 1, B8 GRADE AISI 304 WITH AN ULTIMATE TENSILE STRENGTH OF 75,000 PSI. NUTS FOR EITHER OF THE ABOVE BOLTS SHALL BE ASTM A194, GRADE 8, STAINLESS STEEL WITH AN ULTIMATE TENSILE STRENGTH OF 75,000 PSI.
6. SET SCREWS FOR ATTACHING BALUSTERS TO RAILING SHALL BE ASTM F880, TYPE 303 MATERIAL.
7. RIVETS SHALL BE COLD DRIVEN HIGH BUTTON HEAD "CONE POINT", CONFORMING TO ASTM B316 ALLOY 6061-T6.
8. THE ANCHOR PLATE FOR THE POST ANCHOR ASSEMBLY SHALL BE ASTM A36 STRUCTURAL STEEL.
9. WELDING SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION 506.10 USING THE GMAW-INERT GAS PROCESS AND AWS ER 5356 ELECTRODE WIRE.
10. UNLESS OTHERWISE SPECIFIED, ANCHOR BOLTS SHALL BE CAST INTO THE CONCRETE AS DETAILED.
11. BARRIER RAIL AND HAND RAIL SECTIONS, SHALL BE FULL LENGTH SECTIONS AND SHALL BE ATTACHED TO AT LEAST THREE POSTS.
12. ENDS OF RAILS SHALL BE CUT SQUARE AND GROUND FREE OF BURRS OR RAGGED EDGES. EXPOSED ENDS SHALL BE CAPPED.
13. THE CONCRETE CONTACT SURFACE AT THE POST BASE SHALL BE BUSH HAMMERED AND/OR SHIMMED AS REQUIRED FOR PROPER POST ALIGNMENT. POST HEIGHT ADJUSTMENTS LESS THAN 1/4" SHALL BE WITH 1/16" AND 1/8" SHIMS. CORRECTIONS EXCEEDING 1/4" SHALL BE WITH EPOXY MORTAR CONFORMING WITH SECTION 530. FABRIC BEARING PADS AND ANY REQUIRED SHIMS OR EPOXY MORTAR ARE SUBSIDIARY TO THE UNIT PRICE BID FOR THE RAILING.
14. SHIMS AND 1/8" FABRIC BEARING PADS SHALL BE 10 3/4" SQUARE WITH SLOTTED HOLES SIZED AND LOCATED THE SAME AS THE POST BASE DETAIL. FABRIC BEARING PADS SHALL CONFORM TO SUBSECTION 731.01 OR 731.02, SHIM MATERIAL SHALL BE ASTM B 209 ALLOY 1100-0.
15. EXTRUDED SECTIONS ARE DETAILED TO COMPLY WITH CURRENT AASHTO-AGC-ARTBA STANDARDS. MINOR VARIATIONS OF THE DETAILS SHOWN MAY BE CONSIDERED PROVIDING THEY DO NOT REDUCE THE STRENGTH CAPACITY OF THE RAIL SYSTEM.
16. ALUMINUM WASHERS SHALL BE ASTM B209 ALLOY ACLAD 2024-T4.



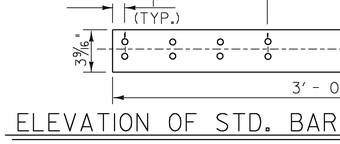
HAND RAIL SPLICE SECTION



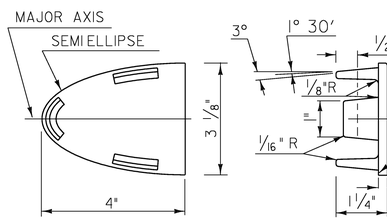
ELEVATION OF HAND RAIL SPLICE BAR



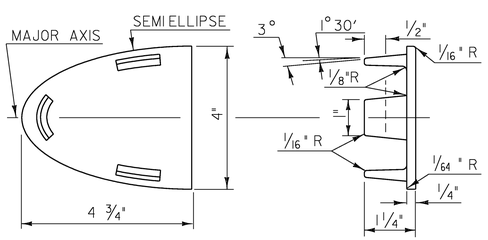
BARRIER RAIL SPLICE SECTION



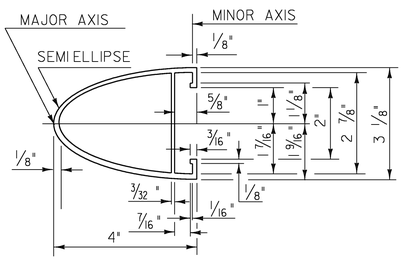
ELEVATION OF STD. BARRIER RAIL SPLICE BAR (FROM BACK)



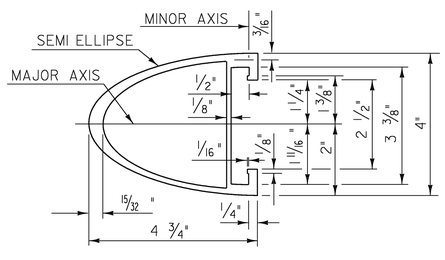
HAND RAIL END CAP



BARRIER RAIL END CAP

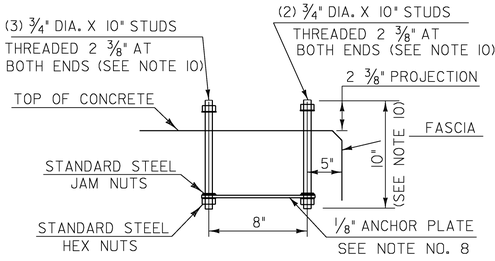


HAND RAIL SECTION

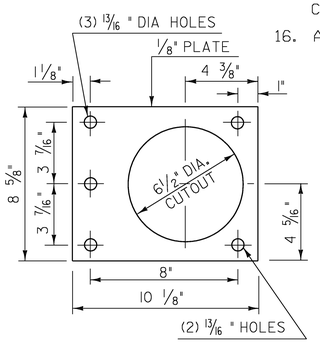


BARRIER RAIL SECTION

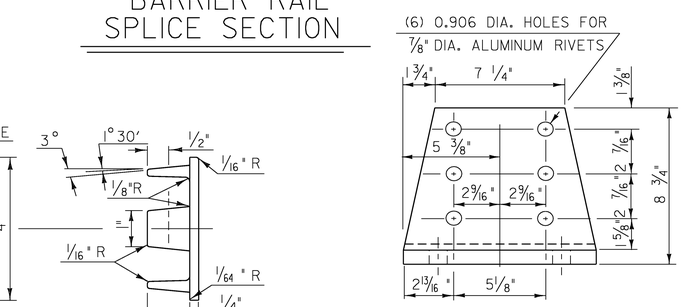
(SEE SHEET 66 FOR ELEVATION OF BARRIER RAIL)



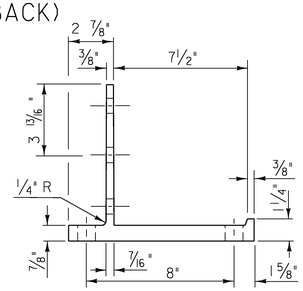
POST ANCHOR ASSEMBLY



ANCHOR PLATE



POST BASE FRONT ELEVATION



POST BASE SECTION

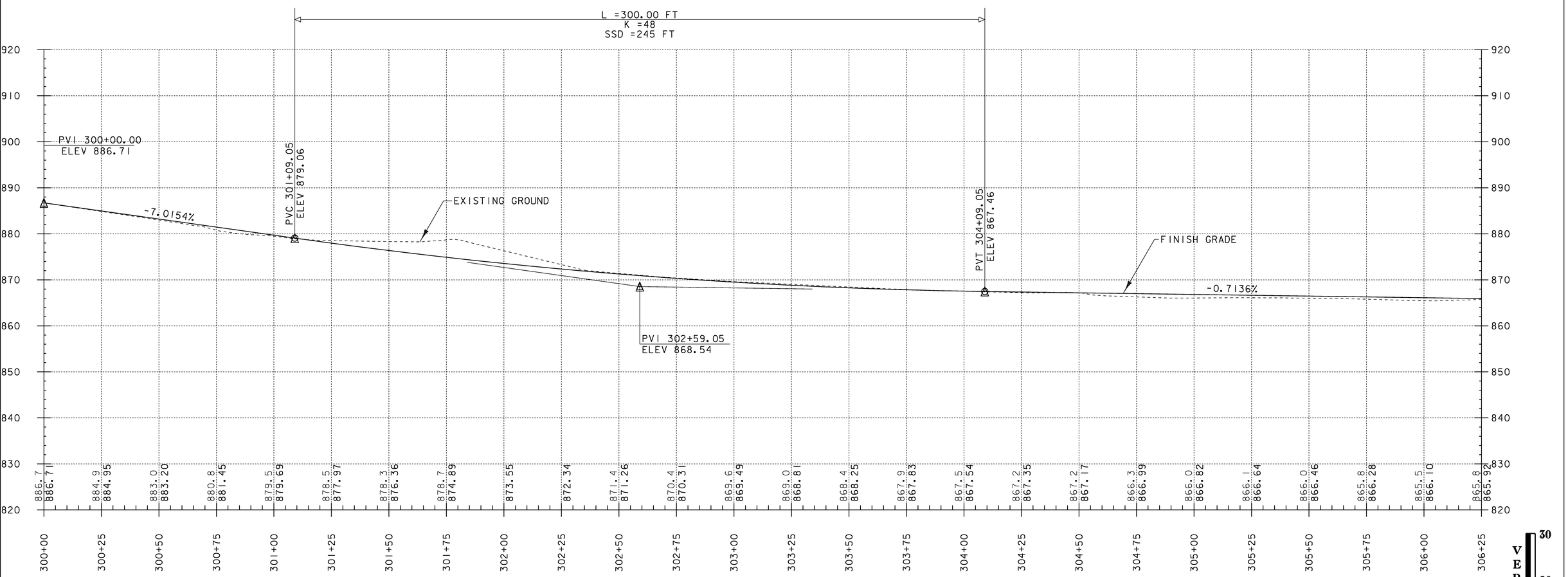
ALL DRAWINGS NTS

BRIDGE RAIL DETAIL SHEET 2

PROJECT NAME:	WILLIAMSTOWN
PROJECT NUMBER:	BRS 0204(4)

FILE NAME: sellbridgerail.dgn	PLOT DATE: 07-APR-2008
PROJECT LEADER: M. EVANS-MONGEON	DRAWN BY: U. STANLEY
DESIGNED BY: U. STANLEY	CHECKED BY: EVANS-MONGEON
IPARM s83ellrail13	SHEET 68 OF 108

DETOUR PROFILE



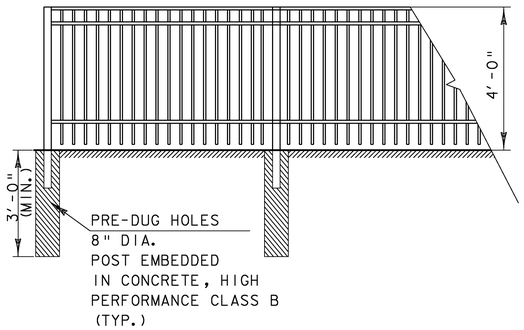
THE GRADES SHOWN TO THE NEAREST TENTH ARE THE ORIGINAL GROUND ELEVATIONS ALONG THE PROPOSED ALIGNMENT. THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE PROPOSED GRADES FOR THE NEW ALIGNMENT.

PEDESTRIAN HAND RAILING NOTES

PEDETSTRIAN HAND RAILING SYSTEM SHALL CONFORM TO THE REQUIREMENTS OF SPECIAL PROVISION SECTION 900.640 (PEDESTRIAN HAND RAILING)

SEE GENERAL NOTE # 6 AND SHEET 23 FOR PLACEMENT DETAILS.

PEDESTRIAN HAND RAILING IS TO BE PLACED FROM DETOUR STA. 305+25 LT TO STA. 305+65 LT AND IS TO BE PAID USING ITEM 900.640 SPECIAL PROVISION (PEDESTRIAN HAND RAILING).



PEDESTRIAN HAND RAILING ELEVATION

SCALE ½"= 1'-0

0 1 2

DETOUR PROFILE AND PEDESTRIAN HAND RAILING DETAILS

PROJECT NAME:	WILLIAMSTOWN
PROJECT NUMBER:	BRS 0204(4)

FILE NAME: 83elll/structures/sellxs.dgn	PLOT DATE: 07-APR-2008
PROJECT LEADER: EVANS-MONGEON	DRAWN BY: EVANS-MONGEON
DESIGNED BY: STANLEY	CHECKED BY: EVANS-MONGEON
s83elldetpf.l	SHEET 69 OF 108

STATE OF VERMONT
AGENCY OF TRANSPORTATION

REINFORCING STEEL SCHEDULE

ABUTMENT # 1

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
	10	5	14'- 0"	1A501A	STR	14'- 0"											
	10	5	18'- 0"	1A501B	STR	18'- 0"											
	10	5	34'- 6"	1A501C	STR	34'- 6"											
	10	5	19'- 5"	1A501D	STR	19'- 5"											
	10	5	8'- 2"	1A501E	STR	8'- 2"											
	79	5	3'- 11"	1A502	STR	3'- 11"											
	85	5	4'- 7"	1A503	STR	4'- 7"											
▲	20	5	32'- 2"	1A505A	STR	32'- 2"											
▲	16	5	20'- 0"	1A505B	STR	20'- 0"											
▲	20	5	14'- 5"	1A505C	STR	14'- 5"											
▲	10	5	23'- 2"	1A505D	STR	23'- 2"											
	10	5	4'- 7"	1A507	STR	4'- 7"											
+	156	5	7'- 8"	1A510	STR	7'- 8"											
	54	5	7'- 0"	1A504A	17		3'- 11"	3'- 1"									
	22	5	6'- 0"	1A504B	17		3'- 11"	2'- 1"									
	28	5	4'- 10"	1A506A	17		1'- 6"	1'- 10"	1'- 6"								
+	16	5	3'- 10"	1A506B	17		1'- 6"	0'- 10"	1'- 6"								
	6	5	9'- 3"	1A508A	19		2'- 2"	4'- 11"	2'- 2"								
	12	5	10'- 8"	1A508B	19		2'- 2"	6'- 4"	2'- 2"								
	6	5	7'- 10"	1A509A	20		2'- 2"	3'- 6"	2'- 2"								
	12	5	8'- 10"	1A509B	20		2'- 2"	4'- 6"	2'- 2"								
	37	8	3'- 0"	1A801	STR	3'- 0"											
+	30	8	4'- 8"	1A802	19		3'- 0"	1'- 8"									
	44	8	3'- 6"	1A803	STR	3'- 6"											
	44	8	3'- 0"	1A804	STR	3'- 0"											

WINGWALL # 1

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
	24	5	20'- 10"	1W501A	STR	20'- 10"											
▲	12	5	13'- 8"	1W501B	STR	13'- 8"											
	54	5	3'- 11"	1W502	STR	3'- 11"											
	52	5	5'- 6"	1W503	STR	5'- 6"											
	16	5	17'- 6"	1W505A	STR	17'- 6"											
	18	5	32'- 2"	1W505B	STR	32'- 2"											
	14	5	6'- 0"	1W505C	STR	6'- 0"											
▲	108	5	7'- 3"	1W507	STR	7'- 3"											
+	3	5	5'- 6"	1W510	STR	5'- 6"											
	54	5	7'- 0"	1W504	17		3'- 11"	3'- 1"									
	26	5	3'- 10"	1W506	17		1'- 6"	0'- 10"	1'- 6"								
	7	5	9'- 3"	1W508	19		2'- 2"	4'- 11"	2'- 2"								
	7	5	7'- 10"	1W509	20		2'- 2"	3'- 6"	2'- 2"								
+	15	5	4'- 5"	1W511	19		2'- 3"	2'- 2"			0'- 10"		2'- 1"				
+	8	8	3'- 0"	1W801	STR	3'- 0"											
	26	8	3'- 6"	1W802	STR	3'- 6"											
	26	8	3'- 0"	1W803	STR	3'- 0"											

WINGWALL # 2

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
	36	5	23'- 4"	2W501A	STR	23'- 4"											
	18	5	17'- 2"	2W501B	STR	17'- 2"											
	18	5	18'- 0"	2W501C	STR	18'- 0"											
	80	5	3'- 11"	2W502	STR	3'- 11"											
▲	84	5	12'- 1"	2W503	STR	12'- 1"											
▲	80	5	18'- 0"	2W504	STR	18'- 0"											
▲	38	5	23'- 0"	2W505A	STR	23'- 0"											
	36	5	22'- 0"	2W505B	STR	22'- 0"											
	36	5	30'- 0"	2W505C	STR	30'- 0"											
	10	5	10'- 3"	2W507A	STR	10'- 3"											
+	5	5	4'- 6"	2W507B	STR	4'- 6"											
	39	5	4'- 1"	2W506	17		1'- 6"	1'- 1"	1'- 6"								
	11	5	7'- 10"	2W508A	19		2'- 2"	3'- 6"	2'- 2"								
	16	5	12'- 1"	2W508B	19		2'- 2"	7'- 9"	2'- 2"								
	11	5	6'- 10"	2W509A	20		2'- 2"	2'- 6"	2'- 2"								
	16	5	9'- 10"	2W509B	20		2'- 2"	5'- 6"	2'- 2"								
+	37	5	8'- 1"	2W510	19		2'- 2"	5'- 11"			1'- 1"		0'- 11"				
	85	7	11'- 2"	2W701	17		6'- 10"	4'- 4"									
+	85	7	11'- 6"	2W702	17		9'- 10"	1'- 8"									
+	11	8	3'- 0"	2W801	STR	3'- 0"											
	36	8	3'- 6"	2W802	STR	3'- 6"											
	36	8	3'- 0"	2W803	STR	3'- 0"											
+	77	10	10'- 3"	2W1001	STR	10'- 3"											

ABUTMENT # 2

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
	10	5	16'- 6"	2A501A	STR	16'- 6"											
	23	5	8'- 6"	2A501B	STR	8'- 6"											
	13	5	24'- 6"	2A501C	STR	24'- 6"											
	13	5	19'- 6"	2A501D	STR	19'- 6"											
	13	5	13'- 8"	2A501E	STR	13'- 8"											
	78	5	3'- 11"	2A502	STR	3'- 11"											
	23	5	5'- 6"	2A503A	STR	5'- 6"											
	61	5	6'- 9"	2A503B	STR	6'- 9"											
	155	5	13'- 6"	2A505	STR	13'- 6"											
▲	18	5	32'- 4"	2A507A	STR	32'- 4"											
▲	24	5	27'- 0"	2A507B	STR	27'- 0"											
▲	26	5	21'- 1"	2A507C	STR	21'- 1"											
	4	5	5'- 6"	2A510A	STR	5'- 6"											
+	7	5	6'- 9"	2A510B	STR	6'- 9"											
	23	5	7'- 0"	2A504A	17		3'- 11"	3'- 1"									
	54	5	8'- 0"	2A504B	17		3'- 11"	4'- 1"									
	28	5	4'- 10"	2A506A	17		1'- 6"	1'- 10"	1'- 6"								
	9	5	3'- 10"	2A506B	17		1'- 6"	0'- 10"	1'- 6"								
	3	5	4'- 1"	2A506C	17		1'- 6"	1'- 1"	1'- 6"								
	30	5	9'- 3"	2A508A	19		2'- 2"	4'- 11"	2'- 2"								
	8	5	7'- 10"	2A508B	19		2'- 2"	3'- 6"	2'- 2"								
	30	5	7'- 10"	2A509A	20		2'- 2"	3'- 6"	2'- 2"								
+	9	5	6'- 10"	2A509B	20		2'- 2"	2'- 6"	2'- 2"								
	37	8	3'- 0"	2A801	STR	3'- 0"											
+	29	8	4'- 8"	2A802	19		3'- 0"	1'- 8"									
	36	8	3'- 6"	2A802	STR	3'- 6"											
	36	8	3'- 0"	2A802	STR	3'- 0"											

WINGWALL # 3

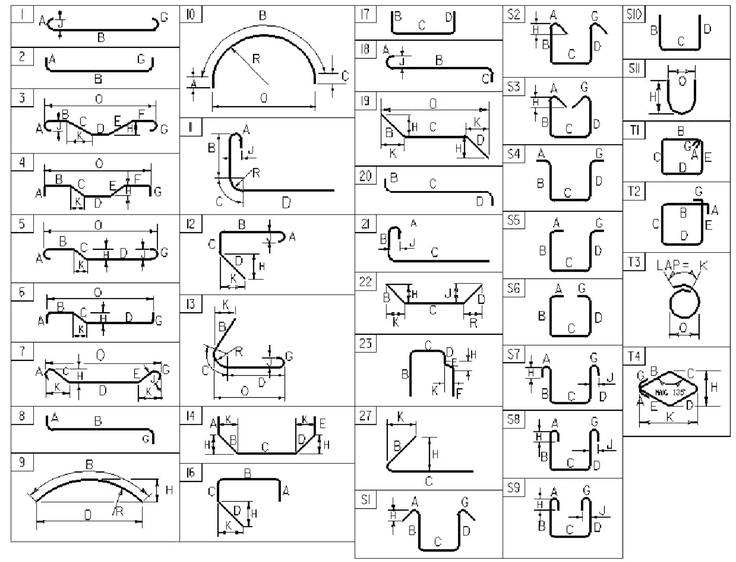
ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
	11	5	7'- 4"	3W501A	STR	7'- 4"											
	11	5	27'- 8"	3W501B	STR	27'- 8"											
	11	5	11'- 6"	3W501C	STR	11'- 6"											
	22	5	16'- 6"	3W501D	STR	16'- 6"											
	77	5	3'- 11"	3W502	STR	3'- 11"											
	75	5	5'- 6"	3W503	STR	5'- 6"											
	8	5	6'- 9"	3W505A	STR	6'- 9"											
	8	5	10'- 10"	3W505B	STR	10'- 10"											
	32	5	32'- 2"	3W505C	STR	32'- 2"											
	156	5	7'- 9"	3W507	STR	7'- 9"											
	8	5	5'- 6"	3W510	STR	5'- 6"											
	79	5	7'- 0"	3W504	17		3'- 1"	3'- 11"									
	39	5	3'- 10"	3W506	17		1'- 6"	0'- 10"	1'- 6"								
	7	5	9'- 3"	3W508A	19		2'- 2"	4'- 11"	2'- 2"								
	21	5	7'- 10"	3W508B	19		2'- 2"	3'- 6"	2'- 2"								
	7	5	7'- 10"	3W509A	20		2'- 2"	3'- 6"	2'- 2"								
	21	5	6'- 10"	3W509B	20		2'- 2"	2'- 6"	2'- 2"								
+	9	5	5'- 10"	3W511	19		2'- 2"	3'- 8"			1'- 1"		1'- 10"				
+	7	8	3'- 0"	3W801	STR	3'- 0"											
+	40	8	3'- 6"	3W802	STR	3'- 6"											
+	40	8	3'- 0"	3W803	STR	3'- 0"											

WINGWALL # 4

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
	18	5	4'- 5"	4W501A	STR	4'- 5"											
	36	5	33'- 6"	4W501B	STR	33'- 6"											
	18	5	20'- 6"	4W501C	STR	20'- 6"											
	87	5	3'- 11"	4W502	STR	3'- 11"											
▲	87	5	10'- 7"	4W503	STR	10'- 7"											
▲	88	5	16'- 1"	4W504	STR	16'- 1"											
▲	34	5	32'- 2"	4W505A	STR	32'- 2"											
▲	32	5	27'- 2"	4W505B	STR	27'- 2"											
▲	32	5	23'- 10"	4W505C	STR	23'- 10"											
	6	5	10'- 3"	4W507	STR	10'- 3"											
	42	5	4'- 1"	4W506	17		1'- 6"	1'- 1"	1'- 6"								
	12	5	10'- 8"	4W508A	19		2'- 2"	6'- 4"	2'- 2"								
	12	5	7'- 10"	4W508B	19		2'- 2"	3'- 6"	2'- 2"								
	12	5	8'- 10"	4W509A	20		2'- 2"	4'- 6"	2'- 2"								
	12	5	6'- 10"	4W509B	20		2'- 2"	2'- 6"	2'- 2"								
+	29	5	14'- 6"	4W510	19		10'- 6"	4'- 0"			5'- 3"		9'- 1"				
	88	7	11'- 2"	4W701	17		6'- 10"	4'- 4"									
+	88	7	11'- 6"	4W702	17		9'- 10"	1'- 8"									
+	18	8	3'- 0"	4W801	STR	3'- 0"											
+	44	8	3'- 6"	4W802	STR	3'- 6"											
+	44	8	3'- 0"	4W803	STR	3'- 0"											
+	89	10	10'- 3"	4W1001	STR	10'- 3"											

~ NOTES ~

1. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING NO. 18 SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31 (ASTM A 615-SI). ALL BARS SHALL BE GRADE 60, UNLESS OTHERWISE DESIGNATED.
2. FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS, AND OTHER STANDARD PRACTICE, SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE".
3. BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS.
5. "J" DIMENSION ON 180 DEGREE HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
6. "H" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
7. WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.
8. ▲ DENOTES BARS TO BE CUT IN FIELD.
9. + DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
10. △ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
11. E IN BAR MARK PREFIX DENOTES EPOXY COATED REINFORCING STEEL.



ASTM STANDARD REINFORCING BARS

BAR SIZE DESIGNATION	WEIGHT POUNDS PER FOOT	NOMINAL DIMENSIONS ROUND SECTION DIAMETER INCHES	AREA INCHES ^{2}	PERIMETER INCHES
#3	0.376	0.375	0.11	1.178
#4	0.668	0.500	0.20	1.571
#5	1.043	0.625	0.31	1.963
#6	1.502	0.750	0.44	2.356
#7	2.044	0.875	0.60	2.749
#8	2.670	1.000	0.79	3.142
#9	3.400	1.128	1.00	3.544
#10	4.303	1.270	1.27	3.990
#11	5.313	1.410	1.56	4.430
#14	7.65	1.693	2.25	5.32
#18	13.60	2.257	4.00	7.09

PROJECT NAME: Williamstown
PROJECT NUMBER: BRS 0204(4)

FILE NAME: engreinf_New.xls
PROJECT MANAGER: M. Evans-Mongeon
DESIGNED BY: M. Evans-Mongeon
REINFORCING STEEL SCHEDULE SHEET #1

PLOT DATE: 3/3/2008
DRAWN BY: M. Evans-Mongec
CHECKED BY: L. Russell
SHEET OF

STATE OF VERMONT
AGENCY OF TRANSPORTATION

REINFORCING STEEL SCHEDULE

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
	SLAB																
	21	5	36'- 6"	ES501	STR	36'- 6"											
+	77	5	36'- 10"	ES506	STR	36'- 10"											
	38	5	14'- 2"	ES502	S6	1'- 6"	1'- 7"	8'- 0"	1'- 7"			1'- 6"					
	31	5	9'- 3"	ES503	S5	1'- 6"	2'- 5"	1'- 5"	2'- 5"			1'- 6"					
	48	5	9'- 0"	ES504	20		4'- 10"	2'- 8"	1'- 6"								
	48	5	9'- 0"	ES505	17		4'- 10"	2'- 8"	1'- 6"								
+	50	11	38'- 1"	ES1101	1	1'- 7"	36'- 6"										
	APPROACH SLABS																
	52	5	24'- 6"	1EAS501	STR	24'- 6"											
+	52	5	24'- 6"	2EAS502	STR	24'- 6"											
+	36	9	25'- 9"	1EAS901	1	1'- 3"	24'- 6"										
	35	9	25'- 9"	2EAS901	1	1'- 3"	24'- 6"										

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

~ NOTES ~

1. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING NO. 18 SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31 (ASTM A 615-SI). ALL BARS SHALL BE GRADE 60, 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".
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8. ▲ DENOTES BARS TO BE CUT IN FIELD.
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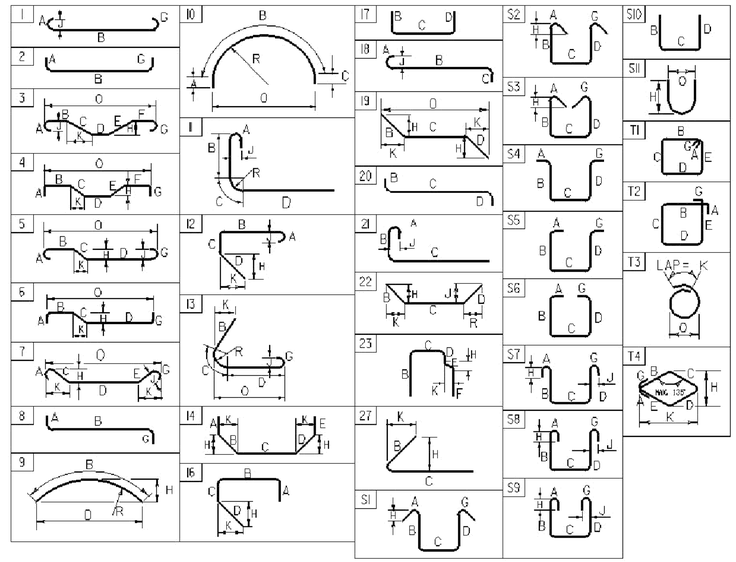
10. △ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
11. E DENOTES EPOXY COATED REINFORCING STEEL.



ASTM STANDARD REINFORCING BARS

BAR SIZE DESIGNATION	WEIGHT POUNDS PER FOOT	NOMINAL DIMENSIONS ROUND SECTION DIAMETER INCHES	AREA INCHES ^{2}	PERIMETER INCHES
#3	0.376	0.375	0.11	1.178
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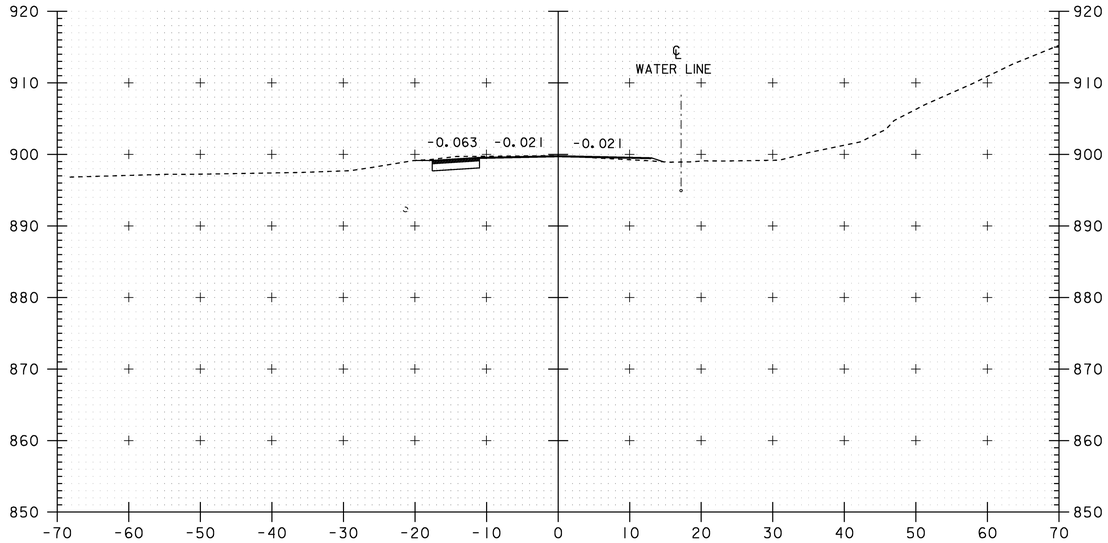
#6	1.502	0.750	0.44	2.356
#7	2.044	0.875	0.60	2.749
#8	2.670	1.000	0.79	3.142
#9	3.400	1.128	1.00	3.544
#10	4.303	1.270	1.27	3.990
#11	5.313	1.410	1.56	4.430
#14	7.65	1.693	2.25	5.32
#18	13.60	2.257	4.00	7.09

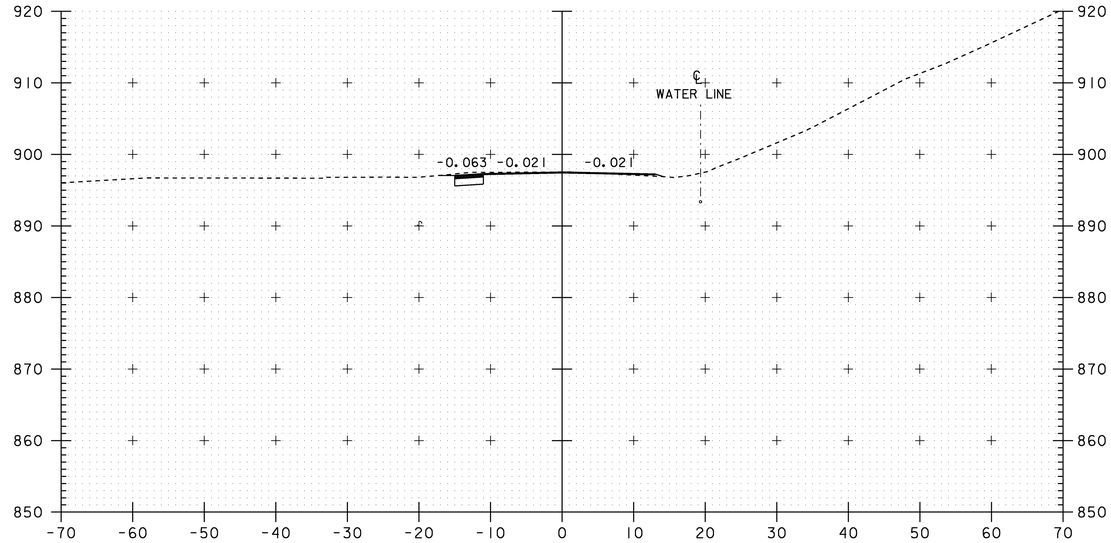
PROJECT NAME: Williamstown
PROJECT NUMBER: BRS 0204(4)

FILE NAME: engreinf_New.xls
PROJECT MANAGER: M. Evans-Mongeon
DESIGNED BY: M. Evans-Mongeon
REINFORCING STEEL SCHEDULE SHEET #2

PLOT DATE: 3/3/2008
DRAWN BY: M. Evans-Mongec
CHECKED BY: L. Russell
SHEET OF



215+20



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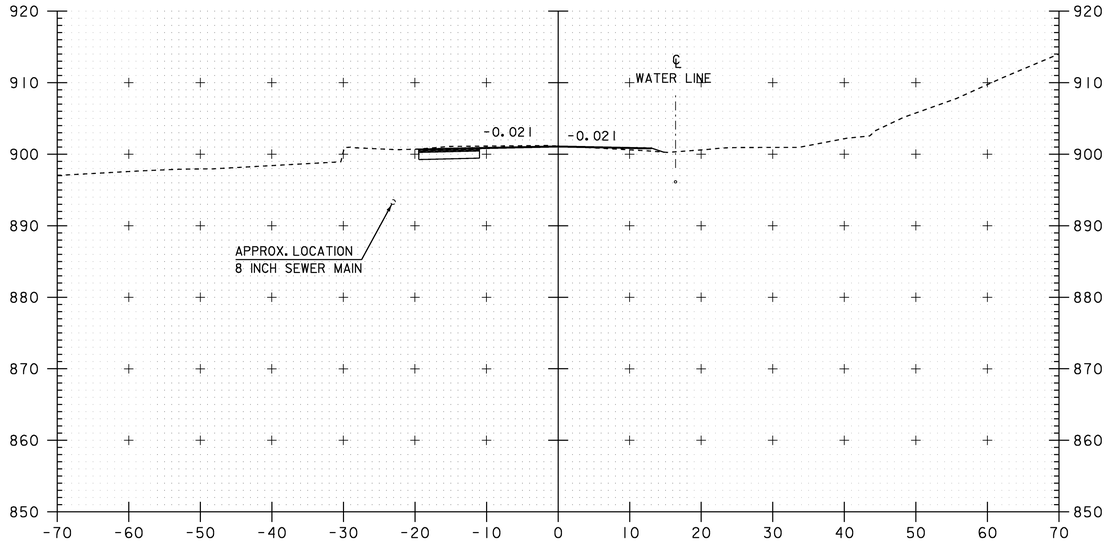
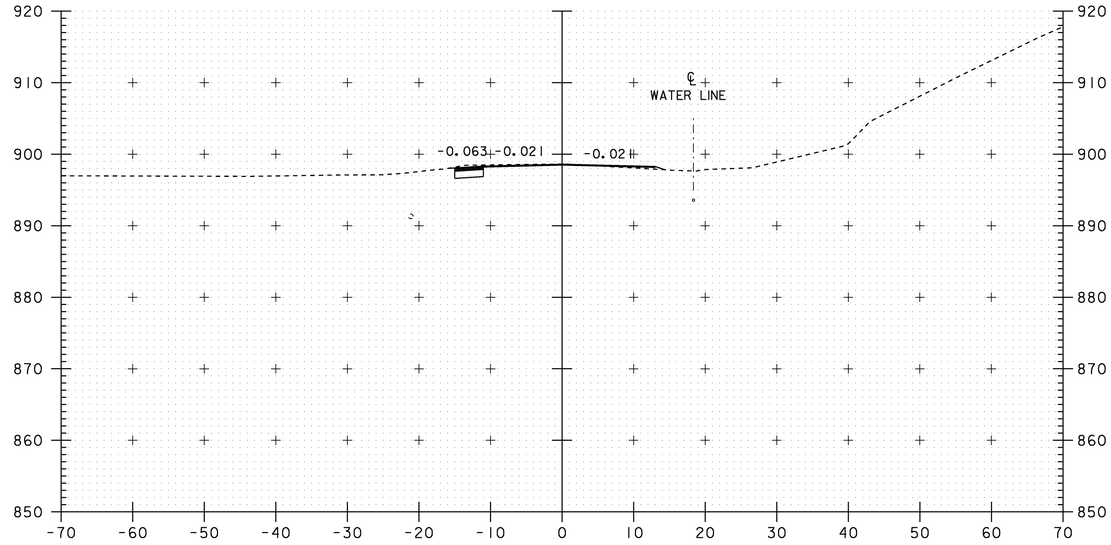


215+00
BEGIN APPROACH



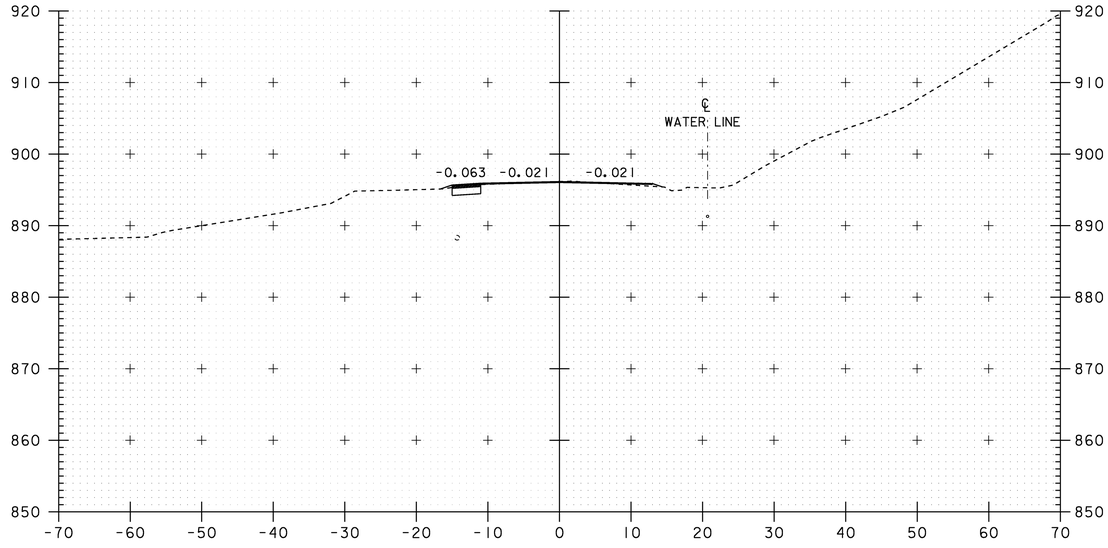
215+40

ROADWAY CROSS SECTIONS

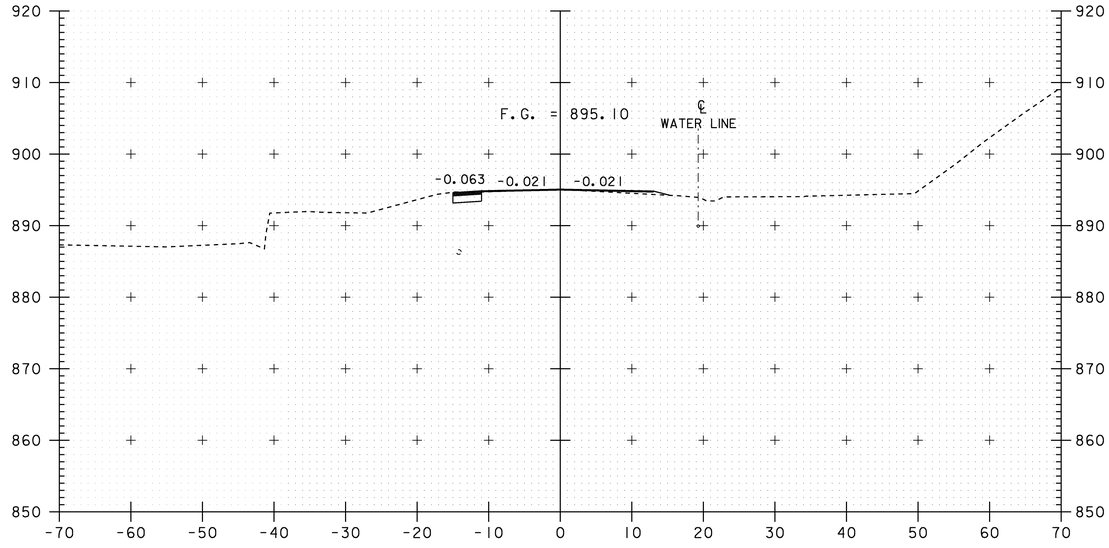
SCALE 1" = 10'-0
10 0 10

STA. 215+00 TO STA. 215+60

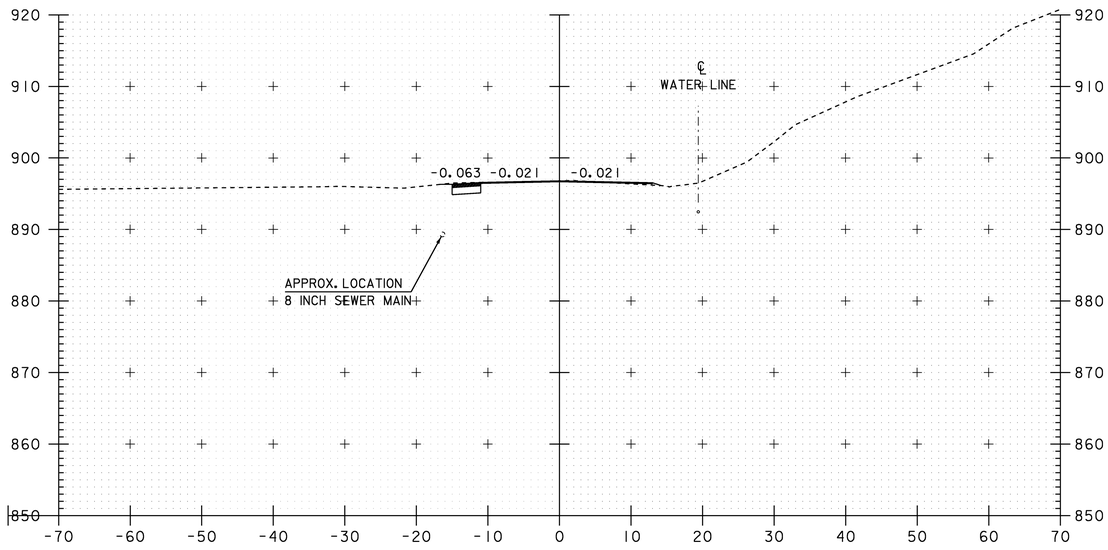
PROJECT NAME:	WILLIAMSTOWN
PROJECT NUMBER:	BRS 0204(4)
FILE NAME: 83ell\Srtuct\sellxs.dgn	PLOT DATE: 07-APR-2008
PROJECT LEADER: EVANS-MONGEON	DRAWN BY: G.ROKES
DESIGNED BY: U. STANLEY	CHECKED BY: EVANS-MONGEON
IPARM: sellxsl.I	SHEET 72 OF 108



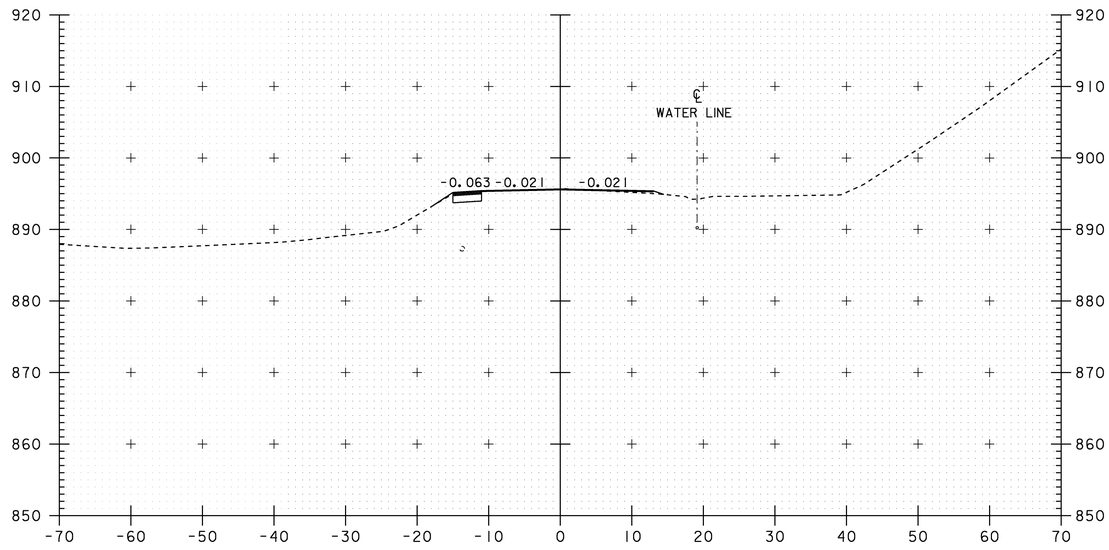
216+00



216+40



215+80



216+20

ROADWAY CROSS SECTIONS

SCALE 1" = 10'-0

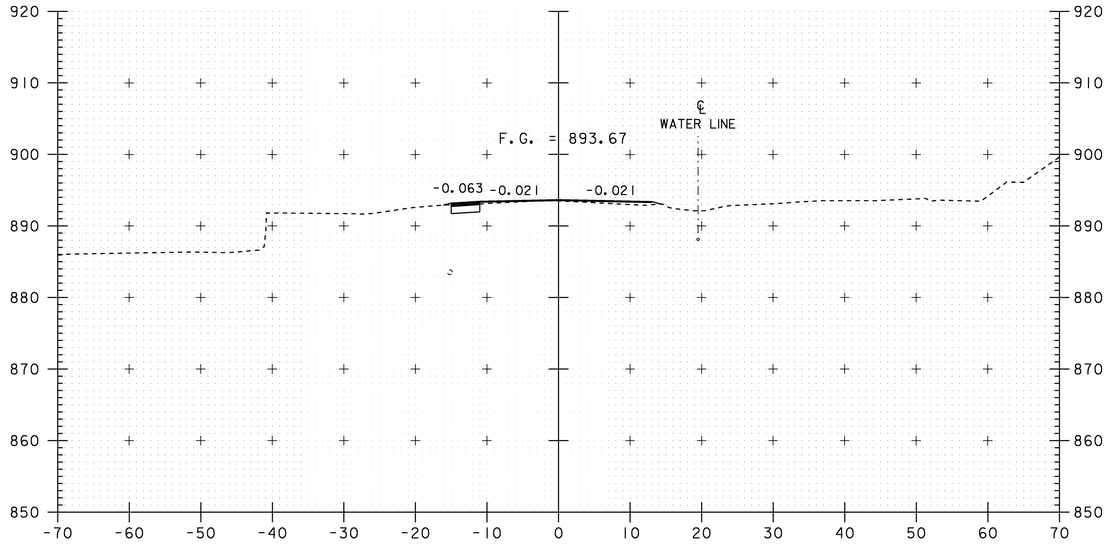
10 0 10

STA. 215+80 TO STA. 216+40

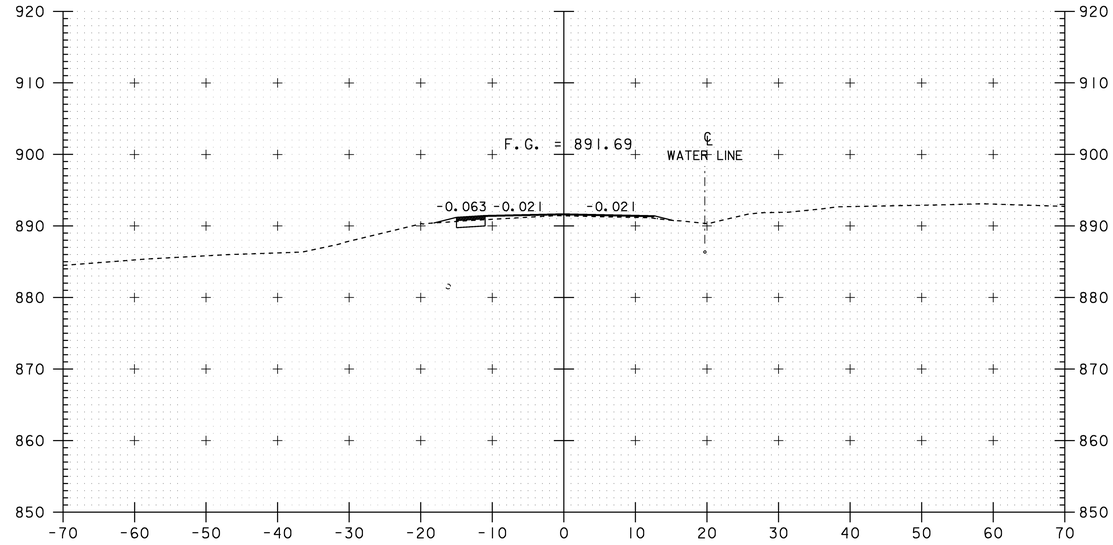
PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83ell\Srtuct\sellxs.dgn
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: U. STANLEY
IPARM: sellxs2.1

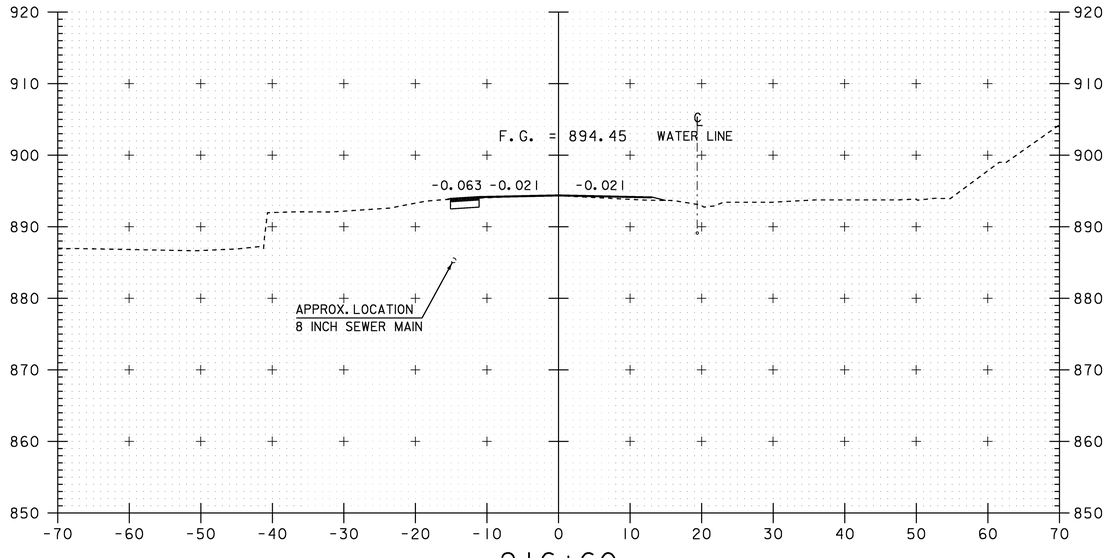
PLOT DATE: 07-APR-2008
DRAWN BY: G.ROKES
CHECKED BY: EVANS-MONGEON
SHEET 73 OF 108



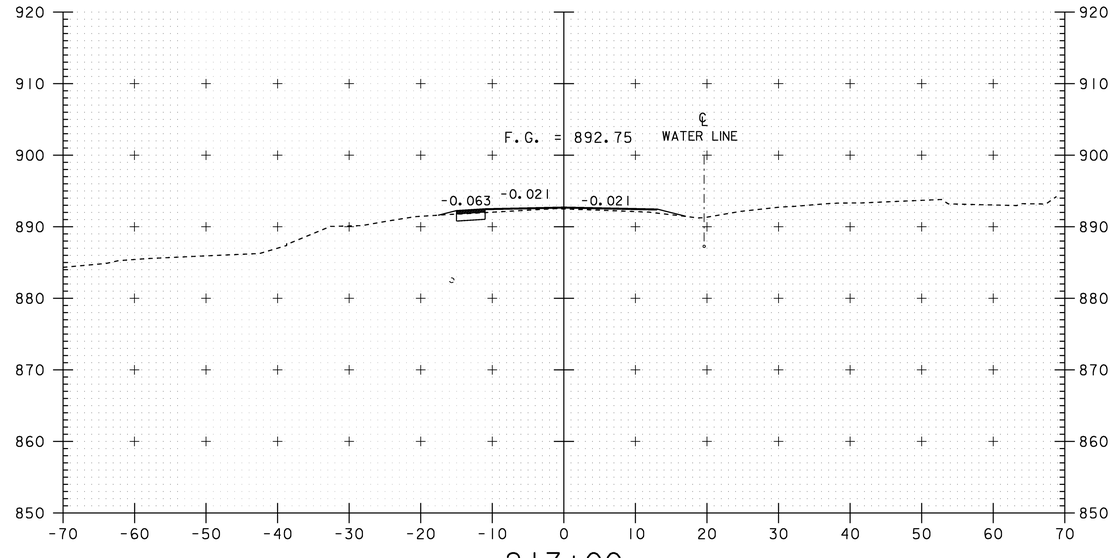
216+80



217+20



216+60



217+00

ROADWAY CROSS SECTIONS

SCALE 1" = 10'-0

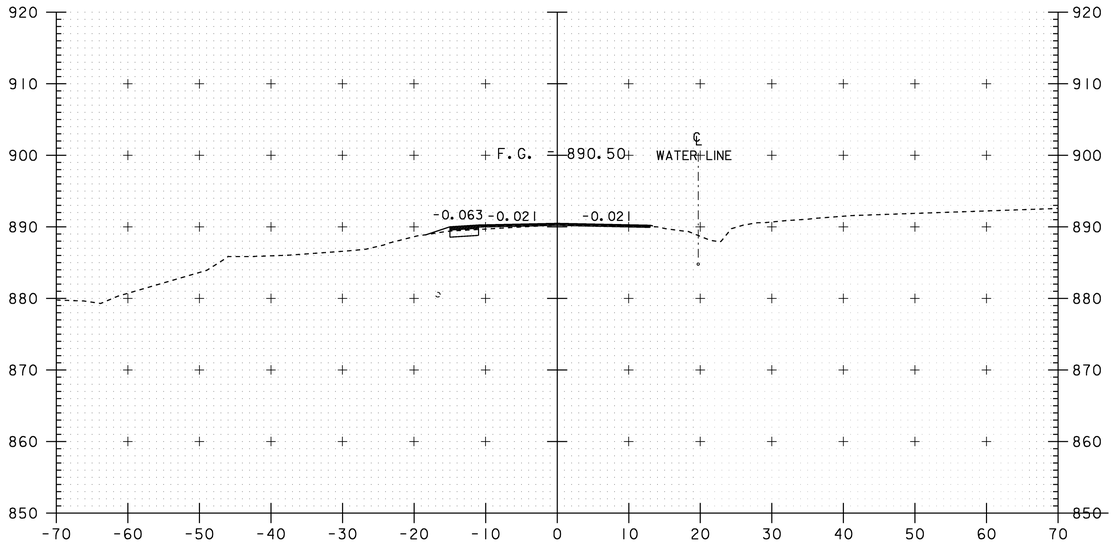
10 0 10

STA. 216+60 TO STA. 217+20

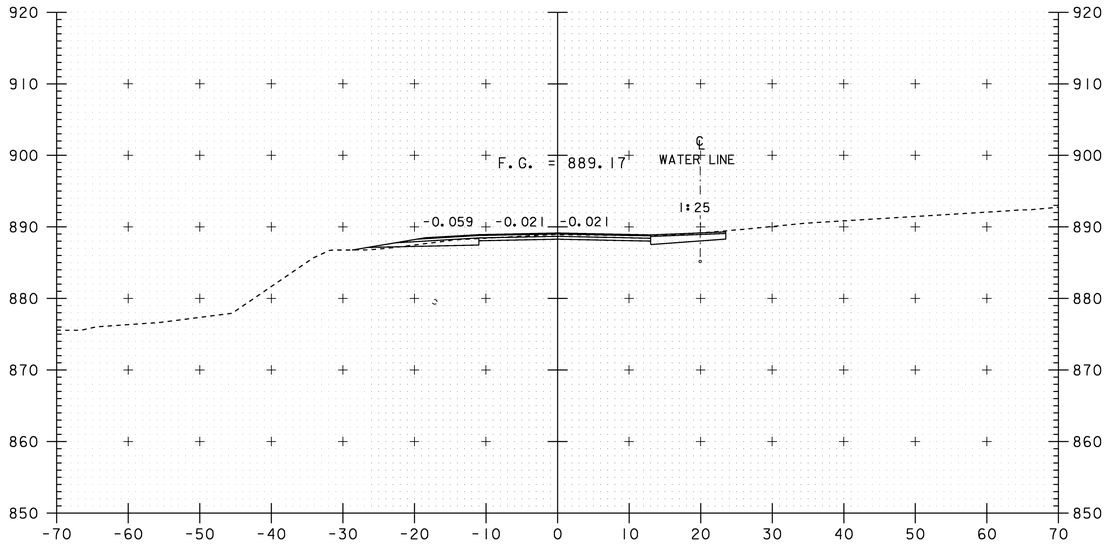
PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83elll\Srtuct\sellIxs.dgn
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: U. STANLEY
IPARM: sellIxs3.1

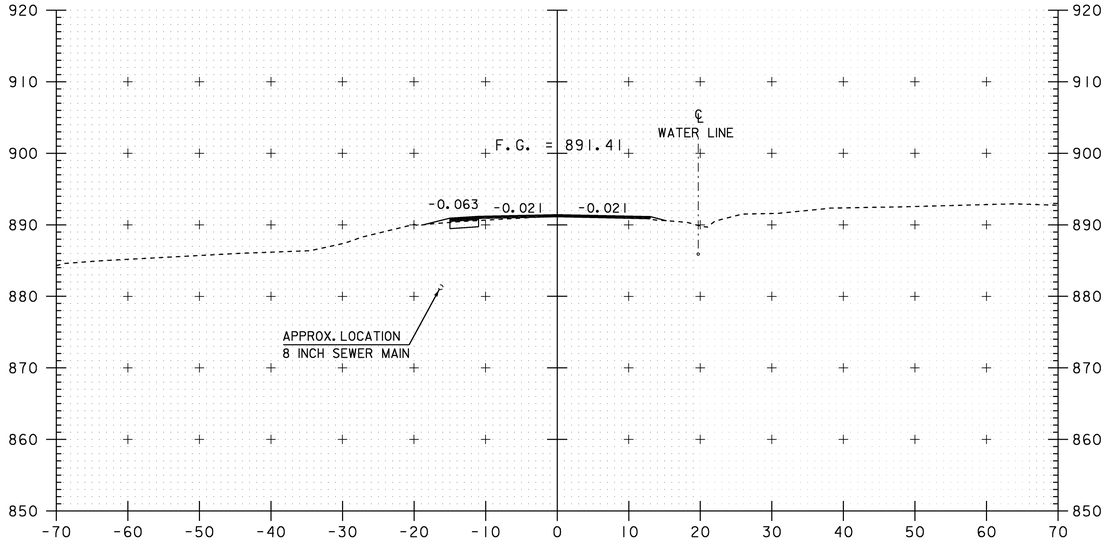
PLOT DATE: 07-APR-2008
DRAWN BY: G.ROKES
CHECKED BY: EVANS-MONGEON
SHEET 74 OF 108



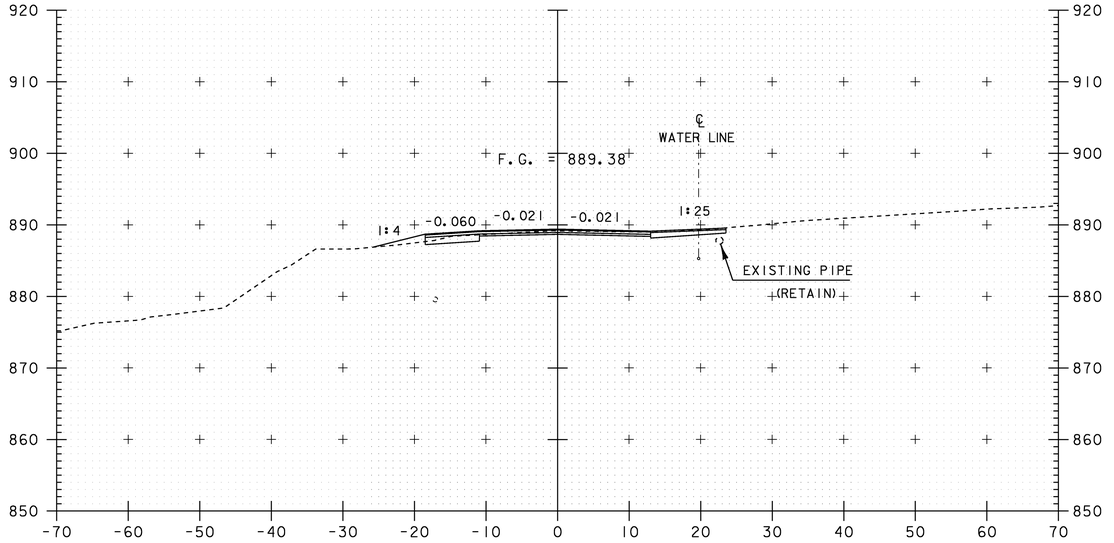
217+40



217+60



217+25



217+57

ROADWAY CROSS SECTIONS

SCALE 1" = 10'-0

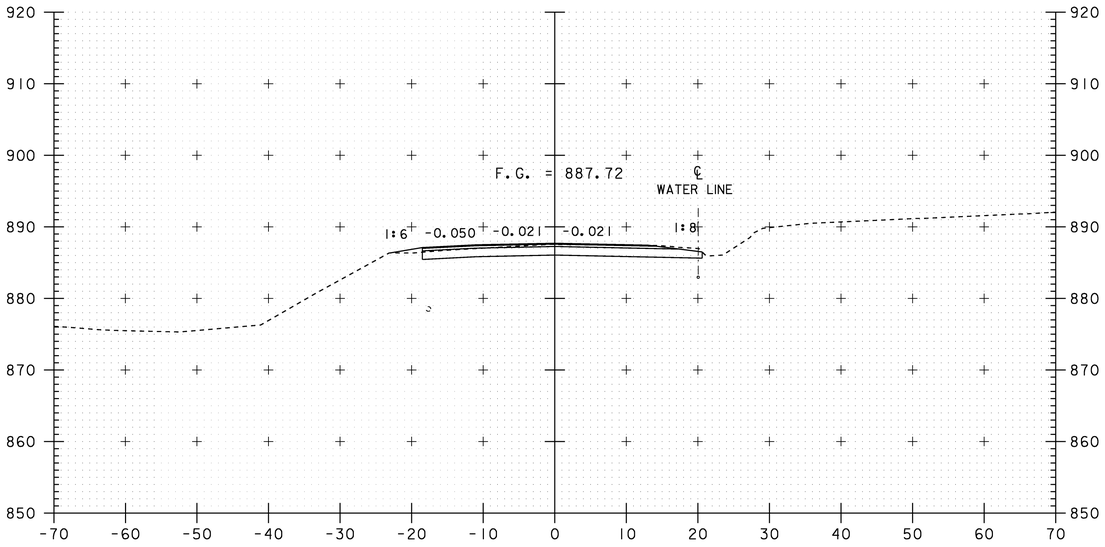
10 0 10

STA. 217+25 TO STA. 217+60

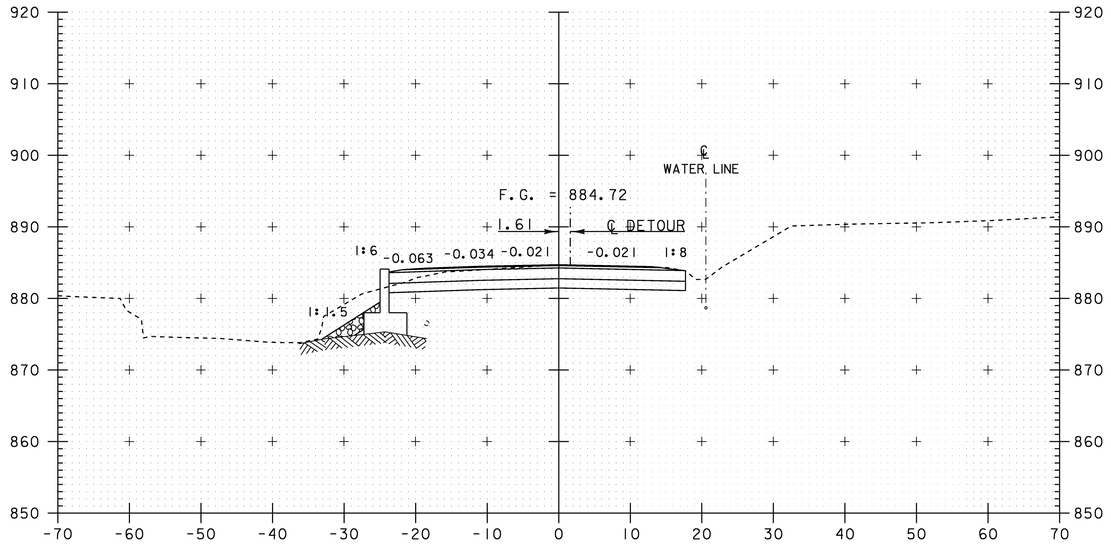
PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83elli\Srtuct\sellixs.dgn
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: U. STANLEY
IPARM: sellixs4.1

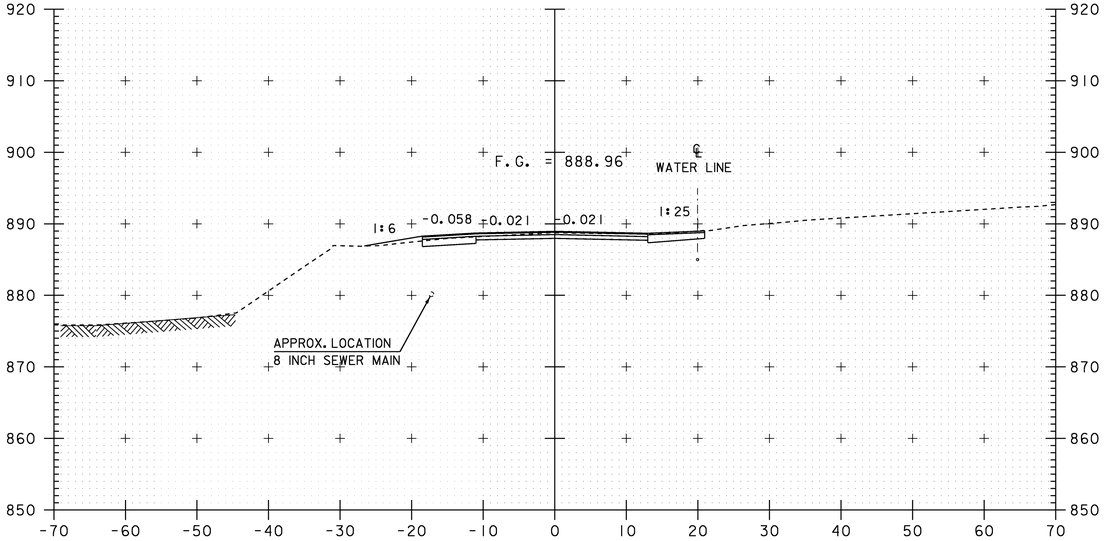
PLOT DATE: 07-APR-2008
DRAWN BY: G.ROKES
CHECKED BY: EVANS-MONGEON
SHEET 75 OF 108



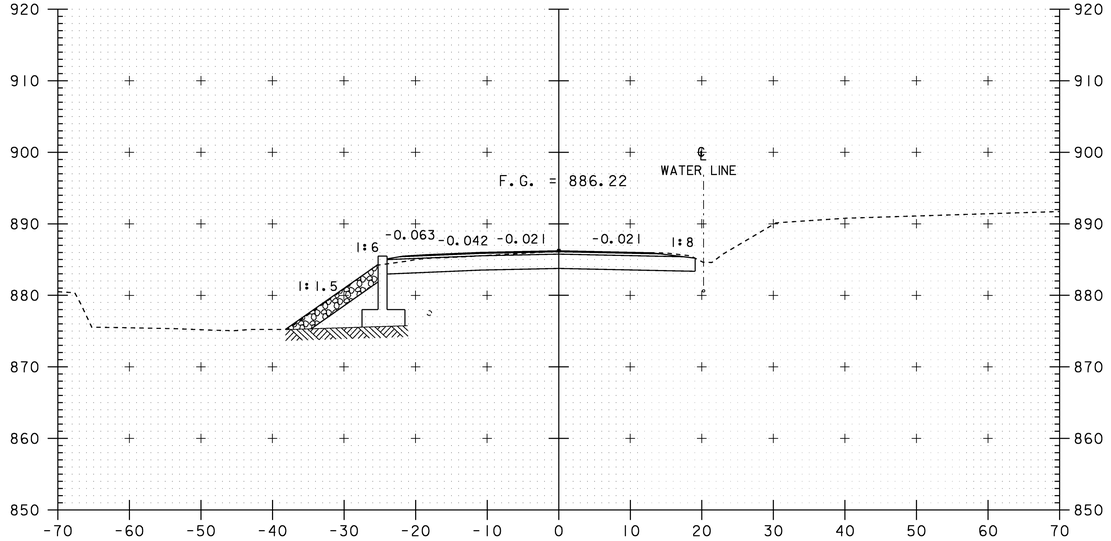
217+80



218+20



217+63



218+00

SCALE 1" = 10'-0

10 0 10

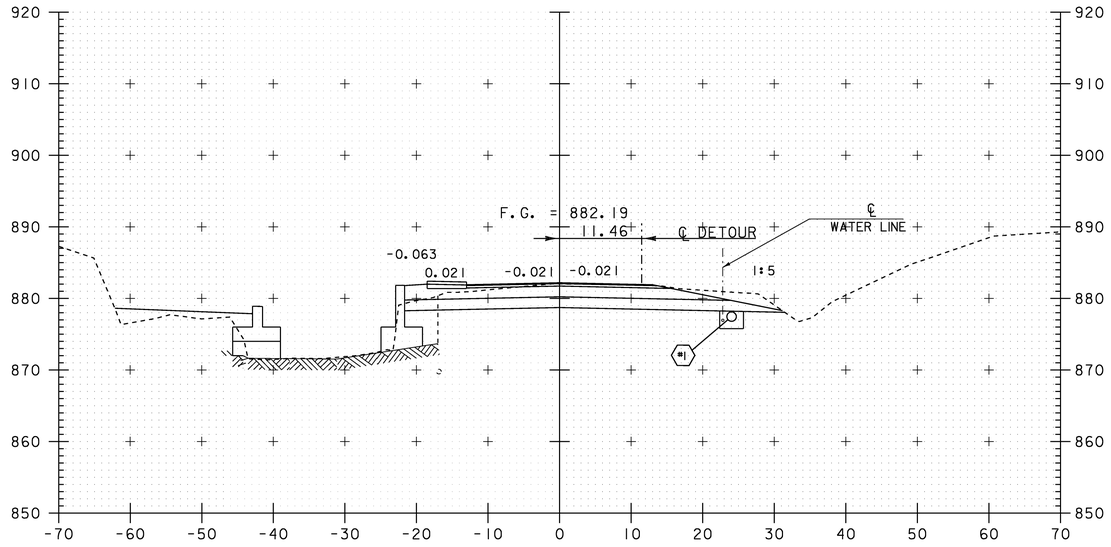
STA. 217+63 TO STA. 218+20

ROADWAY CROSS SECTIONS

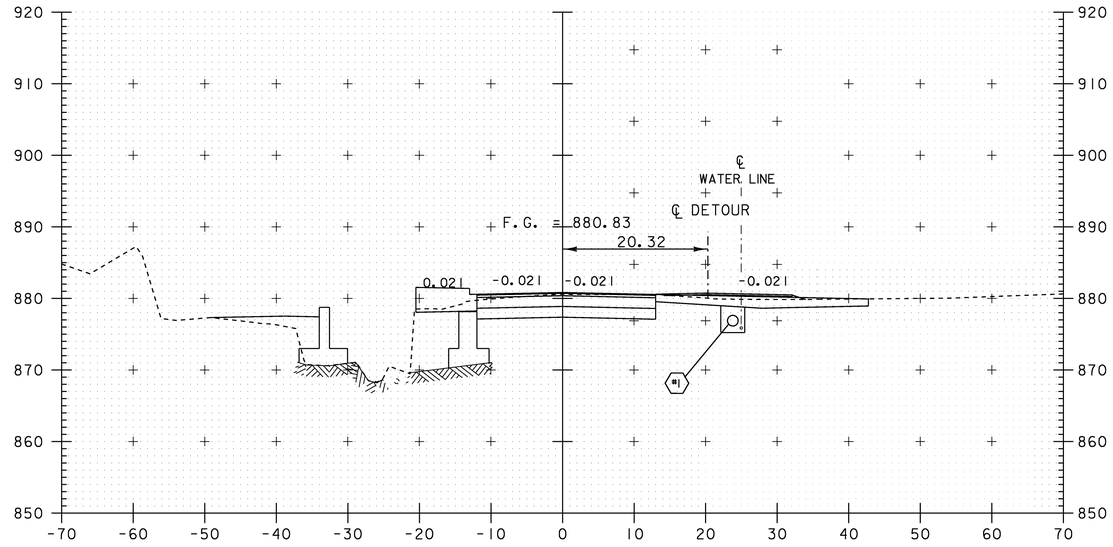
PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83elli\Srtuct\sellixs.dgn
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: U. STANLEY
IPARM: sellixs5.1

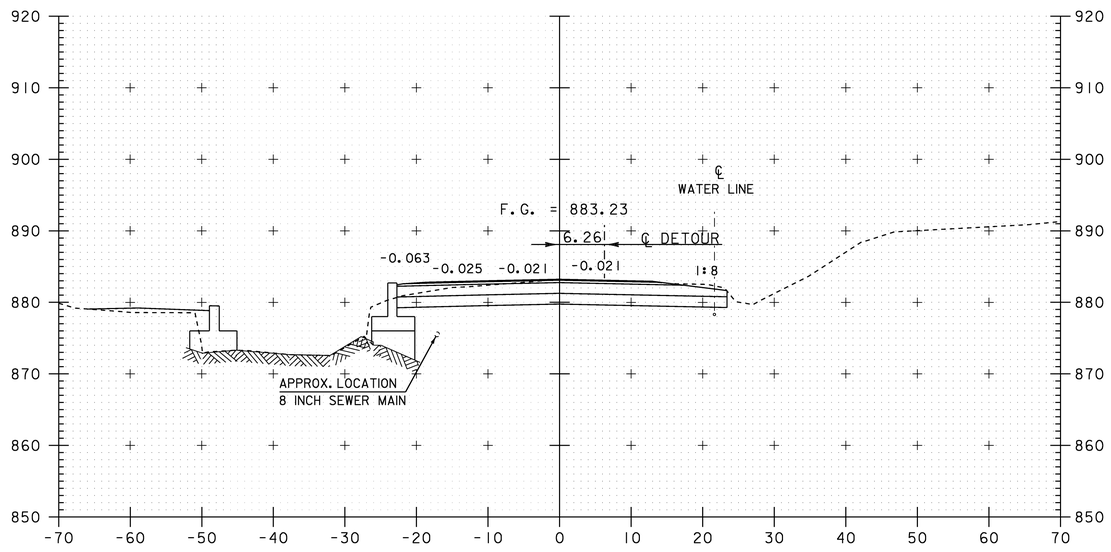
PLOT DATE: 07-APR-2008
DRAWN BY: G.ROKES
CHECKED BY: EVANS-MONGEON
SHEET 76 OF 108



218+54

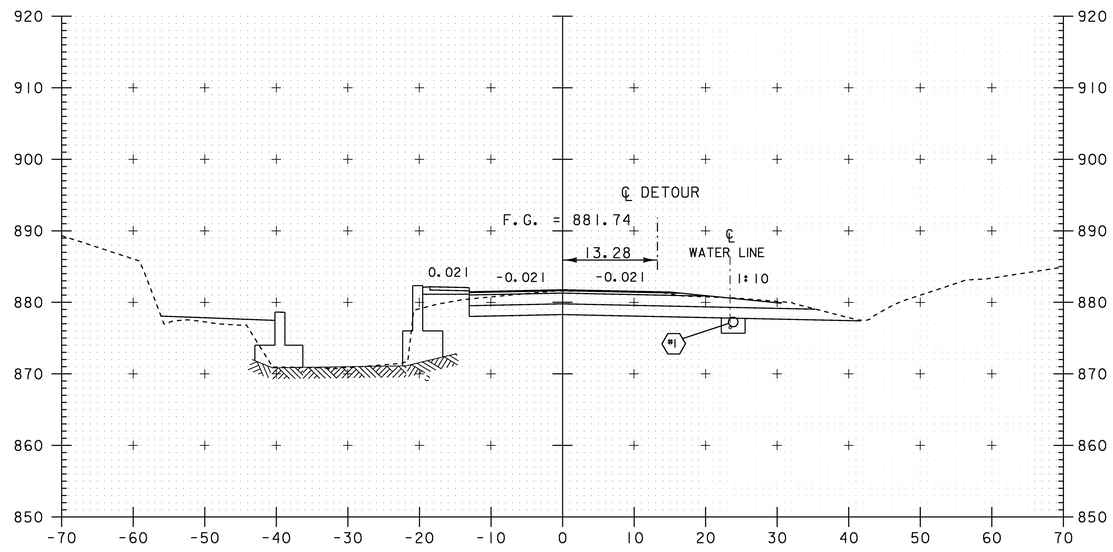


218+73



218+40

218+25
END APPROACH
BEGIN PROJECT



218+60

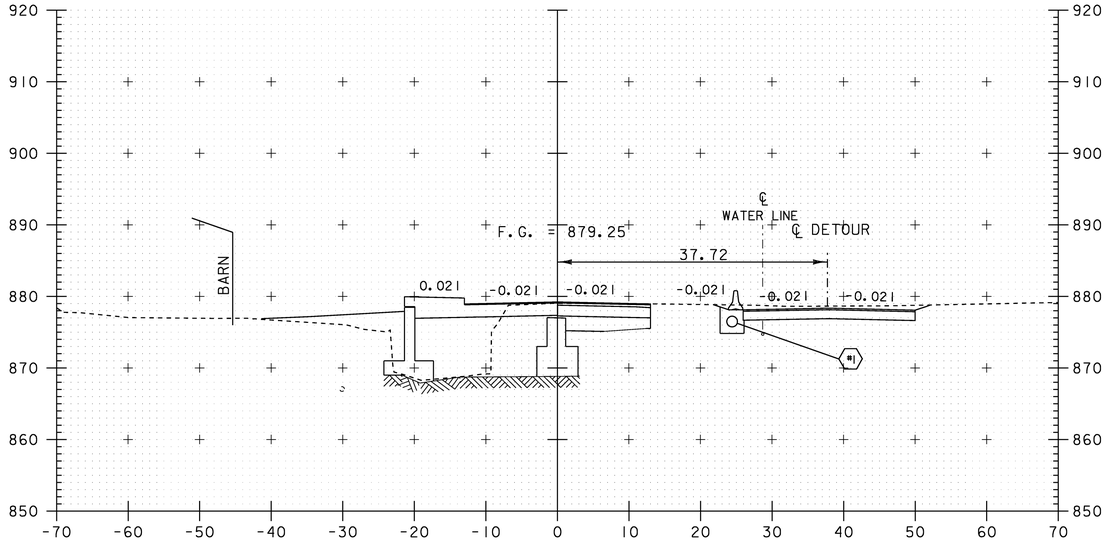
ROADWAY CROSS SECTIONS

SCALE 1" = 10'-0
10 0 10

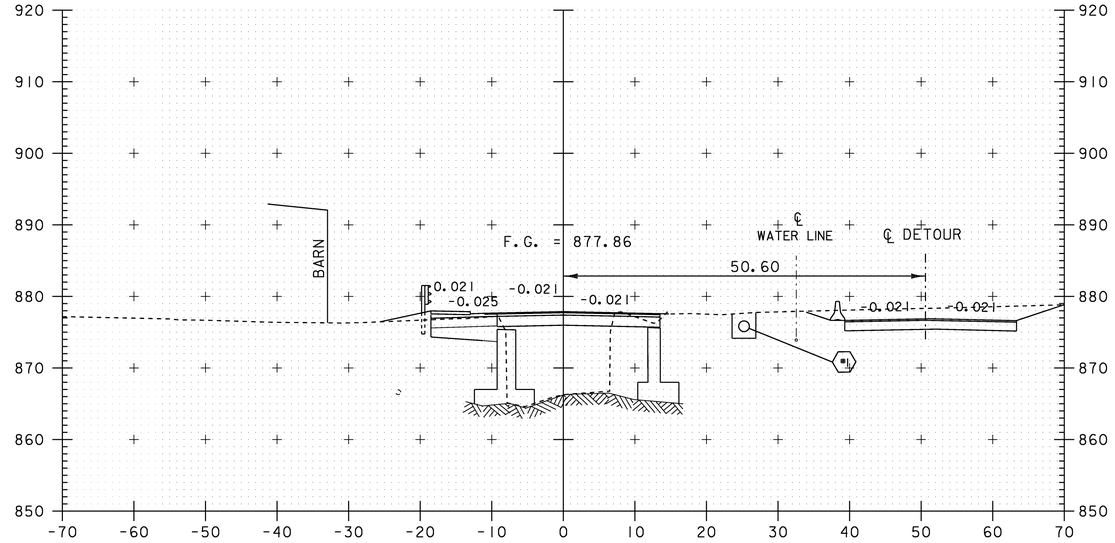
STA. 218+40 TO STA. 218+73

PROJECT NAME:	WILLIAMSTOWN
PROJECT NUMBER:	BRS 0204(4)

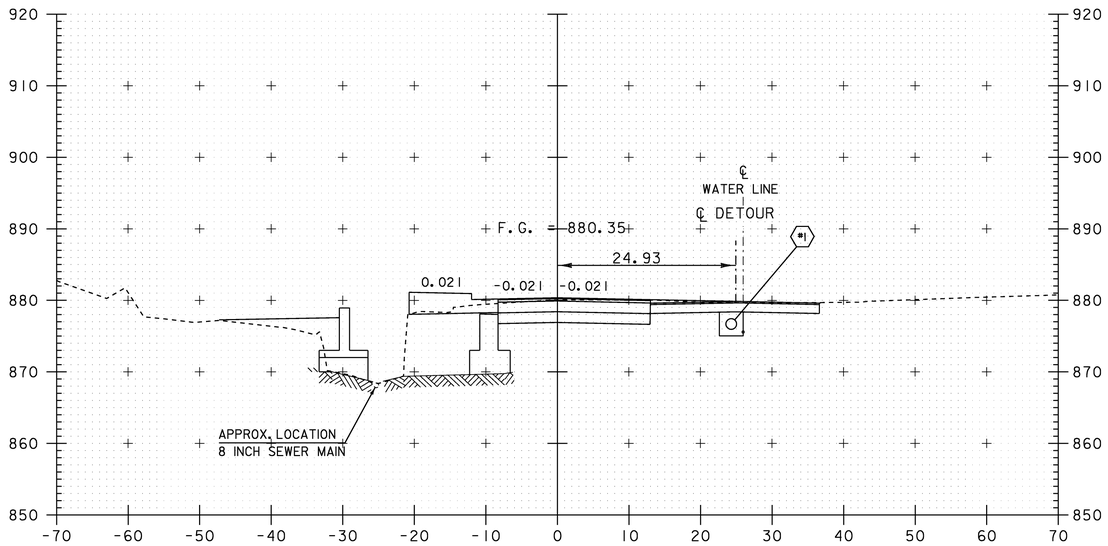
FILE NAME: 83elli\Srtuct\sellixs.dgn	PLOT DATE: 07-APR-2008
PROJECT LEADER: EVANS-MONGEON	DRAWN BY: G.ROKES
DESIGNED BY: U. STANLEY	CHECKED BY: EVANS-MONGEON
IPARM: sellixs6.1	SHEET 77 OF 108



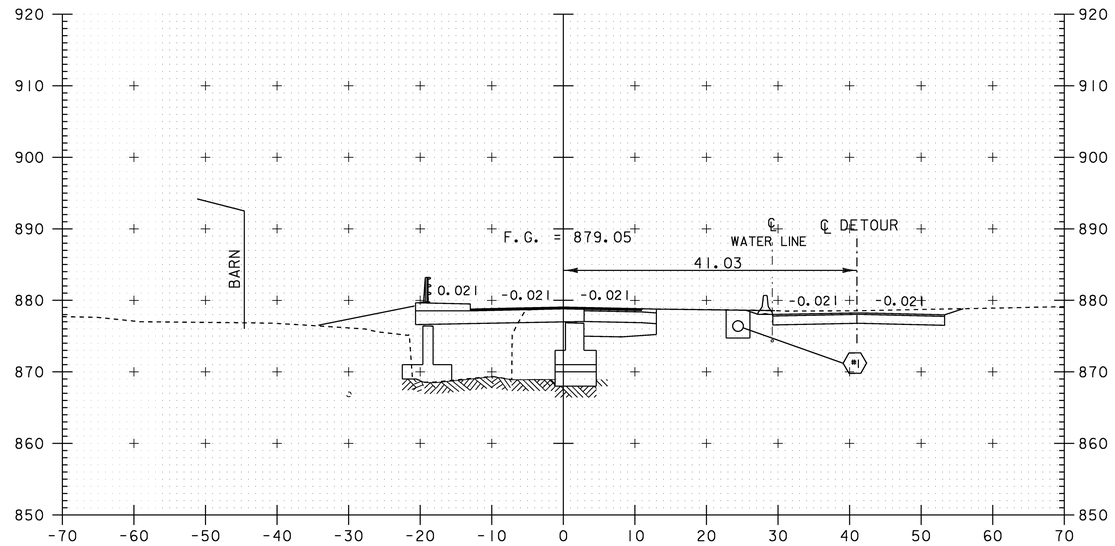
218+97
BEGIN BRIDGE



219+20



218+80



219+00

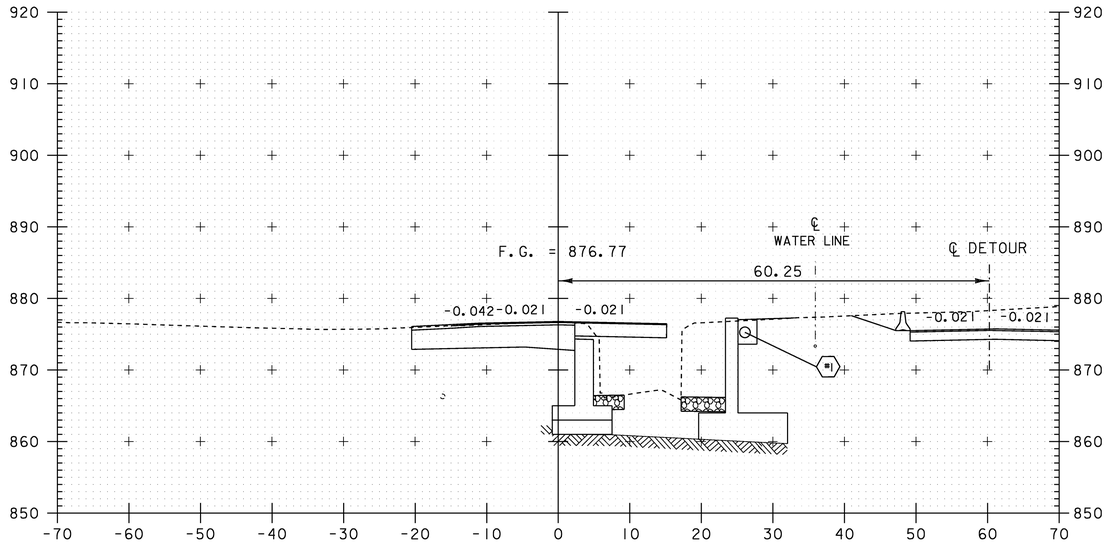
ROADWAY CROSS SECTIONS

SCALE 1" = 10'-0
10 0 10

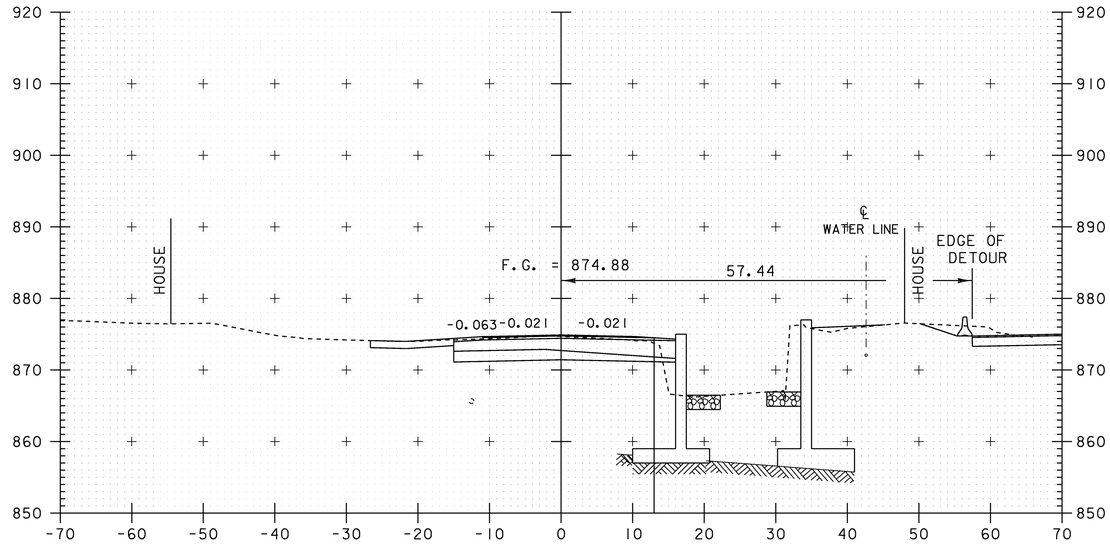
STA. 218+80 TO STA. 219+20

PROJECT NAME:	WILLIAMSTOWN
PROJECT NUMBER:	BRS 0204(4)

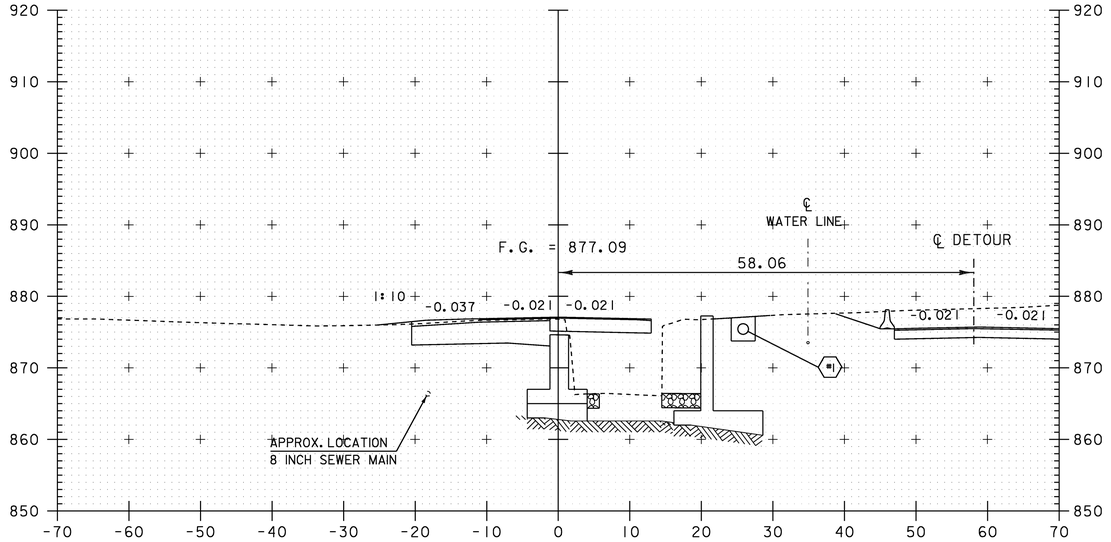
FILE NAME: 83elli\Srtuct\sellixs.dgn	PLOT DATE: 07-APR-2008
PROJECT LEADER: EVANS-MONGEON	DRAWN BY: G.ROKES
DESIGNED BY: U. STANLEY	CHECKED BY: EVANS-MONGEON
IPARM: sellixs7.1	SHEET 78 OF 108



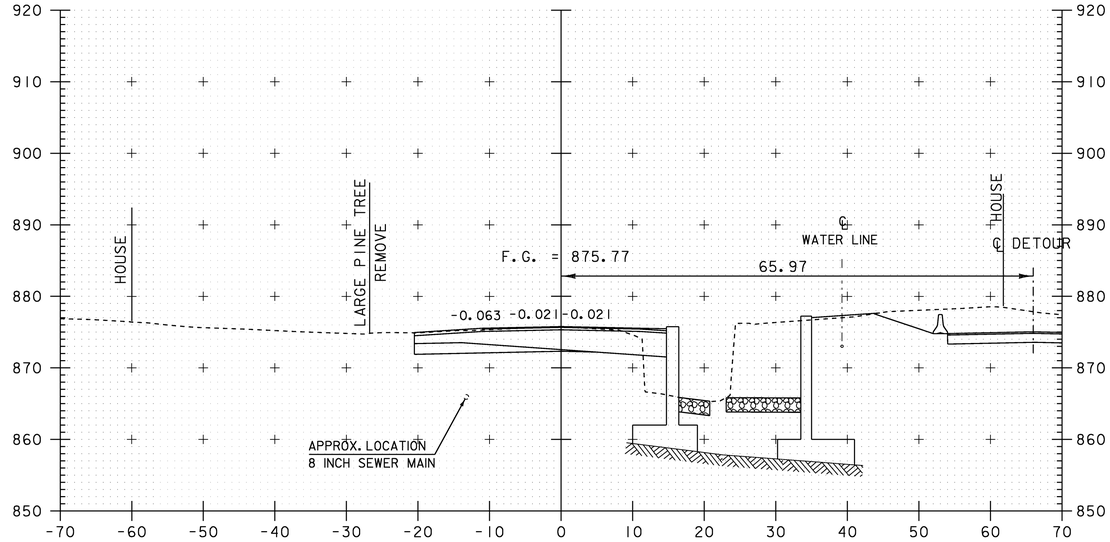
219+40



219+80



219+34
END BRIDGE



219+60

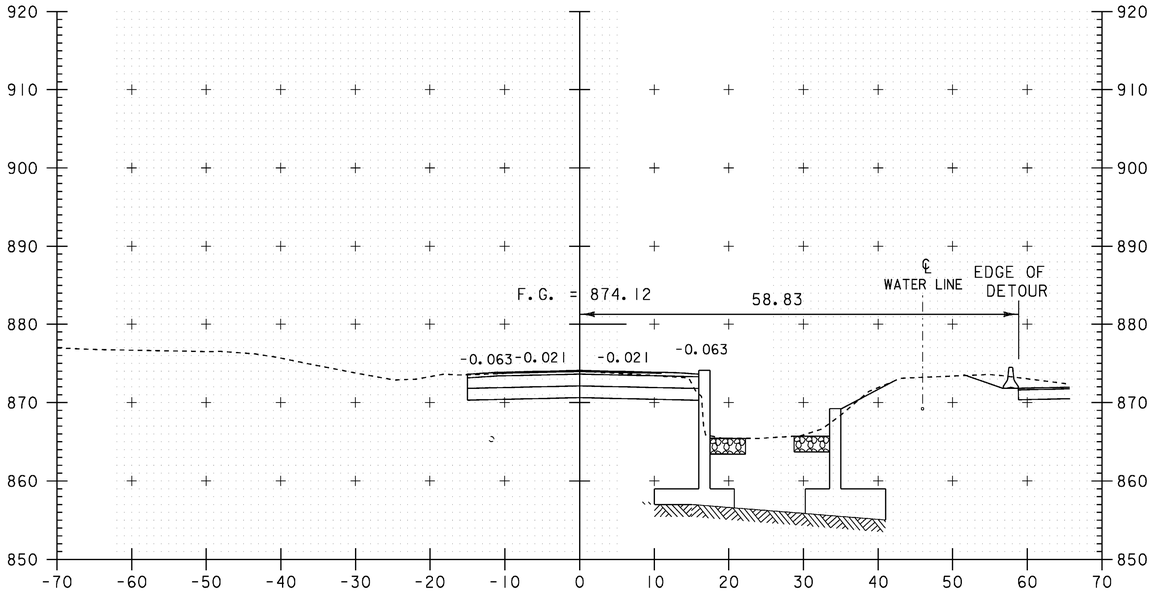
ROADWAY CROSS SECTIONS

SCALE 1" = 10'-0

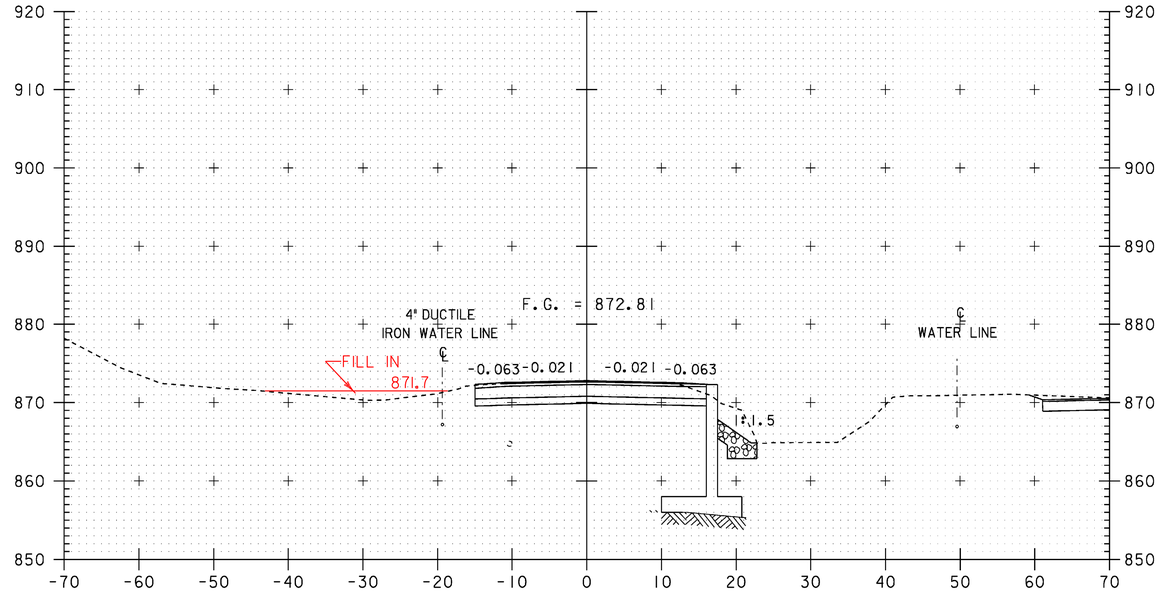
STA. 219+34 TO STA. 219+80

PROJECT NAME:	WILLIAMSTOWN
PROJECT NUMBER:	BRS 0204(4)

FILE NAME: 83elli\Srtuct\sellixs.dgn	PLOT DATE: 07-APR-2008
PROJECT LEADER: EVANS-MONGEON	DRAWN BY: G.ROKES
DESIGNED BY: U. STANLEY	CHECKED BY: EVANS-MONGEON
IPARM: sellixs8.1	SHEET 79 OF 108

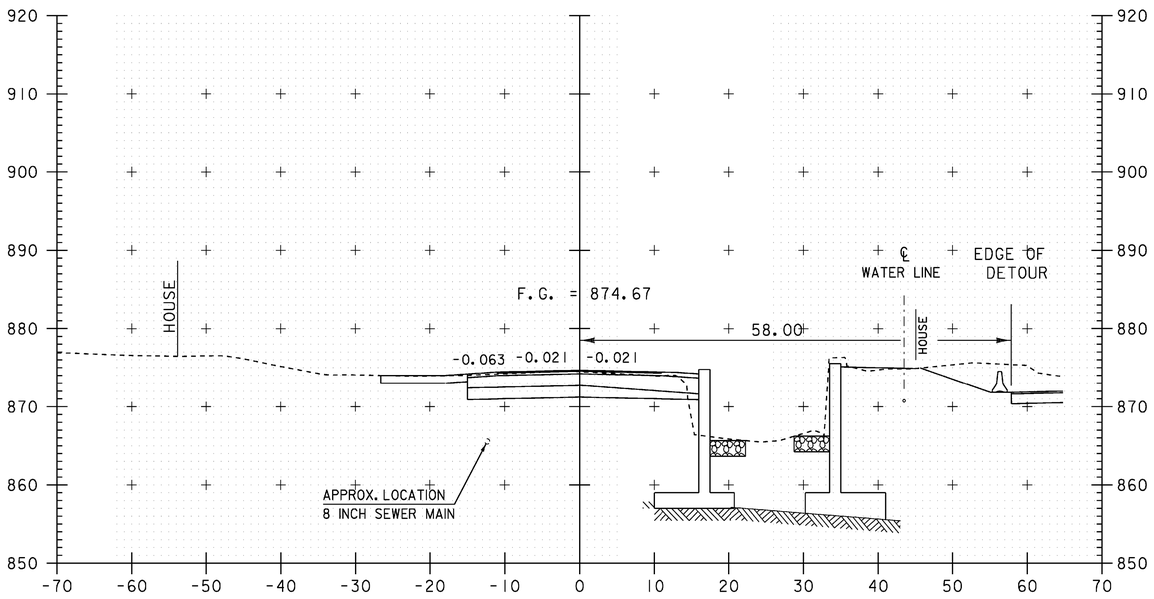


220+00

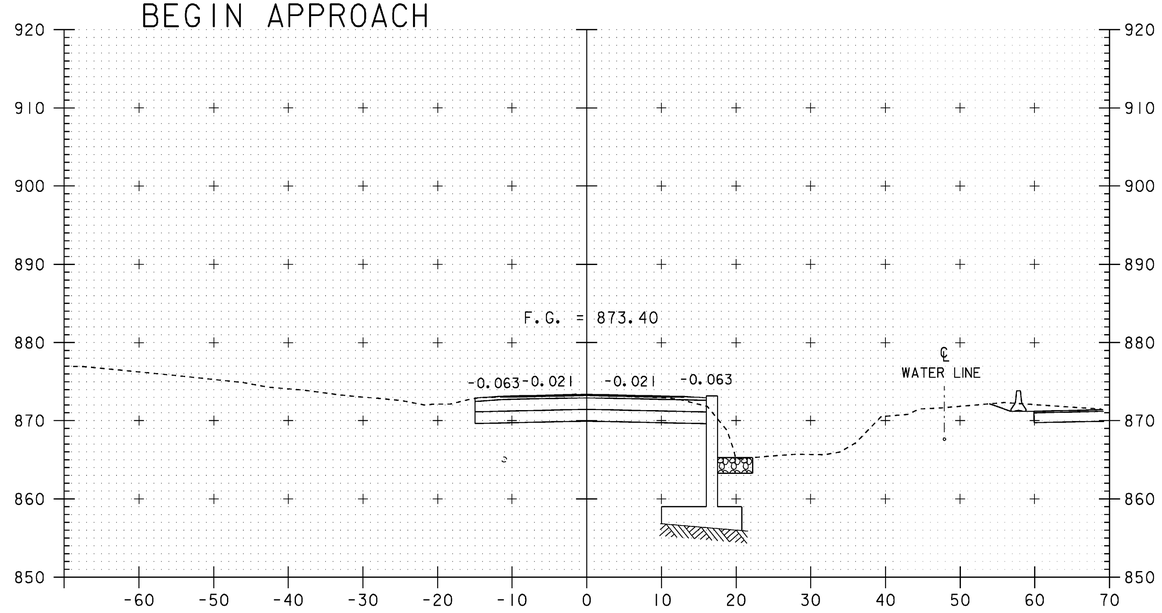


220+40

STA. 220+25
END PROJECT
BEGIN APPROACH



219+85



220+20

SCALE 1" = 10'-0
10 0 10

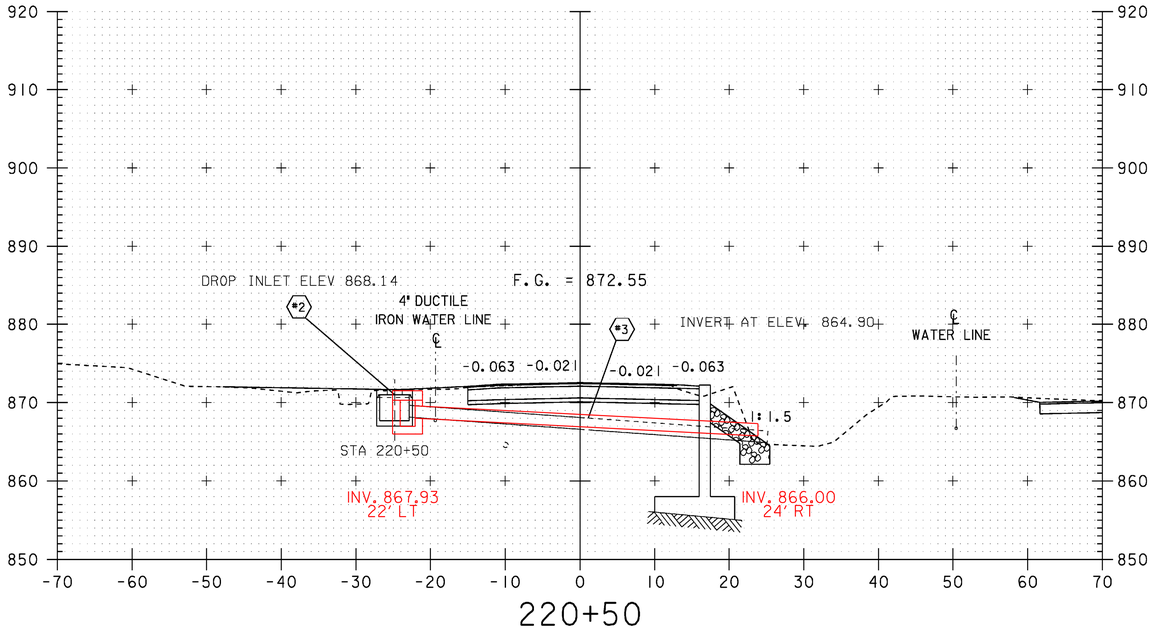
STA. 219+85 TO STA. 220+40

ROADWAY CROSS SECTIONS

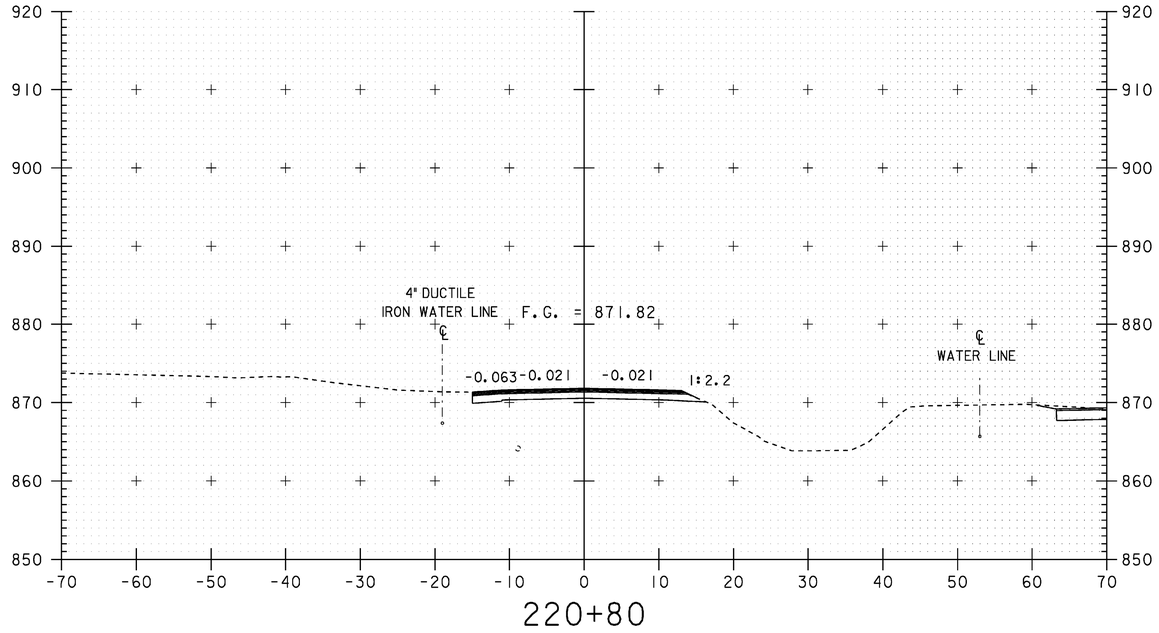
PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83ellI\Srtuct\sellIxs.dgn
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: U. STANLEY
IPARM: sellIxs9.I

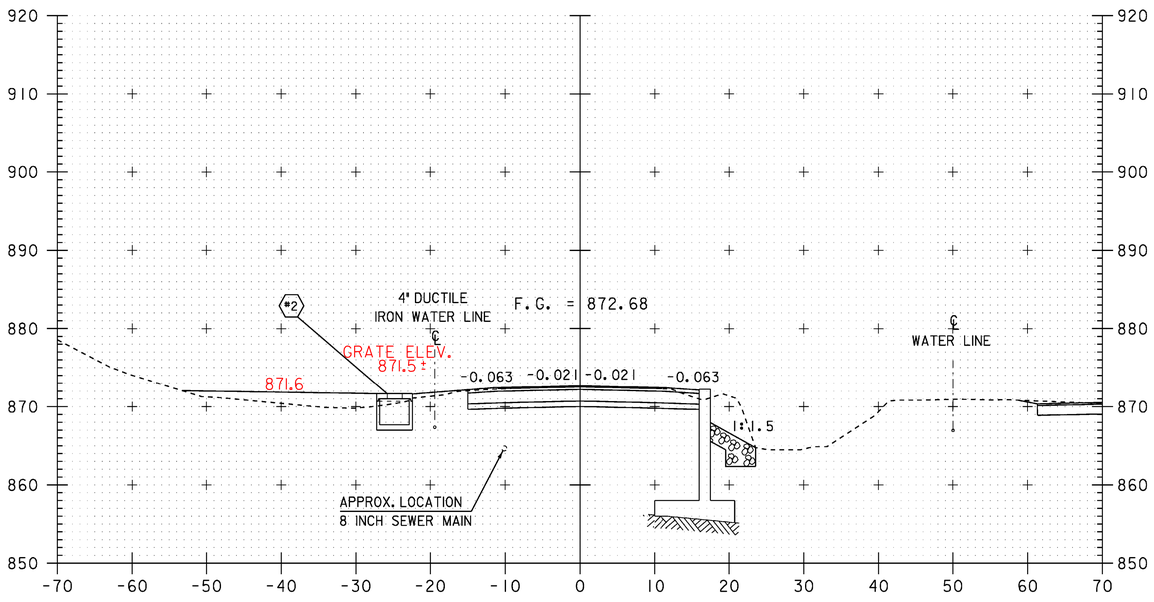
PLOT DATE: 07-APR-2008
DRAWN BY: G.ROKES
CHECKED BY: EVANS-MONGEON
SHEET 80 OF 108



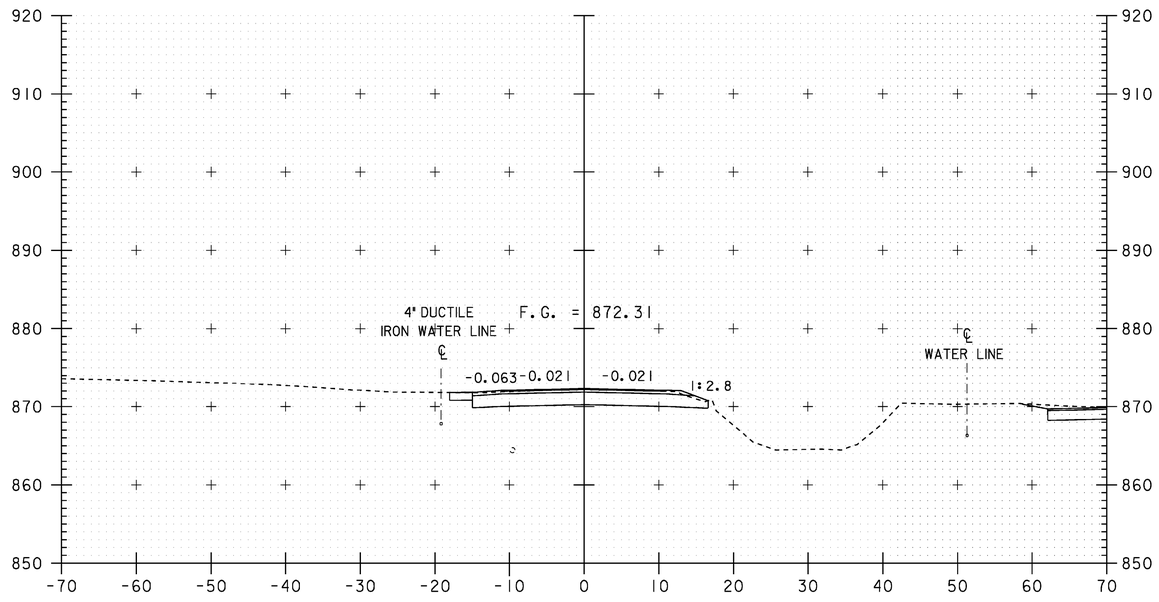
220+50



220+80



220+45



220+60

SCALE 1" = 10'-0

10 0 10

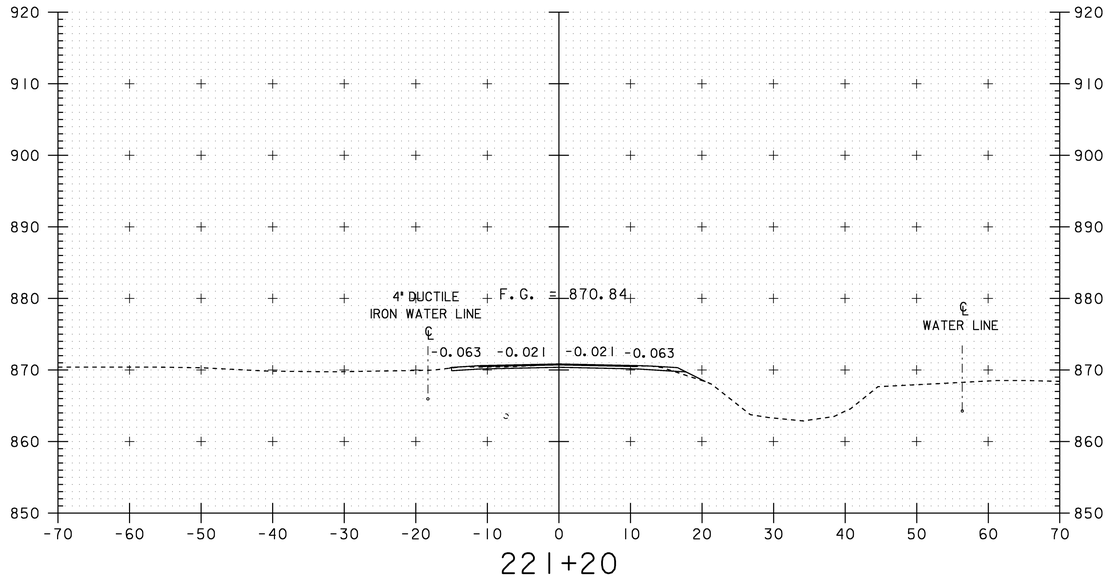
STA. 220+45 TO STA. 220+80

ROADWAY CROSS SECTIONS

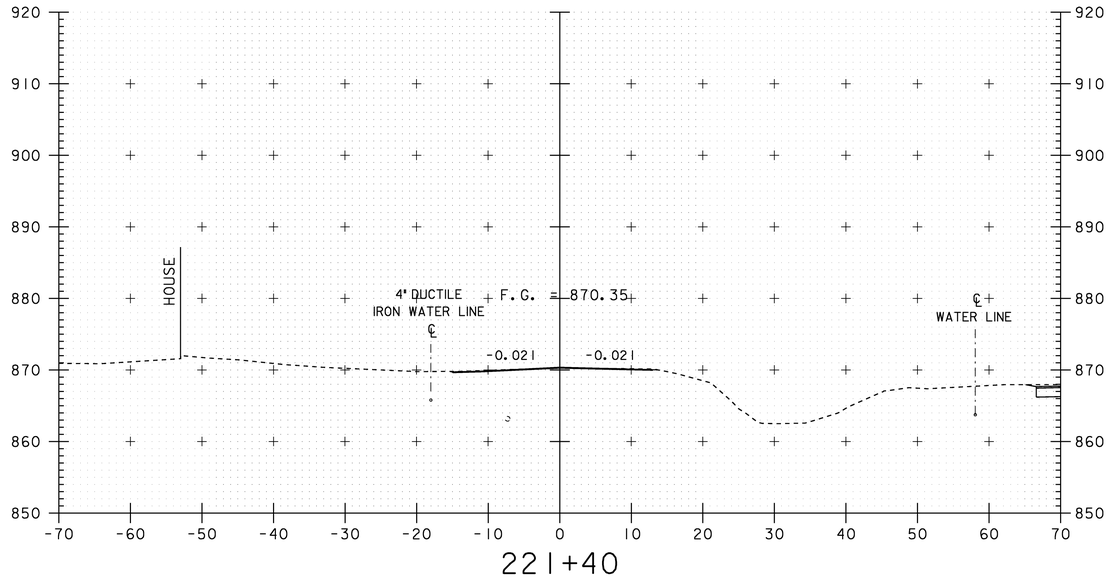
PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83elll\Srtuct\sellxs.dgn
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: U. STANLEY
IPARM: sellxs10.1

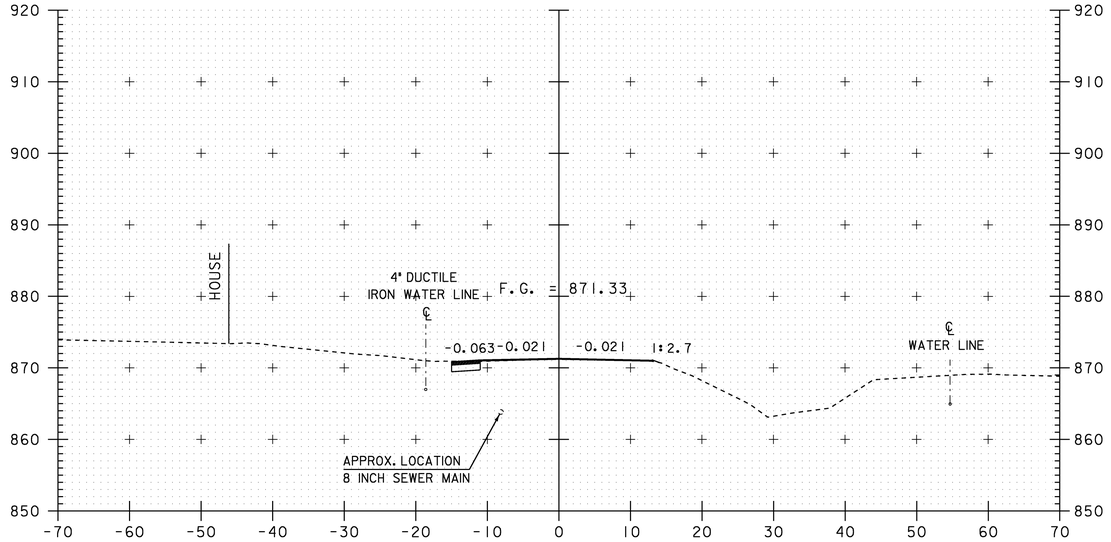
PLOT DATE: 07-APR-2008
DRAWN BY: G.ROKES
CHECKED BY: EVANS-MONGEON
SHEET 81 OF 108



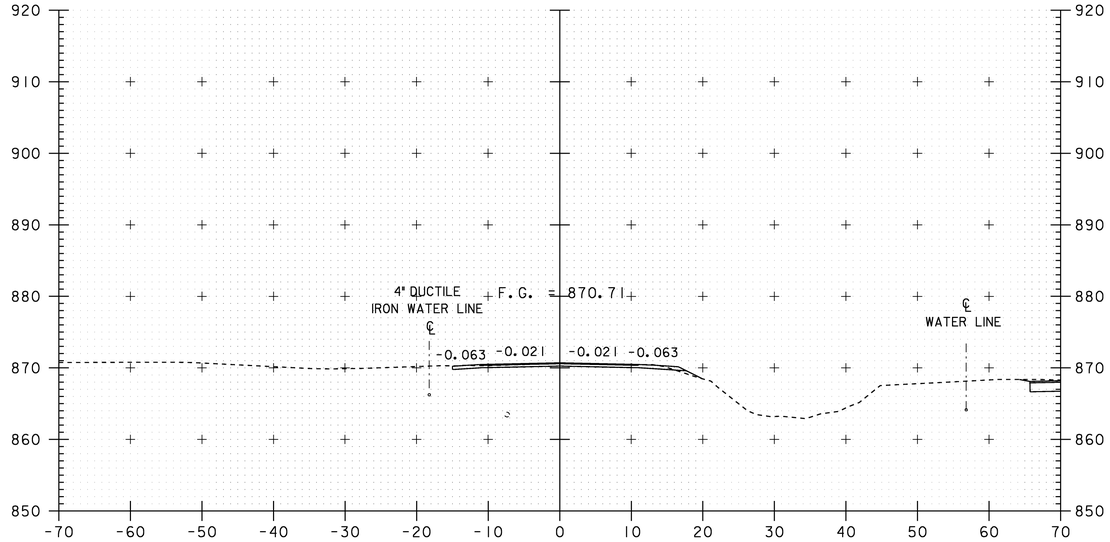
221+20



221+40



221+00



221+25

ROADWAY CROSS SECTIONS

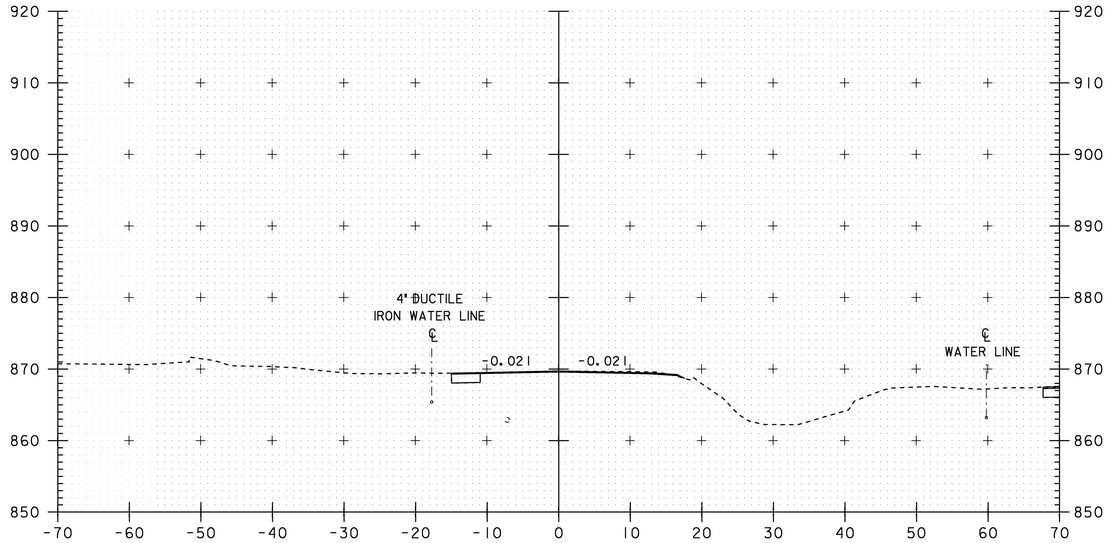
SCALE 1" = 10'-0

10 0 10

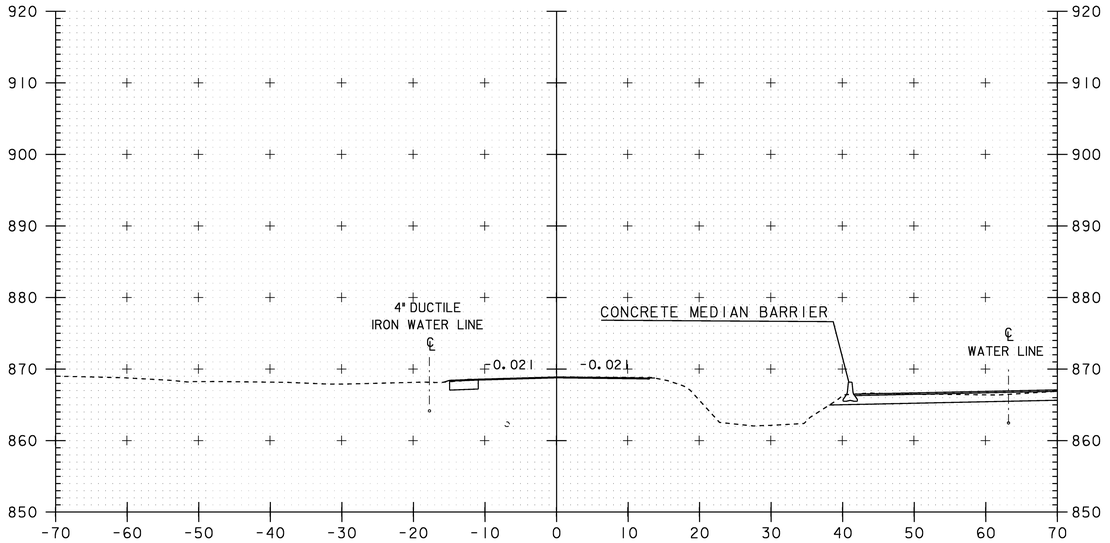
STA. 221+00 TO STA. 221+40

PROJECT NAME:	WILLIAMSTOWN
PROJECT NUMBER:	BRS 0204(4)

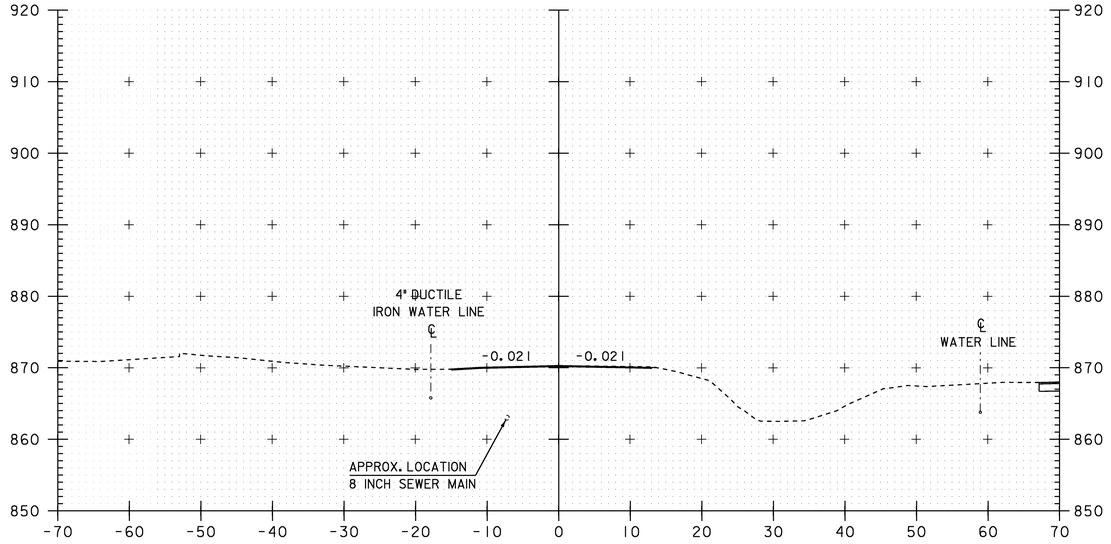
FILE NAME: 83elli\Srtuct\sellixs.dgn	PLOT DATE: 07-APR-2008
PROJECT LEADER: EVANS-MONGEON	DRAWN BY: G.ROKES
DESIGNED BY: U. STANLEY	CHECKED BY: EVANS-MONGEON
IPARM: sellixsll.I	SHEET 82 OF 108



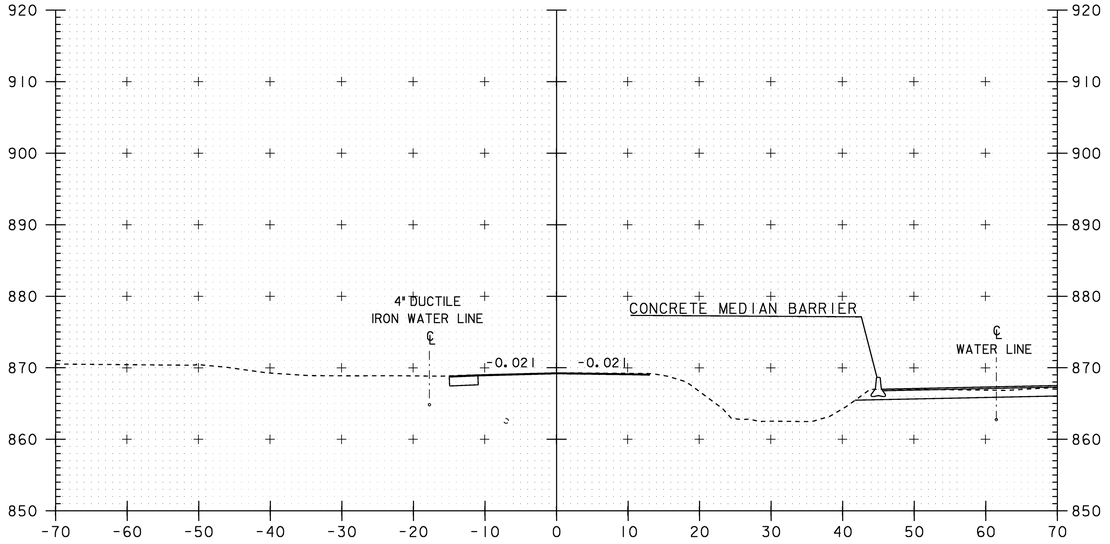
221+60



222+00



221+50



221+80

SCALE 1" - 10'-0

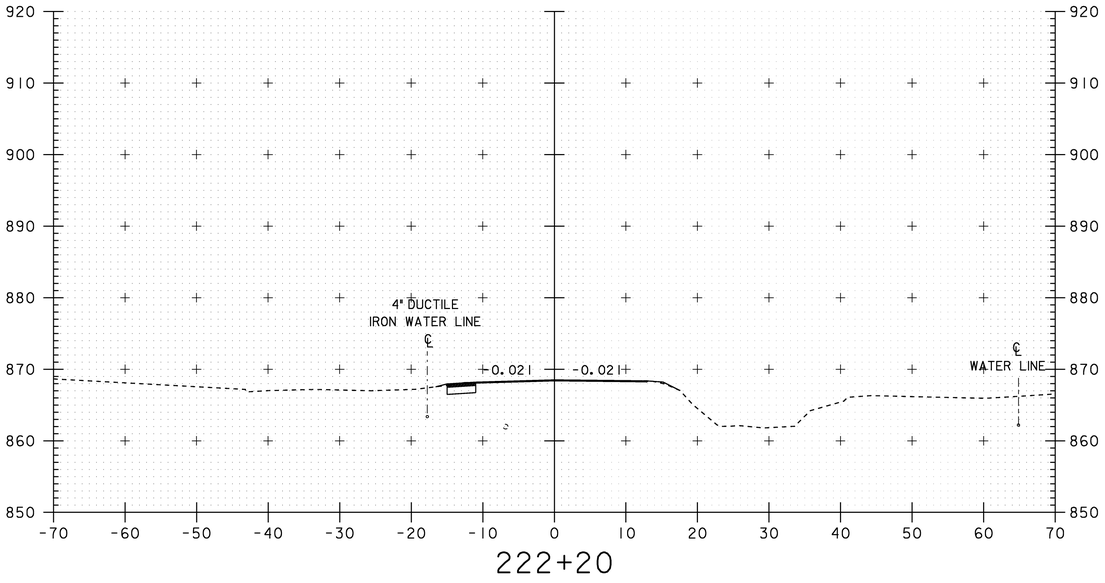
STA. 221+50 TO STA. 222+00

ROADWAY CROSS SECTIONS

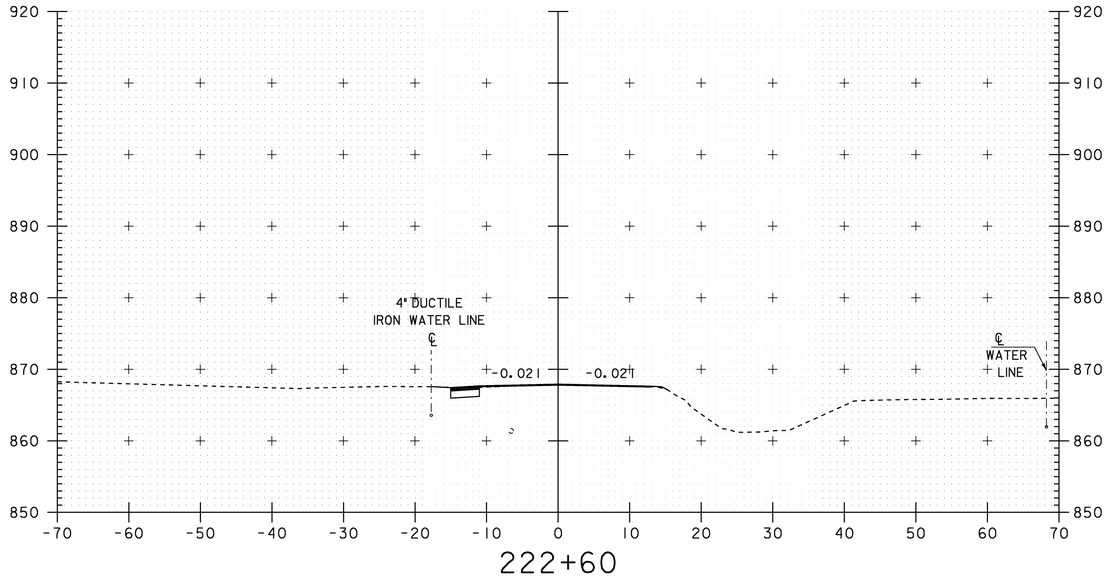
PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83elll\Srtuct\sellxs.dgn
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: U. STANLEY
IPARM: sellxsl2.1

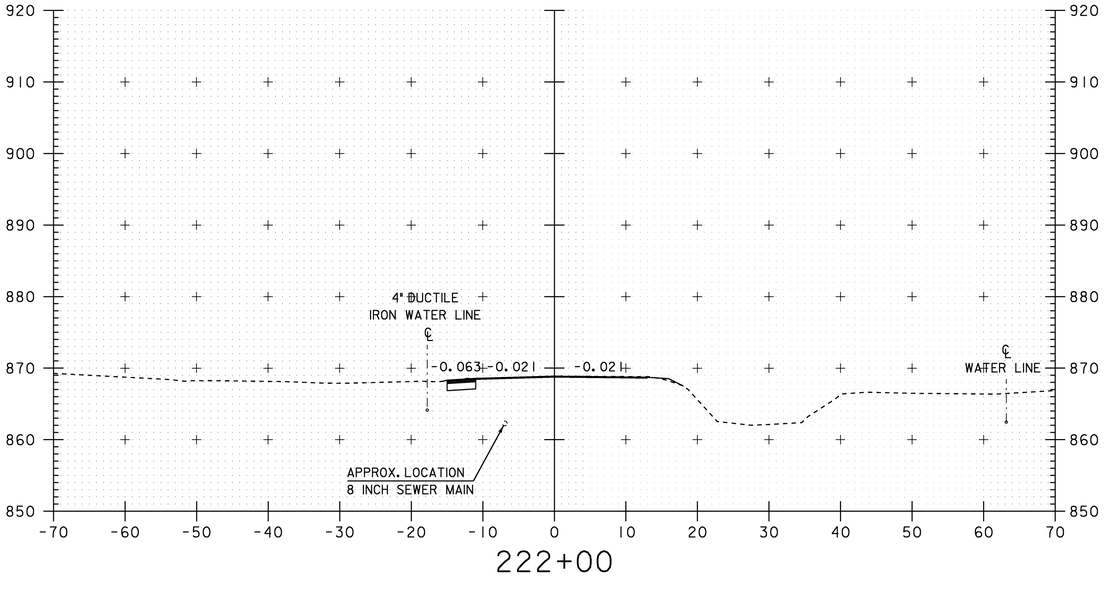
PLOT DATE: 07-APR-2008
DRAWN BY: G.ROKES
CHECKED BY: EVANS-MONGEON
SHEET 83 OF 108



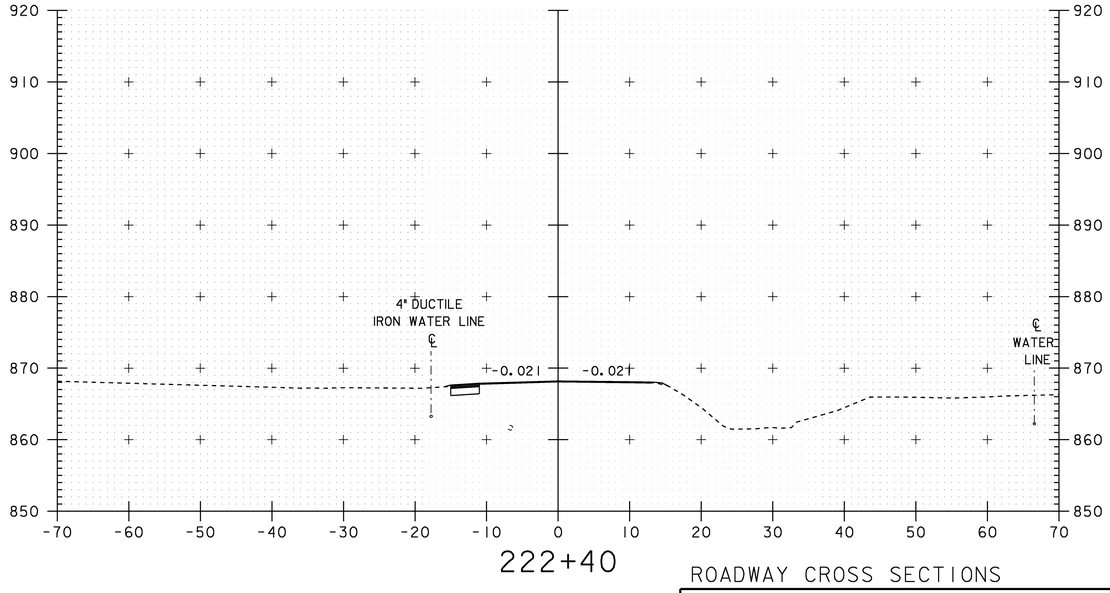
222+20



222+60



222+00



222+40

ROADWAY CROSS SECTIONS

SCALE 1" = 10'-0

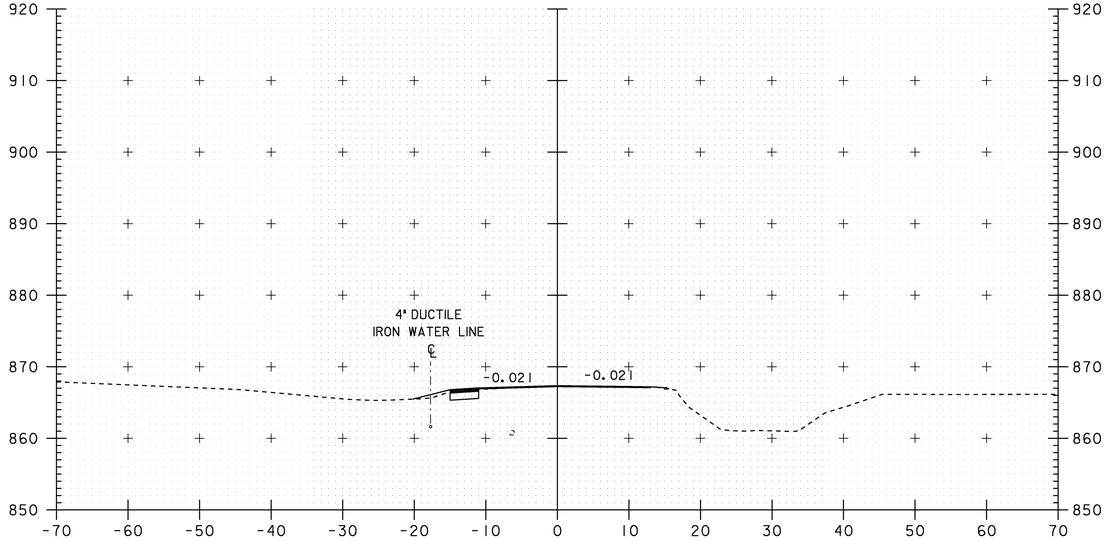
10 0 10

STA. 222+00 TO STA. 222+60

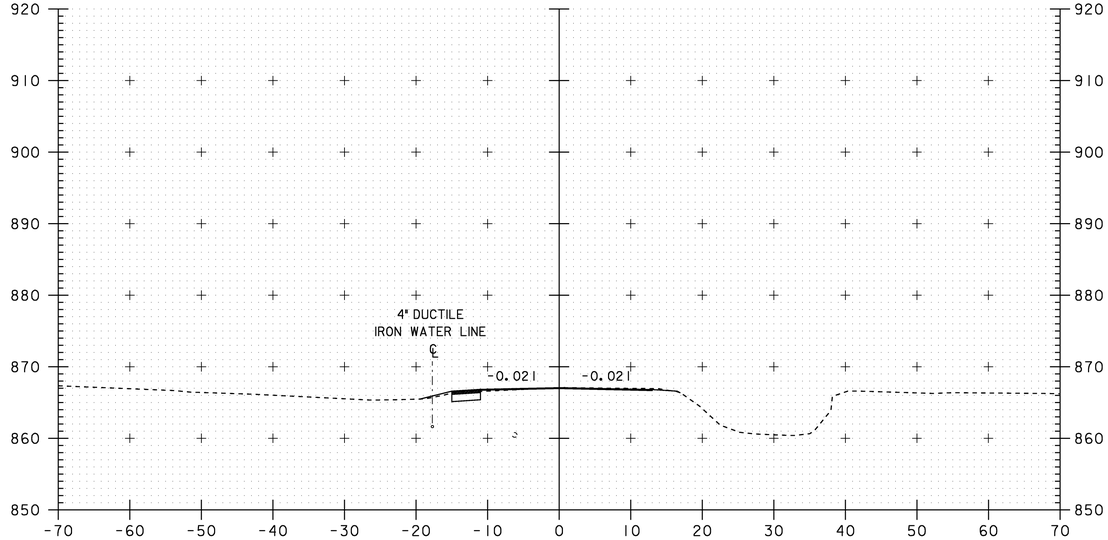
PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83elll\Srtuct\sellIxs.dgn
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: U. STANLEY
IPARM: sellIxsl3.1

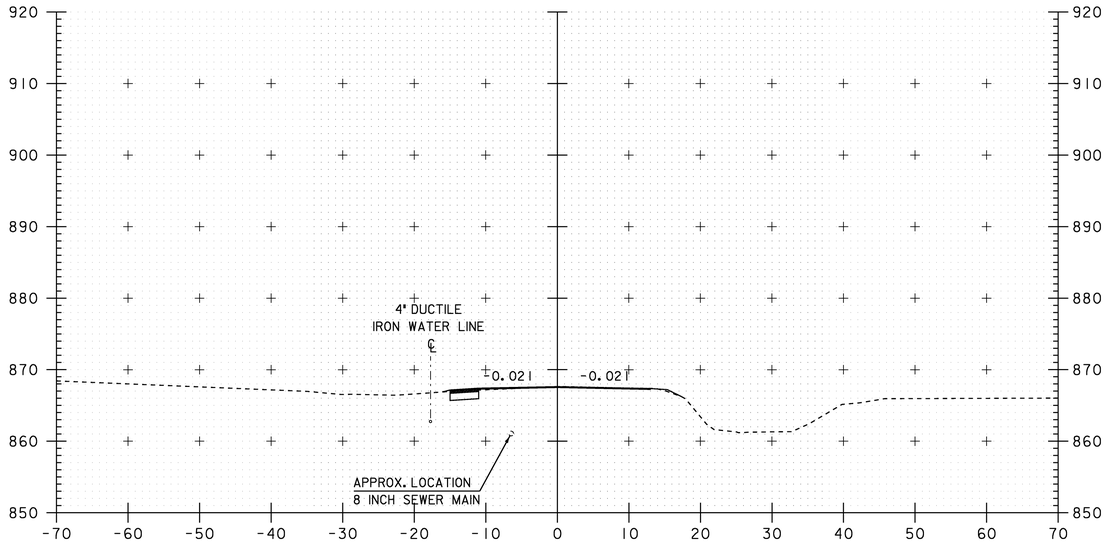
PLOT DATE: 07-APR-2008
DRAWN BY: G.ROKES
CHECKED BY: EVANS-MONGEON
SHEET 84 OF 108



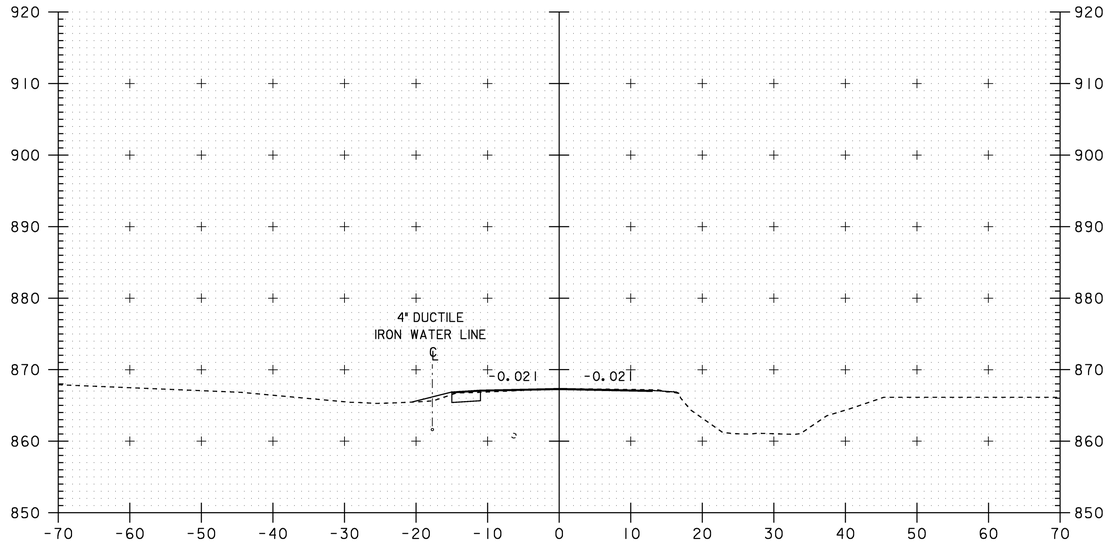
223+00



223+20



222+80



223+00

SCALE 1" = 10'-0
10 0 10

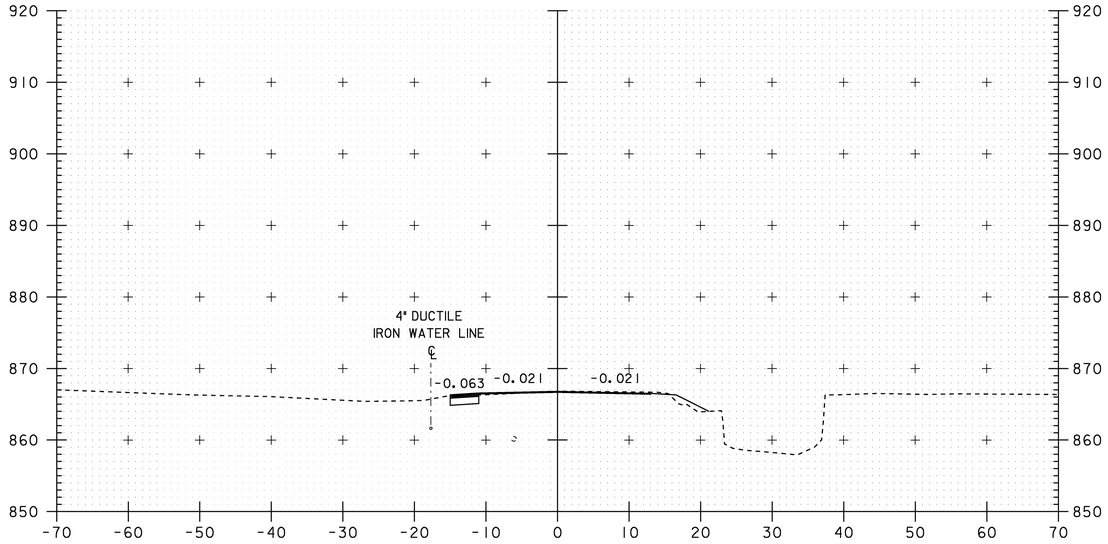
STA. 222+80 TO STA. 223+20

ROADWAY CROSS SECTIONS

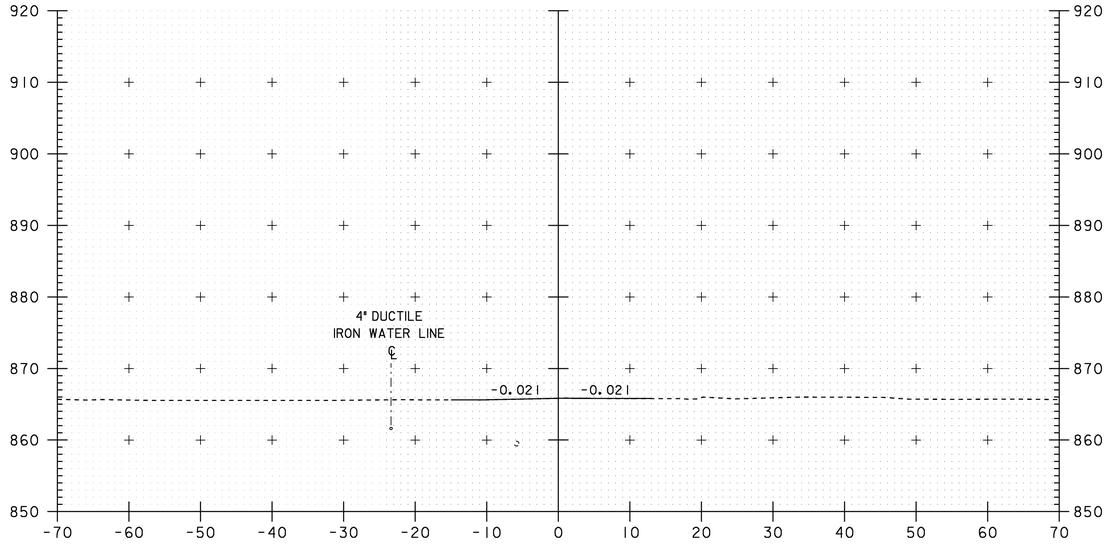
PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83elll\Srtuct\sellIxs.dgn
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: U. STANLEY
IPARM: sellIxsl4.1

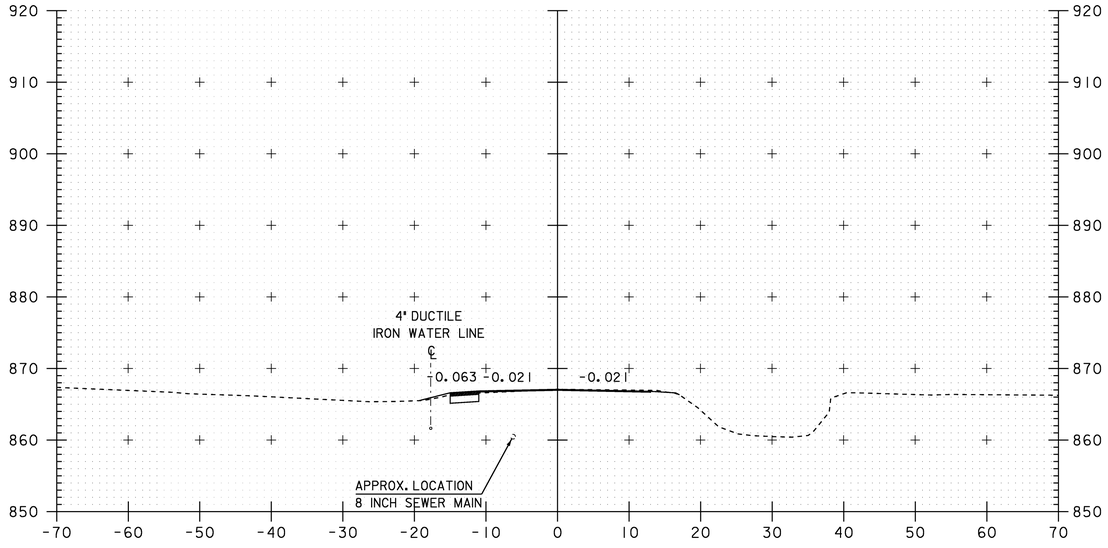
PLOT DATE: 07-APR-2008
DRAWN BY: G.ROKES
CHECKED BY: EVANS-MONGEON
SHEET 85 OF 108



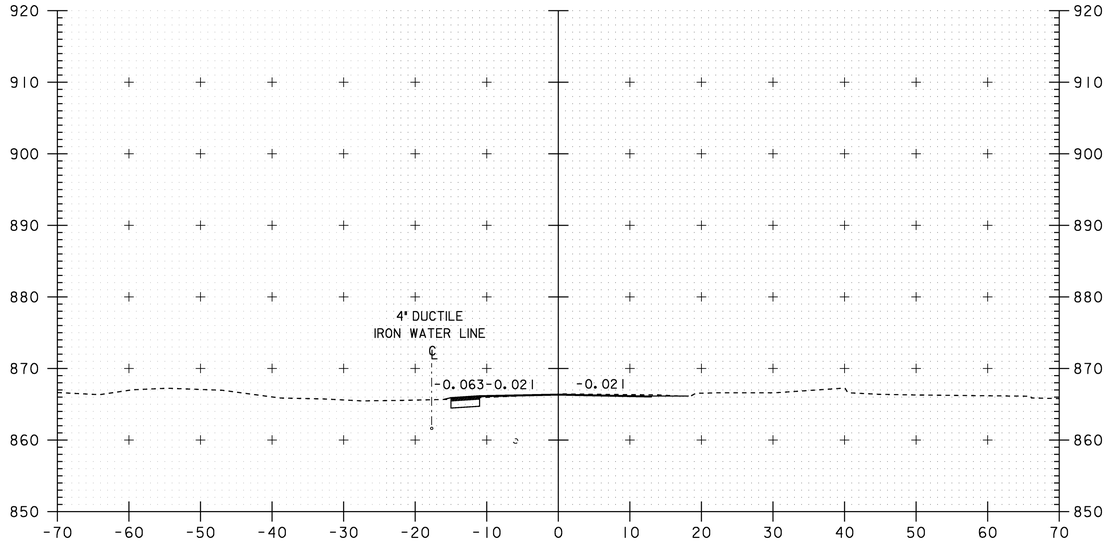
223+40



223+85
END APPROACH



223+20



223+60

SCALE 1" = 10'-0

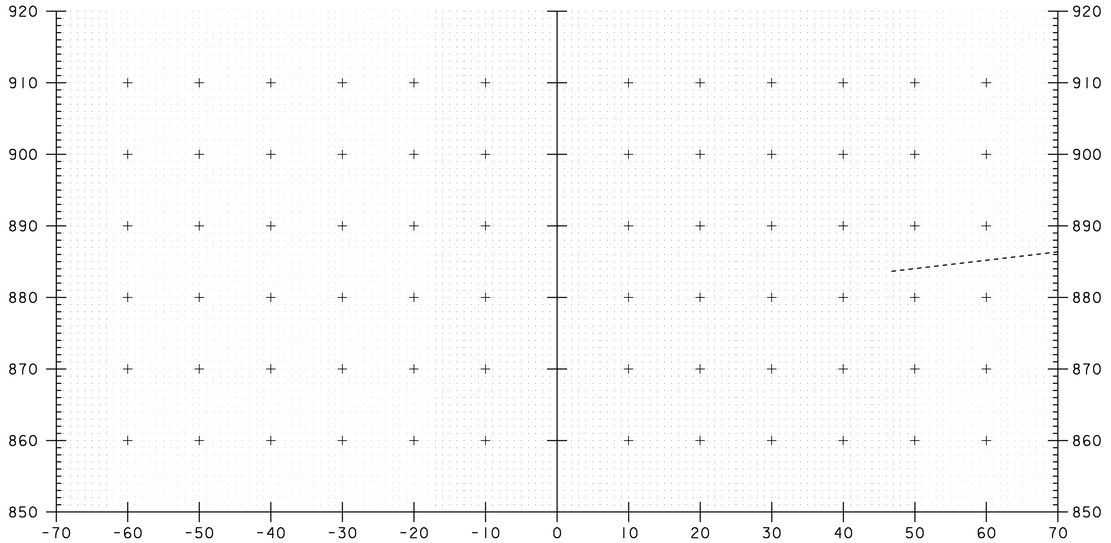
STA. 223+20 TO STA. 223+85

ROADWAY CROSS SECTIONS

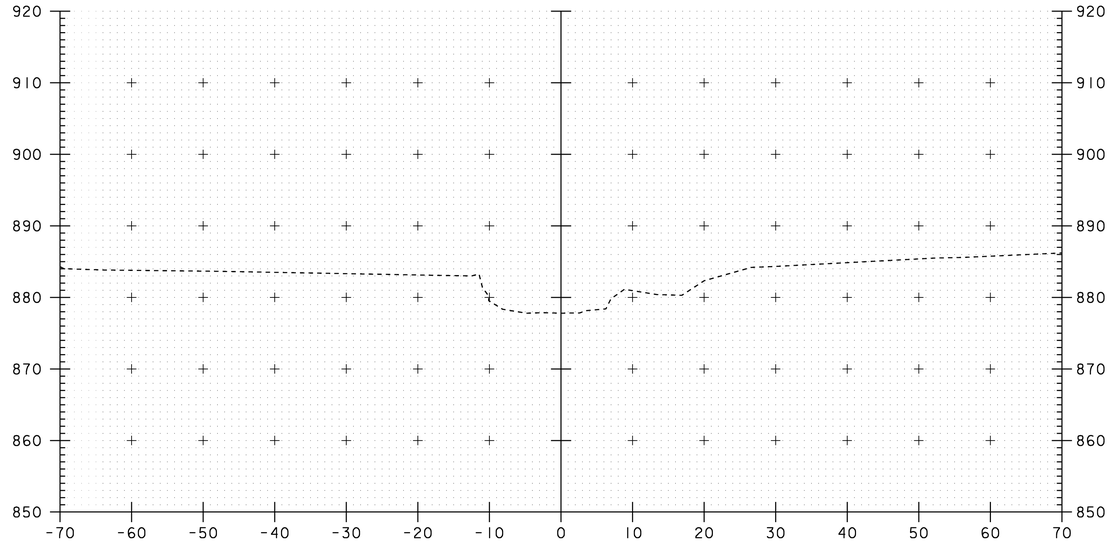
PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83elll\Srtuct\sellIxs.dgn
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: U. STANLEY
IPARM: sellIxsl5.1

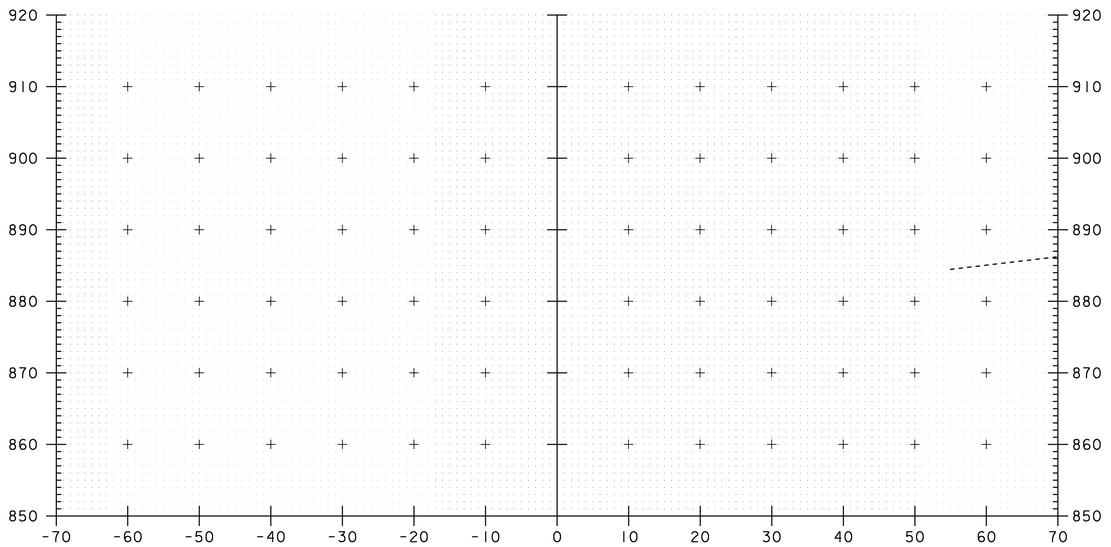
PLOT DATE: 07-APR-2008
DRAWN BY: G.ROKES
CHECKED BY: EVANS-MONGEON
SHEET 86 OF 108



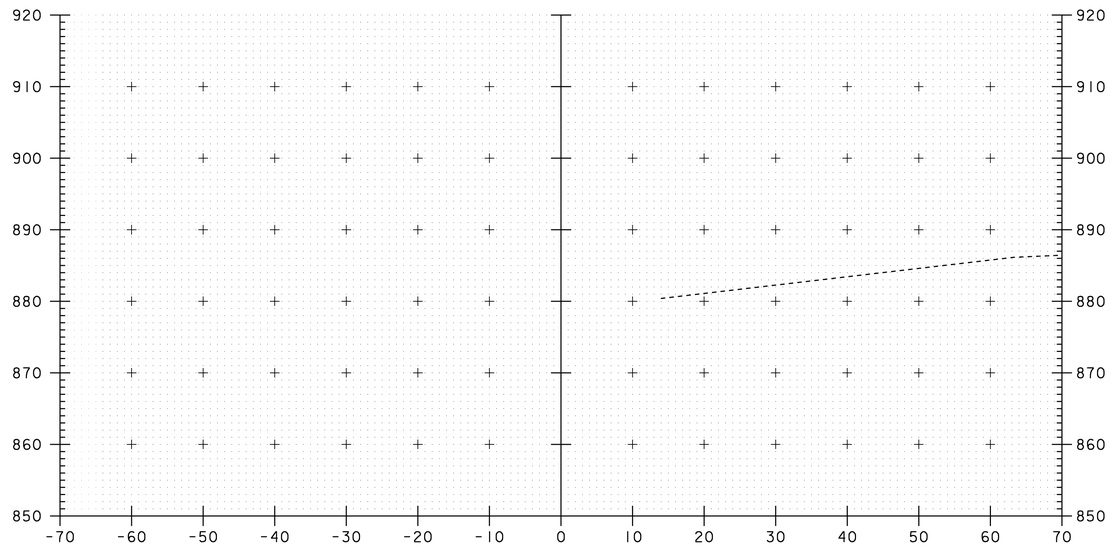
48+80



49+20



48+75



49+00

SCALE 1" = 10'-0

10 0 10

STA. 48+75 TO STA. 49+20

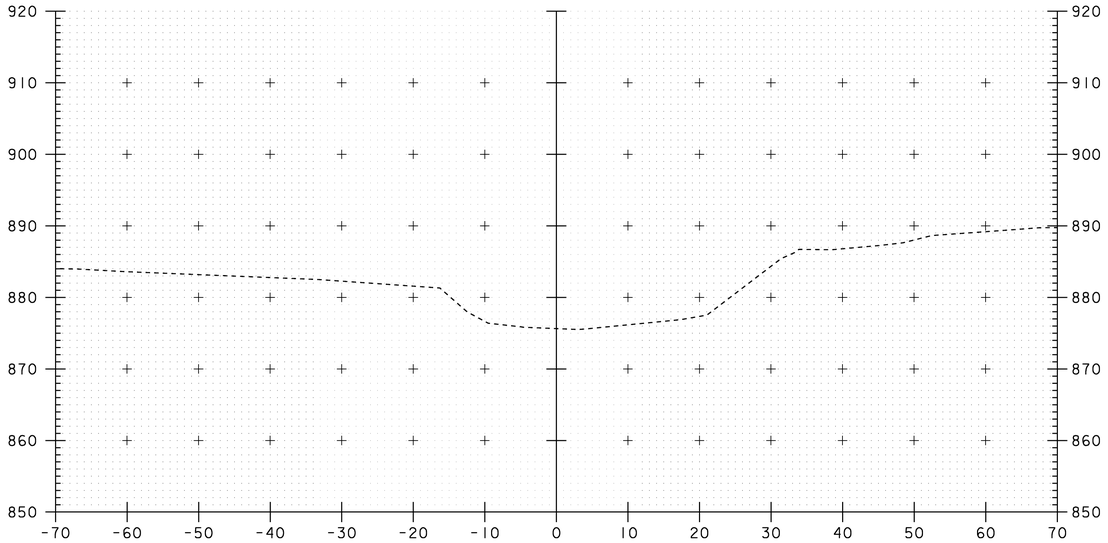
CHANNEL CROSS SECTIONS

PROJECT NAME: WILLIAMSTOWN

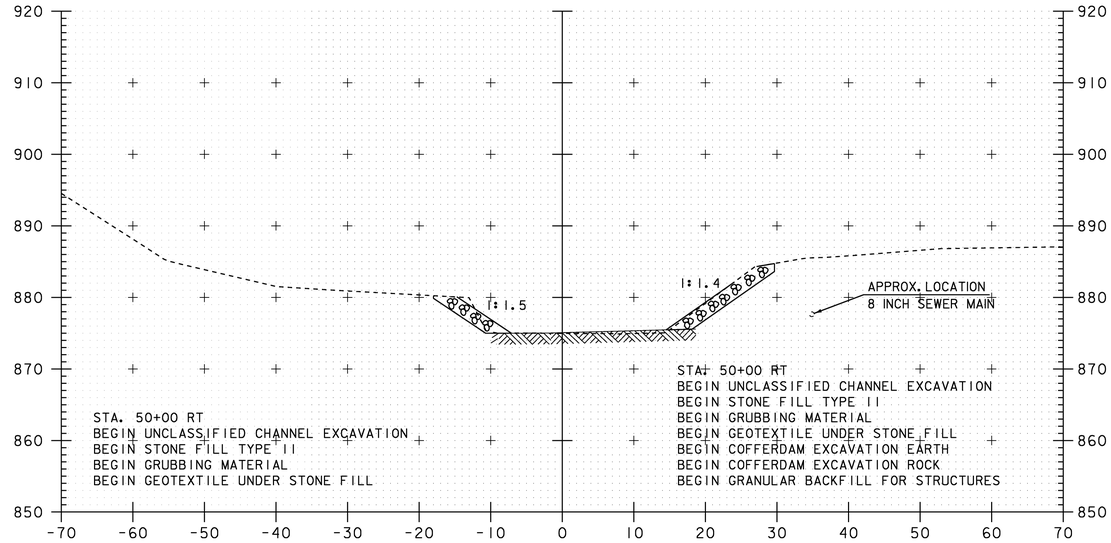
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83elll\structuresSelllxs.d
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: U. STANLEY
IPARM: selllchl.i

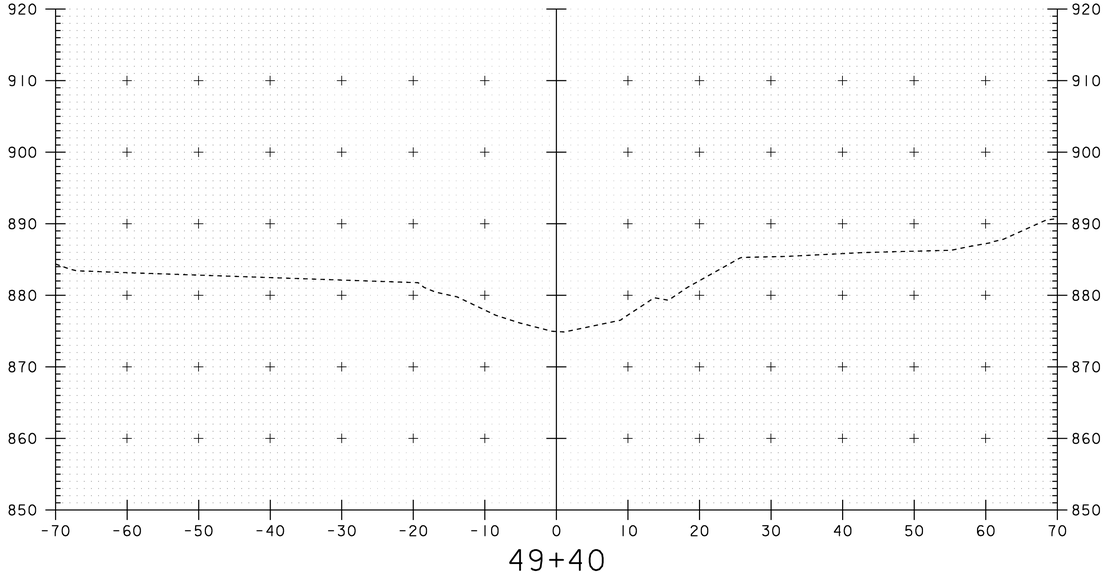
PLOT DATE: 07-APR-2008
DRAWN BY: G.ROKES
CHECKED BY: EVANS-MONGEON
SHEET 87 OF 108



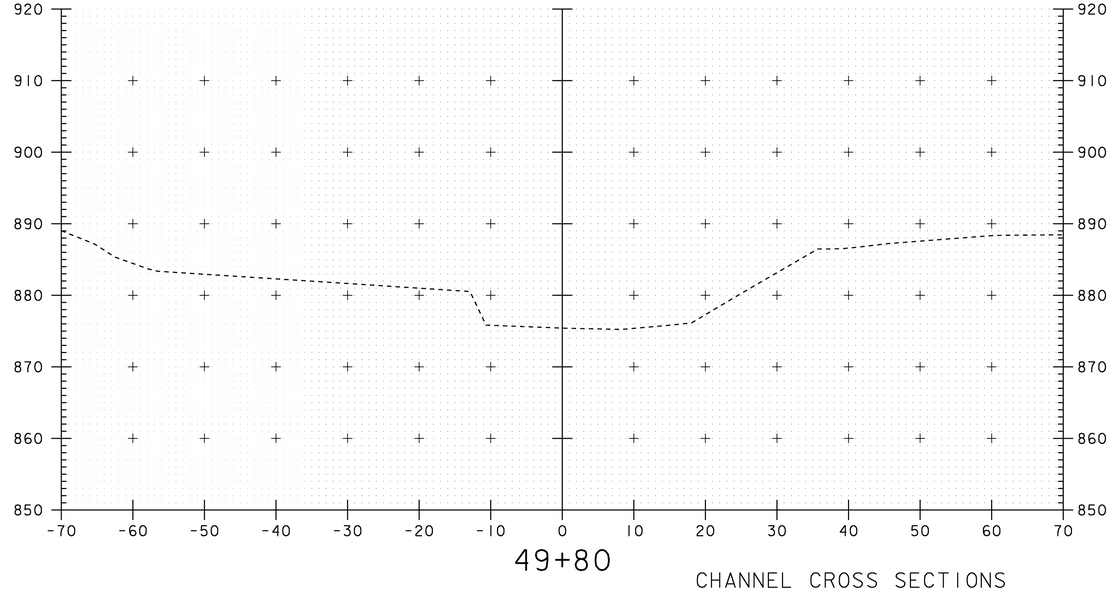
49+60



50+00



49+40



49+80

SCALE 1" = 10'-0

10 0 10

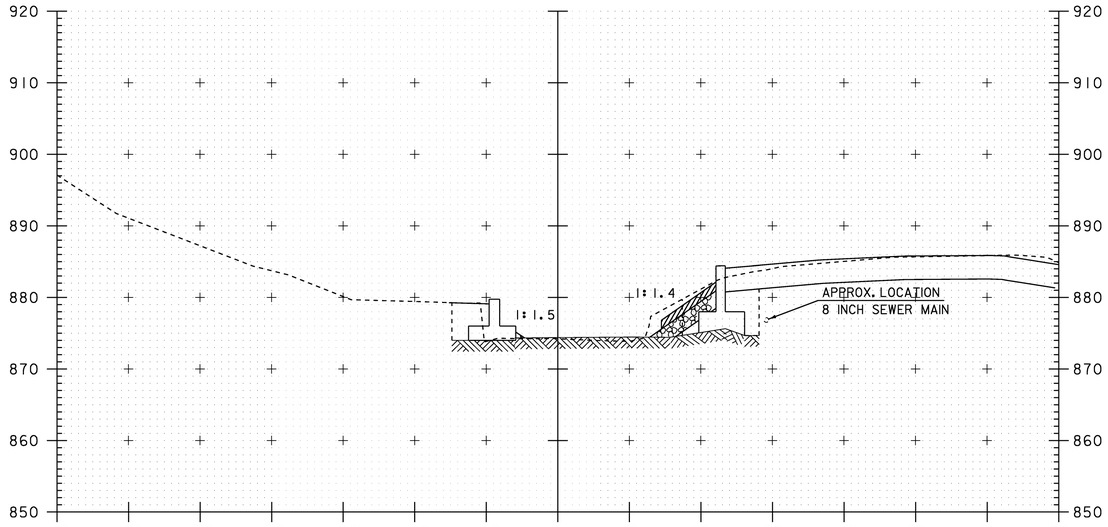
STA. 49+40 TO STA. 50+00

CHANNEL CROSS SECTIONS

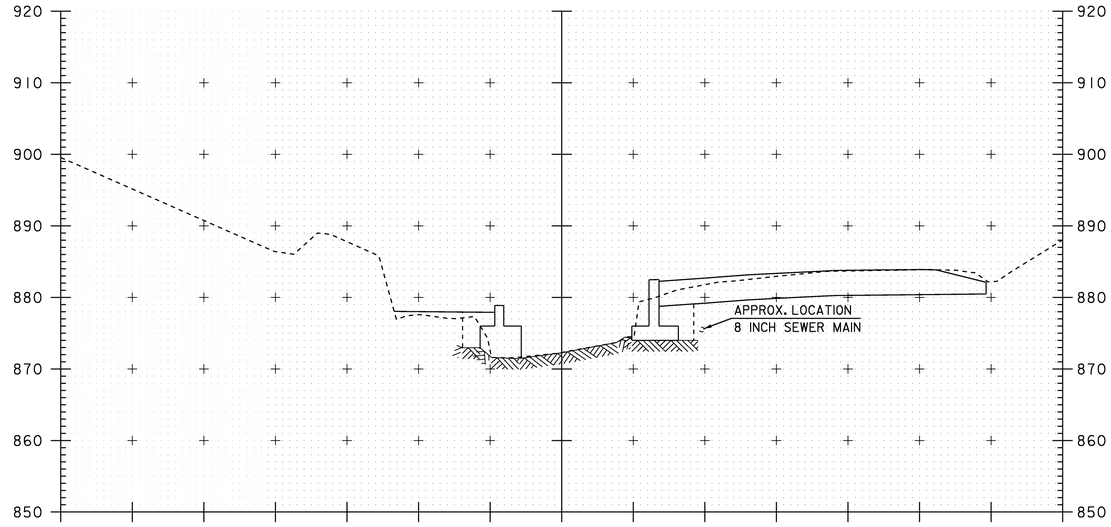
PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83elll\structuresSelllxs.d
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: U. STANLEY
IPARM: selllch2.I

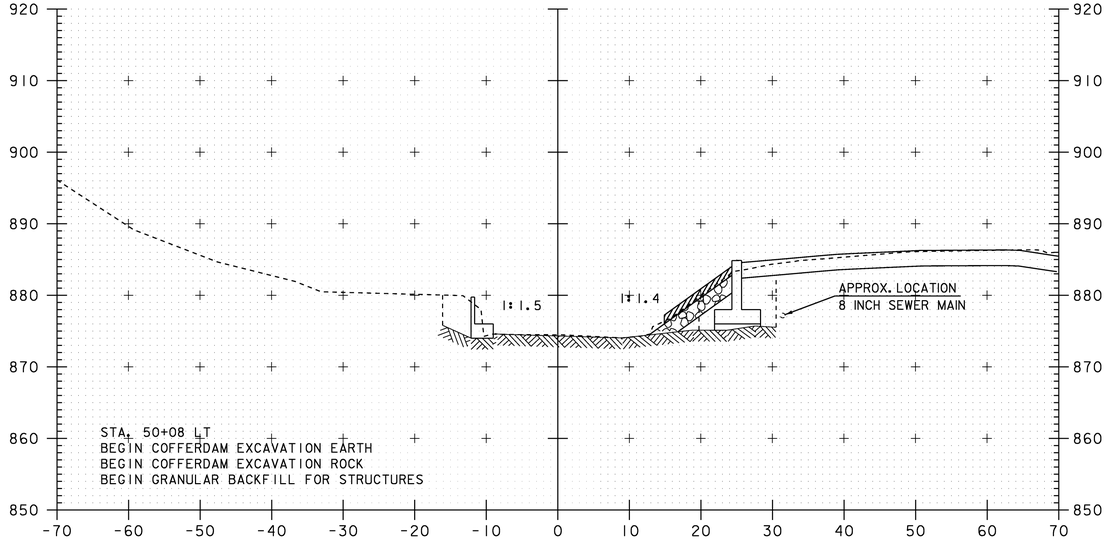
PLOT DATE: 07-APR-2008
DRAWN BY: G.ROKES
CHECKED BY: EVANS-MONGEON
SHEET 88 OF 108



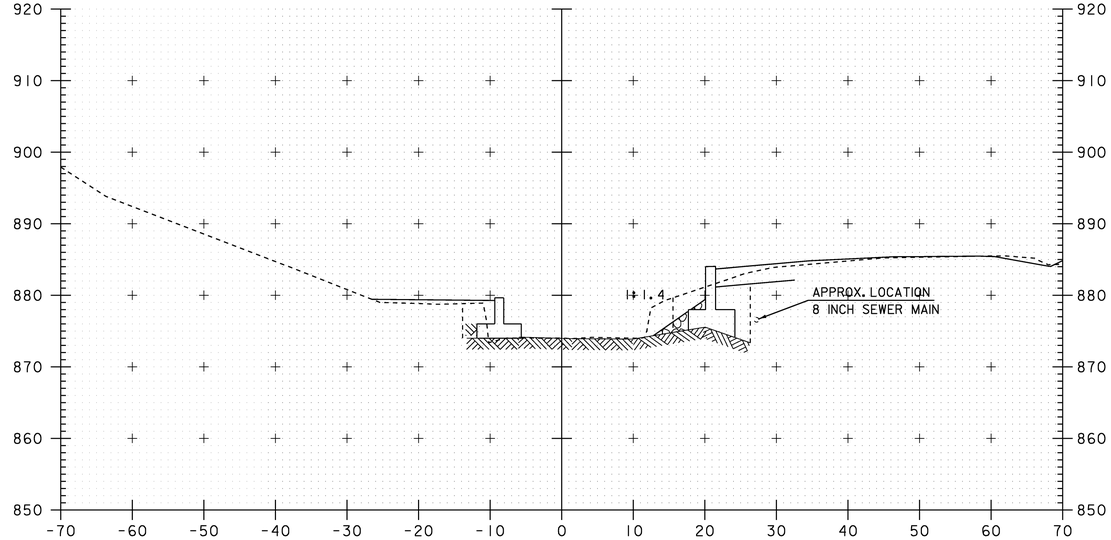
50+15



50+40



50+09



50+20

SCALE 1" = 10'-0

10 0 10

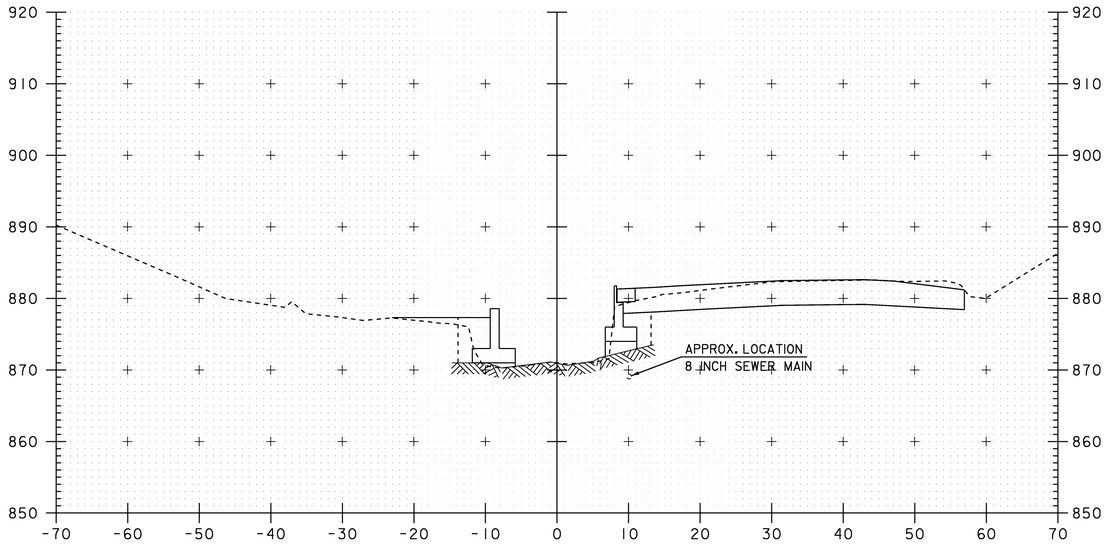
STA. 50+09 TO STA. 50+40

CHANNEL CROSS SECTIONS

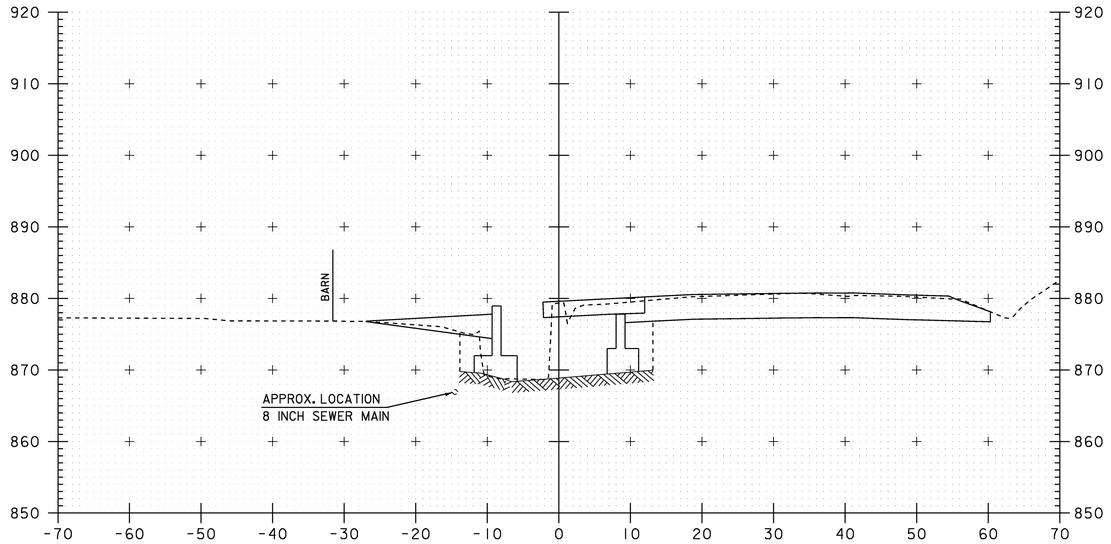
PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83elll\structuresSelllxs.d
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: U. STANLEY
IPARM: selllch3.I

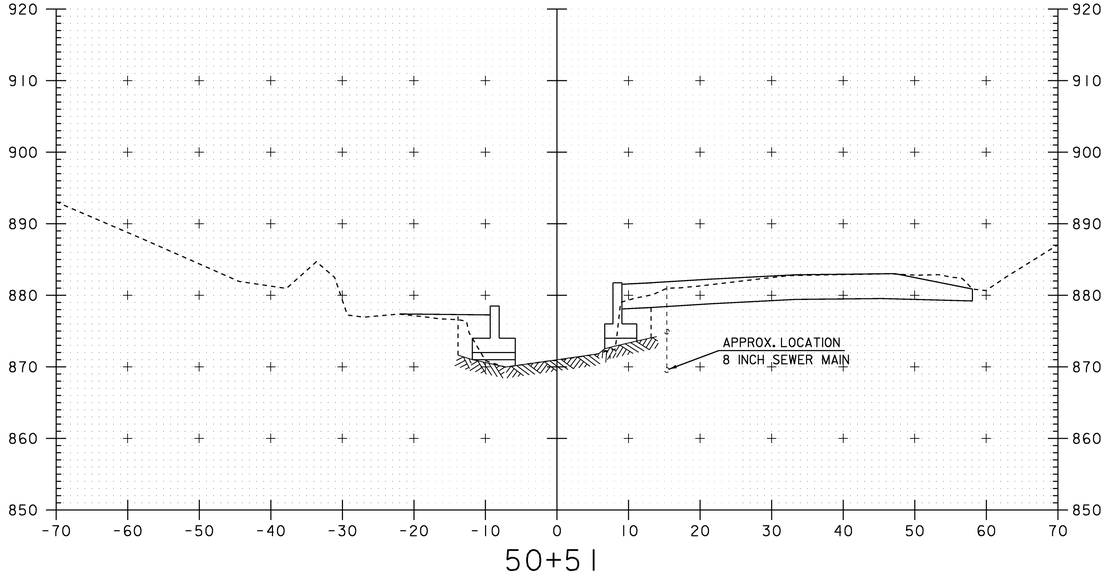
PLOT DATE: 07-APR-2008
DRAWN BY: G.ROKES
CHECKED BY: EVANS-MONGEON
SHEET 89 OF 108



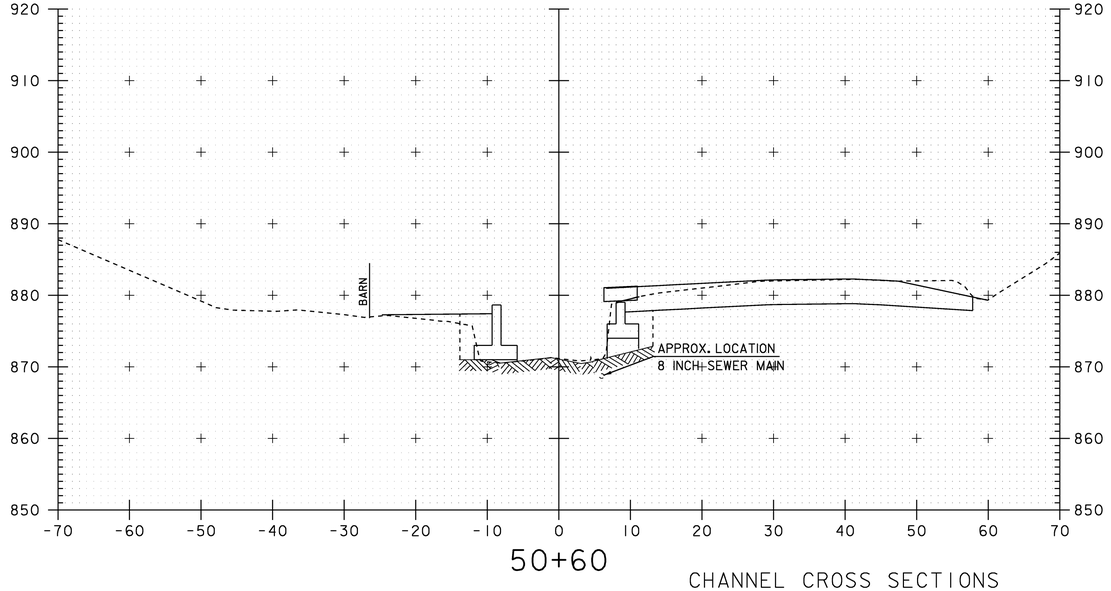
50+56



50+80



50+51



50+60

SCALE 1" = 10'-0

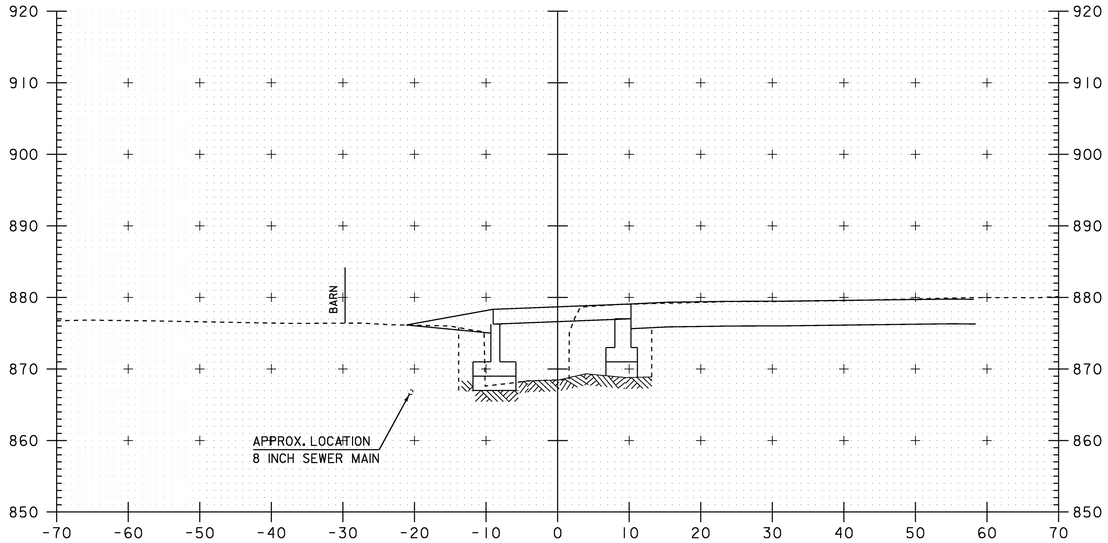
STA. 50+51 TO STA. 50+80

CHANNEL CROSS SECTIONS

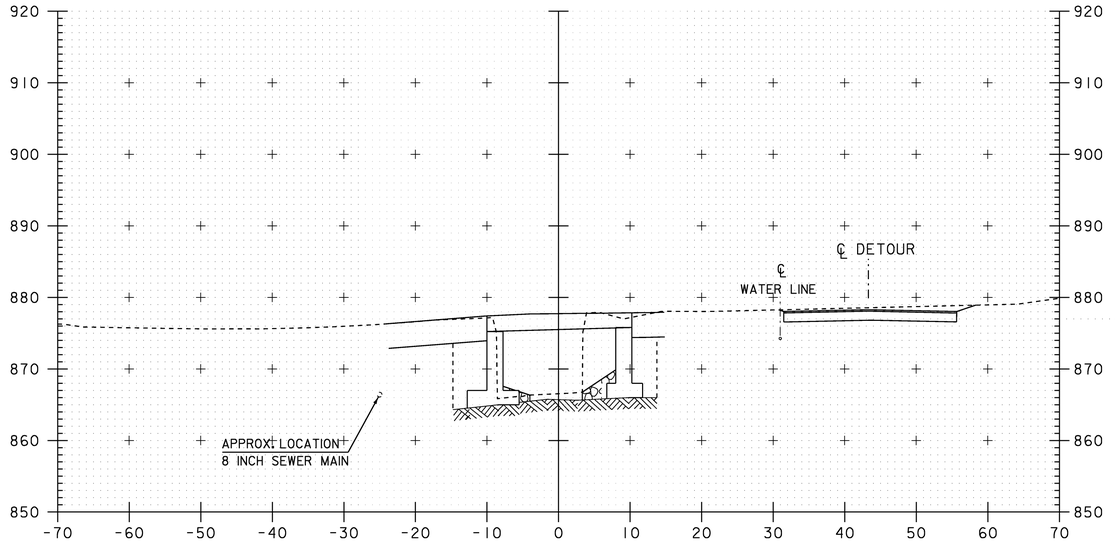
PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83elll\structuresSelllxs.d
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: U. STANLEY
IPARM: selllch4.I

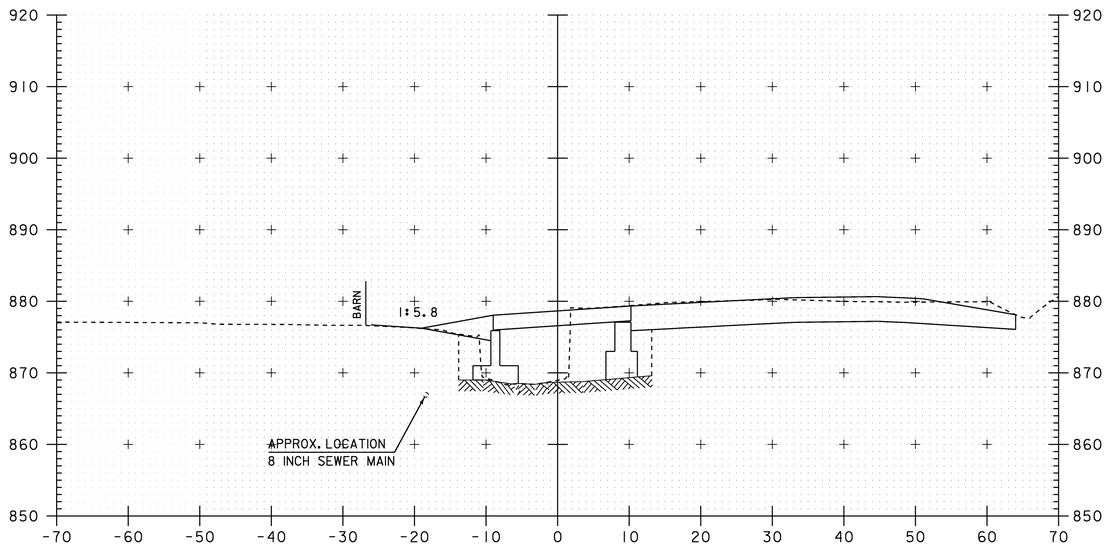
PLOT DATE: 07-APR-2008
DRAWN BY: G.ROKES
CHECKED BY: EVANS-MONGEON
SHEET 90 OF 108



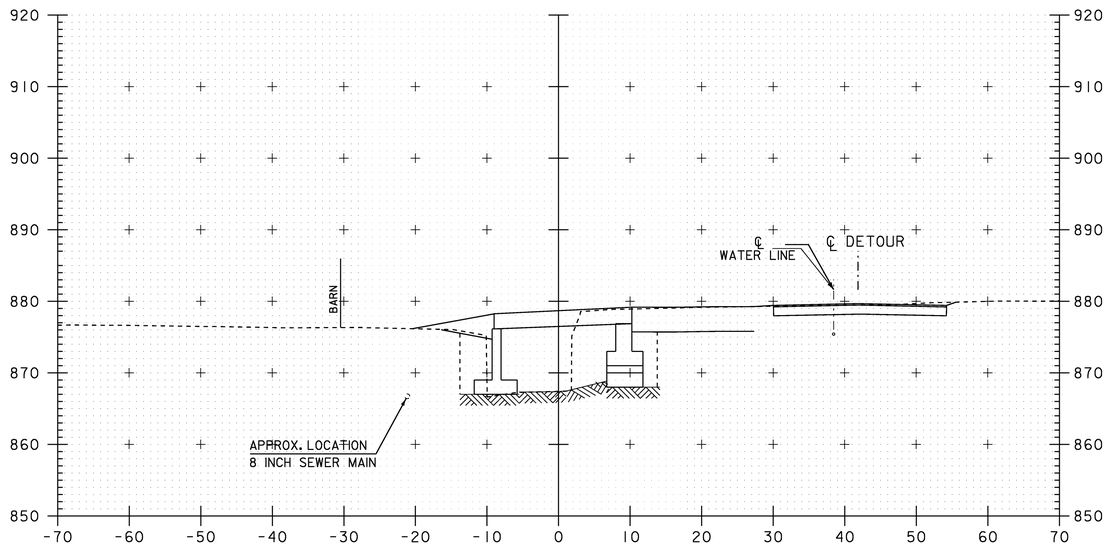
50+97



51+20



50+86



51+00

SCALE 1" = 10'-0
10 0 10

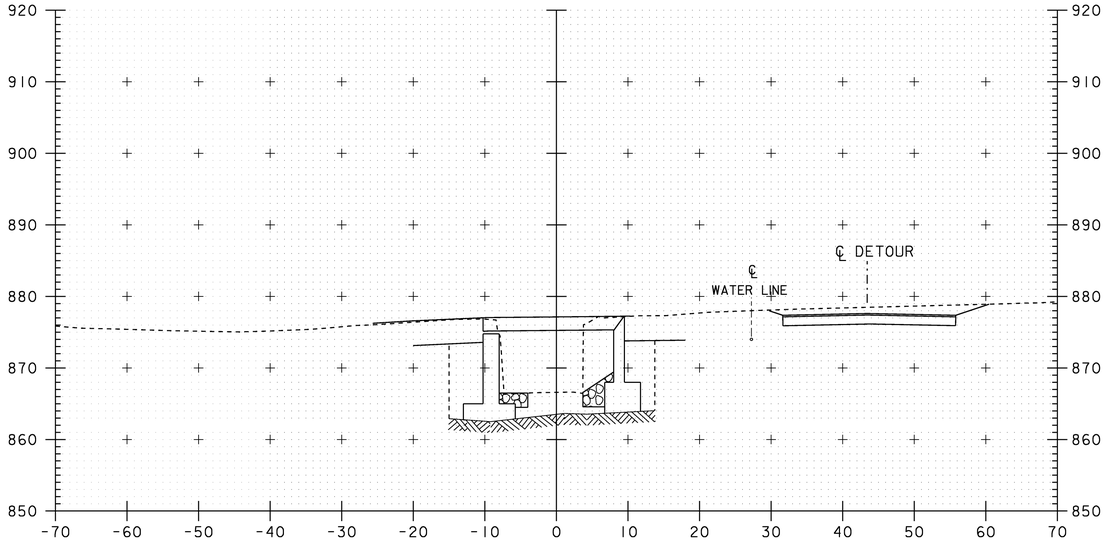
STA. 50+86 TO STA. 51+20

CHANNEL CROSS SECTIONS

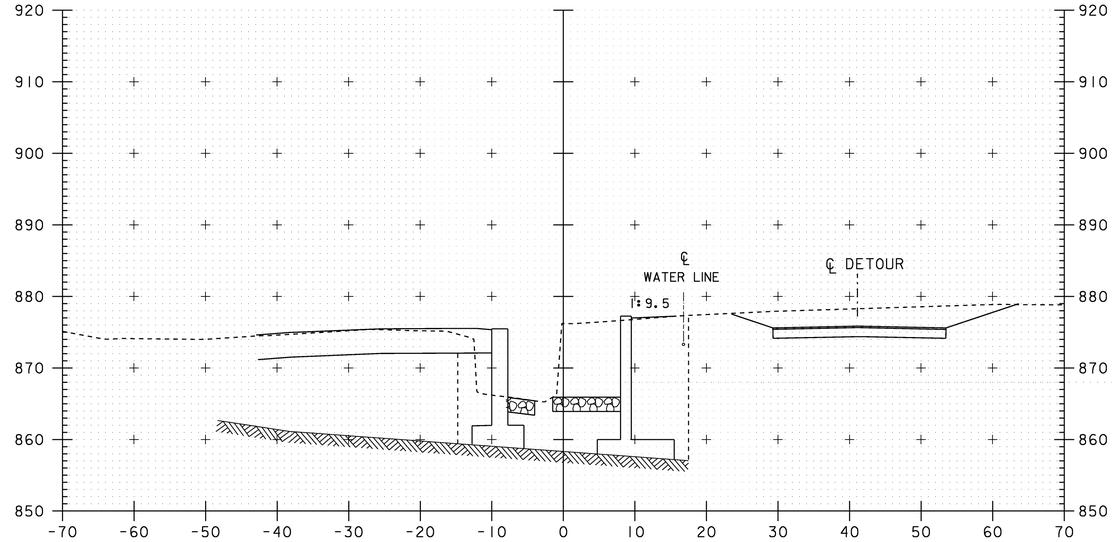
PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83elll\structuresSelllxs.d
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: MEM
IPARM: selllch5.I

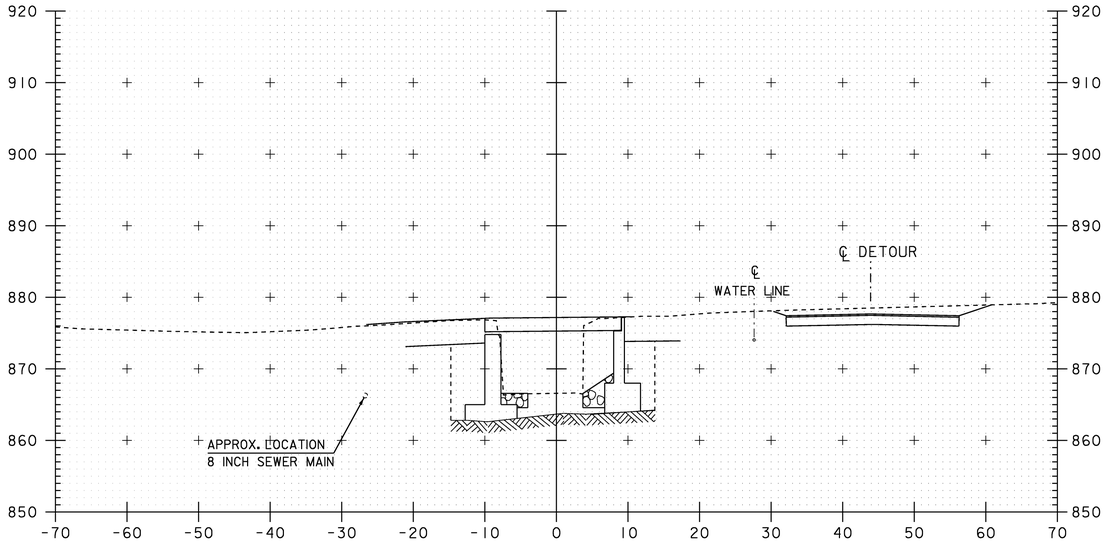
PLOT DATE: 07-APR-2008
DRAWN BY: G.ROKES
CHECKED BY:
SHEET 91 OF 108



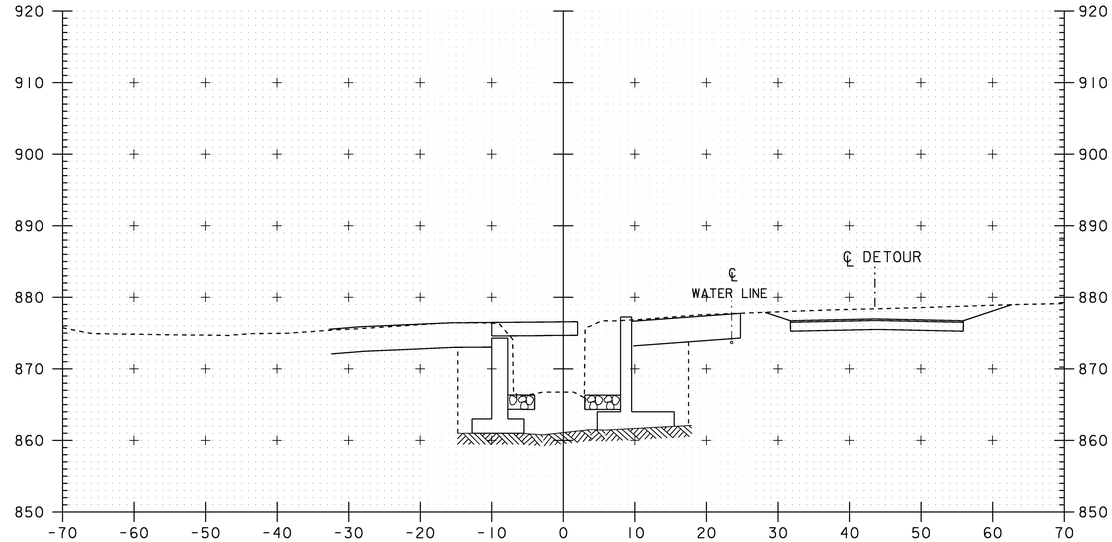
51+30



51+58



51+29



51+40

SCALE 1" = 10'-0

10 0 10

STA. 51+29 TO STA. 51+58

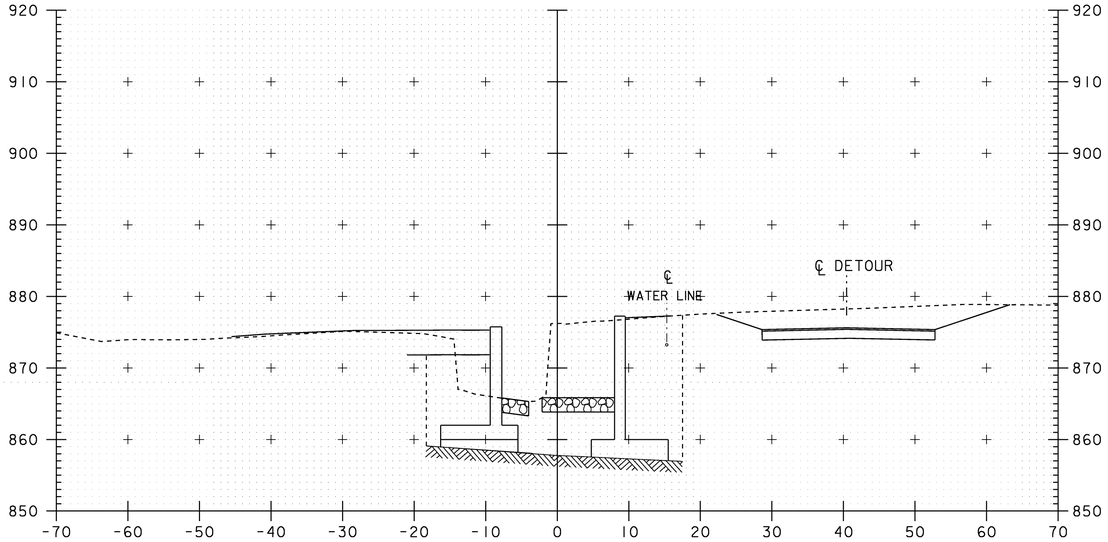
CHANNEL CROSS SECTIONS

PROJECT NAME: WILLIAMSTOWN

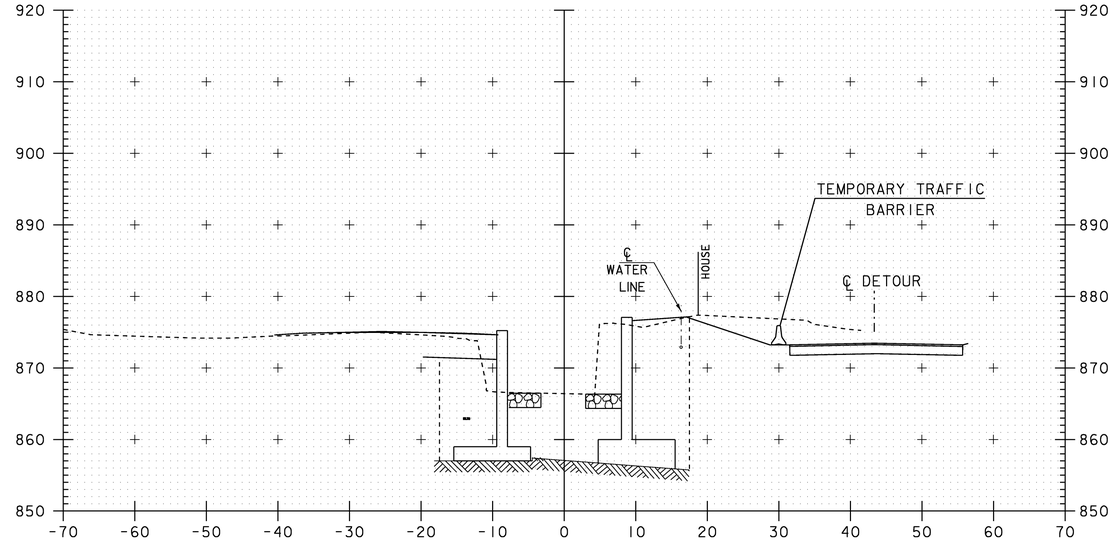
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83ellI\structuresEllIxs.d
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: MEM
IPARM: sellIch6.I

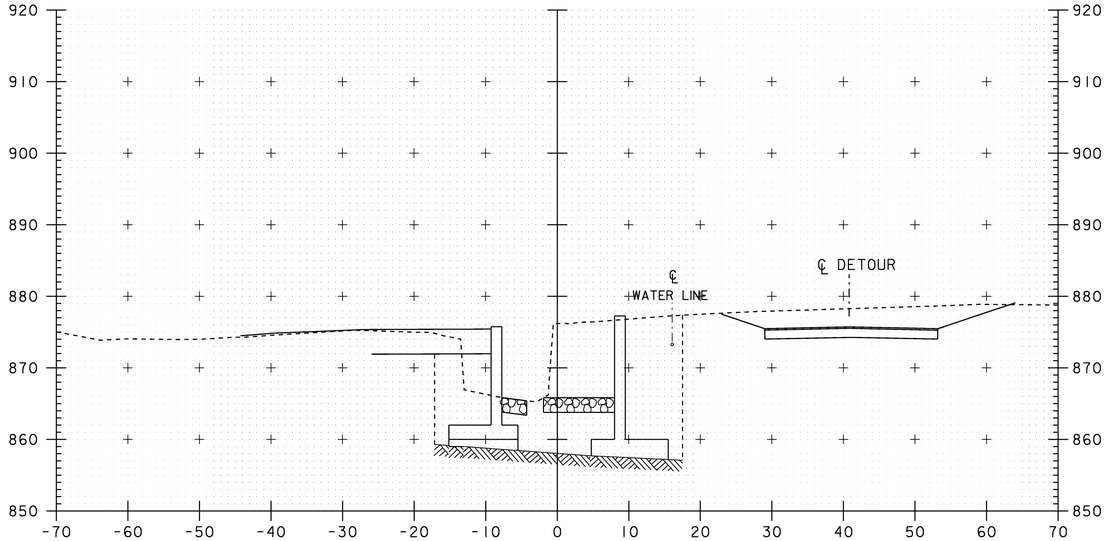
PLOT DATE: 07-APR-2008
DRAWN BY: G.ROKES
CHECKED BY:
SHEET 92 OF 108



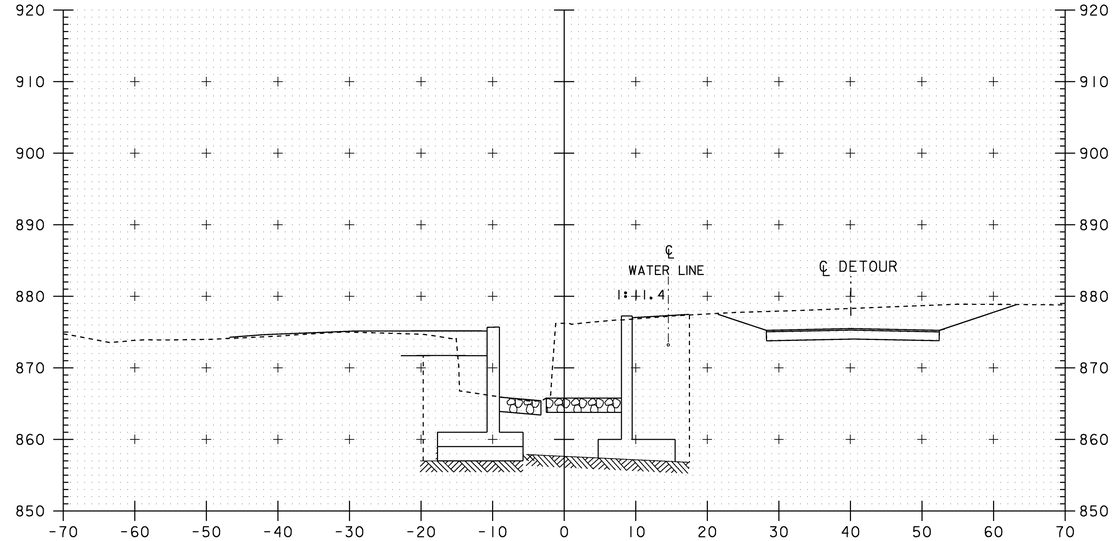
51+62



51+80



51+60



51+64

SCALE 1" = 10'-0
10 0 10

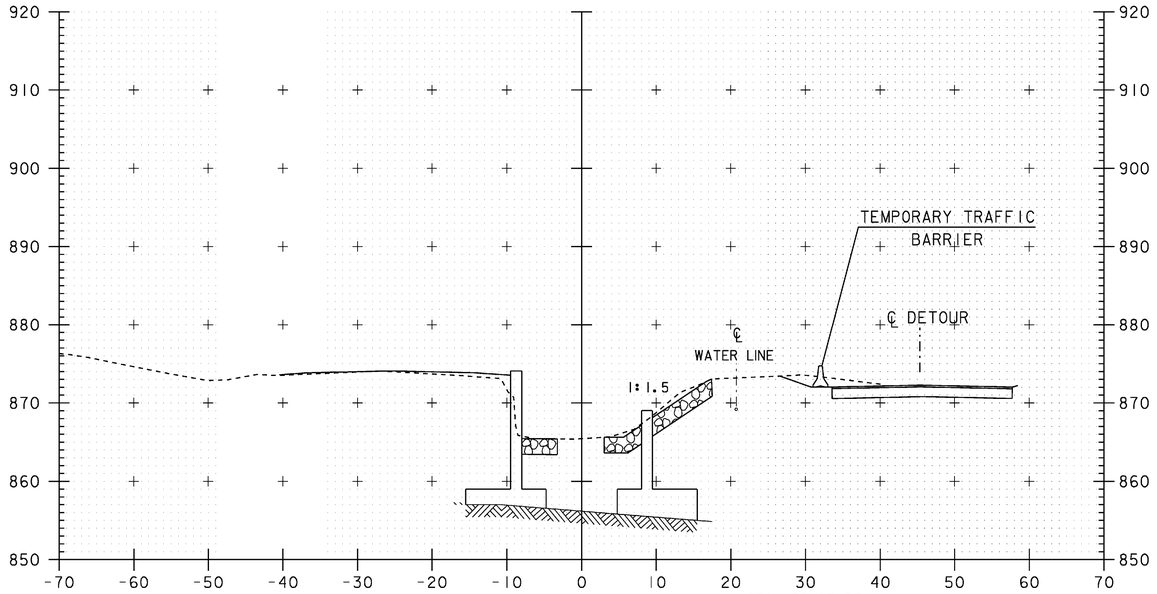
STA. 51+60 TO STA. 51+80

CHANNEL CROSS SECTIONS

PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

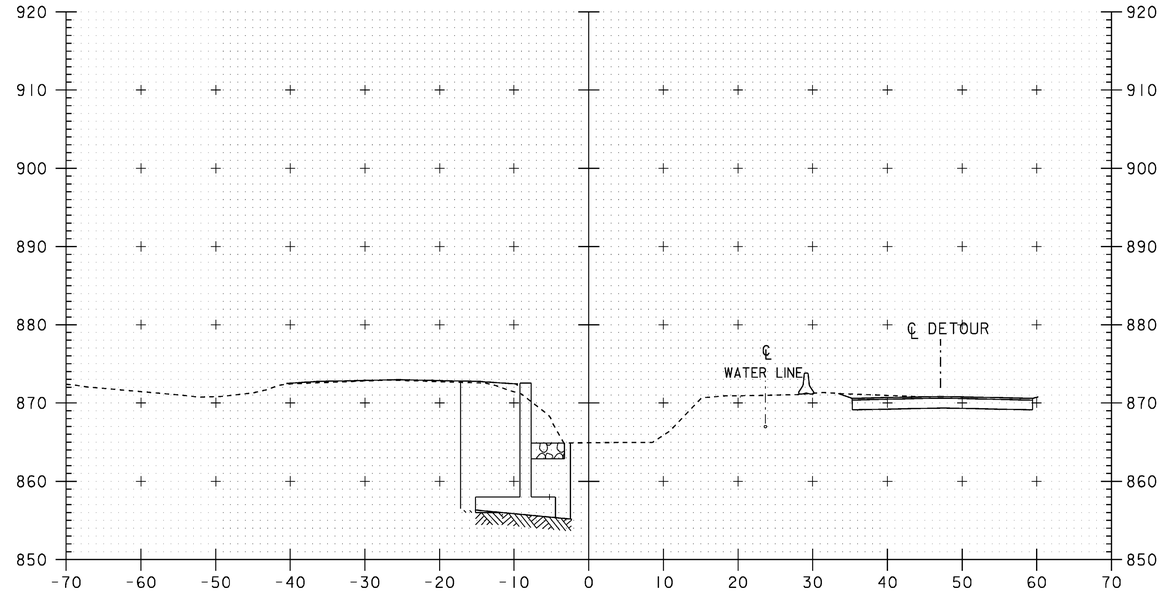
FILE NAME: 83elll\structuresSelllxs.d
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: U. STANLEY
IPARM: selllch7.I

PLOT DATE: 07-APR-2008
DRAWN BY: G.ROKES
CHECKED BY: EVANS-MONGEON
SHEET 93 OF 108

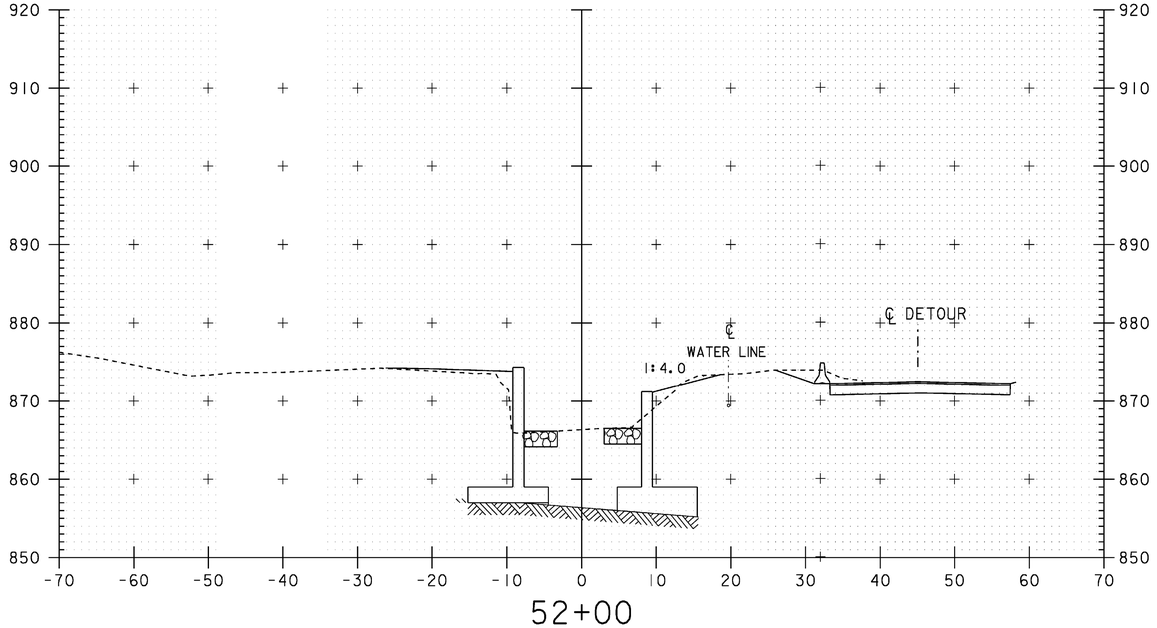


52+05

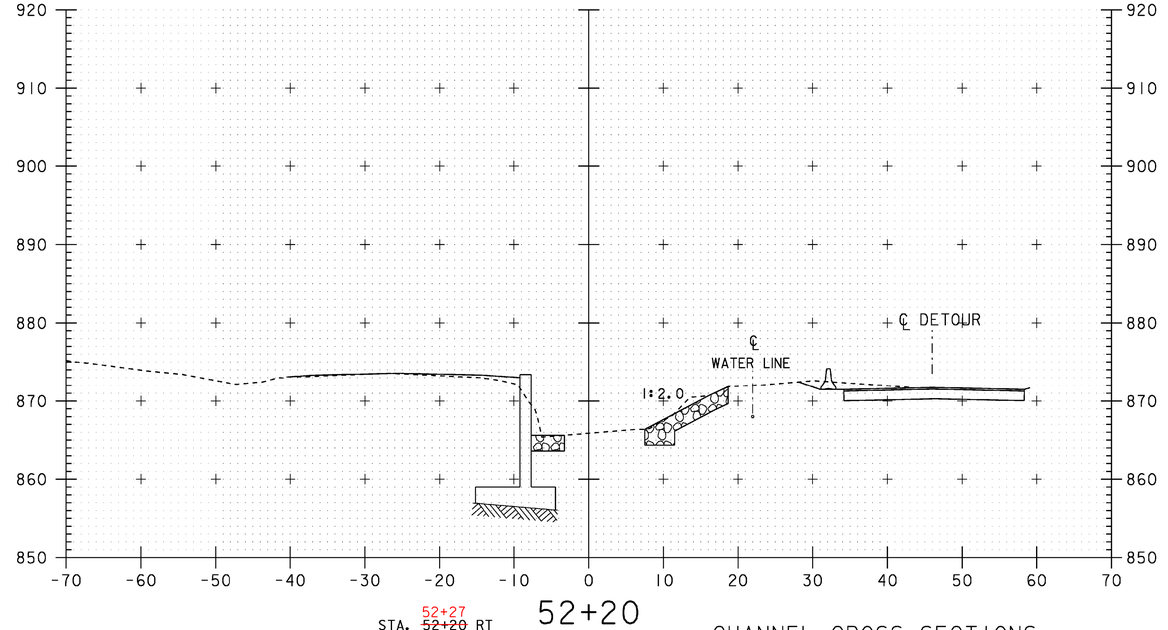
STA. 52+05 RT
END COFFERDAM EXCAVATION EARTH
END COFFERDAM EXCAVATION ROCK
END GRANULAR BACKFILL FOR STRUCTURES



52+40



52+00



52+20

STA. ~~52+20~~ 52+27 RT
END UNCLASSIFIED CHANNEL EXCAVATION
END STONE FILL TYPE II
END GRUBBING MATERIAL
END GEOTEXTILE UNDER STONE FILL

SCALE 1" = 10'-0
10 0 10

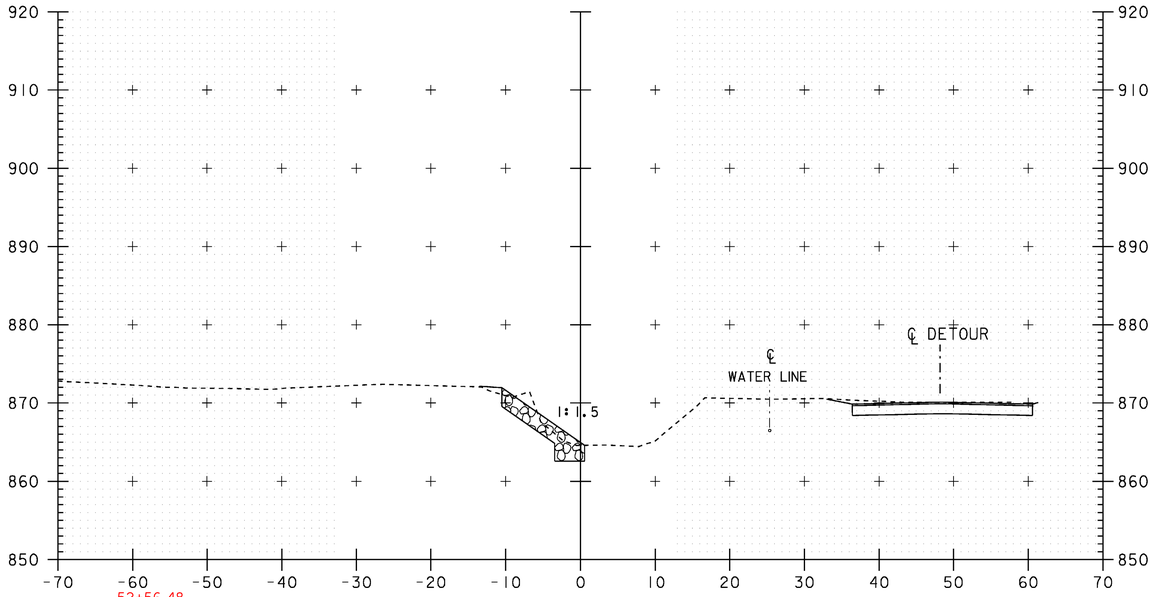
STA. 52+00 TO STA. 52+40

CHANNEL CROSS SECTIONS

PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

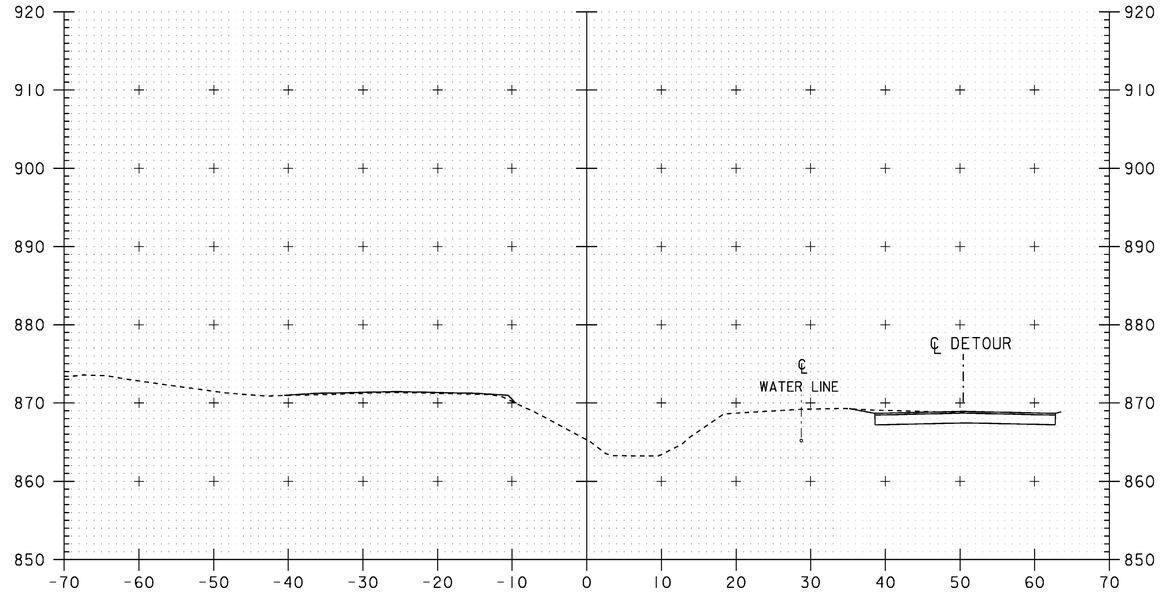
FILE NAME: 83elll\structuresSelllxs.d
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: U. STANLEY
IPARM: selllch8.1

PLOT DATE: 07-APR-2008
DRAWN BY: G.ROKES
CHECKED BY: EVANS-MONGEON
SHEET 94 OF 108

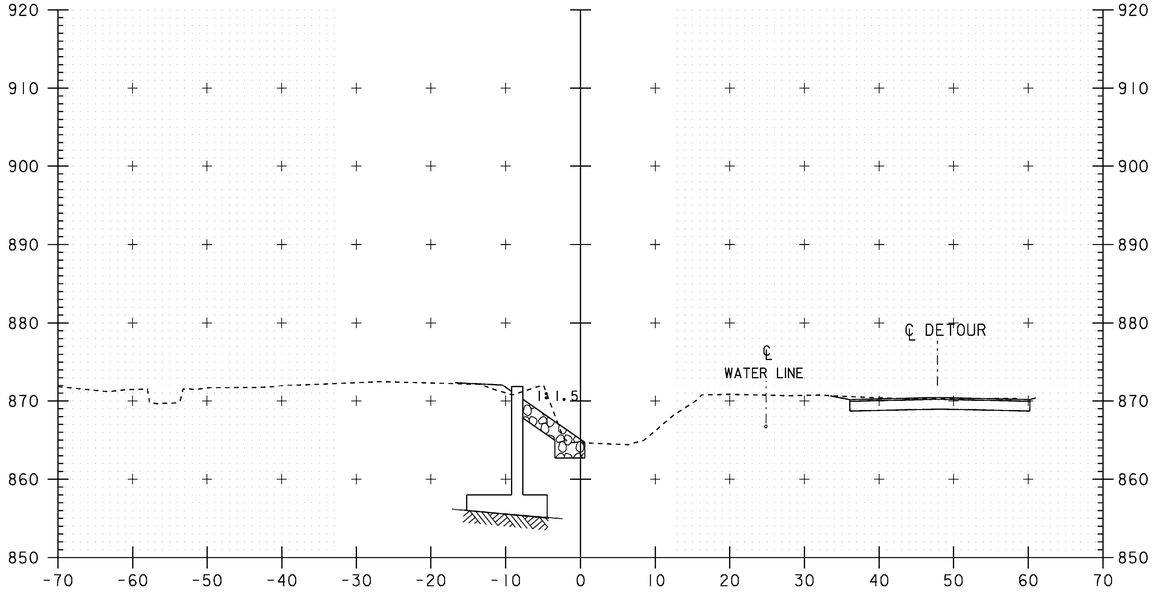


52+60

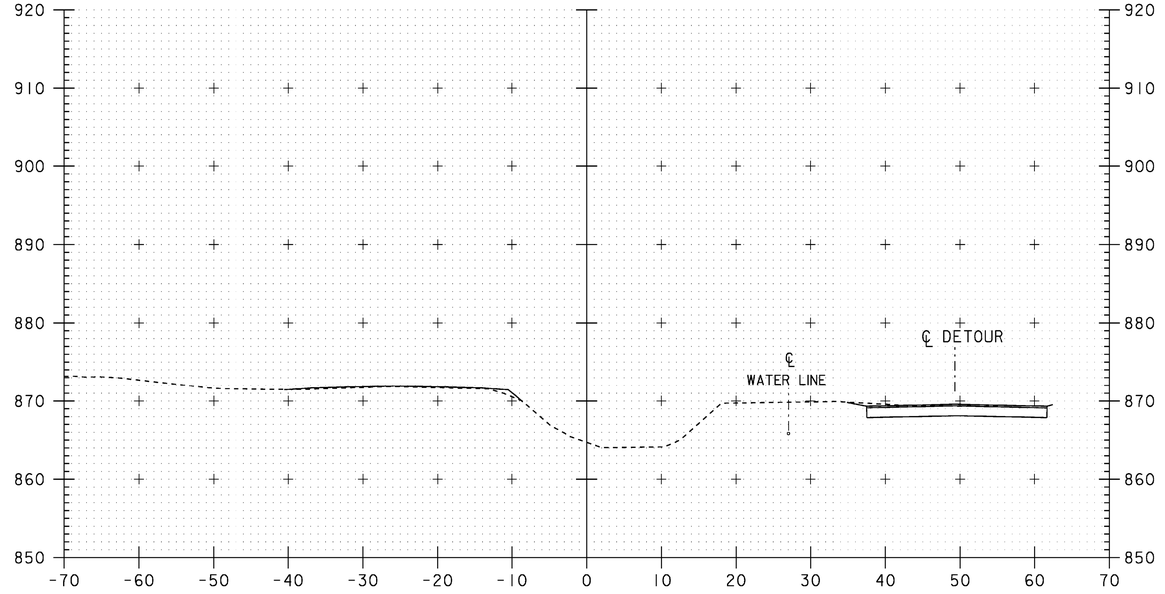
STA. ~~52+55~~ 52+56.48 LT
END COFFERDAM EXCAVATION EARTH
END COFFERDAM EXCAVATION ROCK
END GRANULAR BACKFILL FOR STRUCTURES



53+00



52+54



52+80

STA. ~~52+62~~ 52+70 LT
END UNCLASSIFIED CHANNEL EXCAVATION
END STONE FILL TYPE II
END GRUBBING MATERIAL
END GEOTEXTILE UNDER STONE FILL

SCALE 1" = 10'-0
10 0 10

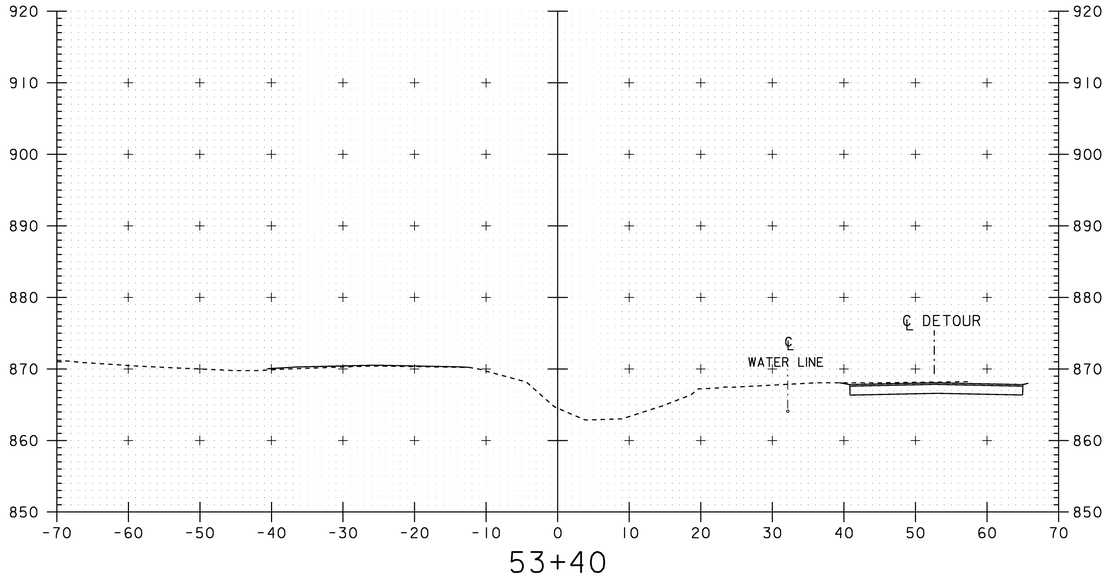
STA. 52+54 TO STA. 53+00

CHANNEL CROSS SECTIONS

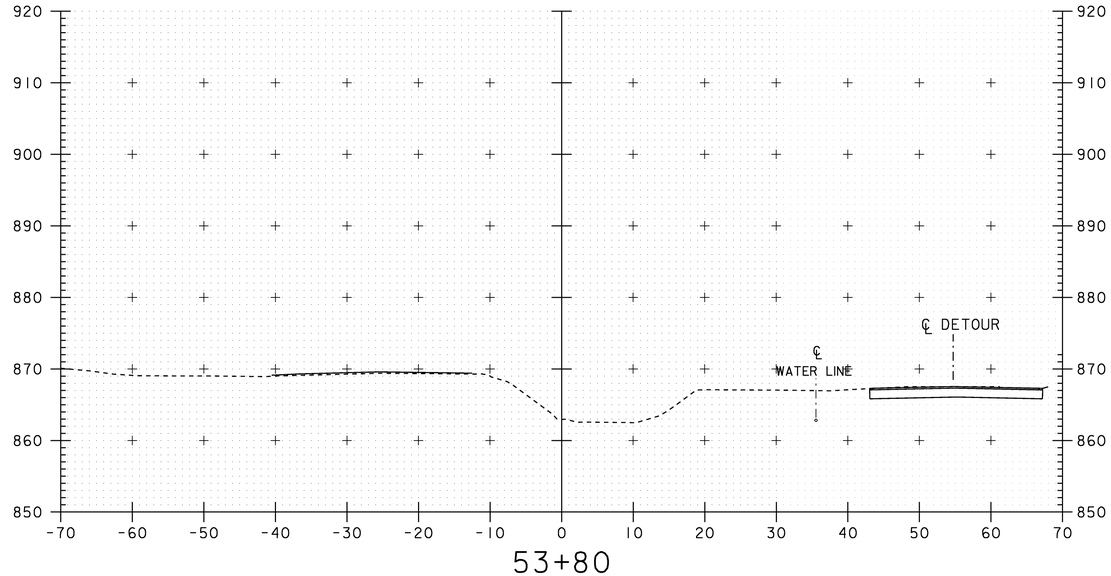
PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83elll\structuresSelllxs.d
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: U. STANLEY
IPARM: selllch9.1

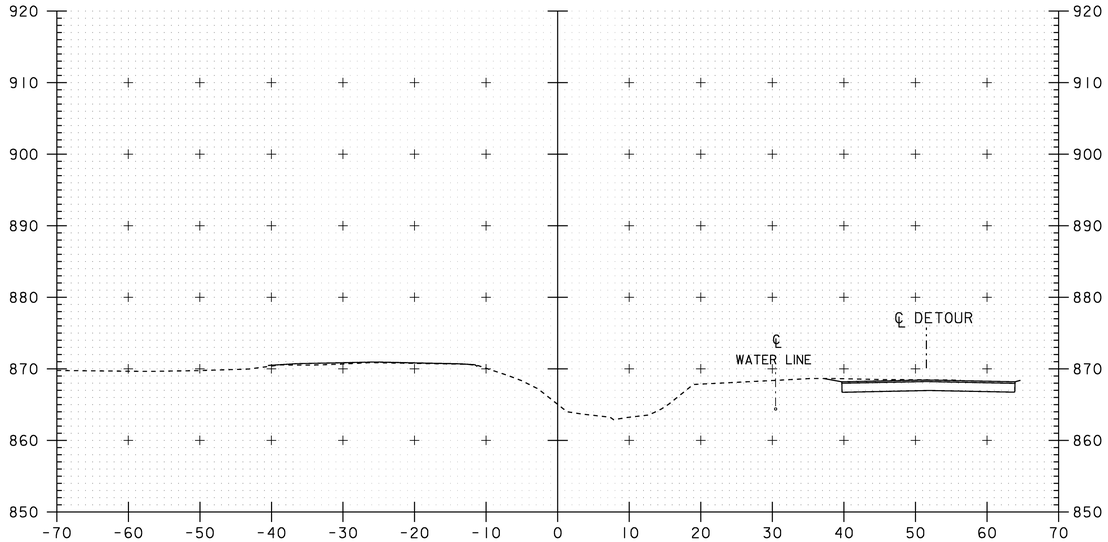
PLOT DATE: 07-APR-2008
DRAWN BY: G.ROKES
CHECKED BY: EVANS-MONGEON
SHEET 95 OF 108



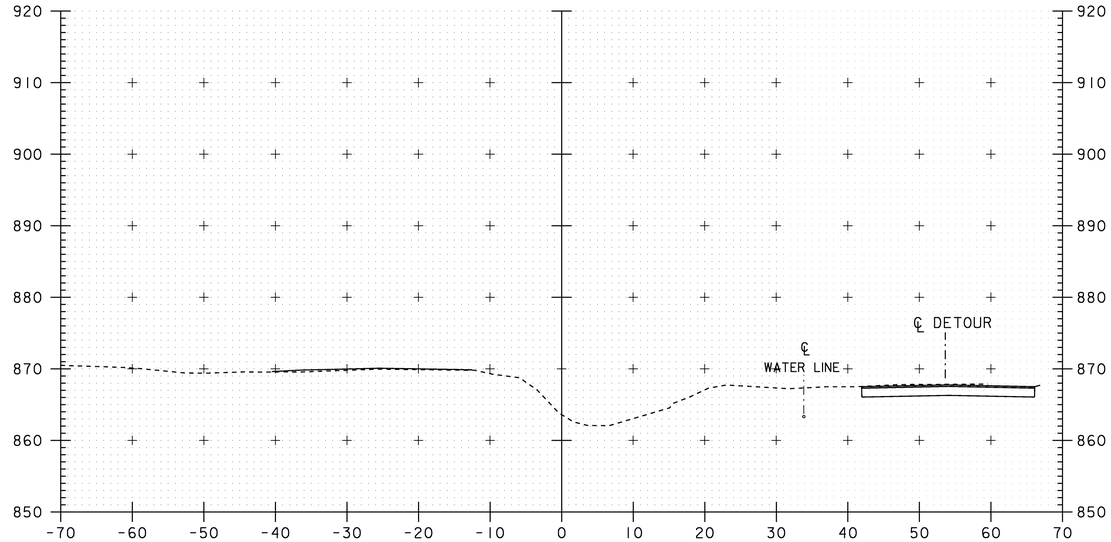
53+40



53+80



53+20



53+60

SCALE 1" = 10'-0
10 0 10

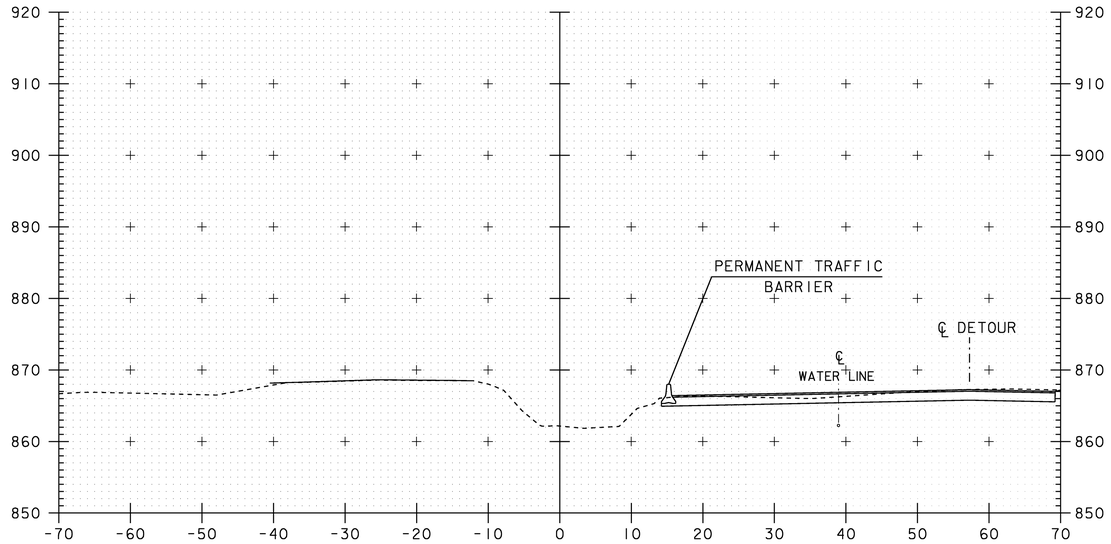
STA. 53+20 TO STA. 53+80

CHANNEL CROSS SECTIONS

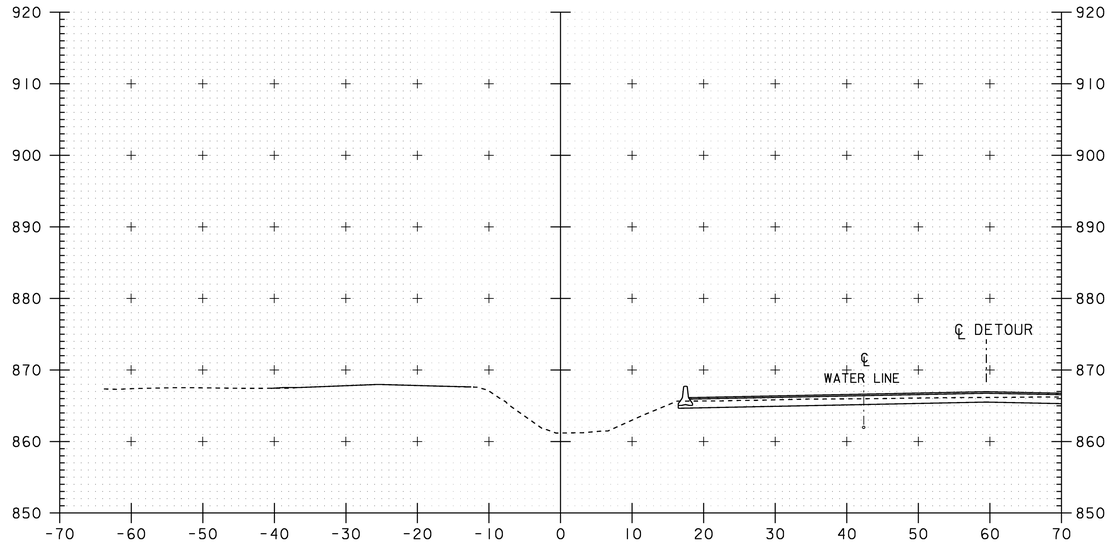
PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83elll\structuresSelllxs.d
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: U. STANLEY
IPARM: selllc10.i

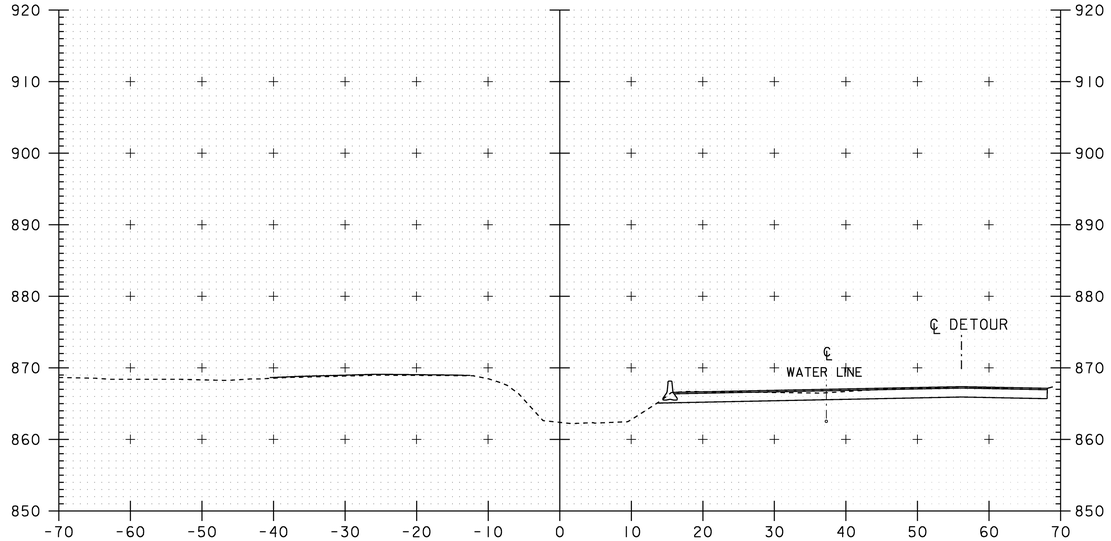
PLOT DATE: 07-APR-2008
DRAWN BY: G.ROKES
CHECKED BY: EVANS-MONGEON
SHEET 96 OF 108



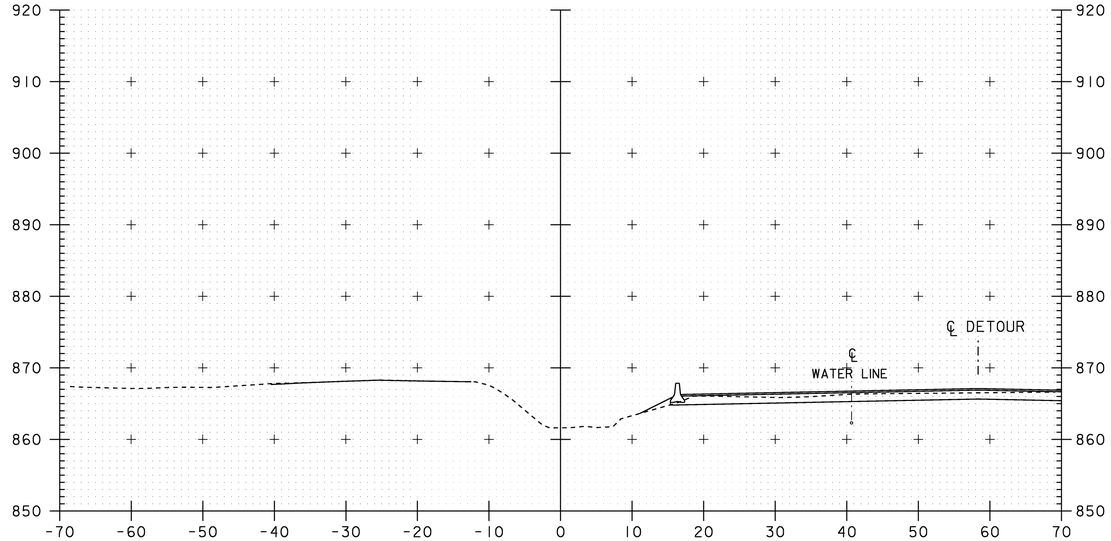
54+20



54+60



54+00



54+40

SCALE 1" = 10'-0

10 0 10

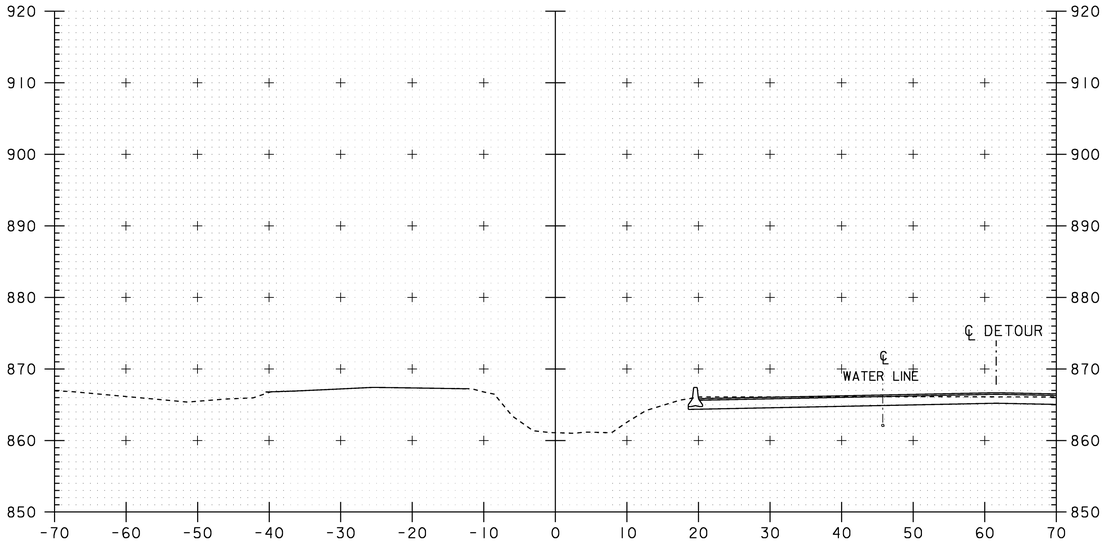
STA. 54+00 TO STA. 54+60

CHANNEL CROSS SECTIONS

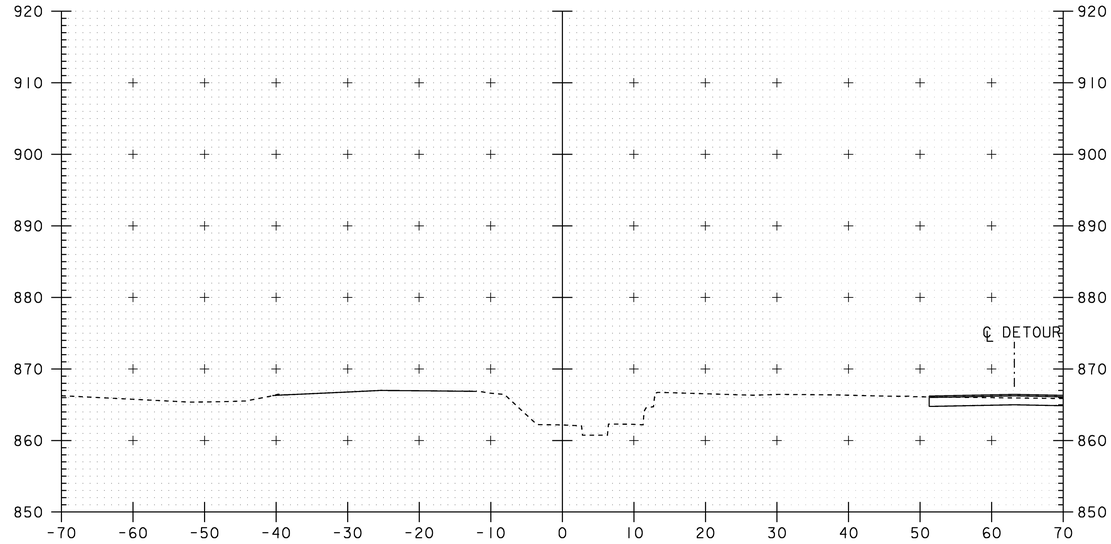
PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83elll\structuresSelllxs.d
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: U. STANLEY
IPARM: selllcll.i

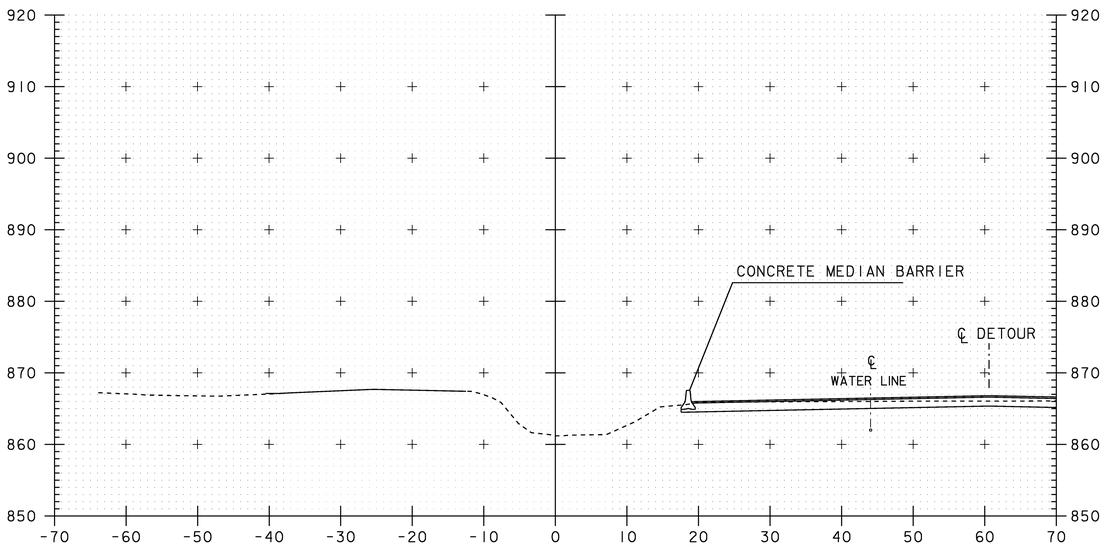
PLOT DATE: 07-APR-2008
DRAWN BY: G.ROKES
CHECKED BY: EVANS-MONGEON
SHEET 97 OF 108



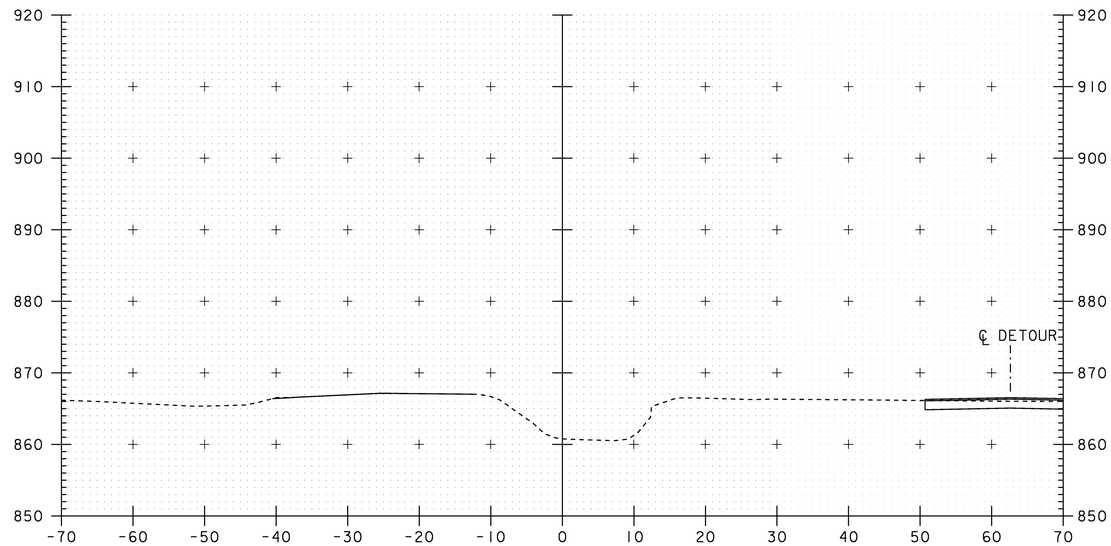
55+00



55+31



54+80



55+20

SCALE 1" = 10'-0

10 0 10

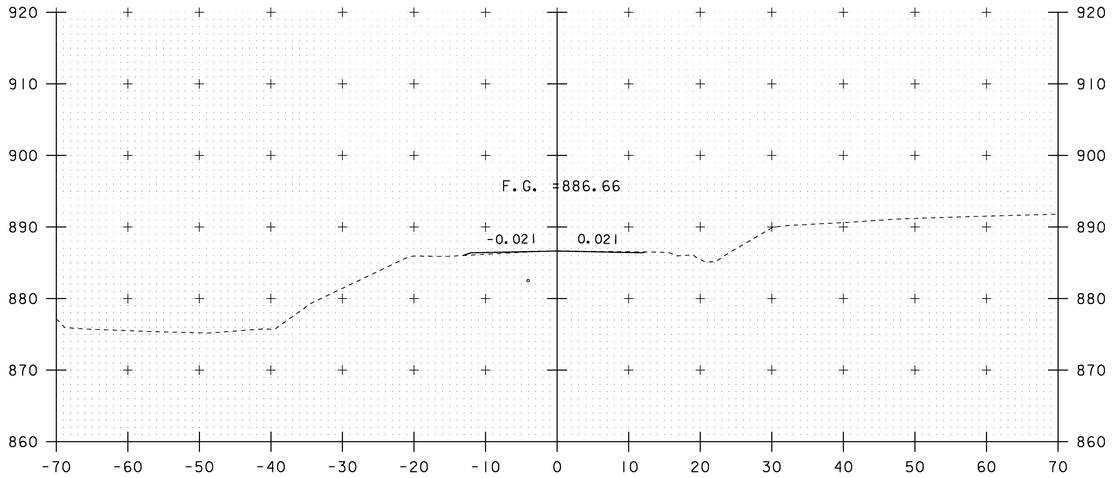
STA. 54+80 TO STA. 55+31

CHANNEL CROSS SECTIONS

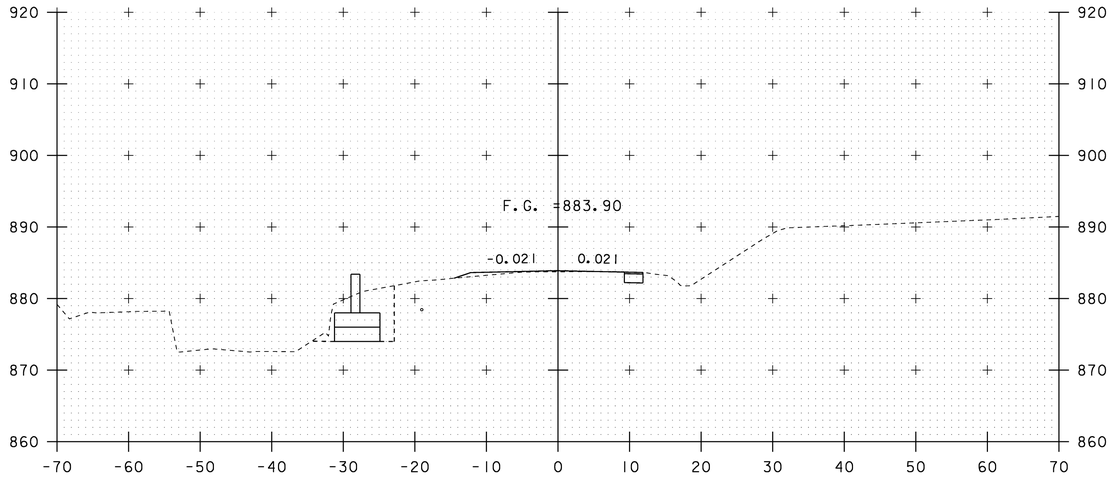
PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83elll\structuresSelllxs.d
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: U. STANLEY
IPARM: selllcl2.i

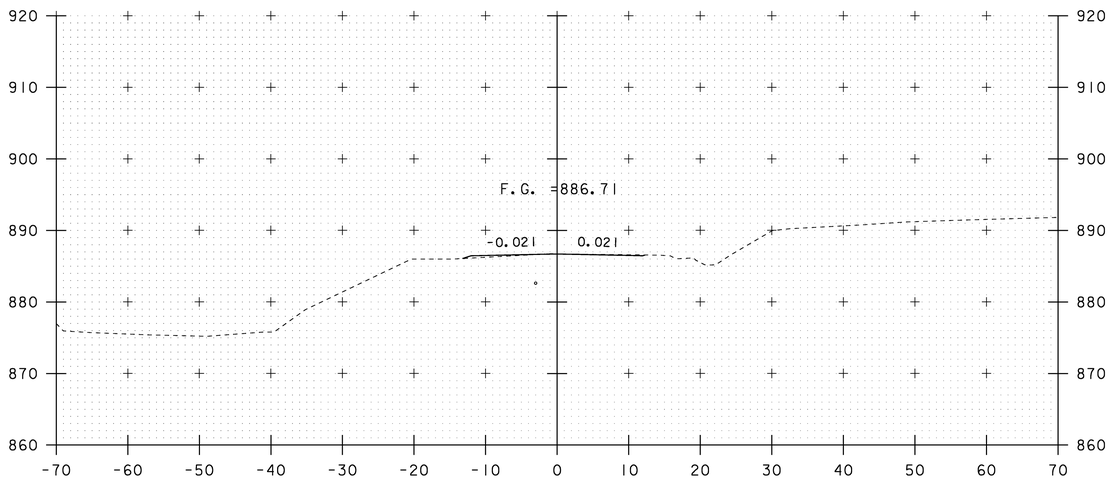
PLOT DATE: 07-APR-2008
DRAWN BY: G.ROKES
CHECKED BY: EVANS-MONGEON
SHEET 98 OF 108



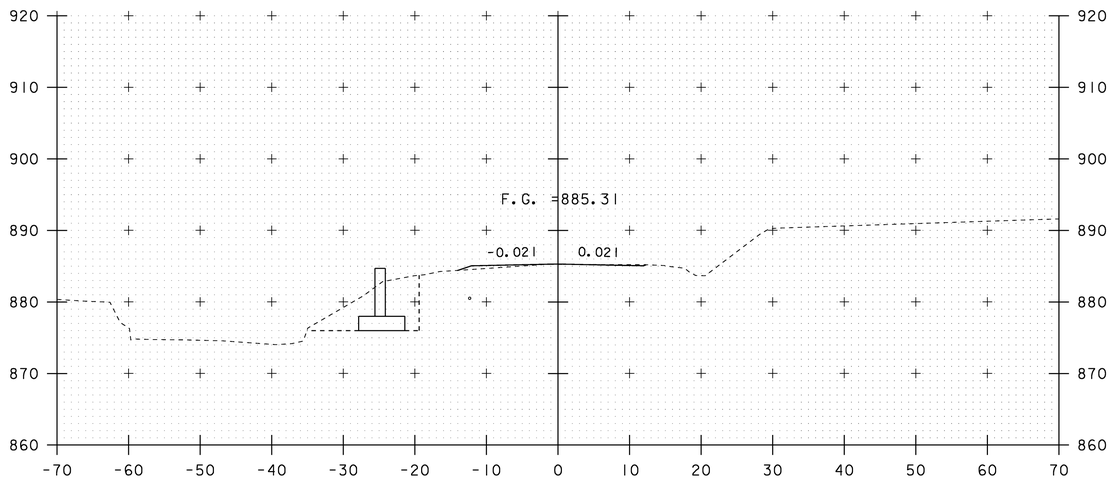
300+01



300+40



300+00



300+20

SCALE 1" = 10'-0

10 0 10

STA. 300+00 TO STA. 300+40

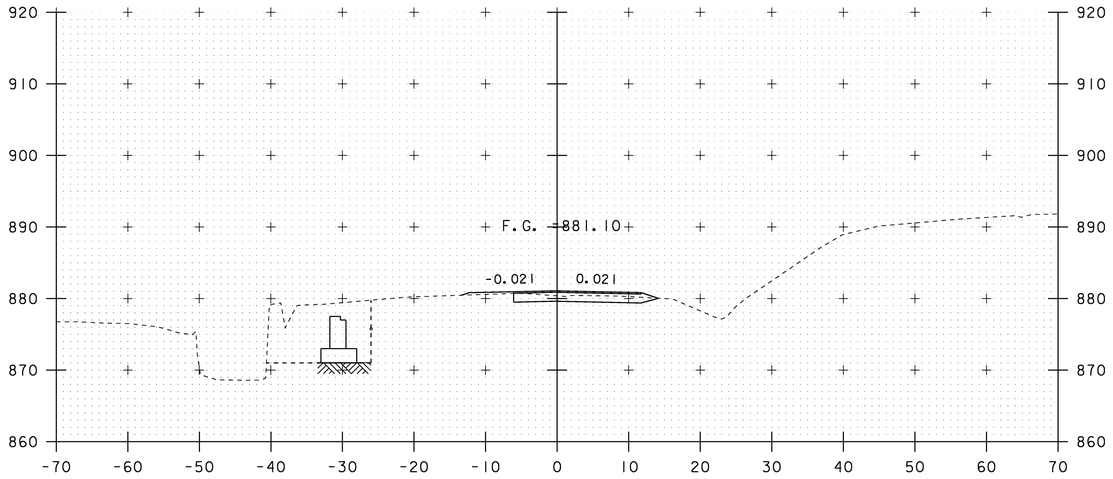
DETOUR CROSS SECTIONS

PROJECT NAME: WILLIAMSTOWN

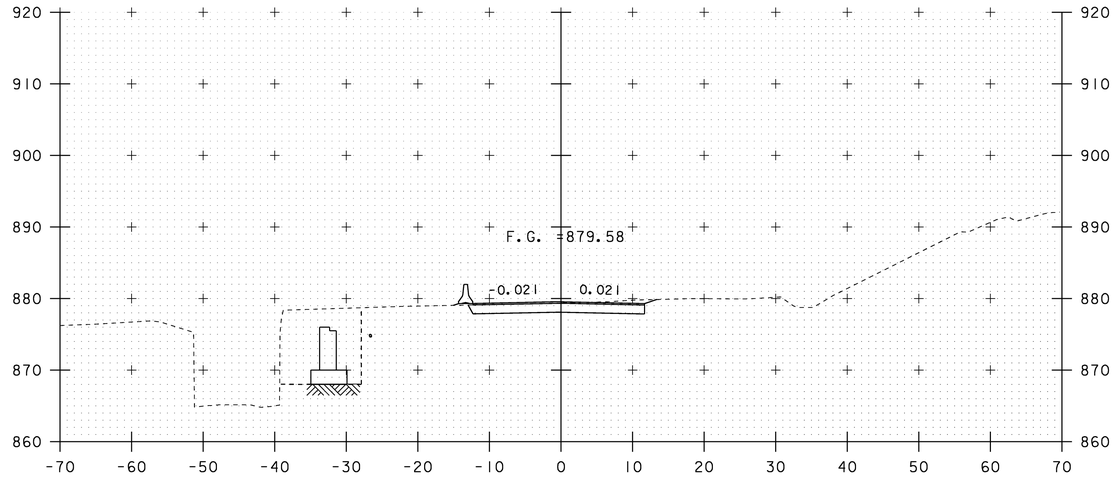
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83elli\Srtuct\sellxs.dgn
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: U. STANLEY
IPARM: sellidetxsi.i

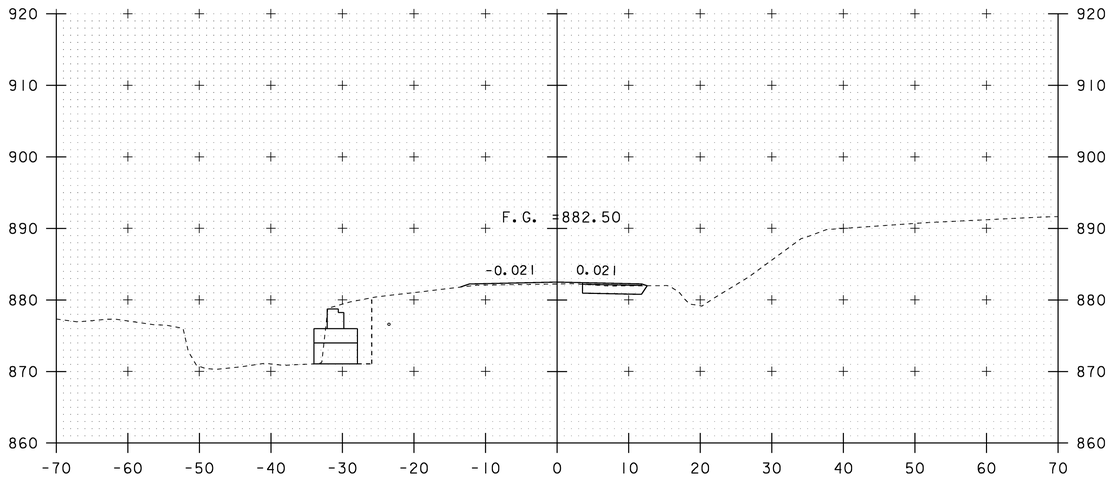
PLOT DATE: 07-APR-2008
DRAWN BY: U. STANLEY
CHECKED BY: EVANS-MONGEON
SHEET 99 OF 108



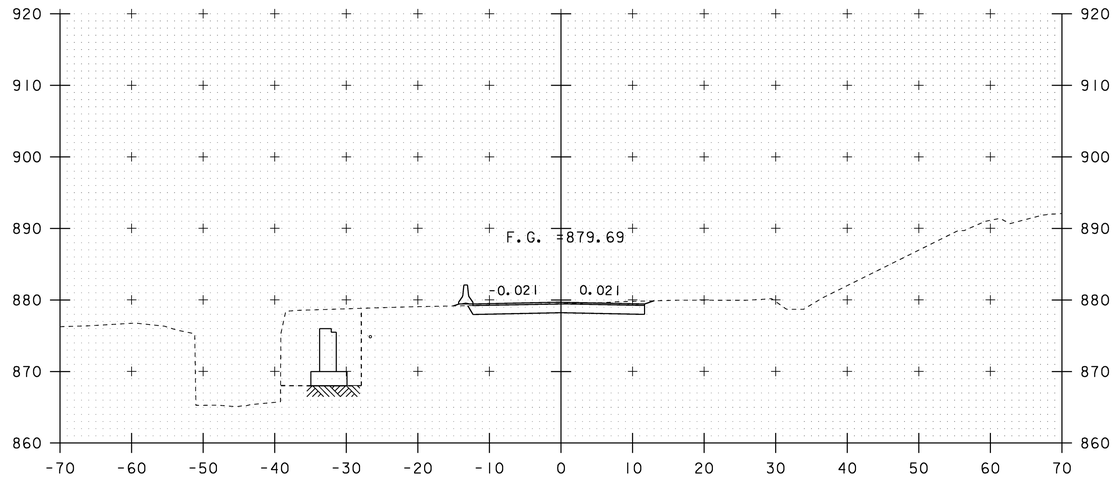
300+80



301+02



300+60



301+00

SCALE 1" = 10'-0

10 0 10

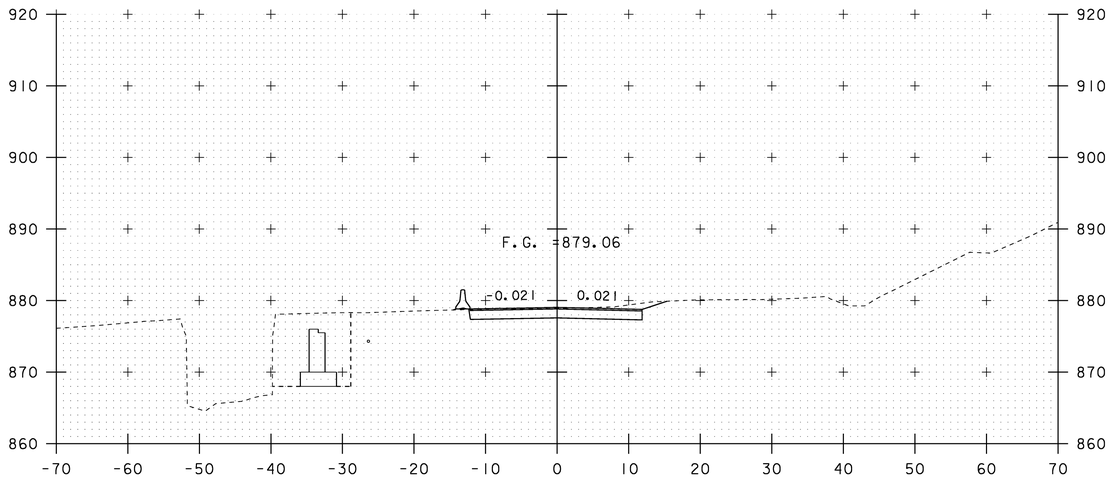
STA. 300+60 TO STA. 301+02

DETOUR CROSS SECTIONS

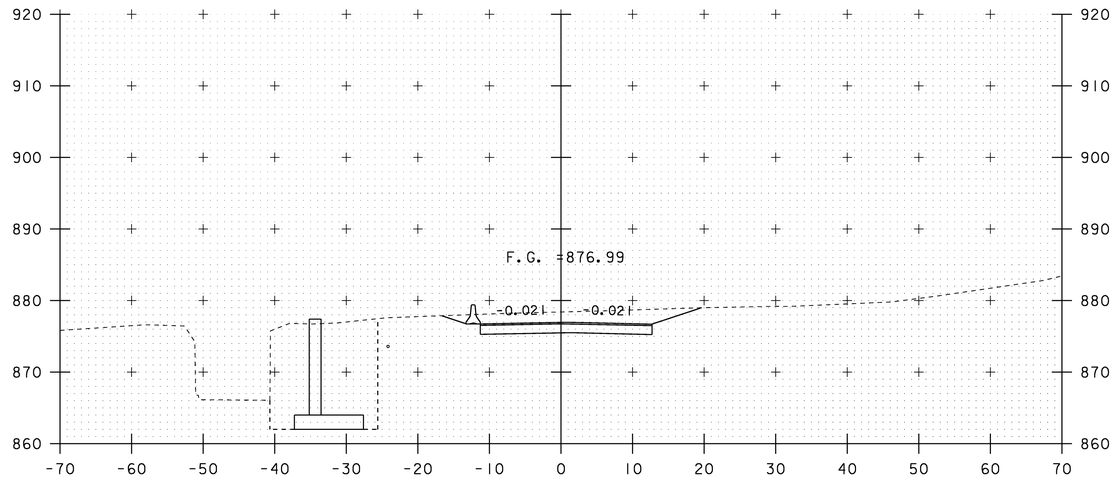
PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83elll\Srtuct\sellxs.dgn
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: U. STANLEY
IPARM: sellldetxs2.I

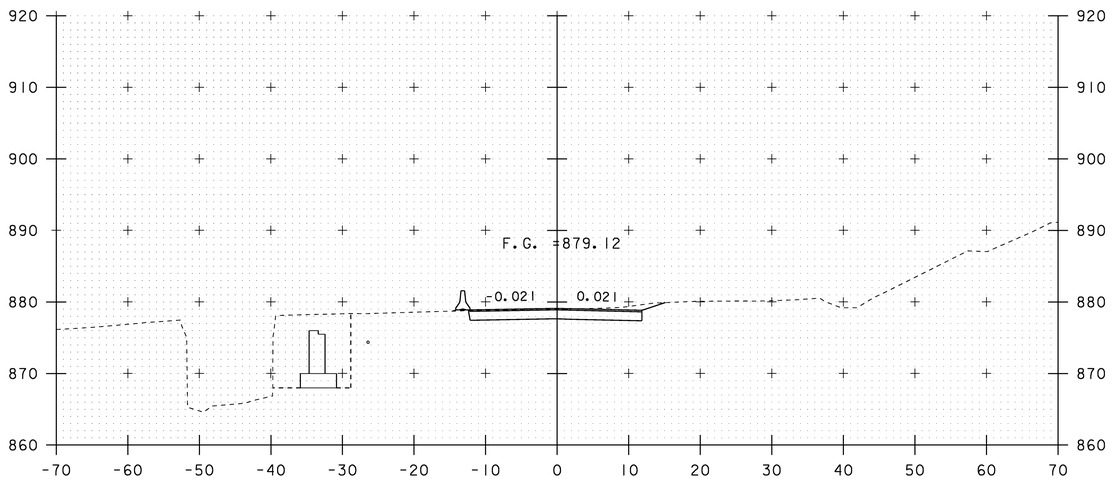
PLOT DATE: 07-APR-2008
DRAWN BY: U. STANLEY
CHECKED BY: EVANS-MONGEON
SHEET 100 OF 108



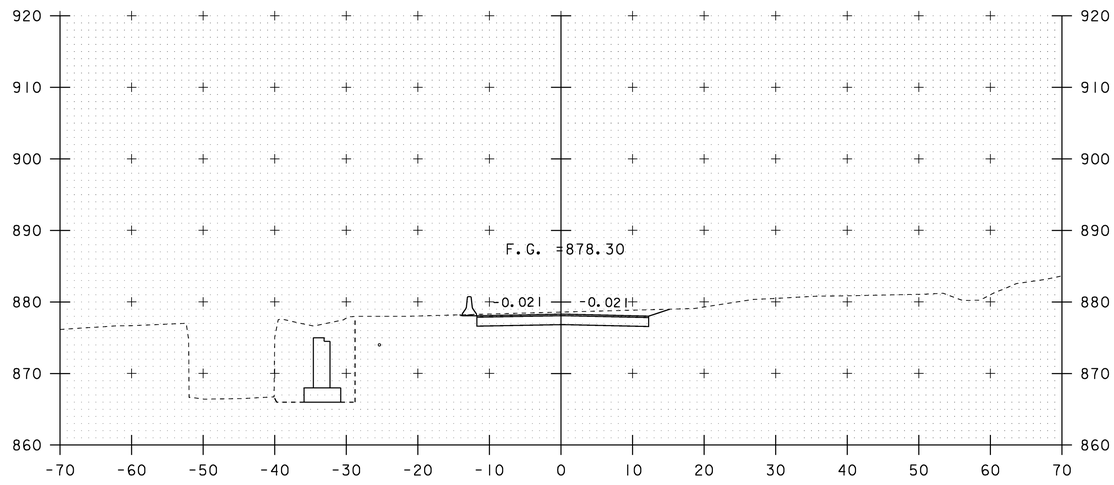
301+09



301+40



301+08



301+20

SCALE 1" = 10'-0

10 0 10

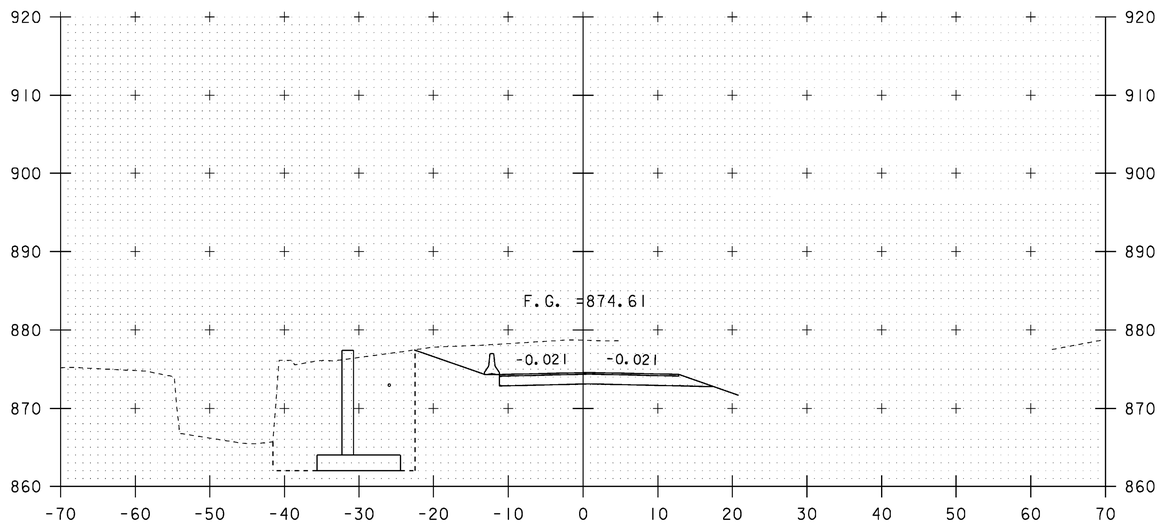
STA. 301+08 TO STA. 301+40

DETOUR CROSS SECTIONS

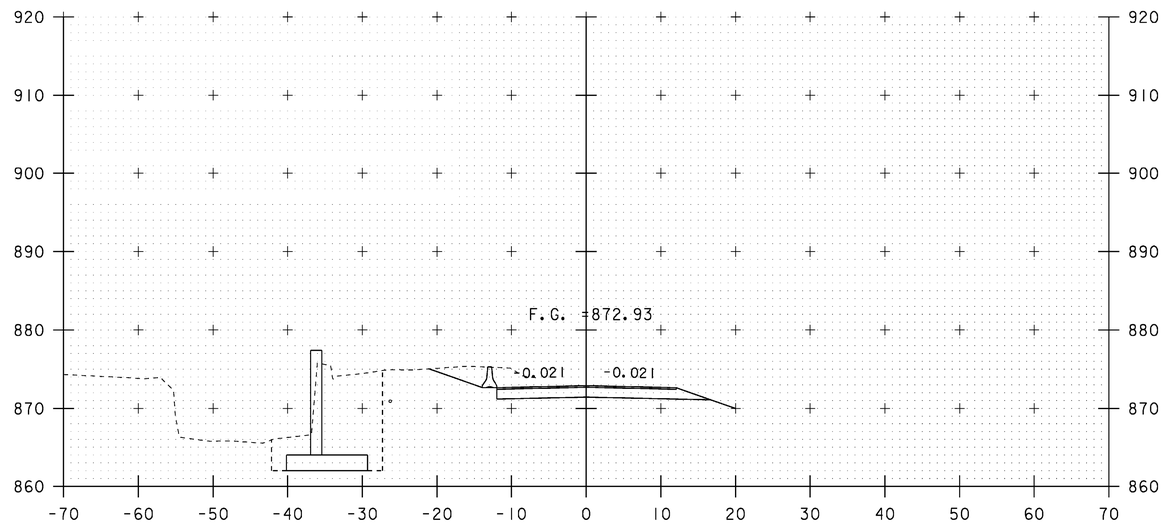
PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83elll\Srtuct\sellxs.dgn
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: U. STANLEY
IPARM: sellldetxs3.I

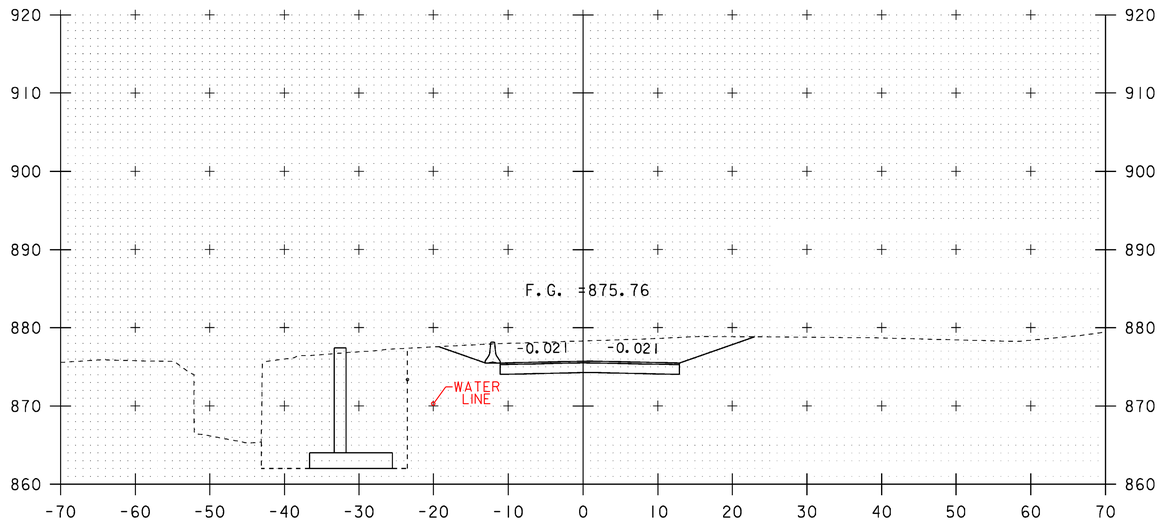
PLOT DATE: 07-APR-2008
DRAWN BY: U. STANLEY
CHECKED BY: EVANS-MONGEON
SHEET 101 OF 108



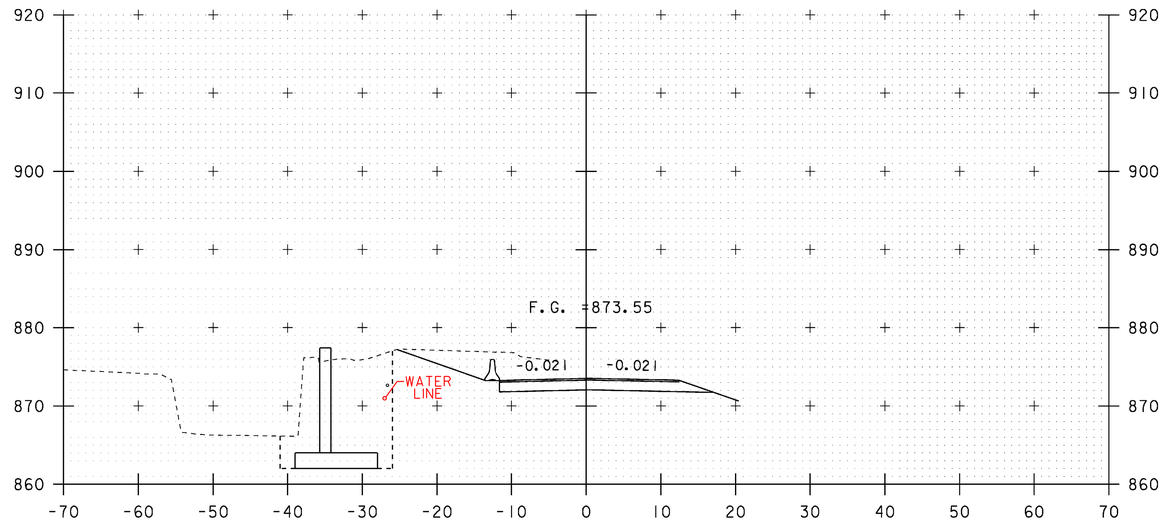
301+80



302+12



301+60



302+00

SCALE 1" = 10'-0

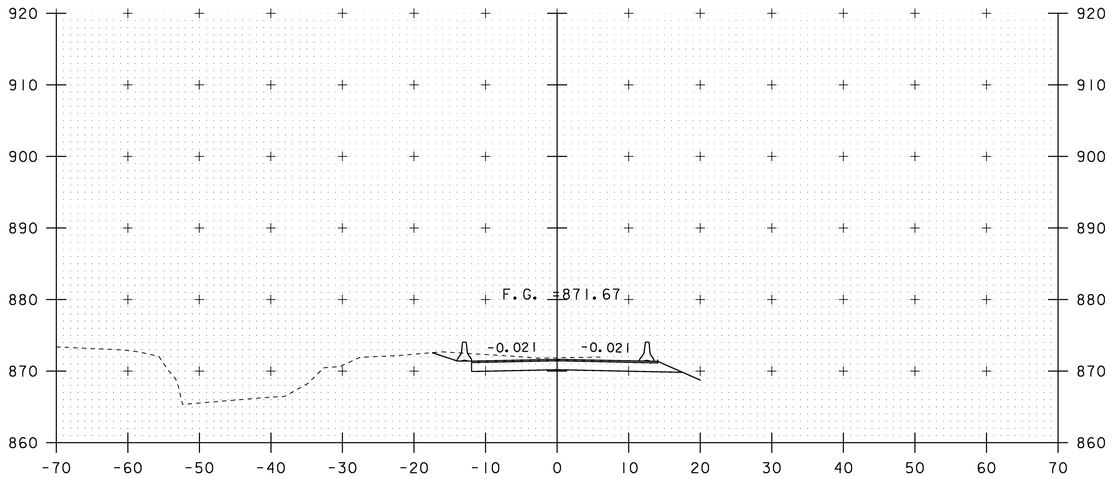
STA. 301+60 TO STA. 302+12

DETOUR CROSS SECTIONS

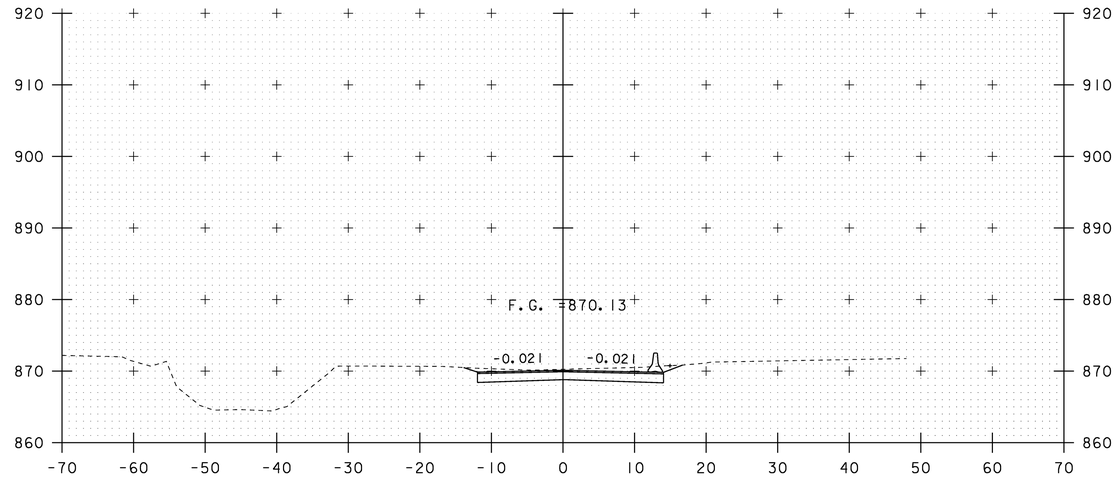
PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83elll\Srtuct\sellxs.dgn
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: U. STANLEY
IPARM: sellldetxs4.i

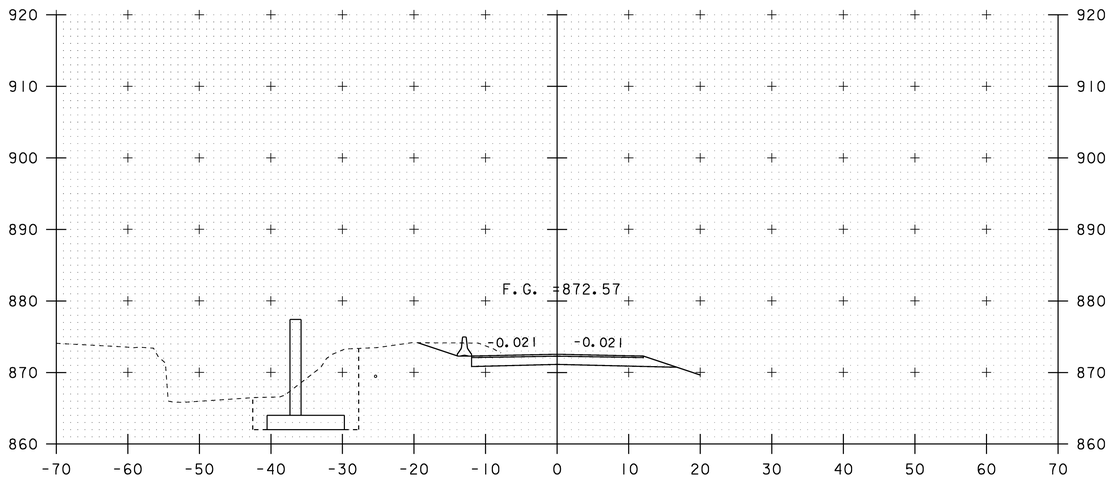
PLOT DATE: 07-APR-2008
DRAWN BY: U. STANLEY
CHECKED BY: EVANS-MONGEON
SHEET 102 OF 108



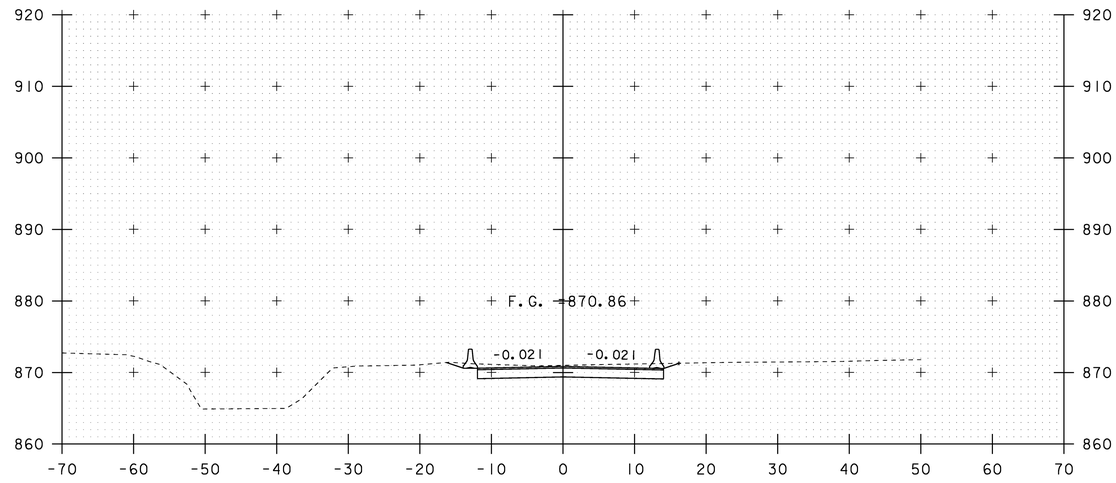
302+40



302+80



302+20



302+60

SCALE 1" = 10'-0
10 0 10

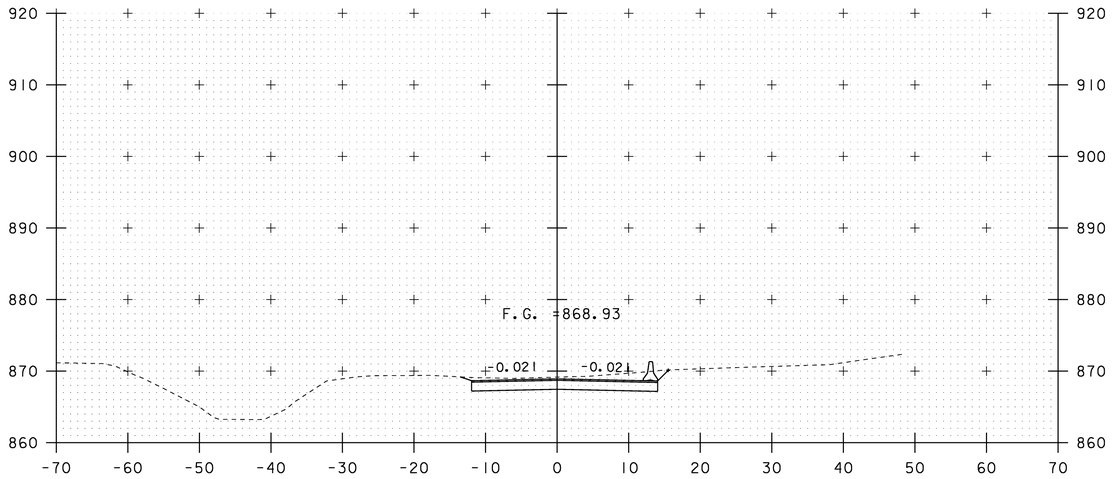
STA. 302+20 TO STA. 302+80

DETOUR CROSS SECTIONS

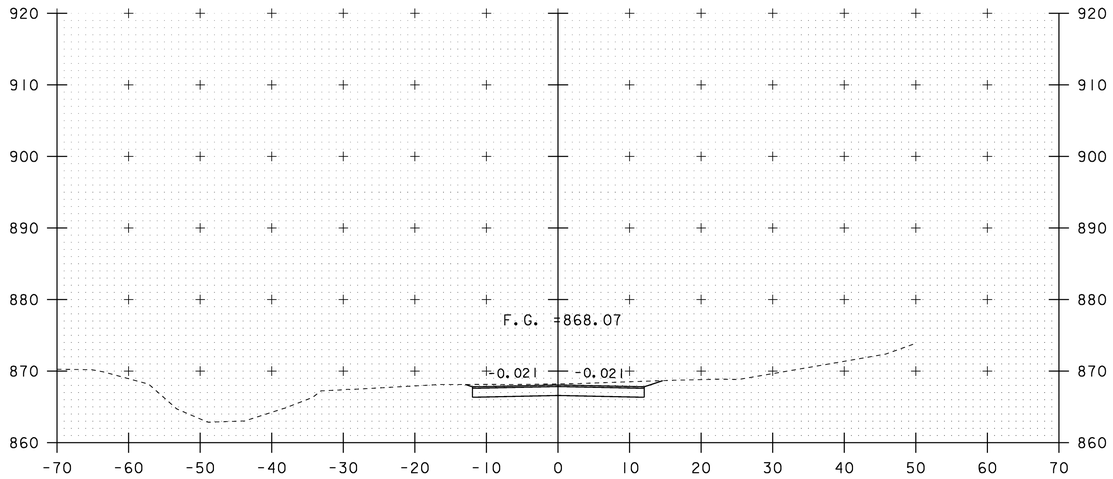
PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83elli\Srtuct\sellixs.dgn
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: U. STANLEY
IPARM: sellidetxs5.i

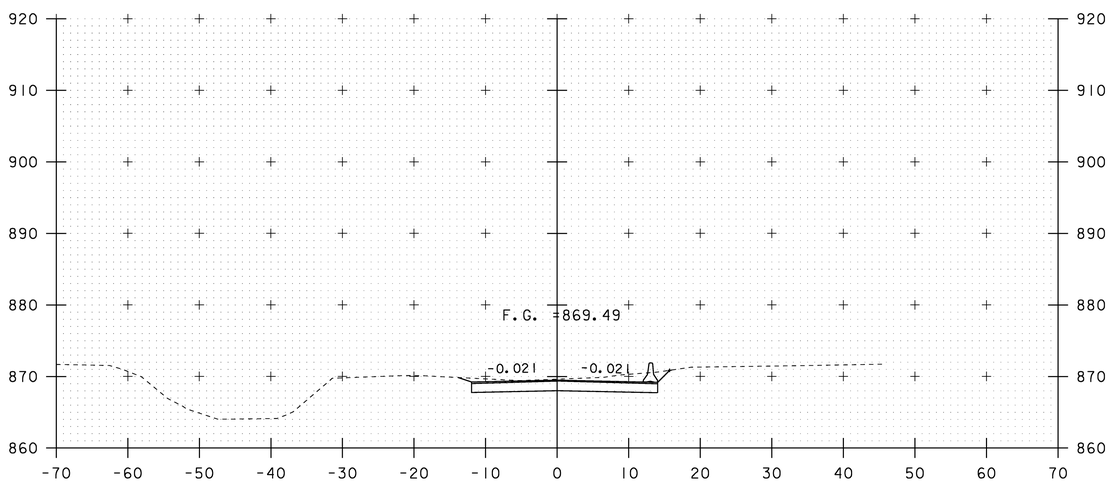
PLOT DATE: 07-APR-2008
DRAWN BY: U. STANLEY
CHECKED BY: EVANS-MONGEON
SHEET 103 OF 108



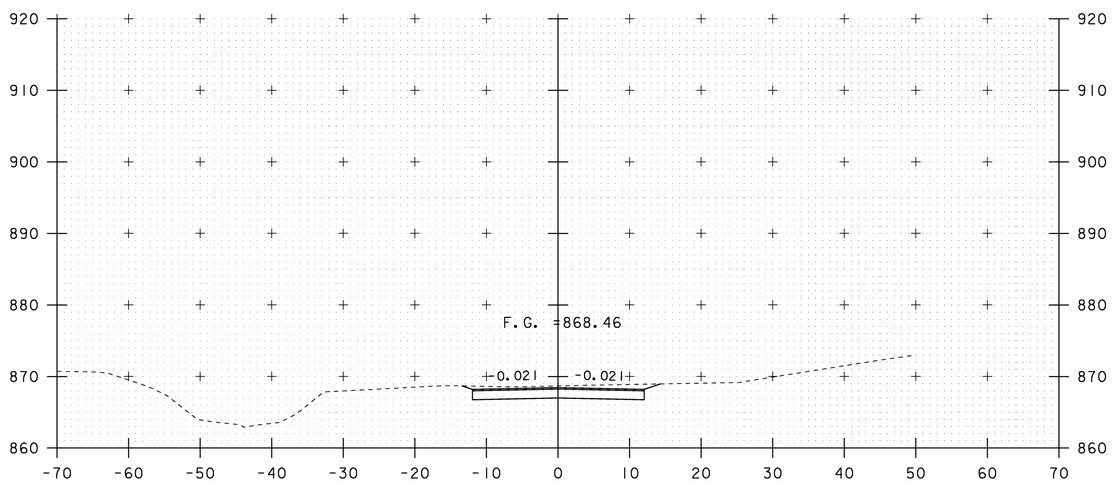
303+20



303+60



303+00



303+40

SCALE 1" = 10'-0
10 0 10

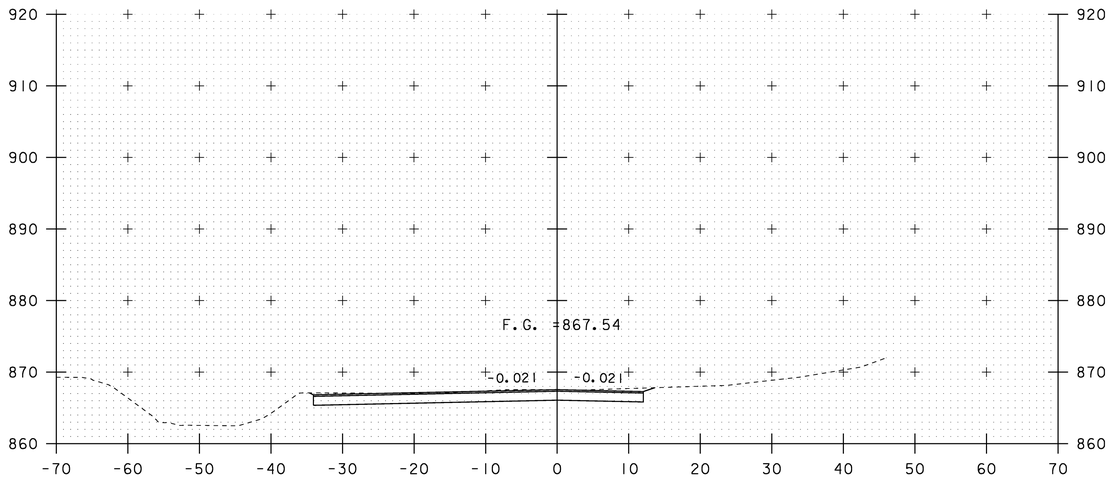
STA. 303+00 TO STA. 303+60

DETOUR CROSS SECTIONS

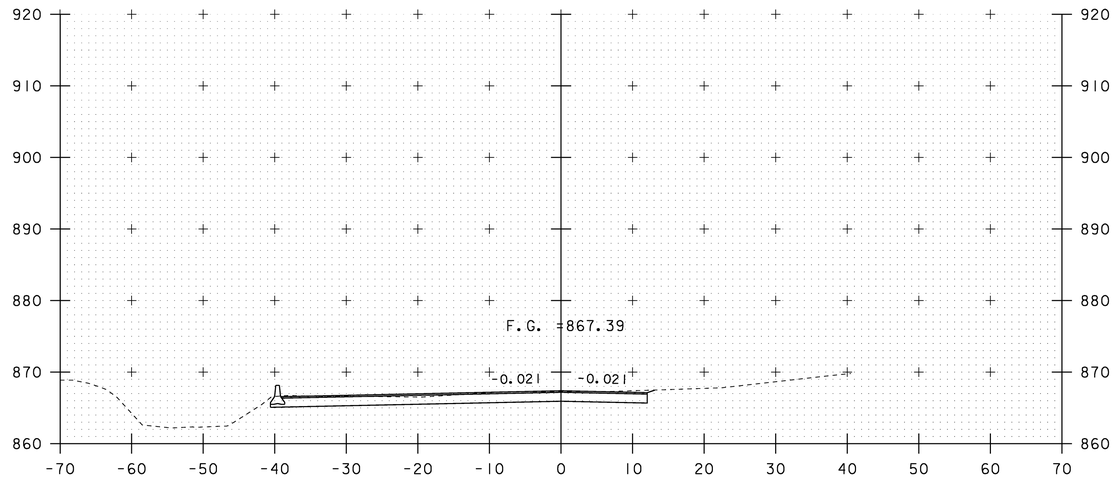
PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83elll\Srtuct\sellxs.dgn
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: U. STANLEY
IPARM: sellldetxs6.I

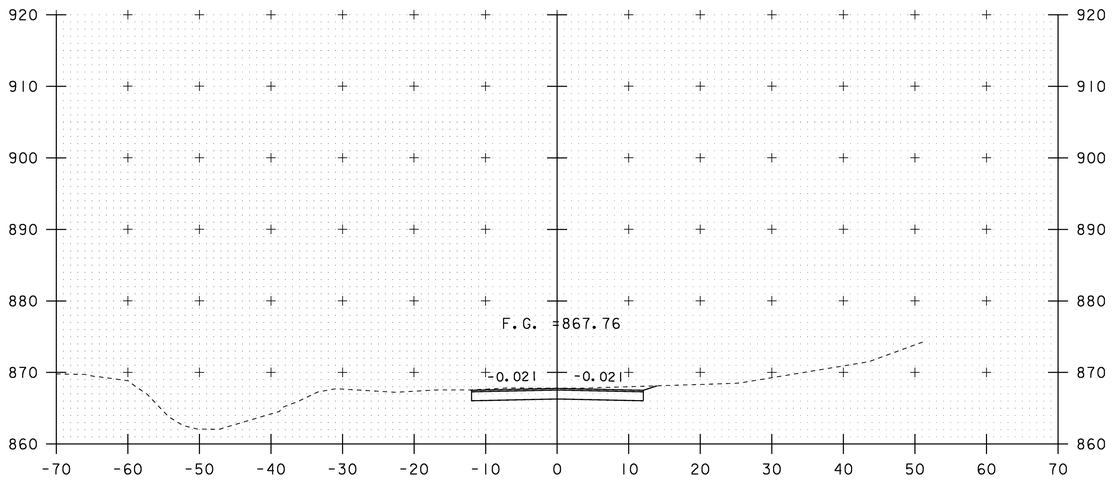
PLOT DATE: 07-APR-2008
DRAWN BY: U. STANLEY
CHECKED BY: EVANS-MONGEON
SHEET 104 OF 108



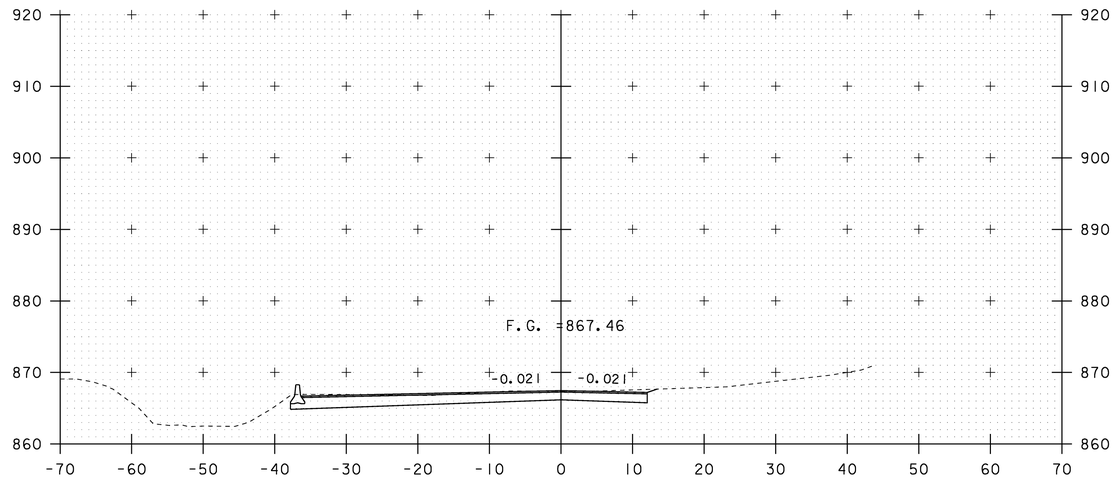
304+00



304+20



303+80



304+09

SCALE 1" = 10'-0
10 0 10

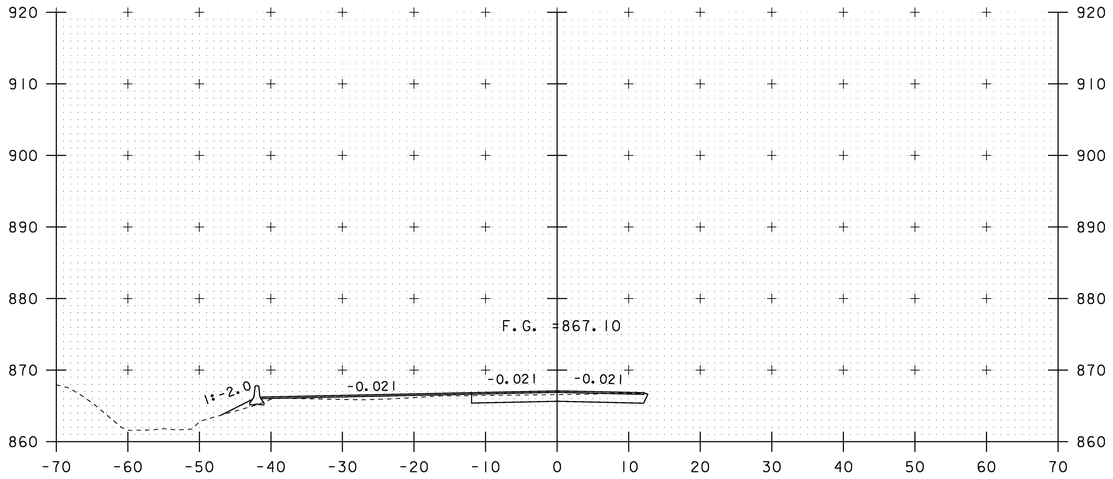
STA. 303+80 TO STA. 304+20

DETOUR CROSS SECTIONS

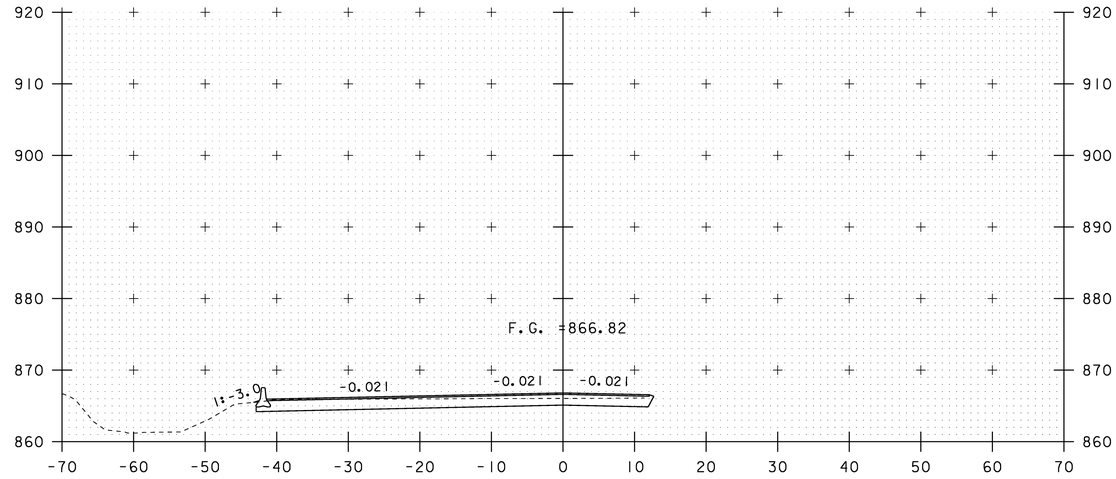
PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83elll\Srtuct\sellIxs.dgn
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: U. STANLEY
IPARM: sellIdetxs7.I

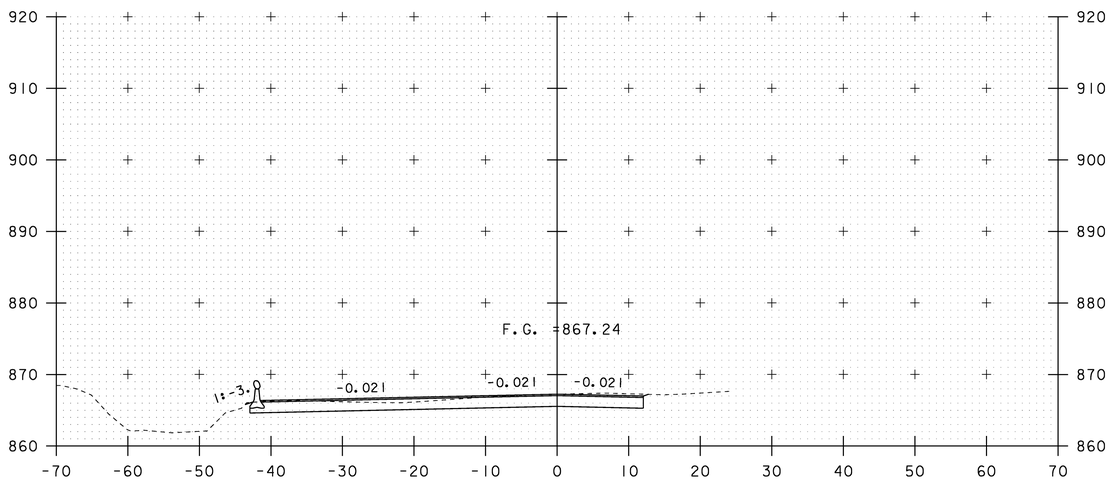
PLOT DATE: 07-APR-2008
DRAWN BY: U. STANLEY
CHECKED BY: EVANS-MONGEON
SHEET 105 OF 108



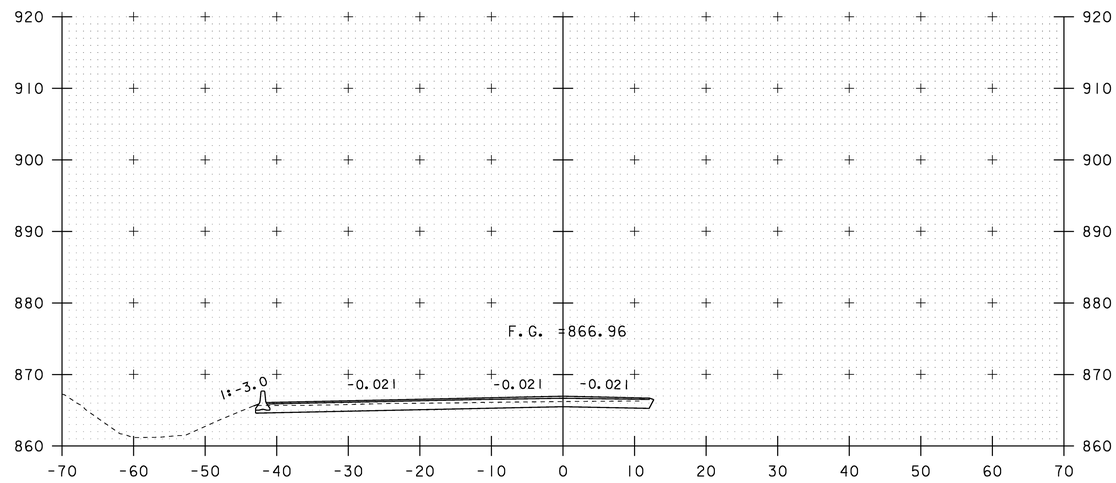
304+60



305+00



304+40



304+80

SCALE 1" = 10'-0
10 0 10

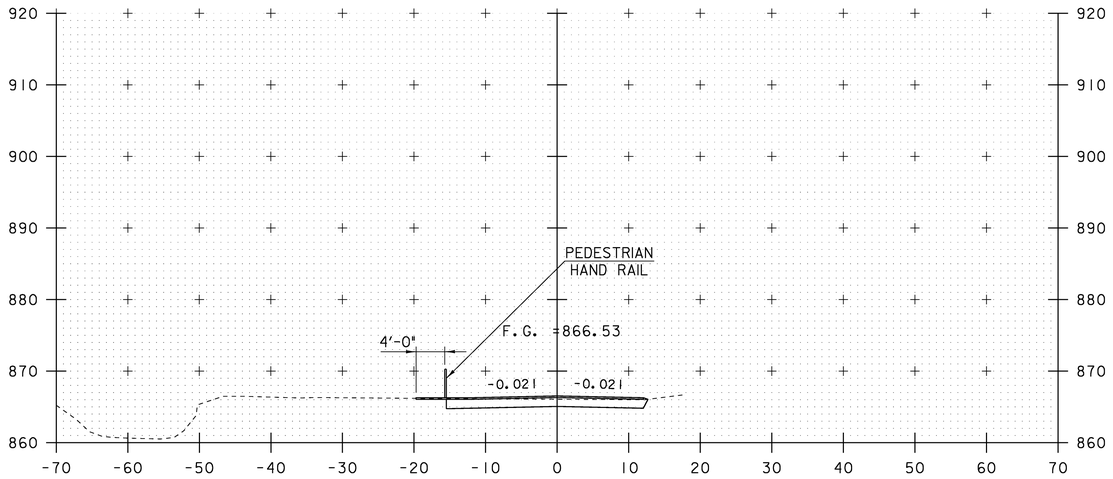
STA. 304+40 TO STA. 305+00

DETOUR CROSS SECTIONS

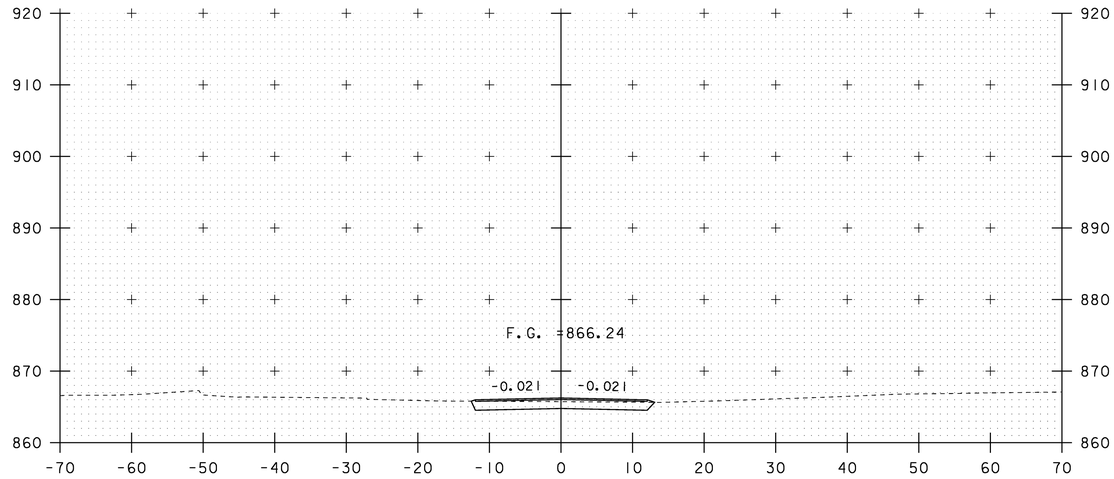
PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83elll\Srtuct\sellxs.dgn
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: U. STANLEY
IPARM: sellidetxs8.i

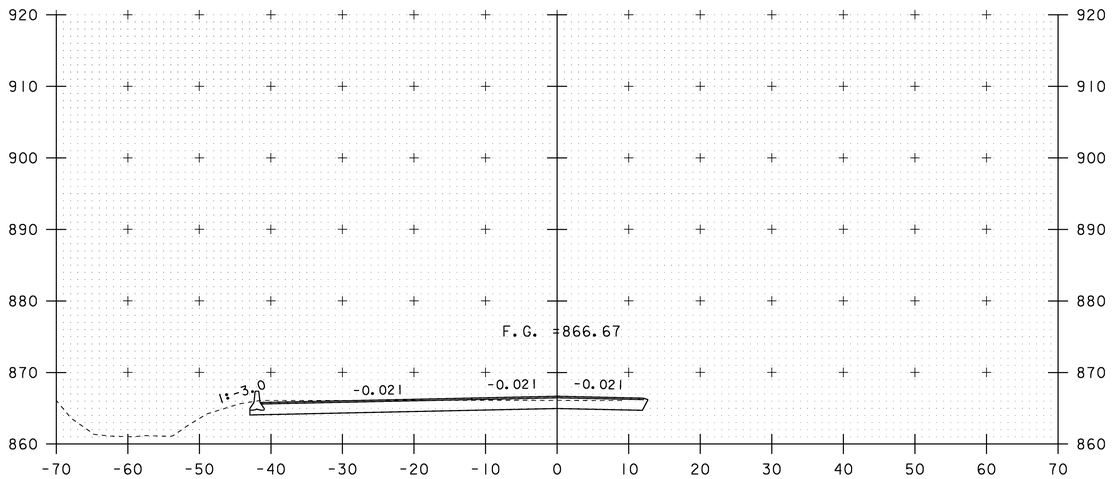
PLOT DATE: 07-APR-2008
DRAWN BY: U. STANLEY
CHECKED BY: EVANS-MONGEON
SHEET 106 OF 108



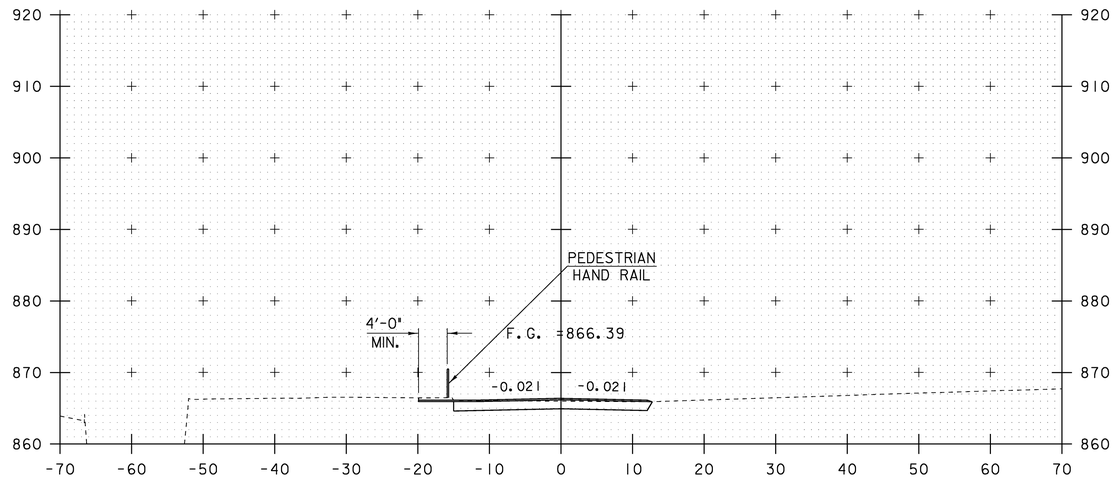
305+40



305+80



305+20



305+60

SCALE 1" = 10'-0
10 0 10

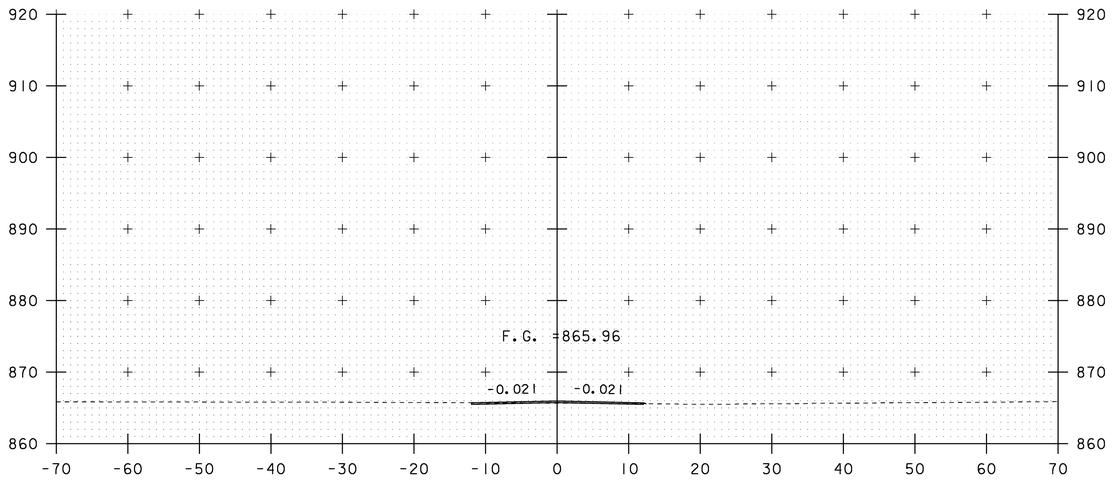
STA. 305+20 TO STA. 305+80

DETOUR CROSS SECTIONS

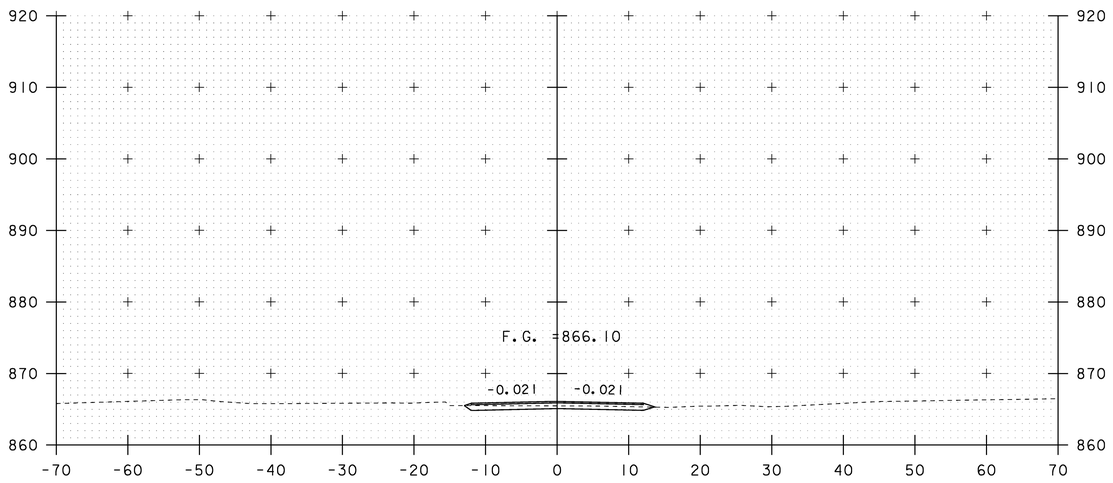
PROJECT NAME: WILLIAMSTOWN
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83elll\Srtuct\sellIxs.dgn
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: U. STANLEY
IPARM: sellIdetxs9.I

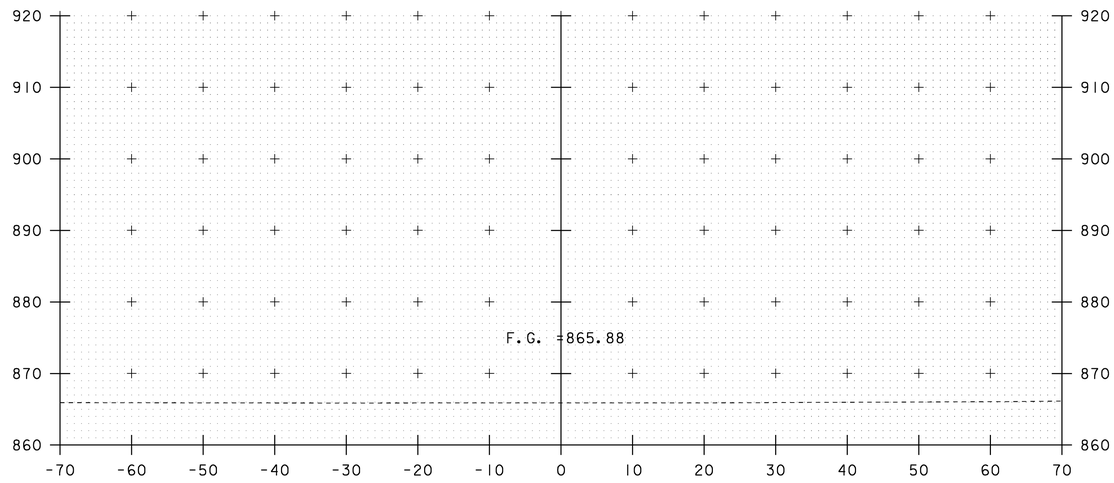
PLOT DATE: 07-APR-2008
DRAWN BY: U. STANLEY
CHECKED BY: EVANS-MONGEON
SHEET 107 OF 108



306+20



306+00



306+31

SCALE 1" = 10'-0

10 0 10

STA. 306+00 TO STA. 306+31

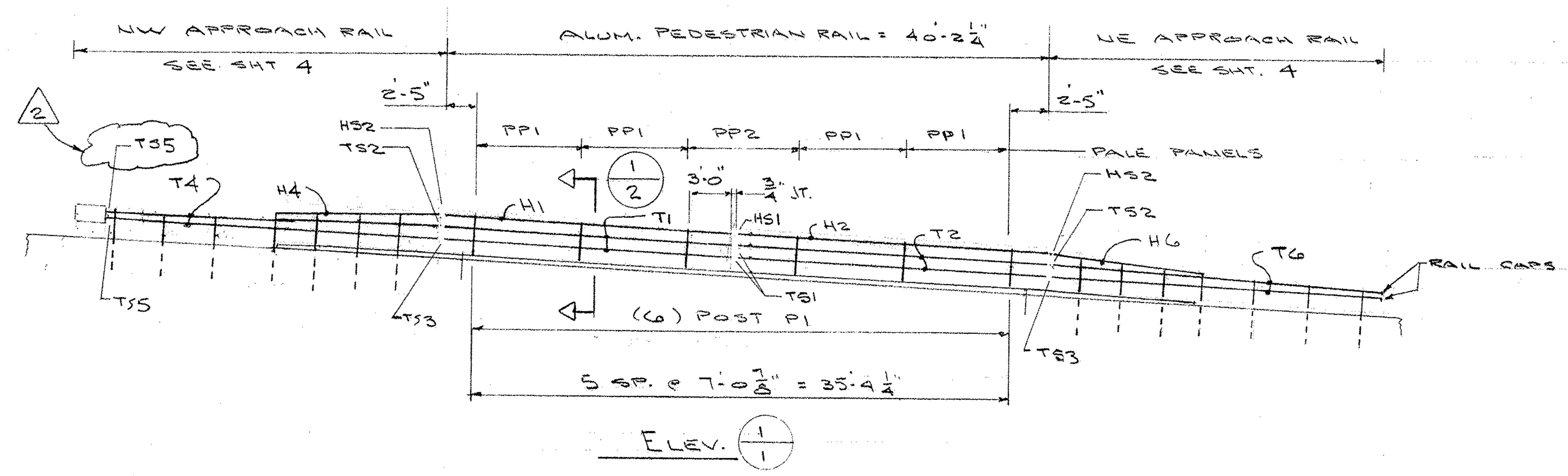
DETOUR CROSS SECTIONS

PROJECT NAME: WILLIAMSTOWN

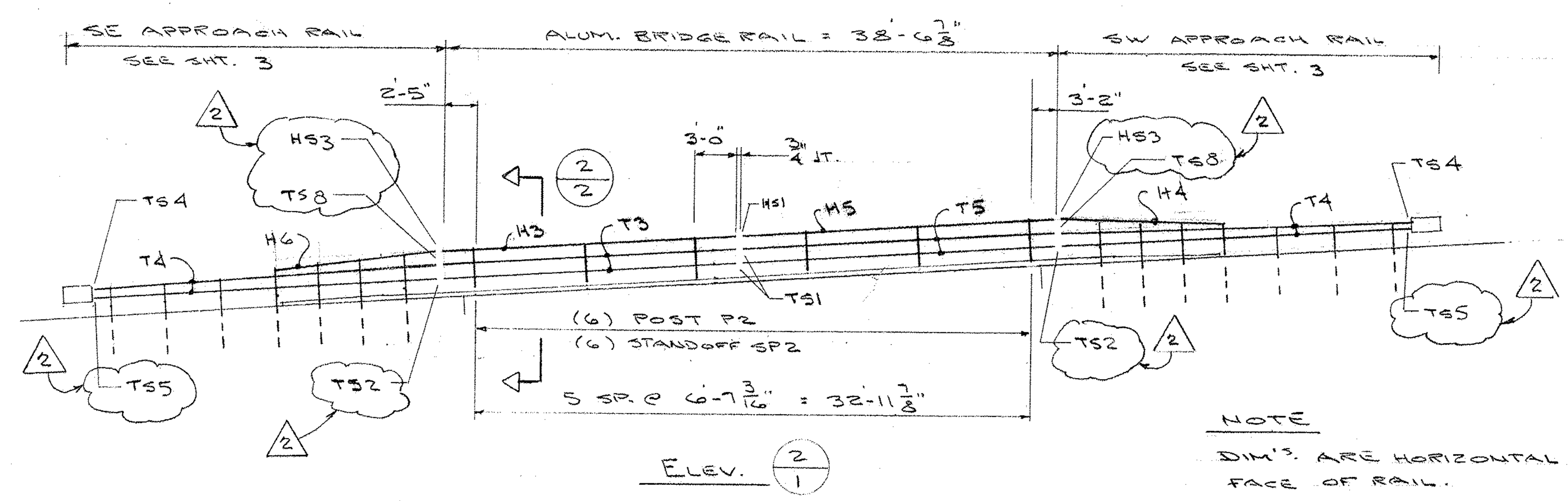
PROJECT NUMBER: BRS 0204(4)

FILE NAME: 83elli\Srtuct\sellxs.dgn
PROJECT LEADER: EVANS-MONGEON
DESIGNED BY: U. STANLEY
IPARM: sellidetxsl0.1

PLOT DATE: 07-APR-2008
DRAWN BY: U. STANLEY
CHECKED BY:
SHEET 108 OF 108



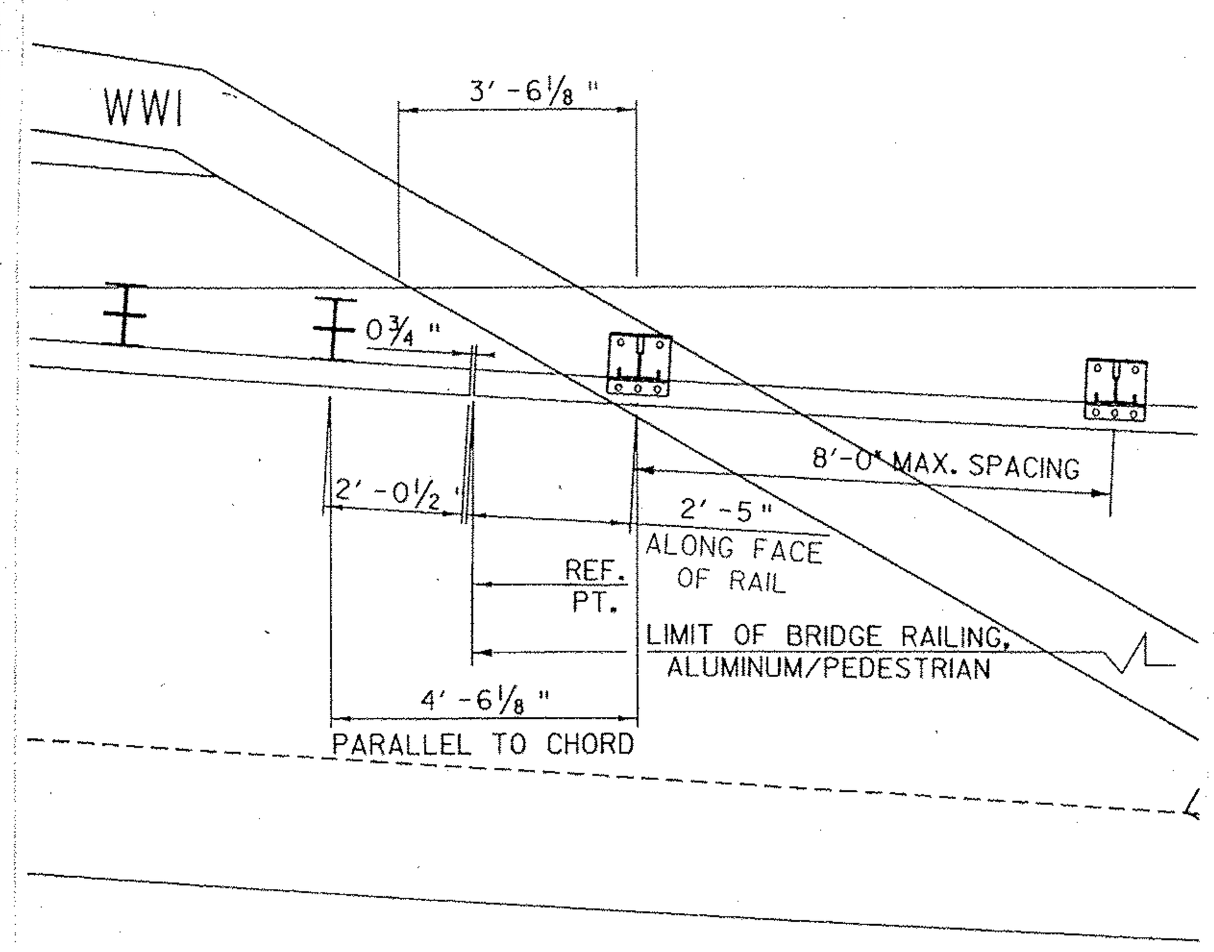
ELEV. 1/1



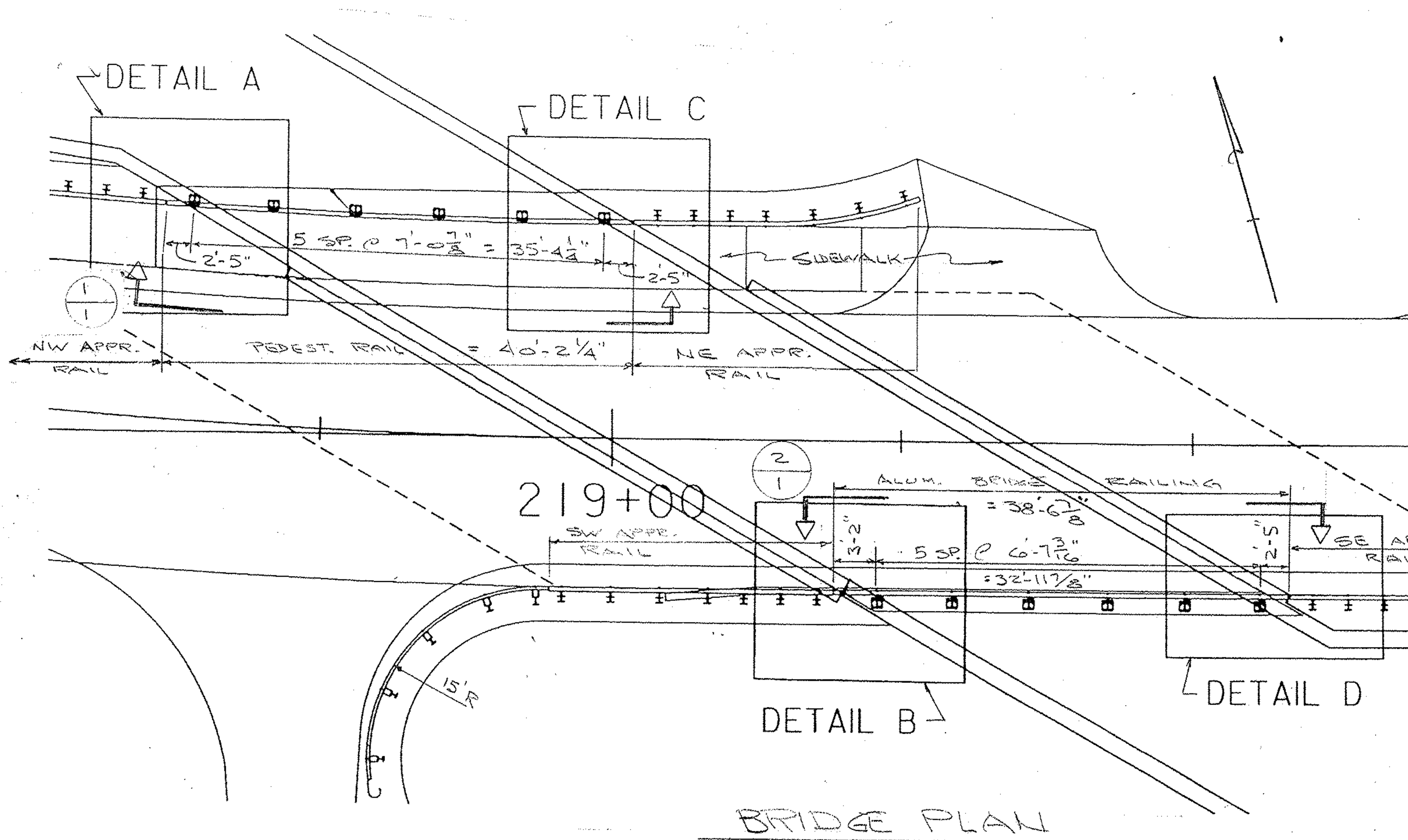
ELEV. 2/1

NOTE
DIM'S ARE HORIZONTAL ALONG FACE OF RAIL.

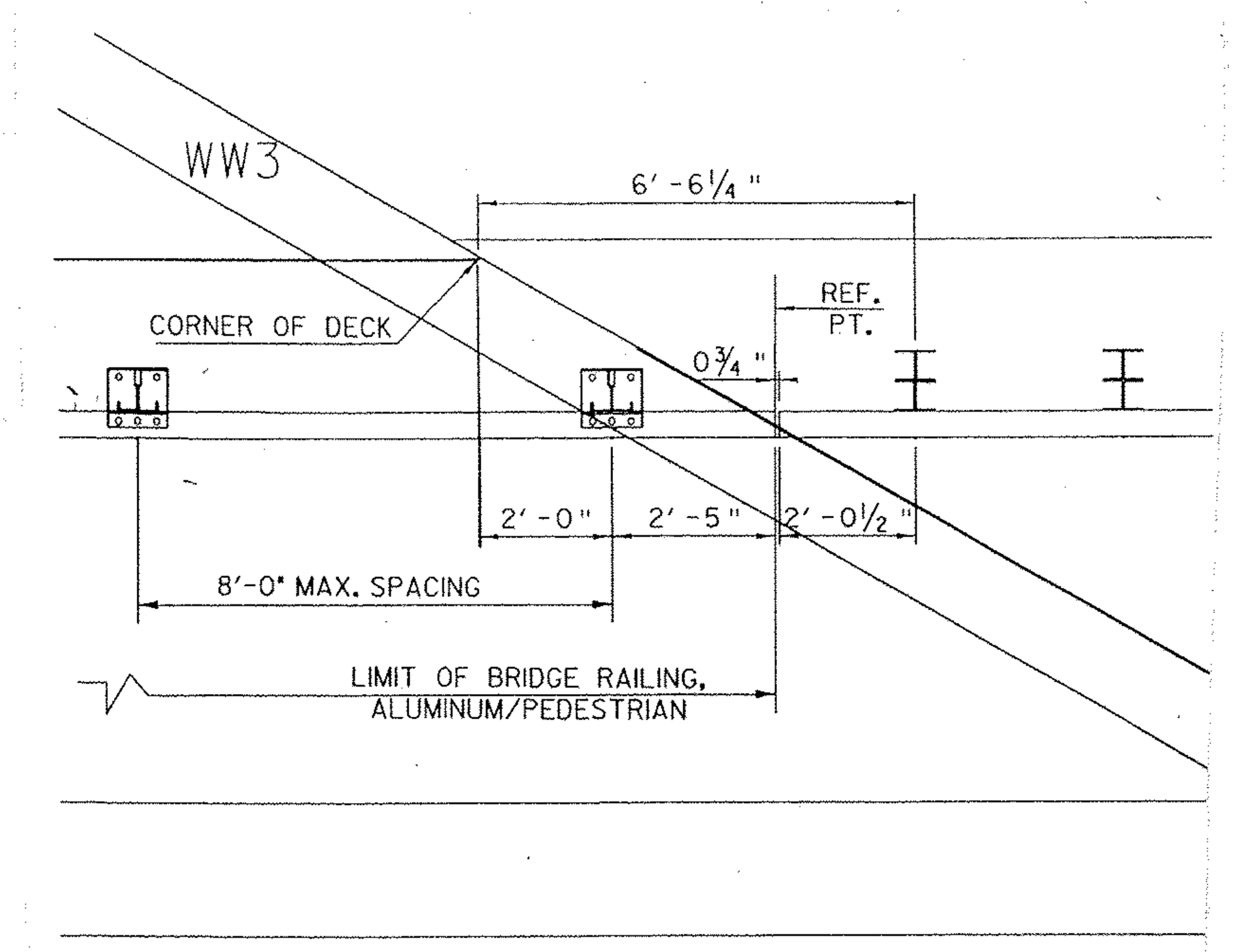
*RAIL LENGTHS ARE ADJUSTED FOR SLOPE



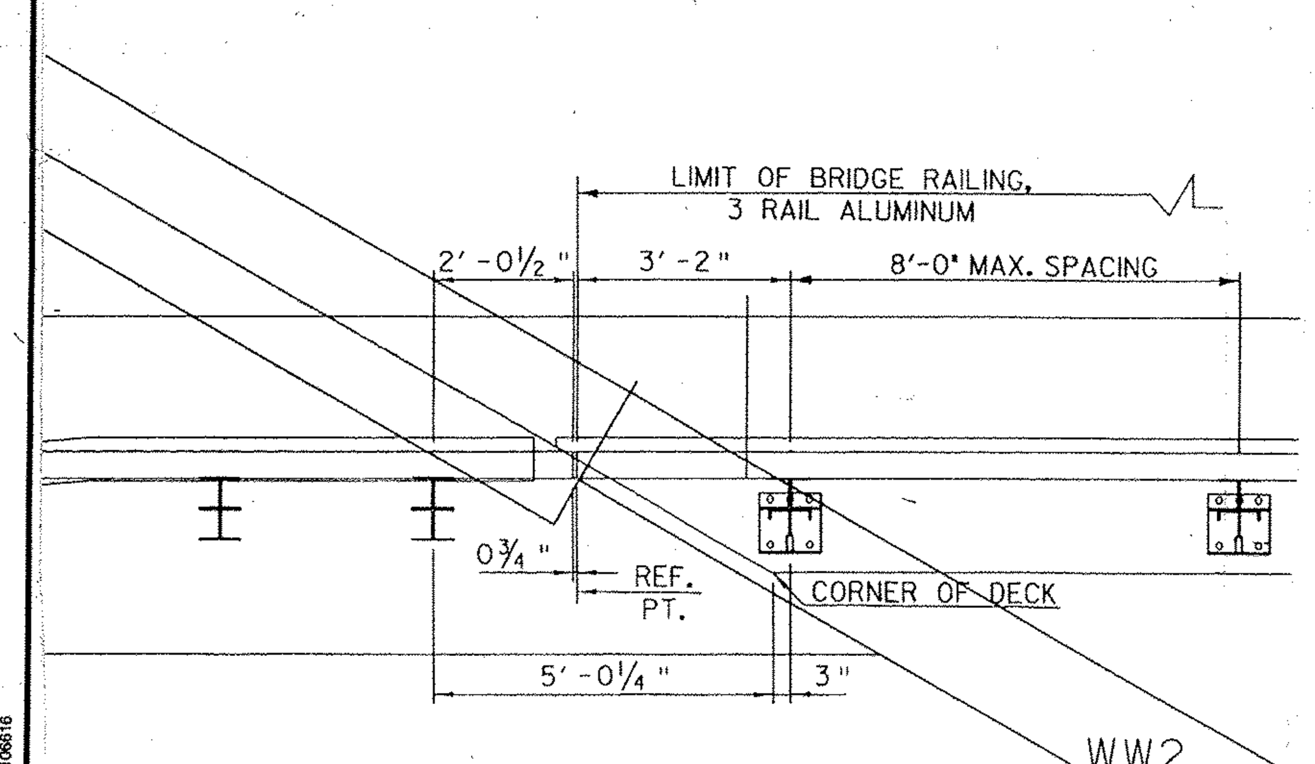
DETAIL A



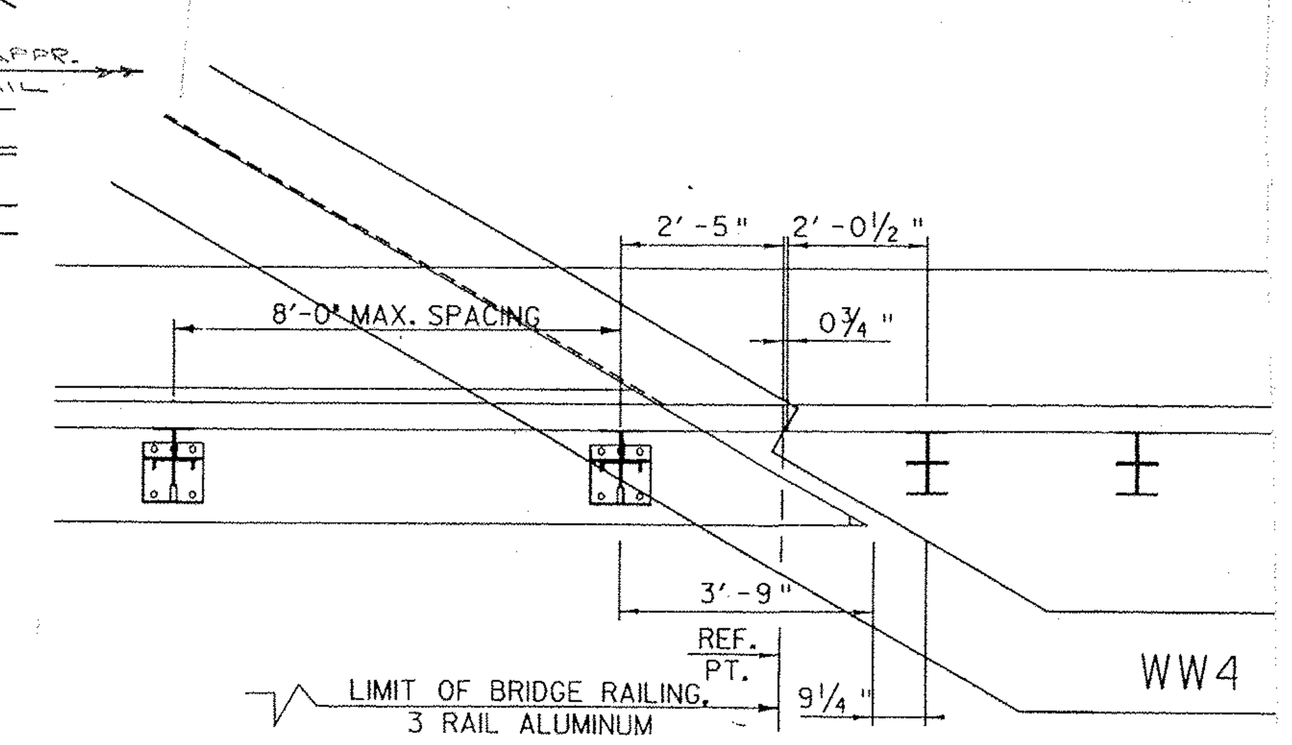
BRIDGE PLAN



DETAIL C



DETAIL B



DETAIL D

JOB #AB97005

QUAN	MK	DESCRIPTION
6	P1	BR. RAIL POST
6	P2	BR. RAIL POST
1	31L	APPR. POST
1	32L	
1	33L	
1	34L	
1	35L	
1	36L	
1	37L	
1	31R	
1	32R	
1	33R	
1	34R	
1	35R	
1	36R	
1	37R	
1	21L	
1	22L	
1	23L	
1	24L	
1	25L	
1	26L	
1	27L	
1	21R	
1	22R	
1	23R	
1	24R	
1	25R	
1	26R	
1	27R	
1		
1	A31L	STANDOFF
1	A32L	
1	A33L	
1	A34L	
1	A35L	
1	A36L	
1	A37L	
1	A31R	
1	A32R	
1	A33R	
1	A34R	
1	A35R	
1	A36R	
1	A37R	
1	A21L	
1	A22L	
1	A23L	
1	A24L	
1	A25L	
1	A26L	
1	A27L	
1	A21R	
1	A22R	
1	A23R	
1	A24R	
1	A25R	
1	A26R	
1	A27R	
6	SP2	

4" x 3½" HANDRAIL

QUAN	MK	LENGTH *
1	H1	19-7 5/16
1	H2	20-7 5/16
1	H3	18-7 15/16
2	H4	11-8¾
1	H5	19-11¼
2	H6	11-9⅞

4¾" x 4" TRAFFIC RAIL

QUAN	MK	LENGTH *
2	T1	19-7 5/16
2	T2	20-7 7/16
2	T3	18-7 15/16
6	T4	25-0
2	T5	19-11¼
2	T6	SEE DETAIL

QUAN	MK	DESCRIPTION
2	HS1	HANDRAIL SPLICE
2	HS2	HANDRAIL SPLICE
2	HS3	HANDRAIL SPLICE
4	TS1	TRAF. RAIL SPLICE
4	TS2	
2	TS3	
2	TS4	
4	TS5	
2	TS8	
3	PL-1	GALV. PLATE
4	PP1	PALE PANEL
1	PP2	
60	—	1/4 x 3/4 ST. STL. SET SCREW
12	—	POST PAD
4	—	DELINIATOR
8	—	#8 x 3/4 ST. STL. SELF-TAP SCREW
56	#4	CLAMP BAR
160	#1	CLAMP BAR
160	—	½ x ¾ ST STL HEX HD CAP SCREW
320	—	½ x 1 do
180	—	½ x 1½ do
192	—	½ x ⅞ "B" BOLT
660	—	½" AL. WASHER
180	—	½" ST STL HEX NUT

RECEIVED
CK'D BY UBS OK'D BY MEM
JUN 03 2009
RESUBMIT ___ APPROVED ✓
BY DATE 6-19-09

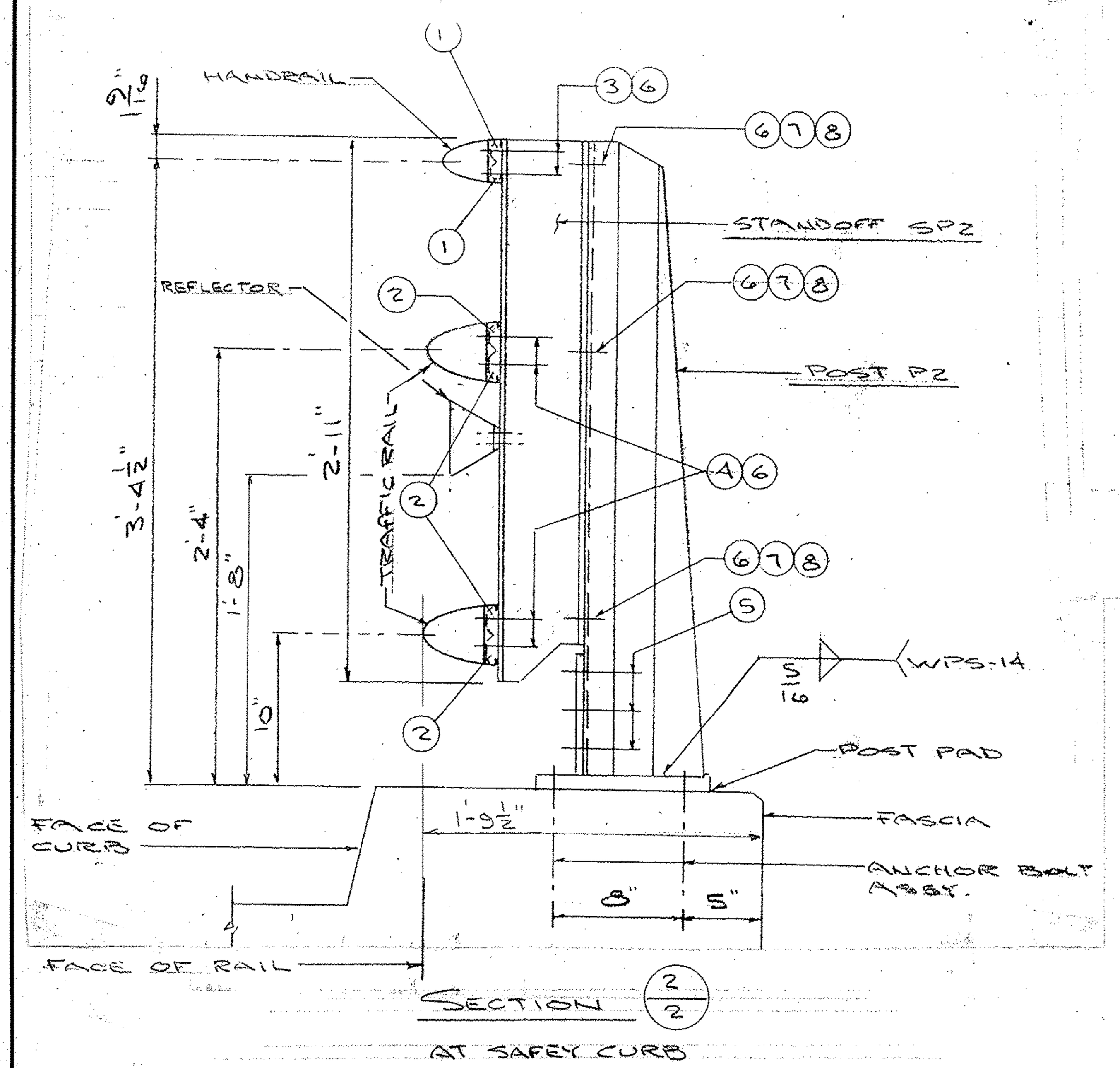
ISSUE	DATE	DESCRIPTION	BY
2	4-30-09	FOR APPROVAL	B
1	1-28-09	FOR APPROVAL	B

AUCIELLO IRON WORKS INC
560 MAIN ST. HUDSON, MA (978) 568-8382

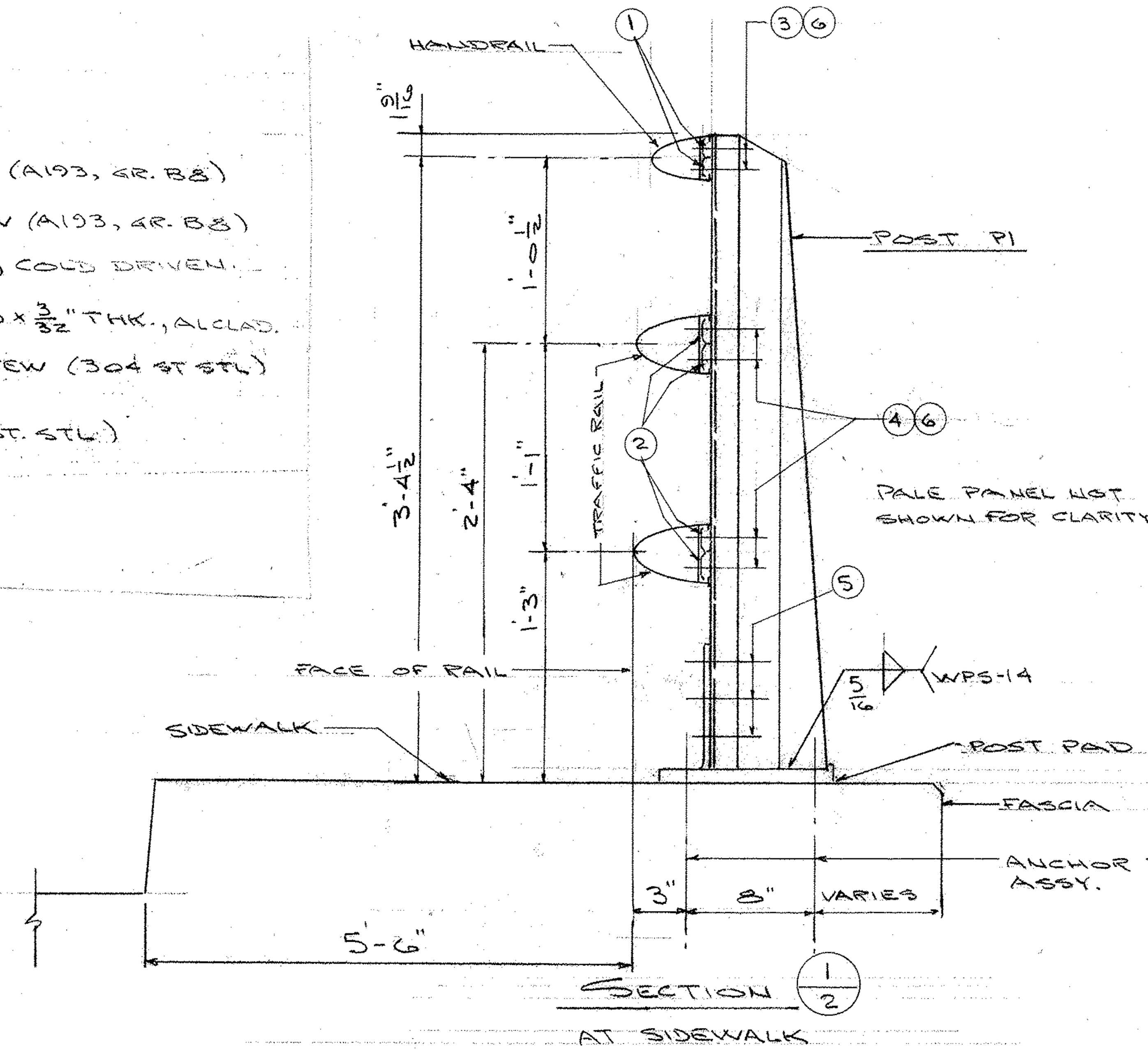
VT. AGENCY OF TRANSPORTATION
WILLIAMSTOWN #BRS 0204 (4)
ROUTE 64 OVER BROOK

AL. BRIDGE & APPROACH RAILING

SURFACE PREP: NONE
FINISH: MILL FINISH
FOR: F.R. LAFAYETTE, INC.
DR: WM 01-19-09
CHK: HPP 1-22-09
JOB NO. AB97005-1001
DWG. NO. BR-2950
SHEET 1 OF 8

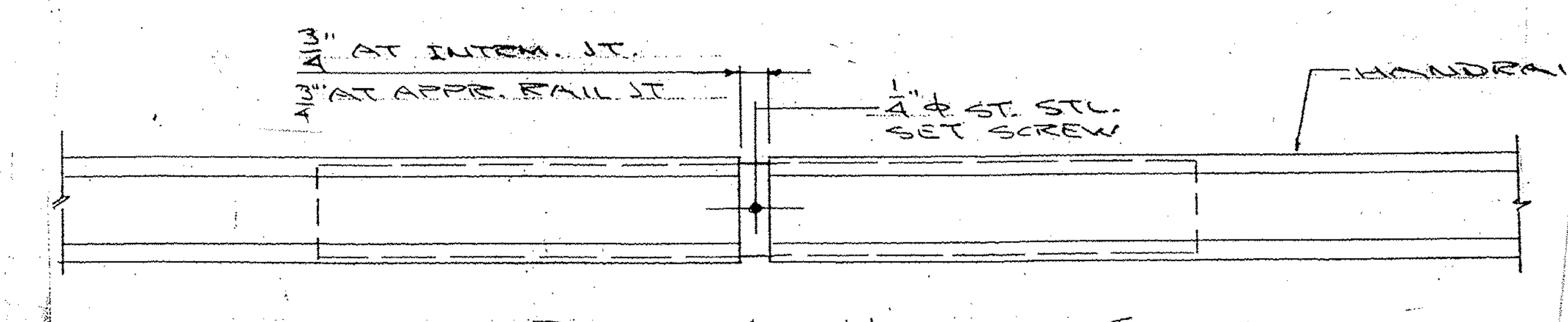


SECTION 2/2
AT SAFETY CURB

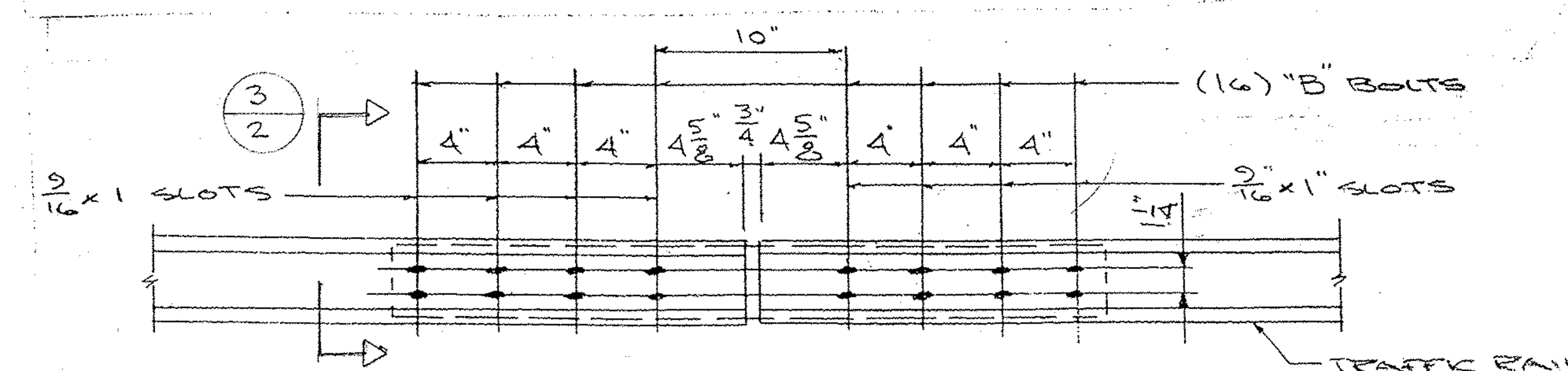


SECTION 1/2
AT SIDEWALK

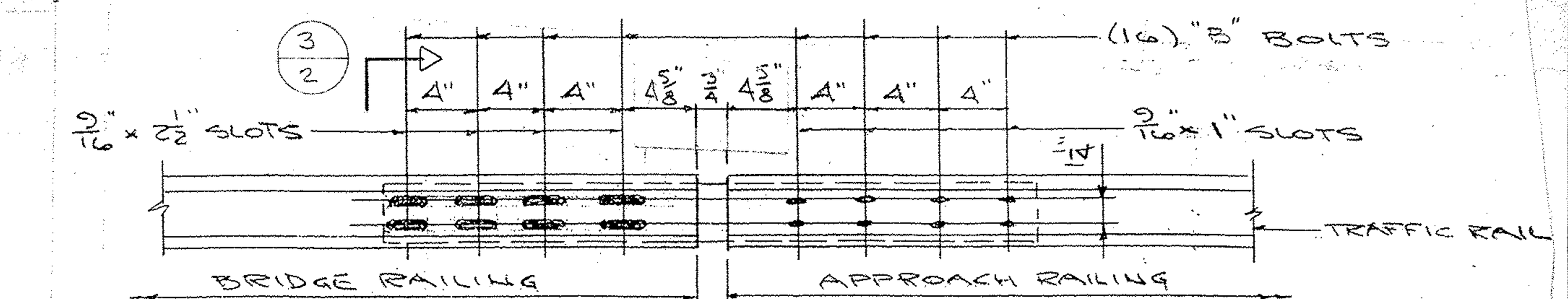
1. #4 CLAMP BAR
2. #1 CLAMP BAR
3. 1/2"-13 x 3/4" HEX HD CAP SCREW (A193, GR. B8)
4. 1/2"-13 x 1" HEX HD CAP SCREW (A193, GR. B8)
5. 7/8" ϕ AL. RIVET (6061-T6) COLD DRIVEN.
6. AL. WASHER 1 1/16" OD x 17/32" ID x 3/32" THK., ALCLAD.
7. 1/2"-13 x 1 1/2" HEX HD CAP SCREW (304 ST STL) 75,000 TENSILE
8. 1/2"-13 HEX NUT (304 ST. STL.) 75,000 TENSILE



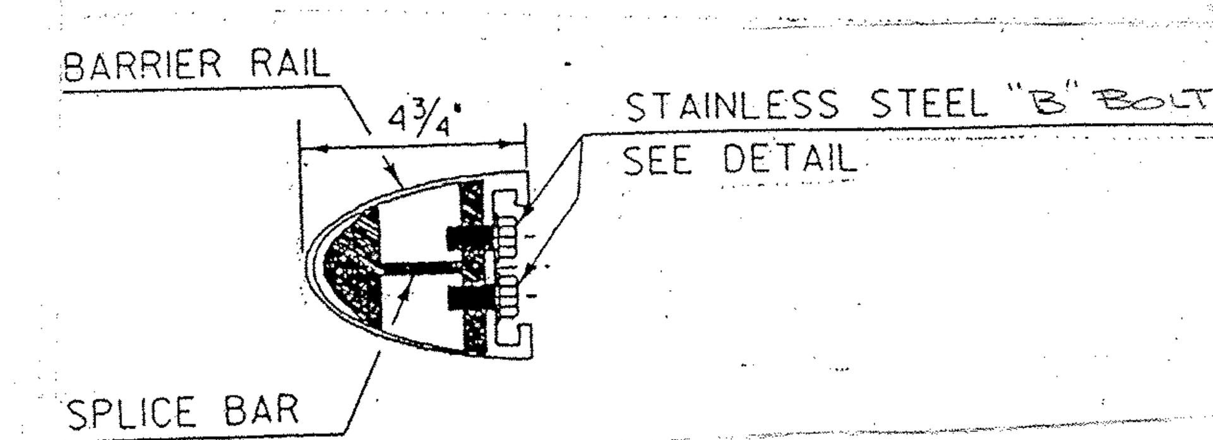
DETAIL AT HANDRAIL SPLICE
OUTBOARD VIEW



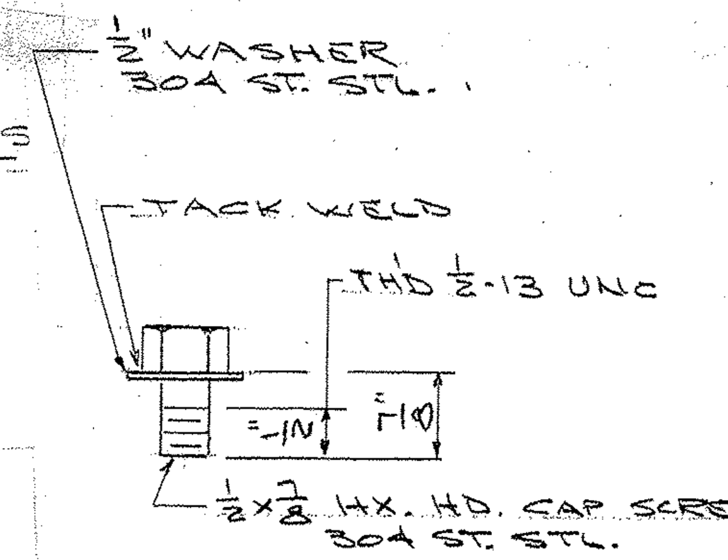
INTERM. SPLICE JT. AT TRAFFIC RAIL
OUTBOARD VIEW



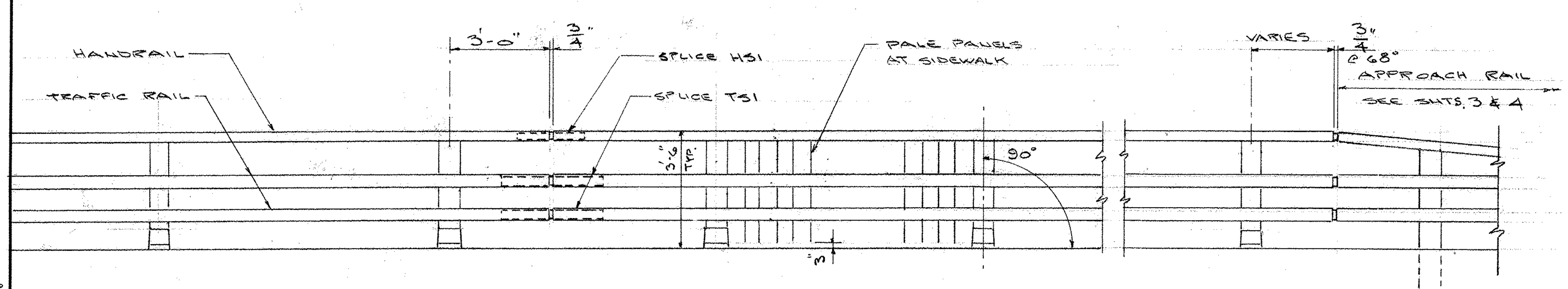
TRAFFIC RAIL SPLICE JT. AT APPROACH RAILING
OUTBOARD VIEW



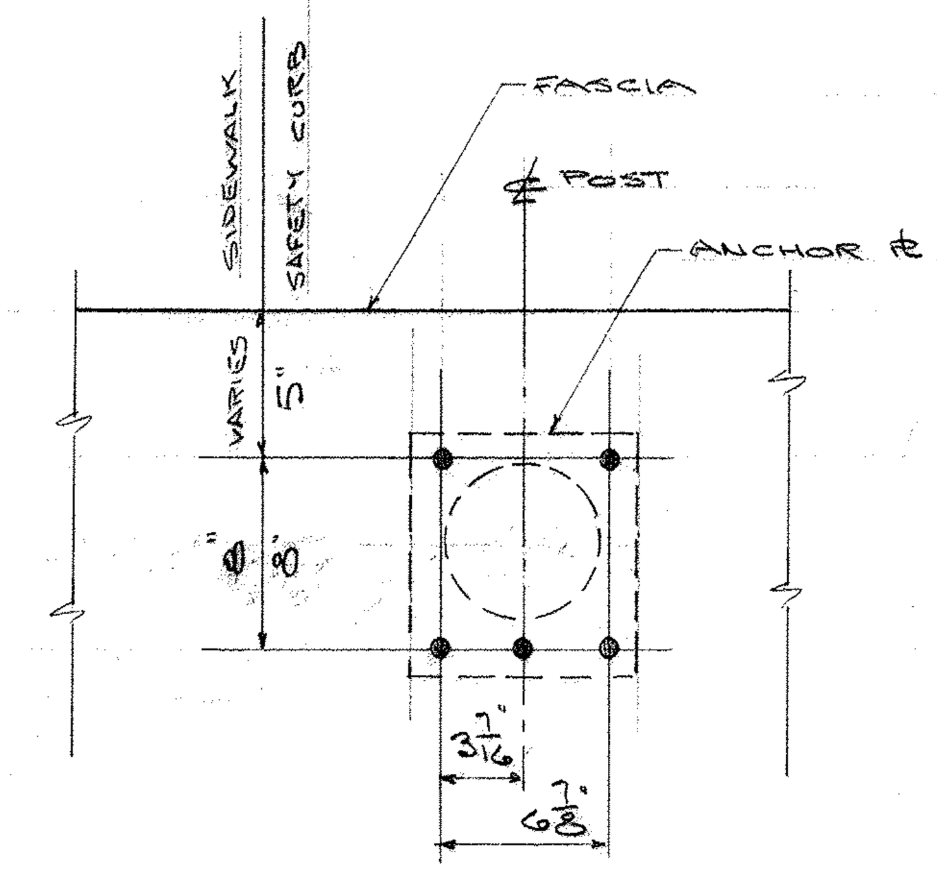
SECT. 3/2



"B" BOLT



TYPICAL DETAILS



PLAN AT ANCHOR BOLTS
BOLT PROJECTION = 2 1/2"

RECEIVED
CK'D BY UBS OK'D BY MCM
JUN 03 2009
RESUBMIT ___ APPROVED ✓
BY ___ DATE 6-19-09

ISSUE	DATE	DESCRIPTION	BY
2	4-24-09	FOR FABRICATION	B
1	1-28-09	FOR APPROVAL	B

AUCIELLO IRON WORKS INC
560 MAIN ST. HUDSON, MA (978) 568-8382

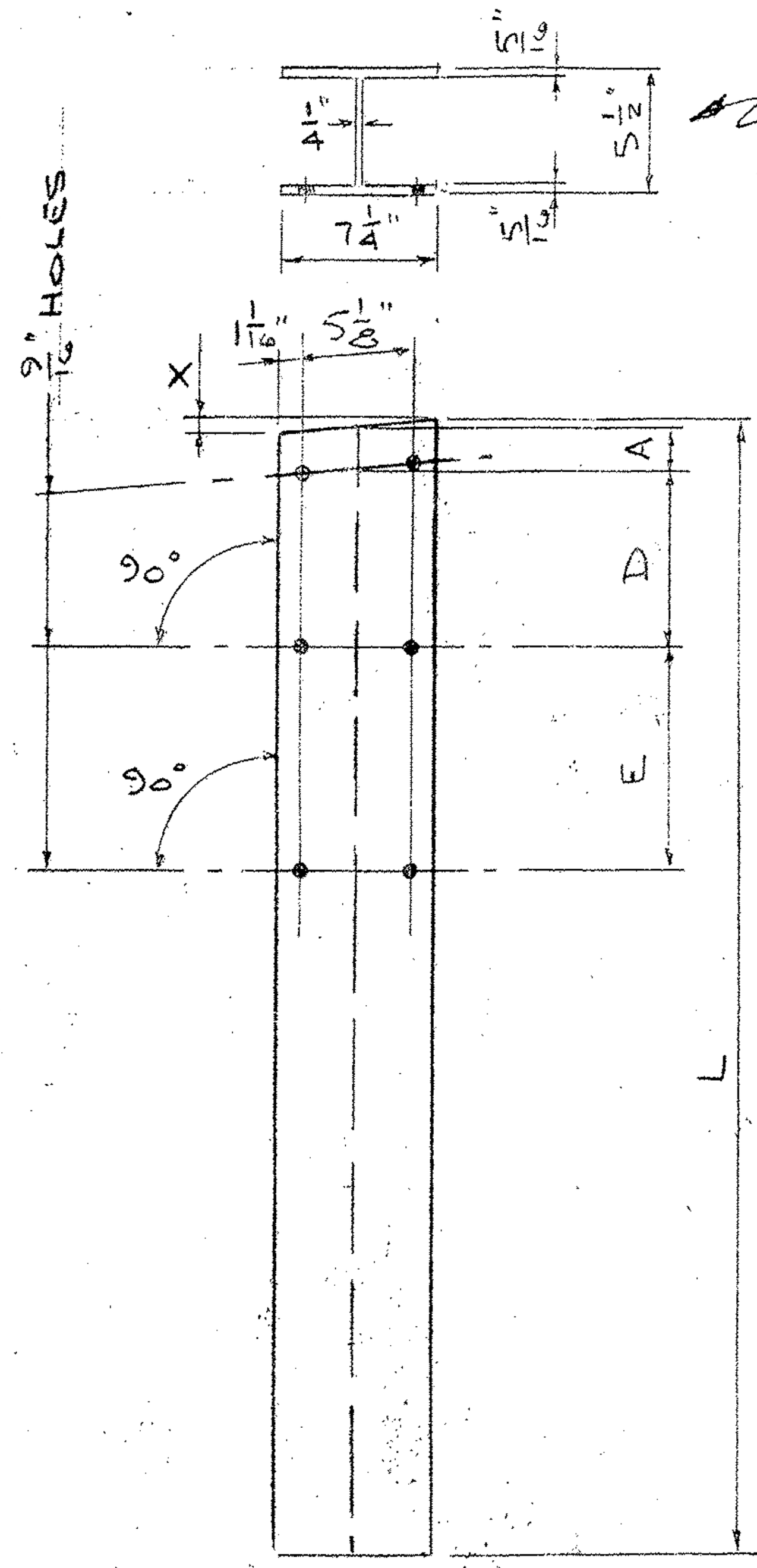
VT. AGENCY OF TRANSPORTATION
WILLIAMSTOWN #BRS 0204 (4)
ROUTE 64 OVER BROOK

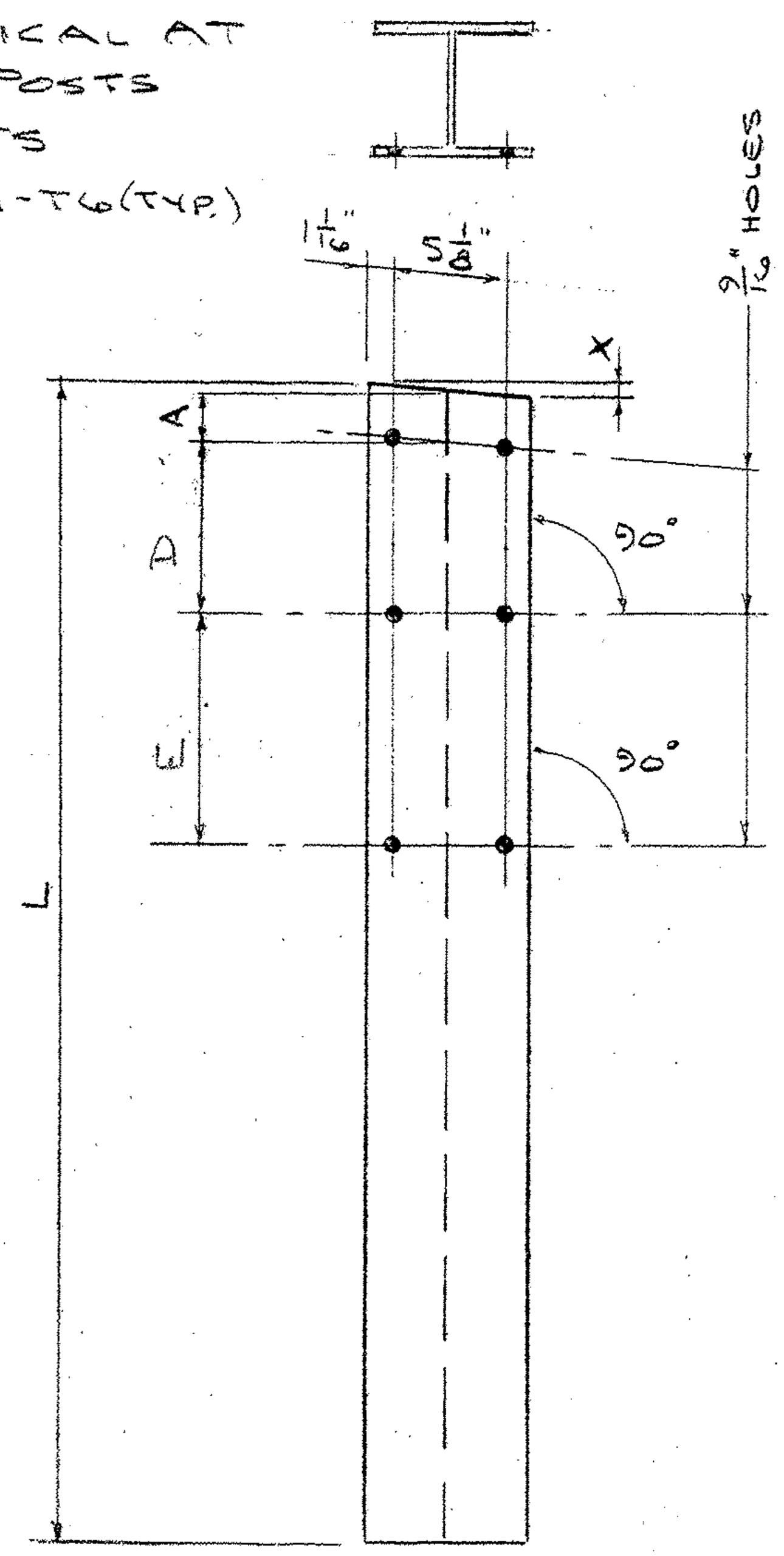
ALUMINUM RAILING

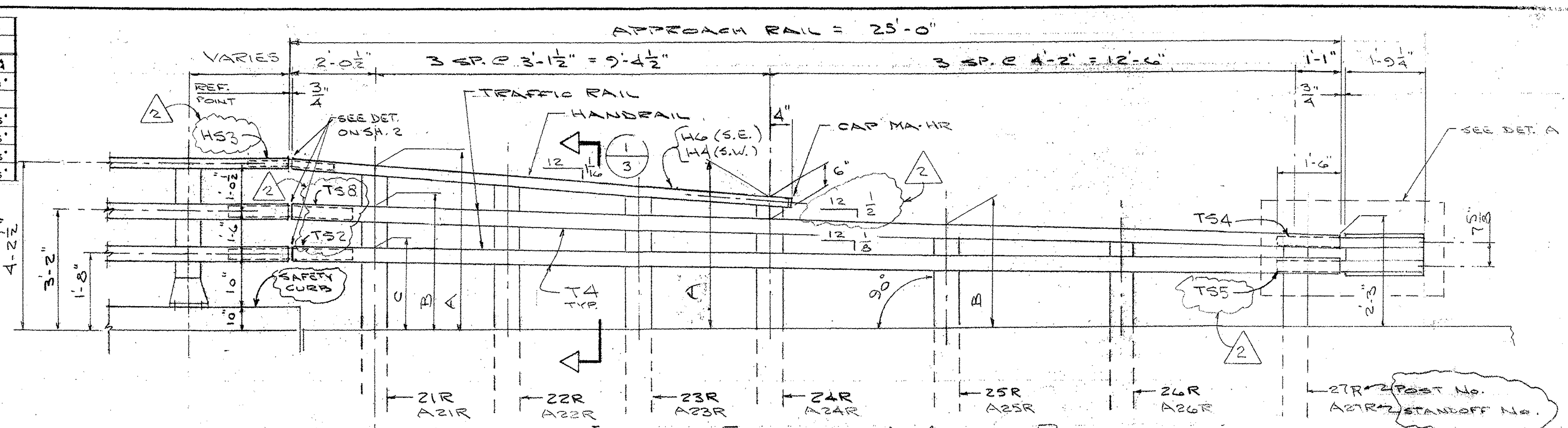
SURFACE PREP: NONE
FINISH: MILL FINISH
FOR: F.R. LAFAYETTE, INC
DR: WM 01-19-09
CHK: MPP 1-22-09
DWG. NO. BR-2950
JOB NO. A597005-1001
SHEET 2 OF 3

DIM'S TYPICAL AT APPROACH POSTS & STANDOFFS
ALLOY 6061-T6 (TYP.)

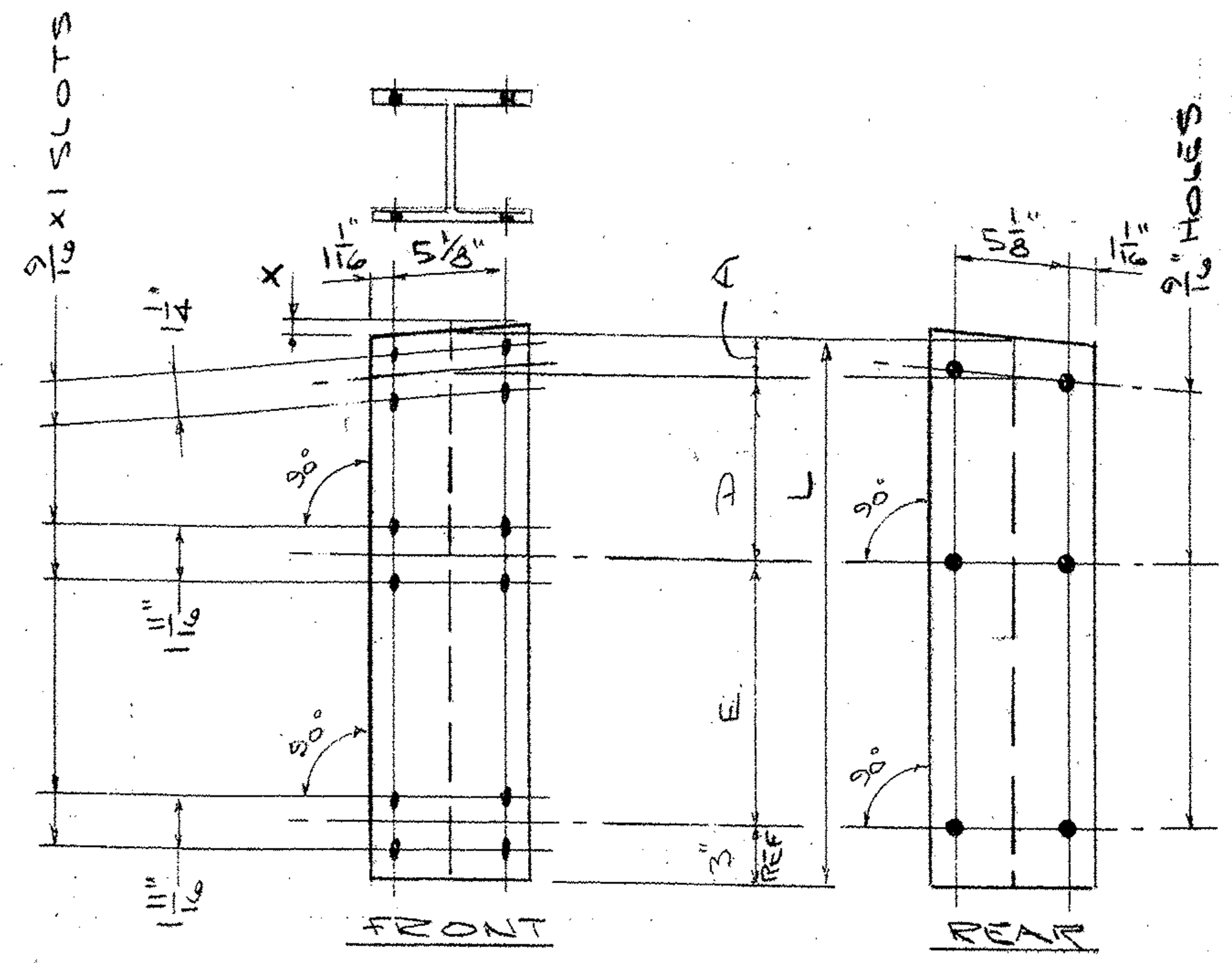
POST NO.	RAIL HEIGHT DIMENSIONS A	B	C
21	4'-1 7/8"	3'-2 15/16"	1'-9 3/4"
22	3'-10 9/16"	3'-1 1/4"	1'-9 3/8"
23	3'-7 1/4"	2'-11 9/16"	1'-9"
24	3'-3 15/16"	2'-9 15/16"	1'-8 11/16"
25	X	2'-7 11/16"	1'-8 3/16"
26	X	2'-5 1/2"	1'-7 11/16"
27	X	2'-3 1/4"	1'-7 3/16"







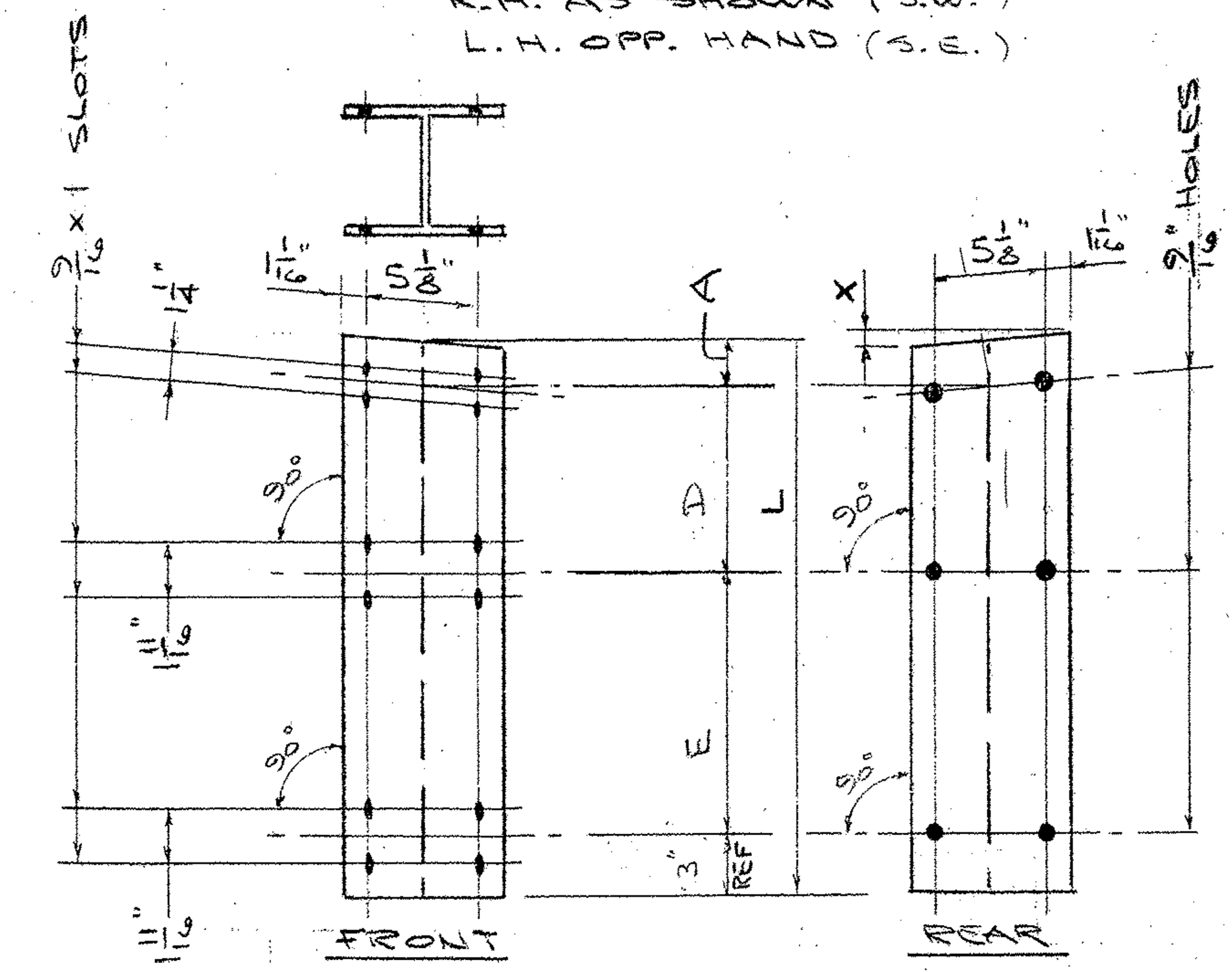
INBOARD ELEVATION AT APPROACH RAILING
R.H. AS SHOWN (S.W.)
L.H. OPP. HAND (S.E.)



STANDOFF

MK	QUAN	L	X	A	D	E
A21L	1	2'-9 1/8"	5/8"	1 9/16"	11 7/16"	1'-5 1/8"
A22L	1	2'-6 3/16"	5/8"	1 9/16"	9 3/4"	1'-3 7/8"
A23L	1	2'-3 1/4"	5/8"	1 9/16"	8 1/8"	1'-2 9/16"
A24L	1	2'-0 1/4"	5/8"	1 9/16"	6 7/16"	1'-1 1/4"
A25L	1	1'-4 9/16"	5/16"	2"	0	11 9/16"
A26L	1	1'-2 13/16"	5/16"	2"	0	9 13/16"
A27L	1	1'-1 1/16"	5/16"	2"	0	8 1/16"

2

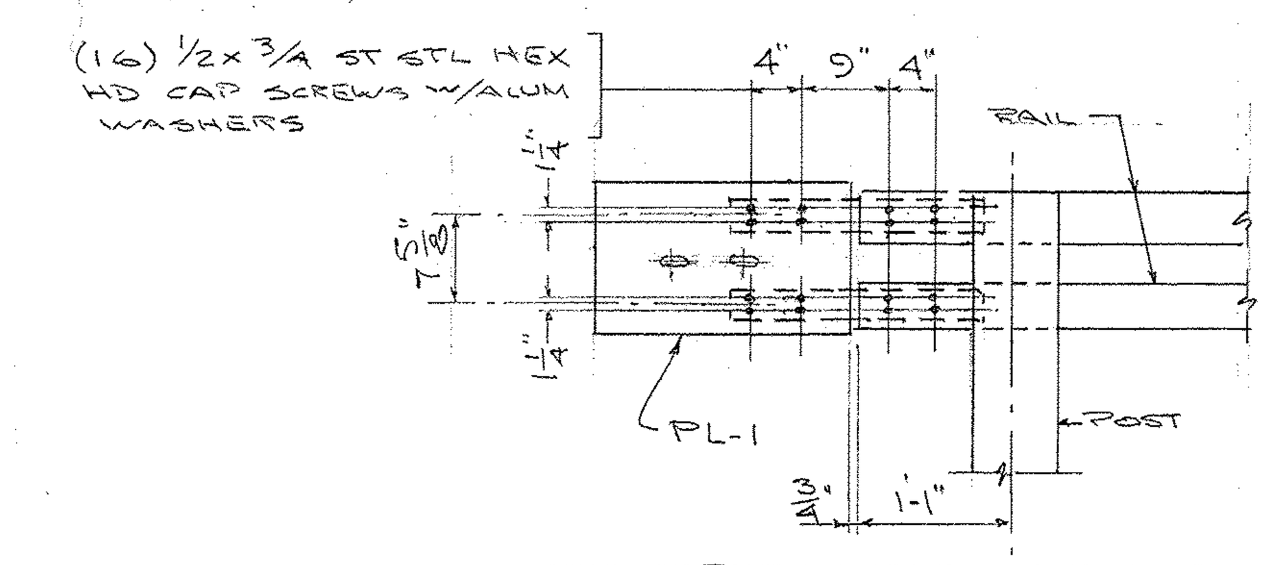


STANDOFF

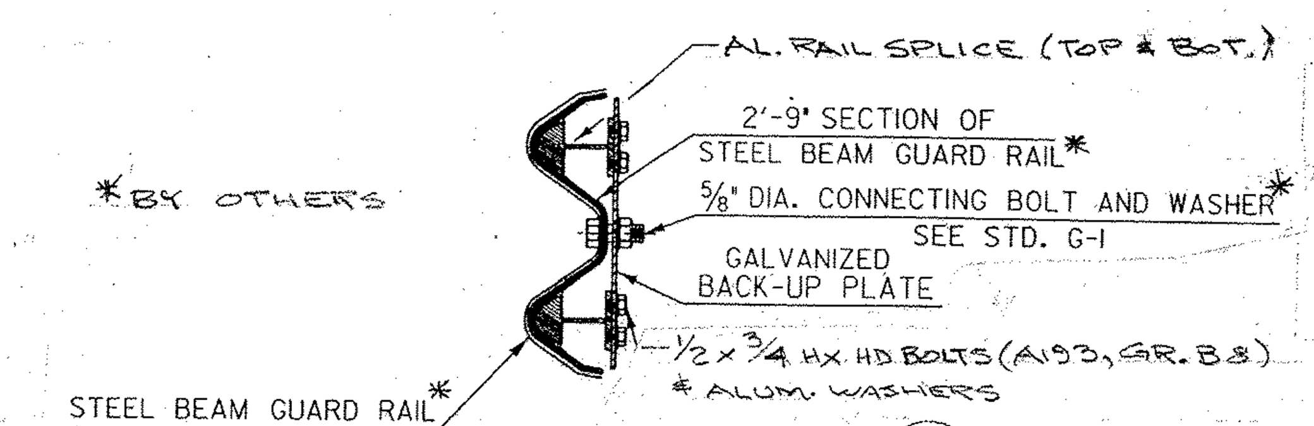
MK	QUAN	L	X	A	D	E
A21R	1	2'-9 1/8"	5/8"	1 9/16"	11 7/16"	1'-5 1/8"
A22R	1	2'-6 3/16"	5/8"	1 9/16"	9 3/4"	1'-3 7/8"
A23R	1	2'-3 1/4"	5/8"	1 9/16"	8 1/8"	1'-2 9/16"
A24R	1	2'-0 1/4"	5/8"	1 9/16"	6 7/16"	1'-1 1/4"
A25R	1	1'-4 9/16"	5/16"	2"	0	11 9/16"
A26R	1	1'-2 13/16"	5/16"	2"	0	9 13/16"
A27R	1	1'-1 1/16"	5/16"	2"	0	8 1/16"

2

(16) 1/2 x 3/4 ST STL HEX HD CAP SCREWS W/ ALUM WASHERS



DETAIL A
OUTBOARD VIEW



*BY OTHERS

SECTION 2/3

APPROACH POST

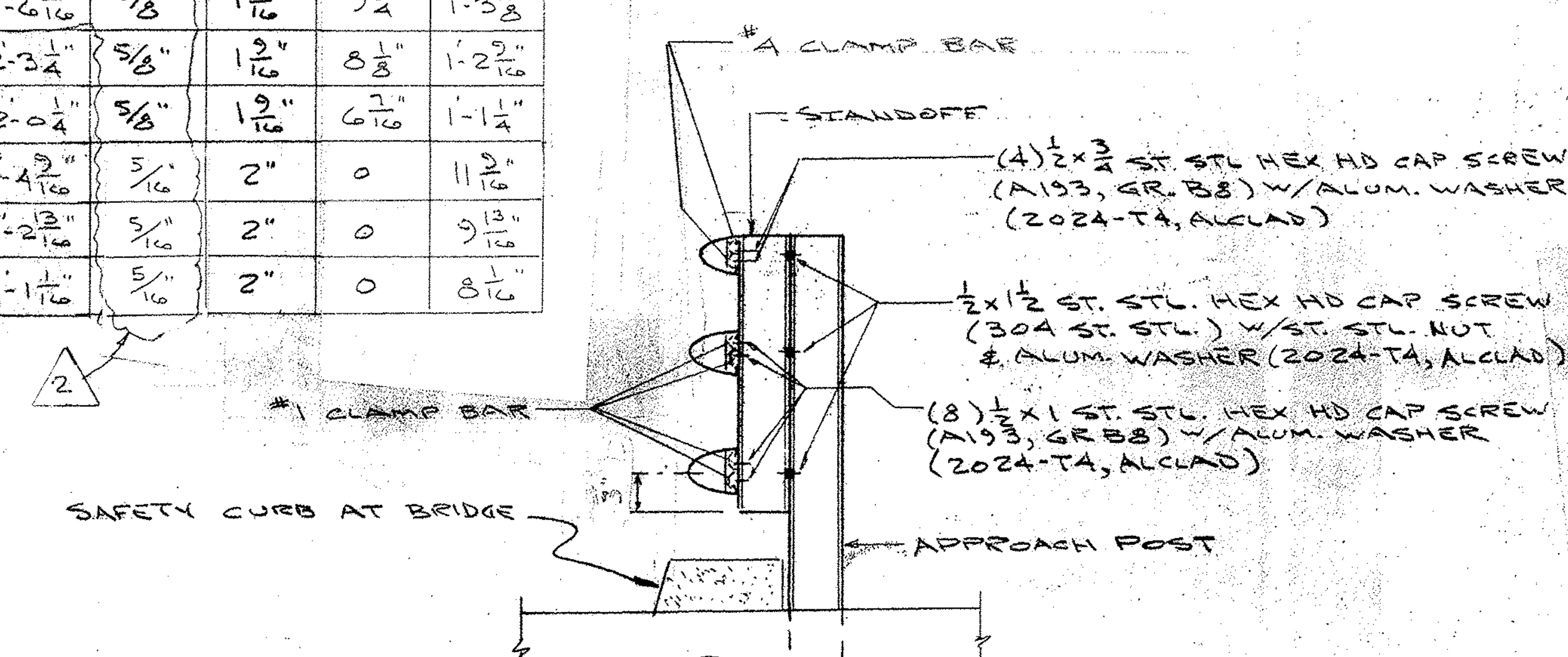
MK	QUAN	L	X	A	D	E
21L	1	6'-6"	5/8"	1 9/16"	11 7/16"	1'-5 1/8"
22L	1	6'-6"	5/8"	1 9/16"	9 3/4"	1'-3 7/8"
23L	1	6'-6"	5/8"	1 9/16"	8 1/8"	1'-2 9/16"
24L	1	6'-6"	5/8"	1 9/16"	6 7/16"	1'-1 1/4"
25L	1	6'-0"	5/16"	2"	0	11 9/16"
26L	1	6'-0"	5/16"	2"	0	9 13/16"
27L	1	6'-0"	5/16"	2"	0	8 1/16"

2

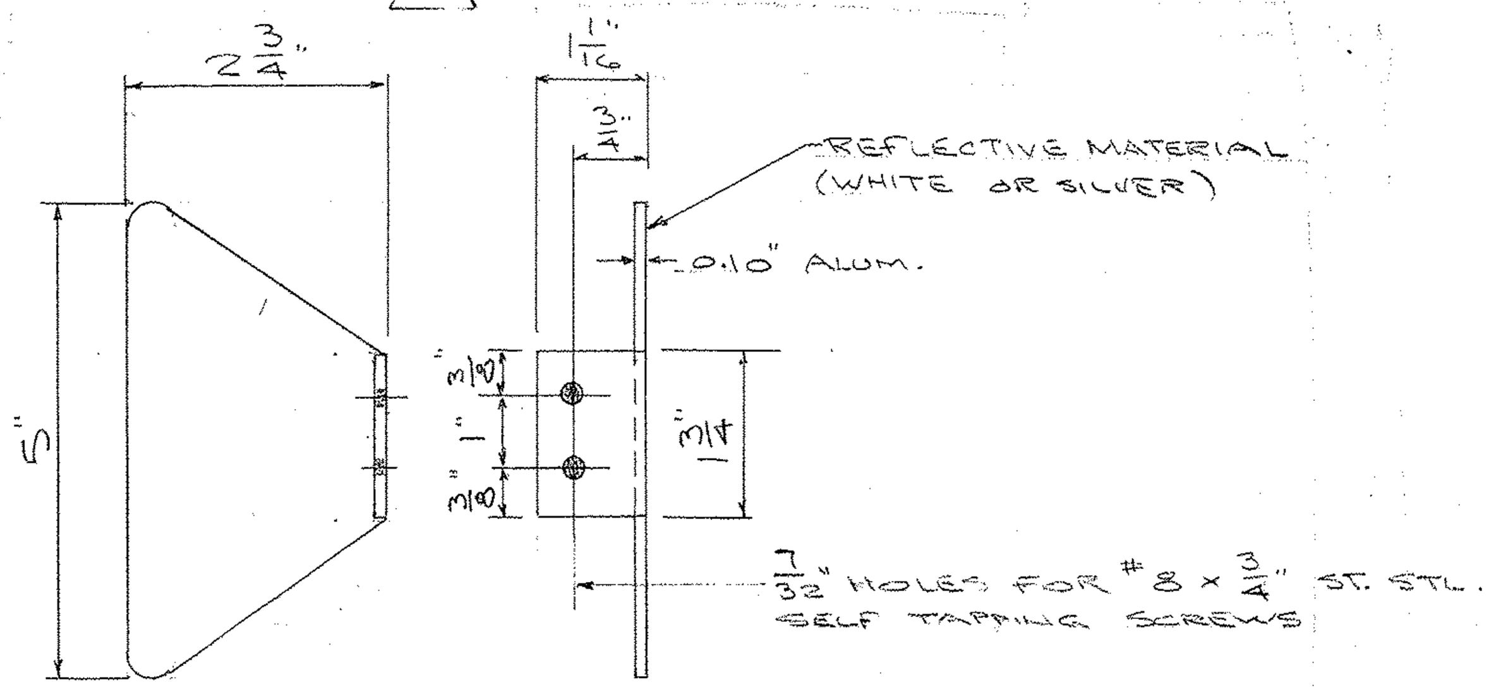
APPROACH POST

MK	QUAN	L	X	A	D	E
21R	1	6'-6"	5/8"	1 9/16"	11 7/16"	1'-5 1/8"
22R	1	6'-6"	5/8"	1 9/16"	9 3/4"	1'-3 7/8"
23R	1	6'-6"	5/8"	1 9/16"	8 1/8"	1'-2 9/16"
24R	1	6'-6"	5/8"	1 9/16"	6 7/16"	1'-1 1/4"
25R	1	6'-0"	5/16"	2"	0	11 9/16"
26R	1	6'-0"	5/16"	2"	0	9 13/16"
27R	1	6'-0"	5/16"	2"	0	8 1/16"

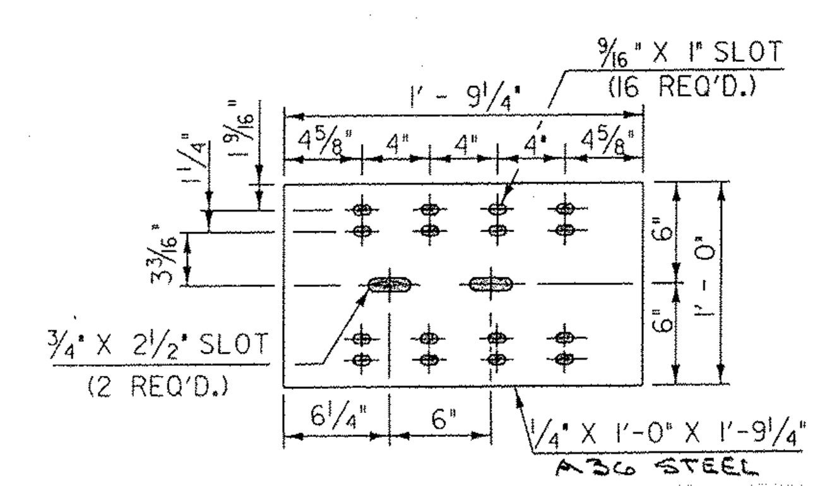
2



SECT. 1/3



POST REFLECTOR (4-REQ'D)
MATERIALS PER V.A.T. SPEC.



(3) PLATE PL-1

ISSUE	DATE	DESCRIPTION	BY
2	4-30-09	FOR APPROVAL	B
1	1-28-09	FOR APPROVAL	B

RECEIVED
CK'D BY UBS OK'D BY MEM
JUN 03 20[illegible]
RESUBMIT ___ APPROVED ✓
BY DATE 6-16-09

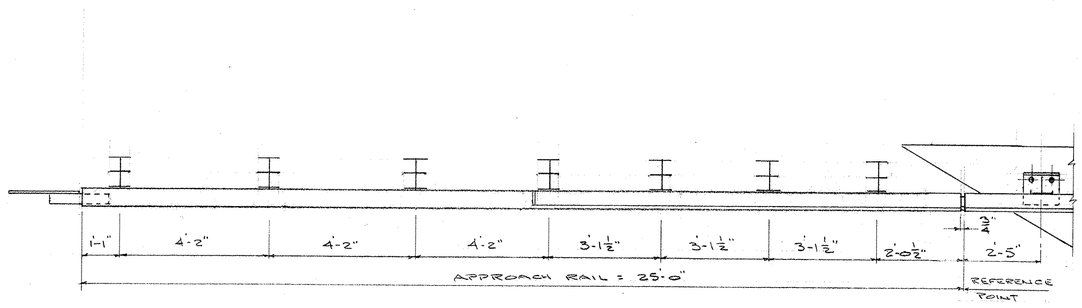
AUCIELLO IRON WORKS INC
560 MAIN ST. HUDSON, MA (978) 568-8382

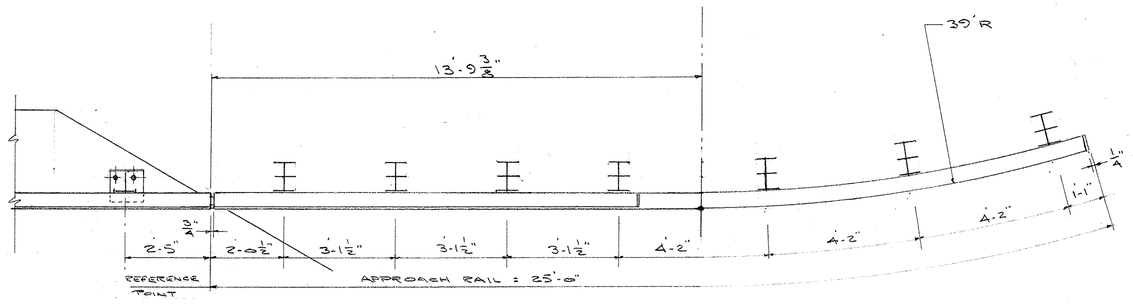
VT. AGENCY OF TRANSPORTATION
WILLIAMSTOWN #BRS 0204(4)
ROUTE 64 OVER BROOK

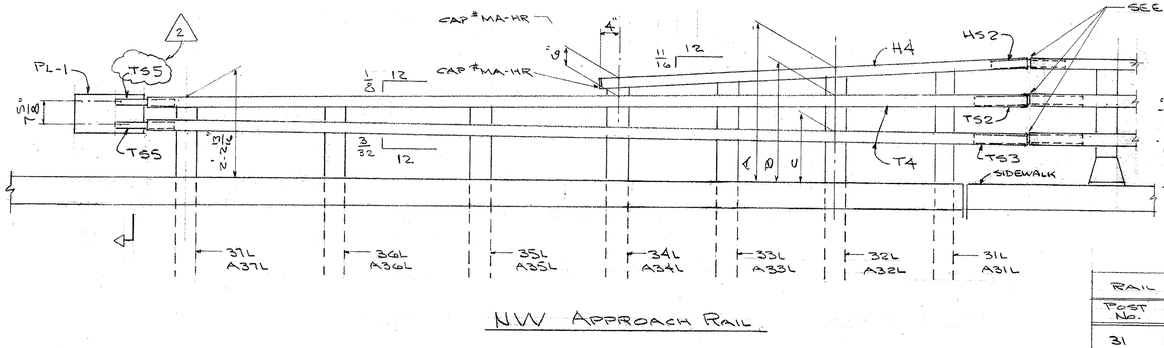
AL. APPROACH RAIL AT SAFETY CURB

SURFACE PREP: NONE
FINISH: MILL FINISH
FOR: F. R. LAFAYETTE, INC.
DR: WM 01-19-09
CHK: KPP 1-22-09
JOB NO. A879005-1001
DWG. NO. BR-2950
SHEET 3 OF 8

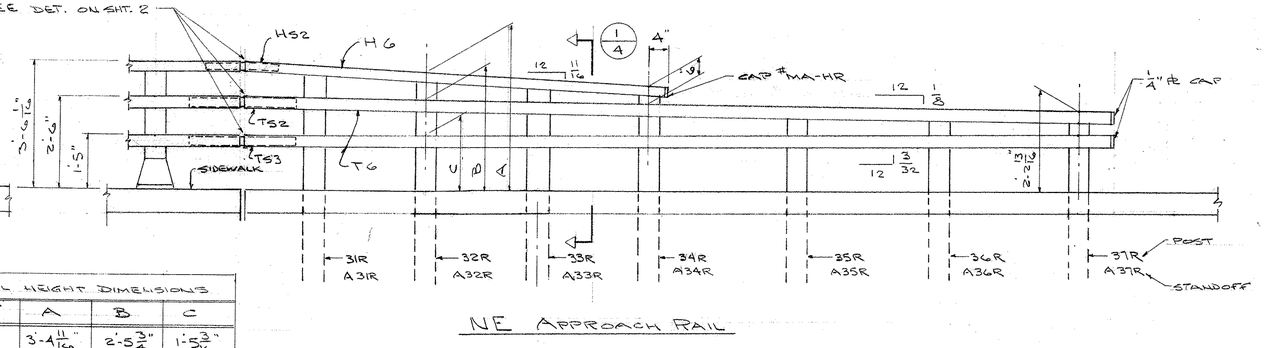
MAKEPEACE





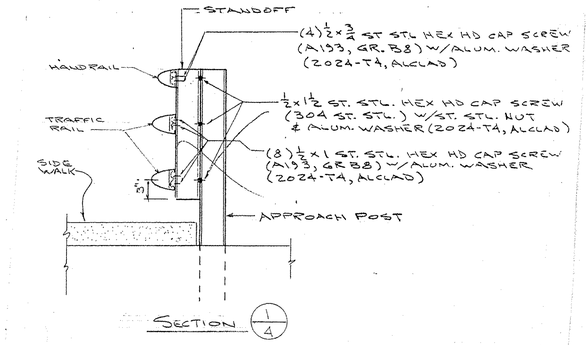


NW APPROACH RAIL



NE APPROACH RAIL

RAIL HEIGHT DIMENSIONS			
POST NO.	A	B	C
31	3'-4 11/16"	2'-5 3/4"	1'-5 3/16"
32	3'-2 5/8"	2'-5 5/16"	1'-5 7/16"
33	3'-0 9/16"	2'-4 7/8"	1'-5 11/16"
34	2'-10½"	2'-4 1/2"	1'-5 15/16"
35	—	2'-3 15/16"	1'-6 5/16"
36	—	2'-3 3/8"	1'-6 5/8"
37	—	2'-2 13/16"	1'-7"



RECEIVED
OK'D BY UGS OK'D BY MAM
JUN 03 2009
RESUBMIT APPROVED ✓
BY DATE 6-16-09

ISSUE	DATE	DESCRIPTION	BY
2	4.30.09	FOR APPROVAL	TS
1	1-28-09	FOR APPROVAL	TS

AUCIELLO IRON WORKS INC
560 MAIN ST. HUDSON, MA (978) 568-8382

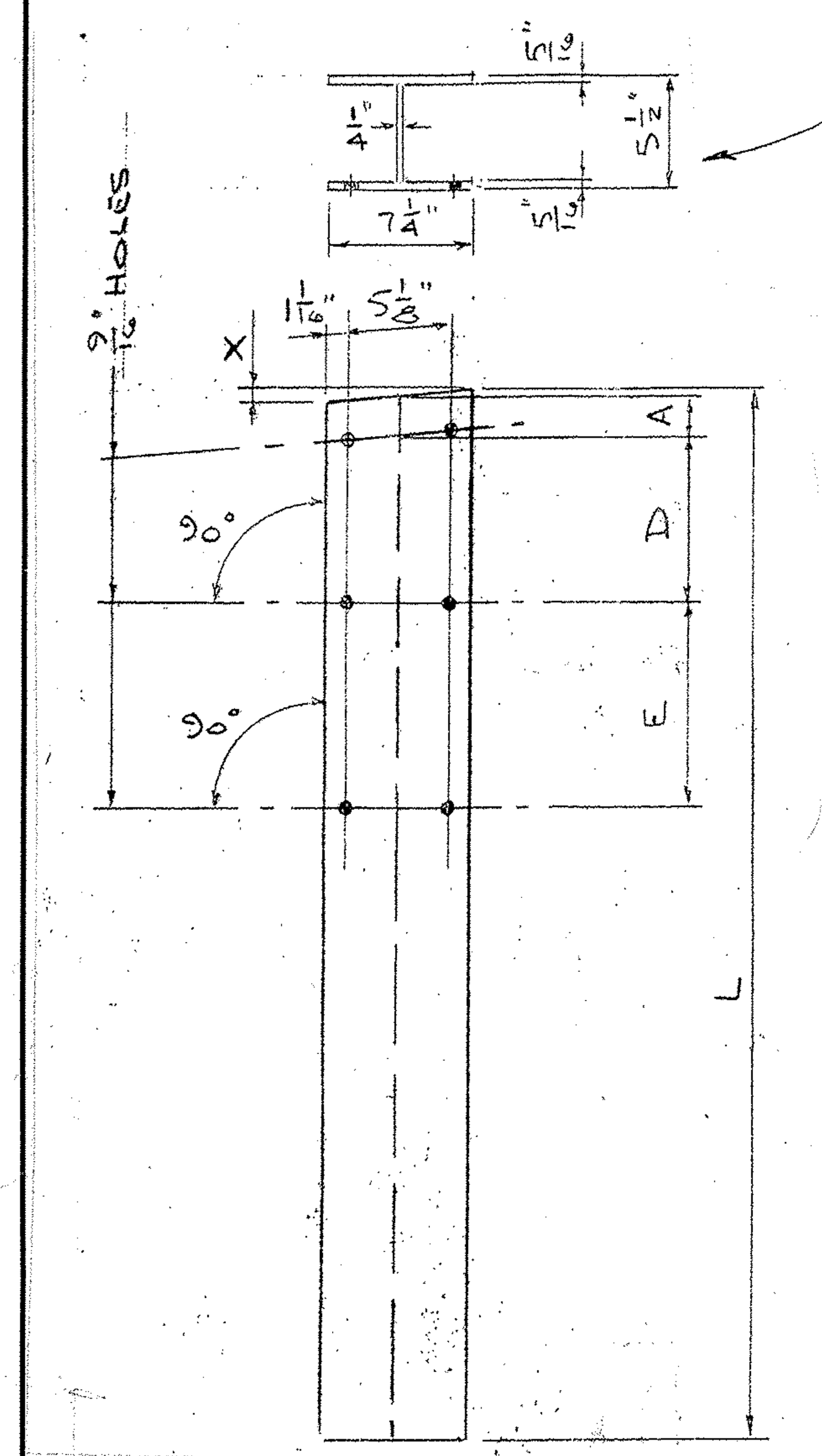
VT. AGENCY OF TRANSPORTATION
WILLIAMSTOWN *BRS 0204(4)
ROUTE 64 OVER BROOK

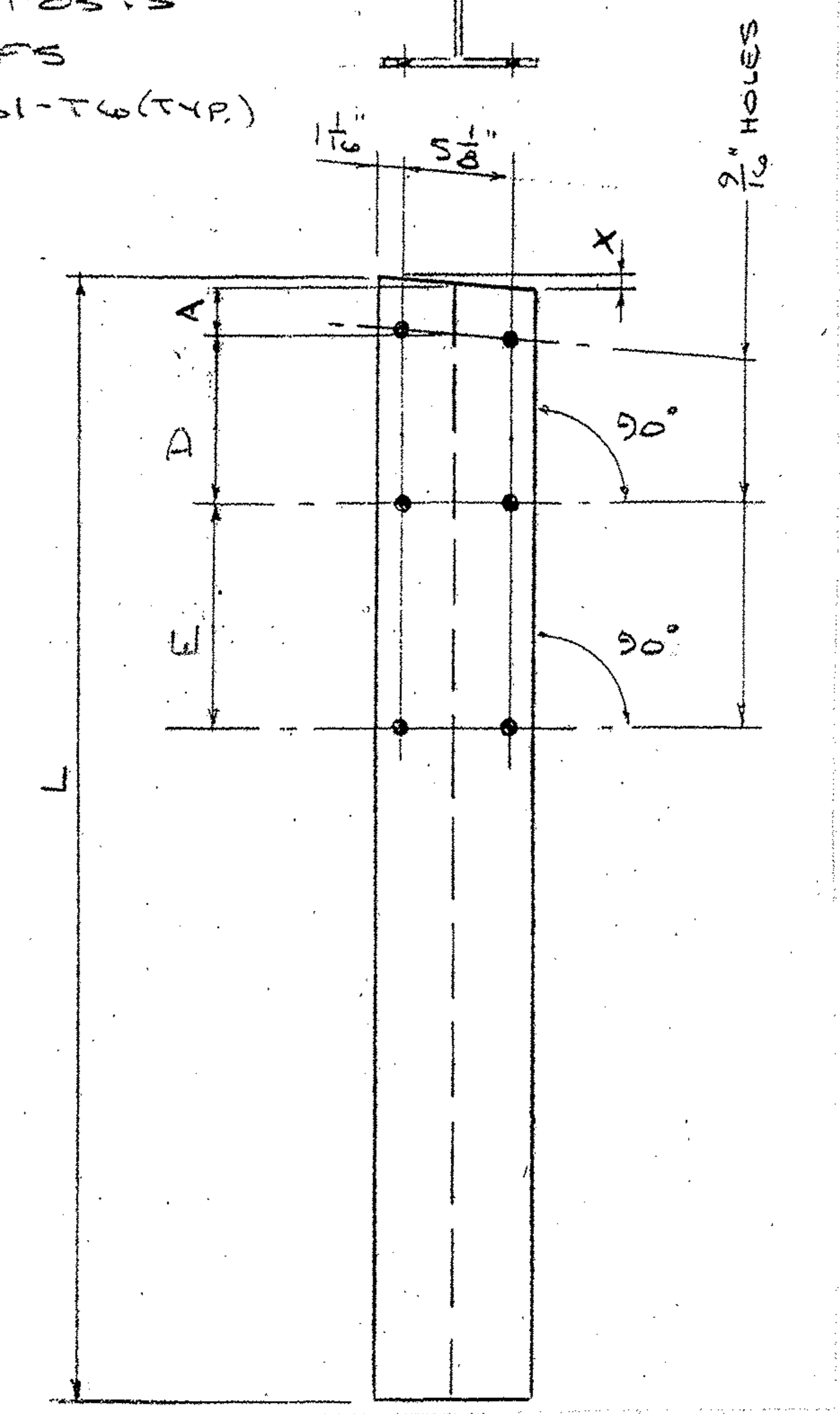
APPROACH RAIL AT SIDEWALK

SURFACE PREP: NONE	FINISH: MILL FINISH
FOR: F.R. LAFAYETTE, INC.	
DR: WM 01-19-09 CHK: MP 1-22-09	DWG. NO. BR-2950
JOB NO. A090005-1001	SHEET 4 OF 8

B.L. MAKEPEACE INC. 10/06/16

DIM'S TYPICAL AT APPROACH POSTS & STANDOFFS
ALLOY 6061-T6 (TYP.)



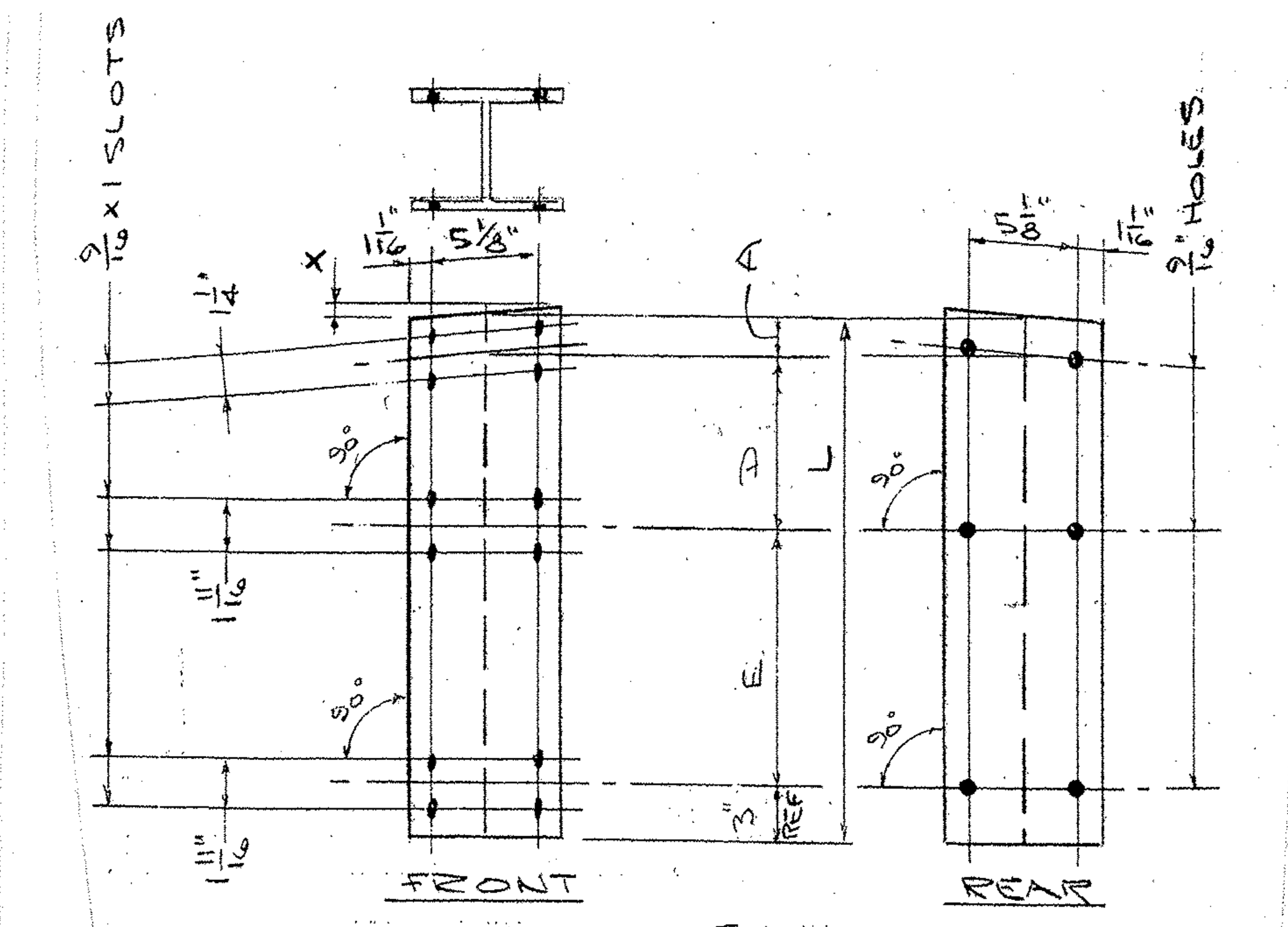


APPROACH POSTS

MK	QUAN	L	X	A	D	E
31L	1	6'-6"	7/16"	1 9/16"	11 7/16	1'-0 9/16
32L	1	|	|	|	9 3/4"	11 7/8"
33L	1	|	|	|	8 1/8"	11 3/16"
34L	1	↓	↓	↓	6 7/16"	10 9/16"
35L	1	6'-0"	0"	2"	—	9 5/8"
36L	1	|	|	|	—	8 3/4"
37L	1	↓	↓	↓	—	7 7/8"

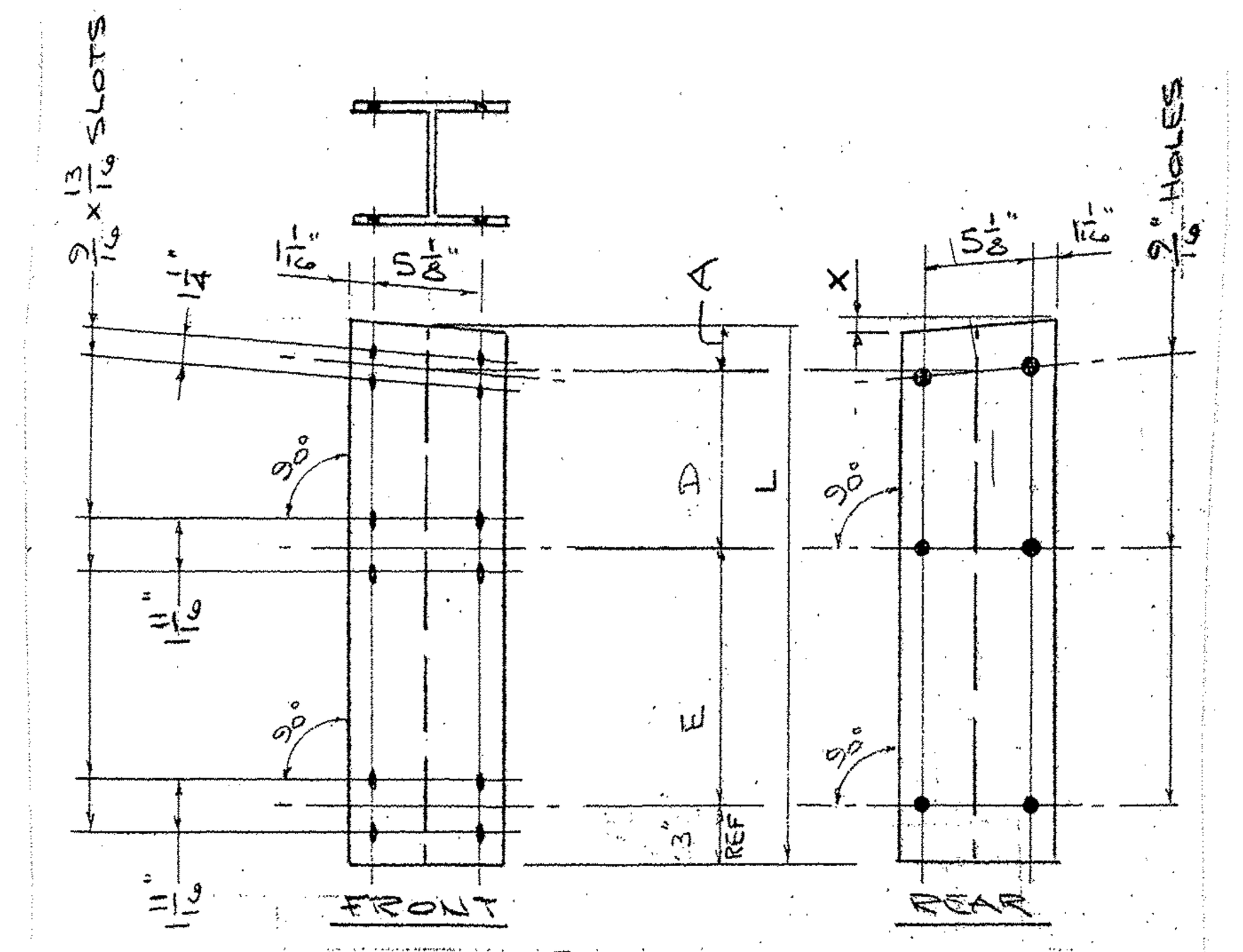
APPROACH POSTS

MK	QUAN	L	X	A	D	E
31R	1	6'-6"	7/16"	1 9/16"	11 7/16"	1'-0 9/16
32R	1	|	|	|	9 3/4"	11 7/8"
33R	1	|	|	|	8 1/8"	11 3/16"
34R	1	↓	↓	↓	6 7/16"	10 9/16"
35R	1	6'-0"	0"	2"	—	9 5/8"
36R	1	|	|	|	—	8 3/4"
37R	1	↓	↓	↓	—	7 7/8"



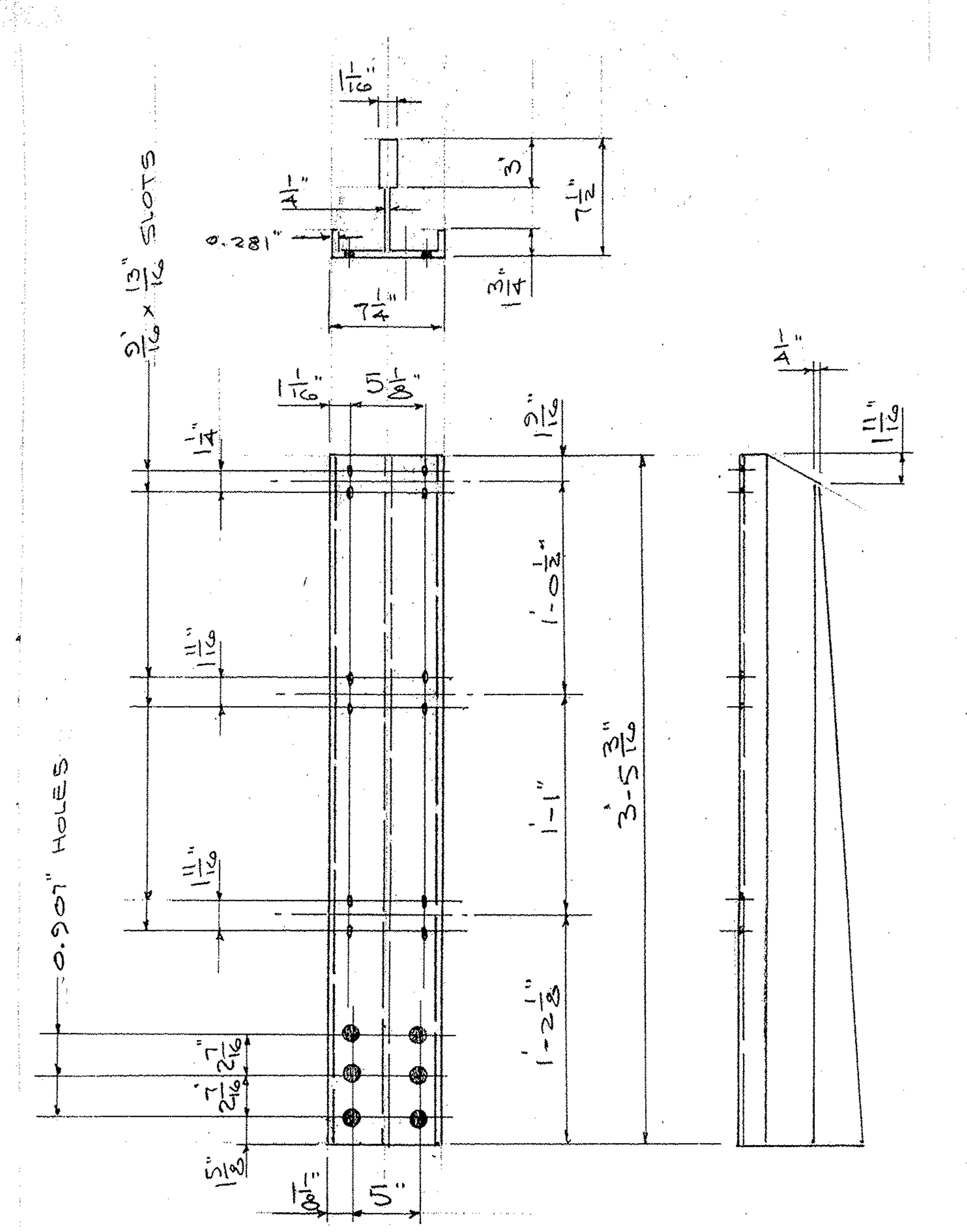
STANDOFF

MK	QUAN	L	X	A	D	E
A31L	1	2'-4 9/16"	7/16"	1 9/16"	11 7/16"	1'-0 9/16"
A32L	1	2'-2 3/16"	|	|	9 3/4"	11 7/8"
A33L	1	1'-11 7/8"	|	|	8 1/8"	11 3/16"
A34L	1	1'-9 9/16"	↓	|	6 7/16"	10 9/16"
A35L	1	1'-2 5/8"	0"	2"	—	9 5/8"
A36L	1	1'-1 3/4"	|	|	—	8 3/4"
A37L	1	1'-0 7/8"	↓	↓	—	7 7/8"



STANDOFF

MK	QUAN	L	X	A	D	E
A31R	1	2'-4 9/16"	7/16"	1 9/16"	11 7/16"	1'-0 9/16"
A32R	1	2'-2 3/16"	|	|	9 3/4"	11 7/8"
A33R	1	1'-11 7/8"	|	|	8 1/8"	11 3/16"
A34R	1	1'-9 9/16"	↓	↓	6 7/16"	10 9/16"
A35R	1	1'-2 5/8"	0"	2"	—	9 5/8"
A36R	1	1'-1 3/4"	|	|	—	8 3/4"
A37R	1	1'-0 7/8"	↓	↓	—	7 7/8"



(6) POST STEM P1
ALLOY 6061-T6

ISSUE	DATE	DESCRIPTION	BY
1	1.28.09	FOR APPROVAL	TS

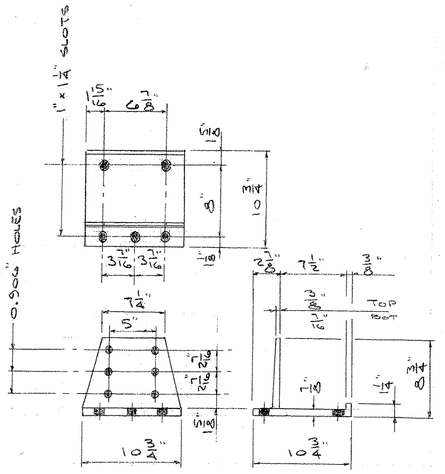
RECEIVED
CK'D BY UBS OK'D BY MSM
JUN 03 2009
RESUBMIT ___ APPROVED ✓
BY DATE 6-16-09

AUCIELLO IRON WORKS INC
560 MAIN ST. HUDSON, MA (978) 568-8382

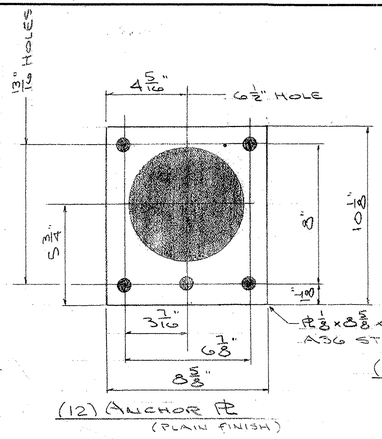
VT. AGENCY OF TRANSPORTATION
WILLIAMSTOWN #BRS 0204 (4)
ROUTE 64 OVER BROOK

BRIDGE & APPROACH RAILING

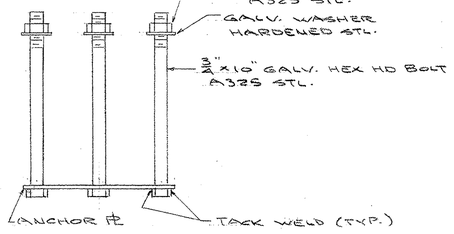
SURFACE PREP: NONE
FINISH: MILL FINISH
FOR: F. R. LAFAYETTE, INC.
DR: WM 01-19-09
CHK: KPP 1-22-09
DWG. NO. BR-2950
JOB NO. AB97005-1001
SHEET 5 OF 8



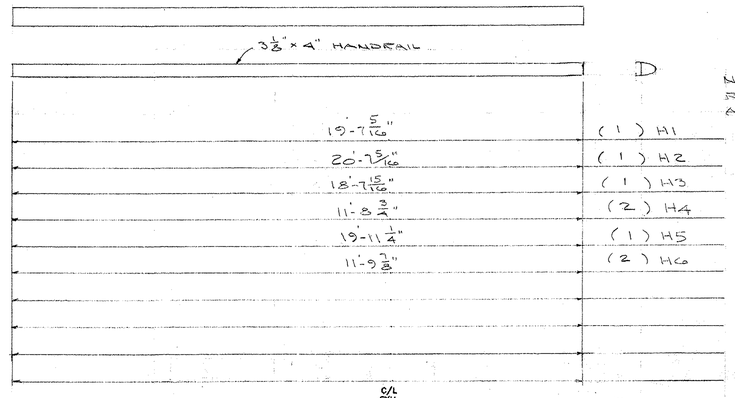
(12) POST BASE
ALLOY 6061-T6



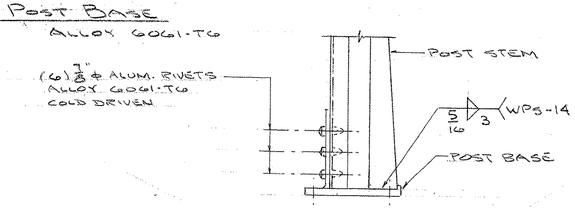
(12) ANCHOR PL
(PLAIN FINISH)



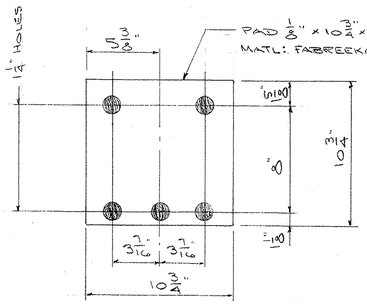
(12) ANCHOR BOLT ASS'Y



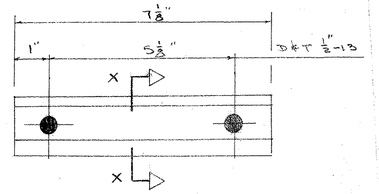
19'-7 5/16"	(1) H1
20'-7 5/16"	(1) H2
18'-7 15/16"	(1) H3
11'-8 3/4"	(2) H4
19'-11 1/4"	(1) H5
11'-9 7/8"	(2) H6



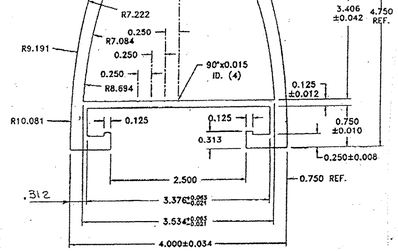
POST ASSY.



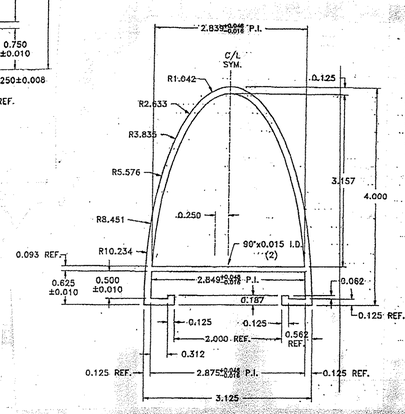
(12) POST PAD



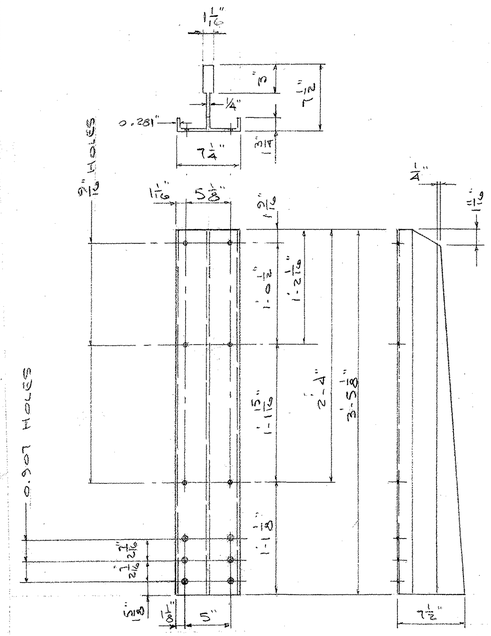
RAIL CLAMP BAR



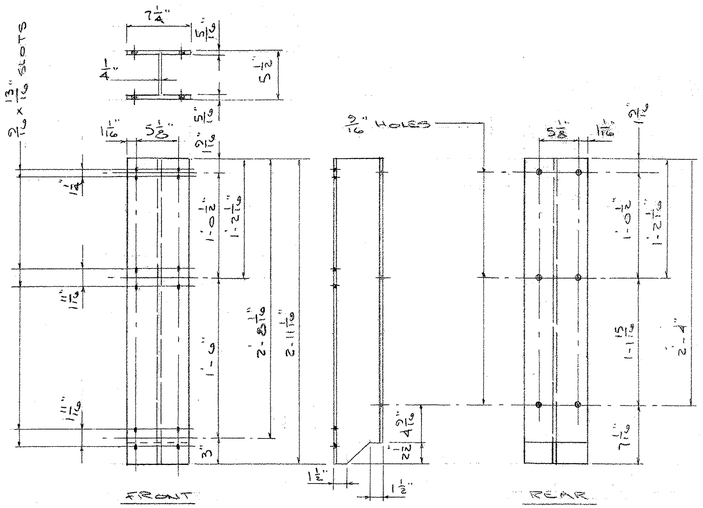
TRAFFIC RAIL EXTRUSION
ALLOY 6061-T6



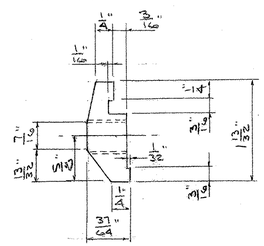
HANDRAIL EXTRUSION
ALLOY 6061-T6



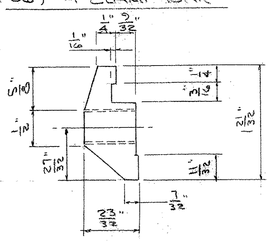
(6) POST STEM P2
ALLOY 6061-T6



(6) STANDOFF SP-2
ALLOY 6061-T6



(56) #4 CLAMP BAR



(160) #1 CLAMP BAR

RECEIVED
OK'D BY UBS OK'D BY mpm
JUN 13 '09
APPROVED ✓
BY DATE 6-16-09

ISSUE	DATE	DESCRIPTION	BY
1	1-29-09	FOR APPROVAL	B

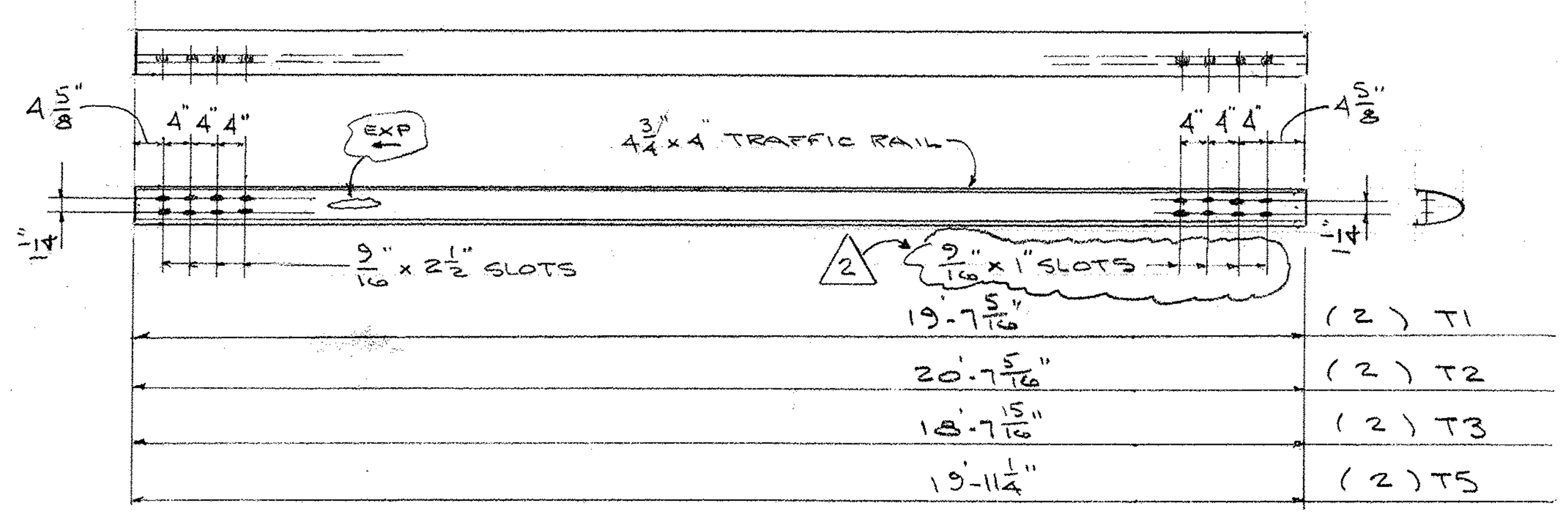
AUCIELLO IRON WORKS INC
560 MAIN ST. HUDSON, MA (978) 568-8382

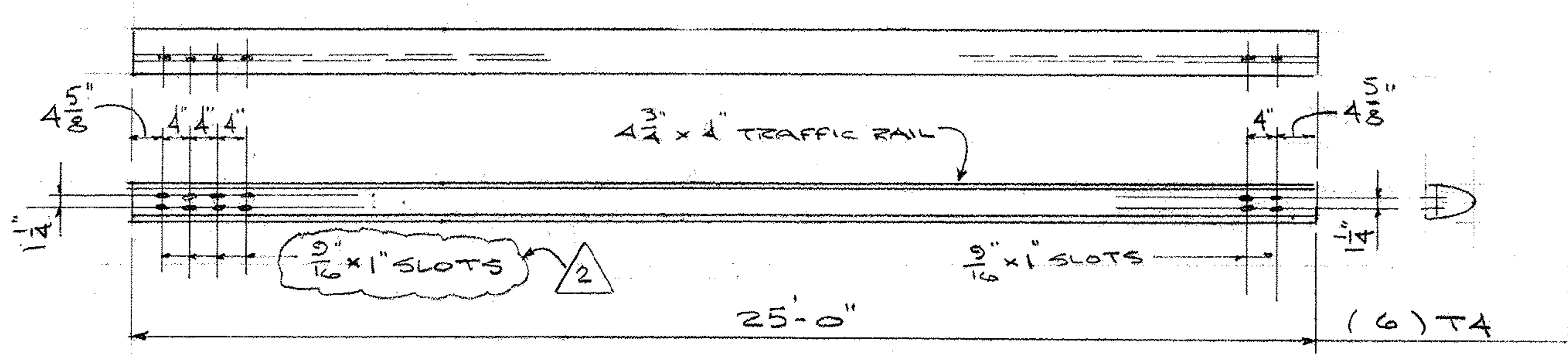
VT. AGENCY OF TRANSPORTATION
WILLIAMSTOWN # BRS 0204(4)
ROUTE 64 OVER BROOK

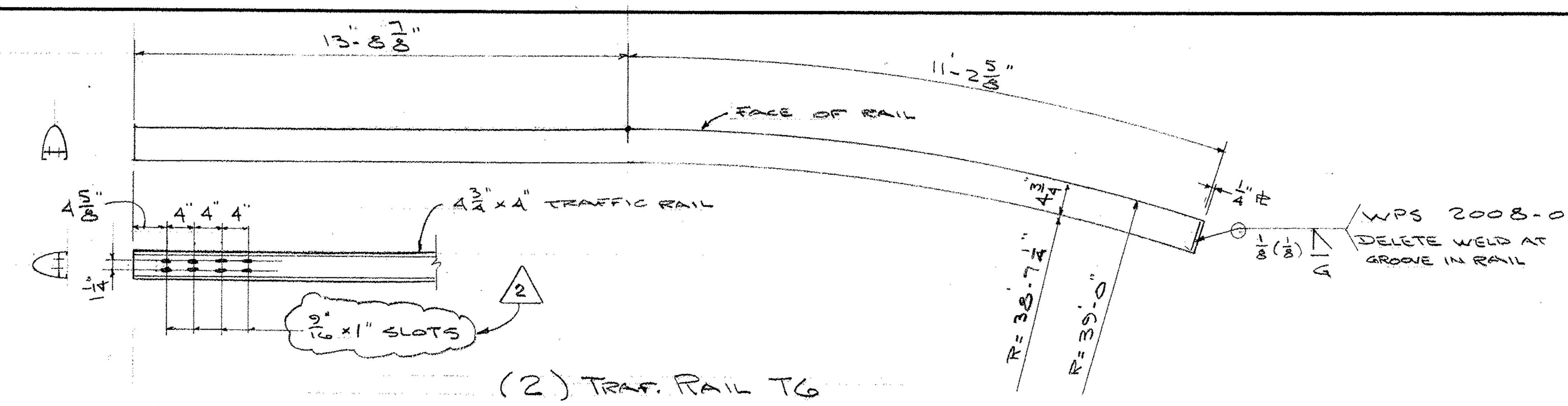
AL. BRIDGE & APPROACH RAILING

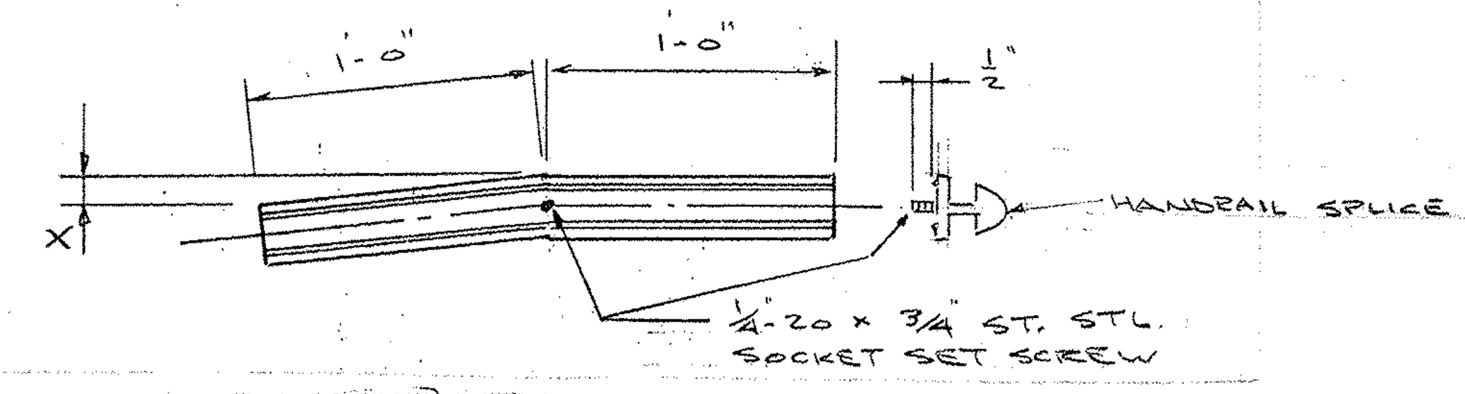
SURFACE PREP: NONE
FINISH:
FOR: F.R. LAFAYETTE, INC.
DR: WM 01-19-09
CHK: MP 1-22-09
DWG. NO. BR-2950
JOB NO. AB97005-1001
SHEET 6 OF 8

EIL MASSPACE INC. 106618

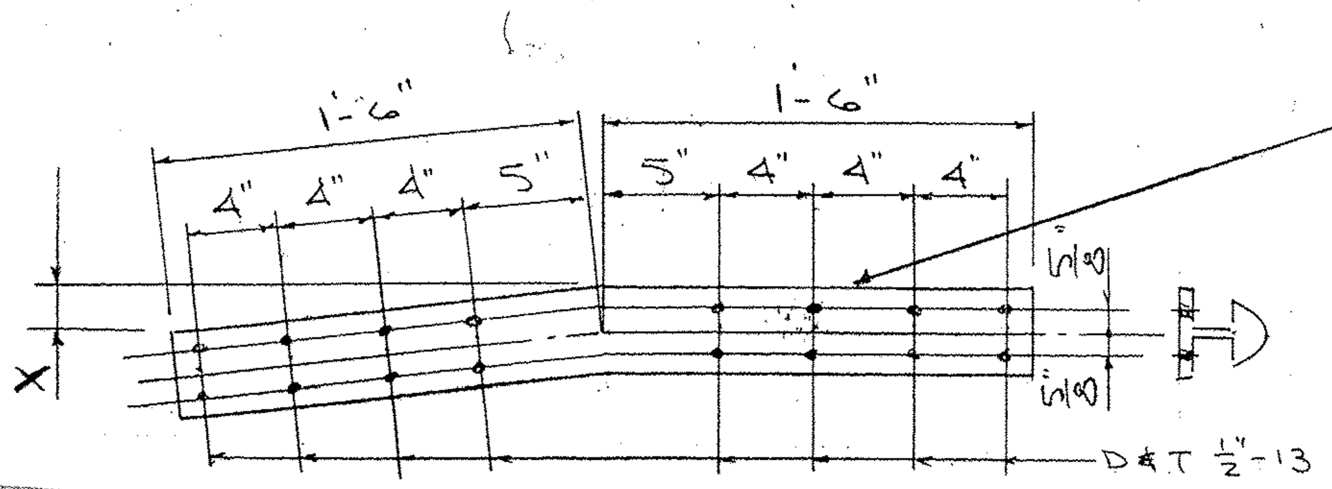


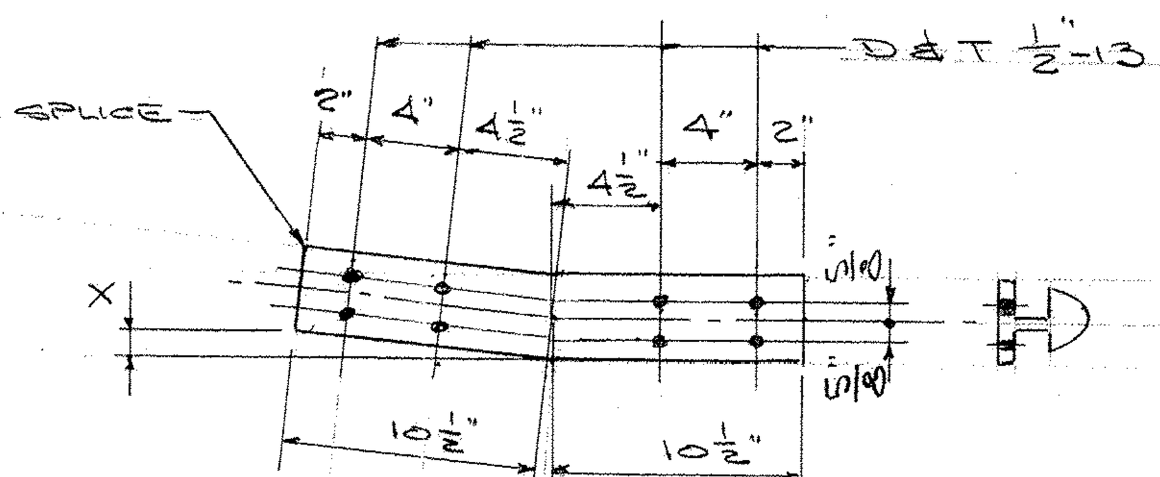






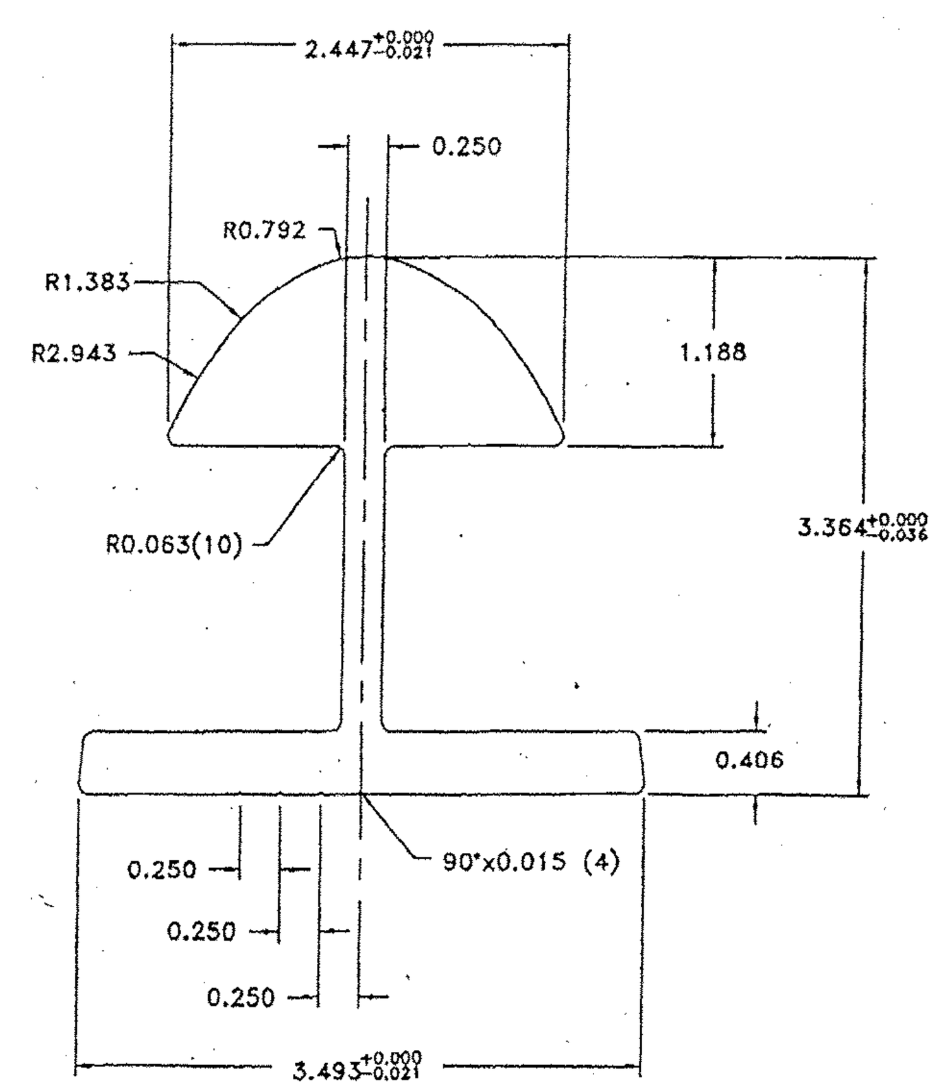
QUAN	MK	X
2	HS1	0
2	HS2	$\frac{11}{16}$"
2	HS3	$1\frac{1}{16}$"





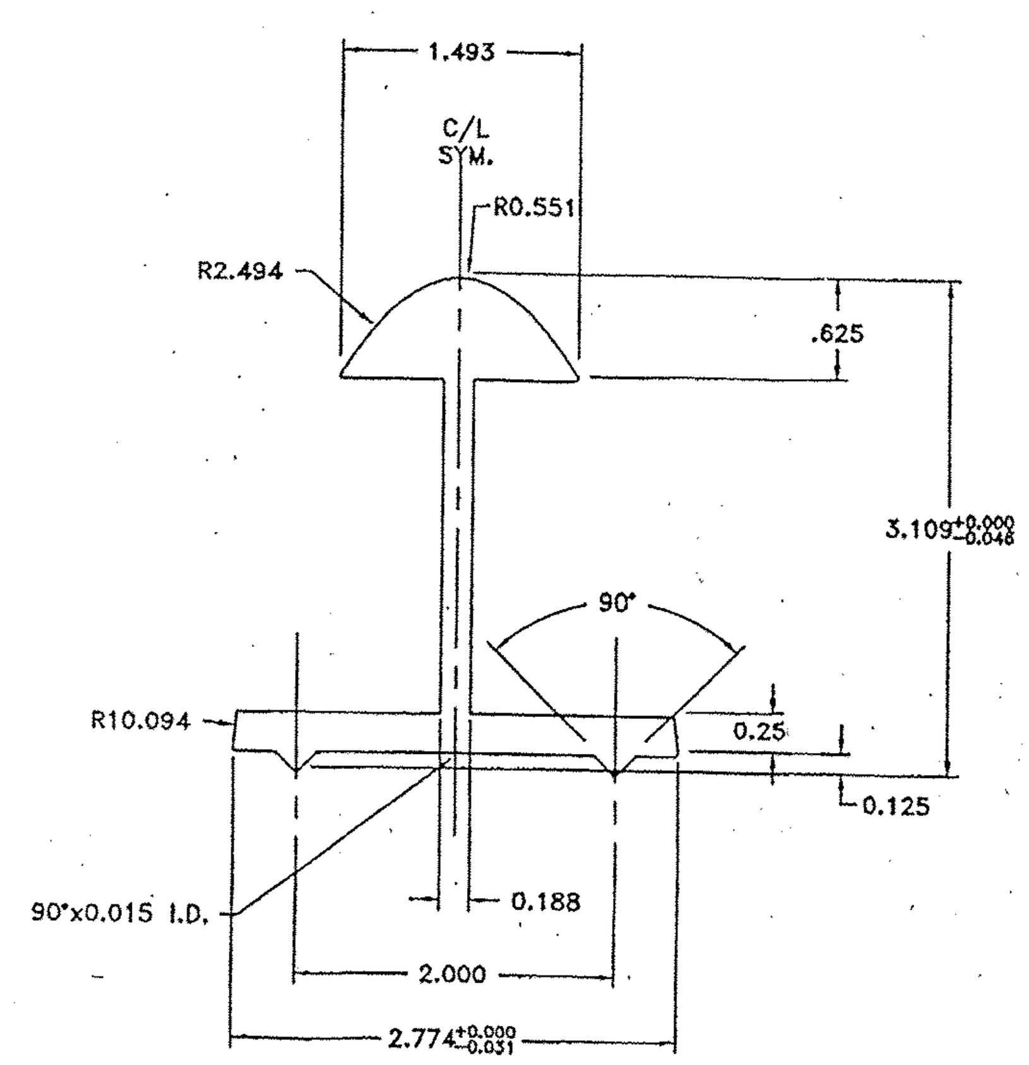
QUAN	MK	X
4	TS1	0
4	TS2	$\frac{3}{16}$"
2	TS3	5/32"
2	TS8	3/16"

QUAN	MK	X
2	TS4	7/16"
4	TS5	3/32"



TRAFFIC RAIL SPLICE EXTRUSION

ALLOY 6061-T6



HANDRAIL SPLICE EXTRUSION

ALLOY, 6061-T6

RECEIVED

CK'D BY UBS BK'D BY MJM

JUN 3 2009

APPROVED ✓

DATE 6-16-09

ISSUE	DATE	DESCRIPTION	BY
2	4-30-09	FOR APPROVAL	B
1	1-28-09	FOR APPROVAL	B

AUCIELLO IRON WORKS INC

560 MAIN ST. HUDSON, MA (978) 568-8382

VT. AGENCY OF TRANSPORTATION

WILLIAMSTOWN #BRS 0204 (4)

ROUTE 64 OVER BROOK

AL. BRIDGE & APPROACH RAILING

SURFACE PREP: NONE

FINISH: MILL FINISH

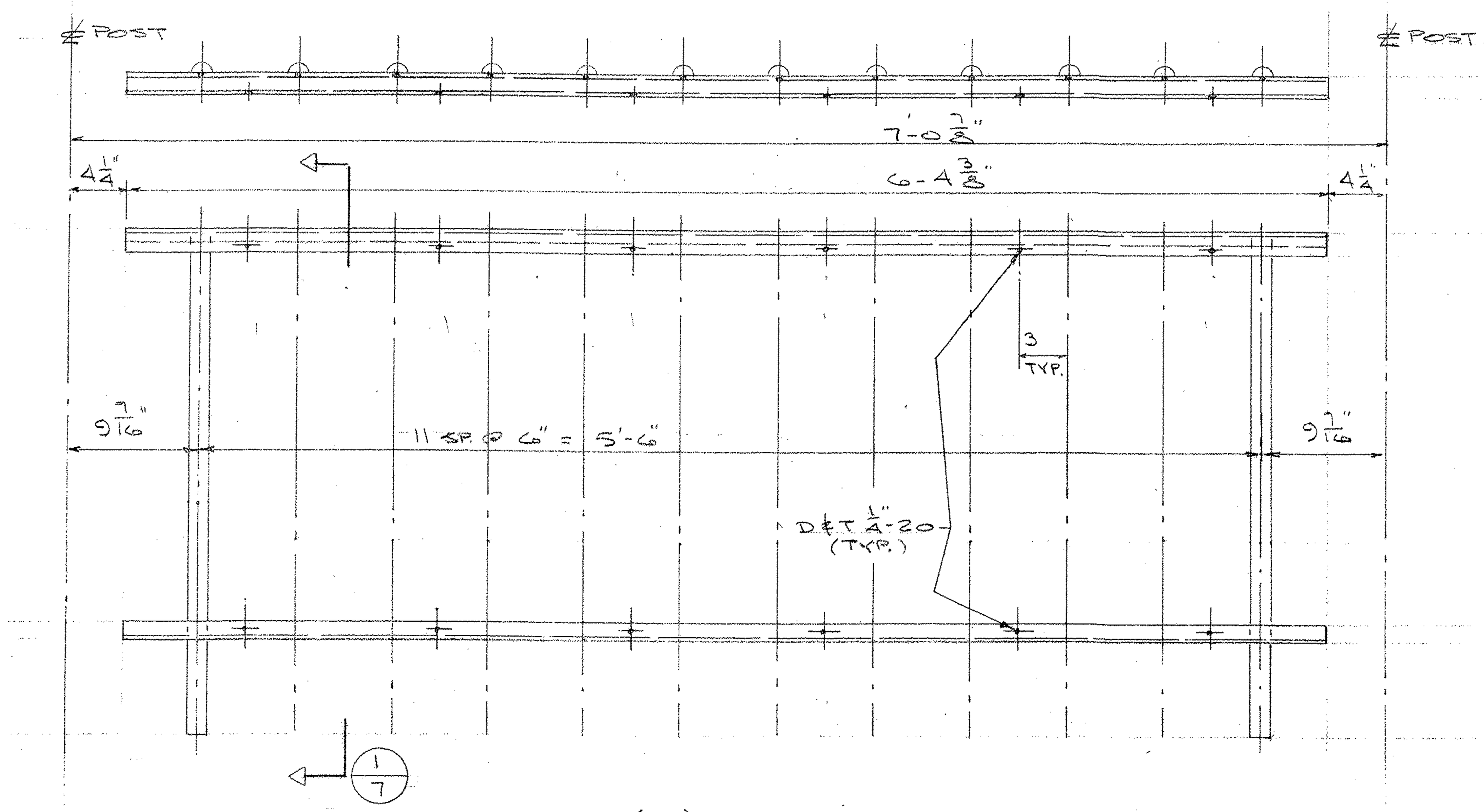
FOR: F. R. LAFAYETTE, INC.

DR: CHK: KPP 1-22-09

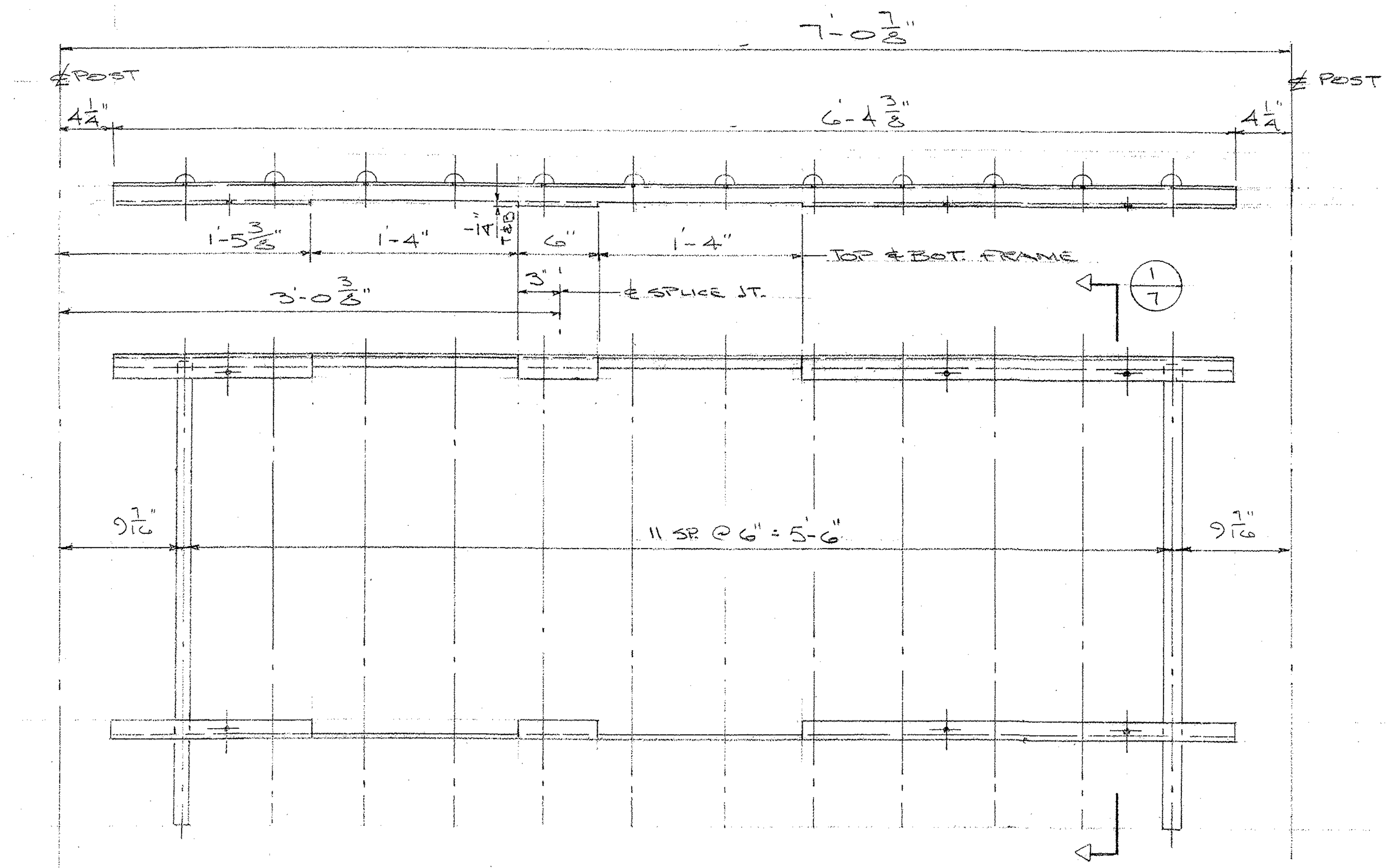
DWG. NO. BR-2950

JOB NO. NBS7005-1001

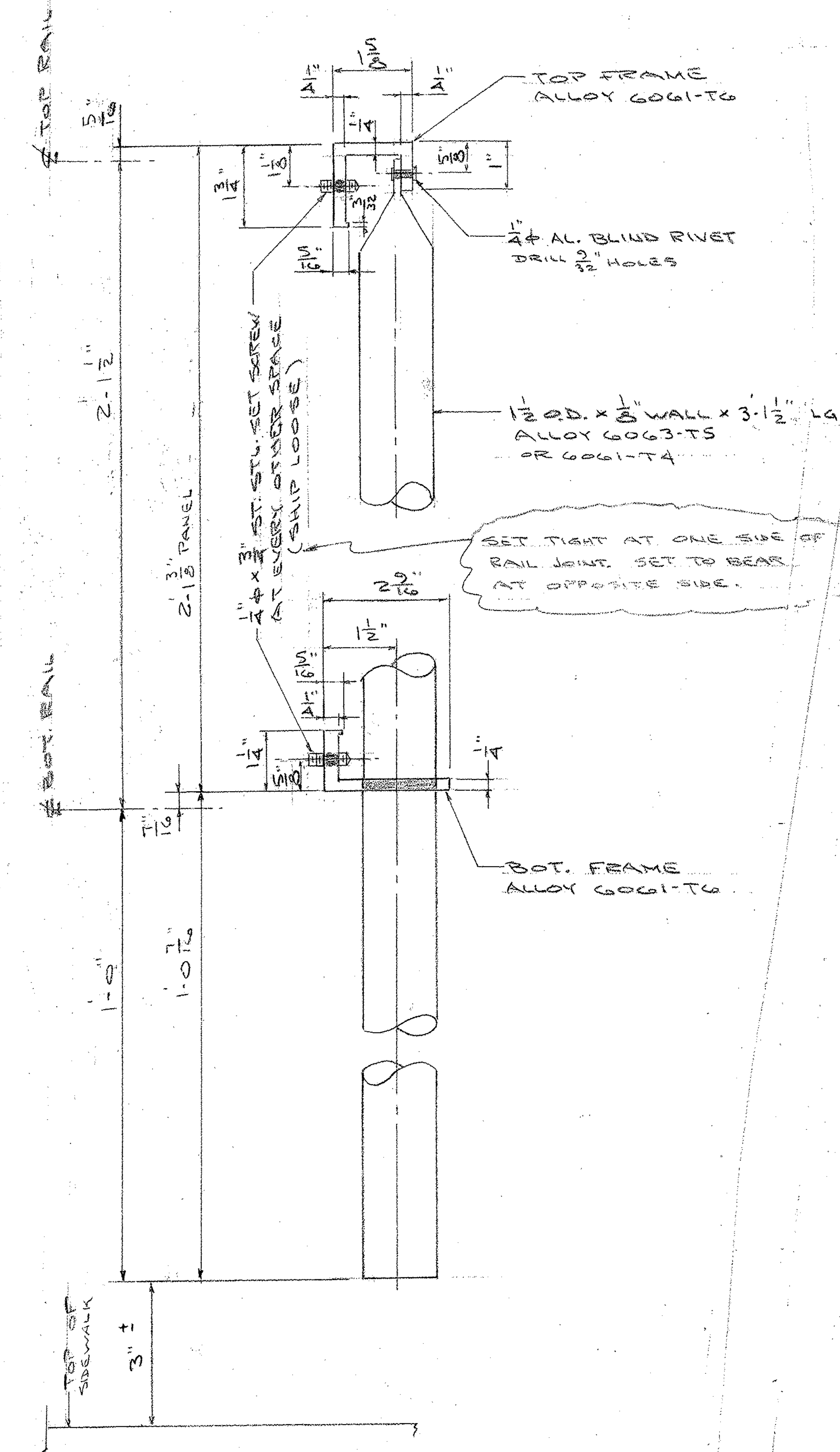
SHEET 7 OF 8



(4) PANEL PP1



(1) PANEL PP2



SECTION 1/7

RECEIVED
CK'D BY UBS OK'D BY MEM
JUN 0 3 2009
APPROVED ✓
BY DATE 6-16-09

AUCIELLO IRON WORKS INC
560 MAIN ST. HUDSON, MA (978) 568-8382

VT. AGENCY OF TRANSPORTATION
WILLIAMSTOWN #BRS 0204 (4)
ROUTE 64 OVER BROOK

AL. BRIDGE & APPROACH RAILING

ISSUE	DATE	DESCRIPTION	BY
2	4/24/09	FOR FABRICATION	B
1	1-28-09	FOR APPROVAL	B

SURFACE PREP: NONE
FINISH: MILL FINISH
FOR: F. R. LAFAYETTE, INC.
DR: WM 01-19-09
CHK: KPP 1-22-09
JOB NO. AB97005-1001
DWG. NO. BR-2950
SHEET [illegible] OF [illegible]