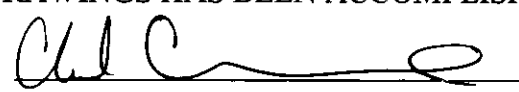


RECORD PLANS

CONTRACTOR	RENAUD BROTHERS, INC - VERNON, VT
RESIDENT ENGINEER	CHAD GREENWOOD
CONSTRUCTION BEGAN	JANUARY 26, 2010
CONSTRUCTION COMPLETE	AUGUST 28, 2010
RECORD PLANS BY	CHAD GREENWOOD & M BIRCHARD

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

BY  RESIDENT ENGINEER

DATE MARCH 17, 2011

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

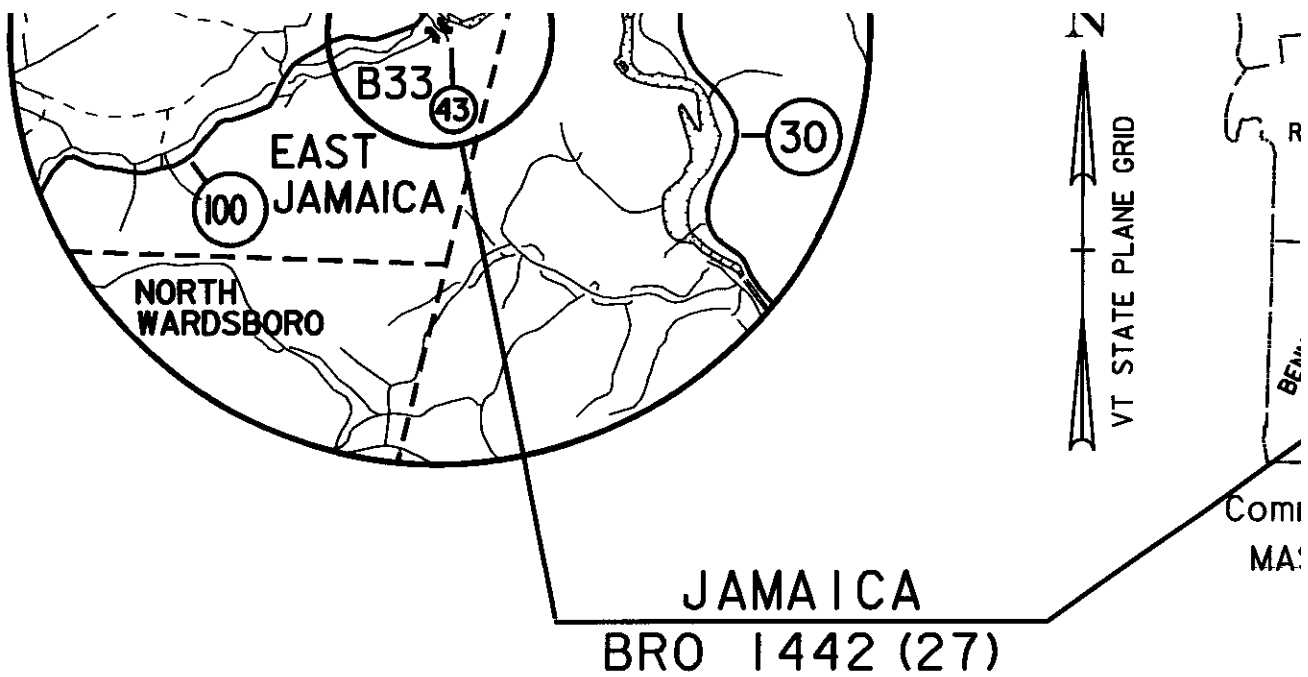


PROPOSED IMPROVEMENT

BRIDGE PROJECT

TOWN OF JAMAICA

COUNTY OF WINDHAM



ROUTE NO : TH 43 CLASS III, LOCAL ROAD

BRIDGE NO : 33

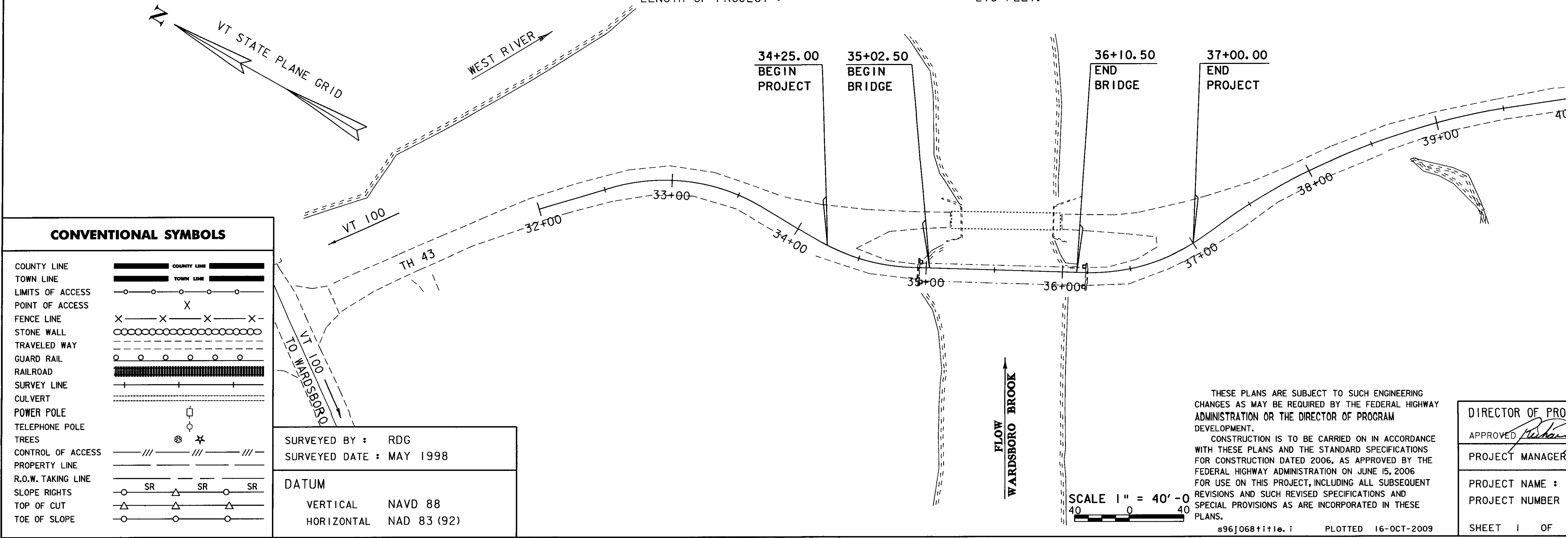
PROJECT LOCATION : BRIDGE #33 IS LOCATED ON TOWN HIGHWAY 43 APPROXIMATELY 0.10 MILES SOUTH OF THE INTERSECTION WITH VT ROUTE 100.

PROJECT DESCRIPTION : REPLACEMENT OF EXISTING THRU TRUSS BRIDGE WITH A NEW INTEGRAL ABUTMENT STEEL GIRDER BRIDGE AND NECESSARY CHANNEL AND APPROACH WORK, AND REMOVAL OF EXISTING TEMPORARY BRIDGE AND APPROACHES.

LENGTH OF STRUCTURE : 108 FEET.

LENGTH OF ROADWAY : 167 FEET.

LENGTH OF PROJECT : 275 FEET.



STATE OF VERMONT
AGENCY OF TRANSPORTATION

PRELIMINARY INFORMATION SHEET (BRIDGE)

Version 09.02.01

LRFD

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E-100

CONSTRUCTION APPROACH SIGNS

2-Jan-04

E-100A

SIDE ROAD CONSTRUCTION - APPROACH SIGNS

2-Jan-04

E-101

CONSTRUCTIONSIGN DETAILS

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CONSTRUCTIONSIGN DETAILS

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1-May-04

E-107

DELINEATION, BARRICADES AND DETOURS FOR CONSTRUCTION AREAS

30-Jan-03

E-107A

BREAKAWAY BARRICADE DETAILS

8-Jun-09

E-108

CONSTRUCTION ZONE LONGITUDINAL DROP OFFS

8-Jun-09

E-110

MAJOR MAINTENANCE OPERATION LANE CLOSURE

8-Aug-95

E-121

STANDARD SIGN PLACEMENT - CONVENTIONAL ROAD

8-Aug-95

E-134

BRIDGE NUMBER PLaque

8-Aug-95

E-160

FLANGED CHANNEL STEEL SIGN POST

20-May-99

G-1B

BOX BEAM GUARD RAIL

1-Jan-04

FINAL HYDRAULIC REPORT

TOWN: Jamaica COUNTY: Windham

PROJECT #: BRO 1442(27) STREAM: Wardboro Brook

HIGHWAY #: TH-43 STRUCTURE #: BR 33

HYDROLOGIC DATA

DRAINAGE AREA: 35.1 sq. mi.

CHARACTER OF TERRAIN: Hilly to mountainous, mostly forested

STREAM CHARACTERISTICS: Sinuous, narrow to wide floodplain

NATURE OF STREAMBED: Cobbles and gravel

PEAK FLOW DATA

Q 233 = 1900 cfs Q 50 = 5600 cfs

Q 10 = 4800 cfs Q 100 = 10,600 cfs

Q 25 = 6800 cfs Q 500 = 16,200 cfs

DATE OF FLOOD OF RECORD: 1959, 1927, 1938, 1976

ESTIMATED DISCHARGE: unknown

WATER SURFACE ELEV.: unknown

NATURAL STREAM VELOCITY: @ Q25 = 12.0 fps

ICE CONDITIONS: moderate

DEBRIS: little

DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? no

IS ORDINARY RISE RAPID? no

IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? yes

IF YES, DESCRIBE: backwater from West River

WATERSHED STORAGE:

HEADWATERS: UNIFORM: X

IMMEDIATELY ABOVE SITE:

EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE: Truss bridge and Temporary Mabey Bridge

YEAR BUILT: 1936 for truss, unknown for temporary

CLEAR SPAN/NORMAL TO STREAM: 117' for truss, 66' for temporary

VERTICAL CLEARANCE ABOVE STREAMBED: 12'-2" Avg. bottom of beam @ 554.7'

WATERWAY OF FULL OPENING: 730 sq. ft. with temporary bridge

DISPOSITION OF STRUCTURE: Removal

TYPE OF MATERIAL UNDER SUBSTRUCTURE: Refer to boring logs.

WATER SURFACE ELEVATIONS AT:

Q233 = 549.0' VELOCITY = 7.5 fps

Q10 = 562.0' " 12.6 fps

Q25 = 553.7' " 14.0 fps

Q50 = 554.7' " 14.0 fps

Q100 = 555.9' " 11.3 fps

LONG TERM STREAMBED CHANGES: None noted

IS THE ROADWAY OVERTOPPED BELOW Q100: Yes

FREQUENCY: Q25

RELIEF ELEVATION: 553.7'

DISCHARGE OVER ROAD @Q100: 3500 cfs

UPSTREAM STRUCTURE

TOWN: Jamaica DISTANCE: 1.2 miles

HIGHWAY #: VT 100 STRUCTURE #: BR 78

CLEAR SPAN: 2 @ 55' = 110' CLEAR HEIGHT: 12'

YEAR BUILT: 1937 - rebuilt 1975 FULL WATERWAY: 840 sq. ft.

STRUCTURE TYPE: 2-span steel beam

DOWNSTREAM STRUCTURE

LOADING LEVELS

TRUCK

H-20 HL-93 352 6 AXLE 3A STR 4A STR 5A SEM

INVENTORY 36 36 66 30 34.5 38

POSTING 2.01 1.09

OPERATING 2.62 1.41 2.26 1.39 2.23 1.98 2.01

COMMENTS:

LRFR LOAD RATING FACTORS

TRUCK

H-20 HL-93 352 6 AXLE 3A STR 4A STR 5A SEM

INVENTORY 36 36 66 30 34.5 38

POSTING 2.01 1.09

OPERATING 2.62 1.41 2.26 1.39 2.23 1.98 2.01

COMMENTS:

PILE DRIVING AND TESTING REQUIREMENTS

1. NOMINAL PILE DRIVING CAPACITY 550.00 KIP

2. PILE TEST RESISTANCE FACTOR 0.65

3. MAXIMUM PILE TIP ELEVATION 547 FT

4. 0

PROPOSED STRUCTURE

STRUCTURE TYPE: Steel girder bridge

CLEAR SPAN/NORMAL TO STREAM: 114'

VERTICAL CLEARANCE ABOVE STREAMBED: 11'

WATERWAY OF FULL OPENING: 920 sq. ft.

WATER SURFACE ELEVATIONS AT:

Q233 = 549.0' VELOCITY = 6.9 fps

Q10 = 551.9' " 9.5 fps

Q25 = 553.1' " 12.2 fps

Q50 = 555.3' " 8.2 fps

Q100 = 555.8' " 8.4 fps

IS THE ROADWAY OVERTOPPED BELOW Q100: Yes

FREQUENCY: below Q50

RELIEF ELEVATION: 553.5'

DISCHARGE OVER ROAD @Q100: 2000 cfs

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 554.2'

VERTICAL CLEARANCE: @ Q25 = 1.1'

SCOUR: Contraction scour at Q500 = 3.0'

REQUIRED CHANNEL PROTECTION: Stone Fill, Type III

PERMIT INFORMATION

AVERAGE DAILY FLOW: 70 cfs DEPTH OR ELEVATION:

ORDINARY LOW WATER: 35 cfs 1.5'

ORDINARY HIGH WATER: 820 cfs 3.7'

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: Mabey Bridge already in place

CLEAR SPAN/NORMAL TO STREAM: 66'

VERTICAL CLEARANCE ABOVE STREAMBED: 12'

WATERWAY AREA OF FULL OPENING: 730 sq. ft.

ADDITIONAL INFORMATION

TRAFFIC MAINTENANCE NOTES

1. MAINTAIN ONE-WAY TRAFFIC ON THE EXISTING TEMPORARY MABEY BRIDGE

2. TRAFFIC SIGNALS ARE NOT NECESSARY.

3. SIDEWALKS ARE NOT NECESSARY

DESIGN VALUES

1. DESIGN LIVE LOAD HL-93

2. FUTURE PAVEMENT d9 3.0 INCH

3. DESIGN SPAN L' 105.00 FT

4. MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS) Δ ---

5. PRESTRESSING STRAND fy ---

6. PRESTRESSED CONCRETE STRENGTH fci ---

7. PRESTRESSED CONCRETE RELEASE STRENGTH fcr ---

8. CONCRETE, HIGH PERFORMANCE CLASS AA fcs 4.0 KSI

9. CONCRETE, HIGH PERFORMANCE CLASS A LOW CEMENT fcs 4.0 KSI

10. CONCRETE, HIGH PERFORMANCE CLASS B fcs 3.5 KSI

11. CONCRETE, CLASS C fcs 3.0 KSI

12. REINFORCING STEEL fy 60 KSI

13. STRUCTURAL STEEL AASHTO M270MM270 fy 50 KSI

14. SOIL UNIT WEIGHT γ 0.140 KCF

15. NOMINAL BEARING RESISTANCE OF SOIL qn ---

16. SOIL BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD) F ---

17. NOMINAL BEARING RESISTANCE OF ROCK qn ---

18. ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD) F ---

19. NOMINAL AXIAL PILE RESISTANCE qp ---

20. PILE YIELD STRENGTH ASTM A572 fy ---

21. PILE SIZE HP 12X 84

22. EST. PILE LENGTHS (TWO SUBSTRUCTURES) Lp ---

23. PILE RESISTANCE FACTOR (ABUTMENT 1 = 42 AND ABUTMENT 2 = 47) FT F ---

24. LATERAL PILE DEFLECTION Δ ---

25. BASIC WIND SPEED V3s ---

26. MINIMUM GROUND SNOW LOAD pg ---

27. SEISMIC DATA S1 ---

TRAFFIC DATA

YEAR ADT DHV % D % T ADTT

2002 100 <10 0 50 50

2002 100 <10 0 50 50

20 year ESAL for flexible pavement from 2002 to 2022 : N/A

40 year ESAL for flexible pavement from 2002 to 2042 : N/A

Design Speed : 20 mph

GENERAL

- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006, AND ITS LATEST REVISIONS, AND THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 4TH EDITION, DATED 2007 AND ITS LATEST REVISIONS.
- THE BRIDGE IS DESIGNED FOR HL 93 LIVE LOAD WITH AN ALLOWANCE FOR 2" OF FUTURE PAVEMENT.
- ALL DIMENSIONS SHOWN IN THE PLANS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 68 DEGREES FAHRENHEIT UNLESS OTHERWISE NOTED.
- THE AREA DISTURBED BY THE EXISTING TEMPORARY BRIDGE SHALL BE SEEDED AND MULCHED AFTER ALL OF THE FILL IS REMOVED AS SHOWN ON THE CROSS SECTIONS. THE COST OF THE SEED, FERTILIZER, AND MULCH WILL BE PAID FOR UNDER THEIR RESPECTIVE ITEMS.
- THE STONE FILL, TYPE III SHALL BE PLACED IN FRONT OF THE ABUTMENTS BEFORE THE STRUCTURAL STEEL HAS BEEN SET.
- DURING CONSTRUCTION, TRAFFIC SHALL BE MAINTAINED ON A ONE-WAY TEMPORARY BRIDGE CONSTRUCTED DOWNSTREAM OF THE PROPOSED STRUCTURE. THE TEMPORARY BRIDGE IS ALREADY IN PLACE. MAINTENANCE OF THE TEMPORARY BRIDGE AND ITS APPROACHES SHALL BE PAID FOR UNDER ITEM 527.10, MAINTENANCE OF STRUCTURES AND APPROACHES. REMOVAL OF THE EXISTING TEMPORARY BRIDGE AND SUBSTRUCTURE UNITS WILL BE PAID FOR UNDER ITEM 529.15 REMOVAL OF STRUCTURE.

CONCRETE

- ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1 INCH BY 1 INCH.
- JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- REINFORCING PLACEMENT TOLERANCES SHALL BE:

SPACING +/- 1 INCH

CLEARANCE +/- ¼ INCH
- THE DECK AND SUBSTRUCTURE CONCRETE ABOVE THE CONSTRUCTION JOINT SHALL BE SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS A LOW CEMENT).
- WATER REPELLENT, SILANE SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES EXCEPT THE UNDERSIDE OF THE DECK BETWEEN THE DRIP NOTCHES.
- ALL ABUTMENT CONCRETE ABOVE THE CONSTRUCTION JOINT SHALL BE PLACED MONOLITHICALLY WITH THE DECK.
- THE SUBSTRUCTURE CONCRETE BELOW THE JOINT SHALL BE CONCRETE, HIGH PERFORMANCE CLASS B.
- THE TOP SURFACE OF THE PILE CAP SHALL INITIALLY BE GIVEN A FLOAT FINISH TO GRADE. THE CONCRETE WITHIN THE REINFORCING CAGE SHALL THEN BE ROUGHENED BY RAKING PARALLEL TO THE FACE OF THE ABUTMENT TO AN AMPLITUDE OF ½ INCH. THE CONCRETE OUTSIDE THE REINFORCING CAGE AND UNDER THE BEARING PADS SHALL REMAIN SMOOTH.
- IN ACCORDANCE WITH SUBSECTION 506.23 (a) OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE RESIDENT ENGINEER, THE CONTRACTOR SHALL TAKE MEASURES NECESSARY TO PROTECT ALL SUBSTRUCTURE CONCRETE FROM STAINING DUE TO OXIDE FORMATION ON THE STRUCTURAL STEEL PRIOR TO PLACEMENT OF THE DECK. THESE MEASURES WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO ITEM 501.34 "CONCRETE, HIGH PERFORMANCE CLASS B". ANY SUCH STAINING THAT OCCURS PRIOR TO DECK PLACEMENT SHALL BE REMOVED AT NO ADDITIONAL COST TO THE STATE.

STRUCTURAL STEEL

- THE EXISTING STRUCTURAL STEEL IS PAINTED WITH A MATERIAL THAT MAY CONTAIN LEAD. THE CONTRACTOR SHALL FOLLOW ALL APPLICABLE REGULATIONS WHEN HANDLING AND WORKING WITH THIS STEEL. THE REMOVED STRUCTURAL STEEL IS THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE STATE, ITS OFFICERS, AND EMPLOYEES HARMLESS CONCERNING THE CONTRACTOR'S USE OR DISPOSITION OF THE REMOVED EXISTING STRUCTURAL STEEL.
- ALL STRUCTURAL STEEL SHALL BE GRADE 50W CONFORMING TO SUBSECTION 714.03 AND SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC).

- STRUCTURAL STEEL MEMBERS DESIGNATED AS "FCM" (FRACTURE CRITICAL MEMBER) IN PLANS SHALL MEET THE FOLLOWING CONSTRUCTION AND TESTING REQUIREMENTS:

A. MEMBERS SHALL BE IMPACT TESTED TO THE FRACTURE CRITICAL REQUIREMENTS AS ALL FRACTURE CRITICAL MEMBERS SHALL BE FABRICATED ACCORDING TO SECTION 12 OF THE AASHTO/AWS D1.5M/D1.5 BRIDGE.

B. ALL FRACTURE CRITICAL MEMBERS SHALL BE FABRICATED IN A PLANT HAVING AN AISC FRACTURE CRITICAL ENDORSEMENT OR THE FABRICATOR SHALL PROVIDE TO THE STRUCTURES ENGINEER PRIOR TO FABRICATION AN ACCEPTABLE FRACTURE CONTROL PLAN MEETING THE REQUIREMENTS OF AASHTO/AWS D1.5.

C. ALL FRACTURE CRITICAL SPECIFIED IN AASHTO M270M/M270.

- ALL WELDING SHALL CONFORM TO THE PROVISIONS OF SUBSECTION 506.10 "WELDING".
- ANY BOLT HOLES IN THE WEBS OF THE FASCIA GIRDERS NOT OTHERWISE FILLED SHALL BE FILLED WITH EITHER BUTTON HEAD OR HEX HEAD BOLTS CONFORMING TO AASHTO M164 TYPE 3. THE BOLTS SHALL BE TIGHTENED IN ACCORDANCE WITH SUBSECTION 506.19 OF THE STANDARD SPECIFICATIONS.
- ALL FIELD CONNECTIONS SHALL BE MADE WITH 7/8 INCH DIAMETER BOLTS CONFORMING TO AASHTO M164 TYPE 3 IN 15/16 INCH DIAMETER HOLES PER 506.19(a). ANY CONNECTIONS NOT DETAILED ON THE PLANS SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE STRUCTURES ENGINEER FOR APPROVAL.
- FLEMING BRACKETS OR SIMILAR FALSEWORK SHALL BE SPACED AS REQUIRED BY DESIGN, BUT SHALL BE LIMITED TO A MAXIMUM SPACING OF 4 FEET AND SHALL BEAR AT THE BOTTOM QUARTER OF THE GIRDER AND BE ATTACHED TO THE TOP FLANGE. THE DESIGN OF THE FALSEWORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

PILES

- THE PILES SHALL BE HP 12X84.
- THE PILES SHALL BE EMBEDDED IN THE GROUND A MINIMUM OF 30 FEET AND BE DRIVEN TO A NOMINAL RESISTANCE OF 550 KIP. TO PREVENT DAMAGE TO THE PILES, PILE SHOES SHALL BE REQUIRED AND SHALL CONFORM TO SECTION 505.
- ALL PILES SHALL HAVE A DYNAMIC LOAD TEST. IF THE MINIMUM PILE LENGTH CAN NOT BE ACHIEVED, OR IF THE DYNAMIC LOAD TEST INDICATES AN UNACCEPTABLE AMOUNT OF PILE DAMAGE, AS DETERMINED BY THE ENGINEER, THAN THE PILE SHALL BE PULLED. THE CONTRACTOR SHALL THEN EXCAVATE TO THE MINIMUM TIP ELEVATION AND REDRIVE THE PILE. THIS WORK SHALL BE PAID FOR UNDER ITEM 503.20 PRE-EXCAVATION OF INTEGRAL ABUTMENT PILES. THE MAXIMUM DEPTH OF THE EXCAVATION SHALL BE 30 FEET.
- FOR ESTIMATING PURPOSES, THE PILE TIP ELEVATIONS WERE ASSUMED AS SHOWN ON THE BORING LOGS. THE ACTUAL IN PLACE LENGTHS MAY VARY.

TRAFFIC CONTROL

- AS PART OF 900.645 SPECIAL PROVISION (TRAFFIC CONTROL, ALL INCLUSIVE), THE CONTRACTOR SHALL SUBMIT A SITE SPECIFIC TRAFFIC CONTROL PLAN TO THE ROADWAY, TRAFFIC, AND SAFETY ENGINEER FOR APPROVAL PER SUBSECTION 105.03. SEE SPECIAL PROVISIONS.
- ALL ITEMS REQUIRED TO IMPLEMENT THE CONTRACTOR'S TRAFFIC CONTROL PLAN WILL NOT BE PAID FOR DIRECTLY BUT WILL BE INCLUDED IN THE BID PRICE FOR ITEM 900.645 SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE). THIS INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING

ITEMS: TEMPORARY TRAFFIC BARRIER

FLAGGERS

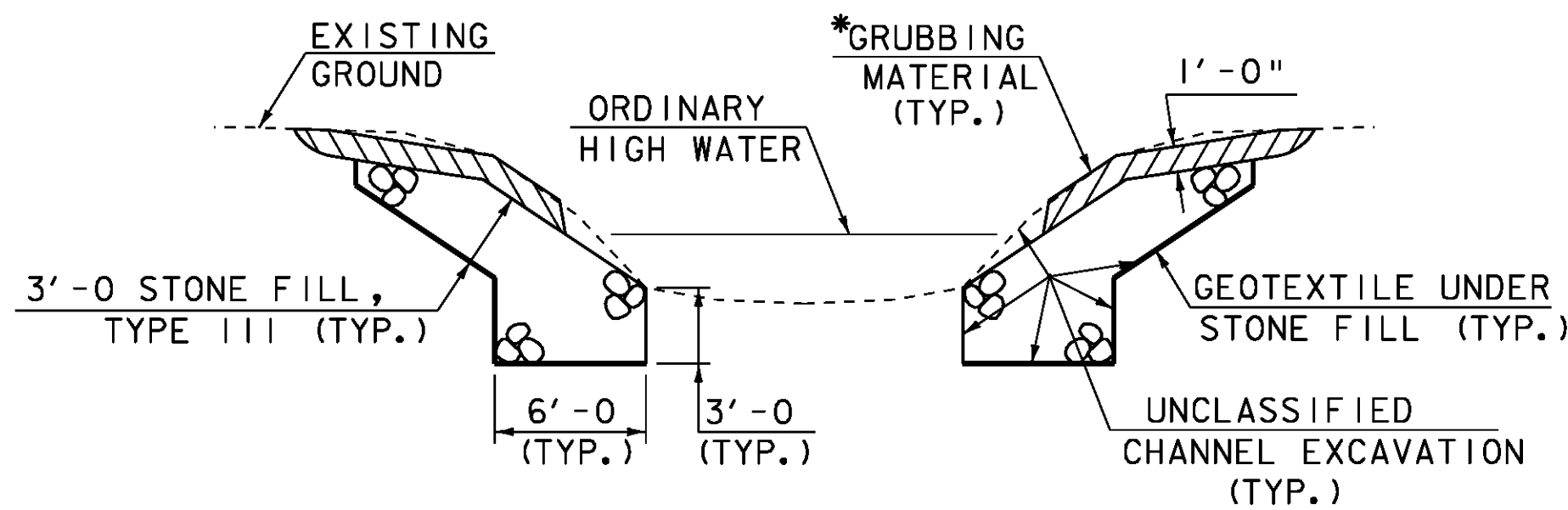
CONSTRUCTION SIGNING
- FOR ADDITIONAL SIGNING INSTRUCTIONS SEE STANDARDS E-100, E-100A, E-107 & E-107A.

PROJECT NAME: JAMAICA
PROJECT NUMBER: BRO 1442(27)

FILE NAME: e361068gen.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. LACROIX
GENERAL NOTES

PLOT DATE: 03-NOV-2009
DRAWN BY: R. PELLETT
CHECKED BY: J. LACROIX
SHEET 3 OF 44

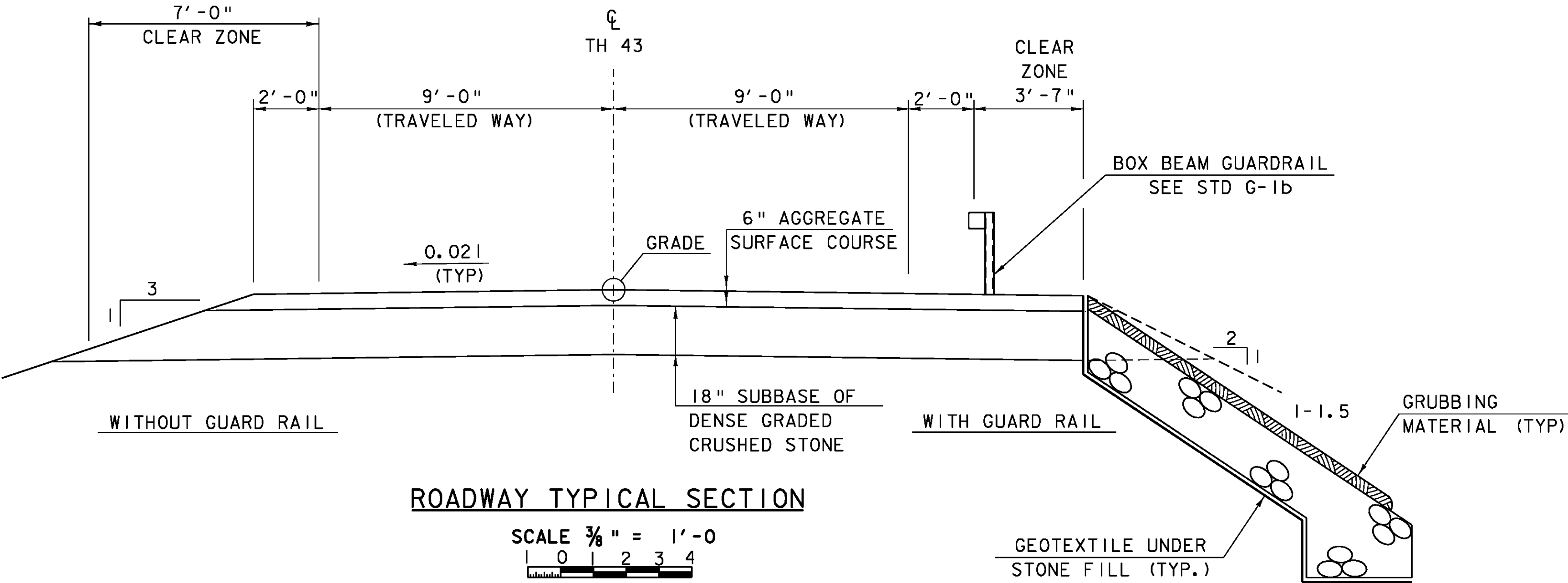
MATERIAL ITEM	TOLERANCE
AGGREGATE SURFACE COURSE	$\pm \frac{1}{2}$ "
SUBBASE	± 1 "



TYPICAL CHANNEL SECTION

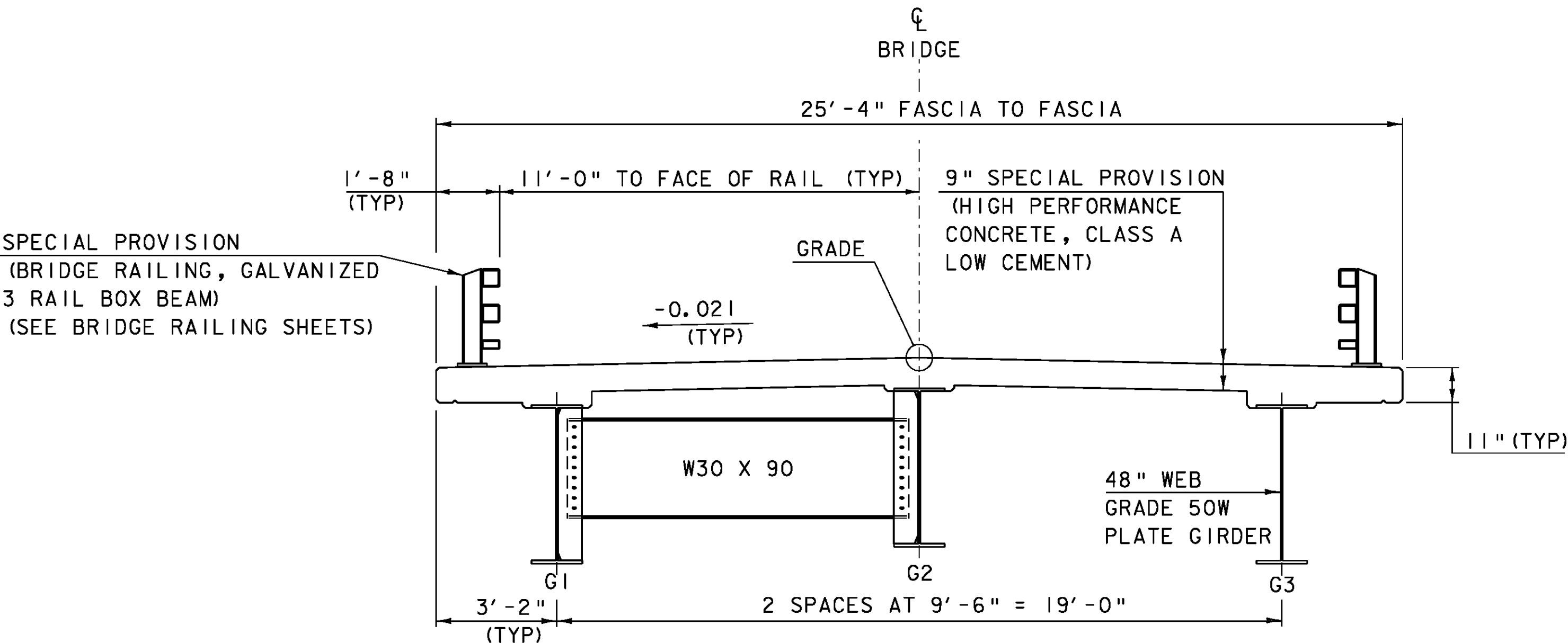
(NOT TO SCALE)

* 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.



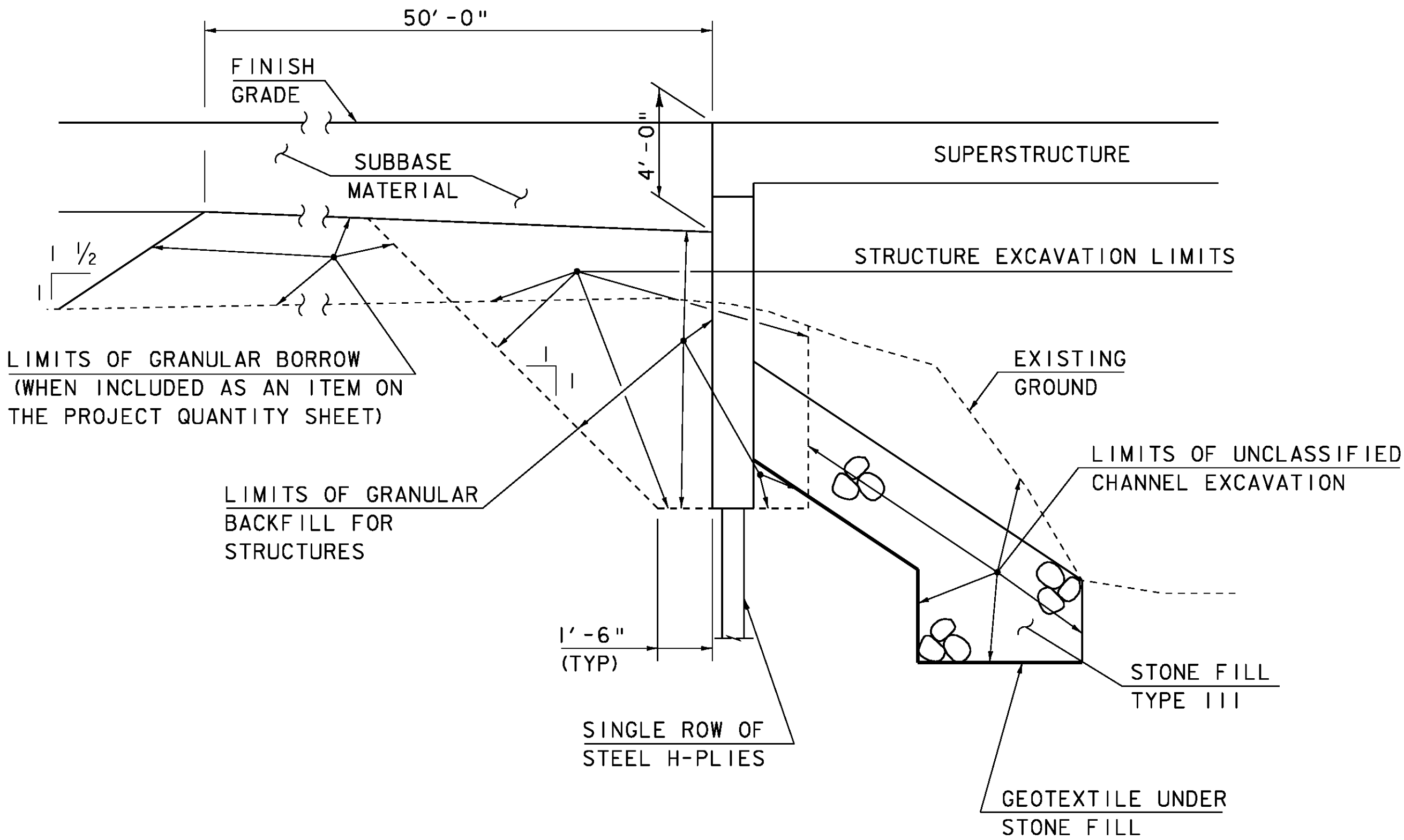
ROADWAY TYPICAL SECTION

SCALE $\frac{3}{8}$ " = 1'-0"



BRIDGE TYPICAL SECTION

SCALE $\frac{3}{8}$ " = 1'-0"



TYPICAL INTEGRAL ABUTMENT SECTION

NOT TO SCALE

ACTUAL LIMITS OF STRUCTURE EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR. HOWEVER, ONLY THE EXCAVATION BETWEEN THE LIMITS SHOWN WILL BE PAID FOR UNDER ITEM 204.25 "STRUCTURE EXCAVATION". EXCAVATION BY THE CONTRACTOR OUTSIDE OF THESE LIMITS WILL BE AT THE EXPENSE OF THE CONTRACTOR.

NOTE:
ALL SLOPES STEEPER THAN 1-2 SHALL HAVE A 2' BLANKET OF STONE FILL, TYPE II. THE STONE FILL BLANKET SHALL BE COVERED WITH A 1' LAYER OF GRUBBING MATERIAL, FERTILIZED, LIMESTONED, SEEDED AND MULCHED.

PROJECT NAME: JAMAICA
PROJECT NUMBER: BRO 1442(27)

FILE NAME: s961068typ.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. LACROIX
TYPICAL SECTIONS

PLOT DATE: 19-OCT-2009
DRAWN BY: R. PELLETT
CHECKED BY: J. LACROIX
SHEET 4 OF 44

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES											TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
							ROADWAY	EROSION CONTROL	BRIDGE	FILL/CE ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
							1				1		LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10				
							1400				1400		CY	COMMON EXCAVATION	203.15				
									1420		1420		CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27				
									140		140		CY	STRUCTURE EXCAVATION	204.25				
									200		200		CY	GRANULAR BACKFILL FOR STRUCTURES	204.30				
							650				650		CY	SUBBASE OF DENSE GRADED CRUSHED STONE	201.35				
							180				180		CY	AGGREGATE SURFACE COURSE	401.10				
									70		70		CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34				
									180		180		LF	PRE-EXCAVATION OF INTEGRAL ABUTMENT PILES	503.20				
									1		1		LS	FURNISHING EQUIPMENT FOR DRIVING PILING	504.10				
									270		270		LF	STEEL PILING FOR INTEGRAL ABUTMENTS, HP 12 X 84	505.265				
									6		6		EACH	DYNAMIC PILE LOADING TEST	505.45				
									80100		80100		LB	STRUCTURAL STEEL, PLATE GIRDER	506.55				
									10480		10480		LB	REINFORCING STEEL	507.15				
									21350		21350		LB	EPOXY COATED REINFORCING STEEL	507.17				
									1		1		LS	SHEAR CONNECTORS (654 - 7/8" X 7')	508.15				
									100		100		GAL	WATER REPELLENT, SLANE	514.10				
							1				1		LS	MAINTENANCE OF STRUCTURES AND APPROACHES	527.10				
							1				1		EACH	REMOVAL OF STRUCTURE (2300 SF - EST)	529.15				
							1				1		EACH	REMOVAL OF STRUCTURE 900 SF - EST.) (TEMPORARY BRIDGE)	529.15				
									6		6		EACH	BEARING DEVICE ASSEMBLY, ELASTOMERIC PAD	531.11				
								1			1		MGAL	DUST CONTROL WITH WATER	609.10				
							60				60		CY	STONE FILL, TYPE II	613.11				
							640				640		CY	STONE FILL, TYPE III	613.12				
							46				46		LF	REMOVING AND RESETTNG FENCE	620.50				
							215				215		LF	BOX BEAM GUARDRAIL	621.30				
							238				238		LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.60				
										1	1		LS	FIELD OFFICE, ENGINEERS	631.10				
										1	1		LS	TESTING EQUIPMENT, CONCRETE	631.16				
							1				1		LS	MOBILIZATION/DEMOLICAZION	635.11				
								800			800		SY	GEOTEXTILE UNDER STONE FILL	649.31				
								210			210		SY	GEOTEXTILE FOR SILT FENCE	649.51				
								80			80		SY	GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED	649.515				
								400			400		SY	GEOTEXTILE FOR FILTER CURTAIN	649.61				
								20			20		LB	SEED	651.15				
								100			100		LB	FERTILIZER	651.18				
								0.5			0.5		TON	AGRICULTURAL LIMESTONE	651.20				
								0.5			0.5		TON	HAYMULCH	651.25				
								500			500		SY	GRUBBNG MATERIAL	651.40				
								1			1		LS	EPSC PLAN	652.10				

GPS CONTROL POINTS

HVCTRL #1

T 127 AZ MK

NORTH = 209820.66
EAST = 1578913.51
ELEV. = 553.80

GENERAL LOCATION, JAMAICA, VT. TO REACH FROM THE MOST SOUTHERLY INTERSECTION OF VT ROUTES 100 AND 30 IN EAST JAMAICA GO EAST ALONG VT ROUTE 30 FOR 0.2 MI (0.3 KM) TO THE MARK ON THE RIGHT OPPOSITE A LEDGE CUT. THE MARK IS SET IN THE TOP OF A FENO TYPE MONUMENT FLUSH WITH GROUND SURFACE. IT IS 1.9 M (6.2 FT) SOUTH OF AND ABOUT LEVEL WITH THE SOUTH EDGE OF PAVEMENT OF VT ROUTE 30, 5.0 M (16.4 FT) WEST NORTHWEST OF POLE NO.594/514, 21.0 M (68.9 FT) NORTHWEST OF A 60 CM PINE, AND 0.3 NORTH OF A FIBERGLASS WITNESS POST

HVCTRL #2

T 127

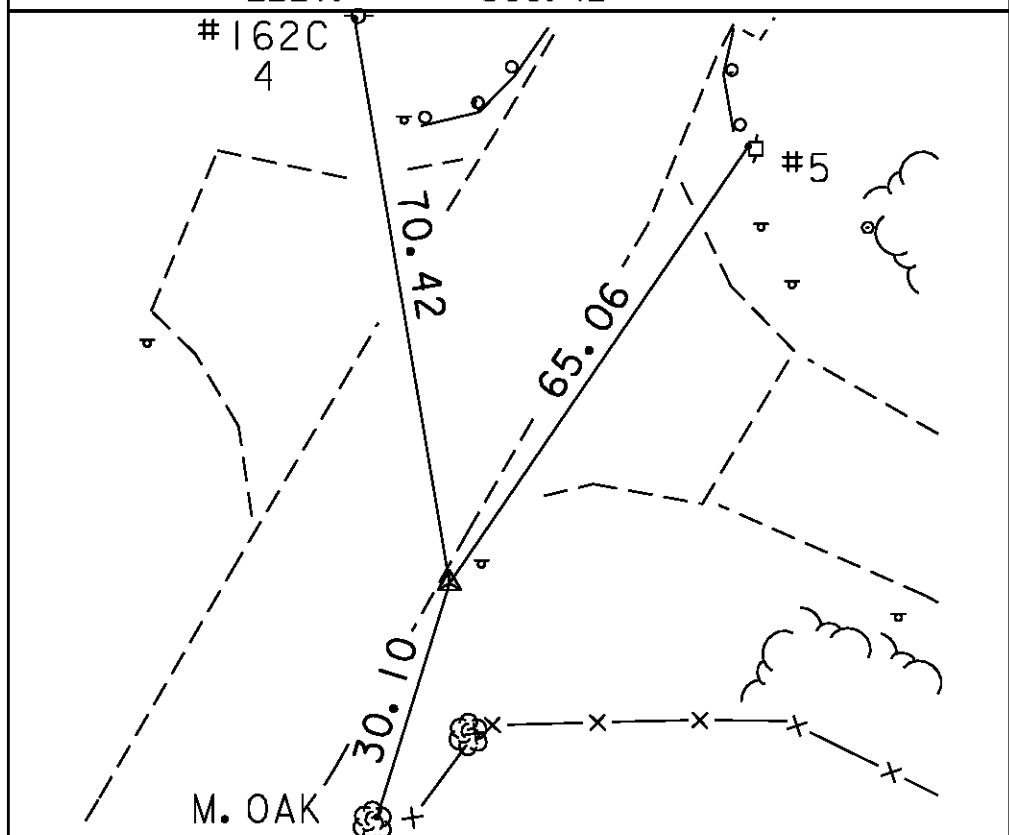
NORTH = 209918.56
EAST = 1577682.96
ELEV. = 553.80

GENERAL LOCATION, JAMAICA, VT. TO REACH FROM THE MOST SOUTHERLY INTERSECTION OF VT ROUTES 100 AND 30 IN EAST JAMAICA GO WEST ALONG VT ROUTE 100 AND 30 FOR ABOUT 65 M (213.3 FT) TO THE INTERSECTION OF A GRAVEL ROAD RIGHT AND THE MARK ON THE RIGHT IN THE SOUTHWEST CORNER OF THE STEPHEN BALLANTINE MEMORIAL ATHLETIC FIELD COMPLEX. THE MARK IS SET FLUSH WITH GROUND SURFACE IN THE TOP OF A CAST ALUMINUM MONUMENT. IT IS 10.7 M (35.1 FT) NORTH OF AND ABOUT 2 M (6.6 FT) LOWER THAN THE NORTH EDGE OF PAVEMENT OF VT ROUTE 100 AND 30, 9.5 M (31.2 FT) EAST OF THE CENTERLINE OF THE GRAVEL ROAD, 18.2 M (59.7 FT) NORTHWEST OF POLE NO. 599/5/505, AND 0.1 SOUTH OF A FIBERGLASS WITNESS POST.

TRAVERSE TIES

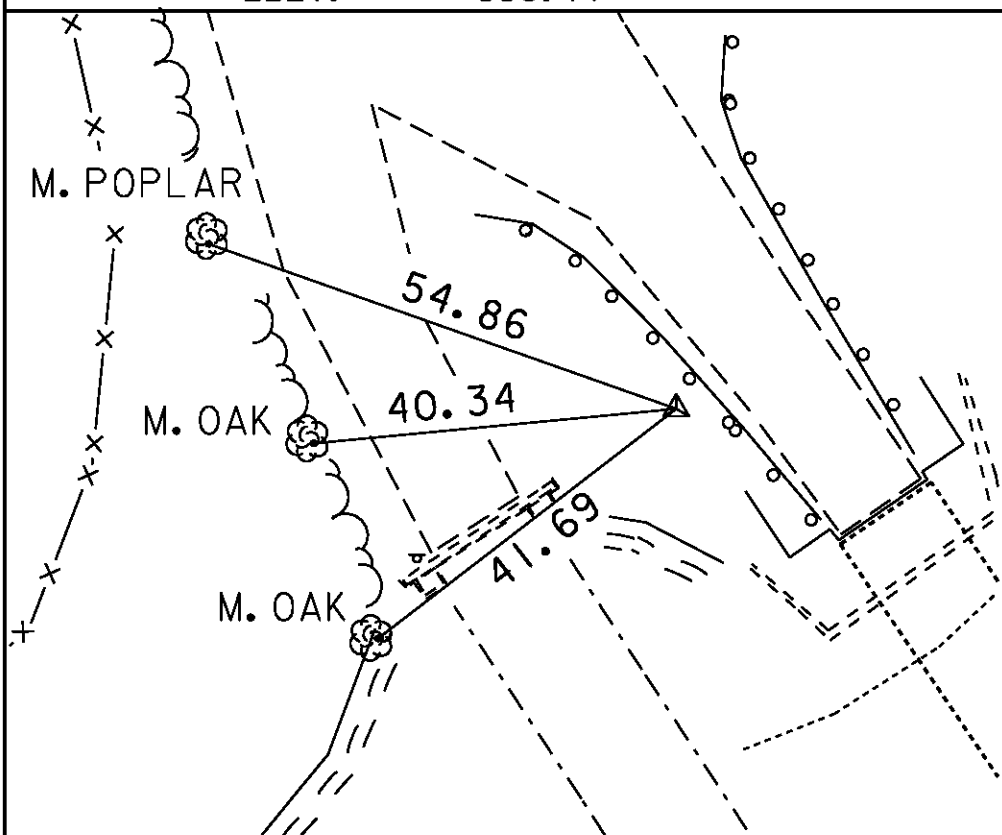
HVCTRL #4

NORTH = 208921.09
EAST = 1577502.54
ELEV. = 560.42



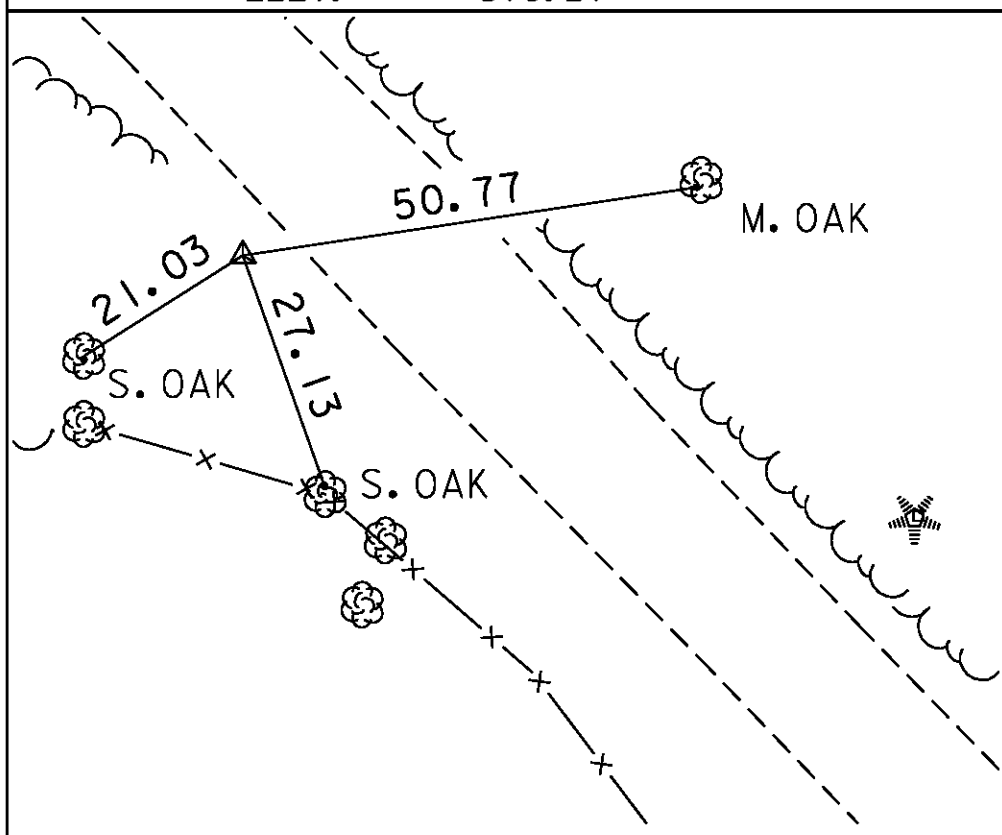
HVCTRL #5

NORTH = 208614.31
EAST = 1577823.08
ELEV. = 558.11



HVCTRL #6

NORTH = 608289.85
EAST = 1578152.51
ELEV. = 570.21



POB 32+00.00

NORTH = 208854.87
EAST = 1577679.68

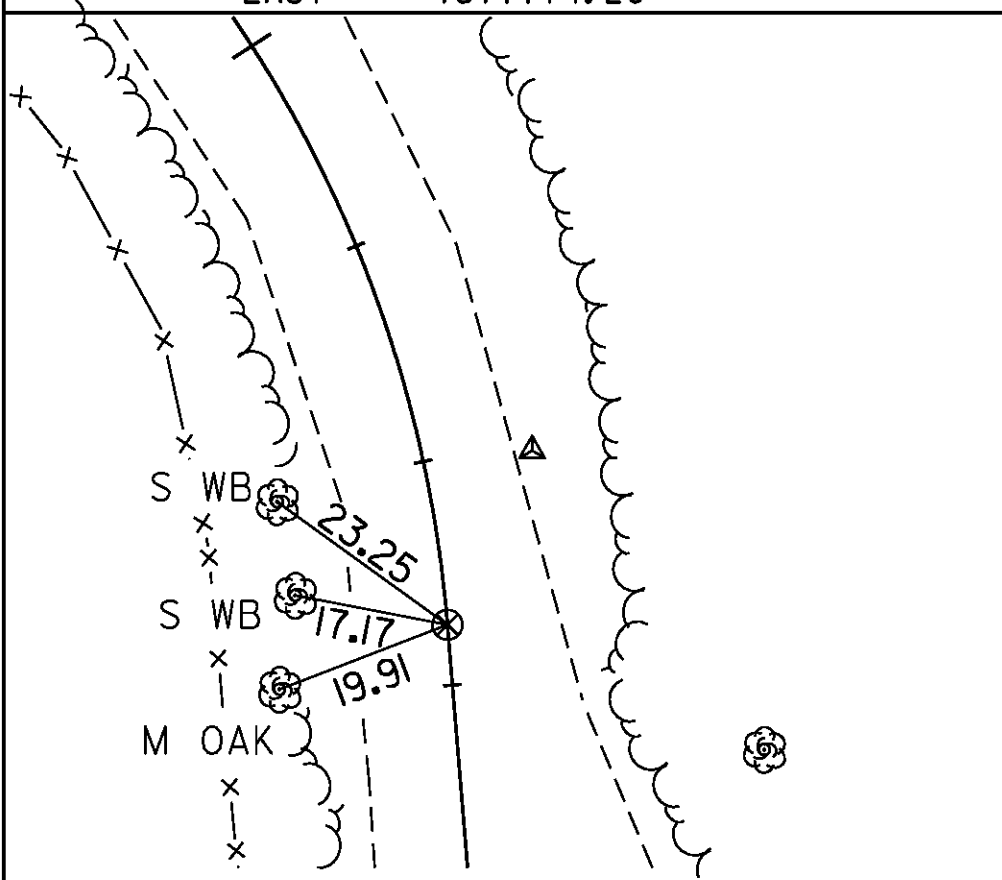
PC 32+54.30

NORTH = 208820.96
EAST = 1577722.09

NOT TIED

PT 33+68.29

NORTH = 208723.09
EAST = 1577774.20

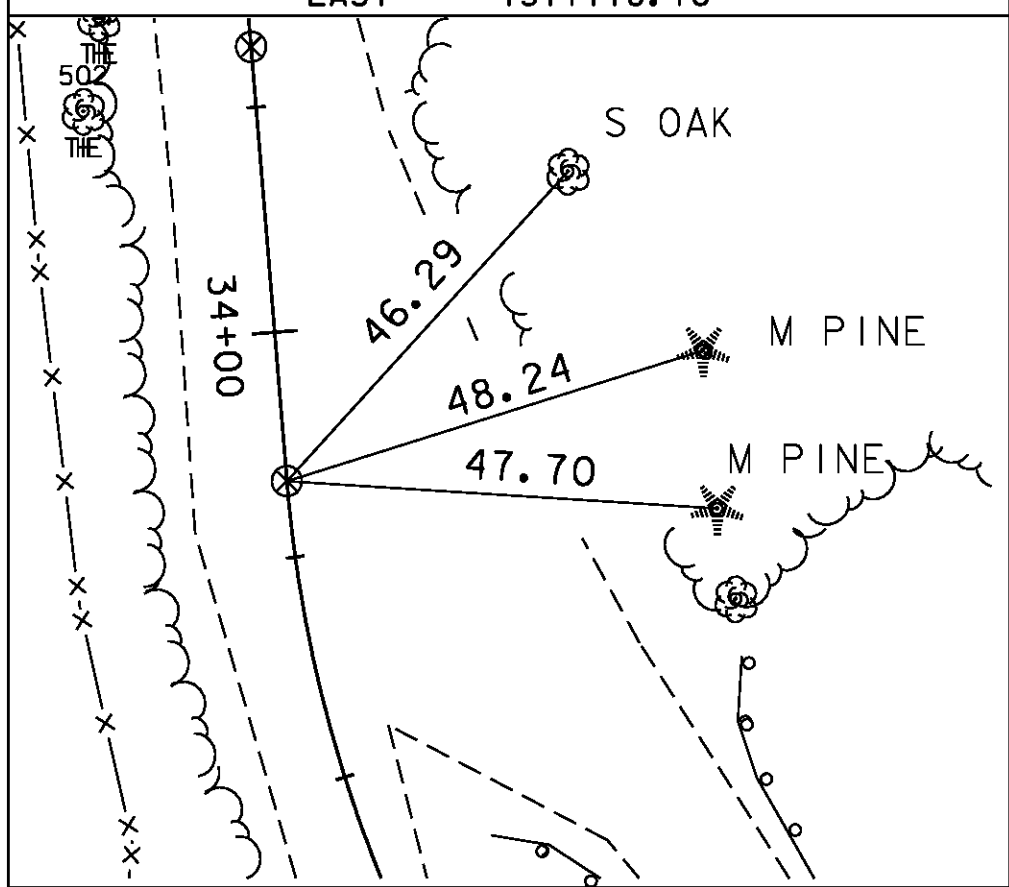


* Main Traverse Completed 04/21/98 by R.Gilman P.C. & T.Companion

ALIGNMENT TIES

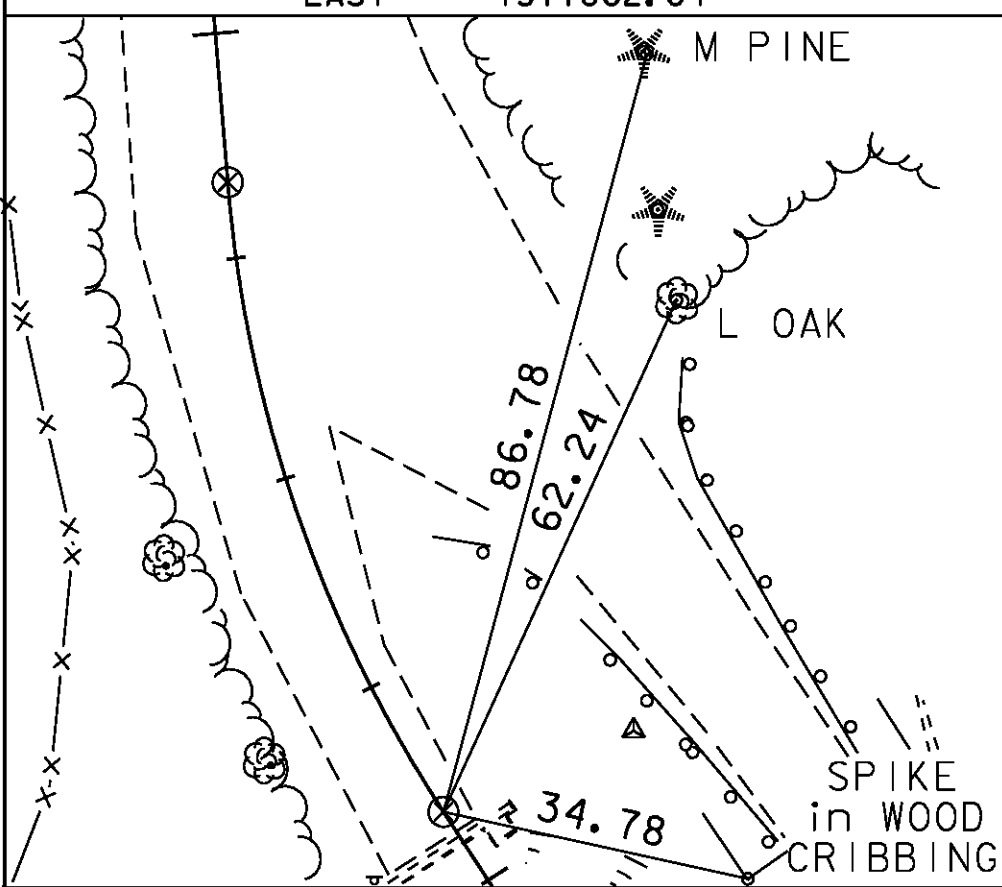
PC 34+16.53

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EAST = 1577778.16



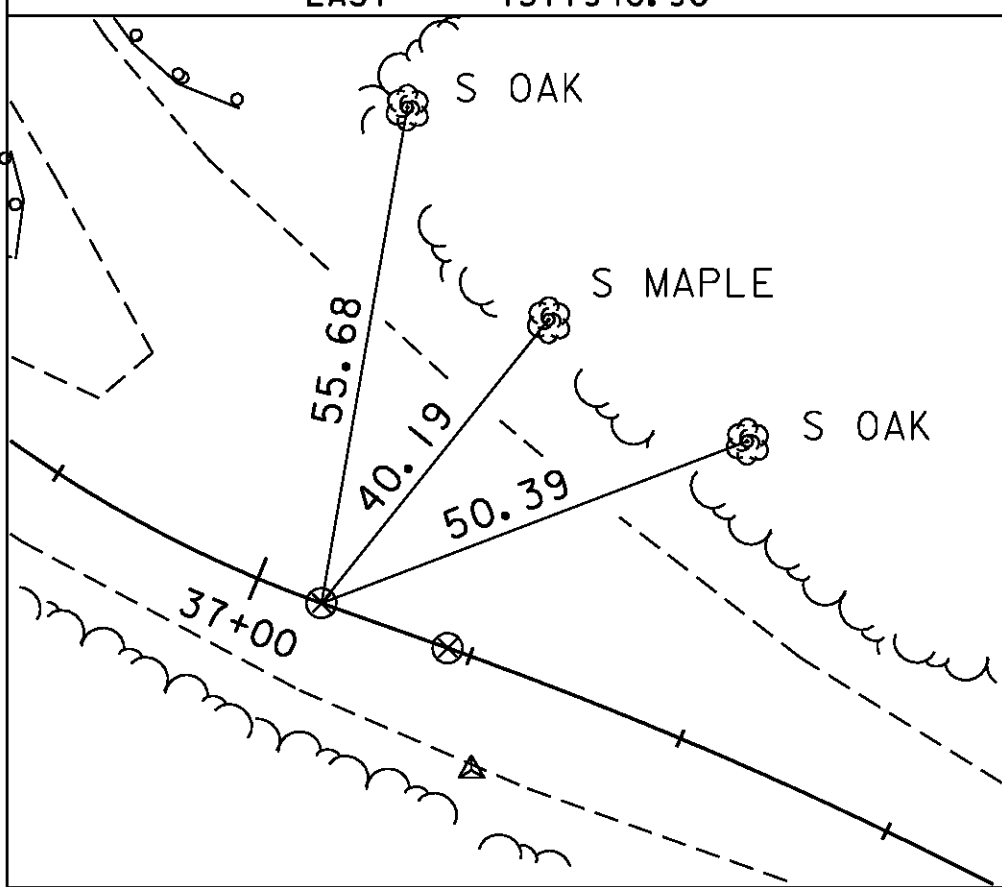
PT 34+90.96

NORTH = 208605.34
EAST = 1577802.04



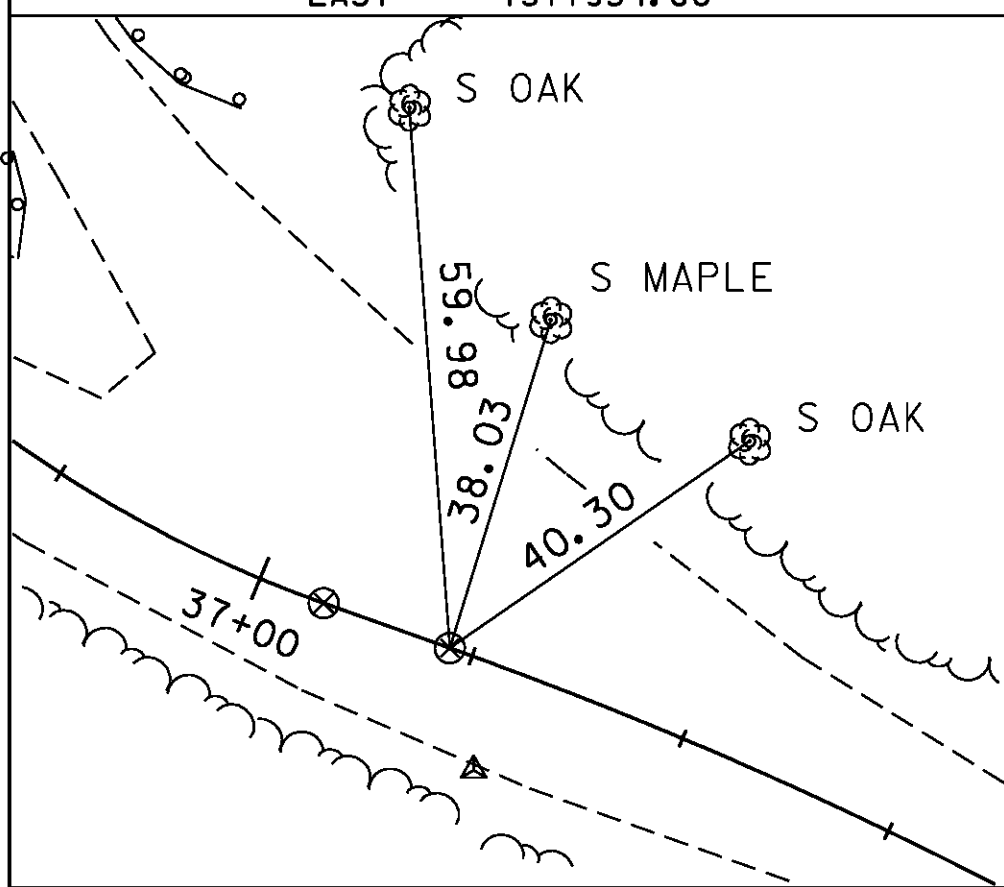
PT 37+07.54

NORTH = 208444.83
EAST = 1577940.90



PC 37+22.36

NORTH = 208439.86
EAST = 1577954.86



PC 36+16.52

NORTH = 208500.19
EAST = 1577870.67

PT 39+52.19

NORTH = 208316.07
EAST = 1578146.06

POE 40+45.24

NORTH = 208248.89
EAST = 1578210.44

NOT TIED

* Alignment Staked 3/22/07 by R.Gilman P.C. & R.Bullock & P.Winters

DATUM

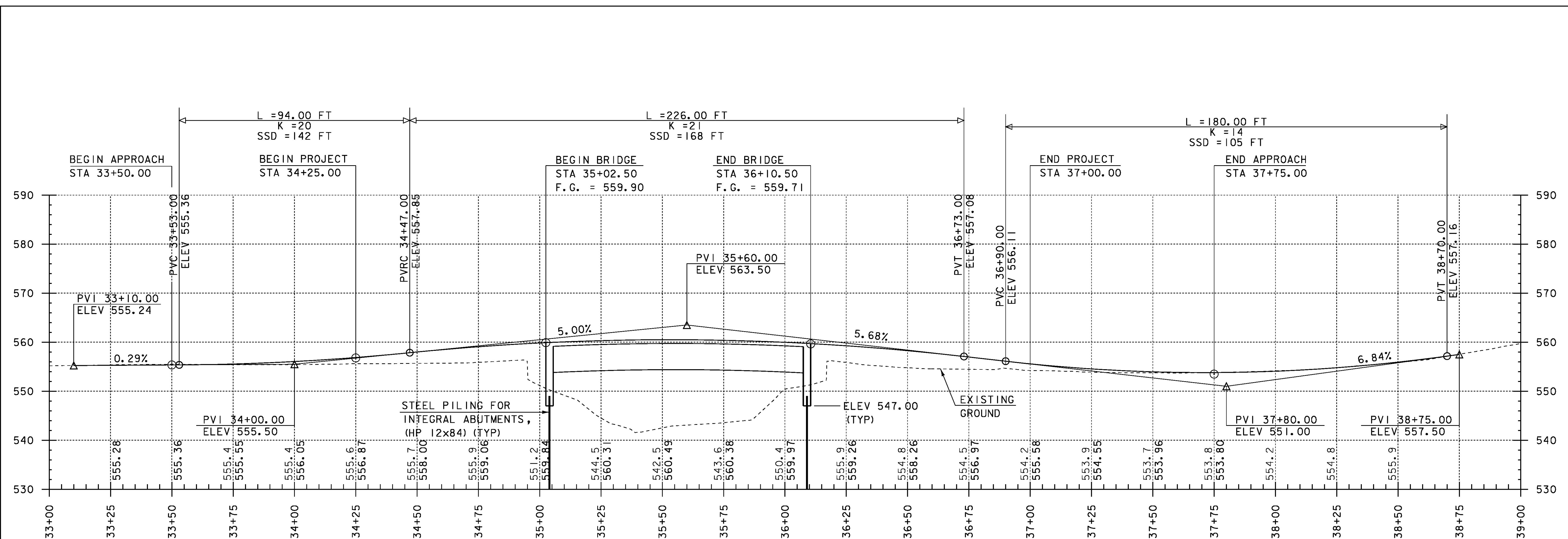
VERTICAL NAVD 88

HORIZONTAL NAD 83 (92)

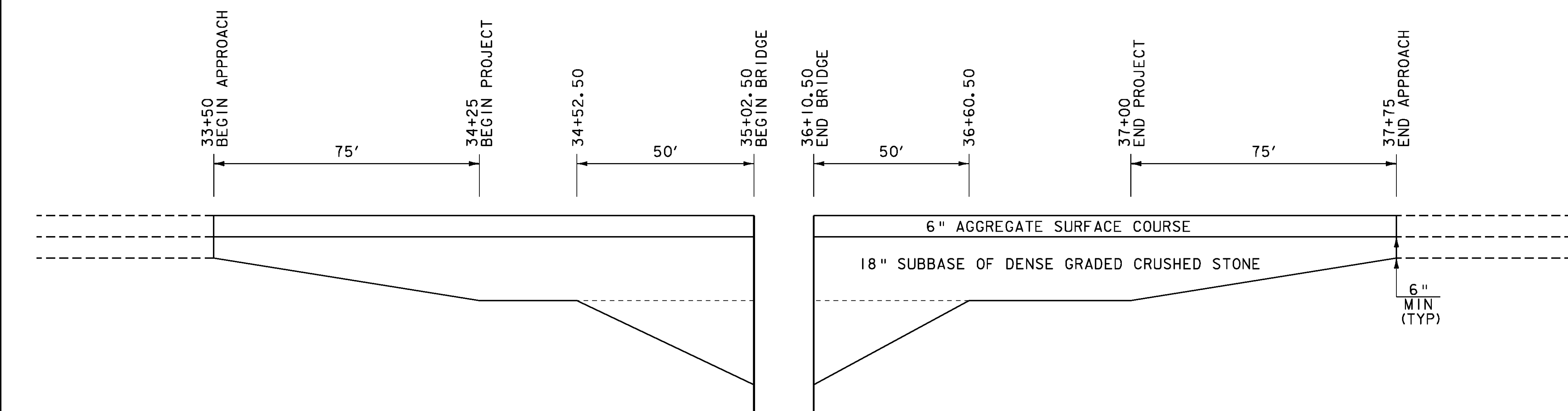
ADJUSTMENT COMPASS

PROJECT NAME: Jamaica
PROJECT NUMBER: BRO 1442 (27)

FILE NAME: 96J068\survey\96J068+1.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: SURVEY
TIE SHEET
PLOT DATE: 19-OCT-2009
DRAWN BY: R. bullock
CHECKED BY: SURVEY
SHEET 7 OF 44

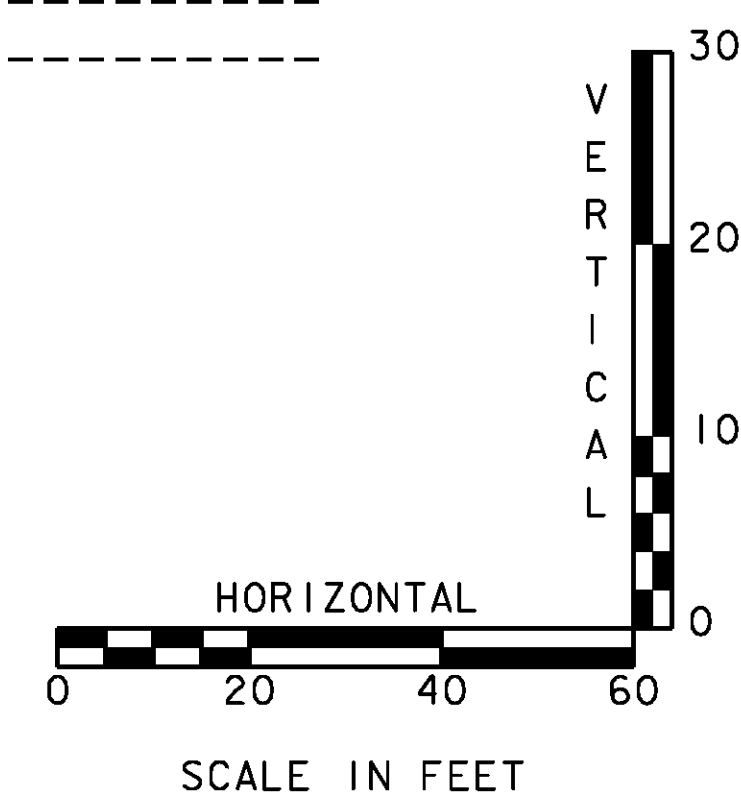


MAINLINE PROFILE



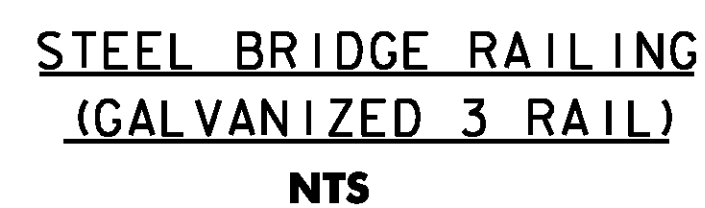
MATERIAL TRANSITION

NOT TO SCALE



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.

PROJECT NAME:	JAMAICA
PROJECT NUMBER:	BRO 1442(27)
FILE NAME:	s96j068pro.dgn
PROJECT LEADER:	K. HIGGINS
DESIGNED BY:	J. LACROIX
MAINLINE PROFILE & MATERIAL TRANSITION	
PLOT DATE:	03-NOV-2009
DRAWN BY:	R. PELLETT
CHECKED BY:	J. LACROIX
SHEET	9
OF	44



A RAILING EXPANSION SPLICE IS REQUIRED IN ANY POST SPACING THAT CONTAINS A SUPERSTRUCTURE EXPANSION JOINT.

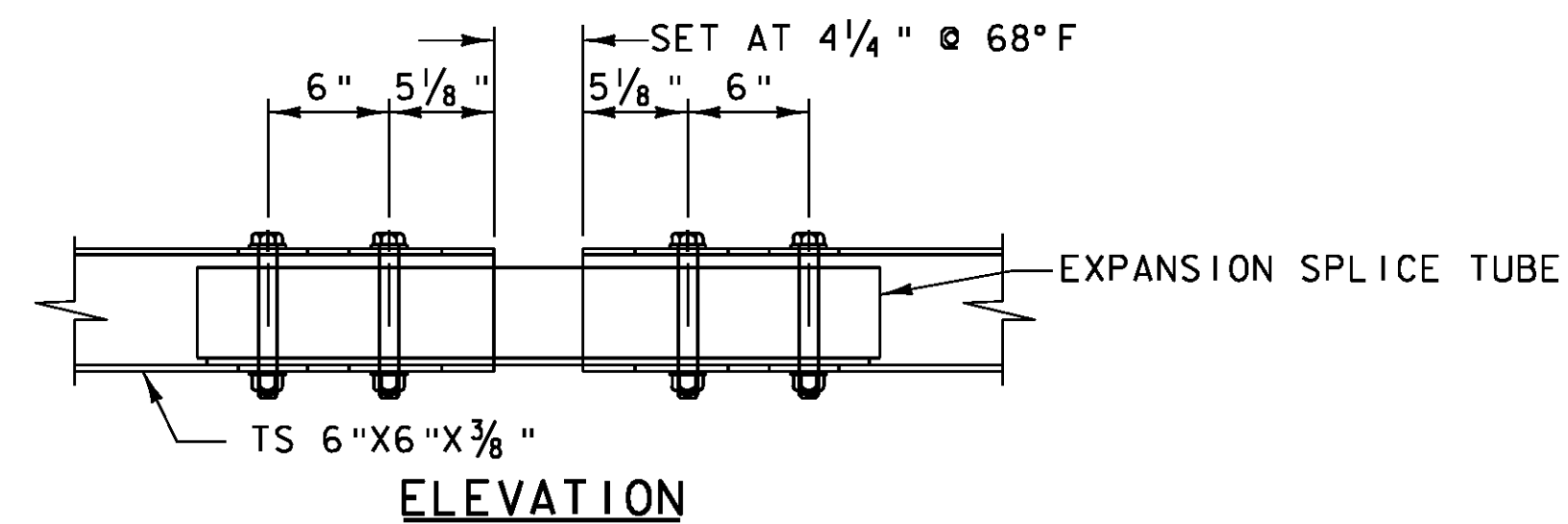
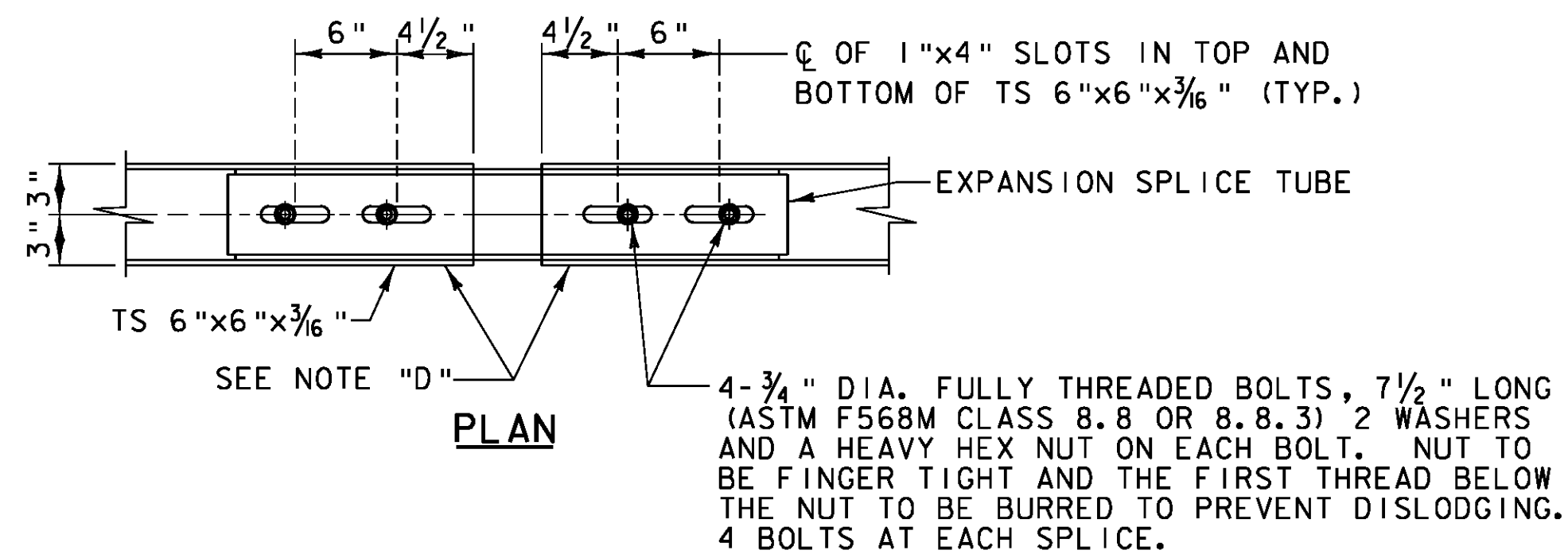
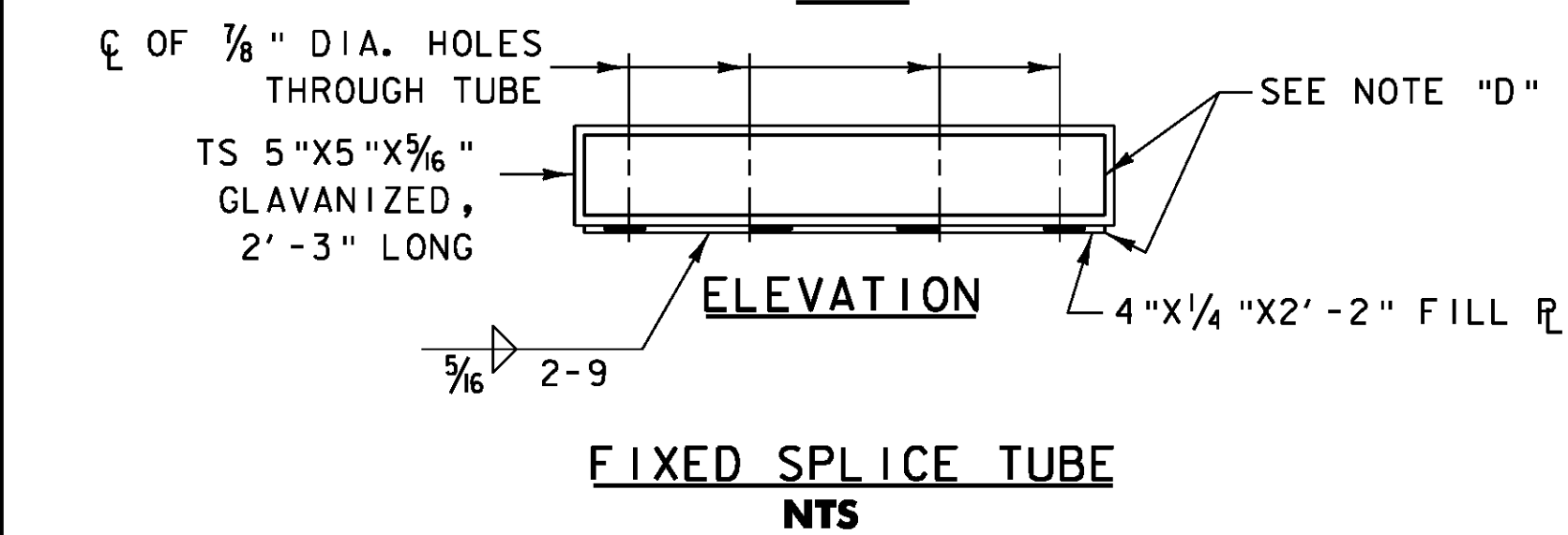
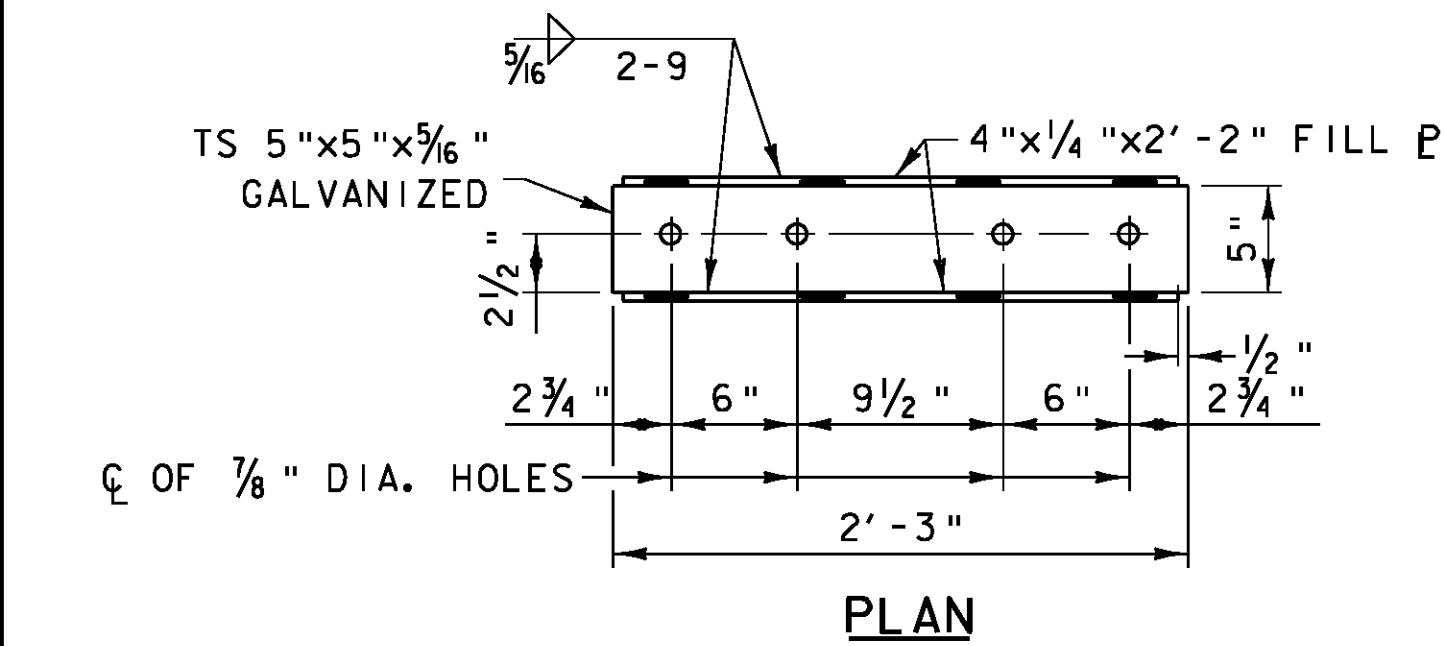
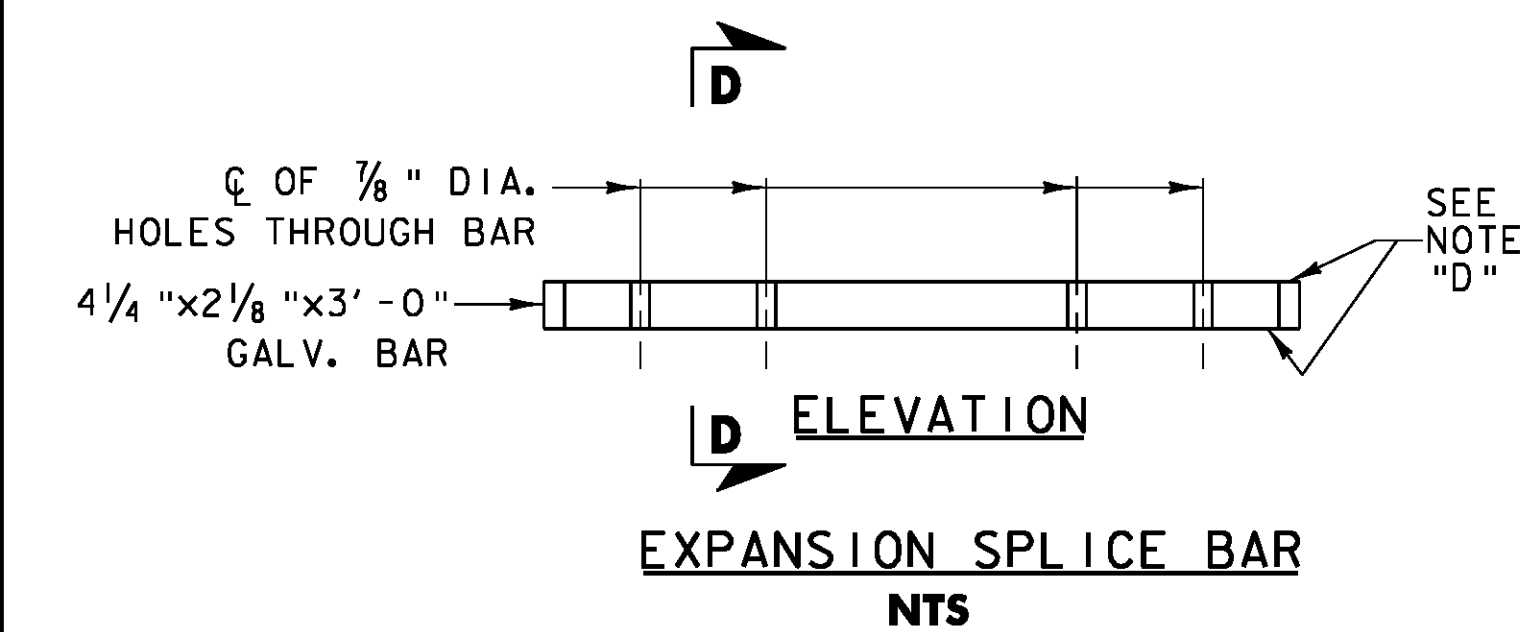
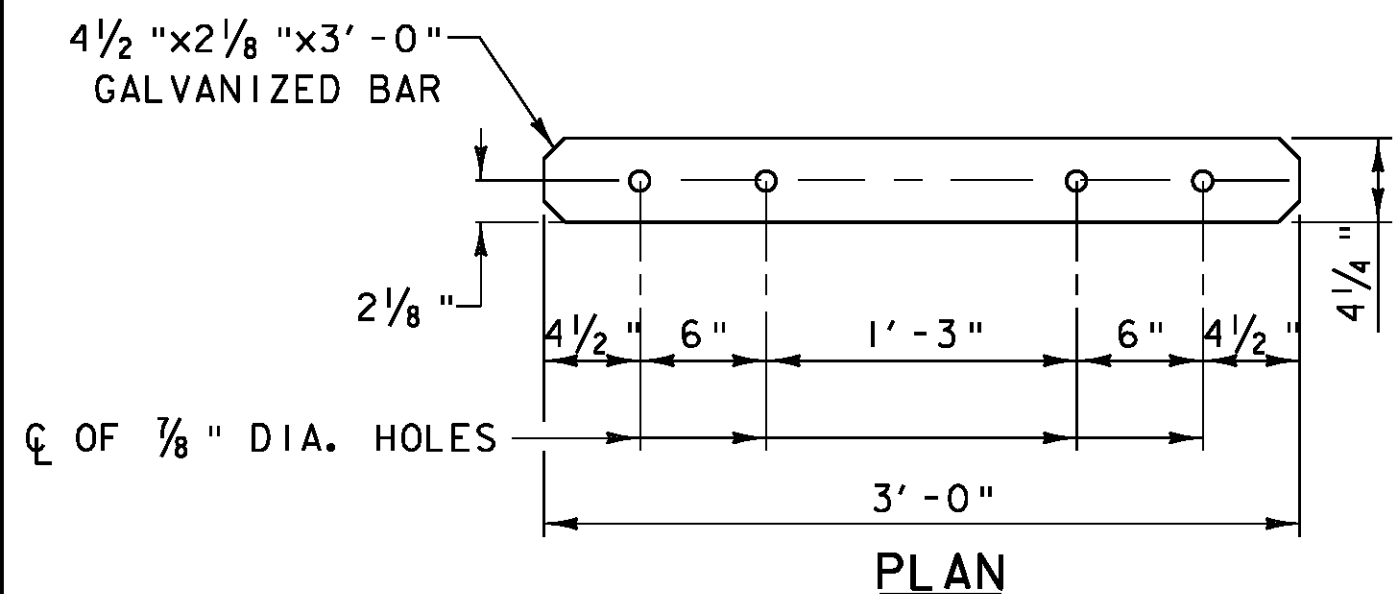
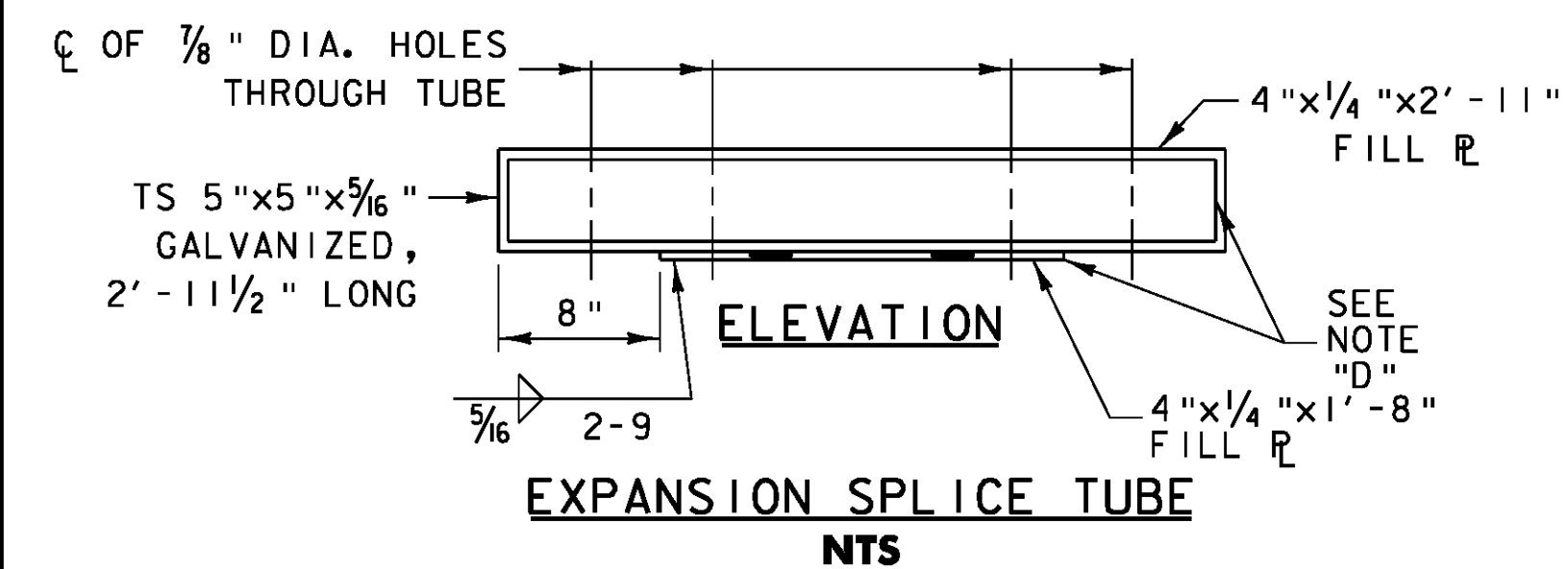
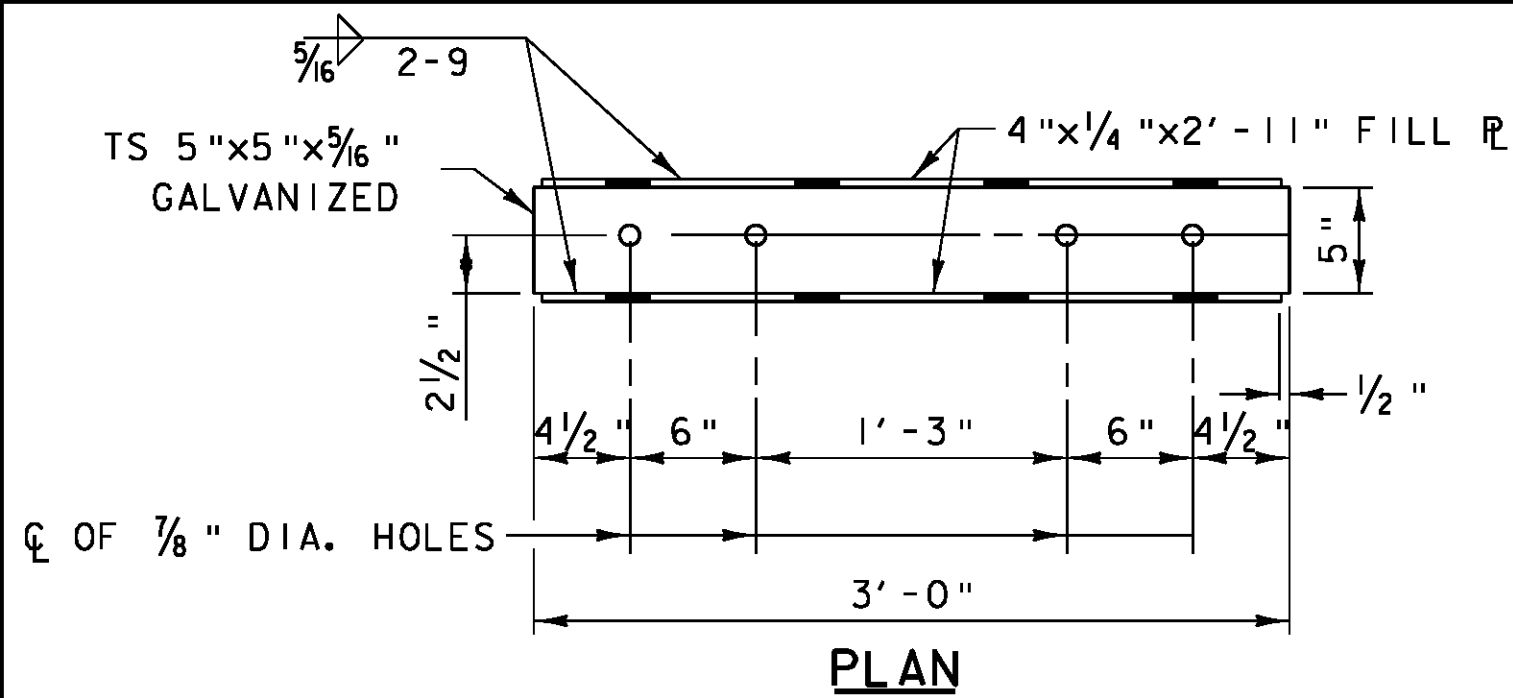


1. ALL RAILING IS TO BE FABRICATED AND ERECTED ACCORDING TO SECTION 525 OF THE STANDARD SPECIFICATIONS.
2. PRIOR TO GALVANIZING THE ASSEMBLED POST, GRIND ALL EDGES TO A MINIMUM RADIUS OF $\frac{1}{16}$ ".
3. BOLTS SHALL BE TORQUED SNUG TIGHT (APPROXIMATELY 100 FT-LB.).
4. DETAILS ON THE DRAWINGS LABELED AS "NOT TO SCALE" ARE INTENTIONALLY DRAWN NOT TO SCALE FOR VISUAL CLARITY. ALL OTHER DETAILS, FOR WHICH NO SCALE IS SHOWN, ARE DRAWN PROPORTIONAL AND ARE FULLY DIMENSIONED.
5. ALL DIMENSIONS ARE SHOWN IN FEET & INCHES UNLESS OTHERWISE NOTED.

FILE NAME: s96j068raildet.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: VTRANS
BRIDGE RAILING DETAIL SHEET #1

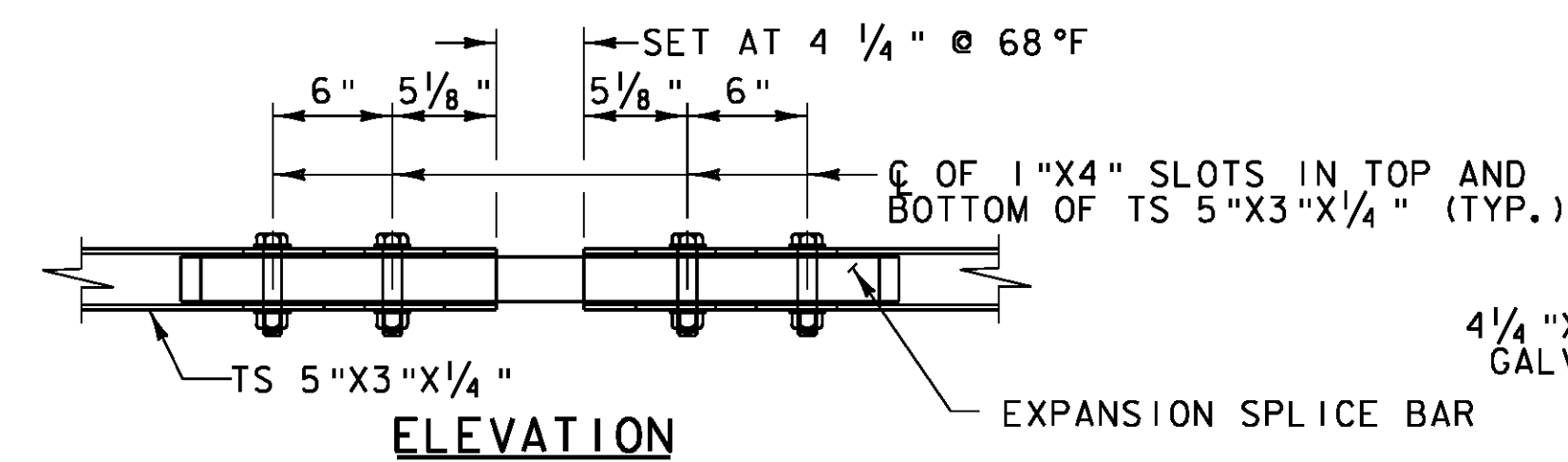
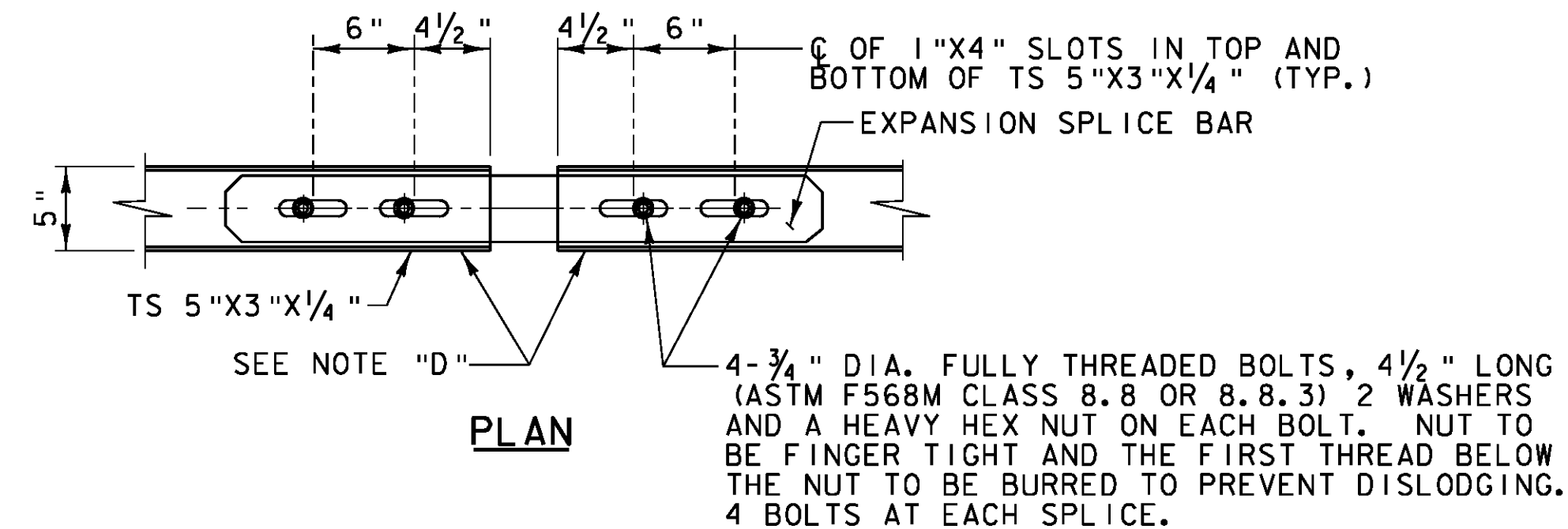
PLOT DATE: 17-DEC-2009
DRAWN BY: VTRANS
CHECKED BY: VTRANS
SHEET 1 OF 4

RAILING ANGLE DETAILS
NTS



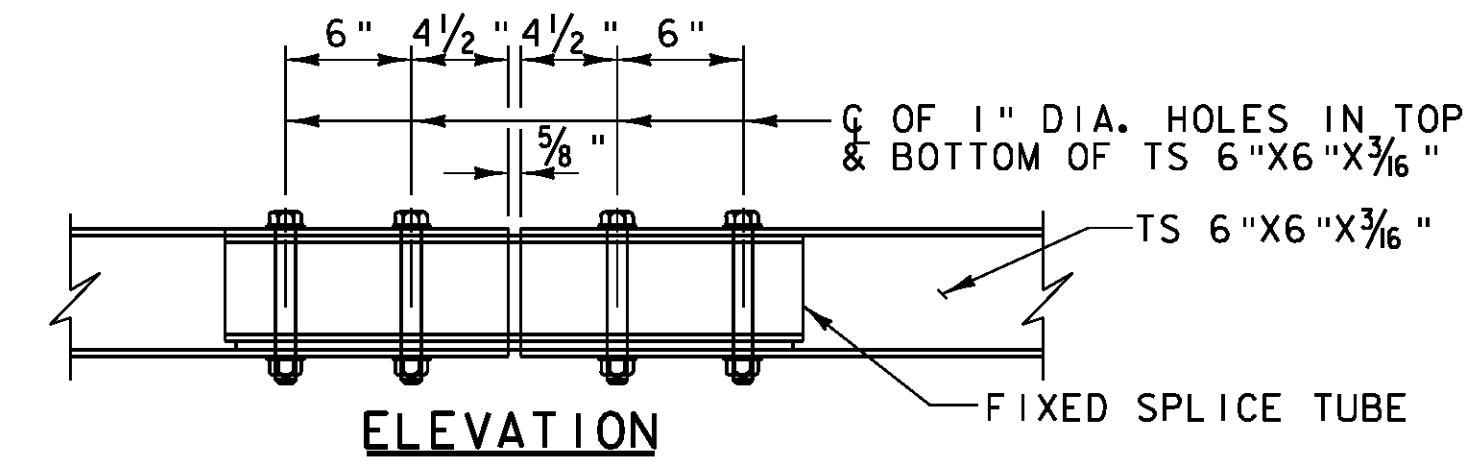
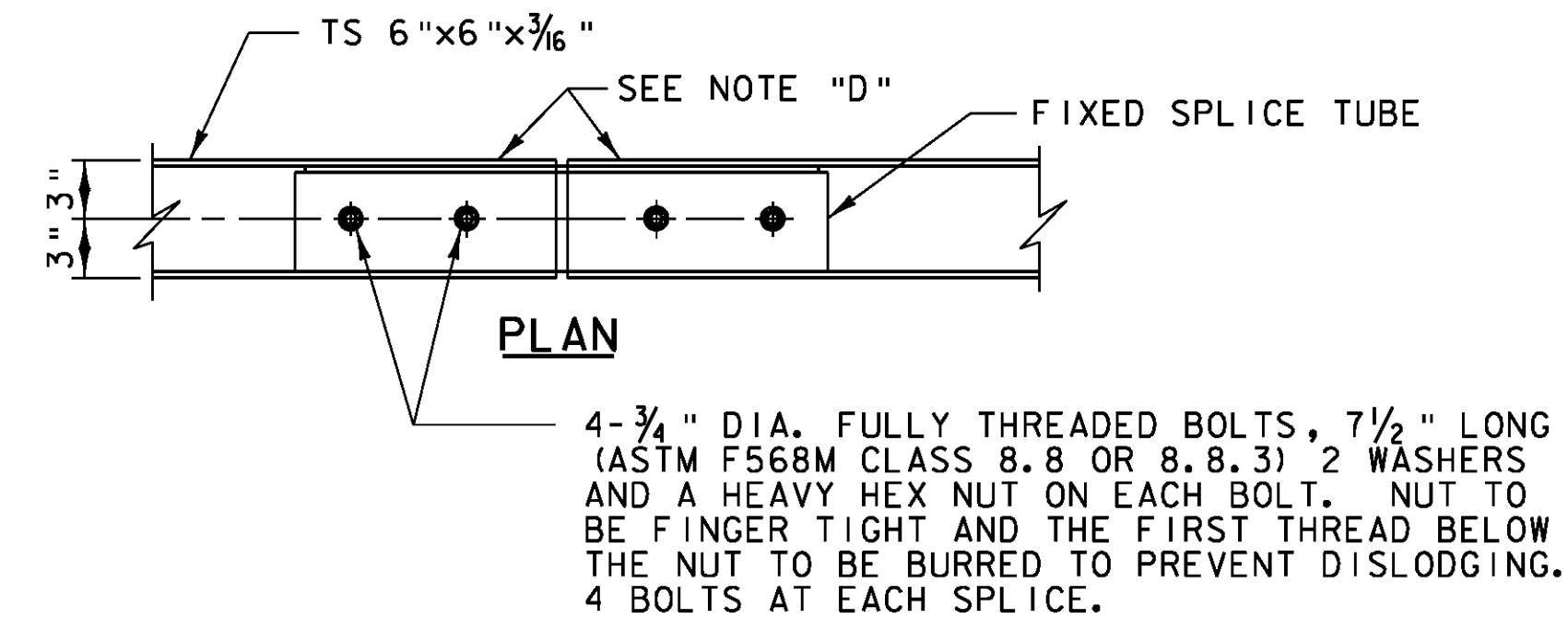
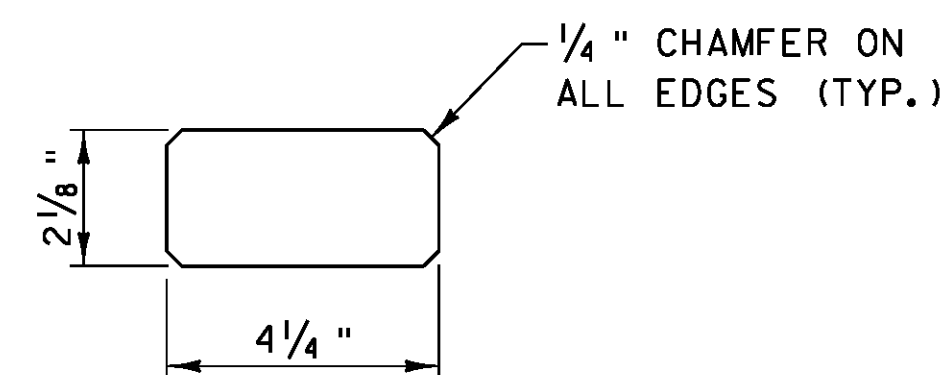
EXPANSION SPLICE ASSEMBLY

NTS



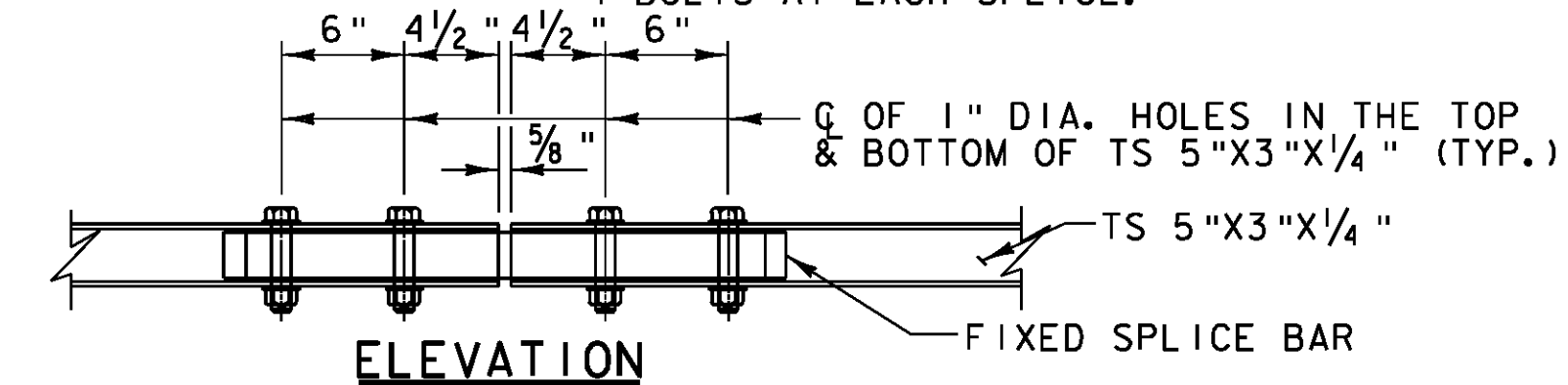
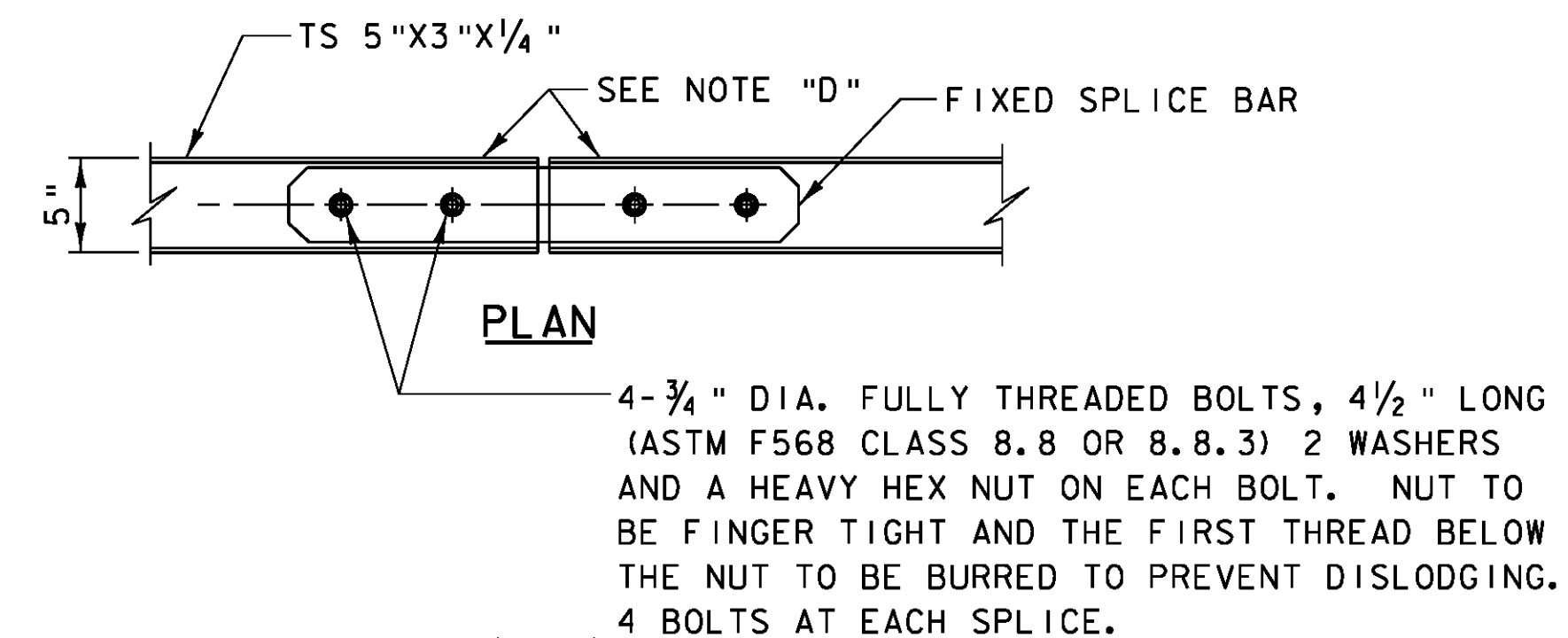
EXPANSION SPLICE ASSEMBLY

NTS



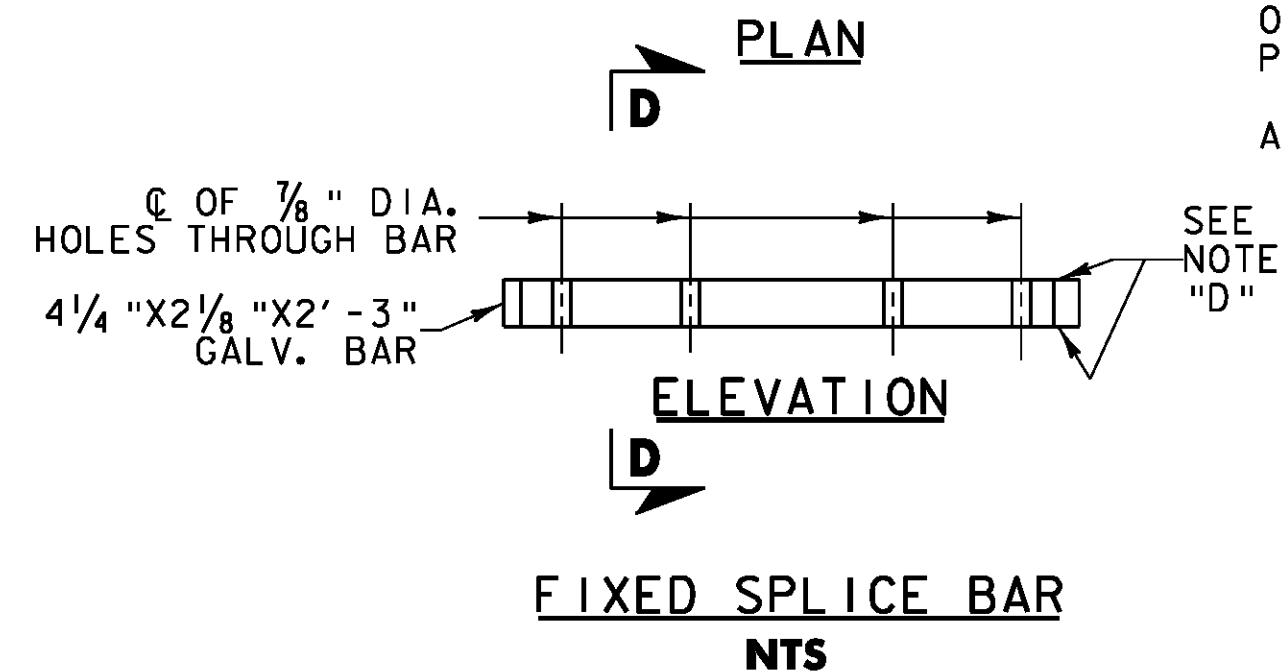
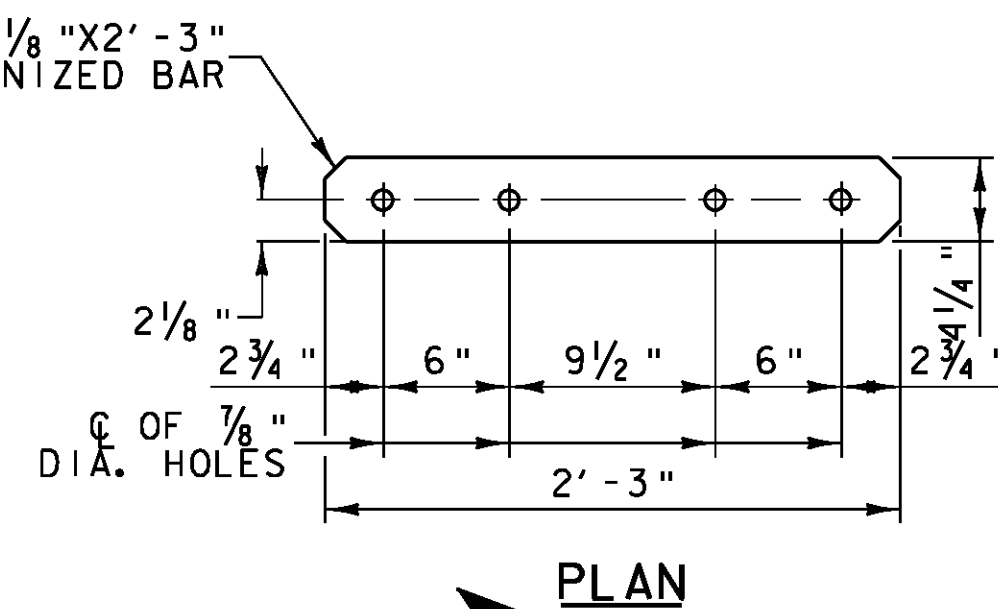
FIXED SPLICE ASSEMBLY

NTS



FIXED SPLICE ASSEMBLY

NTS



NOTES:

NOTE "D": PROTRUSIONS CAUSED BY WELDING OR GALVANIZING ARE NOT PERMITTED ON THE ADJOINING SURFACES OF THE BOX BEAM RAILS, SPLICE TUBES AND FILL PLATES.

DETAILS ON THE DRAWINGS LABELED AS "NOT TO SCALE" ARE INTENTIONALLY DRAWN NOT TO SCALE FOR VISUAL CLARITY. ALL OTHER DETAILS, FOR WHICH NO SCALE IS SHOWN, ARE DRAWN PROPORTIONAL AND ARE FULLY DIMENSIONED.

ALL DIMENSIONS ARE SHOWN IN FEET & INCHES UNLESS OTHERWISE NOTED.

PROJECT NAME: JAMAICA

PROJECT NUMBER: BRO 1442(27)

FILE NAME: s96j068rclldet.dgn

PROJECT LEADER: K. HIGGINS

DESIGNED BY: VTRANS

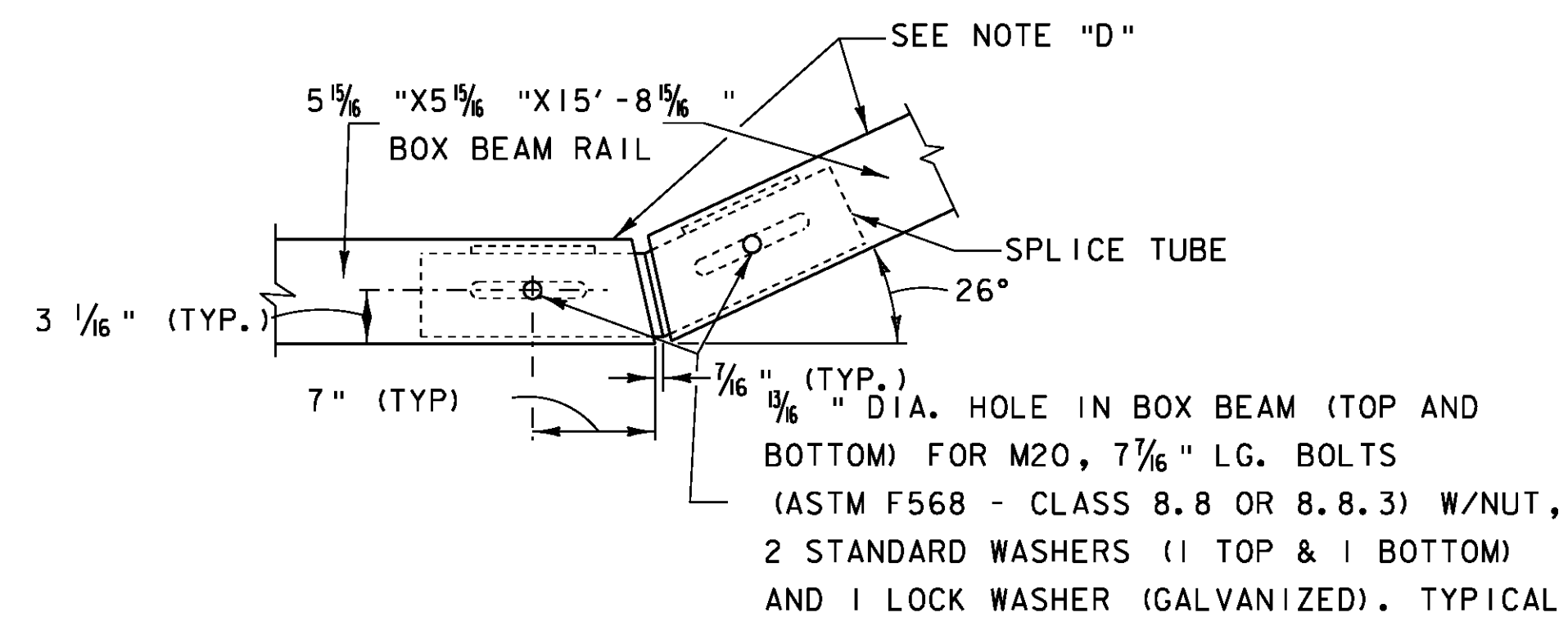
BRIDGE RAILING DETAIL SHEET #3

PLOT DATE: 17-DEC-2009

DRAWN BY: VTRANS

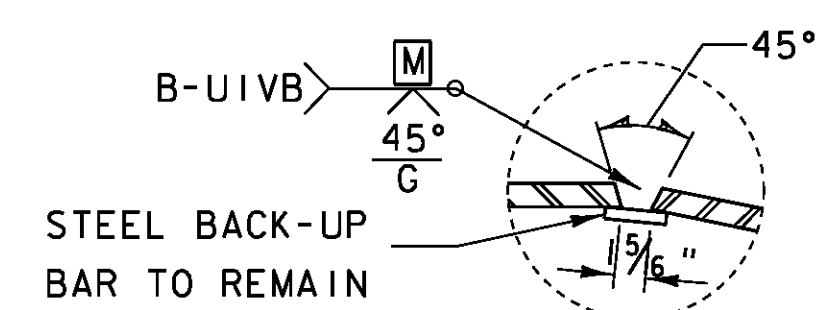
CHECKED BY: VTRANS

SHEET 3 OF 4

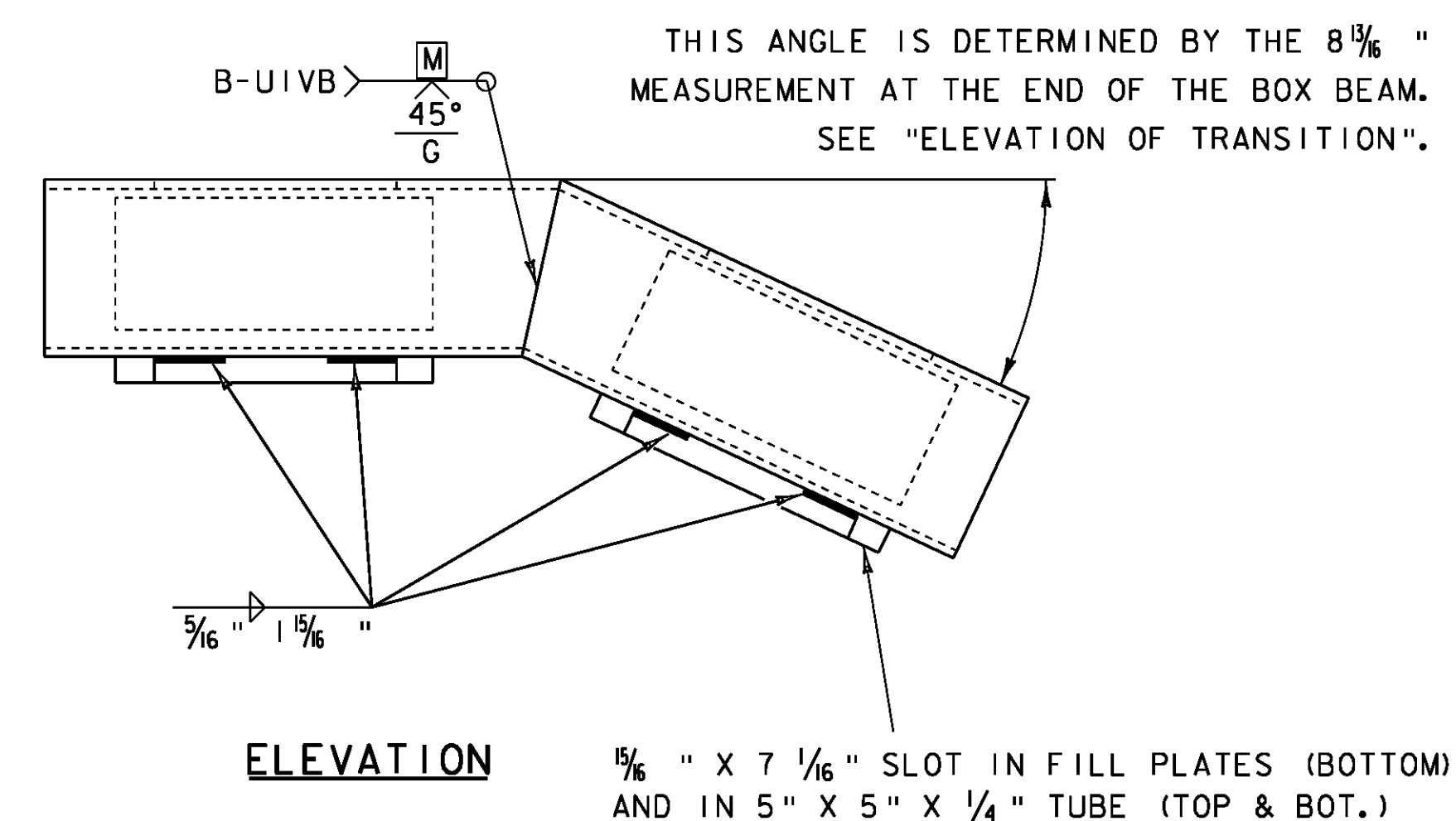


SPLICE DETAIL AT TURN BACK IN
LOWER TRANSITION GUIDE RAIL

NTS

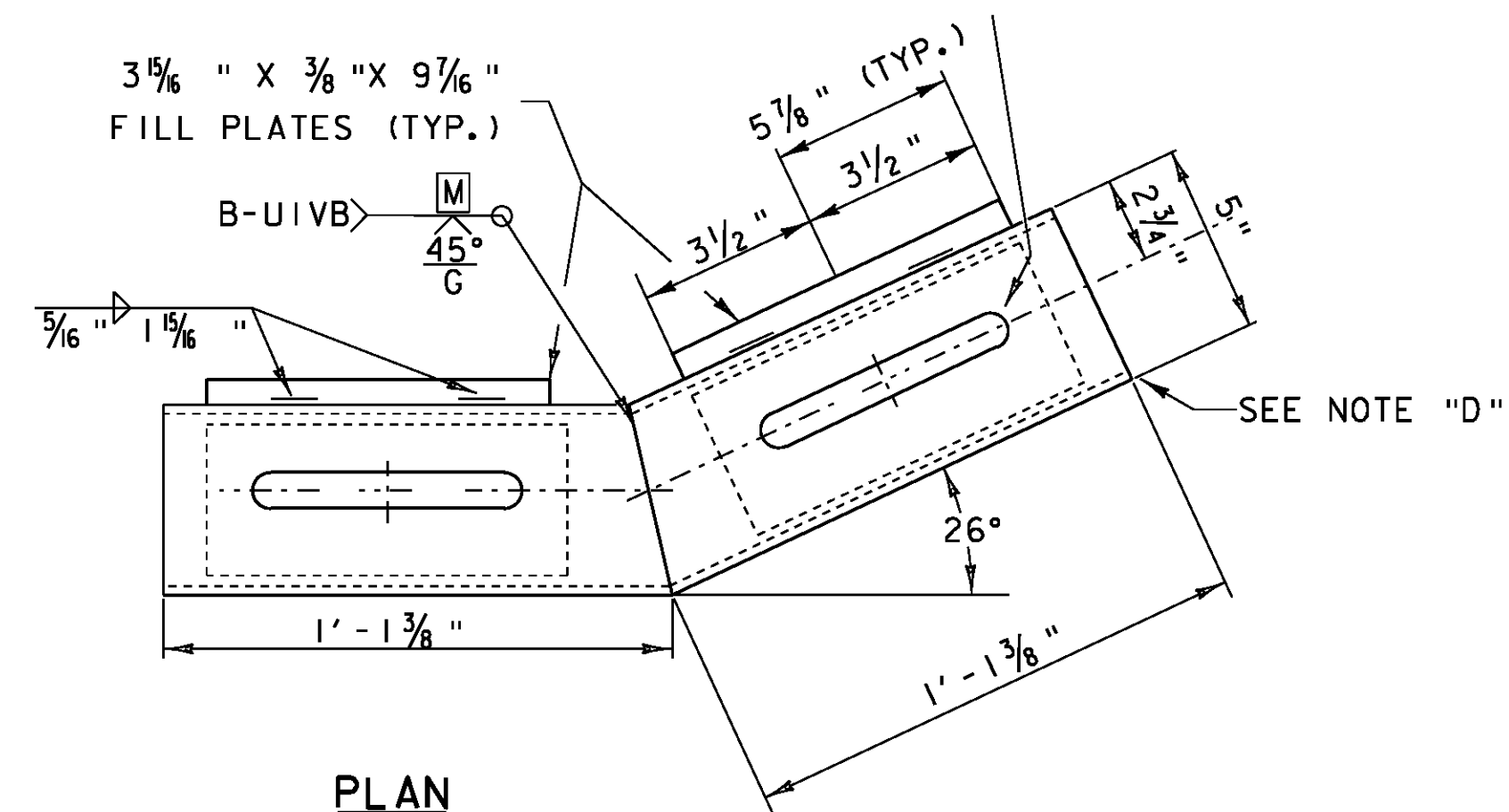


WELD DETAIL FOR
SPLICE TUBE

NTS

ELEVATION

$\frac{15}{16}$ " X $7 \frac{1}{16}$ " SLOT IN FILL PLATES (BOTTOM)
AND IN 5" X 5" X $\frac{1}{4}$ " TUBE (TOP & BOT.)



PLAN

SPLICE TUBE DETAIL
FOR TURN BACK

NTS

ALL DIMENSIONS ARE SHOWN IN FEET & INCHES UNLESS OTHERWISE NOTED.

PROJECT NAME: JAMAICA	
PROJECT NUMBER: BRO 1442(27)	
FILE NAME: s96j068rlddet.dgn	PLOT DATE: 17-DEC-2009
PROJECT LEADER: K. HIGGINS	DRAWN BY: VTRANS
DESIGNED BY: VTRANS	CHECKED BY: VTRANS
BRIDGE RAILING DETAIL SHEET #4	SHEET 4 OF 4

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 3/8"
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
Sl	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)

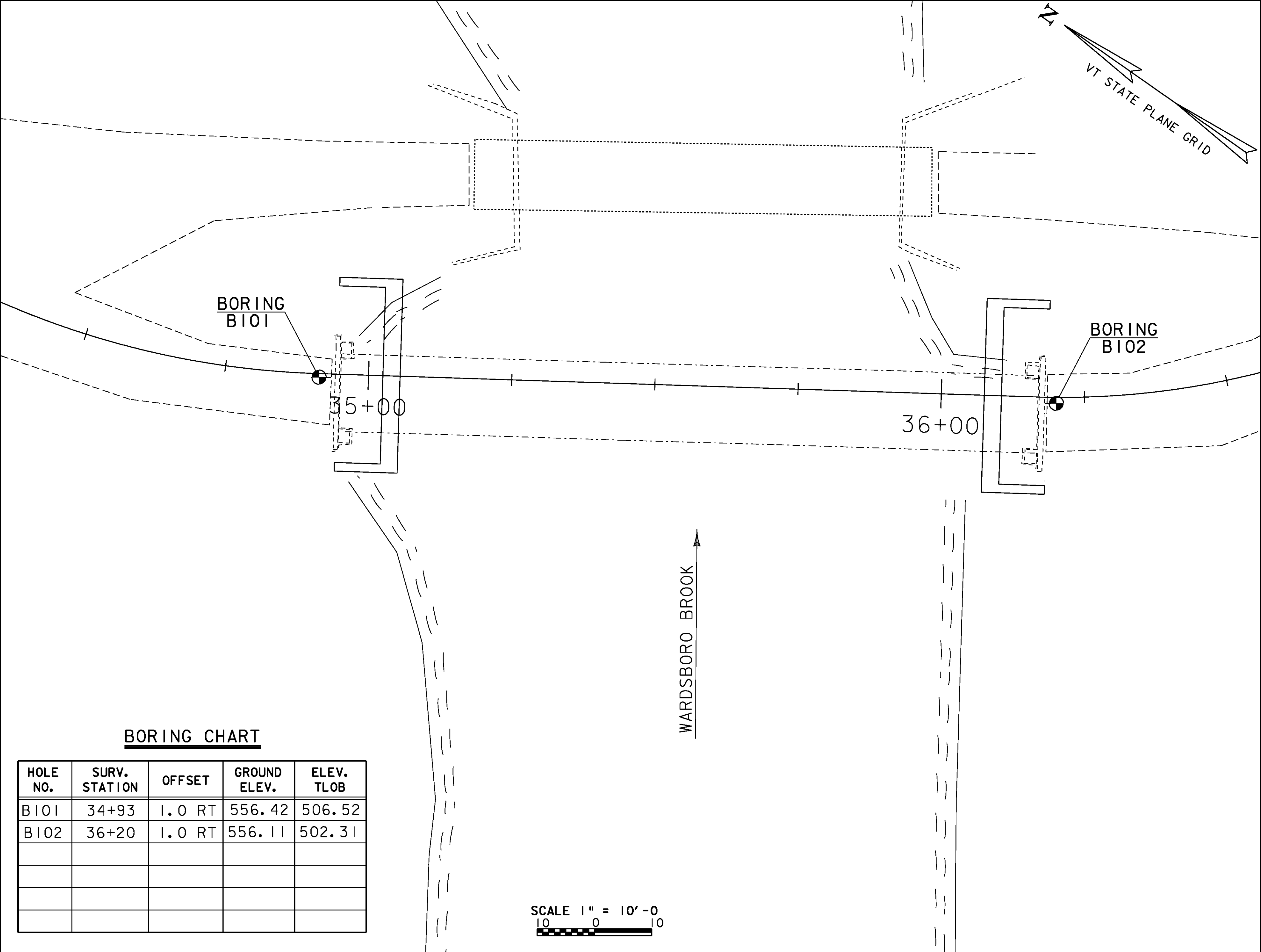
COLOR			
blk	Black	pnk	Pink
bl	Blue	pu	Purple
brn	Brown	rd	Red
dk	Dark	tn	Tan
gry	Gray	wh	White
gn	Green	yel	Yellow
lt	Light	mltc	Multicolored
or	Orange		

BORING CHART

HOLE NO.	SURV. STATION	OFFSET	GROUND ELEV.	ELEV. TLOB
B101	34+93	1.0 RT	556.42	506.52
B102	36+20	1.0 RT	556.11	502.31

GENERAL NOTES

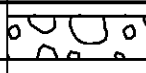
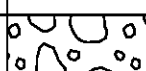
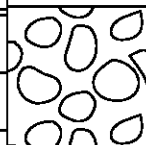
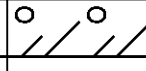
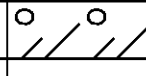
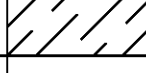
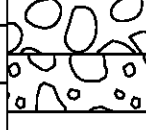
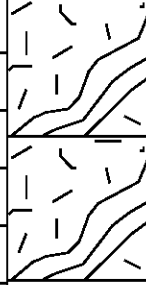
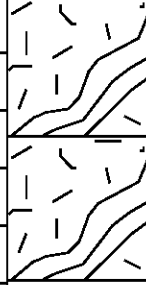
1. The subsurface explorations shown herein were made between 6/24/07 and 5/31/07 by the Agency.
2. Soil and rock classifications, properties and descriptions are based on engineering interpretation from available subsurface information by the Agency and may not necessarily reflect actual variations 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 judgment 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 judgment 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.



PROJECT NAME: JAMAICA	
PROJECT NUMBER: BRO 1442(27)	
FILE NAME: s96j068bor.dgn	PLOT DATE: 19-OCT-2009
PROJECT LEADER: K. HIGGINS	DRAWN BY: R. PELLETT
DESIGNED BY: J. LACROIX	CHECKED BY: J. LACROIX
BORING LAYOUT	SHEET 14 OF 44

ABUTMENT #1
BOTTOM OF STEM
ELEV. 547.00

PILE DEPTH
(ESTIMATED)
ELEV. 506.50

		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING NUMBER: B-101 SHEET 1 of 1 DATE STARTED: 5/31/07 DATE COMPLETED: 6/07/07			
PROJECT NAME: JAMAICA SITE NAME: TH-43 STATION: 34+93 OFFSET: 1.00 VTSPG: N 208604.63 ft E 1577801.71 ft				PROJECT NUMBER: BRO 1442(27) SITE NUMBER: BR-33 GROUND ELEVATION: 556.42 ft GROUNDWATER DEPTH: 13.8 ft 6/07/07 PROJECT PIN NUMBER: 96J068			
BORING CREW CREW CHIEF: GARROW DRILLER: GARROW LOGGER: CARRIERE				BORING RIG: LARGE SKID RIG w/AUTO HAMMER BORING TYPE: WASH BORE SAMPLE TYPE: SPLIT BARREL CHECKED BY: CAA			
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
			RUN	REC (%)	RQD (%)	Dip (deg)	Drill Rate (min/ft)
		Visual Classification: Coarse sand withleaves, roots, & grass., brn, Moist, Rec. = 0.3 ft	3	6.0	32.6	64.8	2.6
		A-1-b, GrSa, brn, Moist, Rec. = 0.8 ft					
		NXDC, Cored ahead into Cobbles and advanced casing., 2.9 ft - 5.0 ft					
		A-1-b, GrSa, brn, MTW, Rec. = 0.6 ft	6	12.9	42.1	49.1	8.8
10		NXDC, Cleaned out casing., 9.3 ft - 10.0 ft	6	11.0	53.7	39.8	6.5
		A-1-a, SaGr, gry, MTW, Rec. = 0.75 ft					
		NXDC, Cored ahead into Cobbles and advanced casing., 13.7 ft - 18.7 ft					
20		A-2-4, Sa, Li/brn, MTW, Rec. = 1.0 ft	16	22.0	0.8	82.0	17.2
		A-3, Sa, brn, MTW, Rec. = 1.2 ft, Used drillers mud.	16	24.7	0.8	89.3	9.9
30		A-2-4, SiSa, gry-brn, Moist, Rec. = 1.3 ft	20	23.5	0.0	74.5	25.5
		NXDC, Cored ahead into Boulder., 33.9 ft - 35.9 ft					
40		A-4, SaSi, Li/brn, Moist, Rec. = 1.5 ft	30	23.2	13.6	36.7	49.7
		NXDC, Cobbles, Cleaned out casing., 42.7 ft - 45.0 ft					
50		A-1-b, SaGr, brn, Moist, Rec. = 1.0 ft	66	9.8	44.3	43.0	12.7
		Top of Bedrock @ 49.9 ft					
60		Gray with some pink, Gneiss, Competent, Very hard, Unweathered, NXMDC, 49.9 ft - 54.9 ft, Rec. = 4.35 ft	1	87	72	10	14 12 11 9 9
		Gray with some pink, Gneiss, Competent, Very hard, Unweathered, NXMDC, 54.9 ft - 59.9 ft, Rec. = 4.55 ft	2	91	91	15	6 8 9 8 8
		Hole stopped @ 59.9 ft					

LOG OF BORING JAMAICA BRO 1442(27).DPT VT DOT.GIT 9/20/07

LOG OF BORING JAMAICA BRO 1442(27).dgn VT AOT.G01 9/29/07

ABUTMENT #2
BOTTOM OF STEM
ELEV. 547.00

PILE DEPTH
(ESTIMATED)
ELEV. 502.30

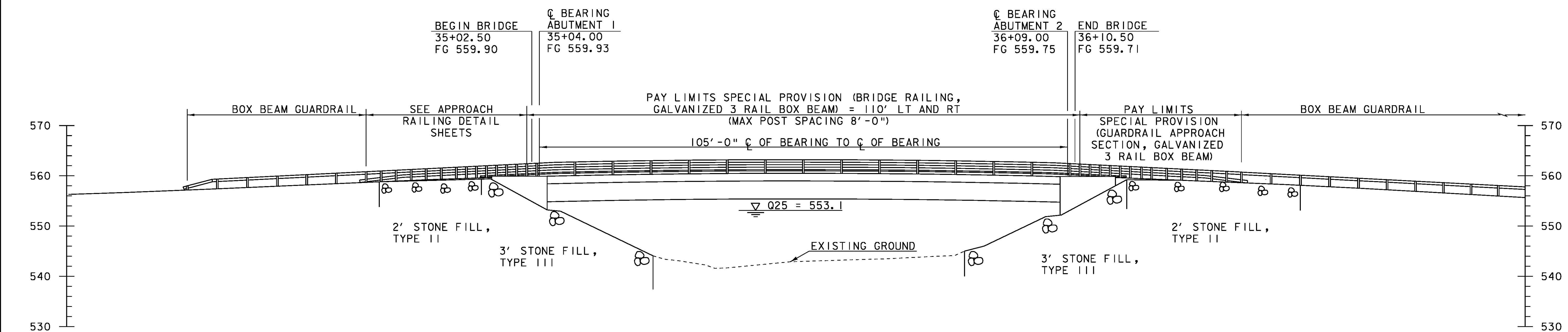
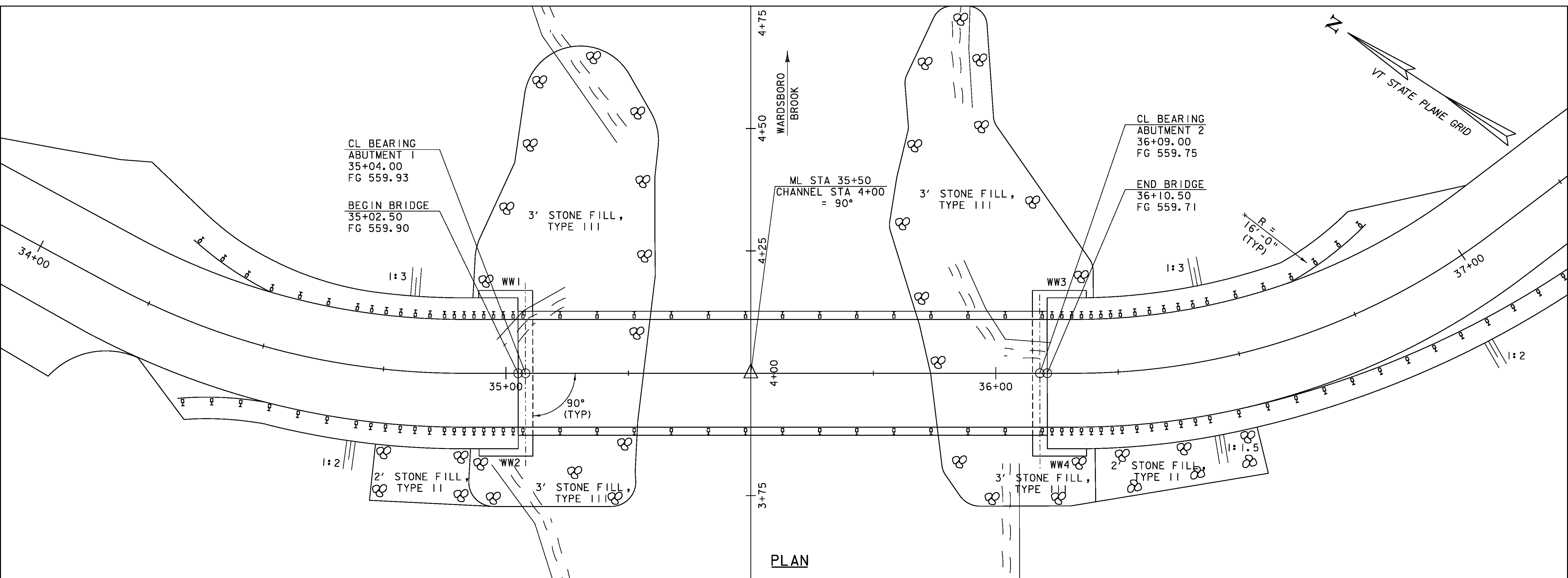
		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING NUMBER: B-102 SHEET 1 of 1 DATE STARTED: 5/24/07 DATE COMPLETED: 5/31/07			
PROJECT NAME: JAMAICA SITE NAME: TH-43 STATION: 36+20 OFFSET: 1.00 VTSPG: N 208496.66 ft E 1577871.81 ft				PROJECT NUMBER: BRO 1442(27) SITE NUMBER: BR-33 GROUND ELEVATION: 556.11 ft GROUNDWATER DEPTH: Hole caved in at 11.0' PROJECT PIN NUMBER: 96J068			
BORING CREW CREW CHIEF: GARROW DRILLER: GARROW LOGGER: CARRIERE				BORING RIG: LARGE SKID RIG w/AUTO HAMMER BORING TYPE: WASH BORE SAMPLE TYPE: SPLIT BARREL CHECKED BY: CAA			
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
			RUN	REC (%)	RQD (%)	Dip (deg)	Drill Rate (min/ft)
		A-2-4, GrSa, brn, Moist, Rec. = 1.3 ft	11	6.3	30.7	54.8	14.5
		A-2-4, GrSa, brn, Moist, Rec. = 0.7 ft	10	13.2	35.1	52.3	12.6
10		NXDC, Cleaned out casing., 9.0 ft - 10.0 ft	17				
		No Recovery, 10.0 ft - 12.0 ft					
		NXDC, Cored ahead into Boulder and cleaned out casing., 13.4 ft - 15.4 ft	R				
		NXMDC, Cored ahead into Boulder., 15.4 ft - 18.4 ft					
20		NXDC, Cleaned out casing., 19.0 ft - 20.0 ft	31	11.7	43.6	44.9	11.5
		A-1-b, GrSa, brn, MTW, Rec. = 1.2 ft					
		NXDC, Cleaned out casing., 24.5 ft - 25.0 ft	R	11.4	40.9	43.2	15.9
		A-1-b, GrSa, brn, Moist, Rec. = 0.6 ft					
		NXDC, Cored ahead into Cobbles., 25.4 ft - 28.4 ft					
30		NXDC, Cored ahead into Boulders., 29.6 ft - 32.6 ft					
		NXDC, Cleaned out casing., 33.0 ft - 34.5 ft	R	12.5	28.6	37.9	33.5
		A-2-4, GrSiSa, brn, Moist, Rec. = 1.1 ft					
		NXDC, Cored ahead into Boulders., 36.7 ft - 40.0 ft					
40		A-2-4, SiSa, brn, Moist, Rec. = 1.6 ft	64	15.4	18.4	55.2	26.4
		A-2-4, GrSiSa, brn, Moist, Rec. = 0.6 ft	R	10.9	26.1	44.7	29.2
		NXMDC, Cored ahead into Boulder., 45.6 ft - 47.6 ft					
50		NXMDC, Cleaned out casing., 49.1 ft - 50.0 ft	R	11.8	27.2	57.6	15.2
		A-2-4, GrSa, brn, Moist, Rec. = 1.1 ft					
		Top of Bedrock @ 53.8 ft	1	96	93	10	10 12 15 12 13
60		Gray with some pink, Gneiss, Competent. Quartz zone from 60.6 ft - 61.4 ft., Very hard, Unweathered, NXMDC, 58.8 ft - 63.8 ft, Rec. = 5.0 ft	2	100	100	10	9 12 15 15 13
		Hole stopped @ 63.8 ft					

LOG OF BORING JAMAICA BRO 1442(27).dgn VT AOT.G01 9/29/07

PROJECT NAME: JAMAICA
PROJECT NUMBER: BRO 1442(27)

FILE NAME: s96J068bor.dgn
PROJECT LEADER: K .HIGGINS
DESIGNED BY: J. LACROIX
BORING LOGS

PLOT DATE: 19-OCT-2009
DRAWN BY: R. PELLETT
CHECKED BY: J. LACROIX
SHEET 15 OF 44

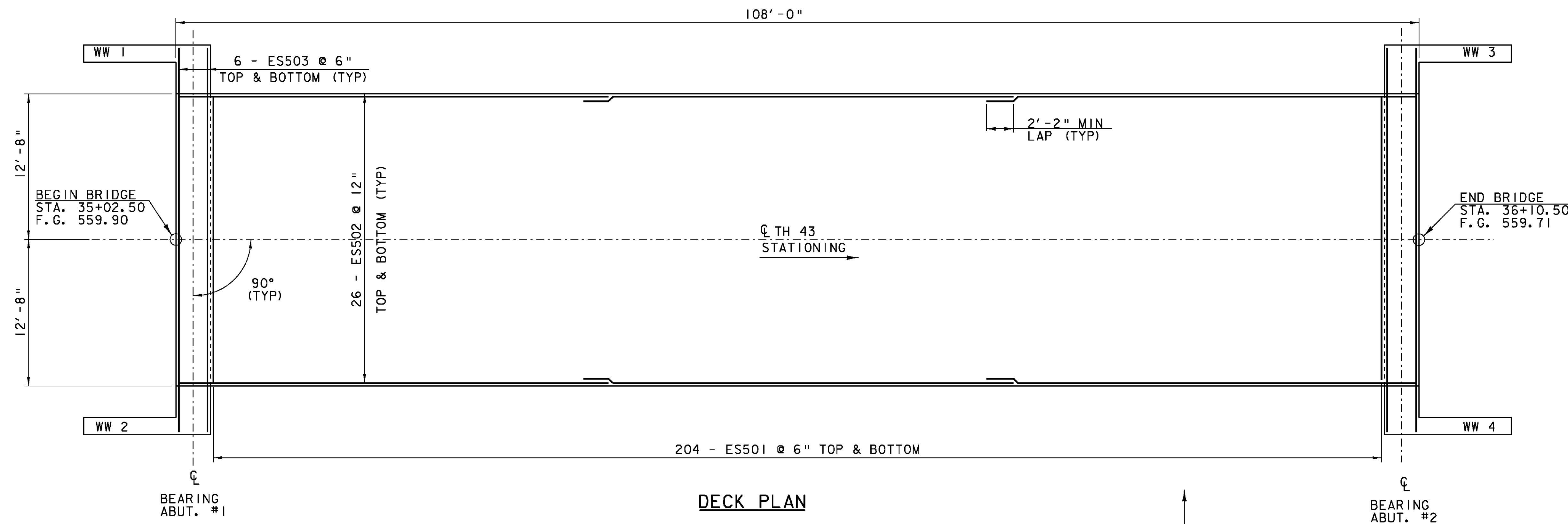


PROJECT NAME: JAMAICA
PROJECT NUMBER: BRO 1442(27)

FILE NAME: s961068pe.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. LACROIX
PLAN AND ELEVATION

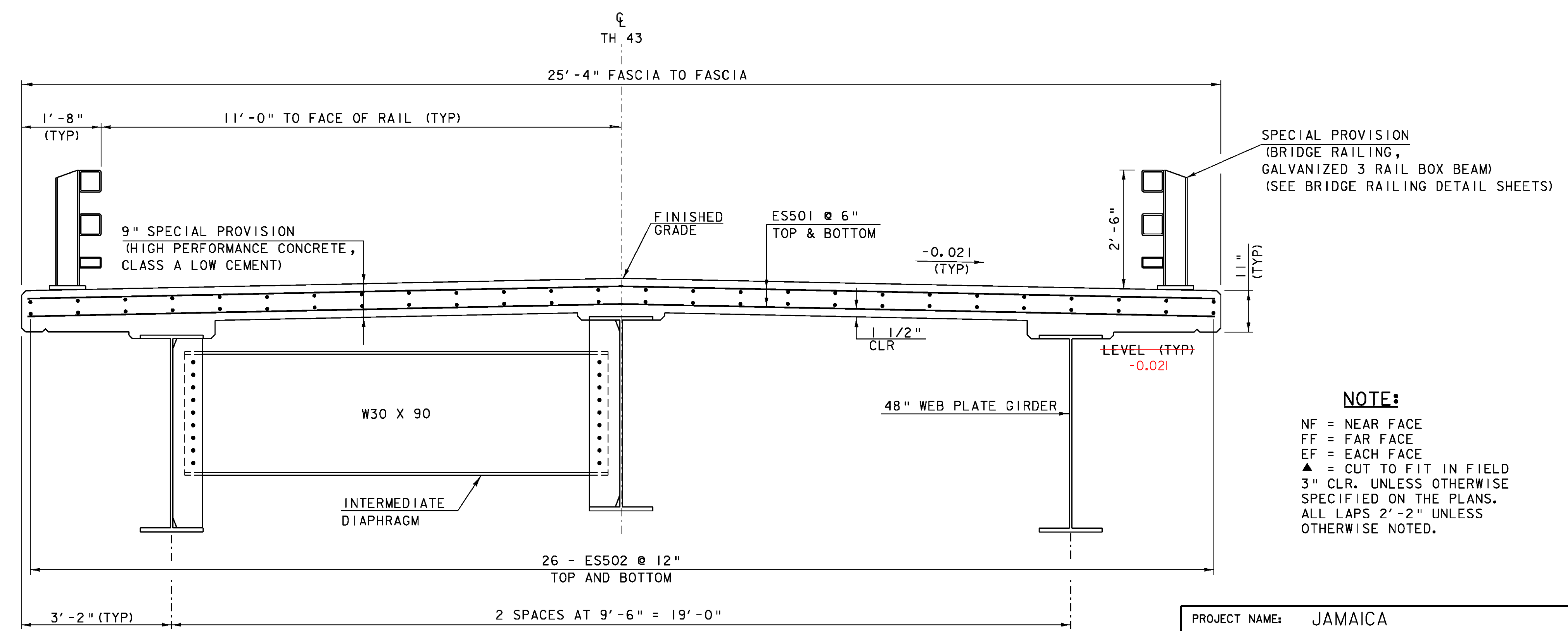
PLOT DATE: 03-NOV-2009
DRAWN BY: R. PELLETT
CHECKED BY: J. LACROIX
SHEET 16 OF 44

SCALE 1" = 10'-0"
10 0 10



SCALE $\frac{3}{16}" = 1'-0"$

0 2 4 6 8



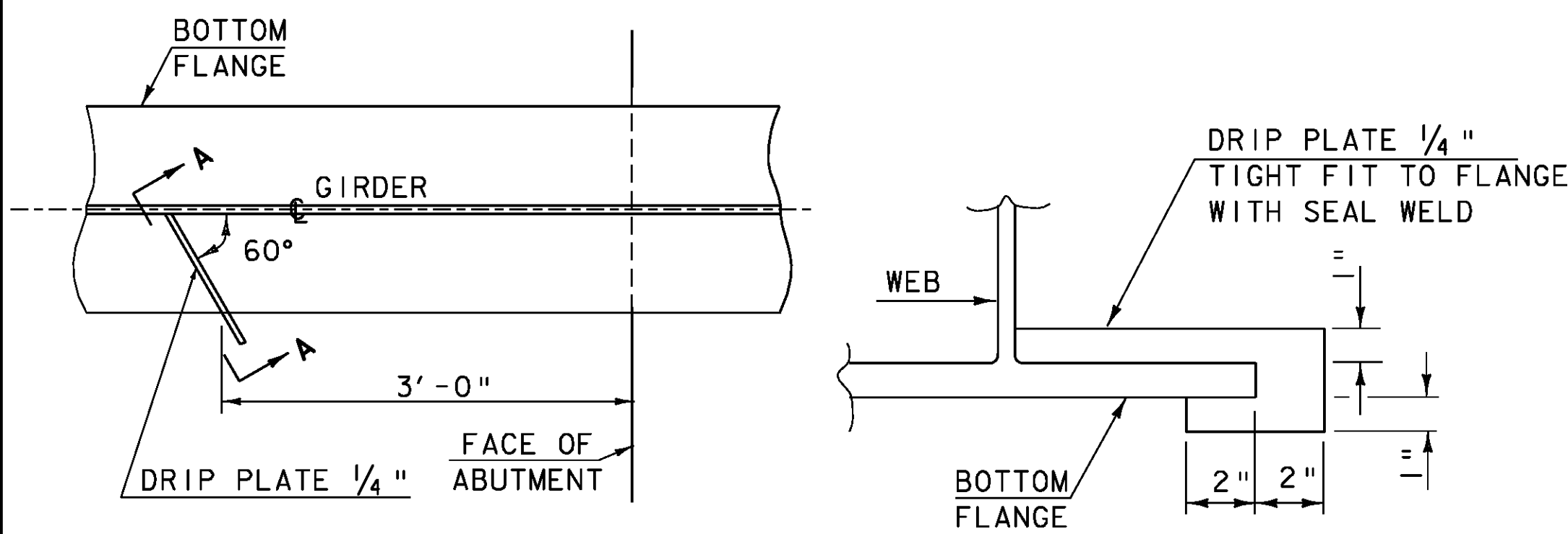
SCALE $\frac{3}{4}" = 1'-0"$

0 1 2

NOTE:

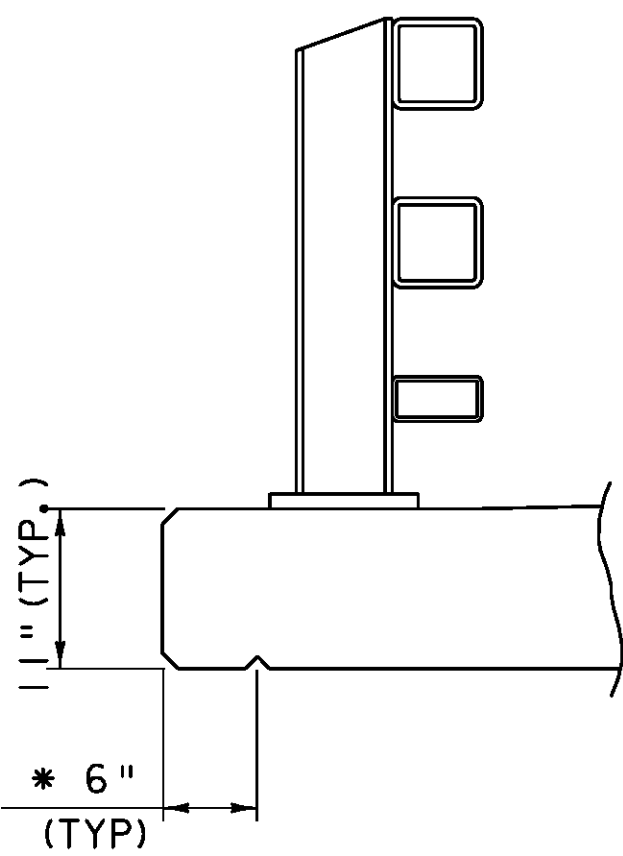
NF = NEAR FACE
 FF = FAR FACE
 EF = EACH FACE
 ▲ = CUT TO FIT IN FIELD
 3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.
 ALL LAPS 2'-2" UNLESS OTHERWISE NOTED.

PROJECT NAME:	JAMAICA
PROJECT NUMBER:	BRO 1442(27)
FILE NAME:	s96j068sup.dgn
PROJECT LEADER:	K. HIGGINS
DESIGNED BY:	J. LACROIX
DECK PLAN & TYPICAL	
PLOT DATE:	19-OCT-2009
DRAWN BY:	R. PELLETT
CHECKED BY:	J. LACROIX
SHEET	17 OF 44



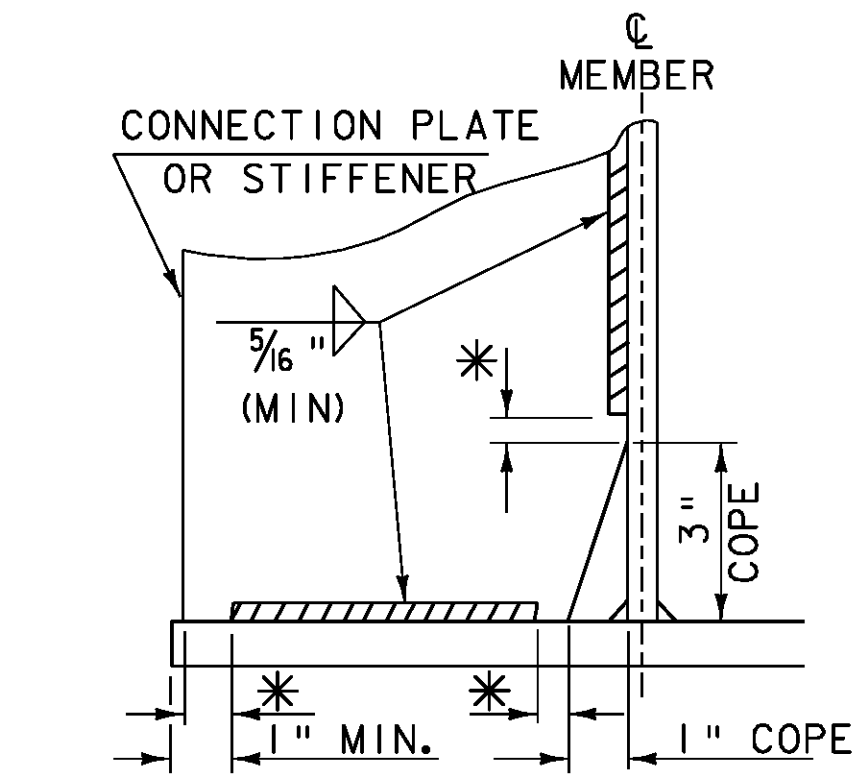
PLAN DRIP PLATE
(NOT TO SCALE)

NOTE: DRIP PLATES SHALL BE PLACED ON OUTSIDE EDGE OF FASCIA GIRDERS ON THE HIGH SIDE OF ALL PIERS AND ABUTMENTS OR AS INDICATED ON PROJECT PLANS.



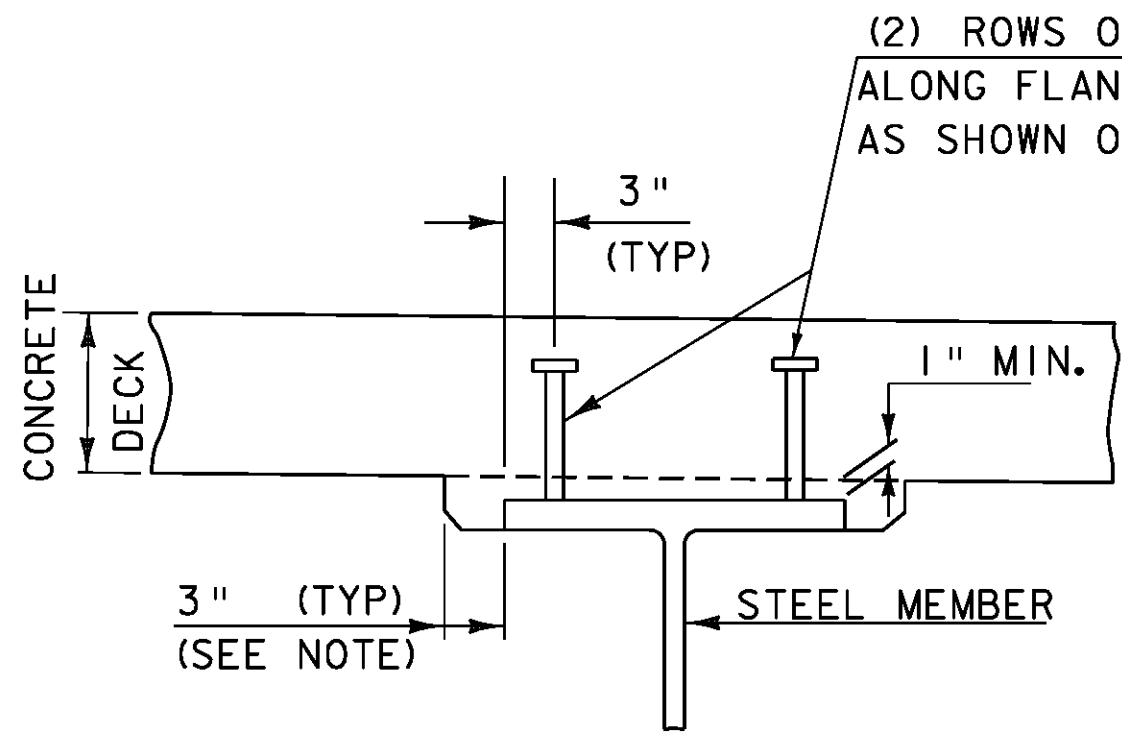
DRIP NOTCH DETAIL
(NOT TO SCALE)

* 3/4" to 2" DRIP NOTCH STOP DRIP NOTCH 3' FROM FACE OF ABUTMENT AND OUTLET @ 45 DEGREES TO FASCIA



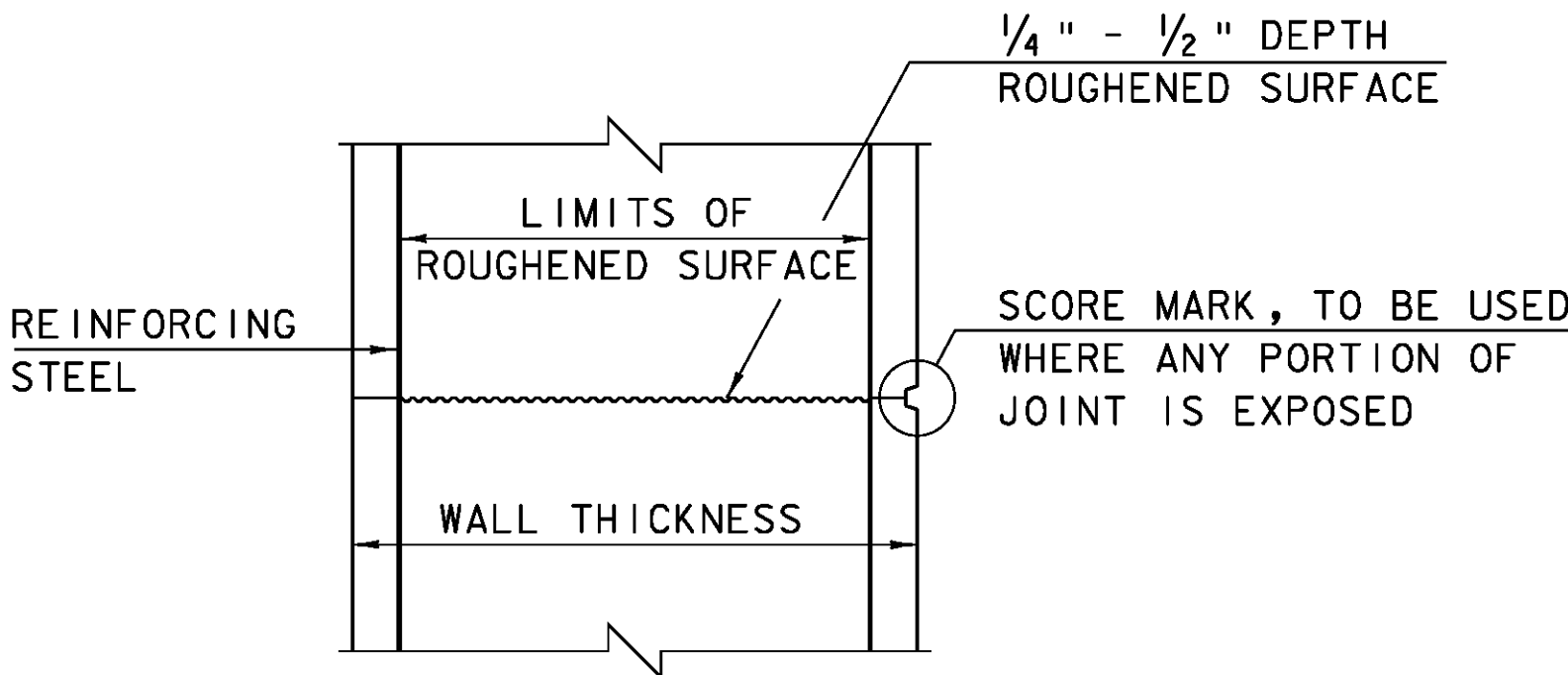
WELD TERMINATION AND COPING DETAILS FOR STEEL MEMBERS
(NOT TO SCALE)

* NO WELD FOR 3/8" MIN. 7/8" MAX. (EXCEPT MUST MAINTAIN 1" MINIMUM FROM EDGE OF FLANGE)



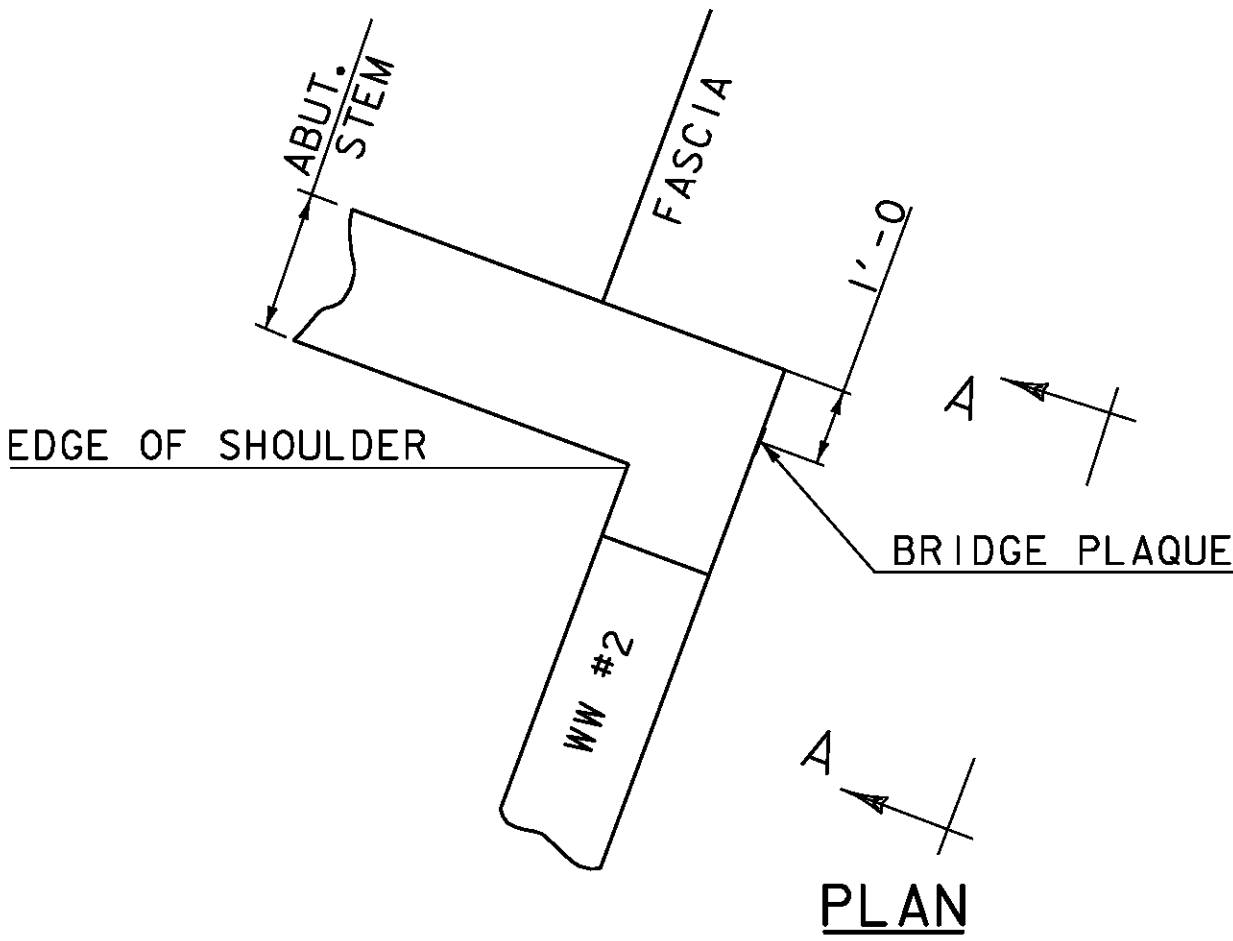
NOTE: THE 3" HORIZONTAL SECTION MAY BE ELIMINATED FOR FORMING SYSTEMS DESIGNED FOR THE CONSTRUCTION OF VERTICAL HAUNCHES. ANY VOIDS RESULTING FROM FORMING SYSTEM ELEMENTS SHALL BE FILLED WITH JOINT SEALER, POLYURETHANE MEETING THE REQUIREMENTS OF SECTION 524. THE COST OF THE JOINT SEALER, POLYURETHANE SHALL BE INCIDENTAL TO THE ADJACENT CONCRETE.

HAUNCH AND SHEAR CONNECTOR DETAIL
(NOT TO SCALE)



TYPICAL HORIZONTAL CONSTRUCTION JOINT
(NOT TO SCALE)

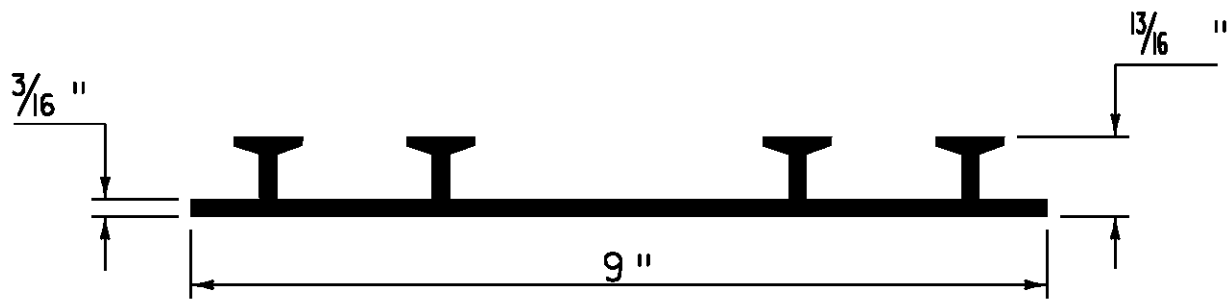
1. THE SURFACE OF THE CONCRETE CONSTRUCTION JOINTS SHALL BE CLEANED AND FREE OF LAITANCE.
2. IMMEDIATELY BEFORE NEW CONCRETE IS PLACED, ALL CONSTRUCTION JOINTS SHALL BE WETTED AND STANDING WATER REMOVED.



BRIDGE PLAQUE
(NOT TO SCALE)

THE 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.

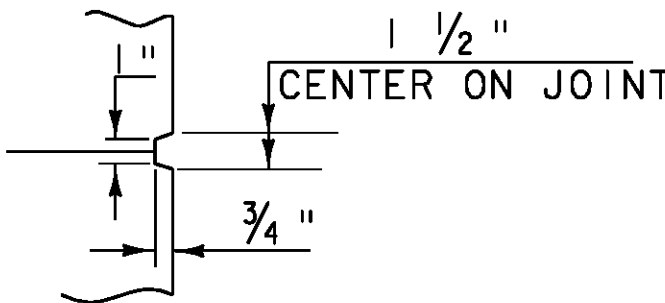
PAYMENT FOR INSTALLATION OF THE BRIDGE PLAQUE SHALL BE INCIDENTAL TO THE ADJACENT CONCRETE.



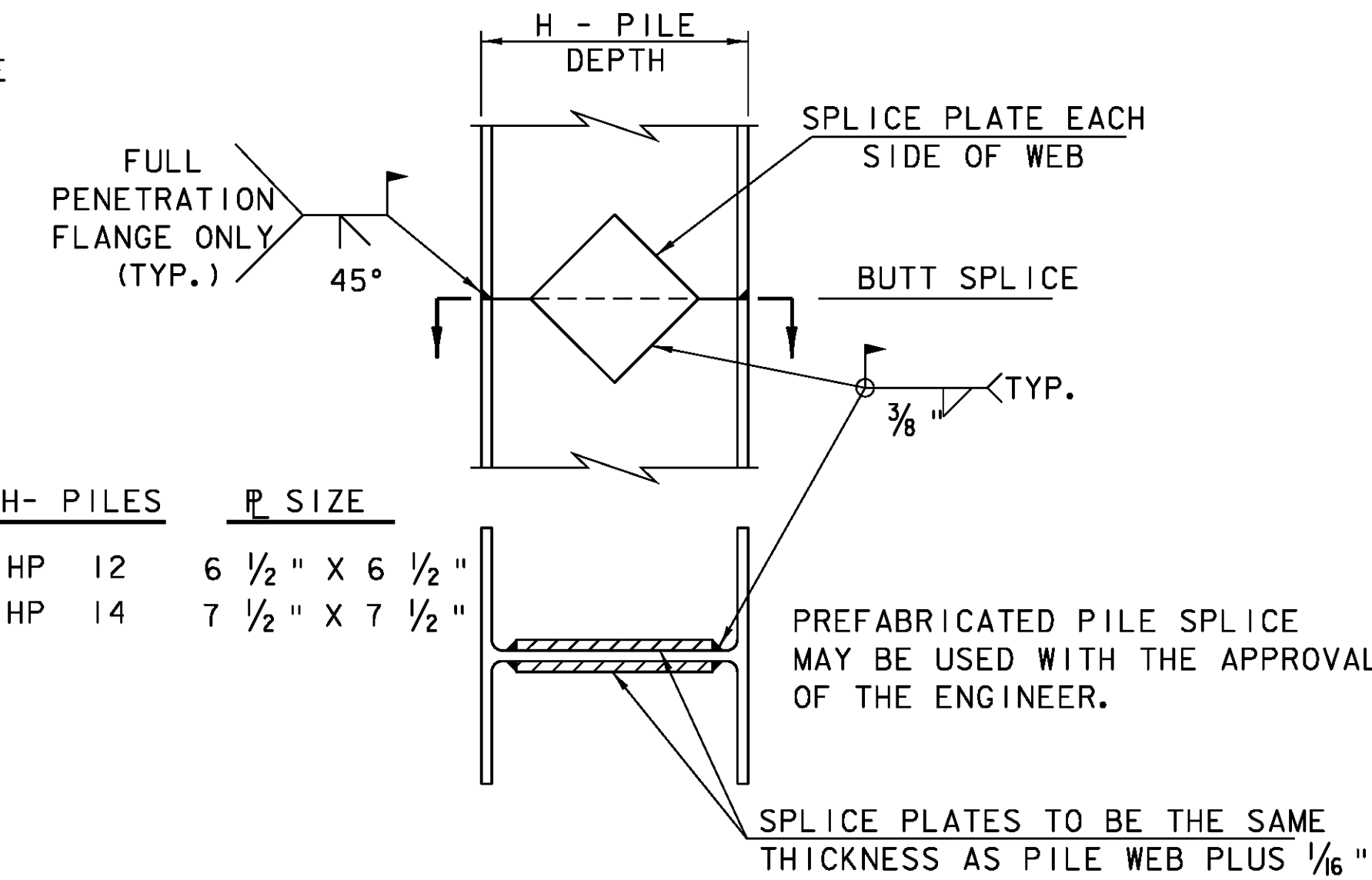
P.V.C. WATERSTOP FOR CONSTRUCTION JOINTS
(NOT TO SCALE)

PAYMENT FOR THE P.V.C. WATERSTOP SHALL BE INCIDENTAL TO THE UNIT BID PRICE FOR THE ADJACENT CONCRETE.

OTHER CONFIGURATIONS OF WATERSTOP MAY BE USED UPON APPROVAL OF THE ENGINEER.



SCORE MARK DETAIL
(NOT TO SCALE)

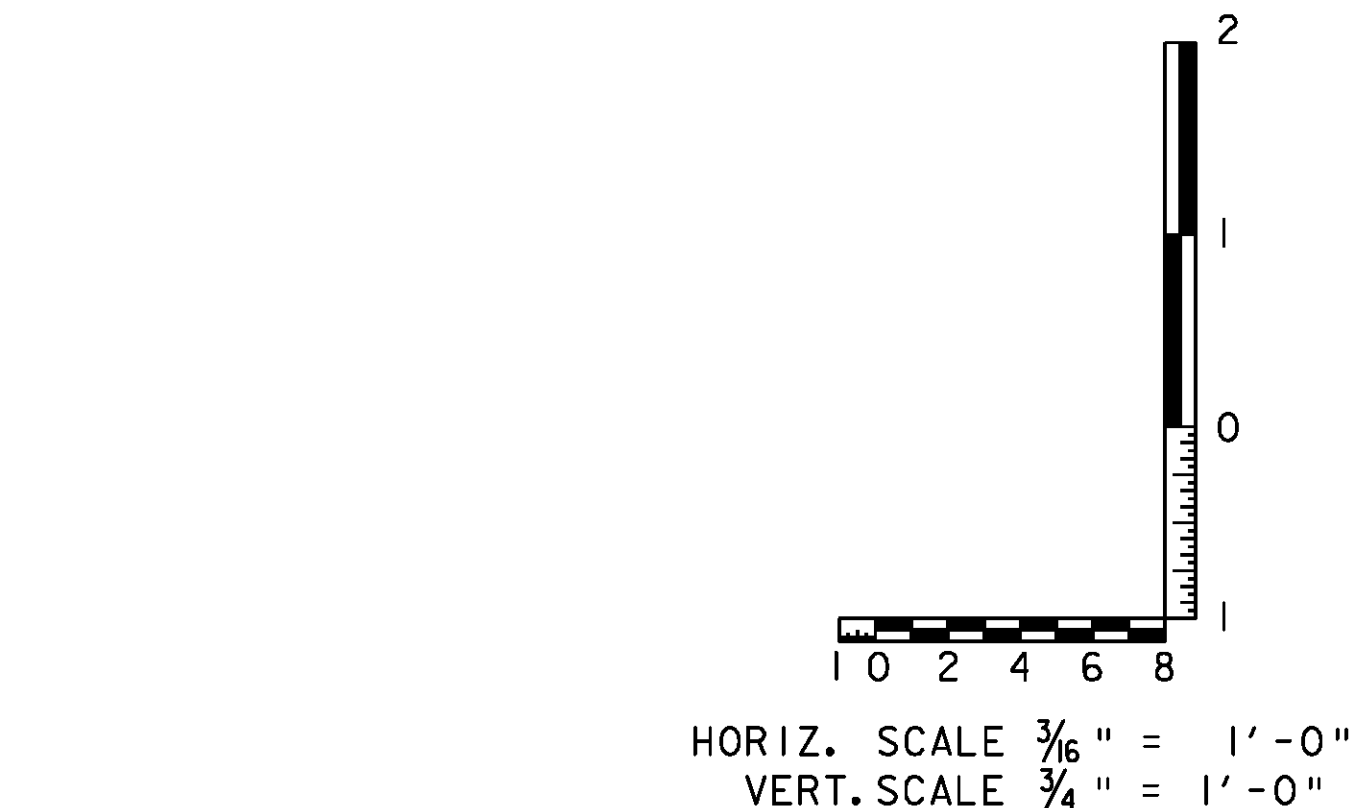
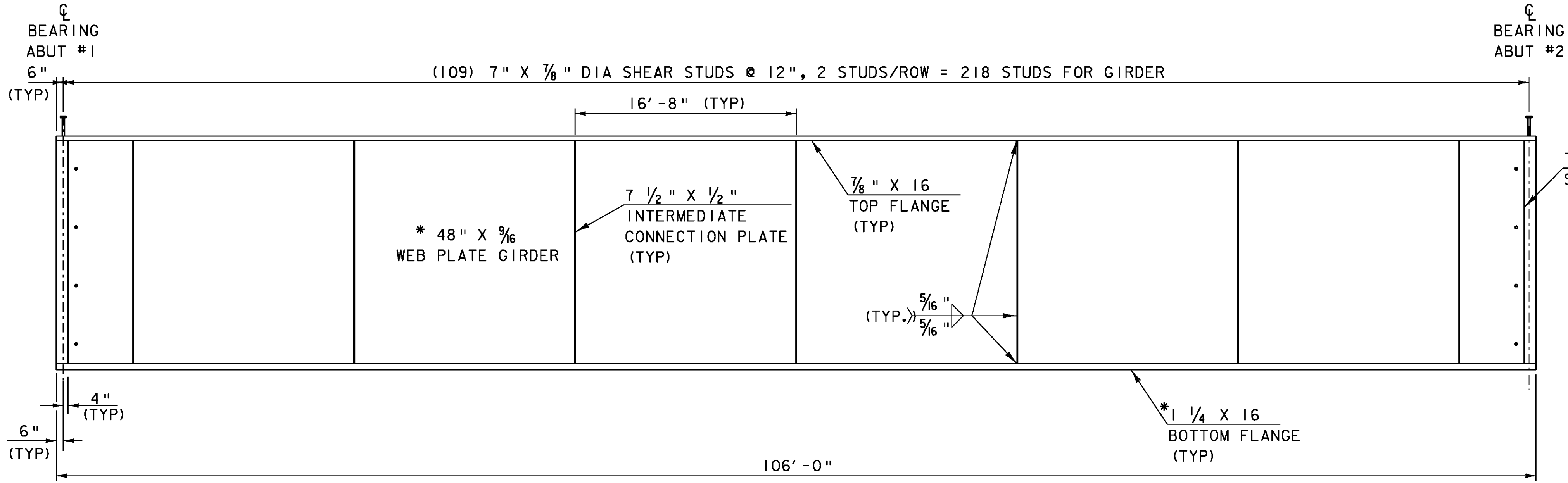


DETAIL OF PILE SPLICE
(NOT TO SCALE)

PROJECT NAME: JAMAICA
PROJECT NUMBER: BRO 1442(27)

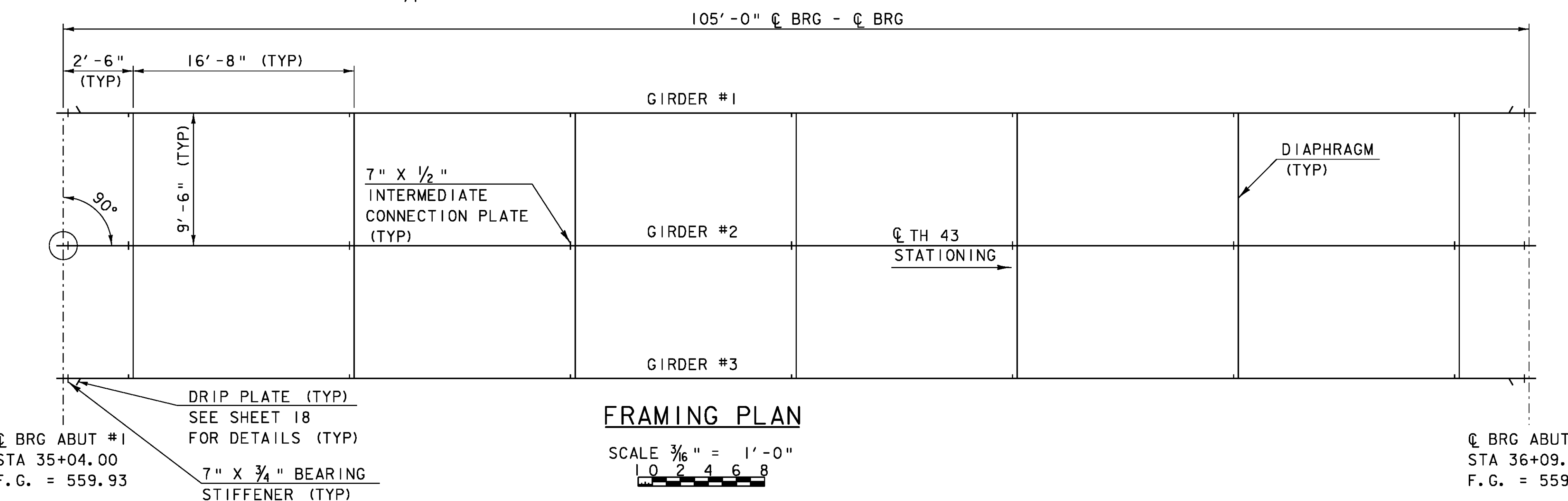
FILE NAME: s96j068det.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. LACROIX
MISCELLANEOUS DETAILS

PLOT DATE: 19-OCT-2009
DRAWN BY: K. PATTERSON
CHECKED BY: J. LACROIX
SHEET 18 OF 44

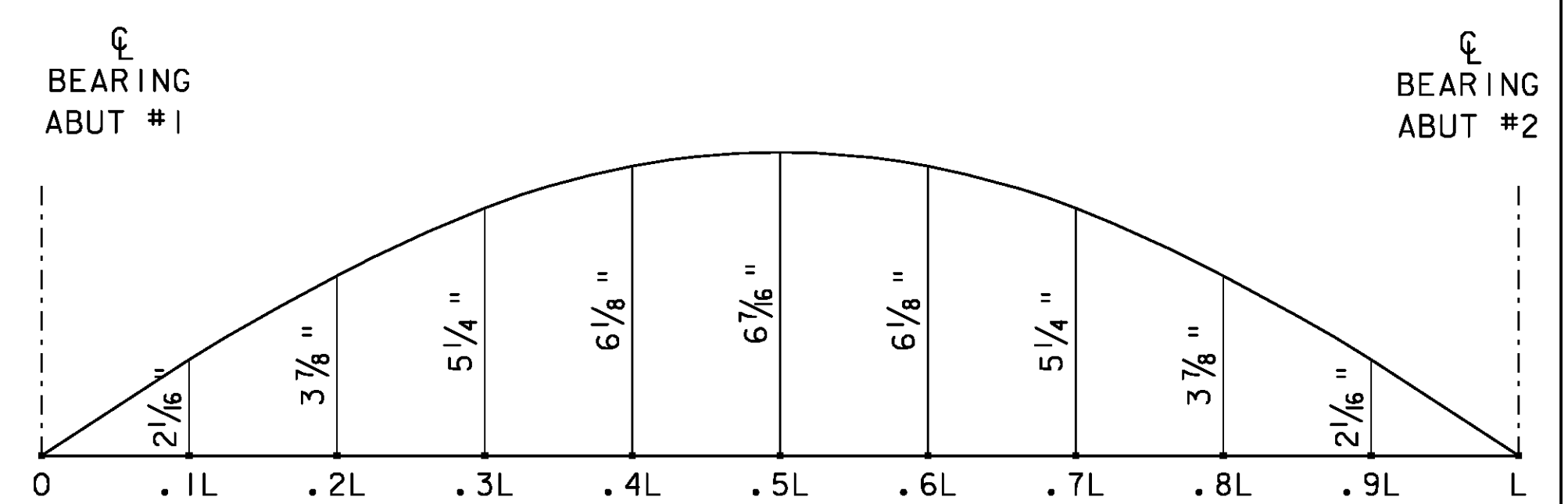
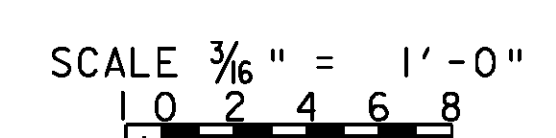


FRAMING PLAN

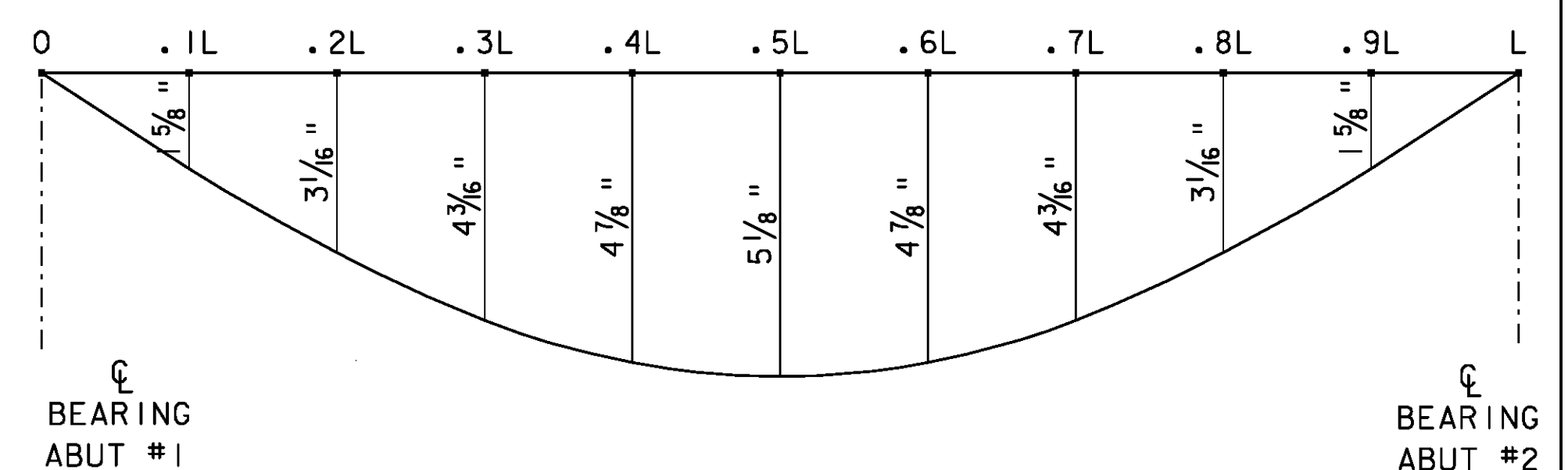
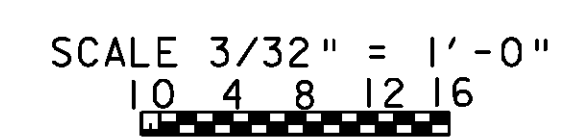
*DENOTES FRACTURE CRITICAL MEMBER
SEE GENERAL NOTES



FRAMING PLAN



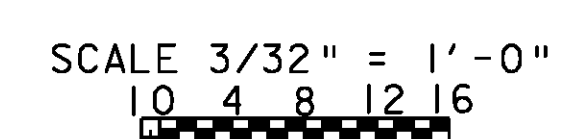
CAMBER DIAGRAM



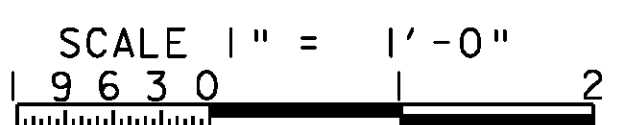
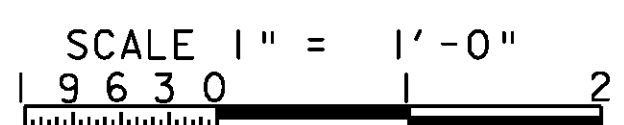
DEFLECTION IS AFTER DEAD LOADS
HAVE BEEN APPLIED

DEAD LOAD DEFLECTION DIAGRAM

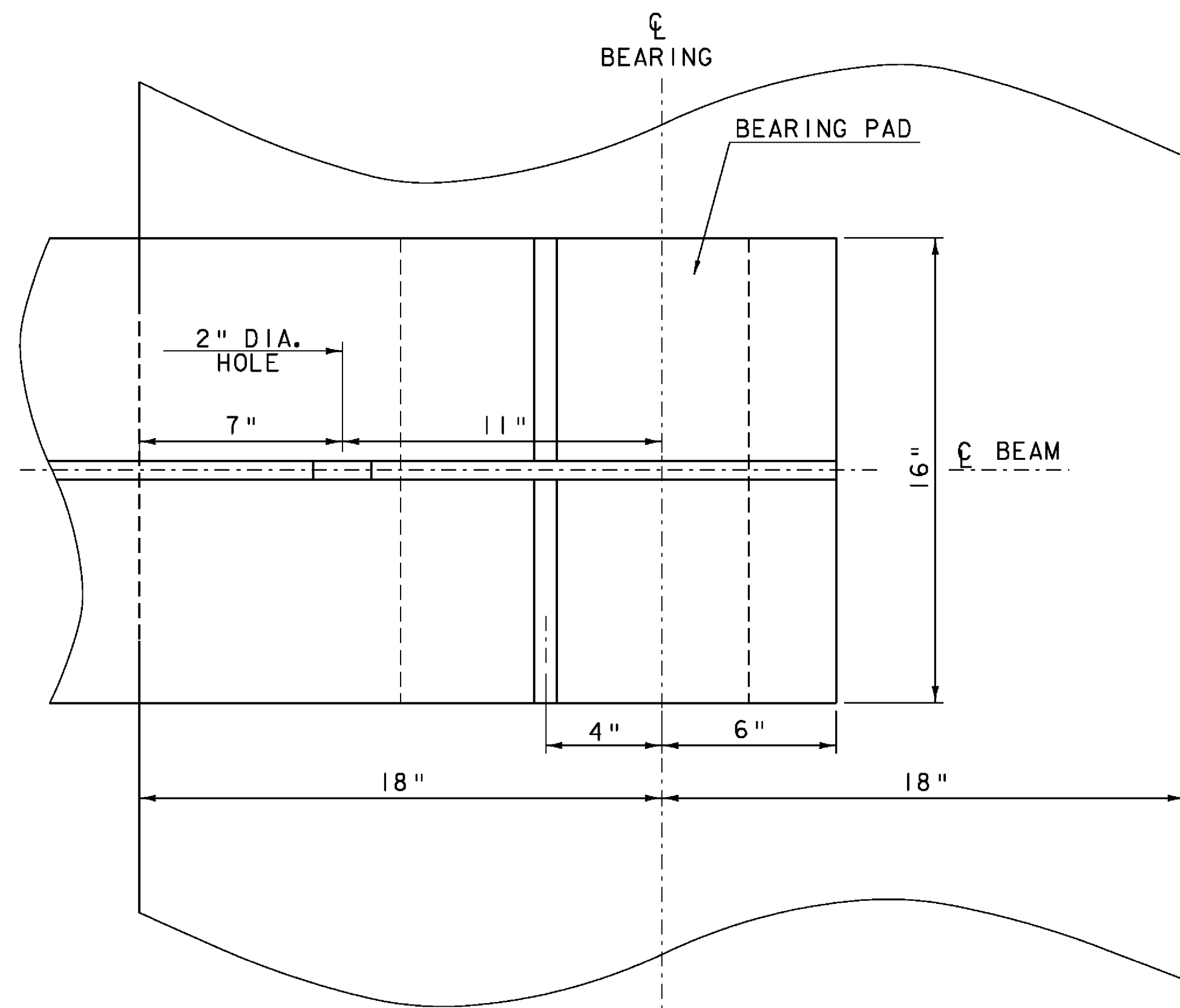
NOTE: DEAD LOAD DEFLECTION INCLUDES
THE GIRDER SELF-WEIGHT.



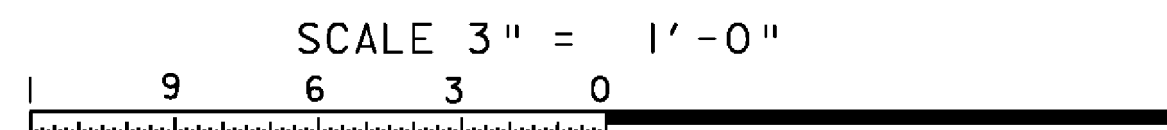
PROJECT NAME: JAMAICA	
PROJECT NUMBER: BRO 1442(27)	
FILE NAME: s96j068de+.dgn	PLOT DATE: 19-OCT-2009
PROJECT LEADER: K. HIGGINS	DRAWN BY: R. PELLETT
DESIGNED BY: J. LACROIX	CHECKED BY: J. LACROIX
FRAMING PLAN & CAMBER DIAGRAM	SHEET 19 OF 44



PROJECT NAME:	JAMACIA
PROJECT NUMBER:	BRO 1442(27)
FILE NAME: s96J068def.dgn	PLOT DATE: 19-OCT-2009
PROJECT LEADER: K. HIGGINS	DRAWN BY: K. PATTERSON
DESIGNED BY: J. LACROIX	CHECKED BY: J. LACROIX
DIAPHRAGM DETAILS	SHEET 20 OF 44

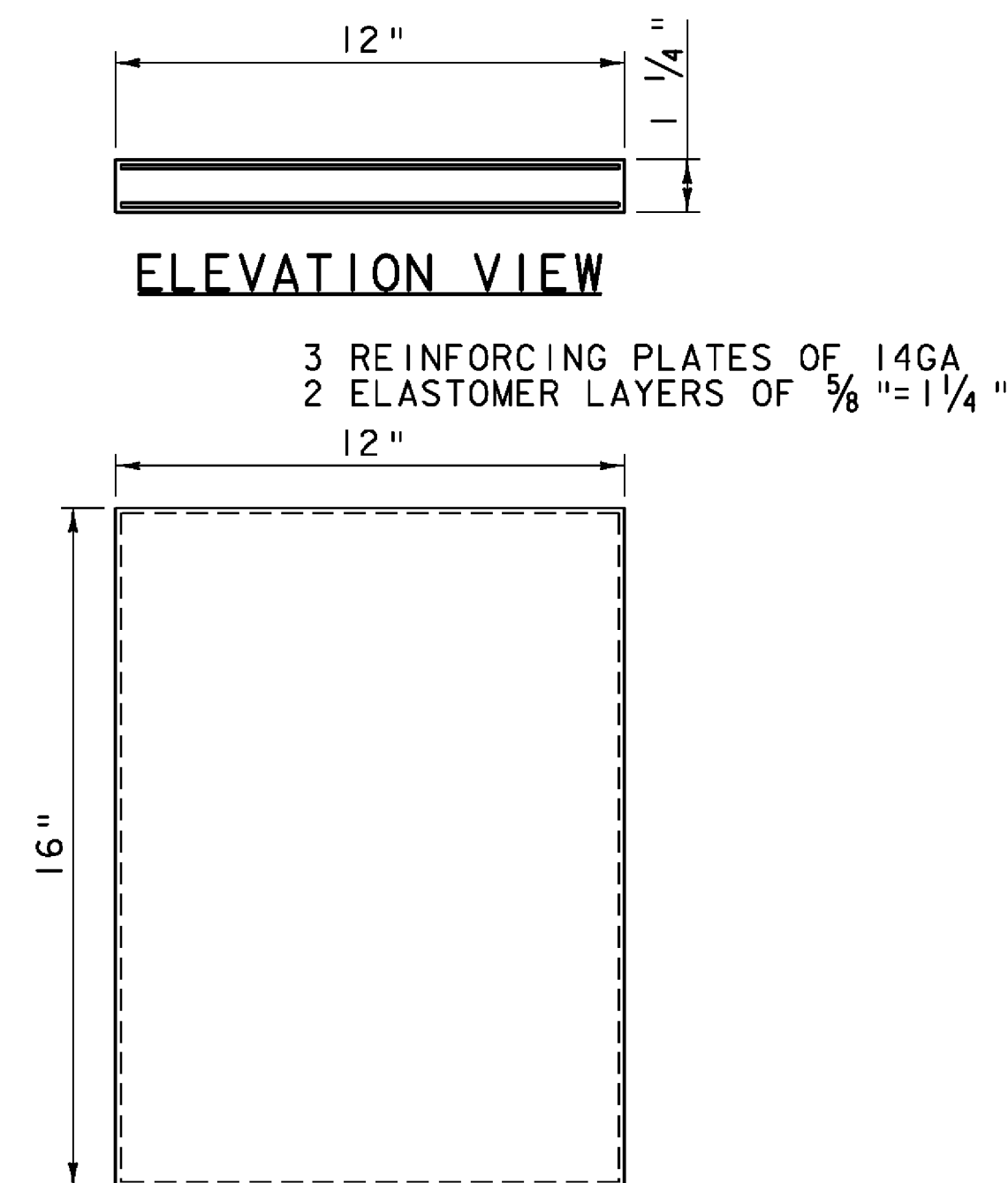


PLAN VIEW - END OF
STEEL MEMBER AT ABUTMENT

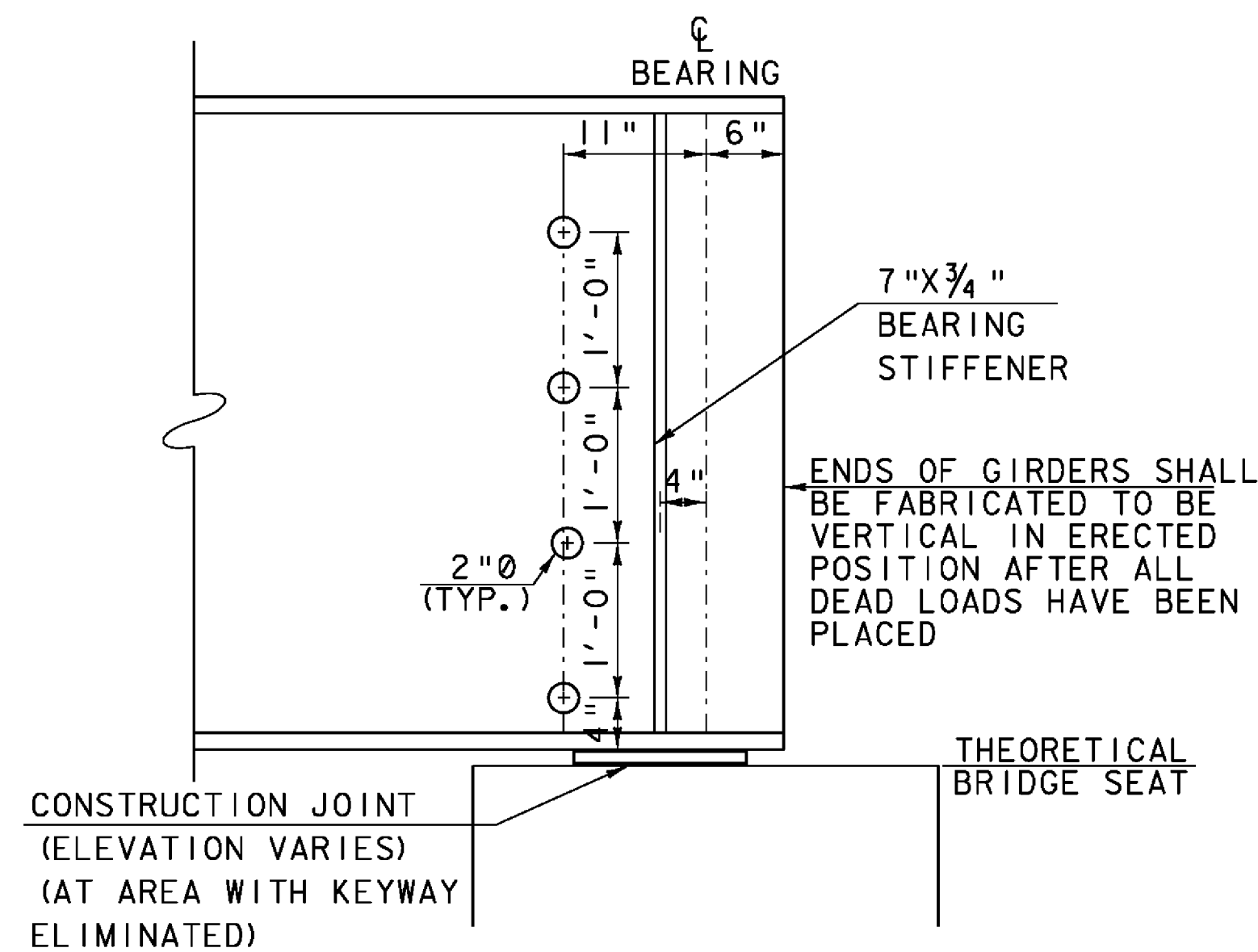
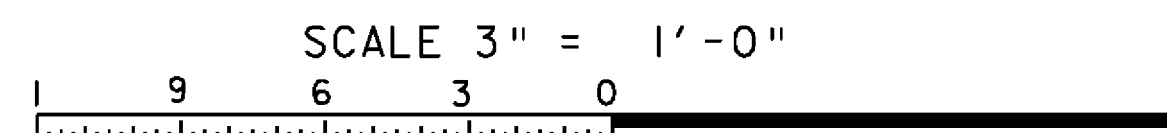


NOTES:

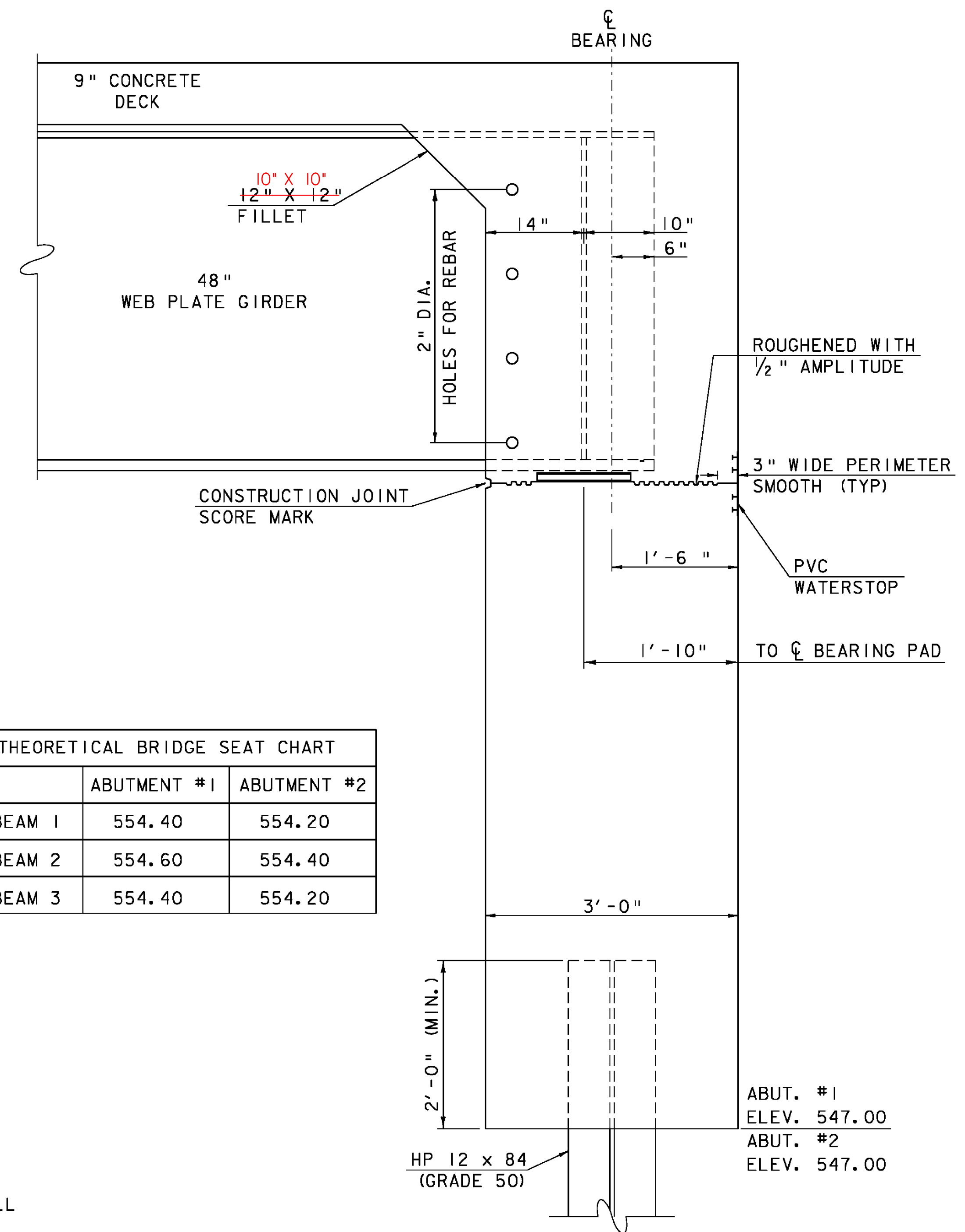
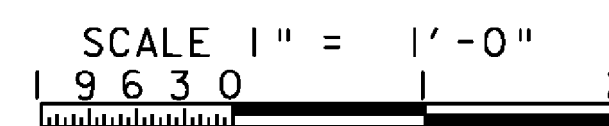
1. THE STEEL REINFORCED ELASTOMER SHALL BE PAID FOR UNDER ITEM 531.11 " BEARING DEVICE ASSEMBLY, ELASTOMERIC PAD" AND SHALL CONFORM TO SECTION 531.
2. ALL STEEL IN BEARING DEVICE ASSEMBLY SHALL BE AASHTO M270M/M270 GRADE 50 UNLESS OTHERWISE NOTED.
3. SUBSTITUTIONS FOR BEARING DEVICE ASSEMBLY COMPONENT MATERIALS AND SIZES SHALL BE DETAILED ON THE FABRICATION DRAWINGS. ALL SUBSTITUTIONS SHALL BE APPROVED BY THE STRUCTURES ENGINEER PRIOR TO FABRICATION AS PER SUBSECTIONS 506.04 AND 531.03 OF THE STANDARD SPECIFICATIONS.
4. ELASTOMER SHALL HAVE A NOMINAL HARDNESS OF 60 ON SHORE 'A' SCALE. ELASTOMER SHALL HAVE A SHEAR MODULUS BETWEEN 130 PSI AND 200 PSI. THE RAW ELASTOMER SHALL BE TEMPERATURE GRADE 3 AS DEFINED IN TABLE 18.4.5.1-1a OF AASHTO, DIVISION 11, SECTION 18. NO FABRIC REINFORCEMENT WILL BE ALLOWED IN ELASTOMERIC PADS.
5. STEEL REINFORCED ELASTOMERIC BEARINGS SHALL HAVE A MINIMUM OF 1/8 INCH EDGE SEAL OF ELASTOMER INTEGRAL WITH BEARING OVER ALL INTERNAL PLATES.
6. THE CONCRETE SURFACE UNDER THE BEARING DEVICE SHALL BE LEVEL.



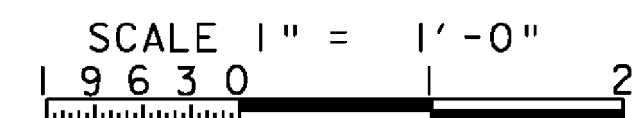
PLAN VIEW
STEEL REINFORCED ELASTOMER



ELEVATION VIEW - END OF
STEEL MEMBER AT ABUTMENT



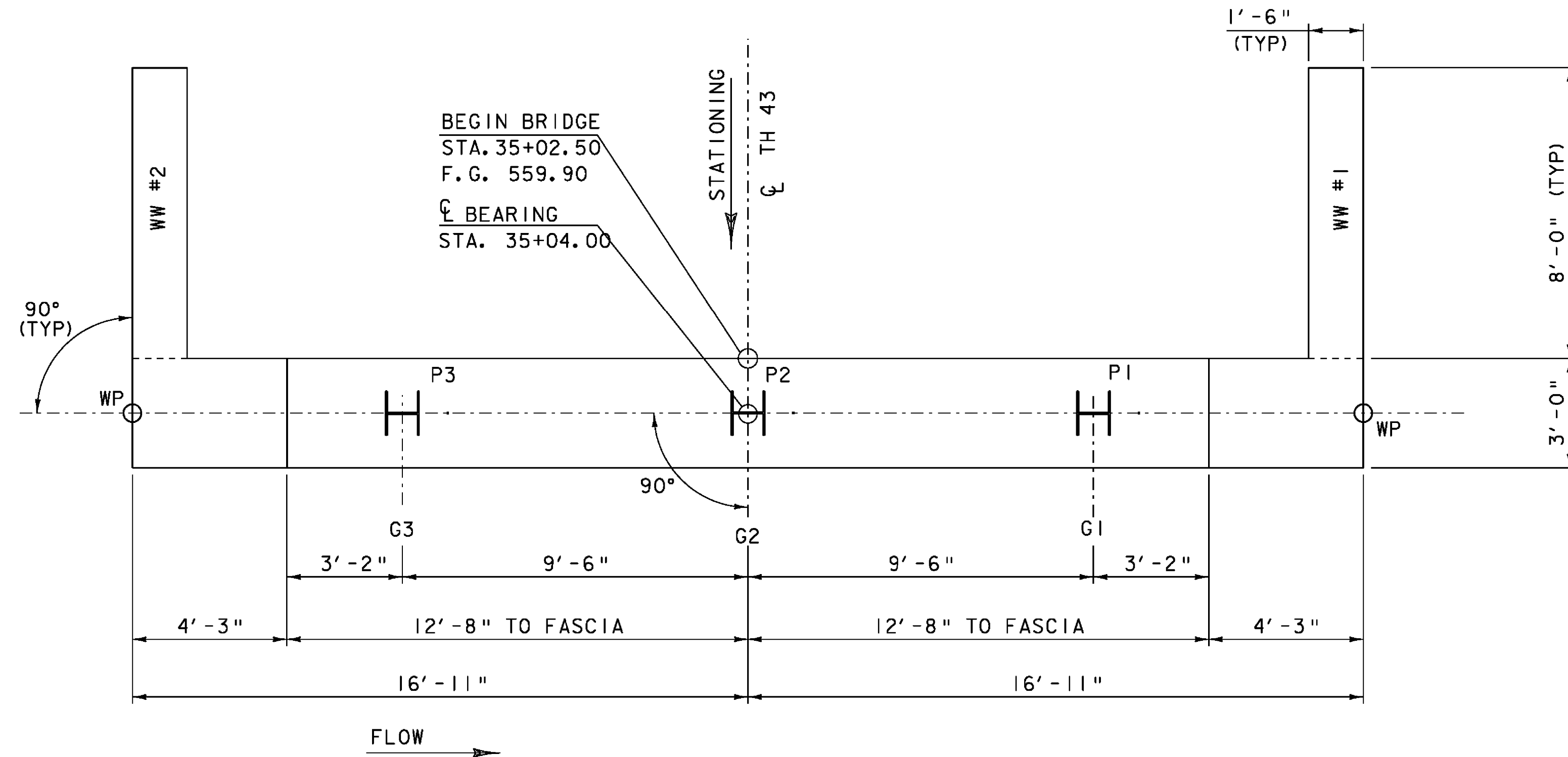
ELEVATION VIEW - END OF
STEEL MEMBER AT ABUTMENT



THEORETICAL BRIDGE SEAT CHART		
	ABUTMENT #1	ABUTMENT #2
BEAM 1	554.40	554.20
BEAM 2	554.60	554.40
BEAM 3	554.40	554.20

HP 12 x 84 (GRADE 50)	ABUT. #1 ELEV. 547.00
	ABUT. #2 ELEV. 547.00

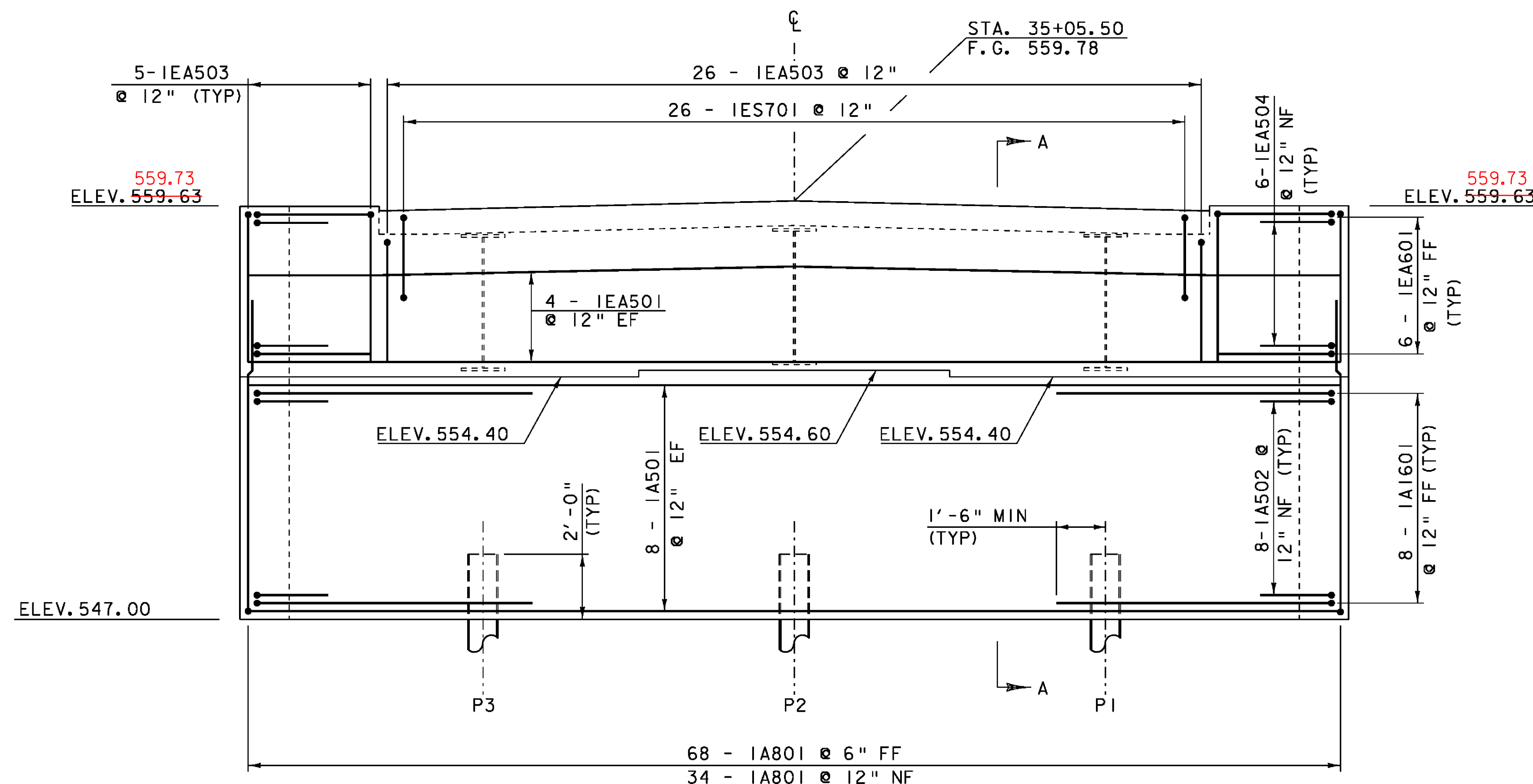
PROJECT NAME: JAMAICA	
PROJECT NUMBER: BRO 1442(27)	
FILE NAME: s96j068sub.dgn	PLOT DATE: 19-OCT-2009
PROJECT LEADER: K. HIGGINS	DRAWN BY: K. PATTERSON
DESIGNED BY: J. LACROIX	CHECKED BY: J. LACROIX
BRIDGE END DETAILS	SHEET 21 OF 44



ABUTMENT #1 PLAN

SCALE $\frac{3}{8}" = 1'-0"$

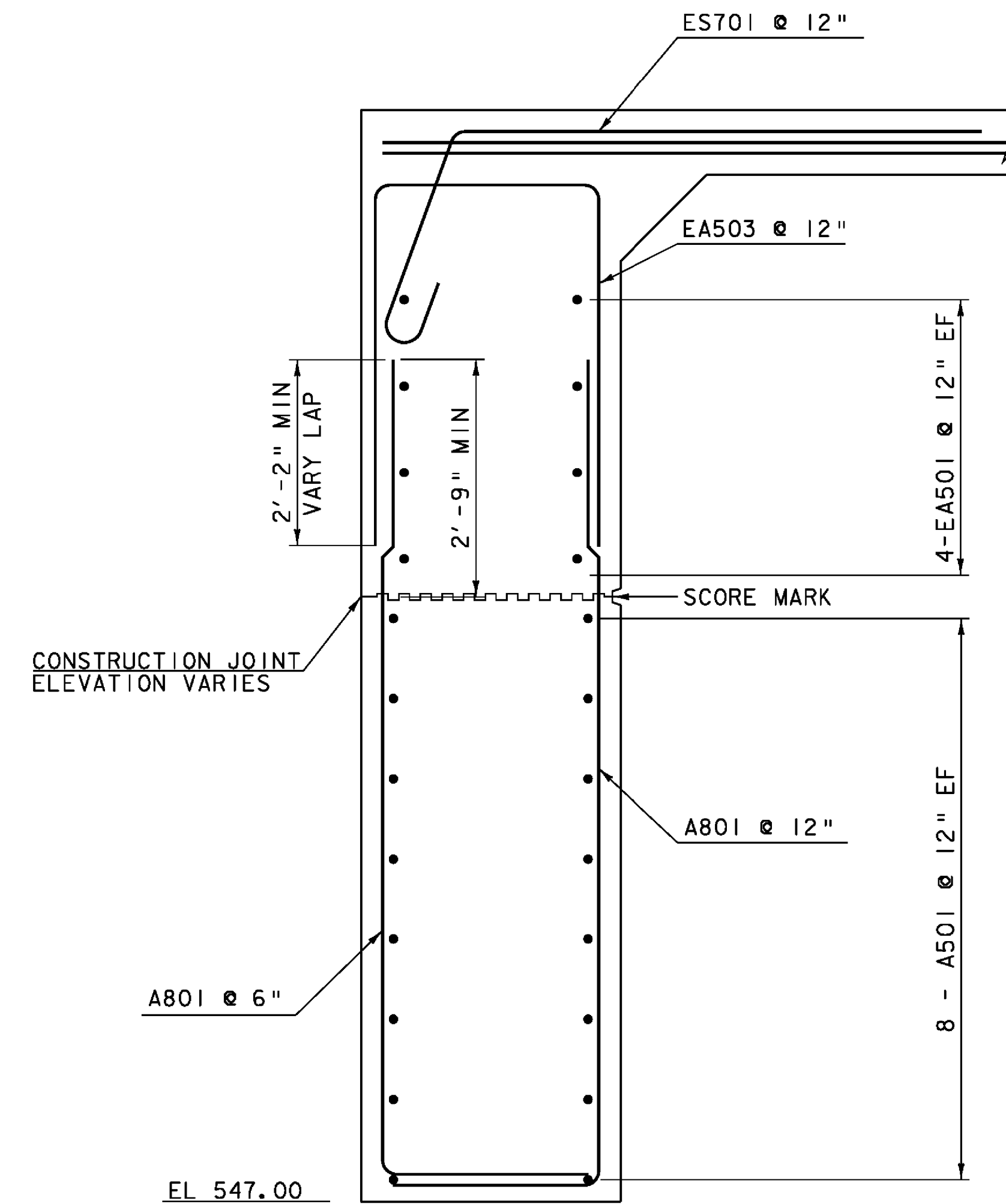
0 1 2 3 4



ABUTMENT #1 ELEVATION

SCALE $\frac{3}{8}" = 1'-0"$

0 1 2 3 4



**SECTION A-A
ABUTMENT TYPICAL**

SCALE $\frac{3}{4}" = 1'-0"$

0 1 2

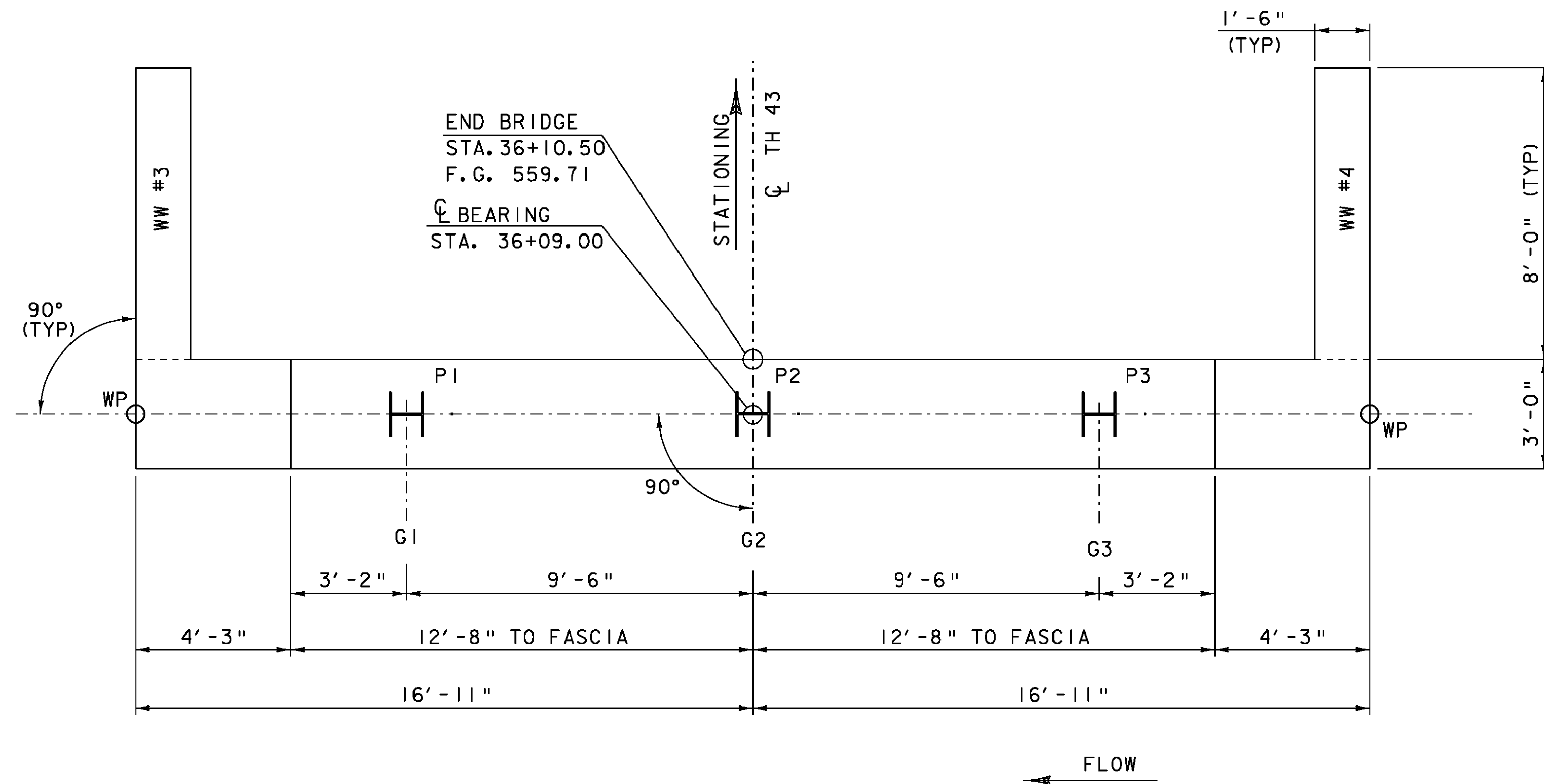
NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE
SPECIFIED ON THE PLANS.
ALL LAPS 2'-2" UNLESS
OTHERWISE NOTED.

PROJECT NAME: JAMAICA
PROJECT NUMBER: BRO 1442(27)

FILE NAME: s96j068sub.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. LACROIX
ABUTMENT #1

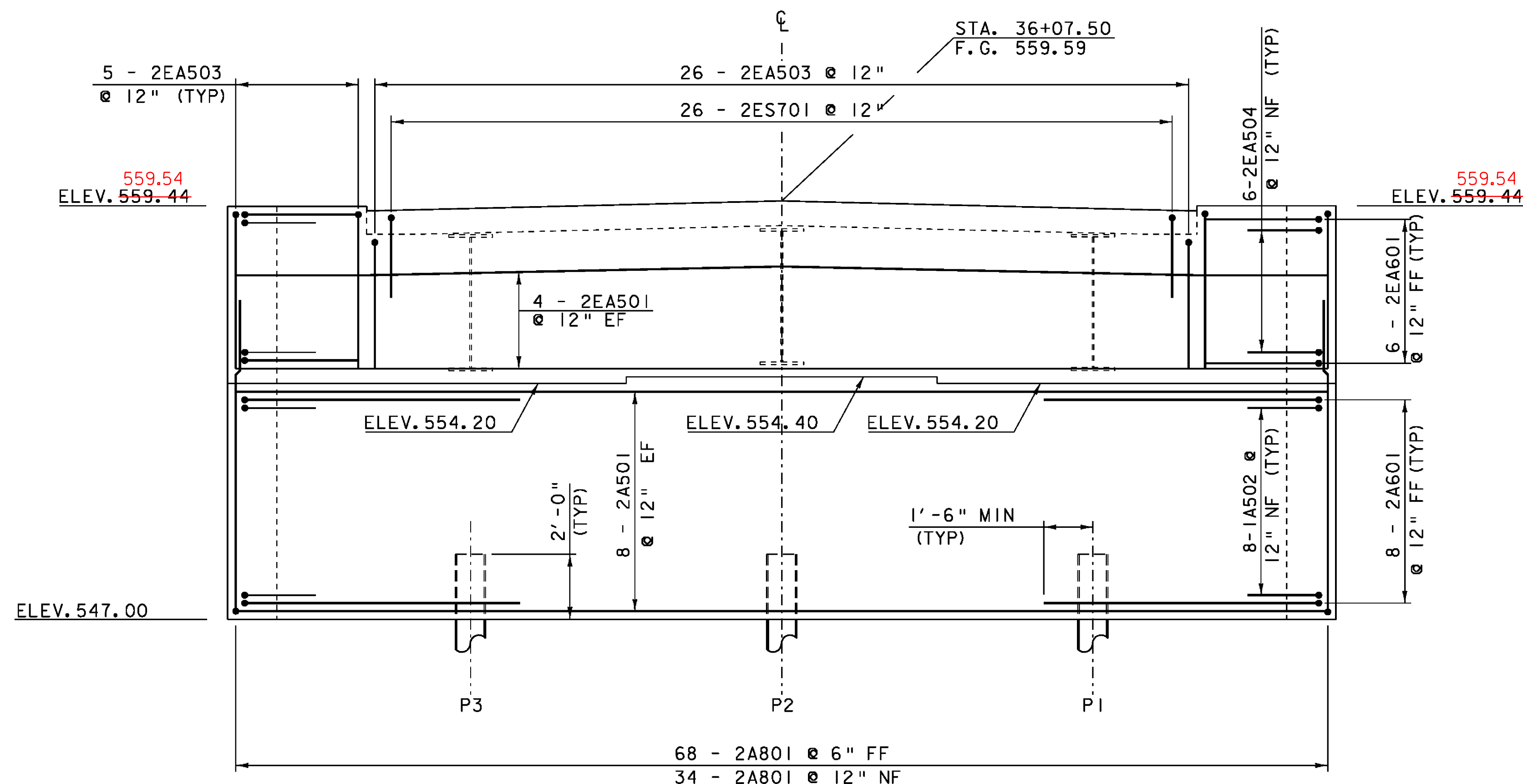
PLOT DATE: 19-OCT-2009
DRAWN BY: R. PELLETT
CHECKED BY: J. LACROIX
SHEET 22 OF 44



ABUTMENT #2 PLAN

SCALE $\frac{3}{8}" = 1'-0"$

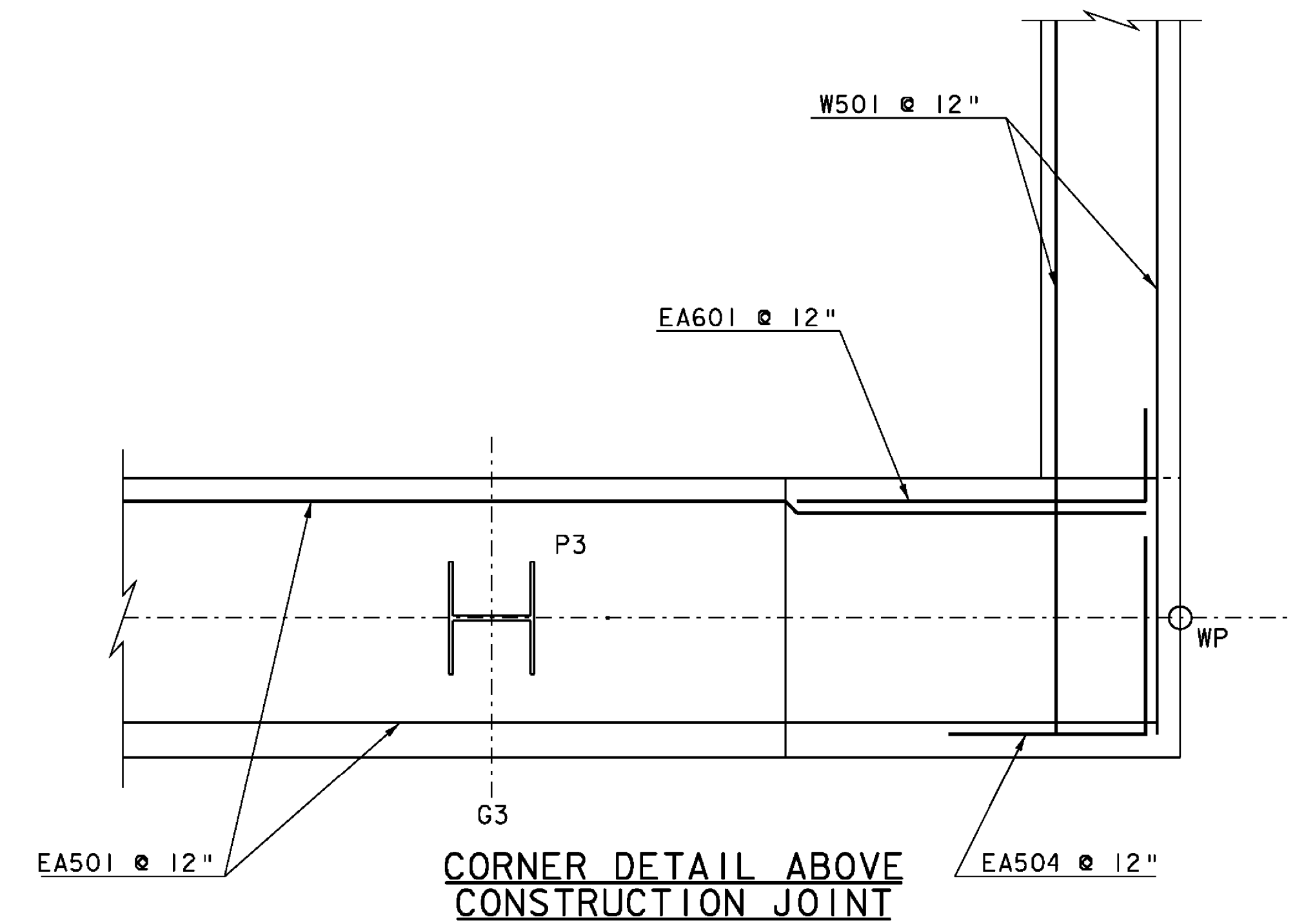
0 1 2 3 4



ABUTMENT #2 ELEVATION

SCALE $\frac{3}{8}" = 1'-0"$

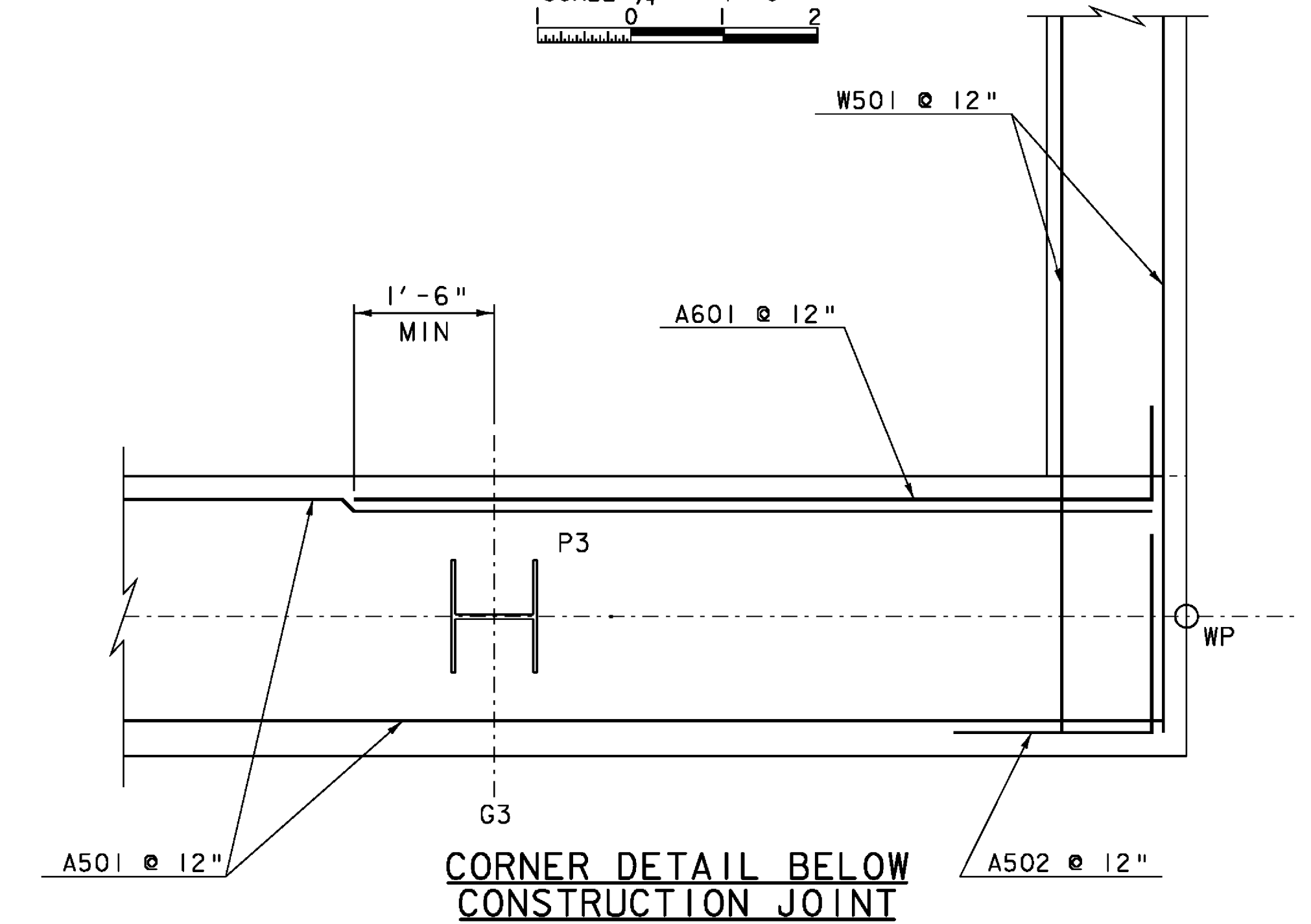
0 1 2 3 4



CORNER DETAIL ABOVE CONSTRUCTION JOINT

SCALE $\frac{3}{4}" = 1'-0"$

0 1 2



CORNER DETAIL BELOW CONSTRUCTION JOINT

SCALE $\frac{3}{4}" = 1'-0"$

0 1 2

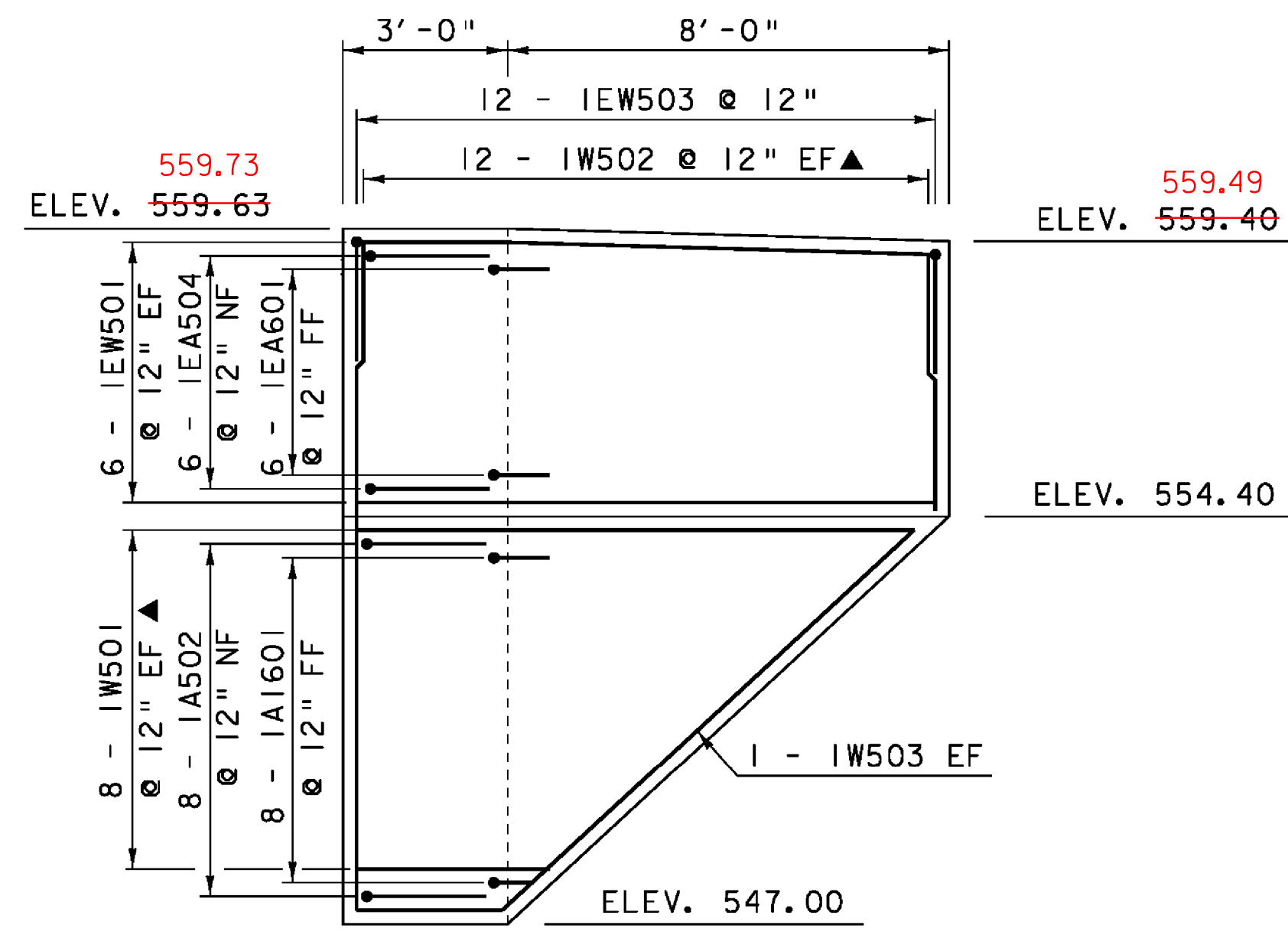
NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE
SPECIFIED ON THE PLANS.
ALL LAPS 2'-2" UNLESS
OTHERWISE NOTED.

PROJECT NAME: JAMAICA
PROJECT NUMBER: BRO 1442(27)

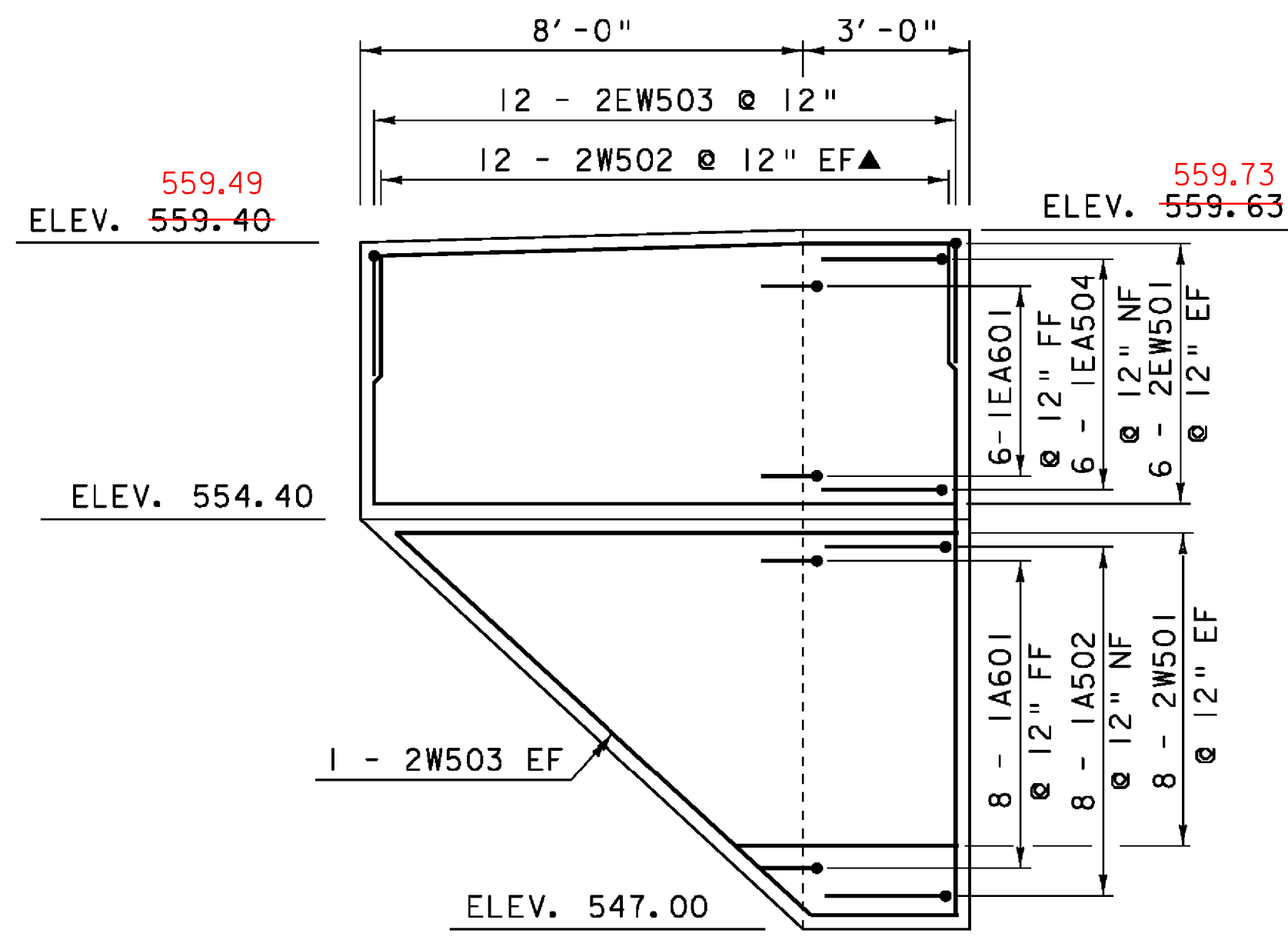
FILE NAME: s96j068sub.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. LACROIX
ABUTMENT #2

PLOT DATE: 19-OCT-2009
DRAWN BY: R. PELLETT
CHECKED BY: J. LACROIX
SHEET 23 OF 44



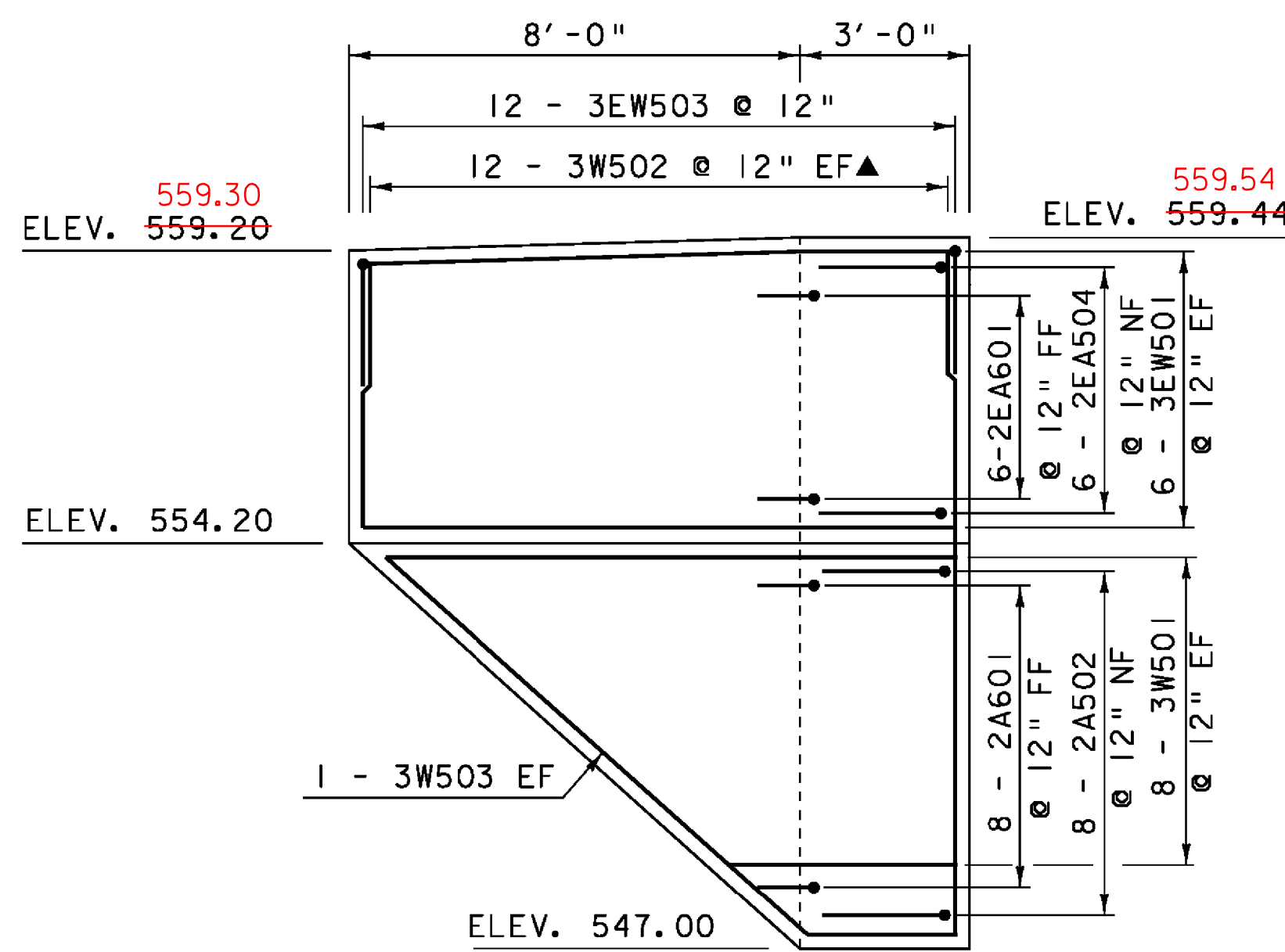
WINGWALL #1 ELEVATION

SCALE $\frac{3}{8}$ " = 1'-0"
 0 1 2 3 4



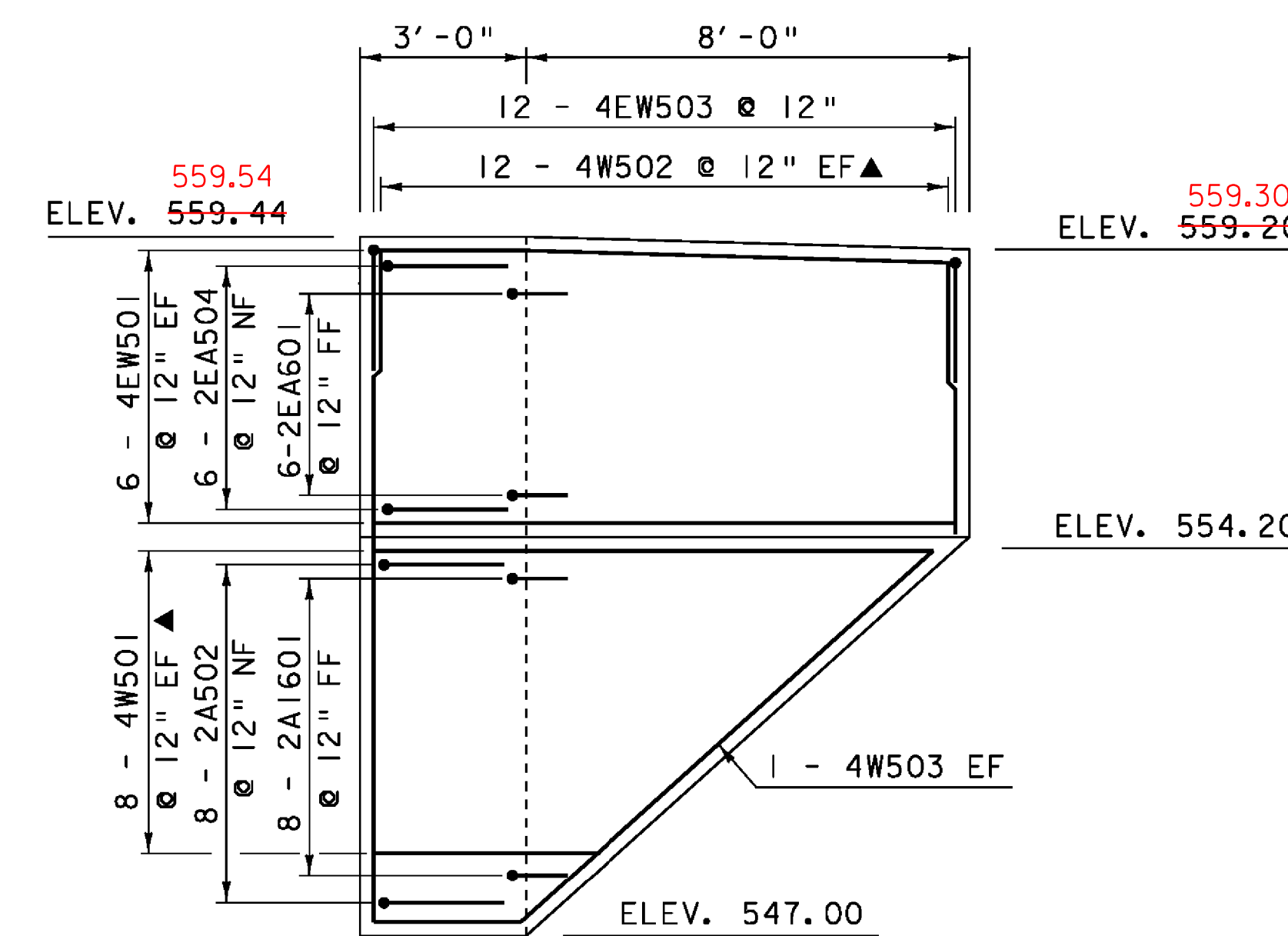
WINGWALL #2 ELEVATION

SCALE $\frac{3}{8}$ " = 1'-0"
 0 1 2 3 4



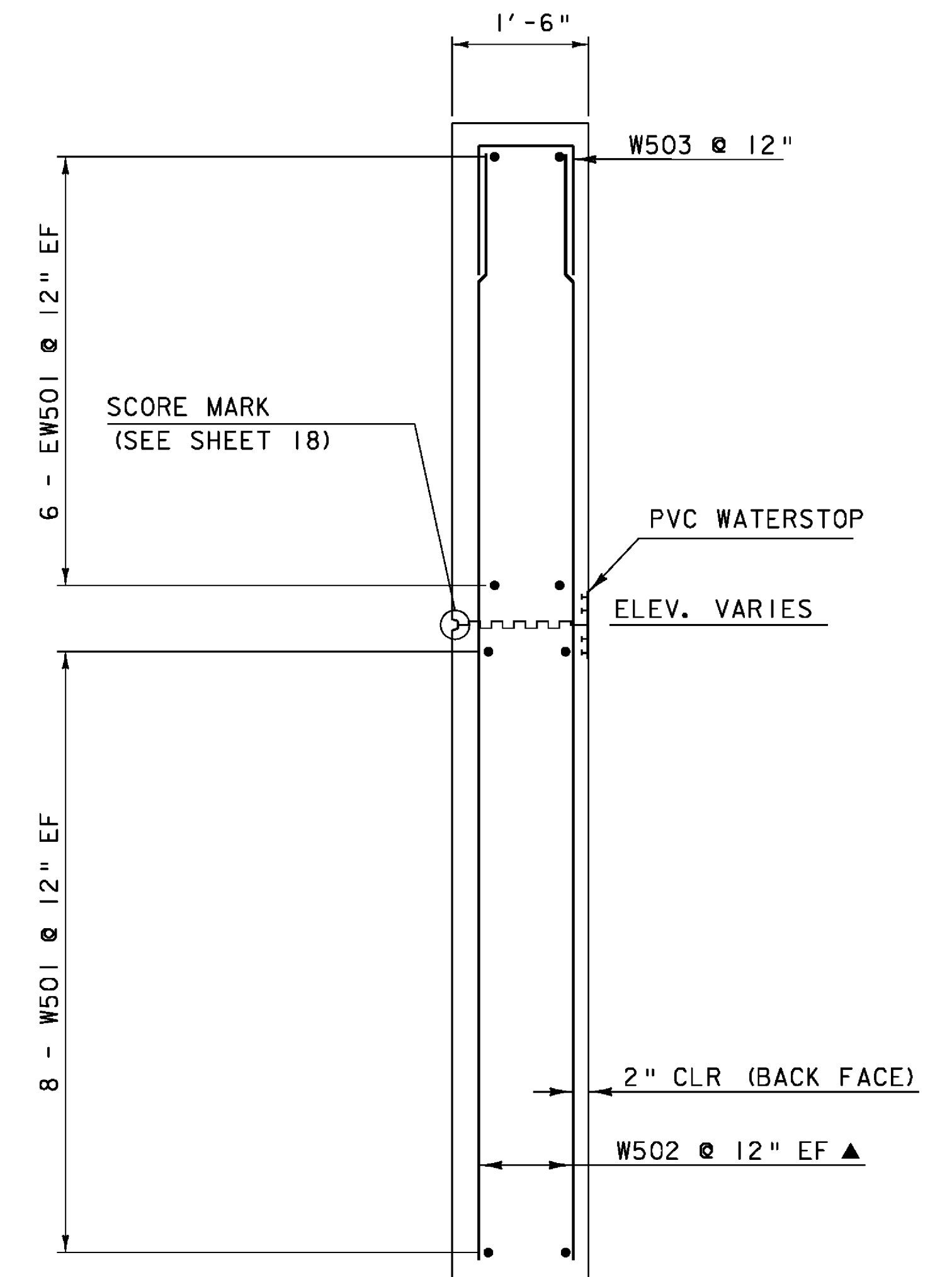
WINGWALL #3 ELEVATION

SCALE $\frac{3}{8}$ " = 1'-0"
 0 1 2 3 4



WINGWALL #4 ELEVATION

SCALE $\frac{3}{8}$ " = 1'-0"
 0 1 2 3 4



WINGWALL TYPICAL

SCALE $\frac{3}{4}$ " = 1'-0"
 0 1 2

NOTE:

NF = NEAR FACE
 FF = FAR FACE
 EF = EACH FACE
 ▲ = CUT TO FIT IN FIELD
 3" CLR. UNLESS OTHERWISE
 SPECIFIED ON THE PLANS.
 ALL LAPS 2'-2" UNLESS
 OTHERWISE NOTED.

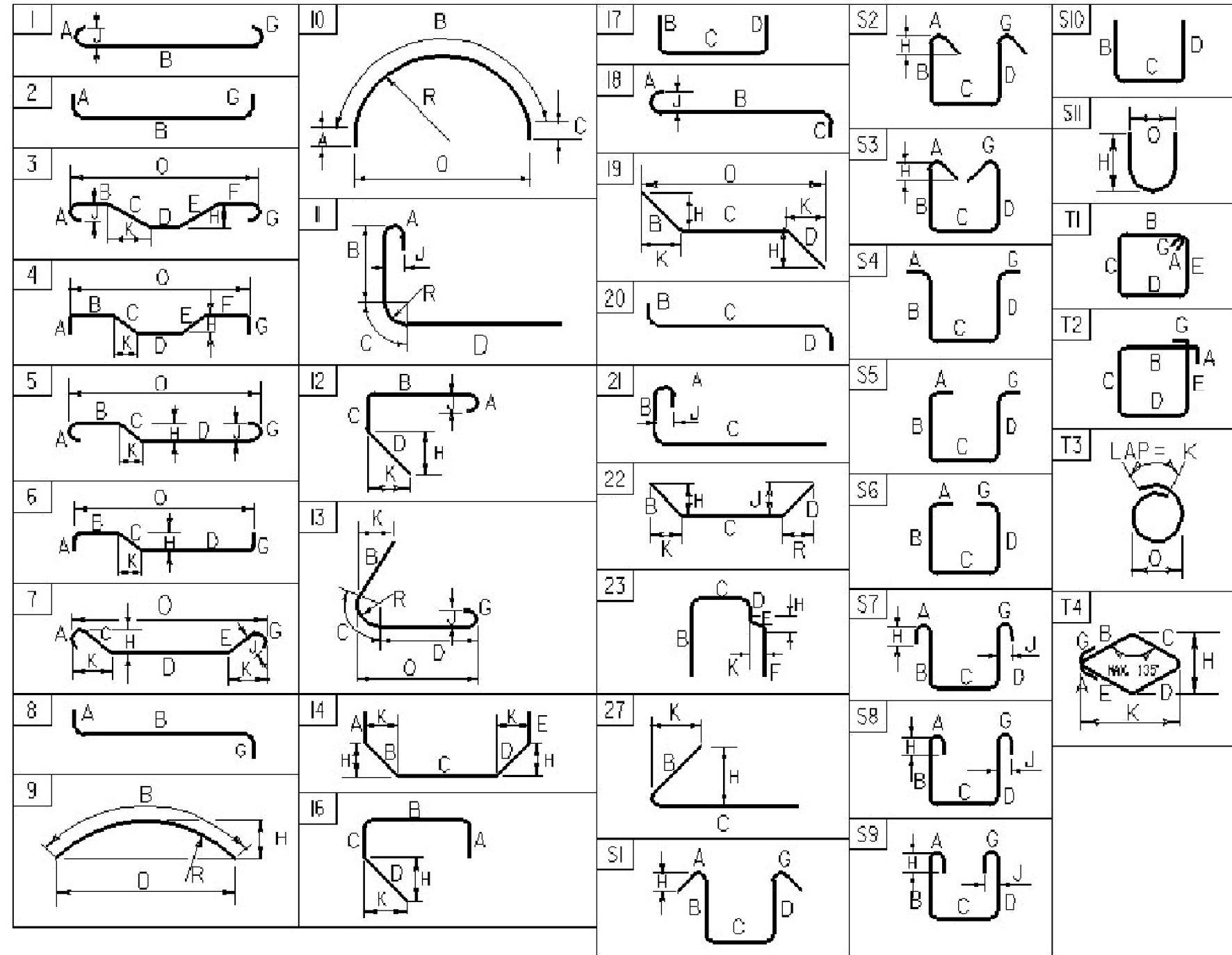
PROJECT NAME:	JAMAICA	FILE NAME:	s96j068sub.dgn	PLOT DATE:	19-OCT-2009
PROJECT NUMBER:	BRO 1442(27)	PROJECT LEADER:	K. HIGGINS	DRAWN BY:	R. PELLETT
		DESIGNED BY:	J. LACROIX	CHECKED BY:	J. LACROIX
		WINGWALLS #1-#4		SHEET	24 OF 44

REINFORCING STEEL SCHEDULE

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O	ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O		
DECK																																					
*	409	5	24'- 10"	ES501	STR	24'- 10"																															
	156	5	37'- 4"	ES502	STR	37'- 4"																															
	24	5	33'- 4"	ES503	STR	33'- 4"																															
△	54	7	10'- 10"	ES701	12	0'- 7"	2'- 3"	---	8'- 0"				5'- 8"	0'- 5"	2'- 1"																						
ABUTMENT #1																																					
*	9	5	33'- 4"	1EA501	STR	33'- 4"																															
▲	36	5	12'- 1"	1EA503	S10		4'- 9"	2'- 7"	4'- 9"																												
	12	6	4'- 9"	1EA601	S10		3'- 9"	1'- 0"	---																												
	12	5	4'- 4"	1EA701	S10		2'- 2"	2'- 2"	---																												
	6	5	6'- 0"	1EA504	17		3'- 0"	3'- 0"																													
*	17	5	33'- 4"	1A501	STR	33'- 4"																															
	16	5	4'- 4"	1A502	S10		2'- 2"	2'- 2"	---																												
△	18	6	9'- 8"	1A601	S10		8'- 8"	1'- 0"	---																												
△	104	8	13'- 6"	1A801	17		11'- 0"	2'- 6"	---																												
WINGWALL #1																																					
	12	5	10'- 6"	1EW501	STR	10'- 6"																															
▲	24	5	12'- 1"	1W502	STR	12'- 1"																															
	12	5	5'- 5"	1EW503	S10		2'- 2"	1'- 1"	2'- 2"																												
▲	16	5	10'- 1"	1W501	STR	10'- 1"																															
	2	5	12'- 10"	1W503	22		10'- 2"	2'- 8"					1'- 10"		1'- 11"																						
WINGWALL #2																																					
	12	5	10'- 6"	2EW501	STR	10'- 6"																															
▲	24	5	12'- 1"	2W502	STR	12'- 1"																															
	12	5	5'- 5"	2EW503	S10		2'- 2"	1'- 1"	2'- 2"																												
▲	16	5	10'- 1"	2W501	STR	10'- 1"																															
	2	5	12'- 10"	2W503	22		10'- 2"	2'- 8"					1'- 10"		1'- 11"																						
ABUTMENT #2																																					
*	9	5	33'- 4"	2EA501	STR	33'- 4"																															
▲	36	5	12'- 5"	2EA503	S10		4'- 11"	2'- 7"	4'- 11"																												
	12	6	4'- 9"	2EA601	S10		3'- 9"	1'- 0"	---																												
	12	5	4'- 4"	2EA701	S10		2'- 2"	2'- 2"	---																												
	6	5	6'- 0"	2EA504	17		3'- 0"	3'- 0"																													
*	17	5	33'- 4"	2A501	STR	33'- 4"																															
	16	5	4'- 4"	2A502	S10		2'- 2"	2'- 2"	---																												
△	18	6	9'- 8"	2A601	S10		8'- 8"	1'- 0"	---																												
△	104	8	13'- 6"	2A801	17		11'- 0"	2'- 6"	---																												
WINGWALL #3																																					
	12	5	10'- 6"	3EW501	STR	10'- 6"																															
▲	24	5	12'- 1"	3W502	STR	12'- 1"																															
	12	5	5'- 5"	3EW503	S10		2'- 2"	1'- 1"	2'- 2"																												
▲	16	5	10'- 1"	3W501	STR	10'- 1"																															
	2	5	12'- 9"	3W503	22		10'- 1"	2'- 8"					1'- 9"		2'- 0"																						
WINGWALL #4																																					
	12	5	10'- 6"	4EW501	STR	10'- 6"																															
▲	24	5	12'- 1"	4W502	STR	12'- 1"																															
	12	5	5'- 5"	4EW503	S10		2'- 2"	1'- 1"	2'- 2"																												

~ NOTES ~

- 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.
- 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".
- BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
- ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS.
- "J" DIMENSION ON 180 DEGREE HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
- "H" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
- WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.
- ▲ DENOTES BARS TO BE CUT IN FIELD.
- * DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
- △ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
- E IN BAR MARK PREFIX DENOTES EPOXY COATED REINFORCING STEEL.



ASTM STANDARD REINFORCING BARS

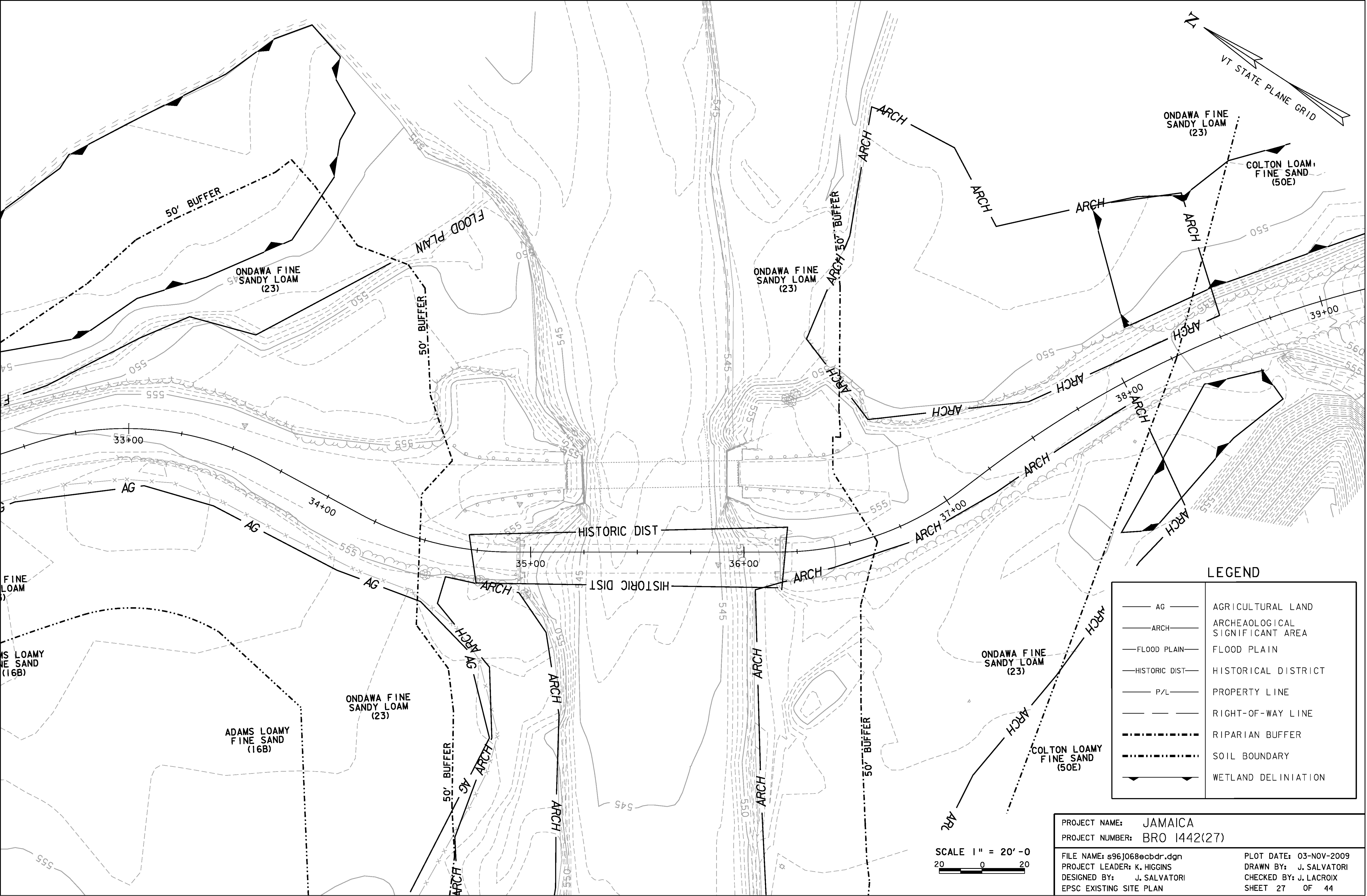
BAR SIZE DESIGNA- TION	WEIGHT POUNDS PER FOOT	NOMINAL DIMENSIONS ROUND SECTION		
		DIAMETER INCHES	AREA INCHES ²	PERIMETER INCHES
#3	0.376	0.375	0.11	1.178
#4	0.668	0.500	0.20	1.571
#5	1.043	0.625	0.31	1.963
#6	1.502	0.750	0.44	2.356
#7	2.044	0.875	0.60	2.749
#8	2.670	1.000	0.79	3.142
#9	3.400	1.128	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: JAMAICA
PROJECT NUMBER: BRO 1442(27)

FILE NAME: s96j068sub.dgn
PROJECT MANAGER: K.HIGGINS
DESIGNED BY: J.LACROIX
REINFORCING STEEL SCHEDULE

PLOT DATE: 10/16/2009
DRAWN BY: K.PATTERSON
CHECKED BY: J.LACROIX
SHEET 25 OF 44

1.1 PROJECT DISCRPTION				2. ALL AREAS MUST HAVE TEMPORARY OR FINAL STABILIZATION WITHIN 21 DAYS OF THE INITIAL DISTURBANCE AND STABILIZED THEREAFTER ON A DAILY BASIS. THE FOLLOWING EXCEPTIONS APPLY:				TEMPORARY EROSION MATTING SHALL BE PLACED ALONG THE PROPOSED SLOPES FROM STATION 33+70 LT TO 34+98 LT, 33+70 RT TO 33+97 RT, 34+14 RT TO 34+81 RT, 36+50 RT TO 37+50 RT, 36+75 LT TO 37+50 LT AS ILLUSTRATED ON THE EPSC CONSTRUCTION SITE PLAN (SHEET 28). EROSION MATTING SHALL BE INSTALLED AS SHOWN AND DESCRIBED IN THE LOW RISK SITE HANDBOOK.			
LOCATED ON TOWN HIGHWAY #43, KNOWN AS EATON ROAD, 0.1 MILES SOUTH OF THE INTERSECTION OF TOWN HIGHWAY #43 AND VERMONT ROUTE 100. THE PROJECT CONTINUES SOUTHERLY FOR A DISTANCE OF 275 FEET ALONG TOWN HIGHWAY #43.				A. STABILIZATION IS NOT REQUIRED IF WORK IS TO CONTINUE IN THE AREA WITHIN 24 HOURS AND NO PRECIPITATION IS FORECASTED FOR THE NEXT 24 HOURS.				SEEDING AND MULCHING WILL BE USED TO STABILIZE SLOPES. USE SEEDING FOR LONG TERM EXPOSED SLOPES. GRASS TAKES TWO WEEKS TO ESTABLISH ITSELF. STABILIZE SLOPES WITHIN 48 HOURS OR SOONER CONSIDERING WEATHER CONDITIONS.			
WORK TO BE PERFORMED UNDER THIS CONTRACT INCLUDES THE REPLACEMENT OF THE EXISTING STEEL TRUSS BRIDGE WITH NECESSARY BRIDGE, ROADWAY AND CHANNEL WORK. REMOVAL OF A TEMPORARY BRIDGE, ABUTMENTS, APPROACHES AND ASSOCIATED CHANNEL RESTORATION WILL ALSO BE PERFORMED UNDER THIS PROJECT.				B. STABILIZATION IS NOT REQUIRED IF THE WORK IS OCCURRING IN A SELF-CONTAINED EXCAVATION WITH A DEPTH OF 2 FEET OR GREATER.				1.4.9 WINTER STABILIZATION			
IT IS ANTICIPATED THAT THIS PROJECT WILL LAST ONE CONSTRUCTION SEASON.				3. INSPECTIONS SHALL BE CONDUCTED AT LEAST ONCE EVERY 7 CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT RESULTING IN THE DISCHARGE OF STORMWATER FROM THE CONSTRUCTION SITE.				AFTER SEPTEMBER 15 ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED TO 3" DEEP OR COVERED WITH ROLLED EROSION CONTROL PRODUCT.			
TOTAL DISTURBED AREA (EXCLUDING WASTE, BORROW AND STAGING AREAS): 0.62 ACRES.				4. IF THERE IS A DISCHARGE OF VISIBLY DISCOLORED STORMWATER FROM THE CONSTRUCTION SITE OR FROM THE CONSTRUCTION SITE TO WATERS OF THE STATE, THE PERMITTEE SHALL TAKE IMMEDIATE CORRECTIVE ACTION.				IF THIS PROJECT EXTENDS PAST OCT. 15, THE EPSC PLAN SHALL BE RE-EVALUATED FOR THE PROPER PROCEDURES FOR WINTER CONSTRUCTION.			
1.2 SITE INVENTORY				5. IF THERE IS A DISCHARGE OF VISIBLY DISCOLORED STORMWATER FROM THE CONSTRUCTION SITE TO WATERS OF THE STATE, THE ON-SITE PLAN COORDINATOR SHALL, WITHIN 72 HOURS OF FIRST DISCOVERING THE DISCHARGE, SUBMIT A WRITTEN REPORT ABOUT THE DISCHARGE AND THE RESULTING CORRECTIVE ACTION TO THE VERMONT AGENCY OF NATURAL RESOURCES, DEPARTMENT OF ENVIRONMENTAL CONSERVATION DEC).				1.4.10 STABILIZE SOIL AT FINAL GRADE			
1.2.1 OFF SITE DRAINAGE CHARACTERISTICS (UP AND DOWN GRADIENT):				RISK RE-EVALUATION				SEEDING AND MULCHING ON ALL DISTURBED SIDE SLOPES TO ESTABLISH PERMANENT VEGETATION. SEE EPSC FINAL SITE PLAN (SHEET 29) FOR LOCATIONS OF AREAS TO BE RE-VEGETATED.			
THE PROPERTY SURROUNDING THE PROJECT SITE CONSISTS OF WELL ESTABLISHED VEGETATION, WITH MODERATE SLOPES OF VARIOUS GRASSES, SHRUBS AND TREES. THE DRAINAGE WAYS ARE WELL DEFINED AND RUNOFF WATER ENTERING THE PROJECT SITE WILL BE PRIMARILY LIMITED TO THAT WHICH IS CONVEYED ALONG ROADWAY DITCHES, AND CULVERTS.				SHOULD CHANGES PRIOR TO OR DURING CONSTRUCTION RESULT IN A POTENTIAL CHANGE IN THE RISK OR SHOULD THE PROJECT BECOME PART OF A COMMON DEVELOPMENT PLAN, THEN THE SELECTED CONTRACTOR WILL BE RESPONSIBLE FOR ADDITIONAL PERMITTING WITH THE DEC VIA FILING OF THE APPROPRIATE NOTICE OF INTENT UNDER THE CONSTRUCTION PERMIT PROCESS.				1.4.11 DEWATERING ACTIVITIES			
1.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES:				1.4 EROSION PREVENTION AND SEDIMENT CONTROL (EPSC)				IT IS NOT EXPECTED THAT DEWATERING WILL BE NECESSARY.			
THE WARDSBORO BROOK AND WEST RIVER ARE LOCATED IN THE PROJECT AREA. THERE ARE NO OTHER BODIES OF WATER WITHIN THE PROJECT AREA.				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 POLLUTION PREVENTION CONTROLS.				1.4.12 INSPECT YOUR SITE			
THERE ARE EXISTING CULVERTS NEAR EACH END OF THE PROJECT AREA BUT THEY WILL NOT BE AFFECTED BY THIS PROJECT.				PREVENTING INITIAL SOIL EROSION IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. MAINTAINING VEGETATED BUFFERS ALONG STREAM BANKS, WETLANDS OR OTHER SENSITIVE AREAS IS A CRUCIAL EROSION AND SEDIMENT CONTROL MEASURE THAT SHOULD BE ESTABLISHED WHEREVER POSSIBLE.				INSPECT SITE BASED ON PERMIT AUTHORIZATION OR SPECIAL PROVISION REQUIREMENTS.			
DISTURBANCE OF SOILS NEAR NATURAL OR MAN-MADE WATERWAYS CONSISTS OF THAT WHICH IS NECESSARY TO REMOVE THE ABUTMENTS OF THE EXISTING TRUSS BRIDGE AS WELL AS THE EXISTING TEMPORARY BRIDGE. STABILIZATION OF DISTURBANCE TO STREAM BANKS WILL BE ACCOMPLISHED WITH STONE FILL, TYPE III.				ALL MEASURES SHALL BE REGULARLY MAINTAINED AND SHALL BE CHECKED FOR SEDIMENT BUILD-UP. SEDIMENT SHALL BE DISPOSED AT AN APPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.							
1.2.3 TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES:				(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.)							
THE TOPOGRAPHY OF THE PROJECT SITE IS SLIGHT TO MODERATE, WITH A MIXTURE OF FORESTED AND OPEN AREAS.				1.4.1 MARK SITE BOUNDARIES							
THERE ARE NO RESIDENCES OR BUSINESSES FOUND WITHIN THE PROJECT.				PRIOR TO ANY CONSTRUCTION ACTIVITIES, THE PROJECT DEMARCATION FENCING (PDF) SHALL BE PLACED ALONG THE PERIMETER OF THE PROJECT AS SHOWN ON THE EPSC CONSTRUCTION SITE PLAN (SHEET 28). THE INSTALLATION OF THE PDF WILL BE PERFORMED SUCH THAT NO VEGETATION ON THE OUTSIDE OF THE FENCING IS DISTURBED.							
THERE ARE NO OVERHEAD UTILITY SERVICES ALONG TOWN HIGHWAY #43.				1.4.2 LIMIT DISTURBANCE AREA							
THE PROJECT IMPACTS STEEP SLOPES. THE SLOPES ARE EITHER WELL VEGETATED OR HAVE EXPOSED LEDGE. THE EXISTING SHAPE OF THE PROJECT AREA CAN BE SEEN BY LOOKING AT THE "EPSC EXISTING SITE PLAN (SHEET 27) WHERE THE EXISTING CONTOURS ARE SHOWN.				THE CUT/FILL LIMITS SHOWN ON THE EPSC CONSTRUCTION SITE PLAN (SHEET 28), ARE THE ABSOLUTE LIMITS OF EARTH DISTURBANCE.							
1.2.4 VEGETATION:				PRESERVE EXISTING VEGETATION, SHRUBS, AND TREES WHENEVER POSSIBLE.							
THE VEGETATION SURROUNDING THE PROJECT SITE CONSISTS OF VARIOUS GRASSES, SHRUBS AND WOODED AREAS. IMPACTS TO VEGETATION WILL BE LIMITED TO THAT EFFECTED BY THE CONSTRUCTION OF THE NEW BRIDGE AND REMOVAL OF THE EXISTING TRUSS BRIDGE AS WELL AS THE EXISTING TEMPORARY BRIDGE.				1.4.3 STABILIZE CONSTRUCTION ENTRANCE							
FOLLOWING THE CONSTRUCTION OF THE NEW BRIDGE, THE SLOPES WILL BE STABILIZED WITH STONE FILL, TYPE III AND VEGETATION WILL BE RE-ESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES.				TRACKING PADS SHALL BE INSTALLED AS SHOWN AND DESCRIBED IN THE LOW RISK SITE HANDBOOK.							
1.2.5 SOILS:				1.4.4 INSTALL SILT FENCE							
SOIL NAME	DEPTH	ERODIBILITY	K-VALUE	SILT FENCE SHALL BE PLACED ALONG CONTOUR LINE AT LOCATIONS ILLUSTRATED ON THE EPSC CONSTRUCTION PLAN (SHEET 28). SILT FENCE SHALL BE INSTALLED AS SHOWN AND DESCRIBED IN THE LOW RISK SITE HANDBOOK.							
ADAMS LOAMY FINE SAND (168)	0-60"	SLIGHT	0.17	1.4.5 DIVERT UPLAND RUNOFF							
COLTON LOAMY FINE SAND (508)	0-60"	SLIGHT	0.17	THE CONTRACTOR SHALL CONTROL ALL SEDIMENT-LADEN RUNOFF WITHIN THE PROJECT SITE. CLEAN RUNOFF FROM OUTSIDE THE PROJECT SITE SHALL BE ROUTED AROUND THE PROJECT SITE USING DIVERSION BERMS, DIVERSION CHANNELS, AND TEMPORARY OR PERMANENT CULVERTS IF PRACTICAL.							
COLTON LOAMY FINE SAND (50E)	0-60"	SEVERE	0.17	1.4.6 SLOW DOWN CHANNELIZED RUNOFF							
ONDAWA FINE SANDY LOAM (23)	0-60"	SLIGHT	0.24	STONE CHECK DAMS SHALL BE PLACED AT LOCATION OF CONCENTRATED FLOW AS ILLUSTRATED ON THE EPSC CONSTRUCTION SITE PLAN (SHEET 28). CHECK DAMS SHALL BE INSTALLED AS SHOWN AND DESCRIBED IN THE LOW RISK SITE HANDBOOK.							
ADAMS SOIL (168) IS A VERY DEEP, GENTLE SLOPING (2 TO 8% SLOPES), WELL DRAINED TO EXCESSIVELY DRAINED SOIL ON TERRACES, KNOLLS AND RIDGES.				1.4.7 CONSTRUCT PERMANENT CONTROLS							
COLTON SOIL (508) IS A VERY DEEP, GENTLE SLOPING (2 TO 8% SLOPES), EXCESSIVELY DRAINED SOIL ON TERRACES, KNOLLS AND RIDGES.				TYPE III STONE SHALL BE PLACED ALONG TO STABILIZE SLOPES AROUND ABUTMENTS. TYPE II STONE SHALL BE PLACED ON THE STEEP SLOPES BETWEEN STATIONS 36+20 RT AND 36+50 RT. SEE EPSC FINAL SITE PLAN (SHEET 29) FOR LOCATION. GEOTEXTILE UNDER STONE FILL WILL BE USED TO INCREASE THE EFFECTIVENESS OF THE STONE FILL PREVENTING EROSION.							
COLTON SOIL (50E) IS A VERY DEEP, STEEP AND VERY STEEP (25 TO 60% SLOPES), EXCESSIVELY DRAINED SOIL ON TERRACES DISSECTED BY DRAINAGEWAYS AND ON THE TOPS OF KNOLLS AND RIDGES.				1.4.8 STABILIZE EXPOSED SOIL							
ONDAWA SOIL CONSISTS OF VERY DEEP, NEARLY LEVEL (0 TO 3% SLOPES), WELL DRAINED SOIL OF FLOOD PLAINS, FLOODED BY STREAM OVERFLOW FOR BRIEF PERIODS.				ALL AREAS OF DISTURBANCE MUST HAVE TEMPORARY OR FINAL STABILIZATION WITHIN 7 DAYS OF THE INITIAL DISTURBANCE. AFTER THIS TIME, ANY DISTURBANCE IN THE AREA MUST BE STABILIZED AT THE END OF EACH WORK DAY. THE FOLLOWING EXCEPTIONS APPLY:							
1.2.6 SENSITIVE RESOURCE AREAS				I. STABILIZATION IS NOT REQUIRED IF WORK IS TO CONTINUE IN THE AREA WITHIN THE NEXT 24 HOURS AND THERE IS NO PRECIPITATION FORECAST FOR THE NEXT 24 HOURS.							
SEE EPSC EXISTING SITE PLAN (SHEET 27) FOR RESOURCE AREAS.				II. STABILIZATION IS NOT REQUIRED IF THE WORK IS OCCURRING IN A SELF-CONTAINED EXCAVATION (I.E. NO OUTLET) WITH A DEPTH OF 2 FEET OR GREATER.							
THERE ARE NO AGRICULTURAL LANDS LOCATED WITHIN THE PROJECT LIMITS.				WHEREVER FEASIBLE, TRACKING AND MULCHING WILL BE USED TO TEMPORARILY STABILIZE SLOPES. USE TRACKING FOR SHORT TERM (TWO WEEKS) EXPOSED SLOPES. DRIVE EQUIPMENT ON THE SLOPES TO LEAVE TRACK (SMALL CHECK DAMS) THAT WILL CATCH WATER FLOW. STABILIZE SLOPES WITHIN 48 HOURS OR SOONER CONSIDERING WEATHER CONDITIONS.							
THERE ARE ARCHEOLOGICAL LANDS LOCATED WITHIN THE PROJECT LIMITS. ANY DISTURBANCE WILL BE LIMITED TO FILL.											
THE EXISTING BRIDGE IS LOCATED WITHIN A HISTORIC DISTRICT.											
NO "THREATENED & ENDANGERED SPECIES" HAVE BEEN IDENTIFIED WITHIN THE PROJECT LIMITS.											
THERE ARE NO KNOWN WETLANDS LOCATED WITHIN THE PROJECT LIMITS.											
1.3 RISK EVALUATION											
RISK DETERMINATION											
THIS PROJECT HAS BEEN DETERMINED TO BE LOW RISK. BASIC RISK EVALUATION RESULTED IN A MORE DETAILED ANALYSIS TO DETERMINE RISK, AND RESULTED IN THE FOLLOWING REQUIREMENTS:											
1. IMPLEMENT THE EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) FIELD GUIDE AND FOLLOW THIS EPSC PLAN PREPARED FOR THIS PROJECT.											

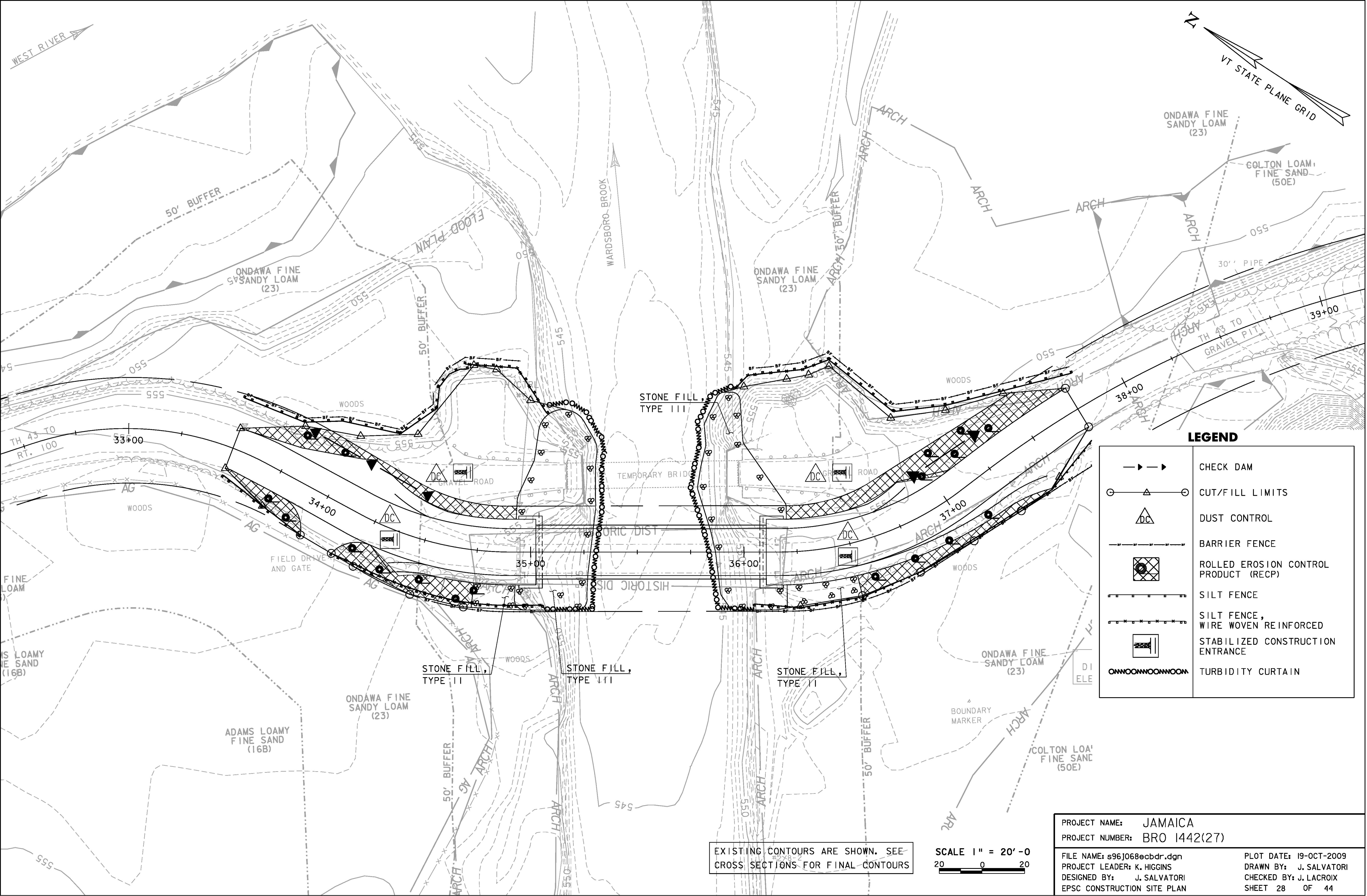


LEGEND

— AG —	AGRICULTURAL LAND
— ARCH —	ARCHEAOLOGICAL SIGNIFICANT AREA
— FLOOD PLAIN —	FLOOD PLAIN
— HISTORIC DIST —	HISTORICAL DISTRICT
— P/L —	PROPERTY LINE
— — —	RIGHT-OF-WAY LINE
- - - - -	RIPARIAN BUFFER
- . - . -	SOIL BOUNDARY
◄ — — — ►	WETLAND DELINIATION

PROJECT NAME: JAMAICA
PROJECT NUMBER: BRO 1442(27)

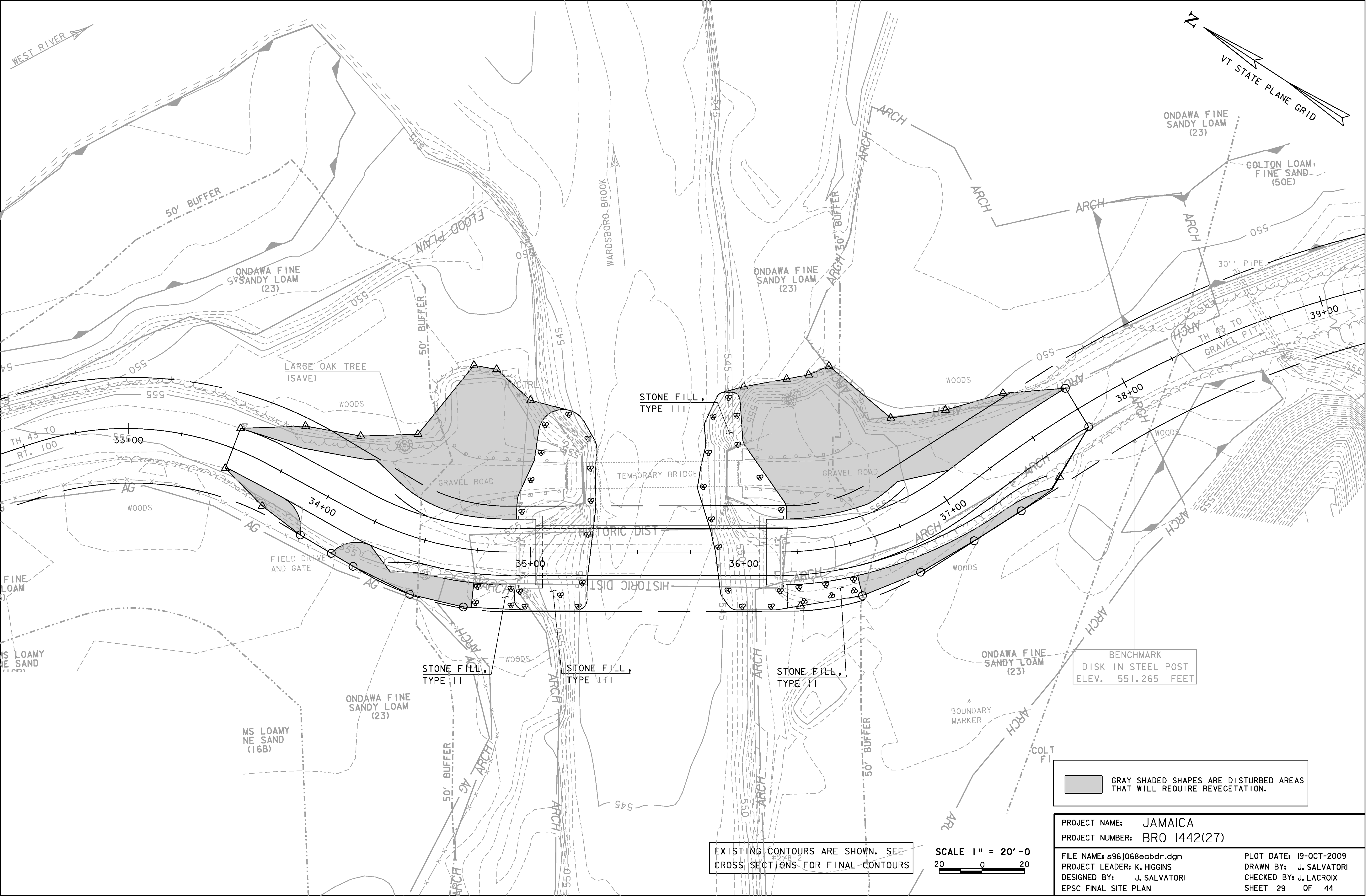
FILE NAME: s96j068ecbdr.dgn	PLOT DATE: 03-NOV-2009
PROJECT LEADER: K. HIGGINS	DRAWN BY: J. SALVATORI
DESIGNED BY: J. SALVATORI	CHECKED BY: J. LACROIX
EPSC EXISTING SITE PLAN	SHEET 27 OF 44



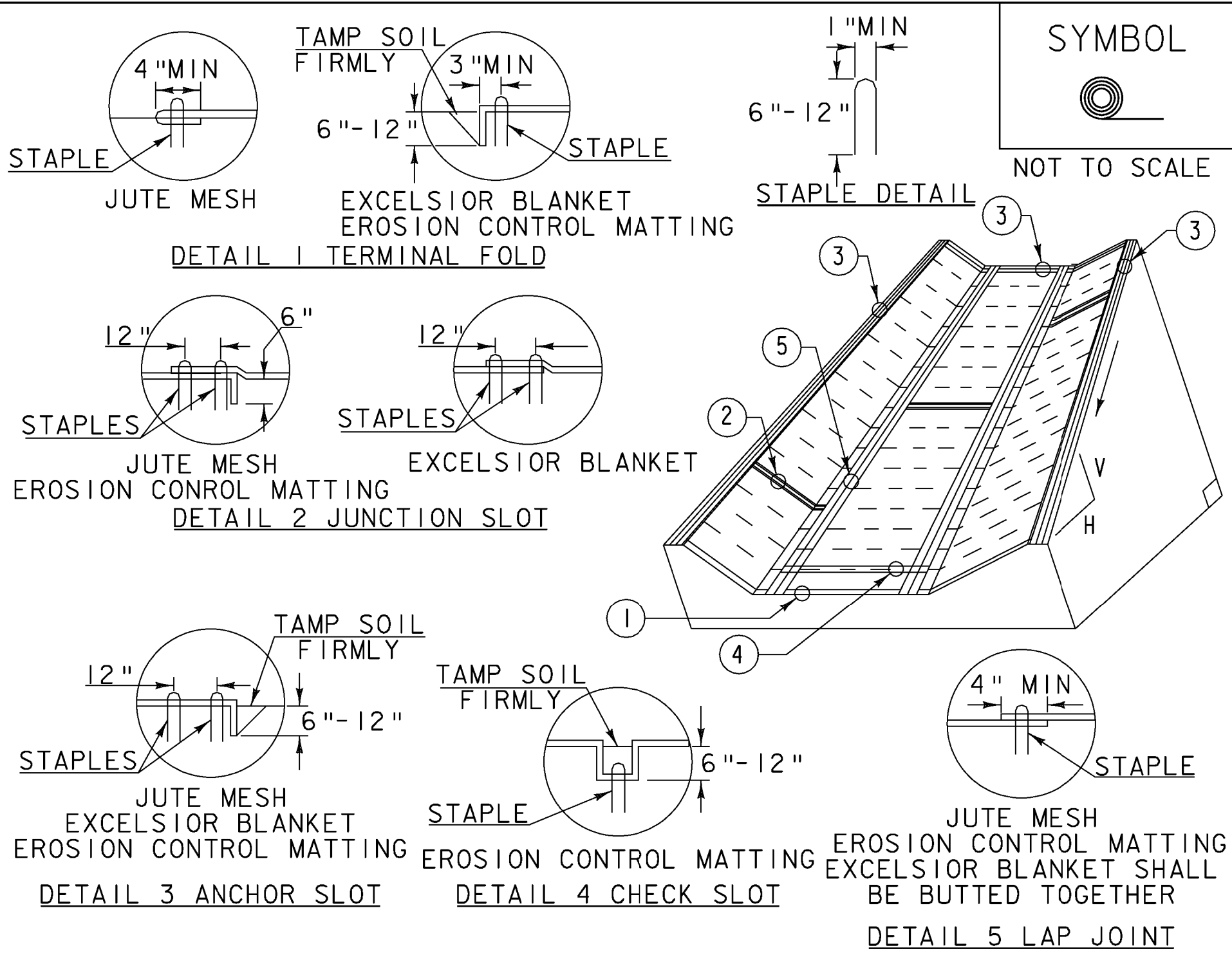
LEGEND

	CHECK DAM
	CUT/FILL LIMITS
	DUST CONTROL
	BARRIER FENCE
	ROLLED EROSION CONTROL PRODUCT (RECP)
	SILT FENCE
	SILT FENCE, WIRE WOVEN REINFORCED
	STABILIZED CONSTRUCTION ENTRANCE
	TURBIDITY CURTAIN

PROJECT NAME:	JAMAICA	FILE NAME:	s96j068ecbdr.dgn	PLLOT DATE:	19-OCT-2009
PROJECT NUMBER:	BRO 1442(27)	PROJECT LEADER:	K. HIGGINS	DRAWN BY:	J. SALVATORI
		DESIGNED BY:	J. SALVATORI	CHECKED BY:	J. LACROIX
		EPSC CONSTRUCTION SITE PLAN		SHEET	28 OF 44



FILE NAME: s96j068epsdct.dgn	PLOT DATE: 19-OCT-2009
PROJECT LEADER: K. HIGGINS	DRAWN BY: R. PELLETT
DESIGNED BY: J. SALVATORI	CHECKED BY: J. LACROIX
EPSC DETAILS - SHEET I	SHEET 30 OF 44



- 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.

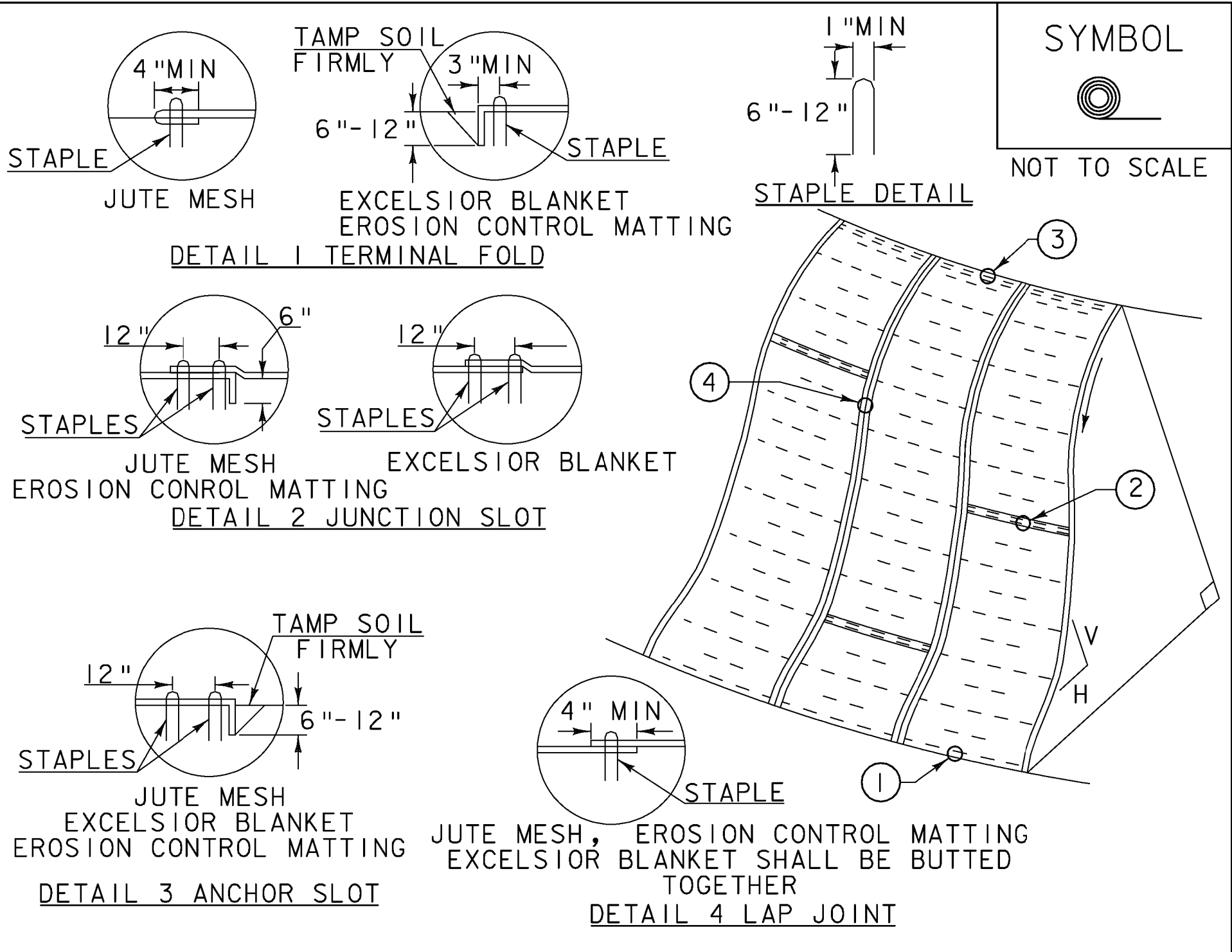
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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 WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION
653 AND AS SHOWN IN THE PLANS FOR TEMPORARY EROSION
MATTING (PAY ITEM 653.20).

REVISIONS

MARCH 8, 2007	JMF
APRIL 16, 2007	WHF
JANUARY 13, 2009	WHF



- CONSTRUCTION SPECIFICATIONS**
1. APPLY TO SLOPES GREATER THAN 3H:1V OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.
 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: NEW YORK STATE DEC
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 WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION
653 AND AS SHOWN IN THE PLANS FOR TEMPORARY EROSION
MATTING (PAY ITEM 653.20)

REVISIONS

APRIL 16, 2007	JMF
JANUARY 13, 2009	WHF

VAOT RURAL AREA MIX					
		LBS/AC			
% WEIGHT		BROADCAST	HYDROSEED	NAME	GERM % PURITY %
37.5%		22.5	45	CREEPING RED FESCUE	85% 98%
37.5%		22.5	45	TALL FESCUE	90% 95%
5.0%		3	6	RED TOP	90% 95%
15.0%		9	18	BIRDSFOOT TREFOIL	85% 98%
5.0%		3	6	ANNUAL RYE GRASS	85% 95%
100%		60	120		

VAOT URBAN AREA MIX					
		LBS/AC			
% WEIGHT		BROADCAST	HYDROSEED	NAME	GERM % PURITY %
42.5%		34	68	CREEPING RED FESCUE	85% 98%
10.0%		8	16	PERENNIAL RYE GRASS	90% 95%
42.5%		34	68	KENTUCKY BLUE GRASS	85% 85%
5.0%		4	8	ANNUAL RYE GRASS	85% 95%
100%		80	160		

GENERAL GUIDANCE			
FERTILIZER		LIME	
BROADCAST	HYDROSEED	BROADCAST	HYDROSEED
10/20/2010	19-19-19	PELLETIZED	LIQUID
500 LBS/AC		2 TONS/AC	4.4 GAL/AC

- CONSTRUCTION GUIDANCE**
1. RURAL SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED UPLAND (NON WETLAND) AREAS DISTURBED BY THE CONTRACTOR.
 2. URBAN SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED LAWN AREAS DISTURBED BY THE CONTRACTOR.
 3. ALL SEED MIXTURES: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.
 4. FERTILIZER AND LIMESTONE: SHALL FOLLOW RATES SHOWN ON PLAN OR AS DIRECTED BY THE ENGINEER
 5. HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, ACHIEVE 90% GROUND COVER OR AS DIRECTED BY THE ENGINEER.
 6. TOPSOIL: TO BE USED WITH SEED AS INDICATED IN THE PLANS, OR AS DIRECTED BY THE ENGINEER.
 7. HYDROSEEDING: ALTHOUGH GUIDANCE IS GIVEN ABOVE THE SITE CONDITIONS AND THE TYPE OF HYDROSEED WILL ULTIMATELY DICTATE THE AMOUNTS AND TYPES OF SOIL AMENDMENTS TO BE APPLIED
 8. TURF ESTABLISHMENT: PLACING SEED, FERTILIZER, LIME AND MULCH PRIOR TO SEPTEMBER 15 AND AFTER APRIL 15 CAN BETTER ENSURE A VIGOROUS GROWTH OF GRASS.

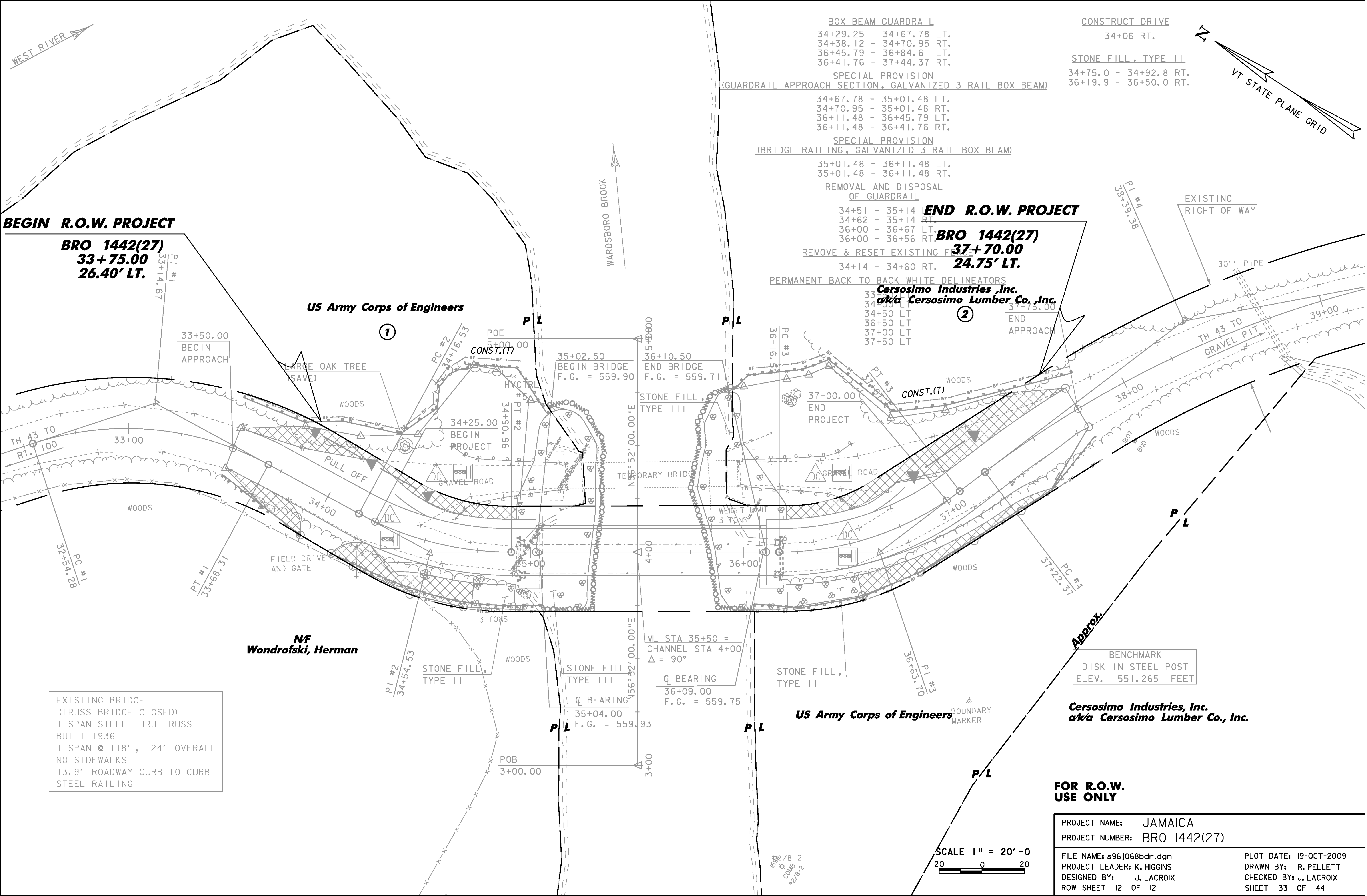
SEED
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 651 FOR SEED (PAY ITEM 651.15)

RIGHT - OF - WAY DETAIL SHEET

[illegible]

PLAN LEGEND			
	EXISTING RIGHT-OF-WAY		TOE OF SLOPE
	TAKING WITH ACCESS		TOP OF CUT
	TAKING WITHOUT ACCESS		SLOPE RIGHT
	CLEAR ZONE		CONSTRUCTION DRIVE
	PROPERTY LINE		PROJECT DEMARCATION FENCE
			EC - EROSION CONTROL (P) - PERMANENT (T) - TEMPORARY DR - DRAINAGE RIGHT DT - DITCHING RIGHT CH - CHANNEL RIGHT D - DRIVE RIGHT CUL - CULVERT RIGHT C&T - CLEARING & TRIMMING RIGHT SLORE - SLOPE RIGHT UE - UTILITY EASEMENT

PROJECTNAME:	JAMAICA	
PROJECTNUMBER:	BRO 1442(27)	
FILE NAME:	r96j068det.xls	PLOT DATE:
PROJECT LEADER:	K. HIGGINS	DRAWN BY:
DESIGNED BY:	J. LACROIX	CHECKED BY:
ROW DETAIL SHEET#1		SHEET 32 OF 44



BEGIN R.O.W. PROJECT

BRO 1442(27)
33+75.00
26.40' LT.

US Army Corps of Engineers

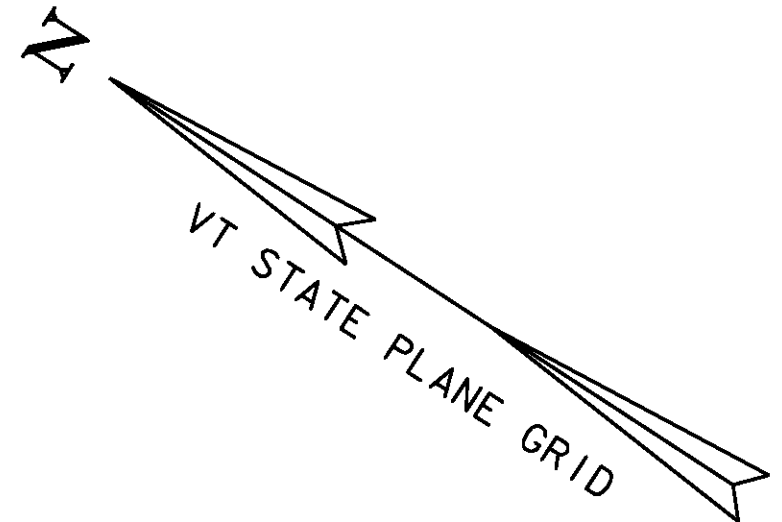
①

NF
Wondrofski, Herman

EXISTING BRIDGE
(TRUSS BRIDGE CLOSED)
1 SPAN STEEL THRU TRUSS
BUILT 1936
1 SPAN @ 118', 124' OVERALL
NO SIDEWALKS
13.9' ROADWAY CURB TO CURB
STEEL RAILING

BOX BEAM GUARDRAIL
34+29.25 - 34+67.78 LT.
34+38.12 - 34+70.95 RT.
36+45.79 - 36+84.61 LT.
36+41.76 - 37+44.37 RT.
SPECIAL PROVISION
(GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM)
34+67.78 - 35+01.48 LT.
34+70.95 - 35+01.48 RT.
36+11.48 - 36+45.79 LT.
36+11.48 - 36+41.76 RT.
SPECIAL PROVISION
(BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM)
35+01.48 - 36+11.48 LT.
35+01.48 - 36+11.48 RT.
REMOVAL AND DISPOSAL
OF GUARDRAIL
34+51 - 35+14 LT.
34+62 - 35+14 RT.
36+00 - 36+67 LT.
36+00 - 36+56 RT.
REMOVE & RESET EXISTING F.R.D.
34+14 - 34+60 RT.
PERMANENT BACK TO BACK WHITE DELINEATORS

CONSTRUCT DRIVE
34+06 RT.
STONE FILL, TYPE II
34+75.0 - 34+92.8 RT.
36+19.9 - 36+50.0 RT.



END R.O.W. PROJECT

BRO 1442(27)
37+70.00
24.75' LT.

Cersosimo Industries, Inc.
a/k/a Cersosimo Lumber Co., Inc.

②

REMOVE & RESET EXISTING F.R.D.

33+75.00
34+00 LT
34+50 LT
36+50 LT
37+00 LT
37+50 LT
END
APPROACH

STONE FILL, TYPE III
37+00.00
END PROJECT

STONE FILL, TYPE II

US Army Corps of Engineers

Approx.

BENCHMARK
DISK IN STEEL POST
ELEV. 551.265 FEET

Cersosimo Industries, Inc.
a/k/a Cersosimo Lumber Co., Inc.

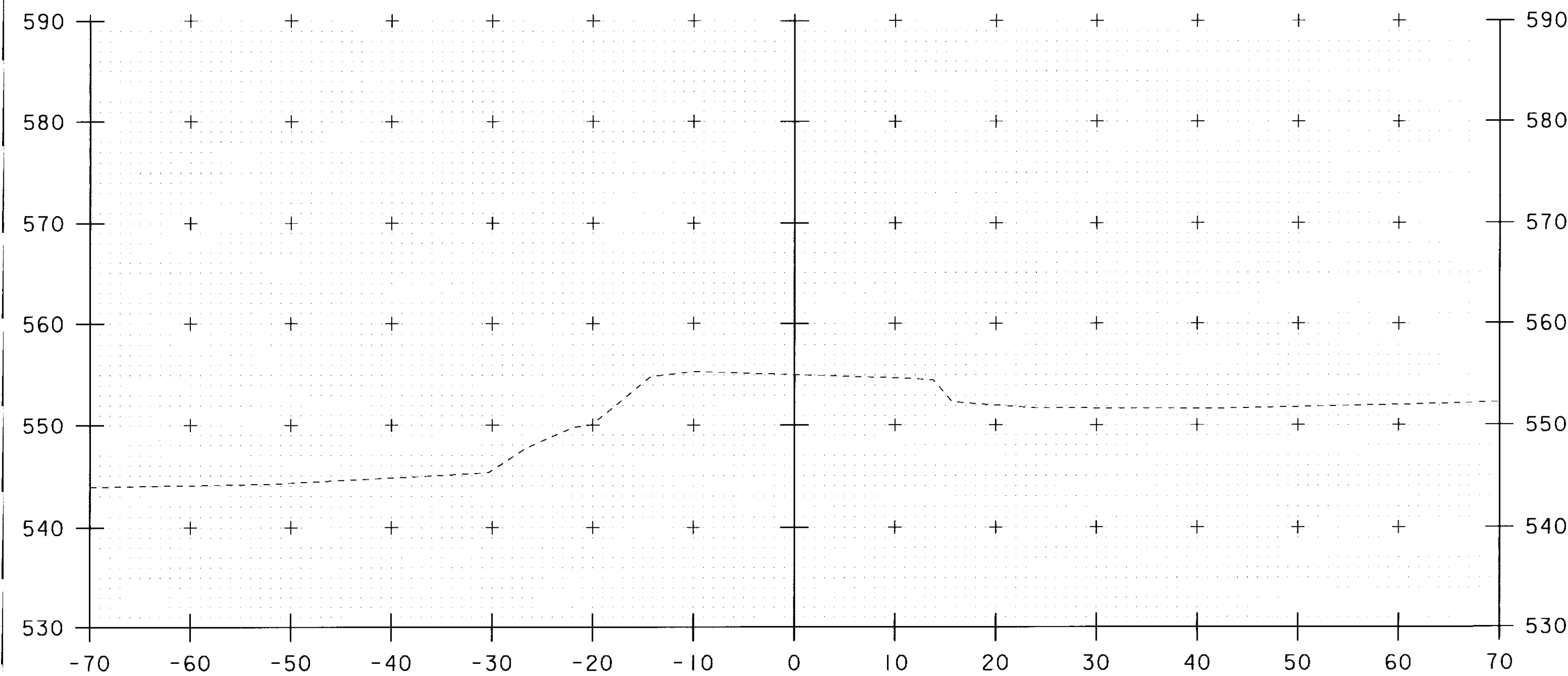
FOR R.O.W.
USE ONLY

PROJECT NAME: JAMAICA
PROJECT NUMBER: BRO 1442(27)

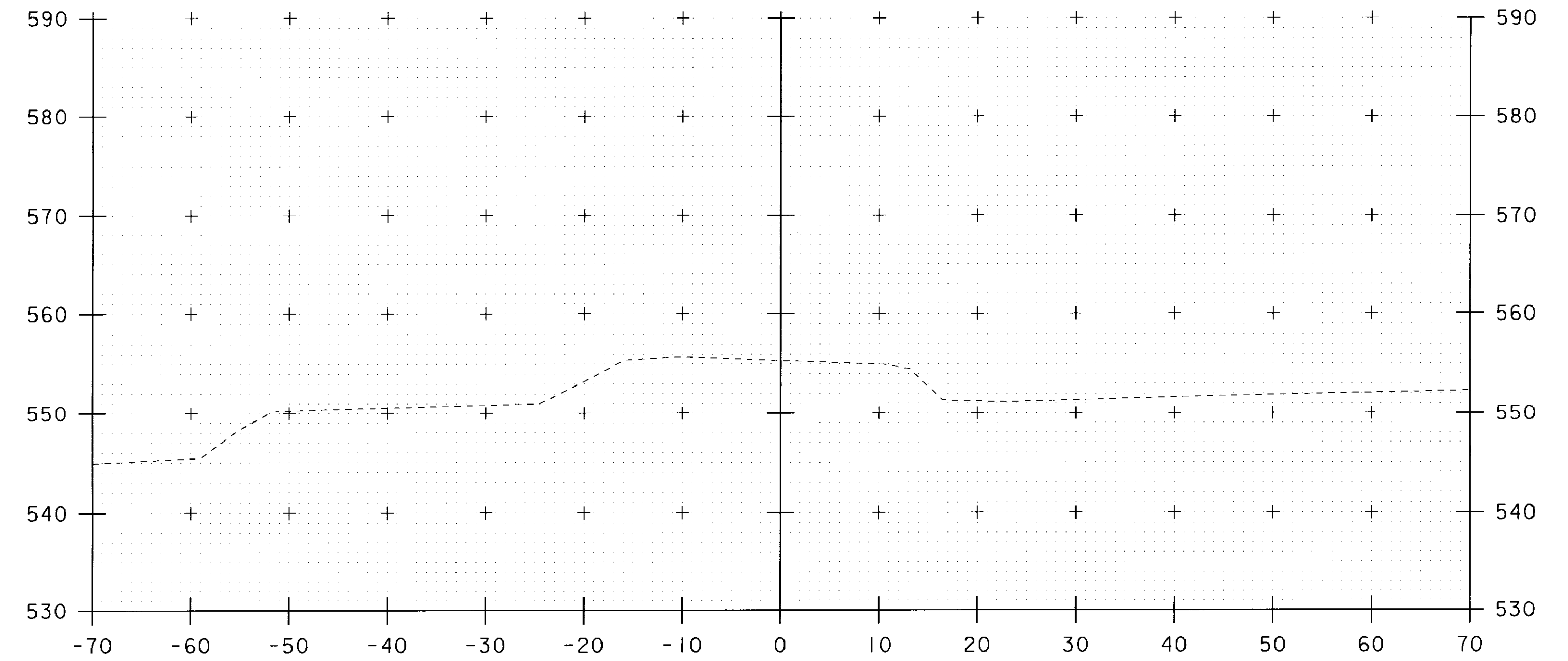
FILE NAME: s96j068bdr.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. LACROIX
ROW SHEET 12 OF 12

PLOT DATE: 19-OCT-2009
DRAWN BY: R. PELLETT
CHECKED BY: J. LACROIX
SHEET 33 OF 44

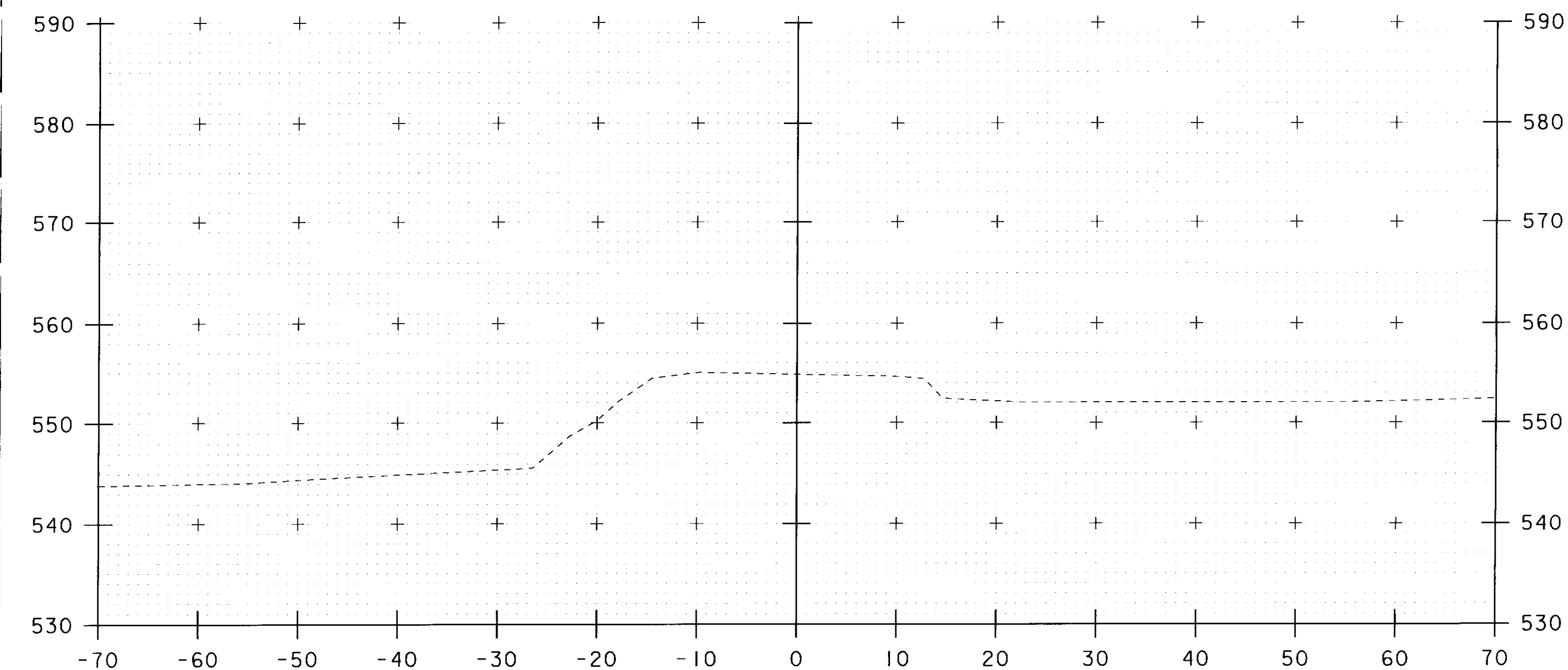
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20 0 20



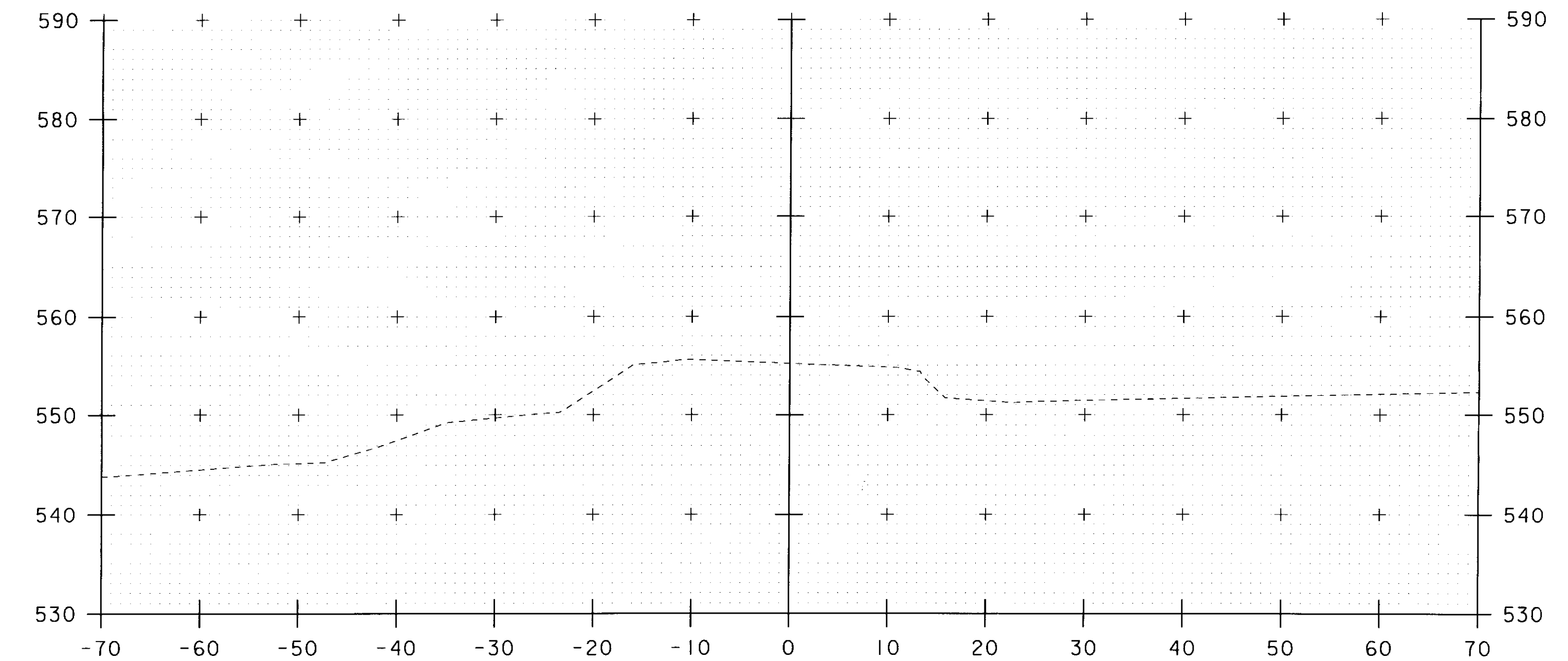
32+75



33+25



32+50



33+00

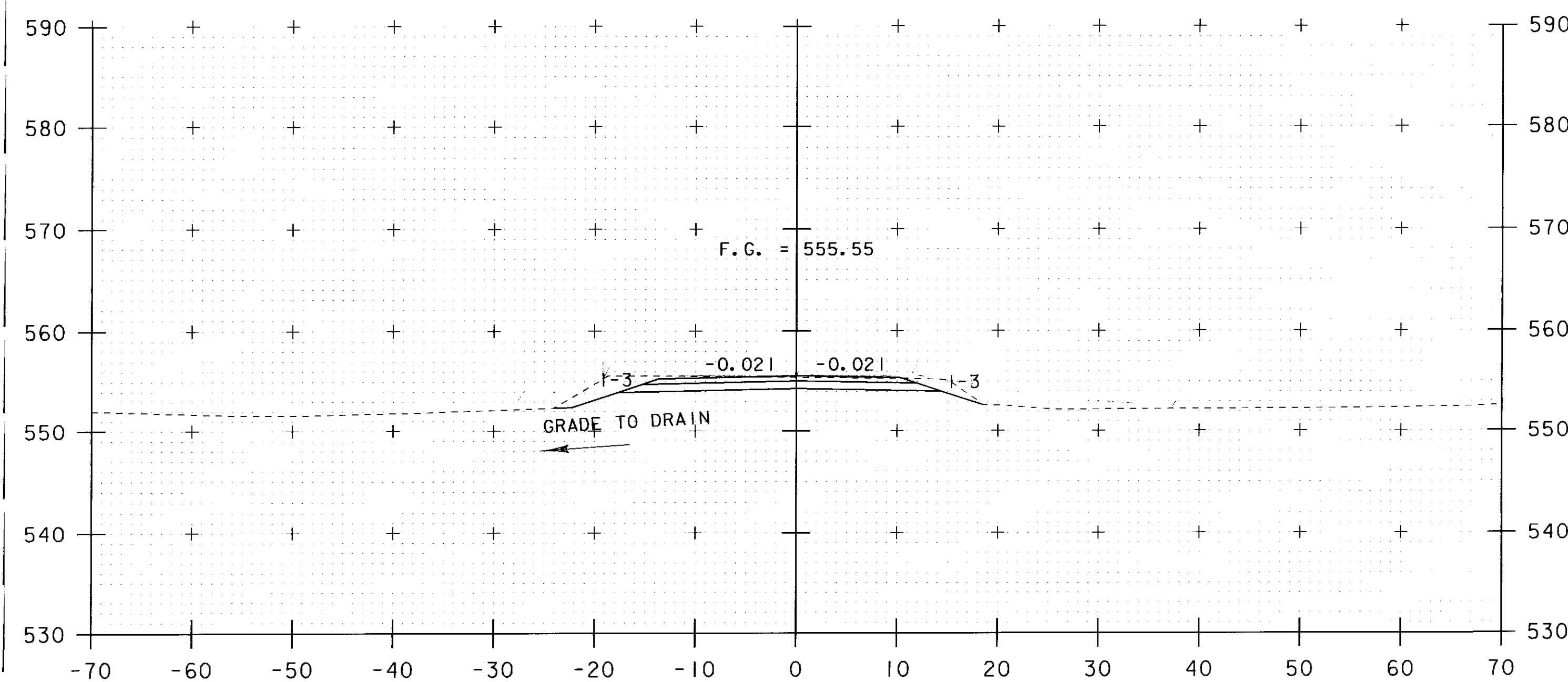
STA. 32+50 TO STA. 33+25

SCALE 1" = 10'-0"
10 0 10

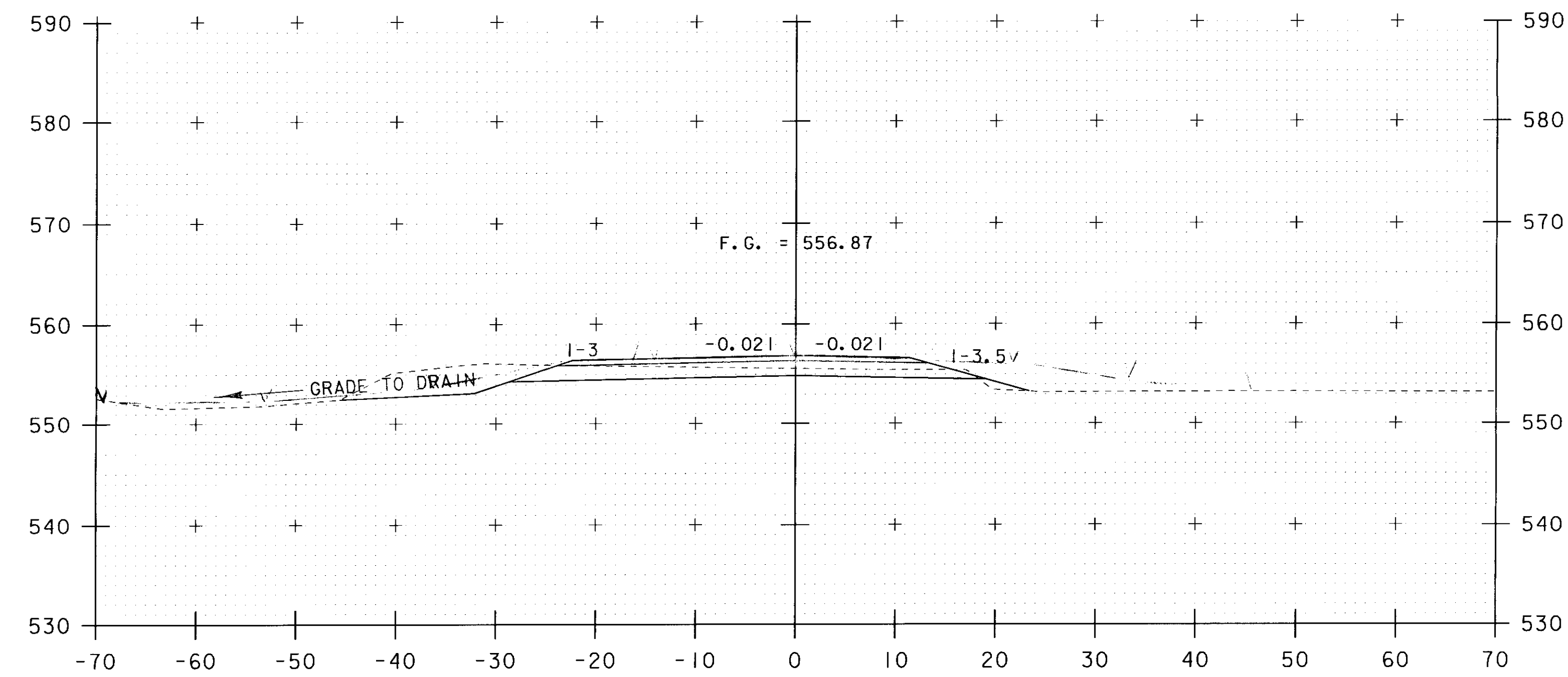
PROJECT NAME: JAMAICA
PROJECT NUMBER: BRO 1442(27)

FILE NAME: s96J068xsl.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. LACROIX
ROADWAY CROSS SECTIONS #1

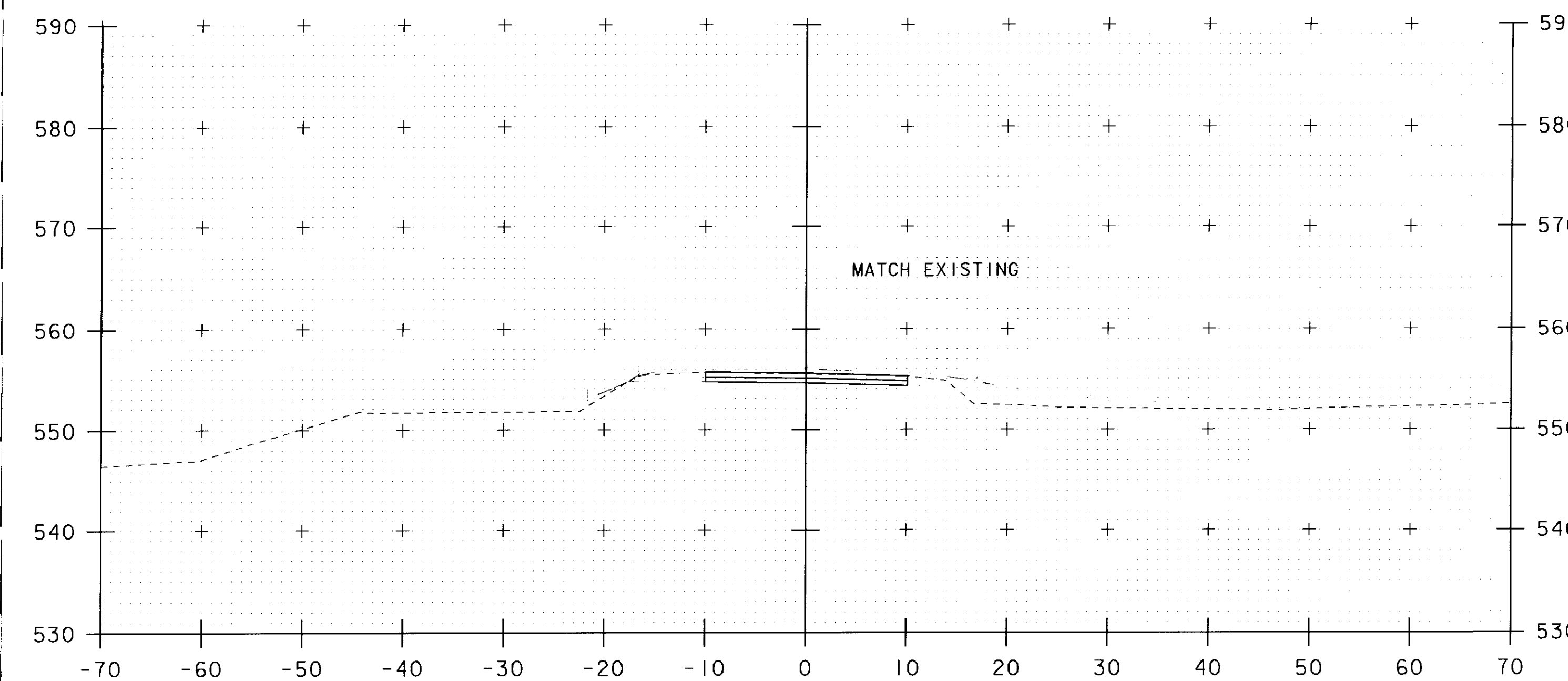
PLOT DATE: 23-SEP-2010
DRAWN BY: R. PELLETT
CHECKED BY: J. LACROIX
SHEET 34 OF 45



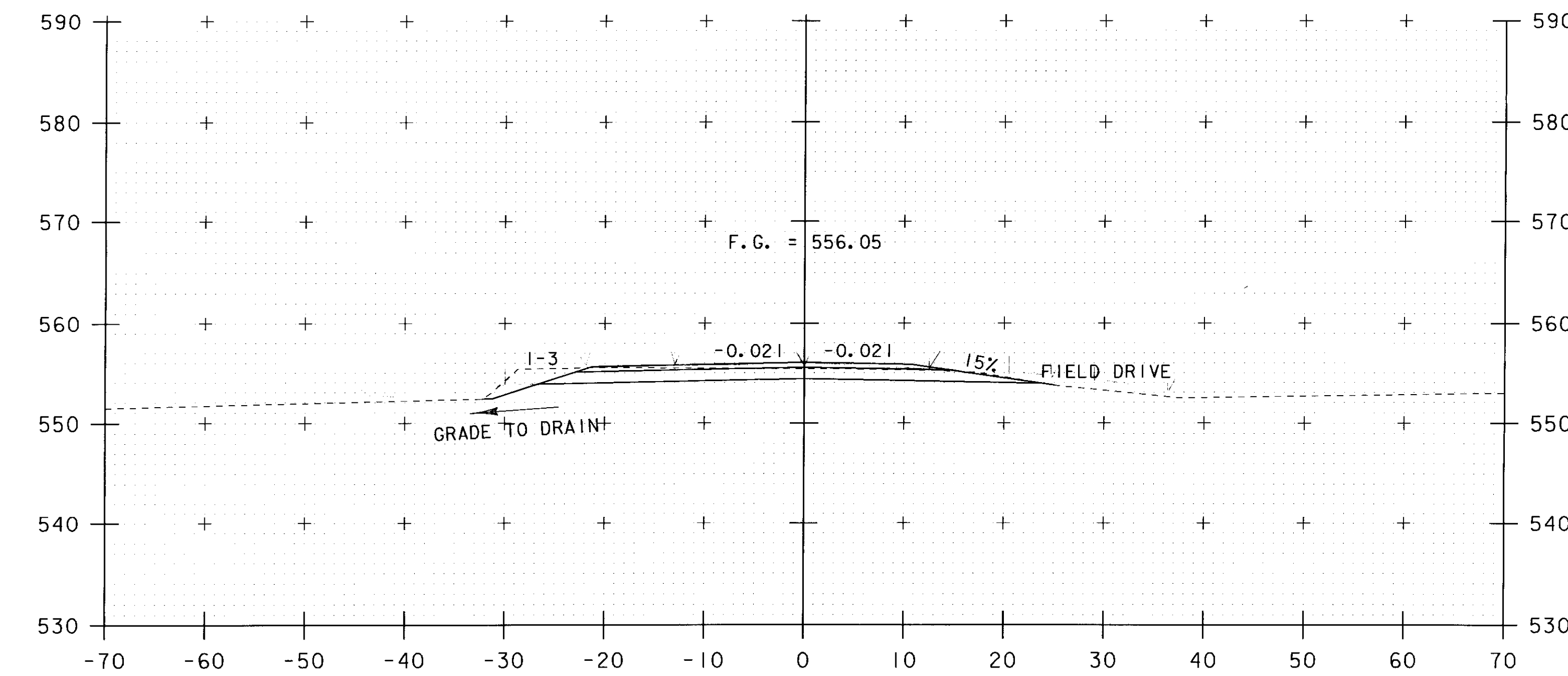
33+75



34+25
BEGIN PROJECT



33+50
BEGIN APPROACH



34+00

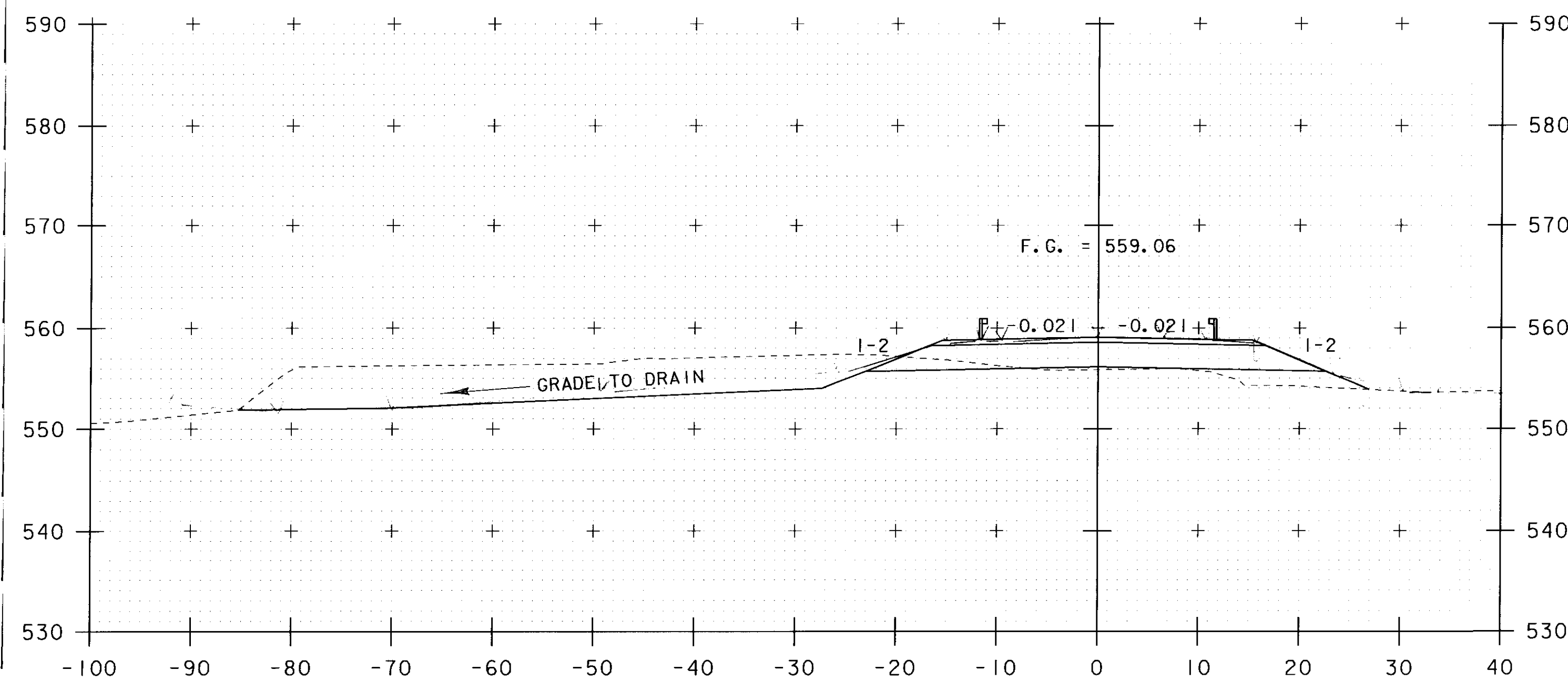
STA. 33+50 TO STA. 34+25

SCALE 1" = 10' - 0
10 0 10

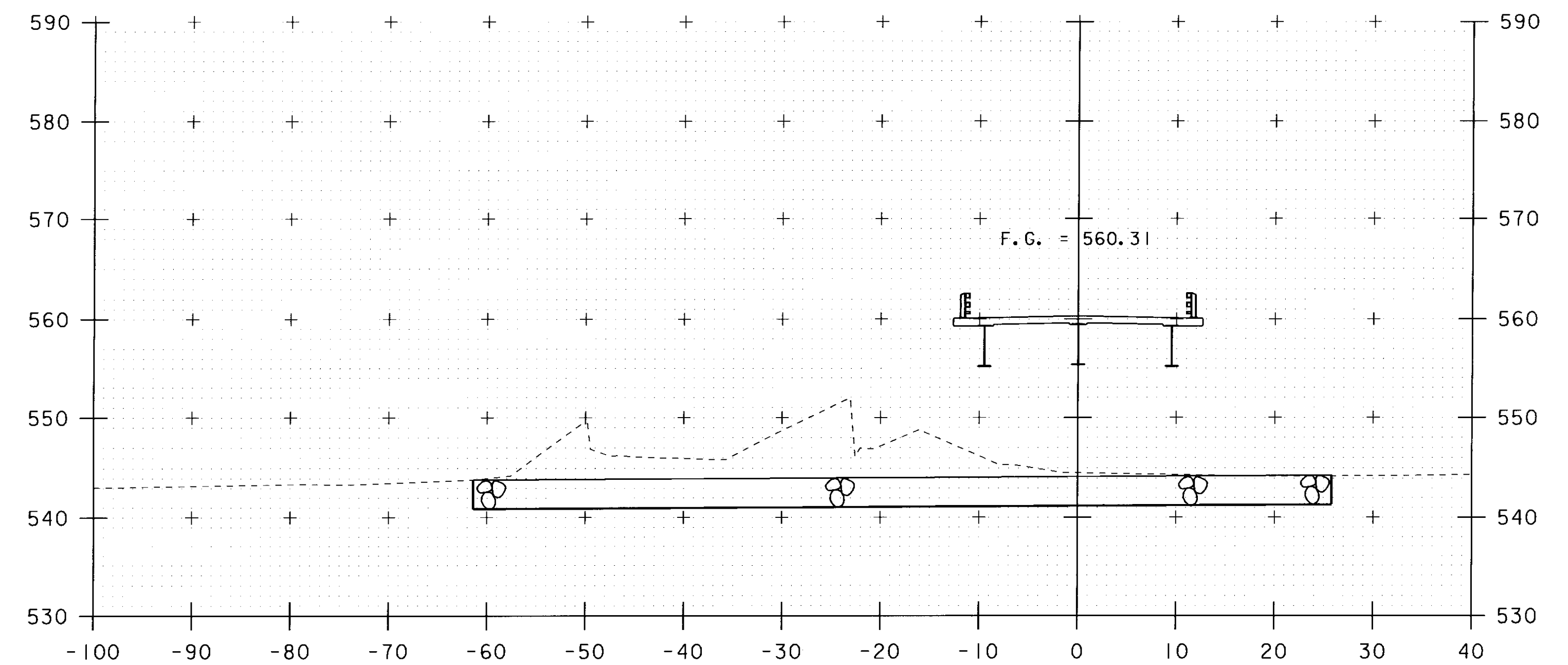
PROJECT NAME: JAMAICA
PROJECT NUMBER: BRO 1442(27)

FILE NAME: s96J068xsl.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. LACROIX
ROADWAY CROSS SECTIONS #2

PLOT DATE: 23-SEP-2010
DRAWN BY: R. PELLETT
CHECKED BY: J. LACROIX
SHEET 35 OF 45

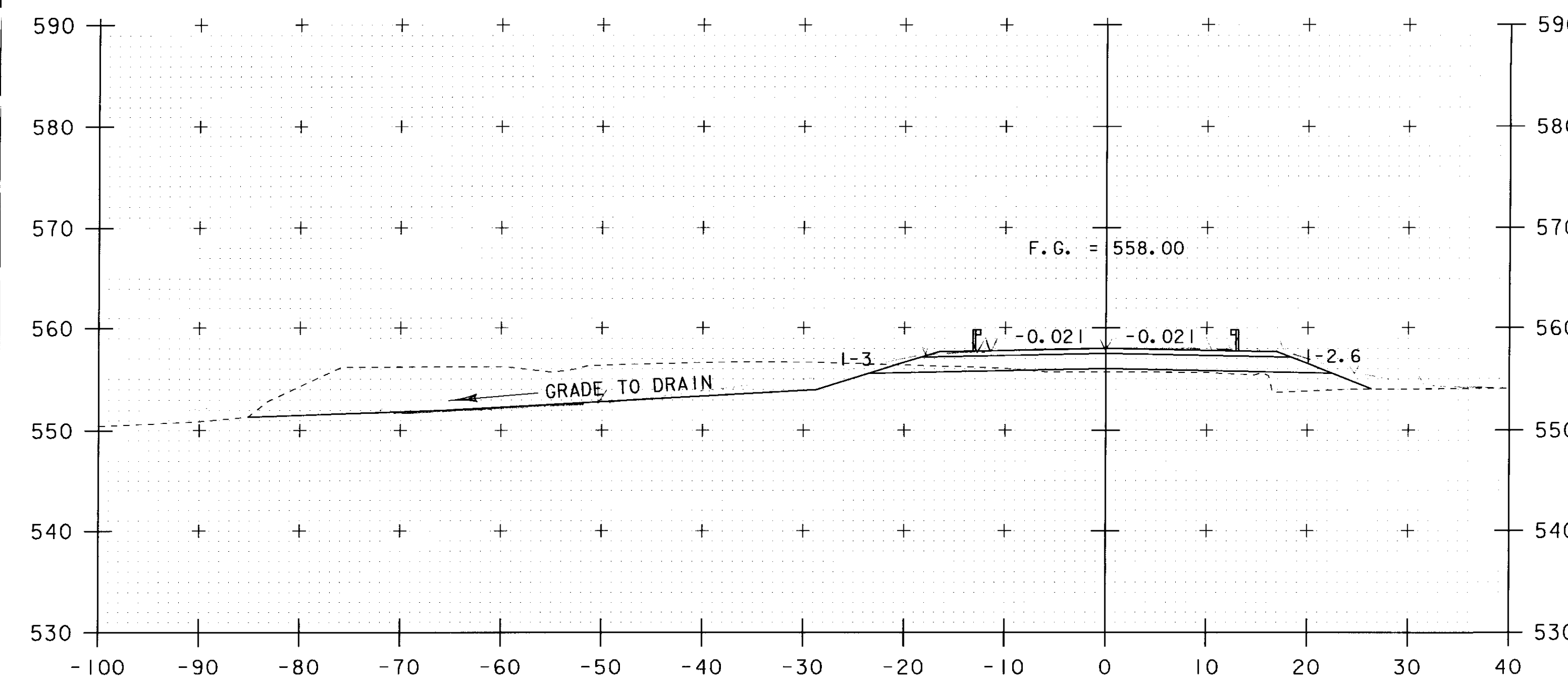


34+75

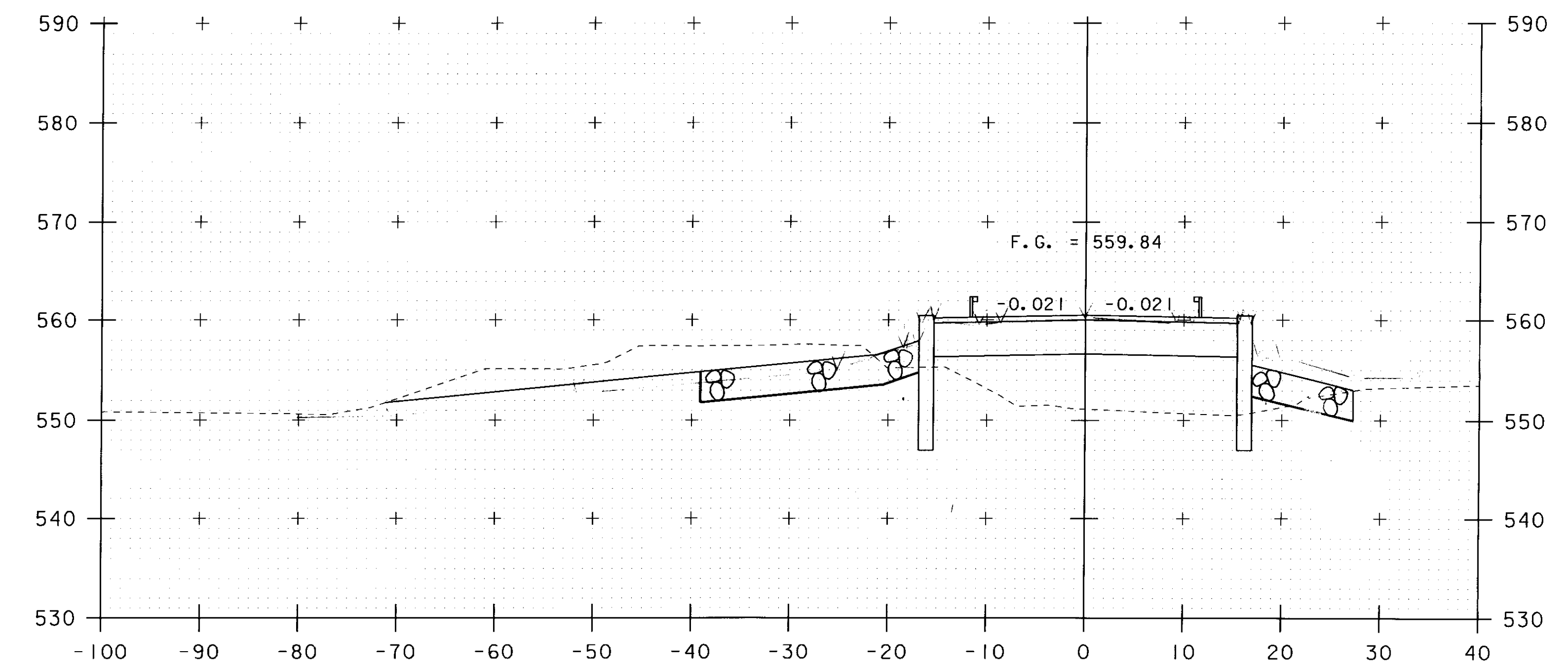


35+25

BEGIN BRIDGE 35+02.50



34+50



35+00

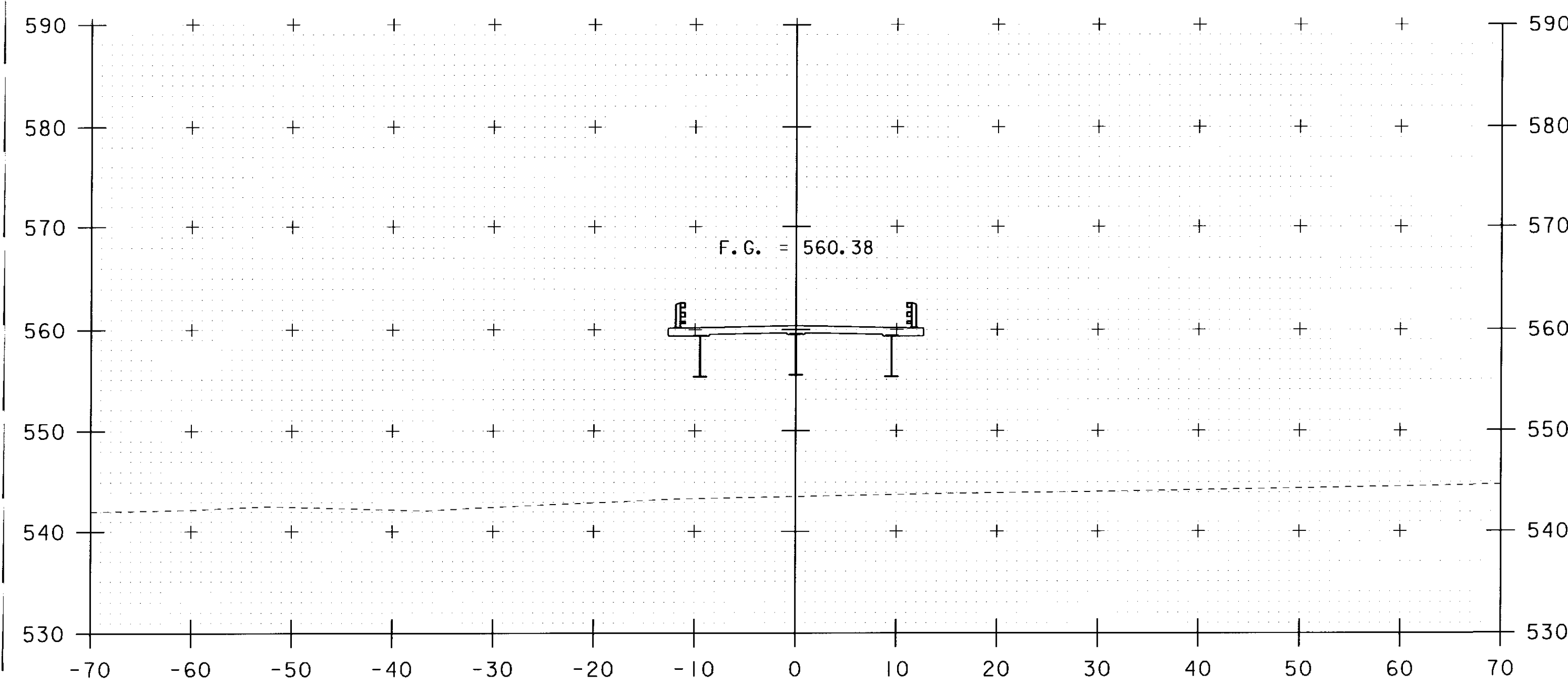
STA. 34+50 TO STA. 35+25

SCALE 1" = 10' - 0
10 0 10

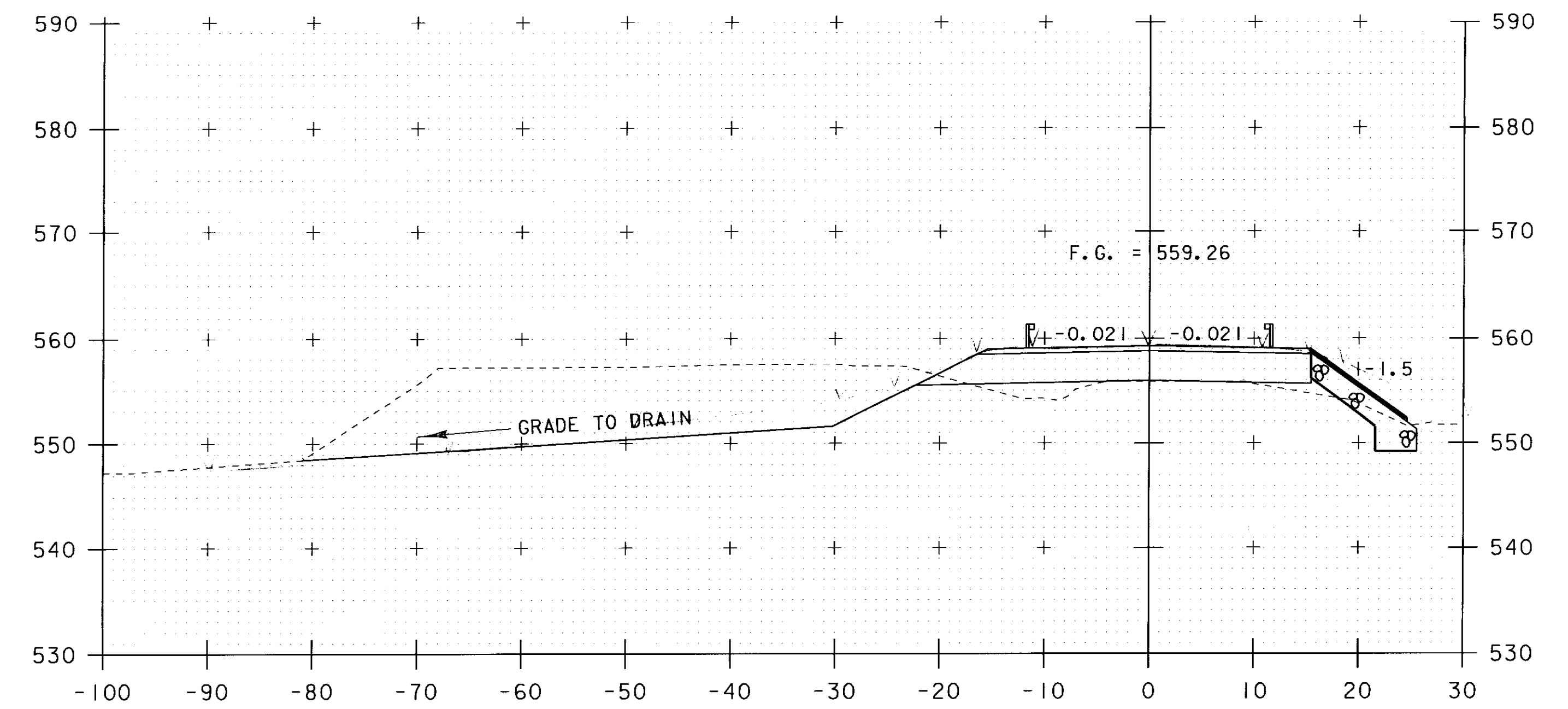
PROJECT NAME: JAMAICA
PROJECT NUMBER: BRO 1442(27)

FILE NAME: s96J068xsl.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. LACROIX
ROADWAY CROSS SECTIONS #3

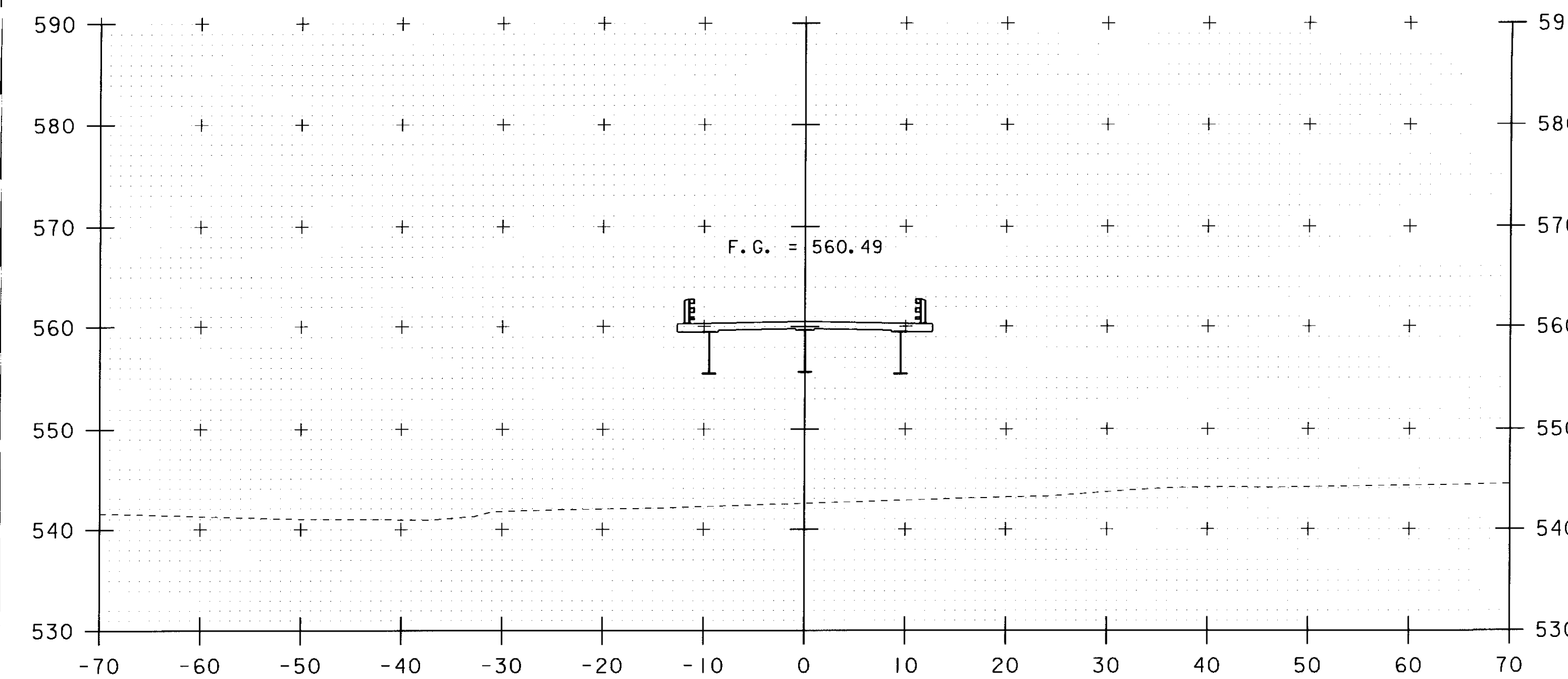
PLOT DATE: 23-SEP-2010
DRAWN BY: R. PELLETT
CHECKED BY: J. LACROIX
SHEET 36 OF 45



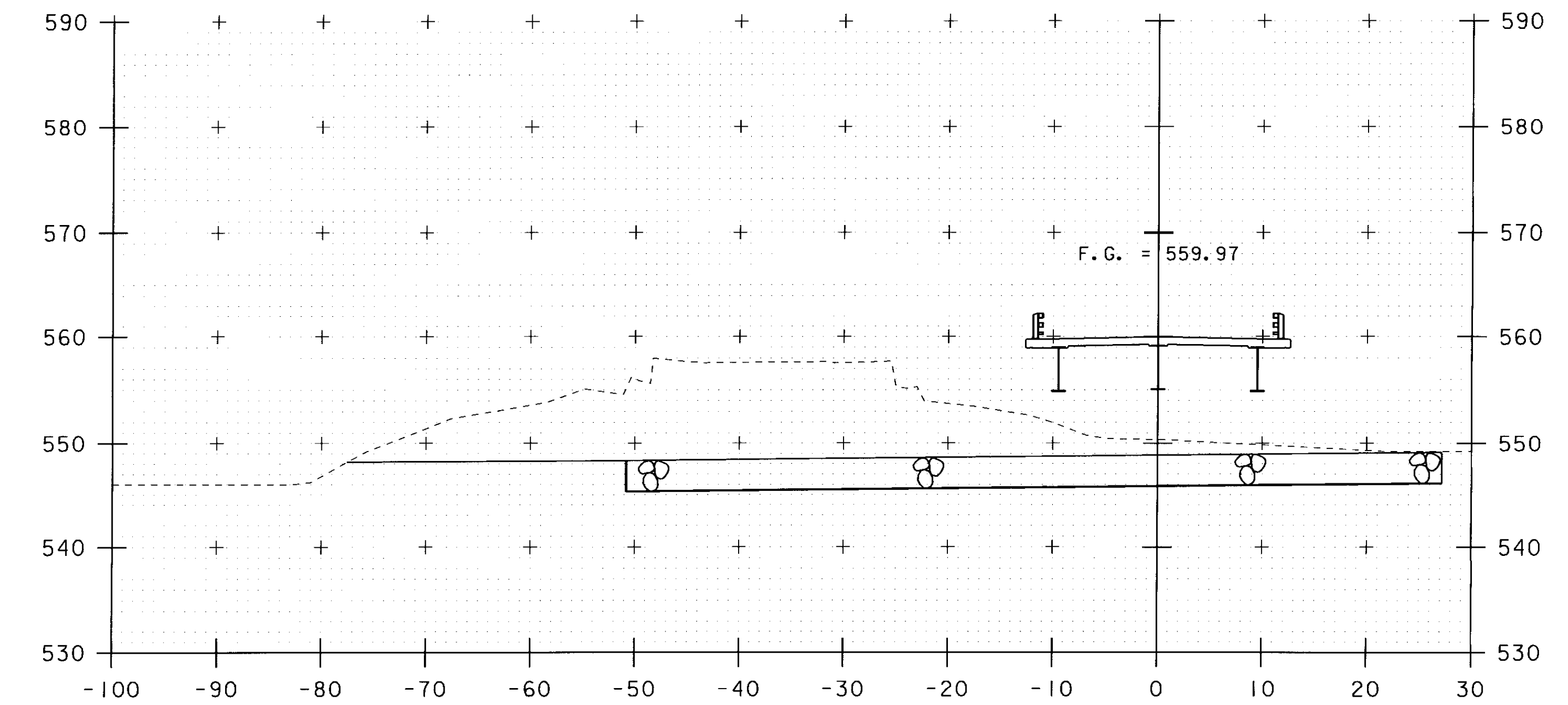
35+75



36+25 STA. 36+19.89 RT.
BEGIN SLOPE STABILIZATION
WITH 2' STONE FILL, TYPE II
WITH 12" GRUBBING MATERIAL



35+50



36+00

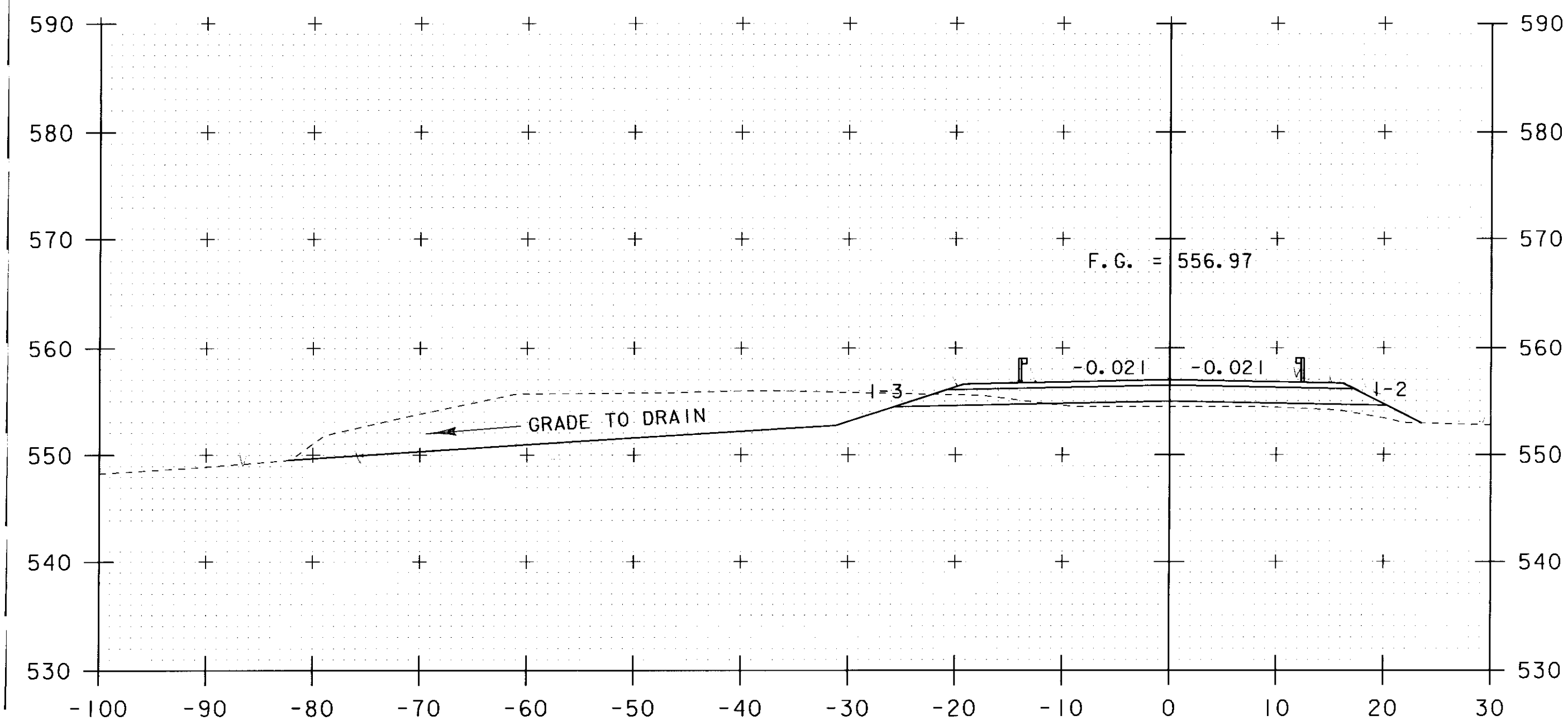
STA. 35+50 TO STA. 36+25

SCALE 1" = 10'-0"
10 0 10

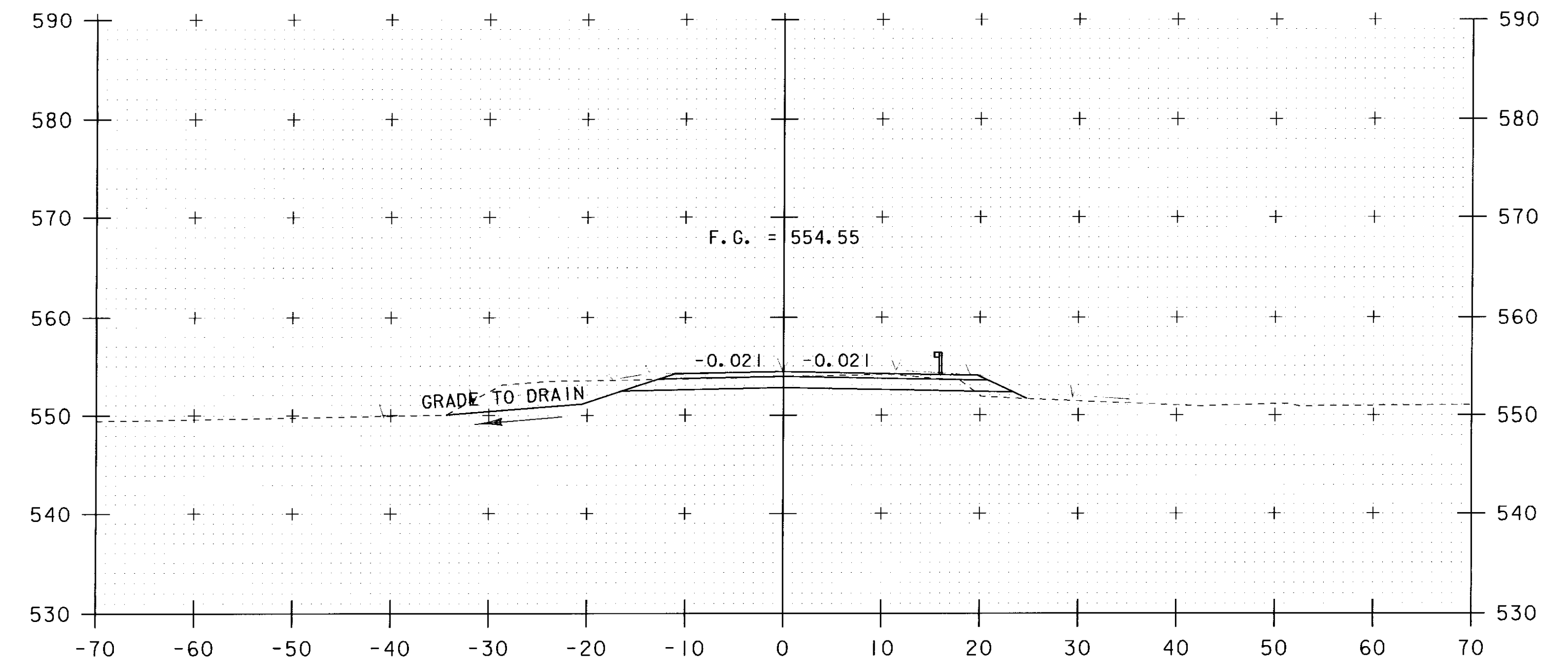
PROJECT NAME: JAMAICA
PROJECT NUMBER: BRO 1442(27)

FILE NAME: s96j068xsl.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. LACROIX
ROADWAY CROSS SECTIONS #4

PLOT DATE: 23-SEP-2010
DRAWN BY: R. PELLETT
CHECKED BY: J. LACROIX
SHEET 37 OF 45

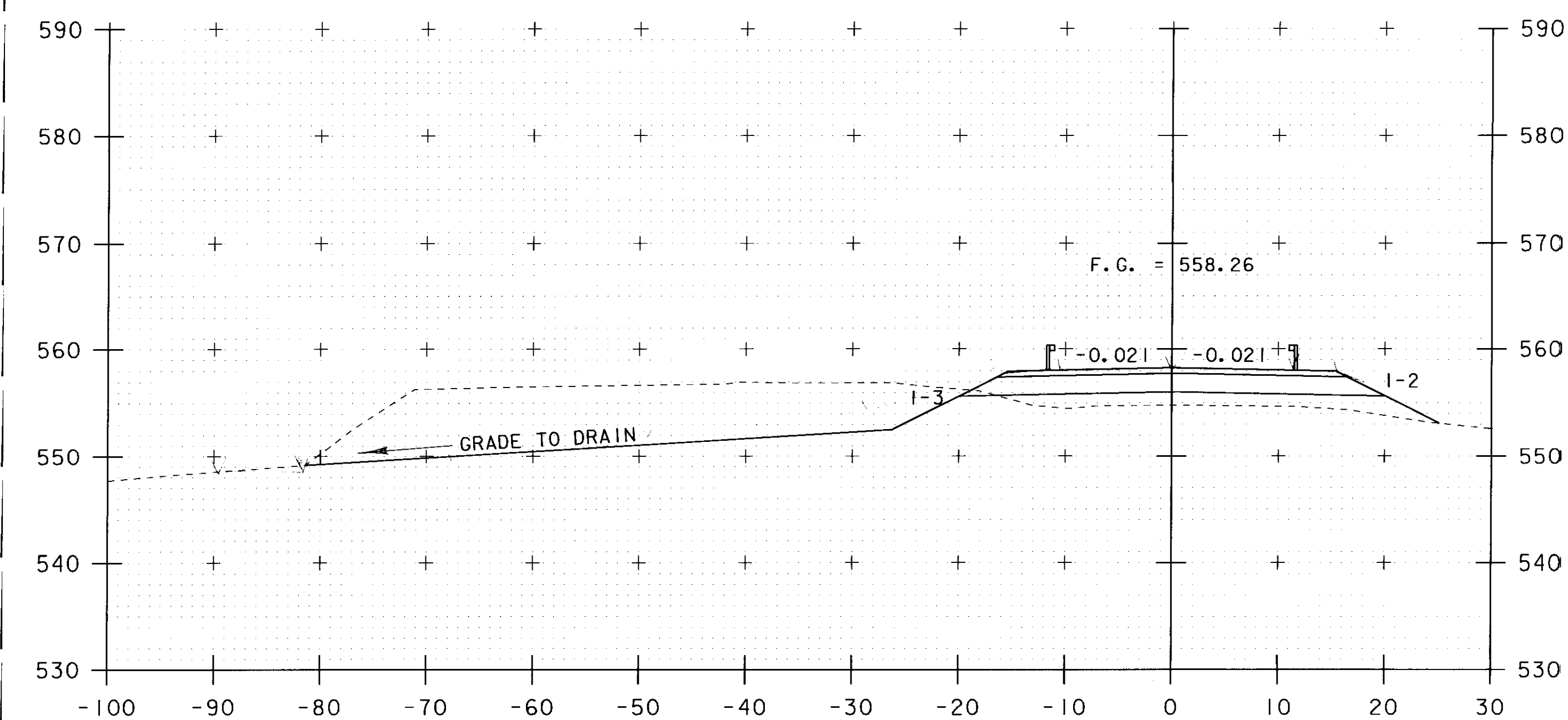


36+75

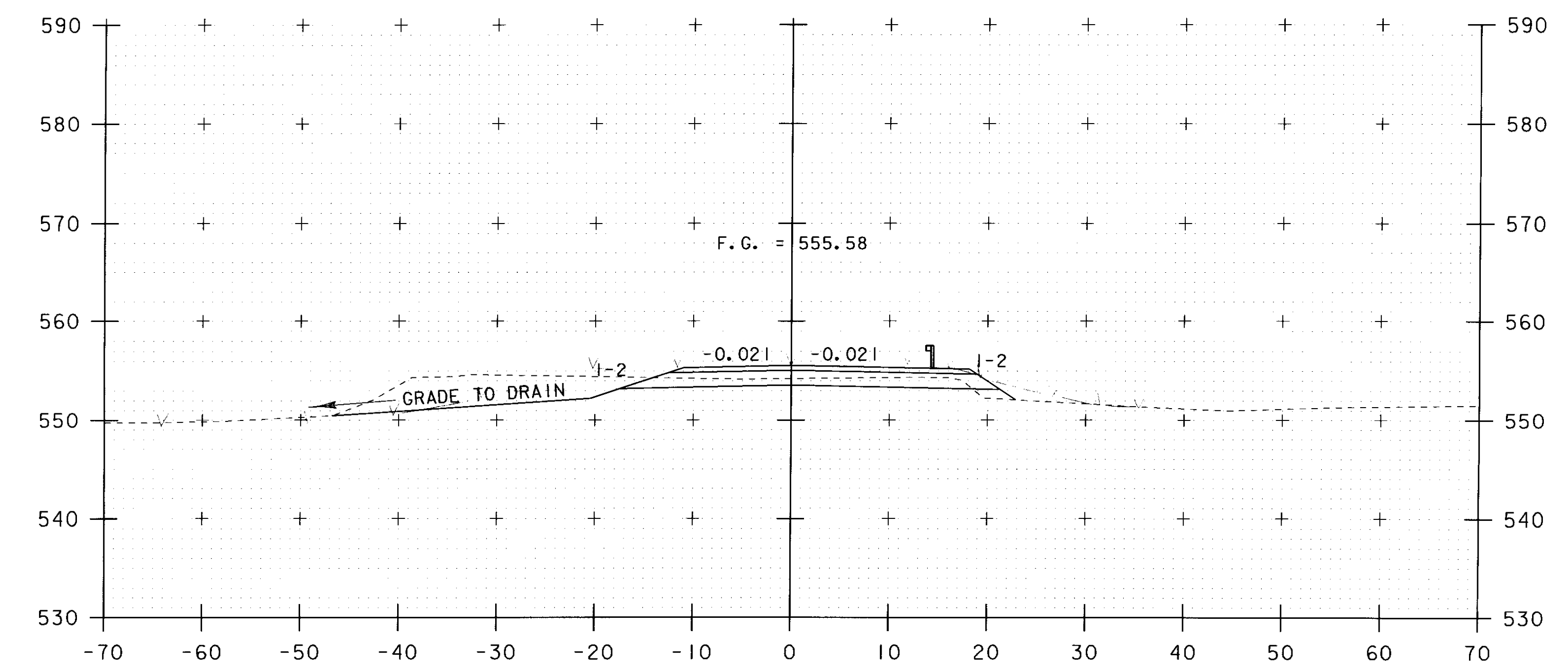


37+25

STA. 36+50 RT.
END SLOPE STABILIZATION
WITH 2' STONE FILL, TYPE II
WITH 12" GRUBBING MATERIAL



36+50



37+00
END PROJECT

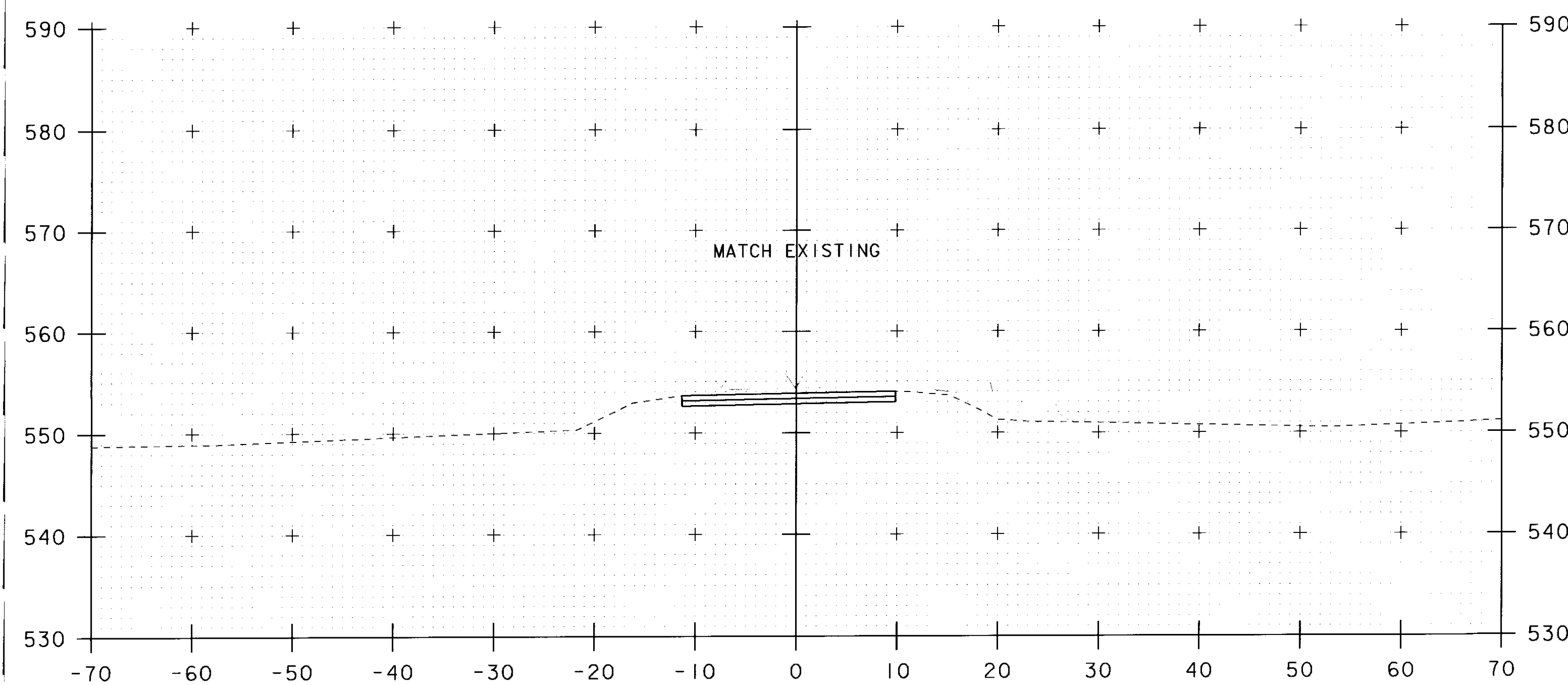
STA. 36+50 TO STA. 37+25

SCALE 1" = 10'-0"
10 0 10

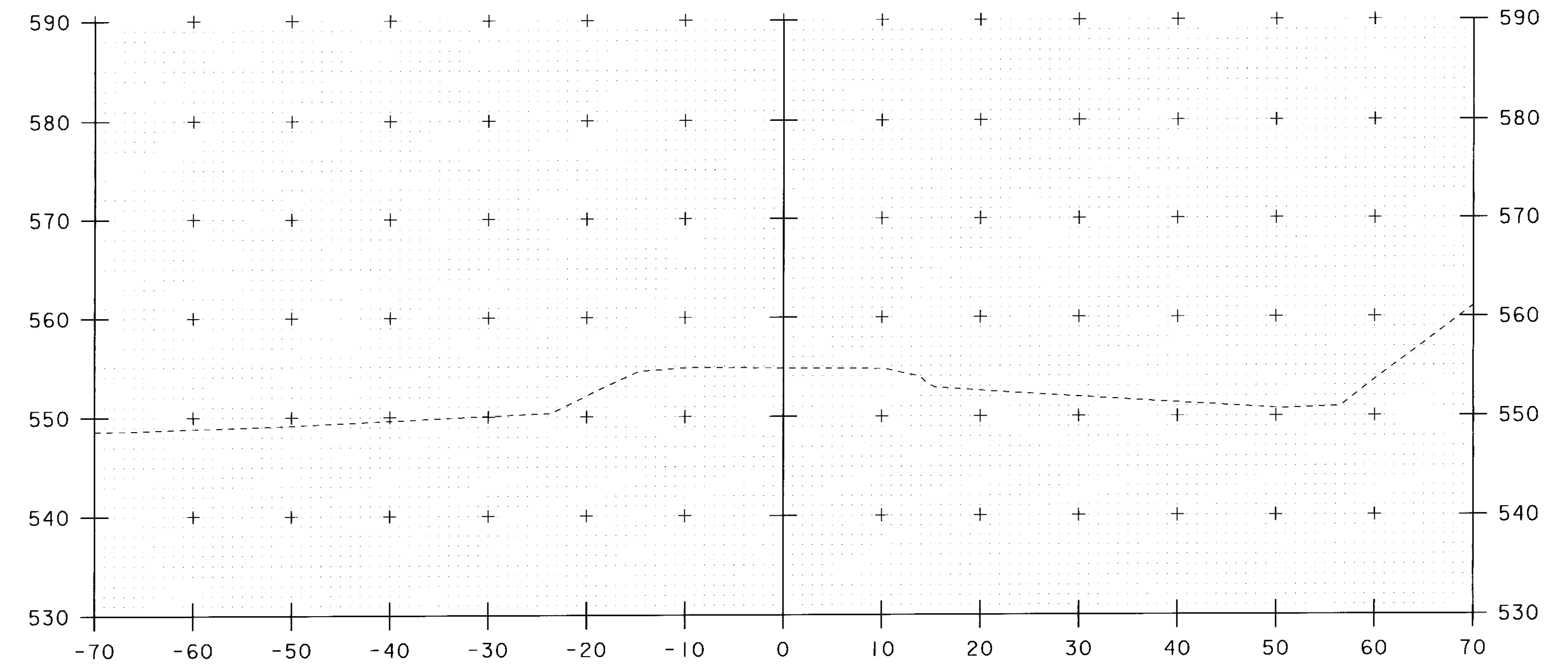
PROJECT NAME: JAMAICA
PROJECT NUMBER: BRO 1442(27)

FILE NAME: s96j068xsl.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. LACROIX
ROADWAY CROSS SECTIONS *5

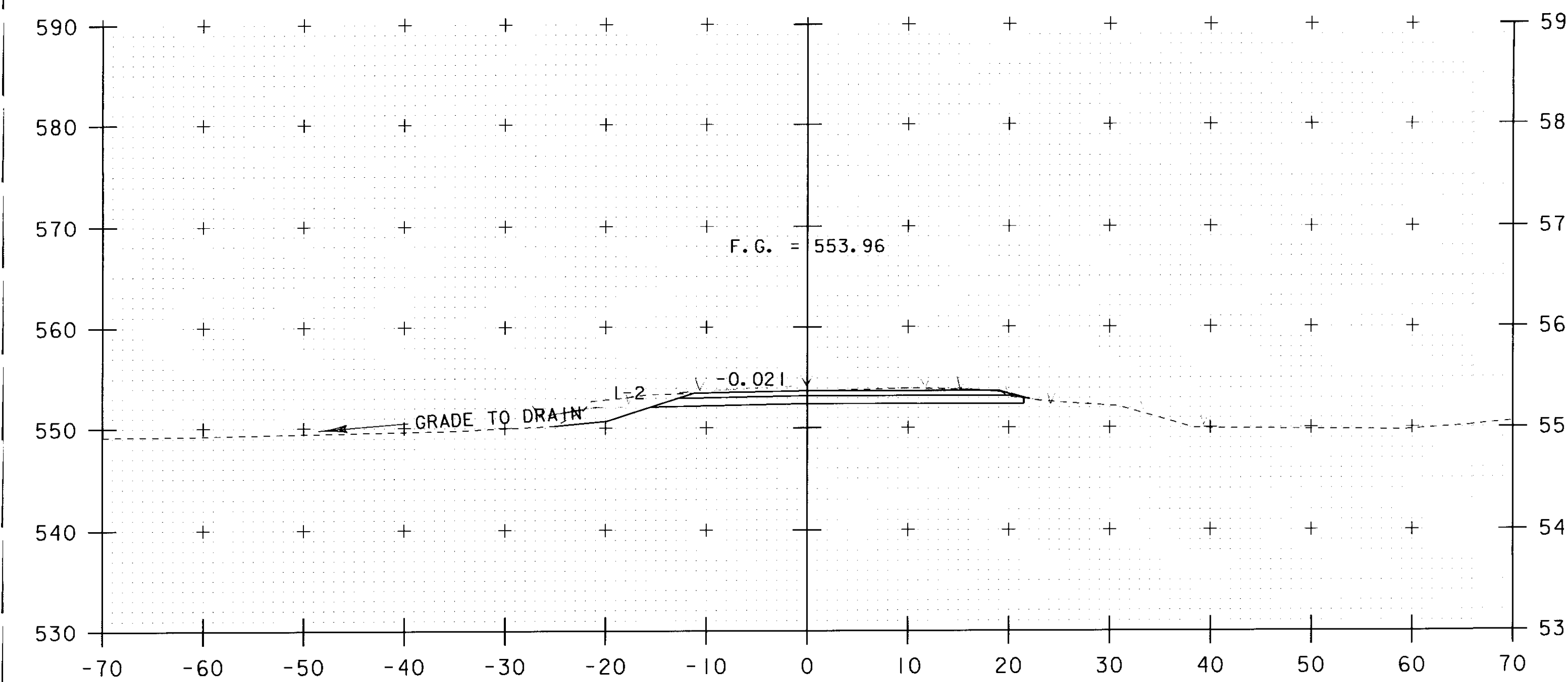
PLOT DATE: 23-SEP-2010
DRAWN BY: R. PELLETT
CHECKED BY: J. LACROIX
SHEET 38 OF 45



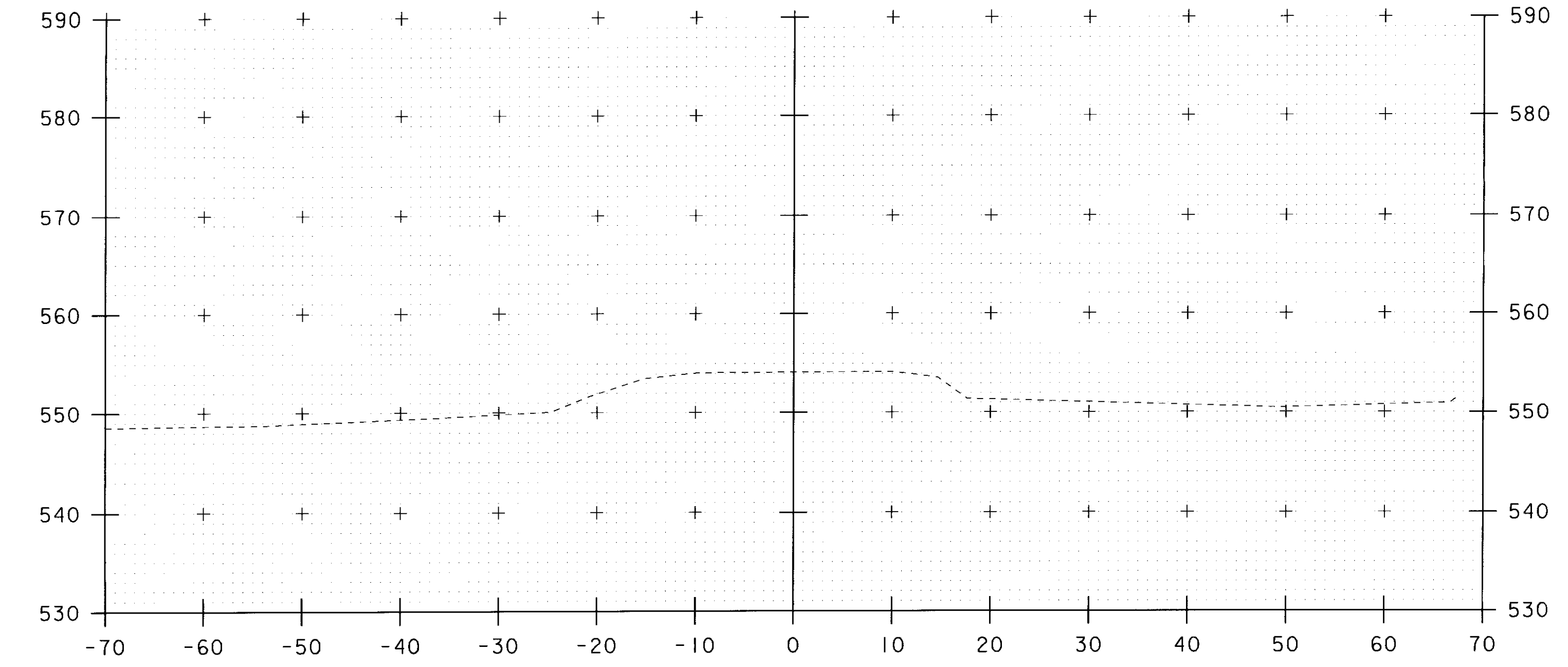
37+75
END APPROACH



38+25



37+50



38+00

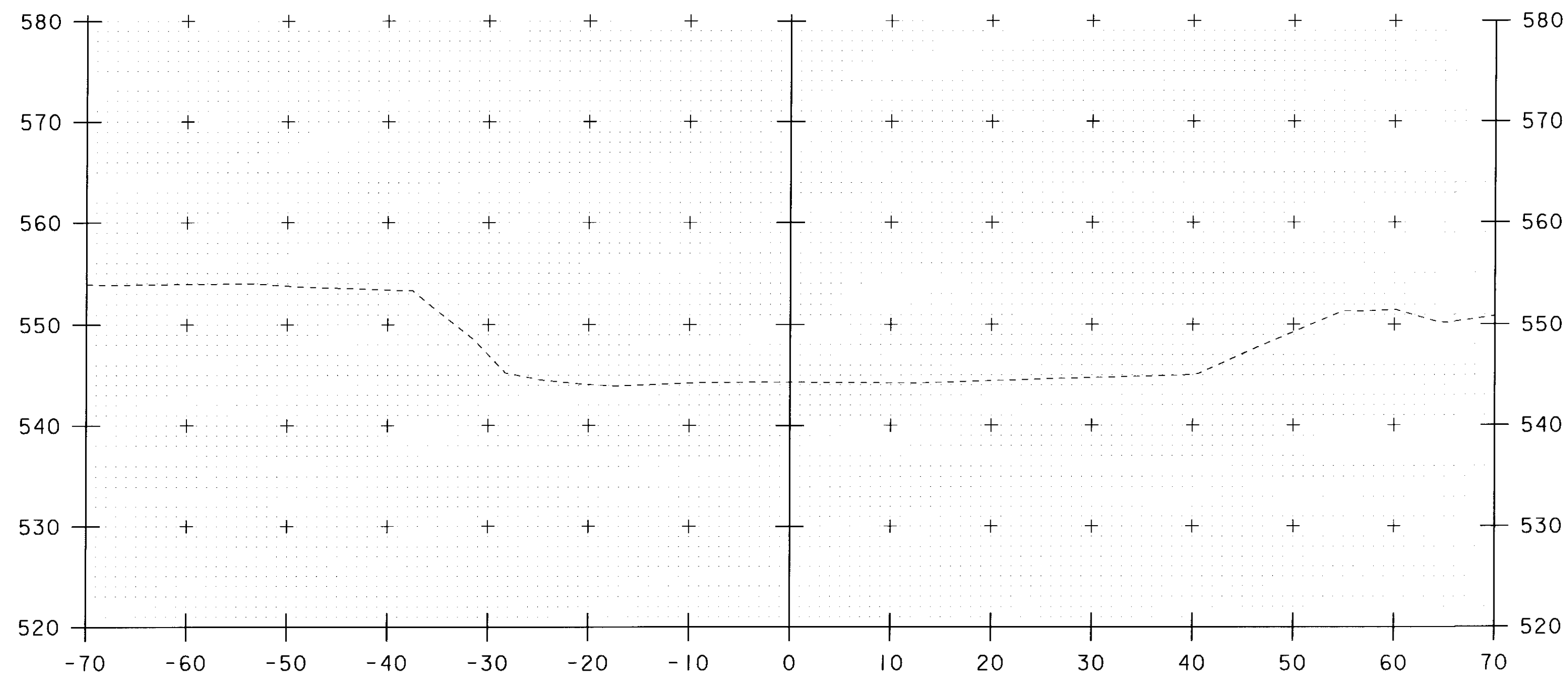
STA. 37+50 TO STA. 38+25

SCALE 1" = 10'-0"
10 0 10

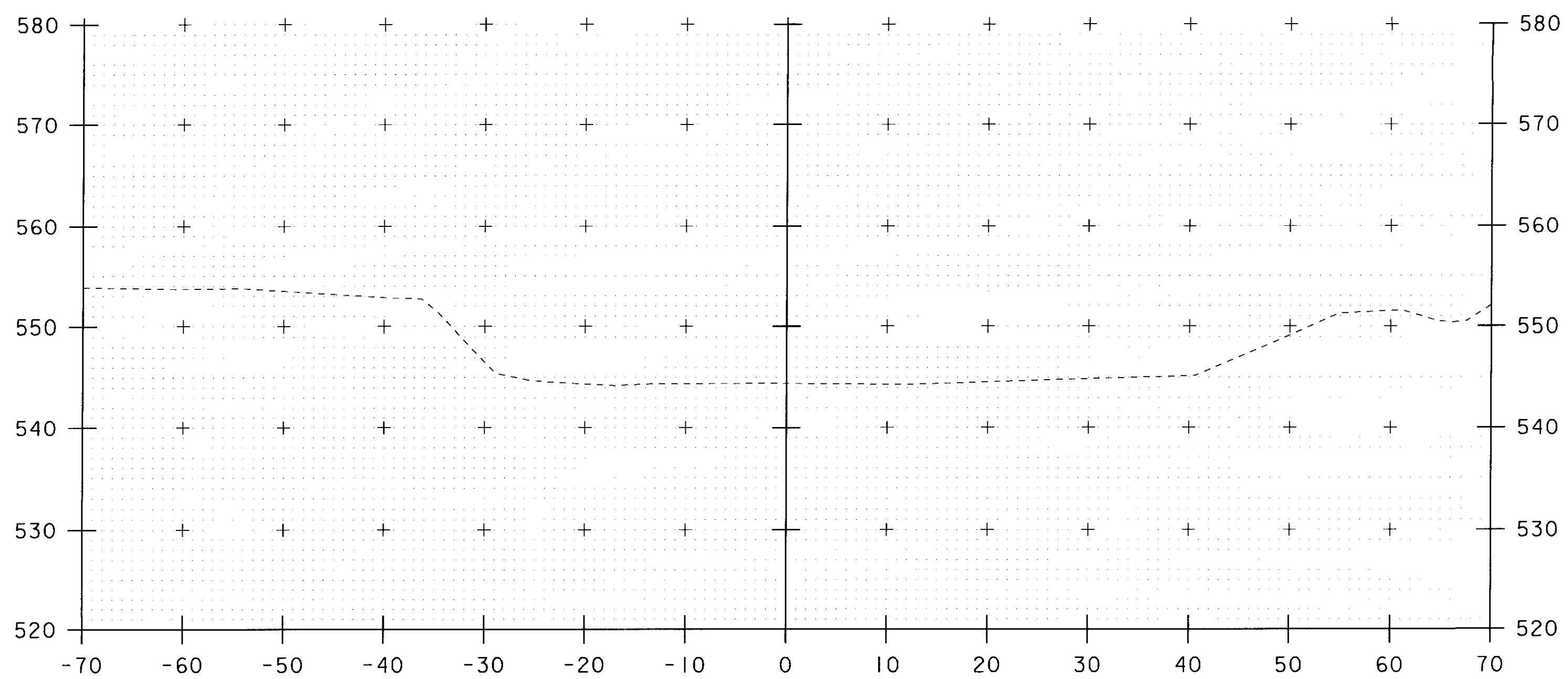
PROJECT NAME: JAMAICA
PROJECT NUMBER: BRO 1442(27)

FILE NAME: s96j068xsl.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. LACROIX
ROADWAY CROSS SECTIONS #6

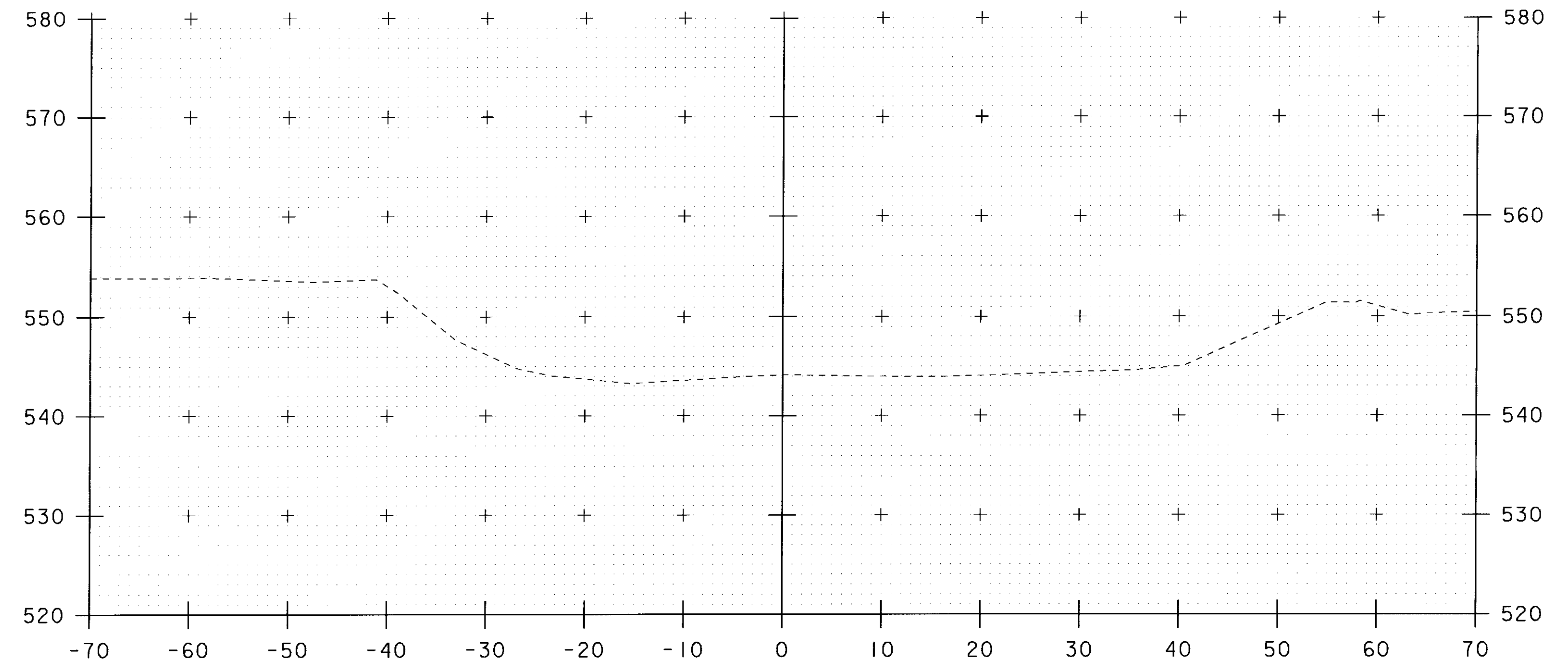
PLOT DATE: 23-SEP-2010
DRAWN BY: R. PELLETT
CHECKED BY: J. LACROIX
SHEET 39 OF 45



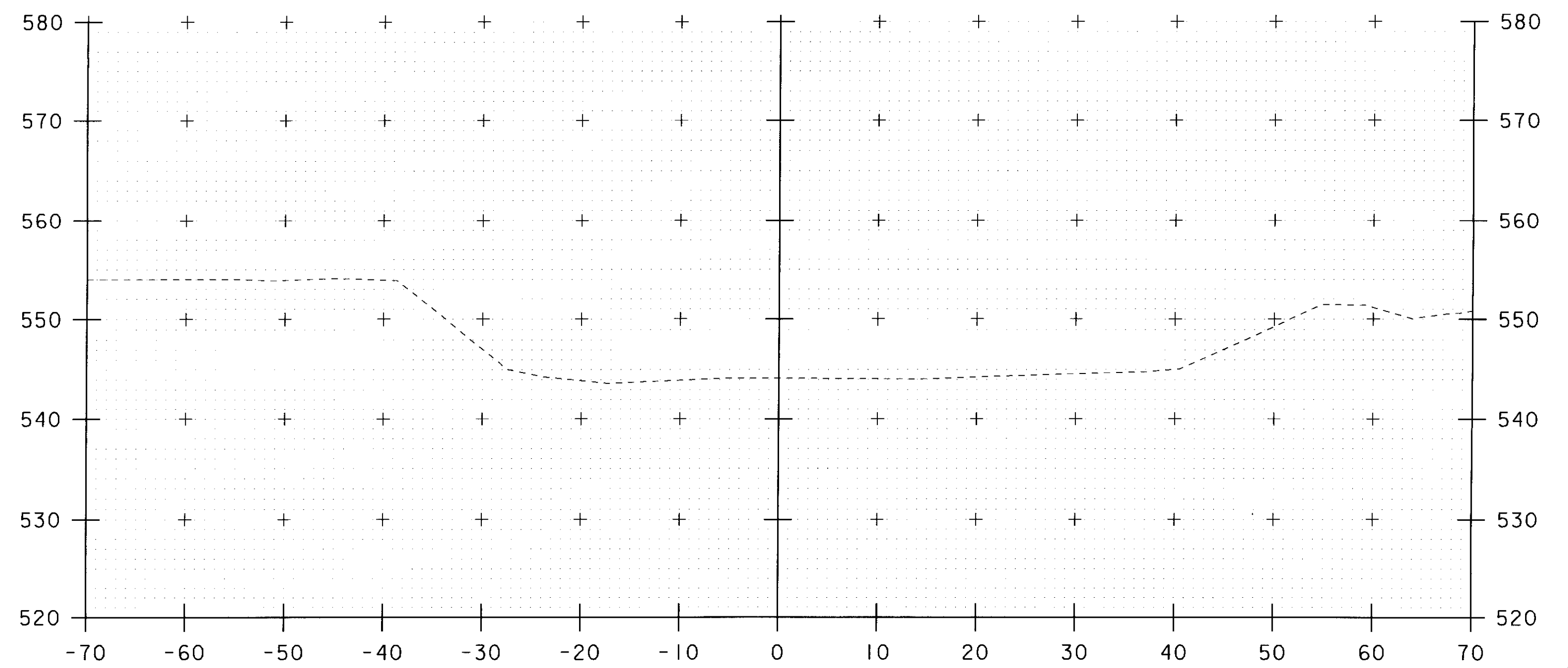
3+40



3+30



3+60



3+50

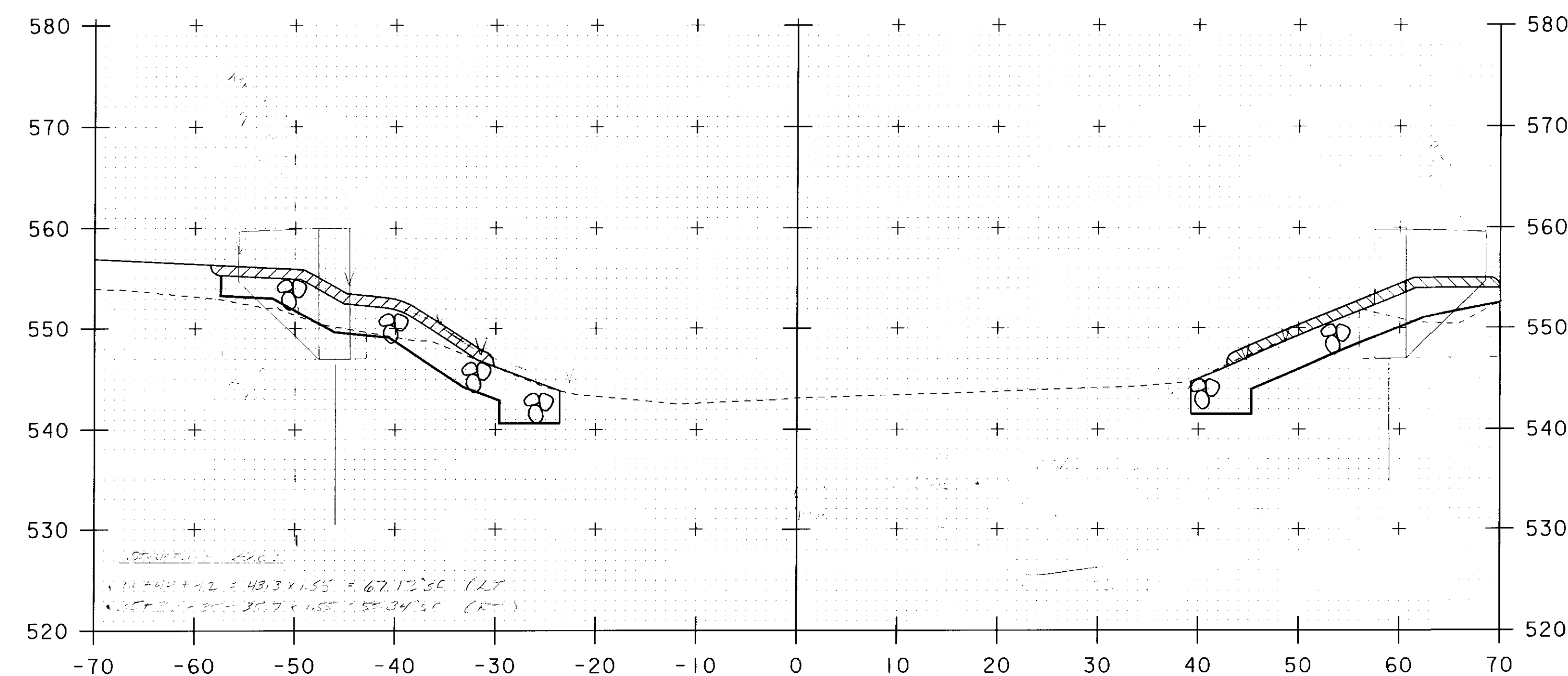
STA. 3+30 TO STA. 3+60

SCALE 1" = 10'-0"
10 0 10

PROJECT NAME: JAMAICA
PROJECT NUMBER: BRO 1442(27)

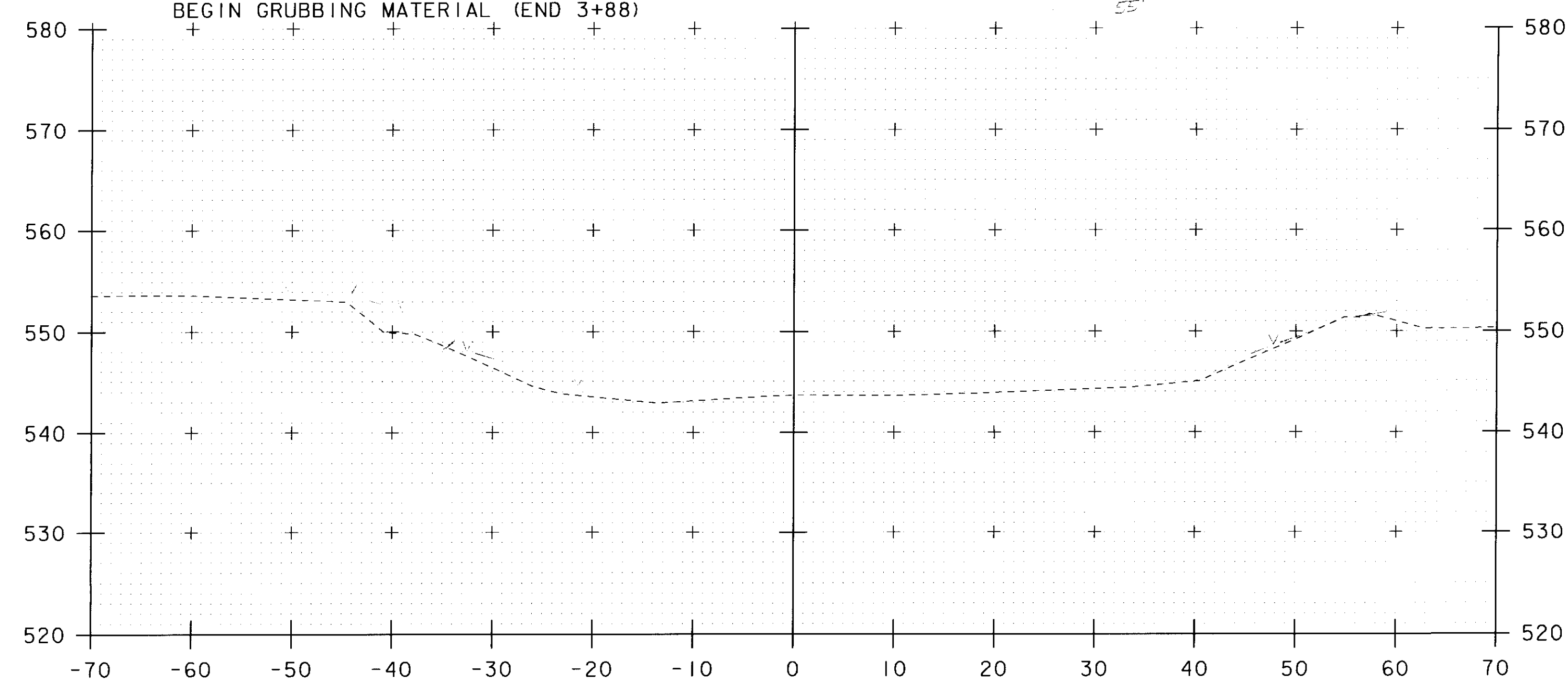
FILE NAME: s96j068xsl.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. LACROIX
CHANNEL CROSS SECTIONS #1

PLOT DATE: 23-SEP-2010
DRAWN BY: R. PELLETT
CHECKED BY: J. LACROIX
SHEET 40 OF 45

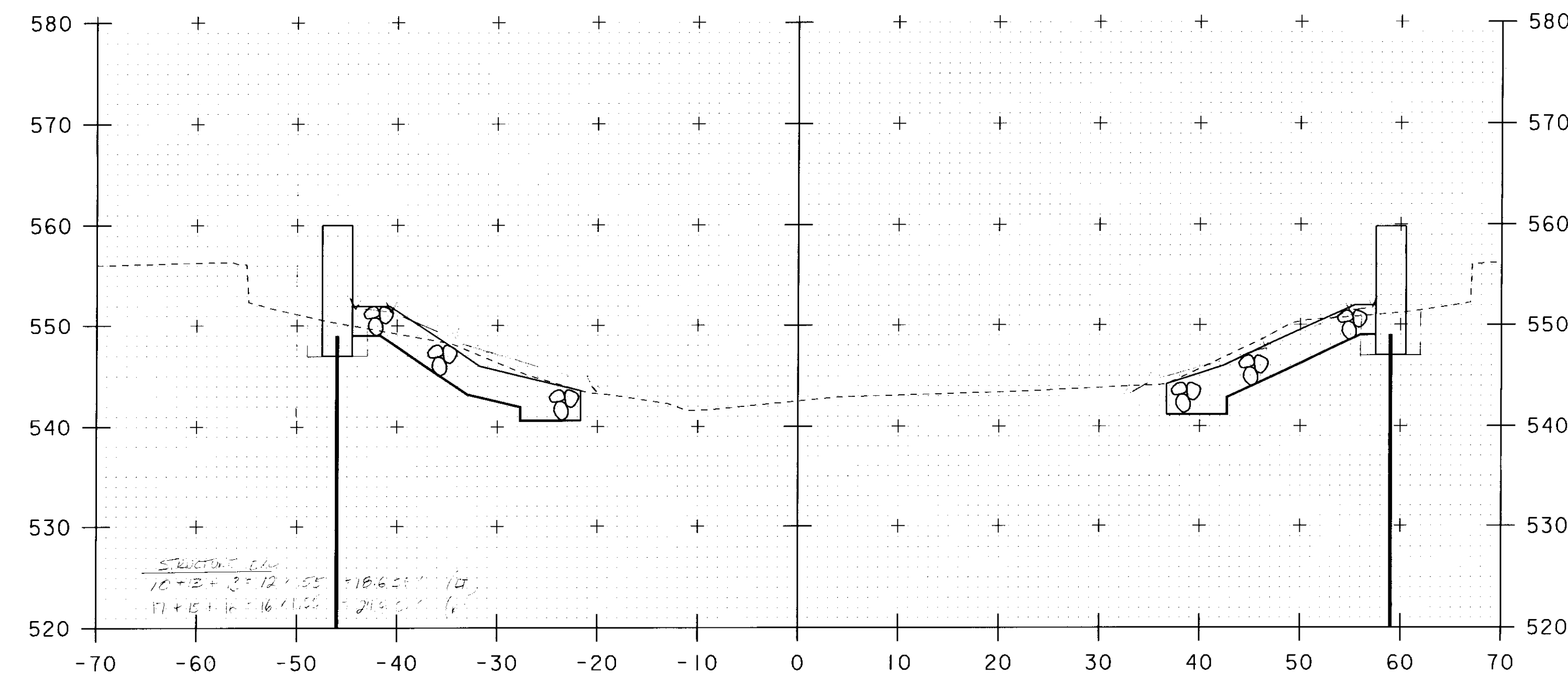


STA 3+72.50 LT & RT
 BEGIN UNCLASSIFIED CHANNEL EXCAVATION
 BEGIN GEOTEXTILE UNDER STONE FILL
 BEGIN STONE FILL TYPE III
 BEGIN GRUBBING MATERIAL (END 3+88)

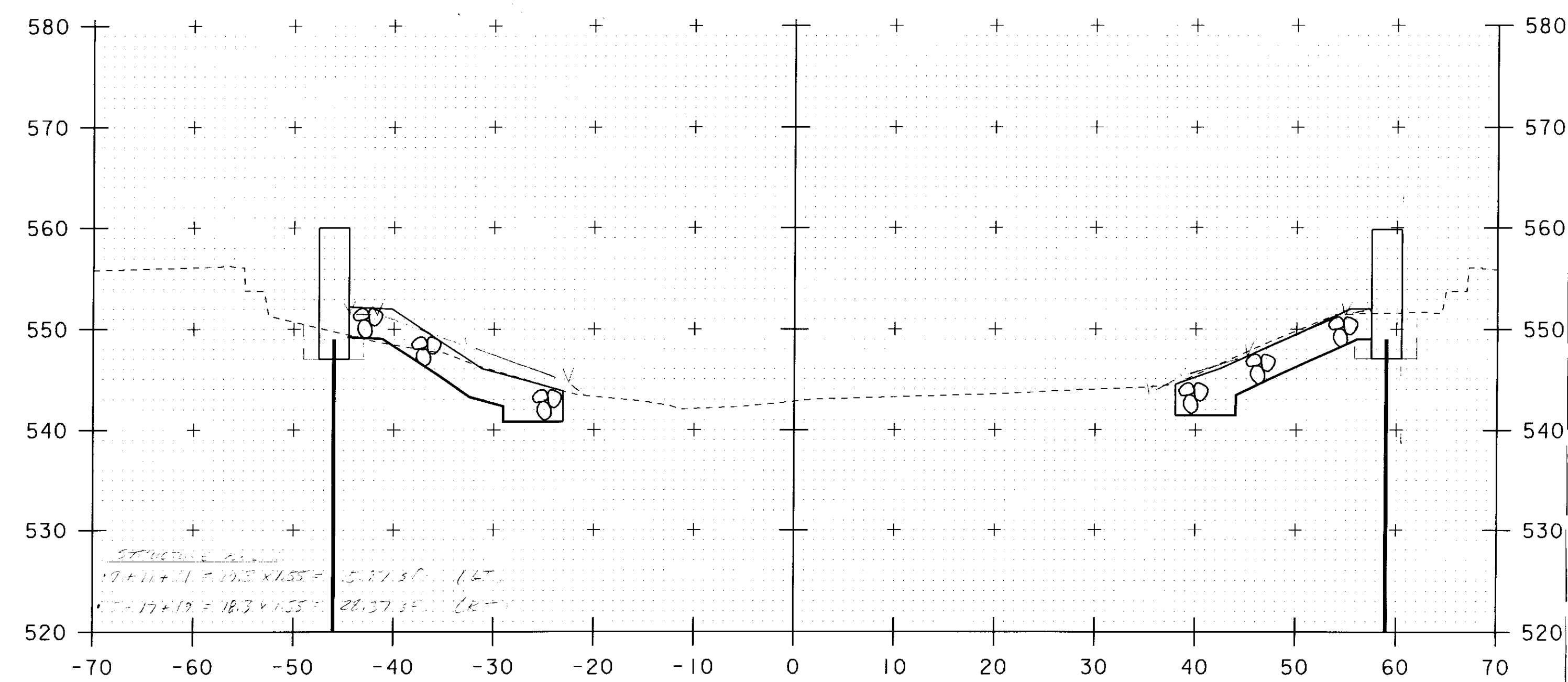
3+80



3+70



4+00



3+90

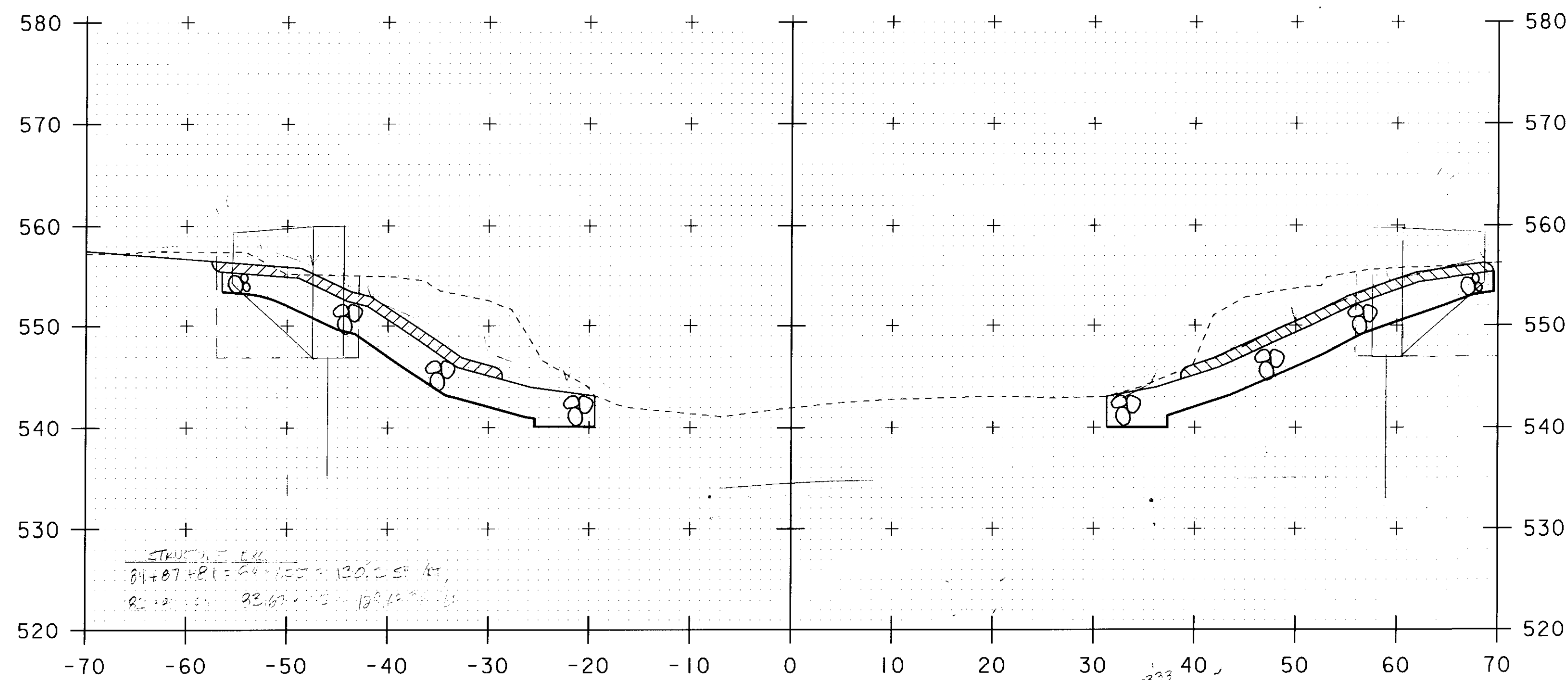
STA. 3+70 TO STA. 4+00

SCALE 1" = 10' - 0
 10 0 10

PROJECT NAME: JAMAICA
 PROJECT NUMBER: BRO 1442(27)

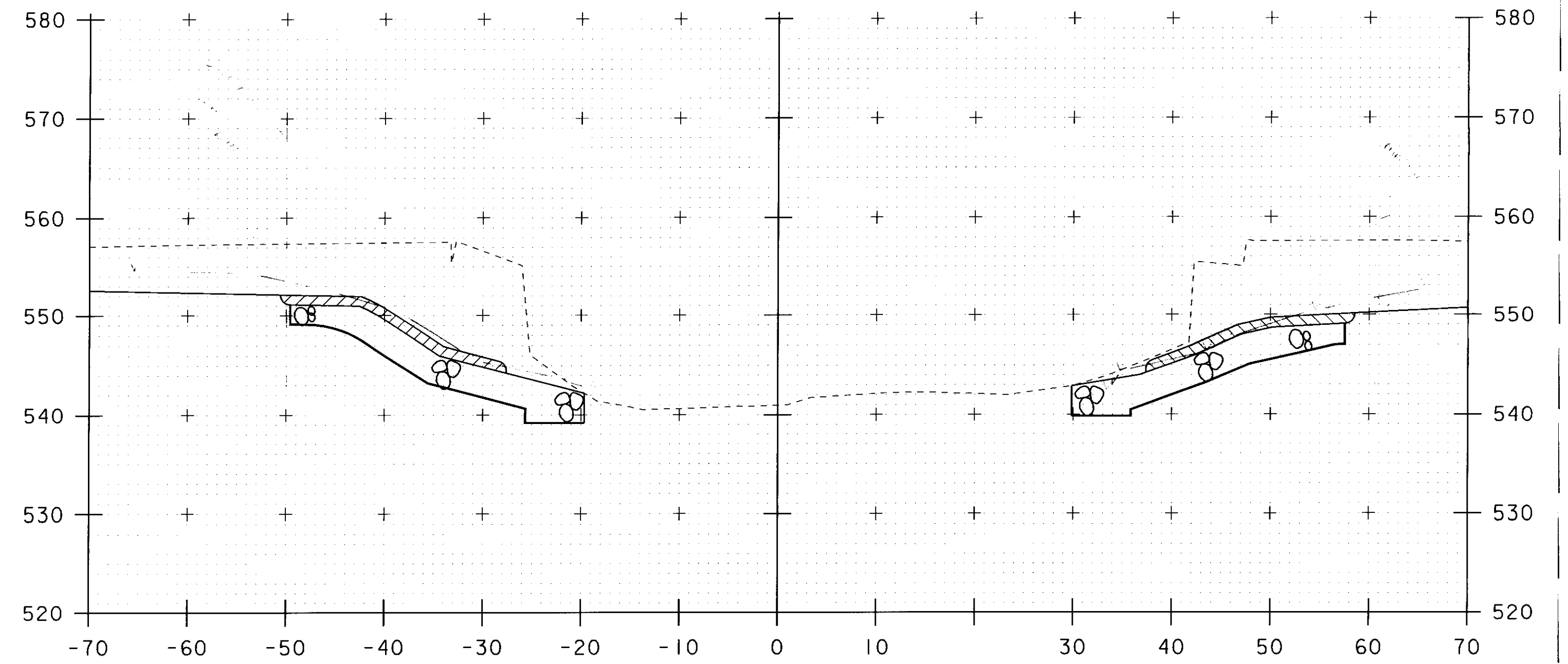
FILE NAME: s96J068xsl.dgn
 PROJECT LEADER: K. HIGGINS
 DESIGNED BY: J. LACROIX
 CHANNEL CROSS SECTIONS #2

PLOT DATE: 23-SEP-2010
 DRAWN BY: R. PELLETT
 CHECKED BY: J. LACROIX
 SHEET 41 OF 45

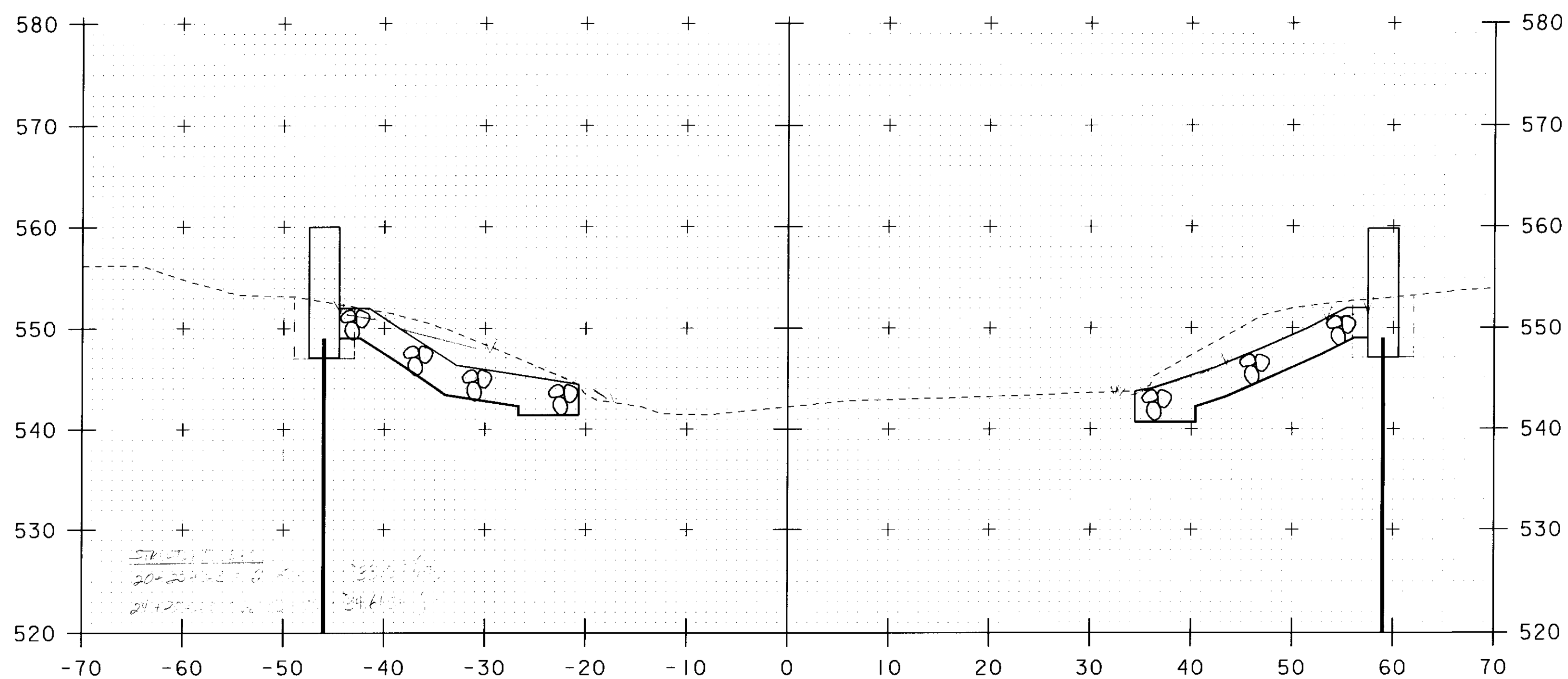


STA 4+12 LT & RT
BEGIN GRUBBING MATERIAL

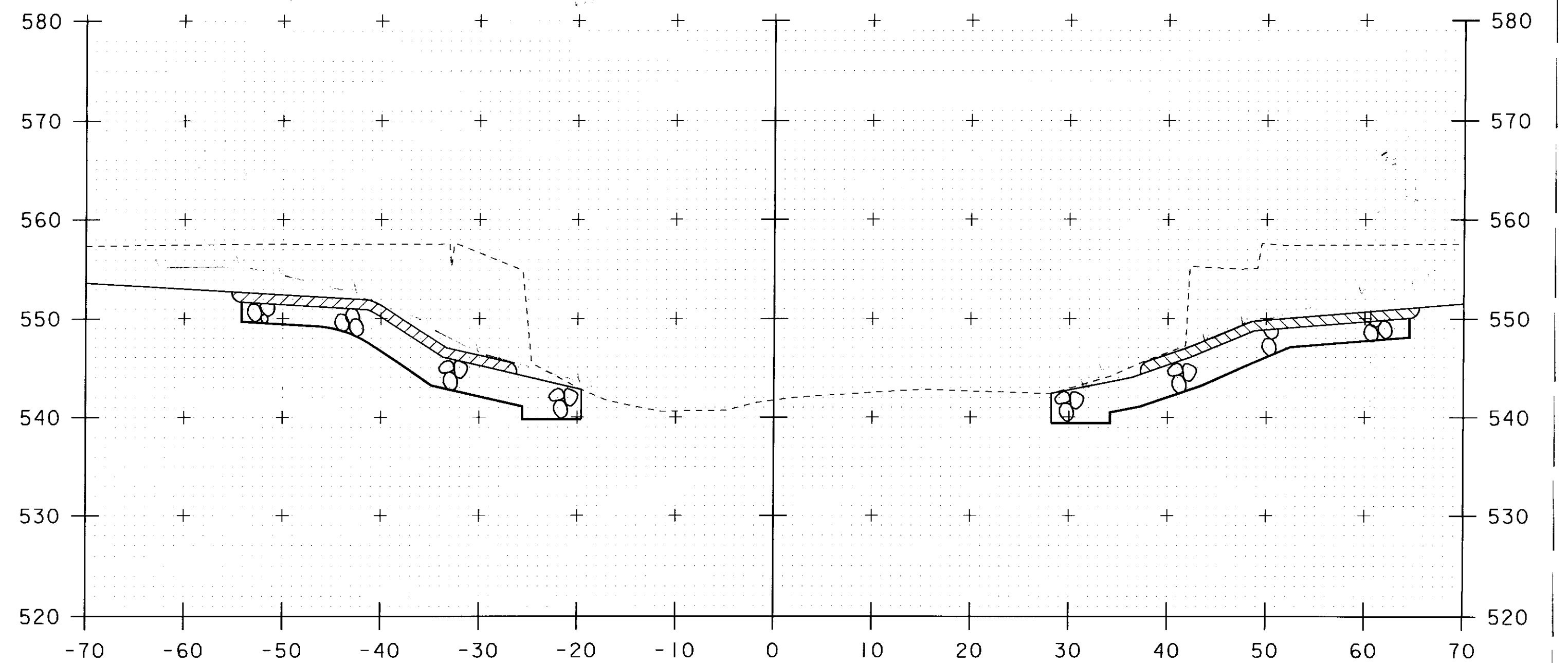
4+20



4+40



4+10



4+30

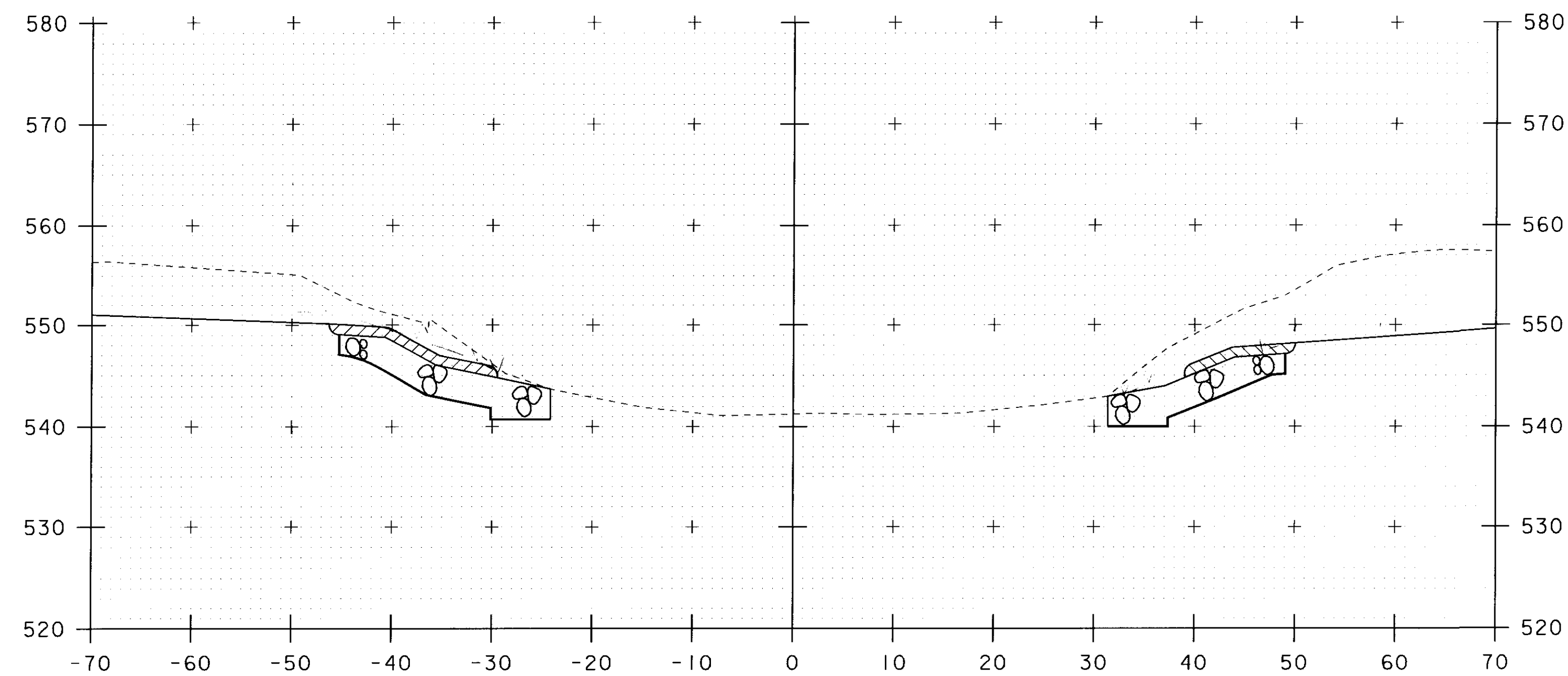
STA. 4+10 TO STA. 4+40

SCALE 1" = 10' - 0"
10 0 10

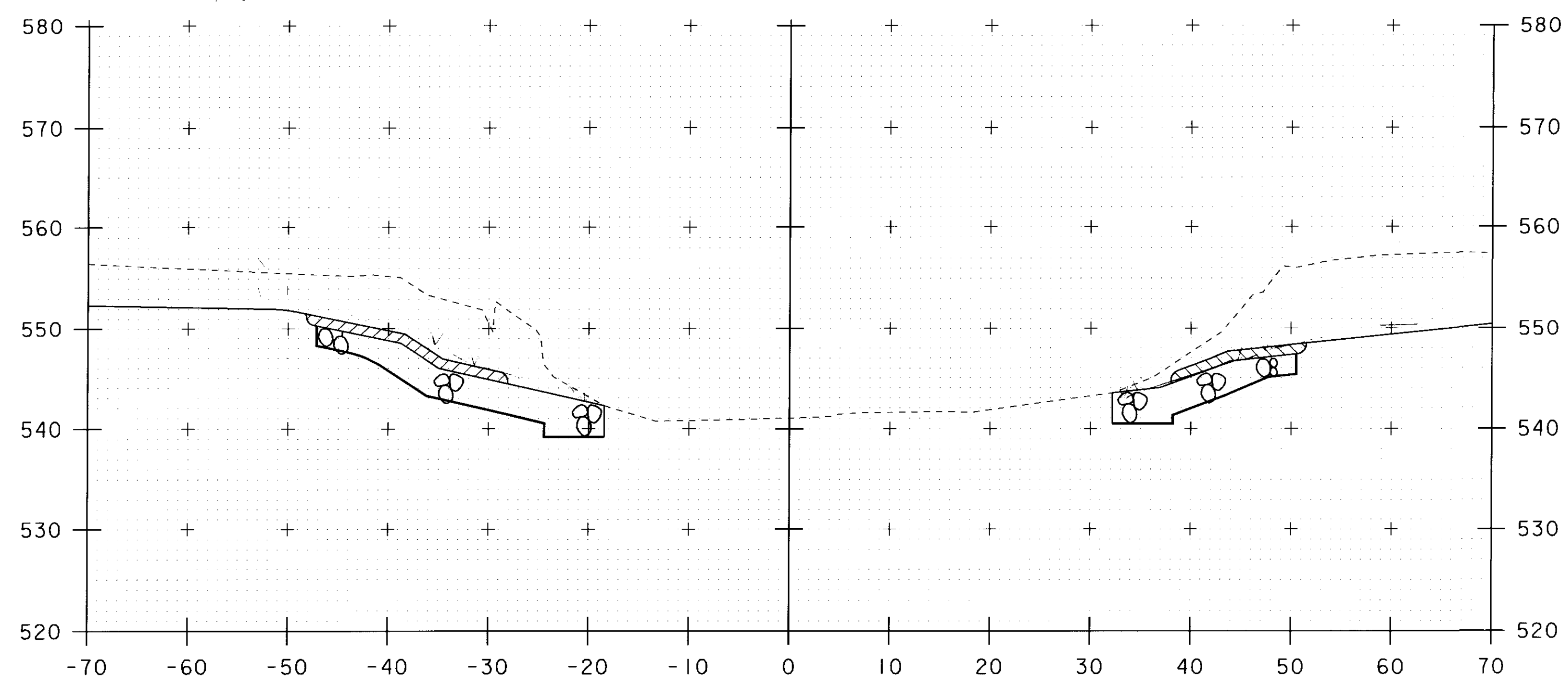
PROJECT NAME: JAMAICA
PROJECT NUMBER: BRO 1442(27)

FILE NAME: s96j068xsl.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. LACROIX
CHANNEL CROSS SECTIONS #3

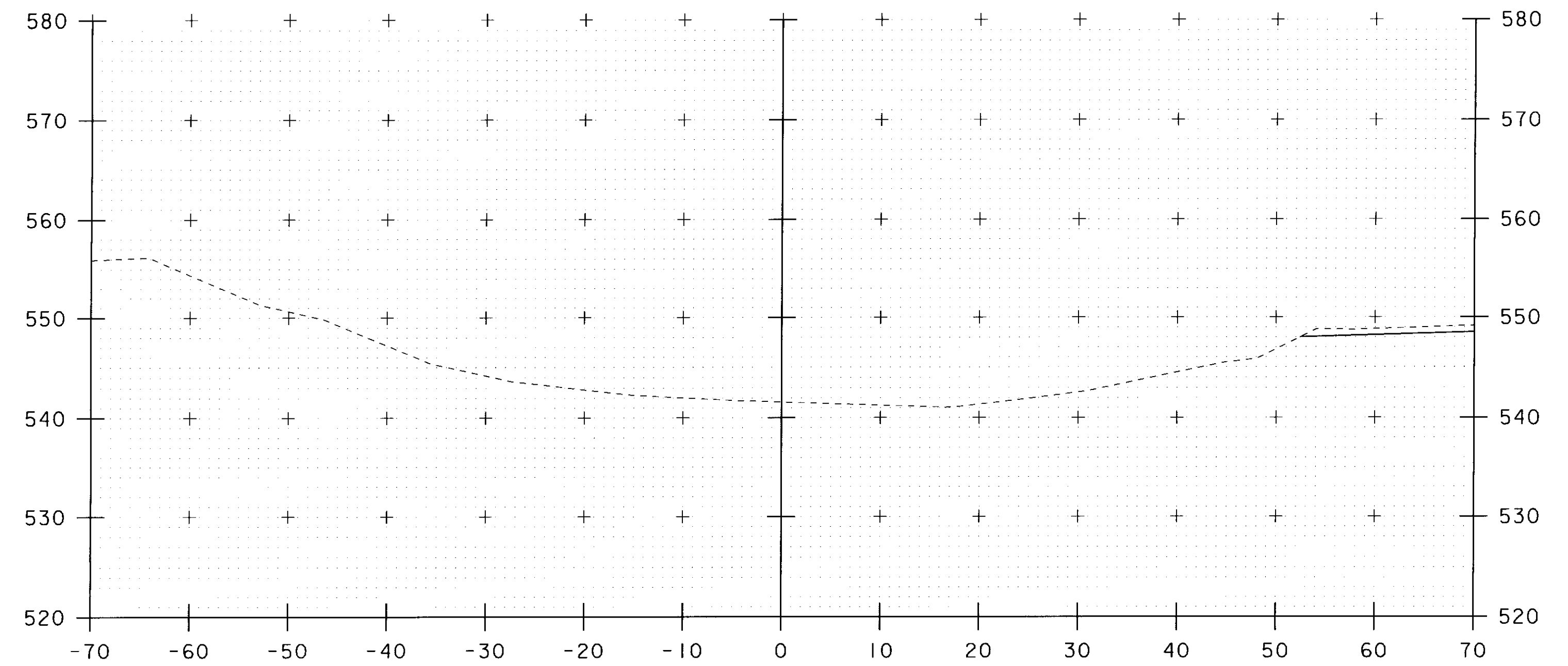
PLOT DATE: 23-SEP-2010
DRAWN BY: R. PELLETT
CHECKED BY: J. LACROIX
SHEET 42 OF 45



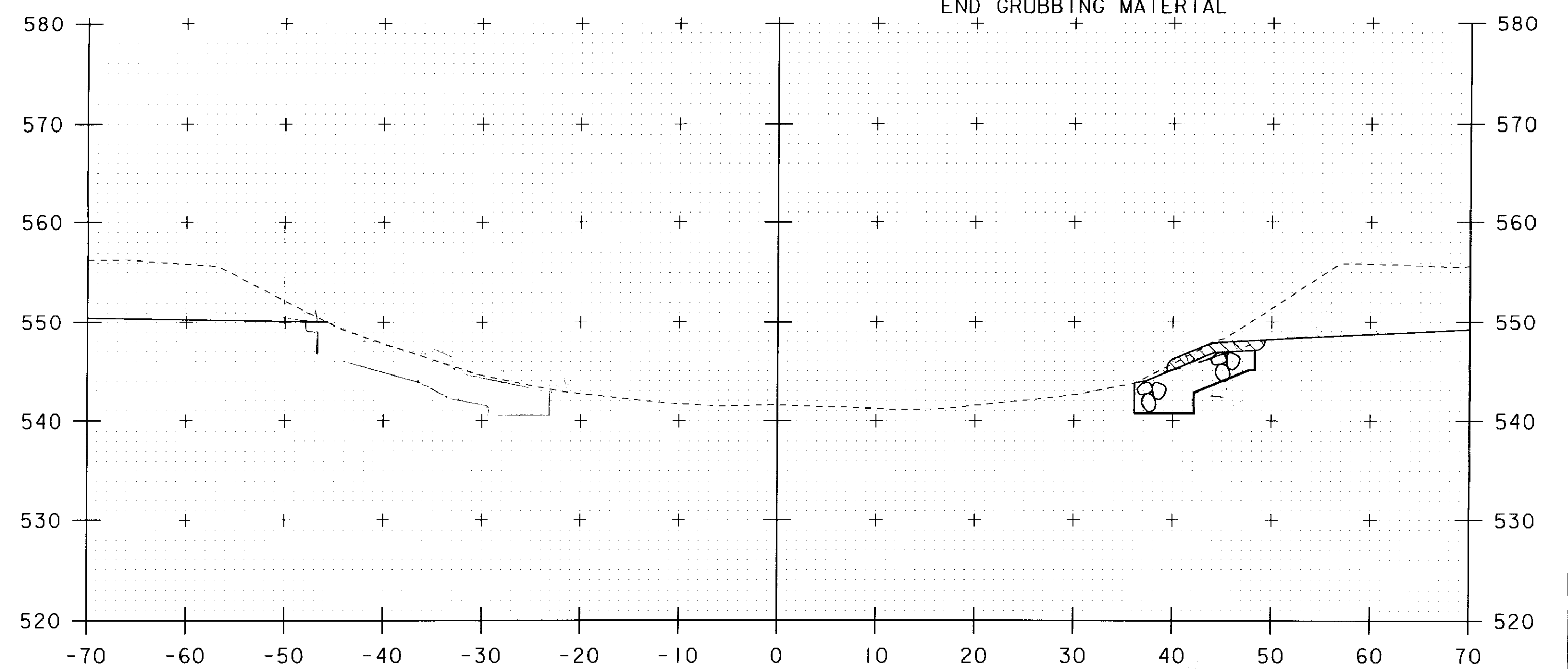
4+60



4+50



4+80



4+70

STA 4+75 RT
END UNCLASSIFIED CHANNEL EXCAVATION
END GEOTEXTILE UNDER STONE FILL
END STONE FILL TYPE III
END GRUBBING MATERIAL

STA 4+66 LT
END UNCLASSIFIED CHANNEL EXCAVATION
END GEOTEXTILE UNDER STONE FILL
END STONE FILL TYPE III
END GRUBBING MATERIAL

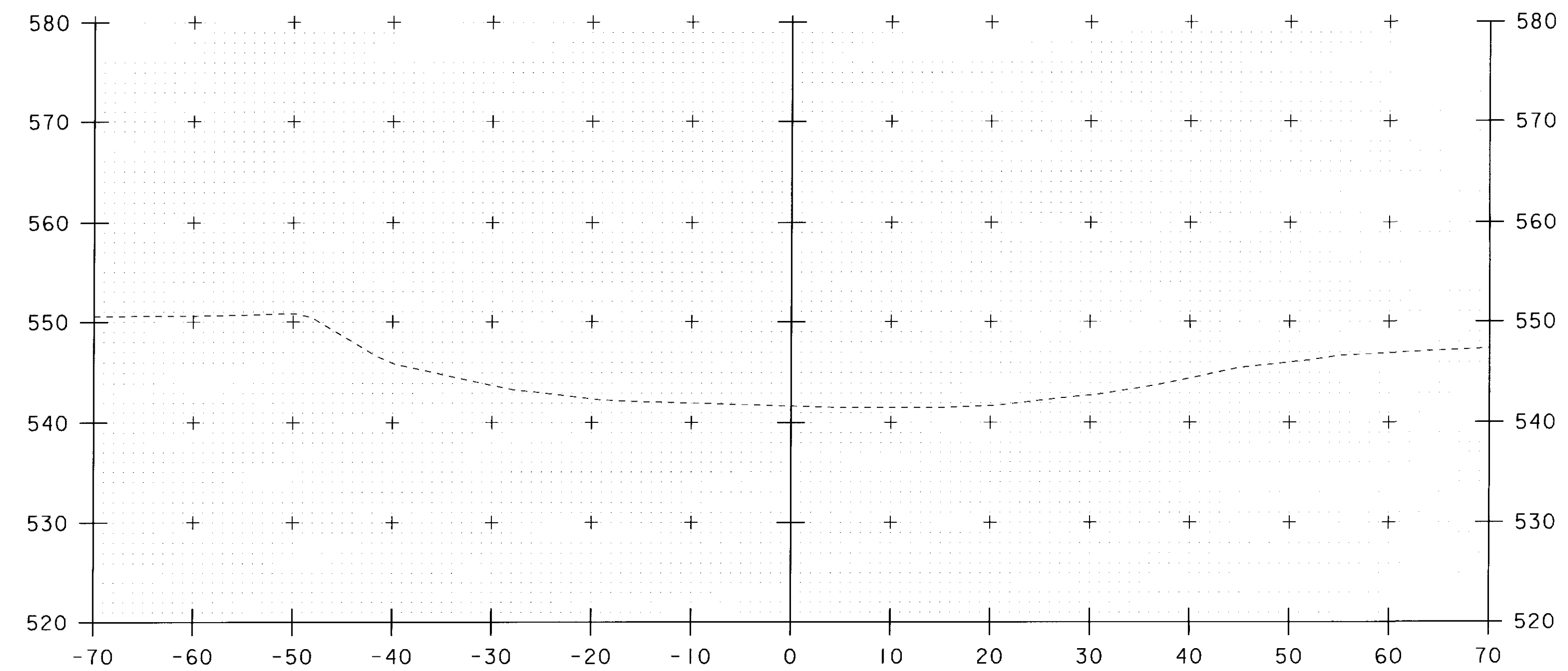
STA. 4+50 TO STA. 4+80

SCALE 1" = 10'-0"
10 0 10

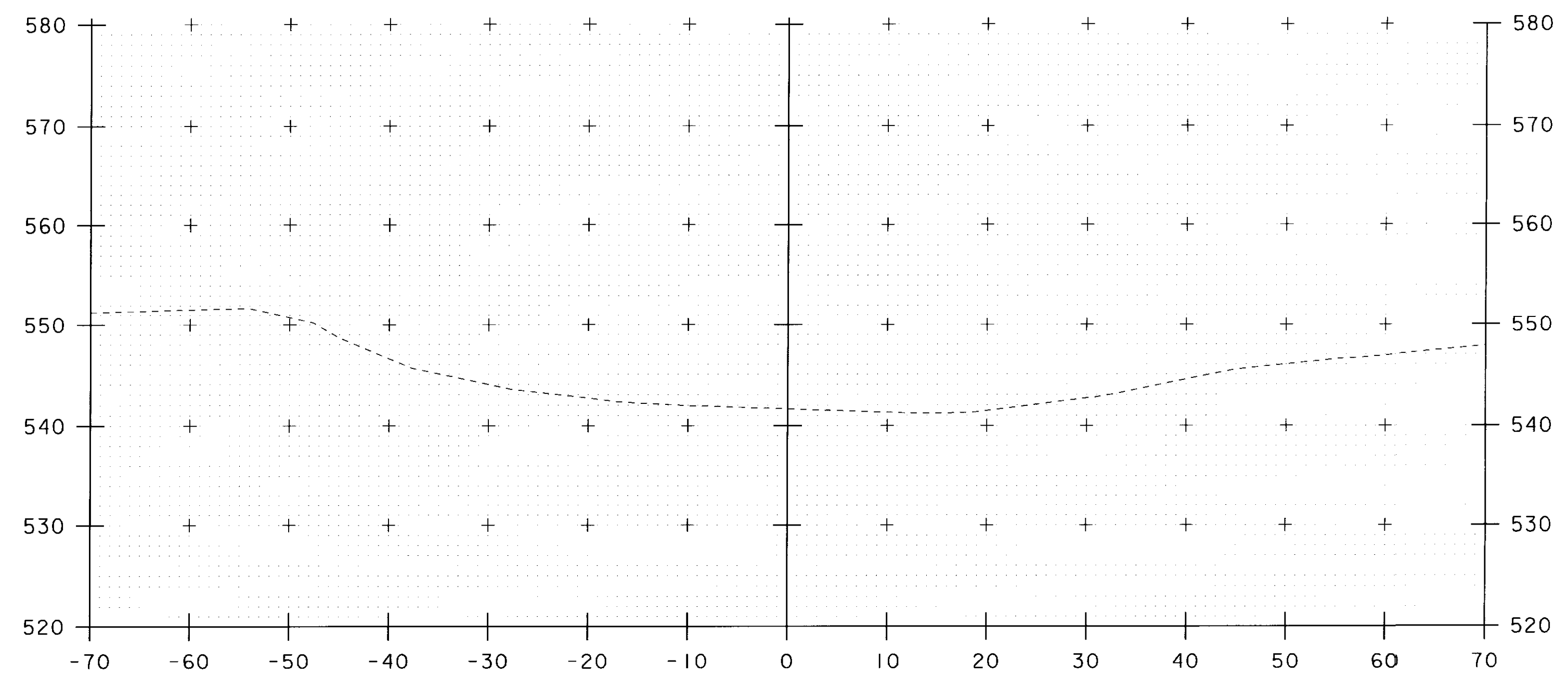
PROJECT NAME: JAMAICA
PROJECT NUMBER: BRO 1442(27)

FILE NAME: s96j068xsl.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. LACROIX
CHANNEL CROSS SECTIONS *4

PLOT DATE: 23-SEP-2010
DRAWN BY: R. PELLETT
CHECKED BY: J. LACROIX
SHEET 43 OF 45



5+00



4+90

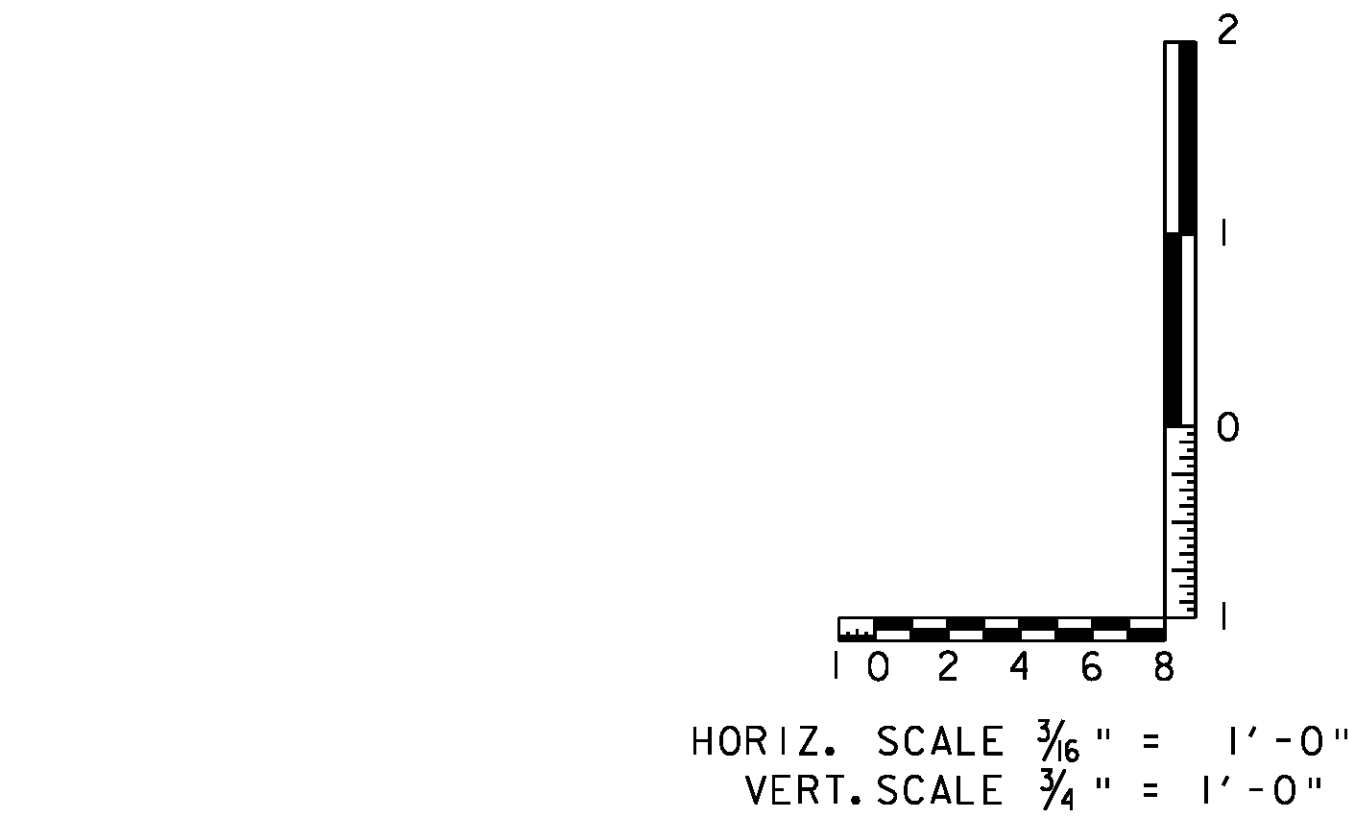
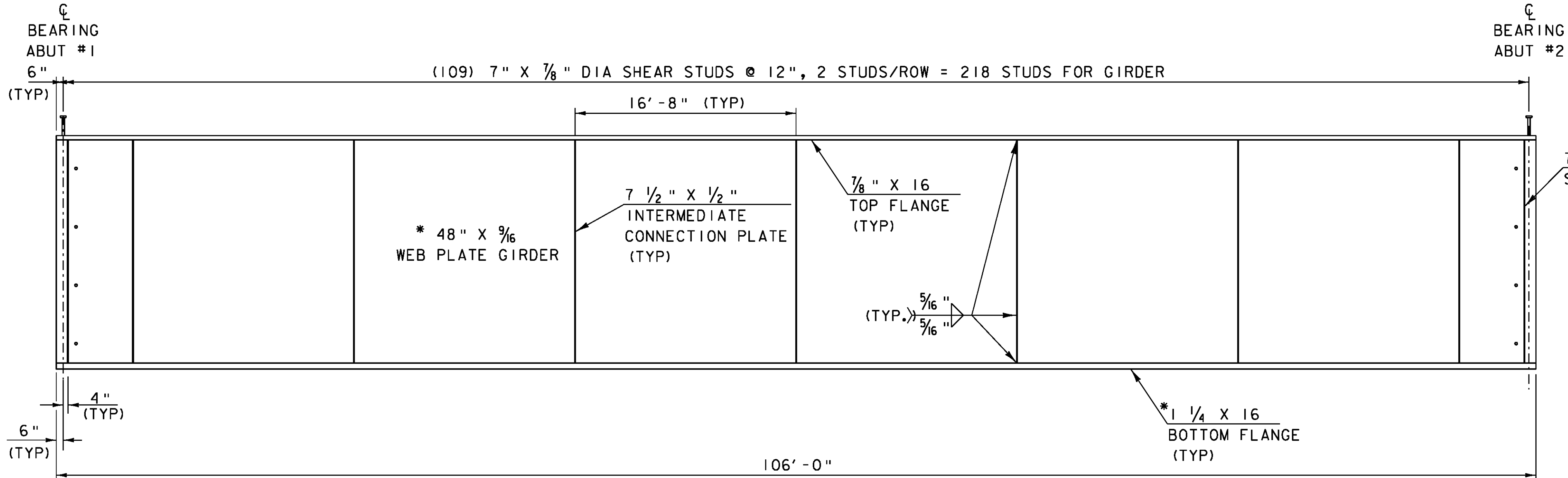
STA. 4+90 TO STA. 5+00

SCALE 1" = 10'-0"
10 0 10

PROJECT NAME: JAMAICA
PROJECT NUMBER: BRO 1442(27)

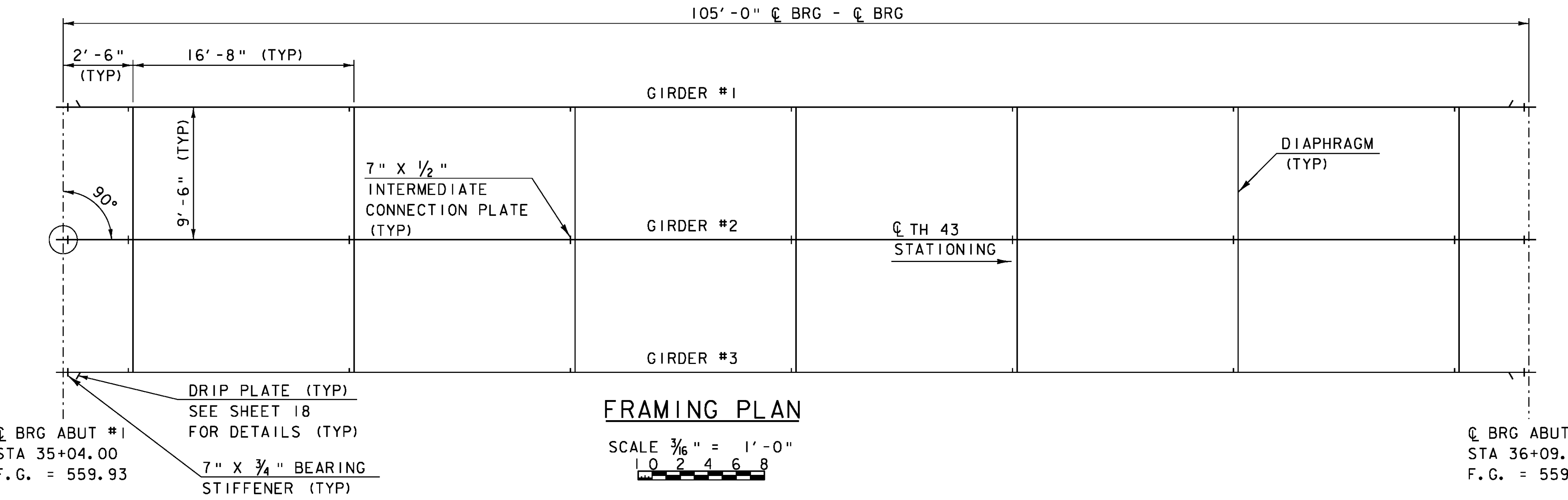
FILE NAME: s96j068xsl.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. LACROIX
CHANNEL CROSS SECTIONS #5

PLOT DATE: 23-SEP-2010
DRAWN BY: R. PELLETT
CHECKED BY: J. LACROIX
SHEET 44 OF 45

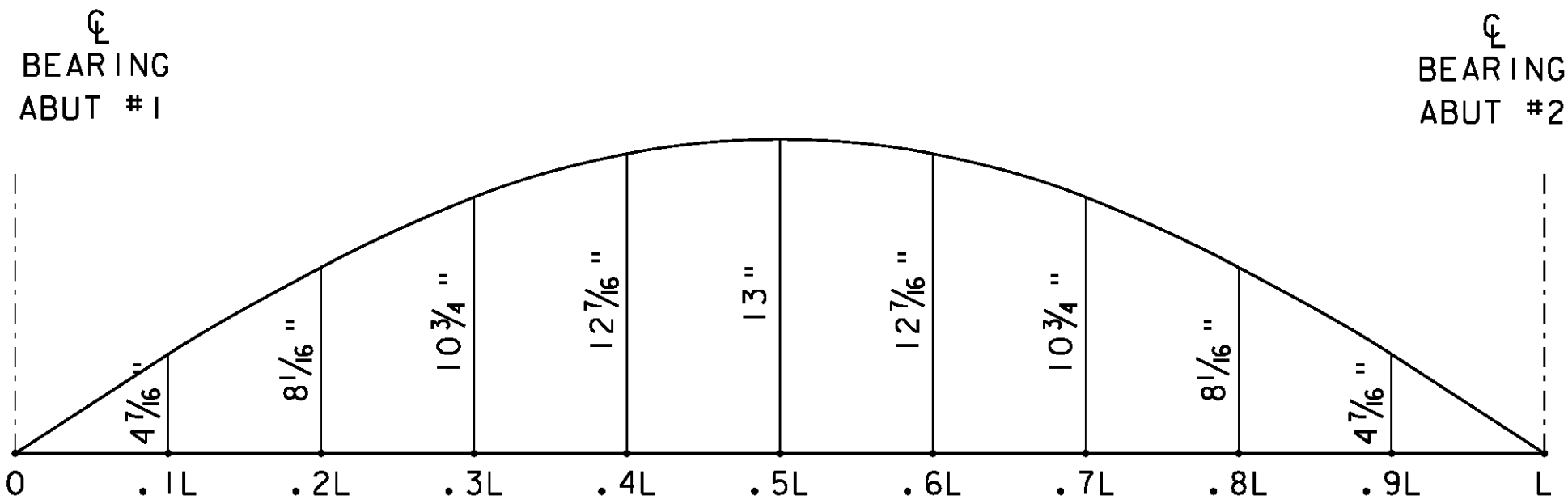


FRAMING PLAN

*DENOTES FRACTURE CRITICAL MEMBER
SEE GENERAL NOTES



FRAMING PLAN

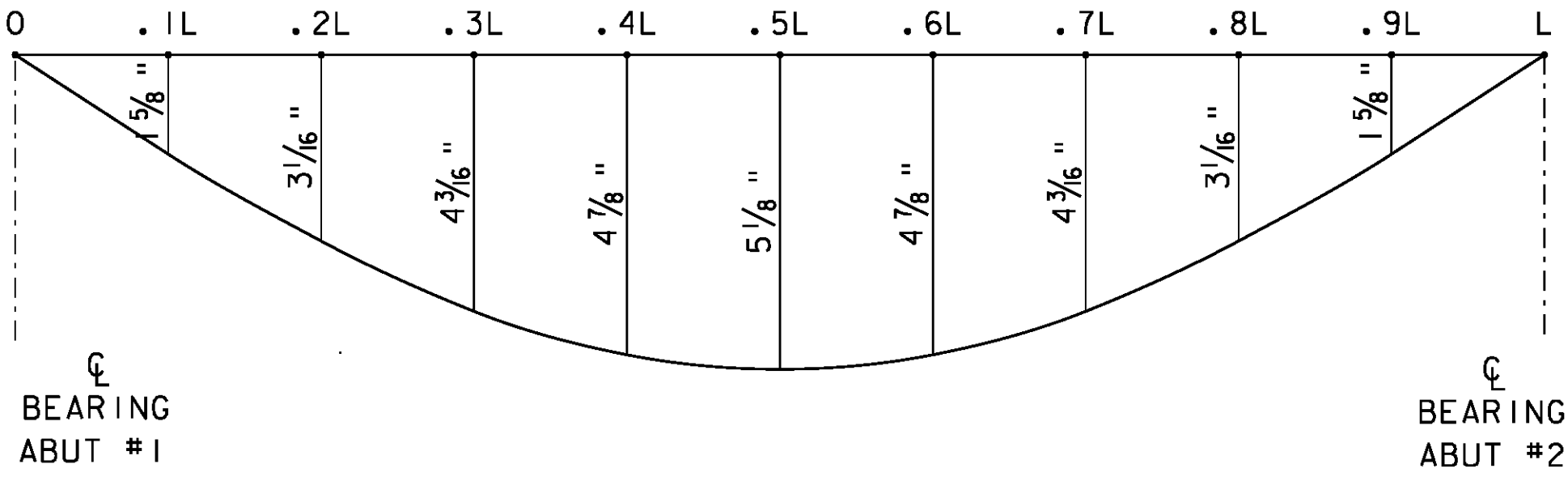


CAMBER DIAGRAM

SCALE 3/32" = 1'-0"

1 0 4 8 12 16

12-17-2009



DEFLECTION IS AFTER DEAD LOADS
HAVE BEEN APPLIED

DEAD LOAD DEFLECTION DIAGRAM

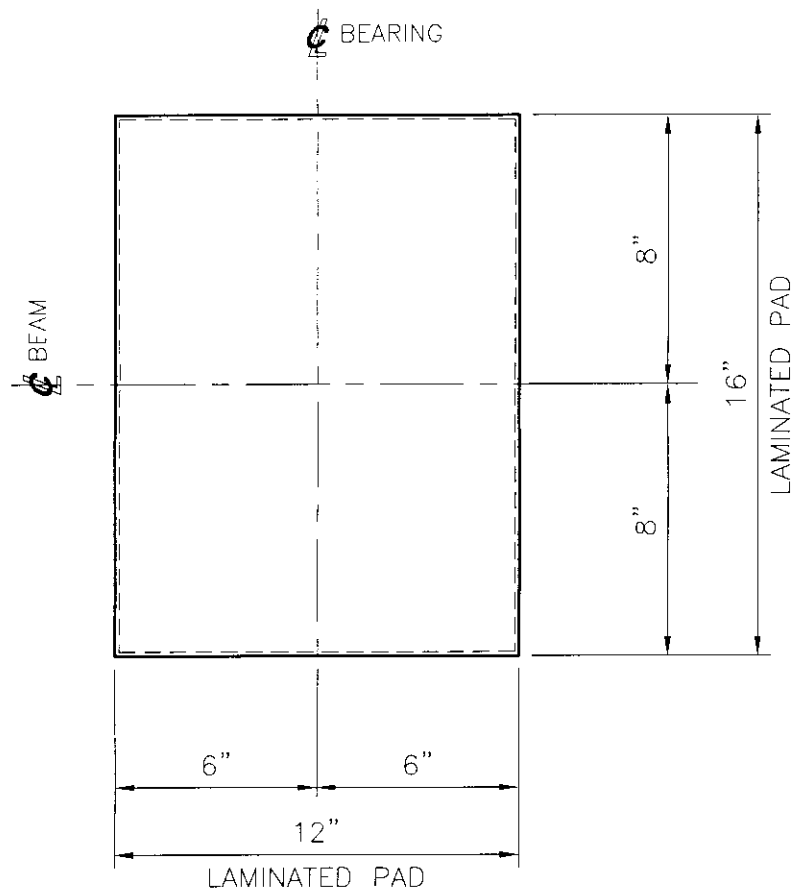
NOTE: DEAD LOAD DEFLECTION INCLUDES
THE GIRDER SELF-WEIGHT.

SCALE 3/32" = 1'-0"

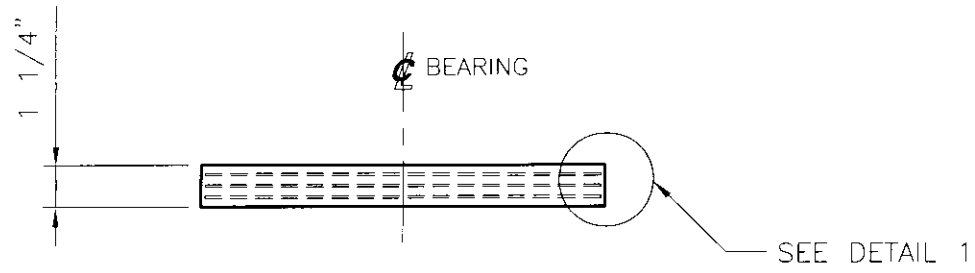
1 0 4 8 12 16

12-17-2009

PROJECT NAME: JAMAICA	
PROJECT NUMBER: BRO 1442(27)	
FILE NAME: s96j068de+.dgn	PLOT DATE: 17-DEC-2009
PROJECT LEADER: K. HIGGINS	DRAWN BY: R. PELLETT
DESIGNED BY: J. LACROIX	CHECKED BY: J. LACROIX
FRAMING PLAN & CAMBER DIAGRAM	SHEET 45 OF 45

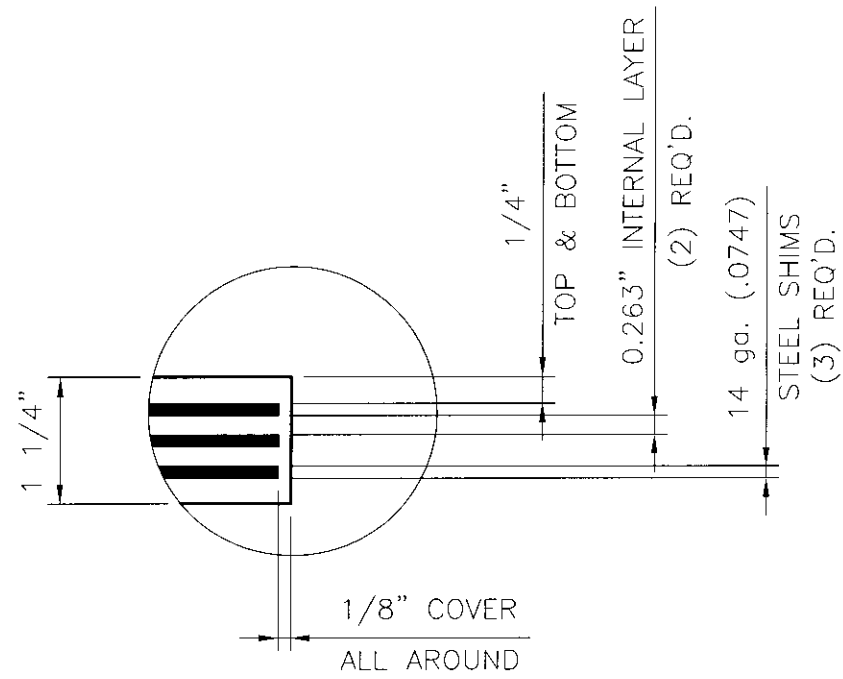


PLAN



(6) LAMINATED ELASTOMERIC BEARING — LEP-1

LAMINATED PAD 1 1/4" X 12" X 16"
60 DUROMETER GRADE 3 NEOPRENE
(6) REQUIRED



DETAIL 1

SHOP NOTES

MATERIALS:

- ELASTOMER: 60 DUROMETER GRADE 3 NEOPRENE.
STEEL SHIMS: SHALL CONFORM TO AASHTO M270,
GRADE 50 OR EQUIVALENT.
- ALL DIMENSIONS ARE IN INCHES.
- BEARING DESIGN METHOD: AASHTO LRFD
SPECIFICATIONS, SECTION 14, METHOD B, AND IN
ACCORDANCE WITH SECTION 531 OF THE 2006 VERMONT
AGENCY OF TRANSPORTATION SPECIFICATIONS.
- ELASTOMERIC BEARINGS SHALL BE INSTALLED AT AN
AMBIENT TEMPERATURE BETWEEN 50° AND
80° F. CENTERLINE OF BEARING PAD SHALL
BE INSTALLED AT THE CENTERLINE OF BEARINGS.

REVISIONS
BY RMH
DATE 1/24/10

LAMINATED BEARING PADS			
VERMONT AGENCY OF TRANSPORTATION			
TOWN OF JAMAICA			
ROUTE NO. TH 43 CLASS III			
STATE	COUNTY	BRIDGE NO.	
VT	WINDHAM	33	
PROJECT NO.: BRO 1442 (27)			
DYNAMIC RUBBER:			
LAMINATED BEARING ASSEMBLIES			
Cosmac			
1501 ROCKY RIDGE ROAD P.O. BOX 2119 ATHENS, TEXAS 75751			
SCALE: NONE	DRAWN BY: PS	CHECKED BY: ELS	
	DATE: 1/16/10	DATE: 1/16/10	
SHEET 1 OF 1		JOB NO.: 10546	
DESIGNED BY: RENAUD BROS., INC.		DRAWING REVISION NO.: 10546-DT 0	

GENERAL NOTES

CONSTRUCTION SPECIFICATIONS

- 1). ALL MATERIAL AND WORKMANSHIP TO BE IN ACCORDANCE WITH THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006 WITH LATEST REVISIONS AND THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR HIGHWAY BRIDGES DATED 2007 AND ITS LATEST REVISIONS.

MATERIAL SPECIFICATIONS

- 1). UNLESS OTHERWISE NOTED, ALL STEEL TO BE AASHTO M270M (ASTM A709M) GRADE 50W.
- 2). MATERIAL NOTED "FCM" OR "F2" ON DETAIL DRAWINGS SHALL BE FRACTURE CRITICAL, ZONE 2, TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF VERMONT STANDARD SPECIFICATIONS SECTION 506.11.
- 3). HIGH STRENGTH BOLTS: $\frac{7}{8}$ " ϕ ASTM A325 TYPE 3 IN $\frac{15}{16}$ " ϕ HOLES. NUTS SHALL BE A563 GRADE C3. BOLTS & NUTS SHALL BE ROTATIONAL CAPACITY TESTED. DO NOT MIX NUTS & BOLTS FROM DIFFERENT CONTAINERS UNLESS ALL BOLTS & NUTS HAVE THE SAME LOT NUMBER.

FABRICATION

- 1). ALL HOLES SHALL BE PUNCHED OR DRILLED FULL SIZE (UN).

WELDING

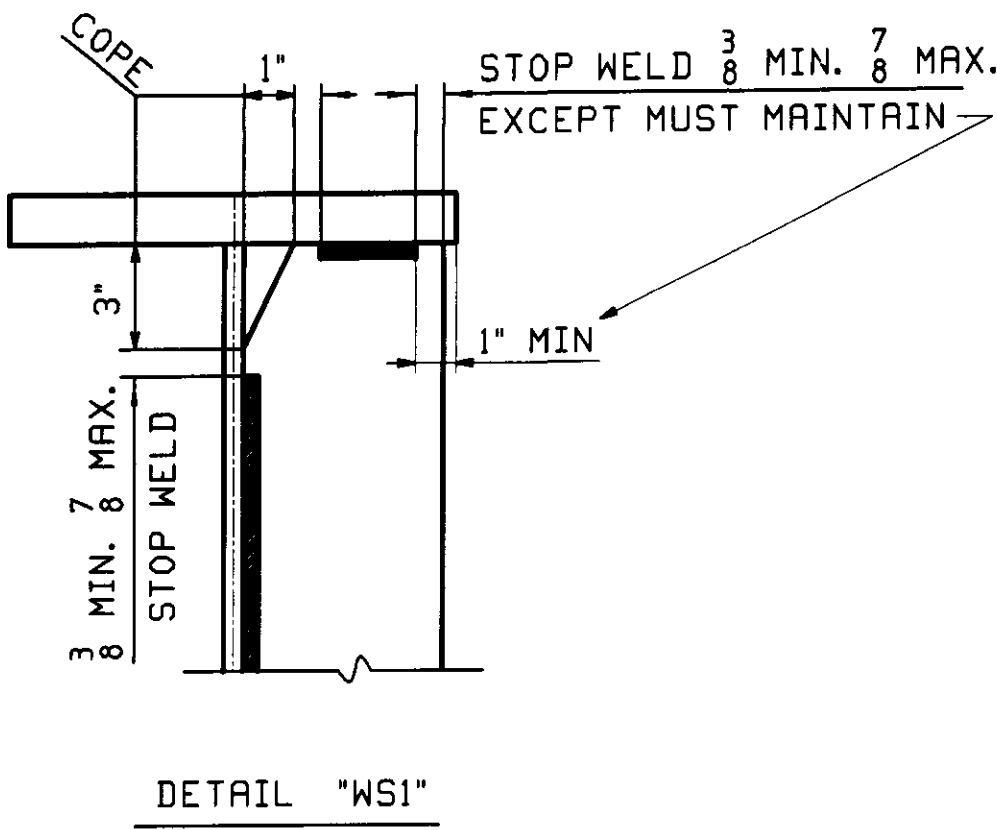
- 1). THE CONFIGURATION OF THE WELD JOINTS AND ALL WELDING PROCEDURES SHALL BE IN ACCORDANCE WITH AASHTO/AWS D1.5-08 BRIDGE WELDING CODE AND IN ADDITION TO SPECIFICATIONS SHOWN ABOVE. ALL WELDING WILL BE DETAILED TO PRE-QUALIFIED JOINTS, UNLESS PROHIBITED BY THE DESIGNER.
- 2). WELDING OF MAIN LOAD CARRYING MEMBERS AND ATTACHMENTS SHALL BE PERFORMED USING THE AUTOMATIC SUBMERGED ARC & SHIELDED METAL ARC PROCESSES. ALL WELDS ARE CONTINUOUS U.N.
- 3). NON DESTRUCTIVE TESTING OF WELDS SHALL BE IN ACCORDANCE WITH THE REFERENCED SPECIFICATION.
- 4). SEE DETAIL "WS1" ON THIS DRAWING FOR WELD TERMINATION DETAIL.
- 5). FCW DENOTES FRACTURE CRITICAL WELDING.

CLEANING

1. ALL STEEL SHALL BE BLAST CLEANED IN ACCORDANCE WITH SSPC SP-10.
2. STRUCTURAL STEEL SHALL NOT BE PAINTED.

FIELD CONNECTIONS

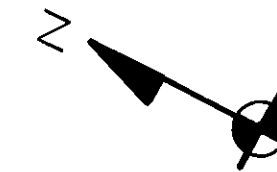
- 1). ALL FIELD CONNECTIONS SHALL BE MADE WITH $\frac{7}{8}$ " DIAMETER HIGH STRENGTH A-325 TYPE 3 BOLTS (UN), INSTALLED PER SECTION 506.19(c). SEE DWG E1 FOR FIELD BOLT SIZES.
- 2). BOLTS SHALL HAVE HEAVY HEX NUT, HEAVY HEX HEAD, AND AT LEAST ONE FLAT WASHER EACH. WASHER TO BE PLACED UNDER TURNED ELEMENT.
- 3). PIECE MARKS WILL BE LOCATED AS SHOWN ON ERECTION DRAWINGS.



APPROVED
KMH 1/21/0

NOTE TO ENGINEER:
THESE NOTES ARE NOT INTENDED TO BE ALL INCLUSIVE AND COMPLIANCE WITH RELEVANT SPECIFICATIONS REMAIN UNCHANGED.

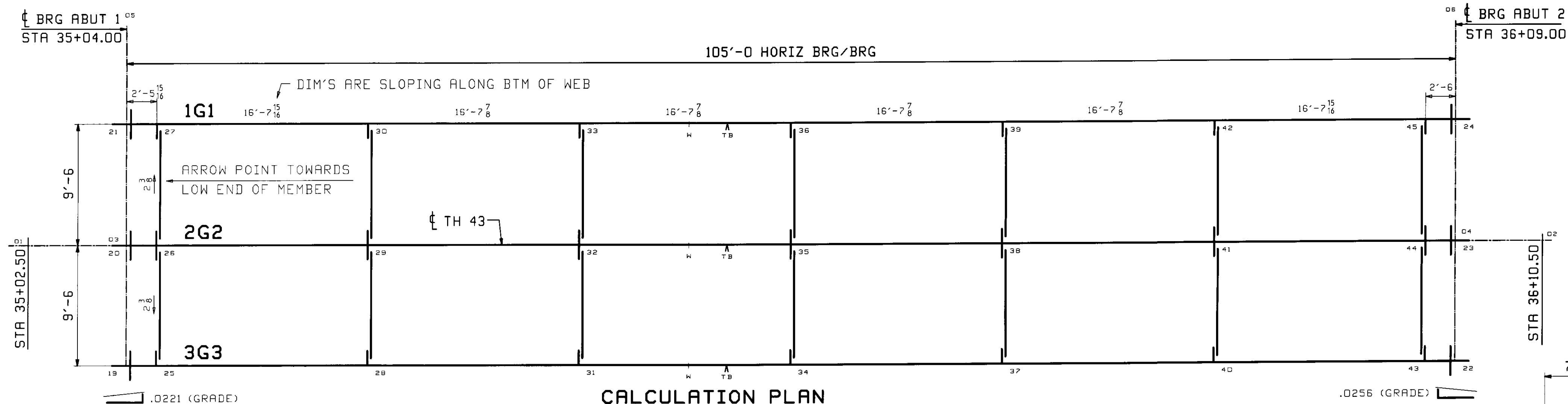
0									
REV.	DATE	REMARKS			DWN	CHK	APVL	SHOP	
MATERIAL:		SURFACE PREP. & PAINT:			HOLES:		SHOP BOLTS:		
DESCRIPTION: GENERAL NOTES									
CASCO BAY STEEL STRUCTURES, INC.									
75 SPRING HILL ROAD				SACO, MAINE 04072					
PHONE (207) 282-7360				FAX. (207) 282-1179					
									
STRUCTURE: BRIDGE OVER WARDSBORO BROOK ROUTE TH 43, BRIDGE NO. 33					DRAWN:		DATE:		
					SOB		12/16		
					CHKD:		DATE:		
					JTB		12/20		
LOCATION: JAMAICA, WINDHAM COUNTY, VT					JOB NO.		DWG NO.		
PROJ NO. BRO 1442(27)					437		GN1		
CUSTOMER: VERMONT A.O.T.							REV. 		



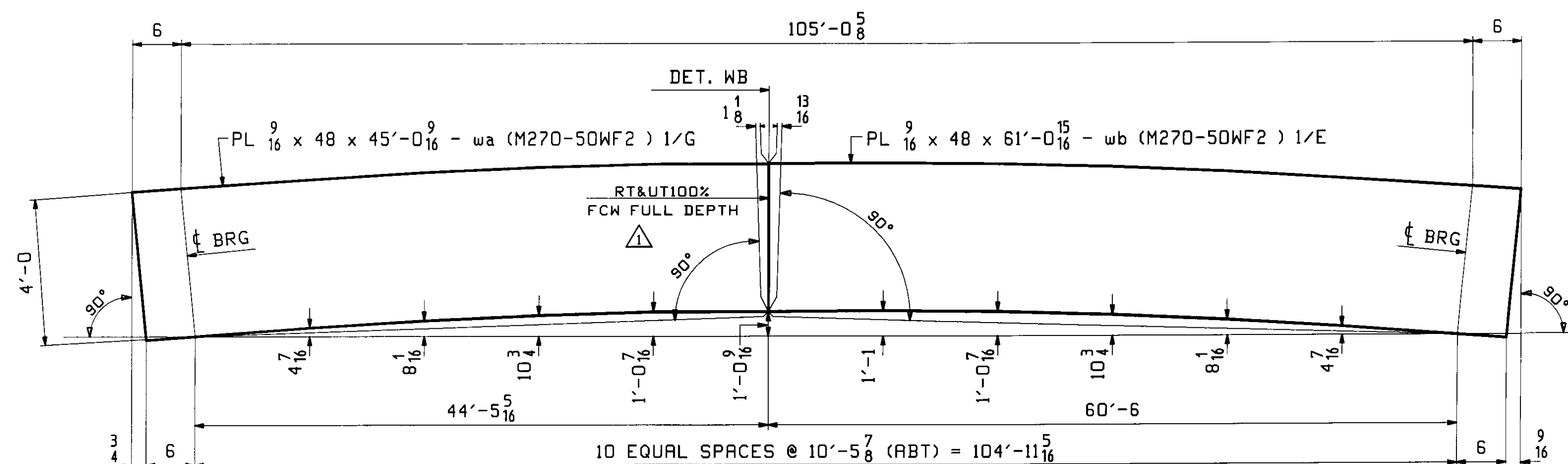
RESIDENT _____ APPROVED _____ ✓
RMH DATE 1/29/10

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ELC Fri, Jan 8, 2010 08:27:13 AM /users/jobs/2944/EI : RevD
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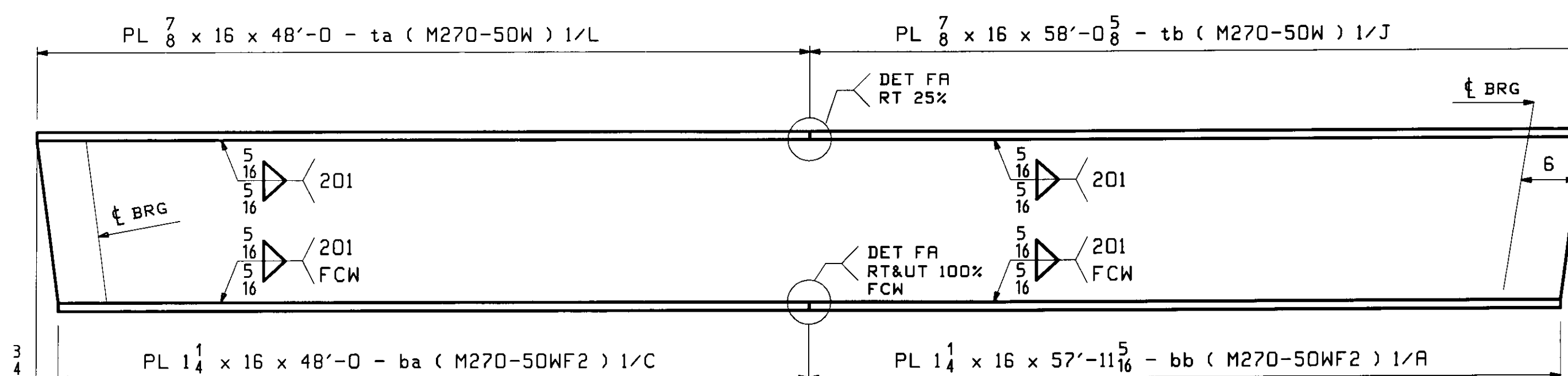
D							JUN 18 2003		
REV.	DATE	REMARKS				DWN	CHK	APVL	SHOP
MATERIAL:		SURFACE PREP. & PAINT:			HOLES:			SHOP BOLTS:	
DESCRIPTION: FRAMING PLAN & FIELD BOLTS									
CASCO BAY STEEL STRUCTURES, INC. 75 SPRING HILL ROAD SACO, MAINE 04072 PHONE (207) 282-7360 FAX. (207) 282-1179									
STRUCTURE: BRIDGE OVER WARDSBORO BROOK ROUTE TH 43, BRIDGE NO. 33						DRAWN:		DATE:	
						JTB		12/20	
						CHKD:		DATE:	
						ELC		1/7/10	
LOCATION: JAMAICA, WINDHAM COUNTY, VT						JOB NO.		DWG NO.	
PROJ NO. BRO 1442(27)						437		E1	
CUSTOMER: VERMONT A.O.T.									
								REV: /	



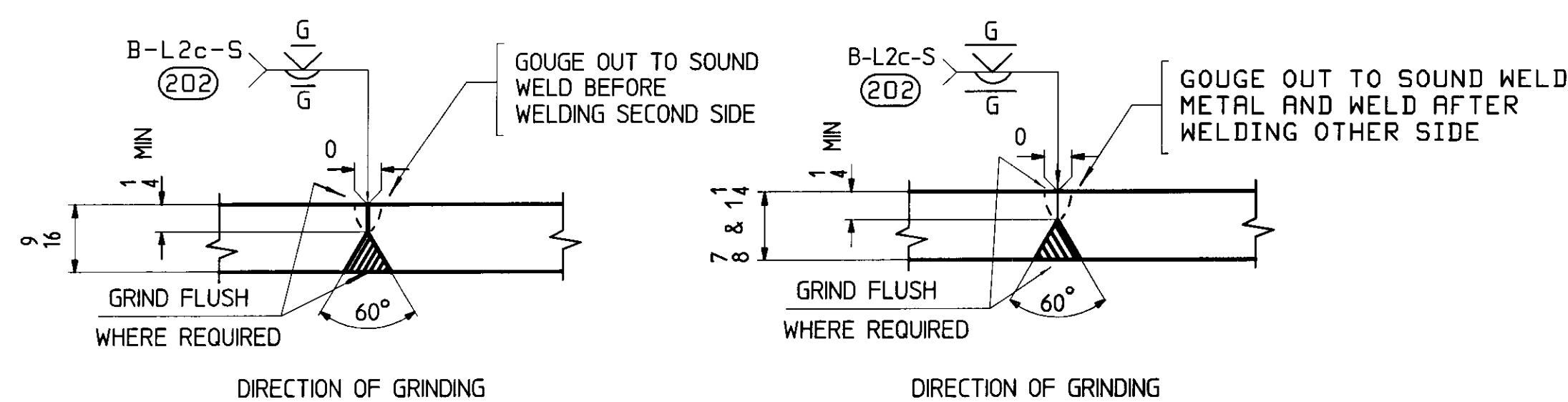
CALCULATION PLAN
ENDS OF GIRDERS AND BRG. STIFF'S ARE VERTICAL AFTER DL ROTATION.
CF STIFF ARE NORMAL TO GRADE.
BOTT PT NUMBERS = TOP PT NUMBERS + 100.



CAMBER DIAGRAM FOR 1G1 THRU 3G3



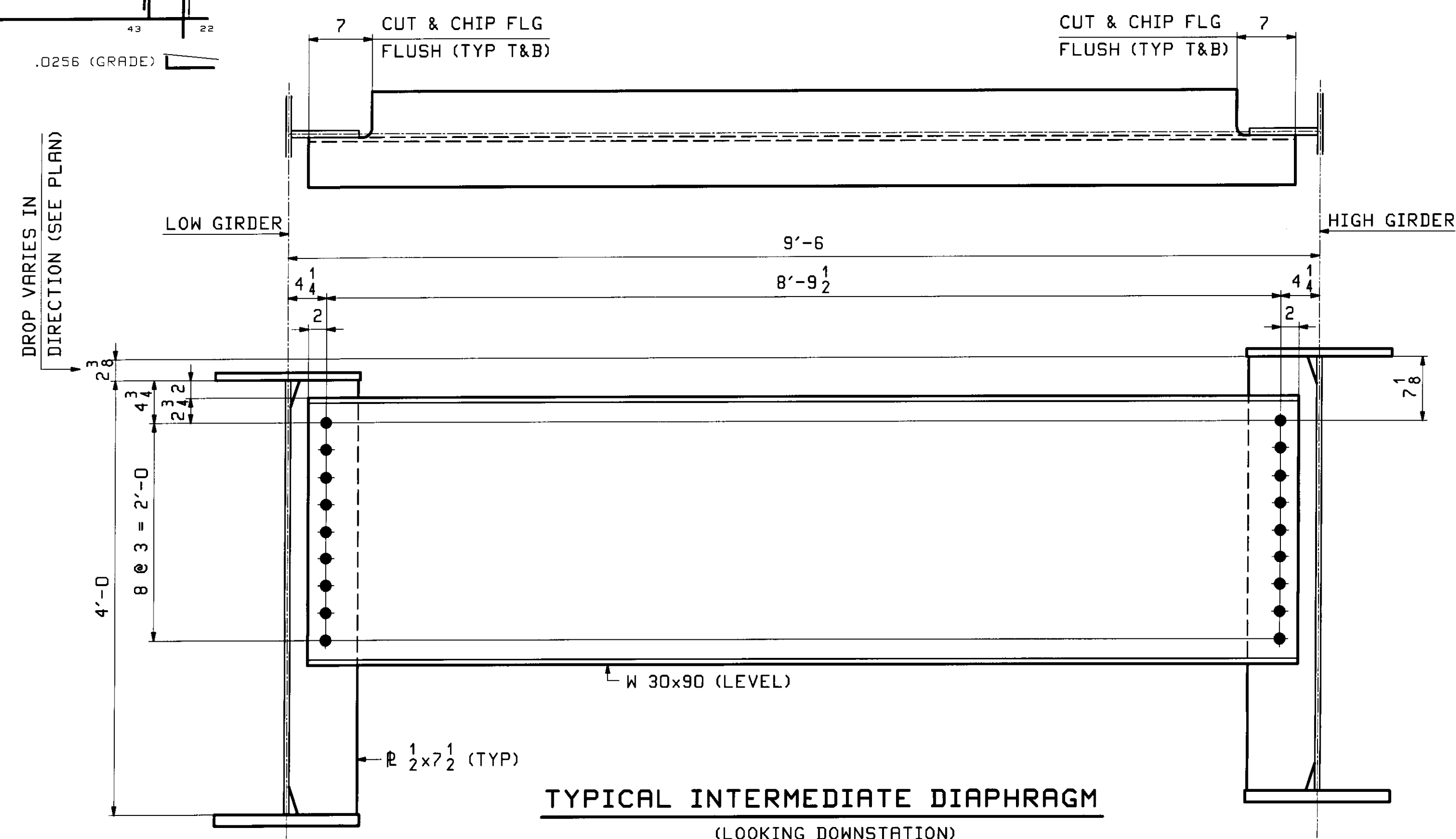
FLANGE DIAGRAM FOR 1G1 THRU 3G3



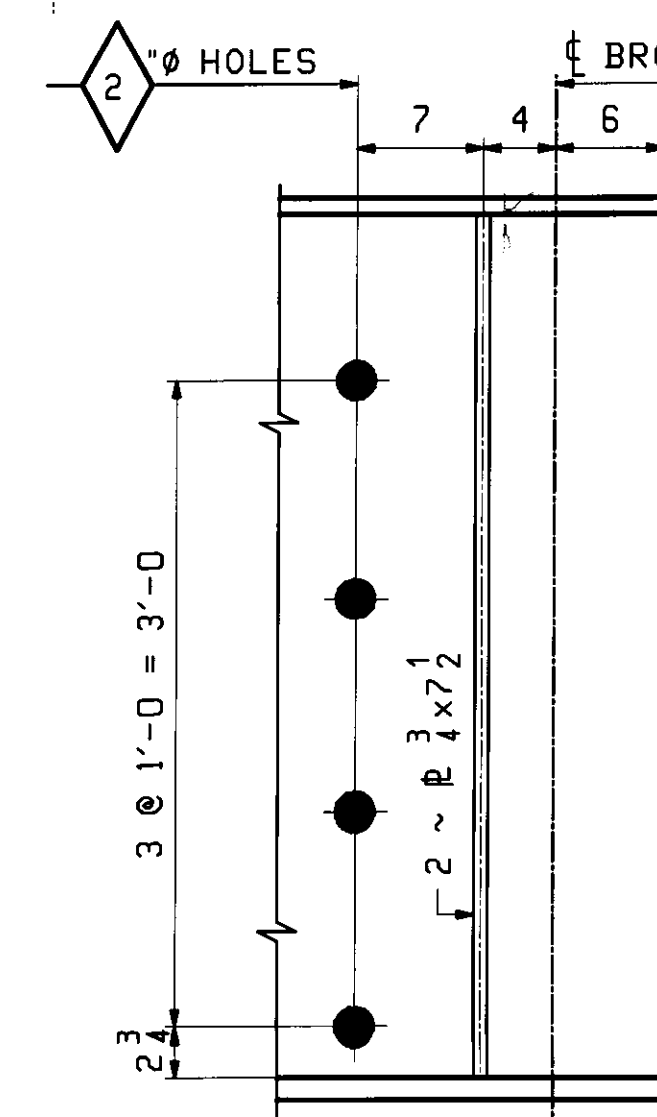
WEB PLATE SPlice DETAIL "WB"

FLANGE SPlice DETAIL "FA"

- NOTES:**
- FOR GENERAL SHOP NOTES SEE DRAWING GNI
 - F2 INDICATES FRACTURE CRITICAL MATERIAL, ZONE 2.
 - RT INDICATES RADIOGRAPHIC TESTING REQUIRED
 - UT INDICATES ULTRASONIC TESTING REQUIRED
 - ALL MATERIALS ASHTO M270-GR50W

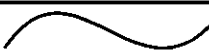


TYPICAL INTERMEDIATE DIAPHRAGM
(LOOKING DOWNSTATION)

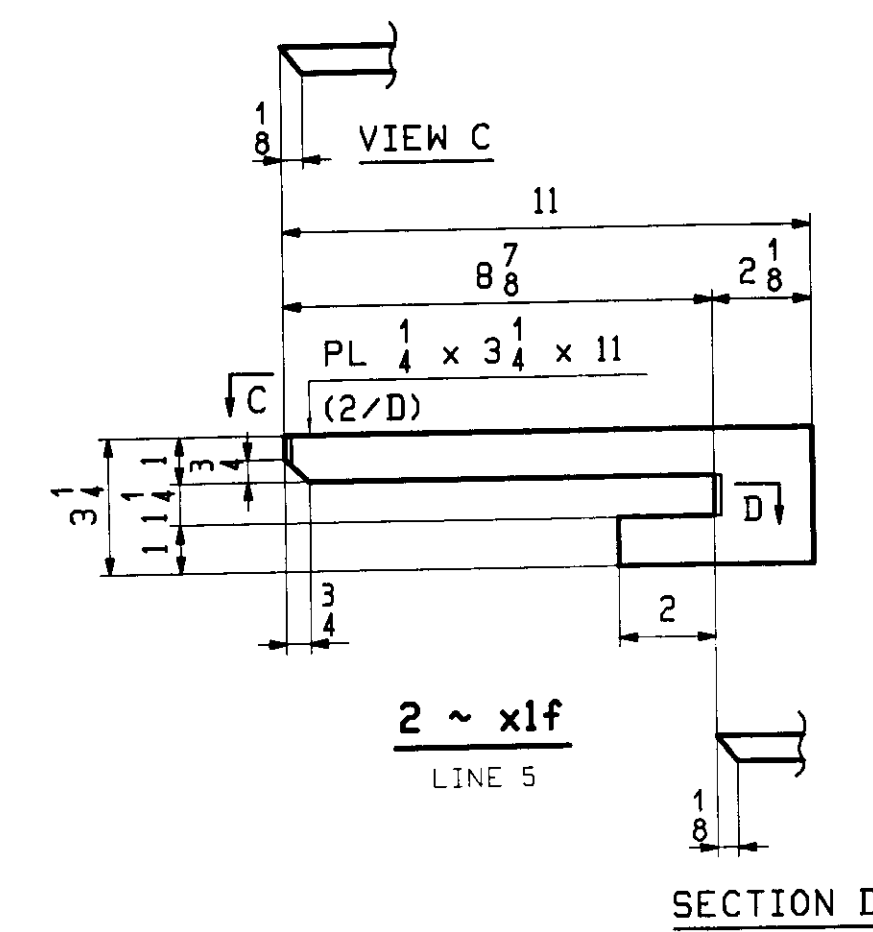
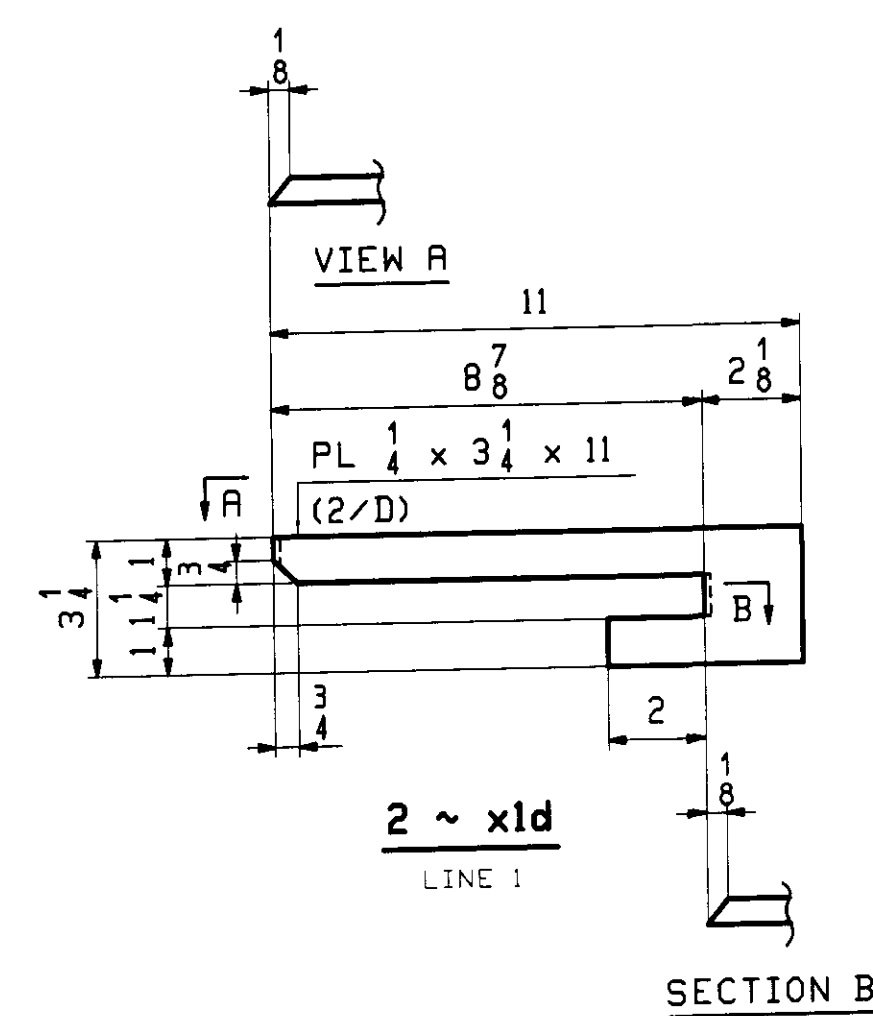
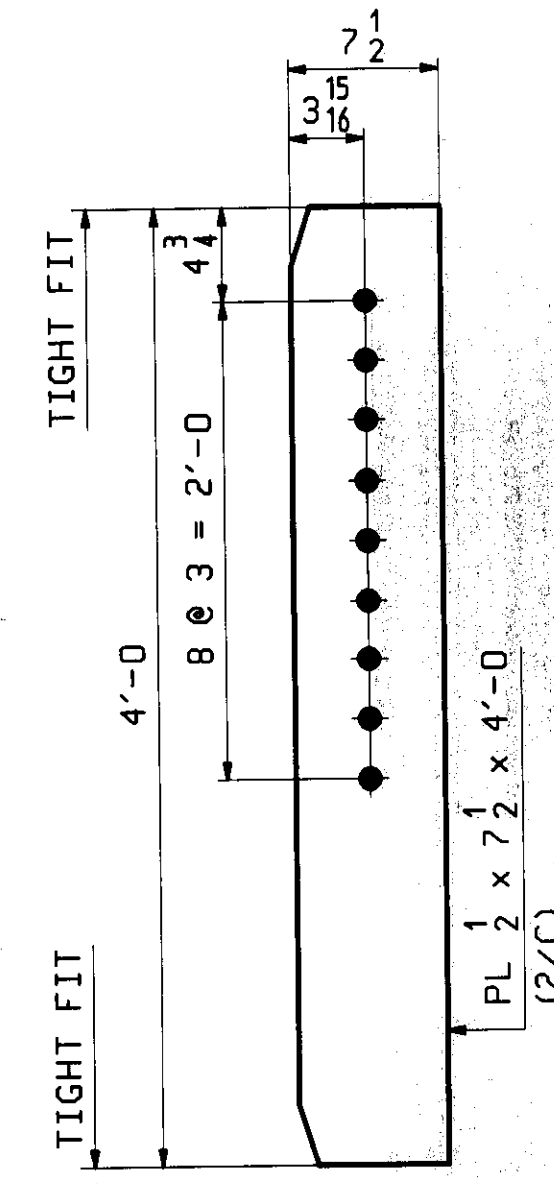
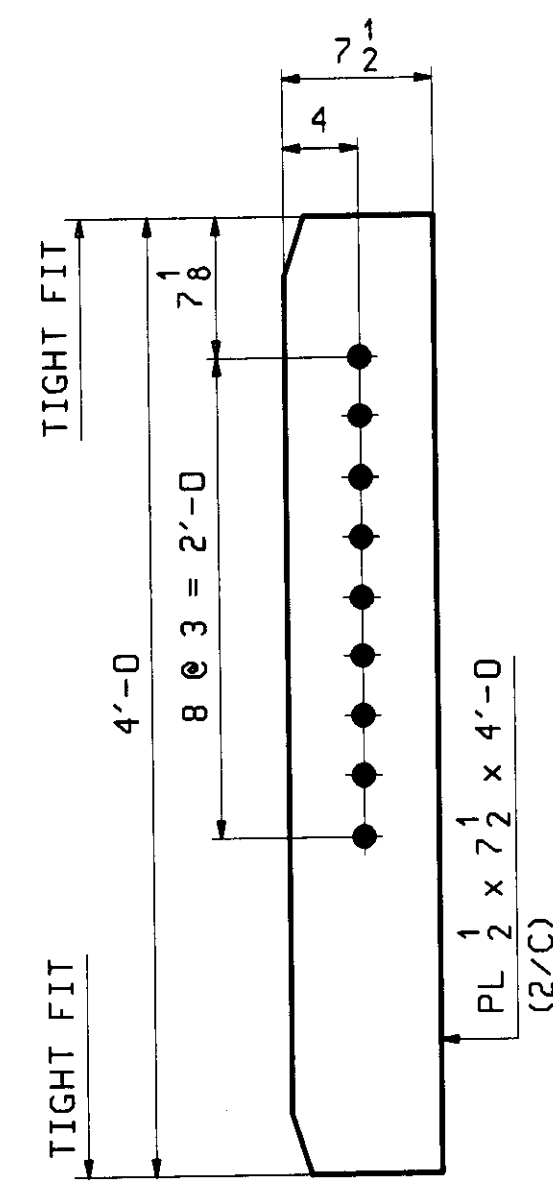
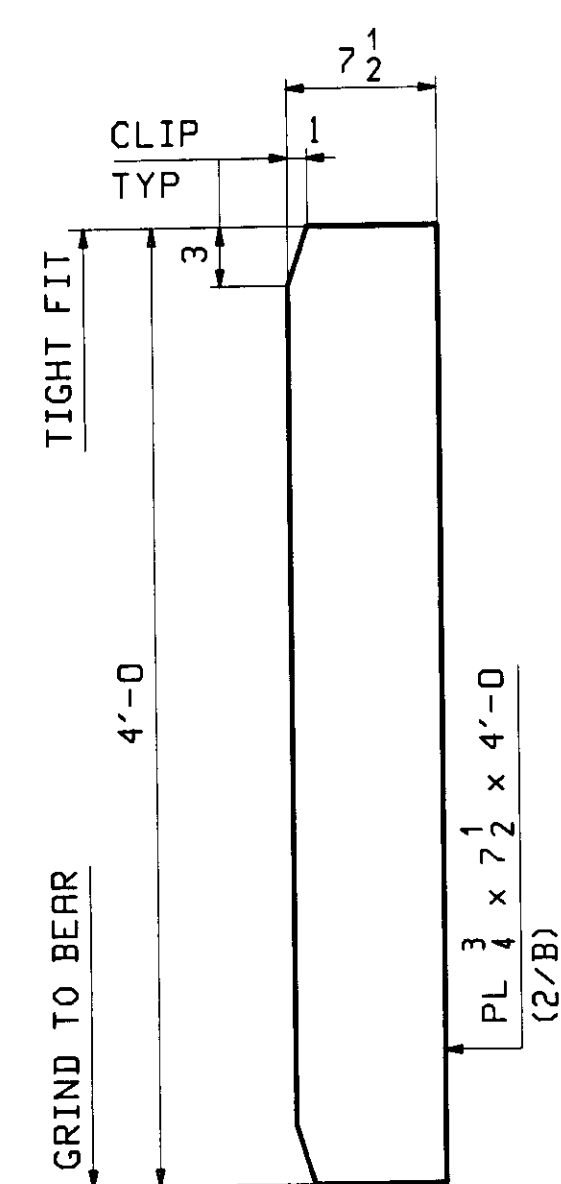


TYPICAL GIRDER END ELEV.

**** NOTE ****
THE PURPOSE OF THIS DRAWING IS TO COORDINATE GEOMETRIC CONTROL INFORMATION. THIS DWG IS SUBMITTED FOR INFORMATION ONLY AND IS NOT INTENDED FOR SHOP FABRICATION.

	1/14 2010	WELD TEST (RFI-TEC-244403)	SOB	JTB		
0						
REV. DATE	REMARKS		DWN	CHK	APVL	SHOP
MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:			
M270-50W(UN)	SEE DWG GNI	15 16" Ø (UN)	NONE			
DESCRIPTION: CALCULATION PLAN/ CAMBER & FLANGE DIAGRAMS/ LAYOUTS						
CASCO BAY STEEL STRUCTURES, INC.						 TENSOR 2544
75 SPRING HILL ROAD			SACO, MAINE 04072			
PHONE (207) 282-7360			FAX. (207) 282-1179			
STRUCTURE:			DRAWN:	DATE:		
BRIDGE OVER WARDSBORO BROOK			SOB	12/16		
ROUTE TH 43, BRIDGE NO. 33			CHKD:	DATE:		
			JTB	12/20		
LOCATION: JAMAICA, WINDHAM COUNTY, VT			JOB NO.		DWG NO.	
PROJ NO. BRO 1442(27)					WS1	
CUSTOMER: VERMONT A.O.T.			437		REV. 	

RECEIVED
JAN 25 2010
RESUBMIT APPROVED
BY KMH DATE 1/27/10



RECEIVED _____ APPROVED _____ ✓
BY KMH Date 1/29/10

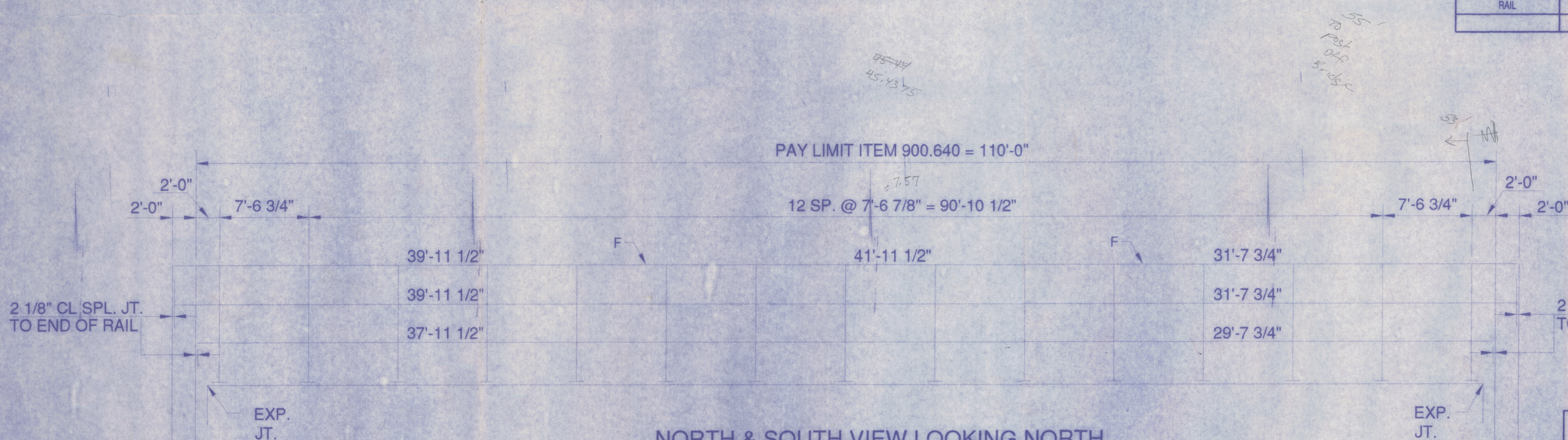
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REV.	DATE	REMARKS			DWN	CHK	APVL	SHOP	
MATERIAL:		SURFACE PREP. & PAINT:		HOLES:		SHOP BOLTS:			
M27D-SOW		SEE DWG GN1		15 16 Ø		NONE			
DESCRIPTION: GIRDER STANDARD DETAILS									
CASCO BAY STEEL STRUCTURES, INC.									
75 SPRING HILL ROAD				SACO, MAINE D4072					
PHONE (207) 282-7360				FAX. (207) 282-1179					
STRUCTURE: BRIDGE OVER WARDSBORO BROOK ROUTE TH 43, BRIDGE NO. 33						DRAWN:	DATE:		
						JTB	12/20		
LOCATION: JAMAICA, WINDHAM COUNTY, VT						CHKD:	DATE:		
						ELC	1/7/10		
PROJ NO. BRO 1442(27)						JOB NO.	DWG NO.		
CUSTOMER: VERMONT R.O.T.							X1		
						437	REV. /		



RECEIVED
FBI - NEW YORK
JAN 21 1960

SUBMIT _____ APPROVE _____ ✓
BY KMH DATE 1/21/10

ZLC
 Fri, Jan 9, 2010 08:28:01 AM
 /users/jobs/2944/4 : RevD



KEY:
F=1/2" FXD. SPL. JT.

BILL OF MATERIAL

MARK OR USE	QTY.	SHAPE	SHAPE		REMARKS
			FT.	IN.	
ITEM NO. 900.640					
RAIL	4	T.S. 6"X6"X3/16" WALL	41	11 1/2	A500 GR B *
RAIL	4	T.S. 6"X6"X3/16" WALL	39	11 1/2	A500 GR B W/EXP. SLOTS @ ONE END *
RAIL	4	T.S. 6"X6"X3/16" WALL	31	7 3/4	A500 GR B W/EXP. SLOTS @ ONE END *
FIXED SPLICE	8	T.S. 5"X5"X5/16" WALL	2	3	A500 GR B w/3-PL1 1/4"x4"x2'-2" A36 CVN A370
EXP. SPLICE	8	T.S. 5"X5"X5/16" WALL	3	0	A500 GR B W/3-PL 1/4"x4" A36 CVN A 370
SPLICE BOLT	64	3/4"Ø HEX BOLT		7 1/2	A325 w/N, 2FW
RAIL	2	T.S. 5"X3"X1/4" WALL	41	11 1/2	A500 GR B *
RAIL	2	T.S. 5"X3"X1/4" WALL	37	11 1/2	A500 GR B W/EXP. SLOTS @ ONE END *
RAIL	2	T.S. 5"X3"X1/4" WALL	29	7 3/4	A500 GR B W/EXP. SLOTS @ ONE END *
FIXED SPLICE	4	BAR 2 1/8"x4 1/4"	2	3	A572 GR50
EXP. SPLICE	4	BAR 2 1/8"x4 1/4"	3	0	A572 GR50
SPLICE BOLT	32	3/4"Ø HEX BOLT		4 1/2	A325 w/ N, 2FW.
RAIL POST BOLT	120	7/8"Ø ROUND HEAD BOLT		8	A325W/N,SQW,LW
L CLIP	30	L 5"X5"X5/8"		6 1/8	A572 GR50
L POST BOLT	60	3/4"Ø HEX BOLT		2 1/4	A325 W/N,LW
L RAIL BOLT	30	3/4"Ø HEX BOLT		8	A325 W/ N,LW
POST	30	W6X25X2-7 3/4"	2	9	A572 GR50 W/PL1 1/4"X10"X 1'-2"
ANCHOR PLATE	30	PL 3/8"X10"	1	2	A36
ANCHOR STUD	120	1"Ø FULLY THREADED	1	2	A449 W/4N, 4FW

BILL OF MATERIAL

MARK OR USE	QTY.	SHAPE	SHAPE		REMARKS
			FT.	IN.	
ITEM NO. 900.620 TRANSITION					
RAIL	4	T.S. 5"X3"X1/4" WALL	4	5 3/4	A500(710-23)W/5'-0" FLAREBACK.

* DROP WEIGHT TEAR TEST PER ASTM E436

RECEIVED
CK'D BY JRL OK'D BY JAG
FEB JAN 23 2010
RESUBMIT _____ APPROVED ✓
BY KMH DATE 3/9/10

PAY LIMIT FOR 3 RAIL= 220.0000 FT. (APPROX.)

DRAWN BY: ESB	DATE 1/27/10	CHECKED BY: DCK	SHEET NO. 1 OF 3
------------------	-----------------	--------------------	---------------------

BRIDGE RAILING LAYOUT

STATE OF VERMONT AGENCY OF TRANSPORTATION
HIGHWAY TH 43 (BR. 33)OVER WARDSBORO BROOK
IN THE TOWN OF JAMAICA IN WINDHAM COUNTY

CONT. NO. BRO 1442 (27)

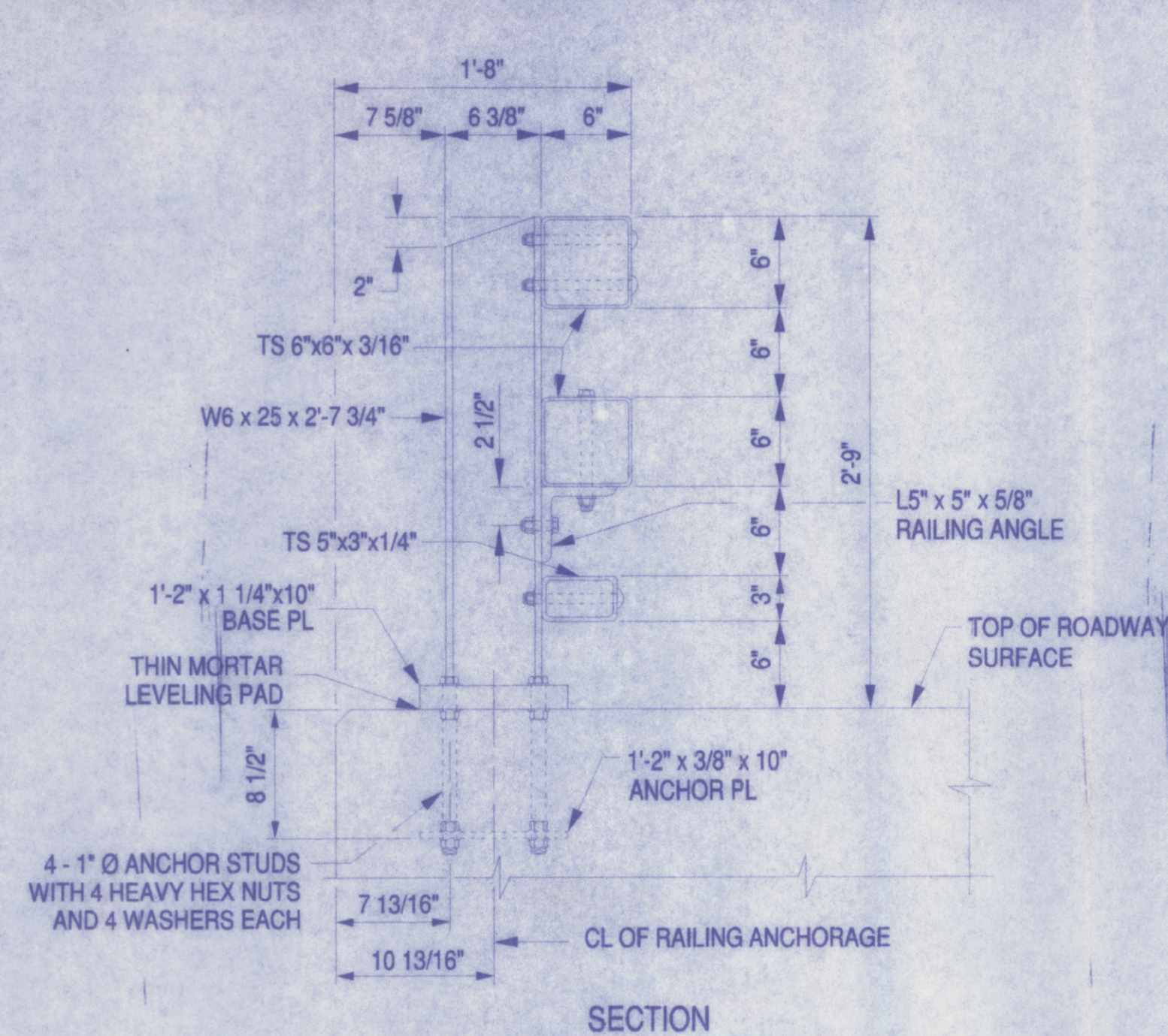
GEN. CONT. RENAUD BROTHERS, INC.

ERECTOR: RENAUD BROTHERS, INC.

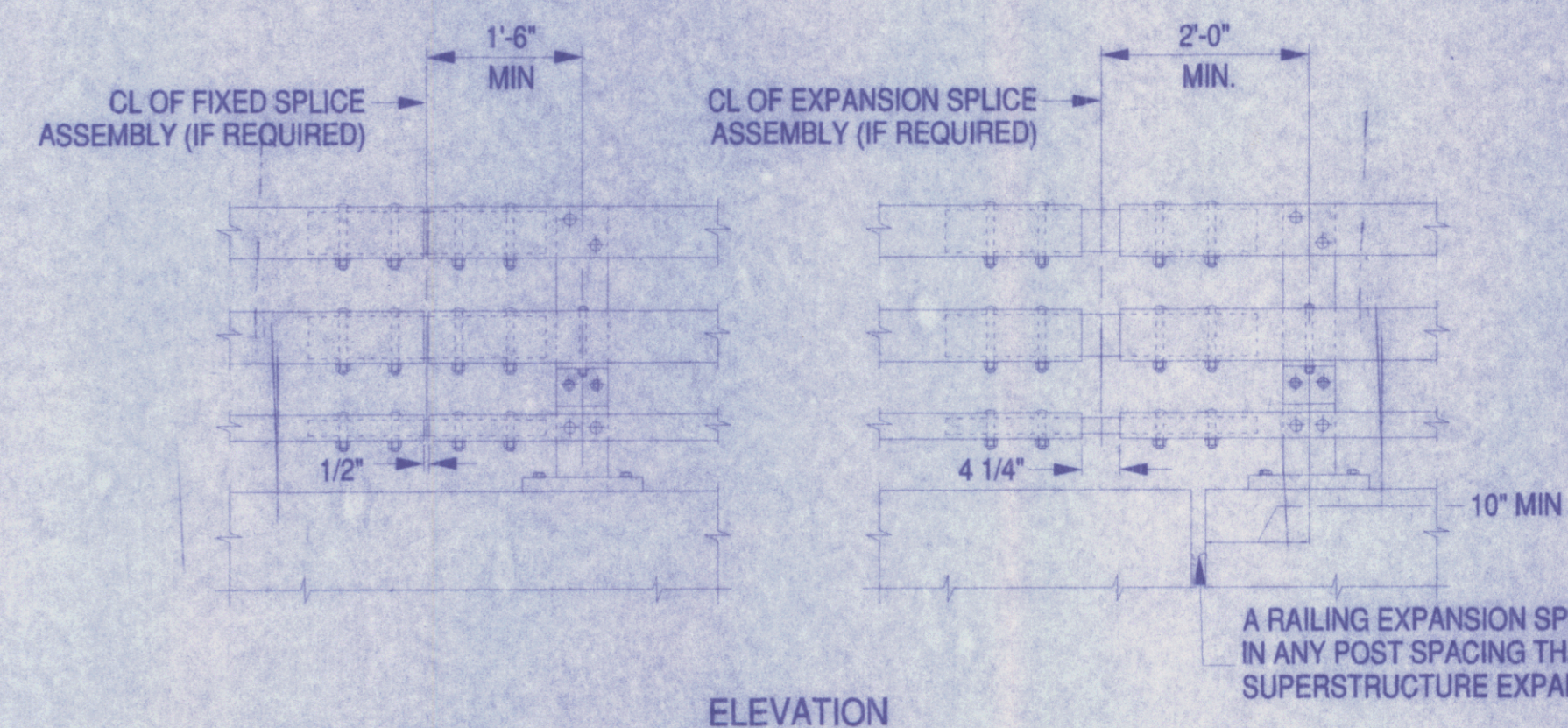
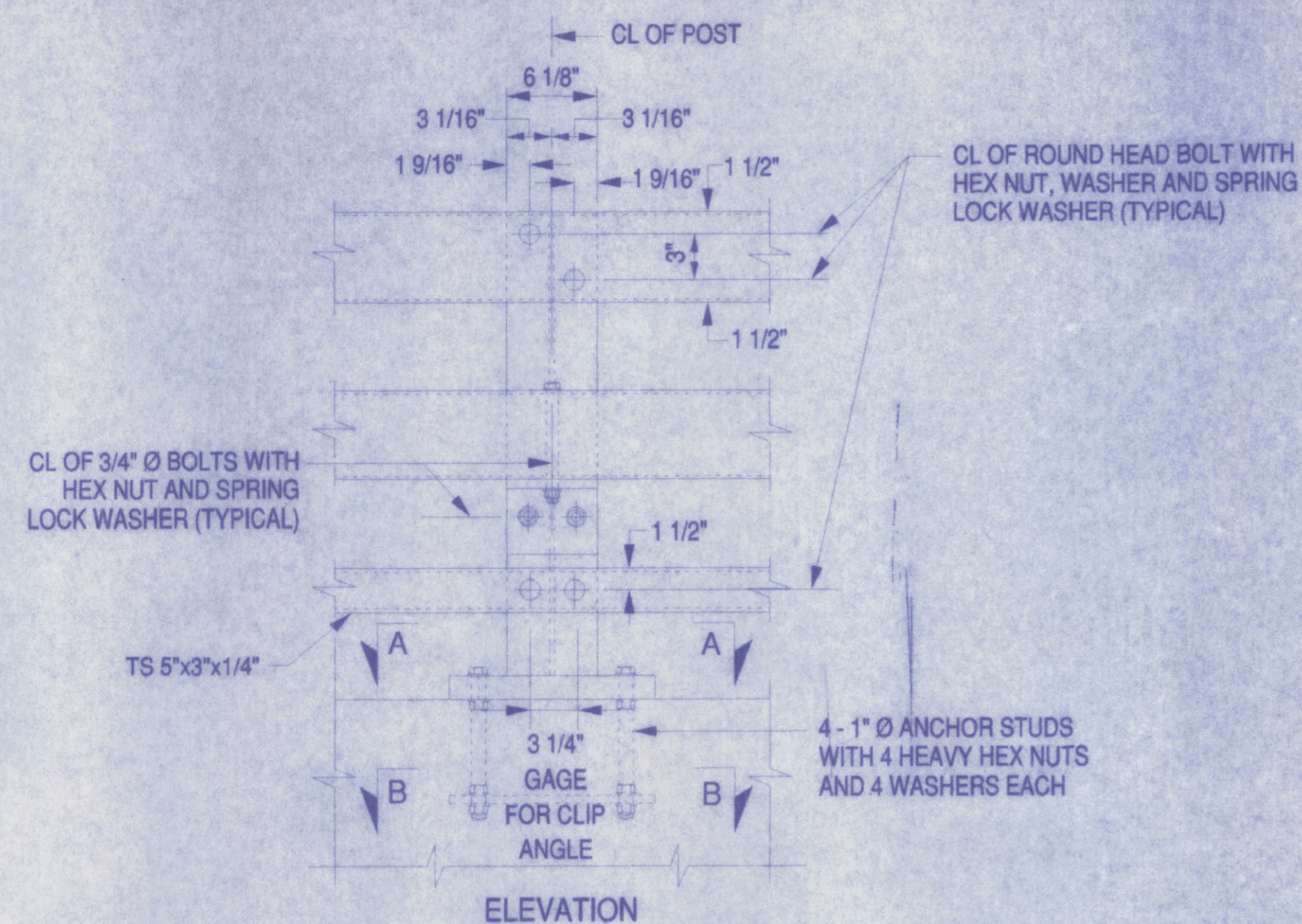
FABRICATOR: PH. (315)736-8312
DI HIGHWAY SIGN & STRUCTURE CORPORATION
P.O. BOX 123(40 GREENMAN AVE.)NEW YORK MILLS, N.Y. 13417

JOB NO.

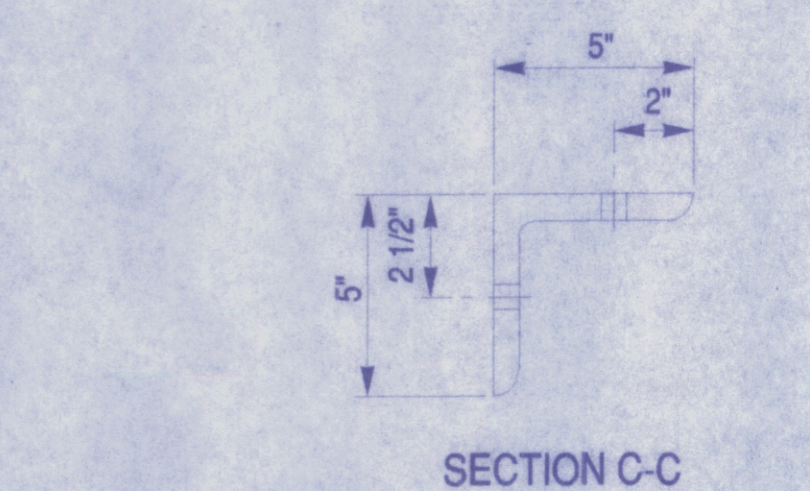
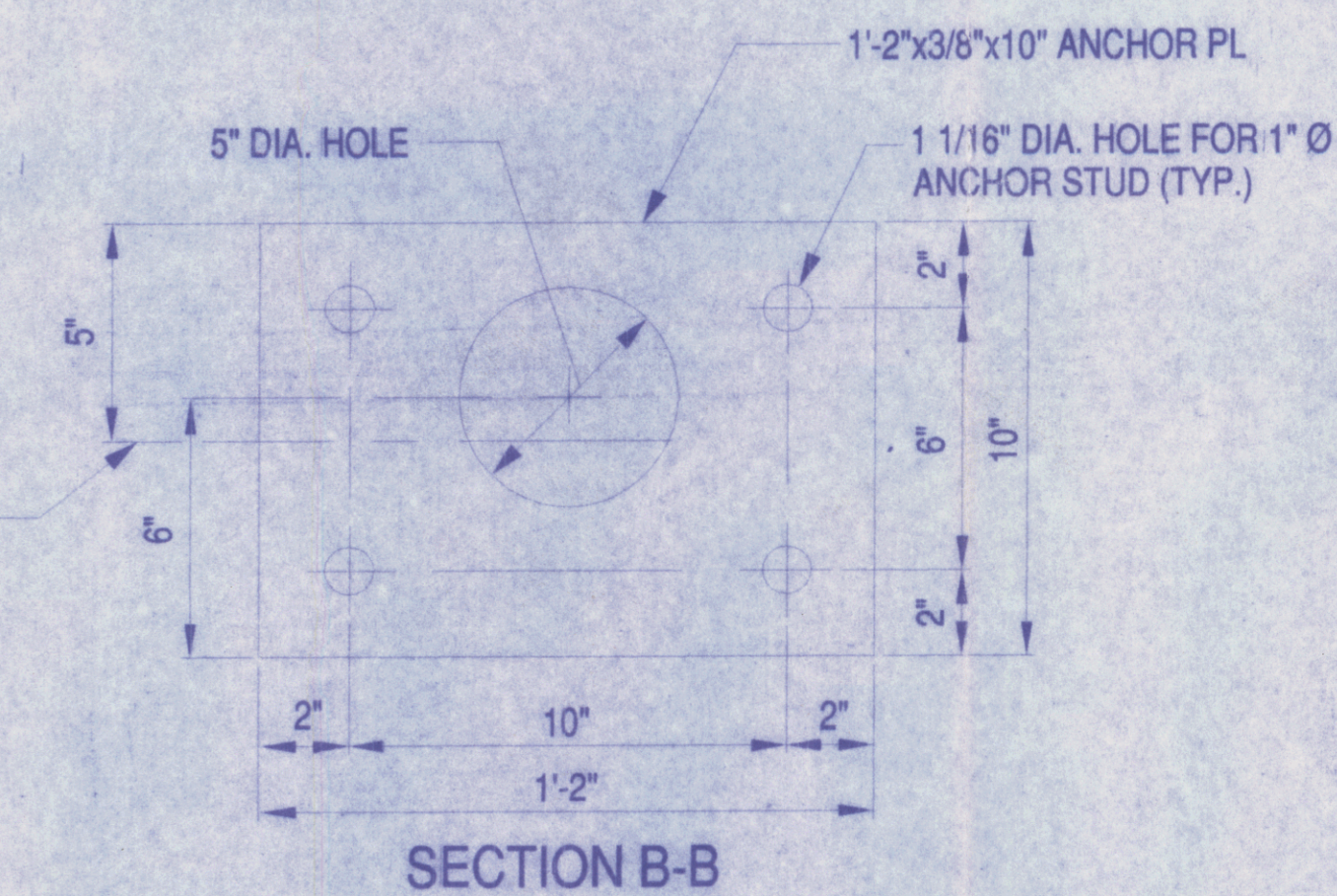
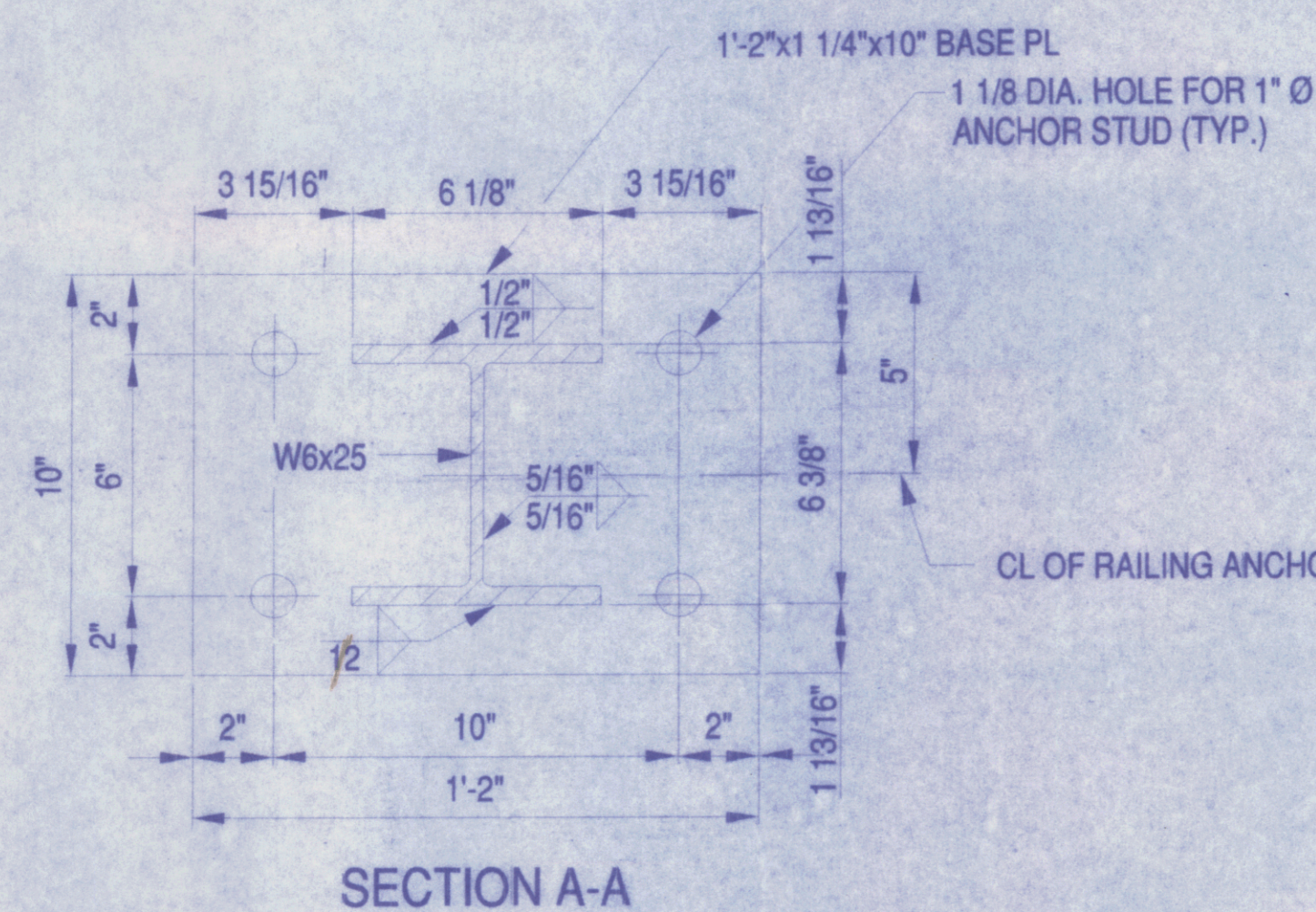
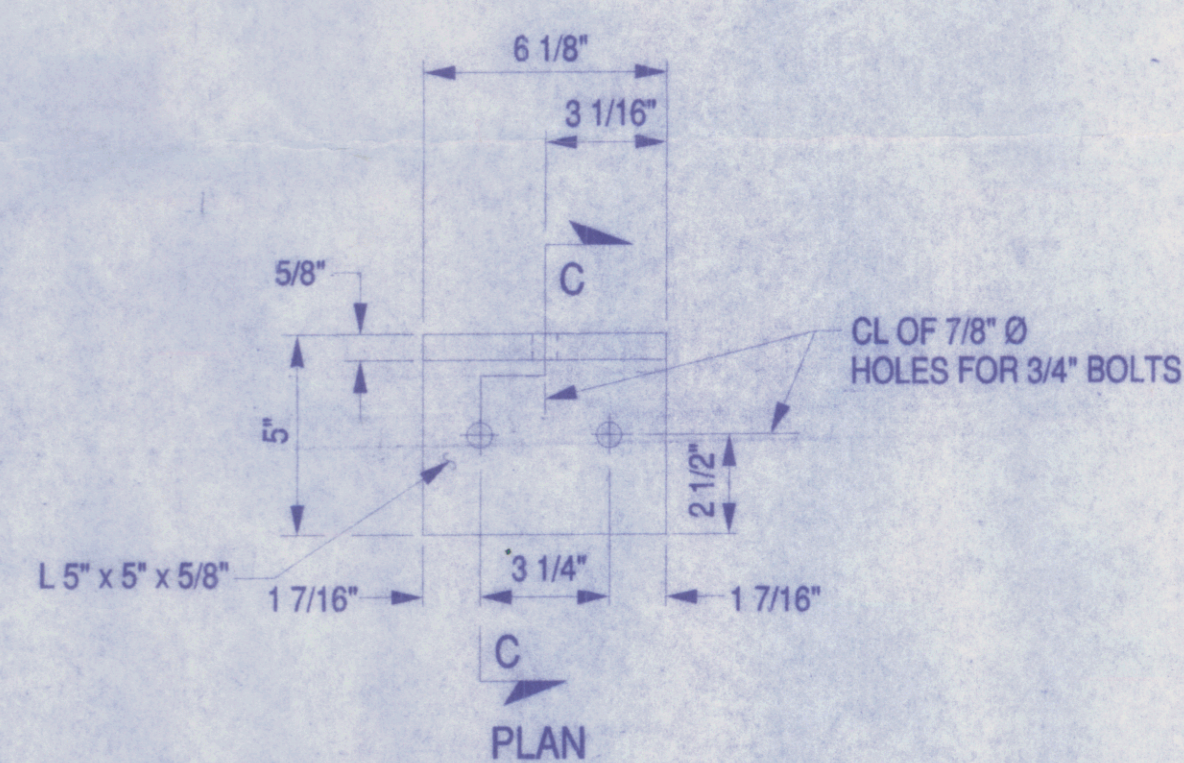
R15-03



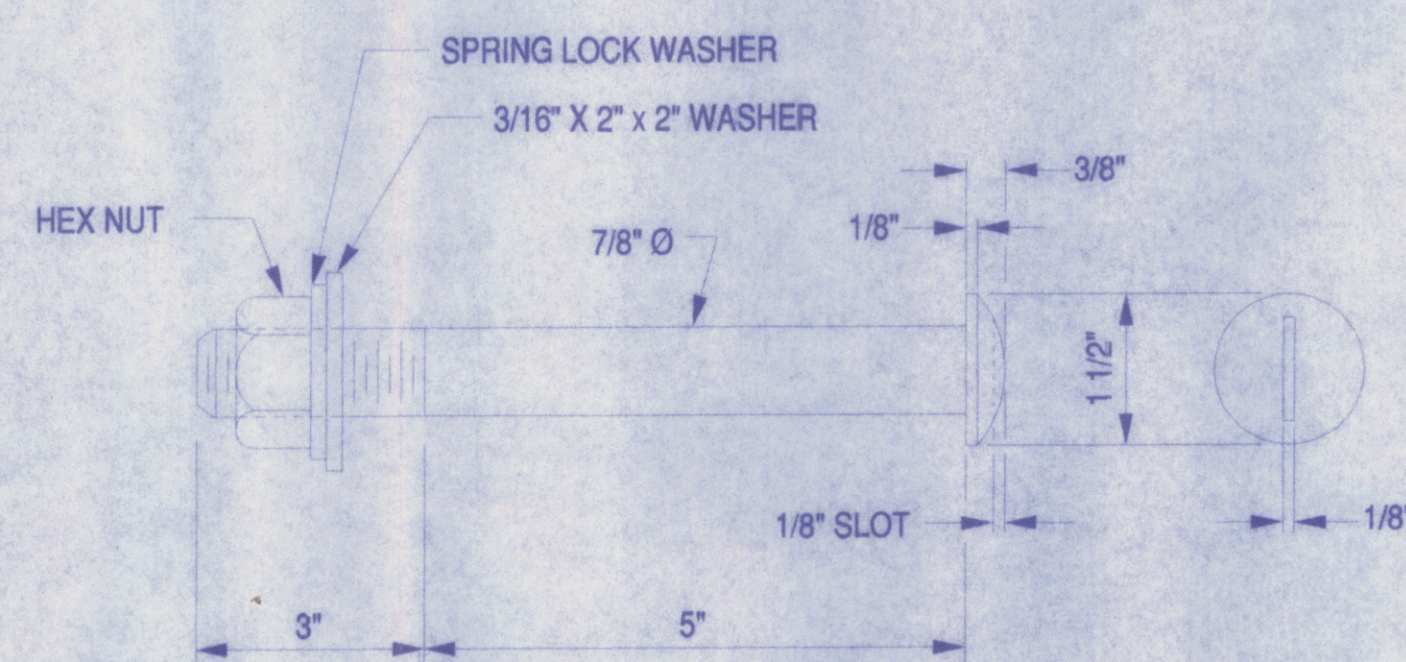
STEEL BRIDGE RAILING
(THREE-RAIL - CURBLESS)



STEEL BRIDGE RAILING SPLICE DETAILS
(THREE-RAIL - CURBLESS)



RAILING ANGLE DETAILS



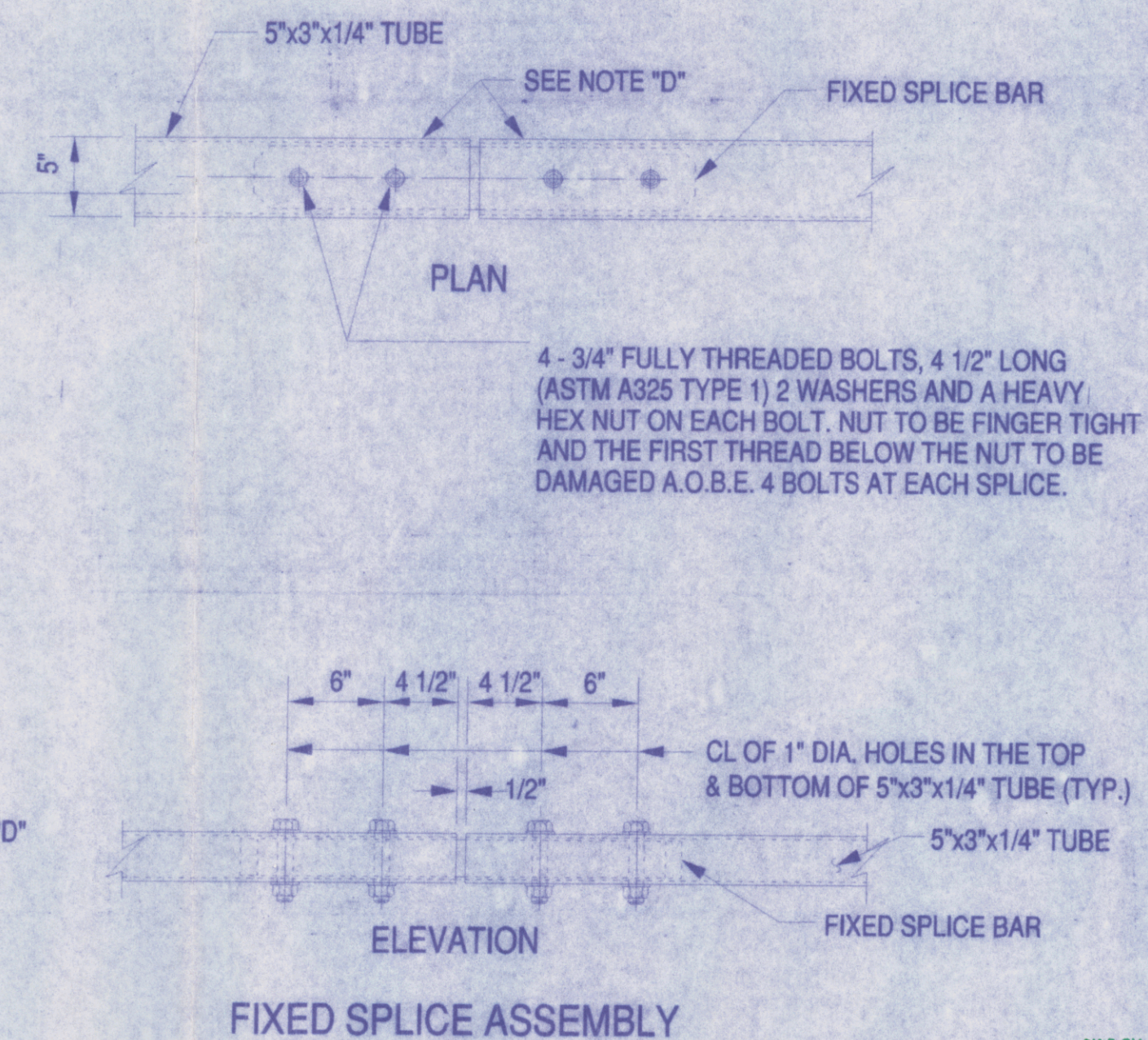
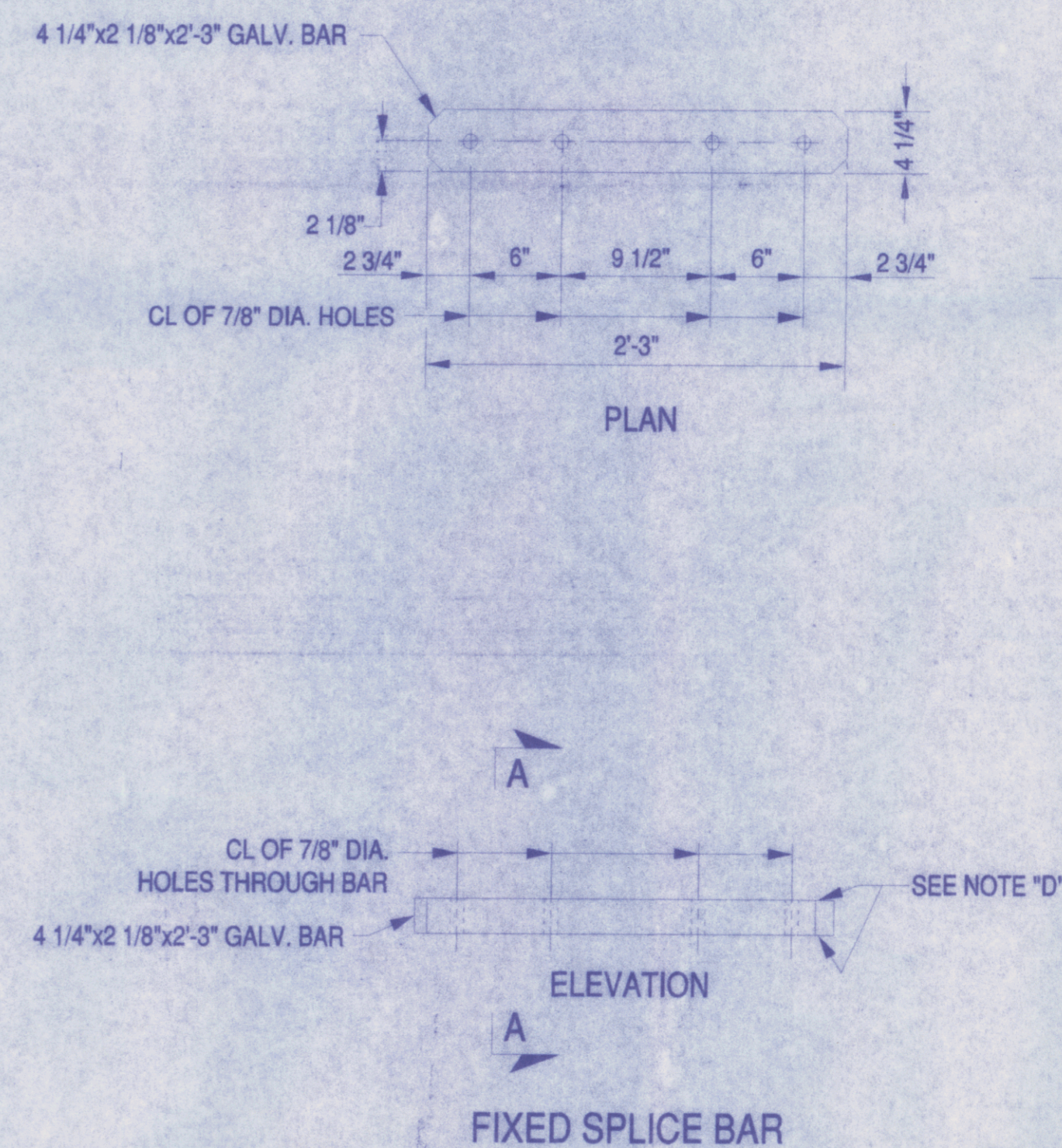
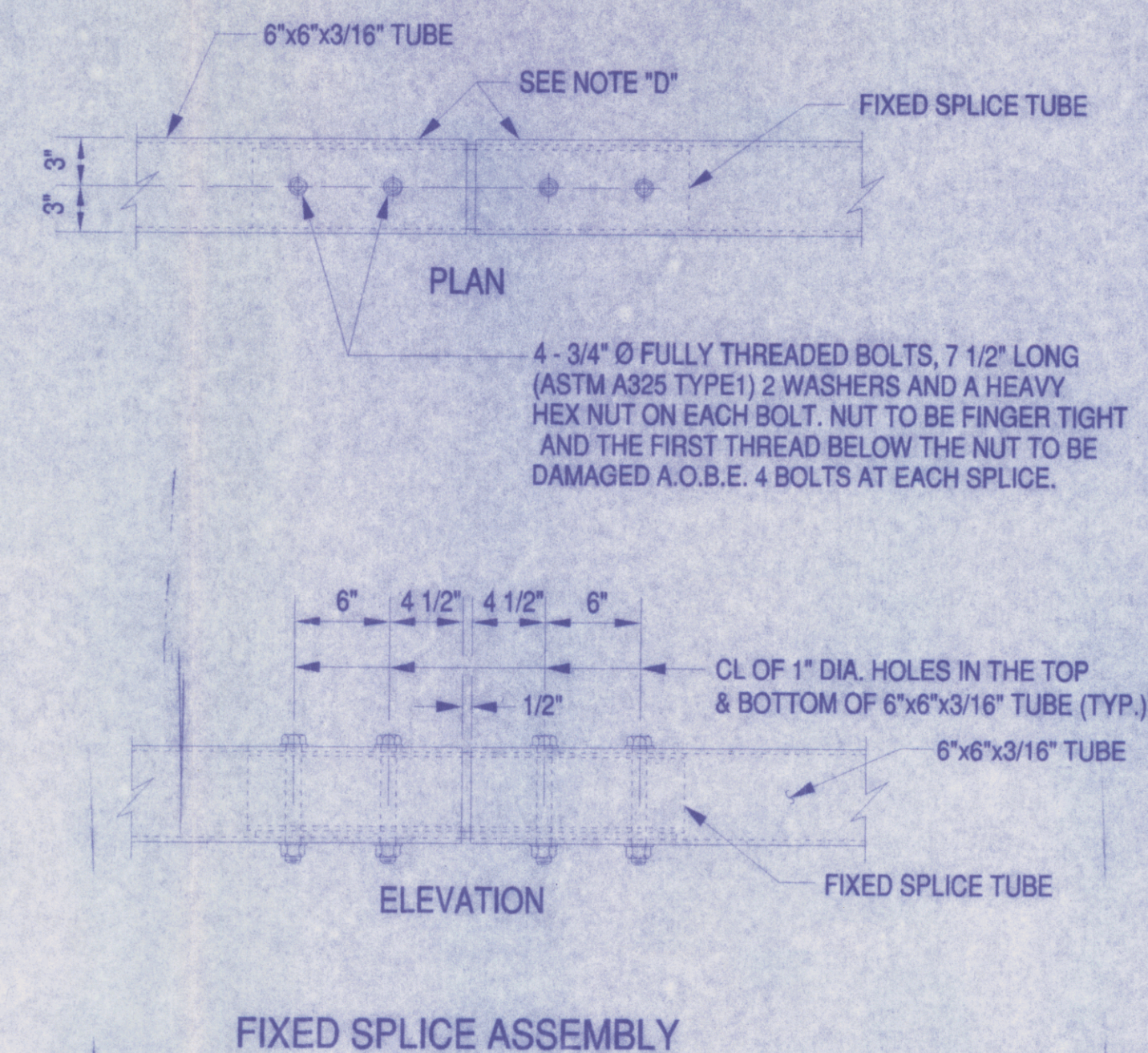
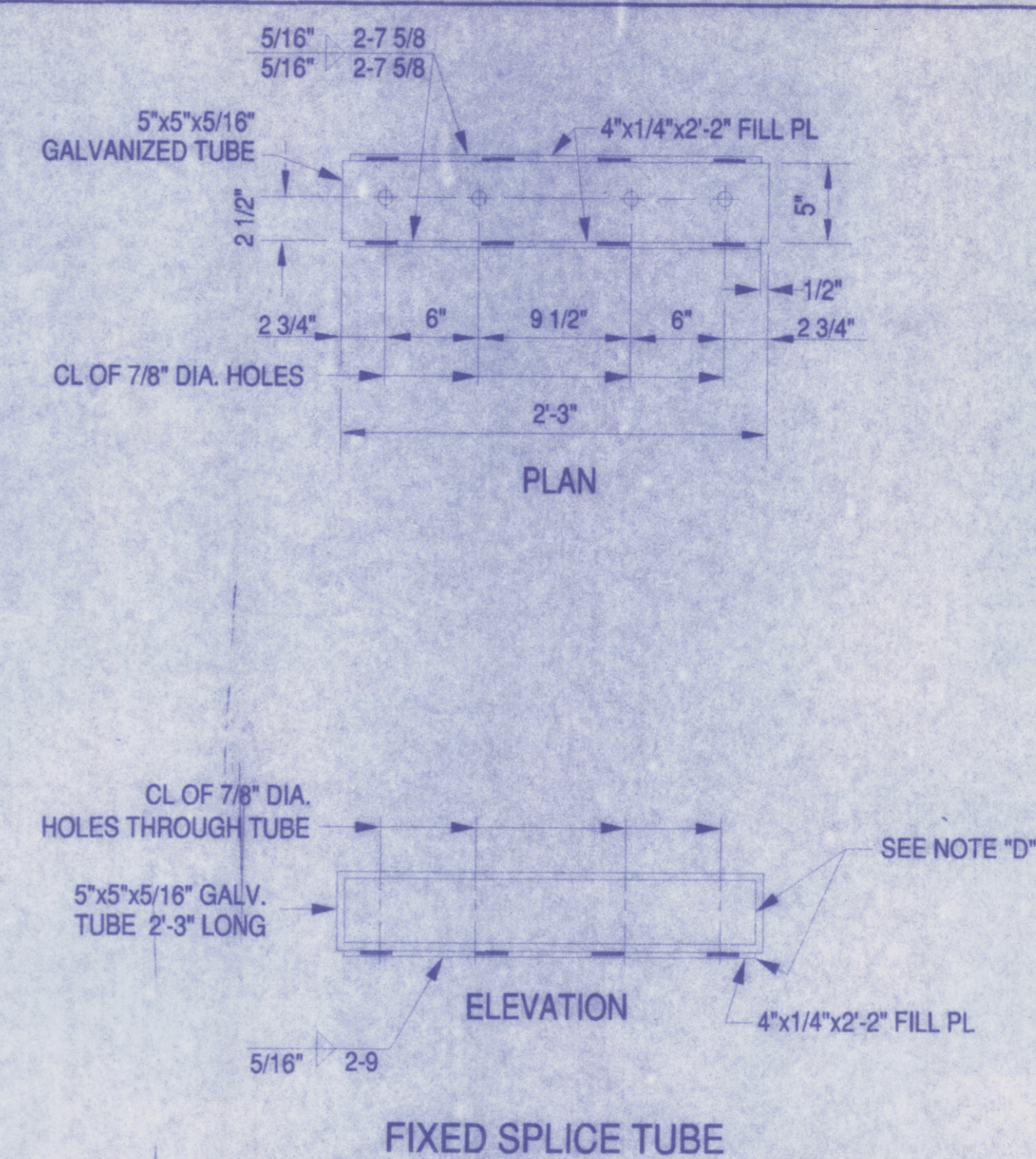
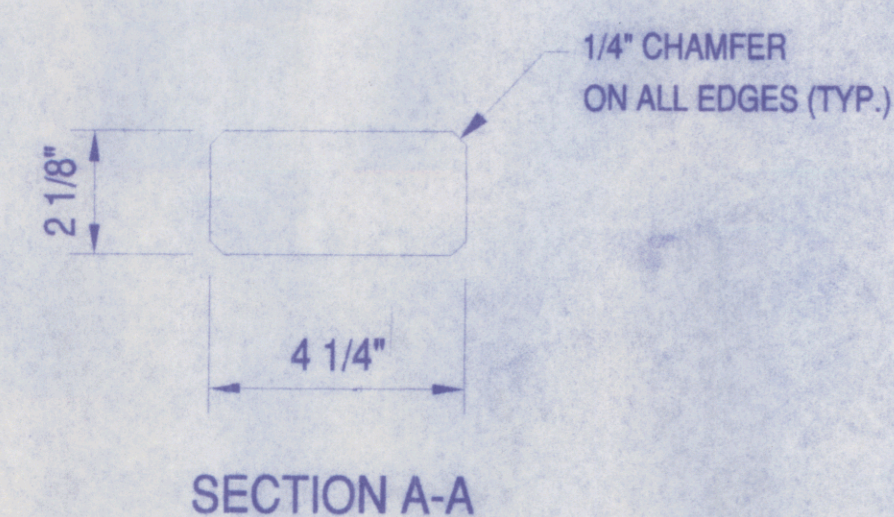
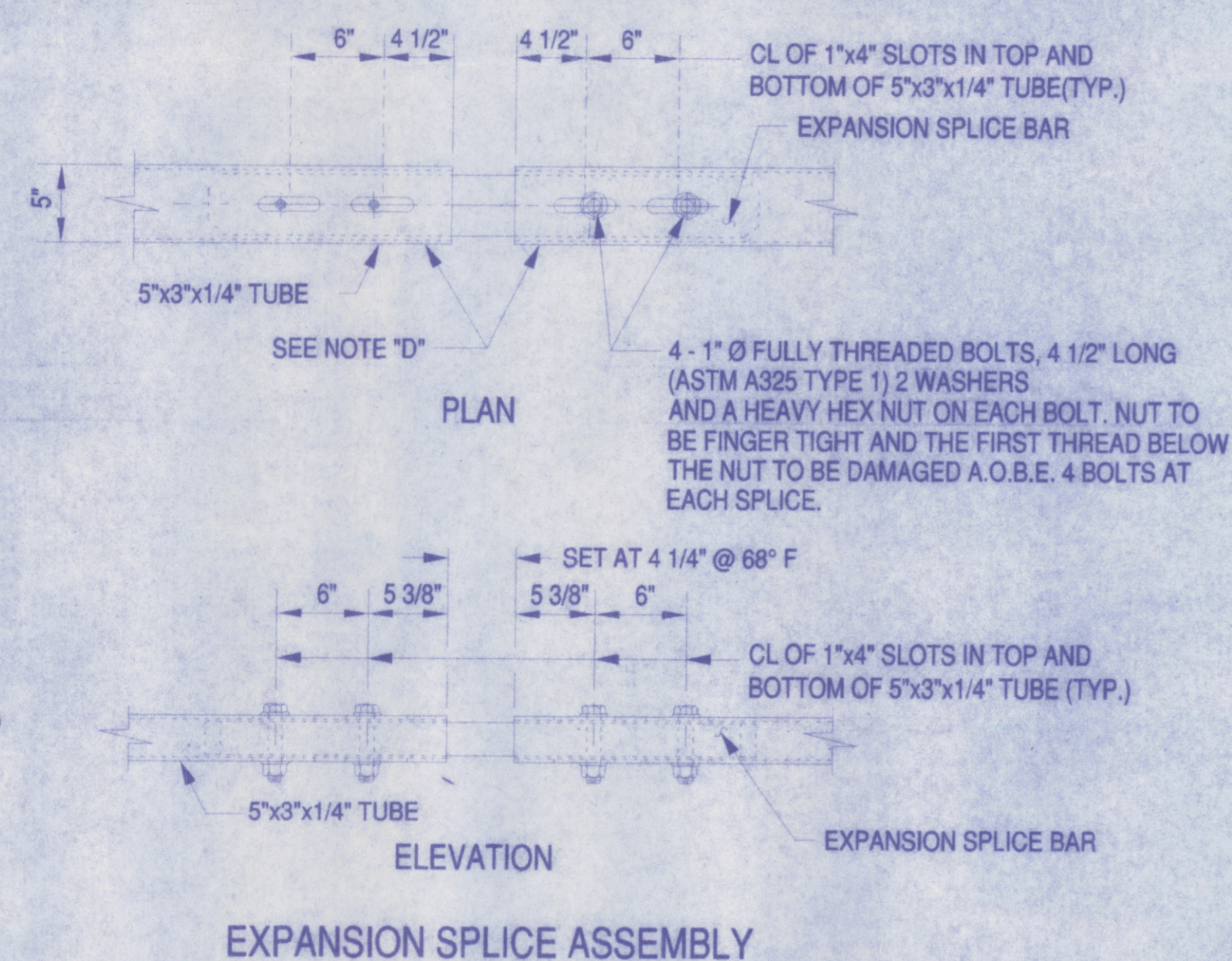
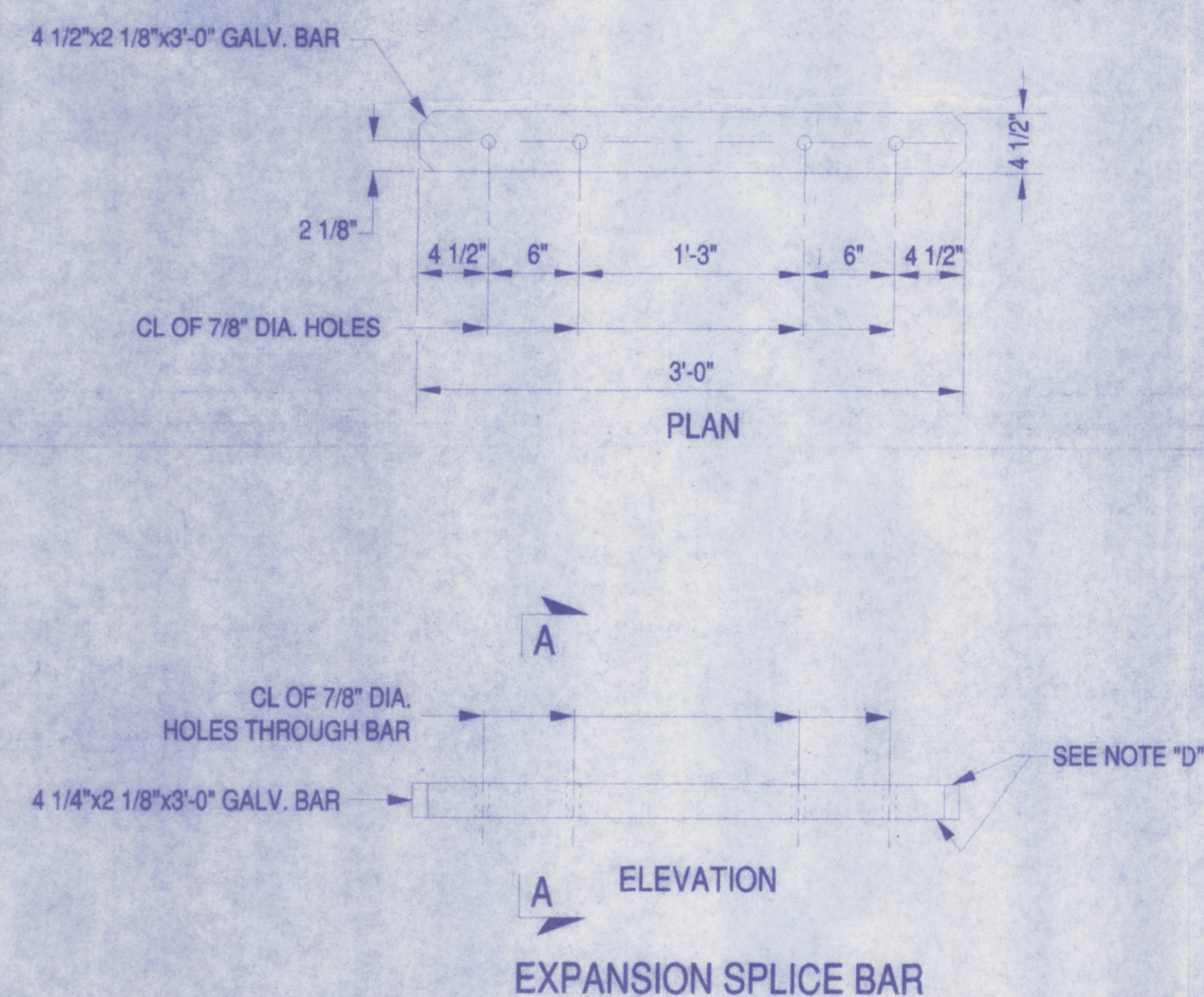
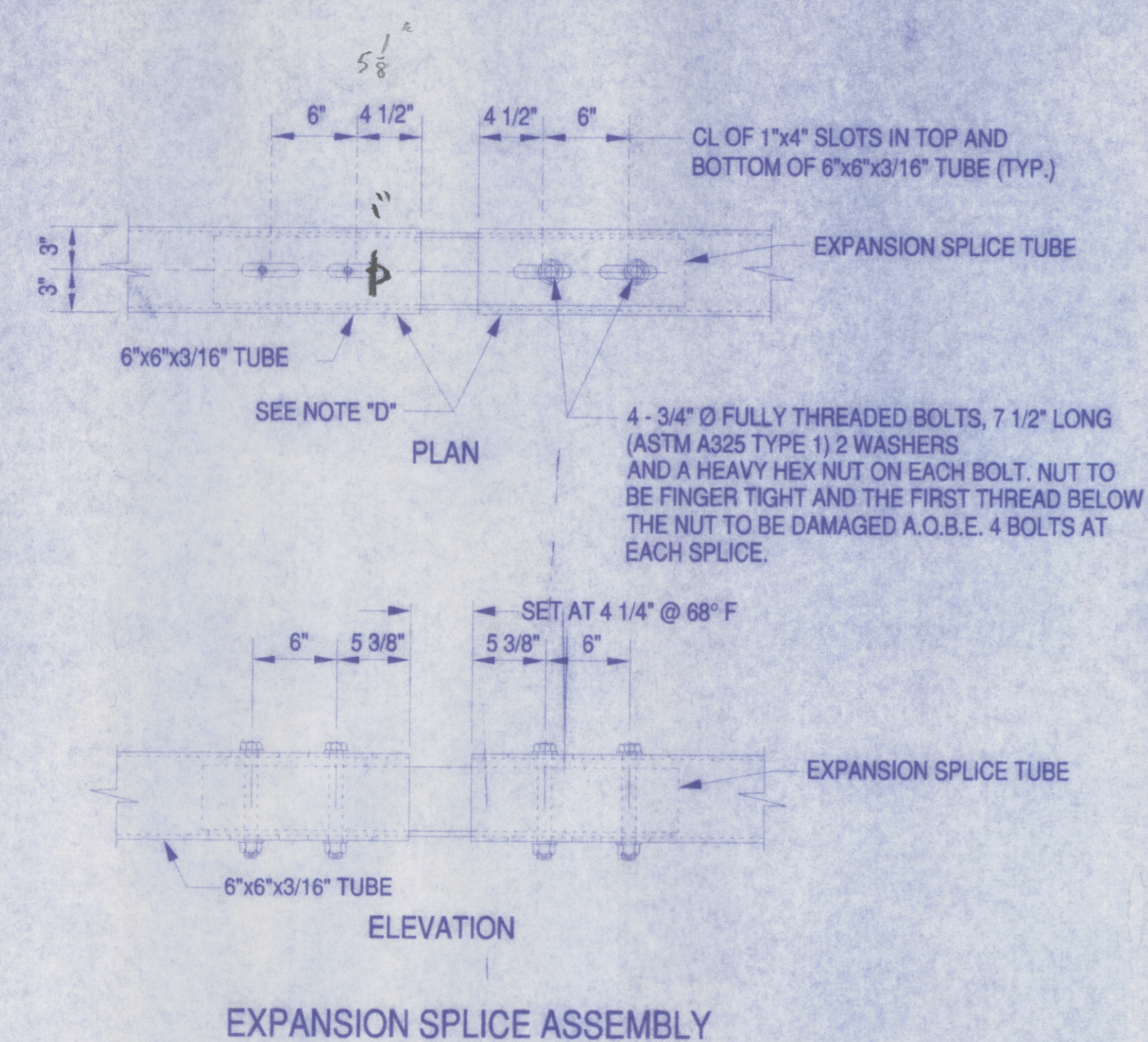
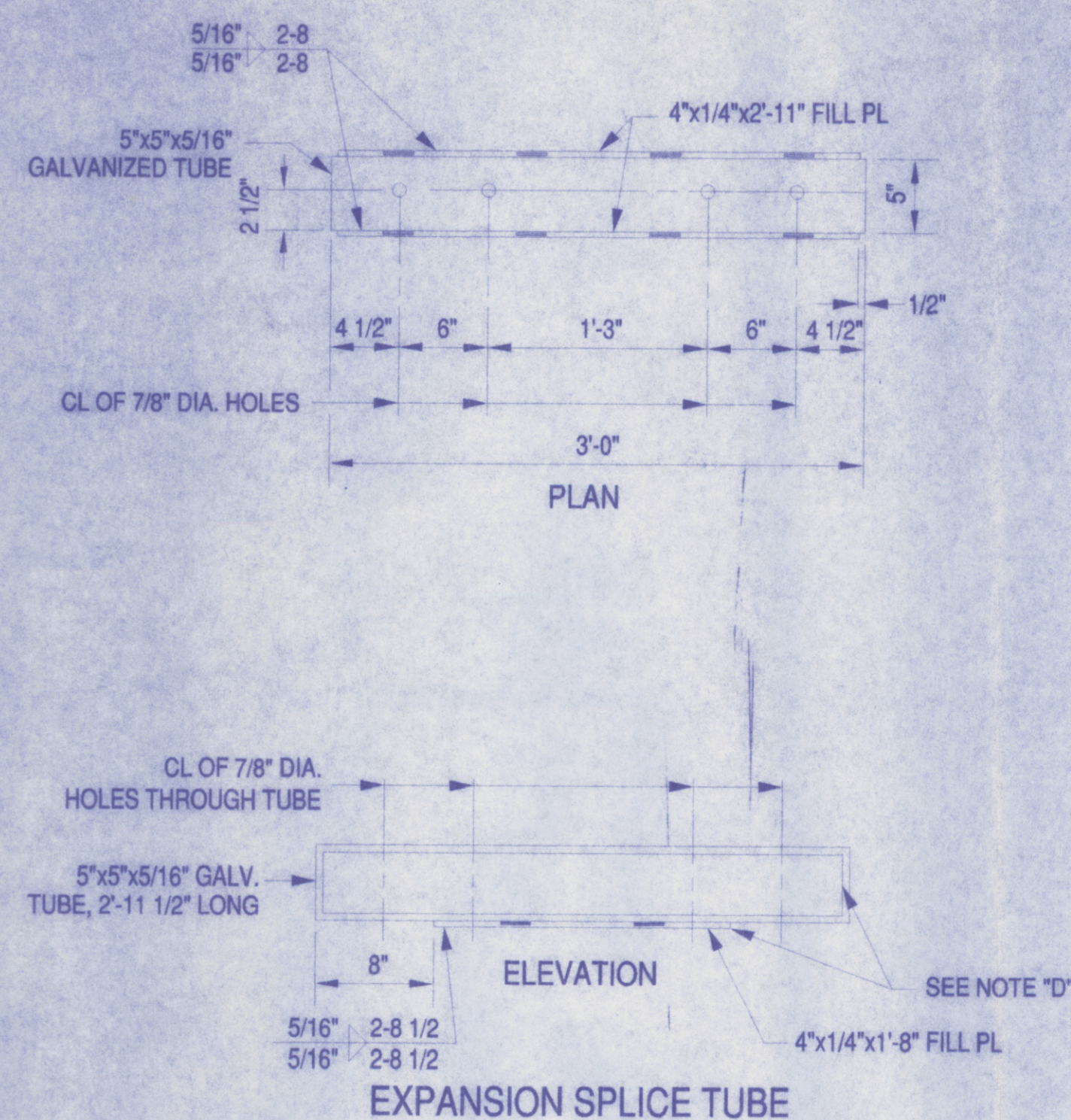
NOTES:

PRIOR TO GALVANIZING THE ASSEMBLED POST, GRIND ALL EDGES TO A MINIMUM RADIUS OF 1/16".

BOLTS SHALL BE TORQUED SNUG TIGHT (APPROXIMATELY 100 ft.-lb.).

RECEIVED
CHK'D BY JEL OK'D BY JAG
FEB JAN 23 2010
RESUBMIT APPROVED
BY KMH DATE 3/9/10

ADDED SHEET	REV.	DATE	DESCRIPTION:	DRAWN BY: ESB	DATE 1/27/10	CHECKED BY: DKK	SHEET NO. 2 OF 3
				BRIDGE RAILING DETAILS			
				STATE OF VERMONT AGENCY OF TRANSPORTATION HIGHWAY TH 43 (BR. 33)OVER WARDBORO BROOK IN THE TOWN OF JAMAICA IN WINDHAM COUNTY			
				CONT. NO. BRO 1442 (27)			
				GEN. CONT. RENAUD BROTHERS, INC. ERECTOR: RENAUD BROTHERS, INC.			
2/16/10				FABRICATOR: PH. (315)736-8312	JOB NO.		
1				DI HIGHWAY SIGN & STRUCTURE CORPORATION P.O. BOX 123(40 GREENMAN AVE.)NEW YORK MILLS, N.Y. 13417			R15-03



NOTES:

BOLTS SHALL BE TORQUED SNUG TIGHT (APPROXIMATELY 100 ft.-lb.).

NOTE "D":
PROTRUSIONS CAUSED BY WELDING OR GALVANIZING ARE NOT PERMITTED
ON THE ADJOINING SURFACES OF THE BOX BEAM RAILS, SPLICE TUBES
AND FILL PLATES.

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CK'D BY JEL OK'D BY JAG
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RESUBMIT _____ APPROVED ☒
BY KMH DATE 3/9/11

1	2/16/70	REV. DATE:	ADDED SHEET	DRAWN BY: ESB	DATE 2/15/70	CHECKED BY: DCK	SHEET NO. 3 OF 3
				BRIDGE RAILING DETAILS STATE OF VERMONT AGENCY OF TRANSPORTATION HIGHWAY TH 43 (BR. 33) OVER WARDSBORO BROOK IN THE TOWN OF JAMAICA IN WINDHAM COUNTY.			
1				CONT. NO. BRO 1442 (27)			
				GEN. CONT. RENAUD BROTHERS, INC.			
				ERECTOR: RENAUD BROTHERS, INC.			
				FABRICATOR: PH. (315)736-8312			
				DI HIGHWAY SIGN & STRUCTURE CORPORATION			
				P.O. BOX 123/40 GREENMAN AVE NEW YORK MILLS NY 13417			
				JOB NO.			
				R15-03			

WELDING PROCEDURE SPECIFICATION

MATERIAL SPECIFICATION

A36, A572 Gr50, A53GR B, A252 GR 2, OR 3, 5LX52, A500 GR B

WELDING PROCESS

FCAW

MANUAL, SEMIAUTOMATIC, AUTOMATIC

SEMI-AUTOMATIC

POSITION OF WELDING

1F & 2F (FLAT & HORIZONTAL)

FILLER METAL SPECIFICATIONS

AWS 5.20

FILLER METAL CLASSIFICATION

E71T-1

ELECTRODE & MANUFACTURE

Ultracore 71C (LINCOLN)

FLUX & MANUFACTURE

N/A

SHIELDING GAS

100%CO2

DEW POINT

-40°F

FLOW RATE

MIN 41 CFH MAX 56 CFH

SINGLE OR MULTIPLE PASS

SINGLE or MULTIPLE

SINGLE OR MULTIPLE ARC

SINGLE

WELDING CURRENT

DC

POLARITY

DCEP (REVERSE)

WELDING PROGRESSION

N/A

ROOT TREATMENT

CLEAN TO REMOVE ALL CONTAMINANT

PREHEAT AND INTERPASS

<3/4=50°F, 3/4 TO 1 1/4 = 70°F, 1 1/4 TO 2 1/2 = 150°F >2 1/2 = 225°F

300°F MAX INTERPASS TEMP.

POSTHEAT TREATMENT

NONE

3/10/10

✓

WELDING PROCEDURE						JOINT DETAIL	
PASS NO.	ELECTRODE SIZE	AMPS	VOLTS	TRAVEL SPEED IN/MIN			
ALL	1/16"	300	27	11.6	Miscellaneous Fillet Welds Single pass Fillet: Min weld size 1/4" on material ≤ 3/4" T & 5/16" on material > 3/4" T. Max size 1/2" in flat position & 5/16" in horizontal position or as contract documents specify. Weld size T1 T2 1/4 3/4 3/4 5/16 1 5/16 3/8 1 3/8 1/2 1 1/2 5/8 1 5/8 3/4 1 3/4 7/8 1 1		
		Max 330	Max 29	Max 12.7			
		Min 270	Min 25	Min 10.5			

PROCEDURE NO:

DL-03

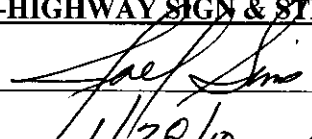
FABRICATOR

DL-HIGHWAY SIGN & STRUCTURE

OUR JOB NO.

Stock fillet weld

AUTHORIZED BY



PQR REF NO.

DL-01-09a

DATE

11/28/10



JOEL W. SIMS

CWI 94030071

OC1 EXP. 03/01/11

Jack
3/11/10

Jack
3/11/10

Jack
3/11/10

Jack
3/11/10

Jack
3/11/10

Jack
3/11/10

Jack
3/11/10

Jack
3/11/10

✓

Two

2/10

WELDING PROCEDURE SPECIFICATION

MATERIAL SPECIFICATION

A36, A53GR B, A252 GR 2, OR 3, 5LX52, A500 GR B

WELDING PROCESS

FCAW

MANUAL, SEMIAUTOMATIC, AUTOMATIC

SEMIAUTOMATIC

POSITION OF WELDING

1F (FLAT)

FILLER METAL SPECIFICATIONS

AWS 5.20

FILLER METAL CLASSIFICATION

E71T-1

ELECTRODE & MANUFACTURE

Ultracore 71C (Lincoln)

FLUX & MANUFACTURE

N/A

SHIELDING GAS

100% CO2

DEW POINT

-40°F

FLOW RATE

MIN 41 CFH MAX 56 CFH

SINGLE OR MULTIPLE PASS

SINGLE

SINGLE OR MULTIPLE ARC

SINGLE

WELDING CURRENT

DC

POLARITY

DCEP (REVERSE)

WELDING PROGRESSION

N/A

ROOT TREATMENT

CLEAN TO REMOVE ALL CONTAMINANT

PREHEAT AND INTERPASS

<3/4=50°F, 3/4 TO 1 1/2= 70°F, 1 1/2 TO 2 1/2= 150°F >2 1/2= 225°F

300°F MAX INTERPASS TEMP.

POSTHEAT TREATMENT

NONE

WELDING PROCEDURE

PASS NO.	ELECTRODE SIZE	AMPS	VOLTS	TRAVEL SPEED IN/MIN	JOINT DETAIL
1	1/16	300	27	11.6	5 X 5 Tube splice
		MAX 330	MAX 29	12.7 TO 10.5	
		MIN 270	MIN 25		

Typ

1/4

1/4" x 4" PL.

PROCEDURE NO: DL-05

FABRICATOR

DL-HIGHWAY SIGN & STRUCTURE

OUR JOB NO: Stock Tube splice for 6 X 6 bridge rail

AUTHORIZED BY

PQR REF NO: DL-01-09a

DATE

1/28/10

JOEL W. SIMS

CMT 94030971

QCT EXP. 03/01/11

WELDING PROCEDURE SPECIFICATION

MATERIAL SPECIFICATION

A36, A53GR B, A252 GR 2, OR 3, 51X52, A500 GR B

WELDING PROCESS

FCAW

MANUAL, SEMIAUTOMATIC, AUTOMATIC

SEMIAUTOMATIC

POSITON OF WELDING

FLAT

FILLERMETAL SPECIFICATIONS

AWS 5.20

FILLER METAL CLASSIFICATION

E71T-1

ELECTRODE & MANUFACTURE

Ultracore 71C (Lincoln)

FLUX & MANUFACTURE

N/A

SHIELDING GAS

100%CO2

DEW POINT

-40°F

FLOW RATE

MIN 41 CFH MAX 56 CFH

SINGLE OR MULTIPLE PASS

SINGLE

SINGLE OR MULTIPLE ARC

SINGLE

WELDING CURRENT

DC

POLARITY

DCEP (REVERSE)

WELDING PROGRESSION

N/A

ROOT TREATMENT

CLEAN TO REMOVE ALL CONTAMINANT

PREHEATAND INTERPASS

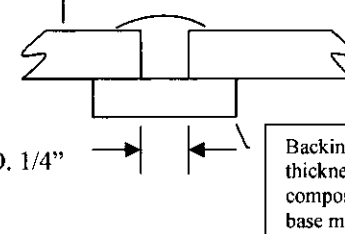
<3/4=50°F, 3/4 TO 1 1/2 = 70°F, 1 1/2 TO 2 1/2 = 150°F >2 1/2 = 225°F

300°F MAX INTERPASS TEMP.

POSTHEAT TREATMENT

NONE

WELDING PROCEDURE

PASS NO.	ELECTRODE SIZE	AMPS	VOLTS	TRAVEL SPEED IN/MIN	JOINT DETAIL
1	1/16	300	27	11.6	Used for 6 X 6 x 3/16 guide rail 5 X 3 X 1/4 bridge rail 3 X 3 X 3/16 pedestrian rail
		MAX 330 MIN 270	MAX 29 MIN 25	12.7 TO 10.5	1/4" max material thickness 

PROCEDURE NO.

DL-06

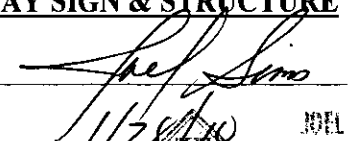
FABRICATOR

DL-HIGHWAY SIGN & STRUCTURE

OUR JOB NO.

Stock bridge rail & guide rail

AUTHORIZED BY



PQR REF NO.

DL-01-09a

DATE

1/2/20

JOEL W. SIMS

CM

96029971

QC

03/04/2018