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STANDARDS			
A-76	3-3-03	E-120	8-8-95
B-5	6-1-94	E-121	8-8-95
D-1	6-1-94	E-143	6-15-04
D-11	6-1-94	E-146	9-20-95
E-100A	1-2-04	E-160	5-20-99
E-102A	5-1-04	E-164	5-20-99
E-102	6-30-03	G-1d	1-3-00
E-106	3-1-04	G-1	1-3-00
E-107A	8-8-95	G-4	6-1-94
E-108	12-8-08	G-16	6-1-94
E-111	3-11-97	G-18	6-1-94

STATE OF VERMONT AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT

TOWN OF DUMMERSTON
COUNTY OF WINDHAM

TH 62 (CLASS III-LOCAL ROAD)
OVER WEST RIVER, BRIDGE NO. 37

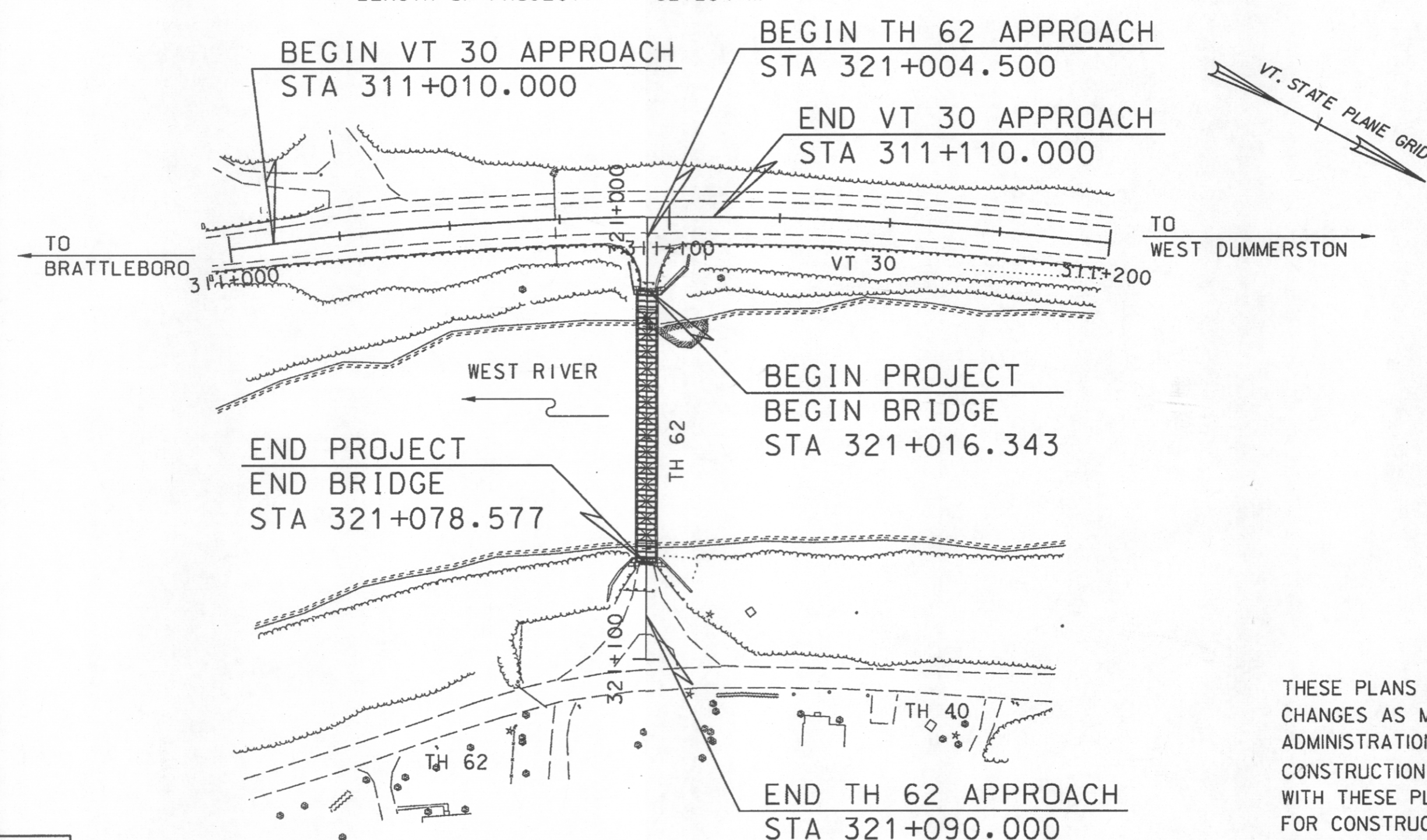
PROJECT LOCATION: THE PROJECT BEGINS 0.016 KM EAST OF THE INTERSECTION
OF VT 30 AND TH 62 (RICE FARM ROAD) AND CONTINUES
EASTERLY FOR 0.062 KM

PROJECT DESCRIPTION: REHABILITATION OF BRIDGE NO. 37 INCLUDING MINOR SUBSTRUCTURE
REPAIR, AND THE WIDENING OF THE VT 30 NORTHBOUND SHOULDER

LENGTH OF STRUCTURE: 62.234 m

LENGTH OF ROADWAY: —

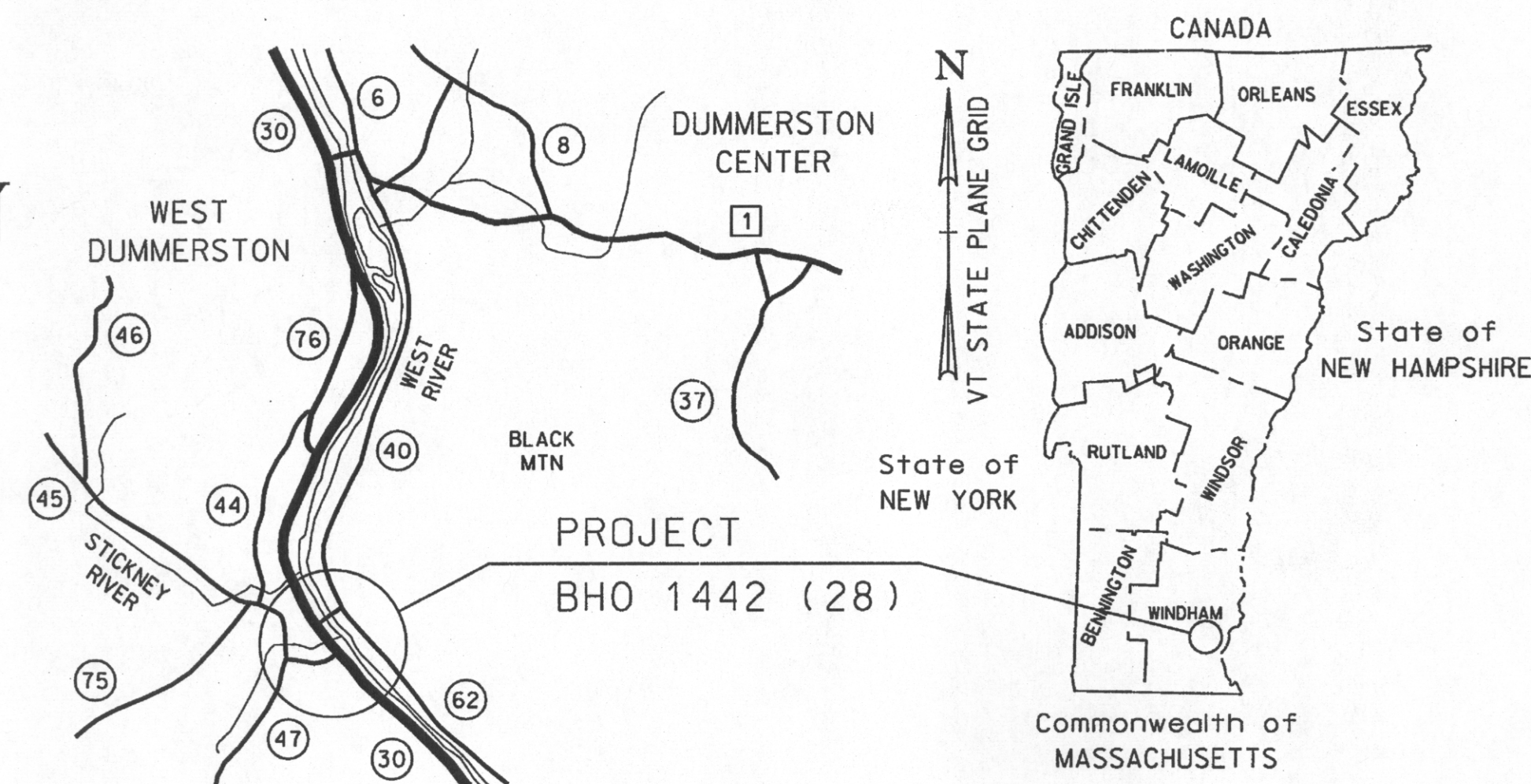
LENGTH OF PROJECT: 62.234 m



PLAN

SCALE: 1:1000

0 20 40 60
SCALE IN METERS



LOCATION MAP

0 500 1000 1500 2000
SCALE IN METERS

RECORD PLANS

CONTRACTOR: RENAUD BROTHERS, INC. - VERNON, VT

RESIDENT ENGINEER: CHAD GREENWOOD

CONSTRUCTION BEGAN: AUGUST 7, 2009

CONSTRUCTION COMPLETE: NOVEMBER 2, 2011

RECORD PLANS BY: CHAD GREENWOOD & J. HYDE

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

BY *[Signature]* RESIDENT ENGINEER

DATE 6/26/13

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

CONVENTIONAL SYMBOLS

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

SURVEYED BY : VAOT
SURVEYED DATE : 8/98

DATUM

VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)



Metric

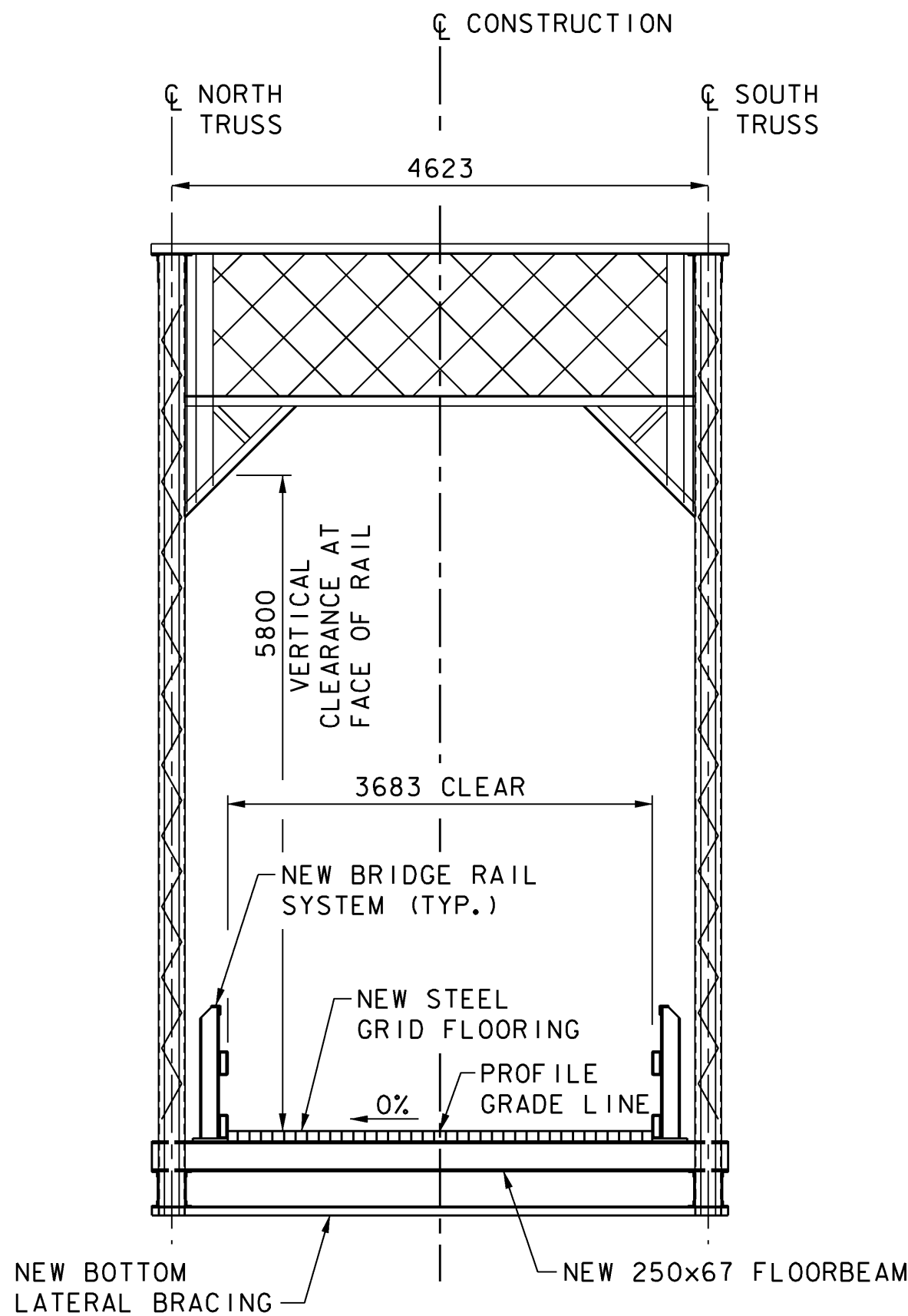
UNLESS NOTED OTHERWISE
STATIONS ARE IN KILOMETERS
ELEVATIONS ARE IN METERS
DIMENSIONS ARE IN MILLIMETERS

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING
CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY
ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.
CONSTRUCTION TO BE CARRIED ON IN ACCORDANCE
WITH THESE PLANS AND THE STANDARD SPECIFICATIONS
FOR CONSTRUCTION DATED 2006, AS APPROVED BY THE
FEDERAL HIGHWAY ADMINISTRATION ON JUNE 15, 2006
FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT
REVISIONS AND SUCH REVISED SPECIFICATIONS AND
SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

VANASSE HANGEN BRUSTLIN, INC.

DIRECTOR OF PROGRAM DEVELOPMENT
APPROVED *[Signature]* DATE 4-6-2009
PROJECT MANAGER : MARTHA EVANS-MONGEON
PROJECT NAME : DUMMERSTON
PROJECT NUMBER : BHO 1442 (28)

SHEET 1 OF 49 SHEETS



BRIDGE TYPICAL SECTION
SCALE: 1:50

MATERIAL ITEM	THICKNESS TOLERANCES (mm)
PAVEMENT	+/- 5 (TOTAL DEPTH)
SUBBASE	+/- 30

SEEDING FORMULA RURAL AREAS

% MASS	kg/ha	NAME	PUR %	GERM %
37.5	26.0	CREeping RED FESCUE	98	85
37.5	26.0	TALL FESCUE	95	90
5.0	4.0	RED TOP	95	90
15.0	10.0	BIRDSFOOT TREFOIL	98	85
5.0	4.0	ANNUAL RYE GRASS	95	85
100.0	70.0			

GENERAL NOTES

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

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

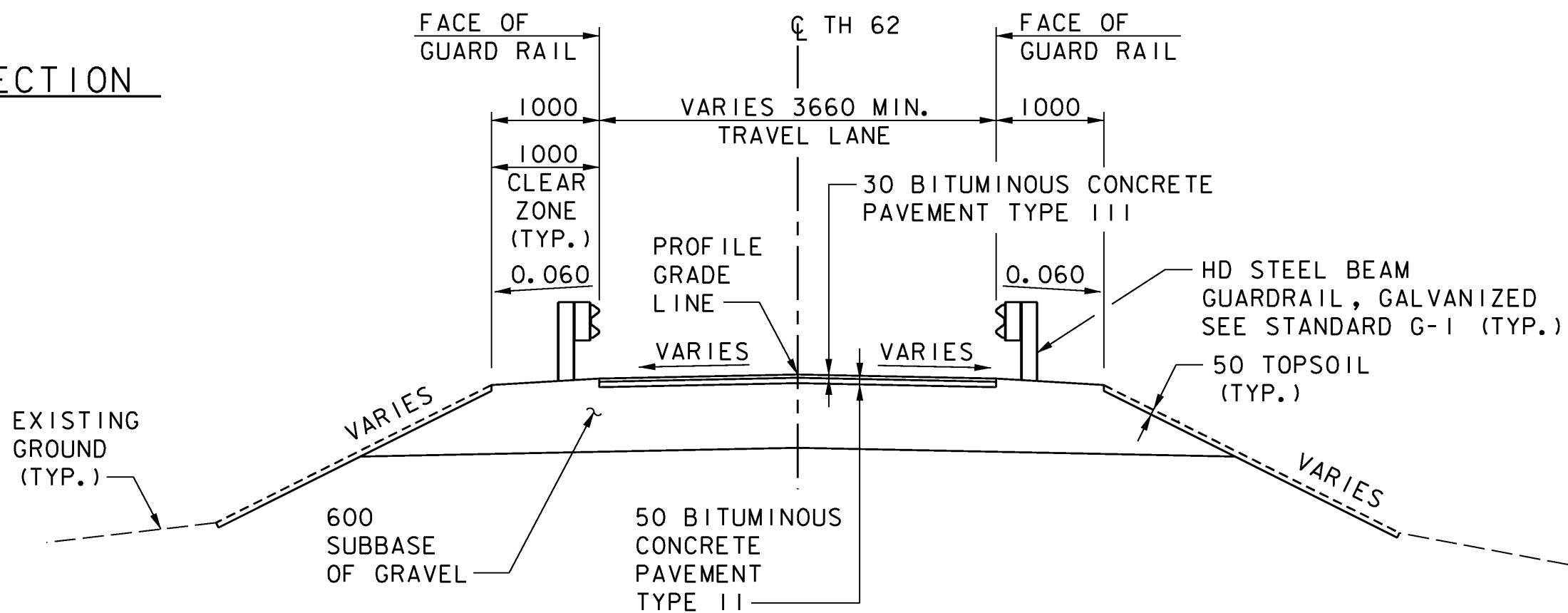
FERTILIZER: FORMULA 10-20-10, TO BE USED WITH SEED, APPLIED AT THE RATE OF 560 kg/ha. (HYDRO SEEDERS MAY USE 19-19-19 FORMULA).

AGRICULTURAL LIMESTONE: TO BE APPLIED AT THE RATE OF 4500 kg/ha, OR AS DIRECTED BY THE ENGINEER.

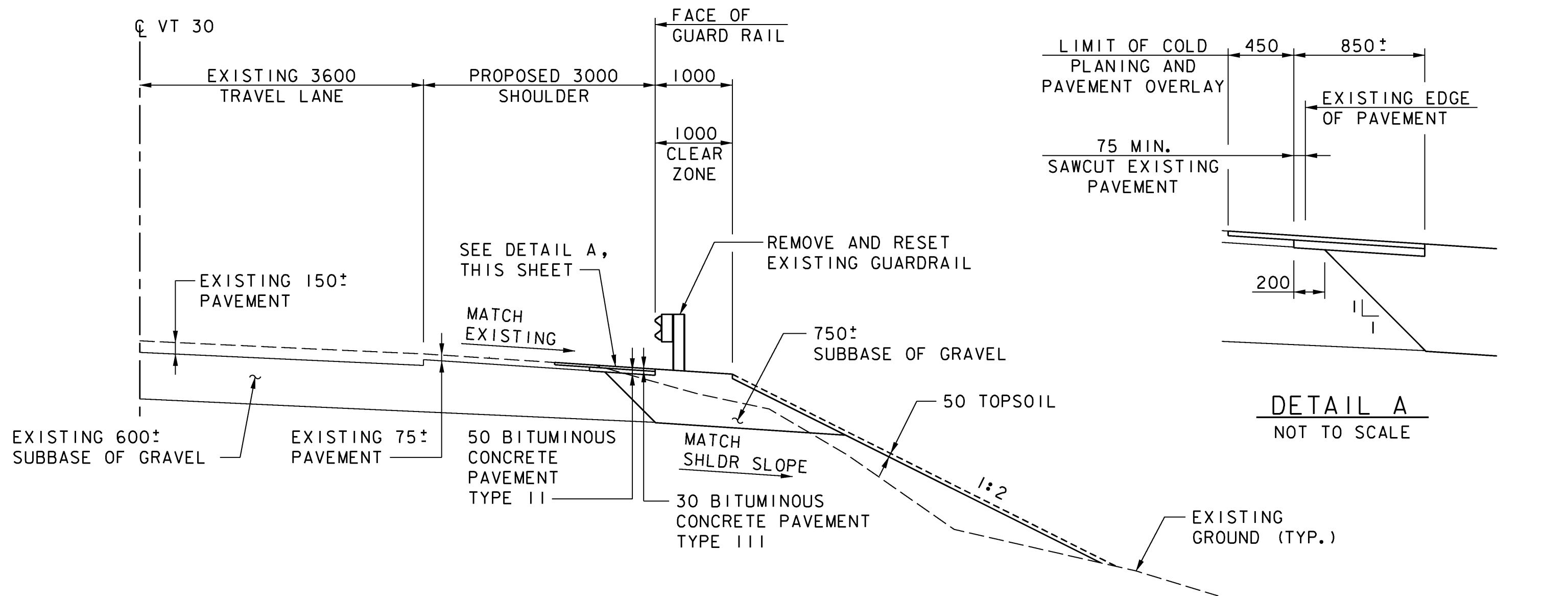
TOPSOIL: TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

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

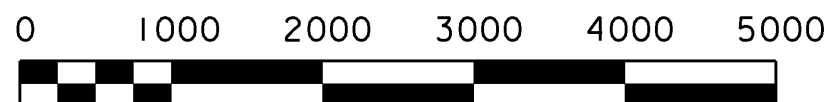
SLOPE ROUNDING: ALL CUT SLOPES TO BE ROUNDED IN ACCORDANCE WITH STANDARD SHEET B-5.



TH 62 TYPICAL SECTION
SCALE: 1:50



VT 30 TYPICAL SECTION
SCALE: 1:50



FINAL HYDRAULICS REPORT



HYDROLOGIC DATA

DRAINAGE AREA= 1050 km²
CHARACTER OF TERRAIN: ROLLING STEEP-SIDED VALLEYS
CHARACTER & TYPE OF STREAM: GRAVEL AND COBBLE BOTTOM

NATURE OF STREAMBED:

Q2.33= 566 CMS
Q10= 849 CMS
Q25= 1500 CMS
Q100= 1500 CMS

DATE OF FLOOD OF RECORD: SEPTEMBER 1938
WATER SURFACE ELEV.: ESTIMATED DISCHARGE:
NATURAL STREAM VELOCITY @ Q: 0
ICE CONDITIONS: UNKNOWN DEBRIS: UNKNOWN
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEVATION RAPIDLY? UNKNOWN
IS ORDINARY RISE RAPID? UNKNOWN
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? NO
IF YES, DESCRIBE.

WATERSHED STORAGE: HEADWATERS: UNIFORM THROUGHOUT WATERSHED
IMMEDIATELY ABOVE SITE

EXISTING STRUCTURE

STRUCTURE TYPE: QUADRUPLER WARREN TRUSS (THROUGH) YEAR BUILT: CIRCA 1892
CLEAR SPAN (NORMAL TO STREAM): 59.63 m
VERTICAL CLEARANCE ABOVE STREAMBED: 7.92 m
WATERWAY OF FULL OPENING:
DISPOSITION OF STRUCTURE: REHABILITATE

TYPE OF MATERIAL UNDER SUBSTRUCTURE: UNKNOWN

WATER SURFACE ELEV. @ Q2.33= VELOCITY=
Q10= 83.6 "
Q25= "
Q50= 84.4 "
Q100= 85.4 "

LONG TERM STREAM BED CHANGES: UNKNOWN

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

UPSTREAM STRUCTURE: TOWN: DUMMERSTON DISTANCE: -
HIGHWAY NO.: TH 1 STRUCTURE NO.: CB 35
STRUCTURE TYPE: TIMBER COVERED BRIDGE
CLEAR SPAN: - CLEAR HEIGHT: -
YEAR BUILT: - FULL WATERWAY: -

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

PROPOSED STRUCTURE

STRUCTURE TYPE: SEE NOTE 2

CLEAR SPAN (NORMAL TO STREAM):
VERTICAL CLEARANCE ABOVE STREAMBED:
WATERWAY OF FULL OPENING:

WATER SURFACE ELEV. @ Q2.33= VELOCITY=
Q10= "
Q25= "
Q50= "
Q100= "

IS THE ROADWAY OVERTOPPED BELOW THE Q100? FREQUENCY: -
RELIEF ELEVATION: - DISCHARGE OVER ROAD @ Q100: -

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE:
VERTICAL CLEARANCE @ Q:

SCOUR:
REQUIRED CHANNEL PROTECTION:

PERMIT INFORMATION

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

ADDITIONAL COMMENTS

1. HYDRAULIC AND HYDROLOGIC INFORMATION IS FROM THE TOWN OF DUMMERSTON FLOOD INSURANCE STUDY, JUNE 1991. ELEVATIONS WERE CALCULATED USING THE SURVEYED STREAMBED ELEVATION AND THE WATER DEPTHS FROM THE FEMA REPORT. ADDITIONAL ANALYSES WERE NOT CONDUCTED FOR THIS SITE.

2. HYDRAULIC CONDITIONS WILL NOT CHANGE FOR THE REHABILITATED STRUCTURE.



DESIGN CRITERIA:
1. DESIGN LIVE LOAD AASHTO M9 (WITH 10% IMPACT ALLOWANCE)
2. DESIGN SPAN: 60.490 m
3. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL: N/A ON LEDGE: N/A
4. ALLOWABLE LOAD FOR PILING: N/A TYPE: - ESTIMATED LENGTH: -
5. STRUCTURAL STEEL: NEW STEEL AASHTO M 270M GRADE 345 (PAINTED)
6. EXISTING STEEL: UNKNOWN Fy = 179 MPa (ASSUMED)
7. REINFORCING STEEL: GRADE 420 Fu = 358 MPa (ASSUMED)
8. CONCRETE HIGH PERFORMANCE CLASS AA f'c = 30 MPa
CLASS A f'c = 25 MPa
CLASS B f'c = 25 MPa

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

WORKING STRESS LOAD RATING (METRIC TONNES)

LANE LOADING:
INVENTORY STRESS LEVEL = M7.6
OPERATING STRESS LEVEL = M9.5
SINGLE UNIT:
INVENTORY STRESS LEVEL = M11.1
POSTED STRESS LEVEL = M13.5
OPERATING STRESS LEVEL = M15.1

TOP CHORD MEMBER U7-U9 COMPRESSION GOVERNS LANE LOADING
VERTICAL MEMBERS L1-U1 & L15-U15 TENSION GOVERN SINGLE UNIT LOADING

TRAFFIC DATA - TH 62
2004 ADT = 230 2024 ADT = 270 DESIGN SPEED = N/A
2004 DHV = 32 2024 DHV = 38
2004 ADTT = N/A 2024 ADTT = N/A
2004 %D = N/A 2024 %D = N/A
2004 %T = N/A 2024 %T = N/A

VANASSE HANGEN BRUSTLIN, INC.

STATE OF VERMONT AGENCY OF TRANSPORTATION

Town Of DUMMERSTON Bridge No. 37
Highway No. TH 62 Log Sta. -
Surv. Sta. -

TH 62 OVER WEST RIVER

PRELIMINARY INFORMATION SHEET

Designed By T. S. BRYANT Drawn By C. L. CILLEY
Checked By Date Bridge Design Supervisor
S. M. HODGDON 4/09 S. M. HODGDON Date 4/09

PROJECT DUMMERSTON PROJECT NO. BHO 1442 (28)

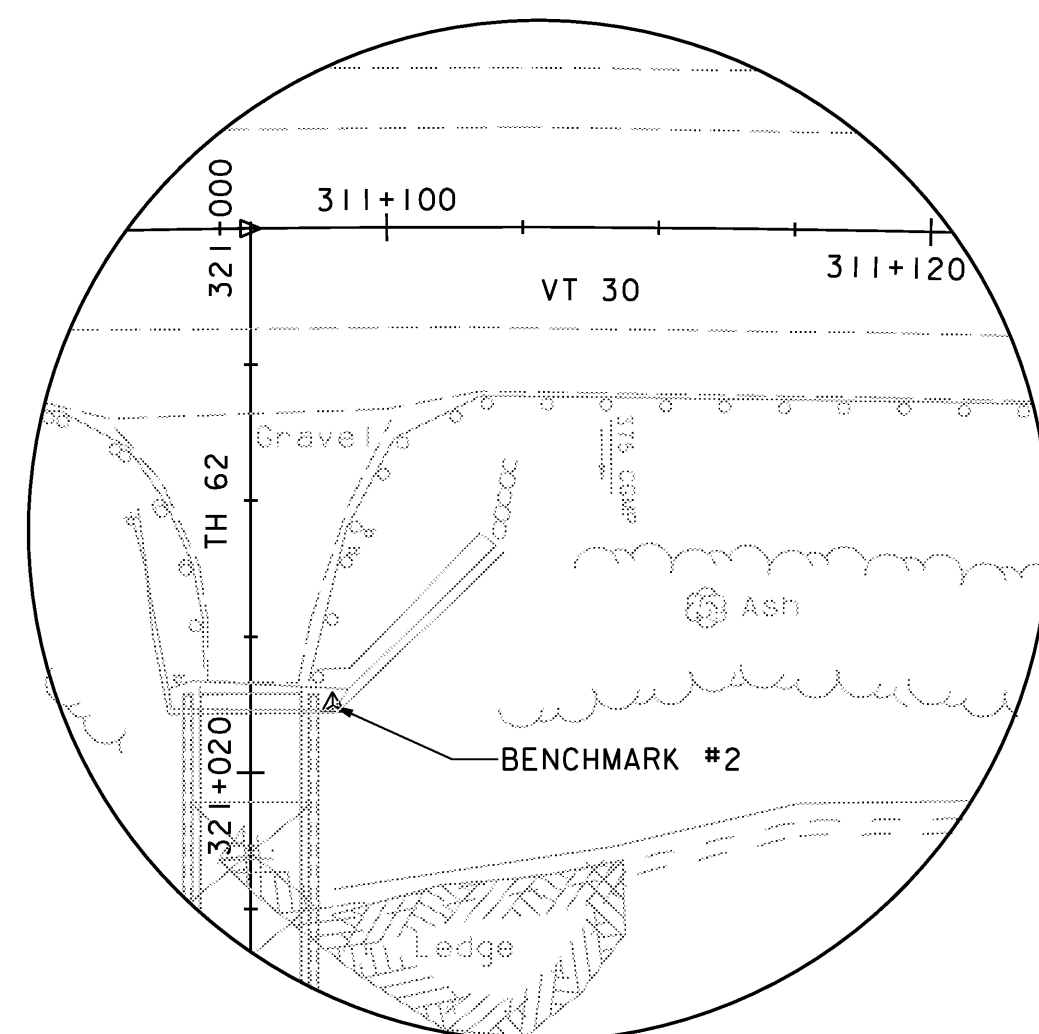
I.G.C. Info.
Bridge Sheet No. ZJ080P1 Sheet 2 of 49

ITEM NO.	ITEM DESCRIPTION	UNIT	CHANNEL	SUPER- STRUCTURE	ABUTMENT 1	ABUTMENT 2	BRIDGE SUBTOTAL	ROADWAY	EROSION CONTROL	FULL E & C	TRAINING	TOTAL	FINAL	REMARKS
201.0	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	LS						1				1		
203.5	COMMON EXCAVATION	CM						190				190		
204.20	TRENCH EXCAVATION OF EARTH	CM						30				30		
204.25	STRUCTURE EXCAVATION	CM			35	5	40					40		
204.30	GRANULAR BACKFILL FOR STRUCTURES	CM			35	5	40					40		
210.0	COLD PLANING, BITUMINOUS PAVEMENT	SM						45				45		
301.5	SUBBASE OF GRAVEL	CM						170				170		
404.65	EMULSFIED ASPHALT	KG						15				15		
406.25	BITUMINOUS CONCRETE PAVEMENT	T						53				53		
406.50	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	LU						1				1		
501.32	CONCRETE, HIGH PERFORMANCE CLASS AA	CM		1.5			1.5					1.5		
501.34	CONCRETE, HIGH PERFORMANCE CLASS B	CM			2	2	4					4		
502.0	SHORING SUPERSTRUCTURE	LS		1			1					1		
506.50	STRUCTURAL STEEL, ROLLED BEAM	KG		16810			16810					16810		
506.60	STRUCTURAL STEEL	KG		18700			18700					18700		
507.15	REINFORCING STEEL	KG			30	30	60					60		
507.16	DRILLING AND GROUTING DOWELS	M			6	6	12					12		
507.17	EPOXY COATED REINFORCING STEEL	KG			115	115	230					230		
513.25	STRUCTURAL PAINTING, SHOP APPLIED	LS		1			1					1		
513.30	STRUCTURAL PAINTING, FIELD APPLIED	LS		1			1					1		
513.36	CONTAINMENT & ENVIRONMENTAL PROTECTION, FIELD	LS		1			1					1		
513.40	SURFACE PREPARATION, SHOP	LS		1			1					1		
513.41	SURFACE PREPARATION, FIELD	LS		1			1					1		
514.0	WATER REPELLENT, SILANE	L			2.5	2.5	5					5		
516.11	BRIDGE EXPANSION JOINT, VERMONT	M		8			8					8		
529.20	PARTIAL REMOVAL OF STRUCTURE	EACH		1			1					1		
529.25	REMOVAL OF CONCRETE OR MASONRY	CM			7	3	10					10		
531.0	BEARING DEVICE ASSEMBLY, PREFORMED FABRIC PAD	EACH		4			4					4		
601.0010	375 CSP 1.63 (68 X 12)	M						2				2		
	•• BEGIN OPTION AA													
601.0015	450 CSP 1.63 (68 X 12)	M						5				5		
601.0815	450 RCP CLASS III	M						5				5		
601.0915	450 CPEP	M						5				5		
	•• END OPTION AA													
602.20	DRY MASONRY	CM			15	1	16					16		
604.25	PRECAST REINFORCED CONCRETE PIPE DI WITH CAST IRON GRATE	EACH						1				1		
613.0	STONE FILL, TYPE I	CM							5			5		
619.17	YIELDING MARKER POSTS	EACH						2				2		
621.20	STEEL BEAM GUARDRAIL, GALVANIZED	M						20				20		
621.21	HD STEEL BEAM GUARDRAIL, GALVANIZED	M						36				36		
621.53	TERMINAL CONNECTOR FOR STEEL BEAM GUARDRAIL	EACH						4				4		
621.56	ENERGY ABSORPTION ATTENUATOR	EACH						3				3		
621.60	ANCHOR FOR STEEL BEAM RAIL	EACH						4				4		
621.75	REMOVE AND RESET GUARDRAIL	M						74				74		
621.80	REMOVAL AND DISPOSAL OF GUARDRAIL	M						63				63		
621.90	TEMPORARY TRAFFIC BARRIER	M						100				100		
630.10	UNIFORMED TRAFFIC OFFICERS	HR						20				20		
630.15	FLAGGERS	HR						100				100		
631.0	FIELD OFFICE, ENGINEERS	LS								1		1		
631.6	TESTING EQUIPMENT, CONCRETE	LS								1		1		
631.17	TESTING EQUIPMENT, BITUMINOUS	LS								1		1		
631.18	TESTING EQUIPMENT, PROTECTIVE COATINGS	LS								1		1		
631.25	FIELD OFFICE TELEPHONE (N.A.B.I.)	LU								1		1		
635.11	MOBILIZATION/DEMOBILIZATION	LS						1				1		
641.0	TRAFFIC CONTROL	LS						1				1		
649.31	GEOTEXTILE UNDER STONE FILL	SM							133			133		
649.515	GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED	SM							90			90		
649.61	GEOTEXTILE FOR FILTER CURTAIN	SM							160			160		
651.5	SEED	KG							8			8		
651.8	FERTILIZER	KG							40			40		
651.20	AGRICULTURAL LIMESTONE	T							0.3			0.3		
651.25	HAY MULCH	T							0.5			0.5		
651.35	TOPSOIL	CM							35			35		
652.0	EPSC PLAN	LS							1			1		
652.20	MONITORING EPSC PLAN	HR							60			60		
652.30	MAINTENANCE OF EPSC PLAN (N.A.B.J.)	LU							1			1		
653.20	TEMPORARY EROSION MATTING	SM							230			230		
653.25	TEMPORARY STONE CHECK DAM, TYPE I	CM							25			25		
653.40	INLET PROTECTION DEVICE, TYPE I	EACH							1			1		
653.55	PROJECT DEMARCACTION FENCE	M												
675.20	TRAFFIC SIGNS, TYPE A	SM						170				170		
675.341	SQUARE TUBE SIGN POST AND ANCHOR	M						6				6		
675.50	REMOVING SIGNS	EACH						58				58		
900.640	SPECIAL PROVISION (BRIDGE RAILING, TRUSS)	M						4				4		
900.645	SPECIAL PROVISION (TEMPORARY WORK PLATFORM)	LS		122			122					122		
900.675	SPECIAL PROVISION (STEEL GRID FLOORING)	SM		1			1					1		
				225			225					225		
							</							

• IF TEMPORARY WORK PLATFORM IS NOT USED OR REQUIRED, THIS ITEM SHALL NOT BE USED OR MEASURED FOR PAYMENT.

VANASSE HANGEN BRUSTLIN, INC.

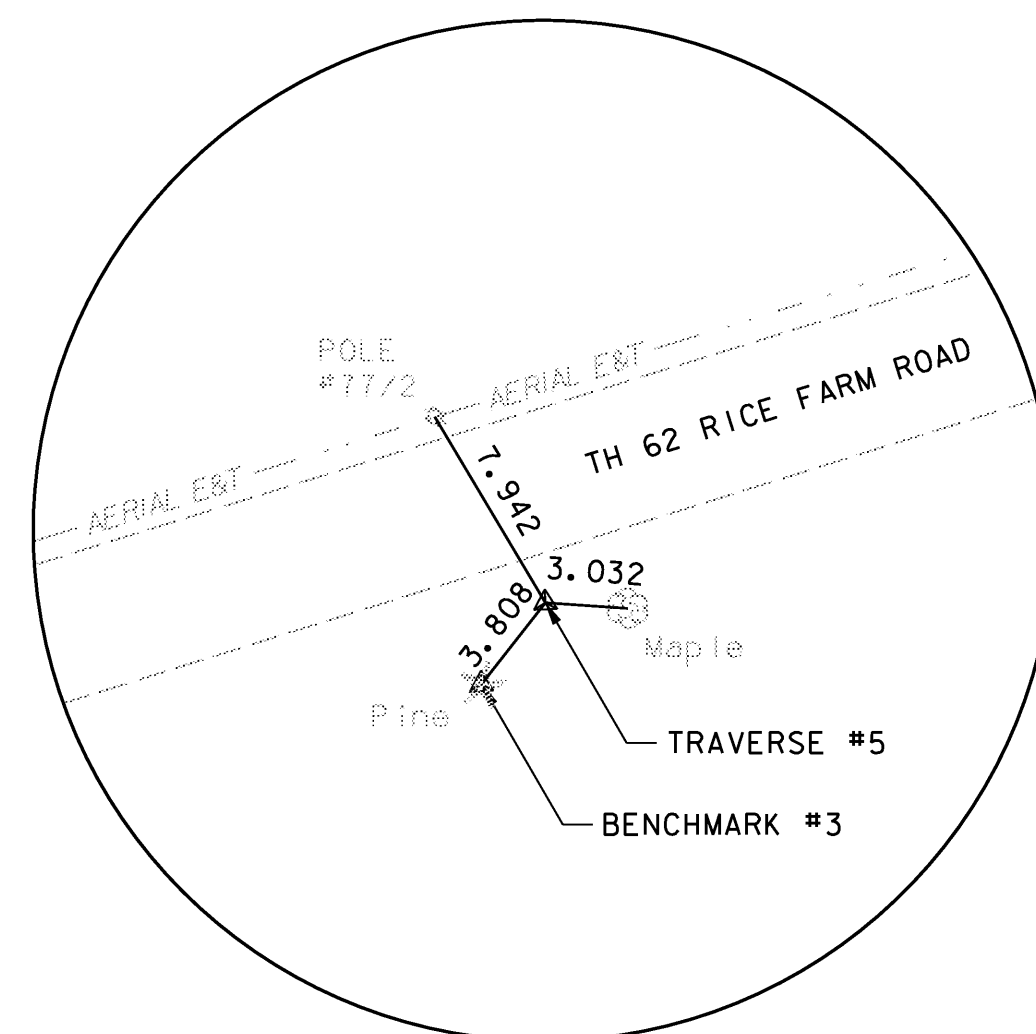
STATE OF VERMONT AGENCY OF TRANSPORTATION		
Town Of DUMMERSTON		Bridge No. 37
Highway No. TH 62		Log Sta.
		Surv. Sta.
TH 62 OVER WEST RIVER		
QUANTITY SHEET		
Designed By T. S. BRYANT		Drawn By C. L. CILLEY
Checked By Date		Bridge Design Supervisor
S. M. HODGDON 4/09		S. M. HODGDON Date 4/09
PROJECT DUMMERSTON		PROJECT NO. BHO 1442 (28)
I.G.C. Info.		
Bridge Sheet No. ZJ080QS1		Sheet 3 of 49



SURVEY DISC STAMPED STICKNEY 1988
DISC SET ON BRIDGE ABUTMENT

BENCHMARK #2
NORTHING = 46238.9390
EASTING = 490731.3521
ELEVATION = 89.09

BENCHMARK #2
NOT TO SCALE

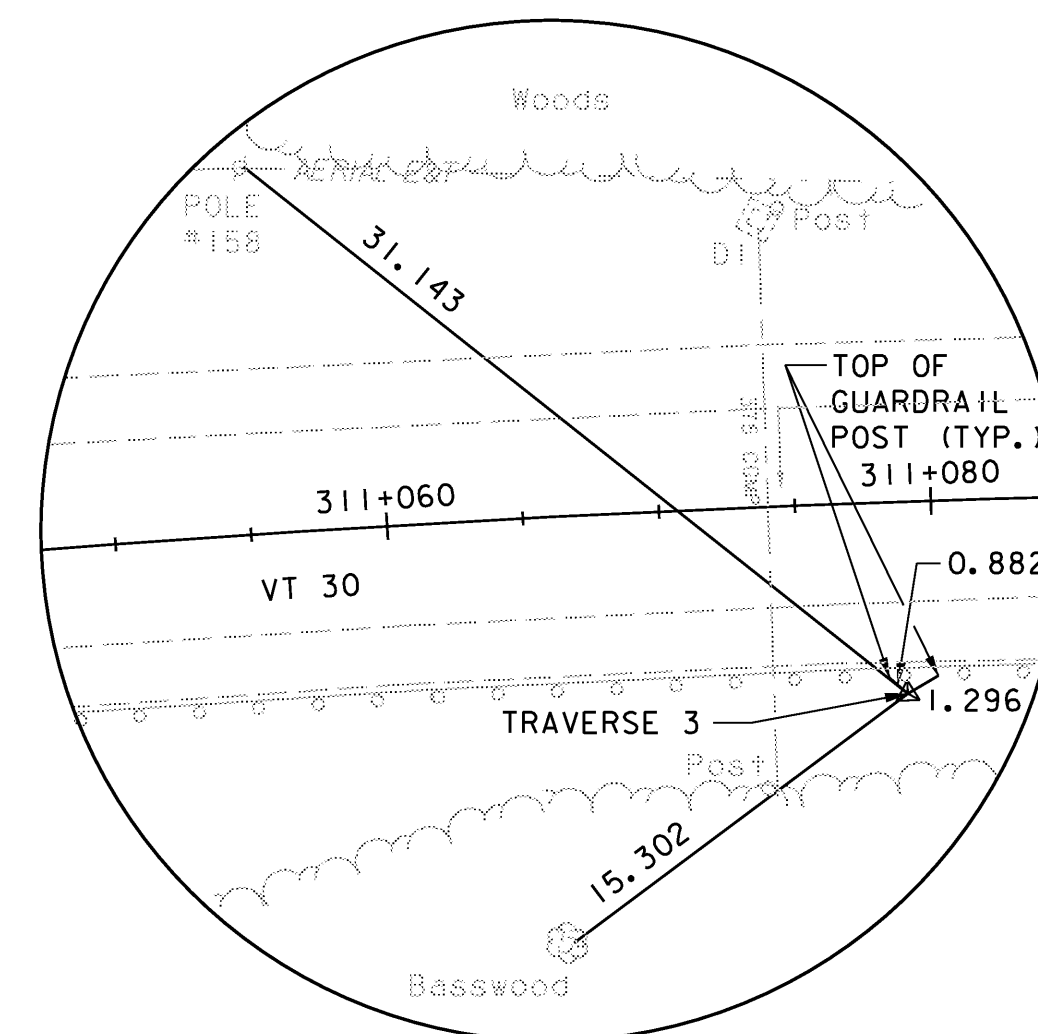


LAG BOLT IN LARGE PINE

BENCHMARK #3
NORTHING = 46169.3250
EASTING = 490922.6800
ELEVATION = 91.90

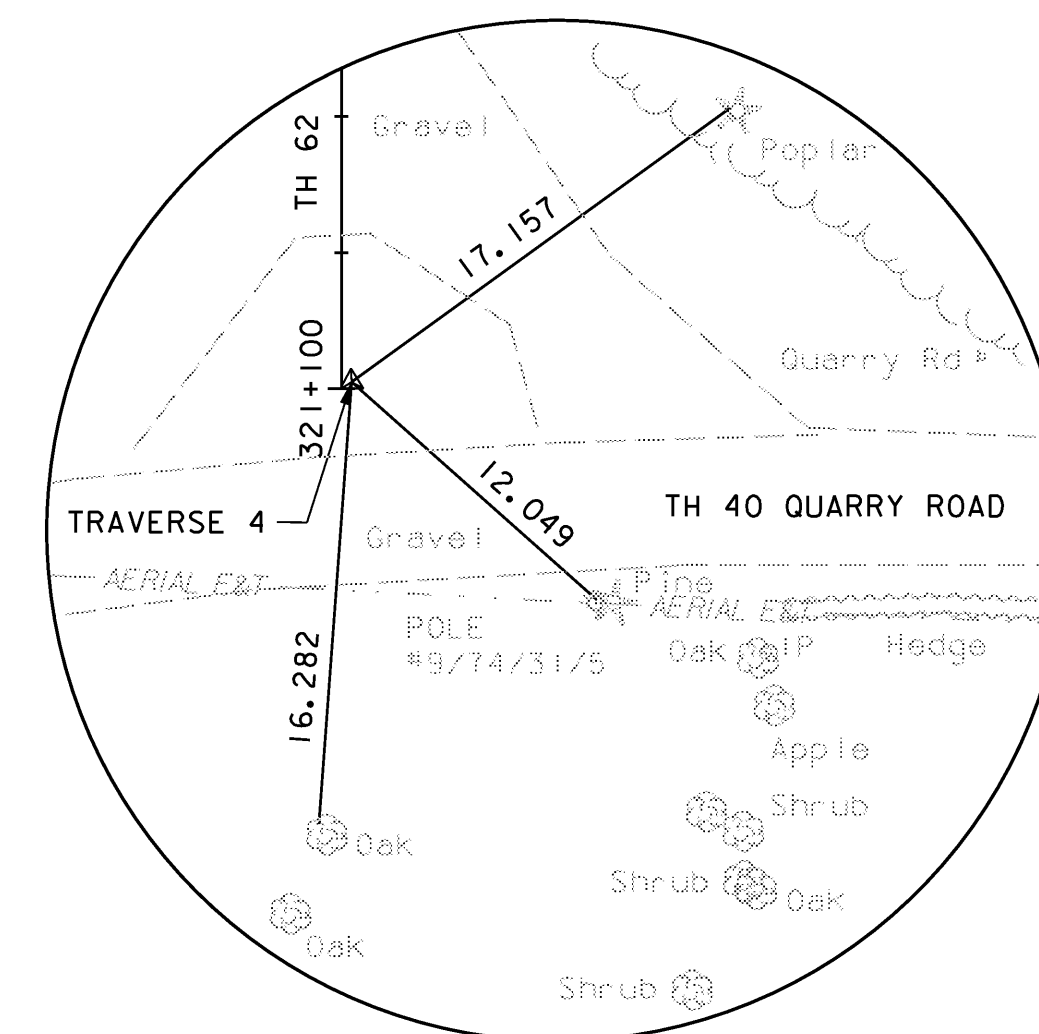
TRAVERSE #5
NORTHING = 46169.9890
EASTING = 490918.9343
ELEVATION = 91.39

BENCHMARK #3
NOT TO SCALE



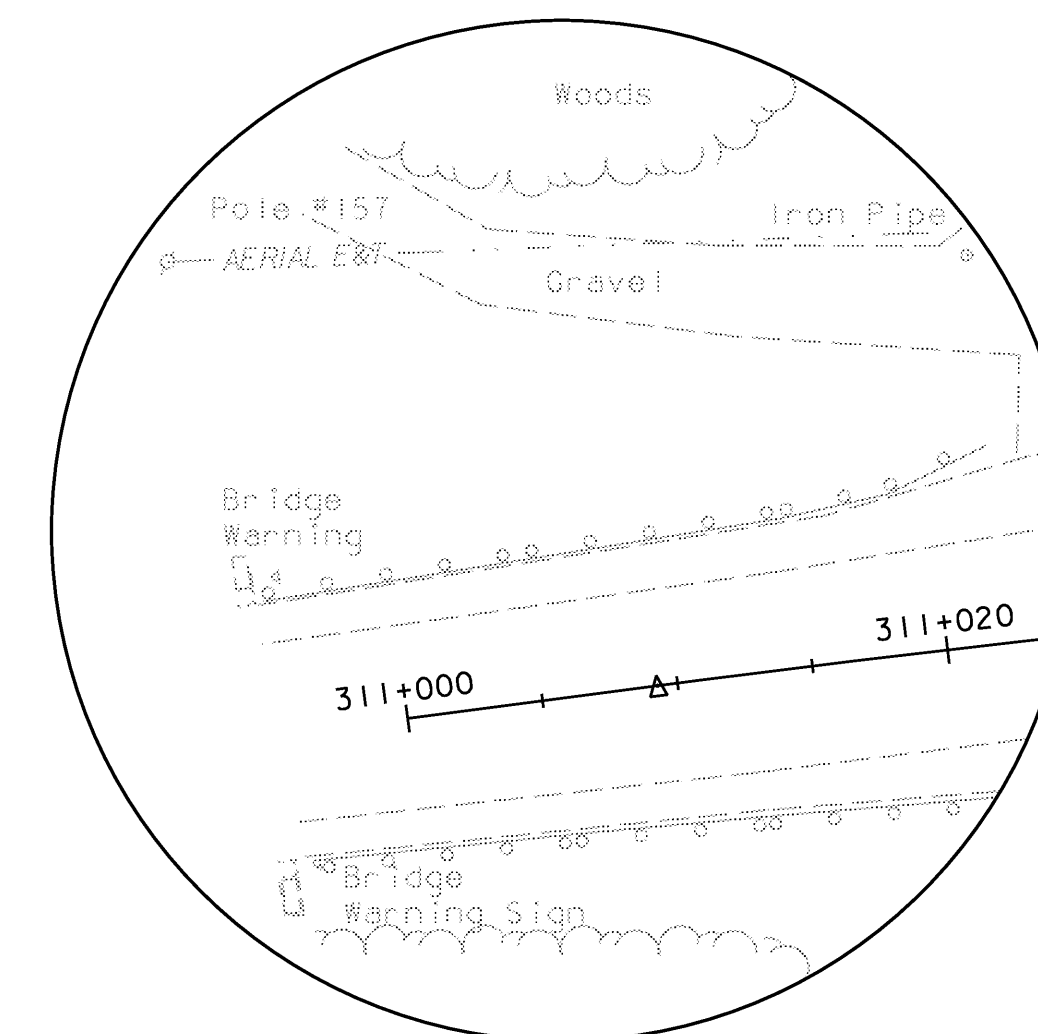
TRAVERSE #3
NORTHING = 46217.5503
EASTING = 490731.2791
ELEVATION = 88.9226

TRAVERSE #3
NOT TO SCALE



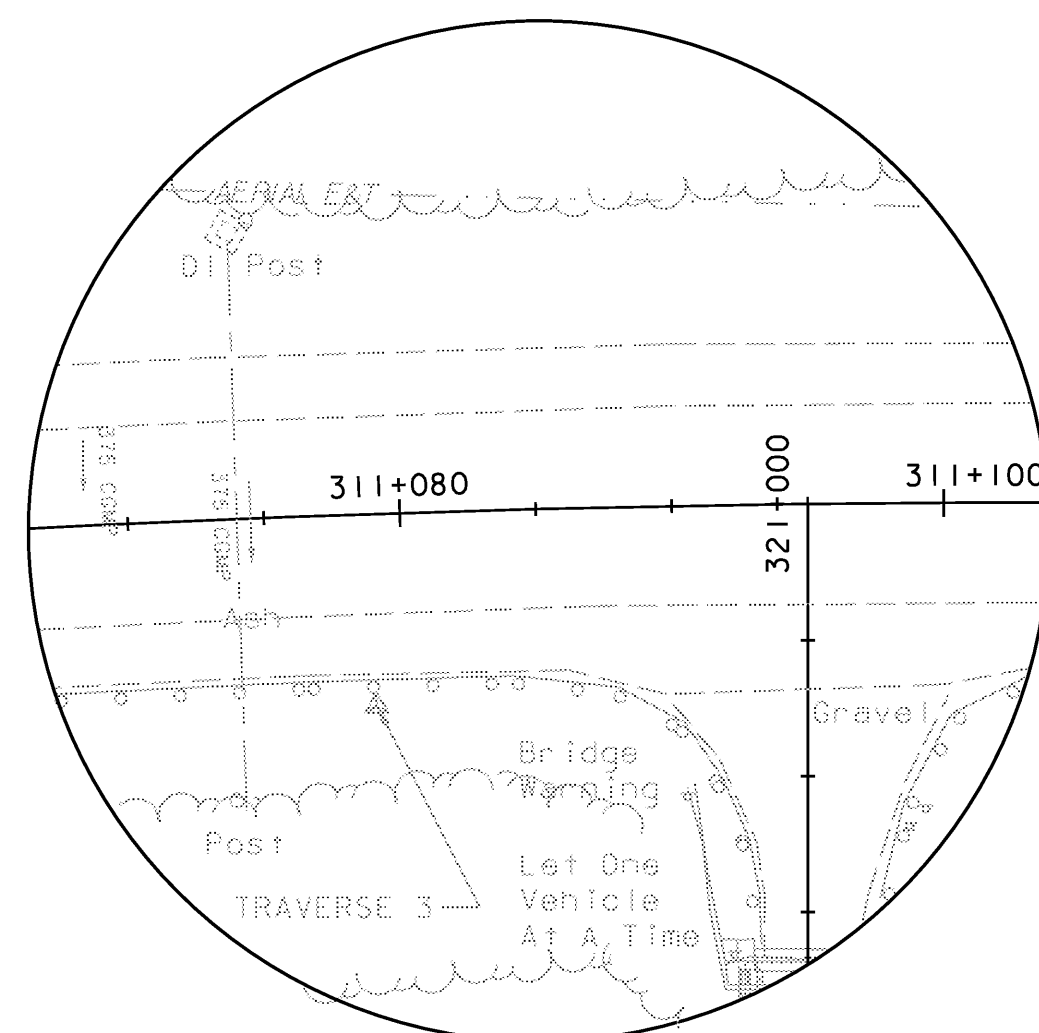
TRAVERSE #4
NORTHING = 46275.1862
EASTING = 490805.2115
ELEVATION = 91.6137

TRAVERSE #4
NOT TO SCALE



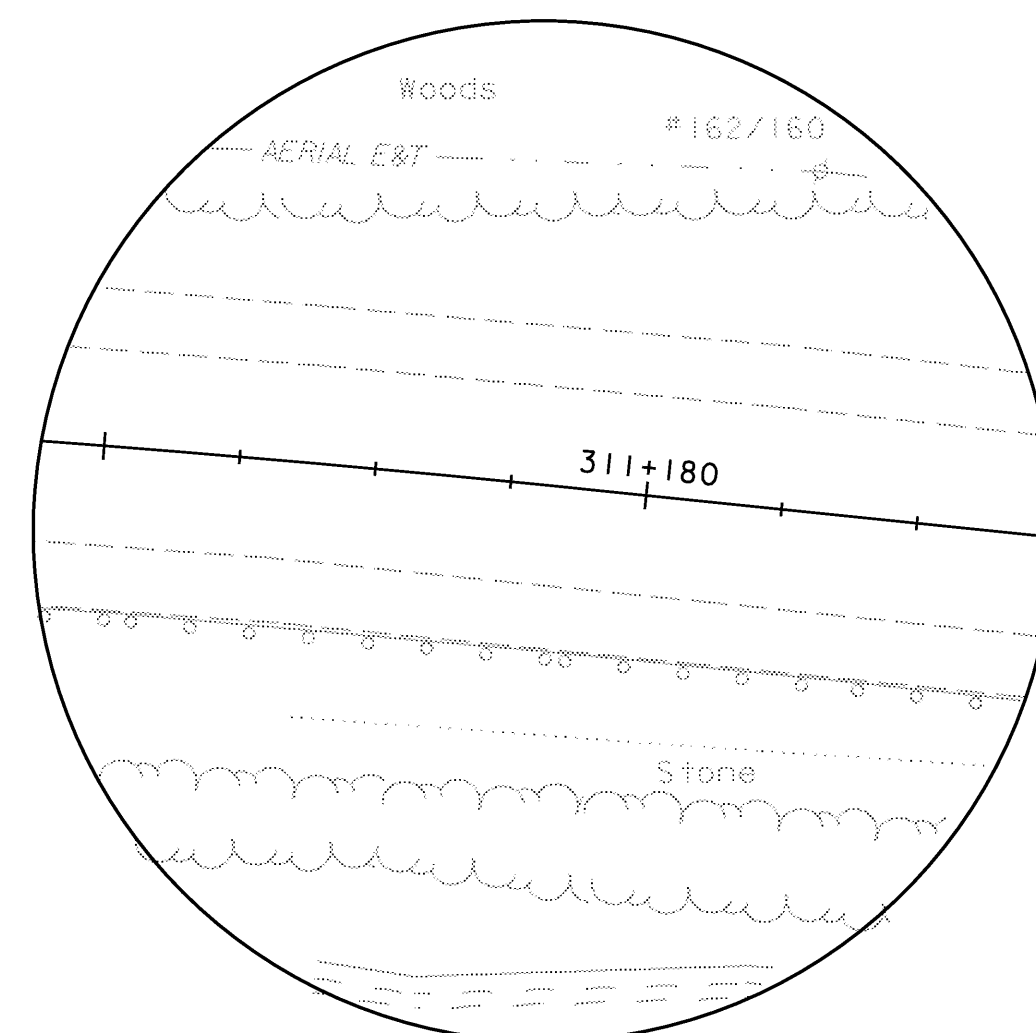
VT 30 PC STA 311+009.257
NORTHING = 46155.4258
EASTING = 490762.7801

VT 30 PC STA 311+009.257
NOT TO SCALE



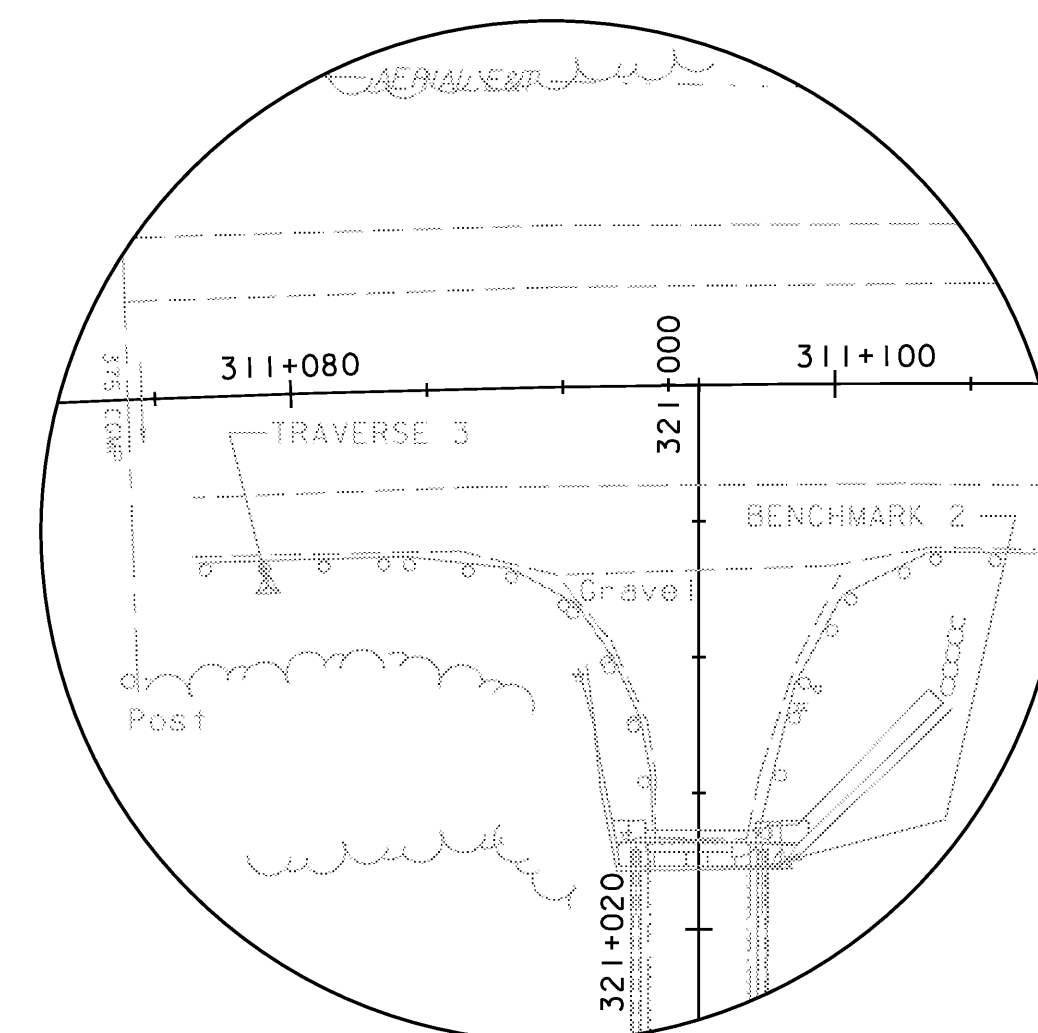
VT 30 PI STA 311+093.887 BK
STA 311+093.124 AHD
NORTHING = 46224.3715
EASTING = 490713.7020

VT 30 PI STA 311+093.887 BK
NOT TO SCALE



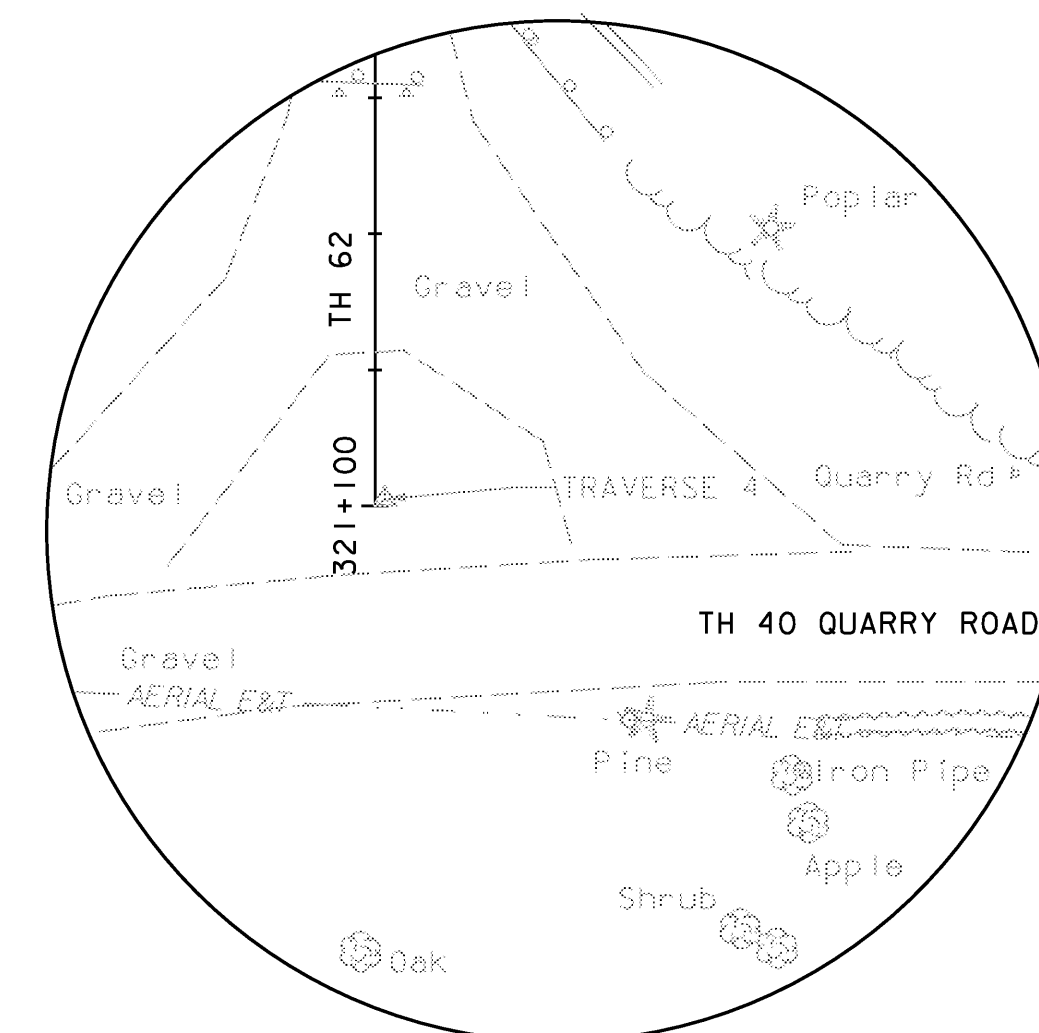
VT 30 PT STA 311+177.754
NORTHING = 46302.7674
EASTING = 490681.8231

VT 30 PT STA 311+177.754
NOT TO SCALE



TH 62 PI STA 321+000
NORTHING = 46228.0524
EASTING = 490717.2982

TH 62 PI STA 321+000
NOT TO SCALE



TH 62 PI STA 321+100
NORTHING = 46274.9744
EASTING = 490805.6066

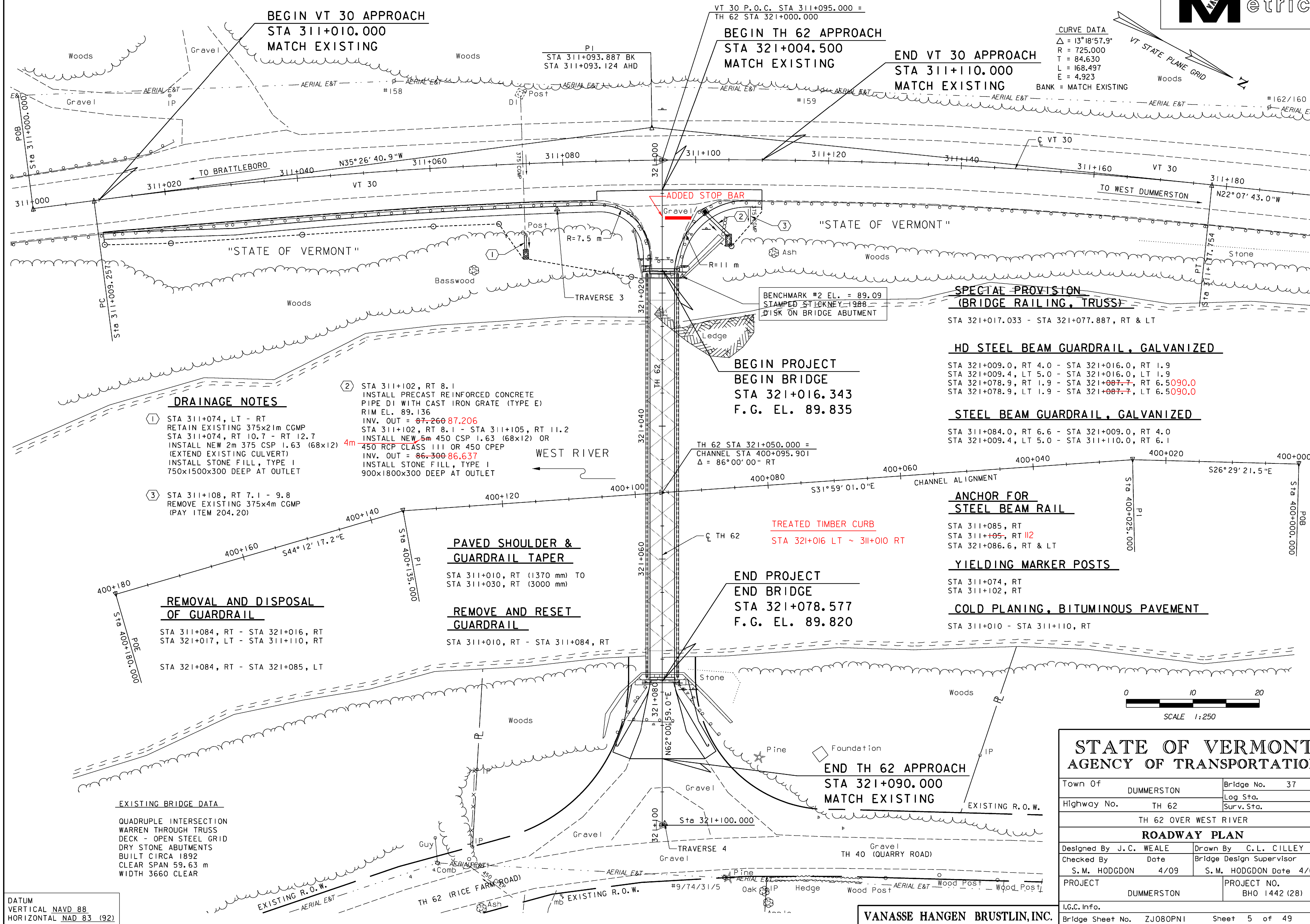
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NOT TO SCALE

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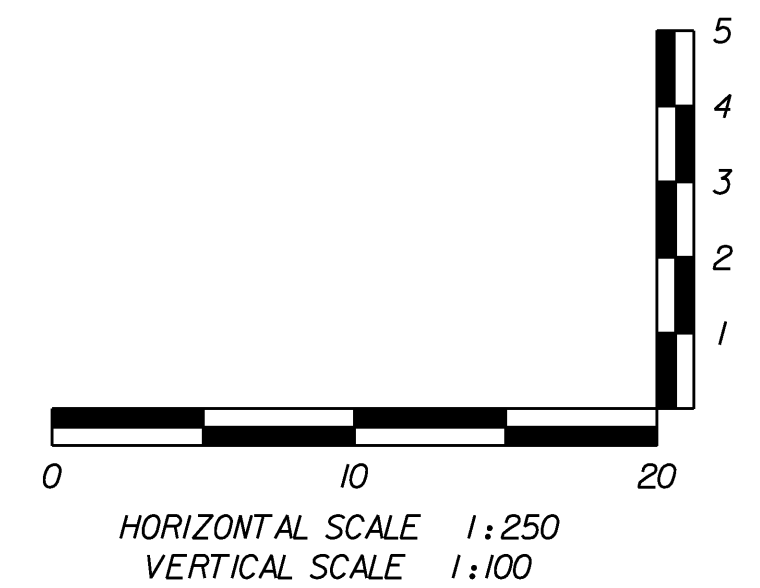
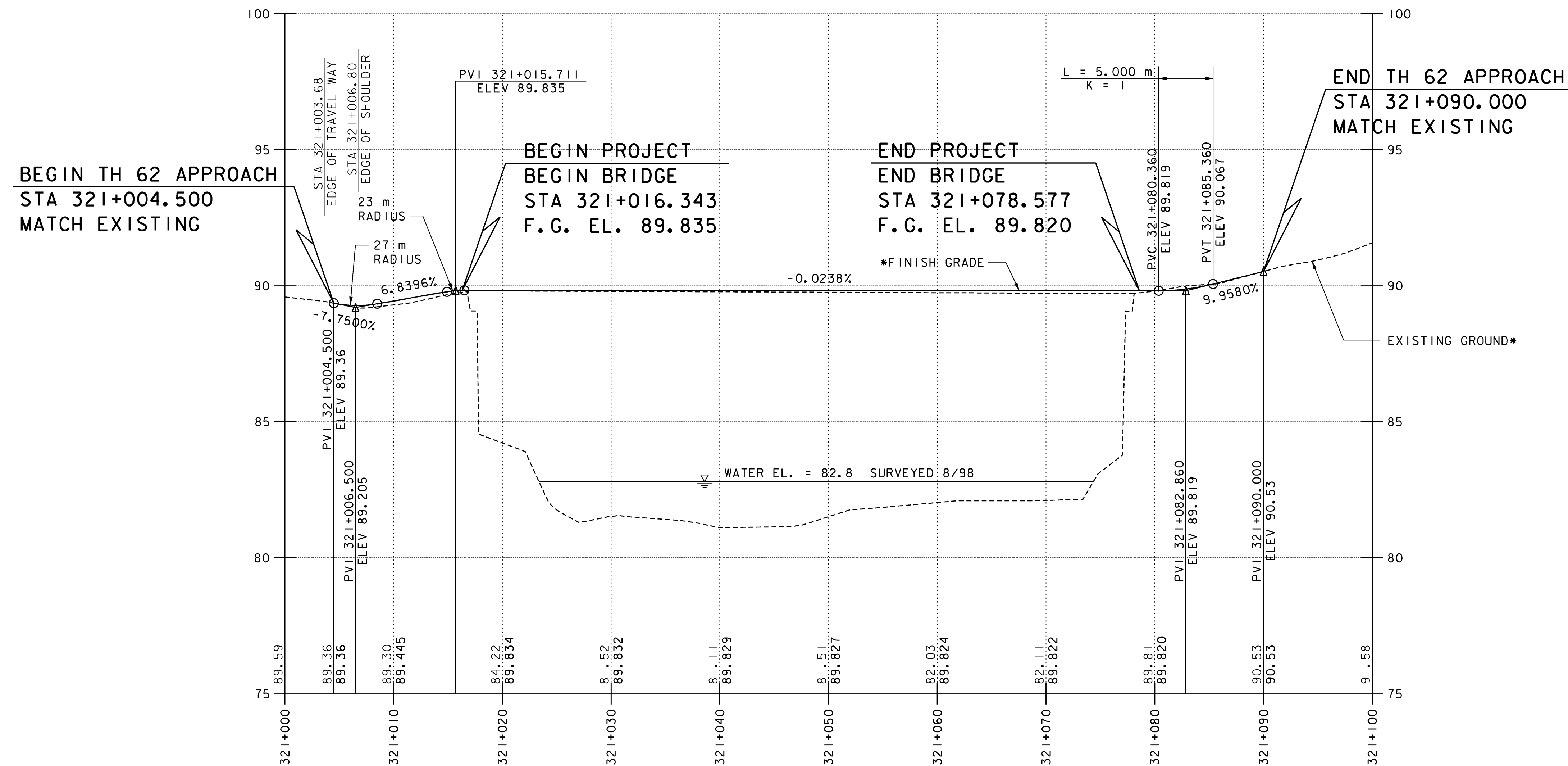
1. SURVEY PROVIDED BY VERMONT SURVEY AND
ENGINEERING, INC. (1998).

**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

Town Of	DUMMERSTON	Bridge No.	37
Highway No.	TH 62	Log Sta.	
		Surv. Sta.	
TH 62 OVER WEST RIVER			
TIE SHEET			
Designed By	VHB	Drawn By	C.L. CILLEY
Checked By	Date	Bridge Design Supervisor	
S.M. HODGDON	4/09	S.M. HODGDON	Date 4/09
PROJECT	DUMMERSTON	PROJECT NO.	BHO 1442 (28)
I.G.C. Info.			
Bridge Sheet No.	ZJ080TIE	Sheet	4 of 49



TH 62



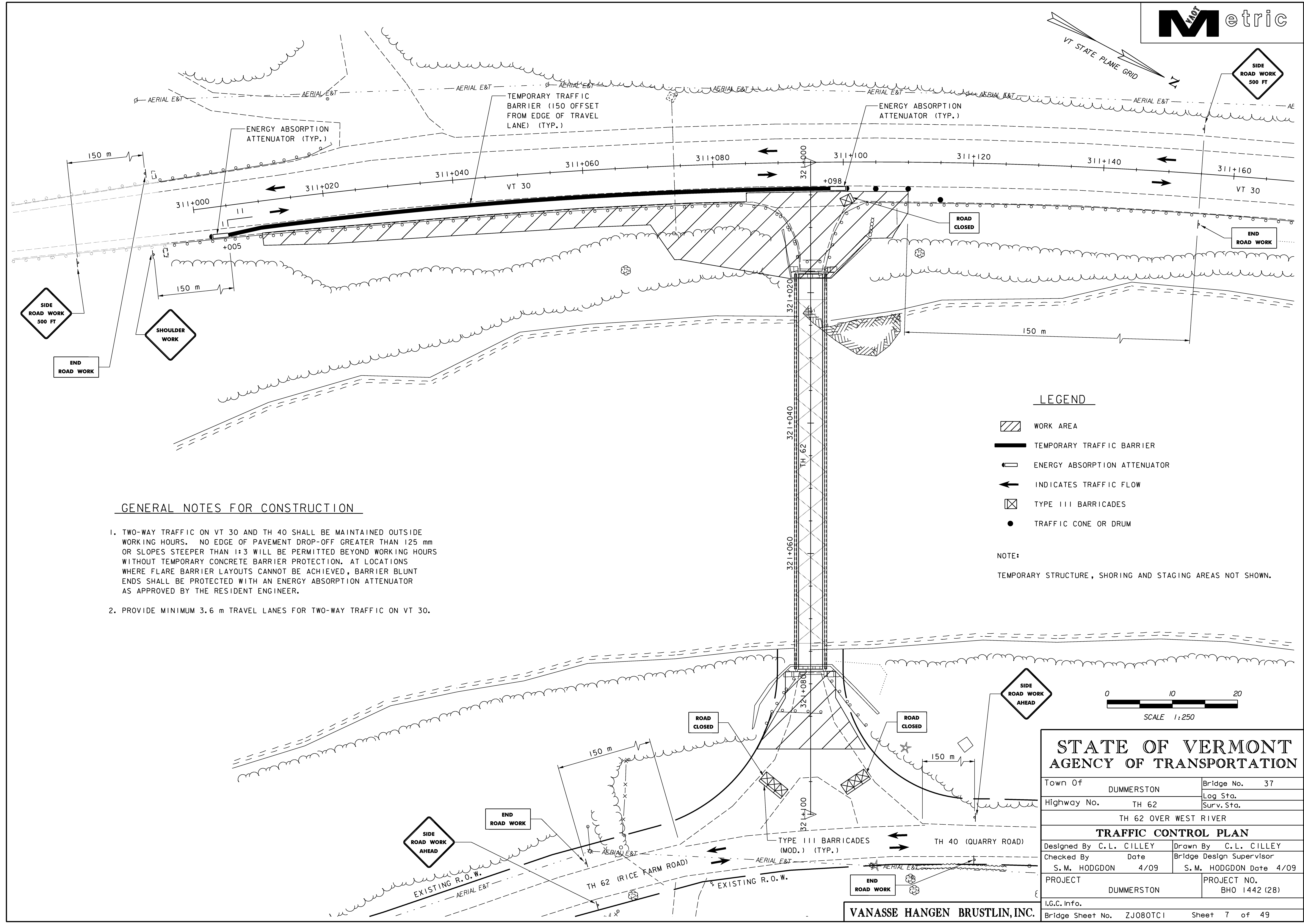
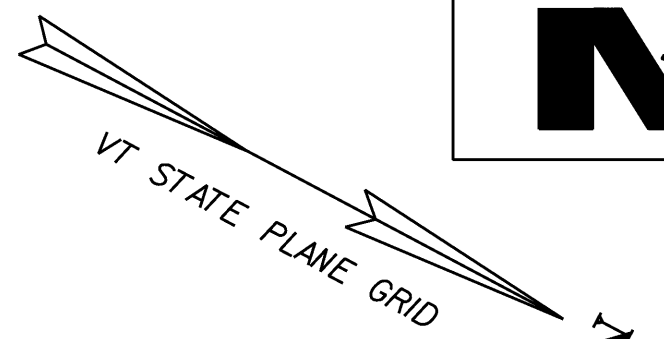
* ELEVATIONS SHOWN TO THREE DECIMAL PLACES ARE FINISH GRADE ALONG TH 62. ELEVATIONS SHOWN TO TWO DECIMAL PLACES ARE EXISTING GROUND ALONG TH 62.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VANASSE HANGEN BRUSTLIN, INC.

STATE OF VERMONT AGENCY OF TRANSPORTATION

Town Of	DUMMERSTON	Bridge No.	37
Highway No.	TH 62	Log Sta.	
		Surv. Sta.	
TH 62 OVER WEST RIVER			
TH 62 PROFILE			
Designed By	C.L. CILLEY	Drawn By	C.L. CILLEY
Checked By	S.M. HODGDON	Bridge Design Supervisor	S.M. HODGDON
Date	4/09	Date	4/09
PROJECT	DUMMERSTON	PROJECT NO.	BHO 1442 (28)
I.G.C. Info.			
Bridge Sheet No.	ZJ080PRI	Sheet	6 of 49



GENERAL NOTES FOR CONSTRUCTION

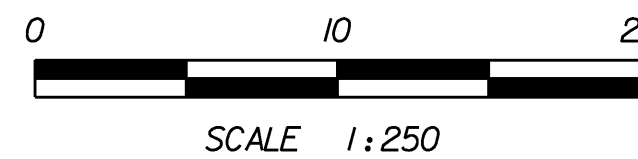
1. TWO-WAY TRAFFIC ON VT 30 AND TH 40 SHALL BE MAINTAINED OUTSIDE WORKING HOURS. NO EDGE OF PAVEMENT DROP-OFF GREATER THAN 125 mm OR SLOPES STEEPER THAN 1:3 WILL BE PERMITTED BEYOND WORKING HOURS WITHOUT TEMPORARY CONCRETE BARRIER PROTECTION. AT LOCATIONS WHERE FLARE BARRIER LAYOUTS CANNOT BE ACHIEVED, BARRIER BLUNT ENDS SHALL BE PROTECTED WITH AN ENERGY ABSORPTION ATTENUATOR AS APPROVED BY THE RESIDENT ENGINEER.
2. PROVIDE MINIMUM 3.6 m TRAVEL LANES FOR TWO-WAY TRAFFIC ON VT 30.

LEGEND

- WORK AREA
- TEMPORARY TRAFFIC BARRIER
- ENERGY ABSORPTION ATTENUATOR
- INDICATES TRAFFIC FLOW
- TYPE III BARRICADES
- TRAFFIC CONE OR DRUM

NOTE:

TEMPORARY STRUCTURE, SHORING AND STAGING AREAS NOT SHOWN.



**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

Town Of	DUMMERSTON	Bridge No.	37
Highway No.	TH 62	Log Sta.	
		Surv. Sta.	
TH 62 OVER WEST RIVER			

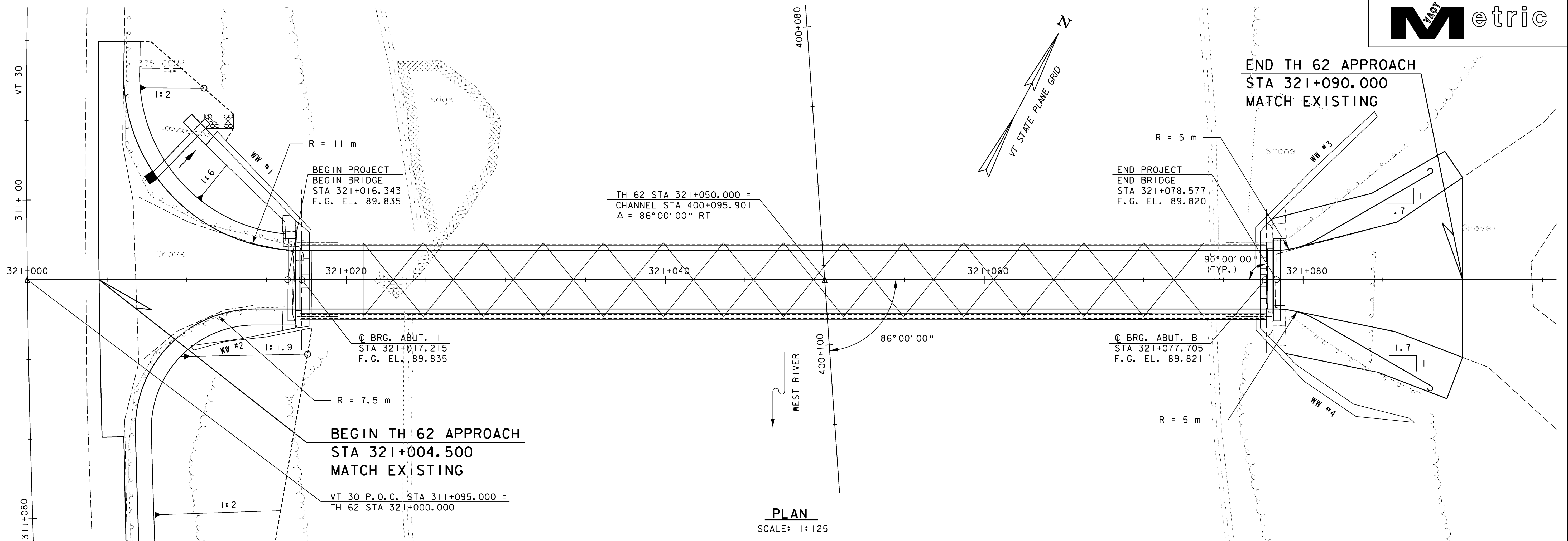
TRAFFIC CONTROL PLAN

Designed By	C.L. CILLEY	Drawn By	C.L. CILLEY
Checked By	S.M. HODGDON	Bridge Design Supervisor	S.M. HODGDON
Date	4/09	Date	4/09

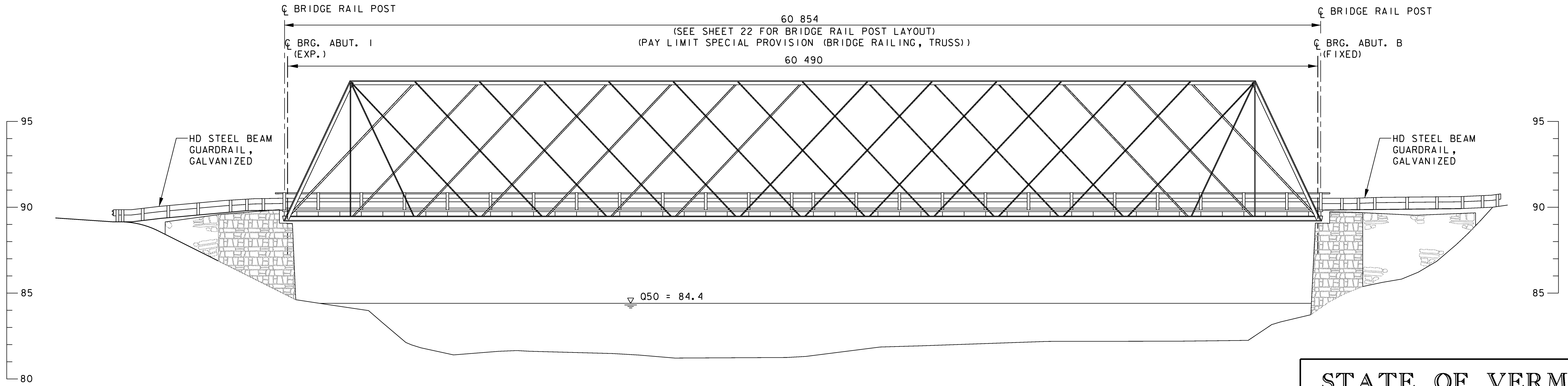
PROJECT	DUMMERSTON	PROJECT NO.	BHO 1442 (28)
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I.G.C. Info.			
Bridge Sheet No.	ZJ080TC1	Sheet	7 of 49

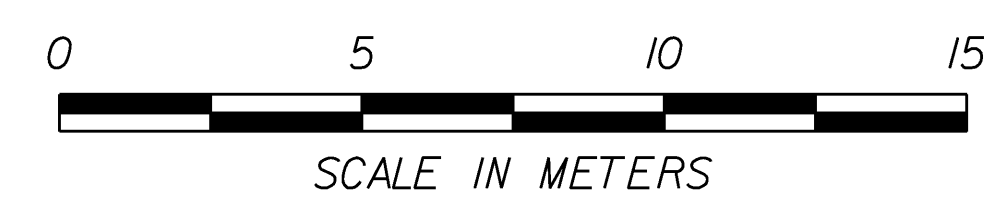
VANASSE HANGEN BRUSTLIN, INC.



PLAN
SCALE: 1:125



ELEVATION
SCALE: 1:125



STATE OF VERMONT AGENCY OF TRANSPORTATION

Town Of	DUMMERSTON	Bridge No.	37
Highway No.	TH 62	Log Sta.	
		Surv. Sta.	
TH 62 OVER WEST RIVER			
PLAN & ELEVATION			
Designed By	T. S. BRYANT	Drawn By	C. L. CILLEY
Checked By	S. M. HODGDON	Bridge Design Supervisor	S. M. HODGDON
	Date 4/09	Date	4/09
PROJECT	DUMMERSTON	PROJECT NO.	BHO 1442 (28)
I.G.C. Info.			
Bridge Sheet No.	ZJ080GPE	Sheet	8 of 49

VANASSE HANGEN BRUSTLIN, INC.

EROSION CONTROL NARRATIVE

I.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REHABILITATION OF THE HISTORIC TRUSS BRIDGE (NO. 37) CARRYING TOWN HIGHWAY 62 OVER THE WEST RIVER IN THE TOWN OF DUMMERSTON. THE BRIDGE IS CURRENTLY CLOSED TO TRAFFIC. THE BRIDGE IS APPROXIMATELY 63 METERS LONG AND 4.7 METERS WIDE. THE TOTAL LENGTH OF THE APPROACH WORK IS APPROXIMATELY 112 METERS. IT ALSO INCLUDES WIDENING THE NORTHBOUND APPROACH SHOULDER OF VERMONT ROUTE 30, REPLACING GUARDRAIL AND REPLACING AN EXISTING CULVERT ON VERMONT ROUTE 30 WITH A DROP INLET AND A NEW PIPE OUTLET.

DURING THIS CONTRACT, IT IS ANTICIPATED THAT A TEMPORARY WORK PLATFORM WILL BE CONSTRUCTED ALONG SIDE AND UPSTREAM OF THE EXISTING TRUSS BRIDGE. TEMPORARY SHORING WILL BE REQUIRED AT THE EXISTING ABUTMENTS AND TEMPORARY SHORING WILL BE REQUIRED FOR THE WORK PLATFORM IN THE RIVER. THE CONTRACTOR SHALL PREVENT ANY DEBRIS FROM FALLING INTO THE WEST RIVER FROM THE EXISTING TRUSS BRIDGE OR THE TEMPORARY WORK PLATFORM. THE EXISTING ABUTMENT BACKWALLS WILL BE RECONSTRUCTED AND PORTIONS OF THE EXISTING DRY MASONRY WILL BE REPAIRED AS NOTED IN THE PLANS. THE APPROACH SHOULDER ON VERMONT ROUTE 30 WILL BE WIDENED AND TOWN HIGHWAY 62 WILL BE REGRADED.

THE SITE IS LOCATED AT LATITUDE 42 DEGREES 54.9 MINUTES, LONGITUDE 72 DEGREES 36.8 MINUTES.

AREA OF DISTURBANCE WITHIN THE PROJECT AREA (INCLUDING WASTE, BORROW, SHORING AND STAGING AREAS): 610 SM (0.061 HECTARES) (0.15 ACRES).
NO WETLANDS HAVE BEEN IDENTIFIED AT THE PROJECT SITE. NO OTHER SENSITIVE RESOURCE AREAS HAVE BEEN IDENTIFIED AT THE PROJECT (EXCEPT THE HISTORIC TRUSS BRIDGE ITSELF).

I.2 SITE INVENTORY

I.2.1 OFFSITE DRAINAGE CHARACTERISTICS (UP AND DOWN GRADIENT)

THE LAND SURROUNDING THE PROJECT SITE CONSISTS OF A WELL ESTABLISHED FOREST WITH RELATIVELY STEEP SLOPES. OFFSITE DRAINAGE FROM THE EAST IS COLLECTED ALONG THE EAST EDGE OF A NORTH-SOUTH GRAVEL ROAD (TH 62 & TH 40) AND CONVEYED INTO A CULVERT AND A WELL-DEFINED, DEEP DITCH THAT DISCHARGES TO THE RIVER VIA OVERLAND FLOW THROUGH THE WOODS. OFFSITE DRAINAGE ALONG THE WEST EDGE OF THE NORTH-SOUTH GRAVEL ROAD GENERALLY DRAINS TO THE RIVER VIA OVERLAND FLOW THROUGH THE WOODS. ON PAVED VERMONT ROUTE 30, THE ROADWAY DRAINAGE IS COLLECTED AND CONVEYED ALONG THE NORTHBOUND CURB AND DISCHARGES THRU A CULVERT TO THE RIVER VIA OVERLAND FLOW. THE SOUTHBOUND SIDE OF PAVED VERMONT ROUTE 30 COLLECTS OFFSITE DRAINAGE IN GRASS LINED SWALES, CONVEYS IT INTO A CULVERT AND DISCHARGES IT TO THE RIVER VIA OVERLAND FLOW.

I.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER, AND PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES

THE WEST RIVER IS THE ONLY WATER SOURCE ON THE PROJECT SITE. THE DRAINAGE BASIN FOR THIS RIVER IS GENERALLY CHARACTERIZED BY ROCKY, STEEP SLOPES WITH A WIDE FLOODPLAIN. THE TRIBUTARY DRAINAGE AREA AT THE BRIDGE IS APPROXIMATELY 104,960 HECTARES (259,354 ACRES). DURING FLOOD EVENTS, THE RIVER RISES RAPIDLY AND THE FLOW IS MODERATE. THE CHANNEL BED MATERIAL CONSISTS OF MEDIUM-SIZED COBBLES WITH FINE SAND AND THE BANKS ARE ROCKY AND RELATIVELY RESISTANT TO EROSION. PREVIOUSLY DISTURBED SOILS ARE LOCATED ALONG THE EXISTING ROADWAYS AND ABUTMENTS AT BOTH SIDES OF THE RIVER AT THE TOP OF BANK. THERE ARE SEVERAL DROP INLETS AND CULVERTS ONSITE DRAINING FROM THE ROADWAY TO THE RIVER.

I.2.3 TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES

THE TOPOGRAPHY OF THE PROJECT IS GENERALLY CHARACTERIZED BY THE WEST RIVER AND ITS BANKS. THE RIVER IS WIDE WITH RELATIVELY STEEP BANKS THAT ARE WELL VEGETATED AND WOODED.

VERMONT ROUTE 30 IS A NORTH-SOUTH PAVED ROAD THAT RUNS PARALLEL TO THE WEST RIVER AT THE WEST END OF THE BRIDGE. IT IS RELATIVELY FLAT AND TRAFFIC IS MODERATE WITH A POSTED SPEED OF 80 KM/H (50 MPH).

TH 62 AND TH 40 ARE SINGLE LANE GRAVEL ROADS THAT RUN PARALLEL TO THE WEST RIVER. TH 62 BEGINS AT THE WEST END OF THE BRIDGE, AT VERMONT ROUTE 30, WHERE IT CROSSES THE RIVER AND THEN TURNS AND RUNS SOUTH. THERE IS A "Y" INTERSECTION AT THE EAST END OF THE BRIDGE WHERE TH 40 BEGINS AND THEN RUNS NORTH. SEVERAL HOUSES WITH GRAVEL DRIVES ARE IN THE VICINITY OF THIS INTERSECTION.

EXISTING OVERHEAD UTILITIES RUN ALONG THE WEST SIDE OF VERMONT ROUTE 30. THE SOUTH APPROACH OF TOWN HIGHWAY 62 HAS UTILITIES ON THE WEST SIDE. AT THE "Y" INTERSECTION, EAST OF THE BRIDGE, THE UTILITIES CROSS THE ROAD AND CONTINUE NORTH ON THE EAST SIDE OF TOWN HIGHWAY 40.

I.2.4 VEGETATION

IN GENERAL, THE WEST BANK OF THE RIVER CONSISTS OF SMALL GRASS AREAS, ASSORTED BRUSH AND A NARROW STRIP OF MIXED HARDWOOD AND SOFTWOOD TREES. THE EAST BANK OF THE RIVER CONSISTS OF A WIDE STRIP OF MIXED HARDWOOD AND SOFTWOOD TREES. ALL AREAS OF DISTURBED VEGETATION WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH.

ALL TREES AND AREAS OF BRUSH WILL BE REMOVED WITHIN THE EXISTING, NARROW RIGHT-OF-WAY OF TH 62 AND THE WORK PLATFORM AREA WITHIN THE PROJECT LIMITS. ALL AREAS OF DISTURBED VEGETATION WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH.

I.2.5 SOILS

ALL SOIL DATA WAS OBTAINED FROM MAPPING CREATED BY THE NATURAL RESOURCES CONSERVATION SERVICE FOR THE COUNTY OF WINDHAM, VERMONT. "WINDSOR" SOIL IS LOCATED ON THE WEST SIDE OF THE BRIDGE. THE SOIL IS LOAMY FINE SAND WITH GENERALLY 2% TO 8% SLOPES. THE SOIL IS NOT CONSIDERED HIGHLY ERODIBLE (K=0.17). "QUONSET" AND "WARWICK" SOILS ARE LOCATED ON THE EAST SIDE OF THE BRIDGE. THESE SOILS ARE FINE SANDY LOAM WITH GENERALLY 2% TO 8% SLOPES. THESE SOILS ARE NOT CONSIDERED HIGHLY ERODIBLE (K=0.20).

NOTE: K-VALUES GENERALLY INDICATE THE FOLLOWING: 0.0 - 0.23 = LOW EROSION POTENTIAL; 0.24 - 0.36 = MODERATE EROSION POTENTIAL; 0.37 AND HIGHER = HIGH EROSION POTENTIAL.

I.2.6 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: NO
HISTORICAL AREAS: EXISTING TRUSS BRIDGE ONLY
ARCHEOLOGICAL AREAS: NO
PRIME AGRICULTURAL LAND: NO
THREATENED AND ENDANGERED SPECIES: NO
WATER RESOURCE: WEST RIVER (REFER TO PROJECT PERMIT CONDITIONS FOR IN-STREAM WORK RESTRICTIONS)
WETLANDS: NO

I.3 RISK EVALUATION

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

I.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE WORK OUTLINED IN THIS NARRATIVE CONSISTS OF APPLYING MEASURES THROUGHOUT THE LIFE OF THE PROJECT MINIMIZING SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION CONTROLS.

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.

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.

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:

I.4.1 MARK SITE BOUNDARIES

PROJECT DEMARCATION FENCE, DENOTED -PDF- ON THE PLANS, IS USED TO DELINEATE THE LIMITS THE CONTRACTOR CAN ACCESS WITH CONSTRUCTION EQUIPMENT. THIS MEASURE LIMITS THE AREA THAT CAN BE DISTURBED AND EXPOSED TO EROSION.

I.4.2 LIMIT DISTURBANCE AREA

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

INSTALL TURBIDITY CURTAIN WITH ADEQUATE ANCHORAGE AND GUIDE DEVICES TO ACCOMMODATE RIVER FLOWS FOR ALL CONSTRUCTION IN OR ADJACENT TO THE RIVER.

I.4.3 STABILIZE CONSTRUCTION ENTRANCE/EXIT

STABILIZED CONSTRUCTION ENTRANCES AND EXITS ARE NOT ANTICIPATED FOR THIS PROJECT.

I.4.4 INSTALL SILT FENCE

SILT FENCE SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK AS SHOWN ON THE PLANS OR AS NECESSARY.

I.4.5 DIVERT UPLAND RUNOFF

COLLECT AND ROUTE CLEAN OFFSITE RUNOFF AROUND OR THROUGH THE PROJECT SITE USING DIVERSION BERMS, DIVERSION TO SWALES, CULVERTS AND/OR TEMPORARY PIPES.

USE EXCAVATED DROP INLET PROTECTION DURING CONSTRUCTION UNTIL CONTRIBUTING DRAINAGE AREAS ARE STABILIZED.

I.4.6 SLOW DOWN CHANNELIZED RUNOFF

TEMPORARY STONE CHECK DAM, TYPE I SHALL BE UTILIZED AS NECESSARY.

I.4.7 CONSTRUCT PERMANENT CONTROLS

SEED AND HAY MULCH
DRAINAGE INLETS AND PIPING

RIPRAP PROTECTION WILL BE INSTALLED AT CULVERT OUTLETS.

I.4.8 STABILIZE EXPOSED SOILS

SEED AND HAY MULCH
TEMPORARY EROSION MATTING

TRACKING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, WILL BE UTILIZED ON A REGULAR BASIS. SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF FORECASTED RAIN. SEEDING, MULCHING AND BIODEGRADABLE EROSION CONTROL MATTING OR EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3. THESE SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF REACHING INTERMITTENT PHASES OF CONSTRUCTION.

I.4.9 WINTER STABILIZATION

IF CONSTRUCTION CONTINUES THRU THE WINTER, USE VARIOUS MEASURES SPECIFIED FOR WINTER (SEE LOW RISK SITE HANDBOOK).

I.4.10 STABILIZE SOIL AT FINAL GRADE

SEED AND HAY MULCH
TEMPORARY EROSION MATTING

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

I.4.11 DE-WATERING ACTIVITIES

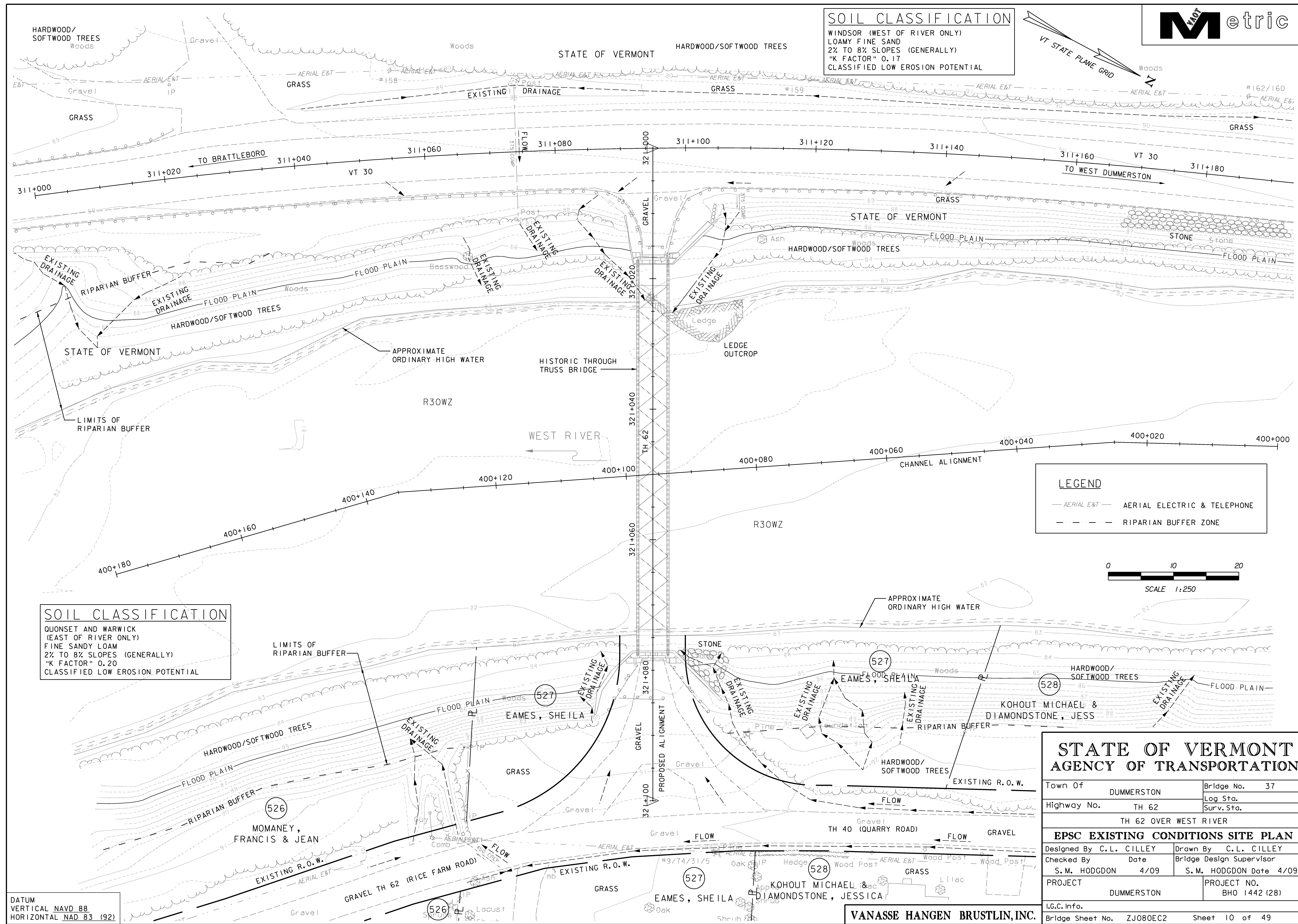
DE-WATERING IS NOT ANTICIPATED FOR THIS PROJECT.

I.4.12 INSPECT YOUR SITE

INSPECT SITE BASED ON PERMIT AUTHORIZATION OR SPECIAL PROVISION REQUIREMENTS.

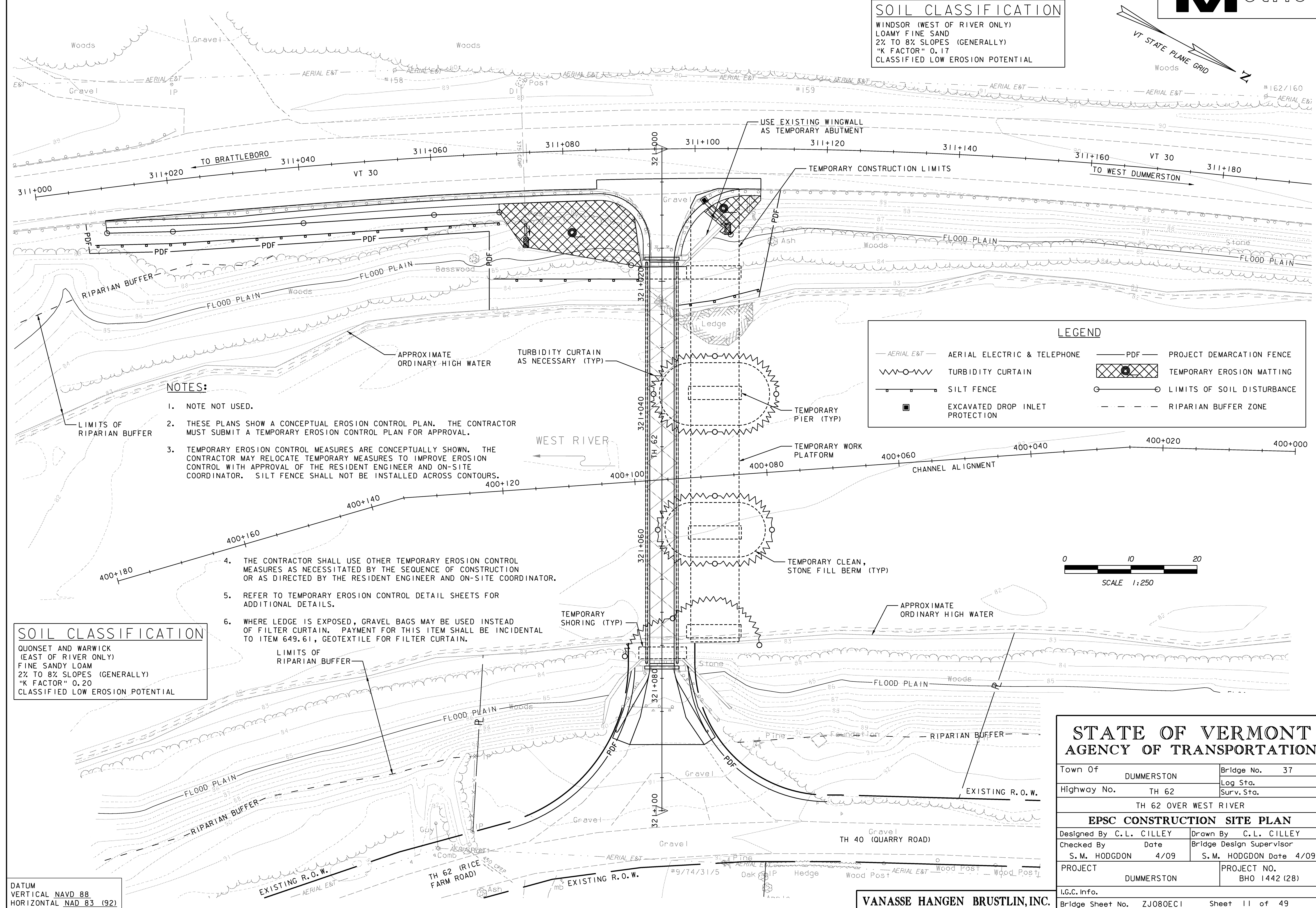
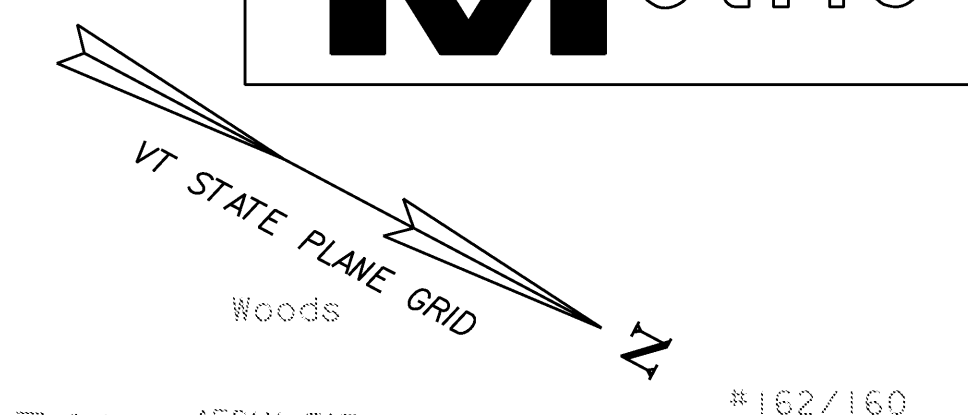


STATE OF VERMONT			
AGENCY OF TRANSPORTATION			
Town Of		Bridge No.	
DUMMERSTON		37	
Highway No.		Log Sta.	
TH 62		Surv. Sta.	
TH 62 OVER WEST RIVER			
EPSC NARRATIVE			
Designed By		Drawn By	
C.L. CILLEY		C.L. CILLEY	
Checked By		Bridge Design Supervisor	
S.M. HODGDON		S.M. HODGDON	
Date		Date	
4/09		4/09	
PROJECT		PROJECT NO.	
DUMMERSTON		BHO 1442 (28)	
I.G.C. Info.			
Bridge Sheet No.		Sheet	
ZJ080ERONAR		9 of 49	



SOIL CLASSIFICATION

WINDSOR (WEST OF RIVER ONLY)
LOAMY FINE SAND
2% TO 8% SLOPES (GENERALLY)
"K FACTOR" 0.17
CLASSIFIED LOW EROSION POTENTIAL



NOTES:

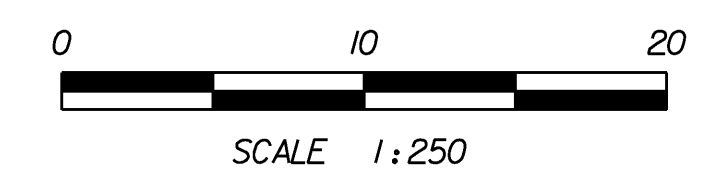
- NOTE NOT USED.
- THESE PLANS SHOW A CONCEPTUAL EROSION CONTROL PLAN. THE CONTRACTOR MUST SUBMIT A TEMPORARY EROSION CONTROL PLAN FOR APPROVAL.
- TEMPORARY EROSION CONTROL MEASURES ARE CONCEPTUALLY SHOWN. THE CONTRACTOR MAY RELOCATE TEMPORARY MEASURES TO IMPROVE EROSION CONTROL WITH APPROVAL OF THE RESIDENT ENGINEER AND ON-SITE COORDINATOR. SILT FENCE SHALL NOT BE INSTALLED ACROSS CONTOURS.
- THE CONTRACTOR SHALL USE OTHER TEMPORARY EROSION CONTROL MEASURES AS NECESSITATED BY THE SEQUENCE OF CONSTRUCTION OR AS DIRECTED BY THE RESIDENT ENGINEER AND ON-SITE COORDINATOR.
- REFER TO TEMPORARY EROSION CONTROL DETAIL SHEETS FOR ADDITIONAL DETAILS.
- WHERE LEDGE IS EXPOSED, GRAVEL BAGS MAY BE USED INSTEAD OF FILTER CURTAIN. PAYMENT FOR THIS ITEM SHALL BE INCIDENTAL TO ITEM 649.61, GEOTEXTILE FOR FILTER CURTAIN.

SOIL CLASSIFICATION

QUONSET AND WARWICK
(EAST OF RIVER ONLY)
FINE SANDY LOAM
2% TO 8% SLOPES (GENERALLY)
"K FACTOR" 0.20
CLASSIFIED LOW EROSION POTENTIAL

LEGEND

- AERIAL E&T AERIAL ELECTRIC & TELEPHONE
- TURBIDITY CURTAIN
- SILT FENCE
- EXCAVATED DROP INLET PROTECTION
- PDF PROJECT DEMARCATION FENCE
- TEMPORARY EROSION MATTING
- LIMITS OF SOIL DISTURBANCE
- RIPARIAN BUFFER ZONE

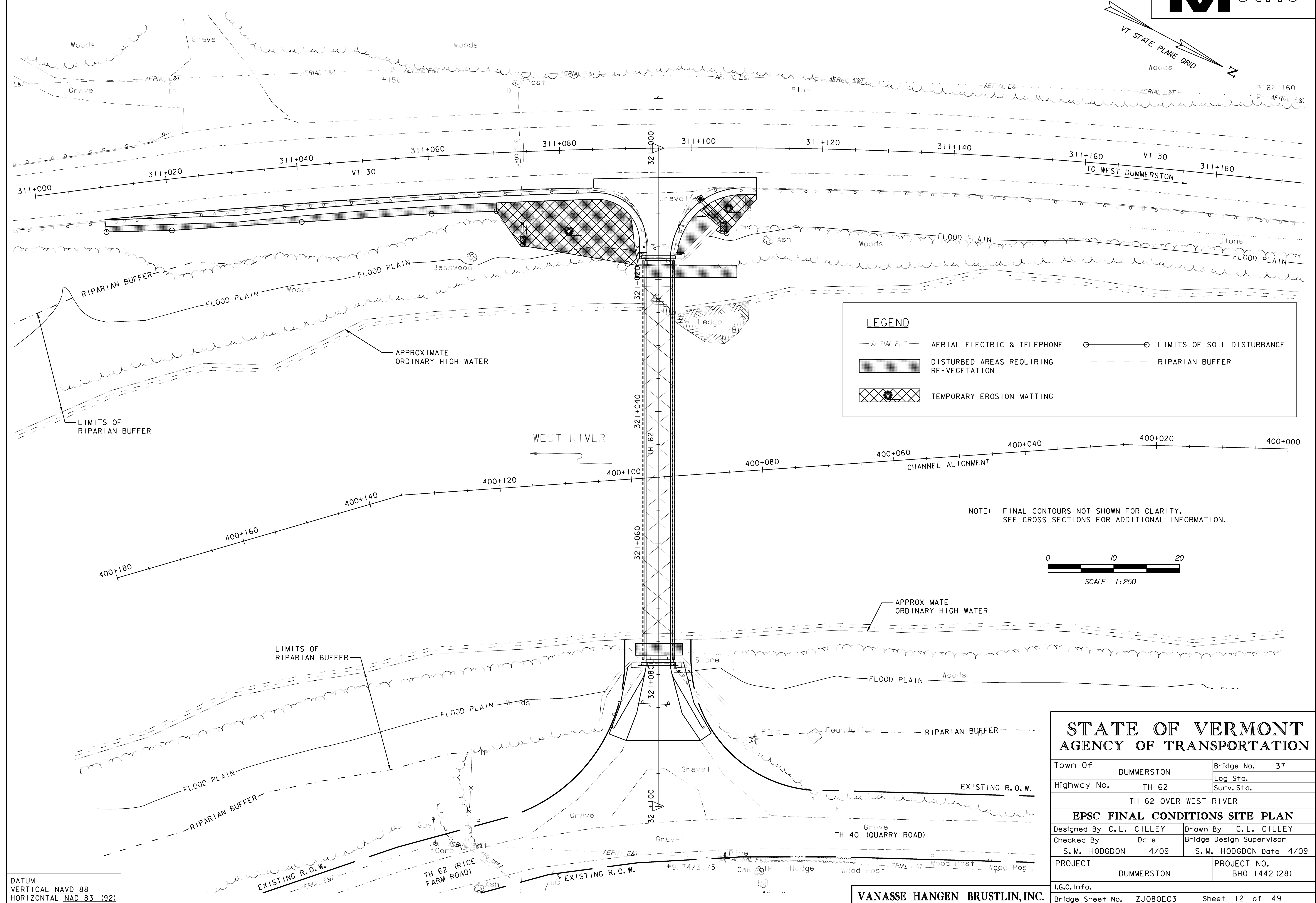
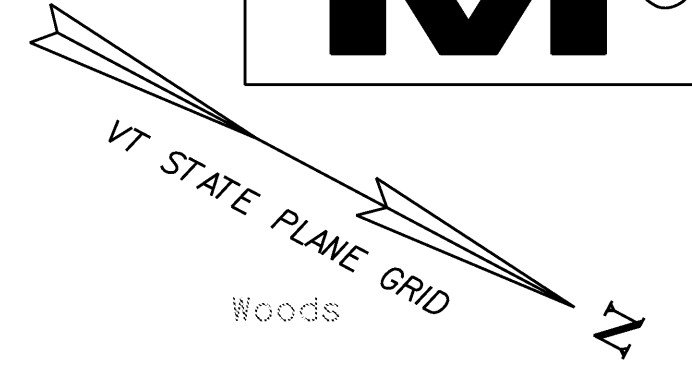


STATE OF VERMONT AGENCY OF TRANSPORTATION

Town Of	DUMMERSTON	Bridge No.	37
Highway No.	TH 62	Log Sta.	
	TH 62 OVER WEST RIVER	Surv. Sta.	
EPSC CONSTRUCTION SITE PLAN			
Designed By	C.L. CILLEY	Drawn By	C.L. CILLEY
Checked By	S.M. HODGDON	Bridge Design Supervisor	S.M. HODGDON
Date	4/09	Date	4/09
PROJECT	DUMMERSTON	PROJECT NO.	BHO 1442 (28)
I.G.C. Info.			
Bridge Sheet No.	ZJ080EC1	Sheet	11 of 49

VANASSE HANGEN BRUSTLIN, INC.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)



DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VANASSE HANGEN BRUSTLIN, INC.

STATE OF VERMONT AGENCY OF TRANSPORTATION			
Town Of	DUMMERSTON	Bridge No.	37
Highway No.	TH 62	Log Sta.	
	TH 62 OVER WEST RIVER	Surv. Sta.	
EPSC FINAL CONDITIONS SITE PLAN			
Designed By	C.L. CILLEY	Drawn By	C.L. CILLEY
Checked By	S.M. HODGDON	Bridge Design Supervisor	S.M. HODGDON
Date	4/09	Date	4/09
PROJECT	DUMMERSTON	PROJECT NO.	BHO 1442 (28)
I.G.C. Info.			
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SYMBOL

CONSTRUCTION SPECIFICATIONS

1. APPLY TO SLOPES GREATER THAN 3H:1V OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.
2. APPLY FERTILIZER, LIME AND SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4'X225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4'X150' ROLL OF MATERIAL.
4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

ADAPTED FROM DETAILS PROVIDED BY: ILLINOIS USDA-NRCS
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

ROLLED EROSION
CONTROL PRODUCT
(RECP) SIDE SLOPE

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

THIS ITEM SHALL BE PAID FOR UNDER ITEM
653.20 TEMPORARY EROSION MATTING

NEW
APRIL 16, 2007 WHF
REVISIONS

SYMBOL

CONSTRUCTION SPECIFICATIONS

1. CLEAR THE AREA OF ALL DEBRIS THAT WILL HINDER EXCAVATION.
2. GRADE APPROACH TO THE INLET UNIFORMLY AROUND THE BASIN.
3. WEEP HOLES SHALL BE PROTECTED BY GRAVEL.
4. UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA, SEAL WEEP HOLES, FILL BASIN WITH STABLE SOIL TO FINAL GRADE, COMPACT IT PROPERLY AND STABILIZE WITH PERMANENT SEEDING.

MAXIMUM DRAINAGE AREA 1 ACRE

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

EXCAVATED DROP
INLET PROTECTION

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

THIS ITEM SHALL BE PAID FOR UNDER ITEM
653.40 INLET PROTECTION DEVICE, TYPE 1

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of	DUMMERSTON	Bridge No.	37
Highway No.	TH 62	Log Sta.	
		Surv. Sta.	

TH 62 OVER WEST RIVER

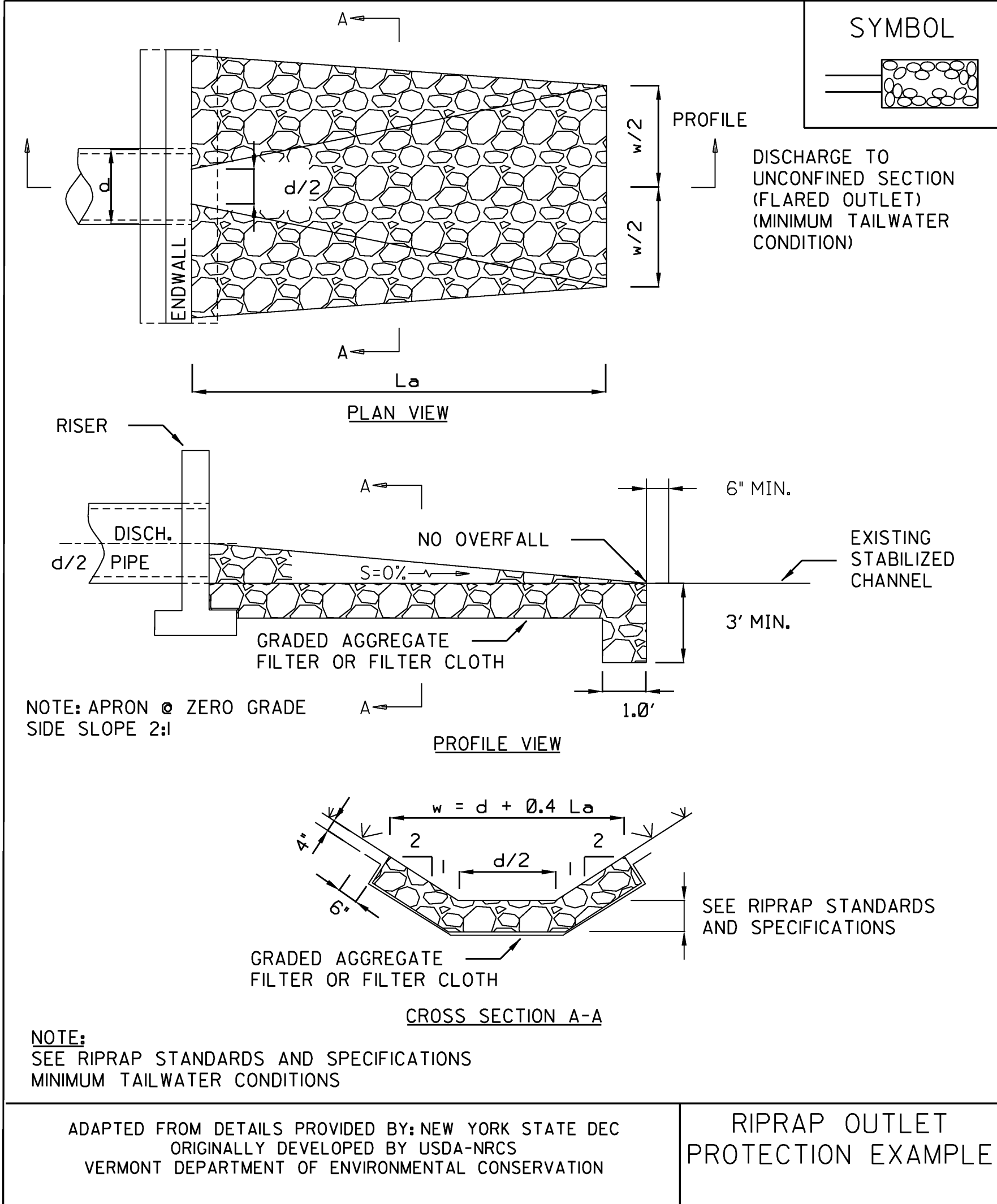
EPSC DETAILS (SHEET 1 OF 3)

Designed By	VTRANS	Drawn By	VTRANS
Checked By	Date	Bridge Design Supervisor	
VTRANS	5/073	S. M. HODGDON	Date 4/09

PROJECT	DUMMERSTON	PROJECT NO.	BHO 1442 (28)
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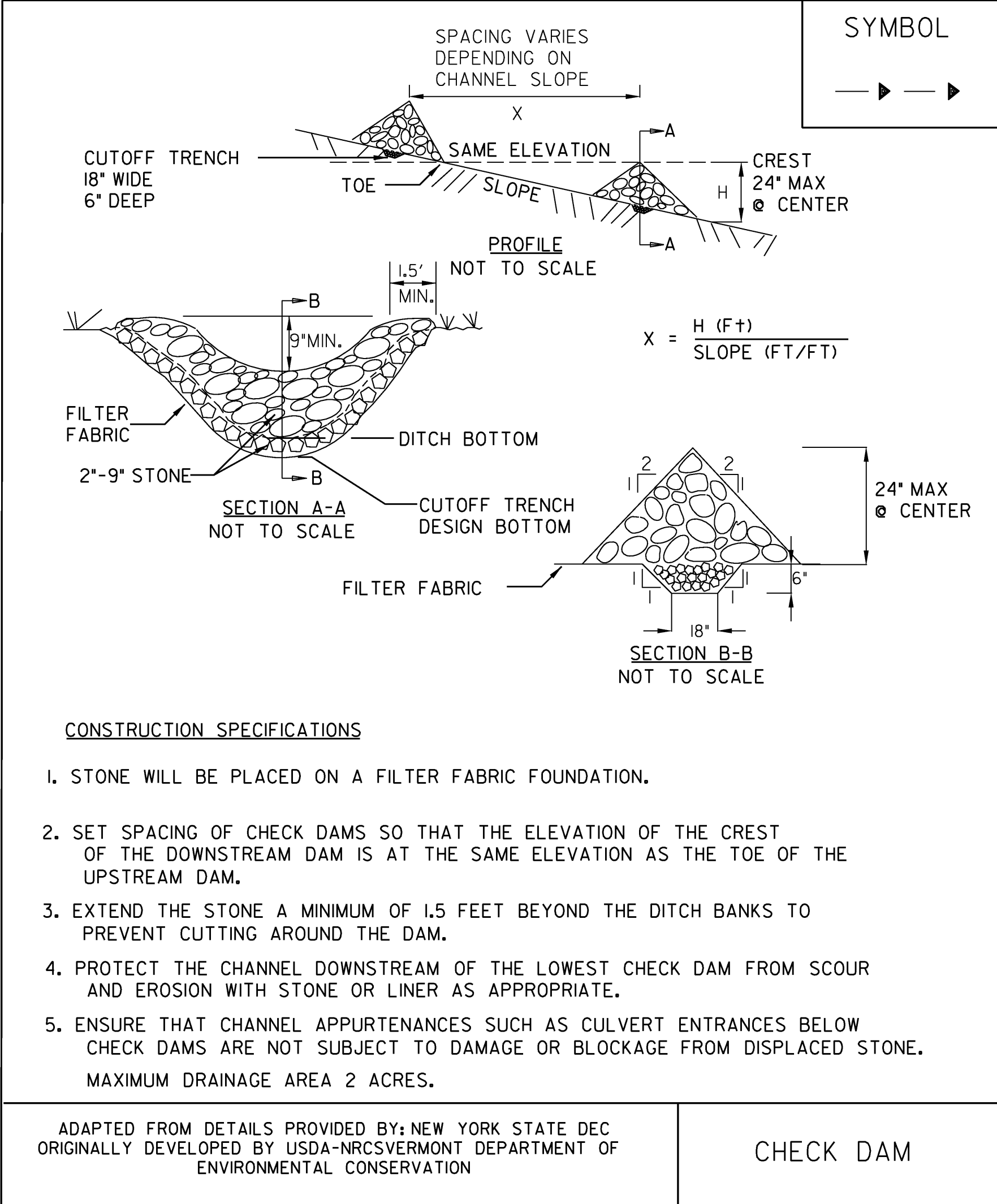
I.G.C. Info.	
Bridge Sheet No.	ZJ080ERODET3 Sheet 13 of 49

VANASSE HANGEN BRUSTLIN, INC.



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

THIS ITEM SHALL BE PAID FOR UNDER ITEM 613.10, STONE FILL, TYPE I.



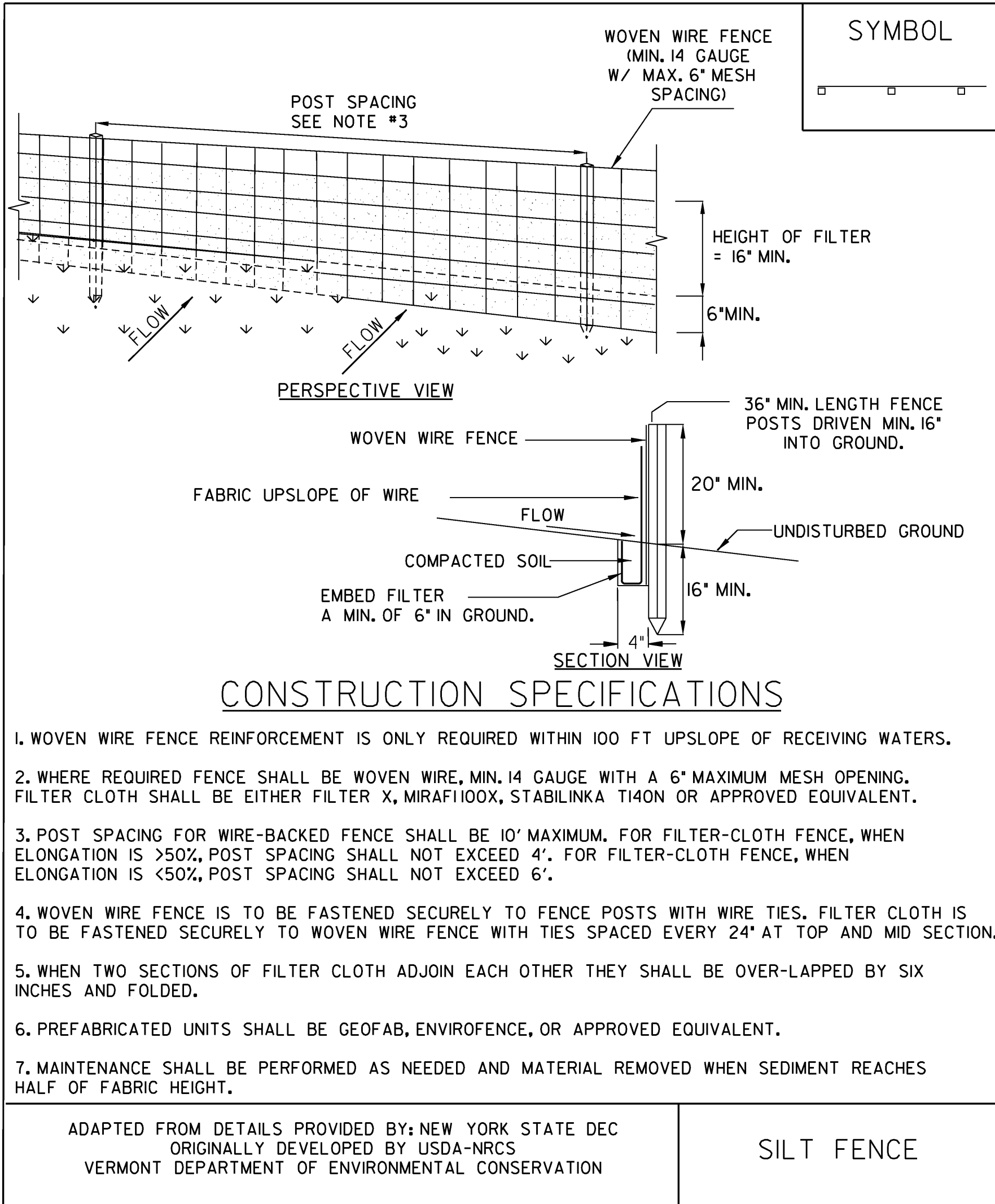
NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

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

REVISIONS	
MARCH 8, 2007	JMF

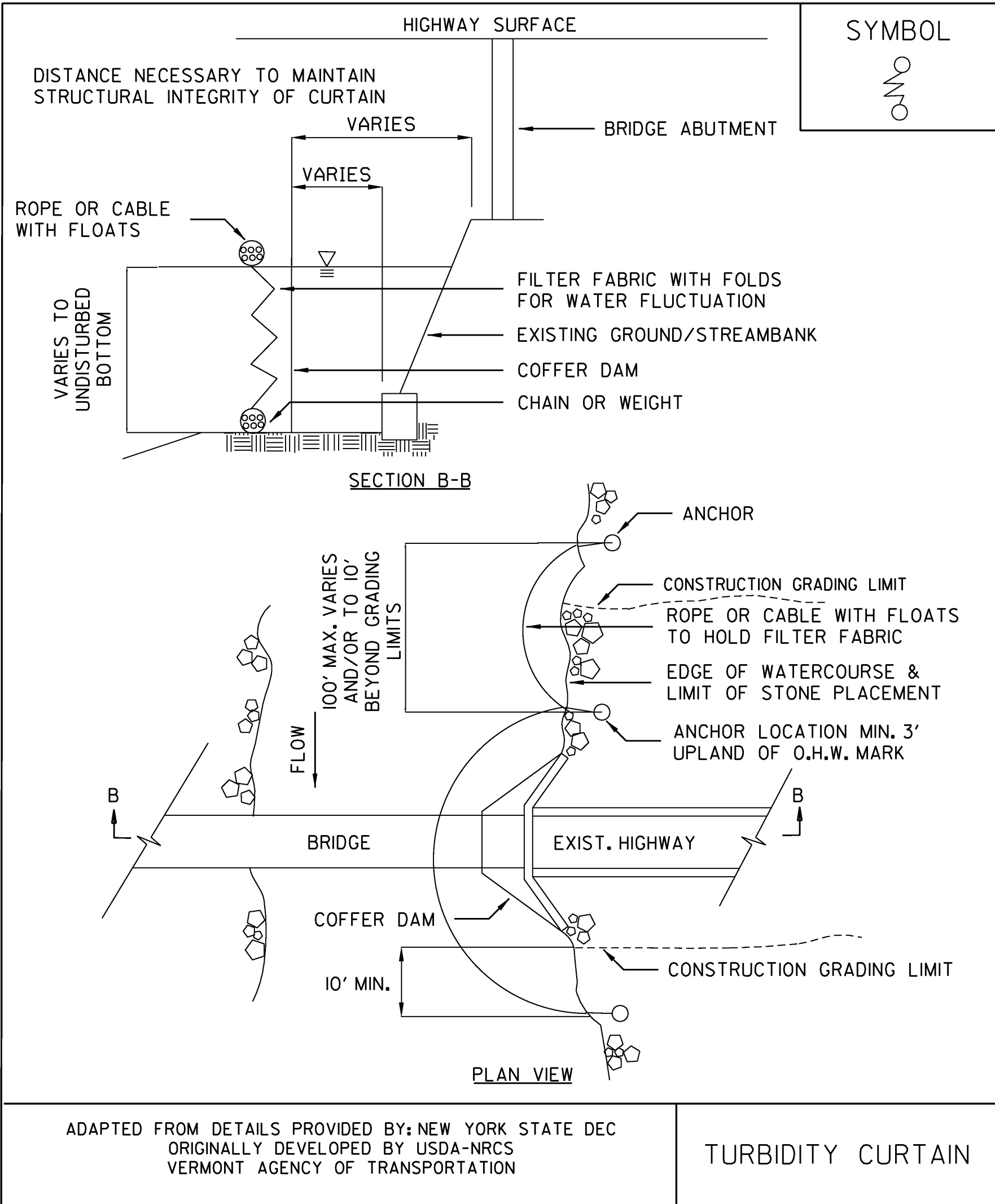
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of	DUMMERSTON	Bridge No.	37
Highway No.	TH 62	Log Sta.	
		Surv. Sta.	
TH 62 OVER WEST RIVER			
EPSC DETAILS (SHEET 2 OF 3)			
Designed By	VTRANS	Drawn By	VTRANS
Checked By	Date	Bridge Design Supervisor	
VTRANS	5/073	S. M. HODGDON	Date 4/09
PROJECT	DUMMERSTON	PROJECT NO.	BHO 1442 (28)
I.G.C. Info.			
Bridge Sheet No.	ZJ080ERODET	Sheet	14 of 49



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

THIS ITEM SHALL BE PAID FOR UNDER
STANDARD SPECIFICATION ~~649.51 GEOTEXTILE FOR SILT FENCE OR~~
ITEM 649.515 GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED



NOTES:
THIS ITEM SHALL BE PAID FOR UNDER ITEM
649.61 GEOTEXTILE FOR FILTER CURTAIN

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of	DUMMERSTON	Bridge No.	37
Highway No.	TH 62	Log Sta.	
		Surv. Sta.	

TH 62 OVER WEST RIVER

EPSC DETAILS (SHEET 3 OF 3)

Designed By	VTRANS	Drawn By	VTRANS
Checked By	Date	Bridge Design Supervisor	
VTRANS	5/073	S. M. HODGDON	Date 4/09

PROJECT	DUMMERSTON	PROJECT NO.	BHO 1442 (28)
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I.G.C. Info.

Bridge Sheet No. ZJ080ERODET2 Sheet 15 of 49

VANASSE HANGEN BRUSTLIN, INC.

GENERAL NOTES:

1.

DIMENSIONS, ANGLES, BEARINGS, AND ELEVATIONS SHOWN ON THESE CONTRACT PLANS HAVE BEEN OBTAINED FROM LIMITED FIELD INVESTIGATION AND FIELD SURVEY, AND MAY NOT ACCURATELY REFLECT ACTUAL FIELD CONDITIONS. ACCORDINGLY, THE CONTRACTOR WILL BE RESPONSIBLE FOR MAKING FIELD MEASUREMENTS OF ALL EXISTING CONDITIONS AFFECTING OR IMPACTED BY THE NEW WORK TO ASSURE CONSISTENCY WITH THE PROPOSED CONSTRUCTION. ANY DISCREPANCIES IN DIMENSIONS, CHARACTER OR EXTENT OF THE EXISTING FEATURES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE ADVANCING THE WORK. THE CONTRACTOR SHALL FIELD VERIFY DIMENSIONS SHOWN IN THESE PLANS PRIOR TO ANY FABRICATION.
2.

THE GENERAL SCOPE OF THE PROJECT INCLUDES, BUT IS NOT LIMITED TO:
 - IMPROVEMENTS TO THE APPROACH ROADWAYS AT BOTH ENDS OF BRIDGE
 - REHABILITATION OF THE EXISTING STEEL TRUSS, INCLUDING BOTTOM CHORD REPLACEMENT AND END POST AND SELECTIVE DIAGONAL REPLACEMENT
 - REPLACEMENT OF THE BRIDGE FLOOR SYSTEM
 - CLEANING AND PAINTING THE EXISTING STEEL TRUSS
 - INSTALLATION OF NEW STEEL BRIDGE RAIL
 - REMOVAL OF EXISTING BACKWALLS AND CONSTRUCTION OF NEW CONCRETE BACKWALLS AT BOTH ABUTMENTS
 - CONSTRUCTION OF NEW DECK END JOINTS AT BOTH ABUTMENTS
 - REPAIRS TO END SECTIONS OF BOTH EXISTING STONE MASONRY WINGWALLS AT ABUTMENT I
 - MINOR CHINKING OF JOINTS IN BOTH DRY-LAID STONE MASONRY ABUTMENTS
3.

ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006, AND ITS LATEST REVISIONS, AND THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 17TH EDITION, INCLUDING INTERIMS, BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO).
4.

DESIGN LIVE LOAD FOR EXISTING STRUCTURE IS UNKNOWN. DESIGN LIVE LOAD FOR NEW COMPONENTS OF STRUCTURE IS AASHTO M9 (H10) UNLESS OTHERWISE NOTED.
5.

NO PLANS ARE AVAILABLE OF THE EXISTING BRIDGE.
6.

WORKING DRAWINGS REQUIRED FOR VARIOUS ITEMS OF THE WORK SHALL BE BASED ON ACTUAL FIELD MEASUREMENTS TAKEN BY THE CONTRACTOR, AND THE DRAWINGS SHALL BE SO NOTED.
7.

THE BRIDGE IS CURRENTLY CLOSED TO TRAFFIC. TRAFFIC ON VT 30 AND TH 62 (RICE FARM ROAD) AND TH 40 (QUARRY ROAD) SHALL BE MAINTAINED AS SHOWN ON SHEET 7.
8.

THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PREVENT DEBRIS FROM FALLING INTO THE WEST RIVER DURING CONSTRUCTION.
9.

ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 20 DEGREES CELSIUS UNLESS OTHERWISE NOTED.
10.

THE METHOD OF SHORING AND THE SEQUENCING OF TRUSS MEMBER REMOVAL PROPOSED BY THE CONTRACTOR SHALL BE SUBSTANTIATED WITH DESIGN CALCULATIONS PERFORMED AND STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF VERMONT. DETAILS AND CALCULATIONS OF PROPOSED SHORING, INCLUDING THE PROPOSED TRUSS MEMBER REMOVAL SEQUENCE, SHALL BE SUBMITTED TO THE STRUCTURES ENGINEER AT LEAST TWO WEEKS PRIOR TO INSTALLATION OF THE SHORING. ALL COSTS FOR DESIGN, MATERIALS, INSTALLATION, AND REMOVAL OF SHORING SHALL BE INCLUDED IN ITEM 502.10, SHORING SUPERSTRUCTURE.
11.

ITEM 529.20, PARTIAL REMOVAL OF STRUCTURE, SHALL INCLUDE REMOVAL AND PROPER DISPOSAL OF:
 - STEEL BRIDGE RAIL
 - STEEL GRID DECK
 - FLOORBEAMS
 - BOTTOM LATERAL BRACING
 - BOTTOM CHORD AND END POSTS OF BOTH TRUSSES
 - TRUSS BEARINGS
 - THE LOWER SECTION OF THE TRUSS ENDPOST AT ALL 4 CORNERS OF THE BRIDGE
 - SELECTED TRUSS DIAGONAL MEMBERS FROM BOTH TRUSSES
 - RIVETS
 - TOP PLATE OF TOP CHORD SPLICE PLATE AT PANEL POINT U13 ON THE DOWNSTREAM TRUSS ONLY
12.

THE EXISTING STRUCTURAL STEEL ON THIS PROJECT WAS PAINTED WITH A MATERIAL THAT MAY CONTAIN LEAD. 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 STRUCTURAL STEEL.
13.

ITEM 529.25, REMOVAL OF CONCRETE OR MASONRY, SHALL INCLUDE:
 - REMOVAL AND PROPER DISPOSAL OF THE EXISTING CONCRETE AND STONE MASONRY BACKWALLS AT BOTH ABUTMENTS
 - REMOVAL AND STOCKPIILING OF STONE MASONRY FROM PORTIONS OF WINGWALLS *1 AND *2 IF THEY ARE RECONSTRUCTED
14.

OPERATIONS SHALL BE PERFORMED SO THAT ALL PORTIONS OF THE EXISTING STRUCTURE THAT ARE TO REMAIN ARE NOT DAMAGED. ANY PORTION OF THE EXISTING STRUCTURE THAT IS TO REMAIN THAT IS DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
15.

EXCAVATION BEHIND EXISTING ABUTMENT BACKWALLS TO THE LIMITS SHOWN IN THE PLANS SHALL BE PAID AS ITEM 204.25, STRUCTURE EXCAVATION. THIS ITEM SHALL ALSO BE USED TO PAY FOR THE EXCAVATION REQUIRED TO REMOVE AND RECONSTRUCT PORTIONS OF WINGWALLS *1 AND *2.
16.

THE EXISTING ABUTMENTS AND WINGWALLS ARE CONSTRUCTED OF DRY-LAID STONE MASONRY. STONES AT THE TOPS OF THE WINGWALLS AND BRIDGE SEATS THAT HAVE SHIFTED OUT FROM THE FACE OF WINGWALL OR ABUTMENT SHALL BE RESET AS DIRECTED BY THE ENGINEER. LARGE (APPROXIMATELY 50mm OR GREATER) JOINTS AND GAPS BETWEEN STONES SHALL BE FILLED WITH CHINKING STONES AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE PAID UNDER ITEM 602.20, DRY MASONRY. MORTAR MAY BE USED SELECTIVELY, WITH THE APPROVAL OF THE ENGINEER, TO SEAT CHINKING STONES, BUT IT SHALL NOT BE USED TO REPOINT THE EXISTING OPEN JOINTS. THE ESTIMATED QUANTITY FOR ITEM 602.20 ASSUMES 10% OF THE EXPOSED AREA WILL REQUIRE REPAIR. WINGWALL AREAS SPECIFICALLY IDENTIFIED FOR REPAIR IN THESE PLANS ARE NOT INCLUDED IN THIS QUANTITY.
17.

RIVETS SHALL BE REMOVED BY MECHANICAL MEANS (NO FLAME CUTTING ALLOWED) THAT SHALL NOT DAMAGE OR SCORE MEMBERS TO REMAIN.
18.

ONLY A TWO ROD (33 FEET) RIGHT-OF-WAY (R.O.W.) IS AVAILABLE FOR CONSTRUCTION AT THE EAST END OF THE PROJECT ALONG TH 62 AND TH 40. IF ADDITIONAL R.O.W. IS NEEDED FOR CONSTRUCTION OR STAGING PURPOSES, THE CONTRACTOR SHALL SECURE ALL NECESSARY EASEMENTS. COST SHALL BE INCIDENTAL TO ALL CONTRACT ITEMS.
19.

A TEMPORARY WORK PLATFORM AREA HAS BEEN INCLUDED IN THE PERMITS FOR THIS PROJECT AND IS SCHEMATICALLY SHOWN IN THE PLANS. THIS PLATFORM IS INTENDED TO FUNCTION AS STAGING AREA AND TO FACILITATE THE TRUSS REHABILITATION BY ALLOWING THE CONTRACTOR THE OPTION OF TEMPORARILY MOVING THE EXISTING TRUSS TO THIS WORK PLATFORM. ONCE THE REHABILITATION IS COMPLETE, THE TRUSS MUST BE RELOCATED TO THE POSITION SHOWN IN THE PLANS AND THE TEMPORARY WORK PLATFORM, ASSOCIATED TEMPORARY SUPPORTS, AND STONE FILL BERMS MUST BE COMPLETELY REMOVED. ALL COSTS FOR THE TEMPORARY WORK PLATFORM INCLUDING STRUCTURAL DESIGN, EXISTING BRIDGE DISPLACEMENT PROCEDURES, PLATFORM CONSTRUCTION, AND REMOVAL SHALL BE INCLUDED IN ITEM 900.645, SPECIAL PROVISION (TEMPORARY WORK PLATFORM). IF A TEMPORARY WORK PLATFORM IS NOT CONSTRUCTED, THIS ITEM SHALL NOT BE USED OR MEASURED FOR PAYMENT AND NO COMPENSATION WILL BE PROVIDED FOR THIS ALTERATION IN THE CONTRACT.

STRUCTURAL STEEL NOTES:

1.

ALL NEW STRUCTURAL STEEL SHALL BE AASHTO M 270M, GRADE 345 PAINTED UNLESS OTHERWISE NOTED AND SHALL CONFORM TO ALL APPLICABLE SUBSECTIONS OF SECTION 506.
2.

ITEM 506.50 STRUCTURAL STEEL, ROLLED BEAM, SHALL INCLUDE NEW FLOORBEAMS AND REQUIRED FASTENERS. THESE MEMBERS SHALL BE GALVANIZED AND PAINTED PER SECTION 513.
3.

ITEM 506.60, STRUCTURAL STEEL, SHALL INCLUDE:
 - NEW BOTTOM LATERAL BRACING AND CONNECTION PLATES
 - NEW BOTTOM CHORD FOR BOTH TRUSSES, INCLUDING SPLICES
 - NEW TRUSS END POSTS
 - SELECTED NEW TRUSS DIAGONAL MEMBERS IN BOTH TRUSSES AS IDENTIFIED ON SHEET 17
 - NEW TOP PLATE OF TOP CHORD SPLICE PLATE AT PANEL POINT U13 ON THE DOWNSTREAM TRUSS ONLY
 - REPLACEMENT OF RIVETS WITH BOLTS IN TRUSS DIAGONAL MEMBER CONNECTIONS TO TOP CHORD AT LOCATIONS IDENTIFIED ON SHEET 17
4.

THE NEW GALVANIZED STEEL GRID FLOORING SHALL BE PAID UNDER ITEM 900.675 SPECIAL PROVISION (STEEL GRID FLOORING).
5.

ALL BOLTED CONNECTIONS IN NEW AND EXISTING STEEL SHALL BE MADE WITH 19 mm DIAMETER AASHTO M 164M TYPE I HEX HEAD BOLTS UNLESS OTHERWISE NOTED. BOLT HOLES IN NEW MATERIAL SHALL BE 21mm DIAMETER STANDARD HOLES UNLESS OTHERWISE NOTED. ORIENT BOLTS AS SHOWN IN THE PLANS UNLESS OTHERWISE PERMITTED BY THE ENGINEER.

6.

FIELD CONNECTION BOLTS FOR ALL STRUCTURAL COMPONENTS THAT HAVE BEEN PAINTED PRIOR TO BEING ERECTED SHALL BE ZINC COATED IN ACCORDANCE WITH AASHTO M298, CLASS 50, TYPE 1. FIELD PAINTING OF BOLTS SHALL INCLUDE BOTH THE INTERMEDIATE AND FINAL COATING SYSTEMS AFTER APPROVAL OF THE CONNECTIONS.
7.

DIMENSIONS OF STRUCTURAL STEEL SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO THE PREPARATION OF FABRICATION DRAWINGS TO ENSURE THAT THE NEW TRUSS MEMBERS CONNECT PROPERLY TO THE EXISTING TRUSS MEMBERS. FABRICATION DRAWINGS REQUIRED FOR VARIOUS ITEMS OF WORK SHALL INDICATE THE ACTUAL FIELD MEASUREMENTS AND SHALL BE SO NOTED. TO ENSURE PROPER FIT ALL HOLES REQUIRING FIELD DRILLING AND MEMBERS REQUIRING FIELD CUTTING SHALL BE CLEARLY SHOWN. FABRICATION DRAWINGS SUBMITTED WITHOUT THE CONTRACTOR'S FIELD MEASUREMENTS CLEARLY NOTED ARE NOT ACCEPTABLE AND WILL BE RETURNED WITHOUT REVIEW. ALL COSTS FOR FIELD MEASUREMENTS REQUIRED TO PREPARE THE STRUCTURAL STEEL FABRICATION DRAWINGS SHALL BE INCLUDED IN ITEMS 506.50 AND 506.60 AND WILL NOT BE PAID SEPARATELY.
8.

ALL REQUIRED CONNECTIONS NOT DESIGNATED IN THESE PLANS SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE ENGINEER FOR APPROVAL.
9.

SOME CONNECTIONS HAVE LIMITED CLEARANCE WHICH MAY REQUIRE CLIPPED WASHERS AND PRECLUDE TIGHTENING OF BOLTS WITH POWER TOOLS OR TORQUE WRENCHES.
10.

IF THE CONTRACTOR CAN DEMONSTRATE TO THE AGENCY THAT HE/SHE CAN PROPERLY CUT AND DRILL/PUNCH NEW TRUSS STEEL MEMBERS IN THE FIELD TO IMPROVE FIT-UP AND ALIGNMENT DURING REHABILITATION, THIS WILL BE PERMITTED.

STRUCTURAL STEEL PAINTING NOTES:

1.

ALL NEW AND EXISTING STRUCTURAL STEEL SHALL BE PAINTED UNLESS OTHERWISE NOTED. SURFACE PREPARATION, CONTAINMENT, AND PAINTING SHALL BE IN CONFORMANCE WITH SECTION 513. THE SURFACE PREPARATION FOR THE REPAINTING OF THE EXISTING STEEL SHALL INCLUDE 100% REMOVAL OF THE EXISTING PAINT SYSTEM.
2.

PAINTING OF NEW STEEL SHALL BE PAID FOR UNDER ITEM 513.40, SURFACE PREPARATION, SHOP, AND ITEM 513.25, STRUCTURAL PAINTING, SHOP APPLIED. ALL AREAS OF SHOP PAINTED ELEMENTS THAT ARE DAMAGED FROM TRANSPORTATION, HANDLING, OR ERECTION SHALL BE REPAINTED AS DIRECTED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
3.

PAINTING OF EXISTING STEEL SHALL BE PAID FOR UNDER ITEM 513.36, CONTAINMENT & ENVIRONMENTAL PROTECTION, FIELD; ITEM 513.41, SURFACE PREPARATION, FIELD; AND ITEM 513.30, STRUCTURAL PAINTING, FIELD APPLIED.
4.

THE COLOR OF THE FINAL COAT OF PAINT SHALL BE GREEN AND SHALL CONFORM TO FEDERAL COLOR STANDARD NO. 595, COLOR CHIP NO. 14062 IN ACCORDANCE WITH SUBSECTION 708.03.
5.

THE CONTRACTOR SHALL ENSURE THAT CONTAINMENT AND ENVIRONMENTAL PROTECTION MEASURES USED FOR PAINTING AND PAINT REMOVAL DO NOT COMPROMISE THE STABILITY OF THE BRIDGE OR OVERSTRESS ANY OF THE TRUSS MEMBERS OR CONNECTIONS. AS SUCH, IT MAY BE NECESSARY TO PERFORM THE PROTECTIVE COATING WORK IN DISCRETE AREAS AND LIMIT THE AMOUNT OF BRIDGE SUBJECT TO CONTAINMENT AT ANY ONE TIME. IN ADDITION TO THE REQUIREMENTS OF SUBSECTION 513.03, THE CONTRACTOR'S CONTAINMENT AND ENVIRONMENTAL PROTECTION PROPOSAL SHALL INCLUDE NECESSARY PLANS AND CALCULATIONS PERFORMED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF VERMONT THAT SUBSTANTIATE THE STABILITY OF THE BRIDGE AND TRUSS MEMBER STRESSES DURING THE CONTAINMENT AND ENVIRONMENTAL PROTECTION OPERATIONS. ALL COST SHALL BE INCLUDED IN ITEM 513.36, CONTAINMENT AND ENVIRONMENTAL PROTECTION, FIELD.

DECK END JOINT NOTES:

1.

ITEM 516.11, BRIDGE EXPANSION JOINT, VERMONT, SHALL INCLUDE THE FABRICATION AND ERECTION OF COMPLETE JOINT ASSEMBLIES AT BOTH ENDS OF THE BRIDGE DECK. ITEM 516.11 SHALL INCLUDE ALL STEEL PLATES, ANGLES, ANCHOR STUDS, EXTRUSIONS, BOLTS, ELASTOMERIC STRIP SEAL AND ANY OTHER MISCELLANEOUS MATERIAL NECESSARY TO INSTALL THE JOINT.
2.

THE FINAL FINISH OF THE JOINT SHALL BE COVERED AND PROTECTED DURING PLACEMENT OF CONCRETE IN THE STEEL GRID DECK.
3.

ALL STEEL COMPONENTS SHALL BE AASHTO M 270M GRADE 250 GALVANIZED OR METALIZED PER SECTION 506.
4.

NO 'LOW PROFILE' STEEL EXTRUSIONS SHALL BE ALLOWED.
5.

THE ELASTOMERIC STRIP SEAL SHALL BE FURNISHED AS ONE CONTINUOUS PIECE AT EACH JOINT. NO SPLICES WILL BE ALLOWED.
6.

THE ANGLES AND VERTICAL PLATES FOR THE JOINTS SHALL BE FURNISHED AS CONTINUOUS PIECES.
7.

EACH DECK END JOINT SHALL BE SHOP ASSEMBLED AND SHIPPED AS ONE UNIT.

CONCRETE NOTES:

1.

CONCRETE IN GRID DECK SHALL BE ITEM 501.32, CONCRETE, HIGH PERFORMANCE CLASS AA, WITH A DESIGN STRENGTH OF f'c = 30 MPa. CONCRETE IN ABUTMENT BACKWALLS SHALL BE ITEM 501.34, CONCRETE, HIGH PERFORMANCE CLASS B, WITH A DESIGN STRENGTH OF f'c = 25 MPa.
2.

ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 25 MILLIMETERS BY 25 MILLIMETERS, UNLESS OTHERWISE NOTED.
3.

ITEM 514.10, WATER REPELLENT, SILANE, SHALL BE APPLIED TO THE TOP AND FRONT FACE OF EACH ABUTMENT BACKWALL.
4.

MINIMUM CLEAR COVER FOR REINFORCING STEEL IN THE ABUTMENT BACKWALLS SHALL BE 80 MILLIMETERS.
5.

REINFORCING STEEL PLACEMENT TOLERANCES SHALL BE +/- 25 MILLIMETERS FOR SPACING, AND +/- 5 MILLIMETERS FOR CLEARANCE.
6.

REINFORCING STEEL IN THE ABUTMENT BACKWALLS SHALL BE EPOXY COATED AND SHALL BE PAID AS ITEM 507.17, EPOXY COATED REINFORCING STEEL. DRILL AND GROUT BARS SHALL BE UNCOATED AND SHALL BE PAID AS ITEM 507.15, REINFORCING STEEL.

BEARING NOTES:

1.

BEARINGS SHALL BE PREFORMED FABRIC PAD TYPE AS DETAILED, AND SHALL BE PAID AS ITEM 531.0, BEARING DEVICE ASSEMBLY, PREFORMED FABRIC PAD.
2.

ALL STEEL IN BEARING DEVICES, EXCEPT STAINLESS STEEL SLIDING SURFACES, SHALL BE AASHTO M 270M, GRADE 250.
3.

DRILL AND SET ANCHOR BOLTS WITH A MINIMUM OF 400 MILLIMETERS EMBEDMENT INTO EXISTING STONE MASONRY BRIDGE SEATS. HOLES SHALL BE 25 MILLIMETERS LARGER IN DIAMETER THAN THE ANCHOR BOLTS. BOLTS SHALL BE SET IN A TYPE IV MORTAR. ALL COSTS FOR ANCHOR BOLTS, DRILLING OR CORING HOLES, AND MORTAR SHALL BE INCLUDED UNDER ITEM 531.10.
4.

ANCHOR BOLTS SHALL BE SWEDGED WITH 100 MILLIMETERS OF THREAD. EXPANSION BEARING NUTS ARE TO BE DRAWN UP FINGER TIGHT AND THEN BACKED OFF 5 MILLIMETERS. THREADS SHALL BE BURRED ABOVE NUT TO PREVENT NUT REMOVAL. TOUCH UP ANY DAMAGED AREAS WITH A ZINC-RICH PAINT AS NECESSARY.

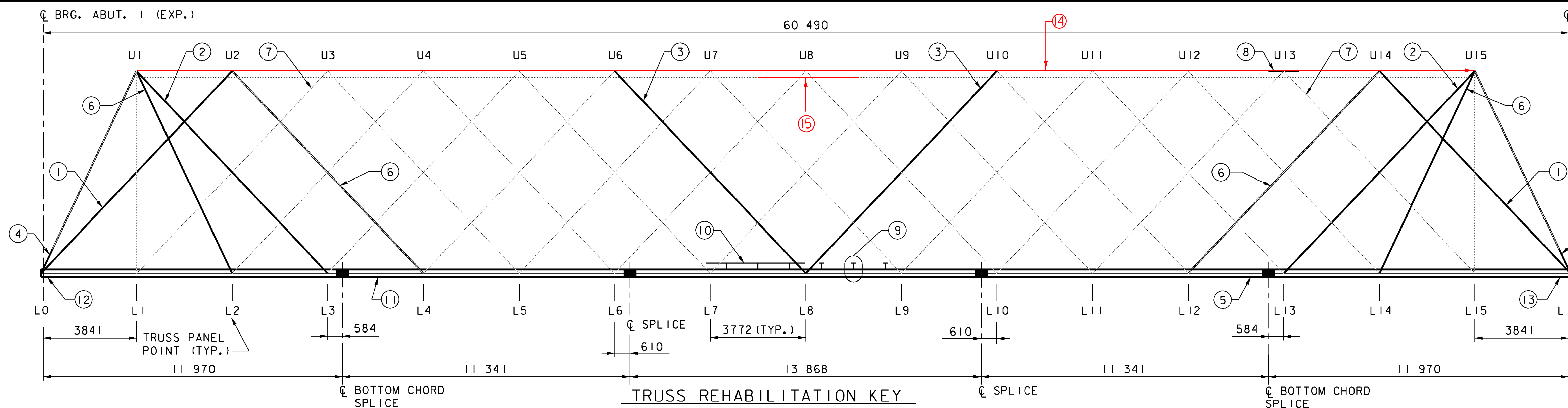
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of		DUMMERSTON		Bridge No. 37	
Highway No.		TH 62		Log Sta.	
				Surv. Sta.	
TH 62 OVER WEST RIVER					
CONSTRUCTION NOTES					
Designed By		T. S. BRYANT		Drawn By C. L. CILLEY	
Checked By		Date		Bridge Design Supervisor	
S. M. HODGDON		4/09		S. M. HODGDON Date 4/09	
PROJECT				PROJECT NO.	
DUMMERSTON				BHO 1442 (28)	
I.G.C. Info.					
Bridge Sheet No. ZJ080CN				Sheet 16 of 49	

NOTES:

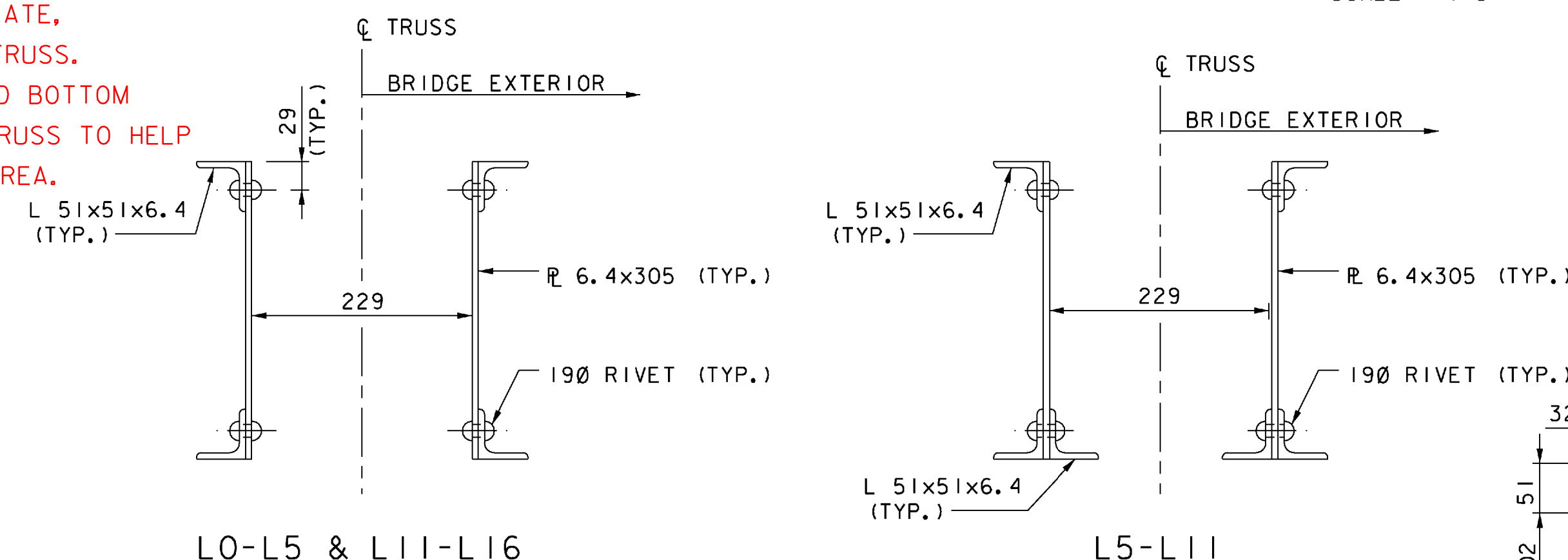
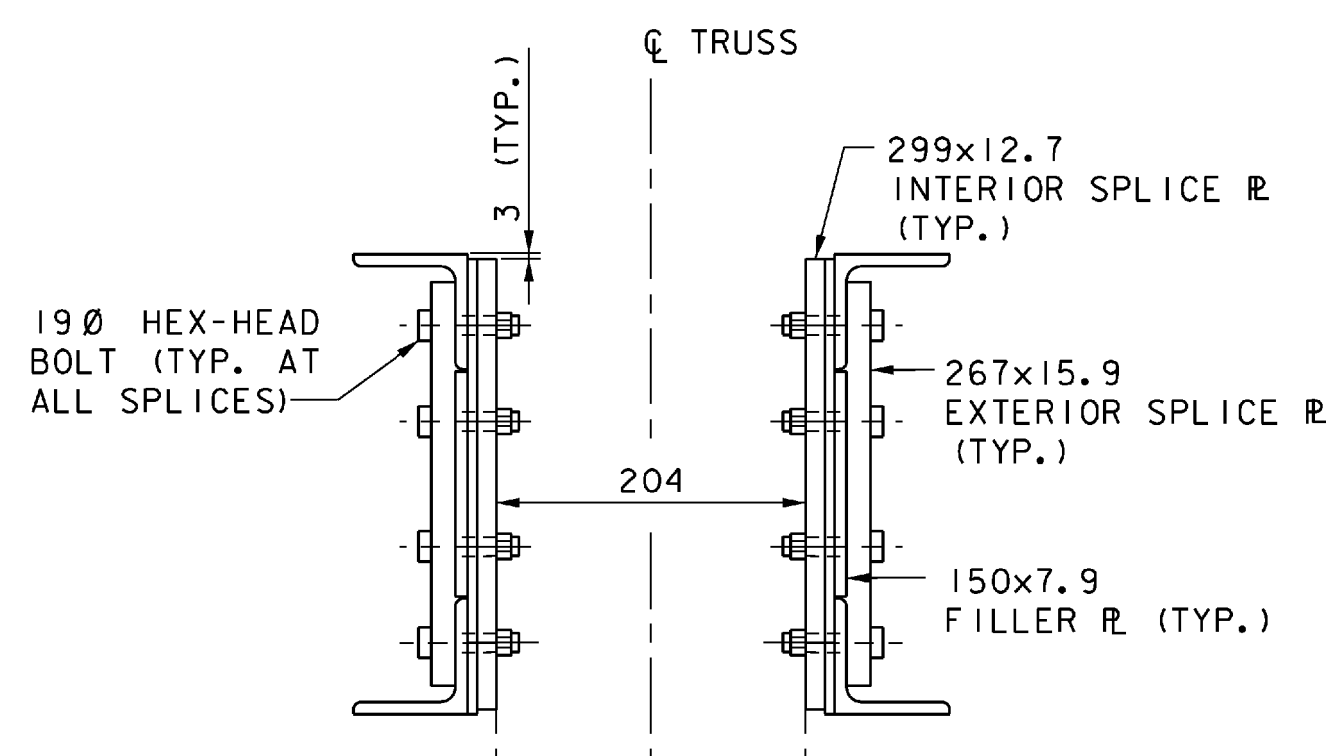
- DOWNSTREAM TRUSS ELEVATION (LOOKING UPSTREAM) SHOWN. ALL REHABILITATION ITEMS APPLY TO BOTH TRUSSES UNLESS OTHERWISE NOTED.
- TRUSS IS SYMMETRICAL ABOUT PANEL POINT L8.
- IN TRUSS REHABILITATION KEY:
 - (X) = REHABILITATION ITEMS
 - BOLD LINES INDICATE TRUSS MEMBER REPLACEMENTS

DIMENSIONS PROVIDED IN THESE PLANS SHALL NOT BE USED FOR FABRICATION PURPOSES. ALL NECESSARY DIMENSIONS AND CONFIGURATIONS SHALL BE DETERMINED FROM ACTUAL FIELD MEASUREMENTS.



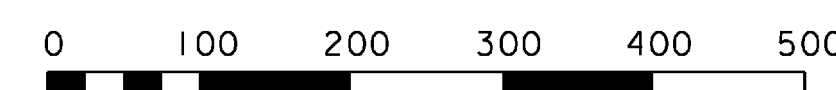
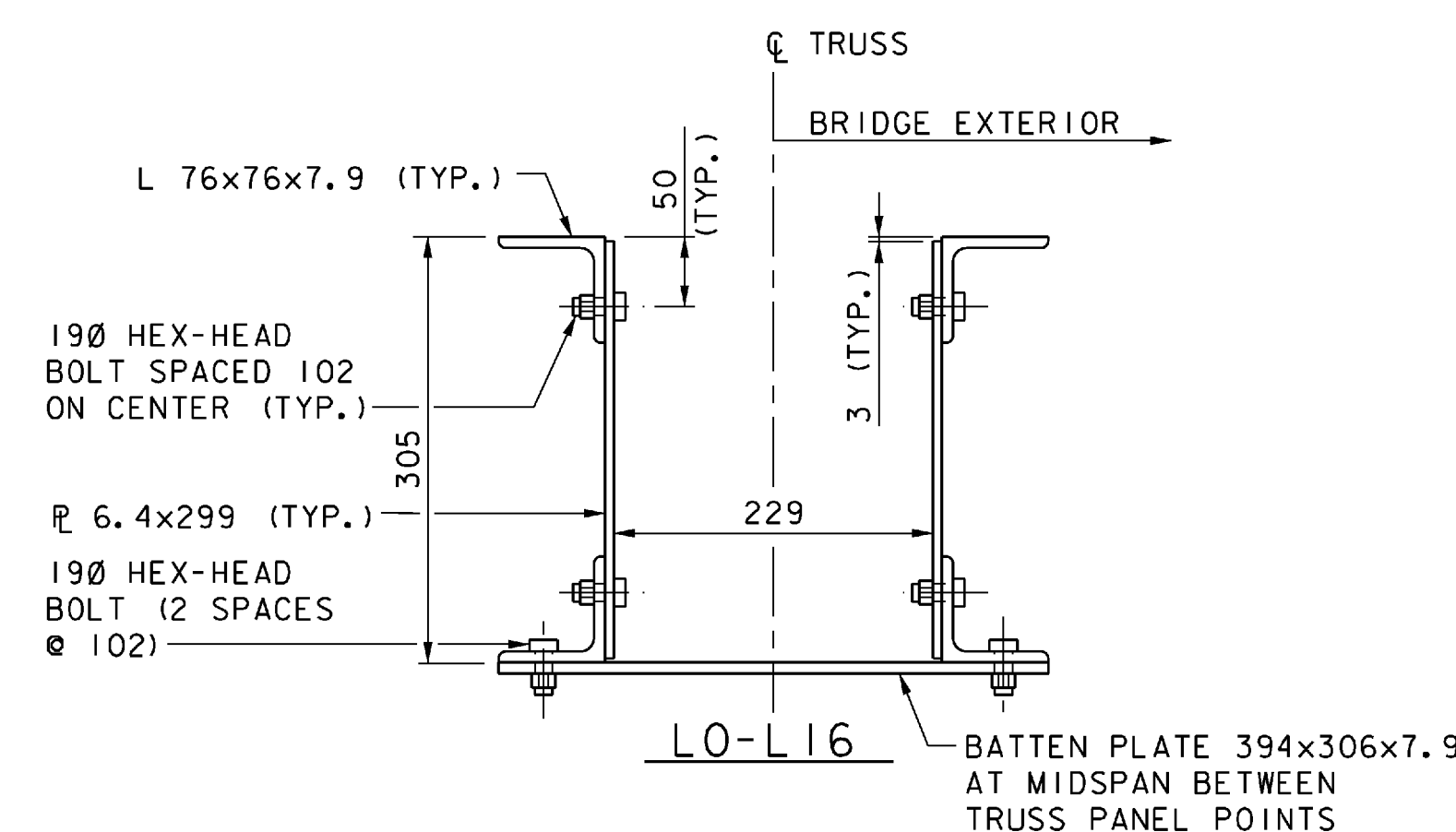
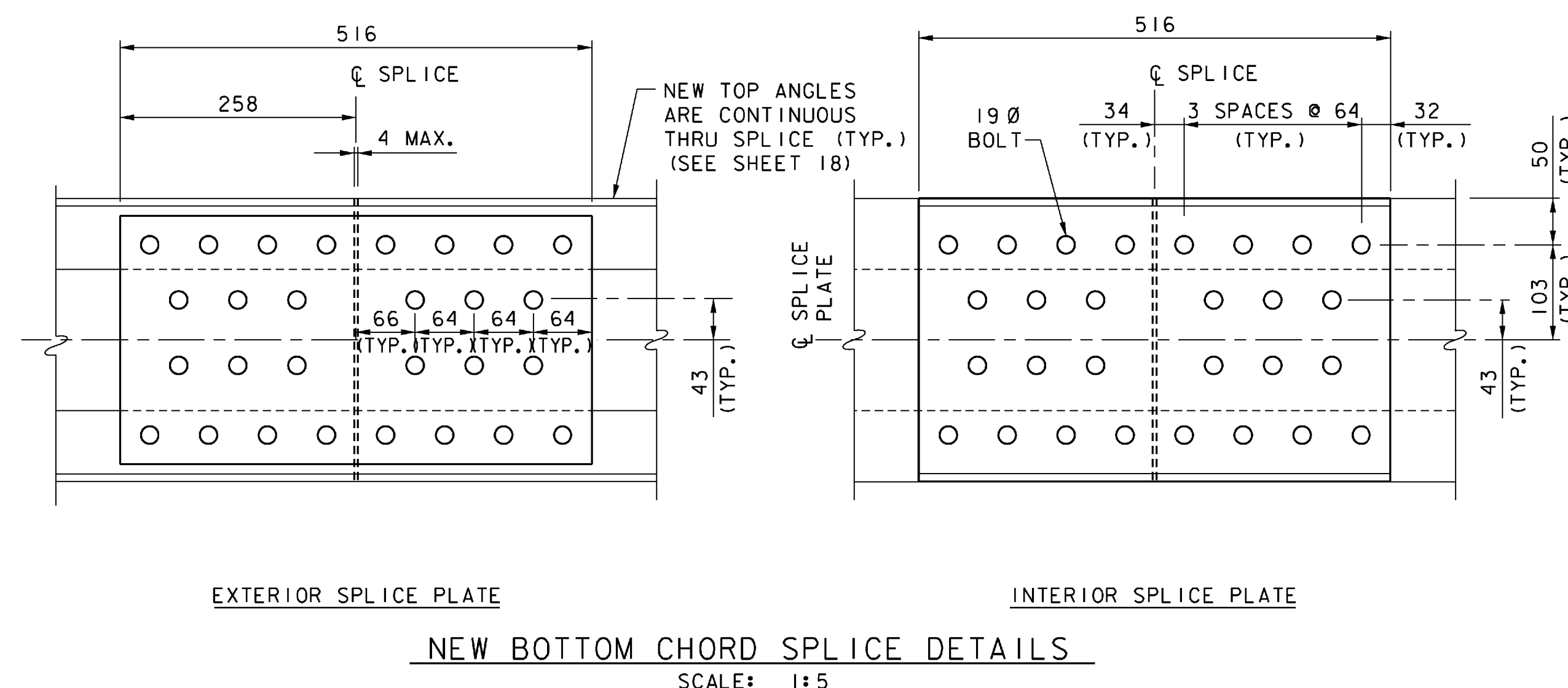
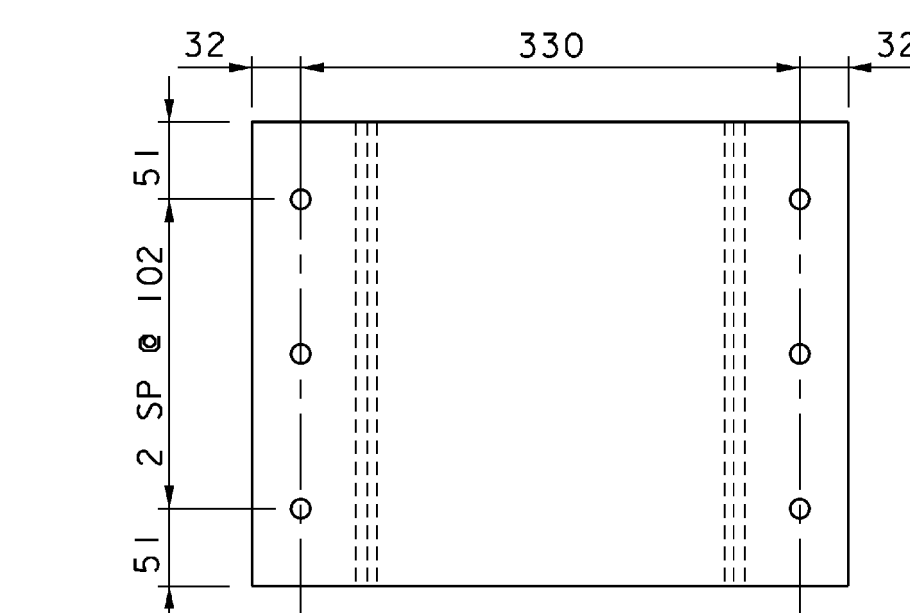
- REPLACE EXISTING MEMBER CONSISTING OF 2-L 89x64x6.4 AND 51x6.4 SINGLE LACING WITH NEW MEMBER CONSISTING OF 2-L 89x76x9.5 AND 64x6.4 SINGLE LACING.
- REPLACE EXISTING MEMBER CONSISTING OF 2-L 51x51x6.4 AND 352x121x6.4 STAY PLATES, WITH NEW MEMBER CONSISTING OF 2-L 76x76x6.4 AND 394x216x6.4 STAY PLATES.
- REPLACE EXISTING MEMBERS CONSISTING OF 2-L 51x51x6.4 AND 352x121x6.4 STAY PLATES, WITH NEW MEMBERS CONSISTING OF 2-L 76x76x6.4 AND 64x6.4 SINGLE LACING.
- REPLACE ALL TRUSS END POSTS.
- REPLACE ENTIRE BOTTOM CHORD.
- REPLACE EXISTING MEMBER CONSISTING OF 2-L 51x51x6.4 AND 352x121x6.4 STAY PLATES IN-KIND.
- REPLACE ALL RIVETS WITH HEX-HEAD H.S. BOLTS IN L1-U3 AND L15-U13 TO TOP CHORD CONNECTIONS.
- REPLACE EXISTING 159x356x6.4 TOP PLATE OF TOP CHORD SPLICE PLATE AT U13 IN-KIND, DOWNSTREAM TRUSS ONLY.
- REPLACE ALL FLOORBEAMS WITH NEW W 250x67 FLOORBEAMS.
- REPLACE EXISTING 64 STEEL GRID DECK WITH NEW 89 STEEL GRID DECK.
- REPLACE ALL BOTTOM LATERAL BRACING.
- INSTALL NEW EXPANSION BEARINGS.
- INSTALL NEW FIXED BEARINGS.
- ADDITION OF NEW 1/4" TOP PLATE, UPSTREAM + DOWNSTREAM TRUSS.
- NEW ANGLES ADDED TOP AND BOTTOM OF TOP CHORD, UPSTREAM TRUSS TO HELP STABILIZE/REPAIR BUCKLED AREA.

(SEE SHEET 17A)



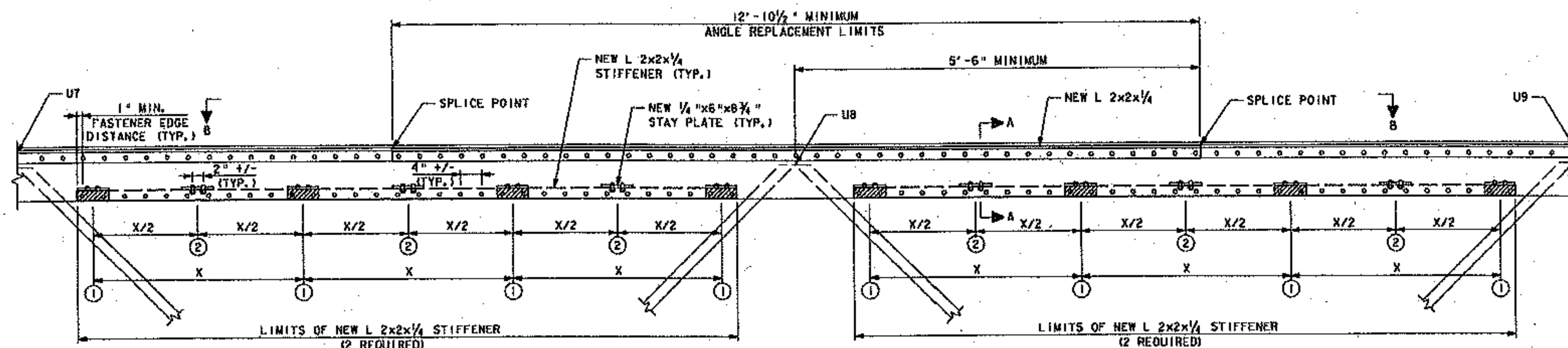
NEW STEEL MEMBERS ADDED TO PORTAL PIECES LOCATED AT PANEL POINT U1, AND U15. (CONNECTING UPSTREAM AND DOWNSTREAM TRUSS)

SEE SHEET 17B AND 17C FOLDER FOR PIECE SIZES



VANASSE HANGEN BRUSTLIN, INC.

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TH 62 OVER WEST RIVER			
TRUSS REHABILITATION KEY & DETAILS			
Designed By T. S. BRYANT		Drawn By C. L. CILLEY	
Checked By Date		Bridge Design Supervisor	
S. M. HODGDON 4/09		S. M. HODGDON Date 4/09	
PROJECT DUMMERSTON		PROJECT NO. BHO 1442 (28)	
I.G.C. Info.			
Bridge Sheet No. Z-1080SSI		Sheet 17 of 49	

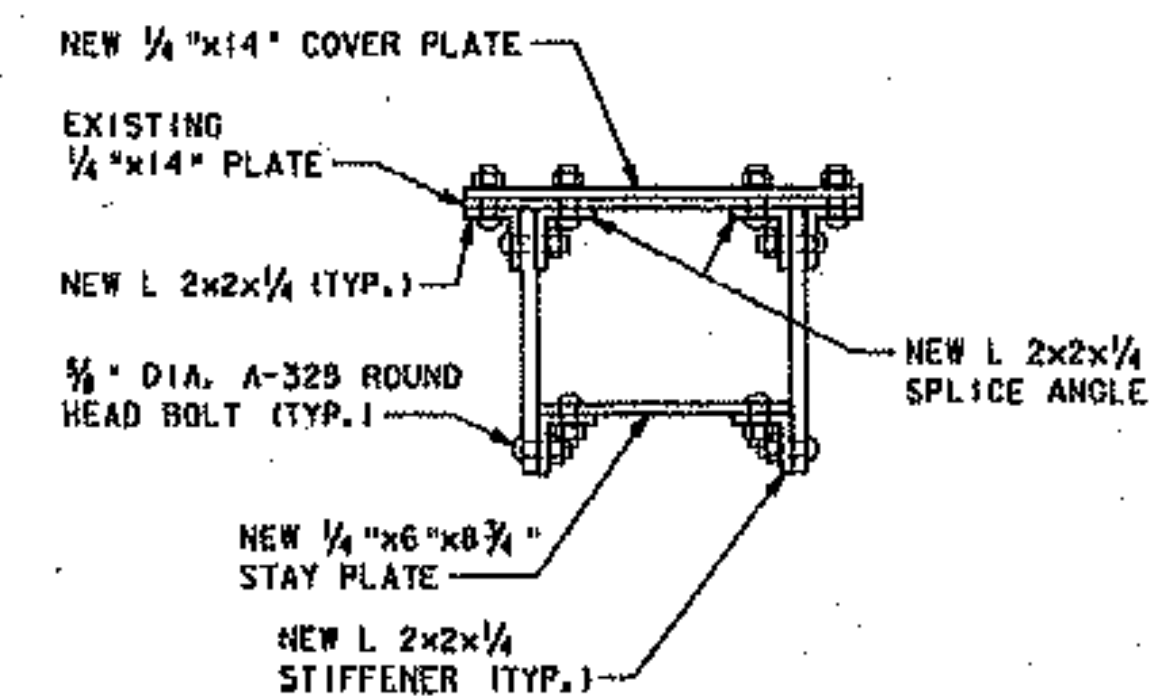


EXISTING STAY PLATE LOCATION

- ① EXISTING L 2x2x1/4 WITH 1/4x6\"
- ② NEW 1/4x6x8 3/4\"

TOP CHORD REHABILITATION DETAIL

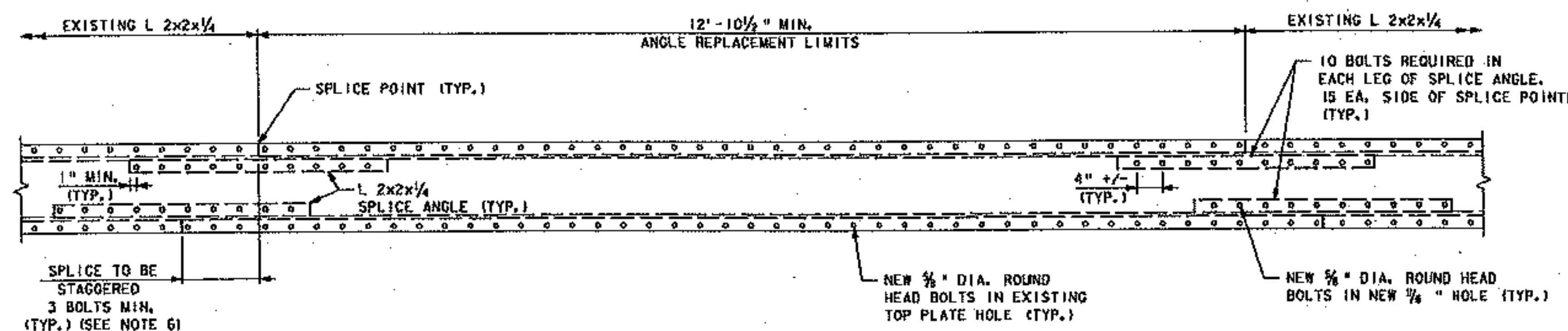
(NEW TOP COVER PLATE NOT SHOWN)
UPSTREAM TRUSS PANEL, LOOKING UPSTREAM
NOT TO SCALE



SECTION A-A
NOT TO SCALE

NOTES:

1. ALL NEW BOLTS SHALL BE 3/8\"
2. NEW ANGLES AND PLATES SHALL BE ASTM A-709, GR. 36 MINIMUM.
3. ALL DIMENSIONS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED.
4. REUSE EXISTING HOLES AND DRILL NEW HOLES FOR SPLICE ANGLES AND STIFFENER ANGLES AS APPROPRIATE. ALL NEW HOLES SHALL BE 3/8\"
5. INSTALL NEW STIFFENER ANGLES BETWEEN PANEL POINTS U7-U8, AND U8-U9 AS SHOWN. TERMINATE ANGLES AT EXISTING STAY PLATE LOCATIONS NEAREST TO TRUSS PANEL POINTS.
6. ANGLE SPLICES SHALL BE STAGGERED BY A MINIMUM OF 3 BOLTS. STAGGERED SPLICE SHALL EXTEND BEYOND THE MINIMUM LIMITS OF ANGLE REPLACEMENT SHOWN.
7. THE METHOD OF SHORING AND THE SEQUENCE OF TRUSS MEMBER REMOVAL PROPOSED BY THE CONTRACTOR SHALL BE SUBSTANTIATED WITH DESIGN CALCULATIONS PERFORMED AND STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF VERMONT. DETAILS AND CALCULATIONS OF PROPOSED SHORING, INCLUDING THE TRUSS MEMBER REMOVAL SEQUENCE, SHALL BE SUBMITTED TO THE RESIDENT ENGINEER FOR APPROVAL BEFORE ADVANCING THE WORK.



VIEW B-B
(NEW TOP COVER PLATE NOT SHOWN)
NOT TO SCALE

PROJECT NAME: DUMMERSTON TRUSS BRIDGE NO. 37

PROJECT NUMBER: 51192.02

FILE NAME: 51192Chord.dgn
PROJECT LEADER: S. M. HODGSON
DESIGNED BY: M. A. CHERVINSKY
TOP CHORD REHABILITATION

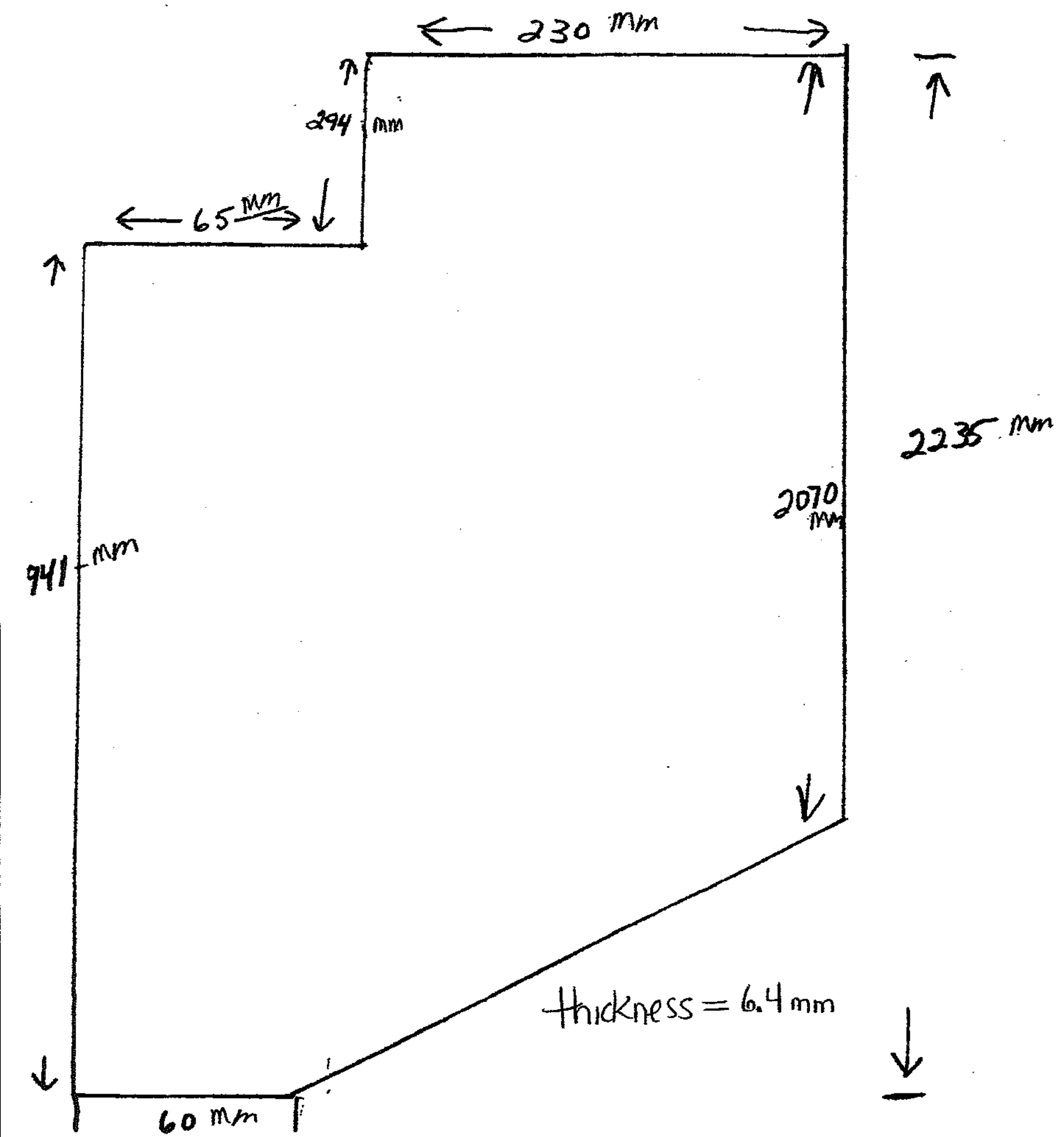
PLOT DATE: 5/20/2011
DRAWN BY: B. J. MASSE
CHECKED BY: G. S. GOODRICH
SHEET 1 OF 1

VHB Vanasse Hangen Brustlin, Inc.

SHT 17A

1055

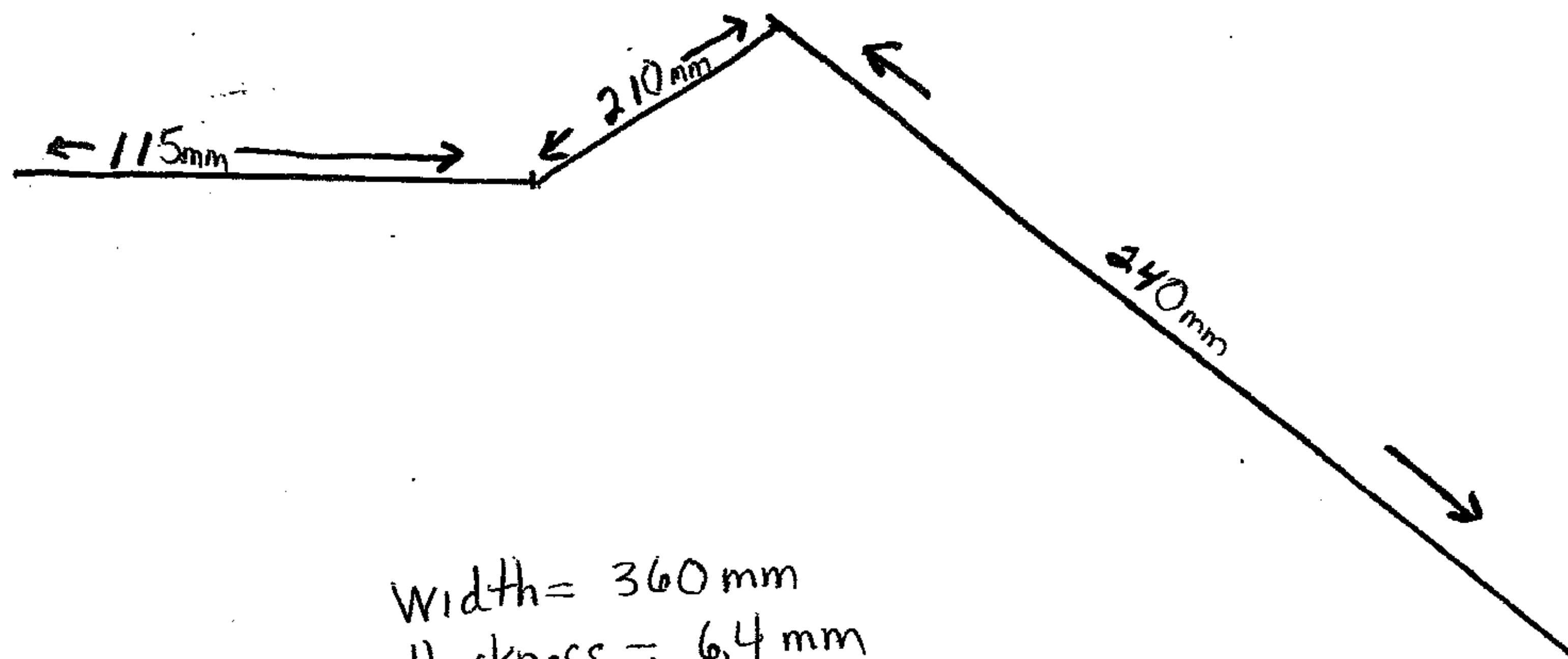
PORTAL - 4 Plates



each - 76.58 lbs
- 34.77 Kg

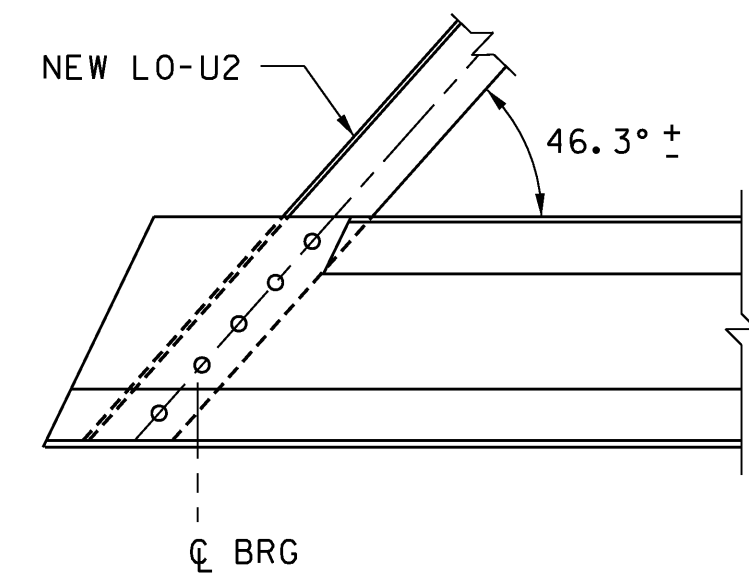
Total - 306.32 lbs
139.09 Kg

Top Plates — 4 Plates



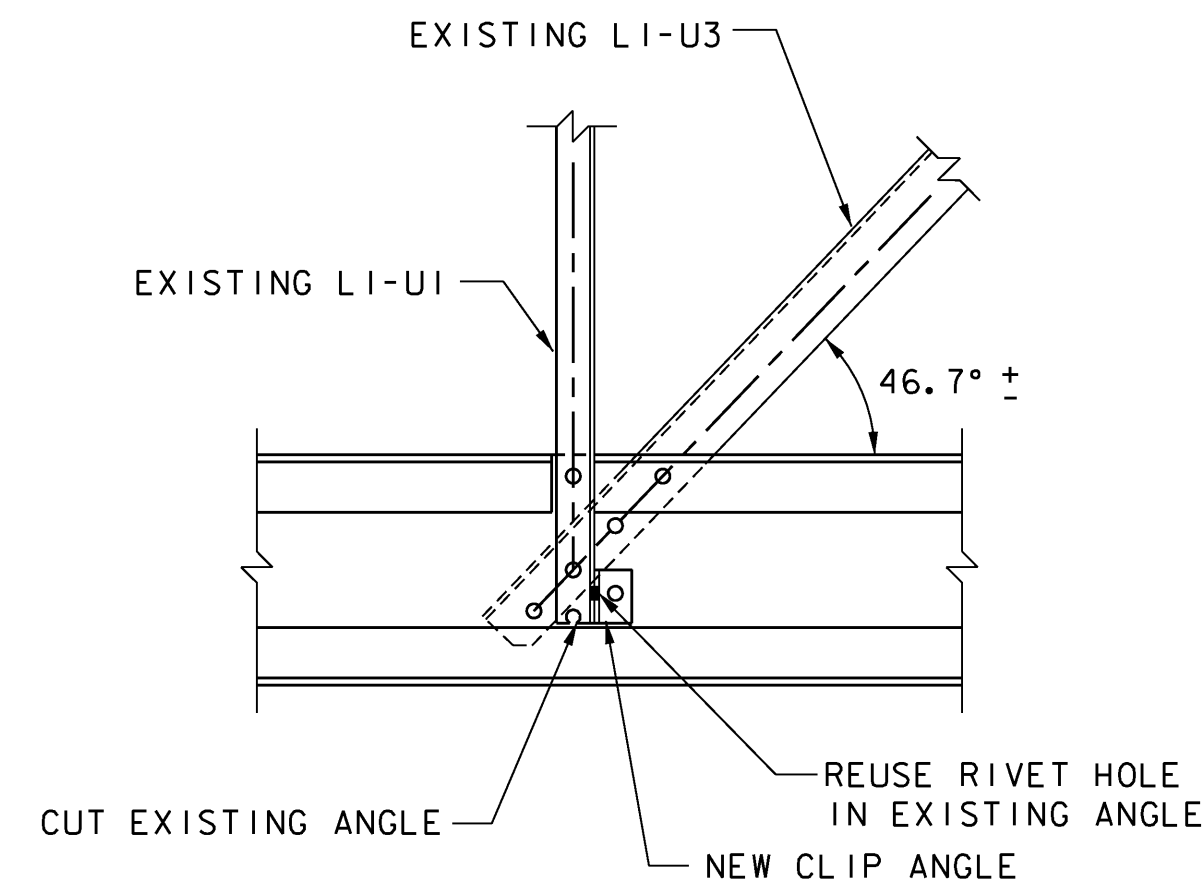
each - 23.82 lbs
10.83 kg

TOTAL = 95.26 lbs
43.30 kg

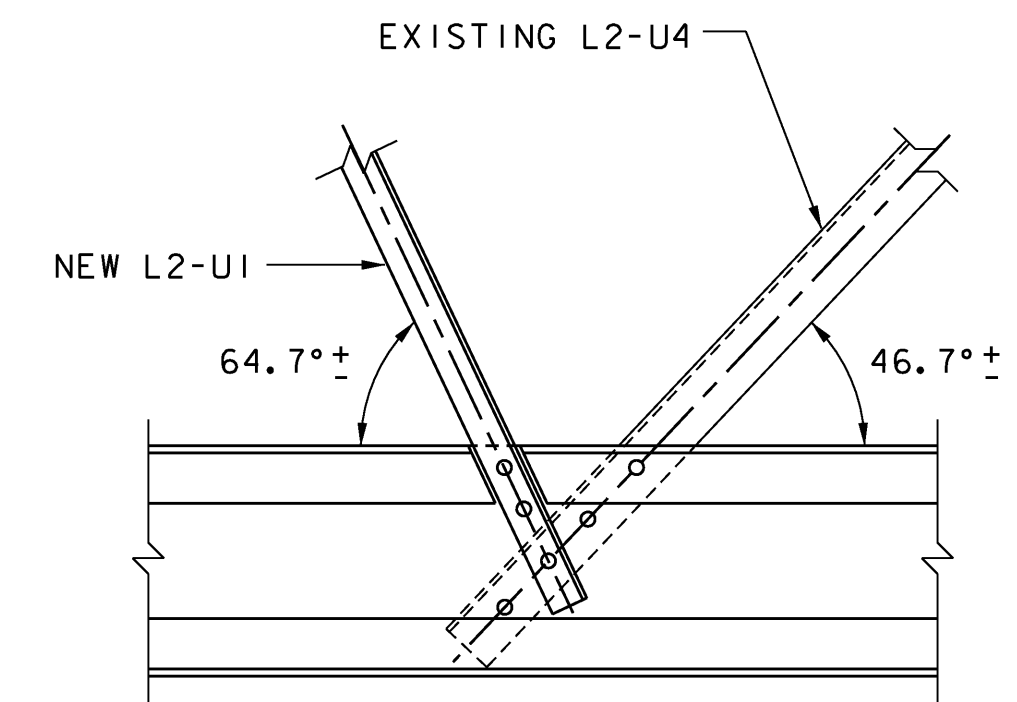


(END POST NOT SHOWN FOR CLARITY)

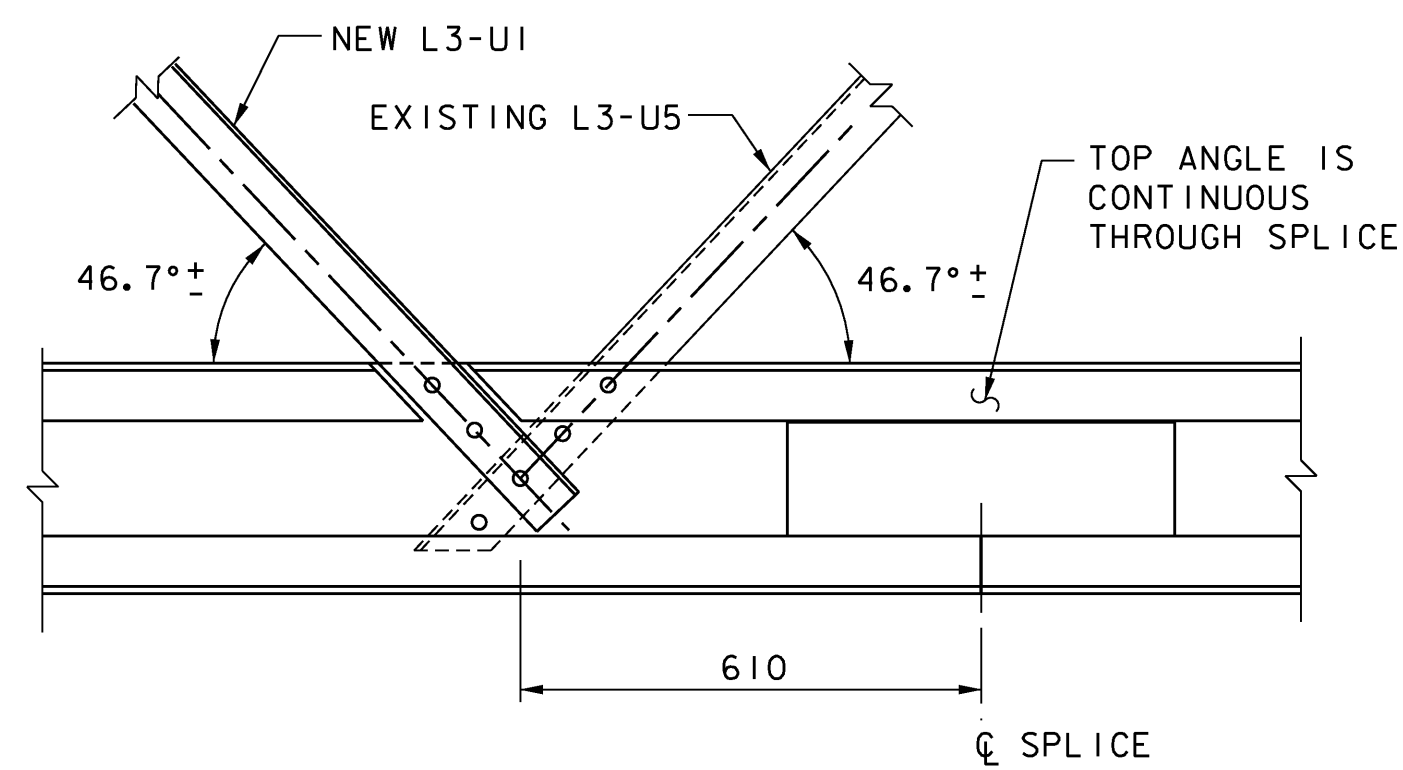
PANEL POINT L0



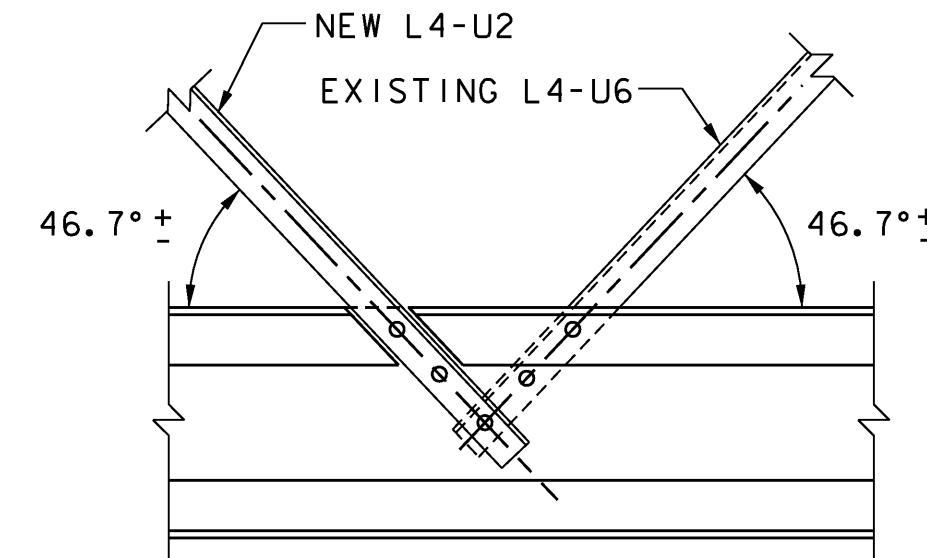
PANEL POINT L1



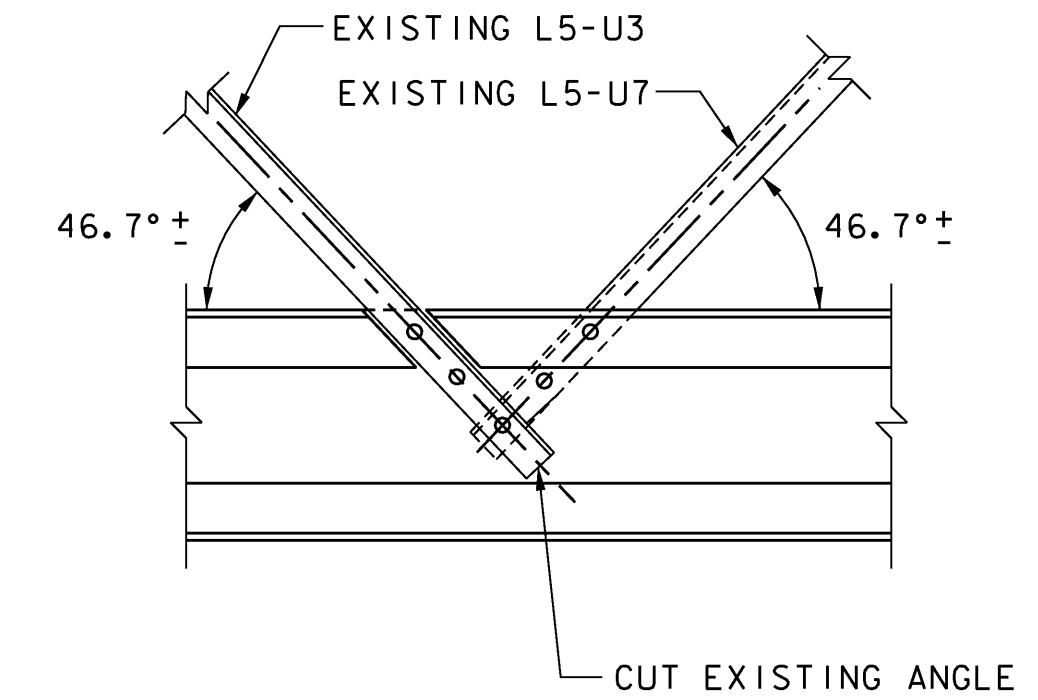
PANEL POINT L2



PANEL POINT L3



PANEL POINT L4

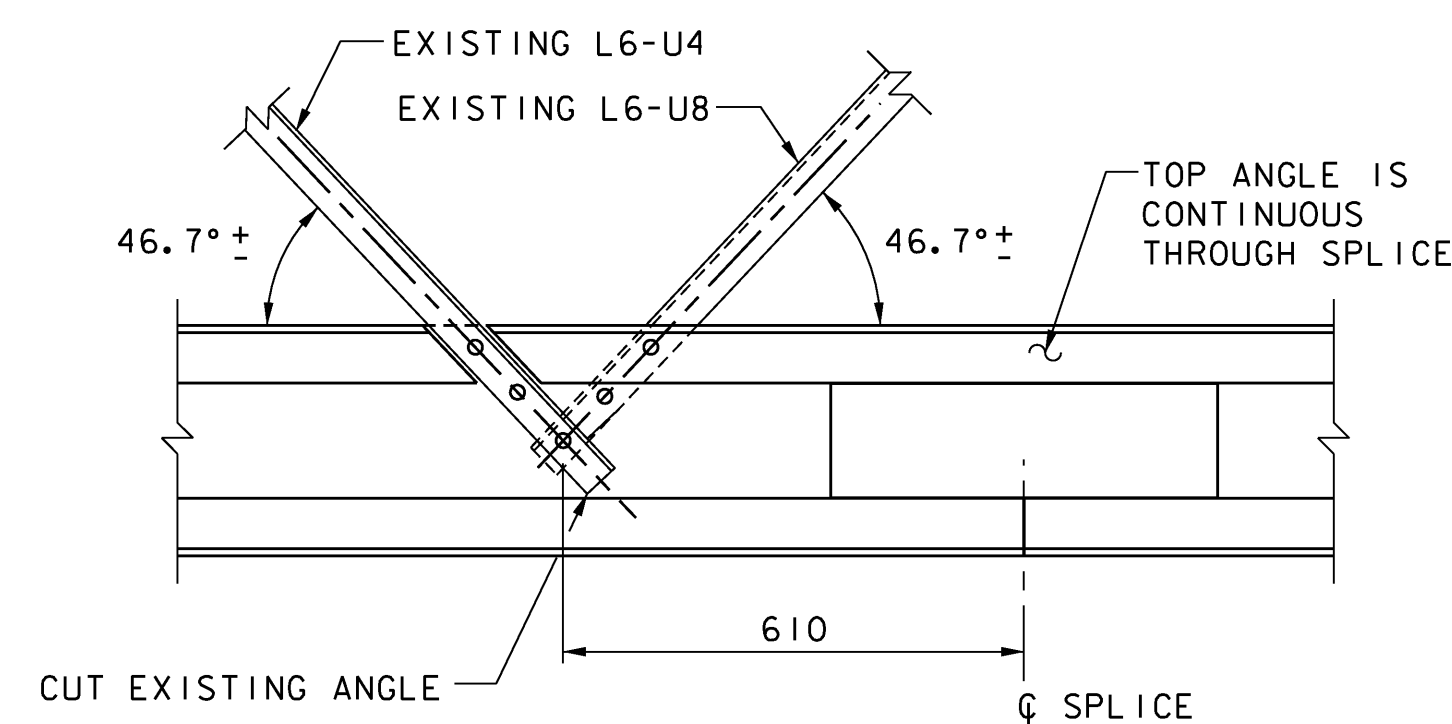


PANEL POINT L5

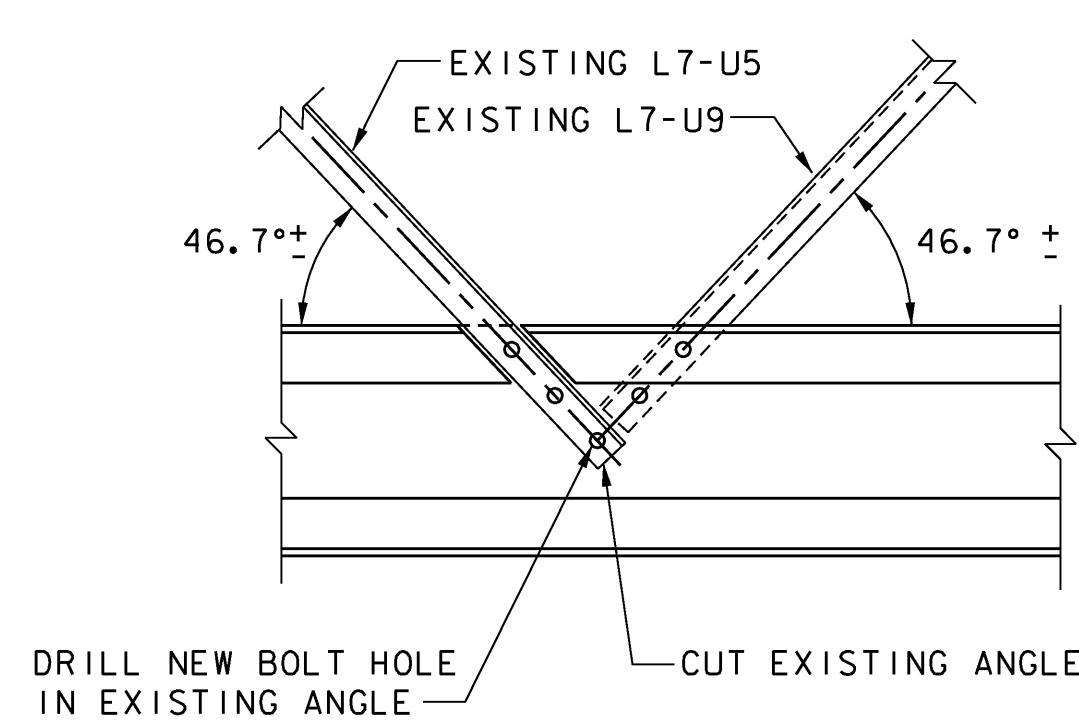
DIMENSIONS PROVIDED IN THESE PLANS SHALL NOT BE USED FOR FABRICATION PURPOSES. ALL NECESSARY DIMENSIONS AND CONFIGURATIONS SHALL BE DETERMINED FROM ACTUAL FIELD MEASUREMENTS.

NOTES:

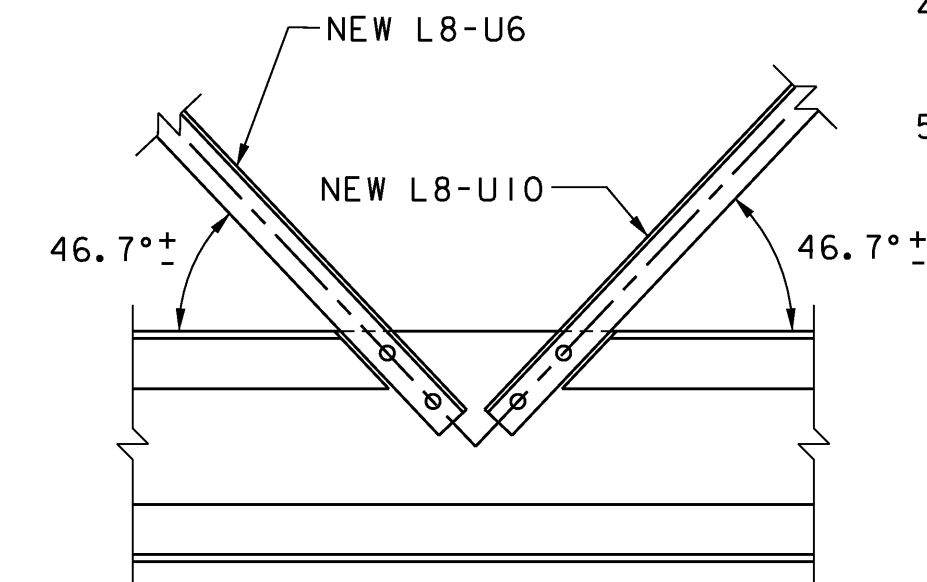
1. TRUSS IS SYMMETRICAL ABOUT PANEL POINT L8. PANEL POINT L9 TO L16 OPPOSITE HAND.
2. BOTTOM CHORD CONNECTIONS TO TRUSS DIAGONALS SHALL BE MADE WITH 19 Ø HEX-HEAD BOLTS.
3. EXISTING RIVET HOLES IN TRUSS DIAGONAL MEMBERS THAT ARE TO REMAIN SHALL BE USED IN CONNECTIONS TO NEW BOTTOM CHORD.
4. BOLT HOLES IN BOTTOM CHORD NOT SHOWN EXCEPT WHERE TRUSS DIAGONALS CONNECT.
5. CLIP ANGLES SHALL BE THE SAME SIZE AS THE ANGLES THEY CONNECT.



PANEL POINT L6



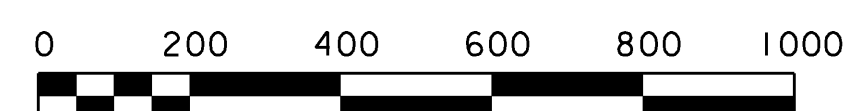
PANEL POINT L7



PANEL POINT L8

TRUSS BOTTOM CHORD CONNECTIONS

SCALE: 1:10



VANASSE HANGEN BRUSTLIN, INC.

**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

Town Of	DUMMERSTON	Bridge No.	37
Highway No.	TH 62	Log Sta.	
		Surv. Sta.	

TH 62 OVER WEST RIVER

TRUSS BOTTOM CHORD DETAILS

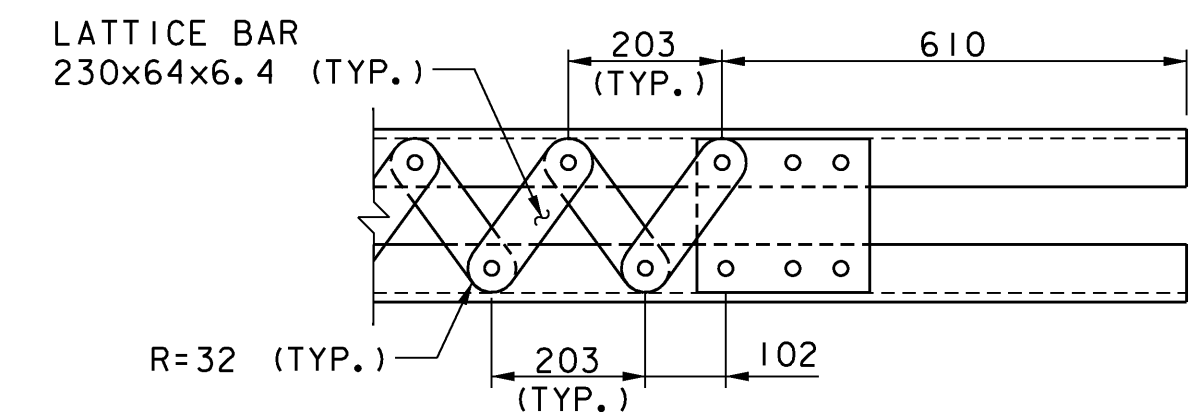
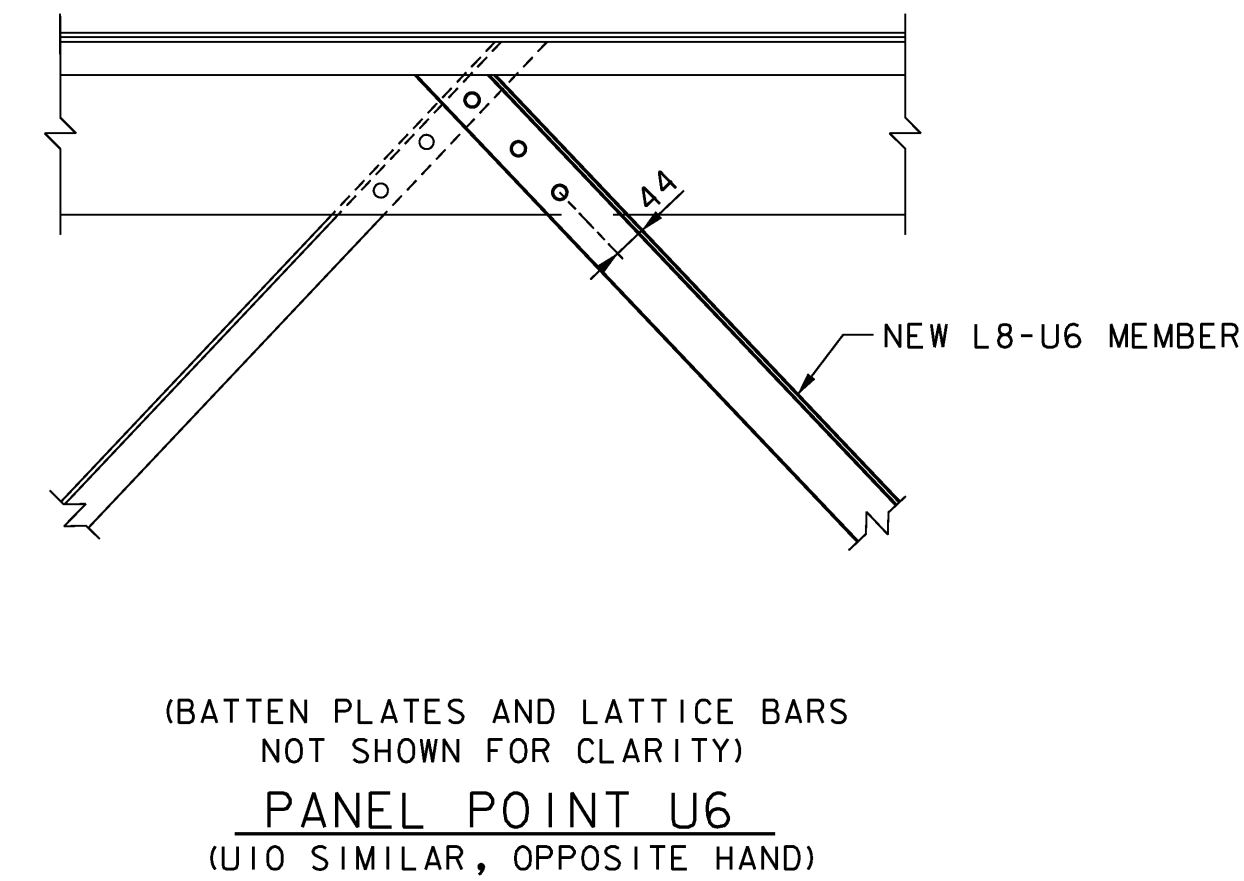
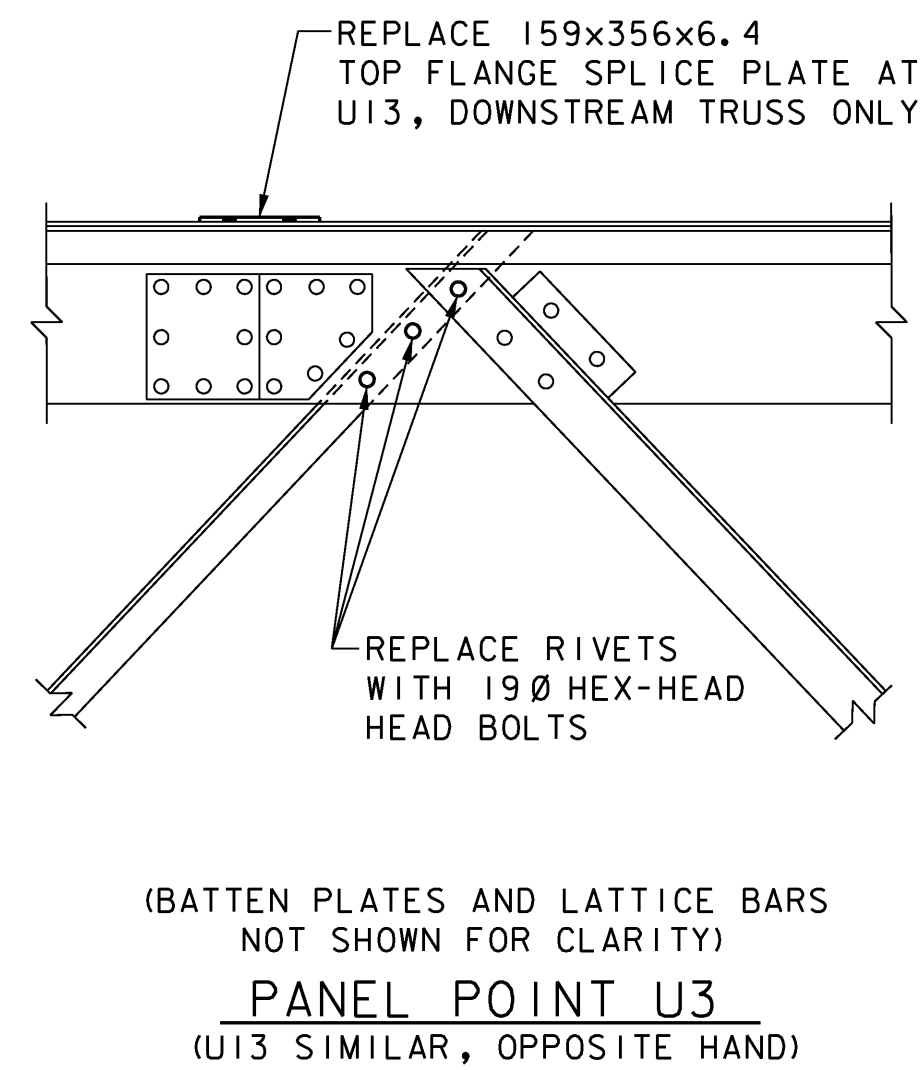
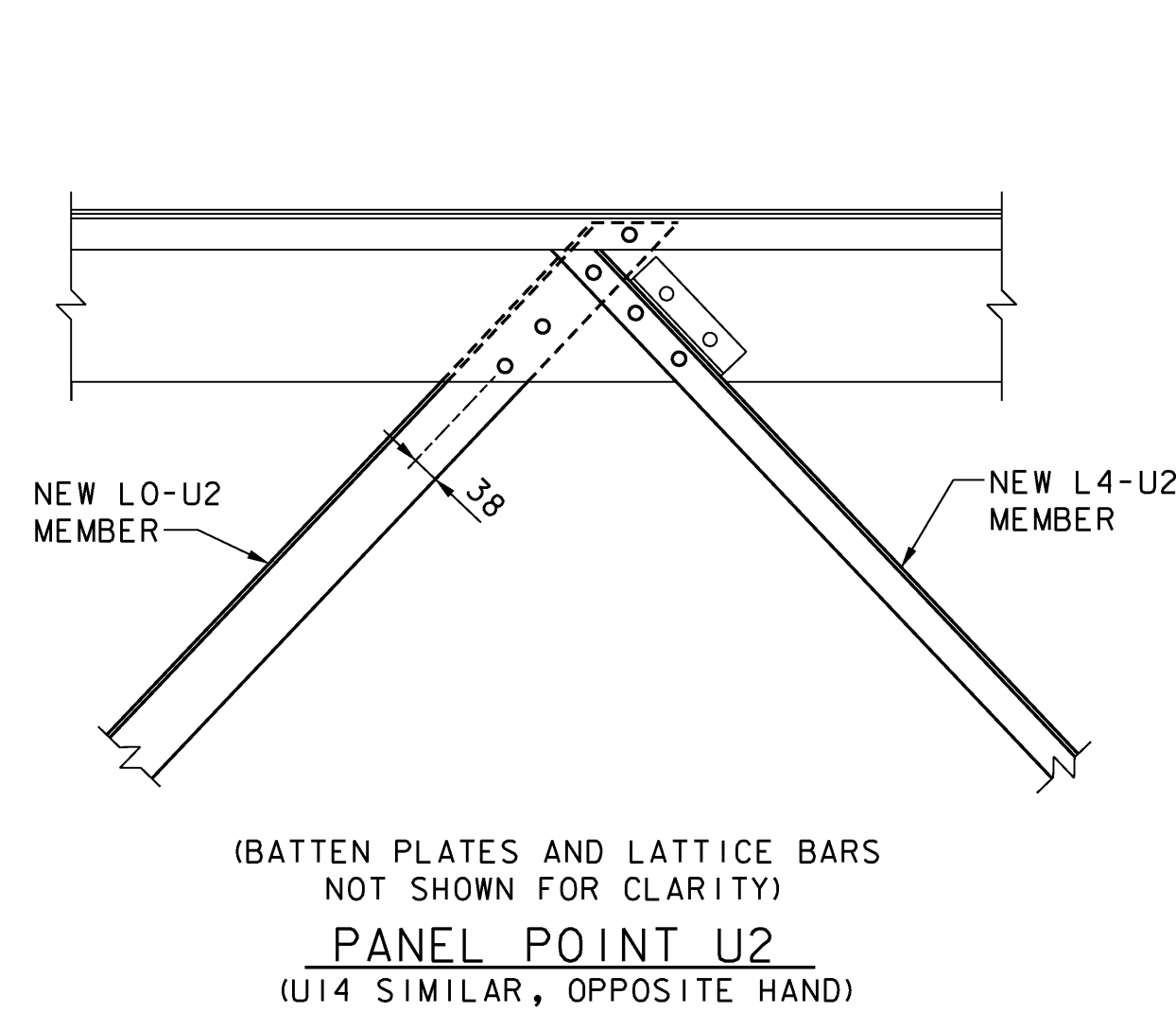
Designed By	A. J. CRAWFORD	Drawn By	B. J. MASSE
Checked By	T. S. BRYANT	Bridge Design Supervisor	S. M. HODGDON
Date	4/09	Date	4/09

PROJECT	DUMMERSTON	PROJECT NO.	BHO 1442 (28)
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I.G.C. Info.			
Bridge Sheet No.	ZJ080DT2	Sheet	18 of 49

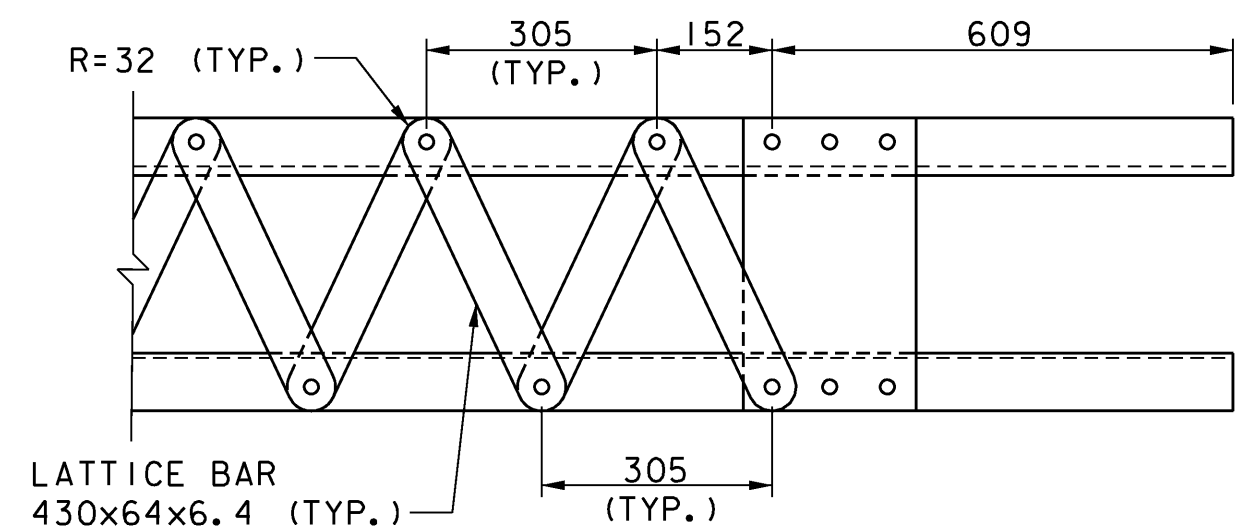
VHB NO. 5192

plot date: 4/3/2009



DETAIL A

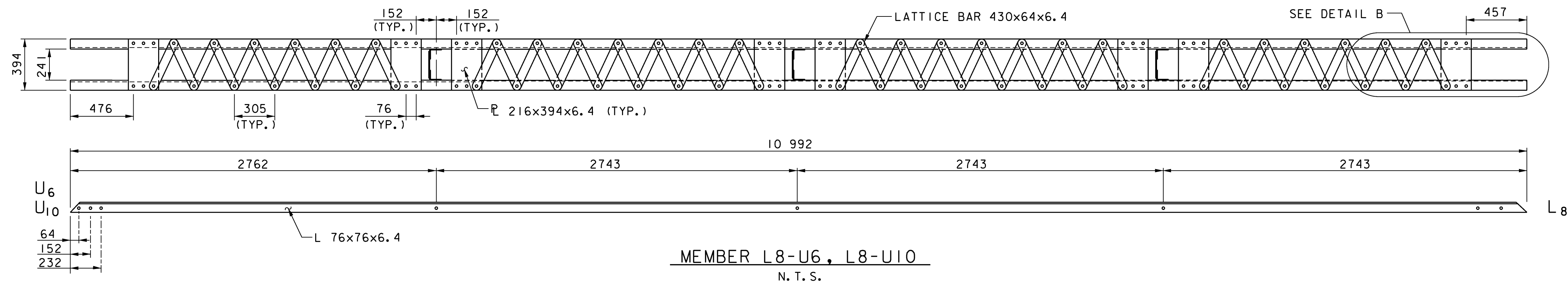
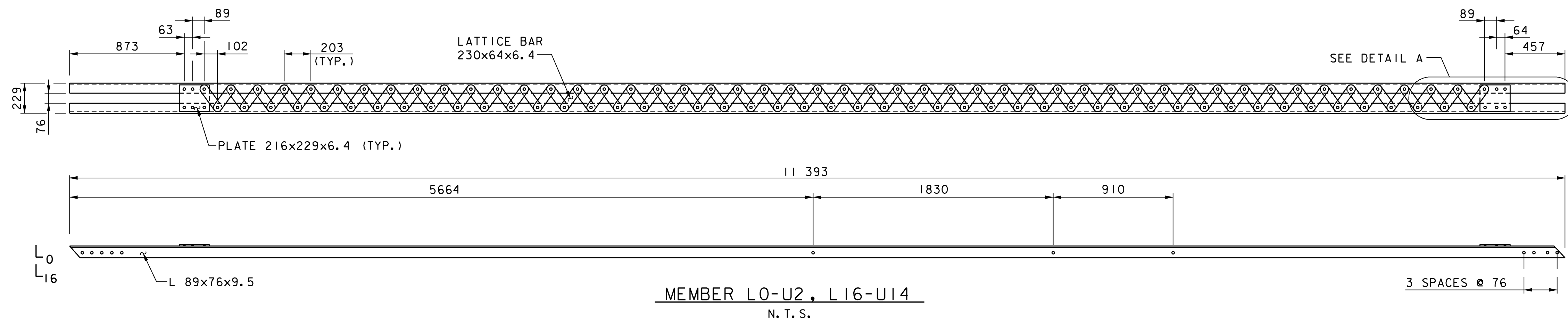
N. T. S.



DETAIL B

N. T. S.

DIMENSIONS PROVIDED IN THESE PLANS SHALL NOT BE USED FOR FABRICATION PURPOSES. ALL NECESSARY DIMENSIONS AND CONFIGURATIONS SHALL BE DETERMINED FROM ACTUAL FIELD MEASUREMENTS.

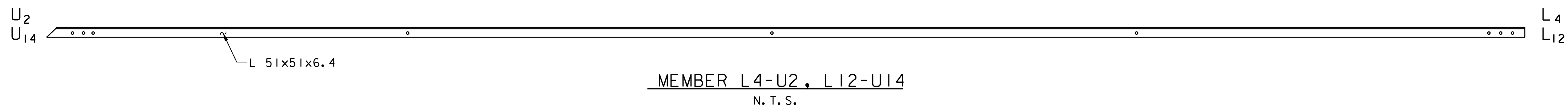
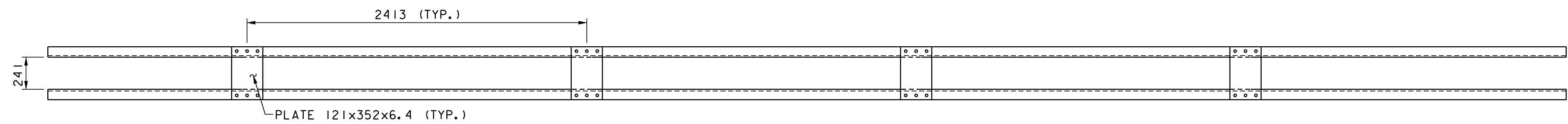
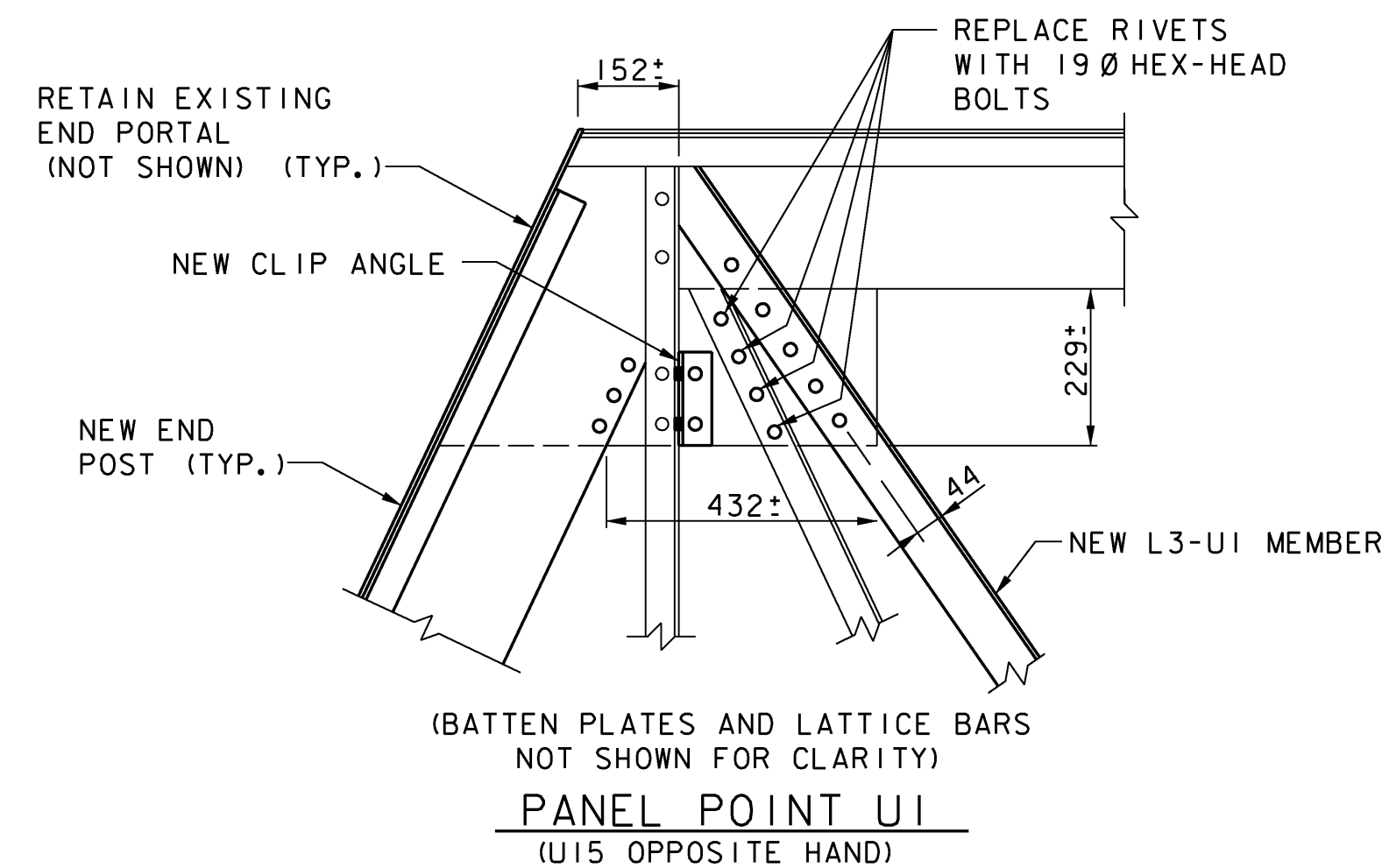


NOTES:

1. NEW TRUSS DIAGONAL MEMBERS SHALL BE CONNECTED TO TRUSS TOP CHORD WITH 19Ø HEX-HEAD BOLTS IN EXISTING RIVET HOLES.
2. BATTEN PLATES AND LATTICE BARS SHALL BE CONNECTED WITH 19Ø SLOTTED BUTTON HEAD BOLTS.

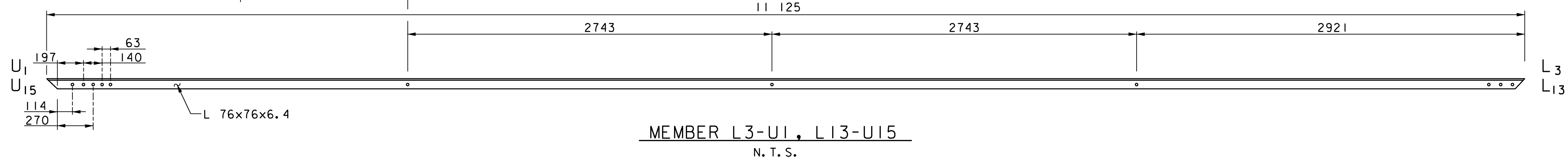
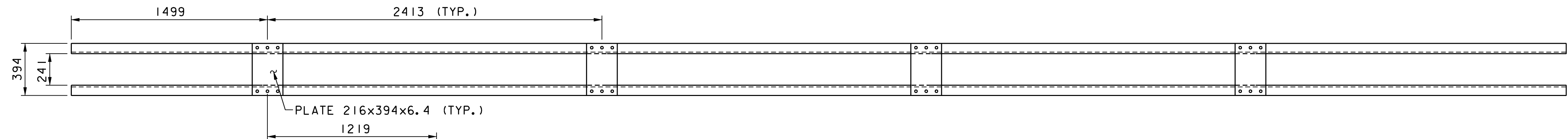
**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

Town Of	DUMMERSTON	Bridge No.	37
Highway No.	TH 62	Log Sta.	
		Surv. Sta.	
TH 62 OVER WEST RIVER			
TRUSS DIAGONAL DETAILS (SHEET 1 OF 2)			
Designed By	T. S. BRYANT	Drawn By	B. J. MASSE
Checked By	S. M. HODGDON	Bridge Design Supervisor	S. M. HODGDON
Date	4/09	Date	4/09
PROJECT	DUMMERSTON	PROJECT NO.	BHO 1442 (28)
I.C.G. Info.			
Bridge Sheet No.	ZJ080DT3	Sheet	19 of 49



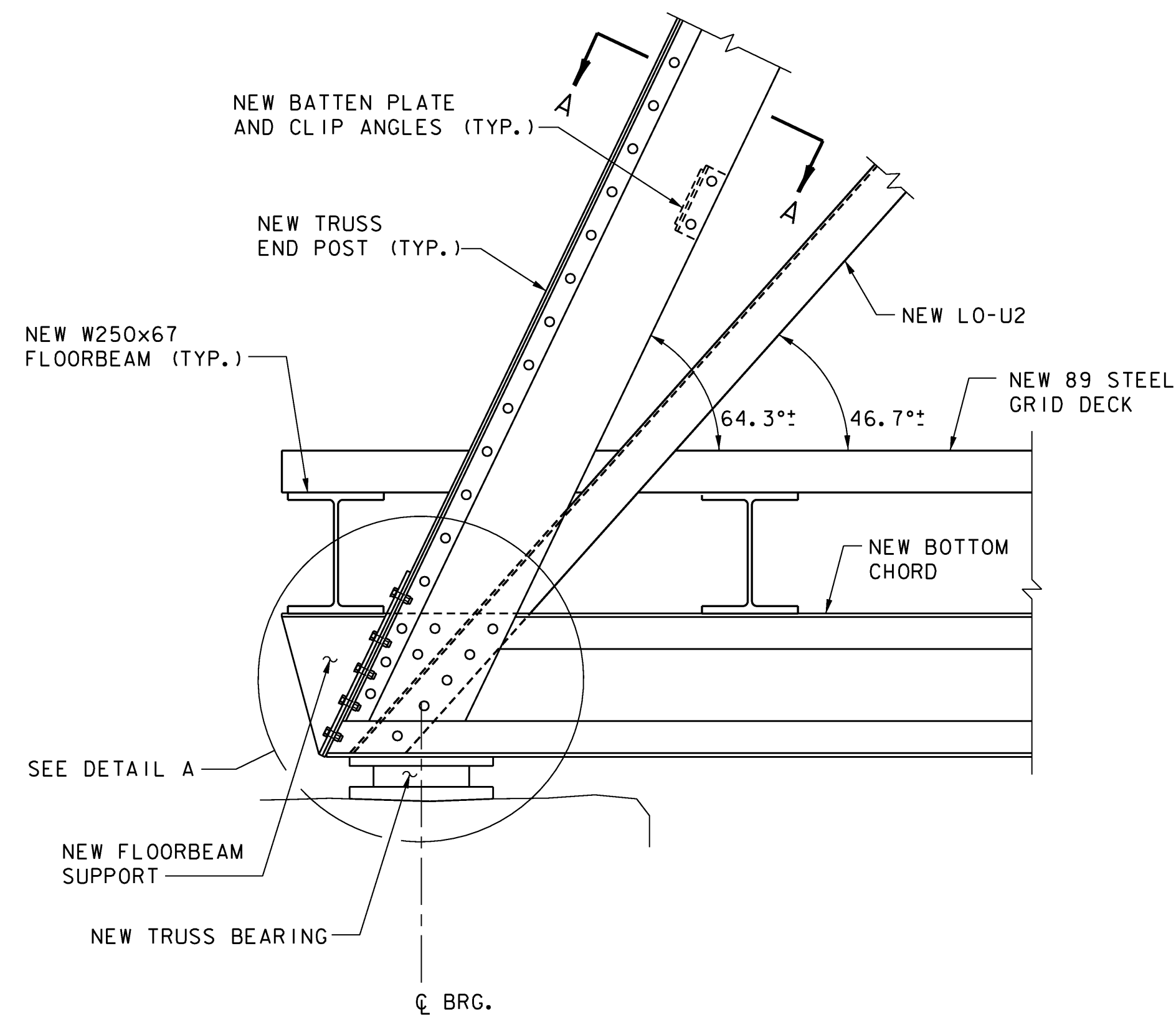
DIMENSIONS PROVIDED IN THESE PLANS SHALL NOT BE USED FOR FABRICATION PURPOSES. ALL NECESSARY DIMENSIONS AND CONFIGURATIONS SHALL BE DETERMINED FROM ACTUAL FIELD MEASUREMENTS.

- NOTES:
1. NEW TRUSS DIAGONAL MEMBERS SHALL BE CONNECTED TO TRUSS TOP CHORD WITH 19 Ø HEX-HEAD BOLTS IN EXISTING RIVET HOLES.
 2. BATTEN PLATES AND LATTICE BARS SHALL BE CONNECTED WITH 19 Ø SLOTTED BUTTON HEAD BOLTS.

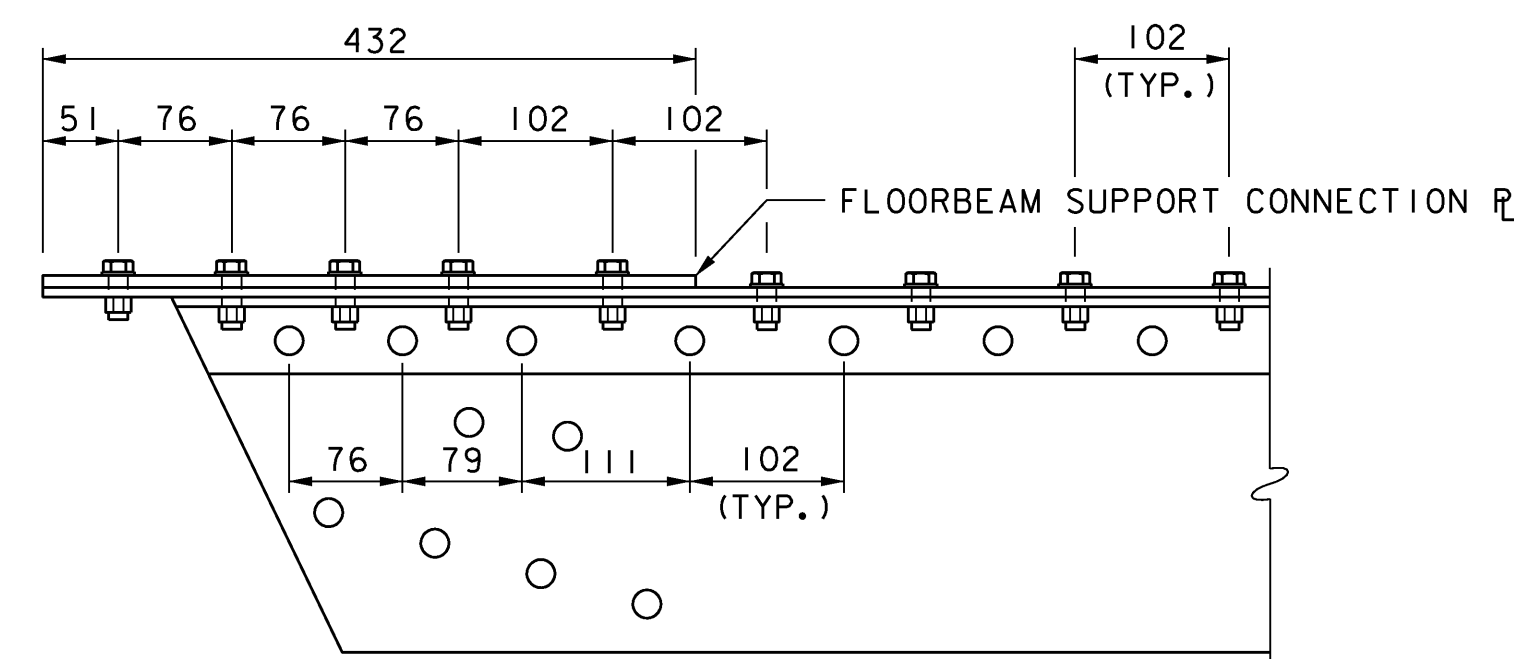
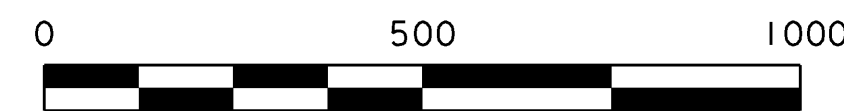


**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

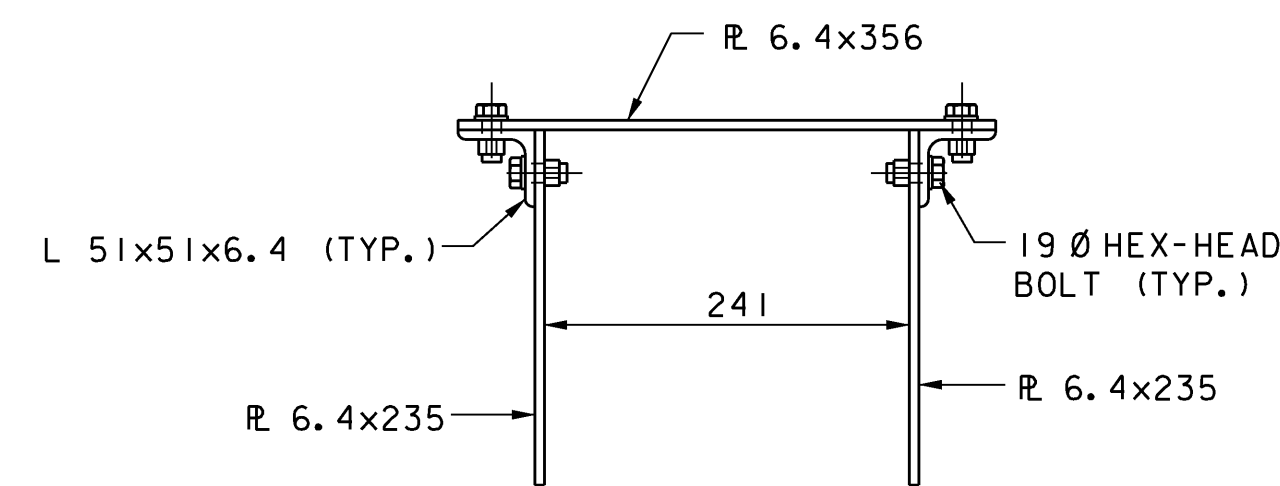
Town Of	DUMMERSTON	Bridge No.	37
Highway No.	TH 62	Log Sta.	
		Surv. Sta.	
TH 62 OVER WEST RIVER			
TRUSS DIAGONAL DETAILS (SHEET 2 OF 2)			
Designed By	T. S. BRYANT	Drawn By	C. L. CILLEY
Checked By	S. M. HODGDON	Bridge Design Supervisor	S. M. HODGDON
Date	4/09	Date	4/09
PROJECT	DUMMERSTON	PROJECT NO.	BHO 1442 (28)
I.G.C. Info.			
Bridge Sheet No.	ZJ080DT3	Sheet	20 of 49



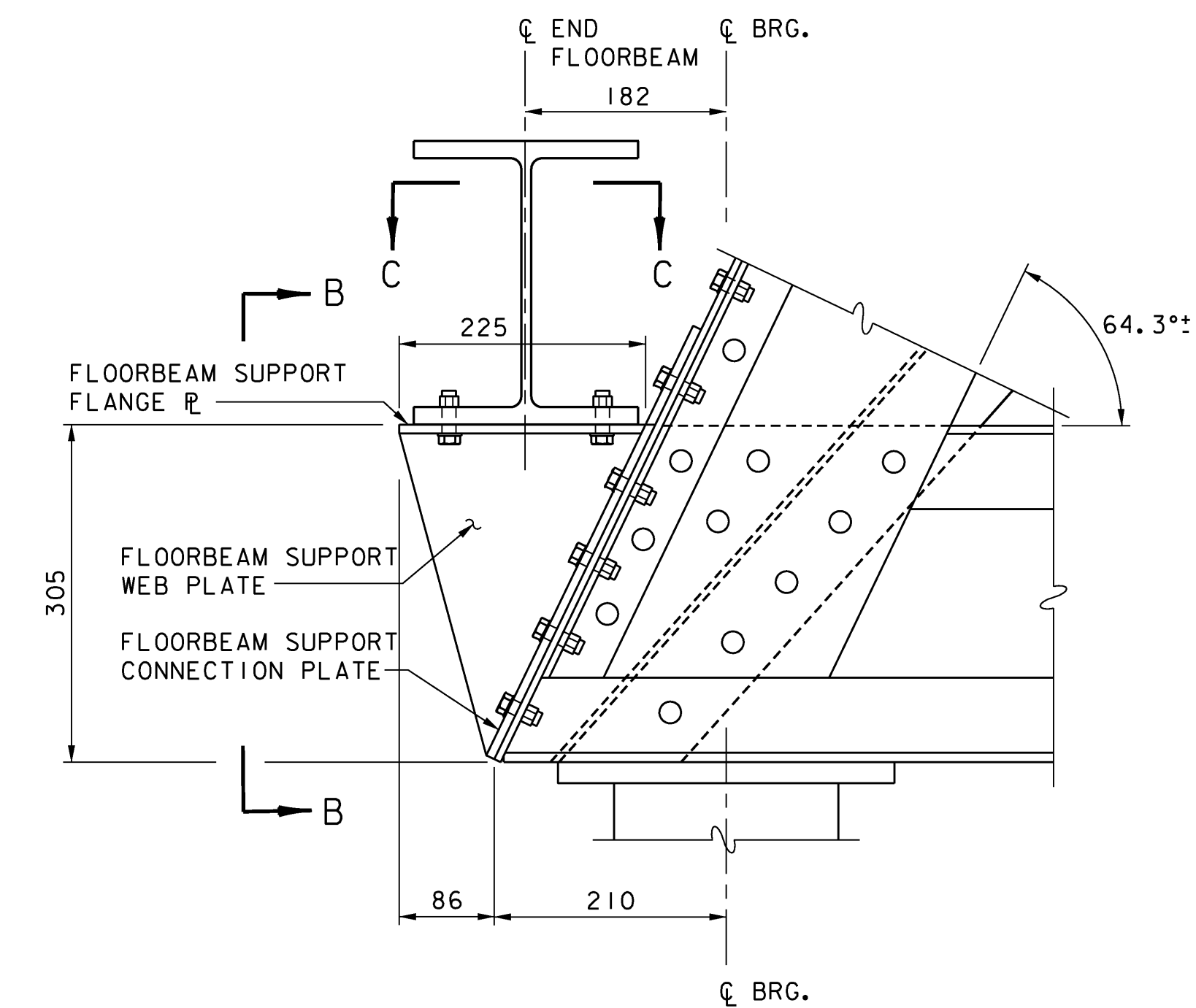
TYPICAL TRUSS END DETAIL
SCALE: 1:10



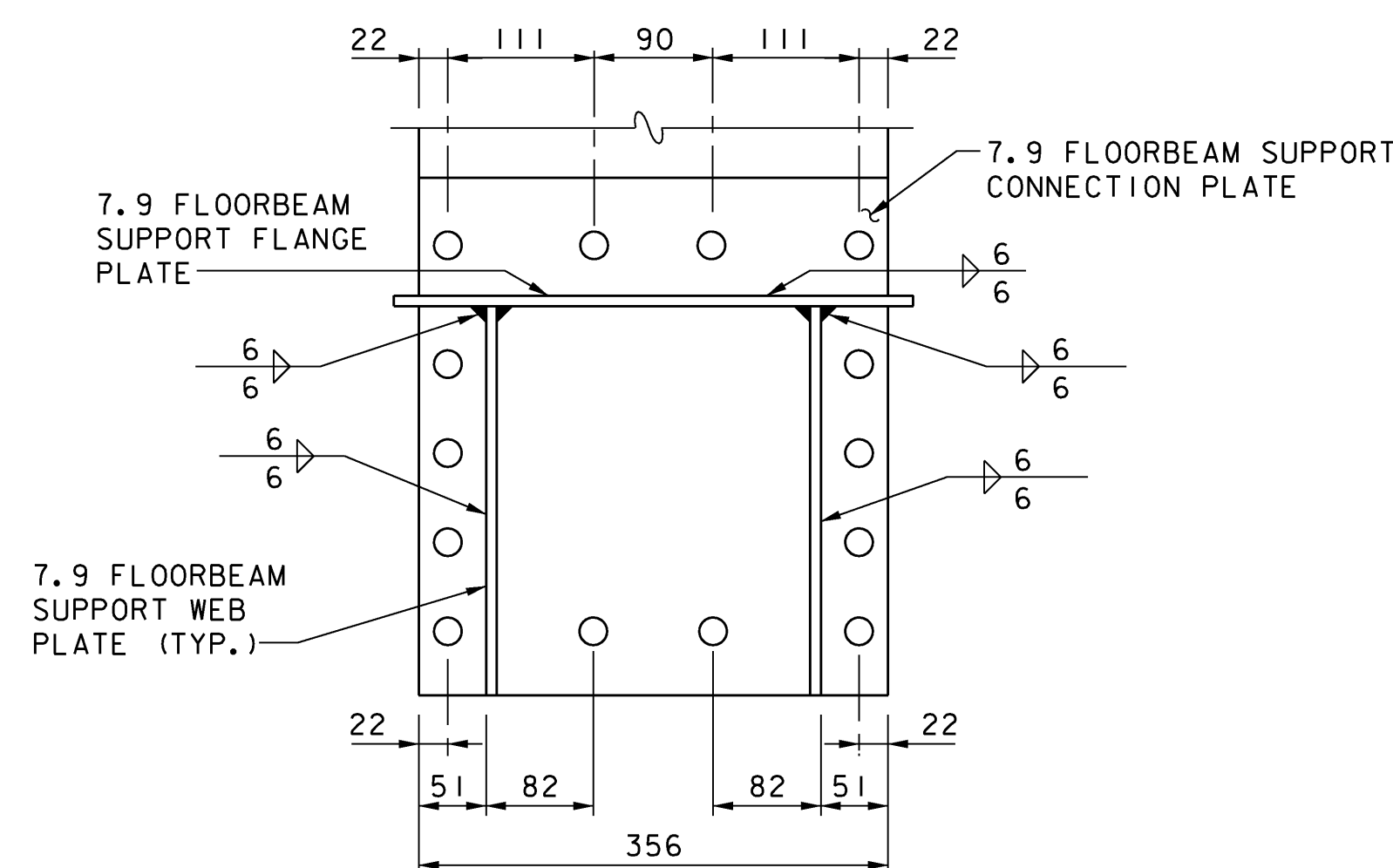
LOWER END POST DETAIL
SCALE: 1:5



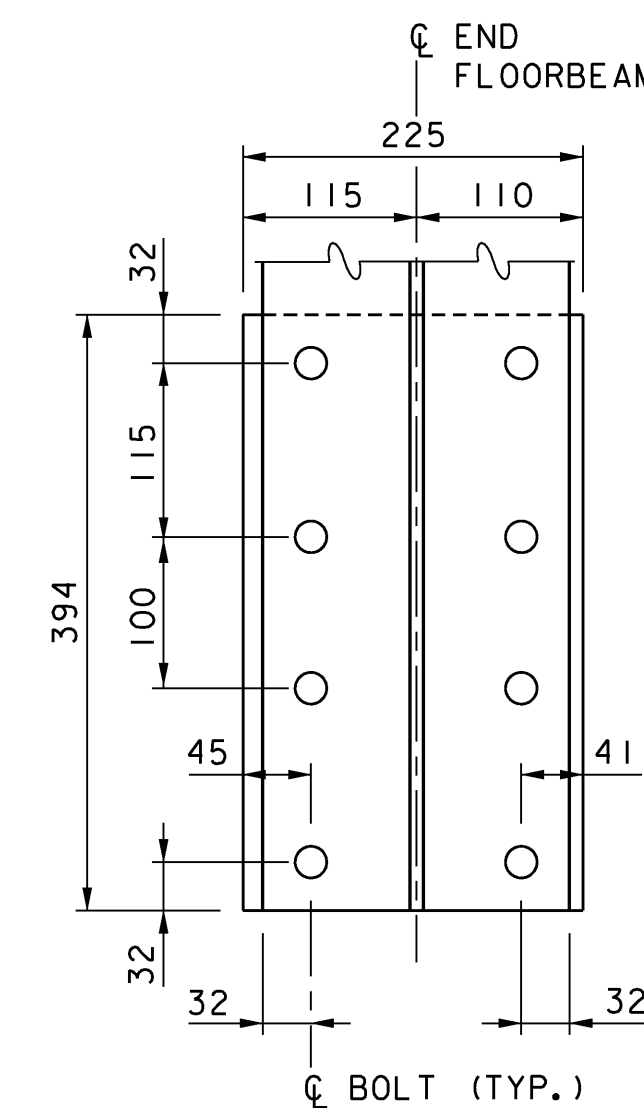
SECTION A-A
(BATTEN PLATE NOT SHOWN)
SCALE: 1:5



DETAIL A
SCALE: 1:5



VIEW B-B
SCALE: 1:5



SECTION C-C
SCALE: 1:5

- NOTES:**
1. BOLT HOLES IN BOTTOM CHORD NOT SHOWN EXCEPT FOR CONNECTIONS TO TRUSS DIAGONALS.

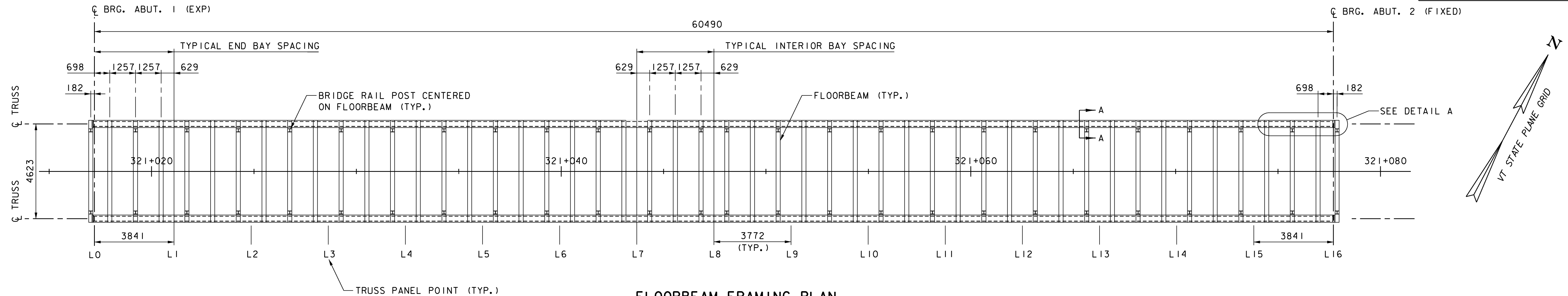
DIMENSIONS PROVIDED IN THESE PLANS SHALL NOT BE USED FOR FABRICATION PURPOSES. ALL NECESSARY DIMENSIONS AND CONFIGURATIONS SHALL BE DETERMINED FROM ACTUAL FIELD MEASUREMENTS.



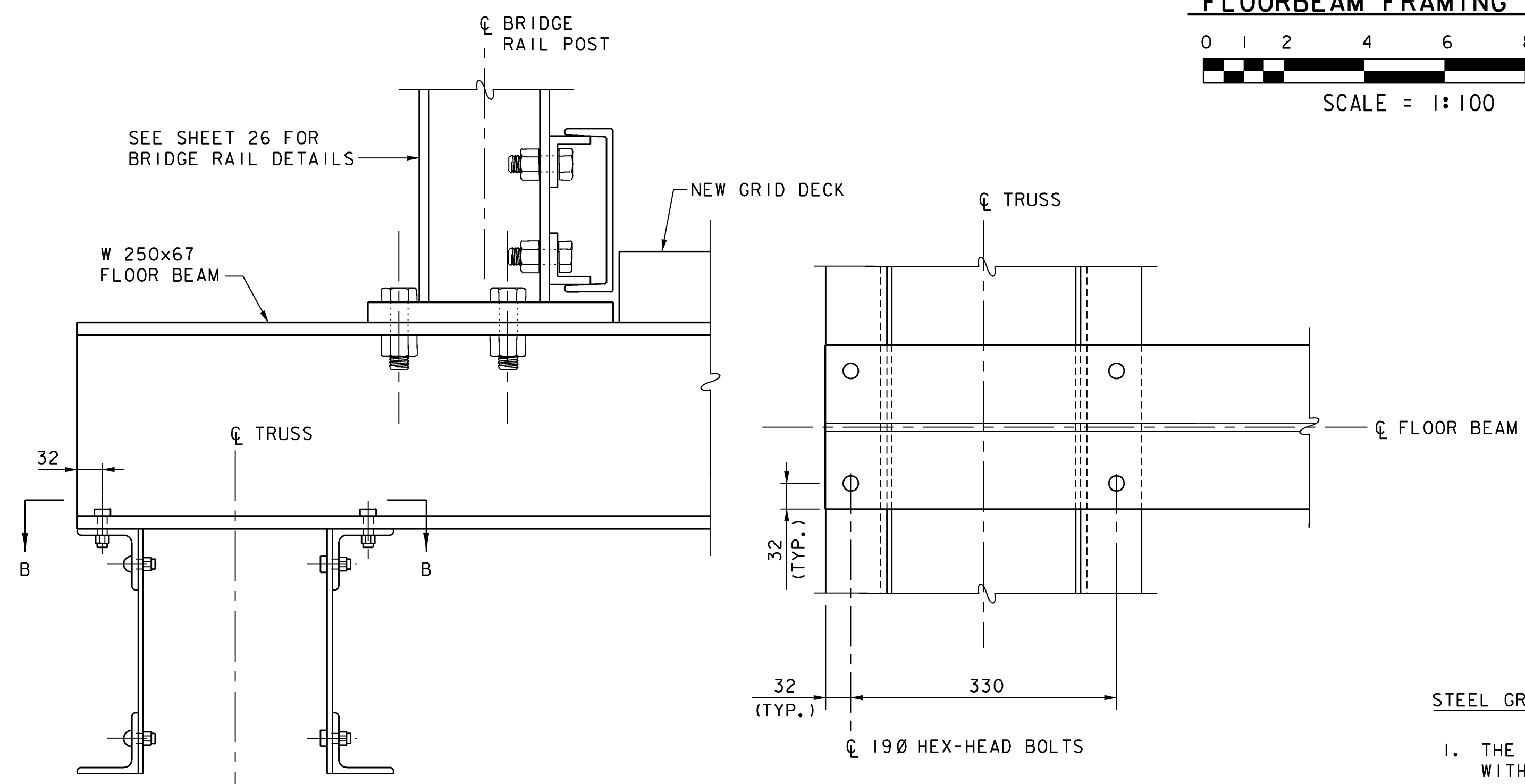
VANASSE HANGEN BRUSTLIN, INC.

STATE OF VERMONT AGENCY OF TRANSPORTATION

Town Of	DUMMERSTON	Bridge No.	37
Highway No.	TH 62	Log Sta.	
		Surv. Sta.	
TH 62 OVER WEST RIVER			
TRUSS END DETAILS			
Designed By	T. S. BRYANT	Drawn By	M. M. LANDRY
Checked By	Date	Bridge Design Supervisor	
S. M. HODGDON	4/09	S. M. HODGDON	Date 4/09
PROJECT	DUMMERSTON	PROJECT NO.	BHO 1442 (28)
I.G.C. Info.			
Bridge Sheet No.	ZJ080SS2	Sheet	21 of 49

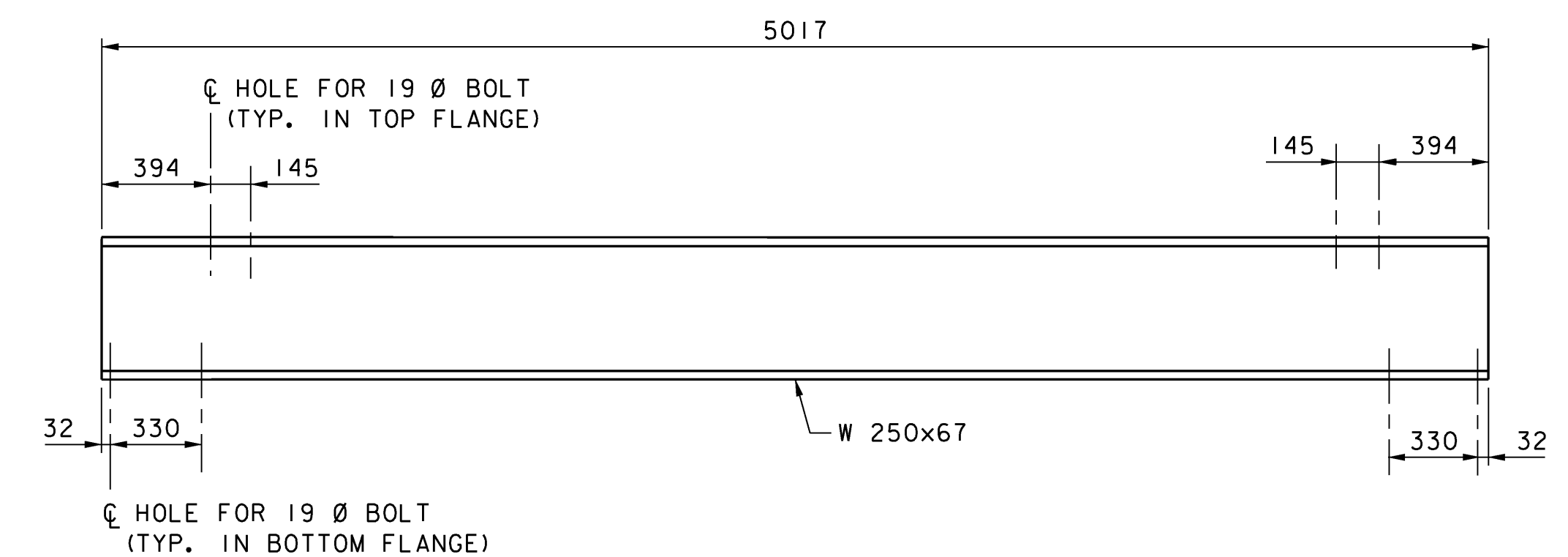


FLOORBEAM FRAMING PLAN
0 1 2 4 6 8 10
SCALE = 1:100

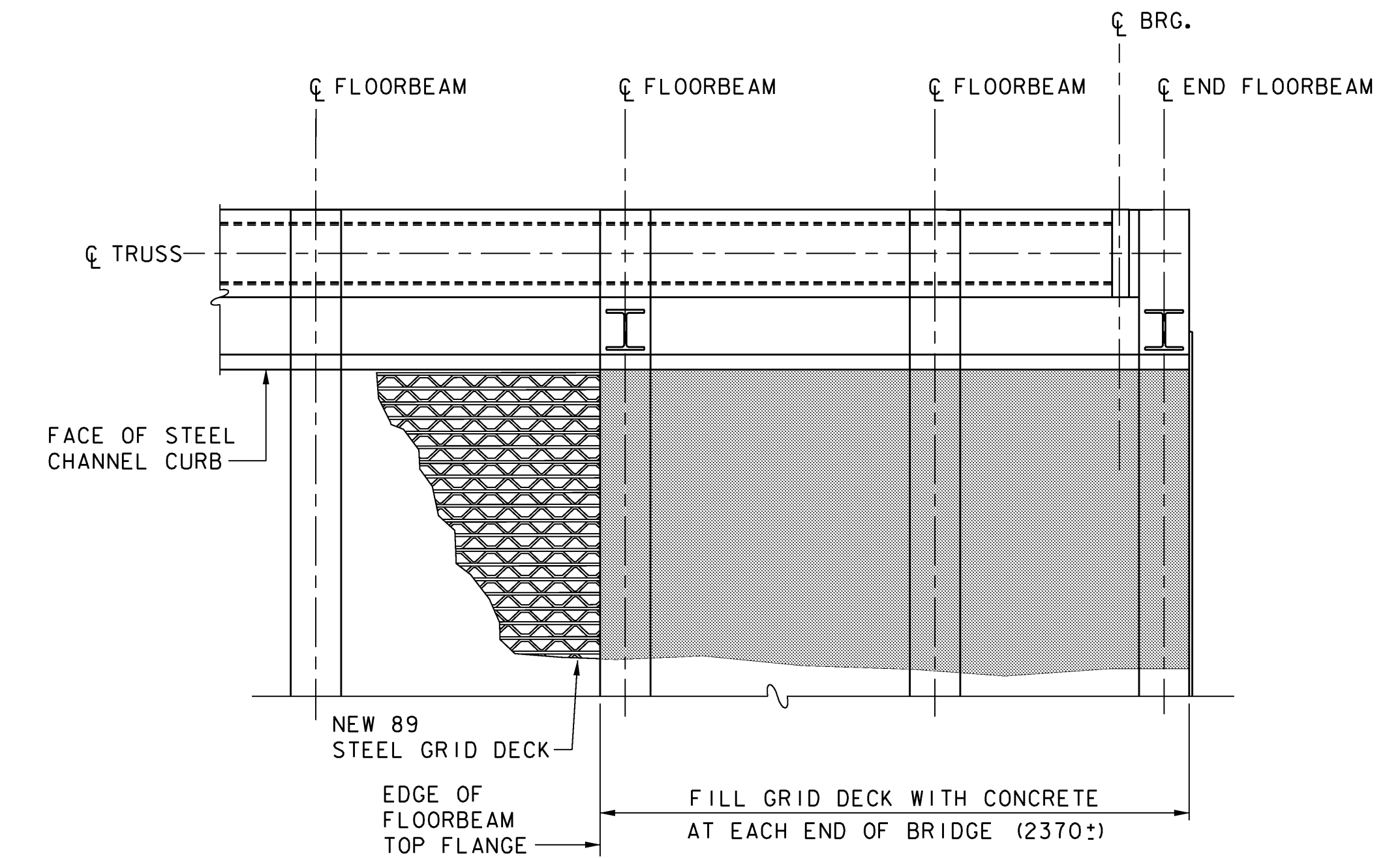


SECTION A-A
0 0.25 0.5
SCALE = 1:5

SECTION B-B



TYPICAL FLOORBEAM ELEVATION
0 1 2
SCALE = 1:20



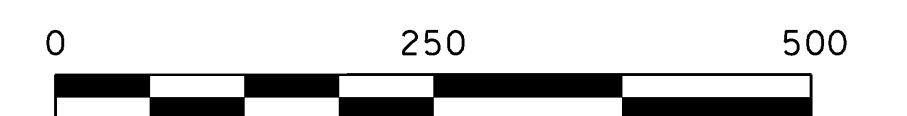
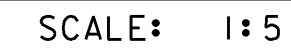
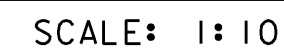
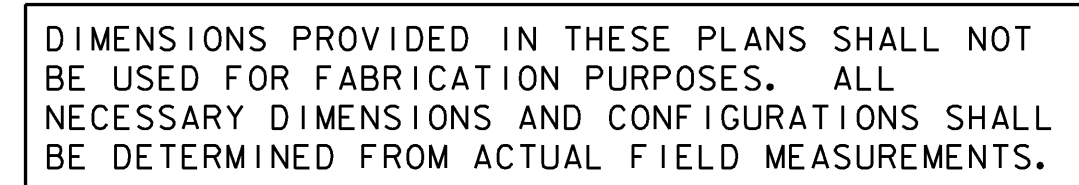
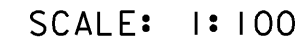
DETAIL A
0 1 2
SCALE = 1:20

STEEL GRID DECK NOTES:

1. THE NEW BRIDGE DECK SHALL BE STEEL GRID FLOORING WITH 89 mm HIGH BEARING BARS. THE GRID DECK SHALL BE DESIGNED FOR AASHTO M13.5 LIVE LOAD AND SHALL SPAN BETWEEN FLOORBEAMS. THE WIDTH, LENGTH, AND LAYOUT OF THE GRID DECK PANELS SHALL BE DETERMINED BY THE CONTRACTOR. DESIGN CALCULATIONS FOR THE STEEL GRID DECK SHALL BE STAMPED BY A LICENSED PROFESSIONAL ENGINEER AND SUBMITTED, ALONG WITH DETAILS OF PANEL SIZES AND LAYOUT, TO THE ENGINEER FOR REVIEW. SEE SECTION 900 OF THE SPECIAL PROVISIONS FOR STEEL GRID FLOORING.
2. THE MAIN BEARING BARS OF THE GRID DECK SHALL BE ATTACHED TO THE TOP FLANGE OF EACH FLOORBEAM WITH 6 mm X 40 mm LONG FILLET WELDS, SPACED AT 300 mm MAXIMUM ALONG THE FLOORBEAM. EACH GRID DECK PANEL SHALL HAVE A MINIMUM OF 4 ATTACHMENTS TO EACH FLOORBEAM.
3. THE ENTIRE WIDTH OF STEEL GRID DECK SHALL BE FILLED WITH CONCRETE, HIGH PERFORMANCE CLASS AA AT EACH END OF THE BRIDGE AS SHOWN ON THIS SHEET. THE CONCRETE SHALL BE PAID UNDER ITEM 501.32, CONCRETE, HIGH PERFORMANCE CLASS AA. THE CONCRETE SHALL BE STRUCK SMOOTH WITH THE TOP OF THE STEEL GRID DECK AND GIVEN A BROOM FINISH.
4. SEE SHEET 25 FOR DETAILS OF OPENINGS IN GRID DECK REQUIRED AT DECK END JOINTS.
5. THE GRID DECK SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH THE REQUIREMENTS OF AASHTO M 111M/M 111.

DIMENSIONS PROVIDED IN THESE PLANS SHALL NOT BE USED FOR FABRICATION PURPOSES. ALL NECESSARY DIMENSIONS AND CONFIGURATIONS SHALL BE DETERMINED FROM ACTUAL FIELD MEASUREMENTS.

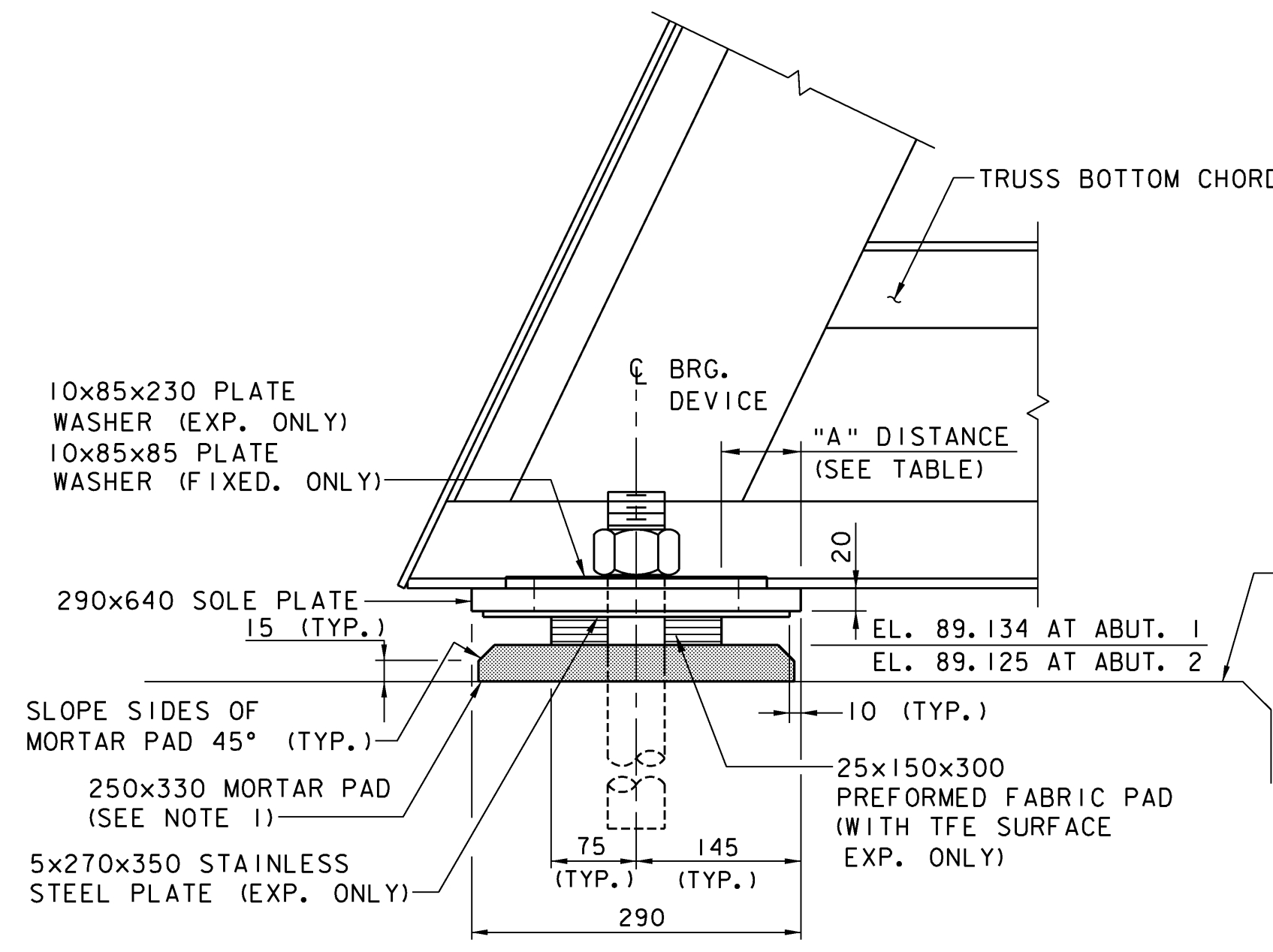
STATE OF VERMONT			
AGENCY OF TRANSPORTATION			
Town Of DUMMERSTON		Bridge No. 37	
Highway No. TH 62		Log Sta.	
		Surv. Sta.	
TH 62 OVER WEST RIVER			
FLOOR SYSTEM DETAILS			
Designed By T. S. BRYANT		Drawn By B. J. MASSE	
Checked By Date		Bridge Design Supervisor	
S. M. HODGDON 4/09		S. M. HODGDON Date 4/09	
PROJECT DUMMERSTON		PROJECT NO. BHO 1442 (28)	
I.G.C. Info.			
Bridge Sheet No. ZJ080DTI		Sheet 22 of 49	



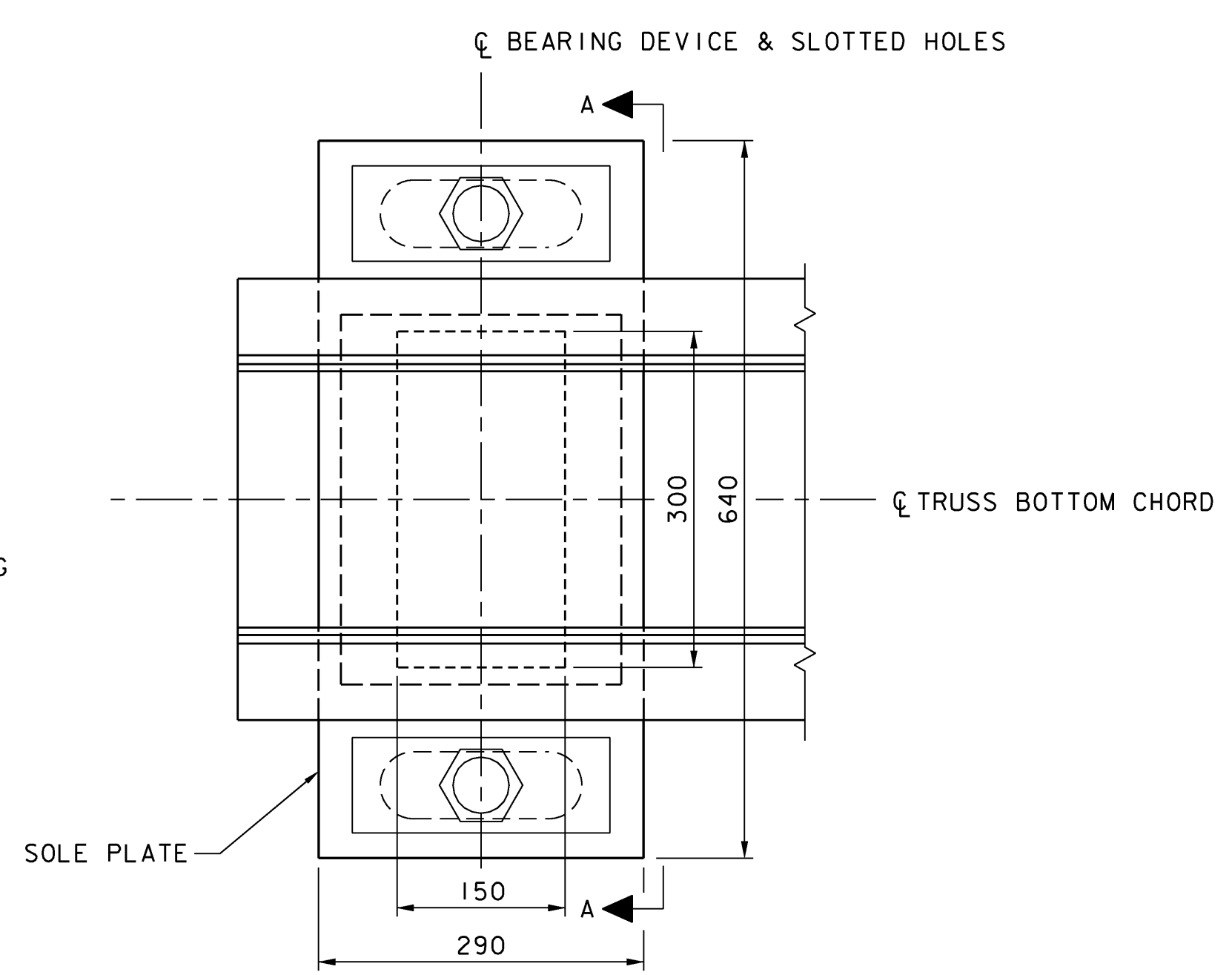
1. THE BOTTOM LATERAL BRACING LAYOUT IS SYMMETRICAL ABOUT TRUSS PANEL POINT LB.
2. ALL LATERAL BRACING ANGLES SHALL BE L 76x76x9.5. ALL GUSSET PLATES SHALL BE 9.5 mm THICK.
3. ALL LATERAL BRACING CONNECTIONS SHALL BE MADE WITH 19 DIAMETER AASHTO M164 TYPE 1 HEX-HEAD BOLTS.
4. SEE SHEET 24 FOR DETAILS A, B, C, & D.

Town Of	DUMMERSTON	Bridge No.	37
Highway No.	TH 62	Log Sta.	
		Surv. Sta.	

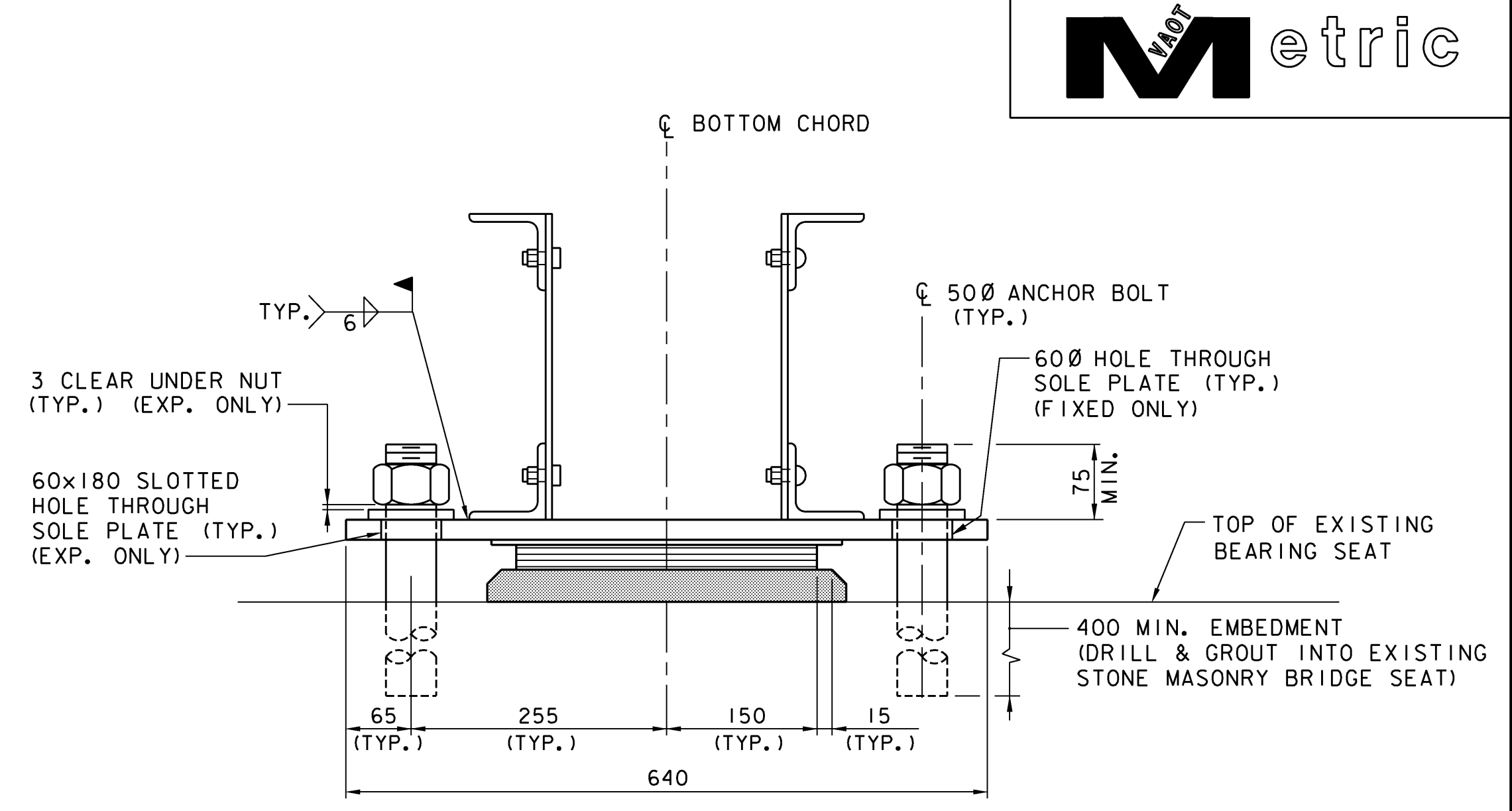
plot date: 4/3/2009



ELEVATION



PLAN

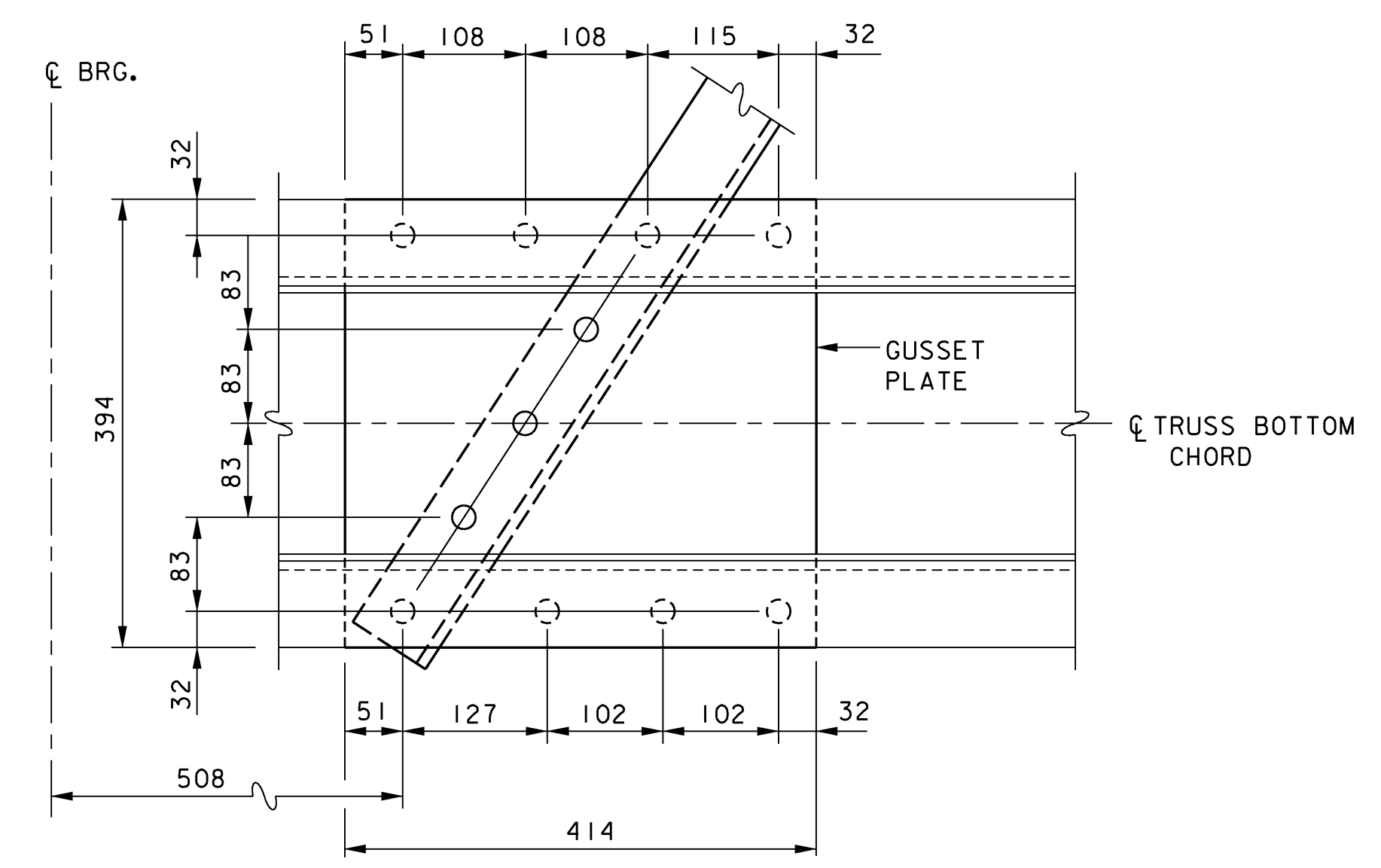


SECTION A-A

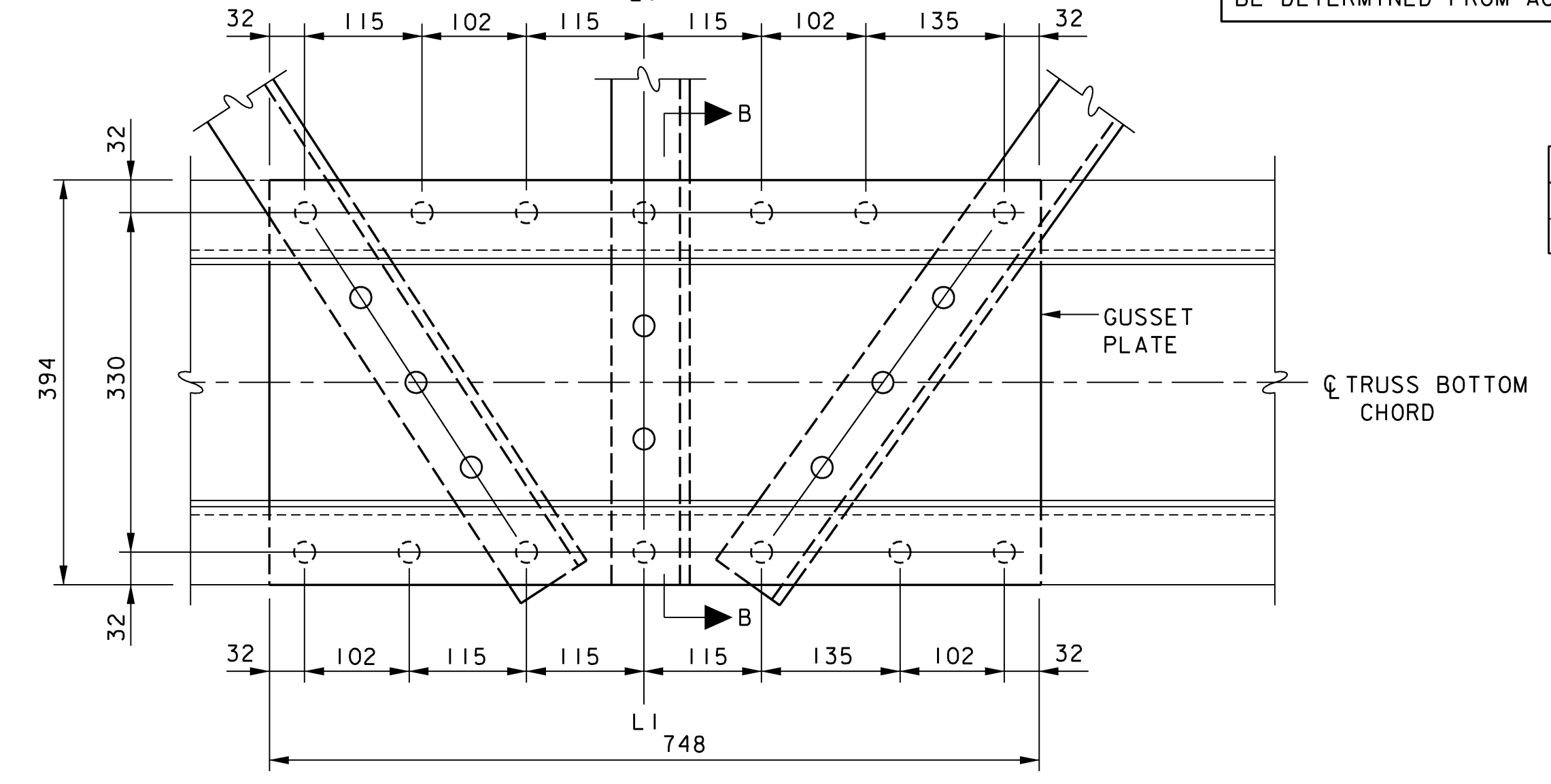
EXPANSION BEARINGS (ABUT. NO. 1)

(FIXED BEARING SIMILAR)
SCALE: 1:5

DIMENSIONS PROVIDED IN THESE PLANS SHALL NOT BE USED FOR FABRICATION PURPOSES. ALL NECESSARY DIMENSIONS AND CONFIGURATIONS SHALL BE DETERMINED FROM ACTUAL FIELD MEASUREMENTS.



DETAIL A
SCALE: 1:5



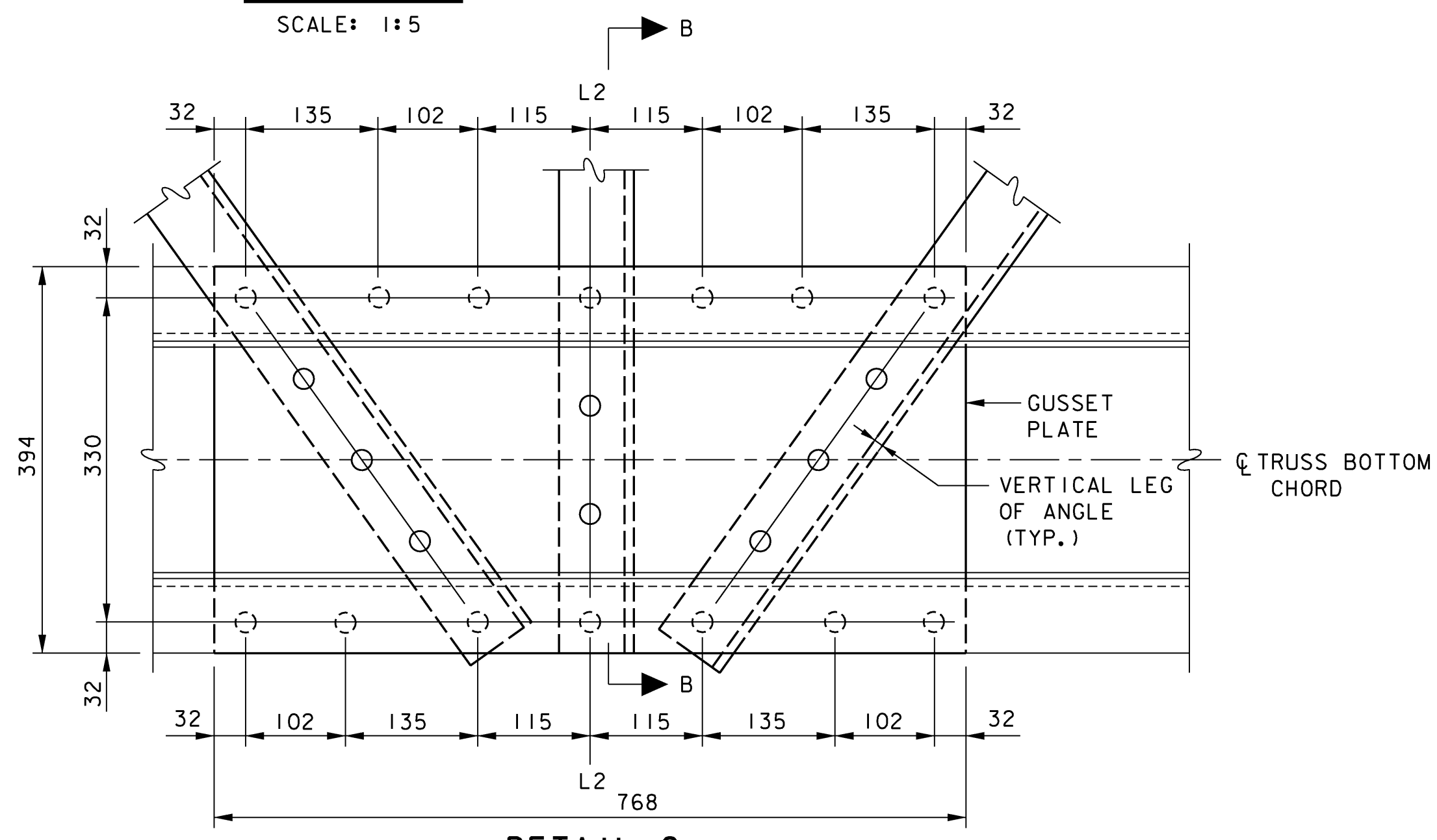
DETAIL B
SCALE: 1:5

REACTIONS (KILONEWTONS)	
LIVE LOAD	89
DEAD LOAD	222

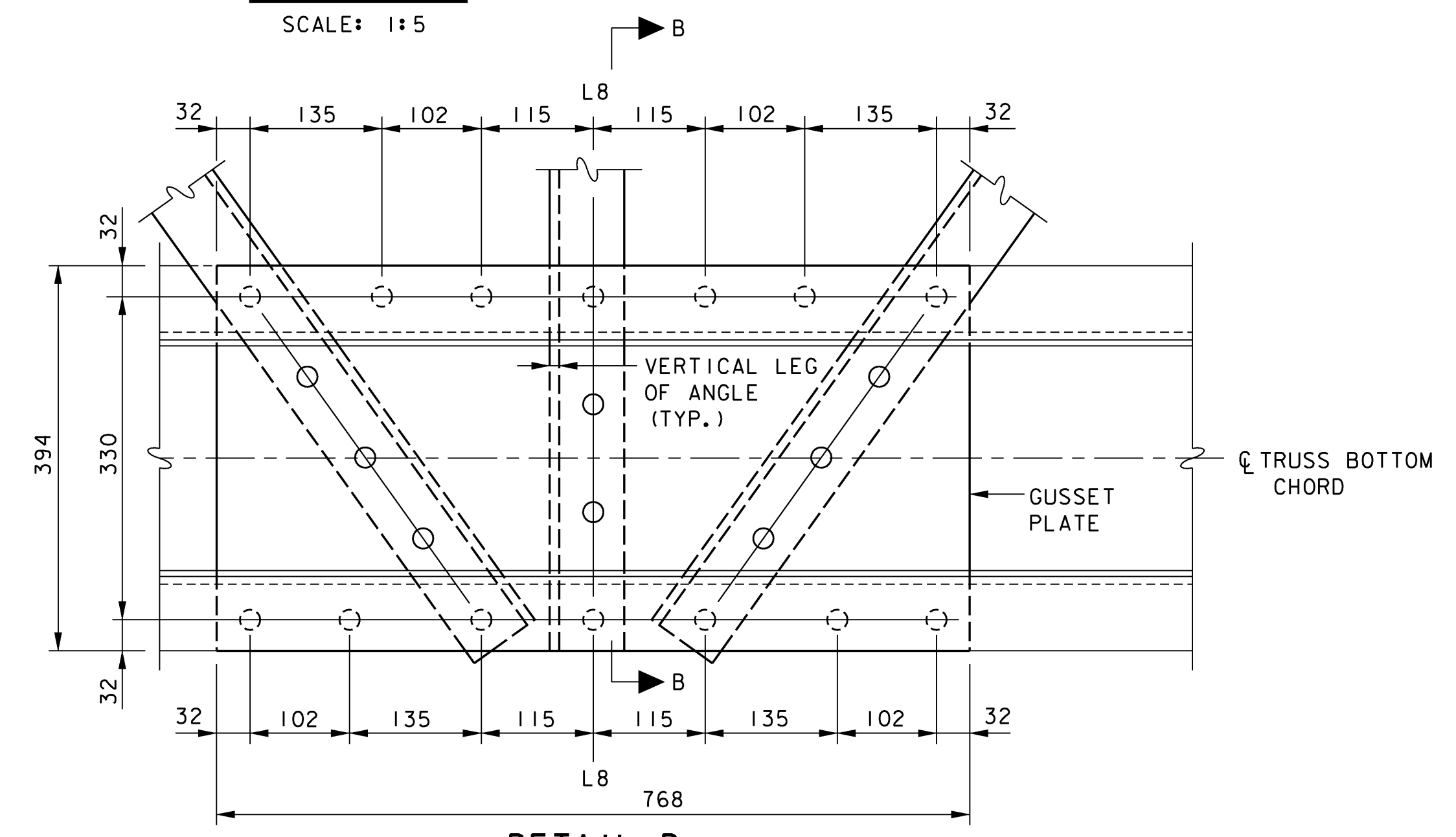
EXPANSION BEARING TEMPERATURE ADJUSTMENT TABLE	
TEMPERATURE	ABUT. NO. 1 "A"
-18° C	88
-9° C	81
-1° C	76
7° C	70
16° C	64
24° C	58
32° C	52
41° C	46

NOTES:

- HIGH STRENGTH NON-SHRINK MORTAR PADS SHALL BE PLACED UNDER EACH BEARING TO PROVIDE A SMOOTH LEVEL SURFACE AT THE PROPOSED ELEVATION FOR THE FABRIC PAD TO BEAR ON. ALL COSTS FOR THE MORTAR PADS SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 531.10, BEARING DEVICE ASSEMBLY, PREFORMED FABRIC PAD. GROUT MATERIAL SHALL BE MORTAR, TYPE IV, CONFORMING TO SUBSECTION 707.03 OF THE SPECIFICATIONS.
- SEE SHEET 16 FOR ADDITIONAL BEARING NOTES.
- SEE SHEET 23 FOR LOCATIONS OF DETAILS A, B, C, & D.
- SEE SHEET 23 FOR SECTION B-B.



DETAIL C
SCALE: 1:5



DETAIL D
SCALE: 1:5

VANASSE HANGEN BRUSTLIN, INC.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of **DUMMERSTON** Bridge No. **37**

Highway No. **TH 62** Log Sta. **Surv. Sta.**

TH 62 OVER WEST RIVER

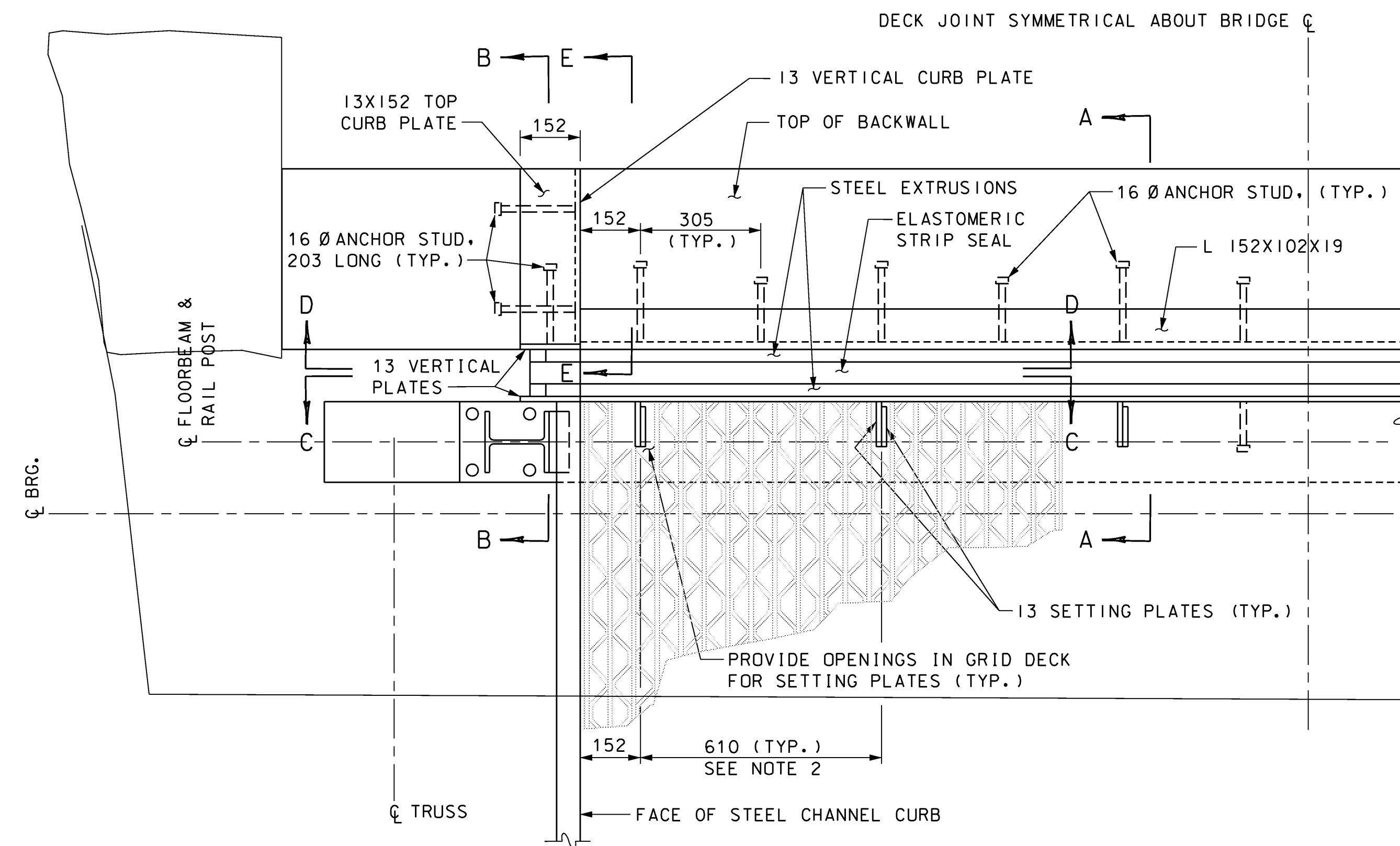
LATERAL BRACING & BEARING DETAILS

Designed By **W. M. MOSHER** Drawn By **M. M. LANDREY**

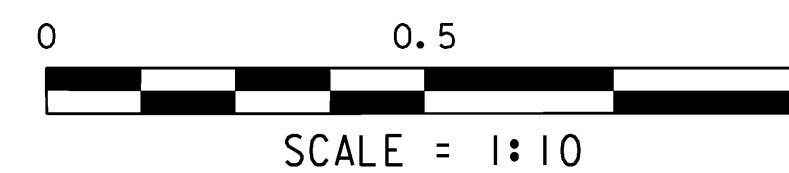
Checked By **S. M. HODGDON** Date **4/09** Bridge Design Supervisor **S. M. HODGDON** Date **4/09**

PROJECT **DUMMERSTON** PROJECT NO. **BHO 1442 (28)**

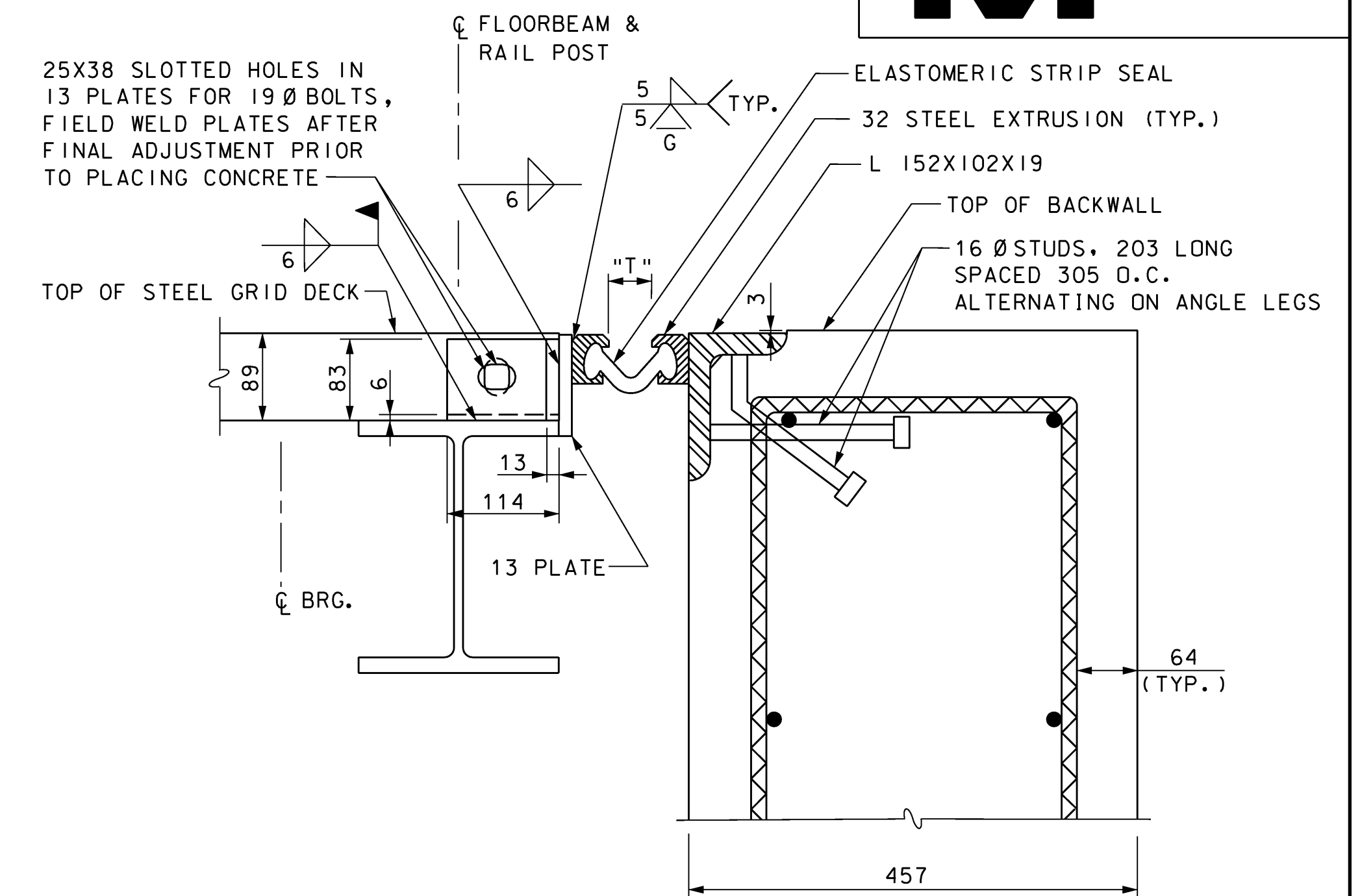
I.G.C. Info. Bridge Sheet No. **ZJ08BRG** Sheet **24 of 49**



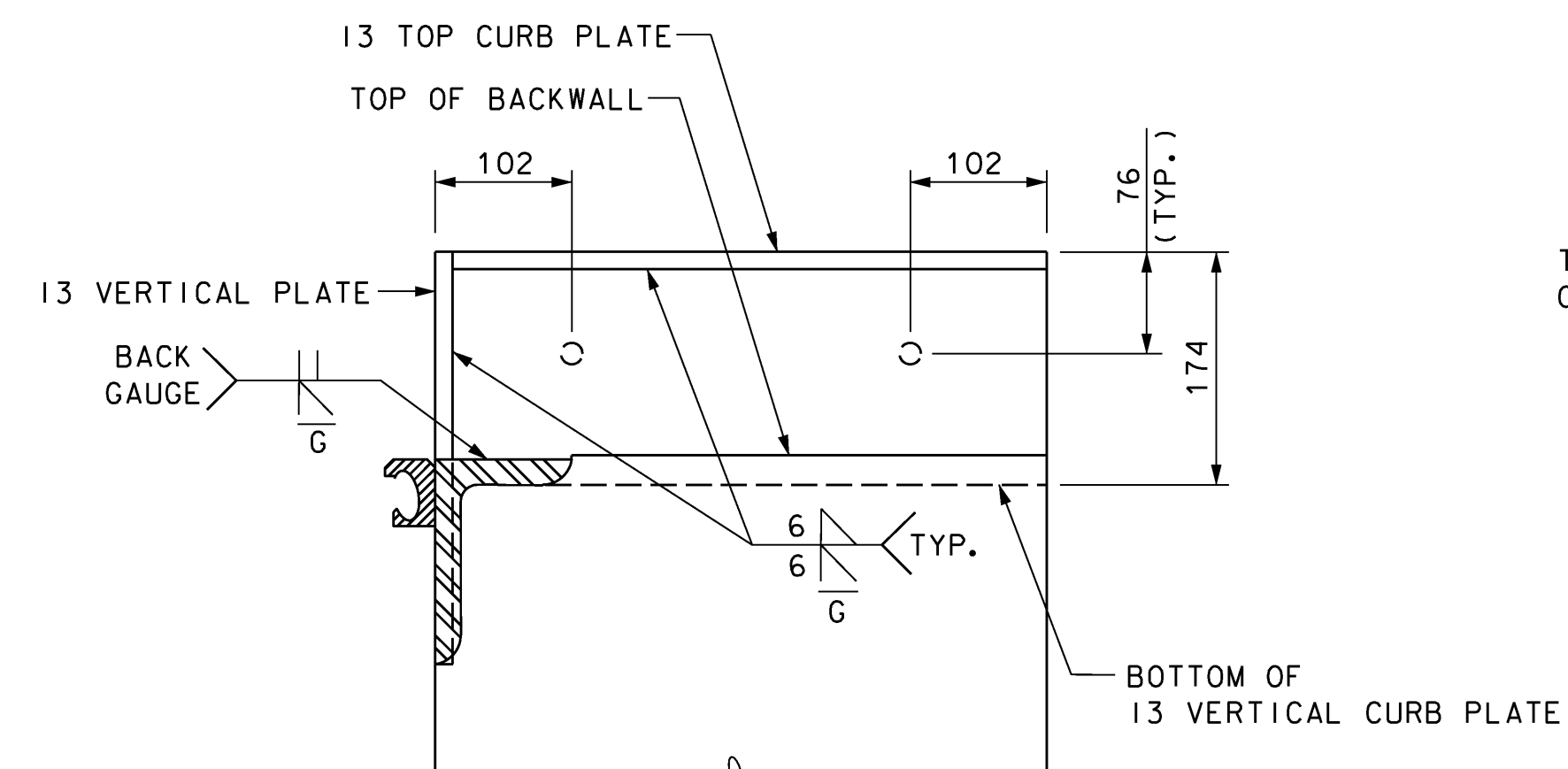
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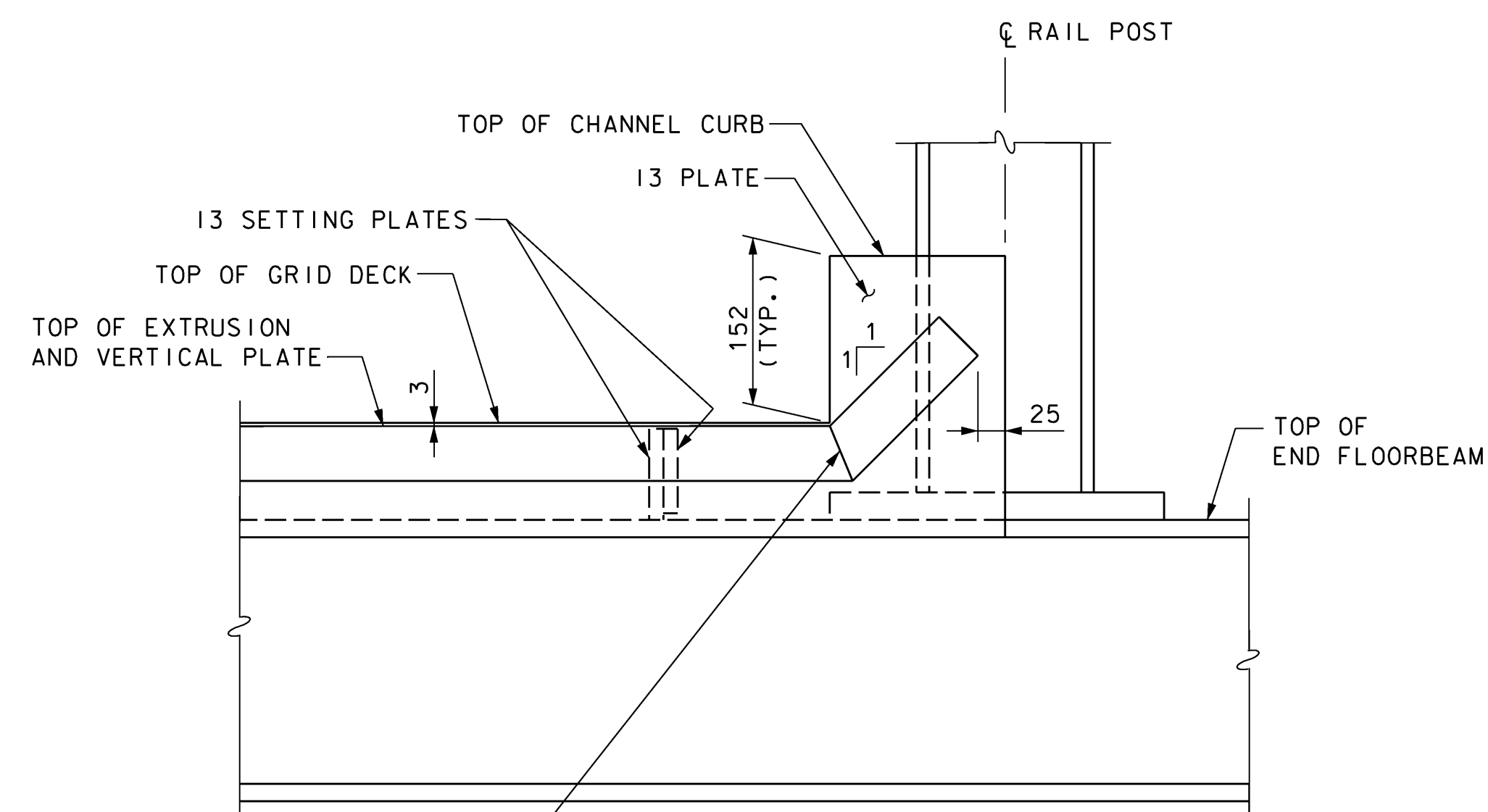
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TEMPERATURE	"T"
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-9°C	67
-1°C	61
7°C	55
16°C	49
24°C	43
32°C	37
41°C	31



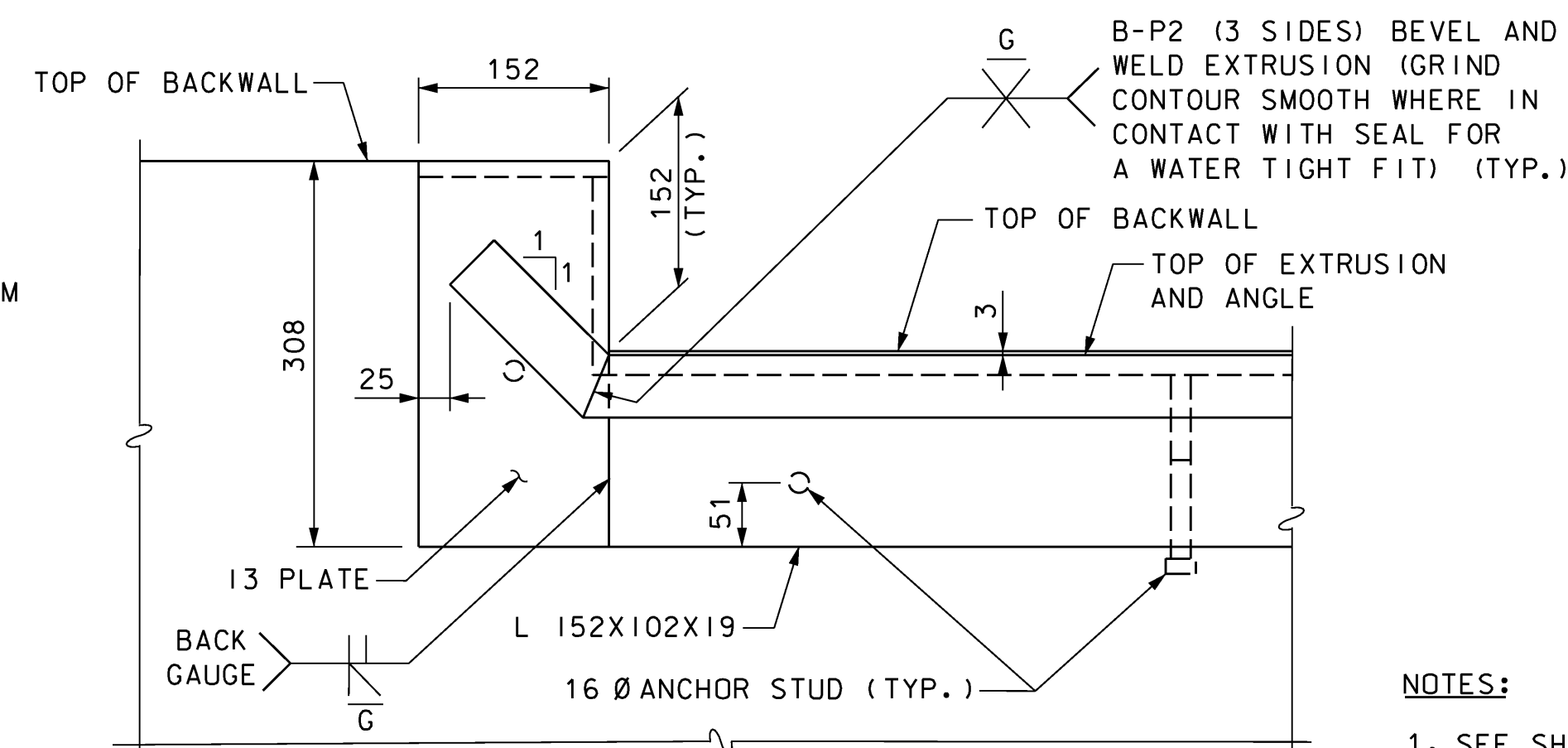
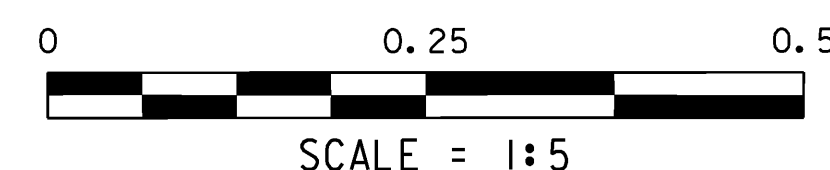
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SCALE: 1:5



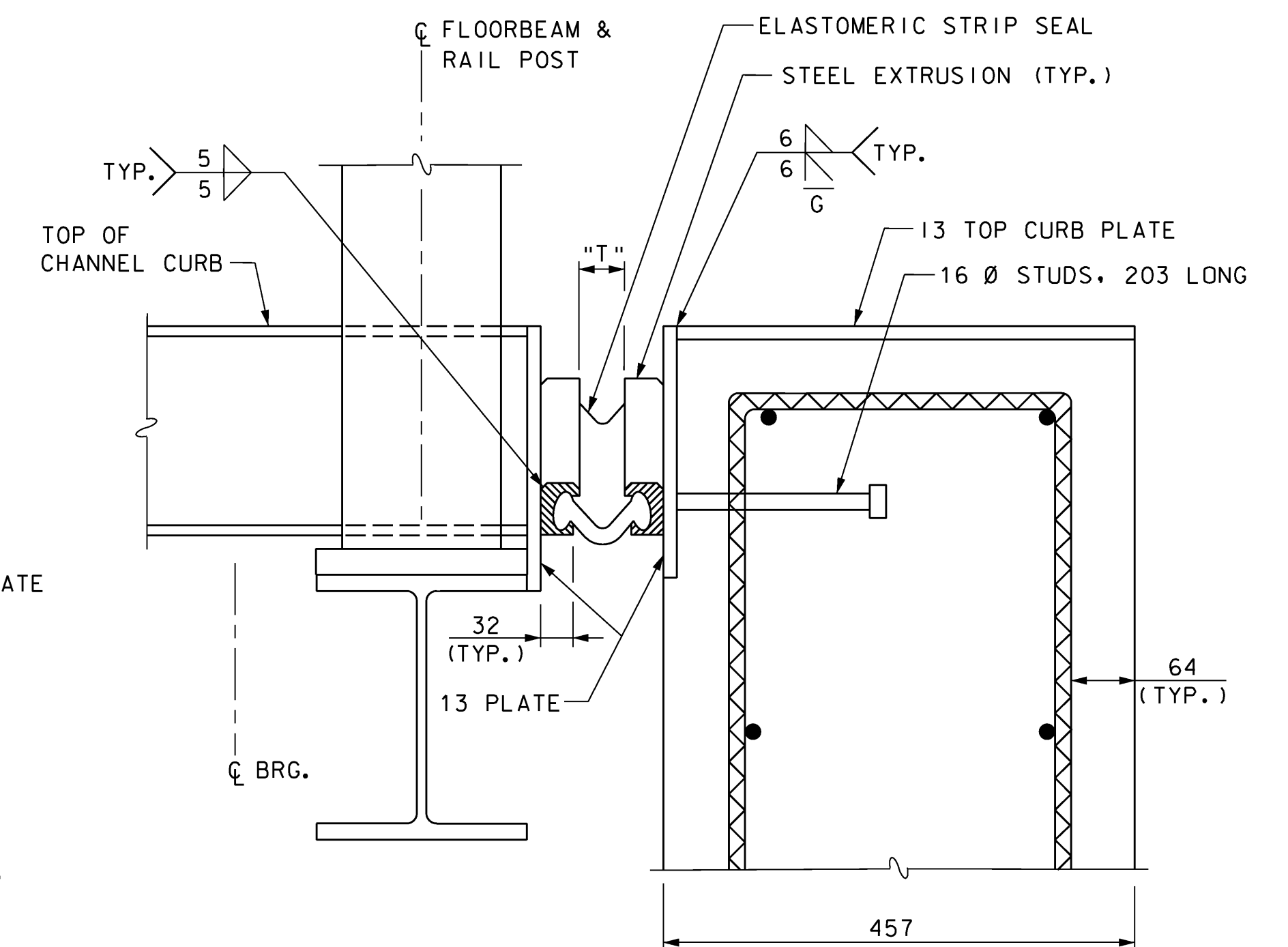
SCALE: 1:5



SCALE: 1:5

NOTES:

1. SEE SHEET 16 FOR DECK END JOINT NOTES.
2. SPACING OF SETTING PLATES MAY BE ADJUSTED UP TO 51 MAX. TO BETTER FIT BETWEEN GRID DECK BEARING BARS.



SCALE: 1:5

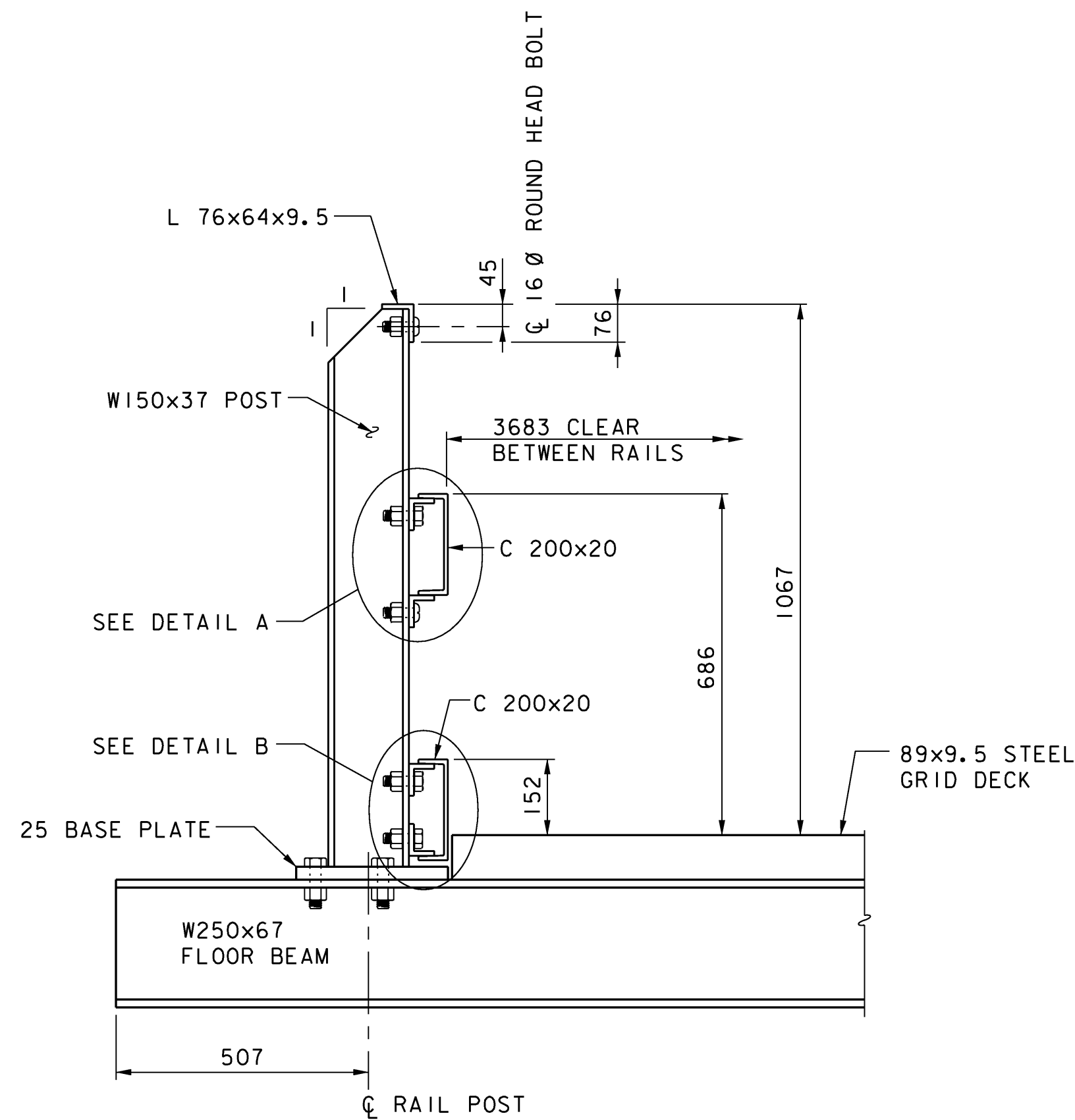
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of	DUMMERSTON	Bridge No.	37
Highway No.	TH 62	Log Sta.	
		Surv. Sta.	
TH 62 OVER WEST RIVER			
DECK END JOINT DETAILS			
Designed By	T. S. BRYANT	Drawn By	B. J. MASSE
Checked By	Date	Bridge Design Supervisor	
S. M. HODGDON	4/09	S. M. HODGDON	Date 4/09
PROJECT		PROJECT NO.	
DUMMERSTON		BHO 1442 (28)	
I.G.C. Info.			
Bridge Sheet No.		Sheet	
ZJ080JT1		25 of 49	

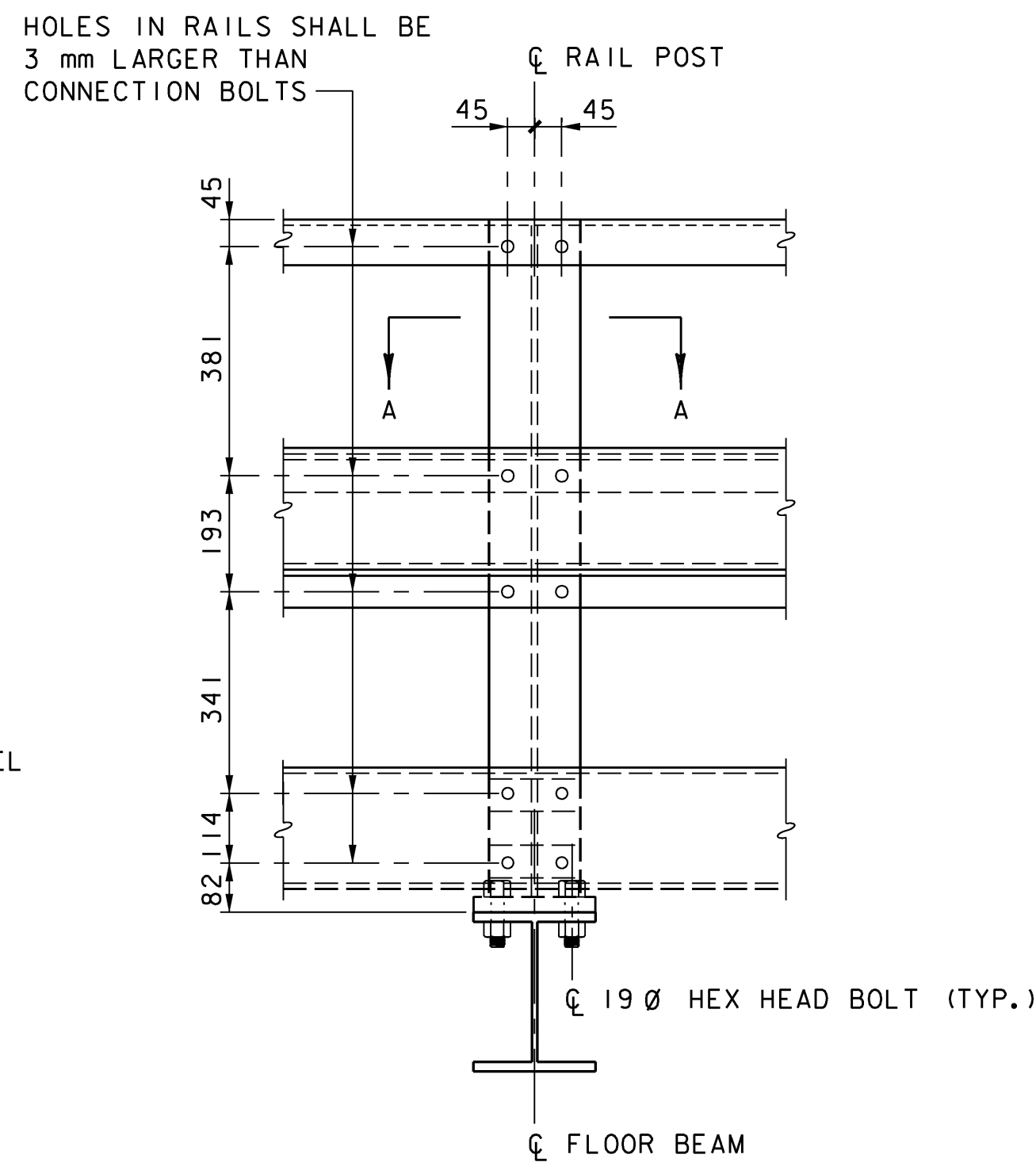
VHB NO. 51192

plot date: 4/3/2009

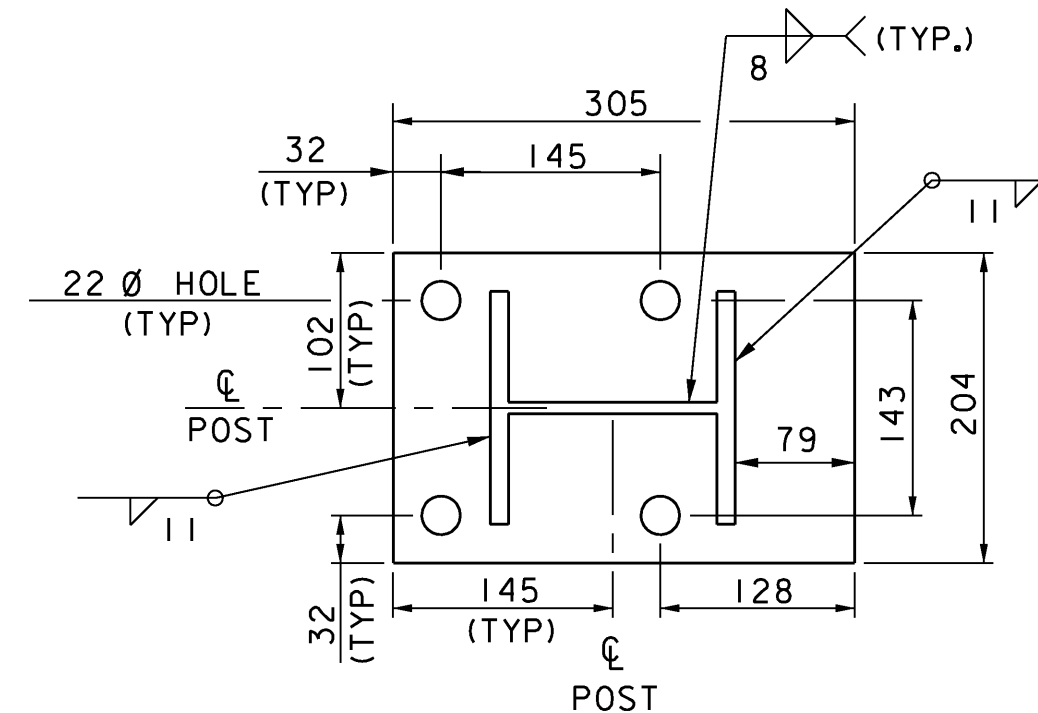
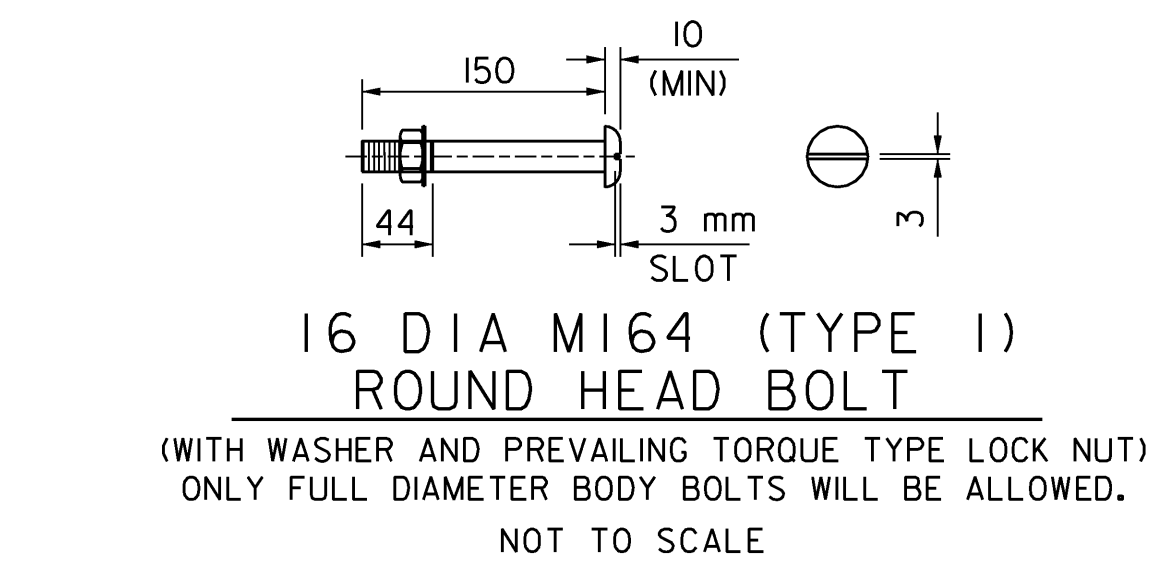
VANASSE HANGEN BRUSTLIN, INC.



TYPICAL SECTION
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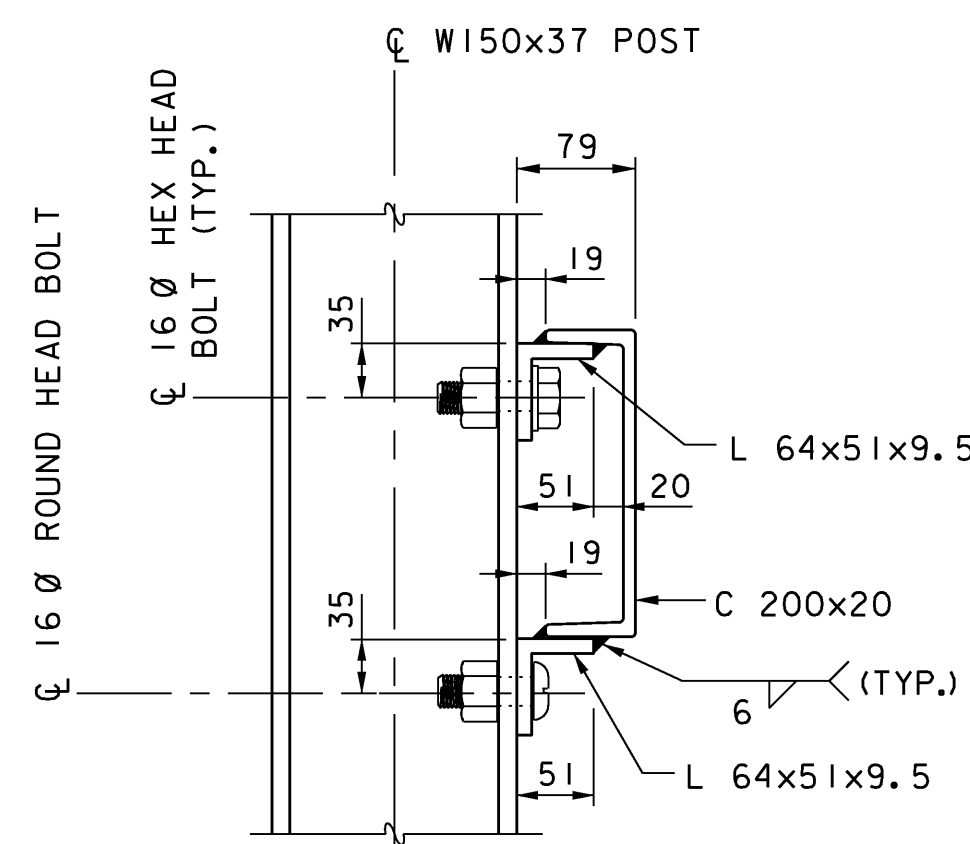
ELEVATION VIEW
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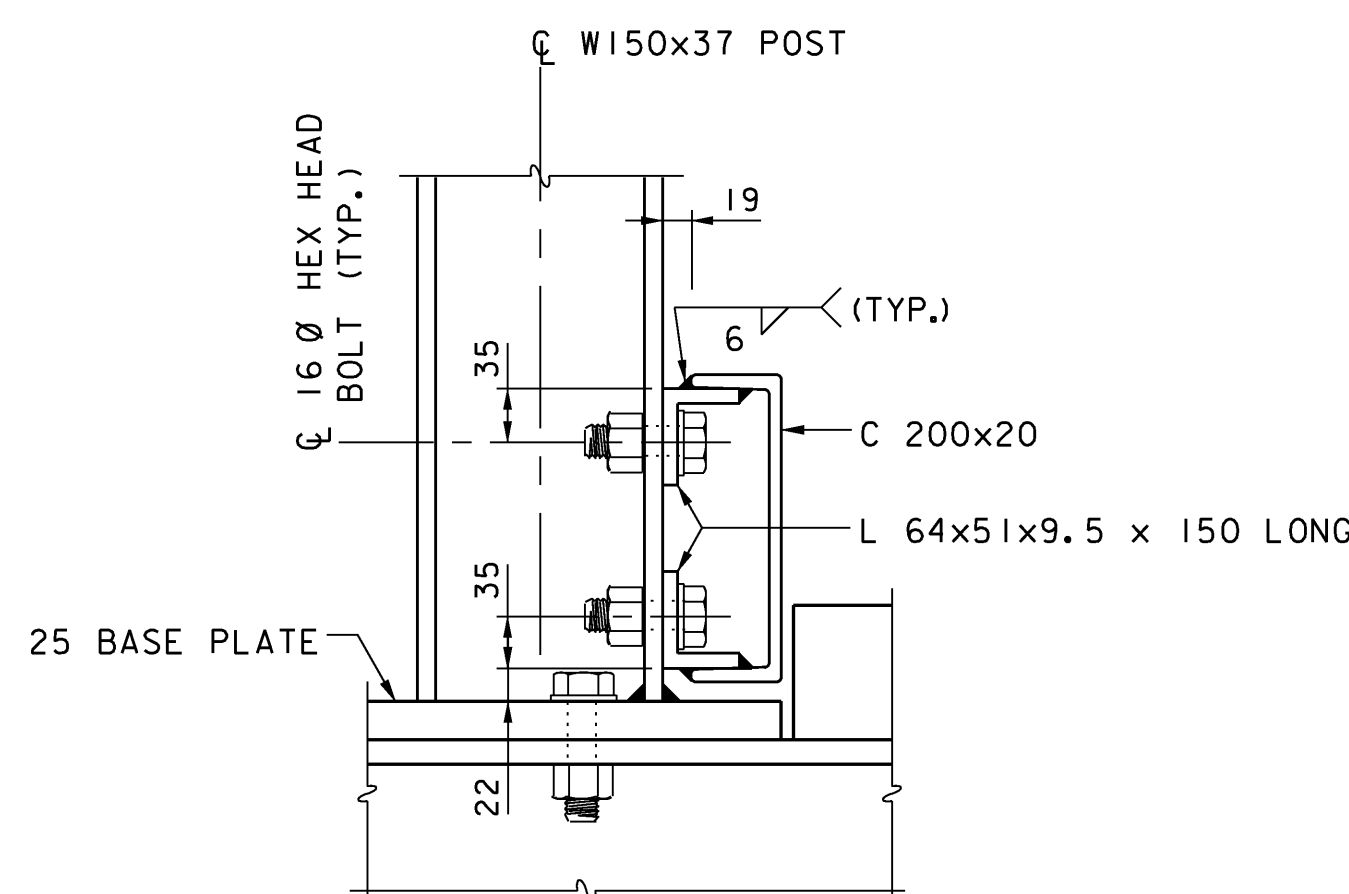
POST & BASE PLATE
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BRIDGE RAIL NOTES:

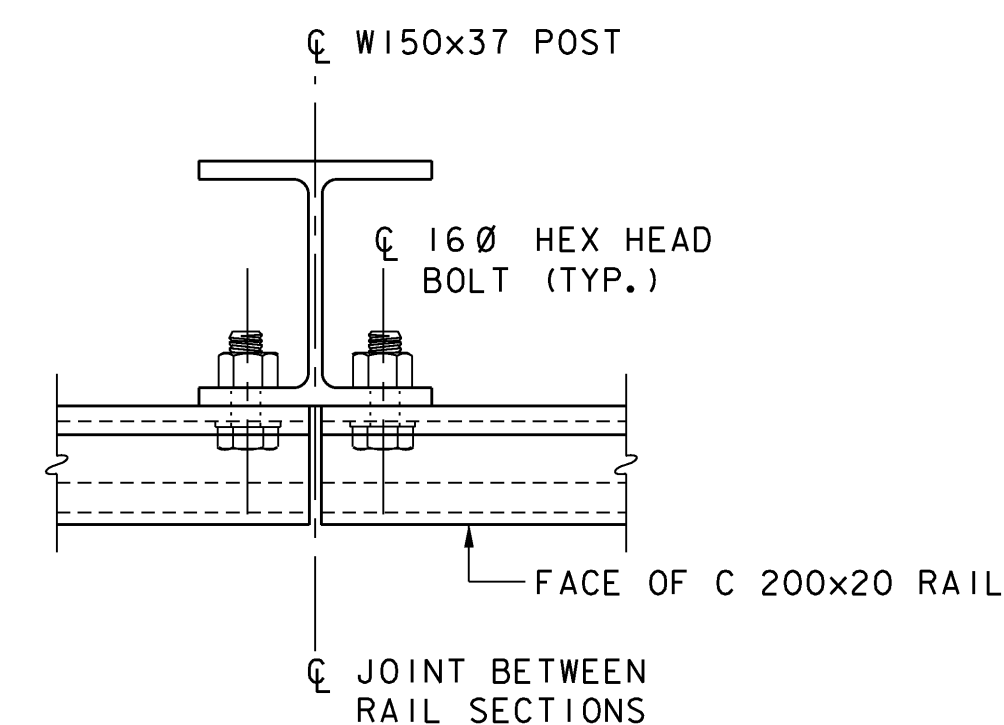
- ALL BRIDGE RAIL STRUCTURAL STEEL SHALL CONFORM TO AASHTO M270M, GRADE 345 PAINTED, EXCEPT FOR THE TOP HANDRAIL ANGLE WHICH MAY BE GRADE 250 PAINTED AT THE FABRICATOR'S OPTION. ALL BRIDGE RAIL STRUCTURAL STEEL SHALL CONFORM TO ALL APPLICABLE SUBSECTIONS OF SECTION 506. ALL BRIDGE RAIL STRUCTURAL STEEL SHALL BE PAID FOR UNDER ITEM 900.640, SPECIAL PROVISION (BRIDGE RAILING, TRUSS).
- ALL BRIDGE RAIL CONNECTIONS SHALL BE MADE WITH TYPE 1 HIGH STRENGTH BOLTS MEETING AASHTO M164M. BOLT DIAMETERS SHALL BE AS SHOWN ON THE PLANS. HOLES IN L64x51 CONNECTION ANGLES AND L76x64 TOP RAILS SHALL BE FIELD MARKED AND DRILLED TO ENSURE PROPER FIT UP OF RAIL SECTIONS.
- ALL EXPOSED CUT, SHEARED OR ROLLED EDGES ON ALL RAIL MEMBERS EXCEPT THE FASCIA FLANGE OF THE RAIL POST SHALL BE ROUNDED TO A 2 mm RADIUS AND SHALL BE FREE OF BURRS.
- RAIL POSTS SHALL BE SET NORMAL TO GRADE.
- SECTIONS OF RAIL AND CURB SHALL BE ATTACHED TO A MINIMUM OF TWO RAIL POSTS AND PREFERABLY TO AT LEAST FOUR POSTS. JOINTS BETWEEN RAIL AND CURB SECTIONS SHALL BE LOCATED ONLY AT RAIL POSTS.
- SEE SHEET 22 FOR BRIDGE RAIL POST LAYOUT. LAYOUT IS SYMMETRIC ABOUT TRUSS PANEL POINT L8.
- SEE SHEET 27 FOR BRIDGE RAIL END TRANSITION DETAILS.



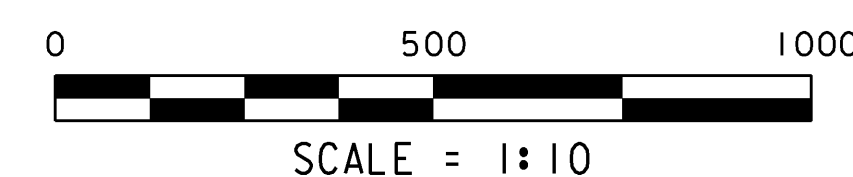
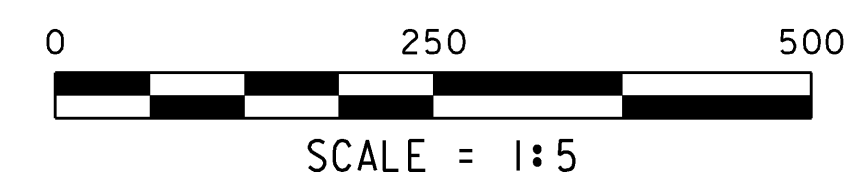
DETAIL A
SCALE: 1:5



DETAIL B
SCALE: 1:5



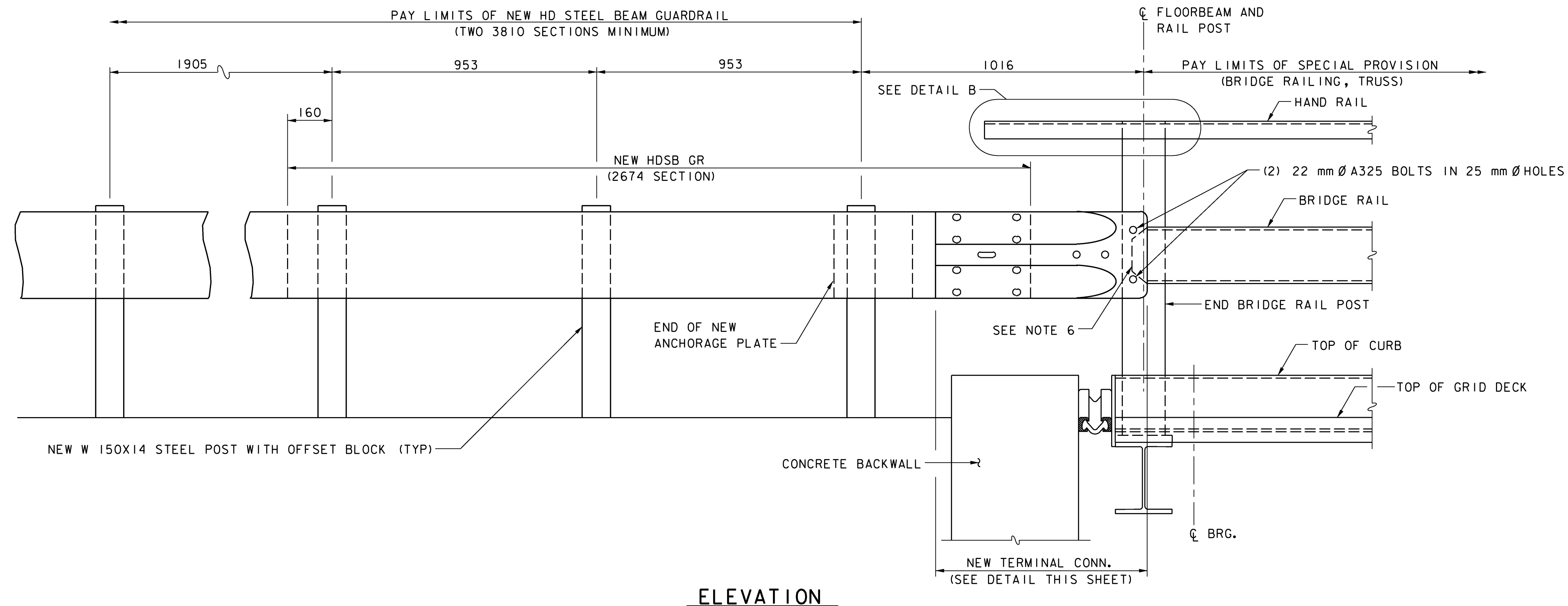
SECTION A-A
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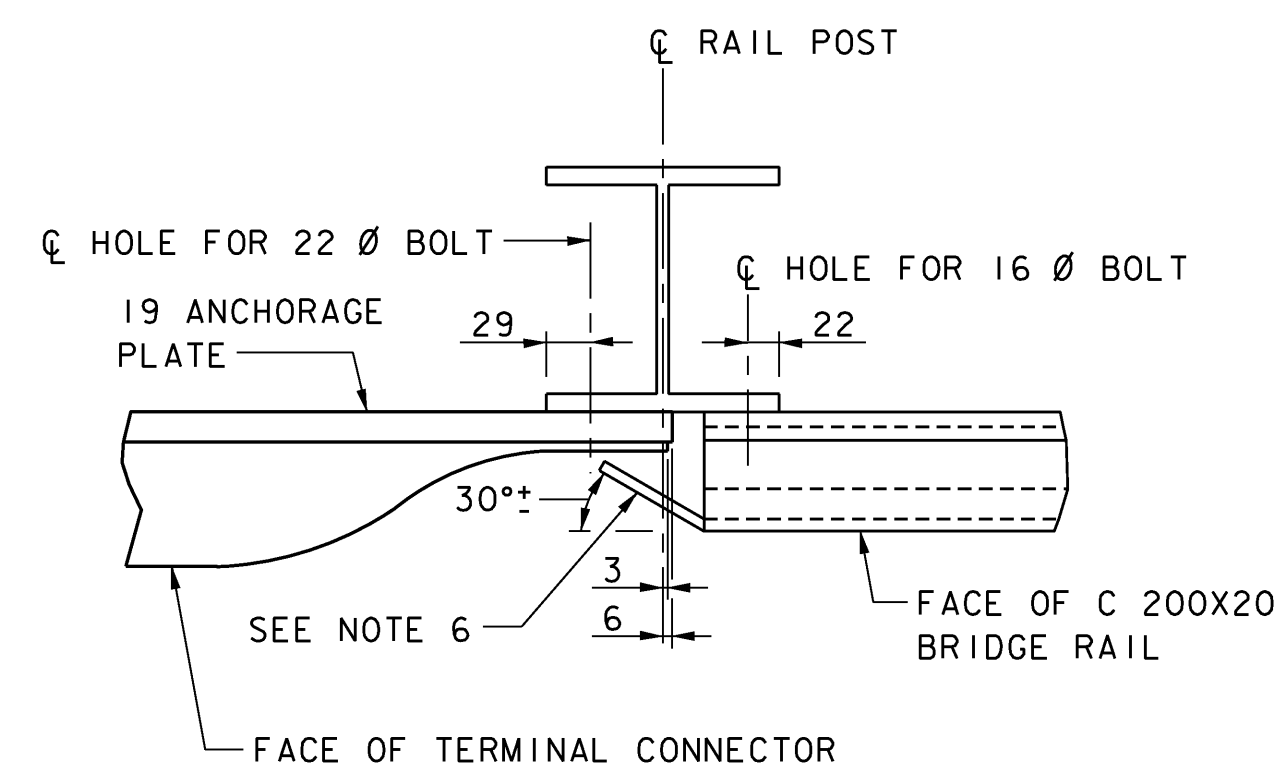
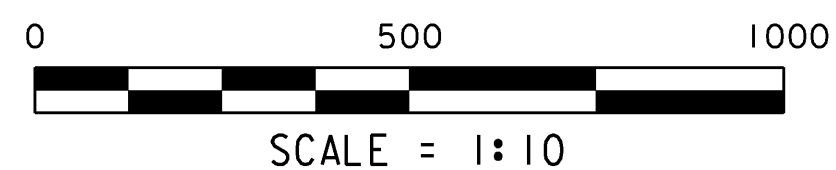
VANASSE HANGEN BRUSTLIN, INC.

**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

Town Of	DUMMERSTON	Bridge No.	37
Highway No.	TH 62	Log Sta.	
		Surv. Sta.	
TH 62 OVER WEST RIVER			
BRIDGE RAIL DETAILS			
Designed By	A. J. CRAWFORD	Drawn By	K. D. WENTWORTH
Checked By	T. S. BRYANT	Bridge Design Supervisor	S. M. HODGDON
	Date 4/09	Date	4/09
PROJECT	DUMMERSTON	PROJECT NO.	BHO 1442 (28)
I.G.C. Info.			
Bridge Sheet No.	ZJ080BRL	Sheet	26 of 49

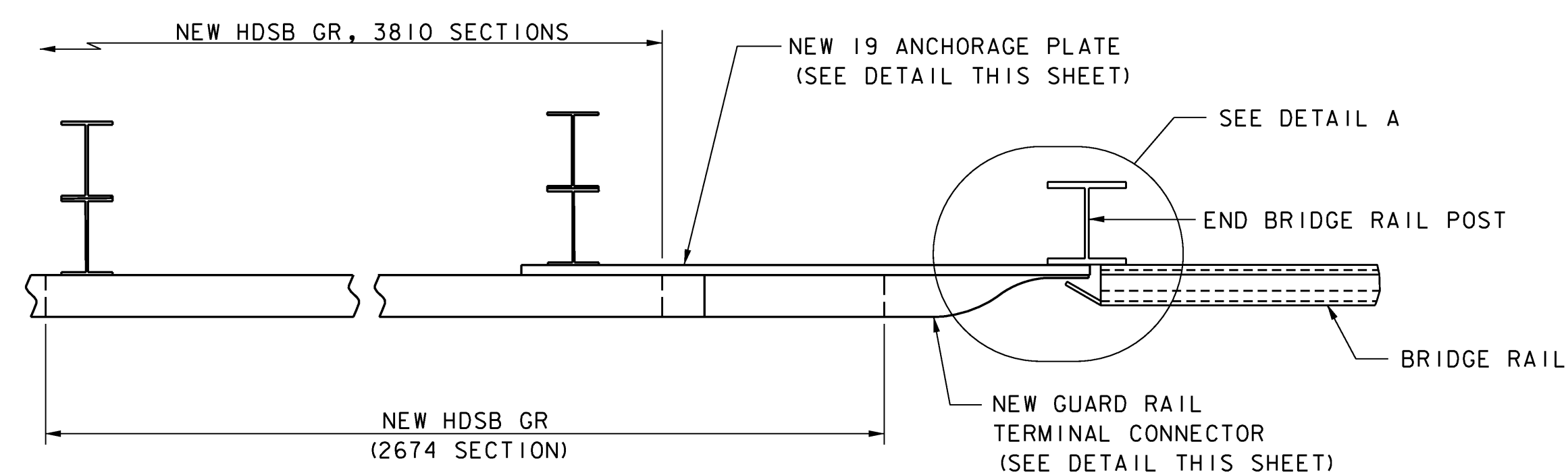
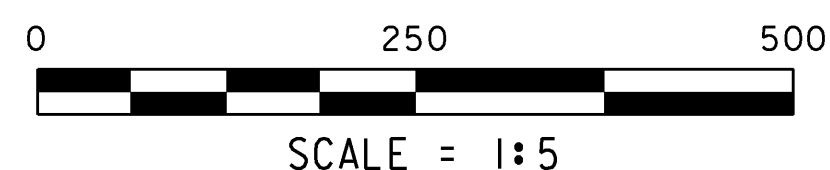


ELEVATION



DETAIL A

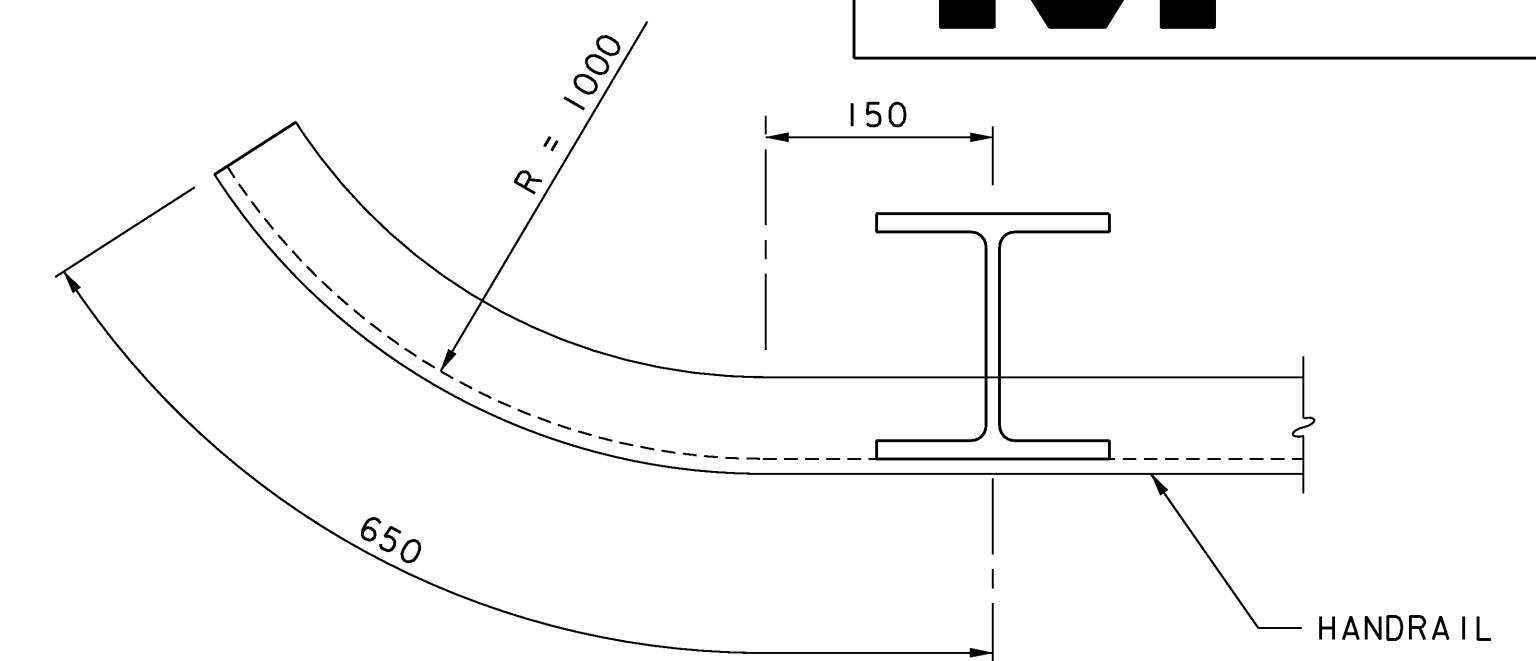
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PLAN

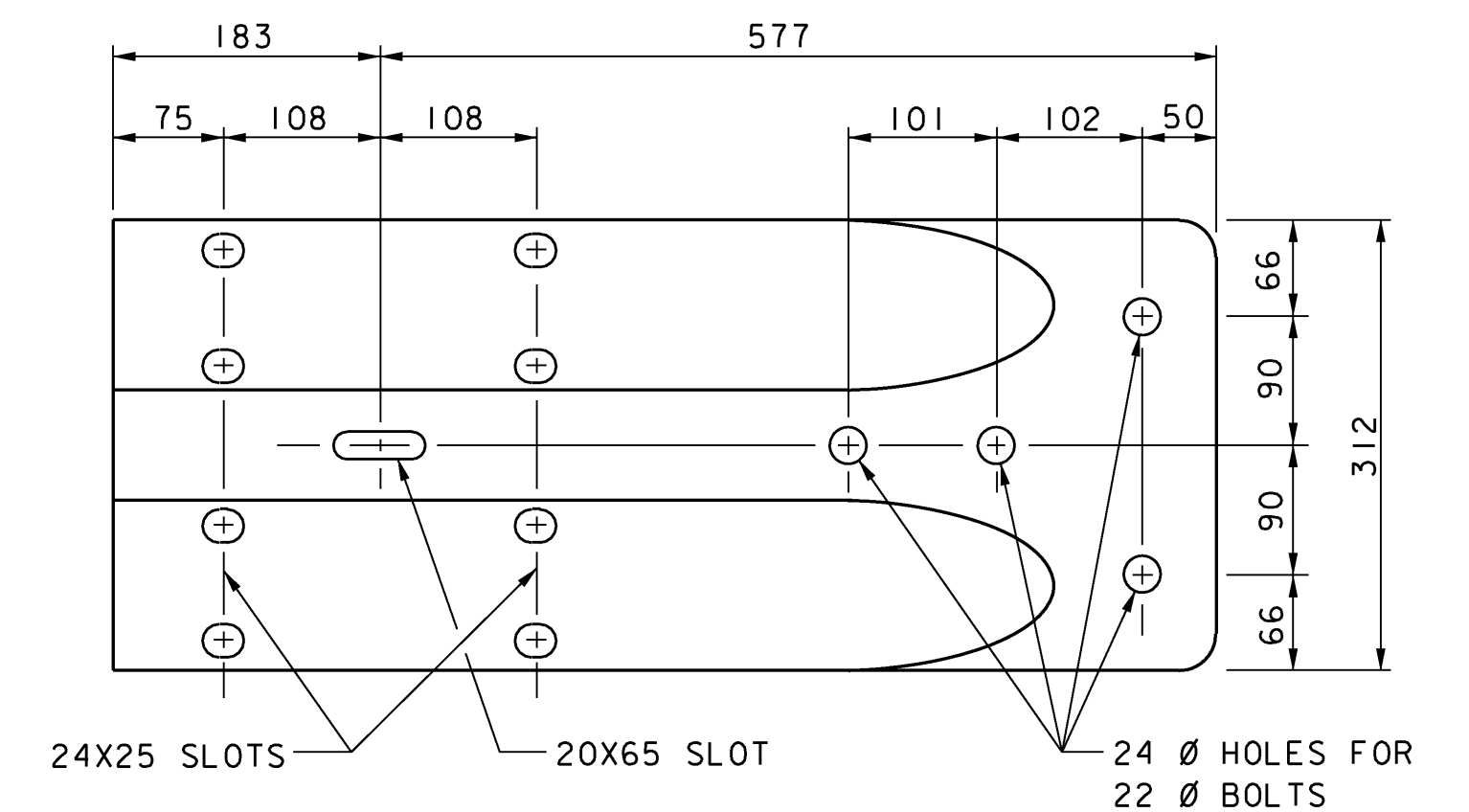
BRIDGE RAIL END TRANSITION DETAILS

SCALE: 1:10



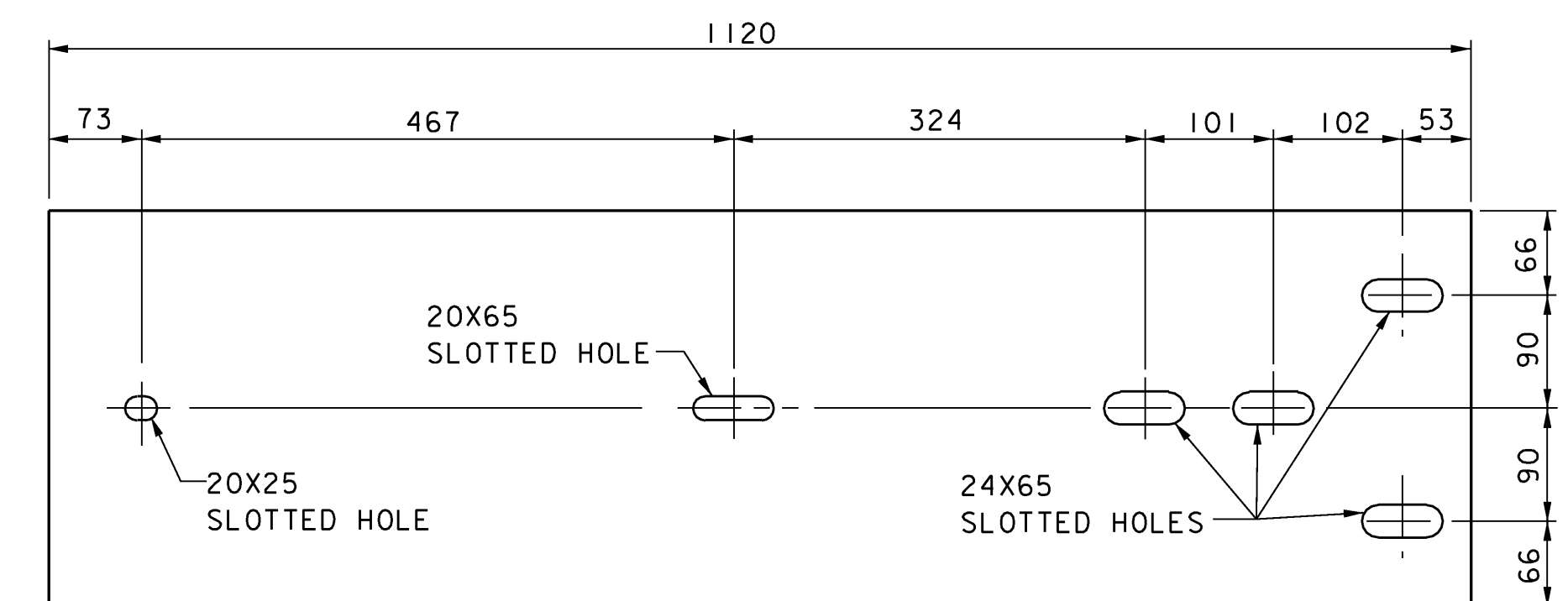
DETAIL B

SCALE: 1:5



RWE02 TERMINAL CONNECTOR DETAIL

SCALE: 1:5



ANCHORAGE PLATE DETAIL

SCALE: 1:5

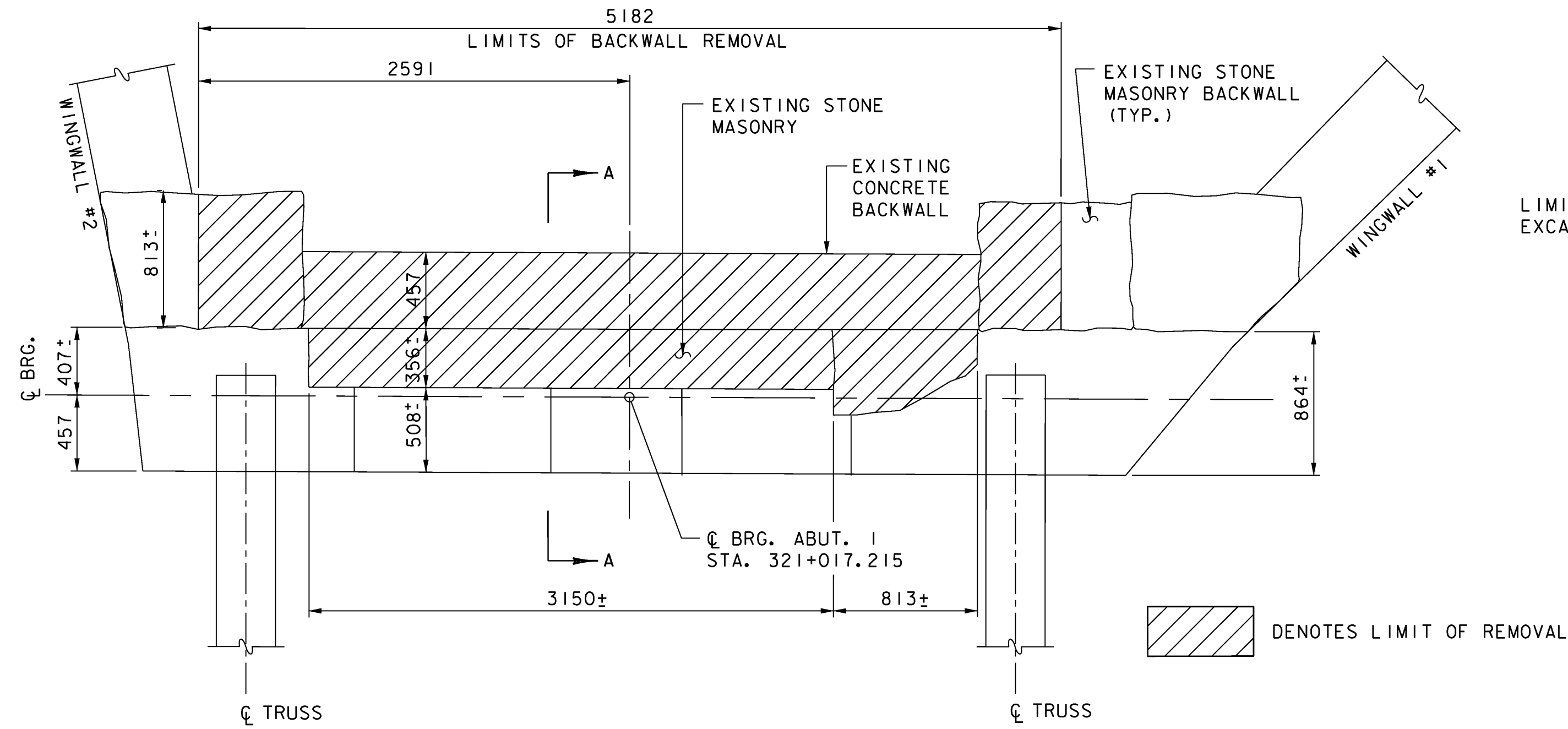
NOTES:

- GUARD RAIL TO BRIDGE RAIL TRANSITION DETAILS SHOWN ARE TYPICAL AT ALL 4 CORNERS OF THE BRIDGE.
- THE PRICE BID PER METER FOR ITEM 621.21, HD STEEL BEAM GUARDRAIL, GALVANIZED, SHALL INCLUDE MATERIAL AND INSTALLATION OF BOTH THE FOUR (4) NEW ANCHORAGE PLATES AND THE FOUR (4) NEW 2674 SECTIONS OF HEAVY DUTY STEEL BEAM GUARD RAIL AT BRIDGE ENDS, AS WELL AS THE FURNISHING OF ALL LABOR, TOOLS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION OF THE HEAVY DUTY STEEL BEAM GUARD RAIL AS SHOWN ON SHEET 5.
- THE 19 mm ANCHORAGE PLATES SHALL BE ASTM A36 STEEL, GALVANIZED TO ASTM A123 AFTER FABRICATION.
- THE PRICE BID EACH FOR ITEM 621.53, TERMINAL CONNECTOR FOR STEEL BEAM GUARDRAIL, SHALL INCLUDE MATERIALS AS WELL AS THE FURNISHING OF ALL LABOR, TOOLS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION OF EACH TERMINAL CONNECTOR AS DETAILED ON THIS SHEET.
- SEE STANDARDS G-1, G-1d, AND G-16 FOR ADDITIONAL DETAILS.
- COPE FLANGES AND CUT AND BEND WEB AT END OF C 200X20 CHANNEL RAIL AS SHOWN ON THIS SHEET. AT THE FABRICATOR'S OPTION A 8 mm THICK PLATE SIMILARLY SHAPED MAY BE WELDED TO THE END OF THE CHANNEL RAIL INSTEAD.
- THE BID PRICE PER METER FOR ITEM 900.640 SPECIAL PROVISION (BRIDGE RAILING, TRUSS) SHALL INCLUDE PAYMENT FOR HAND RAIL EXTENSION AS DETAILED ON THIS SHEET.

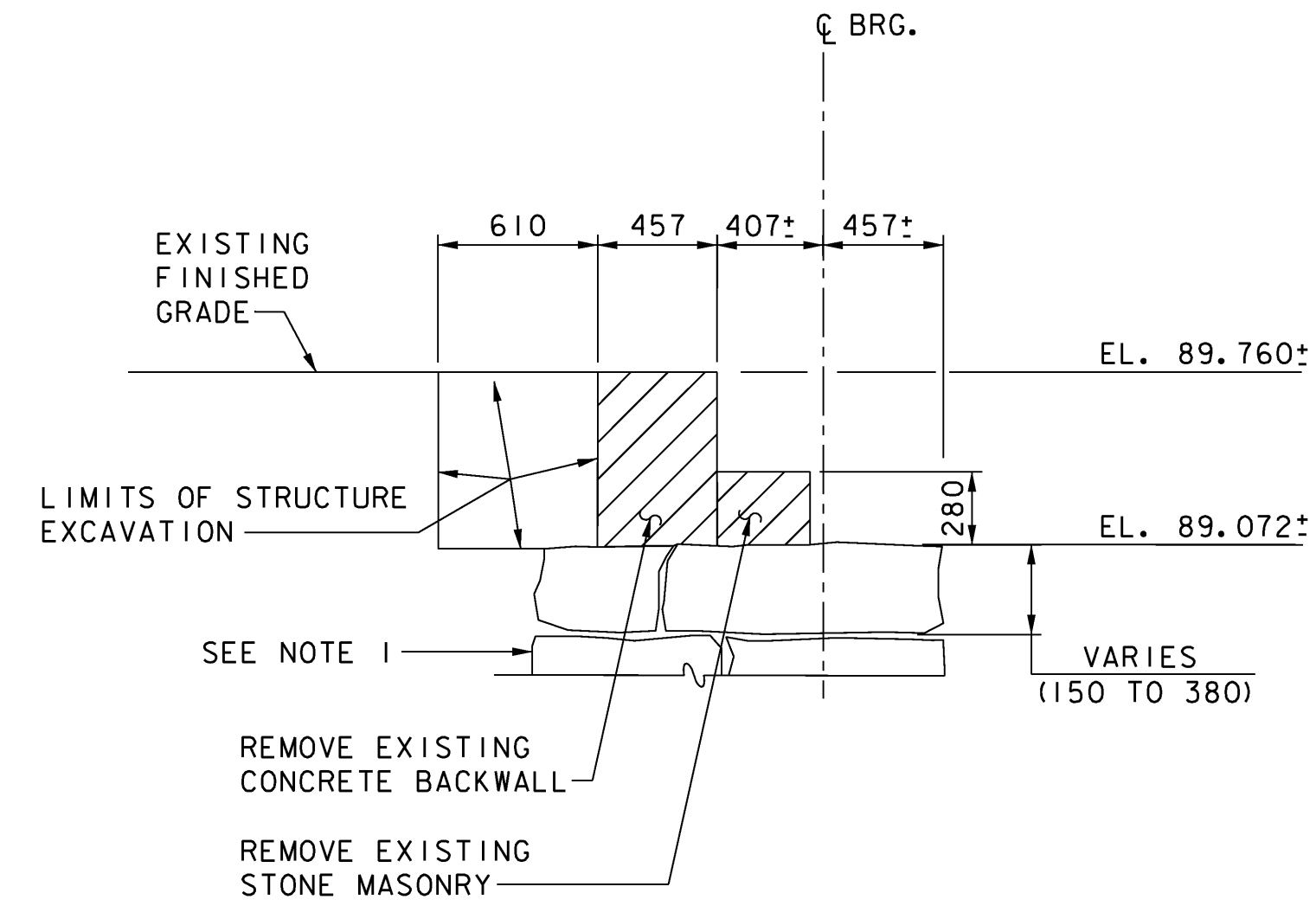
VANASSE HANGEN BRUSTLIN, INC.

**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

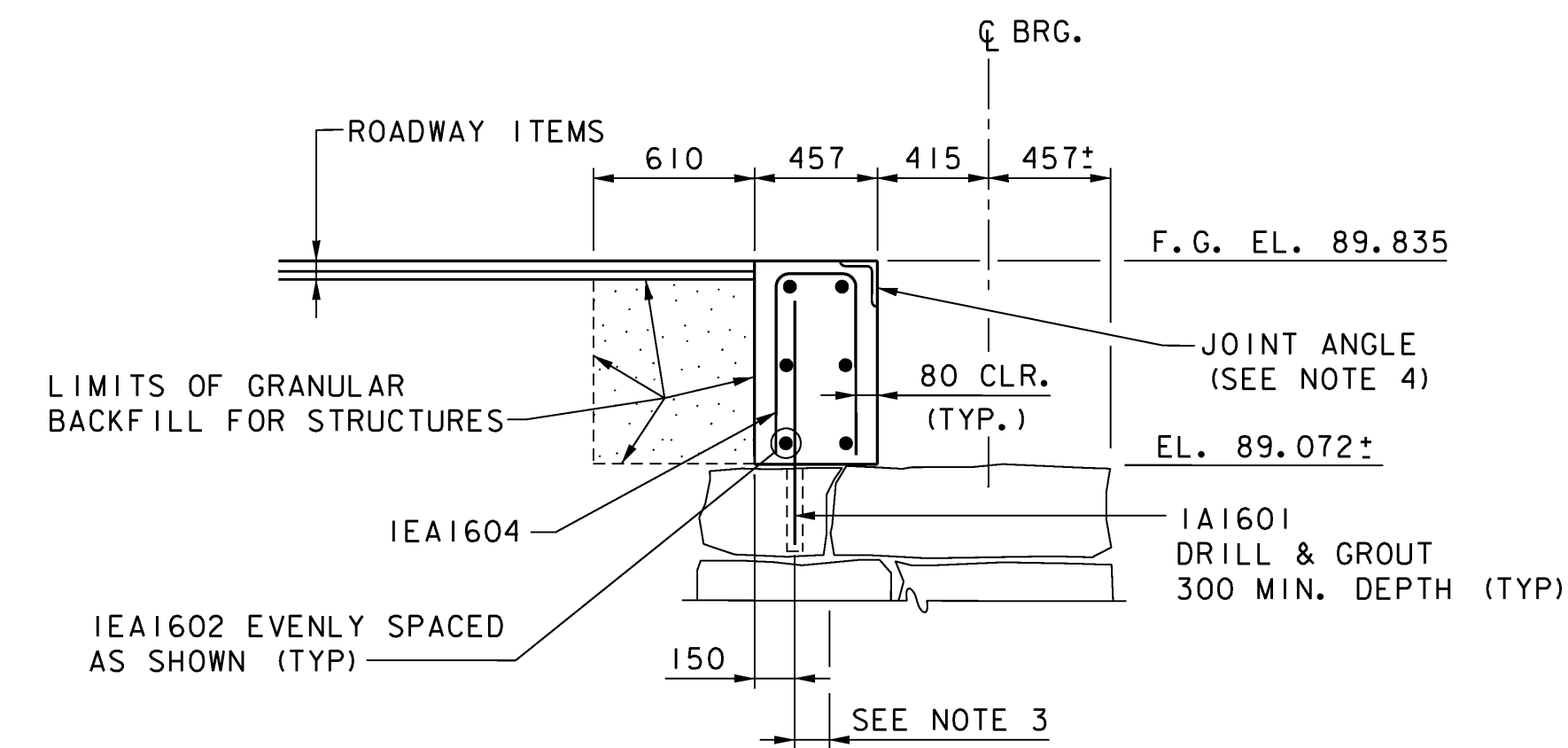
Town Of	DUMMERSTON	Bridge No.	37
Highway No.	TH 62	Log Sta.	
		Surv. Sta.	
TH 62 OVER WEST RIVER			
BRIDGE RAIL END TRANSITION DETAILS			
Designed By	A. J. CRAWFORD	Drawn By	B. J. MASSE
Checked By	T. S. BRYANT	Bridge Design Supervisor	S. M. HODGDON
Date	4/09	Date	4/09
PROJECT	DUMMERSTON	PROJECT NO.	BHO 1442 (28)
I.G.C. Info.			
Bridge Sheet No.	ZJ080RD1	Sheet	27 of 49



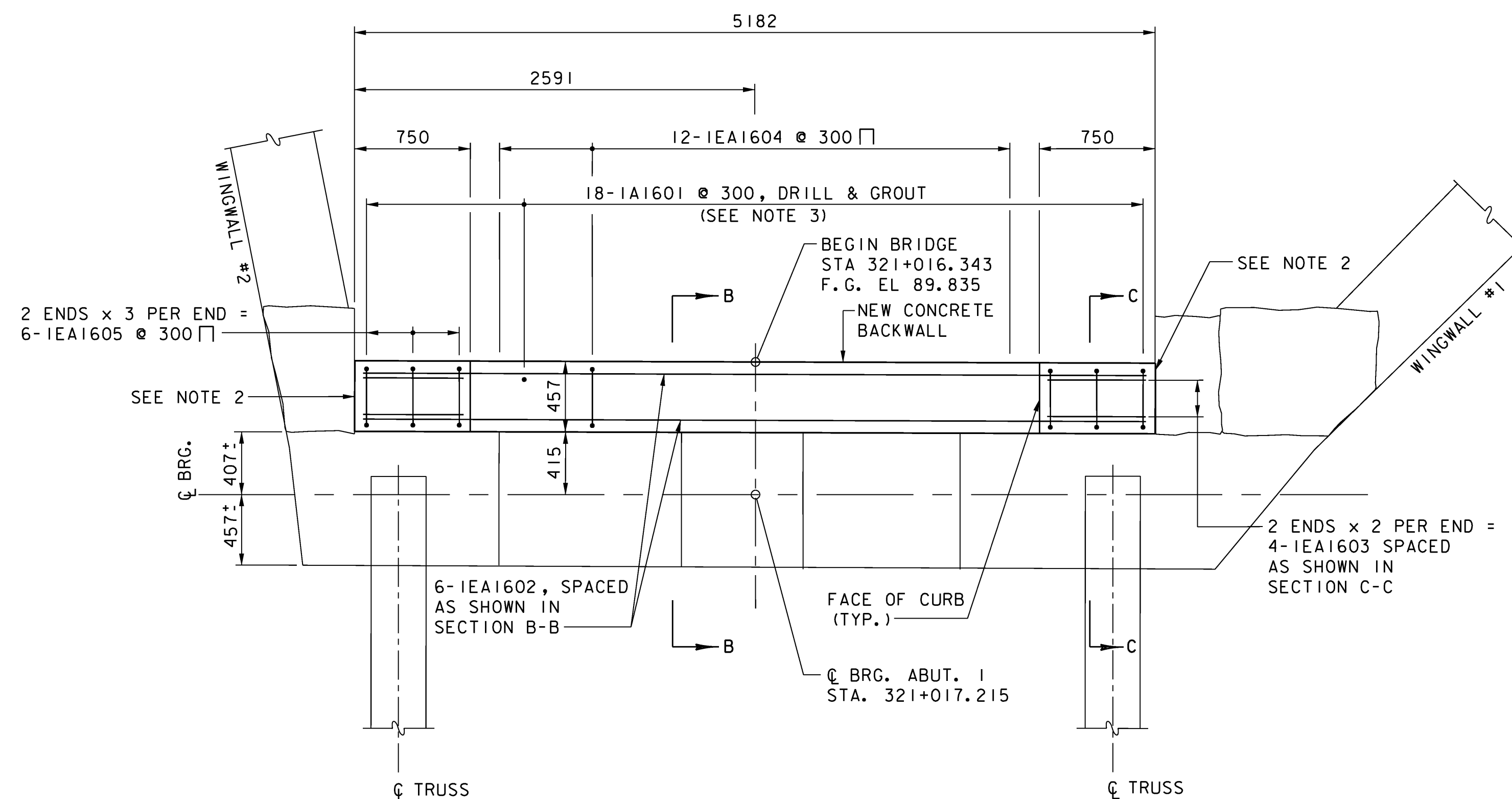
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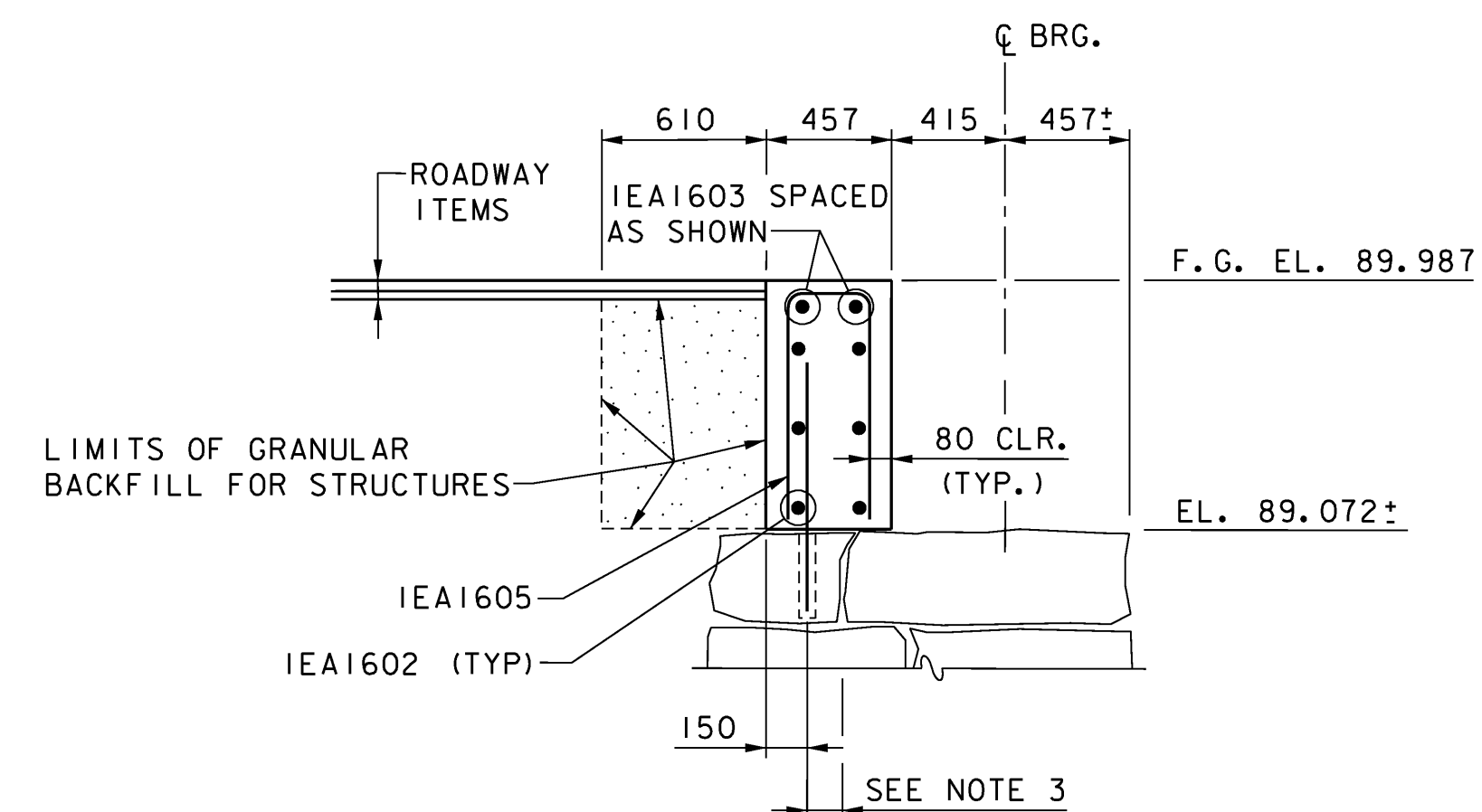
SECTION A-A
SCALE: 1:25



SECTION B-B
SCALE: 1:25



PROPOSED ABUTMENT I MODIFICATIONS PLAN
SCALE: 1:25



SECTION C-C
SCALE: 1:25

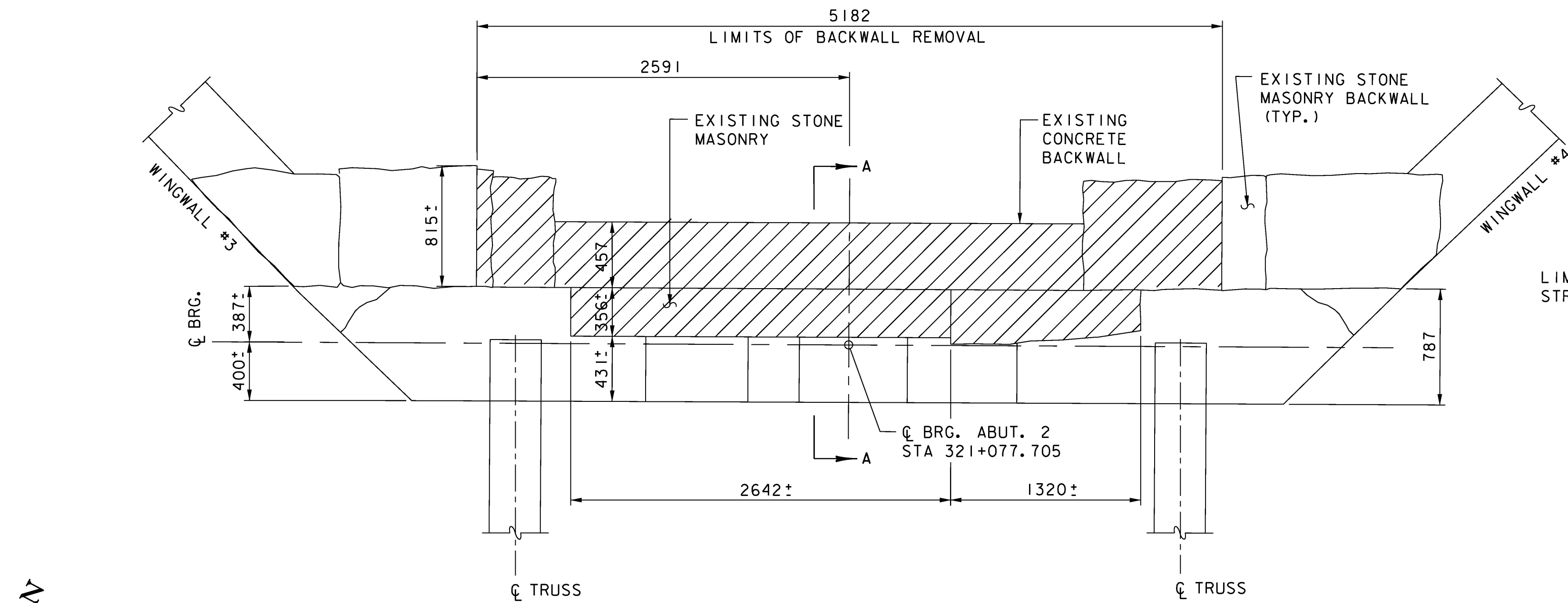
NOTES:

1. AN ASSUMED CONFIGURATION OF THE BACK OF BACKWALL AND ABUTMENT IS SHOWN IN THE SECTIONS ON THIS SHEET. THE ACTUAL CONFIGURATION IS UNKNOWN.
2. SHAPE AND RESET EXISTING STONE MASONRY IN BACKWALL TO FORM A VERTICAL JOINT FOR THE NEW BACKWALL CONCRETE TO BE CAST AGAINST. ALL COSTS FOR THIS WORK SHALL BE INCLUDED IN ITEM 620.20, DRY MASONRY.
3. ADJUST SPACING BETWEEN DRILL AND GROUT BARS 150 MAX. TO AVOID LOCATING BARS WITHIN 100 OF MASONRY EDGES. DRILL AND GROUT BARS MAY BE PLACED MORE THAN 150 FROM THE BACK FACE OF BACKWALL TO MAINTAIN CLEARANCE FROM JOINTS. COST INCLUDED IN ITEM 507.16, DRILLING AND GROUTING DOWELS.
4. SEE SHEET 25 FOR DECK END JOINT DETAILS AND NOTE 1 ON SHEET 30..

**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

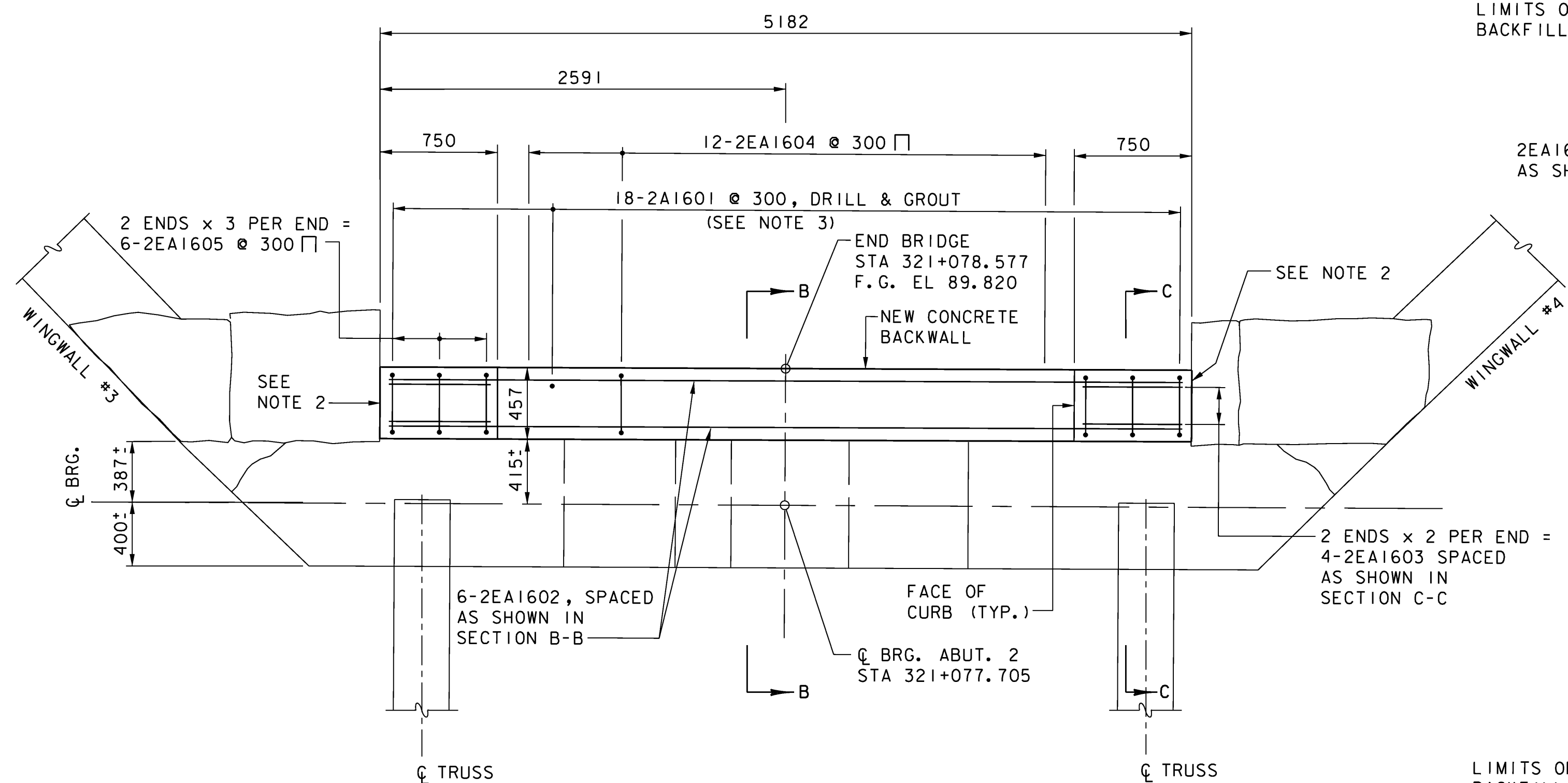
Town Of	DUMMERSTON	Bridge No.	37
Highway No.	TH 62	Log Sta.	
		Surv. Sta.	
TH 62 OVER WEST RIVER			
ABUTMENT 1 MODIFICATIONS			
Designed By	T. S. BRYANT	Drawn By	B. J. MASSE
Checked By	S. M. HODGDON	Bridge Design Supervisor	S. M. HODGDON
PROJECT	DUMMERSTON	PROJECT NO.	BHO 1442 (28)
I.G.C. Info.			
Bridge Sheet No.	ZJ080MA1	Sheet	28 of 49



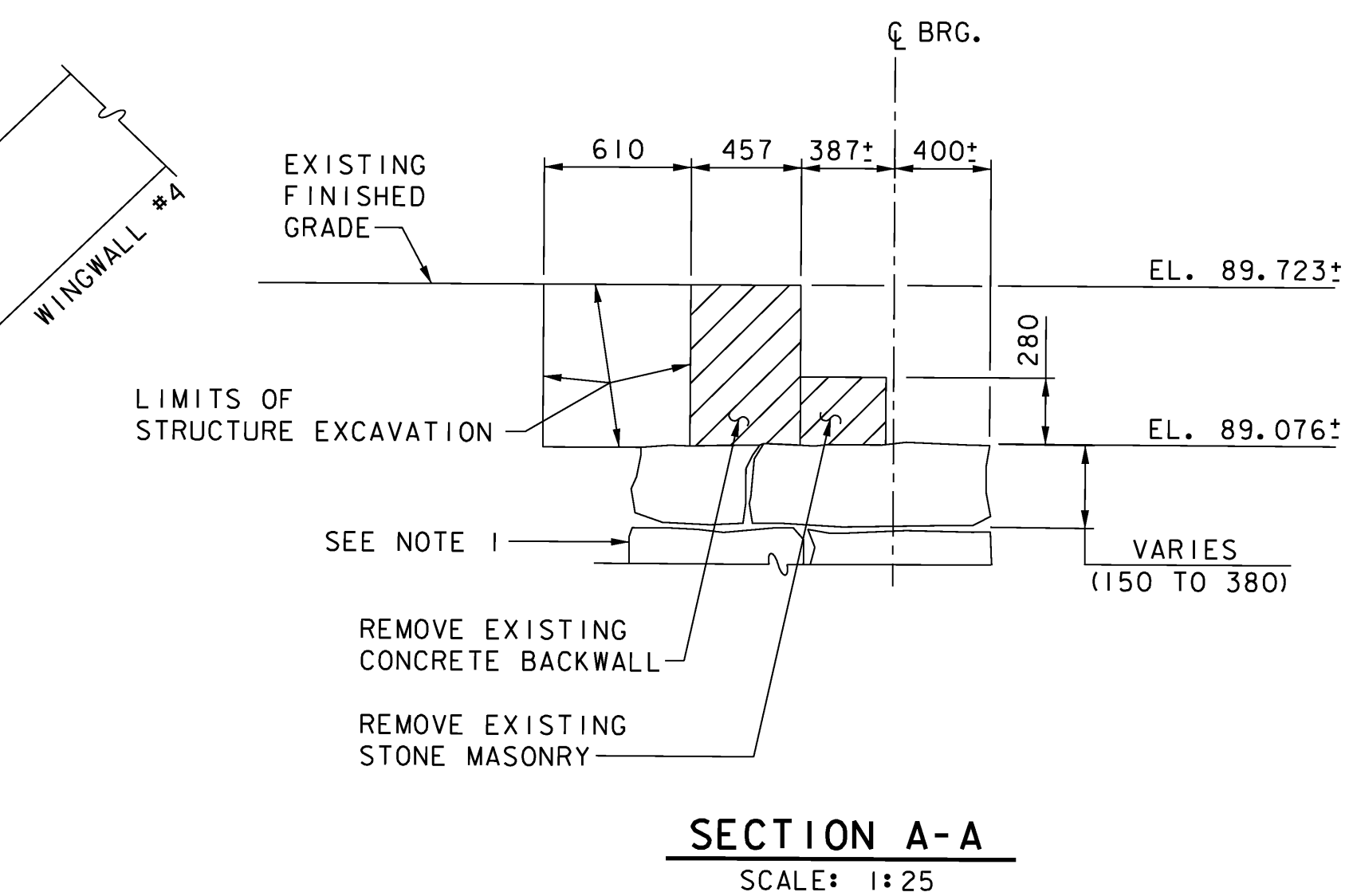


EXISTING ABUTMENT 2 PLAN
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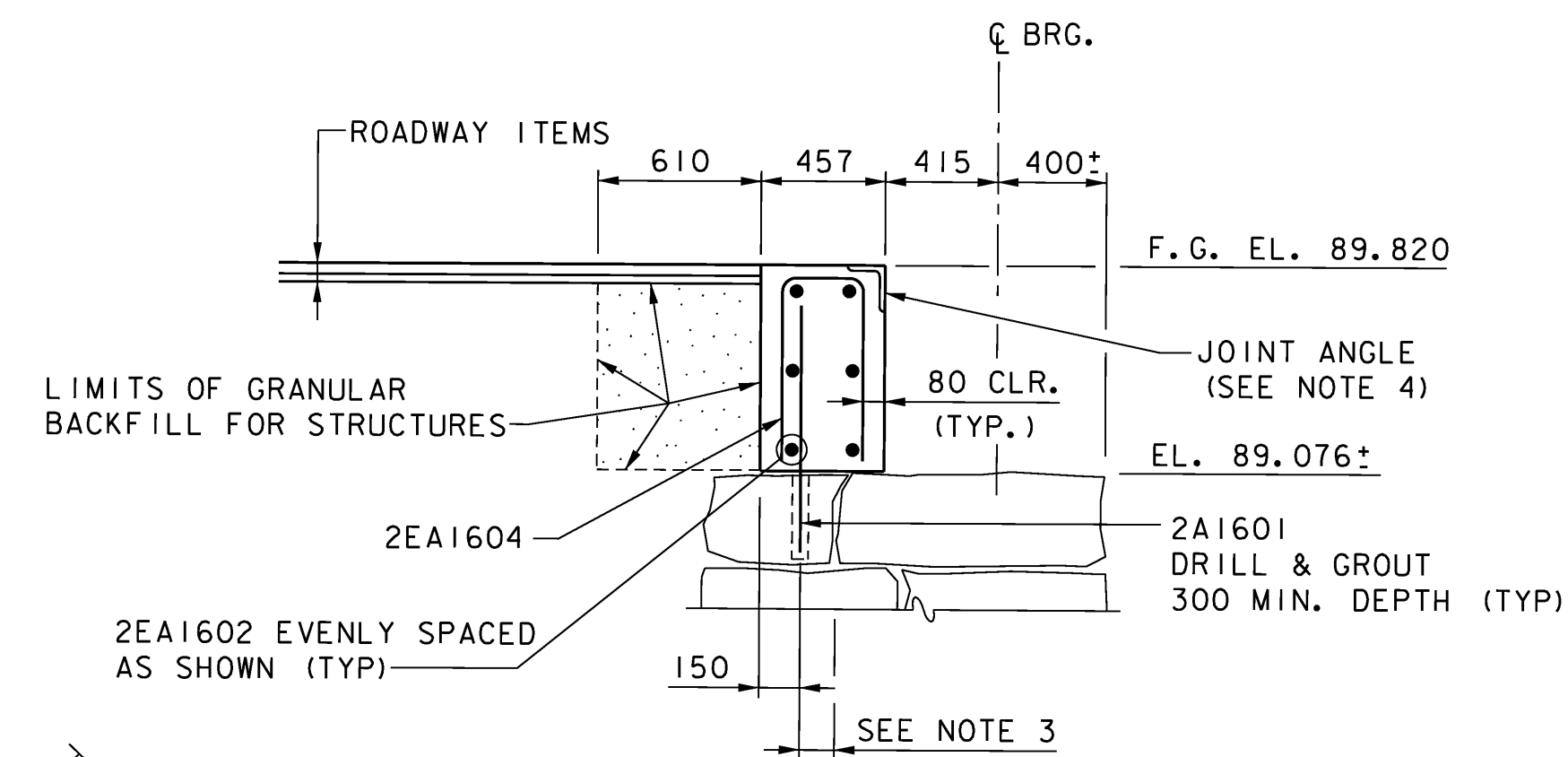
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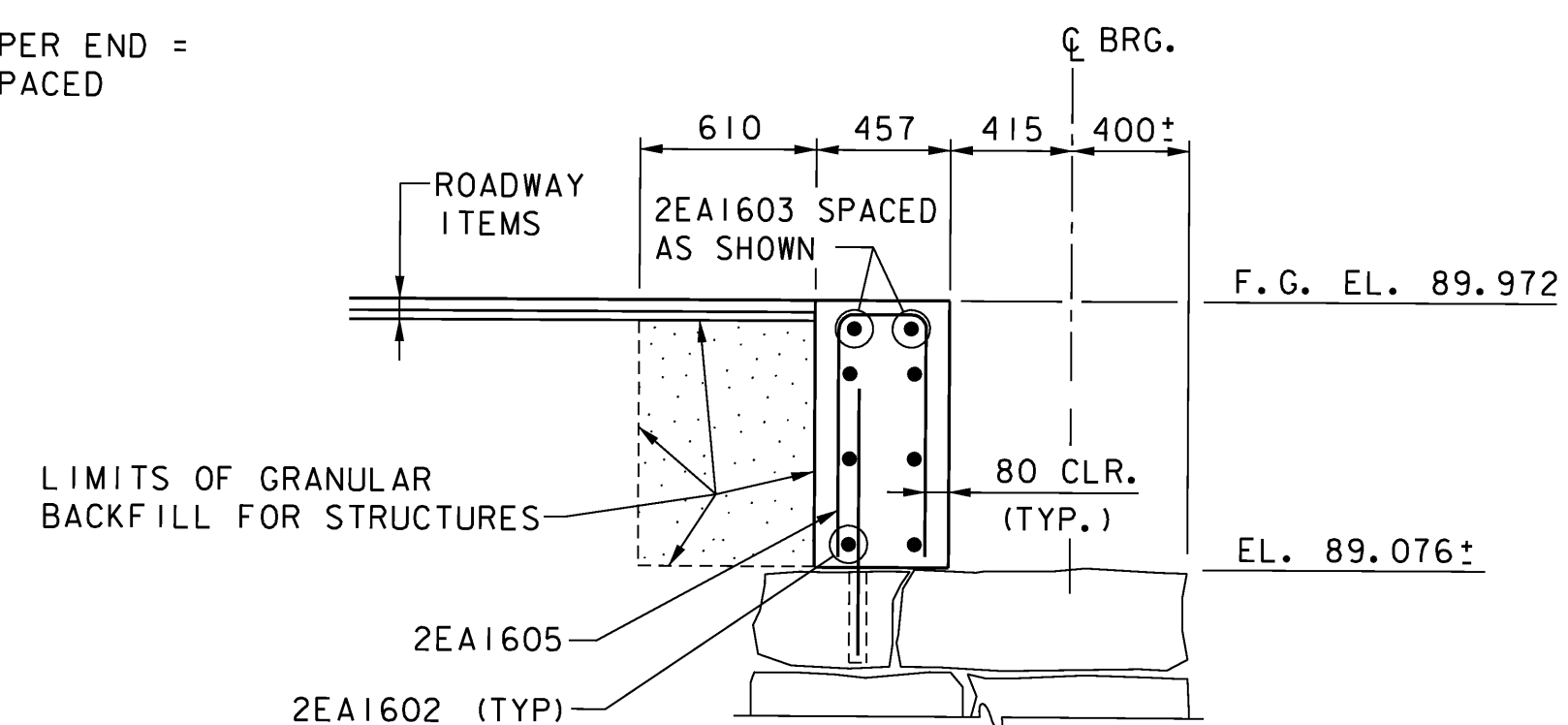
PROPOSED ABUTMENT 2 MODIFICATION PLAN
SCALE: 1:25



SECTION A-A
SCALE: 1:25



SECTION B-B
SCALE: 1:25



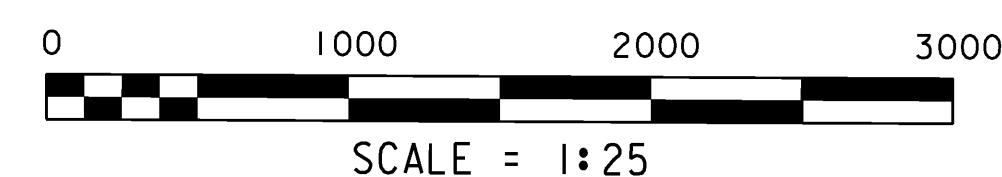
SECTION C-C
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NOTES:

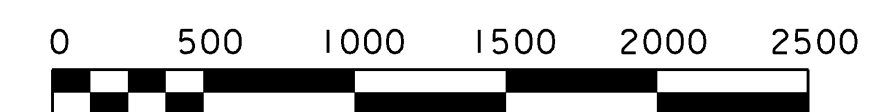
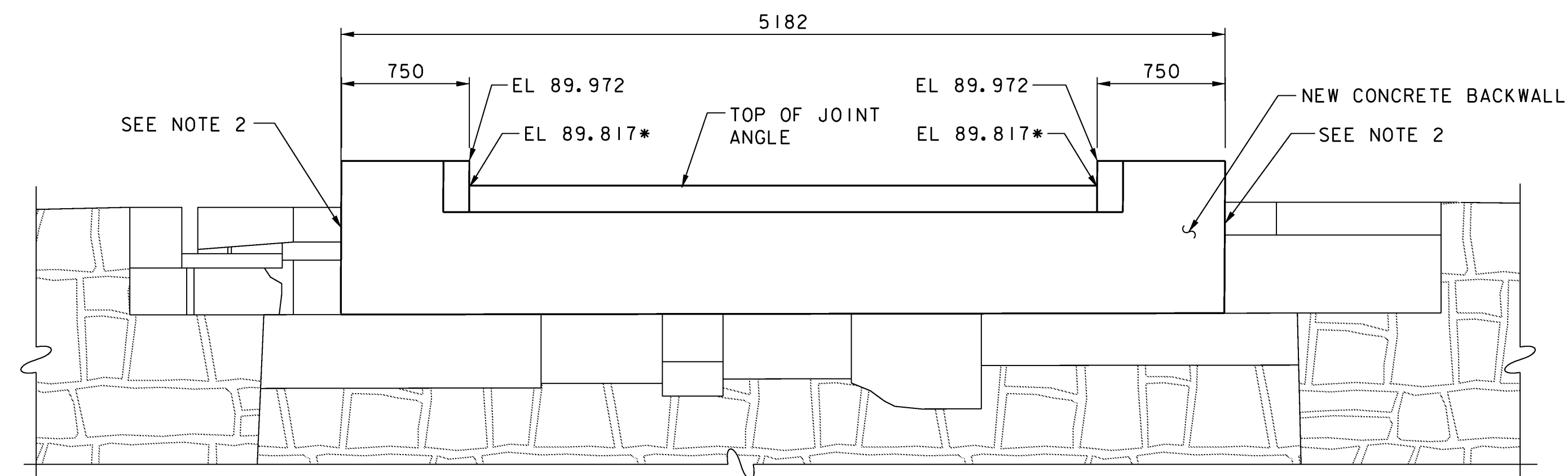
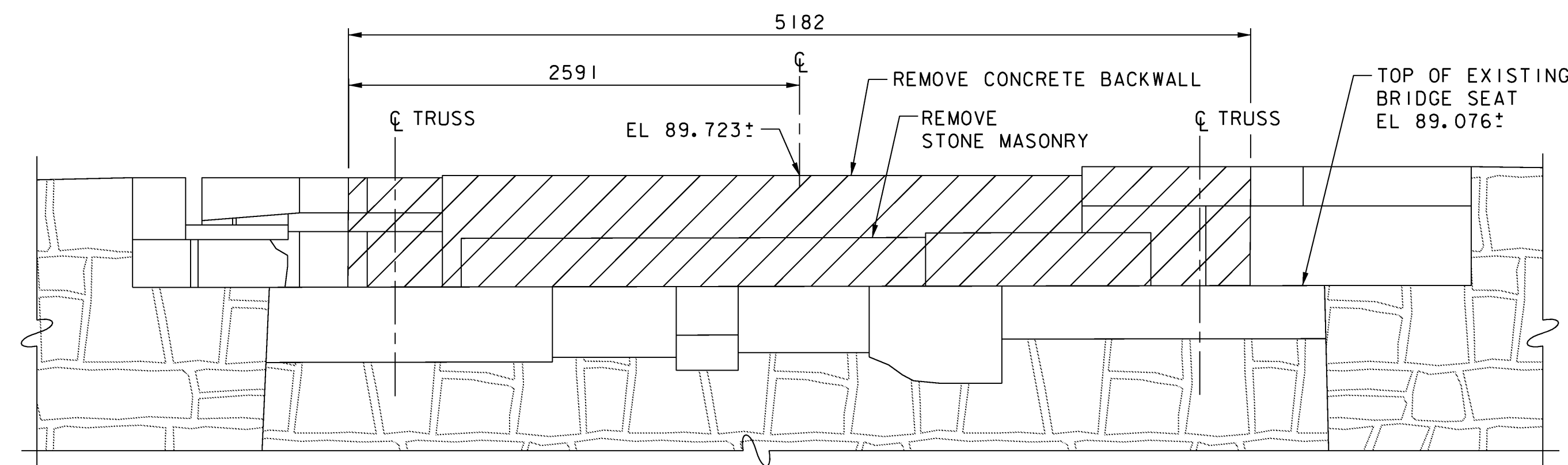
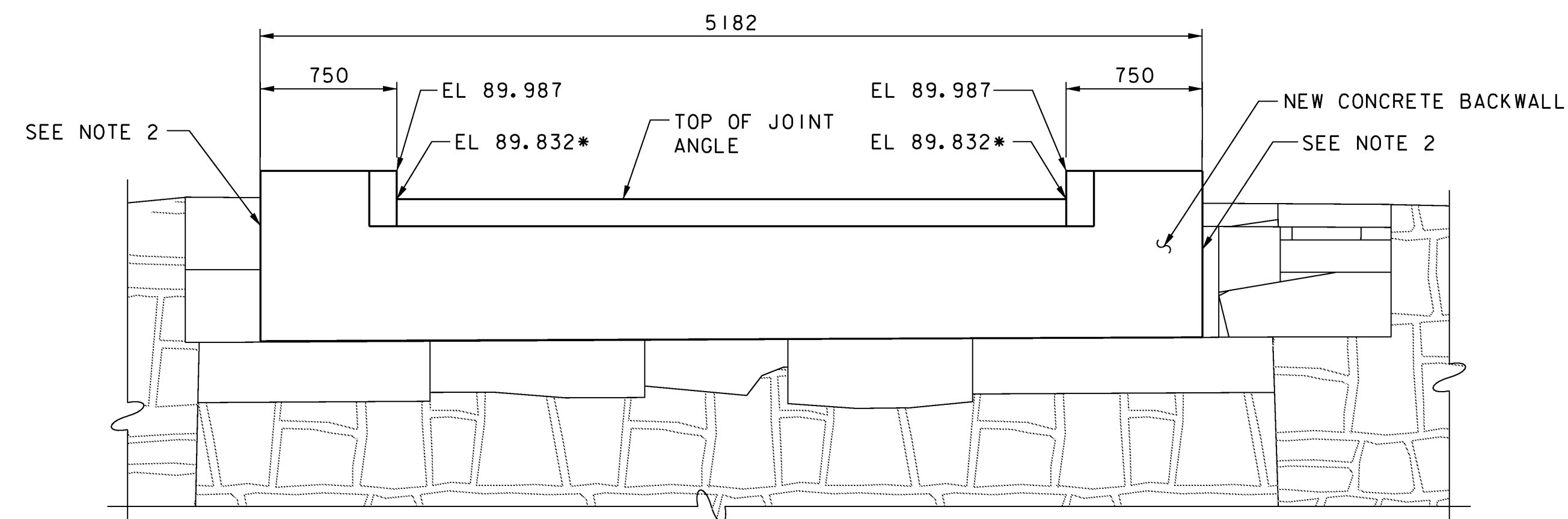
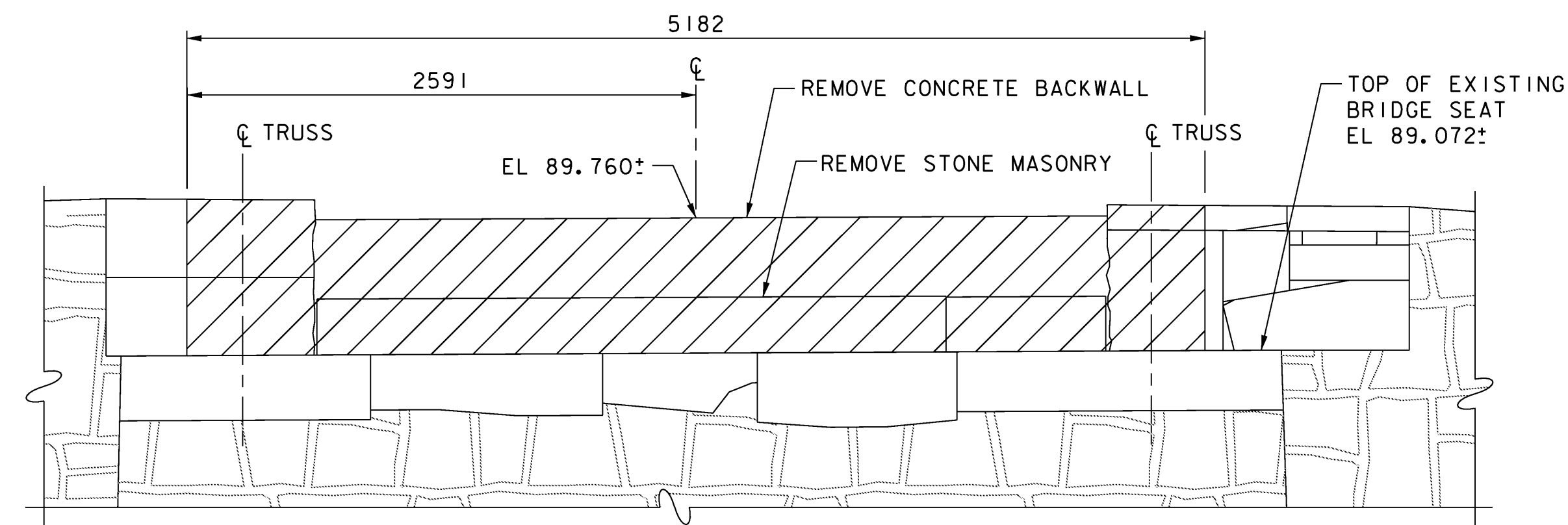
1. AN ASSUMED CONFIGURATION OF THE BACK OF BACKWALL AND ABUTMENT IS SHOWN IN THE SECTIONS ON THIS SHEET. THE ACTUAL CONFIGURATION IS UNKNOWN.
2. SHAPE AND RESET EXISTING STONE MASONRY IN BACKWALL TO FORM A VERTICAL JOINT FOR THE NEW BACKWALL CONCRETE TO BE CAST AGAINST. ALL COSTS FOR THIS WORK SHALL BE INCLUDED IN ITEM 620.20, DRY MASONRY.
3. ADJUST SPACING BETWEEN DRILL AND GROUT BARS 150 MAX. TO AVOID LOCATING BARS WITHIN 100 OF MASONRY EDGES. DRILL AND GROUT BARS MAY BE PLACED MORE THAN 150 FROM THE BACK OF BACKWALL TO MAINTAIN CLEARANCE FROM JOINTS. COST INCLUDED IN ITEM 507.16, DRILLING AND GROUTING DOWELS.
4. SEE SHEET 25 FOR DECK END JOINT DETAILS AND NOTE 1 ON SHEET 30.

**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

Town Of	DUMMERSTON	Bridge No.	37
Highway No.	TH 62	Log Sta.	
		Surv. Sta.	
TH 62 OVER WEST RIVER			
ABUTMENT 2 MODIFICATIONS			
Designed By	T. S. BRYANT	Drawn By	B. J. MASSE
Checked By	S. M. HODGDON	Bridge Design Supervisor	S. M. HODGDON
PROJECT	DUMMERSTON	PROJECT NO.	BHO 1442 (28)
I.G.C. Info.			
Bridge Sheet No.	ZJ080MA2	Sheet	29 of 49



VANASSE HANGEN BRUSTLIN, INC.



SCALE 1:25

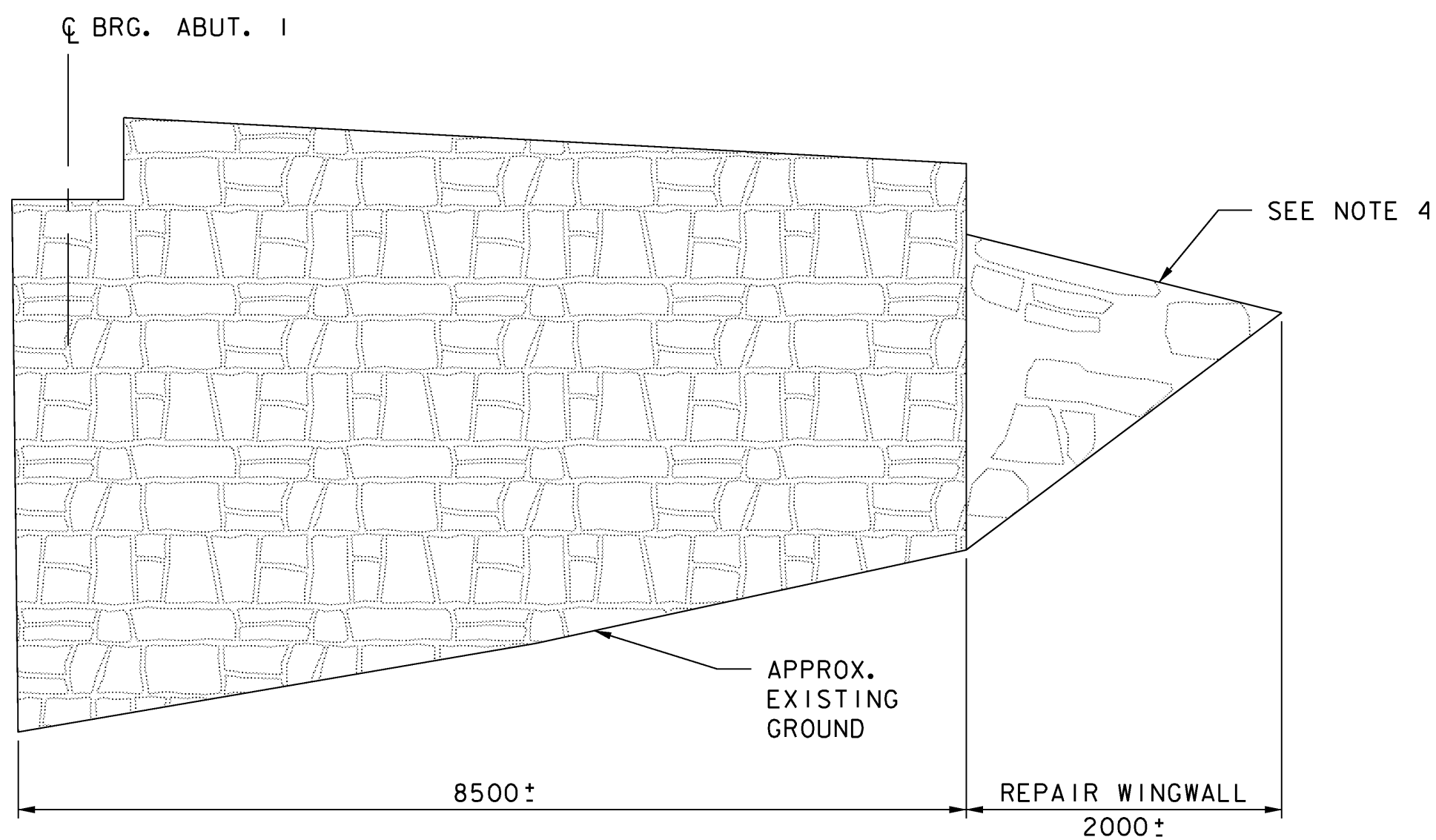
VANASSE HANGEN BRUSTLIN, INC.

NOTES:

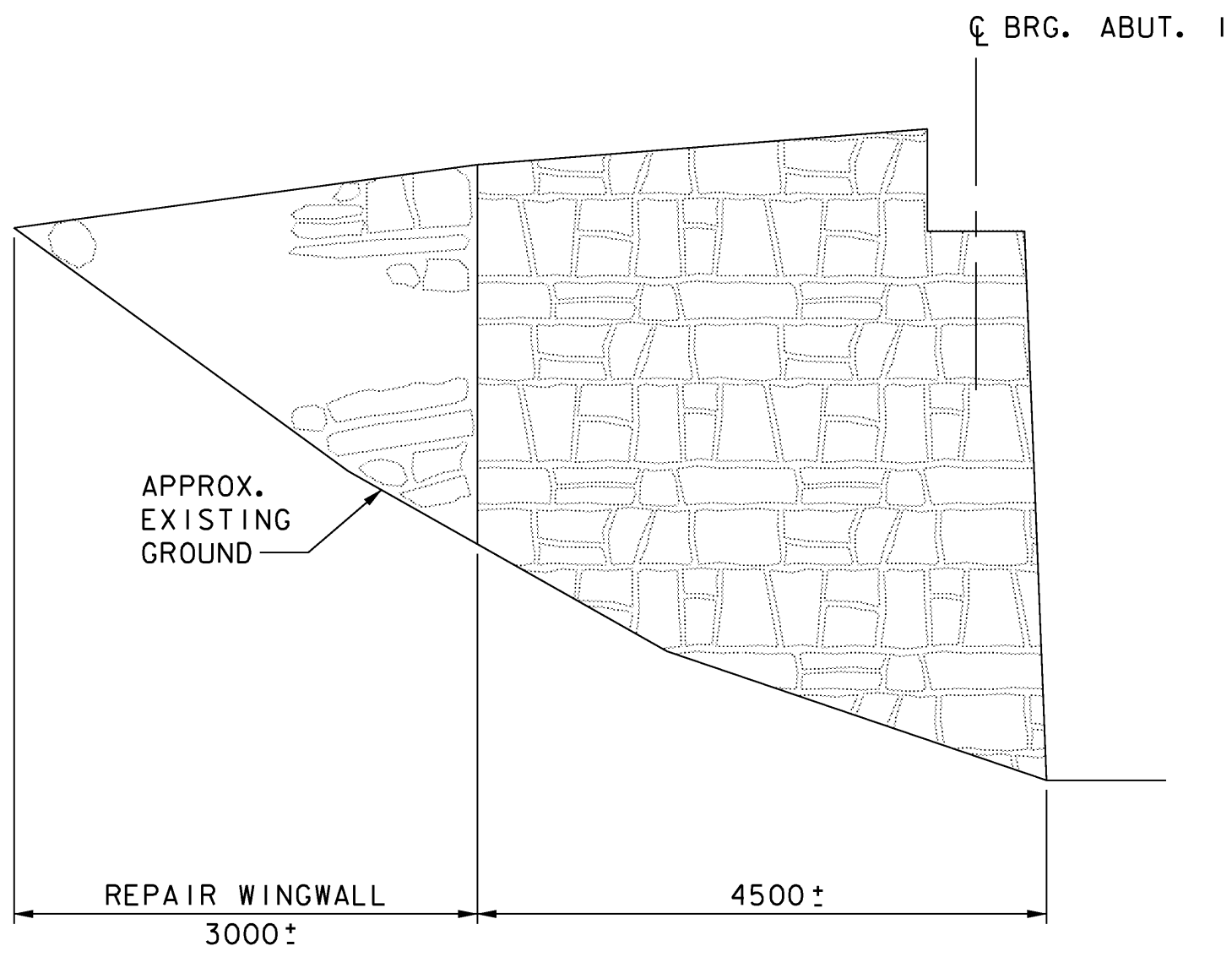
- ELEVATIONS ARE GIVEN AT FACE OF BACKWALL. ELEVATIONS MARKED * ARE AT TOP OF JOINT ANGLE, WHICH IS 3 mm LOWER THAN TOP OF BACKWALL ELEVATION.
- SHAPE AND RESET EXISTING STONE MASONRY IN BACKWALL TO FORM A VERTICAL JOINT FOR THE NEW BACKWALL CONCRETE TO BE CAST AGAINST. ALL COSTS FOR THIS WORK SHALL BE INCLUDED IN ITEM 620.20, DRY MASONRY.
- SEE SHEET 25 FOR DECK END JOINT DETAILS.

STATE OF VERMONT AGENCY OF TRANSPORTATION

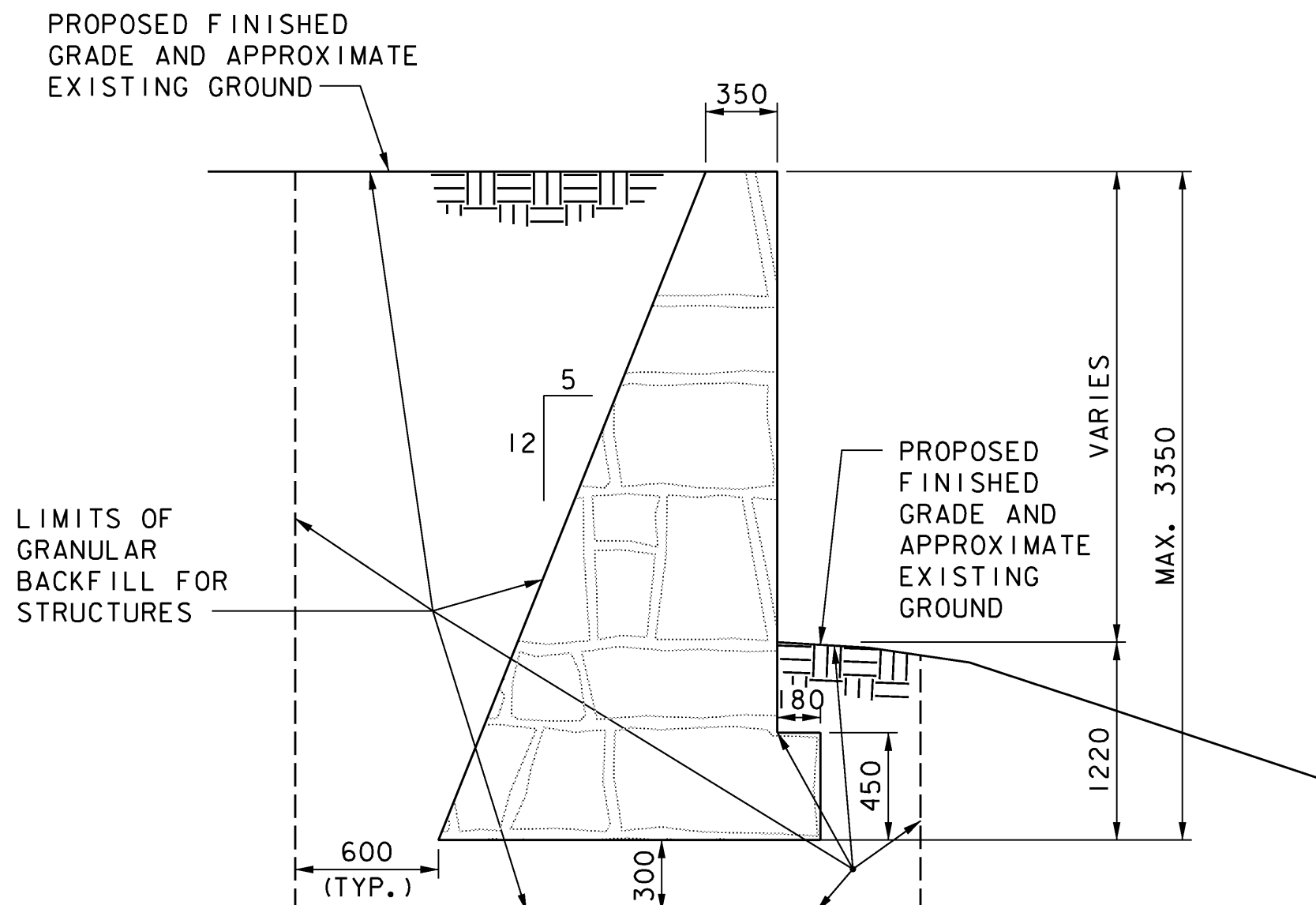
Town Of	DUMMERSTON	Bridge No.	37
Highway No.	TH 62	Log Sta.	
		Surv. Sta.	
TH 62 OVER WEST RIVER			
ABUTMENT ELEVATIONS			
Designed By	T. S. BRYANT	Drawn By	B. J. MASSE
Checked By	Date	Bridge Design Supervisor	
	S. M. HODGDON 4/09		S. M. HODGDON Date 4/09
PROJECT	DUMMERSTON	PROJECT NO.	BHO 1442 (28)
I.G.C. Info.			
Bridge Sheet No.	ZJ080MA5	Sheet	30 of 49



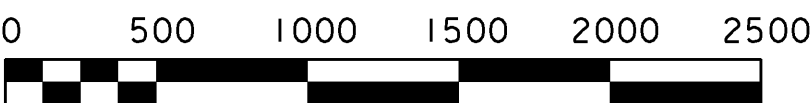
WINGWALL #1
SCALE: 1:50



WINGWALL #2
SCALE: 1:50

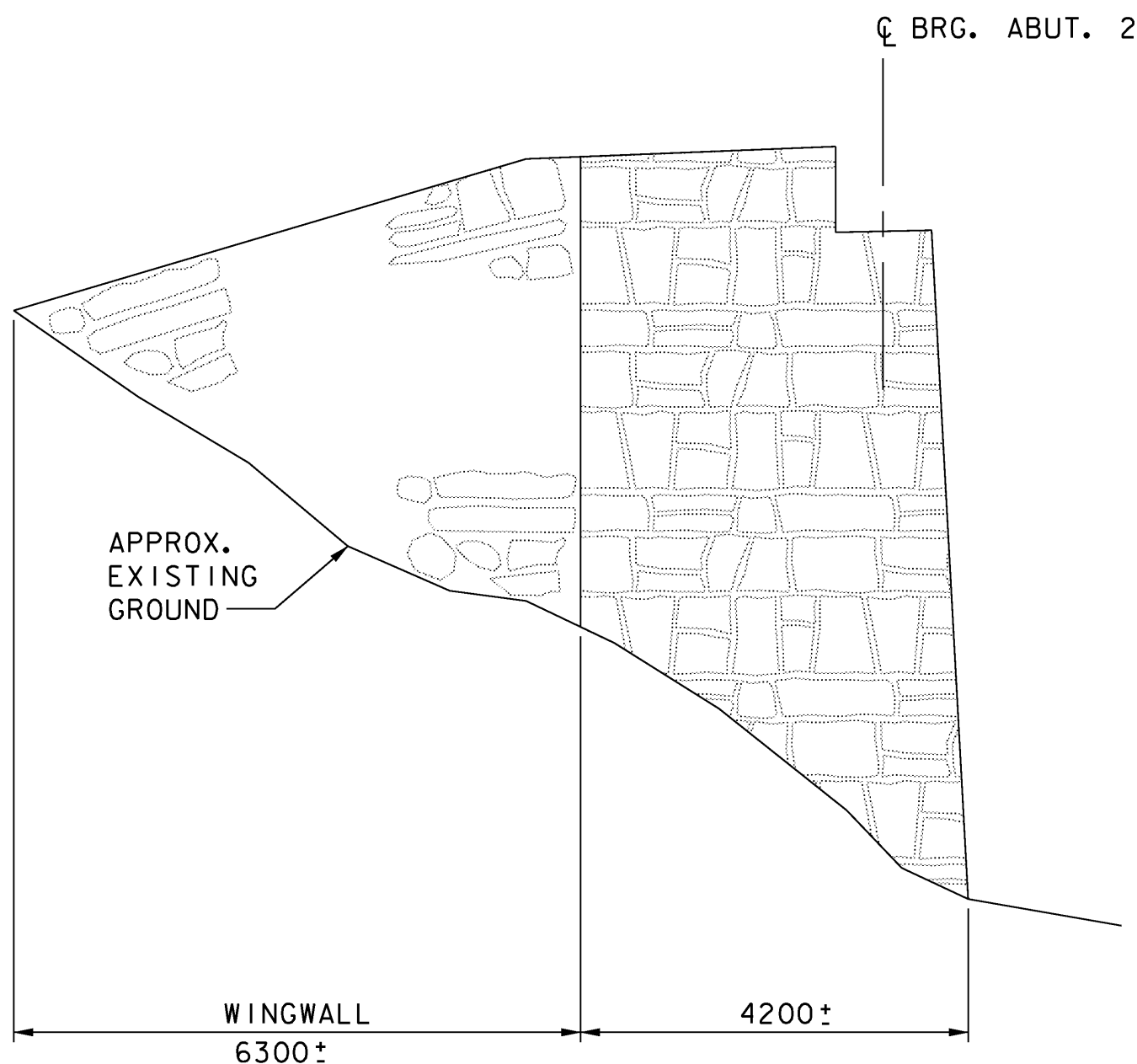


TYPICAL
RECONSTRUCTED SECTION
NOT TO SCALE

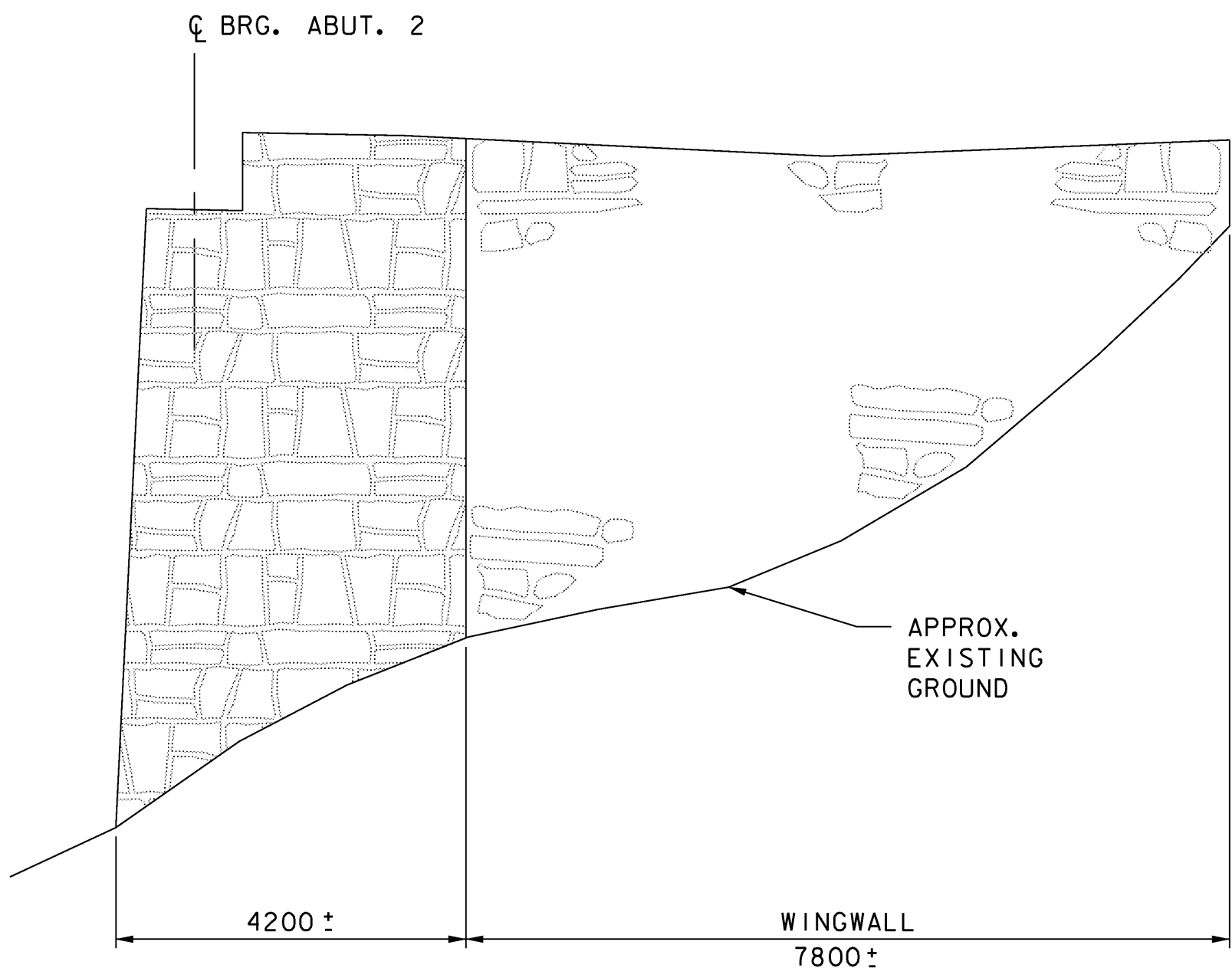


WINGWALL REPAIR NOTES:

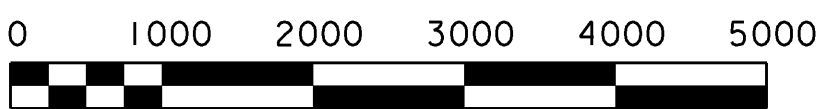
- THE PORTIONS OF ABUTMENT NO. 1 WINGWALLS IDENTIFIED FOR REPAIR ON THIS SHEET SHALL BE REPAIRED BY ONE OR A COMBINATION OF THE FOLLOWING METHODS AS DIRECTED BY THE ENGINEER. REGARDLESS OF THE METHOD USED, ALL WINGWALL REPAIRS WITHIN THE IDENTIFIED AREAS SHALL BE PAID AS ITEM 602.20, DRY MASONRY.
 - THE WINGWALLS MAY BE REPAIRED BY RECONSTRUCTING ALL OR PART OF THE WALL AS SHOWN IN THE TYPICAL RECONSTRUCTED SECTION ON THIS SHEET. THE MAXIMUM ALLOWABLE HEIGHT OF THE SECTION SHOWN IS 3350 MILLIMETERS WITHOUT ADDITIONAL ANALYSIS BY THE ENGINEER.
 - ALTERNATIVELY THE WINGWALLS MAY BE REPAIRED BY RESETTING SELECTED STONES THAT HAVE SHIFTED, AND BY CHINKING GAPS BETWEEN THE STONES WITH SMALL STONES. MORTAR MAY BE USED SELECTIVELY, WITH THE APPROVAL OF THE ENGINEER, TO SEAT CHINKING STONES, BUT IT SHALL NOT BE USED TO REPOINT EXISTING OPEN JOINTS. THE QUANTITY TO BE PAID FOR REPAIR OF THE WINGWALLS BY THIS METHOD SHALL BE EQUIVALENT TO THE QUANTITY FOR RECONSTRUCTING THE SAME AREA OF WALL AS SHOWN IN THE TYPICAL RECONSTRUCTION SECTION ON THIS SHEET.
- ITEM 204.25, STRUCTURE EXCAVATION SHALL BE USED TO PAY FOR EXCAVATION BEHIND THE ABUTMENT NO. 1 WINGWALLS IF THEY ARE RECONSTRUCTED. THE PAY LIMITS OF ITEM 204.25 SHALL BE FROM TOP OF EXISTING GROUND TO THE OUTER LIMITS OF GRANULAR BACKFILL FOR STRUCTURES SHOWN IN THE TYPICAL RECONSTRUCTED SECTION ON THIS SHEET, LESS THE VOLUME OF THE EXISTING WALL.
- COSTS FOR REMOVING AND STOCKPILING EXISTING STONE MASONRY SHALL BE PAID AS ITEM 529.25, REMOVAL OF CONCRETE OR MASONRY, IF THE ABUTMENT NO. 1 WINGWALLS ARE RECONSTRUCTED. THE EXISTING STONE MASONRY MAY BE REUSED FOR RECONSTRUCTING THE WINGWALLS. ANY ADDITIONAL STONE REQUIRED TO COMPLETE THE RECONSTRUCTION SHALL BE GRANITE APPROXIMATELY SIMILAR TO THE EXISTING IN SIZE AND APPEARANCE.
- SEE SHEET 5 FOR THE LOCATION OF NEW 450 MILLIMETER DIAMETER DRAINAGE PIPE THAT WILL OUTLET THROUGH THE SECTION OF WINGWALL #1 THAT REQUIRES REPAIR.
- SEE GENERAL NOTE 16 ON SHEET 16 FOR REQUIREMENTS FOR WINGWALL REPAIRS BEYOND THE LIMITS IDENTIFIED FOR REPAIRS ON THIS SHEET.



WINGWALL #3
SCALE: 1:50



WINGWALL #4
SCALE: 1:50



STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of	DUMMERSTON	Bridge No.	37
Highway No.	TH 62	Log Sta.	
		Surv. Sta.	

TH 62 OVER WEST RIVER

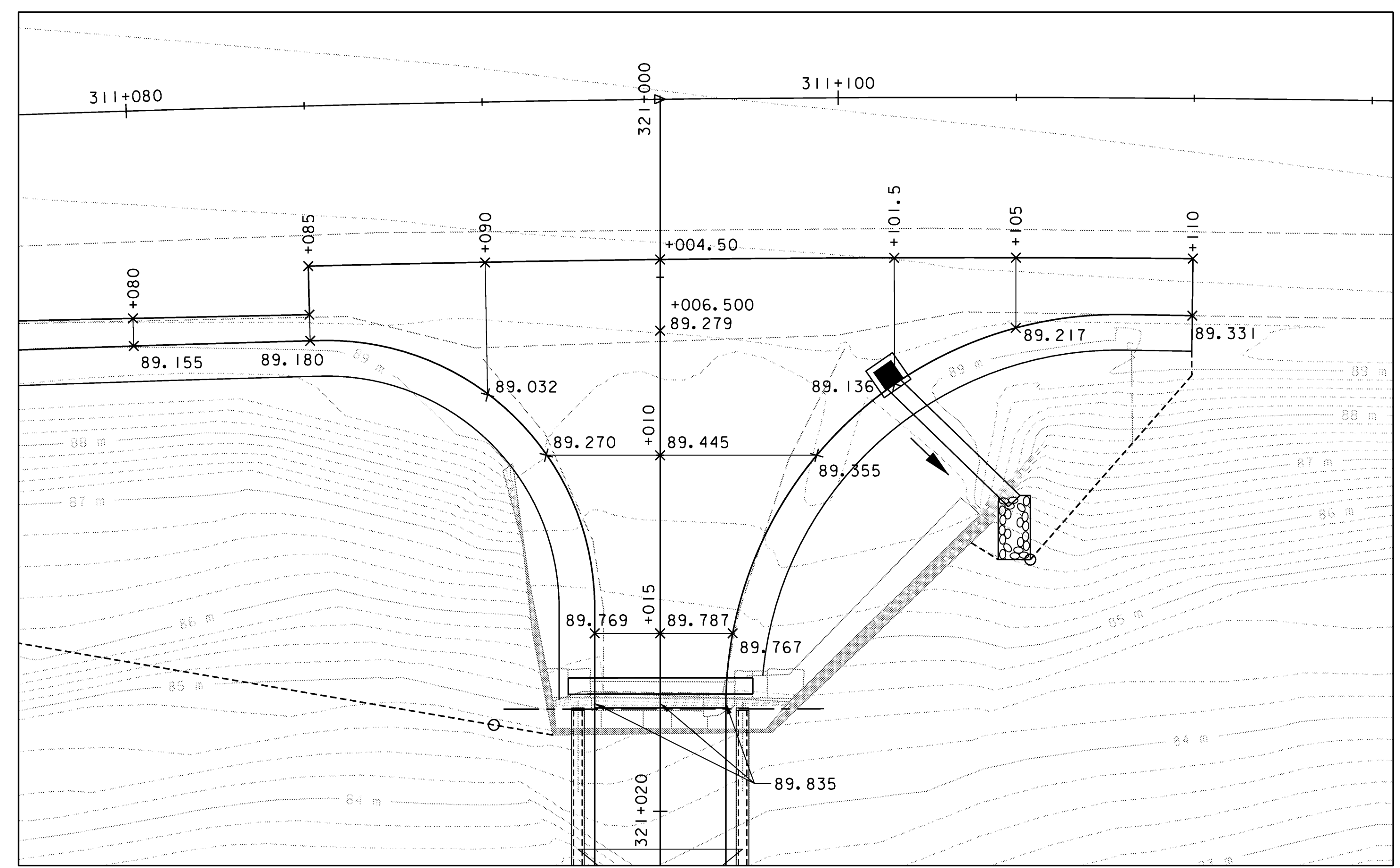
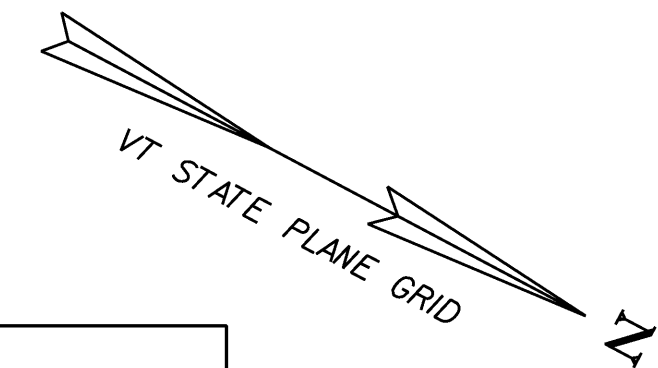
WINGWALL REPAIR DETAILS

Designed By	T. S. BRYANT	Drawn By	B. J. MASSE
Checked By	Date	Bridge Design Supervisor	
S. M. HODGDON	4/09	S. M. HODGDON	Date 4/09

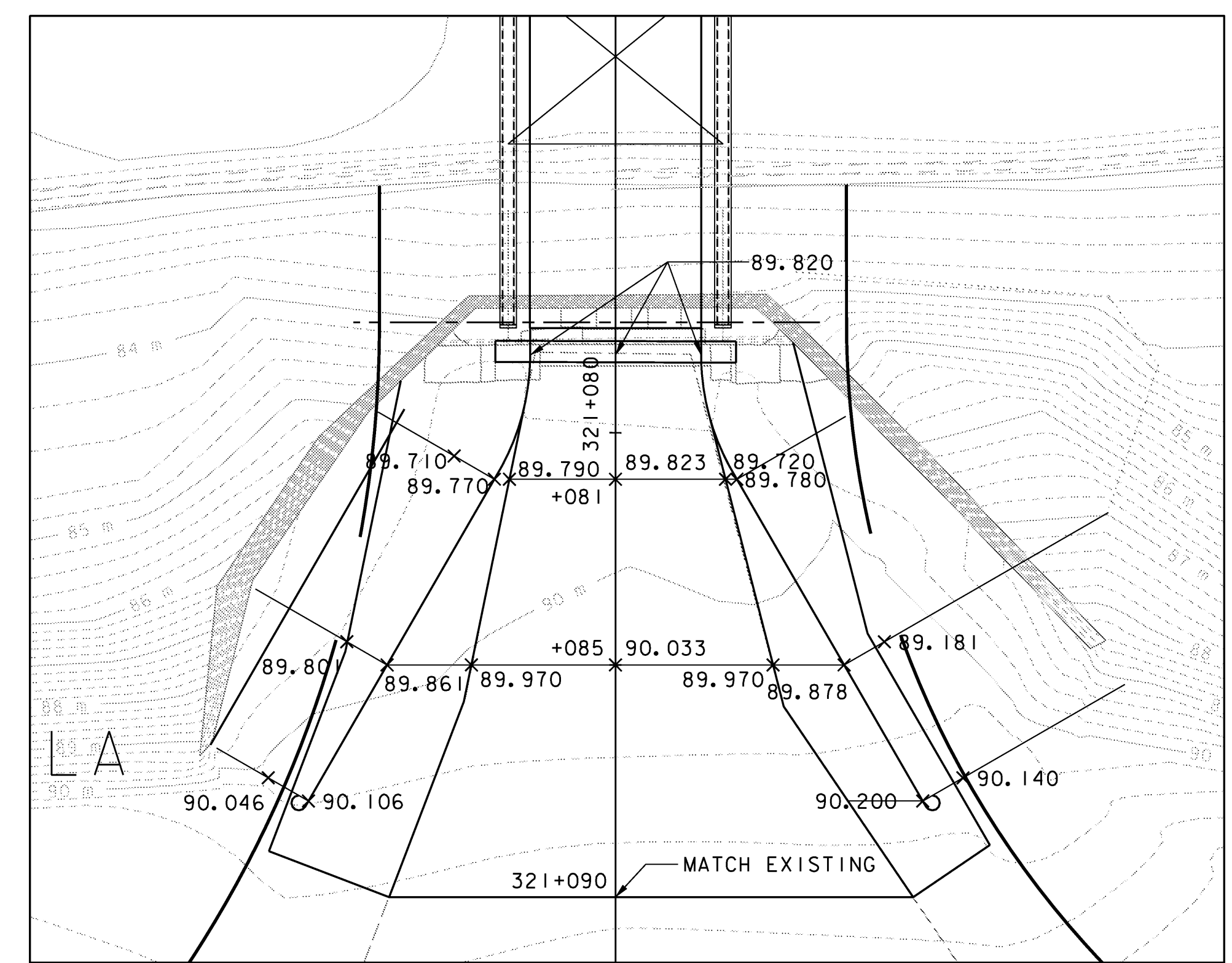
PROJECT	DUMMERSTON	PROJECT NO.	BHO 1442 (28)
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I.G.C. Info.			
Bridge Sheet No.	ZJ080MA3	Sheet	31 of 49

ITEM	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O	ITEM	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
1	20	16	900	1A1601														100																	
2	8	16	5020	1EA1602														101																	
3	4	16	580	1EA1603														102																	
4	12	16	1500	1EA1604	17		600	300	600									103																	
5	6	16	1800	1EA1605	17		750	300	750									104																	
6																		105																	
7	20	16	900	2A1601														106																	
8	8	16	5020	2EA1602														107																	
9	4	16	580	2EA1603														108																	
10	12	16	1460	2EA1604	17		580	300	580									109																	
11	6	16	1760	2EA1605	17		730	300	730									110																	
12																		111																	
13																		112																	
14																		113																	
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77																		176																	
78																		177																	
79																		178																	
80																		179																	
81																		180																	
82																																			



VT 30/TH 62 INTERSECTION GRADING PLAN
SCALE: 1" = 100'

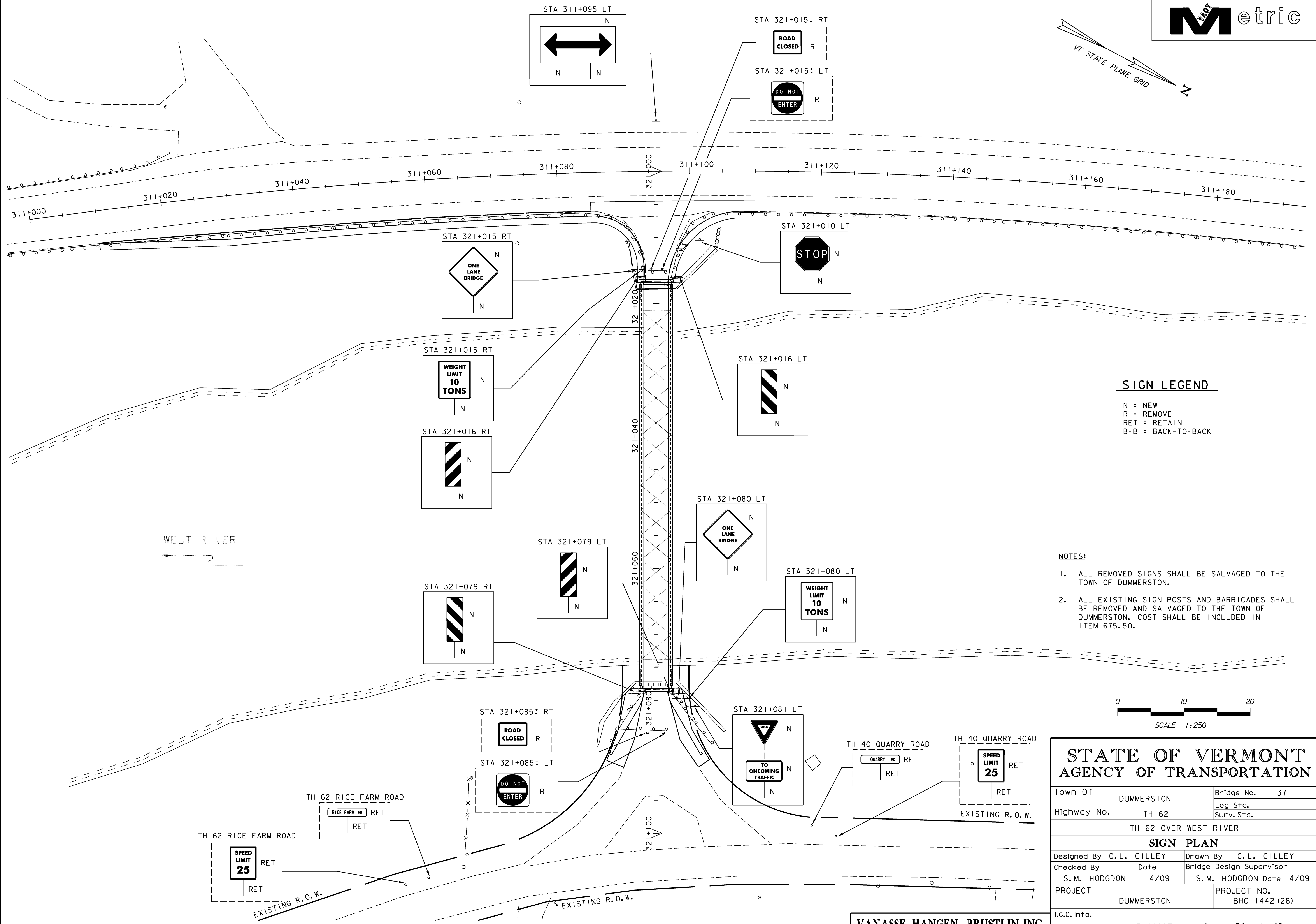
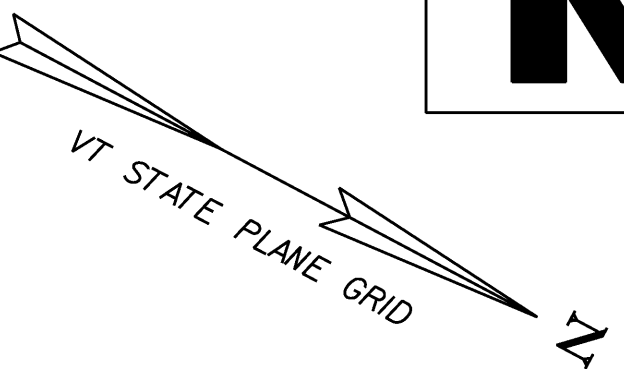


END BRIDGE/TH 62 GRADING PLAN
SCALE: 1" = 100'



VANASSE HANGEN BRUSTLIN, INC.

STATE OF VERMONT AGENCY OF TRANSPORTATION			
Town Of	DUMMERSTON	Bridge No.	37
Highway No.	TH 62	Log Sta.	
		Surv. Sta.	
TH 62 OVER WEST RIVER			
ROADWAY GRADING PLAN			
Designed By	C.L. CILLEY	Drawn By	C.L. CILLEY
Checked By	S.M. HODGDON	Bridge Design Supervisor	S.M. HODGDON
Date	4/09	Date	4/09
PROJECT	DUMMERSTON	PROJECT NO.	BHO 1442 (28)
I.G.C. Info.			
Bridge Sheet No.	ZJ080GR1	Sheet	33 of 49

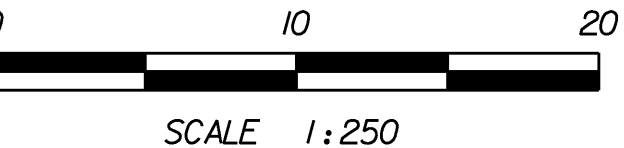


SIGN LEGEND

N = NEW
R = REMOVE
RET = RETAIN
B-B = BACK-TO-BACK

NOTES:

1. ALL REMOVED SIGNS SHALL BE SALVAGED TO THE TOWN OF DUMMERSTON.
2. ALL EXISTING SIGN POSTS AND BARRICADES SHALL BE REMOVED AND SALVAGED TO THE TOWN OF DUMMERSTON. COST SHALL BE INCLUDED IN ITEM 675.50.

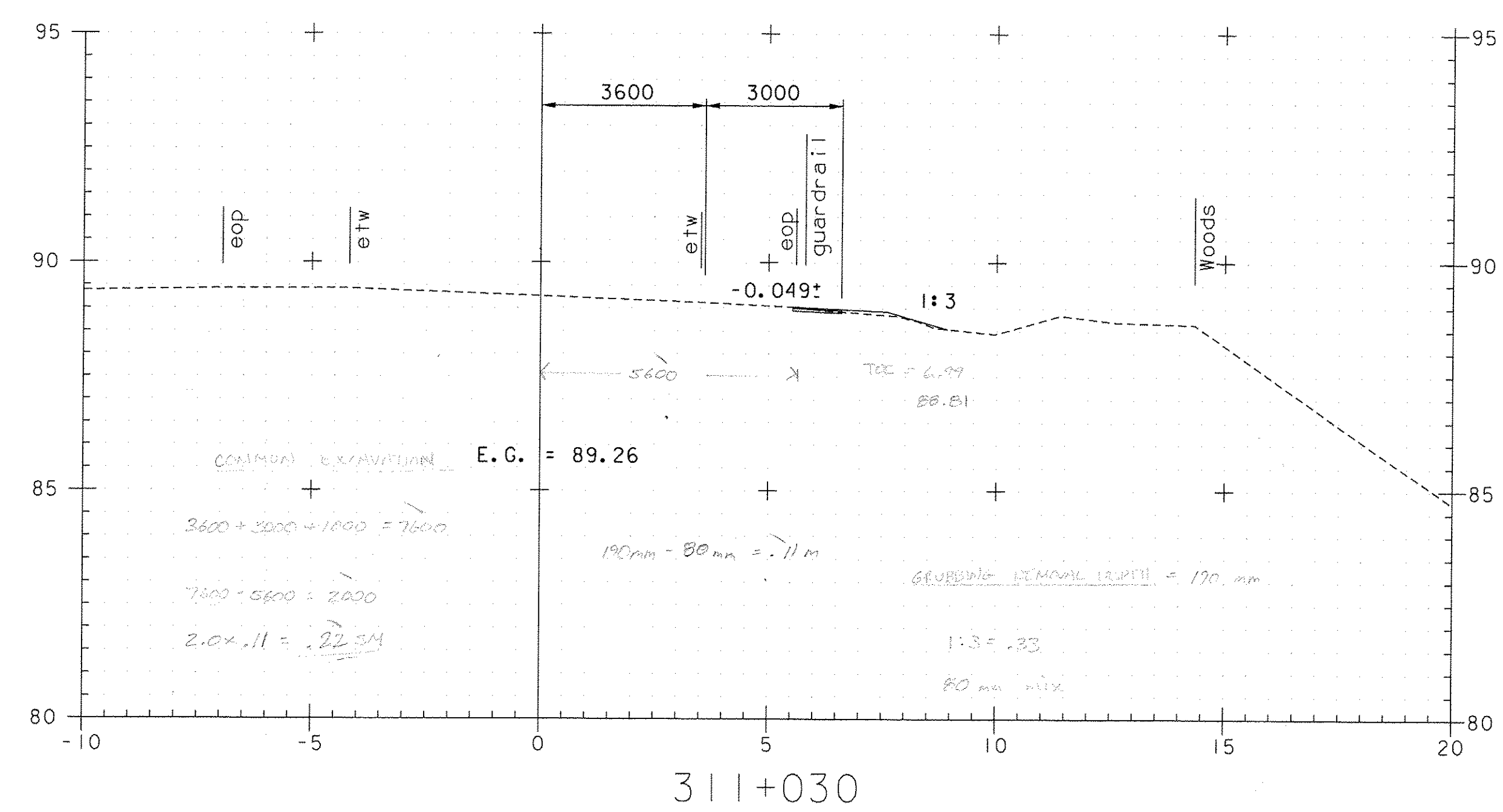
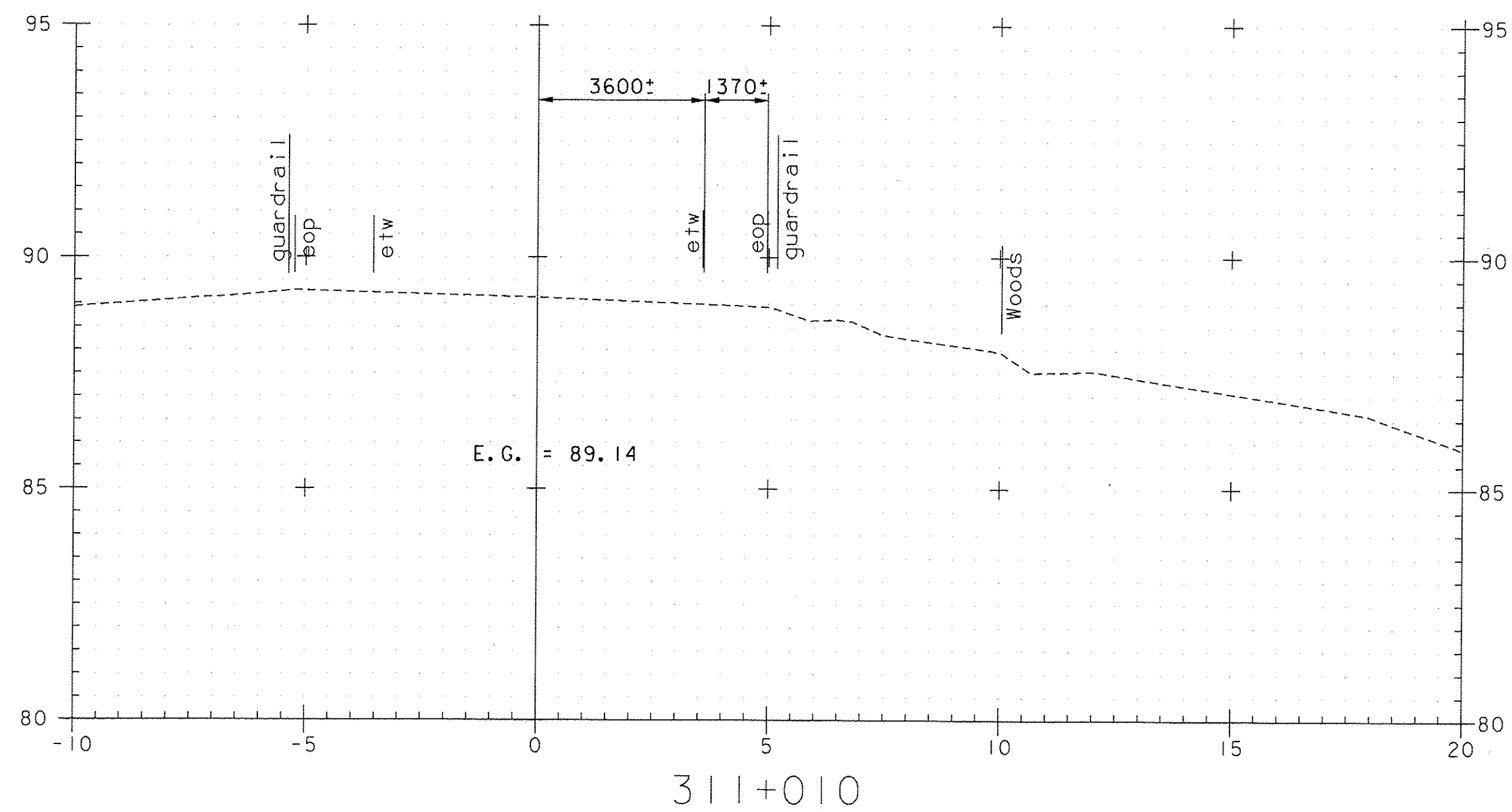
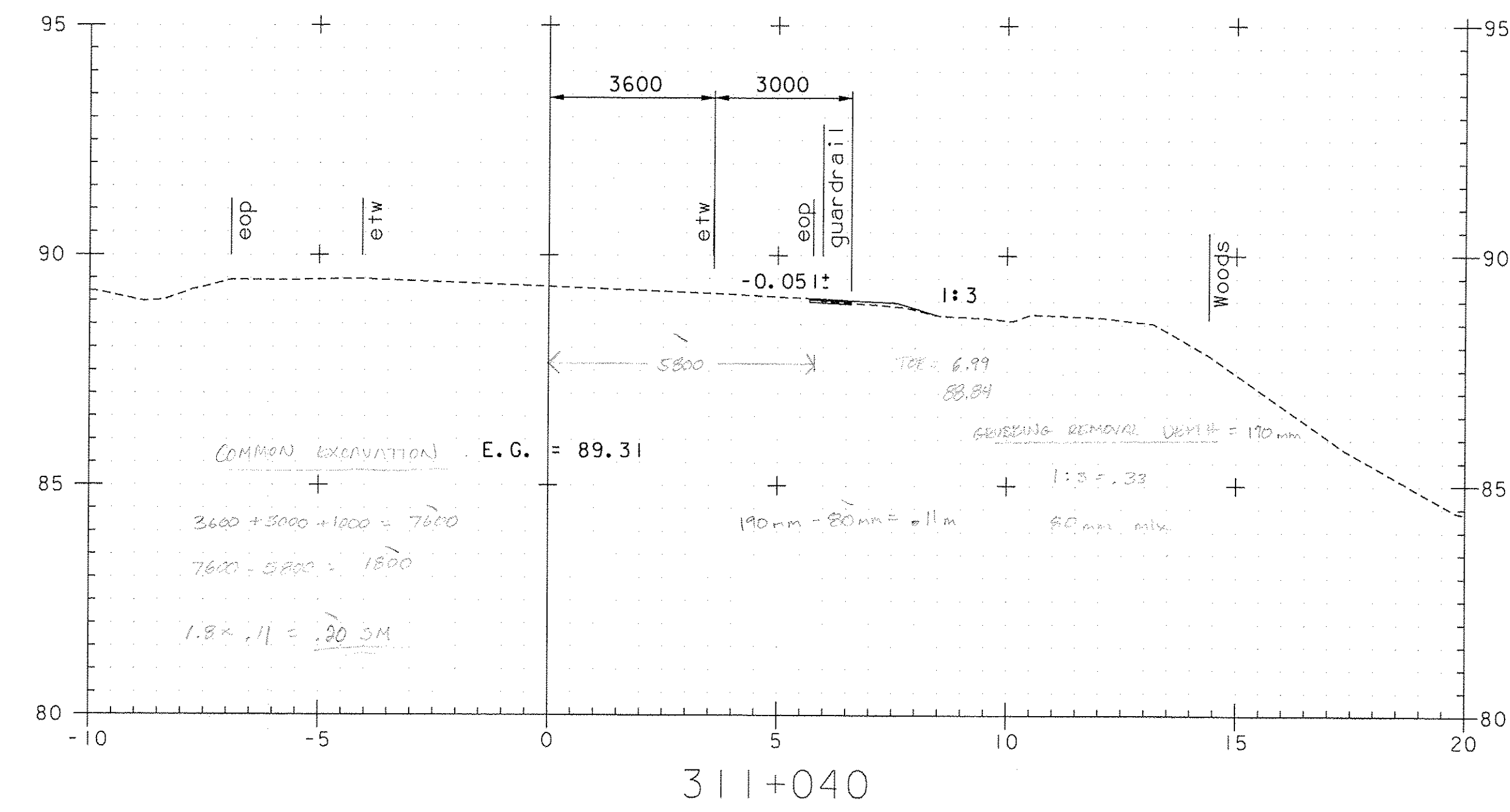
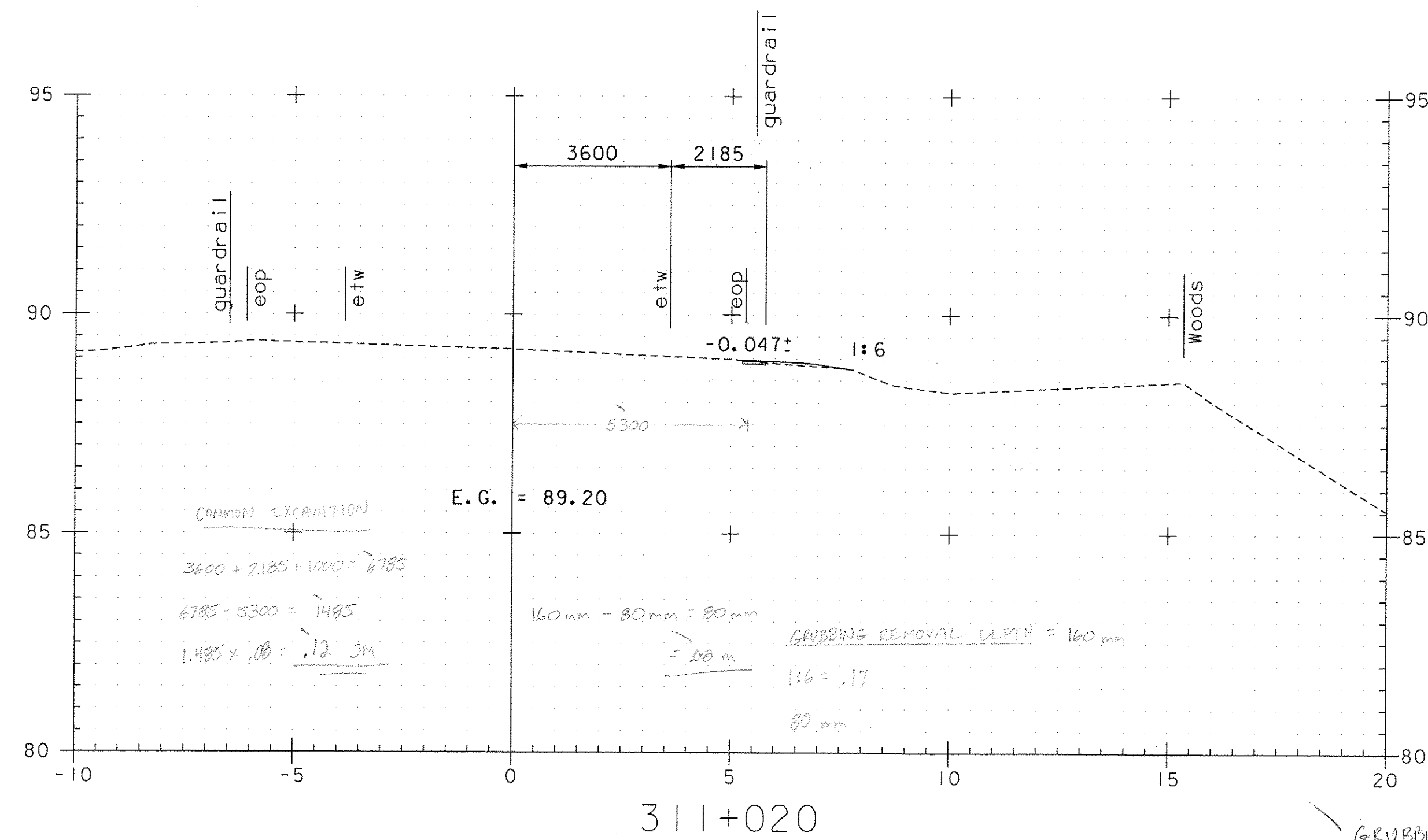


**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

Town Of	DUMMERSTON	Bridge No.	37
Highway No.	TH 62	Log Sta.	
		Surv. Sta.	
TH 62 OVER WEST RIVER			
SIGN PLAN			
Designed By	C.L. CILLEY	Drawn By	C.L. CILLEY
Checked By	Date	Bridge Design Supervisor	
	S.M. HODGDON 4/09	S.M. HODGDON	Date 4/09
PROJECT	DUMMERSTON	PROJECT NO.	BHO 1442 (28)
I.G.C. Info.			
Bridge Sheet No.	ZJ080ST1	Sheet	34 of 49

VANASSE HANGEN BRUSTLIN, INC.

VHB NO. 51192 plot date: 4/3/2009



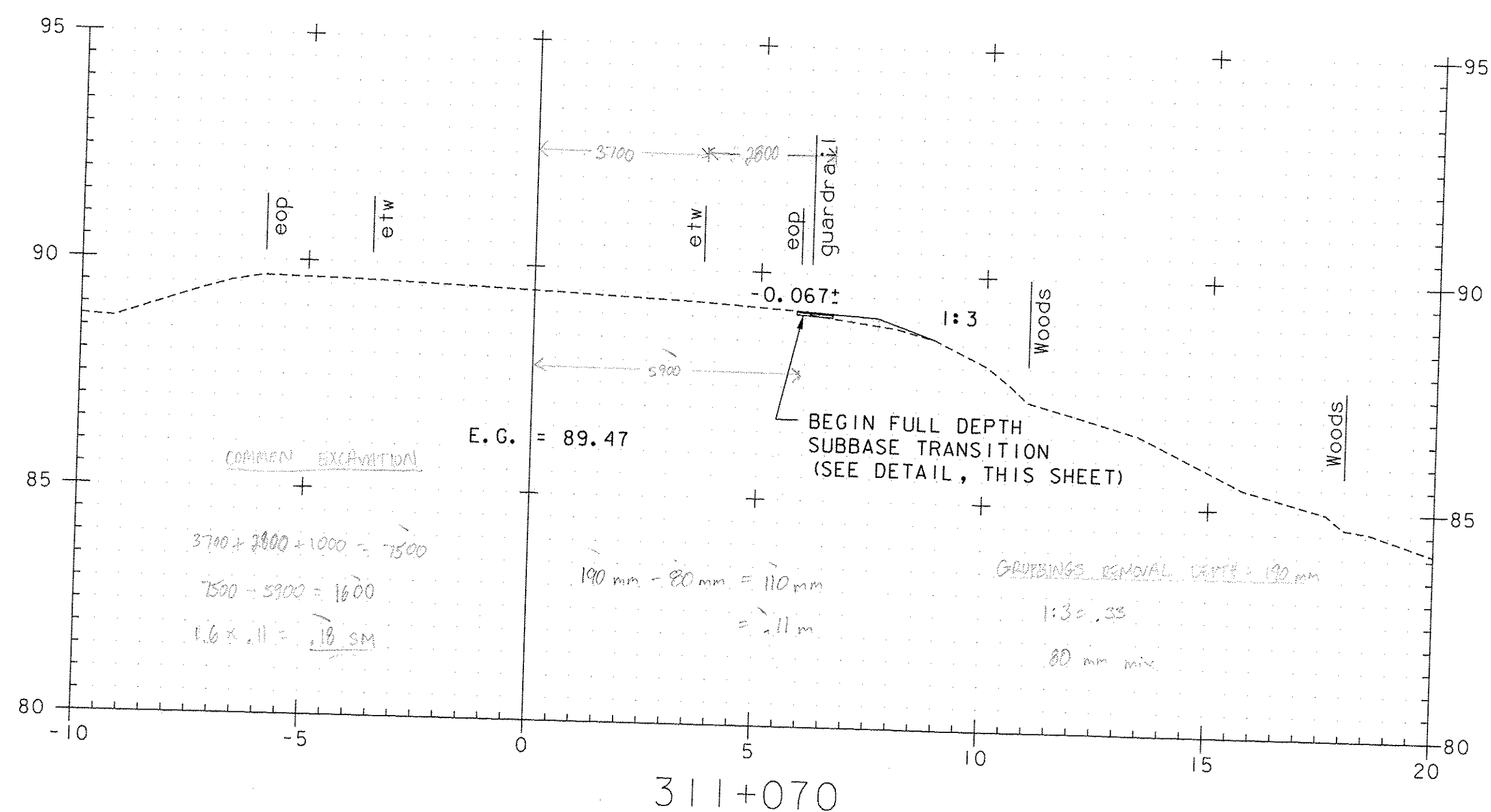
BEGIN VT 30 APPROACH
STA 311+010
MATCH EXISTING



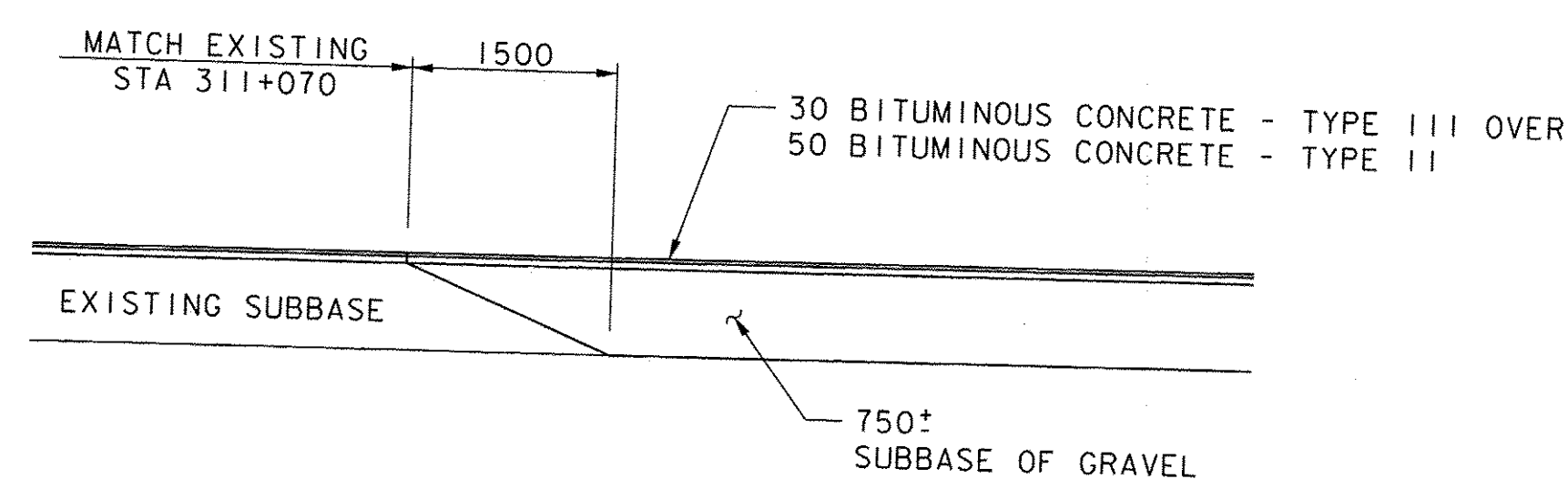
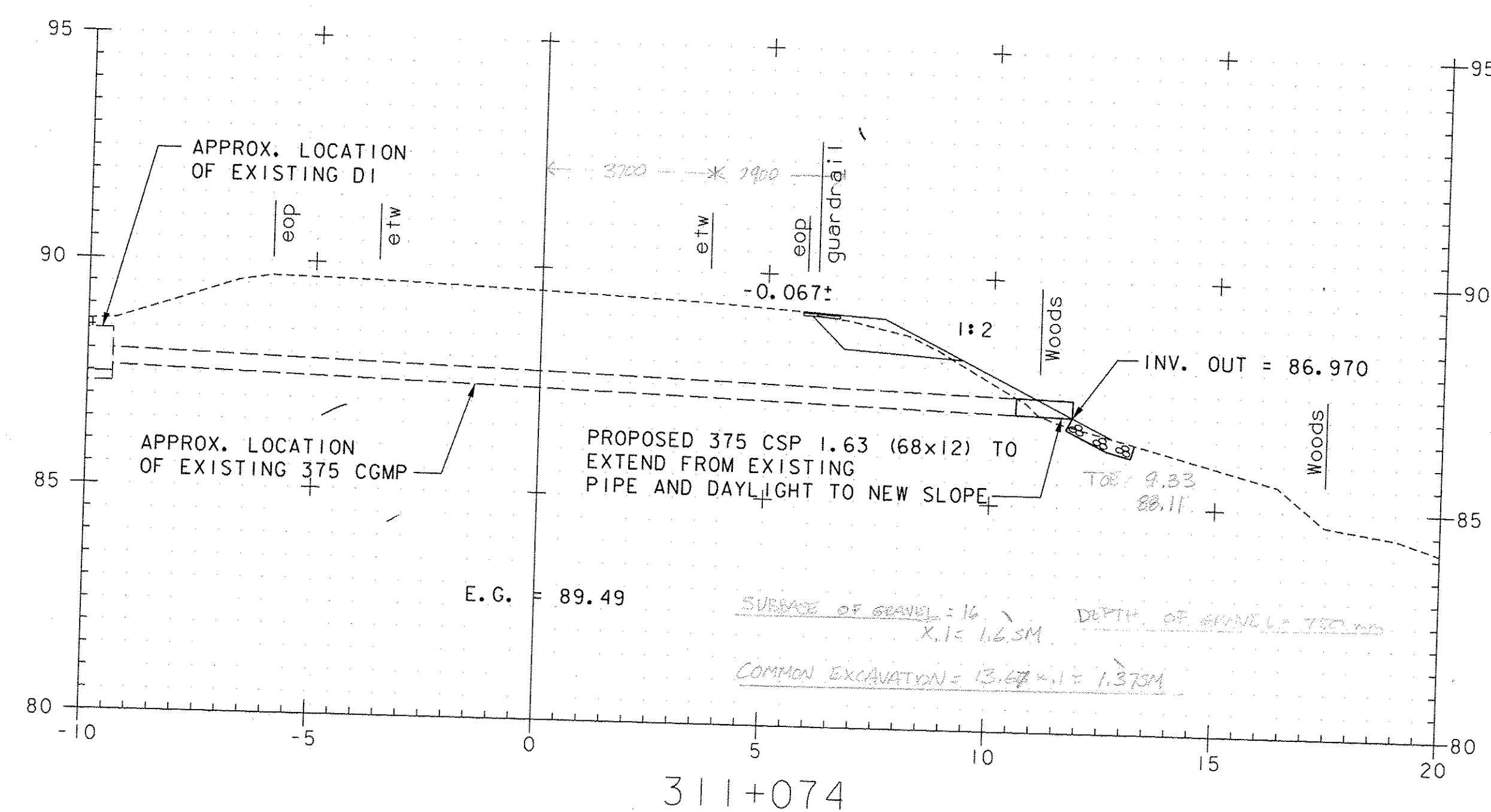
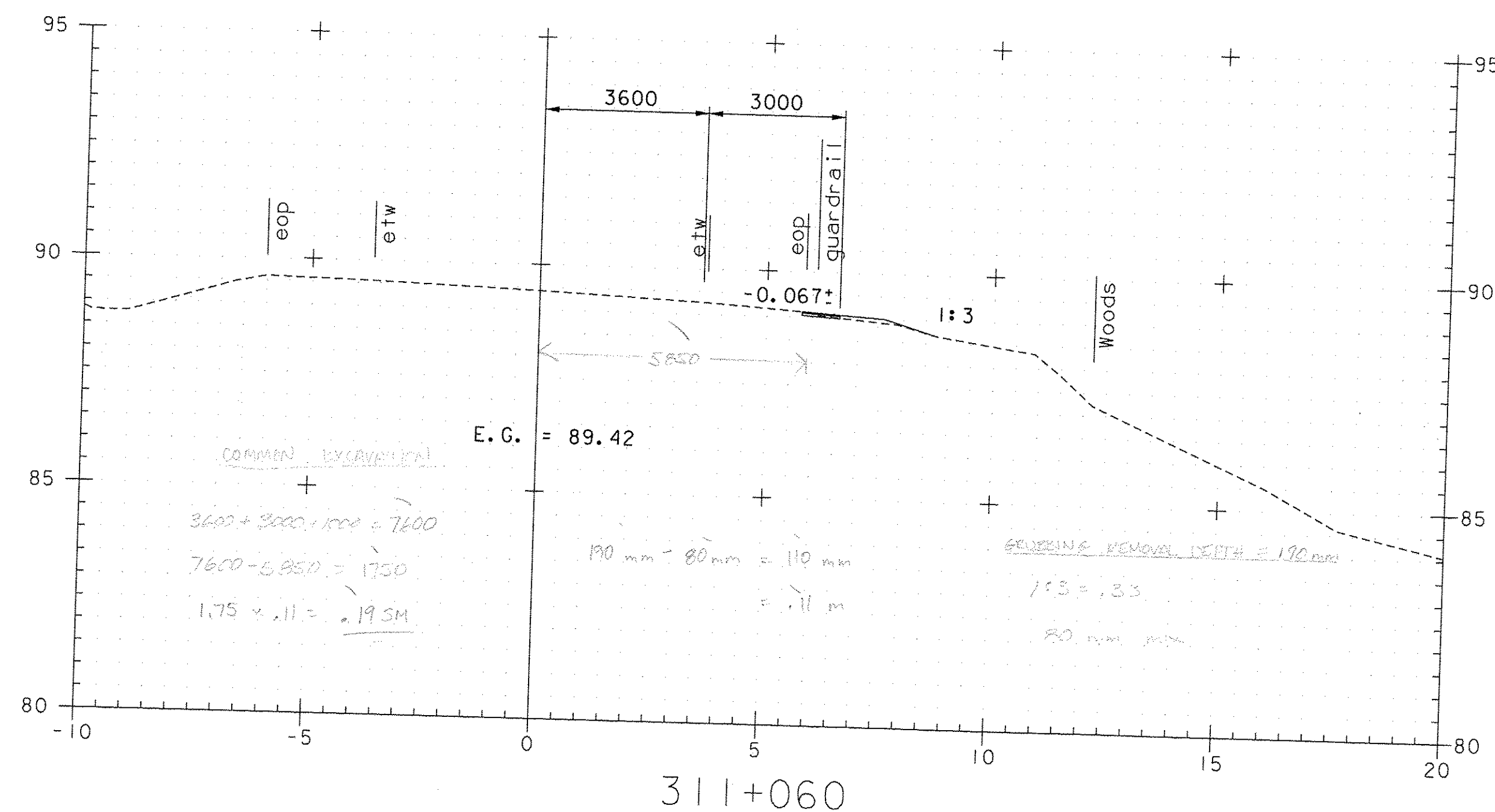
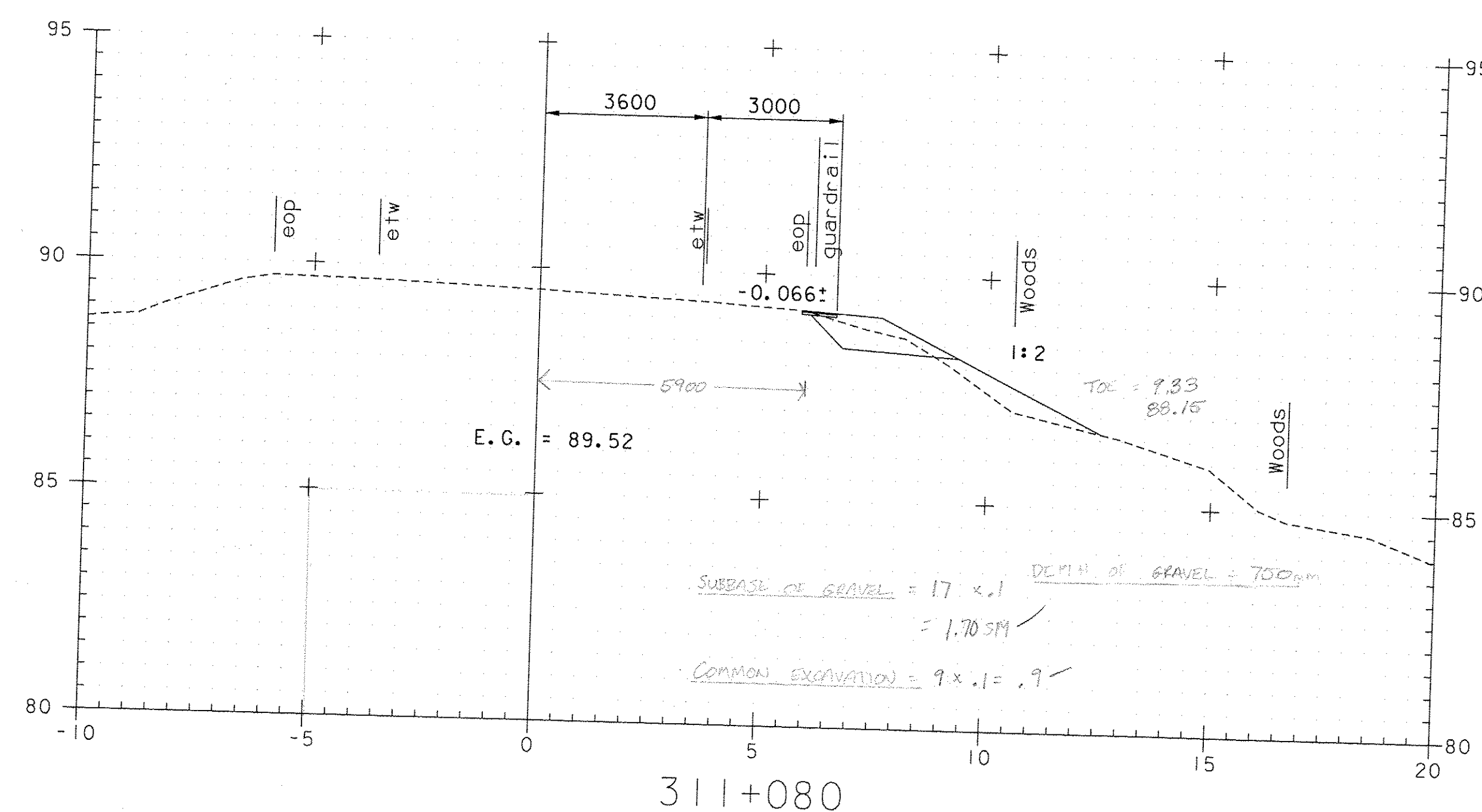
VT 30

VANASSE HANGEN BRUSTLIN, INC.

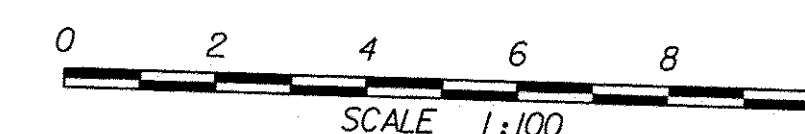
ROADWAY CROSS SECTION FROM STA 311+010 TO STA 311+040
PROJECT NAME DUMMERSTON
PROJECT NO. BHO 1442 (28)
SURVEYED BY VAOT 8/98
SHEET 36 OF 49



GRAVEL REMOVAL DEPTH FIELD MEASURED BY M. LEWIS



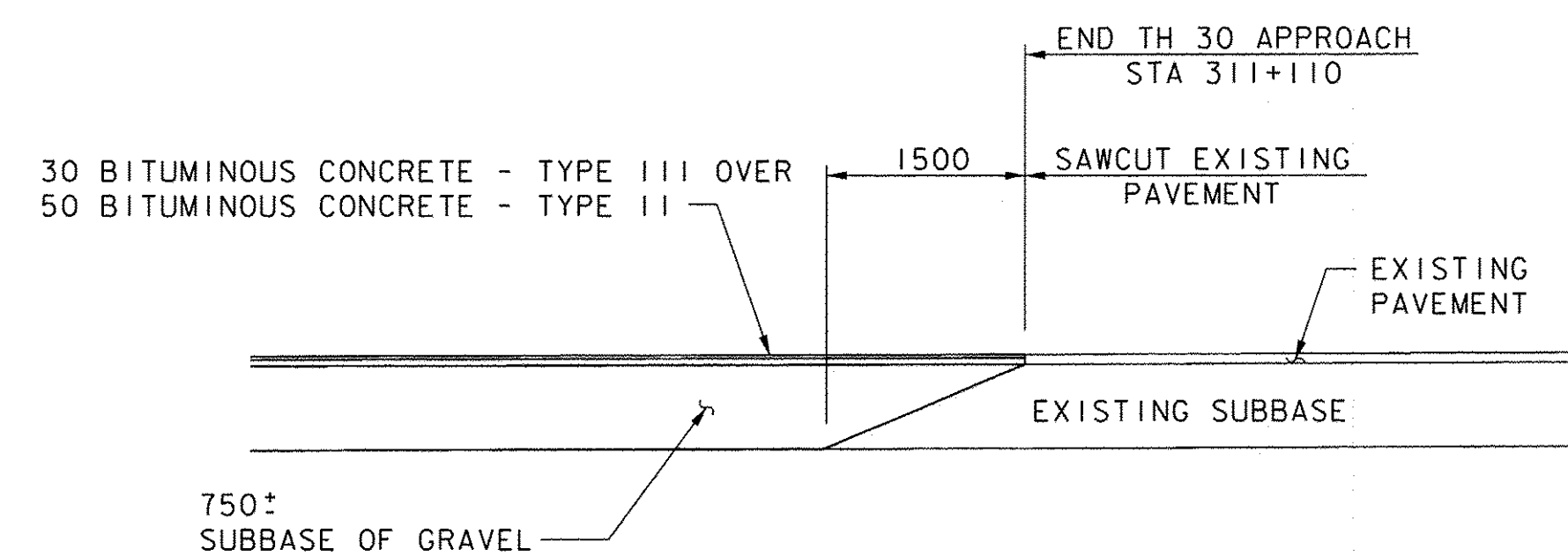
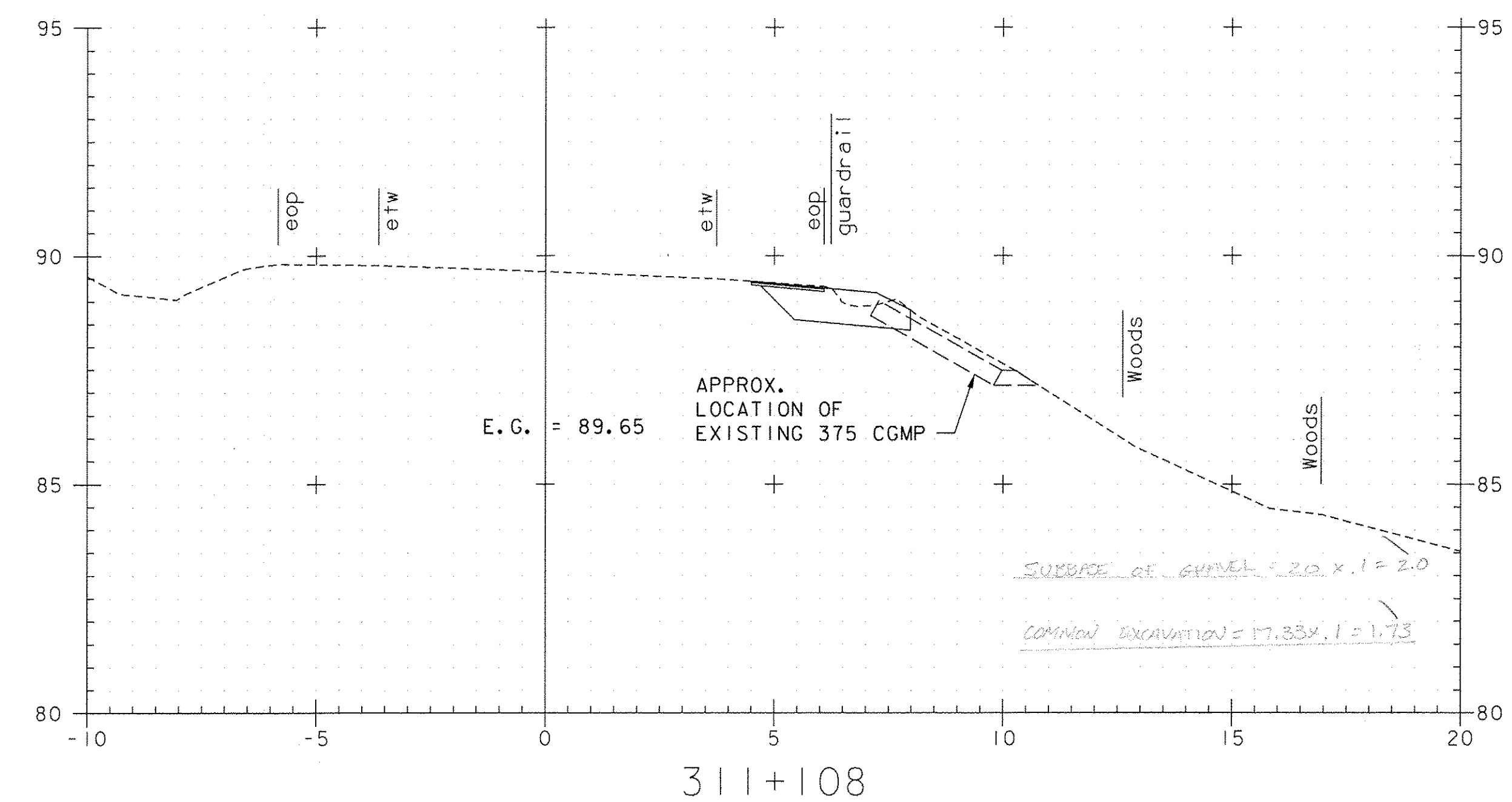
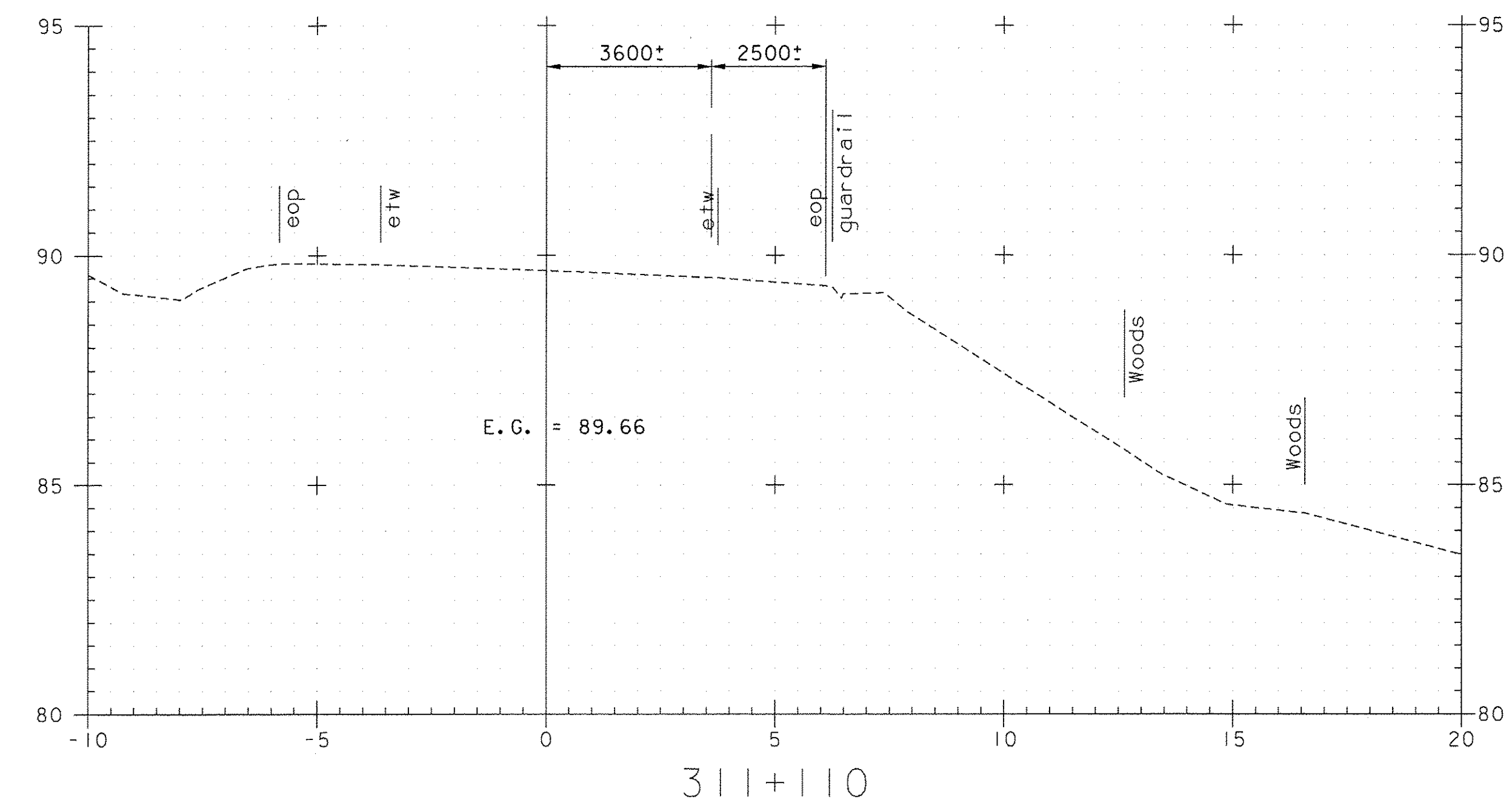
VT 30 MATERIAL TRANSITION DETAIL
NOT TO SCALE



VT 30

VANASSE HANGEN BRUSTLIN, INC.

ROADWAY CROSS SECTION FROM STA 311+060 TO STA 311+080
PROJECT NAME DUMMERSTON
PROJECT NO. BHO 1442 (28)
SURVEYED BY VAOT 8/98
SHEET 37 OF 49



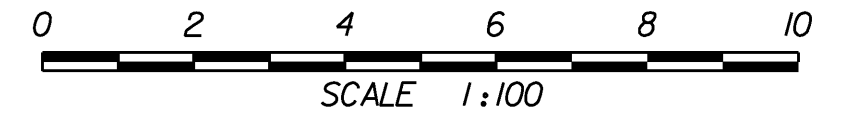
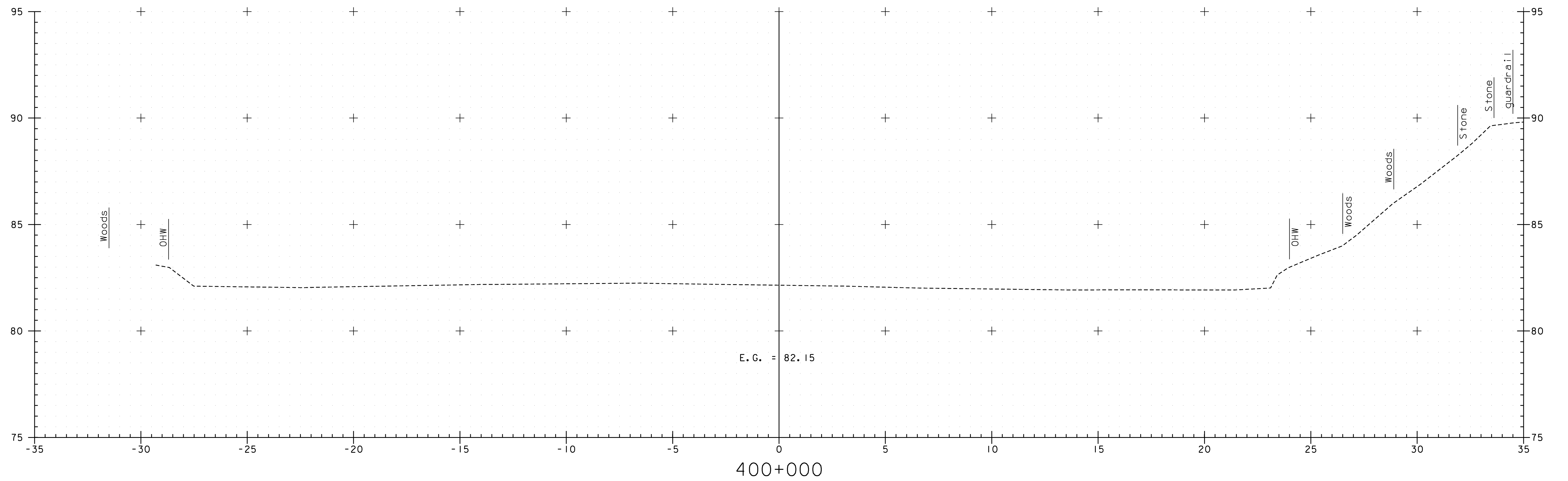
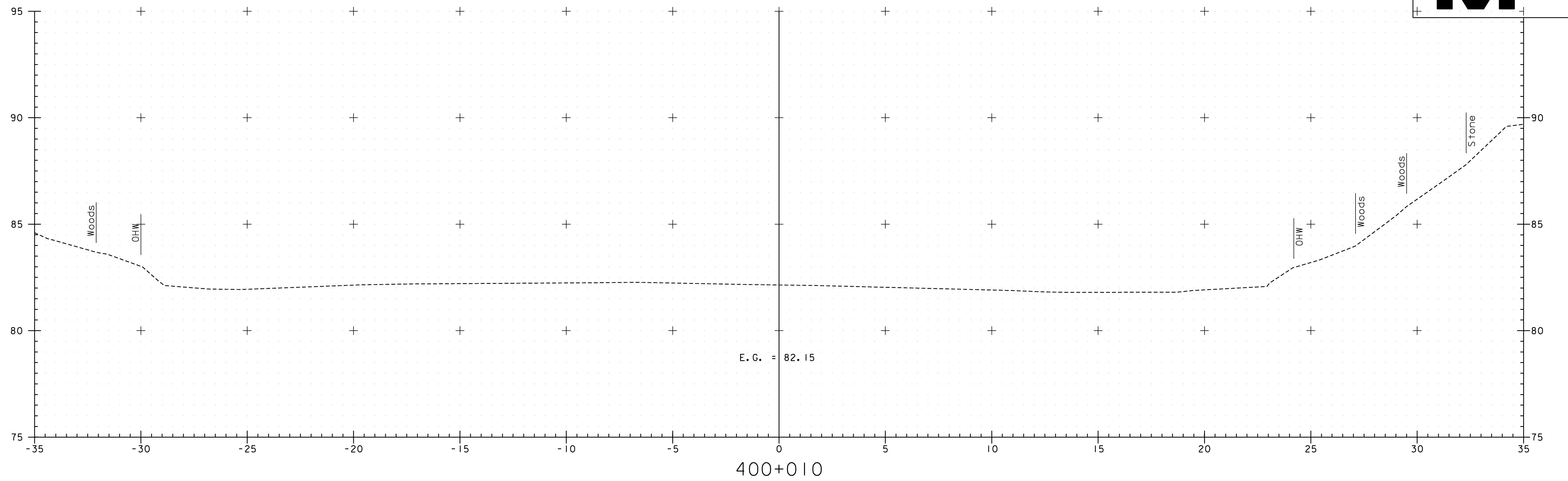
VT 30 MATERIAL TRANSITION DETAIL
NOT TO SCALE

VANASSE HANGEN BRUSTLIN, INC.

ROADWAY CROSS SECTION FROM STA	31+090	TO STA	31+110
PROJECT NAME	DUMMERSTON		
PROJECT NO.	BHO 1442 (28)		
SURVEYED BY	VAOT 8/98		
SHEET	38 OF 49		

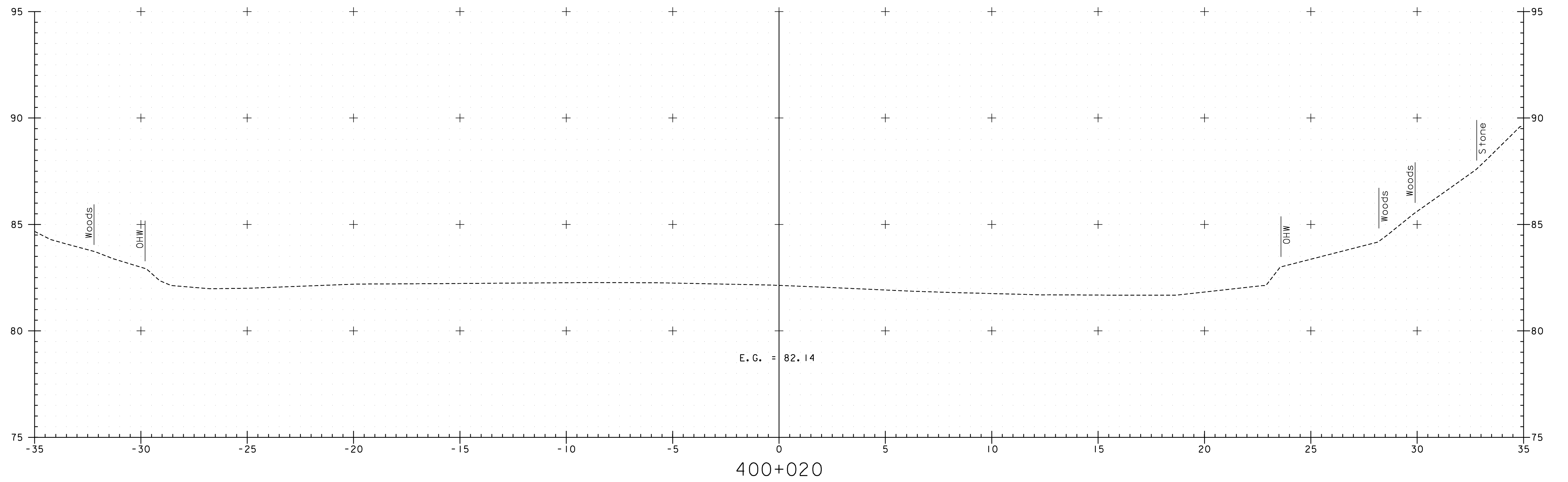
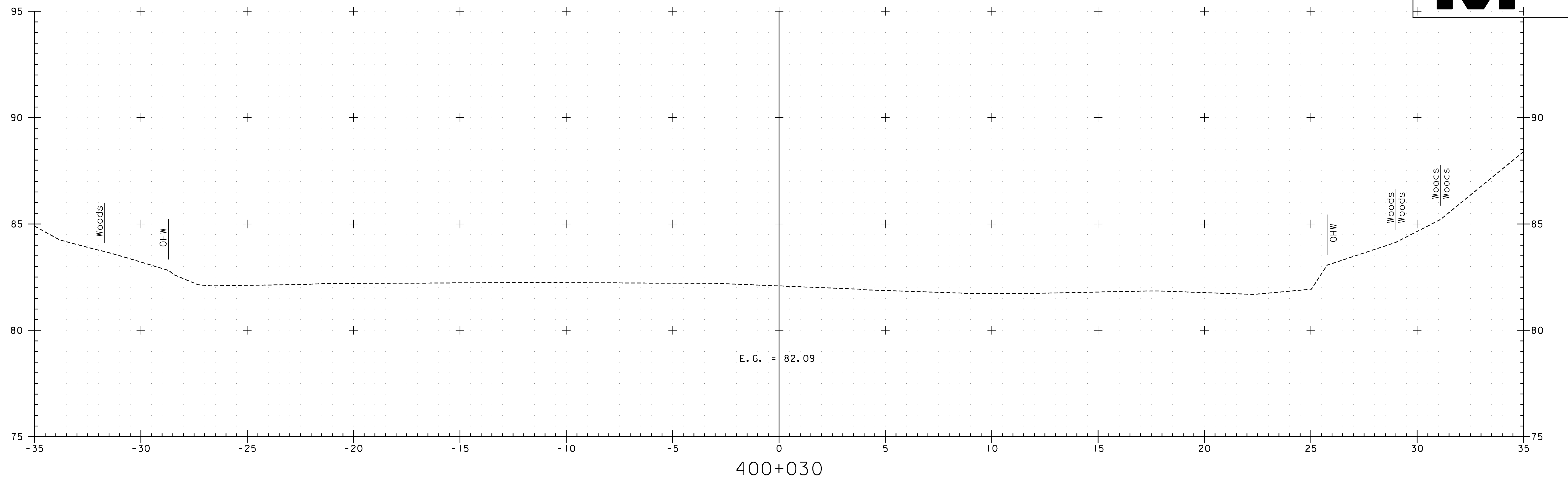
VHB NO. 51192

plot date: 4/3/2009



VANASSE HANGEN BRUSTLIN, INC.

CHANNEL CROSS SECTION FROM STA	400+000	TO STA	400+010
PROJECT NAME	DUMMERSTON		
PROJECT NO.	BHO 1442 (28)		
SURVEYED BY	VAOT 8/98		
SHEET	40 OF 49		



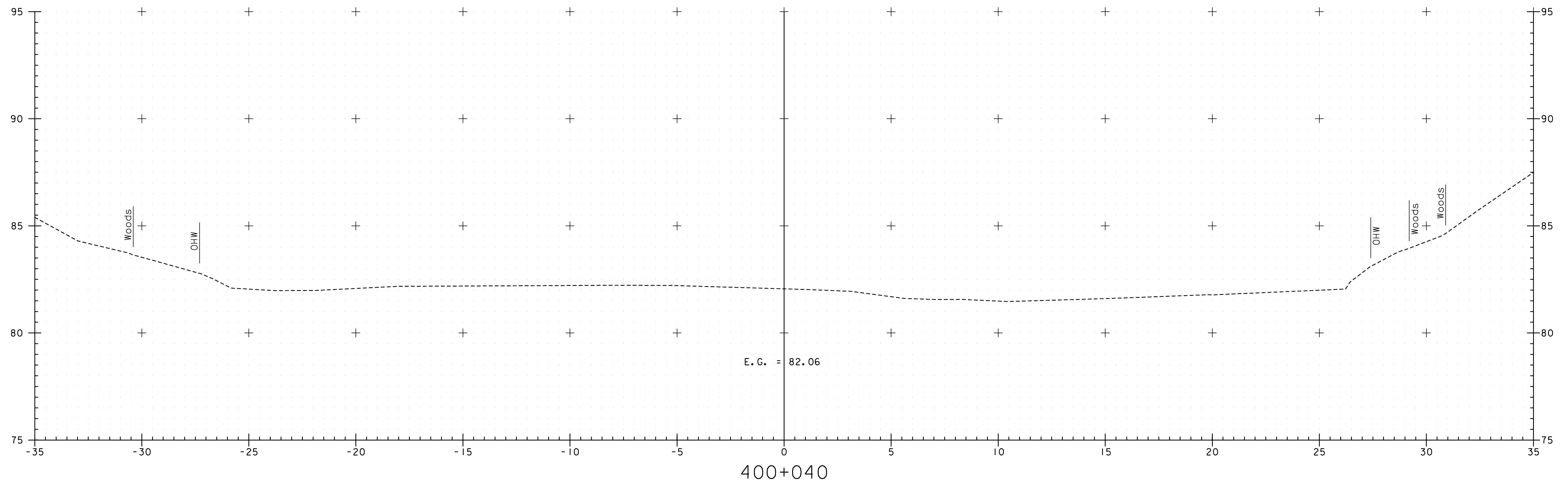
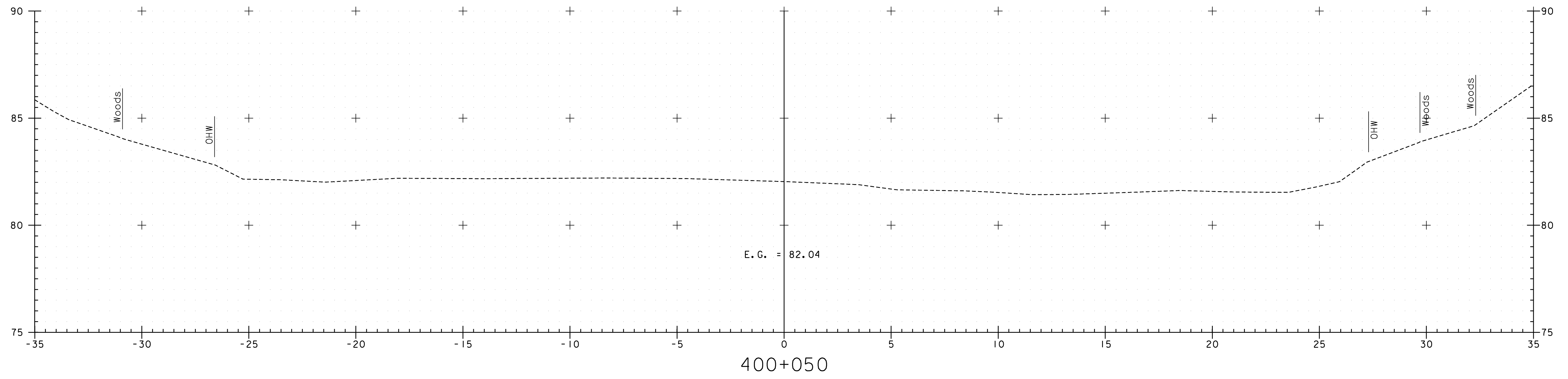
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SCALE 1:100

VANASSE HANGEN BRUSTLIN, INC.

CHANNEL CROSS SECTION FROM STA 400+020 TO STA 400+030
PROJECT NAME DUMMERSTON
PROJECT NO. BHO 1442 (28)
SURVEYED BY VAOT 8/98
SHEET 41 OF 49

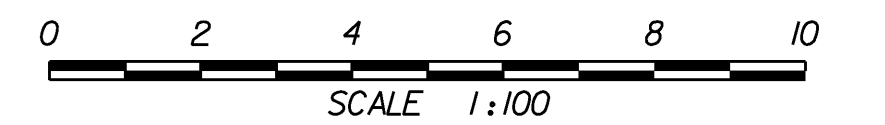
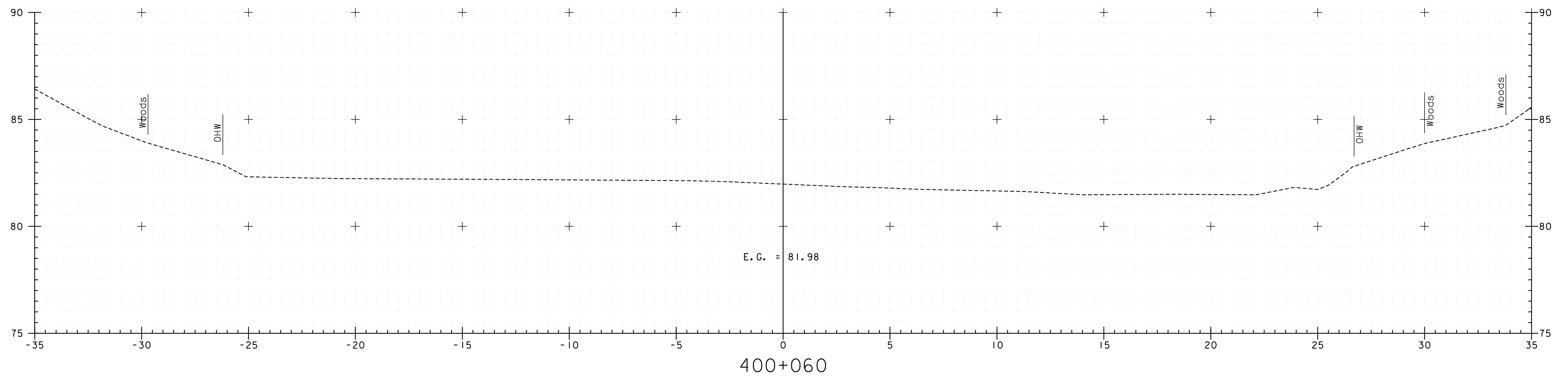
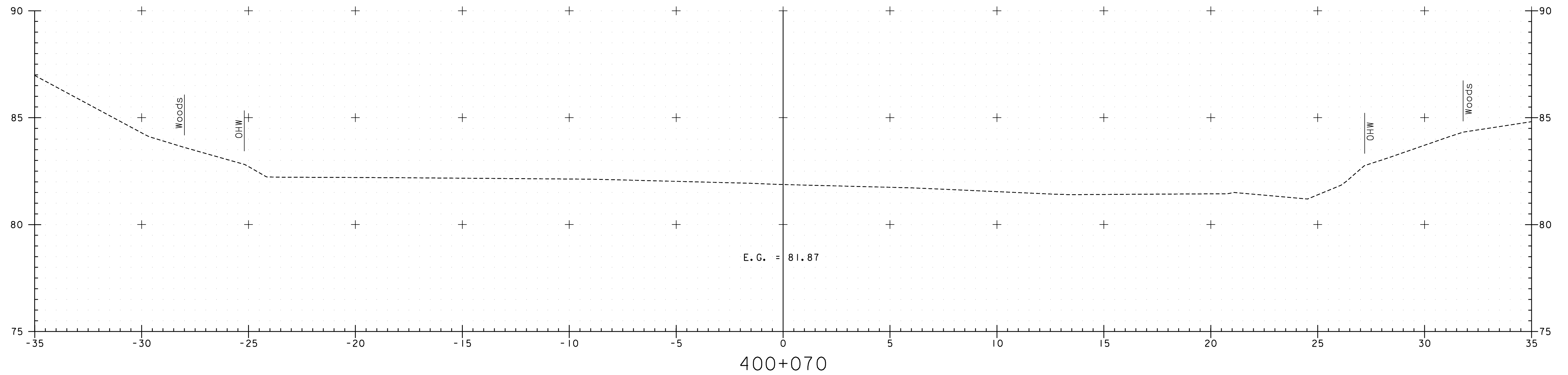
VHB NO. 51192

plot date: 4/3/2009



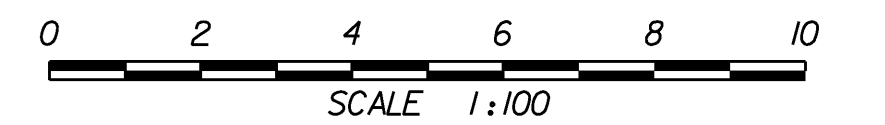
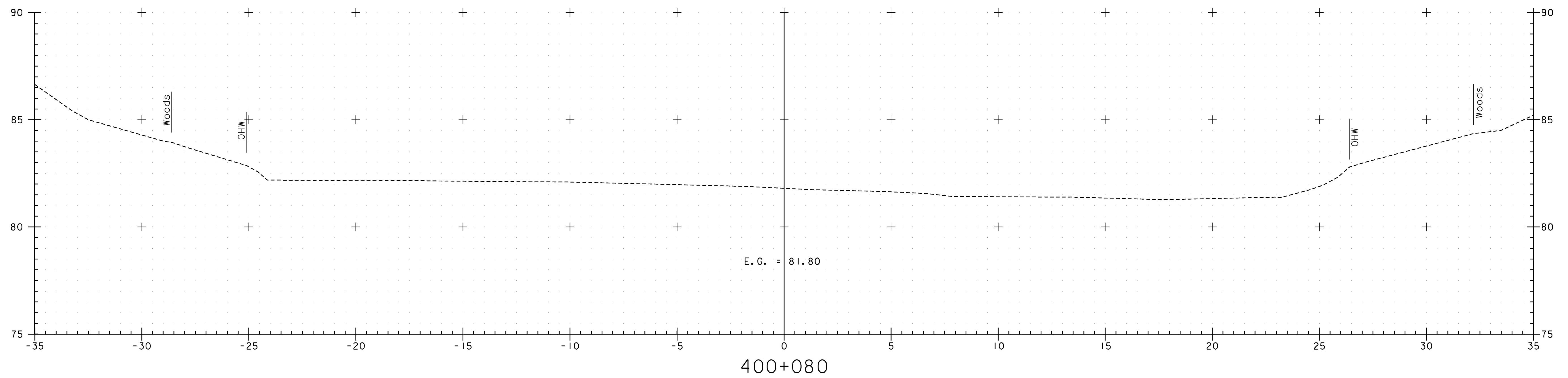
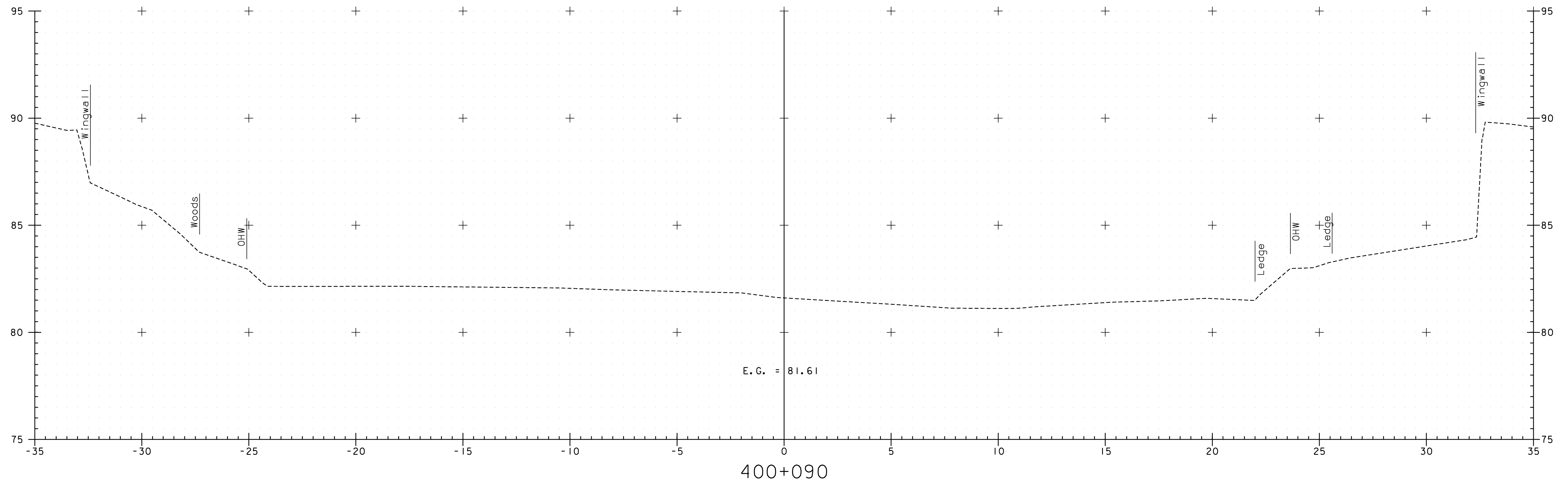
VANASSE HANGEN BRUSTLIN, INC.

CHANNEL CROSS SECTION FROM STA 400+040 TO STA 400+050
PROJECT NAME DUMMERSTON
PROJECT NO. BHO 1442 (28)
SURVEYED BY VAOT 8/98
SHEET 42 OF 49



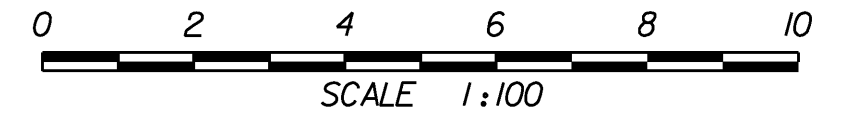
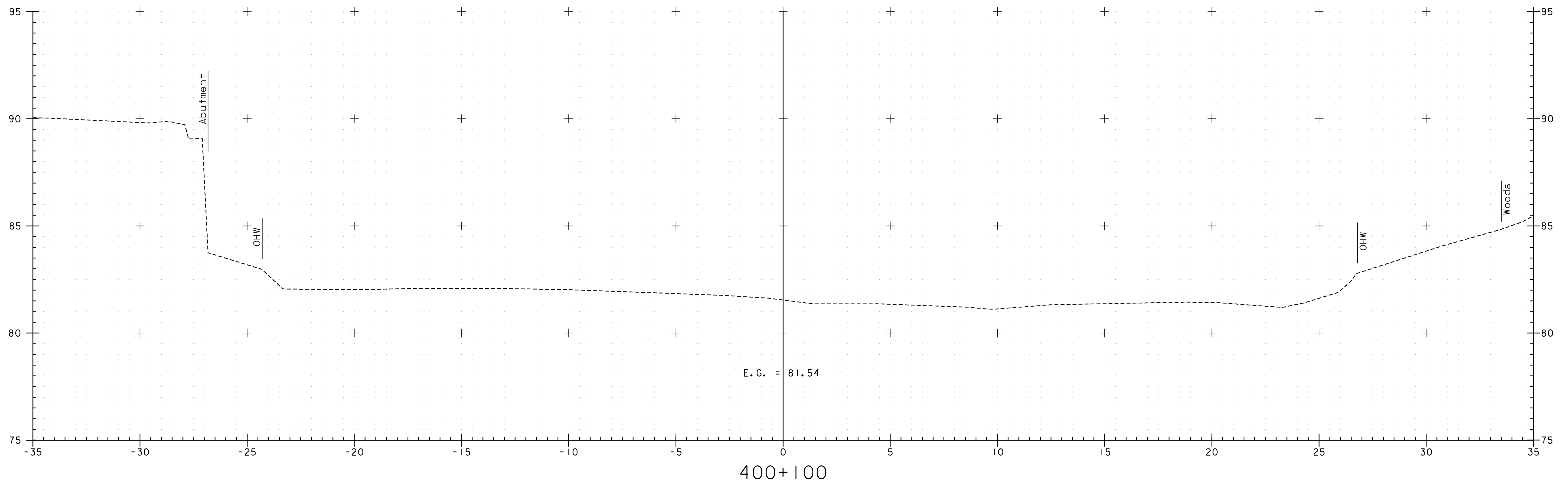
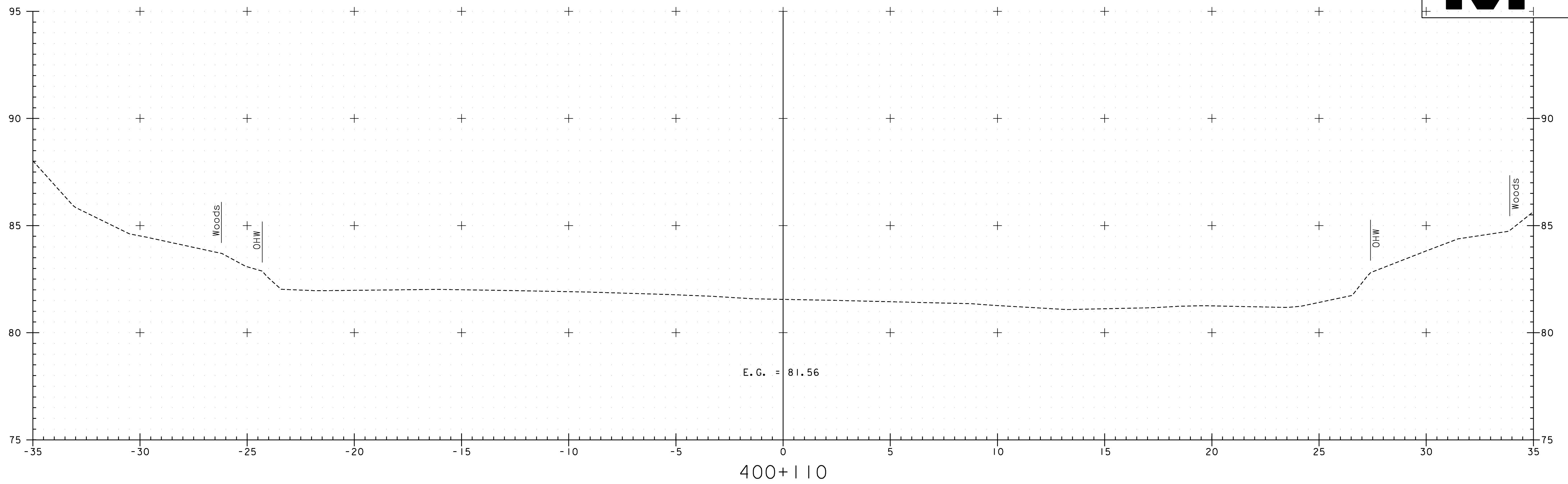
VANASSE HANGEN BRUSTLIN, INC.

CHANNEL CROSS SECTION FROM STA	400+060	TO STA	400+070
PROJECT NAME	DUMMERSTON		
PROJECT NO.	BHO 1442 (28)		
SURVEYED BY	VAOT 8/98		
SHEET	43 OF 49		



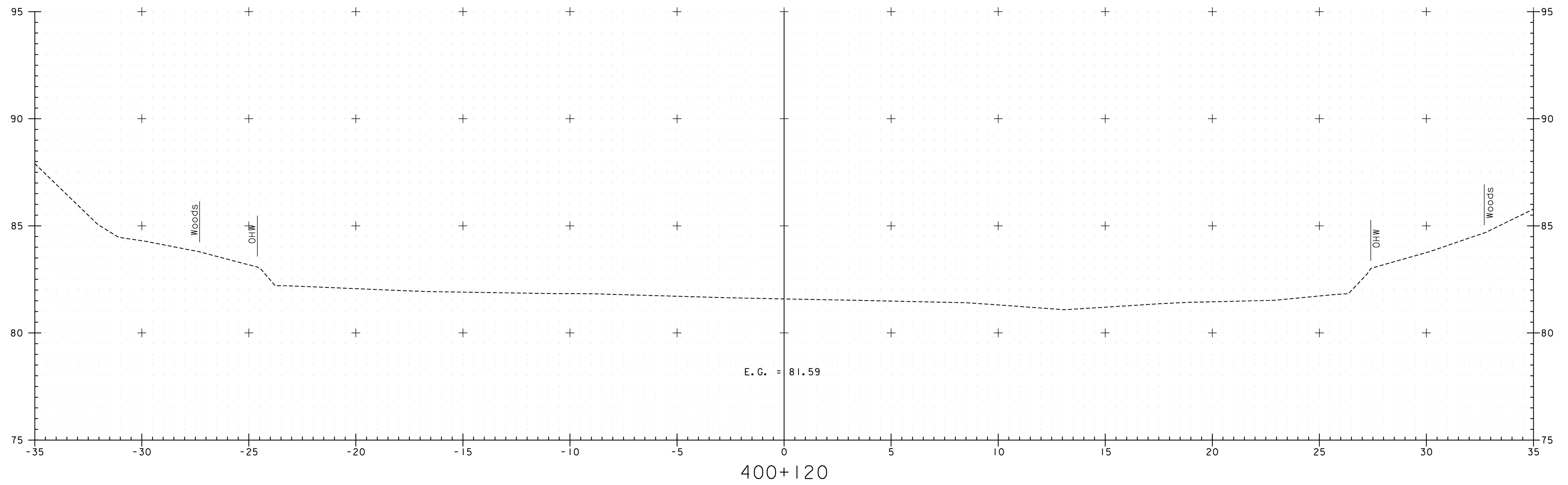
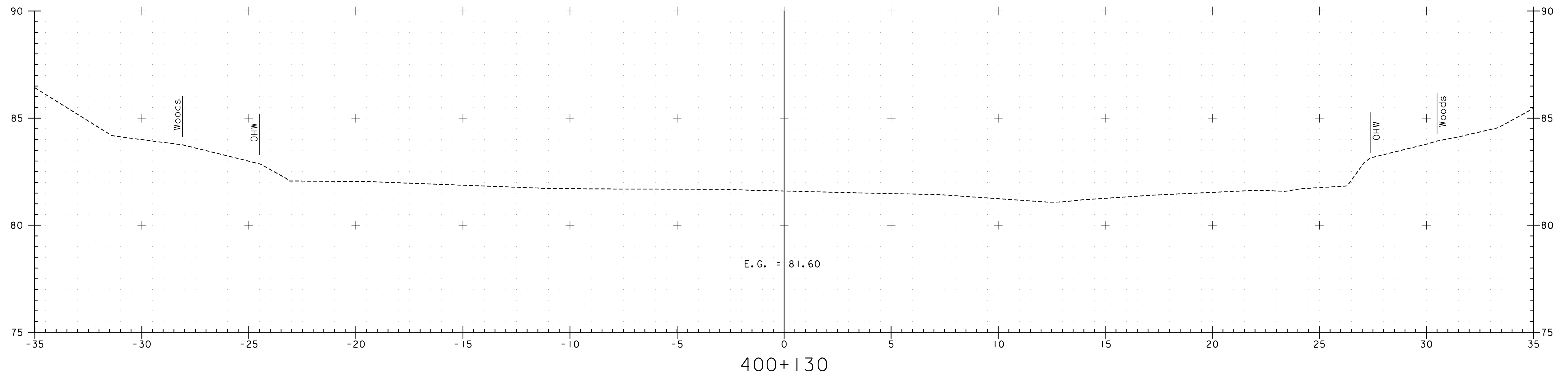
VANASSE HANGEN BRUSTLIN, INC.

CHANNEL CROSS SECTION FROM STA	400+080	TO STA	400+090
PROJECT NAME	DUMMERSTON		
PROJECT NO.	BHO 1442 (28)		
SURVEYED BY	VAOT 8/98		
SHEET	44 OF 49		



VANASSE HANGEN BRUSTLIN, INC.

CHANNEL CROSS SECTION FROM STA	400+100	TO STA	400+110
PROJECT NAME	DUMMERSTON		
PROJECT NO.	BHO 1442 (28)		
SURVEYED BY	VAOT 8/98		
SHEET	45 OF 49		



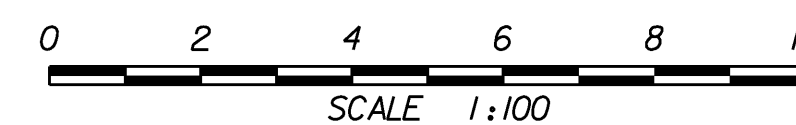
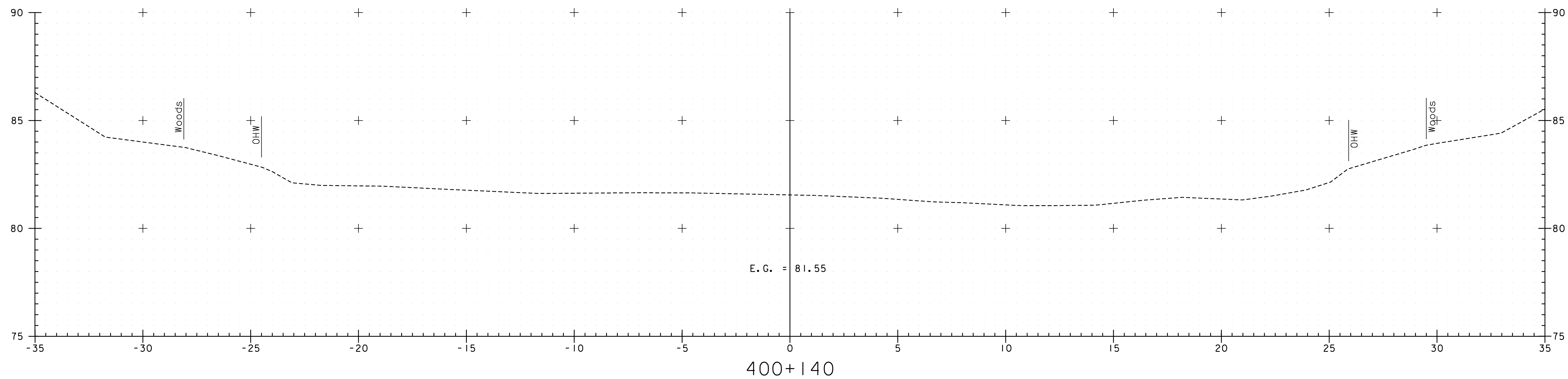
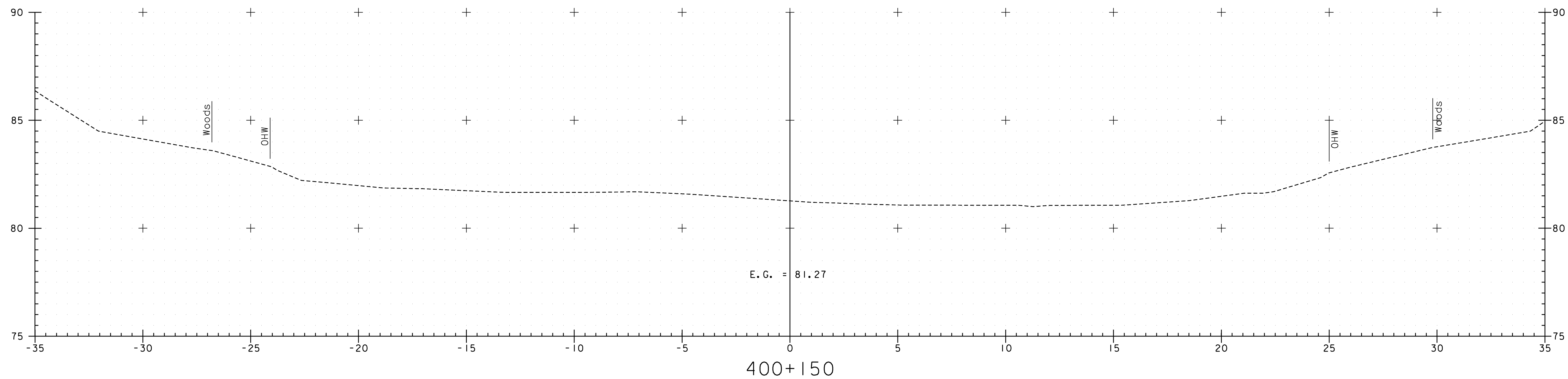
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VANASSE HANGEN BRUSTLIN, INC.

CHANNEL CROSS SECTION FROM STA	400+120	TO STA	400+130
PROJECT NAME	DUMMERSTON		
PROJECT NO.	BHO 1442 (28)		
SURVEYED BY	VAOT 8/98		
SHEET	46 OF 49		

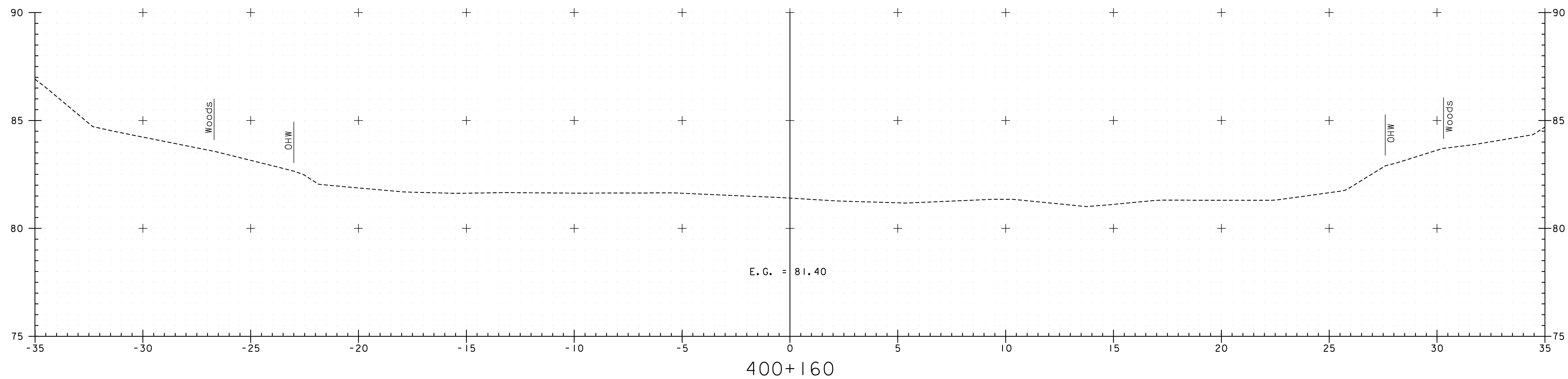
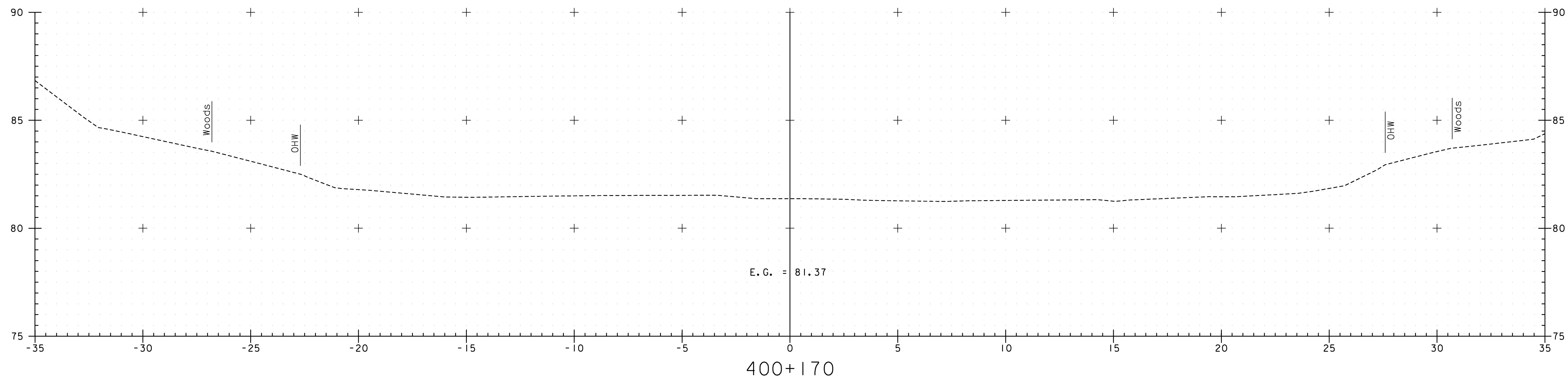
VHB NO. 51192

plot date: 4/3/2009



VANASSE HANGEN BRUSTLIN, INC.

CHANNEL CROSS SECTION FROM STA	400+140	TO STA	400+150
PROJECT NAME	DUMMERSTON		
PROJECT NO.	BHO 1442 (28)		
SURVEYED BY	VAOT 8/98		
SHEET	47 OF 49		



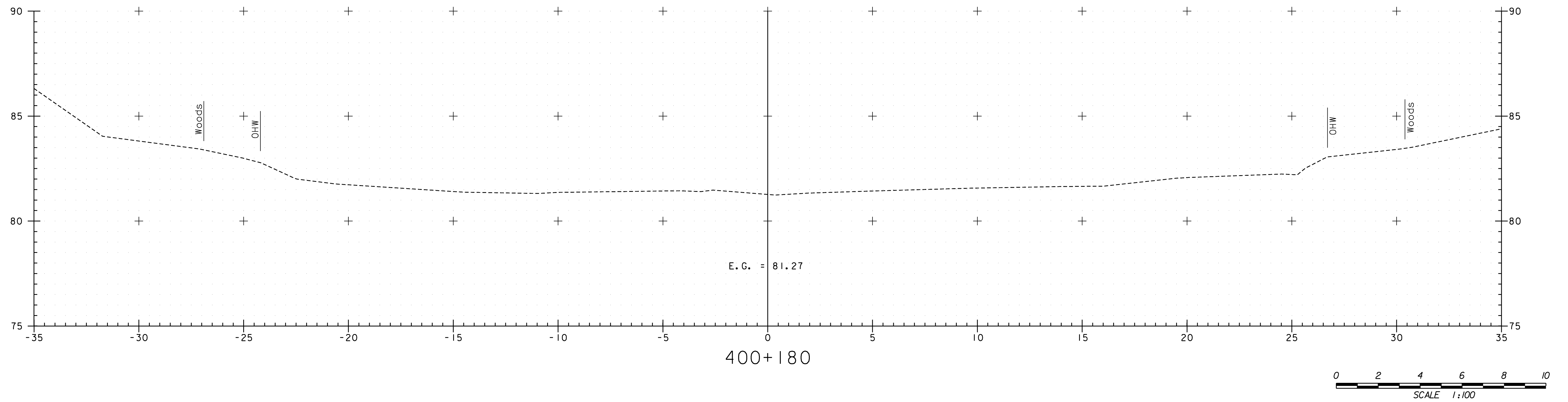
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SCALE 1:100

VANASSE HANGEN BRUSTLIN, INC.

CHANNEL CROSS SECTION FROM STA 400+160 TO STA 400+170
PROJECT NAME DUMMERSTON
PROJECT NO. BHO 1442 (28)
SURVEYED BY VAOT 8/98
SHEET 48 OF 49

VHB NO. 51192

plot date: 4/3/2009



VANASSE HANGEN BRUSTLIN, INC.

CHANNEL CROSS SECTION FROM STA	400+180	TO STA	400+180
PROJECT NAME	DUMMERSTON		
PROJECT NO.	BHO 1442 (28)		
SURVEYED BY	VAOT 8/98		
SHEET	49 OF 49		



Production Joint Welding Procedure Specification (D1.5-02)

Procedure No: A-GTF-01 Date Issued: 1-9-04 Revision No: 0 Rev. Date: _____

Contractor (Fabricator) D.S. Brown Company Prepared by: James R. Connor, Quality Assurance Manager

1. Non-Fracture Critical ☒ Fracture Critical ☐ WPS Expiration Date: _____

2. Qualified in accordance with: AWS D1.5- 2002 , AWS D1.6-99

Referenced PQR No(s). PQR-GTAW-01-(03) , _____ , _____

Referenced FWST No(s). PQR-GTAW-01(03) , _____ , _____

3. Material specification(s) ASTM A709 Gr. 36, 50, 50W, 304SS, 316SS

For DOT Approval

4. Material Thickness (es) Unlimited

5. Welding process GTAW

6. Manual ☒ , machine ☐ , or semiautomatic ☐

7. Position(s) of welding 1F, 2F

8. Filler metal specification AWS A5.9

9. Filler metal class and brand name ER309L (Murrex)

10. Flux class & brand N/A , Type N/A

11. Shielding gas 100% Argon Flow rate 20 CFH

12. Single pass ☒ Or multiple pass ☐

13. Single arc ☒ Or multiple arc ☐

14. Welding Current DCEN

15. Polarity Straight

16. Welding progression stringers

17. Root treatment Clean to bright sound metal or per AWS D1.5 (3.2.1 & 3.11)

18. Postheat treatment N/A

19. Calculated Heat Input (KJ/In) Min 10.9 KJ Max 20.4 KJ

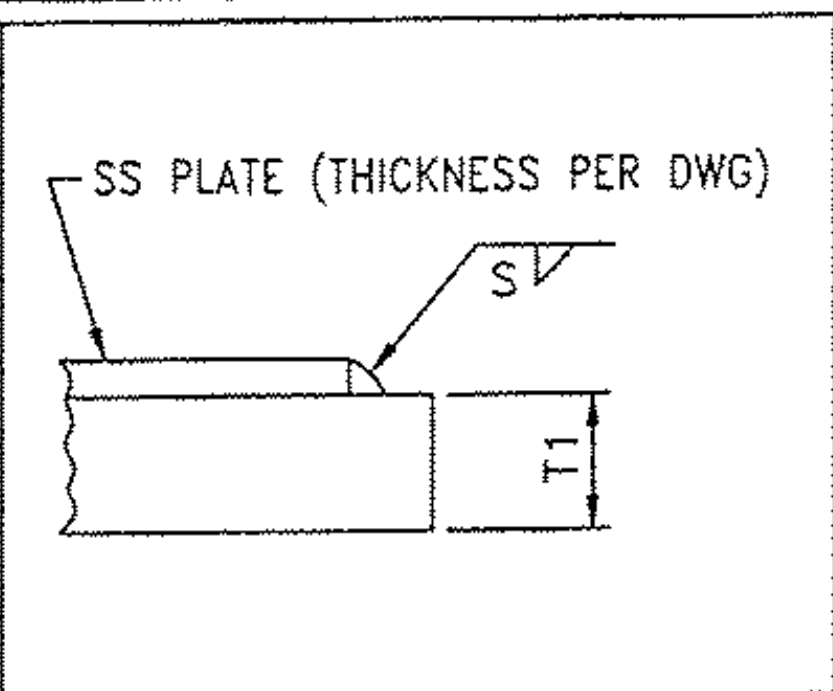
20. Electrode extension (electrical stickout) N/A

CK'D BY _____ OK'D BY JRC

NOV 17 2009

RECEIVED APPROVED ☒

BY _____ DATE 12/29/09

Weld size (In)	Pass No(s).	Electrode Size (In)	Welding Process Variables		Travel Speed (IPM)	Joint Detail (Flare Bevel) Show all dimensions, weld sizes, passes, and AWS symbols
			AMPS/WFS*	VOLTS		
20 ga.	1	1/8"	170-200	15-17	10-14	 T₁ = Varies S = Fillet Weld Size (Fillet weld must not exceed thickness of stainless steel)
16 ga.	1	1/8"	170-200	15-17	10-14	
14 ga.	1	1/8"	170-200	15-17	10-14	
12 ga.	1	1/8"	170-200	15-17	10-14	
11 ga.	1	1/8"	170-200	15-17	10-14	
10 ga.	1	1/8"	170-200	15-17	10-14	
8 ga.	1	1/8"	170-200	15-17	10-14	
3/16"	1	1/8"	170-200	15-17	10-14	

* Wire feed speed may be used along with amperage (include chart)

Prepared By: James R. Connor DSB QA Manager

Project: _____

DSB Job: 27177-1106

Preheat and Interpass Temperature Chart

Base Metal Thickness range	Minimum Preheat (°F)	Max Preheat & Interpass (°F)
≤3/4"	50°F	450°F
>3/4" to ≤1.5"	70°F	450°F
>1.5" to ≤2.5"	150°F	450°F
>2.5"	225°F	450°F

Note: When this procedure is used for A709Gr50W materials, it shall be limited to 5/16" single pass or material be coated.



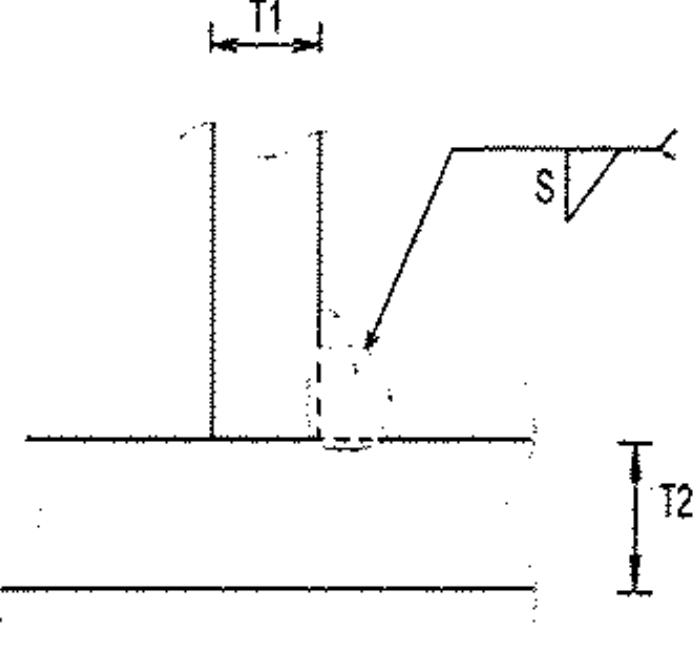
Production Joint Welding Procedure Specification (D1.5-02)

Procedure No: A-(MC)GF-01 Date Issued: 9-28-04 Revision No: 1 Rev. Date: 2-5-09

Contractor (Fabricator) D. S. Brown Company Prepared by: James R. Connor, Quality Assurance Manager

1. Non-Fracture Critical ☒ Fracture Critical ☐ WPS Expiration Date: 9-28-09
2. Qualified in accordance with: AWS D1.5- 2002 (5.12.1)
Referenced PQR No(s). PQR-(MC)GMAW-01(04) , ,
Referenced FWST No(s). PQR-(MC)GMAW-FWST-01A(04) , PQR-(MC)GMAW-FWST-01B(04) , ,
3. Material specification(s) ASTM A709 Gr. 36, 50, 50W For DOT Approval
4. Material Thickness (es) Unlimited
5. Welding process GMAW
6. Manual ☐ , machine ☒ , or semiautomatic ☒
7. Position(s) of welding 1F, 2F
8. Filler metal specification AWS A5.18
9. Filler metal class and brand name E70C-6M Corex Metal-Core Maxim
10. Flux class & brand N/A , Type N/A
11. Shielding gas 75% Ar / 25% CO2 Flow rate 45 CFH
12. Single pass ☒ Or multiple pass ☒
13. Single arc ☒ Or multiple arc ☐
14. Welding Current DCEP
15. Polarity Reverse
16. Welding progression stringers
17. Root treatment Clean to bright sound metal or per AWS D1.5 (3.2.1 & 3.11)
18. Postheat treatment N/A
19. Calculated Heat Input (KJ/in) Min 30.6 KJ/in Max 51.1 KJ/in
20. Electrode extension (electrical stickout) 3/4"

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Weld size (in)	Pass No(s)	Electrode Size (in)	Welding Process Variables		Travel Speed (IPM)	Joint Detail (Fillet) Show all dimensions, weld sizes, passes, and AWS symbols
			AMPS/WFS*	VOLTS		
**1/4"	1	.052"	265-320	31-34.5	13-16	 T1 = Varies T2 = Varies S = Weld Size ** T1 & T2 equal to or less than 3/4" for 1/4" welds.
5/16"	1	.052"	265-320	31-34.5	13-16	
3/8"	1-3	.052"	265-320	31-34.5	13-16	
7/16"	2-4	.052"	265-320	31-34.5	13-16	
1/2"	4-6	.052"	265-320	31-34.5	13-16	
5/8"	5-7	.052"	265-320	31-34.5	13-16	
3/4"	6-8	.052"	265-320	31-34.5	13-16	

* Wire feed speed may be used along with amperage (include chart)

Prepared By: James R. Connor DSB QA Manager

Project: TH 62 OVER WEST RIVER

DSB Job: 27177-1011

Preheat and Interpass Temperature Chart		
Base Metal Thickness range	Minimum Preheat (°F)	Max Preheat & Interpass (°F)
≤ 3/4"	50°F	450°F
>3/4" to ≤1.5"	70°F	450°F
>1.5" to ≤2.5"	150°F	450°F
>2.5"	225°F	450°F

Note: When this procedure is used for A709Gr50W materials, it shall be limited to 5/16" single pass or material be coated.



Production Joint Welding Procedure Specification (D1.5-02)

Procedure No: A-(MC)GSB-01 Date Issued: 9-28-04 Revision No: 0 Rev. Date: _____

Contractor (Fabricator) D. S. Brown Company Prepared by: James R. Connor, Quality Assurance Manager

- Non-Fracture Critical ☒ Fracture Critical ☐ WPS Expiration Date: _____
- Qualified in accordance with: AWS D1.5-2002 (5.12.1)
Referenced PQR No(s). PQR-(MC)GMAW-01(04) , _____ , _____
Referenced FWST No(s). PQR-(MC)GMAW-FWST-01A(04) , PQR-(MC)GMAW-FWST-01B(04) , _____ , _____
- Material specification(s) ASTM A709 Gr. 36, 50, 50W
- Material Thickness (es) Unlimited
- Welding process GMAW
- Manual ☐ , machine ☐ , or semiautomatic ☒
- Position(s) of welding 1G, 2G, 1F, 2F
- Filler metal specification AWS A5.18
- Filler metal class and brand name E70C-6M Corex Metal-Core Maxim
- Flux class & brand N/A , Type N/A
- Shielding gas 75% Ar / 25% CO2 Flow rate 45 CFH
- Single pass ☒ Or multiple pass ☒
- Single arc ☒ Or multiple arc ☐
- Welding Current DCEP
- Polarity Reverse
- Welding progression stringers
- Root treatment Clean to bright sound metal or per AWS D1.5 (3.2.1 & 3.11)
- Postheat treatment N/A
- Calculated Heat Input (KJ/in) Min 30.6 KJ/in Max 51.1 KJ/in
- Electrode extension (electrical stickout) 3/4"

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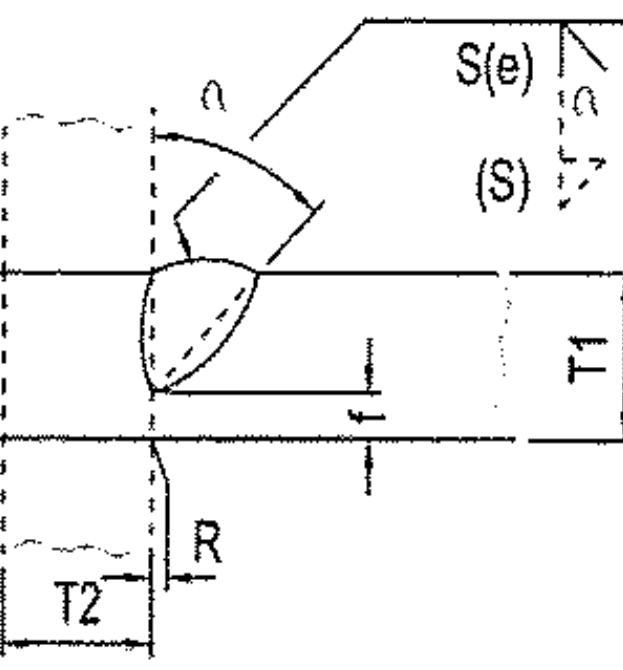
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(F&S)	Weld size (in)	Pass No(s)	Electrode size (in)	Welding Process Variables		Travel Speed (IPM)	Joint Detail (TC-P4-GF) Show all dimensions, weld sizes, passes, and AWS symbols
				AMPS/WFS*	VOLTS		
1/4"	1	.052"	265-320	31-34.5	13-16		T1 = 1/4" min. T2 = Varies (E) = S-1/8" f = 1/8" min. R = 0 alpha = 45° S = size groove (S) = size of reinforcing fillet (if required) not to exceed 1/4" in corner & T jts.
5/16"	1	.052"	265-320	31-34.5	13-16		
3/8"	1-2	.052"	265-320	31-34.5	13-16		
1/2"	3-4	.052"	265-320	31-34.5	13-16		
5/8"	4-6	.052"	265-320	31-34.5	13-16		
3/4"	5-7	.052"	265-320	31-34.5	13-16		
7/8"	6-9	.052"	265-320	31-34.5	13-16		
1"	7-10	.052"	265-320	31-34.5	13-16		

* Wire feed speed may be used along with amperage (include chart)

Prepared By: James R. Connor DSB QA Manager

Project: TH 62 OVER WEST RIVER

DSB Job: 27177-1011

Preheat and Interpass Temperature Chart		
Base Metal Thickness range	Minimum Preheat (°F)	Max Preheat & Interpass (°F)
≤ 3/4"	50°F	450°F
>3/4" to ≤1.5"	70°F	450°F
>1.5" to ≤2.5"	150°F	450°F
>2.5"	225°F	450°F

Note: When this procedure is used for A709Gr50W materials, it shall be limited to 5/16" single pass or material be coated.



Production Joint Welding Procedure Specification (D1.5-02)

Procedure No: A-(MC)GSB-105 Date Issued: 2-16-05 Revision No: 0 Rev. Date: _____

Contractor (Fabricator) D. S. Brown Company Prepared by: James R. Connor, Quality Assurance Manager

1. Non-Fracture Critical ☒ Fracture Critical ☐ WPS Expiration Date: _____

2. Qualified in accordance with: AWS D1.5- 2002 (5.12.1)

Referenced PQR No(s). PQR-(MC)GMAW-01(04) , _____

Referenced FWST No(s). PQR-(MC)GMAW-FWST-01A(04) , PQR-(MC)GMAW-FWST-01B(04) , _____

3. Material specification(s) ASTM A709 Gr. 36, 50, 50W

For DOT Approval

4. Material Thickness (es) Unlimited

5. Welding process GMAW

6. Manual ☐ , machine ☐ , or semiautomatic ☒

7. Position(s) of welding 1G, 2G, 1F, 2F

8. Filler metal specification AWS A5.18

9. Filler metal class and brand name E70C-6M Corex Metal-Core Maxim

10. Flux class & brand N/A , Type N/A

11. Shielding gas 75% Ar / 25% CO2 Flow rate 45 CFH

12. Single pass ☒ Or multiple pass ☒

13. Single arc ☒ Or multiple arc ☐

14. Welding Current DCEP

15. Polarity Reverse

16. Welding progression stringers

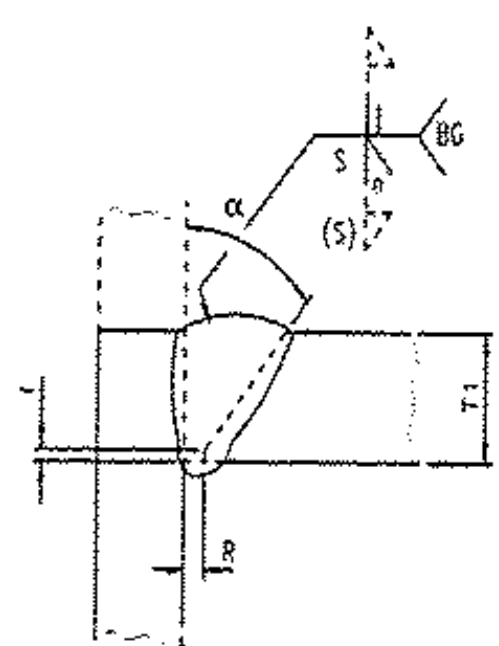
17. Root treatment Clean to bright sound metal or per AWS D1.5 (3.2.1 & 3.11)

18. Postheat treatment N/A

19. Calculated Heat Input (KJ/in) Min 30.6 KJ/in Max 51.1 KJ/in

20. Electrode extension (electrical stickout) 3/4"

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Weld size (E)&(S)	Pass No(s).	Electrode Size (in)	Welding Process Variables		Travel Speed (IPM)	Joint Detail (TC-P5-GF) Show all dimensions, weld sizes, passes, and AWS symbols
			AMPS/WFS*	VOLTS		
1/4"	1	.052"	265-320	31-34.5	13-16	 T1 = Varies T2 = Varies f = 0 to 1/8" min. R = 0 to 1/8" α = 45° (S)=Fillet Reinforcement (If Necessary) Note: Backgouge root to clean sound metal before welding second side.
5/16"	1	.052"	265-320	31-34.5	13-16	
3/8"	1-2	.052"	265-320	31-34.5	13-16	
1/2"	3-4	.052"	265-320	31-34.5	13-16	
5/8"	4-6	.052"	265-320	31-34.5	13-16	
3/4"	5-7	.052"	265-320	31-34.5	13-16	
7/8"	6-8	.052"	265-320	31-34.5	13-16	
1"	7-9	.052"	265-320	31-34.5	13-16	

* Wire feed speed may be used along with amperage (include chart)

Prepared By: James R. Connor DSB QA Manager

Project: TH 62 OVER WEST RIVER

DSB Job: 27177-1011

Preheat and Interpass Temperature Chart

Base Metal Thickness range	Minimum Preheat (°F)	Max Preheat & Interpass (°F)
≤ 3/4"	50°F	450°F
>3/4" to ≤1.5"	70°F	450°F
>1.5" to ≤2.5"	150°F	450°F
>2.5"	225°F	450°F

Note: When this procedure is used for A709Gr50W materials, it shall be limited to 5/16" single pass or material be coated.



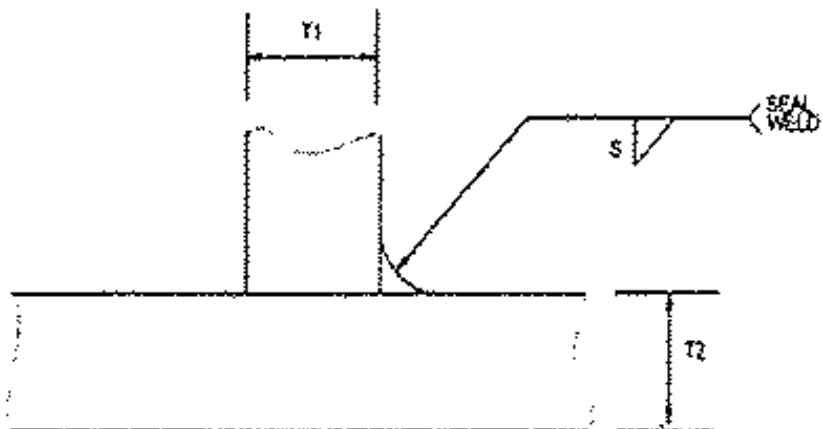
Production Joint Welding Procedure Specification (D1.5-02)

Procedure No: A-(MC)G-SEALWELD-01 Date Issued: 9-29-04 Revision No: 0 Rev. Date: _____

Contractor (Fabricator) D. S. Brown Company Prepared by: James R. Connor, Quality Assurance Manager

- Non-Fracture Critical ☒ Fracture Critical ☐ WPS Expiration Date: _____
- Qualified in accordance with: AWS D1.5- 2002 (5.12.1)
Referenced PQR No(s). PQR-(MC)GMAW-01(04) , _____ , _____
Referenced FWST No(s). PQR-(MC)GMAW-FWST-01A(04) , PQR-(MC)GMAW-FWST-01B(04) , _____ , _____
- Material specification(s) ASTM A709 Gr. 36, 50, 50W For DOT Approval
- Material Thickness (es) Unlimited
- Welding process GMAW
- Manual ☐ , machine ☐ , or semiautomatic ☒
- Position(s) of welding 1G, 2G, 1F, 2F
- Filler metal specification AWS A5.18
- Filler metal class and brand name E70C-6M Corex Metal-Core Maxim
- Flux class & brand N/A , Type N/A
- Shielding gas 75% Ar / 25% CO2 Flow rate 45 CFH
- Single pass ☒ Or multiple pass ☒
- Single arc ☒ Or multiple arc ☐
- Welding Current DCEP
- Polarity Reverse
- Welding progression stringers
- Root treatment Clean to bright sound metal or per AWS D1.5 (3.2.1 & 3.11)
- Postheat treatment N/A
- Calculated Heat Input (KJ/in) Min 30.6 KJ/in Max 51.1 KJ/in
- Electrode extension (electrical stickout) 3/4"

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Weld size (In)	Pass No(s).	Electrode Size (In)	Welding Process Variables		Travel Speed (IPM)	Joint Detail (Fillet) Show all dimensions, weld sizes, passes, and AWS symbols
			AMPS	VOLTS		
**1/8"	1	.052"	265-320	31-34.5	13-16	 T1 = Varies T2 = Varies S = Weld Size
**3/16"	1	.052"	265-320	31-34.5	13-16	
NOTE: THIS JOINT DETAIL TO BE ONLY USED FOR SEALING NON-STRUCTURAL APPLICATIONS WHERE FULL SIZED WELDMENTS ARE NOT DESIGNED, DETAILED OR ARE NOT PRACTICAL.						

Prepared By: <u>James R. Connor</u> DSB QA Manager Project: <u>TH 62 OVER WEST RIVER</u> DSB Job: <u>27177-1011</u>	Preheat and Interpass Temperature Chart		
	Base Metal Thickness range	Minimum Preheat (°F)	Max Preheat & Interpass (°F)
	≤ 3/4"	50°F	450 °F
	>3/4" to ≤1.5"	70°F	450 °F
	>1.5" to ≤2.5"	150°F	450 °F
	>2.5"	225°F	450 °F

Note: When this procedure is used for A709Gr50W materials, it shall be limited to 5/16" single pass or material be coated.



Production Joint Welding Procedure Specification (D1.5-02)

Procedure No: A-(MC)GSV-01 Date Issued: 9-29-04 Revision No: 0 Rev. Date: _____

Contractor (Fabricator) D. S. Brown Company Prepared by: James R. Connor, Quality Assurance Manager

1. Non-Fracture Critical ☒ Fracture Critical ☐ WPS Expiration Date: _____

2. Qualified in accordance with: AWS D1.5- 2002 (5.12.1)

Referenced PQR No(s). PQR-(MC)GMAW-01(04) , ,

Referenced FWST No(s). _____ , _____ , _____

3. Material specification(s) ASTM A709 Gr. 36, 50, 50W

For DOT Approval

4. Material Thickness (es) Unlimited

5. Welding process GMAW

6. Manual ☐ , machine ☐ , or semiautomatic ☒

7. Position(s) of welding 1G, 2G

8. Filler metal specification AWS A5.18

9. Filler metal class and brand name E70C-6M Corex Metal-Core Maxim

10. Flux class & brand N/A , Type N/A

11. Shielding gas 75% Ar / 25% CO2 Flow rate 45 CFH

12. Single pass ☒ Or multiple pass ☒

13. Single arc ☒ Or multiple arc ☐

14. Welding Current DCEP

15. Polarity Reverse

16. Welding progression stringers

17. Root treatment Clean to bright sound metal or per AWS D1.5 (3.2.1 & 3.11)

18. Postheat treatment N/A

19. Calculated Heat Input (KJ/In) Min 30.6 KJ/in Max 51.1 KJ/in

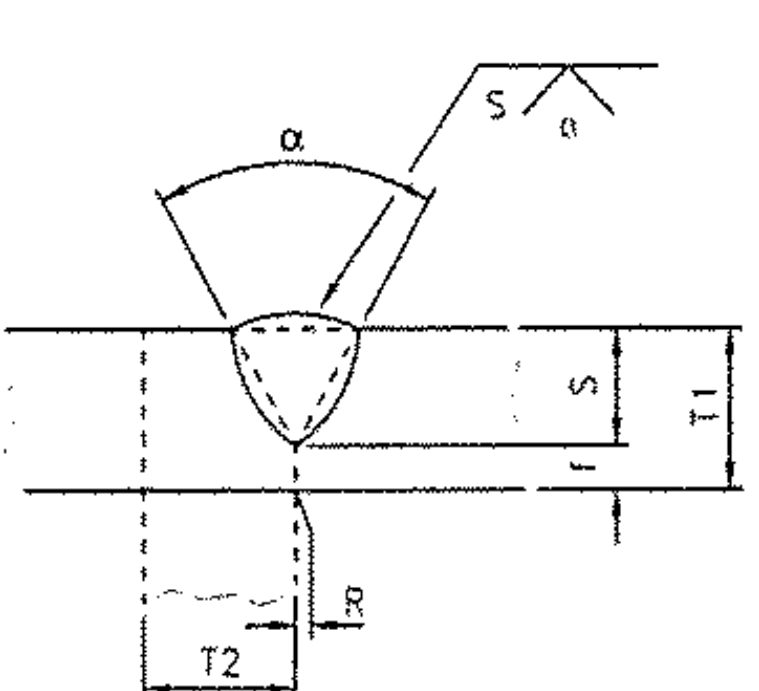
20. Electrode extension (electrical stickout) 3/4"

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DATE 12/29/09

Weld size (in)	Pass No(s)	Electrode Size (in)	Welding Process Variables		Travel Speed (IPM)	Joint Detail (C-P2-GF)
			AMPS	VOLTS		
1/4"	1	.052"	265-320	31-34.5	13-16	 T1 = 1/4" min. T2 = Unlimited f = 1/8" min. R = 0 $\alpha = 60^\circ$ S = Groove Prep Depth
5/16"	1-2	.052"	265-320	31-34.5	13-16	
3/8"	1-3	.052"	265-320	31-34.5	13-16	
1/2"	3-4	.052"	265-320	31-34.5	13-16	
5/8"	4-6	.052"	265-320	31-34.5	13-16	
3/4"	5-8	.052"	265-320	31-34.5	13-16	
						For Butt Joints see AWS 2.14

Prepared By: <u>James R. Connor</u> DSB QA Manager Project: <u>TH 62 OVER WEST RIVER</u> DSB Job: <u>27177-1011</u>	Preheat and Interpass Temperature Chart		
	Base Metal Thickness range	Minimum Preheat (°F)	Max Preheat & Interpass (°F)
	$\leq 3/4"$	50°F	450 °F
	$>3/4"$ to $\leq 1.5"$	70°F	450 °F
	$>1.5"$ to $\leq 2.5"$	150°F	450 °F
	$>2.5"$	225°F	450 °F

Note: When this procedure is used for A709Gr50W materials, it shall be limited to 5/16" single pass or material be coated.



Production Joint Welding Procedure Specification (D1.5-02)

Procedure No: A-SM-STUD-REP-01 Date Issued: 8/6/04 Revision No: 0 Rev. Date: _____

Contractor (Fabricator) D. S. Brown Company Prepared by: James R. Connor, Quality Assurance Manager

1. Non-Fracture Critical ☒ Fracture Critical ☐ WPS Expiration Date: N/A

2. Qualified in accordance with: AWS D1.5- 2002

Referenced PQR No(s). N/A

Referenced FWST No(s). N/A

3. Material specification(s) ASTM A709 Gr. 36, 50, 50W, A108 Stud

For DOT Approval

4. Material Thickness (es) Unlimited

5. Welding process SMAW

6. Manual ☒, machine ☐, or semiautomatic ☐

7. Position(s) of welding 1F, 2F

8. Filler metal specification AWS A5.1

9. Filler metal class and brand name LINCOLN JET LH-78-MR E7018

10. Flux class & brand N/A, Type N/A

11. Shielding gas N/A Flow rate N/A

12. Single pass ☒ Or multiple pass ☒

13. Single arc ☒ Or multiple arc ☐

14. Welding Current DCEP

15. Polarity Reverse

16. Welding progression stringers

17. Root treatment Clean to bright sound metal or per AWS D1.5 (3.2.1 & 3.11)

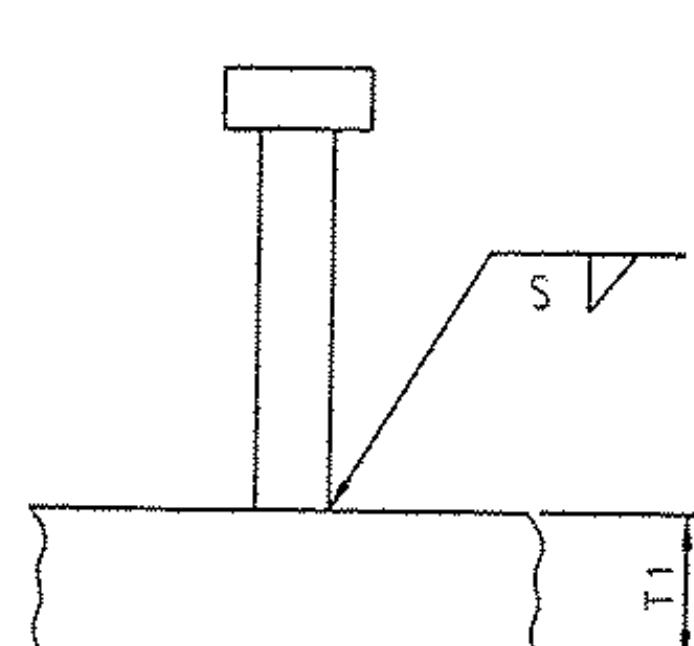
18. Postheat treatment N/A

19. Calculated Heat Input (KJ/In) Min 20.28 KJ/In Max 30.6 KJ/In

20. Electrode extension (electrical stickout) Varies

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Joint Detail (Fillet)													
Show all dimensions, weld sizes, passes, and AWS symbols													
Weld size (in)	Pass No(s).	Electrode Size (in)	Welding Process Variables		Travel Speed (IPM)								
			AMPS/WFS*	VOLTS									
1/4"	1	5/32"	130-170	26-30	10								
5/16"	1	5/32"	130-170	26-30	10								
3/8"	2-3	5/32"	130-170	26-30	10								
As per AWS D1.5 Sec. 7 (Table 7.2) <table><tr><th>Stud Diameter</th><th>Minimum Fillet</th></tr><tr><td>≤ 3/8"</td><td>1/4"</td></tr><tr><td>3/8" ≤ 1"</td><td>5/16"</td></tr><tr><td>> 1"</td><td>3/8"</td></tr></table>						Stud Diameter	Minimum Fillet	≤ 3/8"	1/4"	3/8" ≤ 1"	5/16"	> 1"	3/8"
Stud Diameter	Minimum Fillet												
≤ 3/8"	1/4"												
3/8" ≤ 1"	5/16"												
> 1"	3/8"												



T1 = Varies
Stud = Varies
S = Weld Size

Weld must cover and extend beyond missing flash at least 3/8" in each direction

(see AWS D1.5 Table 7.2 for required weld size)

Prepared By: James R. Connor DSB QA Manager

Project: TH 62 OVER WEST RIVER

DSB Job: 27177-1011

Preheat and Interpass Temperature Chart		
Base Metal Thickness range	Minimum Preheat (°F)	Max Preheat & Interpass (°F)
≤ 3/4"	50°F	450°F
>3/4" to ≤1.5"	70°F	450°F
>1.5" to ≤2.5"	150°F	450°F
>2.5"	225°F	450°F

Note: When this procedure is used for A709Gr50W materials, it shall be limited to 5/16" single pass or material be coated.



Production Joint Welding Procedure Specification (D1.5-02)

Procedure No: B-FF-01 Date Issued: 3-28-08 Revision No: 0 Rev. Date: _____

Contractor (Fabricator) D. S. Brown Company Prepared by: Brad Streeter, Quality Assurance Manager

1. Non-Fracture Critical ☒ Fracture Critical ☐ WPS Expiration Date: 3-6-13

2. Qualified in accordance with: AWS D1.5- 2002 (5.13)

Referenced PQR No(s). PQR-FCAW-01-(08) , _____ , _____

Referenced FWST No(s). N/A , N/A , _____ , _____

3. Material specification(s) ASTM A709 Gr. 36, 50, 50W For DOT Approval

4. Material Thickness (es) Unlimited

5. Welding process FCAW

6. Manual ☐ , machine ☐ , or semiautomatic ☒

7. Position(s) of welding 1F, 2F

8. Filler metal specification AWS A5.20

9. Filler metal class and brand name E71T-1CH8 (UltraCore71C)

10. Flux class & brand N/A , Type N/A

11. Shielding gas 100% CO2 Flow rate 45 CFH

12. Single pass ☒ Or multiple pass ☒

13. Single arc ☒ Or multiple arc ☐

14. Welding Current DCEP

15. Polarity Reverse

16. Welding progression stringers

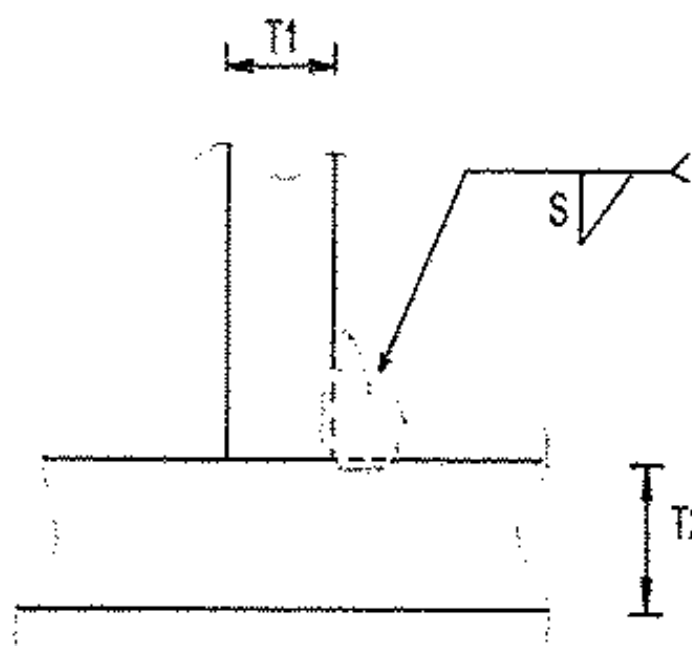
17. Root treatment Clean to bright sound metal or per AWS D1.5 (3.2.1 & 3.11)

18. Postheat treatment N/A

19. Calculated Heat Input (KJ/in) Min 32.2 KJ/in Max 45.8 KJ/in

20. Electrode extension (electrical stickout) 3/4"

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Weld size (in)	Pass No(s)	Electrode Size (in)	Welding Process Variables		Travel Speed (IPM)	Joint Detail (Fillet) Show all dimensions, weld sizes, passes, and AWS symbols
			AMPS/WFS*	VOLTS		
**1/4"	1	1/16"	257-295	26.1-29.5	11.4-12.5	 T1 = Varies T2 = Varies S = Weld Size ** T1 & T2 equal to or less than 3/4" for 1/4" welds.
5/16"	1	1/16"	257-295	26.1-29.5	11.4-12.5	
3/8"	2-3	1/16"	257-295	26.1-29.5	11.4-12.5	
7/16"	3-5	1/16"	257-295	26.1-29.5	11.4-12.5	
1/2"	4-6	1/16"	257-295	26.1-29.5	11.4-12.5	
5/8"	5-7	1/16"	257-295	26.1-29.5	11.4-12.5	
3/4"	6-8	1/16"	257-295	26.1-29.5	11.4-12.5	

* Wire feed speed may be used along with amperage (include chart)

Prepared By: _____ DSB QA Manager

Project: TH 62 OVER WEST RIVER

DSB Job: 27177-1011

Preheat and Interpass Temperature Chart

Base Metal Thickness range	Minimum Preheat (°F)	Max Preheat & Interpass (°F)
≤ 3/4"	50°F	450°F
>3/4" to ≤1.5"	70°F	450°F
>1.5" to ≤2.5"	150°F	450°F
>2.5"	225°F	450°F

Note: When this procedure is used for A709Gr50W materials, it shall be limited to 5/16" single pass or material be coated.



Production Joint Welding Procedure Specification (D1.5-02)

Procedure No: B-FSB-105 Date Issued: 3-28-08 Revision No: 0 Rev. Date:

Contractor (Fabricator) D. S. Brown Company Prepared by: Brad Streeter, Quality Assurance Manager

1. Non-Fracture Critical ☒ Fracture Critical ☐

2. Qualified in accordance with: AWS D1.5- 2002 (5.13)

Referenced PQR No(s). PQR-FCAW-01-(08)

Referenced FWST No(s). N/A

3. Material specification(s) ASTM A709 Gr. 36, 50, 50W

4. Material Thickness (es) Unlimited

5. Welding process FCAW

6. Manual ☐ , machine ☐ , or semiautomatic ☒

7. Position(s) of welding 1G,2G, 1F, 2F

8. Filler metal specification AWS A5.20

9. Filler metal class and brand name E71T-1CH8 (UltraCore71C)

10. Flux class & brand N/A , Type N/A

11. Shielding gas 100% CO2 Flow rate 45 CFH

12. Single pass ☒ Or multiple pass ☒

13. Single arc ☒ Or multiple arc ☐

14. Welding Current DCEP

15. Polarity Reverse

16. Welding progression Stringers

17. Root treatment Clean to bright sound metal or per AWS D1.5 (3.2.1 & 3.11)

18. Postheat treatment N/A

19. Calculated Heat Input (KJ/in) Min 32.2 KJ/in Max 45.8 KJ/in

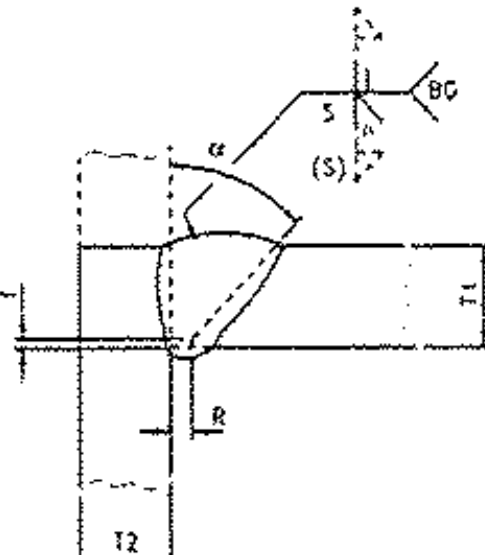
20. Electrode extension (electrical stickout) 3/4"

WPS Expiration Date: 3-6-13

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APPROVED
DEC 12/29/09

Weld size (in) (E&S)	Pass No(s)	Electrode Size (in)	Welding Process Variables		Travel Speed (IPM)	Joint Detail (TC-U4b-GF) Show all dimensions, weld sizes, passes, and AWS symbols
			AMPS/WFS*	VOLTS		
1/4"	CJP	1/16"	257-295	26.1-29.5	11.4-12.5	 T1 = Varies T2 = Varies f = 0 to 1/8" min. R = 0 to 1/8" α = 45° (S)=Fillet Reinforcement (If Necessary) Note: Backgouge root to clean sound metal before welding second side.
5/16"	CJP	1/16"	257-295	26.1-29.5	11.4-12.5	
3/8"	CJP	1/16"	257-295	26.1-29.5	11.4-12.5	
1/2"	CJP	1/16"	257-295	26.1-29.5	11.4-12.5	
5/8"	CJP	1/16"	257-295	26.1-29.5	11.4-12.5	
3/4"	CJP	1/16"	257-295	26.1-29.5	11.4-12.5	
7/8"	CJP	1/16"	257-295	26.1-29.5	11.4-12.5	
1"	CJP	1/16"	257-295	26.1-29.5	11.4-12.5	

* Wire feed speed may be used along with amperage (include chart)

Prepared By:  DSB QA Manager

Project: TH 62 OVER WEST RIVER

DSB Job: 27177-1011

Preheat and Interpass Temperature Chart		
Base Metal Thickness range	Minimum Preheat (°F)	Max Preheat & Interpass (°F)
≤ 3/4"	50°F	450 °F
>3/4" to ≤1.5"	70°F	450 °F
>1.5" to ≤2.5"	150°F	450 °F
>2.5"	225°F	450 °F

Note: When this procedure is used for A709Gr50W materials, it shall be limited to 5/16" single pass or material be coated.



Production Joint Welding Procedure Specification (D1.5-02)

Procedure No: B-F-SEALWELD-01 Date Issued: 3-28-08 Revision No: 0 Rev. Date: _____

Contractor (Fabricator) D. S. Brown Company Prepared by: Brad Streeter, Quality Assurance Manager

1. Non-Fracture Critical ☒ Fracture Critical ☐ WPS Expiration Date: 3-6-13

2. Qualified in accordance with: AWS D1.1- 2004 Sec. 4

Referenced PQR No(s). PQR-FCAW-01-(08) , , _____

Referenced FWST No(s). N/A , N/A , , _____

3. Material specification(s) ASTM A709 Gr. 36, 50, 50W For DOT Approval

4. Material Thickness (es) Unlimited

5. Welding process FCAW

6. Manual ☐ , machine ☐ , or semiautomatic ☒

7. Position(s) of welding 1G,1F, 2F

8. Filler metal specification AWS A5.20

9. Filler metal class and brand name E71T-1CH8 (UltraCore71C)

10. Flux class & brand N/A , Type N/A

11. Shielding gas 100% CO2 Flow rate 45 CFH

12. Single pass ☒ Or multiple pass ☐

13. Single arc ☒ Or multiple arc ☐

14. Welding Current DCEP

15. Polarity Reverse

16. Welding progression stringers

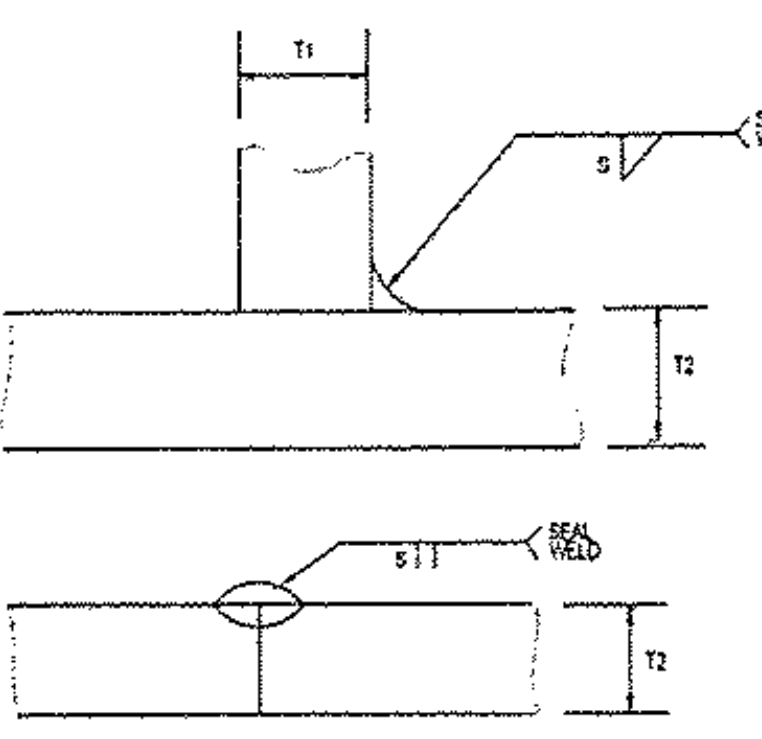
17. Root treatment Clean to bright sound metal and per AWS D1.5 (3.2.1 & 3.11)

18. Postheat treatment N/A

19. Calculated Heat Input (KJ/in) Min 32.2 KJ/in Max 45.8 KJ/in

20. Electrode extension (electrical stickout) 3/4"

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Weld size (in)	Pass No(s).	Electrode Size (in)	Welding Process Variables		Travel Speed (IPM)	Joint Detail (Fillet) Show all dimensions, weld sizes, passes, and AWS symbols
			AMPS	VOLTS		
1/8"	1	1/16"	257-295	26.1-29.5	11.4-12.5	 T1 = Varies T2 = Varies S = Weld Size
3/16"	1	1/16"	257-295	26.1-29.5	11.4-12.5	
NOTE: THIS JOINT DETAIL TO BE USED FOR SEALING NON-STRUCTURAL GALVANIZED OR PAINTED APPLICATIONS WHERE FULL SIZED WELDMENTS ARE NOT DESIGNED, DETAILED OR ARE NOT PRACTICAL.						

Prepared By: <u>[Signature]</u> DSB QA Manager Project: <u>TH 62 OVER WEST RIVER</u> DSB Job: <u>27177-1011</u>	Preheat and Interpass Temperature Chart		
	Base Metal Thickness range	Minimum Preheat (°F)	Max Preheat & Interpass (°F)
	≤ 3/4"	50°F	450 °F
	>3/4" to ≤1.5"	70°F	450 °F
	>1.5" to ≤2.5"	150°F	450 °F
	>2.5"	225°F	450 °F

Note: When this procedure is used for A709Gr50W materials, it shall be limited to 5/16" single pass or material be coated.



Production Joint Welding Procedure Specification (D1.5-02)

Procedure No: B-FSB-01 Date Issued: 3-28-08 Revision No: 0 Rev. Date: _____

Contractor (Fabricator) D. S. Brown Company Prepared by: Brad Streeter, Quality Assurance Manager

1. Non-Fracture Critical ☒ Fracture Critical ☐ WPS Expiration Date: 3-6-13

2. Qualified in accordance with: AWS D1.5- 2002 (5.13)

Referenced PQR No(s). PQR-FCAW-01-(08) , _____ , _____

Referenced FWST No(s). N/A , N/A , _____ , _____

3. Material specification(s) ASTM A709 Gr. 36, 50, 50W For DOT Approval

4. Material Thickness (es) Unlimited

5. Welding process FCAW

6. Manual ☐ , machine ☐ , or semiautomatic ☒

7. Position(s) of welding 1G, 2G, (1F, 2F)

8. Filler metal specification AWS A5.20

9. Filler metal class and brand name E71T-1CH8 (UltraCore71C)

10. Flux class & brand N/A , Type N/A

11. Shielding gas 100% CO2 Flow rate 45 CFH

12. Single pass ☒ Or multiple pass ☒

13. Single arc ☒ Or multiple arc ☐

14. Welding Current DCEP

15. Polarity Reverse

16. Welding progression Stringers

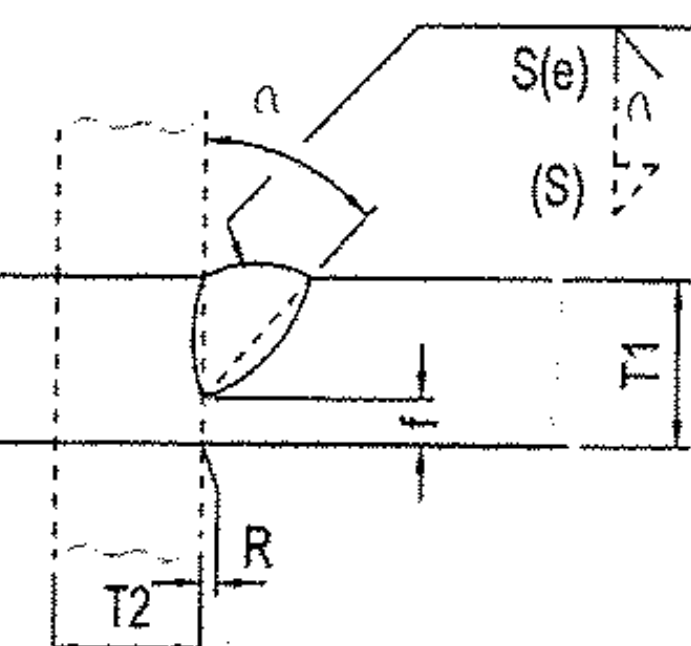
17. Root treatment Clean to bright sound metal or per AWS D1.5 (3.2.1 & 3.11)

18. Postheat treatment N/A

19. Calculated Heat Input (KJ/in) Min 32.2 KJ/in Max 45.8 KJ/in

20. Electrode extension (electrical stickout) 3/4"

VTRANS
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Weld size (E)&(S)	Pass No(s).	Electrode Size (in)	Welding Process Variables		Travel Speed (IPM)	Joint Detail (TC-P4-GF) Show all dimensions, weld sizes, passes, and AWS symbols ** T1 & T2 equal to or less than 3/4" for 1/4" welds
			AMPS/WFS*	VOLTS		
**1/4"	1	1/16"	257-295	26.1-29.5	11.4-12.5	 T1 = 1/4" min. T2 = Varies (E) = S-1/8" f = 1/8" min. R = 0 $\alpha = 45^\circ$ S = size groove (S) = size of reinforcing fillet(if required) not to exceed 1/4" in corner & T jts.
5/16"	1	1/16"	257-295	26.1-29.5	11.4-12.5	
3/8"	2-3	1/16"	257-295	26.1-29.5	11.4-12.5	
1/2"	3-4	1/16"	257-295	26.1-29.5	11.4-12.5	
5/8"	4-6	1/16"	257-295	26.1-29.5	11.4-12.5	
3/4"	5-7	1/16"	257-295	26.1-29.5	11.4-12.5	
7/8"	6-8	1/16"	257-295	26.1-29.5	11.4-12.5	
1"	7-9	1/16"	257-295	26.1-29.5	11.4-12.5	

For Butt Joints see AWS 2.14

* Wire feed speed may be used along with amperage (include chart)

Prepared By: [Signature] DSB QA Manager

Project: TH 62 OVER WEST RIVER

DSB Job: 27177-1011

Preheat and Interpass Temperature Chart		
Base Metal Thickness range	Minimum Preheat (°F)	Max Preheat & Interpass (°F)
≤ 3/4"	50°F	450°F
>3/4" to ≤1.5"	70°F	450°F
>1.5" to ≤2.5"	150°F	450°F
>2.5"	225°F	450°F

Note: When this procedure is used for A709Gr50W materials, it shall be limited to 5/16" single pass or material be coated.



Production Joint Welding Procedure Specification (D1.5-02)

Procedure No: B-FF-STUD-REP-01 Date Issued: 3-28-08 Revision No: 0 Rev. Date: _____

Contractor (Fabricator) D. S. Brown Company Prepared by: Brad Streeter, Quality Assurance Manager

1. Non-Fracture Critical ☒ Fracture Critical ☐

2. Qualified in accordance with: AWS D1.5- 2002 (5.13)

Referenced PQR No(s). PQR-FCAW-01-(08)

Referenced FWST No(s). N/A

3. Material specification(s) ASTM A709 Gr. 36, 50, 50W, A500B to A108 Stud

4. Material Thickness (es) Unlimited

5. Welding process FCAW

6. Manual ☐ , machine ☐ , or semiautomatic ☒

7. Position(s) of welding 2F

8. Filler metal specification AWS A5.20

9. Filler metal class and brand name E71T-1CH8 (UltraCore71C)

10. Flux class & brand N/A , Type N/A

11. Shielding gas 100% CO2 Flow rate 45 CFH

12. Single pass ☒ Or multiple pass ☒

13. Single arc ☒ Or multiple arc ☐

14. Welding Current DCEP

15. Polarity Reverse

16. Welding progression stringers

17. Root treatment Clean to bright sound metal and per AWS D1.5 (3.2.1 & 3.11)

18. Postheat treatment N/A

19. Calculated Heat Input (KJ/In) Min 32.2 KJ/in Max 45.8 KJ/in

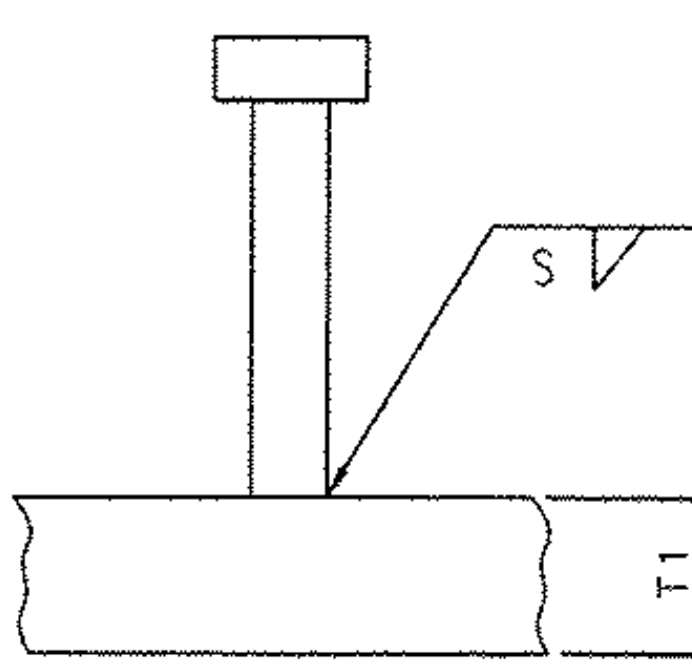
20. Electrode extension (electrical stickout) 3/4"
- WPS Expiration Date: 3-6-13

For DOT Approval

OK'D BY _____ OK'D BY JUC

NOV 17 2009

APPROVED BY 12/29/09

Weld size (in)	Pass No(s).	Electrode Size (in)	Welding Process Variables		Travel Speed (IPM)	Joint Detail (Fillet) Show all dimensions, weld sizes, passes, and AWS symbols
			AMPS	VOLTS		
**1/4"	1	1/16"	257-295	26.1-29.5	11.4-12.5	
5/16"	1	1/16"	257-295	26.1-29.5	11.4-12.5	
3/8"	2-3	1/16"	257-295	26.1-29.5	11.4-12.5	
Table 7.2 STUD DIAMETER 3/8"(13MM) 1/2", 5/8, 3/4, 7/8(13,16,19,22MM) 1"(25MM) MIN. SIZE FILLET 1/4(6MM) 5/16(8MM) 3/8(10MM)						T₁ =VARIES S =VARIES PER TABLE 7.2 (AS SHOWN LEFT OF PAGE). APPLICATION: REPAIR OF STUD WELDMENTS, WHICH DO NOT EXHIBIT A FULL 360° FLASH ** T₁ & T₂ equal to or less than 3/4" for 1/4" welds
PROCEDURE: 1) REPAIR WELDMENT SHALL BE OF THE SIZE LISTED BELOW AND EXTEND AT LEAST 3/8" (9MM) BEYOND THE END OF EACH DISCONTINUITY BEING REPAIRED.						

Prepared By: <u> </u>
--

Note: When this procedure is used for A709Gr50W materials, it shall be limited to 5/16" single pass or material be coated.



Production Joint Welding Procedure Specification (D1.5-02)

Procedure No: B-FSV-01 Date Issued: 3-28-08 Revision No: 0 Rev. Date: _____

Contractor (Fabricator) D. S. Brown Company Prepared by: Brad Streeter, Quality Assurance Manager

1. Non-Fracture Critical ☒ Fracture Critical ☐ WPS Expiration Date: 3-6-13

2. Qualified in accordance with: AWS D1.5- 2002 (5.13)

Referenced PQR No(s). PQR-FCAW-01-(08) , _____ , _____

Referenced FWST No(s). N/A , _____ , _____ , _____

3. Material specification(s) ASTM A709 Gr. 36, 50, 50W

4. Material Thickness (es) Unlimited

5. Welding process FCAW

6. Manual ☐ , machine ☐ , or semiautomatic ☒

7. Position(s) of welding 1G

8. Filler metal specification AWS A5.20

9. Filler metal class and brand name E71T-1CH8 (UltraCore71C)

10. Flux class & brand N/A , Type N/A

11. Shielding gas 100% CO2 Flow rate 45 CFH

12. Single pass ☒ Or multiple pass ☒

13. Single arc ☒ Or multiple arc ☐

14. Welding Current DCEP

15. Polarity Reverse

16. Welding progression Stringers

17. Root treatment Clean to bright sound metal and per AWS D1.5 (3.2.1 & 3.11)

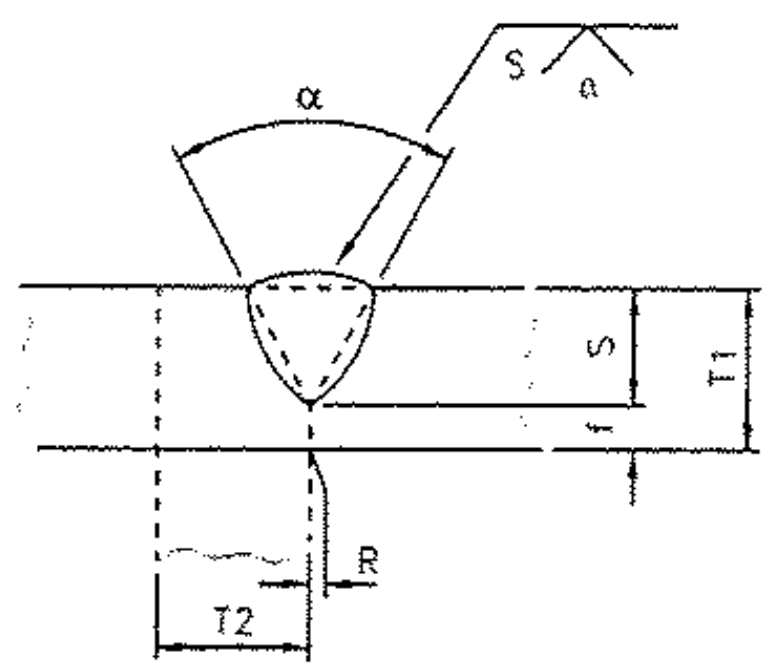
18. Postheat treatment N/A

19. Calculated Heat Input (KJ/in) Min 32.2 KJ/in Max 45.8 KJ/in

20. Electrode extension (electrical stickout) 3/4"

For DOT Approval

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NOV 17 2008
APPROVED ✓
BY _____ DATE 12/29/09

Weld size (in)	Pass No(s)	Electrode Size (in)	Welding Process Variables		Travel Speed (IPM)	Joint Detail (C-P2-GF) Show all dimensions, weld sizes, passes, and AWS symbols
			AMPS	VOLTS		
**1/4"	1	1/16"	257-295	26.1-29.5	11.4-12.5	 T1 = 1/4" min. T2 = Unlimited f = 1/8" min. R = 0 $\alpha = 60^\circ$ S = Groove Prep Depth ** T1 & T2 equal to or less than 3/4" for 1/4" welds.
5/16"	1-2	1/16"	257-295	26.1-29.5	11.4-12.5	
3/8"	2-3	1/16"	257-295	26.1-29.5	11.4-12.5	
1/2"	4-5	1/16"	257-295	26.1-29.5	11.4-12.5	
5/8"	5-6	1/16"	257-295	26.1-29.5	11.4-12.5	
3/4"	5-8	1/16"	257-295	26.1-29.5	11.4-12.5	

For Butt Joints see AWS 2.14

Prepared By: <u>[Signature]</u> DSB QA Manager Project: <u>TH 62 OVER WEST RIVER</u> DSB Job: <u>27177-1011</u>	Preheat and Interpass Temperature Chart		
	Base Metal Thickness range	Minimum Preheat (°F)	Max Preheat & Interpass (°F)
	≤ 3/4"	50°F	450°F
	>3/4" to ≤1.5"	70°F	450°F
	>1.5" to ≤2.5"	150°F	450°F
	>2.5"	225°F	450°F

Note: When this procedure is used for A709Gr50W materials, it shall be limited to 5/16" single pass or material be coated.

Casco Bay Steel Structures, Inc.

75 Spring Hill Road
Saco, Maine 04072

Phone: (207) 282-7360

Fax: (207) 282-1179

WELDING PROCEDURE SPECIFICATION

Material specification ASTM A709/A709M-Grade 36(250) 50(345) 50W(345W)
Welding process Flux Cored Arc welding (FCAW)
Manual or machine Semi AUTO
Position of welding Flat (1F) Horizontal (2F)
Filler metal specification AWS A5-20
Filler metal classification E71T-1
Flux NA
Shielding gas 75% AR 25% CO2 Flow rate 40 CFH ±5
Single or multiple pass Single and Multiple - Electrode Extension 5/8" ± 1/4 (15.87 ± 6.35)
Single or multiple arc Single
Welding current DC
Polarity Reverse
Welding progression _____
Root treatment To meet AWS specification
Preheat and interpass temperature To 3/4 (19) = 50° (10) - 3/4 (19) To 1 1/2 (38) = 70° (20) - 1 1/2 (38) To 2 1/2 (63) = 150° (65)
Postheat temperature NA over 2 1/2 (63) = 225° (110°)
Heat Input Min NA Max NA

ST. & F. VERMONT
DUMMERSTON
Proj. BHO 1442(28)
CBSS NO

WELDING PROCEDURE

Pass no.	Electrode size	Welding current		Travel speed	AWS D1-5 Joint detail
		Amperes	Volts		
	<u>1/16</u>	<u>275</u>	<u>28.8</u>	<u>11.6</u>	<u>1F</u>
		<u>247.5</u> TO <u>302.5</u>	<u>26.8</u> TO <u>30.8</u>	<u>10.4</u> TO <u>12.8</u>	
	<u>1.6</u>	<u>275</u>	<u>28.8</u>	<u>294.6</u>	<u>2F</u>
		<u>247.5</u> TO <u>302.5</u>	<u>26.8</u> TO <u>30.8</u>	<u>264.2</u> TO <u>325.12</u>	



To 1/2 (12.7) TRANS
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CK'D BY _____ OK'D BY JWC

APR 01 2010

RESUBMIT _____ APPROVED _____

BY _____ DATE 4/20/10

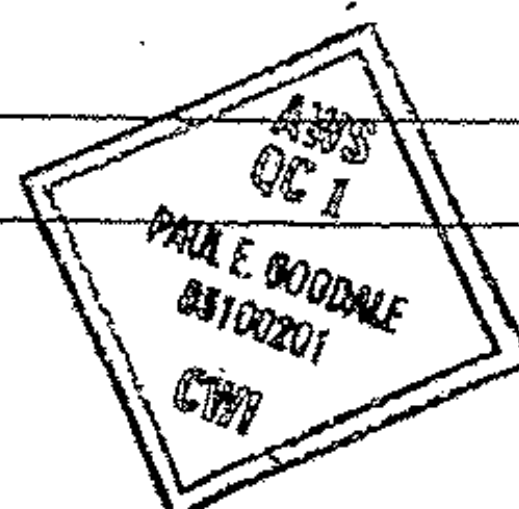
To 3/8 (9.5)

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in applicable A.W.S. codes or contract specifications

Procedure no. 101

Revision no. _____

Form III-2



Contractor Casco Bay Steel

Authorized By Paul E. Goodale

Date 3/23/00

State of Vermont
PDD/Structures Design Section
National Life Building – Drawer 33
Montpelier, VT 05633-5001
www.aot.state.vt.us

Agency of Transportation

[phone] 802-828-2621
[fax] 802-828-3566
[ttd] 800-253-0191

Casco Bay Steel Structures
75 Spring Hill Road
Saco, Maine 04072

DATE: April 28, 2010

Project Name: Dummerston Project #: BHO 1442 (28)

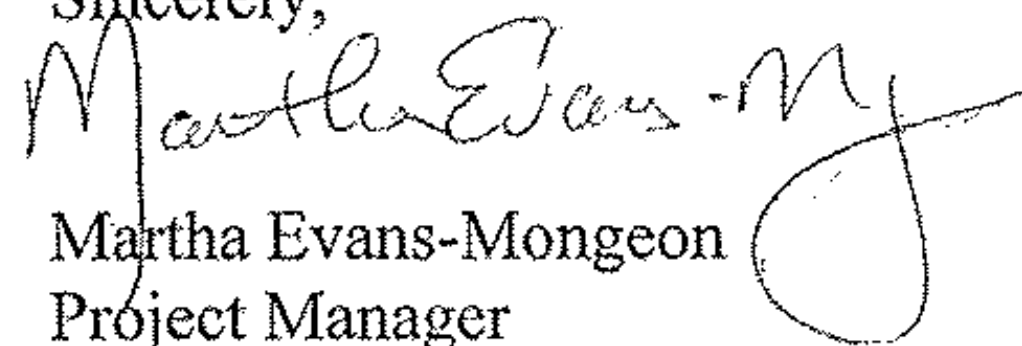
Structure Identification: Town Highway 62, Bridge 37 over the West River

The following Bridge Railing details Item #900.640, Special Provision (Bridge Railing, Truss) for the above project, transmitted with your letter dated March 31, 2010, have been reviewed and are being returned herewith.

Sheets: 20 through 26 and E6
are approved

You must provide notice to our fabrication inspector, Jeff Clark, as to the date fabrication represented by these drawings will begin. That notice must be received and acknowledged at least seven days prior to that date, as per Specification 506.03. Jeff may be contacted by phone at (802)828-0044 or email at jeff.clark@state.vt.us. Any material fabricated prior to the notification date is subject to rejection without further cause.

Sincerely,



Martha Evans-Mongee
Project Manager

Attachments

cc: ☒ Resident Engineer w/prints, Chad Greenwood
☒ Shop Inspector w/prints, Jeff Clark
☒ Contractor w/prints, Renaud Brothers
☐ Subcontractor – letter only _____
☒ Construction Division – letter only
☒ Materials & Research Section (C&IA Unit) – letter only
☒ Files, MEM, w/ prints



CASCO BAY STEEL STRUCTURES, INC.
75 Spring Hill Rd.
SACO, MAINE 04072

LETTER OF TRANSMITTAL

(207) 282-7360 FAX (207) 282-1179
TO VT Agency of Transportation
1 National Life Dr., Drawer 33
Montpelier, VT 05633

DATE	3/31/10	JOB NO.	BHO 1442 (28)
ATTENTION	MARSHA EVANS		
RE:	Dummerston Bridge Ratings Shop Drawings		

WE ARE SENDING YOU ☐ Attached ☐ Under separate cover via _____ the following items:

☒ Shop drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications

☐ Copy of letter ☐ Change order ☐ _____

COPIES	DATE	NO.	DESCRIPTION
7	3/31/10		DUMMERSTON BRIDGE RAIL SHOP DRAWINGS
7	3/31/10		FCAW WELDING PROCEDURE

THESE ARE TRANSMITTED as checked below:

☒ For approval ☐ Approved as submitted ☐ Resubmit _____ copies for approval

☐ For your use ☐ Approved as noted ☐ Submit _____ copies for distribution

☐ As requested ☐ Returned for corrections ☐ Return _____ corrected prints

☐ For review and comment ☐ _____

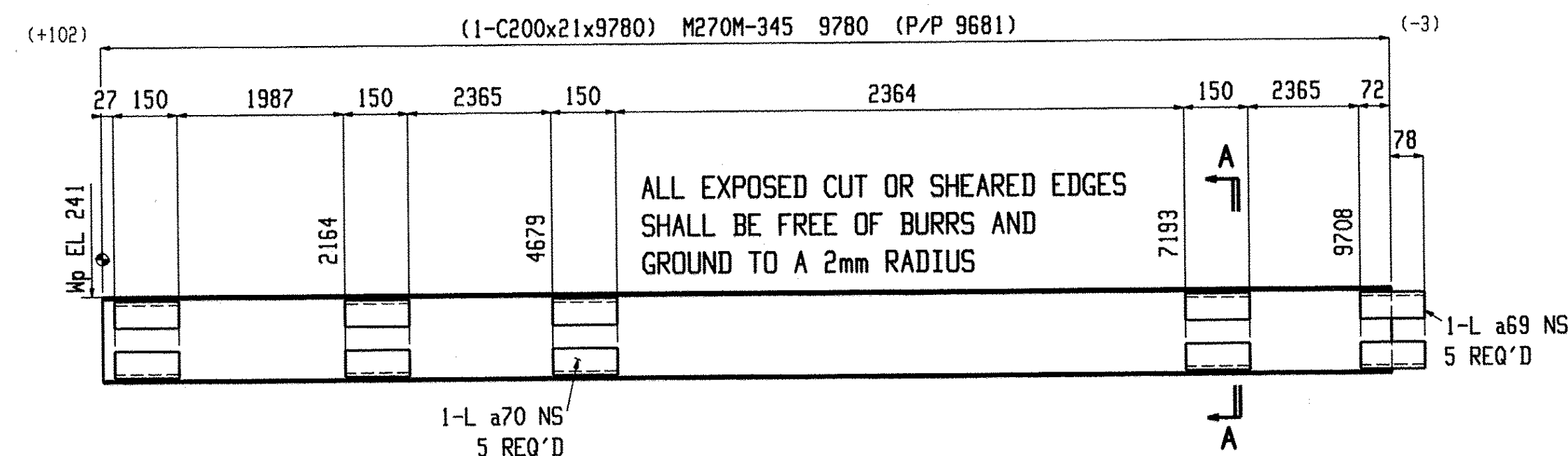
☐ FOR BIDS DUE _____ ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS Any Questions Contact: Brian Tupper

COPY TO _____

SIGNED: BT/CAR

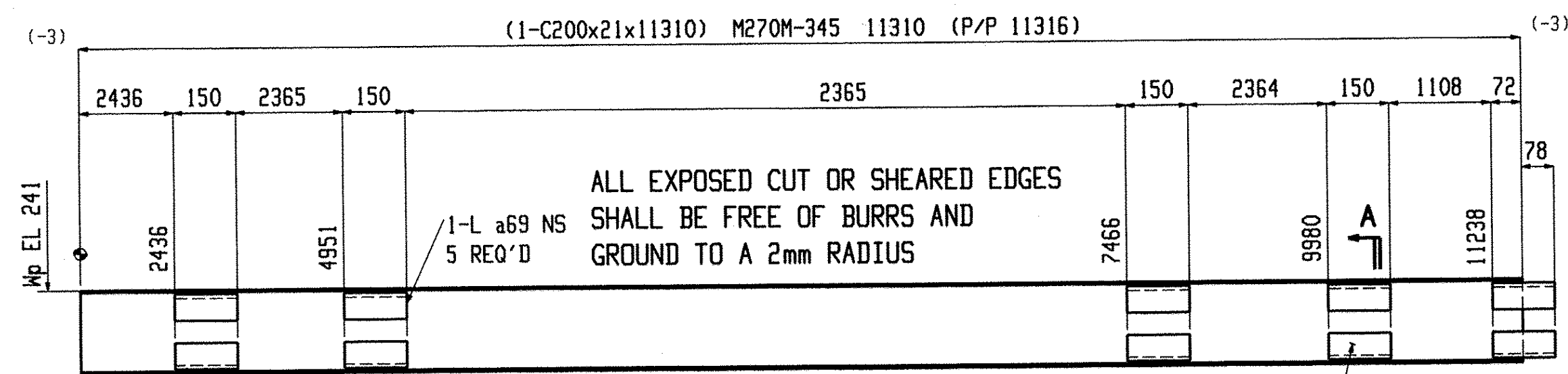
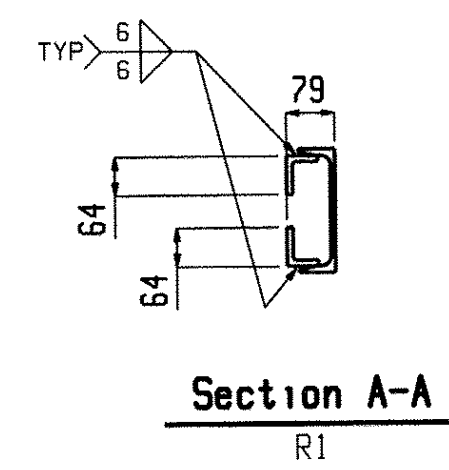
If enclosures are not as noted, kindly notify us at once.



ONE BEAM R1

W 203x7.5
F 59.5x10
K 24x18

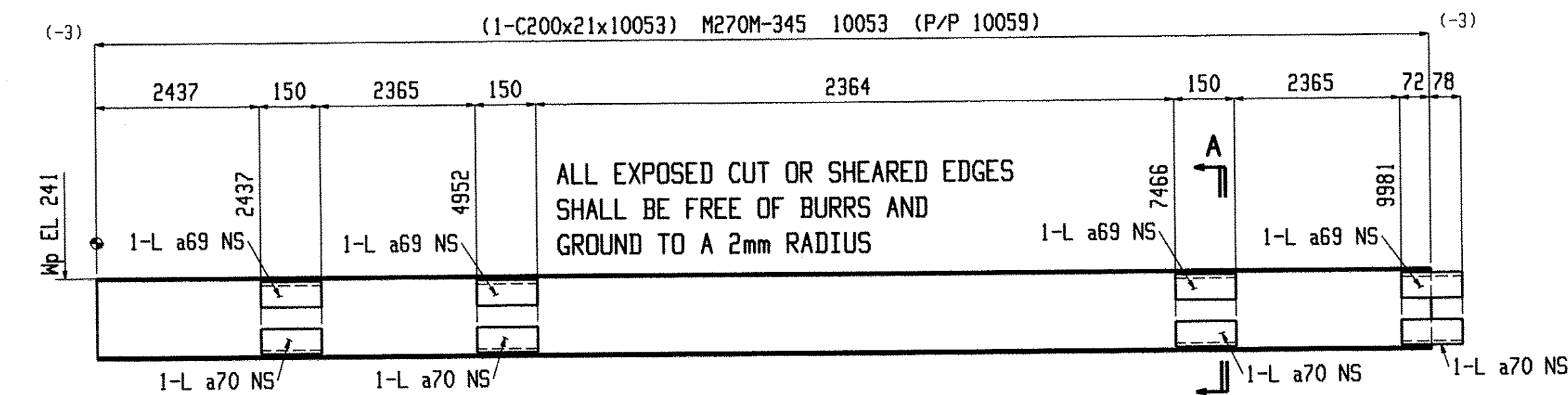
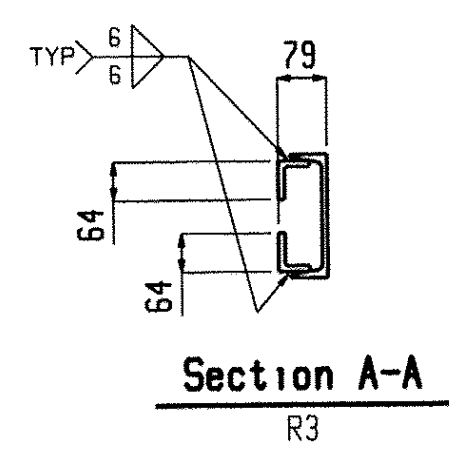
SHOP NOTE:
TOE DIRECTION NEAR SIDE



ONE BEAM R3

W 203x7.5
F 59.5x10
K 24x18

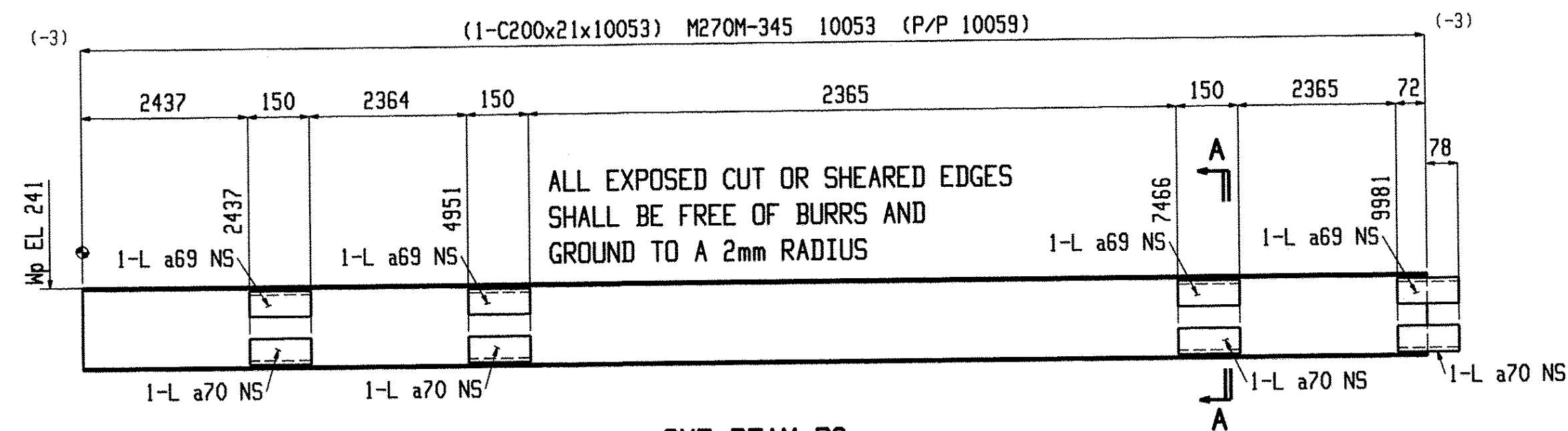
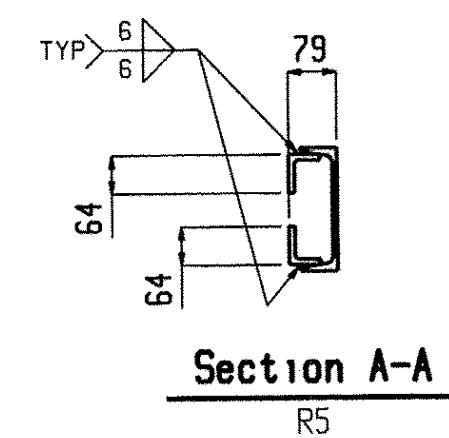
SHOP NOTE:
TOE DIRECTION NEAR SIDE



ONE BEAM R5

W 203x7.5
F 59.5x10
K 24x18

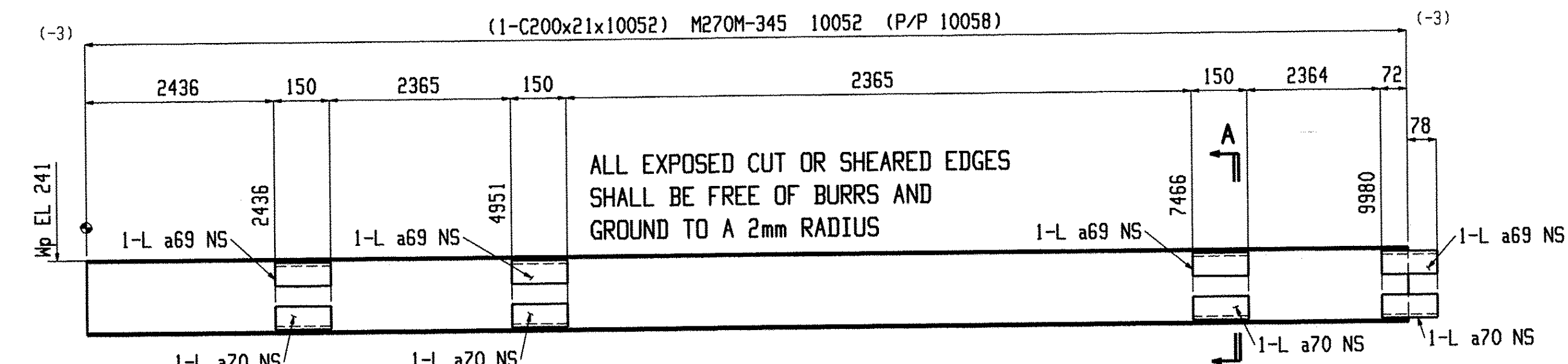
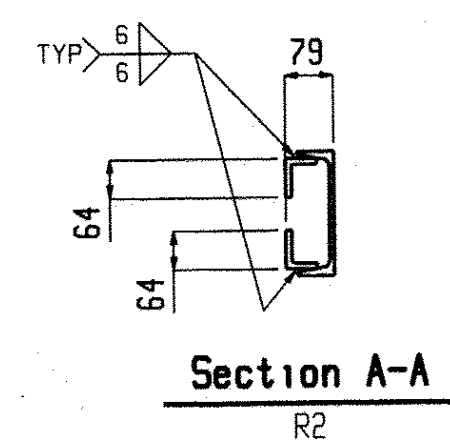
SHOP NOTE:
TOE DIRECTION NEAR SIDE



ONE BEAM R2

W 203x7.5
F 59.5x10
K 24x18

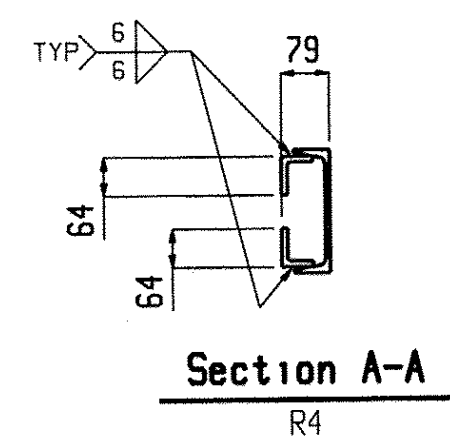
SHOP NOTE:
TOE DIRECTION NEAR SIDE



ONE BEAM R4

W 203x7.5
F 59.5x10
K 24x18

SHOP NOTE:
TOE DIRECTION NEAR SIDE



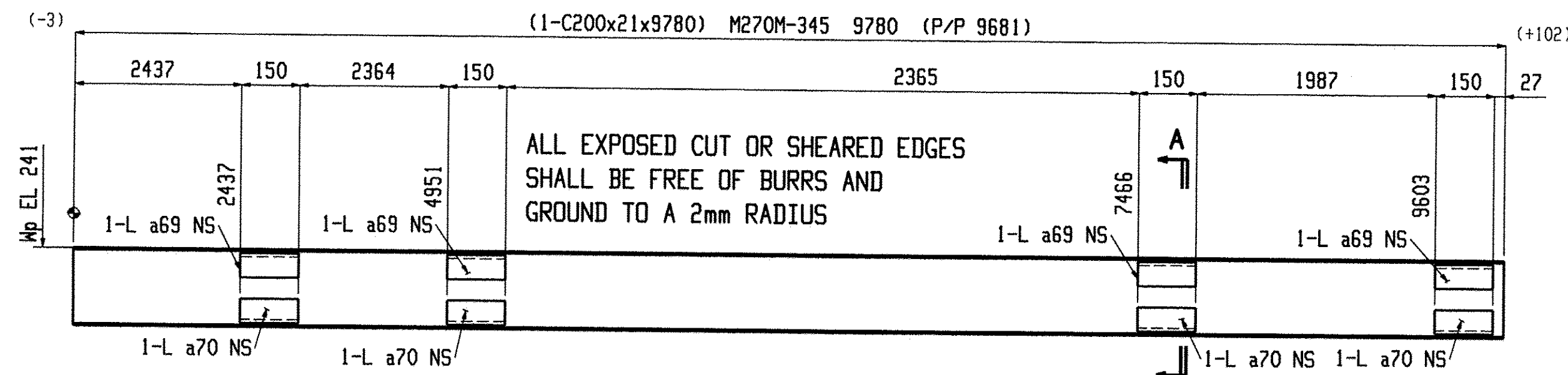
BILL OF MATERIAL										BILL OF MATERIAL										BILL OF MATERIAL									
Qty	Piece			Seq	Seq	Adv	Steel			Qty	Piece			Seq	Seq	Adv	Steel			Qty	Piece			Seq	Seq	Adv	Steel		
Tot.	Mark	Description	Length	NO.	Qty	ADM #	Grade	Remarks		Tot.	Mark	Description	Length	NO.	Qty	ADM #	Grade	Remarks		Tot.	Mark	Description	Length	NO.	Qty	ADM #	Grade	Remarks	
ONE R1	BEAM			2	1					ONE R3	BEAM			2	1					ONE R5	BEAM			2	1				
1 R1	C200x21		9780				M270M-345			1 R3	C200x21		11310				M270M-345			1 R5	C200x21		10053				M270M-345		
5 a69	L64x51x9.5		150				M270M-345			5 a69	L64x51x9.5		150				M270M-345			4 a69	L64x51x9.5		150				M270M-345		
5 a70	L64x51x9.5		150				M270M-345			5 a70	L64x51x9.5		150				M270M-345			4 a70	L64x51x9.5		150				M270M-345		
ONE R2	BEAM			2	1					ONE R4	BEAM			2	1														
1 R2	C200x21		10053				M270M-345			1 R4	C200x21		10052				M270M-345												
4 a69	L64x51x9.5		150				M270M-345			4 a69	L64x51x9.5		150				M270M-345												
4 a70	L64x51x9.5		150				M270M-345																						

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CK'D BY: *[Signature]*
APR 01 2010
RESUBMIT: ☒ APPROVED: ☒
BY: *[Signature]* DATE: *4/28/10*

ITEMS ON THIS SHEET ARE PAY ITEM: 900.640 (UN)

Casco Bay Steel Structures 75 Spring Hill Rd Saco, ME, 04072 207-282-7360		Holes: 21mm UNO BOLTS: 19mm DIA. M164M-I GALV UNO Steel GR: M270M-GR345 UNO	
		Paint: PER SPECS (GREEN) UNO Surface Prep: PER SPECS	
Project: DUMMERSTON RAILS DUMMERSTON, VT	Date: 9-9-09 DWN. BY: EG Checked: MRS	Job No.: Sheet No.: 20	Rev. No.: Date: 3-17-10

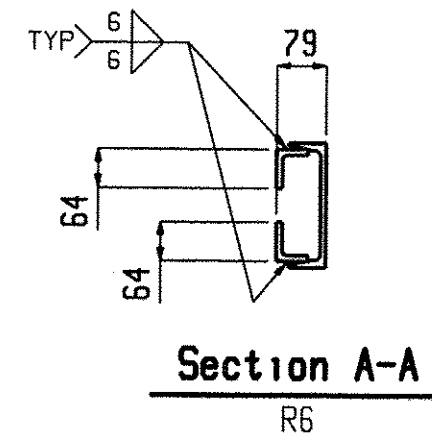
Rev 18 2010 03:41:54 PM



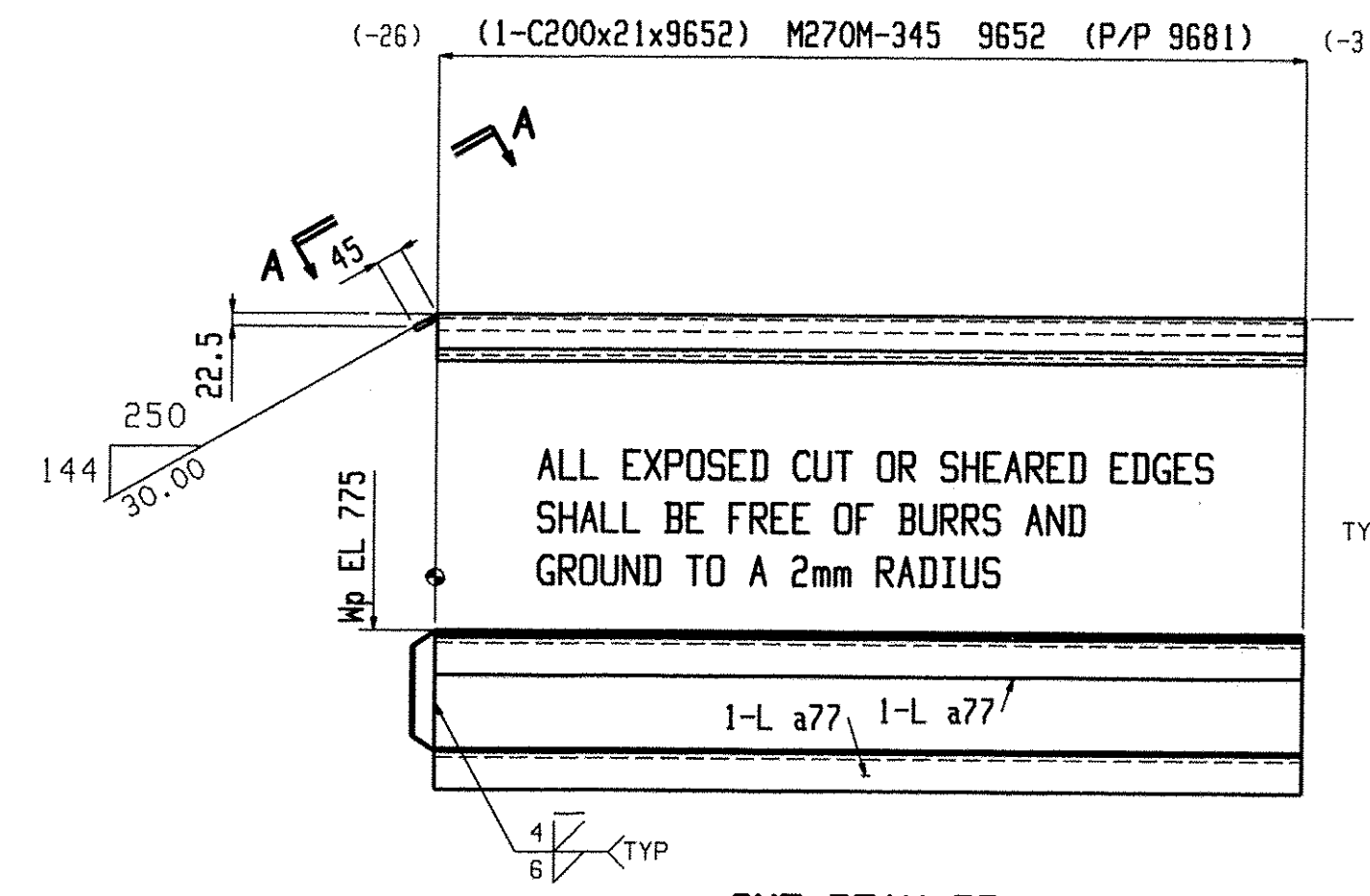
ONE BEAM R6

W 203x7.5
F 59.5x10
K 24x18

SHOP NOTE:
TOE DIRECTION NEAR SIDE



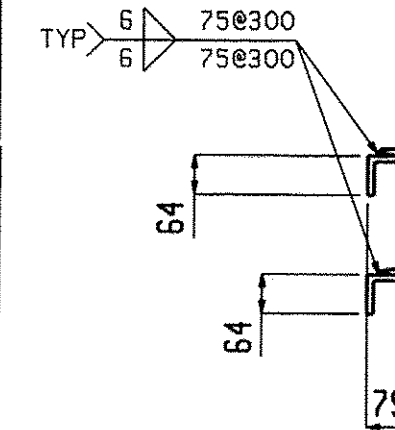
Section A-A
R6



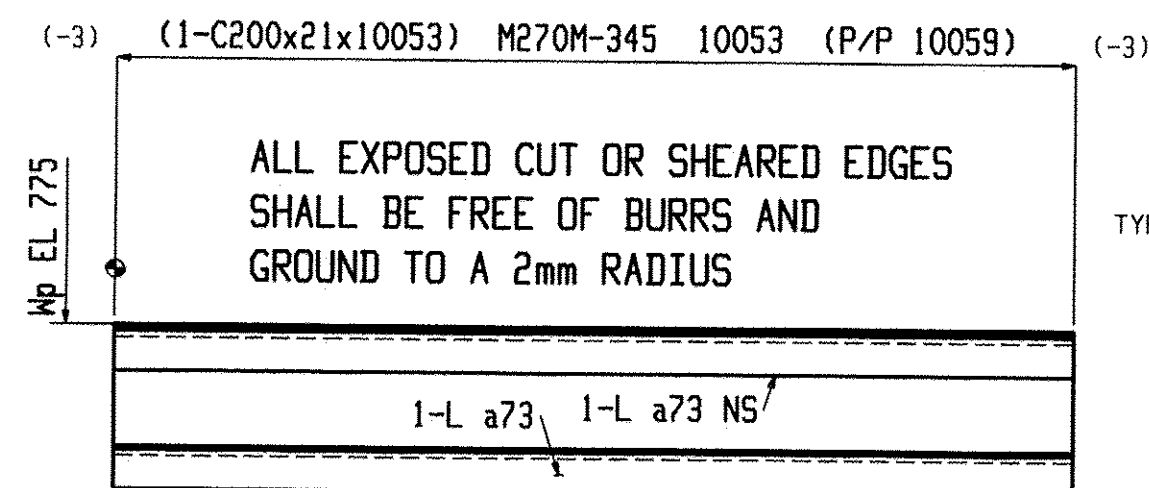
ONE BEAM R7

W 203x7.5
F 59.5x10
K 24x18

SHOP NOTE:
TOE DIRECTION NEAR SIDE



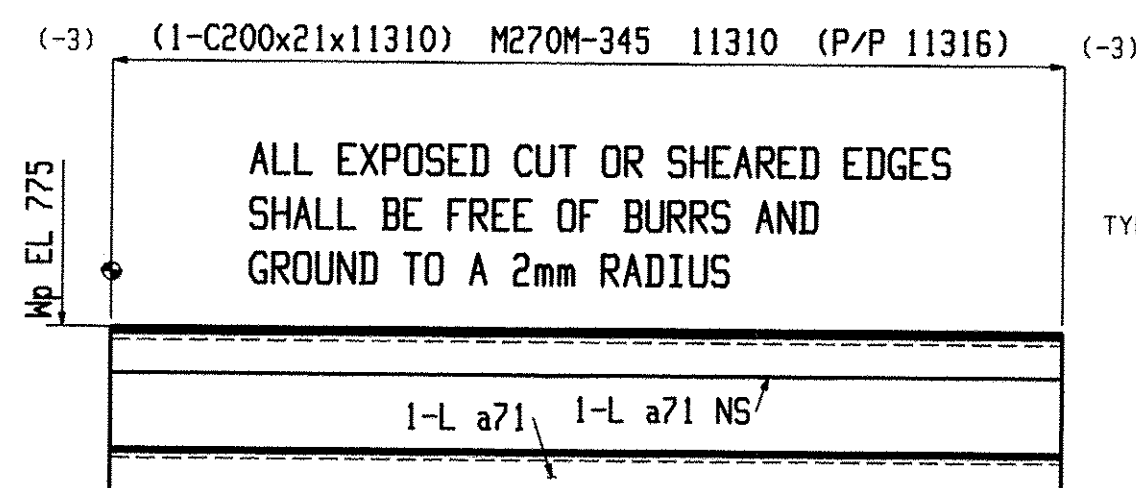
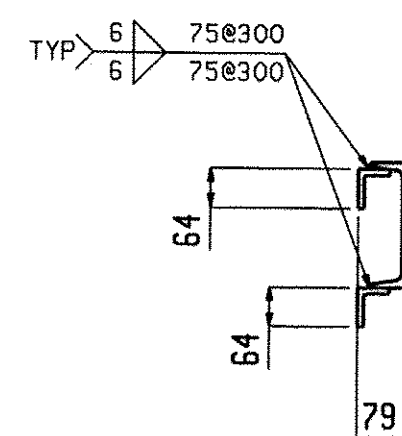
Section A-A
R7



2 BEAMS R8

W 203x7.5
F 59.5x10
K 24x18

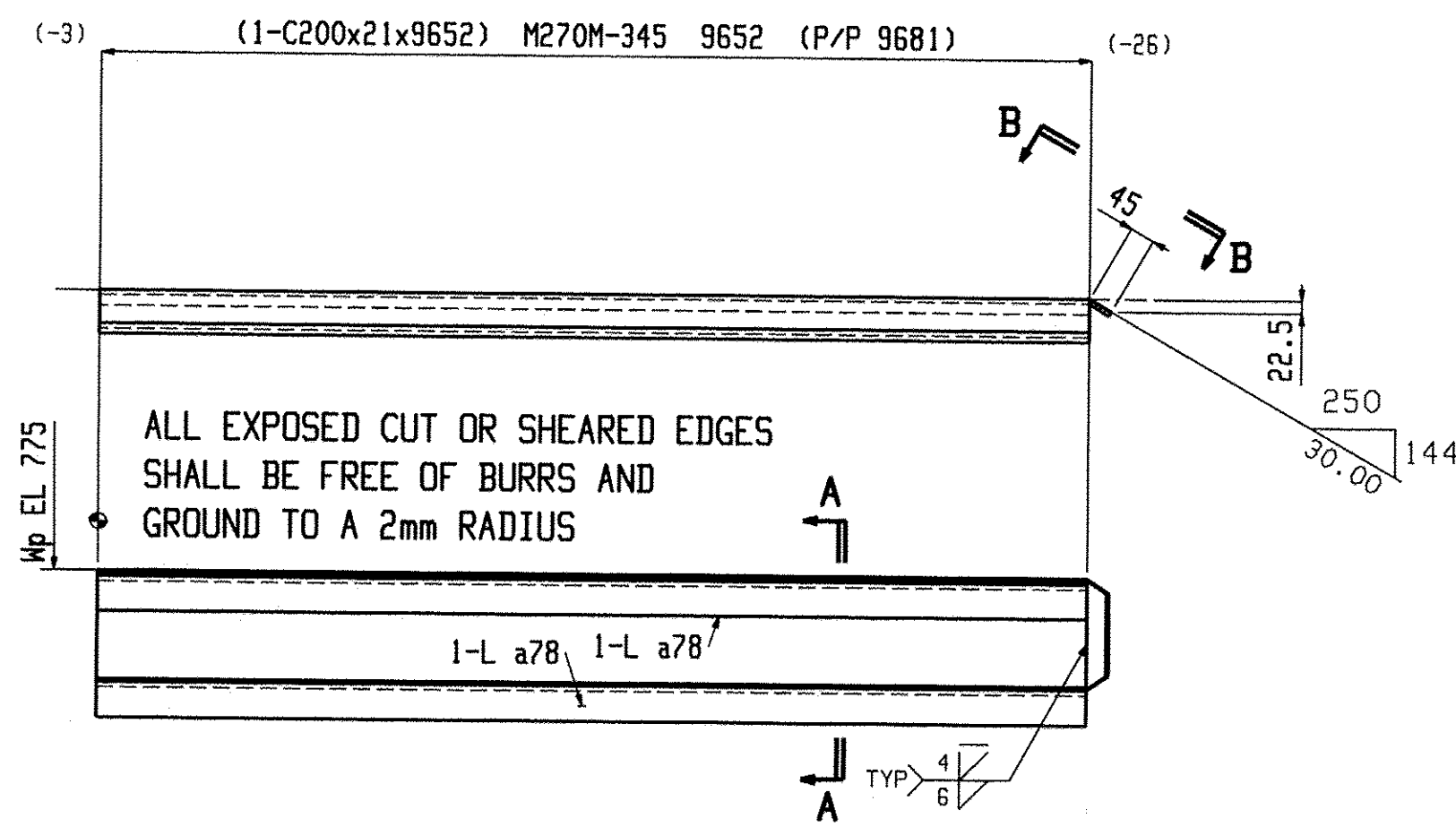
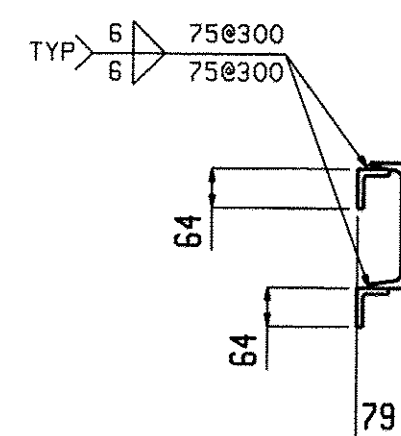
SHOP NOTE:
TOE DIRECTION NEAR SIDE



ONE BEAM R9

W 203x7.5
F 59.5x10
K 24x18

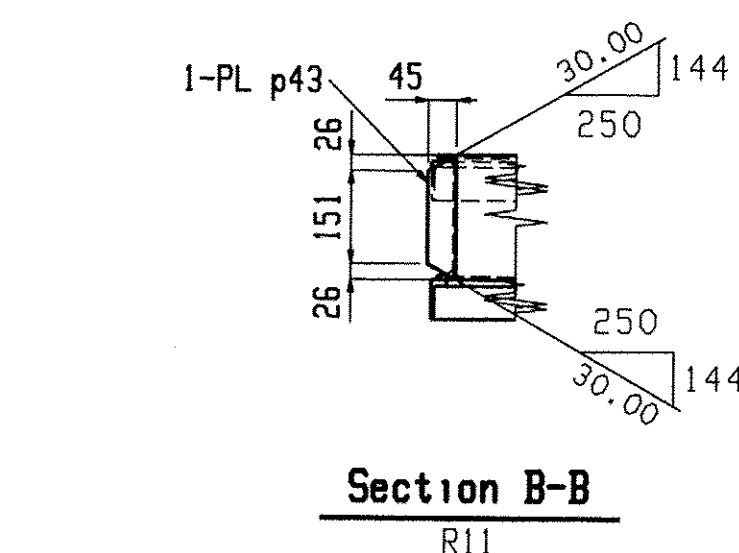
SHOP NOTE:
TOE DIRECTION NEAR SIDE



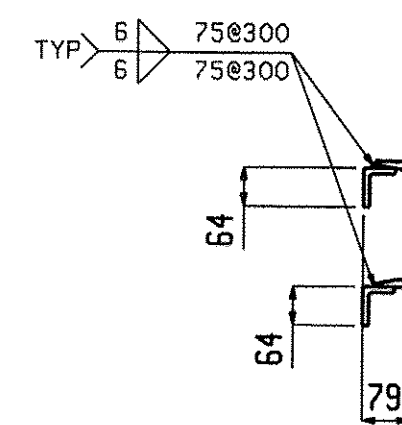
ONE BEAM R11

W 203x7.5
F 59.5x10
K 24x18

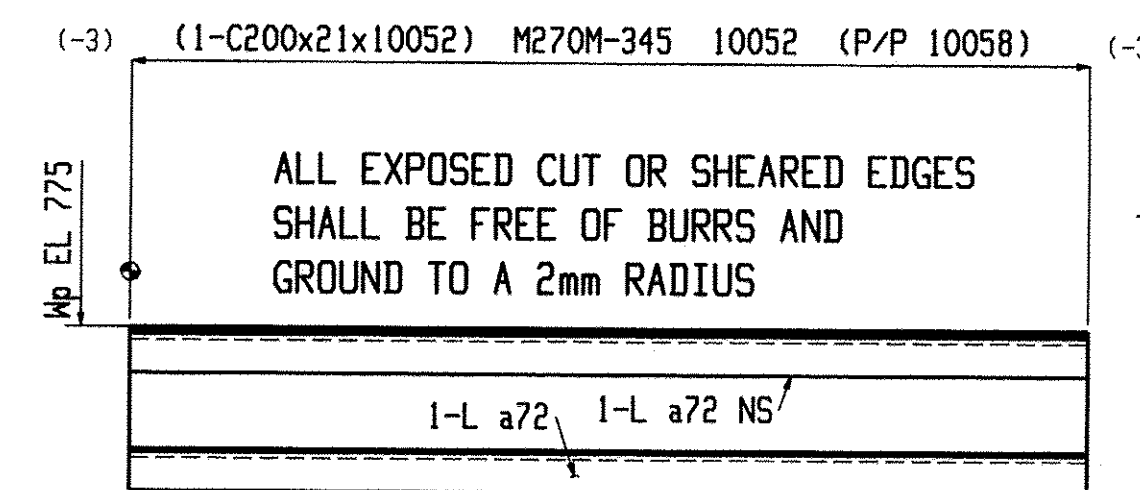
SHOP NOTE:
TOE DIRECTION NEAR SIDE



Section B-B
R11



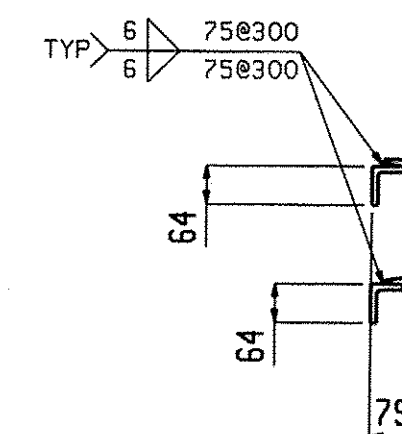
Section A-A
R11



ONE BEAM R10

W 203x7.5
F 59.5x10
K 24x18

SHOP NOTE:
TOE DIRECTION NEAR SIDE

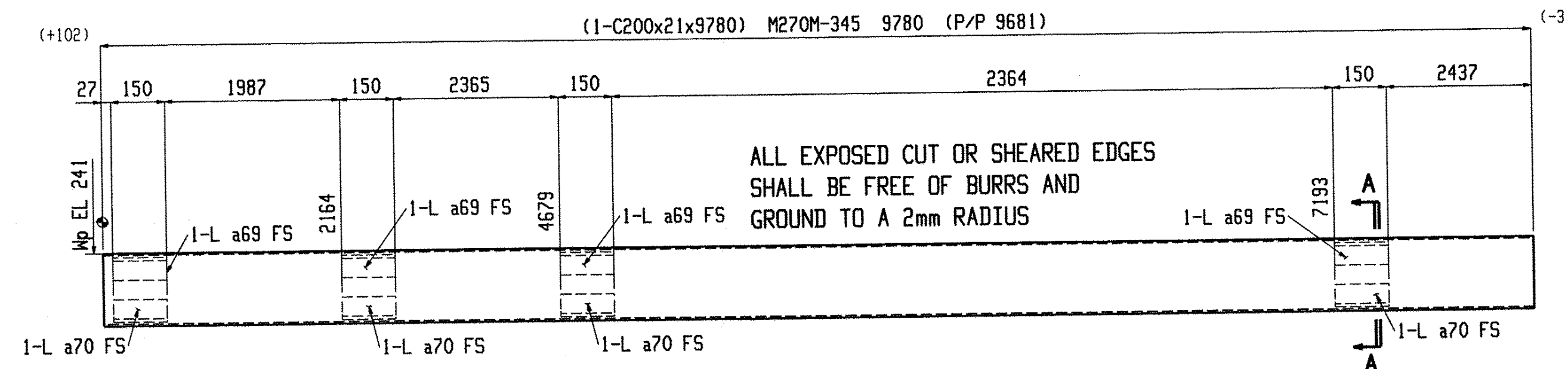


BILL OF MATERIAL										BILL OF MATERIAL										BILL OF MATERIAL										
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ONE	R6	BEAM		2		1				ONE	R10	BEAM		2		1					ONE	R11	BEAM		2		1			
1	R6	C200x21	9780				M270M-345			2	R8	BEAM		2		2				1	R10	C200x21	10052					M270M-345		
4	a69	L64x51x9.5	150				M270M-345			2	R8	C200x21	10053				M270M-345			2	a72	L64x51x9.5	10052					M270M-345		
4	a70	L64x51x9.5	150				M270M-345			4	a73	L64x51x9.5	10053				M270M-345													
ONE	R7	BEAM		2		1				ONE	R9	BEAM		2		1					1	R11	C200x21	9652				M270M-345		
1	R7	C200x21	9652				M270M-345			1	R9	C200x21	11310				M270M-345			2	a78	L64x51x9.5	9652					M270M-345		
2	a77	L64x51x9.5	9652				M270M-345			2	a71	L64x51x9.5	11310				M270M-345			1	p43	PL8x45	203					M270M-345		
1	p51	PL8x45	203				M270M-345																							

RECEIVED
CHK'D BY _____ OK'D BY *mpm*
APR 01 2010
RESUBMIT _____ APPROVED _____
BY _____ DATE 4/28/10

ITEMS ON THIS SHEET ARE PAY ITEM: 900.640 (UN)

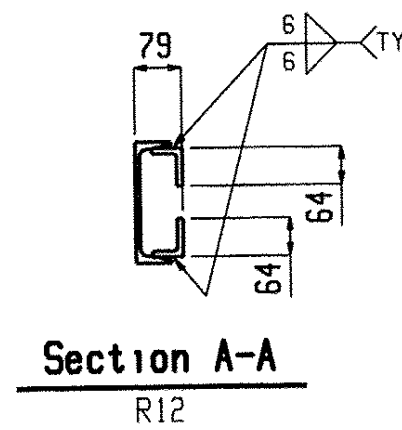
Casco Bay Steel Structures 75 Spring Hill Rd Saco, ME, 04072 207-282-7360		Holes: 21mm UNO	
		BOLTS: 19mm DIA. M164M-I GALV UNO	
		Steel GR: M270M-GR345 UNO	
		Paint: PER SPECS (GREEN) UNO	
Project: DUMMERSTON RAILS DUMMERSTON, VT		Rev.No:	DATE: 9-9-09
DWN. BY: EG		Checked: MRS	Job No. Sheet No. 21



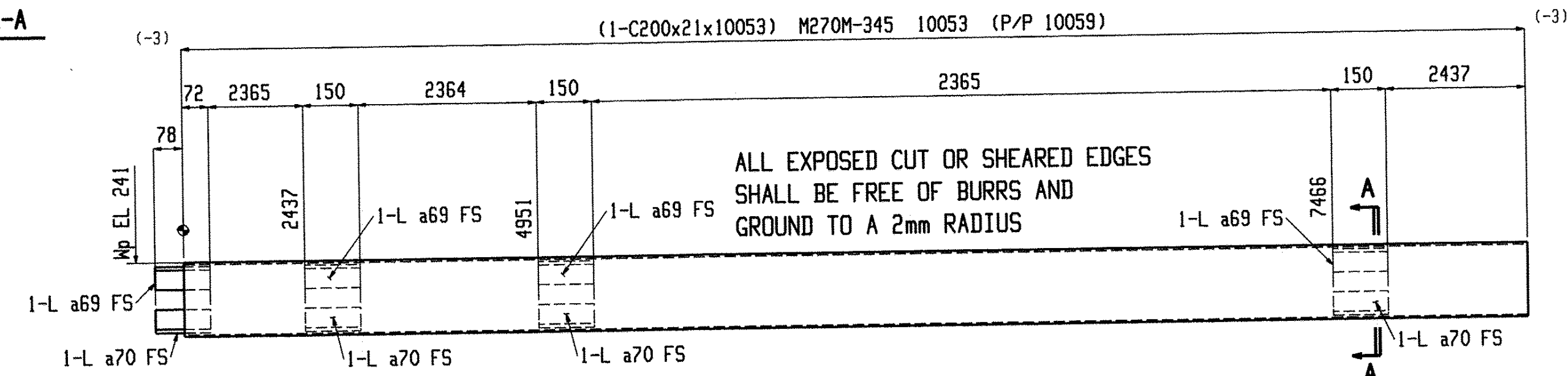
ONE BEAM R12

W 203x7.5
F 59.5x10
K 24x18

SHOP NOTE:
TOE DIRECTION FAR SIDE



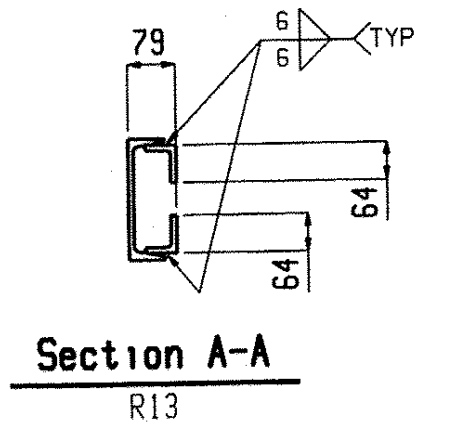
Section A-A
R12



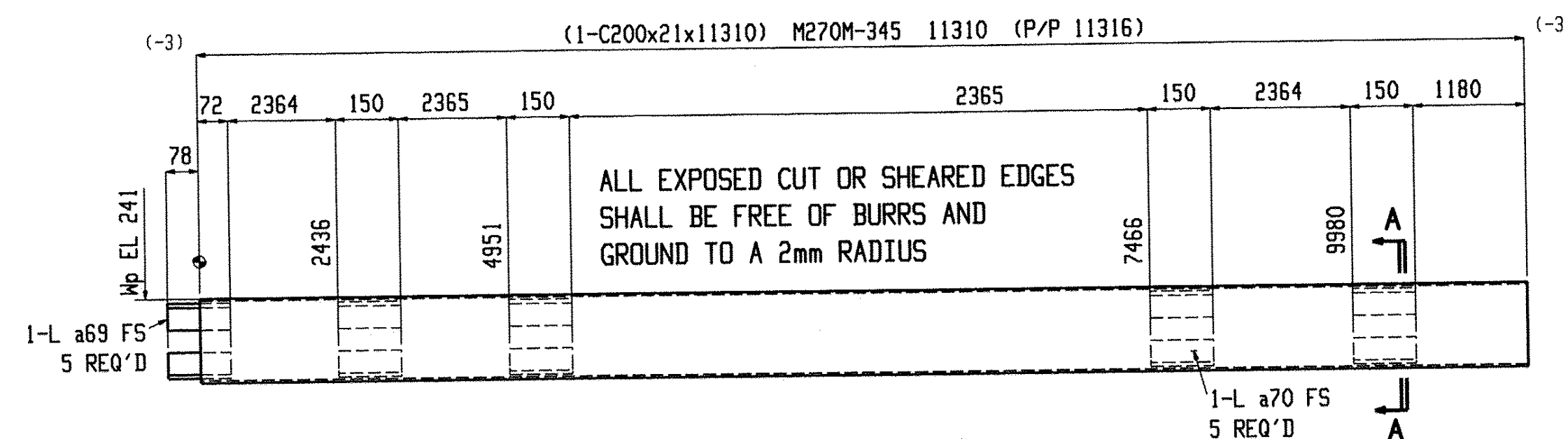
ONE BEAM R13

W 203x7.5
F 59.5x10
K 24x18

SHOP NOTE:
TOE DIRECTION FAR SIDE



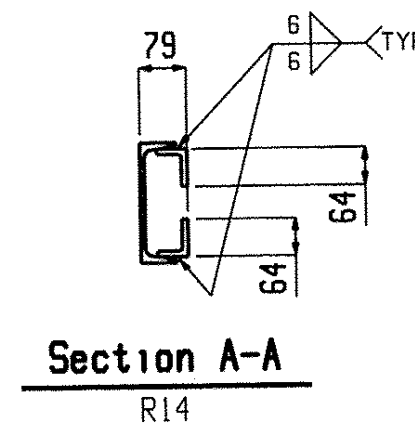
Section A-A
R13



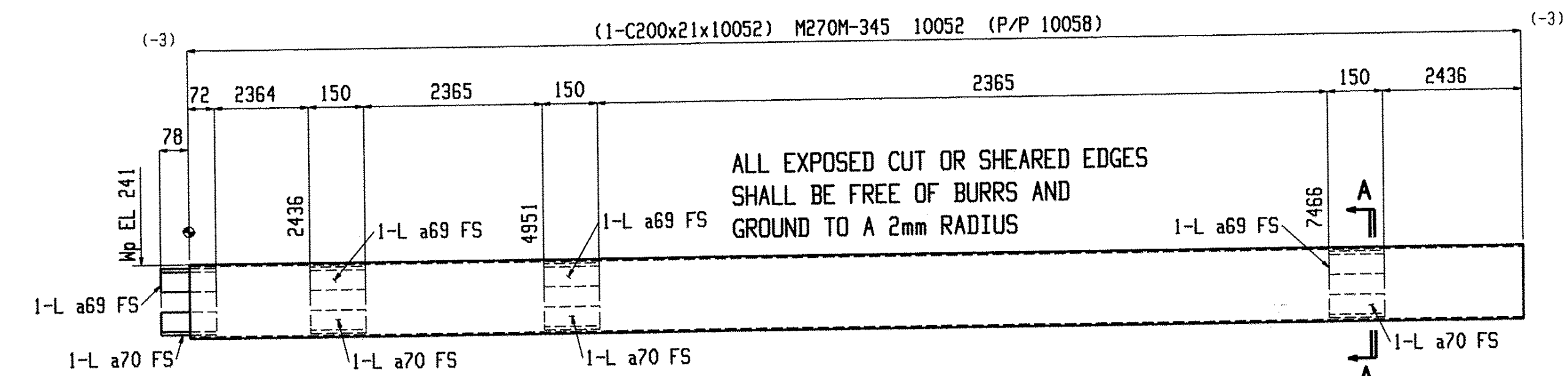
ONE BEAM R14

W 203x7.5
F 59.5x10
K 24x18

SHOP NOTE:
TOE DIRECTION FAR SIDE



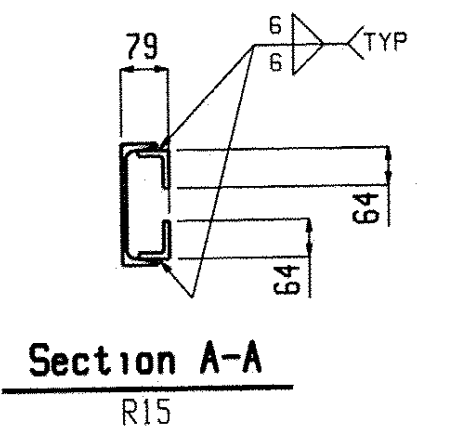
Section A-A
R14



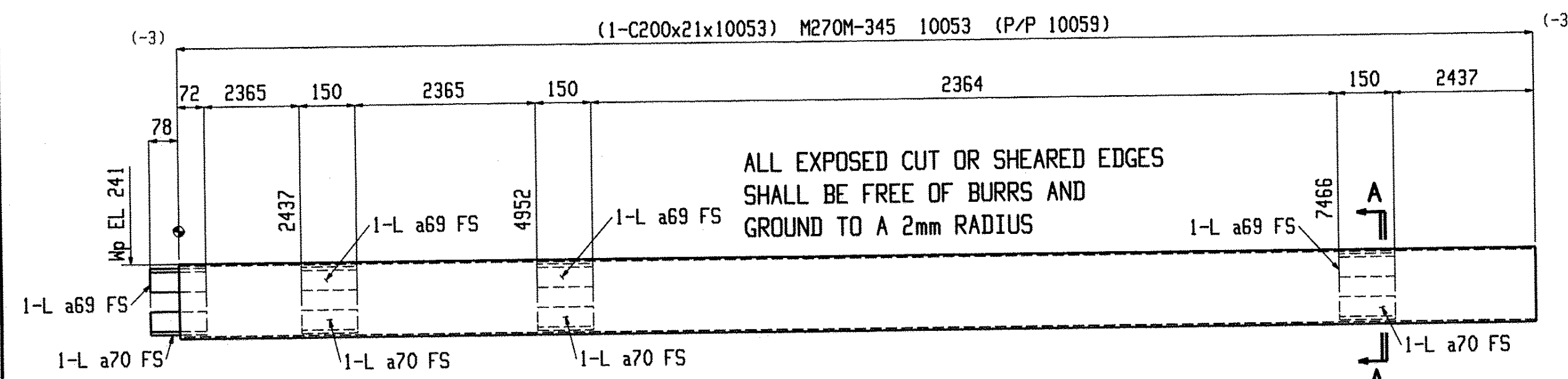
ONE BEAM R15

W 203x7.5
F 59.5x10
K 24x18

SHOP NOTE:
TOE DIRECTION FAR SIDE



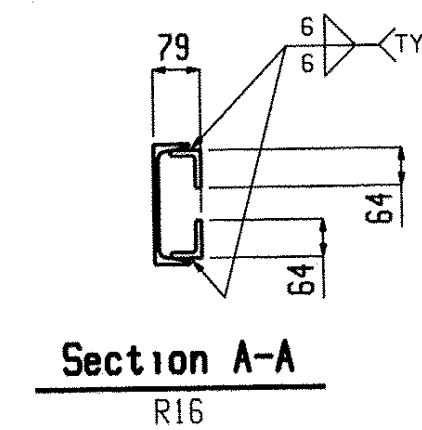
Section A-A
R15



ONE BEAM R16

W 203x7.5
F 59.5x10
K 24x18

SHOP NOTE:
TOE DIRECTION FAR SIDE



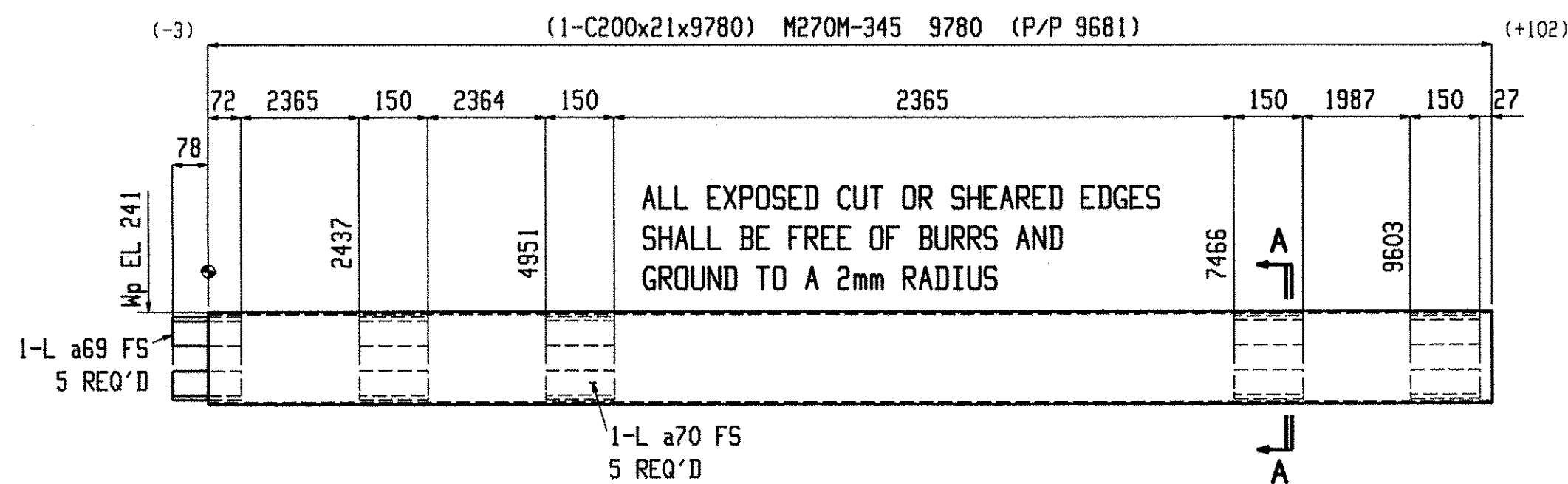
Section A-A
R16

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ONE	R12	BEAM		2	1					ONE	R14	BEAM		2	1						4	a70	L64x51x9.5	150				M270M-345	
1	R12	C200x21	9780				M270M-345			1	R14	C200x21	11310				M270M-345			ONE	R16	BEAM		2	1				
4	a69	L64x51x9.5	150				M270M-345			5	a69	L64x51x9.5	150				M270M-345			1	R16	C200x21	10053					M270M-345	
4	a70	L64x51x9.5	150				M270M-345			5	a70	L64x51x9.5	150				M270M-345			4	a69	L64x51x9.5	150				M270M-345		
ONE	R13	BEAM		2	1					ONE	R15	BEAM		2	1						4	a70	L64x51x9.5	150				M270M-345	
1	R13	C200x21	10053				M270M-345			1	R15	C200x21	10052				M270M-345											M270M-345	
4	a69	L64x51x9.5	150				M270M-345			4	a69	L64x51x9.5	150				M270M-345											M270M-345	
4	a70	L64x51x9.5	150				M270M-345																						

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CKT BY: OK'D BY: *mem*
APR 8 2010
RESUBMIT: APPROVED: *mem*
BY: DATE: 4/23/10

ITEMS ON THIS SHEET ARE PAY ITEM: 900.640 (UN)

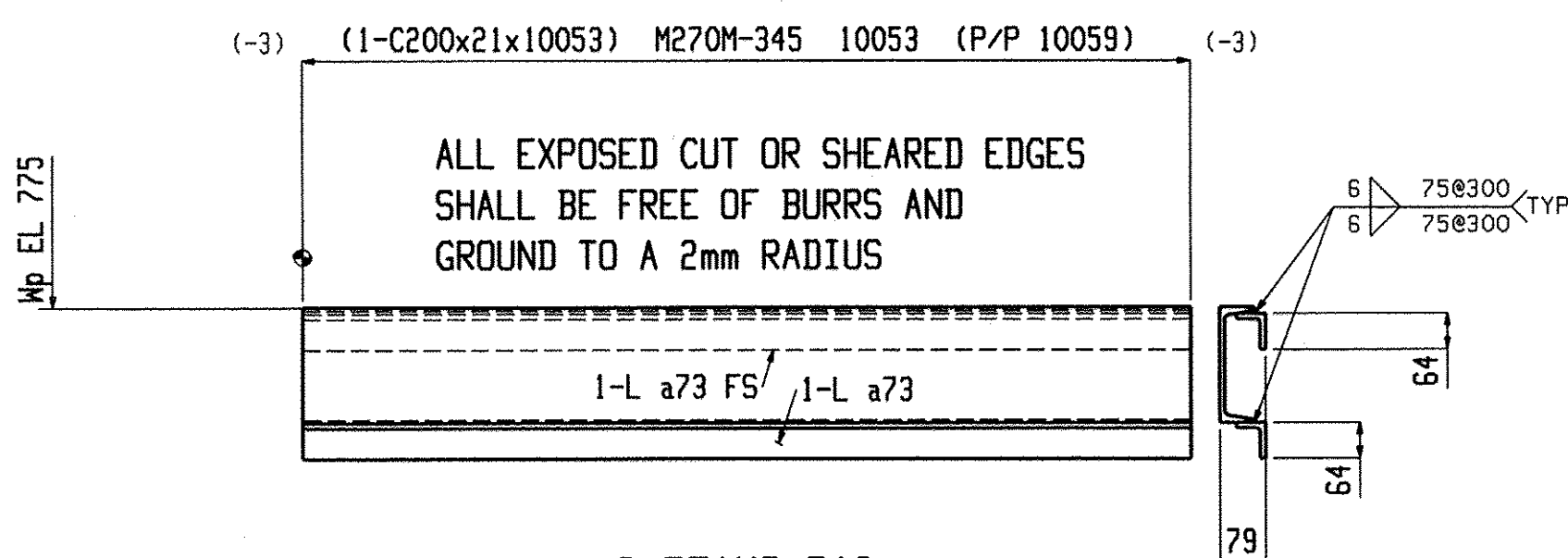
Casco Bay Steel Structures 75 Spring Hill Rd Saco, ME, 04072 207-282-7360		Holes: 21mm UNO	
		BOLTS: 19mm DIA. M164M-I GALV UNO	
APPR. 3-17-10		Steel GR: M270M-GR345 UNO	
Rev.No:		Paint: PER SPECS (GREEN) UNO	
Date: 9-9-09		Surface Prep: PER SPECS	
Project: DUMMERSTON RAILS DUMMERSTON, VT		Job No.	
DWN. BY: EG		Checked: MRS	
		Sheet No. 22	



ONE BEAM R17

W 203x7.5
F 59.5x10
K 24x18

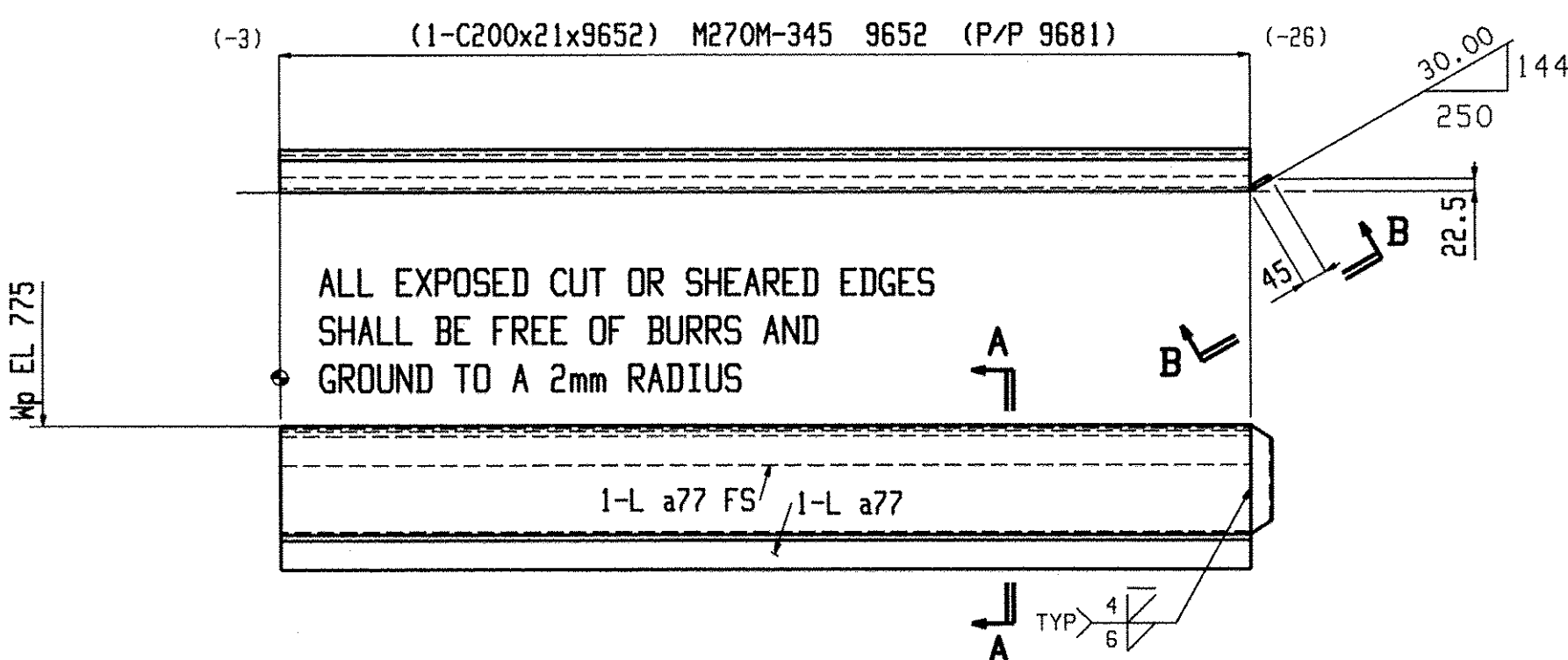
SHOP NOTE:
TOE DIRECTION FAR SIDE



2 BEAMS R19

W 203x7.5
F 59.5x10
K 24x18

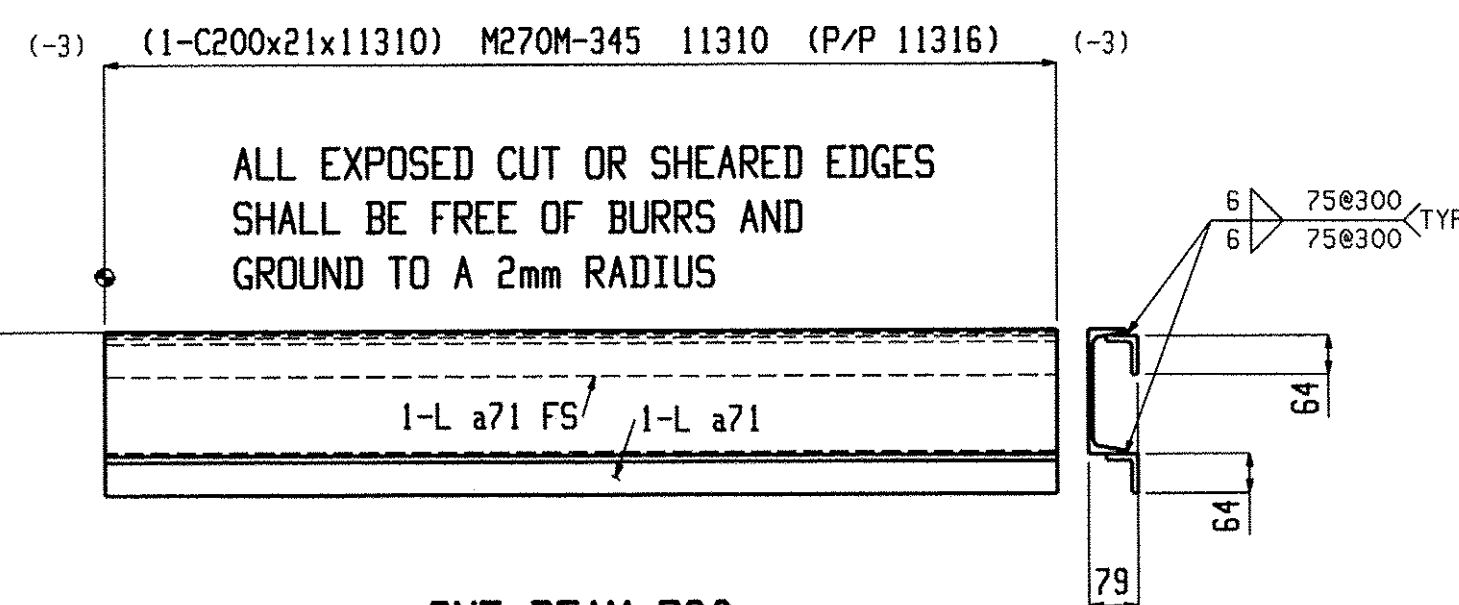
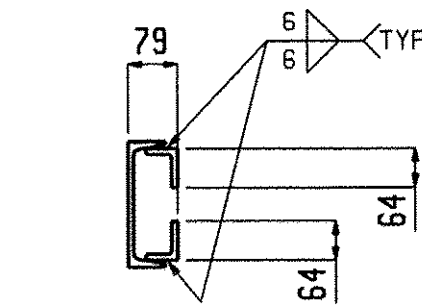
SHOP NOTE:
TOE DIRECTION FAR SIDE



ONE BEAM R22

W 203x7.5
F 59.5x10
K 24x18

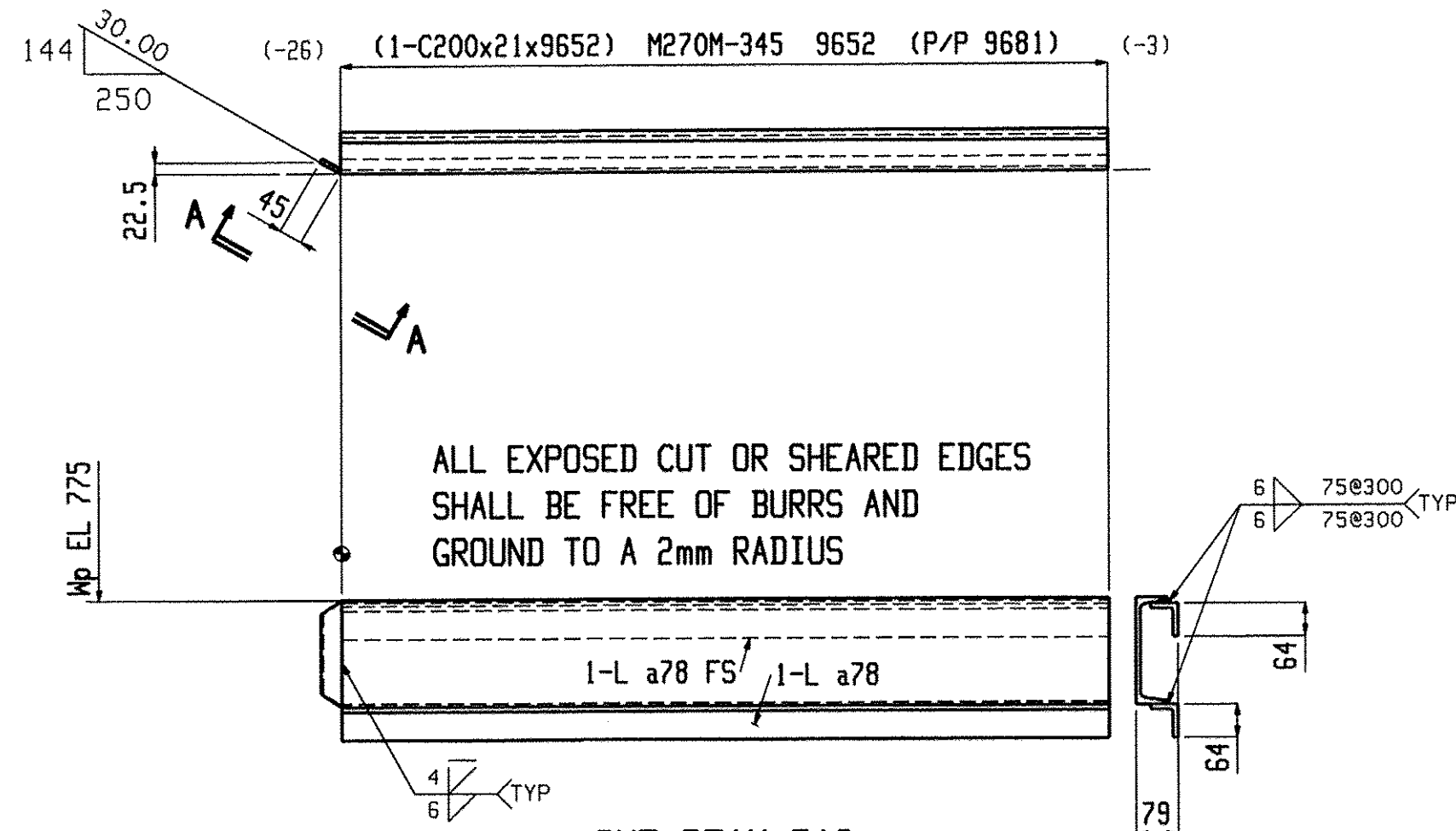
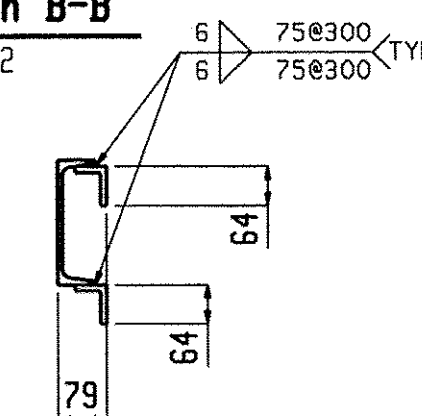
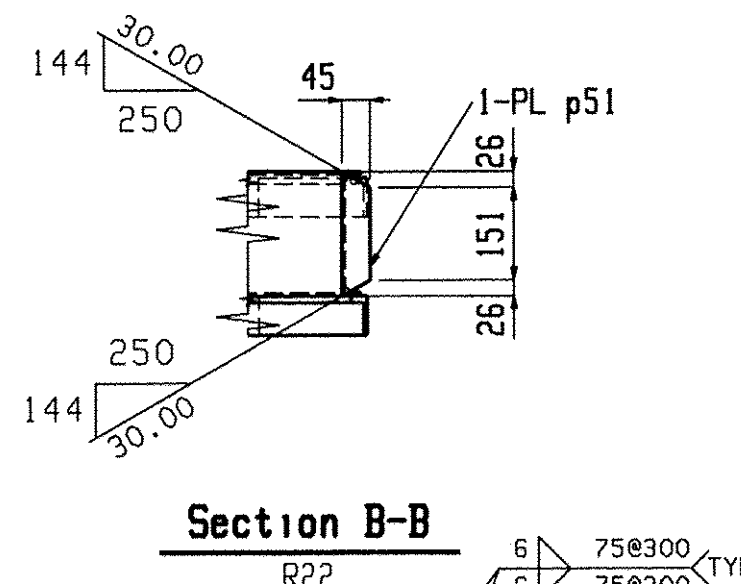
SHOP NOTE:
TOE DIRECTION FAR SIDE



ONE BEAM R20

W 203x7.5
F 59.5x10
K 24x18

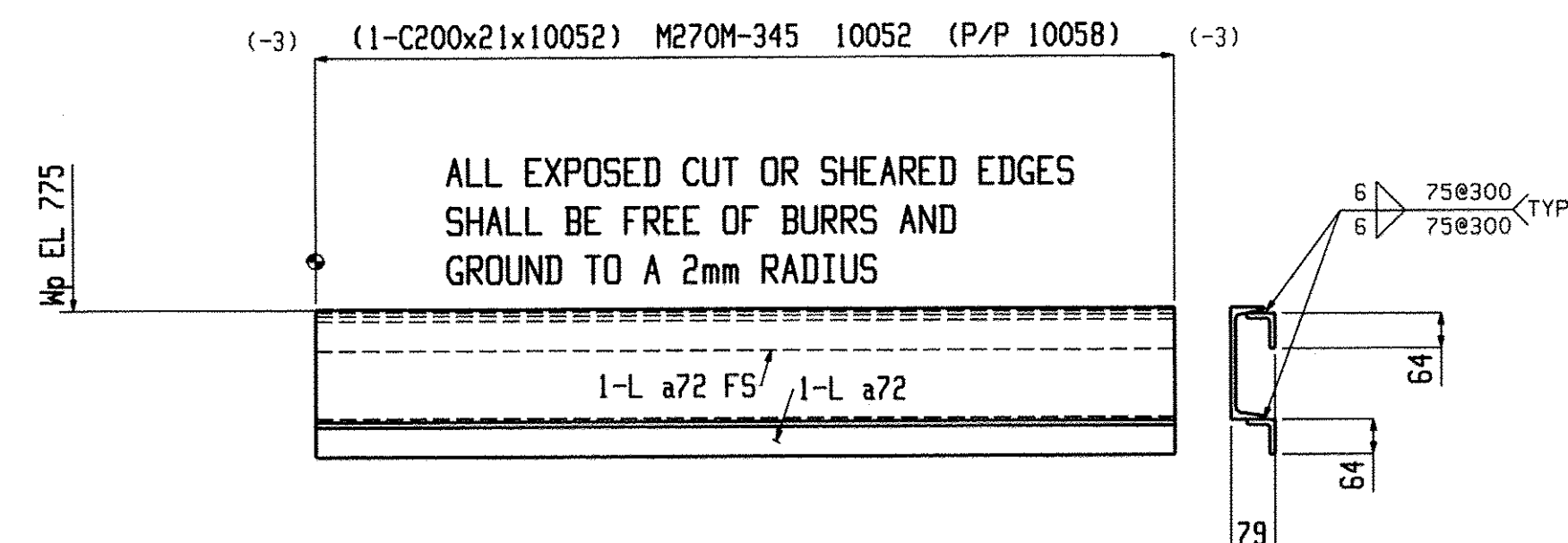
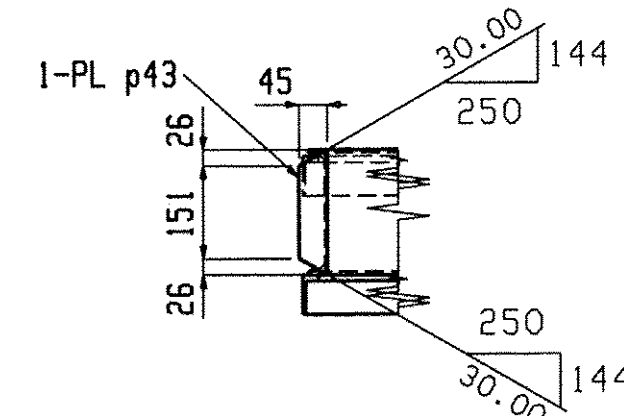
SHOP NOTE:
TOE DIRECTION FAR SIDE



ONE BEAM R18

W 203x7.5
F 59.5x10
K 24x18

SHOP NOTE:
TOE DIRECTION FAR SIDE



ONE BEAM R21

W 203x7.5
F 59.5x10
K 24x18

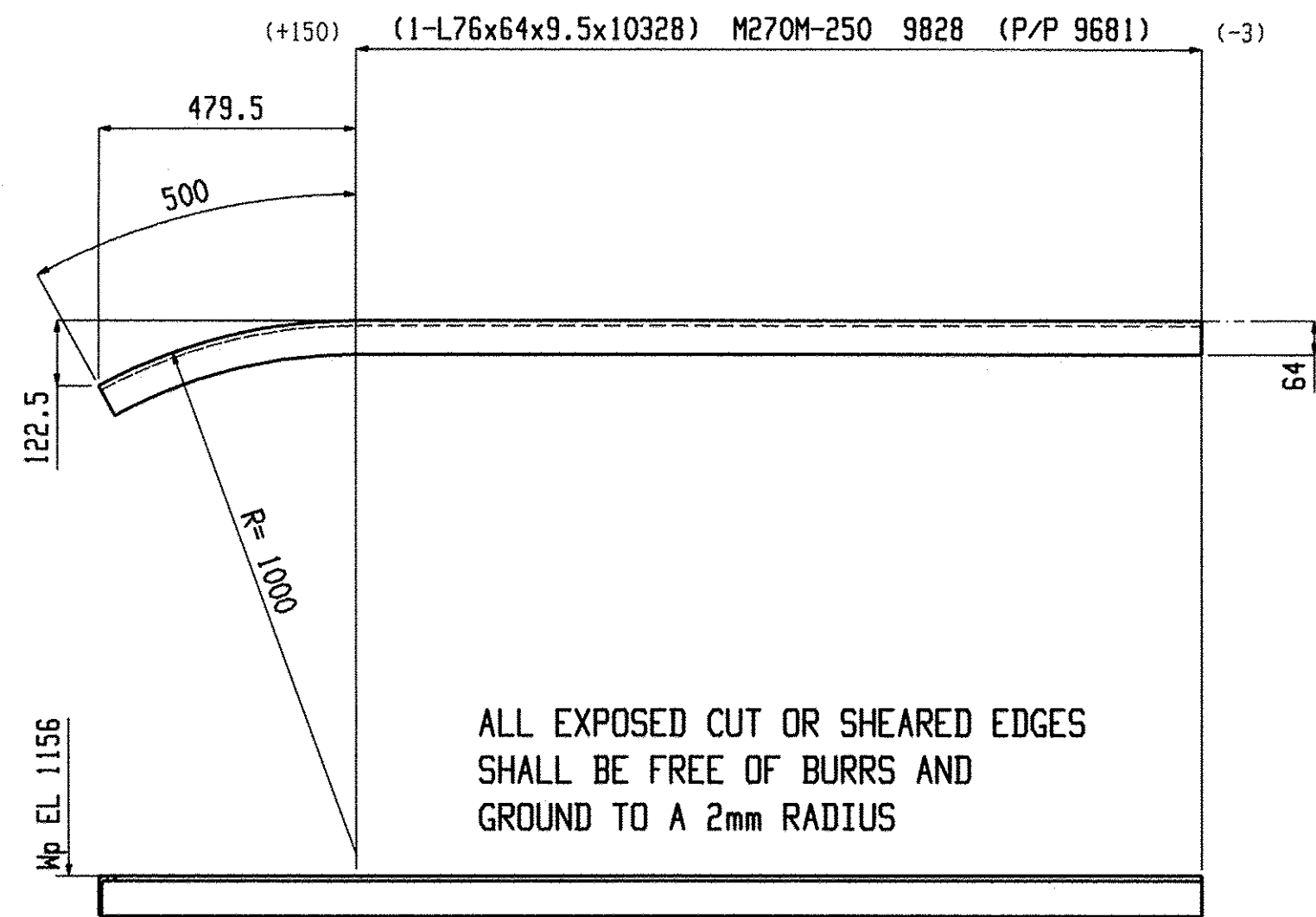
SHOP NOTE:
TOE DIRECTION FAR SIDE

BILL OF MATERIAL									BILL OF MATERIAL									BILL OF MATERIAL								
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ONE	R17	BEAM		2	1													ONE	R21	BEAM		2	1			
1	R17	C200x21	9780				M270M-345		2	R19	BEAM		2	2				1	R21	C200x21	10052					M270M-345
5	a69	L64x51x9.5	150				M270M-345		2	R19	C200x21	10053				M270M-345		2	a72	L64x51x9.5	10052					M270M-345
5	a70	L64x51x9.5	150				M270M-345		4	a73	L64x51x9.5	10053				M270M-345										
																		ONE	R22	BEAM		2	1			
ONE	R18	BEAM		2	1				ONE	R20	BEAM		2	1				1	R22	C200x21	9652					M270M-345
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2	a78	L64x51x9.5	9652				M270M-345		2	a71	L64x51x9.5	11310				M270M-345		1	p51	PL8x45	203					M270M-345
1	p43	PL8x45	203				M270M-345																			

RECEIVED
CHK BY: *MD*
APR 01 2010
RESUBMIT: ☒ APPROVED: ☒
BY: *MD* DATE: 4/28/10

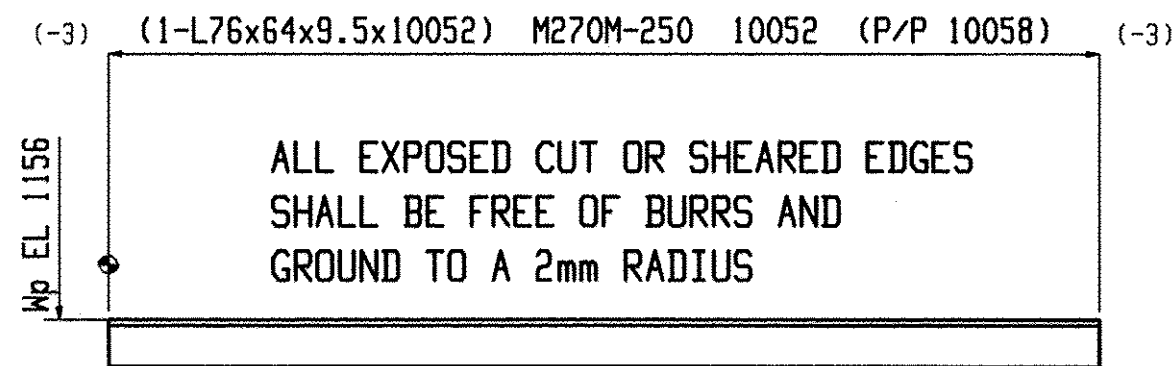
ITEMS ON THIS SHEET ARE PAY ITEM: 900.640 (UN)

Casco Bay Steel Structures 75 Spring Hill Rd Saco, ME, 04072 207-282-7360		Holes: 21mm UNO BOLTS: 19mm DIA. M164M-I GALV UNO Steel GR: M270M-GR345 UNO	
		Paint: PER SPECS (GREEN) UNO Surface Prep: PER SPECS	
Project: DUMMERSTON RAILS DUMMERSTON, VT		Date: 9-9-09 DWN. BY: EG	Job No. Checked: MRS Sheet No. 23



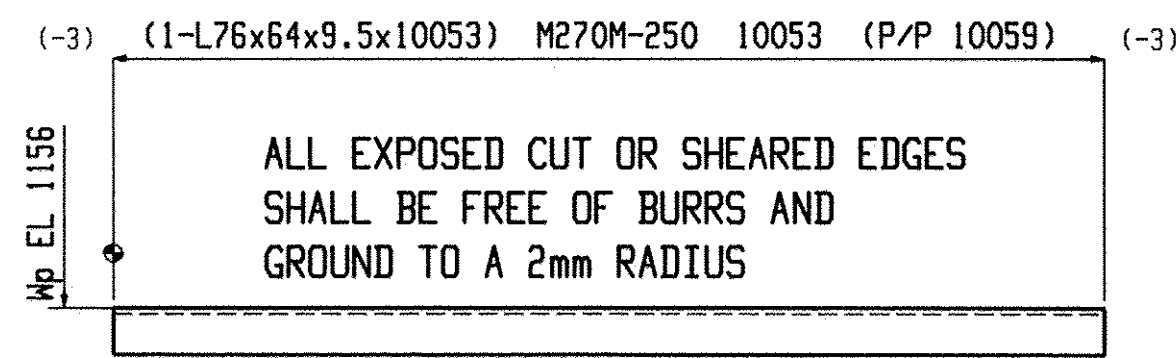
ONE BEAM R23

SHOP NOTE:
TOE DIRECTION NEAR SIDE



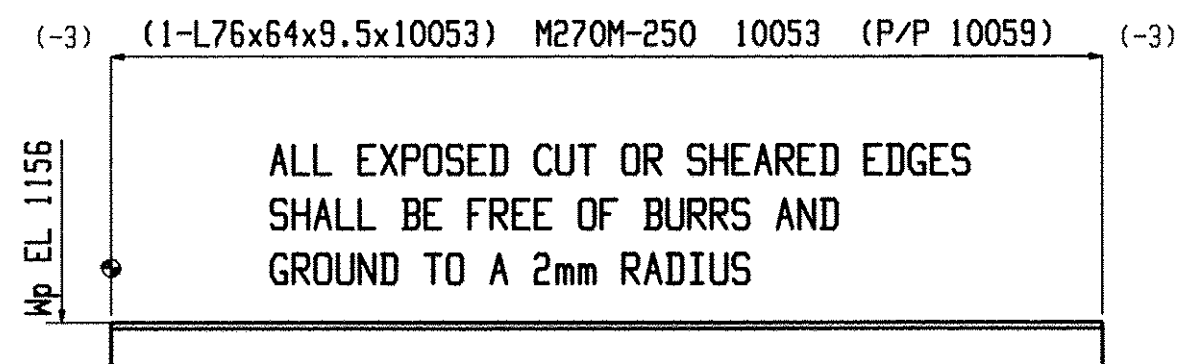
ONE BEAM R26

SHOP NOTE:
TOE DIRECTION NEAR SIDE



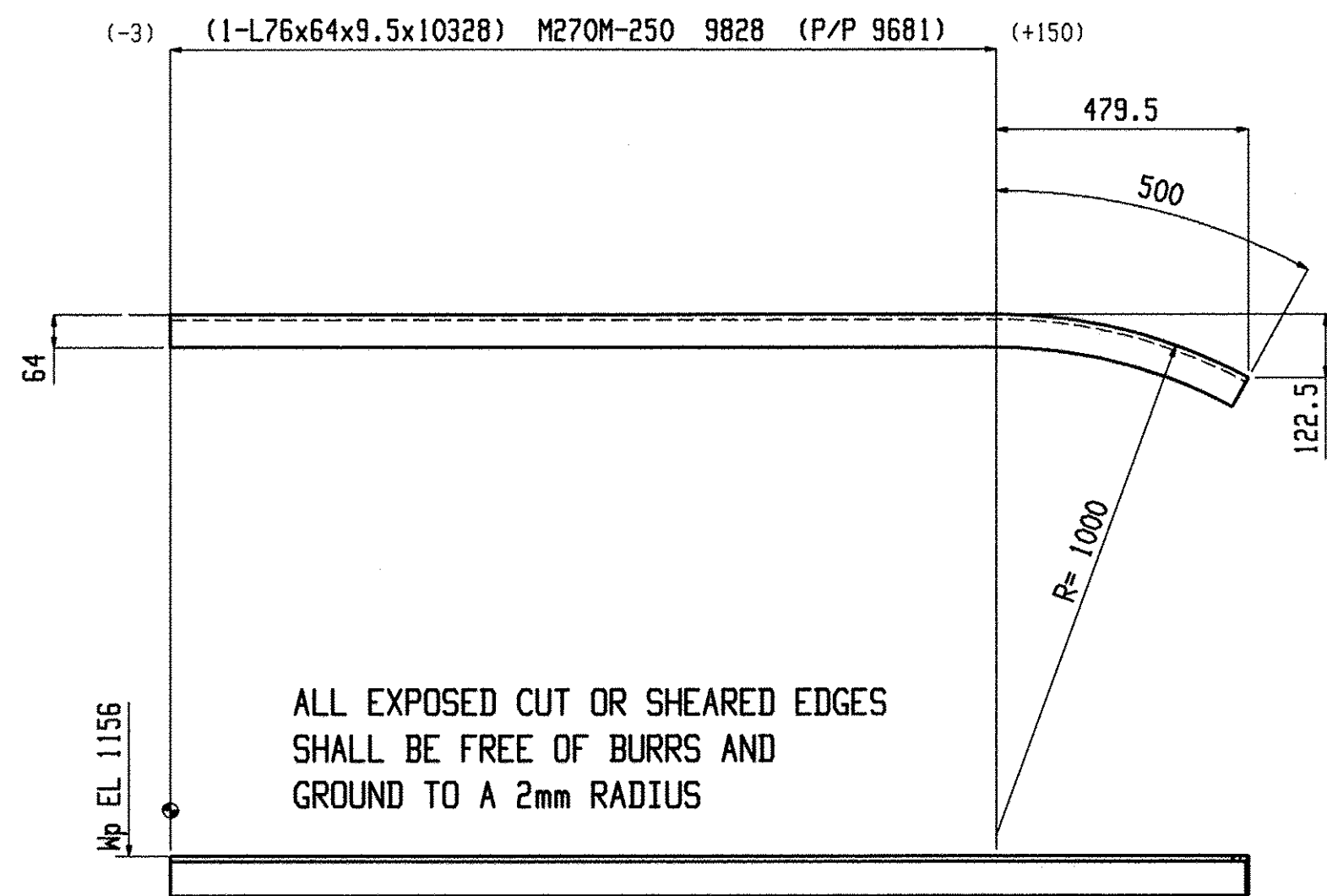
2 BEAMS R29

SHOP NOTE:
TOE DIRECTION FAR SIDE



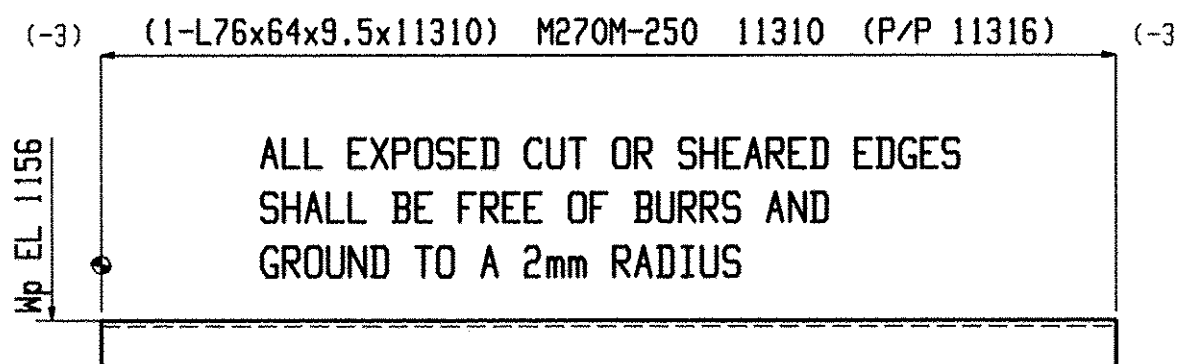
2 BEAMS R24

SHOP NOTE:
TOE DIRECTION NEAR SIDE



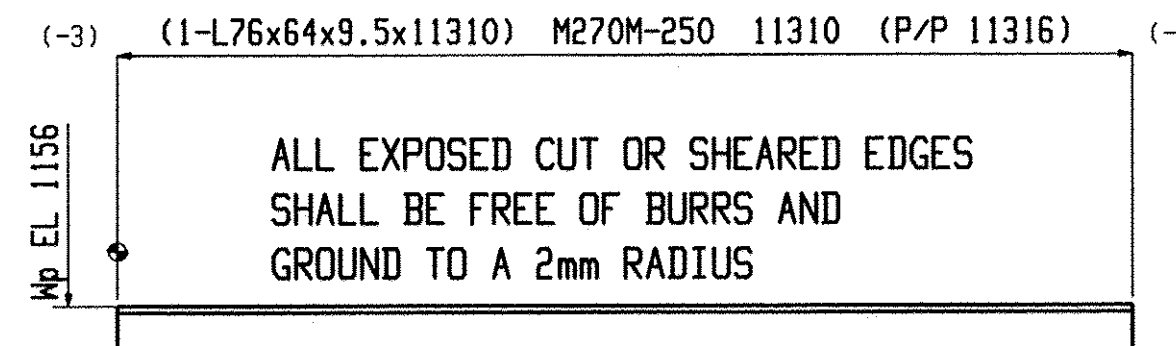
ONE BEAM R27

SHOP NOTE:
TOE DIRECTION NEAR SIDE



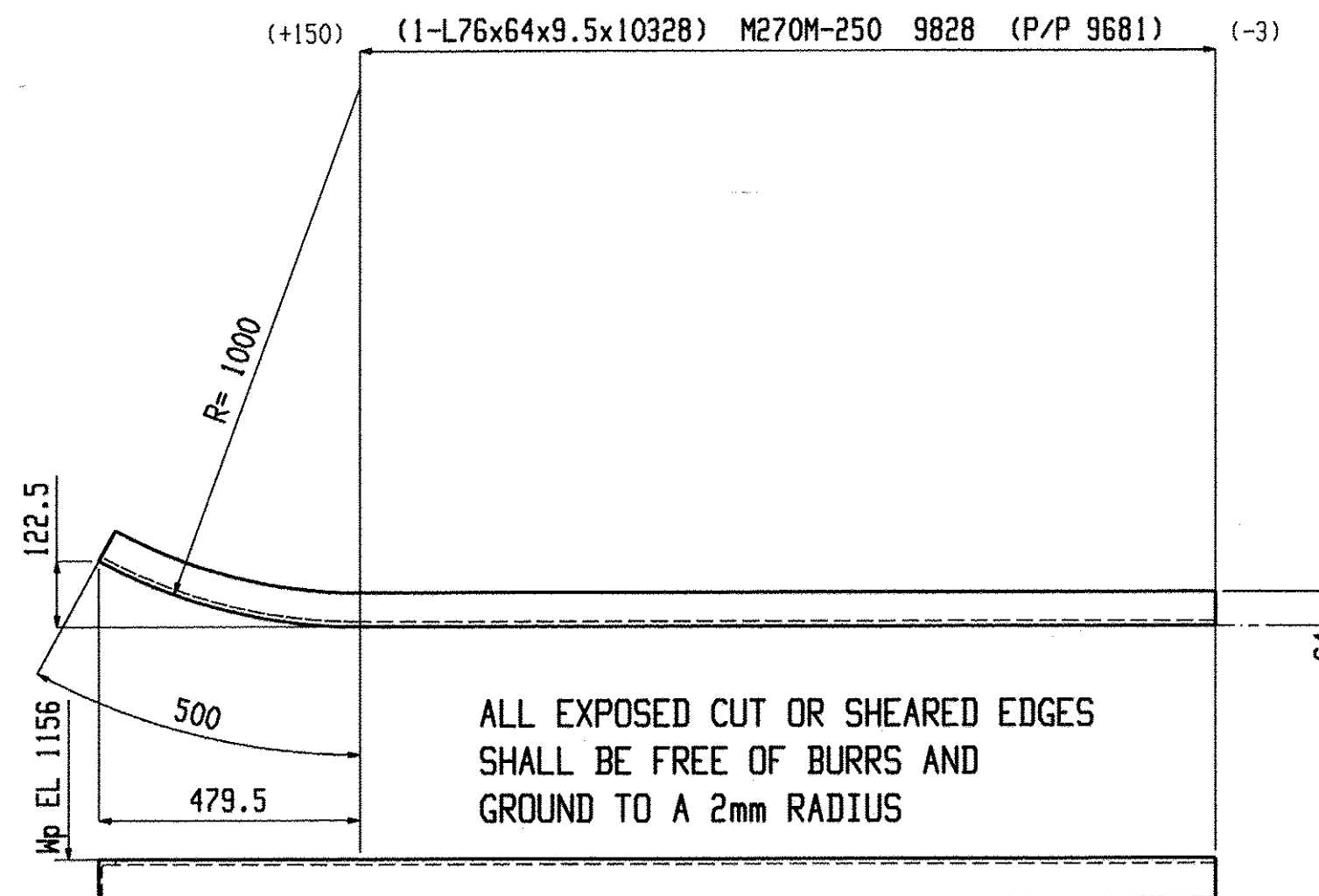
ONE BEAM R30

SHOP NOTE:
TOE DIRECTION FAR SIDE



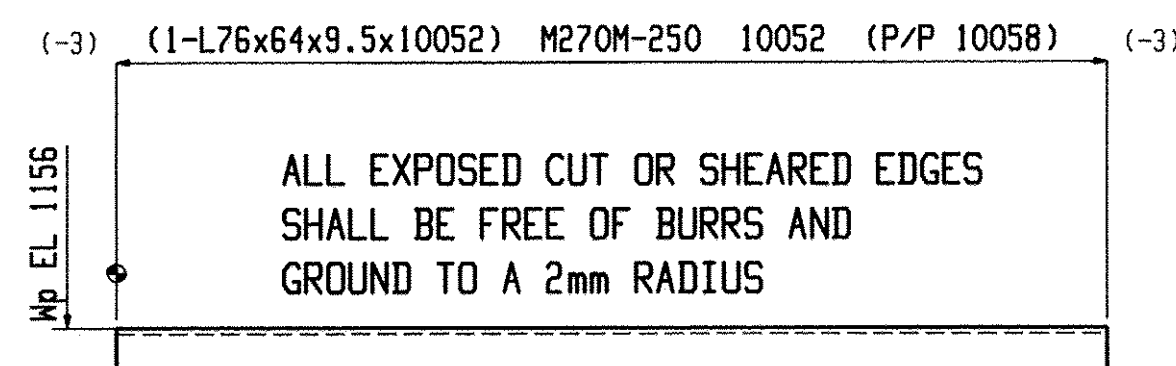
ONE BEAM R25

SHOP NOTE:
TOE DIRECTION NEAR SIDE



ONE BEAM R28

SHOP NOTE:
TOE DIRECTION FAR SIDE



ONE BEAM R31

SHOP NOTE:
TOE DIRECTION FAR SIDE

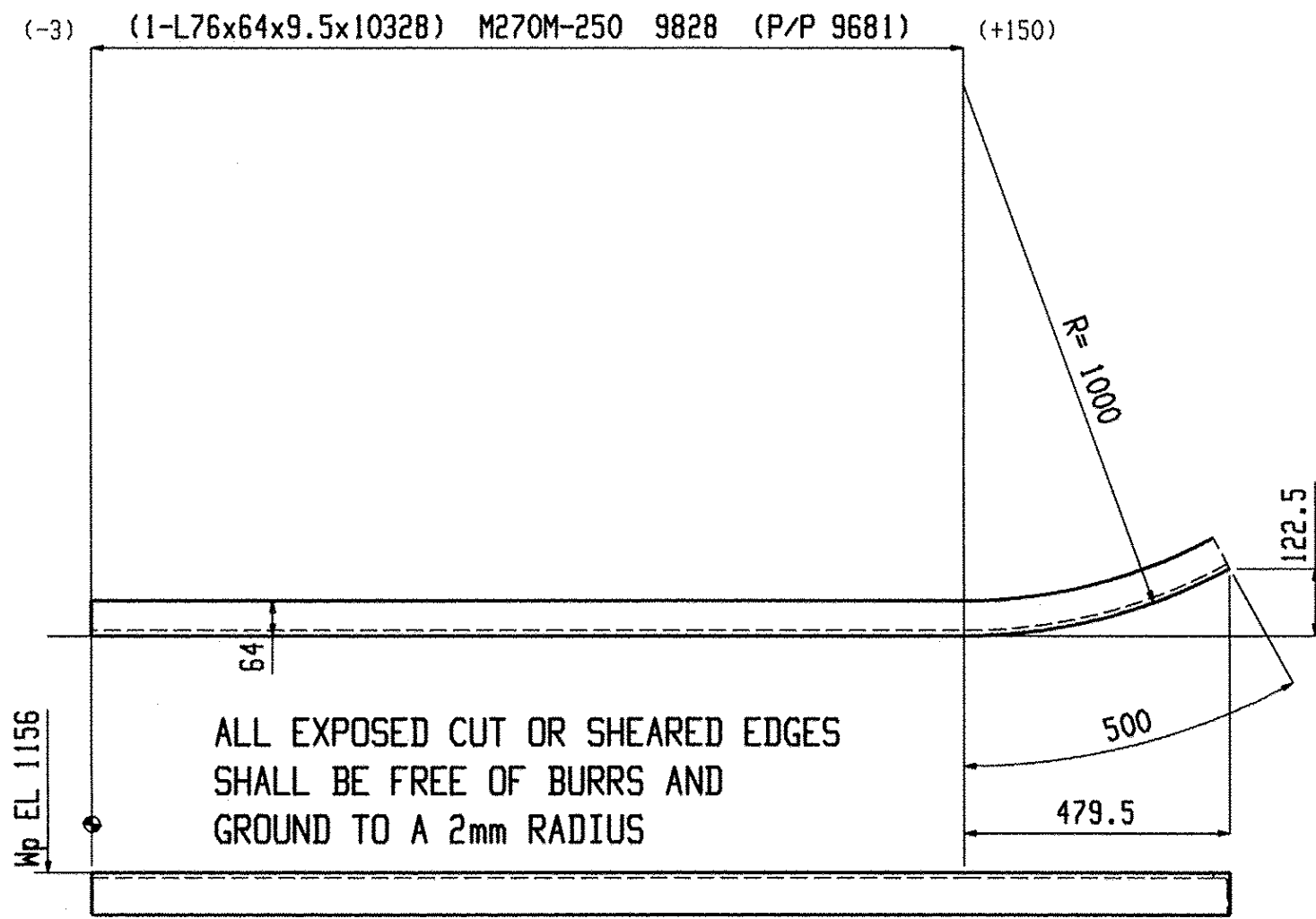
Mar 18 2010 08:45:20 PM

BILL OF MATERIAL									BILL OF MATERIAL									BILL OF MATERIAL								
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Tot.	Mark	Description	Length	NO.	Qty	ABM #	Grade	Remarks	Tot.	Mark	Description	Length	NO.	Qty	ABM #	Grade	Remarks	Tot.	Mark	Description	Length	NO.	Qty	ABM #	Grade	Remarks
ONE	R23	BEAM		2	1				ONE	R26	BEAM		2	1				2	R29	BEAM		2	2			
1	R23	L76x64x9.5	10328				M270M-250		1	R26	L76x64x9.5	10052				M270M-250		2	R29	L76x64x9.5	10053				M270M-250	
2	R24	BEAM		2	2				ONE	R27	BEAM		2	1				ONE	R30	BEAM		2	1			
2	R24	L76x64x9.5	10053				M270M-250		1	R27	L76x64x9.5	10328				M270M-250		1	R30	L76x64x9.5	11310				M270M-250	
ONE	R25	BEAM		2	1				ONE	R28	BEAM		2	1				ONE	R31	BEAM		2	1			
1	R25	L76x64x9.5	11310				M270M-250		1	R28	L76x64x9.5	10328				M270M-250		1	R31	L76x64x9.5	10052				M270M-250	

RECEIVED
CHK BY: [Signature]
APR 01 2010
RESUBMIT: [Signature]
BY: [Signature] DATE: 4/28/10

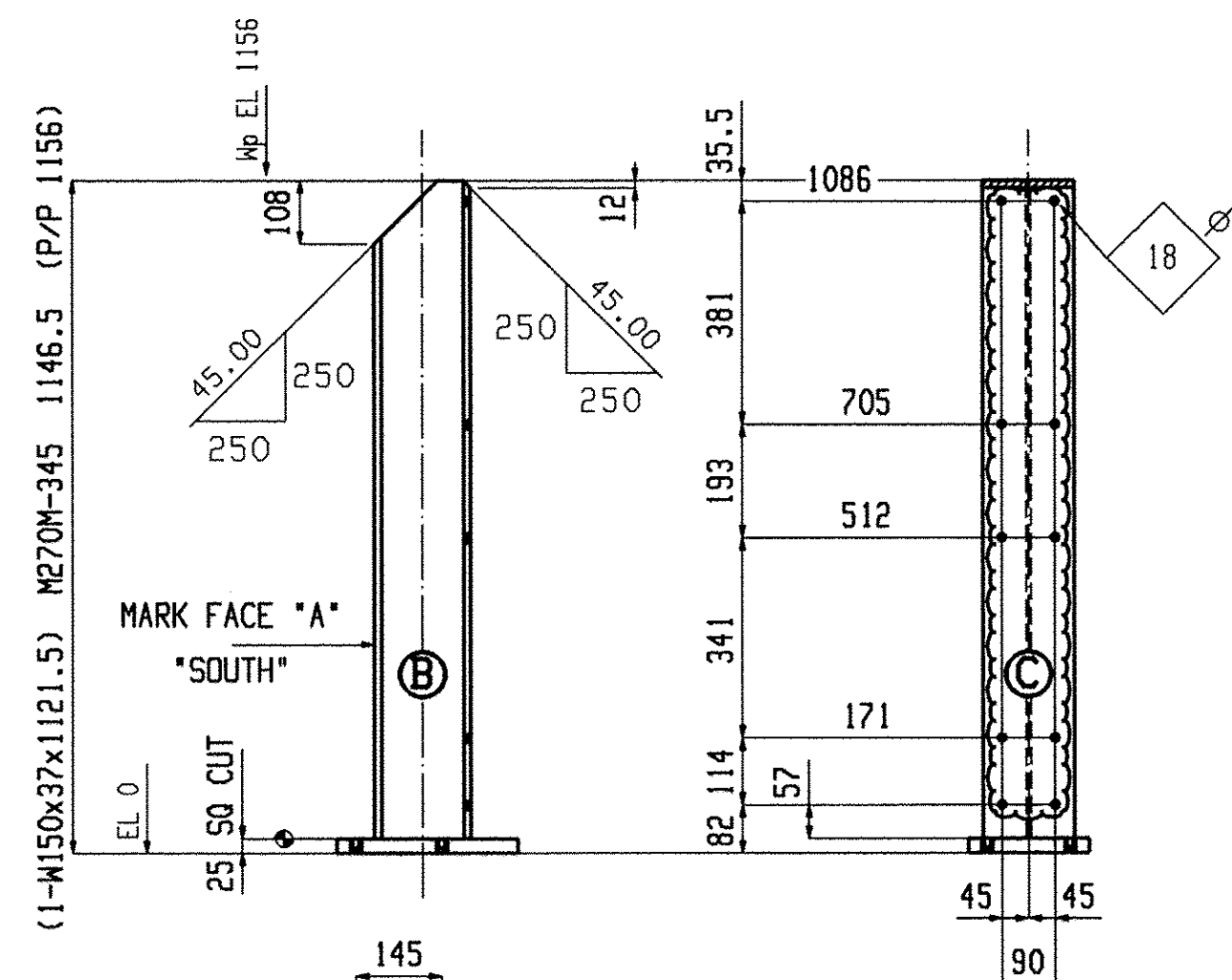
ITEMS ON THIS SHEET ARE PAY ITEM: 900.640 (UN)

Casco Bay Steel Structures 75 Spring Hill Rd Saco, ME, 04072 207-282-7360		Holes: 21mm UNO	
		BOLTS: 19mm DIA. M164M-I GALV UNO	
Project: DUMMERSTON RAILS DUMMERSTON, VT		Steel GR: M270M-GR345 UNO	
Date: 9-9-09		Paint: PER SPECS (GREEN) UNO	
Rev. No:		Surface Prep: PER SPECS	
Job No.		Sheet No. 24	
DMM. BY: EG		Checked: MRS	



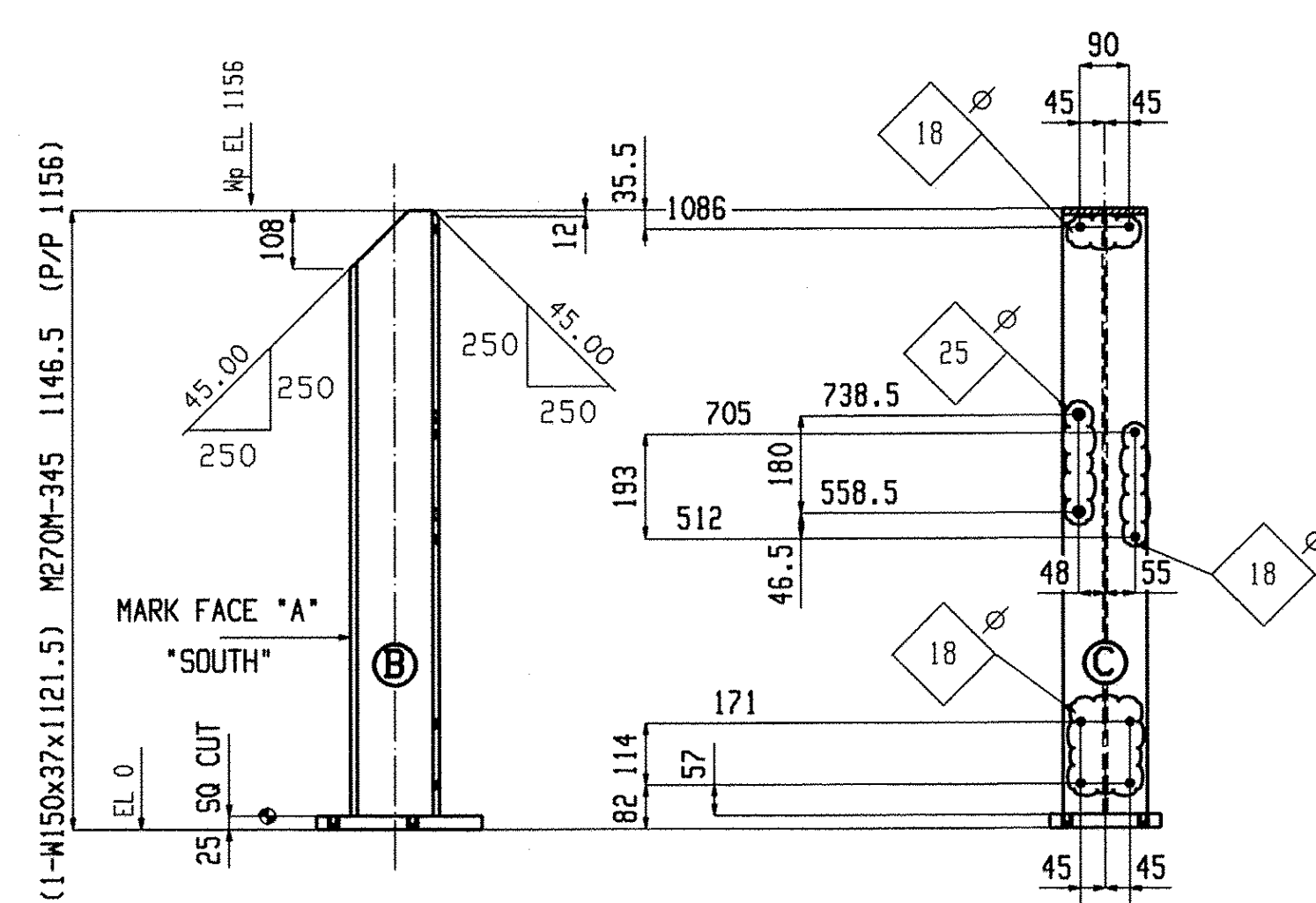
ONE BEAM R32

SHOP NOTE:
TOE DIRECTION FAR SIDE



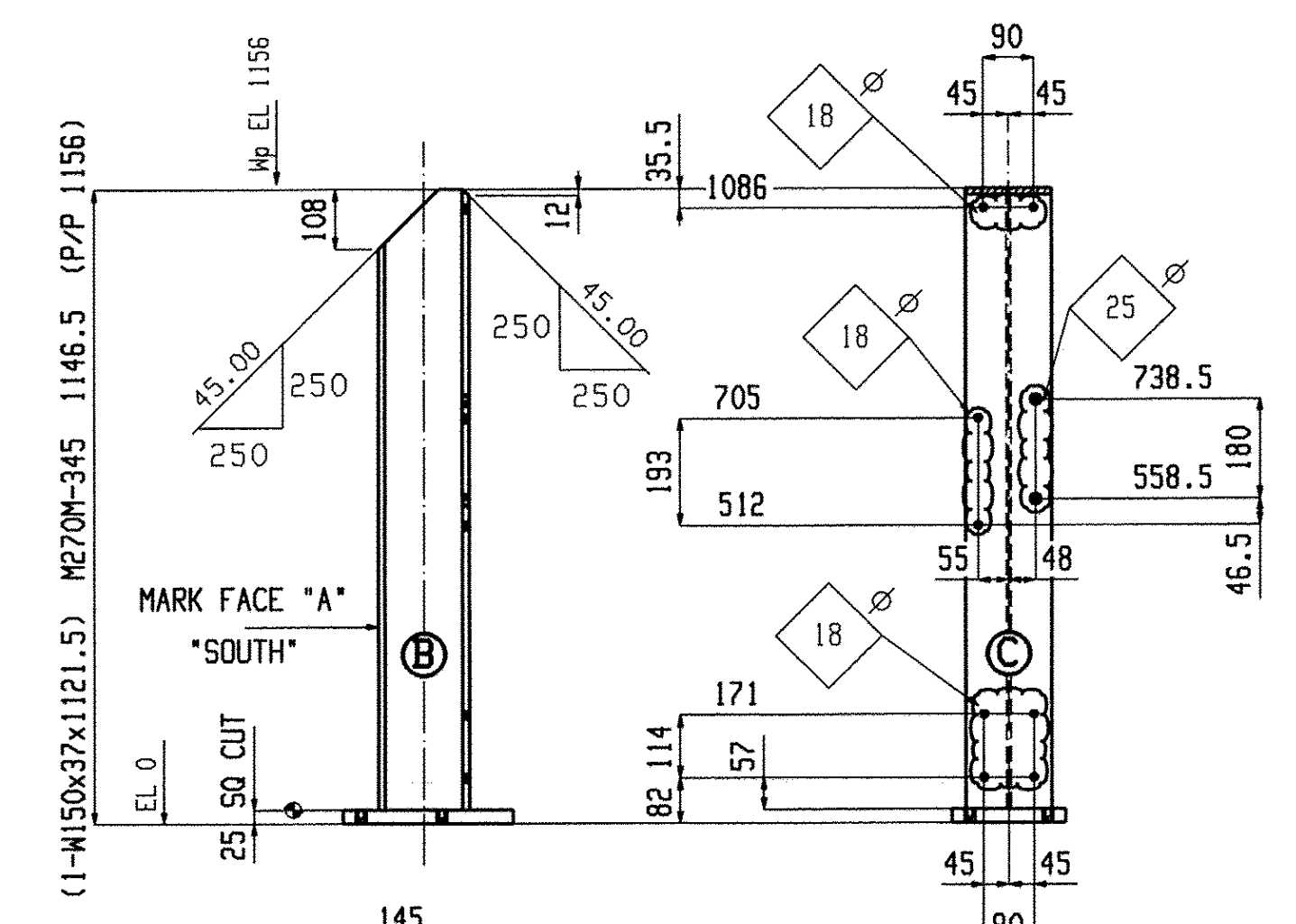
24 COLUMNS C1

W 162x8
F 154.5x11.5
K 20.5x13



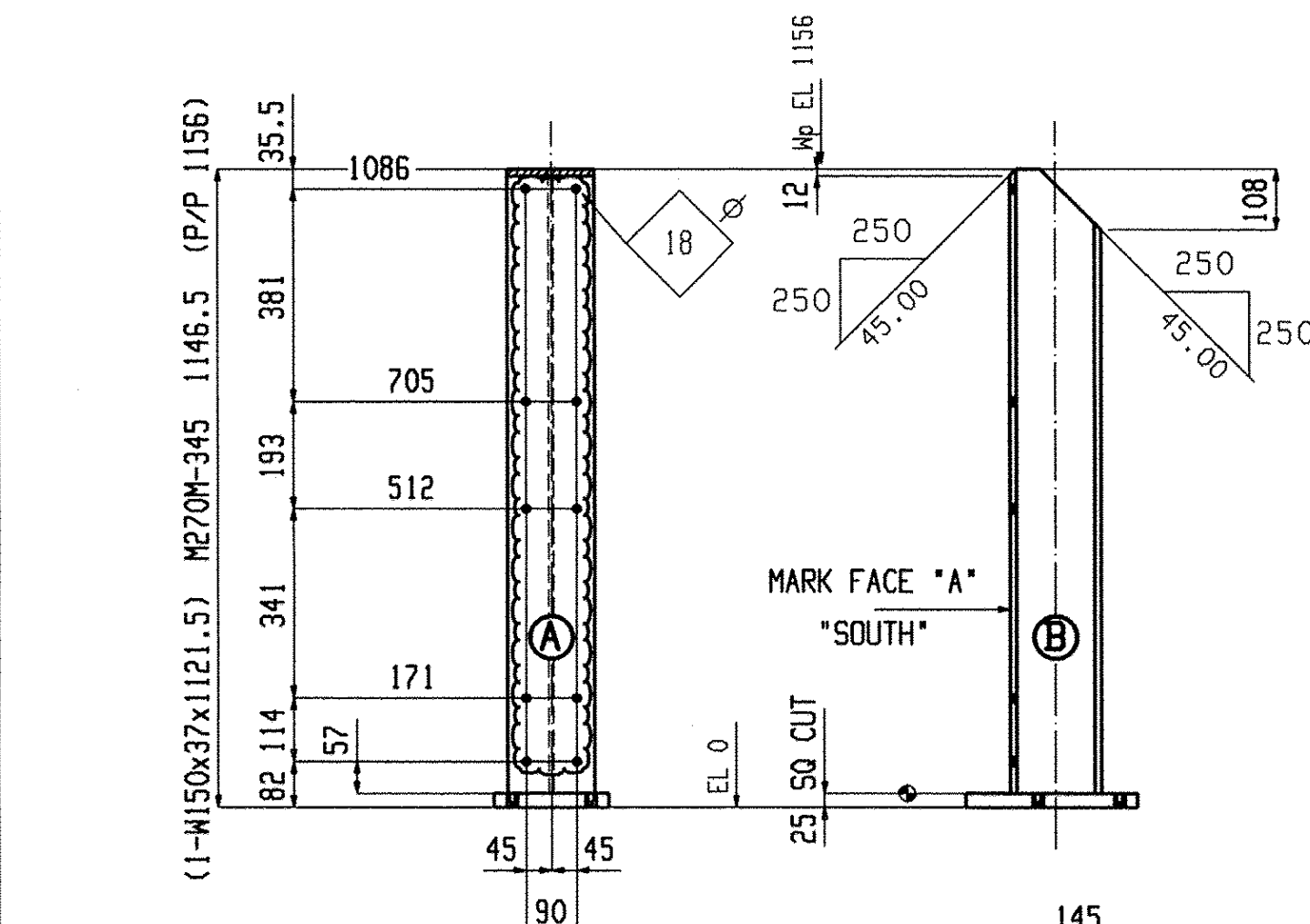
ONE COLUMN C2

W 162x8
F 154.5x11.5
K 20.5x13



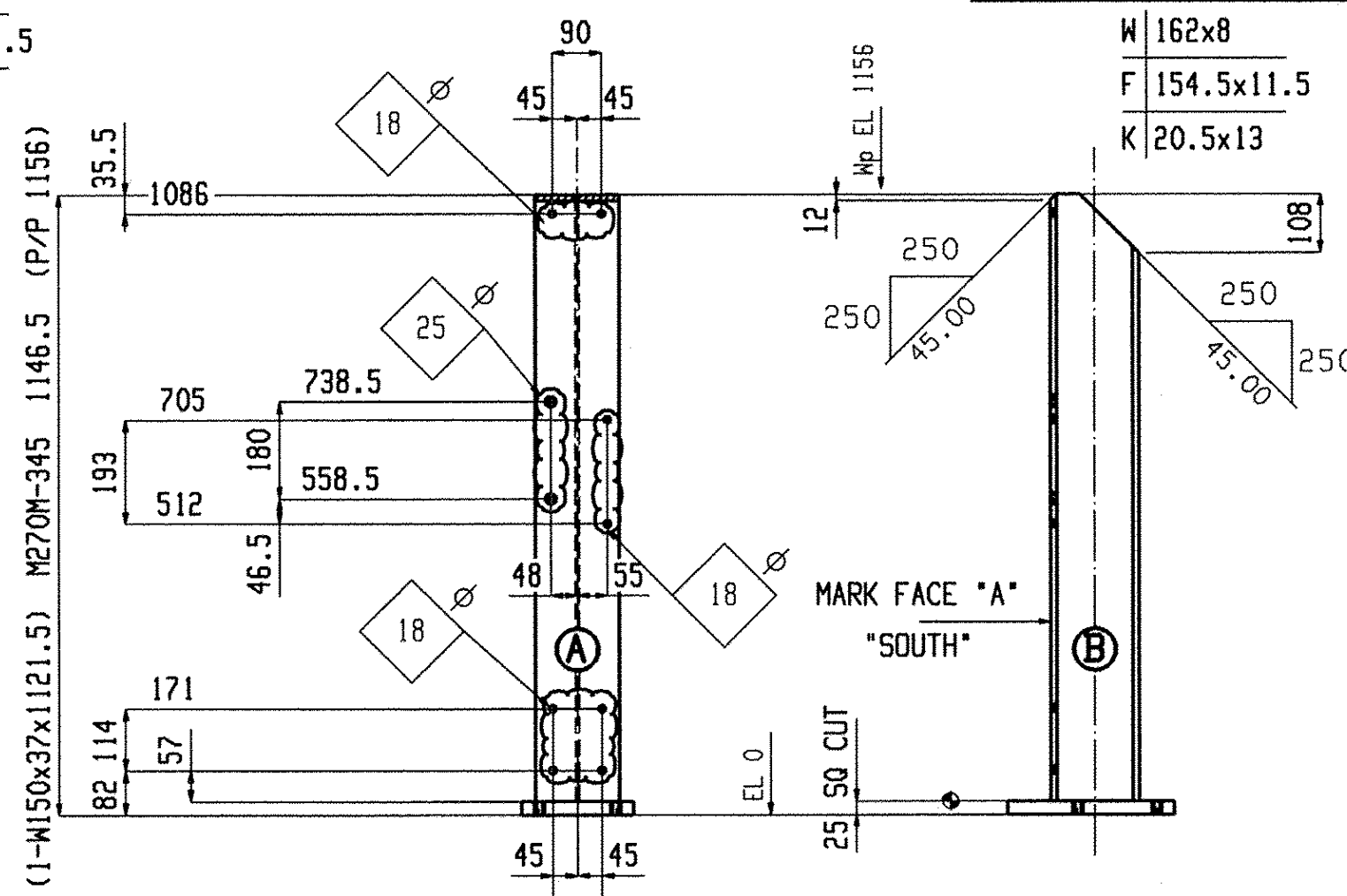
ONE COLUMN C3

W 162x8
F 154.5x11.5
K 20.5x13



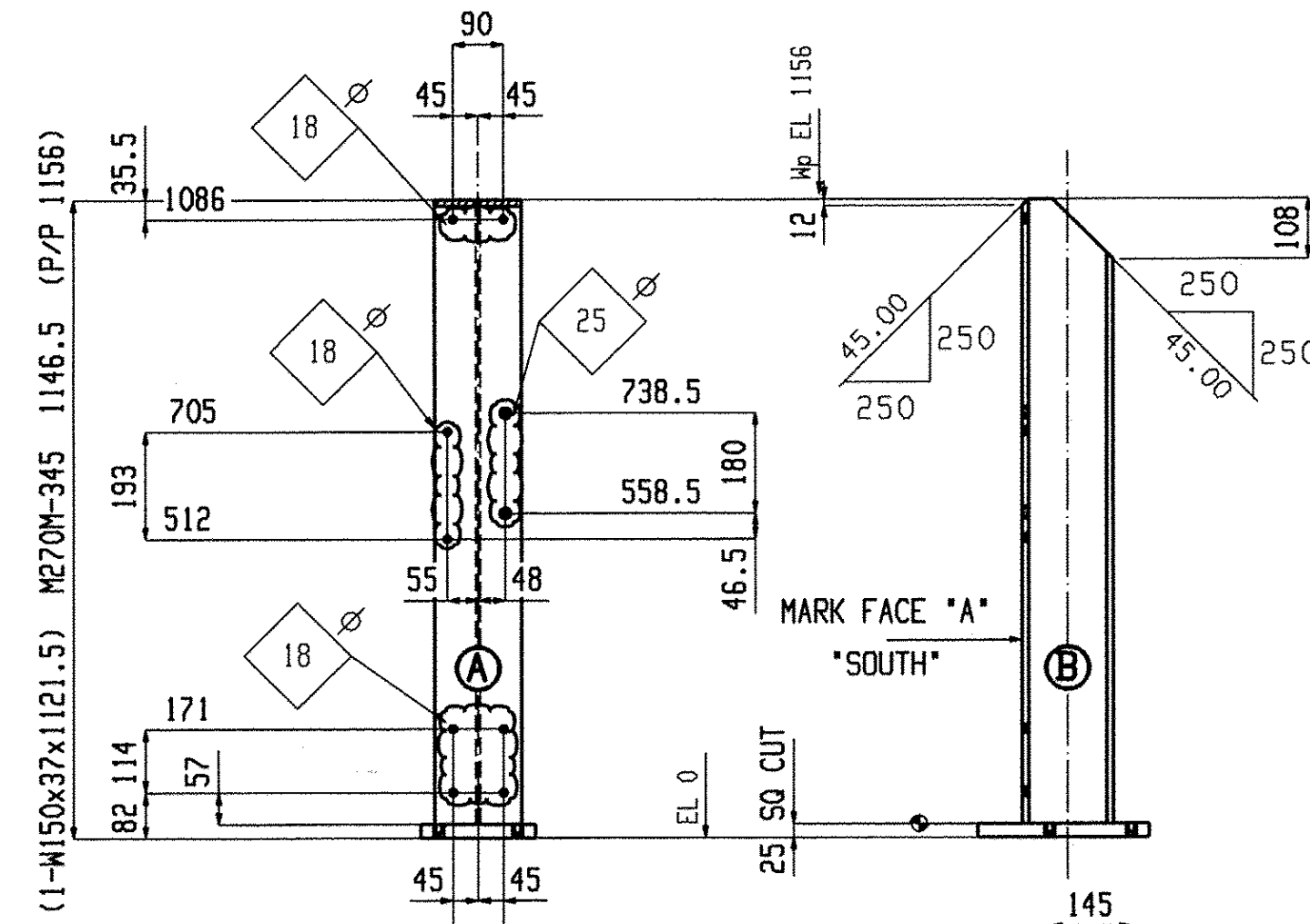
24 COLUMNS C4

W 162x8
F 154.5x11.5
K 20.5x13



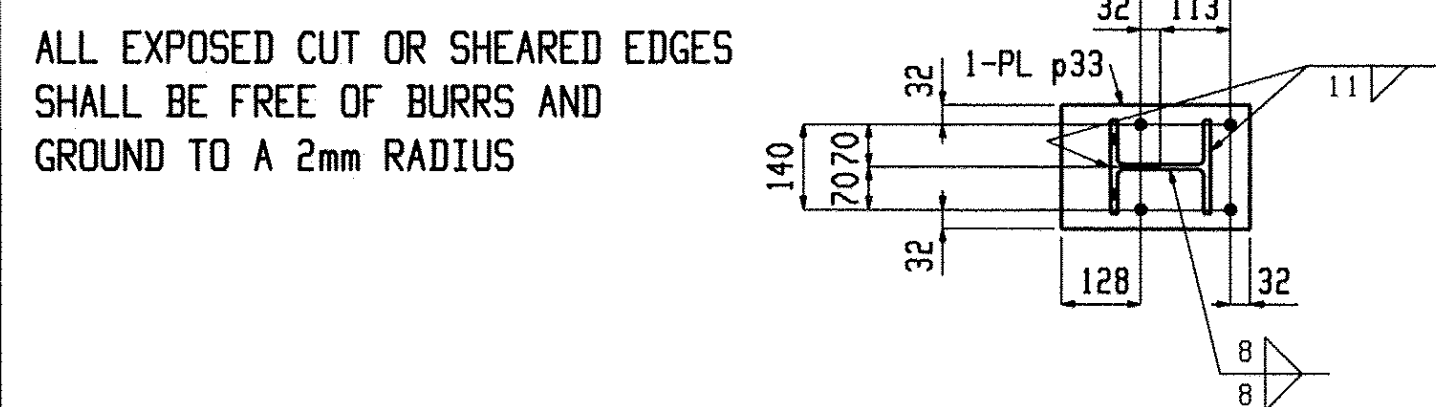
ONE COLUMN C5

W 162x8
F 154.5x11.5
K 20.5x13



ONE COLUMN C6

W 162x8
F 154.5x11.5
K 20.5x13



BILL OF MATERIAL									BILL OF MATERIAL									BILL OF MATERIAL									
Qty	Piece			Seq	Seq	Adv	Steel		Qty	Piece			Seq	Seq	Adv	Steel		Qty	Piece			Seq	Seq	Adv	Steel		
Tot.	Mark	Description	Length	NO.	Qty	ABM #	Grade	Remarks	Tot.	Mark	Description	Length	NO.	Qty	ABM #	Grade	Remarks	Tot.	Mark	Description	Length	NO.	Qty	ABM #	Grade	Remarks	
ONE	R32	BEAM		2	1				1	p33	PL25x204	305				M270M-345		ONE	C5	COLUMN		2	1				
1	R32	L76x64x9.5	10328				M270M-250		ONE	C3	COLUMN		2	1				1	C5	W150x37	1121					M270M-345	S1E
24	C1	COLUMN		2	24				1	C3	W150x37	1121				M270M-345	S1E	1	p33	PL25x204	305					M270M-345	
24	C1	W150x37	1121				M270M-345	S1E	1	p33	PL25x204	305				M270M-345		ONE	C6	COLUMN		2	1				
24	p33	PL25x204	305				M270M-345		24	C4	COLUMN		2	24				1	C6	W150x37	1121					M270M-345	S1E
ONE	C2	COLUMN		2	1				24	C4	W150x37	1121				M270M-345	S1E	1	p33	PL25x204	305					M270M-345	
1	C2	W150x37	1121				M270M-345	S1E	24	p33	PL25x204	305				M270M-345											

ITEMS ON THIS SHEET ARE PAY ITEM: 900.640 (UN)

Casco Bay Steel Structures 75 Spring Hill Rd Saco, ME, 04072 207-282-7360		Holes: 21mm UNO BOLTS: 19mm DIA. M164M-I GALV UNO Steel GR: M270M-GR345 UNO	
		Paint: PER SPECS (GREEN) UNO Surface Prep: PER SPECS	
Project: DUMMERSTON RAILS DUMMERSTON, VT		Date: 9-9-09 DWN. BY: EG	Job No. Checked: MRS Sheet No. 25



State of Vermont
PDD/Structures Design Section
National Life Building – Drawer 33
Montpelier, VT 05633-5001
www.aot.state.vt.us

Agency of Transportation

[phone] 802-828-2621
[fax] 802-828-3566
[ttd] 800-253-0191

Renaud Brothers, Inc.
283 Fort Bridgeman Road #2
Vernon, VT 05354

DATE: October 22, 2010

Project Name: Dummerston Project #: BHO 1442 (28)

Structure Identification: Bridge 37 on TH 62 over the West River

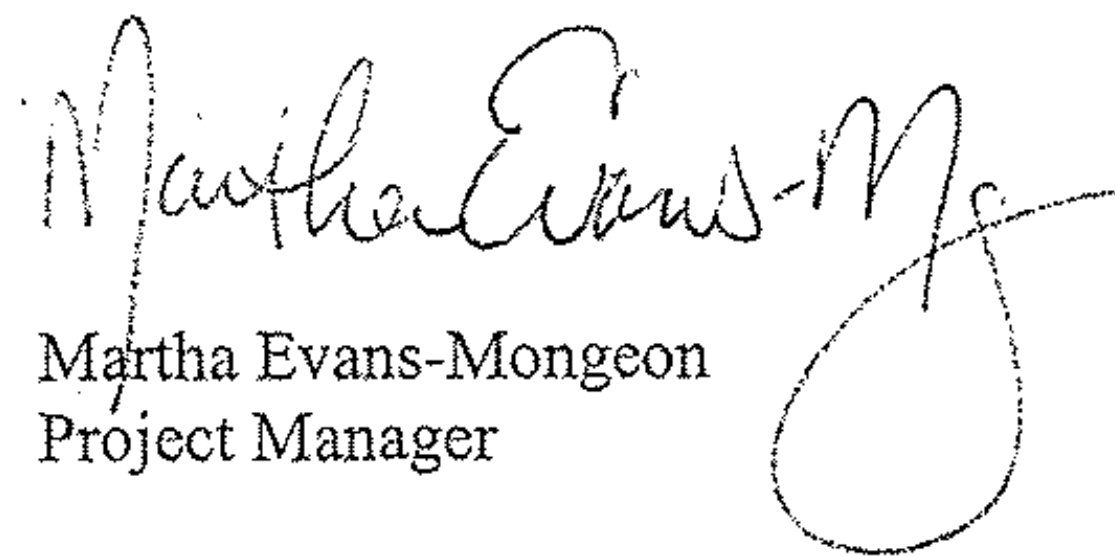
The following Additional Structural Steel details [Item # 506.60, Structural Steel] for the above project transmitted with your letter dated October 21, 2010, have been reviewed and are being returned herewith.

Sheets: 1 and 2 of 2

are approved

Please notify our fabrication inspector, Jeff Clark, as to the date fabrication represented by these drawings will begin. You may contact Jeff by phone at (802)828-0044 or email at jeff.clark@state.vt.us. Any material fabricated prior to the notification date is subject to rejection without further cause.

Sincerely,



Martha Evans-Mongeon
Project Manager

Attachments

cc: ☒ Resident Engineer w/prints , Chad Greenwood
☒ Shop Inspector w/prints, Jeff Clark
☐ Contractor w/prints
☒ Construction Division – letter only
☒ Materials & Research Section (C&IA Unit) – letter only
☒ Files (Structures)



RENAUD BROS., INC.

283 Fort Bridgeman Road #2, Vernon, VT 05354

phone (802) 257-7383
fax (802) 257-7308

October 21, 2010

Martha Evans-Mongeon, Project Manager
Structures Section
Vermont Agency of Transportation
1 National Life Drive, Drawer 33
Montpelier, VT 05633-5001

RE: Dummerston BHO 1442(28)
Top Chord Repair & Shoring Plans

Dear Martha:

Enclosed for review please find five (5) copies of the revised Top Chord Plate Plans and the Shoring Plan for the above-referenced project.

Please review and comment as soon as possible.

If you have any questions or require additional information, please do not hesitate to contact us.

Very truly yours,

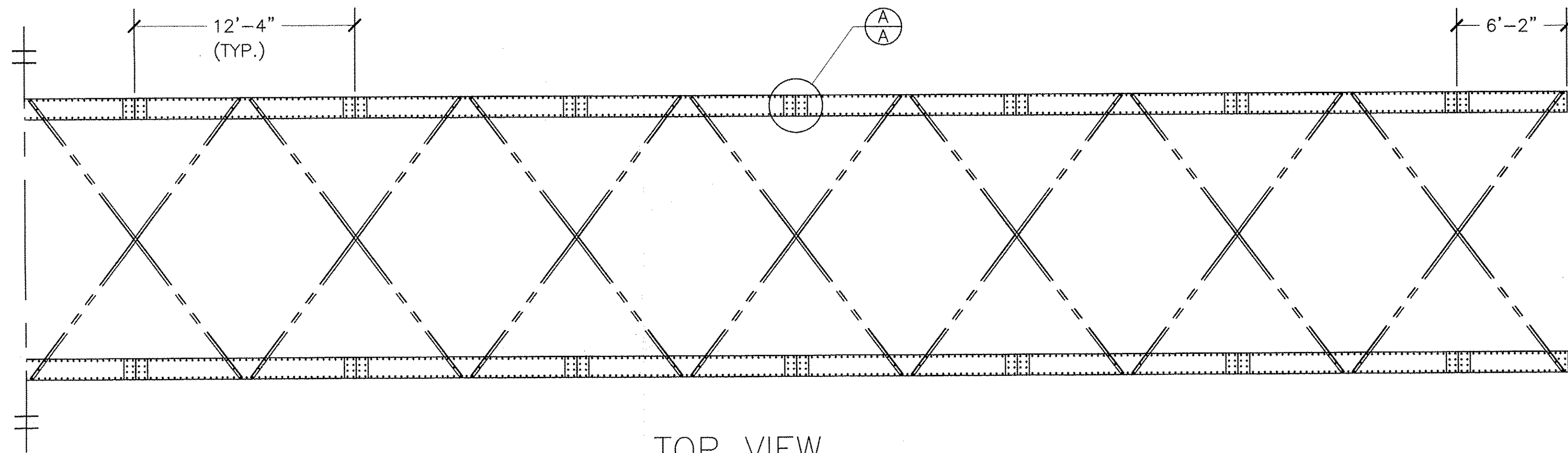
RENAUD BROS., INC.

A handwritten signature in cursive script that reads "Michael J. Renaud" with a small "(CRJ)" written below it.

Michael J. Renaud, V.P.

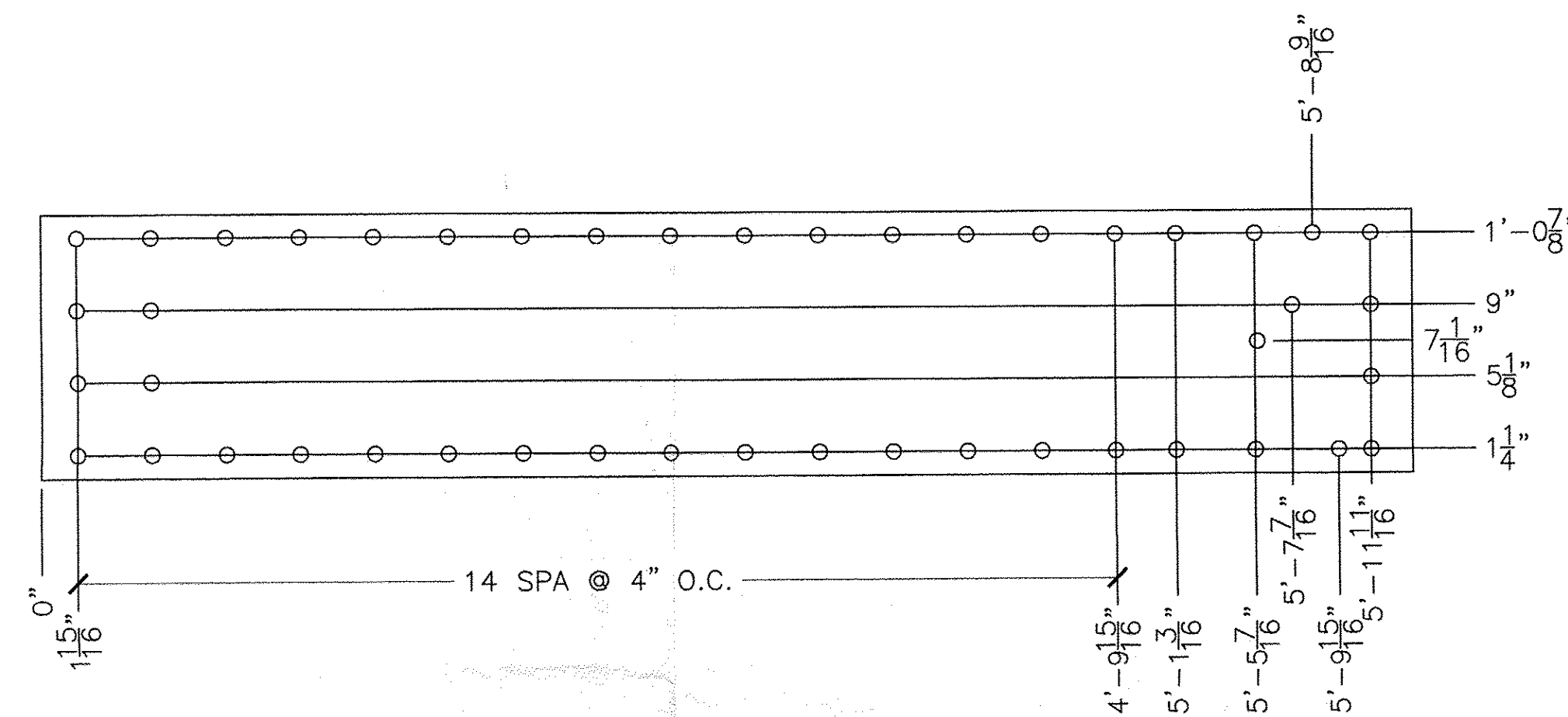
MJR:car

Enclosures



TOP VIEW

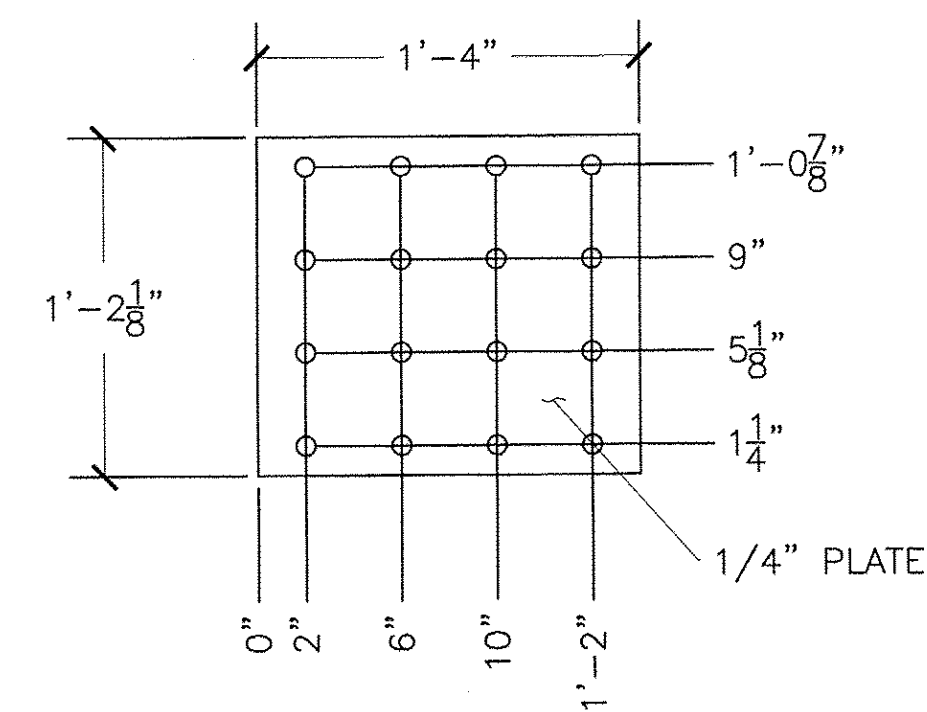
SCALE: 3/16"=1'-0"



END COVER PLATE

SCALE: 1 1/2"=1'-0"
MAT'L A572-50 PL.

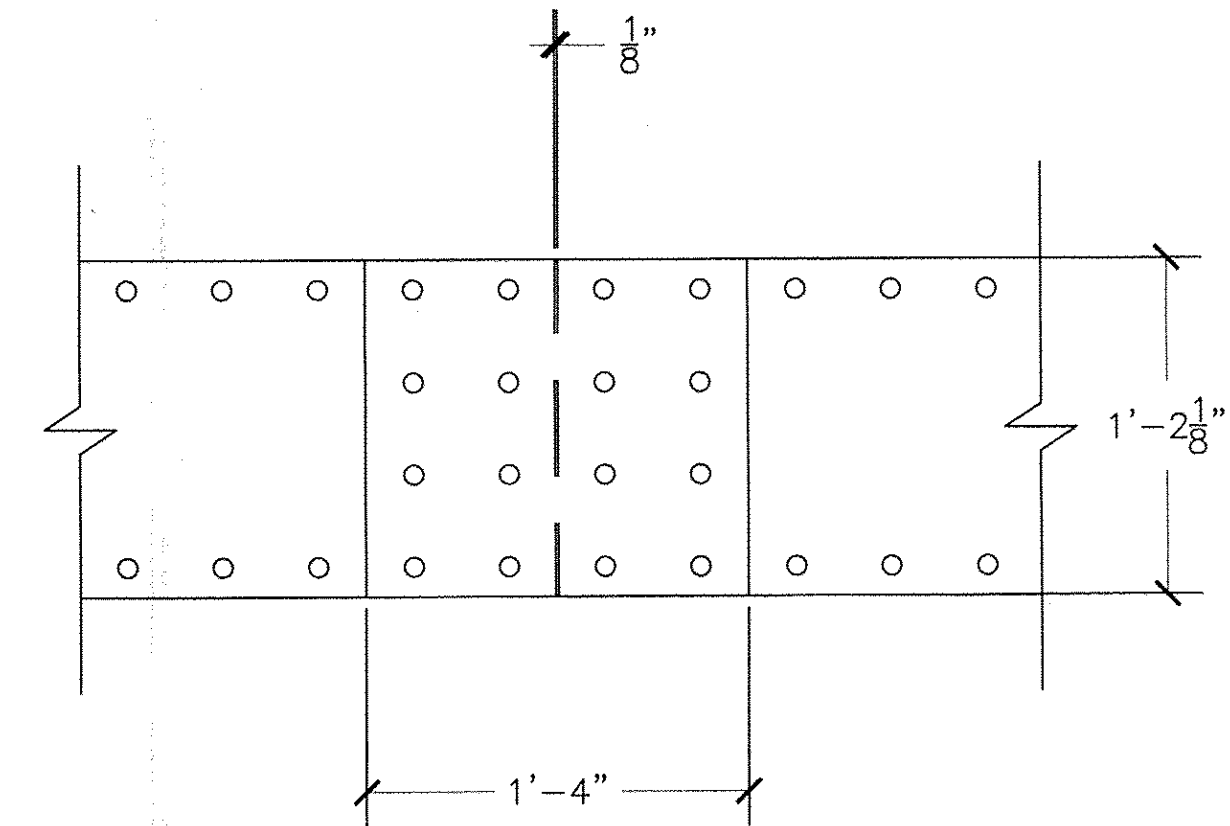
QTY. 4
HOLES 13/16 Ø TYP.



SPLICE PLATE

SCALE: 1 1/2"=1'-0"
MAT'L A572-50 PL.

QTY. 28
HOLES 13/16 Ø TYP.



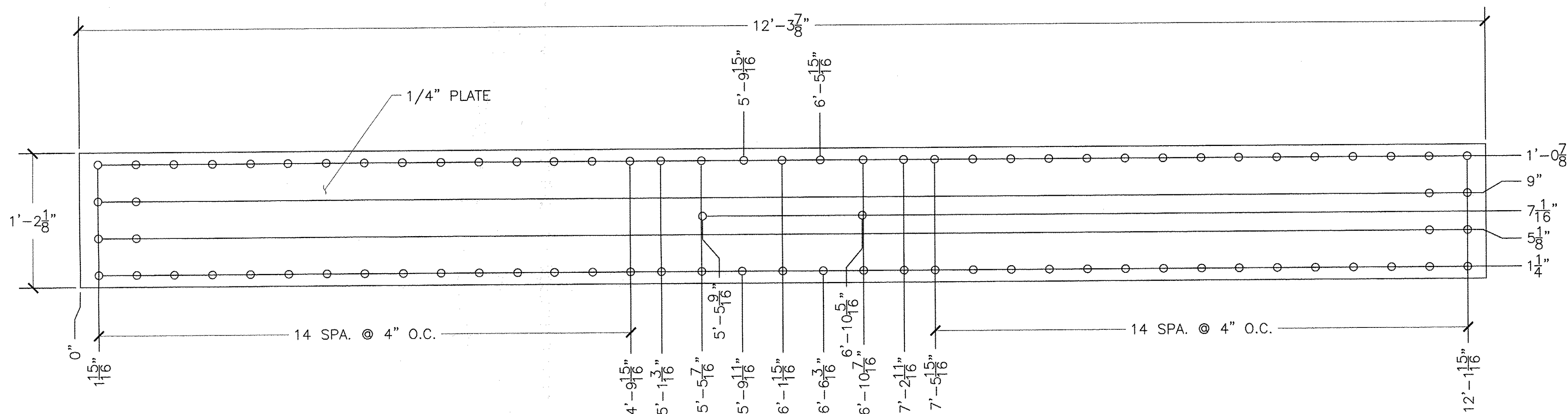
SPLICE DETAIL

SCALE: 1 1/2"=1'-0"

NOTES:

- *ALL MATERIAL TO BE A572-50 DOMESTIC
- *BACKING AND SPLICE PLATES TO BE 1/4" THICK.
- *ONLY ONE SECTION SHALL BE COMPLETED AT A TIME
- *PLATE TO BE GALVANIZED, THEN FINISHED OUT WITH MID AND FINISH COAT OF PAINT.
- *ALL EXISTING HOLES TO BE REAMED TO 3/4" Ø
- *ALL 5/8" Ø RIVETS SHALL BE REPLACED WITH 3/4" Ø T.C. BOLTS GR. A325 M.G.
- *ALL MEASUREMENTS TO BE FIELD VERIFIED
- *ALL CUT EDGES SHALL BE GROUND TO A 1/16" RADIUS

RECEIVED
OCT 27 2010
RESUBMIT _____ APPROVED _____
BY _____ DATE 10/22/10



TOP COVER PLATE

SCALE: 1 1/2"=1'-0"
MAT'L A572-50 PL.

QTY. 26
HOLES 13/16 Ø TYP.

BILL OF MATERIALS

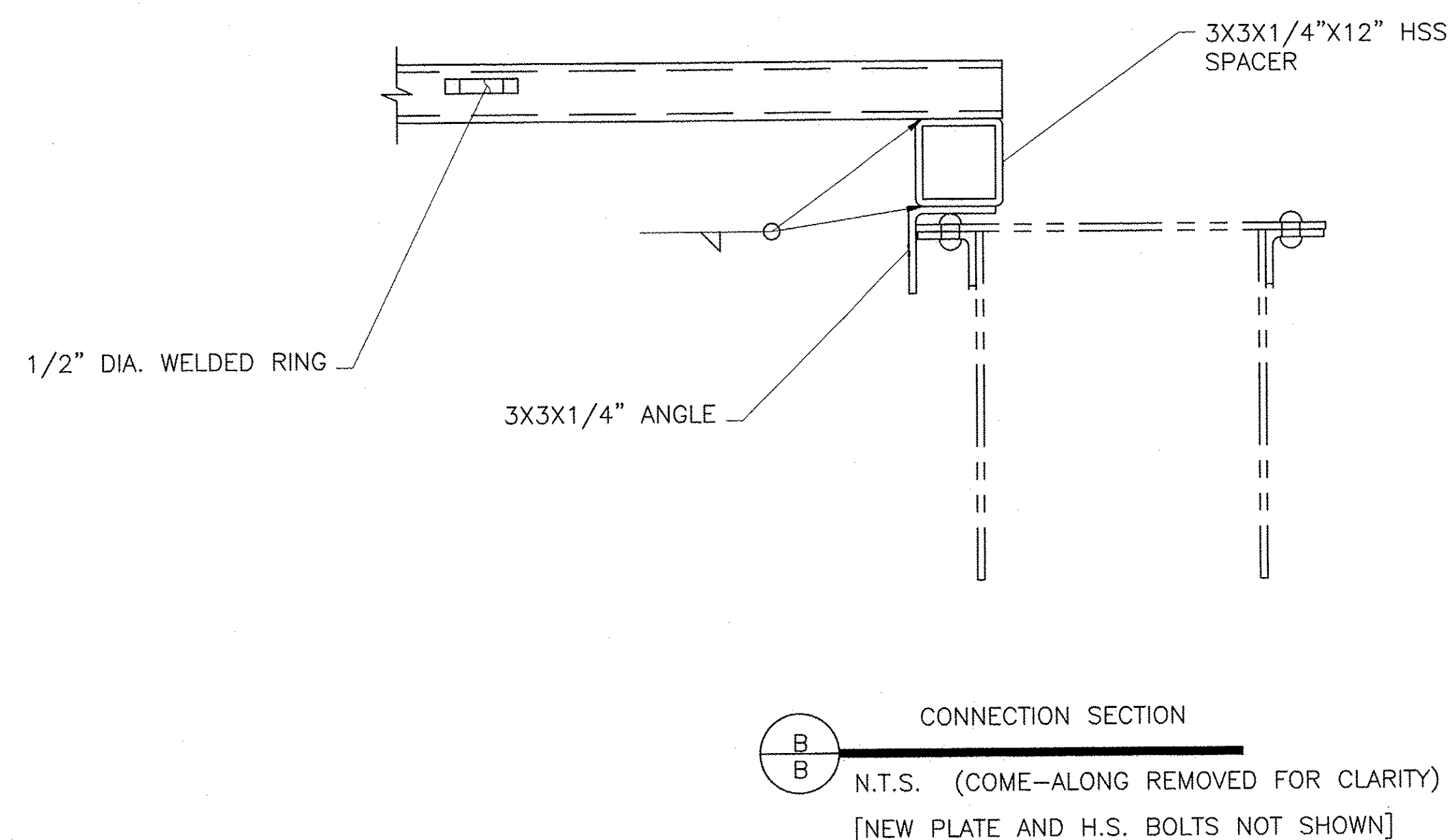
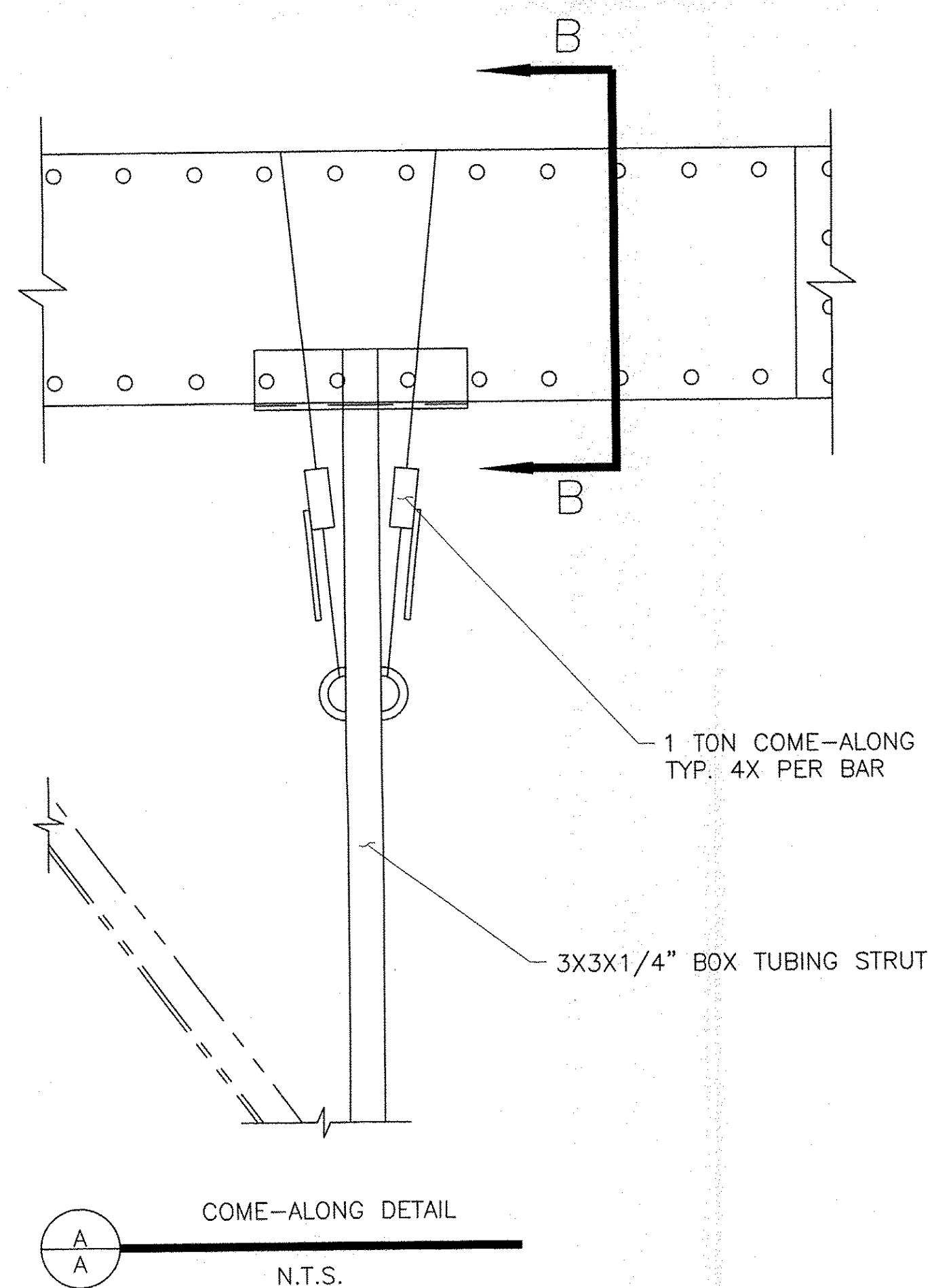
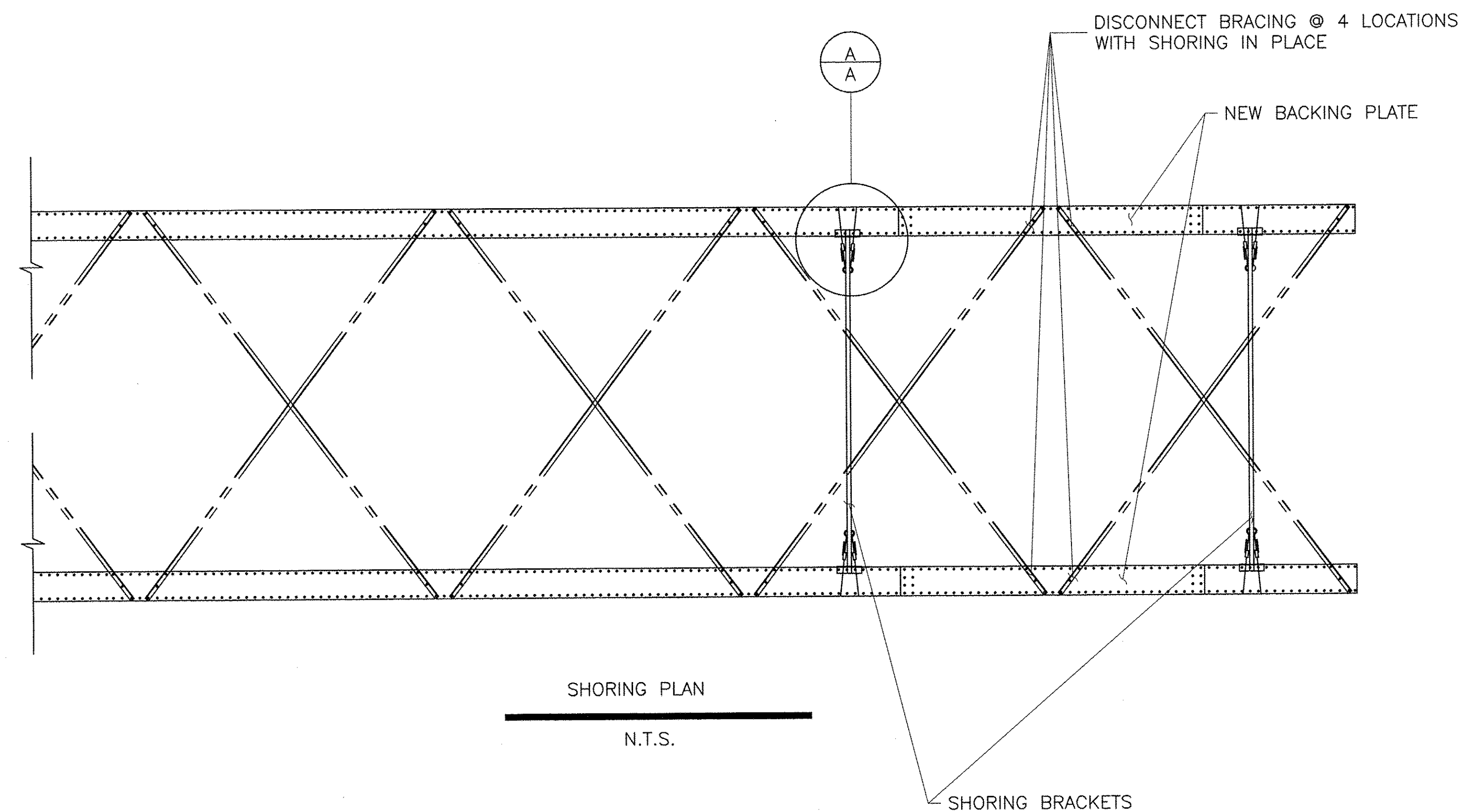
QTY.	DESCRIPTION	THICKNESS	SIZE
26	TOP REPL. PL.	0'-0 1/4"	1'-2 1/8"X12'-3 7/8"
4	END REPL. PLATE	0'-0 1/4"	1'-2 1/8"X6'-1 15/16"
26	SPLICE PLATE	0'-0 1/4"	1'-2 1/8"X1'-4"
2024	A325 T.C. BOLT M.G.	3/4" DIA.	2"
344	A325 T.C. BOLT M.G.	3/4" DIA.	2 1/4"

SHEET NAME:
TOP CHORD PLATES

REV. NO.	DATE:	PROJECT NAME:	SHEET NO.
1	10/19/2010	DUMMERSTON	1 OF 2
		PROJECT NO: BHO 1442(28)	
		DRAWN BY: A.D. CHK'D BY: M.R. DATE: 10/12/10	

Renaud Bros. Inc.

283 FT BRIDGMAN RD.
VERNON VT. 05354
PH. 802-257-7383 FAX 802-257-7308



NOTES:

- *STRUTS WILL BE PLACED ON EITHER SIDE OF WHERE THE SPLICE WILL BE LOCATED, BEFORE ANY LATERAL BRACING IS DISCONNECTED. (EXCEPTION; ON THE ENDS OF THE BRIDGE ONLY ONE STRUT WILL BE NEEDED, PORTAL WILL ACT AS SECOND STRUT).
- *TENSION WILL BE PULLED ON THE COME-ALONGS, TO ENSURE THAT CONTACT IS BETWEEN CHORD, AND ANGLE LOCATED ON BOTTOM OF STRUT, TO ENSURE THAT NO MOVEMENT IS ALLOWED IN OR OUT.
- *NO MORE THAN ONE BAY OF LATERAL BRACING SHALL BE REMOVED AT A TIME. (UPSTREAM AND DOWNSTREAM TOP CHORD).
- *CONTAINMENT WILL BE PROVIDED TO ENSURE THAT NO SHAVINGS WILL FALL ONTO FRESHLY PAINTED SURFACES, IN AN EFFORT TO AVOID RUST STAINS.

RECEIVED
OCT 22 2010
APPROVED
DATE 10/22/10

SHEET NAME: SHORING PLAN

REV. NO. 1	DATE: 10/19/2010	Renaud Bros. Inc. 283 FT BRIDGMAN RD. VERNON VT. 05354 PH. 802-257-7383 FAX 802-257-7308	PROJECT NAME: DUMMERSTON	SHEET NO. 2 OF 2
			PROJECT NO: BHO 1442(28)	
			DRAWN BY: A.D. CHK'D BY: M.R. DATE: 10/12/10	



State of Vermont
PDD/Structures Design Section
National Life Building – Drawer 33
Montpelier, VT 05633-5001
www.aot.state.vt.us

[phone] 802-828-2621
[fax] 802-828-3566
[ttd] 800-253-0191

Agency of Transportation

D. S. Brown
302 East Cherry Street
North Baltimore, OH 45872

DATE: December 31, 2009

Project Name: Dummerston Project #: BHO 1442 (28)

Structure Identification: Bridge # 37 On TH 62 over the West River

The following Expansion Joint details, Item # 516.11, Bridge Expansion Joint, Vermont , for the above project (Vendor's Job # 27177), transmitted with your letter dated November 12, 2009 have been reviewed and are being returned herewith.

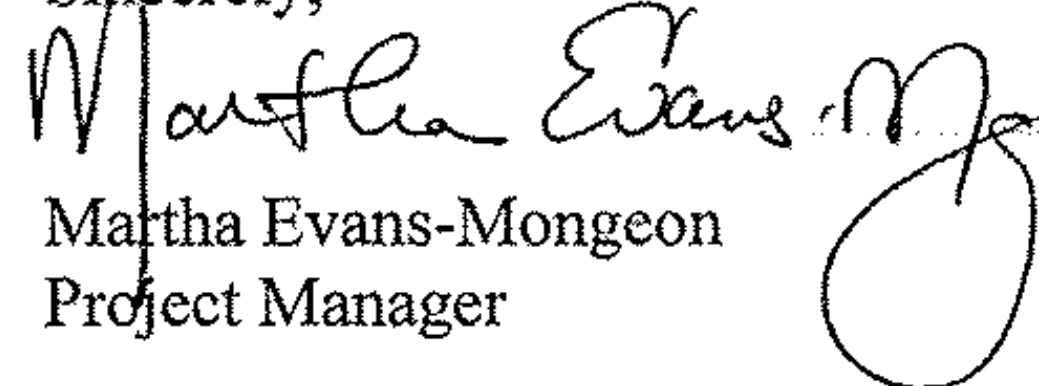
Sheet: 2 of 3
is approved X]

Sheets: 1 and 3 of 3
are approved "as noted"[X]

Sheets: _____
Are to be reconsidered (note comments in red) and resubmitted for final approval.

You must provide notice to our fabrication inspector, Jeff Clark, as to the date fabrication represented by these drawings will begin. That notice must be received and acknowledged at least seven days prior to that date, as per Specification 506.03. Jeff may be contacted by phone at (802)828-0044 or email at jeff.clark@state.vt.us. Any material fabricated prior to the notification date is subject to rejection without further cause.

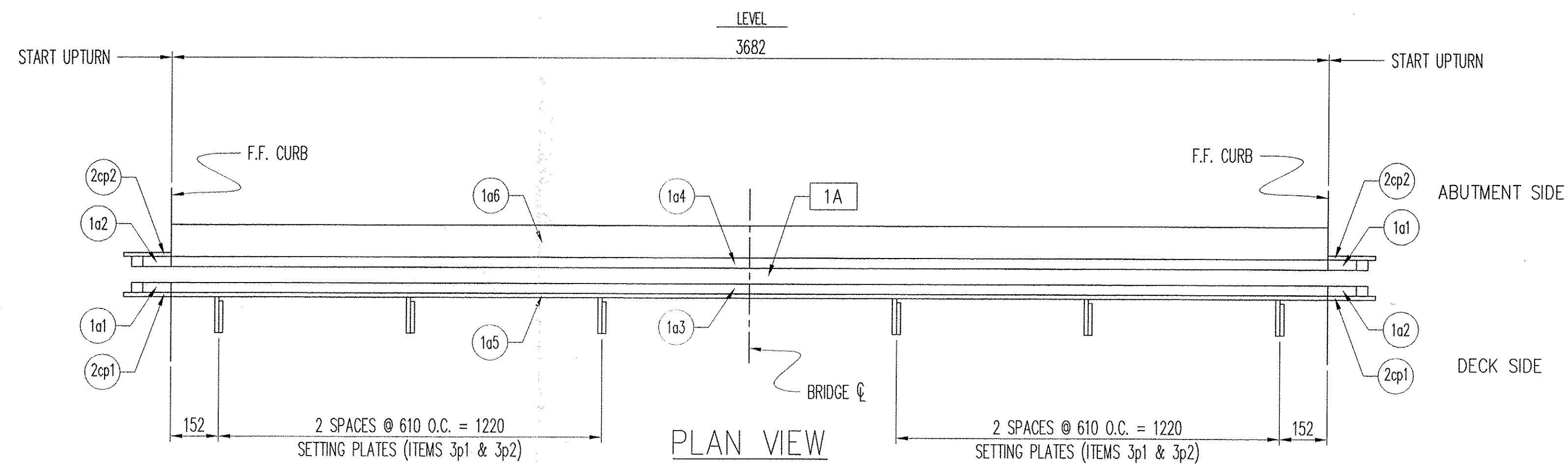
Sincerely,


Martha Evans-Mongee
Project Manager

Attachments

cc: ☒ [X] Resident Engineer w/prints, Chad Greenwood
☒ [X] Shop Inspector w/prints, Jeff Clark
☒ [X] Contractor w/prints, Renaud Brothers, Inc
☐ [] Subcontractor – letter only _____
☒ [X] Construction Division – letter only
☒ [X] Materials & Research Section (C&IA Unit) – letter only
☒ [X] Files, Structures

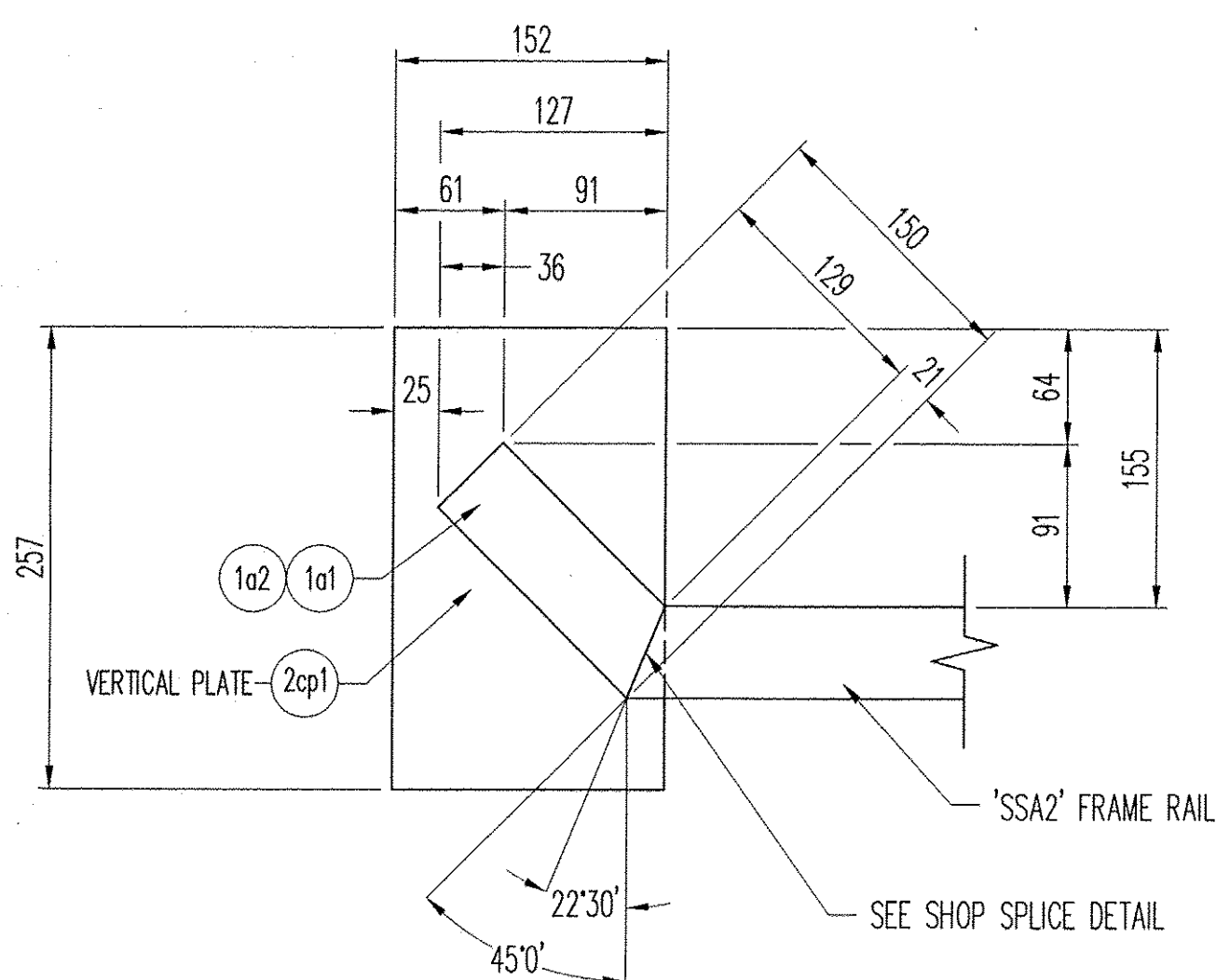




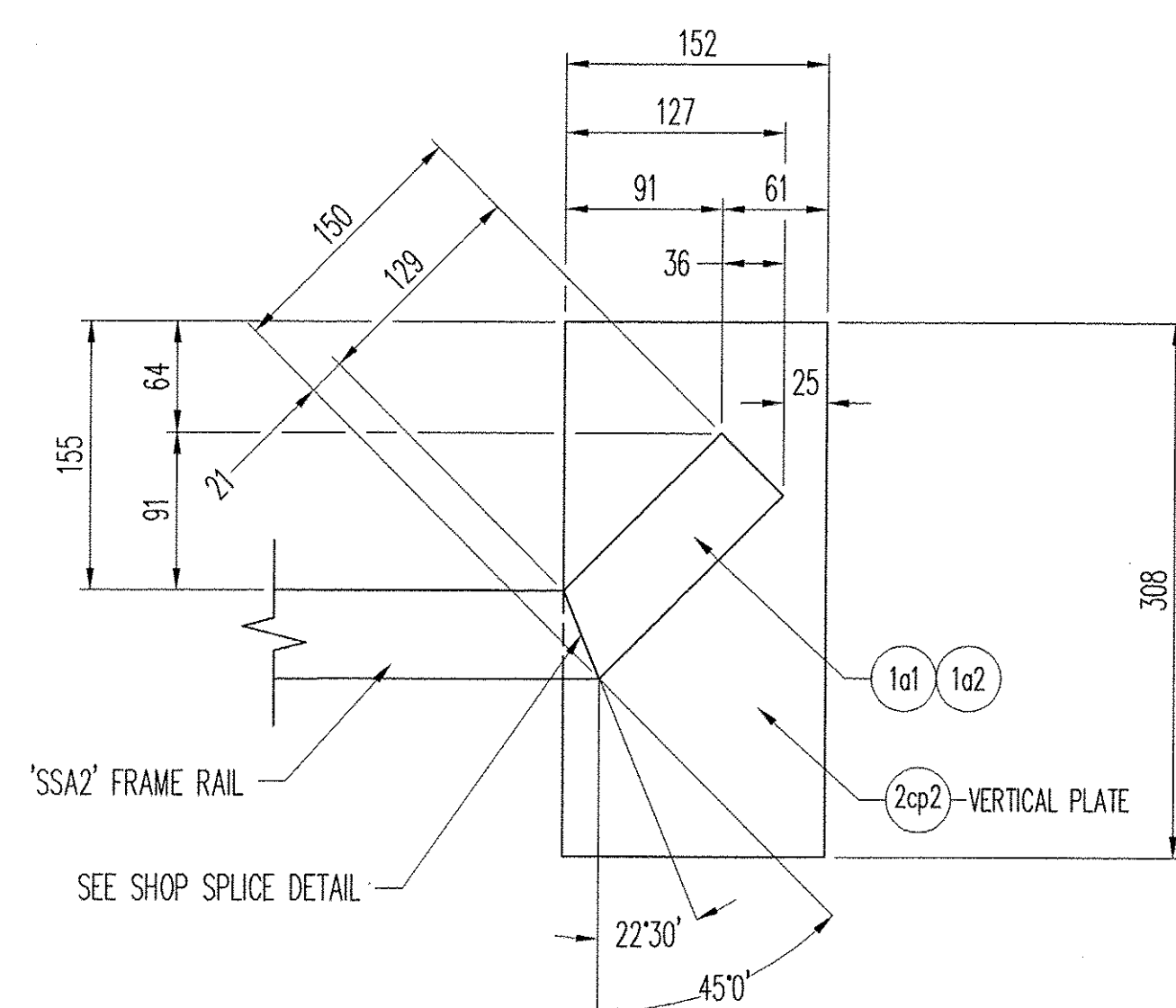
ABUTMENT 1 (LOOKING DOWNSTATION)
ABUTMENT 2 (LOOKING UPSTATION)
'SSA2'-400 EXP. JOINT (M.R.= 102mm)
(2) JOINTS TOTAL

NOTE: ONLY VERTICAL PLATES SHOWN FOR CLARITY. SEE SHEET 2 FOR FULL COVER PLATE DETAILS.

MK	QTY	DESCRIPTION	MATERIAL	LENGTH	REMARKS	REV
1A	2	EXPANSION JOINT ASSEMBLY			3986MM	-
1a1	4	SSA2 FRAME RAIL	M270 GR 250 (A709)	150.0	A123-HDG	-
1a2	4	SSA2 FRAME RAIL	M270 GR 250 (A709)	150.0	A123-HDG	-
1a3	2	SSA2 FRAME RAIL	M270 GR 250 (A709)	3724.0	A123-HDG	-
1a4	2	SSA2 FRAME RAIL	M270 GR 250 (A709)	3724.0	A123-HDG	-
1a5	2	12.7 X 102.0	M270 GR 250 (A709)	3682.0	A123-HDG	-
1a6	2	W10X45	M270 GR 250 (A709)	3682.0	A123-HDG	-
2cp1	4	12.7 X 152.0	M270 GR 250 (A709)	257.0	A123-HDG	-
2cp2	4	12.7 X 152.0	M270 GR 250 (A709)	308.0	A123-HDG	-
2cp3	4	12.7 X 152.0	M270 GR 250 (A709)	444.0	A123-HDG	-
2cp4	2	12.7 X 161.0	M270 GR 250 (A709)	444.0	A123-HDG	-
2cp5	2	12.7 X 161.0	M270 GR 250 (A709)	444.0	A123-HDG	-
3h1	36	Ø15.9 X 203.2 WELD STUD	M169 (A108)		A123-HDG	-
3h2	24	Ø15.9 X 203.2 WELD STUD	M169 (A108)		BENT 45° @ 50MM; A123-HDG	-
3p1	12	12.7 X 77.0	M270 GR 250 (A709)	114.0	A123-HDG	-
1XA	12	VERTICAL SUPPORT PLATE				-
3p2	12	12.7 X 83.0	M270 GR 250 (A709)	101.0	A123-HDG	-
1XC	12	STIFFENER BOLT				-
3h3	12	Ø19.1 X 57.2 HEX HEAD BOLT	M164 (A325)		A153-HDG	-
1XF	12	SUPPORT NUT				-
3h4	12	Ø19.1 HEX NUT	M291-DH (A563-DH)		A153-HDG	-
1XG	24	SUPPORT WASHER				-
3h5	24	Ø19.1 FLAT WASHER	M293 (F436)		A153-HDG	-
1YA	1	LUBRICANT-ADHESIVE				-
1h19	1	LUBRICANT ADHESIVE (1 GAL. UNIT)	D4070			-
1YB	2	STRIP SEAL GLAND				-
1g1	2	A2R-400 GLAND	NEOPRENE	4550.0		-
						11/11/2009 9:33:29 AM



UPTURN DETAIL
DECK SIDE

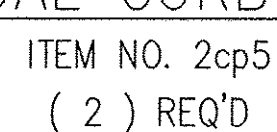
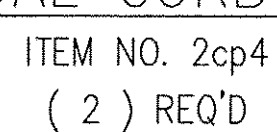
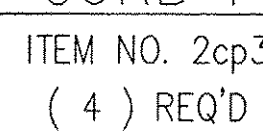
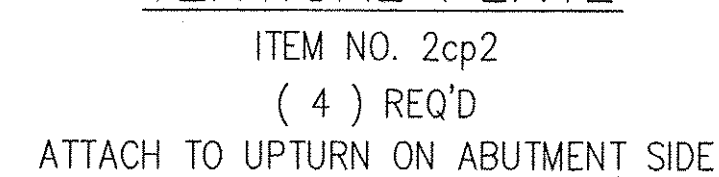
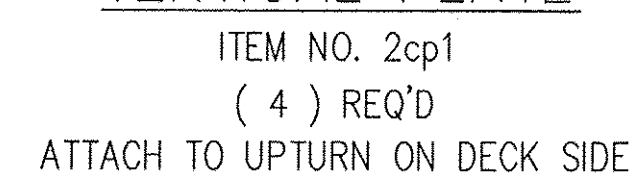
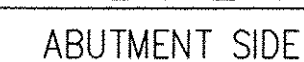
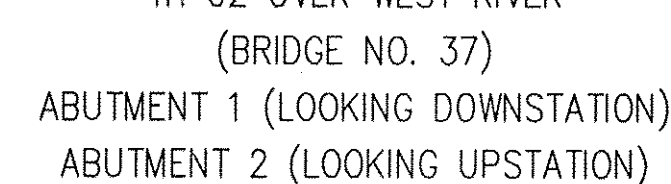
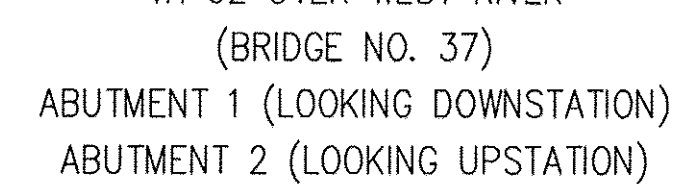


UPTURN DETAIL
ABUTMENT SIDE

D.S. BROWN
THE D.S. BROWN COMPANY
300 E. CHERRY STREET
NORTH BALTIMORE, OHIO 45872
419.257.3561
FAX: 419.257.0332
WWW.DSBROWN.COM



REV	DESCRIPTION	DATE	DET.	CKD.
	LOCATION — TH 62 OVER WEST RIVER BRIDGE — 37 PROJECT NO. — BHO 1442 (28)			
	DESIGNER — VANASSE HANGEN BRUSTLIN, INC. CUSTOMER — RENAUD BROTHERS			
	DESCRIPTION: 'SSA2' PLAN VIEW WINDHAM COUNTY, VERMONT	SCALE: N.T.S. PROJECT NUMBER: 27177	DRAWN BY: MJS CHECKED BY: DAE RELEASE: 1011	DATE: 11/05/09 SHEET: 1 OF 3



RECEIVED
CDD BY _____ CDD BY *mpa*
NOV 17 2000
RECEIVED _____ APPROVED *✓*
BY _____ DATE 12/31/00

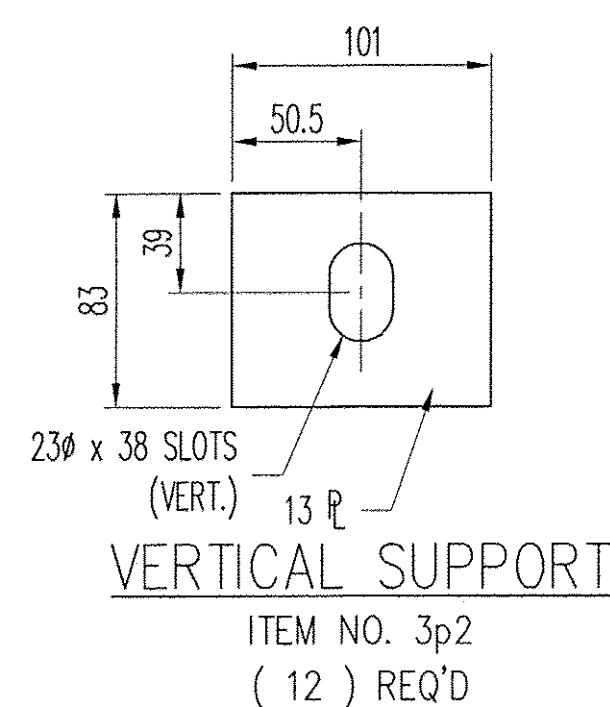
[illegible]



TEMPERATURE ADJUSTMENT CHART



STRIP SEAL MOVEMENT RATINGS	
TEMPERATURE	A2R-400
MAXIMUM	13
MID	64
MINIMUM	114



RECEIVED
DATE: 11/17/2000
BY: [signature]
* SEAL WELD ALL
CONNECTIONS WHERE
POSSIBLE
REQUIRANT: APPROVED AS NOTED
DATE: 12/31/09

[illegible]



State of Vermont
PDD/Structures Design Section
National Life Building – Drawer 33
Montpelier, VT 05633-5001
www.aot.state.vt.us

Agency of Transportation

[phone] 802-828-2621
[fax] 802-828-3566
[ttd] 800-253-0191

Renaud Brothers
283 Fort Bridgeman Road #2
Vernon, Vermont 05354

DATE: January 12, 2010

Project Name: Dummerston Project #: BHO 1442 (28)

Structure Identification: TH 62, Bridge #37 over the West River

The following Structural Steel details [Item #506.50, Structural Steel, Rolled Beam and Item 506.60, Structural Steel,] for the above project (Vendor's Job # none given) have been reviewed and are being returned herewith.

Sheets: "GM1, GM2", "GM3, GM4", "GM5, GM6", "GM7, GM8", "GM9, GM10", "GM11, GM12", "GM13, GM14", "GM15, GM16", 2, 3, 5-19, E1-E6

are approved "as noted"

Sheets: 1, 4, 20-25

are to be reconsidered (note comments in red) and resubmitted for final approval

Please make appropriate changes as indicated on these "as noted" or "approved" drawings and submit white prints for our use in the record plans for this project. Also, please submit extended weights for item # 506.50 for our approval.

Partial payment for this item will be withheld until extended weights are received and approved.

You must provide notice to our fabrication inspector, Jeff Clark, as to the date fabrication represented by these drawings will begin. Jeff must receive and acknowledge your notice at least seven days prior to that date, as per Specification 506.03. You may contact Jeff by phone at (802)828-0044 or email at jeff.clark@state.vt.us. Any material fabricated prior to the notification date is subject to rejection without further cause.

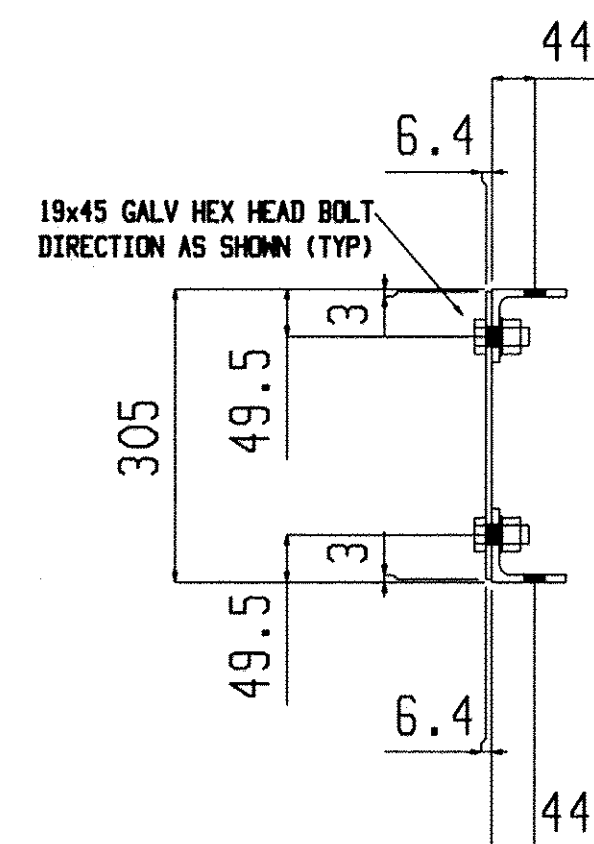
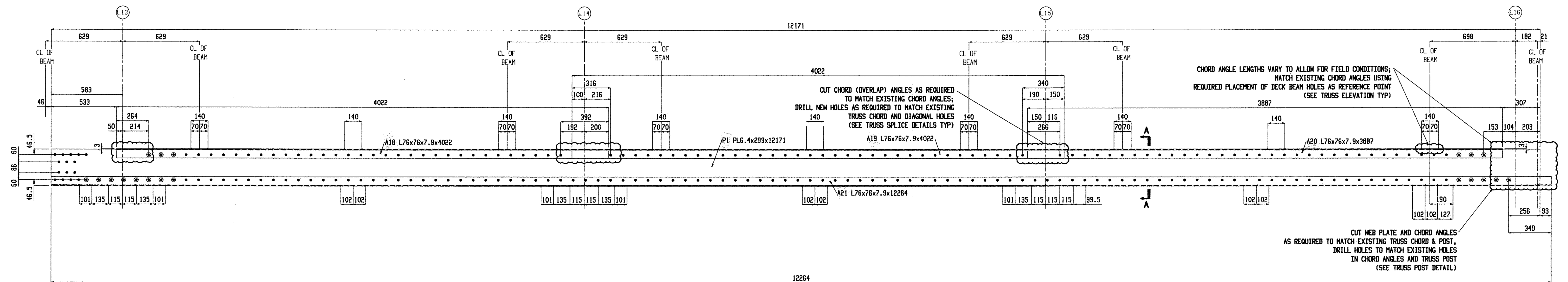
Sincerely,


Martha Evans-Mongeon
Project Manager

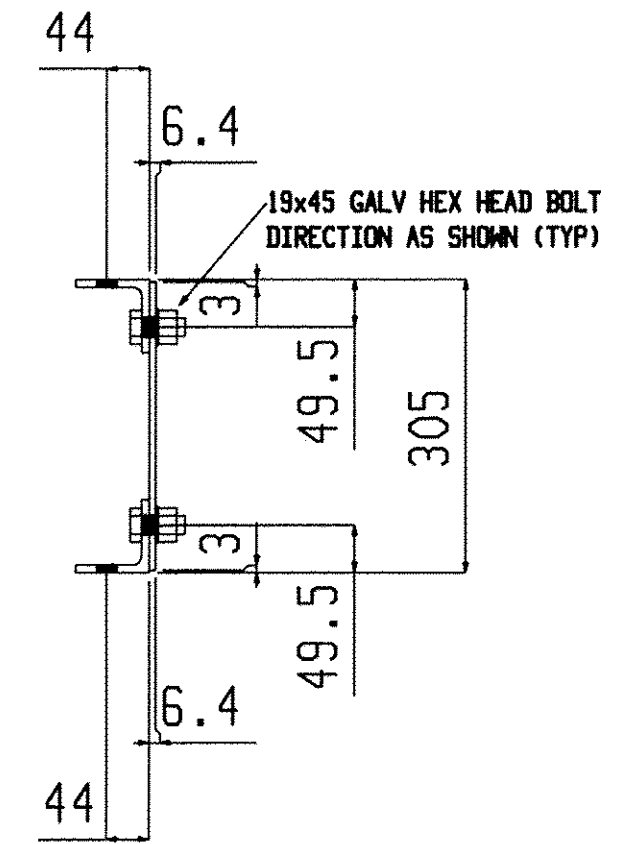
Attachments

cc: ☒ Resident Engineer w/prints, Chad Greenwood
☒ Shop Inspector w/prints, Jeff Clark
☒ Construction Division – letter only
☒ Materials & Research Section (C&IA Unit) – letter only
☒ Files (Structures)

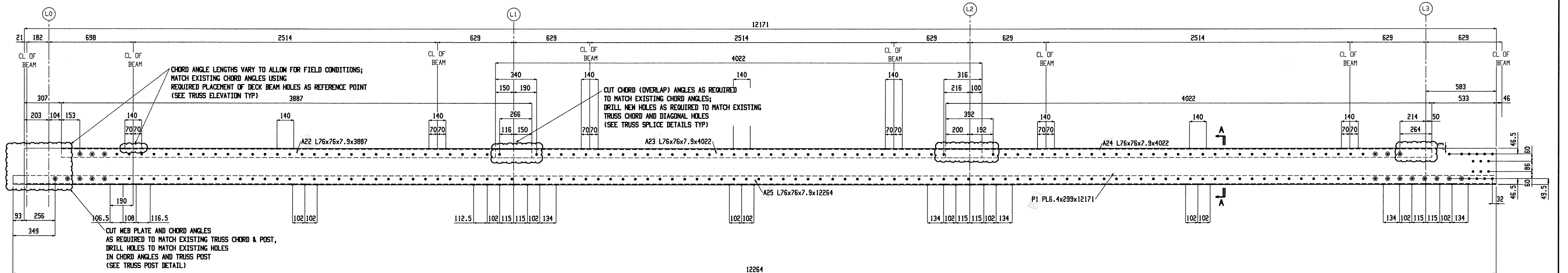




Section A-A
GM6



Section A-A
GM5



2 GROUP MEMBERS GM6

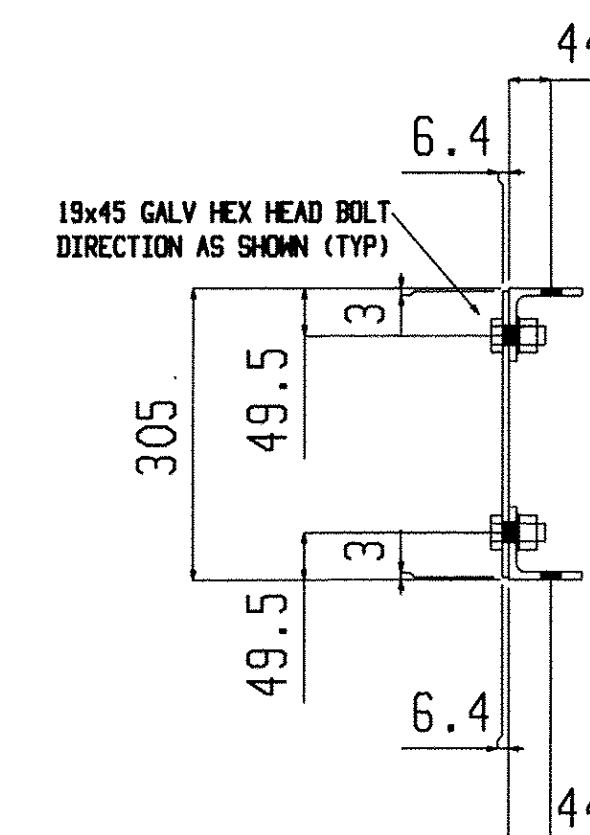
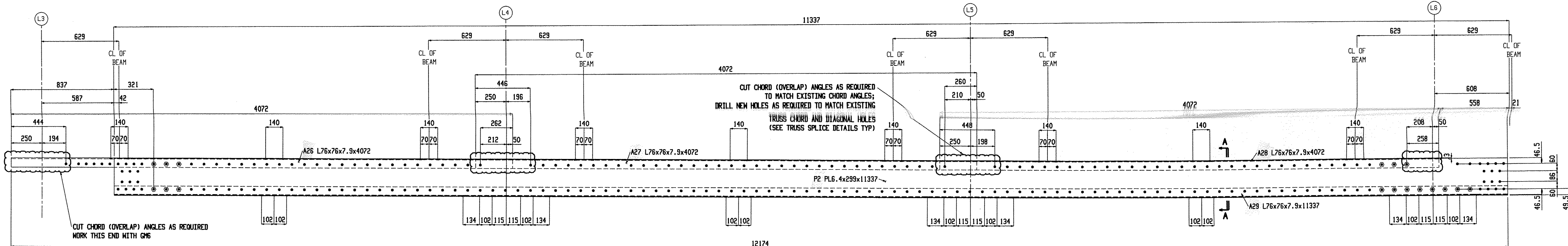
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2	A21	L76x76x7.9	12264				M270M-345		2	A25	L76x76x7.9	12264				M270M-345										
2	A18	L76x76x7.9	4022				M270M-345		2	A24	L76x76x7.9	4022				M270M-345										
2	A19	L76x76x7.9	4022				M270M-345		2	A23	L76x76x7.9	4022				M270M-345										
2	A20	L76x76x7.9	3887				M270M-345		2	A22	L76x76x7.9	3887				M270M-345										
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Total weight : 1602

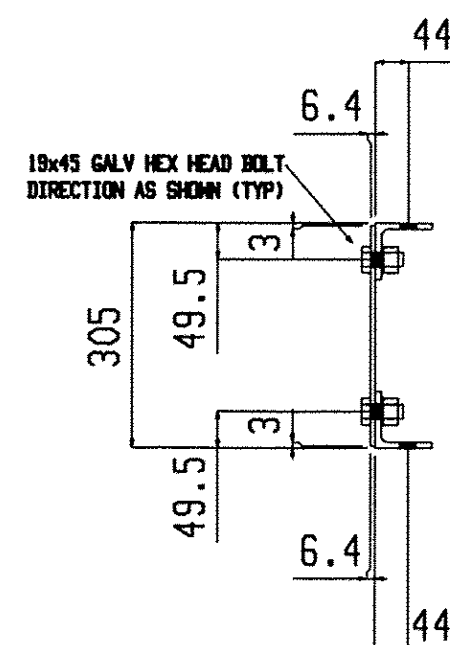
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NOV 17 2009
RESUBMIT: _____ APPROVED: ☒ AS NOTED
BY: _____ DATE: _____

Renaud Bros. Inc. 283 Fort Bridgeman Rd. #2 Vernon, VT. 05354 Phone 1-802 257-7383		Holes: 21mm UNO	
		BOLTS: 19mm DIA. M164M-I GALV UNO	
Steel GR: M270M-GR345 UNO		Paint: PER SPECS (GREEN) UNO	
Surface Prep: PER SPECS		Job No. BHO 1442(28)	
Project: DUMMERSTON BRIDGE	Date: 9-9-09	Rev. No:	Checked: MRS
DWN. BY: EG	Checked: MRS	Sheet No. GM5, GM6	Product Sheet #

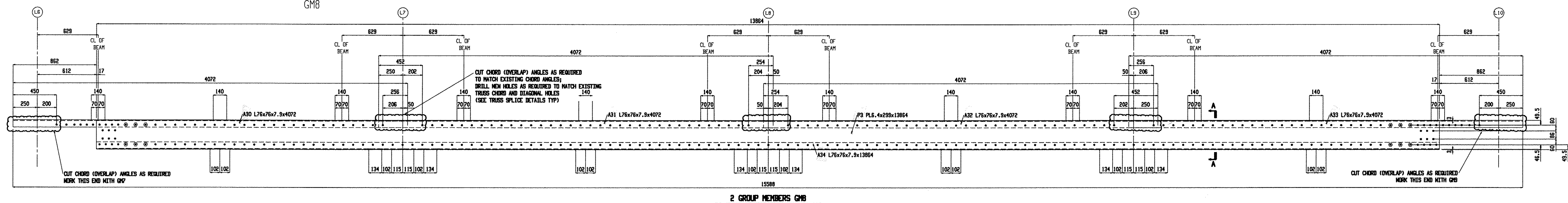
Nov 06 2009 10:54:02 AM



Section A-A
GM7



Section A-A
GM8



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2	A29	L76x76x7.9	11337				M270M-345		2	A34	L76x76x7.9	13864				M270M-345										
2	A26	L76x76x7.9	4072				M270M-345		2	A30	L76x76x7.9	4072				M270M-345										
2	A27	L76x76x7.9	4072				M270M-345		2	A31	L76x76x7.9	4072				M270M-345										
2	A28	L76x76x7.9	4072				M270M-345		2	A32	L76x76x7.9	4072				M270M-345										
									2	A33	L76x76x7.9	4072				M270M-345										

INV 08 2003 10-2-108-41

Total weight : 1722

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RESUBMIT _____ APPROVED _____
BY _____ DATE _____

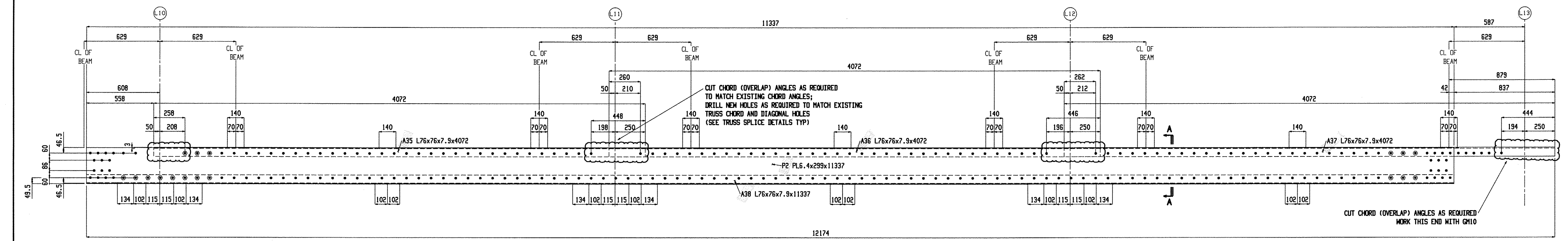
Renaud Bros. Inc.
283 Fort Bridgeman Rd. #2
Vernon, VT. 05354
Phone 1-802 257-7383

Holes: 21mm UNO
BOLTS: 19mm DIA. M16M-I GALV UNO
Steel GR: M270M-GR345 UNO
Paint: PER SPECS (GREEN) UNO
Surface Prep: PER SPECS

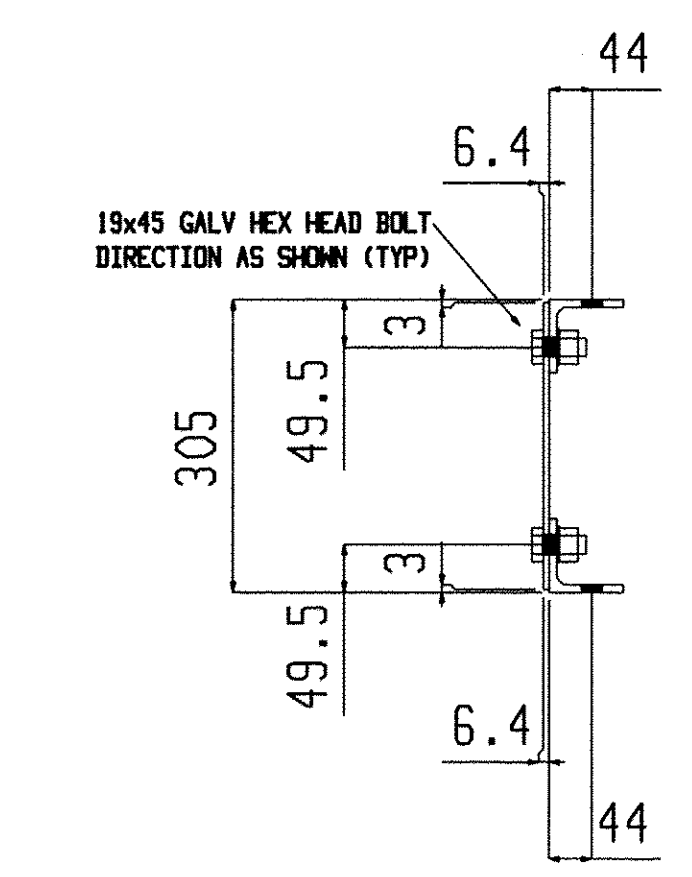
Project: DUMMERSTON BRIDGE
DUMMERSTON, VT

Rev.No: _____ Date: 9-9-09 Job No. B40 1442 (28)
DMN. BY: EG Checked: MRS Sheet No. -GM7, GM8

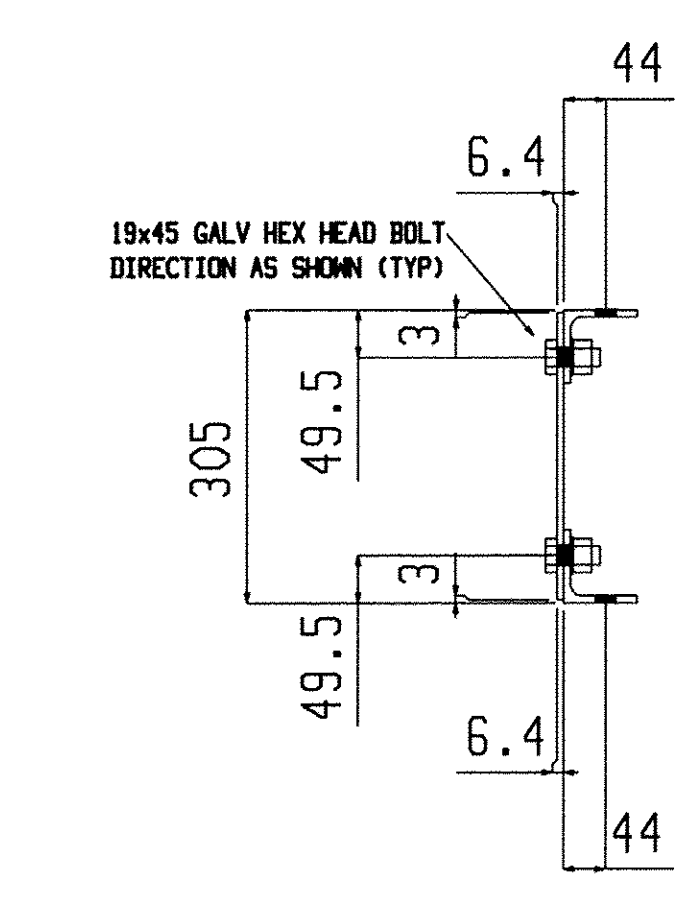
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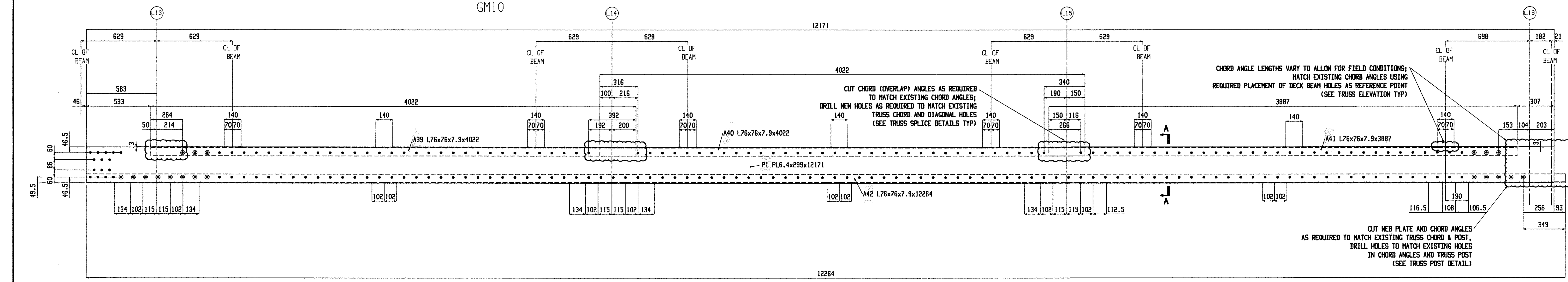
2 GROUP MEMBERS GM9



Section A-A
GM10



Section A-A
GM9



2 GROUP MEMBERS GM10

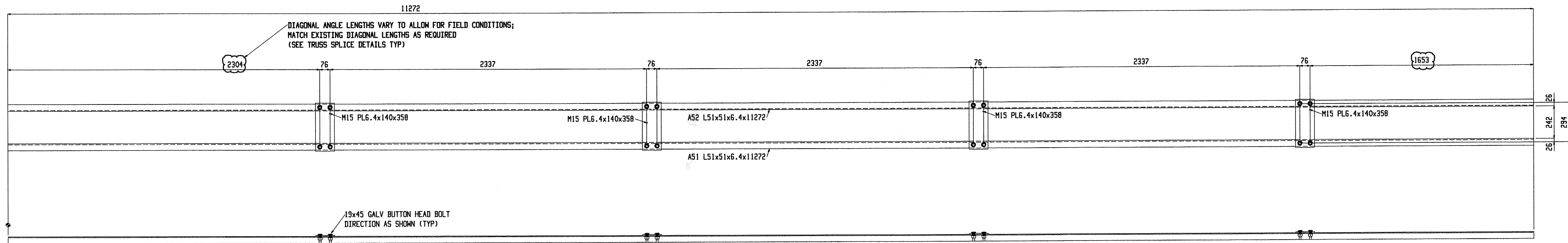
Nov 05 2003 10:54:09 AM

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2	P2	PL6.4x299	11337				M270M-345		2	P1	PL6.4x299	12171				M270M-345										
2	A38	L76x76x7.9	11337				M270M-345		2	A42	L76x76x7.9	12264				M270M-345										
2	A37	L76x76x7.9	4072				M270M-345		2	A39	L76x76x7.9	4022				M270M-345										
2	A36	L76x76x7.9	4072				M270M-345		2	A40	L76x76x7.9	4022				M270M-345										
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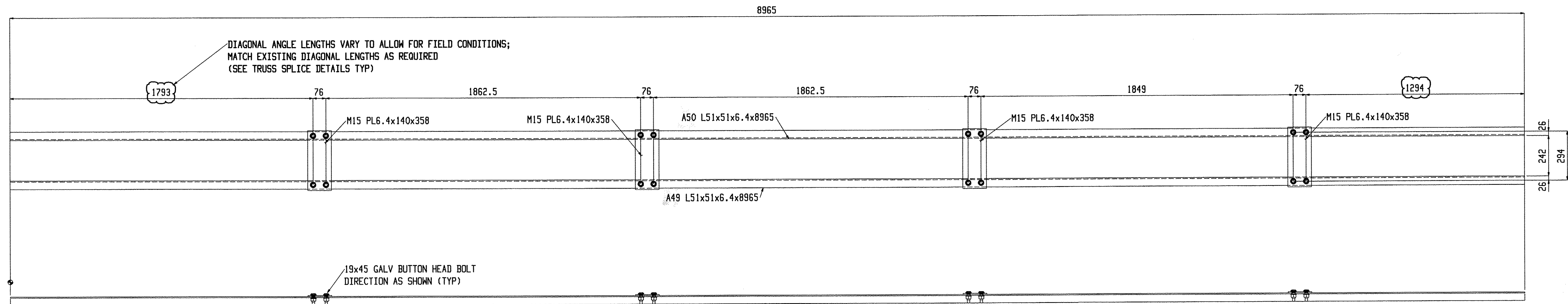
Total weight : 1565

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NOV 17 2009
RESUBMIT APPROVED
BY DATE

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		BOLTS: 19mm DIA. M164M-I GALV UNO
		Steel GR: M270M-GR345 UNO
		Paint: PER SPECS (GREEN) UNO
		Surface Prep: PER SPECS
Project: DUMMERSTON BRIDGE DUMMERSTON, VT	Date: 9-9-09	Job No. 8401442(28)
DMN. BY: EG	Checked: MRS	Sheet No. GM9, GM10



4 GROUP MEMBERS GM15



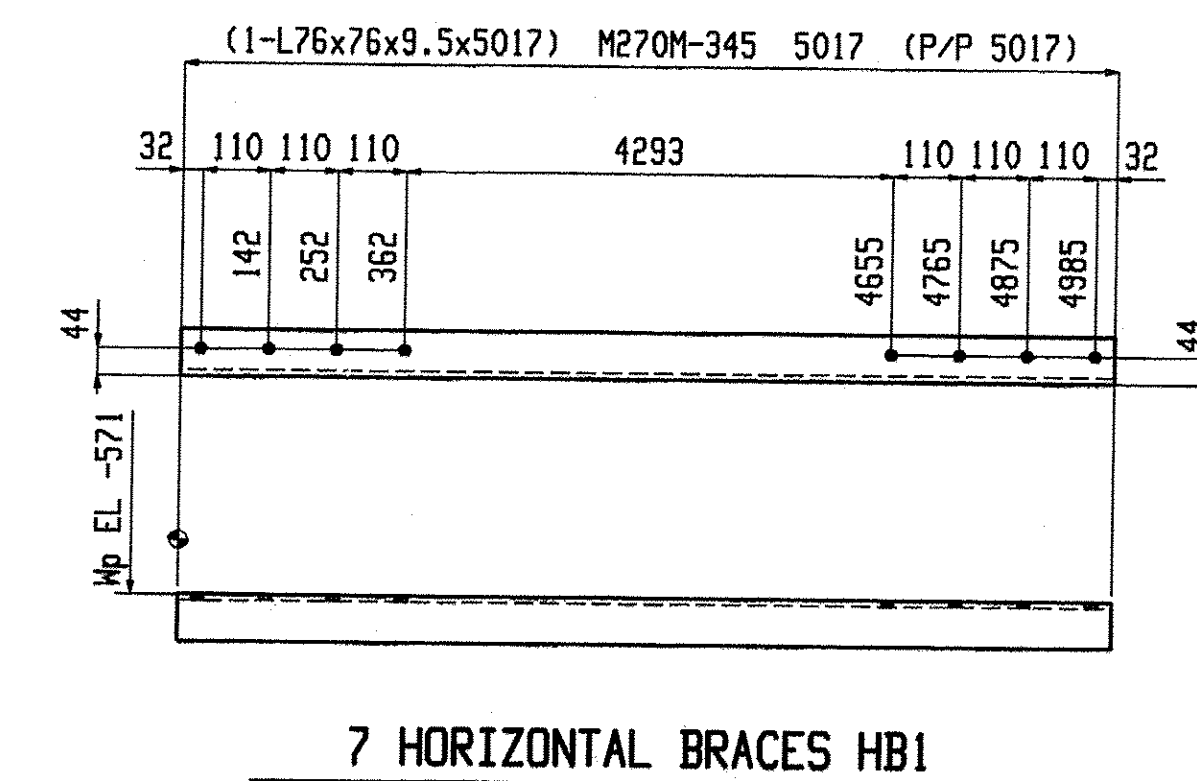
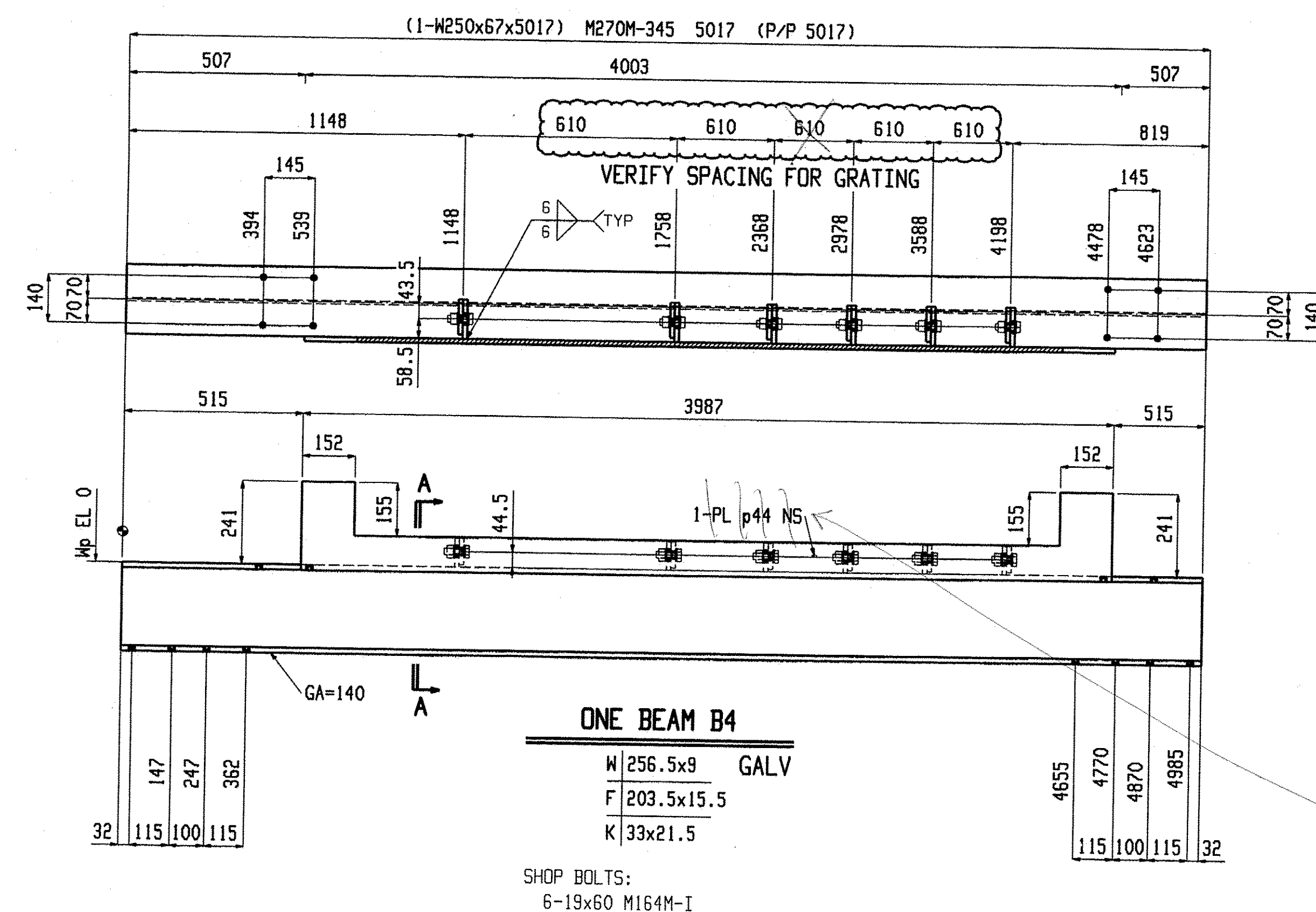
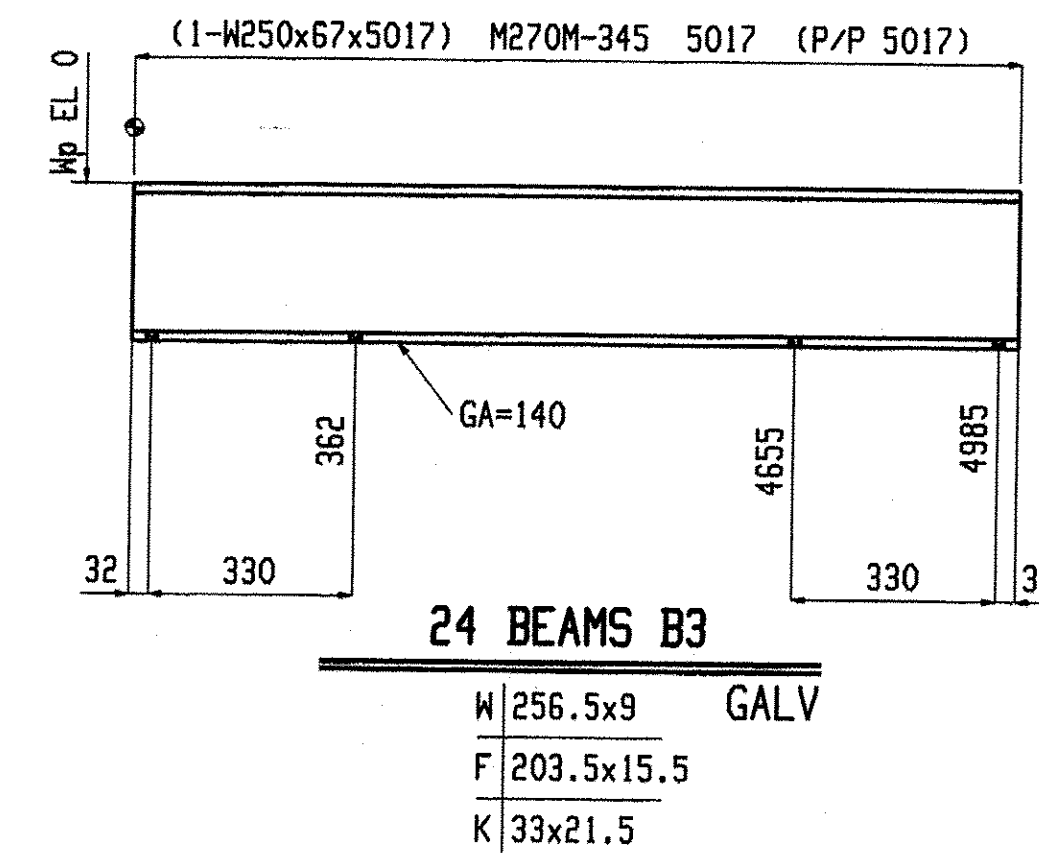
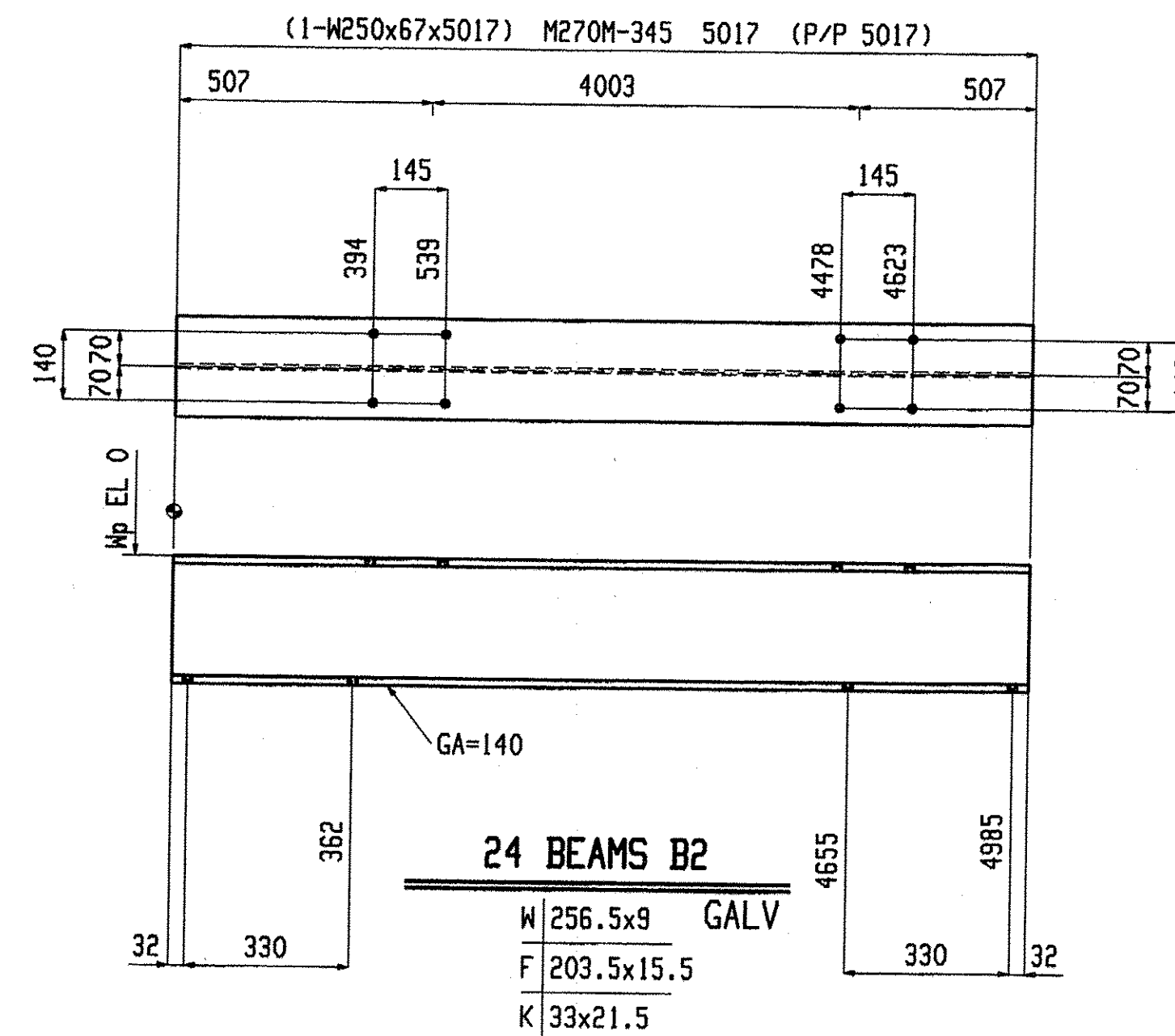
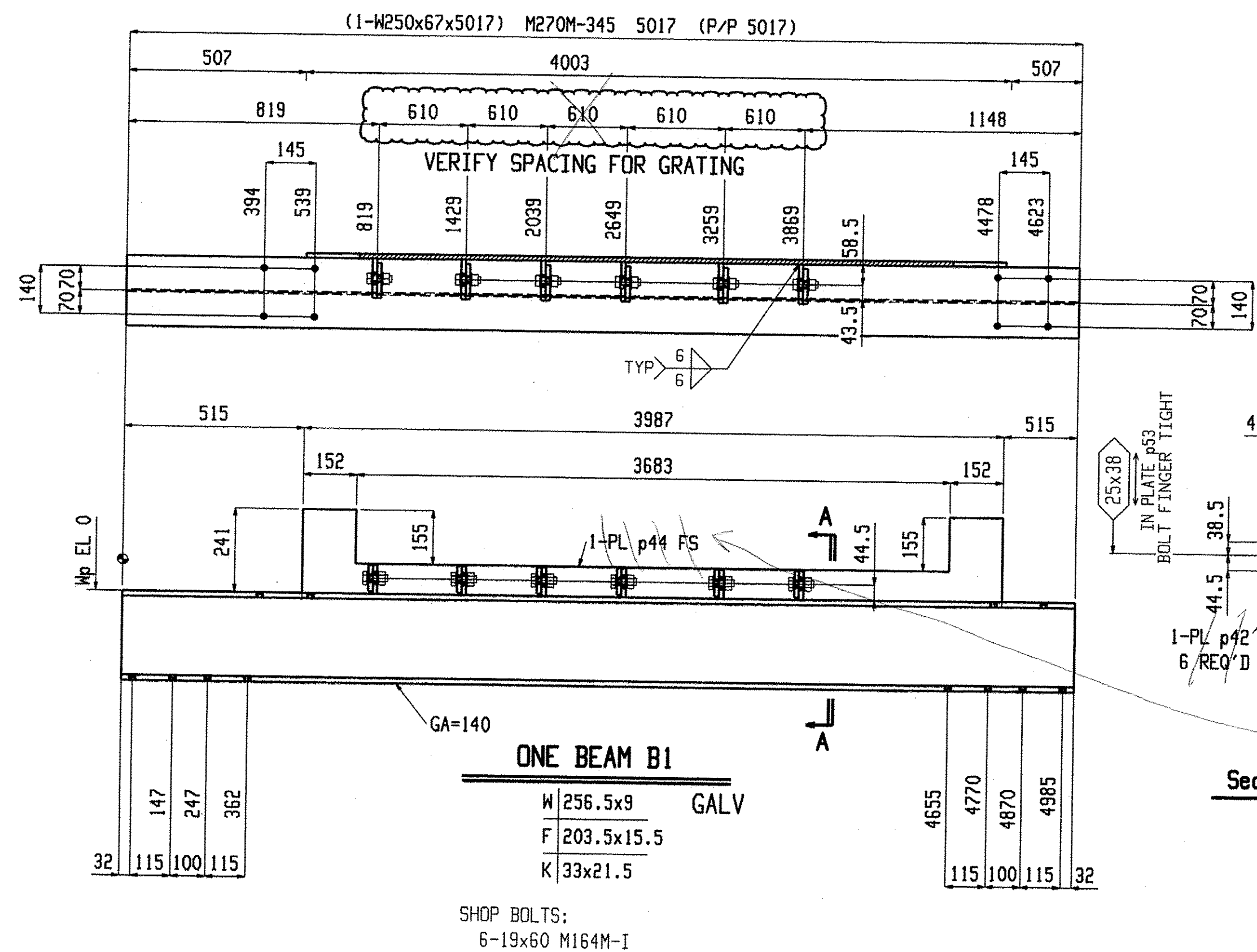
4 GROUP MEMBERS GM16

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4	A51	L51x51x6.4	11272				M270M-345			4	A49	L51x51x6.4	8965				M270M-345												
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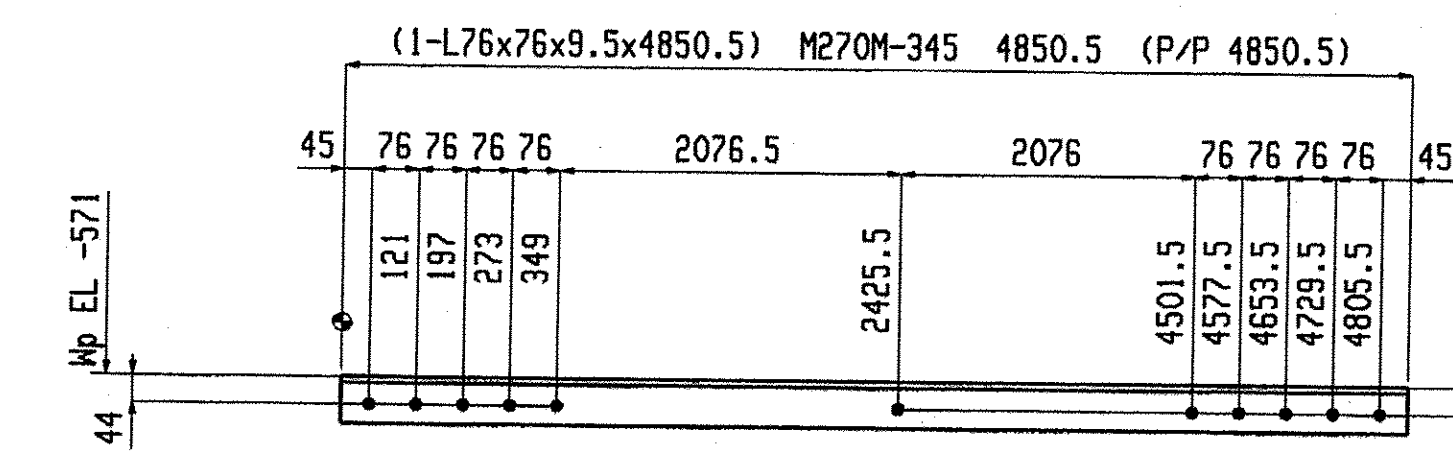
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 NOV 17 2009
 RECEIVED _____ APPROVED _____
 BY _____ DATE _____

Renaud Bros. Inc. 283 Fort Bridgeman Rd. #2 Vernon, VT. 05354 Phone 1-802 257-7383		Rev.No:	Date:	Holes:	21mm UNO
				BOLTS:	19mm DIA. M164M-I GALV UNO
				Steel GR:	M270M-GR345 UNO
				Paint:	PER SPECS (GREEN) UNO
Project:		DWN. BY:	Checked:	Sheet No.	Product
DUMMERSTON BRIDGE		EG	MRS	GM15, GM16	Sheet
DUMMERSTON, VT					



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SHOP NOTE:
TOE DIRECTION NEAR SIDE

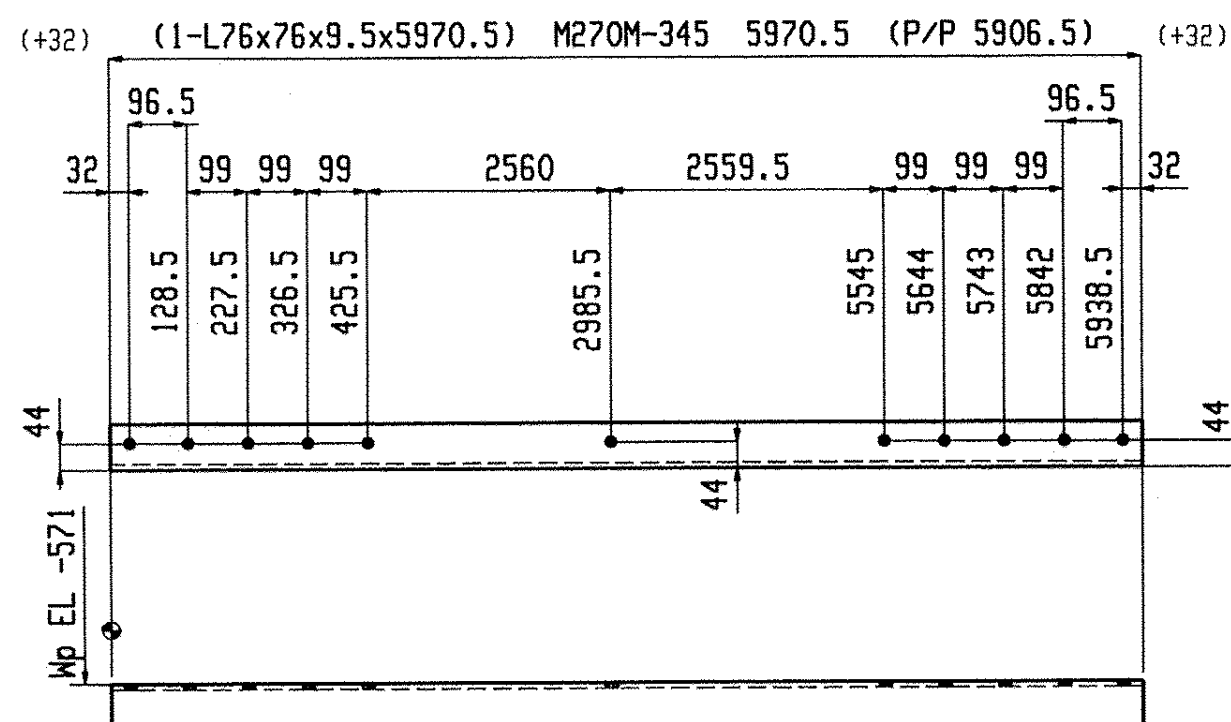
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ONE B1	BEAM			1	1				GALV	24 B3	BEAM			1	24				GALV	6		19 Dia M164M-I	60						2HD WASH
1 B1	M250x67		5017				M270M-345			24 B3	M250x67		5017				M270M-345			ONE B4	BEAM			1	1				GALV
1 p44	PL13x257		3987				M270M-345			1 B4	M250x67		5017				M270M-345			1 p44	PL13x257		3987						M270M-345
6 p42	PL13x83		101				M270M-345			6 p42	PL13x83		101				M270M-345			6 p42	PL13x83		101						M270M-345
6 p41	PL13x77		114				M270M-345			6 p41	PL13x77		114				M270M-345												
6	19 Dia M164M-I		60						2HD WASH																				
24 B2	BEAM			1	24				GALV																				
24 B2	M250x67		5017				M270M-345																						

These pieces are
Part of expansion
Joint item and
drawings

Total weight : 17512

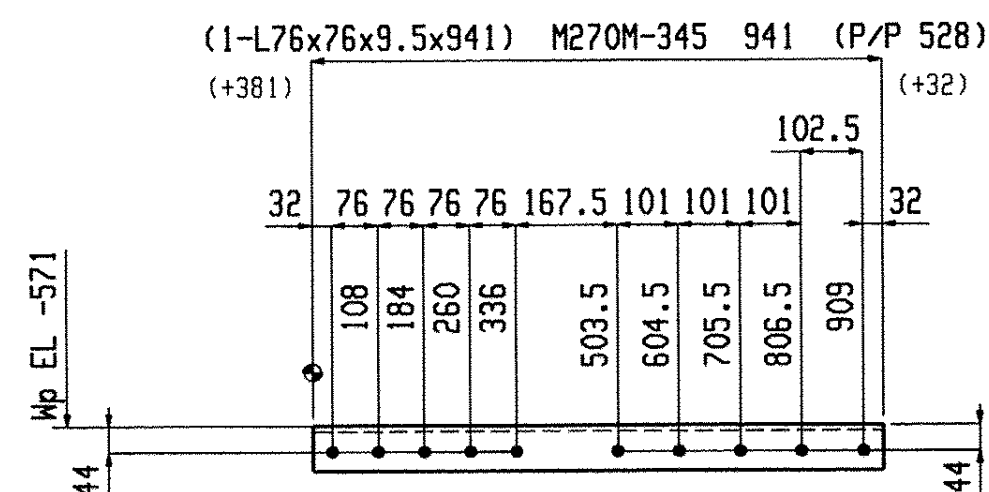
Need to separate out
beams as they are
paid by weight. Other
pieces are Lump Sum
payment

Renaud Bros. Inc.		Holes: 21mm UNO	
283 Fort Bridgeman Rd. #2 Vernon, VT. 05354 Phone 1-802 257-7383		BOLTS: 19mm DIA. M164M-I GALV UNO	
		Steel GR: M270M-GR345 UNO	
		Paint: PER SPECS (GREEN) UNO	
Rev. No:		Date: 9-9-09	
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DW. BY: EG		Checked: MRS	
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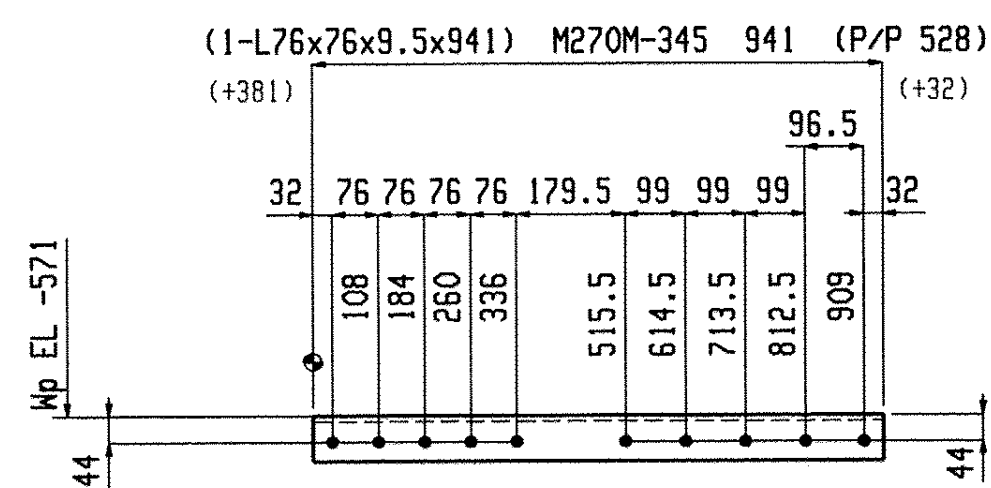
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SHOP NOTE:
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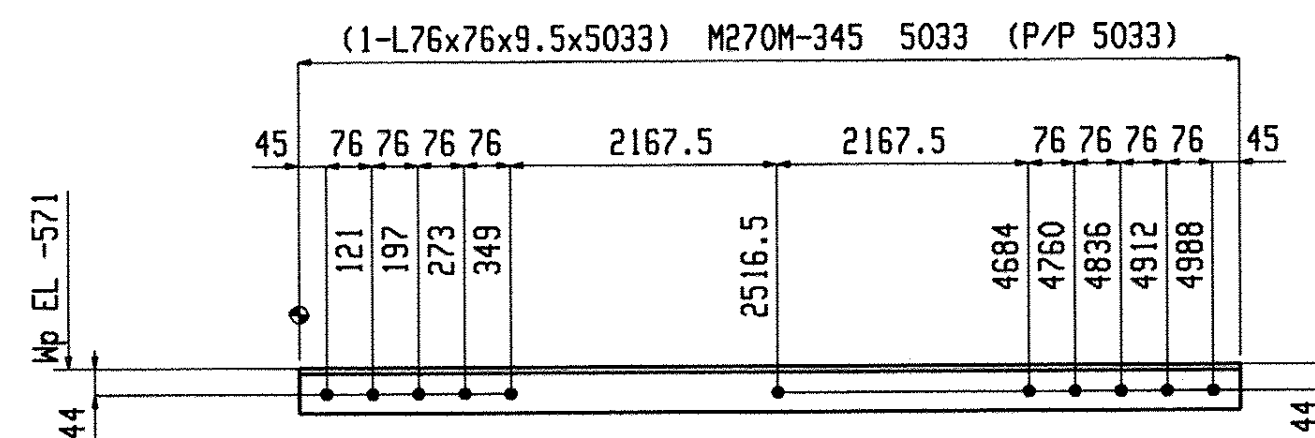
14 HORIZONTAL BRACES HB7

SHOP NOTE:
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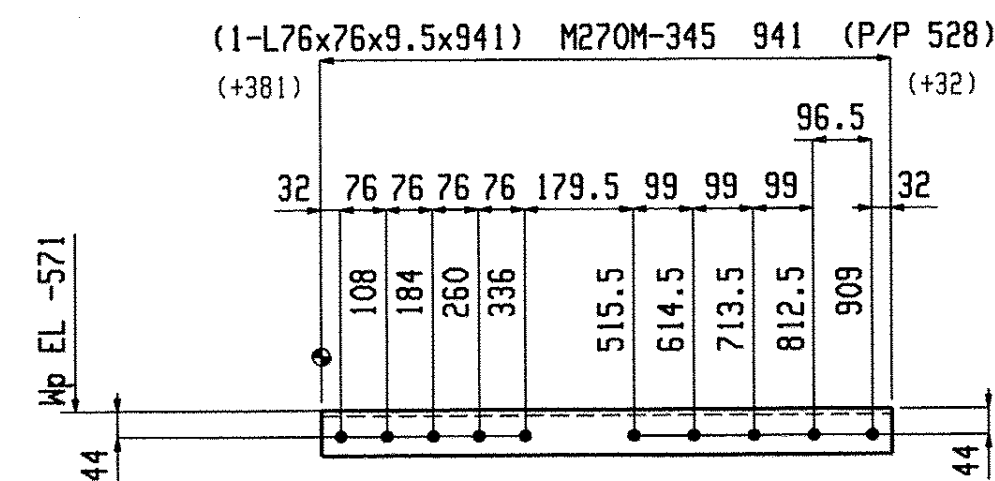
ONE HORIZONTAL BRACE HB11

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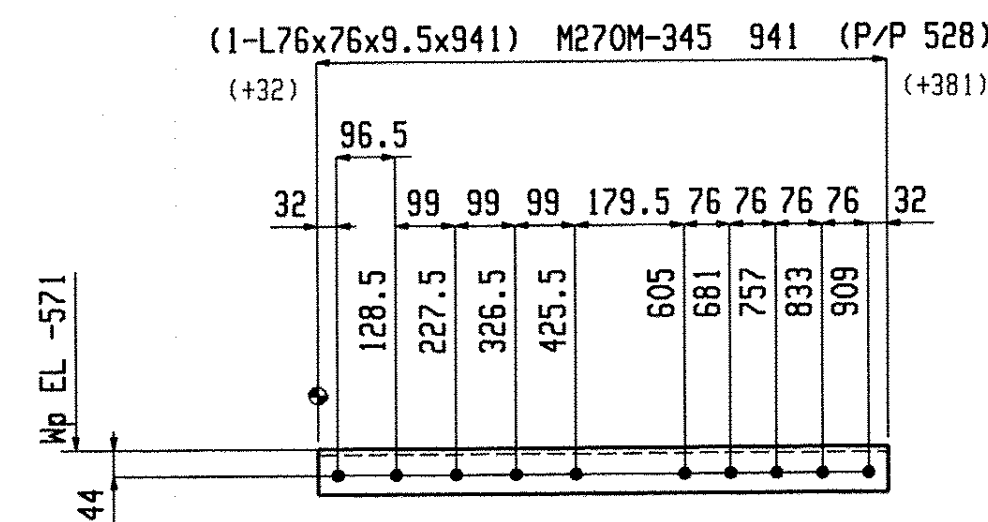
14 HORIZONTAL BRACES HB4

SHOP NOTE:
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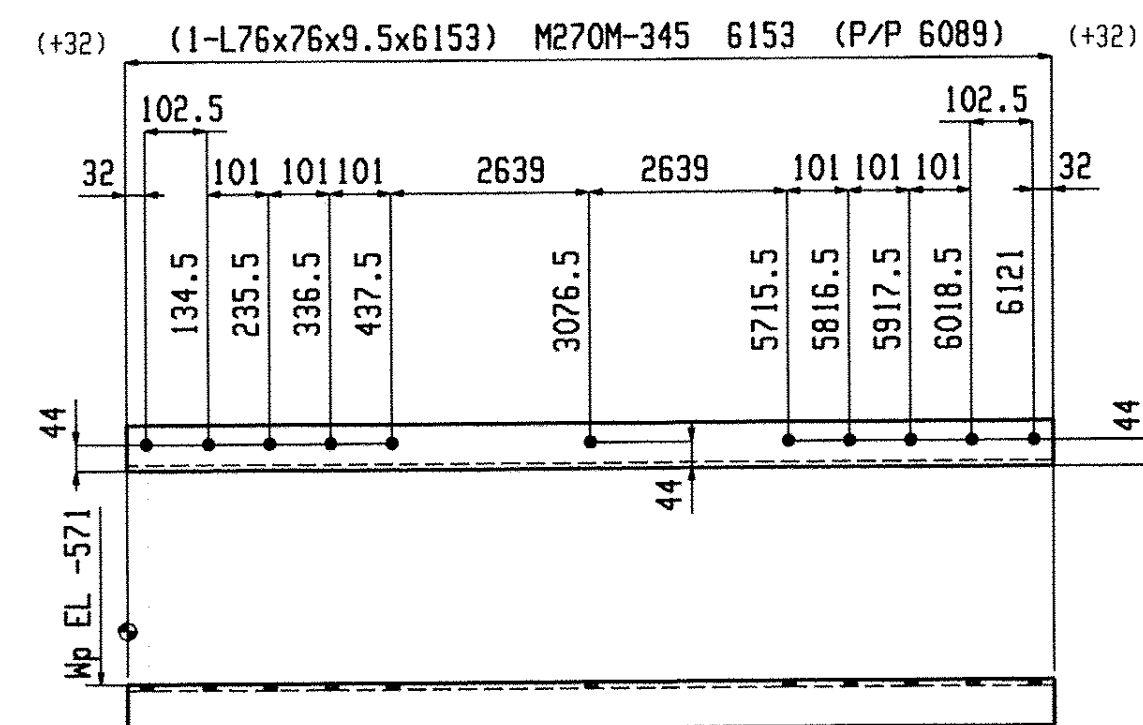
ONE HORIZONTAL BRACE HB8

SHOP NOTE:
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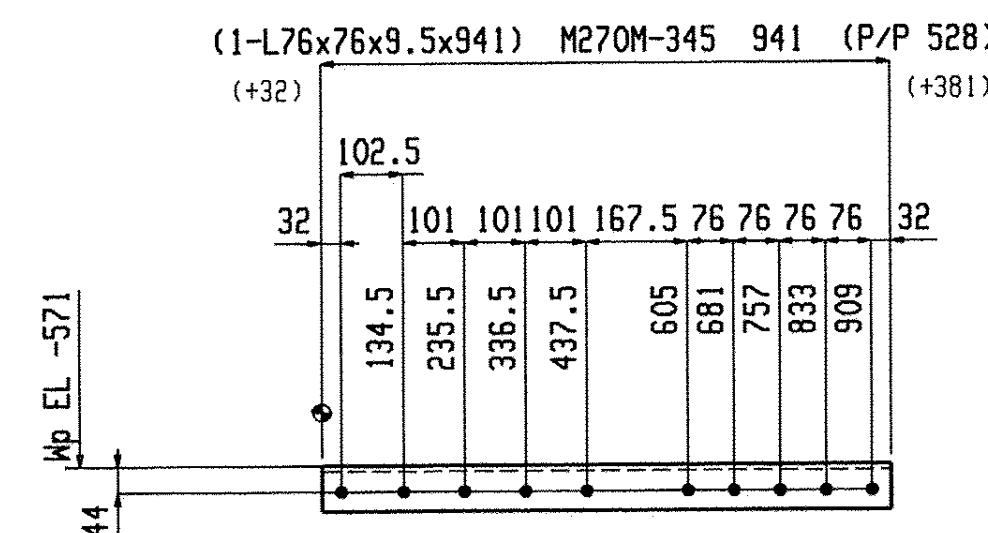
ONE HORIZONTAL BRACE HB5

SHOP NOTE:
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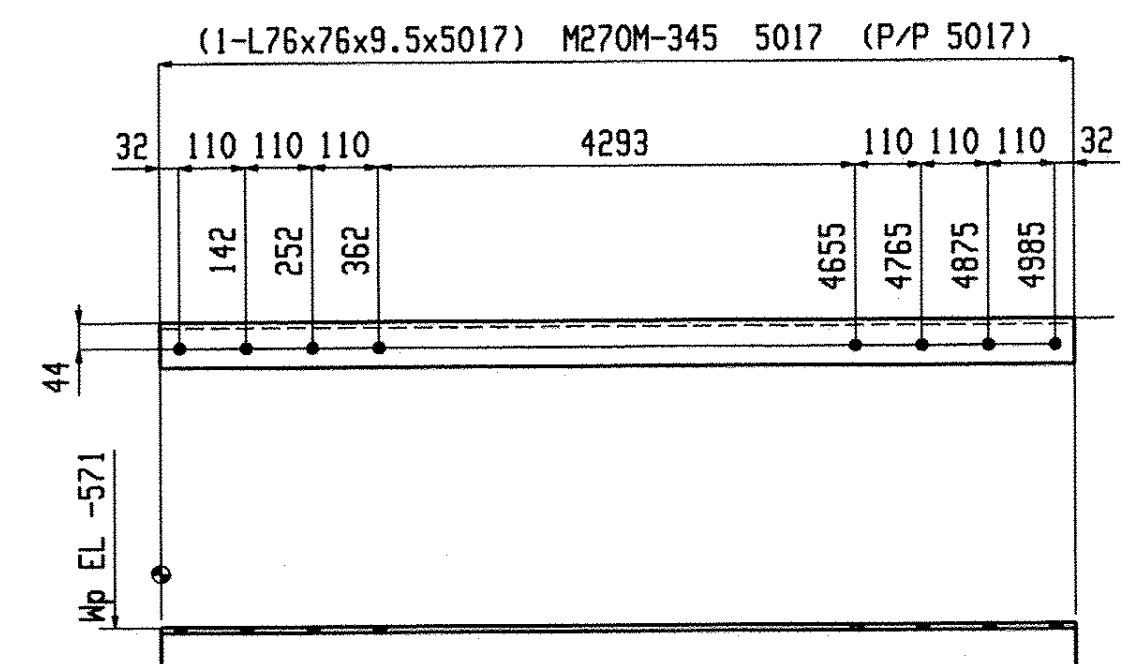
14 HORIZONTAL BRACES HB9

SHOP NOTE:
TOE DIRECTION FAR SIDE



14 HORIZONTAL BRACES HB6

SHOP NOTE:
TOE DIRECTION FAR SIDE



8 HORIZONTAL BRACES HB10

SHOP NOTE:
TOE DIRECTION NEAR SIDE

BILL OF MATERIAL									BILL OF MATERIAL									BILL OF MATERIAL								
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2	HB3	HORIZONTAL BRACE		1	2				14	HB6	HORIZONTAL BRACE		1	14				14	HB9	HORIZONTAL BRACE		1	14			
2	HB3	L76x76x9.5	5970.5				M270M-345		14	HB6	L76x76x9.5	941				M270M-345		14	HB9	L76x76x9.5	6153				M270M-345	
14	HB4	HORIZONTAL BRACE		1	14				14	HB7	HORIZONTAL BRACE		1	14				8	HB10	HORIZONTAL BRACE		1	8			
14	HB4	L76x76x9.5	5033				M270M-345		14	HB7	L76x76x9.5	941				M270M-345		8	HB10	L76x76x9.5	5017				M270M-345	
ONE	HB5	HORIZONTAL BRACE		1	1				ONE	HB8	HORIZONTAL BRACE		1	1				ONE	HB11	HORIZONTAL BRACE		1	1			
1	HB5	L76x76x9.5	941				M270M-345		1	HB8	L76x76x9.5	941				M270M-345		1	HB11	L76x76x9.5	941				M270M-345	

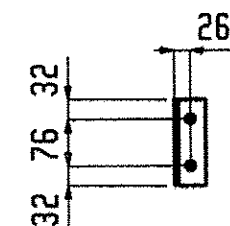
Total weight : 2545

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NOV 17 2003
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BY _____ DATE _____

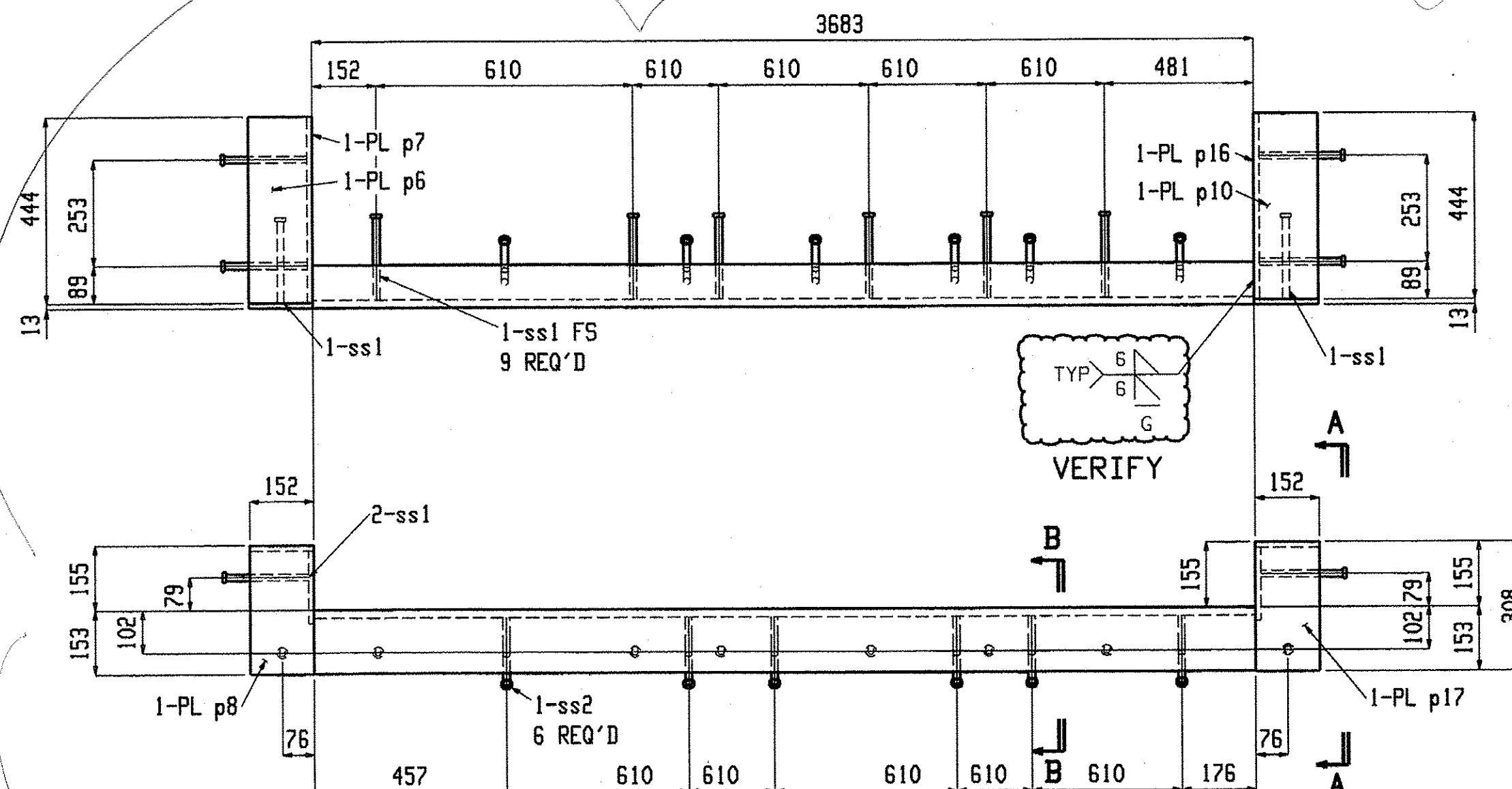
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		BOLTS: 19mm DIA. M164M-I GALV UNF	
		Steel GR: M270M-GR345 UNF	
		Paint: PER SPECS (GREEN) UNF	
Rev. No:	Date:	Surface Prep: PER SPECS	
Project: DUMMERSTON BRIDGE DUMMERSTON, VT		Date: 9-9-09	Job No. 840 1442 (26)
DWN. BY: EG	Checked: MRS	Sheet No. 2	

Product?

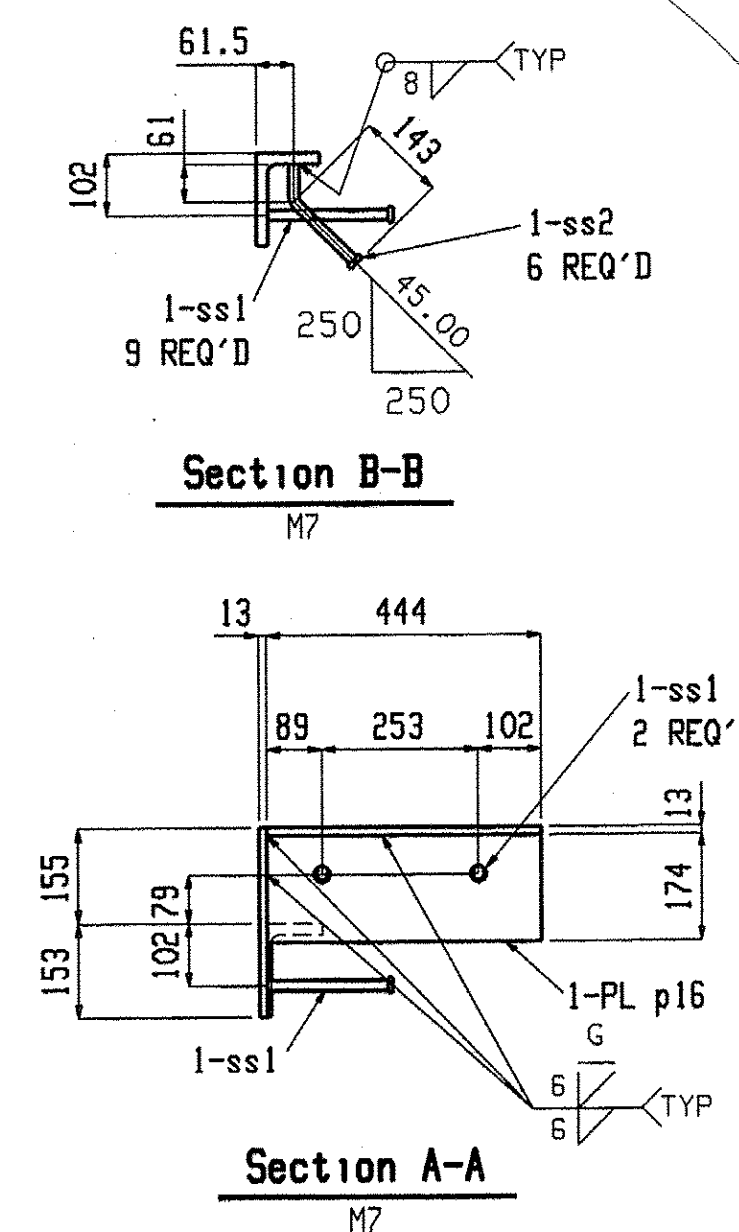
product?



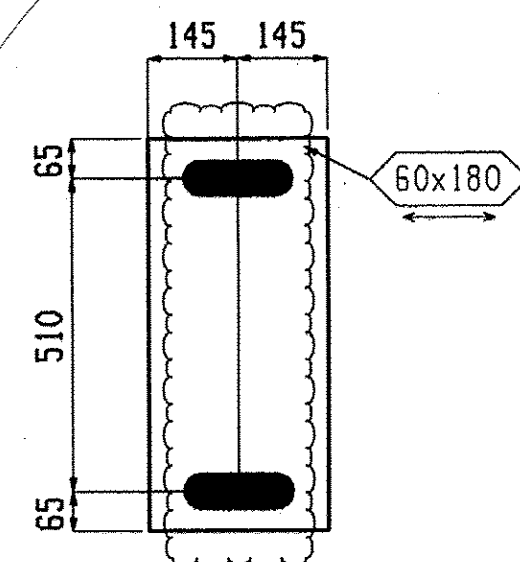
24 MISCS M6



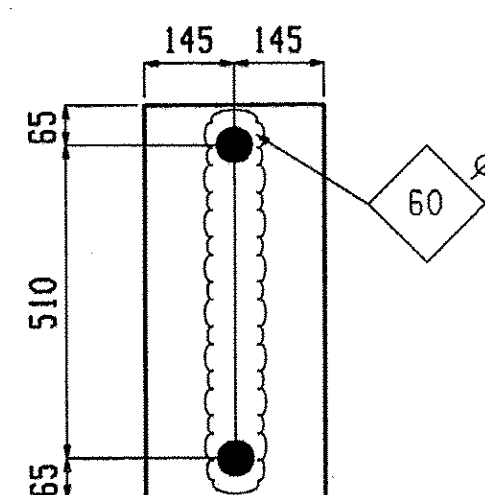
2 MISCS M7



These pieces are part of expansion joint item and drawings.



2 MISCS BRG1



2 MISCS BRG2

These pieces are part of the bearing device item and drawings.

Need to separate out beams as they are paid by weight. Other pieces are lump sum payment

Total weight : 482

Nov 05 2009 10:54:37 AM

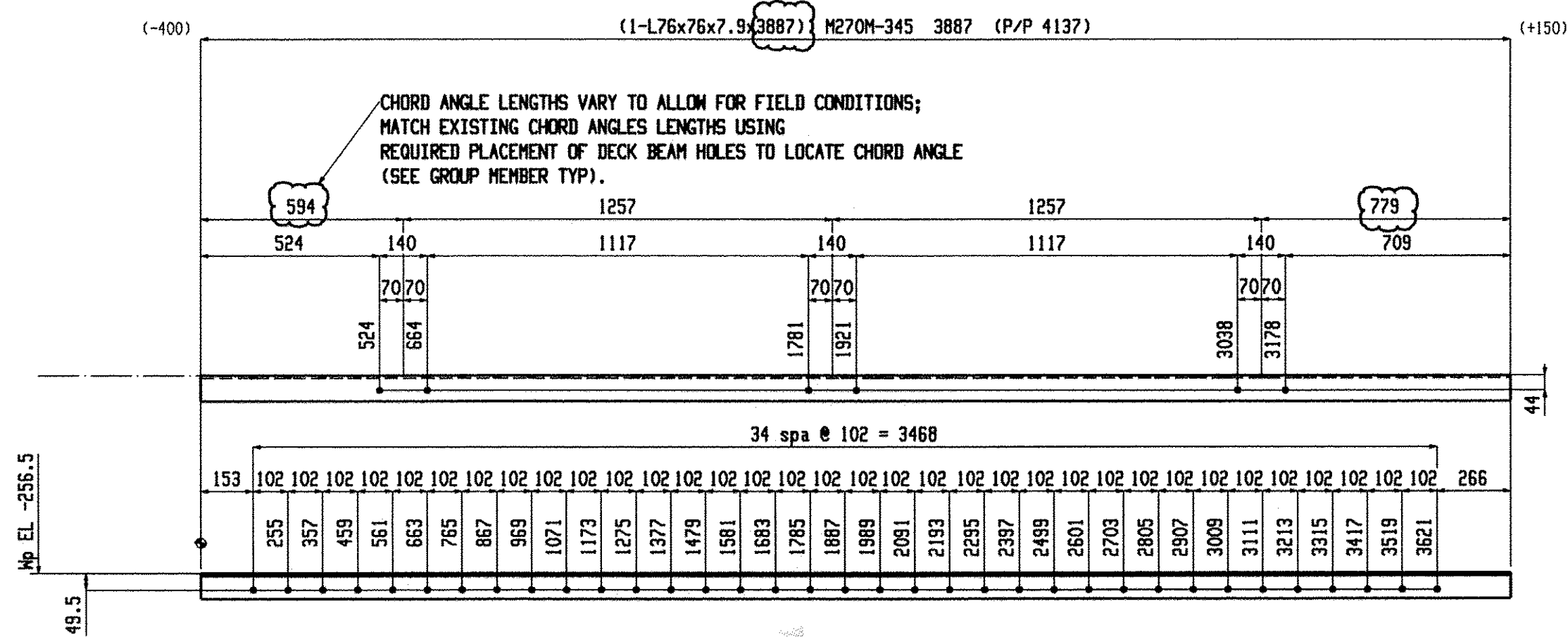
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24	M6	MISC		1	24				2	p10	PL13x152	444				M270M-345		2	BRG1	PL20x290	640				M270M-345	
24	M6	L51x51x6.4	140				M270M-345		2	p8	PL13x152	308				M270M-345										
									2	p17	PL13x152	308				M270M-345										
									18	ss1	CP16	203				A108		2	BRG2	MISC		1	2			
									6	ss3	CP16	203				A108		2	BRG2	PL20x290	640				M270M-345	
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2	M7	L152x102x19	3683				M270M-345																			
2	p7	PL13x174	444				M270M-345																			
2	p16	PL13x174	444				M270M-345																			
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DATE: 1/12/2010

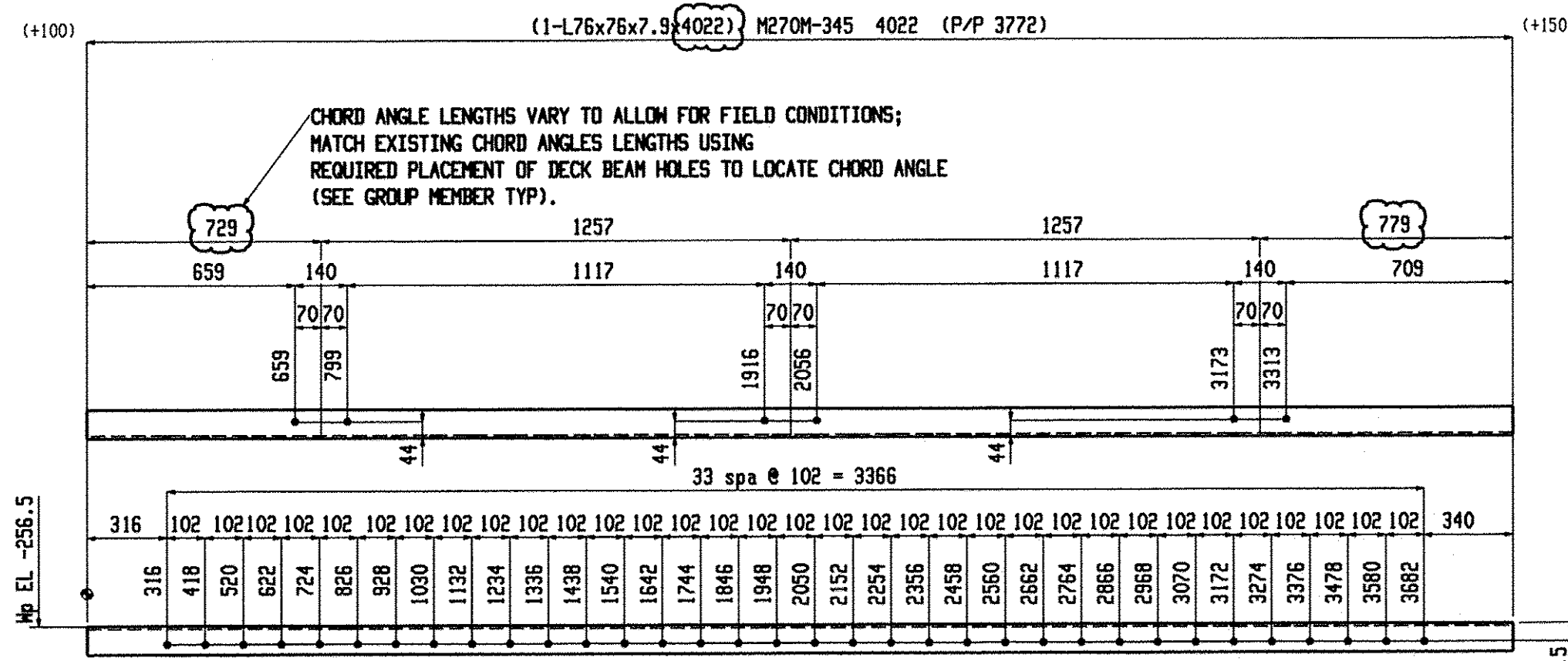
Renaud Bros. Inc. 283 Fort Bridgeman Rd. #2 Vernon, VT. 05354 Phone 1-802 257-7383		Holes:		21mm UNO
		BOLTS:		19mm DIA. M16M-I GALV UNO
		Steel GR:		M270M-GR345 UNO
		Paint:		PER SPECS (GREEN) UNO
Rev.No:	Date:	Surface Prep:		PER SPECS
Project:		Date:		Job No.
DUMMERSTON BRIDGE		9-9-09		BHO 1442(28)
DUMMERSTON, VT		DWN. BY:	Checked:	Sheet No.
		EG	MRS	4

Nov 06 2009 10:54:40 AM



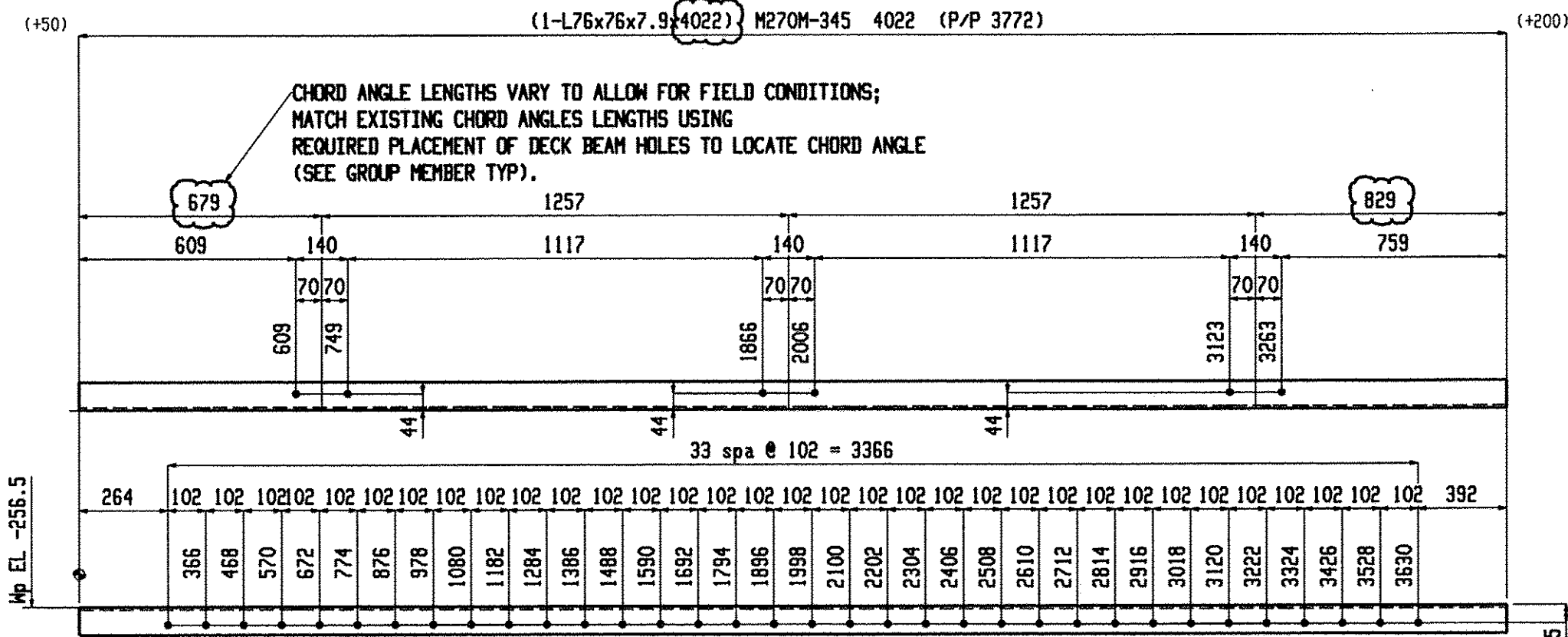
2 ANGLES A1

SHOP NOTE:
TOE DIRECTION NEAR SIDE



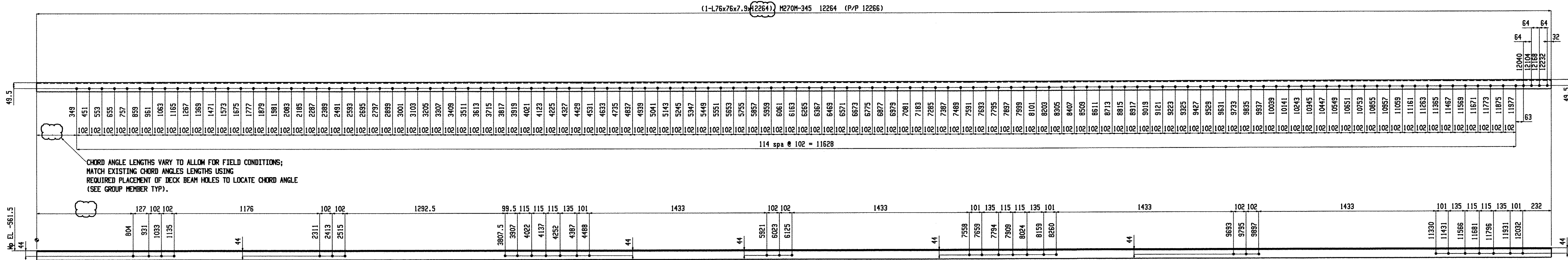
2 ANGLES A2

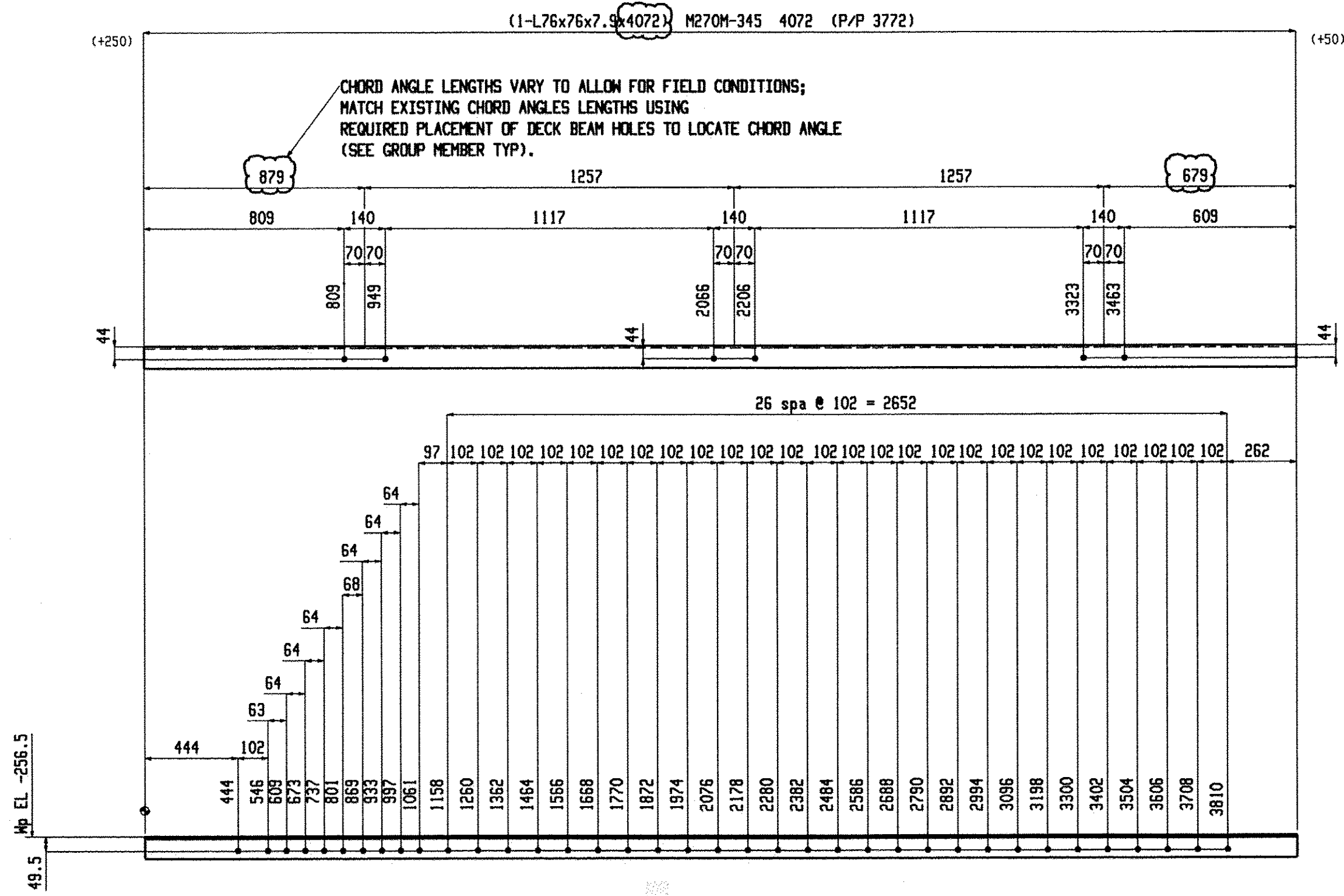
SHOP NOTE:
TOE DIRECTION FAR SIDE



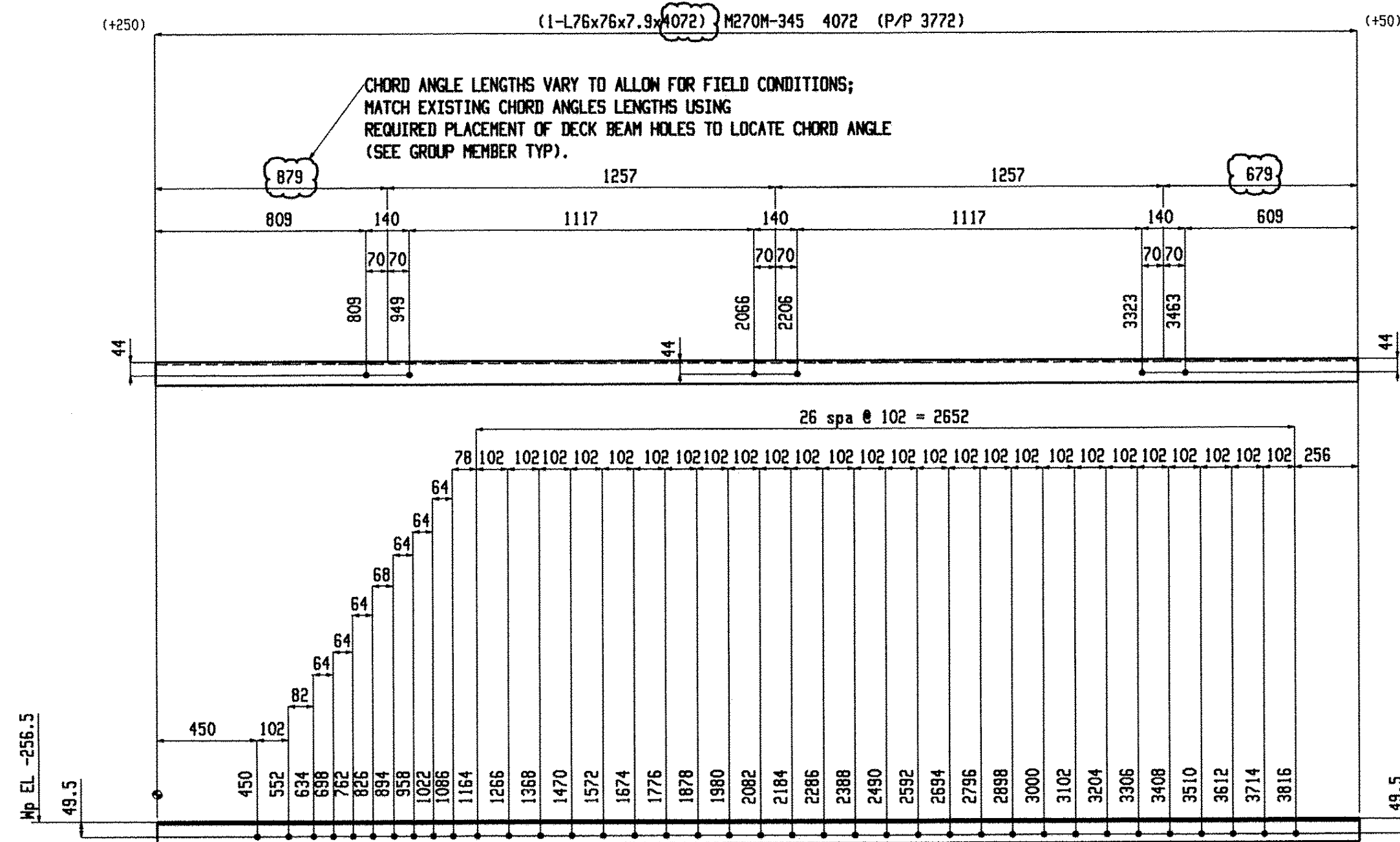
2 ANGLES A3

SHOP NOTE:
TOE DIRECTION FAR SIDE



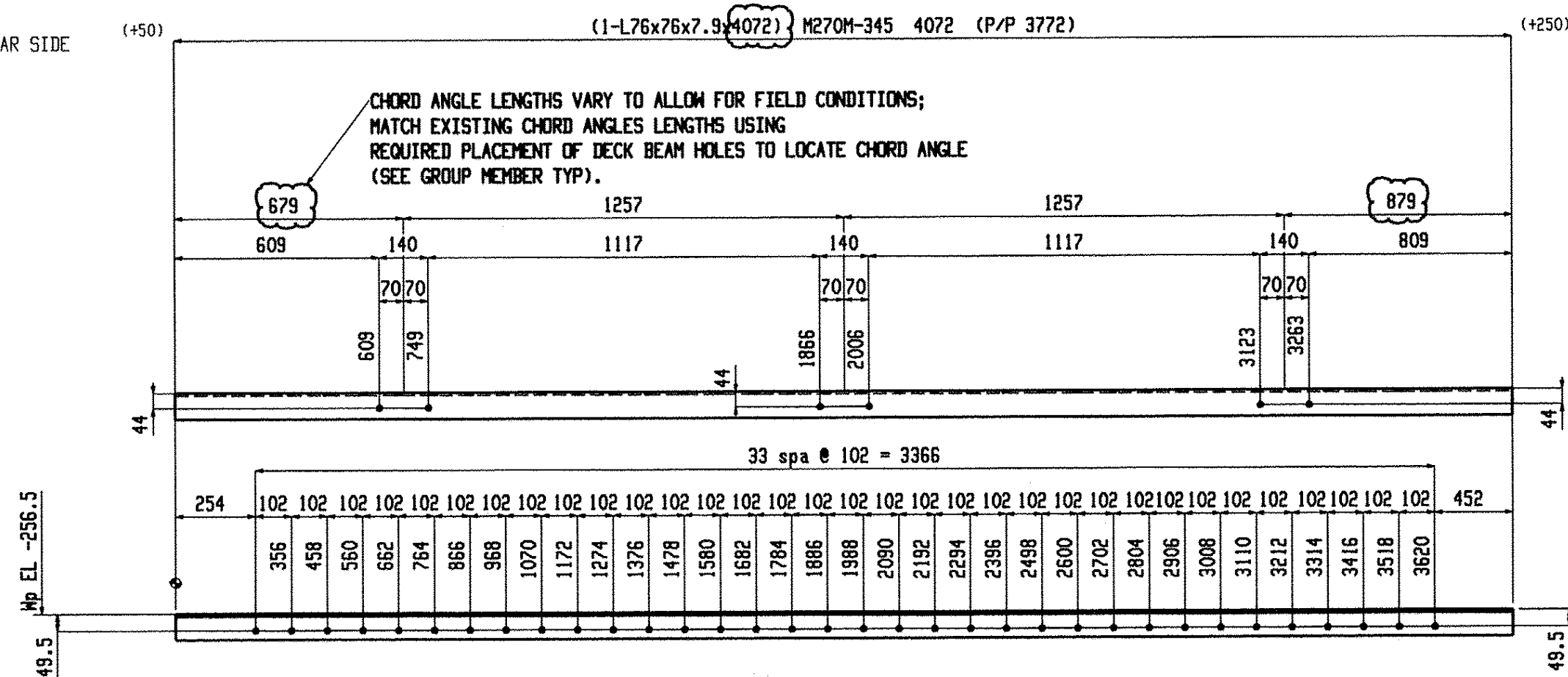


Nov 06 2003 10:54:48 AM



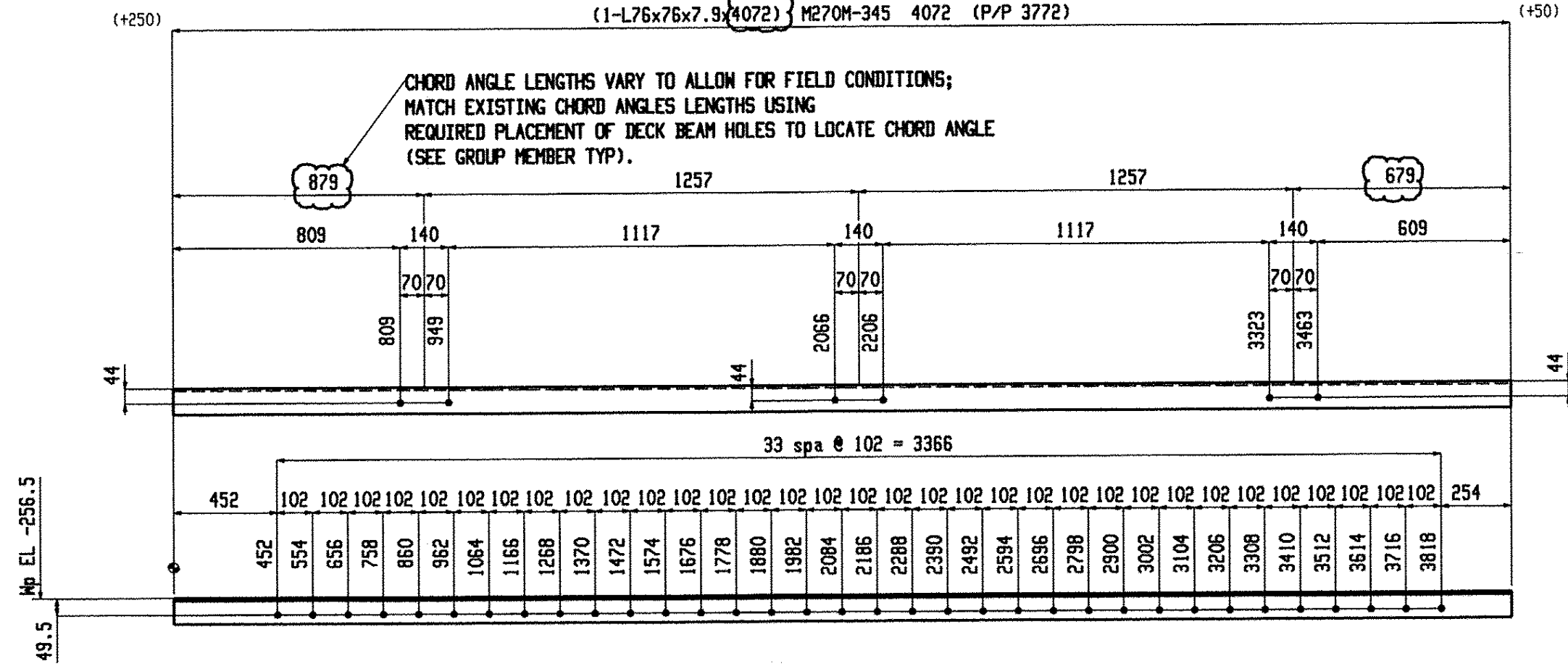
2 ANGLES A9

SHOP NOTE:
TOE DIRECTION NEAR SIDE



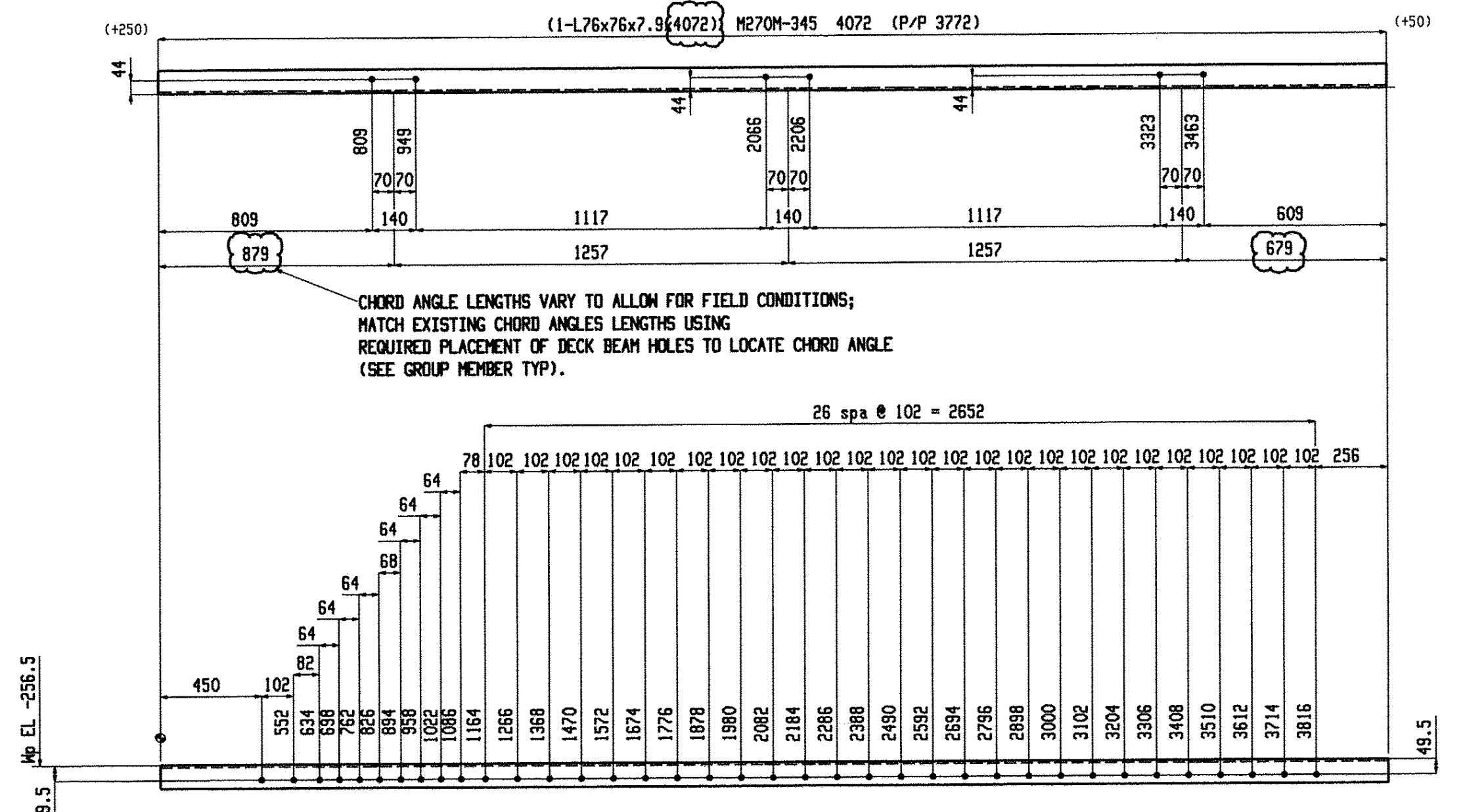
2 ANGLES A11

SHOP NOTE:
TOE DIRECTION NEAR SIDE



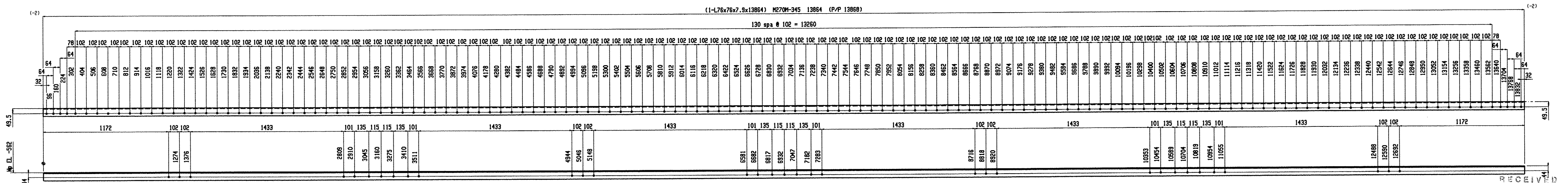
2 ANGLES A10

SHOP NOTE:
TOE DIRECTION NEAR SIDE



2 ANGLES A12

SHOP NOTE:
TOE DIRECTION FAR SIDE



2 ANGLES A13

SHOP NOTE:
TOE DIRECTION NEAR SIDE

BILL OF MATERIAL									BILL OF MATERIAL									BILL OF MATERIAL								
Qty	Piece			Seq	Seq	Adv	Steel		Qty	Piece			Seq	Seq	Adv	Steel		Qty	Piece			Seq	Seq	Adv	Steel	
Tot.	Mark	Description	Length	NO.	Qty	ABM #	Grade	Remarks	Tot.	Mark	Description	Length	NO.	Qty	ABM #	Grade	Remarks	Tot.	Mark	Description	Length	NO.	Qty	ABM #	Grade	Remarks
2	A9	ANGLE		1	2				2	A11	ANGLE		1	2				2	A13	ANGLE		1	2			
2	A9	L76x76x7.9	4072				M270M-345		2	A11	L76x76x7.9	4072				M270M-345		2	A13	L76x76x7.9	13864				M270M-345	
2	A10	ANGLE		1	2				2	A12	ANGLE		1	2												
2	A10	L76x76x7.9	4072				M270M-345		2	A12	L76x76x7.9	4072				M270M-345										

Rev 05-2005

1023148-A1

NOTE: WORK THIS DRAWING WITH
GROUP MEMBER GM3

Renaud Bros. Inc.
283 Fort Bridgeman Rd. #2
Vernon, VT. 05354
Phone 1-802 257-7383

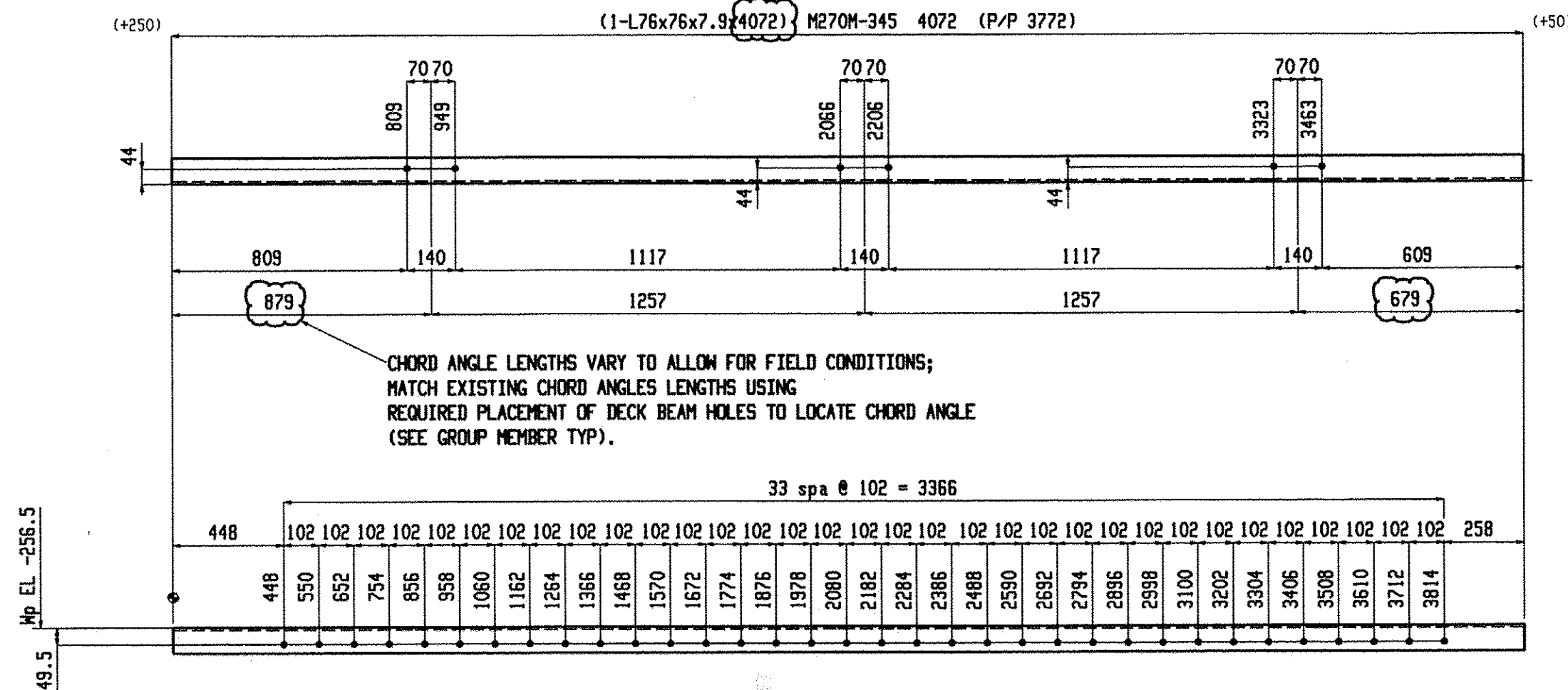
Holes: 21mm UNO
BOLTS: 19mm DIA. M164M-I GALV UNO
Steel GR: M270M-GR345 UNO
Paint: PER SPECS (GREEN) UNO
Surface Prep: PER SPECS

Project: **DUMMERSTON BRIDGE**
DUMMERSTON, VT

Date: 9-9-09
Job No. **BHO 1442 (28)**
DW. BY: EG
Checked: MRS
Sheet No. **7**

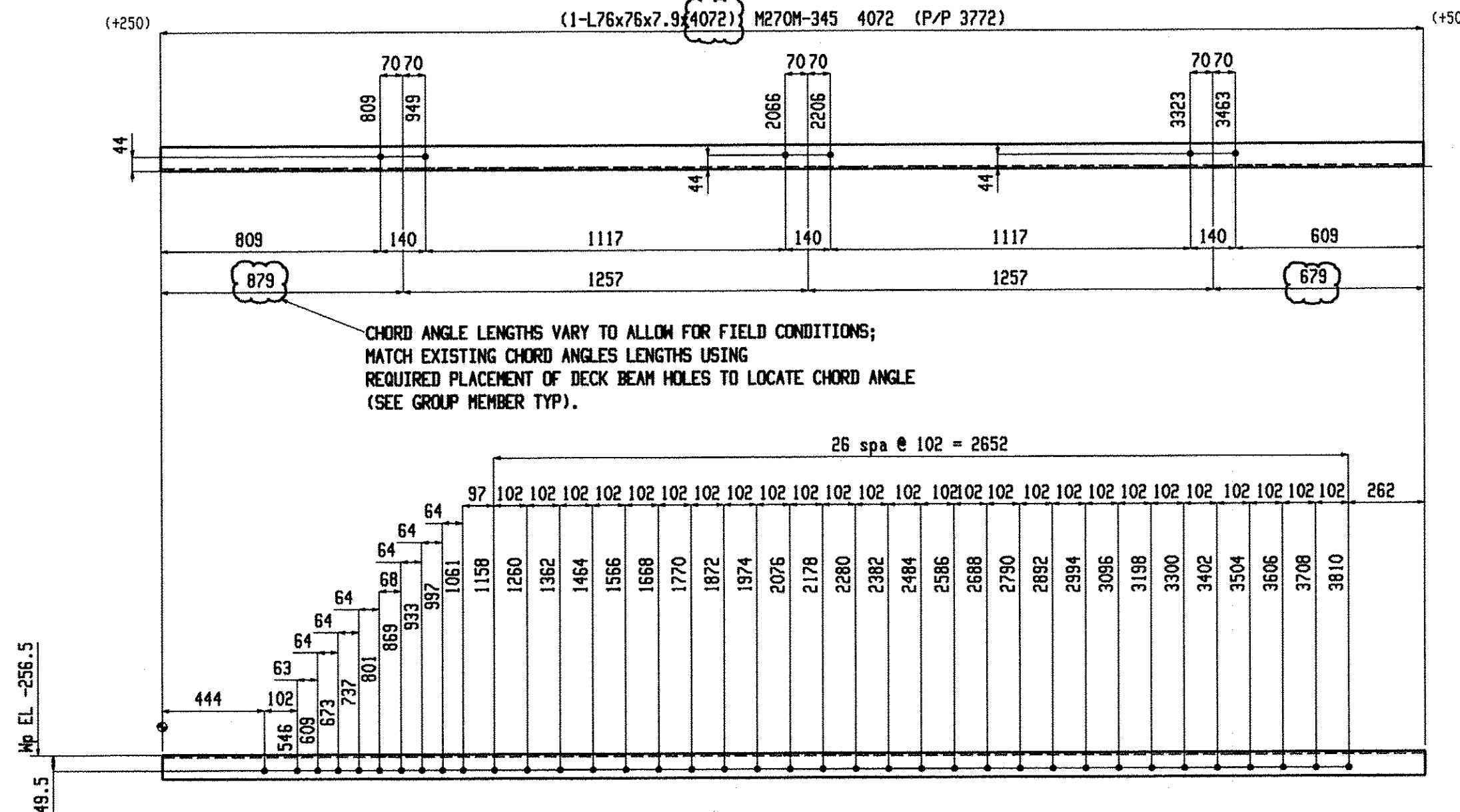
Total weight: 542

Nov 06 2009 10:54:53 AM



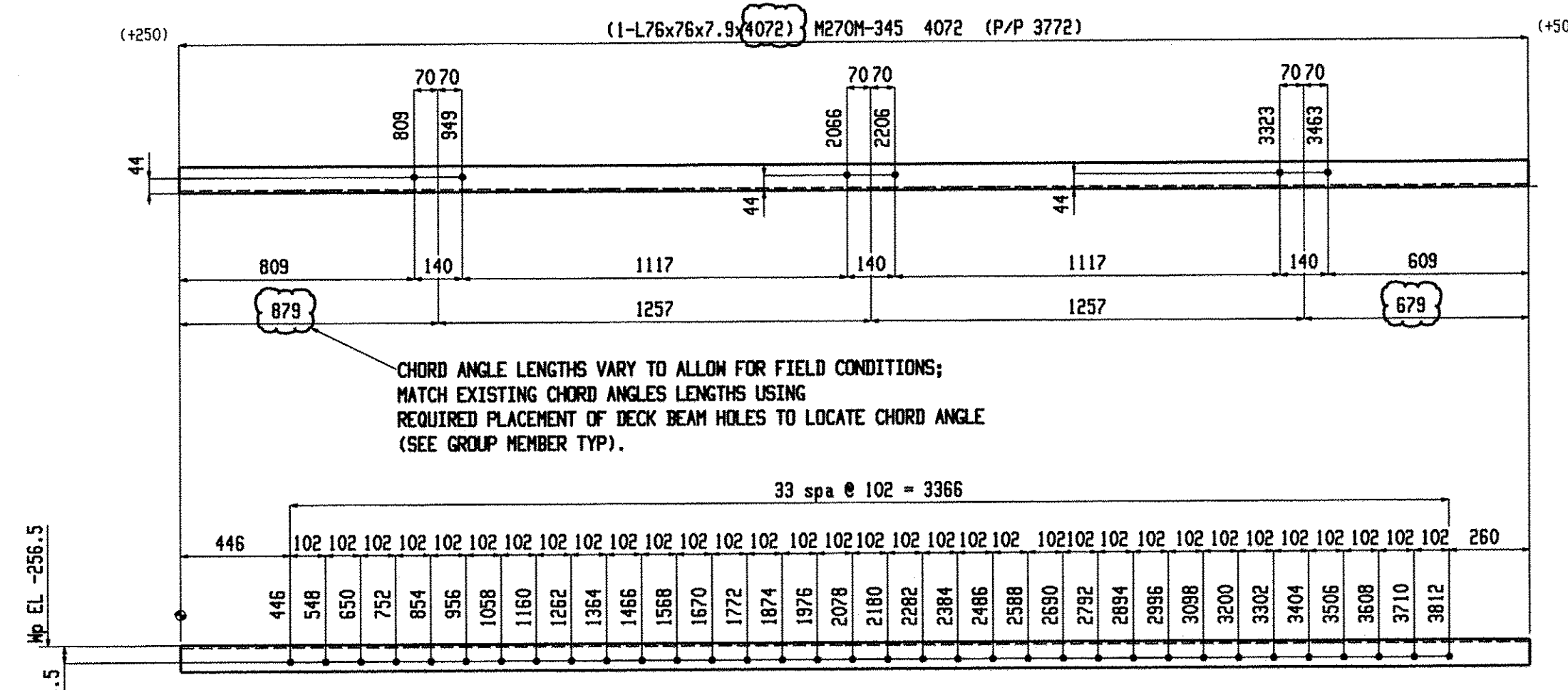
2 ANGLES A14

SHOP NOTE:
TOE DIRECTION FAR SIDE



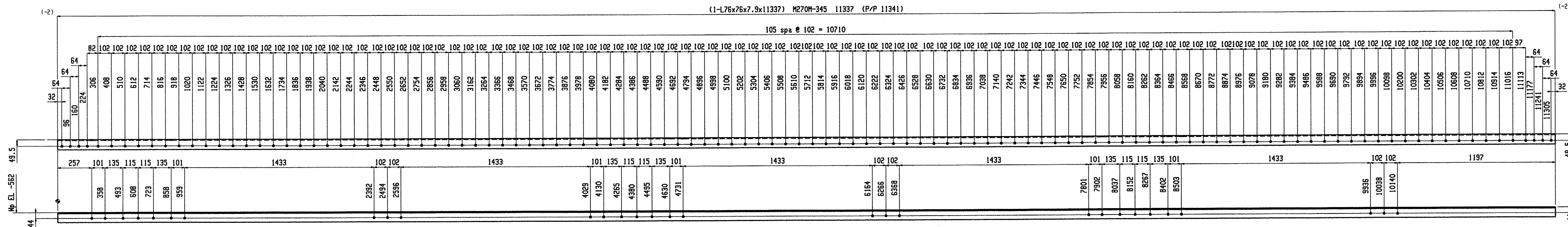
2 ANGLES A16

SHOP NOTE:
TOE DIRECTION FAR SIDE



2 ANGLES A15

SHOP NOTE:
TOE DIRECTION FAR SIDE



2 ANGLES A17

SHOP NOTE:
TOE DIRECTION NEAR SIDE

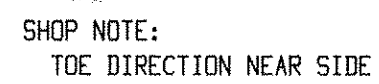
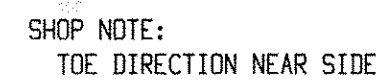
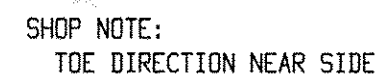
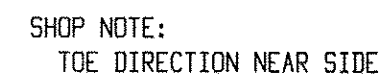
BILL OF MATERIAL									BILL OF MATERIAL									BILL OF MATERIAL								
Qty	Piece			Seq	Seq	Adv	Steel		Qty	Piece			Seq	Seq	Adv	Steel		Qty	Piece			Seq	Seq	Adv	Steel	
Tot.	Mark	Description	Length	NO.	Qty	ABM #	Grade	Remarks	Tot.	Mark	Description	Length	NO.	Qty	ABM #	Grade	Remarks	Tot.	Mark	Description	Length	NO.	Qty	ABM #	Grade	Remarks
2	A14	ANGLE		1	2				2	A16	ANGLE		1	2												
2	A14	L76x76x7.9	4072				M270M-345		2	A16	L76x76x7.9	4072				M270M-345										

Total weight: 423

RECEIVED
NOV 17 2009
APPROVED
BY DATE

NOTE: WORK THIS DRAWING WITH
GROUP MEMBER GM4

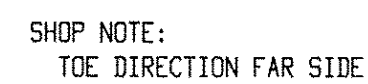
Renaud Bros. Inc. 283 Fort Bridgeman Rd. #2 Vernon, VT. 05354 Phone 1-802 257-7383		Holes: 21mm UNF
Bolts: 19mm DIA. M164M-I GALV UNF		Steel GR: M270M-GR345 UNF
Paint: PER SPECS (GREEN) UNF		Surface Prep: PER SPECS
Project: DUMMERSTON BRIDGE DUMMERSTON, VT	Date: 9-9-09	Job No. BHO 1442 (28)
Rev. No. EG	Checked: MRS	Sheet No. 8



NOTE: WORK THIS DRAWING WITH
GROUP MEMBER GM5

Renaud Bros. Inc. 283 Fort Bridgeman Rd. #2 Vernon, VT. 05354 Phone 1-802 257-7383		Holes:	21mm UNO
		BOLTS:	19mm DIA. M164M-I GALV UNO
		Steel GR:	M270M-GR345 UNO
		Paint:	PER SPECS (GREEN) UNO
	Rev. No:	Date:	Surface Prep: PER SPECS
Project: DUMMERSTON BRIDGE DUMMERSTON, VT		Date: 9-9-09	Job No. B4h 1442 (28)
		DWN. BY: ENG	Checked: MRS
			Sheet No. 9

~~Total weight: 435~~

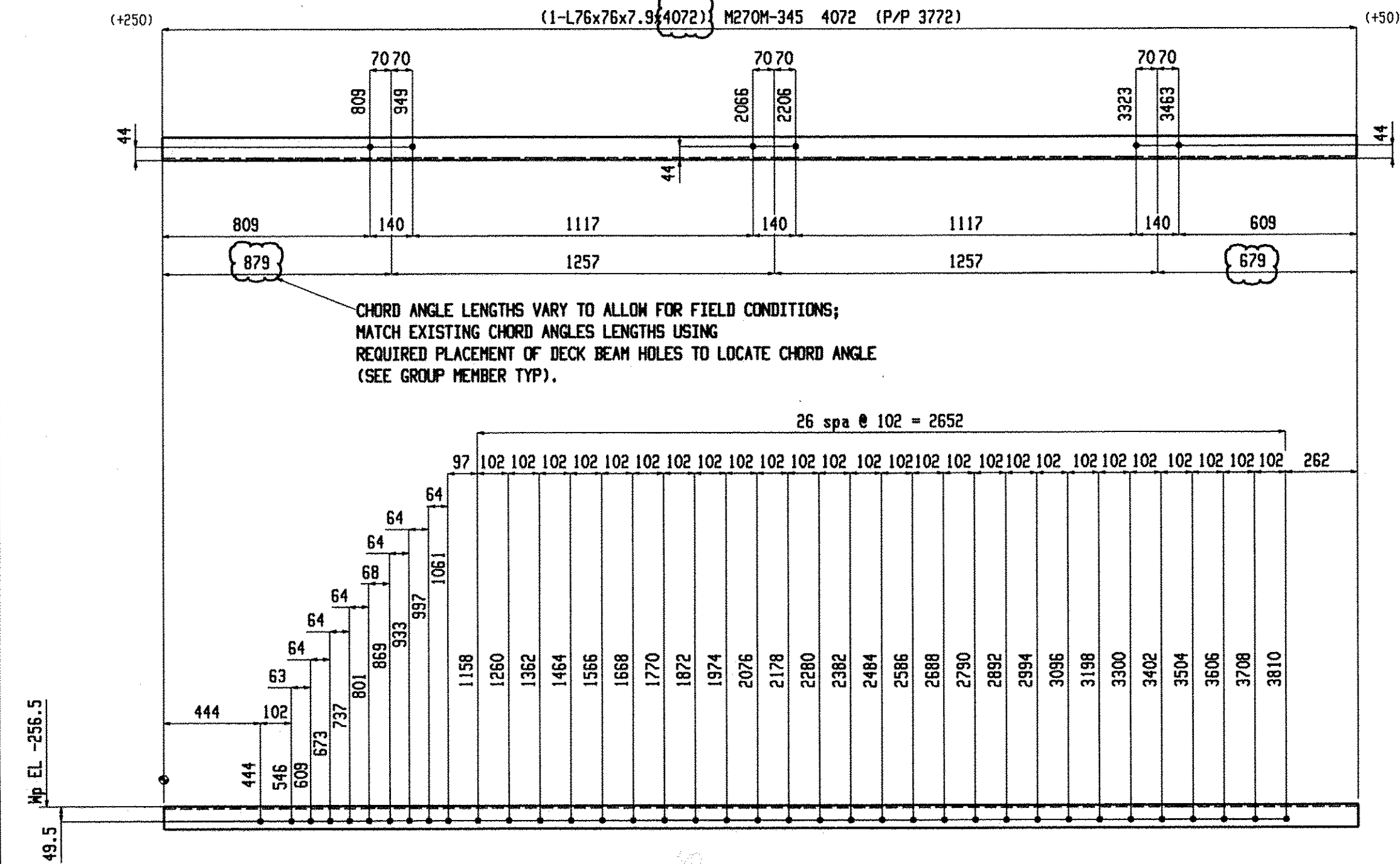


NOTE: WORK THIS DRAWING WITH
GROUP MEMBER GM6

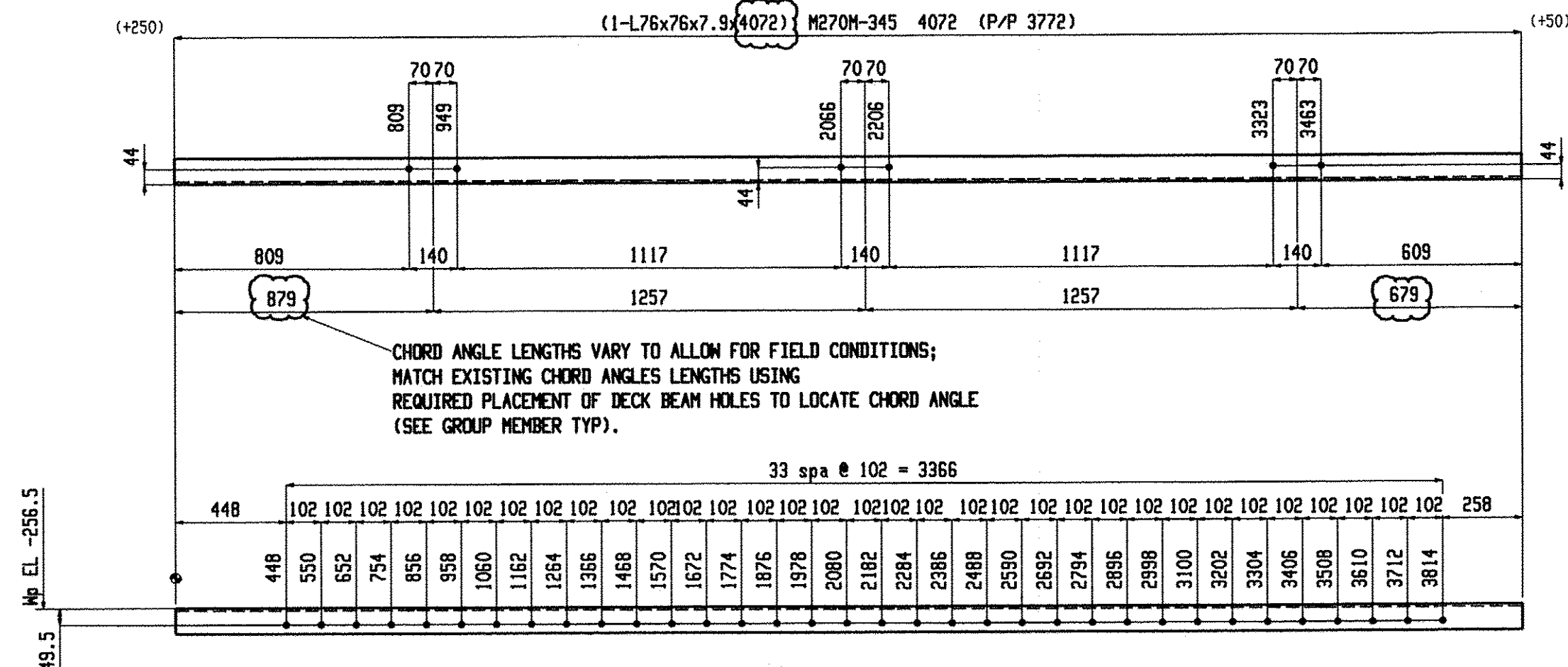
Renaud Bros. Inc. 283 Fort Bridgeman Rd. #2 Vernon, VT. 05354 Phone 1-800 257-7383		UNC	Holes: _____ 21mm
		UNC	BOLTS: 19mm DIA. M16M-I GALV UNO
		UNC	Steel GR: M270M-GR345 UNO
		UNC	Paint: PER SPECS (GREEN) UNO
	Rev. No:	Date:	Surface Prep: PER SPECS
Project: DUMMERSTON BRIDGE DUMMERSTON, VT		Date: 9-9-09 DWN. BY: EG Checked: MRS	Job No. BHO 1442 (22) Sheet No. 10

Total weight : 435

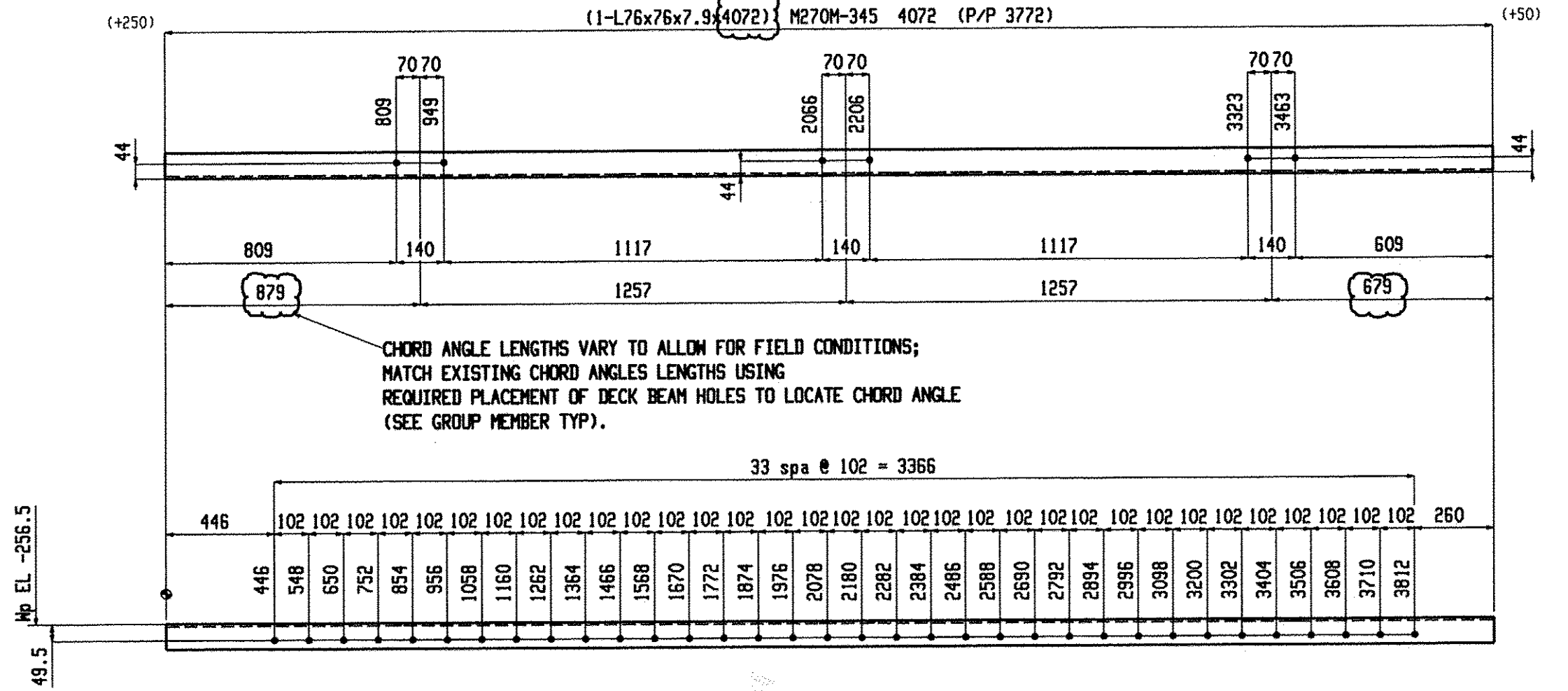
Nov 06 2008 10:55:05 AM



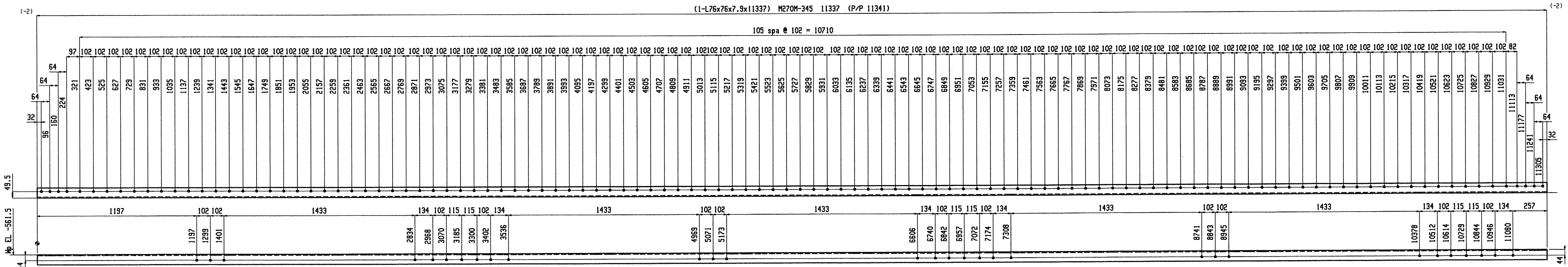
2 ANGLES A26



2 ANGLES A28



2 ANGLES A27



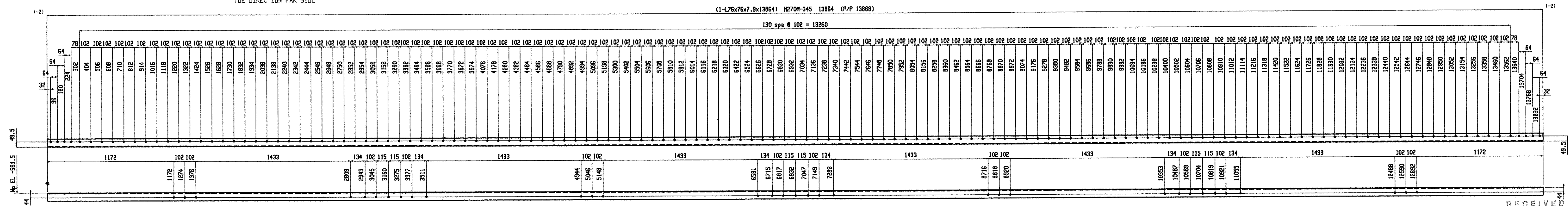
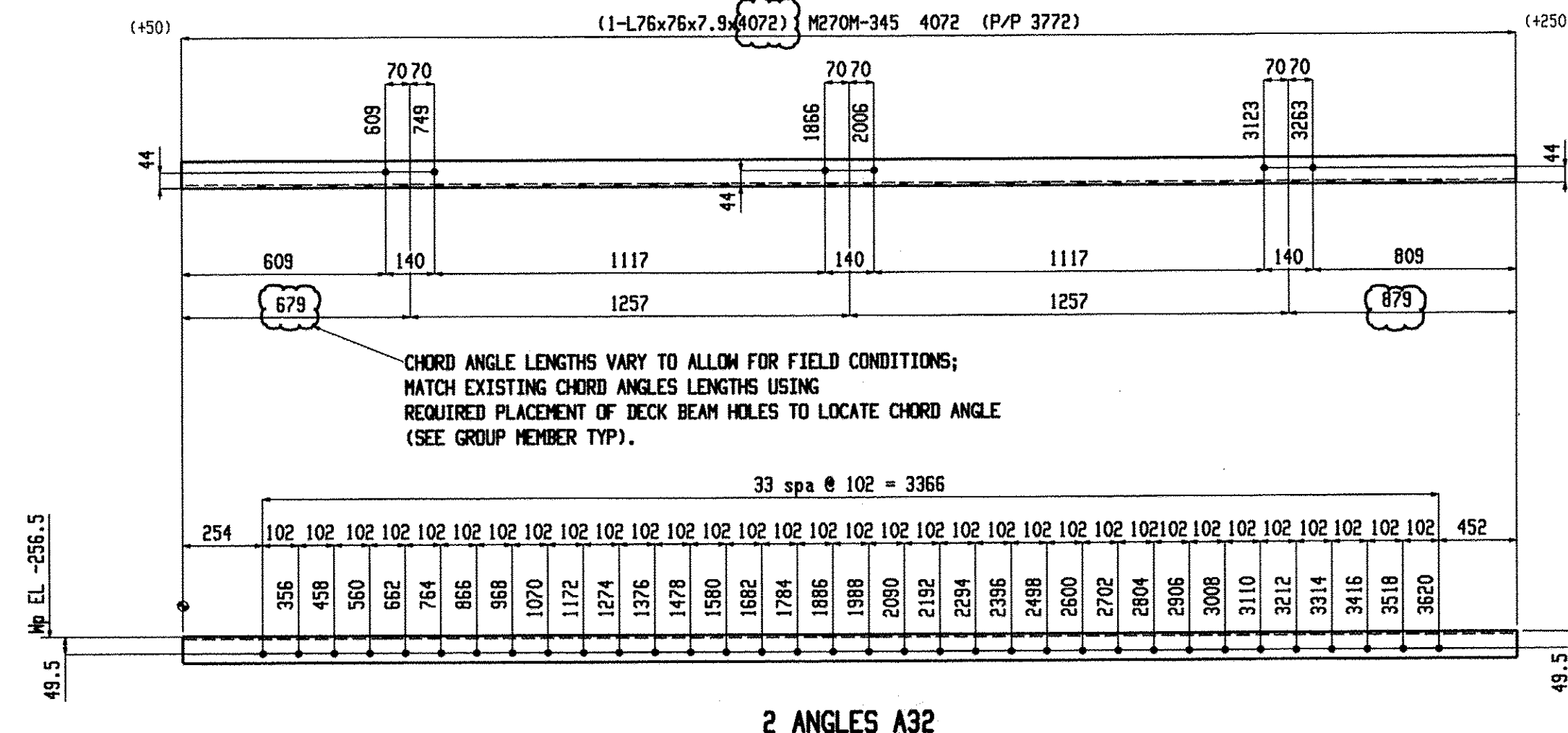
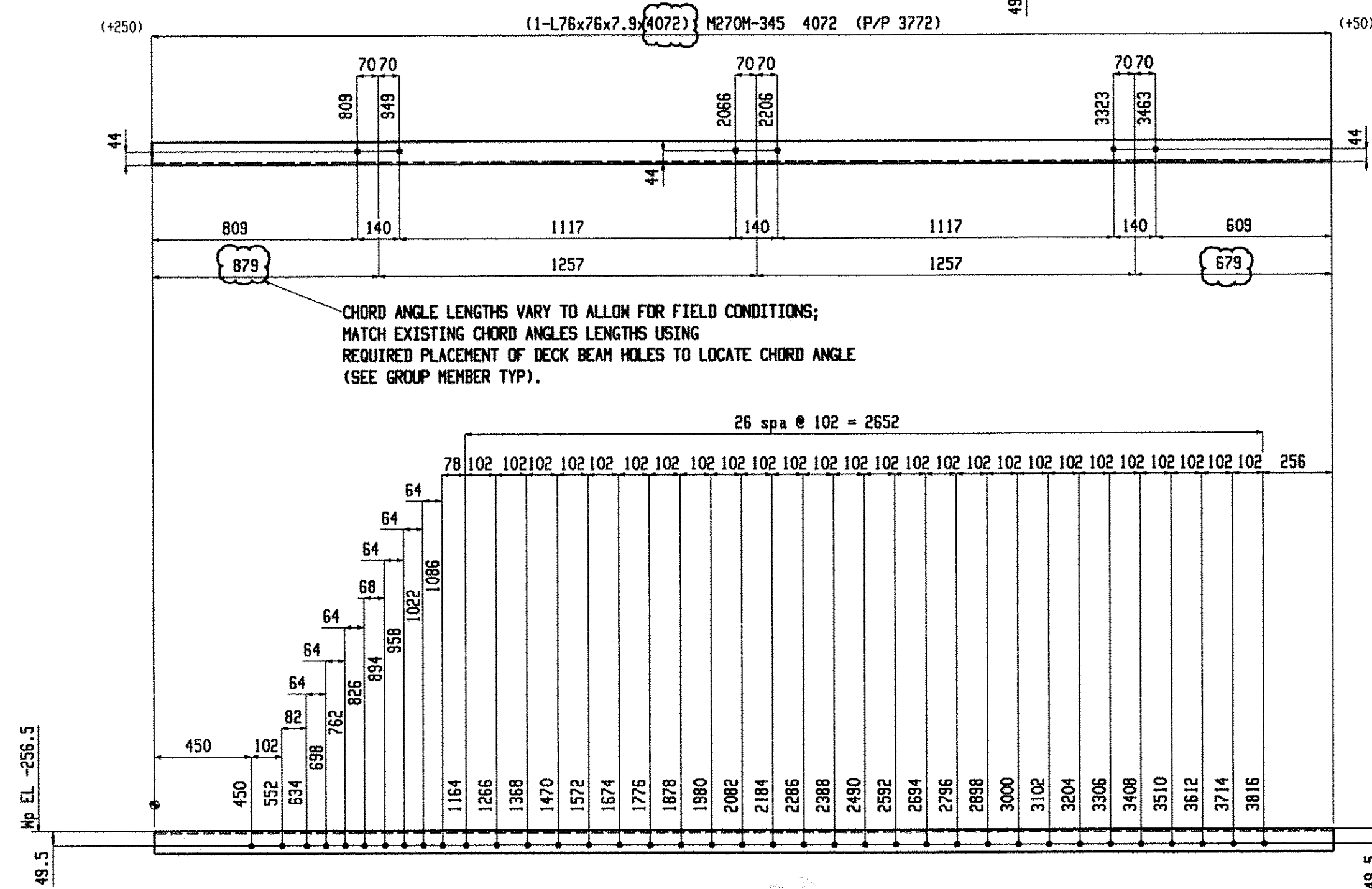
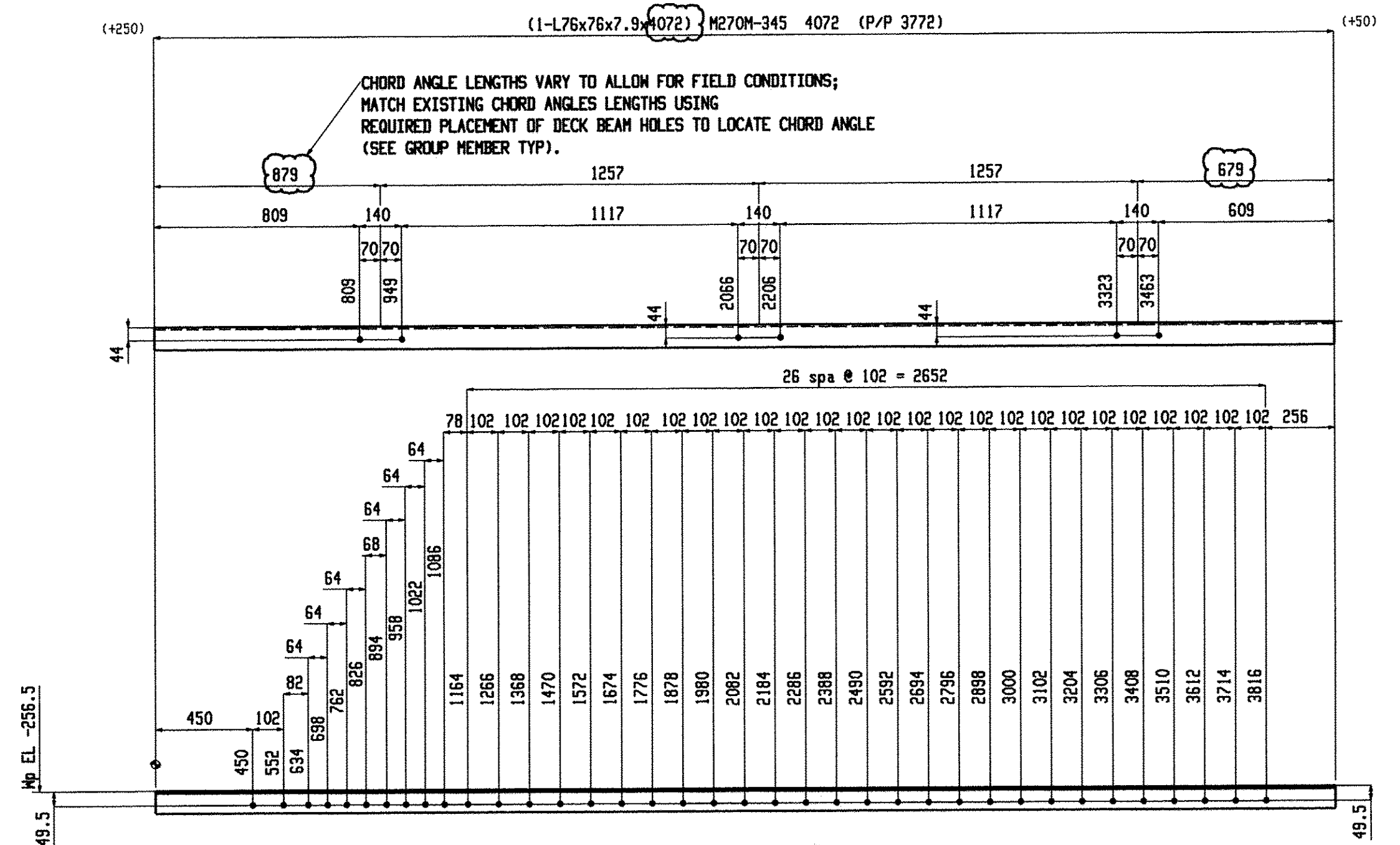
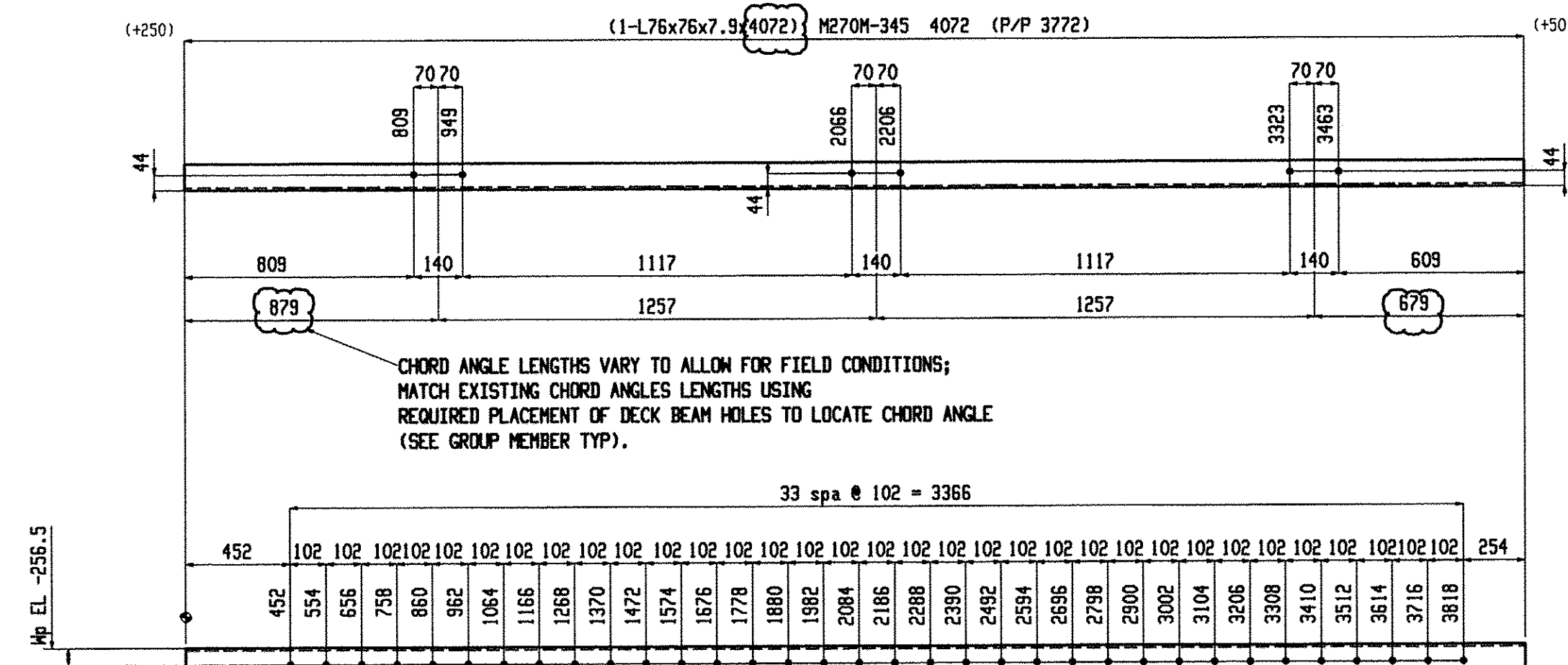
2 ANGLES A29

BILL OF MATERIAL									BILL OF MATERIAL									BILL OF MATERIAL								
Qty	Piece			Seq	Seq	Adv	Steel		Qty	Piece			Seq	Seq	Adv	Steel		Qty	Piece			Seq	Seq	Adv	Steel	
Tot.	Mark	Description	Length	NO.	Qty	ARM #	Grade	Remarks	Tot.	Mark	Description	Length	NO.	Qty	ARM #	Grade	Remarks	Tot.	Mark	Description	Length	NO.	Qty	ARM #	Grade	Remarks
2	A26	ANGLE		1	2				2	A28	ANGLE		1	2												
2	A26	L76x76x7.9	4072				M270M-345		2	A28	L76x76x7.9	4072				M270M-345										
2	A27	ANGLE		1	2				2	A29	ANGLE		1	2												
2	A27	L76x76x7.9	4072				M270M-345		2	A29	L76x76x7.9	11337				M270M-345										

Total weight = 423

NOTE: WORK THIS DRAWING WITH
GROUP MEMBER GM7

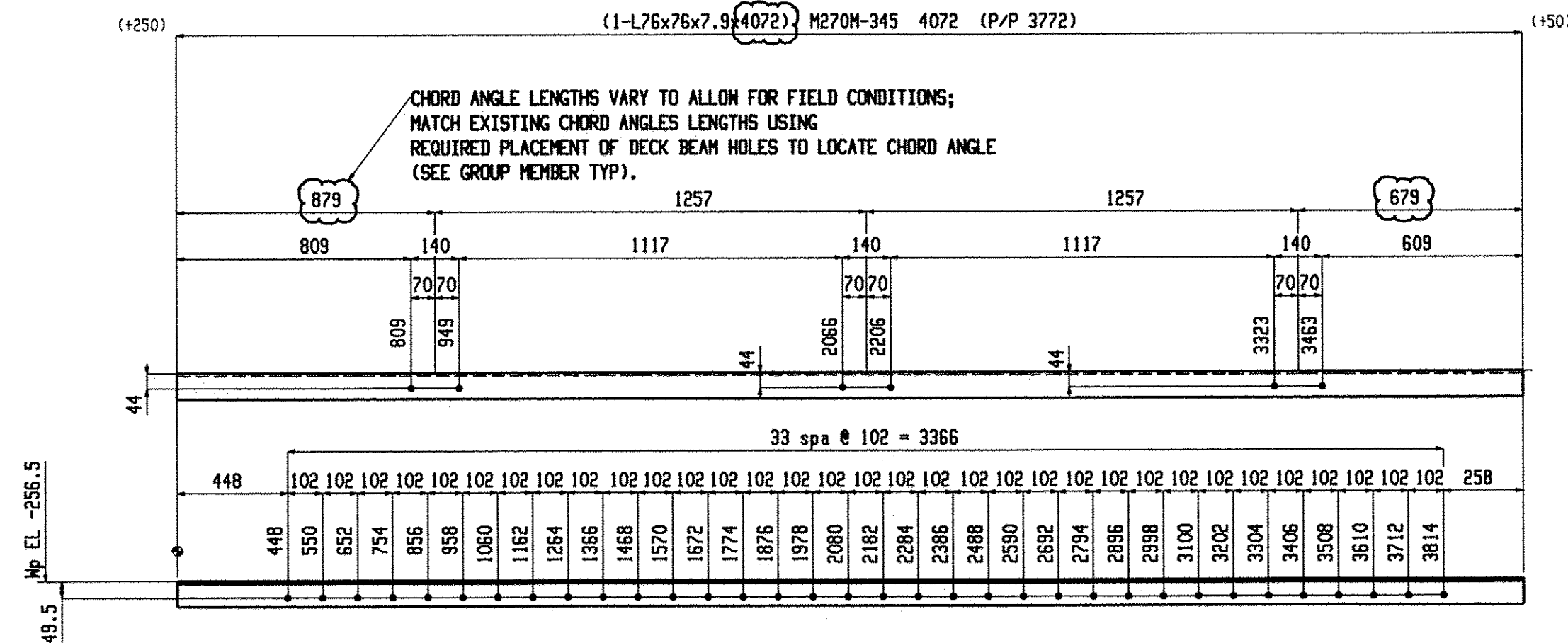
Renaud Bros. Inc. 283 Fort Bridgeman Rd. #2 Vernon, VT. 05354 Phone 1-802 257-7383		Rev.No:	Date:	Holes:	21mm UNO
				BOLTS:	19mm DIA. M164M-I GALV UNO
				Steel GR:	M270M-GR345 UNO
				Paint:	PER SPECS (GREEN) UNO
				Surface Prep:	PER SPECS
Project:		Date:		Job No.	
DUMMERSTON BRIDGE		9-9-09		BHO 1942(28)	
DUMMERSTON, VT		DWN. BY:	Checked:	Sheet No.	
		EG	MRS	11	

[illegible]

Total weight : 542

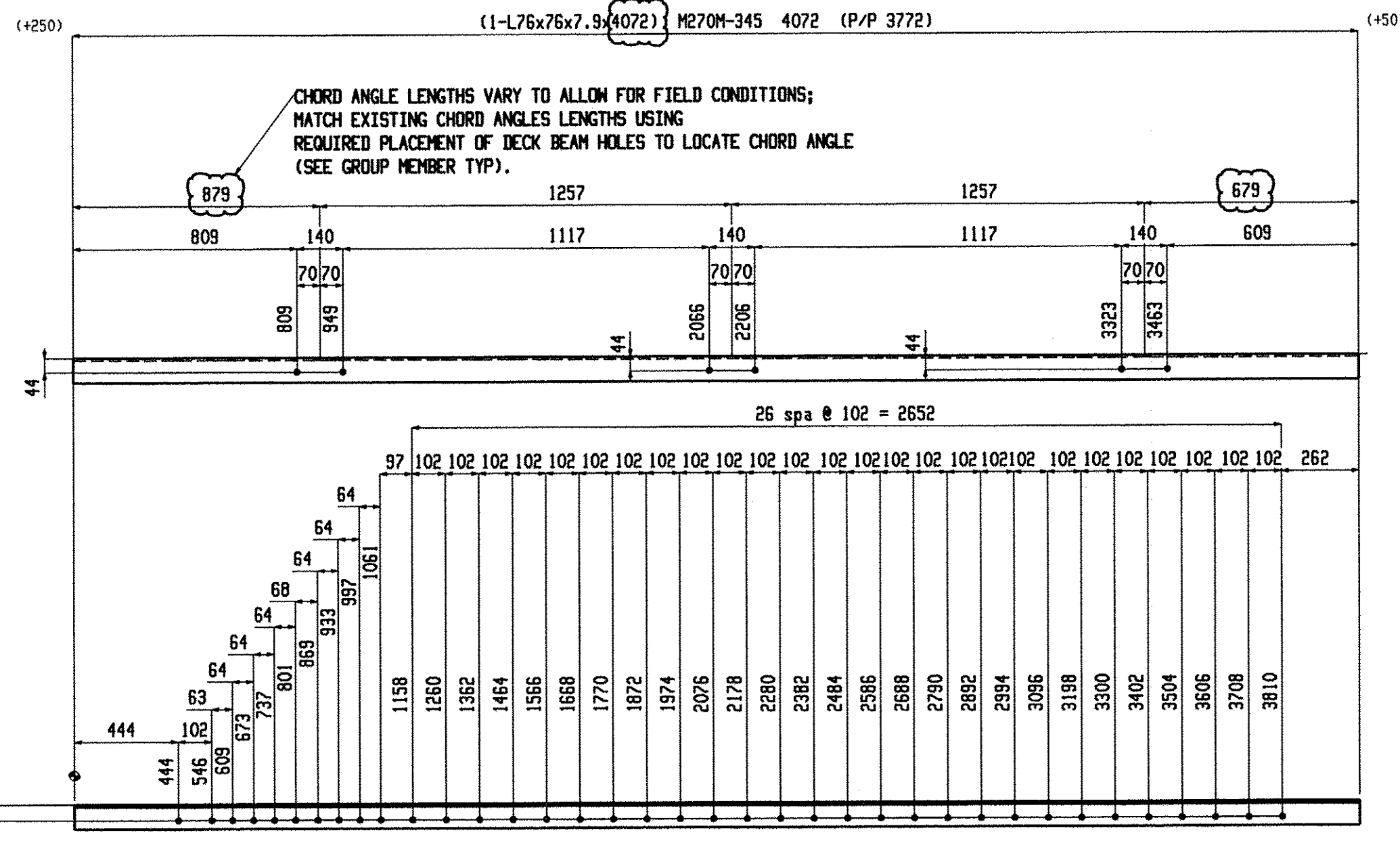
NOTE: WORK THIS DRAWING WITH
GROUP MEMBER GM8

Renaud Bros. Inc. 283 Fort Bridgeman Rd. #2 Vernon, VT. 05354 Phone 1-802 257-7383			Holes:	21mm UNO
			BOLTS:	19mm DIA. M16M-I GALV UNO
			Steel GR:	M270M-GR345 UNO
			Paint:	PER SPECS (GREEN) UNO
Rev. No:		Date:	Surface Prep: PER SPECS	
Project: DUMMERSTON BRIDGE DUMMERSTON, VT		Date: 9-9-09		Job No. BHO 1442 (28)
		DWN. BY: EG	Checked: MRS	Sheet No. 12



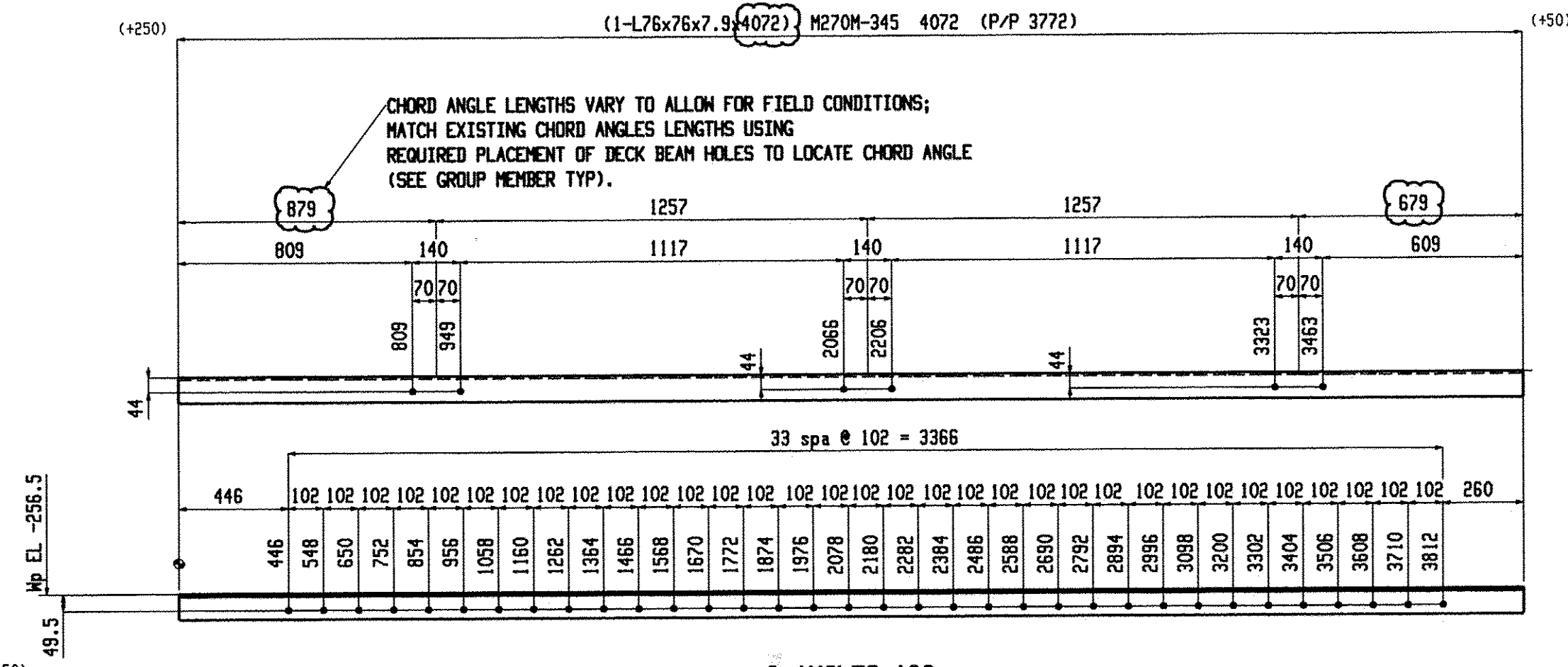
2 ANGLES A35

SHOP NOTE:
TOE DIRECTION NEAR SIDE



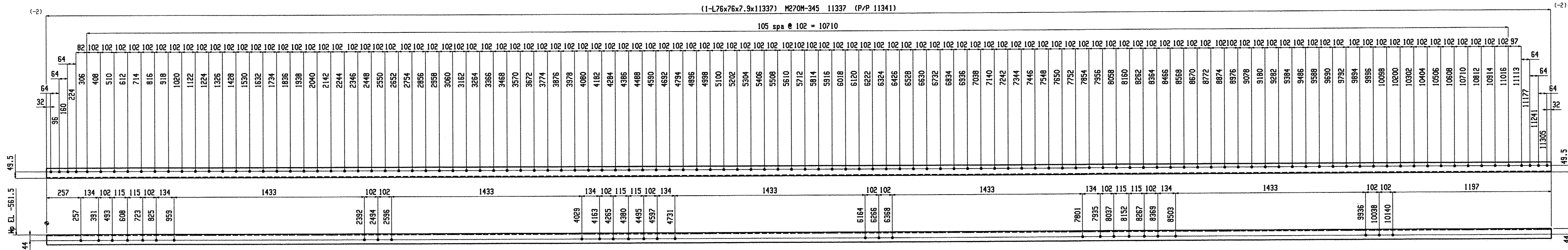
2 ANGLES A37

SHOP NOTE:
TOE DIRECTION NEAR SIDE



2 ANGLES A36

SHOP NOTE:
TOE DIRECTION NEAR SIDE



2 ANGLES A38

SHOP NOTE:
TOE DIRECTION FAR SIDE

BILL OF MATERIAL									BILL OF MATERIAL									BILL OF MATERIAL								
Qty	Piece			Seq	Seq	Adv	Steel		Qty	Piece			Seq	Seq	Adv	Steel		Qty	Piece			Seq	Seq	Adv	Steel	
Tot.	Mark	Description	Length	NO.	Qty	ABM #	Grade	Remarks	Tot.	Mark	Description	Length	NO.	Qty	ABM #	Grade	Remarks	Tot.	Mark	Description	Length	NO.	Qty	ABM #	Grade	Remarks
2	A35	ANGLE		1	2				2	A37	ANGLE		1	2												
2	A35	L76x76x7.9	4072				M270M-345		2	A37	L76x76x7.9	4072				M270M-345										

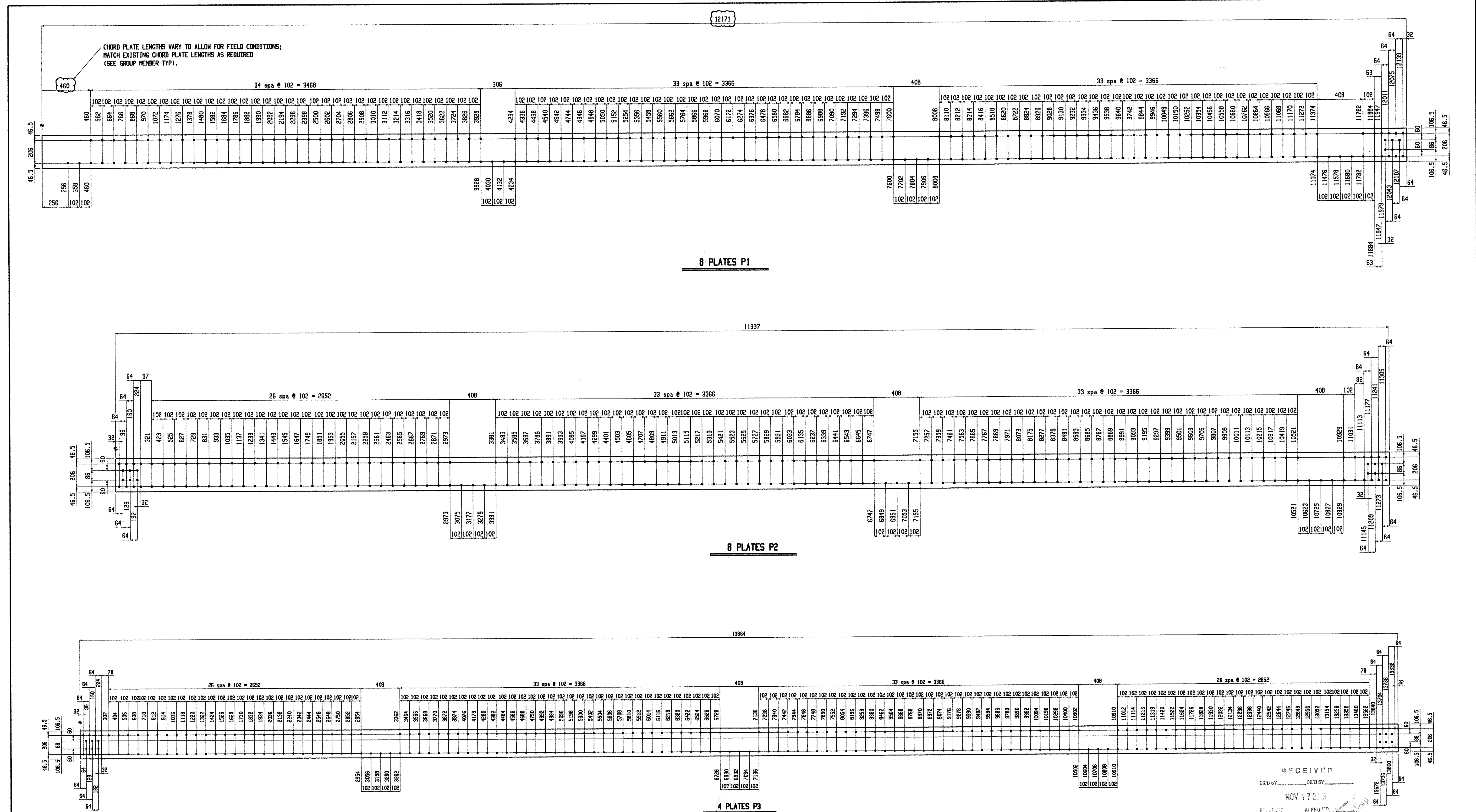
NOTE: WORK THIS DRAWING WITH
GROUP MEMBER GMS

Renaud Bros. Inc. 283 Fort Bridgeman Rd. #2 Vernon, VT. 05354 Phone 1-802 257-7383		Holes: 21mm UNO	
		BOLTS: 19mm DIA. M164M-I GALV UNO	
Steel GR: M270M-GR345 UNO		Paint: PER SPECS (GREEN) UNO	
Rev.No:	Date:	Surface Prep: PER SPECS	
Project: DUMMERSTON BRIDGE DUMMERSTON, VT		Date: 9-9-09	Job No. 1442 (18)
DMN. BY: EG	Checked: MRS	Sheet No. 13	

Total weight : 423

Nov. 05 2009 10:55:22 AM

BILL OF MATERIAL								BILL OF MATERIAL								BILL OF MATERIAL							
Qty	Piece			Seq	Seq	Adv	Steel	Qty	Piece			Seq	Seq	Adv	Steel	Qty	Piece			Seq	Seq	Adv	Steel
Tot.	Mark	Description	Length	NO.	Qty	ABM #	Grade	Tot.	Mark	Description	Length	NO.	Qty	ABM #	Grade	Tot.	Mark	Description	Length	NO.	Qty	ABM #	Grade
8	P1	PLATE		1	8																		
8	P1	PL6.4x299	12171				M270M-345																
8	P2	PLATE		1	8																		
8	P2	PL6.4x299	11337				M270M-345																



Total weight : 3657

Renaud Bros. Inc. 283 Fort Bridgeman Rd. #2 Vernon, VT. 05354 Phone 1-802 257-7383		Holes: 21mm UNO BOLTS: 19mm DIA. M164M-I GALV UNO Steel GR: M270M-GR345 UNO Paint: PER SPECS (GREEN) UNO Surface Prep: PER SPECS	
Rev.No:	Date:	Job No.	Sheet No.
	9-9-09	BHO 1442 (28)	15
Drawn By: EG	Checked: MRS		

POST PLATE LENGTHS VARY TO ALLOW FOR FIELD CONDITIONS;
CUT POST PLATE AS REQUIRED TO MATCH EXISTING POST,
DRILL HOLES TO MATCH EXISTING HOLES IN POST
(SEE TRUSS POST DETAIL TYP)

9249.5

51

22

127 203 279 381 483 585 687 789 891 993 1095 1197 1299 1401 1503 1605 1707 1809 1911 2013 2115 2217 2319 2421 2523 2625 2727 2829 2931 3033 3135 3237 3339 3441 3543 3645 3747 3849 3951 4053 4155 4257 4359 4461 4563 4665 4767 4869 4971 5073 5175 5277 5379 5481 5583 5685 5787 5889 5991 6093 6195 6297 6399 6501 6603 6705 6807 6909 7011 7113 7215 7317 7419 7521 7623 7725 7827 7929 8031 8133 8235 8337 8439 8541 8643 8745 8847 8949 9051

SET FLOORBEAM SEAT
AT ELEVATION SHOWN
ON TRUSS POST DETAIL,
DRILL HOLES FOR SEAT AS REQUIRED
TO OBTAIN ELEVATION
(SEE TRUSS POST DETAIL)

RETAIN EXISTING END TRUSS
MATCH AND DRILL NEW HOLES

4 MISCS P4

[illegible]

RECEIVED
OK'D BY _____ OK'D BY _____
NOV 17 2000
RECEIVED _____ APPROVED _____
BY _____ DATE _____

[illegible]

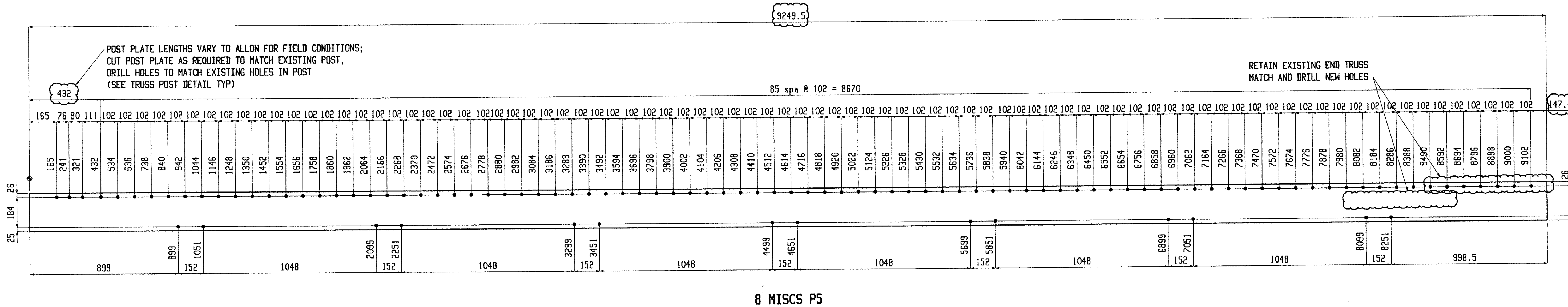
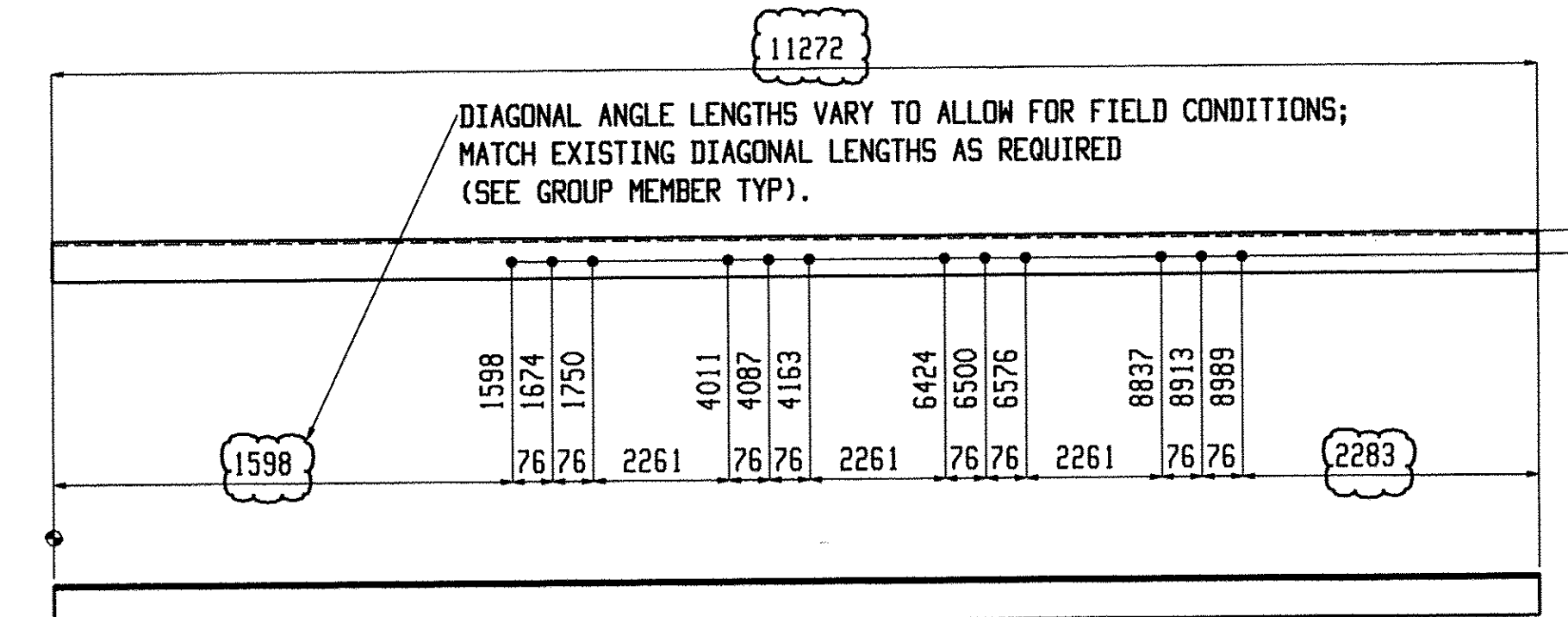
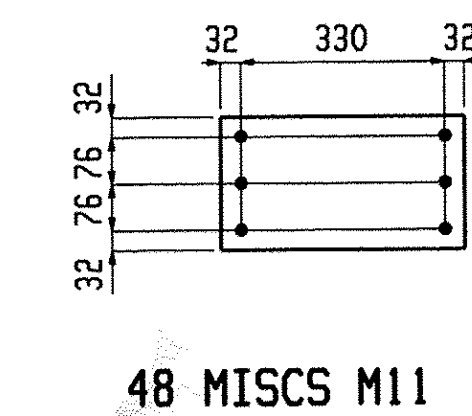
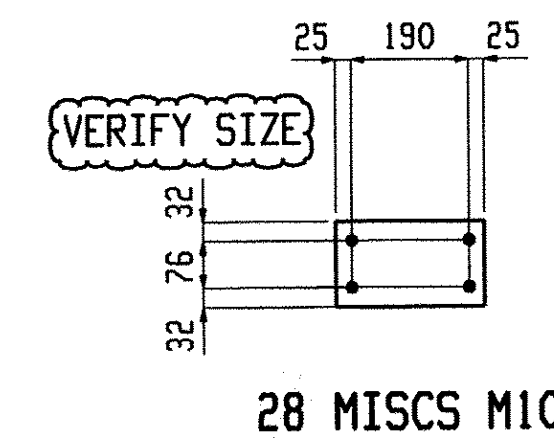
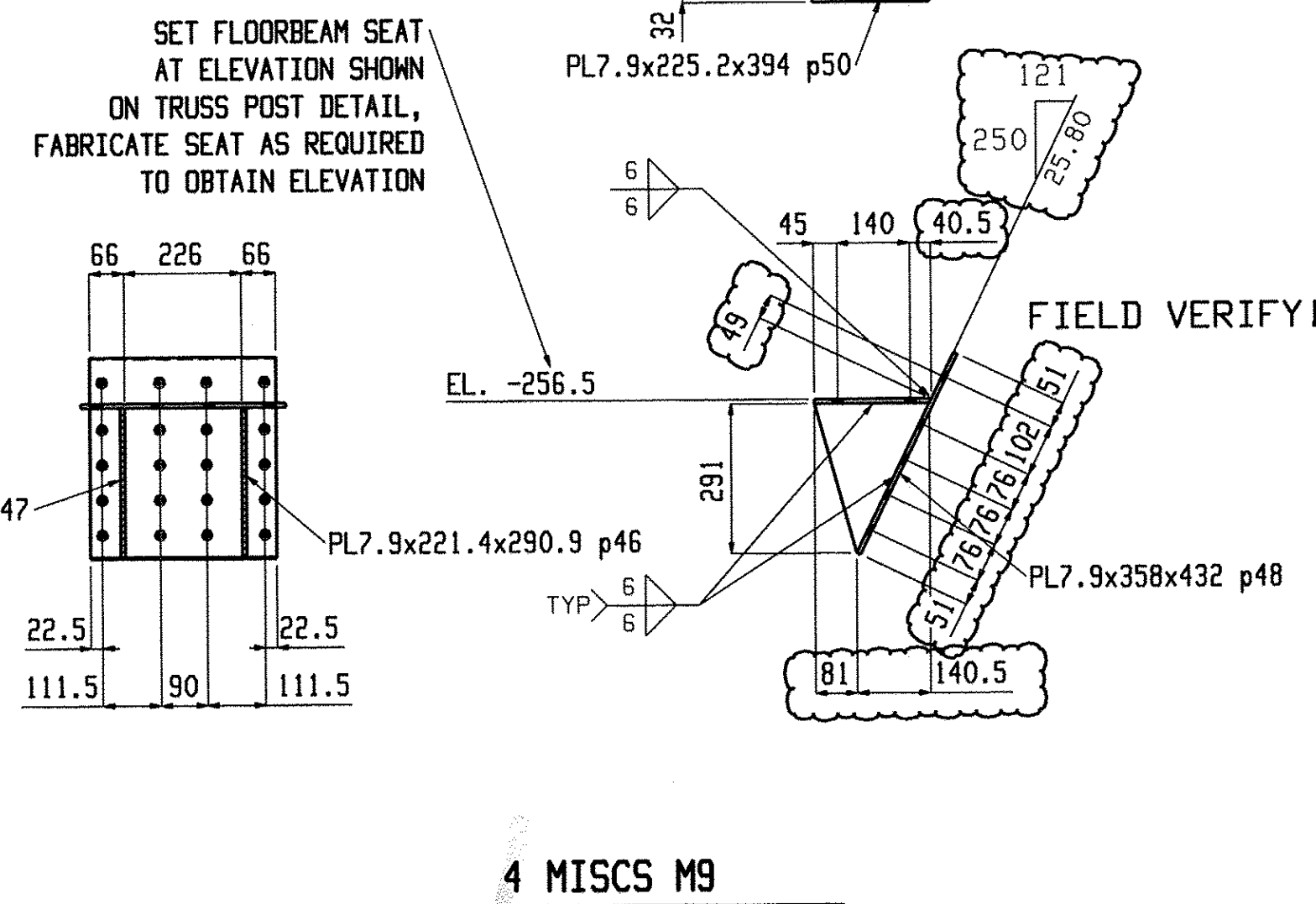
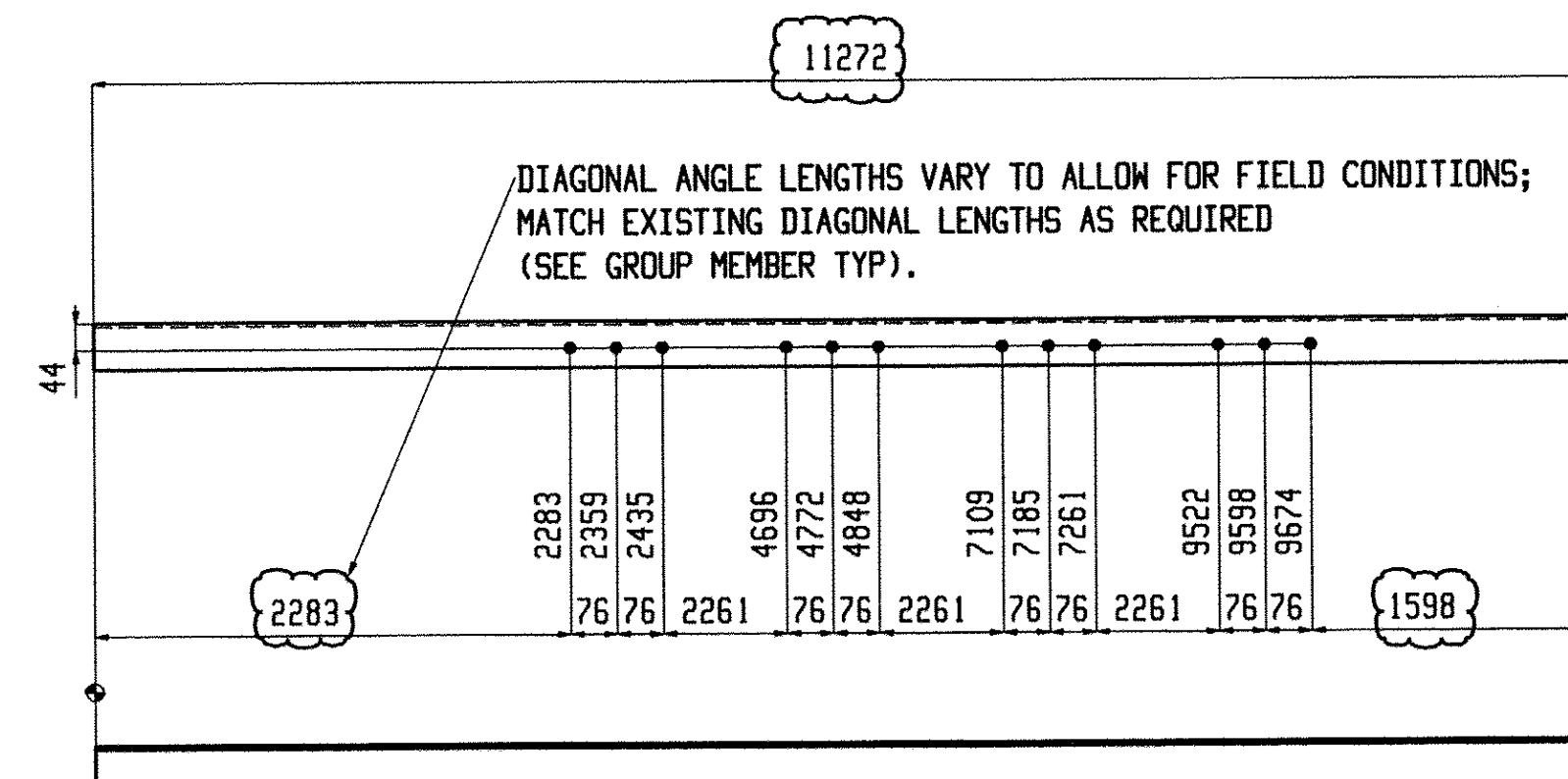
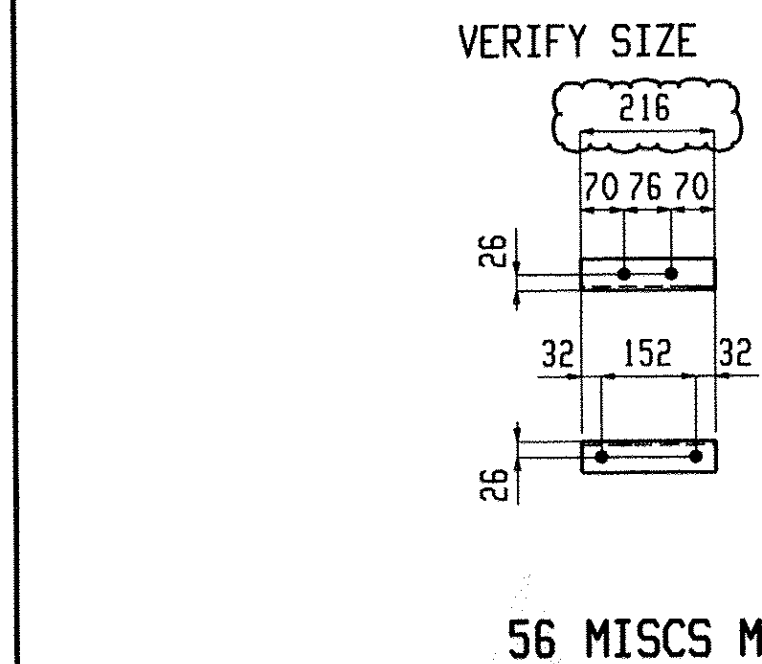
Holes:	21mm UNO
BOLTS:	19mm DIA. M164M-I GALV UNO
Steel GR:	M270M-GR345 UNO
Paint:	PER SPECS (GREEN) UNO
Surface Prep:	PER SPECS

Date: 9-9-09		Job No. BHO 1442 (28)
DWN. BY: EG	Checked: MRS	Sheet No. 16

Total weight : 1014

Nov 06 2008 10:55:30 AM

BILL OF MATERIAL										BILL OF MATERIAL										BILL OF MATERIAL									
Qty	Piece			Seq	Seq	Adv	Steel			Qty	Piece			Seq	Seq	Adv	Steel			Qty	Piece			Seq	Seq	Adv	Steel		
Tot.	Mark	Description	Length	NO.	Qty	ABM #	Grade	Remarks		Tot.	Mark	Description	Length	NO.	Qty	ABM #	Grade	Remarks		Tot.	Mark	Description	Length	NO.	Qty	ABM #	Grade	Remarks	
8	P5	MISC		1	8					4	p46	PL7.9x221.4	291				M270M-345			4	A45	MISC		1	4				
8	P5	PL6.4x235	9249.5				M270M-345			4	p47	PL7.9x221.4	291				M270M-345			4	A45	L76x76x6.4	11272					M270M-345	
56	M8	MISC		1	56					28	M10	MISC		1	28					4	A46	MISC		1	4				
56	M8	L51x51x6.4	216				M270M-345			28	M10	PL6.4x140	240				M270M-345			4	A46	L76x76x6.4	11272					M270M-345	
4	M9	MISC		1	4					48	M11	MISC		1	48														
4	p48	PL7.9x358	432				M270M-345			48	M11	PL6.4x216	394				M270M-345												
4	p50	PL7.9x225.2	394				M270M-345																						

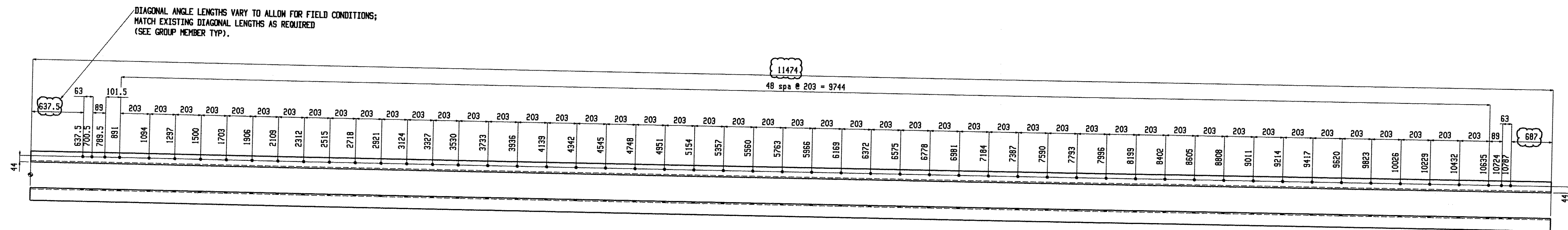


Total weight: 1931

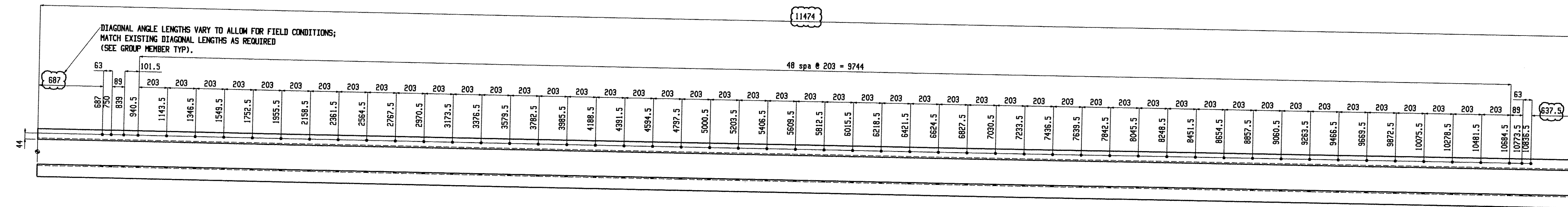
Renaud Bros. Inc. 283 Fort Bridgeman Rd. #2 Vernon, VT. 05354 Phone 1-802 257-7383		Rev.No:	Date:	Job No.
		EG	9-9-09	BHO 1442(28)
Project: DUMMERSTON BRIDGE DUMMERSTON, VT		Checked:	MRS	Sheet No. 17
Holes: 21mm UNO		BOLTS: 19mm DIA. M164M-I GALV UNO		
Steel GR: M270M-GR345 UNO		Paint: PER SPECS (GREEN) UNO		
Surface Prep: PER SPECS		product?		

RECEIVED
GND BY: OK'D BY:
NOV 17 2008
BY: DATE:

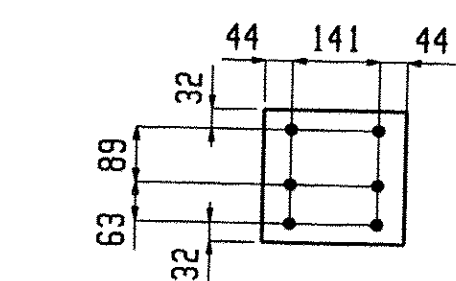
NOTE: WORK THIS DRAWING WITH
GROUP MEMBER GM11, GM13&GM14



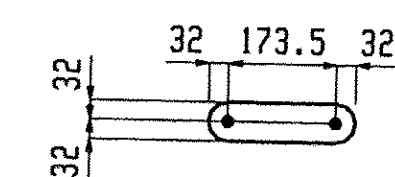
4 MISCS A47



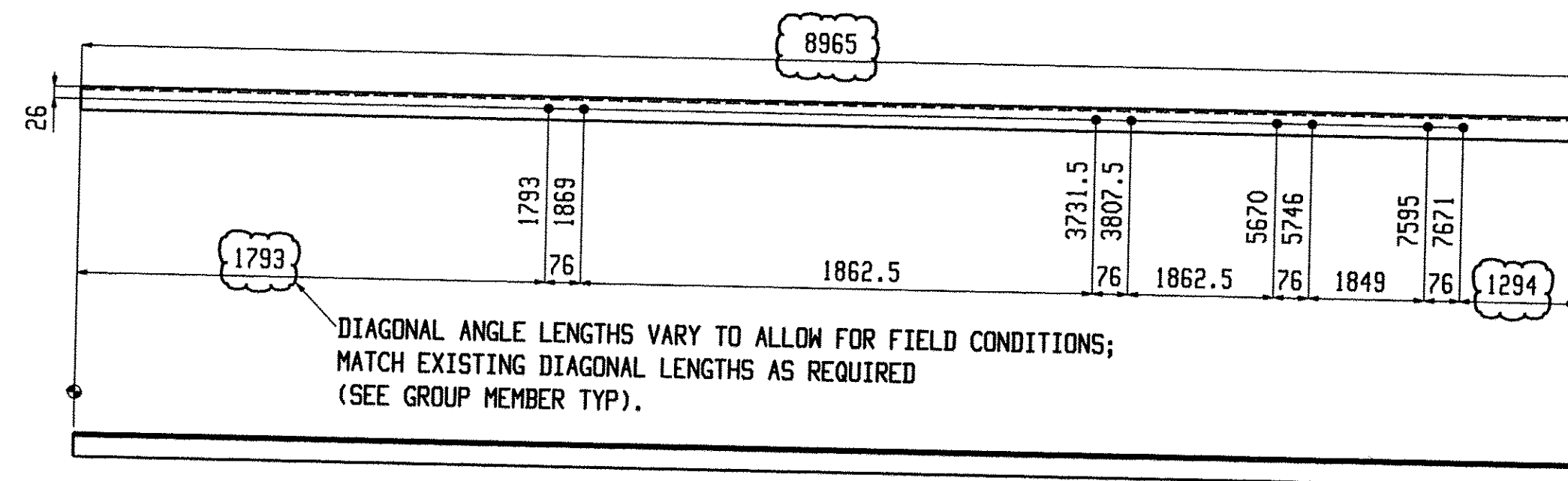
4 MISCS A48



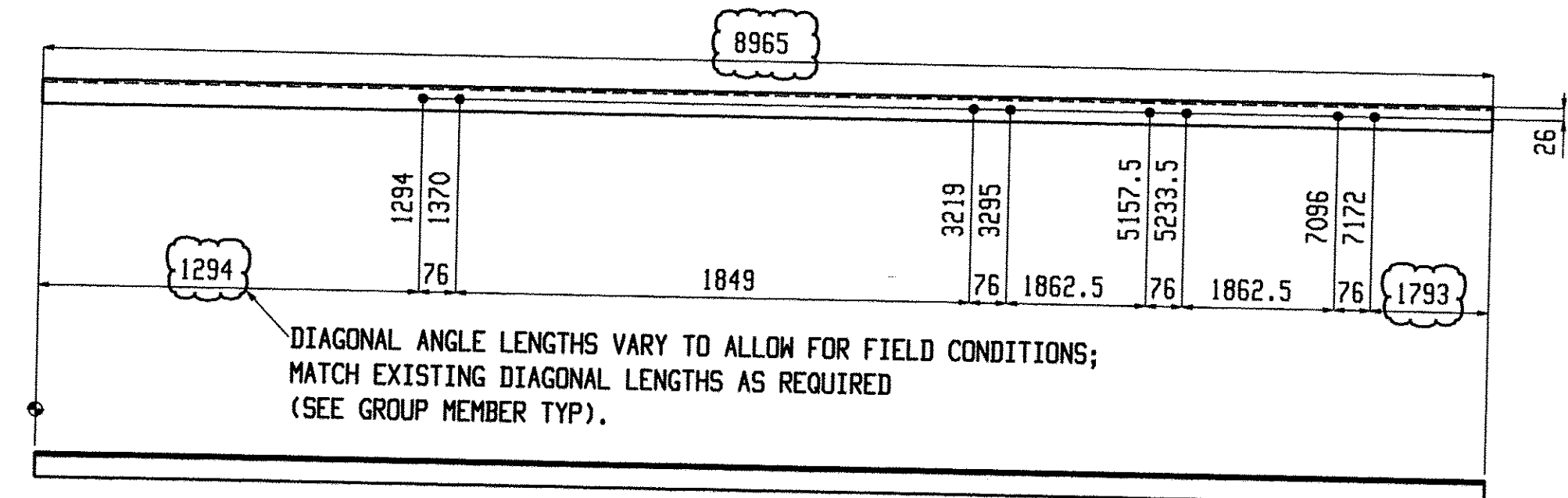
8 MISCS M12



388 MISCS M13



4 MISCS A49



4 MISCS A50

BILL OF MATERIAL

Qty	Piece		Seq	Seq	Adv	Steel	
Tot.	Mark	Description	Length	NO.	Qty	ADM #	Grade
4	A47	MISC	1	4			
4	A47	L89x76x9.5	11474				M270M-345
4	A48	MISC	1	4			
4	A48	L89x76x9.5	11474				M270M-345
8	M12	MISC	1	8			

BILL OF MATERIAL

Qty	Piece		Seq	Seq	Adv	Steel	
Tot.	Mark	Description	Length	NO.	Qty	ADM #	Grade
8	M12	PL6.4x216	229				M270M-345
388	M13	MISC	1	388			
388	M13	PL6.4x64	237.5				M270M-345
4	A49	MISC	1	4			
4	A49	L51x51x6.4	8965				M270M-345

BILL OF MATERIAL

Qty	Piece		Seq	Seq	Adv	Steel	
Tot.	Mark	Description	Length	NO.	Qty	ADM #	Grade
4	A50	MISC	1	4			
4	A50	L51x51x6.4	8965				M270M-345

Total weight : 1721

RECEIVED
NOV 17 2010
BY DATE

NOTE: WORK THIS DRAWING WITH
GROUP MEMBER GM12&GM16

Renaud Bros. Inc.
283 Fort Bridgeman Rd. #2
Vernon, VT. 05354
Phone 1-802 257-7383

Holes:	21mm UNO
BOLTS:	19mm DIA. M164M-I GALV UNO
Steel GR:	M270M-GR345 UNO
Paint:	PER SPECS (GREEN) UNO
Surface Prep:	PER SPECS

Project:
DUMMERSTON BRIDGE
DUMMERSTON, VT

Date: 9-9-09
Job No. BHD 1442(28)
Sheet No. 18

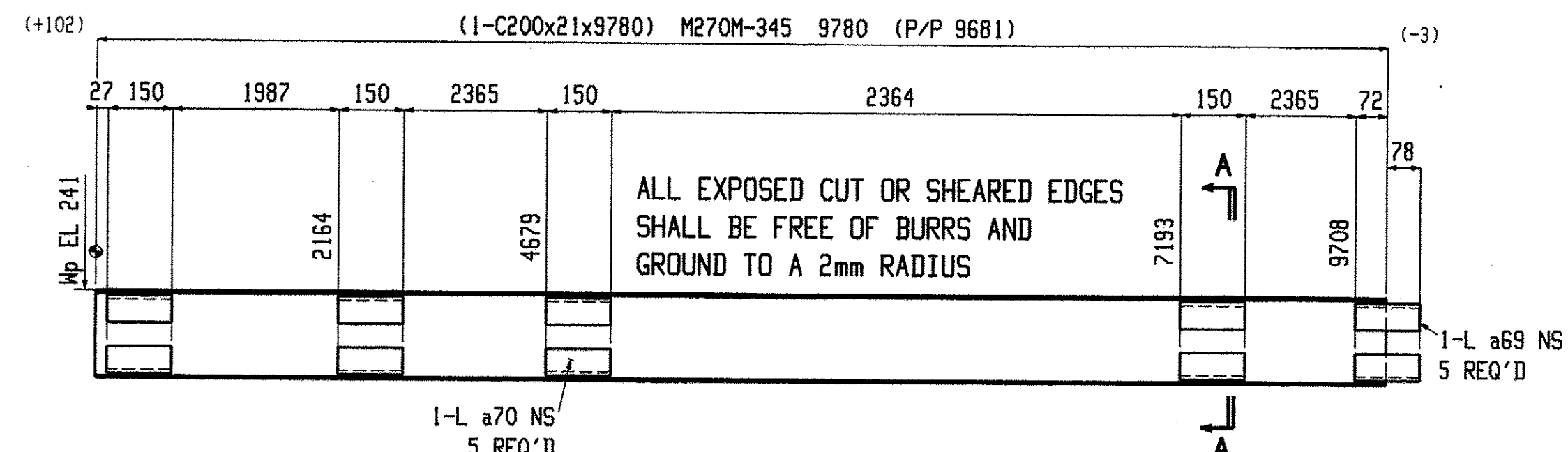


NOTE: WORK THIS DRAWING WITH
GROUP MEMBER GM13,GM15&GM16

Renaud Bros. Inc. 283 Fort Bridgeman Rd. #2 Vernon, VT. 05354 Phone 1-802 257-7383			Holes: _____ 21mm DIA.
			BOLTS: 19mm DIA. M164M-I GALV UNCO
			Steel GR: M270M-GR345 UNCO
			Paint: _____ PER SPECS (GREEN) UNCO
	Rev. No:	Date:	Surface Prep: _____ PER SPECS
Project: DUMMERSTON BRIDGE DUMMERSTON, VT		Date: 9-9-09 BHO 1442 (28)	
	DWN. BY: EG Checked: MRS	Sheet No. 19	

Total weight : 1451

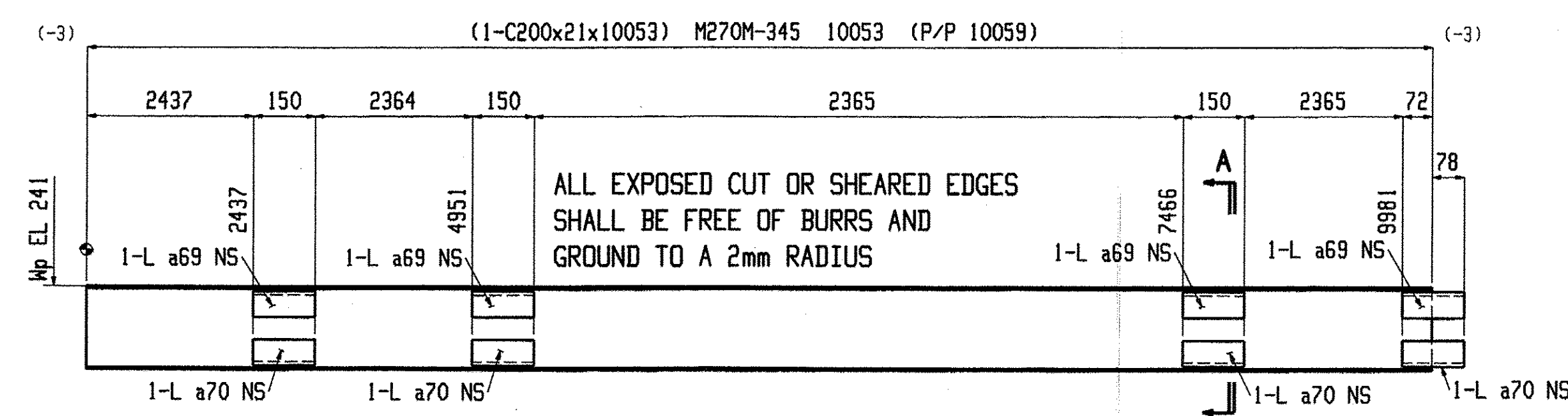
Nov 06 2009 10:55:37 AM



ONE BEAM R1

W 203x7.5
F 59.5x10
K 24x18

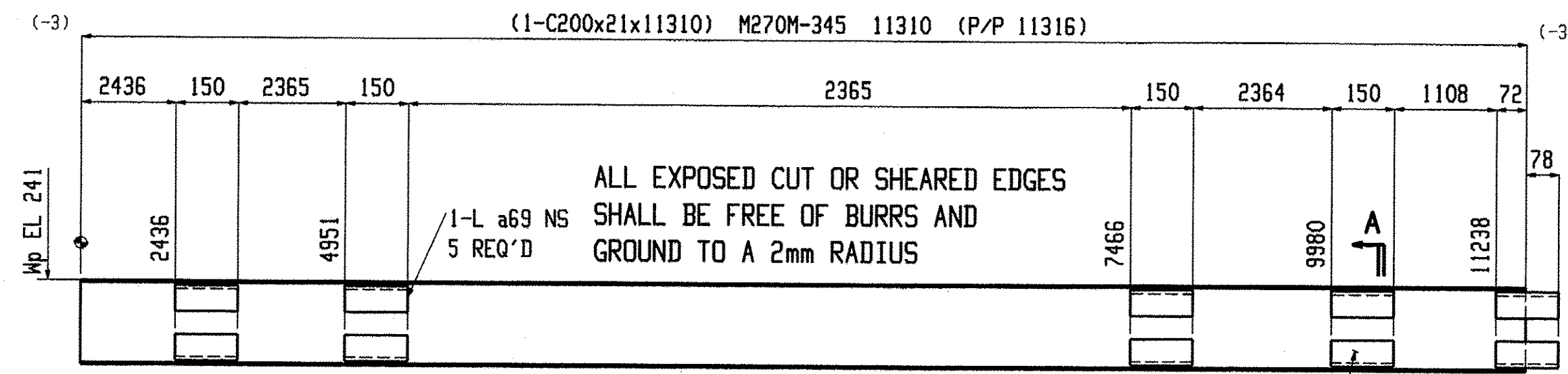
SHOP NOTE:
TOE DIRECTION NEAR SIDE



ONE BEAM R2

W 203x7.5
F 59.5x10
K 24x18

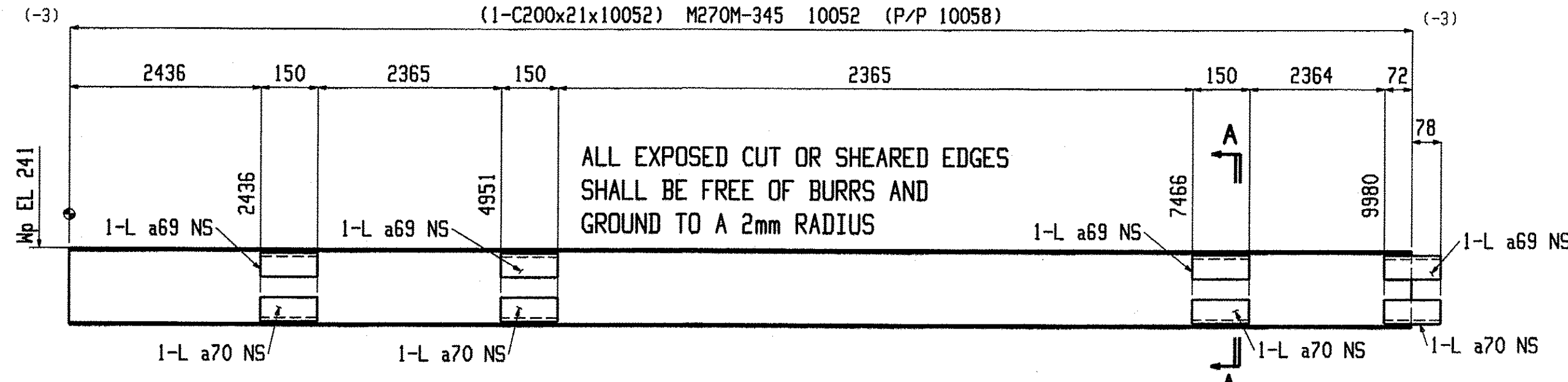
SHOP NOTE:
TOE DIRECTION NEAR SIDE



ONE BEAM R3

W 203x7.5
F 59.5x10
K 24x18

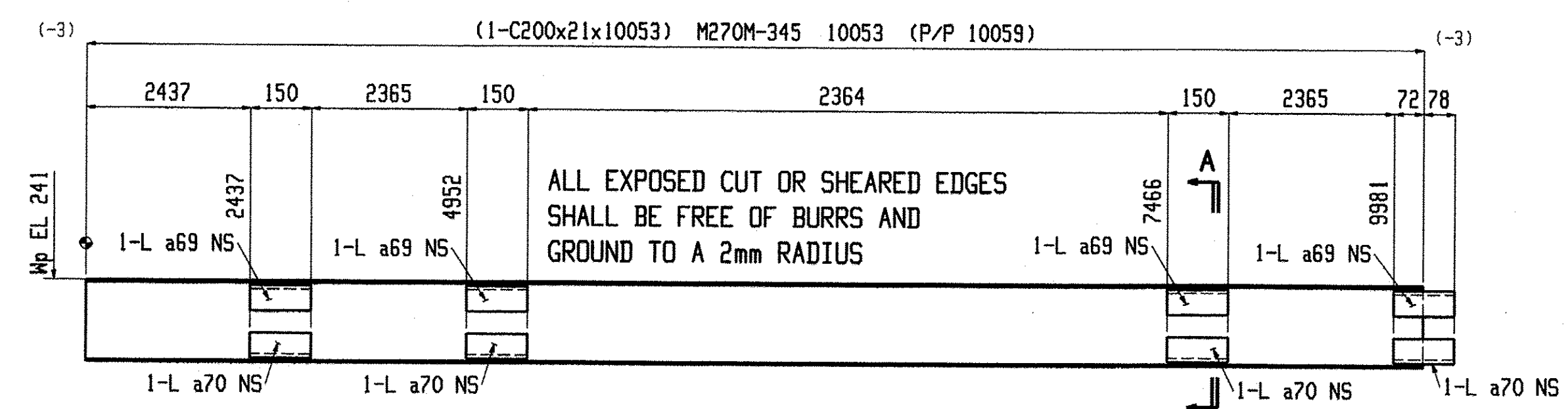
SHOP NOTE:
TOE DIRECTION NEAR SIDE



ONE BEAM R4

W 203x7.5
F 59.5x10
K 24x18

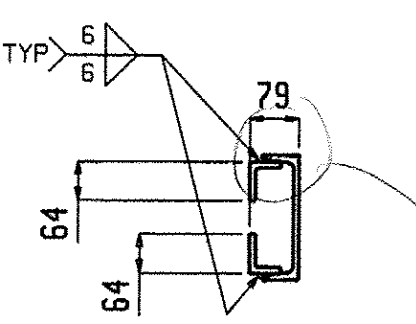
SHOP NOTE:
TOE DIRECTION NEAR SIDE



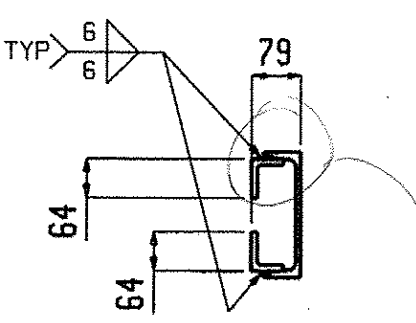
ONE BEAM R5

W 203x7.5
F 59.5x10
K 24x18

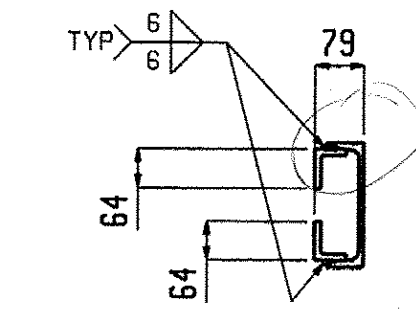
SHOP NOTE:
TOE DIRECTION NEAR SIDE



Section A-A
R1



Section A-A
R3



Section A-A
R5

will this be a fillet weld?

weld type?

Total weight : 1100

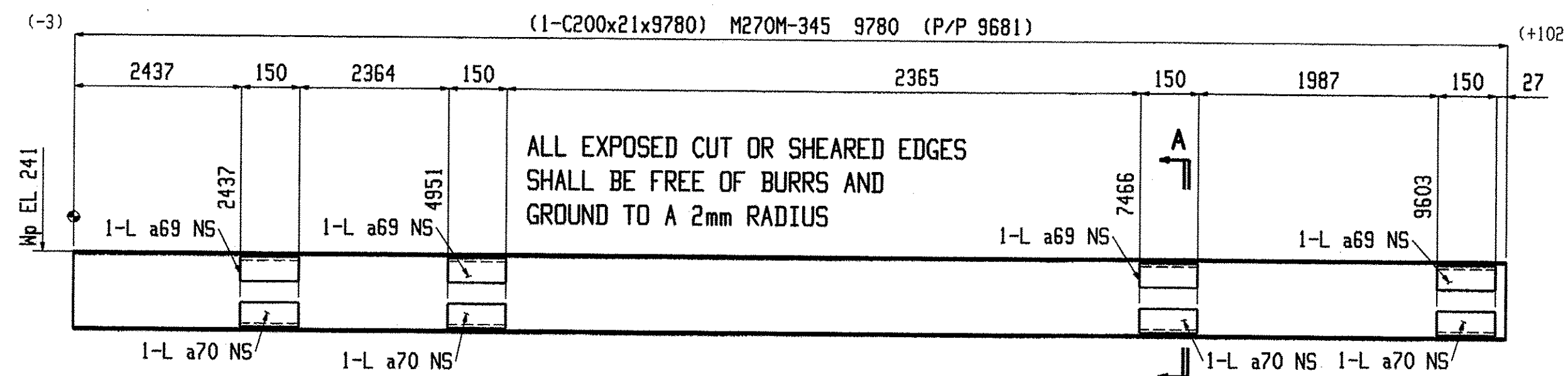
Fabrication is not to be done by Renaud Bros. Have fabricator resubmit with name of fabricator on sheets.

DATE 1/12/2010

Nov 06 2009 10:55:40 AM

BILL OF MATERIAL									BILL OF MATERIAL									BILL OF MATERIAL									
Qty	Piece			Seq	Seq	Adv	Steel		Qty	Piece			Seq	Seq	Adv	Steel		Qty	Piece			Seq	Seq	Adv	Steel		
Tot.	Mark	Description	Length	NO.	Qty	ARM #	Grade	Remarks	Tot.	Mark	Description	Length	NO.	Qty	ARM #	Grade	Remarks	Tot.	Mark	Description	Length	NO.	Qty	ARM #	Grade	Remarks	
ONE	R1	BEAM		2	1													4	a70	L64x51x9.5	150					M270M-345	
1	R1	C200x21	9780				M270M-345		ONE	R3	BEAM		2	1					ONE	R5	BEAM		2	1			
5	a69	L64x51x9.5	150				M270M-345		1	R3	C200x21	11310				M270M-345		1	R5	C200x21	10053					M270M-345	
5	a70	L64x51x9.5	150				M270M-345		5	a69	L64x51x9.5	150				M270M-345		4	a69	L64x51x9.5	150					M270M-345	
									5	a70	L64x51x9.5	150				M270M-345		4	a70	L64x51x9.5	150					M270M-345	
ONE	R2	BEAM		2	1				ONE	R4	BEAM		2	1													
1	R2	C200x21	10053				M270M-345		1	R4	C200x21	10052				M270M-345											
4	a69	L64x51x9.5	150				M270M-345		4	a69	L64x51x9.5	150				M270M-345											
4	a70	L64x51x9.5	150				M270M-345																				

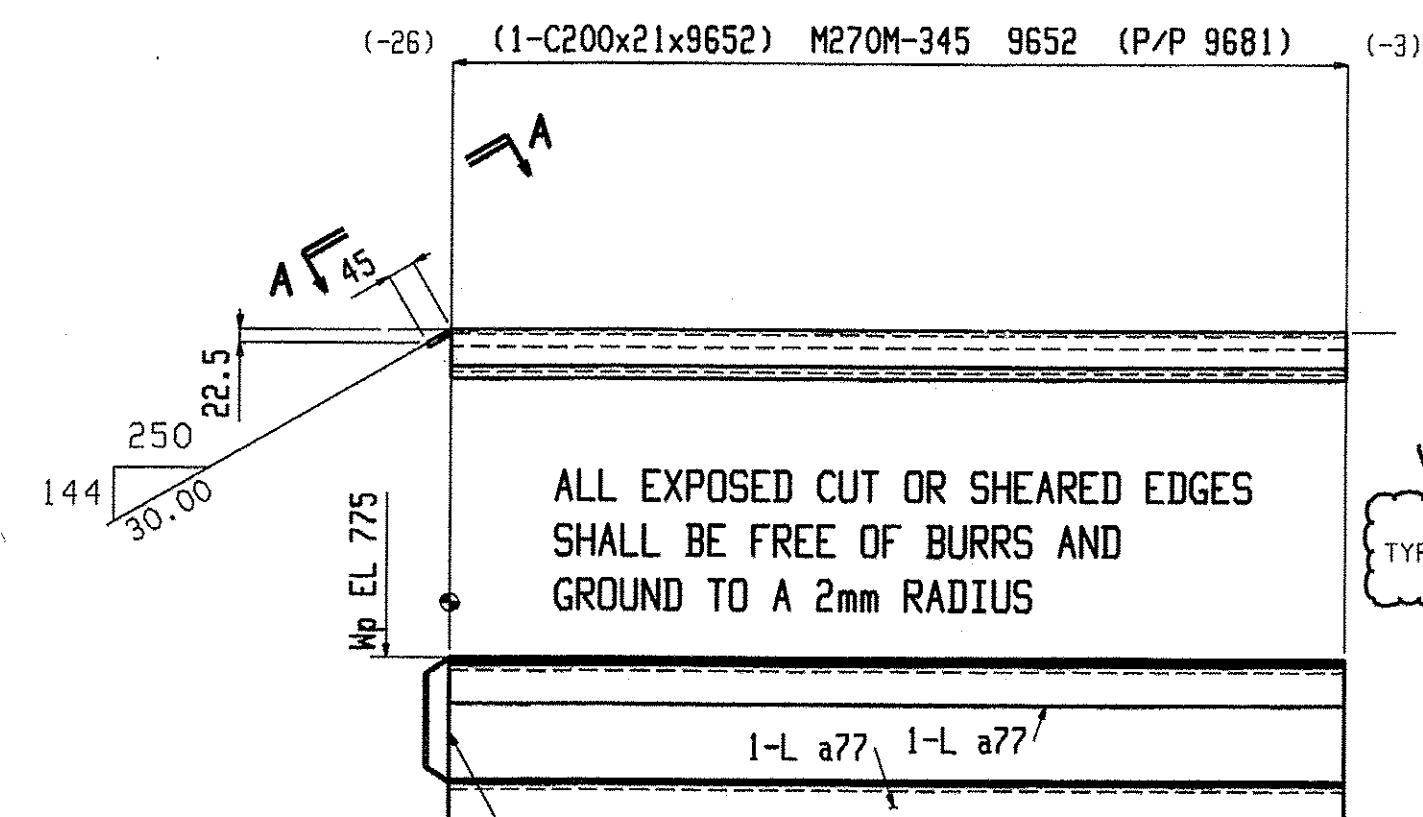
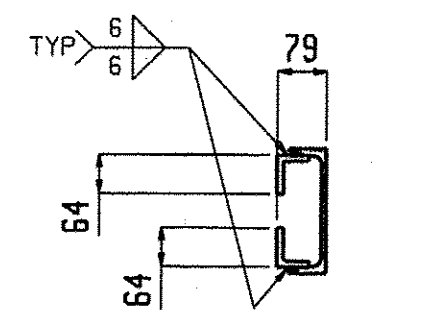
Renaud Bros. Inc. 283 Fort Bridgeman Rd. #2 Vernon, VT. 05354 Phone 1-802 257-7383		Rev.No:	Date:	Holes:	21mm UNO
		Date:	9-9-09	BOLTS:	19mm DIA. M164M-I GALV UNO
Project:		Date:		Steel GR:	M270M-GR345 UNO
DUMMERSTON BRIDGE		Date:		Paint:	PER SPECS (GREEN) UNO
DUMMERSTON, VT		Date:		Surface Prep:	PER SPECS
DWN. BY:		Date:		Job No.	3-Ho 1442(25)
EG		Checked:		Sheet No.	20
		MRS			



ONE BEAM R6

W 203x7.5
F 59.5x10
K 24x18

SHOP NOTE:
TOE DIRECTION NEAR SIDE

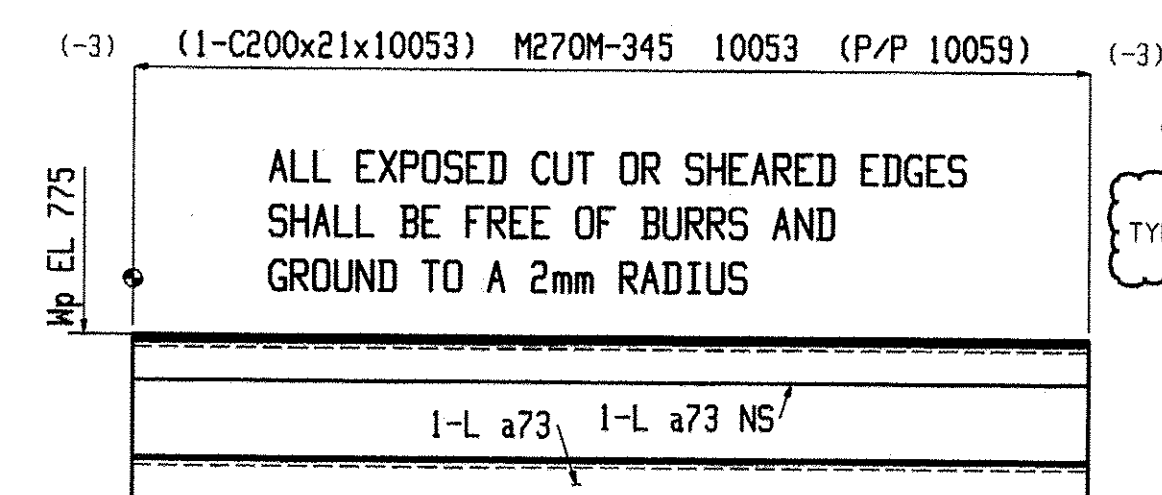
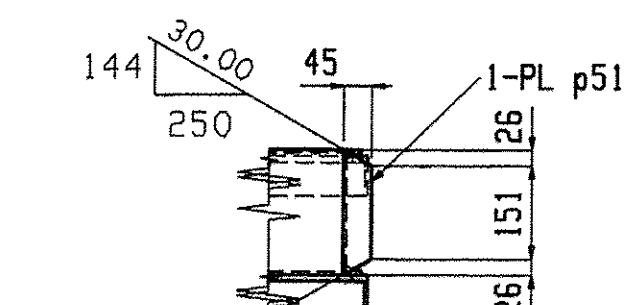


ONE BEAM R7

W 203x7.5
F 59.5x10
K 24x18

SHOP NOTE:
TOE DIRECTION NEAR SIDE

VERIFY!
TYP 6 758300 758300

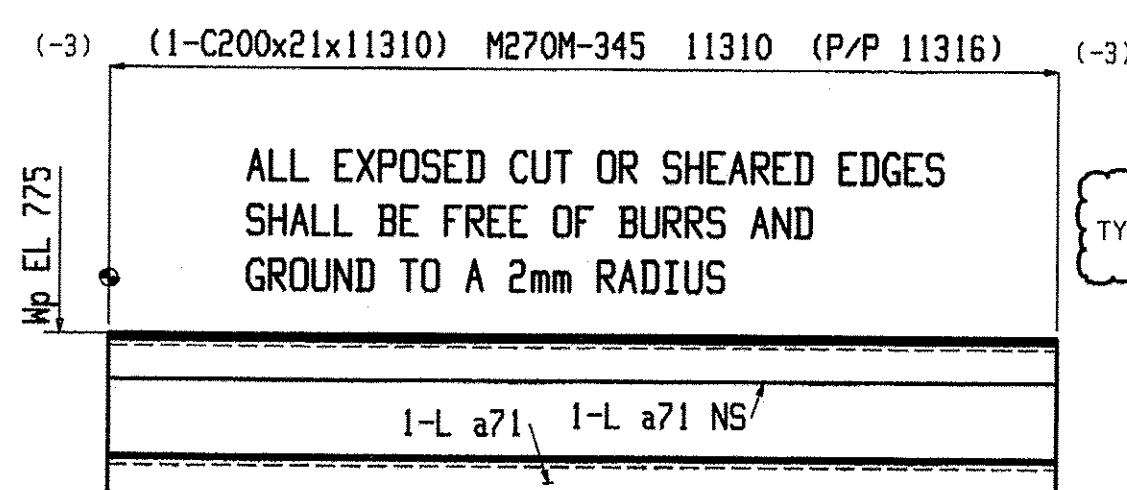
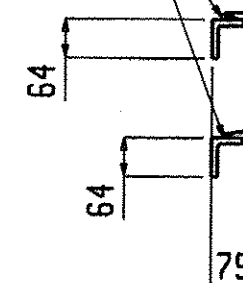


2 BEAMS R8

W 203x7.5
F 59.5x10
K 24x18

SHOP NOTE:
TOE DIRECTION NEAR SIDE

VERIFY!
TYP 6 758300 758300

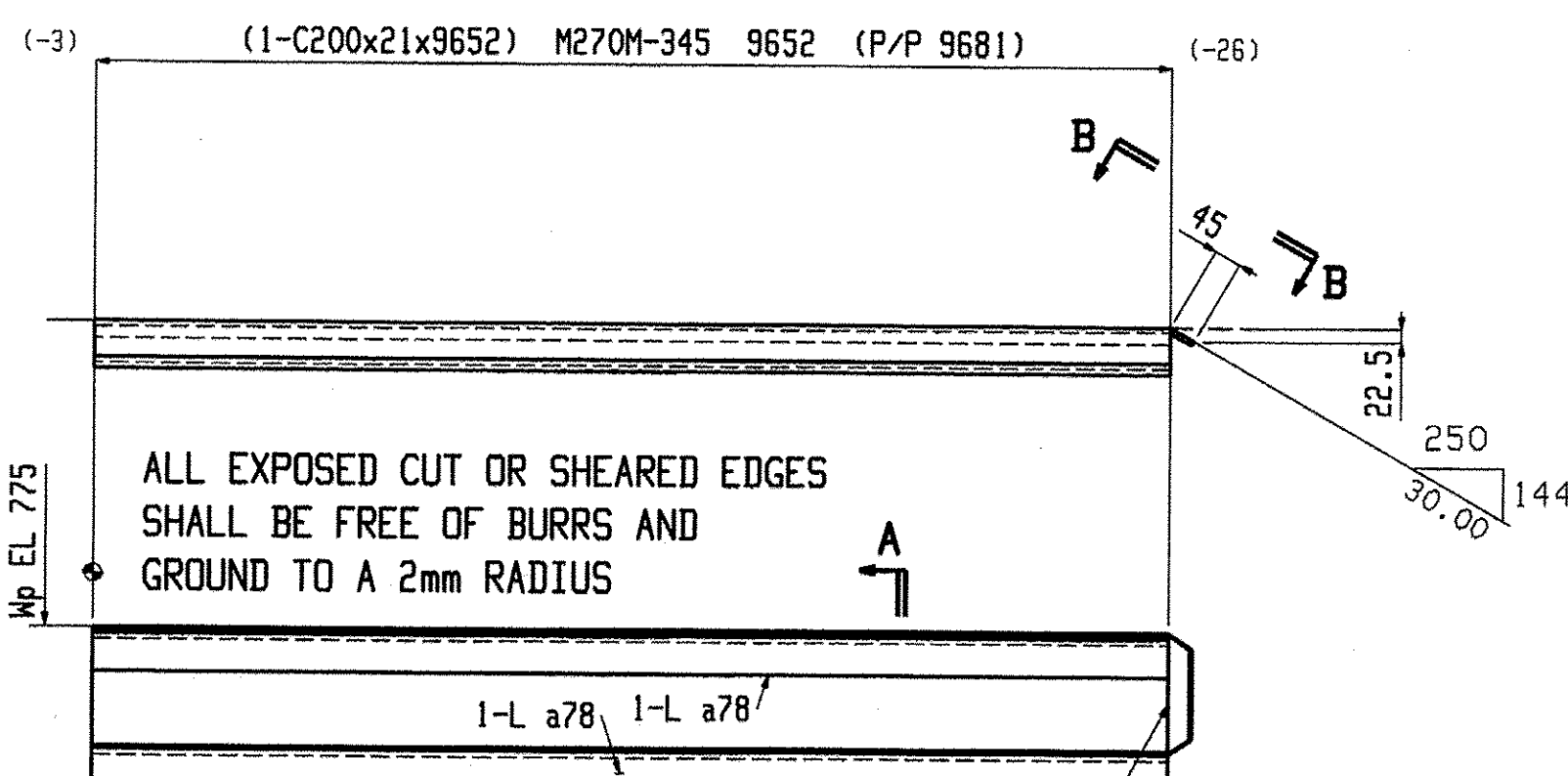
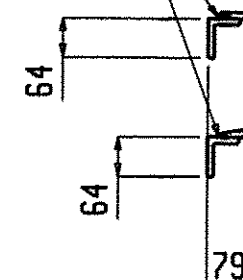


ONE BEAM R9

W 203x7.5
F 59.5x10
K 24x18

SHOP NOTE:
TOE DIRECTION NEAR SIDE

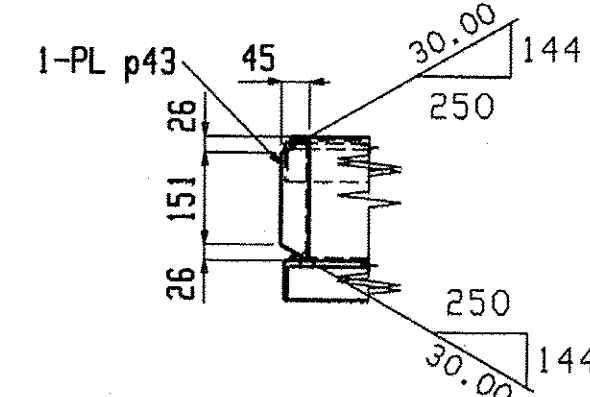
VERIFY!
TYP 6 758300 758300



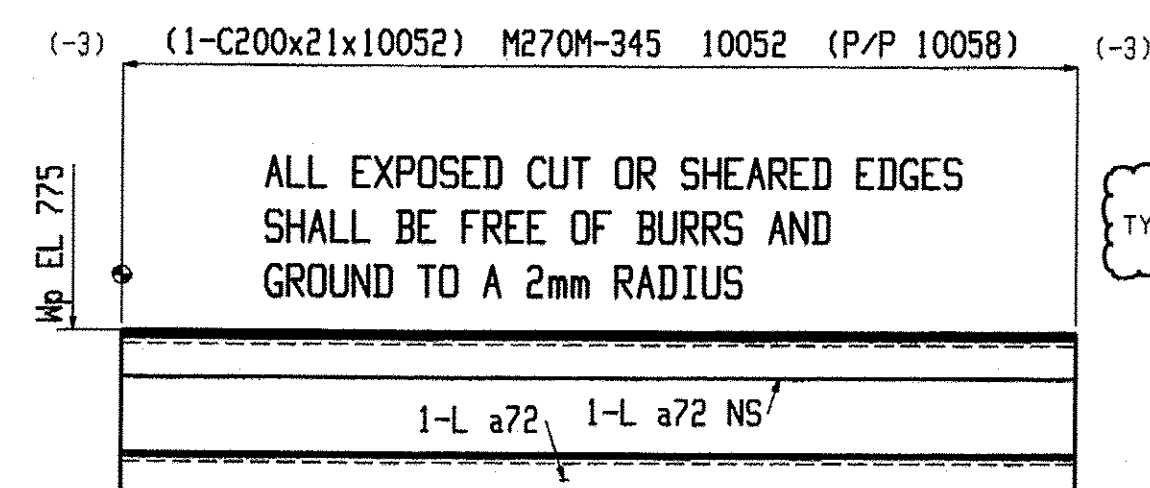
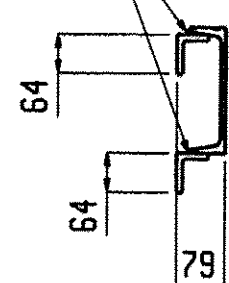
ONE BEAM R11

W 203x7.5
F 59.5x10
K 24x18

SHOP NOTE:
TOE DIRECTION NEAR SIDE



VERIFY!
TYP 6 758300 758300

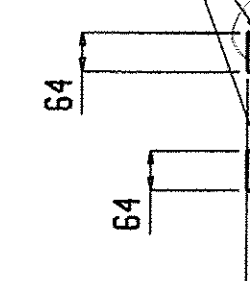


ONE BEAM R10

W 203x7.5
F 59.5x10
K 24x18

SHOP NOTE:
TOE DIRECTION NEAR SIDE

VERIFY!
TYP 6 758300 758300



weld type

BILL OF MATERIAL

Qty	Piece		Seq	Seq	Adv	Steel	
Tot.	Mark	Description	Length	NO.	Qty	ABM #	Grade
ONE R6	BEAM		2	1			
1 R6	C200x21						M270M-345
4 a69	L64x51x9.5						M270M-345
4 a70	L64x51x9.5						M270M-345
ONE R7	BEAM		2	1			
1 R7	C200x21						M270M-345
2 a77	L64x51x9.5						M270M-345
1 p51	PL8x45						M270M-345

BILL OF MATERIAL

Qty	Piece		Seq	Seq	Adv	Steel	
Tot.	Mark	Description	Length	NO.	Qty	ABM #	Grade
2 R8	BEAM		2	2			
2 R8	C200x21						M270M-345
4 a73	L64x51x9.5						M270M-345
ONE R9	BEAM		2	1			
1 R9	C200x21						M270M-345
2 a71	L64x51x9.5						M270M-345

BILL OF MATERIAL

Qty	Piece		Seq	Seq	Adv	Steel	
Tot.	Mark	Description	Length	NO.	Qty	ABM #	Grade
ONE R10	BEAM		2	1			
1 R10	C200x21						M270M-345
2 a72	L64x51x9.5						M270M-345
ONE R11	BEAM		2	1			
1 R11	C200x21						M270M-345
2 a78	L64x51x9.5						M270M-345
1 p43	PL8x45						M270M-345

Total weight : 2407

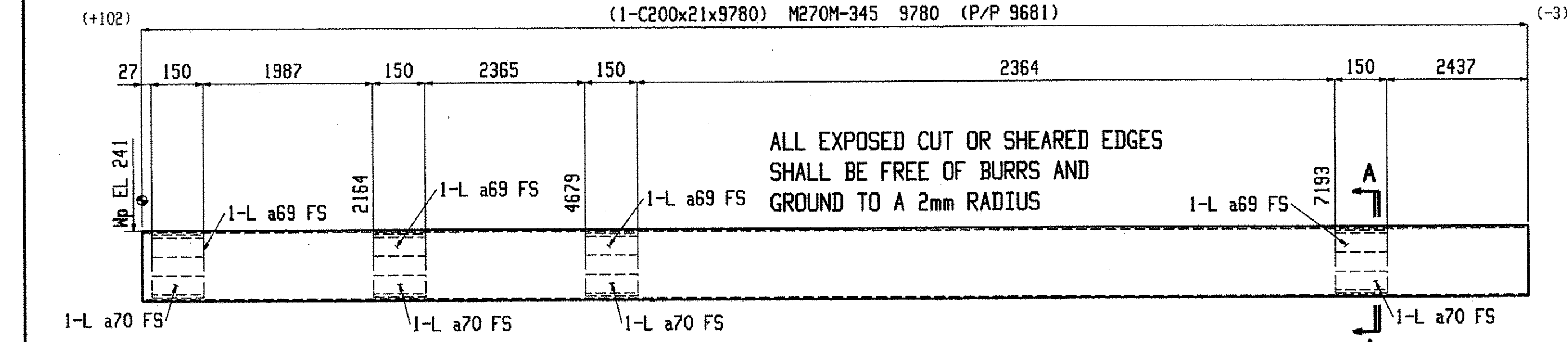
Fabrication is not to be done by Renaud Bros. Have fabricator resubmit with name of fabricator on drawings

Renaud Bros. Inc.
283 Fort Bridgeman Rd. #2
Vernon, VT, 05354
Phone 1-802 257-7383

Project: **DUMMERSTON BRIDGE**
DUMMERSTON, VT

Holes: 21mm UNF
BOLTS: 19mm DIA. M164M-I GALV UNF
Steel GR: M270M-GR345 UNF
Paint: PER SPECS (GREEN) UNF

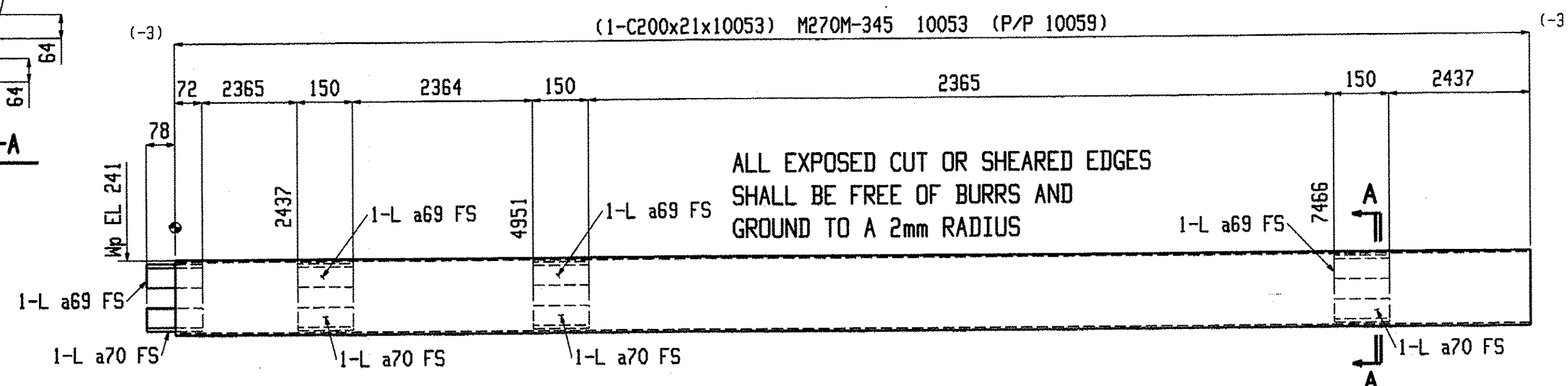
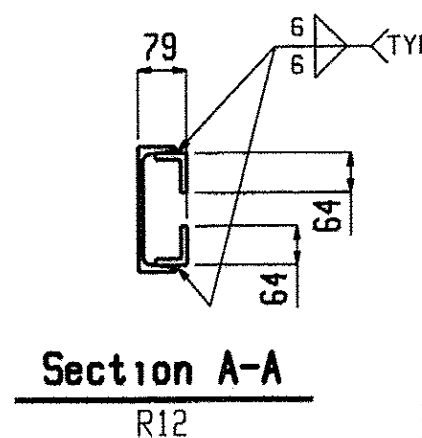
Rev. No: Date: Surface Prep: PER SPECS
Date: 9-9-09 Job No. BHO1442(28)
DWN. BY: EG Checked: MRS Sheet No. 21



ONE BEAM R12

W 203x7.5
F 59.5x10
K 24x18

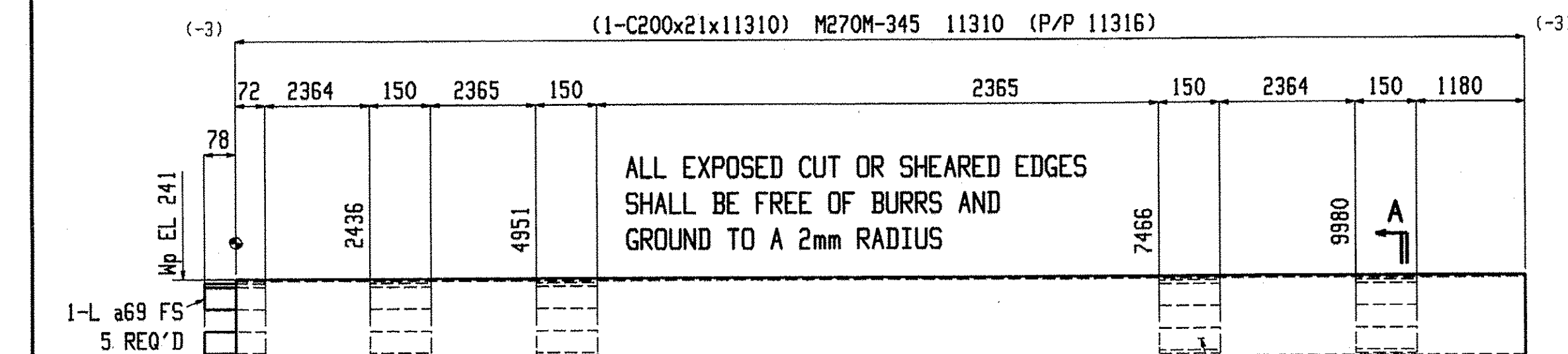
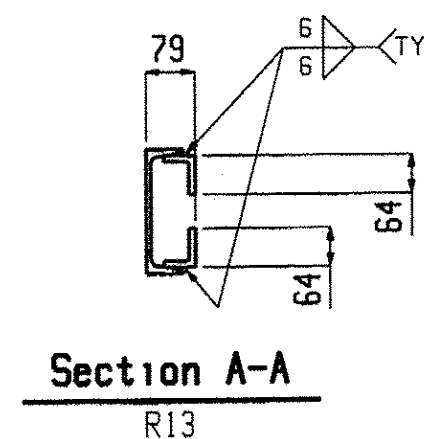
SHOP NOTE:
TOE DIRECTION FAR SIDE



ONE BEAM R13

W 203x7.5
F 59.5x10
K 24x18

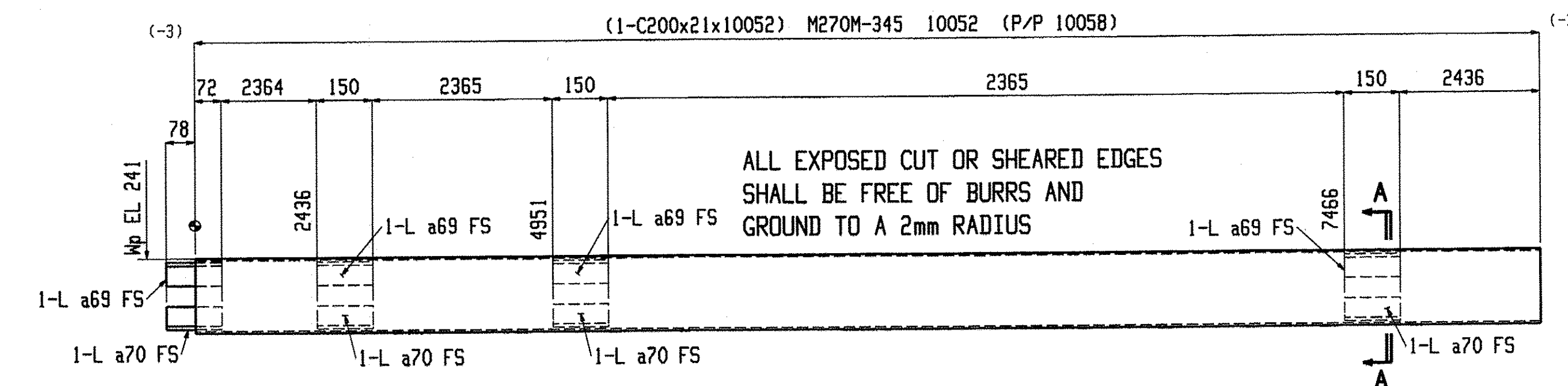
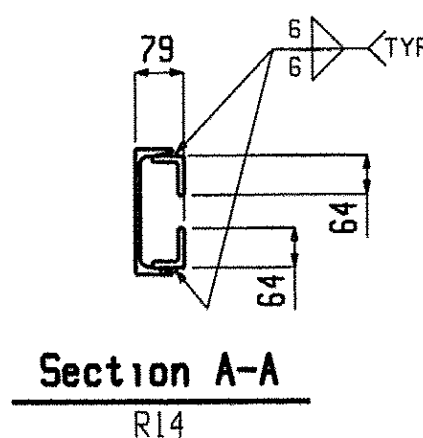
SHOP NOTE:
TOE DIRECTION FAR SIDE



ONE BEAM R14

W 203x7.5
F 59.5x10
K 24x18

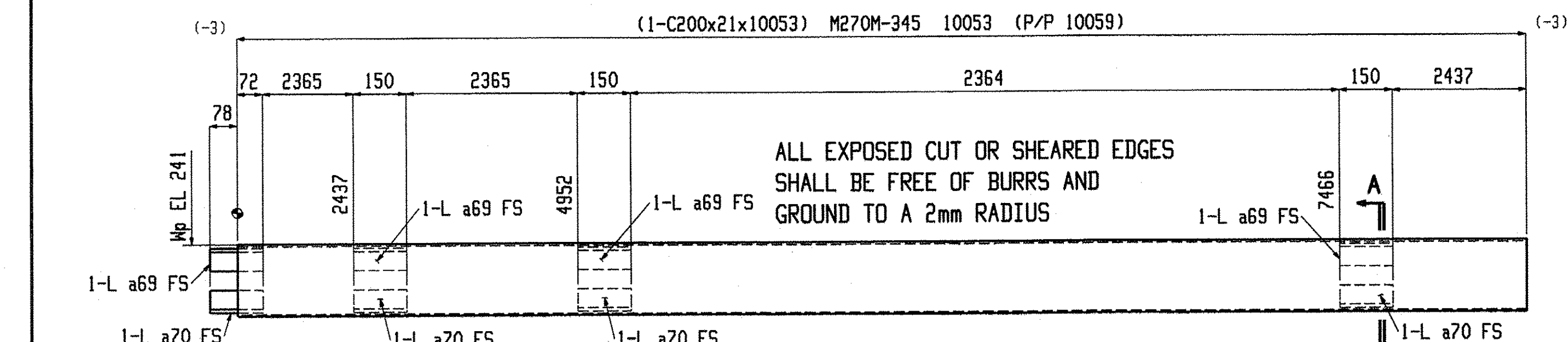
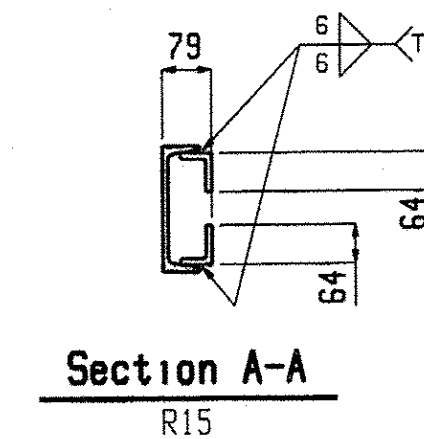
SHOP NOTE:
TOE DIRECTION FAR SIDE



ONE BEAM R15

W 203x7.5
F 59.5x10
K 24x18

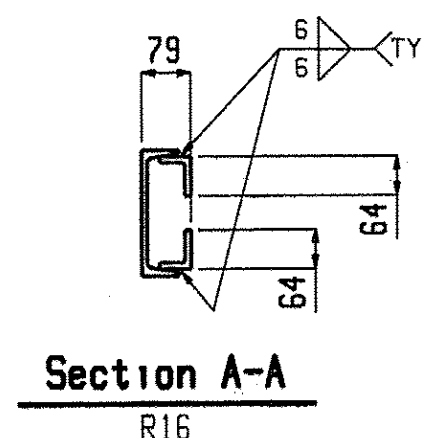
SHOP NOTE:
TOE DIRECTION FAR SIDE



ONE BEAM R16

W 203x7.5
F 59.5x10
K 24x18

SHOP NOTE:
TOE DIRECTION FAR SIDE



Nov 06 2009 10:55:46 AM

BILL OF MATERIAL									BILL OF MATERIAL									BILL OF MATERIAL								
Qty	Piece			Seq	Seq	Adv	Steel		Qty	Piece			Seq	Seq	Adv	Steel		Qty	Piece			Seq	Seq	Adv	Steel	
Tot.	Mark	Description	Length	NO.	Qty	ABM #	Grade	Remarks	Tot.	Mark	Description	Length	NO.	Qty	ABM #	Grade	Remarks	Tot.	Mark	Description	Length	NO.	Qty	ABM #	Grade	Remarks
ONE	R12	BEAM		2	1				ONE	R14	BEAM		2	1				4	a70	L64x51x9.5	150					M270M-345
1	R12	C200x21	9780				M270M-345		1	R14	C200x21	11310				M270M-345		ONE	R16	BEAM		2	1			M270M-345
4	a69	L64x51x9.5	150				M270M-345		5	a69	L64x51x9.5	150				M270M-345		1	R16	C200x21	10053					M270M-345
4	a70	L64x51x9.5	150				M270M-345		5	a70	L64x51x9.5	150				M270M-345		4	a69	L64x51x9.5	150					M270M-345
ONE	R13	BEAM		2	1				4	a70	L64x51x9.5	150				M270M-345		4	a70	L64x51x9.5	150					M270M-345
1	R13	C200x21	10053				M270M-345		ONE	R15	BEAM		2	1												
4	a69	L64x51x9.5	150				M270M-345		1	R15	C200x21	10052				M270M-345										
4	a70	L64x51x9.5	150				M270M-345		4	a69	L64x51x9.5	150				M270M-345										

Total weight : 1098

Fabrication is not to be done by Renaud Bros. Have fabricator resubmit with name of fabricator on the drawings.

Renaud Bros. Inc.

283 Fort Bridgeman Rd. #2
Vernon, VT. 05354
Phone 1-802 257-7383

Project:
DUMMERSTON BRIDGE
DUMMERSTON, VT

Holes: 21mm UNO

BOLTS: 19mm DIA. M16M-I GALV UNO

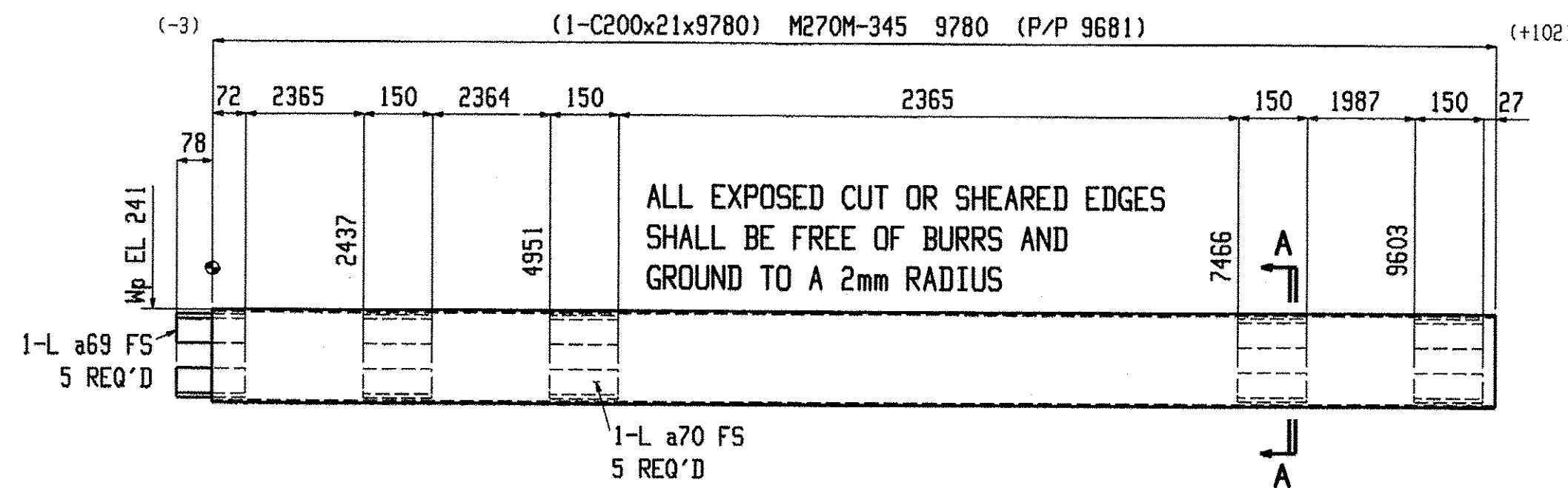
Steel GR: M270M-GR345 UNO

Paint: PER SPECS (GREEN) UNO

Surface Prep: PER SPECS

Rev.No: Date: 9-9-09 Job No. BHO 1442 (28)

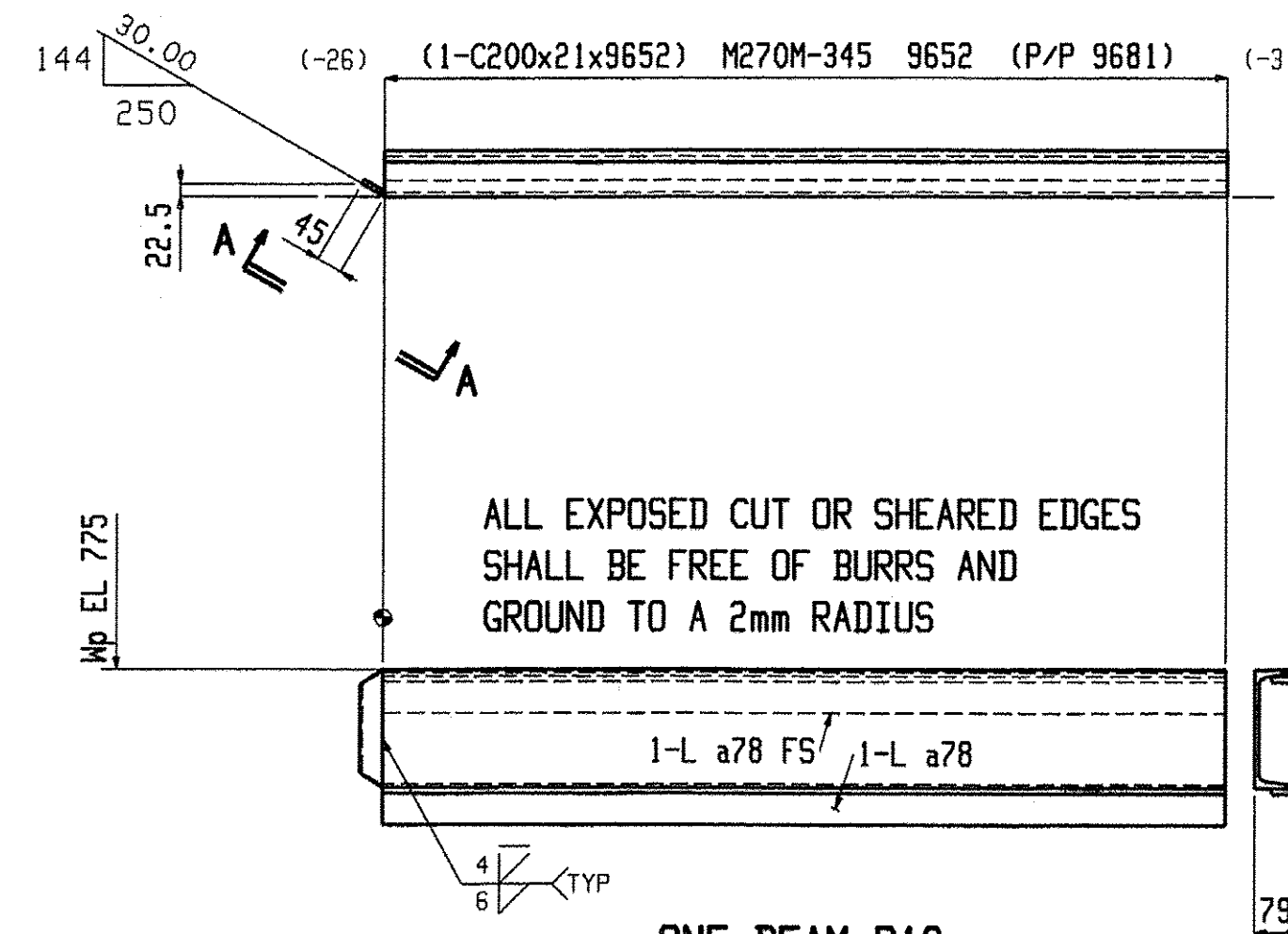
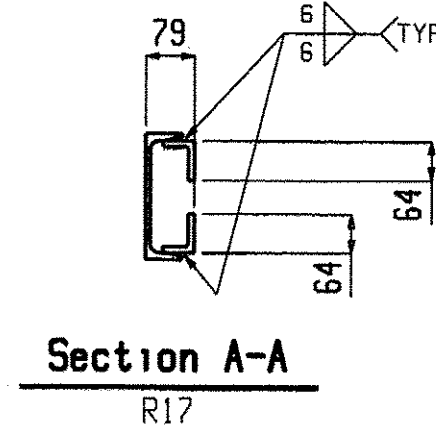
DWN. BY: EG Checked: MRS Sheet No. 22



ONE BEAM R17

W 203x7.5
F 59.5x10
K 24x18

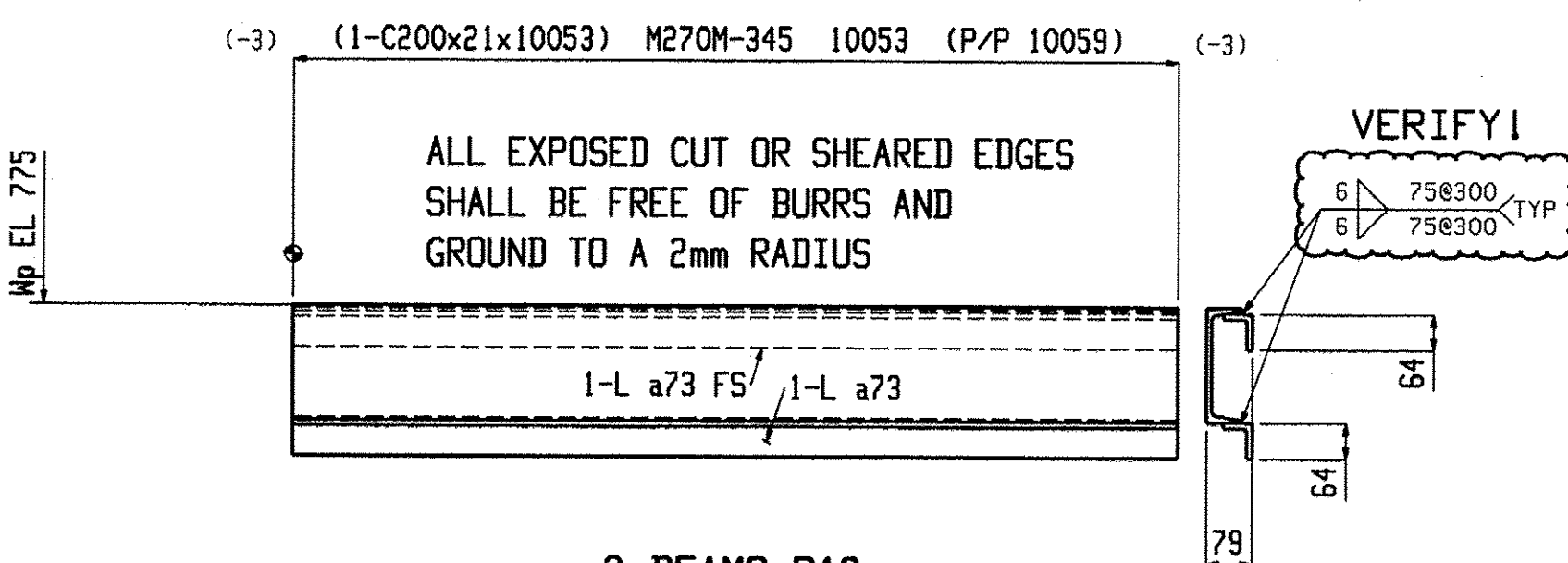
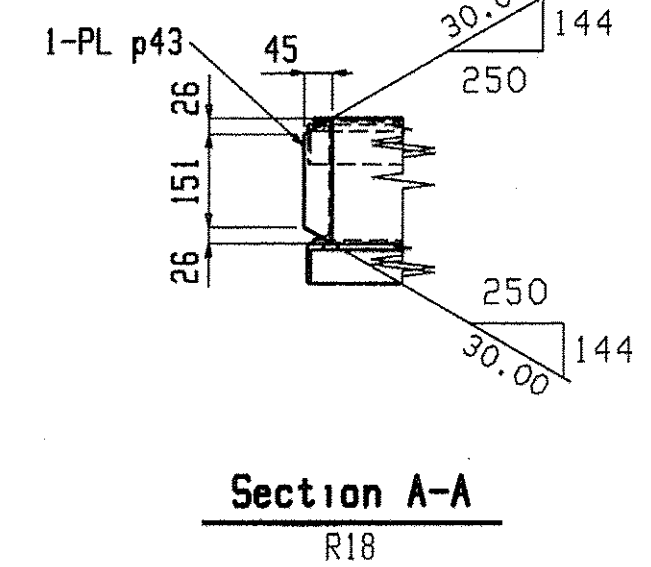
SHOP NOTE:
TOE DIRECTION FAR SIDE



ONE BEAM R18

W 203x7.5
F 59.5x10
K 24x18

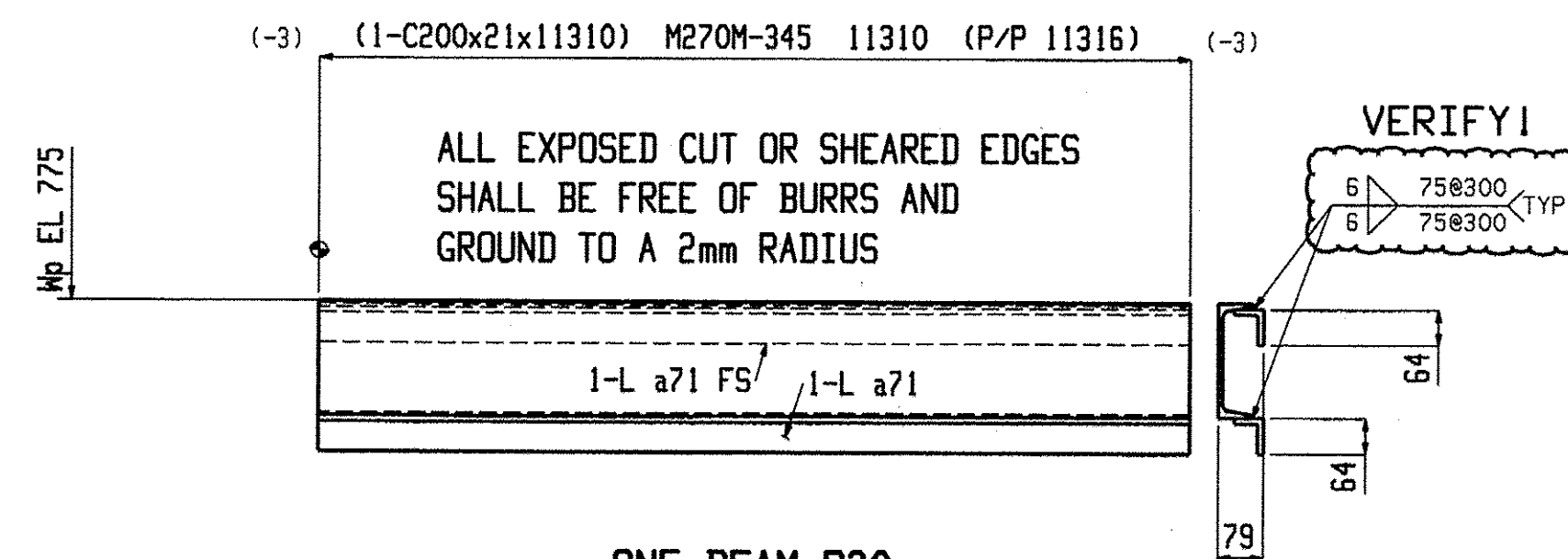
SHOP NOTE:
TOE DIRECTION FAR SIDE



2 BEAMS R19

W 203x7.5
F 59.5x10
K 24x18

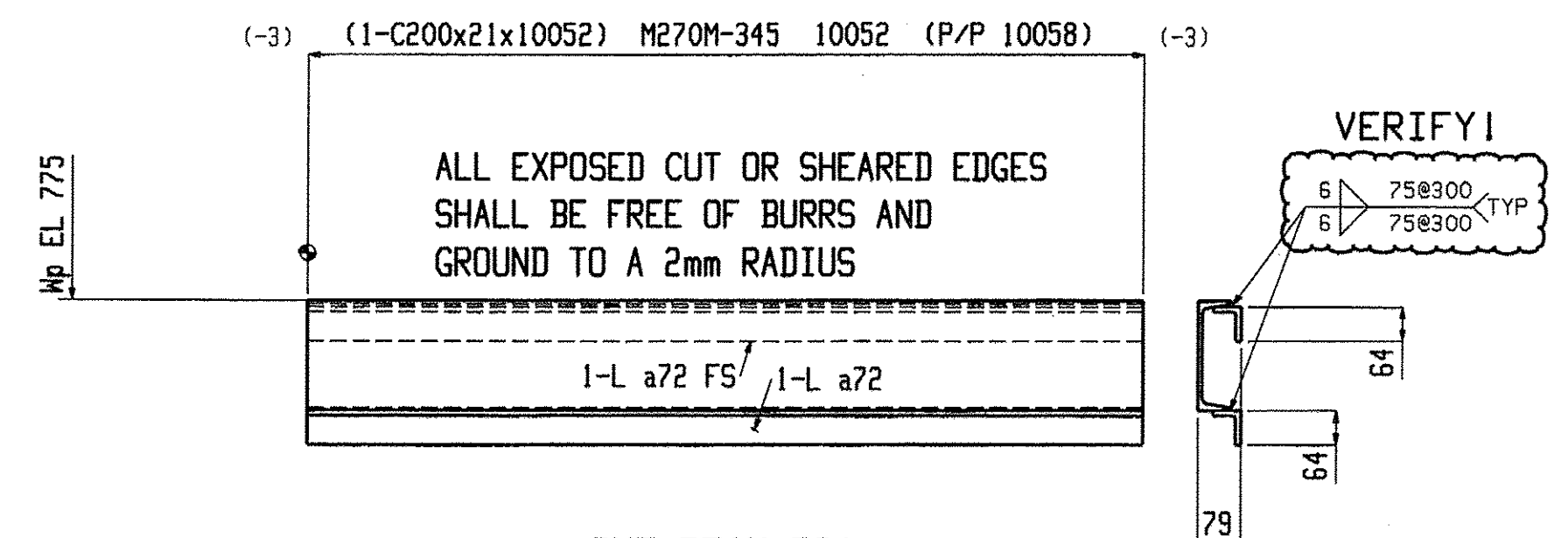
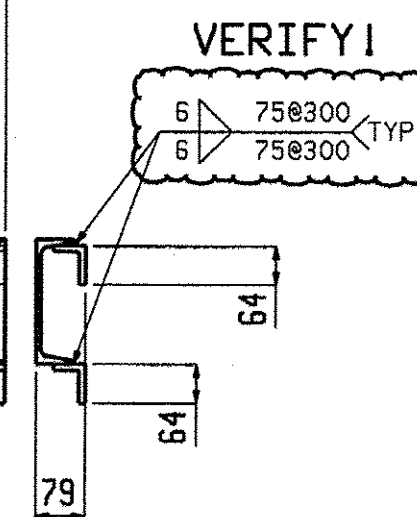
SHOP NOTE:
TOE DIRECTION FAR SIDE



ONE BEAM R20

W 203x7.5
F 59.5x10
K 24x18

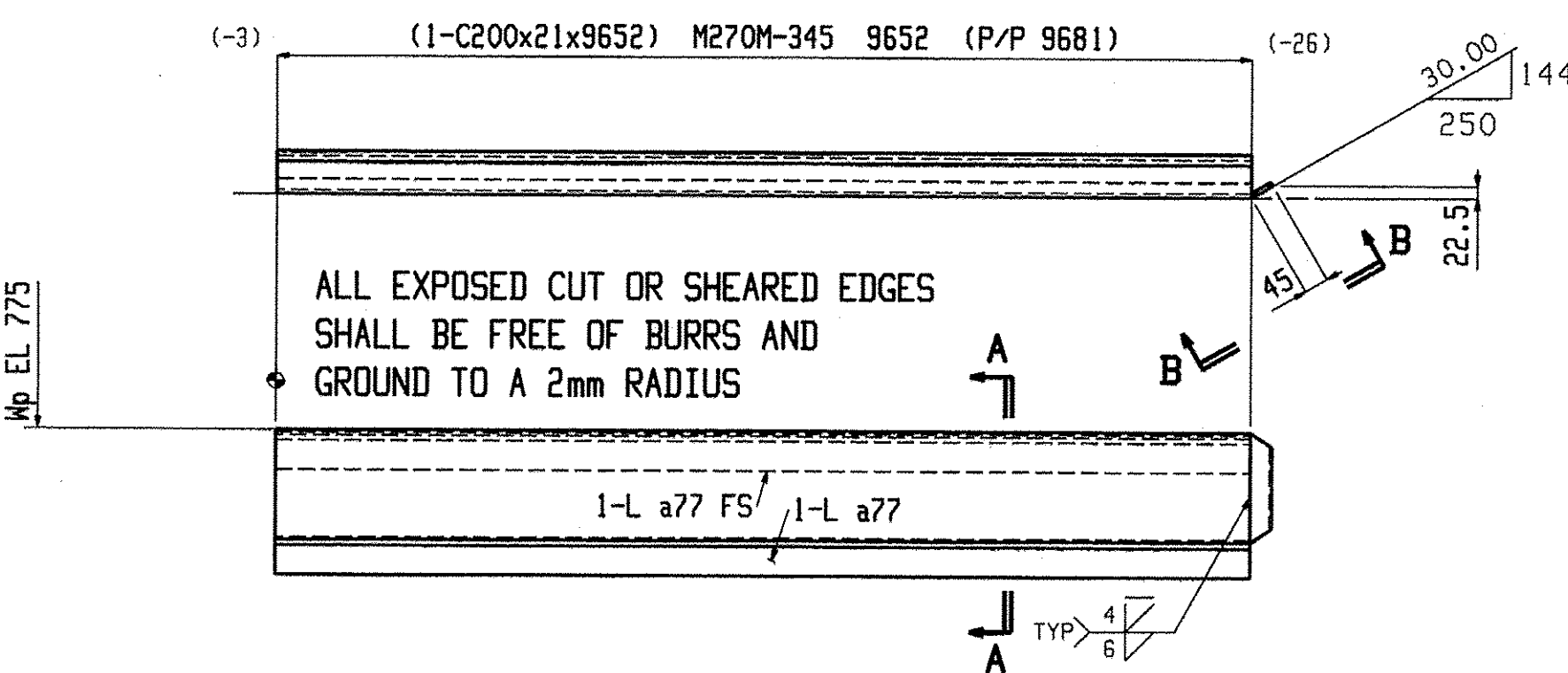
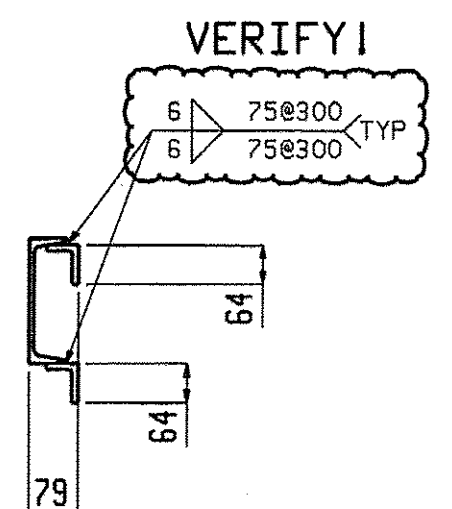
SHOP NOTE:
TOE DIRECTION FAR SIDE



ONE BEAM R21

W 203x7.5
F 59.5x10
K 24x18

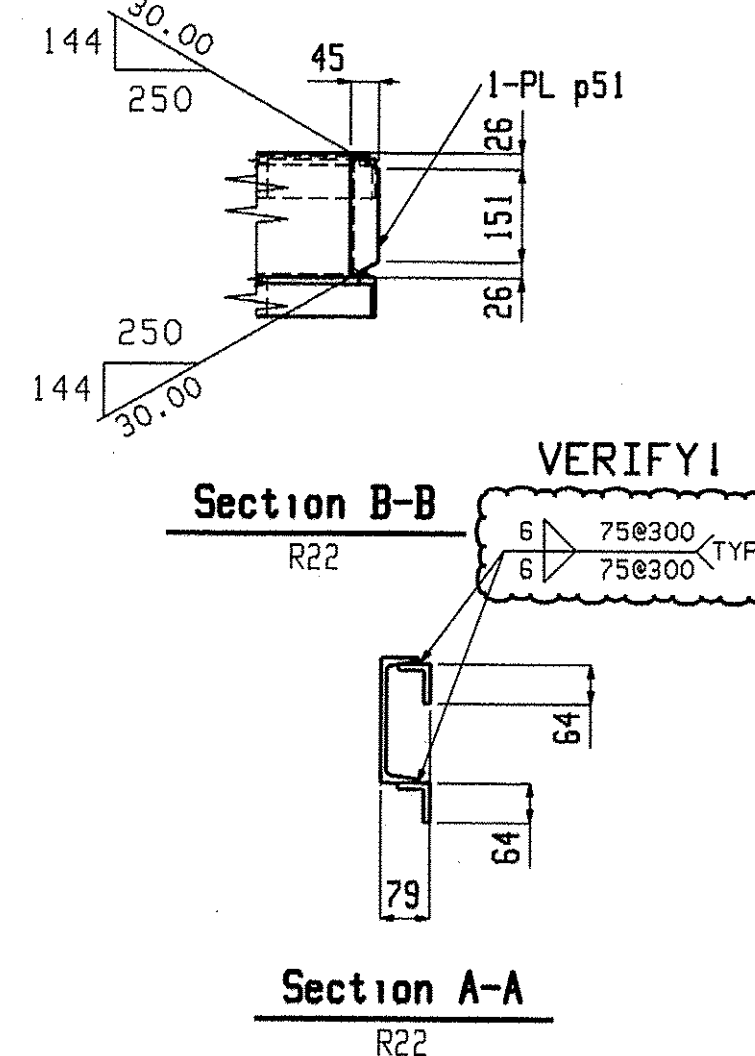
SHOP NOTE:
TOE DIRECTION FAR SIDE



ONE BEAM R22

W 203x7.5
F 59.5x10
K 24x18

SHOP NOTE:
TOE DIRECTION FAR SIDE



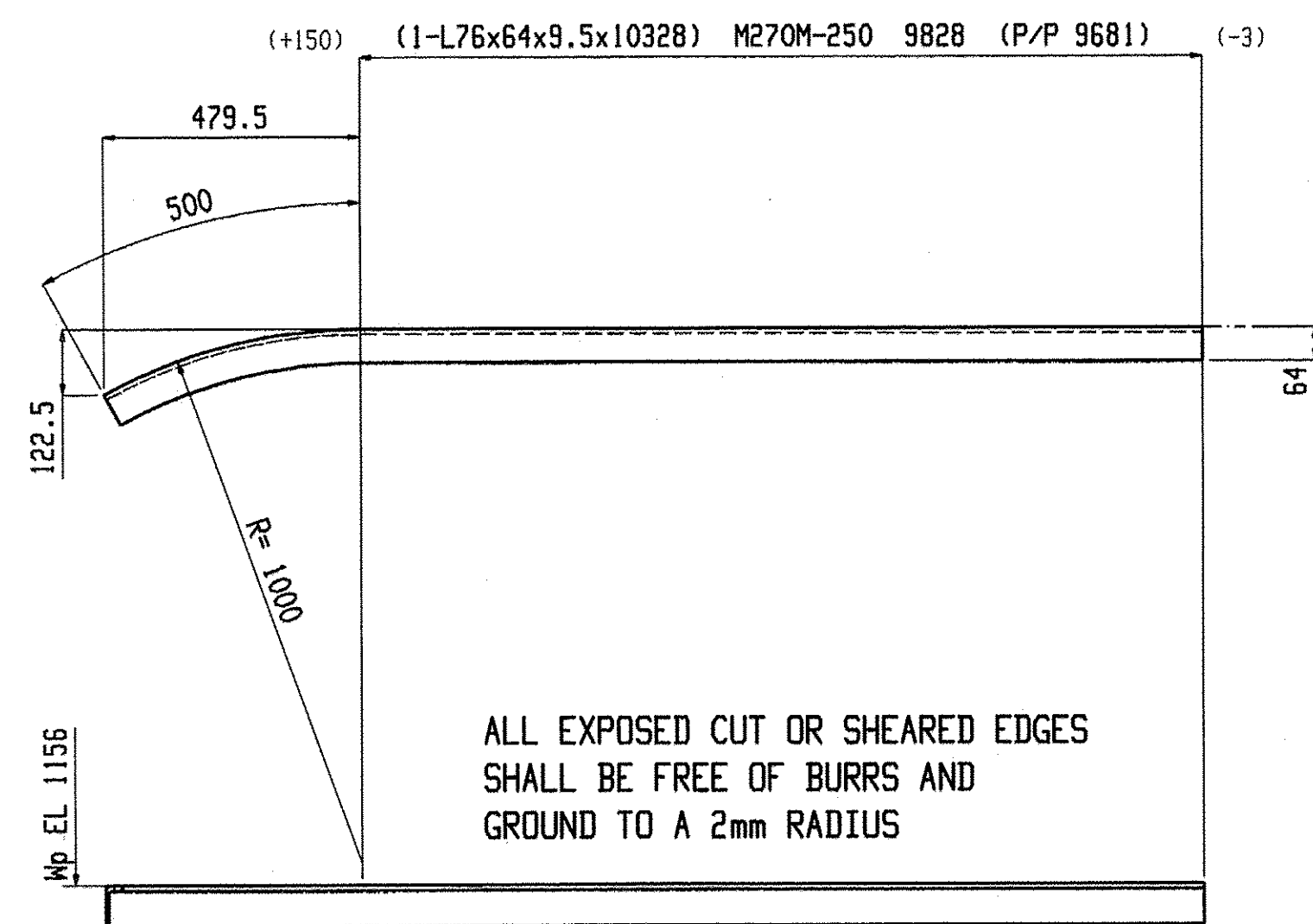
Section A-A
R22

BILL OF MATERIAL									BILL OF MATERIAL									BILL OF MATERIAL								
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Tot.	Mark	Description	Length	NO.	Qty	ABM #	Grade	Remarks	Tot.	Mark	Description	Length	NO.	Qty	ABM #	Grade	Remarks	Tot.	Mark	Description	Length	NO.	Qty	ABM #	Grade	Remarks
ONE R17	BEAM			2	1				ONE R21	BEAM			2	1				ONE R22	BEAM			2	1			
1 R17	C200x21		9780				M270M-345		1 R21	C200x21		10052				M270M-345		1 R22	C200x21		9652				M270M-345	
5 a69	L64x51x9.5		150				M270M-345		2 a72	L64x51x9.5		10052				M270M-345		2 a77	L64x51x9.5		9652				M270M-345	
5 a70	L64x51x9.5		150				M270M-345		1 p51	PL8x45		203				M270M-345										
ONE R18	BEAM			2	1				ONE R20	BEAM			2	1				ONE R22	BEAM			2	1			
1 R18	C200x21		9652				M270M-345		1 R20	C200x21		11310				M270M-345		1 R22	C200x21		9652				M270M-345	
2 a78	L64x51x9.5		9652				M270M-345		2 a71	L64x51x9.5		11310				M270M-345										
1 p43	PL8x45		203				M270M-345																			

Total weight : 2409

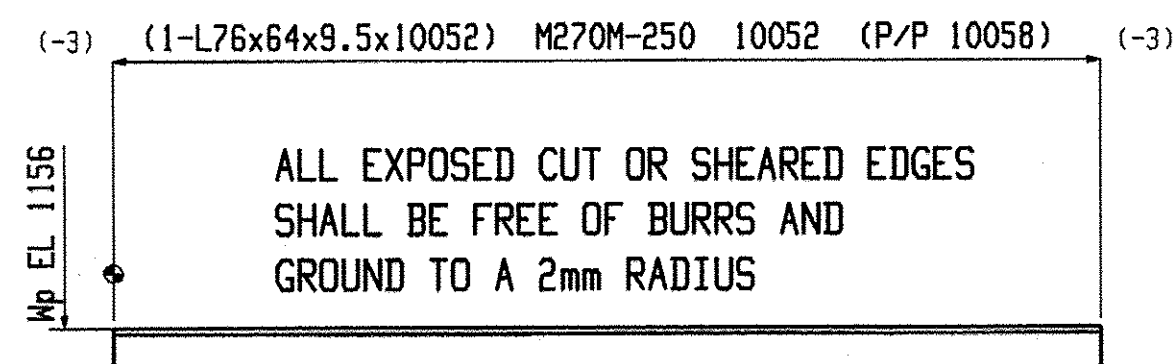
Fabrication is not to be done by Renaud Bros. Have fabricator resubmit with name of fabricator on the drawings

Renaud Bros. Inc. 283 Fort Bridgeman Rd. #2 Vernon, VT. 05354 Phone 1-802 257-7383		Date: 9-9-09		Job No. BHO 1442 (28)	
Project: DUMMERSTON BRIDGE DUMMERSTON, VT		Date: 9-9-09		Job No. BHO 1442 (28)	
Rev. No:		Date:		Job No.	
DWN. BY: EG		Checked: MRS		Sheet No. 23	
Holes: 21mm UNO		BOLTS: 19mm DIA. M164M-I GALV UNO		Steel GR: M270M-GR345 UNO	
Paint: PER SPECS (GREEN) UNO		Surface Prep: PER SPECS			



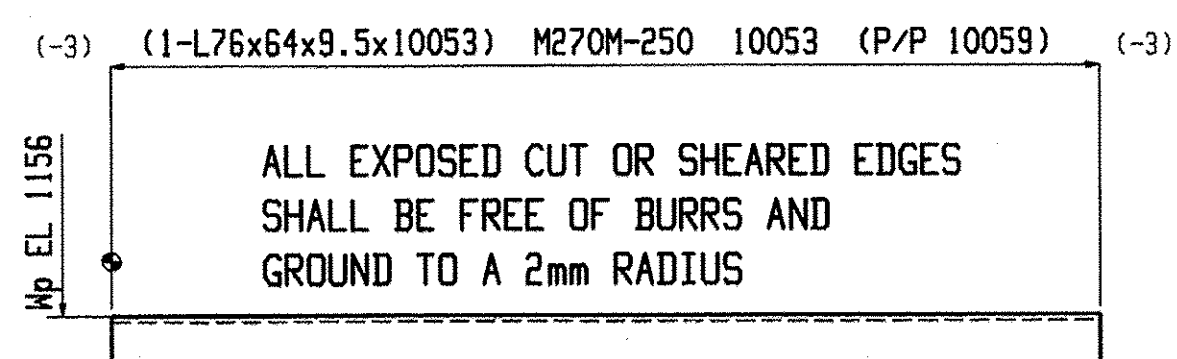
ONE BEAM R23

SHOP NOTE:
TOE DIRECTION NEAR SIDE



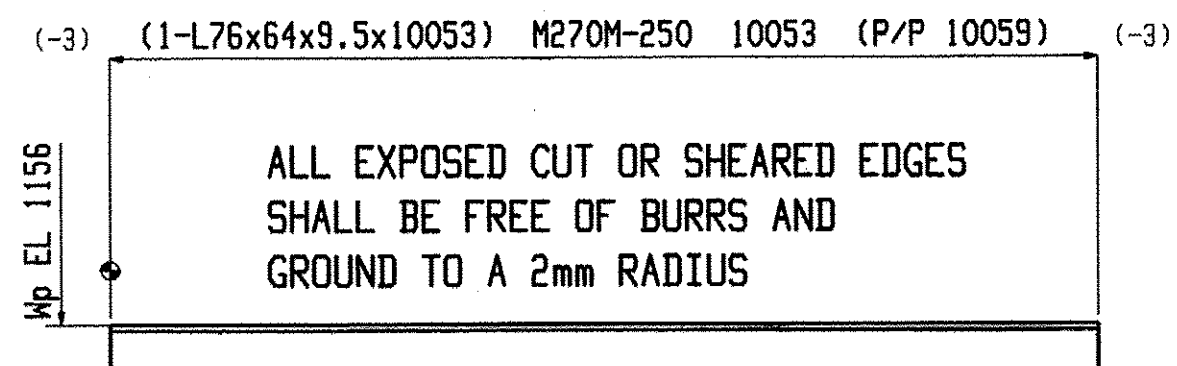
ONE BEAM R26

SHOP NOTE:
TOE DIRECTION NEAR SIDE



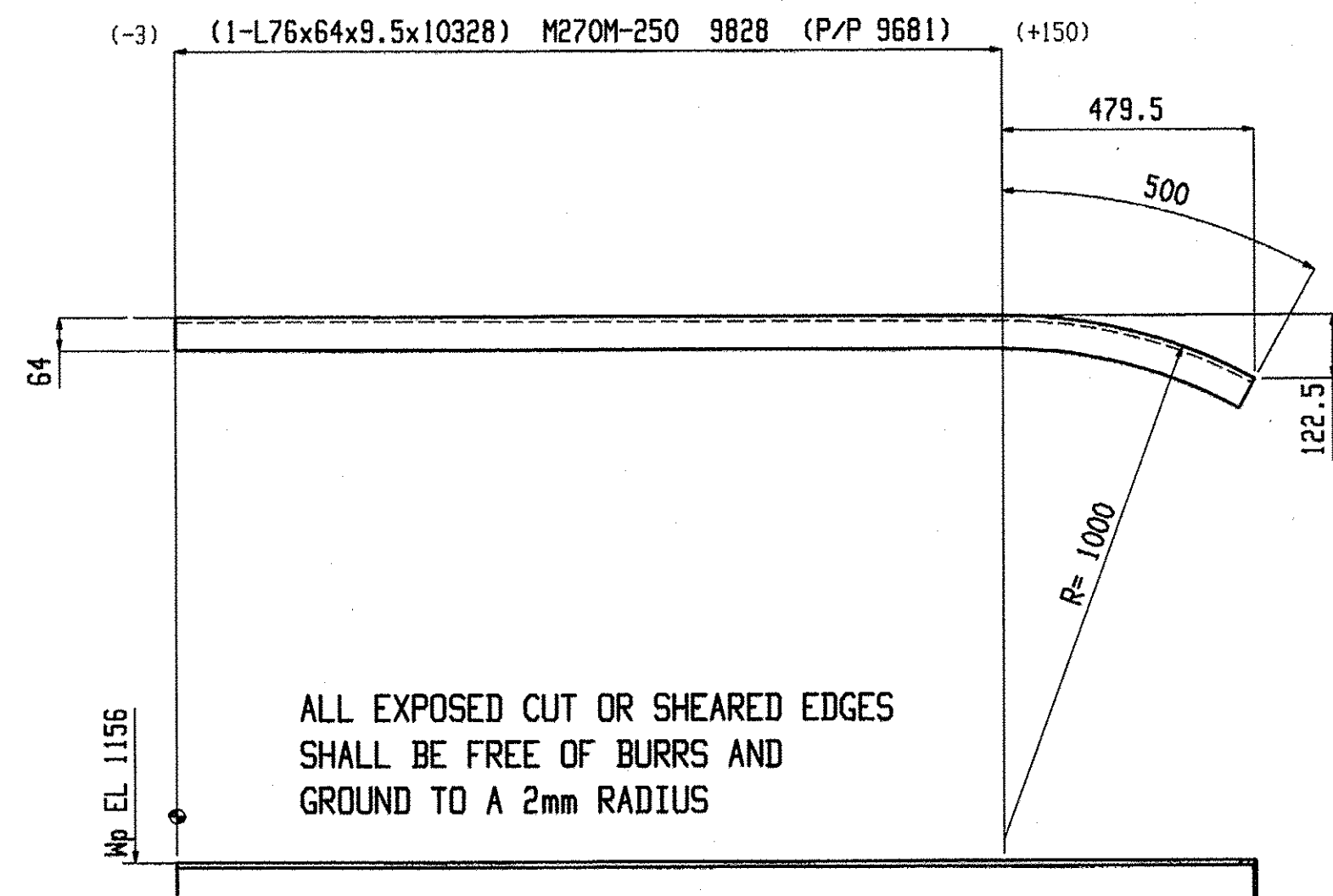
2 BEAMS R29

SHOP NOTE:
TOE DIRECTION FAR SIDE



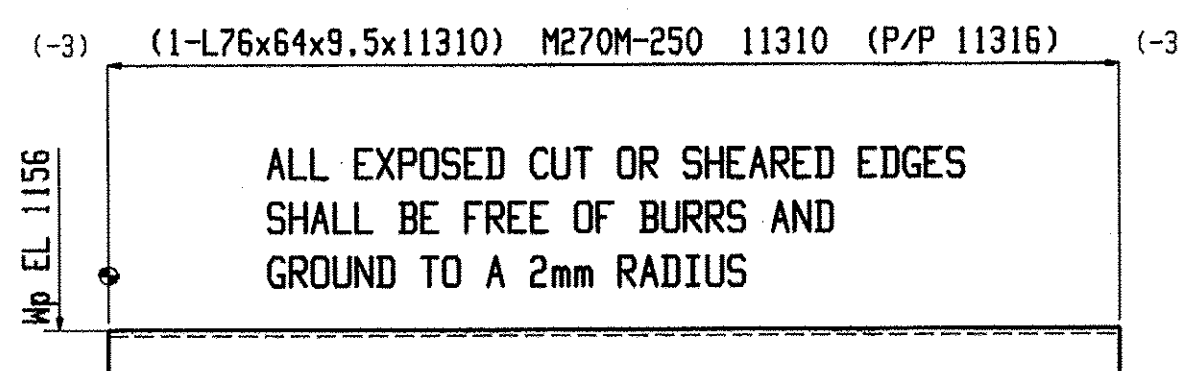
2 BEAMS R24

SHOP NOTE:
TOE DIRECTION NEAR SIDE



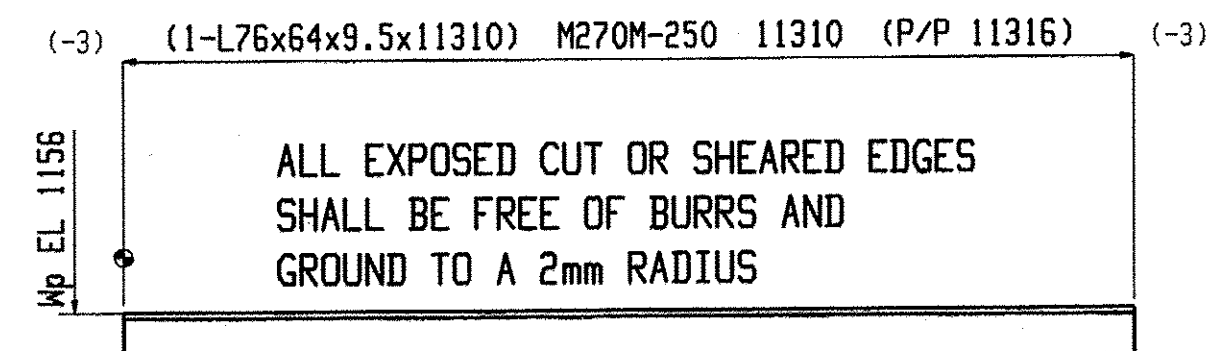
ONE BEAM R27

SHOP NOTE:
TOE DIRECTION NEAR SIDE



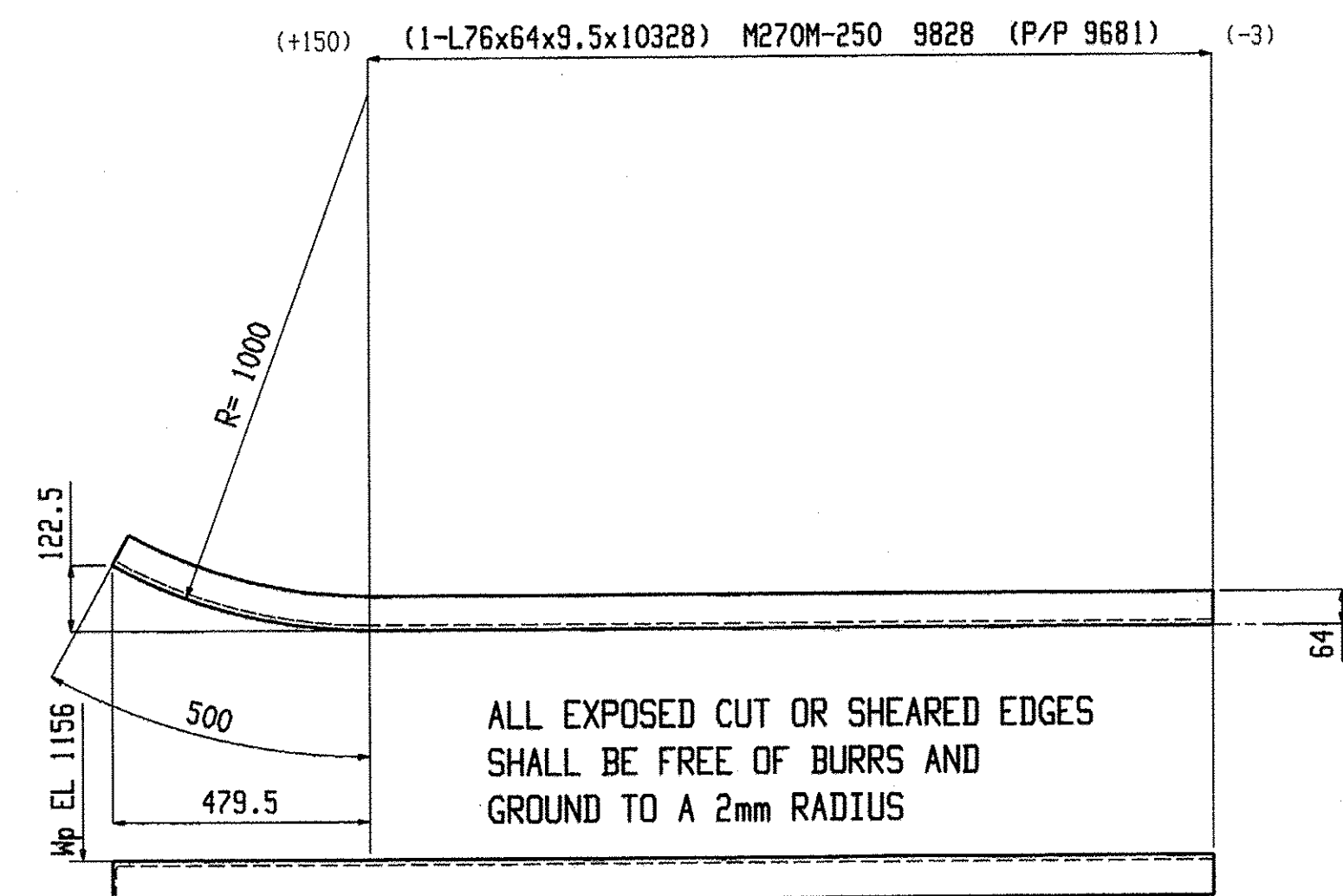
ONE BEAM R30

SHOP NOTE:
TOE DIRECTION FAR SIDE



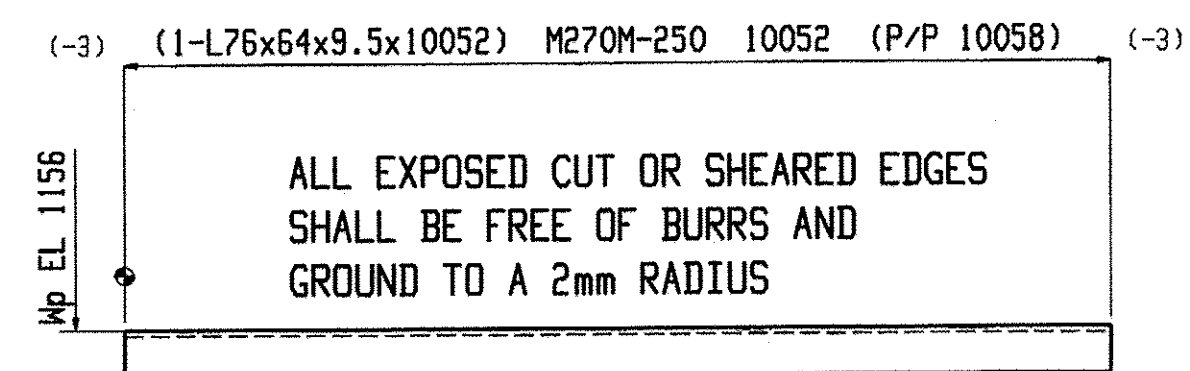
ONE BEAM R25

SHOP NOTE:
TOE DIRECTION NEAR SIDE



ONE BEAM R28

SHOP NOTE:
TOE DIRECTION FAR SIDE



ONE BEAM R31

SHOP NOTE:
TOE DIRECTION FAR SIDE

Nov 05 2009 10:55:52 AM

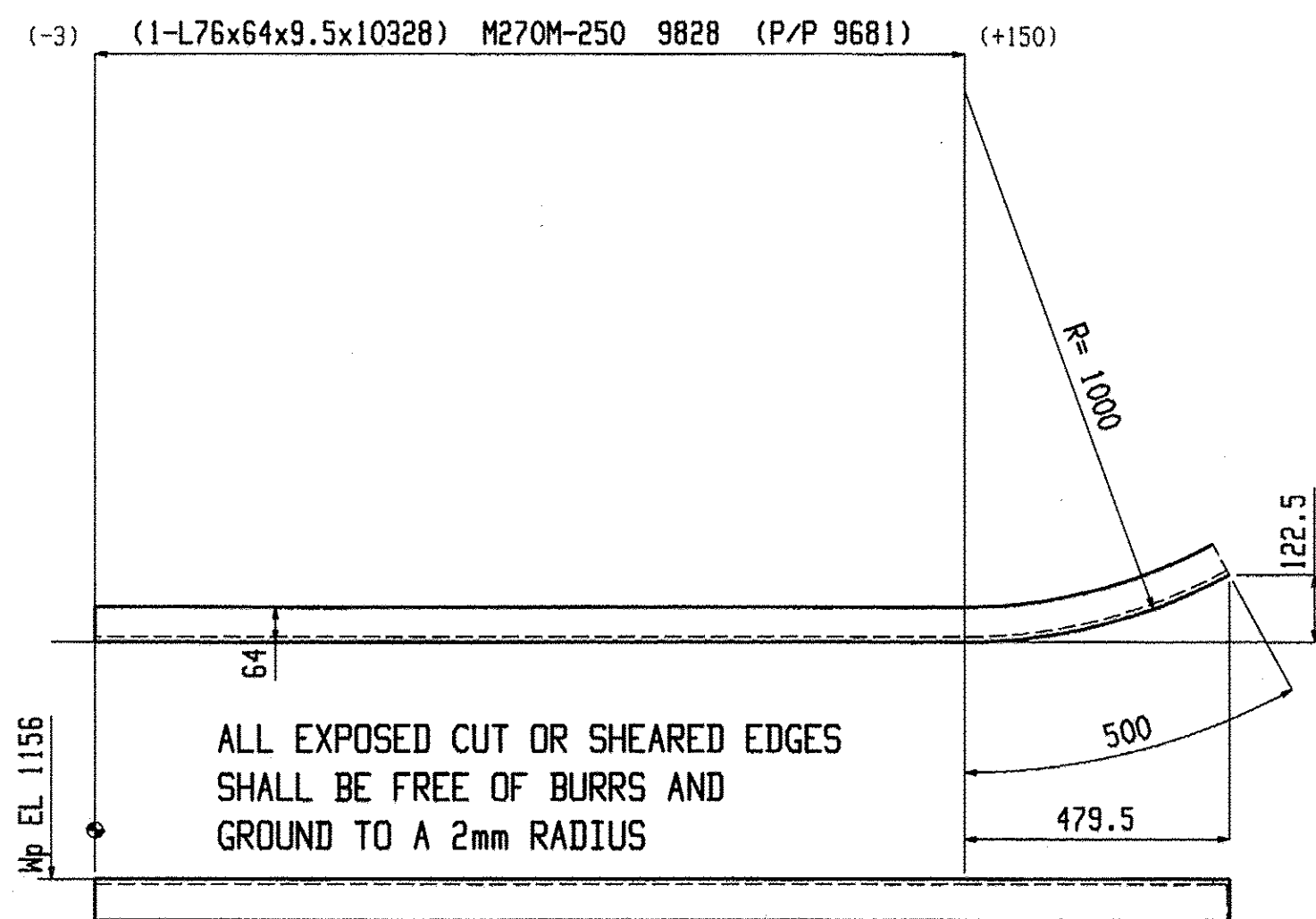
Nov 06 2009 10:55:52 AM

BILL OF MATERIAL									BILL OF MATERIAL									BILL OF MATERIAL								
Qty	Piece			Seq	Seq	Adv	Steel		Qty	Piece			Seq	Seq	Adv	Steel		Qty	Piece			Seq	Seq	Adv	Steel	
Tot.	Mark	Description	Length	NO.	Qty	ABM #	Grade	Remarks	Tot.	Mark	Description	Length	NO.	Qty	ABM #	Grade	Remarks	Tot.	Mark	Description	Length	NO.	Qty	ABM #	Grade	Remarks
ONE	R23	BEAM		2	1				ONE	R26	BEAM		2	1				2	R29	BEAM		2	2			
1	R23	L76x64x9.5	10328				M270M-250		1	R26	L76x64x9.5	10052				M270M-250		2	R29	L76x64x9.5	10053				M270M-250	
2	R24	BEAM		2	2				ONE	R27	BEAM		2	1				ONE	R30	BEAM		2	1			
2	R24	L76x64x9.5	10053				M270M-250		1	R27	L76x64x9.5	10328				M270M-250		1	R30	L76x64x9.5	11310				M270M-250	
ONE	R25	BEAM		2	1				ONE	R28	BEAM		2	1				ONE	R31	BEAM		2	1			
1	R25	L76x64x9.5	11310				M270M-250		1	R28	L76x64x9.5	10328				M270M-250		1	R31	L76x64x9.5	10052				M270M-250	

Total weight : 1110

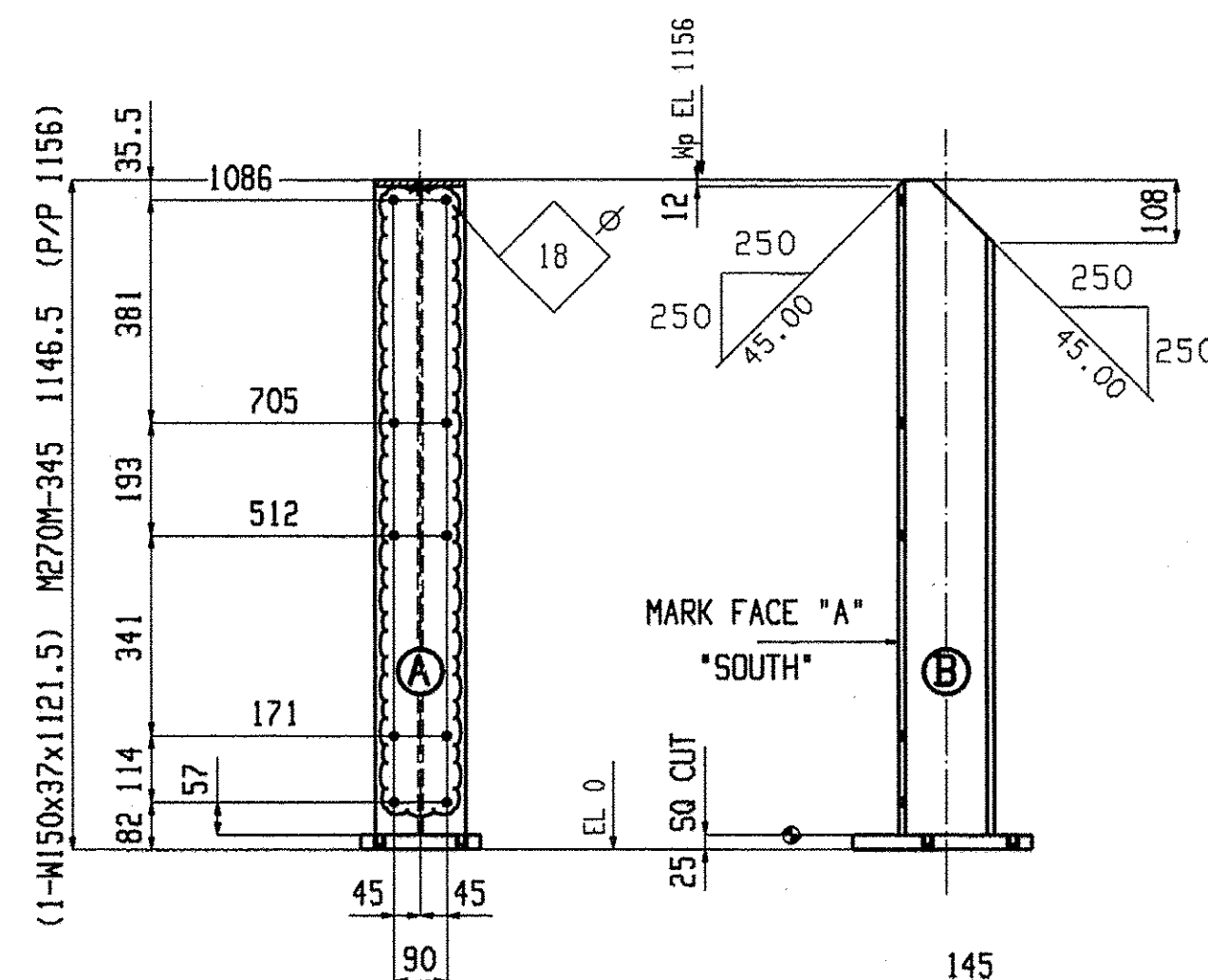
Fabrication is not to be done by Renaud Bros. Have fabricator resubmit with name of fabricator on the drawings.

Renaud Bros. Inc.		Holes: 21mm UNF	
283 Fort Bridgeman Rd. #2		BOLTS: 19mm DIA. M16M-1 GALV UNF	
Vernon, VT. 05354		Steel GR: M270M-GR345 UNF	
Phone 1-802 257-7383		Paint: PER SPECS (GREEN) UNF	
Rev.No:	Date:	Surface Prep:	PER SPECS
Project: DUMMERSTON BRIDGE		Job No. BHO 1442 (28)	
DUMMERSTON, VT		Sheet No. 24	
DWN. BY: EG	Checked: MRS		

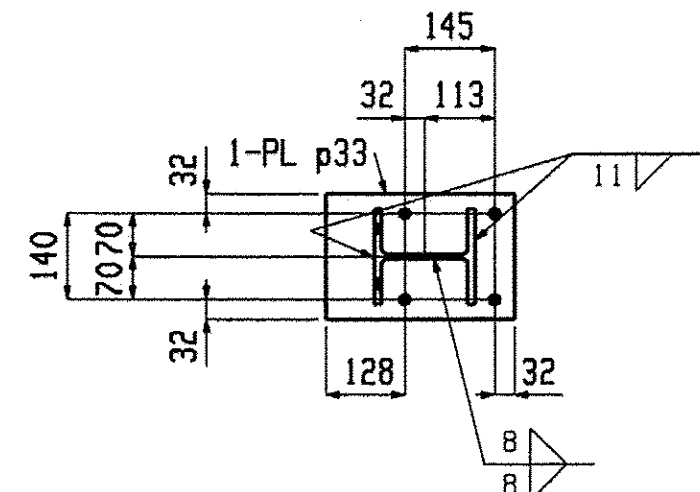


ONE BEAM R32

SHOP NOTE:
TOE DIRECTION FAR SIDE

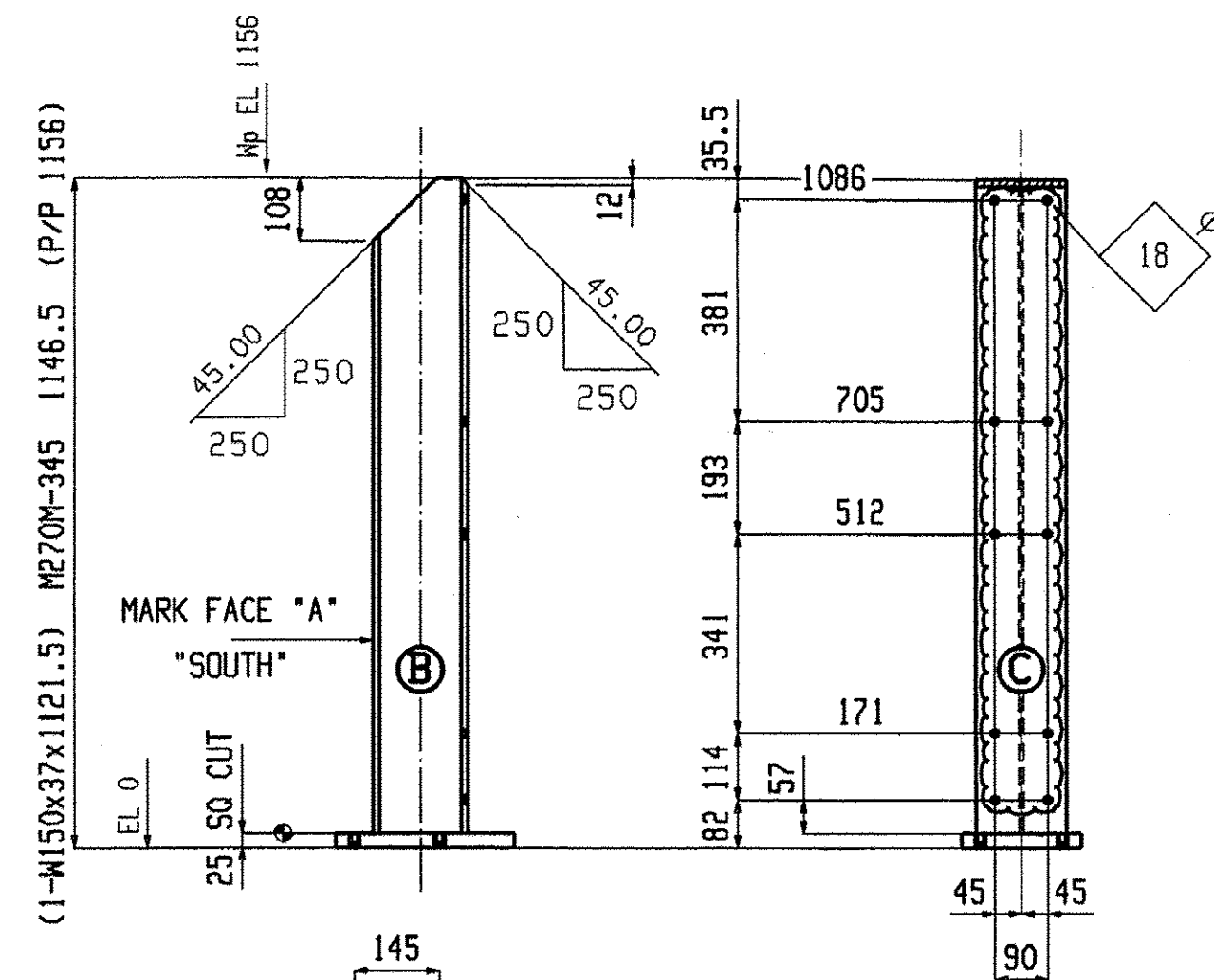


ALL EXPOSED CUT OR SHEARED EDGES
SHALL BE FREE OF BURRS AND
GROUND TO A 2mm RADIUS



24 COLUMNS C4

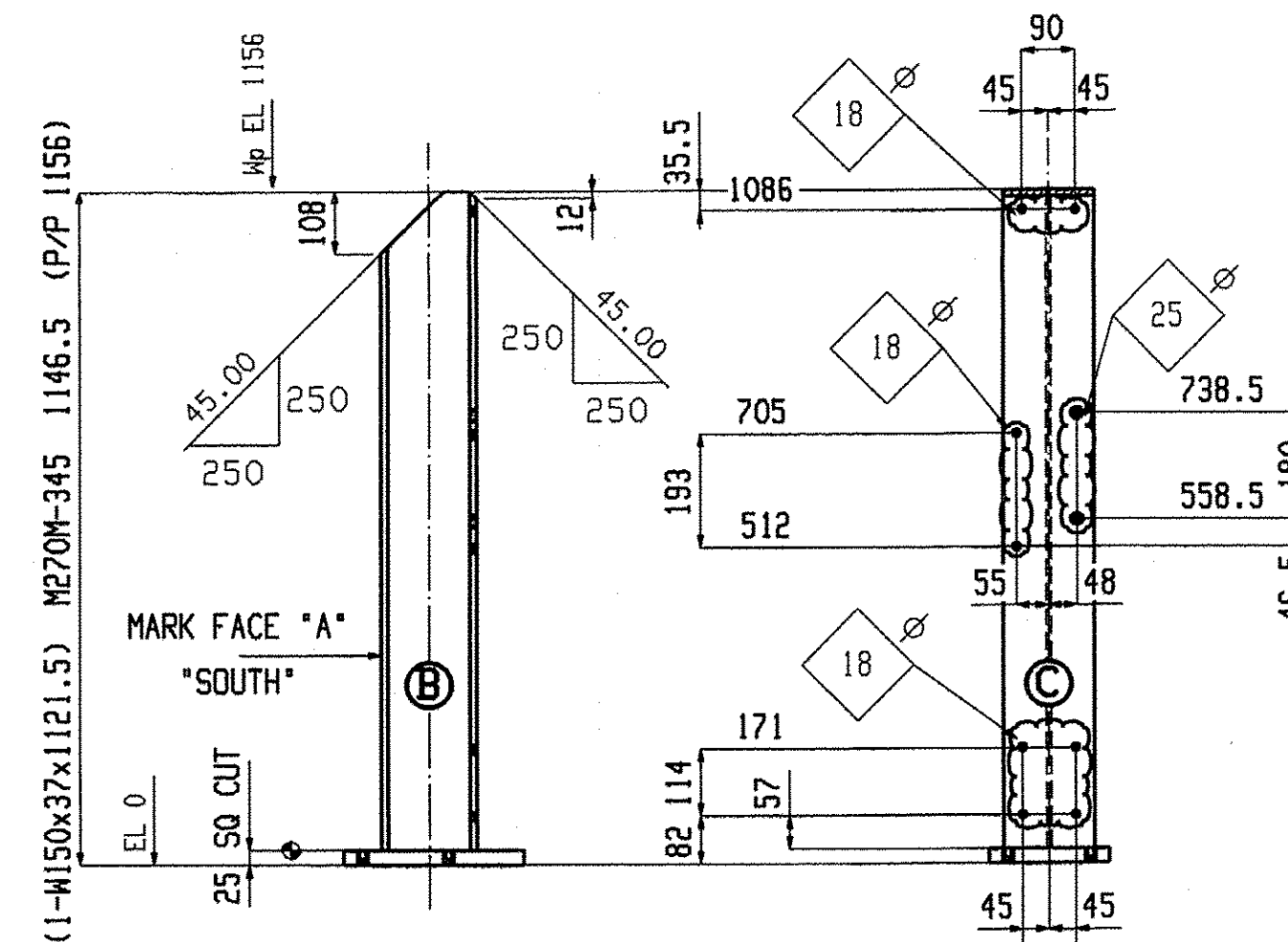
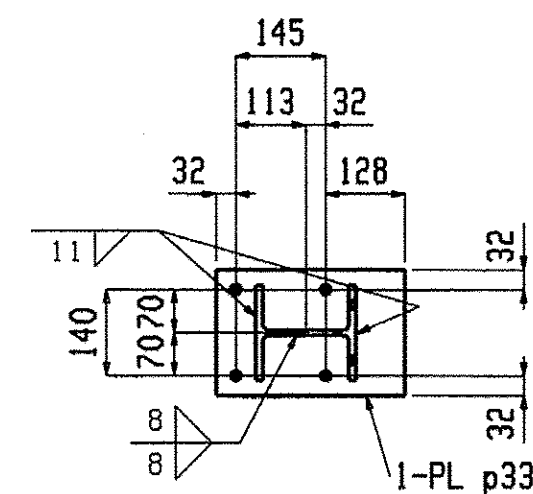
W 162x8
F 154.5x11.5
K 20.5x13



24 COLUMNS C1

W 162x8
F 154.5x11.5
K 20.5x13

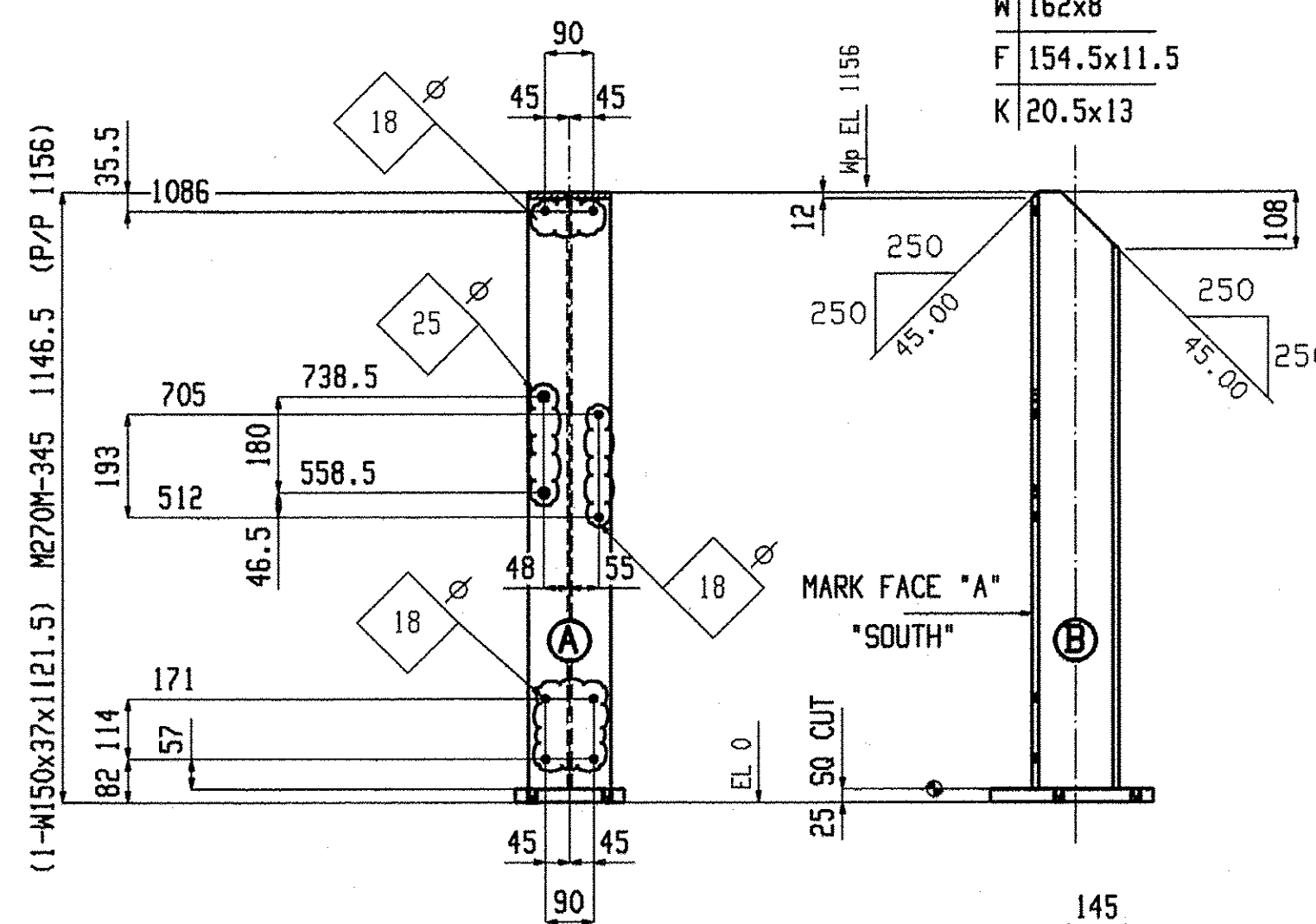
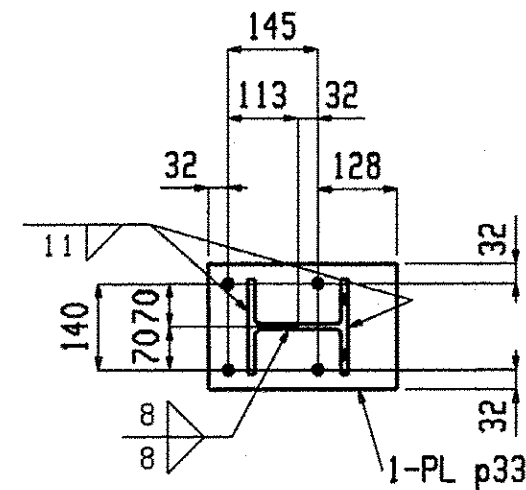
ALL EXPOSED CUT OR SHEARED EDGES
SHALL BE FREE OF BURRS AND
GROUND TO A 2mm RADIUS



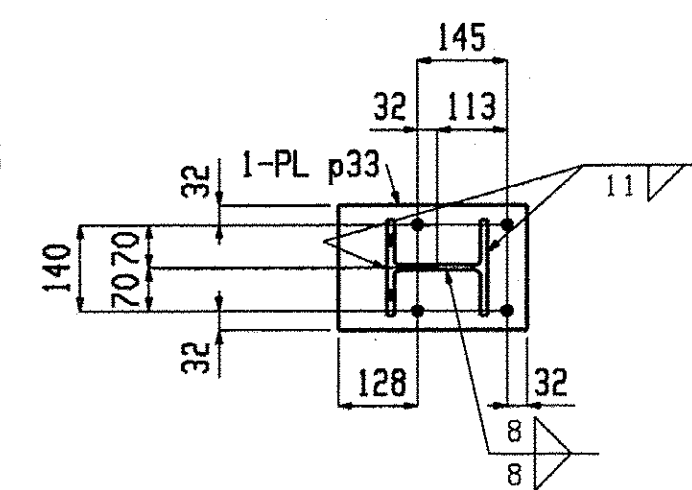
ONE COLUMN C3

W 162x8
F 154.5x11.5
K 20.5x13

ALL EXPOSED CUT OR SHEARED EDGES
SHALL BE FREE OF BURRS AND
GROUND TO A 2mm RADIUS

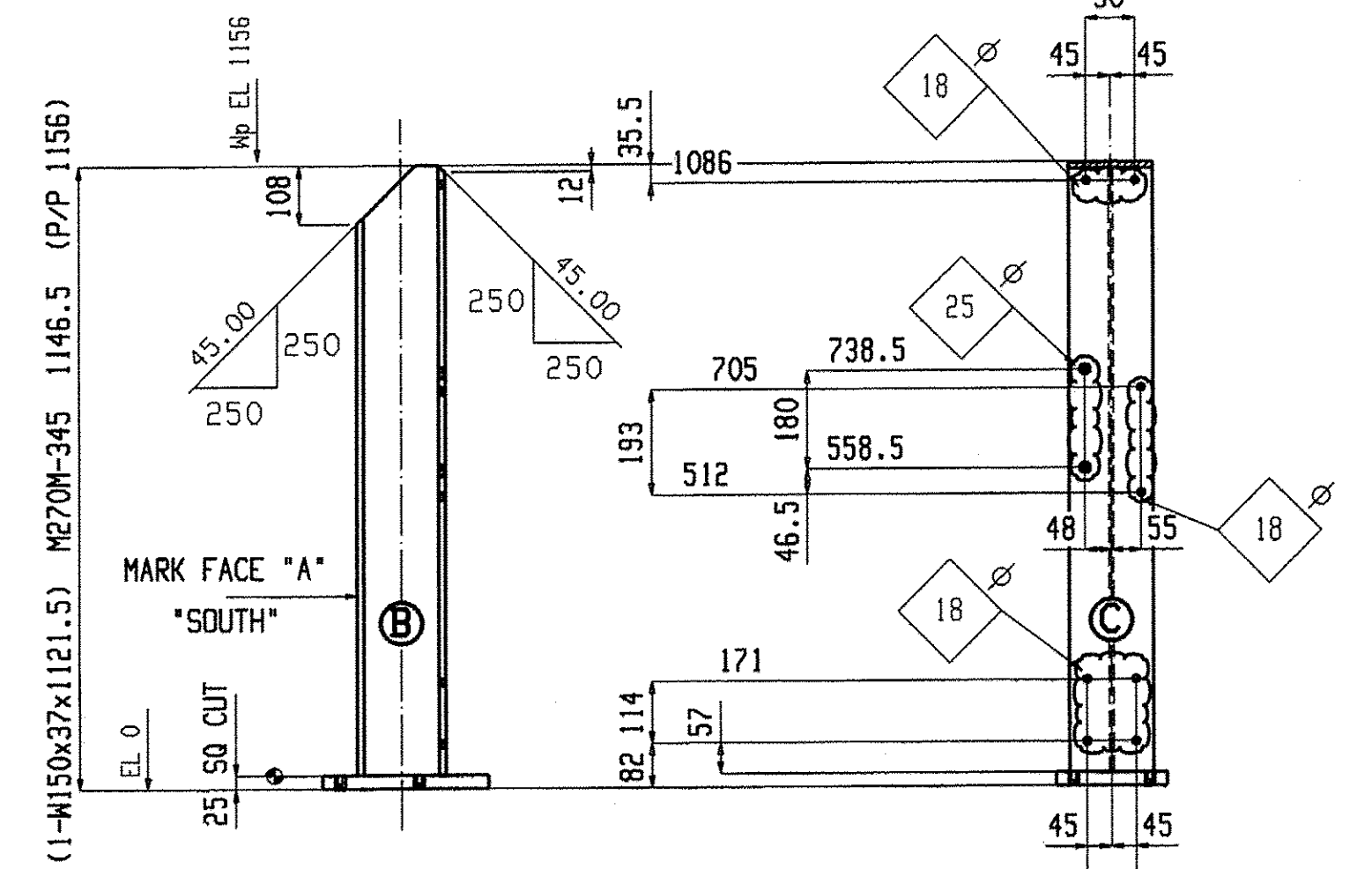


ALL EXPOSED CUT OR SHEARED EDGES
SHALL BE FREE OF BURRS AND
GROUND TO A 2mm RADIUS



ONE COLUMN C5

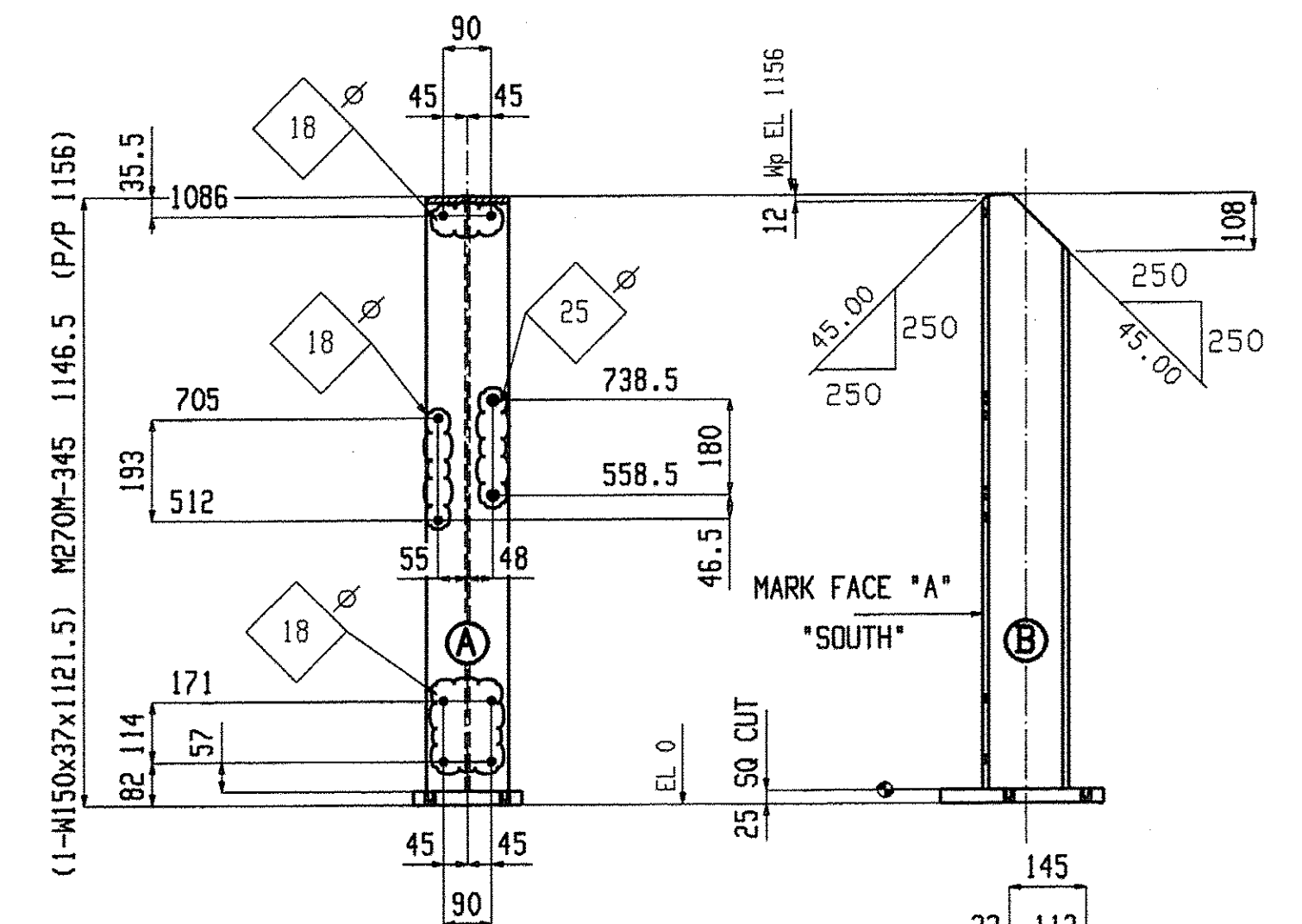
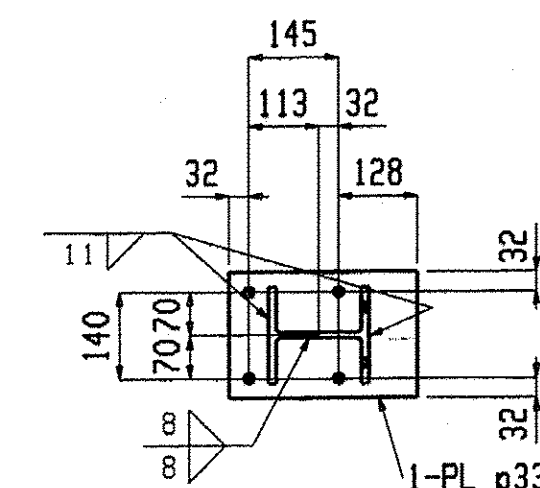
W 162x8
F 154.5x11.5
K 20.5x13



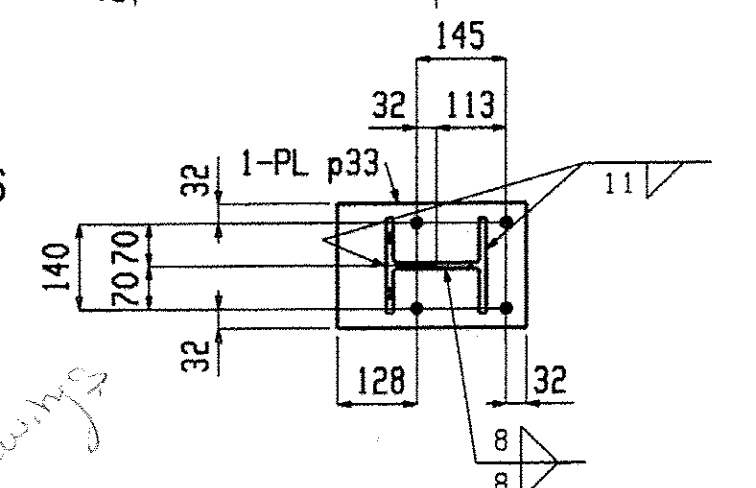
ONE COLUMN C2

W 162x8
F 154.5x11.5
K 20.5x13

ALL EXPOSED CUT OR SHEARED EDGES
SHALL BE FREE OF BURRS AND
GROUND TO A 2mm RADIUS



ALL EXPOSED CUT OR SHEARED EDGES
SHALL BE FREE OF BURRS AND
GROUND TO A 2mm RADIUS



ONE COLUMN C6

W 162x8
F 154.5x11.5
K 20.5x13

BILL OF MATERIAL								BILL OF MATERIAL								BILL OF MATERIAL							
Qty	Piece			Seq	Seq	Adv	Steel	Qty	Piece			Seq	Seq	Adv	Steel	Qty	Piece			Seq	Seq	Adv	Steel
Tot.	Mark	Description	Length	NO.	Qty	ABM #	Grade	Tot.	Mark	Description	Length	NO.	Qty	ABM #	Grade	Tot.	Mark	Description	Length	NO.	Qty	ABM #	Grade
ONE	R32	BEAM		2				ONE	C3	COLUMN		2				ONE	C5	COLUMN		2			
1	R32	L76x64x9.5	10328				M270M-250	1	p33	PL25x204	305				M270M-345	1	C5	W150x37	1121.5				M270M-345
24	C1	COLUMN		2	24			1	C3	W150x37	1121.5				M270M-345	1	p33	PL25x204	305				M270M-345
24	C1	W150x37	1121.5				M270M-345	1	p33	PL25x204	305				M270M-345	24	C4	COLUMN		2	24		
24	p33	PL25x204	305				M270M-345	24	C4	W150x37	1121.5				M270M-345	24	C4	W150x37	1121.5				M270M-345
ONE	C2	COLUMN		2				24	p33	PL25x204	305				M270M-345	ONE	C6	COLUMN		2			
1	C2	W150x37	1121.5				M270M-345	24	p33	PL25x204	305				M270M-345	1	C6	W150x37	1121.5				M270M-345

Total weight : 2905

Renaud Bros. Inc.
283 Fort Bridgeman Rd. #2
Vernon, VT. 05354
Phone 1-802 257-7383

Project: **DUMMERSTON BRIDGE**
DUMMERSTON, VT

Rev. No:

Date: 9-9-09

DNW. BY: EG

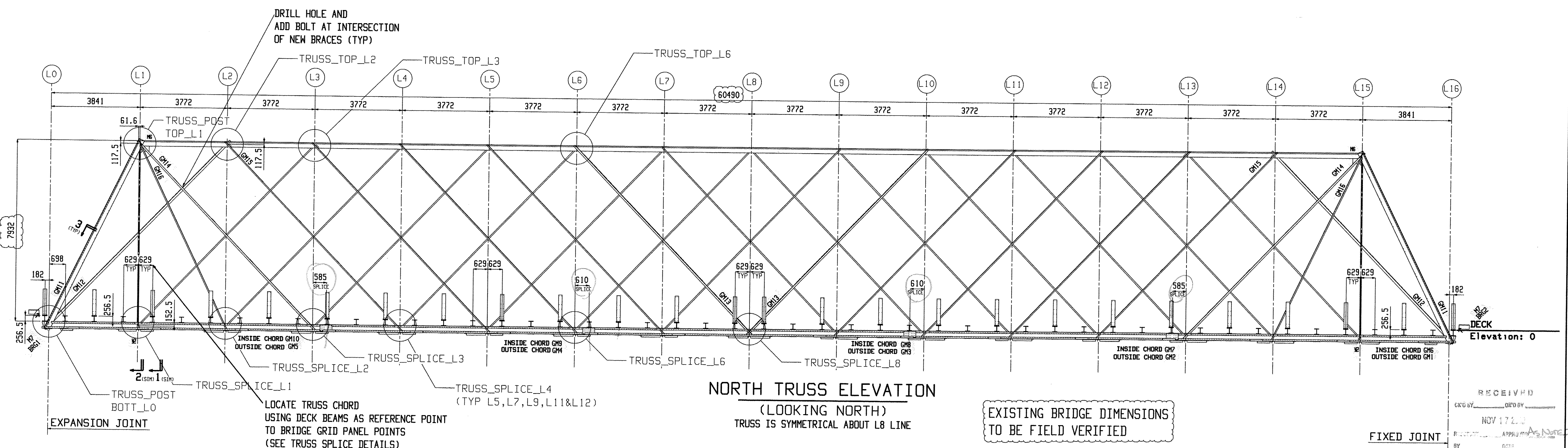
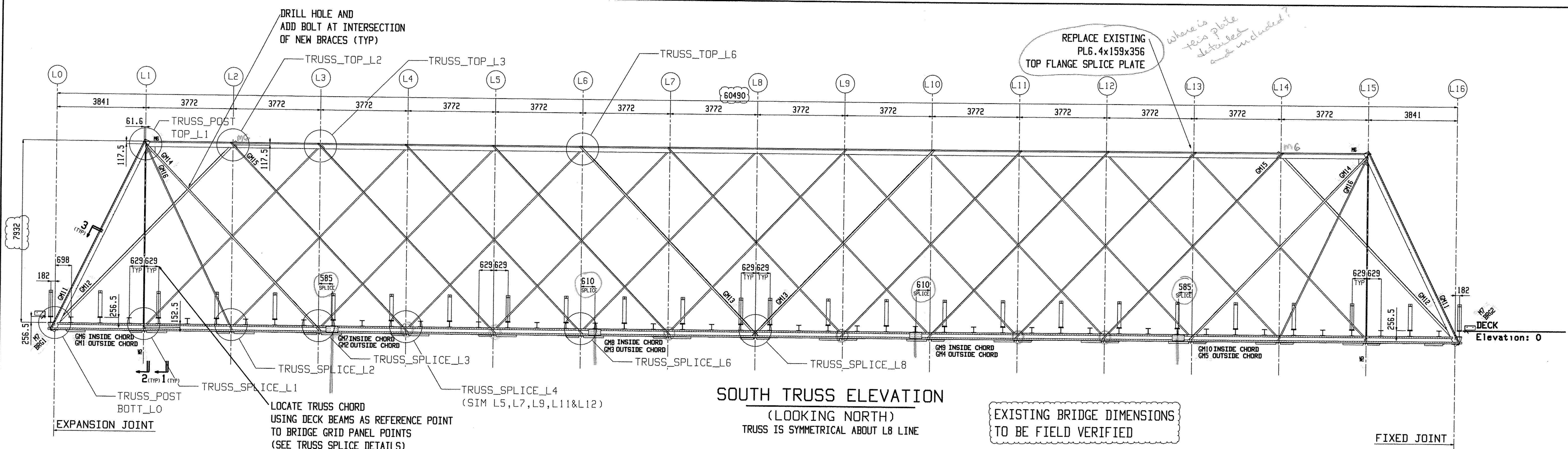
Checked: MRS

Job No. DHO 1442 (28)

Sheet No. 25

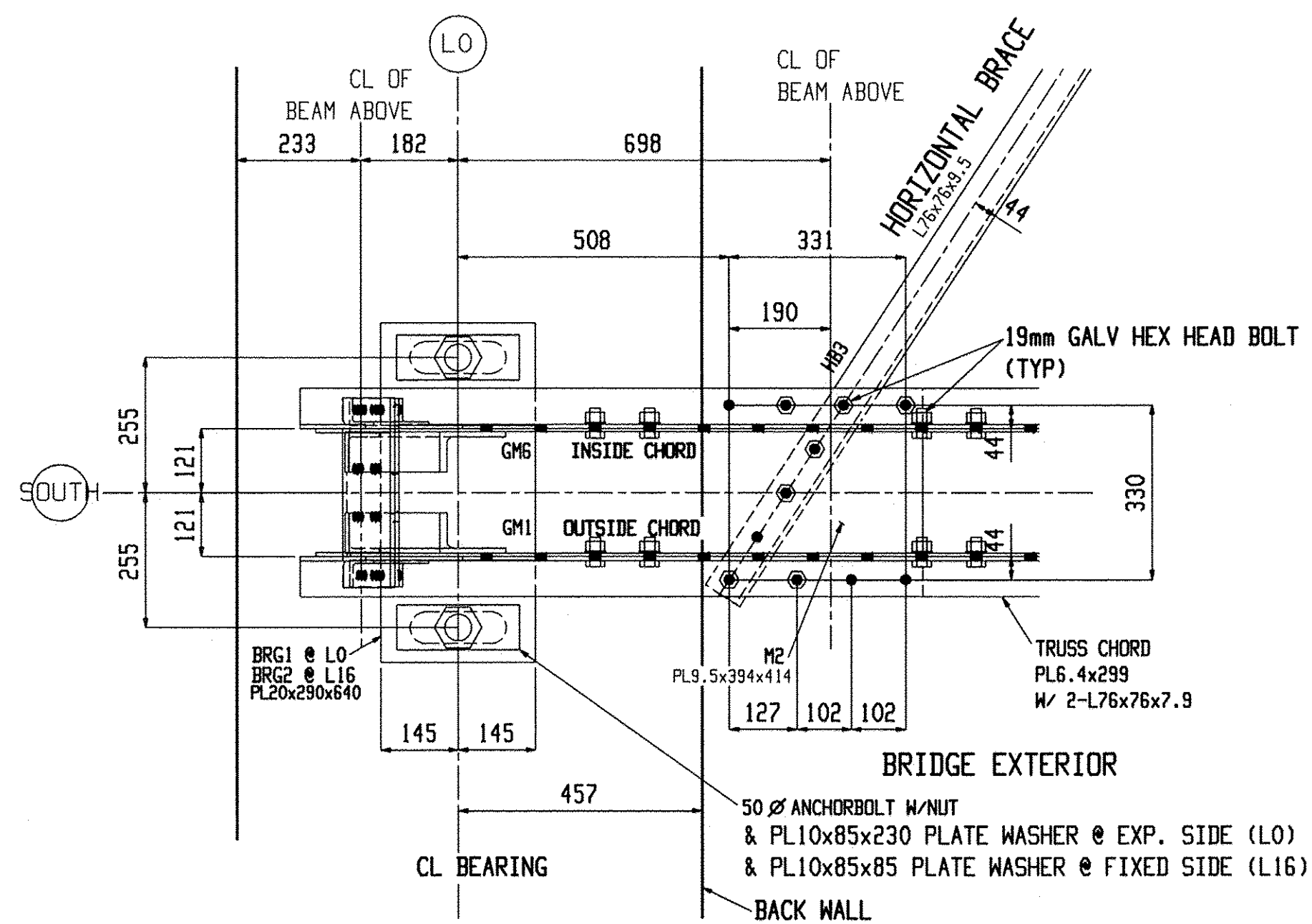
Holes: 21mm UNO
BOLTS: 19mm DIA. M164M-I GALV UNO
Steel GR: M270M-GR345 UNO
Paint: PER SPECS (GREEN) UNO
Surface Prep: PER SPECS

Fabrication is not to be done by Renaud Bros. Have fabricator resubmit with name of fabricator on the drawing.

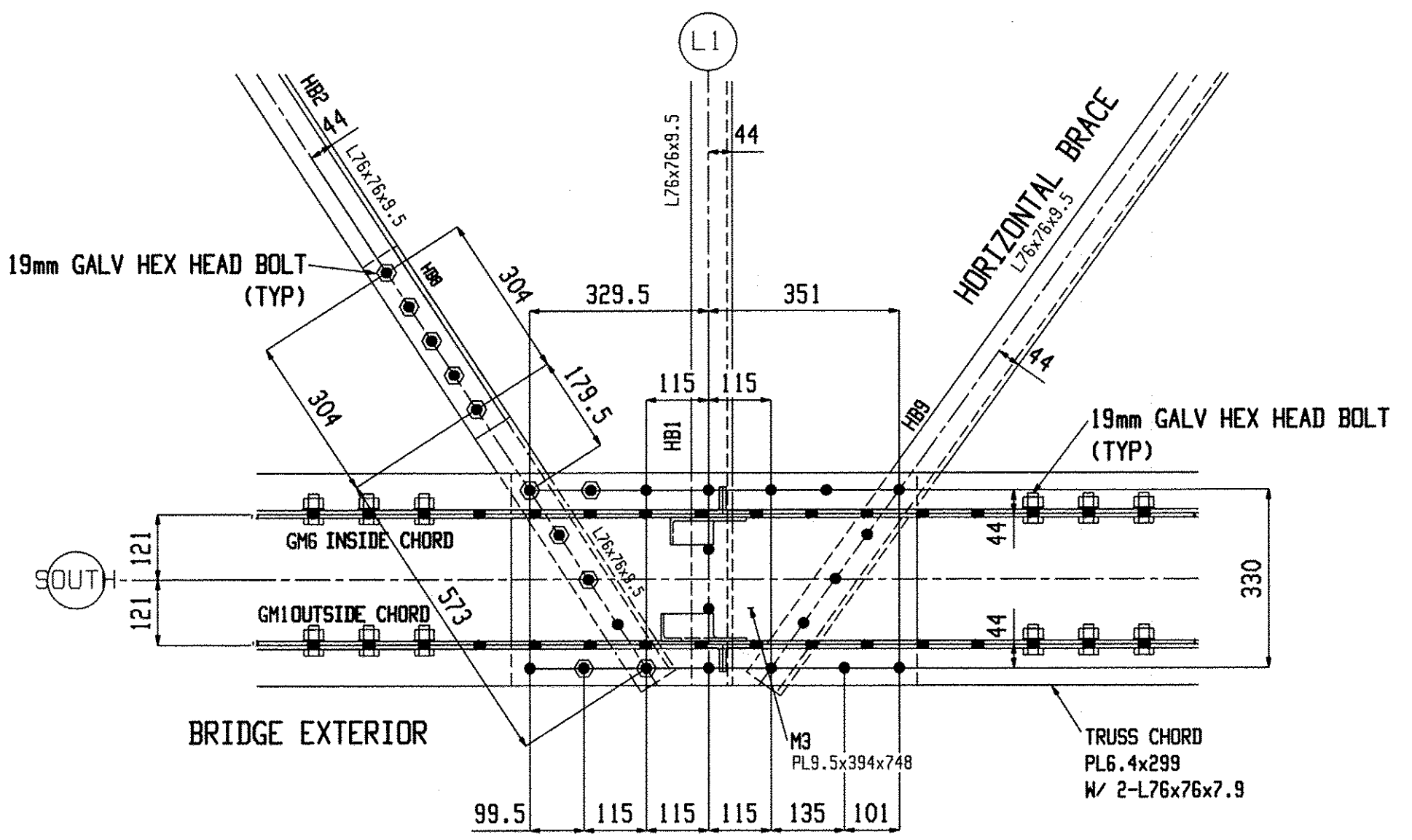


Renaud Bros. Inc. 283 Fort Bridgeman Rd. #2 Vernon, VT. 05354 Phone 1-802 257-7383		Holes:	21mm UNO
		BOLTS:	19mm DIA. M164M-I GALV UNO
		Steel GR:	M270M-GR345 UNO
		Paint:	PER SPECS (GREEN) UNO
Rev. No:	Date:	Surface Prep:	PER SPECS
Project:		Date:	Job No.
DUMMERSTON BRIDGE		9-9-09	BHO 1442 (28)
DWN. BY:	Checked:	Sheet No.	
EG	MRS	E2	

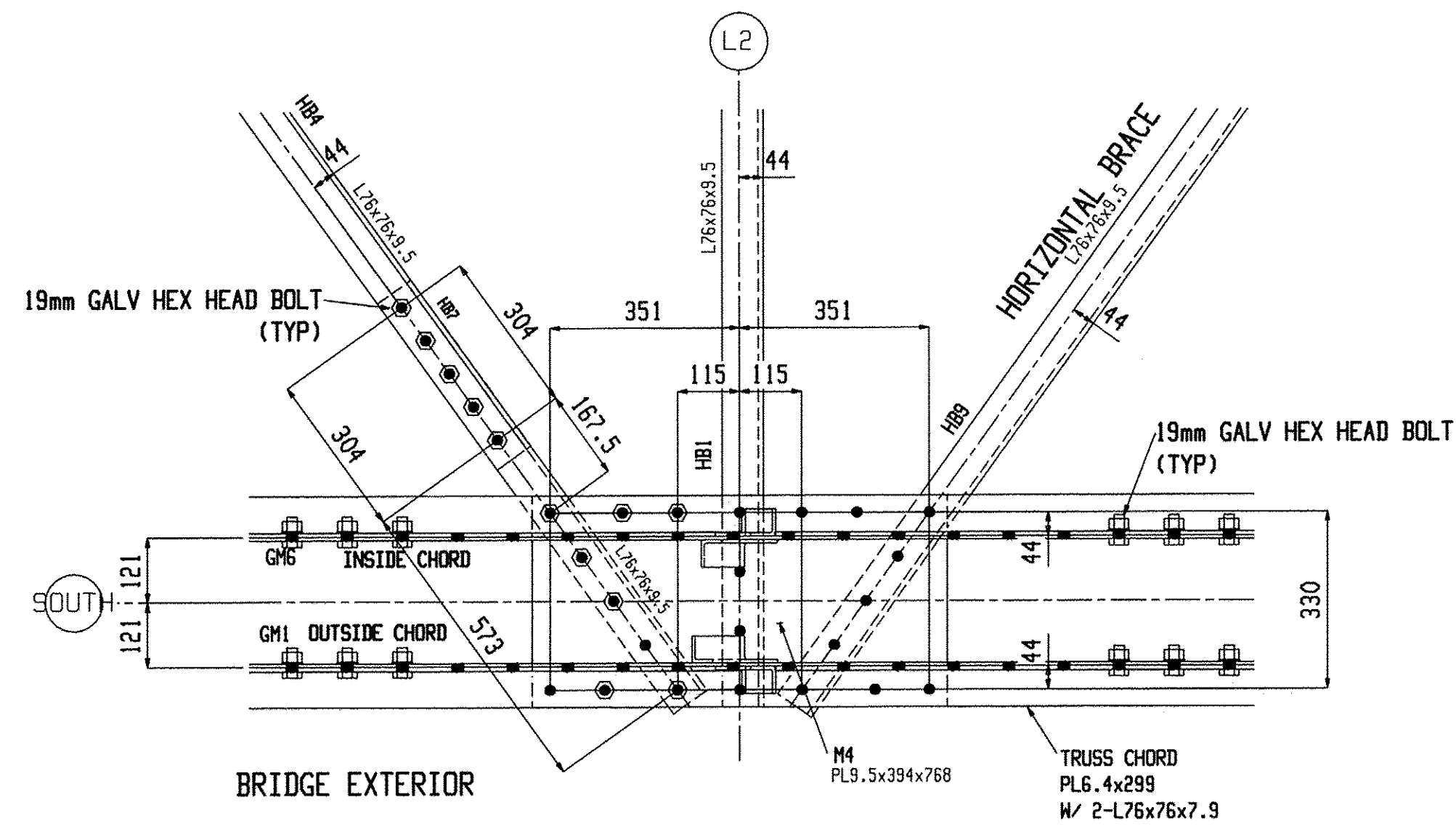
Nov 06 2008 10:55:09 AM



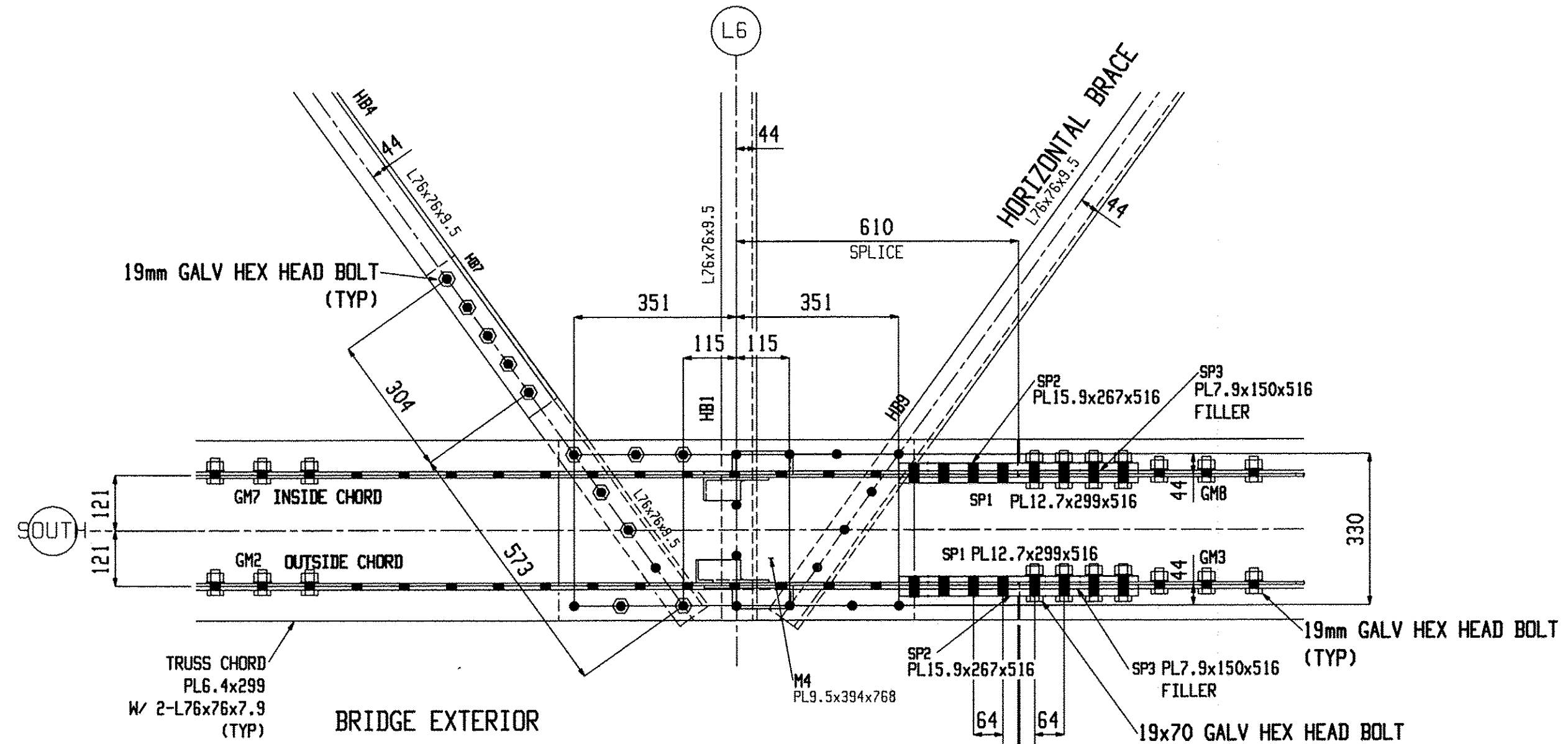
BRACE_DETAIL_L0
Elevation: -571 (U.N.)
(SIM L16)



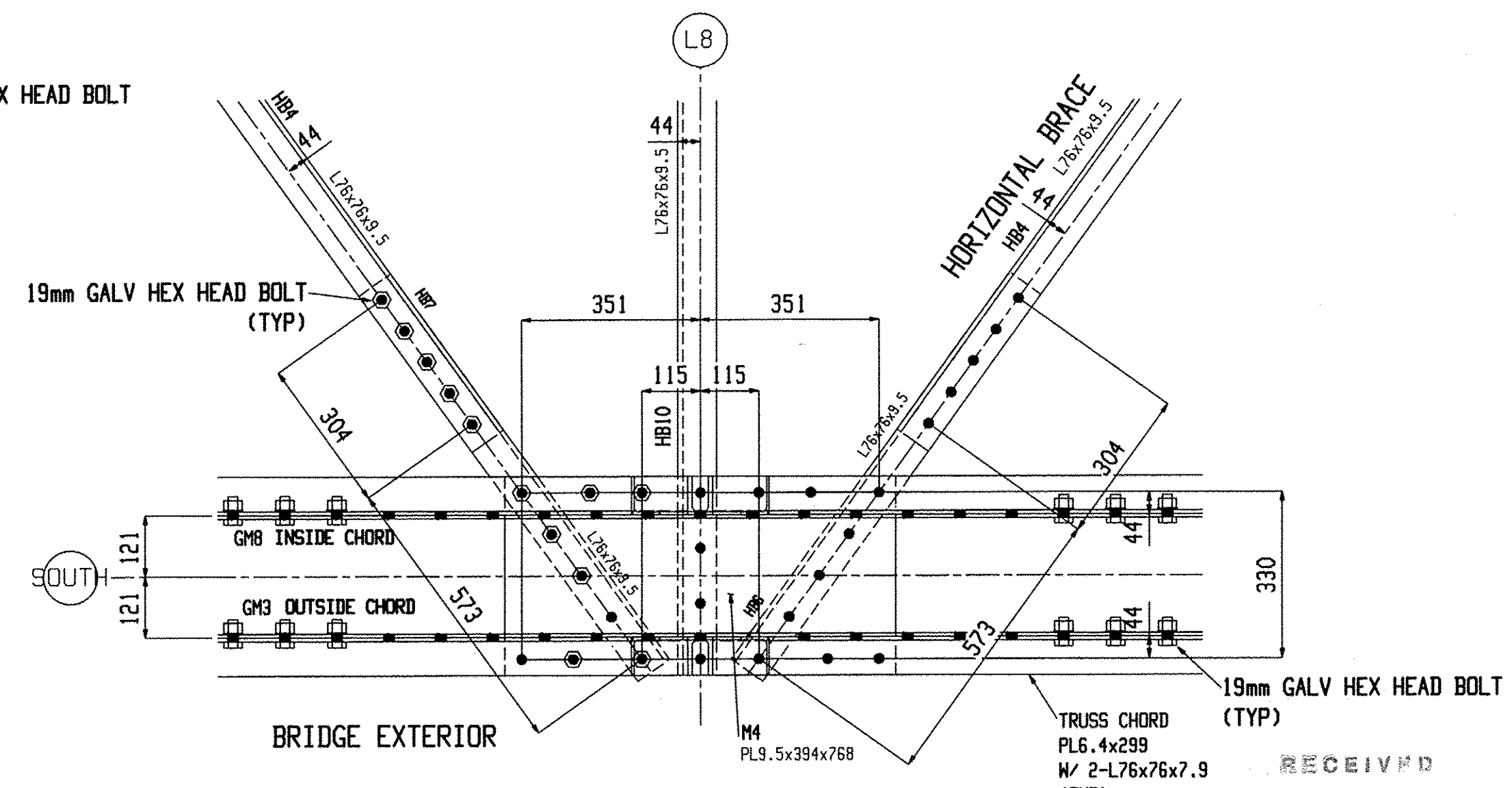
BRACE_DETAIL_L1
Elevation: -571 (U.N.)
(SIM L15)



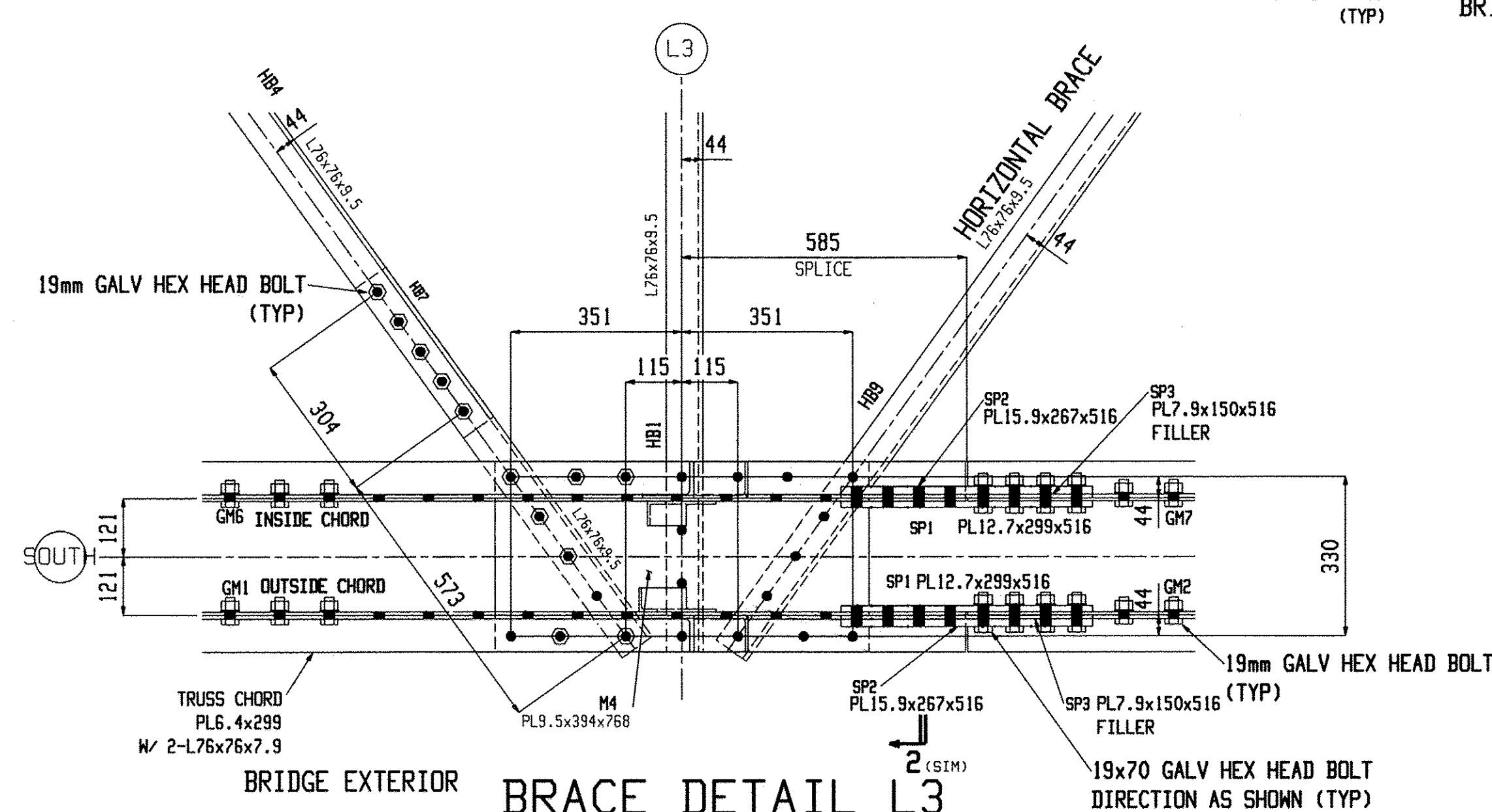
BRACE_DETAIL_L2
Elevation: -571 (U.N.)
(SIM L4, L5, L7, L9, L11, L12 & L14)



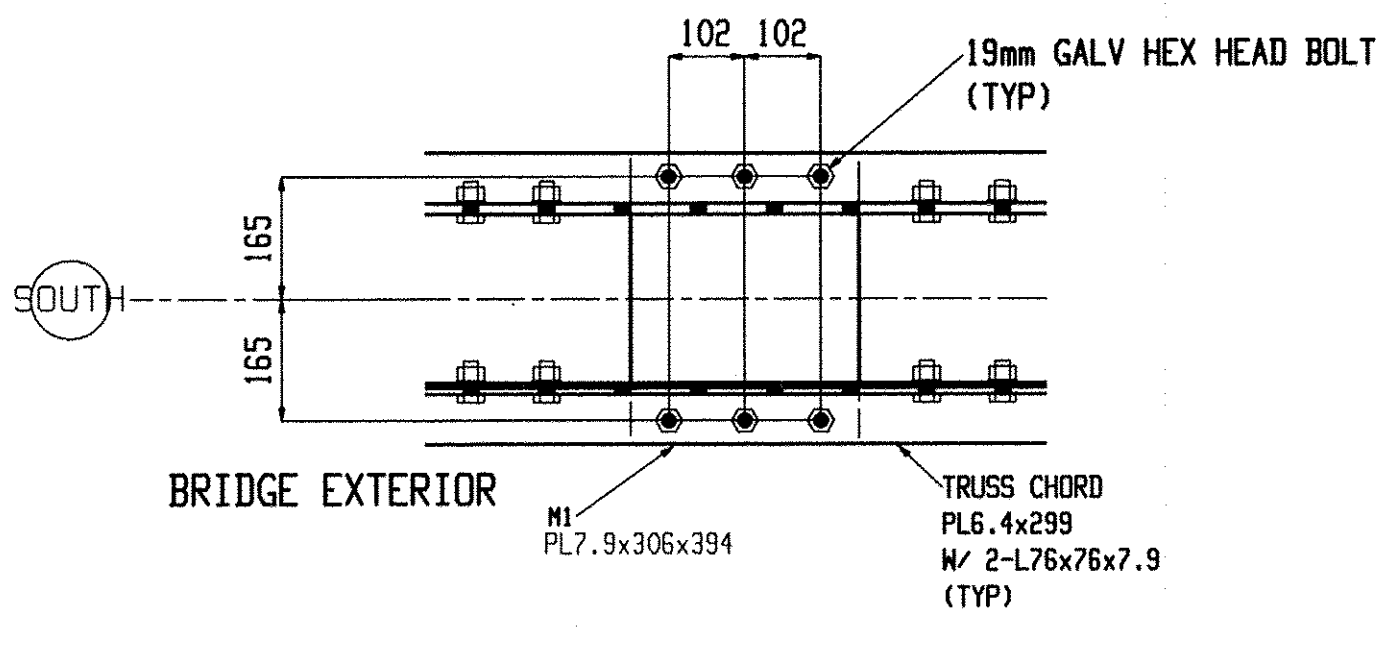
BRACE_DETAIL_L6
Elevation: -571 (U.N.)
(SIM L10)



BRACE_DETAIL_L8
Elevation: -571 (U.N.)



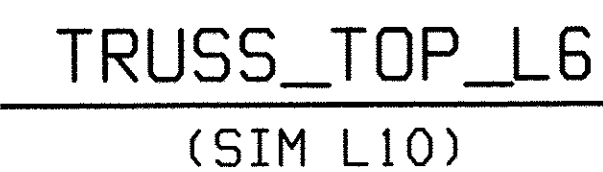
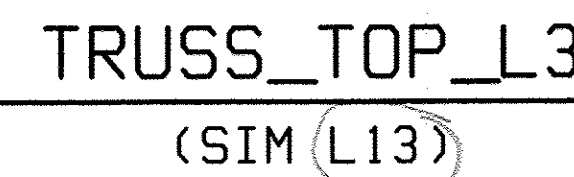
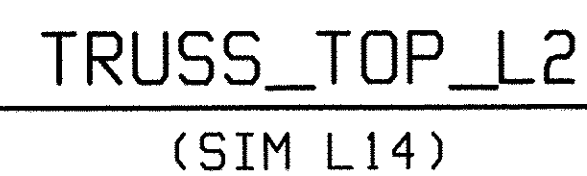
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Elevation: -571 (U.N.)
(SIM L13)



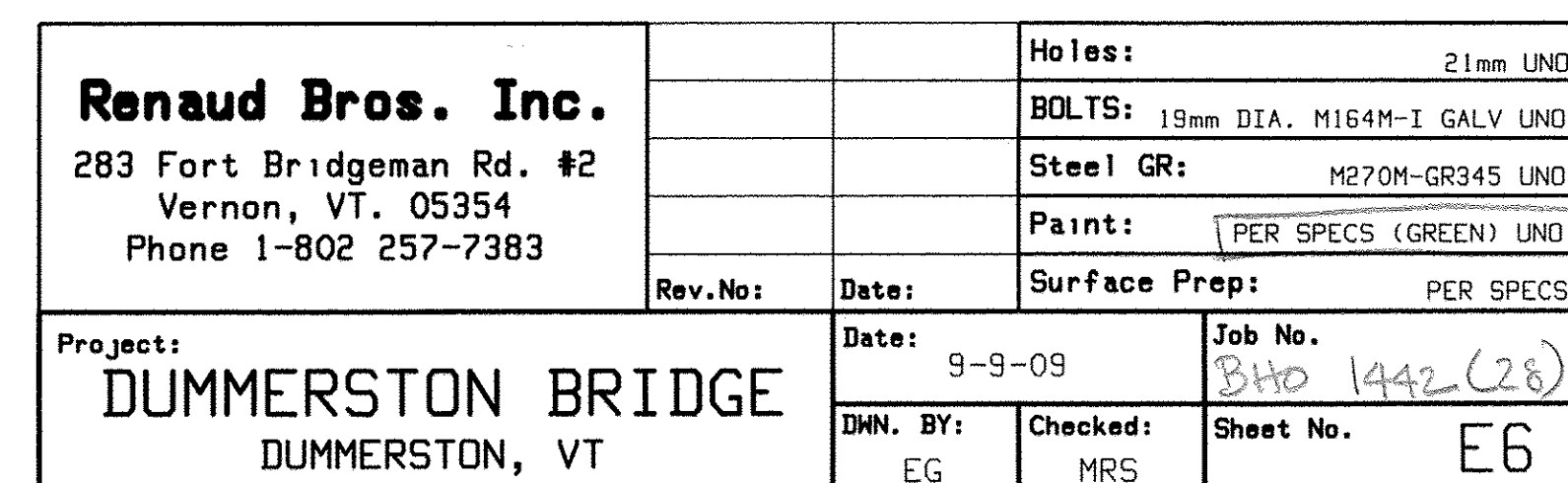
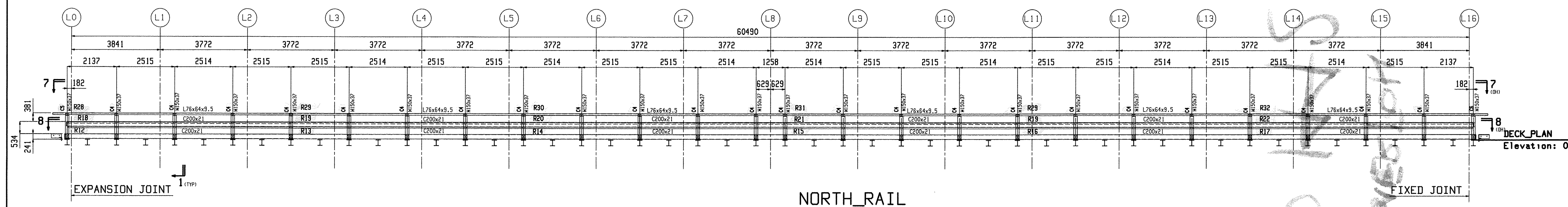
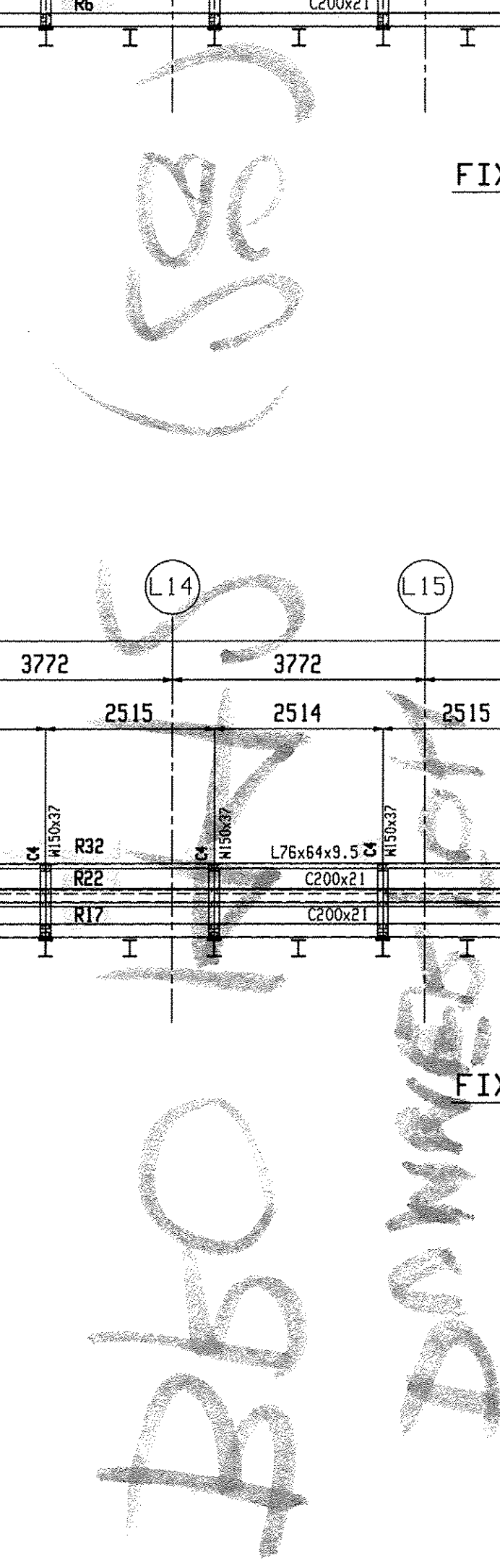
DETAIL_A
Elevation: -571 (U.N.)

Renaud Bros. Inc. 283 Fort Bridgeman Rd. #2 Vernon, VT. 05354 Phone 1-802 257-7383		Holes: 21mm UNO	
		Bolts: 19mm DIA. M164M-I GALV UNO	
Steel GR: M270M-GR345 UNO		Paint: PER SPECS (GREEN) UNO	
Surface Prep: PER SPECS		Date: 9-9-09	
Job No. B40 1442 (28)		Sheet No. E4	
Project: DUMMERSTON BRIDGE		DWN. BY: EG	
DUMMERSTON, VT		Checked: MRS	

Nov 06 2009 10:55:15 AM



product?





State of Vermont
PDD/Structures Design Section
National Life Building – Drawer 33
Montpelier, VT 05633-5001
www.aot.state.vt.us

Agency of Transportation

[phone] 802-828-2621
[fax] 802-828-3566
[ttd] 800-253-0191

D. S. Brown
302 East Cherry Street
North Baltimore, OH 45872

DATE: December 31, 2009

Project Name: Dummerston Project #: BHO 1442 (28)

Structure Identification: Bridge # 37 On TH 62 over the West River

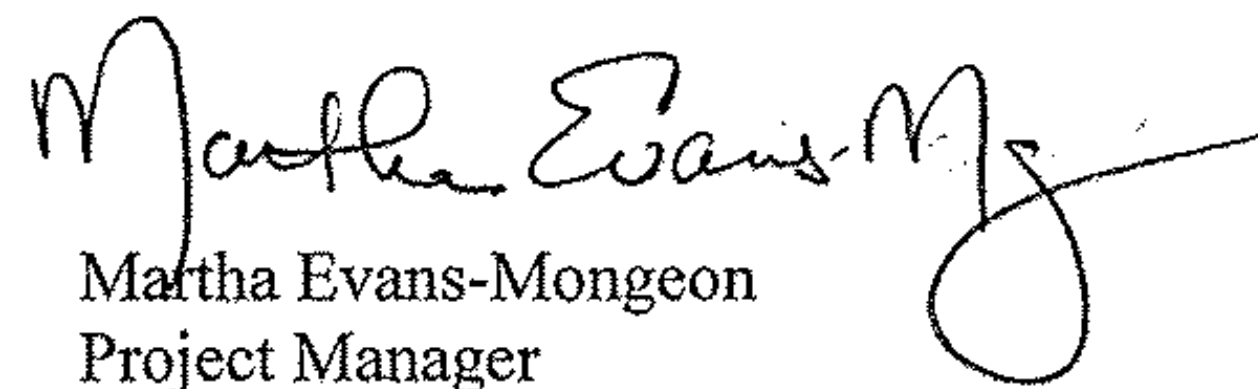
The following Bearing Device details Item # 531.10, Bearing Device Assembly, Preformed Fabric Pad, for the above project Vendor's Job # 27177, transmitted with your letter dated November 10, 2009, have been reviewed and are being returned herewith.

Sheets: GN1, 01 and 02

are approved "as noted" [X]

You must provide notice to our fabrication inspector, Jeff Clark, as to the date fabrication represented by these drawings will begin. That notice must be received and acknowledged at least seven days prior to that date, as per Specification 506.03. Jeff may be contacted by phone at (802)828-0044 or email at jeff.clark@state.vt.us. Any material fabricated prior to the notification date is subject to rejection without further cause.

Sincerely,


Martha Evans-Mongee
Project Manager

Attachments

cc: [X] Resident Engineer w/prints, Chad Greenwood
[X] Shop Inspector w/prints, Jeff Clark
[X] Contractor w/prints, Renaud Brothers, Inc
[] Subcontractor – letter only _____
[X] Construction Division – letter only
[X] Materials & Research Section (C&IA Unit) – letter only
[X] Files, Structures



RENAUD BROS., INC.

283 Fort Bridgeman Road #2, Vernon, VT 05354

phone (802) 257-7383
fax (802) 257-7308

November 13, 2009

Martha Evans-Mongeon, Project Manager
Structures Section
Vermont Agency of Transportation
1 National Life Drive, Drawer 33
Montpelier, VT 05633-5001

RE: Dummerston BHO 1442(28)
Preformed Fabric Bearing Shop Drawings

Dear Martha:

Enclosed for review please find five (5) sets of the Preformed Fabric Bearing Shop Drawings as well as five (5) copies of the Welding Procedure for the same on the above-referenced project.

Please review and comment as soon as possible.

If you have any questions or require additional information, please do not hesitate to contact us or LuAnn Hayfield at D.S. Brown, phone number on enclosed Letter of Transmittal. Thank you.

Very truly yours,

RENAUD BROS., INC.



Michael J. Renaud, V.P.

MJR:car

Enclosures

RECEIVED

OK'D BY _____ OK'D BY _____

NOV 17 2009

RECEIVED _____ APPROVED _____

BY _____ DATE _____

DS Brown Company
300 East Cherry Street
North Baltimore, OH 45872
(419) 257-3561
(419) 257-0332 [Engineering Fax #]



Date: November 10, 2009

Renaud Brothers
Mike Renaud
283 Fort Bridgeman Road #2
Vernon, VT 05354
Telephone #: (802) 257-7383

Project # 27177-1106
Description: TH 62 over West River
Project #: BHO 1442(28)
County, State: Windham County, VT

The following documents are being submitted for:

- ☒ Approval
- ☐ Distribution
- ☐ Per your Request
- ☐ Information

# of Copies	Sheet #s	Document Size	Description
9	GN1, 1 & 2	22" x 36"	"Preformed Fabric Bearing" Shop Drawings
3	1	8 1/2" x 11"	Welding Procedure [A-GTF-01]

Please forward the enclosed documents to the appropriate party for review. Return the reviewed documents to DS Brown as soon as possible. Note that once drawings are returned, 10-12 weeks will be required for product fabrication. Your assistance in expediting the approval process would be appreciated.

Remarks:
If you have any comments or concerns, please contact LuAnn Hayfield, Engineering Administrator @ (419) 257-3561 or lhayfield@dsbrown.com.

RECEIVED

OK'D BY _____ OK'D BY _____

NOV 17 2009

RECEIVED _____ APPROVED _____

BY _____ DATE _____

1. MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE VERMONT AGENCY OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION, 2006 EDITION", INCLUDING ITS LATEST REVISIONS, THE SPECIAL PROVISIONS, THE CONTRACT PLANS AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH EDITION, AND ITS LATEST REVISIONS. GENERAL SHOP PRACTICES, STRUCTURAL FABRICATION, WELDING AND ASSEMBLY SHALL BE GOVERNED BY ANSI/AASHTO/AWS D1.5 BRIDGE WELDING CODE.

2. THESE SHOP DRAWINGS WERE PREPARED IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS. THE D.S. BROWN COMPANY DOES NOT ACCEPT LIABILITY FOR THE DESIGN OF THE PRODUCTS DETAILED IN THESE SHOP DRAWINGS.

3. THE D.S. BROWN COMPANY TO SUPPLY ONLY THE PARTS SHOWN ON THIS DRAWING.

4. ALL STEEL SHALL BE PRODUCED IN THE UNITED STATES OF AMERICA.

5. PTFE (TEFLON) SHALL BE VIRGIN, UNFILLED POLYTETRAFLUOROETHYLENE SATISFYING THE REQUIREMENTS OF ASTM D4894.

6. PTFE IS TO BE PURCHASED ETCHED ON ONE SIDE FOR BONDING. THE BONDING PROCESS FOR LAMINATING PTFE TO THE FABRIC PAD IS AS FOLLOWS: THE FABRIC PAD SURFACE TO BE BONDED IS PREPARED FOR LAMINATION. A TWO-PART STRUCTURAL GRADE EPOXY IS THEN APPLIED PER THE MANUFACTURER'S INSTRUCTIONS. THE PTFE IS CUT SLIGHTLY OVERSIZE TO ACCOUNT FOR POSSIBLE DRIFT. THE PTFE IS THEN APPLIED TO THE FABRIC PAD AND PUT INTO A VACUUM PRESS AT THE APPROPRIATE PRESSURE FOR THE NECESSARY TIME PERIOD. ONCE THE FABRIC PAD AND PTFE IS REMOVED FROM THE PRESS, THE PTFE IS TRIMMED TO PLAN SIZE AND THE PADS ARE SUBMITTED FOR QUALITY CONTROL REVIEW.

7. STAINLESS STEEL SHALL CONFORM TO ASTM A240 - TYPE 304 AND SHALL BE 6GA. (4.8). STAINLESS STEEL SLIDING SURFACES IN CONTACT WITH PTFE SHALL HAVE A NO. 8 MIRROR FINISH AND ALL OTHERS SHALL HAVE A 2B FINISH.

8. ALL CORNERS AND EDGES OF STEEL PLATES SHALL BE GROUND TO A 1.6 RADIUS FOR PAINTING.

9. THE TEMPERATURE OF THE STEEL SHALL NOT EXCEED 250°F (121°C) FOR SURFACES IN CONTACT WITH THE PTFE, WHERE APPLICABLE. TEMPERATURE SHALL BE CONTROLLED BY THE USE OF TEMPERATURE INDICATING CRAYON OR OTHER DEVICES APPROVED BY THE ENGINEERS.

11. DS BROWN MAY SUBSTITUTE A709 GR. 345W FOR A709 GR. 345 DUE TO AVAILABILITY AT NO ADDITIONAL COST TO THE OWNER OR CONTRACTOR.

SOLE PL. PLAN DIMENSIONS	± 1.6
SOLE PL. THICKNESS	± 1.6
HOLE LOCATION	± 1.6
PTFE THICKNESS	± 1.6
PTFE PLAN DIMENSION, TOTAL DESIGN AREA	± 1.6
STAINLESS STEEL FINISH	≤20μ' RMS #8 MIRROR

BEARING SURFACES SHALL BE FLAT WITH A MAXIMUM PERMISSIBLE VARIATION OF 0.25mm FROM A PLANE DETERMINED BY ANY THREE CORNERS OF THE PLATE.

FOR STAINLESS STEEL MATING TO PTFE BONDED TO FABRIC BEARING PAD MATERIAL THE TOLERANCE SHALL BE 0.25mm FROM A PLANE DETERMINED BY ANY THREE CORNERS OF THE PLATE.



1. ALL STRUCTURAL STEEL SURFACES TO BE PAINTED SHALL BE CLEANED IN ACCORDANCE WITH SSPC-SP10.

2. ALL SPECIFIED EXTERNAL STEEL TO BE PAINTED WITH:

PRIMER COAT - CARBOZINC 859 @ 75-225 μm (3-10 MILS) D.F.T.
SECOND COAT - CARBOGUARD 888 @ 75-225 μm (3-10 MILS) D.F.T.
FINISH COAT - CARBOTHANE 133 LH @ 75-175 μm (3-7 MILS) D.F.T.

FINISH COAT FEDERAL STANDARD COLOR NO. 14062 (GREEN).

INTERMEDIATE COAT SHALL OF A CONTRASTING COLOR TO THE PRIMER AND TOP COAT COLORS.

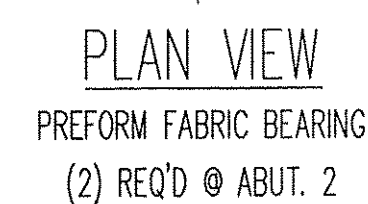
3. SEE COATING LIMIT DETAILS FOR PAINT LOCATIONS.

PLEASE VERIFY COATING SYSTEM. DSB
WILL FABRICATE AS SHOWN IF NOT MARKED.

NO PAINT
ALL METAL COMPONENTS OF BEARING DEVICES
SHALL BE GALVANIZED OR METALIZED. GALVANIZING
SHALL BE APPLIED IN ACCORDANCE WITH
AASHTO M118M/M118 OR AASHTO M232M/M232,
METALIZING SHALL CONFORM TO SECTION 506.15(b)

RECEIVED
OK'D BY _____ OK'D BY mem
NOV 17 2009
RECEIVED _____ APPROVED AS NOTED
BY _____ DATE 12/31/09

[illegible]



LOAD TABLE	
LIVE LOAD (KN)	89.0
DEAD LOAD (KN)	222.0

SEE SHT. GN1 FOR GENERAL NOTES & COATING LIMITS.

[illegible]