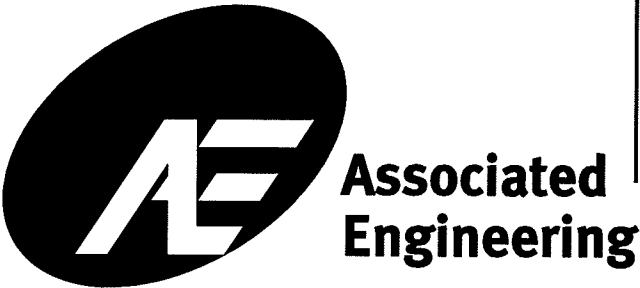
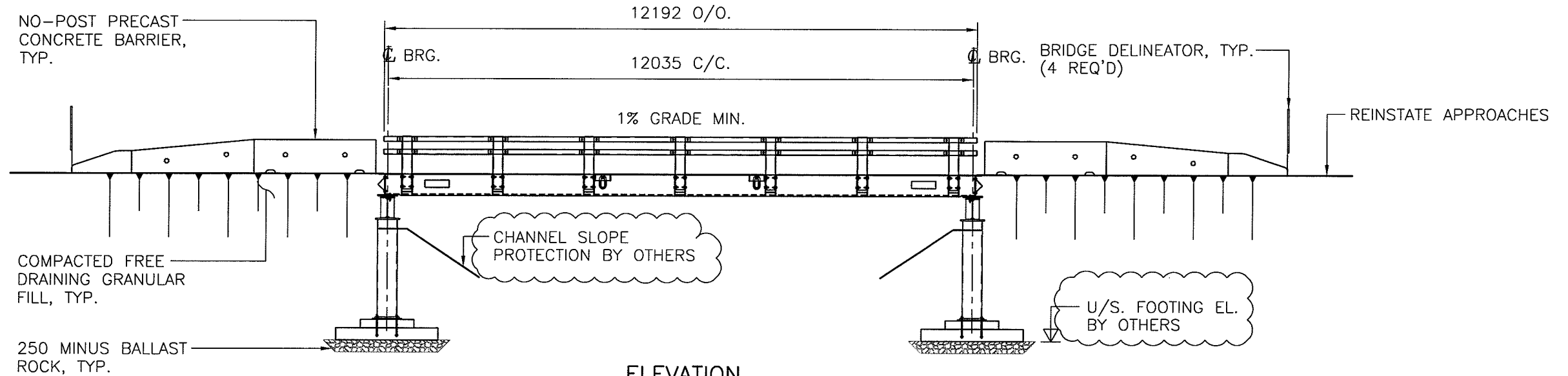


**CUMBERLAND RESOURCES LTD.**

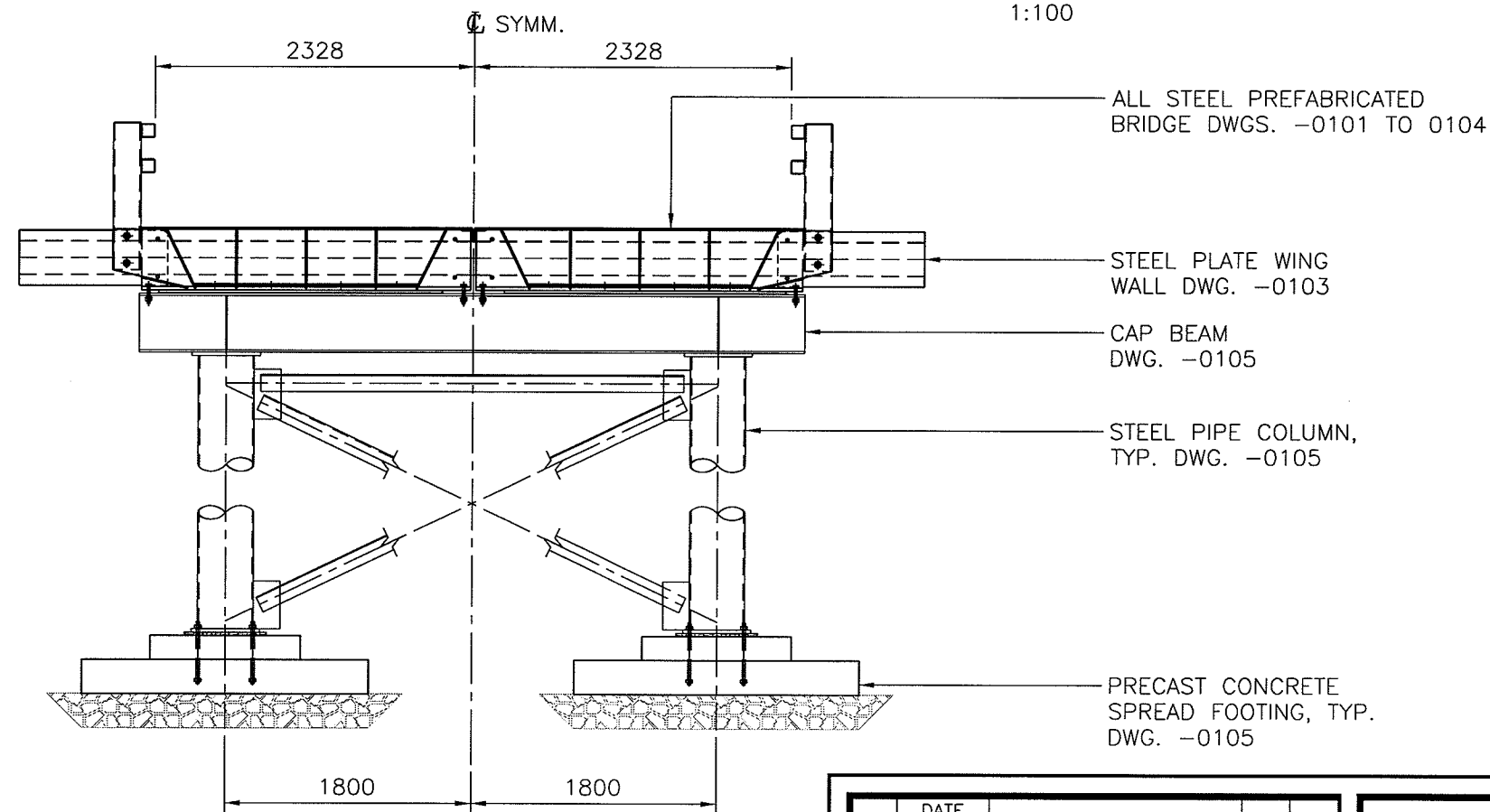
**40'x16' ALL STEEL PORTABLE**



DRAWING SCHEDULE			
DRAWING No.	DESCRIPTION	REV.	DATE
062858-SK-0101	GENERAL ARRANGEMENT	1	06/07/12
062858-SK-0102	STRUCTURE DETAILS SHT. 1	1	06/07/12
062858-SK-0103	STRUCTURE DETAILS SHT. 2	1	06/07/12
062858-SK-0104	STRUCTURE DETAILS SHT. 3	1	06/07/12
062858-SK-0105	BEARING & FOOTING DETAILS	1	06/07/12
062858-SK-0106	GENERAL NOTES	1	06/07/12



**ELEVATION**  
1:100



**ABUTMENT ELEVATION**  
1:50

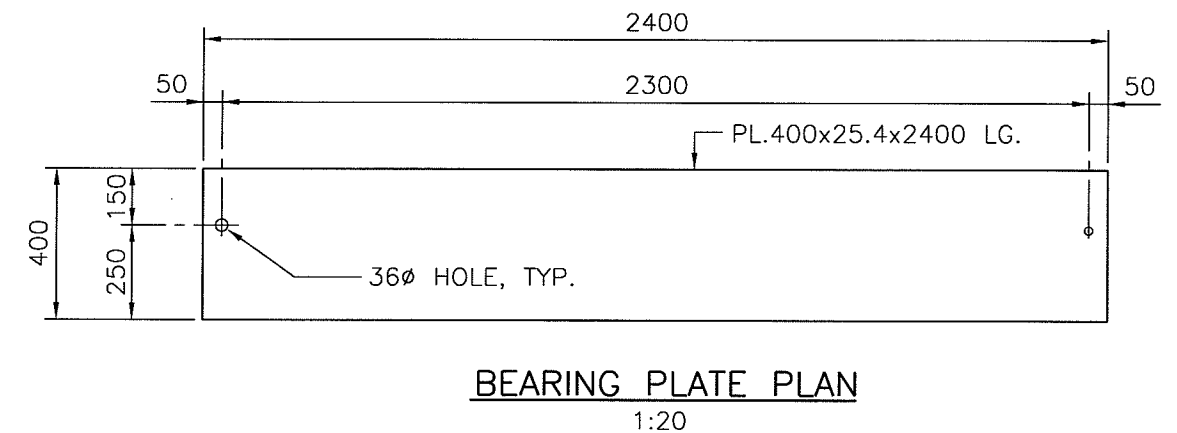
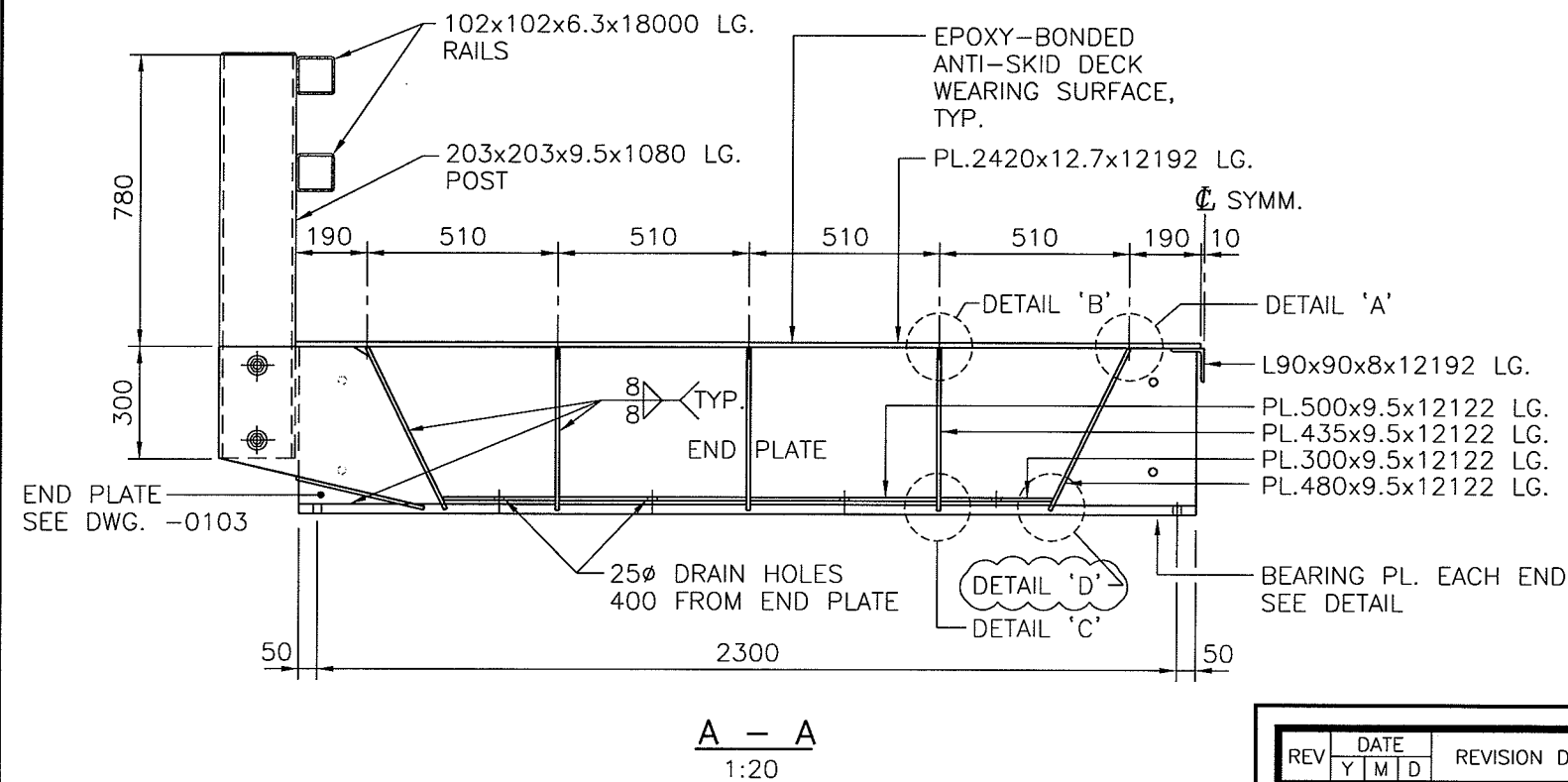
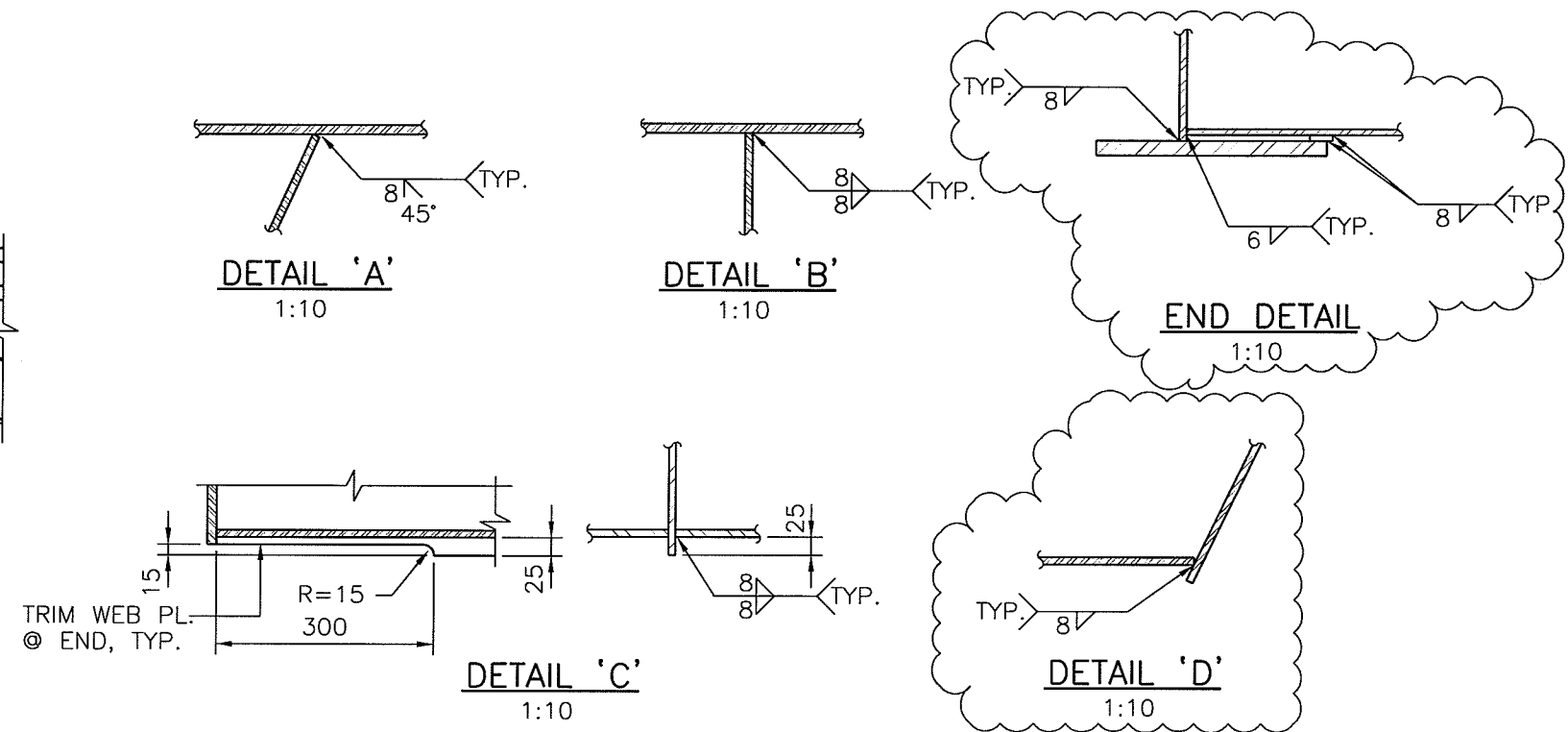
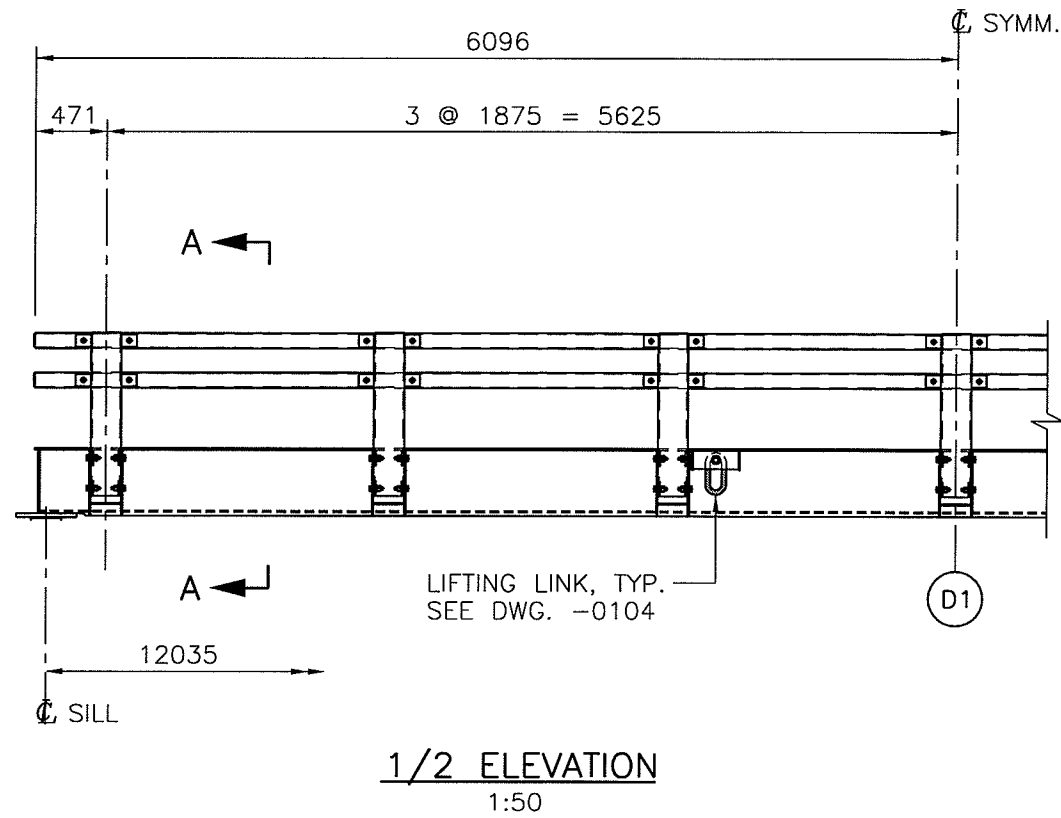
REV	DATE			REVISION DESCRIPTION	ENG	DWN
	Y	M	D			
0	06	06	30	ISSUED FOR TENDER	J.H.	R.V.
1	06	07	12	ISSUED FOR CONSTRUCTION	J.H.	S.P.

**CUMBERLAND RESOURCES LTD.**

**40'x16' ALL STEEL PORTABLE**

**GENERAL ARRANGEMENT**

DESIGN: J.H.	
CHECK: S.C.	
DRAWN: R.V.	
DATE: JUNE 2006	
SCALE: AS SHOWN	
JOB No. 20062858	
DWG. No. 062858-SK-0101	1



REV	DATE			REVISION DESCRIPTION	ENG	DWN
	Y	M	D			
0	06	06	30	ISSUED FOR TENDER	J.H.	R.V.
1	06	07	12	ISSUED FOR CONSTRUCTION	J.H.	S.P.

CUMBERLAND RESOURCES LTD.

40'x16' ALL STEEL PORTABLE

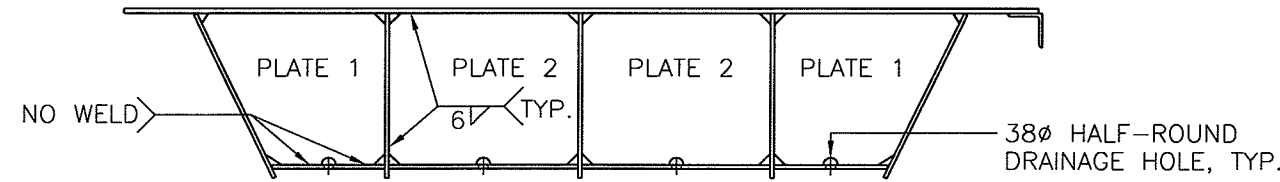
STRUCTURE DETAILS SHT. 1



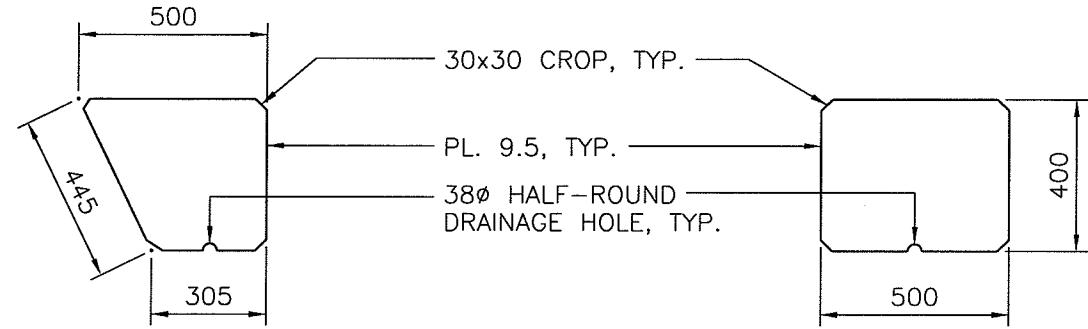
ALL DRAWINGS SUPERSEDED PRIOR TO REVISION

DESIGN: J.H.	
CHECK: S.C.	
DRAWN: R.V.	
DATE: JUNE 2006	
SCALE: AS SHOWN	
JOB No. 20062858	
DWG. No. 062858-SK-0102	

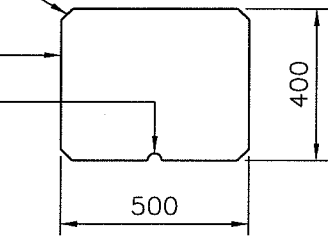




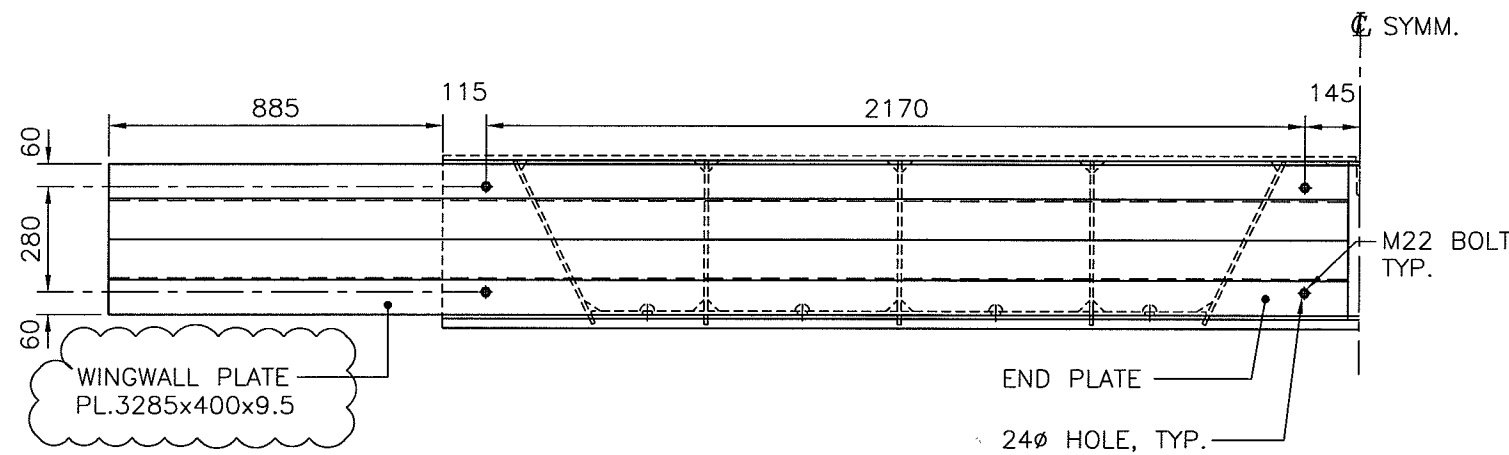
**PLATE DIAPHRAGM D1 DETAIL**  
1:20 (1 REQ'D/BOX)



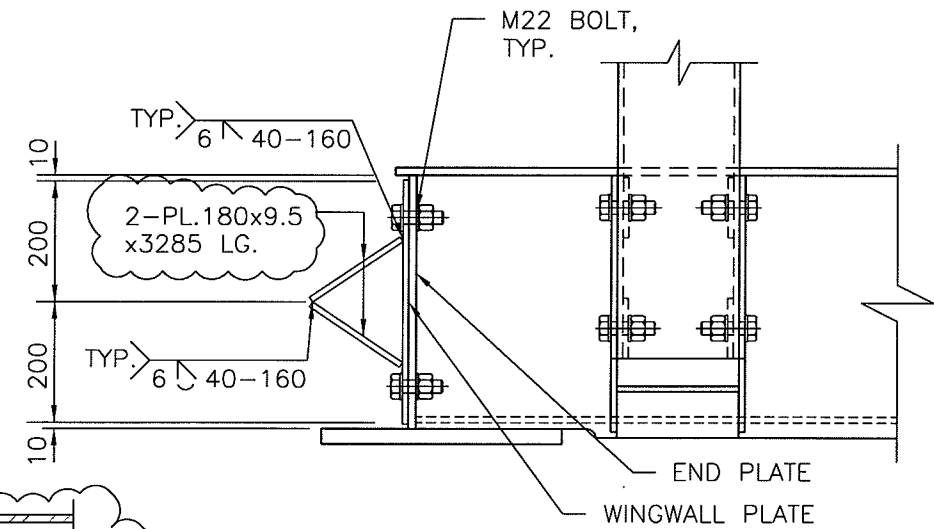
**PLATE 1 DETAIL**  
1:20



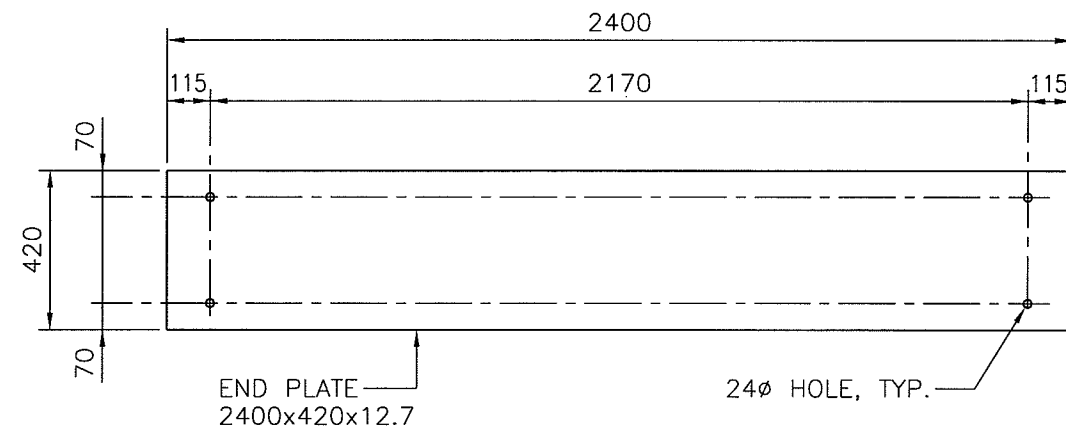
**PLATE 2 DETAIL**  
1:20



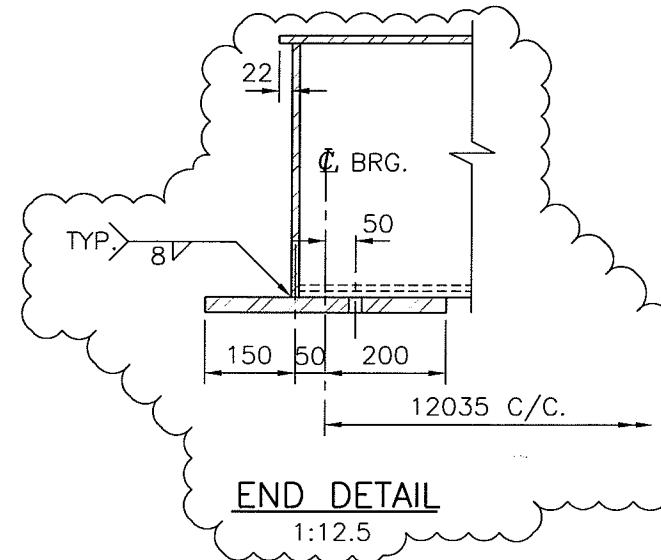
**END DETAIL**  
1:20



**END SECTION**  
1:12.5



**END PLATE DETAIL**  
1:20



**END DETAIL**  
1:12.5

REV	DATE			REVISION DESCRIPTION	ENG	DWN
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1	06	07	12	ISSUED FOR CONSTRUCTION	J.H.	S.P.

CUMBERLAND RESOURCES LTD.

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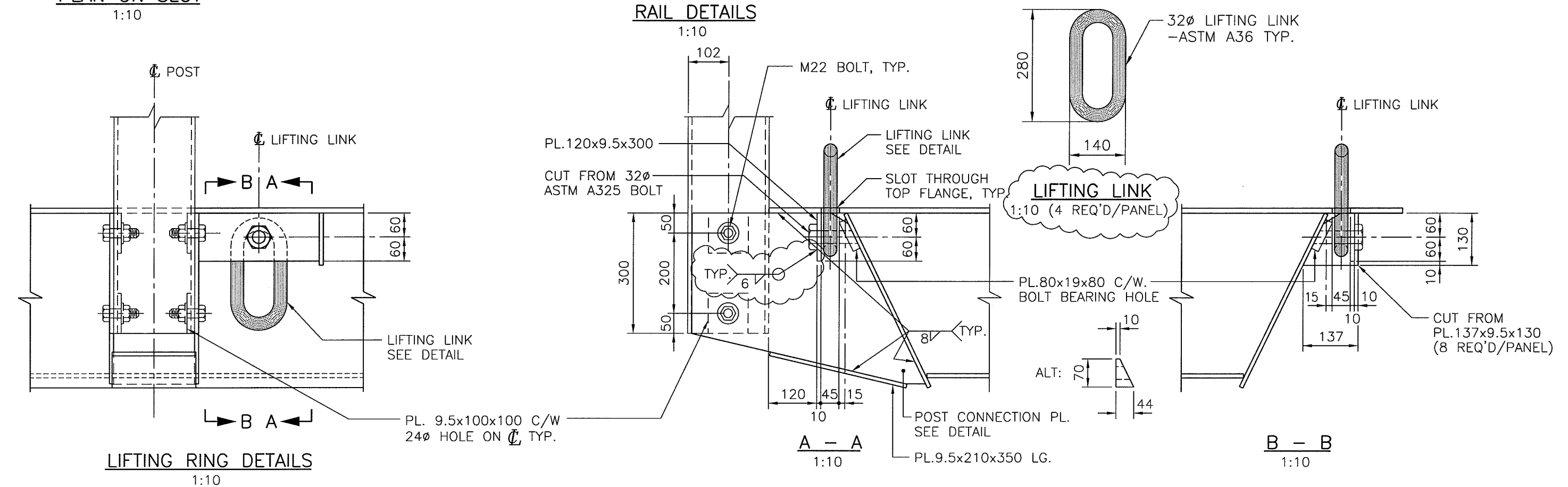
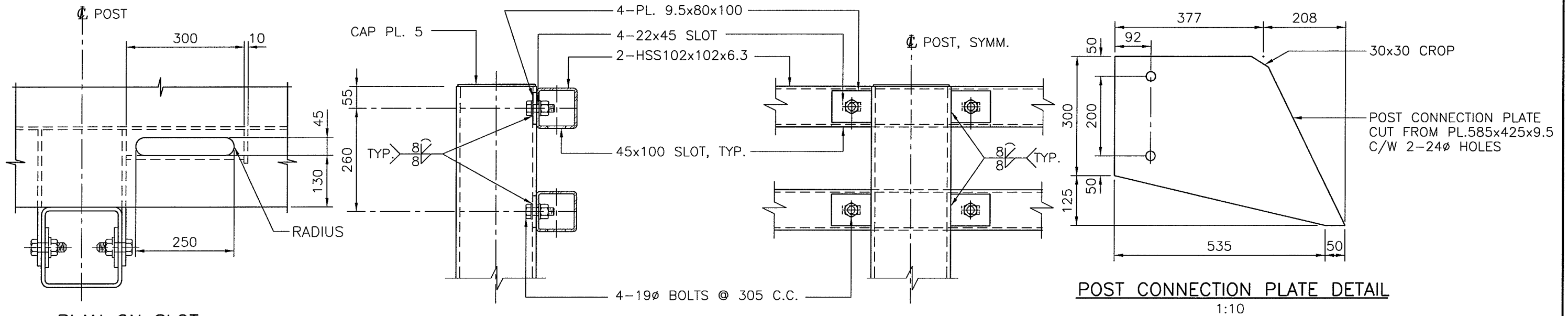
STRUCTURE DETAILS SHT. 2



ALL DRAWINGS SUPERSEDED PRIOR TO REVISION

DESIGN: J.H.	
CHECK: S.C.	
DRAWN: R.V.	
DATE: JUNE 2006	
SCALE: AS SHOWN	
JOB No. 20062858	
DWG. No. 062858-SK-0103	





REV	DATE	REVISION DESCRIPTION	ENG	DWN
0	06/06/30	ISSUED FOR TENDER	J.H.	R.V.
1	06/07/12	ISSUED FOR CONSTRUCTION	J.H.	S.P.

CUMBERLAND RESOURCES LTD.

40'x16' ALL STEEL PORTABLE

STRUCTURE DETAILS SHT. 3



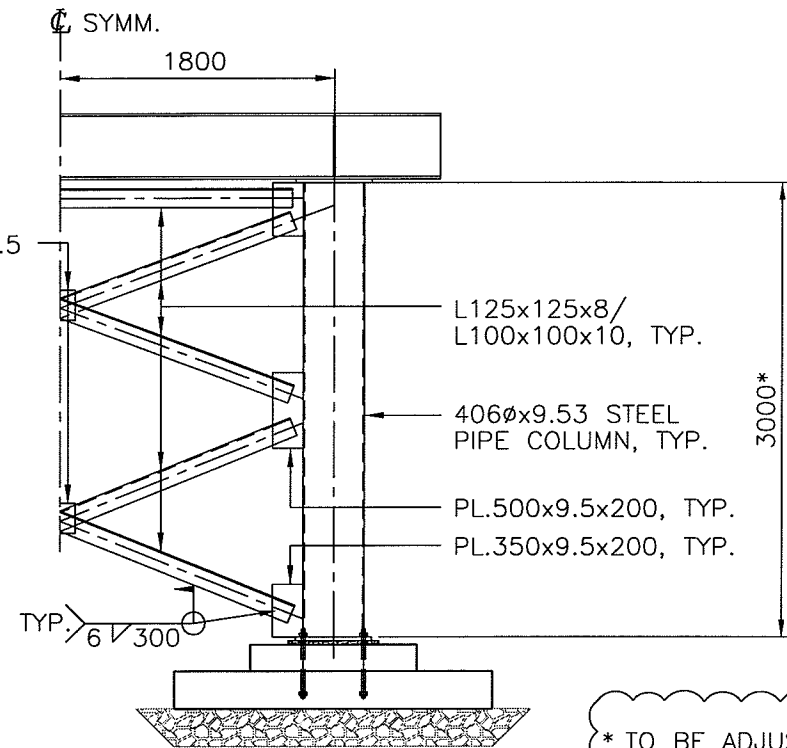
ALL DRAWINGS SUPERSEDED PRIOR TO REVISION →

DESIGN: J.H.	✓
CHECK: S.C.	
DRAWN: R.V.	
DATE: JUNE 2006	
SCALE: AS SHOWN	
JOB No. 20062858	
DWG. No. 062858-SK-0104	1

NOTE:  
OMIT BRACING IF COLUMN  
HEIGHT IS LESS THAN  
1000mm.

NOTE:  
INSTALL SECOND BAY  
OF BRACING IF COLUMN  
HEIGHT EXCEEDS 3500mm

PL.200x200x9.5  
FILLER PLATE

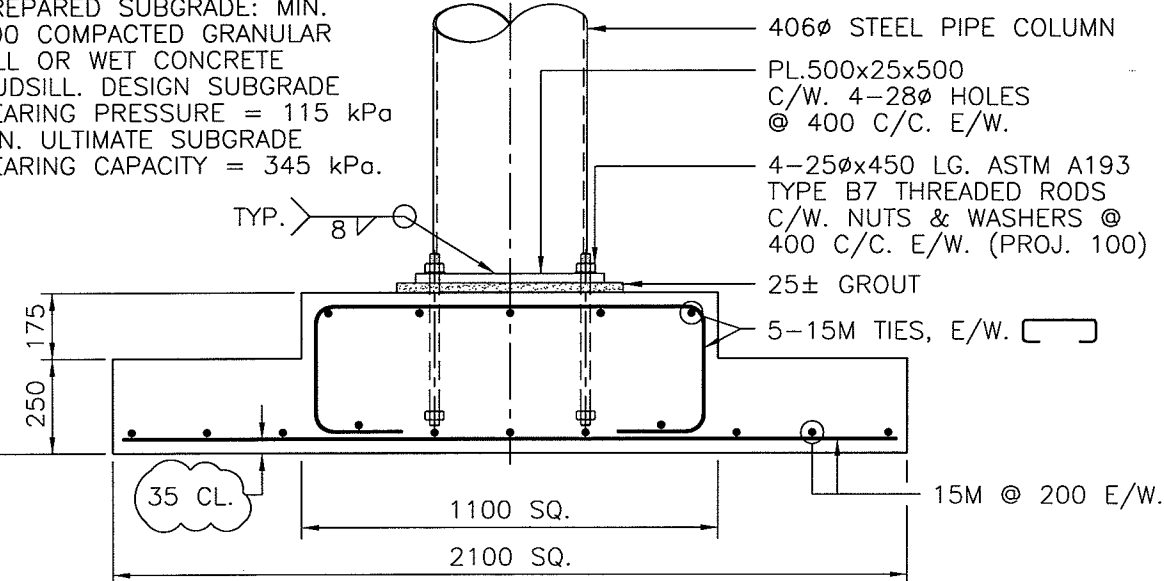


**1/2 ABUTMENT DETAIL**

1:50

BED PRECAST FOOTING ON  
PREPARED SUBGRADE: MIN.  
200 COMPACTED GRANULAR  
FILL OR WET CONCRETE  
MUDSILL. DESIGN SUBGRADE  
BEARING PRESSURE = 115 kPa  
MIN. ULTIMATE SUBGRADE  
BEARING CAPACITY = 345 kPa.

TYP. 8x300



**PRECAST CONCRETE FOOTING DETAIL**

1:20 (4 REQ'D)

\* TO BE ADJUSTED ON-SITE  
TO SUIT ACTUAL FIELD  
CONDITIONS

32ø ASTM A325  
BOLT, TYP.  
PEEN THREADS  
AFTER INSTALLATION

WEB PL.  
400x12.7x4876 LG.

BOT. FLANGE  
PL. 300x15.9x  
4876 LG.

BEARING PLATE

TOP FLANGE SEE DETAIL

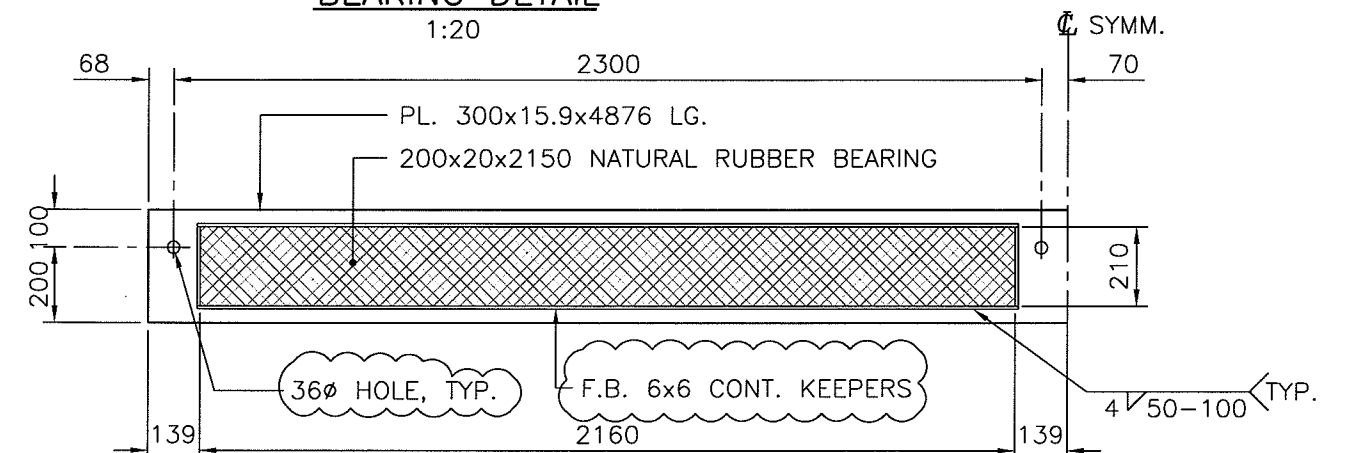
BRG. STIFF  
PL. 130x9.5, TYP.  
30x30 CROP, TYP.

PL. 500x25x500

STEEL PIPE COLUMN  
CUT TO SUIT HEIGHT  
AND GRADE.

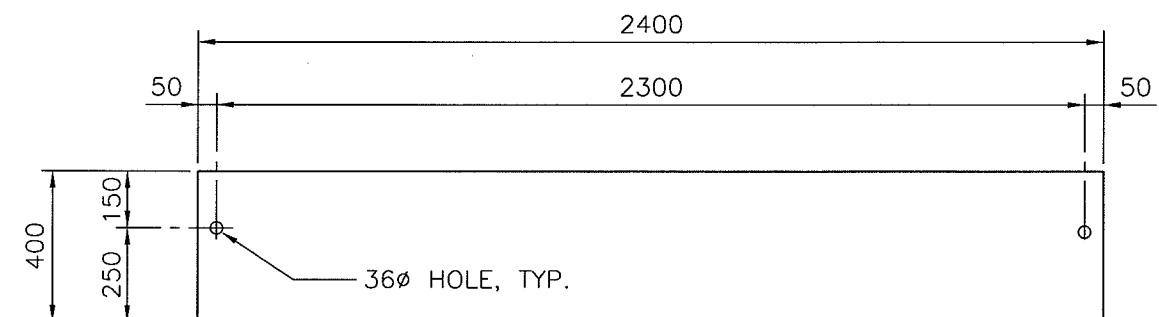
**BEARING DETAIL**

1:20



**PLAN ON TOP FLANGE**

1:20



**BEARING PLATE PLAN**

1:20

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CUMBERLAND RESOURCES LTD.

40'x16' ALL STEEL PORTABLE

BEARING & FOOTING DETAILS

**Associated Engineering**

ALL DRAWINGS SUPERSEDED PRIOR TO REVISION →

DESIGN: J.H.	
CHECK: S.C.	
DRAWN: R.V.	
DATE: JUNE 2006	
SCALE: AS SHOWN	
JOB No. 20062858	
DWG. No. 062858-SK-0105	

NOTES:

GENERAL:

- ASSOCIATED ENGINEERING (B.C.) LTD. HAS BEEN RETAINED TO PROVIDE THE DETAILED DESIGN OF COMPONENTS ONLY BASED ON INFORMATION PROVIDED BY OTHERS.
- FOR INSTALLATION BY OTHERS NO RESPONSIBILITY CAN BE ACCEPTED FOR WORK BY OTHERS.
- THE PROVISION OF FIELD INSPECTION SERVICES DURING THE INSTALLATION OF THIS BRIDGE IS NOT INCLUDED IN SCOPE OF SERVICES BEING PROVIDED BY ASSOCIATED ENGINEERING (B.C.) LTD. ASSOCIATED ENGINEERING (B.C.) LTD. RECOMMENDS FIELD REVIEWS PRIOR TO FOUNDATION INSTALLATION AND UPON COMPLETION OF WORK.
- FABRICATION TO CONFORM TO CAN/CSA-S6-00.
- ANY DESIGN CHANGES PROPOSED DURING CONSTRUCTION SHALL REQUIRE PRIOR WRITTEN APPROVAL FROM THE DESIGN ENGINEER.

GEOTECHNICAL:

- GEOTECHNICAL ENGINEERING IS NOT INCLUDED WITHIN THE SCOPE OF SERVICES BEING PROVIDED BY ASSOCIATED ENGINEERING (B.C.) LTD. THEREFORE THIS DESIGN HAS BEEN PREPARED WITHOUT THE BENEFIT OF GEOTECHNICAL FIELD INVESTIGATION OR ADVICE. GROUND CONDITIONS MAY VARY. THE FOUNDATION REQUIREMENTS AND BRIDGE CONCEPT MAY NEED TO BE MODIFIED TO ACCOMMODATE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION. ASSOCIATED ENGINEERING (B.C.) LTD. ACCEPTS NO LIABILITY OR RESPONSIBILITY FOR DELAY OR ADDITIONAL COSTS THAT MAY RESULT IF GROUND CONDITIONS VARY FROM THOSE ASSUMED. PLEASE CONTACT ASSOCIATED ENGINEERING (B.C.) LTD. IF GEOTECHNICAL DATA AND RECOMMENDATIONS ARE AVAILABLE FOR THIS BRIDGE CROSSING OR IF THE OWNER WISHES TO EXPAND THE ENGINEERING SERVICES TO INCORPORATE THIS EXTRA WORK.

BRIDGE DESIGN:

- CAN/CSA-S6-00 (MODIFIED).
- LOADING: CL900.
- FATIGUE: 500,000 CYCLES.
- MAXIMUM LIVE LOAD DEFLECTION: SPAN/350 (TRUCK CENTERED IN ROADWAY; 50-50 LOAD DISTRIBUTION; INCLUDES DLA).

MATERIALS & FABRICATION

- STEEL FABRICATION: FABRICATOR TO BE CERTIFIED FOR DIVISION 1 OR 2 IN ACCORDANCE WITH CSA W47.1
- STEEL: CSA G40.21M GRADE 350AT CAT 3 (STEEL PLATE)  
GRADE 350A (ROLLED SECTIONS)  
GRADE 300W (PAINTED COLUMN BRACING)  
GRADE 250W (GUARD RAIL TUBE)
- PIPE: ASTM A252 GRADE 2
- BOLTS: ASTM A325 TYPE 3
- WELDING: CSA W59 (X-RAY TENSION FLANGE BUTT WELDS)
- CONCRETE: CSA A23.1 EXPOSURE CLASS C1, F'C = 35 MPA AT 28 DAYS PRECAST CONCRETE TO BE FABRICATED IN ACCORDANCE WITH CSA A23.4 BY CSA CERTIFIED PLANT GROUT MIN. F'C = 35 MPA AT 28 DAYS TO BE INSTALLED ACCORDING TO MANUFACTURERS INSTRUCTIONS.
- BEARINGS: OZONE RESISTING NATURAL RUBBER (NATURAL POLYISOPRENE), TO CAN/CSA-S6-00.
- WEARING SURFACE: SURFACE PREPARATION SANDBLAST TO SSPC-SP6, COATING AMERLOCK 400 (OR EQUIVALENT EPOXY COATING APPROVED BY ENGINEER) C/W 16 GRIT SAND TO PROVIDE ANTI-SKID WEARING SURFACE.
- GUARD RAILS: PAINT USING TWO COATS AMERLOCK EPOXY OR APPROVED EQUAL INSTALLED ACCORDING TO MANUFACTURERS SPECIFICATIONS (PAINT COLOUR "SAFETY YELLOW")

HYDROLOGY AND HYDRAULIC ASSESSMENT:

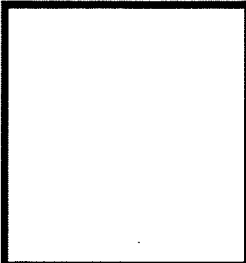
- A HYDRAULIC ASSESSMENT HAS NOT BEEN COMPLETED AS PART OF THIS ASSIGNMENT.

BRIDGE FOUNDATIONS:

PRECAST CONCRETE FOOTINGS

- FOOTING SUBGRADE TO CONSIST OF 250 MINUS BALLAST ROCK ENCLOSED IN SUITABLE GEOTEXTILE.
- BED PRECAST CONCRETE FOOTINGS ON MINIMUM 200 THICK COMPACTED GRANULAR FILL OR CONCRETE MUDSILL.
- COAT STEEL SUBSTRUCTURE WITH ONE COAT BITUMINOUS PAINT PRIOR TO BACKFILLING

REV	DATE			REVISION DESCRIPTION	ENG	DWN
	Y	M	D			
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1	06	07	12	ISSUED FOR CONSTRUCTION	J.H.	S.P.



CUMBERLAND RESOURCES LTD.

40'x16' ALL STEEL PORTABLE

GENERAL NOTES



DESIGN: J.H.	
CHECK: S.C.	
DRAWN: R.V.	
DATE: JUNE 2006	
SCALE: N/A.	
JOB No. 20062858	
DWG. No. 062858-SK-0106	