

**Public Works
Canada**

Western Region

**Travaux publics
Canada**

Région de l'Ouest

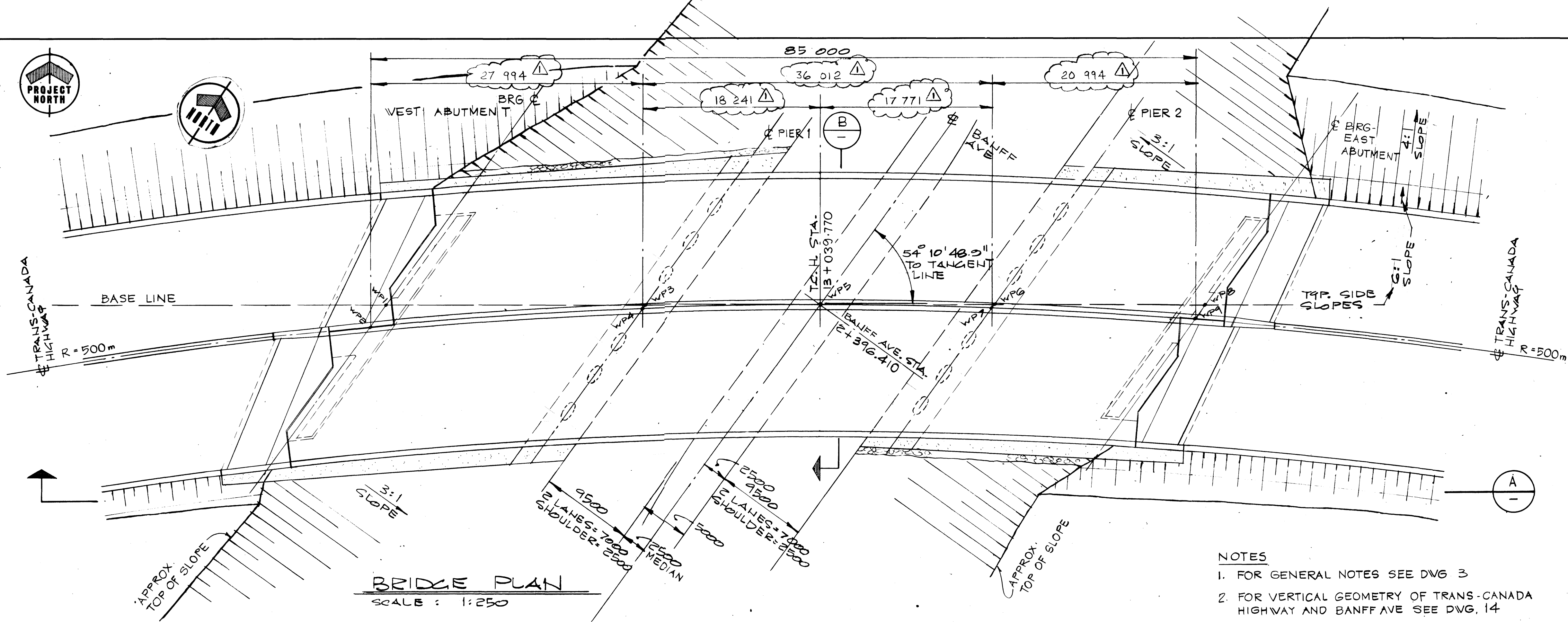
Trans-Canada Highway Twinning

TRANS-CANADA HIGHWAY OVERPASS STRUCTURE

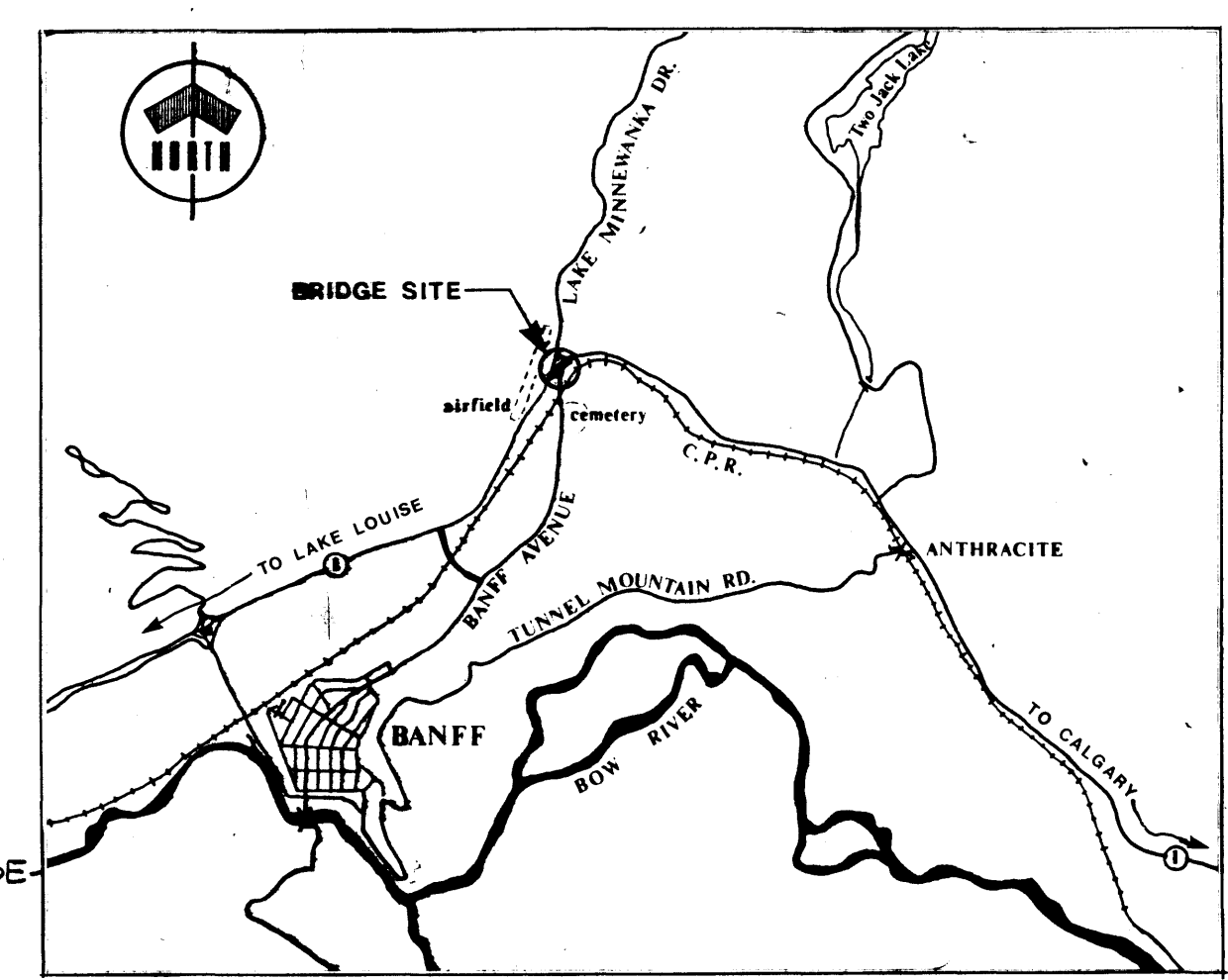
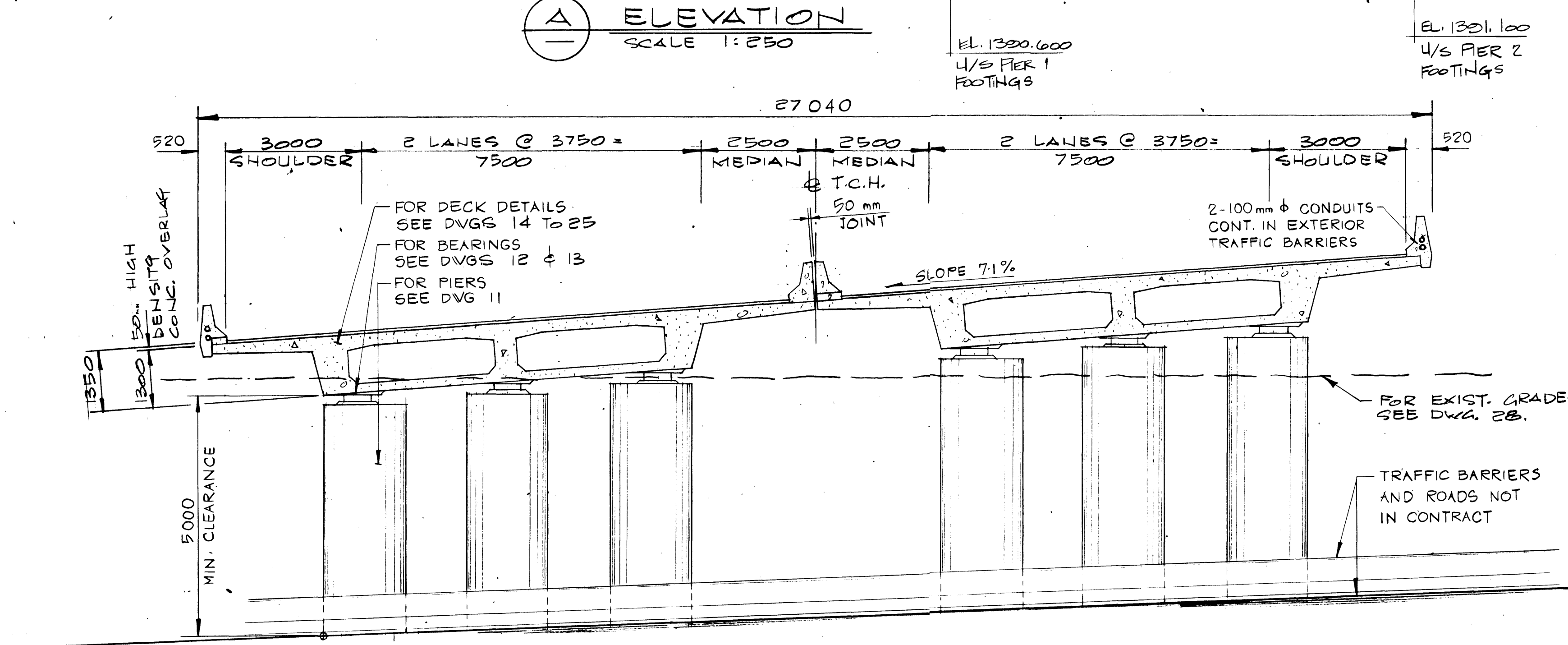
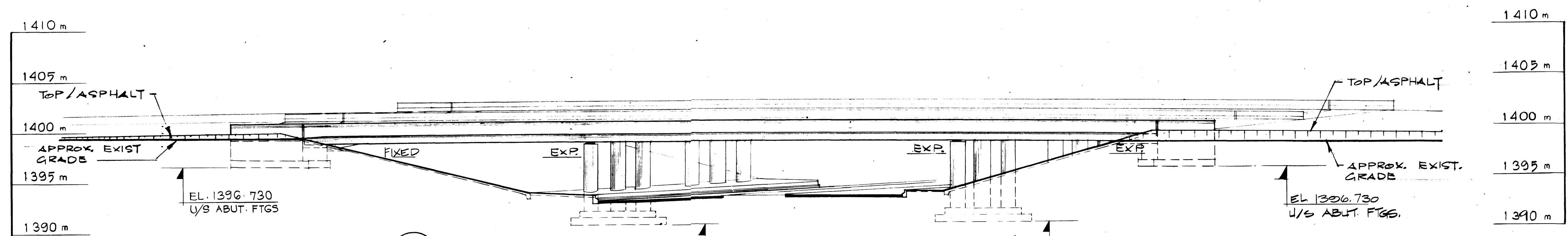
km 13.05

BANFF NATIONAL PARK

STAGE II MINNEWANKA INTERSECTION



- NOTES
1. FOR GENERAL NOTES SEE DWG 3
 2. FOR VERTICAL GEOMETRY OF TRANS-CANADA HIGHWAY AND BANFF AVE SEE DWG. 14



Western Region

Project: TRANS-CANADA HIGHWAY TWINNING
Banff National Park, Alberta
Minnewanka Interchange

Project No.: 003876

REV	D	M	Y	REVISION DESCRIPTION	DRN	DES	CHK	APP
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Compiled by: [Signature]

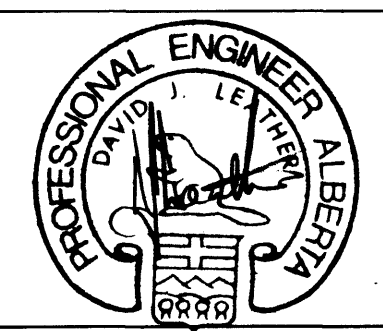
Horizontal Scale Echelle horizontale	N.A.	Contour Interval Eau-distance	N.A.
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Compilation Photos Photos de compilation	N.A.	Photo Scale Echelle photographique	N.A.
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Drawn by Dessiné par	J. HALEY
Date	JAN. 28. 84

Checked by Vérifié par	D. LEATHER
Date	JAN. 28. 84

Approved by Approuvé par	D. LEATHER
Date	JAN. 28. 84



THE ASSOCIATION OF PROFESSIONAL ENGINEERS, GEOLOGISTS AND GEOPHYSICISTS OF ALBERTA
PERMIT NUMBER P 2375
UNDERWOOD McLELLAN LTD.

Underwood McLellan Ltd.
Consulting Engineers and Planners
Calgary, Alberta

T.C.H. BRIDGE OVER BANFF AVENUE


km 13+050

AA006009

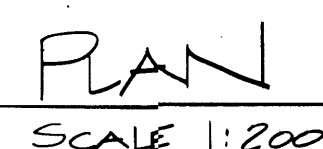
GENERAL ARRANGEMENT

Horizontal Scale Echelle horizontale	AS NOTED	Vertical Scale Echelle verticale	AS NOTED
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NTS. No. STN. No.	Draw. No. Dessain No.	Sheet Feuille	1 of 28
N.A.	2977-022		

- 
- THE ASSOCIATION OF
PROFESSIONAL ENGINEERS,
GEOLOGISTS AND GEOPHYSICISTS
OF ALBERTA
PERMIT NUMBER
P 2375
UNDERWOOD
McLELLAN LTD.

Project No.	
Project No.	003876



NOTE: SECTIONS & DETAILS
SHOWN ARE TYP. FOR BOTH
EAST & WEST SIDES OF BRIDGE

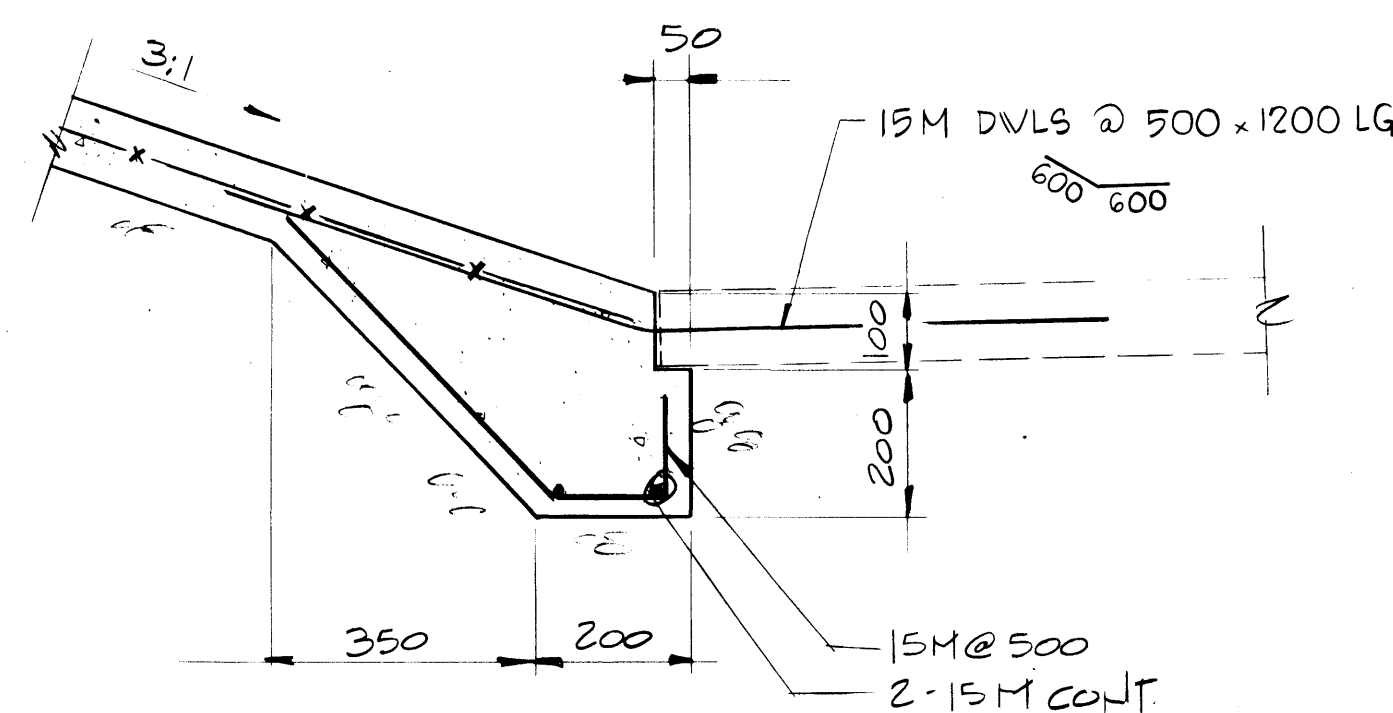
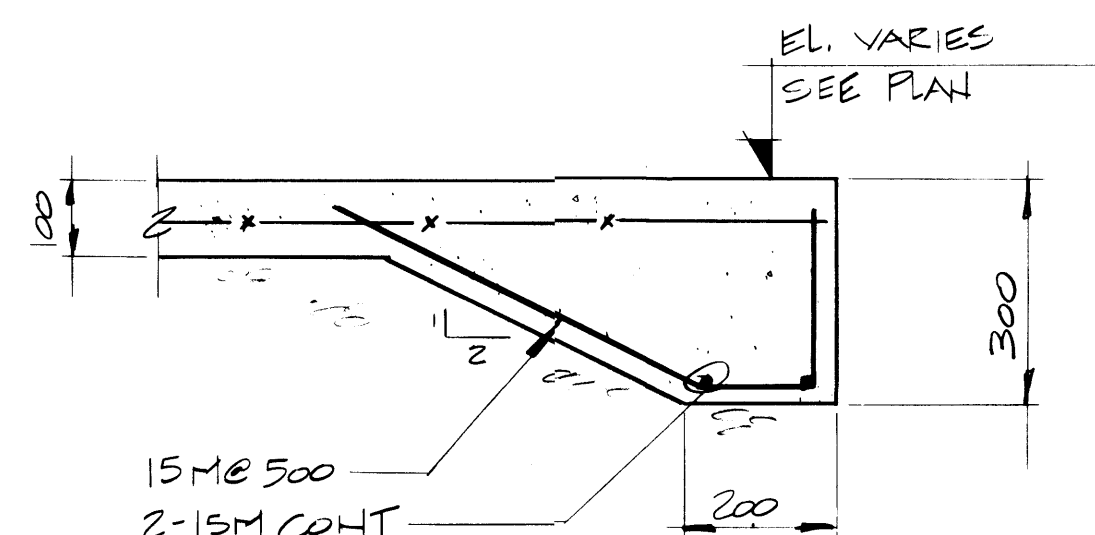
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PERMIT NUMBER
P 2375
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km 13+050

**SLOPE
PROTECTION
SHEET 1**

N.A.	2977-022	3 28
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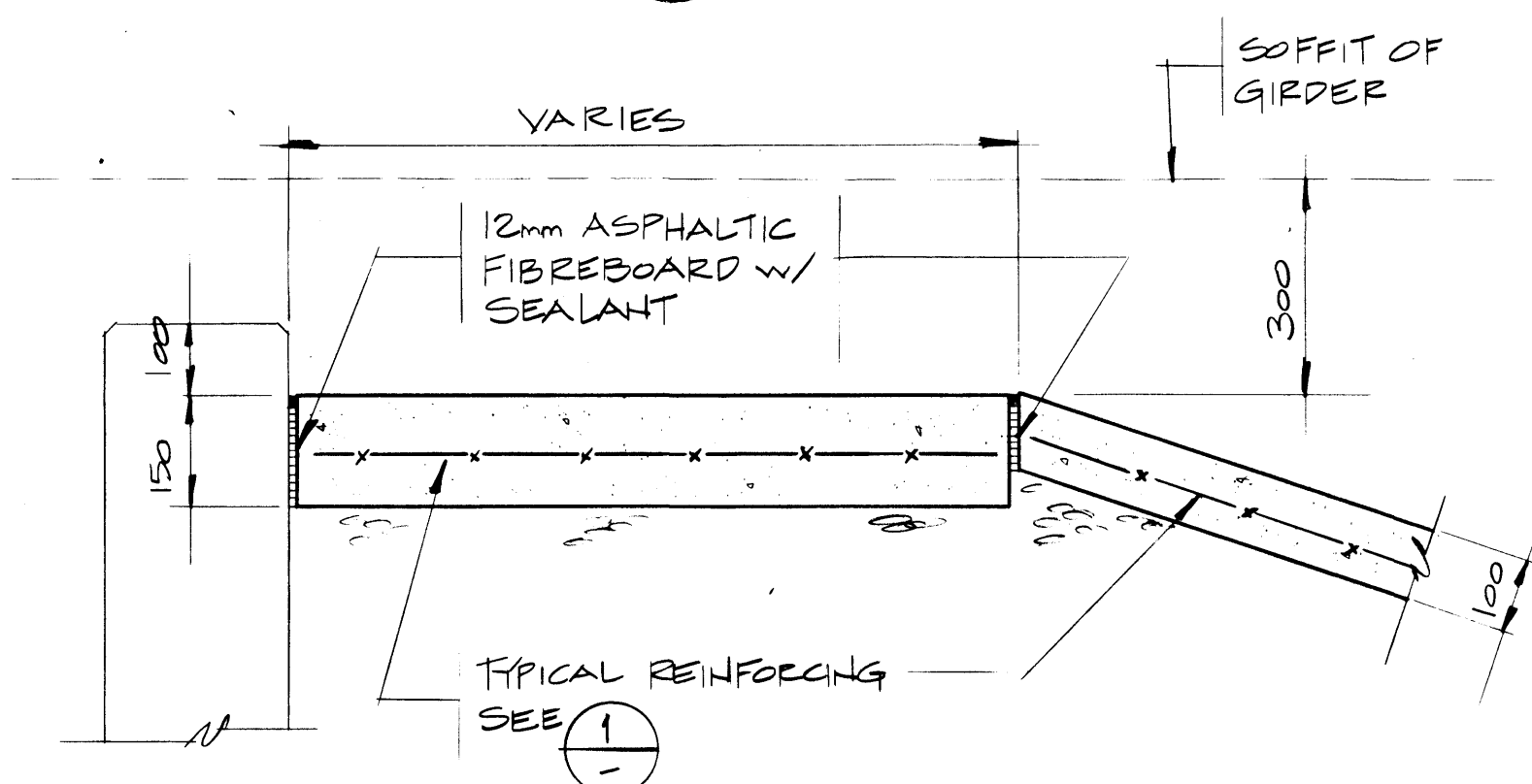
003876



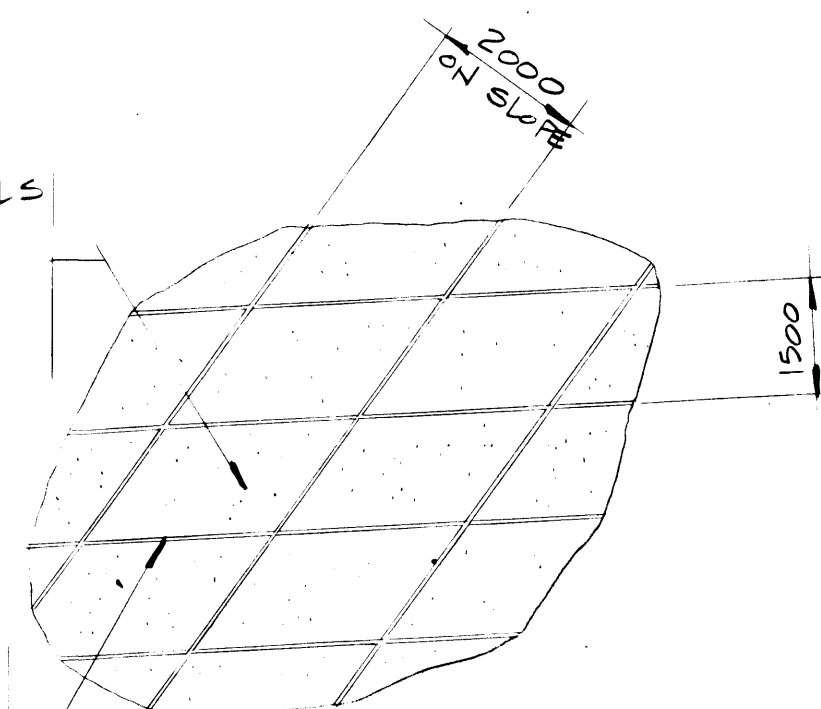
A SECTION
3 SCALE 1:10

B SECTION
3 SCALE 1:10

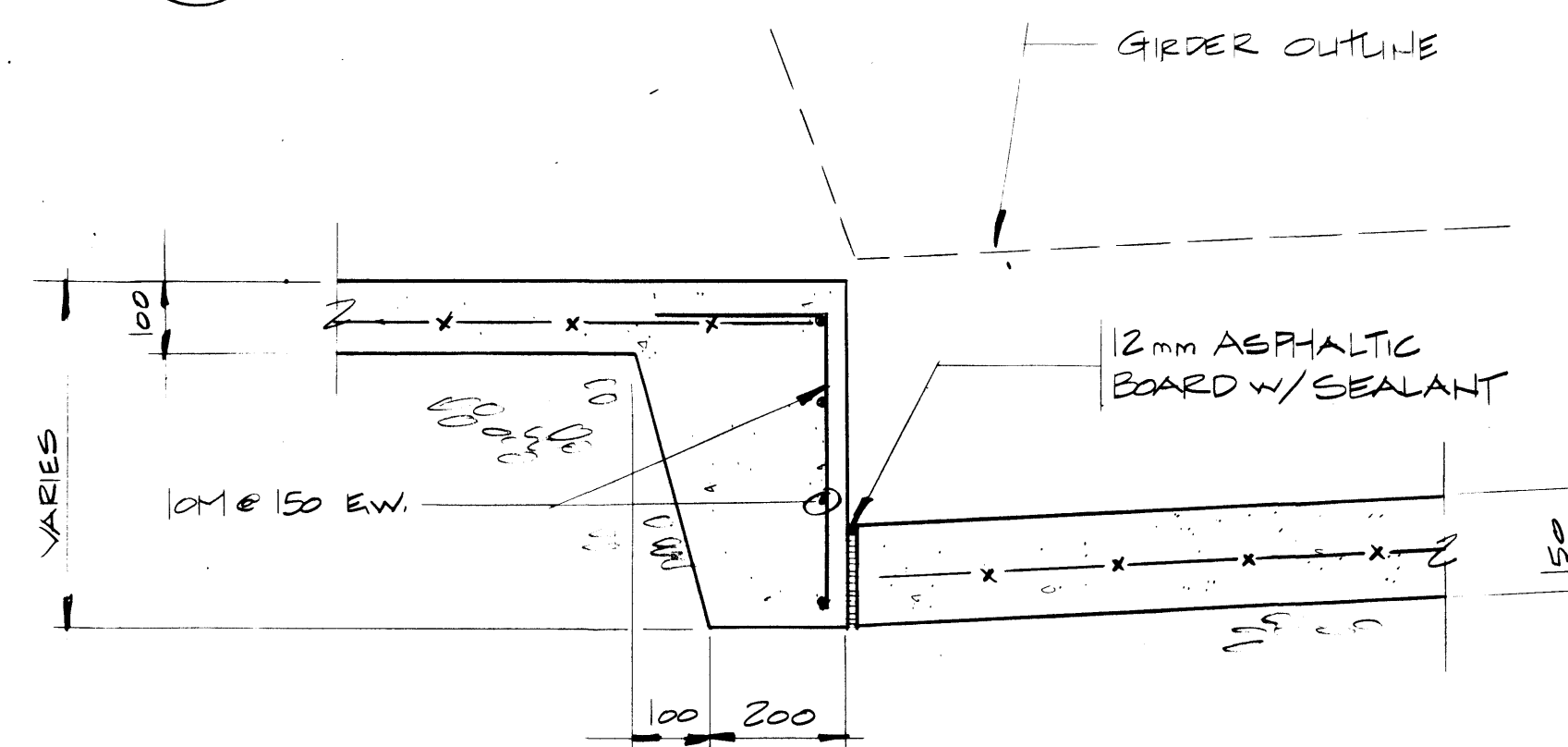
C SECTION
3 SCALE 1:10



2000 x 1500 PANELS
REINFORCED w/
W.W.F. 152 x 152 x
MW. 18.7 x MW 18.7
@ MID-HEIGHT



SLOPE PROTECTION PLAN

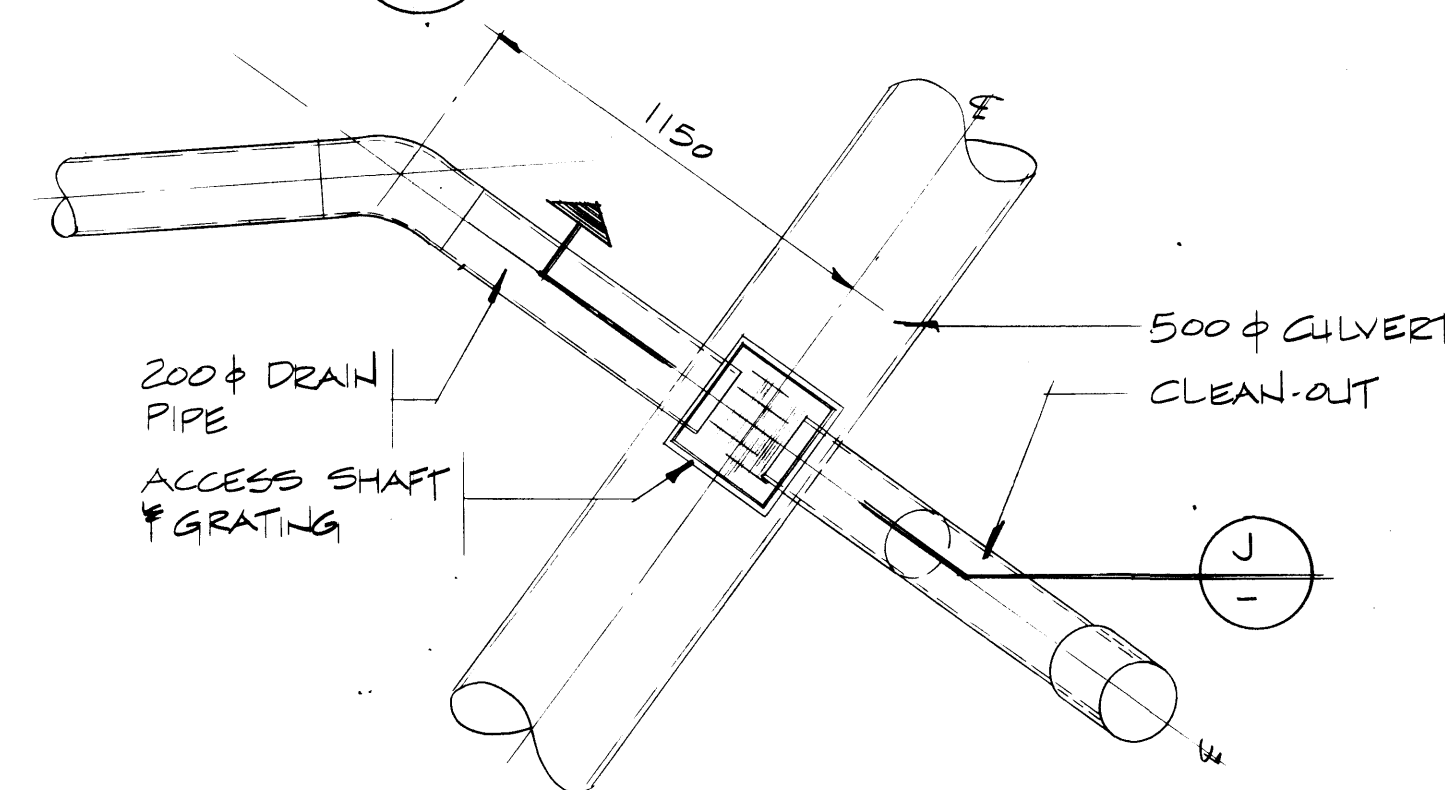
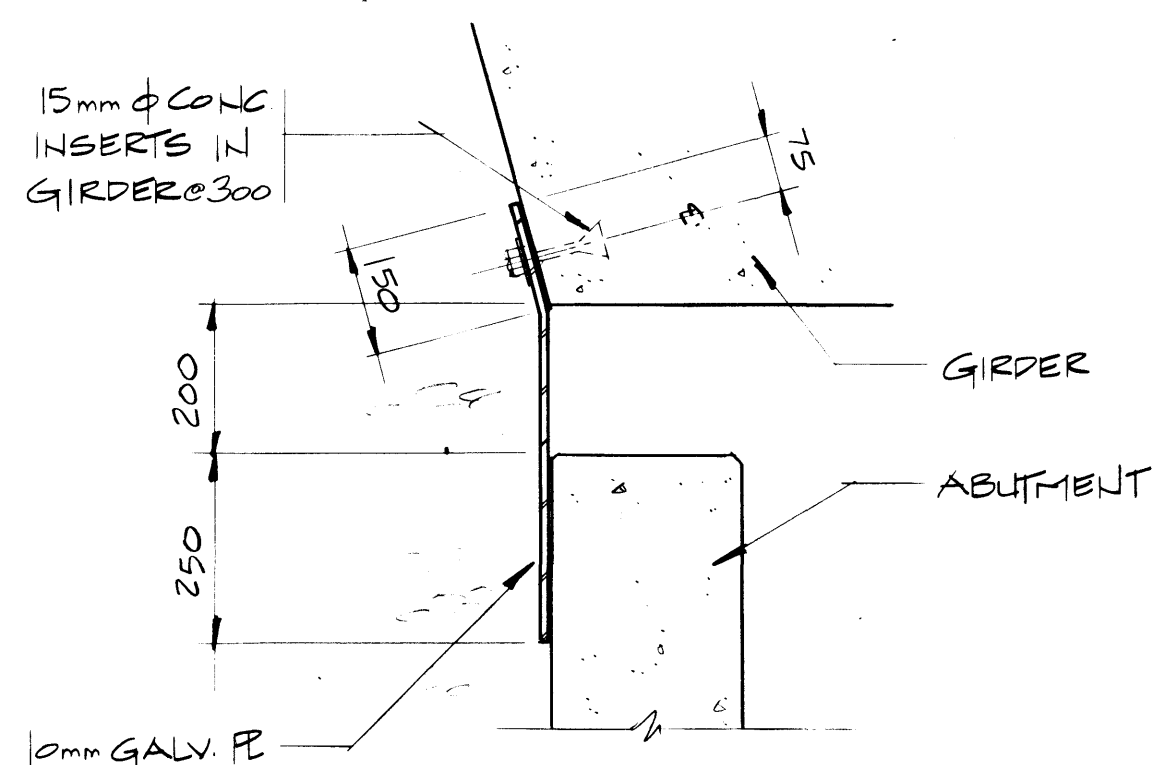
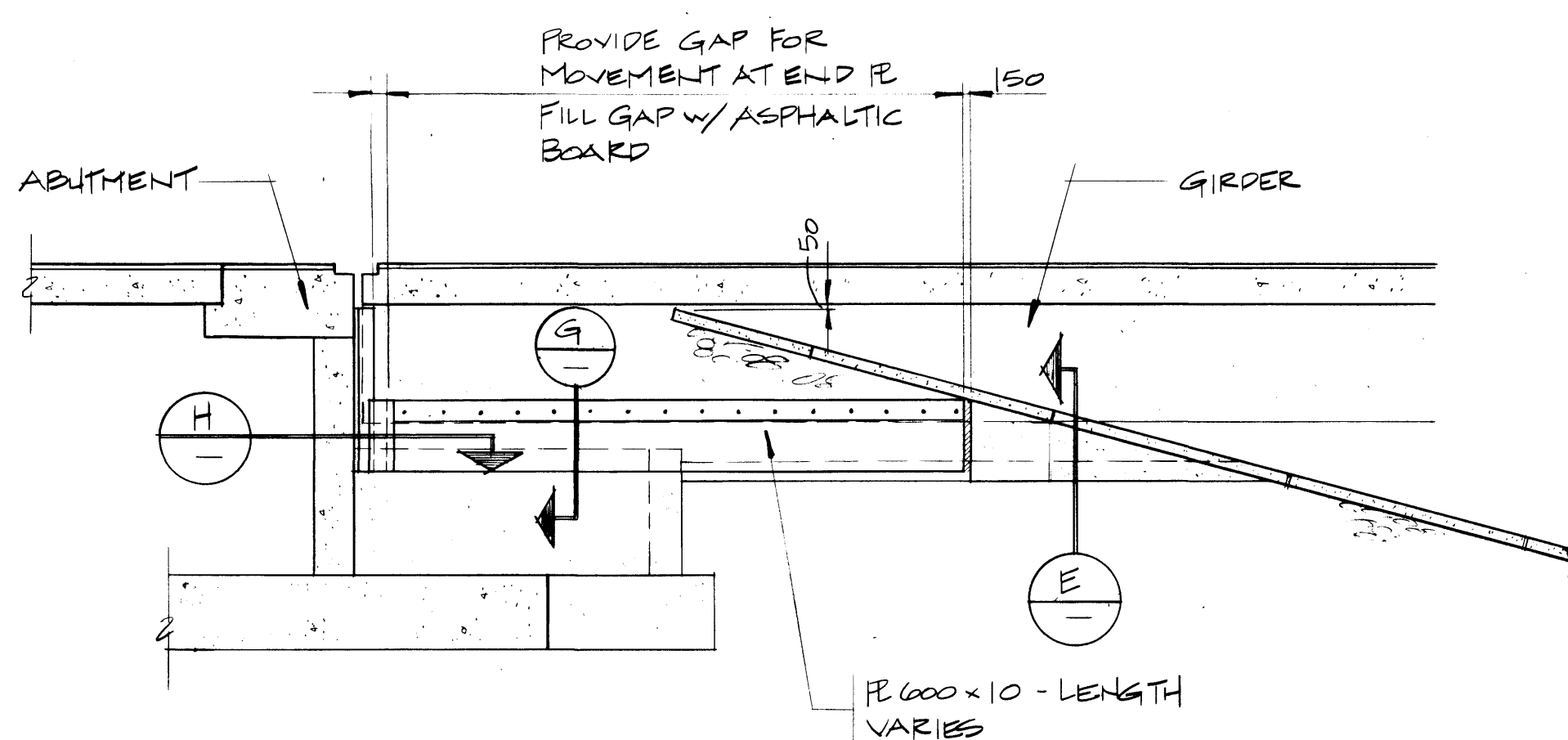


D SECTION
3 SCALE 1:10

1
3

DETAIL
SCALE 1:100.

 SECTION
SCALE 1:10



F
3

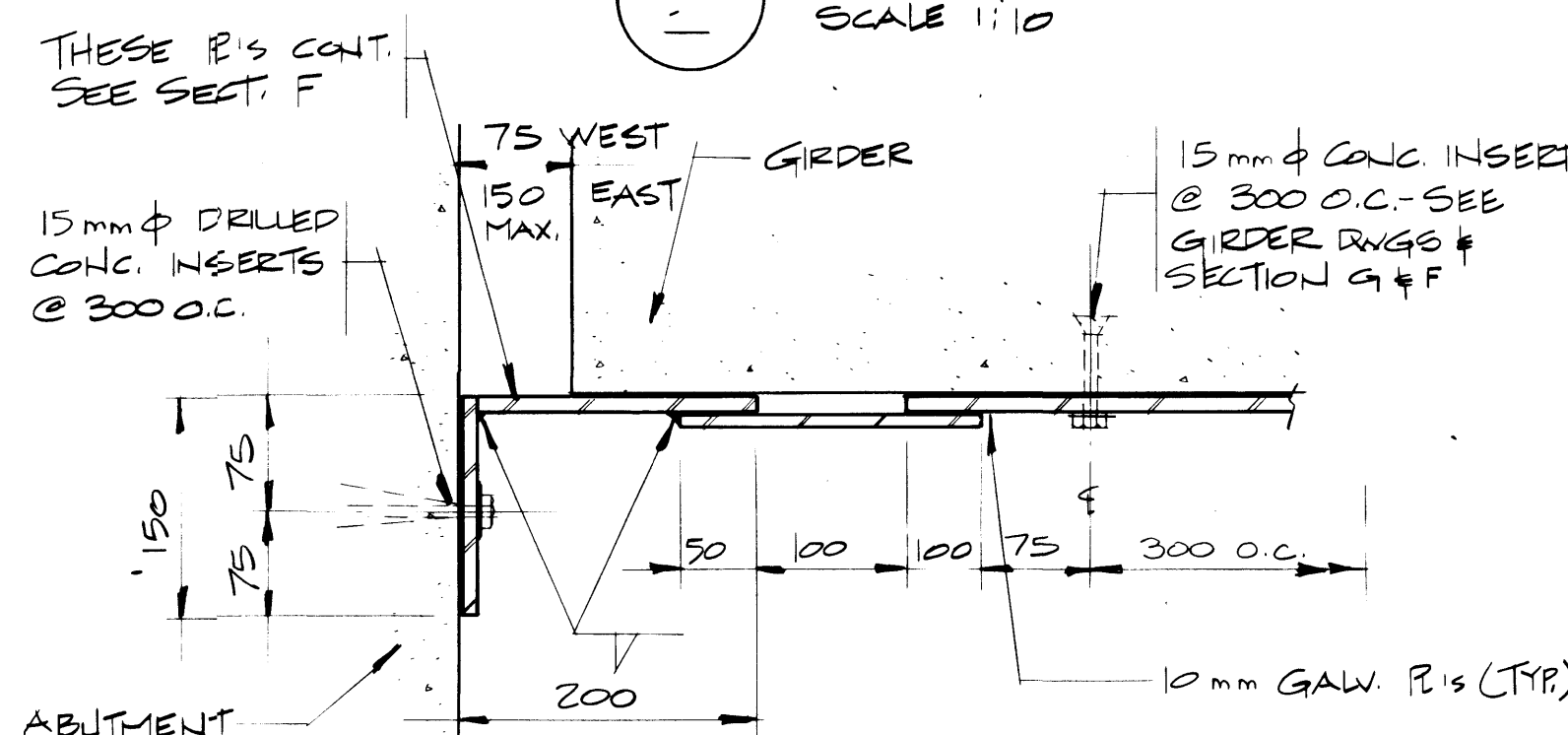
SECTION
SCALE 1:50

G SECTION
SCALE 1:10

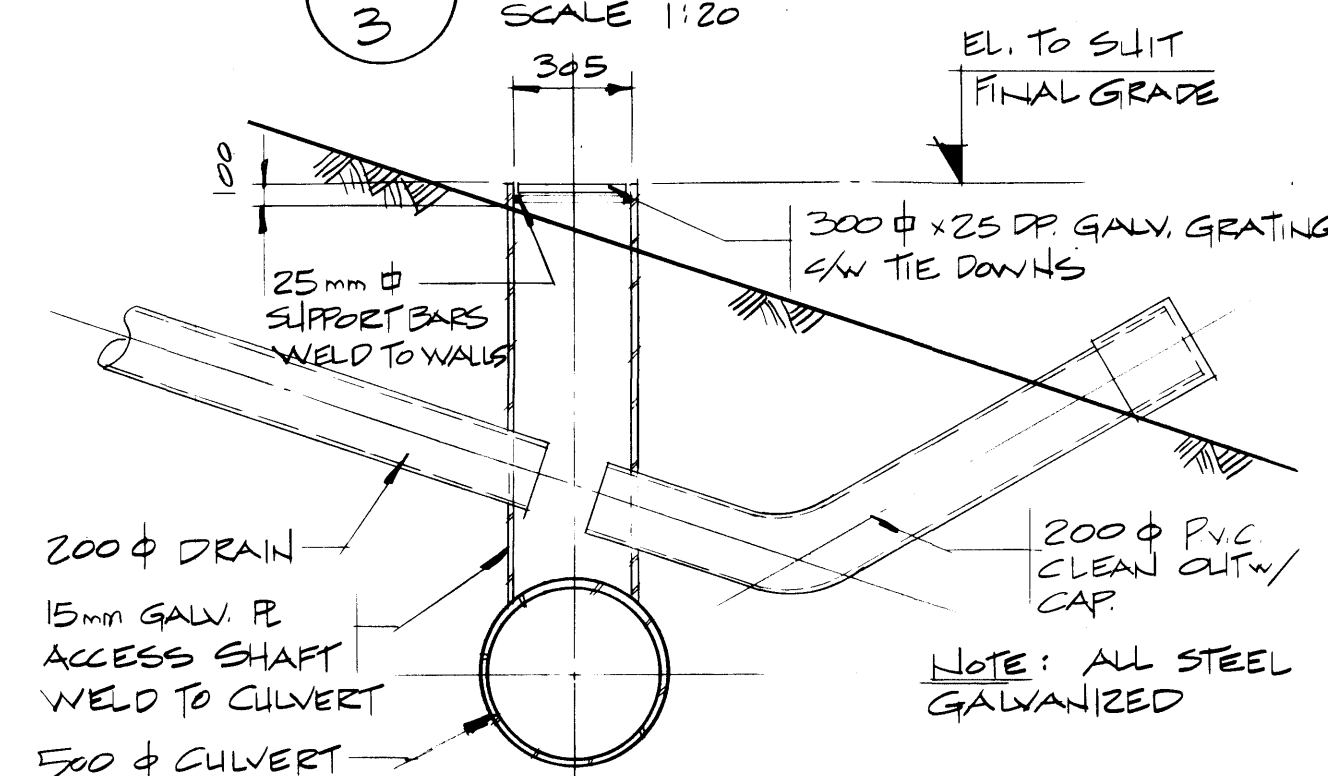
2
3

DETAIL
SCALE 1:20
3+5

NOTE: SLIDING PLATE DETAILS ARE TYPICAL IN FOUR LOCATIONS - LENGTHS WILL VARY TO SUIT EAST & WEST ABUT.



SECTION
SCALE 1:5



SECTION
SCALE 1:20

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Calgary, Alberta

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T.C.H. BRIDGE OVER
BANFF AVENUE
km 13+050

SLOPE PROTECTION SHEET 2

AA006012

AS NOTED		AS NOTED	
N/A, No. N/A, No. N/A	(Low) No. (Dress) No. 2977-032	Green Female	4 of 28

Western Region

Project: TRANS-CANADA HIGHWAY TWINNING
BANFF NATIONAL PARK, ALBERTA
MINNEWANKA INTERCHANGE

Project No. 003876

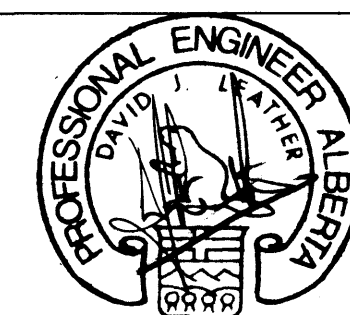
REV	D	M	Y	REVISION DESCRIPTION	DRN	DES	CHK	APP
1				Compiled by				
2				Complete per				

Horizontal Scale	Contour Interval
Echelle horizontale	Echelle horizontale
N.A.	N.A.

Compilation Photos	Photo Scale
Photos de compilation	Echelle photographique
N.A.	N.A.

Drawn by	D. WIDDIFIELD
Date	JAN. 28. 84
Checked by	T. HASENRUECK
Date	JAN. 28. 84

Approved by	D. LEATHER
Date	JAN. 28. 84



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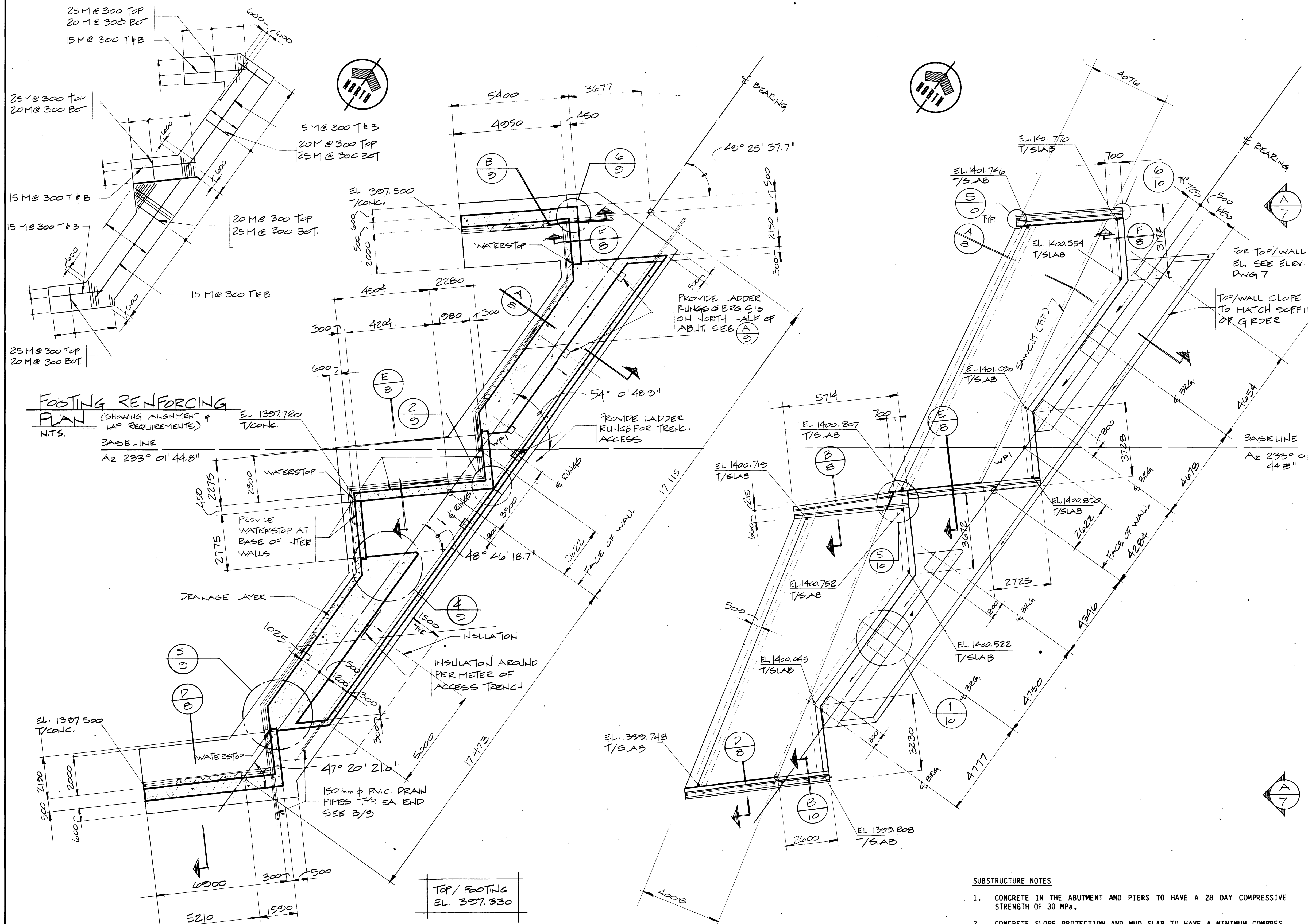
T.C.H. BRIDGE OVER
BANFF AVENUE
km 13+050

WEST ABUTMENT PLANS



Horizontal Scale	Vertical Scale
Echelle horizontale	Echelle verticale
AS NOTED	AS NOTED

NTS. No.	Draw. No.	Sheet	5	of	28
STN. No.	Design No.	Feuille		de	
N.A.	2977-022				



FOUNDATION PLAN
- WEST ABUTMENT
SCALE 1:100

PLAN - WEST ABUTMENT
SCALE 1:100

SUBSTRUCTURE NOTES

- CONCRETE IN THE ABUTMENT AND PIERS TO HAVE A 28 DAY COMPRESSIVE STRENGTH OF 30 MPa.
- CONCRETE SLOPE PROTECTION AND MUD SLAB TO HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 25 MPa.
- THE CONTRACTOR IS TO PROVIDE THE ENGINEER WITH DETAILS OF EACH CONCRETE MIX DESIGN INCLUDING AGGREGATE TYPES AND SOURCES AND PREVIOUS 28 DAY STRENGTH RESULTS FOR EACH MIX PRIOR TO ANY CONCRETE BEING PLACED. ANY UNTRIED CONCRETE MIXES ARE TO BE PROVEN WITH TRIAL MIXES AT NO ADDITIONAL COST TO THE ENGINEER. THE CONTRACTOR SHALL NOT AMEND ANY ACCEPTED MIX DESIGNS WITHOUT PRIOR APPROVAL OF THE ENGINEER.
- ALL REINFORCEMENT SHALL CONFORM WITH CSA G30.12 MADE 400.
- ALL LAPS SHALL BE TENSION LAP SLICES CLASS C UNLESS OTHERWISE SHOWN.
- CONCRETE COVER TO REINFORCEMENT TO BE 50 mm UNLESS OTHERWISE SHOWN.
- CHAMFERS TO BE PROVIDED ON ALL EDGES MINIMUM 20 X 20 UNLESS OTHERWISE SHOWN.
- FOR CONCRETE FINISHES SEE SPECIFICATIONS.

Western Region

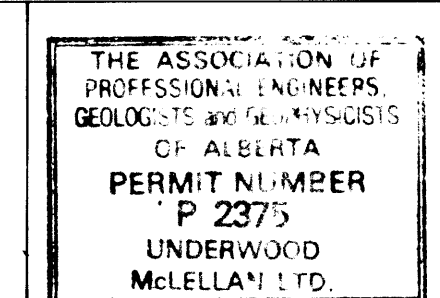
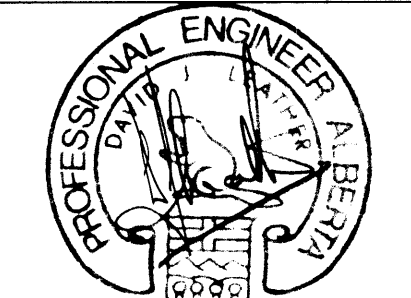
Project: TRANS-CANADA HIGHWAY TWINNING
Banff National Park, Alberta
Minnewanka Interchange

Project No.: 003876

REV	D	M	Y	REVISION DESCRIPTION	DRN	DES	CHK	APP
1				Completed by Sample par				

Horizontal Scale Échelle horizontale	N.A.	Vertical Scale Échelle verticale	N.A.
Compilation Photos Photos de compilation	N.A.	Photograph Ensemble de photographies	N.A.

Drawn by Dessiné par	D. WIDDIFIELD
Date	JAN. 28. 84
Checked by Vérifié par	T. HASSEN RUECK
Date	JAN. 28. 84
Approved by Approuvé par	D. LEATHER
Date	JAN. 28. 84



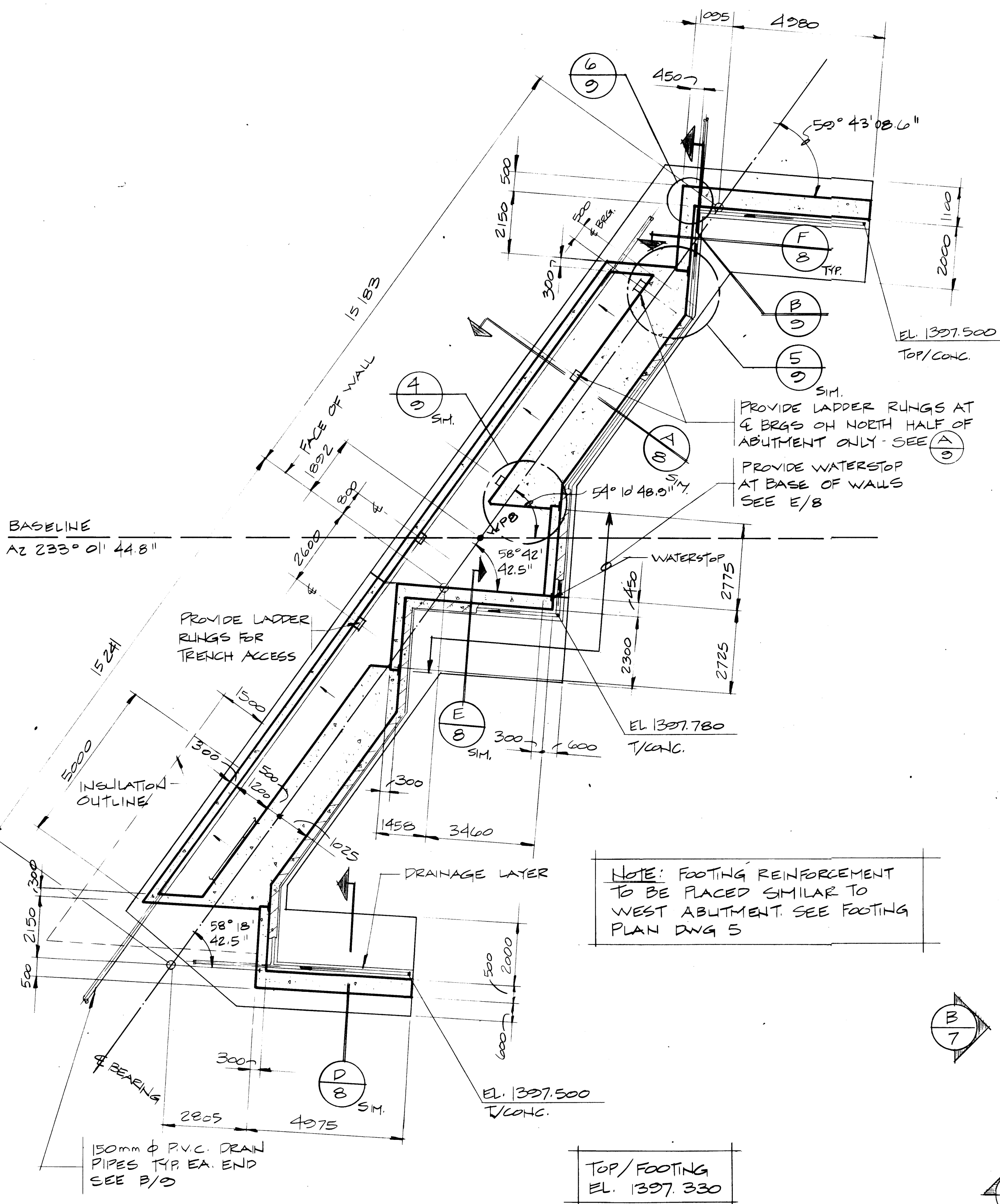
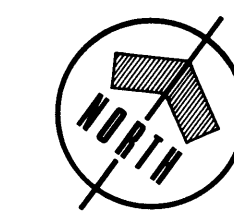
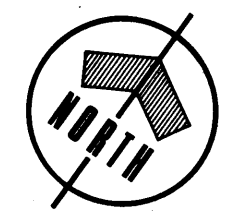
Underwood McLellan Ltd.
Consulting Engineers and Planners
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BANFF AVENUE
km 13+050

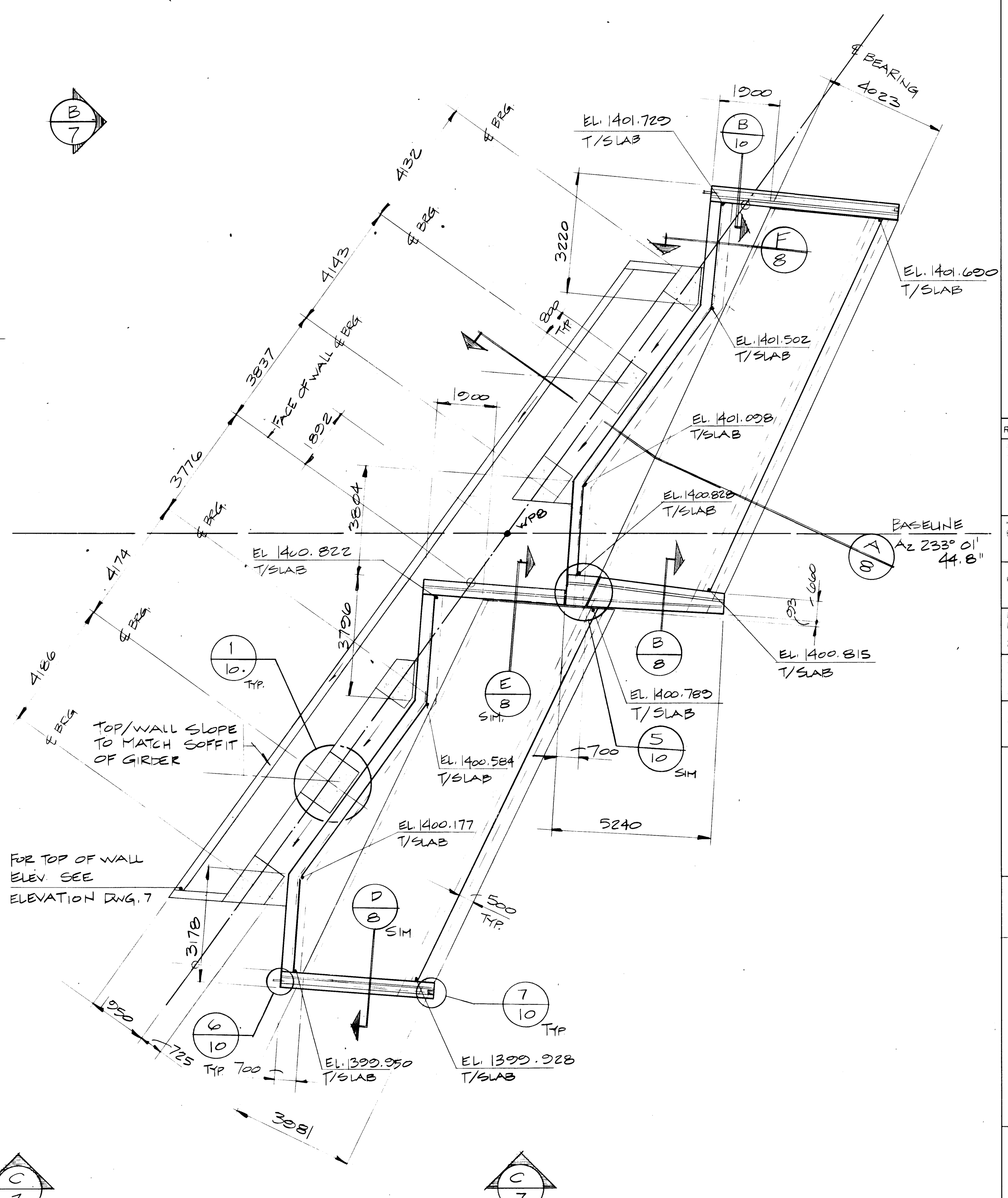
EAST ABUTMENT PLANS



Horizontal Scale Échelle horizontale	AS NOTED	Vertical Scale Échelle verticale	AS NOTED
North Arrow N.A.	2977-022	Sheet No. Feuille	6 of 28



FOUNDATION PLAN
- EAST ABUTMENT
SCALE 1:100

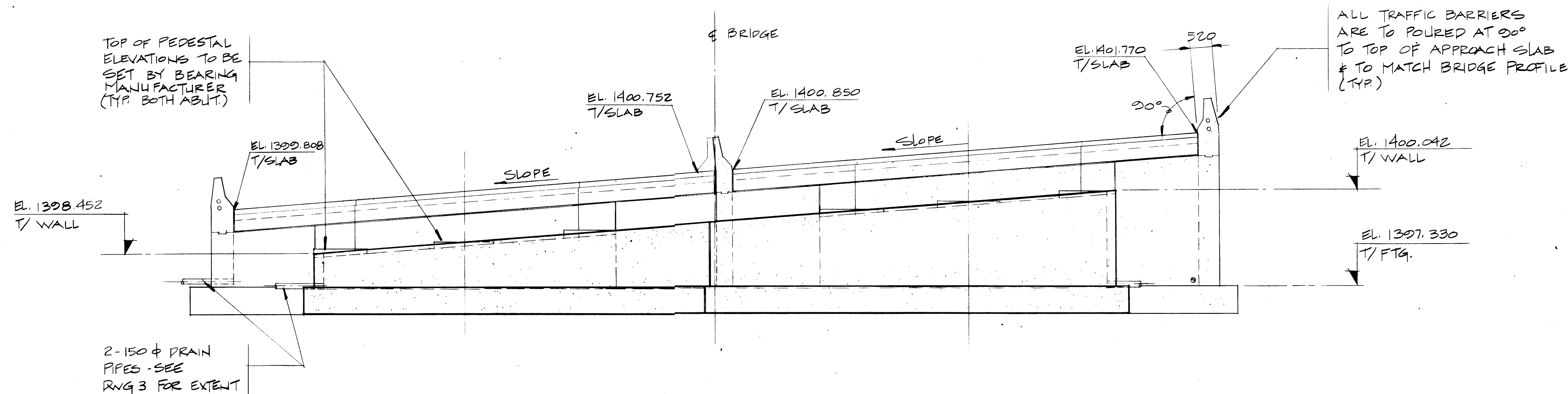


PLAN - EAST ABUTMENT
SCALE 1:100

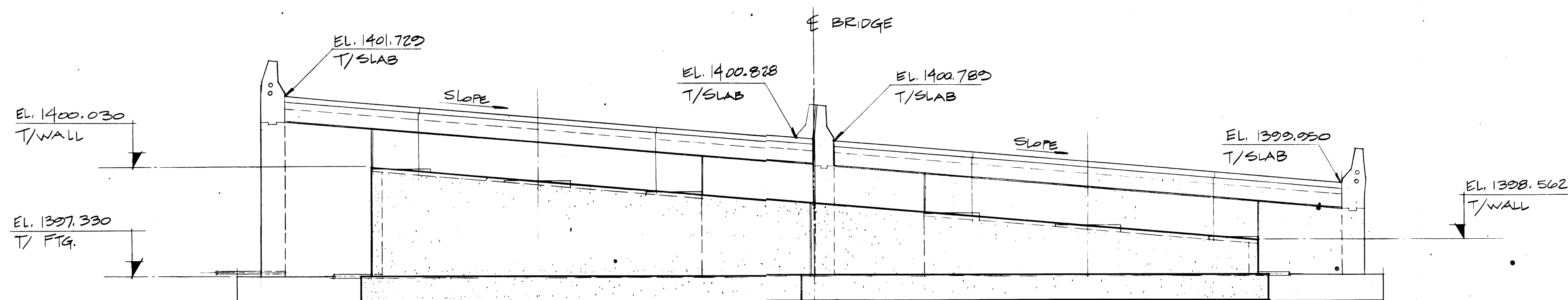
Western Region

TRANS-CANADA HIGHWAY TWINNING
BANFF NATIONAL PARK, ALBERTA
MINNEWANKA INTERCHANGE

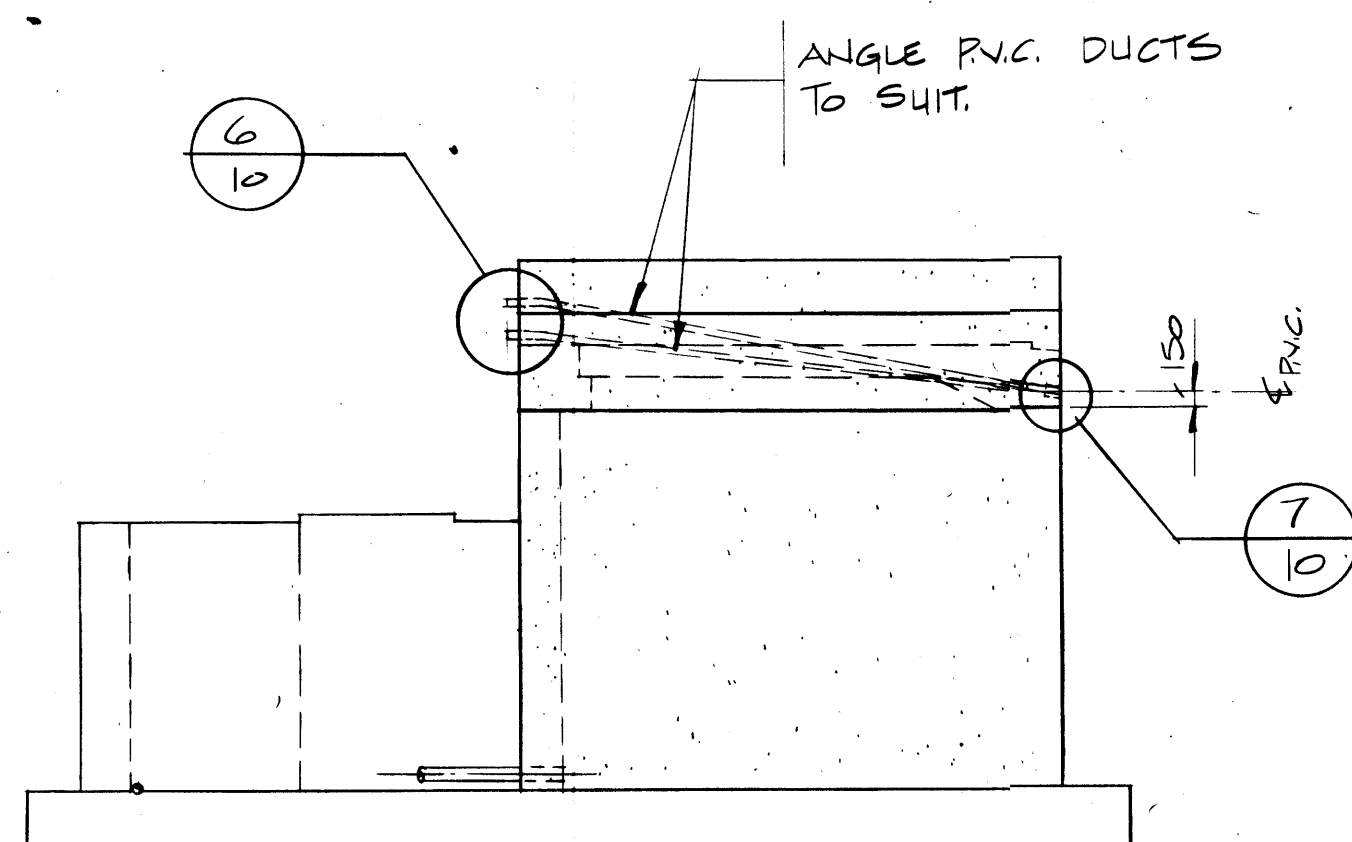
003876



A
5 ELEVATION - WEST ABUTMENT
SCALE 1:75



B
6 ELEVATION - EAST ABUTMENT
SCALE 1:75



C
6 ELEVATION (TYP. SIDE ELEV.)
SCALE 1:75

REV	D	M	Y	REVISION DESCRIPTION	DRN	DES	CHK	APP
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Compiled by
Compté par

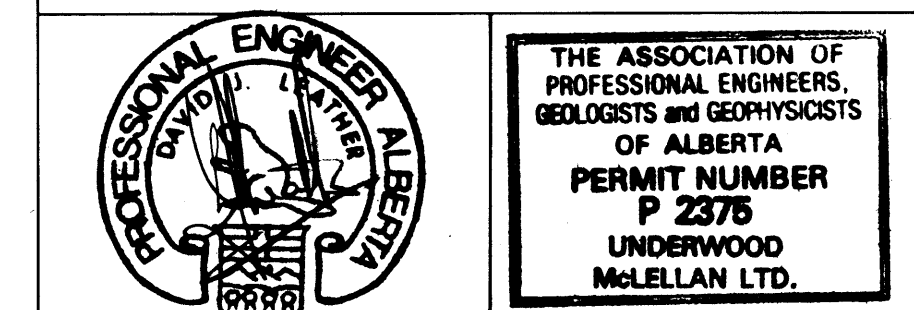
Horizontal Scale Echelle horizontale	N.A.	Contour Interval Eau-distance	N.A.
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Compilation Photos Photos de compilation	N.A.	Photo Scale Echelle photographique	N.A.
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Drawn by
Dessiné par
Date
JAN. 28. 84

Checked by
Vérifié par
Date
JAN. 28. 84

Approved by
Approuvé par
Date
JAN. 28. 84



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Consulting Engineers and Planners
Calgary, Alberta

T.C.H. BRIDGE OVER
BANFF AVENUE
km 13+050



ABUTMENT ELEVATIONS

Horizontal Scale Echelle horizontale	AS NOTED	Vertical Scale Echelle verticale	AS NOTED
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STN. No.
N.A.

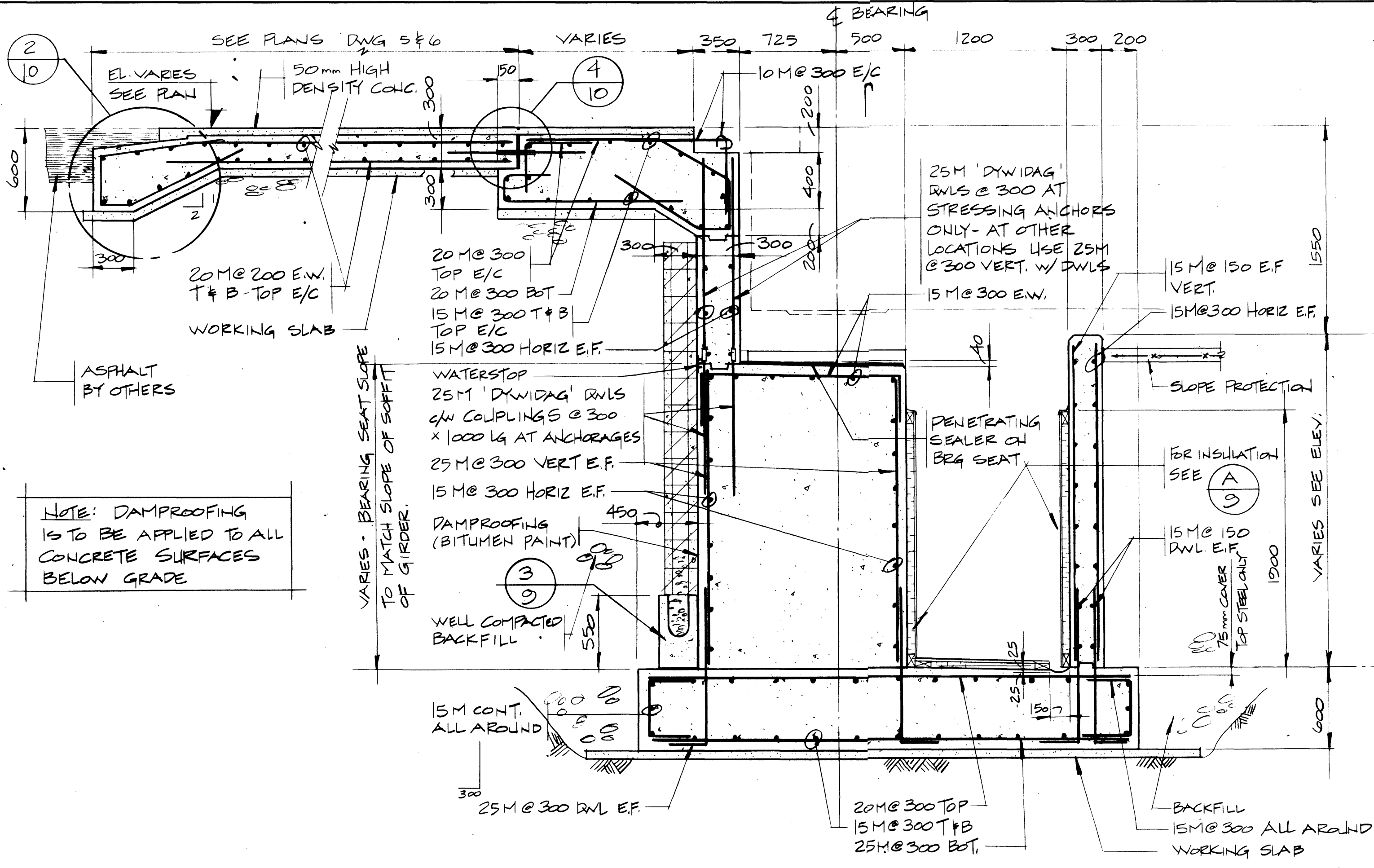
Draw. No.
Dessin No.
2977-022

Sheet
Feuille
7 of 28

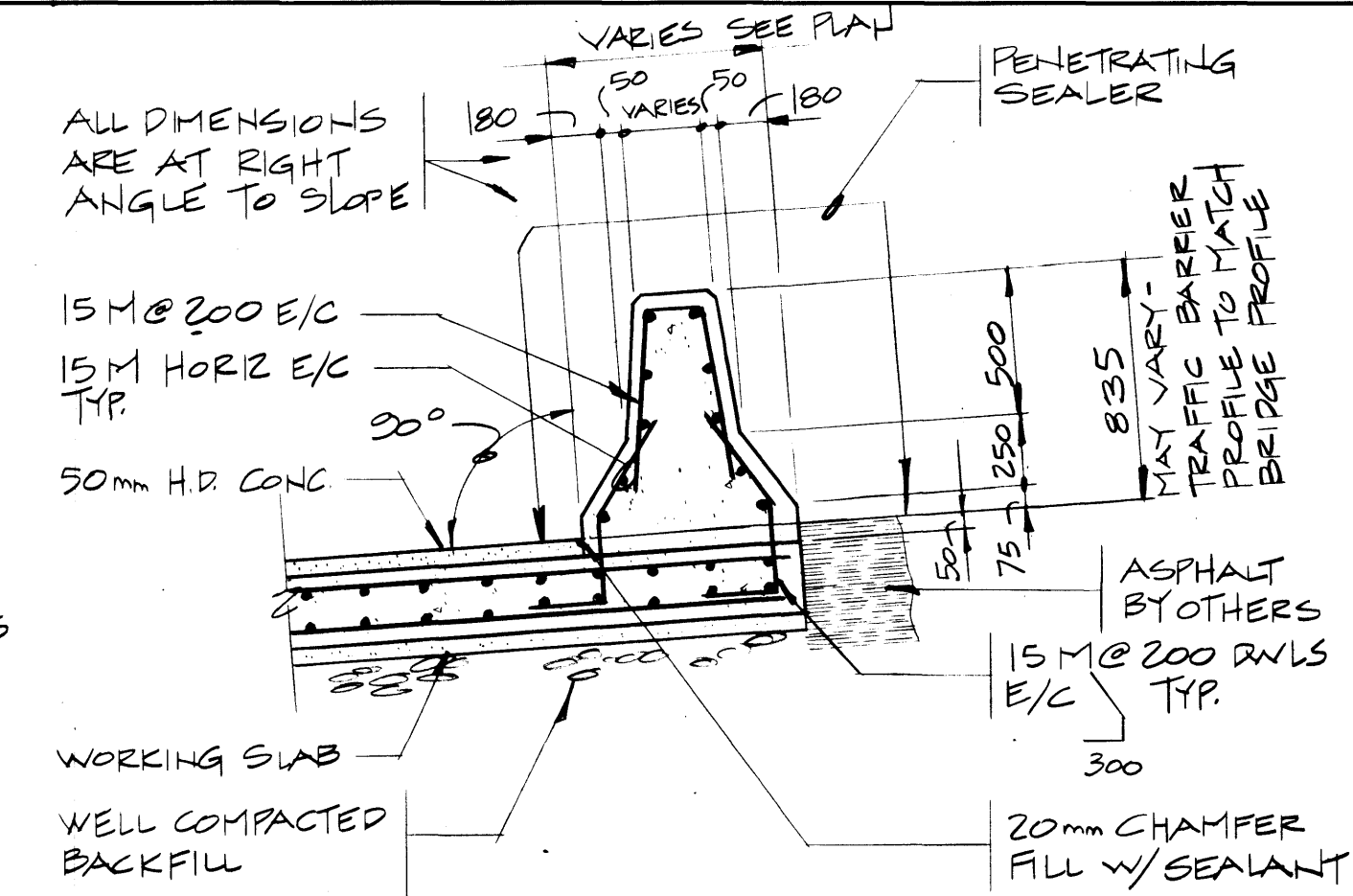
Western Region

Project: TRANS-CANADA HIGHWAY TWINNING
BANFF NATIONAL PARK, ALBERTA
MINNEWANKA INTERCHANGE

Project No. 003876



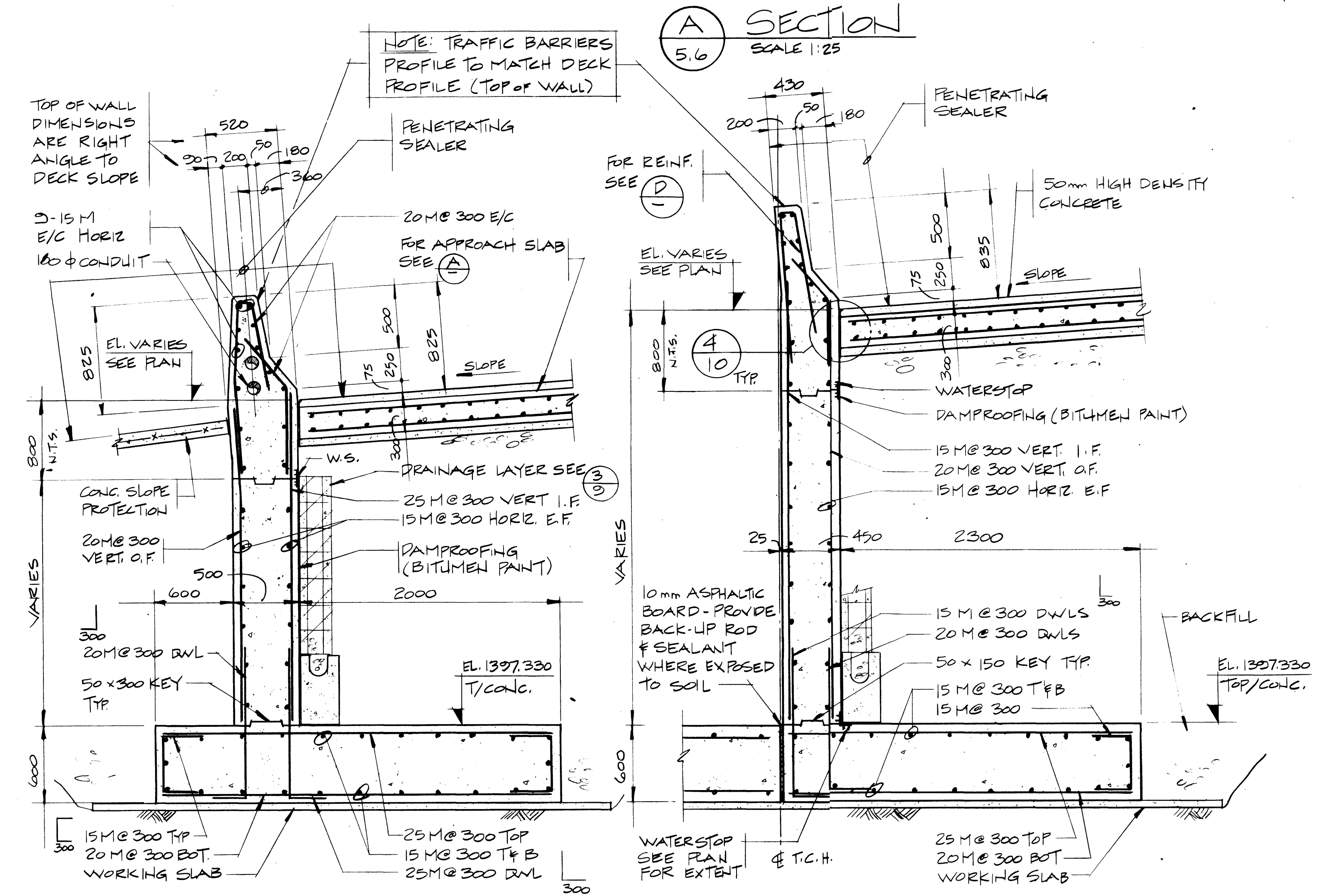
NOTE: DAMPROOFING IS TO BE APPLIED TO ALL CONCRETE SURFACES BELOW GRADE



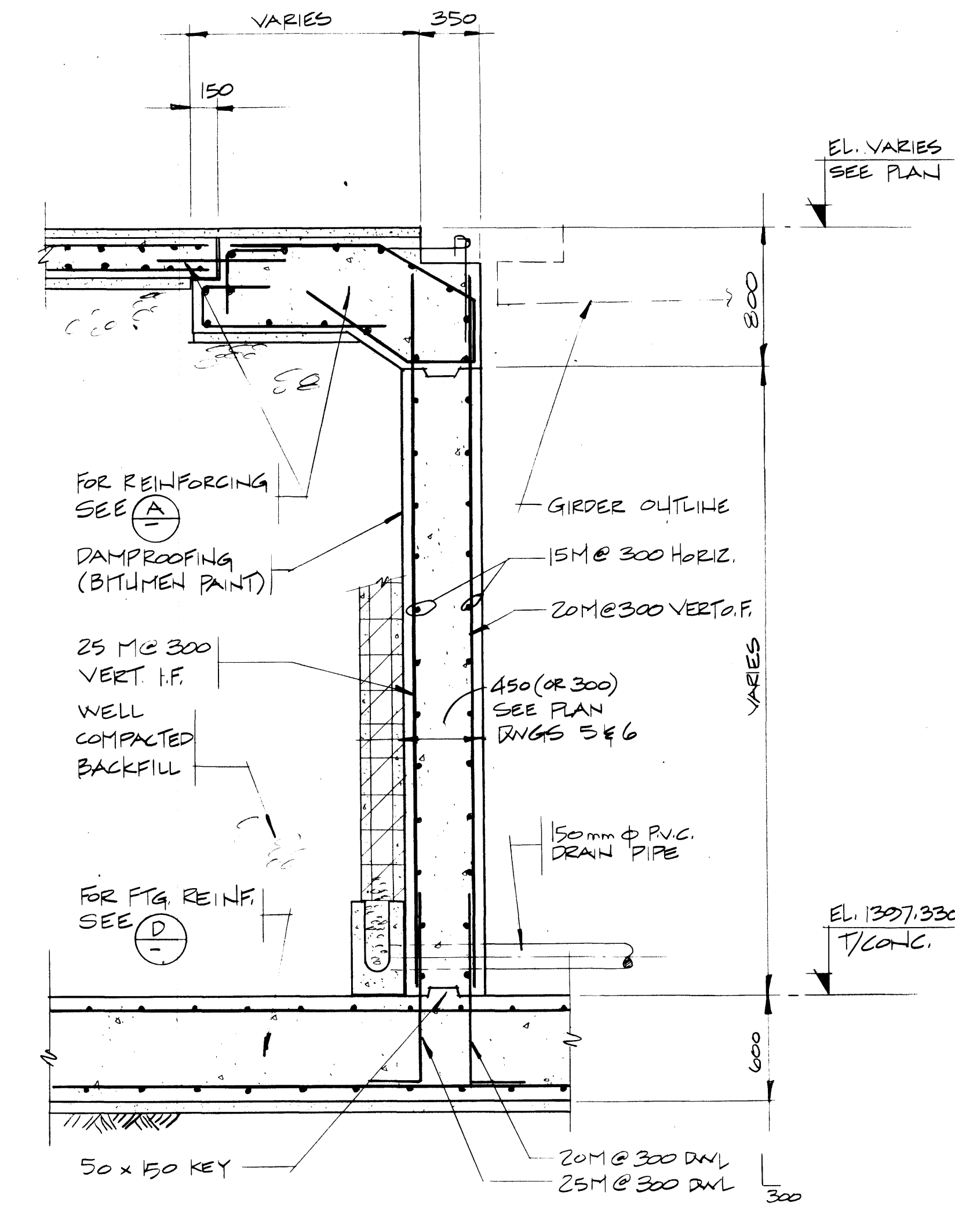
B SECTION
5.6 SCALE 1:25

NOTE: ALL SPLICES ARE TO BE BASIC TENSION LAP SPLICES CLASS 'C'

NOTE: REFER TO REINFORCING PLAN ON DWG 5 FOR ORIENTATION OF REINFORCING



A SECTION
5.6 SCALE 1:25

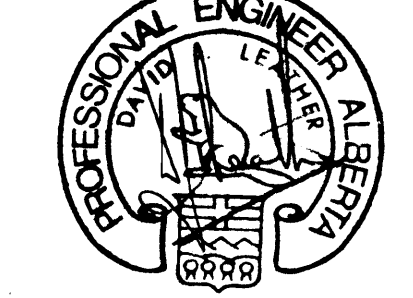


F SECTION
5.6 SCALE 1:25

REV	D	M	Y	REVISION DESCRIPTION	DRN	DES	CHK	APP

Horizontal Scale Echelle horizontale	N.A.	Contour Interval Eau-distance	N.A.
Compilation Photos Photos de compilation	N.A.	Photo Scale Echelle photographique	N.A.

Drawn by Dessine par	D. WIDDIFIELD
Date	JAN. 28. 84
Checked by Verifie par	T. HASSEN RUECK
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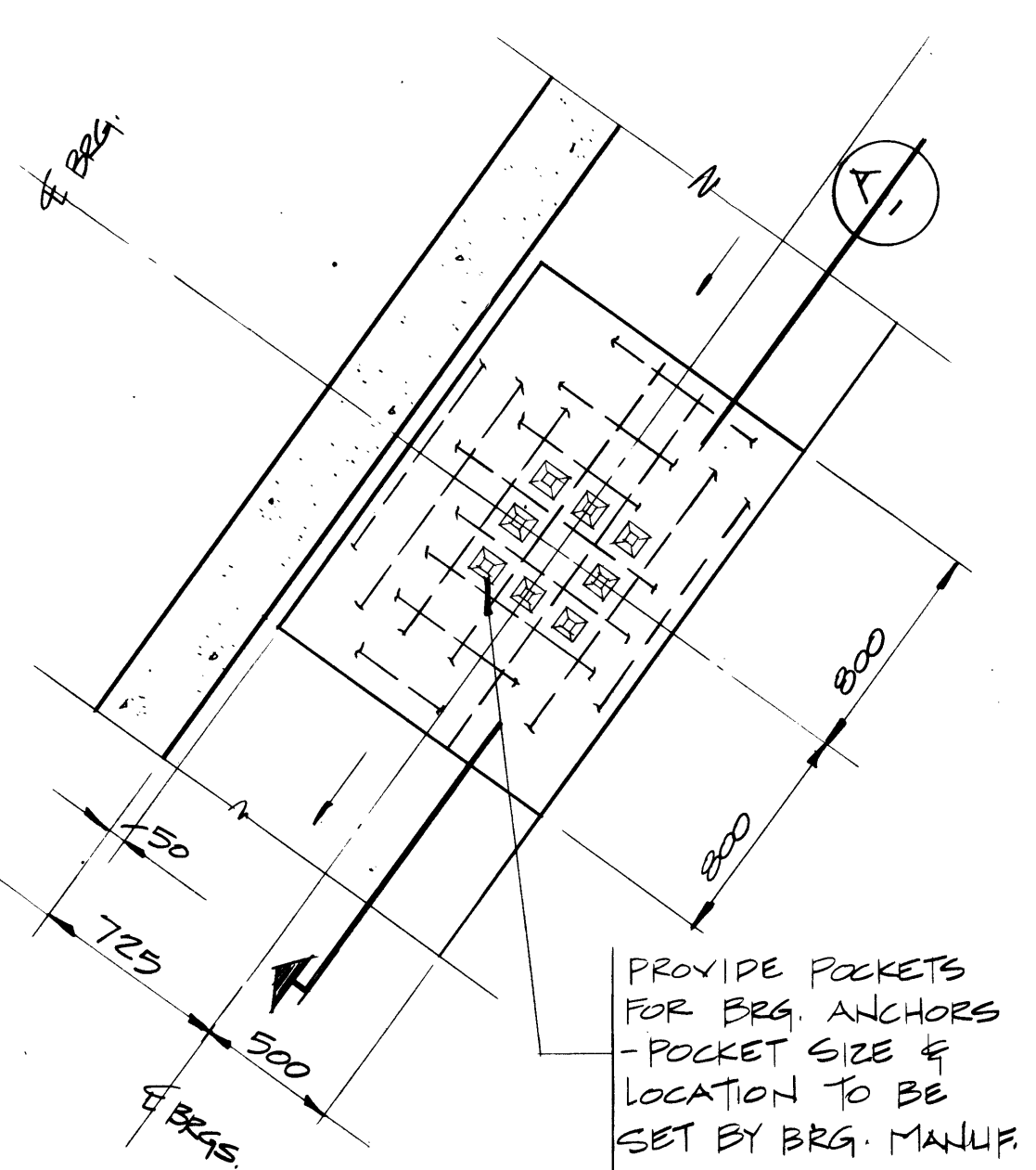
ABUTMENT DETAILS SHEET 1

Horizontal Scale Echelle horizontale	AS NOTED	Vertical Scale Echelle verticale	AS NOTED
N.A.	2977-022	8	28

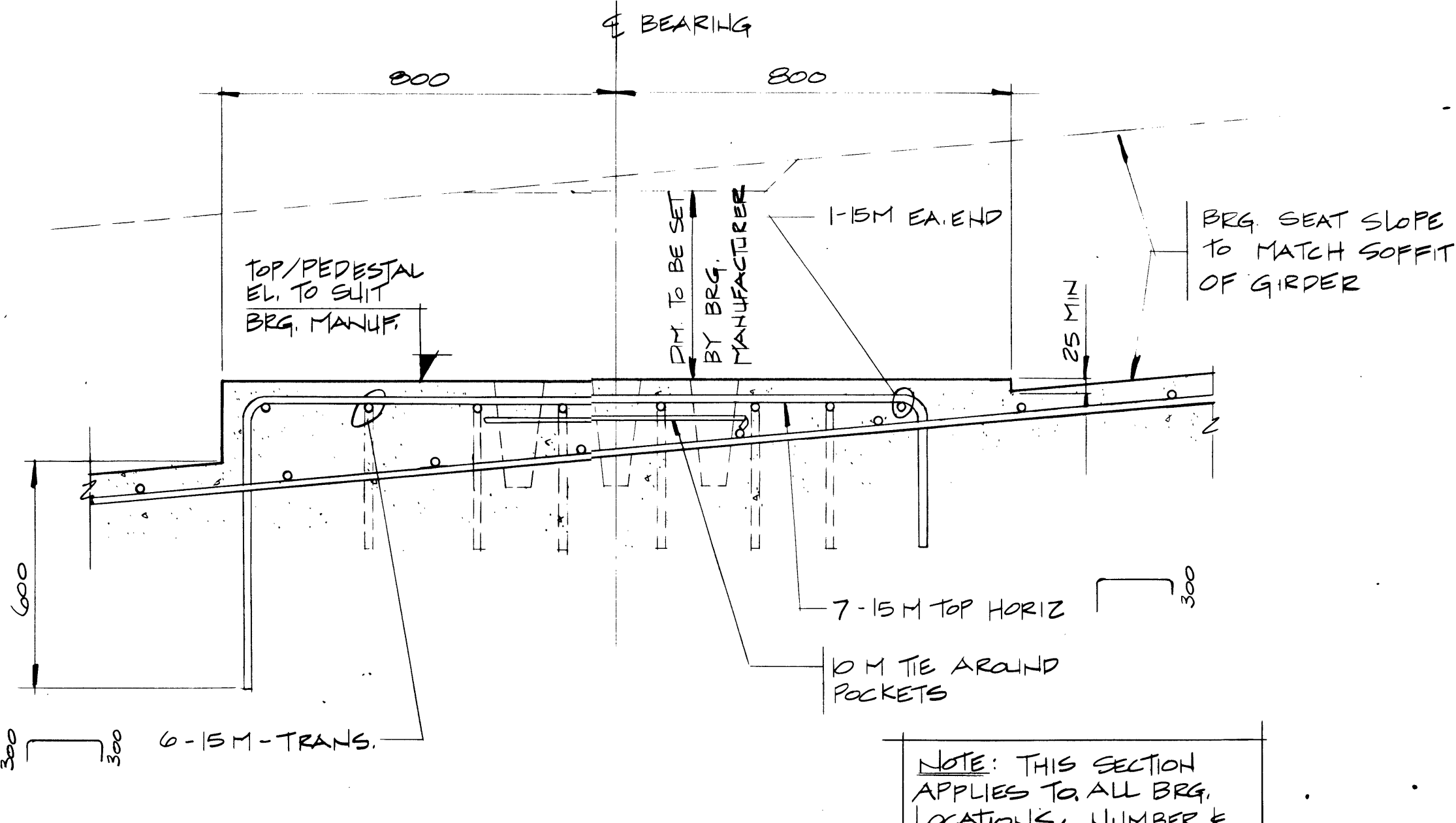
Western Region

Project: TRANS-CANADA HIGHWAY TWINNING
Banff National Park, Alberta
Minnewanka Interchange

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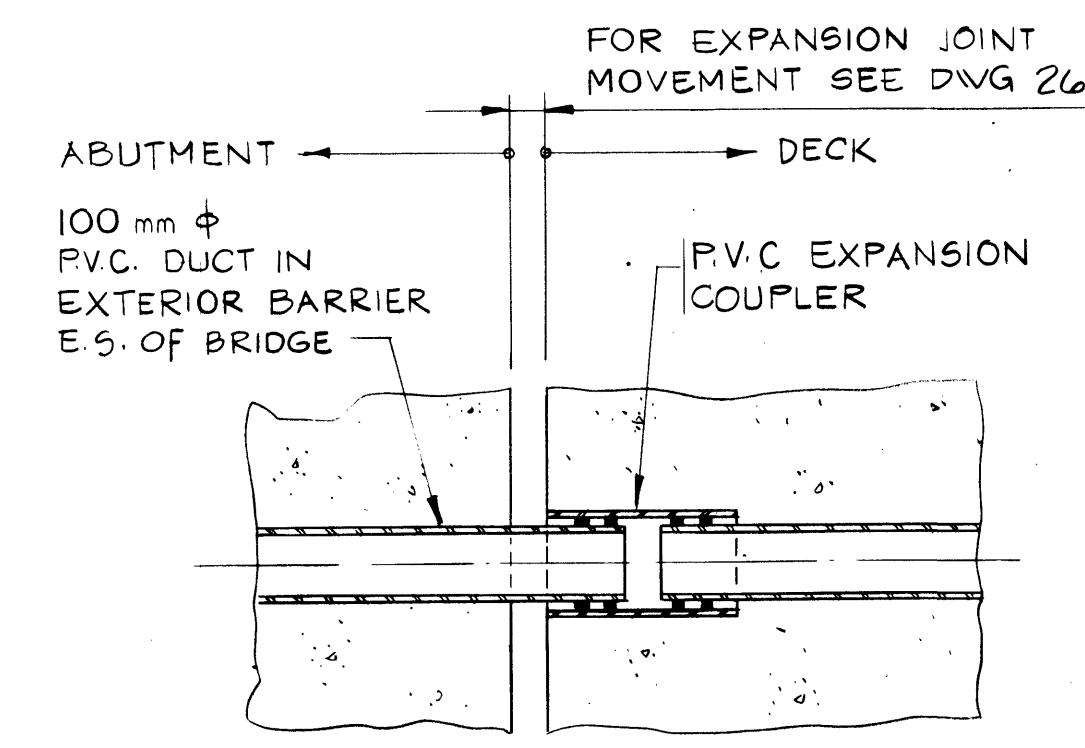


1 DETAIL
5,6 SCALE 1:25



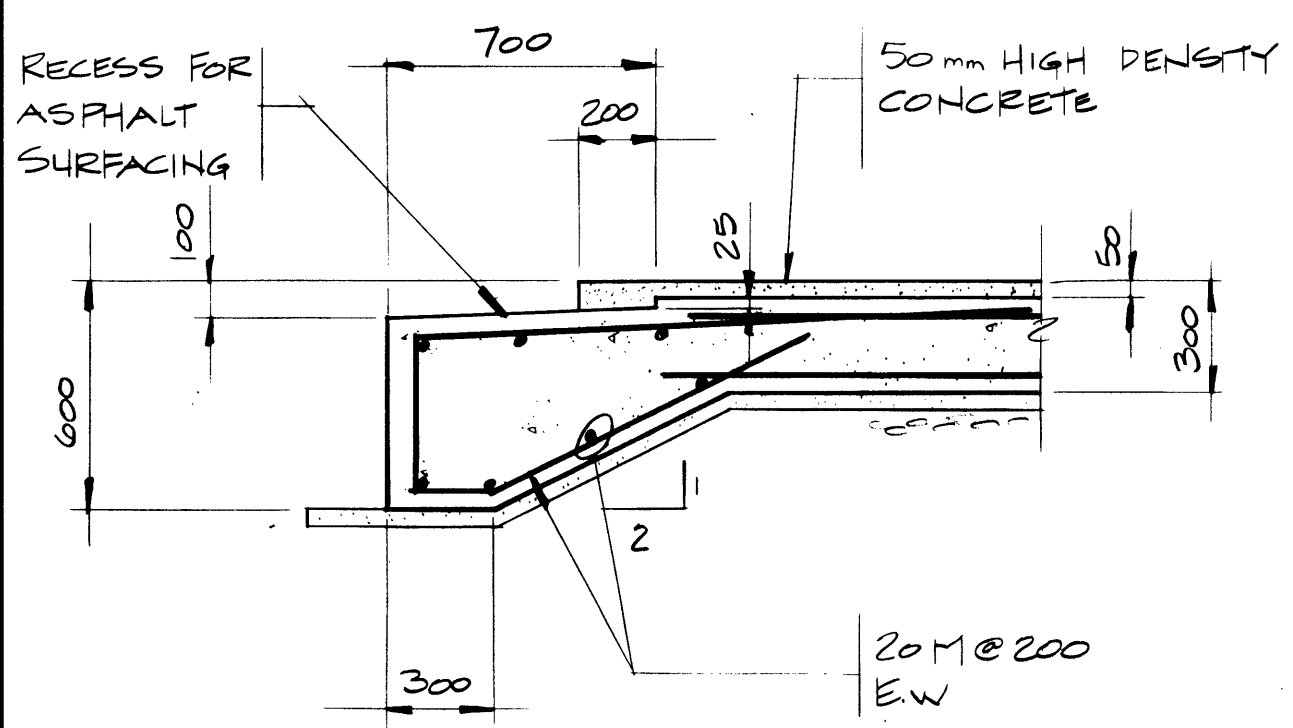
A SECTION
SCALE 1:10

NOTE: THIS SECTION APPLIES TO ALL BRG. LOCATIONS, NUMBER & LENGTH OF REIN. MAY VARY TO SUIT PEDESTAL.

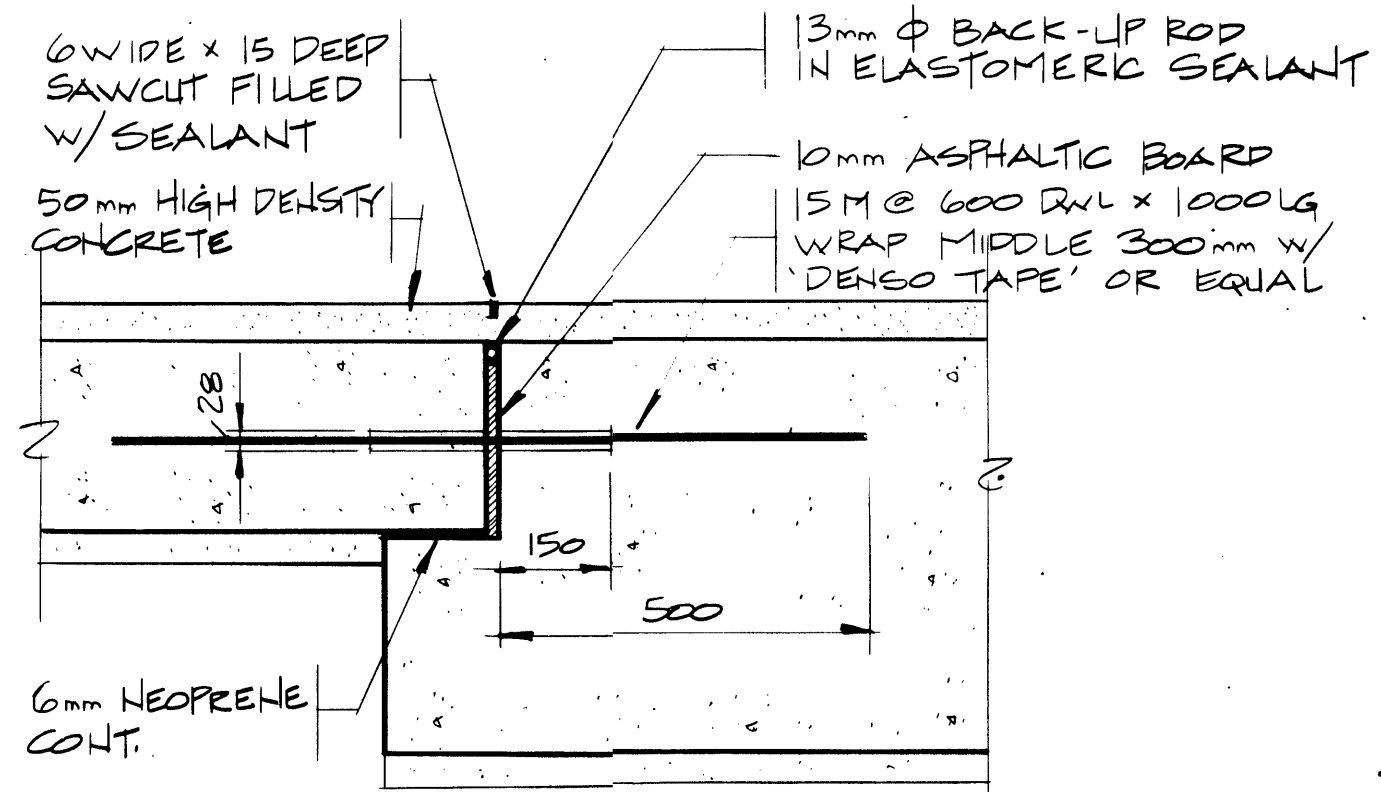


EXPANSION JOINT COUPLER

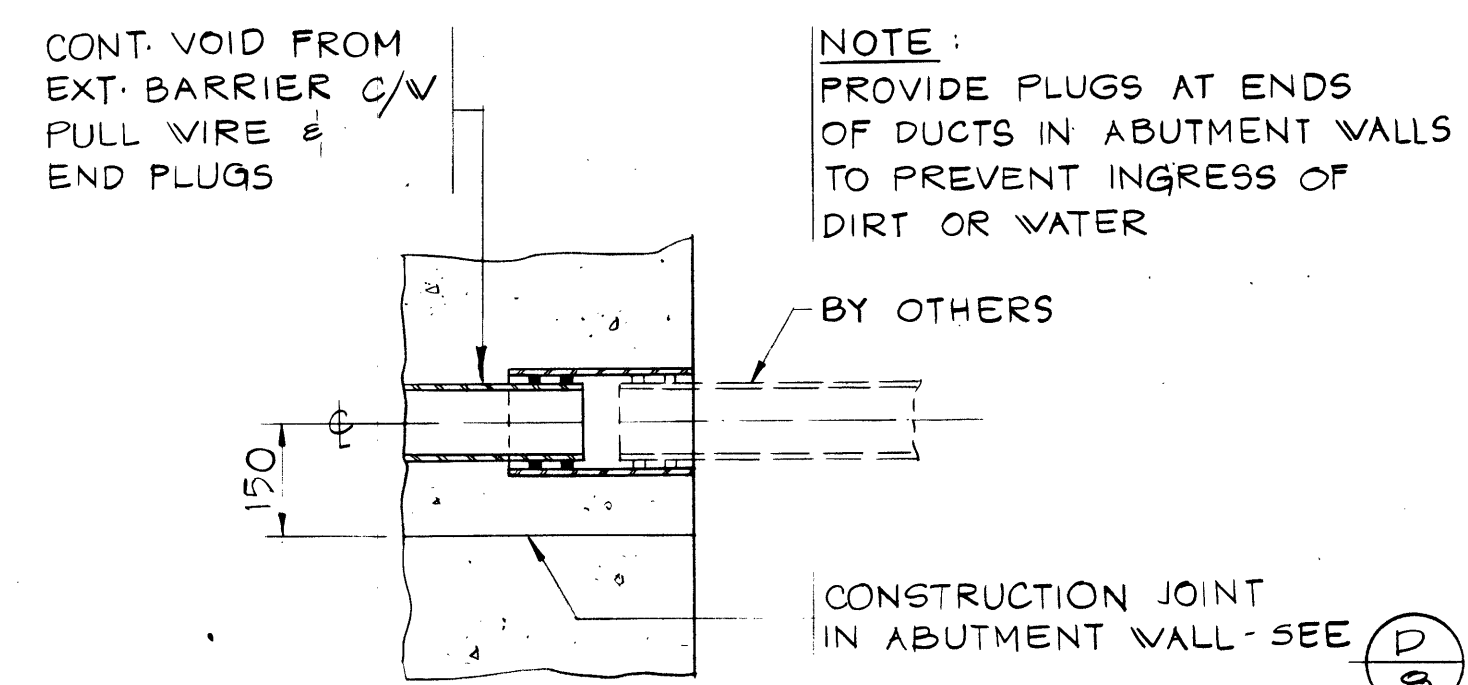
6 DETAIL
5,6 SCALE 1:10



2 DETAIL
8 SCALE 1:20

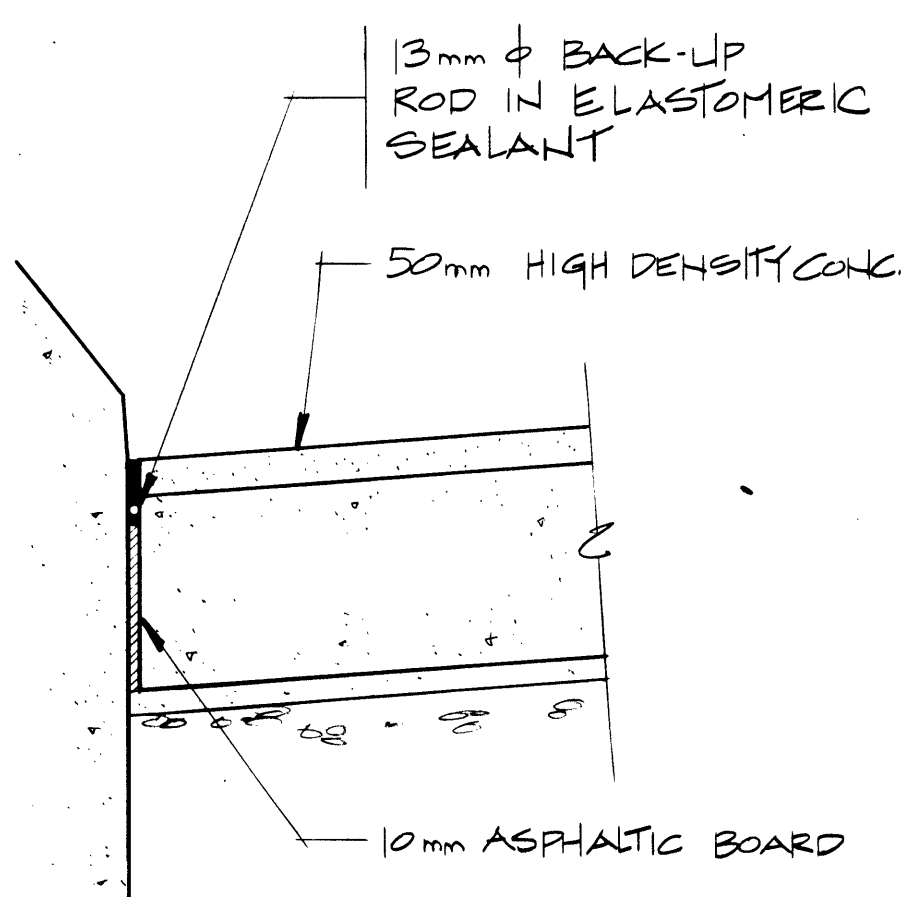


3 DETAIL
8 SCALE 1:10

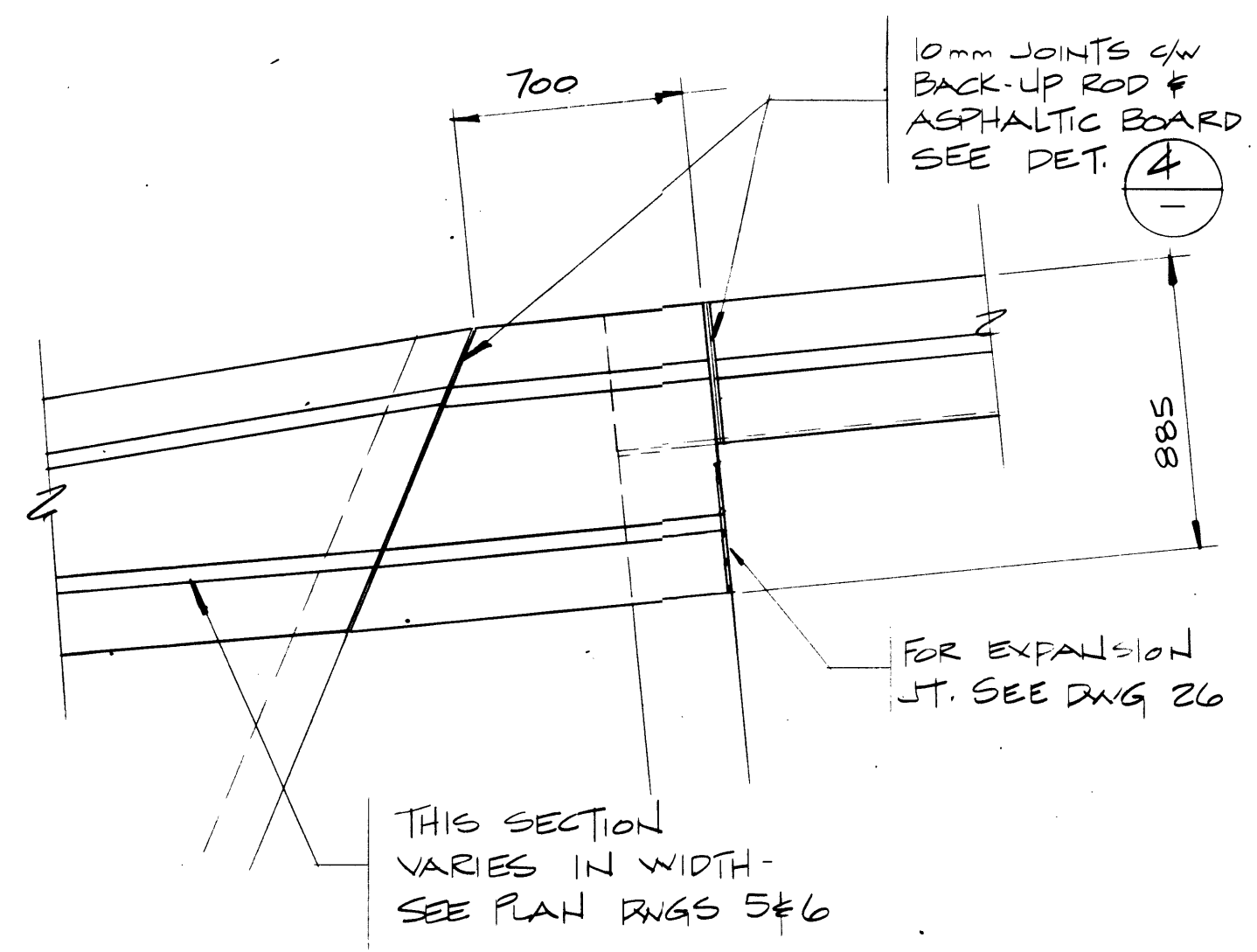


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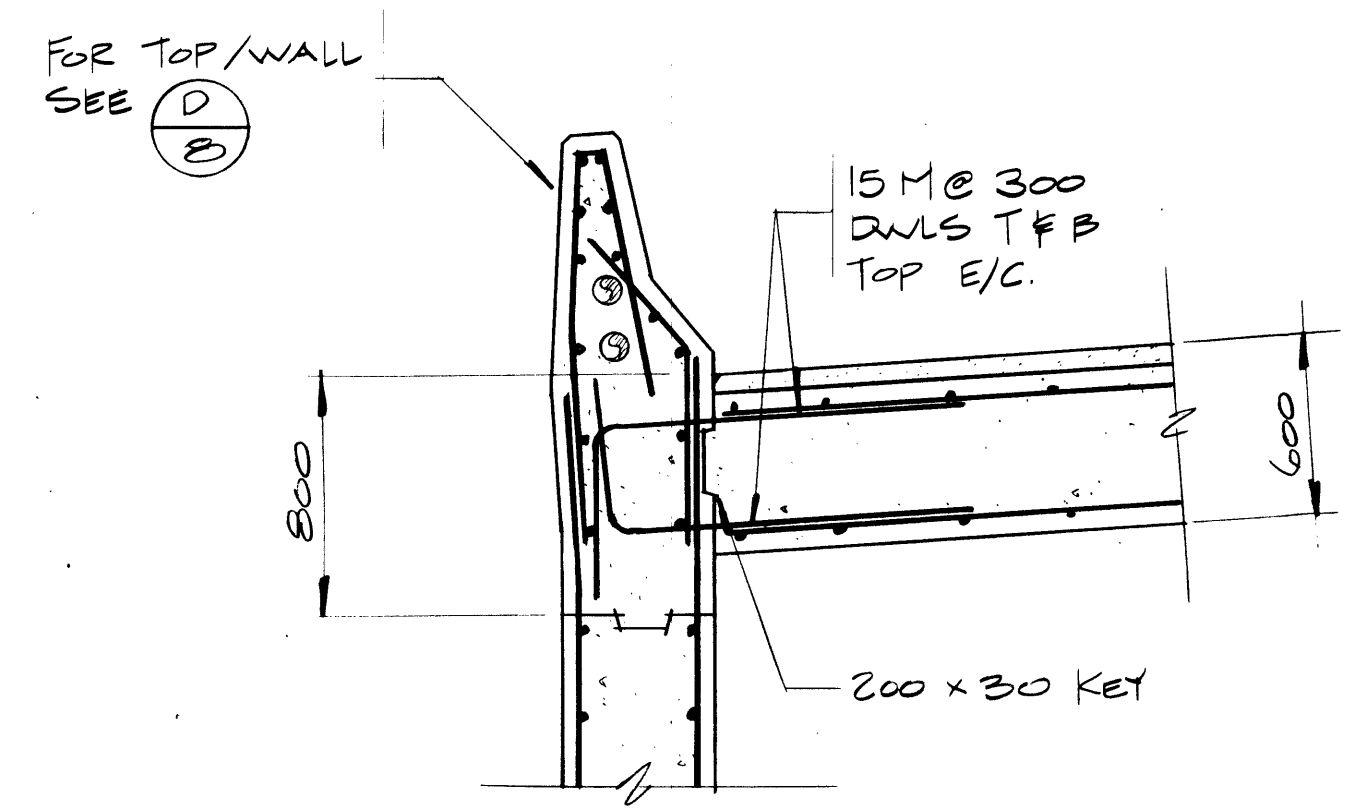
7 DETAIL
5,6 SCALE 1:10



4 DETAIL
8 SCALE 1:10



5 DETAIL
5,6 SCALE 1:10



B SECTION
5,6 SCALE 1:25

REV	D	M	Y	REVISION DESCRIPTION	DRN	DES	CHK	APP
Compiled by								
Compile par								

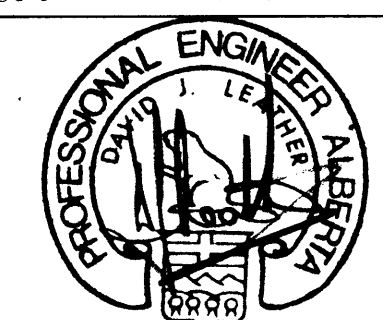
Horizontal Scale Echelle horizontale	N.A.	Contour Interval Elevation	N.A.
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Compilation Photos Photos de compilation	N.A.	Photo Scale Echelle photographique	N.A.
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Drawn by Dessine par	D. WIDDIFIELD
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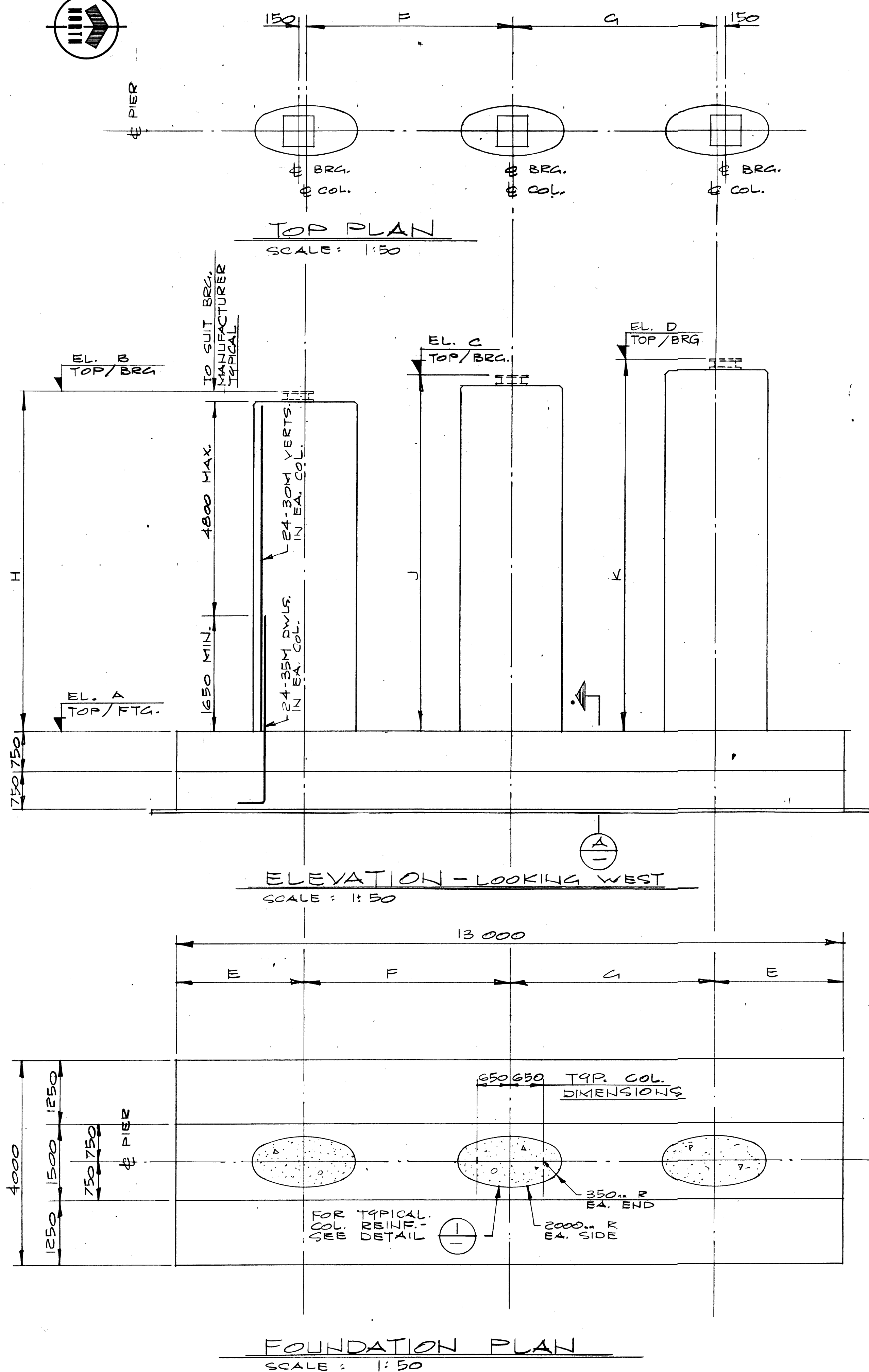
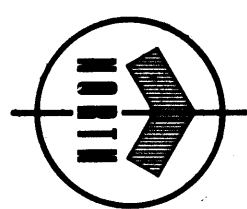
Underwood McLellan Ltd.
Consulting Engineers and Planners
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T.C.H. BRIDGE OVER
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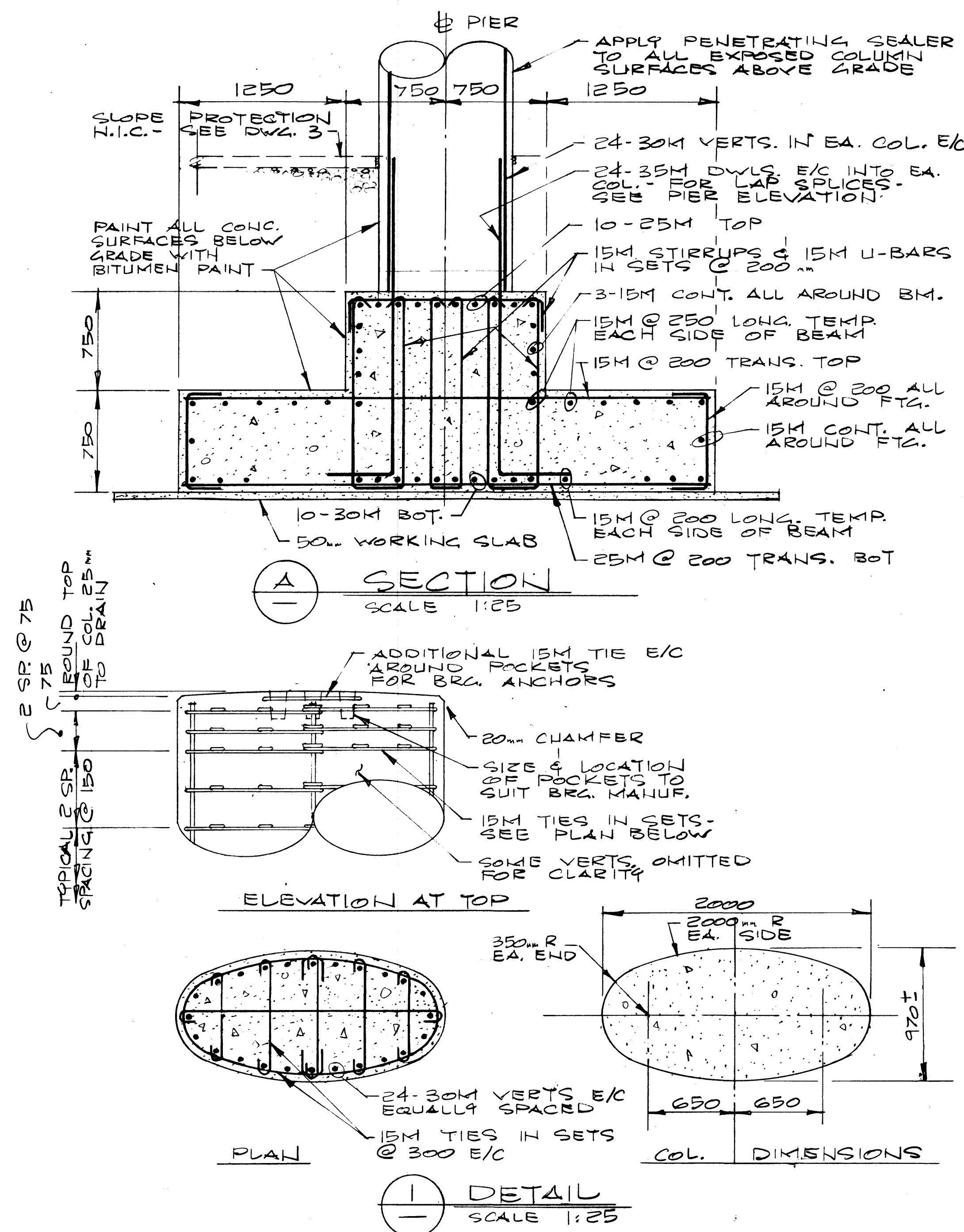
ABUTMENT DETAILS SHEET 3

Horizontal Scale Echelle horizontale	AS NOTED	Vertical Scale Echelle verticale	AS NOTED
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NTS. No. STN. No.	Draw. No. Dessain. No.	Sheet Feuille	10 of 28
N.A.	2977-022		



PIER SCHEDULE				
	MARK NUMBER (SEE DWG. 2)			
	PIS	PIN	P2S	P2N
ELEVATIONS				
A	1392.100	1392.100	1392.600	1392.600
B	1398.810	1399.810	1398.850	1399.800
C	1399.055	1400.050	1399.080	1400.025
D	1399.300	1400.285	1399.310	1400.250
DIMENSIONS				
E	2420	2500	2670	2725
F	4090	4010	3840	3780
G	4070	3990	3820	3770
H	6710	7710	6250	7200
I	6955	7950	6480	7425
J	7200	8185	6710	7650



Western Region

Project: TRANS-CANADA HIGHWAY TWINNING
Project: BANFF NATIONAL PARK, ALBERTA
Project: MINNEWANKA INTERCHANGE

Project No.: 003876

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Compiled by: [Signature]
Compile par: [Signature]

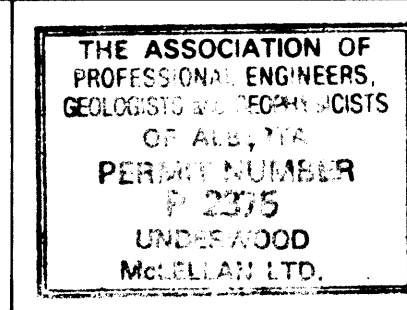
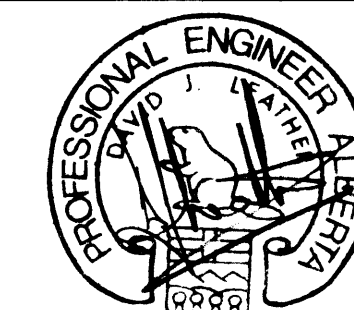
Horizontal Scale	Contour Interval
N.A.	Equidistance

Compilation Photos	Photo Scale
N.A.	Echelle photographique

Drawn by: J. HALEY
Date: JAN. 28. 84

Checked by: D. LEATHER
Date: JAN. 28. 84

Approved by: D. LEATHER
Date: JAN. 28. 84



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Calgary, Alberta



T.C.H. BRIDGE OVER
BANFF AVENUE

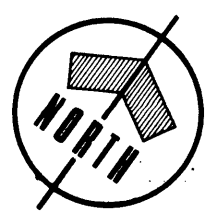
km 13+050

PIERS

AA006019

Horizontal Scale	Vertical Scale
AS NOTED	AS NOTED

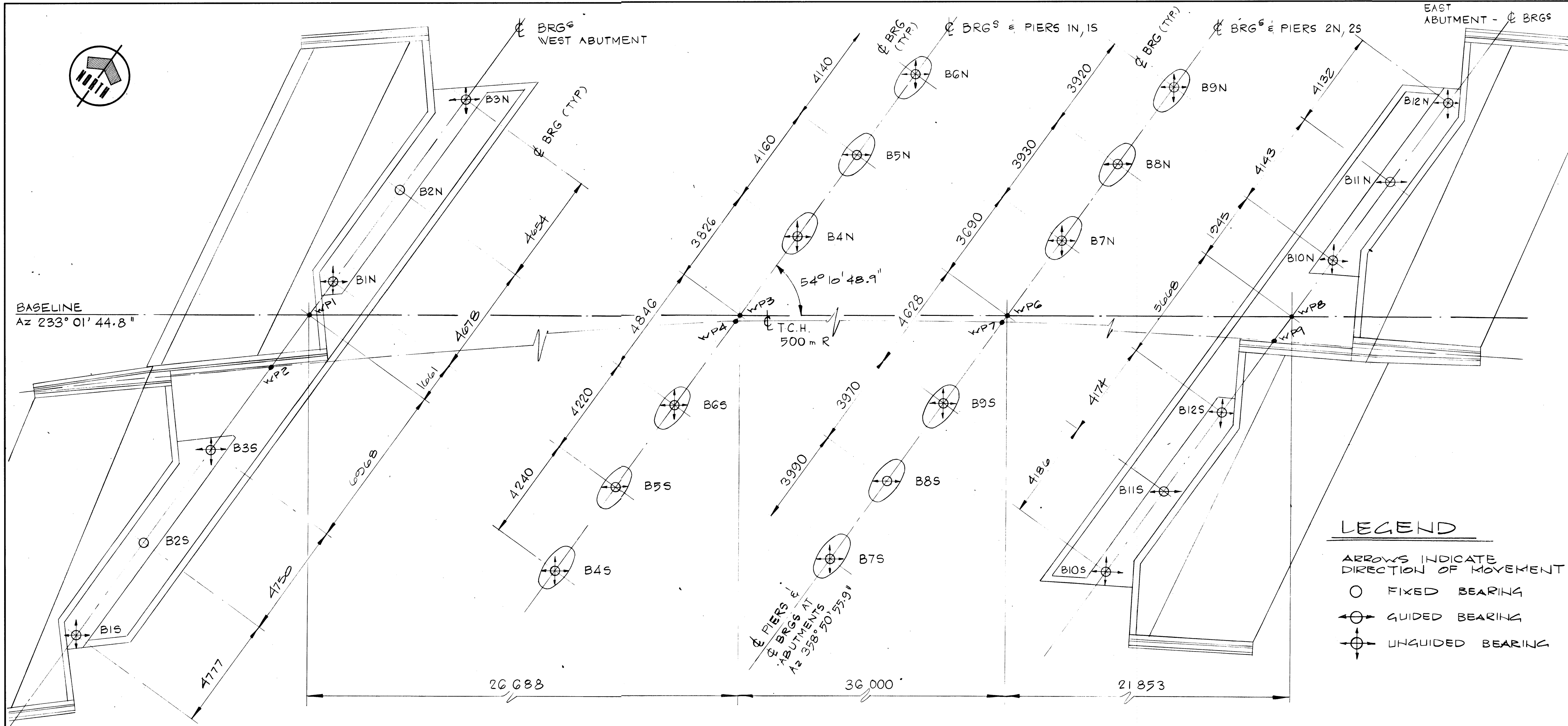
NTS. No.	Draw. No.	Sheet	of
N.A.	2977-022	11	28



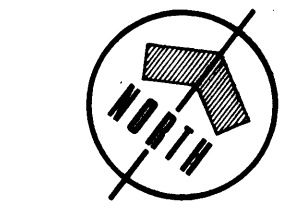
Western Region

TRANS-CANADA HIGHWAY TWINNING
BANFF NATIONAL PARK, ALBERTA
MINNEWANKA INTERCHANGE

003876



BEARING LAYOUT - PLAN
SCALE 1:100



SEE BEARINGS DESIGN
SCHEDULE
DWG. 13

TANGENT TO
CL DECK AT
BRG

ALIGNMENT OF
GUIDES ON BRG OR
CL TOP PL

CL OF BEARING
AT PIERS &
ABUTMENTS
Az 358° 50' 55.9"

PLAN

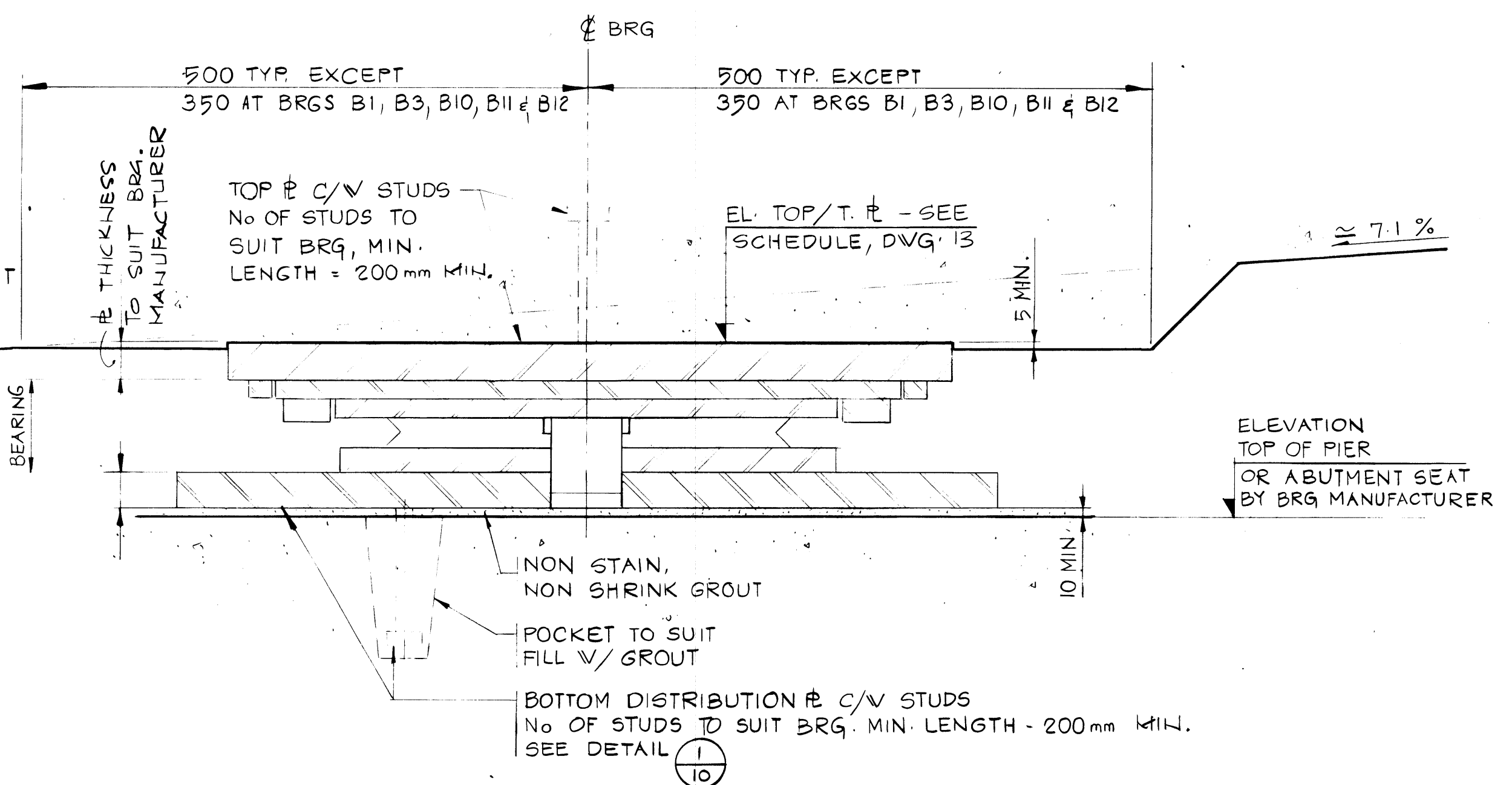
PLATE ORIENTATION
N.T.S.

BOTTOM DISTRIBUTION PL TO SUIT BRG TYPE BY BRG MANUFACTURER

DIRECTION OF BRG REMOVAL → EAST FOR WEST ABUTMENT & PIER 2; WEST FOR EAST ABUTMENT & PIER 1

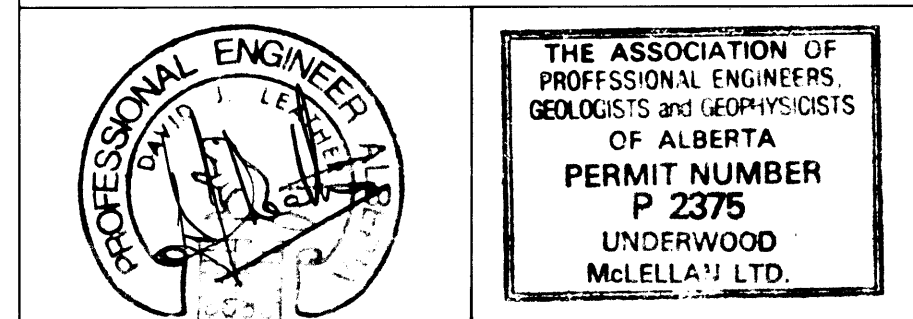
BEARING BY MANUFACTURER

TOP PL - TO SUIT BRG TYPE BY BRG MANUFACTURER



NOTE: ALL COMPONENTS IN SECTION TO BE DESIGNED BY BEARING MANUFACTURER

SECTION
N.T.S.



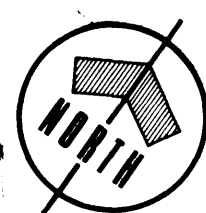
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T.C.H. BRIDGE OVER
BANFF AVENUE
km 13+050

BEARINGS SHEET 1

BRG MARK No.	ANGLE θ	ELEVATION	QTY	TYPE ^{*A}	VERTICAL LOADS (kN) (-ve REF. TO UPLIFT)							HORIZ. LOADS (kN)		MOVEMENT (mm)		LONGITUDINAL ROTATIONS (RADIAN)					
					DL	SDL	PRE	LL	WIND	MAX.	MIN.	LONGITUD.	TRANSV.	LONGIT.	TRANSV.	φ DL	φ PRE	φ SDL	φ CREEP	φ LL	TOTAL MAX.
B1N	128° 14' 30"	1399.685	1	U/G	488	137	198	495/-50	-72 +12	1330	701	-	-	± 30	± 10	-0.0014	+ 0.0016	- 0.0003	- 0.0001	- 0.0009	- 0.0011
B1S	129° 30' 50"	1398.630	1																		
B2N	128° 4' 10"	1399.945	1	FIXED	781	89	573	197/-133	-13	1640	1297	750	83	0	0	- 0.0013	+ 0.0014	- 0.0002	- 0.0001	- 0.0009	- 0.0011
B2S	129° 19' 40"	1398.900	1																		
B3N	127° 54' 00"	1400.220	1	U/G	854	33	- 448	983/-344	-38 +12	1434	57	-	-	± 30	± 10	- 0.0012	+ 0.0014	- 0.0002	0	- 0.0009	- 0.0009
B3S	129° 8' 40"	1399.185	1																		
B4N	126° 38' 10"	1399.810	1	U/G	2665	591	- 1113	1165/-147	-297 + 47	3355	1699	-	-	± 70	± 10	- 0.00001	- 0.00033	- 0.00001	- 0.00035	- 0.0007	- 0.0014
B4S	127° 50' 00"	1398.810	1																		
B5N	126° 30' 00"	1400.050	1	G	1418	75	1420	484/-116	- 47	3397	2750	-	384	± 70	± 1.5 ^{*C}	- 0.00035	+ 0.00002	- 0.00007	- 0.0004	- 0.0007	- 0.0015
B5S	127° 41' 00"	1399.055	1																		
B6N	126° 21' 40"	1400.285	1	U/G	2638	513	- 688	1092/-155	-289 + 47	3602	2019	-	-	± 70	± 10	- 0.0001	+ 0.0003	- 0.0004	- 0.0003	- 0.0008	- 0.0014
B6S	127° 32' 10"	1399.300	1																		
B7N	124° 35' 40"	1399.800	1	U/G	2508	527	- 811	1132/-232	-159 + 41	3397	1833	-	-	± 120	± 10	+ 0.0009	- 0.0009	+ 0.00015	+ 0.00015	+ 0.00075	+ 0.0010
B7S	125° 42' 10"	1398.850	1																		
B8N	124° 28' 30"	1400.025	1	G	1566	78	963	600/-218	- 42	3207	2347	-	384	± 120	± 2 ^{*C}	+ 0.00066	- 0.00069	+ 0.00011	+ 0.00003	+ 0.0006	+ 0.0007
B8S	125° 34' 30"	1399.080	1																		
B9N	124° 21' 30"	1400.250	1	U/G	1978	538	- 422	991/-23	-368 + 41	3126	1703	-	-	± 120	± 10	+ 0.00045	- 0.00054	+ 0.00009	0	+ 0.0005	+ 0.0005
B9S	125° 27' 00"	1399.310	1																		
B10N	123° 24' 50"	1399.700	1	U/G	255	34	72	697/-419	-24 + 44	1102	-82 ^{*B}	-	-	± 160	± 10	+ 0.0003	- 0.00008	+ 0.00007	+ 0.0003	+ 0.0005	+ 0.0011
B10S	124° 28' 30"	1398.775	1																		
B11N	123° 17' 40"	1399.940	1	G	699	-3	393	378/-13	- 14	1467	1062	-	182	± 160	± 3 ^{*C}	+ 0.0004	- 0.0002	+ 0.00009	+ 0.0003	+ 0.0005	+ 0.0011
B11S	124° 20' 50"	1399.020	1																		
B12N	123° 10' 30"	1400.175	1	U/G	453	204	- 116	290/-41	-35 + 44	875	465	-	-	± 160	± 10	+ 0.0005	- 0.00033	+ 0.00014	+ 0		

N.T. No. D.N. No. N.A.	Drwg. No. Dessain No. 2977-022	Green Kelly 13	of 30 28
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Western Region

Project: TRANS-CANADA HIGHWAY TWINNING
Banff National Park, Alberta
Minnewanka Interchange

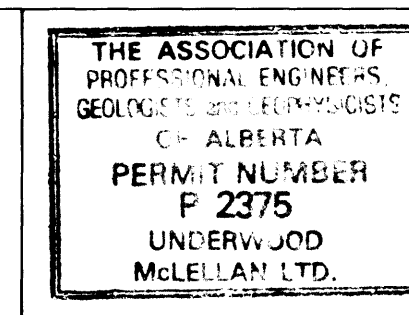
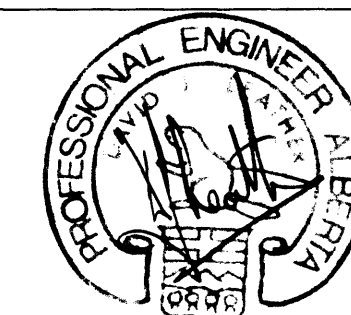
Project No.: 003876

REV	D	M	Y	REVISION DESCRIPTION	DRN	DES	CHK	APP
1	18	4	84	DIMENSIONS - PLAN	J.H.	G.W.	G.W.	D.L.

Drawn by: D. MZIK
Date: JAN. 28. 84

Checked by: H. DANIEL
Date: JAN. 28. 84

Approved by: D. LEATHER
Date: JAN. 28. 84



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Calgary, Alberta



T.C.H. BRIDGE OVER BANFF AVENUE

km 13+050

DECK PLAN

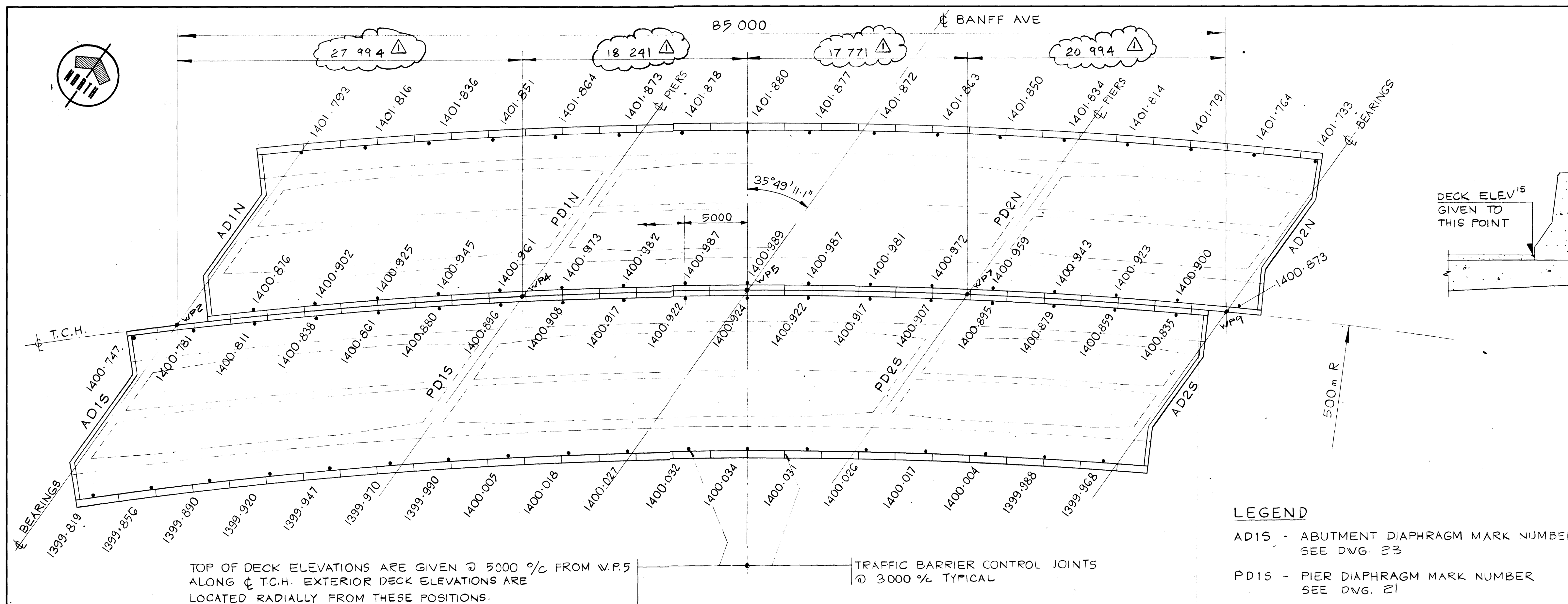


Horizontal Scale: AS NOTED
Vertical Scale: AS NOTED

Drawn by: D. MZIK
Date: JAN. 28. 84

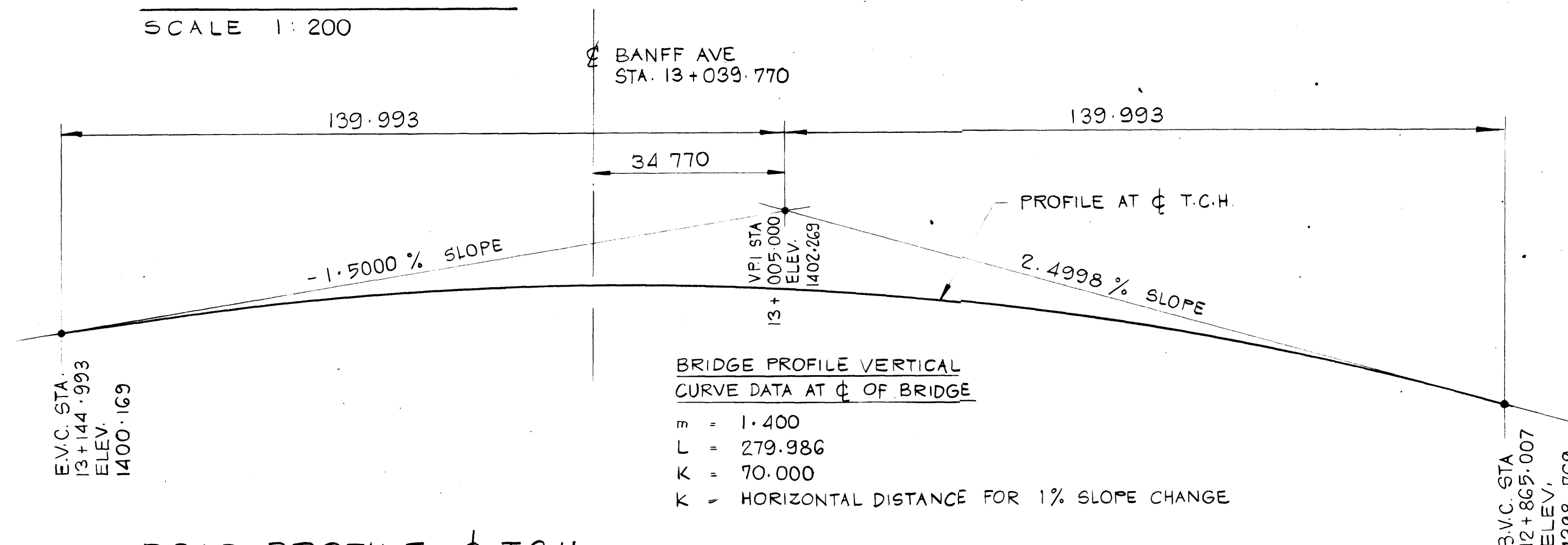
Checked by: H. DANIEL
Date: JAN. 28. 84

Approved by: D. LEATHER
Date: JAN. 28. 84



DECK PLAN

SCALE 1:200

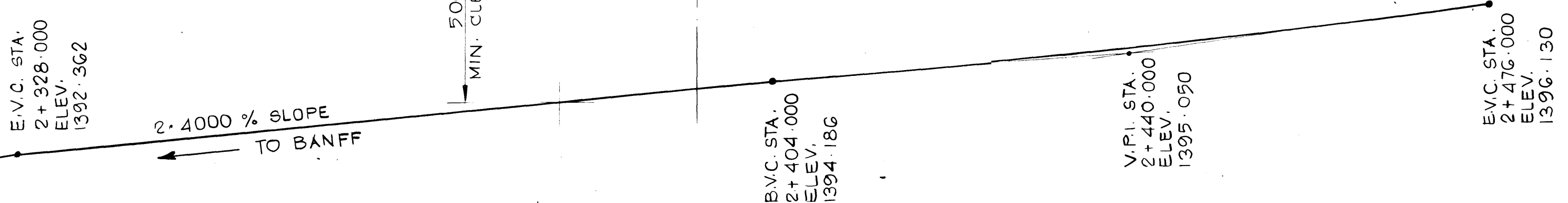


ROAD PROFILE @ T.C.H.

N.T.S.

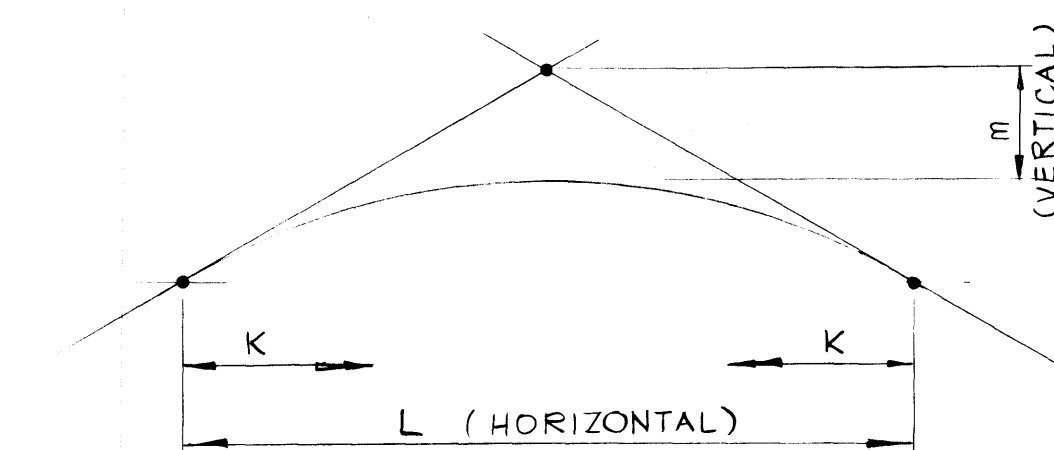
ROAD PROFILE VERTICAL CURVE DATA

B = 2.187
L = 324.000
K = 60.000



ROAD PROFILE @ BANFF AVE

N.T.S.



VERTICAL CURVE DIAGRAM

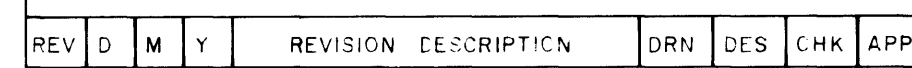
NOTE:

ALL DECK ELEVATIONS AND T.C.H. PROFILE DATA HAVE BEEN SET 50 mm HIGH TO ALLOW FOR FUTURE ADDITIONAL SURFACING OF T.C.H. ADJACENT TO BRIDGE.



TRANS-CANADA HIGHWAY TWINNING
BANFF NATIONAL PARK, ALBERTA
MINNEWANKA INTERCHANGE

003876

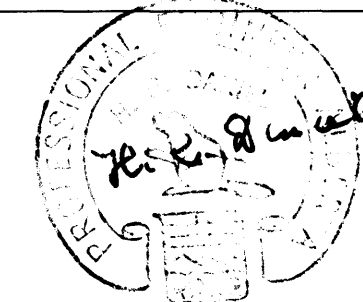


non zongolo e non zongolo N.A.	zongolo e zongolo N.A.
zongolo e zongolo N.A.	zongolo e zongolo N.A.

Drawn by **D. MZIK**
 Dessiné par
 Date **JAN. 28. 84**

checked by	H. DANIEL
verified par	
Date	JAN. 28. 84

Approved by **D. LEATHER**
 Approved for
 Date **JAN. 28. 84**



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PROFESSIONAL ENGINEERS,
GEOLOGISTS and GEOPHYSICISTS
OF ALBERTA
PERMIT NUMBER
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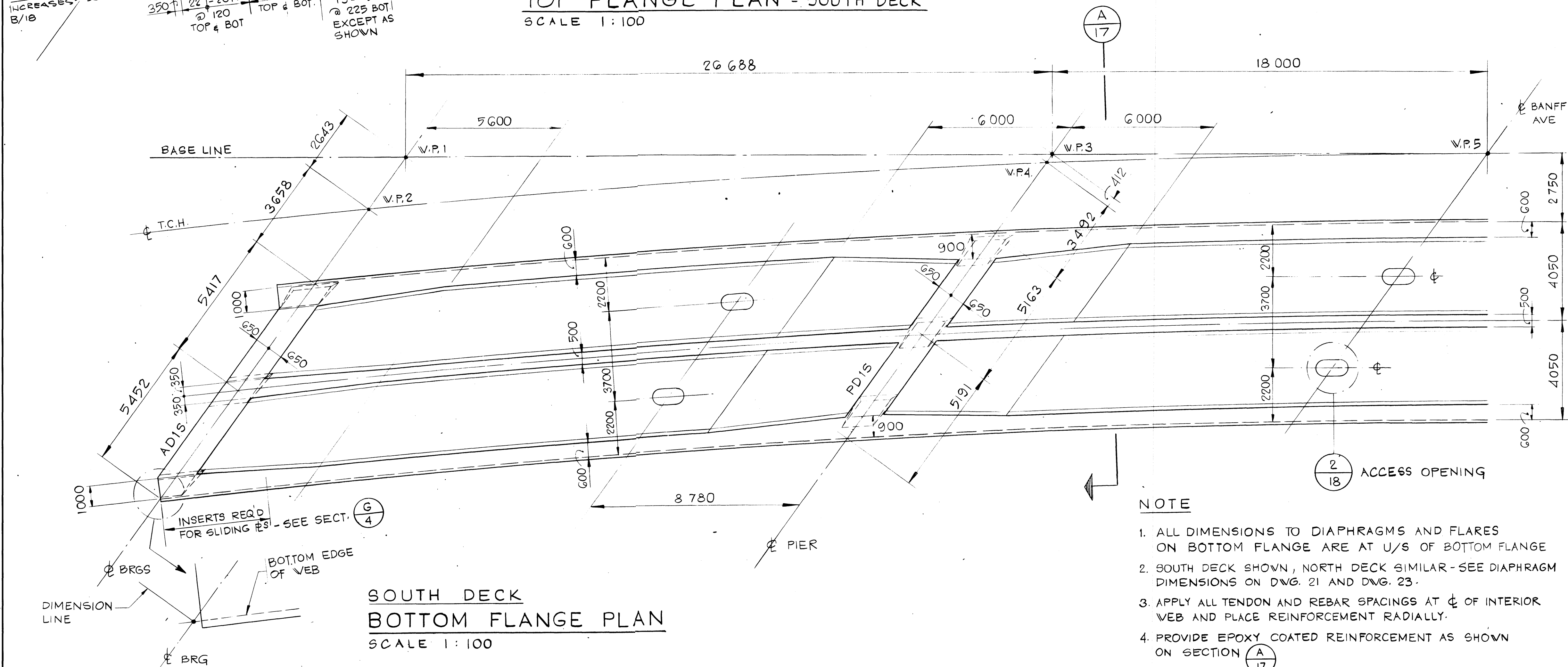
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Calgary, Alberta

**T.C.H. BRIDGE OVER
BANFF AVENUE**
km 13+050



Horizontal Scale Echelle horizontale	Vertical Scale Echelle verticale
AS NOTED	AS NOTED

NTS. No. STN. No. N.A.	Drawg. No. Desser. No. 2977-022	Sheet Total 15	of 30 28
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- NOTE

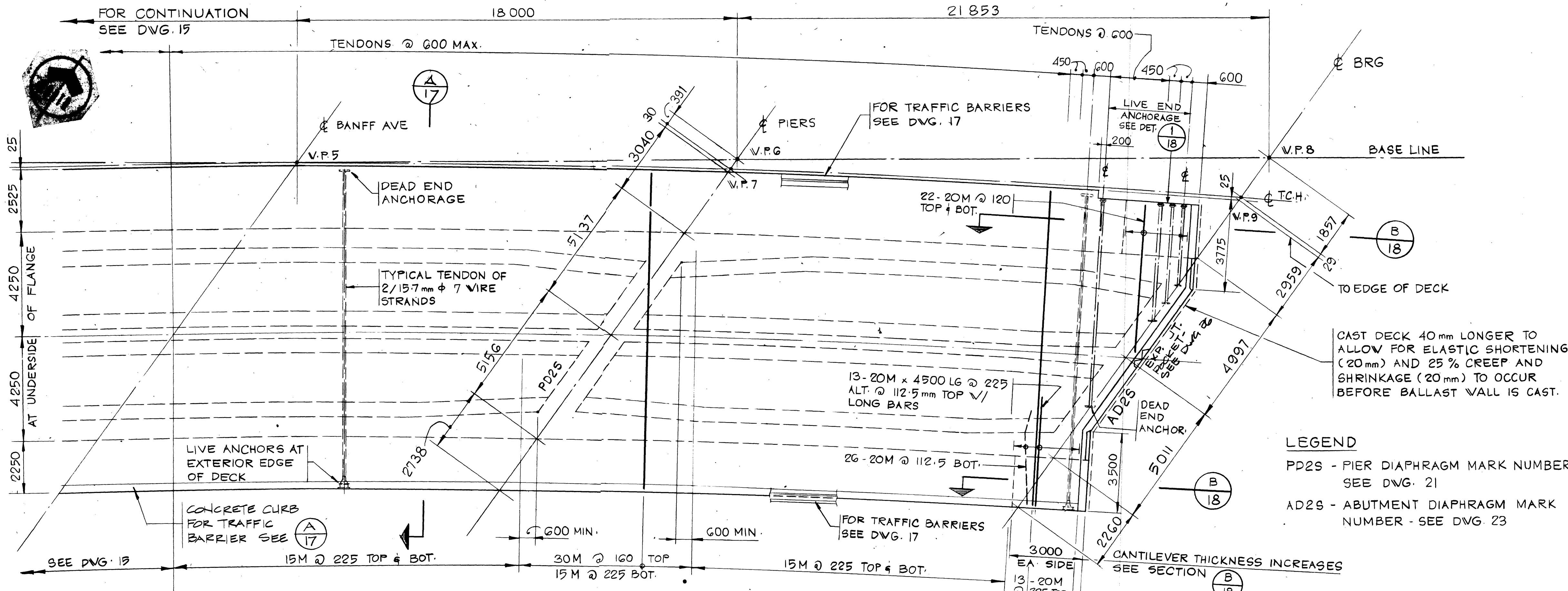
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2. SOUTH DECK SHOWN, NORTH DECK SIMILAR - SEE DIAPHRAGM DIMENSIONS ON DWG. 21 AND DWG. 23.
3. APPLY ALL TENDON AND REBAR SPACINGS AT $\frac{1}{4}$ OF INTERIOR WEB AND PLACE REINFORCEMENT RADially.
4. PROVIDE EPOXY COATED REINFORCEMENT AS SHOWN ON SECTION (A)

$$N \begin{pmatrix} A \\ 17 \end{pmatrix}$$

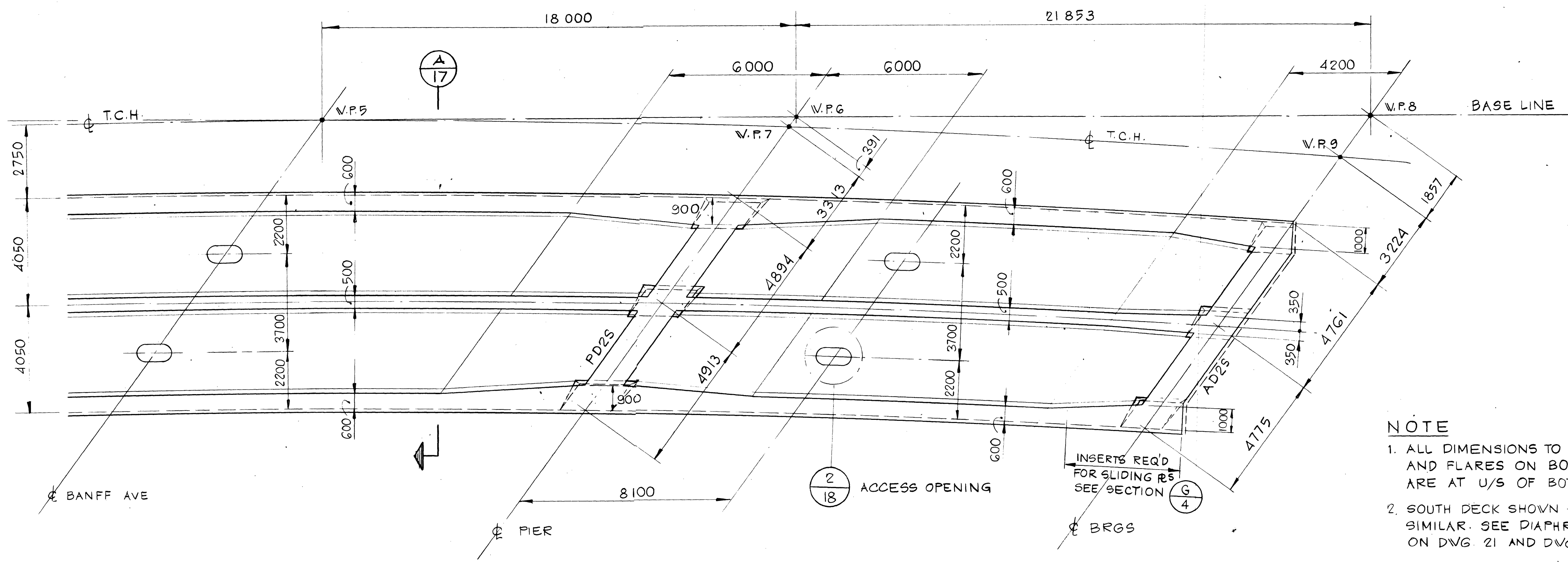
Western Region

Project: TRANS-CANADA HIGHWAY TWINNING
Banff National Park, Alberta
Minnewanka Interchange

Project No. 003876



**SOUTH DECK
TOP FLANGE PLAN**
SCALE 1:100



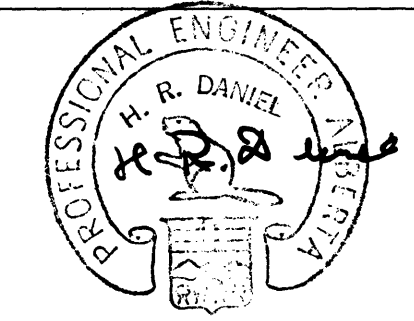
**SOUTH DECK
BOTTOM FLANGE PLAN**
SCALE 1:100

- NOTE**
1. ALL DIMENSIONS TO DIAPHRAGM AND FLARES ON BOTTOM FLANGE ARE AT U/S OF BOTTOM FLANGE
 2. SOUTH DECK SHOWN - NORTH DECK SIMILAR. SEE DIAPHRAGM DIMENSIONS ON DWG. 21 AND DWG. 23
 3. APPLY ALL TENDON & REBAR SPACINGS AT & OF INTERIOR WEB AND PLACE REINFORCEMENT RADIALLY.
 4. PROVIDE EPOXY COATED REINFORCEMENT AS SHOWN ON SECTION

REV	D	M	Y	REVISION DESCRIPTION	DRN	DES	CHK	APP
1				COMPILED BY				

Horizontal Scale Echelle horizontale	N.A.	Contour Interval Equidistance	N.A.
Compilation Photos Photos de compilation	N.A.	Photo Scale Echelle photographique	N.A.

Drawn by Dessine par	D. MZIK
Date	JAN. 28. 84
Checked by Verifie par	H. DANIEL
Date	JAN. 28. 84
Approved by Approuve par	D. LEATHER
Date	JAN. 28. 84



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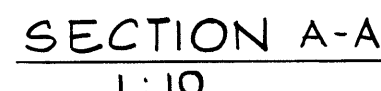
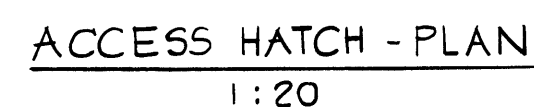
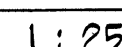
**T.C.H. BRIDGE OVER
BANFF AVENUE**
km 13+050

SOUTH DECK FLANGE PLANS EAST END

Horizontal Scale Echelle horizontale	AS NOTED	Contour Interval Equidistance	AS NOTED
Compilation Photos Photos de compilation	N.A.	Photo Scale Echelle photographique	16 28

Project No.	
Project No.	003876

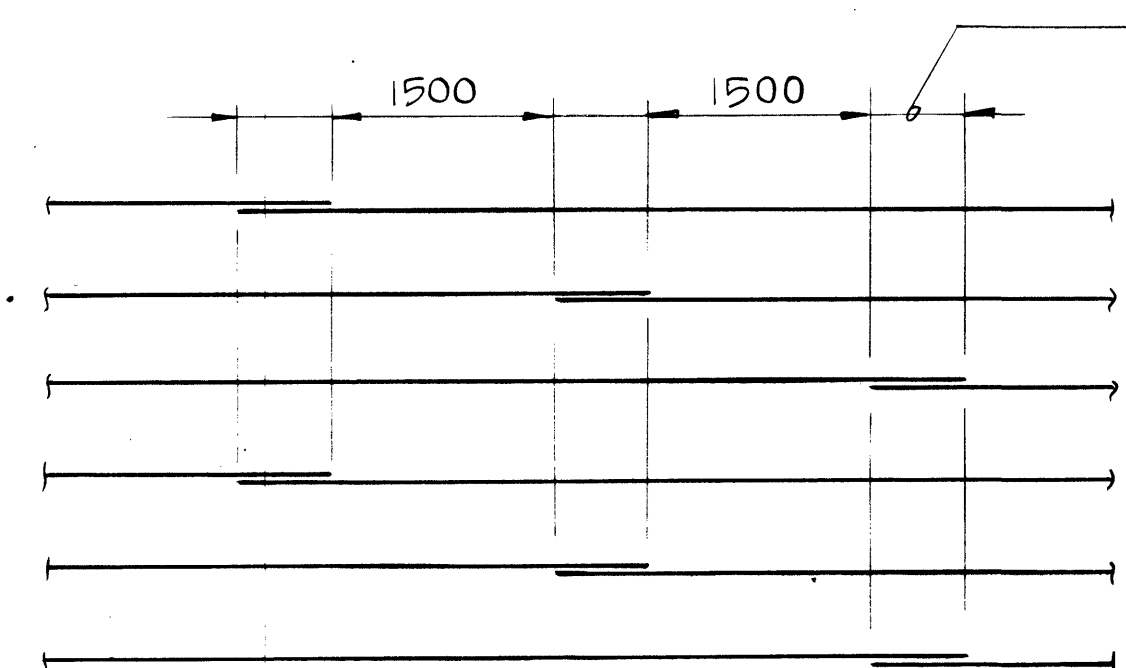
003876



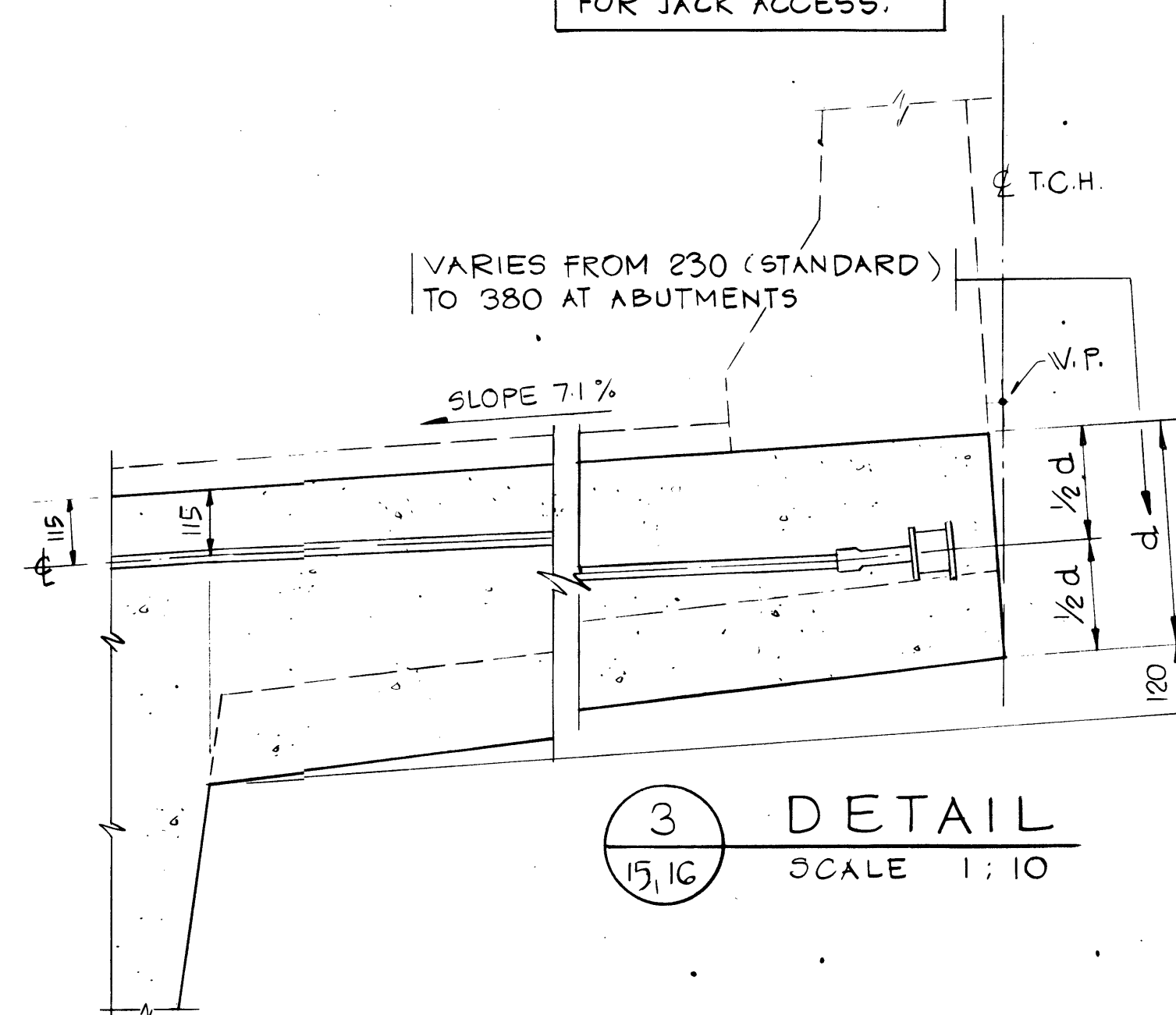
2 DETAIL - ACCESS HATCH - 12 REQ'D
15, 16 SCALE AS SHOWN



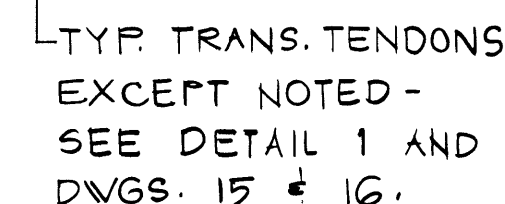
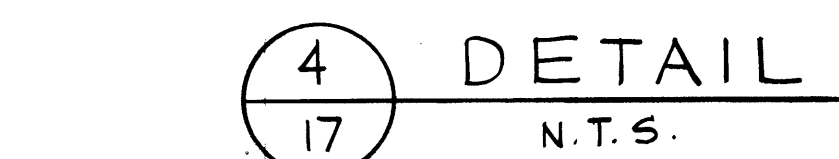
1 ANCHORAGE LAYOUT DETAIL
16 SCALE 1:20



VARIES FROM 230 (STANDARD)
TO 380 AT ABUTMENTS



3 DETAIL
15.16 SCALE 1:10



B SECTION
SCALE 1:10

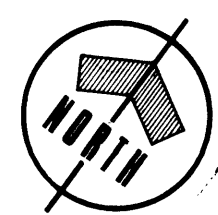
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DECK DETAILS SHEET 2

*AA006026

NTS. No. STN. No.	Drwg. No. Dessain No.	Sheet Feuille	18 of 28 de
NA	2977-022		



Western Region

TRANS-CANADA HIGHWAY TWINNING
BANFF NATIONAL PARK, ALBERTA
MINNEWANKA INTERCHANGE

003876

REV	D	M	Y	REVISION DESCRIPTION	DRN	DES	CHK	APP
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Compiled by: _____
Compte par: _____

Horizontal Scale Echelle horizontale	Contour Interval Eau de surface
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N.A. N.A.

Compilation Photos Photos de compilation	Photo Scale Echelle photographique
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N.A. N.A.

Drawn by Dessiné par	D. MZIK
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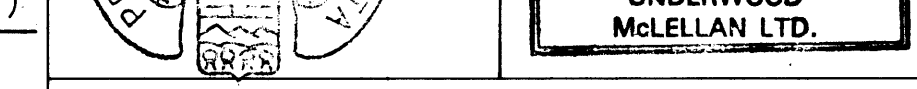
Date	JAN. 28. 84
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Checked by Vérifié par	H. DANIEL
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Date	JAN. 28. 84
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Approved by Approuvé par	D. LEATHER
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Date	JAN. 28. 84
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T.C.H. BRIDGE OVER
BANFF AVENUE
km 13+050

WEB POST-TENSIONING SHEET 1

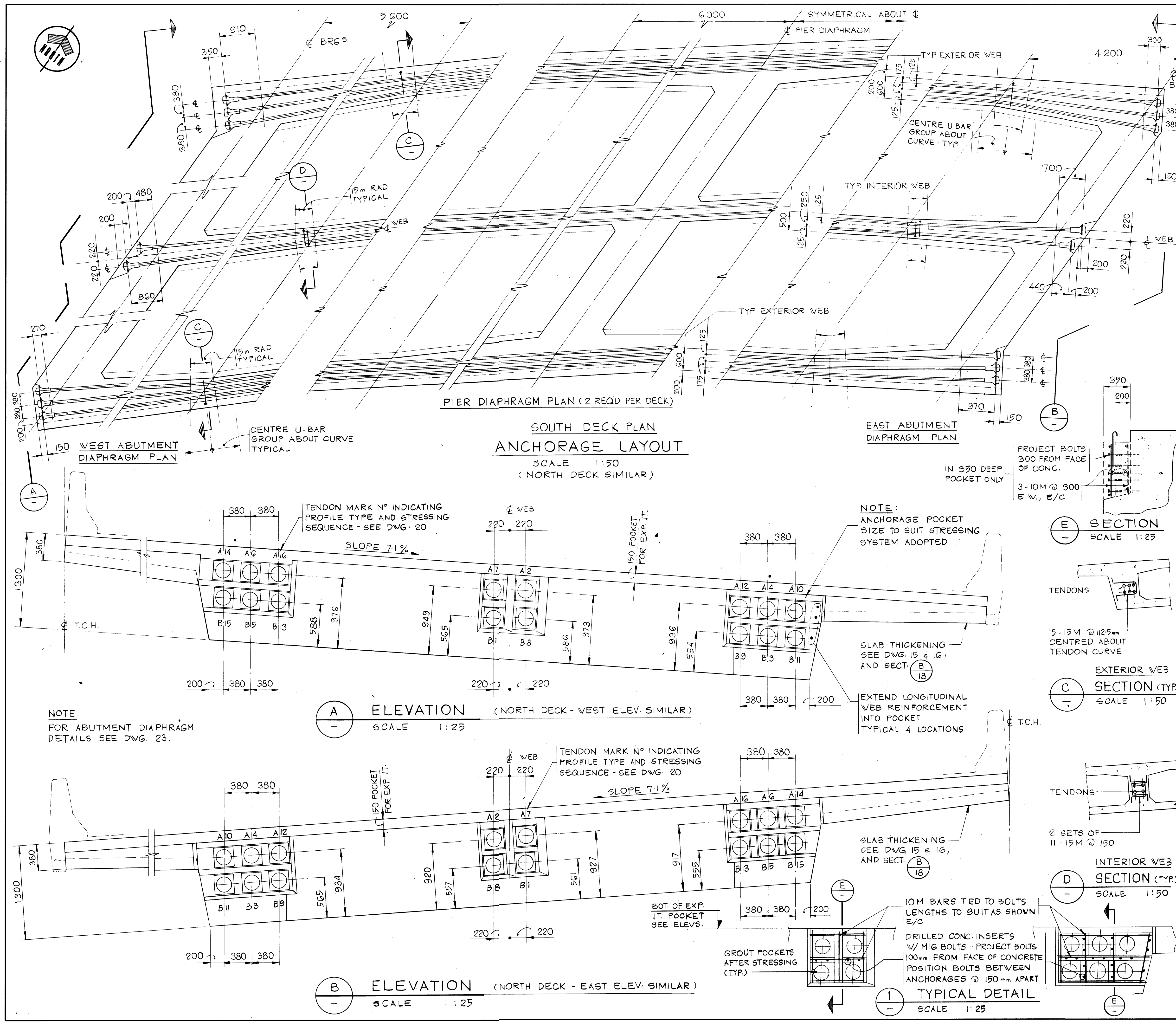
AA006027

Horizontal Scale Echelle horizontale	Vertical Scale Echelle verticale
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AS NOTED AS NOTED

NTS. No. STN. No.	Draw. No. Dessain No.	Sheet Feuille
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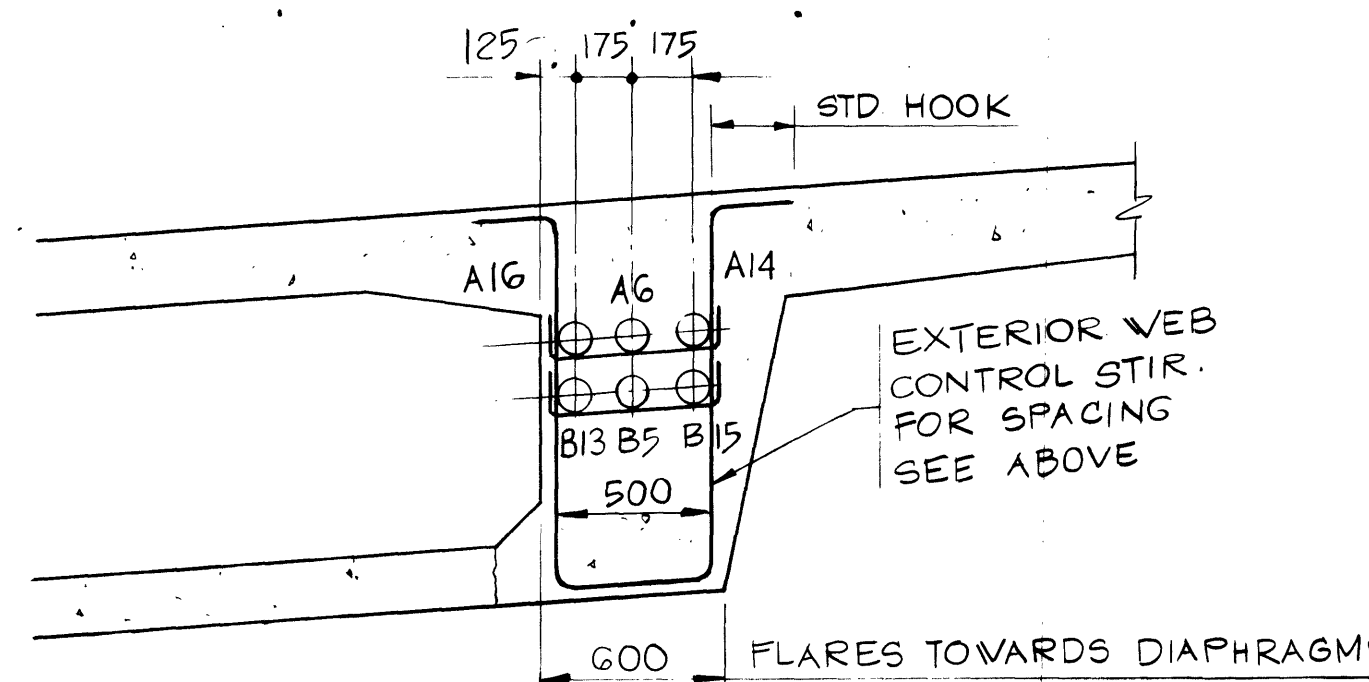
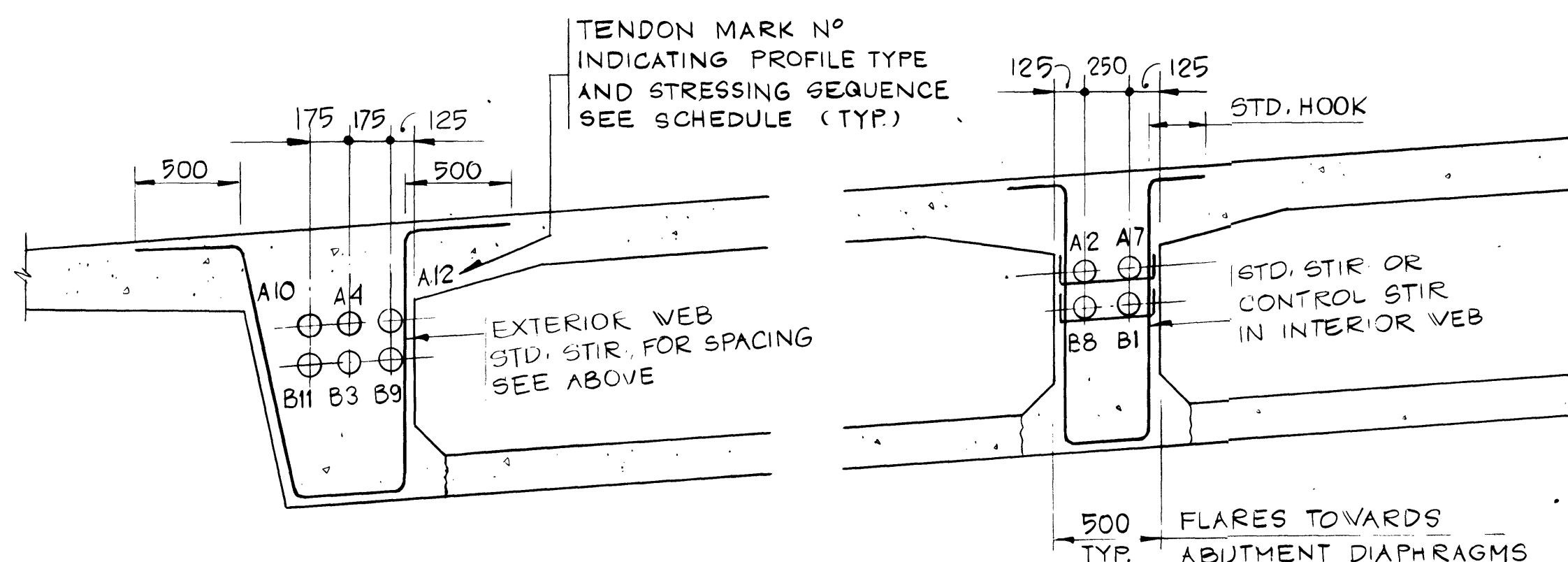
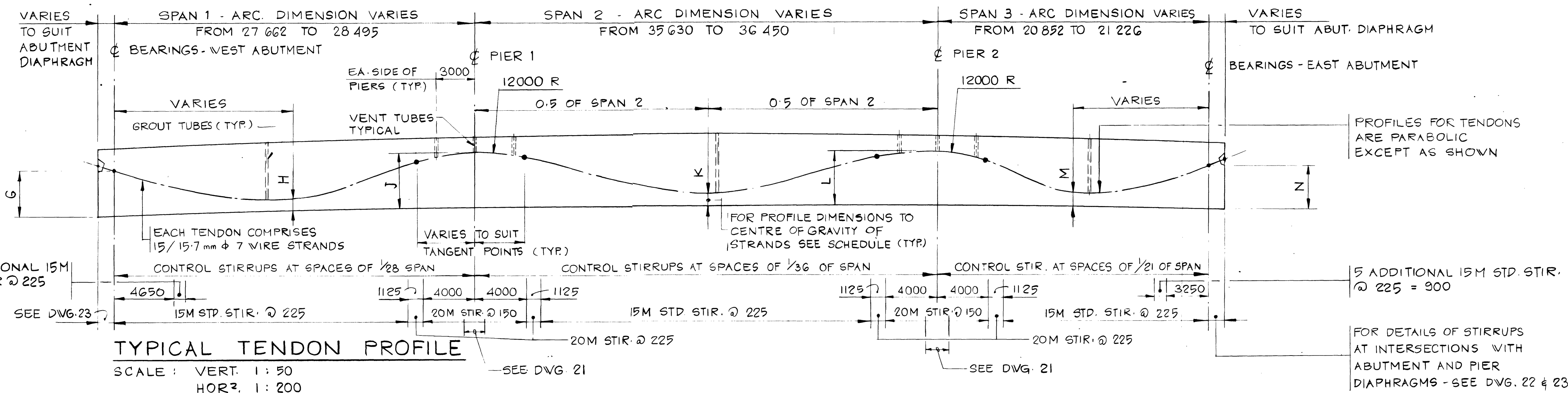
N.A. 2977-022 19 of 28



Western Region

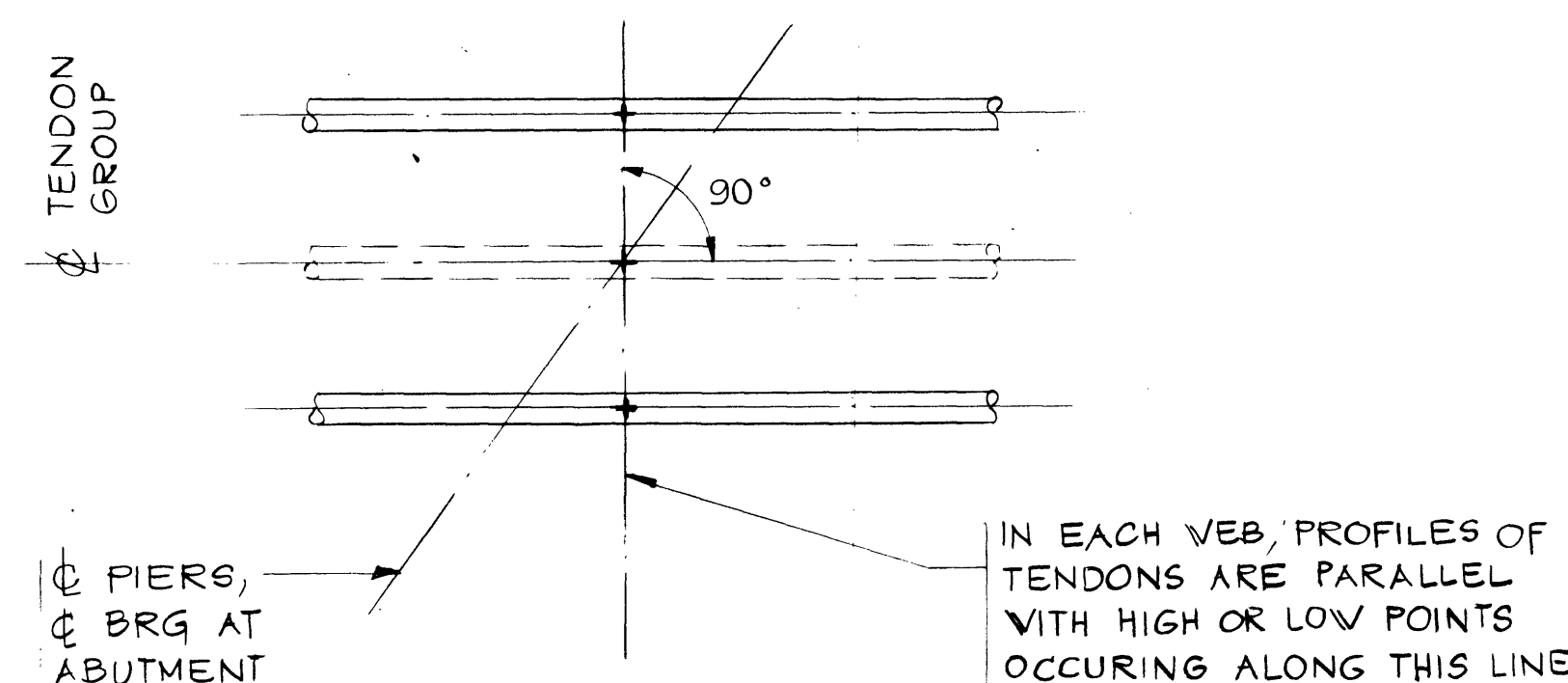
TRANS-CANADA HIGHWAY TWINNING
BANFF NATIONAL PARK, ALBERTA
MINNEWANKA INTERCHANGE

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NOTE: ALL DECK REINF./TRANS. TENDONS SPACINGS APPLY AT ϕ OF CENTRE WEB WITH REINF. PLACED RADIALLY

ALL STIRRUPS ARE EPOXY COATED.



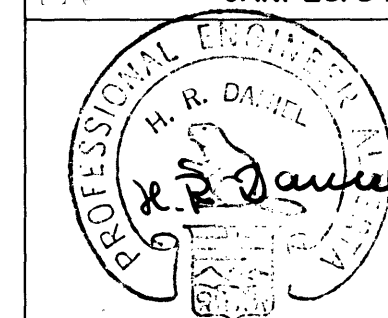
TENDON PROFILE SCHEDULE (SEE NOTE 6)							
TENDON	DIMENSION						
	G	H	J	K	L	M	N
PROFILE A	919	520	1053	357	1053	804	919
PROFILE B	539	240	913	217	913	514	539

POST TENSIONING NOTES

- THE CONTRACTOR SHALL VERIFY ALL POST TENSIONING DETAILS AND INFORM THE ENGINEER OF ANY DISCREPANCIES WHICH MAY ARISE FOR A PARTICULAR SYSTEM.
- TENDON DATA:
DECK (TRANS) - 2/15.7 @ 600 TENDONS STRESSED INITIALLY TO 78% UTS
INTERNAL WEB (LONG) - 4 NO. 15/15.7 TENDONS STRESSED INITIALLY TO 78% UTS
EXTERNAL WEB (LONG) - 6 NO. 15/15.7 TENDONS STRESSED INITIALLY TO 78% UTS
- ALL STRANDS SHALL BE 7 WIRE LOW RELAXATION WITH A NOMINAL DIAMETER OF 15.7 mm. THE MINIMUM SPECIFIED BREAKING TENSILE STRENGTH (UTS) IS TO BE 261 kN.
- DESIGN PRESTRESS FORCES HAVE BEEN BASED ON THE FOLLOWING CRITERIA:
 $k = 0.0016/m = 0.15/RAD$ ANCHOR SET = 7 mm
- THE CONTRACTOR IS TO LIAISE WITH THE ENGINEER REGARDING THE PARTICULAR STRESSING SYSTEM ADOPTED AND DESIGN FORCES REQUIRED AND IS TO INCLUDE ALL NECESSARY CALCULATIONS FOR DESIGN FORCES AND ELONGATIONS.
- THE PROFILE, EQUATION, CURVATURE AND CENTRE LINE ELEVATIONS OF EACH TENDON AS DESIGNED WILL BE SUPPLIED AT 1 m INTERVALS AND CRITICAL LOCATIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL END BLOCK REINFORCEMENT AND OTHER REINFORCEMENT WHICH MAY BE REQUIRED FOR THE SATISFACTORY PERFORMANCE OF A PARTICULAR STRESSING SYSTEM. ANY ADDITIONAL FEATURES ARE TO BE INCLUDED ON SHOP DRAWINGS AND SUBMITTED TO THE ENGINEER FOR INFORMATION.
- THE TENDON PROFILES SHOWN REFER TO THE CENTRE OF GRAVITY OF THE STRANDS AND THE DUCT POSITIONS MAY REQUIRE AMENDING TO ALLOW FOR ECCENTRICITY OF STRANDS IN THE DUCT.
- THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE AT TRANSFER IS TO BE 28 MPa. THE MINIMUM 28 DAY COMPRESSIVE STRENGTH OF THE CONCRETE IS TO BE 35 MPa. THE MINIMUM 28 DAY COMPRESSIVE STRENGTH OF THE GROUT IS TO BE 35 MPa.
- THE PRESTRESSING FORCE MAY VARY +5% FROM THE THEORETICAL FORCE IN ANY TENDON, BUT NOT MORE THAN 2% IN ANY WEB, AND NOT MORE THAN 1% FOR ALL THREE WEBS AND ALL TRANSVERSE TENDONS.
- ENDS OF ANCHORS ARE TO BE CLEANED AND DEGREASED AND AN EPOXY BONDING AGENT APPLIED TO THE ANCHOR AND POCKET PRIOR TO PLACING CONCRETE.

STRESSING SEQUENCE

- STRESS TRANSVERSE DECK TENDONS AS FOLLOWS:
WORKING FROM THE CENTRE OF THE DECK TO EACH ABUTMENT STRESS EVERY 4TH TENDON, THEN EVERY SECOND TENDON, THEN THE REMAINING TENDON.
- STRESS LONGITUDINAL TENDONS IN WEBS FROM THE WEST ABUTMENT END OF THE DECK TO THE SEQUENCE SHOWN ON THE DRAWINGS, i.e. B1, A2, B3, A4 ... ETC., ETC., AND THEN REPEAT THE PROCEDURE FROM THE EAST ABUTMENT.
- GROUT TENDONS AS REQUIRED: THE WEB GROUT TUBES 3.0 m EITHER SIDE OF THE PIER CENTRE LINES ARE TO BE RE-INJECTED WITH GROUT 3 TO 4 HOURS AFTER ORIGINAL GROUTING OPERATION TO ELIMINATE AIR ENTRAPMENT IN THE DUCTS.



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Consulting Engineers and Planners
Calgary, Alberta



T.C.H. BRIDGE OVER
BANFF AVENUE
km 13+050

WEB
POST-TENSIONING
SHEET 2



AS NOTED	AS NOTED
N.A.	2977-022
20	28

Western Region

Project: TRANS-CANADA HIGHWAY TWINNING
Banff National Park, Alberta
Minnewanka Interchange

Project No. 003876

REV	D	M	Y	REVISION DESCRIPTION	DRN	DES	CHK	APP
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Compiled by
Compte par

Horizontal Scale
Echelle horizontale

Contour Interval
Eau distance

Compilation Photos
Photos de compilation

Photo Scale
Echelle photographique

Drawn by
Dessiné par

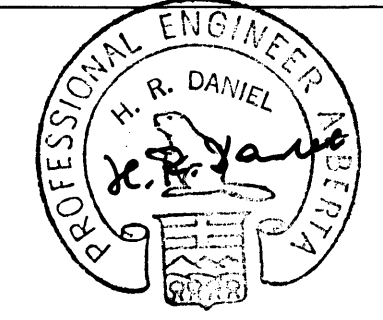
Date

Checked by
Vérifié par

Date

Approved by
Approuvé par

Date



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GEOLOGISTS AND GEOPHYSICISTS
OF ALBERTA
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Calgary, Alberta



T.C.H. BRIDGE OVER
BANFF AVENUE

km 13+050

PIER DIAPHRAGM SHEET 1

AA006029

Horizontal Scale
Echelle horizontale

Vertical Scale
Echelle verticale

AS NOTED

AS NOTED

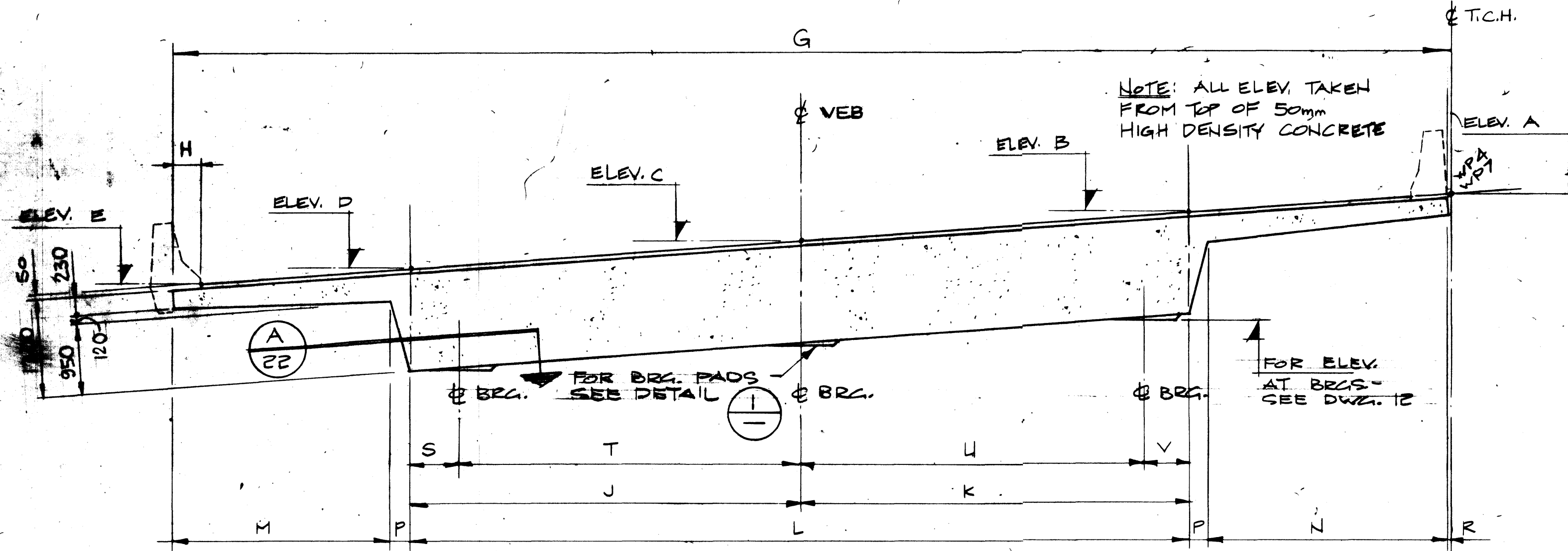
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2977-022

21

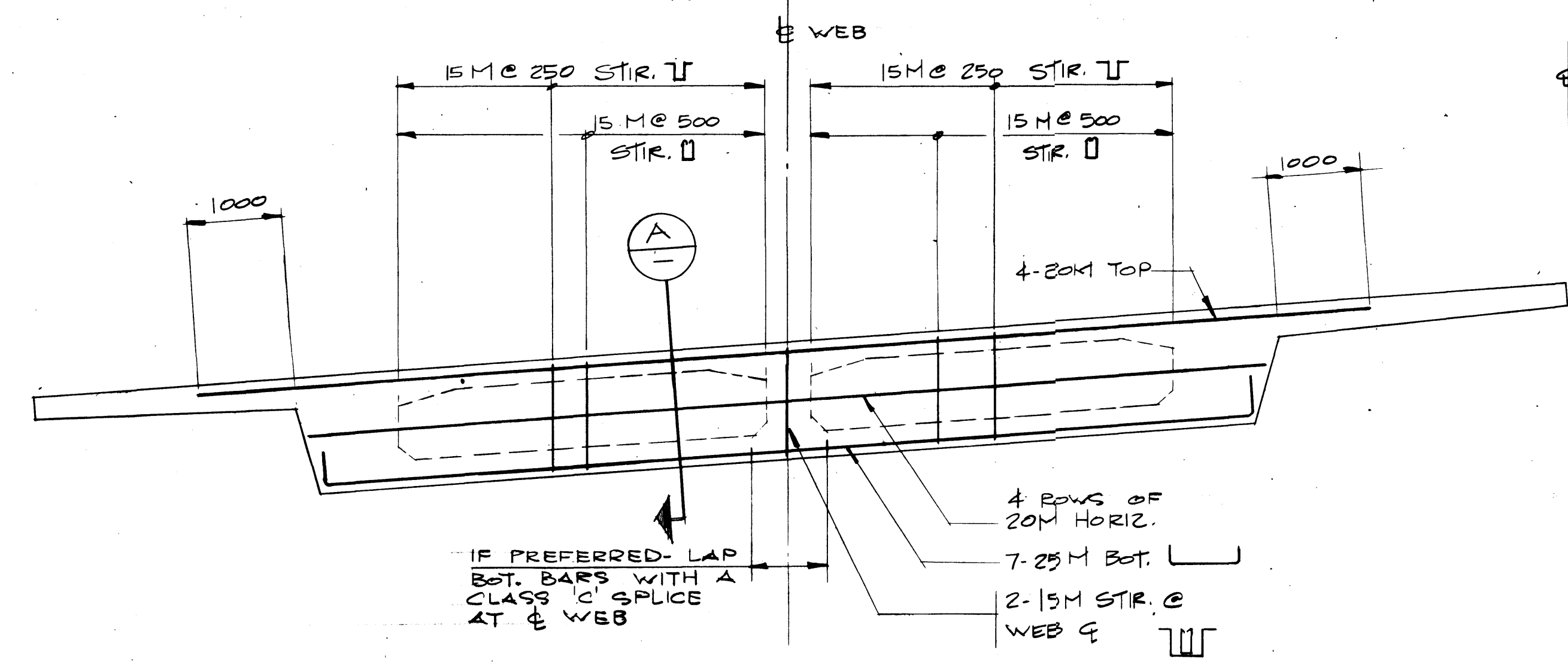
28

PIER DIAPHRAGM SCHEDULE				
ELEVATIONS	MARK NUMBER (SEE DWGS. 14, 15 & 16)			
	PD1S	PD1N	PD2S	PD2N
A	400.933	400.933	400.933	400.933
B	400.732	401.133	400.743	401.123
C	400.434	401.428	400.461	401.403
D	400.135	401.720	400.178	401.681
E	1399.975	401.875	400.028	401.829
DIMENSIONS				
	G	H	J	K
	16.997	386	5.191	5.163
	16.726	375	5.080	5.104
	16.101	365	4.913	4.894
	15.910	357	4.836	4.852
	10.354	2.895	10.184	9.807
	2.812	2.738	3.040	2.679
	3.203	2.812	3.040	2.679
	3.198	2.738	3.040	2.679
	2.257	2.250	2.243	2.238
	32	32	30	30
	951	940	923	916
	4.240	4.140	3.990	3.920
	4.220	4.160	3.970	3.930
	943	944	924	922

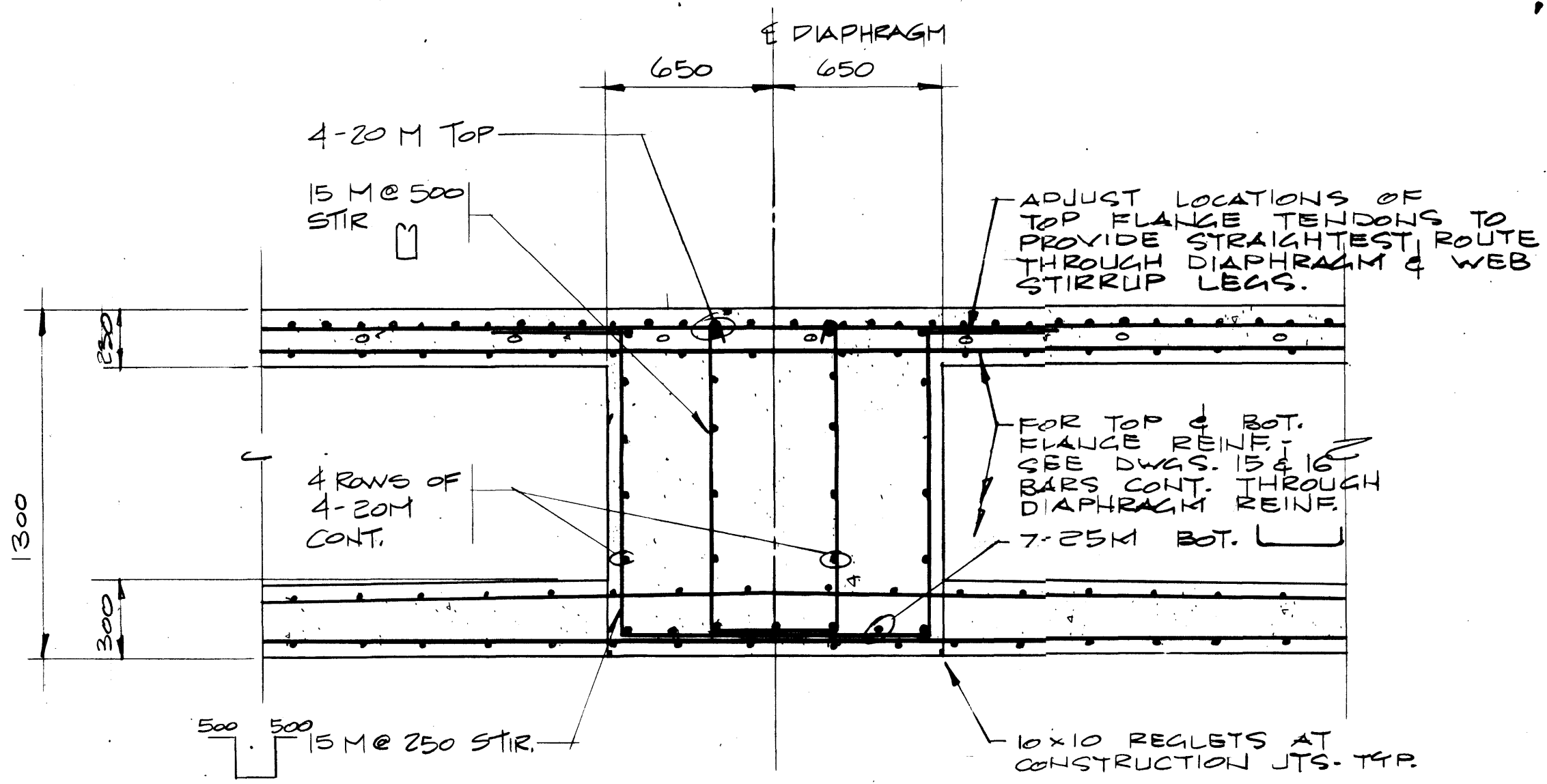


VIEWED ALONG & DIER (SKEWED)
PIER DIAPHRAGM SECTION
SCALE 1:50

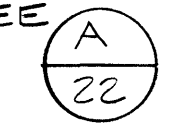
NOTE: LOOK WEST FOR
PD1S & PD2S, LOOK
EAST FOR PD1N & PD2N
& REVERSE SLOPE.



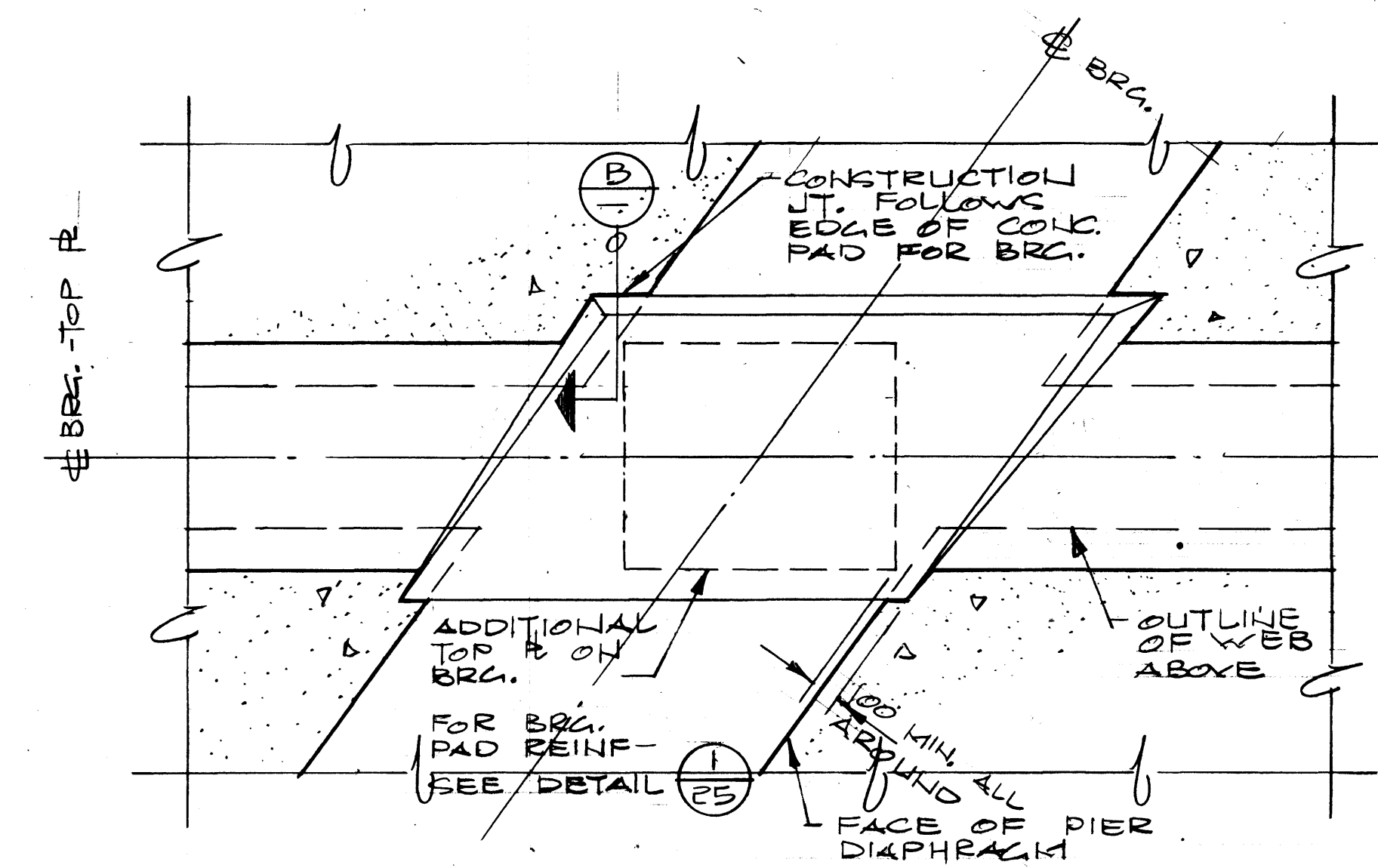
PIER DIAPHRAGM ELEVATION
SCALE 1:50



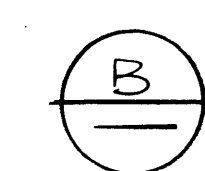
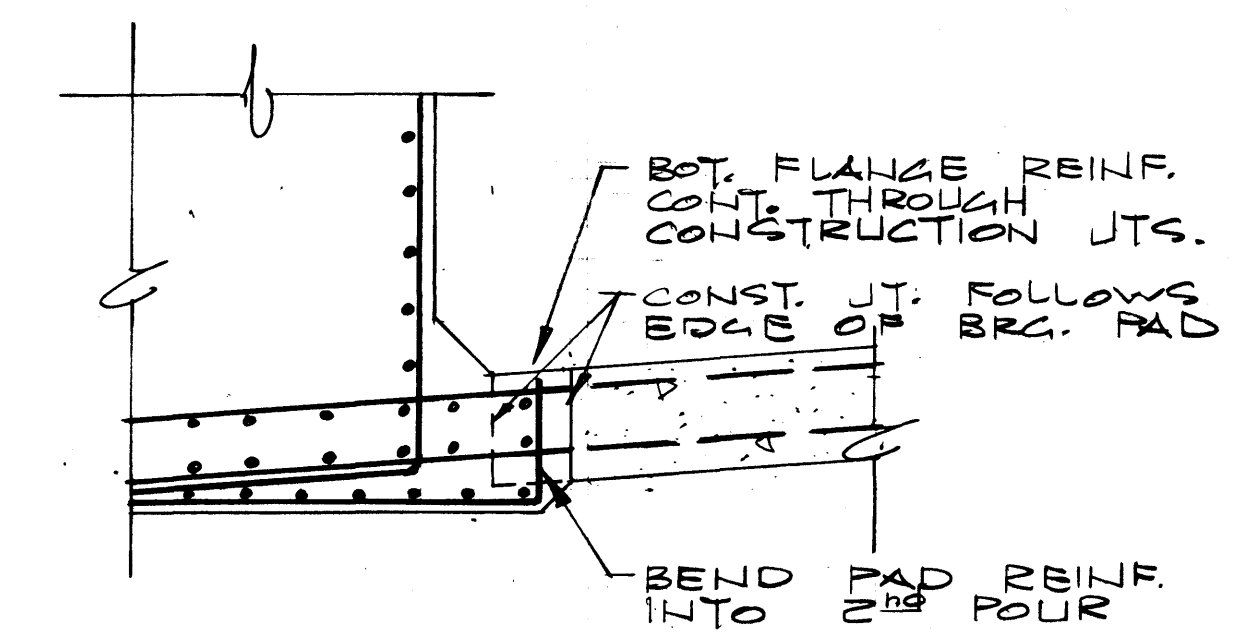
NOTE: FOR
ORIENTATION OF
REINFORCING SEE



SECTION A
SCALE 1:20



DETAIL 1
SCALE 1:20



SECTION B
SCALE 1:20

Western Region

Project: TRANS-CANADA HIGHWAY TWINNING
BANFF NATIONAL PARK, ALBERTA
MINNEWANKA INTERCHANGE

Project No. 003876

REV	D	M	Y	REVISION	DESCRIPTION	DRN	DES	CHK	APP

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Complie par:

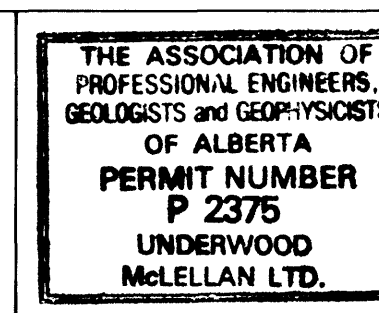
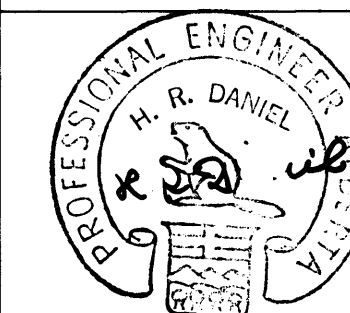
Horizontal Scale Echelle horizontale	Contour Interval Equidistance
N.A.	N.A.

Compilation Photos Photos de compilation	Photo Scale Echelle photographique
N.A.	N.A.

Drawn by: D. WIDDIFIELD
Date: JAN. 28.84

Checked by: H. DANIEL
Date: JAN. 28.84

Approved by: D. LEATHER
Date: JAN. 28.84



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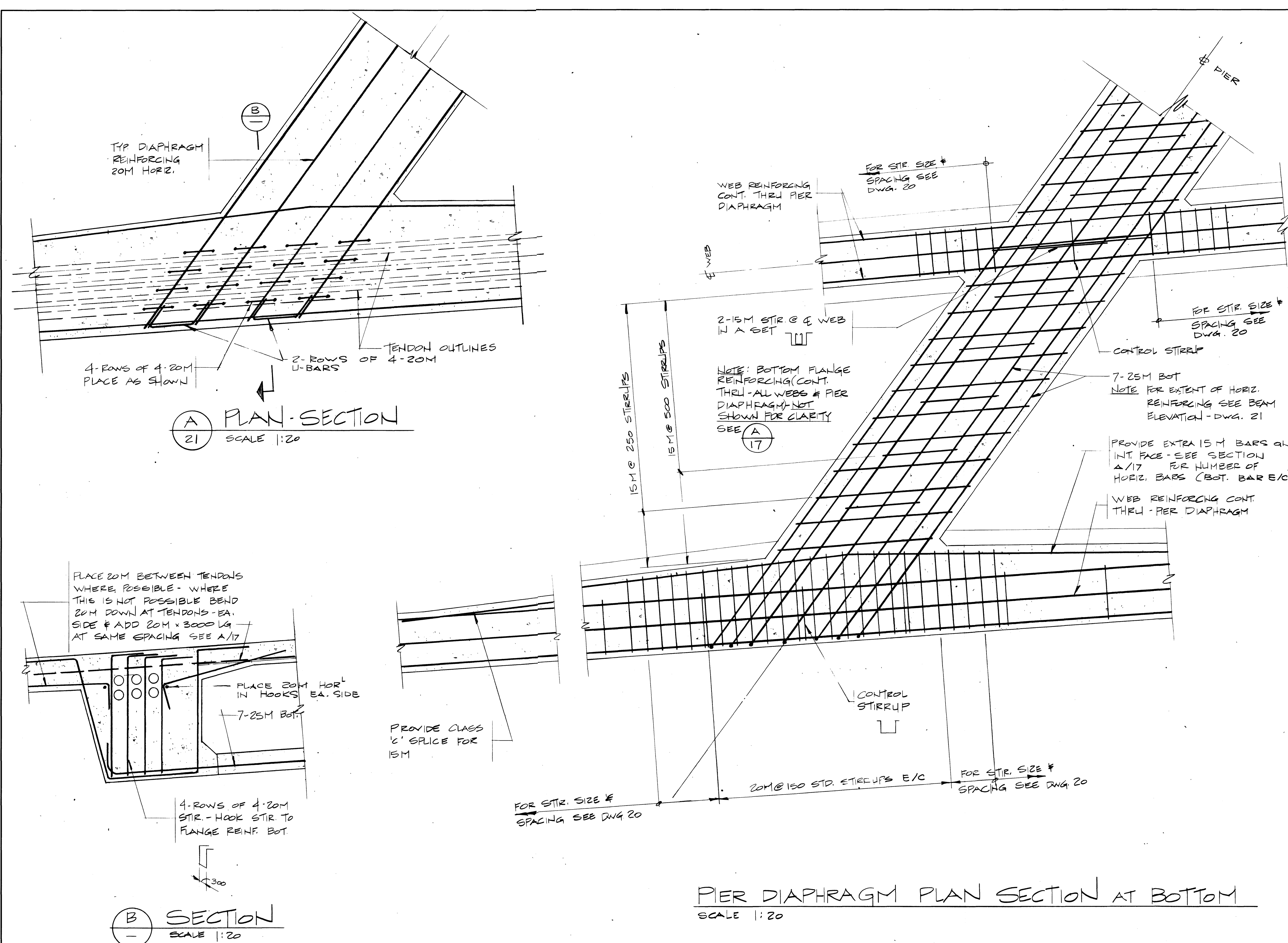
T.C.H. BRIDGE OVER
BANFF AVENUE
km 13+050

PIER
DIAPHRAGM
SHEET 2



Horizontal Scale Echelle horizontale	Vertical Scale Echelle verticale
AS NOTED	AS NOTED

NTS. No. STN. No.	Dwg. No. Dessin No.	Sheet Feuille
N.A.	2977-022	22 of 28



Western Region

Project: TRANS-CANADA HIGHWAY TWINNING
BANFF NATIONAL PARK, ALBERTA
MINNEWANKA INTERCHANGE

Project No. 003876

REV	D	M	Y	REVISION	DESCRIPTION	DRN	DES	CHK	APP

Compiled by
Compile par

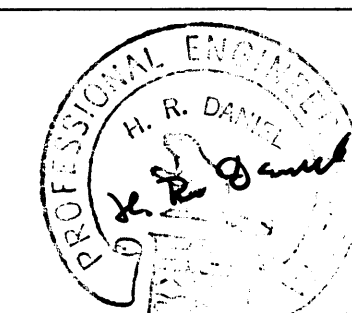
Horizontal Scale	Contour Interval
Echelle horizontale	Echelle horizontale
N.A.	N.A.

Compilation Photos	Photo Scale
Photos de compilation	Echelle photographique
N.A.	N.A.

Drawn by	Date
D. MZIK	JAN. 28. 84

Checked by	Date
H. DANIEL	JAN. 28. 84

Approved by	Date
D. LEATHER	JAN. 28. 84



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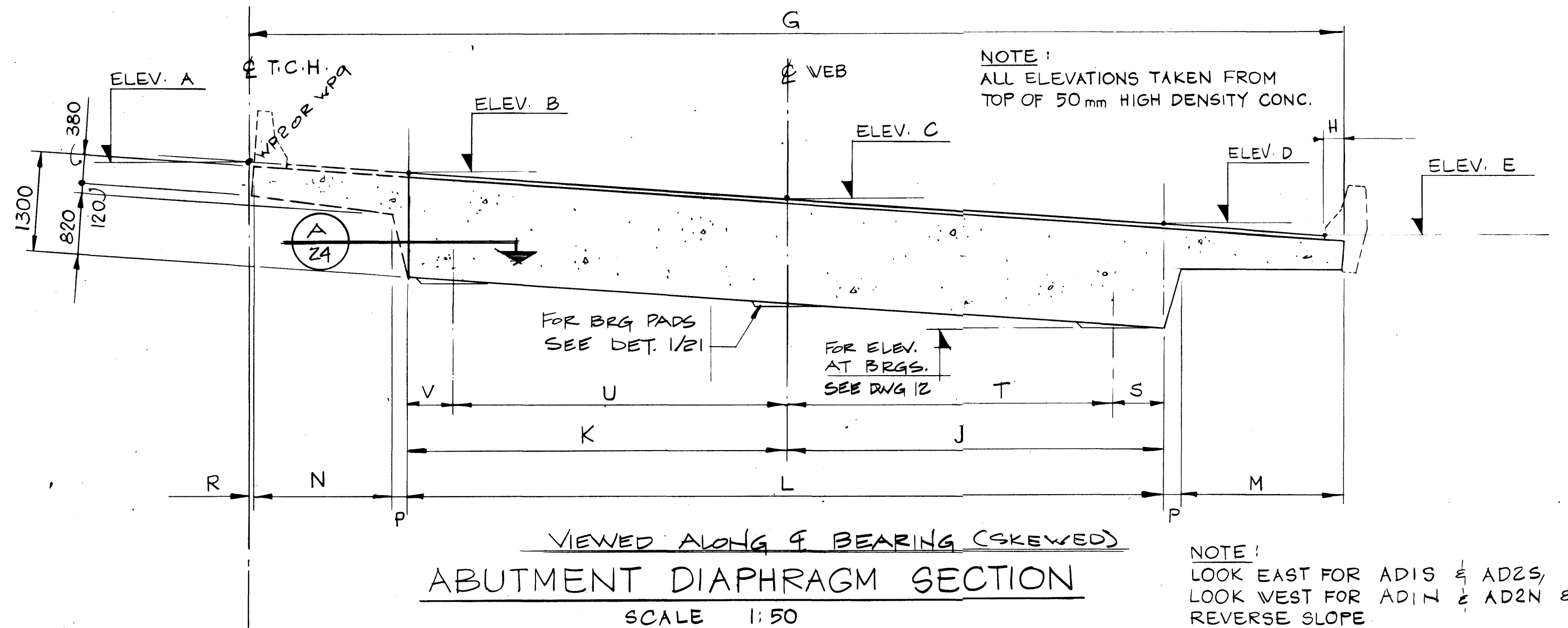
Underwood McLellan Ltd.
Consulting Engineers and Planners
Calgary, Alberta

T.C.H. BRIDGE OVER
BANFF AVENUE
km 13+050

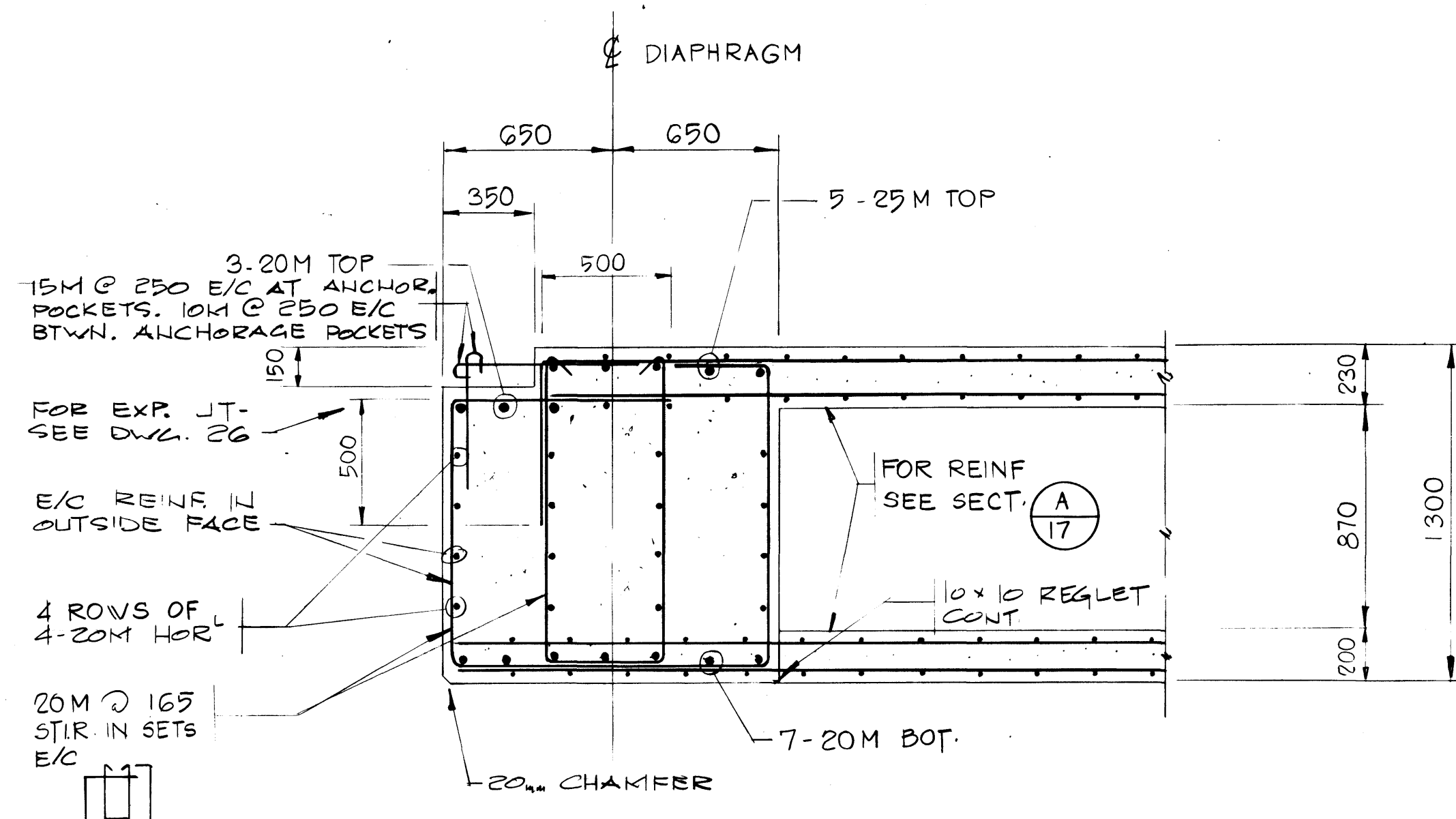
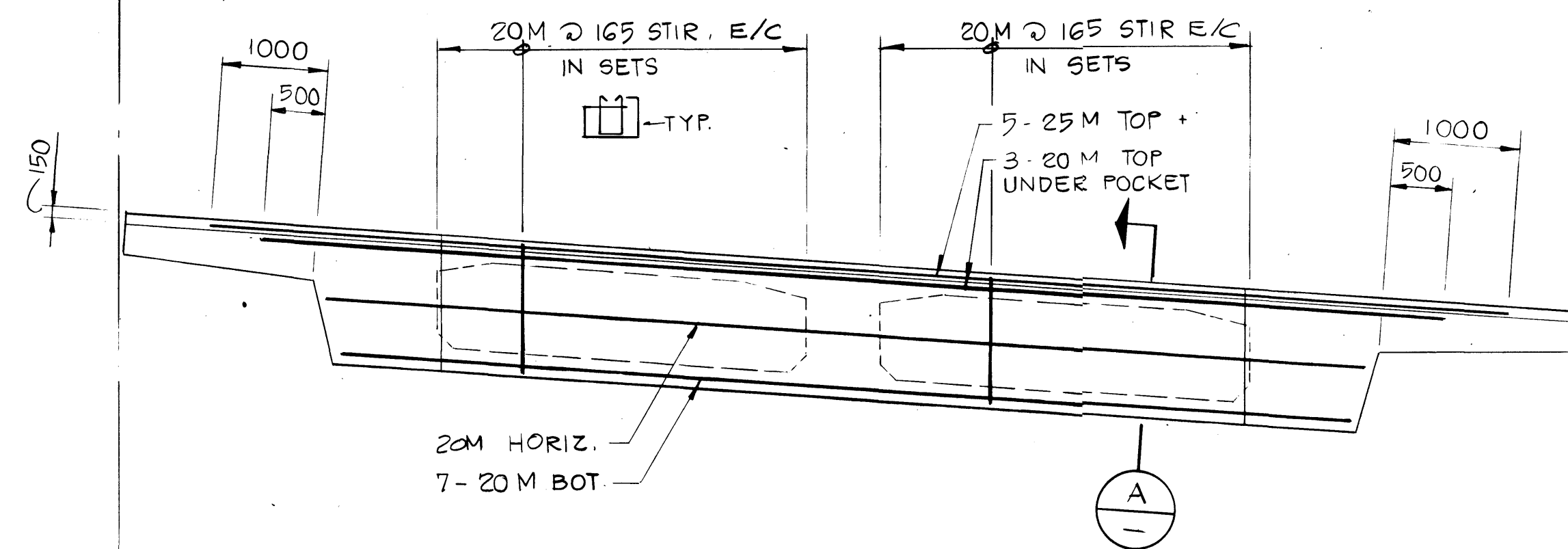
ABUTMENT DIAPHRAGM SHEET 1

Horizontal Scale	Vertical Scale
Echelle horizontale	Echelle verticale
AS NOTED	AS NOTED

NTS. No.	Drwg. No.	Sheet
N.A.	2977-022	23 of 28

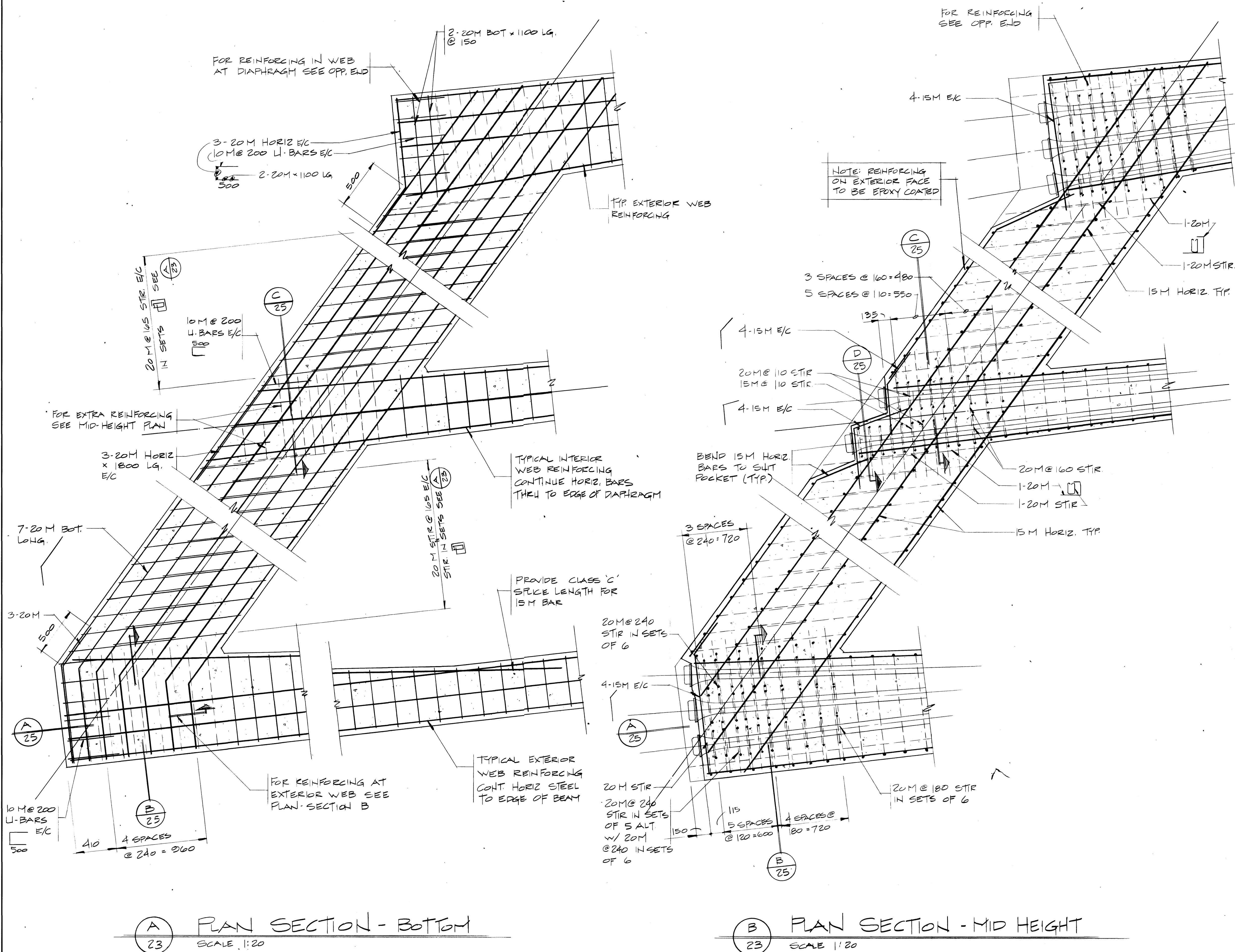


NOTE: LOOK EAST FOR AD1S & AD2S, LOOK WEST FOR AD1N & AD2N & REVERSE SLOPE



SECTION

SCALE 1:20



Western Region

Project
Project

TRANS-CANADA HIGHWAY TWINNING
BANFF NATIONAL PARK, ALBERTA
MINNEWANKA INTERCHANGE

Project No.
Project No.

003876

REV	D	M	Y	REVISION DESCRIPTION	DRN	DES	CHK	APP
Compiled by Complé par								

Horizontal Scale Echelle horizontale	N.A.	Contour Interval Équidistance	N.A.
Compilation Photos Photos de compilation	N.A.	Photo Scale Echelle photographique	N.A.

Drawn by Dessiné par	D. WIDDIFIELD
Date	JAN. 28. 84
Checked by Vérifié par	H. DANIEL
Date	JAN. 28. 84
Approved by Approuvé par	D. LEATHER
Date	JAN. 28. 84

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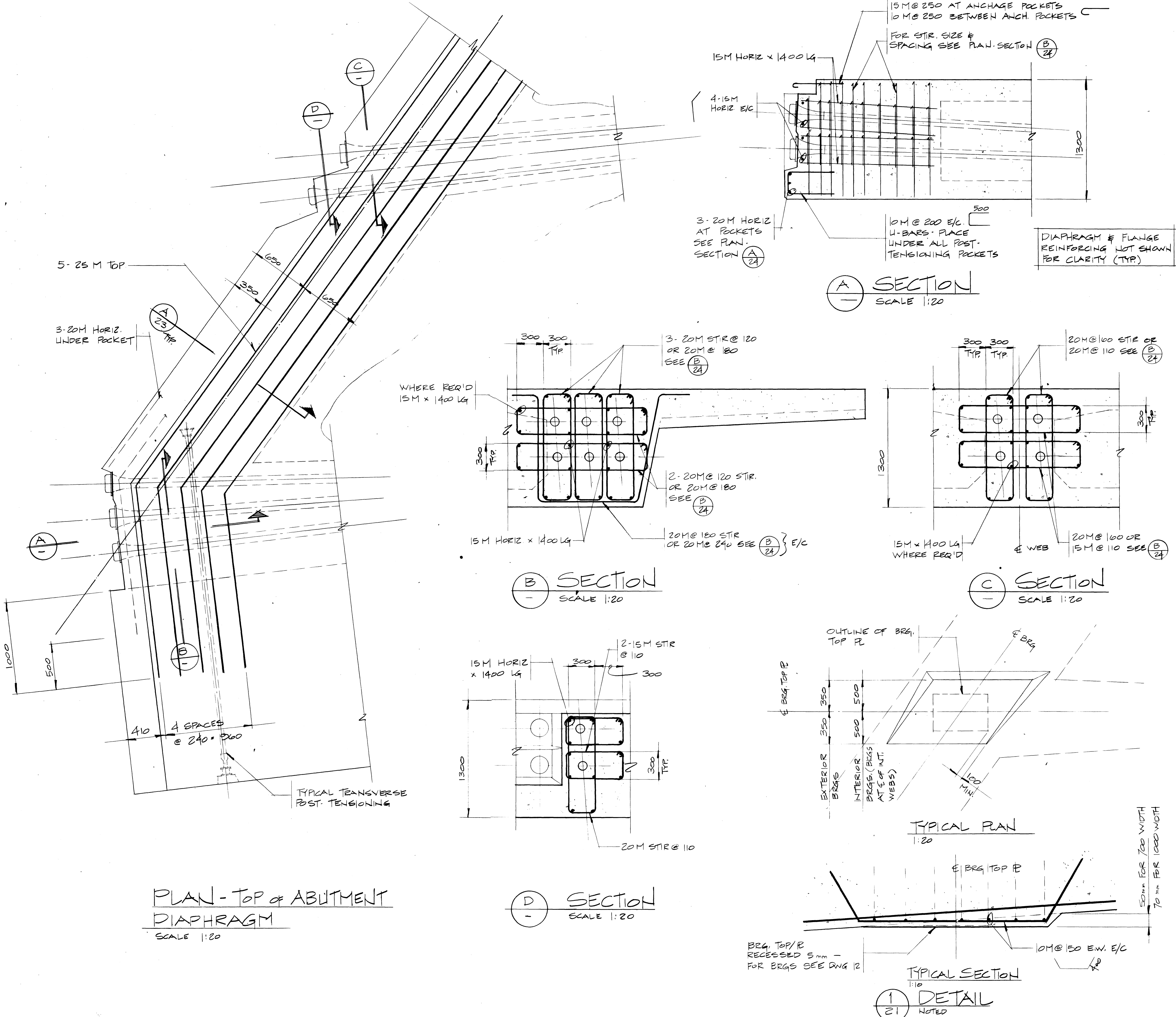
T.C.H. BRIDGE OVER
BANFF AVENUE

km 13+050

ABUTMENT
DIAPHRAGM
SHEET 3

AA006033

Horizontal Scale Echelle horizontale	AS NOTED	Vertical Scale Echelle verticale	AS NOTED
Project No. Project No.	N.A.	Drawn by Dessiné par	2977-022
Project No. Project No.		Drawn by Dessiné par	25 28



Western Region

TRANS-CANADA HIGHWAY TWINNING
BANFF NATIONAL PARK, ALBERTA
MINNEWANKA INTERCHANGE

003876

REV	D	M	Y	REVISION DESCRIPTION	DRN	DES	CHK	APP
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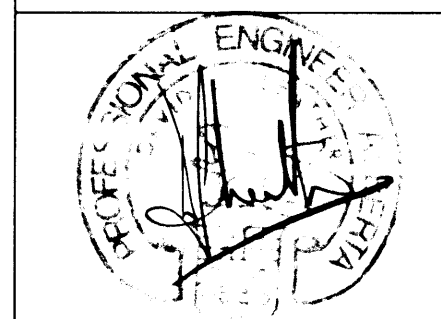
Horizontal Scale	Vertical Scale
N.A.	N.A.

Horizontal Scale	Vertical Scale
N.A.	N.A.

Drawn by	D. MZIK
Checked by	JAN. 28. 84

Designed by	J. HALEY
Approved by	JAN. 28. 84

Reviewed by	D. LEATHER
Approved by	JAN. 28. 84



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T.C.H. BRIDGE OVER
BANFF AVENUE
km 13+050

EXPANSION
JOINTS
SHEET 1



Horizontal Scale	Vertical Scale
AS NOTED	AS NOTED

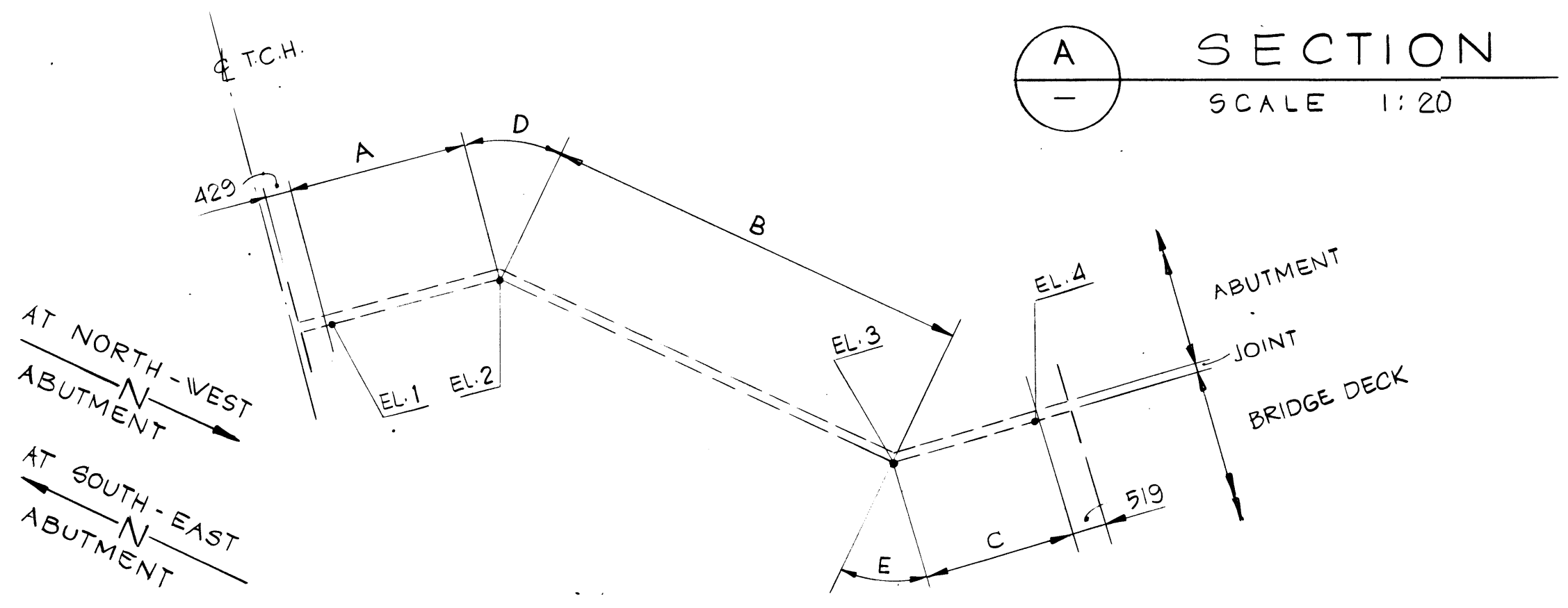
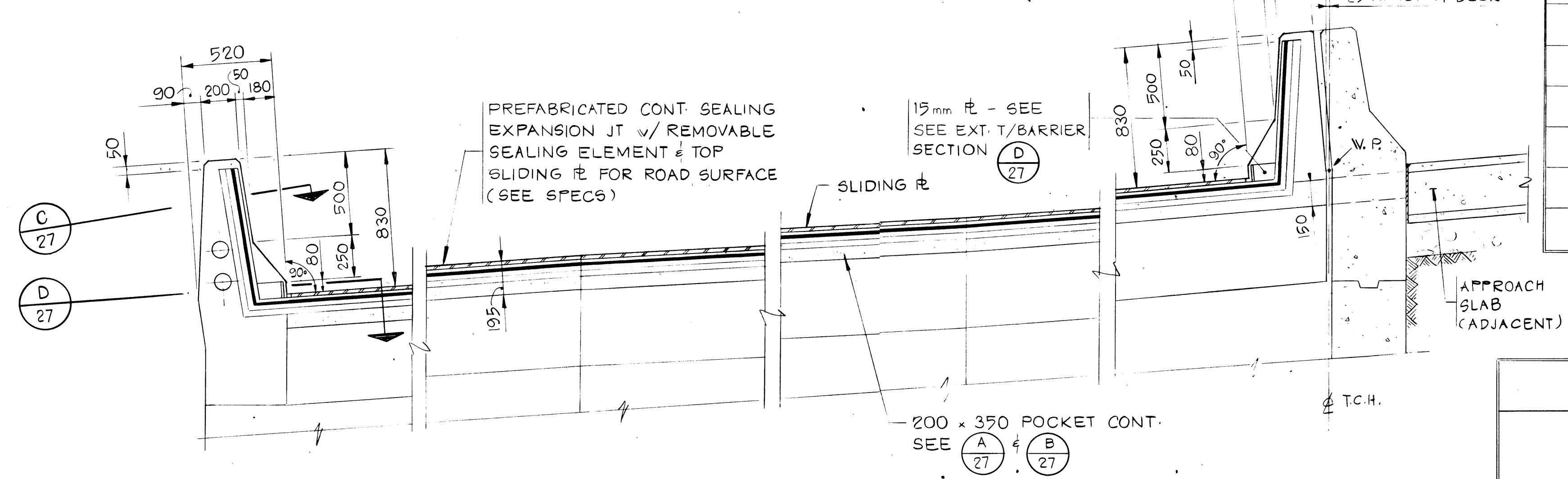
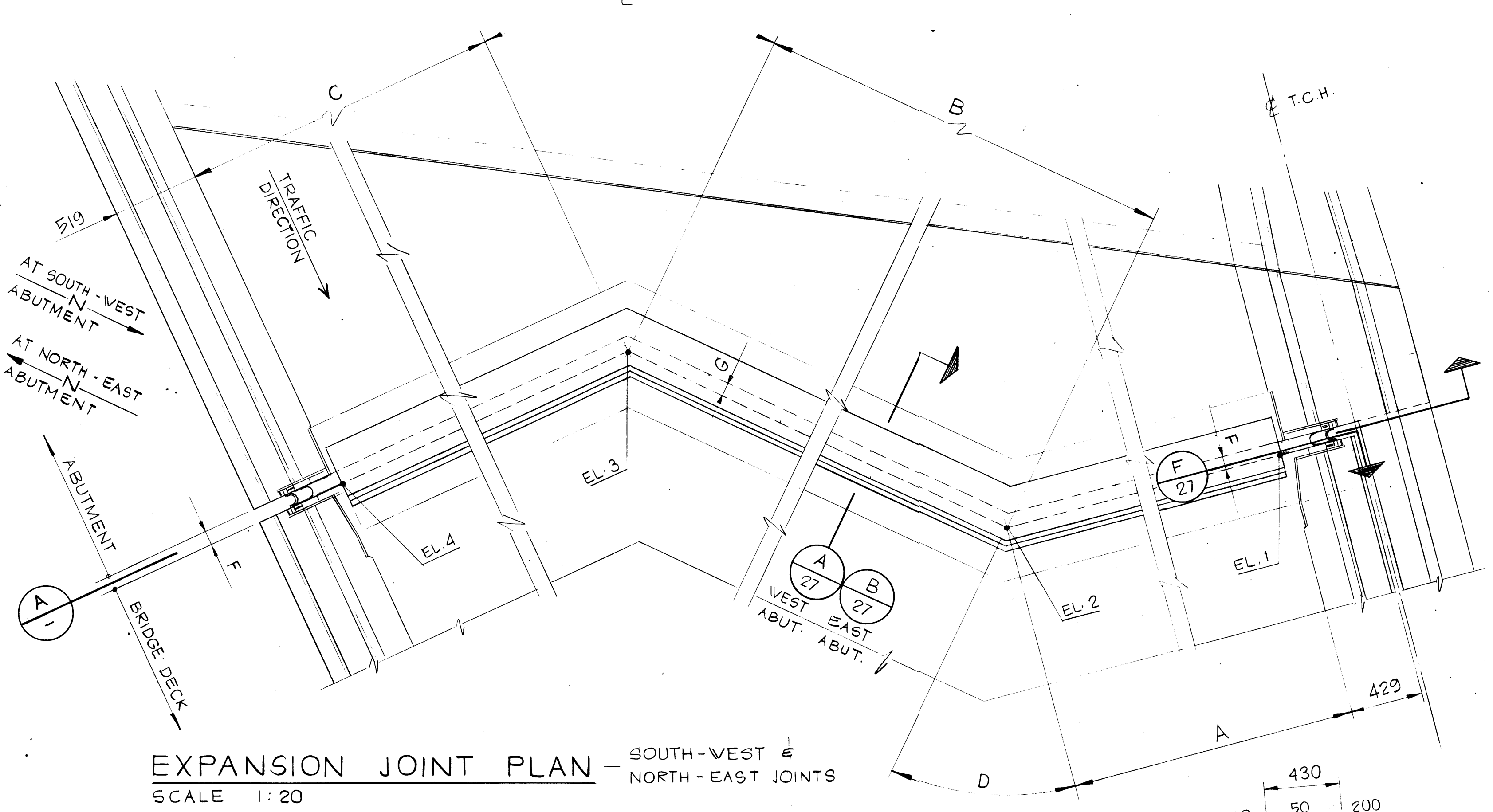
Drawn by	Checked by	Designed by	Reviewed by
N.A.	2977-022	26	28

EXPANSION JOINT SCHEDULE					
	HORIZONTAL DIMENSIONS			°	
	A	B	C	D	E
NORTH DECK					
WEST JOINT	3 245	8 029	3 200	41° 13' 41"	40° 40' 26"
EAST JOINT	3 345	6 957	3 200	31° 17' 18"	30° 13' 4"
SOUTH DECK					
WEST JOINT	3 245	8 198	3 200	41° 13' 41"	42° 39' 21"
EAST JOINT	3 345	7 057	3 200	31° 17' 18"	31° 33' 18"

SETTING SCHEDULE			
EAST EXP. JT. ONLY			
DAILY MEAN TEMPER.	EFFECTIVE BRIDGE TEMPER.	JOINT CASTING WIDTH (mm)	
°C	°C	F	G
-38	-37	98	97
-31	-30	90	90
-22	-20	80	81
-13	-10	70	73
-4	0	60	64
+6	+10	50	55
+15	+20	40	47
+24	+30	30	38
+28	+34	25	34

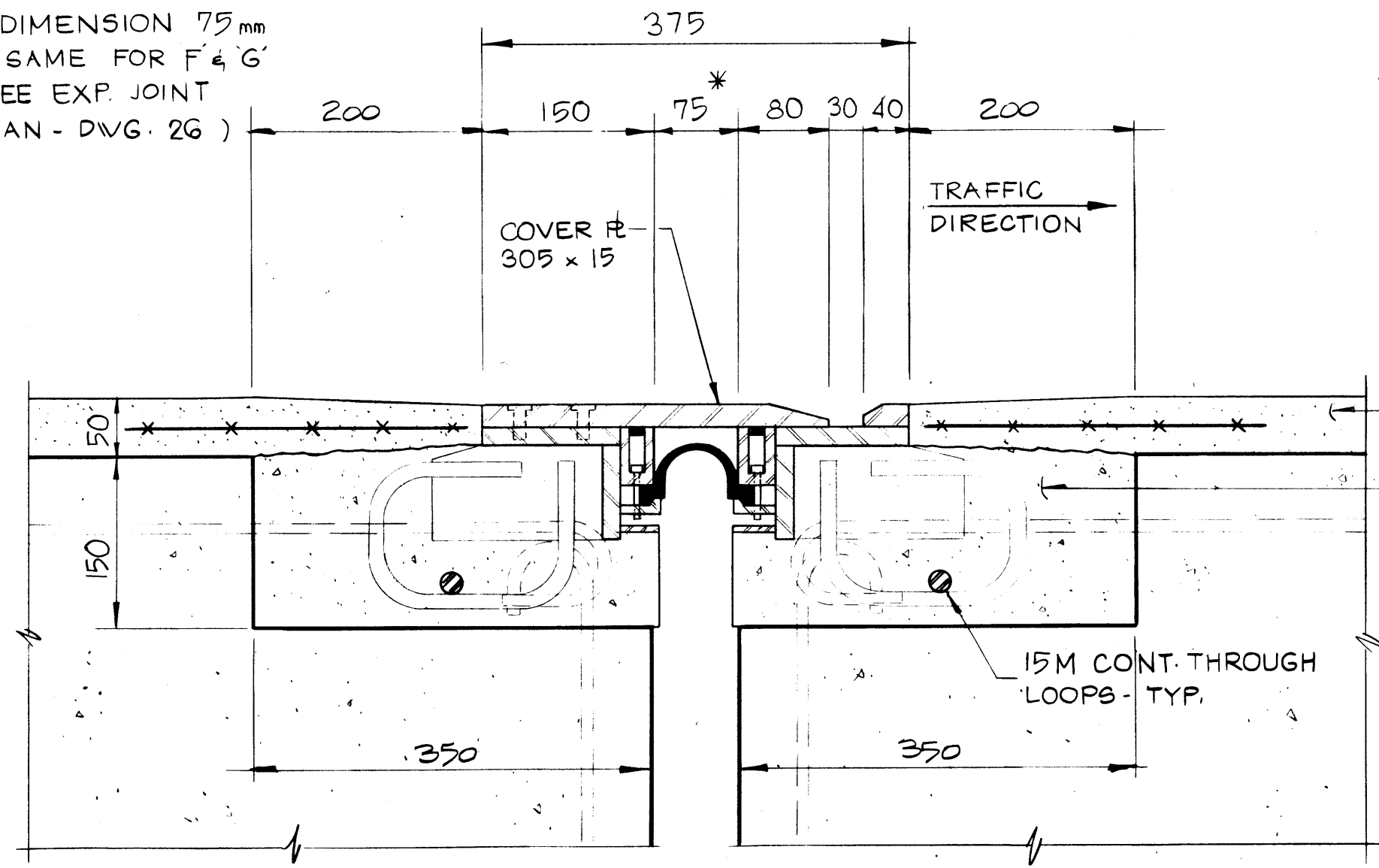
ELEVATION SCHEDULE				
	TOP OF PLATE ELEVATIONS			
	EL. 1	EL. 2	EL. 3	EL. 4
NORTH DECK				
WEST JOINT	1400.846	1401.078	1401.541	1401.768
EAST JOINT	1400.856	1401.095	1401.499	1401.726
SOUTH DECK				
WEST JOINT	1400.740	1400.508	1400.033	1399.806
EAST JOINT	1400.820	1400.581	1400.174	1399.947

- EXPANSION JOINTS
- APPROVED EXPANSION JOINTS FOR THIS BRIDGE ARE THE HONEL 151 SYSTEMS. ALTERNATIVE JOINT TYPES ARE TO BE SUBMITTED TO THE ENGINEER FOR REVIEW.



ORIENTATION PLAN - NORTH-WEST & SOUTH-EAST JOINTS
SCALE 1:10

* DIMENSION 75 mm
IS SAME FOR F & G
(SEE EXP. JOINT
PLAN - DWG. 26)

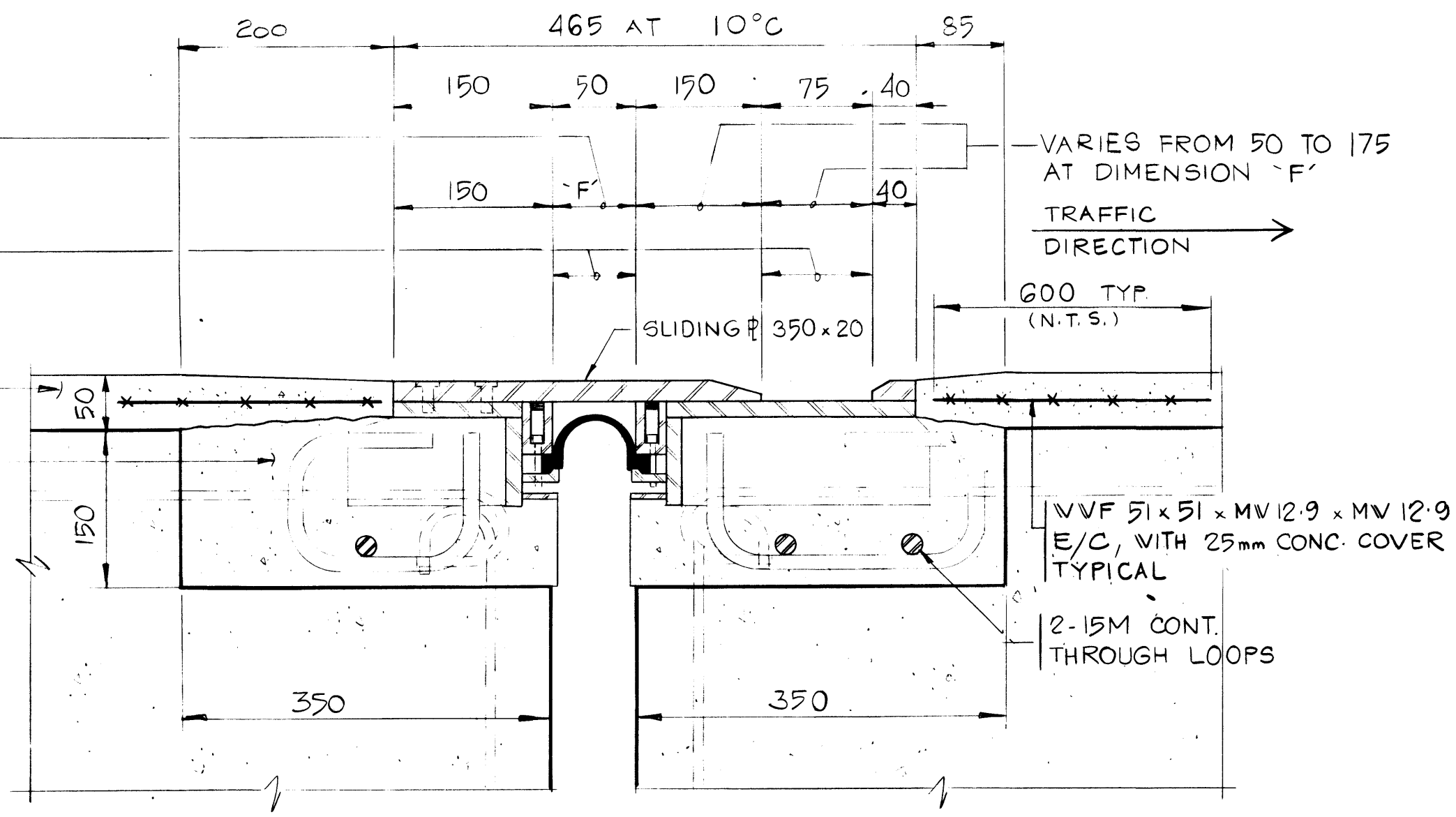


DIMENSION 'F'
VARIES FROM 25 TO 150

DIMENSION 'F' & 'G' VARIES
SEE EXP. JOINT PLAN &
SETTING TABLE ON DWG. 28

HIGH DENSITY
CONCRETE
30 MPa CONCRETE w/
10mm ϕ AGGREGATE

NOTE:
MANUFACTURER TO SUPPLY
EXP. JOINT C/W P'S, ANCHORS
& BREATHER HOLES TO SUIT
MOVEMENTS & SLIDING P'S.

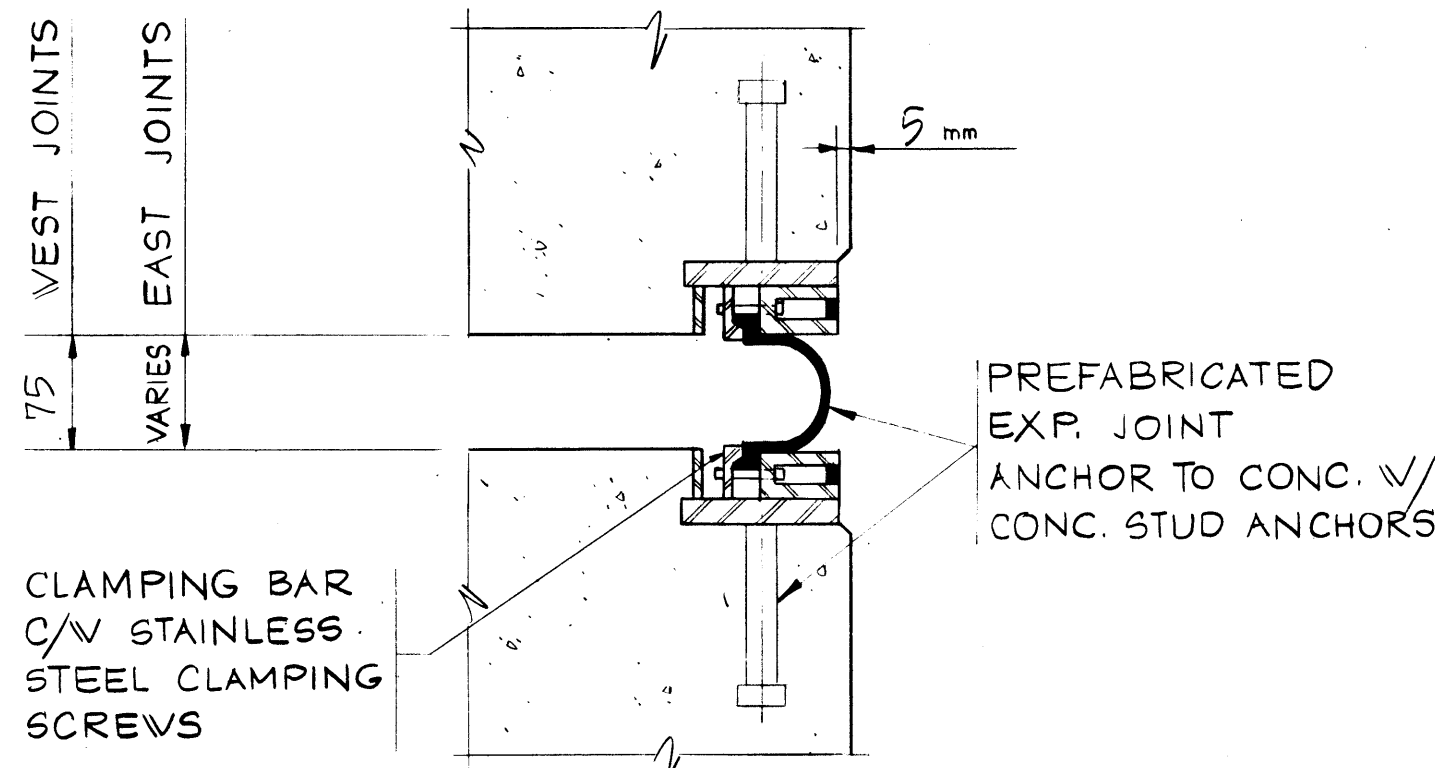


EAST JOINTS

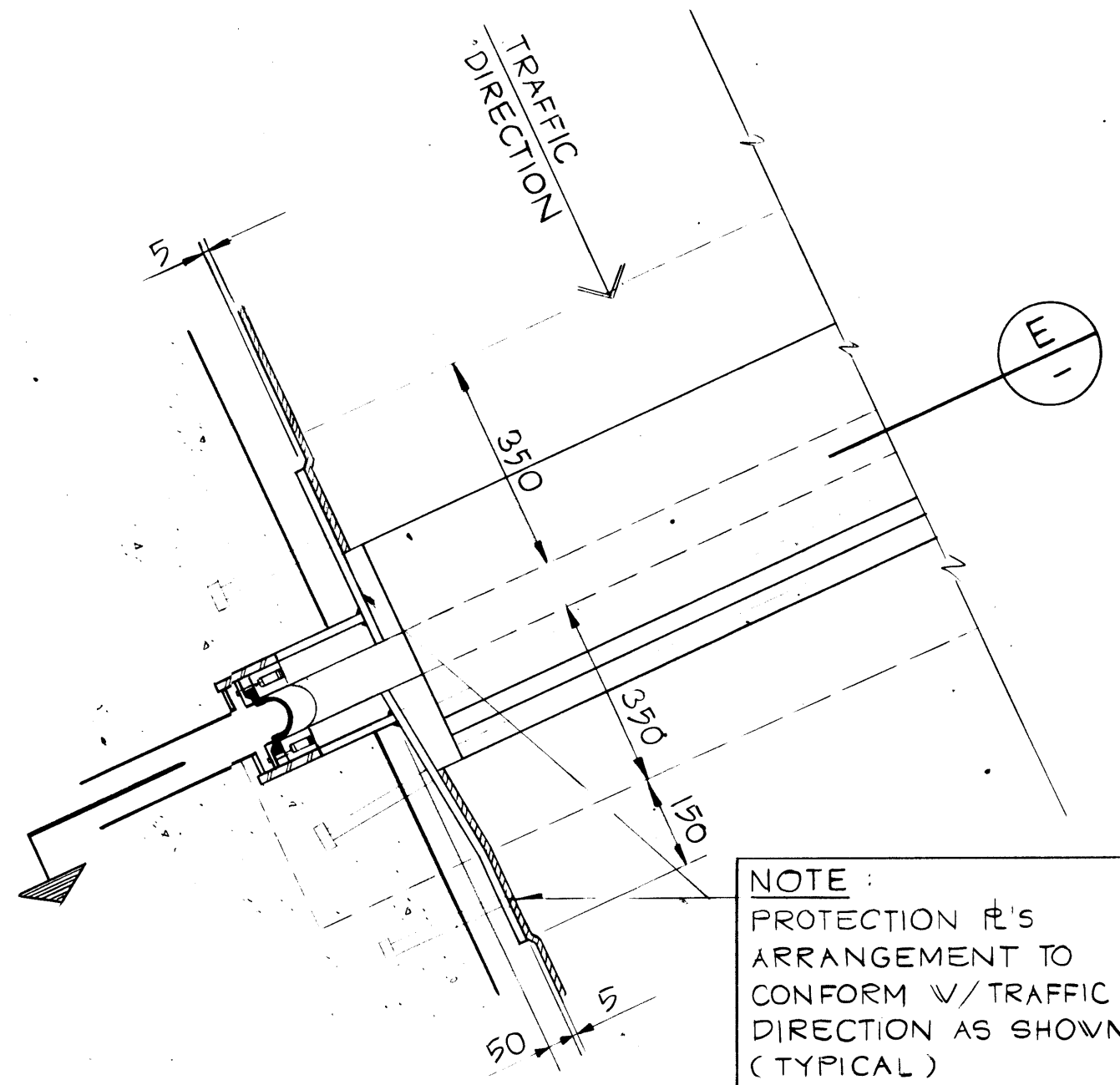
B SECTION
26 SCALE 1:5

WEST JOINTS

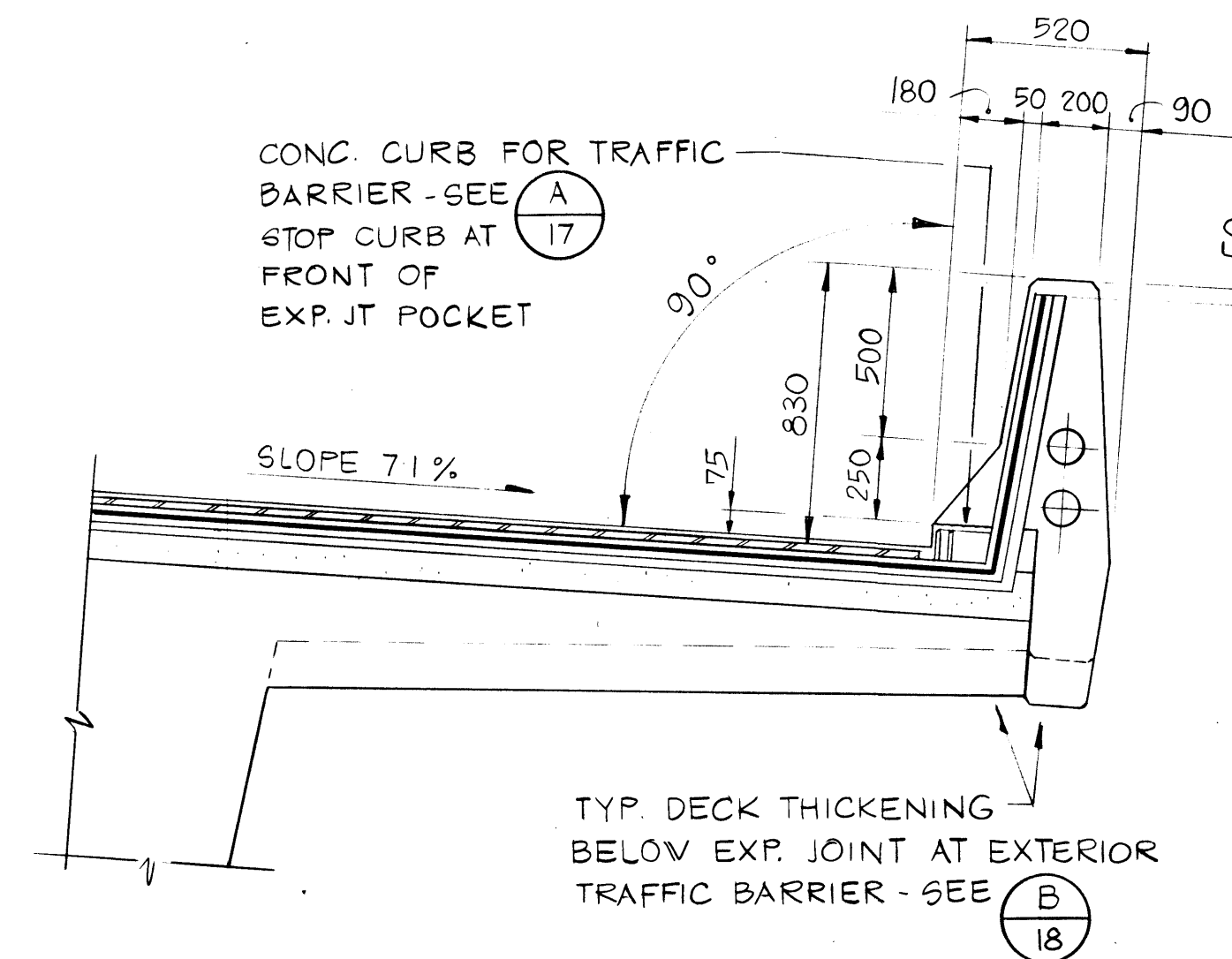
A SECTION
26 SCALE 1:5



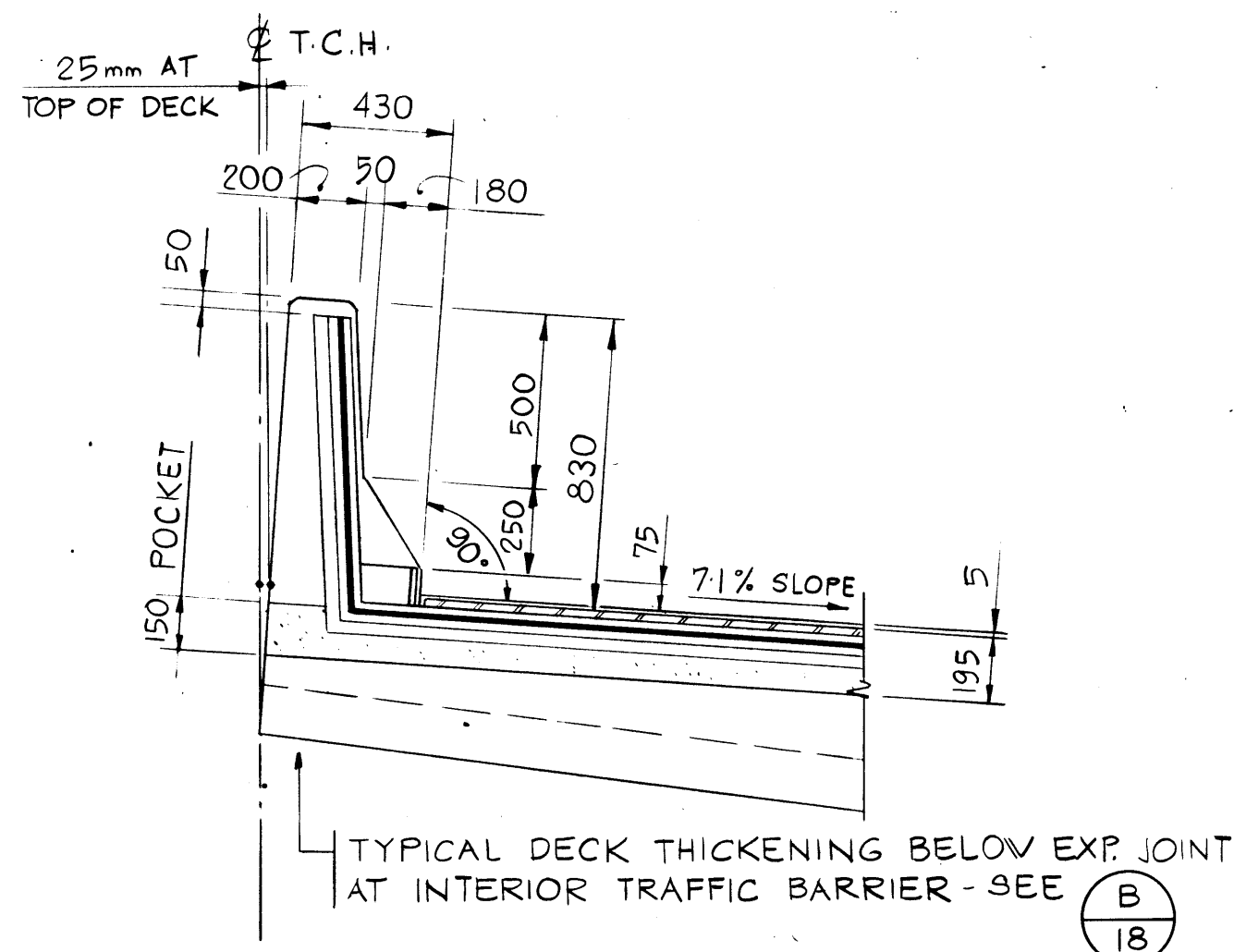
C SECTION
26 SCALE 1:5



D SECTION
26 SCALE 1:10



E SECTION
- SCALE 1:10



F SECTION @ ϕ of T.C.H.
26 SCALE 1:20

Western Region

Project
Project: TRANS-CANADA HIGHWAY TWINNING
BANFF NATIONAL PARK, ALBERTA
MINNEWANKA INTERCHANGE

Project No.
Project No.: 003876

REV	D	M	Y	REVISION	DESCRIPTION	DRN	DES	CHK	APP
1									

Compiled by
Compil  par

Horizontal Scale
Echelle horizontale

Contour Interval
Eauidistance

Compilation Photos
Photos de compilation

Photo Scale
Echelle photographique

Drawn by
Dessine par

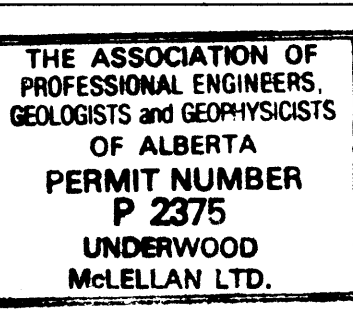
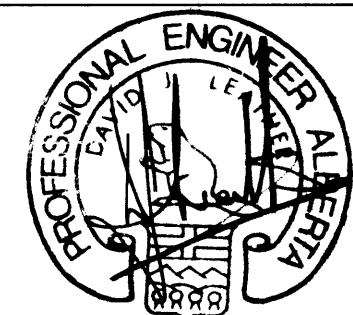
Date
JAN. 28. 84

Checked by
V rifie par

Date
JAN. 28. 84

Approved by
Approuv  par

Date
JAN. 28. 84



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Consulting Engineers and Planners
Calgary, Alberta



T.C.H. BRIDGE OVER
BANFF AVENUE

km 13+050

EXPANSION
JOINTS
SHEET 2



Horizontal Scale
Echelle horizontale

Vertical Scale
Echelle verticale

AS NOTED

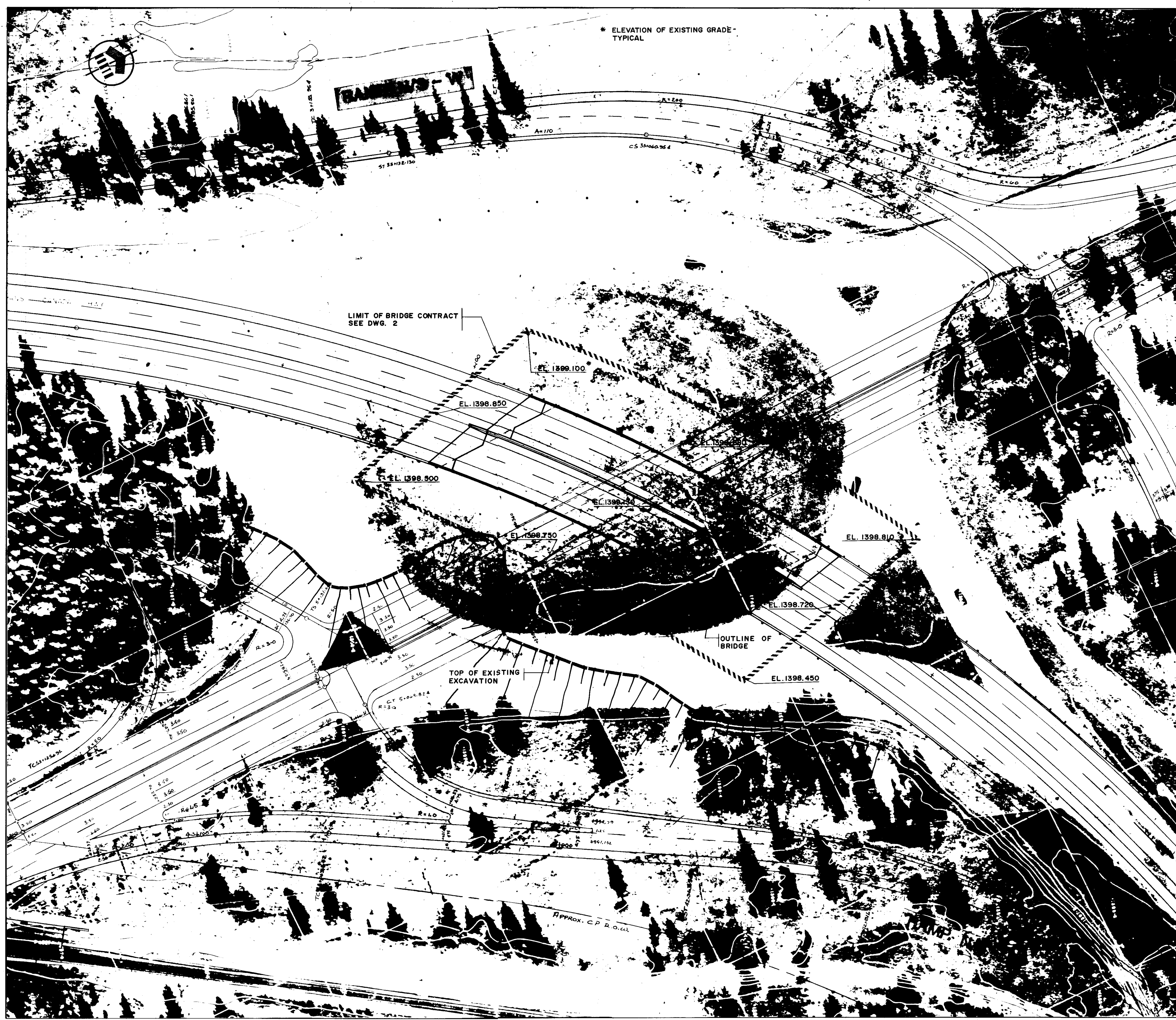
AS NOTED

N.T.S. No.
STN. No.

Drawg. No.
Dessin. No.

Sheet
Feuille

27 of 28



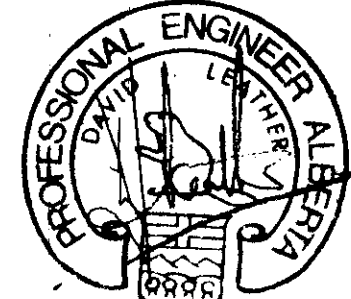
* ELEVATION OF EXISTING GRADE - TYPICAL

Western Region

Project: TRANS-CANADA HIGHWAY TWINNING
Project: BANFF NATIONAL PARK, ALBERTA
Project: MINNEWANKA INTERCHANGE

Project No. 003876

REV	D	M	Y	REVISION DESCRIPTION	DRN	DES	CHK	APP
1				Completed by				
2				Complete par				
3				Horizontal Scale				
4				Echelle horizontale				
5				N.A.				
6				Contour Interval				
7				Echelle de contour				
8				N.A.				
9				Photomontage Scale				
10				Echelle de photomontage				
11				N.A.				
12				Drawn by				
13				Dessiné par				
14				D. WIDDIFIELD				
15				Date				
16				JAN. 28. 84				
17				Checked by				
18				Vérifié par				
19				J. HALEY				
20				Date				
21				JAN. 28. 84				
22				Approved by				
23				Approuvé par				
24				D. LEATHER				
25				Date				
26				JAN. 28. 84				



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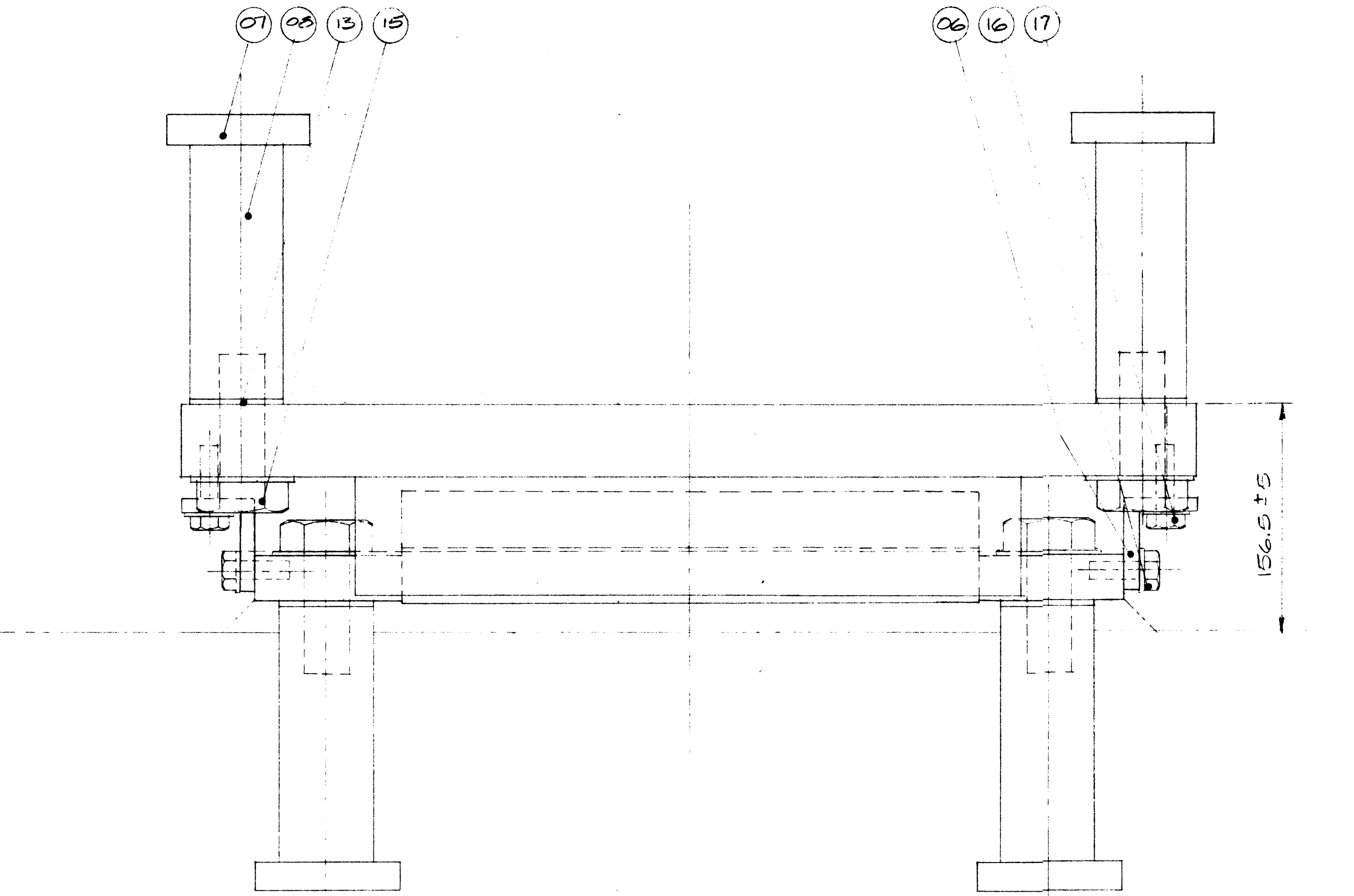
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Calgary Alberta



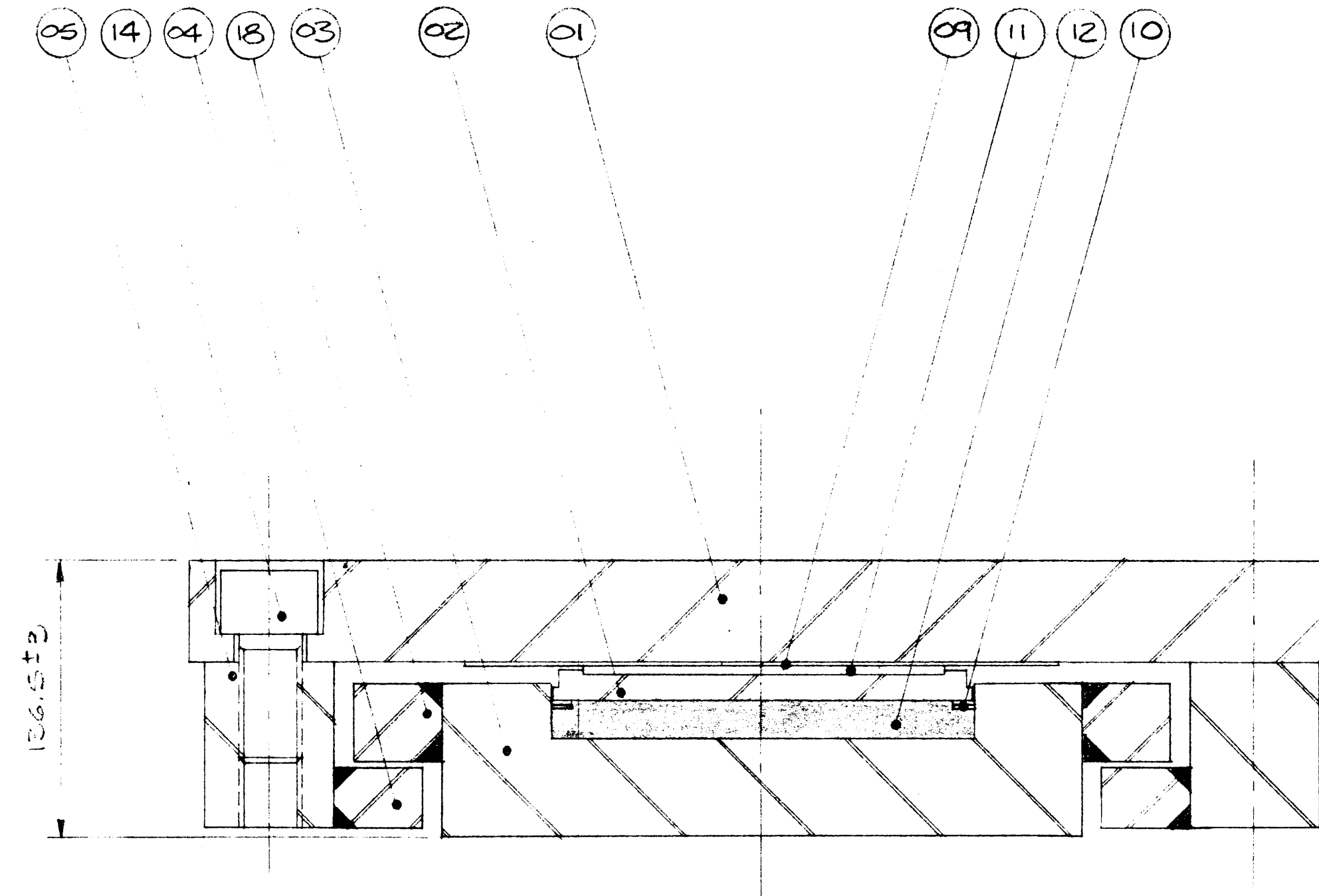
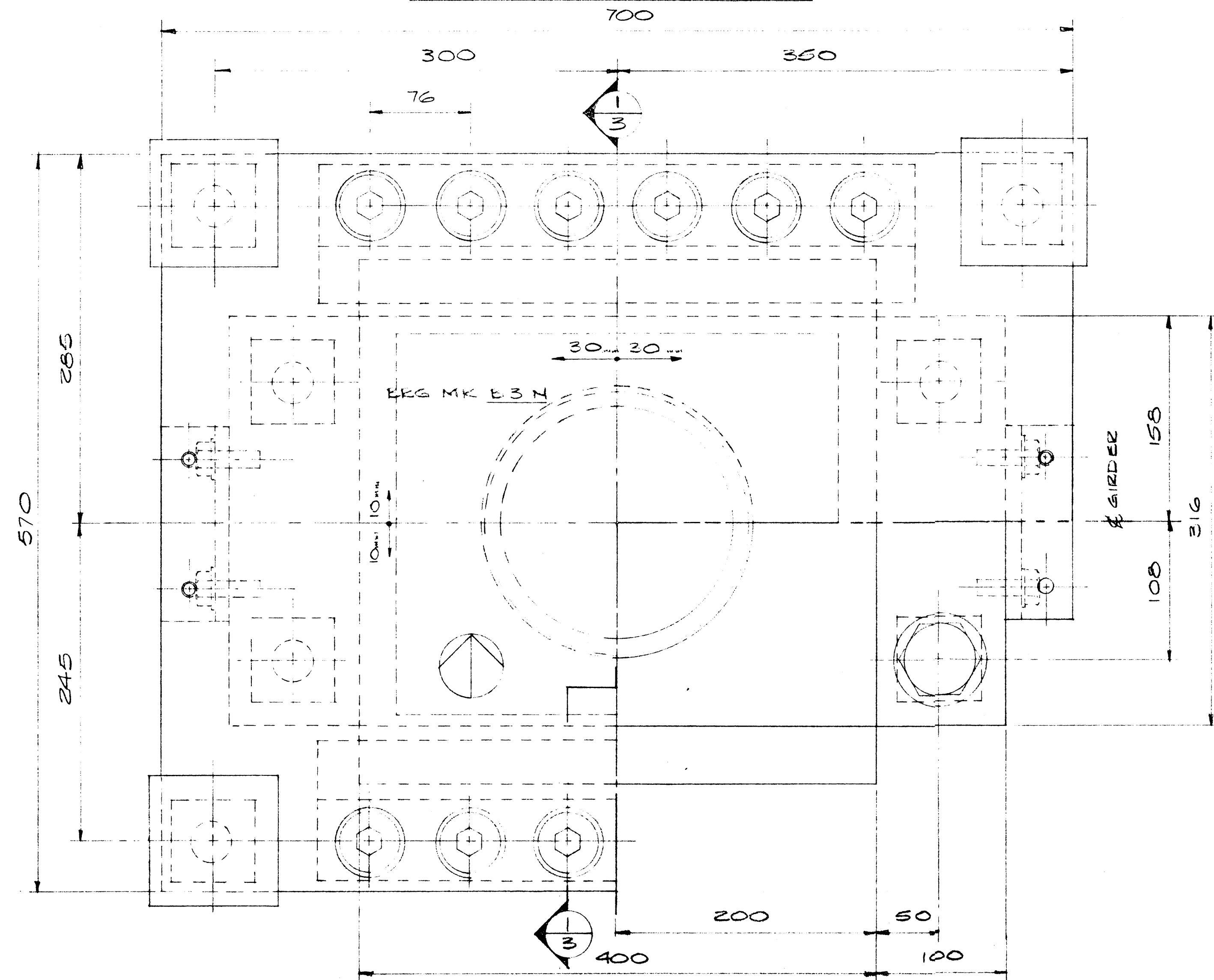
T.C.H. BRIDGE OVER
BANFF AVENUE
km 13+050

GENERAL
SITE PLAN

Horizontal Scale	Vertical Scale
Echelle horizontale	Echelle verticale
1: 500	N.A.
Sheet No.	Draw. No.
N.A.	2977-022
Sheet No.	28 28



LONGITUDINAL ELEVATION



SECTION 1/3

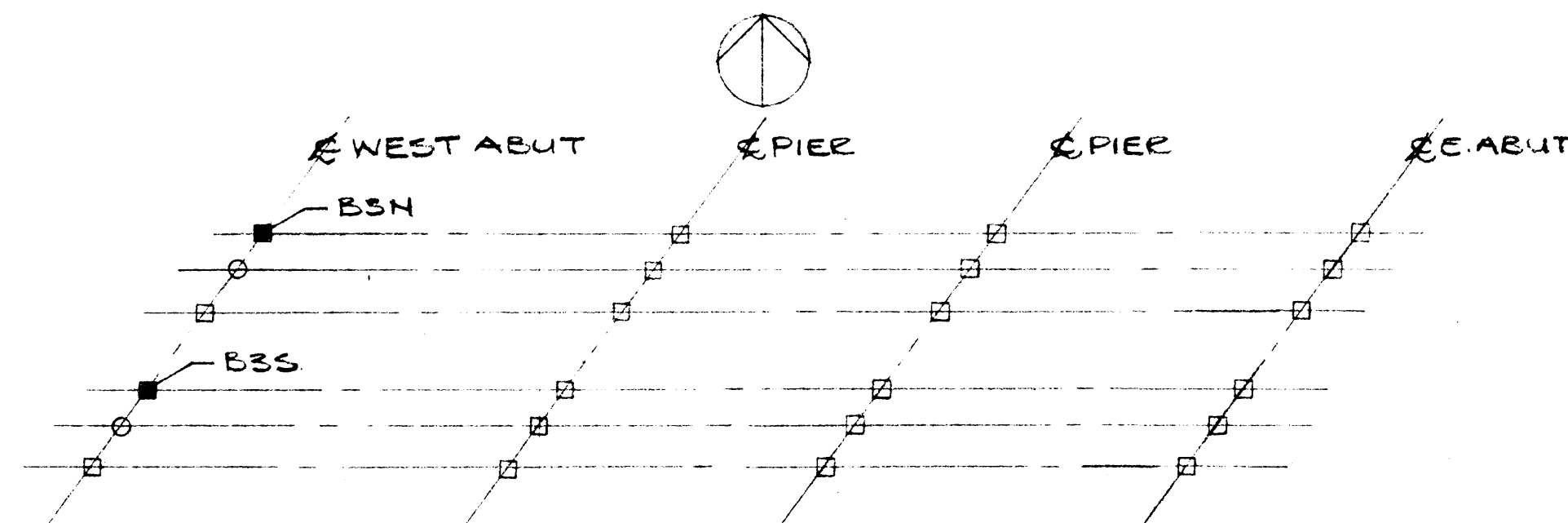
BEARING DATA

BEARING TYPE 12K'C'130 (UPLIFT)
QUANTITY 2
MAX. V. LOAD 1434 KN
MAX. D. LOAD 439 KN
MAX. UPLIFT LOAD -358 KN
COEF. OF FRICTION 0.03
MAX. ROTATION 0.0009
LONG. MOV'T. ±30
TRANS. MOV'T. ±10

NOTE: FOR COMMENTS & NOTES
SEE SHEET No. 1.

SHOP DRAWING REVIEW	
The review of this drawing does not in any way relieve the contractor of responsibility as detailed in the contract documents	
Reviewed	Submission No. 1
Reviewed as noted	Job No. 2977-022
Revise & resubmit	Date JUNE 6/84
Dwg. review by	V. HALEY
UNDERWOOD McLELLAN LTD.	

THIS DRAWING HAS BEEN CHECKED AND IS SUBMITTED IN ACCORDANCE WITH PROVISIONS OF THE GENERAL CONDITIONS OF THE CONTRACT, AND IS SUBJECT TO FURTHER REVIEW BY THE CLIENT, HAVING JURISDICTION OVER THE WORK.	
DATE SUBMITTED	MAY 2 1984
DATE RETURNED	

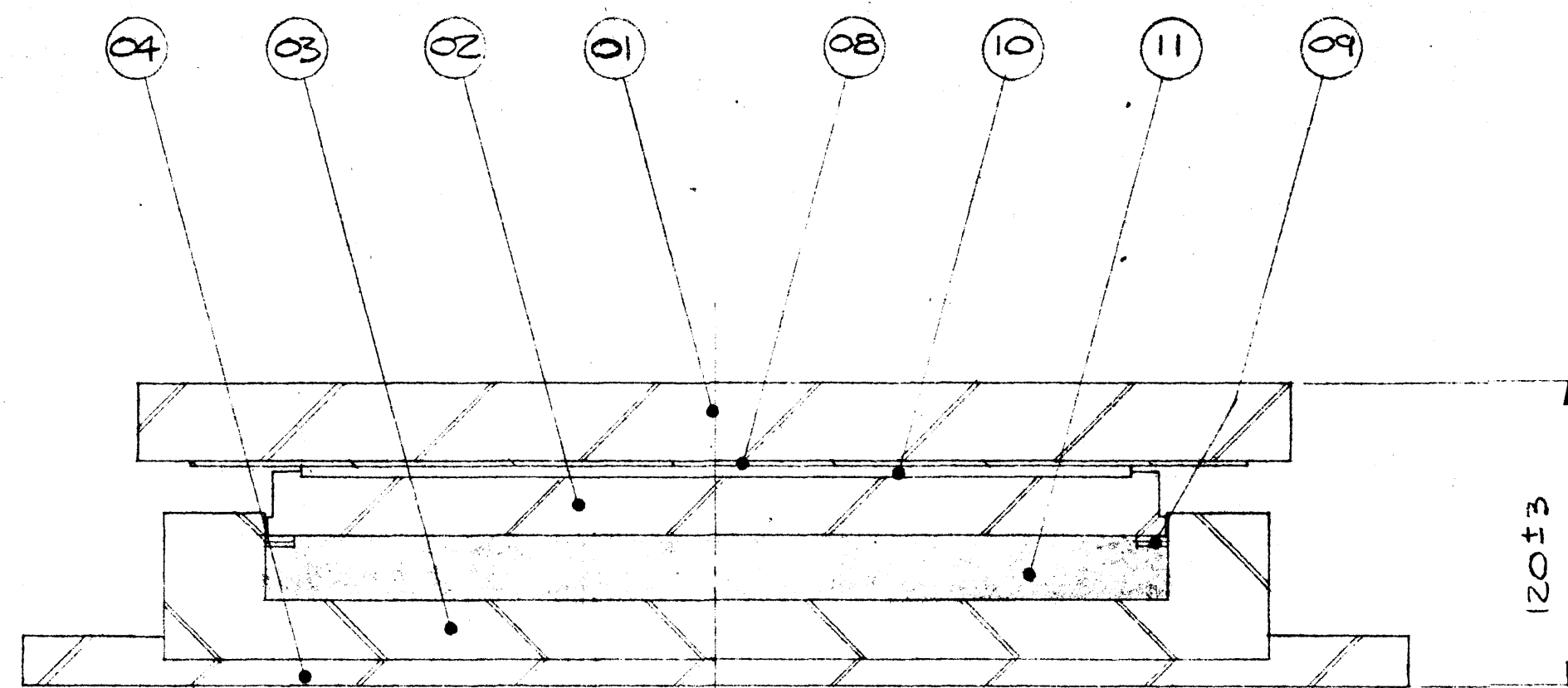


PLOT PLAN

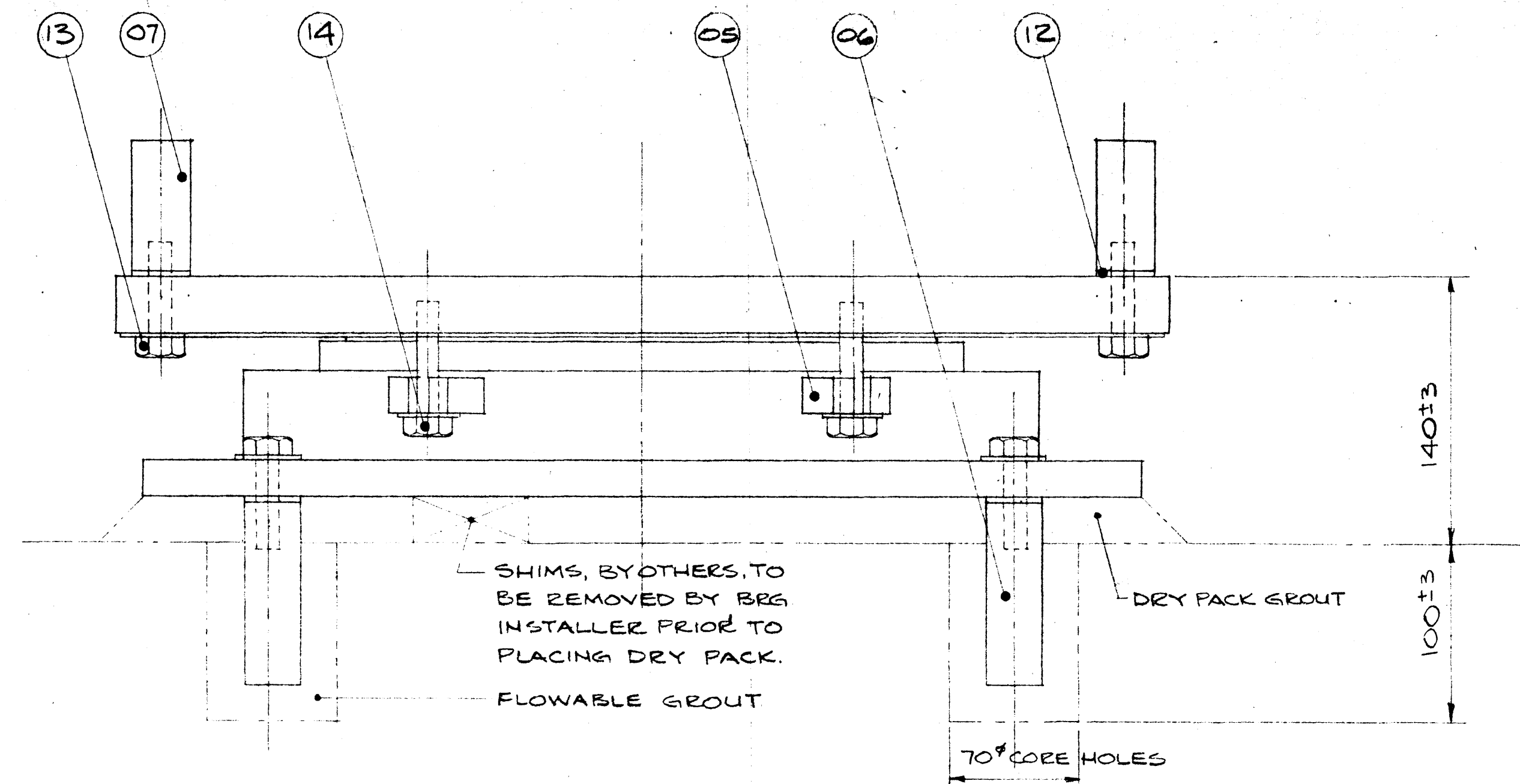
19	2PCS	STEEL ANCHOR LUG 4"x12 1/2"x1 1/4"
18	2PCS	STEEL BAR 1/2"x1 3/4"x15 3/4"
17	4PCS	HEX HEAD SCREWS 1/2"x2"LG 9W WASH
16	4PCS	HEX HEAD SCREWS 1/2"x1 1/2"LG 9W WASH
15	8PCS	HEX HD. A325 SCREWS 1/4"x3 1/2"LG GALV.
14	12PCS	CAP SCREWS 1/4"x2 1/2"LG GR. 8.
13	8PCS	RUBBER WASHERS 2 1/2"x2 1/2"x 1/8"
12	1PC	RUBBER DISC FOR K130
11	1PC	PTFE DISC FOR 12K130
10	2PCS	BRASS RINGS FOR K130
09	1PC	S/S SHEET FOR 12K100 W/L 13 1/2" LG.
08	8PCS	STEEL ANCHOR BARS 2 1/2"x2 1/2"x7 1/4"LG
07	8PCS	STEEL ANCHOR CAPS 4"x4"x 3/4"
06	2PCS	STEEL TRANSIT ANGLE 2x2 1/2"x3/8"x6"LG.
05	2PCS	STEEL BAR 2 1/2"x3/4"x18 1/8" LG
04	2PCS	STEEL BAR 1/4"x1 3/4"x18 1/8" LG.
03	1PC	STEEL BASE POT 12 1/2"x3" x15 3/4"
02	1PC	STEEL PISTON FOR 12K130
01	1PC	STEEL TOP PLATE 22 1/2"x2"x27 1/2"
ITEM	QTY.	DESCRIPTION

LIST OF MATERIALS PER BRG.

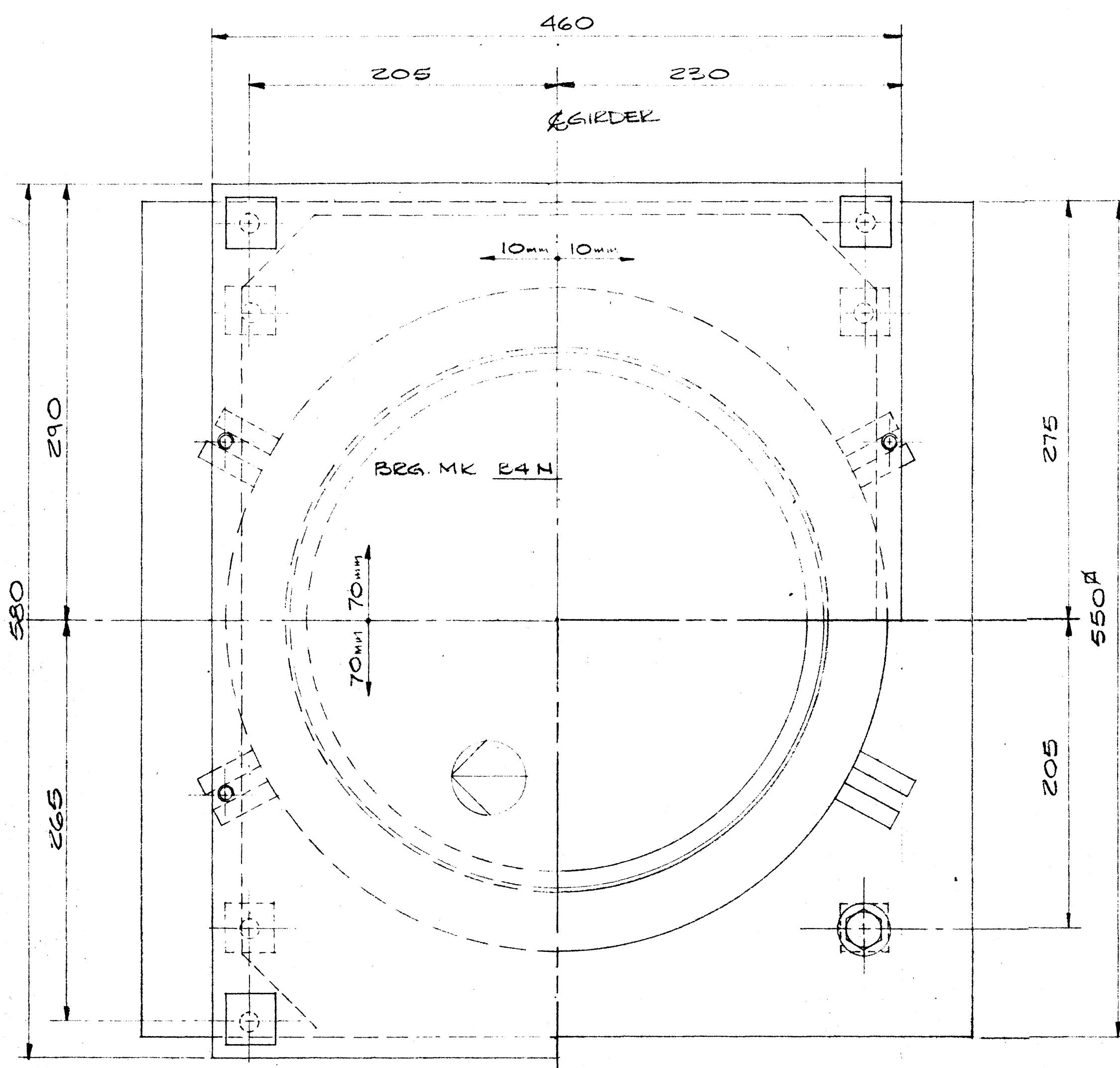
GLACIER		W.G. BEARINGS INC.	
BURLINGTON, ONTARIO		BURLINGTON, ONTARIO	
THESE DRAWINGS AND THE DATA CONTAINED THEREIN, ARE THE EXCLUSIVE PROPERTY OF W.G. BEARINGS INC. ISSUED IN STRICT CONFIDENCE AND SHALL NOT BE REPRODUCED COPIED OR USED FOR ANY PURPOSE WHATSOEVER, WITHOUT PRIOR WRITTEN PERMISSION OF W.G. BEARINGS INC.			
JOB TITLE: T.C.H. BRIDGE OVER BANFF AVE.			
SYSTEM: GLACIER 12K'C'130 UPLIFT DESIGN			
DRAWN BY: BONNOE	PROJECT NO: PG40-84	DRAWING NO: W255-84	REV. 3
CHECKED BY: [Signature]	DATE: MAY 1984		SHT. 10



SECTION 1-4



LONGITUDINAL ELEVATION



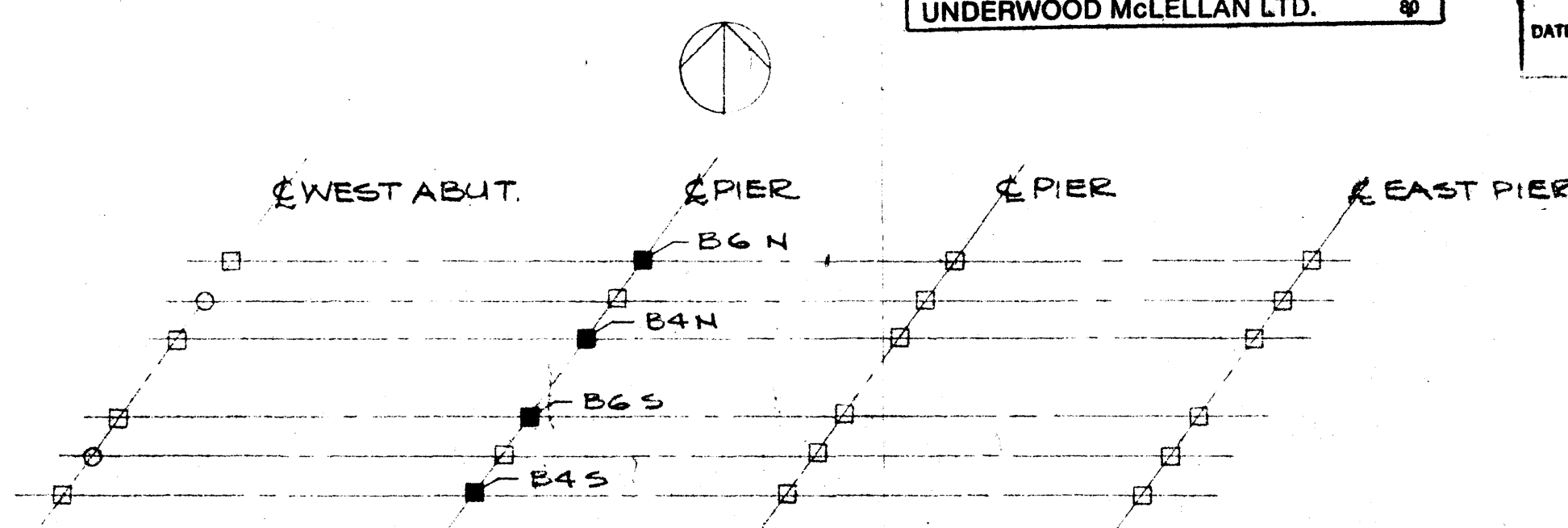
PLAN

BEARING DATA		B4N'S	B6N'S
BEARING TYPE	12 K'C'300	12 K'C'300	12 K'C'300
QUANTITY	2	2	2
MAX. V. LOAD	3355 KN	3355 KN	3602 KN
MAX. D. LOAD	2143 KN	2143 KN	2463 KN
COEF. OF FRICTION	0.03	0.03	0.03
MAX. ROTATION	0.0014	0.0014	0.0014
LONG. MOV'T.	±70	±70	±70
TRANS. MOV'T.	±10	±10	±10

NOTE:
FOR COMMENTS & NOTES
SEE SHEET No. 1.

SHOP DRAWING REVIEW	
The review of this drawing does not in any way relieve the contractor of responsibility as detailed in the contract documents.	
Reviewed	Submission No. 1
✓ Reviewed as noted	Job No. 2977-022
Revise & resubmit	Date JUNE 6/84
Dwg. review by	J. HALEY
UNDERWOOD McLELLAN LTD.	

THIS DRAWING HAS BEEN CHECKED AND IS SUBMITTED IN ACCORDANCE WITH PROVISIONS OF THE GENERAL CONDITIONS OF THE CONTRACT AND IS SUBJECT TO FURTHER REVIEW BY STUDIES HAVING JURISDICTION OVER THE WORK.	
THE RESPONSIBILITY FOR ACCURACY, DIMENSIONS AND CONFORMING TO THE CONTRACT DOCUMENTS REMAINS WITH THE SUB CONTRACTOR.	
ELLIS DON MANAGEMENT SERVICES LTD.	
DATE SUBMITTED	MAY 23 1984
DATE RETURNED	



PLOT PLAN

ITEM	QTY.	DESCRIPTION
14	4PCS	HEX HEAD SCREW 1/2" x 2 1/2" LG 9W WASHER
13	8PCS	HEX. HEAD A325 SCREW 1/2" x 2" LG 9W WASH (GALV.)
12	8PCS	RUBBER WASHER 1 1/4" x 1 1/4" x 1/8"
11	1PC	RUBBER DISC FOR K 300
10	1PC	P.T.F.E. DISC FOR 12K 300
09	2PCS	BRASS RINGS FOR 12K 300
08	1PC	S/S SHEET FOR 12K 300 WD x 21 1/2" LG
07	4PCS	STEEL ANCHOR BARS 1 1/4" x 1 1/4" x 3" LG
06	4PCS	STEEL ANCHOR BARS 1 1/4" x 1 1/4" x 4" LG
05	8PCS	STEEL TRANSIT LUGS 1/2" x 3/4" x 1 1/2"
04	1PC	STEEL BASE PL. 21 5/8" x 21 5/8" x 3/4"
03	1PC	STEEL BASE PL. 17 3/8" x 2 1/2"
02	1PC	STEEL PISTON 1 1/8" x 1"
01	1PC	STEEL TOP PL. 18 1/8" x 1 1/4" x 22 7/8" LG.

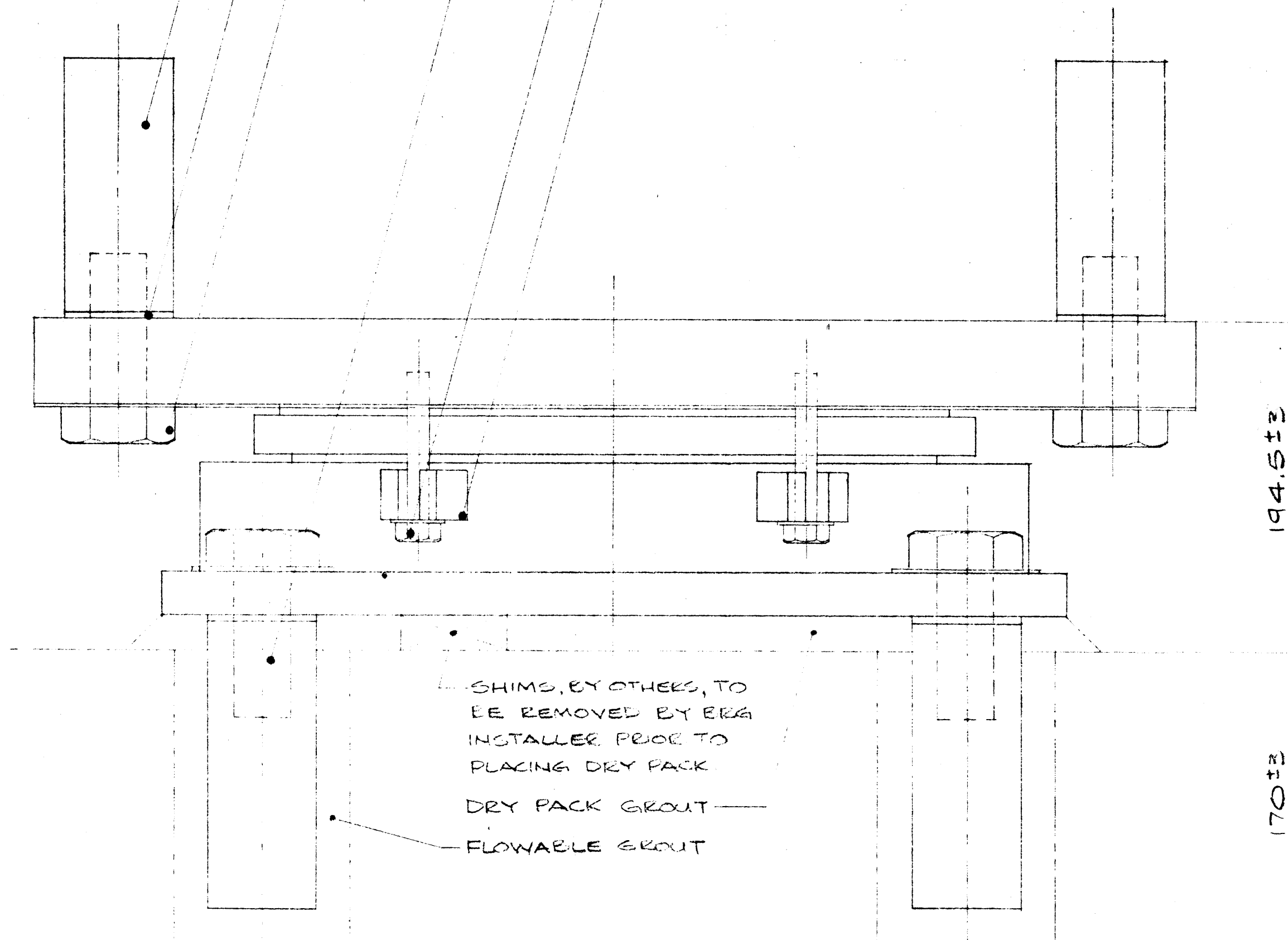
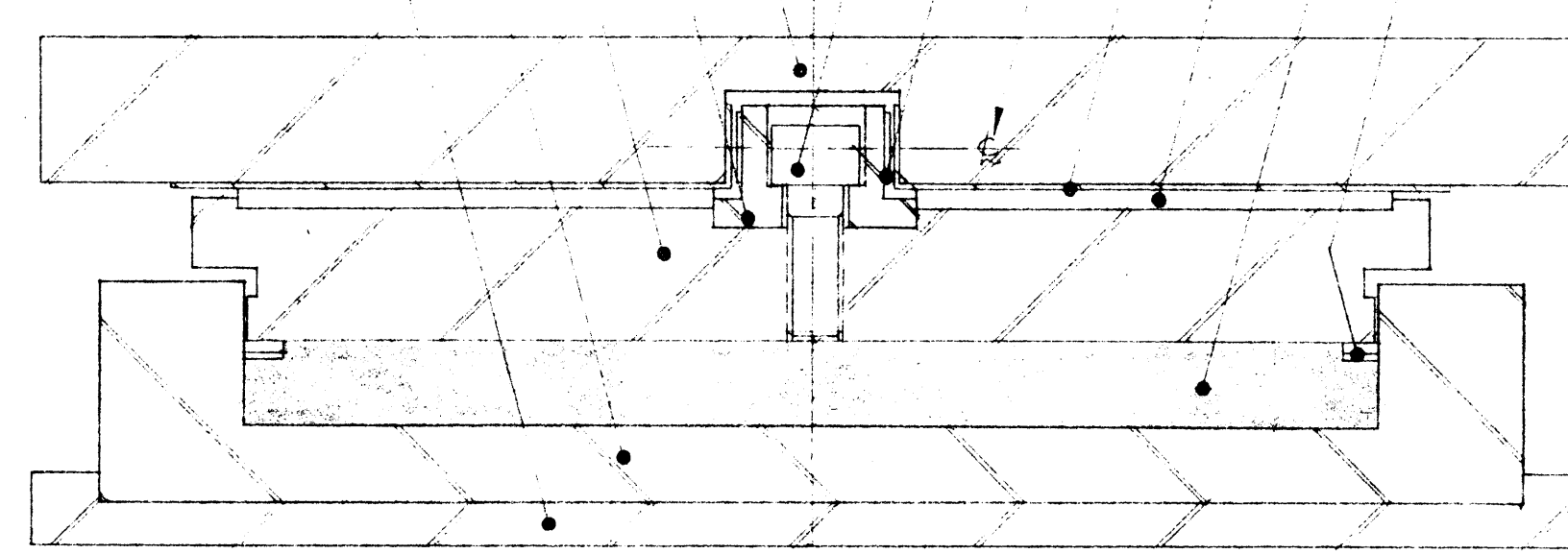
LIST OF MATERIALS PER BRG.

		W.G. BEARINGS INC. BURLINGTON, ONTARIO	
THESE DRAWINGS AND THE DATA CONTAINED THEREIN ARE THE EXCLUSIVE PROPERTY OF W.G. BEARINGS INC. ISSUED IN STRICT CONFIDENCE AND SHALL NOT BE REPRODUCED COPIED OR USED FOR ANY PURPOSE WHATSOEVER WITHOUT PRIOR WRITTEN PERMISSION OF W.G. BEARINGS INC.			
JOB TITLE: T.C.H. BRIDGE OVER BANFF AVE			
SYSTEM: GLACIER 12 K'C'300 POT BEARING			
DRAWN BY: ECONNOR	PROJECT NO: P640-84	DRAWING NO.: W84-255	REV 4
CHECKED BY: 	DATE: APRIL 1984		

AA006040

05 04 03 02 01 16 10 15 09 12 13 11

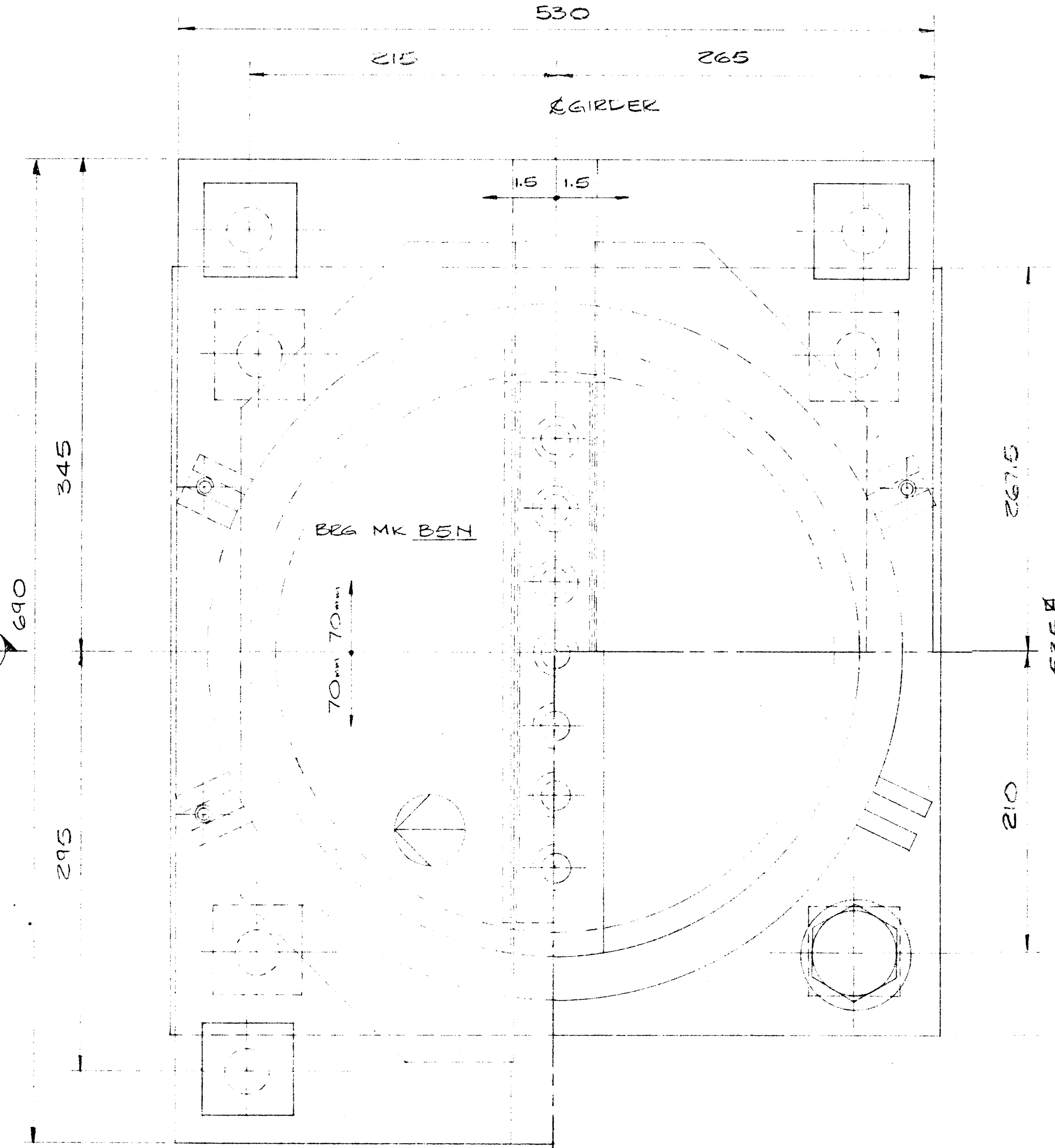
07 14 17 08 18 06



SECTION 1
5

SHIMS, EY OTHERS, TO
BE REMOVED BY ERS
INSTALLER PRIOR TO
PLACING DRY PACK
DRY PACK GROUT
FLOWABLE GROUT

LONGITUDINAL ELEVATION



PLAN

BEARING DATA

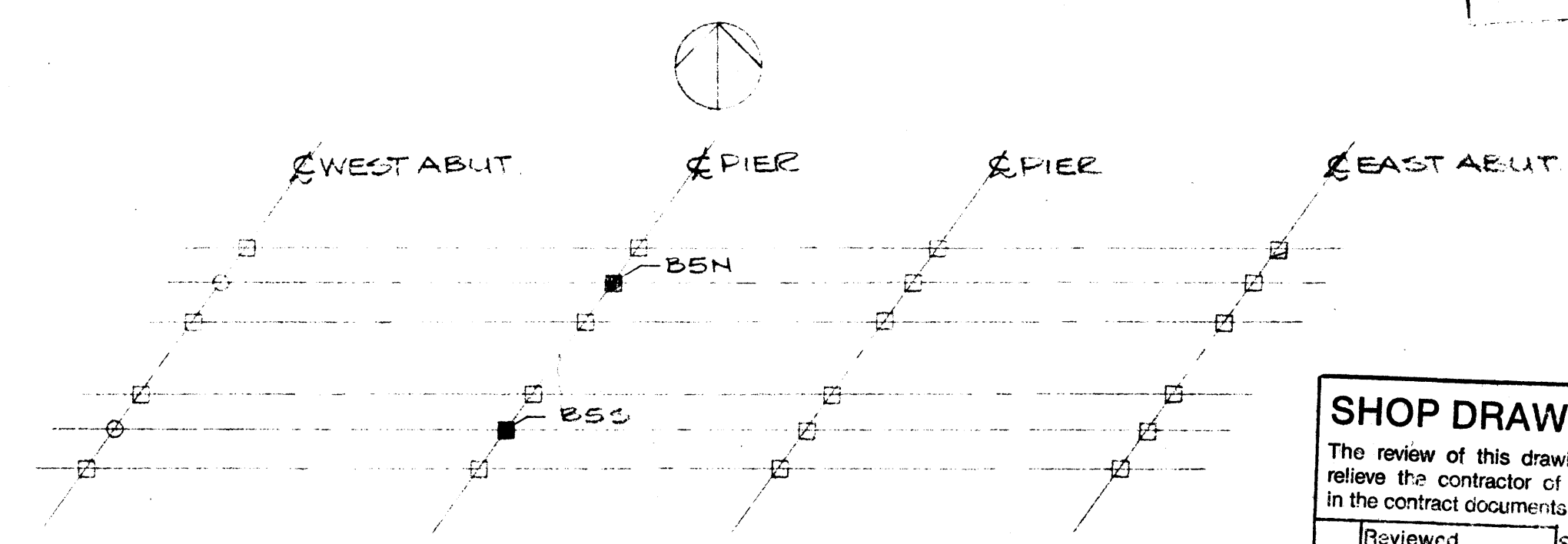
BEARING TYPE	11K'C'350
QUANTITY	2
MAX V. LOAD	3397 KN
MAX D. LOAD	2913 KN
MAX H. LOAD	384 KN
COEF OF FRICTION	0.03
MAX. ROTATION	0.0015
LONG. MOV'T	±70
TRANS. MOV'T	±1.5

NOTE:
FOR COMMENTS & NOTES
SEE SHEET No. 1.

THIS DRAWING HAS BEEN CHECKED AND IS SUBMITTED IN ACCORDANCE WITH PROVISIONS OF THE GENERAL CONDITIONS OF THE CONTRACT, AND IS SUBJECT TO FURTHER REVIEW BY FORCES HAVING JURISDICTION OVER THE WORK.

THE RESPONSIBILITY FOR ACCURACY, DIMENSIONS AND CONFORMING TO THE CONTRACT DOCUMENTS REMAINS WITH THE SUB CONTRACTOR.

ELLIS-DON MANAGEMENT SERVICES LTD.
DATE SUBMITTED MAY 23 1984
DATE RETURNED



PLOT PLAN

18	4RS	HEX HEAD SCREWS 1/2" x 3 1/2" LG 9W WASH
17	8RS	HEX HEAD SCREWS 1/2" x 3 1/2" LG 9W WASH (GALV)
16	7RS	CAP SCREWS 7/8" x 2" LG GR B.
15	4RS	BRASS FLAT HEAD SCREWS 1/4" x 3/4" LG
14	8RS	RUBBER WASHER 2 1/2" x 2 1/2" x 1/8"
13	1PC	RUBBER DISC FOR K 350
12	2RS	PTFE 1/2 DISCS 15.55" x 3/16" (11K350 MAX)
11	2RS	BRASS RINGS FOR K 350
10	2RS	GLACIER D.U. 3/4" x 3/32" x 14 3/4"
09	2RS	S/S SHEET TO SUIT 11K350 WD x 22 3/8" LONG
08	4RS	STEEL ANCHOR BAR 2 1/2" x 2 1/2" x 6 3/4" LG
07	4RS	STEEL ANCHOR BAR 2 1/2" x 2 1/2" x 6" LG
06	8RS	STEEL TRANSIT LUGS 1/2" x 1 1/4" x 1 1/2" LG
05	1PC	STEEL BASE PL. 21" x 21" x 1"
04	1PC	STEEL BASE POT 19 3/8" x 3"
03	1PC	STEEL PISTON 16 3/4" x 2"
02	1PC	STEEL GUIDE BAR 2 3/4" x 1 3/4" x 15"
01	1PC	STEEL TOP PL 20 7/8" x 2" x 27 1/8" LG
ITEM	QTY	DESCRIPTION

LIST OF MATERIALS PER BEG.

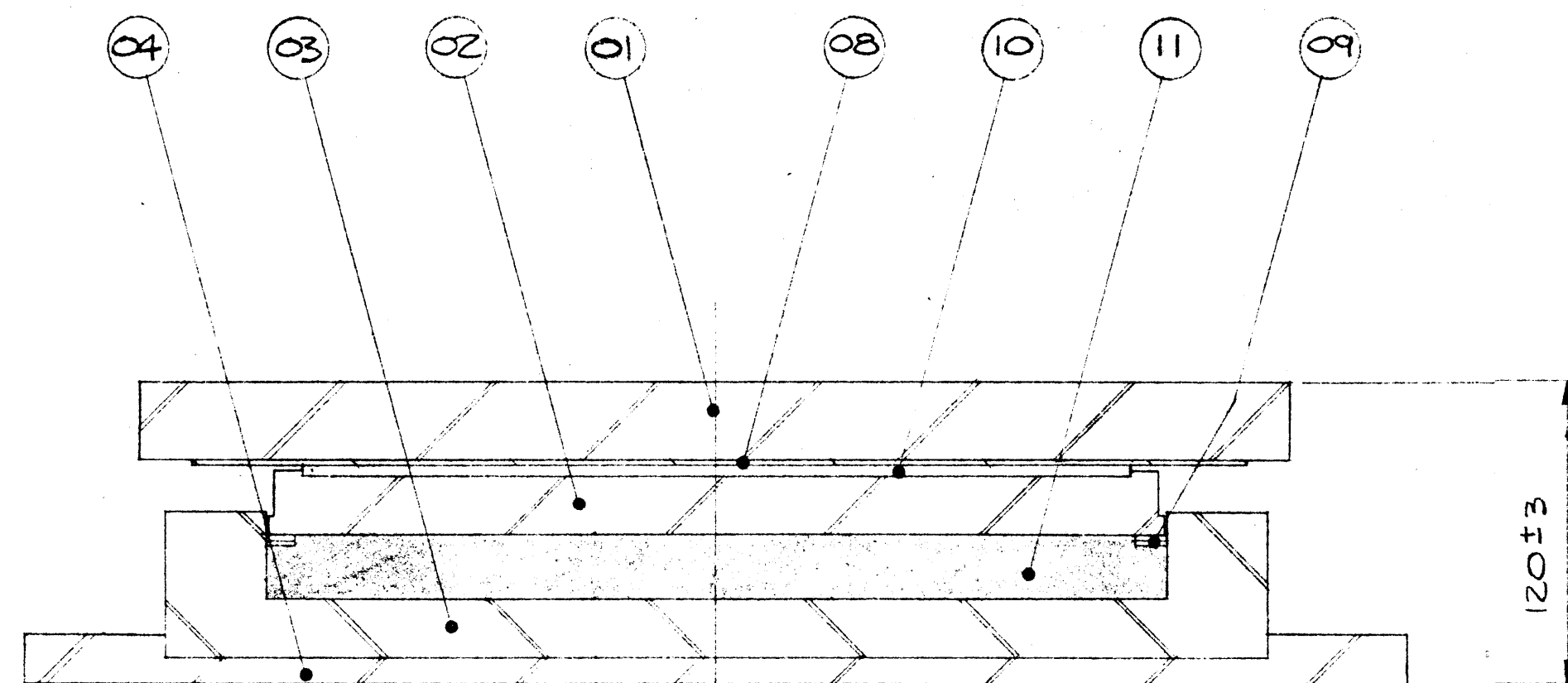
		W.G. BEARINGS INC. BURLINGTON, ONTARIO	
THESE DRAWINGS AND THE DATA CONTAINED THEREIN ARE THE PROPERTY OF W.G. BEARINGS INC. ISSUED IN STRICT CONFIDENCE. NOT TO BE REPRODUCED COPIED OR USED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN PERMISSION OF W.G. BEARINGS INC.			
JOB TITLE: T.C.H. BRIDGE OVER BANFF AVE.			
SYSTEM: GLACIER 11K'C'350 POT BEARING			
DRAWN BY:	PROJECT NO:	DRAWING NO.:	
BEONNOR	P640-84	W84-255	
CHECKED BY:	DATE:		
	APRIL 1984		

SHOP DRAWING REVIEW

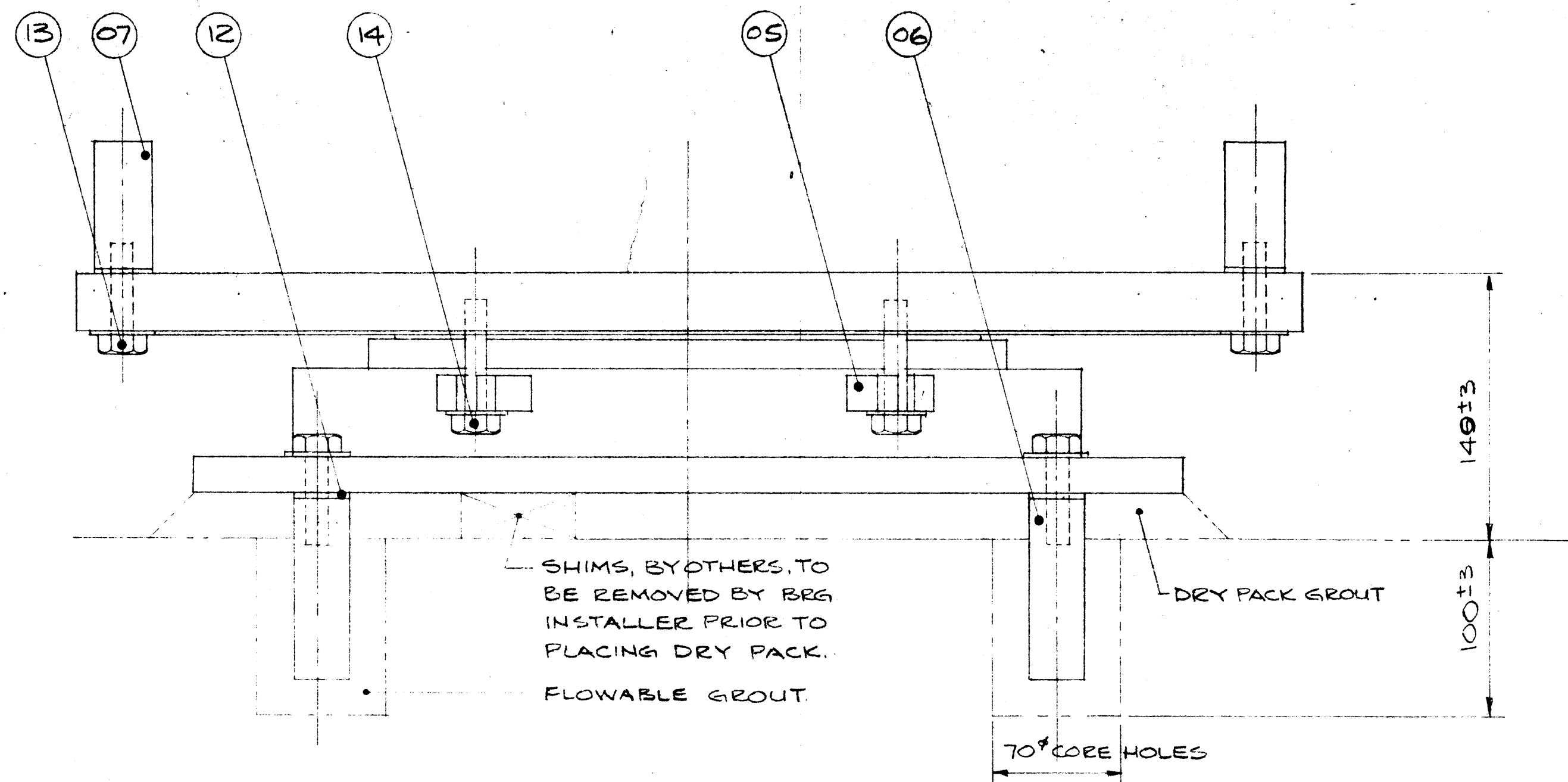
The review of this drawing does not in any way relieve the contractor of responsibility as detailed in the contract documents.

Reviewed	Submission No. 1
Reviewed as noted	Job No. 2977-222
Revise & resubmit	Date JUN 6 1984
Dwg. review by	V. HALEY

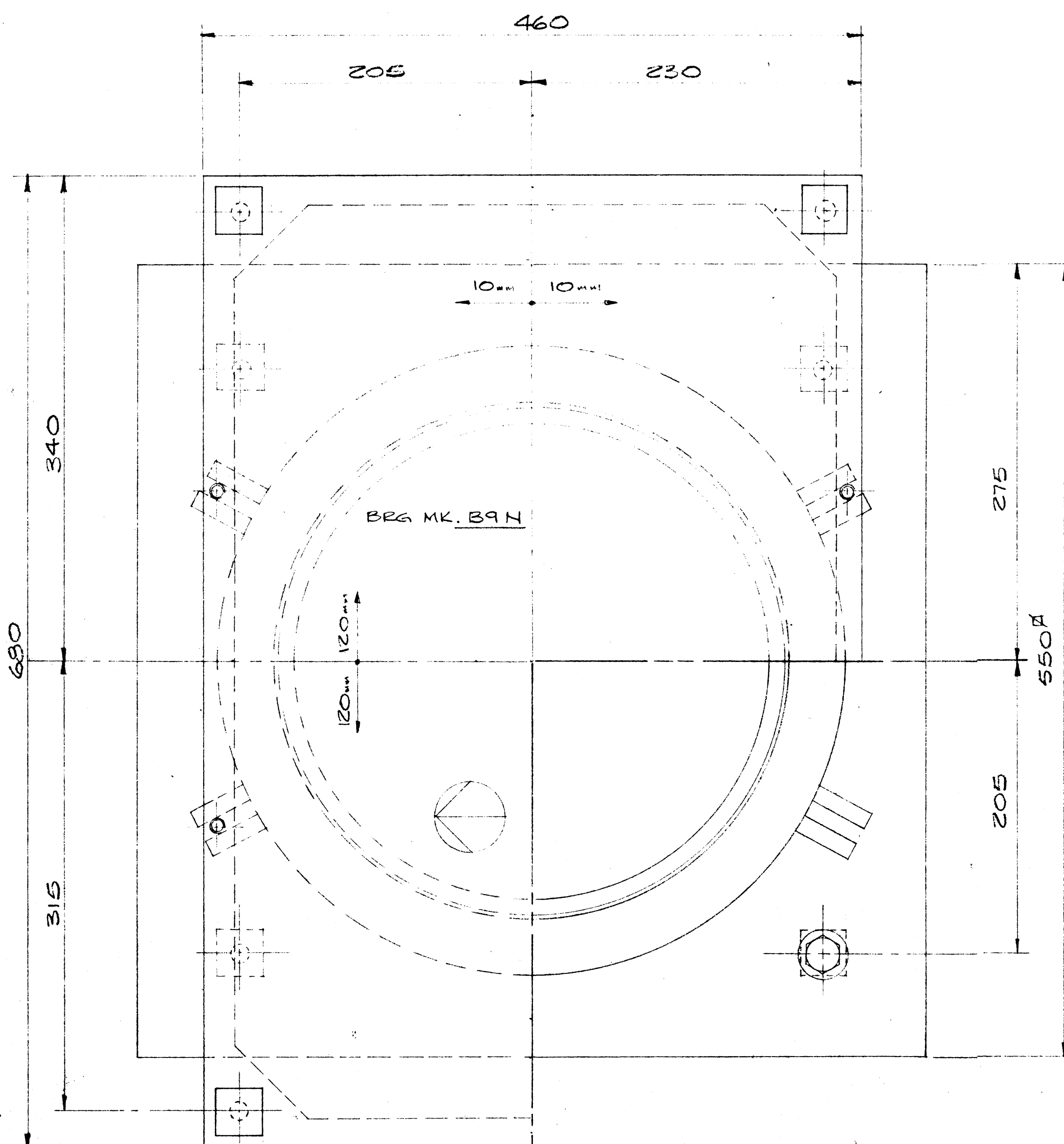
UNDERWOOD McLELLAN LTD.



SECTION 1



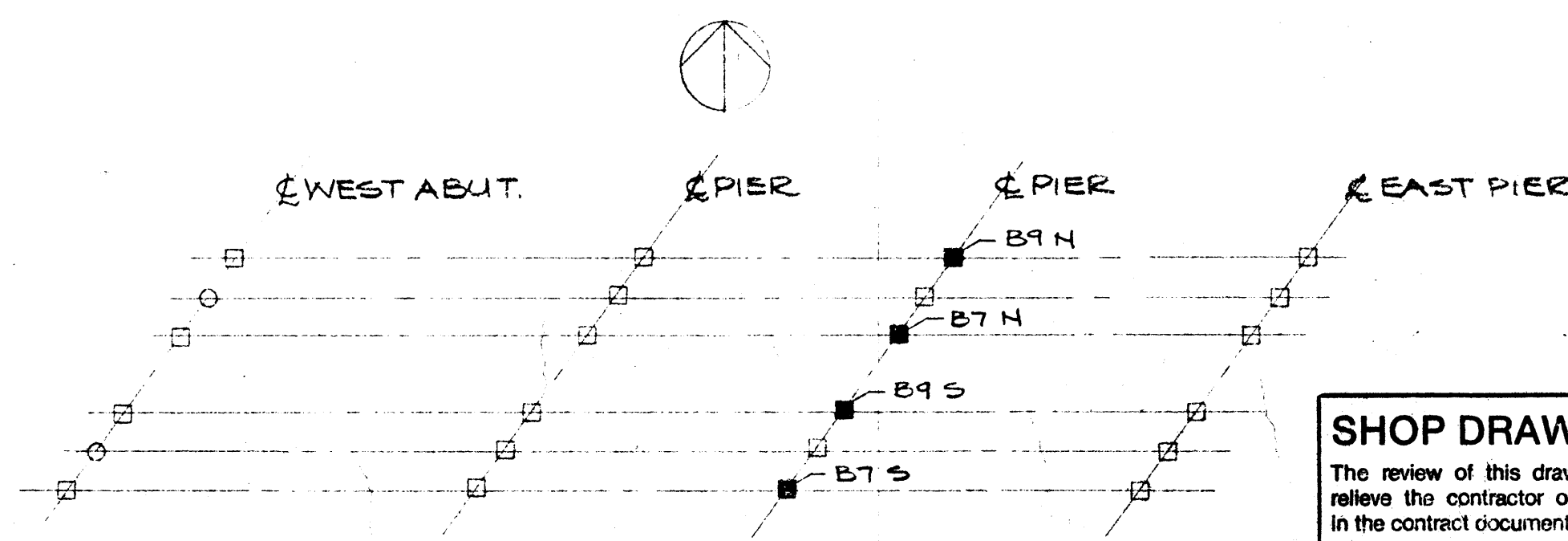
LONGITUDINAL ELEVATION



PLAN

BEARING DATA B7 N&S		B9 N&S	
BEARING TYPE	12 K'C'300	12 K'C'300	
QUANTITY	2	2	
MAX. V. LOAD	3397 KN	3126 KN	
MAX. D. LOAD	2224 KN	2094 KN	
COEF OF FRICTION	0.03	0.03	
MAX. ROTATION	0.0010	0.0005	
LONG. MOV'T.	± 120	± 120	
TRANS. MOV'T.	± 10	± 10	

NOTE:
FOR COMMENTS & NOTES
SEE SHEET No. 1.



PLOT PLAN

SHOP DRAWING REVIEW	
The review of this drawing does not in any way relieve the contractor of responsibility as detailed in the contract documents.	
Reviewed	Submission No. 1
Reviewed as noted	Job No. 2177-022
Revise & resubmit	Date JUNE 6/84
Dwg. review by	J. HALEY
UNDERWOOD McLELLAN LTD.	

THIS DRAWING HAS BEEN CHECKED AND IS SUBMITTED IN ACCORDANCE WITH PROVISIONS OF THE GENERAL CONDITIONS OF THE CONTRACT, AND IS SUBJECT TO FURTHER REVIEW BY BODIES HAVING JURISDICTION OVER THE WORK.

THE RESPONSIBILITY FOR ACCURACY, DIMENSIONS AND CONFORMING TO THE CONTRACT DOCUMENTS REMAINS WITH THE SUB CONTRACTOR.

ELLIS-DON MANAGEMENT SERVICES LTD.
DATE SUBMITTED
DATE RETURNED MAY 23 1984

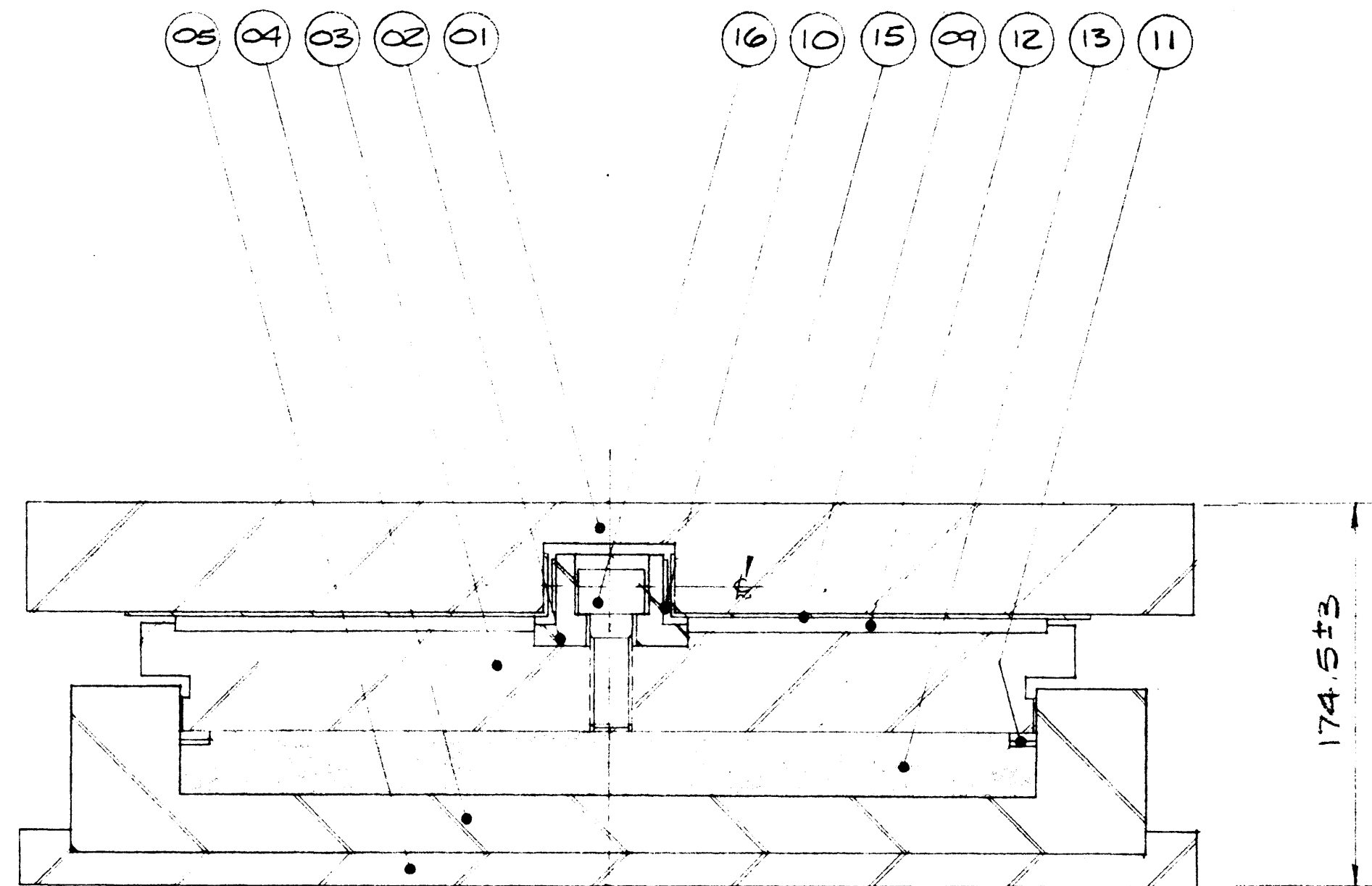
ITEM	QTY.	DESCRIPTION
14	4PCS	HEX HEAD SCREW 1/2" x 2 1/2" LG 9W WASHER
13	8PCS	HEX. HEAD A325 SCREW 1/2" x 2" LG 9W WASH (GALV.)
12	8PCS	RUBBER WASHER 1/4" x 1/4" x 1/8"
11	1PC	RUBBER DISC FOR K 300
10	1PC	R.T.F.E. DISC FOR 12K 300
09	2PCS	BRASS RINGS FOR 12K 300
08	1PC	S/S SHEET FOR 12K 300 WD x 25 1/8" LG.
07	4PCS	STEEL ANCHOR BARS 1/4" x 1/4" x 3" LG
06	4PCS	STEEL ANCHOR BARS 1/4" x 1/4" x 4" LG
05	8PCS	STEEL TRANSIT LUGS 1/2" x 3/4" x 1 1/2"
04	1PC	STEEL BASE PL. 21 5/8" x 21 5/8" x 3/4"
03	1PC	STEEL BASE PL. 17 3/8" x 2 1/2"
02	1PC	STEEL PISTON 14 1/8" x 1"
01	1PC	STEEL TOP PL. 18 1/8" x 1 1/4" x 26 3/4" LG.

LIST OF MATERIALS PER BRG.

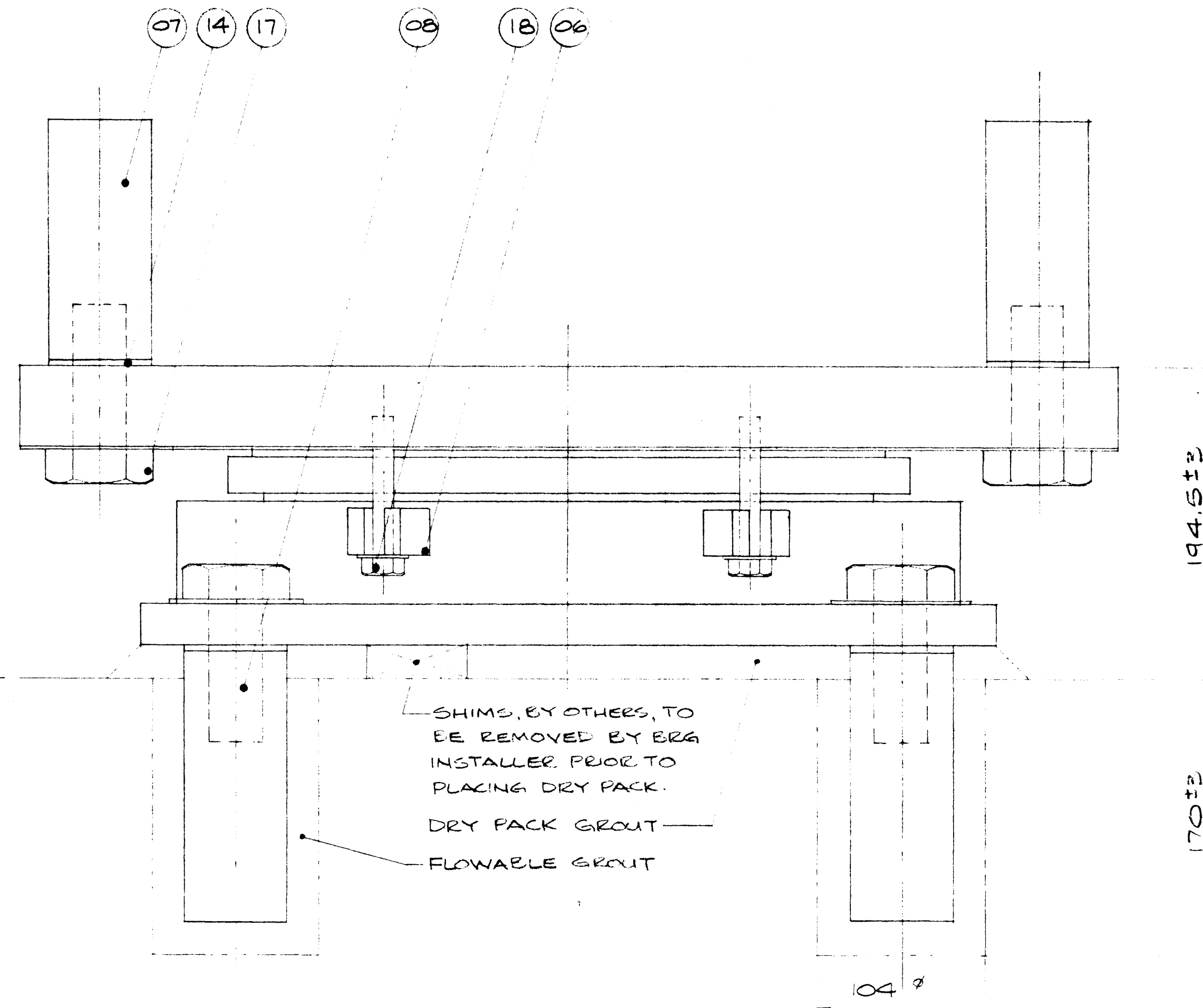
		W.G. BEARINGS INC. BURLINGTON, ONTARIO	
THESE DRAWINGS AND THE DATA CONTAINED THEREIN ARE THE EXCLUSIVE PROPERTY OF W.G. BEARINGS INC. ISSUED IN STRICT CONFIDENCE AND SHALL NOT BE REPRODUCED COPIED OR USED FOR ANY PURPOSE WHATSOEVER WITHOUT PRIOR WRITTEN PERMISSION OF W.G. BEARINGS INC.			
JOB TITLE: T.C.H. BRIDGE OVER BANFF AVE			
SYSTEM: GLACIER 12 K'C'300 POT BEARING			
DRAWN BY: ECONNOR	PROJECT NO: PG40-84	DRAWING NO.: W84-255	REV 6
CHECKED BY: 	DATE: APRIL 1984		



AA006042



SECTION 1
7



SHIMS, BY OTHERS, TO
BE REMOVED BY BRS
INSTALLER, PRIOR TO
PLACING DRY PACK.

DRY PACK GROUT
FLOWABLE GROUT

T/O PIER

LONGITUDINAL ELEVATION

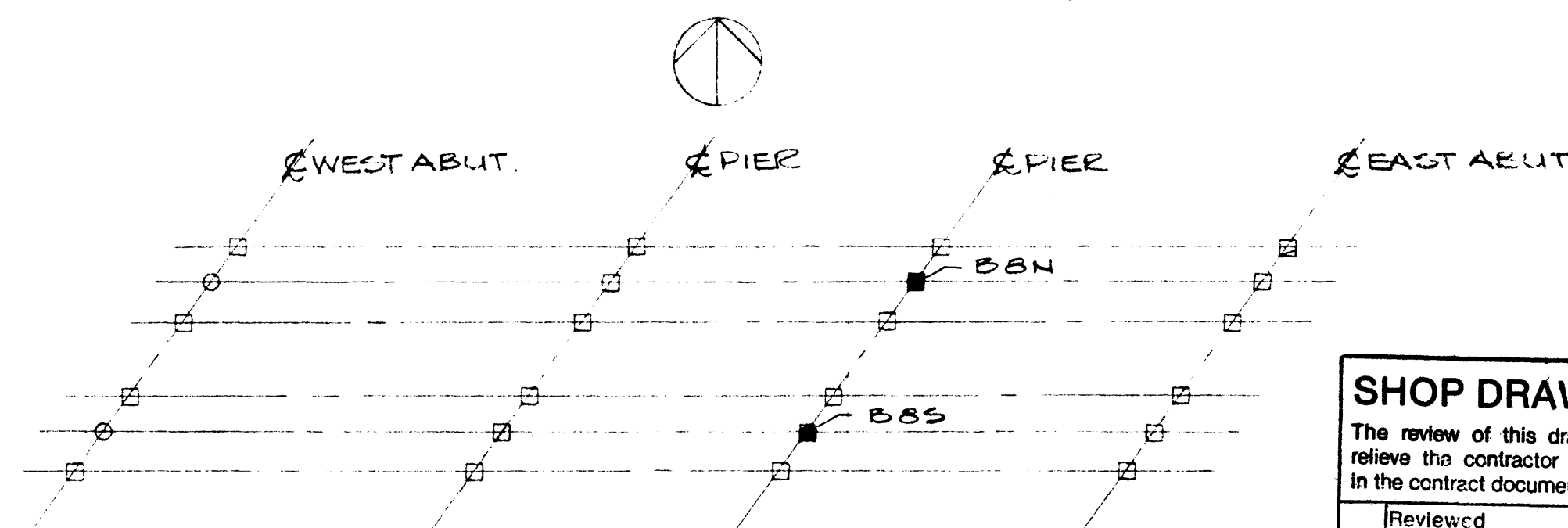
THIS DRAWING HAS BEEN CHECKED AND
IS SUBMITTED IN ACCORDANCE WITH
PROVISIONS OF THE GENERAL CONDITIONS
OF THE CONTRACT, AND IS SUBJECT TO
FURTHER REVIEW BY BODIES HAVING
JURISDICTION OVER THE WORK.
SIGNED
THE RESPONSIBILITY FOR ALL
DIMENSIONS AND CONFORMING
CONTRACT DOCUMENTS REMAINS
THE SUBCONTRACTOR.
ELLIS DON MANAGEMENT SERVICES LTD.
DATE SUBMITTED MAY 23 1984
DATE RETURNED

BEARING DATA

BEARING TYPE 11K'C'350
QUANTITY 2
MAX V. LOAD 3207 kN
MAX D. LOAD 2607 kN
MAX H. LOAD 384 kN
COEF. OF FRICTION 0.03
MAX. ROTATION 0.0007
LONG. MOV'T ± 120 mm
* TRANS. MOV'T ± 2 mm

* EXTRA MOVEMENT REQUIRED FOR
CURVATURE OF BRIDGE.

NOTE:
FOR COMMENTS & NOTES
SEE SHEET No. 1.



PLOT PLAN

SHOP DRAWING REVIEW	
The review of this drawing does not in any way relieve the contractor of responsibility as detailed in the contract documents.	
Reviewed	Submission No. 1
✓ Reviewed as noted	Job No. 2977-022
Revise & resubmit	Date JUNE 6/84
Dwg. review by	J. HALEY
UNDERWOOD McLELLAN LTD.	

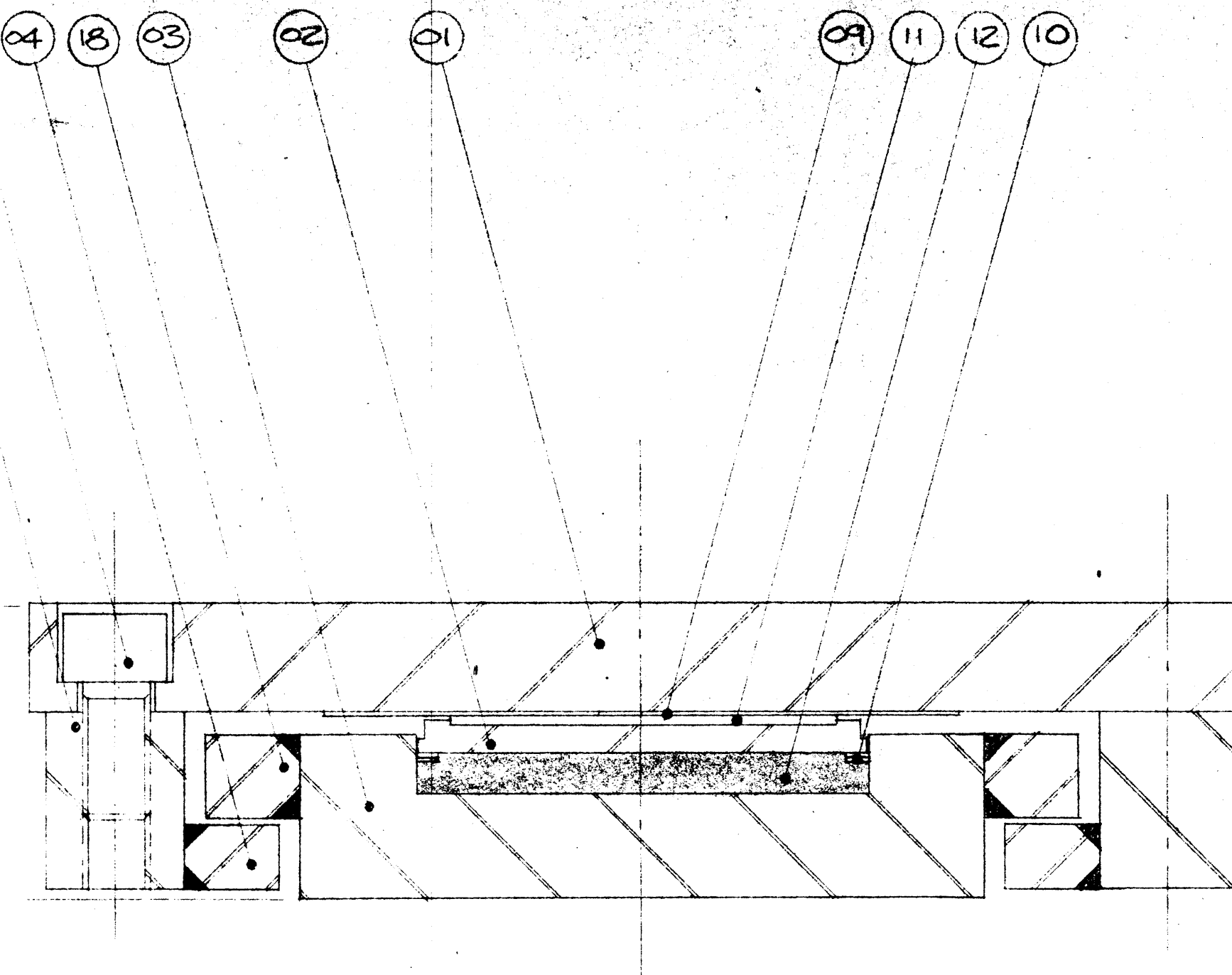
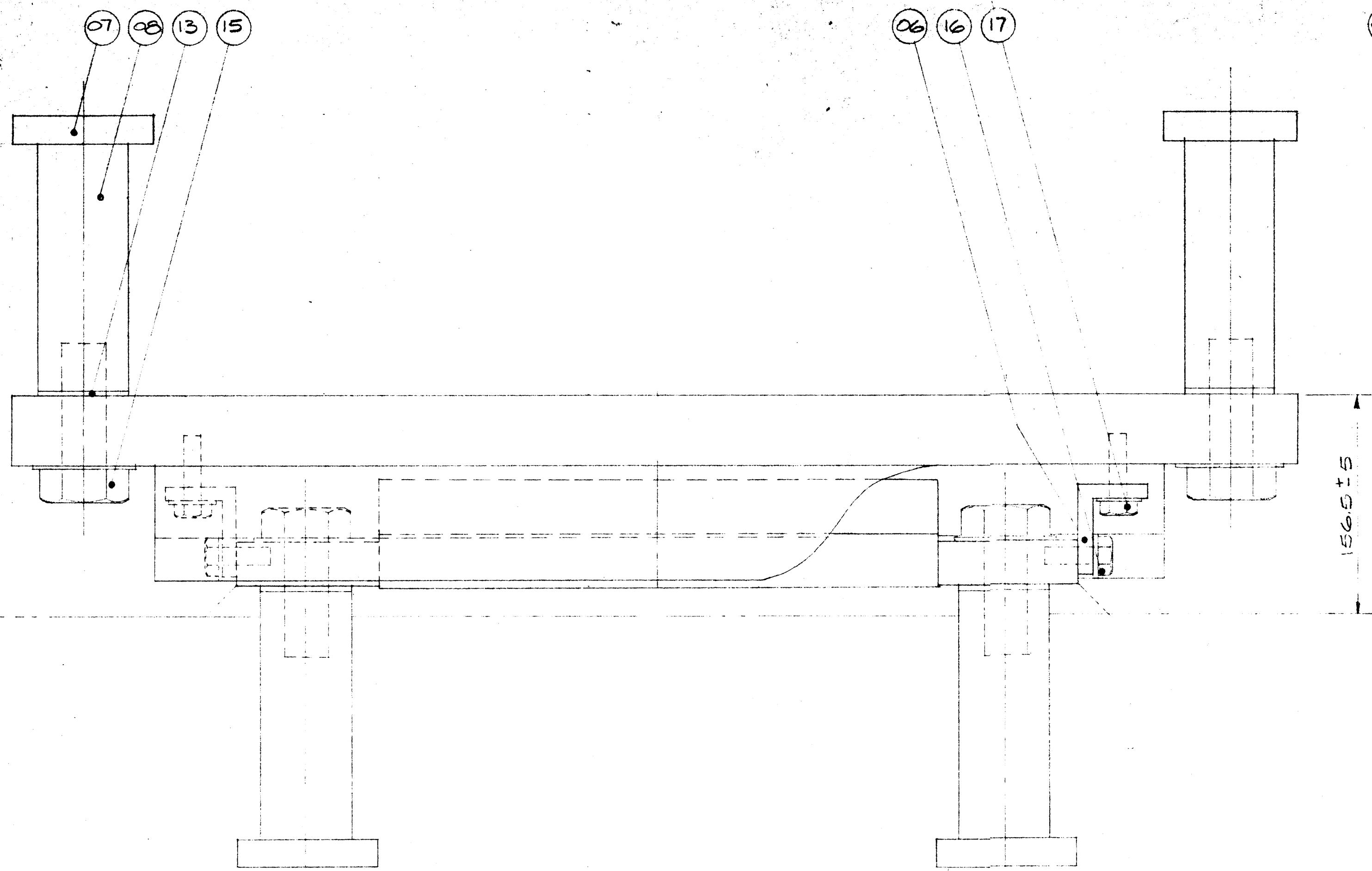
18	4RS	HEX HEAD SCREWS 1/2" x 3 1/2" LG 9.0 WASH
17	8PCS	HEX HEAD SCREWS 1/2" x 3 1/2" LG 9.0 WASH (GALV.)
16	7RS	CAP SCREWS 7/8" x 2" LG GR B.
15	4RS	BRASS FLAT HEAD SCREWS 1/4" x 3/4" LG
14	8RS	RUBBER WASHER 2 1/2" x 2 1/2" x 1/8"
13	1PC	RUBBER DISC FOR K 350
12	2RS	PTFE 1/2 DISCS 15.55" x 3 1/16" (11K350 MOD)
11	2RS	BRASS RINGS FOR K 350
10	2RS	GLACIER D.U. 3/4" x 3/2" x 14 3/4"
09	2RS	S/S SHEET TO SUIT 11K350 WD x 26 7/8" LONG
08	4RS	STEEL ANCHOR BAR 2 1/2" x 2 1/2" x 6 3/4" LG
07	4RS	STEEL ANCHOR BAR 2 1/2" x 2 1/2" x 6" LG
06	8PCS	STEEL TRANSIT LUGS 1/2" x 1 1/4" x 1 1/2" LG
05	1PC	STEEL BASE PL. 21" x 21" x 1"
04	1PC	STEEL BASE POT 19 3/8" x 3"
03	1PC	STEEL PISTON 16 3/4" x 2"
02	1PC	STEEL GUIDE BAR 2 3/4" x 1 3/4" x 15"
01	1PC	STEEL TOP PL. 20 7/8" x 2" x 3 1/8" LG
ITEM	QTY	DESCRIPTION

LIST OF MATERIALS PER BRS

GLACIER		W.G. BEARINGS INC.	
BURLINGTON, ONTARIO		BURLINGTON, ONTARIO	
THESE DRAWINGS AND THE DATA CONTAINED THEREIN, ARE THE EXCLUSIVE PROPERTY OF W.G. BEARINGS INC. ISSUED IN STRICT CONFIDENCE AND SHALL NOT BE REPRODUCED COPIED OR USED FOR ANY PURPOSE WHATSOEVER, WITHOUT PRIOR WRITTEN PERMISSION OF W.G. BEARINGS INC.			
JOB TITLE: T.C.H. BRIDGE OVER BANFF AVE.			
SYSTEM: GLACIER 11K'C'350 POT BEARING			
DRAWN BY: ECONNOR	PROJECT NO: P640-84	DRAWING NO: W84-255	REV. 7 OF 10
CHECKED BY: [Signature]	DATE: APRIL 1984		

AA006043

HTS



SECTION 1/8

THIS DRAWING HAS BEEN CHECKED AND IS SUBMITTED IN ACCORDANCE WITH THE PROVISIONS OF THE GENERAL CONDITIONS OF THE CONTRACT AND IS SUBJECT TO FURTHER REVIEW BY BODIES HAVING JURISDICTION OVER THE WORK.

THE RESPONSIBILITY FOR ACCURACY OF DIMENSIONS AND CONFORMING TO CONTRACT DOCUMENTS REMAINS WITH THE SUB CONTRACTOR.

ELLISON MANAGEMENT SERVICES LTD.
DATE SUBMITTED MAY 23 1984
DATE RETURNED

LONGITUDINAL ELEVATION

920

410

460

90
(TYP)

8

816 MK ELEV

160 160

100

158
316
108

200

50

400

100

BEARING DATA

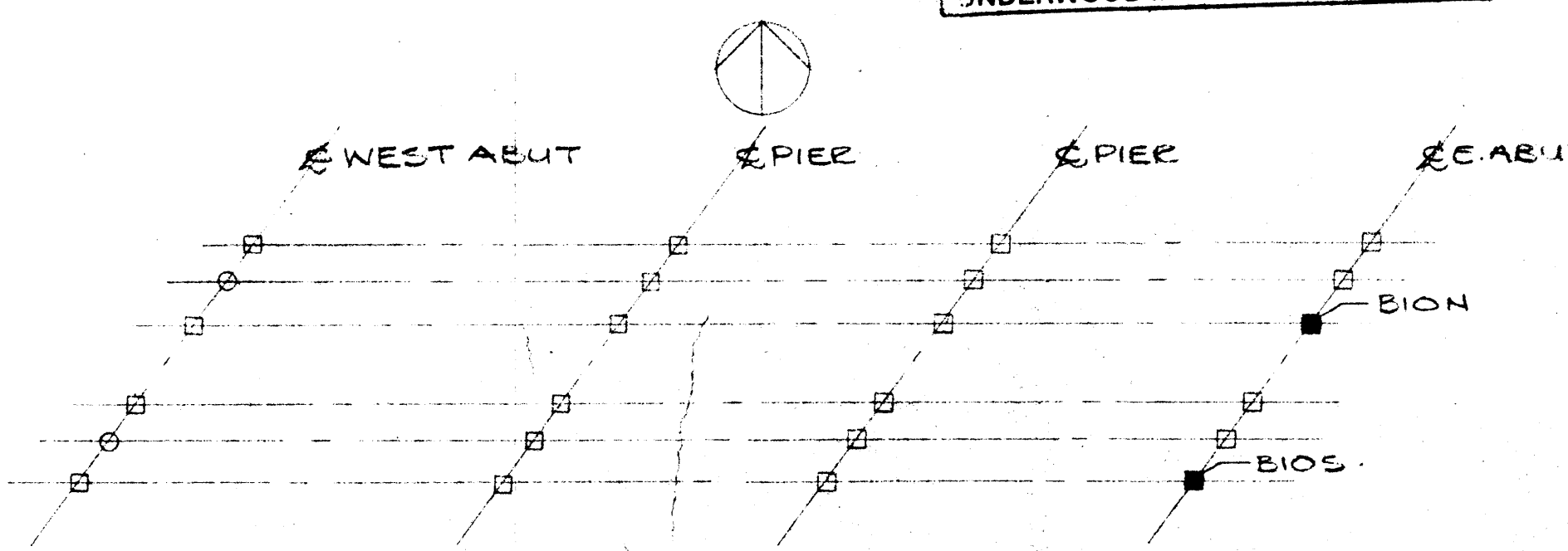
BEARING TYPE 12 K'C 100 (UPLIFT)
QUANTITY 2
MAX. V. LOAD 1102 KN
MAX. D. LOAD 361 KN
MAX. UPLIFT LOAD - 565 KN
COEF OF FRICTION 0.03
MAX. ROTATION 0.0011
LONG. MOV'T. ±160
TRANS. MOV'T. ±10

NOTE:
FOR COMMENTS & NOTES
SEE SHEET No. 1.

SHOP DRAWING REVIEW
The review of this drawing does not in any way relieve the contractor of responsibility as detailed in the contract documents.

Reviewed	Submission No. 1
Reviewed as noted	Job No. 177-022
Revise & resubmit	Date JUNE 2/84
Dwg. review by	HALEY

UNDERWOOD McLELLAN LTD.



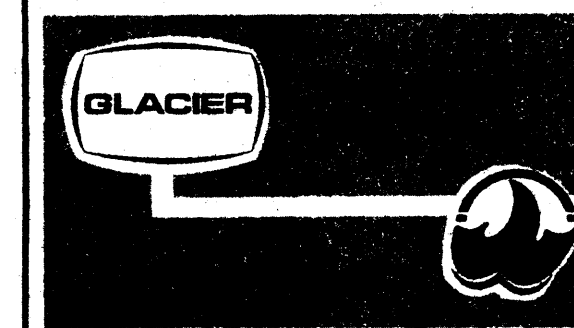
PLOT PLAN

ADD ITEM #19

MAY 18/84

19	ZRS	STEEL ANCHOR LUG 4" x 12 1/2" x 1 1/4"
18	ZRS	STEEL BAR 1 1/2" x 3/4" x 15 3/4" LG
17	4 PCS	HEX HEAD SCREWS 1/2" x 2" LG 9W WASH
16	4 PCS	HEX HEAD SCREWS 1/2" x 1 1/2" LG 9W WASH
15	8 PCS	HEX HD A325 SCREWS 1/4" x 3 1/2" LG GALV.
14	16 PCS	CAP SCREWS 1/4" x 2 1/2" LG GR. B.
13	8 PCS	RUBBER WASHERS 2 1/2" x 2 1/2" x 1/8"
12	1 PC	RUBBER DISC FOR K100.
11	1 PC	PTFE DISC FOR 12 K100.
10	ZRS	BRASS RINGS FOR K100
09	1 PC	2/S SHEET FOR 12K100 W/ 2 x 22 1/2" LG
08	8 PCS	STEEL ANCHOR BARS 2 1/2" x 2 1/2" x 7 1/4" LG
07	8 PCS	STEEL ANCHOR CAPS 4" x 4" x 3/4"
06	ZRS	STEEL TRANSIT ANGLE 2 x 2 1/2 x 3/8 x 6" LG
05	ZRS	STEEL BAR 2 1/2" x 3/4" x 28 3/8" LG
04	ZRS	STEEL BAR 1 1/4" x 3/4" x 28 3/8" LG
03	1 PC	STEEL BASE POT 12 1/2" x 3" x 15 3/4"
02	1 PC	STEEL PISTON FOR 12K100.
01	1 PC	STEEL TAP B 22 1/2" x 2" x 36 1/4"
ITEM	QTY.	DESCRIPTION


LIST OF MATERIALS PER BRS.

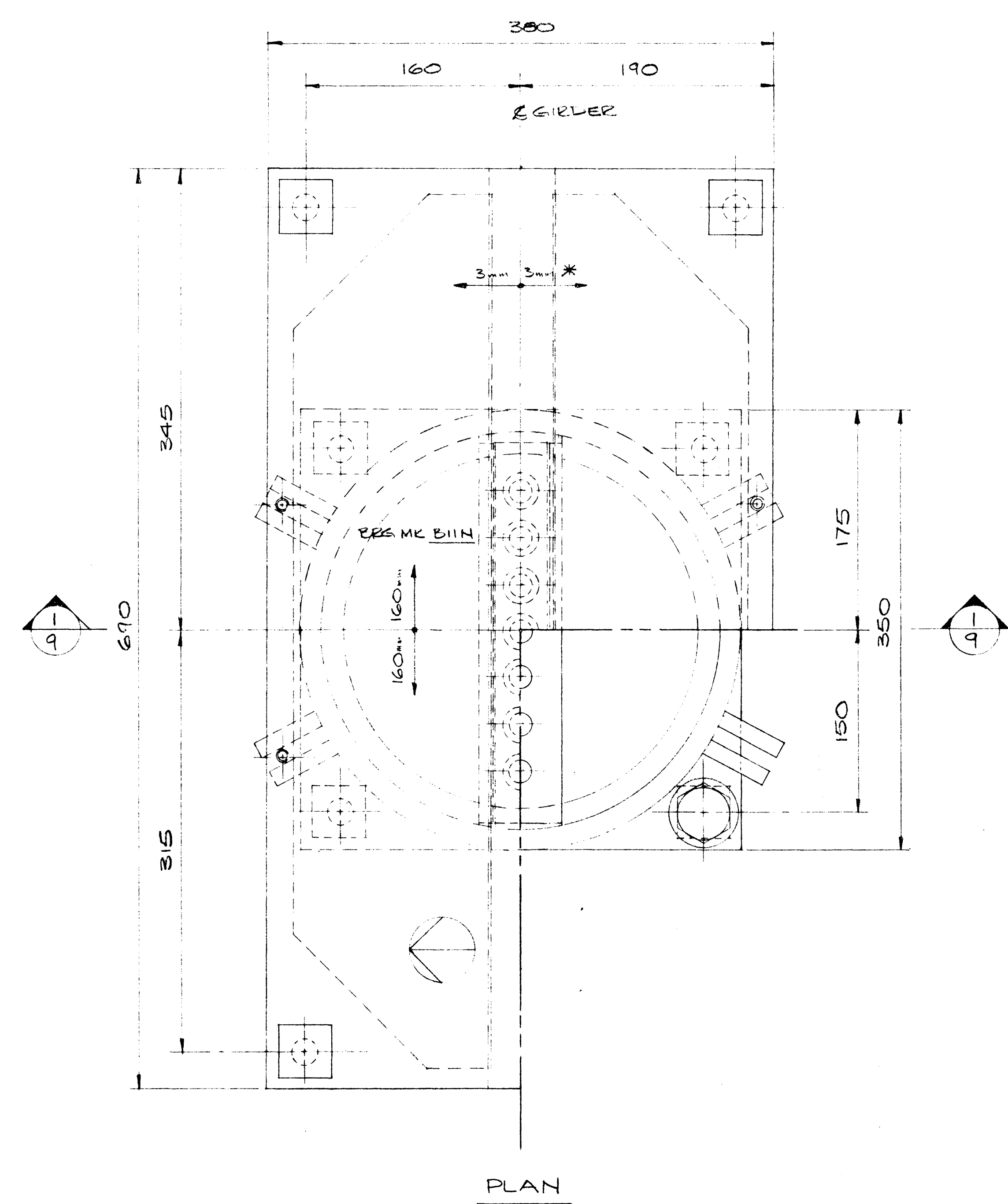
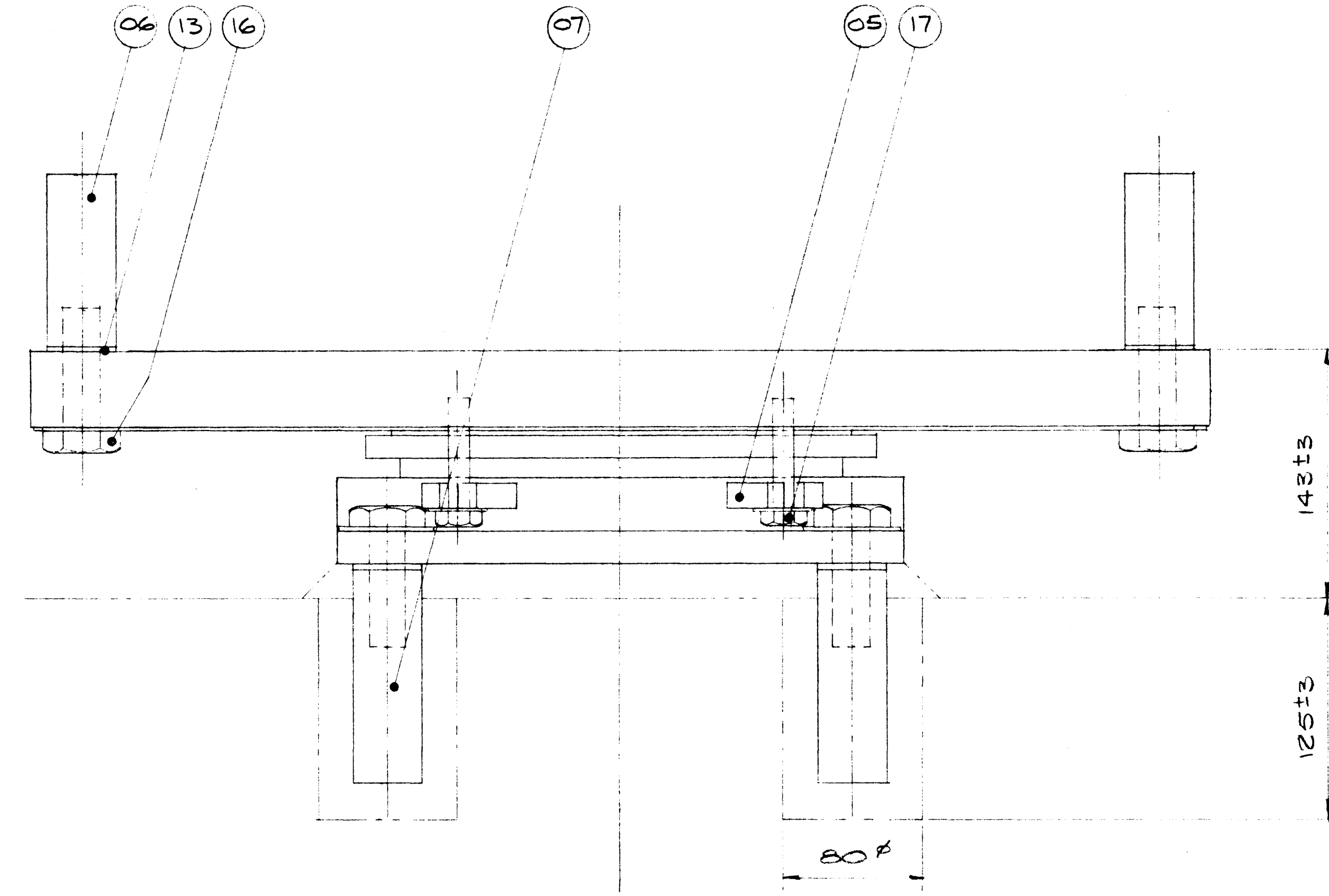
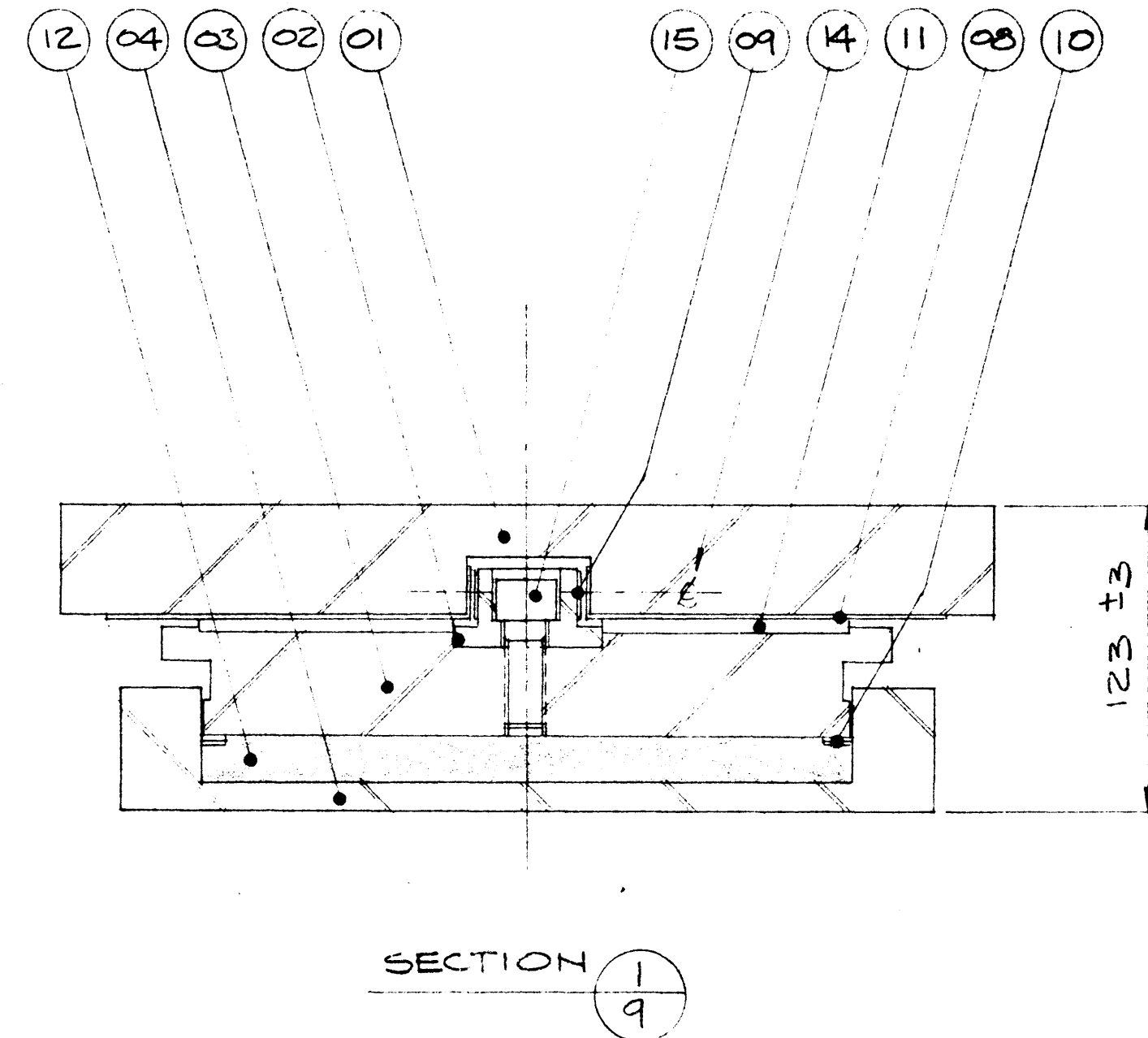


W.G. BEARINGS INC.

BURLINGTON, ONTARIO

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JOB TITLE:					T.C.H BRIDGE OVER BANFF AVE				
SYSTEM:					GLACIER 12 K'C/100 UPLIFT DESIGN				
DRAWN BY:		PROJECT NO:		DRAWING NO:		REV.		SHEET	
BEANOR		P640-84		W255-84				8	
CHECKED BY:		DATE:							
		MAY 1984							

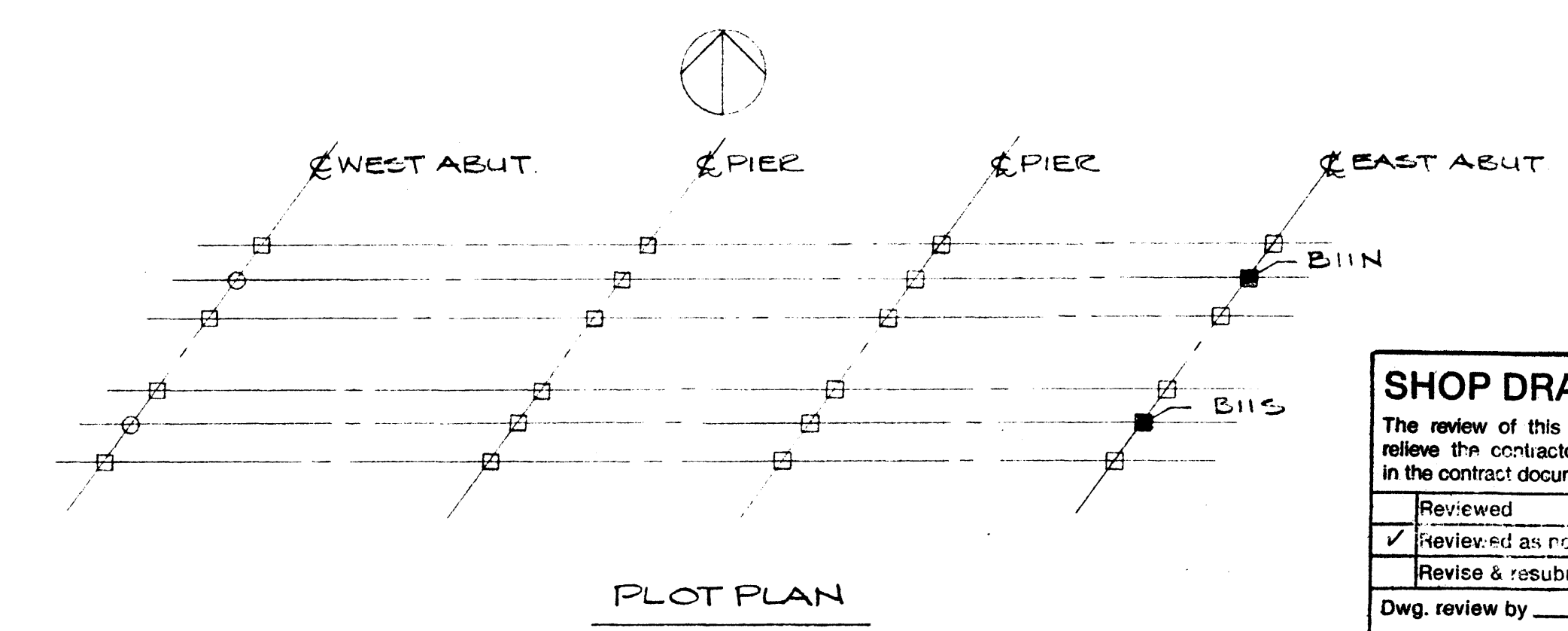


LONGITUDINAL ELEVATION

BEARING DATA

- BEARING TYPE — 11K'C'160
 - QUANTITY — 2
 - MAX. V. LOAD — 1467 KN
 - MAX. D. LOAD — 1089 KN
 - MAX. H. LOAD — 182 KN
 - COEF OF FRICTION — 0.03
 - MAX. ROTATION — 0.0011
 - LONG. MOV'T — ±160
 - * TRANS. MOV'T — ±3
- * EXTRA MOVEMENT REQUIRED FOR CURVATURE OF BRIDGE.

NOTE :
FOR COMMENTS & NOTES
SEE SHEET No. 1.



SHOP DRAWING REVIEW

The review of this drawing does not in any way relieve the contractor of responsibility as detailed in the contract documents.

Reviewed	Submission No. 1
✓ Reviewed as noted	Job No. 2977-022
Revise & resubmit	Date JUNE 6/84
Dwg. review by	J. HALEY

UNDERWOOD McLELLAN LTD.

THIS DRAWING HAS BEEN CHECKED AND IS SUBMITTED IN ACCORDANCE WITH THE PROVISIONS OF THE GENERAL CONDITIONS OF THE CONTRACT AND IS SUBJECT TO FURTHER REVIEW BY ELLIS-BORR MANAGEMENT SERVICES LTD. JURISDICTION OVER THE WORK. SIGNED

THE RESPONSIBILITY FOR ACCURACY OF DIMENSIONS AND CONFORMING TO CONTRACT DOCUMENTS REMAINS THE SUB CONTRACTOR.

ELLIS-BORR MANAGEMENT SERVICES LTD.

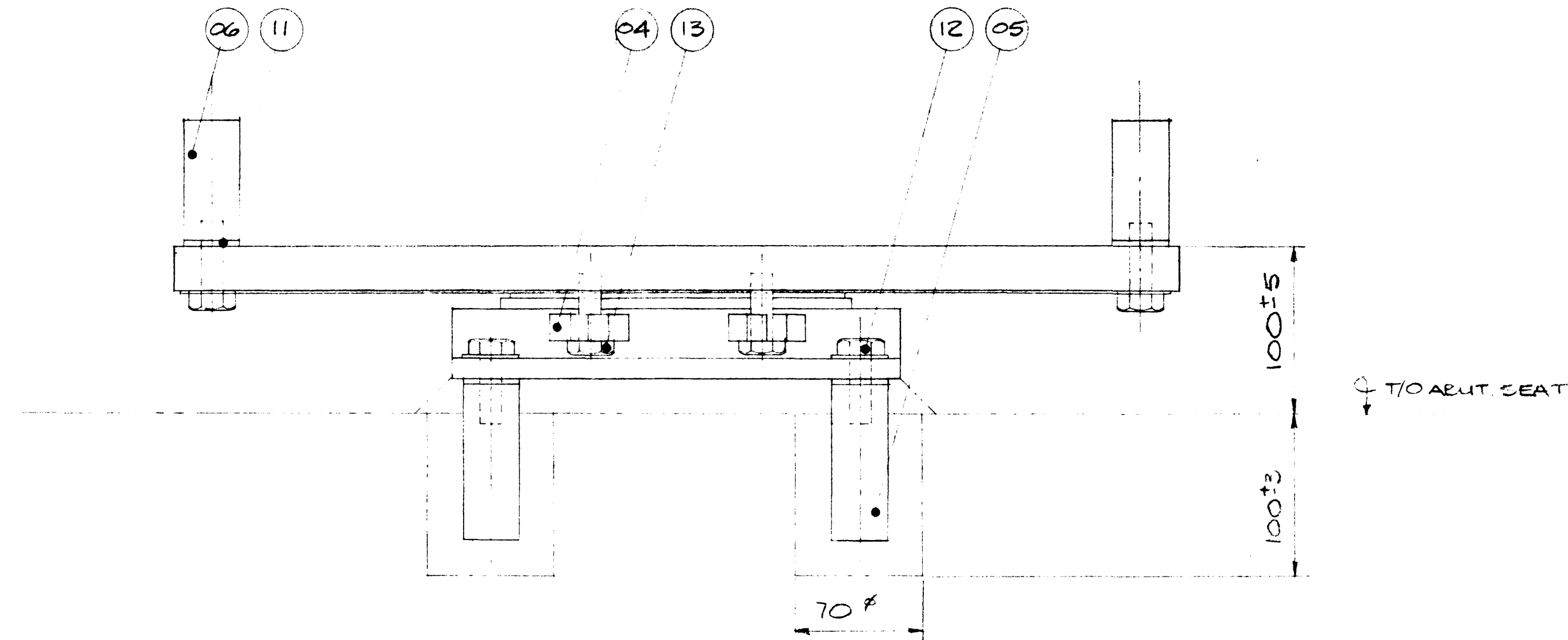
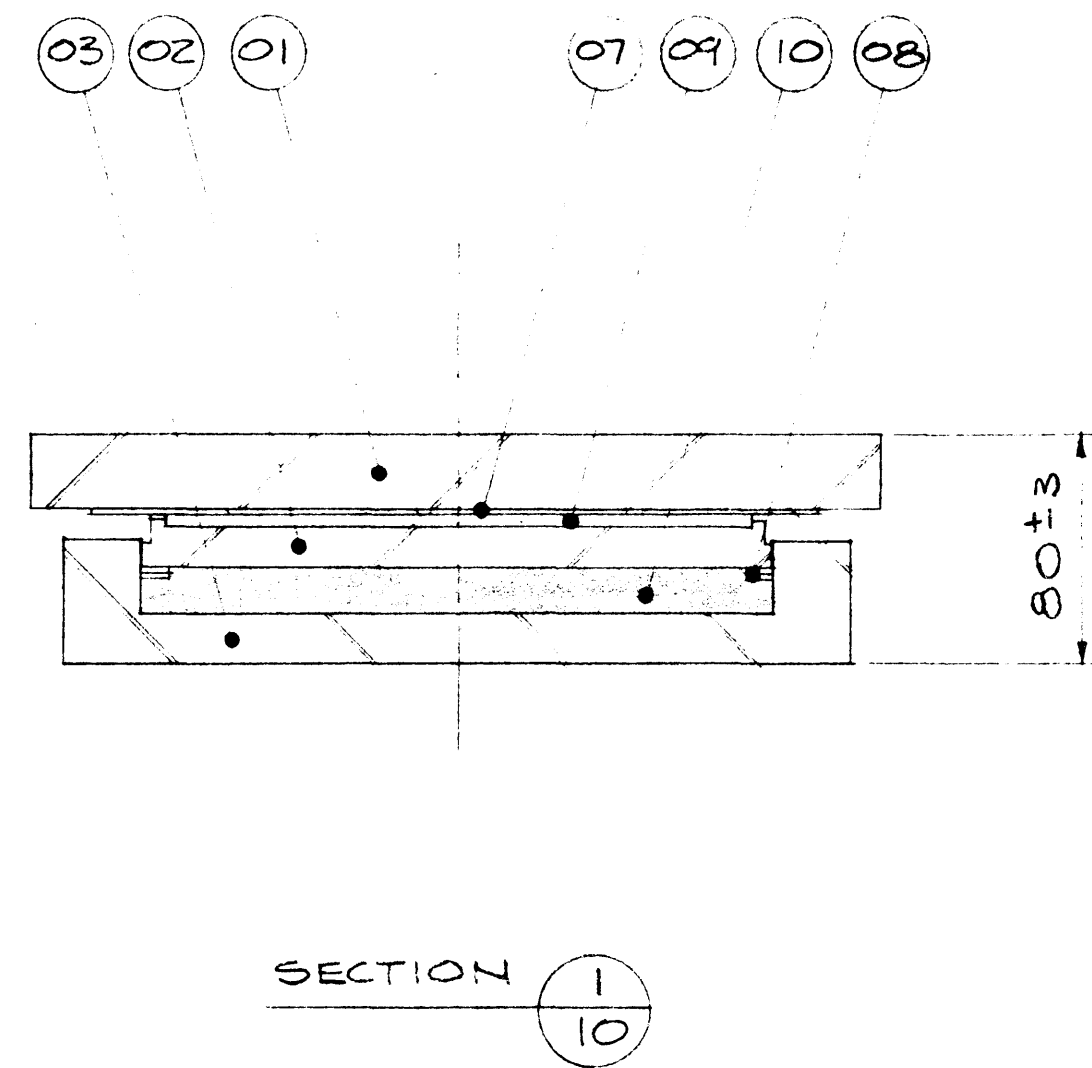
DATE SUBMITTED MAY 23 1984

DATE RETURNED

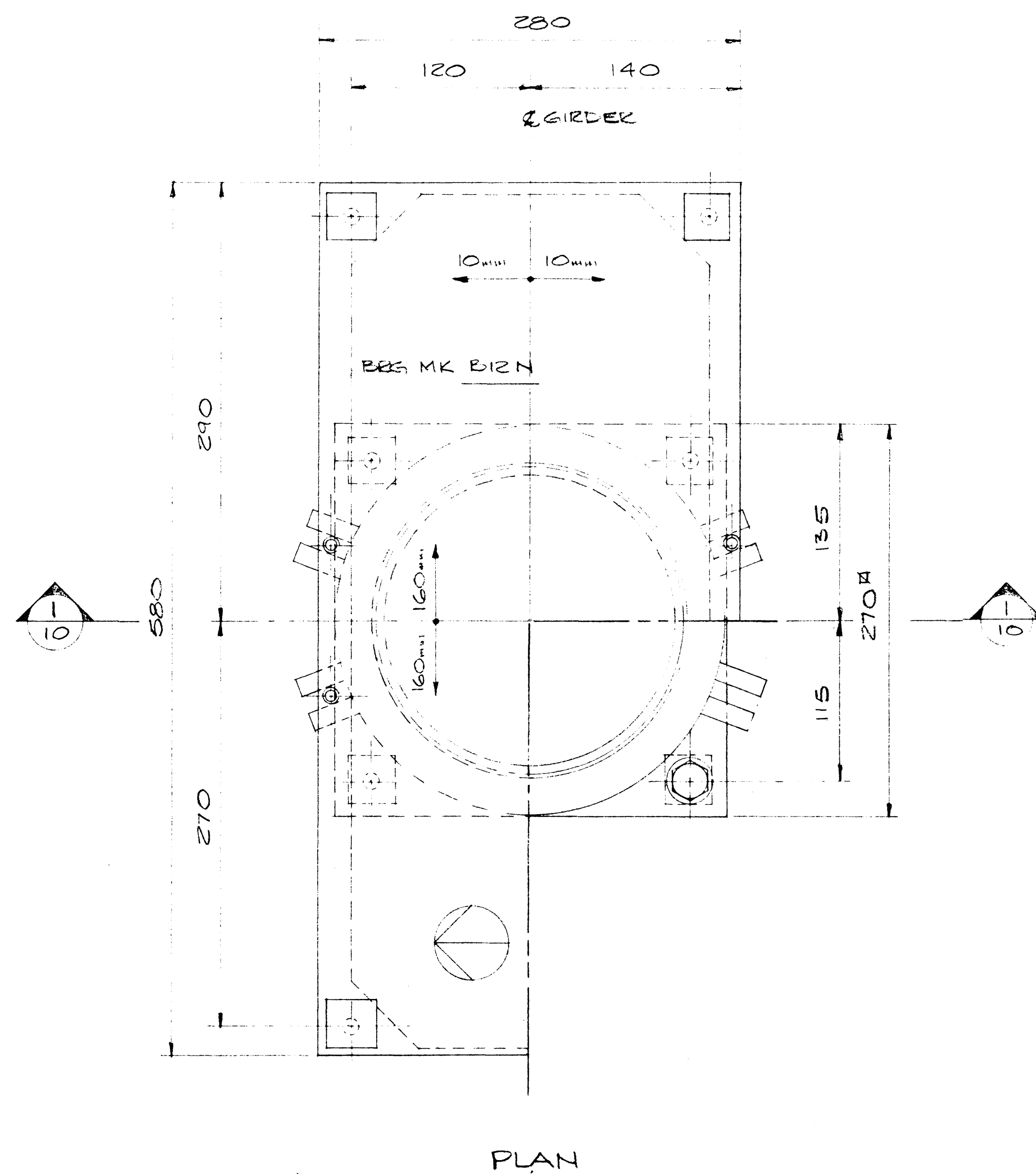
17	4PCS	HEX HEAD SCREW 1/2"x2 1/2" LG 9W WASHER
16	8PCS	HEX HD A325 SCREW 3/4"x2 3/4" LG 9W WASH (GALV)
15	7PCS	CAP SCREW 5/8"x1 3/4" LG GR 8
14	4PCS	BRASS FLAT HEAD SCREWS 1/4"x3/4" LG
13	8PCS	RUBBER WASHERS 1 1/2"x1 1/2"x1/8"
12	1PC	RUBBER DISC TO SUIT K160
11	2PCS	PT.F.E. 1/2 DISC TO SUIT 11K160
10	2PCS	BRASS RINGS FOR K160
09	2PCS	GLACIER D.U. TO SUIT 11K160
08	2PCS	S/S SHEET TO SUIT 11K160 WD x 26 1/8" LG
07	4PCS	STEEL ANCHOR BAR 1 1/2"x1 1/2"x5" LG
06	4PCS	STEEL ANCHOR BAR 1 1/2"x1 1/2"x4" LG
05	8PCS	STEEL TRANSIT LUG 1/2"x5/8"x2" LG
04	1PC	STEEL BASE POT 13 5/8"x13 3/8"x2
03	1PC	STEEL PISTON FOR 11K160
02	1PC	STEEL GUIDE BAR FOR 11K160
01	1PC	STEEL TOP PLATE 15"x13 1/4"x27 1/8" LG
ITEM	QTY	DESCRIPTION

LIST OF MATERIALS PER BRS.

		W.G. BEARINGS INC. BURLINGTON, ONTARIO	
THESE DRAWINGS AND THE DATA CONTAINED THEREIN ARE THE EXCLUSIVE PROPERTY OF W.G. BEARINGS INC. ISSUED IN STRICT CONFIDENCE AND SHALL NOT BE REPRODUCED COPIED OR USED FOR ANY PURPOSE WHATSOEVER WITHOUT PRIOR WRITTEN PERMISSION OF W.G. BEARINGS INC.			
JOB TITLE: T.C.H. BRIDGE OVER BANFF AVE			
SYSTEM: GLACIER 11K'C'160 POT BEARING			
DRAWN BY: ECONNOR CHECKED BY: [Signature]	PROJECT NO: P640-84 DATE: APRIL 1984	DRAWING NO.: W84-255	REV. 9 OF 10



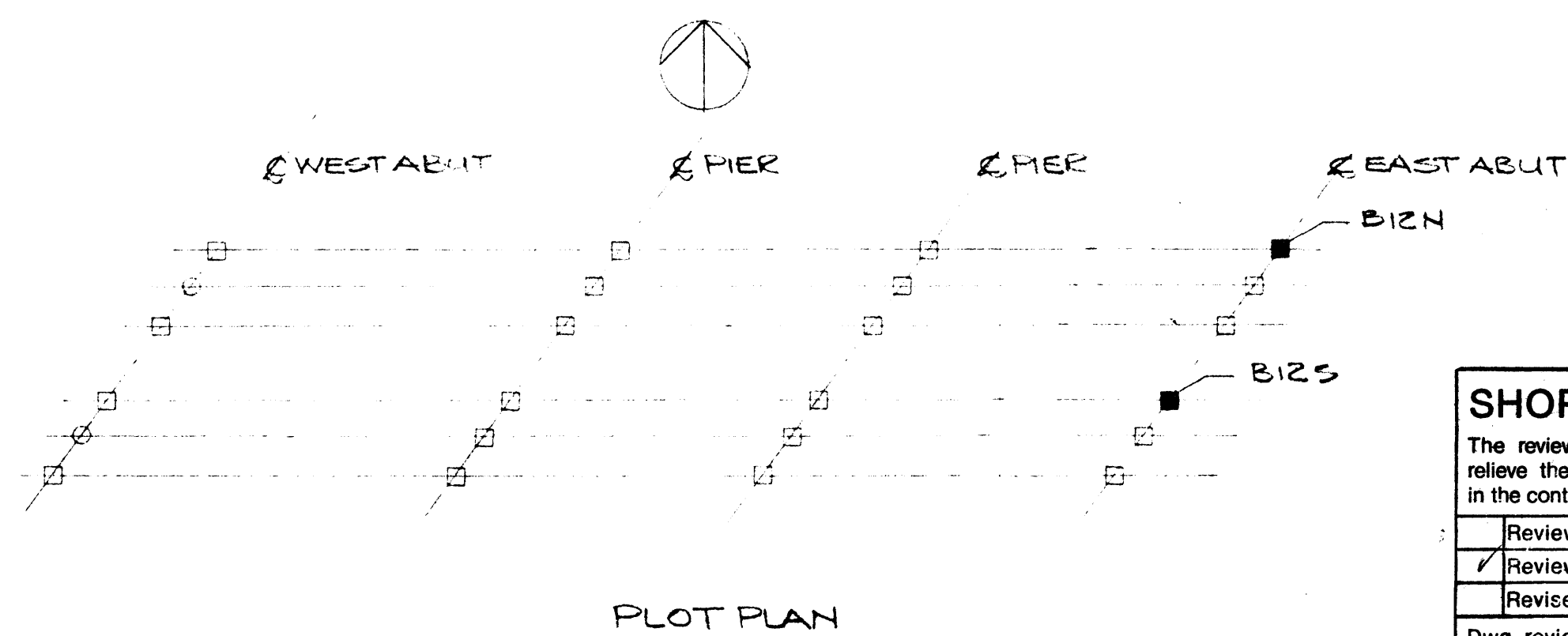
LONGITUDINAL ELEVATION



BEARING DATA

BEARING TYPE	12 K'C'100
QUANTITY	2 (SEE PLOT PLAN)
MAX V. LOAD	875 KN
MAX D. LOAD	541 KN
COEF. OF FRICTION	0.03
MAX ROTATION	0.0012
LONG. MOV. NT.	± 160
TRANS. MOV. NT.	± 10

NOTE:
FOR COMMENTS
& NOTES SEE
SHEET No. 1.



PLOT PLAN

THIS DRAWING HAS BEEN CHECKED AND IS SUBMITTED IN ACCORDANCE WITH PROVISIONS OF THE GENERAL CONDITIONS OF THE CONTRACT, AND IS SUBJECT TO FURTHER REVIEW BY BODIES HAVING JURISDICTION OVER THE WORK.

THE RESPONSIBILITY FOR ACCURACY, DIMENSIONS AND CONFORMING TO THE CONTRACT DOCUMENTS REMAINS WITH THE SUBCONTRACTOR.

ELLISON MANAGEMENT SERVICES LTD.
DATE SUBMITTED MAY 23 1984
DATE RETURNED

13	4PCS	HEX HEAD SCREW 1/2" x 1 1/2" LG
12	8PCS	HEX HEAD SCREW 1/2" x 2" LG 9/16" WASH (GALV.)
11	8PCS	RUBBER WASHERS 1 1/4" x 1 1/4" x 1/8"
10	1PC	RUBBER DISC FOR K100
09	1PC	P.T.F.E DISC FOR 12K100
08	2PCS	BRASS RINGS FOR K100
07	1PC	3/8" SHEET FOR 12K100 WD x 22 1/2" LG
06	4PCS	STEEL ANCHOR BAR 1 1/4" x 1 1/4" x 3" LG
05	4PCS	STEEL ANCHOR BAR 1 1/4" x 1 1/4" x 4" LG
04	8PCS	STEEL TRANSIT BRACKETS 1/2" x 5/8" x 1 1/4"
03	1PC	STEEL BASE POT 10 5/8" x 10 5/8" x 1 3/4"
02	1PCS	STEEL PISTON R 3/4" x 3/4"
01	1PCS	STEEL TOP R 11" x 1" x 22 7/8"
ITEM	QTY	DESCRIPTION

LIST OF MATERIALS PER BBS

W.G. BEARINGS INC.
BURLINGTON, ONTARIO

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JOB TITLE: T.C.H. BRIDGE OVER BANFF AVE

SYSTEM: GLACIER 12K'C'100 POT BEARING

DRAWN BY: BEONNOR	PROJECT NO: P640-84	DRAWING NO.: W84-255	REV. 10 OF 10
CHECKED BY: [Signature]	DATE: APRIL 1984		

SHOP DRAWING REVIEW

The review of this drawing does not in any way relieve the contractor of responsibility as detailed in the contract documents

Reviewed	Submission No. 1
Reviewed as noted	Job No. 1977-212
Revise & resubmit	Date JUNE 6/84
Dwg. review by	J. HALEY

UNDERWOOD McLELLAN LTD. 80



Western Region

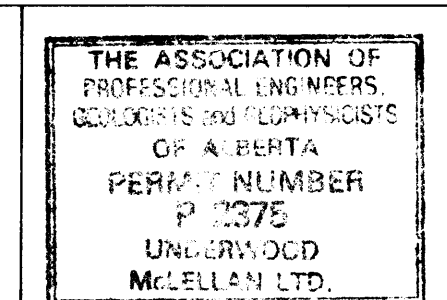
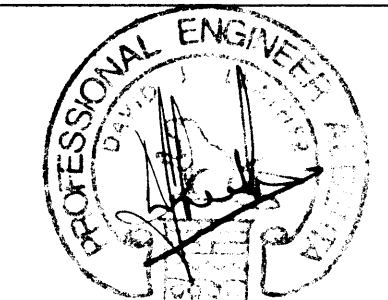
Project: TRANS-CANADA HIGHWAY TWINNING
BANFF NATIONAL PARK, ALBERTA
MINNEWANKA INTERCHANGE

Project No.
Project No.

REV	D	M	Y	REVISION DESCRIPTION	DRN	DES	CHK	APP
1	24	5	84	DIMENSIONS REVISED	JAH	DL	DL	DL

Horizontal Scale Echelle horizontale	N.A.	Contour Interval Elevation	N.A.
Compilation Photos Photos de compilation	N.A.	Photo Scale Echelle photographique	N.A.

Drawn by Dessiné par	D. WIDDIFIELD
Date	JAN. 28. 84
Checked by Vérifié par	T. HASSEN RUECK
Date	JAN. 28. 84
Approved by Approuvé par	D. LEATHER
Date	JAN. 28. 84

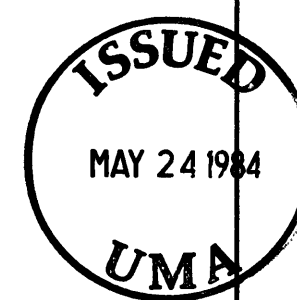


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Consulting Engineers and Planners
Calgary, Alberta

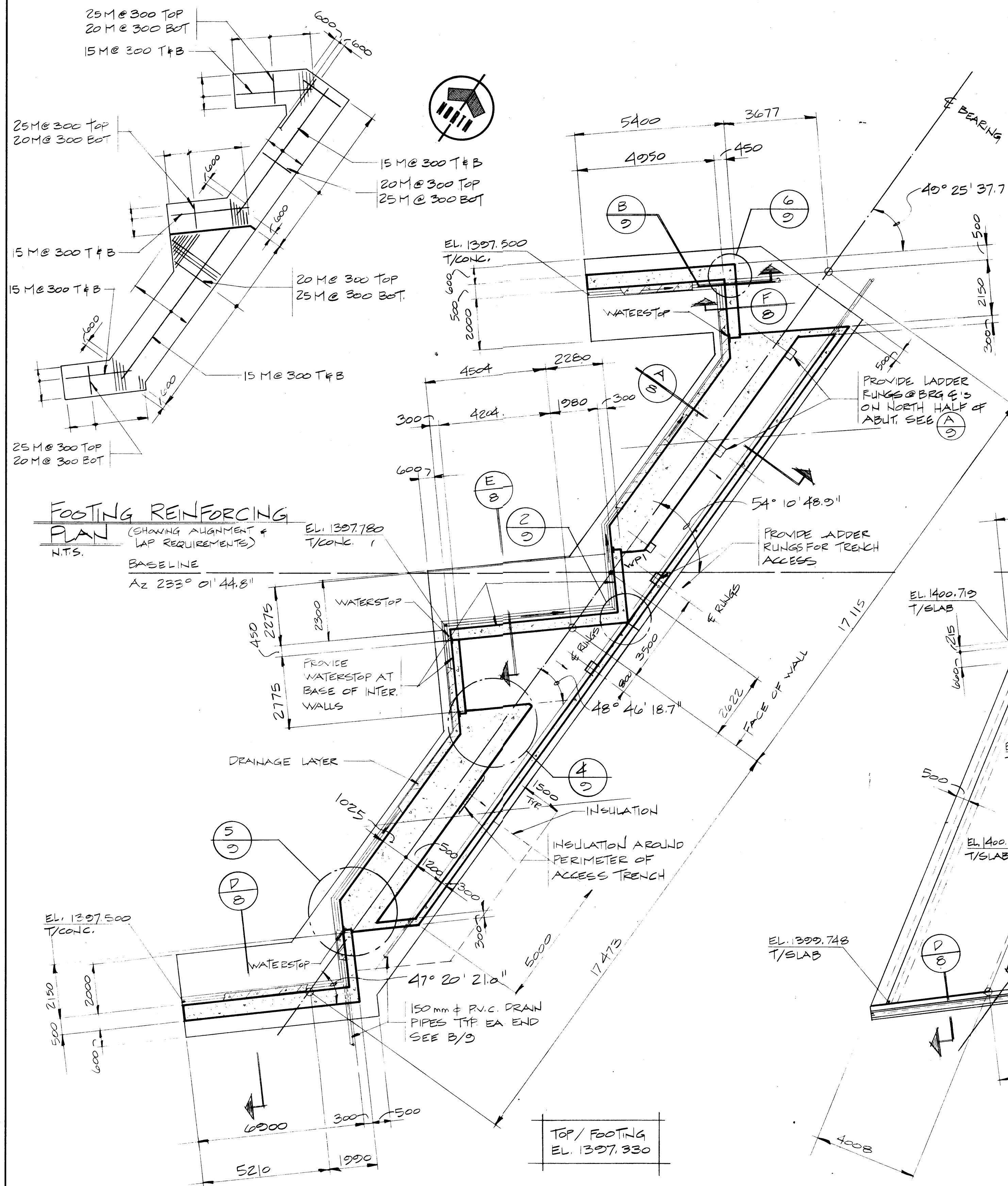
T.C.H. BRIDGE OVER
BANFF AVENUE
km 13+050



WEST
ABUTMENT
PLANS



Horizontal Scale Echelle horizontale	AS NOTED	Vertical Scale Echelle verticale	AS NOTED
NTS. No. STN. No.	Draw. No. Dessin No.	Sheet Feuille	5 of 28
N.A.	2977-022		



FOUNDATION PLAN
- WEST ABUTMENT
SCALE 1:100

PLAN - WEST ABUTMENT
SCALE 1:100

SUBSTRUCTURE NOTES

- CONCRETE IN THE ABUTMENT AND PIERS TO HAVE A 28 DAY COMPRESSIVE STRENGTH OF 30 MPa.
- CONCRETE SLOPE PROTECTION AND MUD SLAB TO HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 25 MPa.
- THE CONTRACTOR IS TO PROVIDE THE ENGINEER WITH DETAILS OF EACH CONCRETE MIX DESIGN INCLUDING AGGREGATE TYPES AND SOURCES AND PREVIOUS 28 DAY STRENGTH RESULTS FOR EACH MIX PRIOR TO ANY CONCRETE BEING PLACED. ANY UNTRIED CONCRETE MIXES ARE TO BE PROVEN WITH TRIAL MIXES AT NO ADDITIONAL COST TO THE ENGINEER. THE CONTRACTOR SHALL NOT AMEND ANY ACCEPTED MIX DESIGNS WITHOUT PRIOR APPROVAL OF THE ENGINEER.
- ALL REINFORCEMENT SHALL CONFORM WITH CSA G30.12 GRADE 400.
- ALL LAPS SHALL BE TENSION LAP SLICES CLASS C UNLESS OTHERWISE SHOWN.
- CONCRETE COVER TO REINFORCEMENT TO BE 50 mm UNLESS OTHERWISE SHOWN.
- CHAMFERS TO BE PROVIDED ON ALL EDGES MINIMUM 20 X 20 UNLESS OTHERWISE SHOWN.
- FOR CONCRETE FINISHES SEE SPECIFICATIONS.

Western Region

Project Projet	TRANS-CANADA HIGHWAY TWINNING BANFF NATIONAL PARK, ALBERTA MINNEWANKA INTERCHANGE
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Project No.	
Project No.	

1	24	5	84	DIMENSIONS REVISED	JGH	DL	DL	DL
REV	D	M	Y	REVISION DESCRIPTION	DRN	DES	CHK	APP

Compiled by	
Compile par	

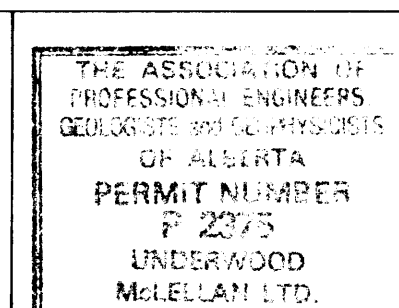
Horizontal Scale Echelle horizontale	N.A.	Contour Interval Egaldistance	N.A.
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Compilation Photos Photos de compilation	Photo Scale Echelle photographique
N.A.	N.A.

Drawn by	D. WIDDIFIELD
Dessiné par	
Date	JAN. 28. 84

Checked by **T. HASSEN RUECK**
 Verifie par
 Date **JAN. 28. 84**

Approved by **D. LEATHER**
 Approve par
 Date **JAN. 28.84**



Underwood McLellan Ltd.
Consulting Engineers and Planners
Calgary, Alberta

the
uma
group

T.C.H. BRIDGE OVER
BANFF AVENUE

km 13+050



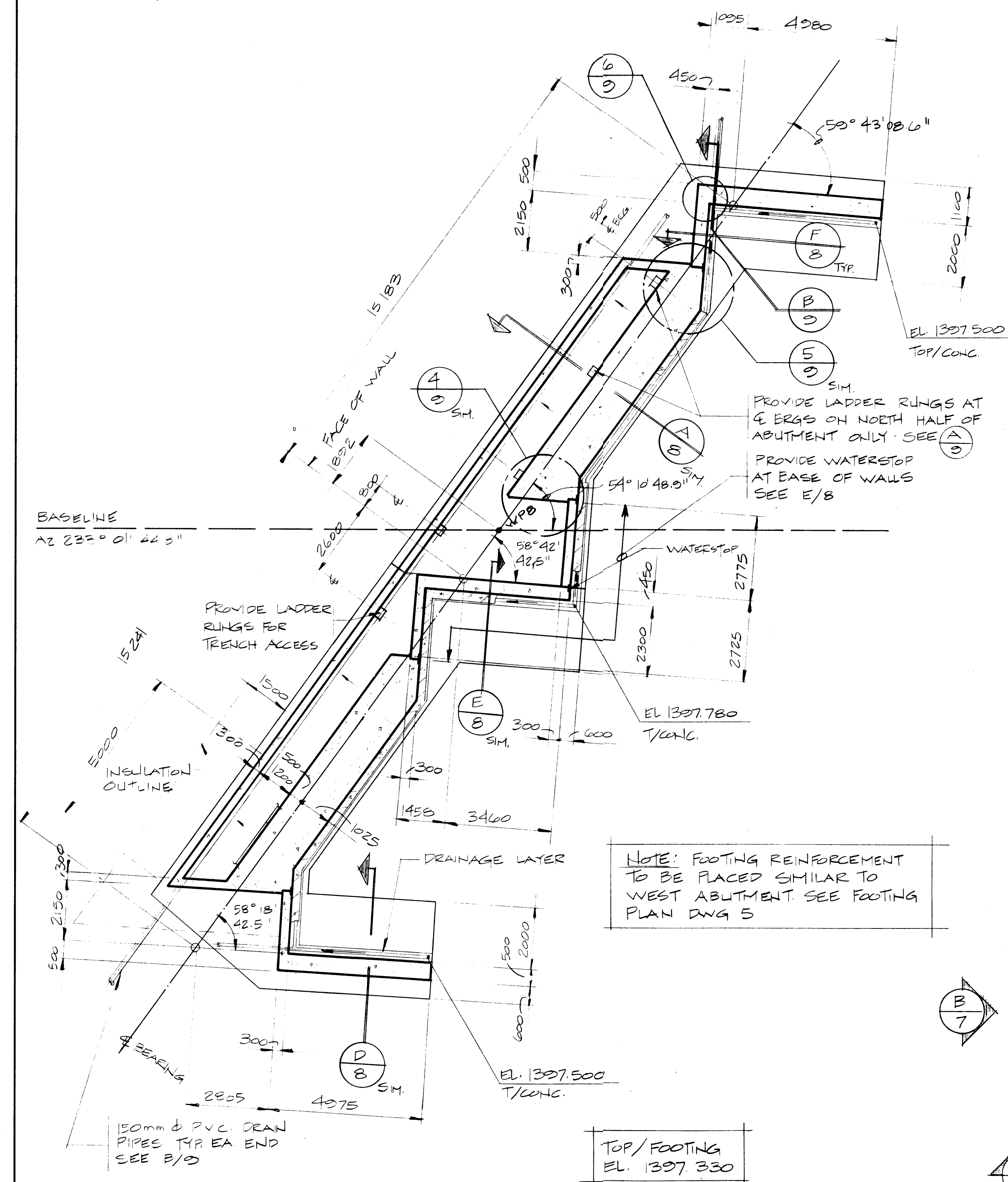
EAST ABUTMENT PLANS

MAY 24 1984

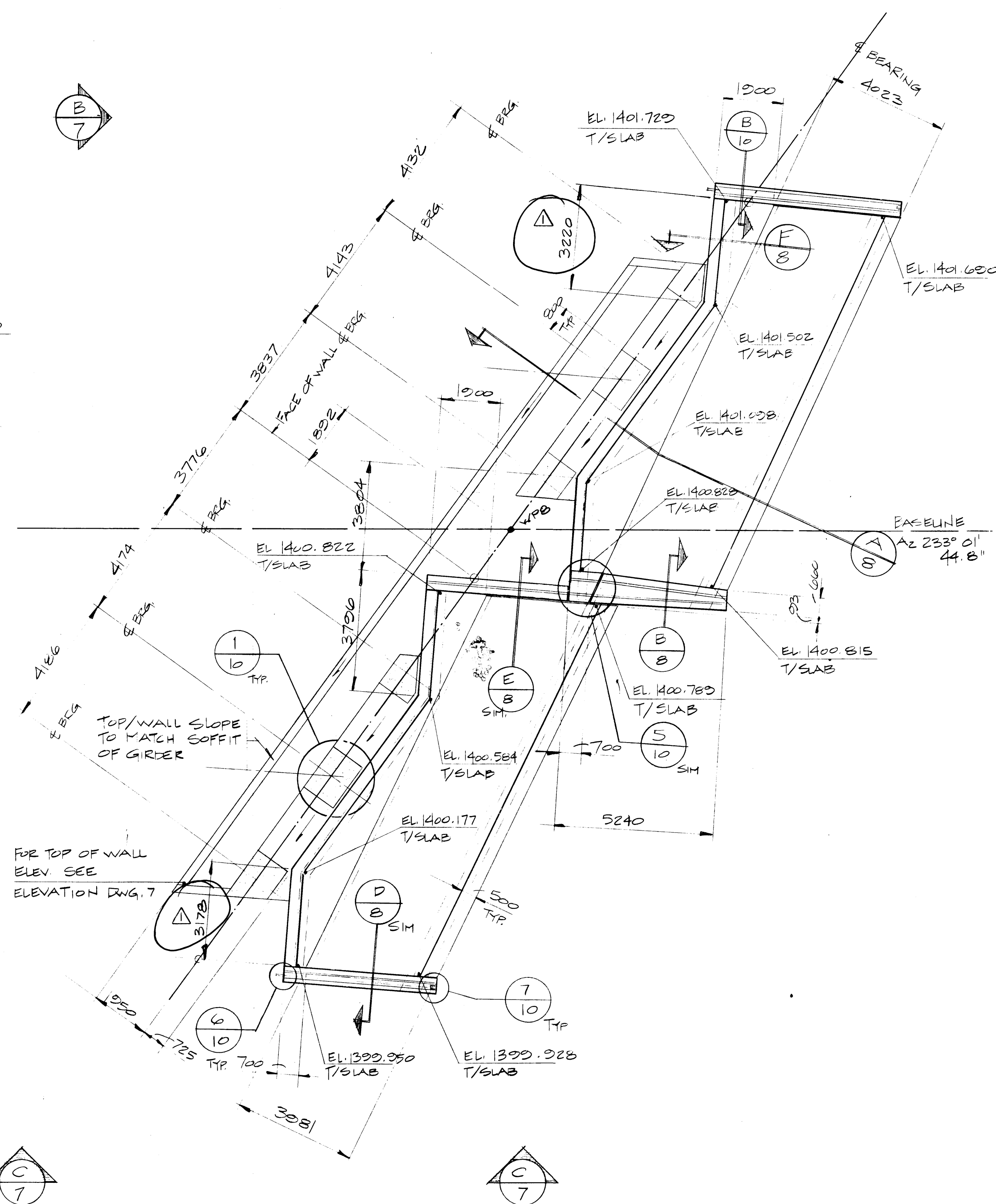
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Horizontal Scale Echelle horizontale	Vertical Scale Echelle verticale
AS NOTED	AS NOTED

NTS. No. STN. No. N.A.	Drwg. No. Dessin No. 2977-022	Sheet Feuille 6 of 28
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FOUNDATION PLAN
- EAST ABUTMENT
SCALE 1:100

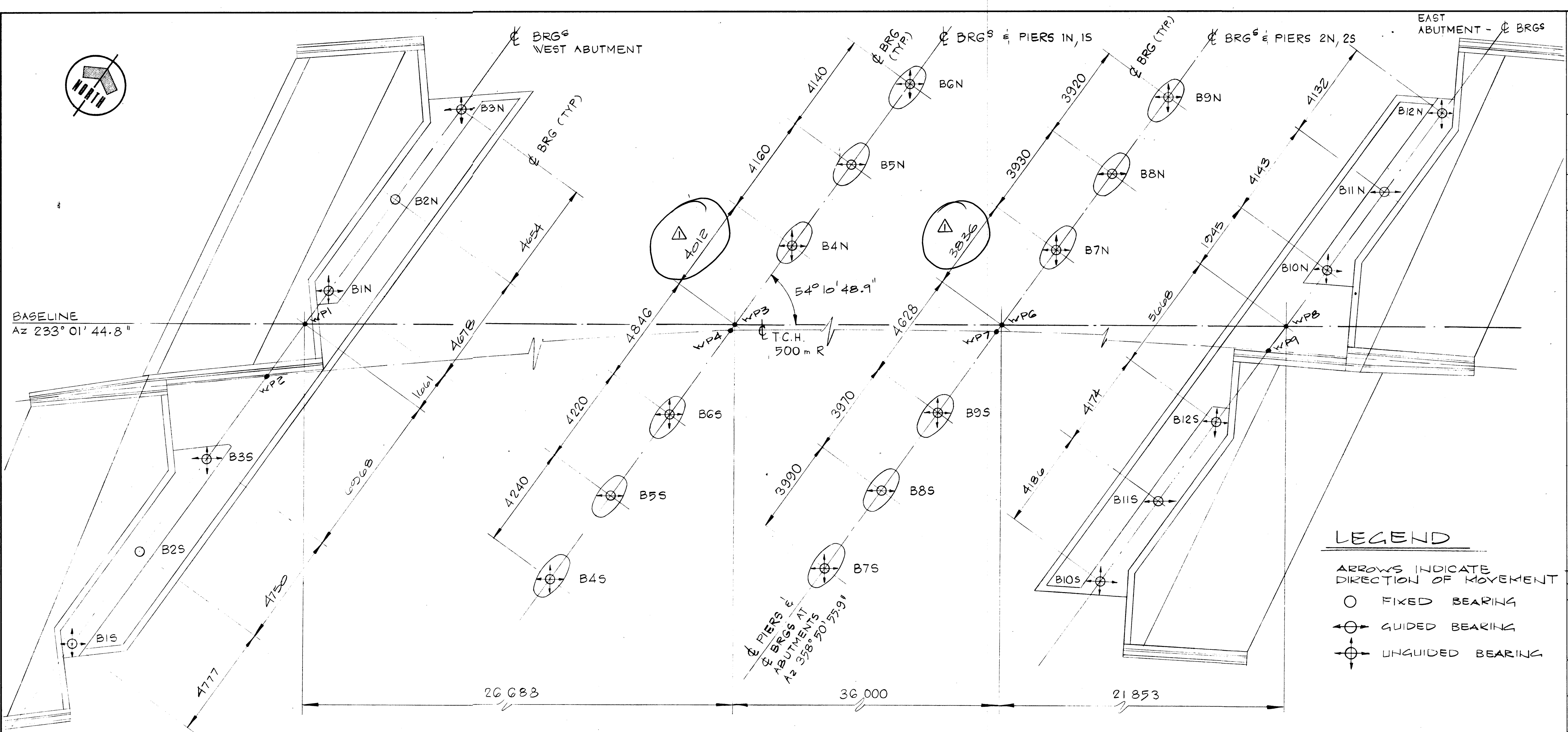


PLAN - EAST ABUTMENT
SCALE 1:100

Western Region

Project: TRANS-CANADA HIGHWAY TWINNING
Banff National Park, Alberta
Minnewanka Interchange

Project No.
Project No.



BEARING LAYOUT - PLAN
SCALE 1:100

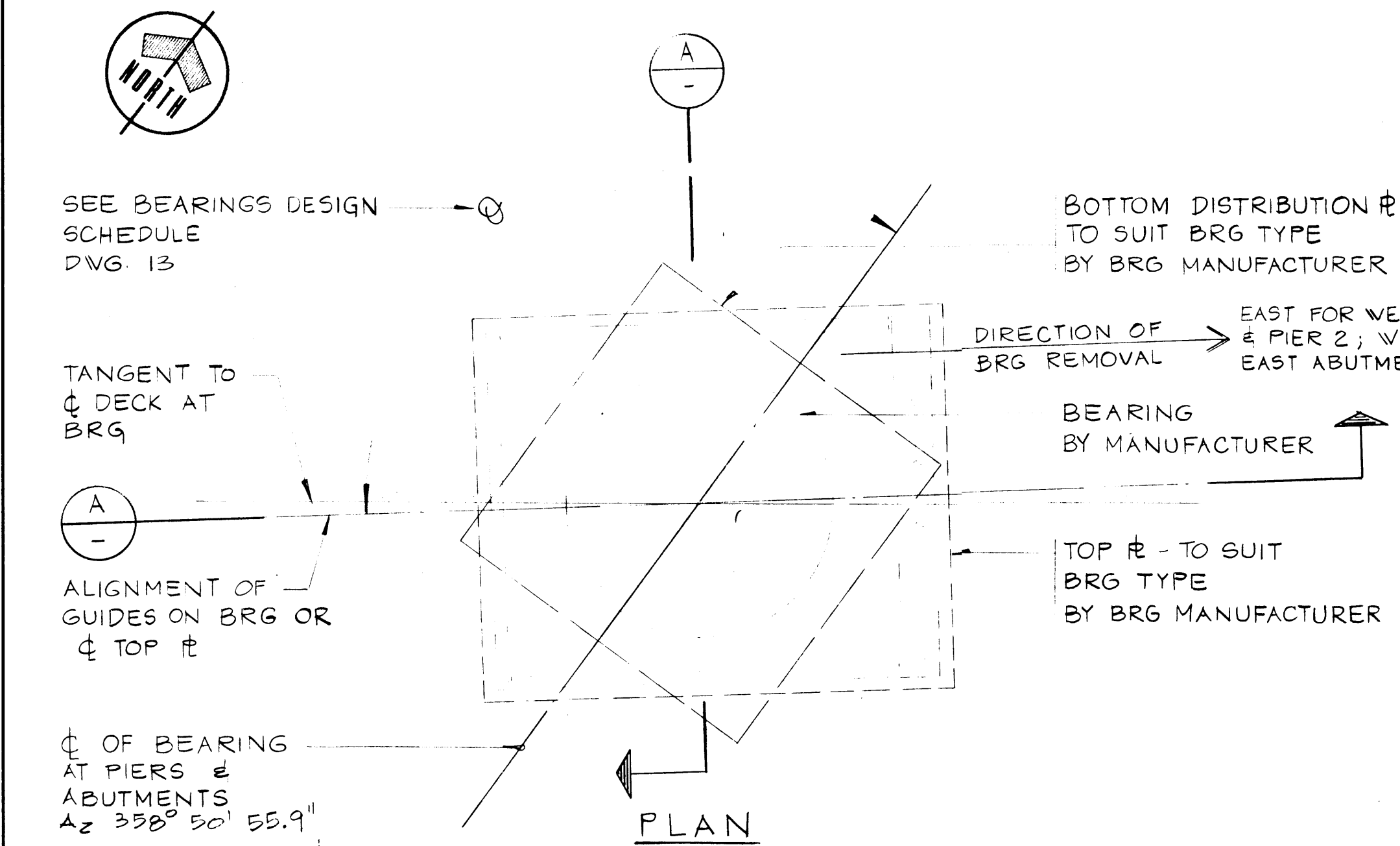
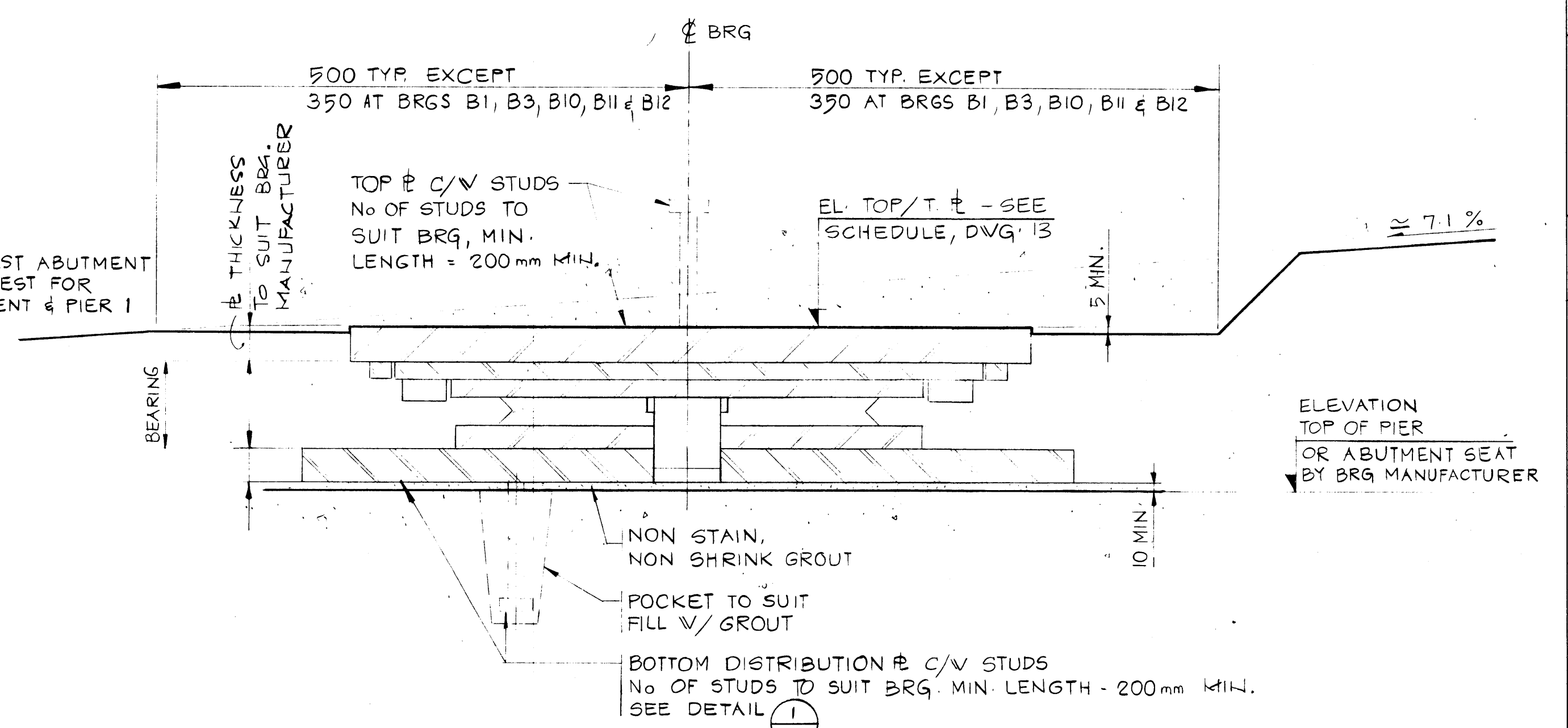


PLATE ORIENTATION
N.T.S.



NOTE: ALL COMPONENTS IN SECTION TO BE DESIGNED BY BEARING MANUFACTURER

SECTION
N.T.S.

REV	D	M	Y	REVISION DESCRIPTION	DRN	DES	CHK	APP
1	24	5	84	DIMENSIONS REVISED	JGH	DL	DL	DL

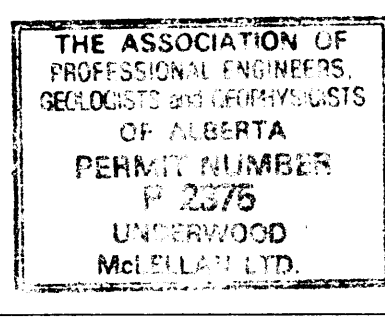
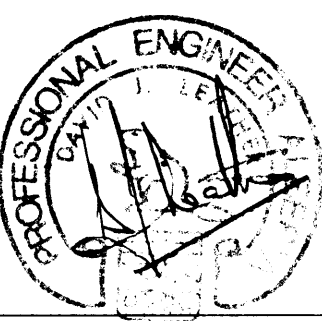
Compiled by
Compile par

Horizontal Scale Echelle horizontale	N.A.	Contour Interval Echelle d'altitude	N.A.
Photograph Scale Echelle photographique	N.A.	Photograph Scale Echelle photographique	N.A.

Drawn by
Dessiné par
Date
JAN. 28. 84

Checked by
Vérifié par
Date
JAN. 28. 84

Approved by
Approuvé par
Date
JAN. 28. 84



Underwood McLellan Ltd.
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Calgary, Alberta

T.C.H. BRIDGE OVER
BANFF AVENUE

km 13+050



BEARINGS
SHEET 1



Horizontal Scale Echelle horizontale	AS NOTED	Vertical Scale Echelle verticale	AS NOTED
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N.T.S. No.
STN. No.
N.A.

Drawn No.
Dessiné No.
2977-022

Sheet
Feuille
12 of 28

BEARING DESIGN SCHEDULE																					
BRG MARK No.	ANGLE θ	ELEVATION	QTY	TYPE ^A *	VERTICAL LOADS (kN) (-ve REF. TO UPLIFT)						HORIZ. LOADS (kN)		MOVEMENT (mm)		LONGITUDINAL ROTATIONS (RADIAN)						
					DL	SDL	PRE	LL	WIND	MAX.	MIN.	LONGITUD.	TRANSV.	LONGIT.	TRANSV.	ϕ DL	ϕ PRE	ϕ SDL	ϕ CREEP	ϕ LL	TOTAL MAX.
B1N	128° 14' 30"	1399.685	1	U/G	488	137	198	495/-50	-72 +12	1330	701	-	-	± 30	± 10	-0.0014	+ 0.0016	- 0.0003	- 0.0001	- 0.0009	- 0.0011
B1S	129° 30' 50"	1398.630	1																		
B2N	128° 4' 10"	1399.945	1	FIXED	781	89	573	197/-133	- 13	1640	1297	750	83	0	0	-0.0013	+ 0.0014	- 0.0002	- 0.0001	- 0.0009	- 0.0011
B2S	129° 19' 40"	1398.900	1																		
B3N	127° 54' 00"	1400.220	1	U/G	854	33	- 448	983/-344	-38 +12	1434	Δ -355* ^B	-	-	± 30	± 10	-0.0012	+ 0.0014	- 0.0002	0	- 0.0009	- 0.0009
B3S	129° 8' 40"	1399.185	1																		
B4N	126° 38' 10"	1399.810	1	U/G	2665	591	- 1113	1165/-147	- 297 + 47	3355	1699	-	-	± 70	± 10	- 0.00001	- 0.00033	- 0.00001	- 0.00035	- 0.0007	- 0.0014
B4S	127° 50' 00"	1398.810	1																		
B5N	126° 30' 00"	1400.050	1	G	1418	75	1420	484/-116	- 47	3397	2750	-	384	± 70	± 1.5* ^C	- 0.00035	+ 0.00002	- 0.00007	- 0.0004	- 0.0007	- 0.0015
B5S	127° 41' 00"	1399.055	1																		
B6N	126° 21' 40"	1400.285	1	U/G	2638	513	- 688	1092/-155	- 289 + 47	3602	2019	-	-	± 70	± 10	- 0.0001	+ 0.0003	- 0.0004	- 0.0003	- 0.0008	- 0.0014
B6S	127° 32' 10"	1399.300	1																		
B7N	124° 35' 40"	1399.800	1	U/G	2508	527	- 811	1132/-232	- 159 + 41	3397	1833	-	-	± 120	± 10	+ 0.0009	- 0.0009	+ 0.00015	+ 0.00015	+ 0.00075	+ 0.0010
B7S	125° 42' 10"	1398.850	1																		
B8N	124° 28' 30"	1400.025	1	G	1566	78	963	600/-218	- 42	3207	2347	-	384	± 120	± 2* ^C	+ 0.00066	- 0.00069	+ 0.00011	+ 0.00003	+ 0.0006	+ 0.0007
B8S	125° 34' 30"	1399.080	1																		
B9N	124° 21' 30"	1400.250	1	U/G	1978	538	- 422	991/-23	- 368 + 41	3126	1703	-	-	± 120	± 10	+ 0.00045	- 0.00054	+ 0.00009	0	+ 0.0005	+ 0.0005
B9S	125° 27' 00"	1399.310	1																		
B10N	123° 24' 50"	1399.700	1	U/G	255	34	72	697/-419	- 24 + 44	1102	Δ -568* ^B	-	-	± 160	± 10	+ 0.0003	- 0.00008	+ 0.00007	+ 0.0003	+ 0.0005	+ 0.0011
B10S	124° 28' 30"	1398.775	1																		
B11N	123° 17' 40"	1399.940	1	G	699	- 3	393	378/-13	- 14	1467	1062	-	182	± 160	± 3* ^C	+ 0.0004	- 0.0002	+ 0.00009	+ 0.0003	+ 0.0005	+ 0.0011
B11S	124° 20' 50"	1399.020	1																		
B12N	123° 10' 30"	1400.175	1	U/G	453	204	- 116	290/-41	- 35 + 44	875	465	-	-	± 160	± 10	+ 0.0005	- 0.00033	+ 0.00014	+ 0.0003	+ 0.0006	+ 0.0012
B12S	124° 13' 10"	1399.260	1																		

ALLOWABLE BEARING PRESSURES : UNDERSIDE OF DECK = 14 MPa
ON CONCRETE TOP OF PIER = 12 MPa

- *^A - G - GUIDED (UNIDIRECTIONAL)
U/G - UNGUIDED (MULTIDIRECTIONAL)
- *^B - UPLIFT ON BEARING IN ACCORDANCE WITH CL 5.1.6 OF CAN3-S6-M78 Δ
- *^C - TOLERANCE REQUIRED ON GUIDED BEARINGS FOR CURVATURE OF BRIDGE

DESIGN SCHEDULE LEGEND

- DL - DEAD LOAD
SDL - SUPERIMPOSED DEAD LOAD
PRE - PRESTRESS
LL - LIVE LOAD

BEARING NOTES

- BEARING TYPES AND DIMENSIONS HAVE BEEN BASED ON WABO FYFE HIGH LOAD STRUCTURAL BEARINGS SUPPLIED BY ELASTOMETAL. GLACIER DUALIGN K BEARINGS SUPPLIED BY W.G. BEARING ARE AN ACCEPTED ALTERNATE.
- THE BEARING MANUFACTURER WILL BE RESPONSIBLE FOR THE CORRECT FUNCTIONING OF EACH BEARING INCLUDING ALL ADDITIONAL MASONRY AND SPREADER PLATES WHICH ARE TO BE DESIGNED TO SUIT EACH BEARING TYPE.
- ALL BEARING CALCULATIONS AND SHOP DRAWINGS ARE TO BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO MANUFACTURE.
- ALL STEEL MATERIAL TO BE IN ACCORDANCE WITH CSA STANDARD G40.21M GRADE 300W EXCEPT WHERE SHOWN OTHERWISE.
- STAINLESS STEEL SHALL BE TYPE 304 2B FINISH WITH A BRIGHT ANNEALED POLISHED SLIDING SURFACE CONFORMING WITH ASTM A167-77 AND A480-75.
- THE ELASTOMERIC DISC AND LEVELLING PAD SHALL BE OZONE TREATED, 50 DURO NATURAL RUBBER CONFORMING TO AASHTO SPECIFICATIONS. LONG TERM DEFLECTION OF THE DISC SHALL BE LESS THAN 8% OF THE ELEMENT THICKNESS.
- THE POLYTETRAFLUOROETHYLENE (PTFE) SHALL BE 100% VIRGIN POLYMER, DIMPLED, LUBRICATED, RECESSED INTO THE BEARING PLATE AND SHALL CONFORM TO ASTM D-1706-59T, D-638 AND D-792.
- ALL METAL TO METAL CONTACT SURFACES WITHIN THE BEARING SHALL BE PREPARED EITHER BY MACHINING OR FINE GRINDING.
- THE TOLERANCE FIT BETWEEN THE PISTON AND POT TO BE +0.75 mm TO 1.25 mm MAXIMUM.
- ALL WELDING SHALL CONFORM TO CSA W59.1 AND SHALL BE DONE BEFORE MACHINING WHEREVER POSSIBLE.
- ALL STEEL EXPOSED TO THE ATMOSPHERE SHALL BE COATED WITH COLTRIET ZINC EPOXY.
- AFTER FINAL INSPECTION AND ACCEPTANCE OF THE VARIOUS PARTS OF THE FINISHED BEARING THEY SHALL BE ASSEMBLED AND CLAMPED TOGETHER.
- COMPLETED BEARINGS SHALL HAVE THE SUPPLIERS NAME OR TRADEMARK AND A SERIAL NUMBER INDELIBLY MARKED UPON IT.
- BEARING SHALL BE DESIGNED SO THAT THEY MAY BE REMOVED WITHOUT LIFTING THE BRIDGE MORE THAN 3 mm.
- ROTATIONAL CAPACITY OF THE BEARING SHALL BE A MINIMUM OF 0.01 RADIAN. MAXIMUM COEFFICIENT OF FRICTION SHALL NOT EXCEED 0.03.

Western Region

Project: TRANS-CANADA HIGHWAY TWINNING
Project: BANFF NATIONAL PARK, ALBERTA
Project: MINNEWANKA INTERCHANGE

Project No.
Project No.

1	24	5	84	LOADS REVISED	JCH	DL	DL	DL
REV	D	M	Y	REVISION DESCRIPTION	DRN	DES	CHK	APP

Complied by
Complie par

Horizontal Scale
Echelle horizontale
N.A.

Contour Interval
Echelle de hauteur
N.A.

Photomaps
Photos de compilation
N.A.

Photomaps
Photos de compilation
N.A.

Drawn by
Dessine par
D. MZIK

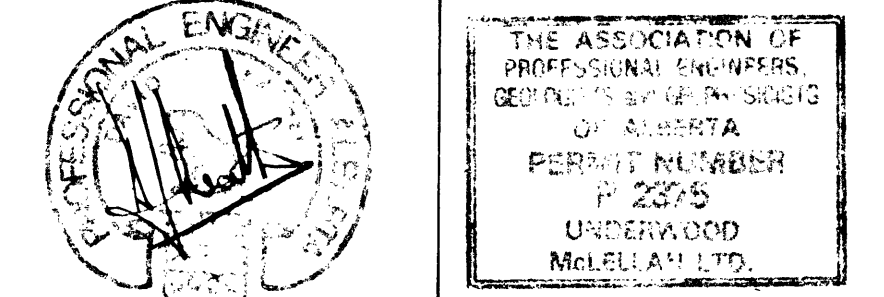
Date
JAN. 28. 84

Checked by
Vérifie par
J. HALEY

Date
JAN. 28. 84

Approved by
Approuvé par
D. LEATHER

Date
JAN. 28. 84



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Consulting Engineers and Planners
Calgary, Alberta

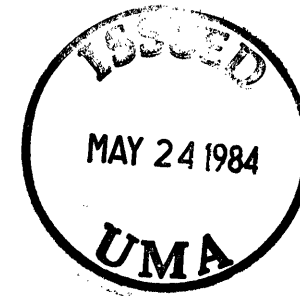
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uma
group

T.C.H. BRIDGE OVER
BANFF AVENUE

km 13+050



BEARINGS
SHEET 2



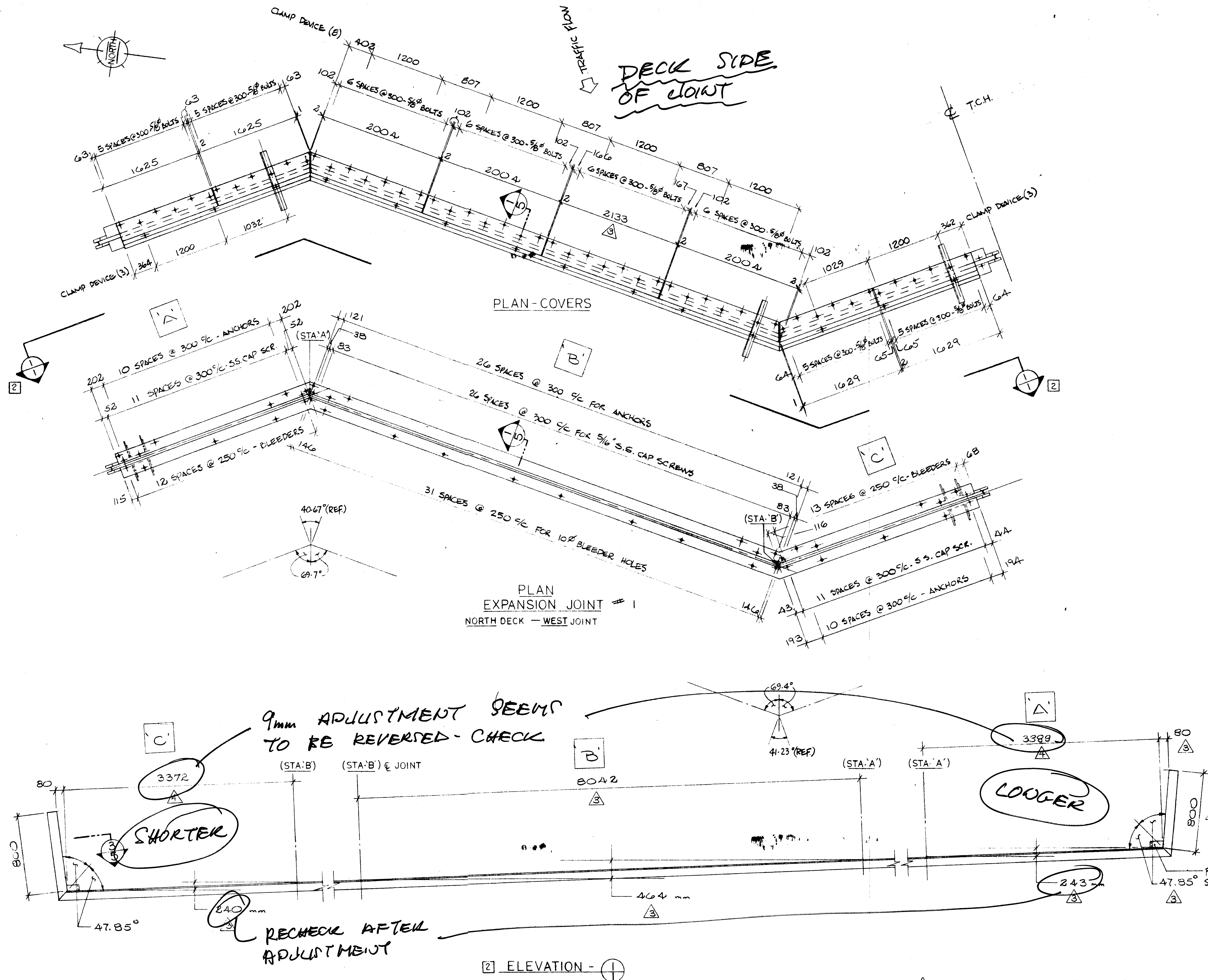
Horizontal Scale
Echelle horizontale
AS NOTED

Vertical Scale
Echelle verticale
AS NOTED

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STN. No.
N.A.

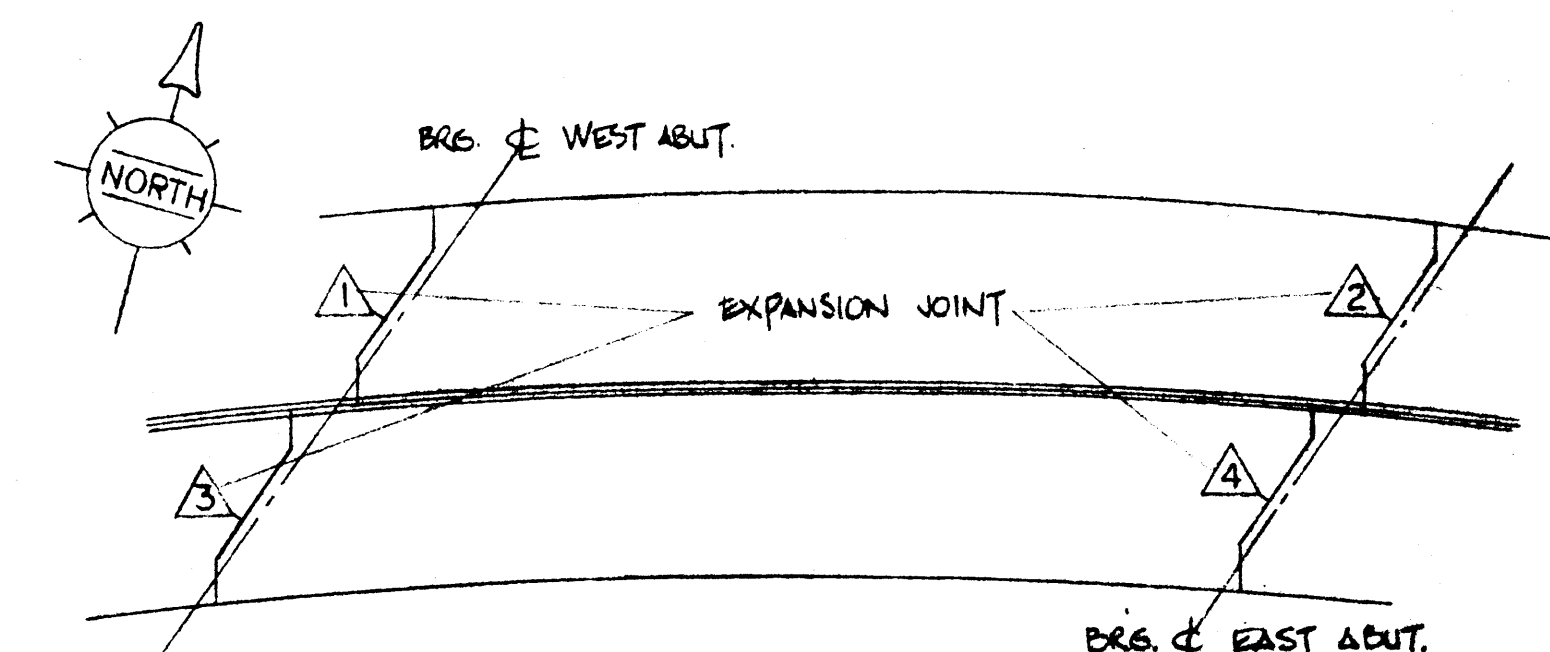
Draw. No.
Dessin No.
2977-022

Sheet
Feuille
13 of
de 28



GENERAL NOTES

- SEAL SHALL BE PERFORMED NEOPRENE IN ACCORDANCE WITH ASTM D2000 MODIFIED AND INSTALLED IN ONE CONTINUOUS PIECE PER JOINT.
- STEEL SHALL BE IN ACCORDANCE WITH C.S.A. STANDARD CAN 3 G40-21-M81 GRADE 300W.
- SEAL WILL BE INSTALLED IN FIELD BY W.H.S.I. AFTER COMPLETE INSTALLATION OF STEEL SECTIONS BY CONTRACTOR.
- STUDS SHALL BE NELSON, K.S.M. OR ERICO JONES USING FUSION WELD PROCESS.
- WELDING SHALL BE OF A LOW HYDROGEN CLASSIFICATION AND IN ACCORDANCE WITH CSA STANDARD W59.
- STEEL COVER PLATES SHALL BE HOT DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH C.S.A. STANDARD G104 M. ALL OTHER STEEL SURFACES TO BE HOT DIP GALVANIZED OR ZINC METALLIZED AFTER FABRICATION IN ACCORDANCE WITH C.S.A. STANDARD G189.
- JOINT ASSEMBLY SHALL BE COMPLETELY SHOP ASSEMBLED (EXCEPT FOR SEAL) AND PRESET TO DIMENSION 'F' FOR 15°C.
- CONTRACTOR TO INSTALL JOINT ASSEMBLIES 5mm BELOW ELEVATION AND GRADE OF CONCRETE END DAMS.
- CONTRACTOR TO MAKE FINAL WIDTH ADJUSTMENT (DIM. 'W') AND TIGHTEN CLAMPING ANGLES JUST PRIOR TO PLACING CONCRETE IN BLOCKOUT. INSTALLATION TEMPERATURE SHALL BE TAKEN AS THE MEAN SHADE AIR TEMPERATURE PRIOR TO JOINT INSTALLATION, AT THE STRUCTURE AS FOLLOWS:
 - CONCRETE STRUCTURES : 48 HOURS
 - STEEL STRUCTURES : 24 HOURS
- CLAMPING ANGLES SHALL BE RELEASED BY CONTRACTOR NOT LATER THAN 4 HOURS AFTER PLACING OF CONCRETE IN BLOCKOUT.
- AFTER REMOVAL OF CLAMPING ANGLES (ITEMS PAINTED RED), CONTRACTOR TO FILL ALL BOLT AND BLEEDER HOLES WITH AN EPOXY GROUT.

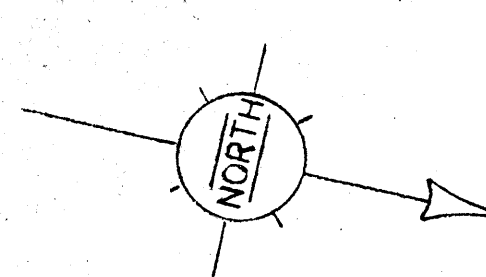


BRIDGE PLOT PLAN

DRAWING REVIEW	
The review of this drawing does not in any way relieve the contractor of responsibility for its accuracy or for compliance with the contract documents.	
By: <i>[Signature]</i>	Date: 25.7.84
UNDERWOOD McLELLAN LTD.	

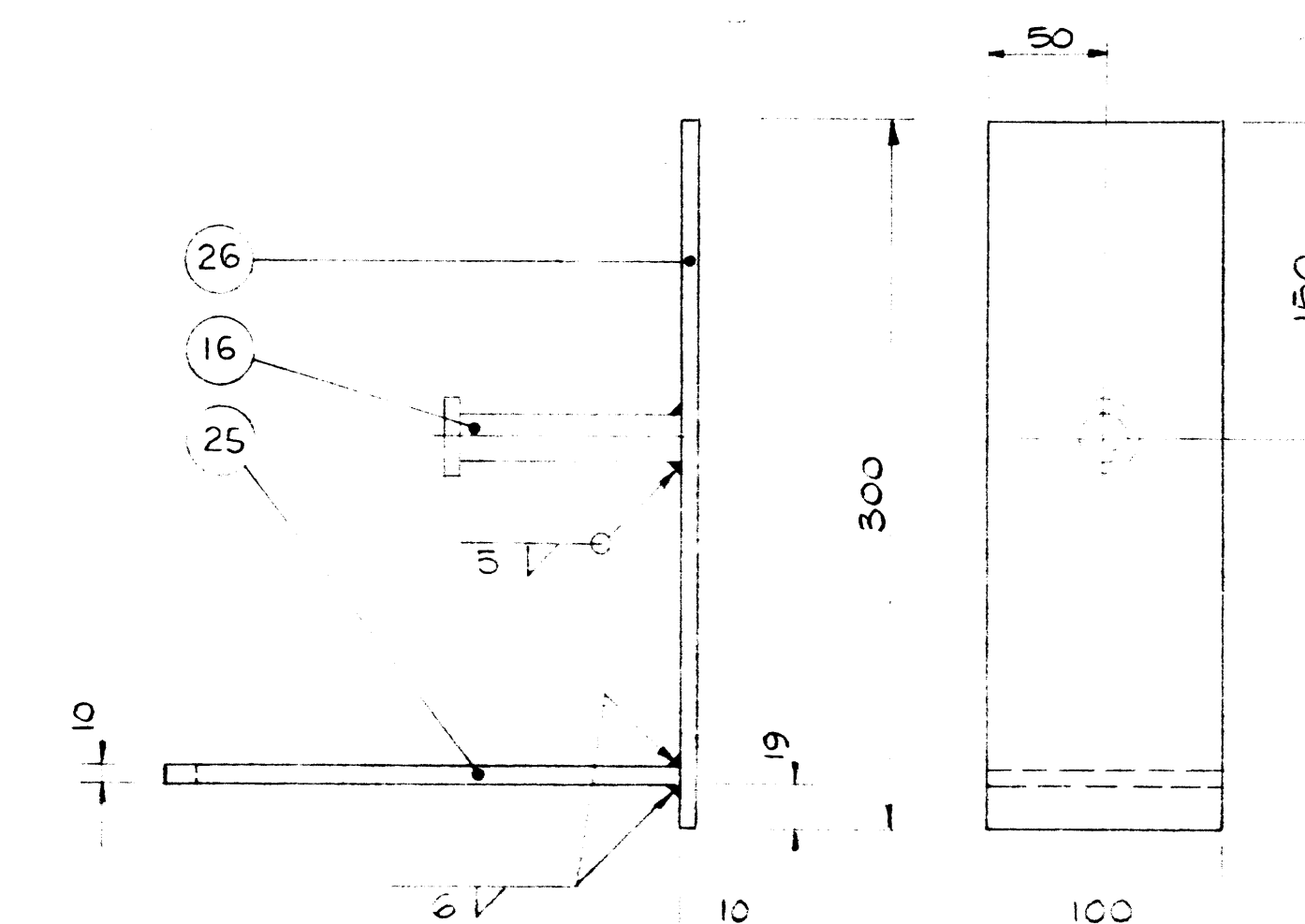
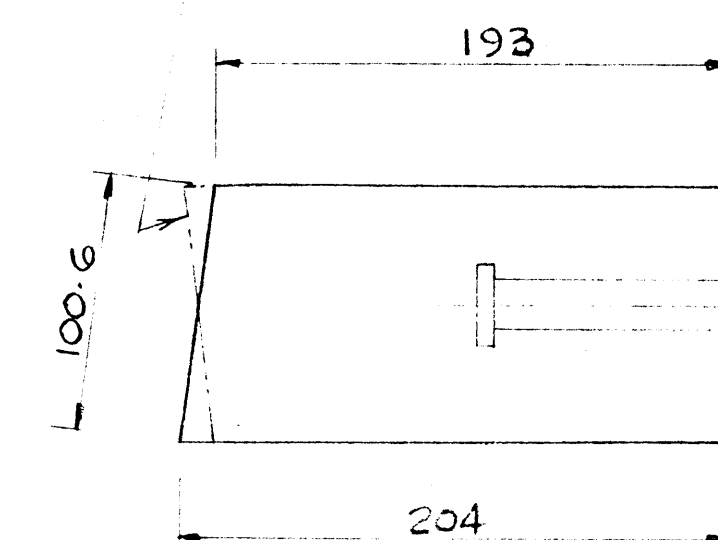
WERCHOLZ-HONEL SYSTEMS INC.	
BURLINGTON, JUL 18 1984 ONTARIO	
THESE DRAWINGS AND THE DATA CONTAINED THEREIN, ARE THE EXCLUSIVE PROPERTY OF WERCHOLZ-HONEL SYSTEMS INC. ISSUED IN STRICT CONFIDENCE AND SHALL NOT BE REPRODUCED, COPIED OR USED FOR ANY PURPOSE WHATSOEVER, WITHOUT PRIOR WRITTEN PERMISSION OF WERCHOLZ-HONEL SYSTEMS INC.	
JOB TITLE: T.C.H. BRIDGE OVER BANFF AVE.	
SYSTEM: HONEL EXPANSION JOINT	
DRAWN BY: J. Darcy	PROJECT NO: P640-84
CHECKED BY: [Signature]	DATE: MAY, 1984
DRAWING NO.: W84-264	
REV. 5	SMT. 1 OF 5

- NO CHANGE JULY 16/84 D.S.
- REVISED JULY 11/84 RJ.
- REVISED JULY 6/84 D.S.
- REVISED - WHERE NOTED - JUN 21/84 JP.



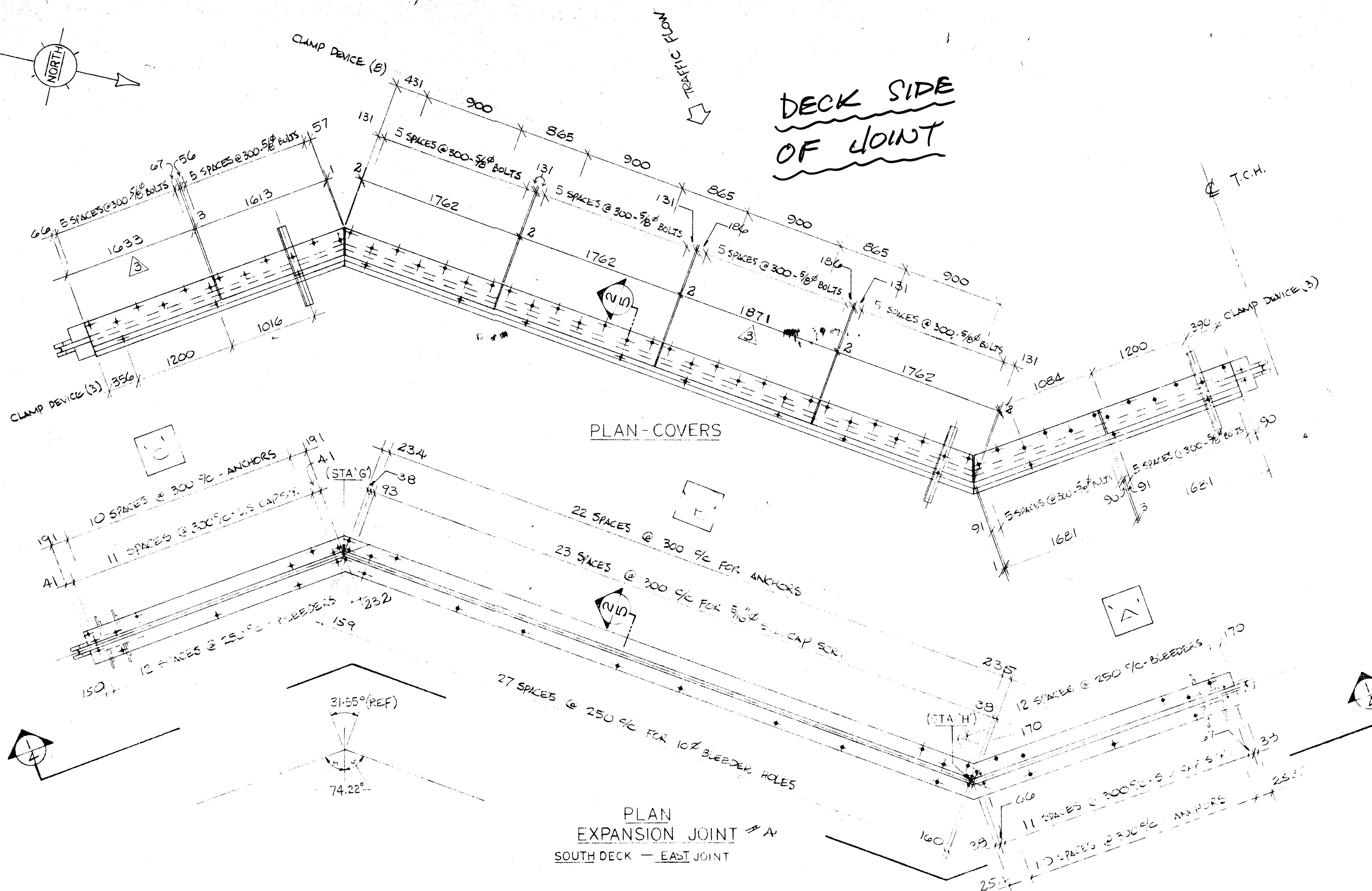
DECK SIDE
OF JOINT

NOTE:



PROTECTION PLATE-2 (S REQ'D)

NOTE: MAKE 4 AS SHOWN AND 4 WITH PLATE (25) OPPOSITE AS INDICATED BY REFERENCE LINE



PLAN - COVERS

PLAN
EXPANSION JOINT # A
SOUTH DECK - EAST JOINT

14mm ADJUSTMENT SEEMS
TO BE REVERSED - CHECK

LONGER

SHORTER

RECHECK AFTER
ADJUSTMENT.

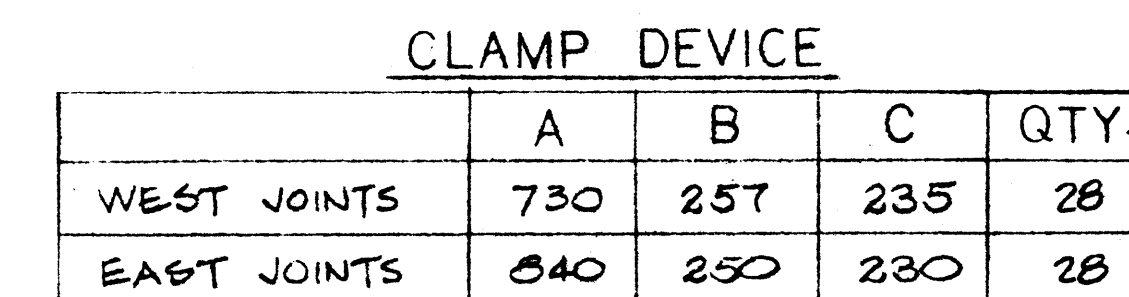
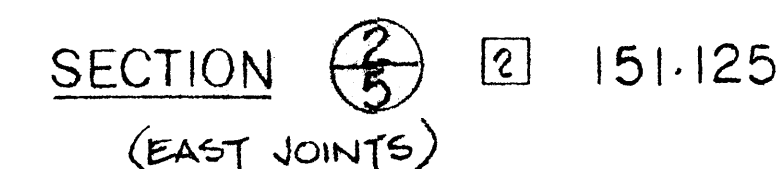
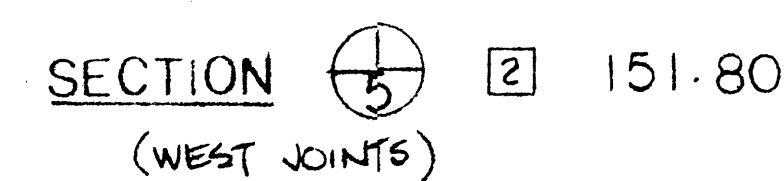
ELEVATION - ①

DRAWING REVIEW	
The review of this drawing does not in any way relieve the controller of responsibility for its accuracy or for compliance with the contract documents.	
<input type="checkbox"/> No Comments	Submission No. 3
<input checked="" type="checkbox"/> Approved, Processed & Released	Job No. 2177/622
<input type="checkbox"/> Amend & Resubmit	Rev. 1
<input type="checkbox"/> Rejected - See Remarks	Date: 25/7/84
UNDERWOOD McLELLAN LTD.	

		WERCHOLOZ-HONEL SYSTEMS INC.	
BURLINGTON,		JUL 18 1984	
		ONTARIO	
THESE DRAWINGS AND THE DATA CONTAINED THEREIN ARE THE EXCLUSIVE PROPERTY OF WERCHOLOZ-HONEL SYSTEMS INC. ISSUED IN STRICT CONFIDENCE AND SHALL NOT BE REPRODUCED, COPIED OR USED FOR ANY PURPOSE WHATSOEVER, WITHOUT PRIOR WRITTEN PERMISSION OF WERCHOLOZ-HONEL SYSTEMS INC.			

JOB TITLE: T.C.H. BRIDGE OVER BANFF AVE.			
SYSTEM: HONEL EXPANSION JOINT			
DRAWN BY: J. DERBY	PROJECT NO.: P640-84	DRAWING NO.: W84-264	REV. 4
CHECKED BY: B. GUNN	DATE: MAY, 1984		5


NO CHANGE JULY 16/84 D.S.
REVISED JULY 11/84 R.S.
REVISED JULY 6/84 D.S.
REVISED WHERE NOTED JUN 21/84 J.D.

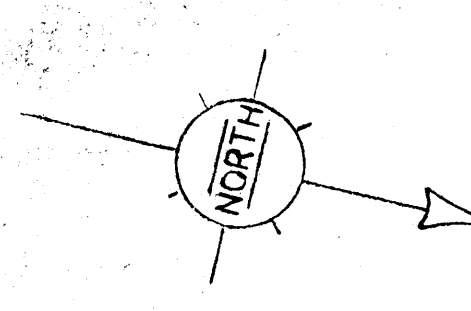


DRAWING REVIEW	
The review of this drawing does not in any way relieve the contractor of responsibility for its accuracy or for compliance with the contract documents.	
<input checked="" type="checkbox"/> No Comment <input type="checkbox"/> Amend, Proceed & Resubmit <input type="checkbox"/> Amend & Resubmit <input type="checkbox"/> Rejected See Remarks	Submission No: <u>3</u> Job No: <u>2877/02</u> By: <u>dale</u> Date: <u>5</u> <u>11</u> <u>88</u> <div style="text-align: center;"> <div style="display: inline-block; width: 20px; height: 20px; border: 1px solid black; margin: 2px;"></div> <div style="display: inline-block; width: 20px; height: 20px; border: 1px solid black; margin: 2px;"></div> <div style="display: inline-block; width: 20px; height: 20px; border: 1px solid black; margin: 2px;"></div> </div>
UNDEWOOD McLELLAN LTD.	

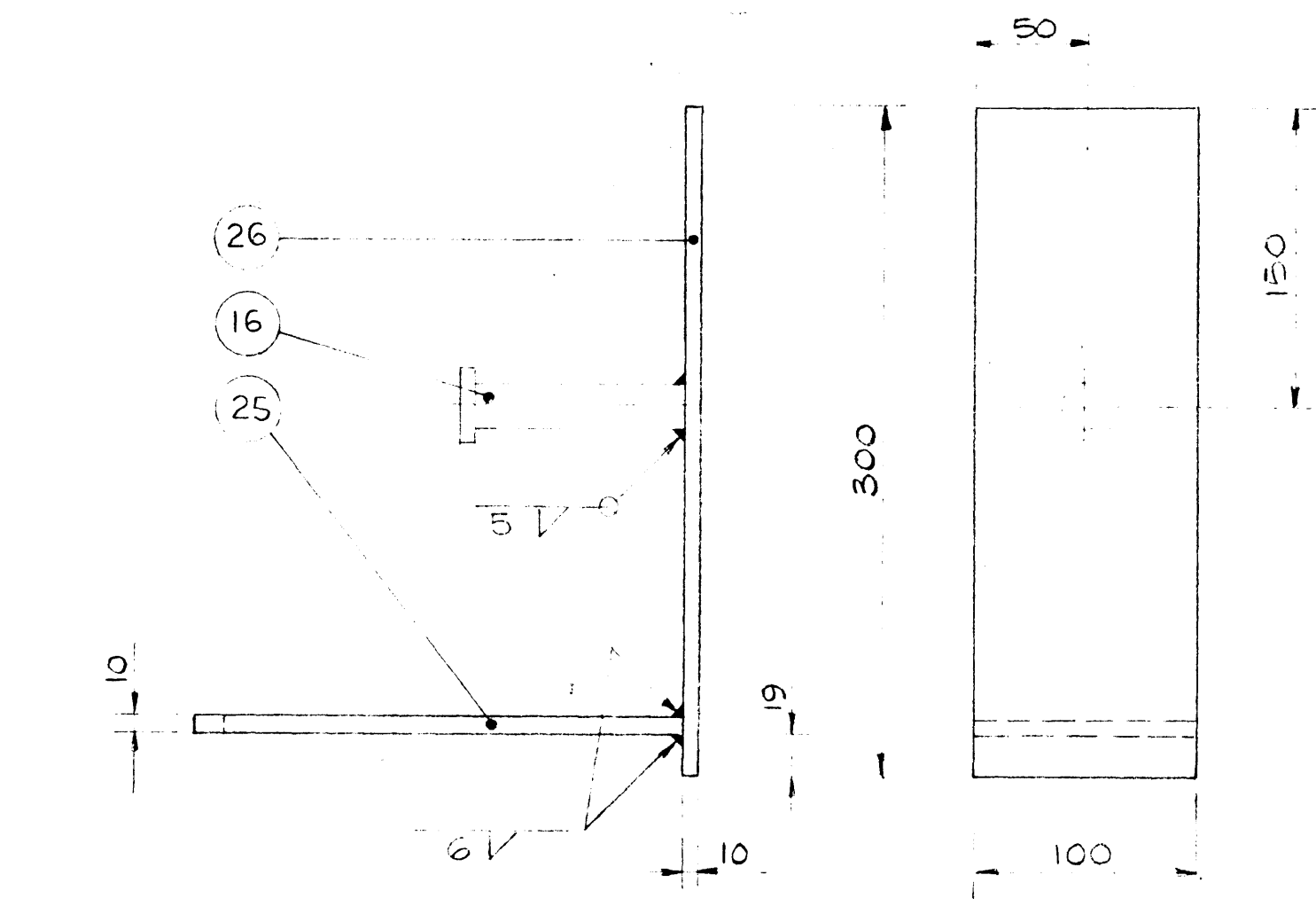
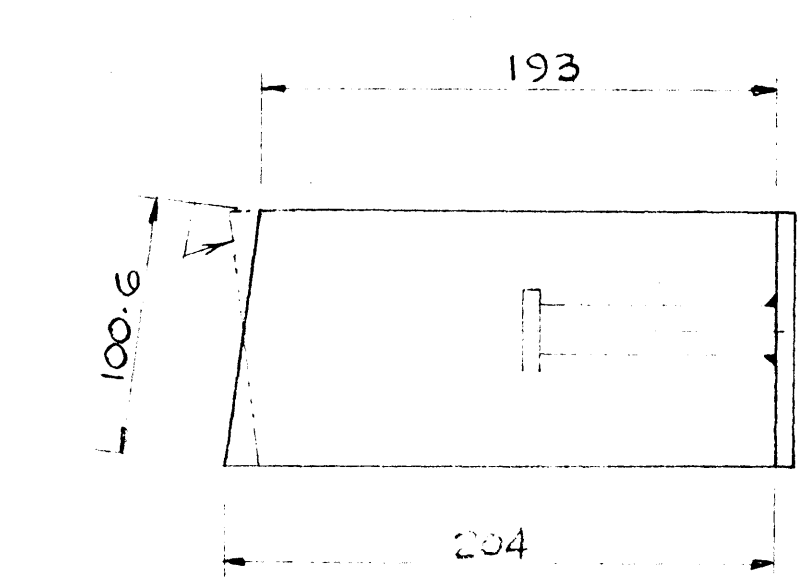
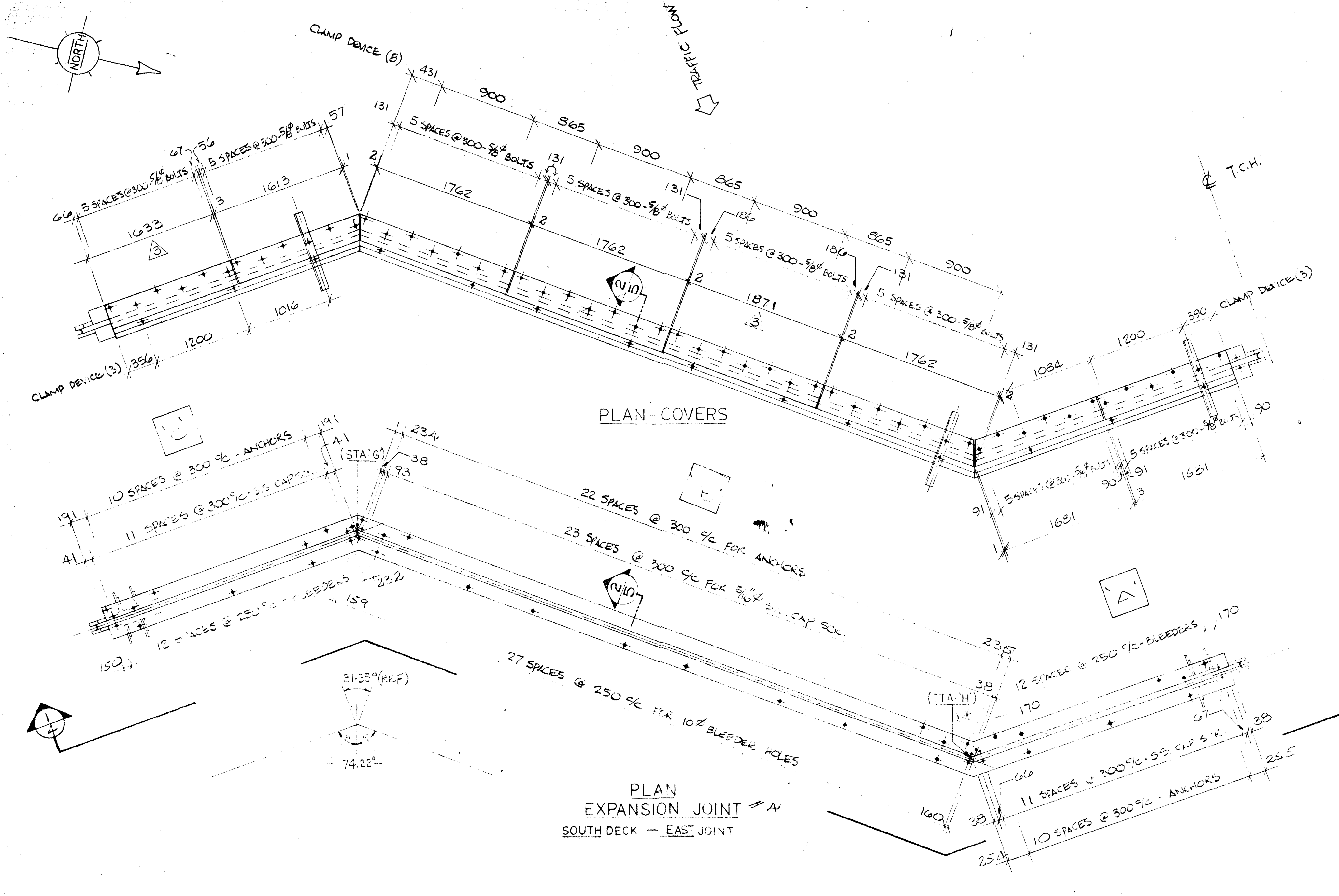
EXPANSION SETTING										
TEMPERATURE °C	-38	-31	-22	-13	-4	+6	+15	+24	+28	
TEMPERATURE °F	-38	-20	-8	5	25	43	59	75	82	
TIME, min	122	114	104	94	84	74	64	54	49	

△ REVISED JULY 16/84 D.S.
 △ NO CHANGE JULY 11/84 RJ.
 △ NO CHANGE JULY 6/84 D.S.
 2 REVISION - WHERE NOTED - J.P. JUN. 21/84
 1 REVISION - ADD CAMPER SITE - J.P. JULY 6/84

	WERCHOLOZ-HONEL SYSTEMS INC.	
	BURLINGTON,	JUL 10 1984
ONTARIO		5 0 5
<small>THESE DRAWINGS AND THE DATA CONTAINED THEREIN, ARE THE EXCLUSIVE PROPERTY OF WERCHOLOZ-HONEL SYSTEMS INC. ISSUED IN STRICT CONFIDENCE AND SHALL NOT BE REPRODUCED, COPIED OR USED FOR ANY PURPOSE WHATSOEVER, WITHOUT THE WRITTEN PERMISSION OF WERCHOLOZ-HONEL SYSTEMS INC.</small>		
JOB TITLE: T.C.H. BRIDGE OVER BANFF AVE.		AA006055
SYSTEM: HONEL 151 EXPANSION JOINT		
DRAWN BY: J. DEBEY	PROJECT NO.: P640-84	DRAWING NO.: W84-264
CHECKED BY: R. BROWN	DATE: MAY, 1984	
		REV. 5 SHT. 5



NOTE:



PROTECTION PLATE - 2 (5 REQ'D)

NOTE: MAKE 4 AS SHOWN AND 4 WITH PLATE (25) OPPOSITE AS INDICATED BY REFERENCE LINE

SEE COMMENTS ON SUB. # 3

DRAWING REVIEW	
The review of this drawing does not in any way relieve the contractor of responsibility for its accuracy or for compliance with the contract documents.	
Reviewed By:	Submission No. 4
Reviewed Date:	2977-022
By:	DEW
Date:	6/3/84
UNDERWOOD McLELLAN LTD.	

ELIUS-DON MANAGEMENT SERVICES LTD.
"APPROVED FOR CONSTRUCTION"
SEP 4 1984

WERCHOLOZ-HONEL SYSTEMS INC.

PER: DATE: AUG 29 1984

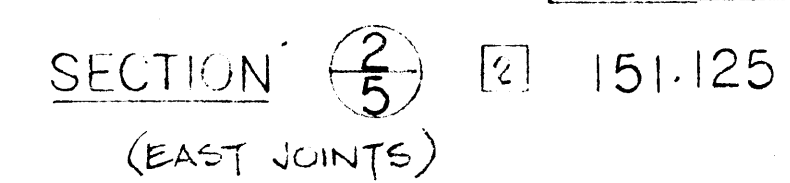
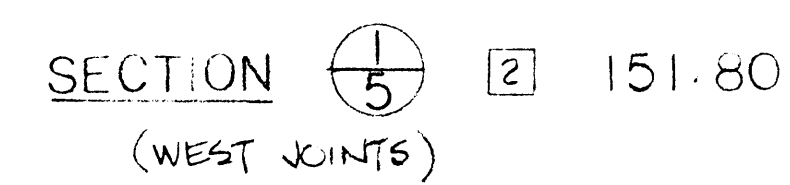
WERCHOLOZ-HONEL SYSTEMS INC.
BURLINGTON, ONTARIO

THESE DRAWINGS AND THE DATA CONTAINED THEREIN ARE THE EXCLUSIVE PROPERTY OF WERCHOLOZ-HONEL SYSTEMS INC. ISSUED IN STRICT CONFIDENCE AND SHALL NOT BE REPRODUCED, COPIED OR USED FOR ANY PURPOSE WHATSOEVER WITHOUT PRIOR WRITTEN PERMISSION OF WERCHOLOZ-HONEL SYSTEMS INC.

JOB TITLE: T.C.H. BRIDGE OVER BANFF AVE.		SYSTEM: HONEL 151 EXPANSION JOINT	
DRAWN BY: J. DERBY	PROJECT NO: P640-84	DRAWING NO.: W84-264	REV. 4
CHECKED BY: B. KIRK	DATE: MAY, 1984		5

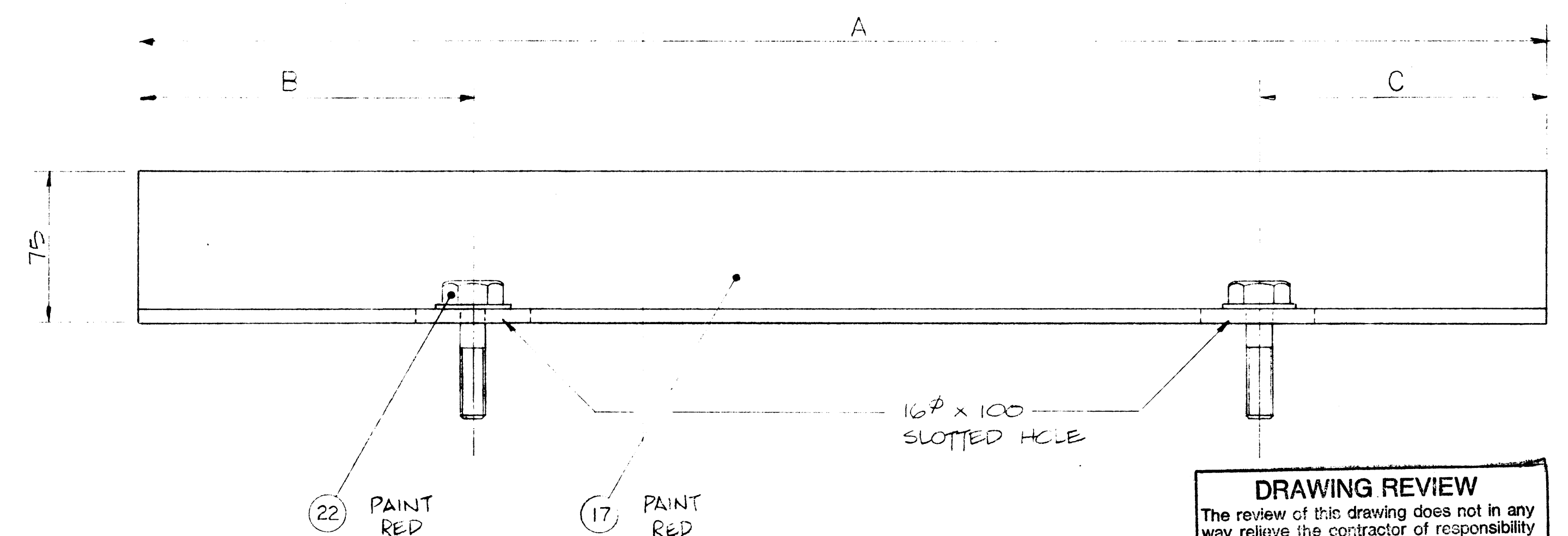
ELEVATION -

- NO CHANGE JULY 16/84 D.S.
- REVISED JULY 11/84 R.S.
- REVISED JULY 6/84 D.S.
- REVISED WHERE NOTED JUN 21/84 J.D.



SECTION $\frac{3}{5}$ 2

SECTION $\frac{4}{5}$ [2]



CLAMP DEVICE				
	A	B	C	QTY.
WEST JOINTS	730	257	235	28
EAST JOINTS	840	250	230	28

DRAWING REVIEW

The review of this drawing does not in any way relieve the contractor of responsibility for its accuracy or for compliance with the contract documents.

✓ No Comments

Amend, Re-submit
& Reprint

Amend & Re-submit

Reprint per Remarks

Submission No: 4

Date: 2017-02-22

By: BSW


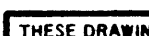
Date: 6-13-18

D M Y

UNDERWRITERS MCGILLAN LTD.

'APPROVED FOR CONSTRUCTION'
 ELI-DON MANAGEMENT SERVICES LTD.
 Per SEP 4 1984
 INTERCOMPUTER SYSTEMS INC.
 AUG 29 1984
 PER: B DATE: _____

5 REVISED JULY 16/84 D.S.
 4 NO CHANGE JULY 11/84 R.I.
 3 NO CHANGE JULY 6/84 D.S.
 2 REVISION - WHERE NOTED - J.D. JUN. 21/84
 1 REVISION - ADD CLAMP SIZE - J.D. JUN 6/84

	WERCHOLOZ-HONEL SYSTEMS INC.	
	BURLINGTON,	ONTARIO
<small>THESE DRAWINGS AND THE DATA CONTAINED THEREIN, ARE THE EXCLUSIVE PROPERTY OF WERCHOLOZ-HONEL SYSTEMS INC. ISSUED IN STRICT CONFIDENCE AND SHALL NOT BE REPRODUCED, COPIED OR USED FOR ANY PURPOSE WHATSOEVER, WITHOUT THE WRITTEN PERMISSION OF WERCHOLOZ-HONEL SYSTEMS INC.</small>		
JOB TITLE: T.C.H. BRIDGE OVER BANFF AVE.	 *AA006060*	
SYSTEM: HONEL 151 EXPANSION JOINT		
DRAWN BY: <i>J. Dery</i>	PROJECT NO.: P640-84	DRAWING NO.: W84-264
CHECKED BY: <i>B. Bouché</i>	DATE: MAY, 1984	REV. 5
		SHT. 5 OF 5

UNDERWOOD McLELLAN LTD.

GRADE	DATE	DWG	REV
400MPa	4/7/84	R-14	1

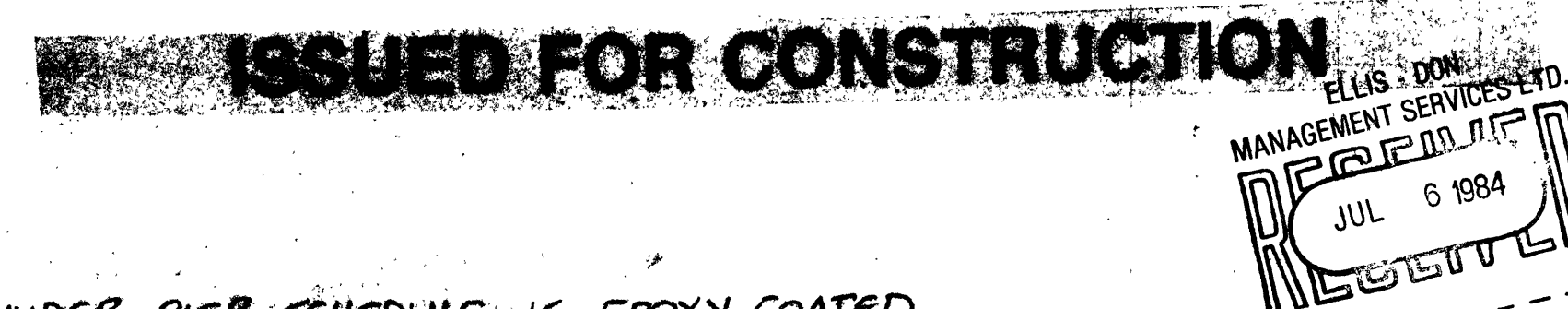
GRADE	DATE	DWG	REV
400MPa	4/7/84	R-14	1

DRAWING REVIEW

The review of this drawing does not in any way relieve the contractor of responsibility for its accuracy or for compliance with the contract documents.

No Comment	Submission No. <u>2</u>
Amend. Proceed & Resubmit	No. <u>2977/022</u>
Amend & Resubmit	By: <u>J. HALEY</u>
Rejected See Remarks	Date: <u>6/28/84</u>
	D M Y

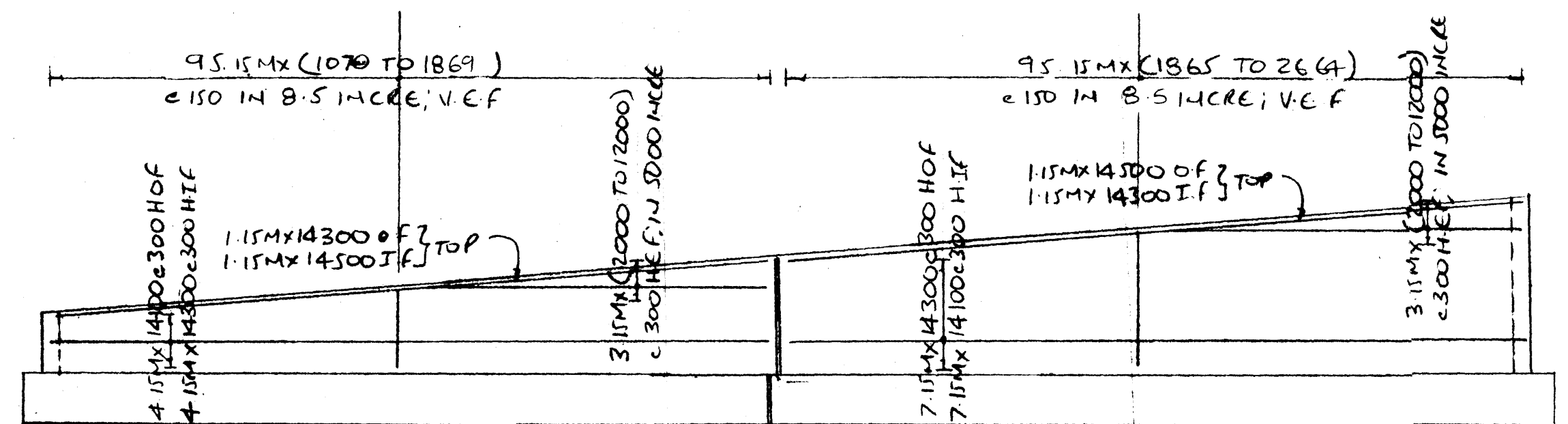
UNDERWOOD McLELLAN LTD.



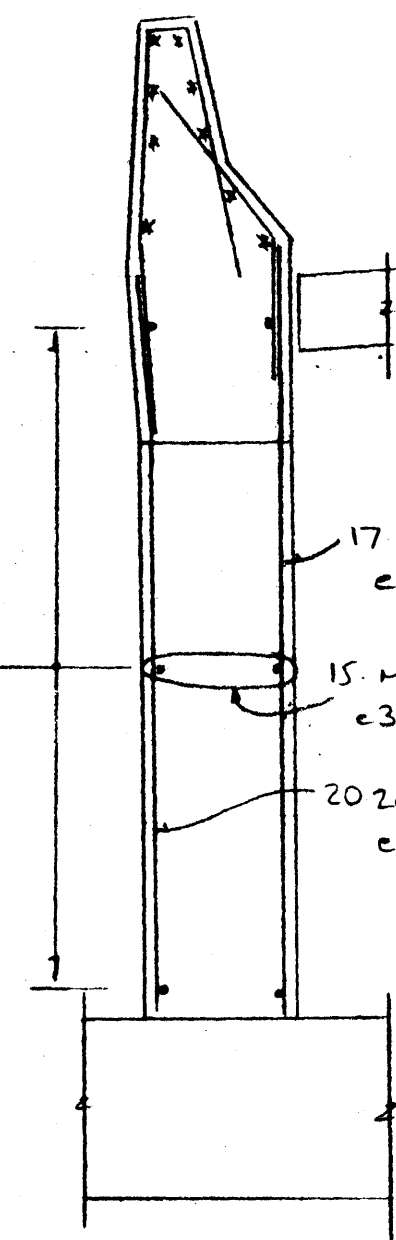
PIER SCHEDULE	
LOCATION	REINFORCING
FTG P2N PIER (G)	24-MK35218 DWLS 24-30M X 7435 VTS 2x 28-MK15208 28-MK15209 28-MK15210 2x 28-MK15211 2x 28-MK15212 1-MK15223 TIE AT TOP AROUND ANCHORS
FTG P2N PIER (H)	24-MK35219 DWLS 24-30M X 7155 VTS 2x 27-MK15208 27-MK15209 27-MK15210 2x 27-MK15211 2x 27-MK15212 1-MK15224 TIE AT TOP AROUND ANCHORS
FTG P2N PIER (J)	24-MK35220 DWLS 24-30M X 6985 VTS 2x 27-MK15208 27-MK15209 27-MK15210 2x 27-MK15211 2x 27-MK15212 1-MK15223 TIE AT TOP AROUND ANCHORS
FTG P2S PIER (K)	24-MK35221 DWLS 24-30M X 6995 VTS 2x 25-MK15208 25-MK15209 25-MK15210 2x 25-MK15211 2x 25-MK15212 1-MK15223 TIE AT TOP AROUND ANCHORS
FTG P2S PIER (L)	24-MK35222 DWLS 24-30M X 6735 VTS 2x 24-MK15208 24-MK15209 24-MK15210 2x 24-MK15211 2x 24-MK15212 1-MK15224 TIE AT TOP AROUND ANCHORS
FTG P2S PIER (M)	24-MK35222 DWLS 24-30M X 6035 VTS 2x 23-MK15208 23-MK15209 23-MK15210 2x 23-MK15211 2x 23-MK15212 1-MK15223 TIE AT TOP AROUND ANCHORS

DRAWING REVIEW	
The review of this drawing does not in any way relieve the contractor of responsibility for its accuracy or for compliance with the contract documents.	
<input checked="" type="checkbox"/> No Comment <input type="checkbox"/> Amend, Proceed <input type="checkbox"/> Amend & Resubmit <input type="checkbox"/> Rejected See Remarks	Submission No: <u>2</u> Job No: <u>2977/02</u> By: <u>J. HALEY</u> Date: <u>19</u> / <u>07</u> / <u>13</u> <div style="text-align: center;">D M</div>
UNDEVELOPED McLELLAN I.T.D.	

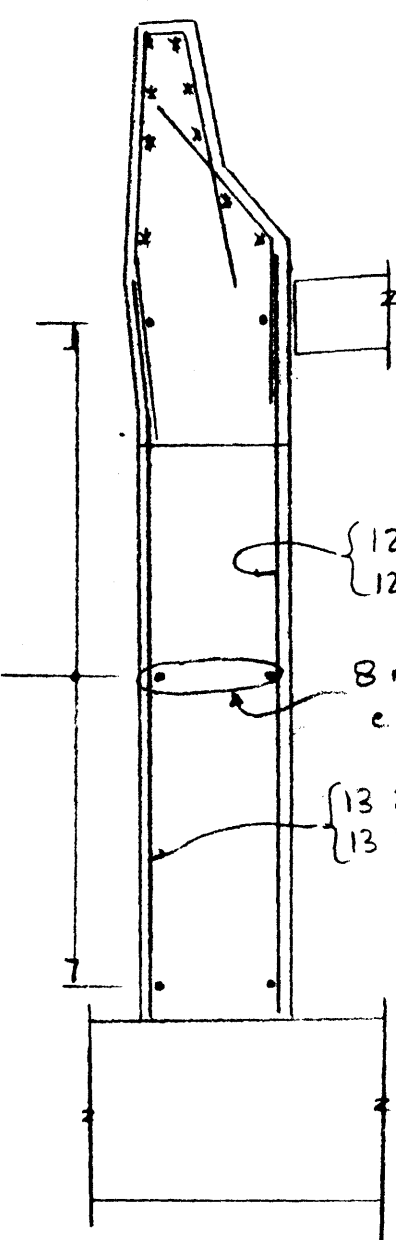
<p><u>MK15211</u></p>	<p><u>MK15212</u></p>	<p><u>MK15213</u></p>																												
<p><u>MK15212</u></p>	<p><u>MK15206</u></p>	<p><u>MK15207</u></p>																												
<p><u>MK35213</u></p>	<p><u>MK15205</u></p>	<p><u>MK15204</u></p>																												
<p><u>MK35214</u></p>	<p><u>MK15202</u></p>	<p><u>MK15203</u></p>																												
<p><u>MK35215</u></p>	<p><u>MK15201</u></p>	<p><u>MK15200</u></p>																												
<p><u>MK35216</u></p>	<p>Contractor shall verify all dimensions and measurements to ensure compliance with contract drawings.</p> <p>All changes from the contract drawing should be clearly marked on the drawings.</p> <p>Any changes in construction sequence from the one detailed should be clearly marked.</p> <p>Contractor to ensure that dimensions on this drawing comply with his form work dimension.</p> <div style="text-align: center;"> </div>																													
<p><u>MK35217</u></p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>DATE</th> <th>SK NO</th> <th>DESCRIPTION</th> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>		DATE	SK NO	DESCRIPTION																									
DATE	SK NO	DESCRIPTION																												
<p><u>MK35218</u></p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>DATE</th> <th>REVISIONS</th> <th>NO.</th> <th>BY</th> </tr> <tr> <td>24/1/84</td> <td>REVISED AS APP'D</td> <td>1</td> <td>ML</td> </tr> <tr> <td>3/1/84</td> <td>ADD TIE AROUND ANCHORS</td> <td>2</td> <td>ML</td> </tr> <tr> <td>4/1/84</td> <td>ISSUED FOR CONST</td> <td>3</td> <td>ML</td> </tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </table>		DATE	REVISIONS	NO.	BY	24/1/84	REVISED AS APP'D	1	ML	3/1/84	ADD TIE AROUND ANCHORS	2	ML	4/1/84	ISSUED FOR CONST	3	ML												
DATE	REVISIONS	NO.	BY																											
24/1/84	REVISED AS APP'D	1	ML																											
3/1/84	ADD TIE AROUND ANCHORS	2	ML																											
4/1/84	ISSUED FOR CONST	3	ML																											
<p><u>MK35219</u></p>	<div style="text-align: center;"> <h2>ACI DETAILING LTD.</h2> <p>CALGARY 3208-52 ST. S.E. 272-8801</p> <p>LEDUC 6613-44 ST. 272-7223</p> <p>986-7085</p> </div>																													
<p><u>MK35220</u></p>	<p>PROJECT TRANS. CANADA HIGHWAY BRIDGE OVER BANFF AVENUE</p> <p>DWG TITLE PIER DETAILS.</p> <p>CONTRACTOR ELLIS - DON</p>																													
<p><u>MK35221</u></p>	<p>BY NIZAR JOB 396 SCALE N.T.S.</p>																													
<p><u>MK35222</u></p>	<p>GRADE 400 MA DATE 17/4/84 DWG R-2 REV</p>																													
<p><u>MK15223</u></p>																														



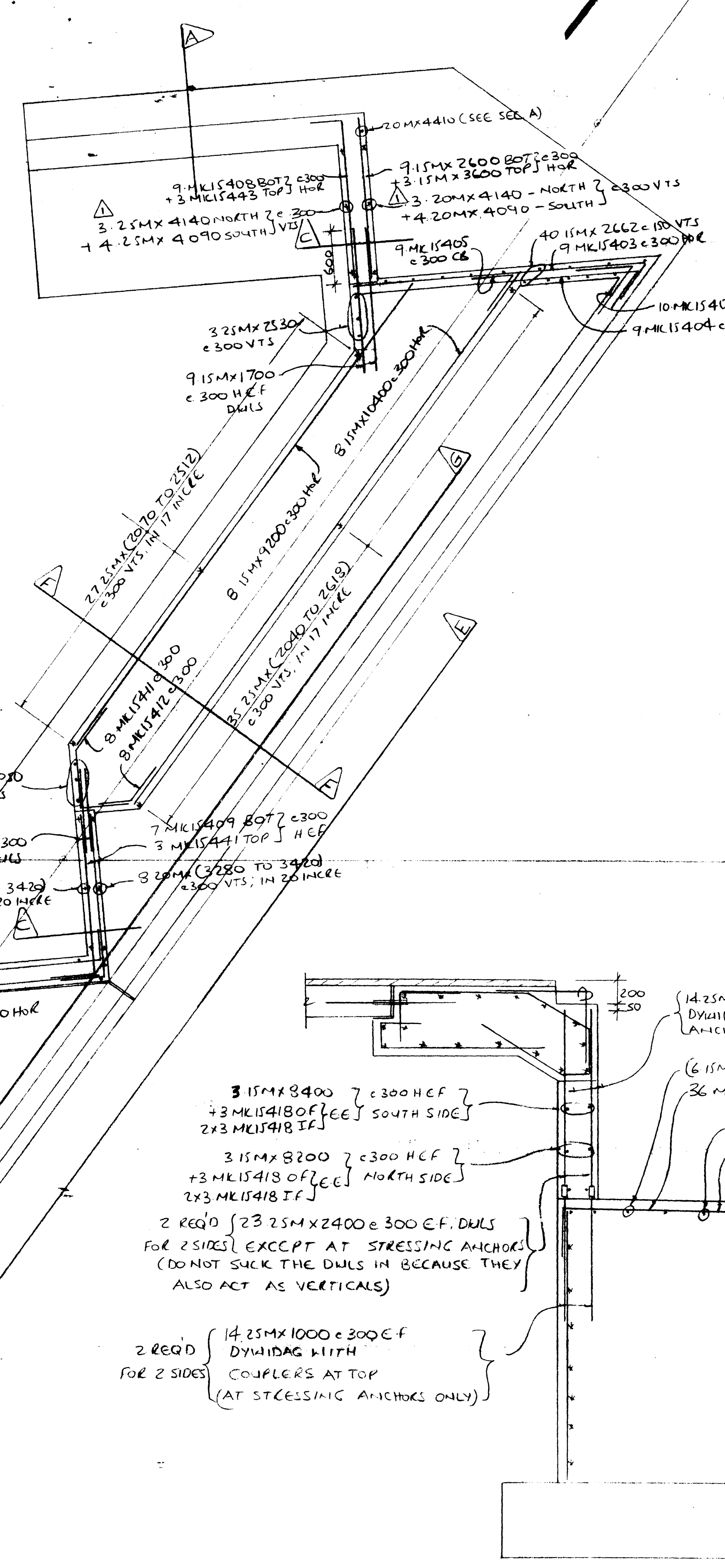
WALL ELEVATION E-E



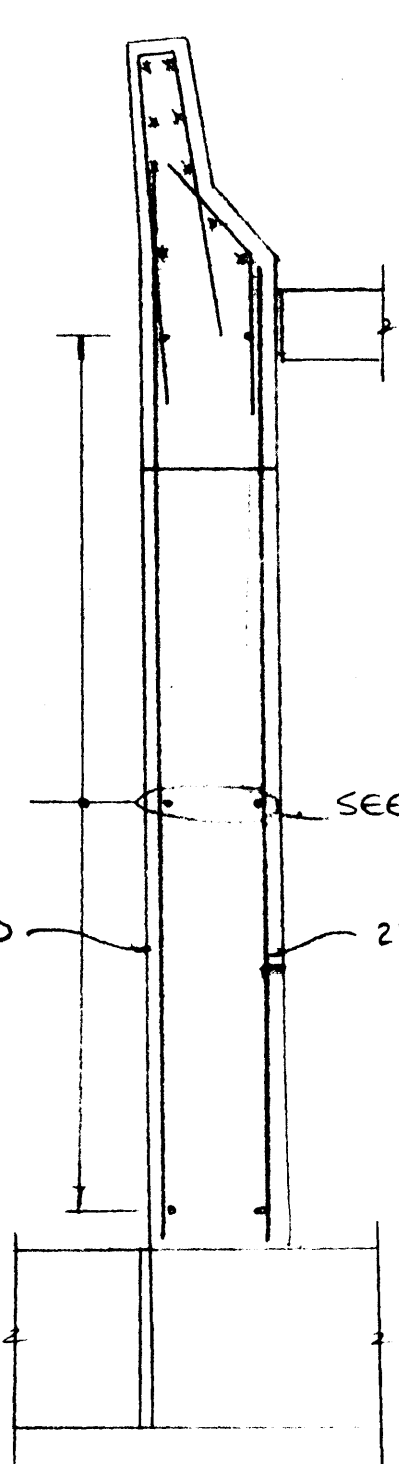
SECTION A



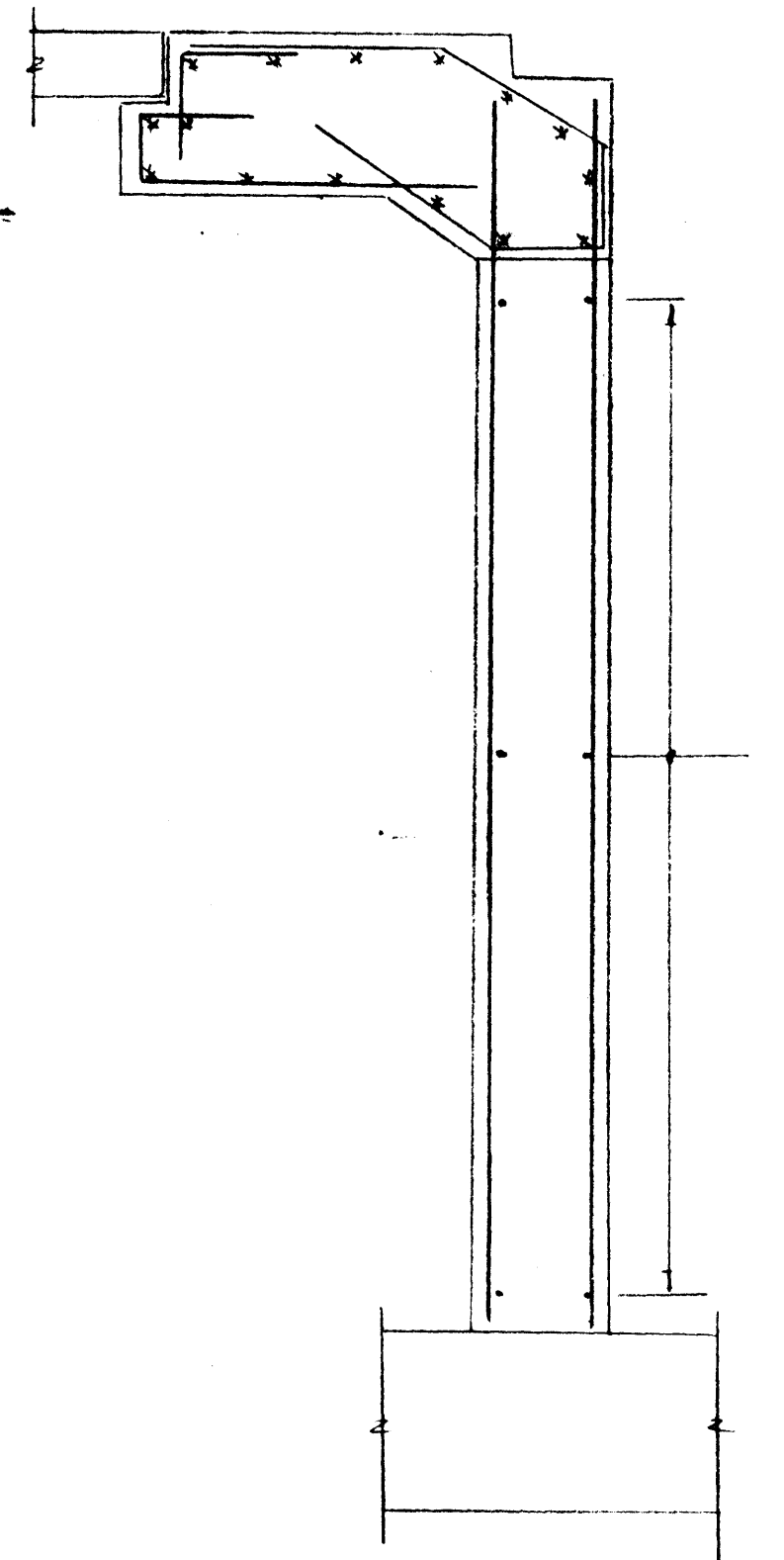
SECTION B



SECTION E-E

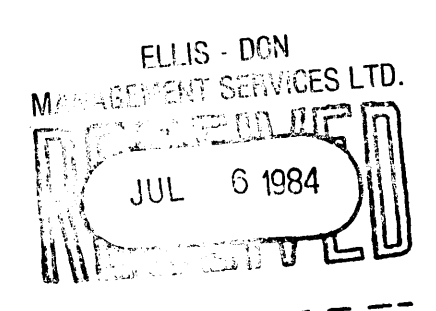


SECTION D



TYPICAL SECTION C
FOR REINF SEE PLAN

ISSUED FOR CONSTRUCTION



MKIS426	MKIS422 TO 1521
300 1075 300	500 TO 1040 IN 150 INCRE 800 300
MKIS418	MKIS419 TO 1542
650 430 650	900 TO 1200 IN 150 INCRE 800 300
MKIS417	MKIS416
300 1425 300	650 1300
MKIS414	MKIS415
445 650 1050	480 650
MKIS413	MKIS412
485 650 2400	490 650
MKIS410	MKIS411
665 650 900	430 650
MKIS409	MKIS408
2675 650	2600 650
MKIS406	MKIS407
5280 650	7080 650
MKIS405	MKIS404
490 650 4300	490 650
MKIS402	MKIS403
450 650 4600	490 650
MKIS401	MKIS400
480 650 2800	480 650

Contractor shall verify all dimensions and measurements to ensure compliance with contract drawings. All changes from the contract drawing should be clearly marked on the drawings. Any changes in construction sequence from the one detailed should be clearly marked. Contractor to ensure that dimensions on this drawing comply with his form work dimension.



DATE	SK NO	DESCRIPTION
2/1/84		

DATE	REVISIONS	NO. BY
2/1/84	REV. V.H. FOR NORTH WALL	1
4/7/84	ISSUED FOR CONSTRUCTION	2

ACI DETAILING LTD.
CALGARY 3208-52 STR. S.E. 272-8801
LEDCU 6613-44 ST. 988-7088

PROJECT TRANS-CANADA HIGHWAY BRIDGE OVER BANIT AVENUE
DWG TITLE WEST ABUTMENT WALLS
CONTRACTOR ELLIS - DON

BY	JOB	SCALE
NIRAR	396	N.T.S.

GRADE	DATE	DWG	REV
400 M.A.	7/5/84	R-4	2

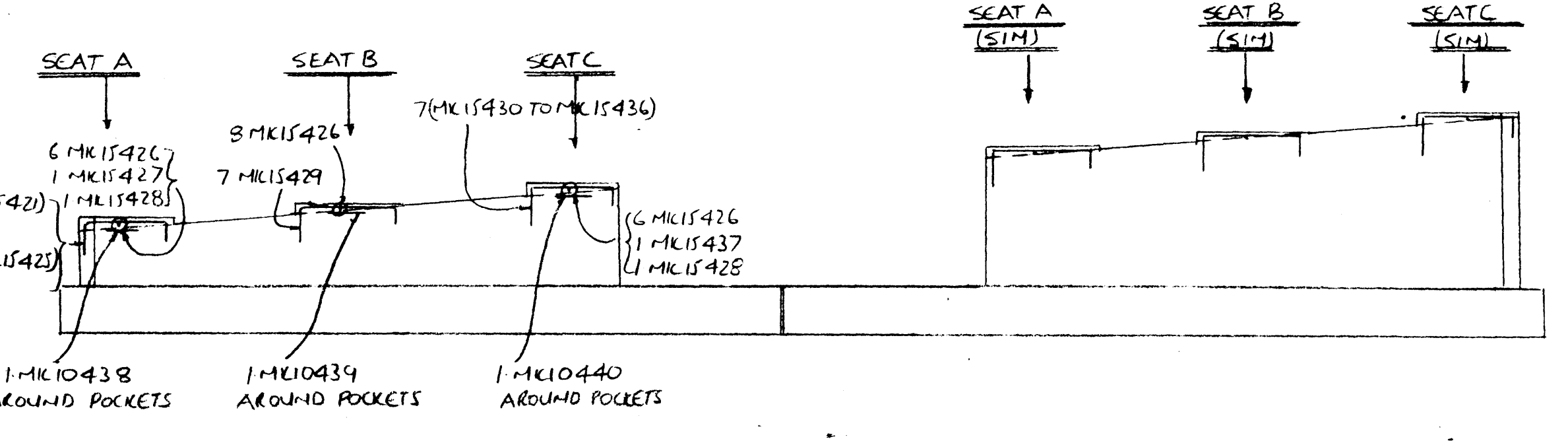
DRAWING REVIEW
The review of this drawing does not in any way relieve the contractor of responsibility for its accuracy or for compliance with the contract documents.

Approved: _____
Checked: _____
Designed: _____
Drawn: _____

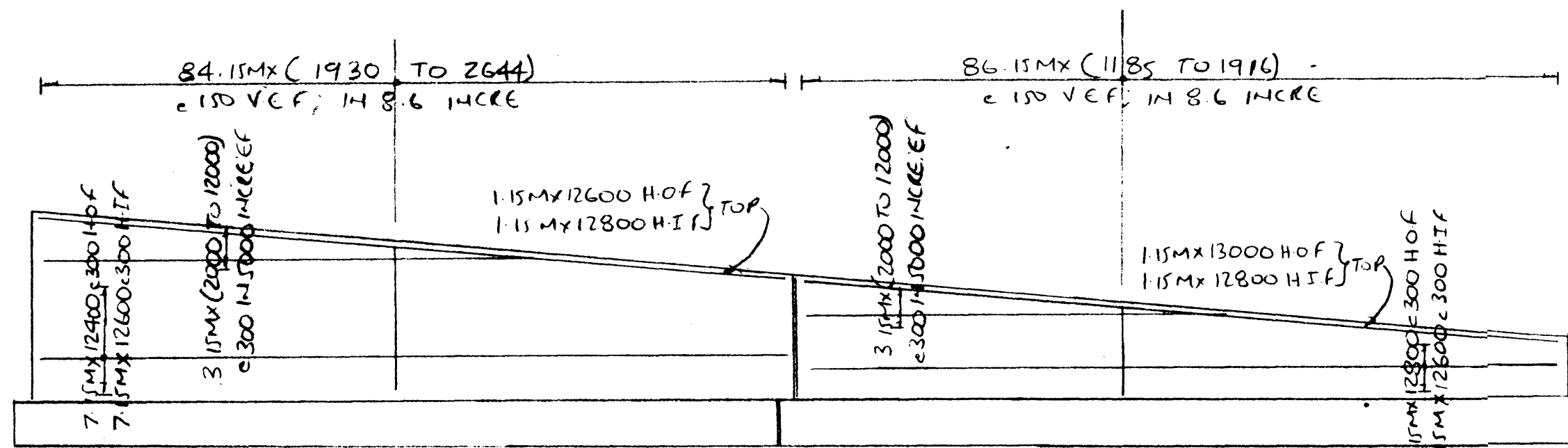
Submission No: 2
Job No: 2422/622
By: J. H. G. H. H.
Date: 19.12.1984

UNDERWOOD McLELLAN LTD.

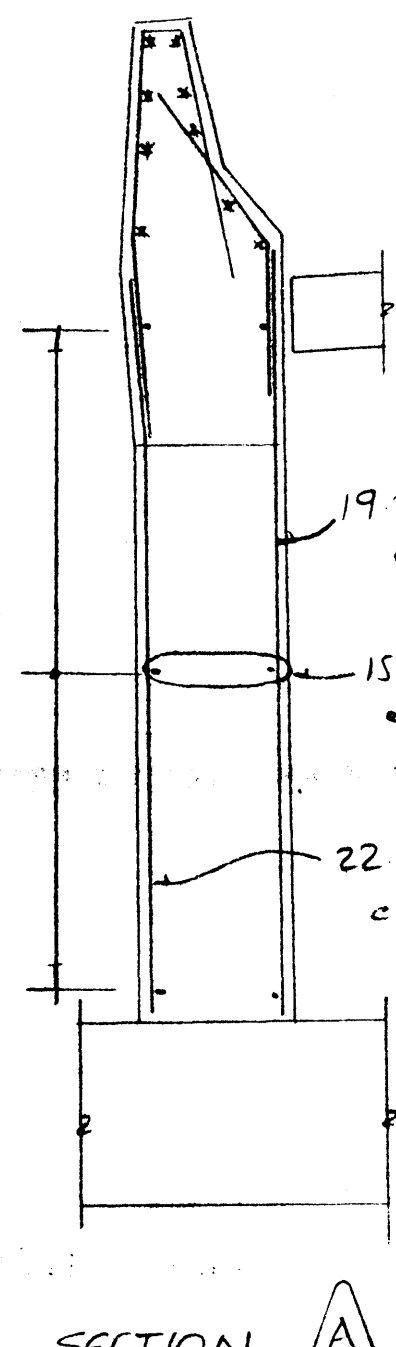
MKIS443	
3400 650	
MKIS442	MKIS441
3750 650	3700 650
MKIS439	MKIS440
645 100 695	660 100 370
MKIS438	MKIS437
390 100 340	800 300 300
MKIS429	MKIS430 TO MKIS436
1500 800 1300	800 TO 1700 IN 150 INCRE 800 1300
MKIS428	MKIS427
600 300 300	900 300 1300



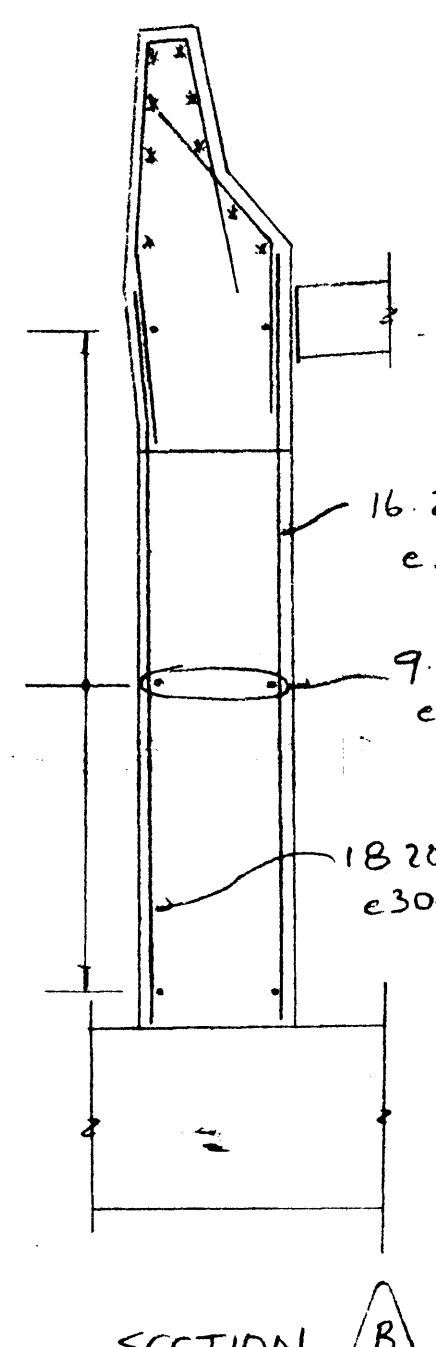
ABUTMENT SEAT ELEVATION G-G



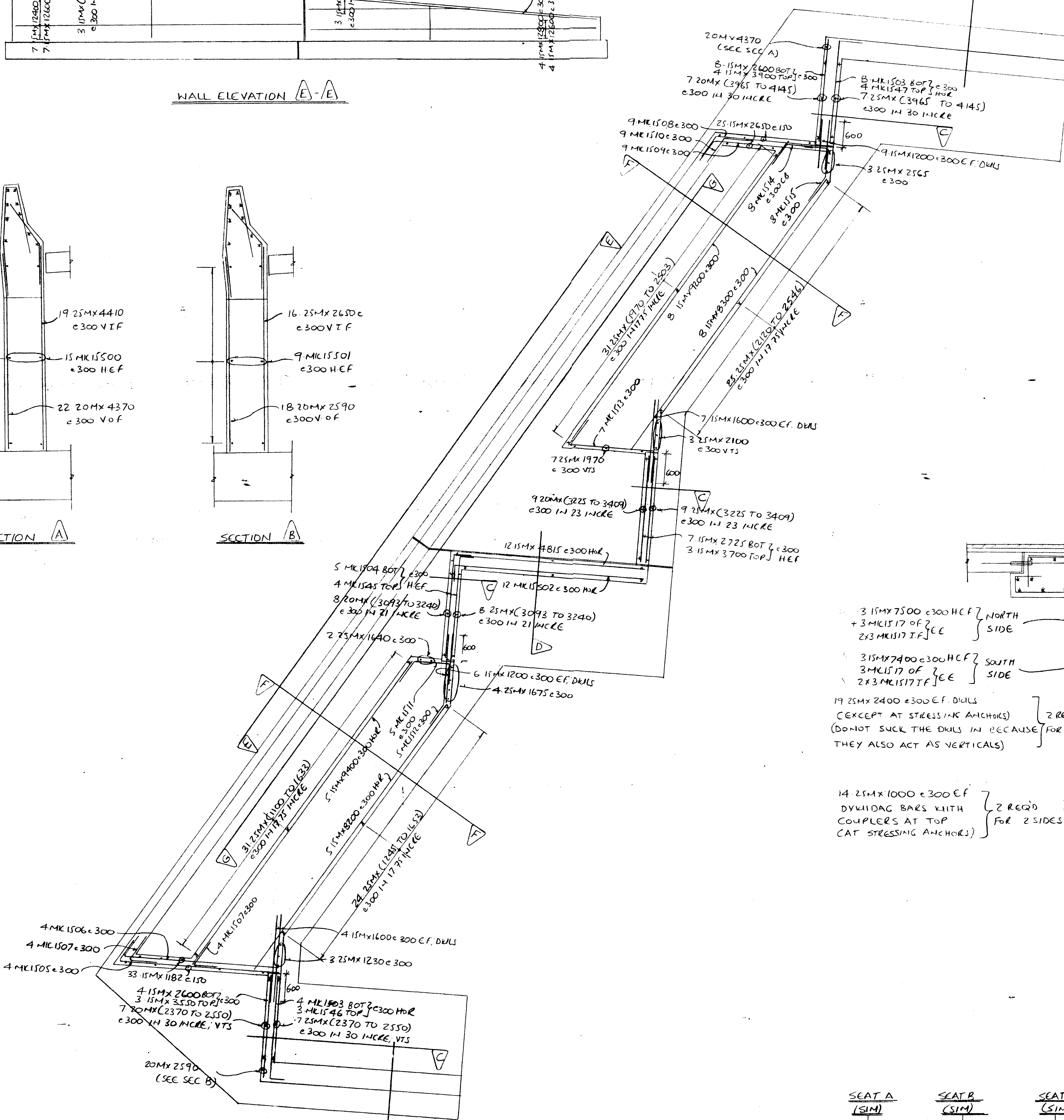
WALL ELEVATION A-A



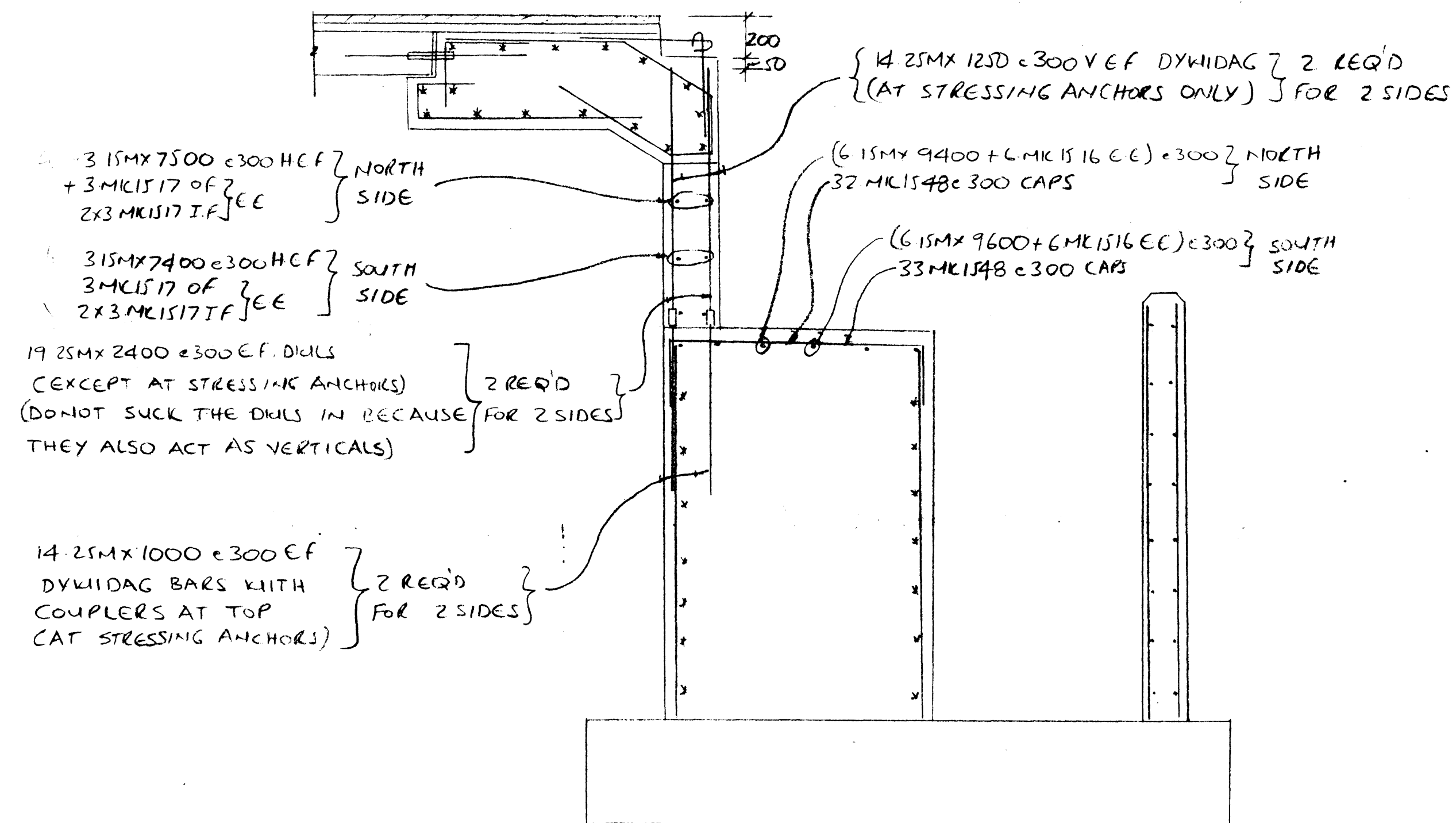
SECTION A



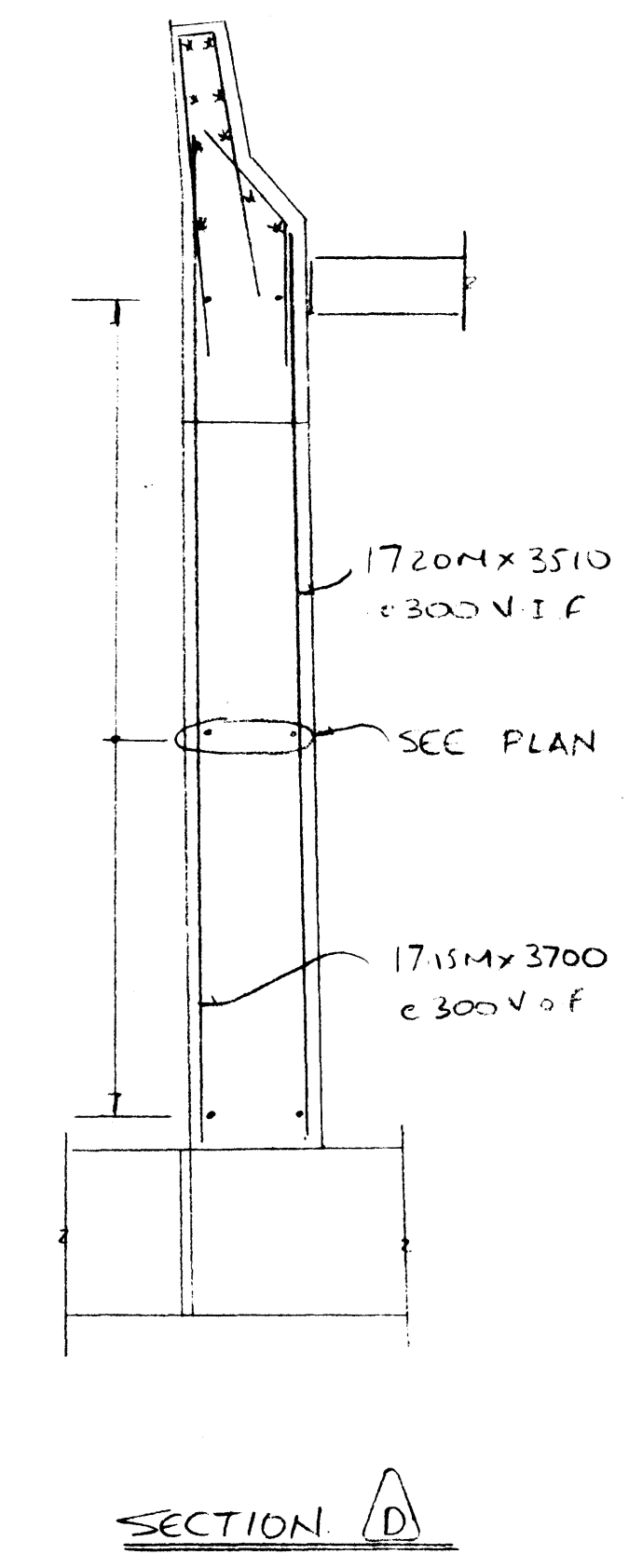
SECTION B



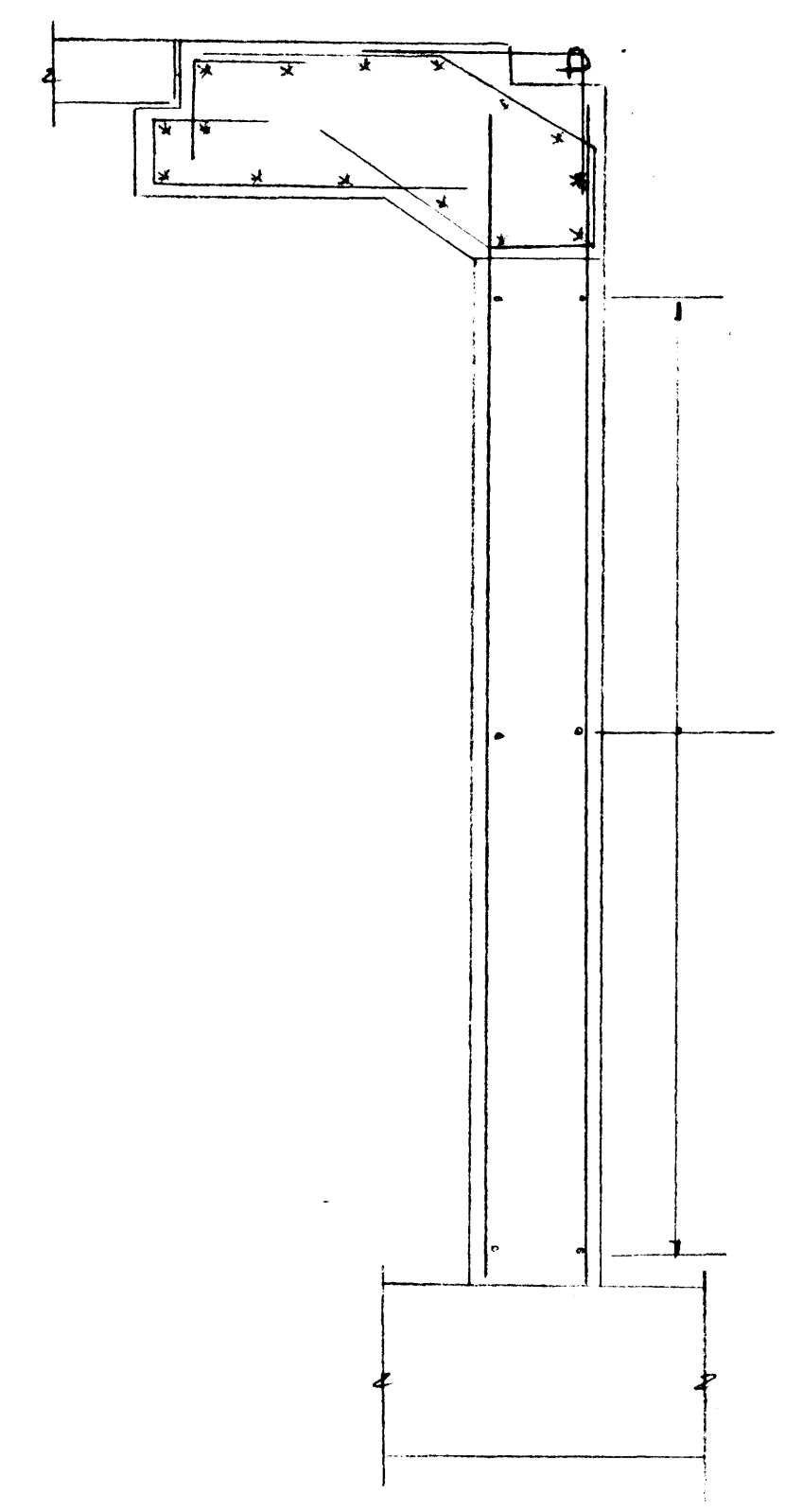
SECTION E E



ABUTMENT SEAT ELEVATION G-G

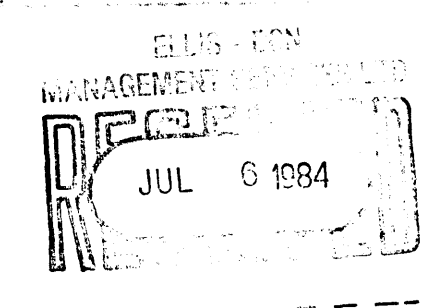


SECTION D



SECTION C
(FOR REINF. SEE PLAN)

ISSUED FOR CONSTRUCTION



DRAWING REVIEW

The review of this drawing does not in any way relieve the contractor of responsibility for its accuracy or for compliance with the contract documents.

By: J. HALEY
Date: 19/07/84

UNDERWOOD McLELLAN LTD.

NO.	DATE	REVISIONS	NO. BY
1	19/07/84	ISSUED FOR CONST	1 NLA

NO.	DATE	REVISIONS	NO. BY
1	19/07/84	ISSUED FOR CONST	1 NLA

Contractor shall verify all dimensions and measurements to ensure compliance with contract drawings.

All changes from the contract drawing should be clearly marked on the drawings.

Any changes in construction sequence from the one detailed should be clearly marked.

Contractor to ensure that dimensions on this drawing comply with his form work dimension.



DATE	SK NO	DESCRIPTION

DATE	REVISIONS	NO. BY
19/07/84	ISSUED FOR CONST	1 NLA

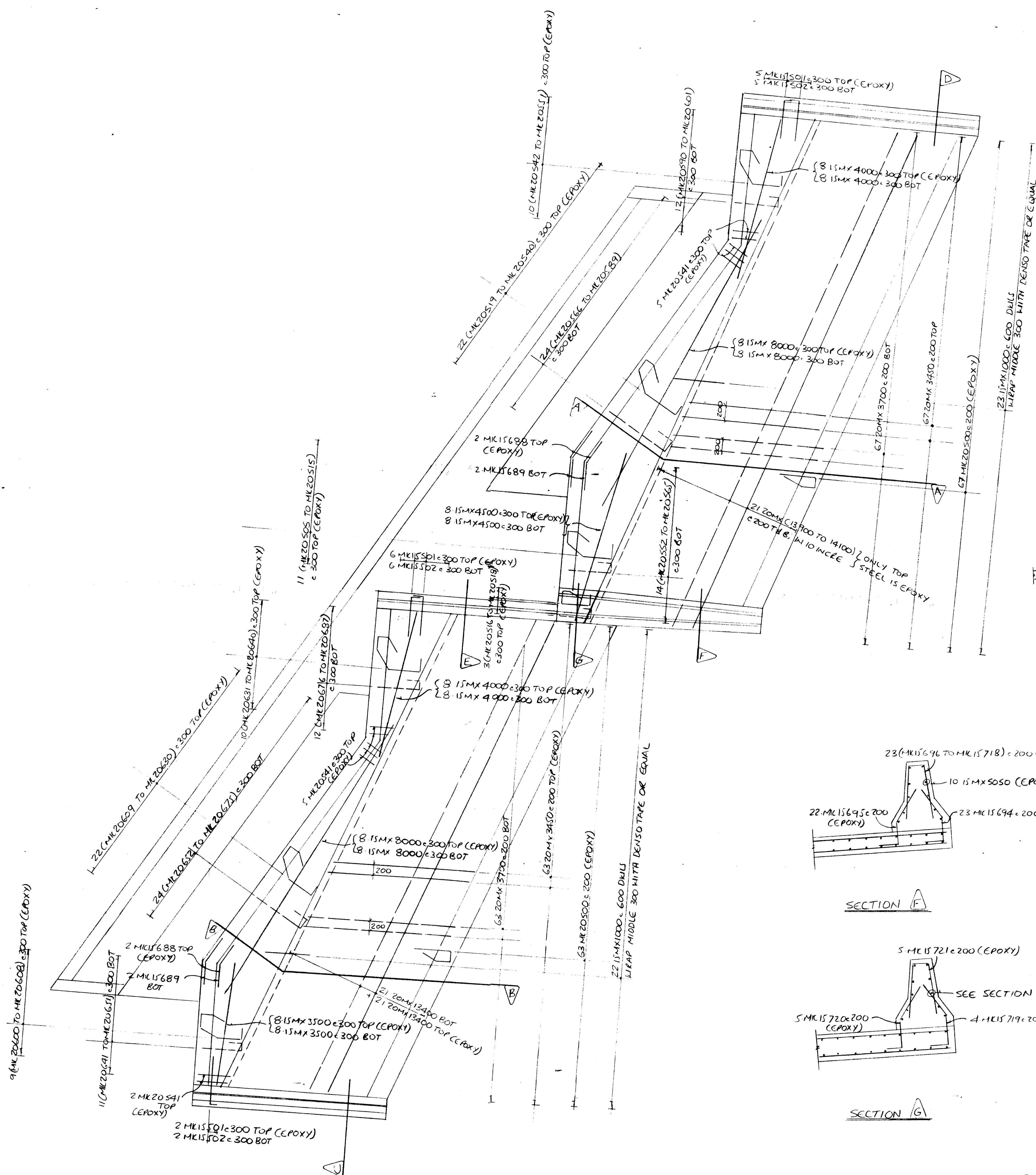
ACI DETAILING LTD.
CALGARY 3208-52 STR S.E. 272-8801
272-7223
LEUC 6813-44 ST. 988-7088

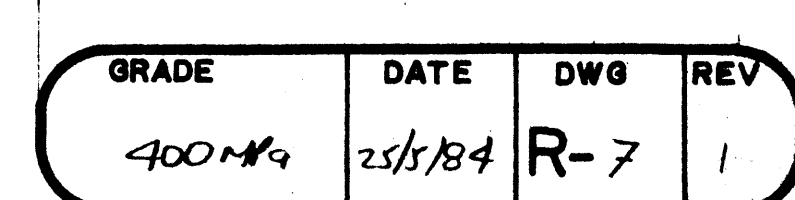
PROJECT
TRANS-CANADA HIGHWAY BRIDGE
OVER BANFF AVENUE

DWG TITLE
EAST ABUTMENT
WALLS

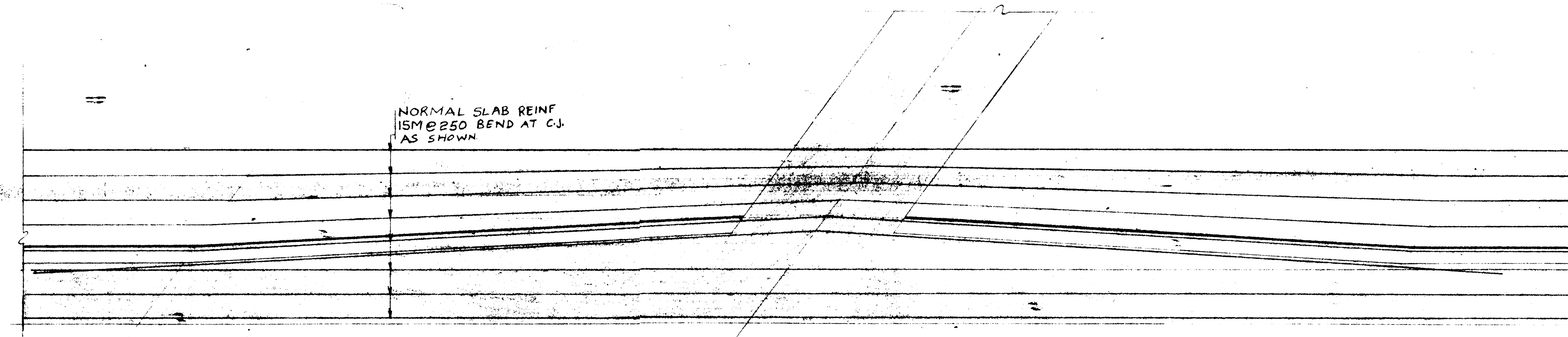
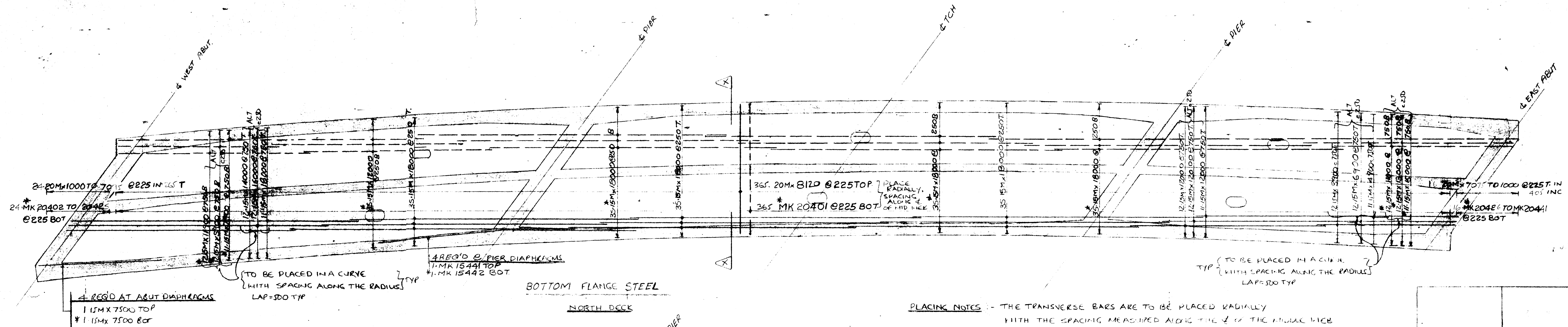
CONTRACTOR
ELLIS-DON

GRADE	DATE	DWG	REV
400 MM	10/5/84	R-5	1





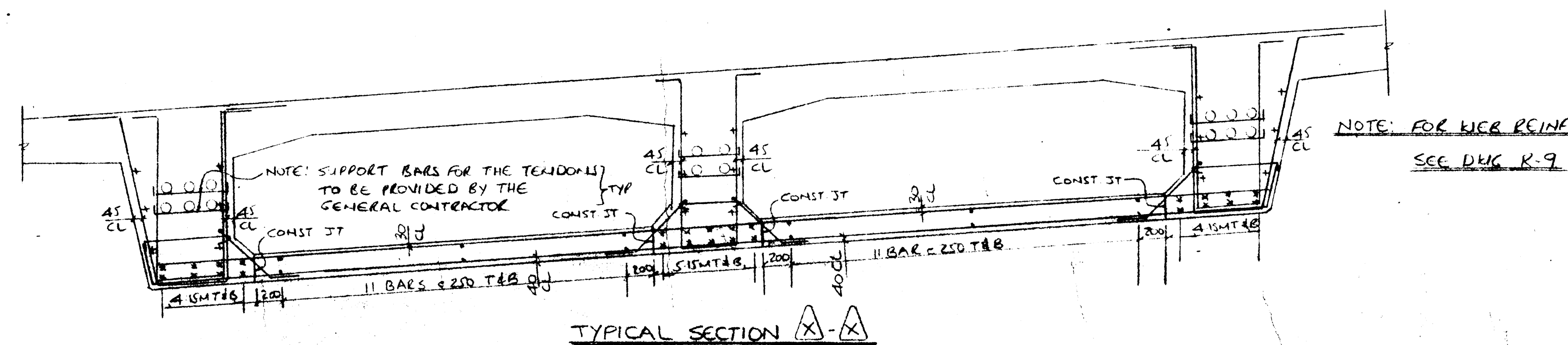
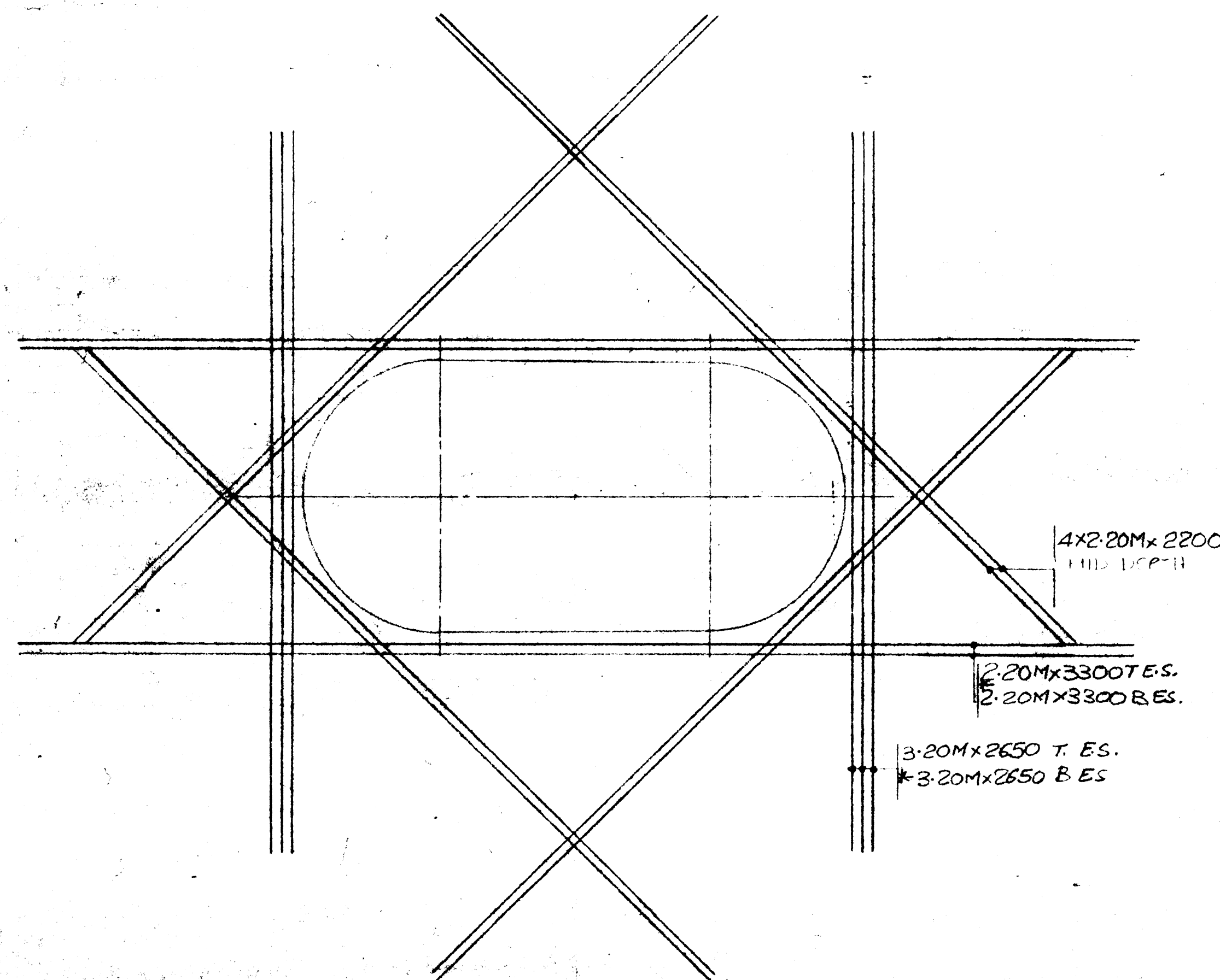
ISSUED FOR CONSTRUCTION



TYPICAL BAR ARRANGEMENT AT PIER DIAPHRAGMS
(BAR ARRANGEMENT AT ABUT. DIAPHRAGMS SIMILAR)

PLACING NOTES - THE TRANSVERSE BARS ARE TO BE PLACED RADially WITH THE SPACING MEASURED ALONG THE ϕ OF THE RADIAL VIBR THE LONGITUDINAL BARS ARE TO BE PLACED IN A CURVE PARALLEL TO THE ϕ OF RADIAL VIBR WITH THE SPACING MEASURED RADially

ALL BARS MARKED WITH * ARE EPOXY COATED.
ALL LONG STEEL LAPPED MIN 500



DRAWING REVIEW	
The review of this drawing does not in any way relieve the contractor of responsibility for its accuracy or for compliance with the contract documents.	
✓ No Comment	Submission No. 2
✓ Amend, Proceed	Job No. 2977/022
✓ Amend & Resubmit	By J. Harty
✓ Rejected See Remarks	Date 19/07/94
UNDERWOOD McLELLAN LTD.	

Contractor shall verify all dimensions and measurements to ensure compliance with contract drawings.
All changes from the contract drawing should be clearly marked on the drawings.
Any changes in construction sequence from the one detailed should be clearly marked.
Contractor to ensure that dimensions on this drawing comply with his form work dimension.

ACI DETAILING

DATE	SK NO	DESCRIPTION

DATE	REVISIONS	NO. BY
4/7/84	ISSUED FOR CONST	1 NGL

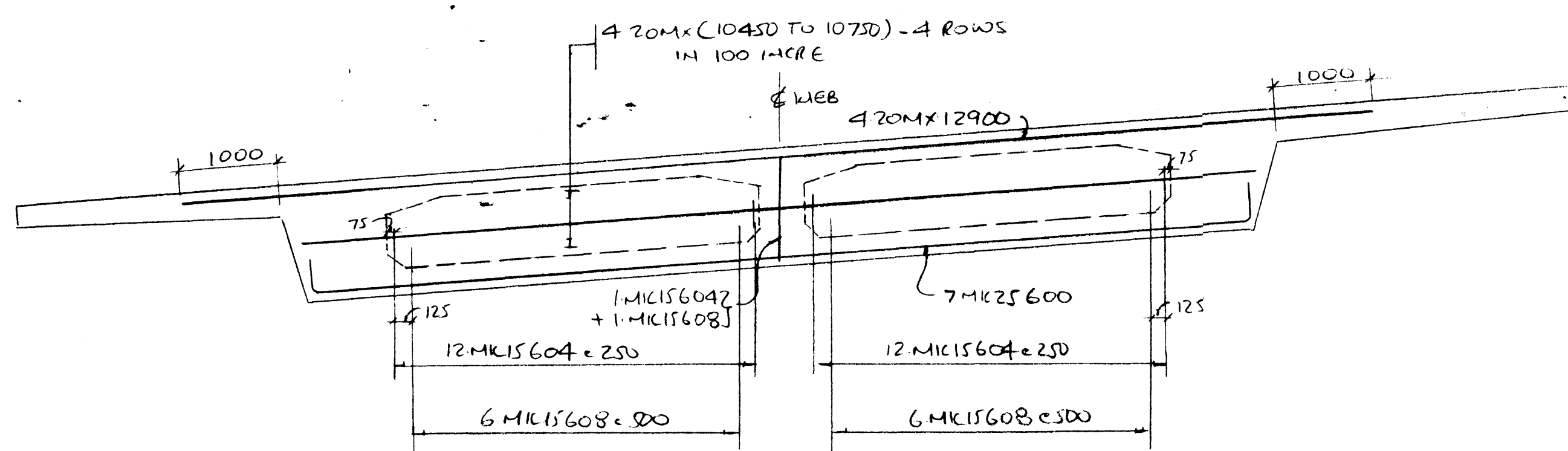
ACI DETAILING LTD.
CALGARY 3208-52 STR.E.E. 272-8801
LEUC 6613-44 ST. 272-7223
966-7005

PROJECT
TCH OVER BANFF AV BRIDGE
DWG TITLE
BOTTOM FLANGE STEEL
NORTH DECK
CONTRACTOR
ELLIS-DON MANAGEMENT
BY NYS
JOB 2977
SCALE 1/4"=1'-0"

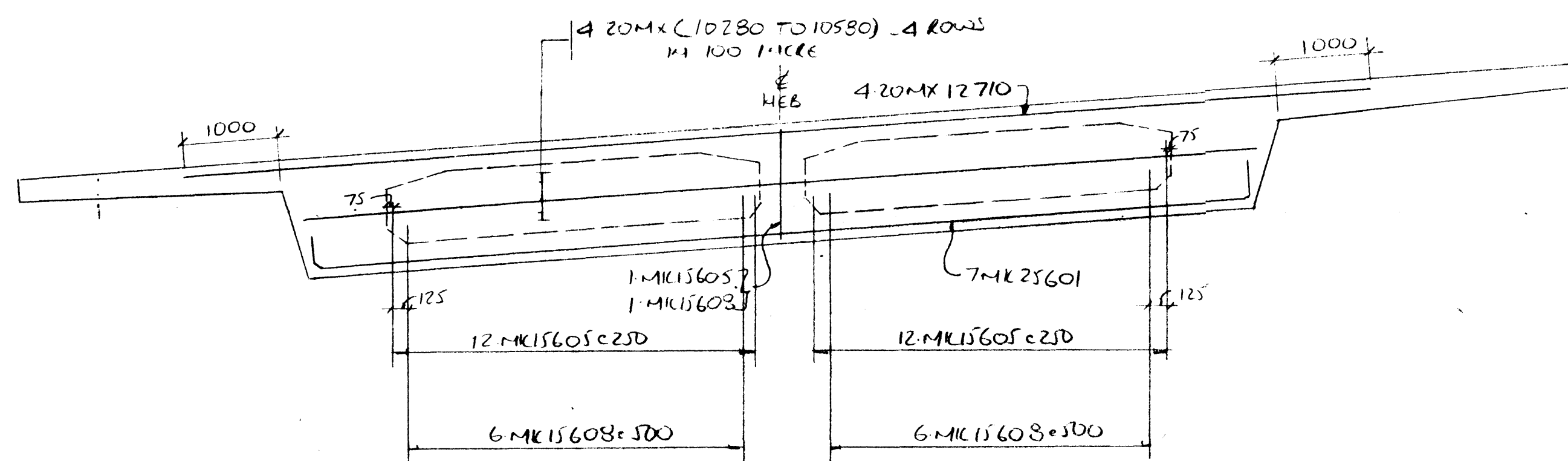
GRADE 400
DATE 29/5/94
DWG R-8
REV 1

ISSUED FOR CONSTRUCTION

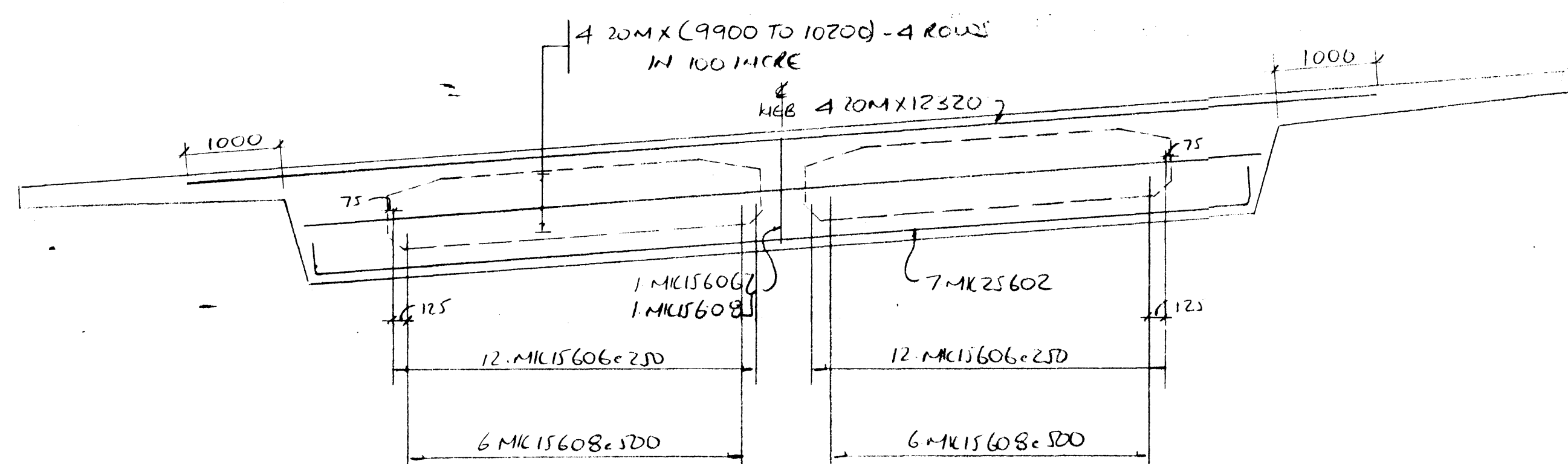
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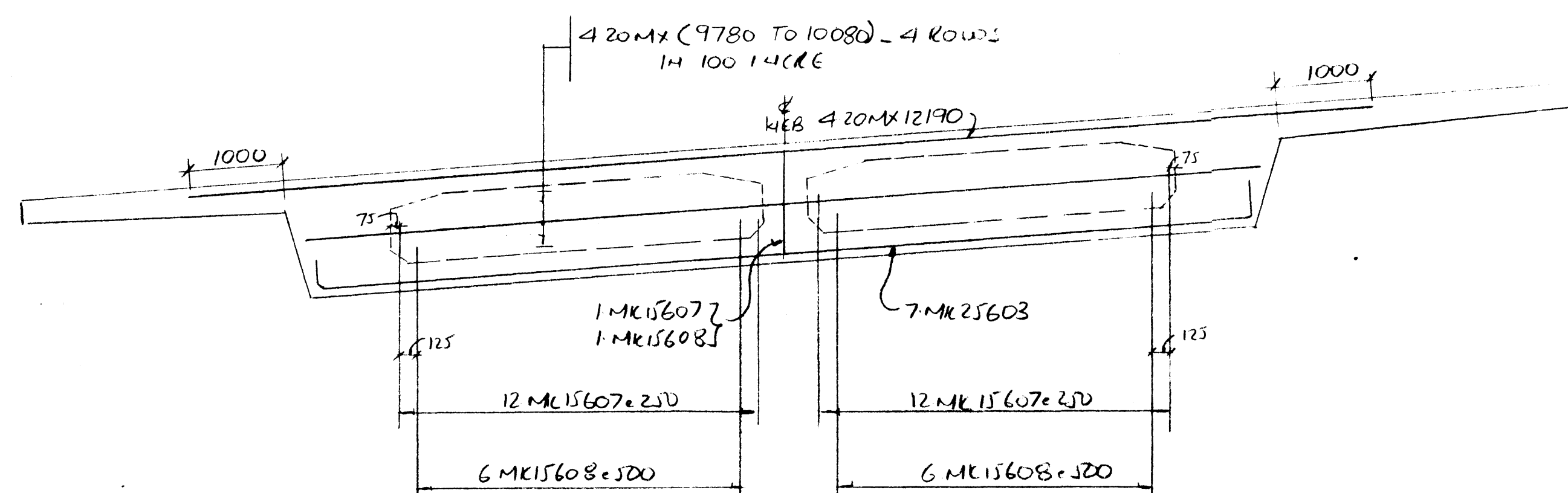
PIER DIAPHRAGM PD1S
(PIER #1 - SOUTH DECK)



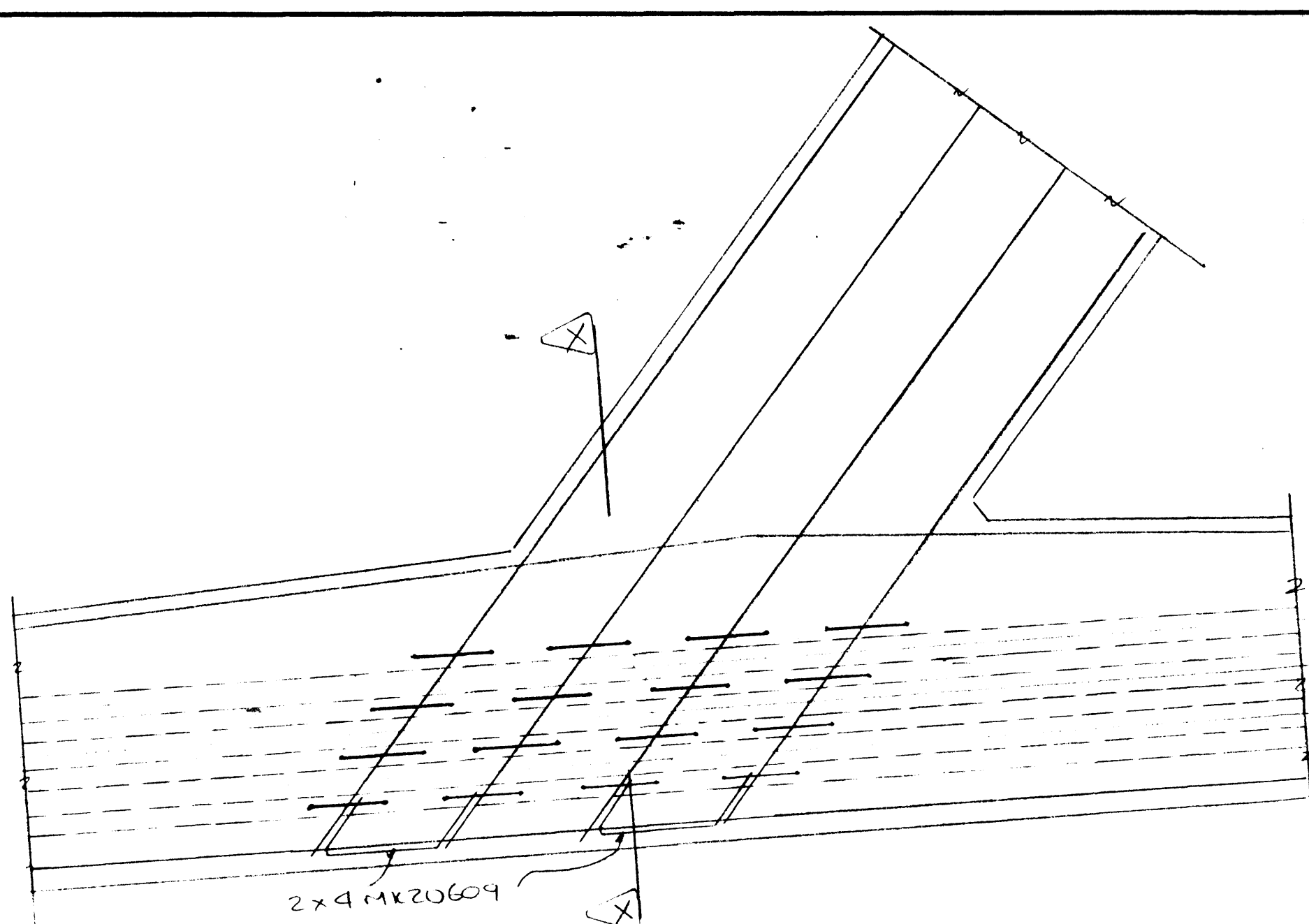
PIER DIAPHRAGM PD1N
(PIER #1 - NORTH DECK)



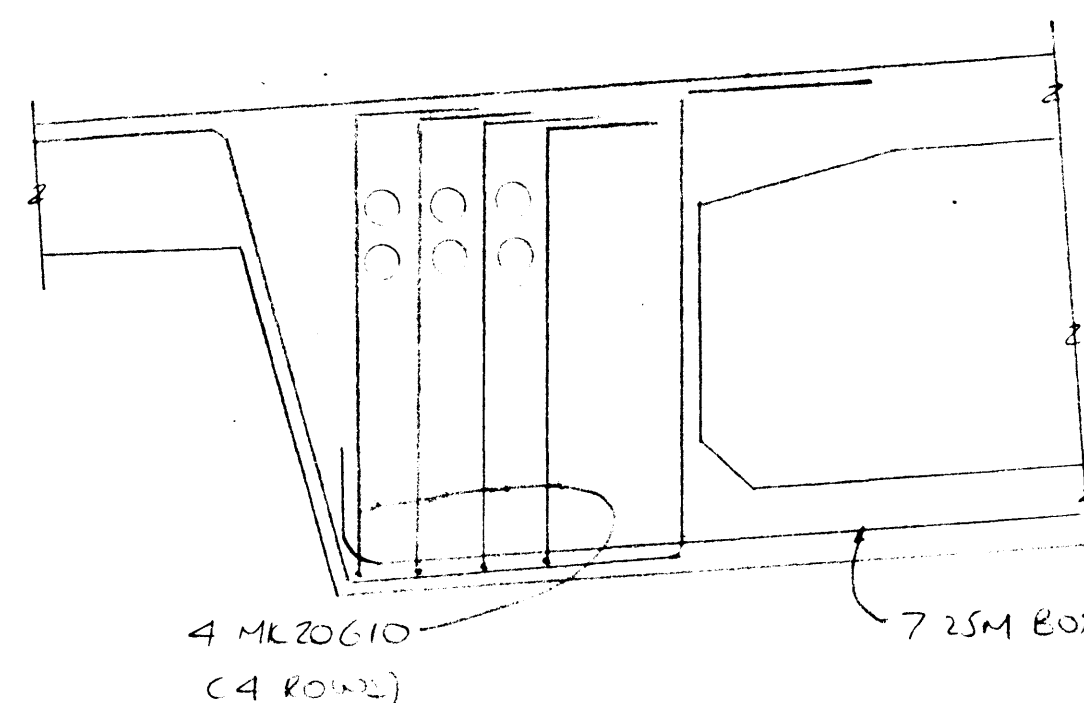
PIER DIAPHRAGM PD2S
(PIER #2 - SOUTH DECK)



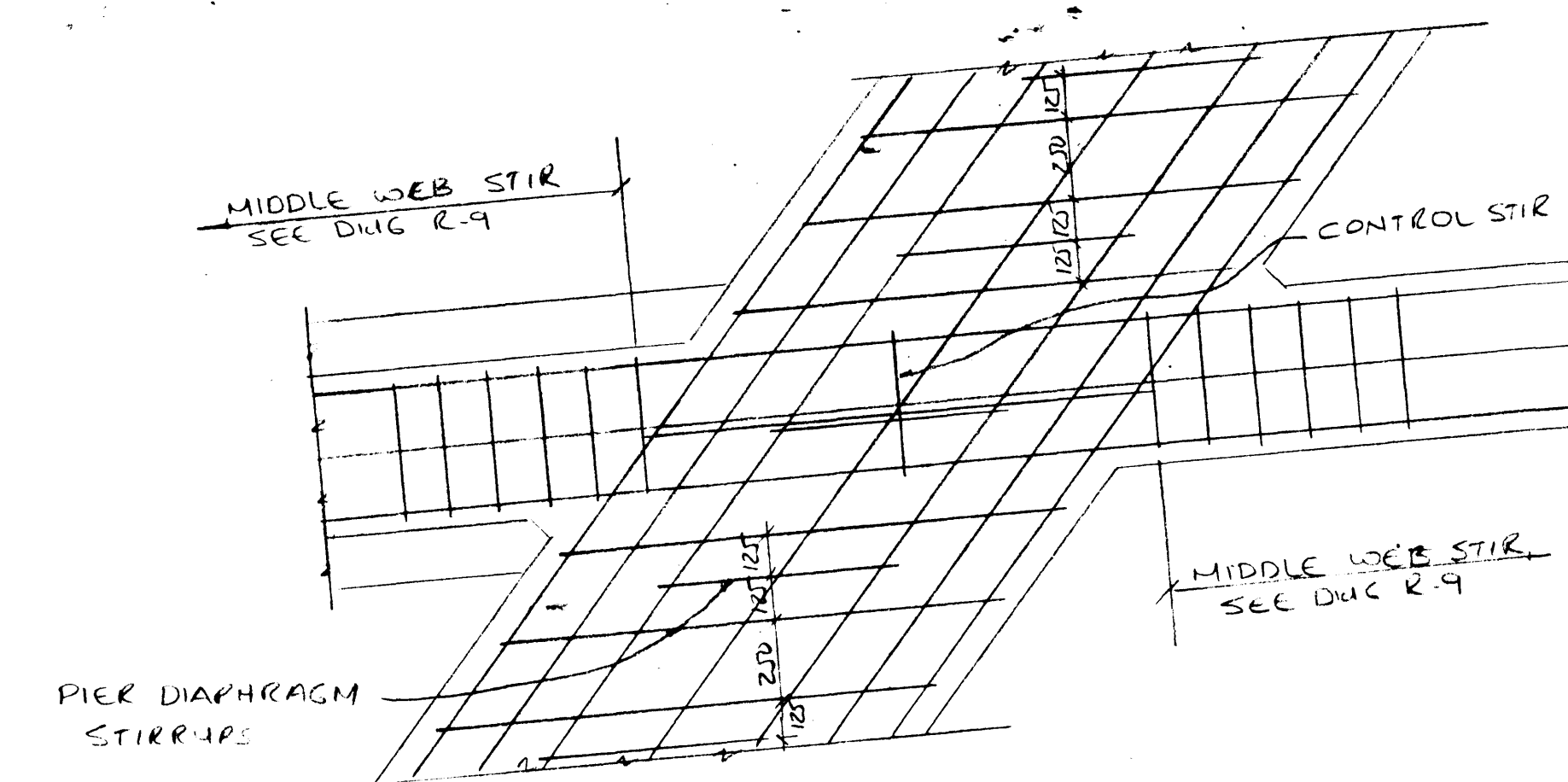
PIER DIAPHRAGM PD2N
(PIER #2 - NORTH DECK)



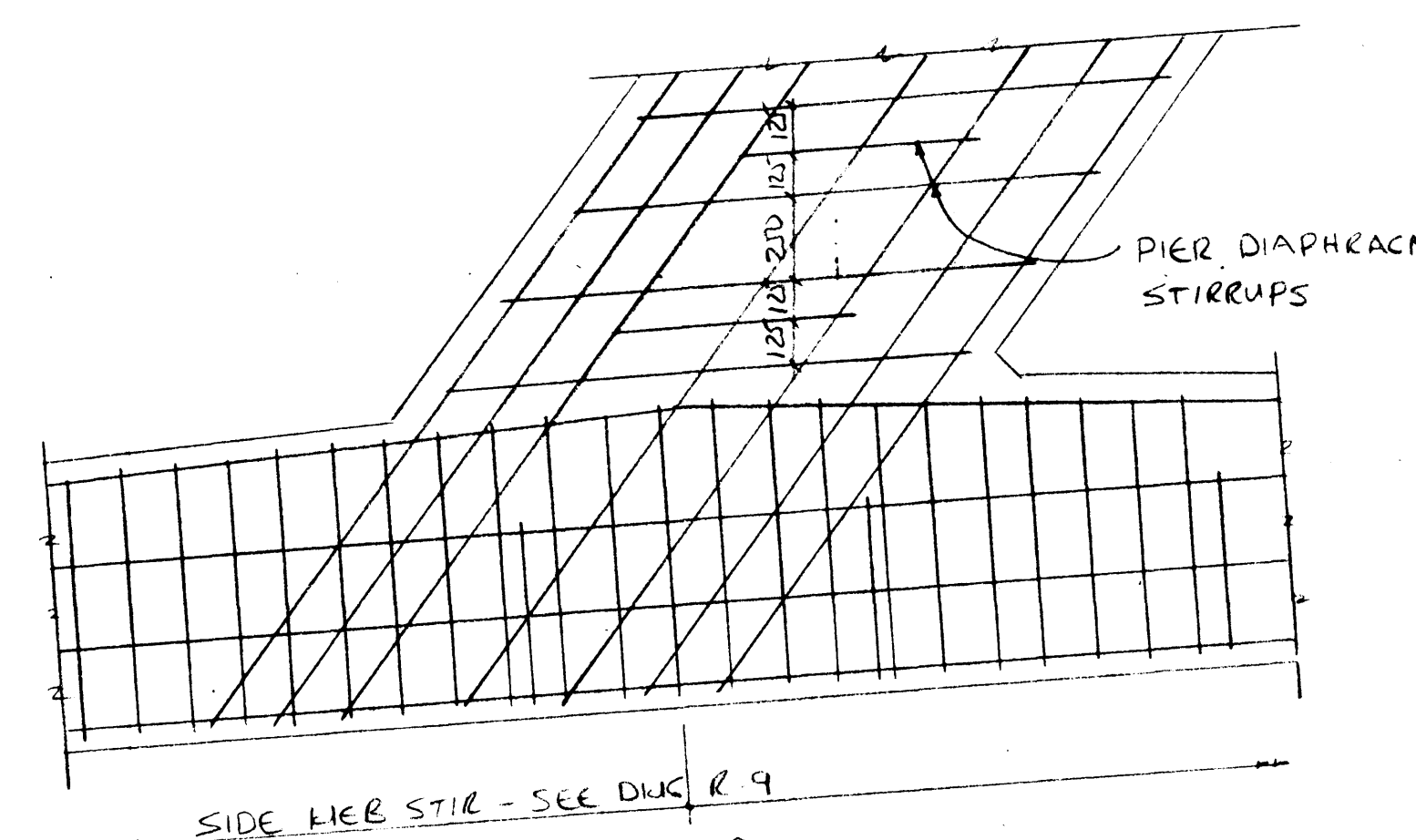
DETAIL A
INTERSECTION OF SIDE WEB & PIER DIAPHRAGM



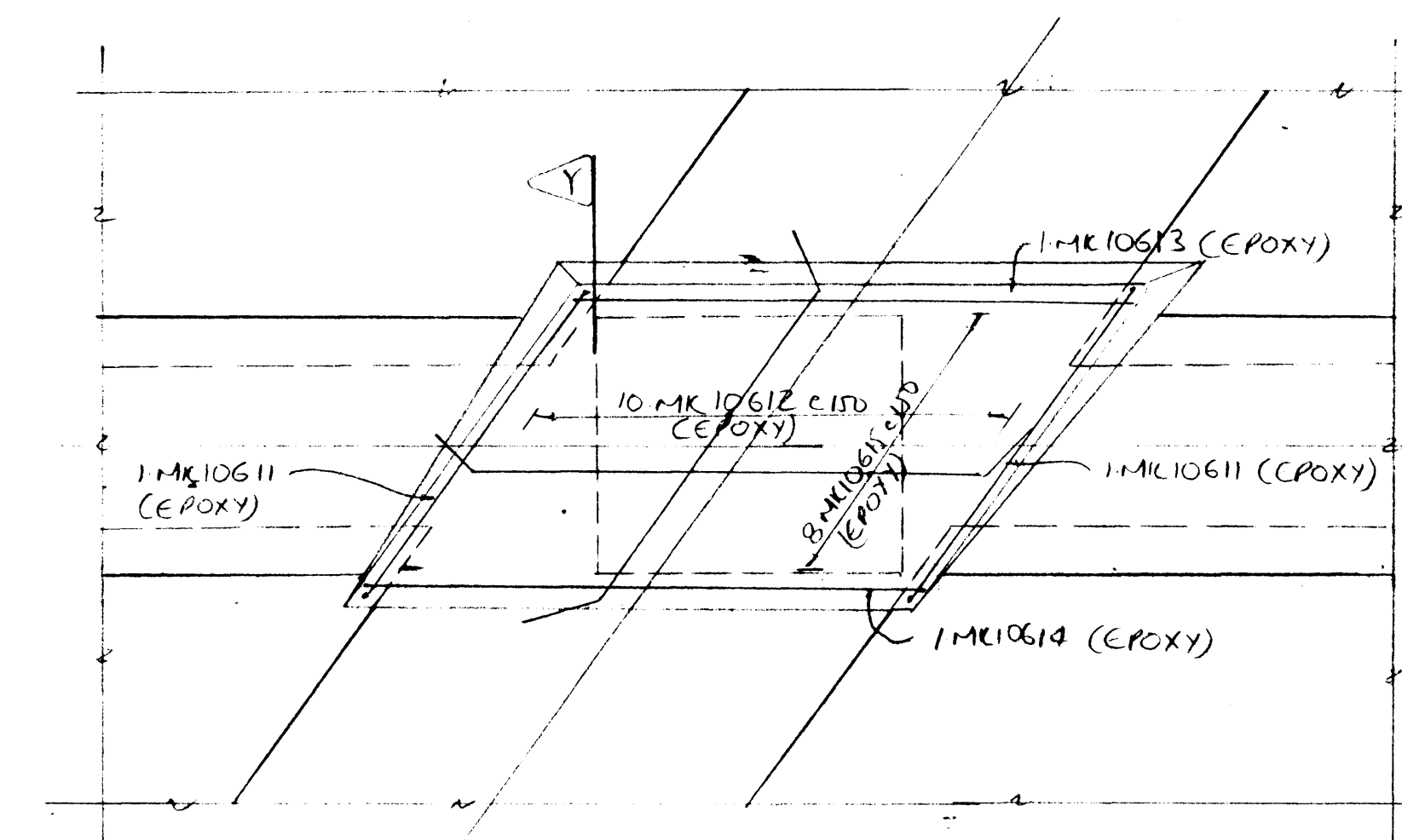
SECTION X-X
TYPICAL PIER DIAPHRAGM SECTION



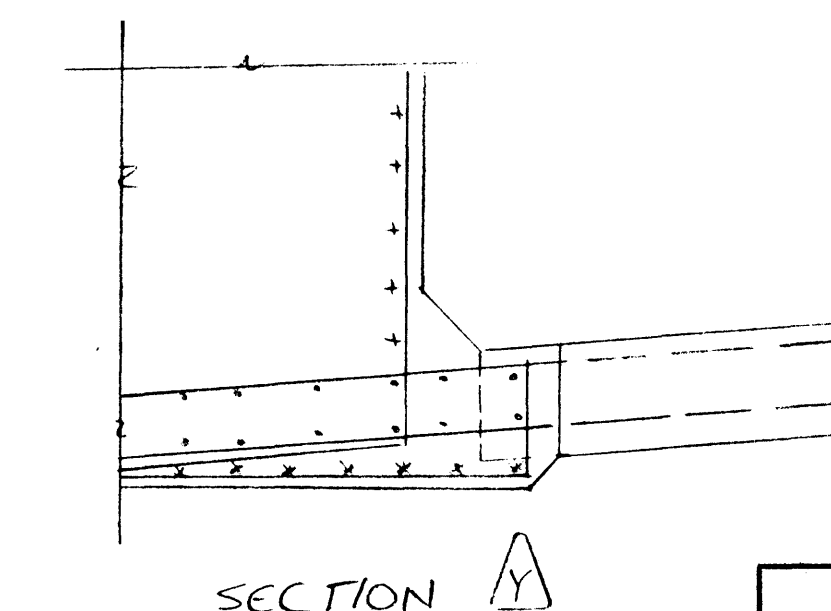
DETAIL B
INTERSECTION OF MIDDLE WEB & PIER DIAPHRAGM



DETAIL C
INTERSECTION OF SIDE WEB & PIER DIAPHRAGM



DETAIL D
EXTRA REINF IN PIER DIAPHRAGMS AT BEARING PADS



SECTION Y-Y

ELLIS - DON
MANAGEMENT SERVICES LTD
JUL 6 1984

DRAWING REVIEW	
The review of this drawing does not in any way relieve the contractor of responsibility for its accuracy or for compliance with the contract documents.	
Submittal No. 2	Job No. 2377/222
By: J. HALL	Date: 12/18/84
UNDERWOOD McLELLAN LTD.	

ML10615 EPOXY	ML10614 EPOXY
ML10612 EPOXY	ML10613 EPOXY
ML10611 EPOXY	ML10610 EPOXY
ML15608	ML20609
ML15607	ML15606
ML15604	ML15605
ML25603	ML25602
ML25600	ML25601

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ACI DETAILING

DATE	SK NO	DESCRIPTION

DATE	REVISIONS	NO. BY
7/1/84	ISSUED FOR COST	1 NIZ

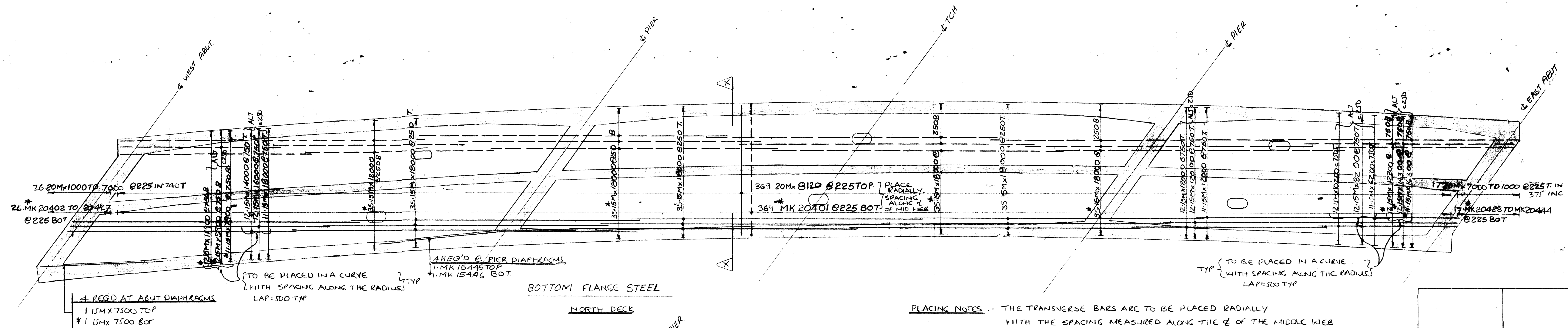
ACI DETAILING LTD.
CALGARY 3208-52 STR S.E. 272-8801
272-7223
LEDUC 6613-44 ST. 986-7055

PROJECT
TRANS-CANADA HIGHWAY BRIDGE
OVER BANFF AVENUE
DWG TITLE
NORTH & SOUTH DECKS
PIER DIAPHRAGMS
CONTRACTOR
ELLIS - DON
BY NIZAR JOB 396 SCALE N.T.S.

ISSUED FOR CONSTRUCTION

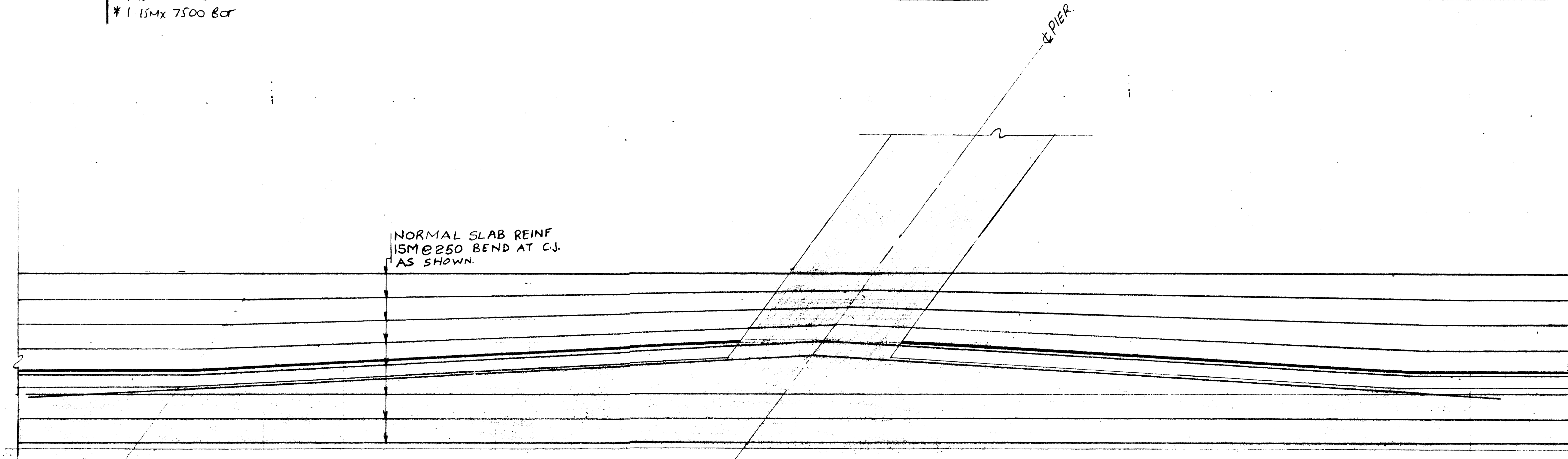
AA006072

GRADE	DATE	DWG	REV
400MA	12/1/84	R-11	1



PLACING NOTES - THE TRANSVERSE BARS ARE TO BE PLACED RADIALLY WITH THE SPACING MEASURED ALONG THE ϕ OF THE MIDDLE WEB

THE LONGITUDINAL BARS ARE TO BE PLACED IN A CURVE PARALLEL TO THE ϕ OF MIDDLE WEB WITH THE SPACING MEASURED RADIALLY

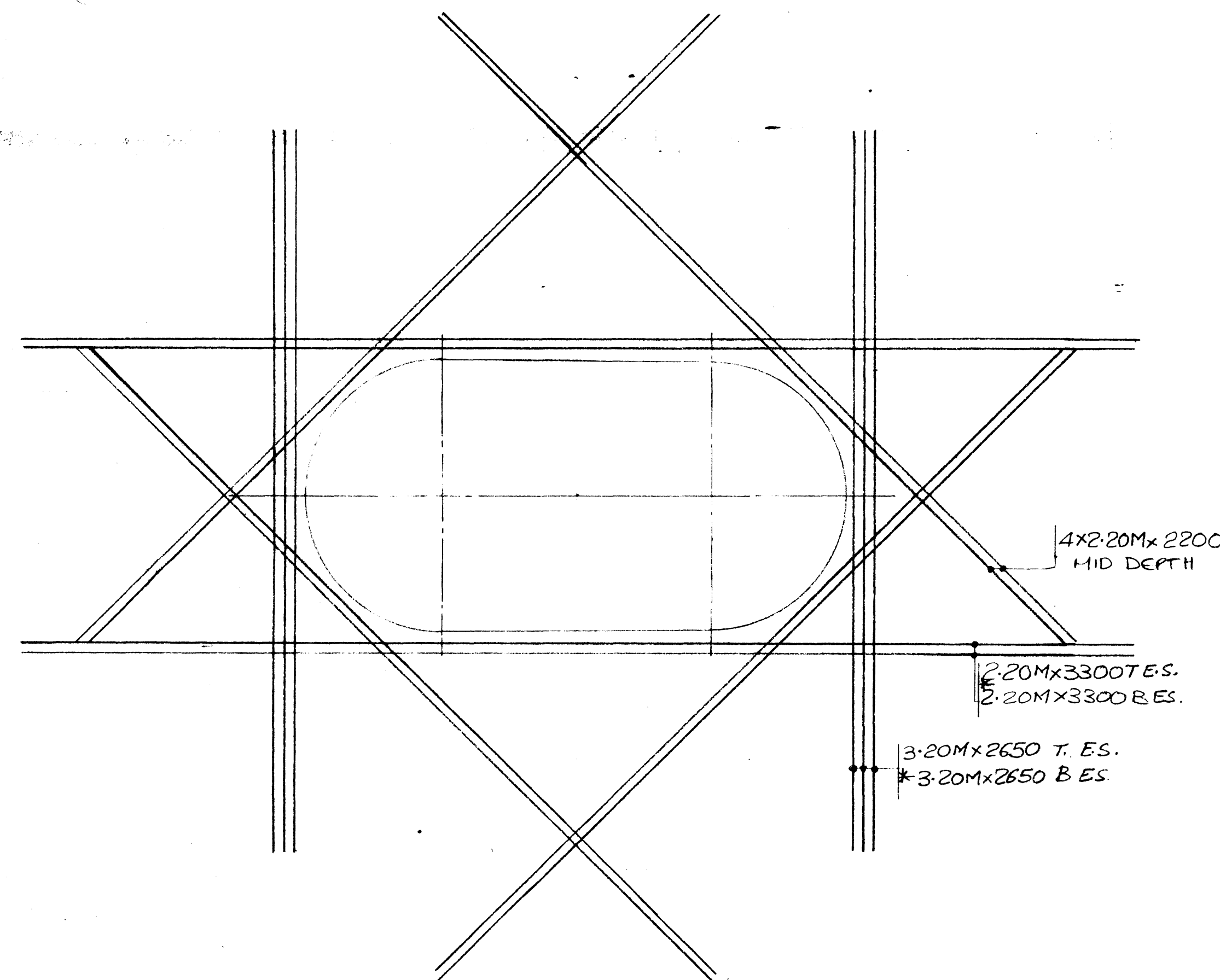


TYPICAL BAR ARRANGEMENT AT PIER DIAPHRAGMS

(BAR ARRANGEMENT AT ABUT. DIAPHRAGMS SIMILAR)

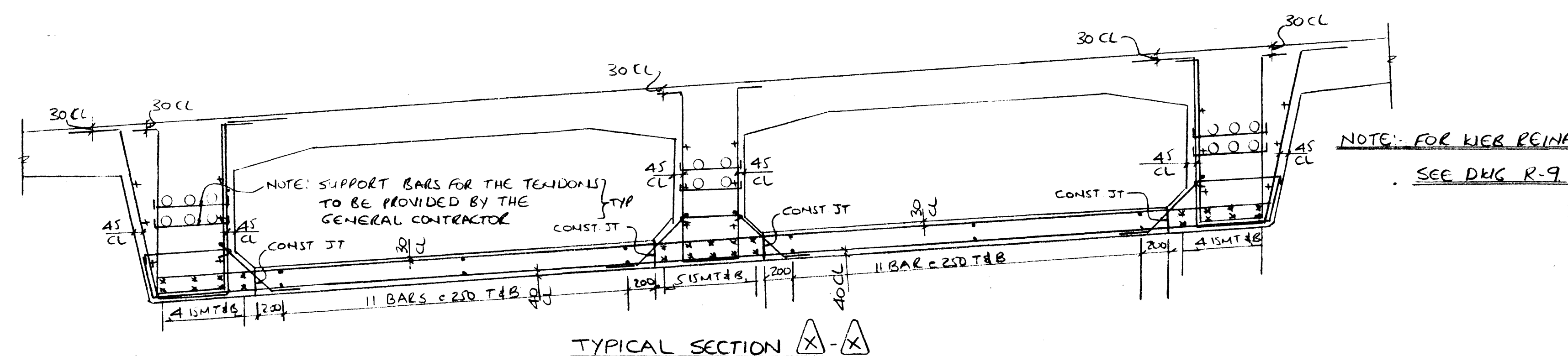
ALL BARS MARKED WITH * ARE EPOXY COATED.

ALL LONG STEEL LAPPED MIN 500



ACCESS OPENING
(6 REQ'D)

(FIELD CUT BARS AS REQ'D) PAINT THE CUTS WITH EPOXY



TYPICAL SECTION A-A

DRAWING REVIEW			
The review of this drawing does not in any way relieve the contractor of responsibility for its accuracy or for compliance with the contract documents.			
Submittal No.	2		
By	J. Hall		
Date	19/07/84		
UNDERWOOD McLELLAN LTD.			

	MK15446 EPOXY 6800 6800 3/4"
	MK15445 6800 6800 3/4"
	MK20428 TO 444 20/1000-63 IN 375 IN EPOXY MK 20402 TO 427
	1000 TO 7000 IN 245 IN EPOXY MK 20401 EPOXY 300 63 8060 3/4"

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ACI DETAILING

DATE	SK NO	DESCRIPTION

DATE	REVISIONS	NO. BY
1/7/84	ISSUED FOR CONST	1 MKL

ACI DETAILING LTD.			
CALGARY 3208-52 STR S.E.	272-8801		
LEDUC 6613-44 ST.	272-7223		
PROJECT			
TCH OVER BANFF AV BRIDGE			
DWG TITLE			
BOTTOM FLANGE STEEL SOUTH DECK			
CONTRACTOR			
ELLIS-DON MANAGEMENT			
BY	JOB	SCALE	REV
NYS	396	N.T.S.	

GRADE	DATE	DWG	REV
400	13/6/84	R-12	

ISSUED FOR CONSTRUCTION

AA006073



GRADE	DATE	DWG	REV
400 MPa	14/6/84	R-13	

DRAWING REVIEW	
<p>The review of this drawing does not in any way relieve the contractor of responsibility for its accuracy or for compliance with the contract documents.</p>	
<input checked="" type="checkbox"/> No Comment	Submission No. <u>2</u>
<input type="checkbox"/> Amend, Proceed & Resubmit	Job No. <u>2377/022</u>
<input type="checkbox"/> Amend & Resubmit	By: <u>J. Hawley</u>
<input type="checkbox"/> Rejected See Remarks	Date: <u>19</u> / <u>07</u> / <u>84</u>
UNDERWOOD McLELLAN LTD.	