



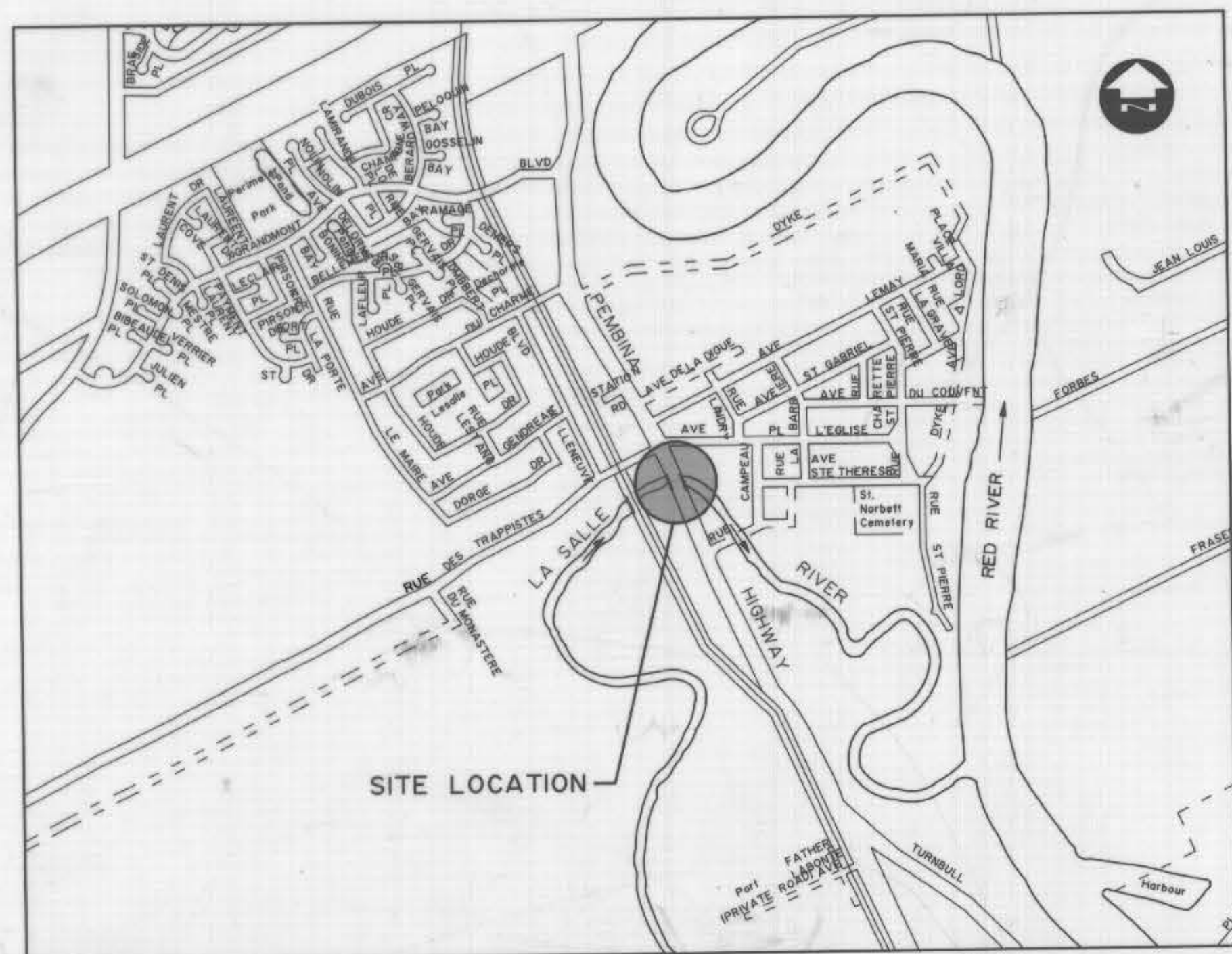
THE CITY OF WINNIPEG

WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

PEMBINA HIGHWAY - SOUTH CITY LIMIT TO RUE DES TRAPPISTES

PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

P.D. NO. 94-188



LOCATION PLAN

DRAWING LIST

- B224-95-01 COVER SHEET
- B224-95-02 SITE PLAN
- B224-95-03 GENERAL ARRANGEMENT
- B224-95-04 CHANNEL WORK - SHEET 1 OF 2
- B224-95-05 CHANNEL WORK - SHEET 2 OF 2
- B224-95-06 EXCAVATION AND BACKFILL AT NORTH AND SOUTH ABUTMENT
- B224-95-07 EAST STRUCTURE FOUNDATION LAYOUT AND DETAILS
- B224-95-08 EAST STRUCTURE SOUTH ABUTMENT - SU-1E - SHEET 1 OF 3
- B224-95-09 EAST STRUCTURE SOUTH ABUTMENT - SU-1E - SHEET 2 OF 3
- B224-95-10 EAST STRUCTURE SOUTH ABUTMENT - SU-1E - SHEET 3 OF 3
- B224-95-11 EAST STRUCTURE NORTH ABUTMENT - SU-4E - SHEET 1 OF 3
- B224-95-12 EAST STRUCTURE NORTH ABUTMENT - SU-4E - SHEET 2 OF 3
- B224-95-13 EAST STRUCTURE NORTH ABUTMENT - SU-4E - SHEET 3 OF 3
- B224-95-14 EAST STRUCTURE PIER - SU-2E
- B224-95-15 EAST STRUCTURE PIER - SU-3E
- B224-95-16 EAST STRUCTURE BOX GIRDERS - PLAN AND CROSS SECTION
- B224-95-17 EAST STRUCTURE BOX GIRDERS - EAST EXTERIOR WEB
- B224-95-18 EAST STRUCTURE BOX GIRDERS - WEST EXTERIOR WEB
- B224-95-19 EAST STRUCTURE BOX GIRDERS - INTERIOR WEBS
- B224-95-20 EAST STRUCTURE BOX GIRDERS - DIAPHRAGMS
- B224-95-21 WEST STRUCTURE FOUNDATION LAYOUT AND DETAILS
- B224-95-22 WEST STRUCTURE SOUTH ABUTMENT - SU-1W - SHEET 1 OF 3
- B224-95-23 WEST STRUCTURE SOUTH ABUTMENT - SU-1W - SHEET 2 OF 3
- B224-95-24 WEST STRUCTURE SOUTH ABUTMENT - SU-1W - SHEET 3 OF 3
- B224-95-25 WEST STRUCTURE NORTH ABUTMENT - SU-4W - SHEET 1 OF 3
- B224-95-26 WEST STRUCTURE NORTH ABUTMENT - SU-4W - SHEET 2 OF 3
- B224-95-27 WEST STRUCTURE NORTH ABUTMENT - SU-4W - SHEET 3 OF 3
- B224-95-28 WEST STRUCTURE PIER - SU-2W
- B224-95-29 WEST STRUCTURE PIER - SU-3W
- B224-95-30 WEST STRUCTURE BOX GIRDERS PLAN AND CROSS SECTION
- B224-95-31 WEST STRUCTURE BOX GIRDERS - EAST EXTERIOR WEB
- B224-95-32 WEST STRUCTURE BOX GIRDERS - WEST EXTERIOR WEB
- B224-95-33 WEST STRUCTURE BOX GIRDERS - INTERIOR WEB

- B224-95-34 WEST STRUCTURE BOX GIRDERS - DIAPHRAGMS
- B224-95-35 BEARINGS - SHEET 1 OF 2
- B224-95-36 BEARINGS - SHEET 2 OF 2
- B224-95-37 EXPANSION JOINTS - SHEET 1 OF 2
- B224-95-38 EXPANSION JOINTS - SHEET 2 OF 2
- B224-95-39 CONCRETE TRAFFIC BARRIERS AND PLANTERS - SHEET 1 OF 4
- B224-95-40 CONCRETE TRAFFIC BARRIERS AND PLANTERS - SHEET 2 OF 4
- B224-95-41 CONCRETE TRAFFIC BARRIERS AND PLANTERS - SHEET 3 OF 4
- B224-95-42 CONCRETE TRAFFIC BARRIERS AND PLANTERS - SHEET 4 OF 4
- B224-95-43 CONCRETE TRAFFIC BARRIERS AND PLANTERS - REINFORCING LAYOUT
- B224-95-44 ALUMINUM TRAFFIC BARRIER RAIL DETAILS
- B224-95-45 ALUMINUM PEDESTRIAN HANDRAIL LAYOUT AND POST DETAILS
- B224-95-46 ALUMINUM PEDESTRIAN HANDRAIL DETAILS
- B224-95-47 ALUMINUM PEDESTRIAN HANDRAIL LIFE PRESERVER ENCLOSURE
- B224-95-48 APPROACH SLABS
- B224-95-49 SLOPE PAVING
- B224-95-50 LIGHTING AND DUCT LAYOUT
- B224-95-51 NAVIGATION LIGHT DETAILS
- B224-95-52 SIDEWALK PAVING BRICK LAYOUT
- B224-95-53 PLANTER IRRIGATION PLAN
- B224-95-54 REINFORCING SCHEDULE - SHEET 1 OF 11
- B224-95-55 REINFORCING SCHEDULE - SHEET 2 OF 11
- B224-95-56 REINFORCING SCHEDULE - SHEET 3 OF 11
- B224-95-57 REINFORCING SCHEDULE - SHEET 4 OF 11
- B224-95-58 REINFORCING SCHEDULE - SHEET 5 OF 11
- B224-95-59 REINFORCING SCHEDULE - SHEET 6 OF 11
- B224-95-60 REINFORCING SCHEDULE - SHEET 7 OF 11
- B224-95-61 REINFORCING SCHEDULE - SHEET 8 OF 11
- B224-95-62 REINFORCING SCHEDULE - SHEET 9 OF 11
- B224-95-63 REINFORCING SCHEDULE - SHEET 10 OF 11
- B224-95-64 REINFORCING SCHEDULE - SHEET 11 OF 11
- B224-95-65 REFERENCE DRAWING - GEOMETRIC LAYOUT
- B224-95-66 REFERENCE DRAWING - SHOWING EXISTING CULVERT - SHEET 1 OF 2
- B224-95-67 REFERENCE DRAWING - SHOWING EXISTING CULVERT - SHEET 2 OF 2
- B224-95-68 EAST STRUCTURE - SCREED ELEVATIONS
- B224-95-69 WEST STRUCTURE - SCREED ELEVATIONS

DESIGN DATA	
DESIGN SPECIFICATIONS	AASHTO 1992 (15TH ADDITION) AND INTERIMS
LIVE LOADING	HSS 30 TRUCK LOADING AND HSS 30 LANE LOADING
CONCRETE	BRIDGE DECK TOP SLAB AND APPROACH SLABS f _c = 35 MPa MINIMUM
REINFORCING STEEL	ALL OTHER CONCRETE (EXCEPT PRECAST PRESTRESSED CONCRETE PILES) f _c = 32 MPa MINIMUM
CLEAR COVER TO REINFORCING STEEL	CSA G30.18 GRADE 400W ALL REINFORCING WITH THE SUFFIX "E" IS EPOXY COATED
BOX GIRDER	ABUTMENT FOOTINGS, PIER FOOTINGS AND SHAFTS 75 mm
	TOP SLAB 75 mm TOP, 40 mm BOTTOM
	BOTTOM SLAB 25 mm TOP, 40 mm BOTTOM
PRECAST PRESTRESSED CONCRETE PILES	ALL OTHER UNLESS OTHERWISE NOTED 50 mm
	REINFORCING STEEL: GRADE 400W
	PRESTRESSING STEEL: GRADE 1860
	CONCRETE f _c = 35 MPa
	f _{ci} = 25 MPa

HYDRAULIC DATA	ELEV. (m.)
DESIGN	
DESIGN BASED ON 100 YEAR FLOOD LEVEL	231.4
160 YEAR FLOOD LEVEL	232.4
FLOOD FRINGE (2 FT ABOVE 160 YEAR FLOOD)	233.0

ACTUAL	ELEV. (m.)
HWL RECORDED DURING CONSTRUCTION:	
APRIL 18, 1996 (PEAK DURING SPRING RUN-OFF)	229.1
JUNE 11, 1997 (MAX. AFTER FLOOD OF CENTURY)	232.5

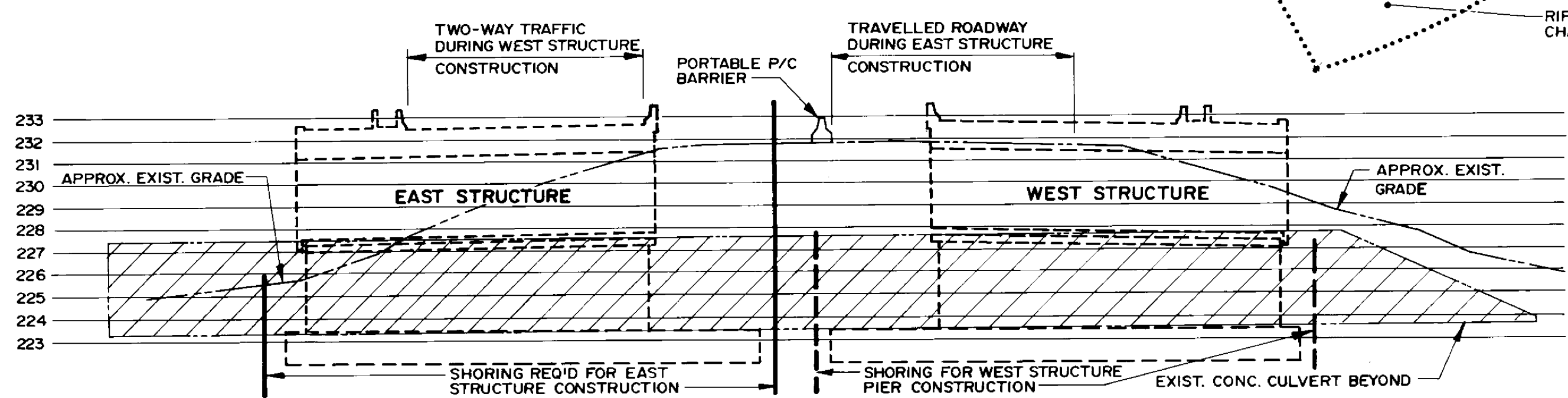
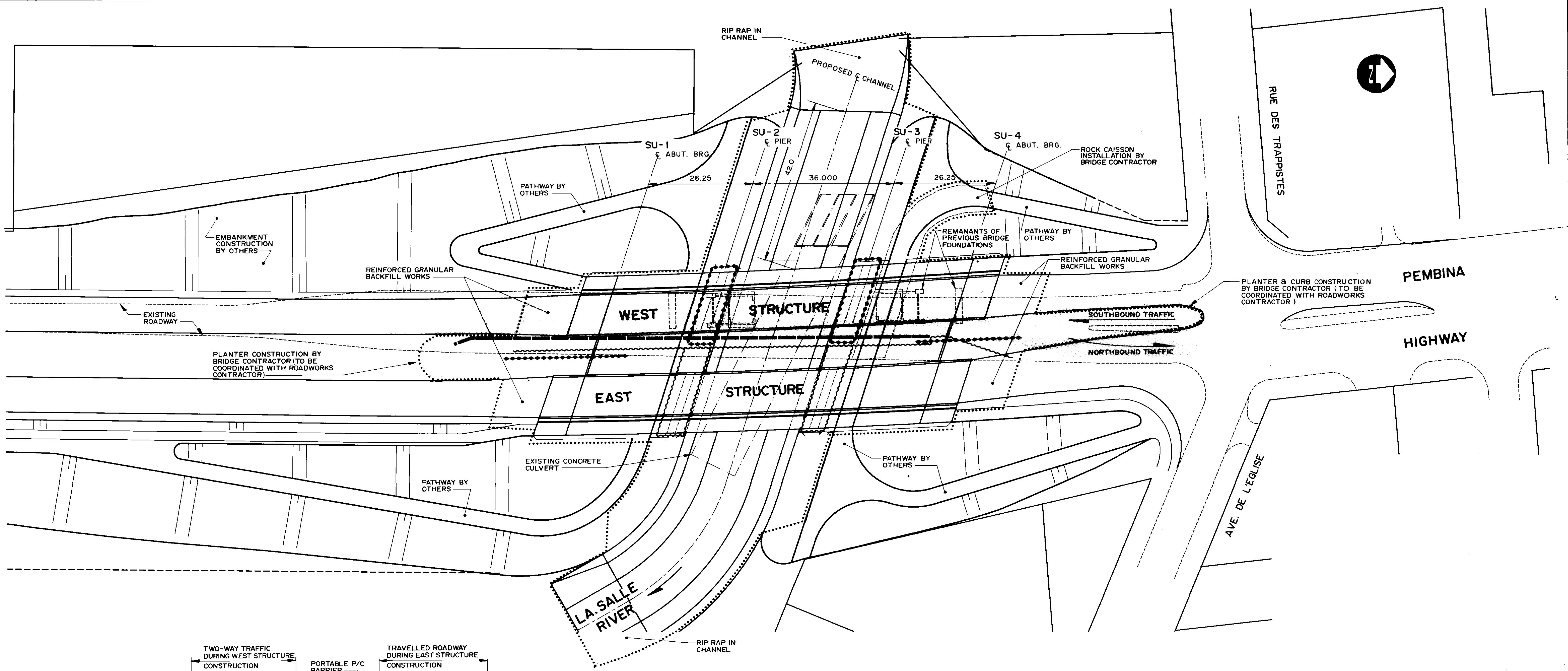
DILLON
Consulting Engineers - Planners
Environmental Scientists



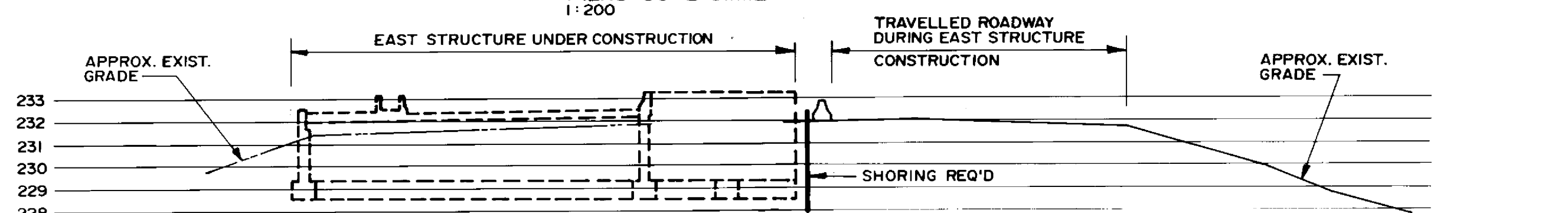
RELEASED FOR CONSTRUCTION BY:
W. Naumko
W. NAUMKO
MANAGER OF ENGINEERING OPERATIONS
DATE: 1994-12-22

RECORD DRAWING
APPROVED BY: *S. J. Bihal* DATE: Dec 18/98

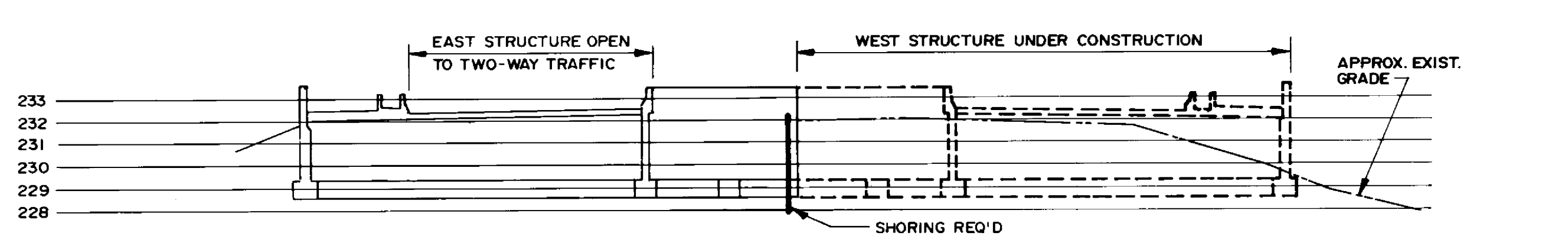
B-6021-1
DRAWING NO. B224-95-01
COVER SHEET



CROSS SECTION AT PIERS SU-3
PIERS SU-2 SIMILAR
1:200



DURING EAST STRUCTURE CONSTRUCTION



DURING WEST STRUCTURE CONSTRUCTION

CROSS SECTION AT NORTH ABUTMENTS
SOUTH ABUTMENTS SIMILAR
1:200

LEGEND

- GENERAL LIMITS OF BRIDGE CONTRACTOR'S WORK AREA.
- ~ ~ ~ ~ ~ APPROXIMATE EXTENT OF EXCAVATION SHORING REQUIRED DURING CONSTRUCTION OF EAST STRUCTURE.
- — — — — PORTABLE PRECAST CONCRETE TRAFFIC BARRIERS REQUIRED DURING CONSTRUCTION OF EAST STRUCTURE. (40 UNITS x 3.05 m LONG REQUIRED) PORTABLE BARRIERS REQUIRED DURING WEST STRUCTURE CONSTRUCTION ARE NOT SHOWN.
- ||||| TRAVELLED ROADWAY (ONE LANE EACH WAY) THROUGH THE SITE DURING CONSTRUCTION OF EAST STRUCTURE.
- NOTE: DURING CONSTRUCTION OF WEST STRUCTURE THE COMPLETED EAST STRUCTURE WILL BE USED FOR TWO-WAY TRAFFIC. CROSSOVERS (TO BE CONSTRUCTED BY OTHERS) ARE NOT SHOWN ON THIS PLAN FOR CLARITY.
- APPROXIMATE EXTENT OF SHORING REQUIRED DURING CONSTRUCTION OF SUBSTRUCTURE UNITS FOR WEST STRUCTURE.

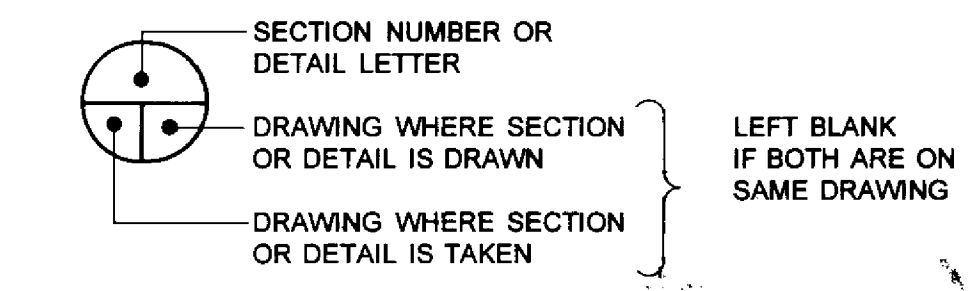
LIST OF ABBREVIATIONS

- BRG - BEARING
- CAW - COMPLETE WITH
- DL - DEAD LOAD
- DWL - DOWEL
- E.F. - EACH FACE
- EL - ELEVATION
- EXP.JT - EXPANSION JOINT
- E.S. - EQUALLY SPACED
- F.F. - FAR FACE
- I.F. - INSIDE FACE
- L.L. - LIVE LOAD
- N.F. - NEAR FACE
- NSWL - NORMAL SUMMER WATER LEVEL
- O.F. - OUTSIDE FACE
- S.U. - SUBSTRUCTURE UNIT
- T/O - TOP OF
- T.H. - TEST HOLE
- TYP. - TYPICAL
- U/N - UNLESS NOTED
- U/S - UNDERSIDE
- W.P. - WORKING POINT

CODE FOR REINFORCING STEEL

- E.G. 20-AF-20,001-E
A B C D E
- A - NO. OF BARS
 - B - LOCATION CODE
 - C - SIZE OF BAR
 - D - IDENTIFICATION NO.
 - E - EPOXY COATED BAR

SECTIONS AND DETAILS



RECORD DRAWING

APPROVED BY: *[Signature]* DATE: 18/94

B.M. ELEV.	
DESIGNED BY	W.P.S.
CHECKED BY	S.S.R.
DRAWN BY	W.P.S. / B.A.S.
APPROVED BY	<i>[Signature]</i>
HOR. SCALE	AS SHOWN
VERTICAL	AS SHOWN
DATE	NOV. 1994
NO. REVISIONS	
DATE	
BY	

DILLON
Consulting Engineers - Planners
Environmental Scientists

DESIGNED BY: W.P.S. CHECKED BY: S.S.R.
DRAWN BY: W.P.S. / B.A.S. APPROVED BY: *[Signature]*
HORIZ. SCALE: AS SHOWN AUTHORIZED BY: *[Signature]* DATE: 16/11/94
VERTICAL: AS SHOWN REGISTERED PROFESSIONAL ENGINEER
DATE: 18/11/94

ENGINEER'S
PROVINCE OF MANITOBA
16/11/94
S.S. RIHAL
REGISTERED PROFESSIONAL ENGINEER

CONSULTANT DRAWING NO.
93-1497-06-02

THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

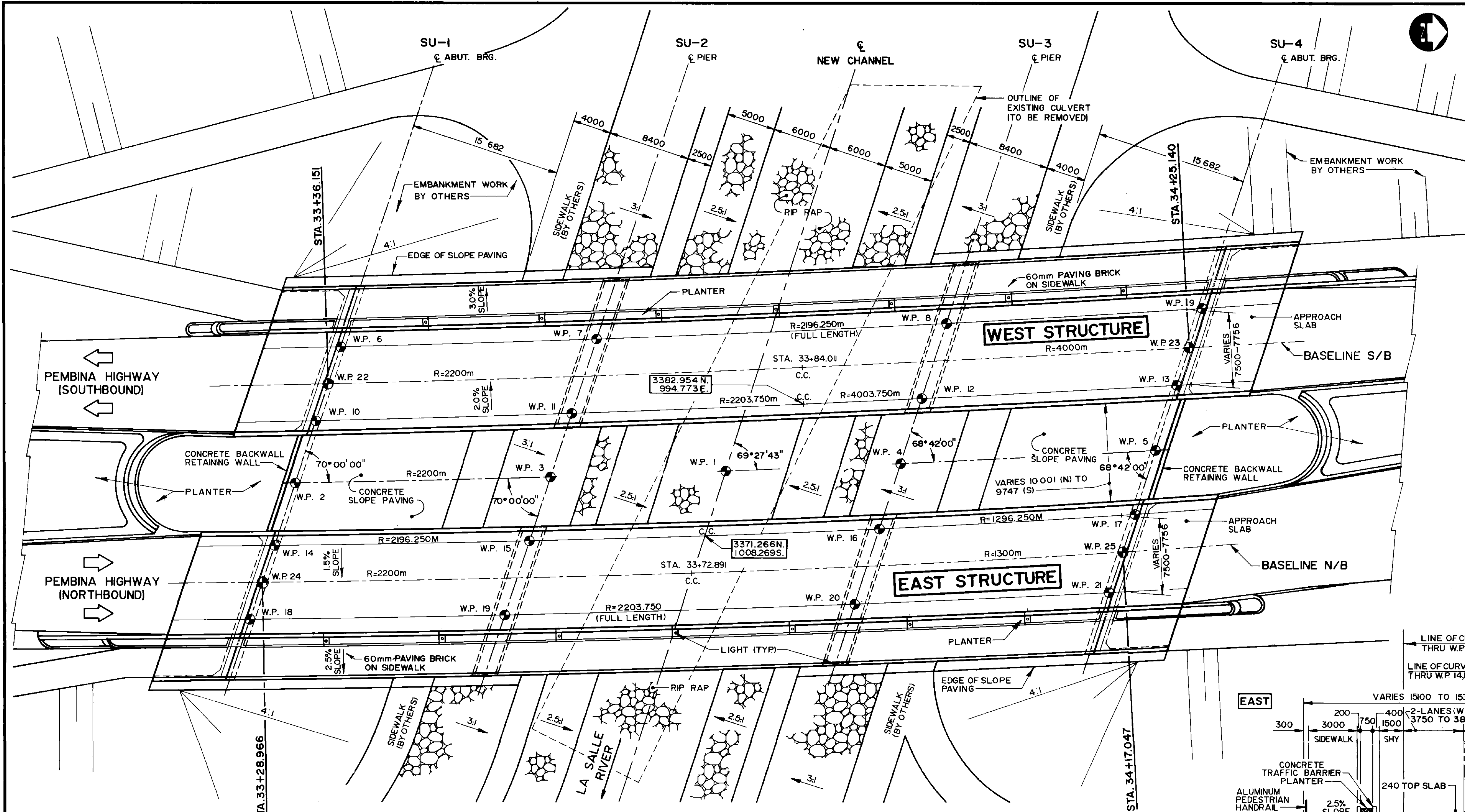
PEMBINA HIGHWAY
SOUTH CITY LIMIT TO RUE DES TRAPPISTES
PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

SITE PLAN

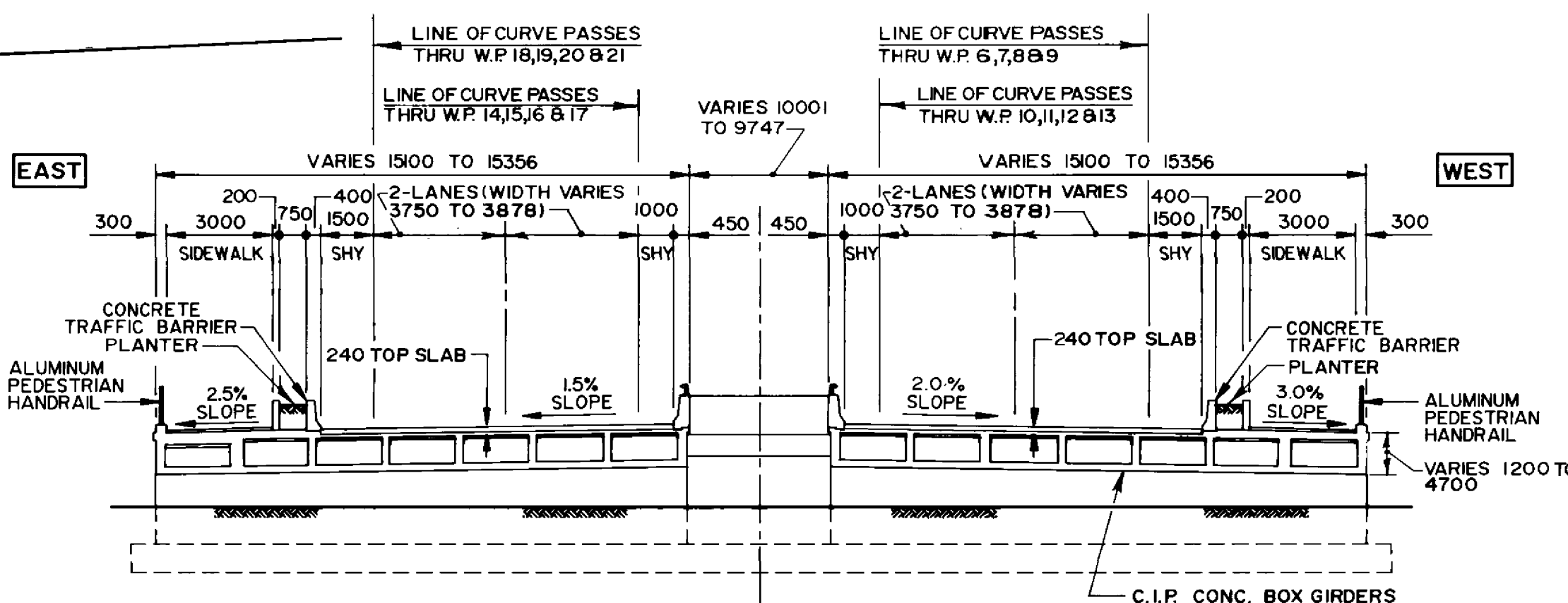
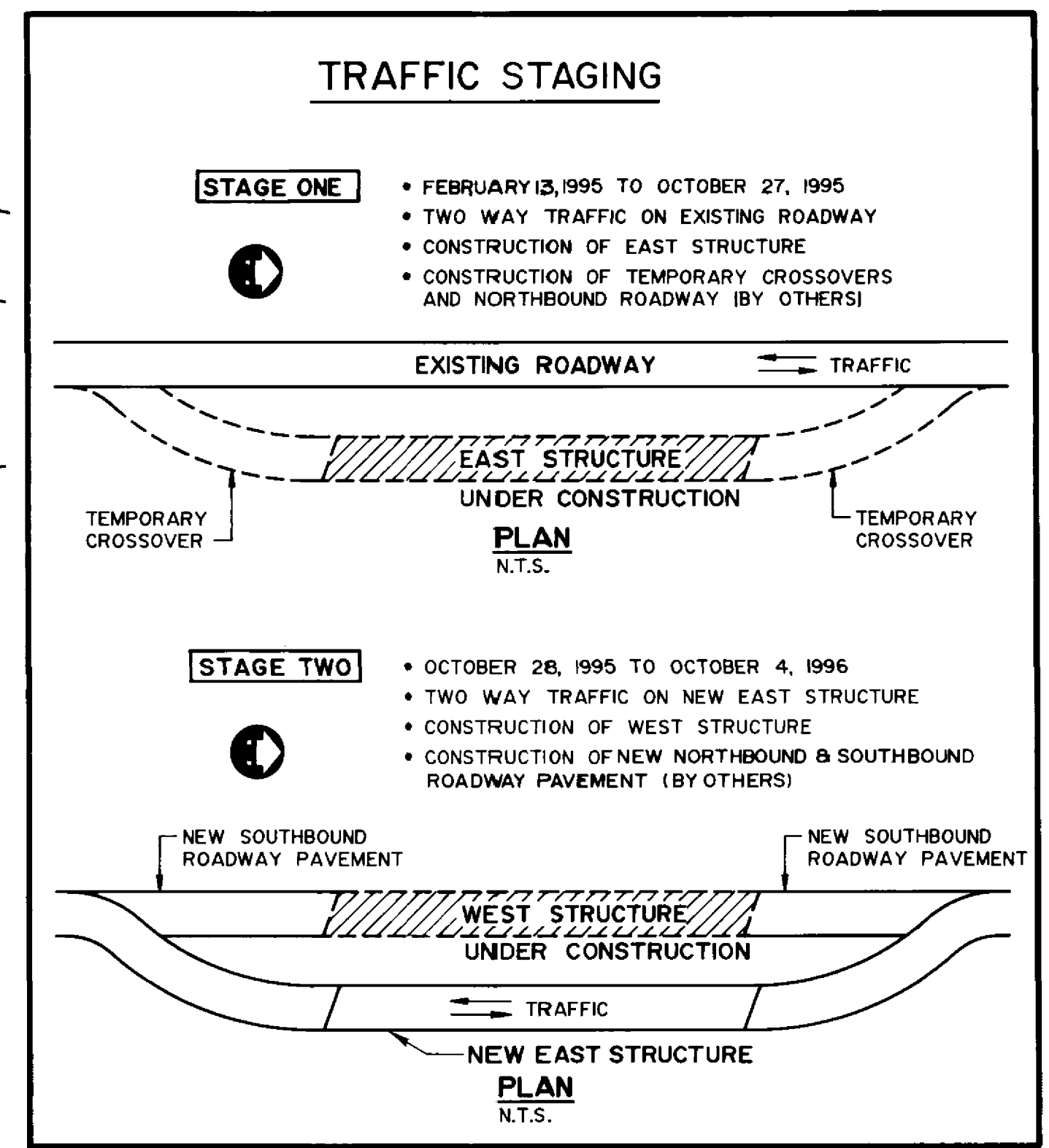
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B224-95-02
SHEET OF

P3072-A-02

B-6021-2

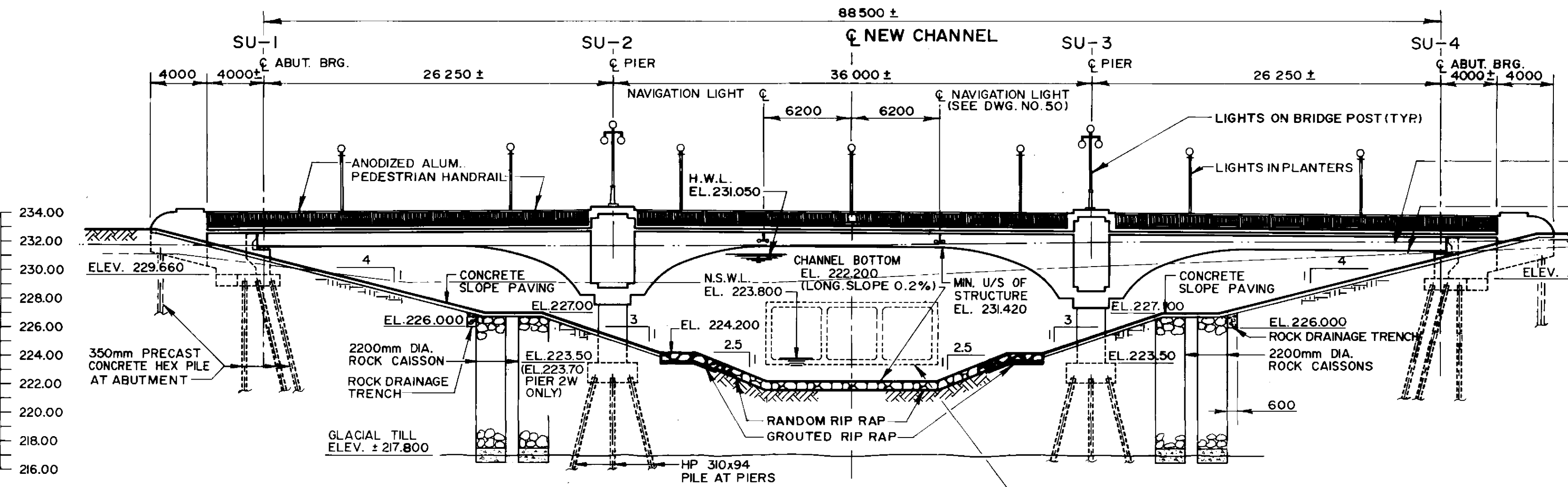


PLAN
SCALE: 1:250



TYPICAL SECTION
(PERPENDICULAR TO ROADWAY)
N.T.S.

RECORD DRAWING
APPROVED BY: *[Signature]* DATE: 22/11/94



ELEVATION
SCALE: 1:250

- NOTES**
- BARRIERS/PLANTERS BEYOND END OF APPROACH SLABS TO BE CONSTRUCTED AFTER CONSTRUCTION OF ROADWAY PAVEMENT BY OTHERS (SEE DRAWING 41).
 - ALL SIDEWALKS BEYOND EDGE OF SLOPE PAVING TO BE CONSTRUCTED BY OTHERS.
 - FOR UTILITY DUCT LAYOUT SEE DRAWING NO. 49.
 - SEE DWG. NO. 63 PROVIDED FOR REFERENCE FOR ROADWAY GEOMETRIC LAYOUT.

WORKING POINT COORDINATES

W.P. No.	NORTHING	EASTING	W.P. No.	NORTHING	EASTING	W.P. No.	NORTHING	EASTING
1	3374.895	1001.612	10	3332.798	996.524	18	3325.980	1016.769
2	3330.663	1002.864	11	3359.088	995.749	19	3352.164	1016.306
3	3356.905	1002.229	12	3395.079	994.193	20	3388.147	1015.163
4	3392.879	1000.848	13	3421.293	992.813	21	3414.302	1013.963
5	3419.093	999.471	14	3328.517	1009.237	22	3334.072	992.743
6	3335.346	988.960	15	3354.712	1008.742	23	3422.559	988.986
7	3371.266	1008.269	16	3371.266	1008.269	24	3371.266	1008.269
8	3382.954	994.773	17	3382.954	994.773	25	3382.954	994.773
9	3423.883	984.980	18	3416.940	984.980	26	3416.940	984.980

NOTE:
CHANNEL DIMENSIONS MEASURED PERPENDICULAR TO C OF NEW CHANNEL

NO.	REVISIONS	DATE	BY

DILLON
Consulting Engineers Planners
Environmental Scientists

DESIGNED BY: S.S.R.	CHECKED BY: N.B.U.
DRAWN BY: M.C.R.	APPROVED BY: <i>[Signature]</i>
HOR. SCALE: AS SHOWN	DATE: NOV. 1994
VERTICAL: AS SHOWN	DATE: NOV. 1994

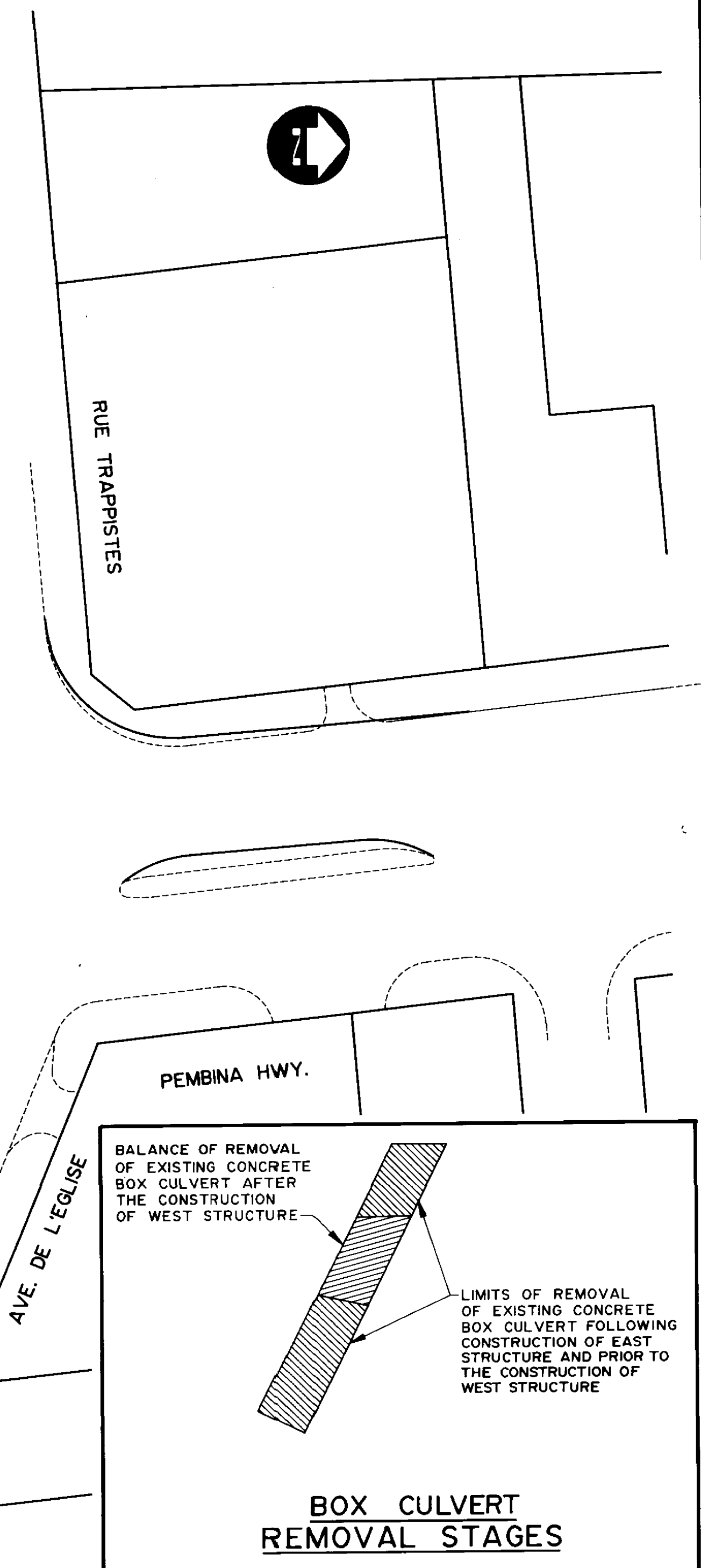
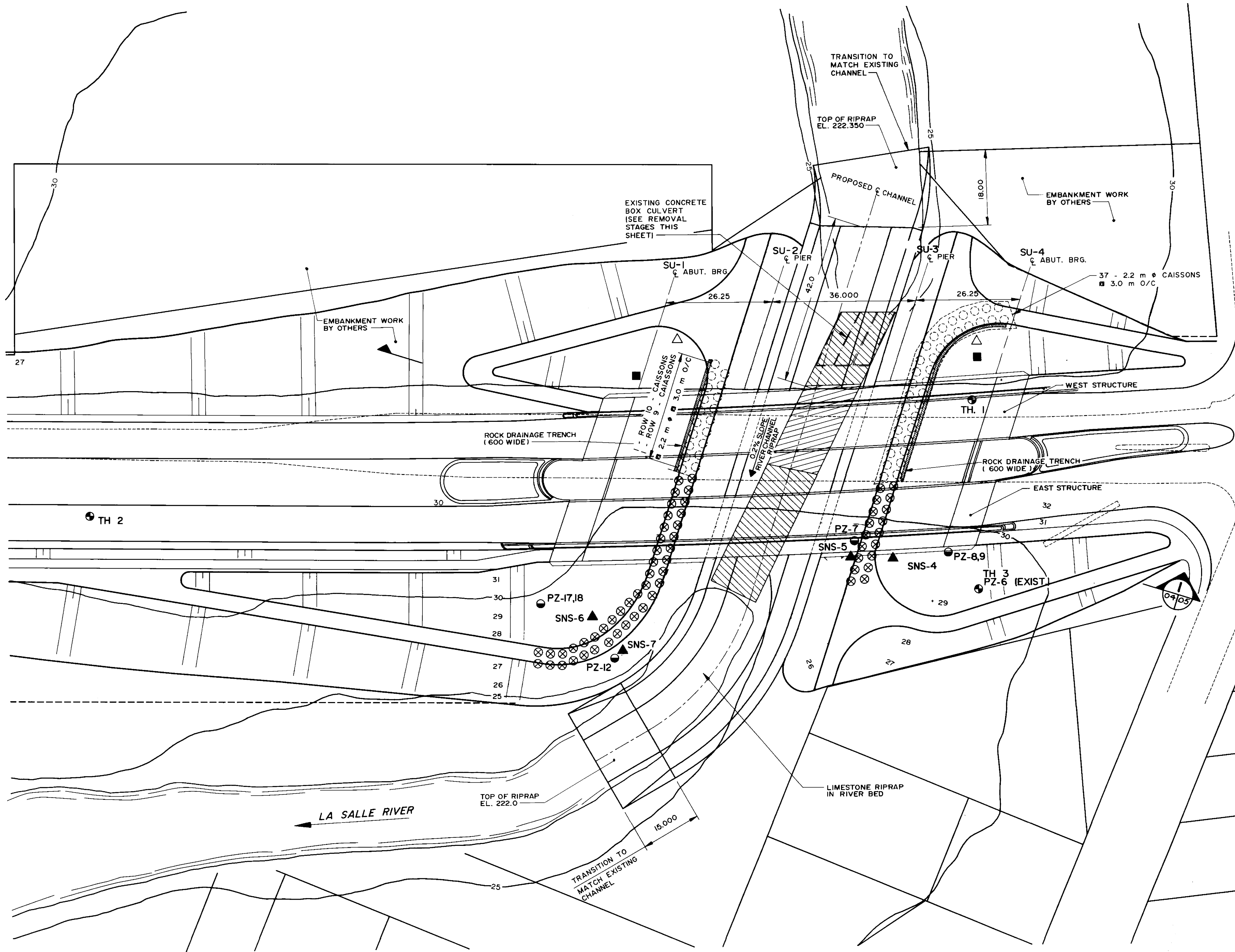
ENGINEER'S SEAL
S.S. RIHAL
REGISTERED PROFESSIONAL ENGINEER
CONSULTANT DRAWING NO. 93-1497-06-03

THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

PEMBINA HIGHWAY
SOUTH CITY LIMIT TO RUE DES TRAPPISTES
PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER
GENERAL ARRANGEMENT

B-6021-3

CITY DRAWING NUMBER
B224-95-03
SHEET OF
P3072-A-03



B-6021-4

UNDERGROUND STRUCTURES	B.M. ELEV.
N/A	
SUPV. U/G STRUCTURES COMMITTEE	DATE
NOTE:	
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.	
NO. REVISIONS	DATE BY

DESIGNED BY	M.C.	CHECKED BY	S.S.R.
DRAWN BY	S.K.B.	APPROVED BY	<i>WS</i>
HOR. SCALE	1 : 500	AUTHORIZED BY	<i>WS</i>
VERTICAL		DATE	11/21/94
DATE	NOV. 1994	ACCEPTED BY	<i>WS</i>
		DATE	11/21/94

DILLON
Consulting Engineers - Planners
Environmental Scientists

ENGINEER'S SEAL
22/11/94
S.S.
RIHAL
REGISTERED PROFESSIONAL ENGINEER

CONSULTANT DRAWING NO.
93-1497-06-04

THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

PEMBINA HIGHWAY
SOUTH CITY LIMIT TO RUE DES TRAPPISTES
PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

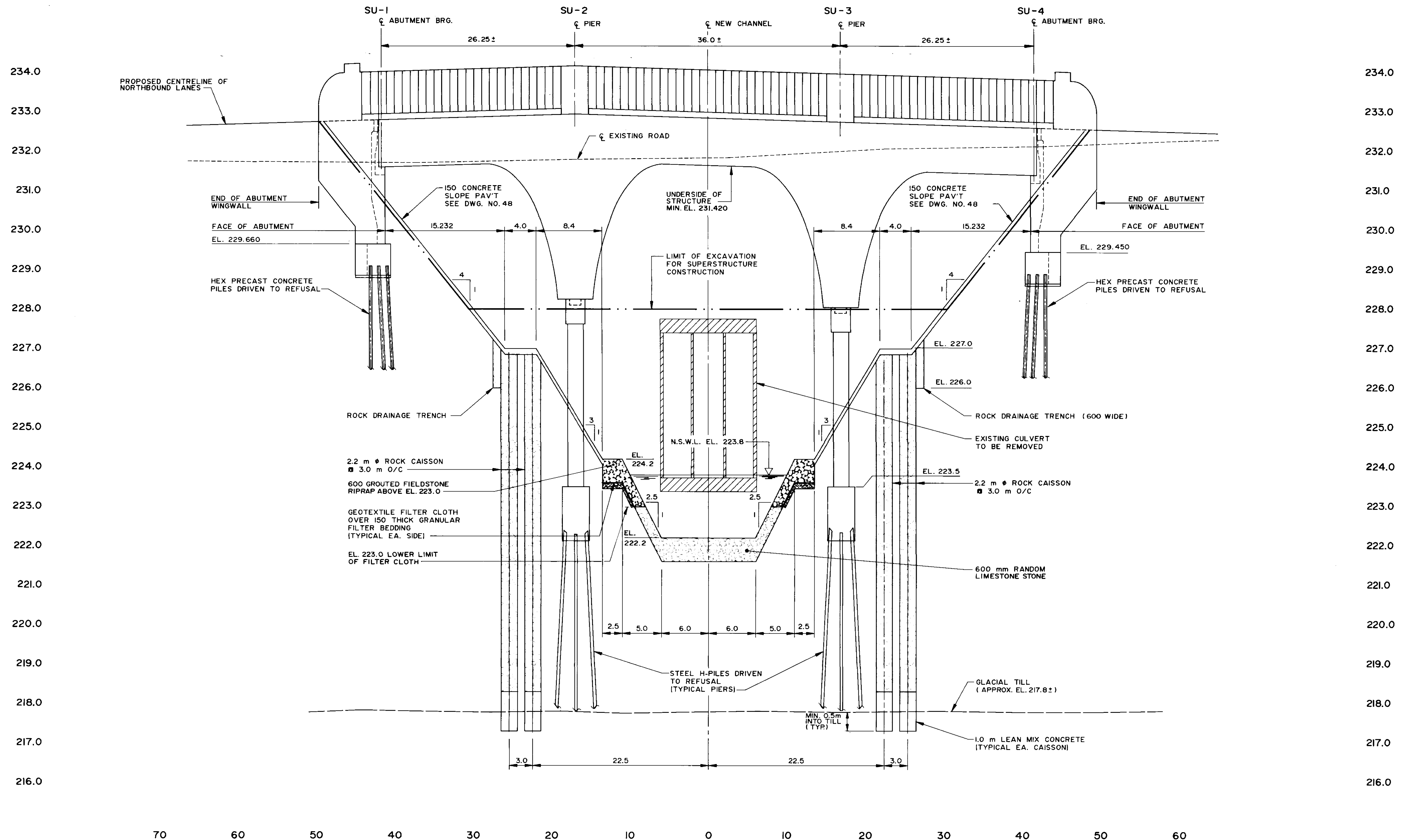
CHANNEL WORK
SHEET 1 OF 2

CITY DRAWING NUMBER
B224-95-04

SHEET OF

P3072-A-04

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APPROVED BY: *WS* DATE: Dec 15/94

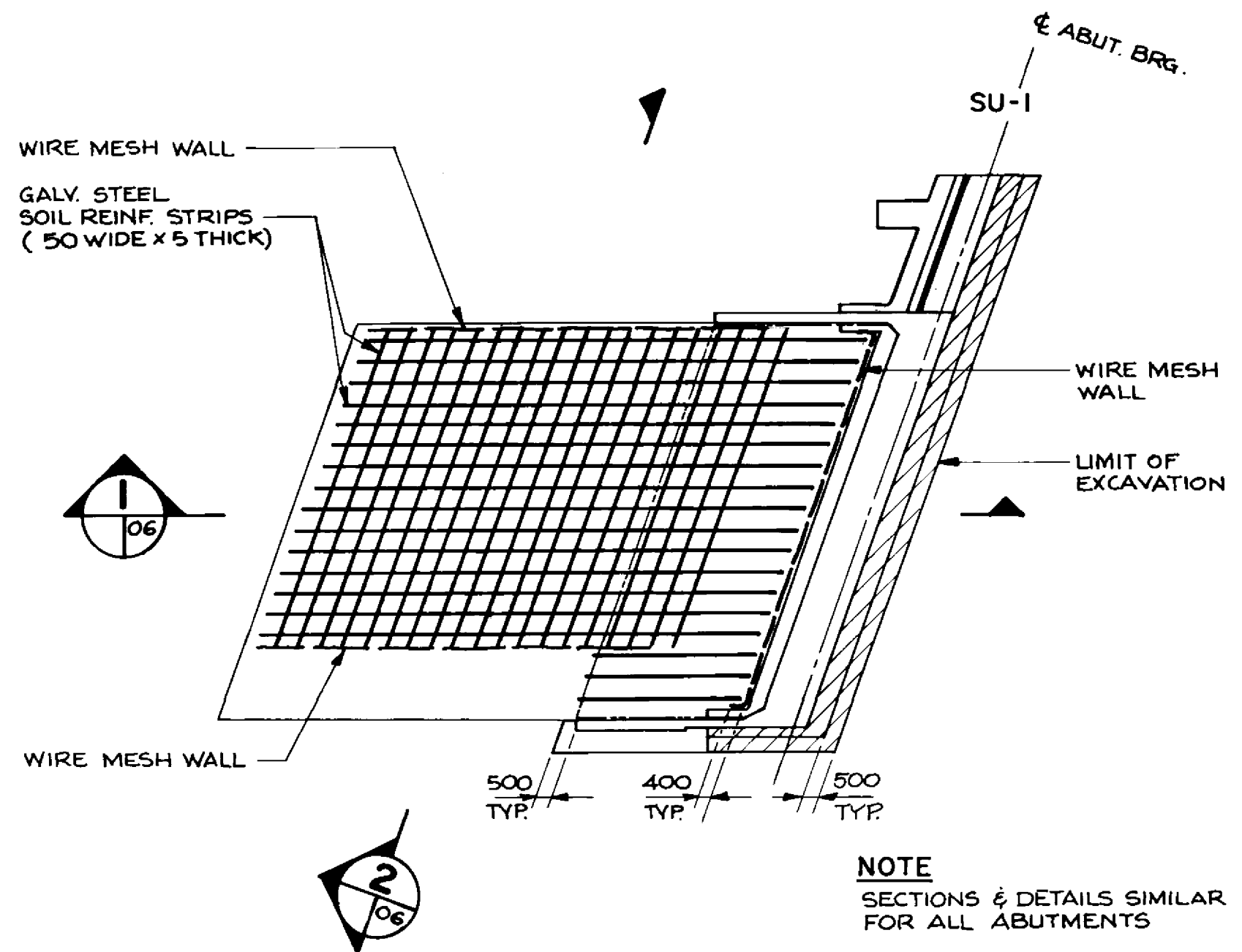


SECTION 04/05

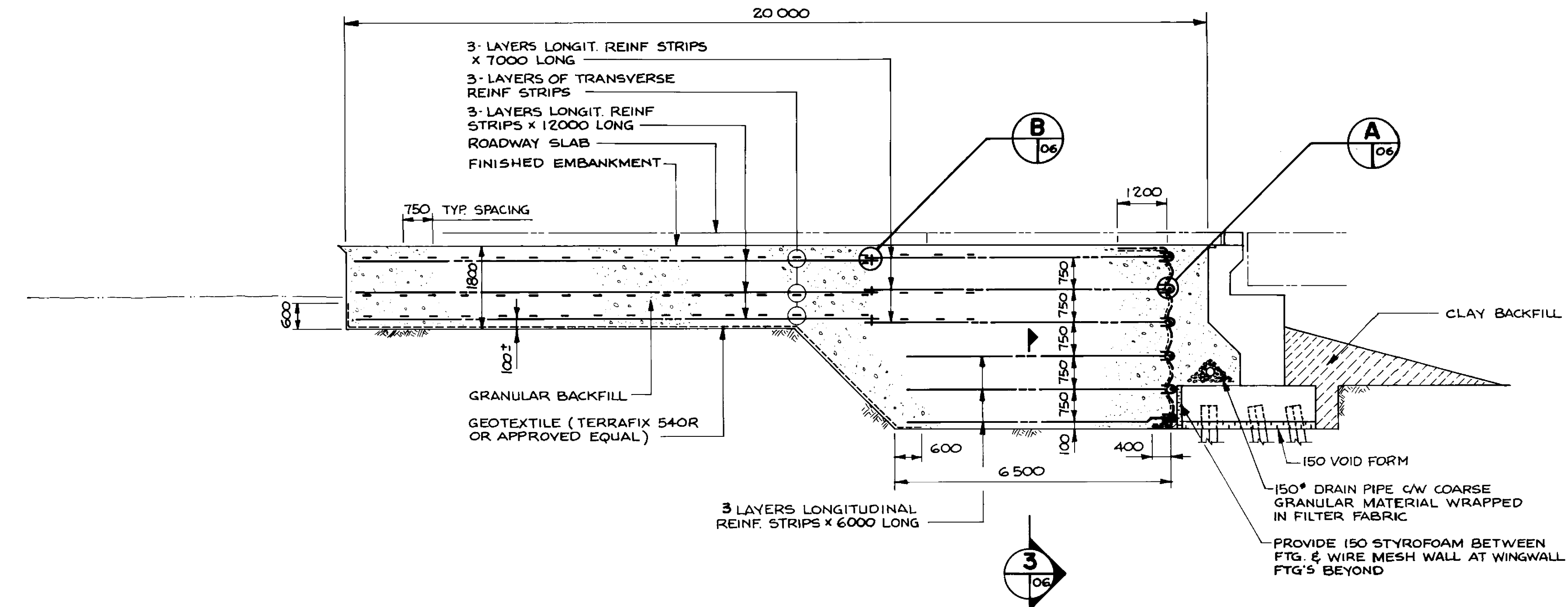
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B-6021-5

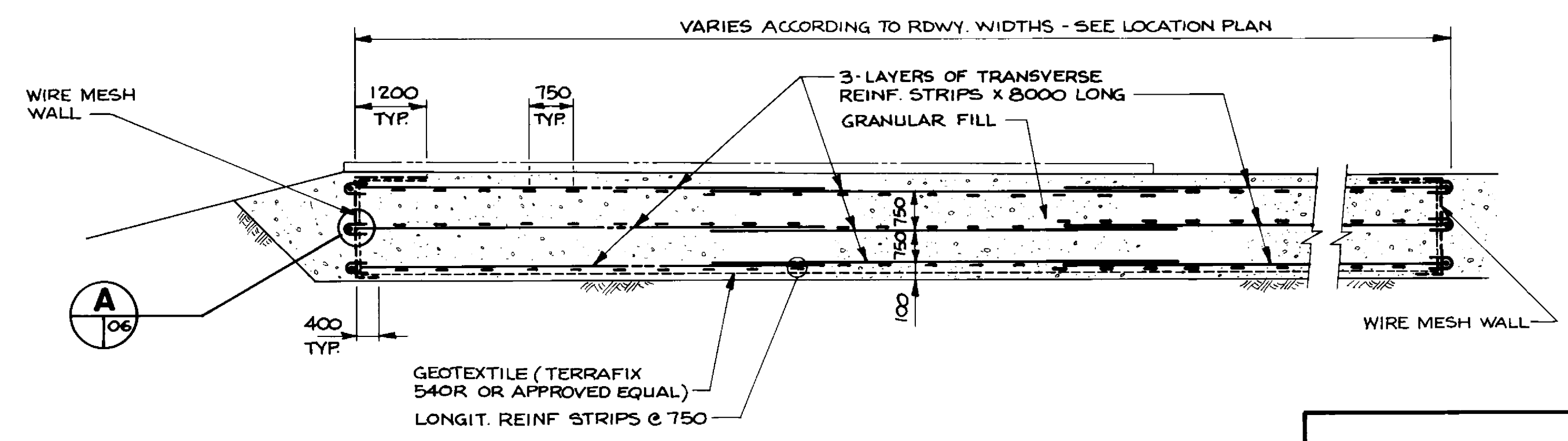
UNDERGROUND STRUCTURES N/A SUPV. U/C STRUCTURES COMMITTEE DATE		B.M. ELEV.		DILLON Consulting Engineers - Planners Environmental Scientists		ENGINEER 22/11/94 S.S. P.M.H. REGISTERED PROFESSIONAL ENGINEER		THE CITY OF WINNIPEG WORKS AND OPERATIONS DIVISION STREETS AND TRANSPORTATION DEPARTMENT	
NOTE: LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE. BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.		DESIGNED BY: M.C. CHECKED BY: S.S.R.		DRAWN BY: S.K.B. APPROVED BY: <i>[Signature]</i> DATE: 11/12/94		HOR. SCALE: 1:250 VERTICAL: 1:50		CONSULTANT DRAWING NO. 93-1497-06-05	
NO. REVISIONS DATE BY		DATE: NOV. 1994		DATE: NOV. 1994		CHANNEL WORK SHEET 2 OF 2		CITY DRAWING NUMBER B224-95-05 SHEET OF P3072-A-05	



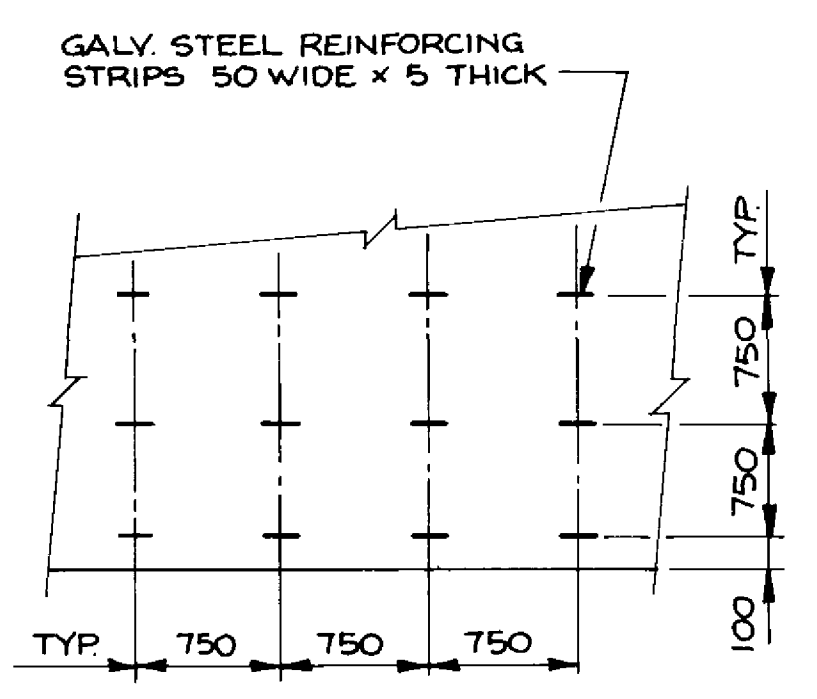
PLAN
(AT WEST STRUCTURE SOUTH ABUTMENT)
1:200



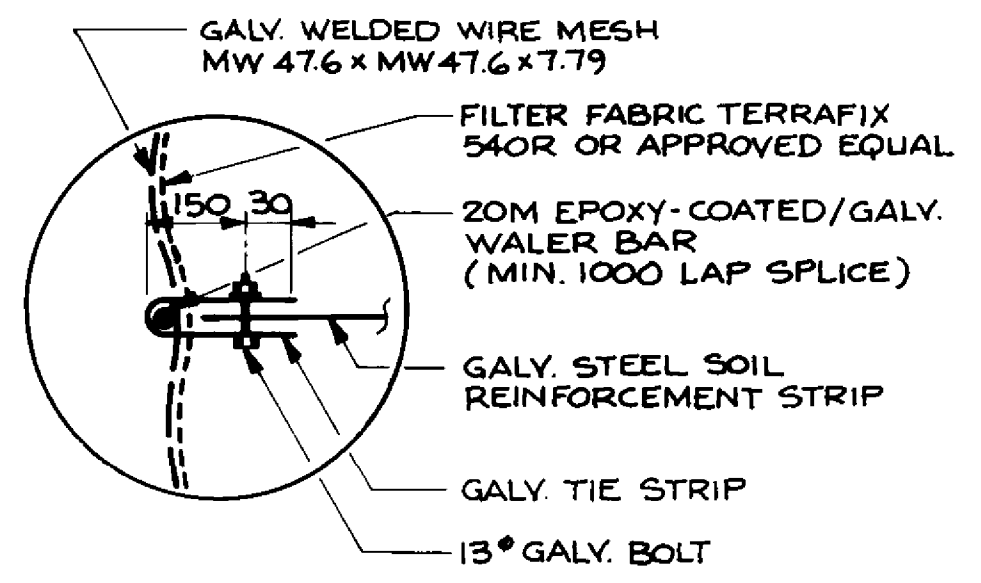
SECTION 1
1:75



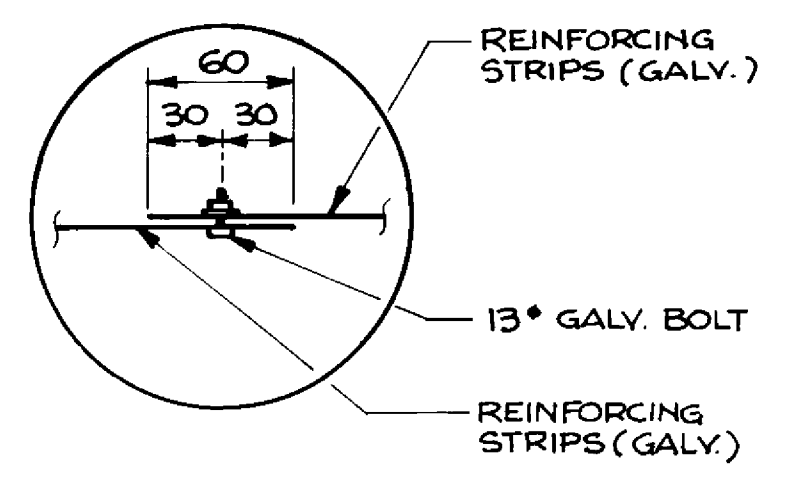
SECTION 2
1:75



SECTION 3
1:75

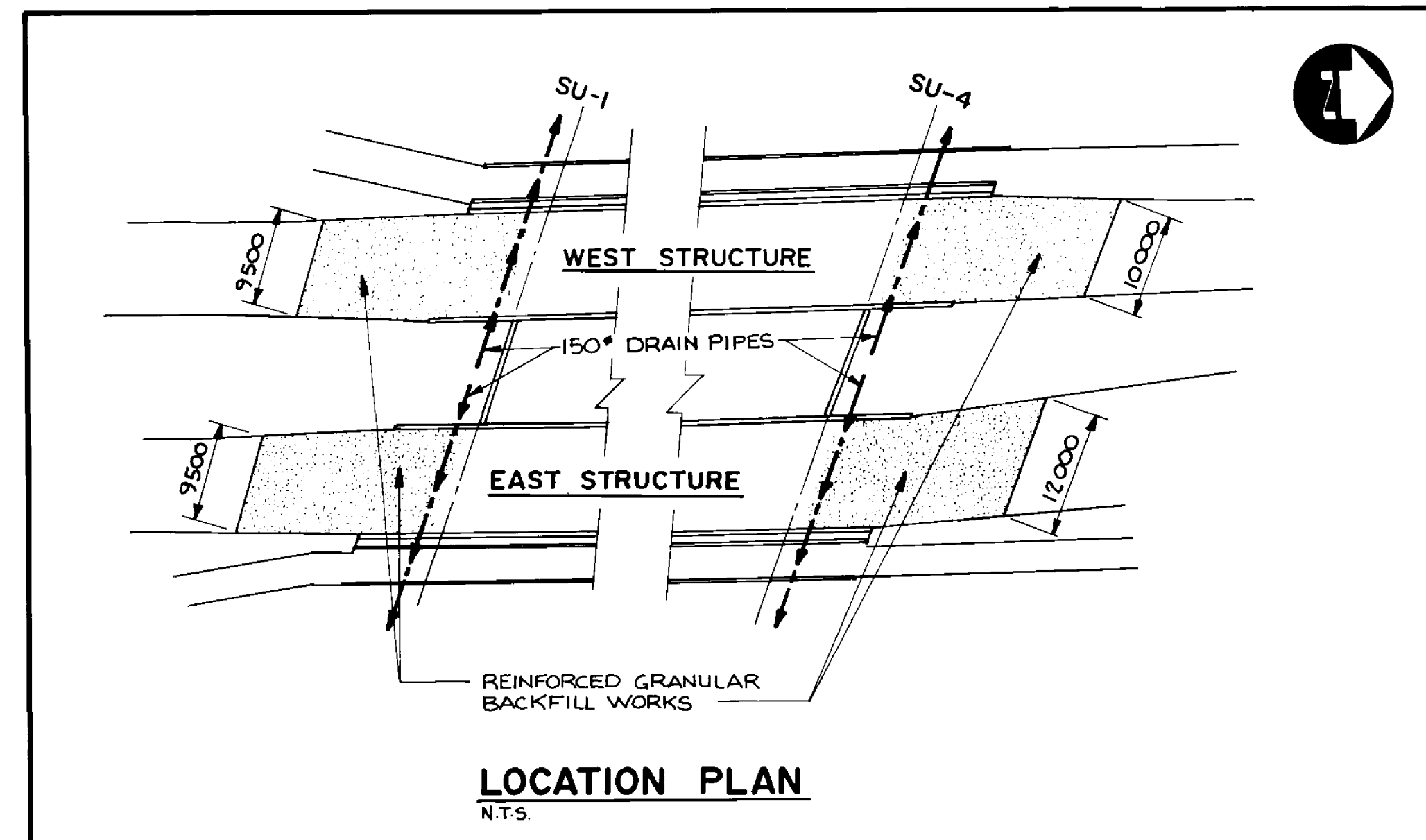


DETAIL A
N.T.S.



DETAIL B
N.T.S.

- NOTES:**
1. CONSTRUCT CONCRETE ABUTMENTS AND WINGWALLS AND APPLY WATERPROOFING.
 2. PLACE CLAY BACKFILL AT FRONT AS SHOWN.
 3. INSTALL DRAINAGE PIPE.
 4. PLACE 150 MM STYROFOAM ALONG ABUTMENT FOOTING.
 5. CONSTRUCT REINFORCED EARTH WIRE MESH WALL IN STAGES IN CONJUNCTION WITH PLACING COMPACTED GRANULAR BACKFILL IN 150 MM (MAXIMUM) LIFTS AND STEEL REINFORCING STRIPS AS SHOWN ON THE DRAWINGS.
 6. PLACE STEEL REINFORCING STRIPS PARALLEL TO THE ROADWAY CENTRELINE.
 7. OVERLAPS AND SPLICES FOR WIRE MESH, FILTER FABRIC, AND STEEL REINFORCING STRIPS, SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION. SPLICE LENGTHS FOR WALER BARS SHALL BE 1000 MM (MINIMUM).
 8. REMOVE ALL FALSEWORK FOR WIRE MESH WALL AND PLACE GRANULAR BACKFILL BETWEEN WIRE MESH WALL AND ABUTMENT BACKWALL.



LOCATION PLAN
N.T.S.

RECORD DRAWING
APPROVED BY: *[Signature]* DATE: *Dec 18/98*

B-6021-6

LOCATION APPROVED UNDERGROUND STRUCTURES
N/A

DATE: _____

NOTE:
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

NO.	REVISIONS	DATE	BY

DILLON
Consulting Engineers • Planners
Environmental Scientists

DESIGNED BY: M.C. CHECKED BY: S.S.R.

DRAWN BY: D.M.W. APPROVED BY: *[Signature]*

HOR. SCALE: AS SHOWN

VERTICAL: _____

DATE: NOV. 1994

ENGINEER
22/11/94
S.S. S.H.A.L.
REGISTERED PROFESSIONAL ENGINEER

CONSULTANT DRAWING NO. 93-1497-06-06

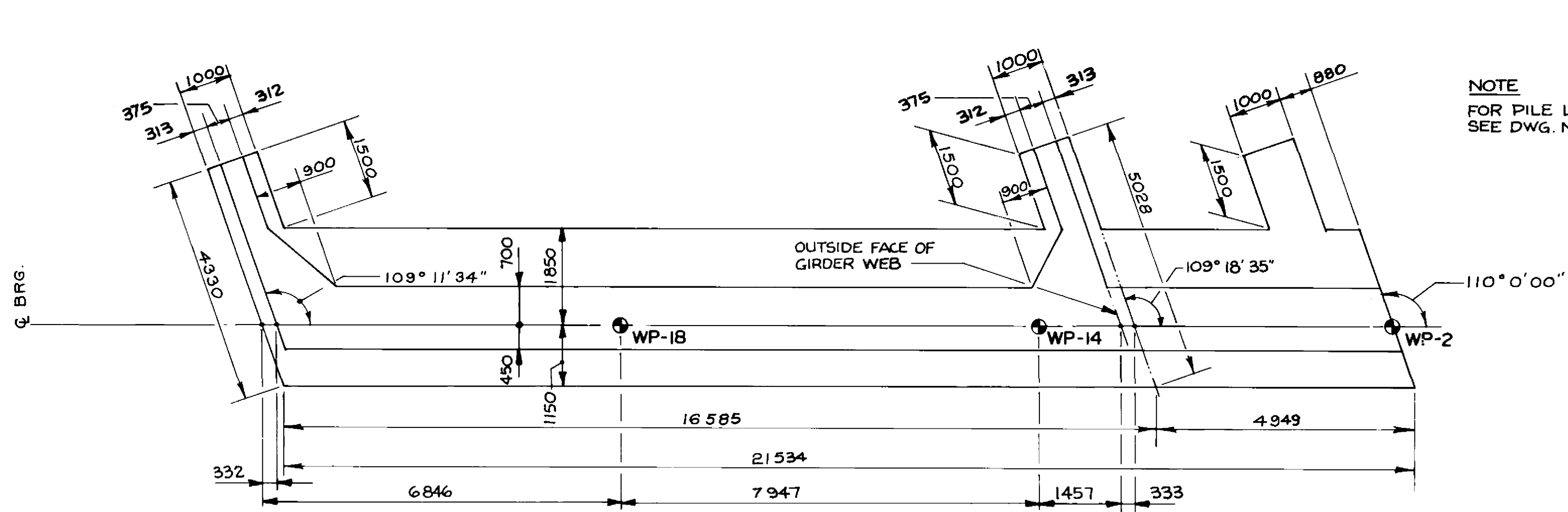
THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

PEMBINA HIGHWAY
SOUTH CITY LIMIT TO RUE DES TRAPPSTES
PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

EXCAVATION AND BACKFILL AT
NORTH & SOUTH ABUTMENTS

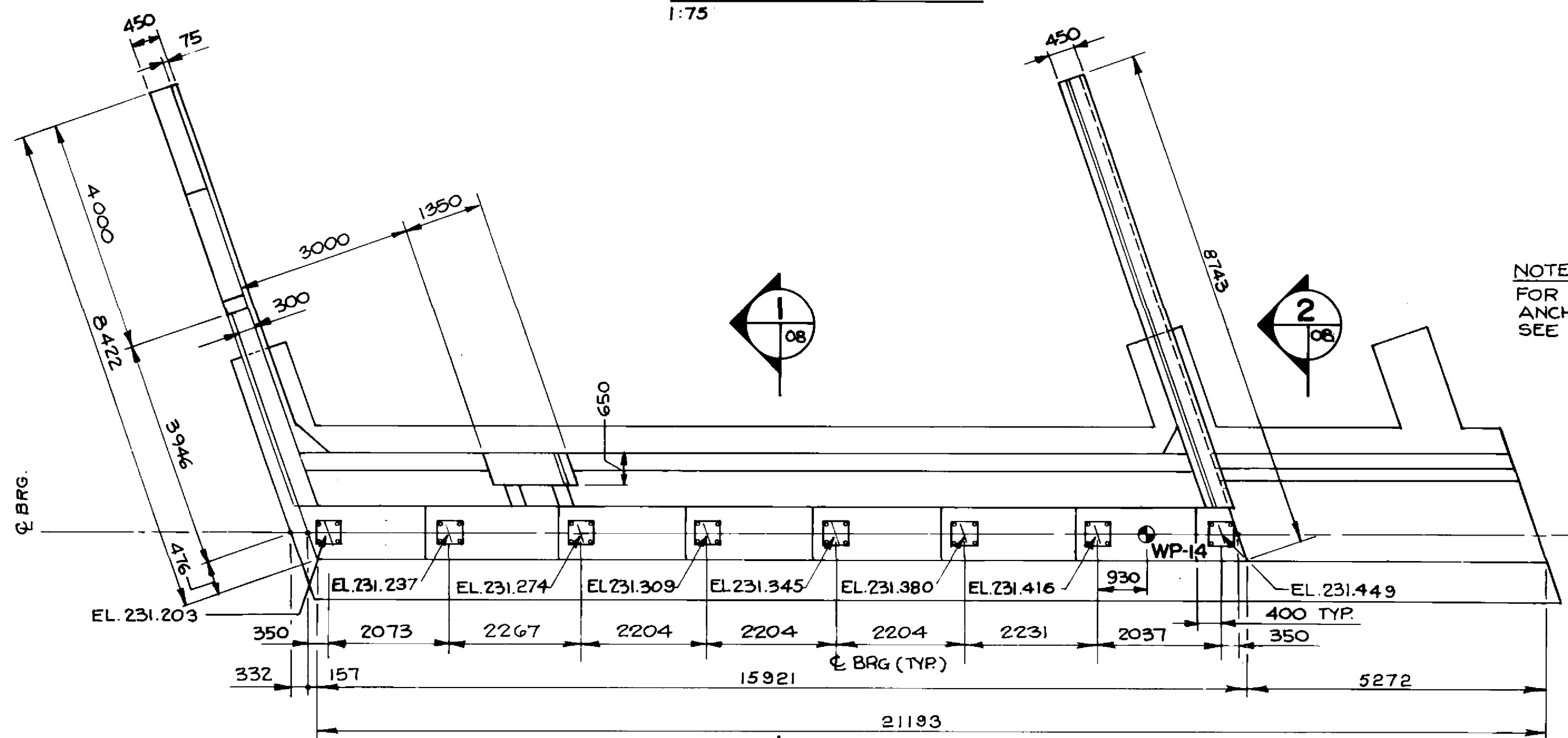
CITY DRAWING NUMBER: B224-95-06
SHEET: _____ OF _____

P3072-A-06



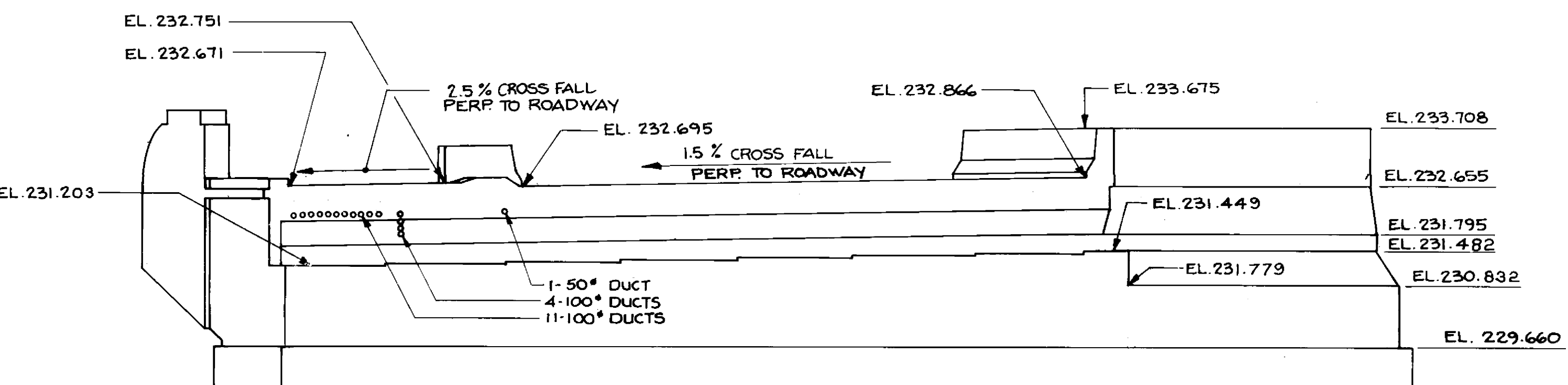
NOTE
FOR PILE LAYOUT
SEE DWG. NO. 07

PLAN AT FOOTING
1:75

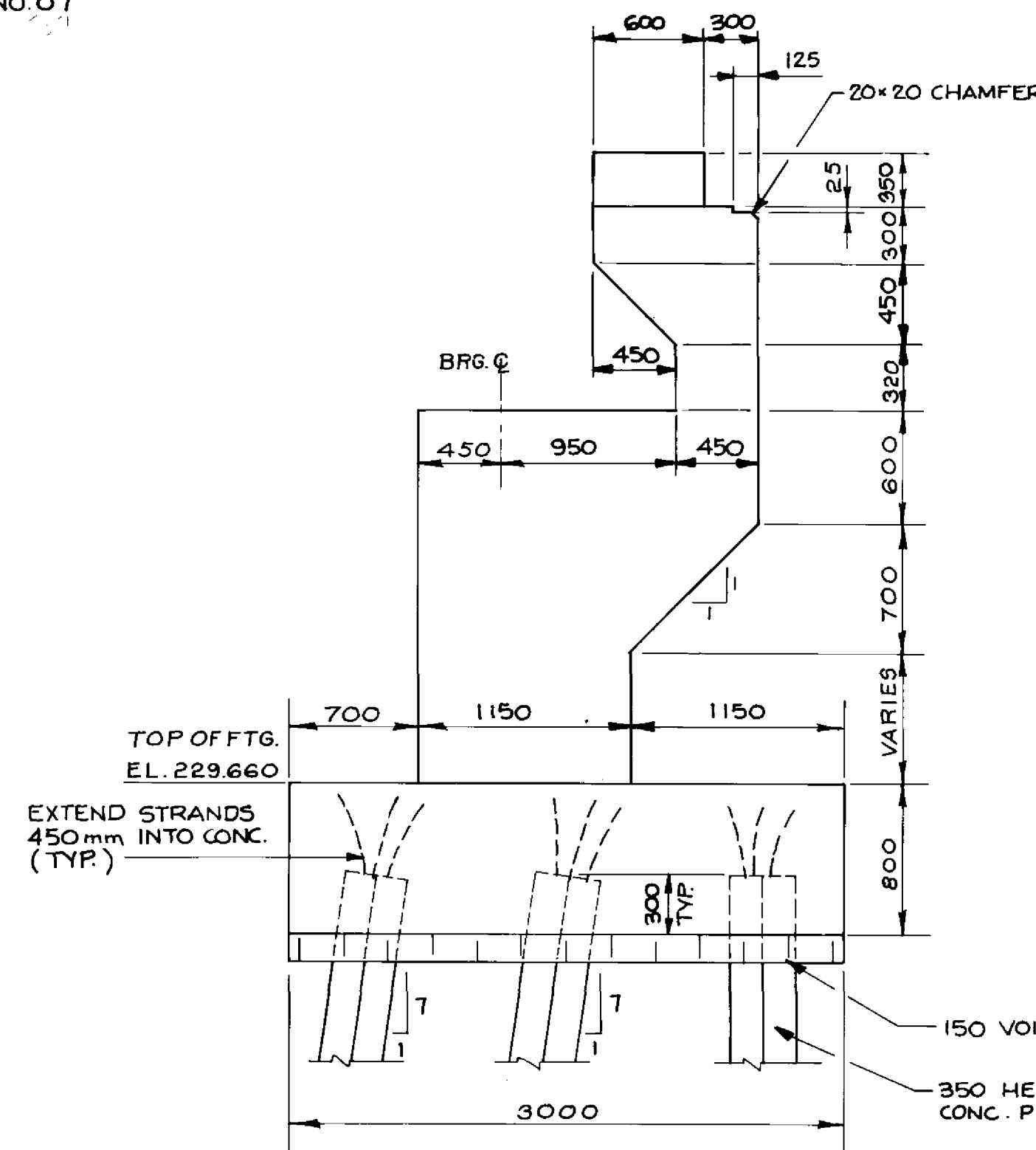


NOTE
FOR BEARING
ANCHOR LAYOUT
SEE DWG. NO. 35

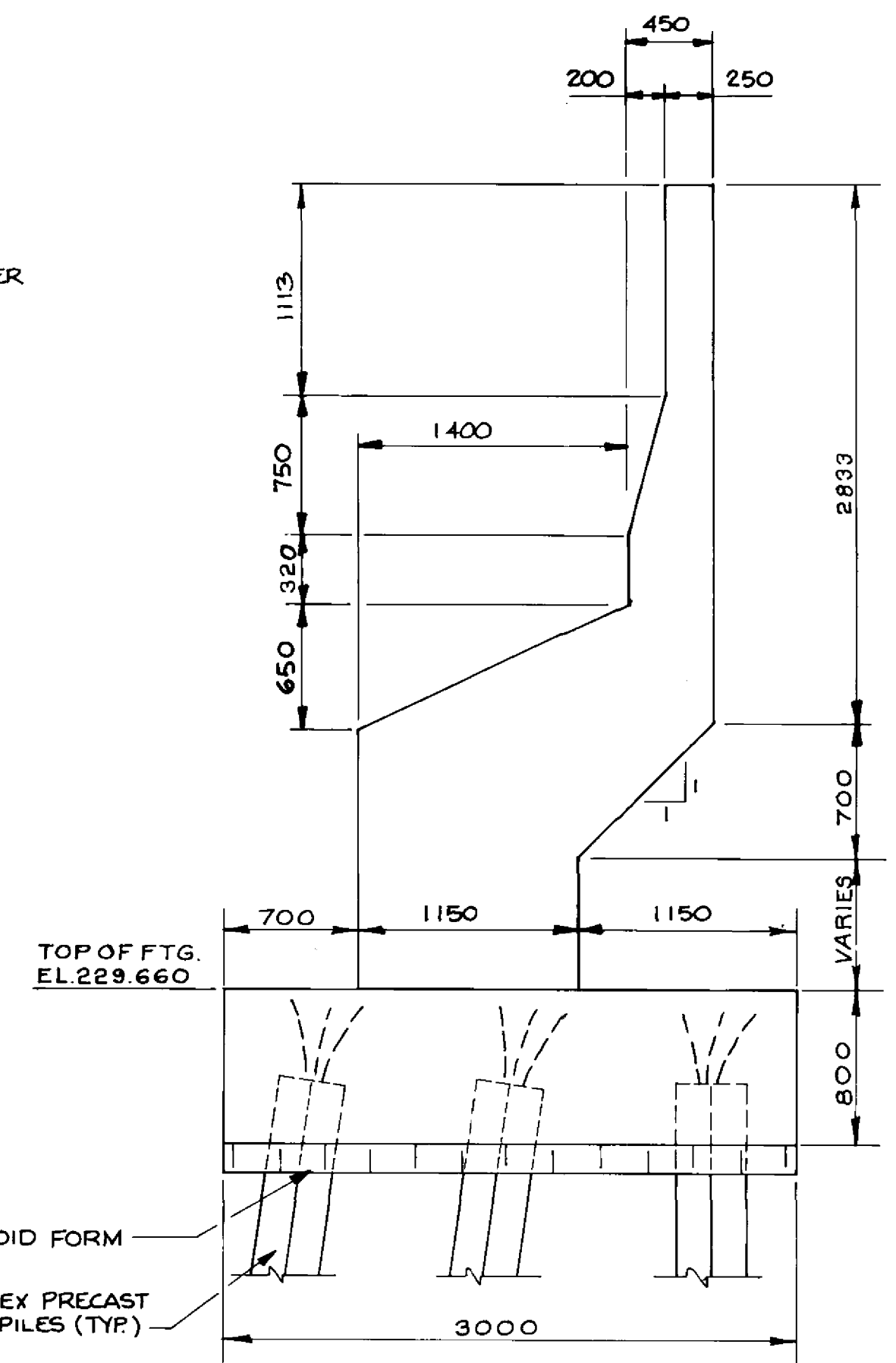
PLAN AT TOP
1:75



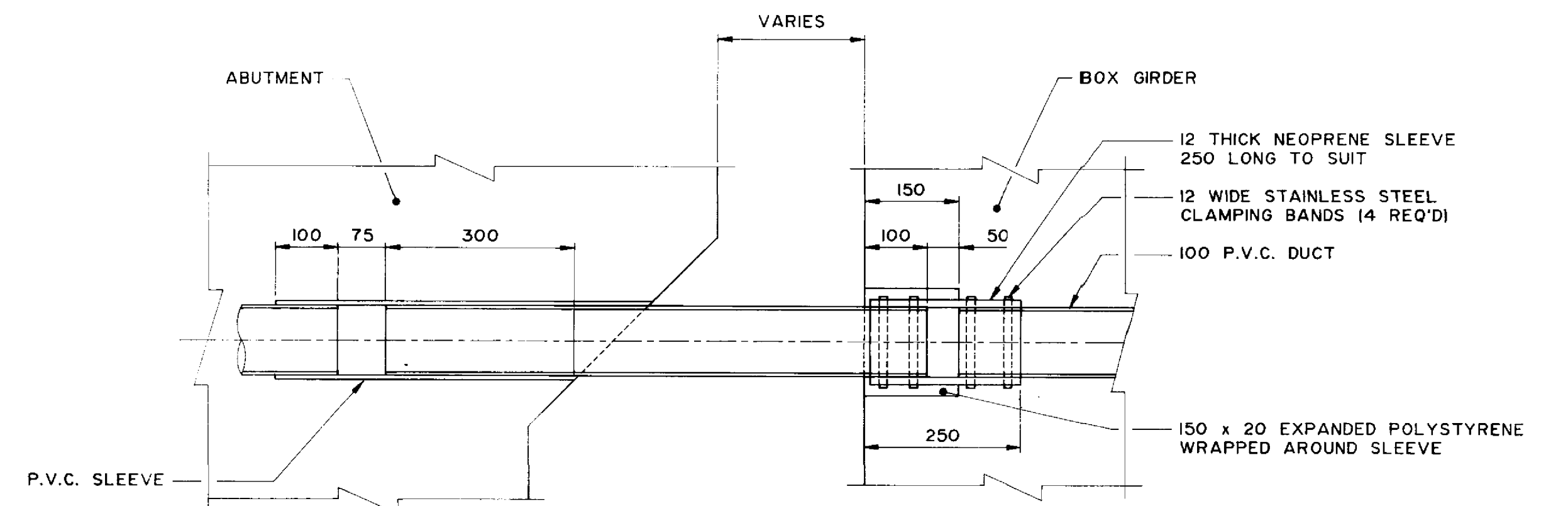
FRONT ELEVATION
1:75



SECTION 1
1:30



SECTION 2
1:30



**TYPICAL EXPANSION JOINT
FOR 100 DIA. CABLE DUCTS**

SCALE 1 : 7.5
USE SIMILAR DETAIL FOR OTHER CONDUITS

RECORD DRAWING

APPROVED BY: *[Signature]* DATE: *20/12/98*

B-6021-8

LOCATION APPROVED UNDERGROUND STRUCTURES	
N/A	
SUPV. U/G STRUCTURES COMMITTEE	DATE
NOTE: LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.	

B.M. ELEV.				
NO.	REVISIONS	DATE	BY	

DILLON Consulting Engineers - Planners Environmental Scientists	
DESIGNED BY: C.R.	CHECKED BY: S.S.R.
DRAWN BY: C.R.B./D.M.W.	APPROVED BY: <i>[Signature]</i>
HOR. SCALE: AS NOTED	DATE: NOV. 1994

CONSULTANT DRAWING NO. 93-1497-06-08

THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

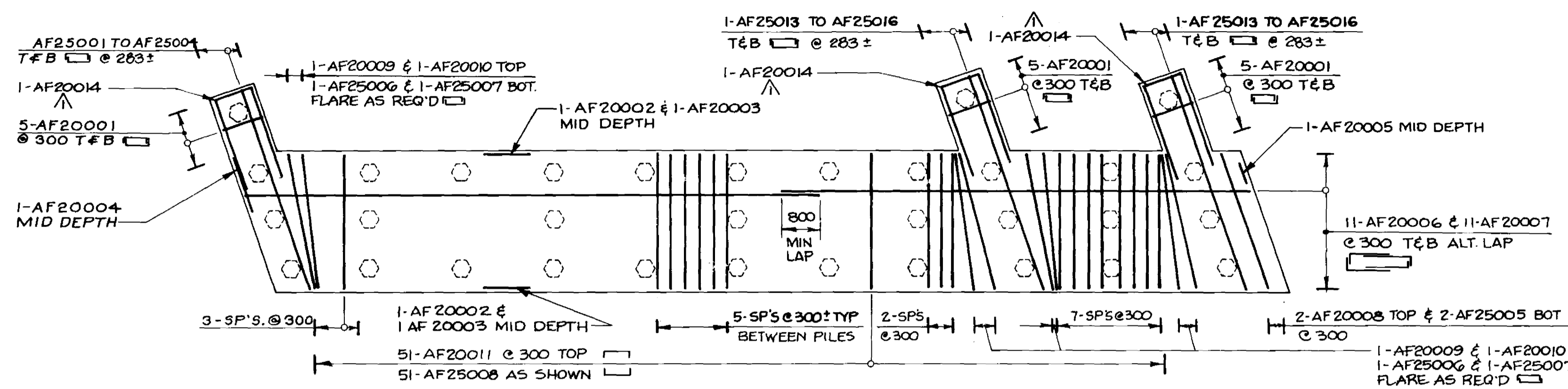
PEMBINA HIGHWAY
SOUTH CITY LIMIT TO RUE DES TRAPPISTES
PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

EAST STRUCTURE
SOUTH ABUTMENT - SU-1E
SHEET 1 OF 3

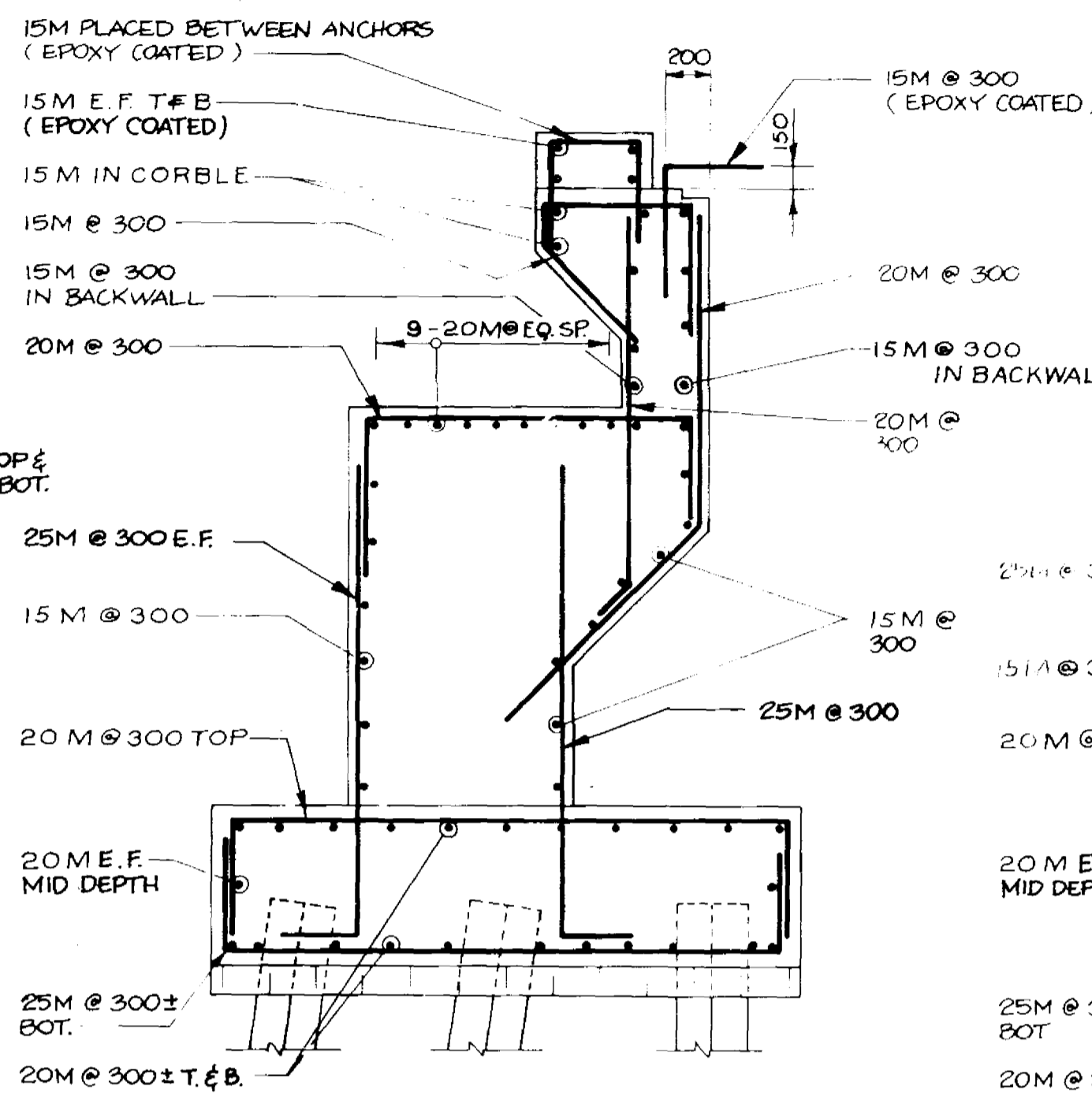
DRAWING NUMBER: B224-95-08
SHEET OF: P3072-A-08

SEE WING WALL ELEVATIONS FOR PILE CAP LOCATIONS & REINF DETAILS (DWG. 10)

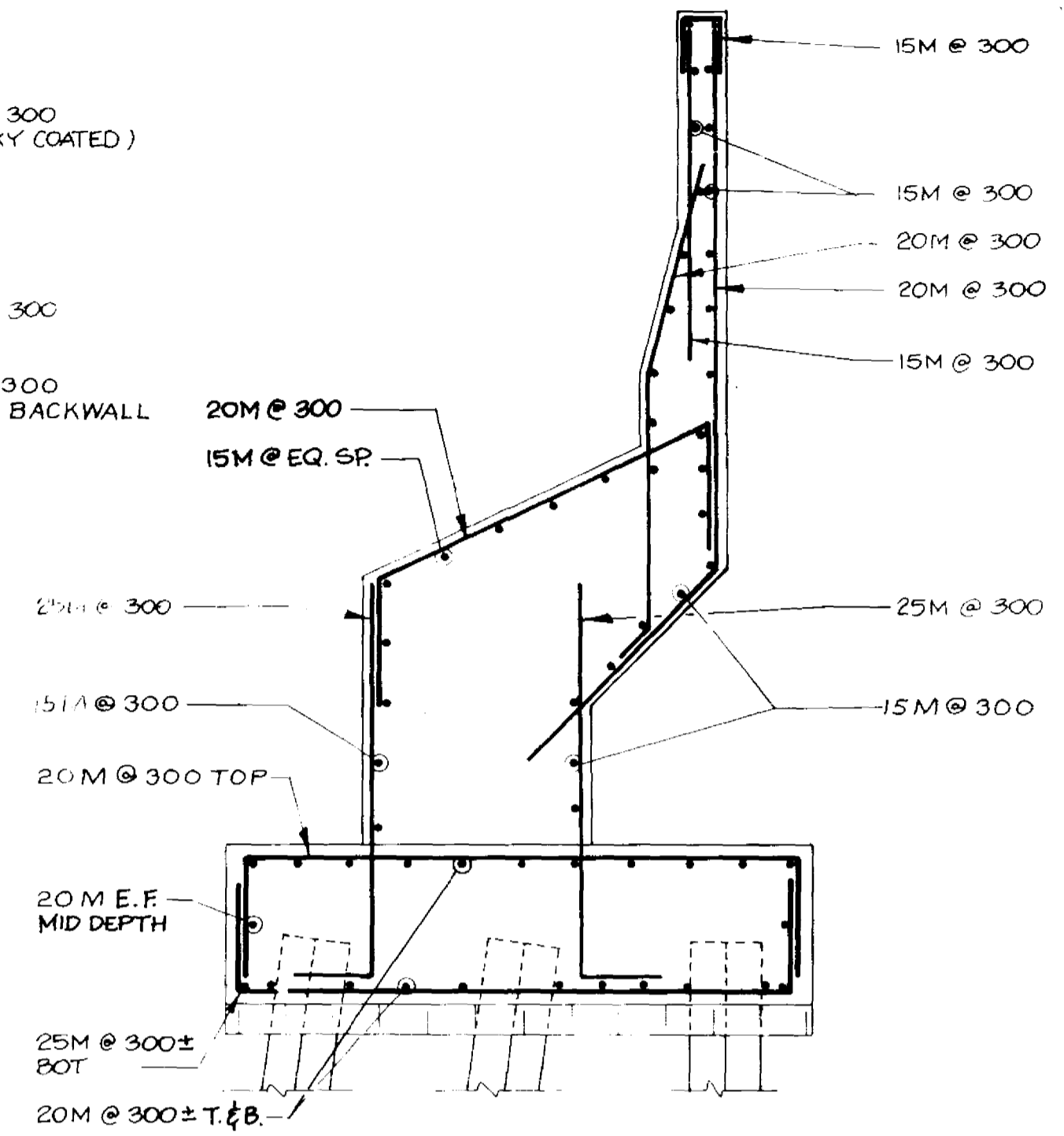
NOTE
 1. FOR PILE LAYOUT SEE DWG. NO. 07
 2. FOR BRG. ANCHOR LAYOUT SEE DWG. NO. 35



FOOTING PLAN
1:75

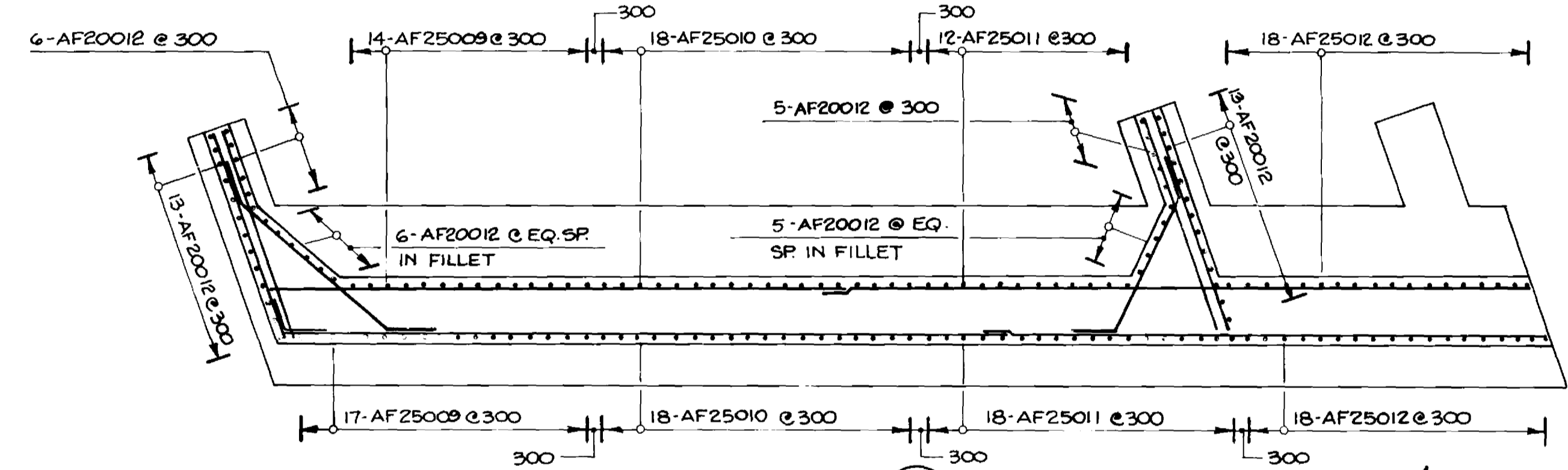


SECTION 2
1:30

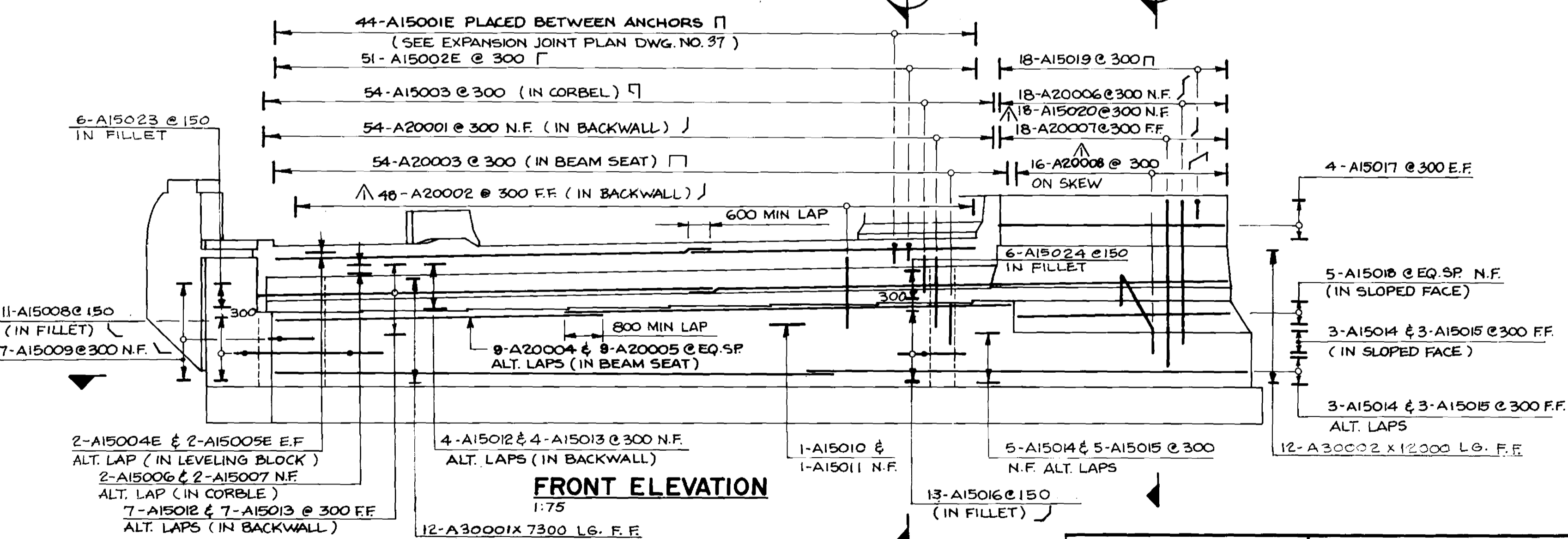


SECTION 3
1:30

NOTE:
FOR HOR REBAR SPACING SEE ELEV. BELOW



SECTION 1
1:75



FRONT ELEVATION
1:75

LOCATION APPROVED UNDERGROUND STRUCTURES
 N/A
 SUPV. U/G STRUCTURES COMMITTEE DATE
 NOTE:
 LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

NO	REVISIONS	DATE	BY
1	REVISIONS	02/20/99	N.B.G.

DILLON
 Consulting Engineers • Planners
 Environmental Scientists

DESIGNED BY: C.R.
 DRAWN BY: C.R.B./D.M.W.
 HOR SCALE: AS NOTED
 VERTICAL SCALE: AS NOTED
 DATE: NOV. 1994

CHECKED BY: S.S.R.
 APPROVED BY: [Signature]
 DATE: 2/1/94
 G.R. SMITH / SENIOR BRIDGE ENGINEER
 DATE: 2/1/94
 CONSULTANT ENGINEER

CONSULTANT DRAWING NO. 93-1497-06-09

RECORD DRAWING
 APPROVED BY: [Signature] DATE: Dec 12/98

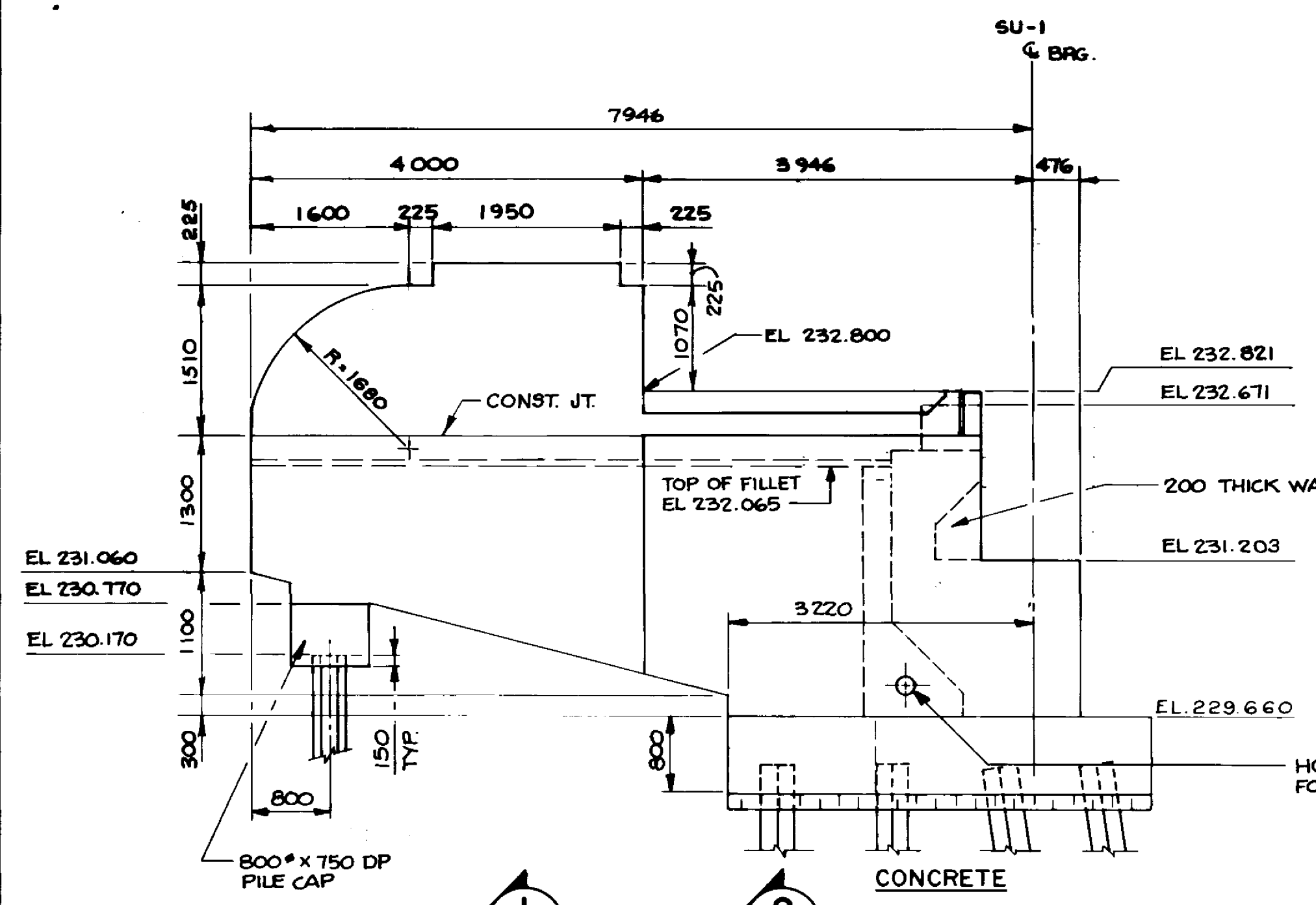
B-6021-9

THE CITY OF WINNIPEG
 WORKS AND OPERATIONS DIVISION
 STREETS AND TRANSPORTATION DEPARTMENT

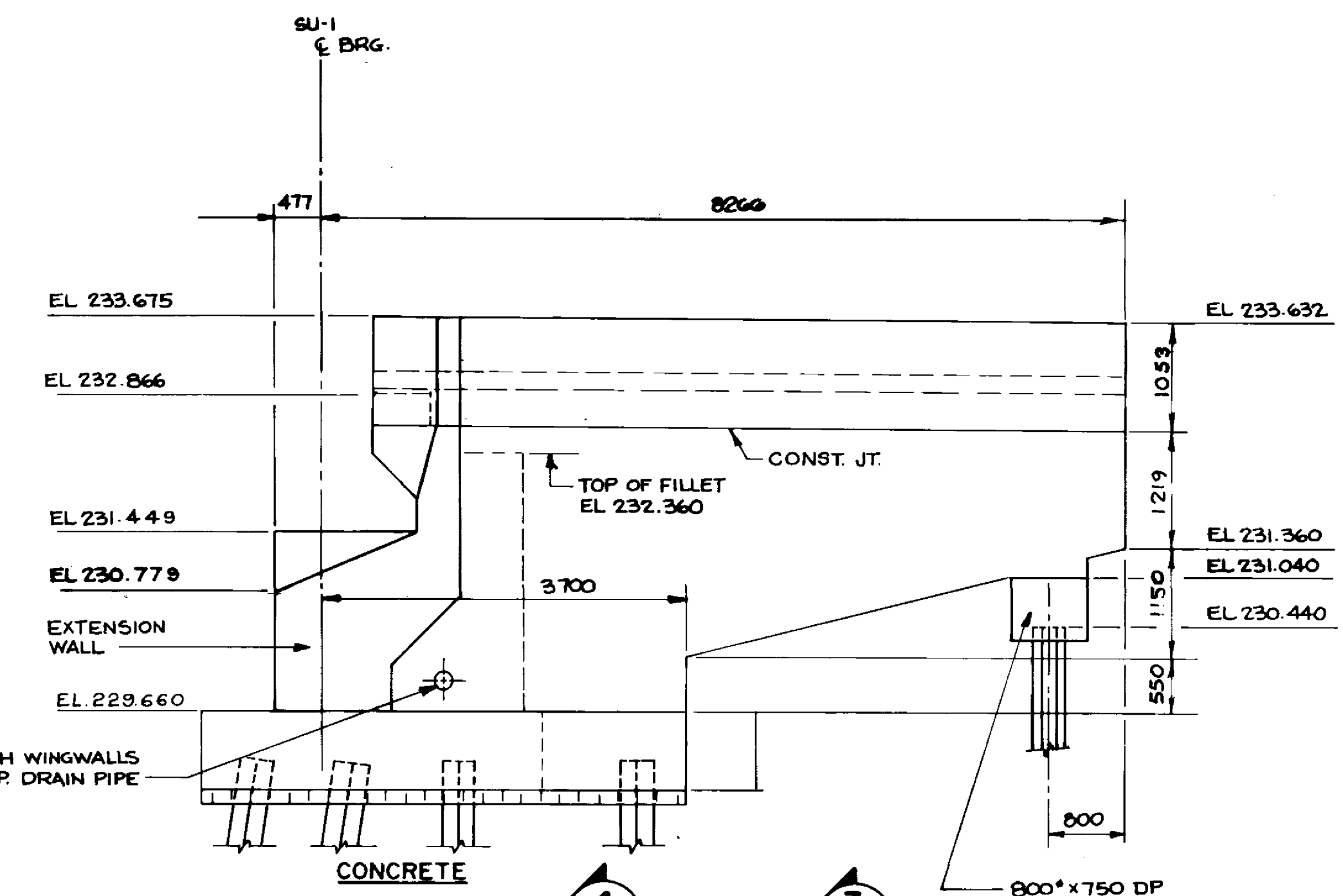
PEMBINA HIGHWAY
 SOUTH CITY LIMIT TO RUE DES TRAPPISTES
 PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

EAST STRUCTURE
 SOUTH ABUTMENT SU-1E
 SHEET 2 OF 3

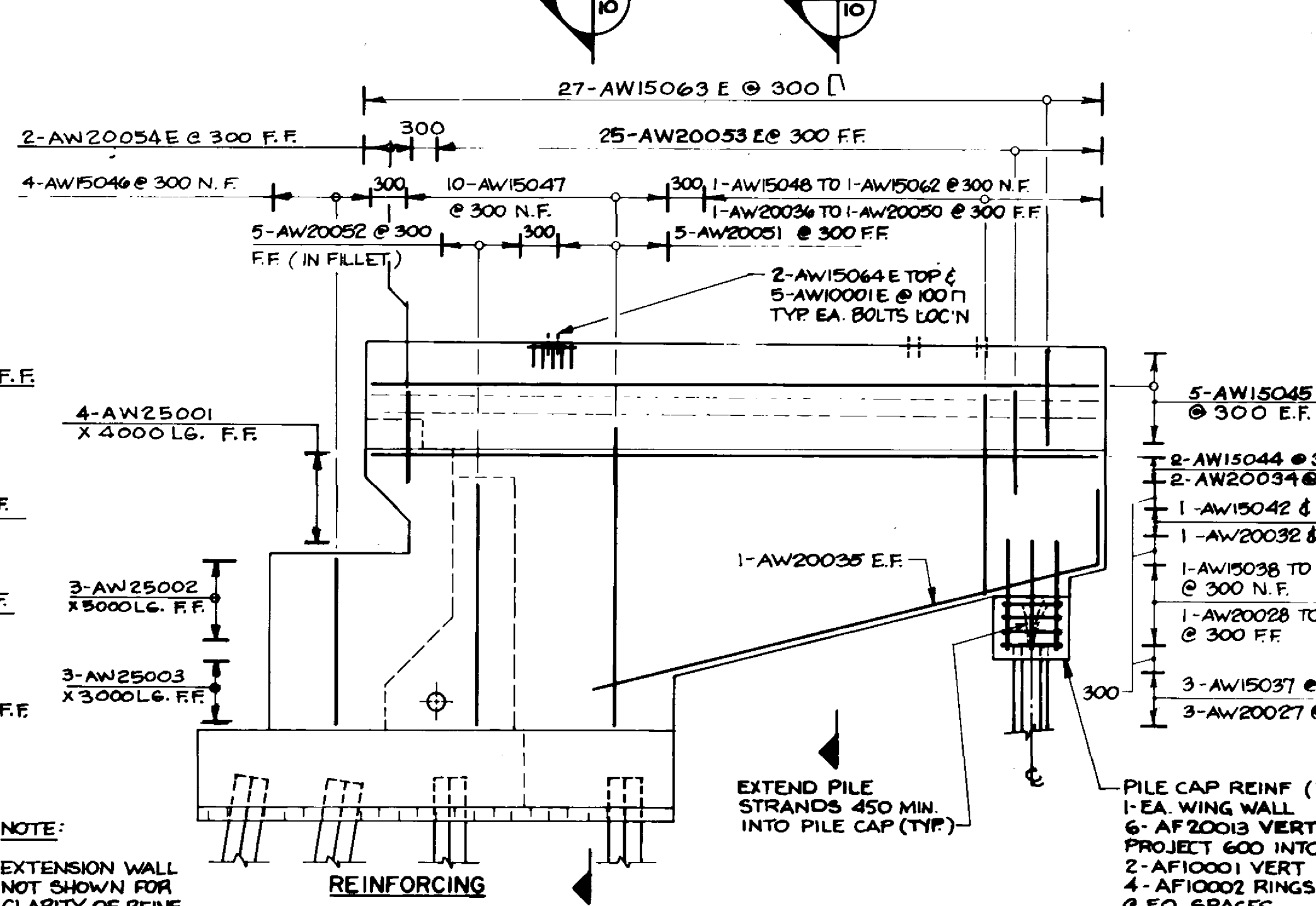
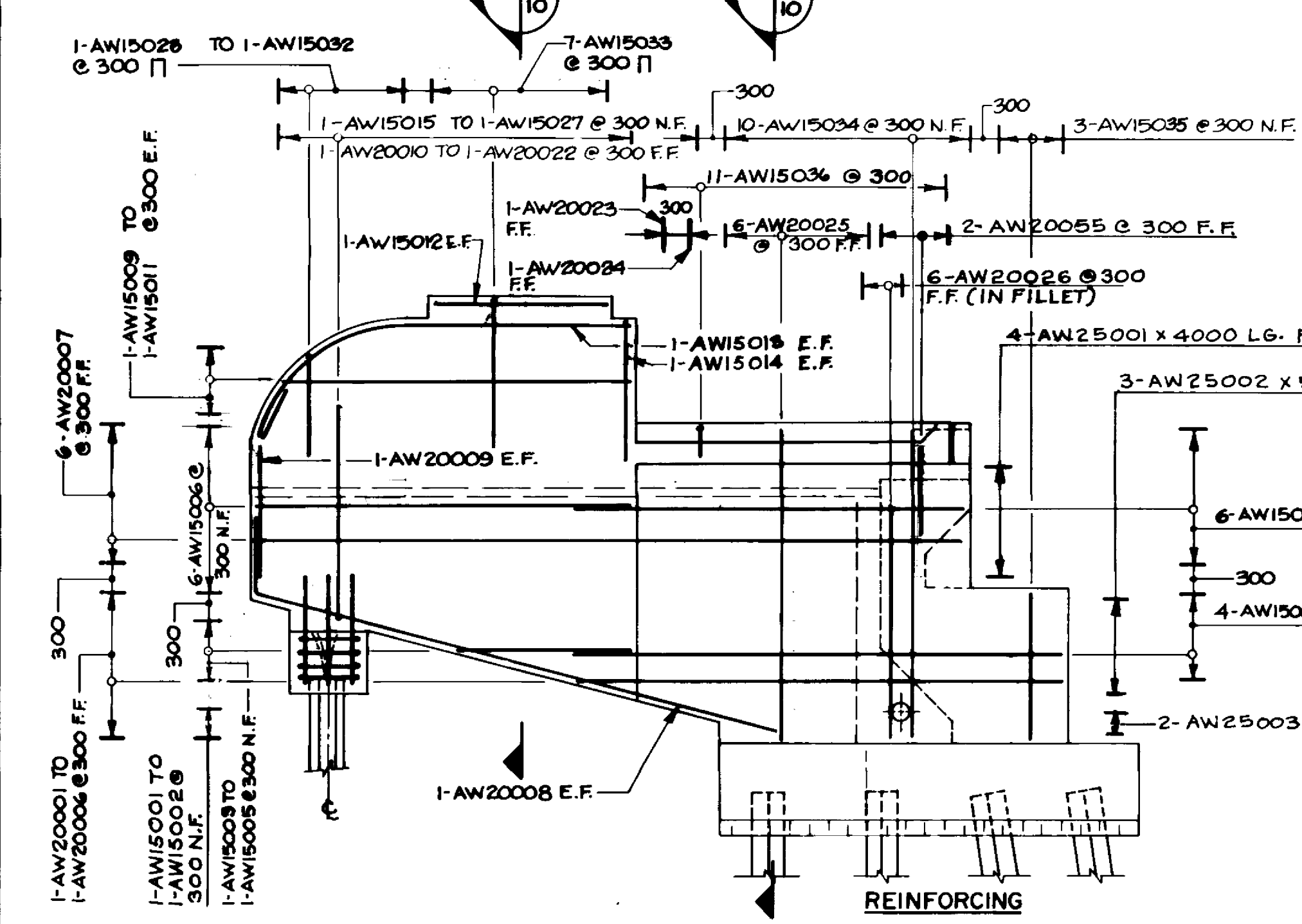
CITY DRAWING NUMBER: B224-95-09
 SHEET: 1F
 P3072-A-09



EAST WINGWALL ELEVATION
1:50



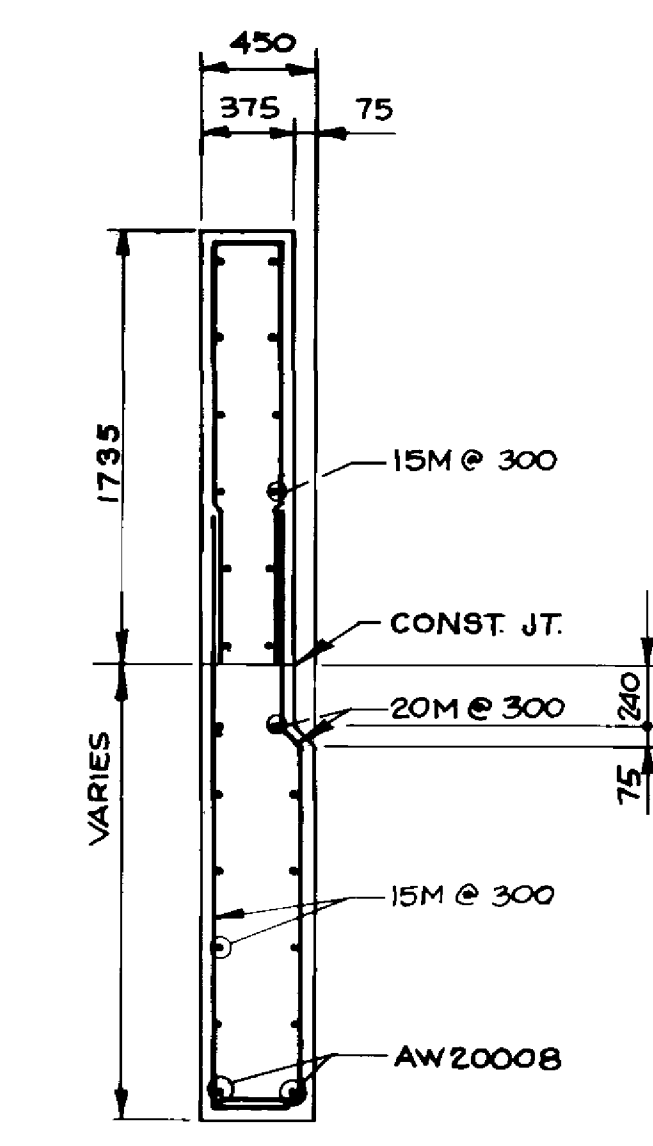
WEST WINGWALL ELEVATION
1:50



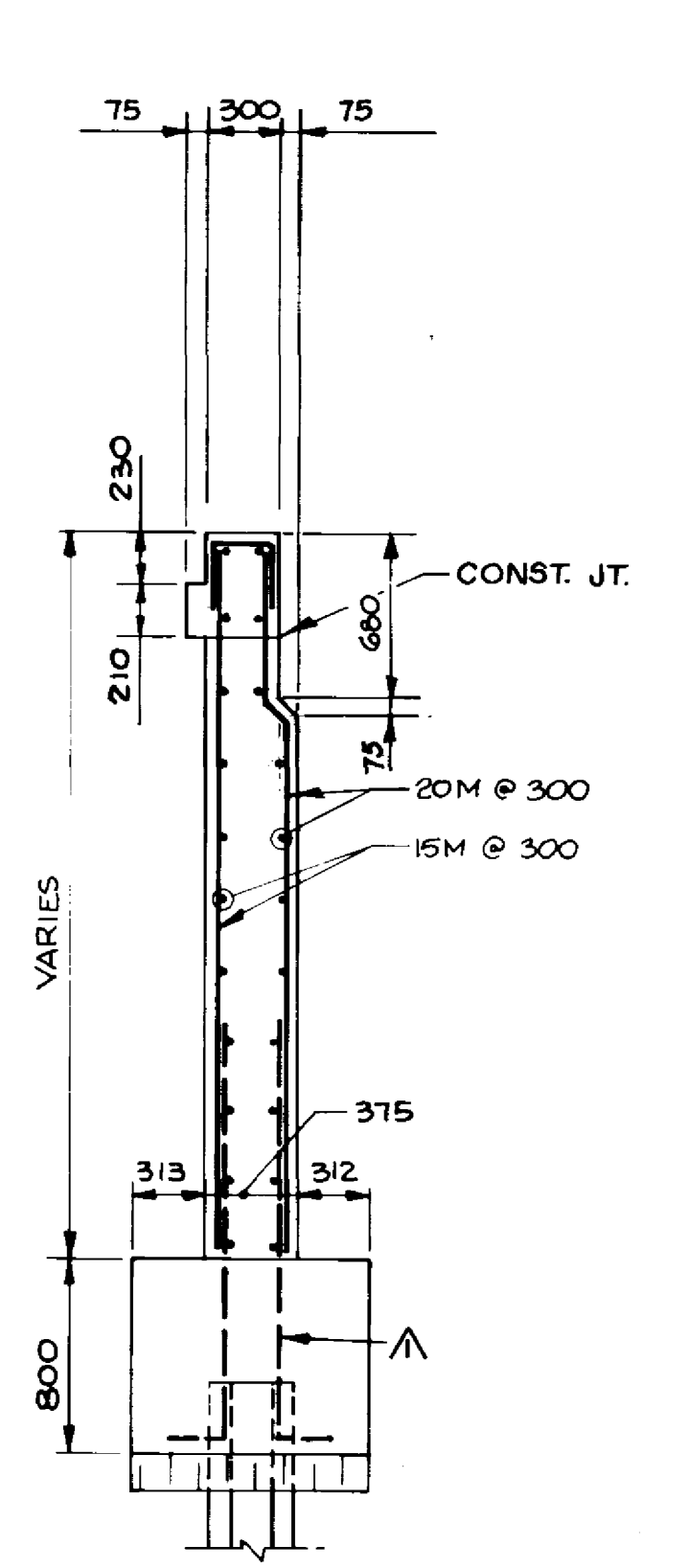
NOTE:
EXTENSION WALL NOT SHOWN FOR CLARITY OF REINF.

EXTEND PILE STRANDS 450 MIN. INTO PILE CAP (TYP.)

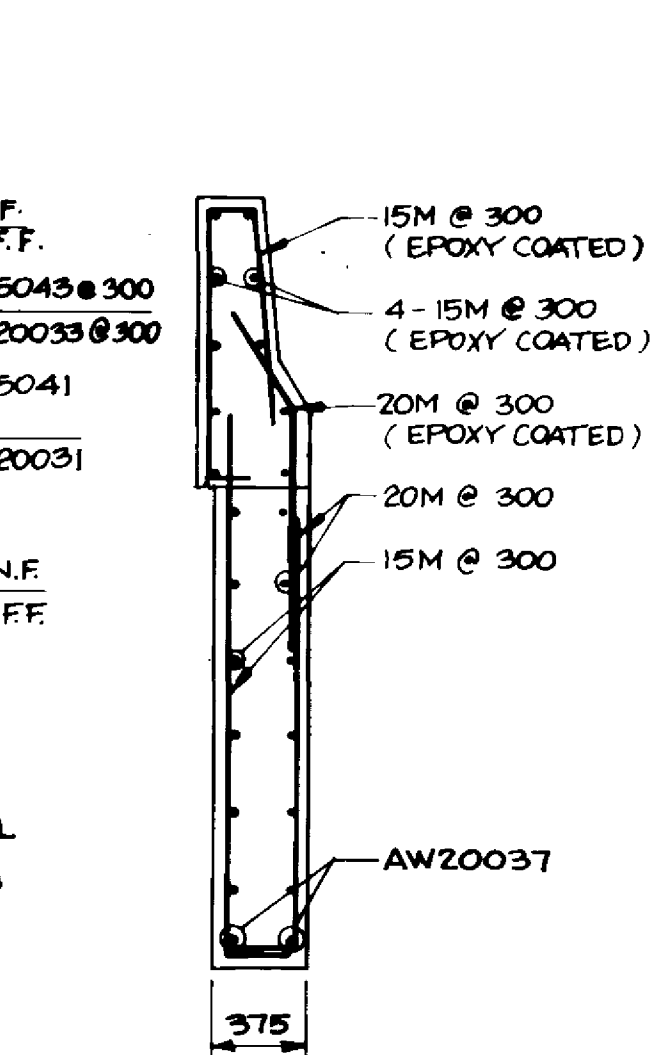
PILE CAP REINF (TYP)
1- EA. WING WALL
6- AF20013 VERT PROJECT 600 INTO WALL
2- AF10001 VERT
4- AF10002 RINGS 650° & EQ. SPACES



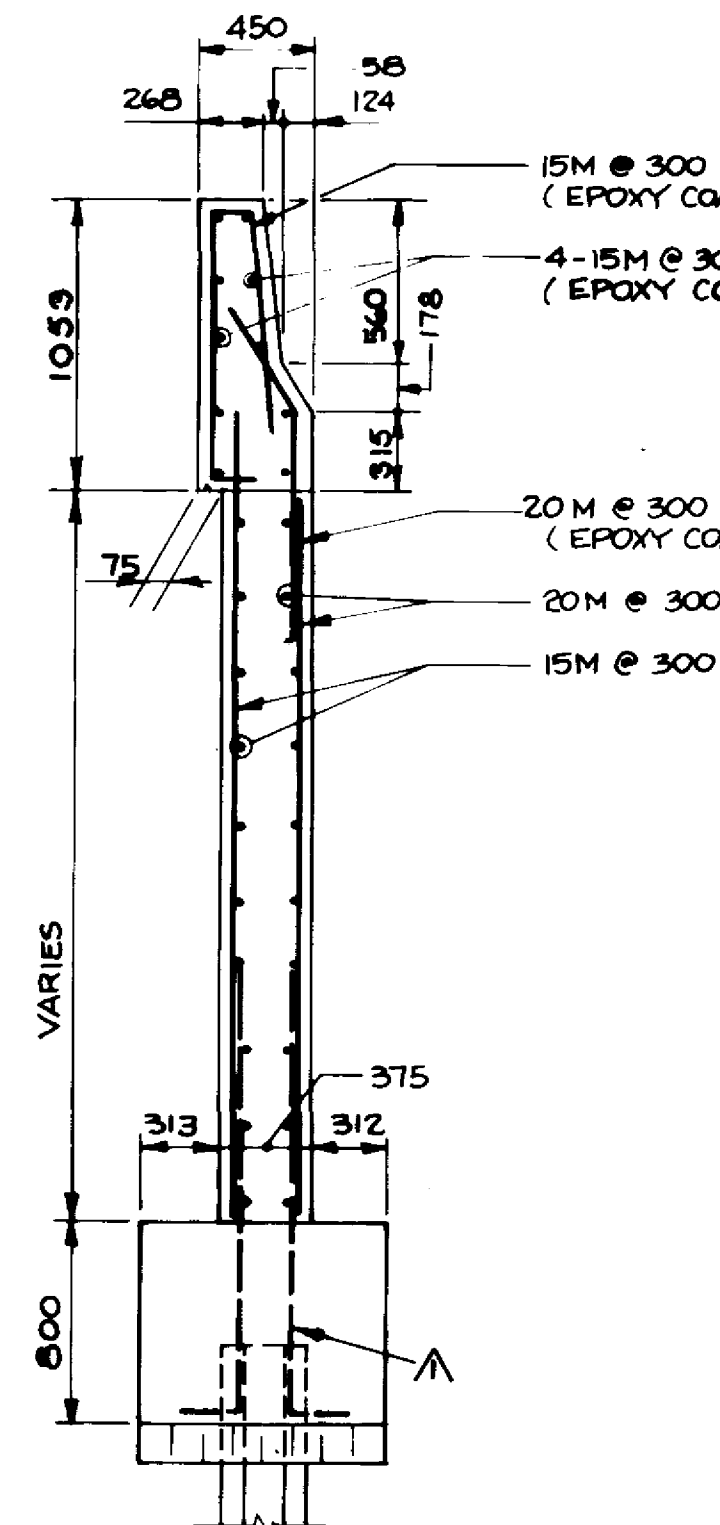
SECTION 1
1:30



SECTION 2
1:30



SECTION 3
1:30



SECTION 4
1:30

RECORD DRAWING
APPROVED BY: [Signature] DATE: Dec 15/99

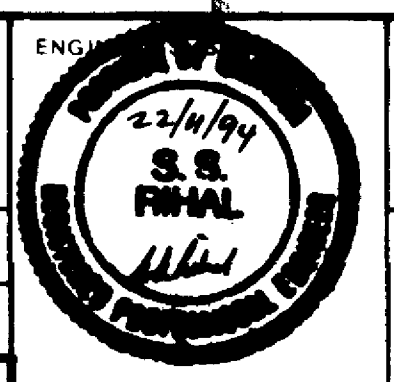
B-6021-10

LOCATION APPROVED UNDERGROUND STRUCTURES
N/A
SURV. LOG STRUCTURES DATE: [Blank]
SUMMARY: [Blank]
NOTE:
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

NO	REVISIONS	DATE	BY
022085	N.B.G.		

DILLON
Consulting Engineers + Planners
Environmental Scientists

DESIGNED BY: C.R. CHECKED BY: S.S.R.
DRAWN BY: C.R.B./DMW APPROVED BY: [Signature]
HOR SCALE: AS NOTED AUTHORIZED BY: [Signature] DATE: 12/15/99
VERTICAL: DATE: 12/15/99
ACCEPTED BY: [Signature] DATE: 12/15/99
CONSULTANT DRAWING NO. 93-1497-06-10

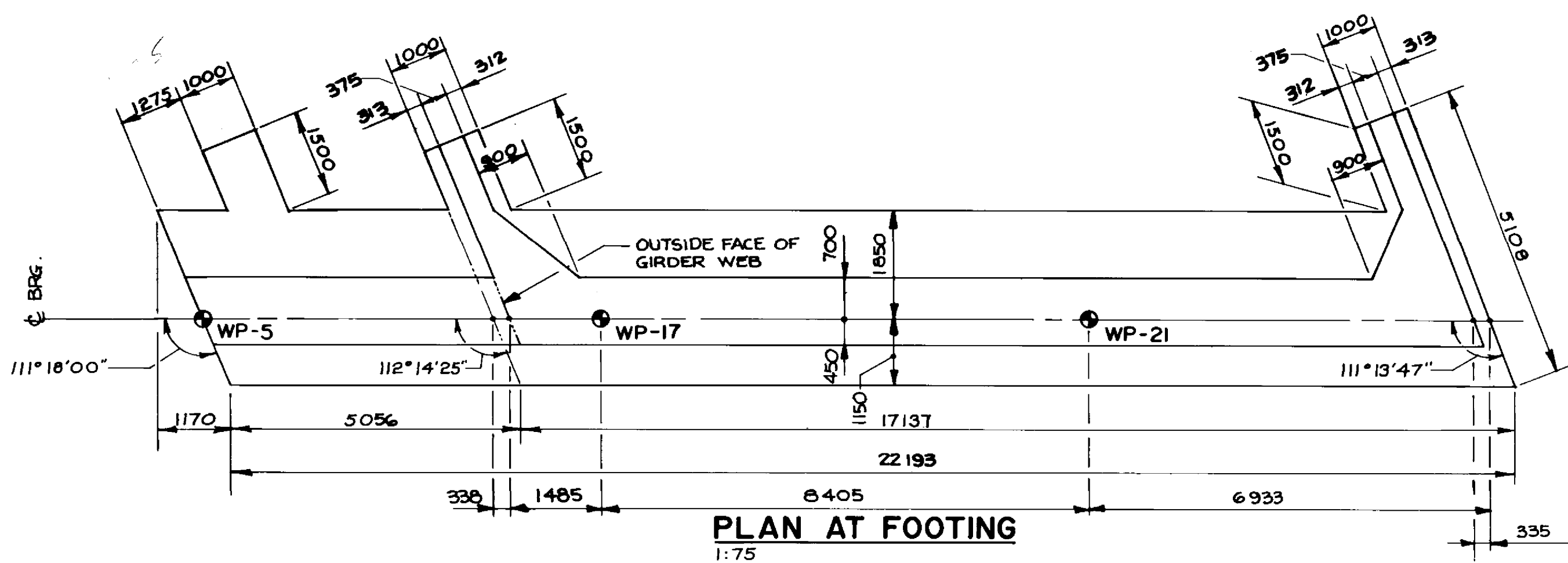


THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

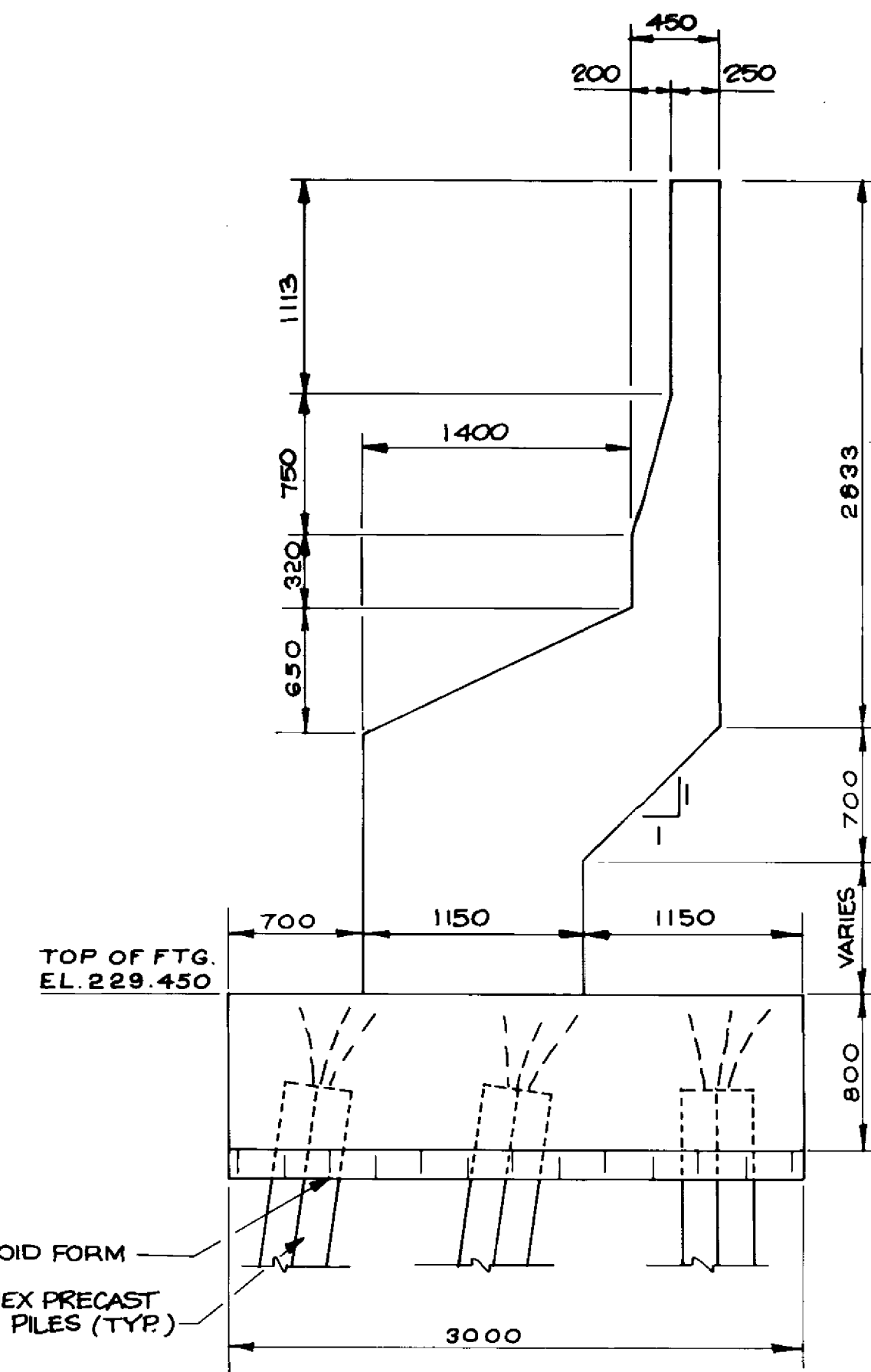
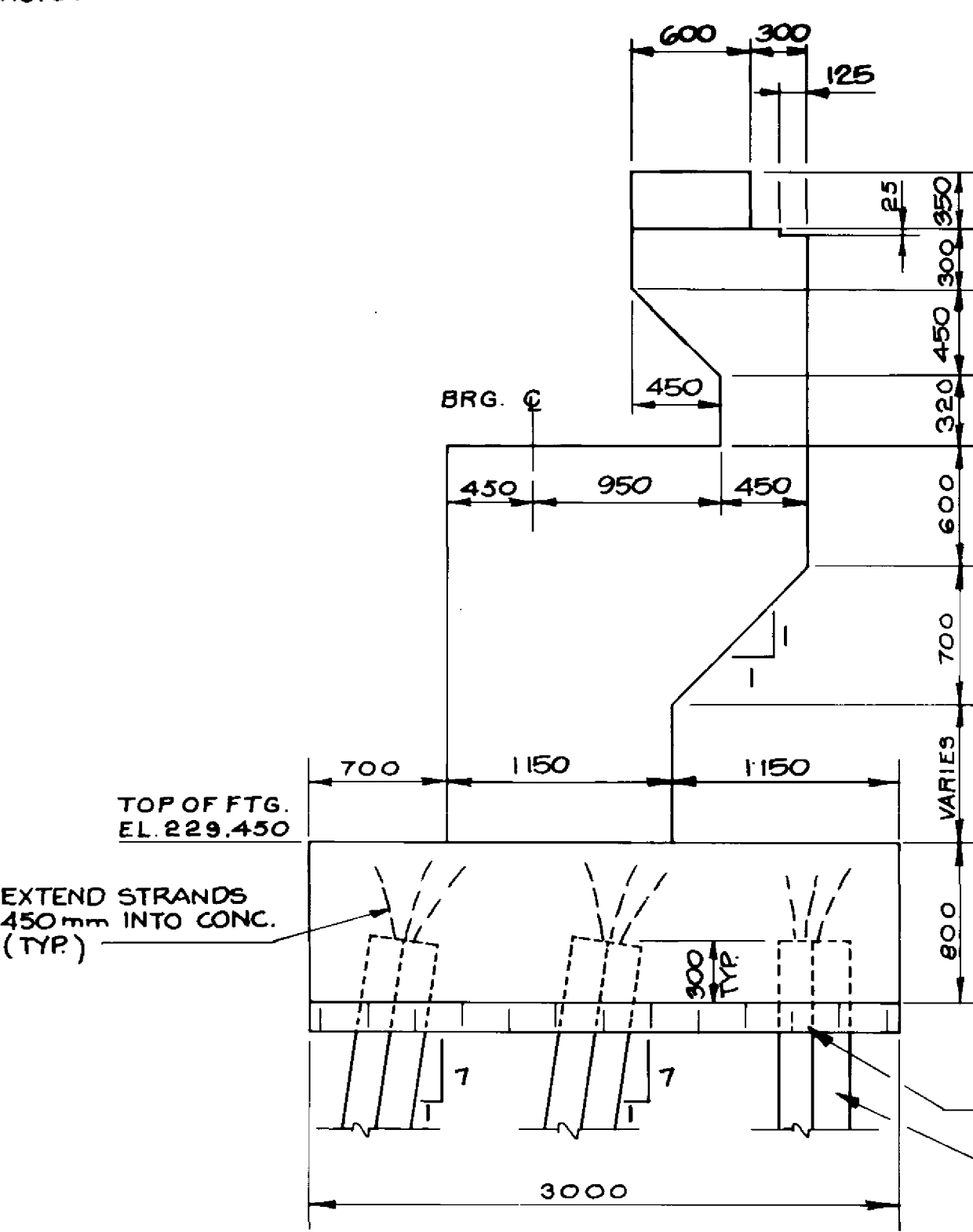
PEMBINA HIGHWAY
SOUTH CITY LIMIT TO RUE DES TRAPPISTES
PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

EAST STRUCTURE
SOUTH ABUTMENT - SU-1E
SHEET 3 OF 3

CITY DRAWING NUMBER: B224-95-10
SHEET OF: [Blank]
P3072-A-10



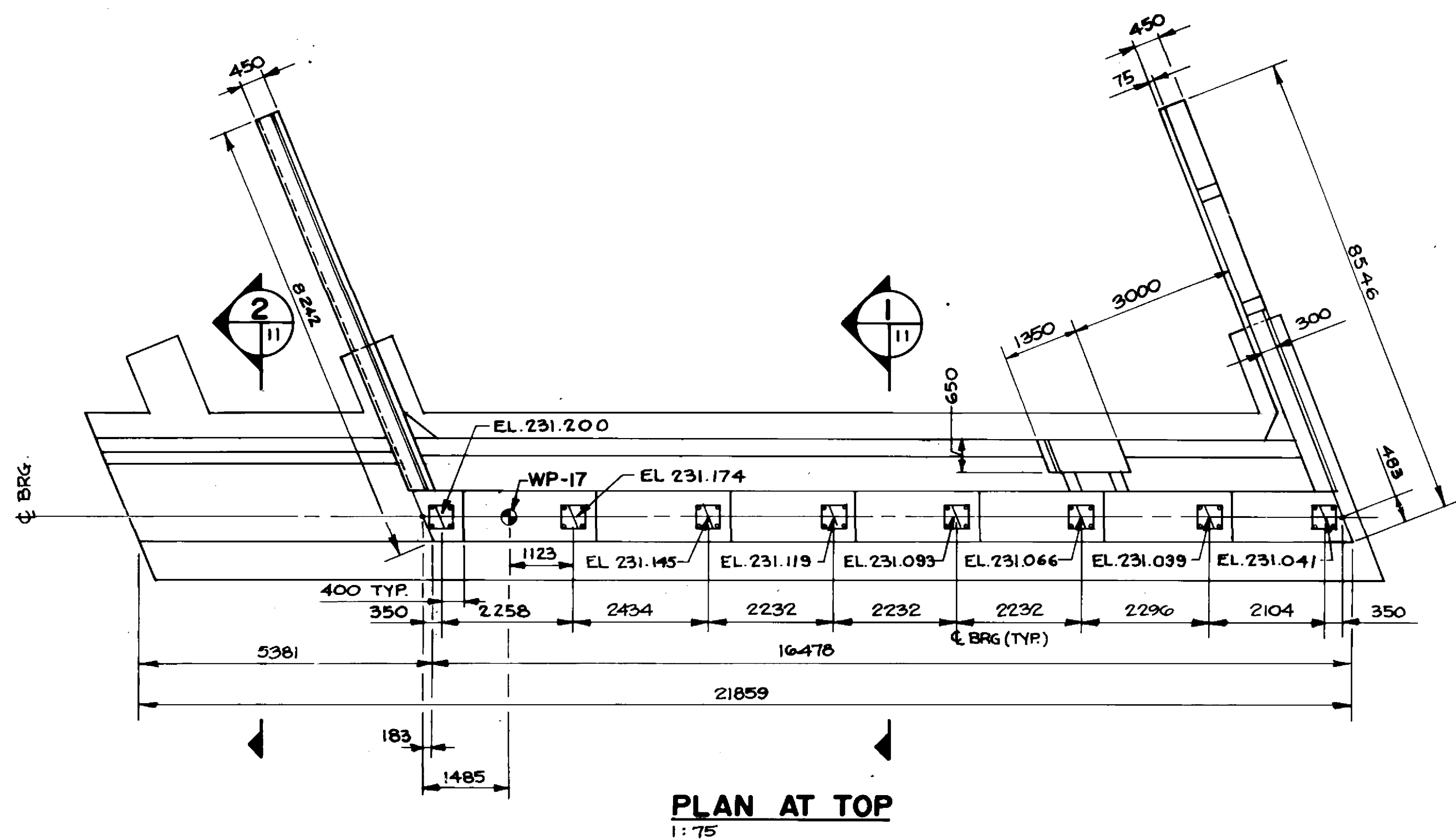
NOTE
FOR PILE LAYOUT
SEE DWG. NO. 07



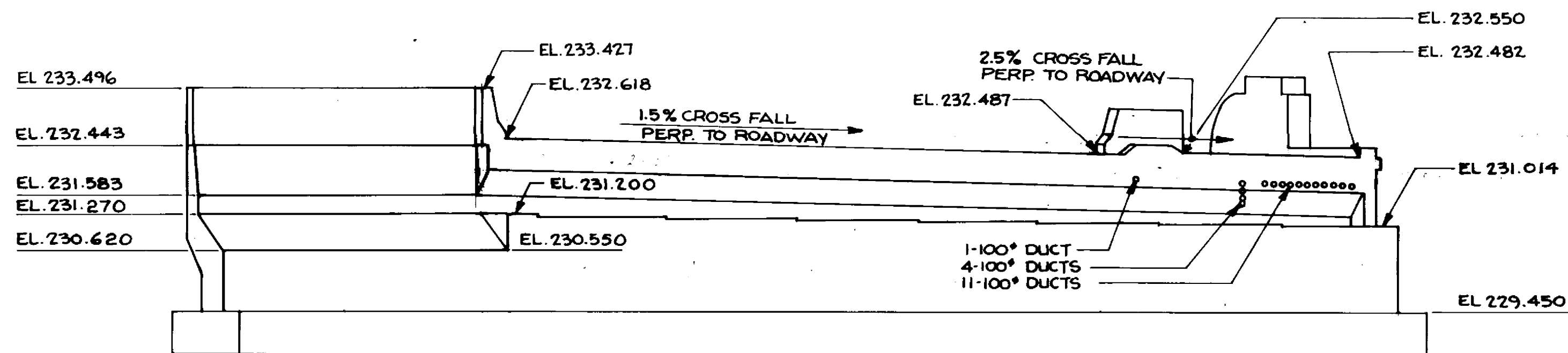
SECTION 1
1:30

SECTION 2
1:30

NOTE
FOR BEARING
ANCHOR LAYOUT
SEE DWG. NO. 35



PLAN AT TOP
1:75



FRONT ELEVATION
1:75

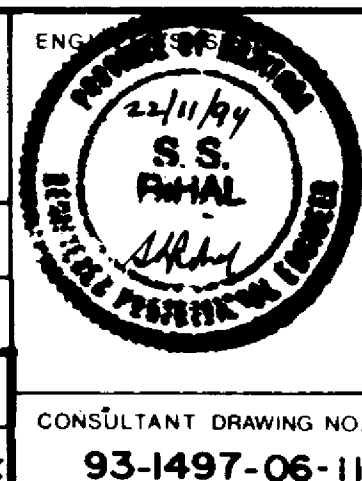
RECORD DRAWING
APPROVED BY: *[Signature]* DATE: *Dec 18/92*

B-6021-II

LOCATION APPROVED UNDERGROUND STRUCTURES	
N/A	
SUPV U/G STRUCTURES COMMITTEE	DATE
NOTE: LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.	

B.M. ELEV.	
NO. REVISIONS	DATE BY

DILLON Consulting Engineers • Planners Environmental Scientists	
DESIGNED BY: C.R.	CHECKED BY: S.S.R.
DRAWN BY: C.R.B./D.M.W.	APPROVED BY: <i>[Signature]</i>
HOR. SCALE: AS NOTED	DATE: <i>Nov 1994</i>
VERTICAL: AS NOTED	DATE: <i>Nov 1994</i>



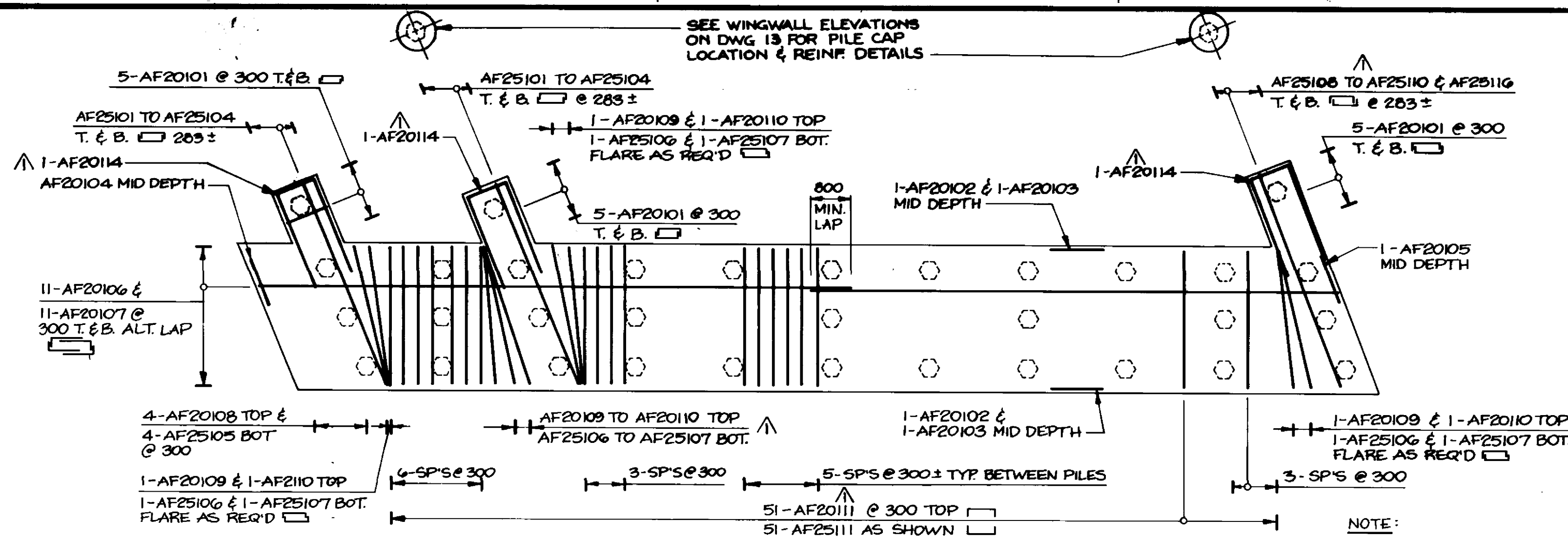
THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

PEMBINA HIGHWAY
SOUTH CITY LIMIT TO RUE DES TRAPPISTES
PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

EAST STRUCTURE
NORTH ABUTMENT - SU-4E
SHEET 1 OF 3

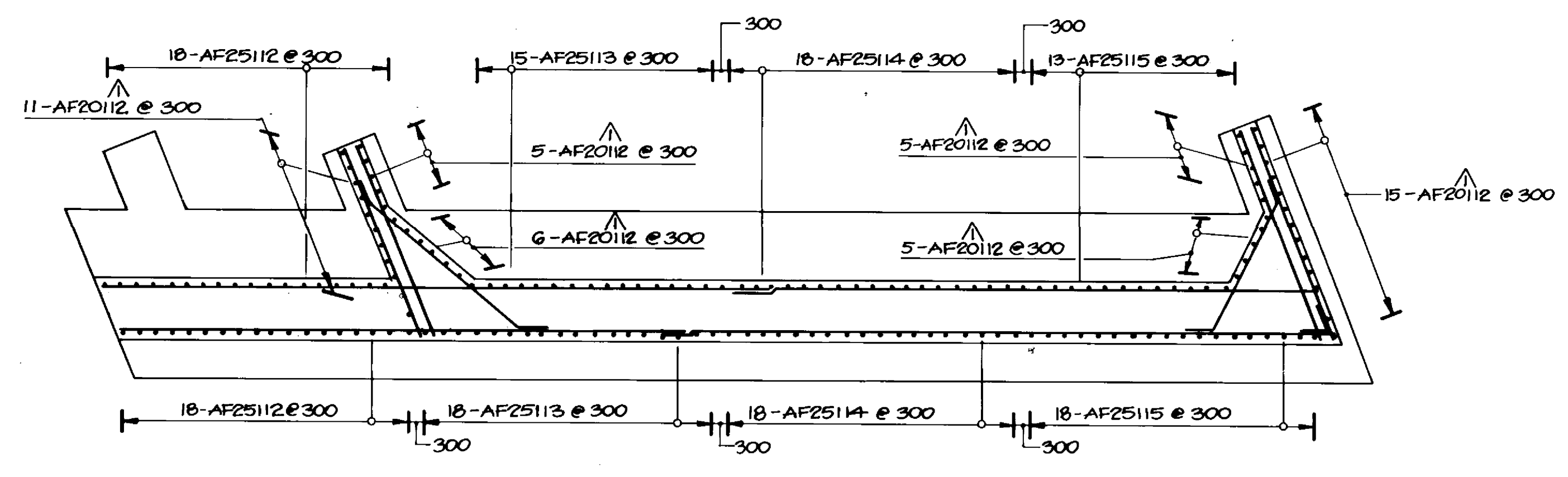
CITY DRAWING NUMBER: B224-95-11
SHEET OF: 11
P3072-A-II

CONSULTANT DRAWING NO.: 93-1497-06-11



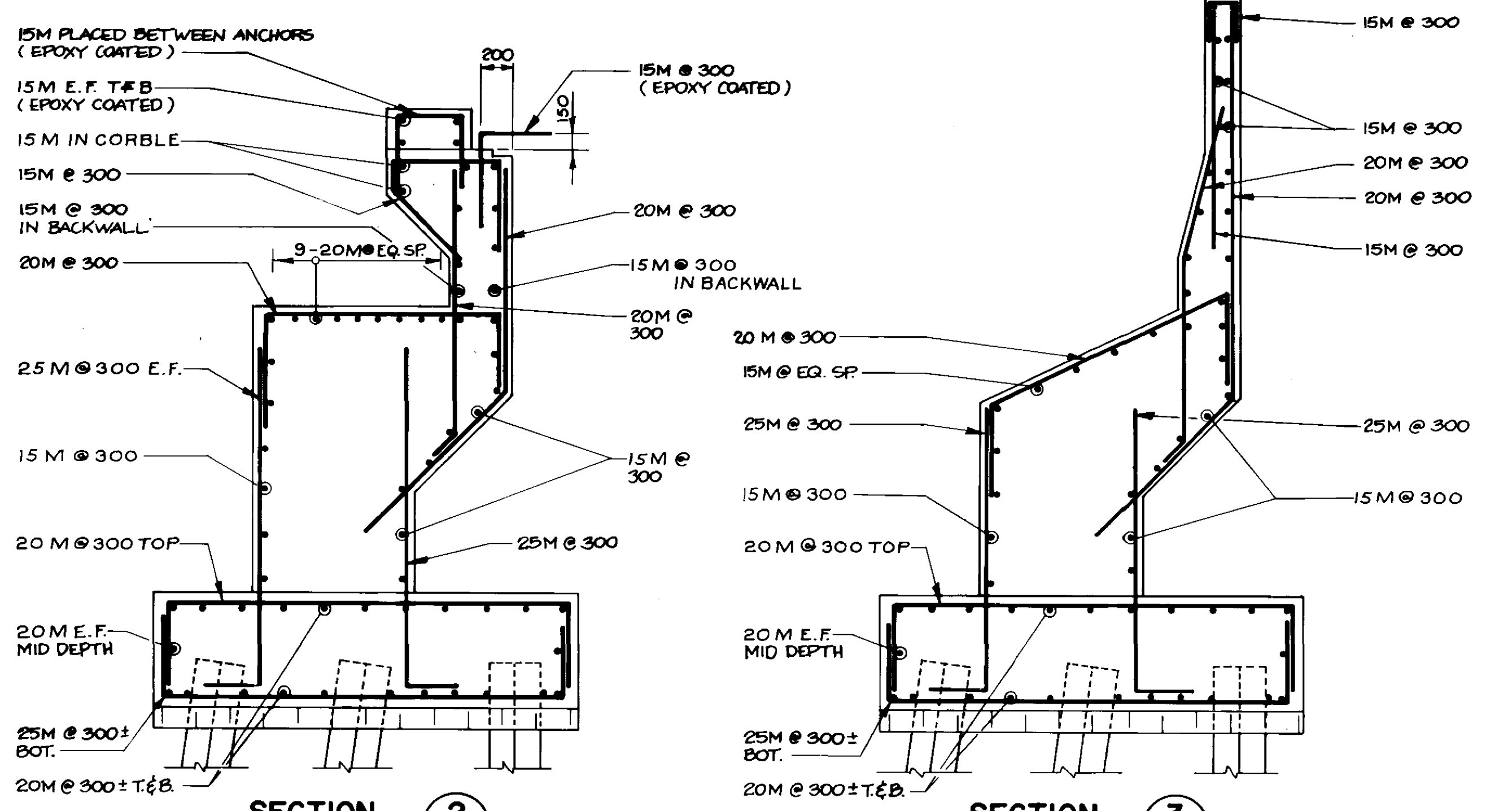
FOOTING PLAN
1:75

NOTE:
1. FOR PILE LAYOUT SEE DWG. NO. 07
2. FOR BRG. ANCHOR LAYOUT SEE DWG. NO. 35



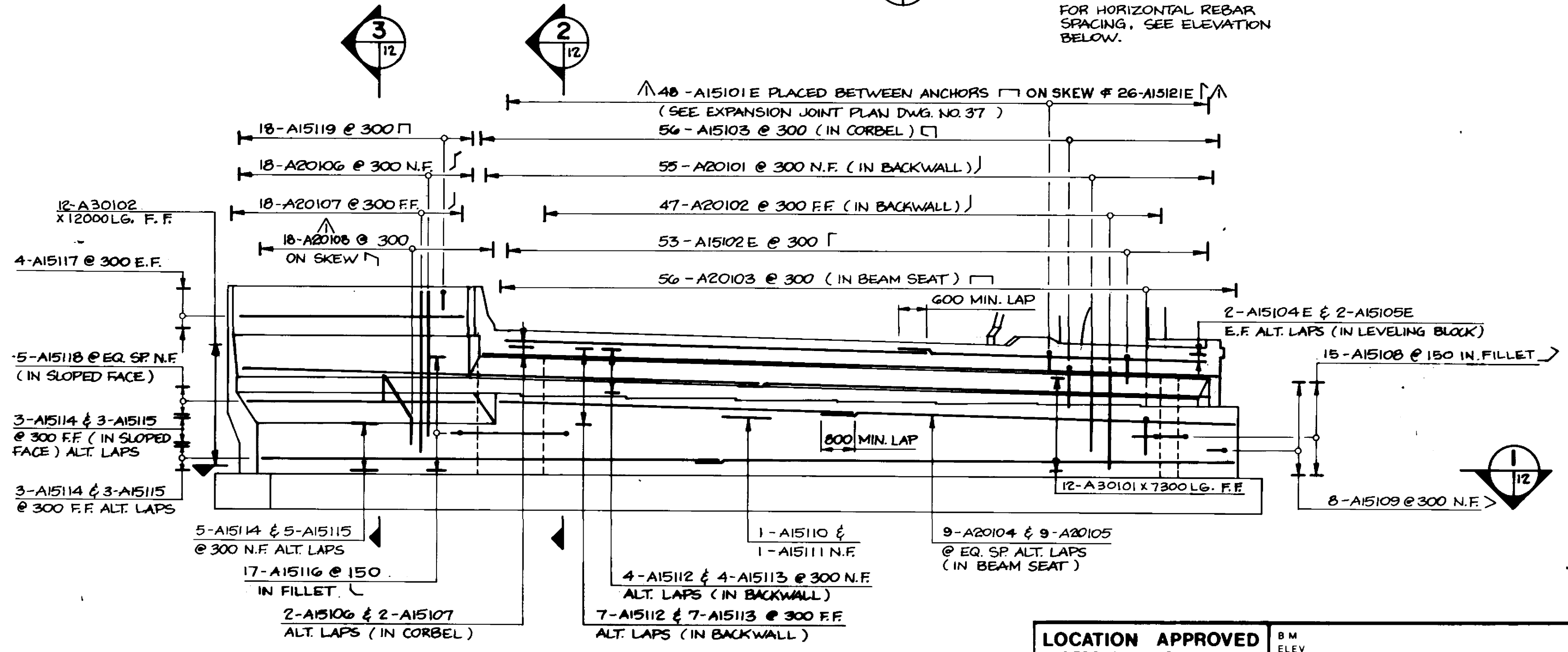
SECTION 1
1:75

NOTE:
FOR HORIZONTAL REBAR SPACING, SEE ELEVATION BELOW.



SECTION 2
1:30

SECTION 3
1:30



FRONT ELEVATION
1:75

LOCATION APPROVED UNDERGROUND STRUCTURES
N/A
SUPV. U/G STRUCTURES COMMITTEE DATE
NOTE:
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

NO.	REVISIONS	DATE	BY
1	REVISIONS	02/20/95	N.B.G.

DILLON
Consulting Engineers - Planners
Environmental Scientists

DESIGNED BY	C.R.	CHECKED BY	S.S.R.
DRAWN BY	C.R.B./D.M.W.	APPROVED BY	[Signature]
HOR. SCALE	AS NOTED	DATE	NOV. 1994

ENGINEER'S SEAL
22/11/94
S.S. FINAL
CONSULTANT DRAWING NO. 93-1497-06-12

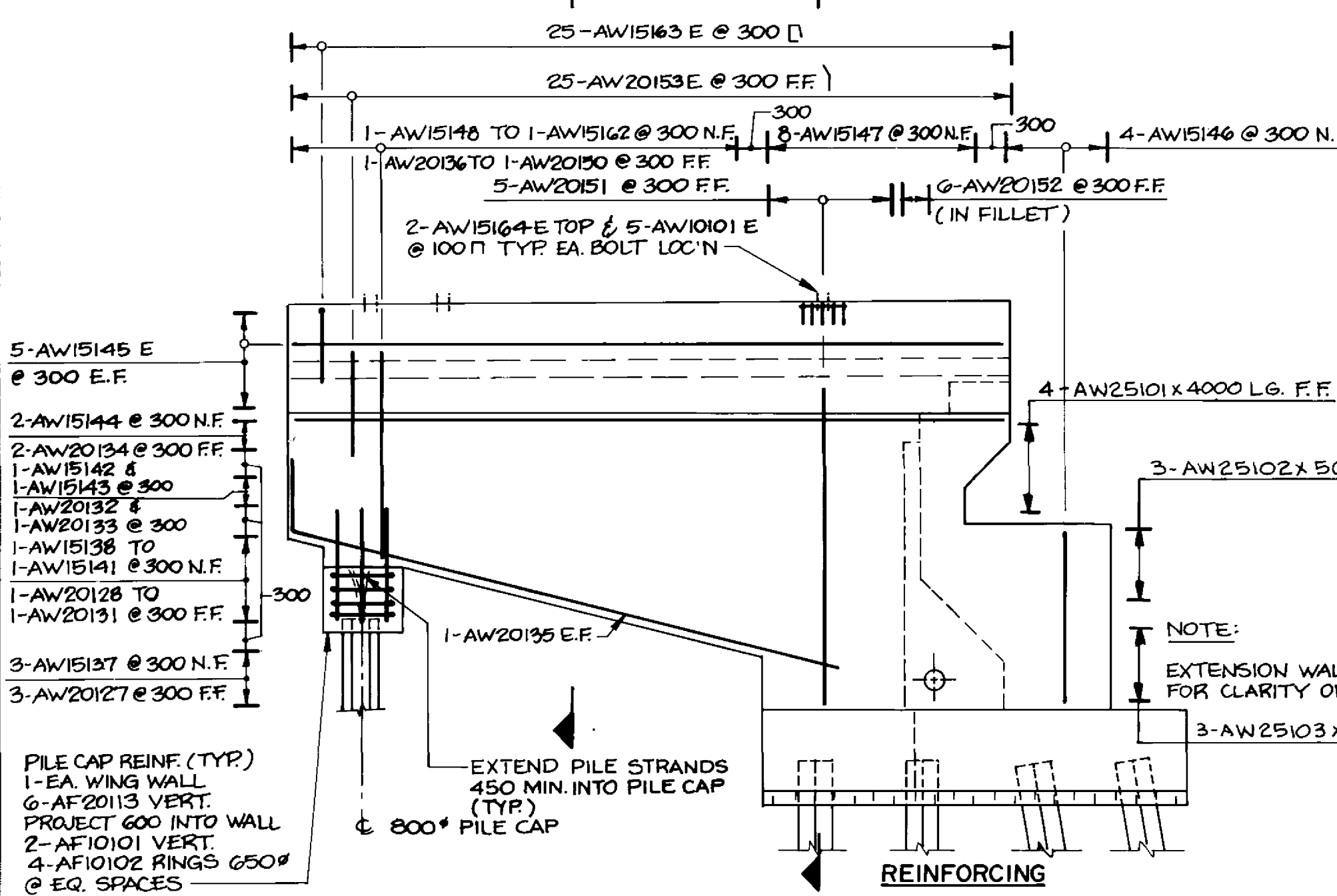
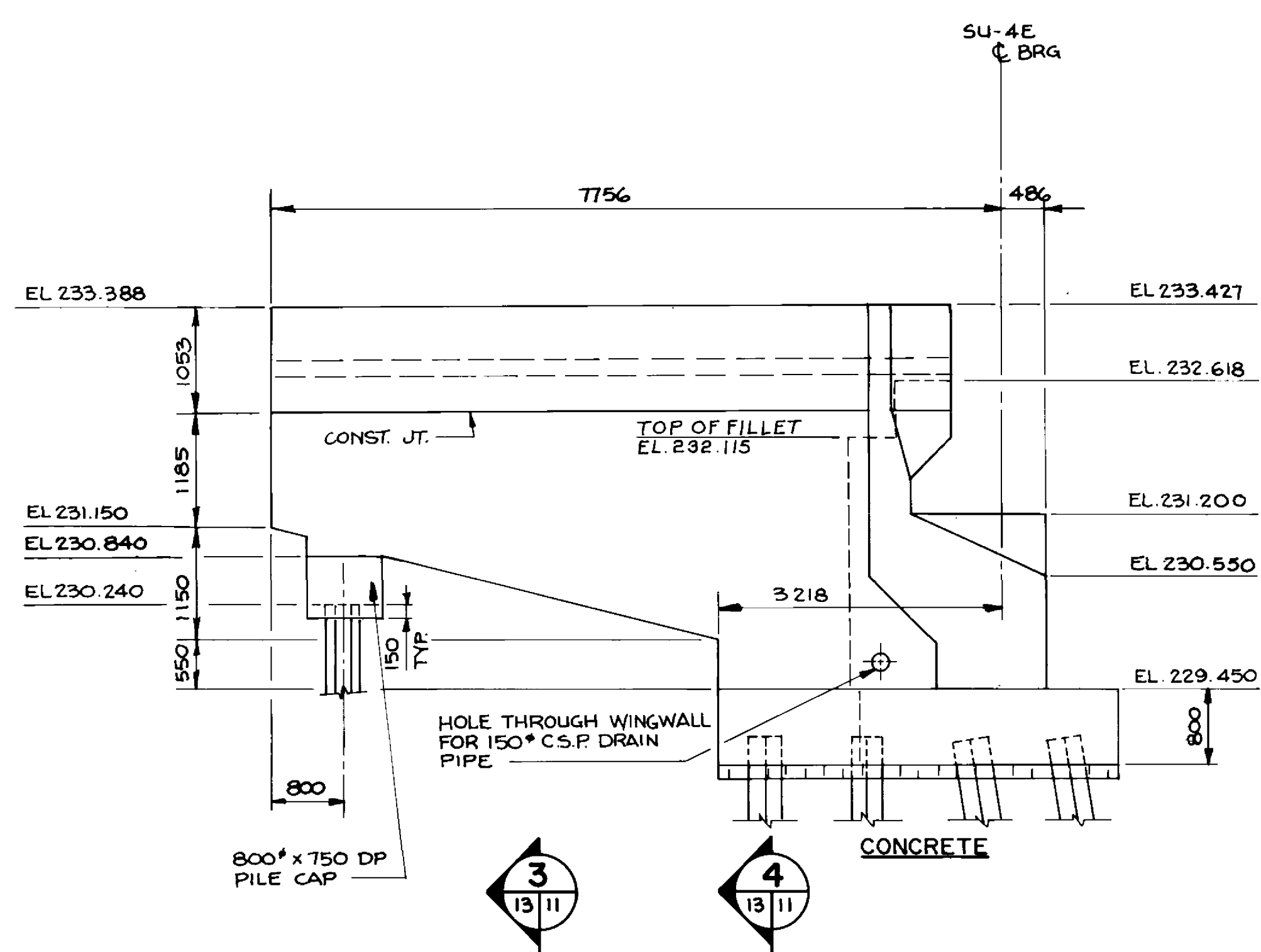
RECORD DRAWING
B-6021-12
APPROVED BY: [Signature] DATE: [Signature]

THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

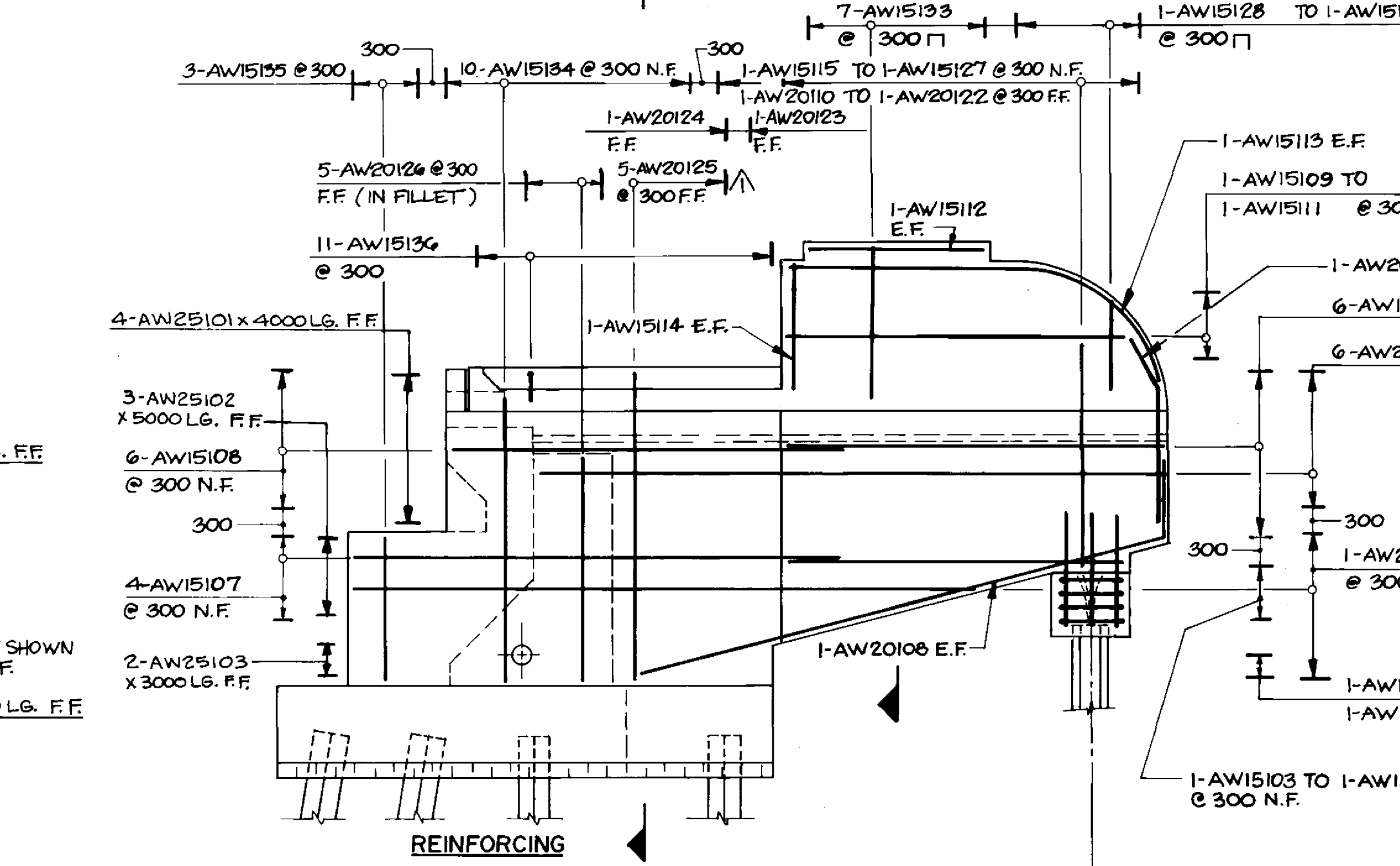
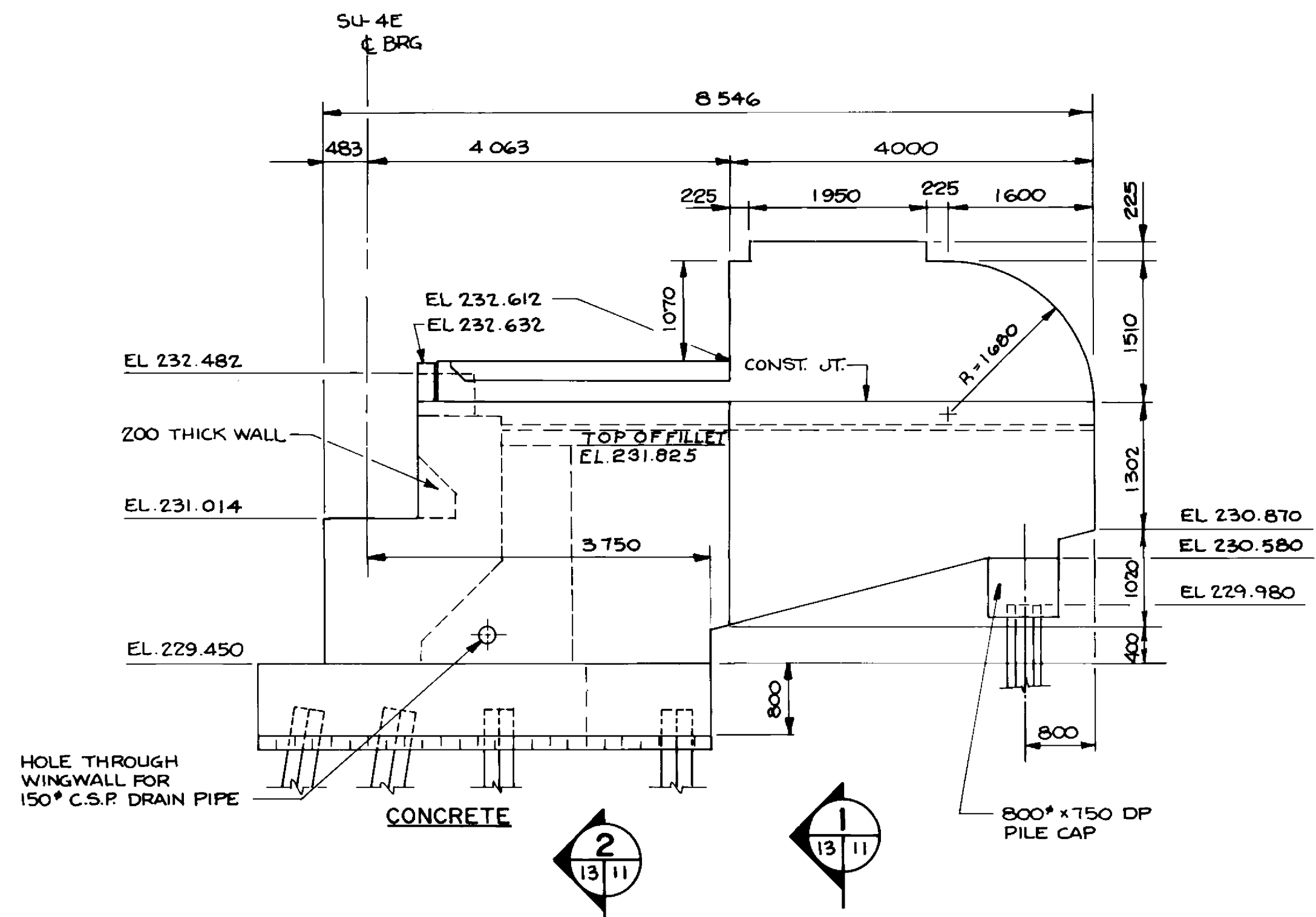
PEMBINA HIGHWAY
SOUTH CITY LIMIT TO RUE DES TRAPPISTES
PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

EAST STRUCTURE
NORTH ABUTMENT - SU-4E
SHEET 2 OF 3

CITY DRAWING NUMBER B224-95-12
SHEET OF
P3072-A-12



WEST WINGWALL ELEVATION
1:50



EAST WINGWALL ELEVATION
1:50

LOCATION APPROVED UNDERGROUND STRUCTURES	
N/A	
SUPV. U/G STRUCTURES COMMITTEE	DATE
NOTE:	
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.	

B.M. ELEV.	
REVISIONS	DATE BY
NO REVISIONS	022098 N.B.G.



DESIGNED BY	C.R.	CHECKED BY	S.S.R.
DRAWN BY	C.R.B./D.M.W.	APPROVED BY	<i>[Signature]</i>
HUR. SCALE	AS NOTED	AUTHORIZED BY	<i>[Signature]</i>
VERTICAL		DATE	NOV. 1994

ENG. PROFESSIONAL ENGINEER
22/11/94
S.S. P.M.A.L.
CONSULTANT DRAWING NO. 93-1497-06-13

THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

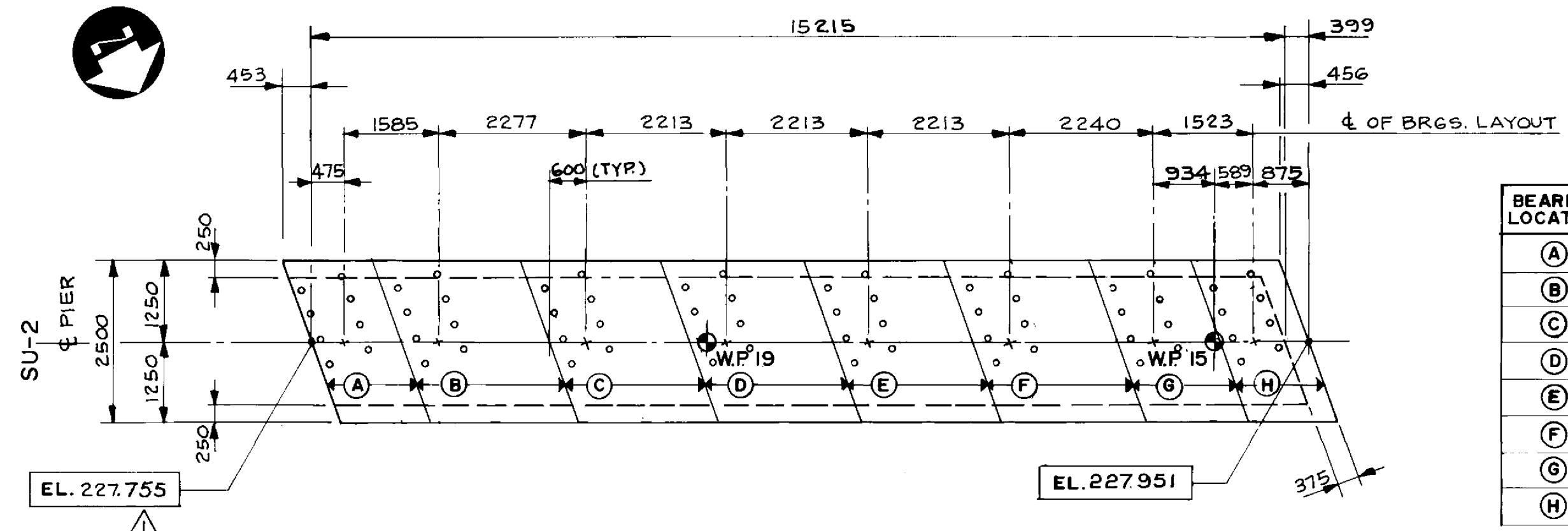
PEMBINA HIGHWAY
SOUTH CITY LIMIT TO RUE DES TRAPPISTES
PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

EAST STRUCTURE
NORTH ABUTMENT - SU-4E
SHEET 3 OF 3

CITY DRAWING NUMBER B224-95-13
SHEET OF
P3072-A-13

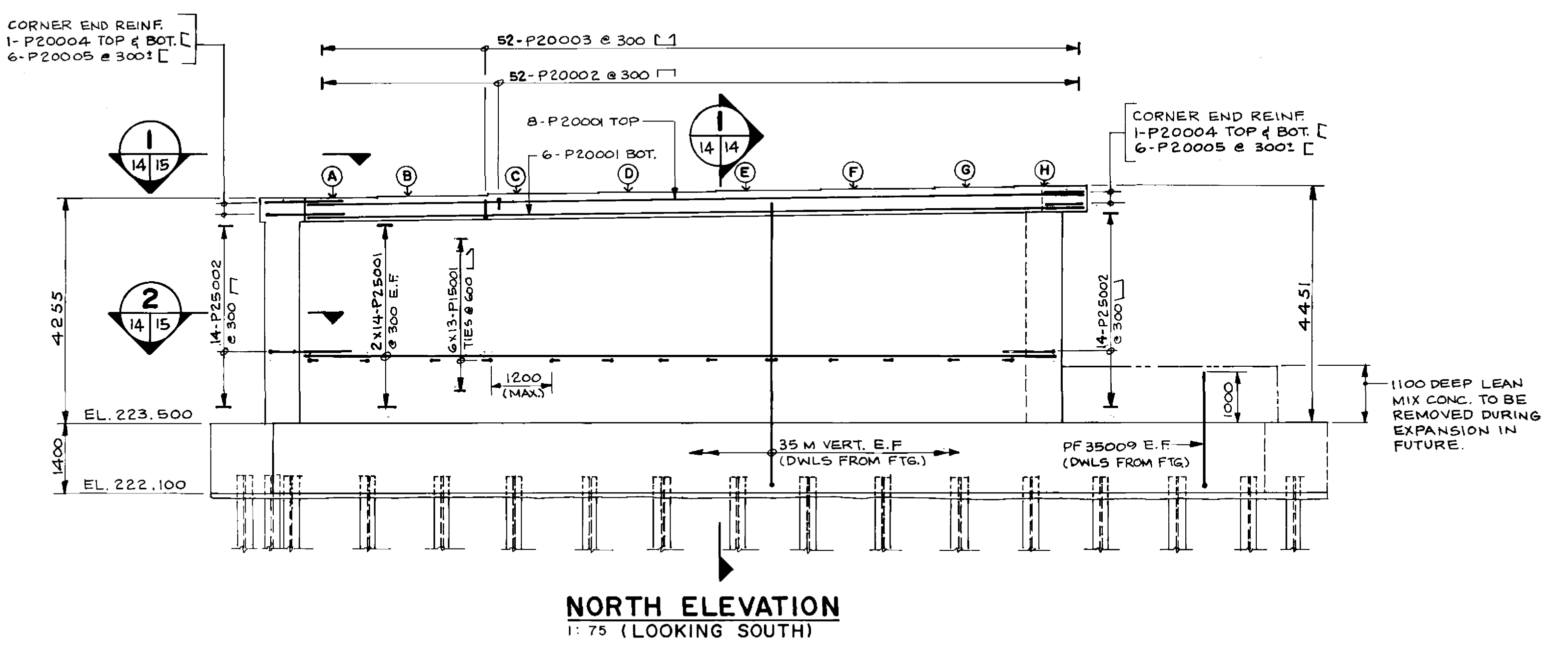
RECORD DRAWING
APPROVED BY: *[Signature]* DATE: Dec 18/94

B-6021-13

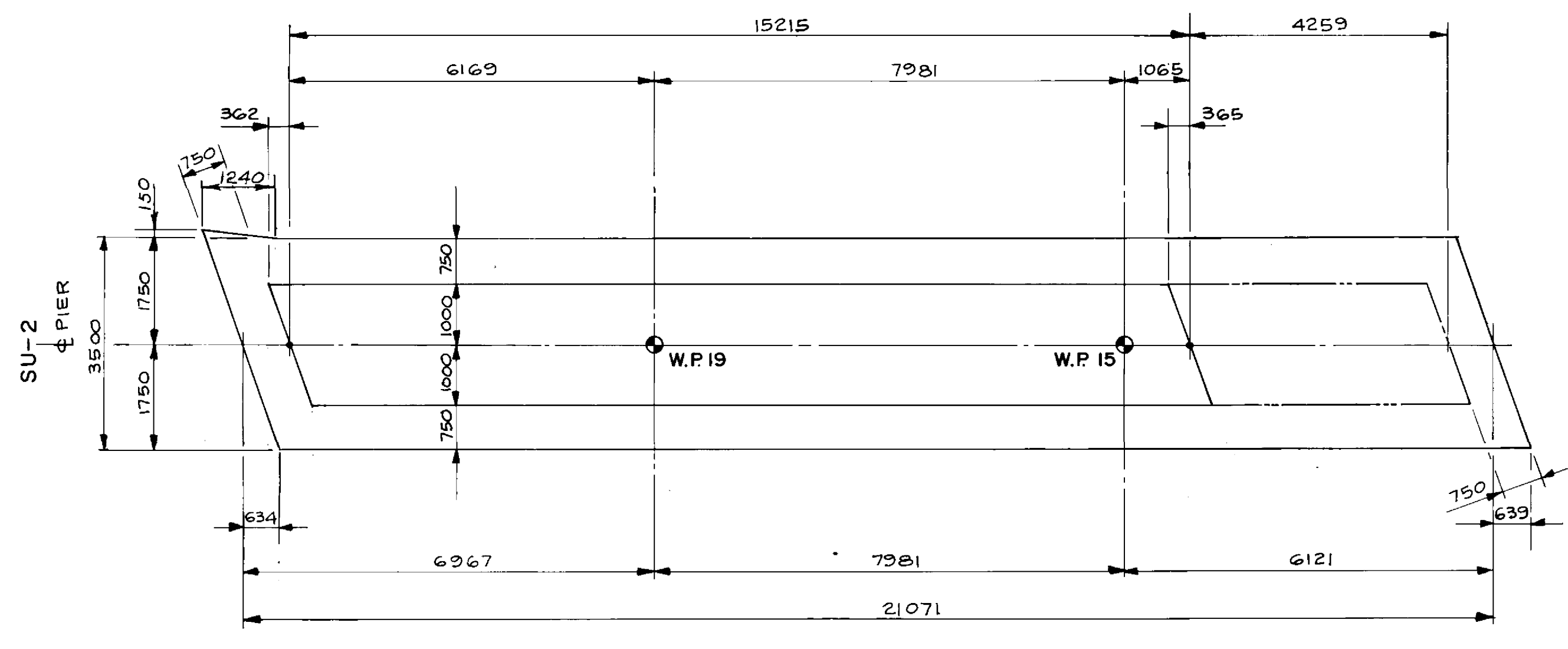


BEARING LOCATION	ELEVATION
(A)	227.755
(B)	227.781
(C)	227.818
(D)	227.900
(E)	227.927
(F)	227.905
(G)	227.932
(H)	227.951

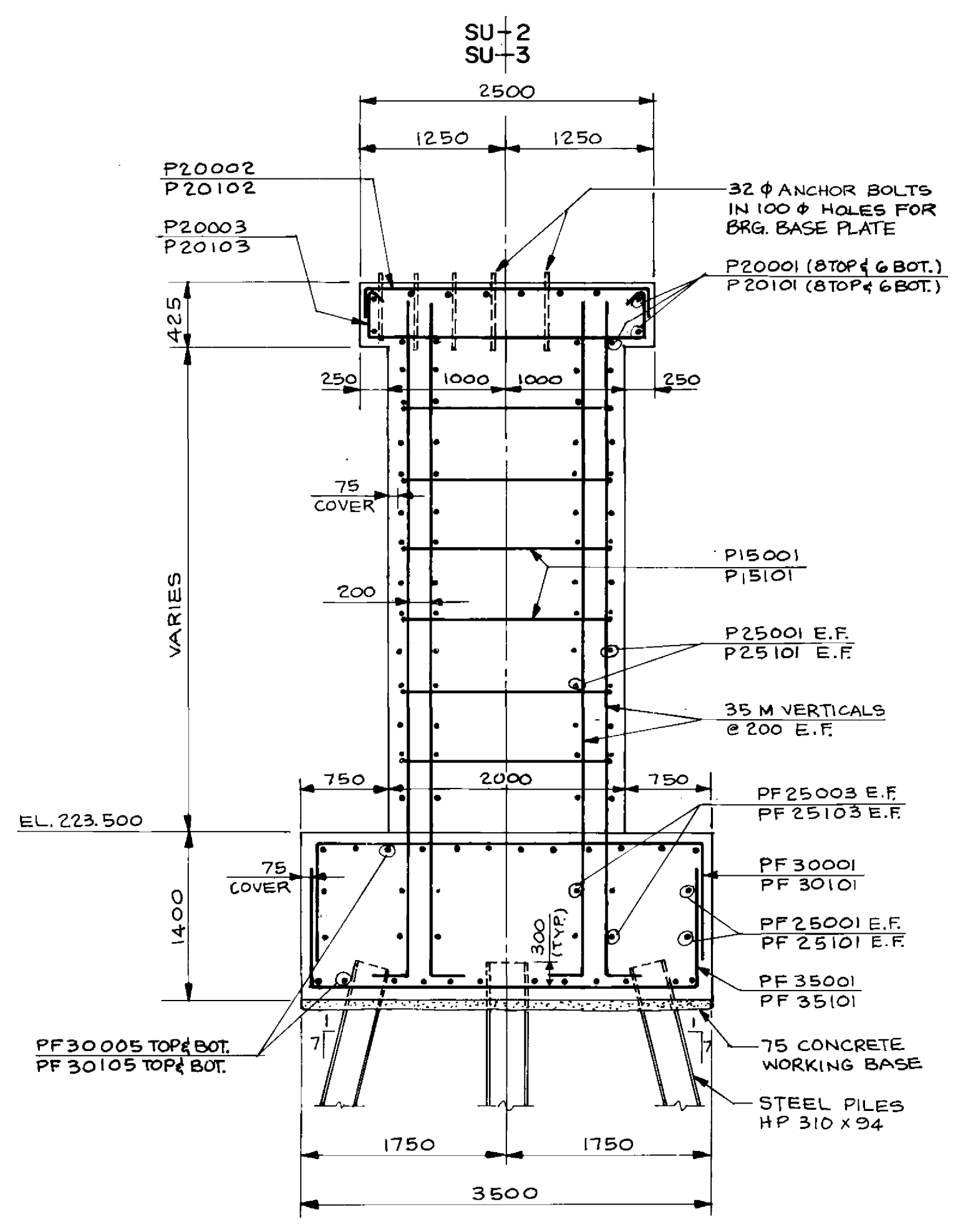
PLAN AT TOP
1: 75



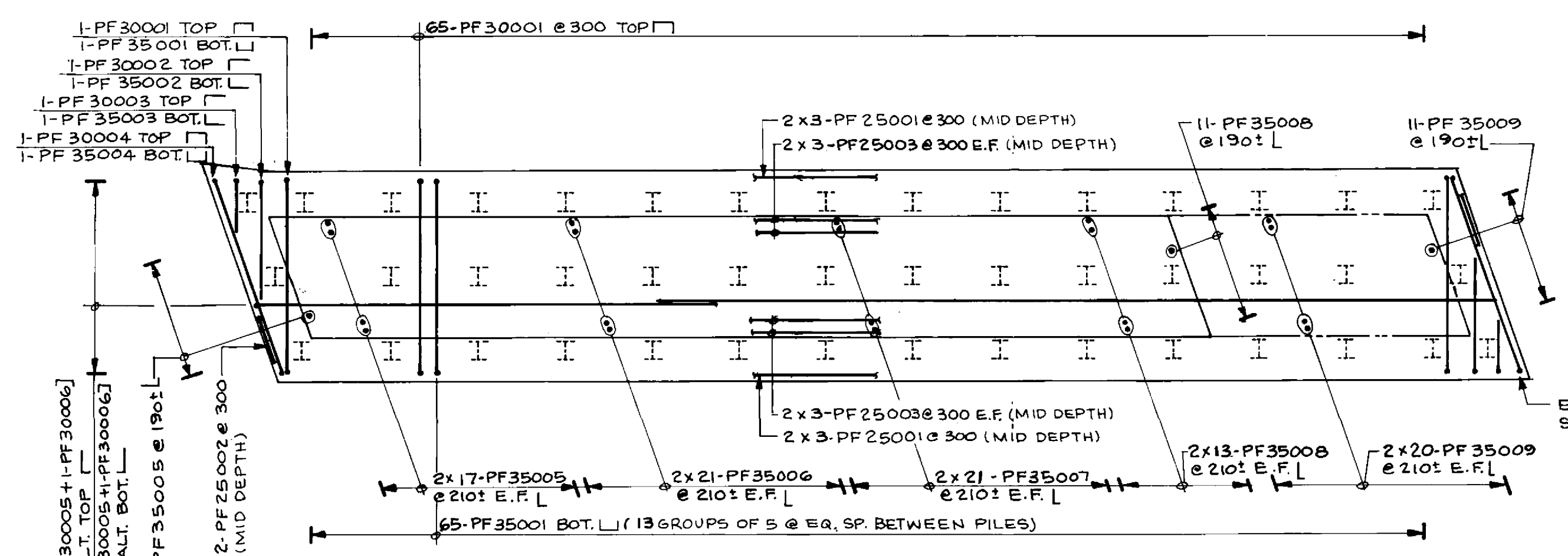
NORTH ELEVATION
1: 75 (LOOKING SOUTH)



PLAN AT FOOTING
1: 75



SECTION I
1: 40



PLAN - FOOTING REINFORCEMENT
1: 75

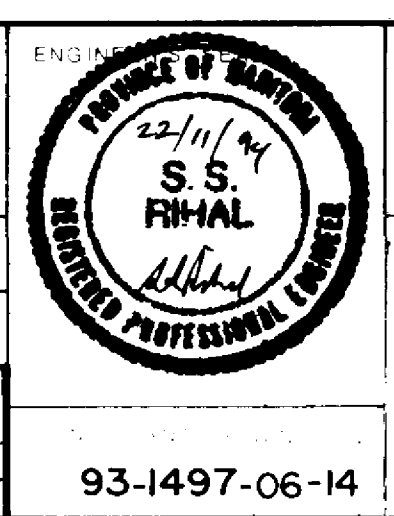
RECORD DRAWING
APPROVED BY: *[Signature]* DATE: *[Date]*

B-6021-14

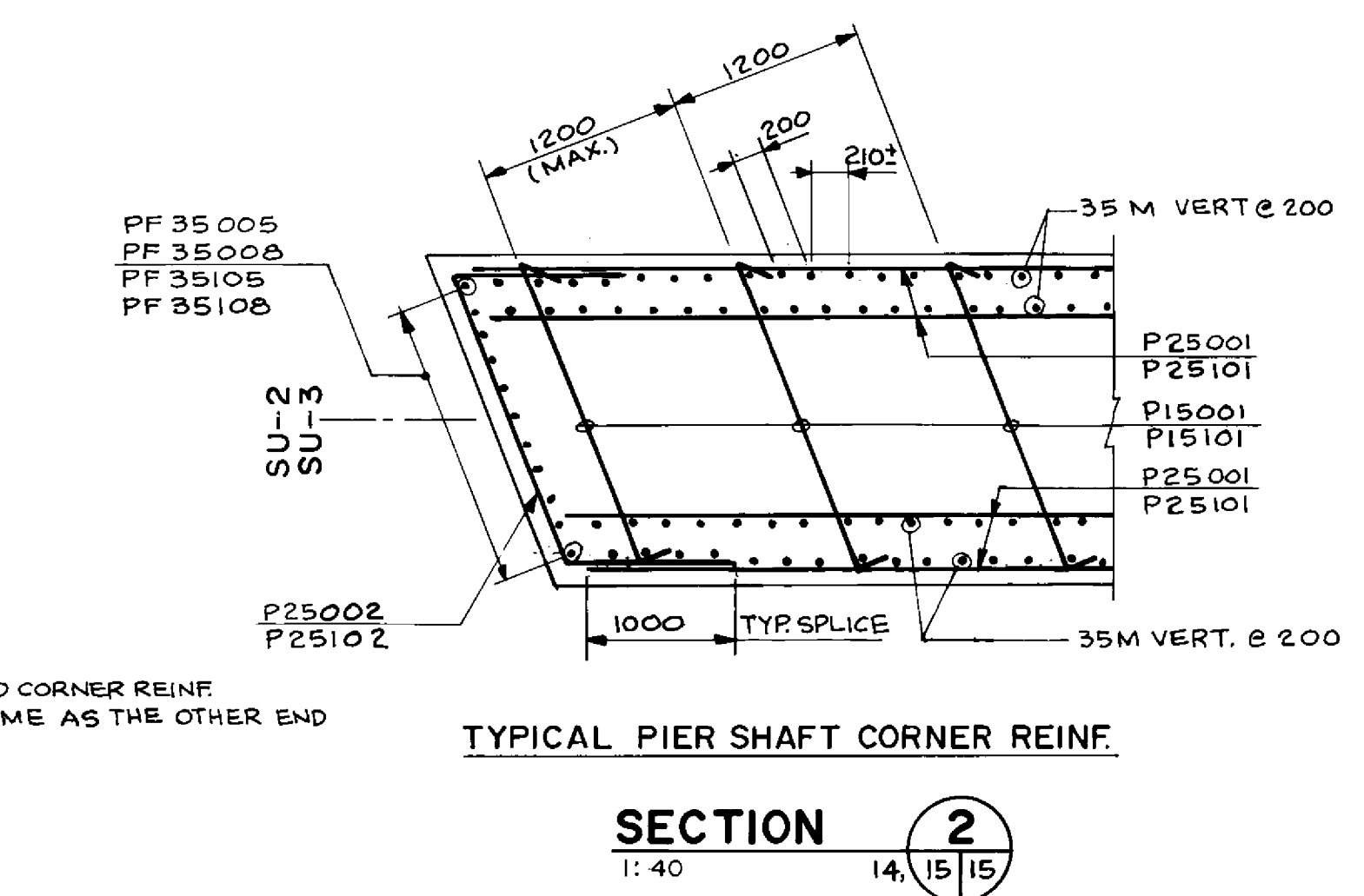
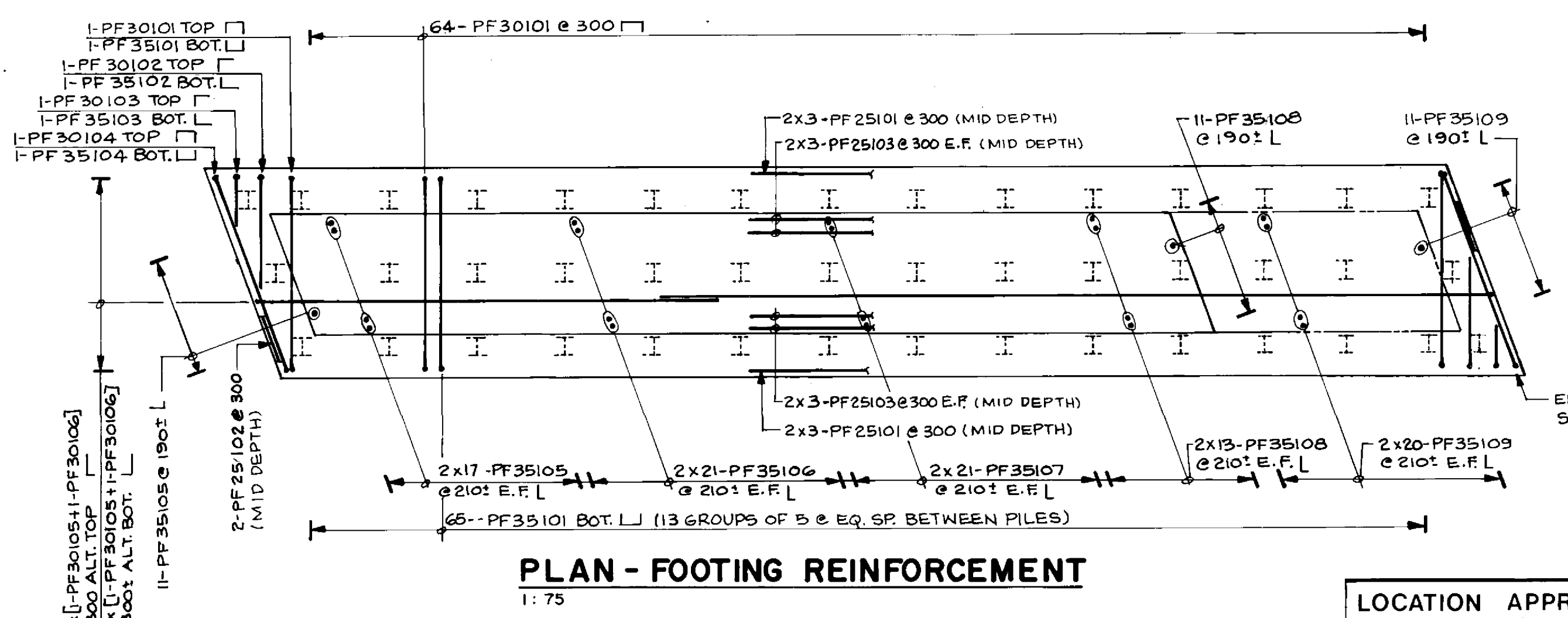
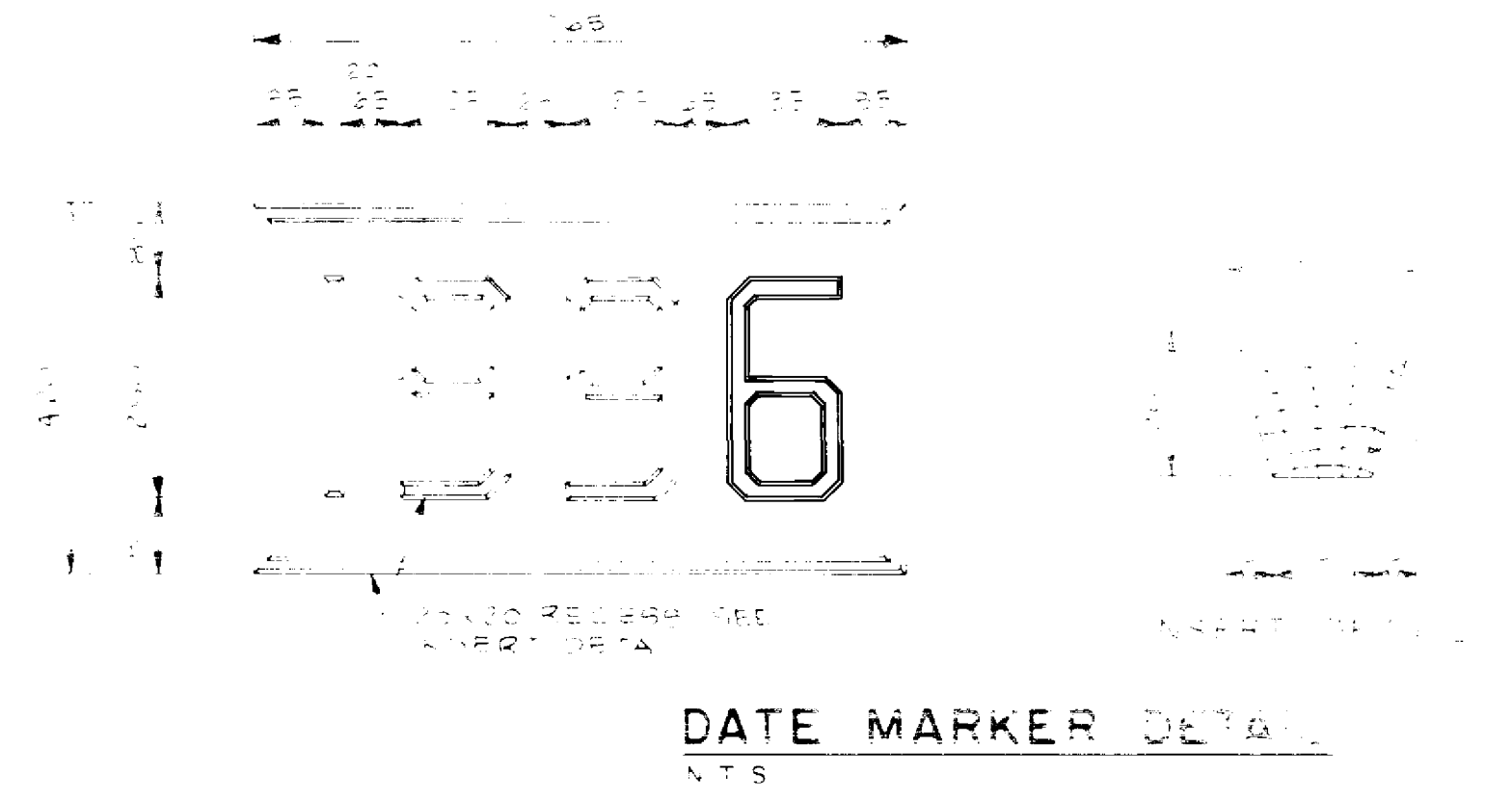
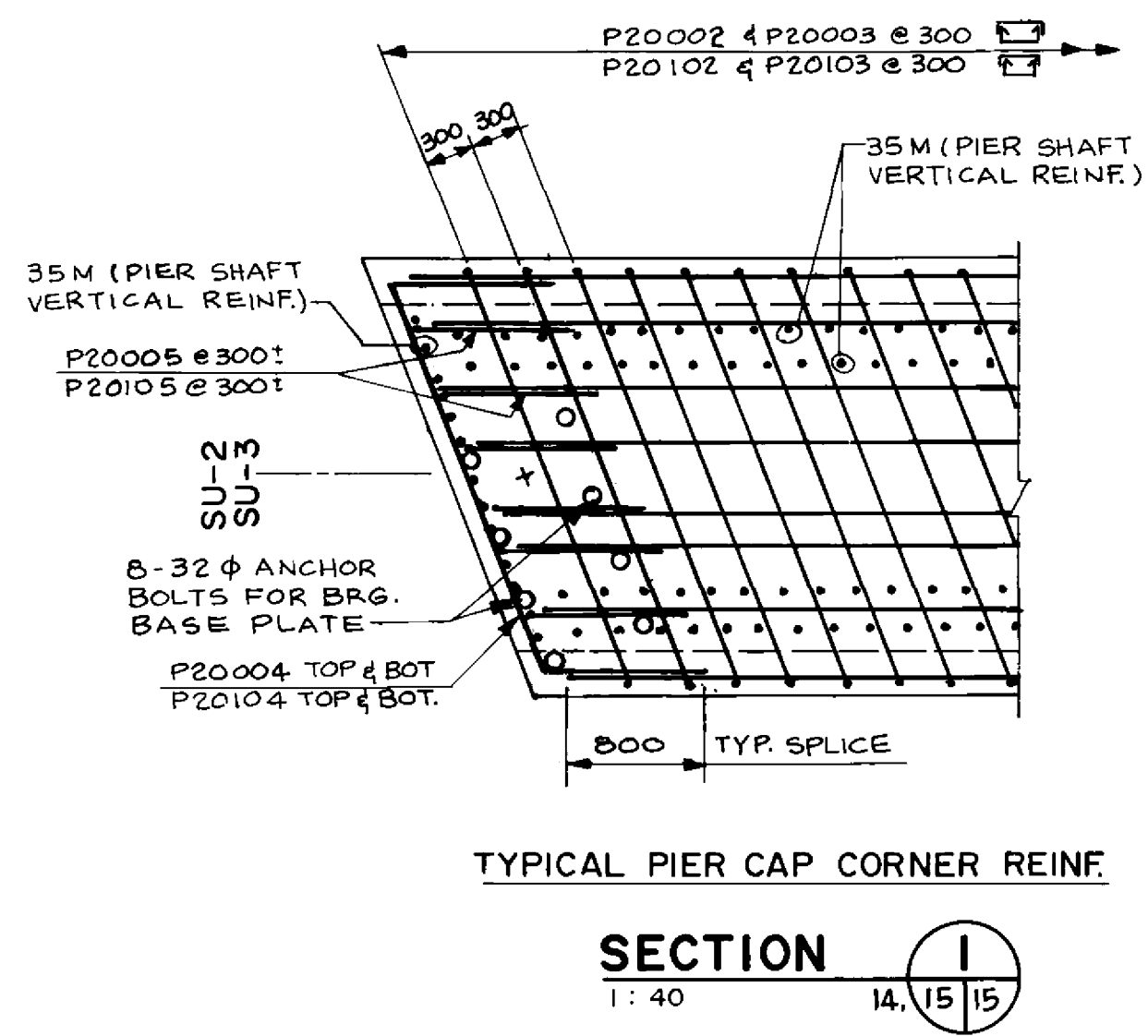
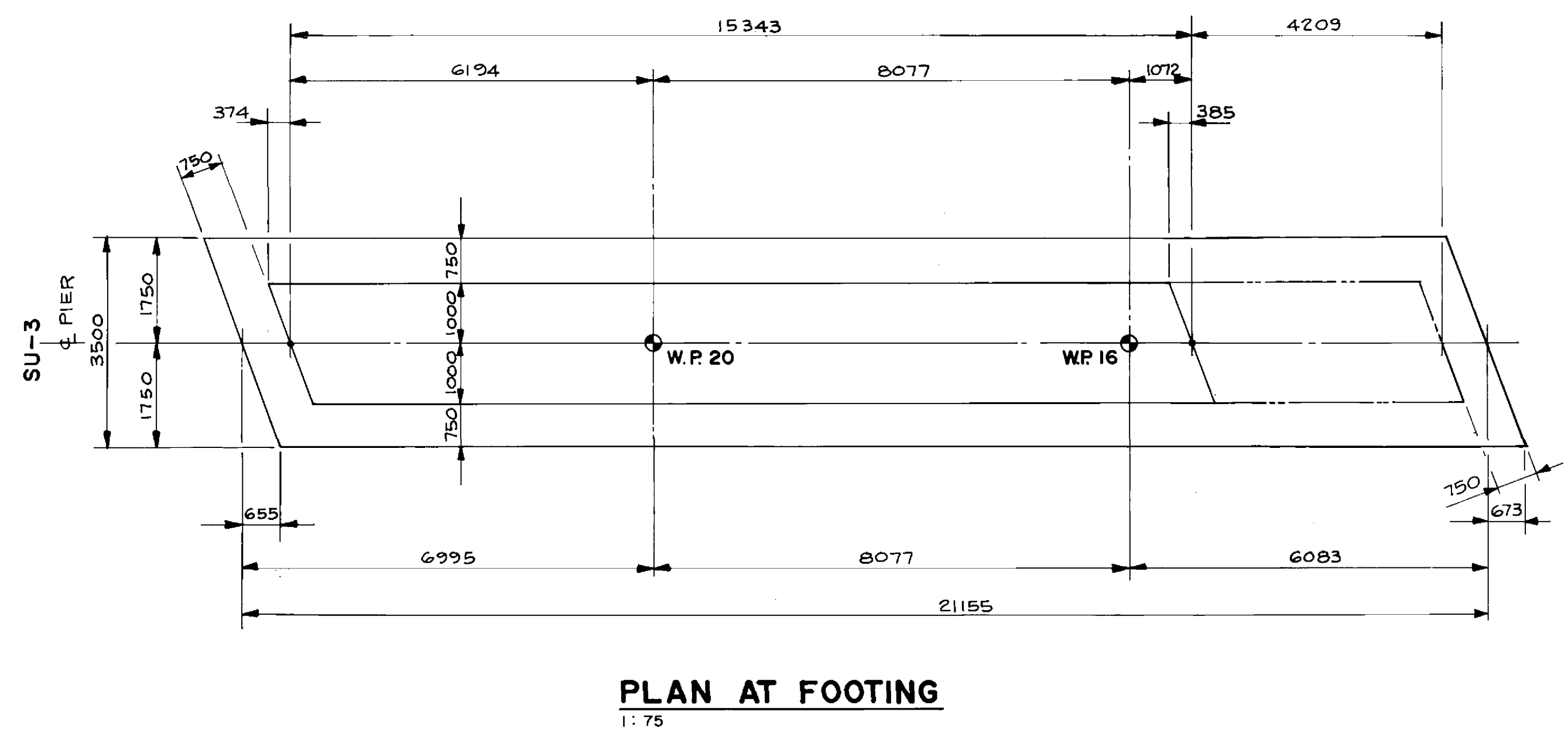
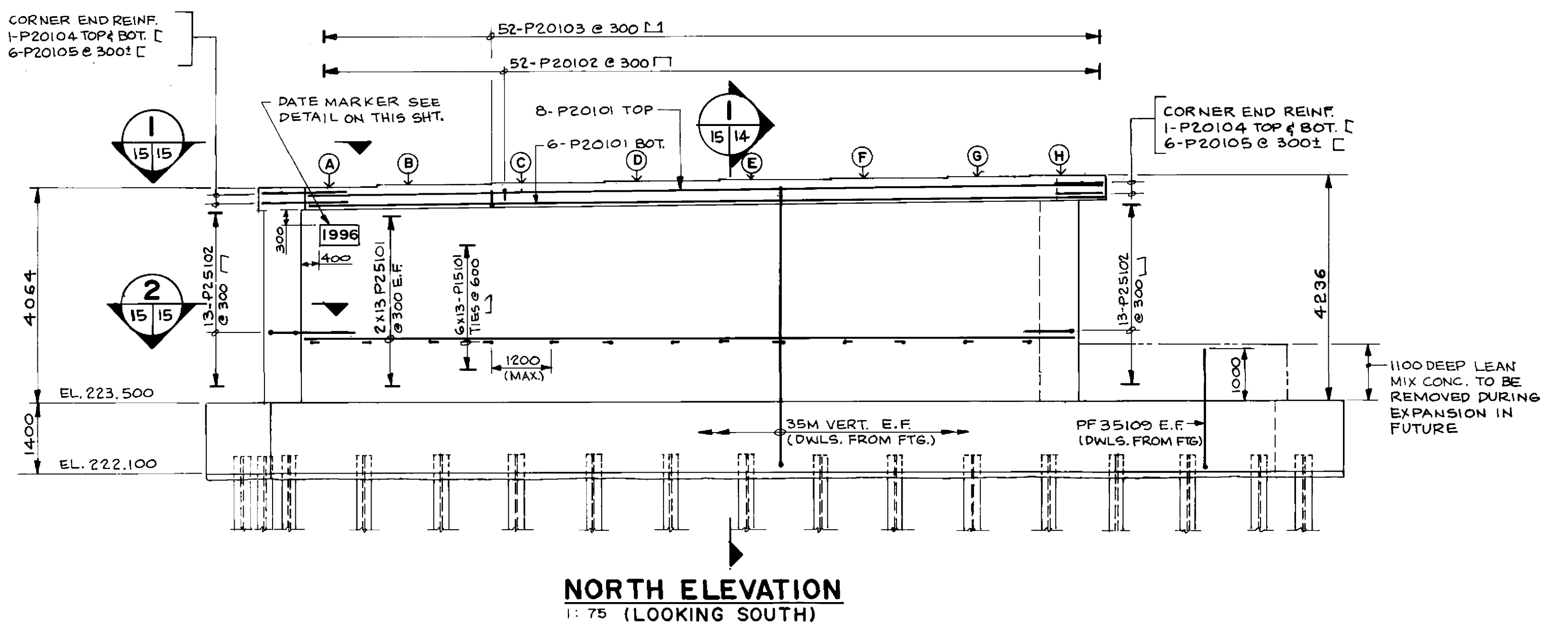
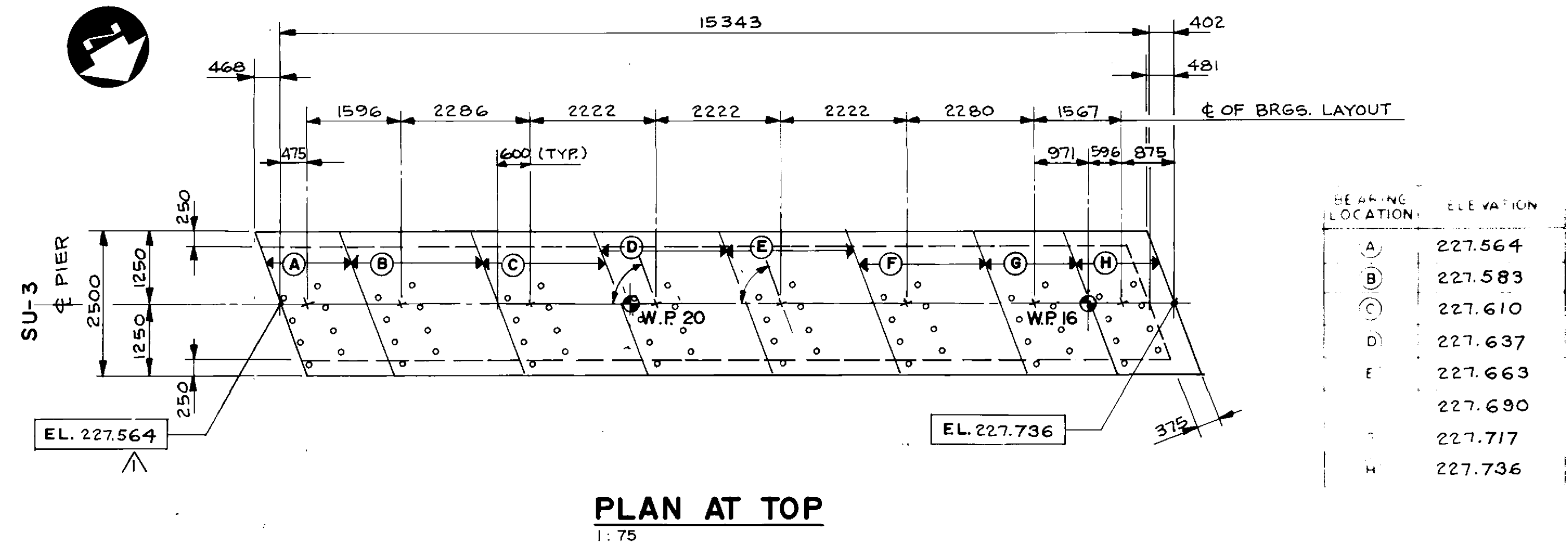
LOCATION APPROVED UNDERGROUND STRUCTURES
N/A
DATE: _____
NOTE: _____

NO.	REVISIONS	DATE	BY

DILLON
Consulting Engineers • Planners
Environmental Scientists
DESIGNED BY: M.C.R.
CHECKED BY: S.S.R.
DATE: NOV. 1994



THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT
PEMBINA HIGHWAY
SOUTH CITY LIMIT TO RUE DES TRAPPISTES
PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER
EAST STRUCTURE PIER - SU-2E
B224-95-14
P3072-A-14

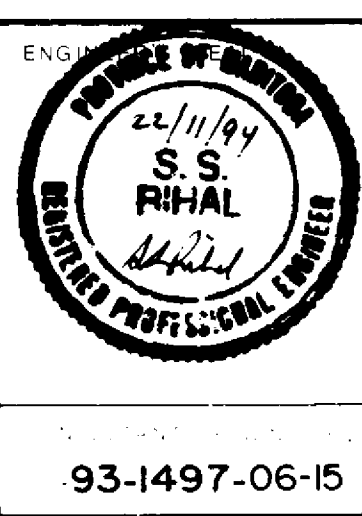


LOCATION APPROVED UNDERGROUND STRUCTURES
N/A
DATE: _____
NOTE: _____

NO.	REVISIONS	DATE	BY
022095 <td>N.B.G. <td></td> <td></td> </td>	N.B.G. <td></td> <td></td>		

DILLON
Consulting Engineers • Planners
Environmental Scientists

DESIGNED BY: M.C.R.
CHECKED BY: S.S.R.
DRAWN BY: N.B.G.
APPROVED BY: *W.B. M...*
HOR. SCALE: AS NOTED
VERT. SCALE: AS NOTED
DATE: NOV. 1994



RECORD DRAWING
B-6021-15
APPROVED BY: *...* DATE: Dec 18/94

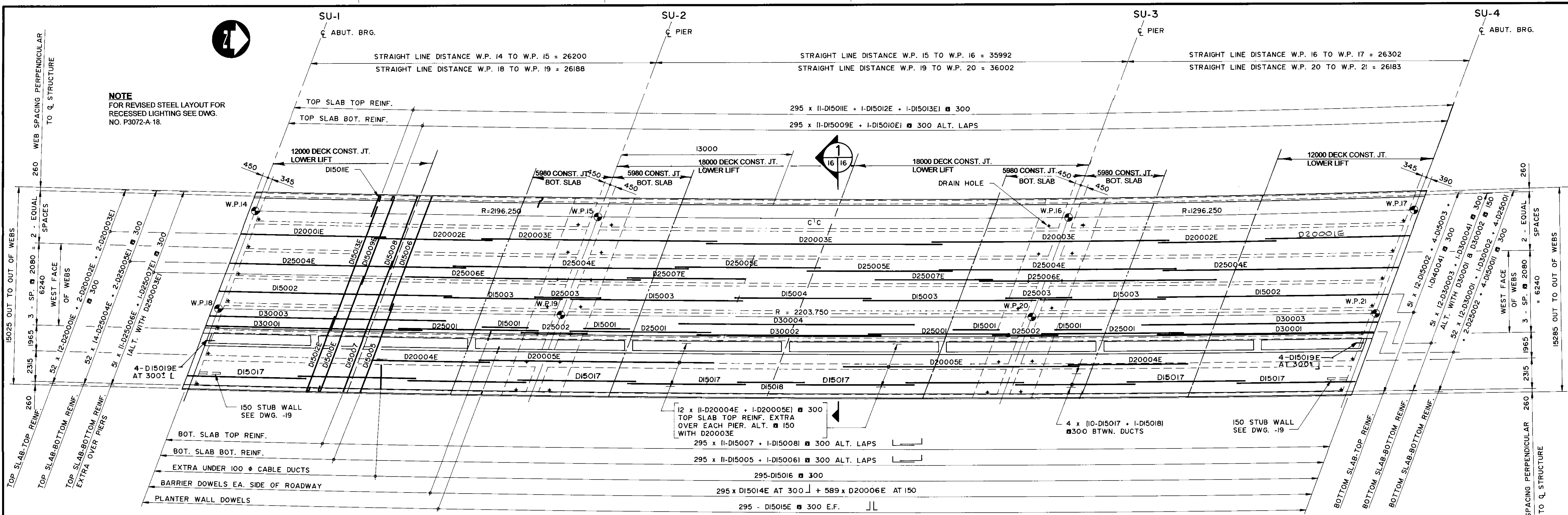
THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

PEMBINA HIGHWAY
SOUTH CITY LIMIT TO RUE DES TRAPPISTES
PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

EAST STRUCTURE PIER - SU-3E
B224-95-15
P3072-A-15

93-1497-06-15

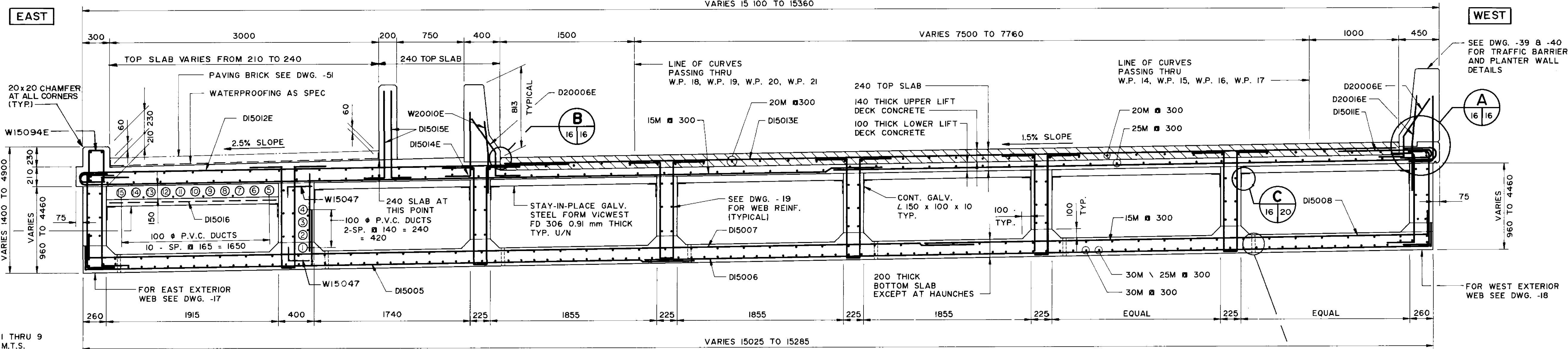
NOTE
FOR REVISED STEEL LAYOUT FOR
RECESSED LIGHTING SEE DWG.
NO. P3072-A-18.



PLAN (EAST DECK)
SCALE: 1:150

NOTE:
FOR ARRANGEMENT OF BOTTOM
SLAB REINF. AT PIERS SEE DWG. -19

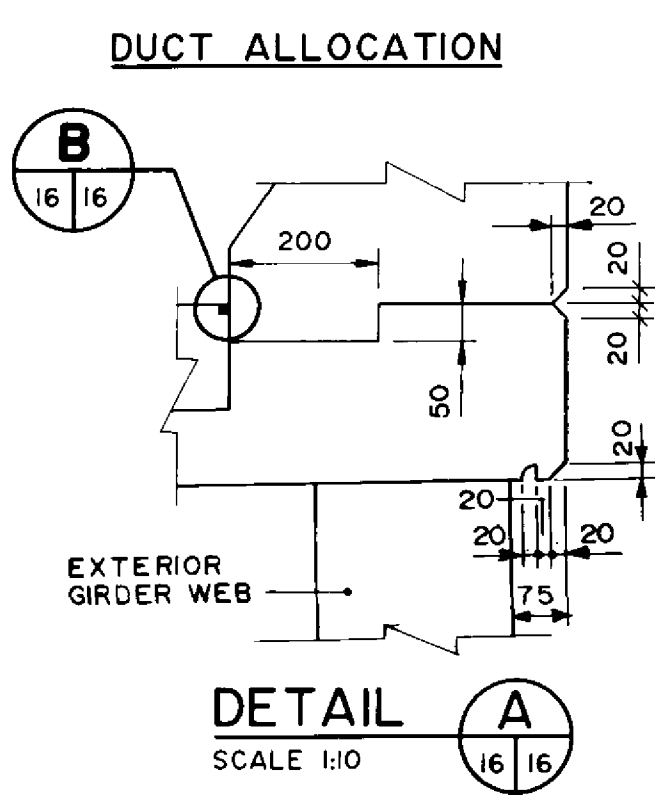
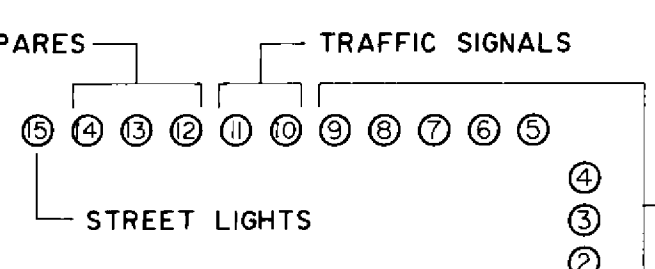
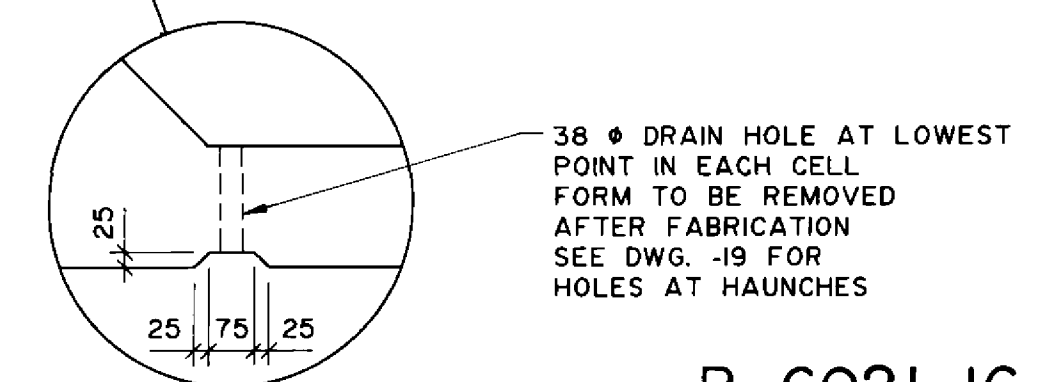
T.O. DECK ELEVATIONS	
W.P. No.	ELEVATION
14	232.852
15	232.976
16	232.761
17	232.608
18	232.724
19	232.880
20	232.665
21	232.509
24	232.788
25	232.560



SECTION I TYPICAL CROSS-SECTION
SCALE 1:25 (PERPENDICULAR TO ROADWAY)

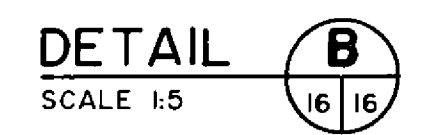
- NOTES:
- THE CONTRACTOR SHALL ADJUST THE FORMWORK FOR DEAD LOAD DEFLECTIONS TO BE SUPPLIED BY THE CONTRACT ADMINISTRATOR.
 - SEE DRAWING 20 FOR BOX GIRDER CONSTRUCTION SEQUENCE.
 - SEE DRAWING - 49 FOR RECESSED LIGHTS IN US OF BOTTOM SLAB.

CONCRETE COVER ON REINF.	
TOP SLAB	75 TOP (EXCEPT AT 40 BOT. SIDE WALKS)
WEBS & DIAPHRAGMS	EXTERIOR FACES 50 INTERIOR FACES 25
BOTTOM SLAB	25 TOP 40 BOT.
ALL OTHER FACES	50



NOTE:
WATER DRIP DETAIL
CONTINUOUS OVER
FULL LENGTH OF
BRIDGE DECK SLAB
WEST SIDE ONLY

RECORD DRAWING
APPROVED BY: [Signature] DATE: 20/11/98



NO.	REVISIONS	DATE	BY

DILLON
Consulting Engineers - Planners
Environmental Scientists

DESIGNED BY: S.S.R. CHECKED BY: N.B.U.
DRAWN BY: S.K.B. APPROVED BY: [Signature]
HORIZ. SCALE: AS SHOWN AUTHORIZED BY: [Signature] DATE: 11/11/98
VERTICAL SCALE: AS SHOWN AUTHORIZED BY: [Signature] DATE: 11/11/98

NOV. 1994

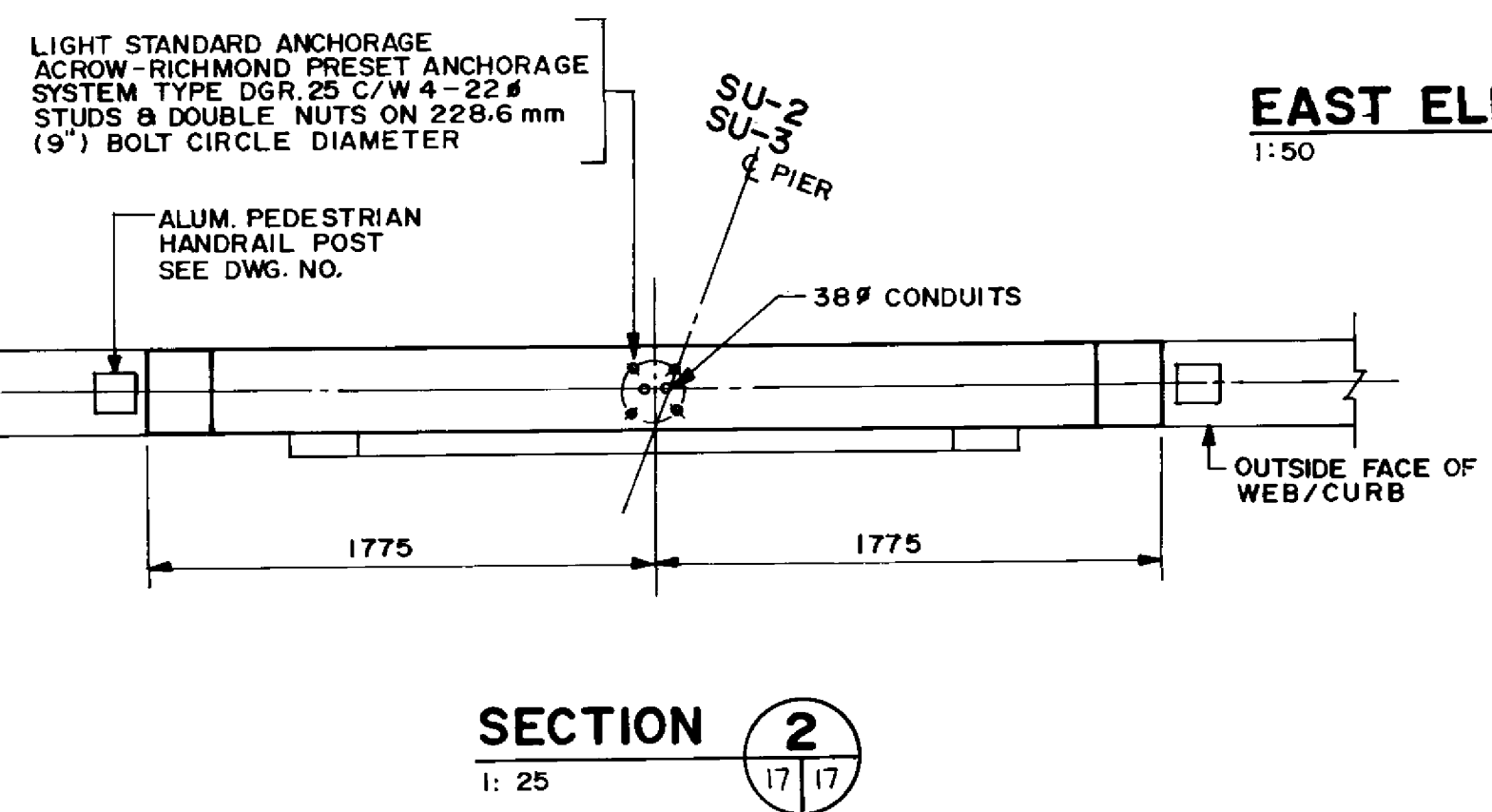
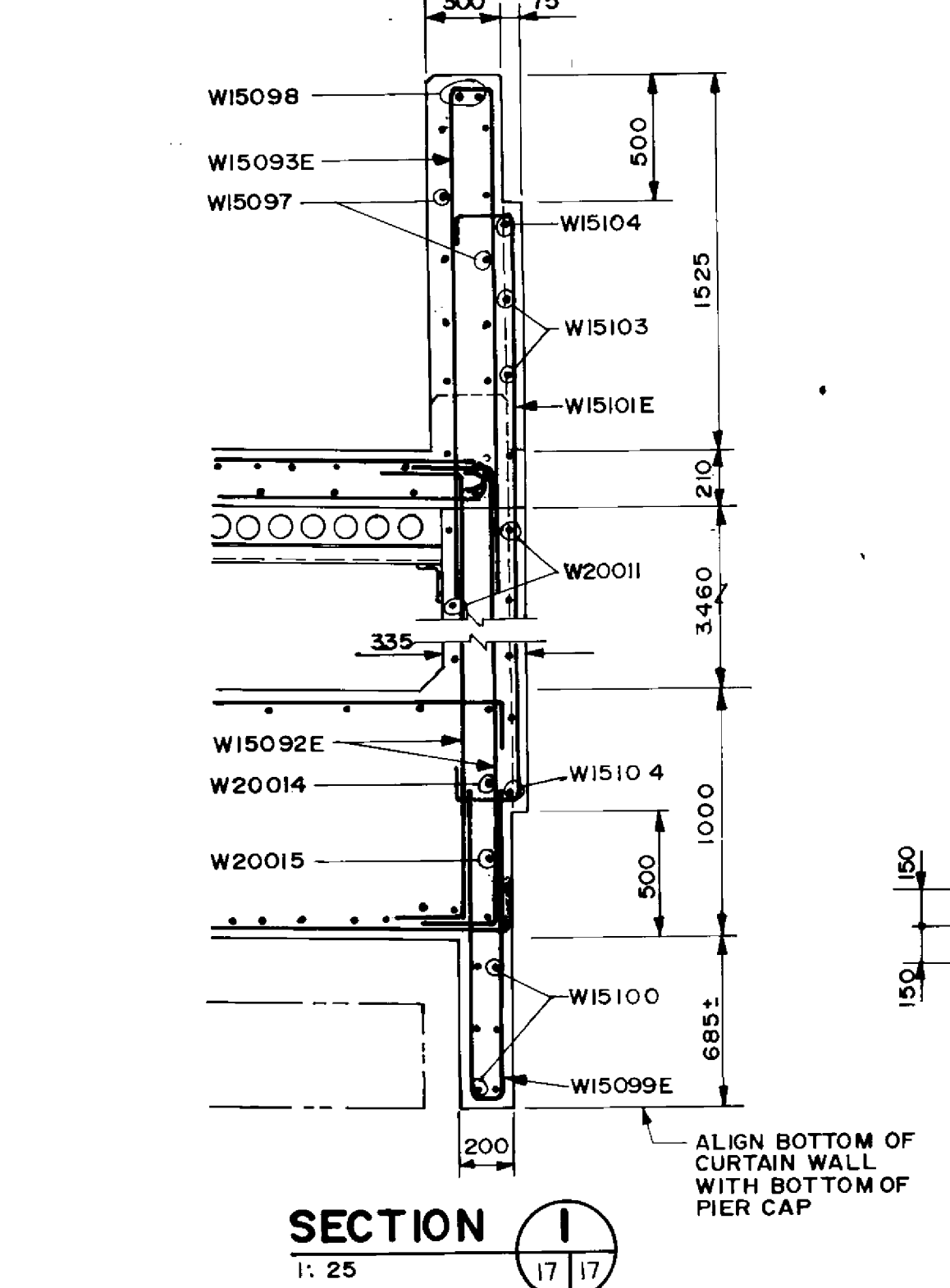
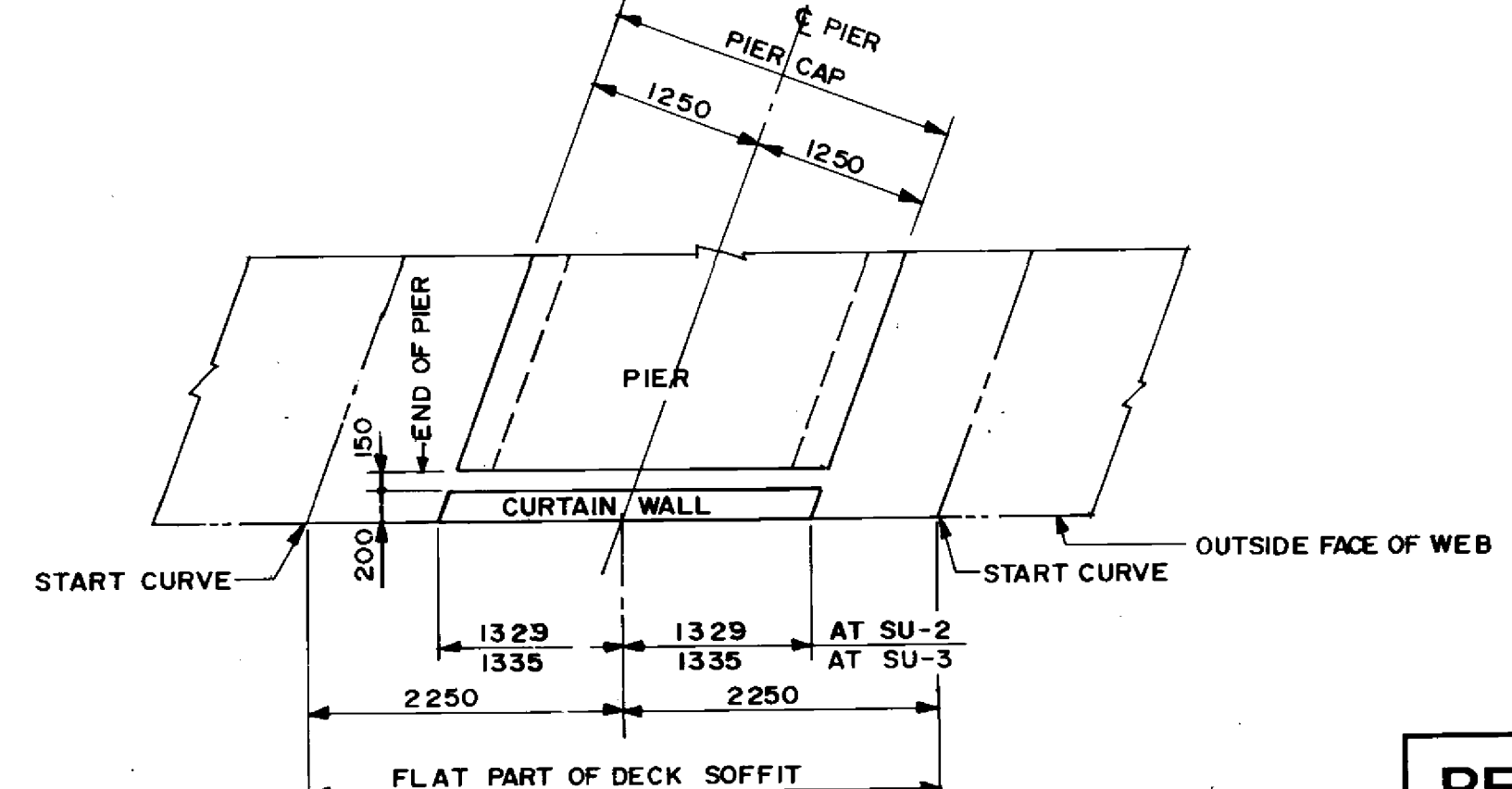
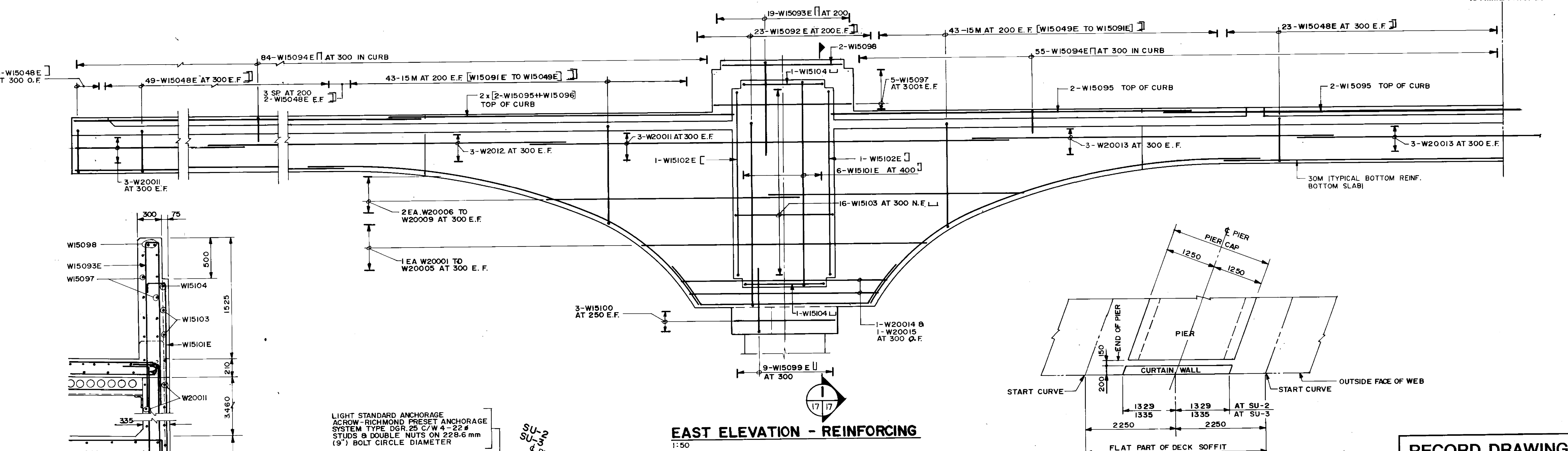
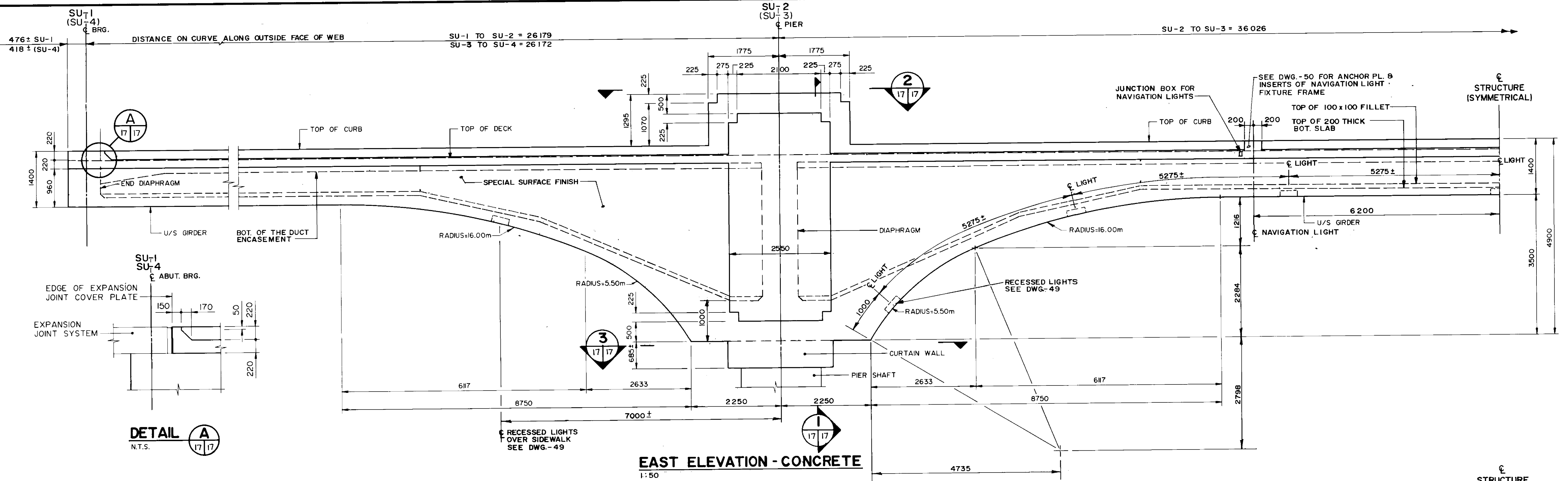
THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

PEMBINA HIGHWAY
SOUTH CITY LIMIT TO RUE DES TRAPPISTES
PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

EAST STRUCTURE
BOX GIRDERS
PLAN & CROSS SECTION

CITY DRAWING NUMBER: B224-95-16
SHEET: [] OF []
P3072-A-16

CONSULTANT DRAWING NO. 93-1497-06-16



RECORD DRAWING
APPROVED BY: *[Signature]* DATE: Dec 18/94

B-6021-17

NO.	REVISIONS	DATE	BY

DILLON
Consulting Engineers Planners
Environmental Scientists

DESIGNED BY: S.S.R.	CHECKED BY: N.B.U.
DRAWN BY: N.B.G./M.C.R.	APPROVED BY: <i>[Signature]</i>
HOR. SCALE: AS SHOWN	DATE: NOV. 1994

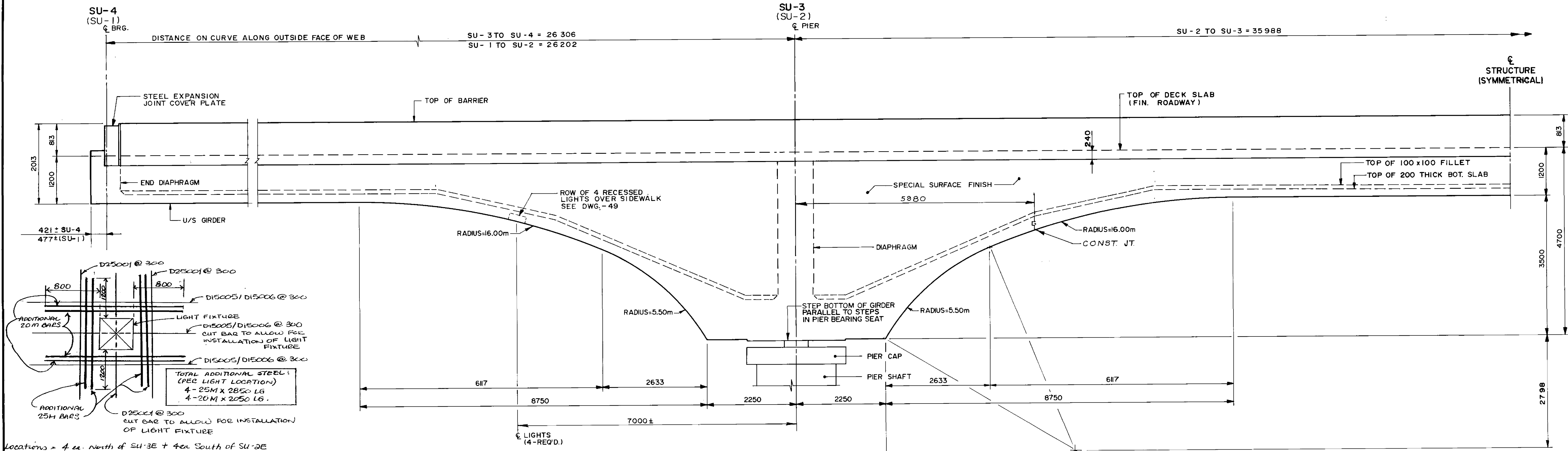
ENGINEER'S SEAL
22/11/94
S.S. RINAL
REGISTERED PROFESSIONAL ENGINEER
CONSULTANT DRAWING NO. 93-1497-06-17

THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

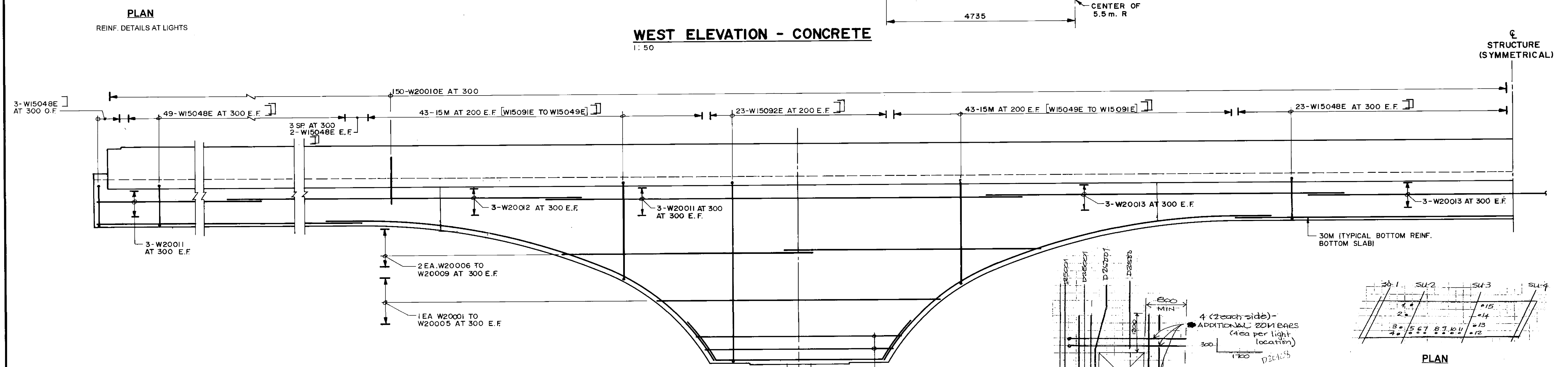
PEMBINA HIGHWAY
SOUTH CITY LIMIT TO RUE DES TRAPPISTES
PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

EAST STRUCTURE
BOX GIRDERS
EAST EXTERIOR WEB

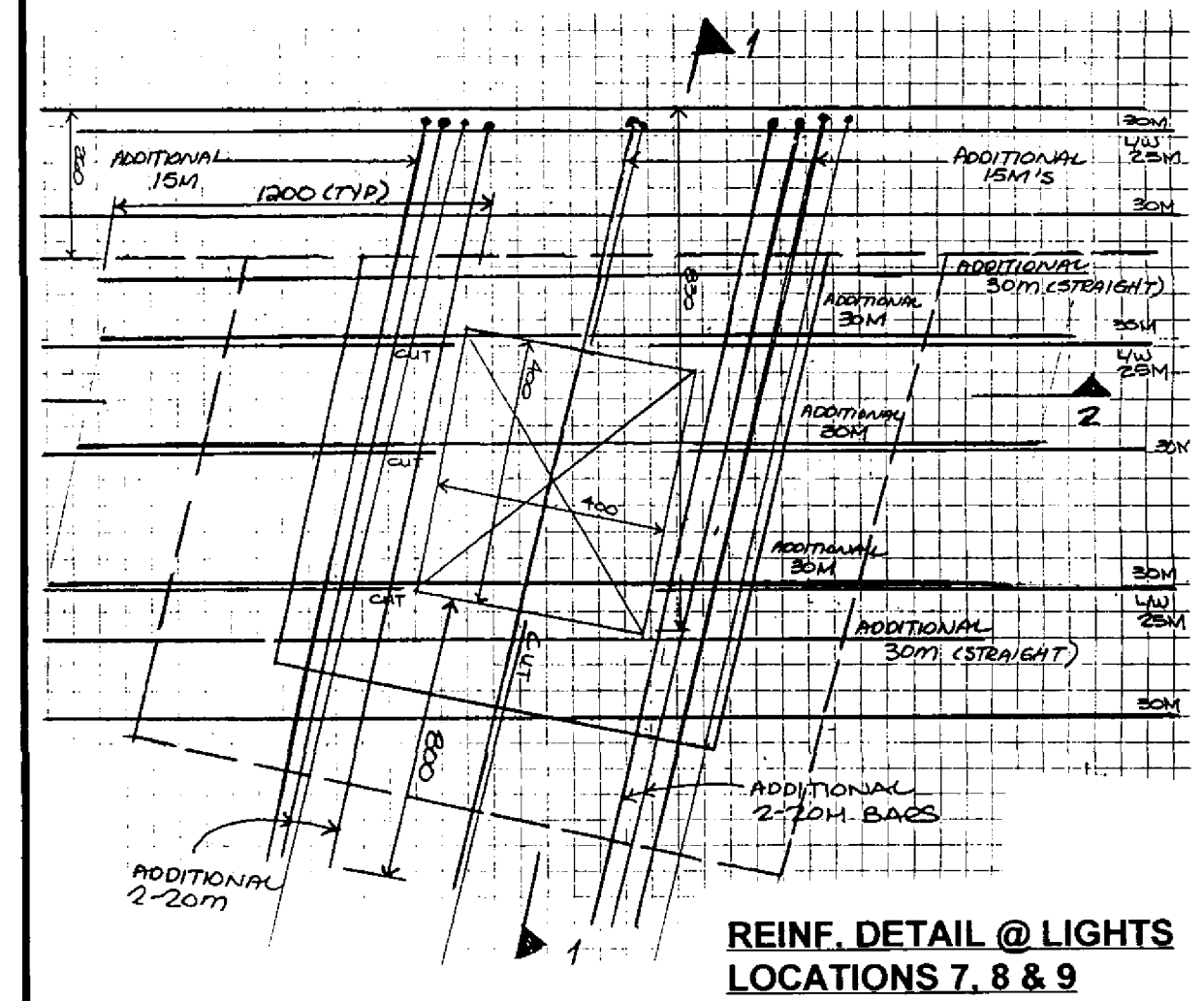
CITY DRAWING NUMBER B224-95-17
SHEET OF
P3072-A-17



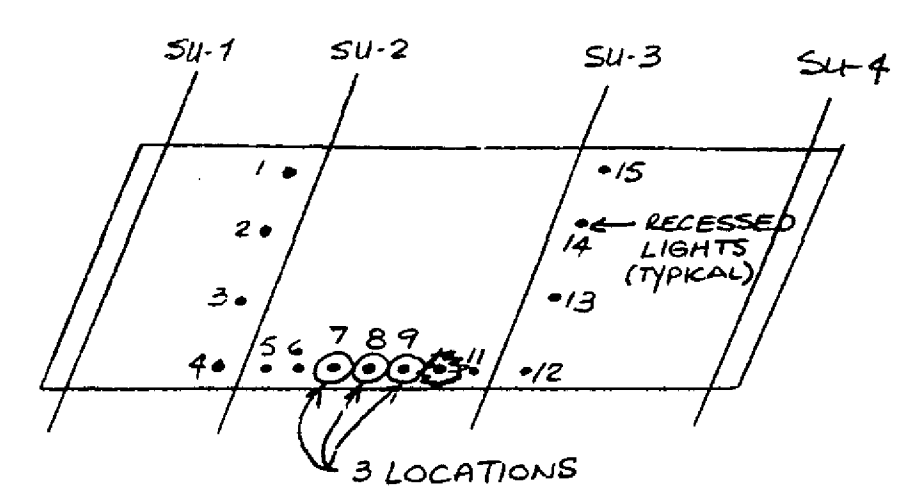
WEST ELEVATION - CONCRETE
1:50



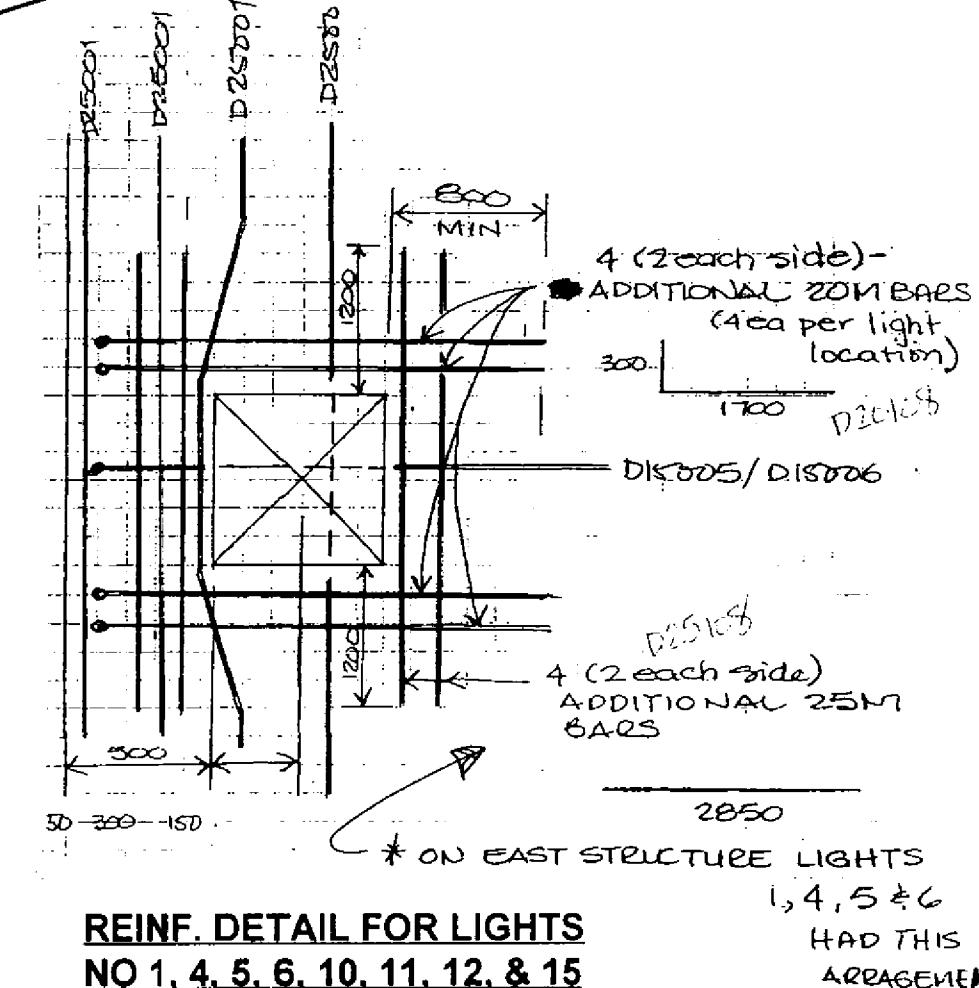
WEST ELEVATION - REINFORCING
1:50



REINFORCING DETAIL AT LIGHTS
LOCATIONS 7, 8 & 9



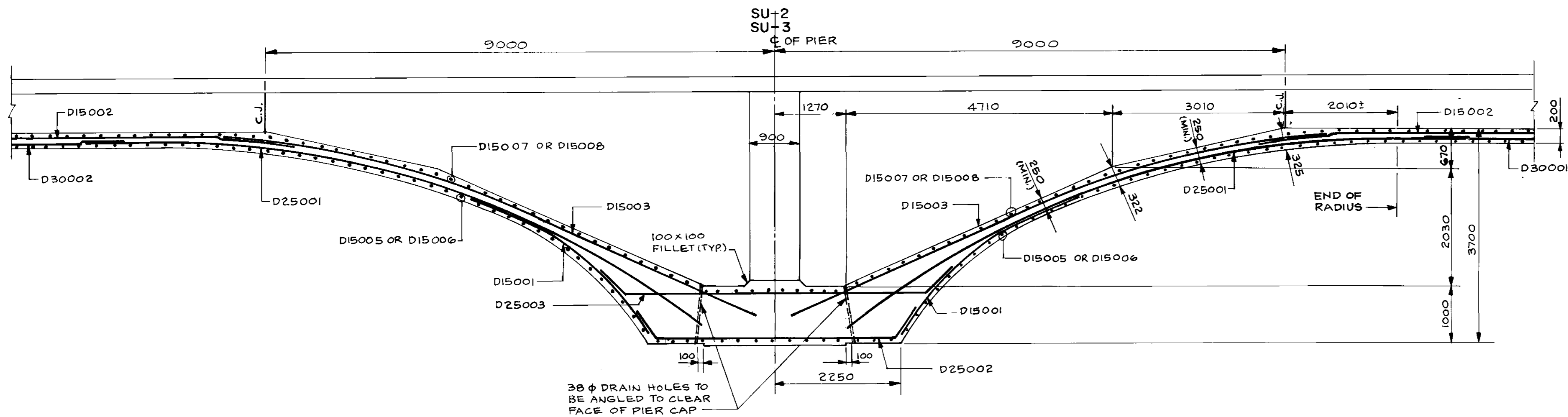
PLAN
APPLIES TO EAST AND WEST STRUCTURES



REINFORCING DETAIL FOR LIGHTS
NO 1, 4, 5, 6, 10, 11, 12, & 15

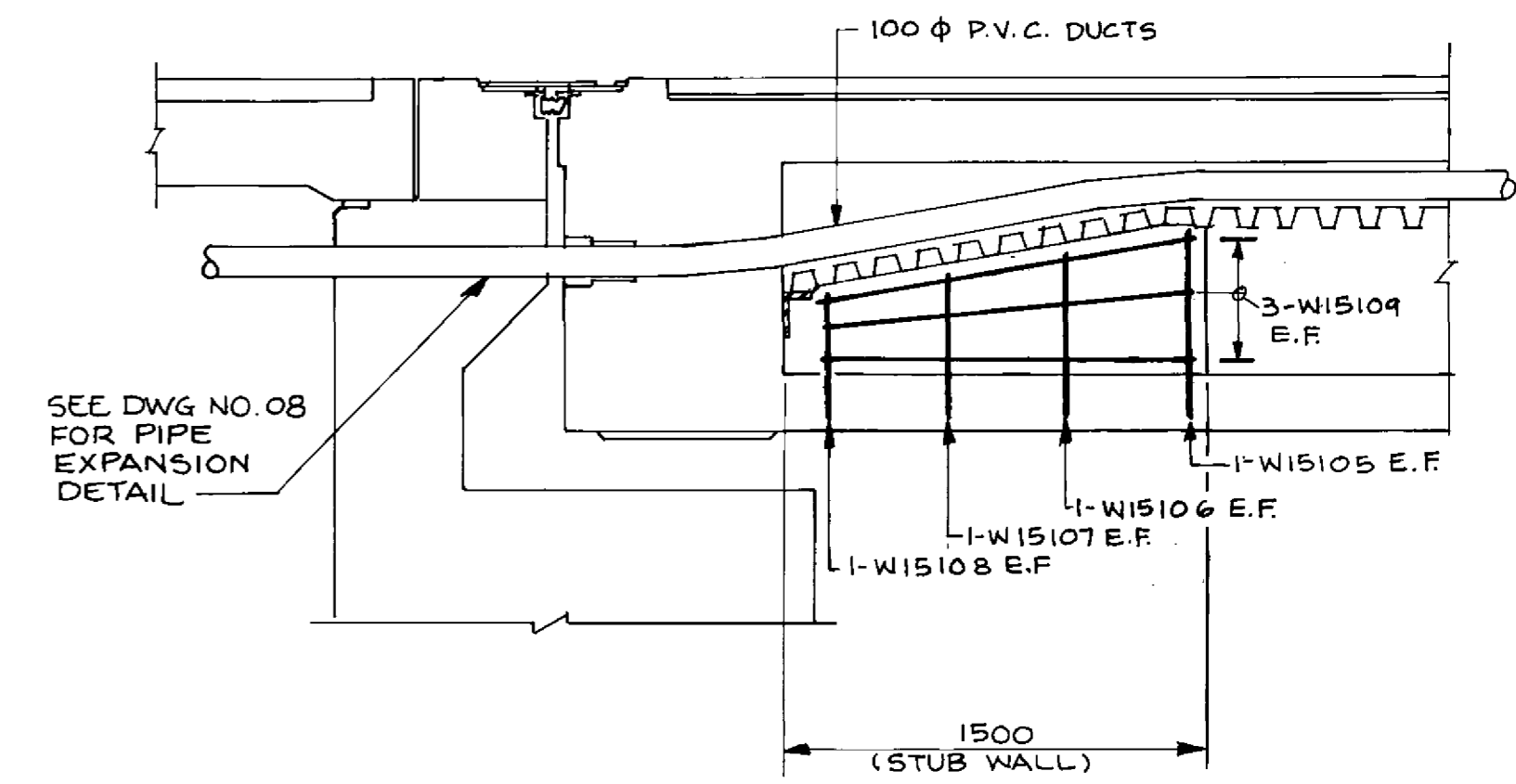
B-6021-18
RECORD DRAWING
APPROVED BY: [Signature] DATE: Dec 18/98

<p>DILLON Consulting Engineers - Planners Environmental Scientists</p>		<p>ENGINEER S.S. RIMAL PROFESSIONAL ENGINEER</p>		<p>THE CITY OF WINNIPEG WORKS AND OPERATIONS DIVISION STREETS AND TRANSPORTATION DEPARTMENT</p>	
DESIGNED BY: S.S.R.	CHECKED BY: N.B.U.	<p>PEMBINA HIGHWAY SOUTH CITY LIMIT TO RUE DES TRAPPISTES PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER</p>		<p>CITY DRAWING NUMBER B224-95-18</p>	
DRAWN BY: NBG / M.C.R.	APPROVED BY: [Signature]	<p>EAST STRUCTURE BOX GIRDERS WEST EXTERIOR WEB</p>		<p>SHEET OF</p>	
HOR. SCALE: AS SHOWN	DATE: NOV. 1994	<p>CONSULTANT DRAWING NO. 93-1497-06-18</p>		<p>P3072-A-18</p>	

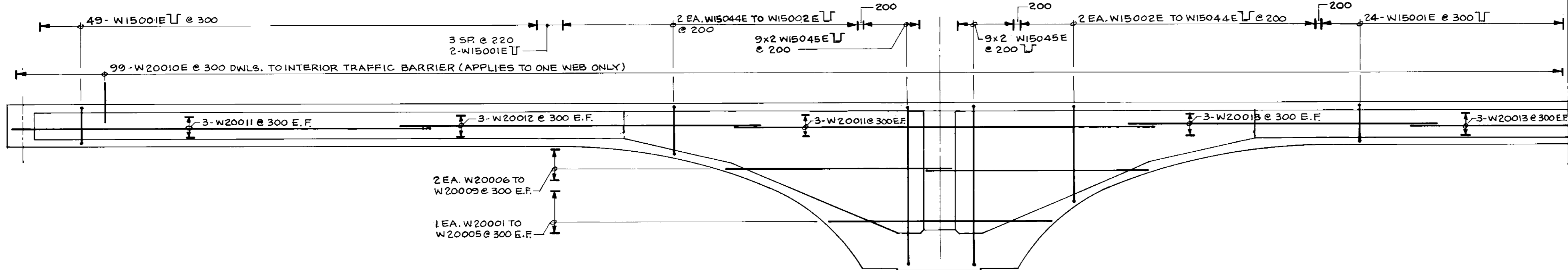


BOTTOM SLAB DETAIL AT PIERS

1:50

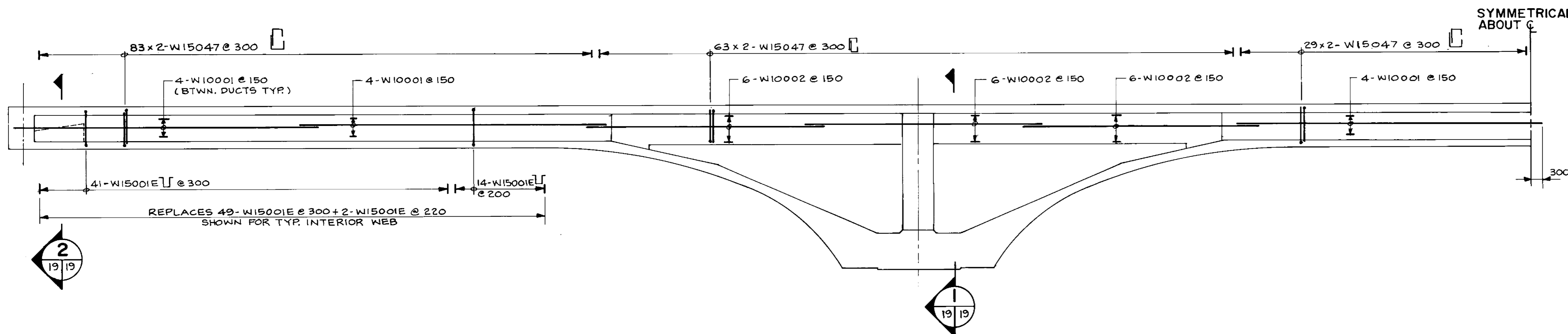


SECTION 3
1:25



TYPICAL INTERIOR WEB REINFORCEMENT (5 THUS)

1:75

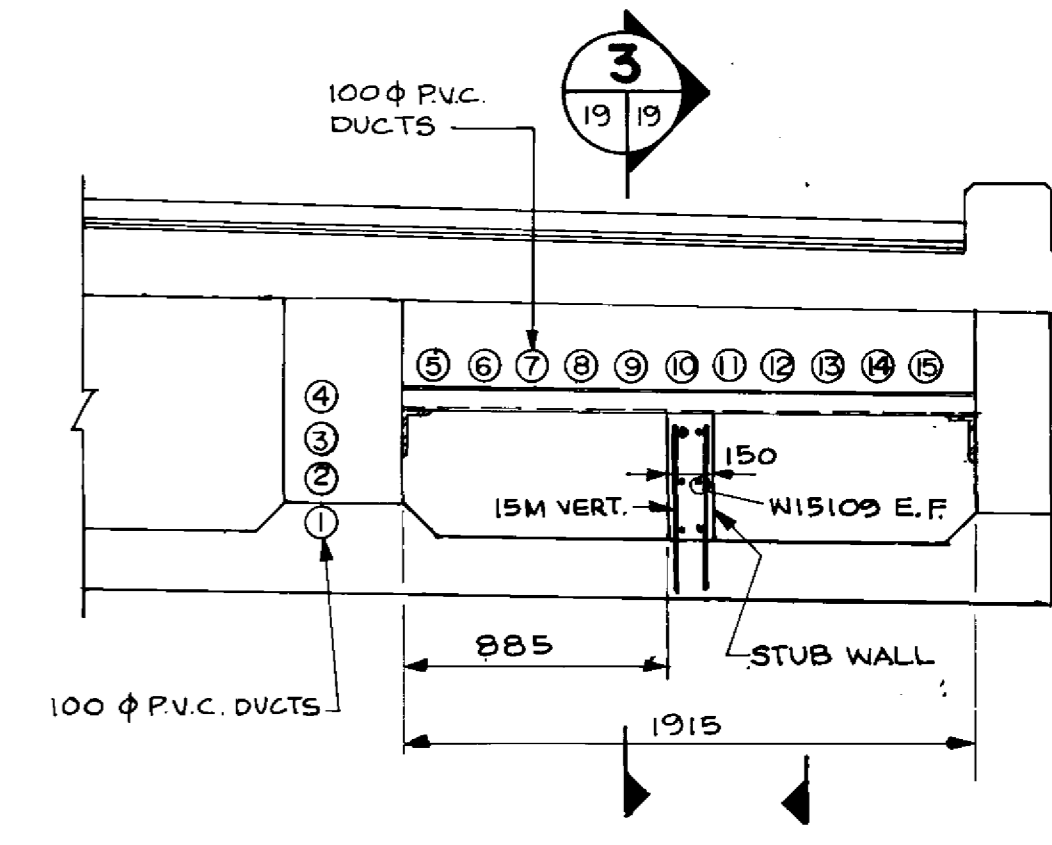


REINFORCEMENT FOR WEB CONTAINING 100 φ CABLE DUCTS (1 THUS)

1:75

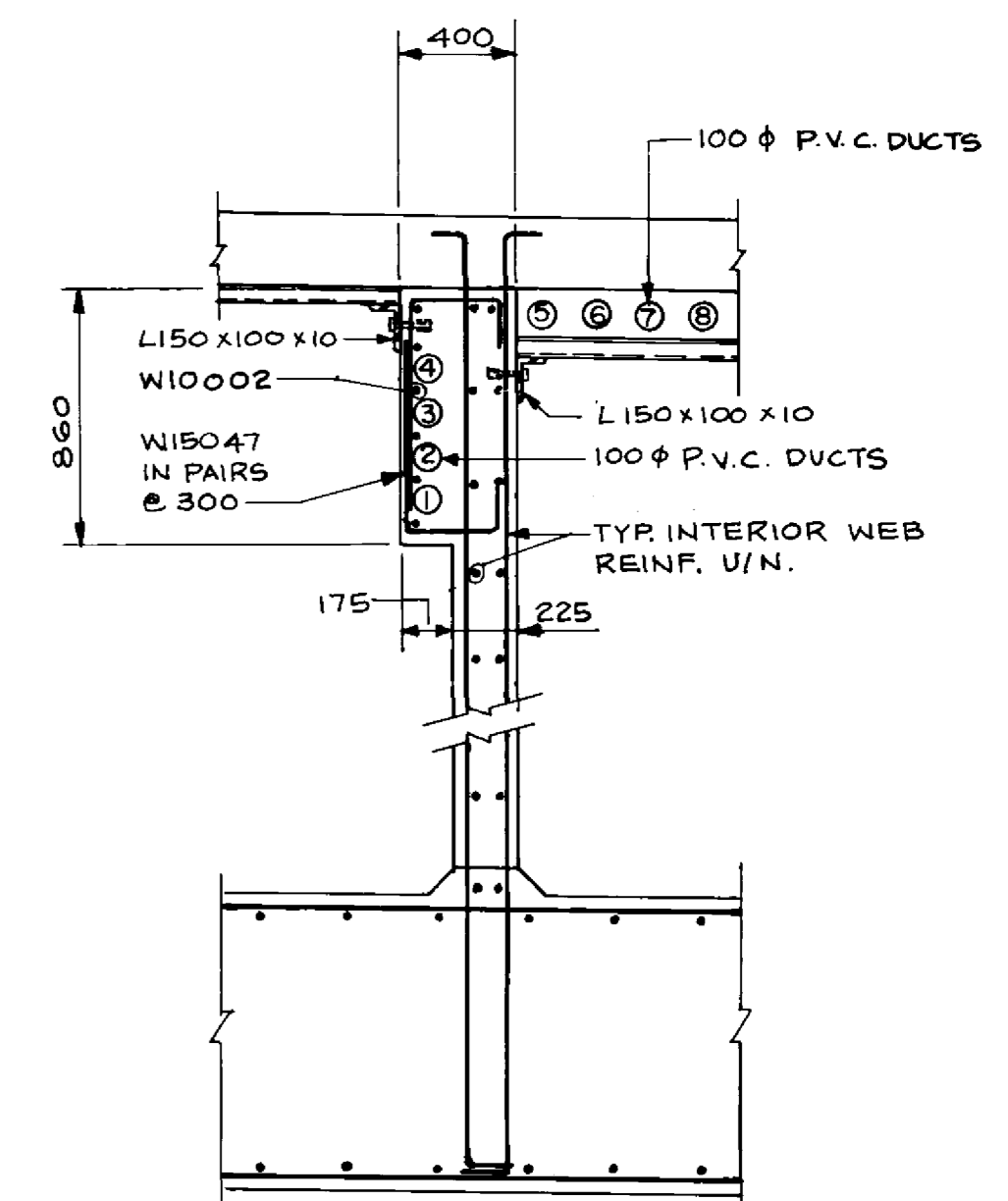
NOTE: REINFORCEMENT SAME AS TYPICAL INTERIOR WEB EXCEPT AS NOTED

SYMMETRICAL ABOUT C



SECTION 2
1:25

SYMMETRICAL ABOUT C



SECTION 1
1:25

RECORD DRAWING

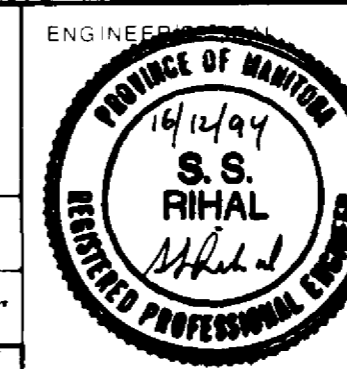
APPROVED BY: *[Signature]* DATE: Dec 18/98

B-6021-19

LOCATION APPROVED UNDERGROUND STRUCTURES	N/A
SUPV. U/G STRUCTURES COMMITTEE	DATE
NOTE:	
NO. REVISIONS	DATE BY

DESIGNED BY	SSR	CHECKED BY	N.B.U.
DRAWN BY	N.B.G.	APPROVED BY	<i>[Signature]</i>
HDR. SCALE	AS NOTED	DATE	NOV 1994

DILLON
Consulting Engineers • Planners
Environmental Scientists



CONSULTANT NO. 93-1497-06-19

THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

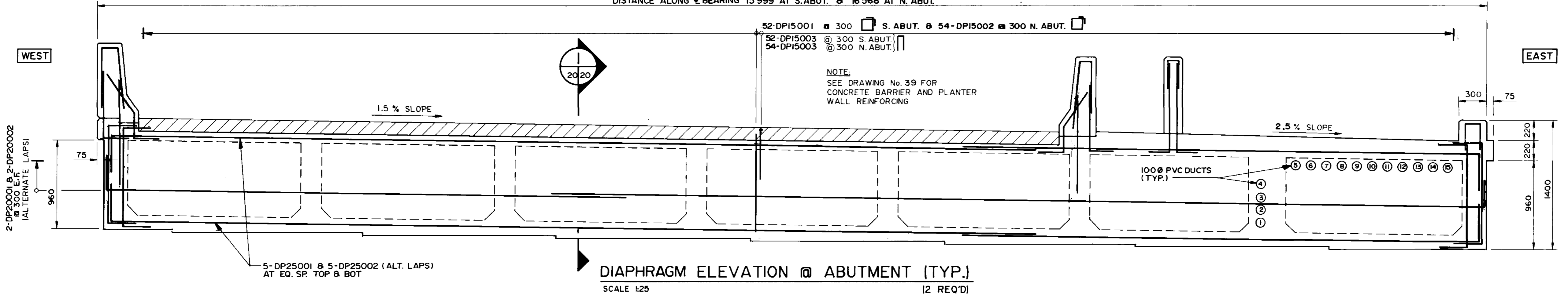
PEMBINA HIGHWAY
SOUTH CITY LIMIT TO RUE DES TRAPPISTES
PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

EAST STRUCTURE
BOX GIRDERS
INTERIOR WEBS

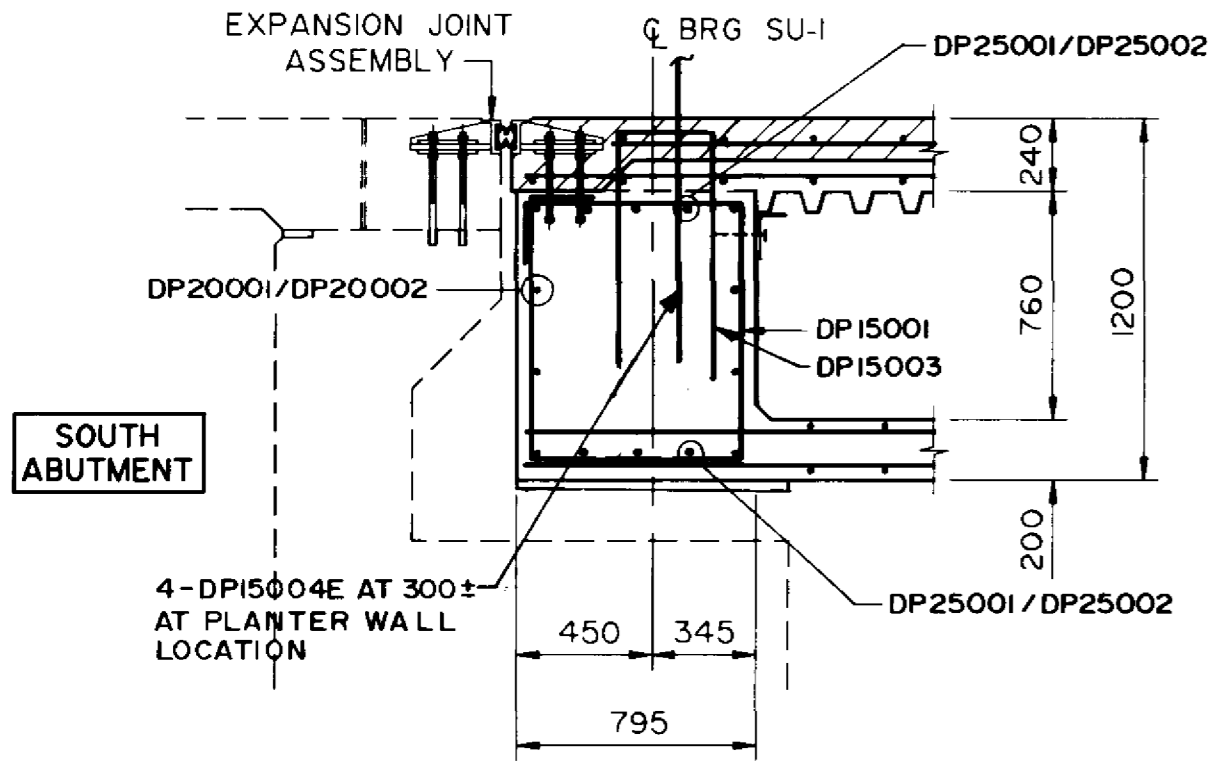
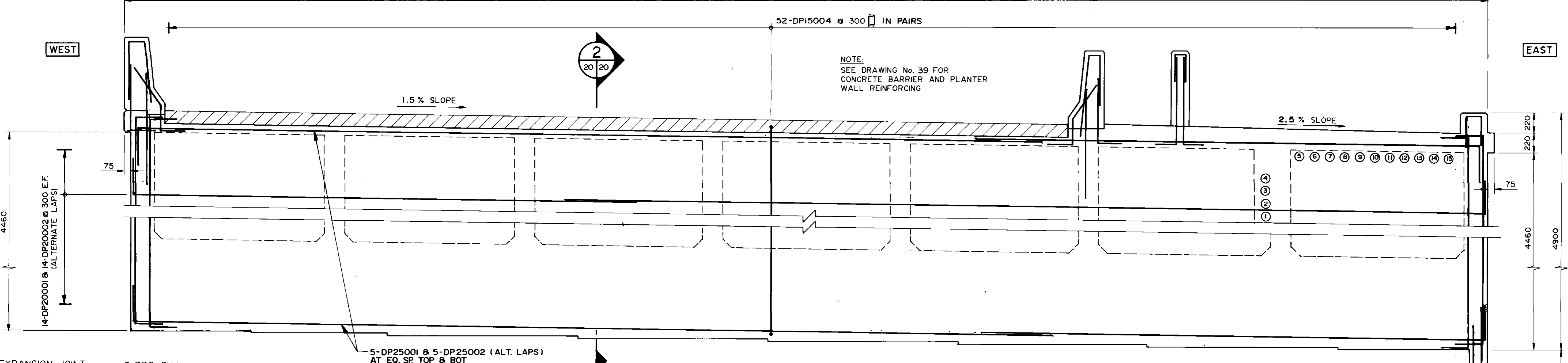
B224-95-19

P3072-A-19

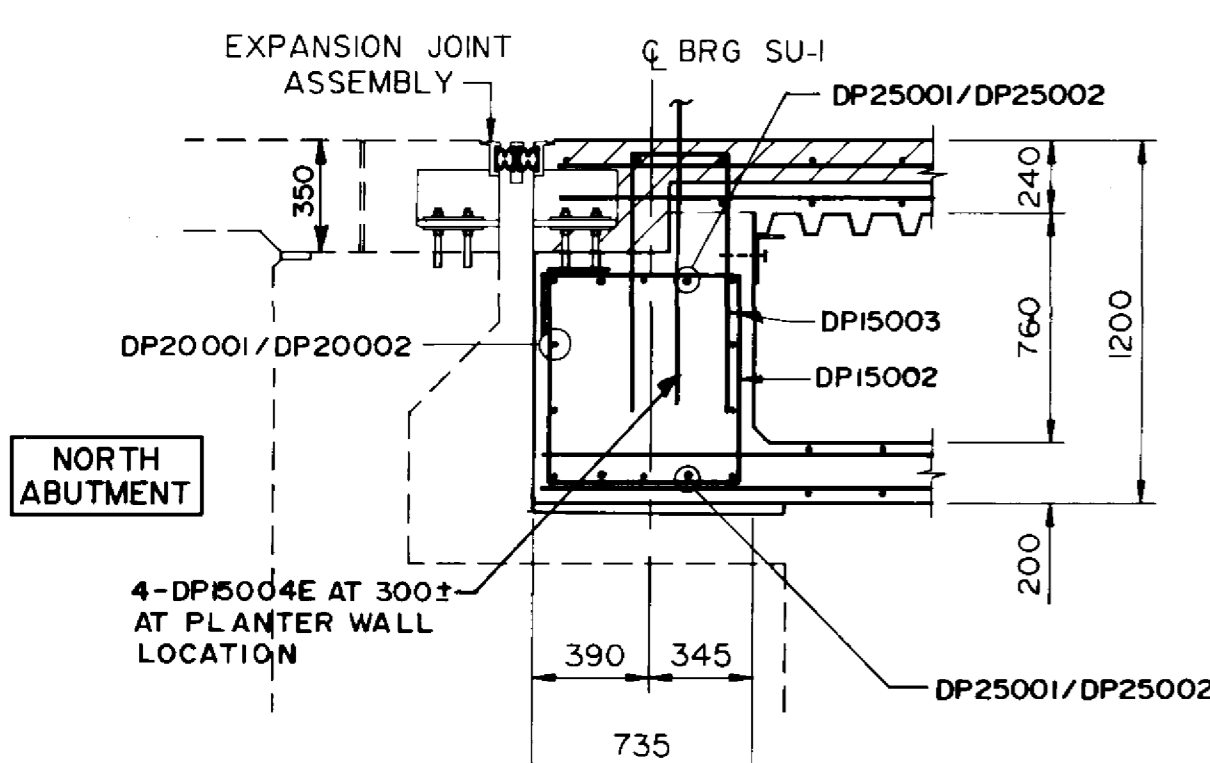
DISTANCE ALONG C BEARING 15 999 AT S. ABUT. & 16 568 AT N. ABUT.



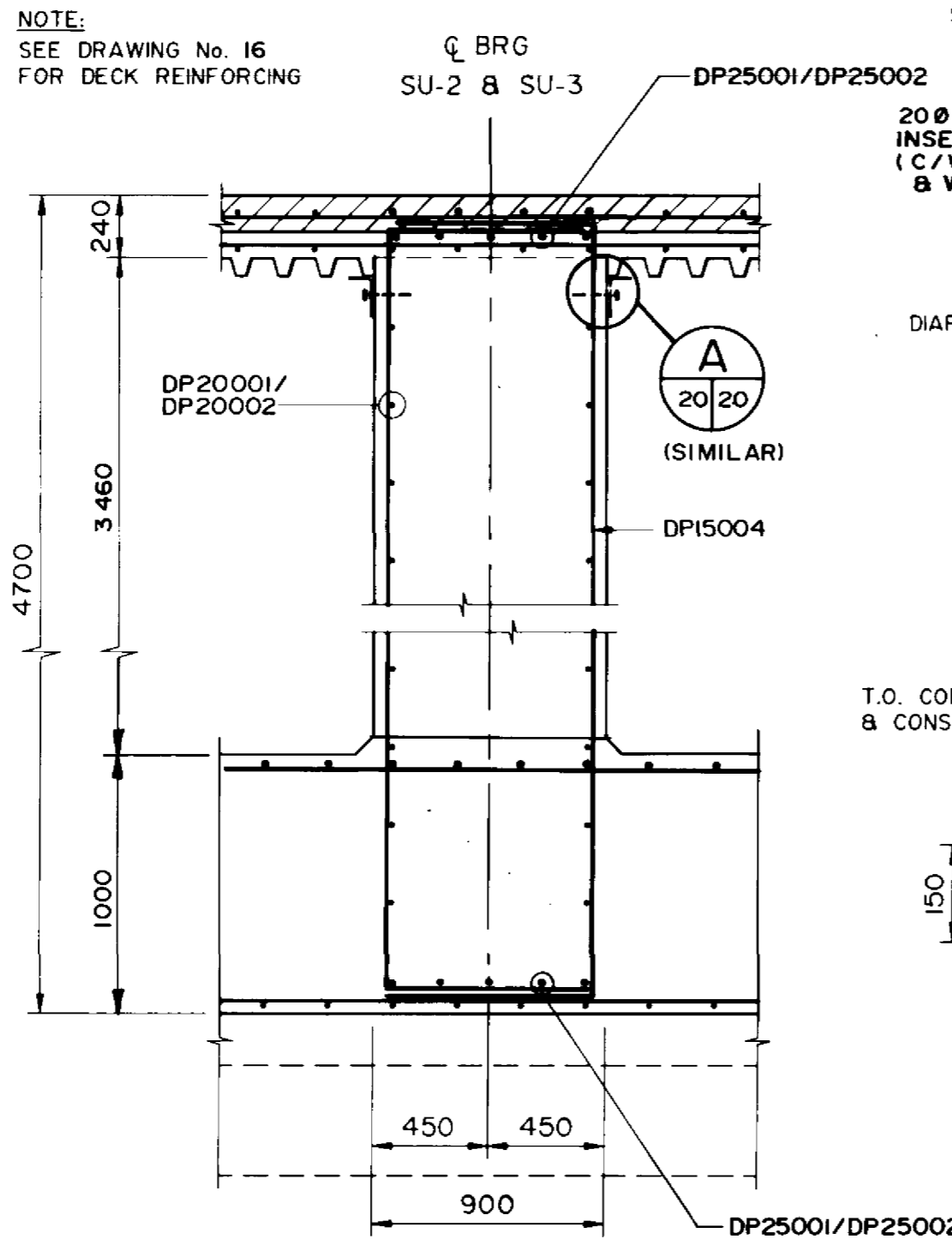
DISTANCE ALONG C BEARING 16 067 AT SU-2 & 16 198 AT SU-3



SOUTH ABUTMENT DIAPHRAGM



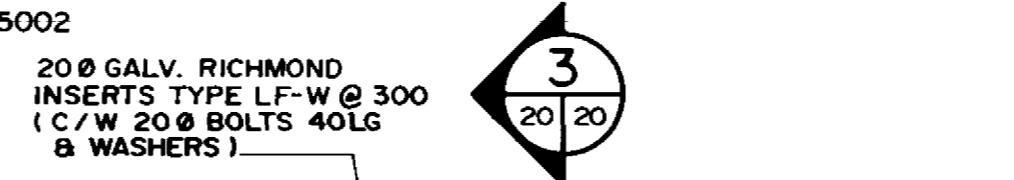
NORTH ABUTMENT DIAPHRAGM



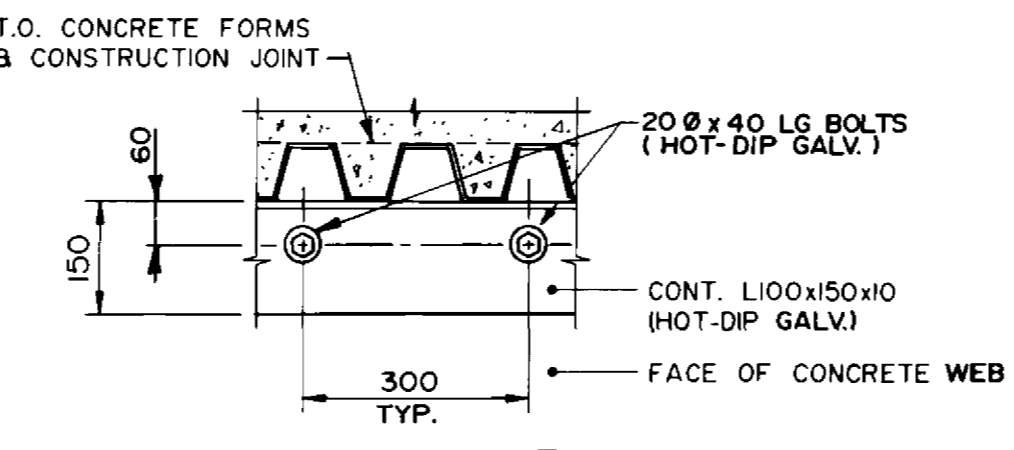
TYPICAL PIER DIAPHRAGM

SECTION 2 SCALE 1:25

DIAPHRAGM ELEVATION @ PIER (TYP.) SCALE 1:25 12 REQ'D

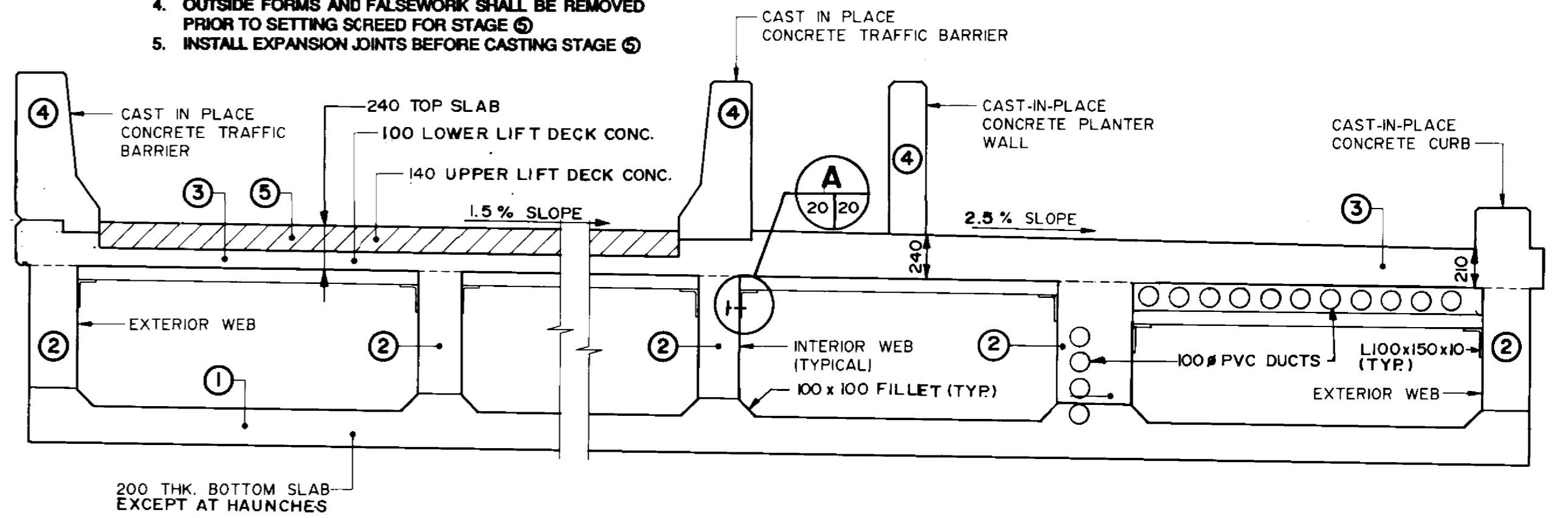


DETAIL SCALE 1:10



SECTION 3 SCALE 1:10

- NOTES:
- NUMBERS 1 ETC. REPRESENT THE STAGING SEQUENCE FOR THE SUPER STRUCTURE.
 - OUTSIDE FORMS AND FALSEWORK SHALL REMAIN IN PLACE FOR STAGES 1 THROUGH 4.
 - INSIDE FORMS FOR STAGE 2 SHALL BE REMOVED BEFORE INSTALLING PERMANENT FORMS FOR STAGE 3.
 - OUTSIDE FORMS AND FALSEWORK SHALL BE REMOVED PRIOR TO SETTING SCREED FOR STAGE 5.
 - INSTALL EXPANSION JOINTS BEFORE CASTING STAGE 5.



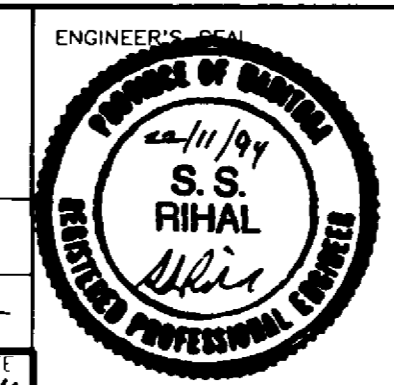
CONSTRUCTION SEQUENCE SCALE 1:25

RECORD DRAWING
 APPROVED BY: *[Signature]* DATE: *DEC 18/98*

B-6021-20

B.M. ELEV.				
DESIGNED BY	S.S.R.	CHECKED BY	N.B.U.	
DRAWN BY	M.C.R.	APPROVED BY	<i>[Signature]</i>	
HOR. SCALE	AS SHOWN	AUTHORIZED BY	<i>[Signature]</i>	
VERTICAL		DATE		
NO. REVISIONS		DATE		
		BY		

DILLON
 Consulting Engineers Planners
 Environmental Scientists



THE CITY OF WINNIPEG
 WORKS AND OPERATIONS DIVISION
 STREETS AND TRANSPORTATION DEPARTMENT

PEMBINA HIGHWAY
 SOUTH CITY LIMIT TO RUE DES TRAPPISTES
 PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

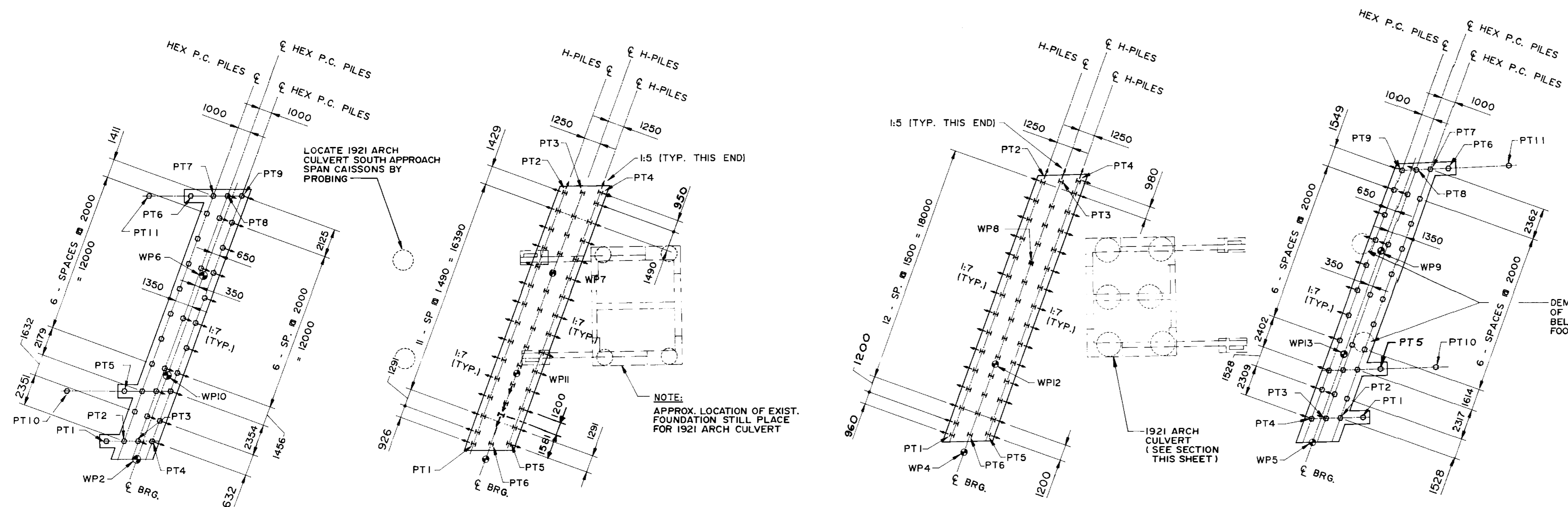
CITY DRAWING NUMBER
 B224-95-20
 SHEET OF

EAST STRUCTURE
 BOX GIRDERS
 DIAPHRAGM S

P3072-A-20

CONSULTANT DRAWING NO.
 93-1497-06-20

DATE NOV. 1994



PLAN - PILING LAYOUT
SCALE 1 : 200

PILE CUT OFF EL. ALL EXCEPT PT10 & PT11 = 229.160
PT10 = 230.450
PT11 = 230.180

PT.	NORTHING	EASTING
PT1	3328.336	1001.561
PT2	3329.688	1001.528
PT3	3330.750	1001.503
PT4	3331.813	1001.485
PT5	3329.609	997.783
PT6	3334.220	983.020
PT7	3335.936	982.979
PT8	3336.999	982.953
PT9	3338.063	982.927
PT10	3325.406	997.874
PT11	3330.242	983.117

PILE CUT OFF EL. 222.40

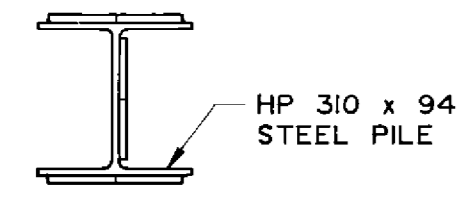
PT.	NORTHING	EASTING
PT1	3355.965	1001.105
PT2	3362.360	982.118
PT3	3363.696	982.067
PT4	3365.032	982.017
PT5	3358.630	1001.025
PT6	3357.296	1001.065

PILE CUT OFF EL. 222.40

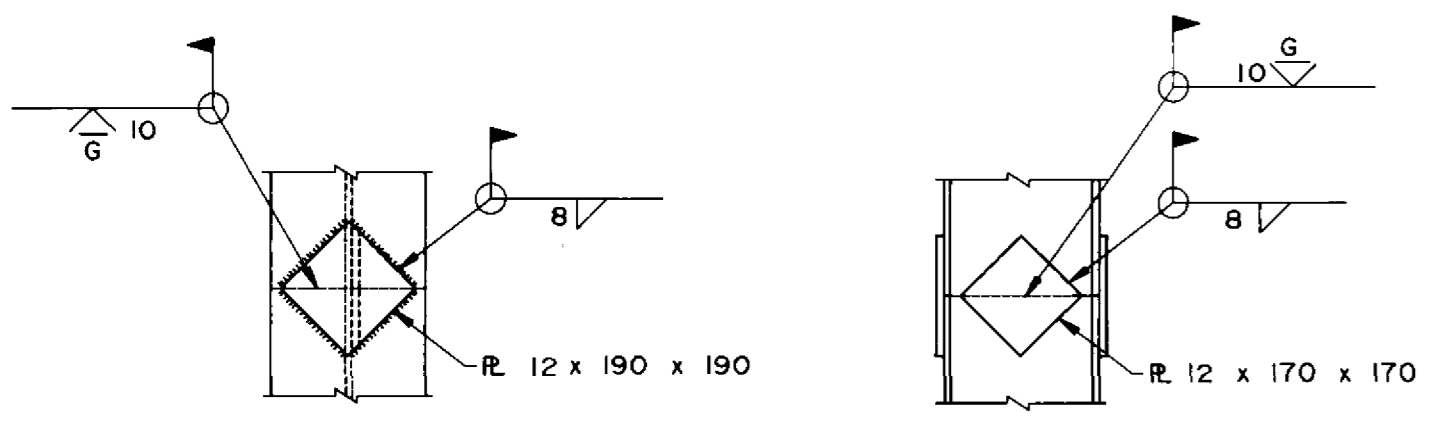
PT.	NORTHING	EASTING
PT1	3391.975	999.601
PT2	3398.302	980.460
PT3	3399.642	980.388
PT4	3400.983	980.315
PT5	3394.651	999.469
PT6	3393.312	999.537

PILE CUT OFF EL. ALL EXCEPT PT10 & PT11 = 228.950
PT10 = 230.240
PT11 = 229.960

PT.	NORTHING	EASTING
PT1	3422.867	997.503
PT2	3421.137	997.594
PT3	3420.063	997.651
PT4	3418.992	997.707
PT5	3424.074	993.846
PT6	3428.690	978.685
PT7	3427.356	978.774
PT8	3426.279	978.846
PT9	3425.202	978.918
PT10	3428.273	993.610
PT11	3433.161	978.378



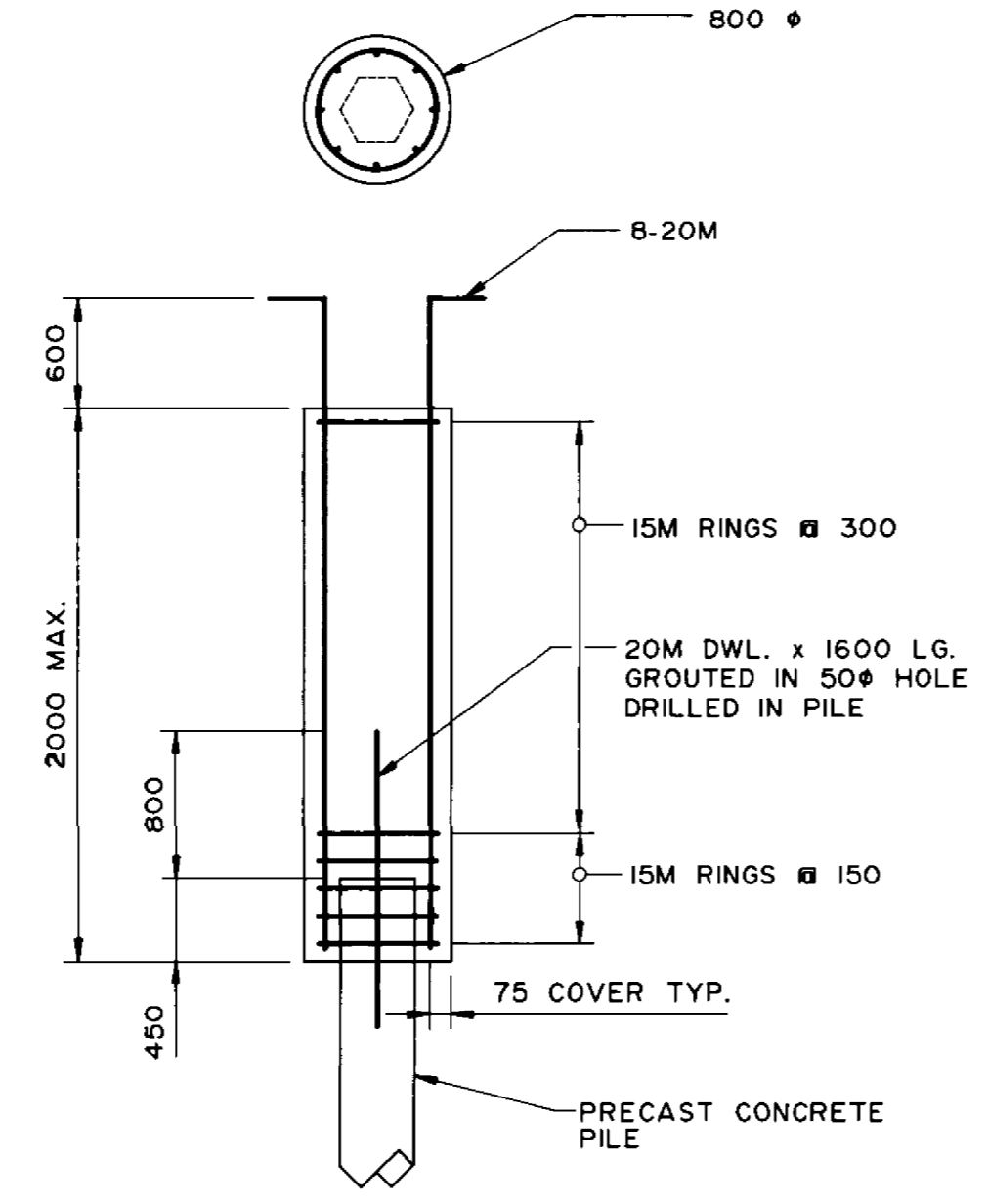
PLAN



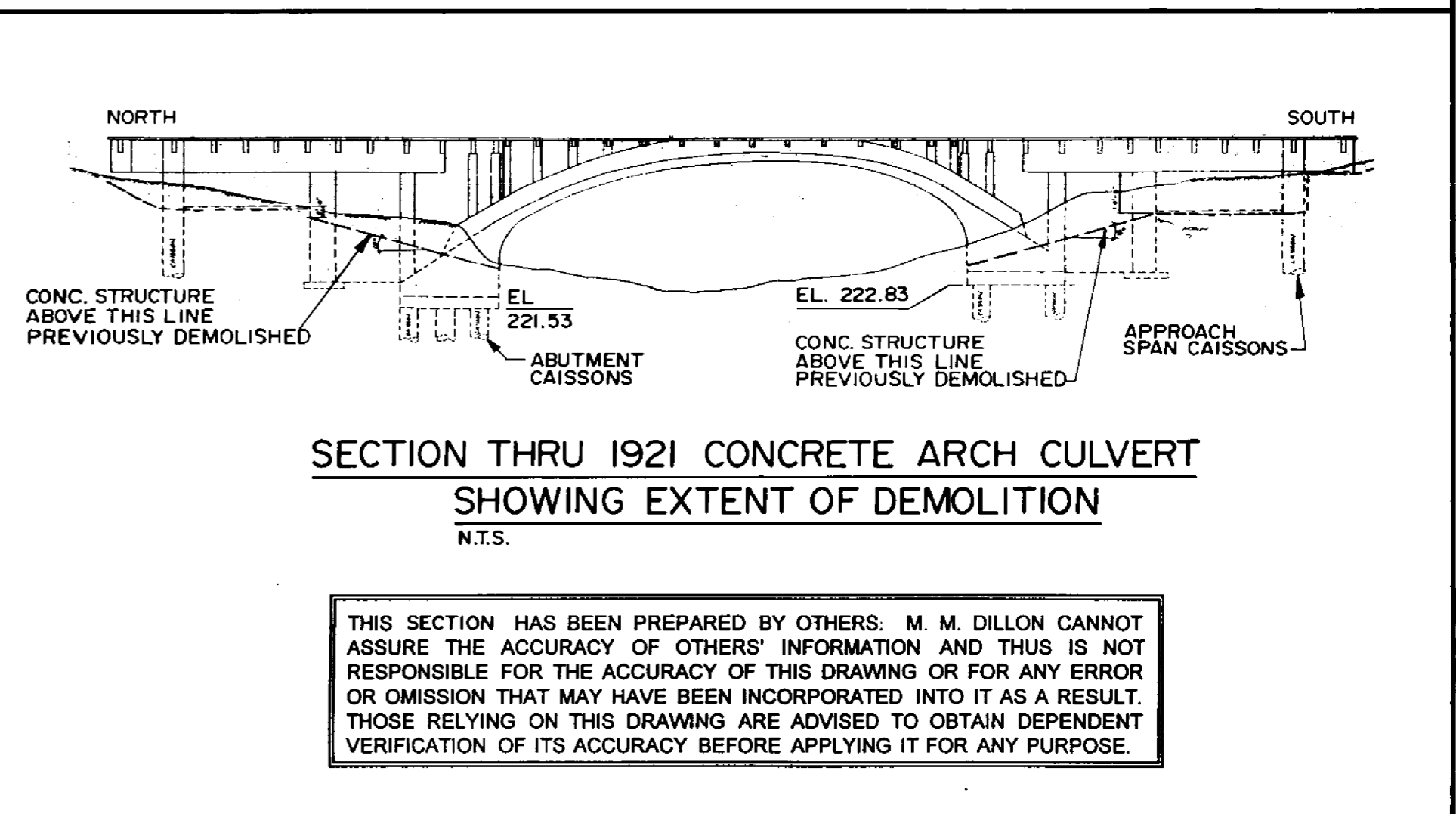
ELEV.

SIDE ELEV.

PILE SPLICE DETAIL
SCALE 1 : 15

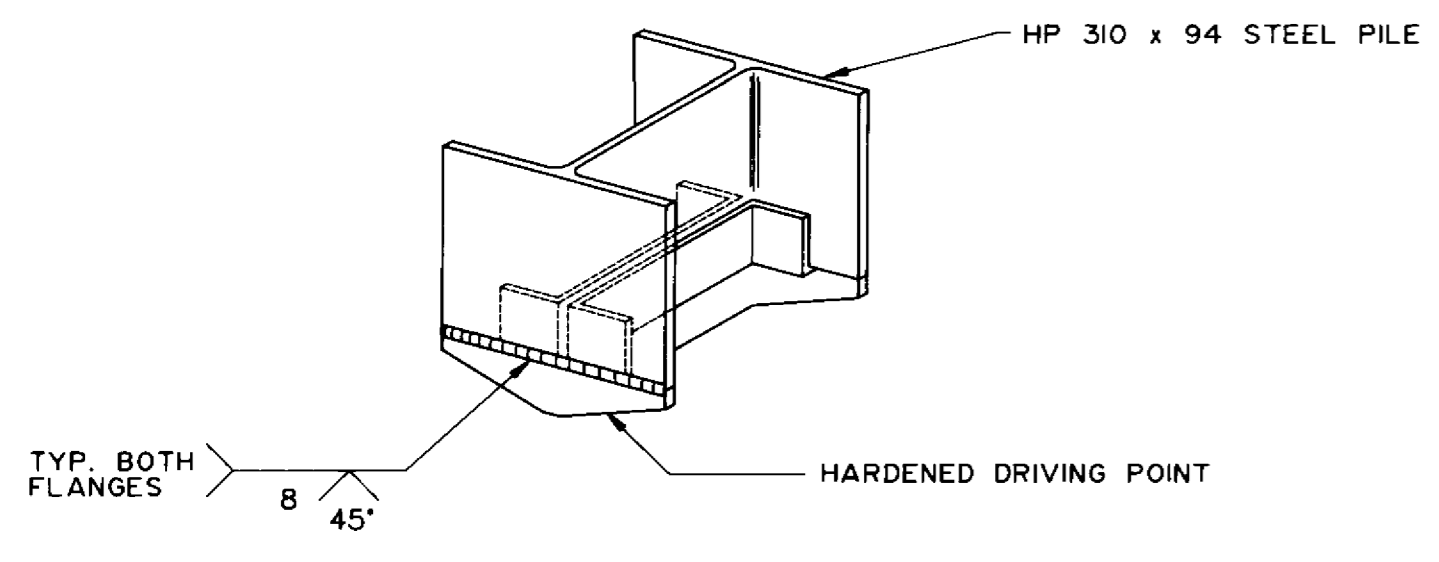


PRECAST CONCRETE PILE EXTENSION
SCALE 1:40



SECTION THRU 1921 CONCRETE ARCH CULVERT
SHOWING EXTENT OF DEMOLITION
N.T.S.

THIS SECTION HAS BEEN PREPARED BY OTHERS. M. M. DILLON CANNOT ASSURE THE ACCURACY OF OTHERS' INFORMATION AND THIS IS NOT RESPONSIBLE FOR THE ACCURACY OF THIS DRAWING OR FOR ANY ERROR OR OMISSION THAT MAY HAVE BEEN INCORPORATED INTO IT AS A RESULT. THOSE RELYING ON THIS DRAWING ARE ADVISED TO OBTAIN DEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.



PILE POINT DETAIL
N.T.S.

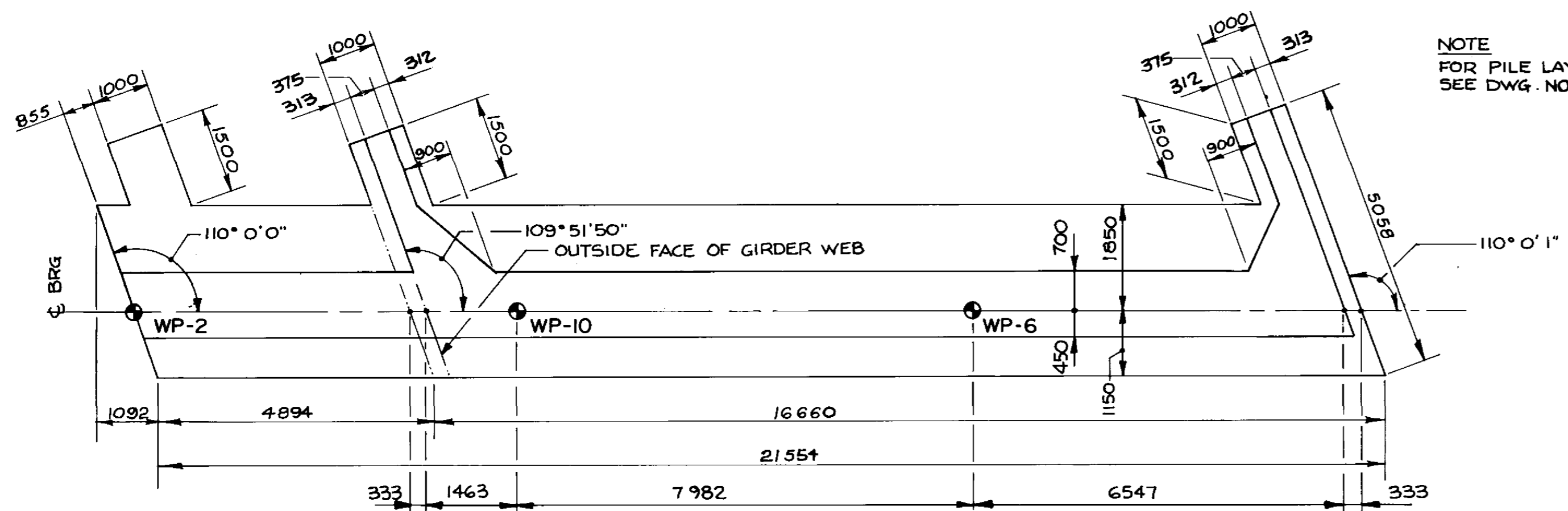
NOTES:

- 35 - 350 HEX PRECAST CONCRETE PILES AT EACH ABUTMENT
- PREBORE FOR HEX PRECAST CONCRETE PILES TO EL. 225.0
- 44 - HP 310 x 94 STEEL BEARING PILES C/W PILE DRIVING POINTS AT EACH PIER.
- ALL PILES DRIVEN TO REFUSAL IN GLACIAL TILL.
- APPROX. TILL EL. 217.8 ±

RECORD DRAWING
APPROVED BY: *[Signature]* DATE: *Dec 18/98*

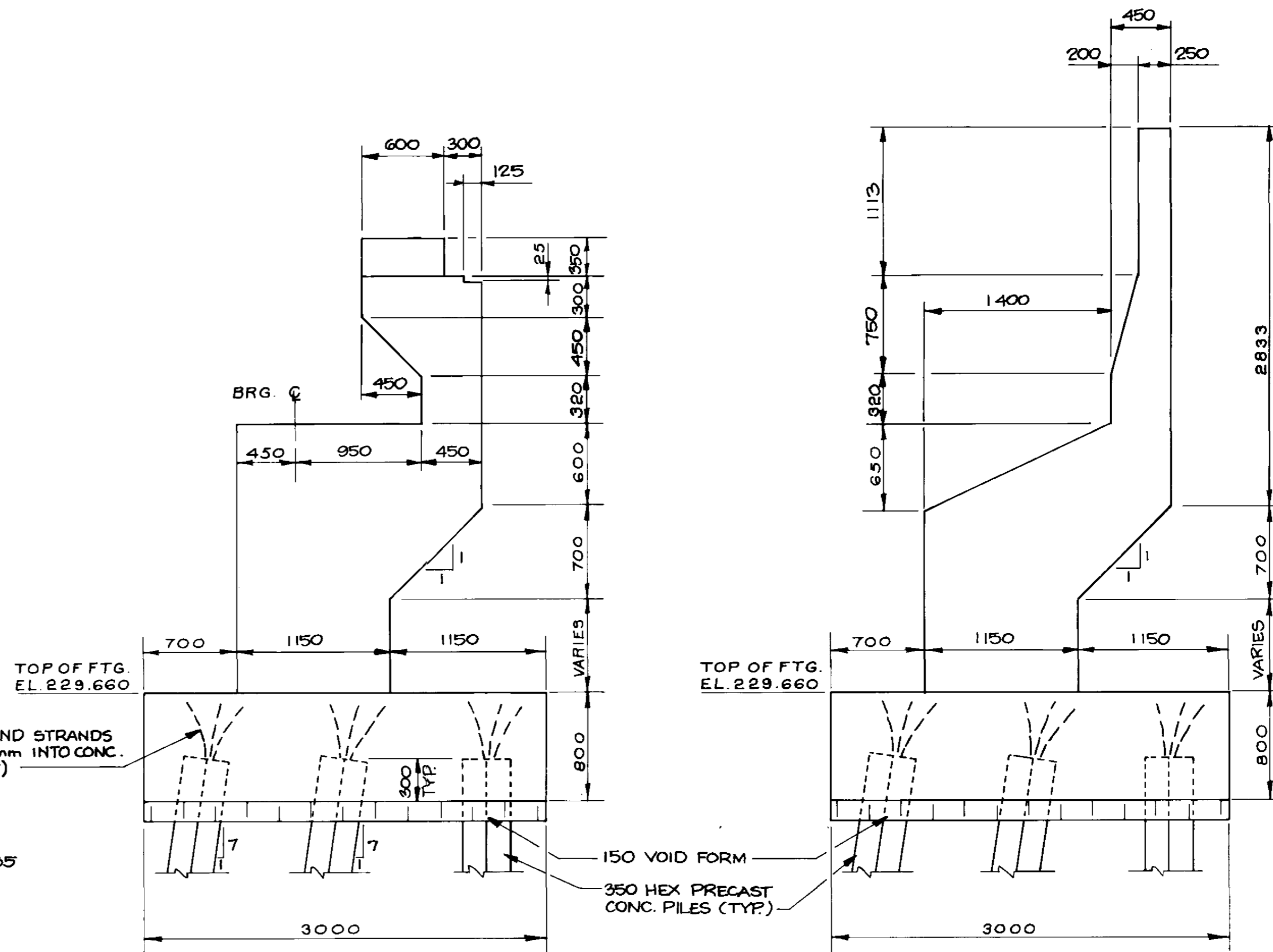
B-6021-21

B.M. ELEV. NO. REVISIONS DATE BY	DILLON Consulting Engineers - Planners Environmental Scientists		ENGINEER'S PROVINCE OF MANITOBA 22/11/98 S.S. RYHAL REGISTERED PROFESSIONAL ENGINEER	THE CITY OF WINNIPEG WORKS AND OPERATIONS DIVISION STREETS AND TRANSPORTATION DEPARTMENT PEMBINA HIGHWAY SOUTH CITY LIMIT TO RUE DES TRAPPISTES PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER WEST STRUCTURE FOUNDATION LAYOUT & DETAILS	CITY DRAWING NUMBER B224-95-21 SHEET OF		
	DESIGNED BY: C.M.R.	CHECKED BY: S.S.R.				CONSULTANT DRAWING NO. 93-1497-06-21	P3207-A-21
	DRAWN BY: S.K.B.	APPROVED BY: <i>[Signature]</i>					
	HOR. SCALE: AS NOTED	VERTICAL SCALE: AS NOTED					



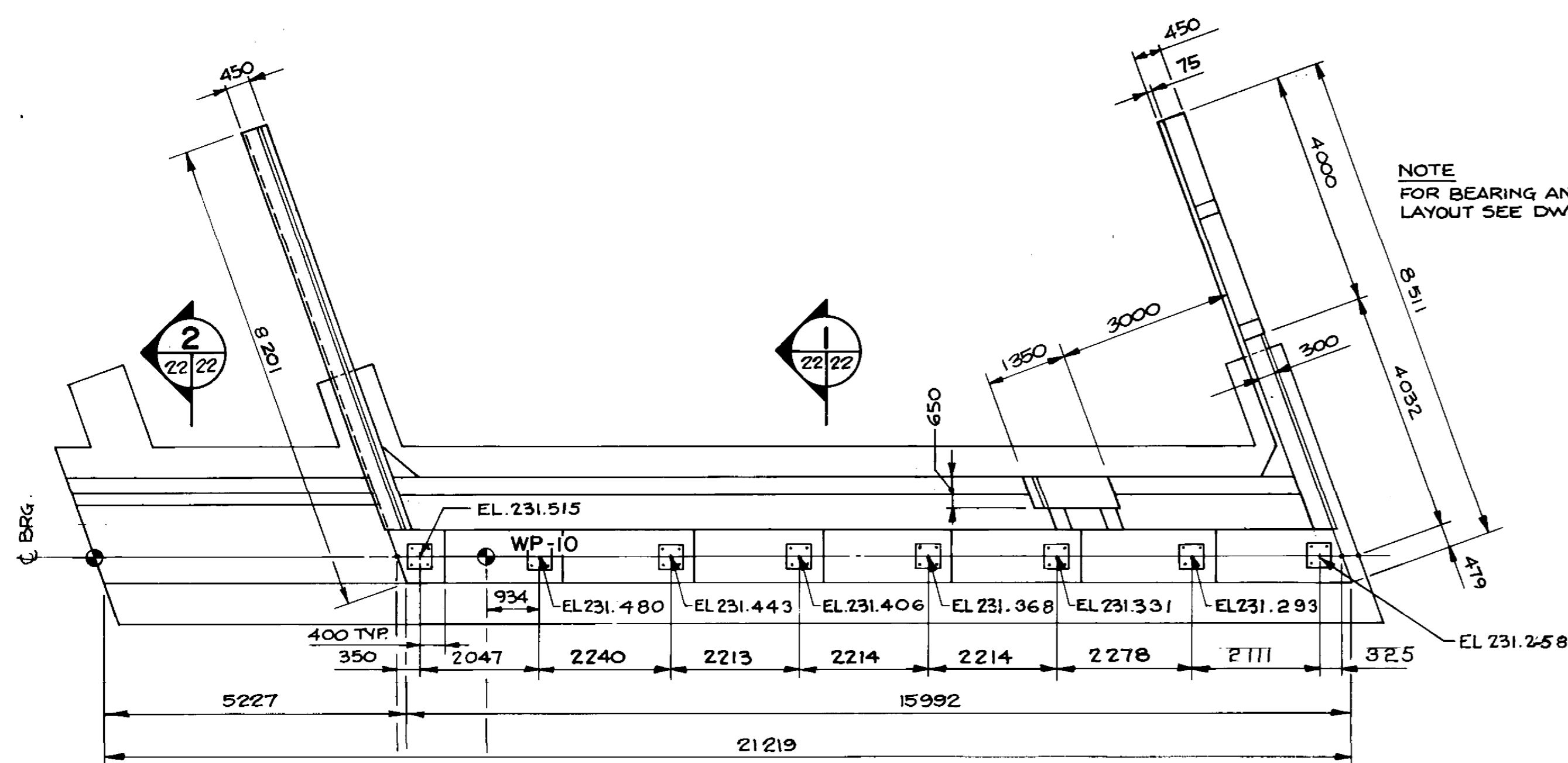
PLAN AT FOOTING
1:75

NOTE
FOR PILE LAYOUT
SEE DWG. NO. 21



SECTION 1
1:30

SECTION 2
1:30

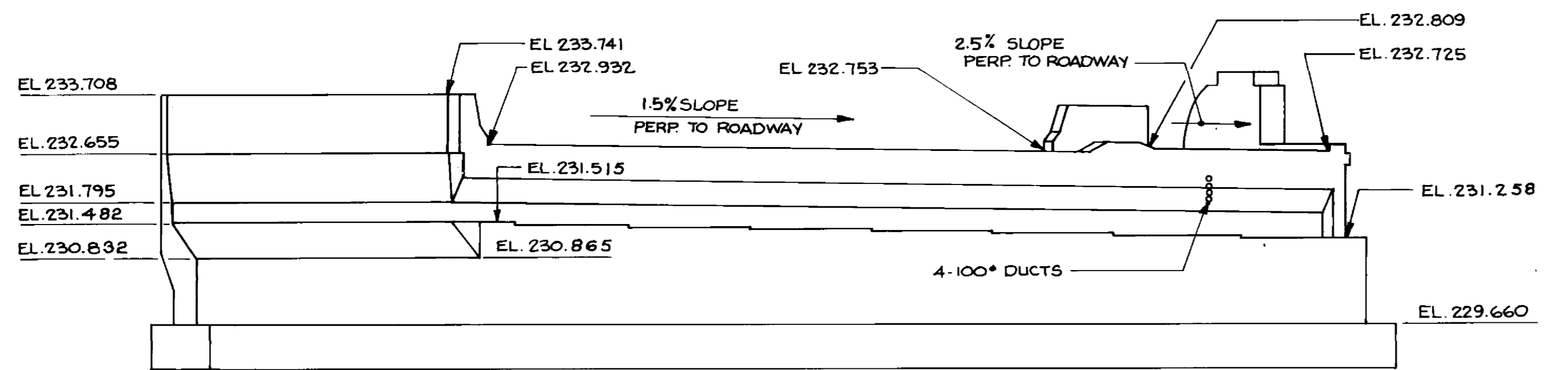


PLAN AT TOP
1:75

NOTE
FOR BEARING ANCHOR
LAYOUT SEE DWG. NO. 35

EXTEND STRANDS
450mm INTO CONC.
(TYP)

150 VOID FORM
350 HEX PRECAST
CONC. PILES (TYP.)



FRONT ELEVATION
1:75

RECORD DRAWING
APPROVED BY: *[Signature]* DATE: Dec 18/94

B-6021-22

LOCATION APPROVED UNDERGROUND STRUCTURES		B.M. ELEV.
N/A		
SUPV. U/G STRUCTURES COMMITTEE	DATE	
NOTE: LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.		
NO. REVISIONS	DATE	BY

DILLON
Consulting Engineers • Planners
Environmental Scientists

DESIGNED BY: C.R.	CHECKED BY: S.S.R.
DRAWN BY: C.R.B./D.M.M.	APPROVED BY: <i>[Signature]</i>
HOR. SCALE: AS NOTED	DATE: 16/11/94
VERTICAL SCALE: AS NOTED	DATE: 16/11/94
DATE: NOV. 1994	DATE: 16/11/94

CONSULTANT DRAWING NO.
93-1497-06-22

THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

PEMBINA HIGHWAY
SOUTH CITY LIMIT TO RUE DES TRAPPISTES
PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

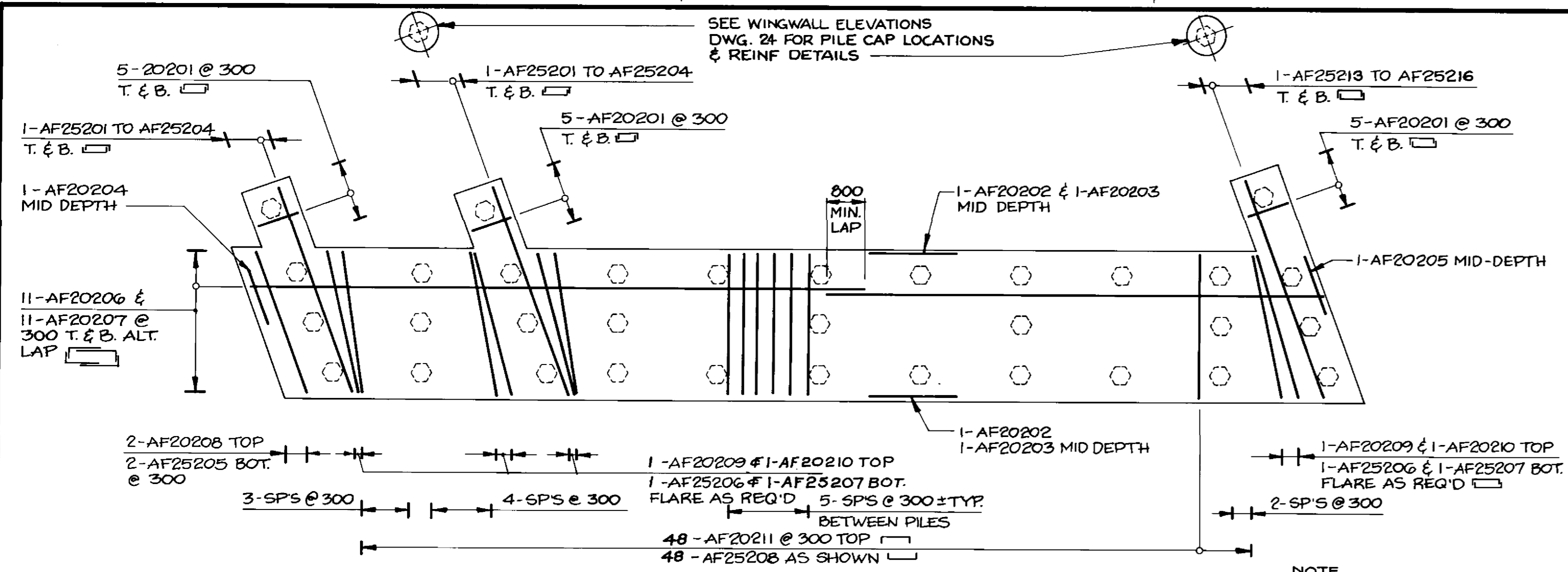
WEST STRUCTURE
SOUTH ABUTMENT - SU-1W
SHEET 1 OF 3

CITY DRAWING NUMBER
B224-95-22

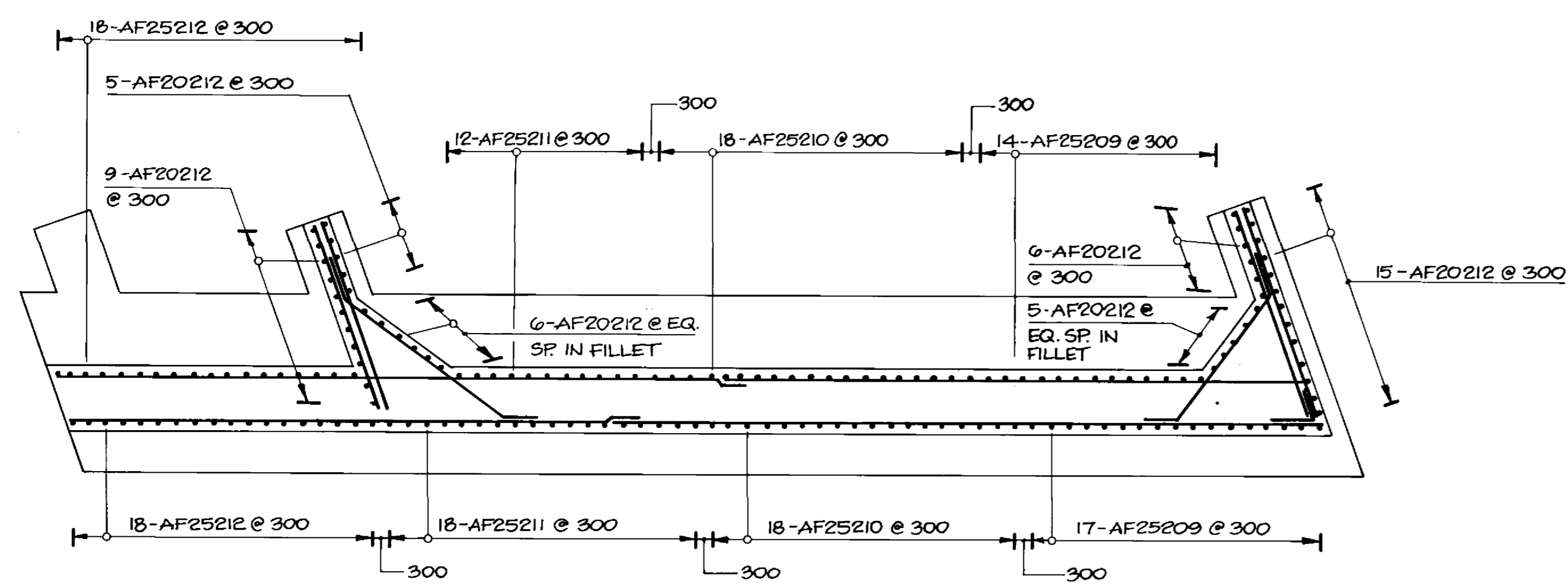
SHEET OF

P3072-A-22

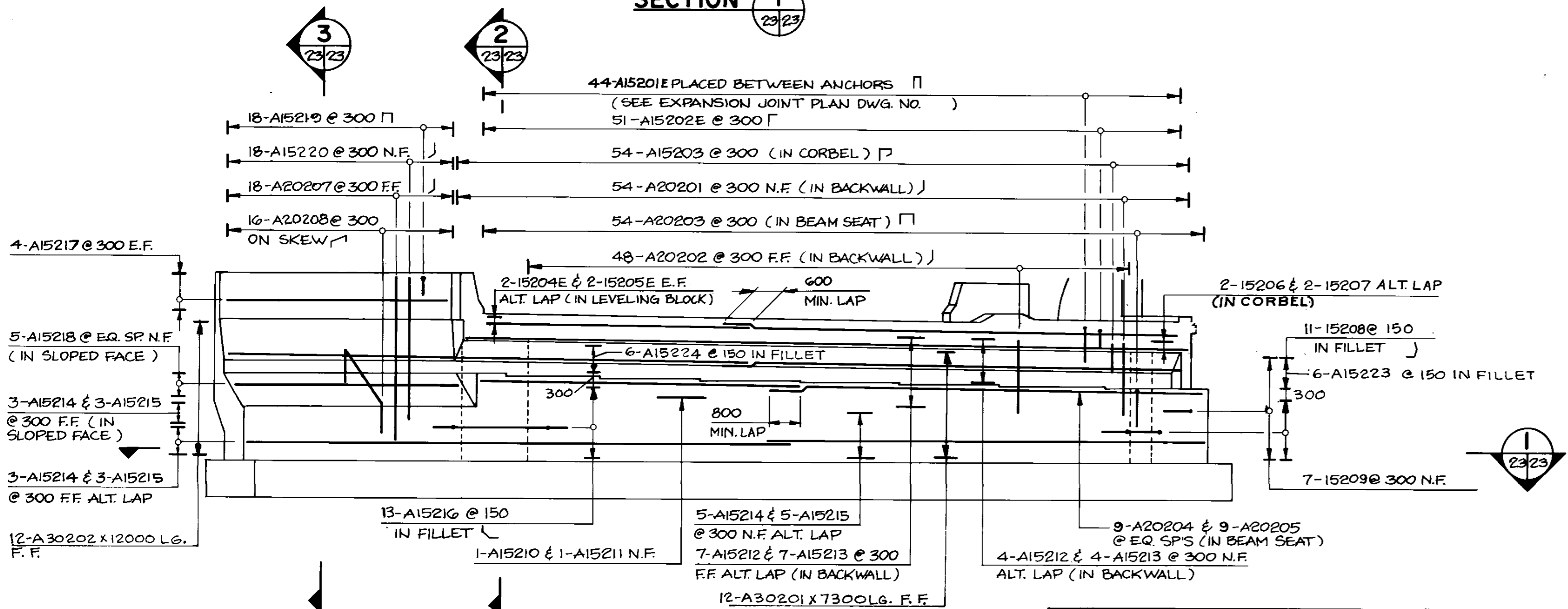
SEE WINGWALL ELEVATIONS
DWG. 24 FOR PILE CAP LOCATIONS
& REINF DETAILS



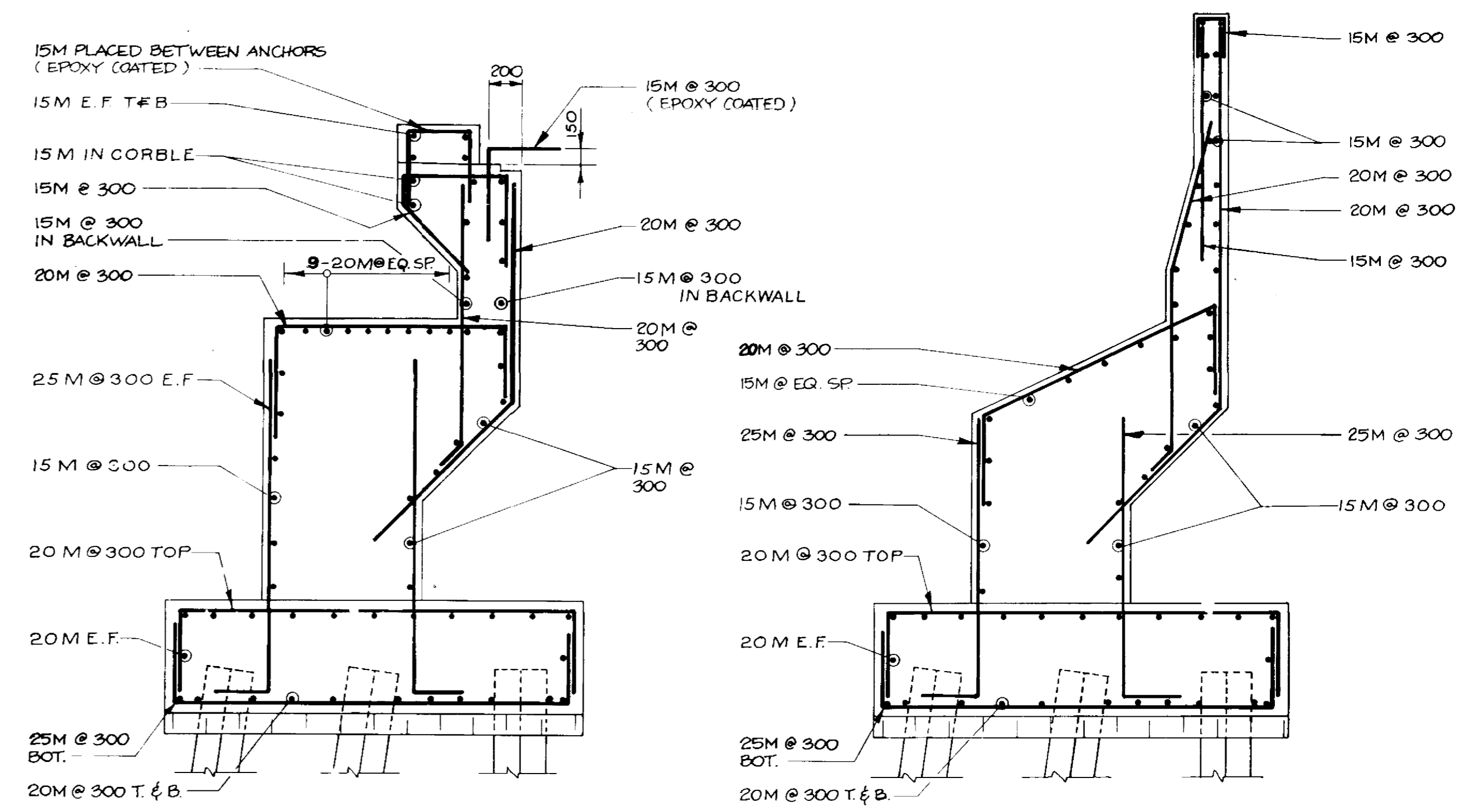
FOOTING PLAN
1:75



SECTION 1
23/23



FRONT ELEVATION
1:75



SECTION 2
23/23

SECTION 3
23/23

NOTE
FOR PILE LAYOUT
SEE DWG. NO. 21

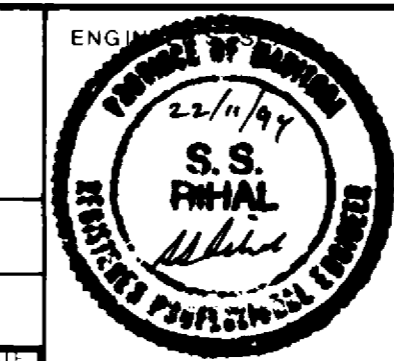
RECORD DRAWING
APPROVED BY: *[Signature]* DATE: *Dec 15/94*

B-6021-23

LOCATION APPROVED UNDERGROUND STRUCTURES		B.M. ELEV.
N/A	DATE	
SUPV. U/G STRUCTURES COMMITTEE		
NOTE: LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.		
NO REVISIONS	DATE	BY

DILLON
Consulting Engineers • Planners
Environmental Scientists

DESIGNED BY	C.R.	CHECKED BY	S.S.R.
DRAWN BY	C.R.B./D.M.W.	APPROVED BY	<i>[Signature]</i>
HOR. SCALE	AS NOTED	DATE	NOV. 1994
VERTICAL		DATE	



THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

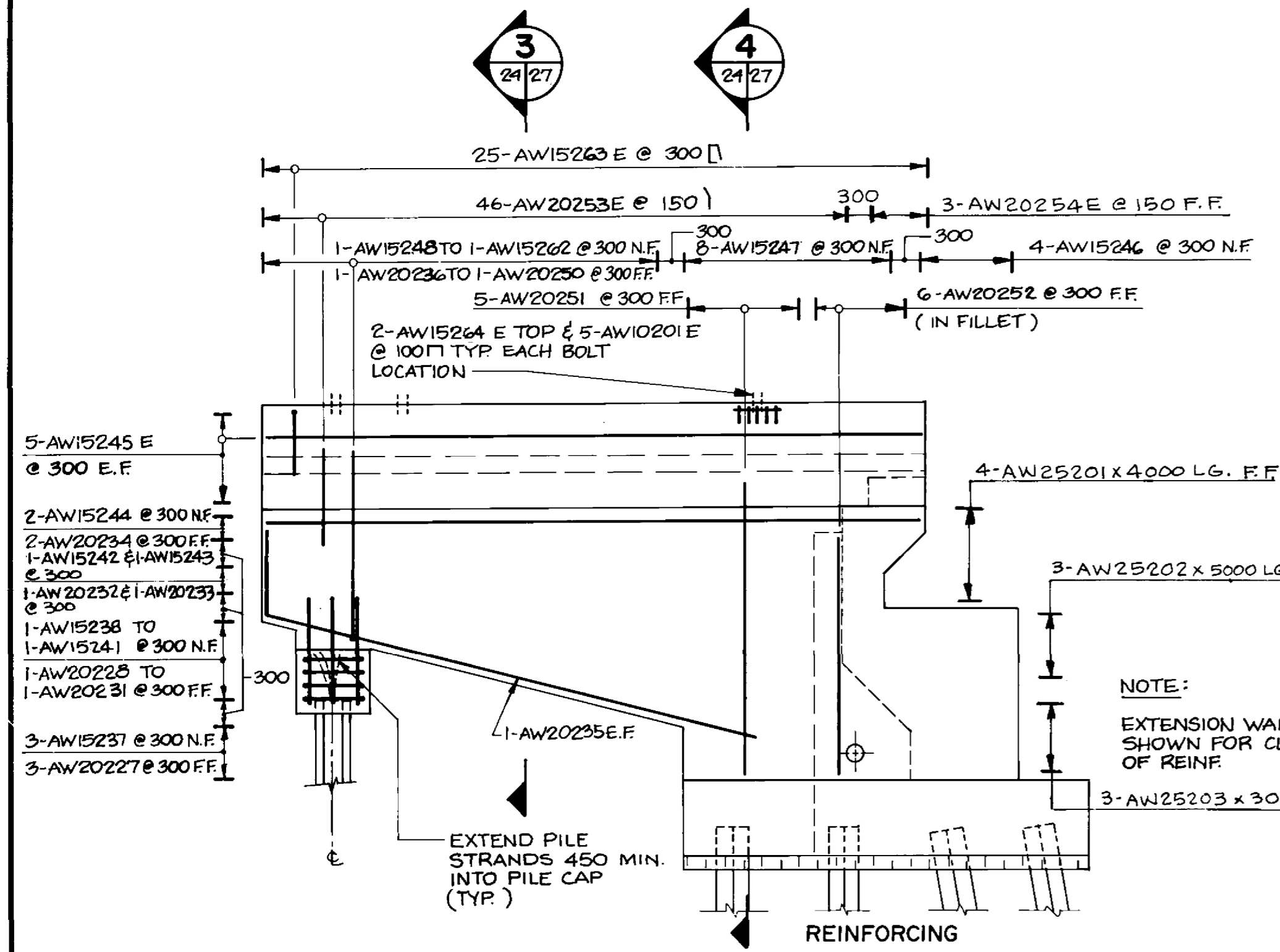
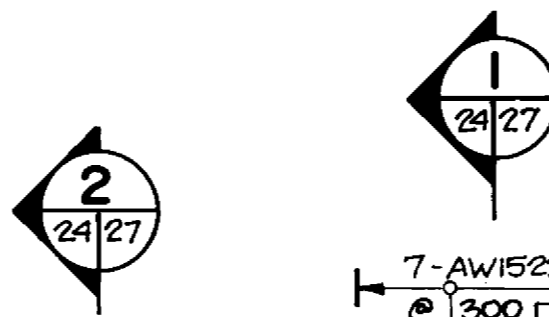
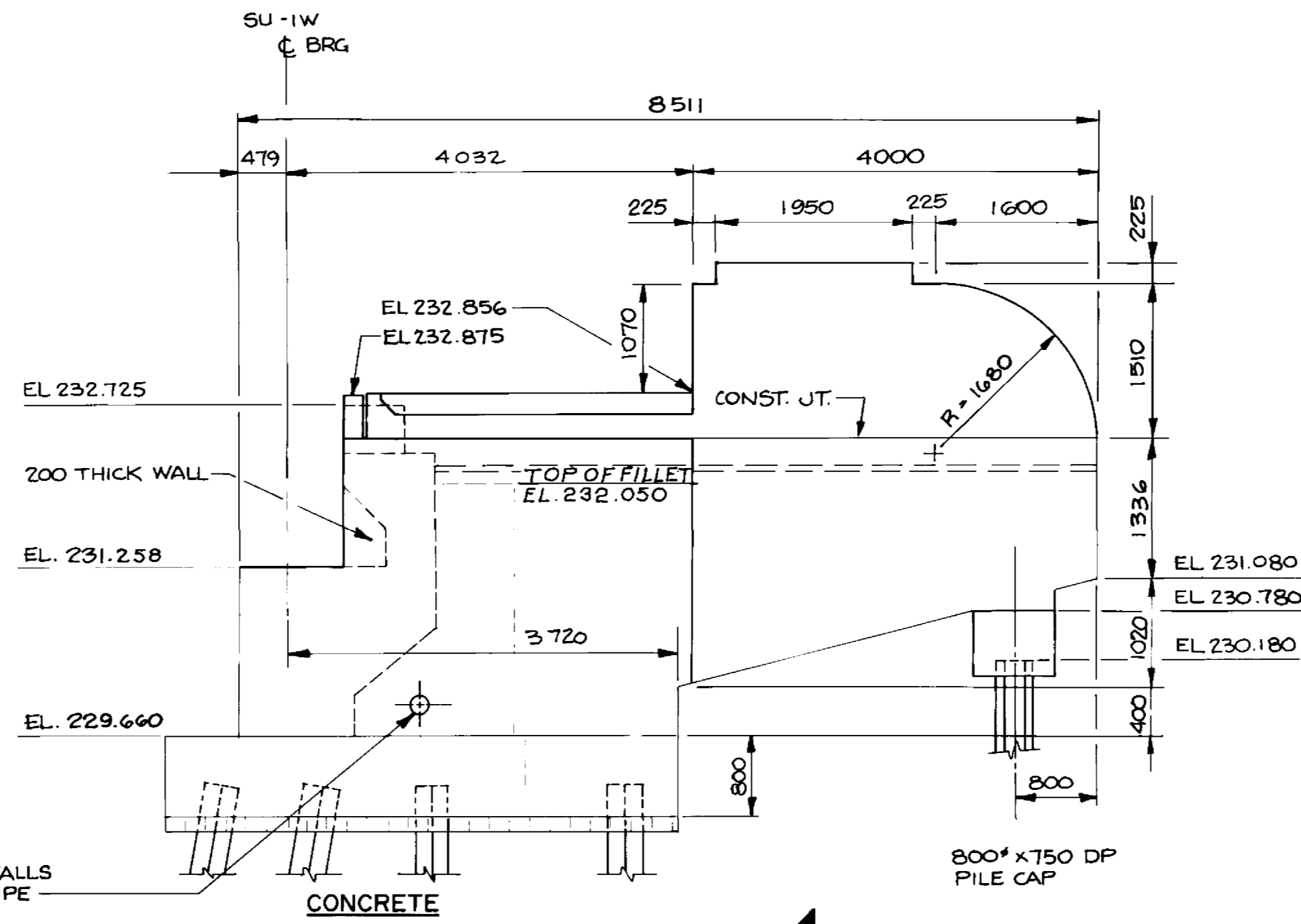
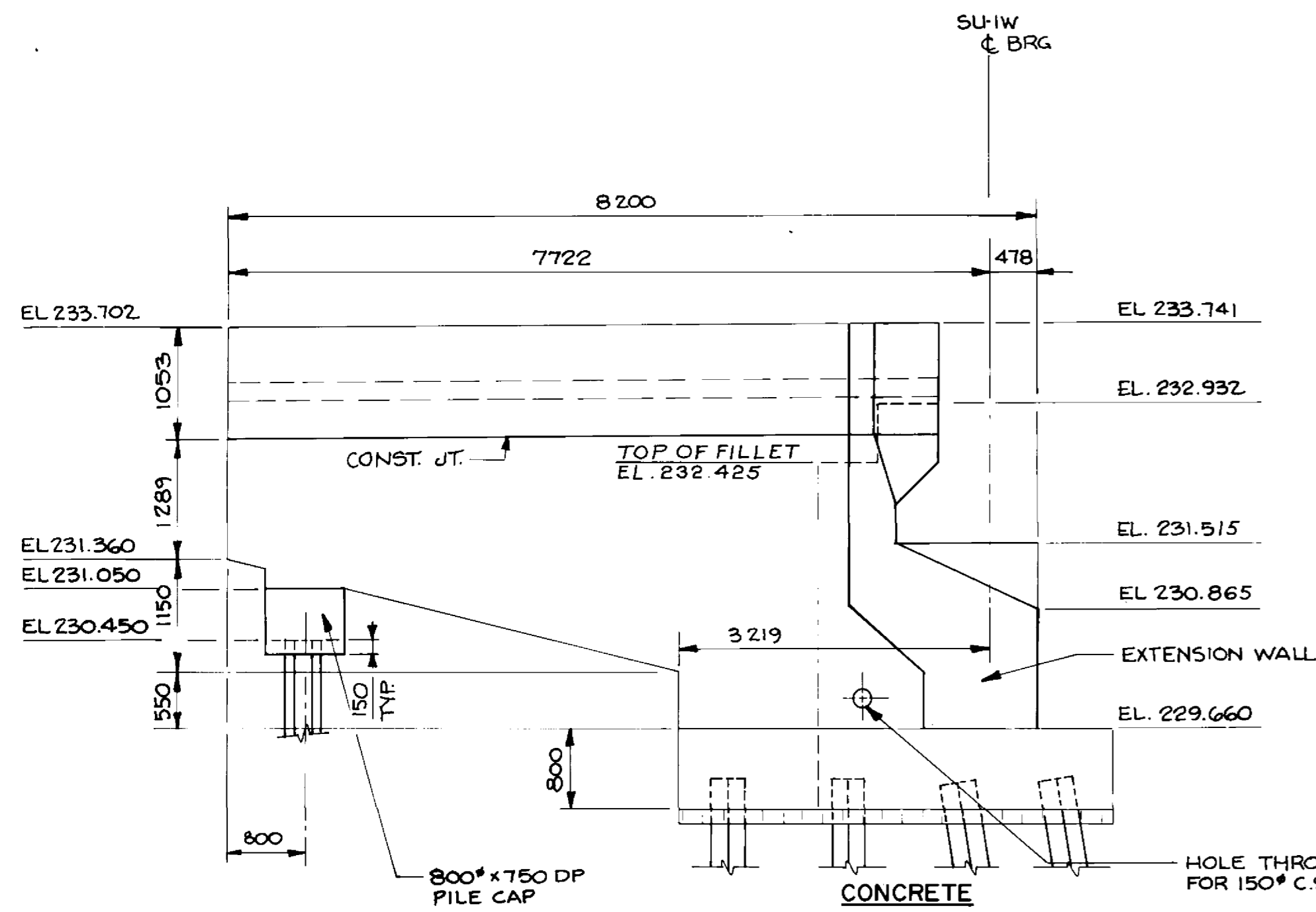
PEMBINA HIGHWAY
SOUTH CITY LIMIT TO RUE DES TRAPPISTES
PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

WEST STRUCTURE
SOUTH ABUTMENT - SU-1W
SHEET 2 OF 3

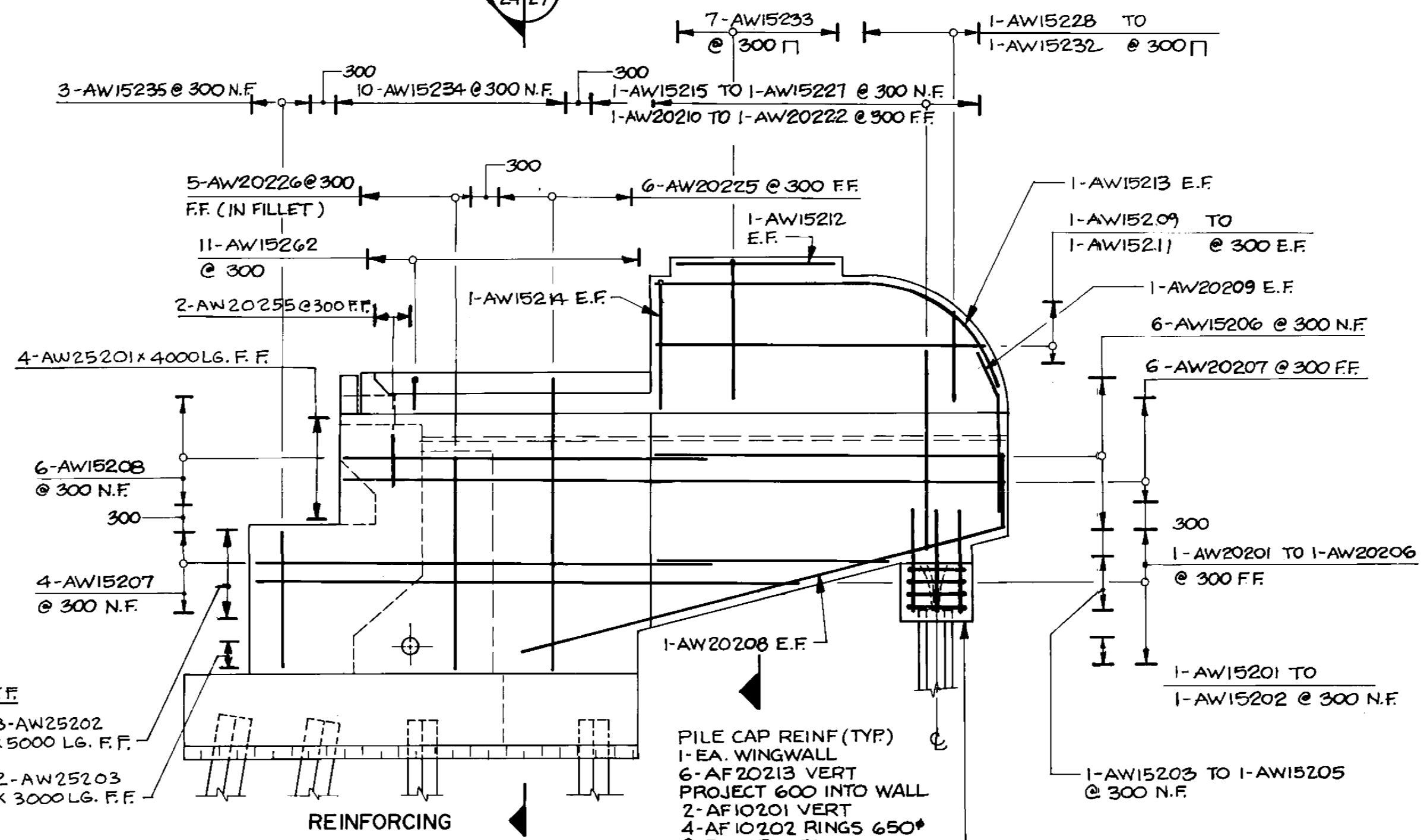
CITY DRAWING NUMBER
B224-95-23
SHEET OF

P3072-A-23

CONSULTANT DRAWING NO.
93-1497-06-23



EAST WINGWALL ELEVATION
1:50



WEST WINGWALL ELEVATION
1:50

NOTE:
EXTENSION WALL NOT SHOWN FOR CLARITY OF REINF.

PILE CAP REINF (TYP)
1-EA. WINGWALL
6-AF20213 VERT PROJECT 600 INTO WALL
2-AF10201 VERT
4-AF10202 RINGS 650° @ EQ SPACES

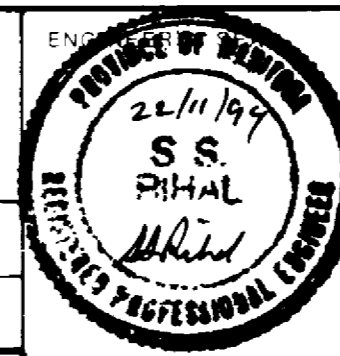
RECORD DRAWING

APPROVED BY: *[Signature]* DATE: *Dec 14/94*

B-6021-24

LOCATION APPROVED UNDERGROUND STRUCTURES	B.M. ELEV.
N/A	
SUPV. U/G STRUCTURES DATE	
COMMITTEE	
NOTE:	
IF ANY CHANGES TO THIS DRAWING ARE MADE, THE ENGINEER SHALL BE ADVISED AND THE ORIGINAL DRAWING SHALL BE REVISIONED. ANY CHANGES SHALL BE MADE IN ACCORDANCE WITH THE REVISIONS LISTED BELOW.	
NO. REVISIONS	DATE BY

DILLON
Consulting Engineers • Planners
Environmental Scientists

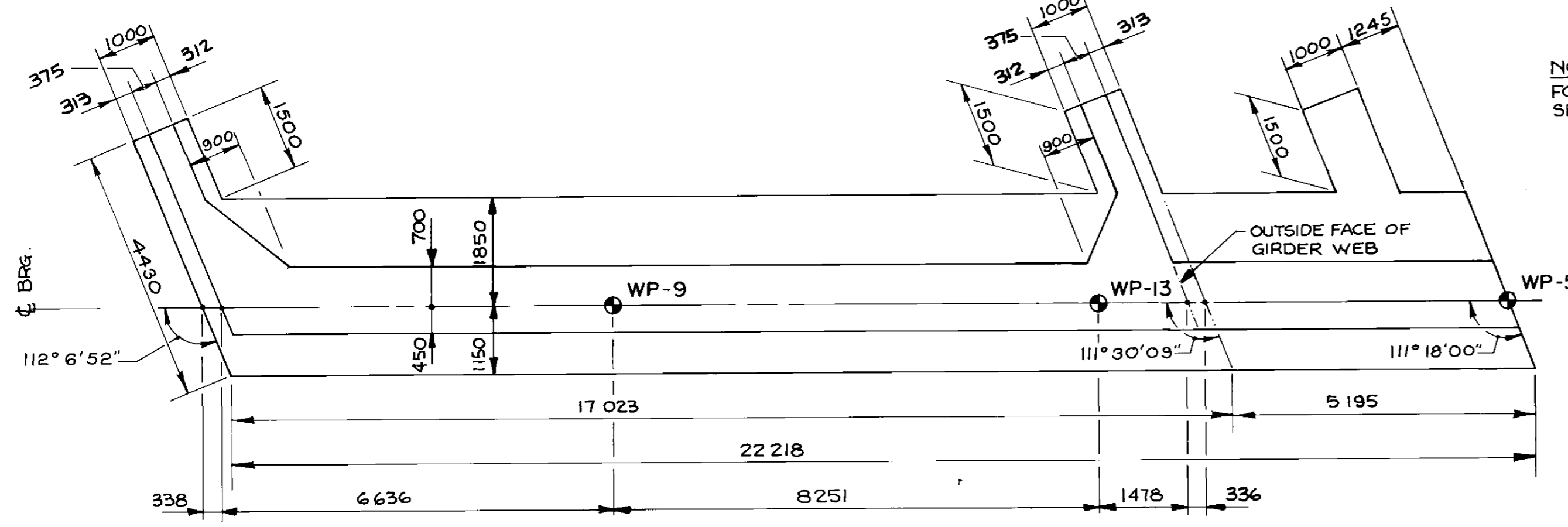


DESIGNED BY	C.R.	CHECKED BY	S.S.R.
DRAWN BY	C.R.B./D.M.W.		
HOR. SCALE	AS NOTED		
VERT. SCALE			
DATE	NOV. 1994		

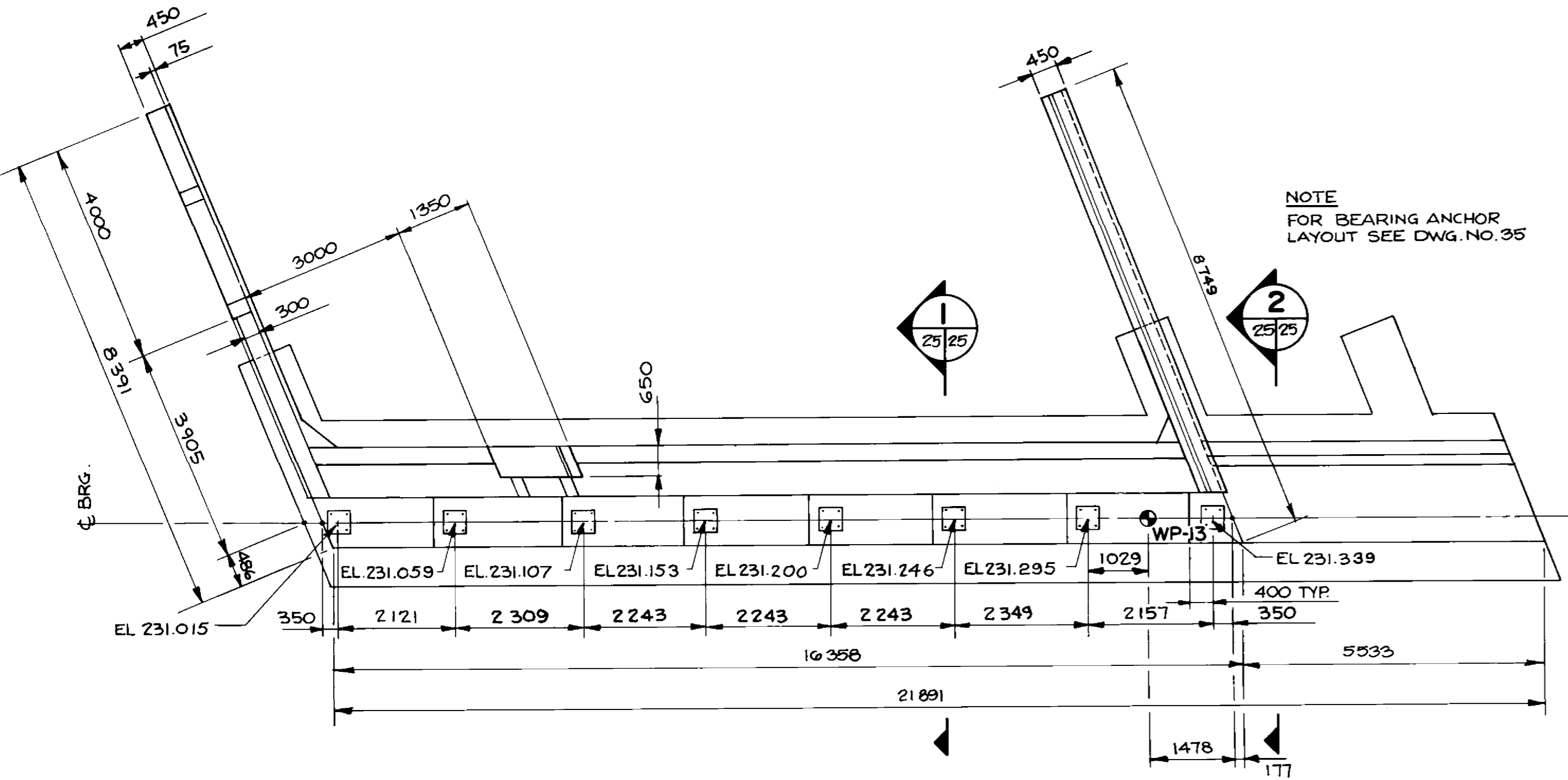
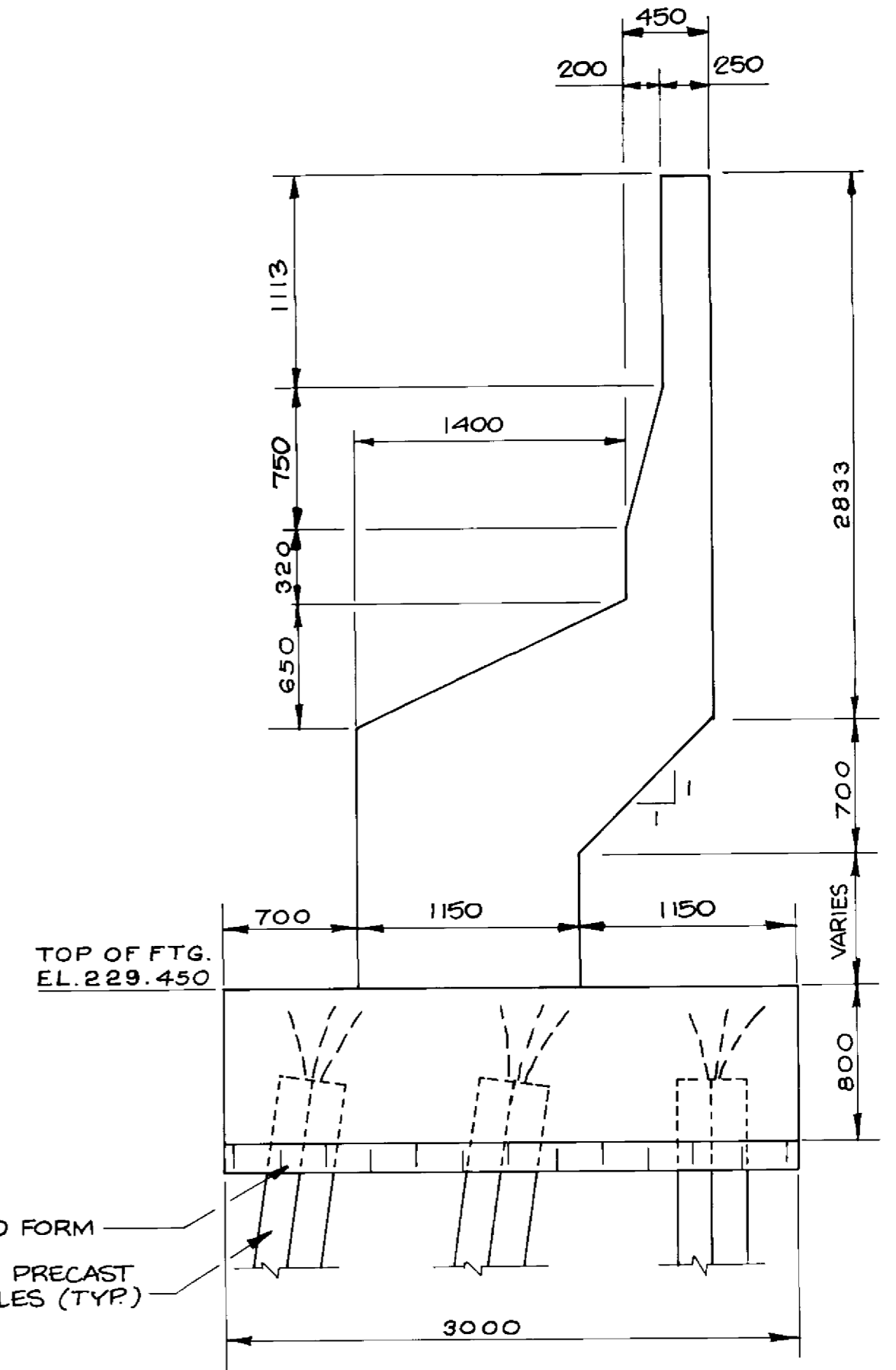
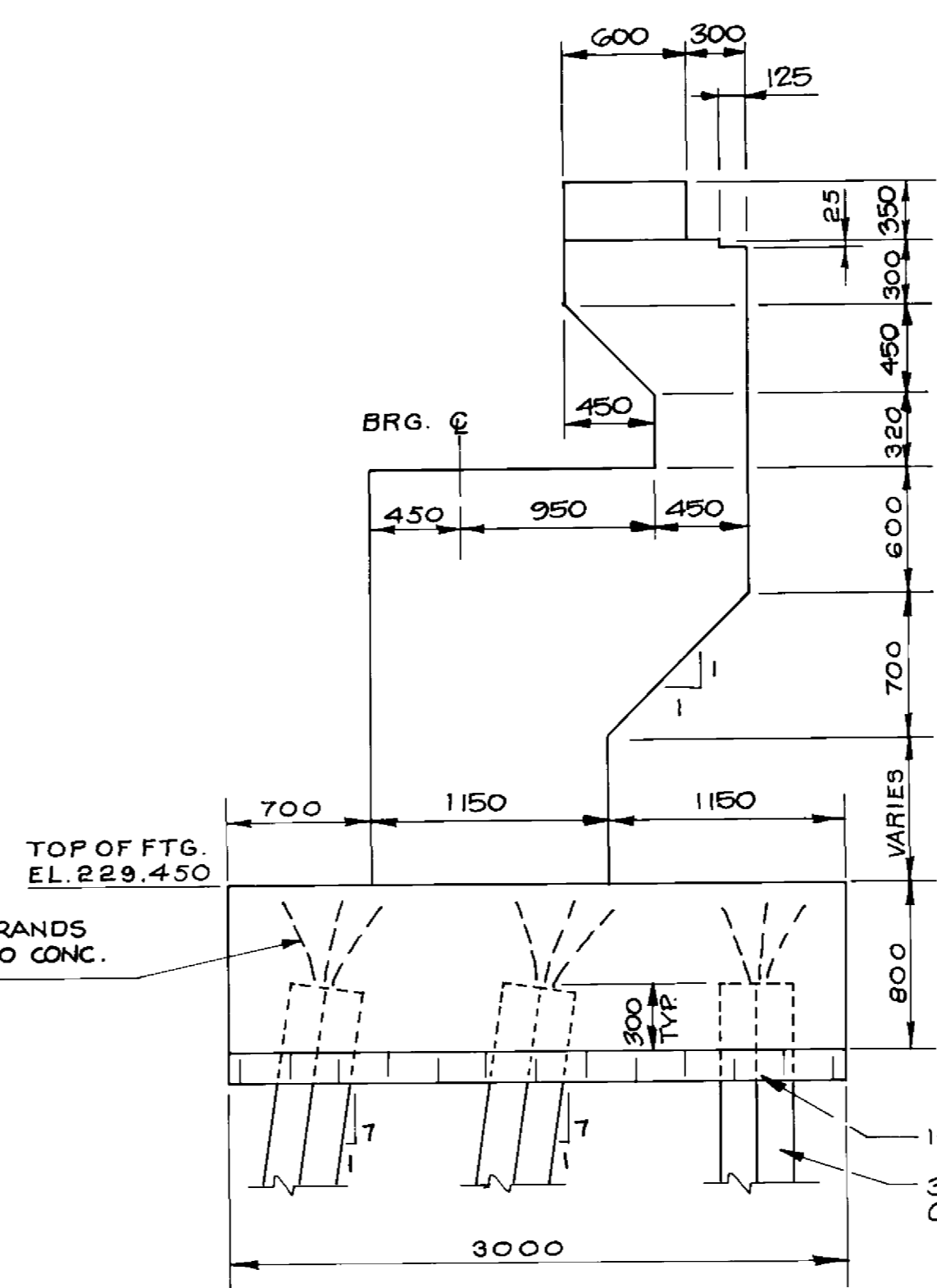
THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

PEMBINA HIGHWAY	B224-95-24
SOUTH CITY LIMIT TO RUE DES TRAPPISTES PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER	
WEST STRUCTURE SOUTH ABUTMENT - SU-1W	P3072-A-24
SHEET 3 OF 3	

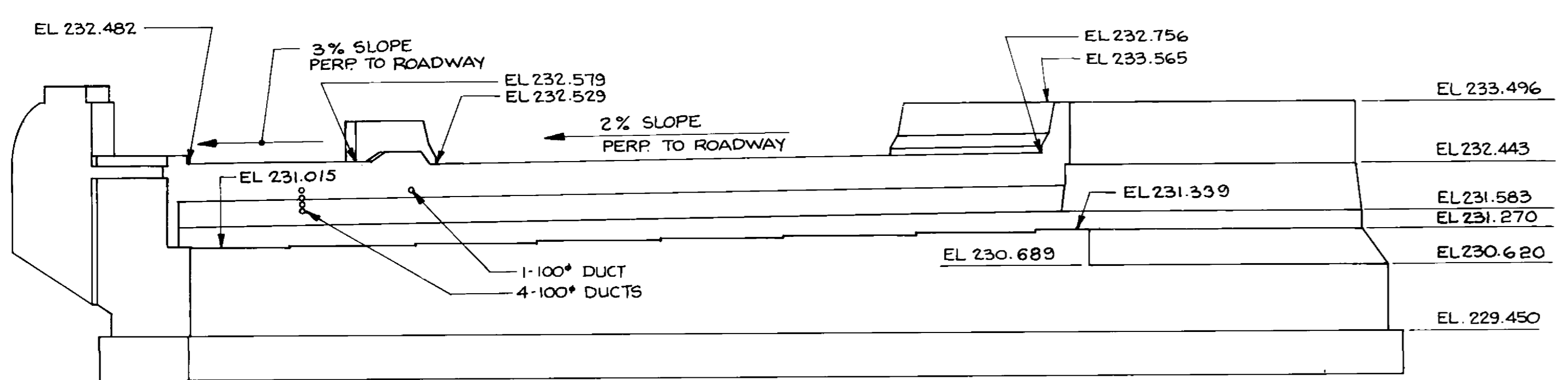
93-1497-06-24



NOTE FOR PILE LAYOUT SEE DWG. NO 21



NOTE FOR BEARING ANCHOR LAYOUT SEE DWG. NO. 35



RECORD DRAWING
 APPROVED BY: *[Signature]* DATE: *Dec 12/94*

B-6021-25

LOCATION APPROVED UNDERGROUND STRUCTURES
 N/A
 SUP. U/G STRUCTURES DATE COMMITTEE
 NOTE:
 THIS IS A GENERAL NOTE FOR THE CONTRACTOR TO BE OBSERVED AT ALL TIMES AND TO BE KEPT ON FILE AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND AUTHORITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND AUTHORITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND AUTHORITIES.

NO.	REVISIONS	DATE	BY

DILLON
 Consulting Engineers - Planners
 Environmental Scientists

DESIGNED BY: C.R.
 DRAWN BY: C.R.B./D.M.W.
 CHECKED BY: S.S.R.
 HORIZ. SCALE: AS NOTED
 VERT. SCALE: AS NOTED
 DATE: NOV. 1994

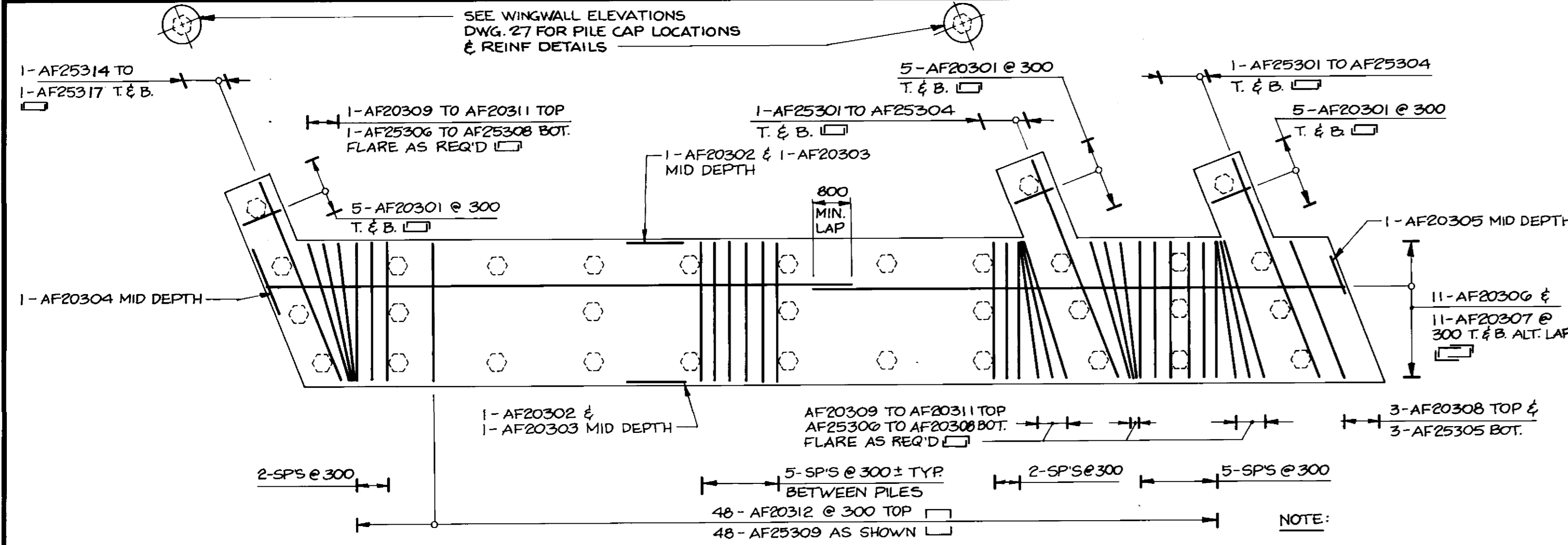
PROFESSIONAL ENGINEER
 22/1/94
 S.S.
 R.H.A.L.
 93-1497-06-25

THE CITY OF WINNIPEG
 WORKS AND OPERATIONS DIVISION
 STREETS AND TRANSPORTATION DEPARTMENT

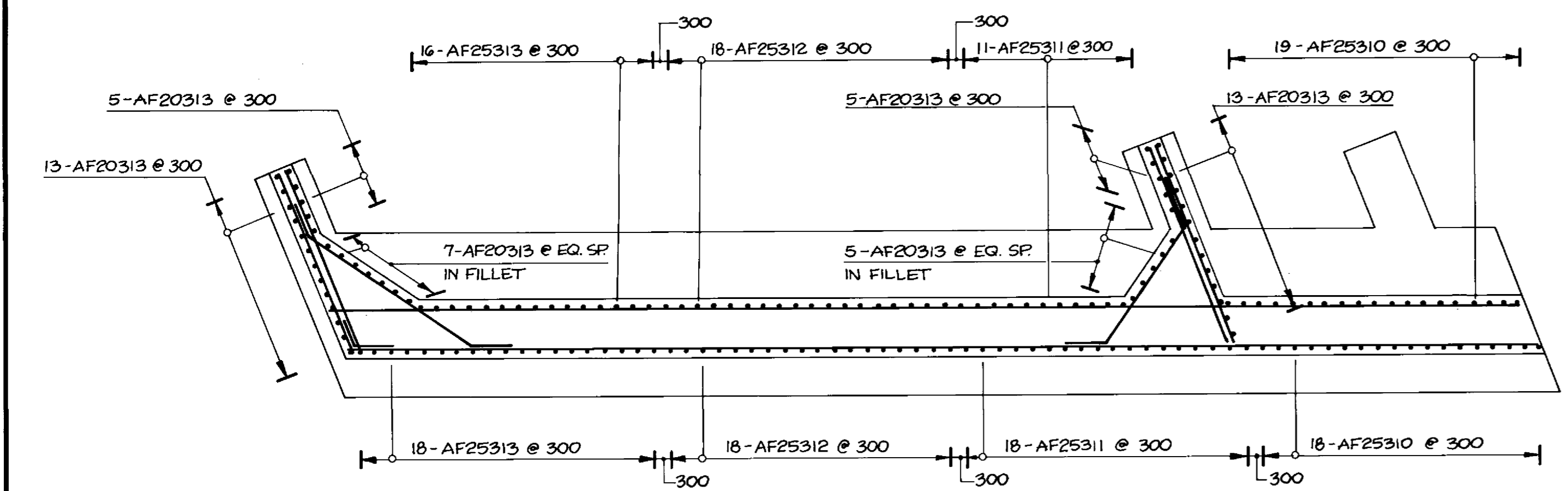
PEMBINA HIGHWAY
 SOUTH CITY LIMIT TO RUE DES TRAPPISTES
 PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

WEST STRUCTURE
 NORTH ABUTMENT - SU-4W
 SHEET 1 OF 3

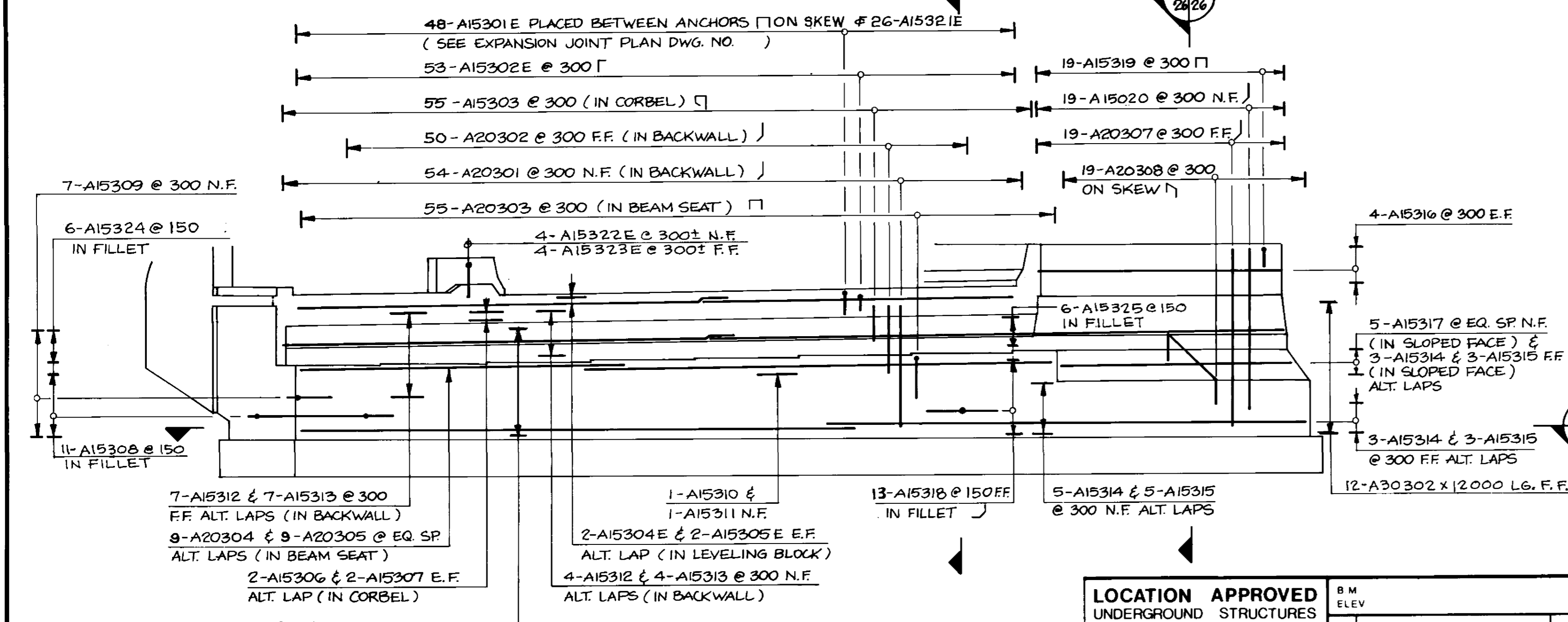
B224-95-25
 P3072-A-25



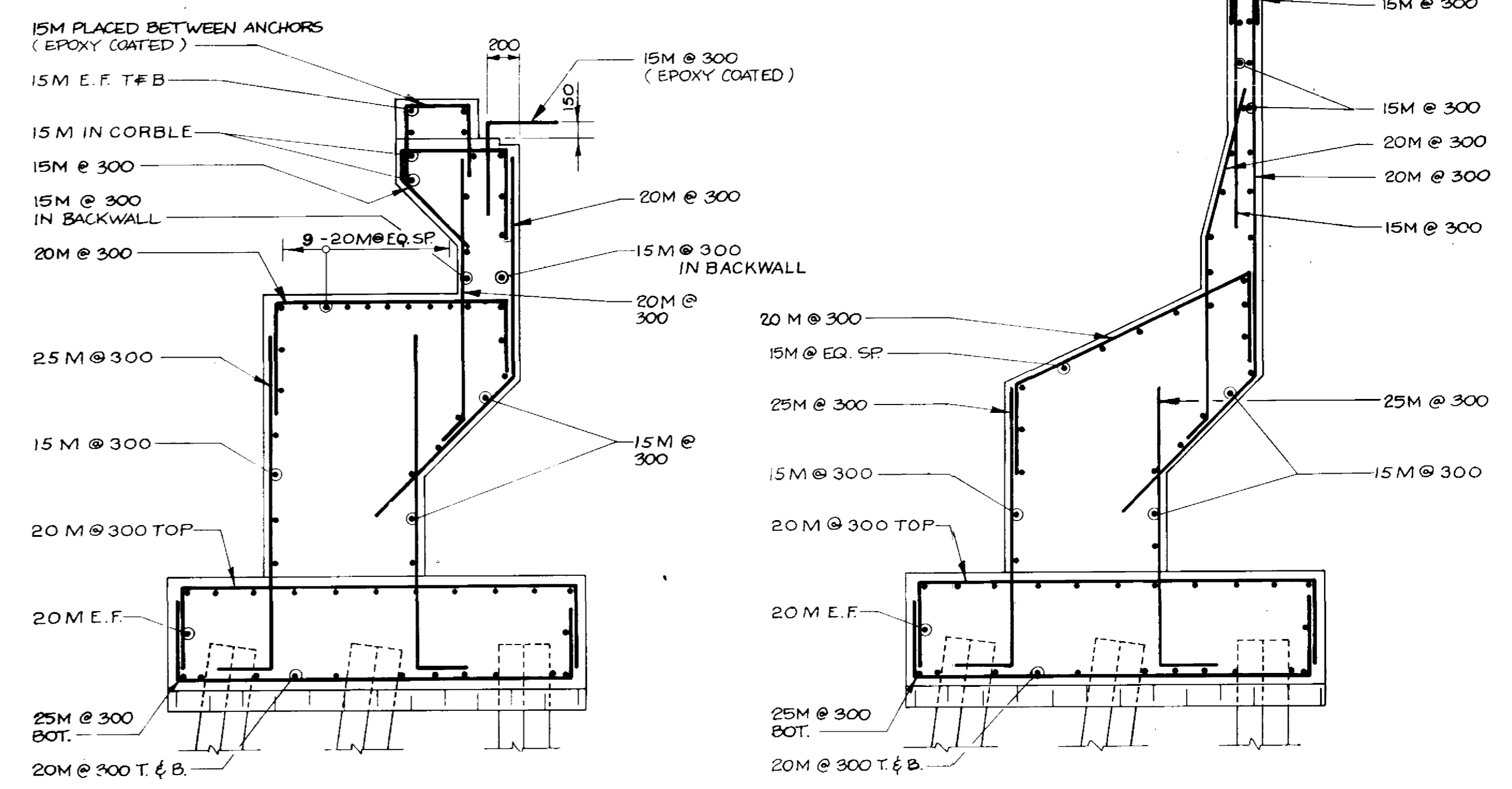
FOOTING PLAN
1:75



SECTION 1
1:75



FRONT ELEVATION
1:75



SECTION 2
1:30

SECTION 3
1:30

NOTE:
FOR HORIZONTAL REBAR SPACING
SEE ELEVATION BELOW.

LOCATION APPROVED UNDERGROUND STRUCTURES
N/A

SUPV. U/G STRUCTURES DATE COMMITTEE

NOTE:
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

NO	REVISIONS	DATE	BY

DILLON
Consulting Engineers • Planners
Environmental Scientists

DESIGNED BY C.R. CHECKED BY S.S.R.

DRAWN BY C.R.B./D.M.W. APPROVED BY [Signature]

HOR. SCALE AS NOTED VERTICAL SCALE AS NOTED

DATE NOV. 1994

CONSULTANT DRAWING NO. 93-1497-06-26

RECORD DRAWING

APPROVED BY: [Signature] DATE: Dec 18/94

B-6021-26

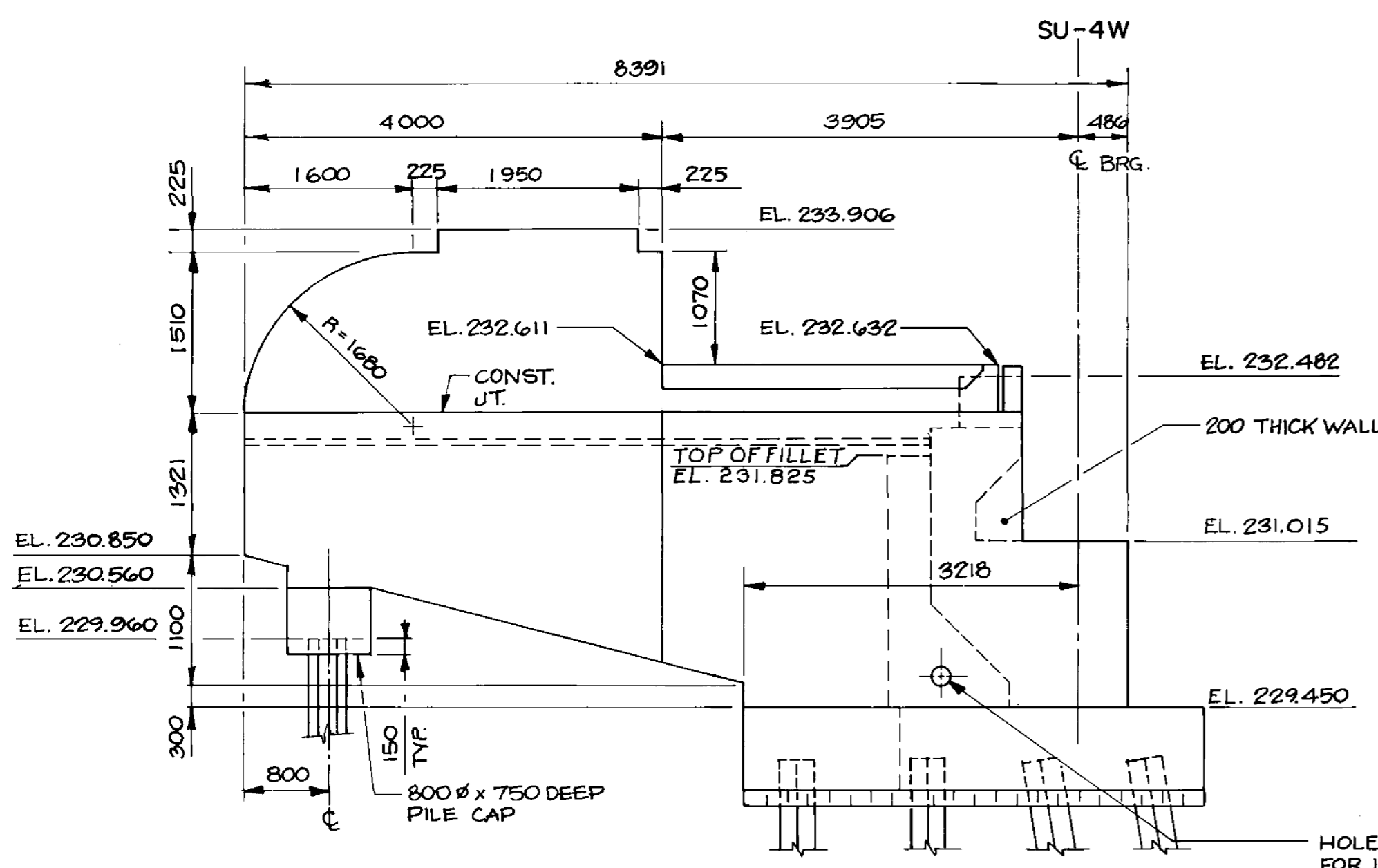
THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

PEMBINA HIGHWAY
SOUTH CITY LIMIT TO RUE DES TRAPPISTES
PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

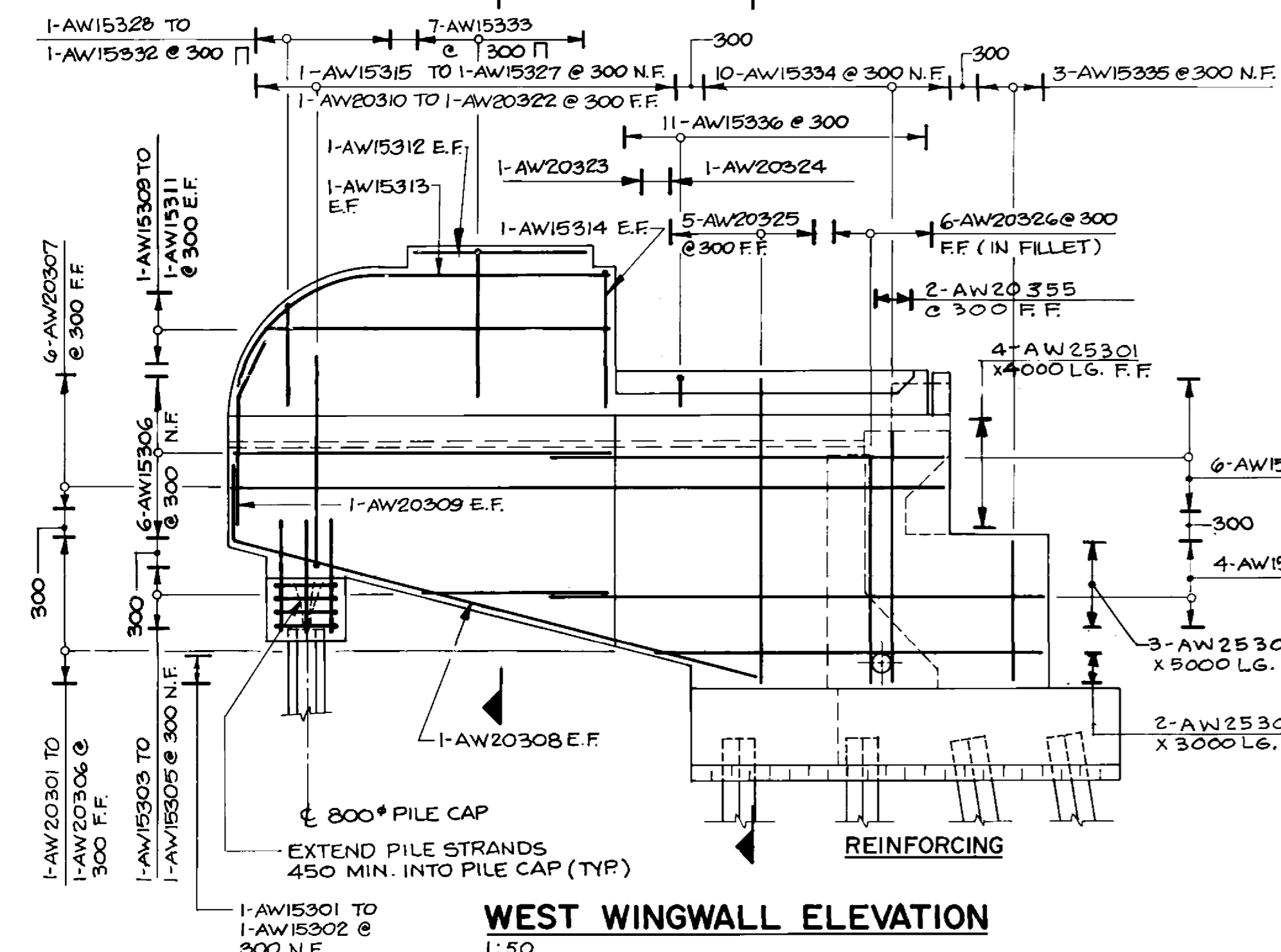
WEST STRUCTURE
NORTH ABUTMENT - SU-4W
SHEET 2 OF 3

CITY DRAWING NUMBER B224-95-26
SHEET OF

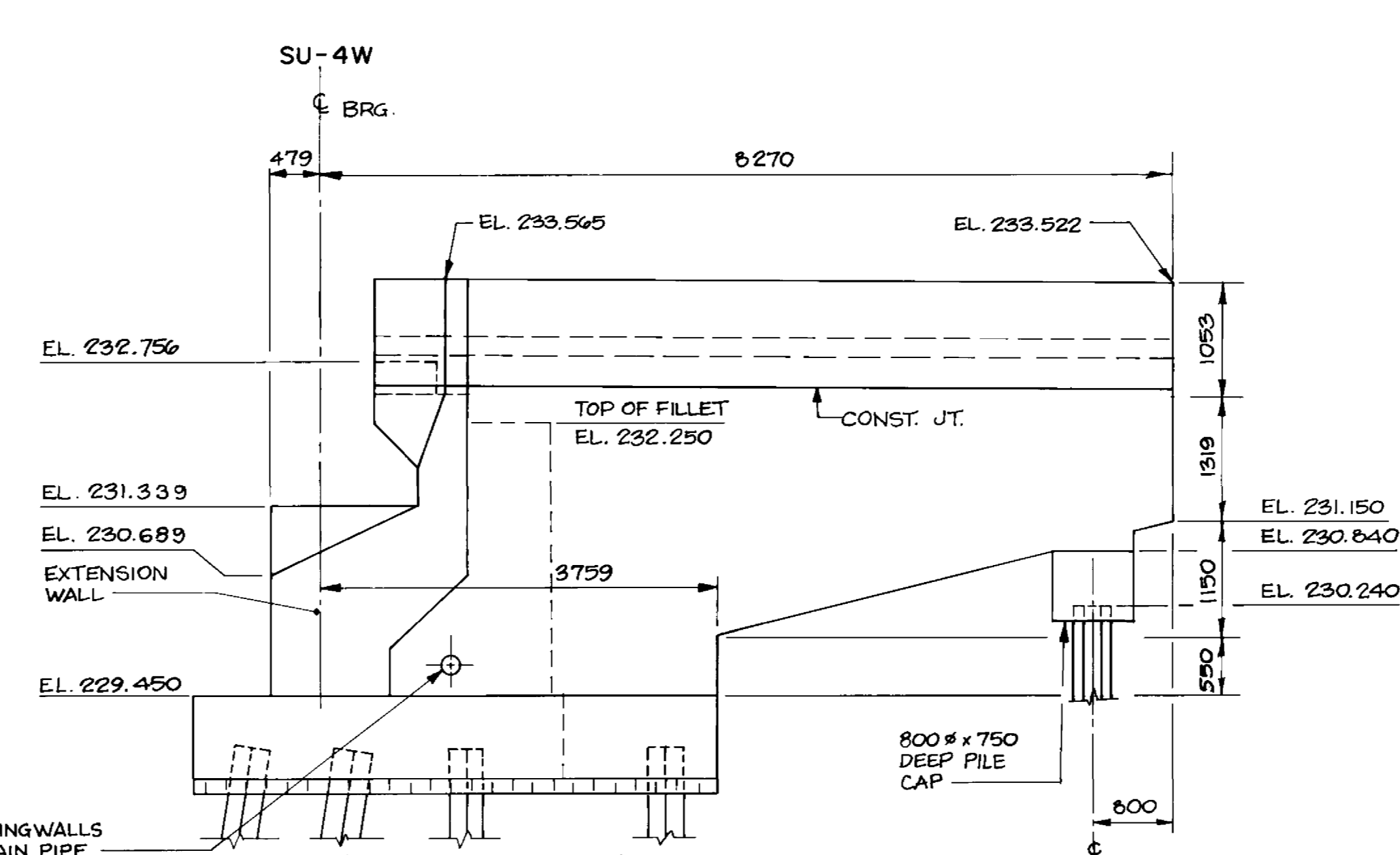
P3072-A-26



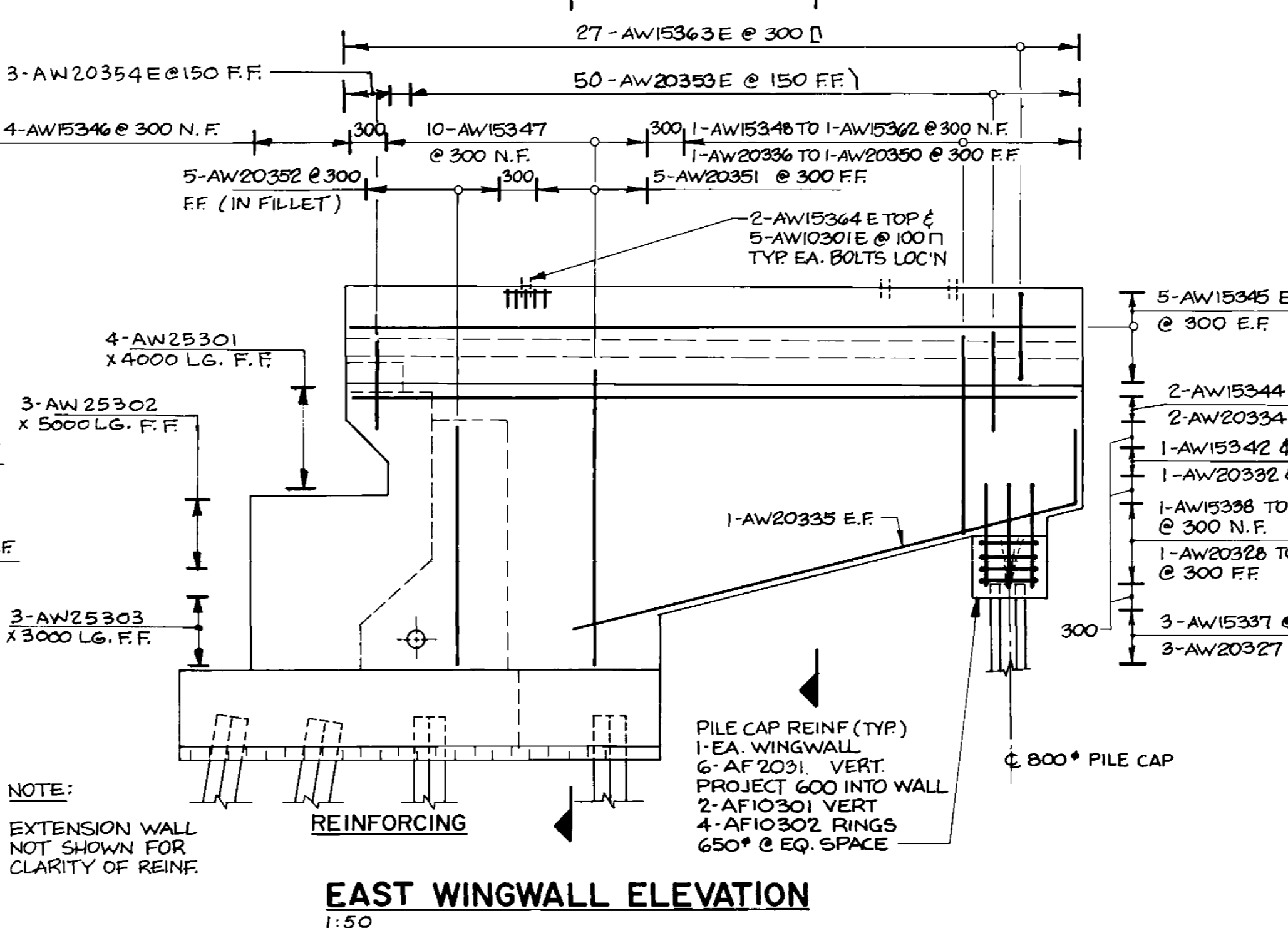
WEST WINGWALL ELEVATION
1:50



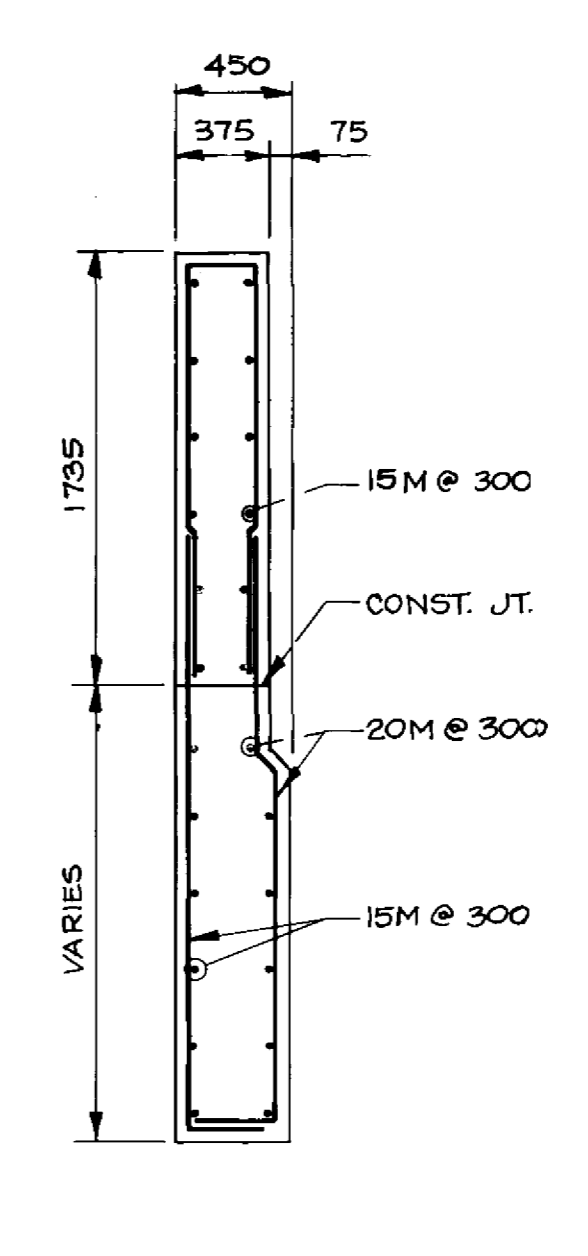
WEST WINGWALL ELEVATION
1:50



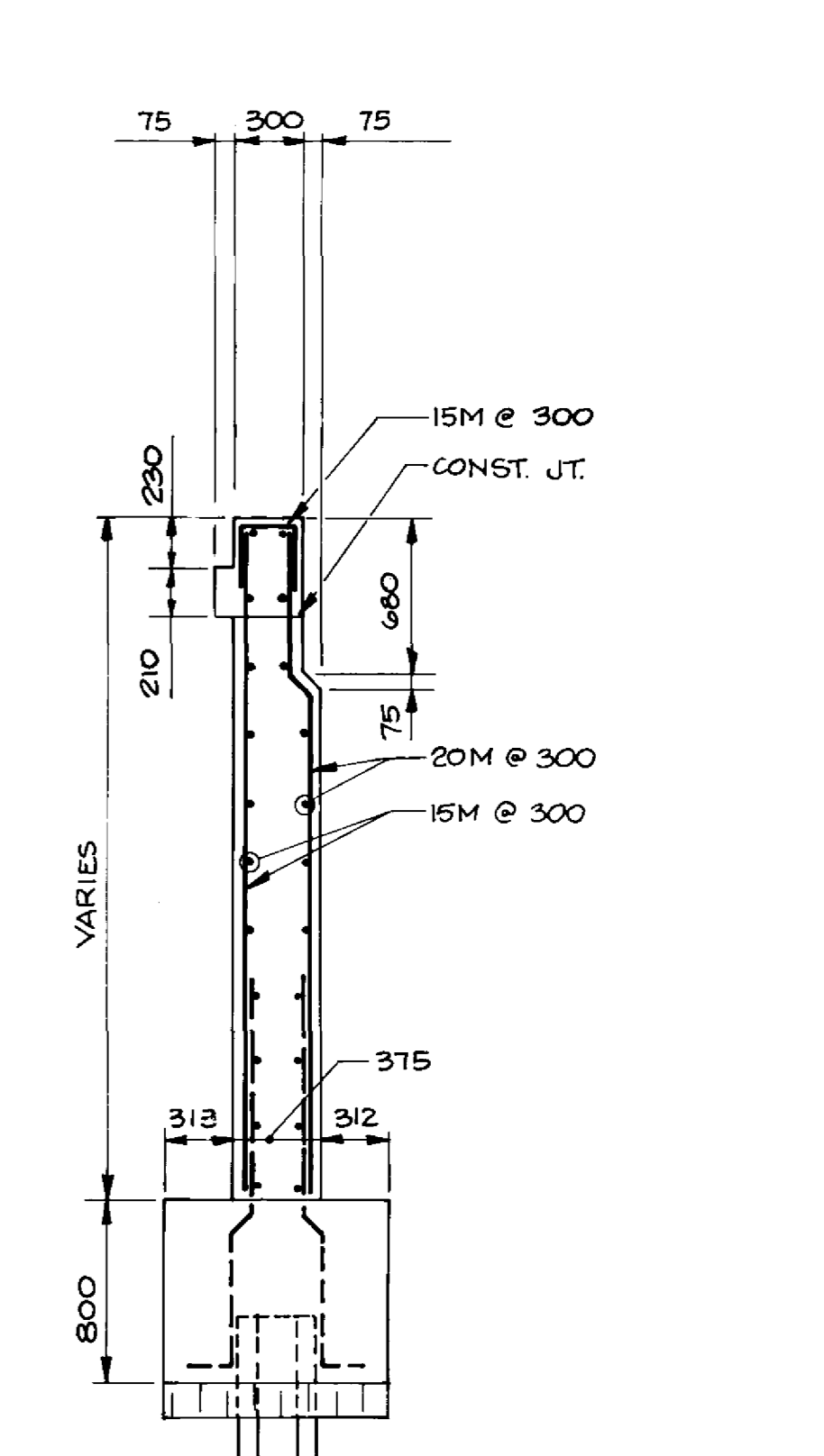
EAST WINGWALL ELEVATION
1:50



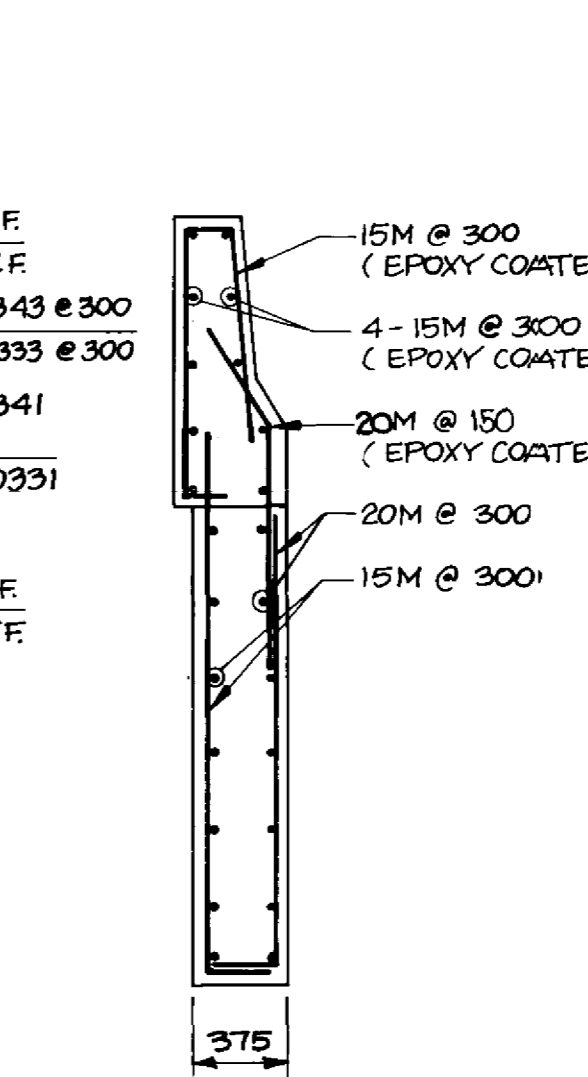
EAST WINGWALL ELEVATION
1:50



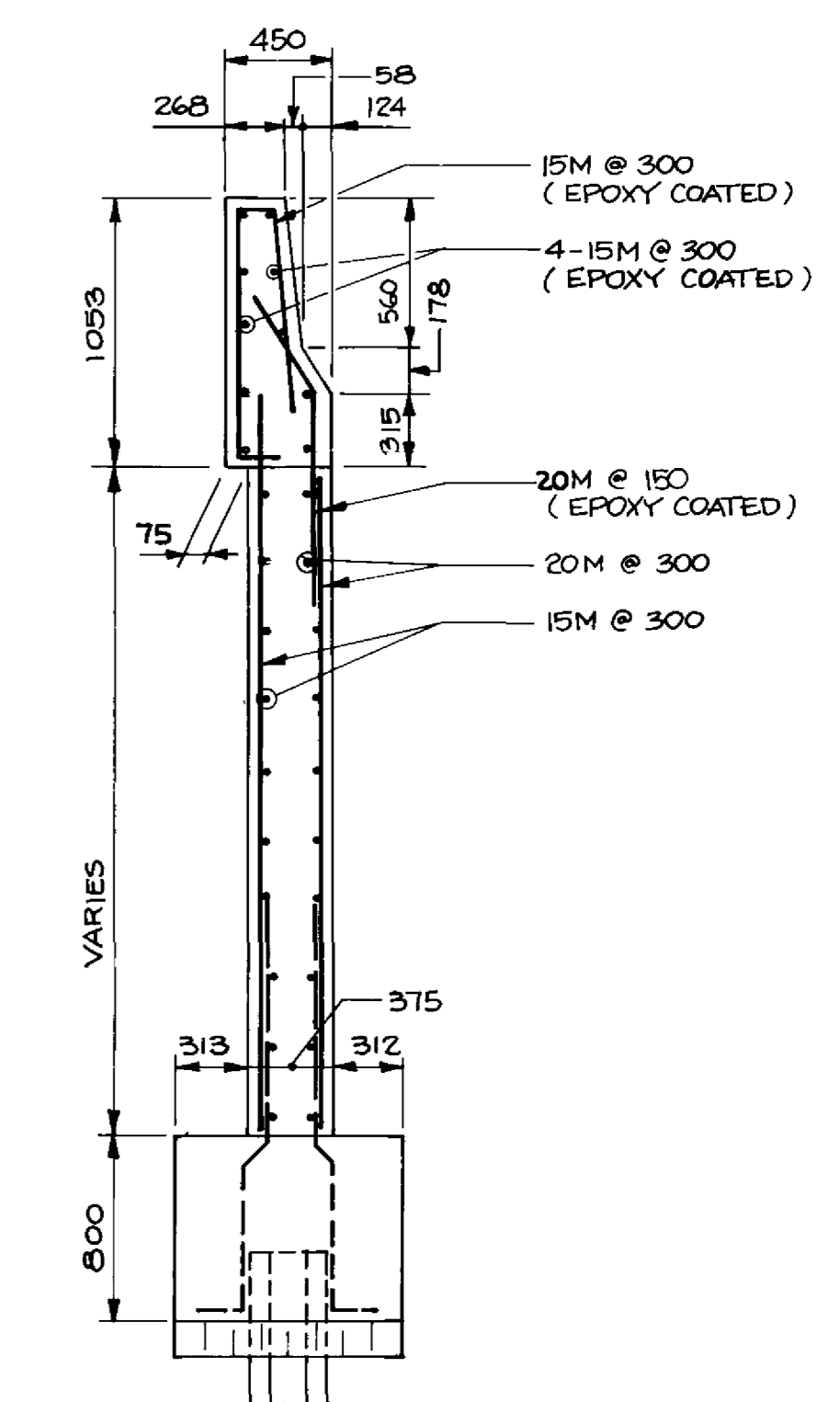
SECTION 1
1:30



SECTION 2
1:30



SECTION 3
1:30



SECTION 4
1:30

NOTE:
EXTENSION WALL NOT SHOWN FOR CLARITY OF REIN.

PILE CAP REIN (TYP)
1-EA. WINGWALL
6-AF2031 VERT. PROJECT 600 INTO WALL
2-AF10302 VERT
4-AF10302 RINGS 650 @ EQ. SPACE

RECORD DRAWING

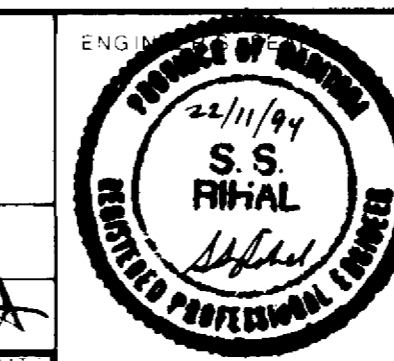
APPROVED BY: *[Signature]* DATE: Dec 14/94

B-6021-27

LOCATION APPROVED UNDERGROUND STRUCTURES N/A	B.M. ELEV.
SUPV. ENG. STRUCTURES DATE	
NOTE:	
NO. REVISIONS	DATE BY

DILLON
Consulting Engineers • Planners
Environmental Scientists

DESIGNED BY	C.R.	CHECKED BY	S.S.R.
DRAWN BY	C.R.B./D.M.W.	APPROVED BY	<i>[Signature]</i>
HOR. SCALE	AS NOTED	DATE	NOV. 1994



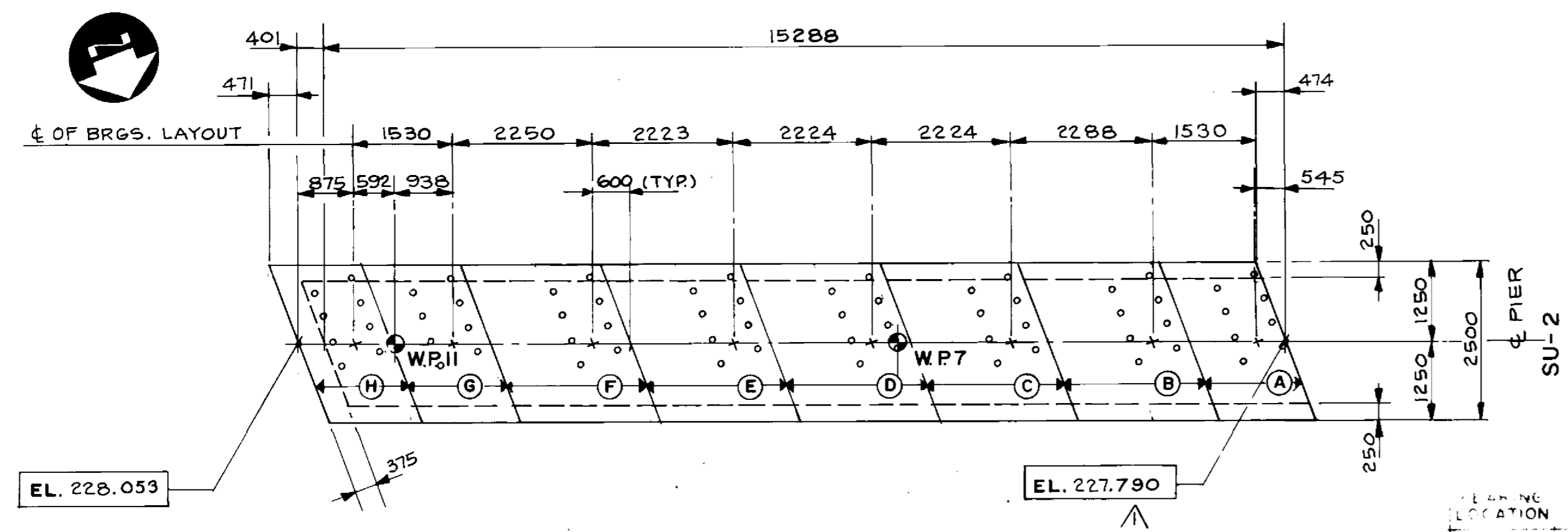
THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

PEMBINA HIGHWAY
SOUTH CITY LIMIT TO RUE DES TRAPPISTES
PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

WEST STRUCTURE
NORTH ABUTMENT - SU-4W
SHEET 3 OF 3

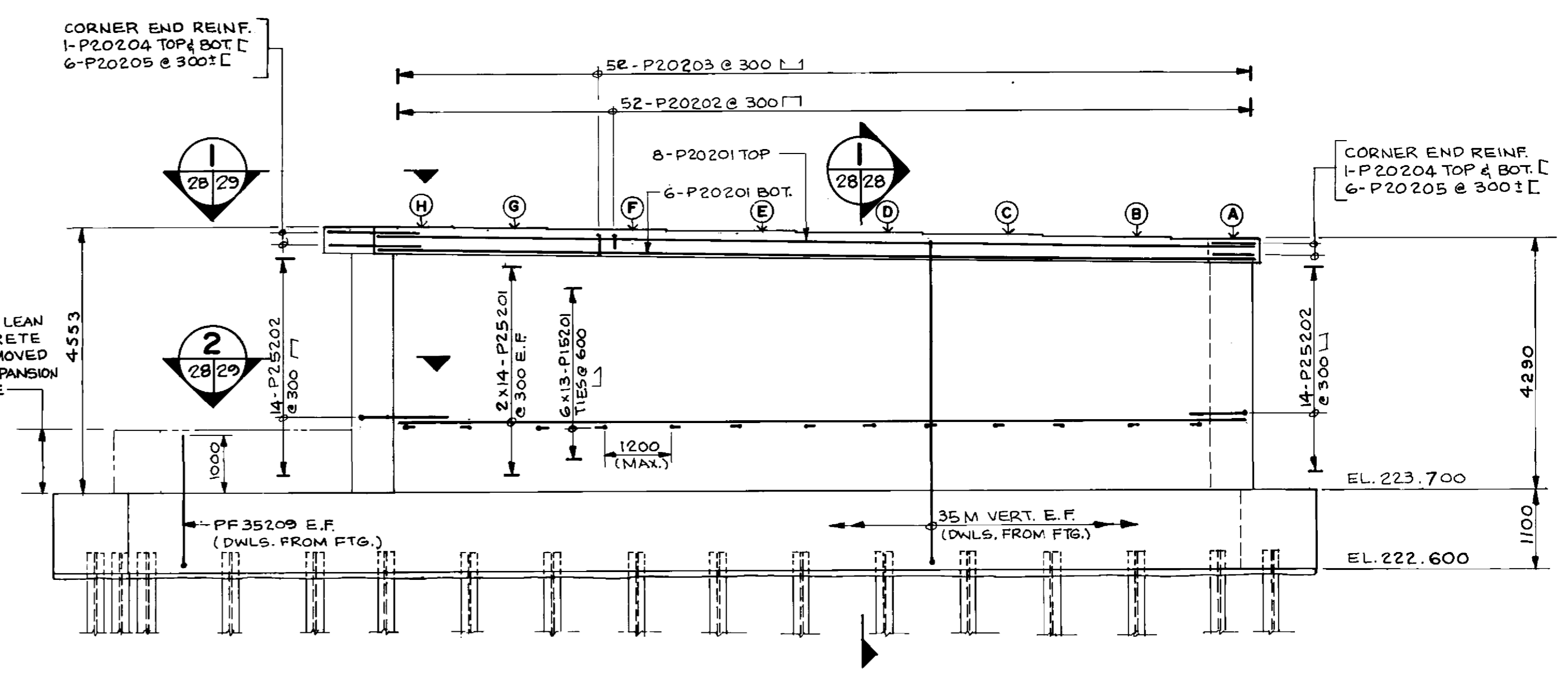
B224-95-27
P3072-A-27

93-1497-06-27

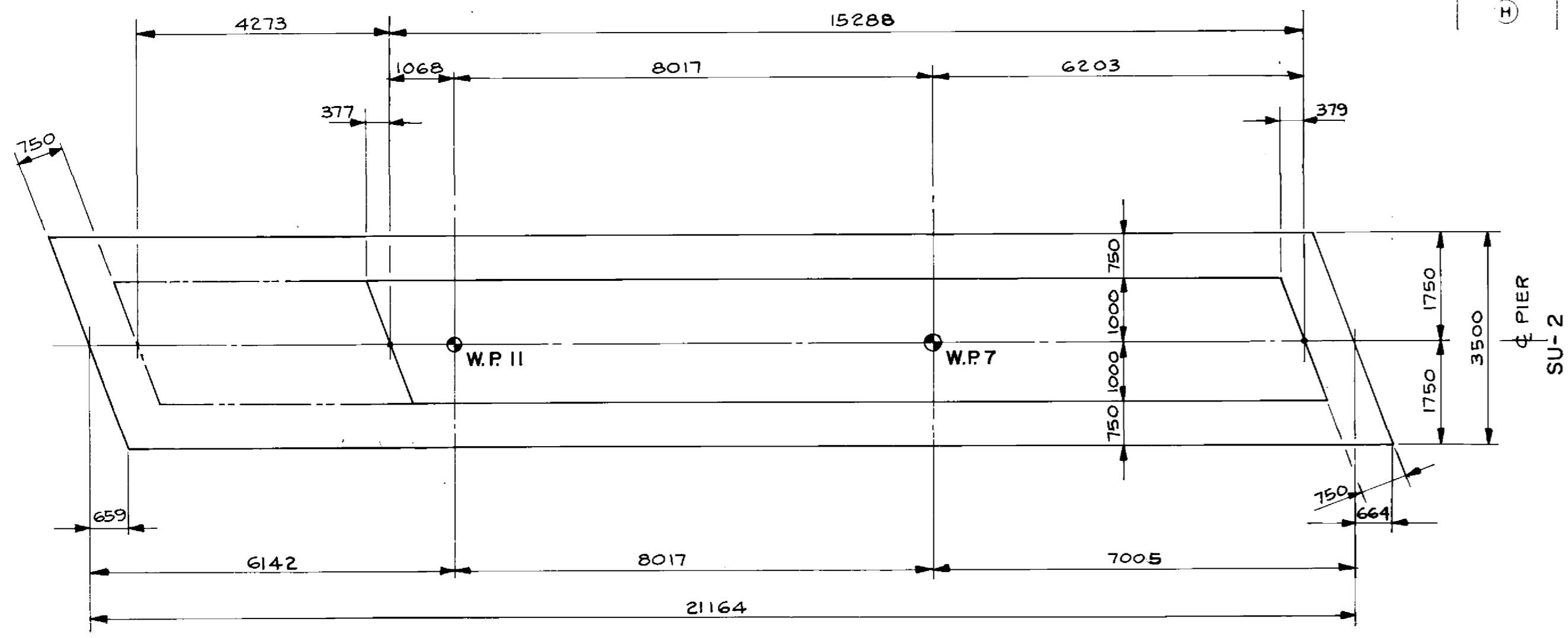


PLAN AT TOP
1:75

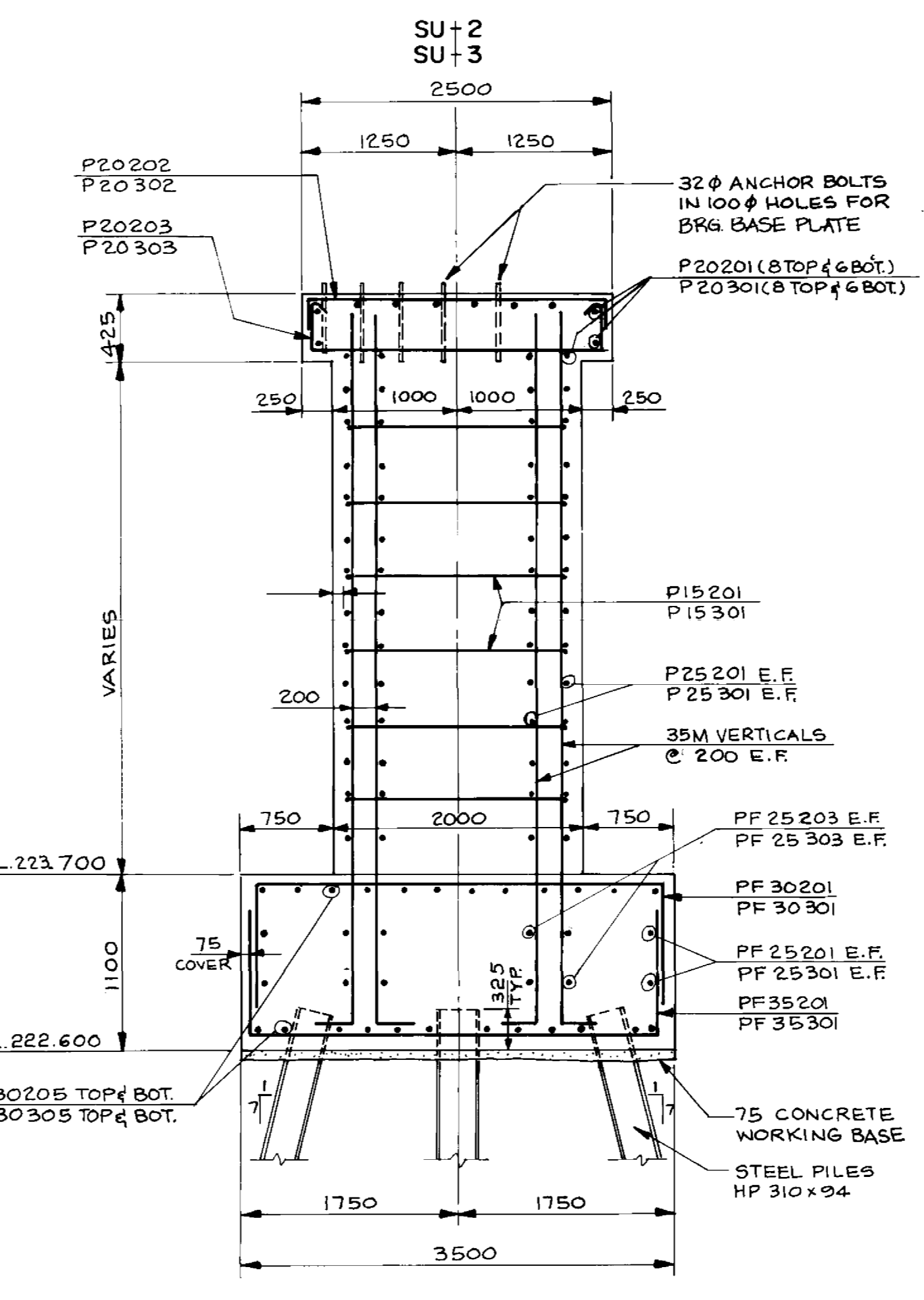
LOCATION	ELEVATION
TOP OF BRGS. LAYOUT	227.790
TOP OF BRGS. LAYOUT	227.823
TOP OF BRGS. LAYOUT	227.871
TOP OF BRGS. LAYOUT	227.963
TOP OF BRGS. LAYOUT	228.001
TOP OF BRGS. LAYOUT	228.990
TOP OF BRGS. LAYOUT	228.028
TOP OF BRGS. LAYOUT	228.053



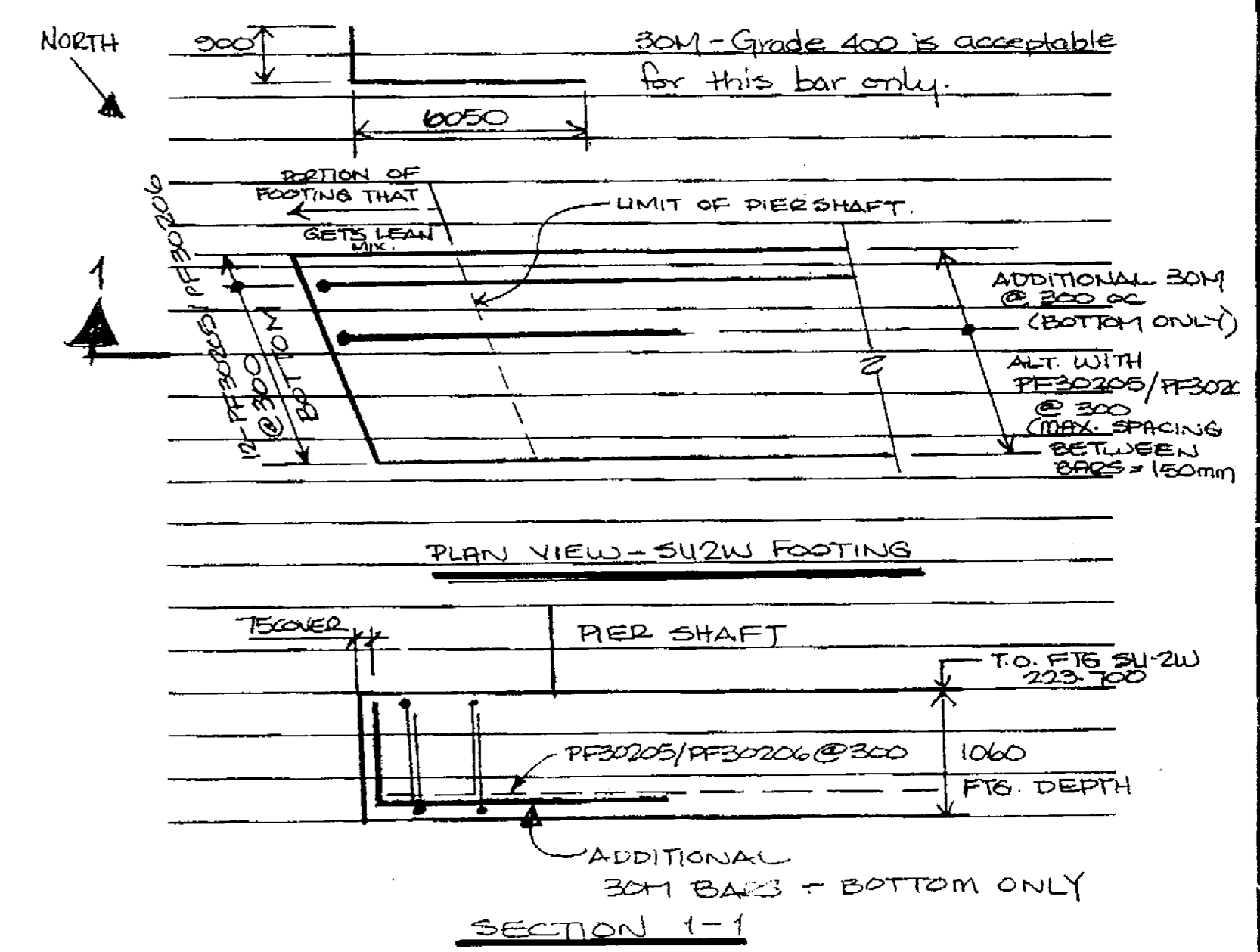
NORTH ELEVATION
1:75 (LOOKING SOUTH)



PLAN AT FOOTING
1:75

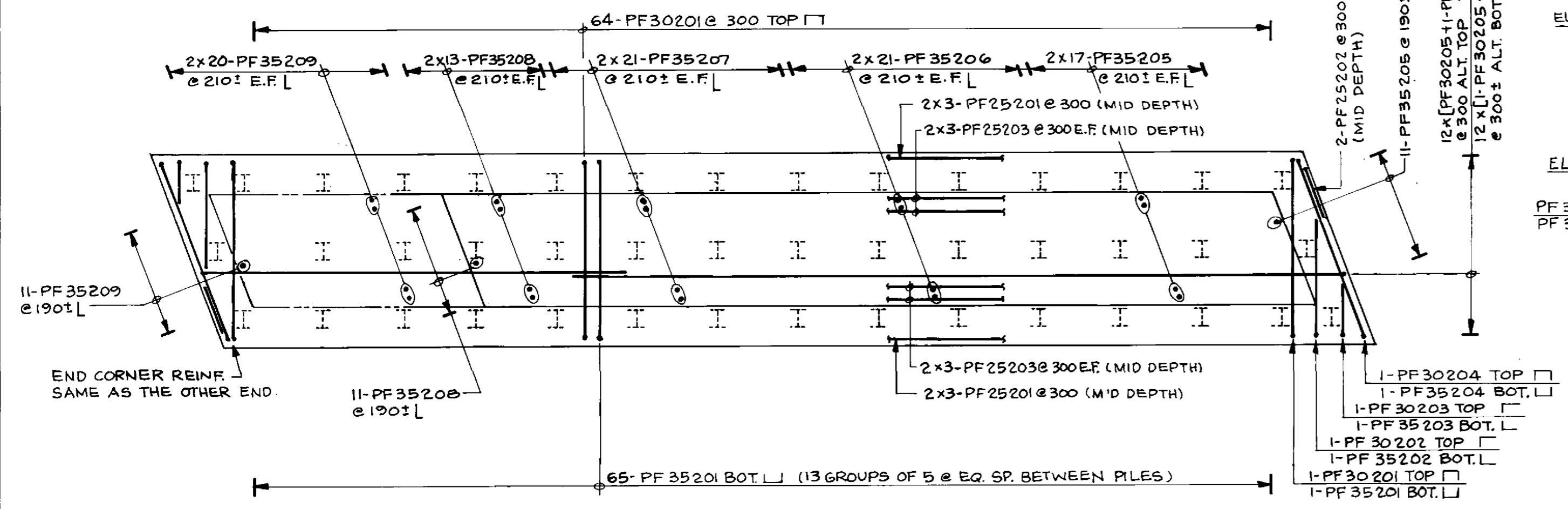


SECTION 1
1:40



PLAN VIEW - SU2W FOOTING

SECTION 1-1

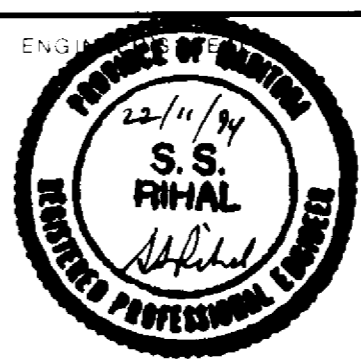


PLAN - FOOTING REINFORCEMENT
1:75

LOCATION APPROVED UNDERGROUND STRUCTURES	N/A
DATE	
NOTE	

REVISIONS	022095	N.B.G.
DATE		

DILLON
Consulting Engineers • Planners
Environmental Scientists



RECORD DRAWING
APPROVED BY: *S.S. Rihal* DATE: 12/18/94

B-6021-28

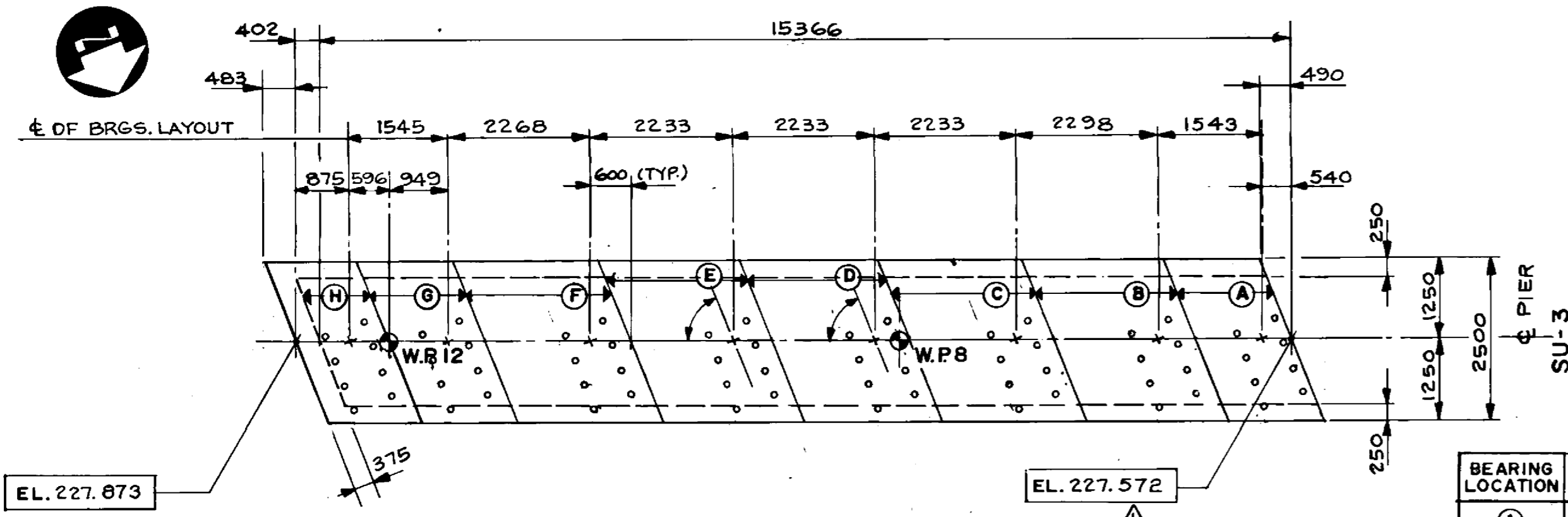
THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

PEMBINA HIGHWAY
SOUTH CITY LIMIT TO RUE DES TRAPPISTES
PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

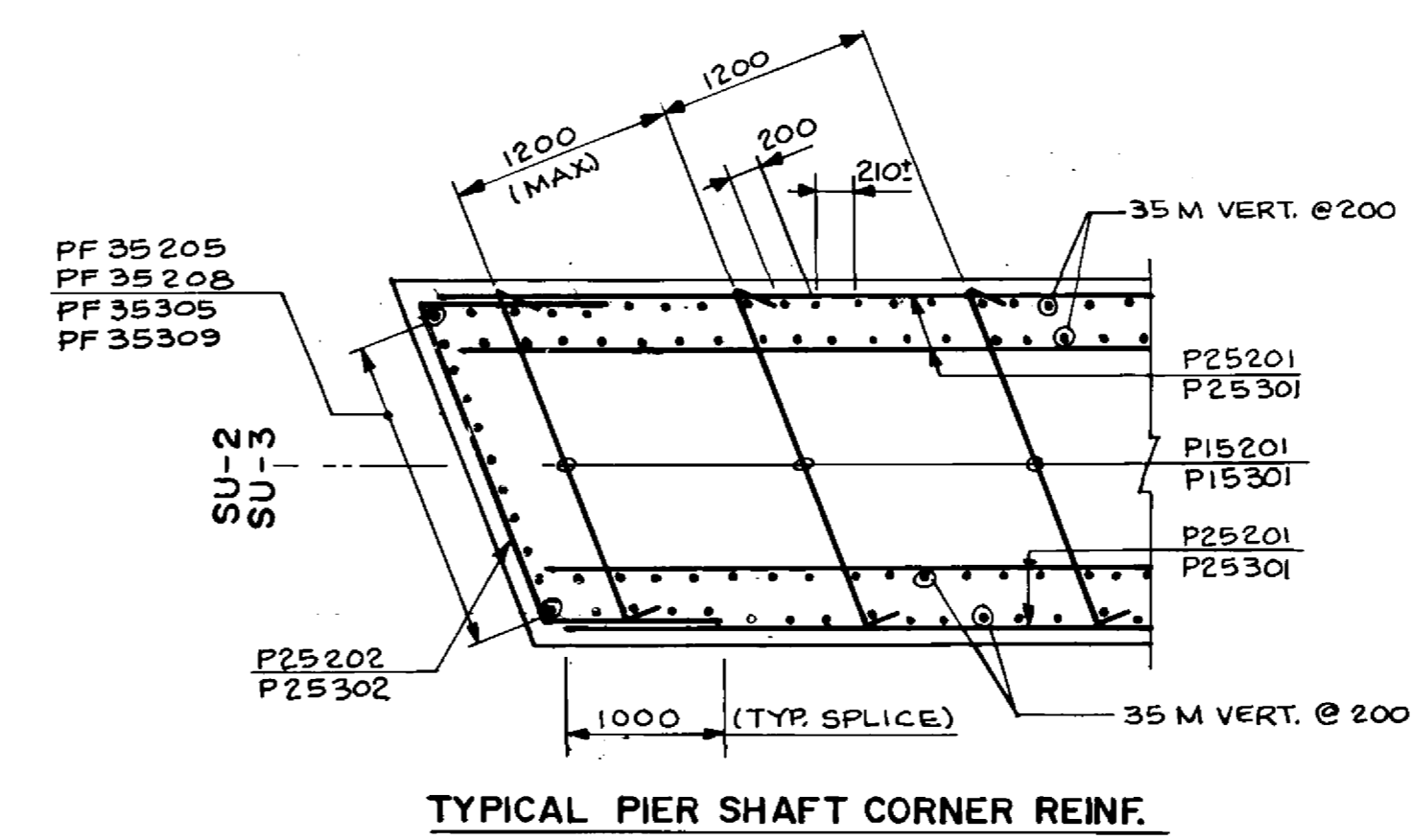
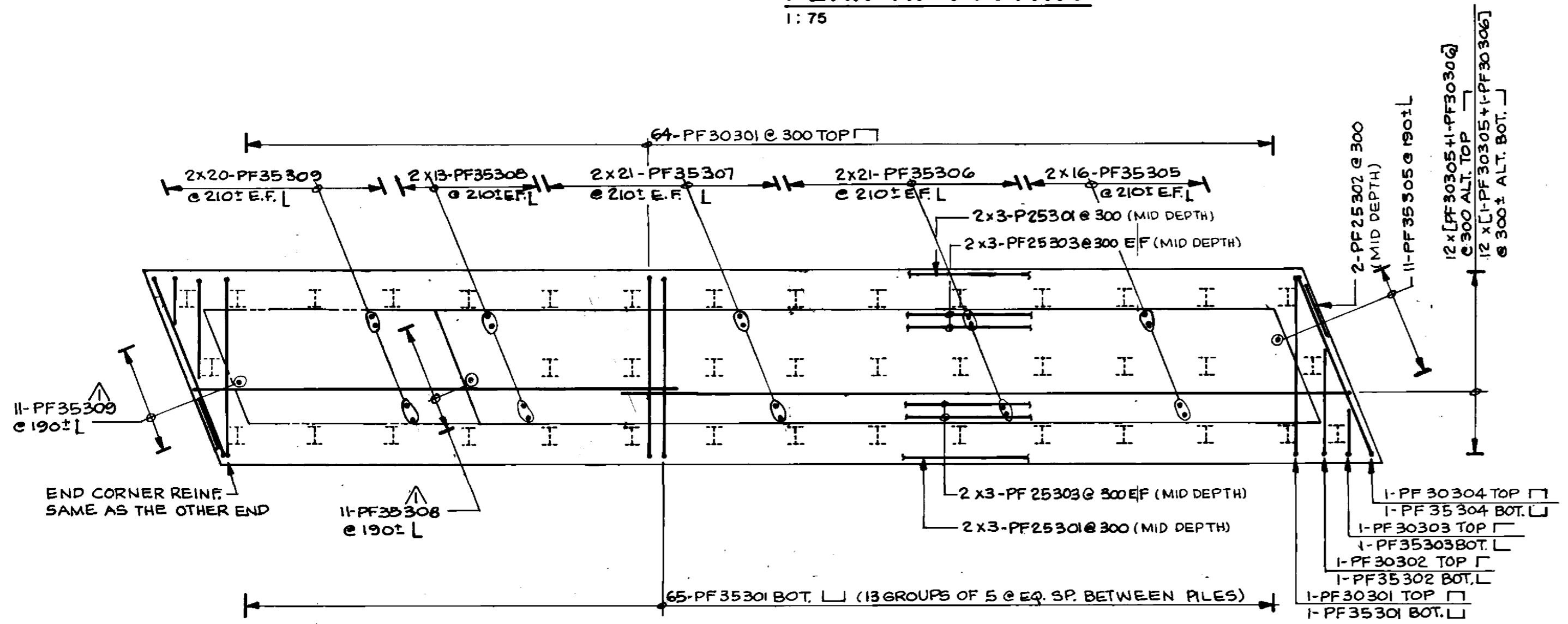
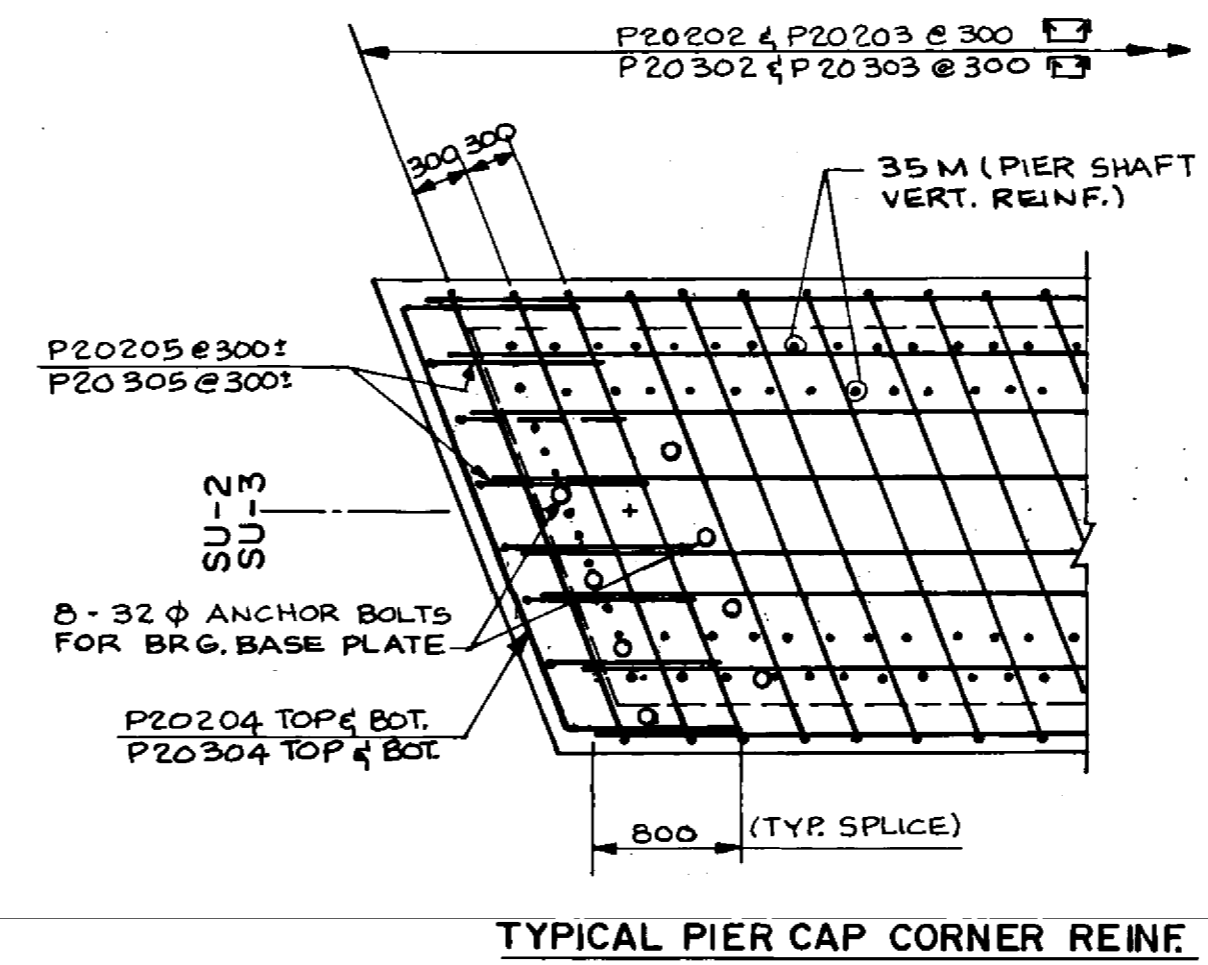
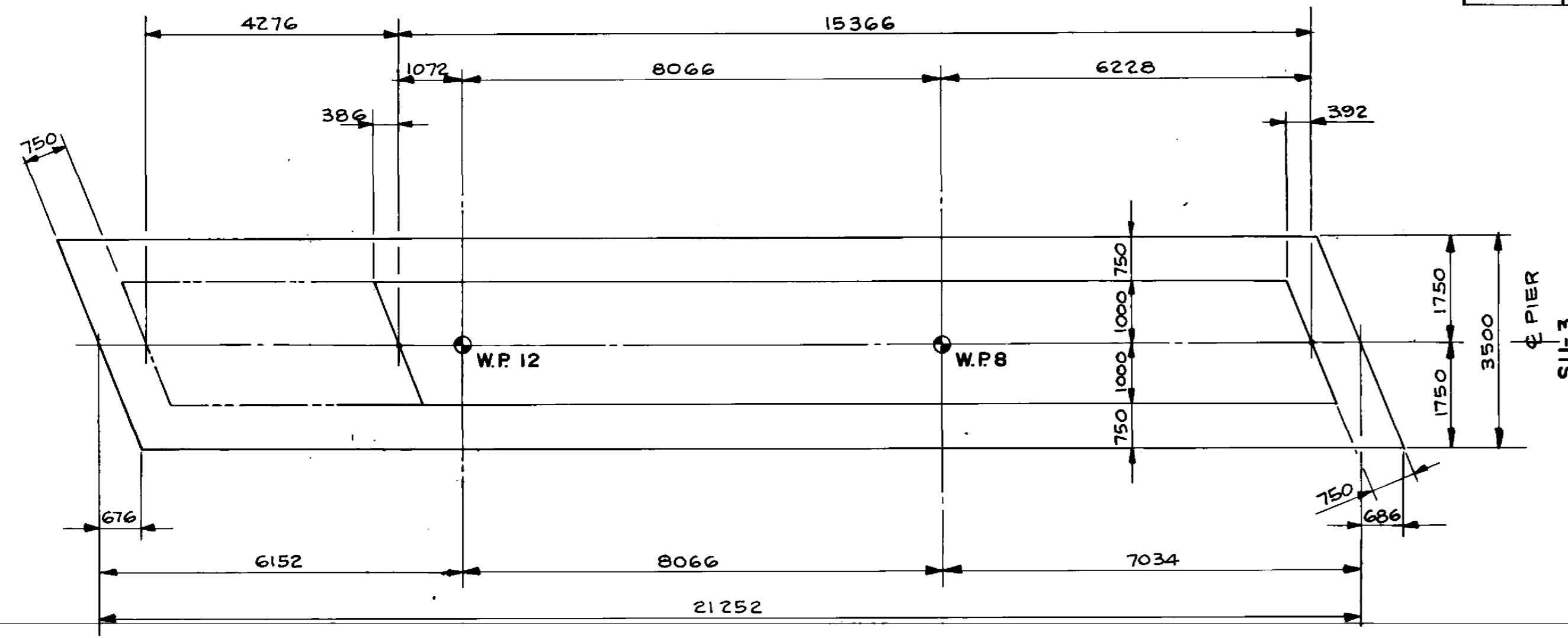
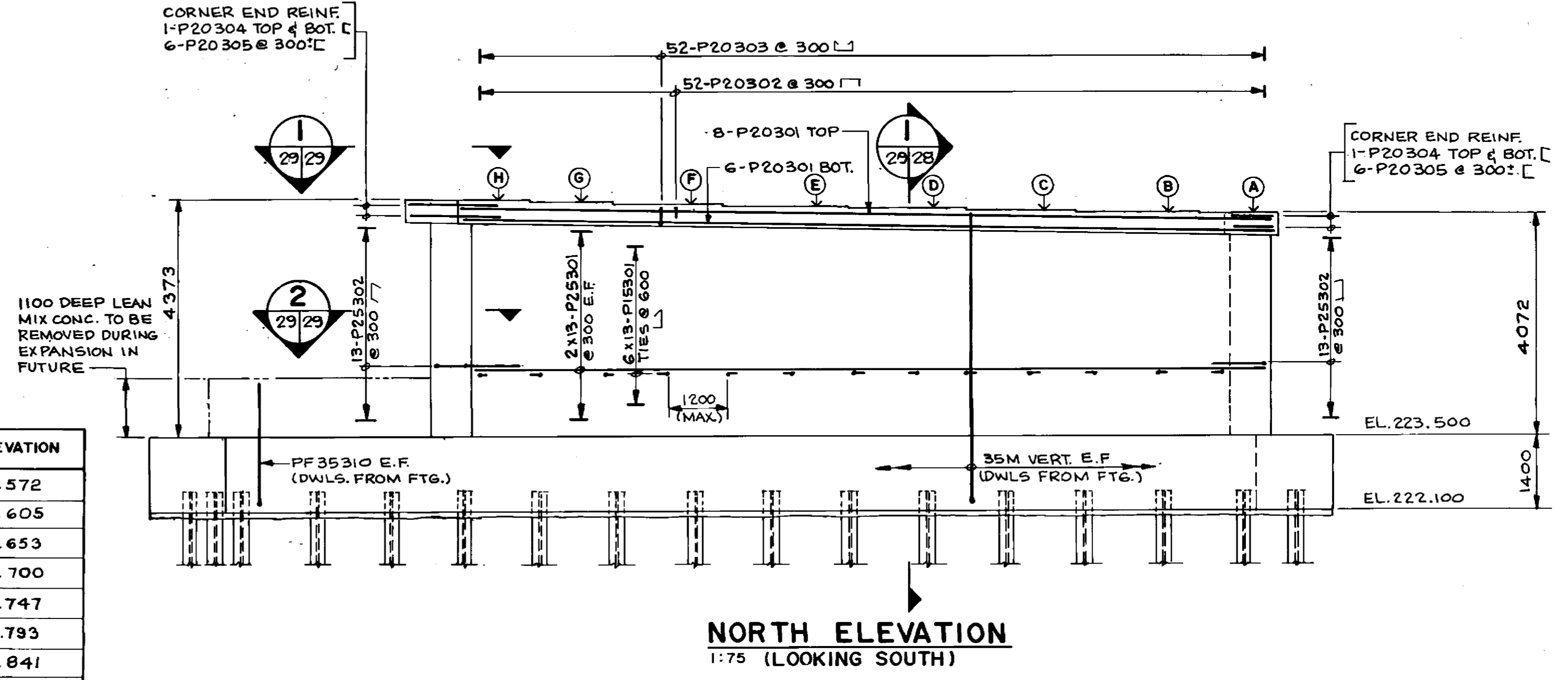
WEST STRUCTURE
PIER - SU-2W

8224-95-28
P3072-A-28

93-1497-06-28



BEARING LOCATION	ELEVATION
(A)	227.572
(B)	227.605
(C)	227.653
(D)	227.700
(E)	227.747
(F)	227.793
(G)	227.841
(H)	227.873



RECORD DRAWING
APPROVED BY: *M. Khan* DATE: Dec 18/94

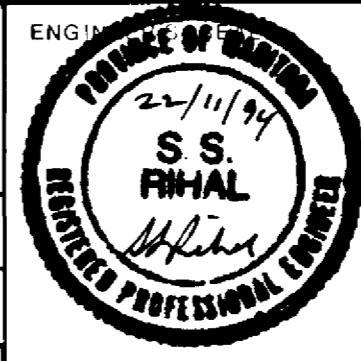
B-6021-29

LOCATION APPROVED UNDERGROUND STRUCTURES
N/A
SUPV. U/G STRUCTURES COMMITTEE DATE
NOTE:
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

NO.	REVISIONS	DATE	BY
1	REVISIONS	222095	N.B.G.
2	REVISIONS		

DILLON
Consulting Engineers - Planners
Environmental Scientists

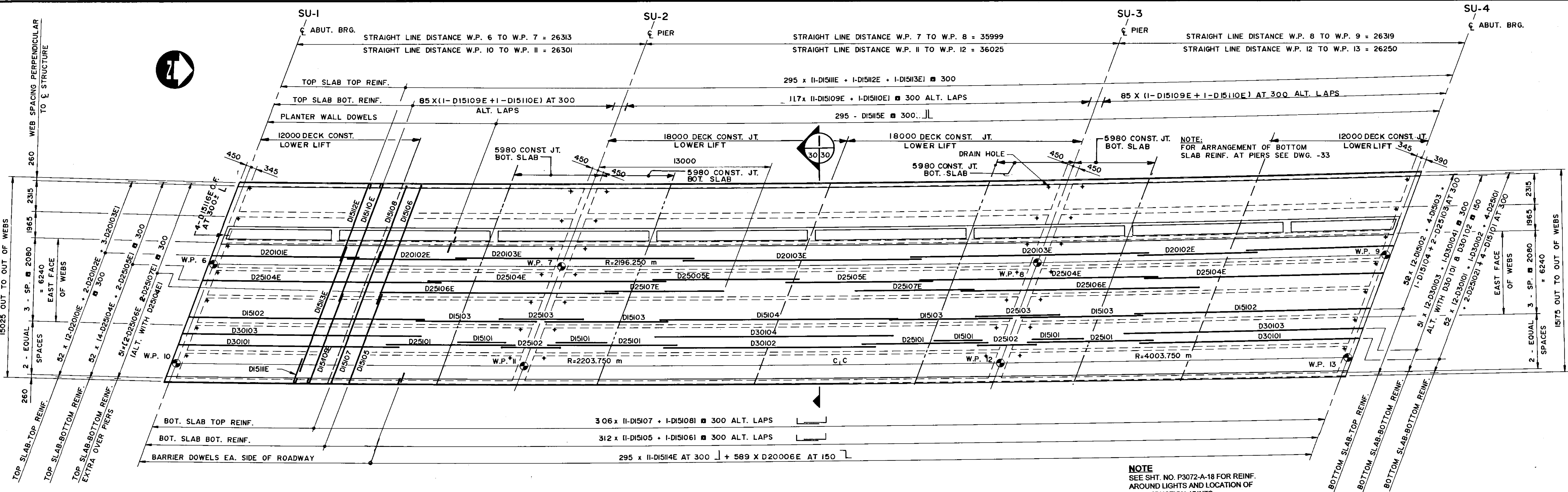
DESIGNED BY: M.C.R. CHECKED BY: S.S.R.
DRAWN BY: N.B.G. APPROVED BY: *M. Khan*
HOR. SCALE: AS NOTED
VERTICAL: AS NOTED
DATE: NOV. 1994



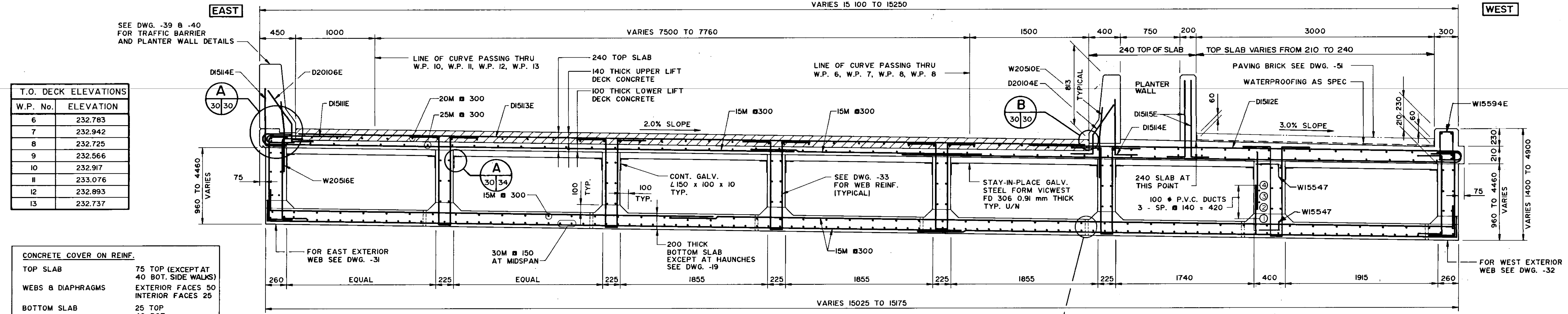
CONSULTANT DRAWING NO. 93-1497-06-29

THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

PEMBINA HIGHWAY
SOUTH CITY LIMIT TO RUE DES TRAPPISTES
PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER
WEST STRUCTURE
PIER - SU-3W
CITY DRAWING NUMBER B224-95-29
SHEET OF
P3072-A-29



RECORD DRAWING
APPROVED BY: *[Signature]* DATE: Dec 12/99



T.O. DECK ELEVATIONS

W.P. No.	ELEVATION
6	232.783
7	232.942
8	232.725
9	232.566
10	232.917
11	233.076
12	232.893
13	232.737

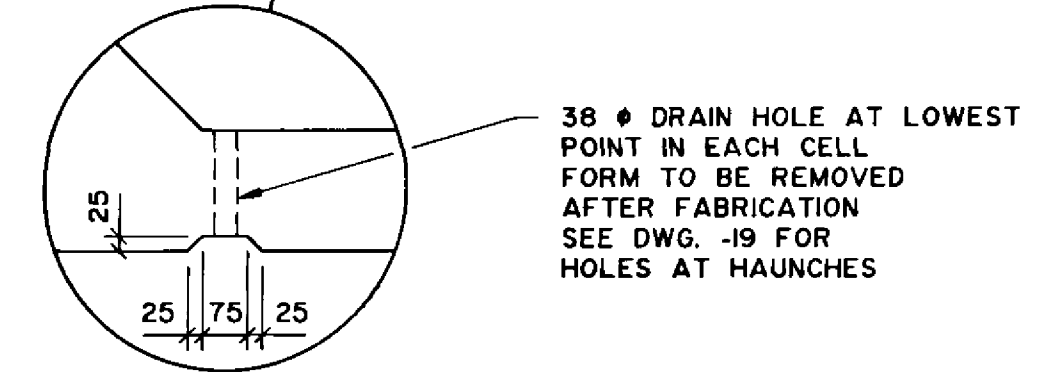
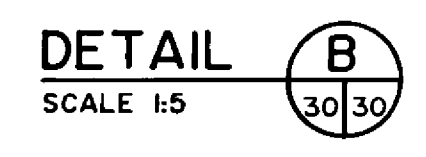
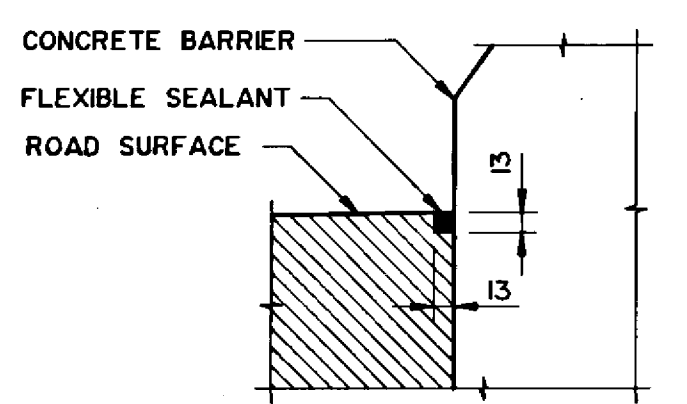
CONCRETE COVER ON REINF.

TOP SLAB 75 TOP (EXCEPT AT 40 BOT. SIDE WALKS)
EXTERIOR FACES 50
INTERIOR FACES 25

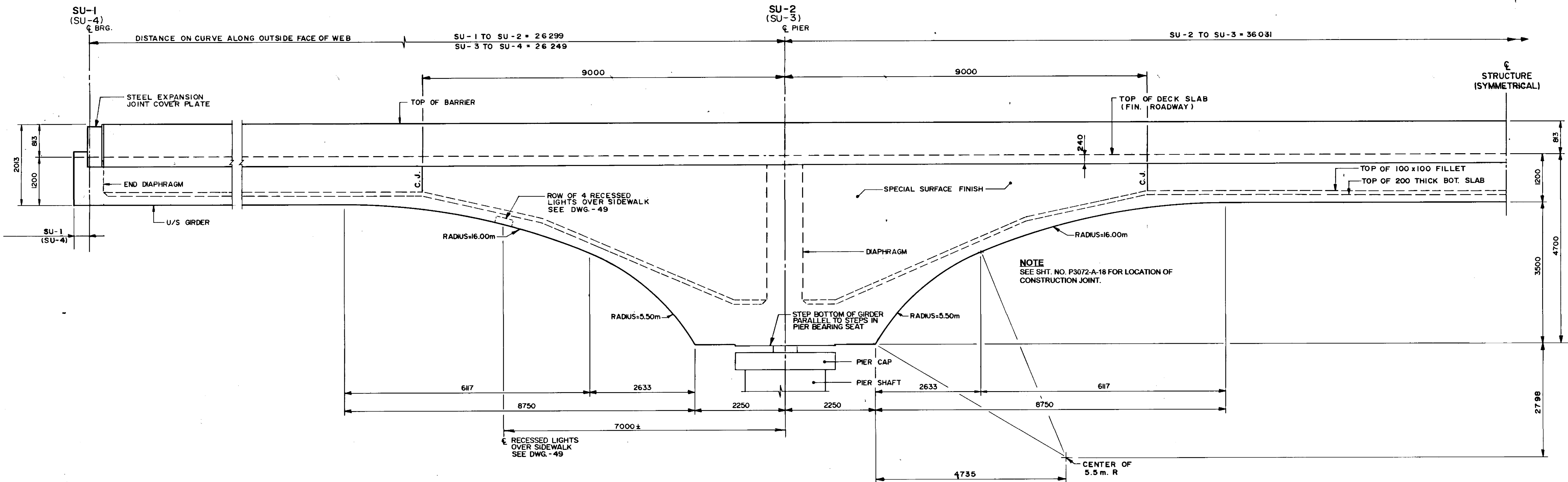
BOTTOM SLAB 25 TOP
40 BOT.

ALL OTHER FACES 50

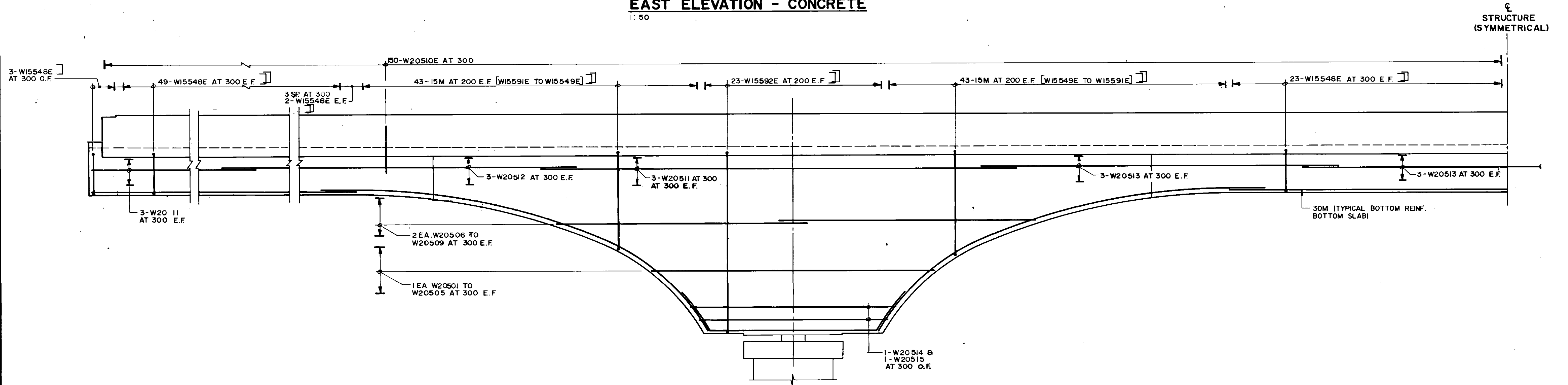
- NOTES:**
- THE CONTRACTOR SHALL ADJUST THE FORMWORK FOR DEAD LOAD DEFLECTIONS TO BE SUPPLIED BY THE CONTRACT ADMINISTRATOR.
 - SEE DRAWING 34 FOR BOX GIRDER CONSTRUCTION SEQUENCE.
 - SEE DRAWING -40 FOR RECESSED LIGHTS IN UPS OF BOTTOM SLAB.



<p>DILLON Consulting Engineers - Planners Environmental Scientists</p>		<p>DESIGNED BY: S.S.R. CHECKED BY: N.B.U. DRAWN BY: S.K.B. HOR. SCALE: AS SHOWN VERTICAL: AS SHOWN DATE: NOV. 1994</p>	<p>APPROVED BY: <i>[Signature]</i> AUTHORIZED BY: <i>[Signature]</i> DATE: <i>[Date]</i> CONSULTANT DRAWING NO. 93-1497-06-30</p>	<p>ENGINEER: <i>[Signature]</i> REGISTERED PROFESSIONAL ENGINEER</p>	<p>THE CITY OF WINNIPEG WORKS AND OPERATIONS DIVISION STREETS AND TRANSPORTATION DEPARTMENT</p> <p>PEMBINA HIGHWAY SOUTH CITY LIMIT TO RUE DES TRAPPISTES PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER</p> <p>WEST STRUCTURE BOX GIRDERS PLAN AND CROSS SECTION</p>	<p>CITY DRAWING NUMBER: B224-95-30 SHEET OF</p> <p>P3072-A-30</p>
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EAST ELEVATION - CONCRETE
 1:50

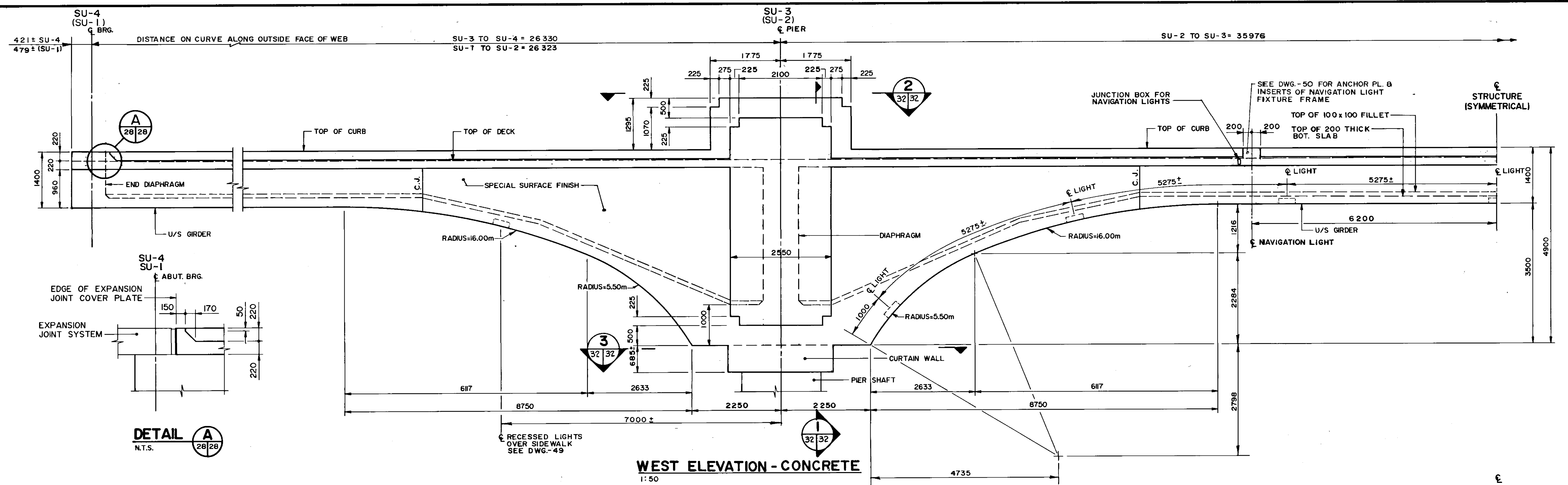


EAST ELEVATION - REINFORCING
 1:50

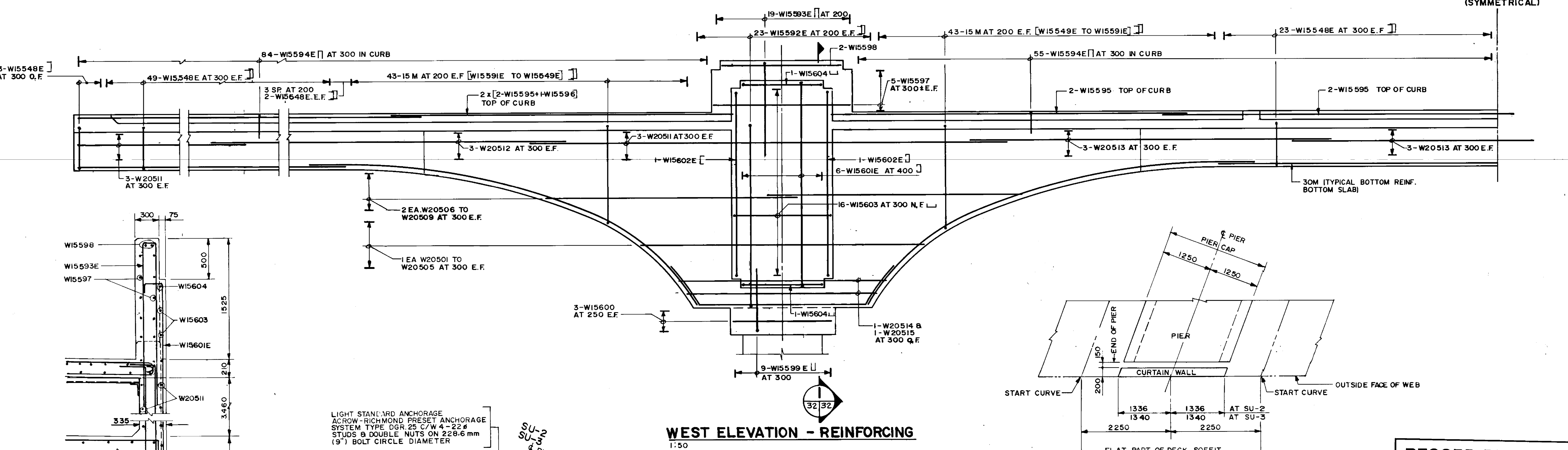
RECORD DRAWING
 APPROVED BY: *[Signature]* DATE: Dec 18/94

B-6021-31

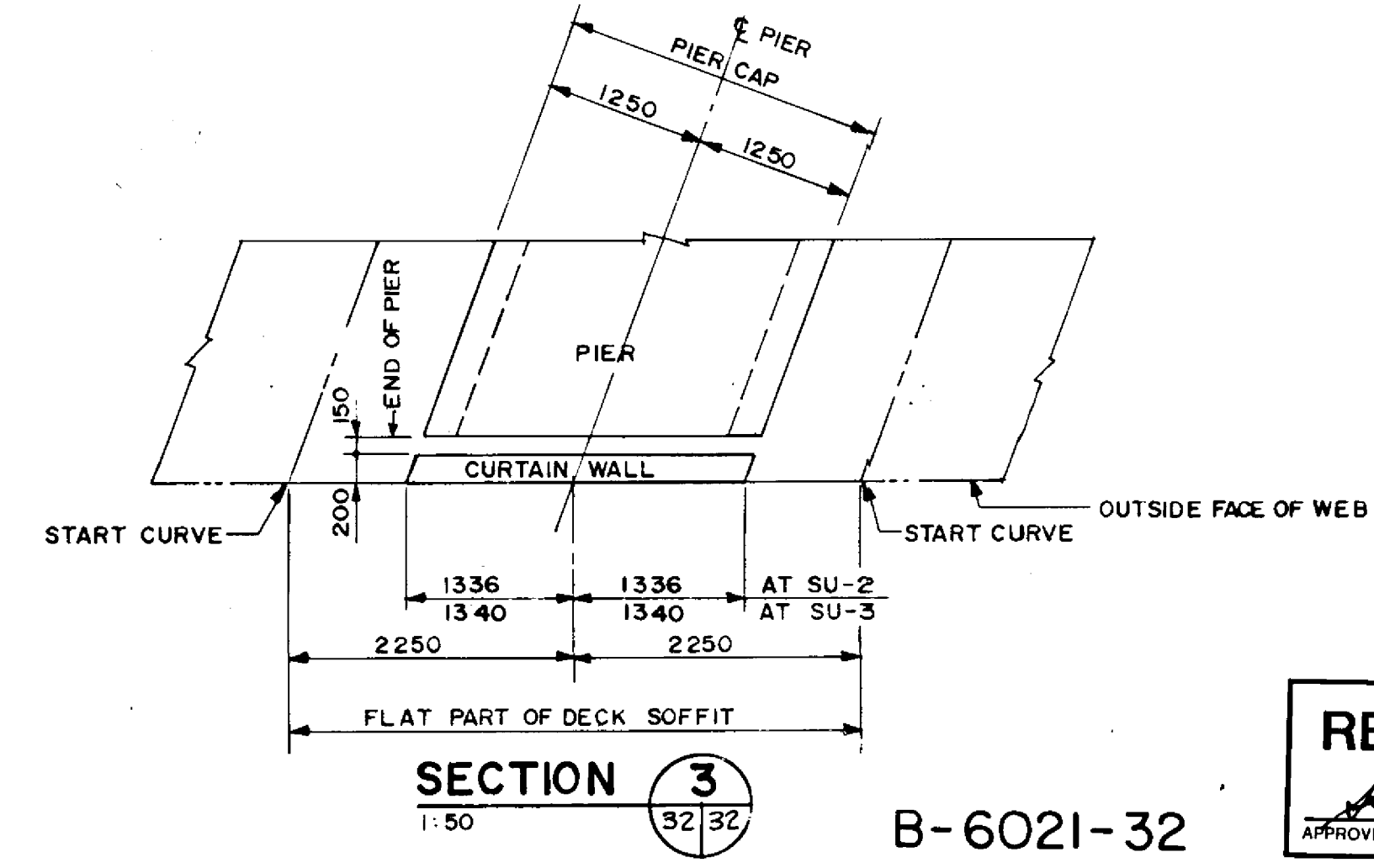
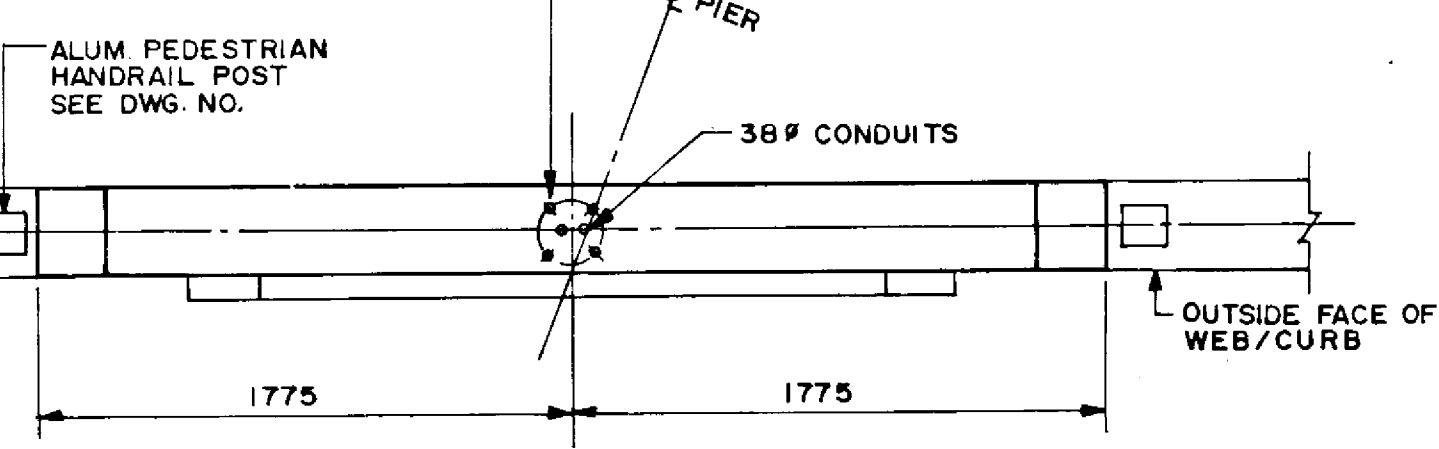
B.M. ELEV. NO. REVISIONS DATE BY	DILLON Consulting Engineers - Planners Environmental Scientists		ENGINEER'S SEAL PROVINCE OF MANITOBA 16/12/94 S.S. RIHAL REGISTERED PROFESSIONAL ENGINEER	THE CITY OF WINNIPEG WORKS AND OPERATIONS DIVISION STREETS AND TRANSPORTATION DEPARTMENT	
	DESIGNED BY: S.S.R.	CHECKED BY: N.B.U.		PEMBINA HIGHWAY SOUTH CITY LIMIT TO RUE DES TRAPPISTES PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER	
	DRAWN BY: N.B.G. / M.C.R.	APPROVED BY: <i>[Signature]</i>		WEST STRUCTURE BOX GIRDERS EAST EXTERIOR WEB	
	HOR. SCALE: AS SHOWN	DATE: NOV. 1994		CONSULTANT DRAWING NO.: 93-1497-06-31	CITY DRAWING NUMBER: B224-95-31 SHEET OF



DETAIL A
N.T.S.



LIGHT STANDARD ANCHORAGE
ACROW-RICHMOND PRESET ANCHORAGE
SYSTEM TYPE DGR.25 C/W 4-22#
STUDS & DOUBLE NUTS ON 228.6 mm
(9") BOLT CIRCLE DIAMETER



RECORD DRAWING
APPROVED BY: [Signature] DATE: Dec 18/94

B-6021-32

NO.	REVISIONS	DATE	BY

DILLON
Consulting Engineers Planners Environmental Scientists

DESIGNED BY: S.S.R. CHECKED BY: N.B.U.
DRAWN BY: N.B.G./MCR. APPROVED BY: [Signature]
HOR. SCALE: AS SHOWN
VERTICAL: AS SHOWN
DATE: NOV. 1994

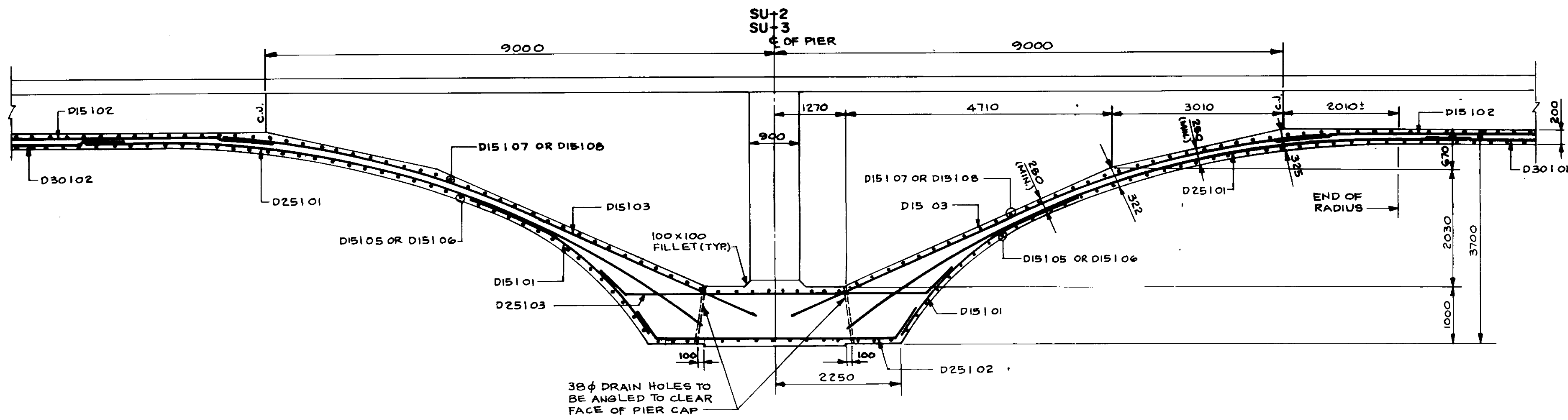
ENGINEER'S SEAL
2011/14/94
S.S. FINLAY
REGISTERED PROFESSIONAL ENGINEER
CONSULTANT DRAWING NO. 93-1497-06-32

THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

PEMBINA HIGHWAY
SOUTH CITY LIMIT TO RUE DES TRAPPISTES
PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

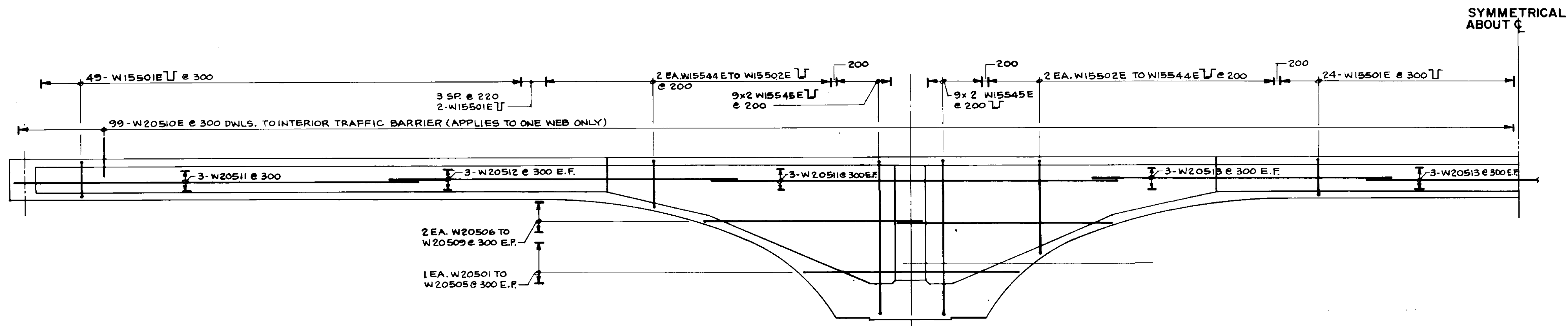
WEST STRUCTURE
BOX GIRDERS
WEST EXTERIOR WEB

CITY DRAWING NUMBER B224-95-32
SHEET OF
P3072-A-32



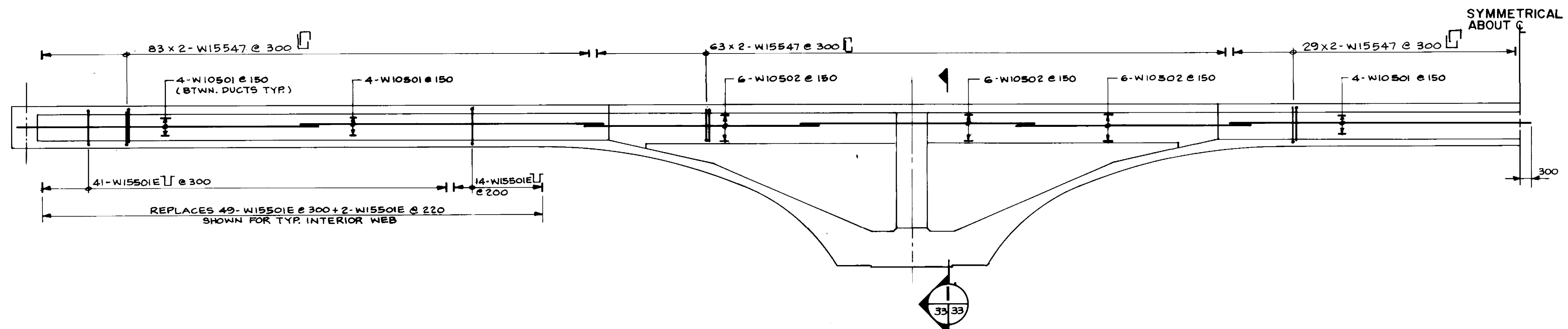
BOTTOM SLAB DETAIL AT PIERS

1:50



TYPICAL INTERIOR WEB REINFORCEMENT (5 THUS)

1:75



REINFORCEMENT FOR WEB CONTAINING 100φ CABLE DUCTS (1 THUS)

1:75

NOTE: REINFORCEMENT SAME AS TYPICAL INTERIOR WEB EXCEPT AS NOTED

RECORD DRAWING

APPROVED BY: *[Signature]* DATE: *Dec 18/94*

SECTION 1

1:25

B-6021-33

LOCATION APPROVED UNDERGROUND STRUCTURES N/A	B.M. ELEV.
SUPV. U/G STRUCTURES COMMITTEE	DATE
NOTE: LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION	NO. REVISIONS
	DATE BY

DESIGNED BY	S.S.R.	CHECKED BY	N.B.U.
DRAWN BY	N.B.G.	APPROVED BY	<i>[Signature]</i>
HOR. SCALE	AS NOTED	DATE	<i>11/18/94</i>
VERTICAL		DATE	<i>11/18/94</i>

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Consulting Engineers - Planners
Environmental Scientists

ENGINEER
16/10/94
S.S.
R.H.A.L.
REGISTERED PROFESSIONAL ENGINEER

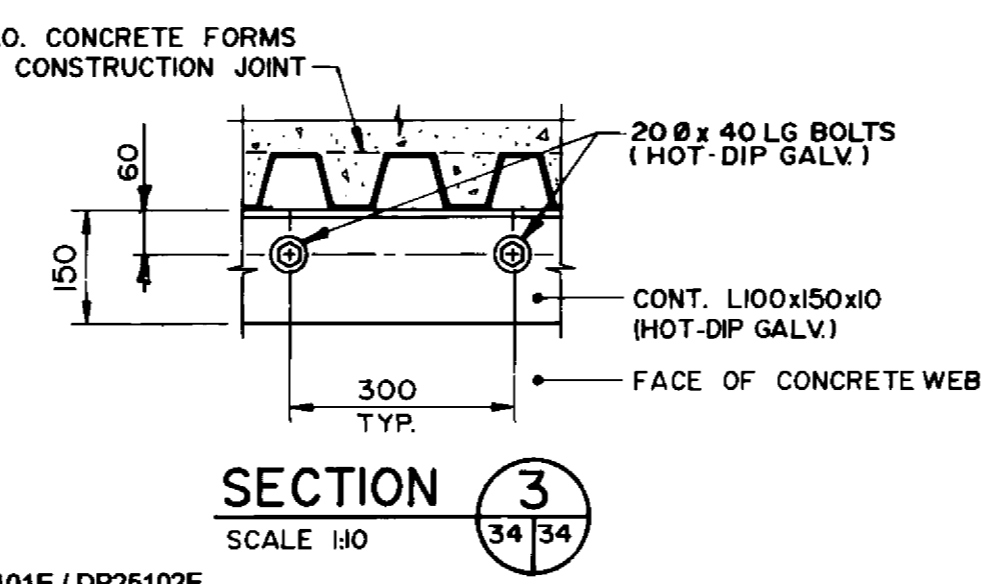
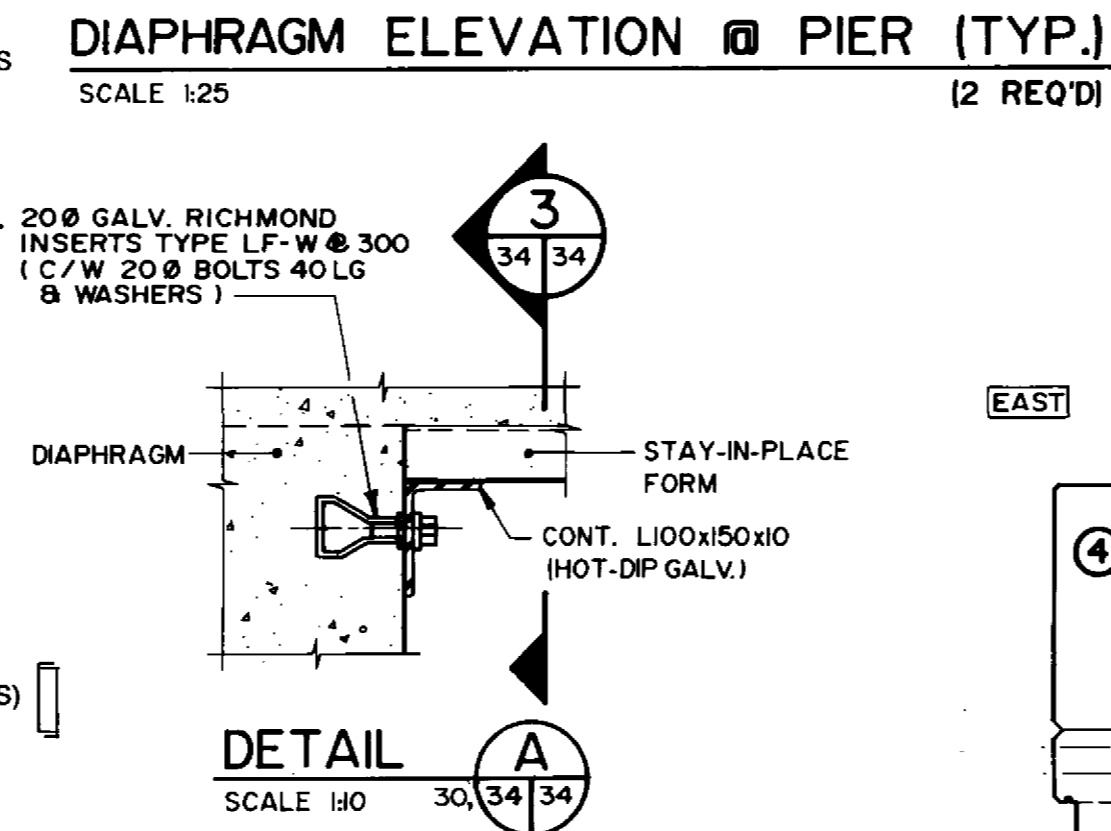
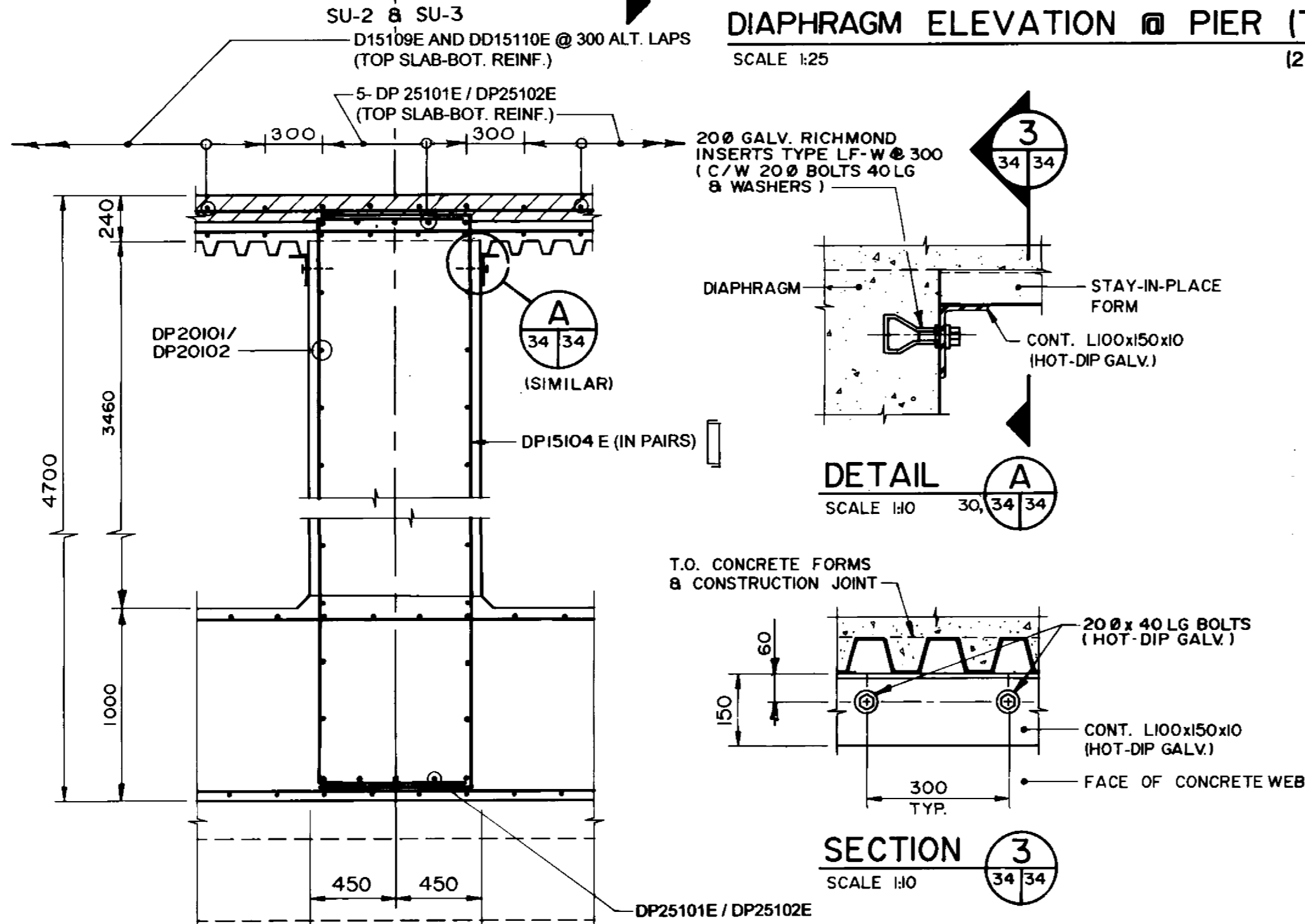
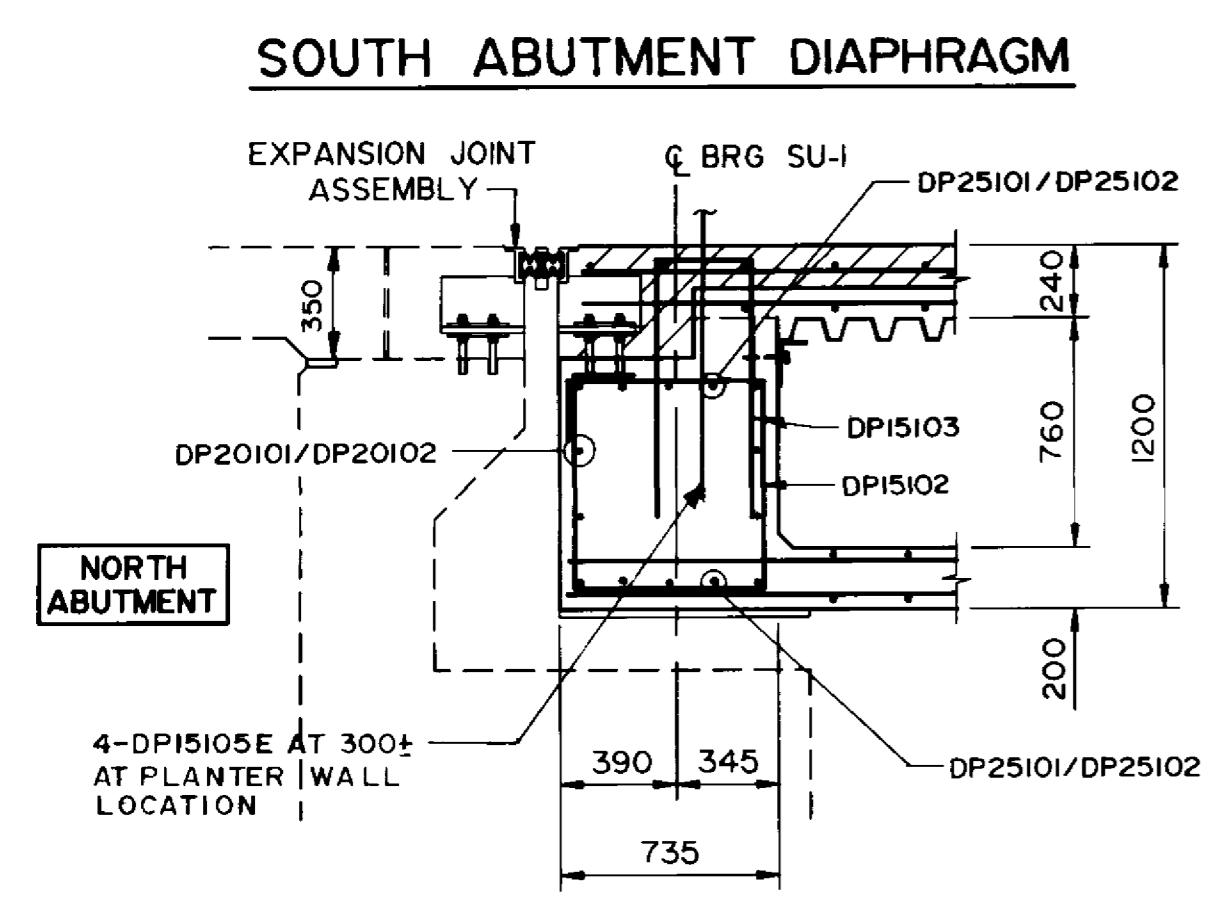
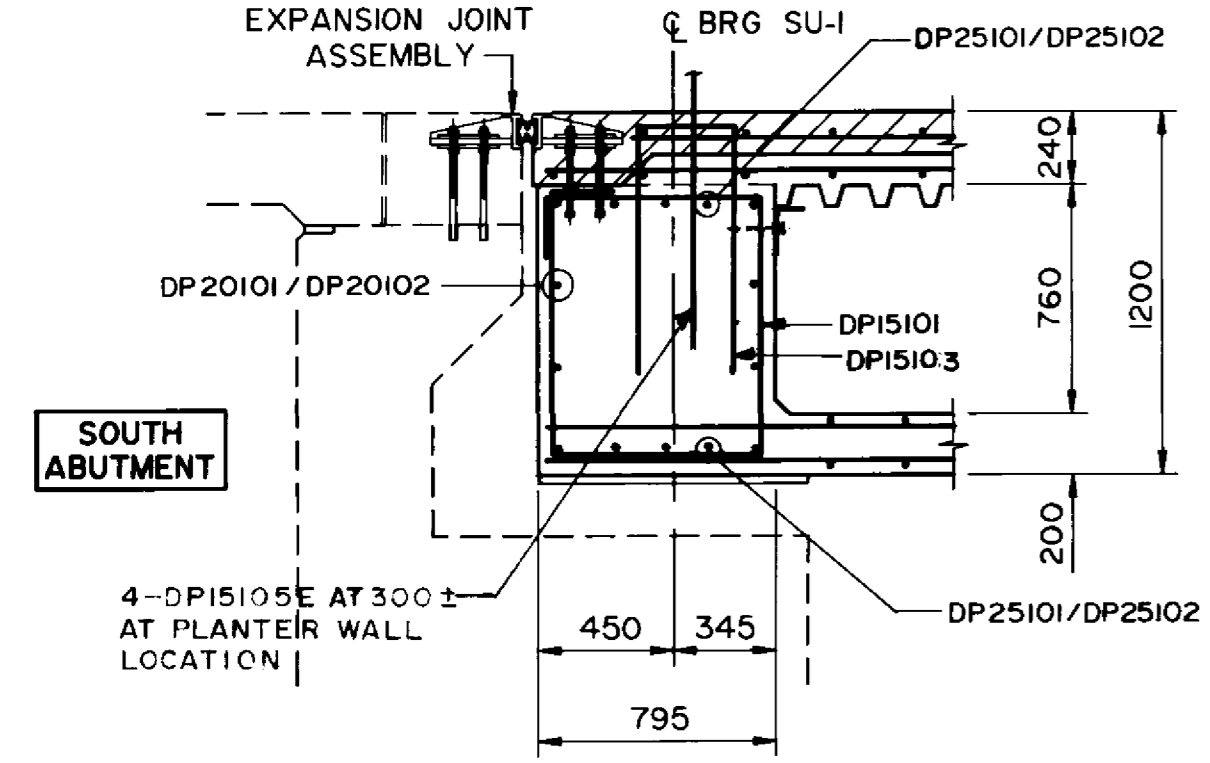
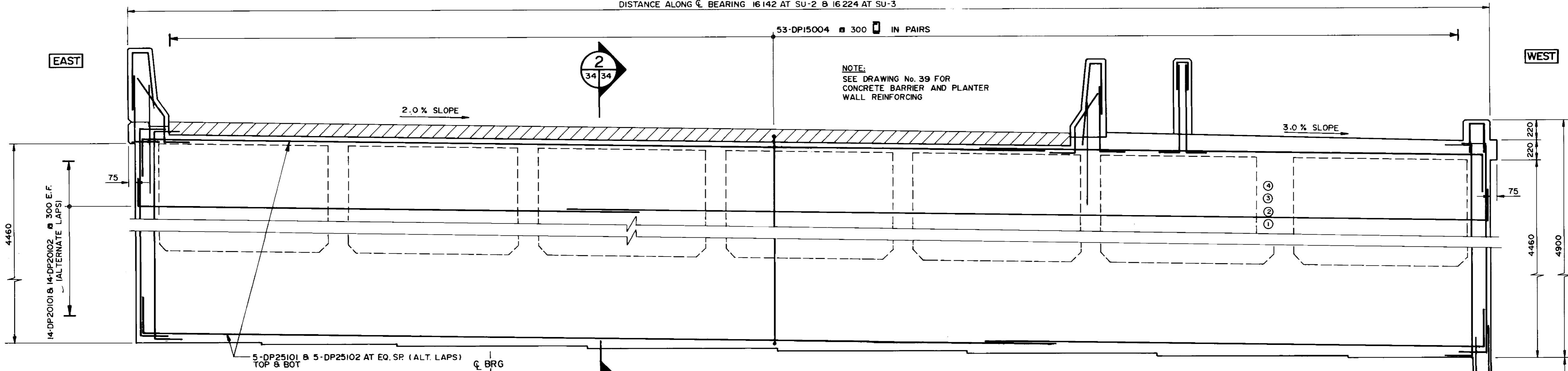
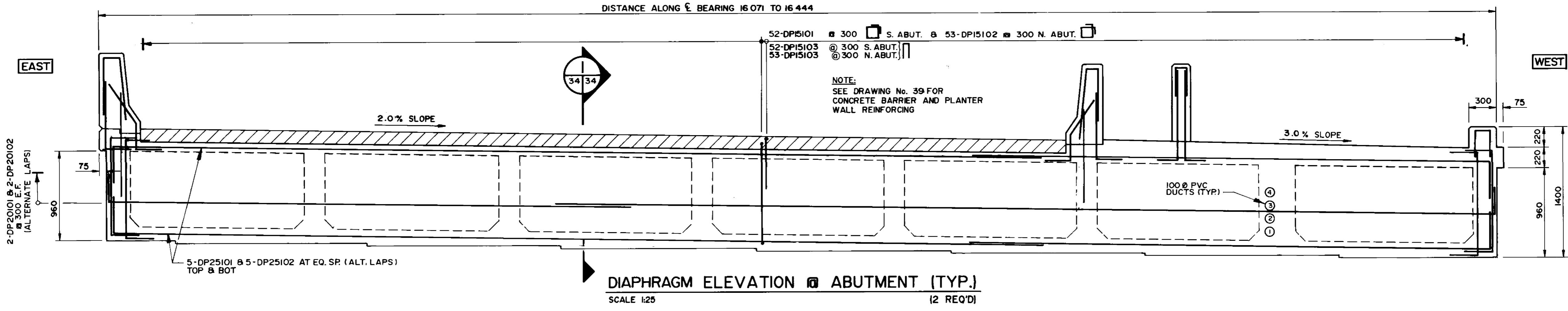
THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

PEMBINA HIGHWAY
SOUTH CITY LIMIT TO RUE DES TRAPPISTES
PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

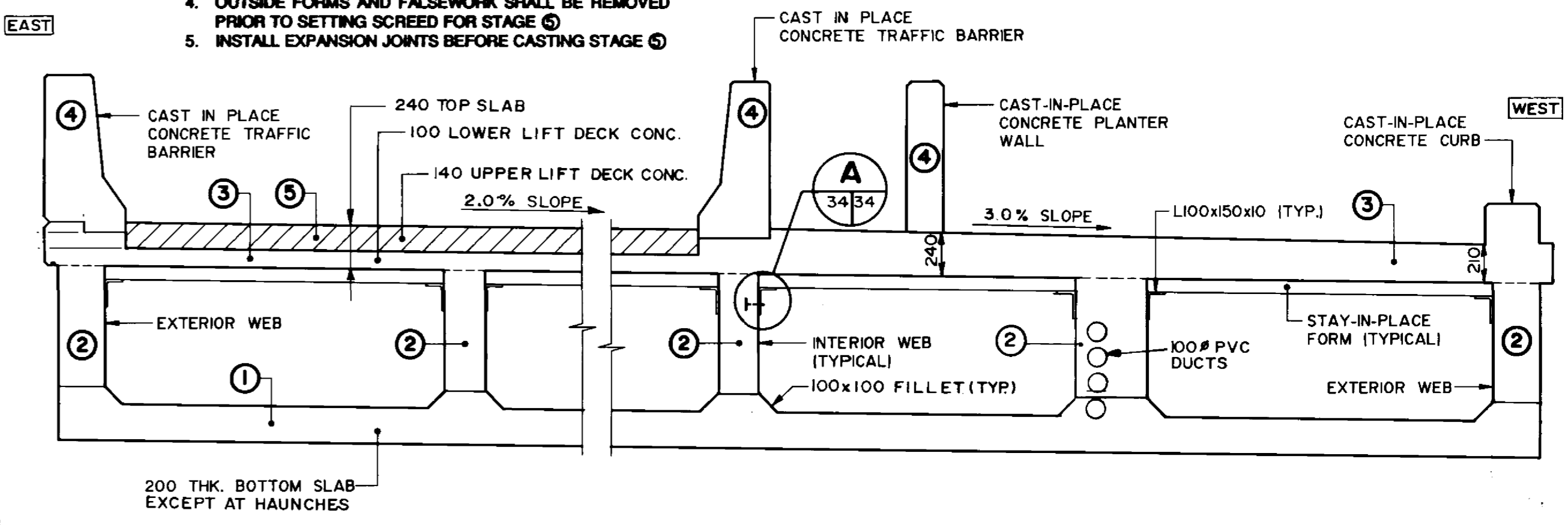
WEST STRUCTURE
BOX GIRDERS
INTERIOR WEB

CITY DRAWING NUMBER
B224-95-33
SHEET OF

P3072-A-33



- NOTES:**
- NUMBERS ① ETC. REPRESENT THE STAGING SEQUENCE FOR THE SUPER STRUCTURE.
 - OUTSIDE FORMS AND FALSEWORK SHALL REMAIN IN PLACE FOR STAGES ① THROUGH ④.
 - INSIDE FORMS FOR STAGE ② SHALL BE REMOVED BEFORE INSTALLING PERMANENT FORMS FOR STAGE ③.
 - OUTSIDE FORMS AND FALSEWORK SHALL BE REMOVED PRIOR TO SETTING SCREED FOR STAGE ⑤.
 - INSTALL EXPANSION JOINTS BEFORE CASTING STAGE ⑤.



RECORD DRAWING
APPROVED BY: *[Signature]* DATE: *Dec 14/94*

B-6021-34

B.M. ELEV.	
DESIGNED BY	S.S.R.
CHECKED BY	N.B.U.
DRAWN BY	M.C.R.
HOR. SCALE	AS SHOWN
VERTICAL	
NO. REVISIONS	DATE

DILLON
Consulting Engineers Planners
Environmental Scientists

DESIGNED BY: S.S.R. CHECKED BY: N.B.U.
DRAWN BY: M.C.R. APPROVED BY: *[Signature]*
HOR. SCALE: AS SHOWN. VERTICAL: *[Signature]*
DATE: NOV. 1994

S.S. RIHAL
REGISTERED PROFESSIONAL ENGINEER

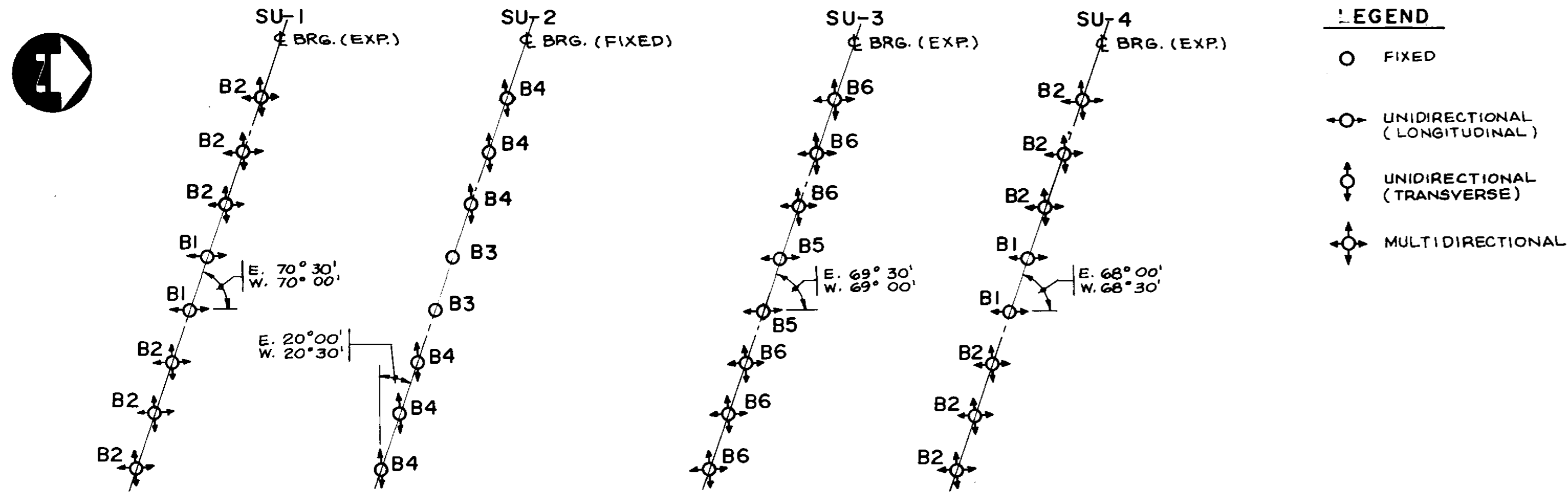
CONSULTANT DRAWING NO. 93-1497-06-34

THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

PEMBINA HIGHWAY
SOUTH CITY LIMIT TO RUE DES TRAPPISTES
PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

WEST STRUCTURE
BOX GIRDERS
DIAPHRAGM S

CITY DRAWING NUMBER B224-95-34
SHEET OF
P3072-A-34

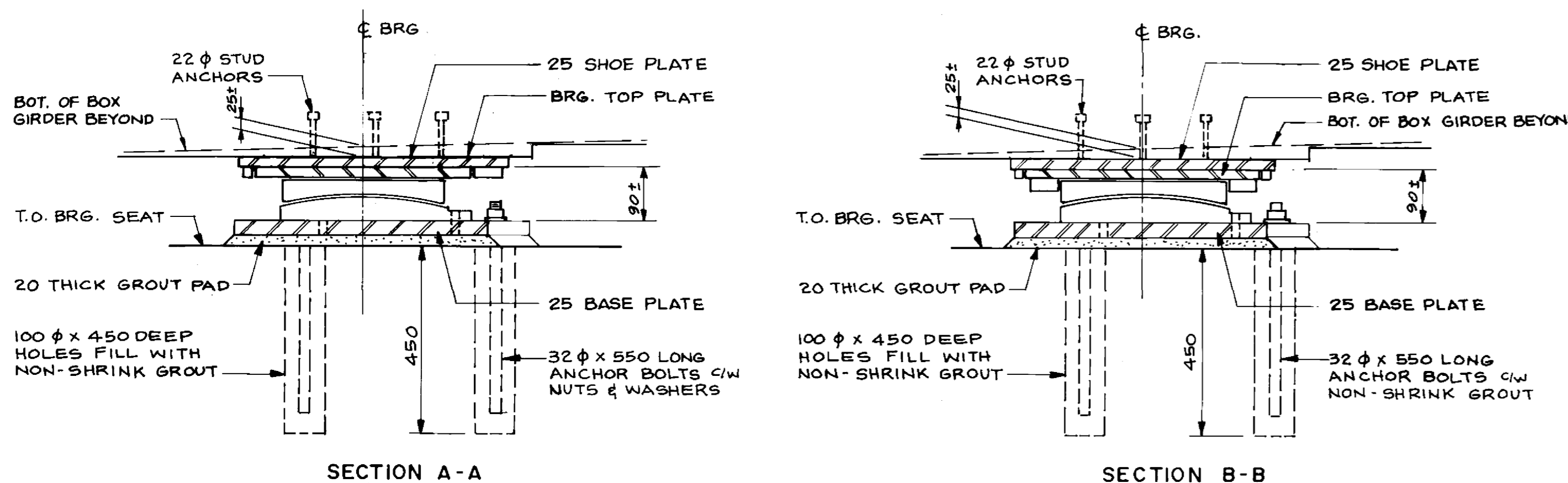
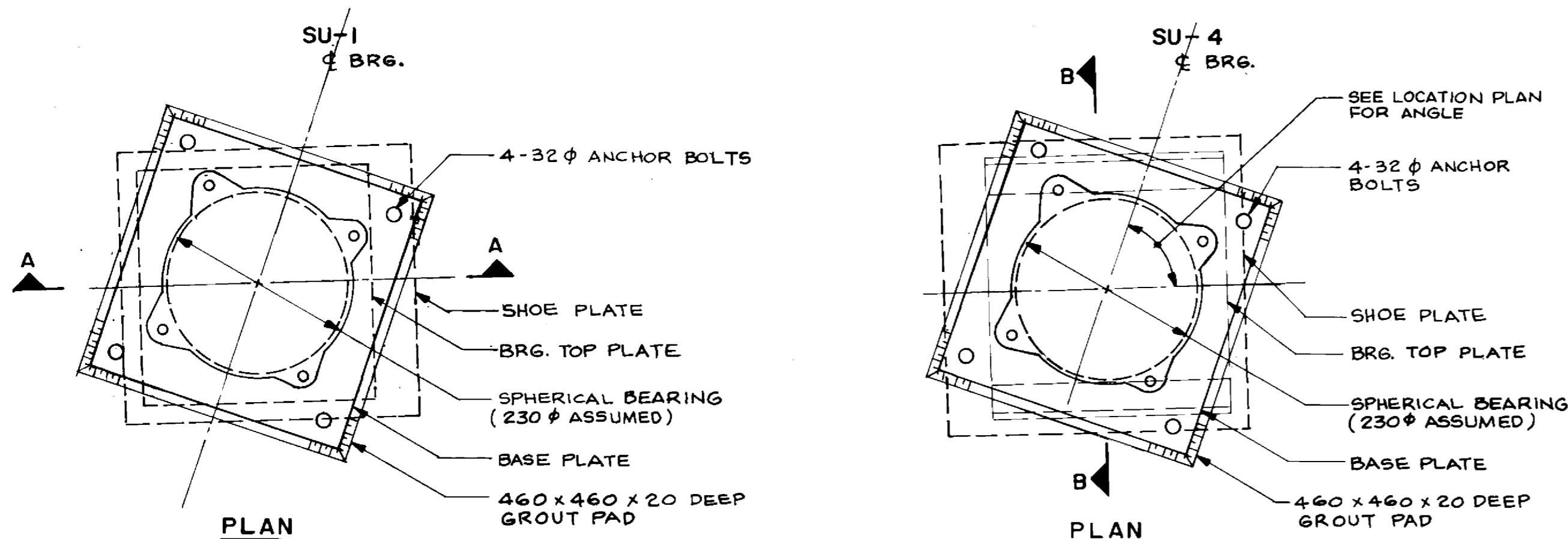


BEARINGS LOCATION PLAN

N.T.S.

BEARING DESIGN DATA								
LOCATION	SU-1 (EXPANSION)		SU-2 (FIXED)		SU-3 (EXPANSION)		SU-4 (EXPANSION)	
BEARING MK. NO.	B1	B2	B3	B4	B5	B6	B1	B2
NO. REQUIRED FOR ONE STRUCTURE	2	6	2	6	2	6	2	6
DEAD LOAD (kN)	277	277	1900	1900	1900	1900	277	277
DEAD LOAD & LIVE LOAD (kN)	578	578	2608	2608	2608	2608	578	578
LATERAL LOAD (kN)	50	-	240	-	240	-	50	-
LONGITUDINAL LOAD (kN)	-	-	103	103	-	-	-	-
LONGITUDINAL MOVEMENT (mm)	± 29	± 29	-	-	± 40	± 40	± 68	± 68
LATERAL MOVEMENT (mm)	-	± 17	-	-	-	± 17	-	± 17

- NOTES:**
- ALL BEARINGS SHALL BE SPHERICAL BEARINGS AS SHOWN.
 - BEARING HEIGHTS SHOWN MAY BE MODIFIED BY BEARING MANUFACTURER SUBJECT TO CONTRACT ADMINISTRATOR'S APPROVAL. THE CONTRACTOR SHALL ADJUST BEARING SEAT ELEVATIONS AND REINFORCING STEEL TO SUIT ACTUAL HEIGHT OF BEARINGS.
 - BEARING DESIGN TO ALLOW FOR FUTURE JACKING OF BRIDGE TO A MAXIMUM OF 5 mm FOR BEARING REPLACEMENT.
 - SHOE PLATE, TOP PLATE AND BASE PLATE DIMENSIONS SHOWN ARE MINIMUM REQUIRED. THE PLATE DIMENSIONS SHOWN MAY BE MODIFIED TO SUIT THE BEARING DIMENSIONS.
 - BEARING FIXING BOLTS SHALL BE ASTM A325M, TYPE 1, HOT-DIP GALVANIZED.
 - ANCHOR BOLT ASSEMBLIES SHALL BE CSA G40.21-M, GR 300W, HOT-DIP GALVANIZED.



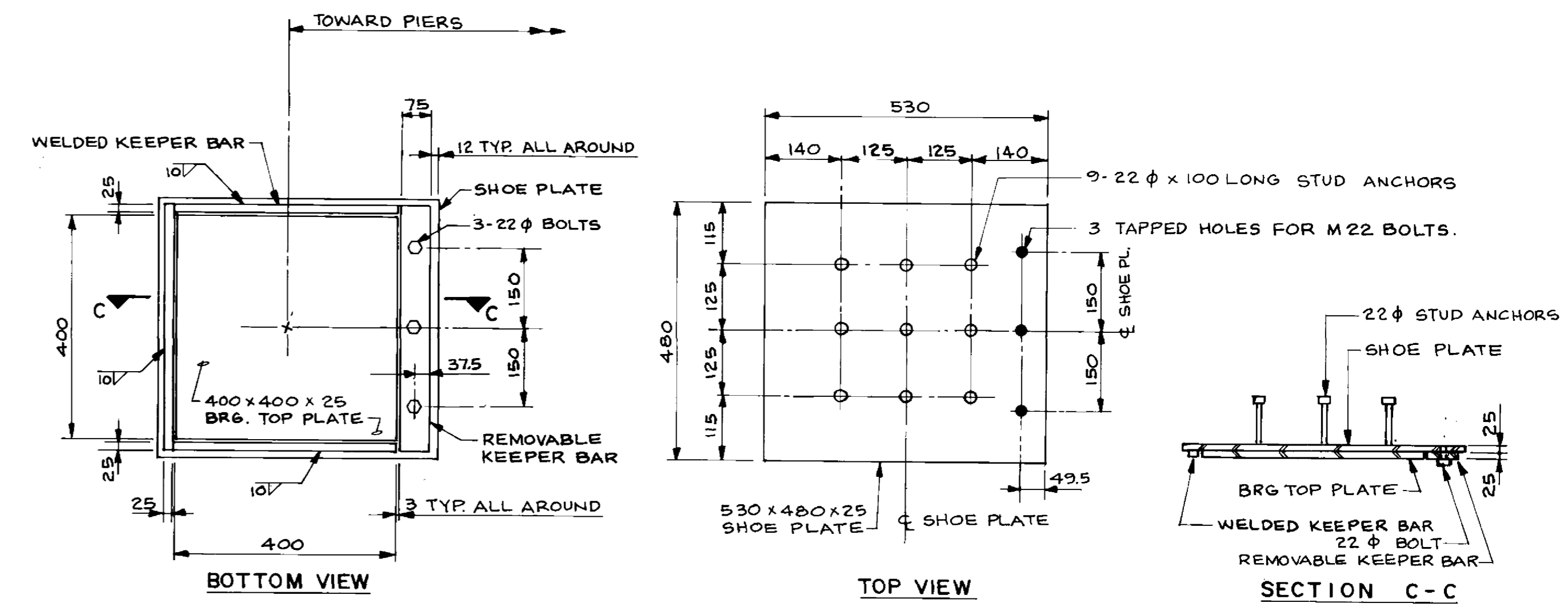
MULTI-DIRECTIONAL

N.T.S.

UNI-DIRECTIONAL

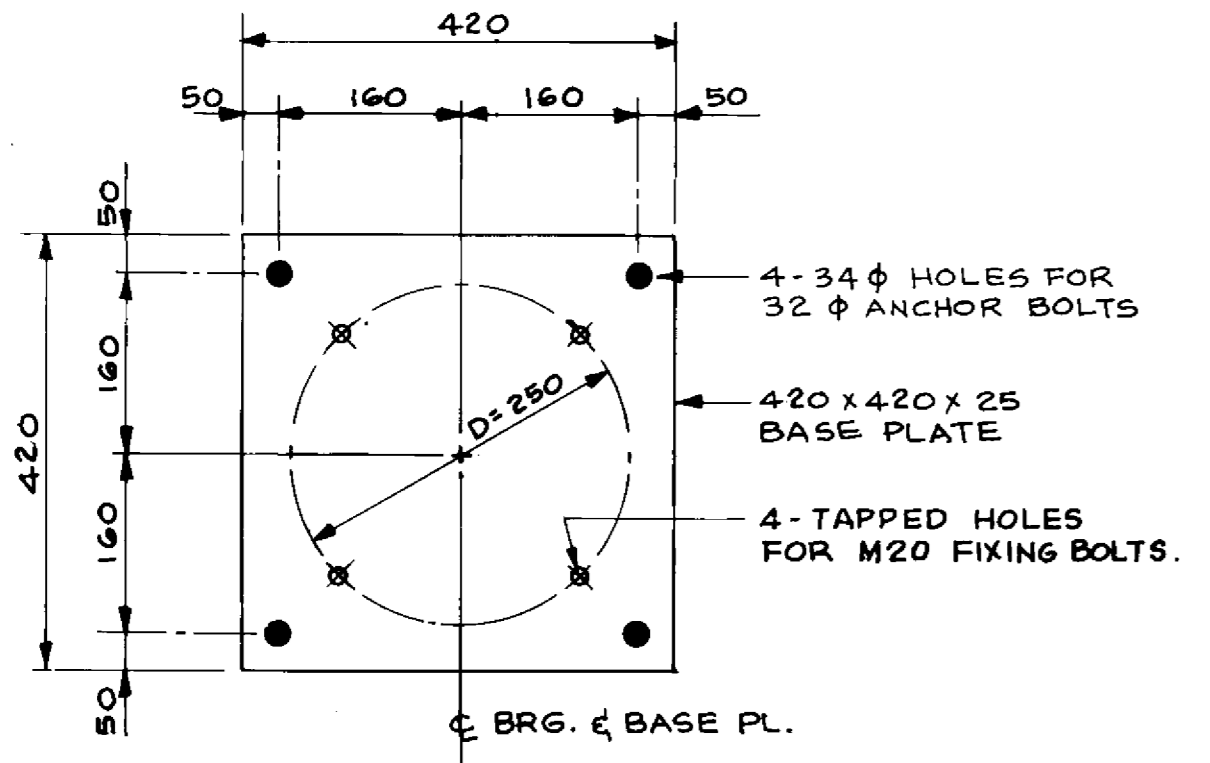
N.T.S.

ABUTMENT BEARINGS



TYPICAL SHOE PLATE

N.T.S.



TYPICAL BASE PLATE

N.T.S.

LOCATION APPROVED UNDERGROUND STRUCTURES
N.A.
 SUPV. U/G STRUCTURES COMMITTEE DATE
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NO.	REVISIONS	DATE	BY

DILLON
 Consulting Engineers • Planners
 Environmental Scientists

DESIGNED BY: S.S.R. CHECKED BY: S.S.R.
 DRAWN BY: N.B.G. APPROVED BY: [Signature]
 HOR. SCALE: N.T.S. VERTICAL: N.T.S.
 DATE: NOV. 1994

Professional Engineer Seal: S.S. [Signature]

CONSULTANT DRAWING NO. 93-1497-06-35

RECORD DRAWING

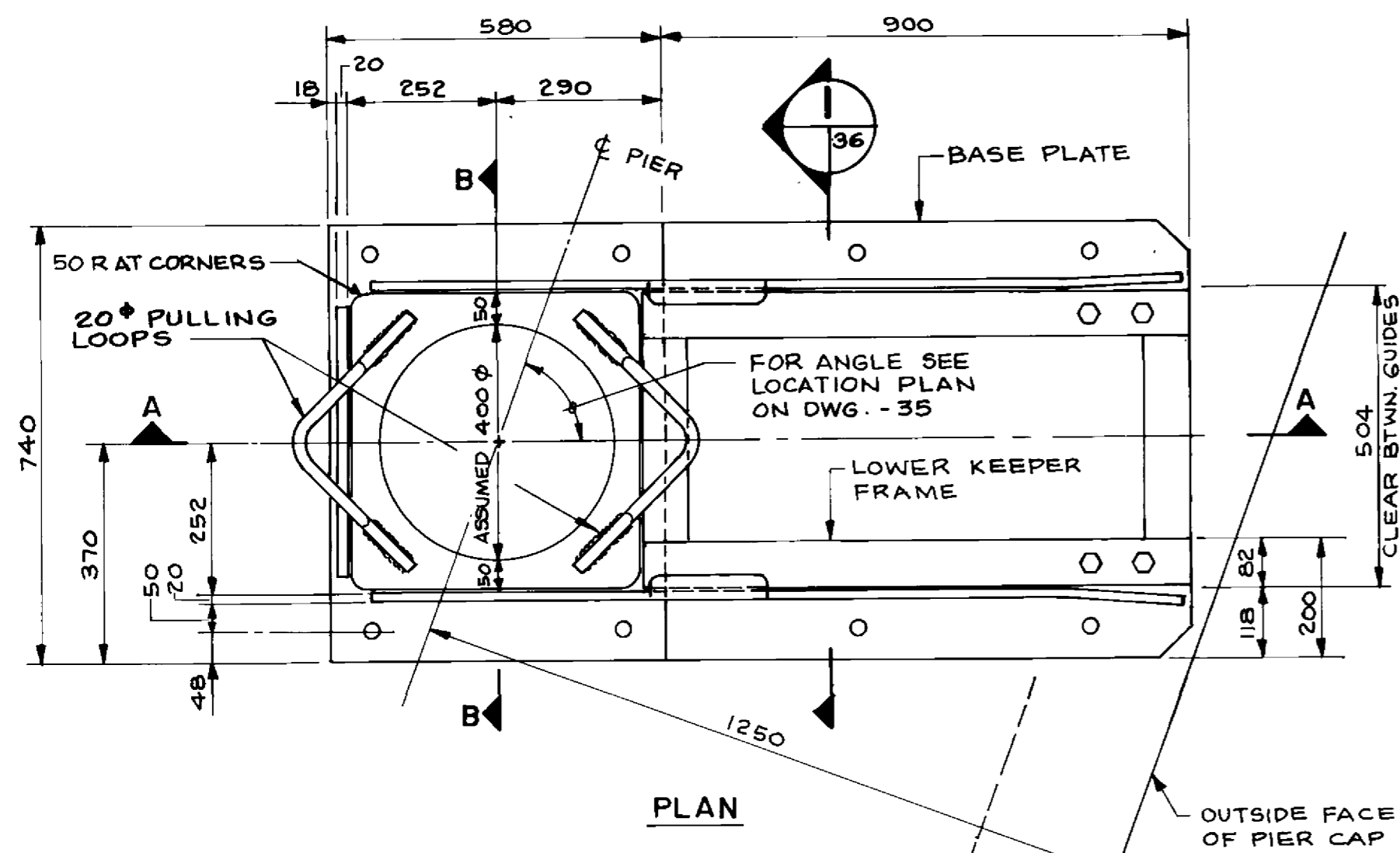
B-6021-35

THE CITY OF WINNIPEG
 WORKS AND OPERATIONS DIVISION
 STREETS AND TRANSPORTATION DEPARTMENT

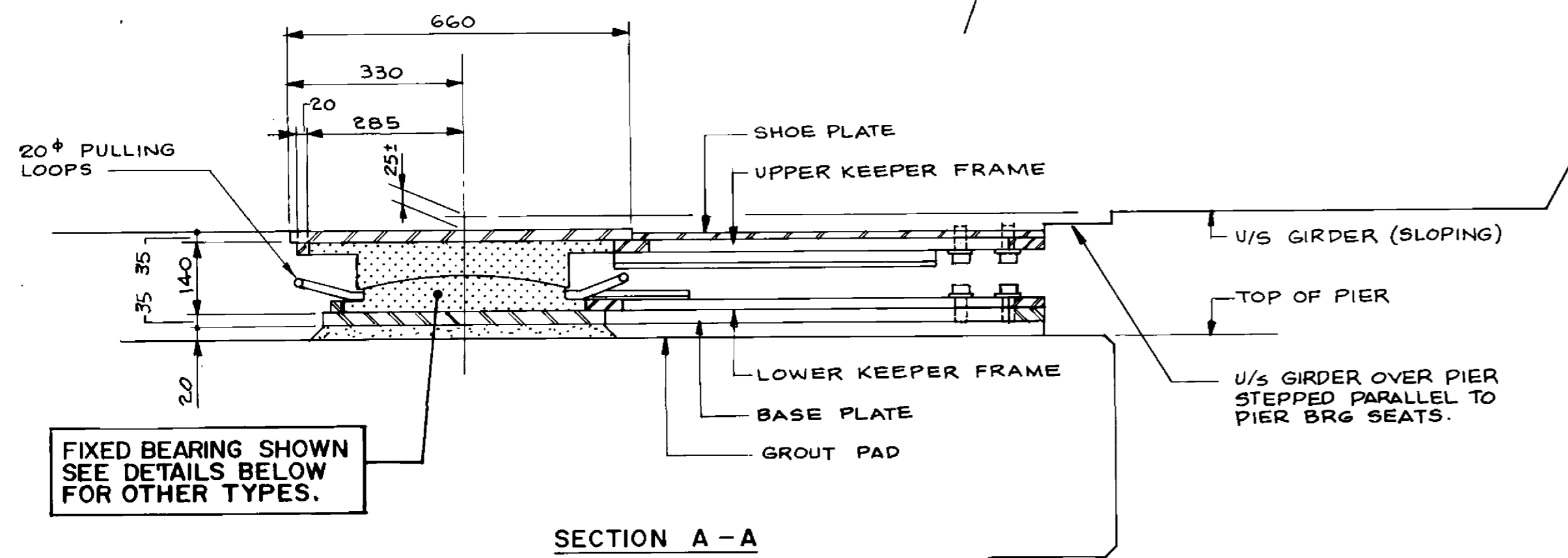
PEMBINA HIGHWAY
 SOUTH CITY LIMIT TO RUE DES TRAPPISTES
 PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

BEARINGS SHEET 1 OF 2

DRAWING NUMBER: B224-95-35
 SHEET OF: P3072-A-35



PLAN

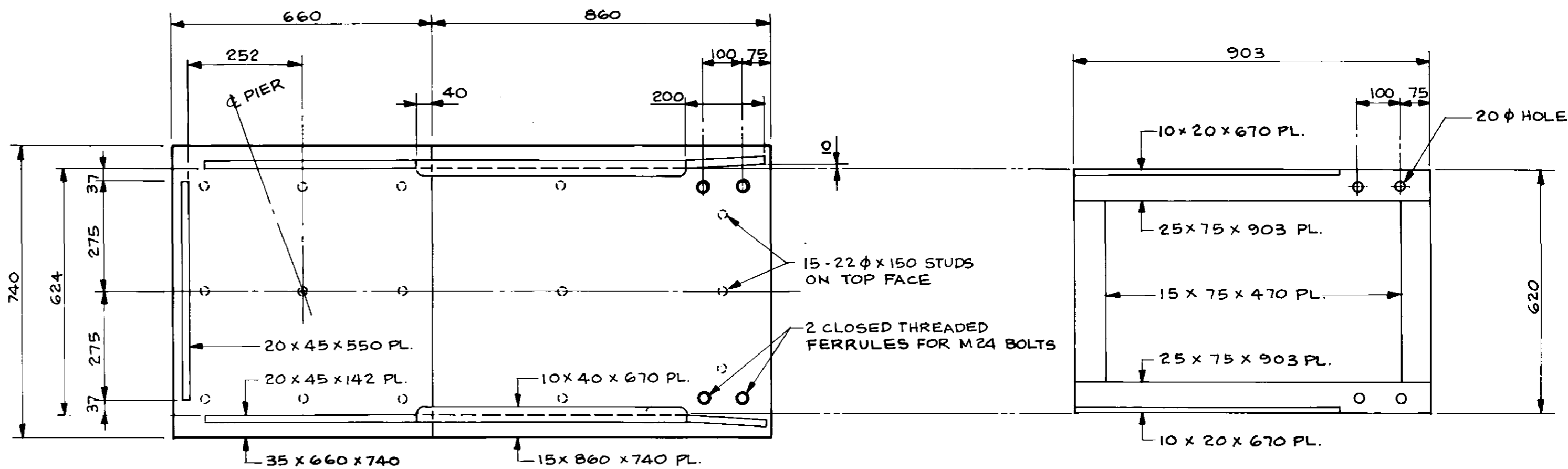


SECTION A-A

FIXED BEARING SHOWN SEE DETAILS BELOW FOR OTHER TYPES.

TYPICAL PIER BEARING ARRANGEMENT

1:10

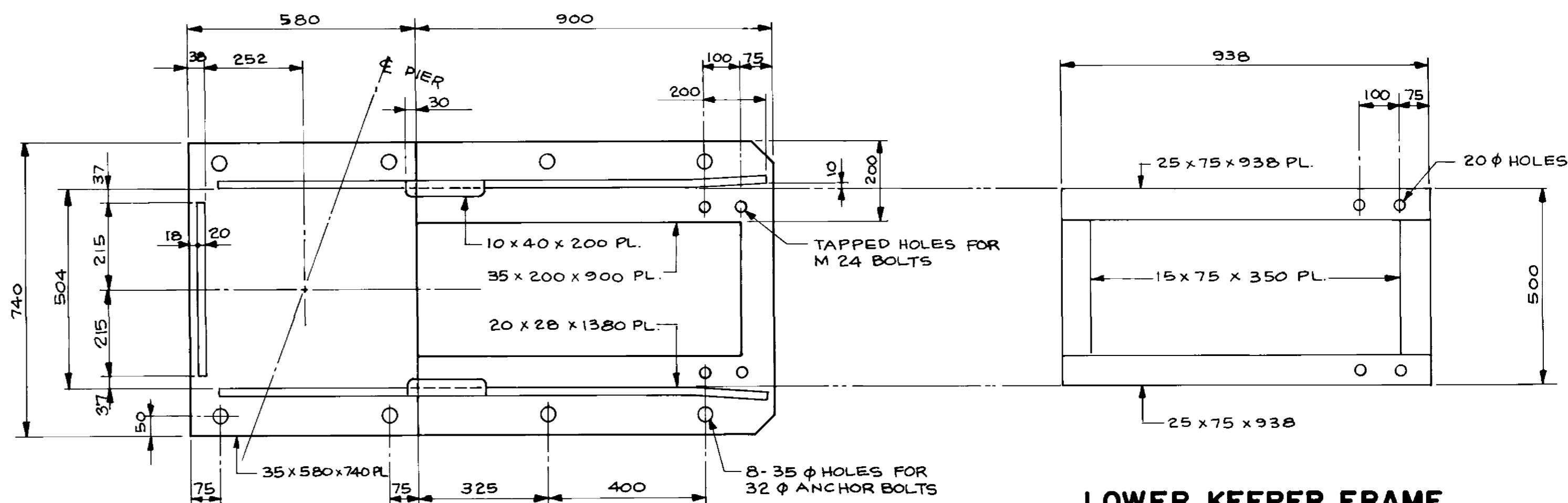


TYPICAL SHOE PLATE

1:10

UPPER KEEPER FRAME

1:10

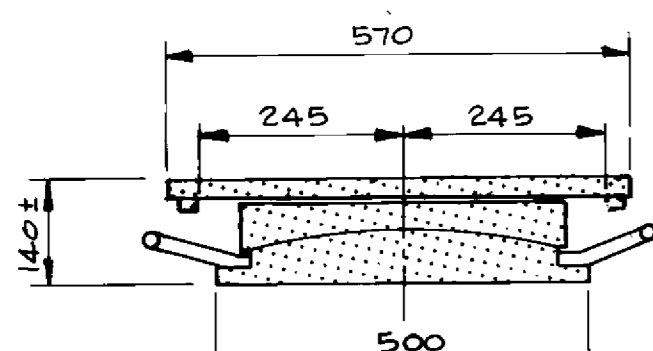


TYPICAL BASE PLATE

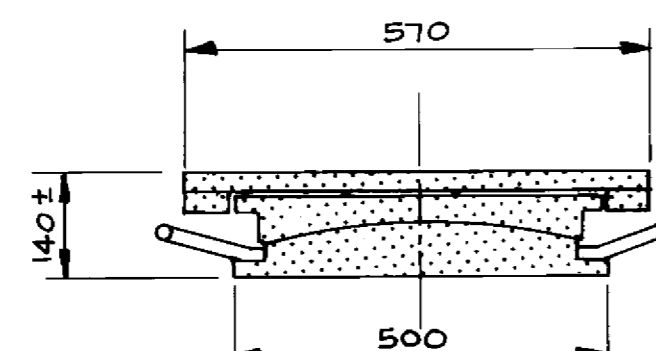
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LOWER KEEPER FRAME

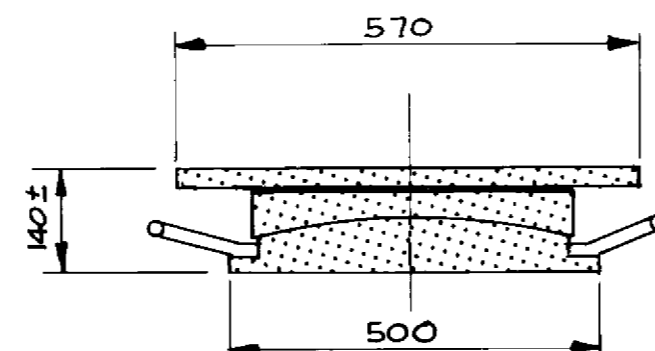
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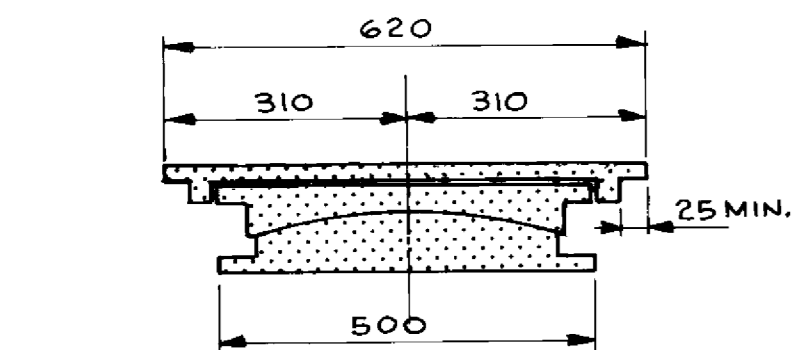
SECTION A-A



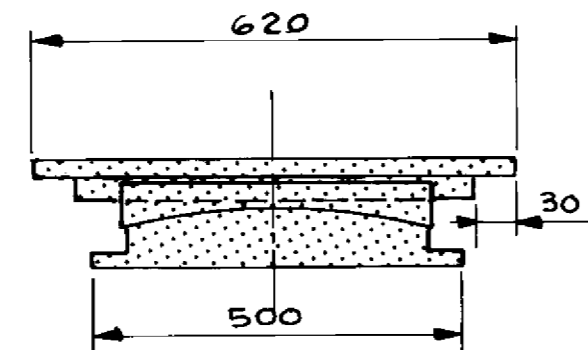
SECTION A-A



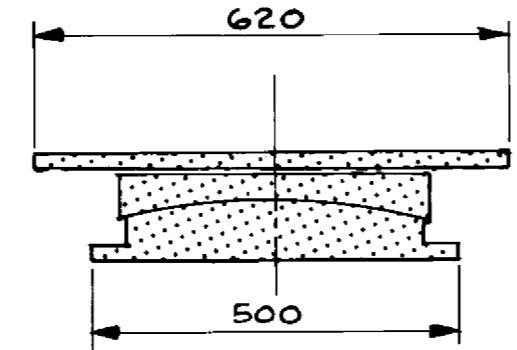
SECTION A-A



SECTION B-B



SECTION B-B



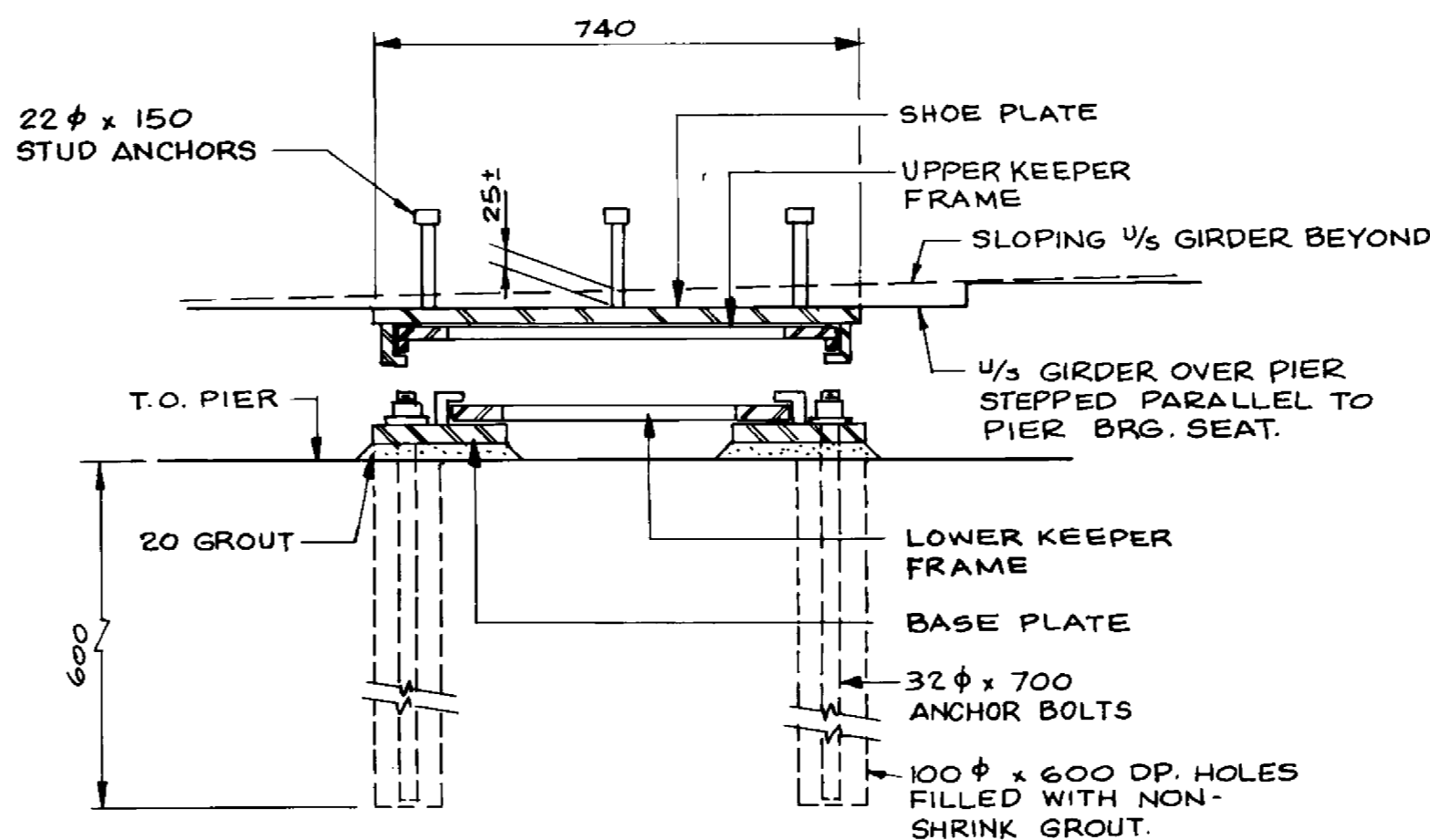
SECTION B-B

UNI-DIRECTIONAL
1:10 (LONGITUDINAL)

UNI-DIRECTIONAL
1:10 (TRANSVERSE)

MULTI-DIRECTIONAL
1:10

PIER BEARINGS



SECTION I

1:10

RECORD DRAWING

B-6021-36

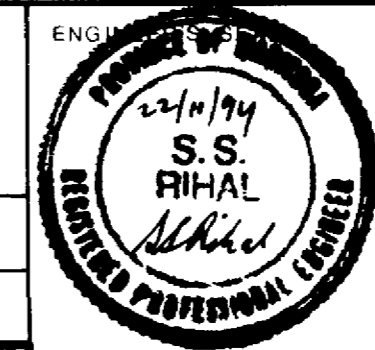
APPROVED BY: *[Signature]* DATE: Dec 18/94

LOCATION APPROVED UNDERGROUND STRUCTURES
N/A
SUPV. U/G STRUCTURES COMMITTEE DATE
NOTE:
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

B.M. ELEV.	
DESIGNED BY	W.P.S./S.S.R.
CHECKED BY	S.S.R.
DRAWN BY	N.B.G.
HOR. SCALE	AS SHOWN
VERTICAL	
DATE	NOV. 1994
NO. REVISIONS	
DATE	
BY	

DILLON
Consulting Engineers • Planners
Environmental Scientists

DESIGNED BY: W.P.S./S.S.R.
CHECKED BY: S.S.R.
DRAWN BY: N.B.G.
HOR. SCALE: AS SHOWN
VERTICAL:
DATE: NOV. 1994

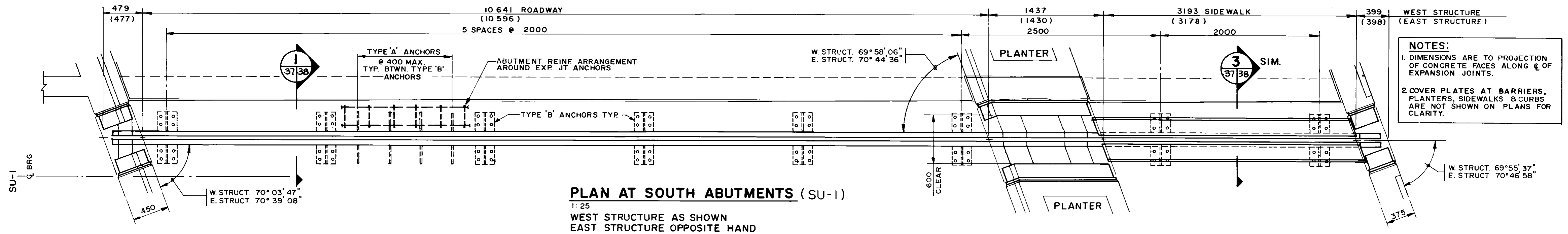


CONSULTANT DRAWING NO.
93-1497-06-36

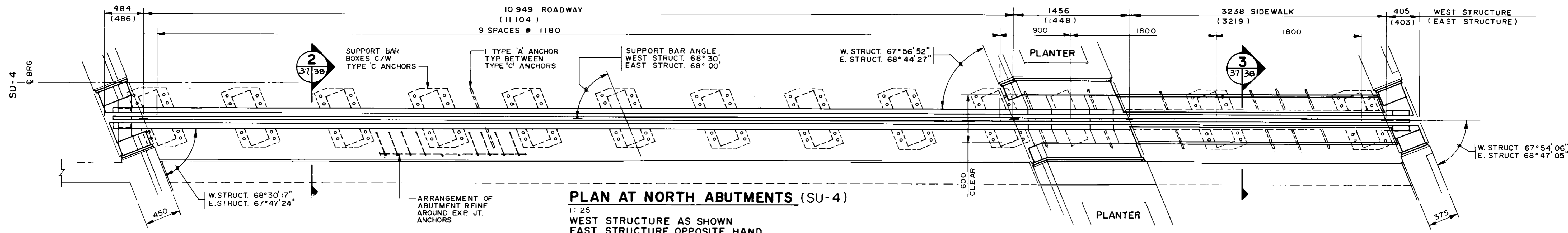
THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

PEMBINA HIGHWAY
SOUTH CITY LIMIT TO RUE DES TRAPPISTES
PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

CITY DRAWING NUMBER: B224-95-36
SHEET OF:
BEARINGS SHEET 2 OF 2
P3072-A-36



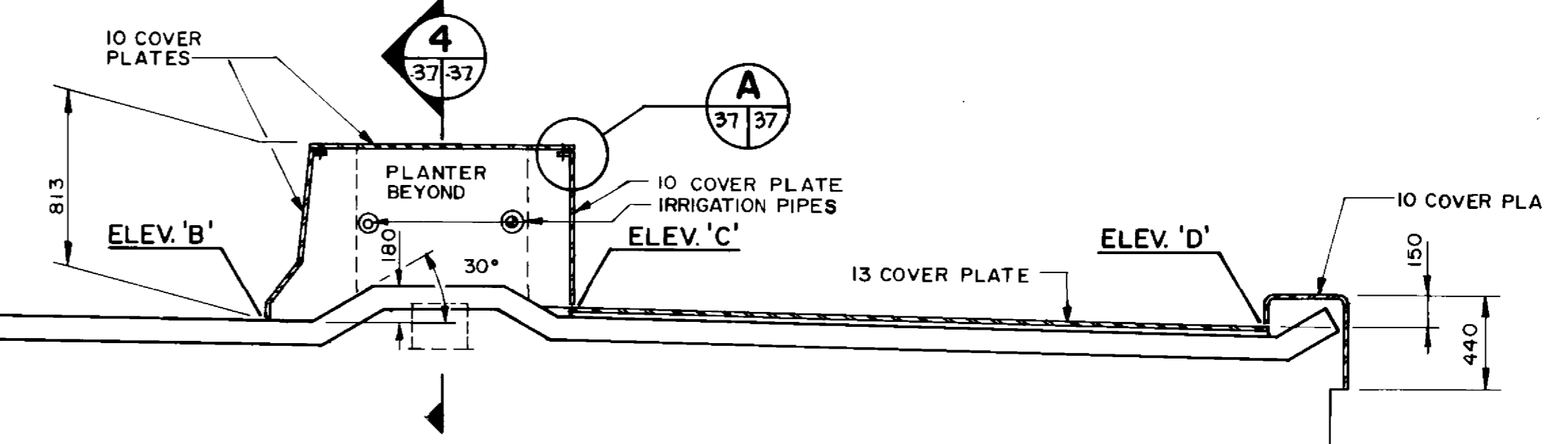
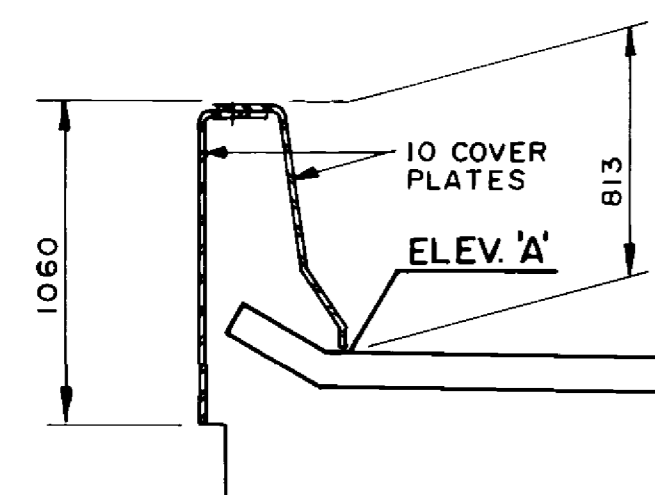
NOTES:
1. DIMENSIONS ARE TO PROJECTION OF CONCRETE FACES ALONG ϵ OF EXPANSION JOINTS.
2. COVER PLATES AT BARRIERS, PLANTERS, SIDEWALKS & CURBS ARE NOT SHOWN ON PLANS FOR CLARITY.



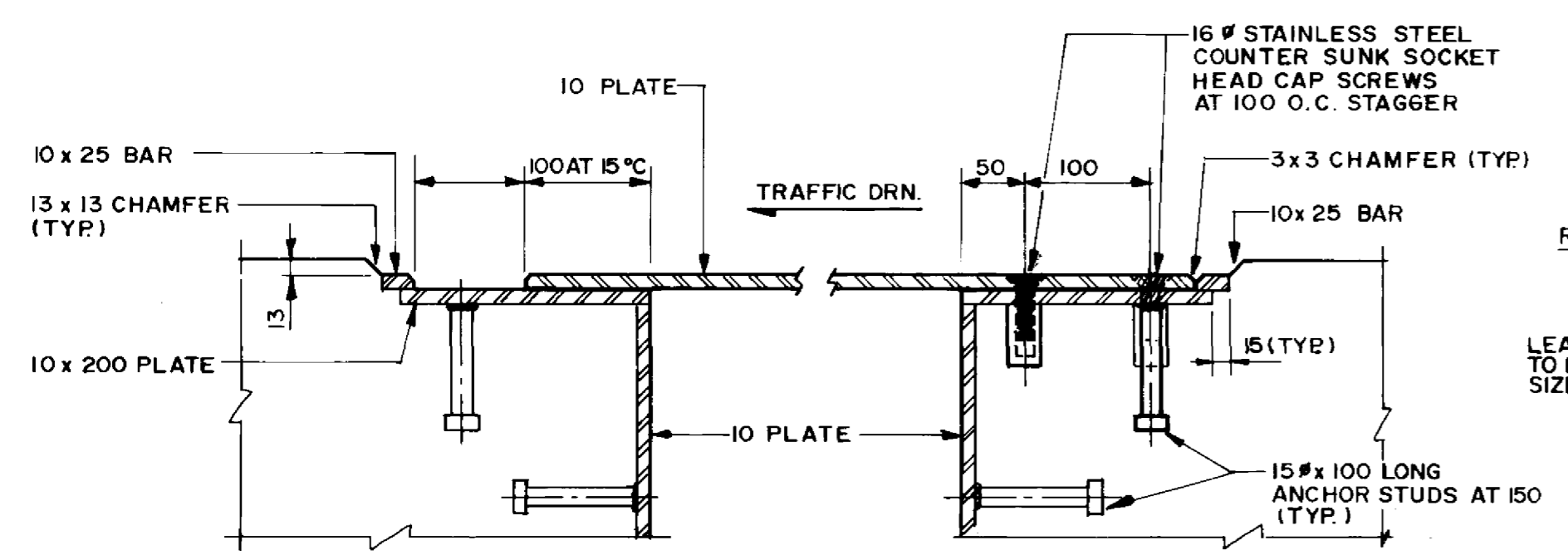
DECK ELEVATION TABLE

	A	B	C	D
SU-1 EAST	232.866	232.695	232.752	232.671
SU-4 EAST	232.618	232.487	232.550	232.482
SU-1 WEST	232.932	232.753	232.809	232.725
SU-4 WEST	232.756	232.529	232.579	232.482

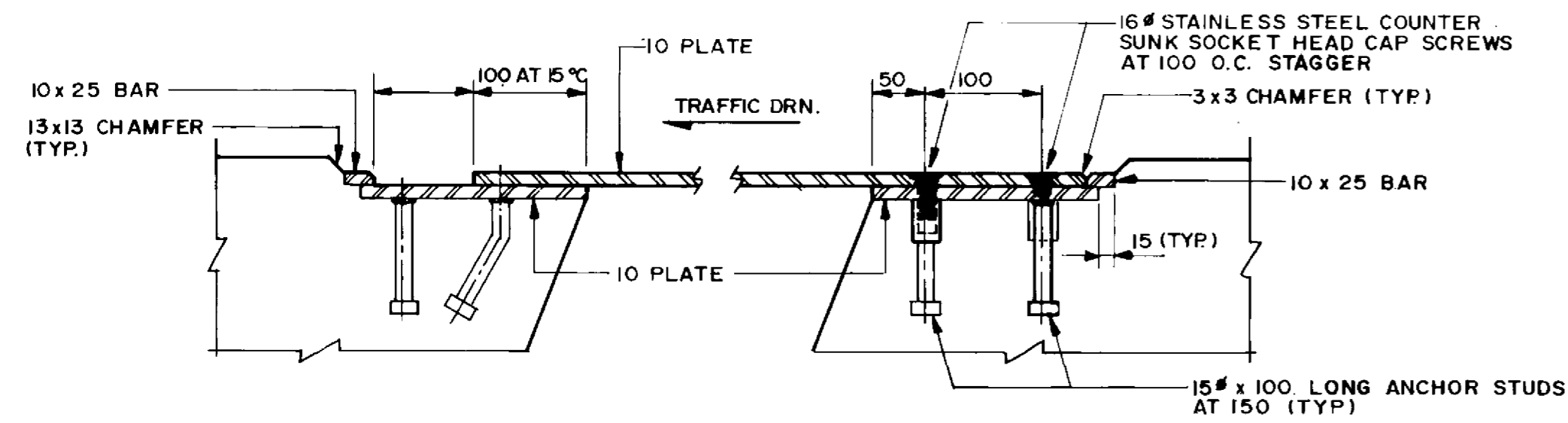
NOTE
ELEVATIONS ARE TO PROJECTION OF FINISHED CONC. GRADES AT CENTER LINE OF EXPANSION JOINT. FABRICATOR SHALL MAKE ALLOWANCES FOR OFFSETS, COVER PLATE THICKNESSES ETC.



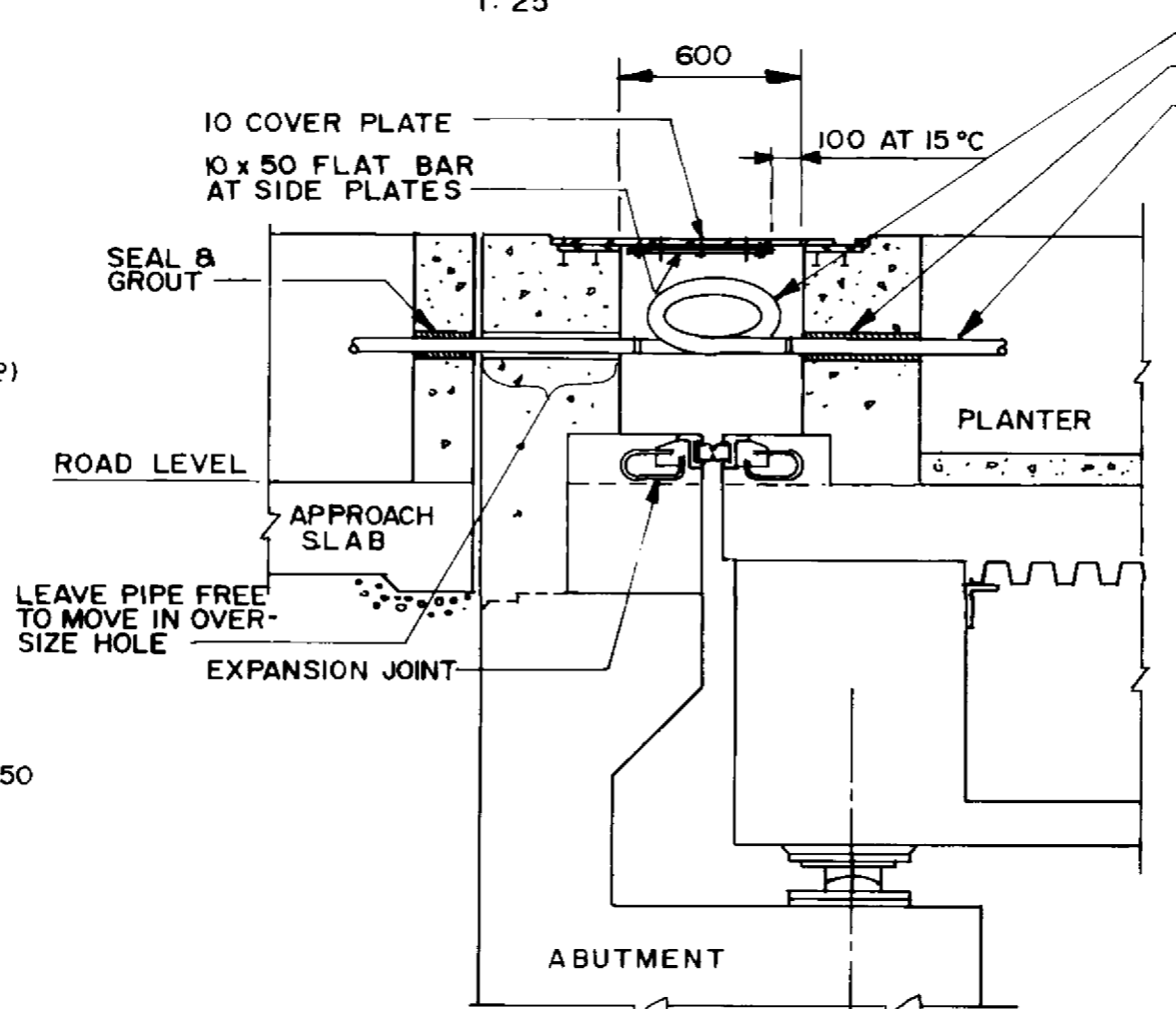
TYPICAL ELEVATION
1:25



COVER PLATE ARRANGEMENT AT BARRIER & CURB
1:5



COVER PLATE ARRANGEMENT AT PLANTER
1:5



DETAIL A
1:10

NOTES:

- MANUFACTURER'S SHOP DRAWINGS SHALL BE SUBMITTED TO THE CONTRACT ADMINISTRATOR FOR APPROVAL AT LEAST FOURTEEN (14) WORKING DAYS PRIOR TO FABRICATION. THE EXPANSION JOINT ASSEMBLIES SHALL BE DESIGNED TO CARRY AASHTO HSS-30 TRUCK AND HS-30 LANE LIVE LOADING.
- STEEL SHALL BE IN ACCORDANCE WITH CSA STANDARD G40.21M GRADE 300 W OR EQUAL.
- STEEL EXTRUSIONS SHALL BE IN ACCORDANCE WITH CSA STANDARD G40.21M GRADE 230 G MIN.
- ALL STEEL SURFACES SHALL BE HOT DIP GALVANIZED TO A NET RETENTION OF 600 G/M² IN ACCORDANCE WITH CSA STANDARD G 164 AFTER FABRICATION AND INSTALLED IN ONE CONTINUOUS PIECE.
- JOINT ASSEMBLY SHALL BE FABRICATED AND COMPLETELY SHOP ASSEMBLED AND PRESET TO DIMENSION "J" FOR 15°C PRIOR TO SHIPMENT.
- WELDING SHALL BE OF LOW HYDROGEN CLASSIFICATION. MANUAL ELECTRODES SHALL BE E7016 OR E7018. ALL WELDING SHALL BE IN ACCORDANCE WITH CSA STANDARD W59.
- SEAL SHALL BE PREFORMED NEOPRENE RUBBER SEAL. EACH RUBBER SEAL SHALL BE SUPPLIED AND INSTALLED IN ONE CONTINUOUS PIECE. NO SPLICES IN THE RUBBER SEAL WILL BE PERMITTED.
- JOINT ASSEMBLY SHALL BE INSTALLED 5 MM BELOW ELEVATION AND GRADE OF BRIDGE DECK.
- AFTER REMOVAL OF CLAMPING CHANNELS AND SPACER DAM, BOLT AND BLEEDER HOLES SHALL BE FILLED WITH AN APPROVED EPOXY GROUT.
- INSTALLATION TEMPERATURE SHALL BE TAKEN AS THE MEAN SHADE AIR TEMPERATURE PRIOR TO JOINT INSTALLATION AT THE STRUCTURE AS FOLLOWS: FOR CONCRETE STRUCTURES - 48 HOURS, FOR STEEL STRUCTURES - 24 HOURS.
- ALL AREAS OF DAMAGED GALVANIZING SHALL BE REPAIRED BY USING AN APPROVED PRODUCT AS SPECIFIED.

RECORD DRAWING
APPROVED BY: *[Signature]* DATE: *[Date]*

LOCATION APPROVED UNDERGROUND STRUCTURES
N.A.
SUPV. U/G STRUCTURES DATE COMMITTEE

NOTE:
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION

NO	REVISIONS	DATE	BY

DILLON
Consulting Engineers - Planners
Environmental Scientists

DESIGNED BY: S.S.R./W.P.S. CHECKED BY: S.S.R.

DRAWN BY: W.P.S. APPROVED BY: *[Signature]* DATE: *[Date]*

HOR. SCALE: AS SHOWN VERTICAL: AS SHOWN

ACCEPTED BY: *[Signature]* DATE: *[Date]*

NOV. / 94

ENGINEER OF WATERS
20/1/94
S.S. FRIHAL
REGISTERED PROFESSIONAL ENGINEER

CONSULTANT DRAWING NO. 93-1497-06-37

THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

PEMBINA HIGHWAY
SOUTH CITY LIMIT TO RUE DES TRAPPISTES
PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

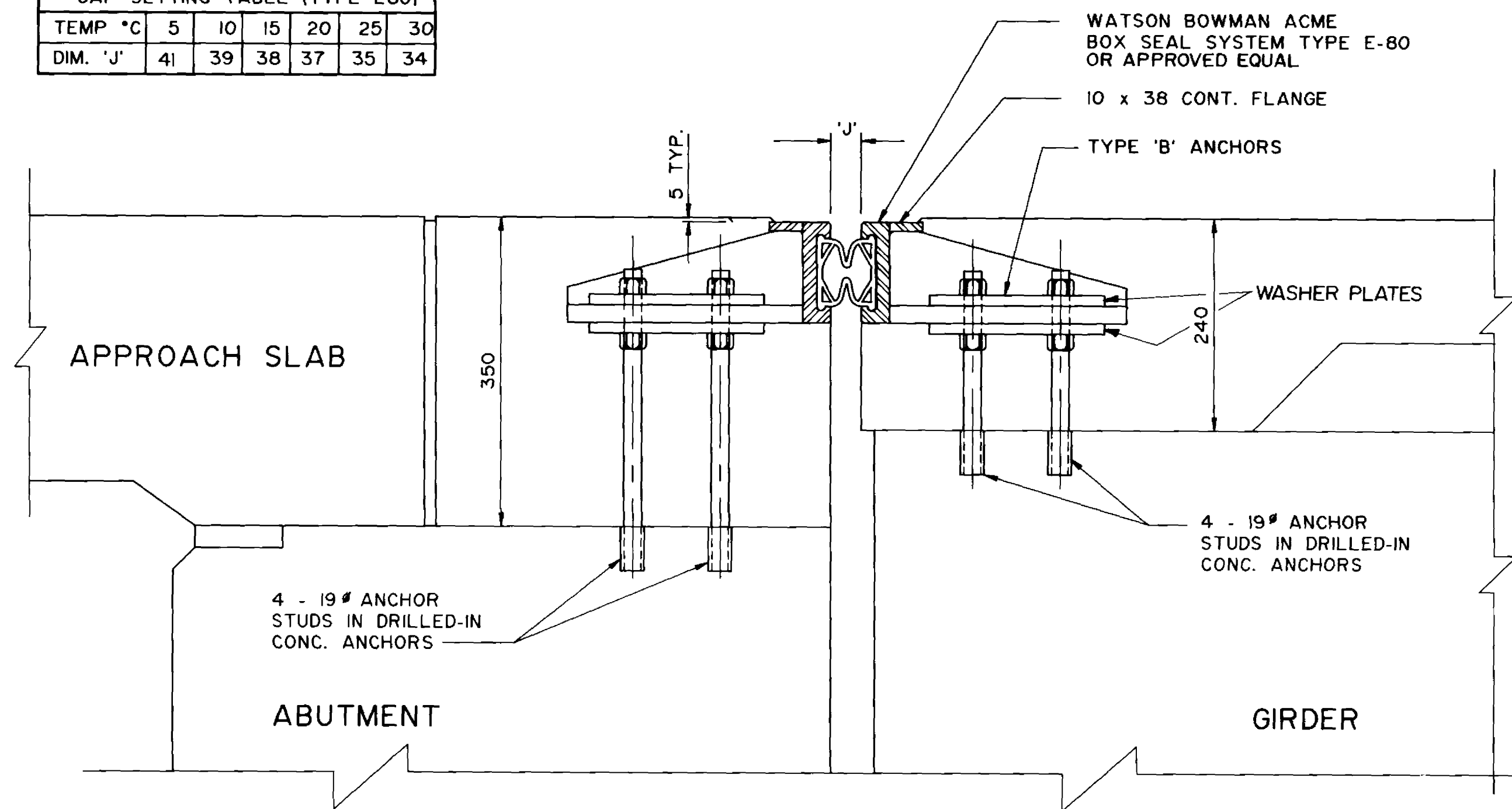
EXPANSION JOINTS
SHEET 1 OF 2

DRAWING NUMBER: B224-95-37
SHEET OF

P3072-A-37

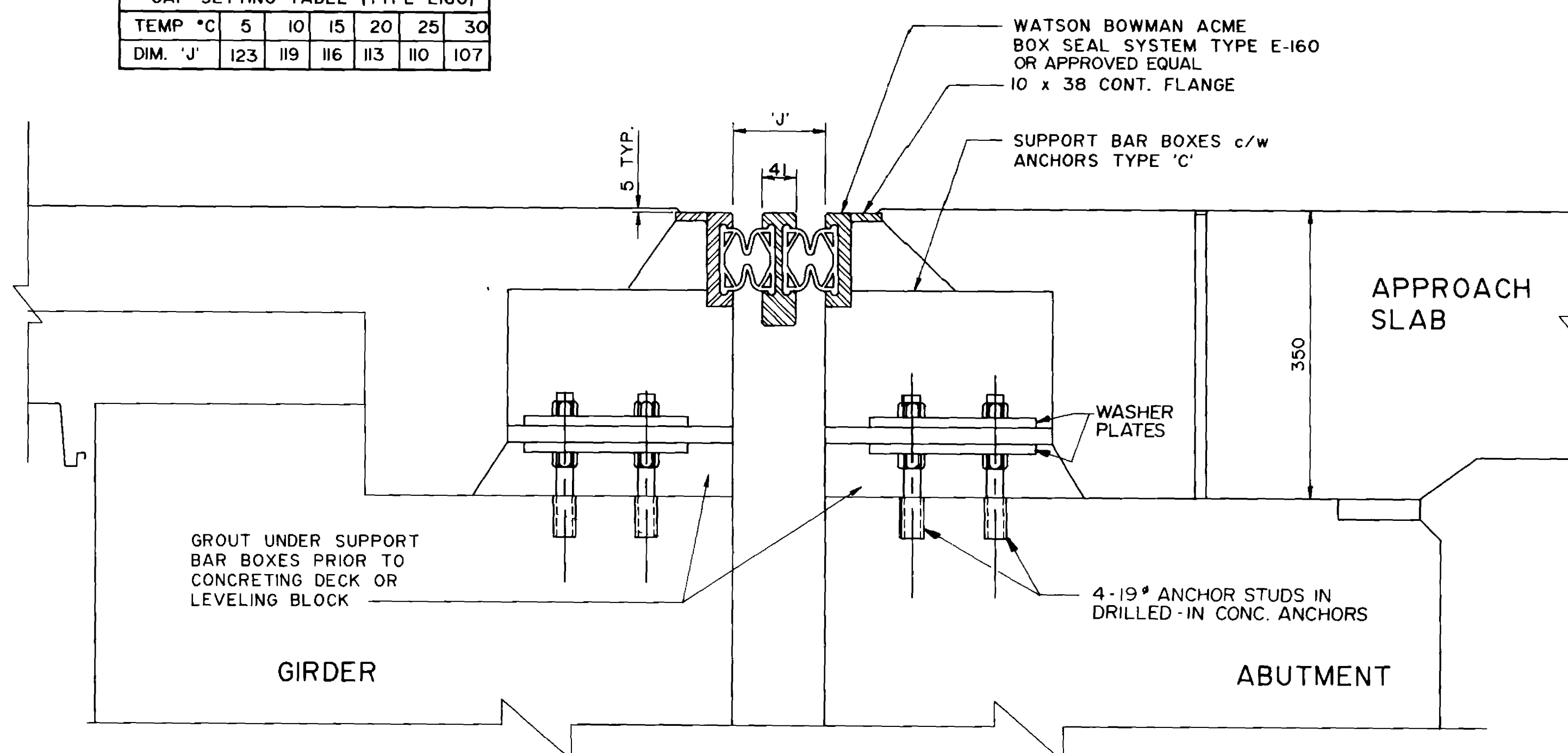
B-6021-37

TEMP °C	5	10	15	20	25	30
DIM. 'J'	41	39	38	37	35	34

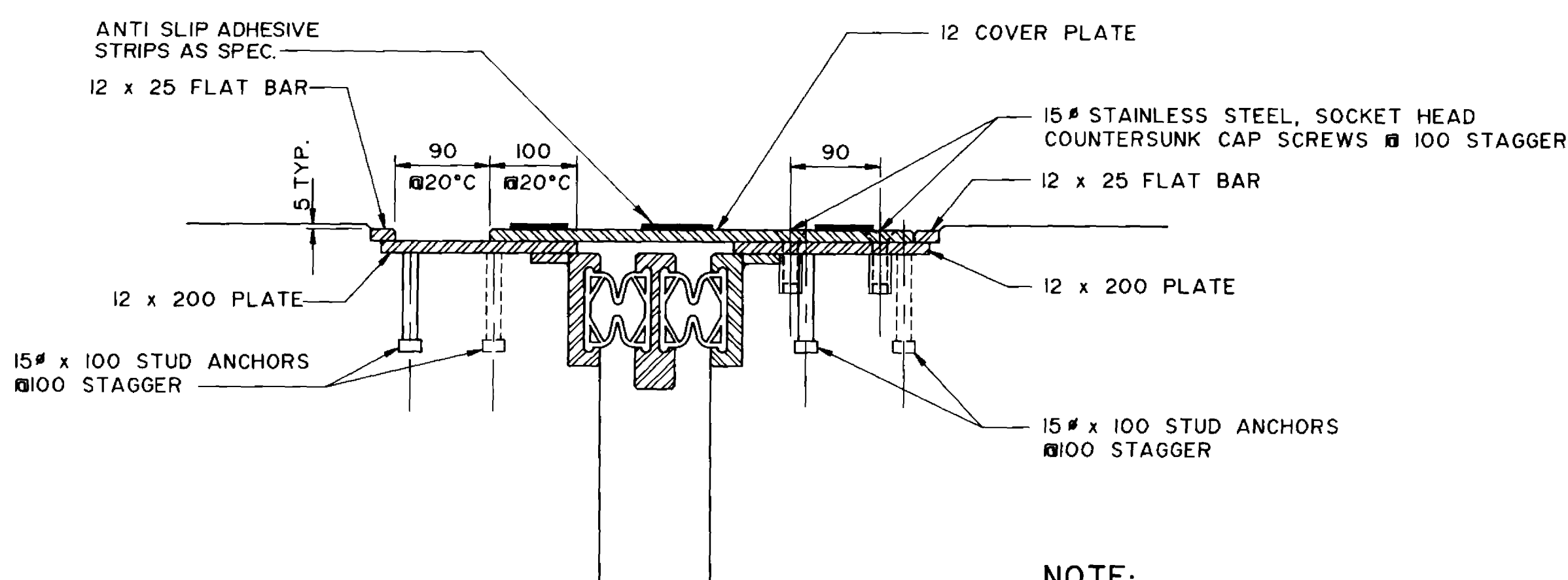


SECTION 1
1 : 5

TEMP °C	5	10	15	20	25	30
DIM. 'J'	123	119	116	113	110	107

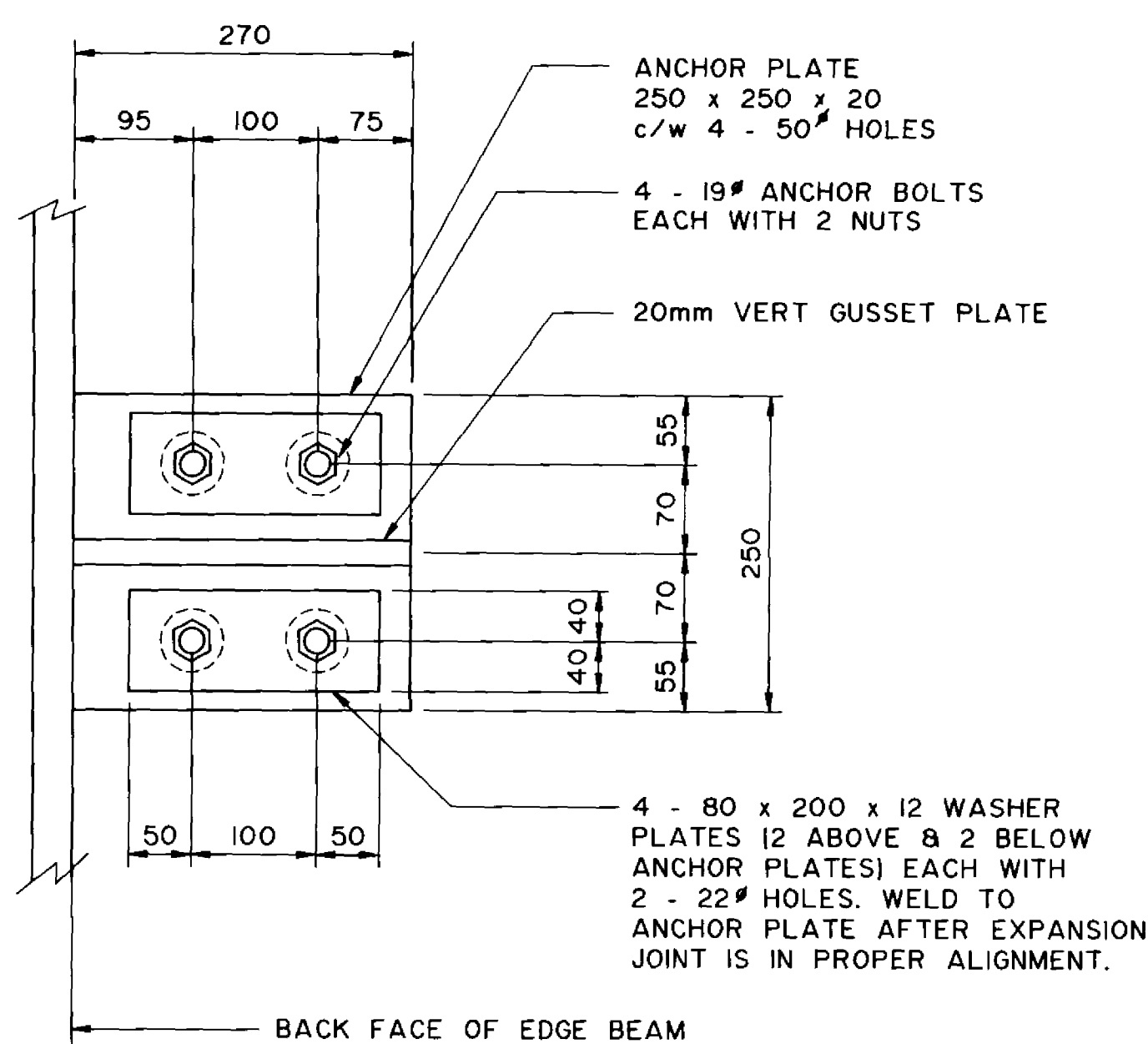


SECTION 2
1 : 5



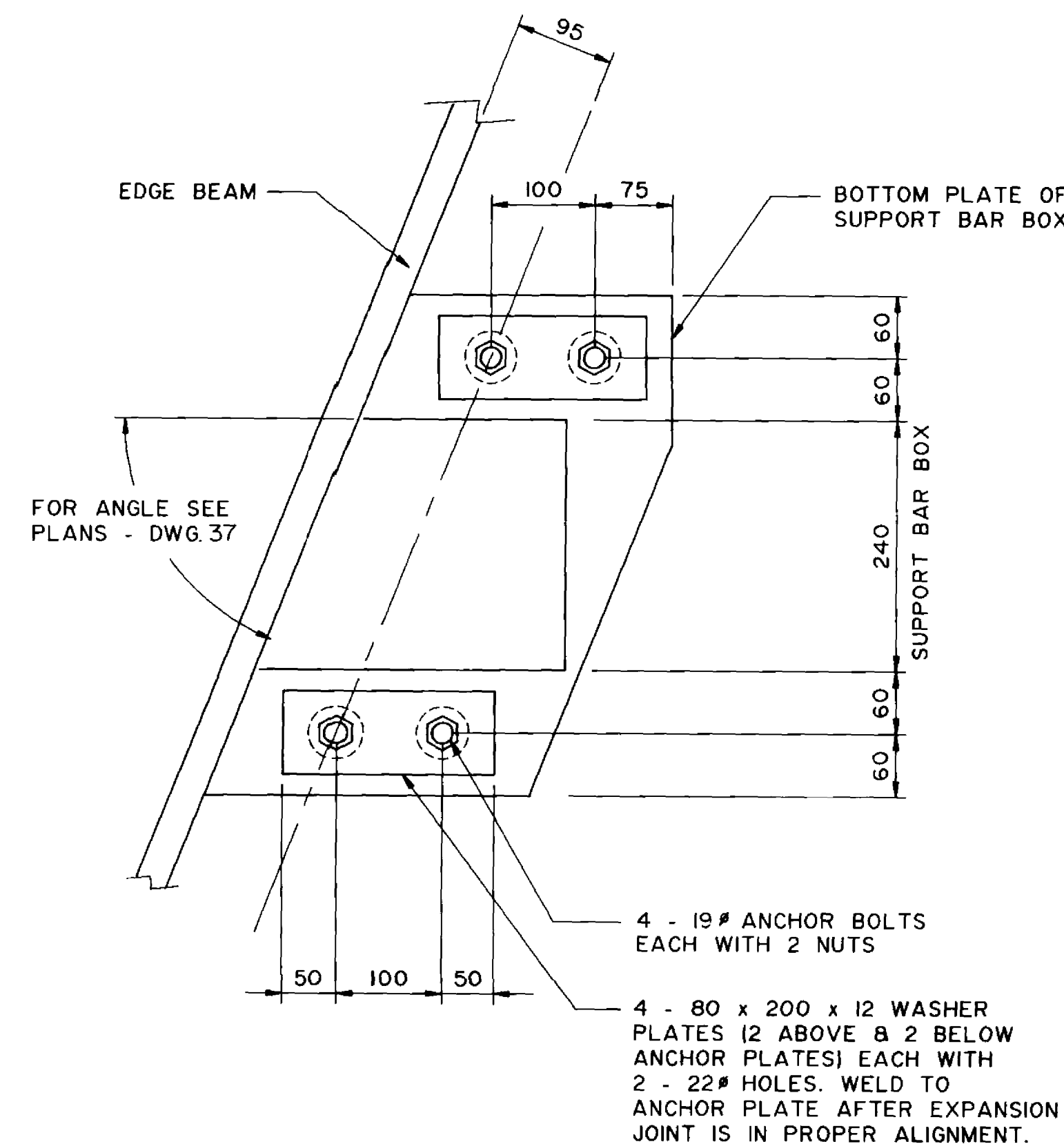
SECTION 3
1 : 5

NOTE:
THIS SECTION SHOWS CONDITION AT NORTH ABUTMENT SIDEWALK. SOUTH ABUTMENT IS SAME EXCEPT EXPANSION JOINT UNIT HAS ONLY ONE SEAL.



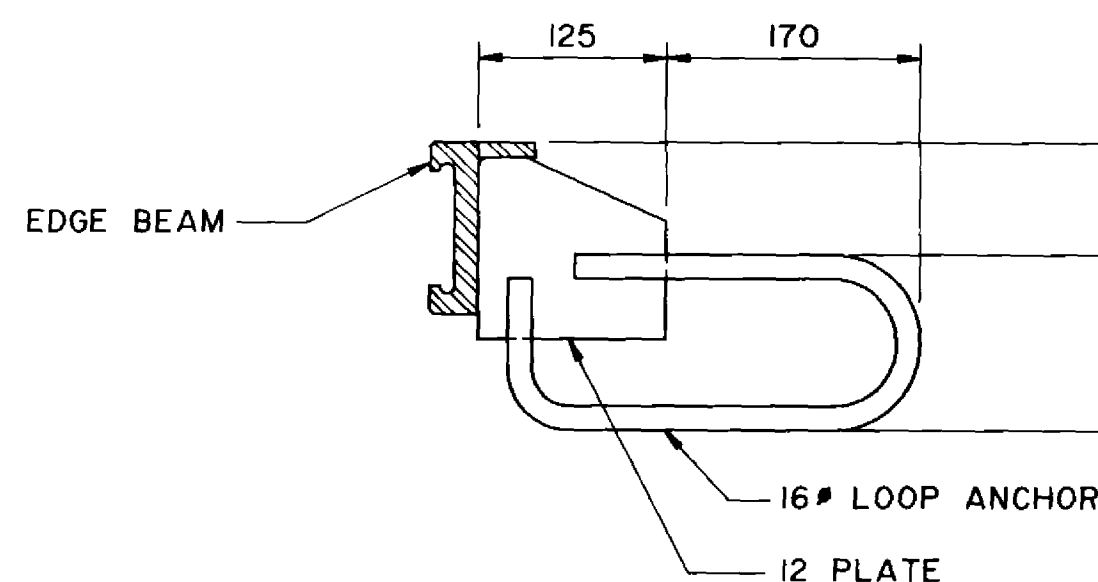
ANCHOR TYPE 'B'

1 : 5



ANCHOR TYPE 'C'

1 : 5



ANCHOR TYPE 'A'

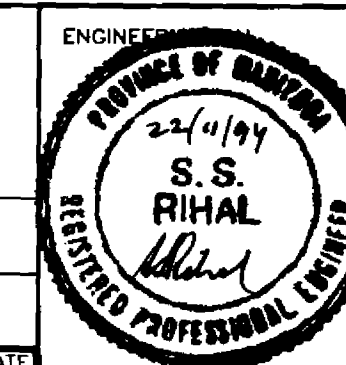
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RECORD DRAWING

APPROVED BY: *[Signature]* DATE: Dec 18/98

B.M. ELEV.	
DESIGNED BY	W.P.S.
DRAWN BY	W.P.S.
HOR. SCALE	AS SHOWN
VERTICAL	
NO. REVISIONS	
DATE	NOV. 94

DILLON
Consulting Engineers - Planners
Environmental Scientists



CONSULTANT DRAWING NO. 93-1497-06-38

THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

PEMBINA HIGHWAY
SOUTH CITY LIMIT TO RUE DES TRAPPISTES
PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

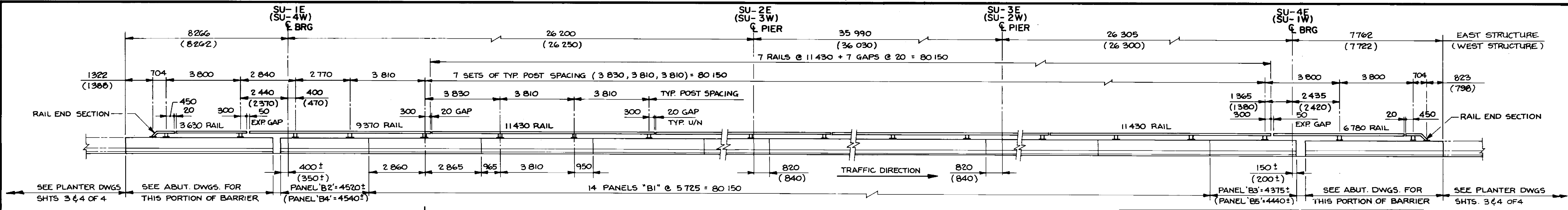
EXPANSION JOINTS
SHEET 2 OF 2

B-6021-38

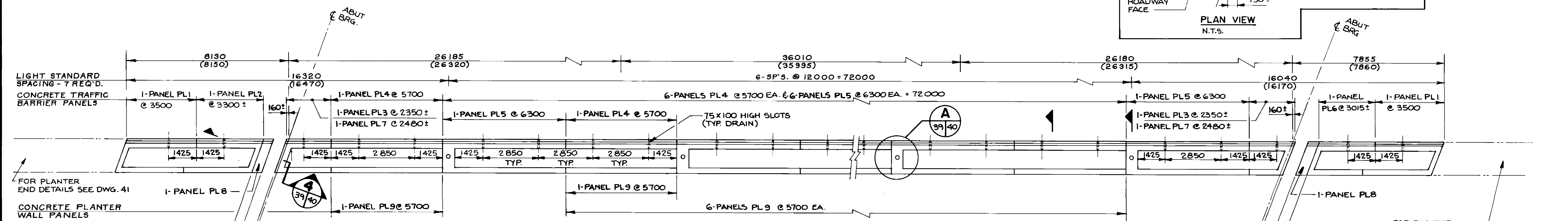
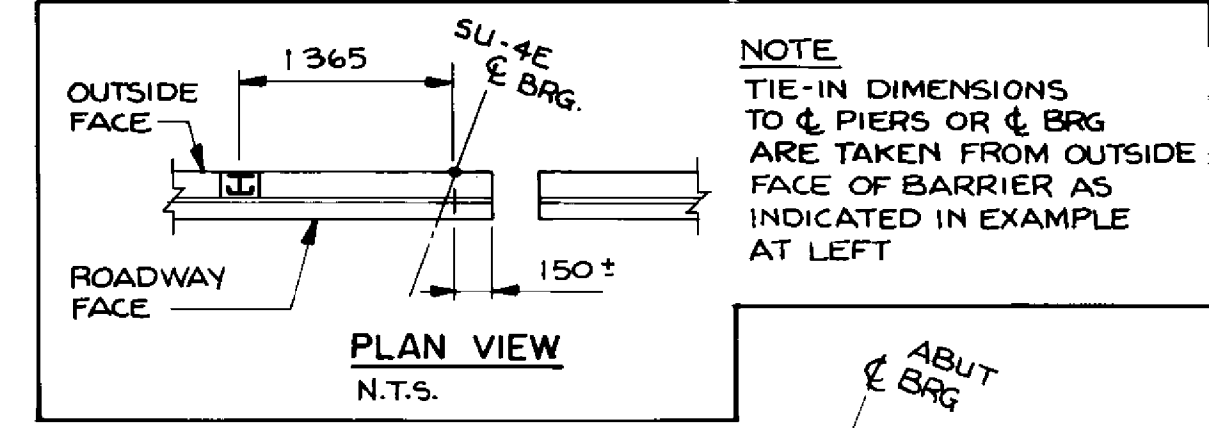
CITY DRAWING NUMBER B224-95-38

SHEET OF

P3072-A-38



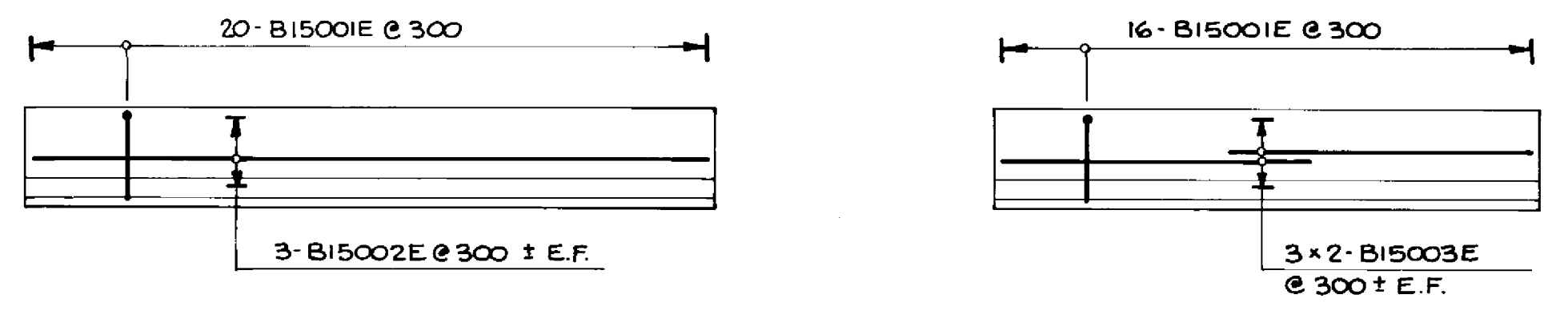
**ELEVATION - EAST STRUCTURE SU-1 TO SU-4 WEST SIDE OF ROADWAY
(WEST STRUCTURE SU-1 TO SU-4 EAST SIDE OF ROADWAY)**
MEDIAN SIDE CONCRETE BARRIER AND ALUMINUM RAIL LAYOUT
1:100



**PLAN - EAST STRUCTURE SU-1 TO SU-4 EAST SIDE OF ROADWAY
WEST STRUCTURE SU-1 TO SU-4 WEST SIDE OF ROADWAY**
CONCRETE PLANTER LAYOUT
1:100

EXTRA REINF. AT RAIL POSTS BTWN SU-1 & SU-4

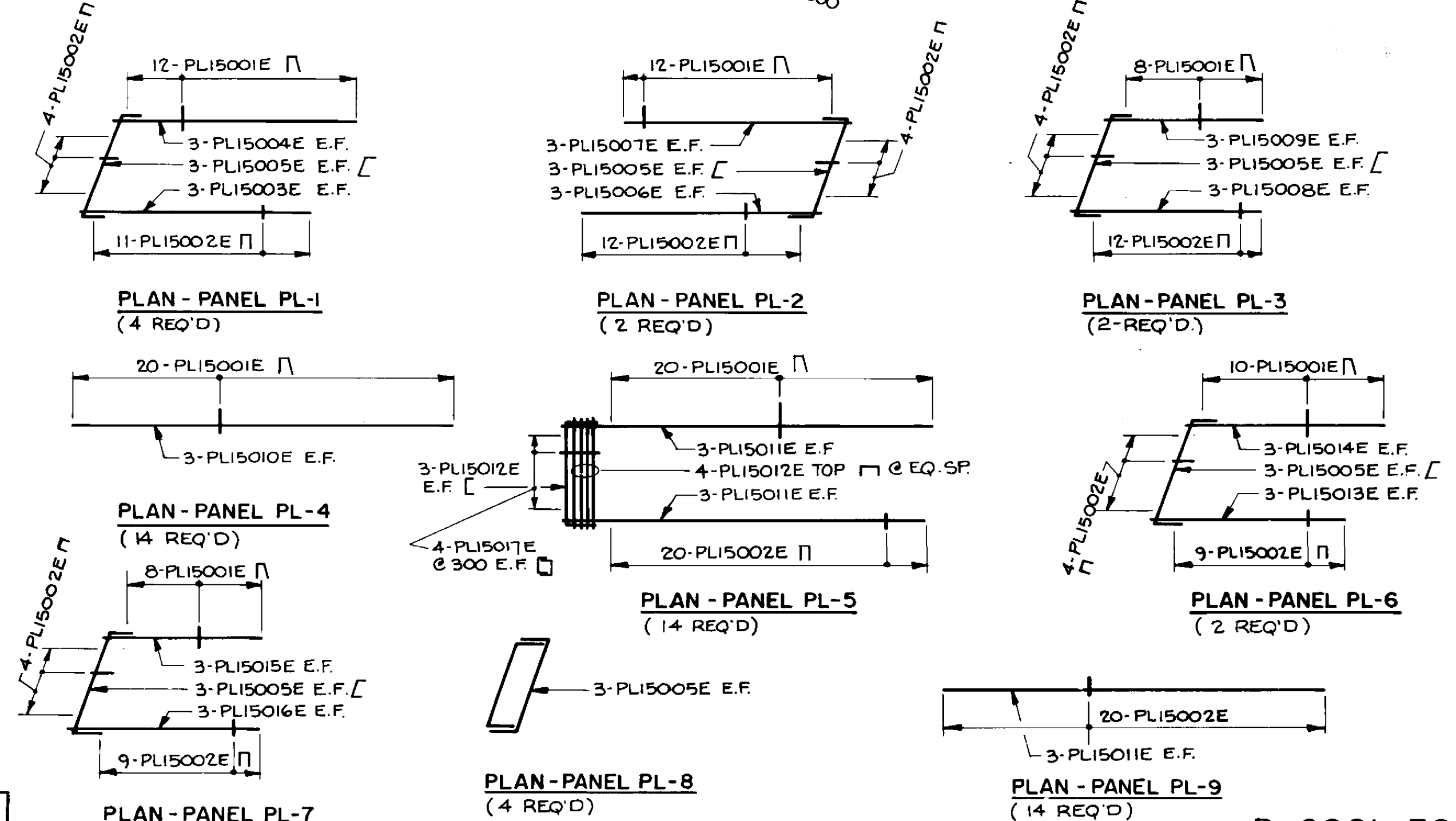
MARK	EAST STRUCTURE	WEST STRUCTURE
B15004E	48 TOTAL	48 TOTAL
B10001E	120 TOTAL	120 TOTAL



ELEVATION - PANEL B-1 (28 REQ'D)
ELEVATION - PANEL B-2, B-3, B-4, B-5 (1- EA. REQ'D)
MEDIAN SIDE CONCRETE BARRIER REINFORCING DETAILS
N.T.S.

CONCRETE TRAFFIC BARRIER ALUMINUM RAIL BILL OF MATERIAL

ITEM	NO. REQUIRED
WELDED RAIL POSTS BR1	56
11430 RAIL	14
9370 RAIL	2
6780 RAIL	2
3630 RAIL	2
RAIL END SECTION	4 (2LH, 2RH)
STD SPLICE BAR (457 LG)	18
EXPANSION SPLICE BAR (700 LG)	4
RAIL CLAMP BAR (146 LG)	112
CAP SCREWS	304
WASHERS	304
SHIMS	AS REQUIRED



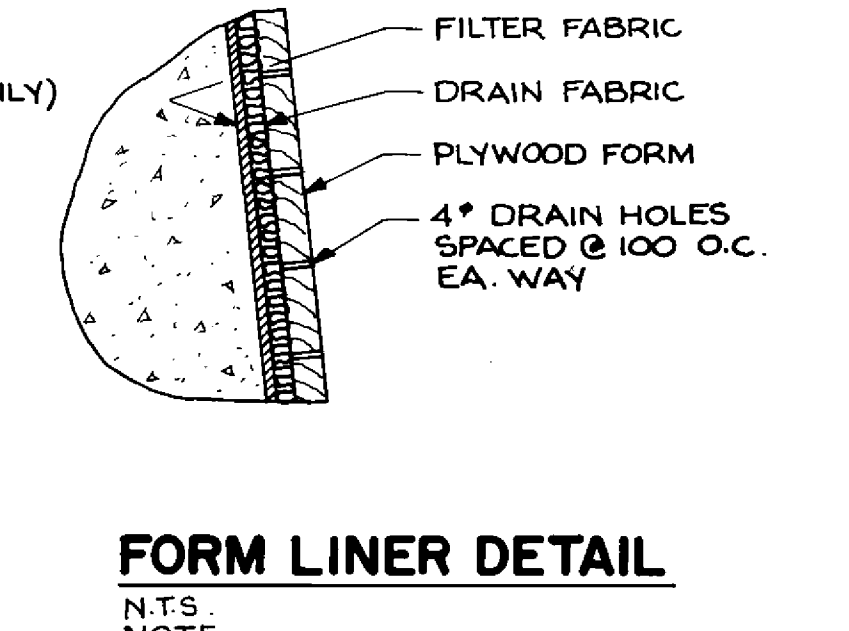
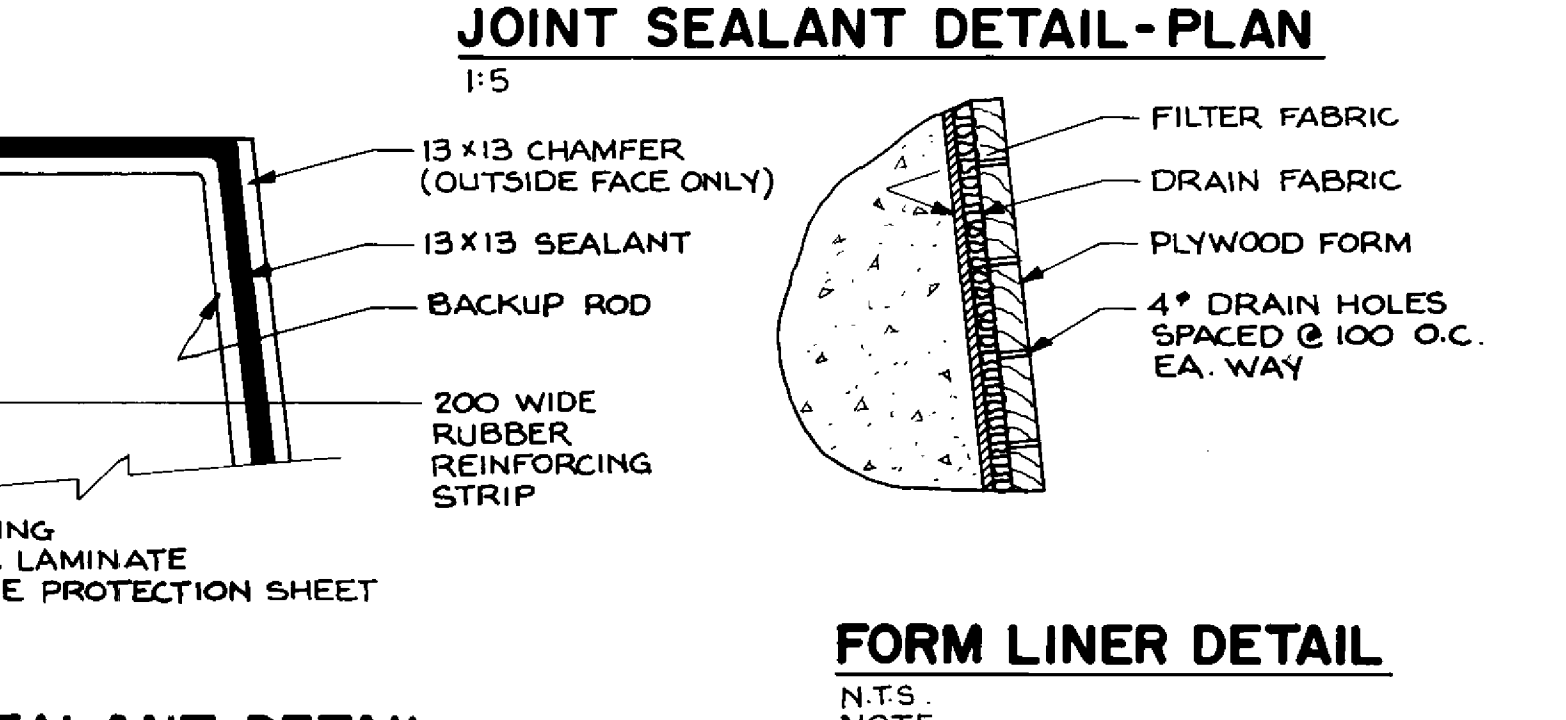
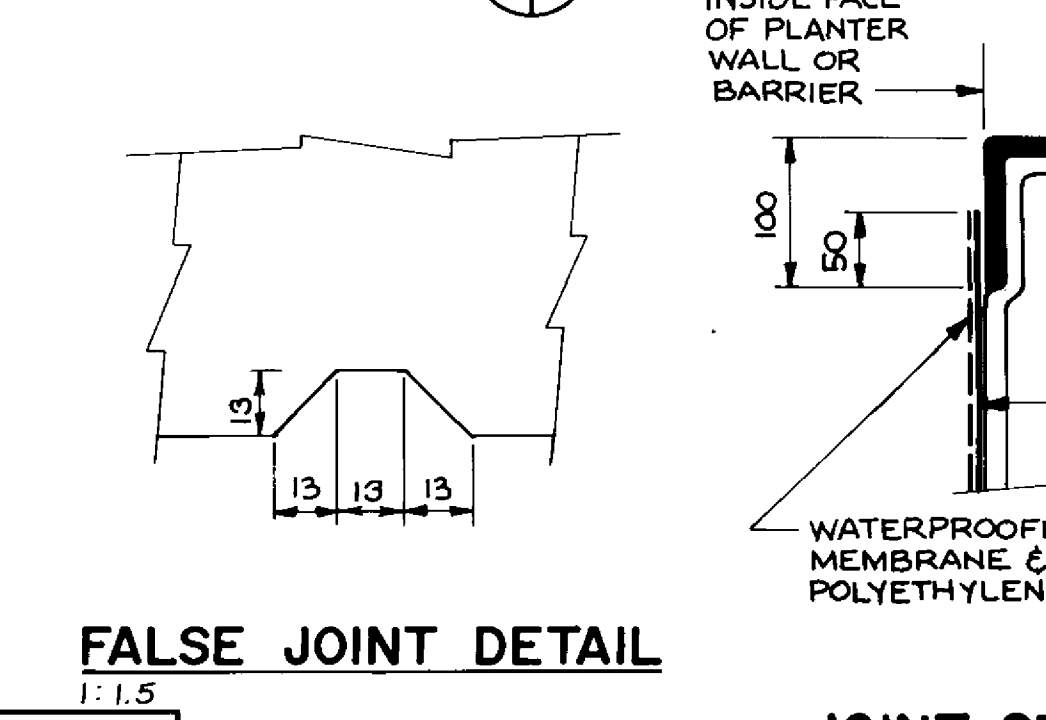
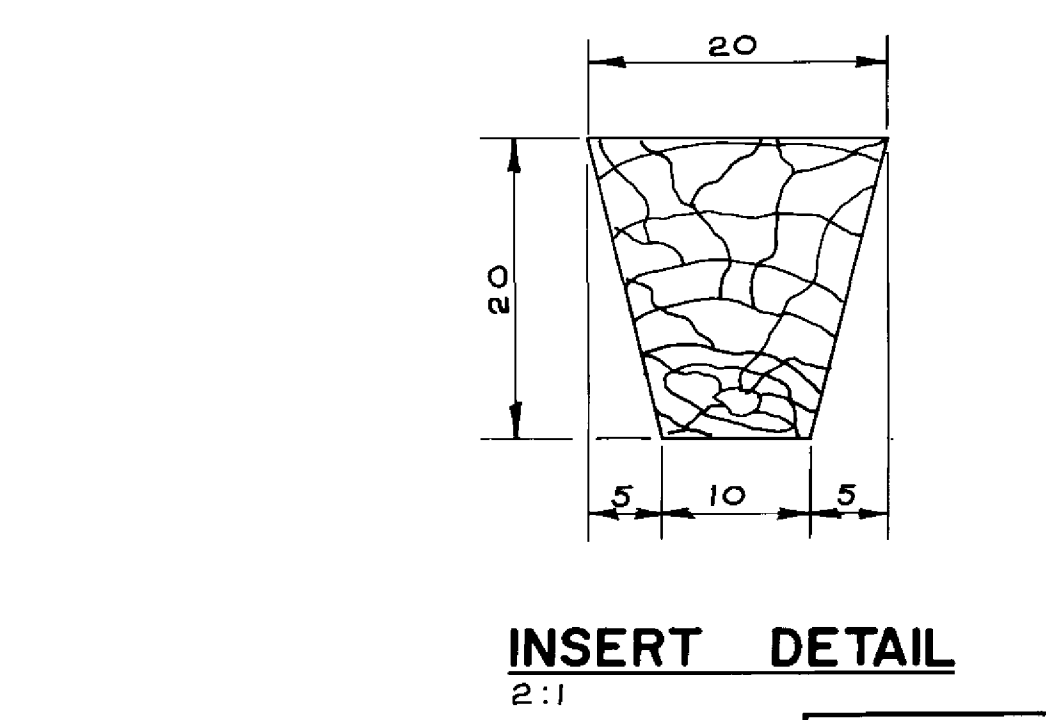
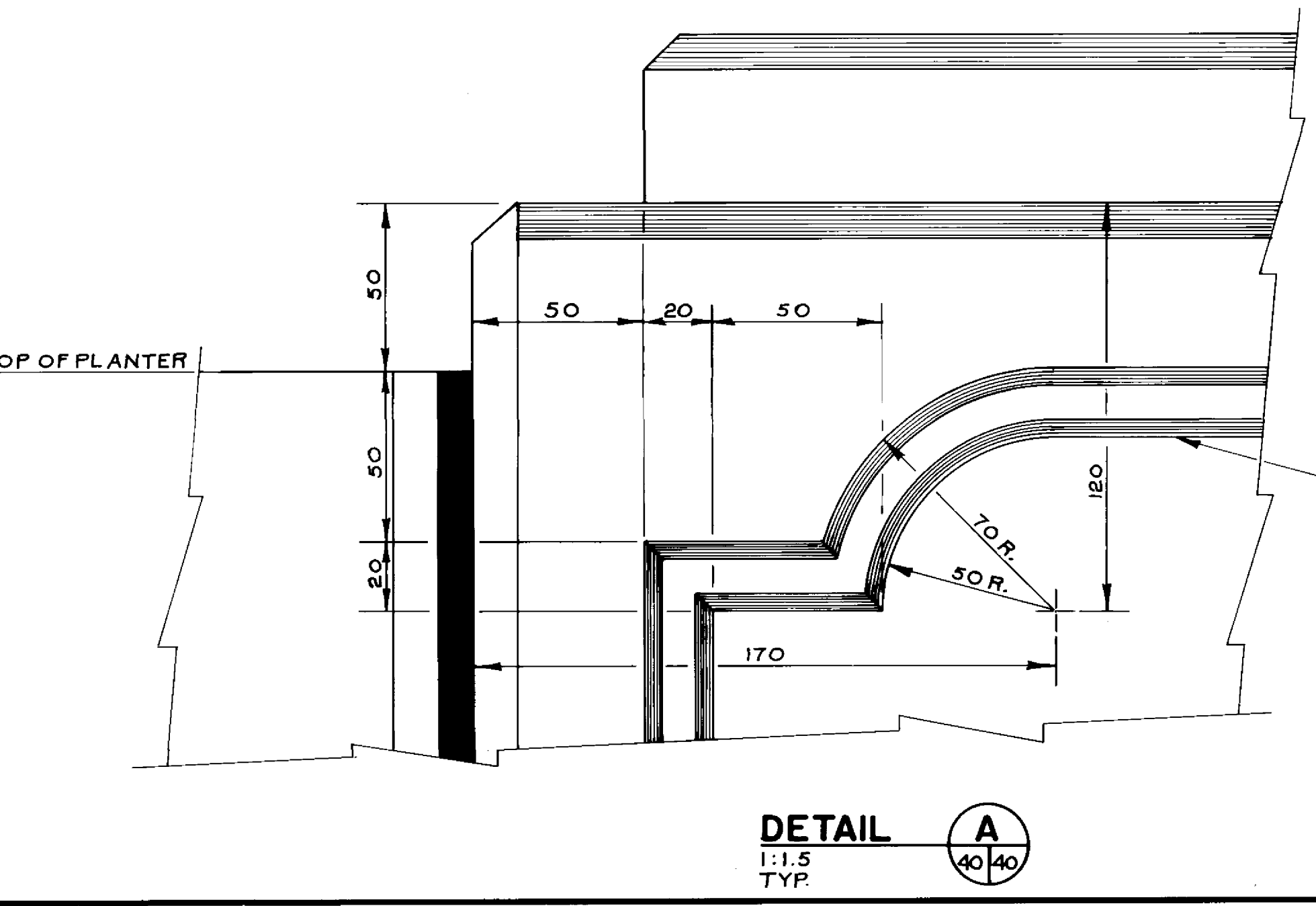
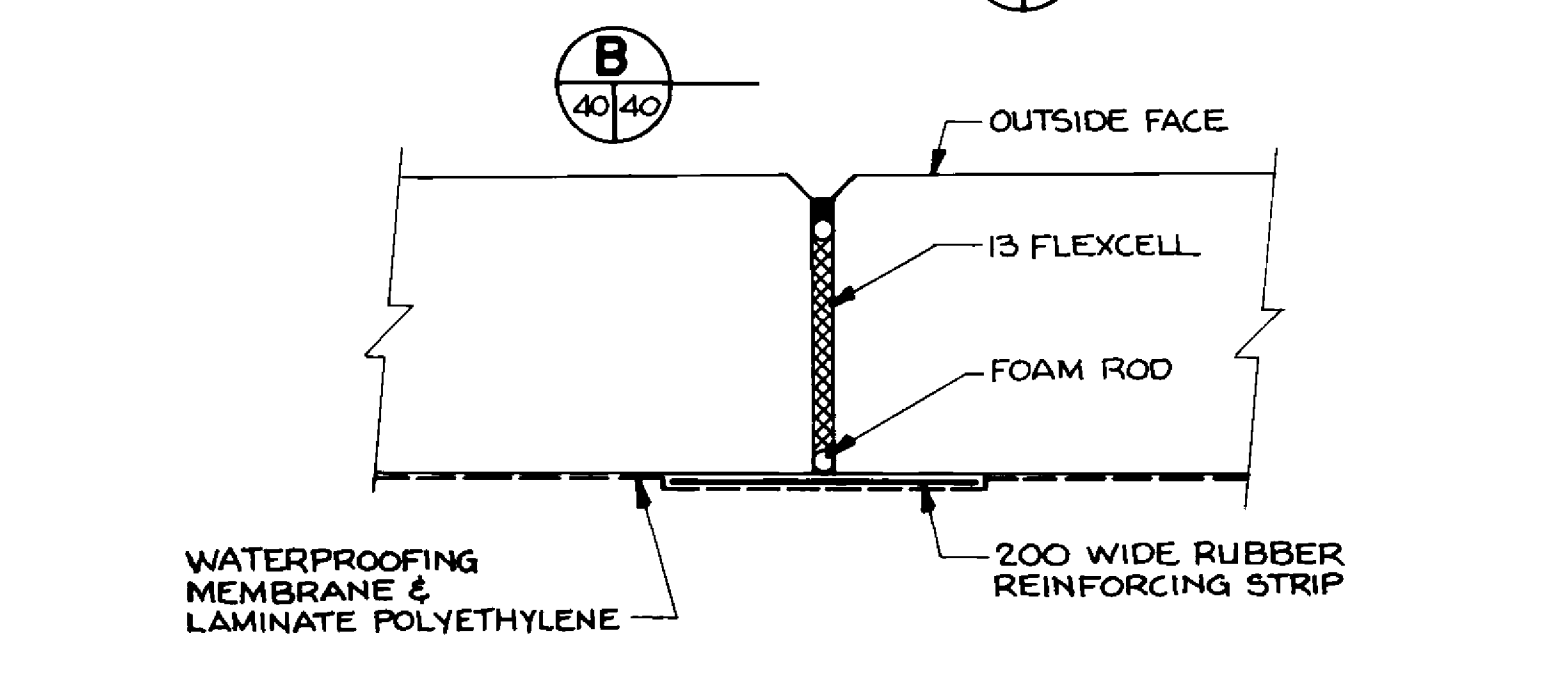
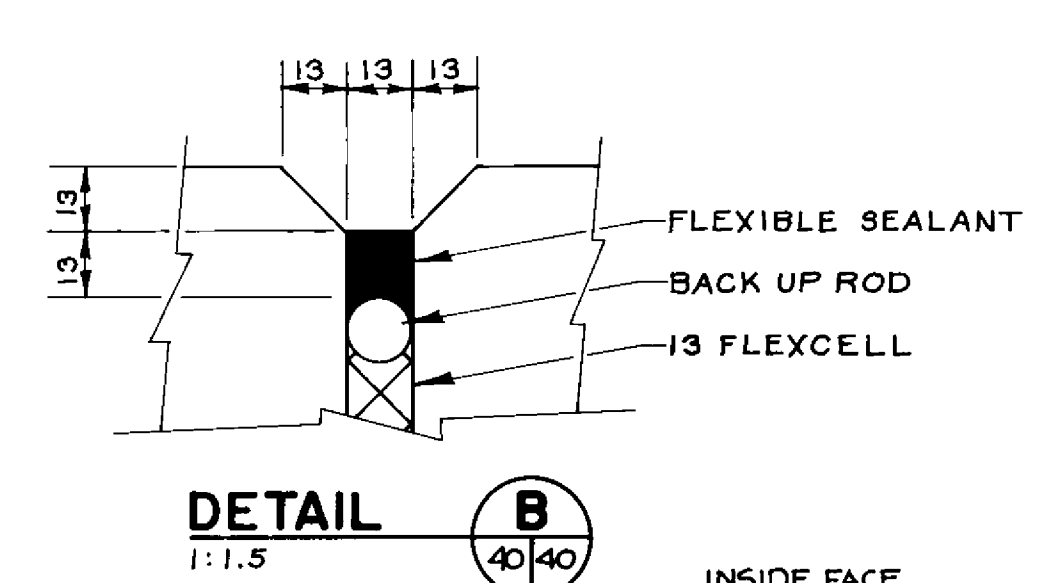
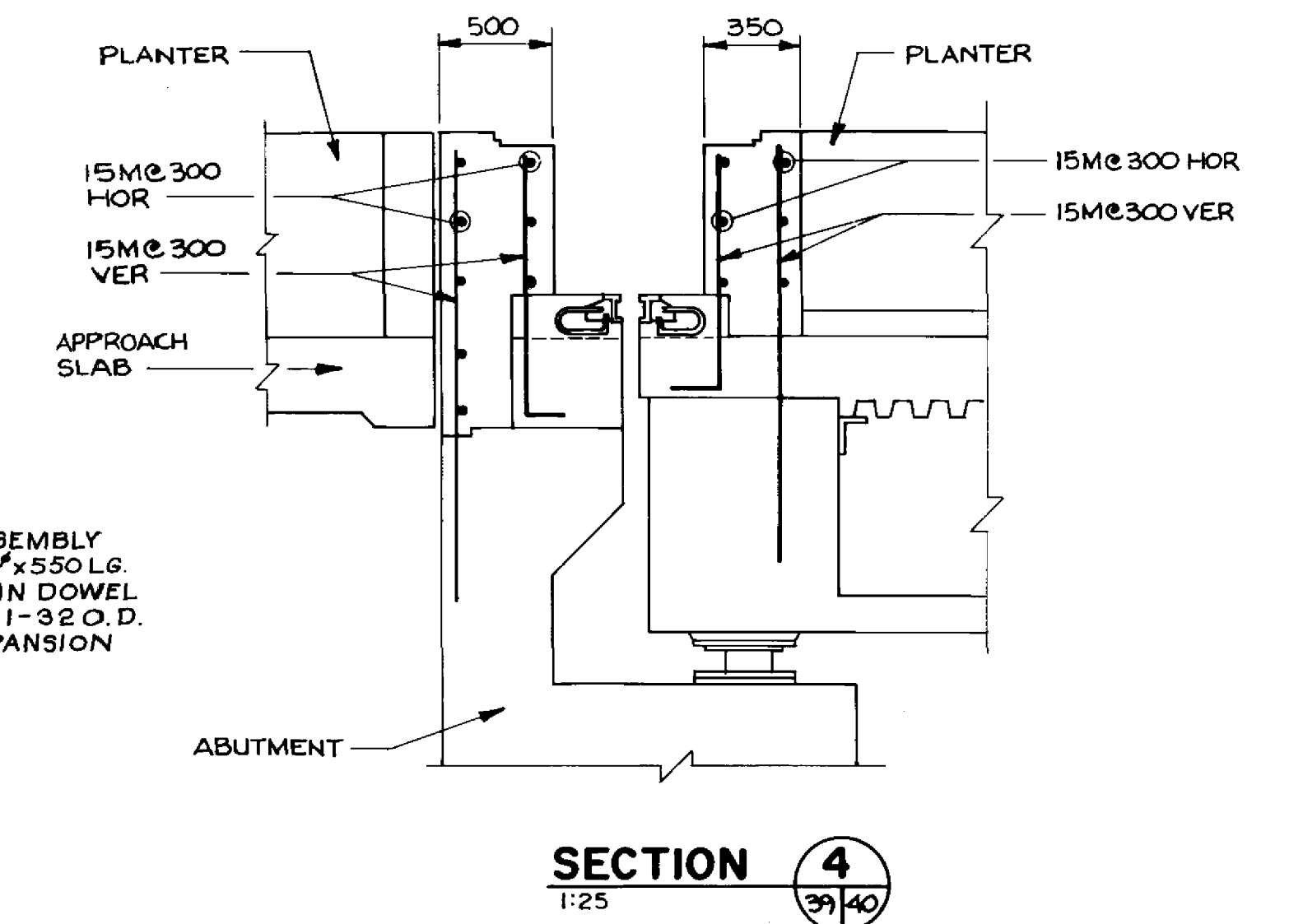
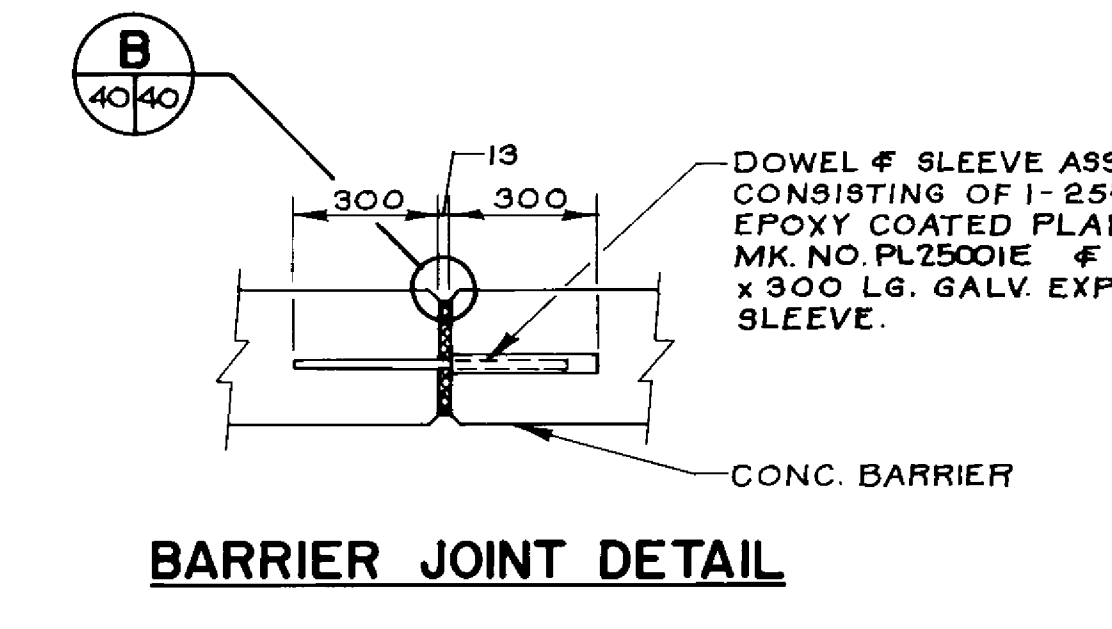
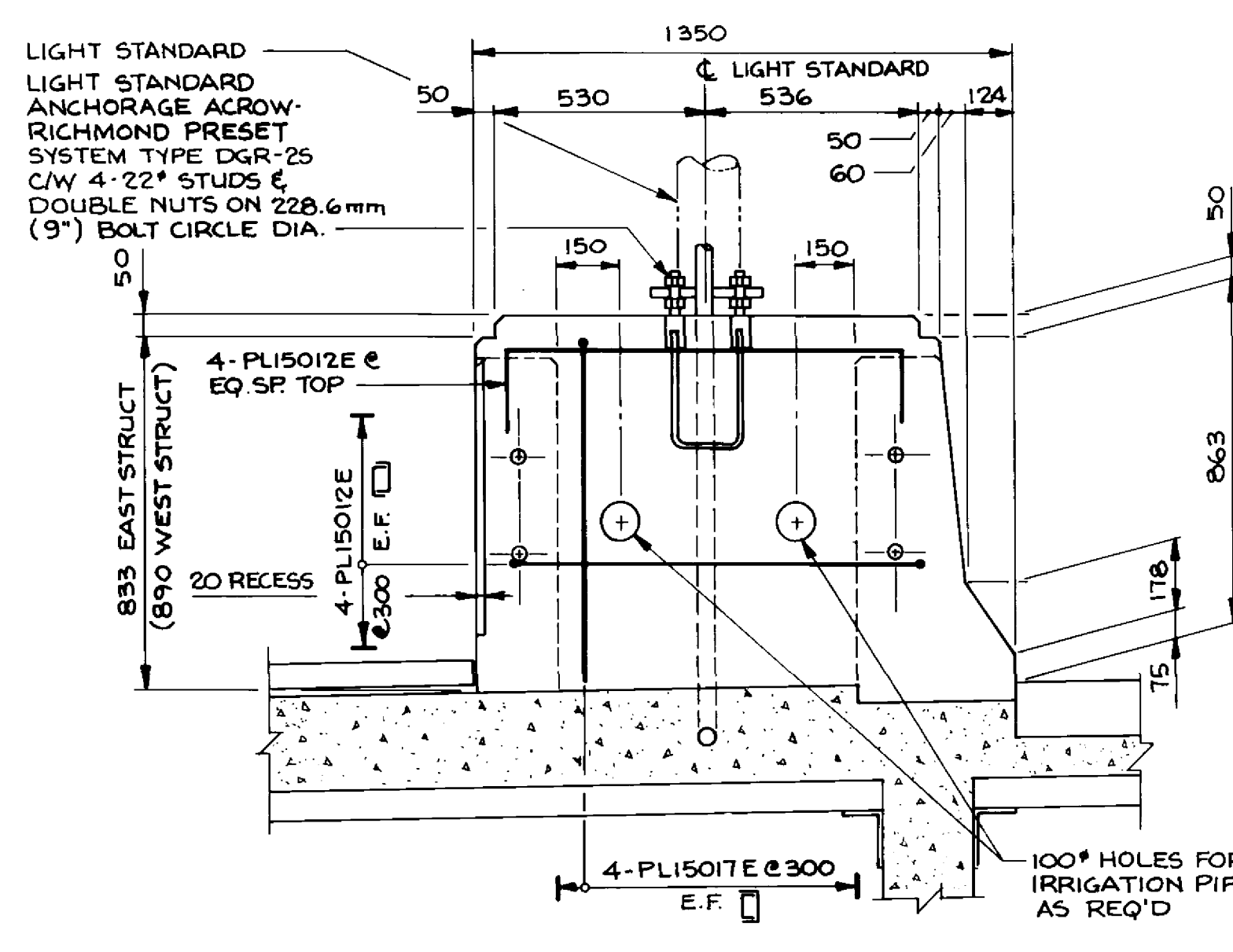
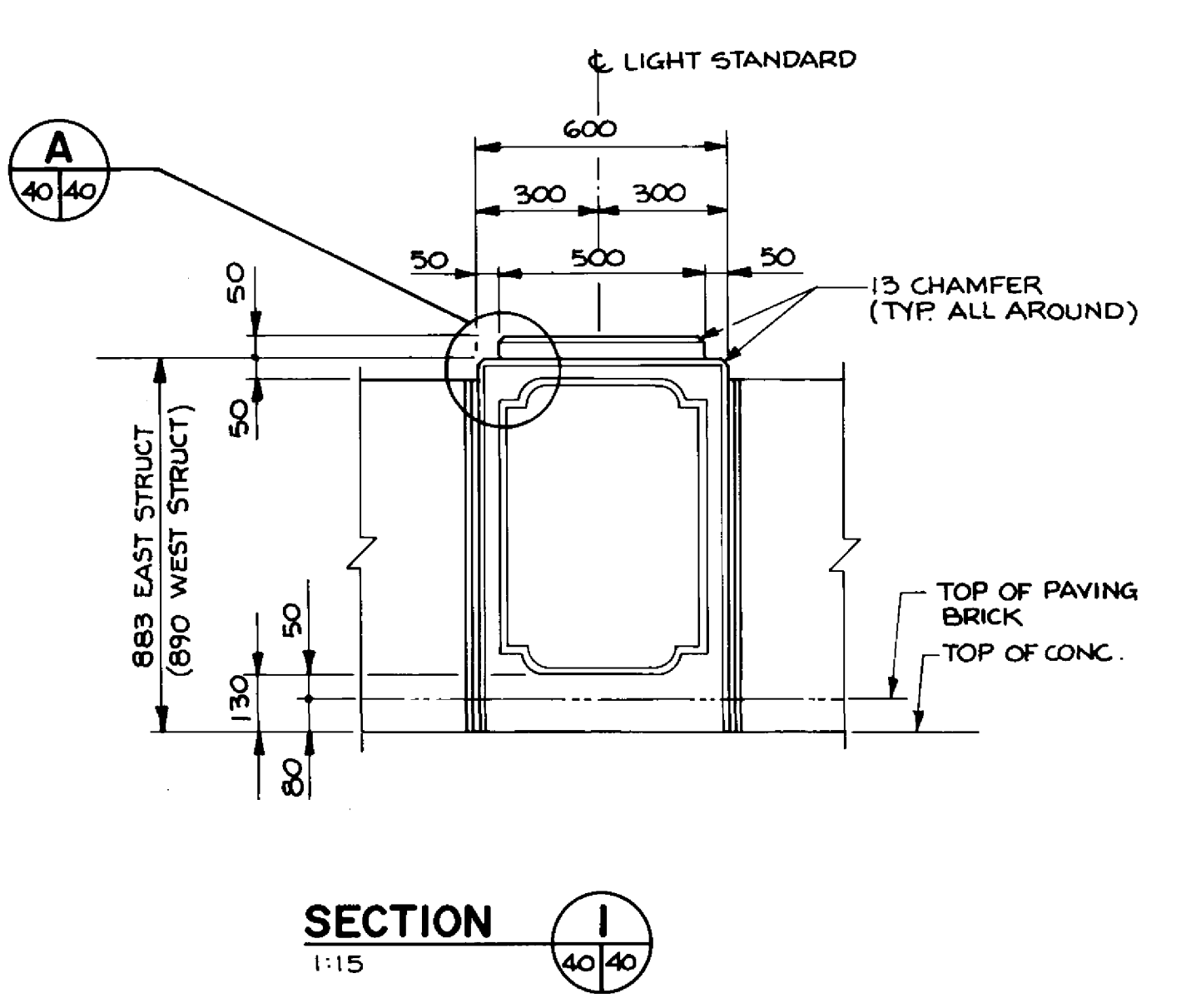
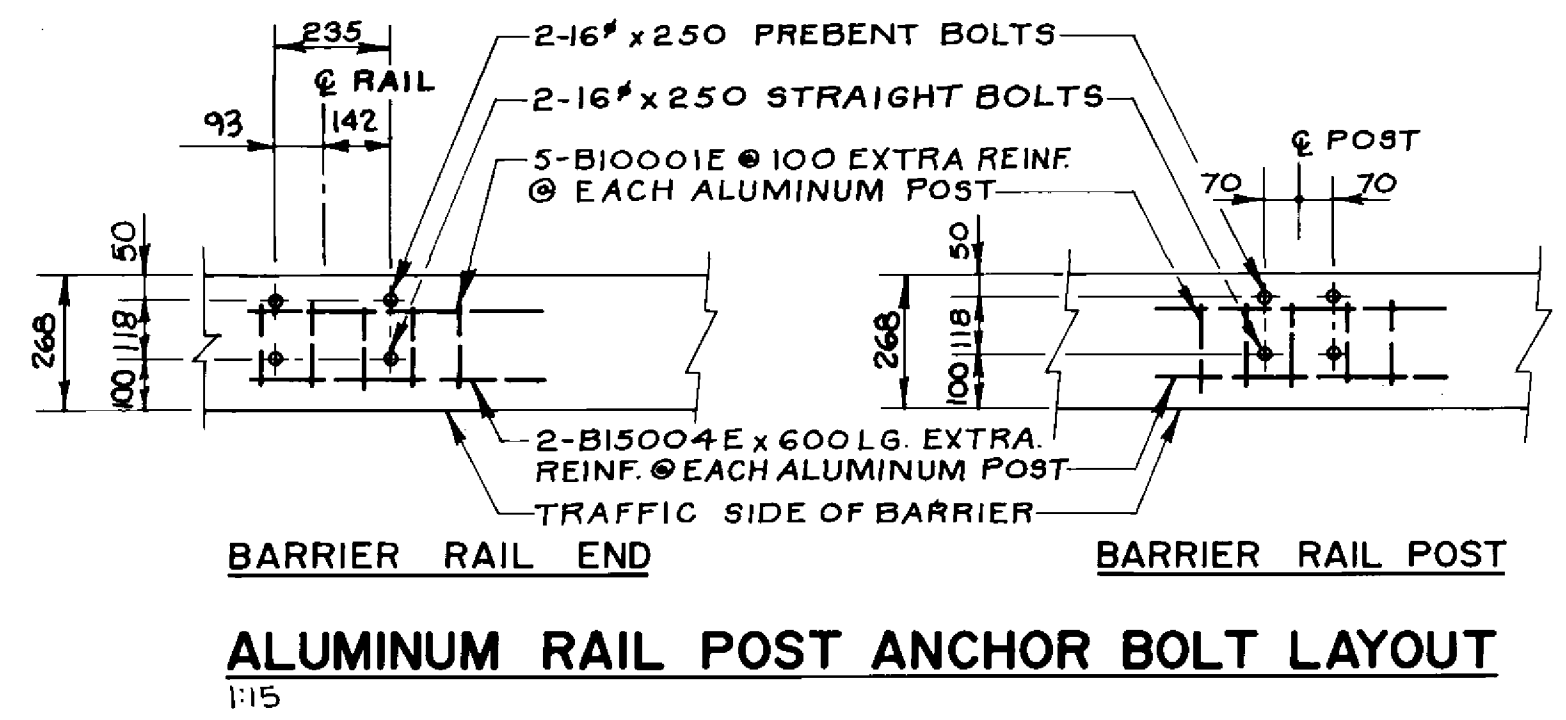
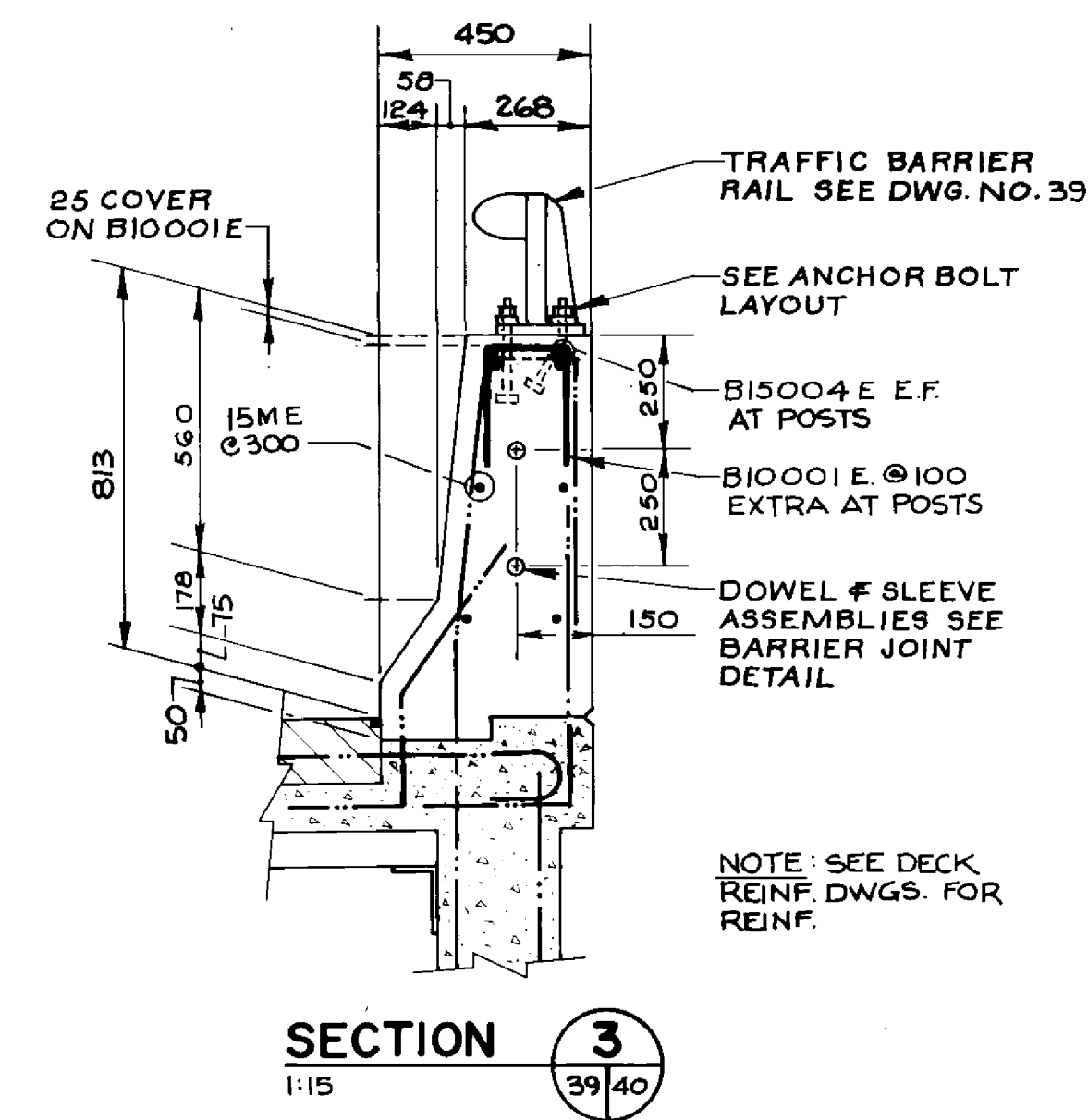
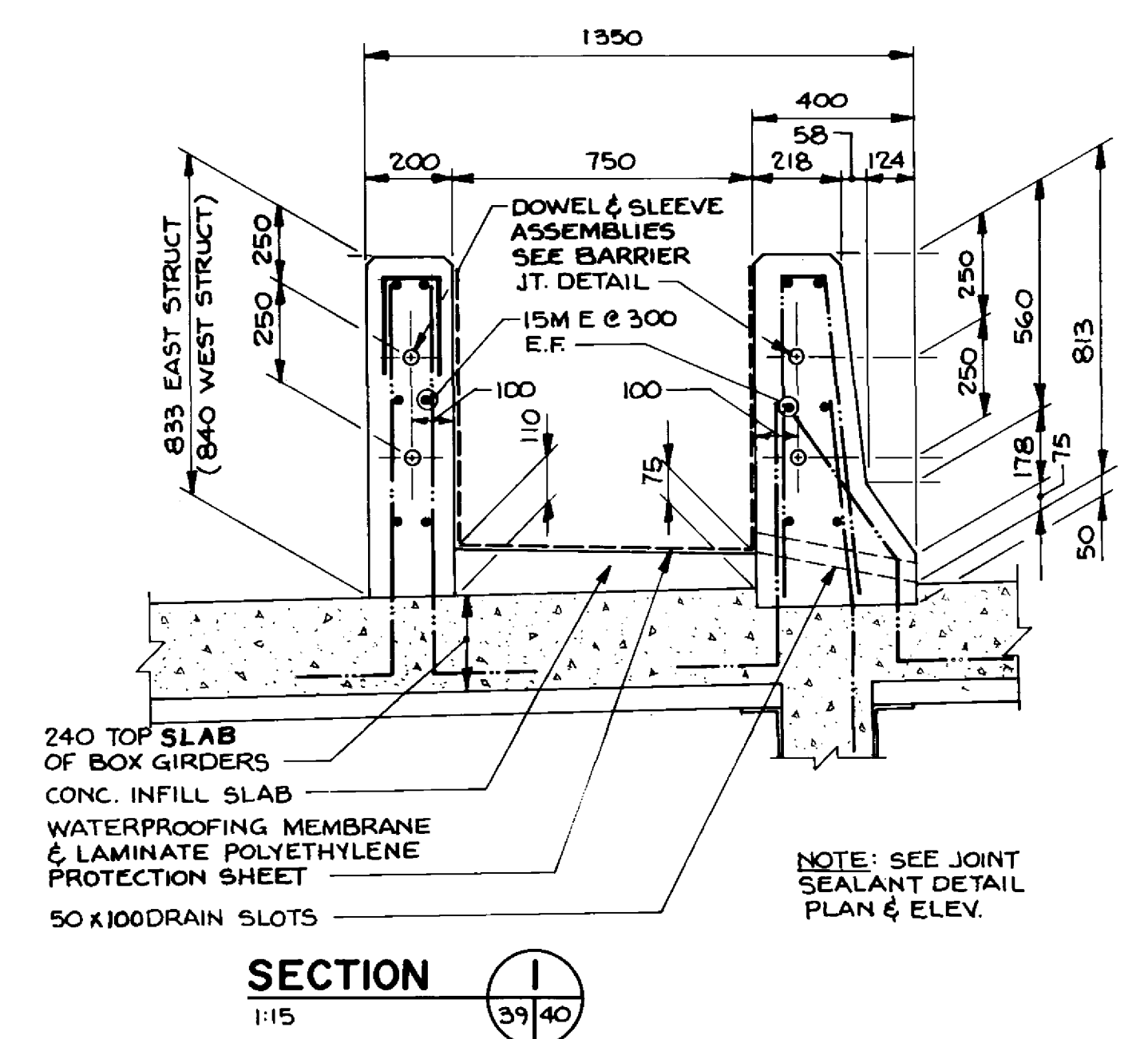
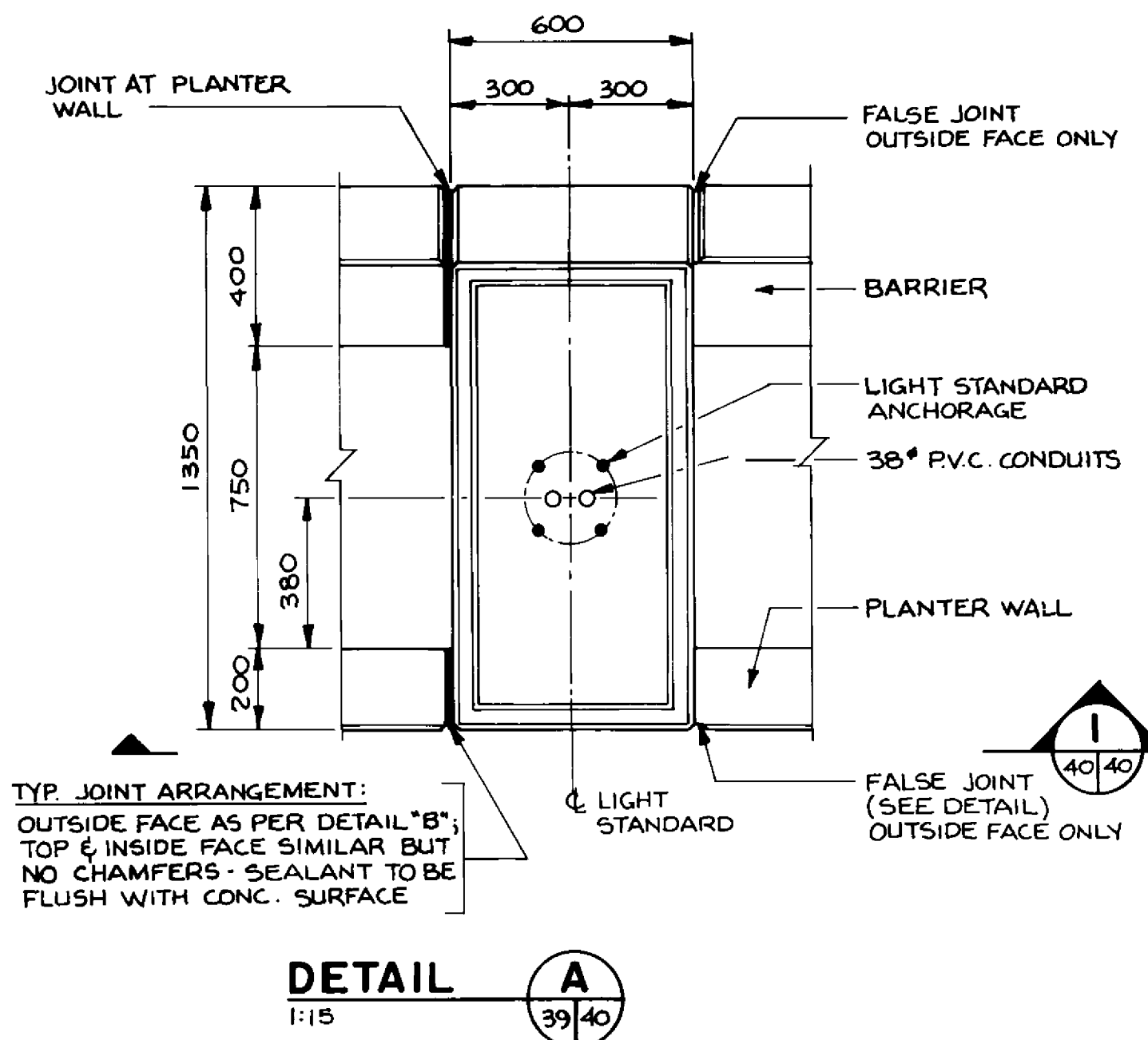
RECORD DRAWING
APPROVED BY: [Signature] DATE: Dec 16/98

CONCRETE PLANTER REINFORCING DETAILS
N.T.S.

NOTE: ALL REINFORCING TO BE 300 SPACING UNLESS OTHERWISE NOTED

LOCATION APPROVED UNDERGROUND STRUCTURES N/A SUPPLY U/G STRUCTURES DATE COMMITTEE NOTE: LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.	B.M. ELEV. NO. REVISIONS DATE BY	DILLON Consulting Engineers • Planners Environmental Scientists	DESIGNED BY: M.C. CHECKED BY: S.S.R. DRAWN BY: C.R.B./D.M.W. HORIZ. SCALE: AS NOTED VERTICAL: AS NOTED DATE: NOV. 1994	CONSULTANT DRAWING NO. 93-1497-06-39	THE CITY OF WINNIPEG WORKS AND OPERATIONS DIVISION STREETS AND TRANSPORTATION DEPARTMENT PEMBINA HIGHWAY SOUTH CITY LIMIT TO RUE DES TRAPPISTES PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER CONCRETE TRAFFIC BARRIERS & PLANTERS SHEET 1 OF 4	SHEET NO. B224-95-39 SHEET OF 4 P3072-A-39

B-6021-39



RECORD DRAWING
APPROVED BY: *[Signature]* DATE: 20/10/98

LOCATION APPROVED UNDERGROUND STRUCTURES
N/A
SUPV. U/G STRUCTURES COMMITTEE DATE: _____
NOTE: LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

NO. REVISIONS	DATE	BY

DILLON
Consulting Engineers • Planners
Environmental Scientists

DESIGNED BY: M.C. CHECKED BY: S.S.R.
DRAWN BY: C.R.B. APPROVED BY: *[Signature]*
HOR SCALE: 1:15 OR VERTICAL: AS NOTED
DATE: OCT. 14, 1994

ENGINEER OF BRIDGE
22/10/98
S.S. RINAL
REGISTERED PROFESSIONAL ENGINEER

THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

PEMBINA HIGHWAY
SOUTH CITY LIMIT TO RUE DES TRAPPISTES
PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

CITY DRAWING NUMBER: B224-95-40
SHEET OF: _____

CONSULTANT DRAWING NO.: 93-1497-06-40

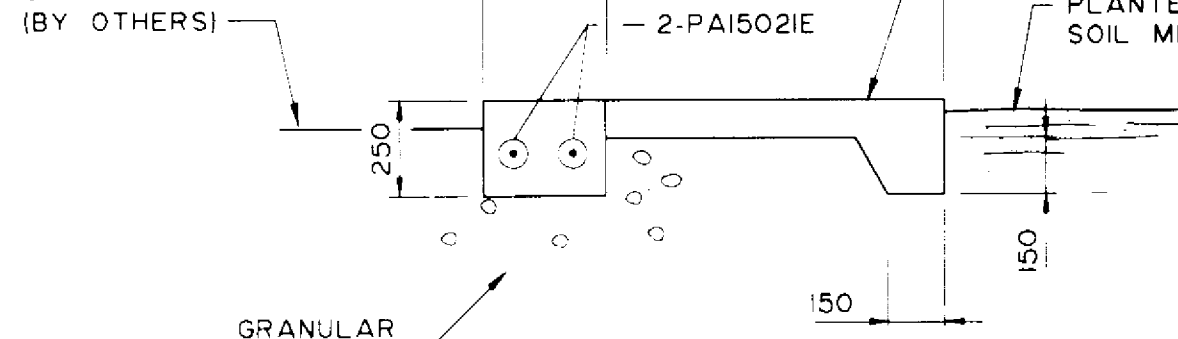
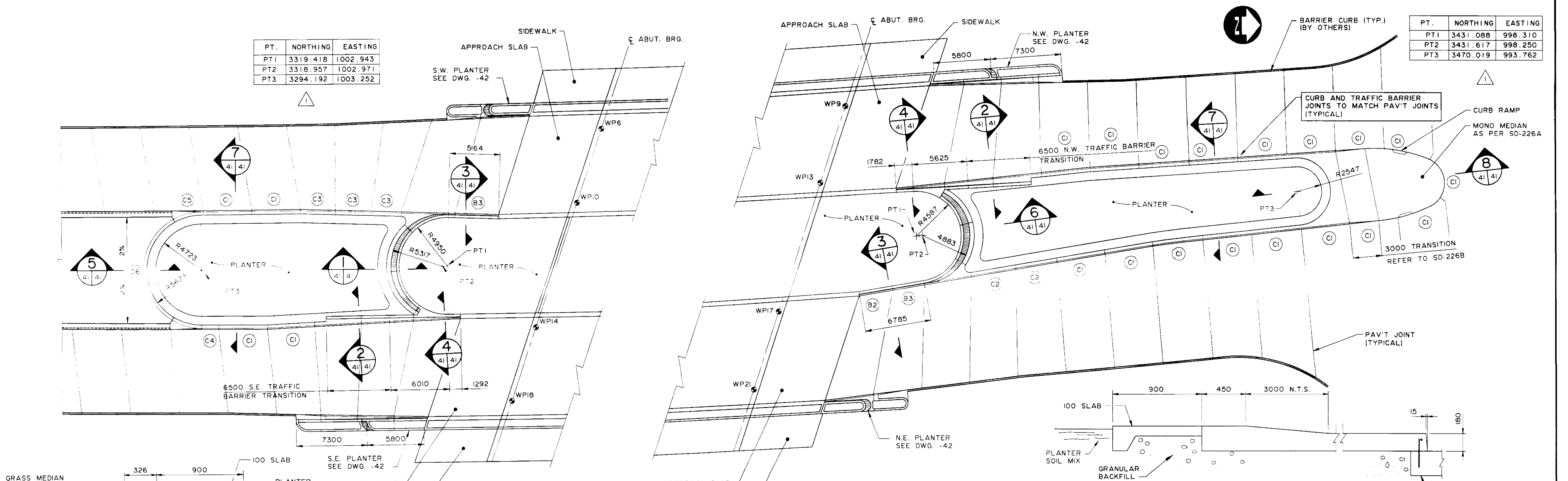
CONCRETE TRAFFIC BARRIERS & PLANTERS
SHEET 2 OF 4

P3072-A-40

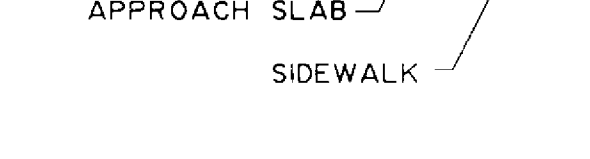
B-6021-40

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PT2	3318.957	1002.971
PT3	3294.192	1003.252

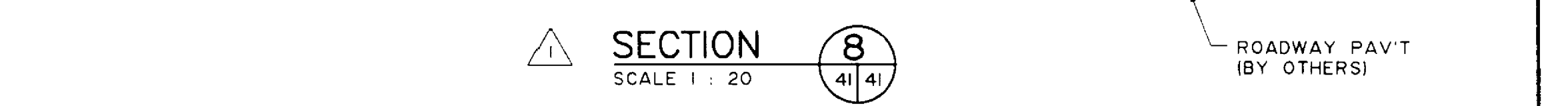
PT.	NORTHING	EASTING
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PT2	3431.617	998.250
PT3	3470.019	993.762



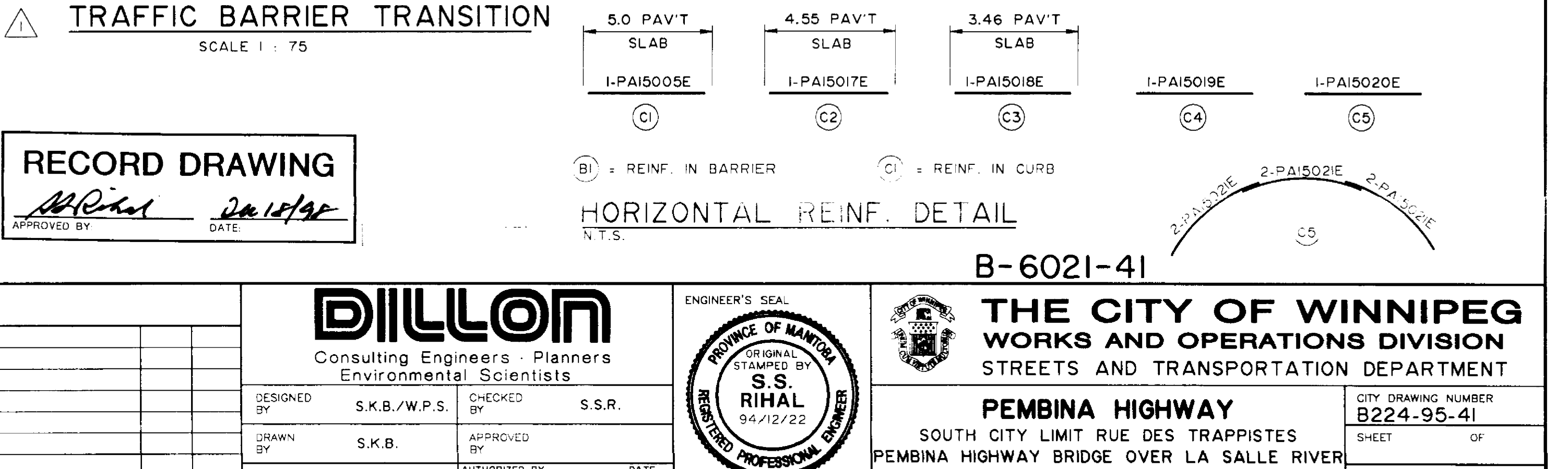
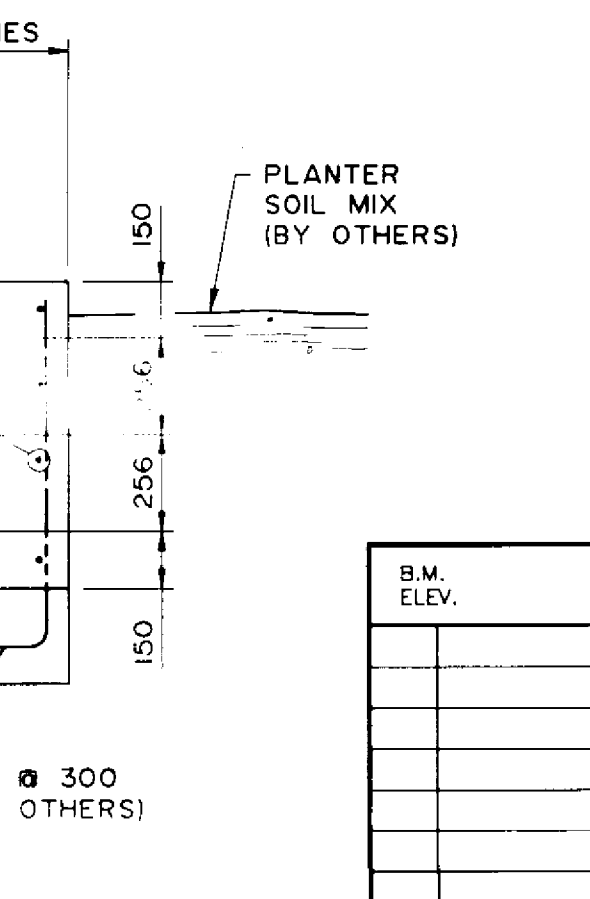
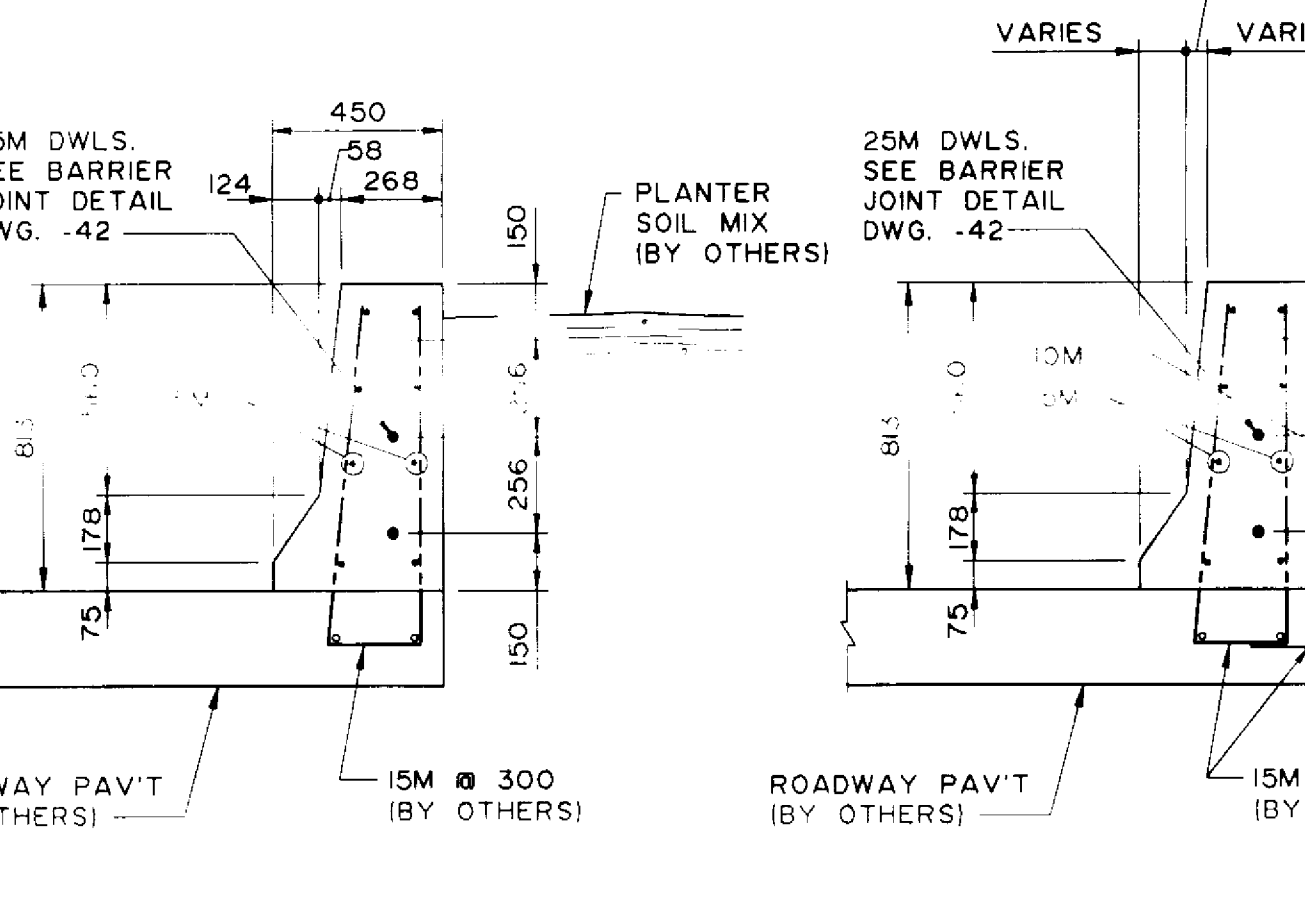
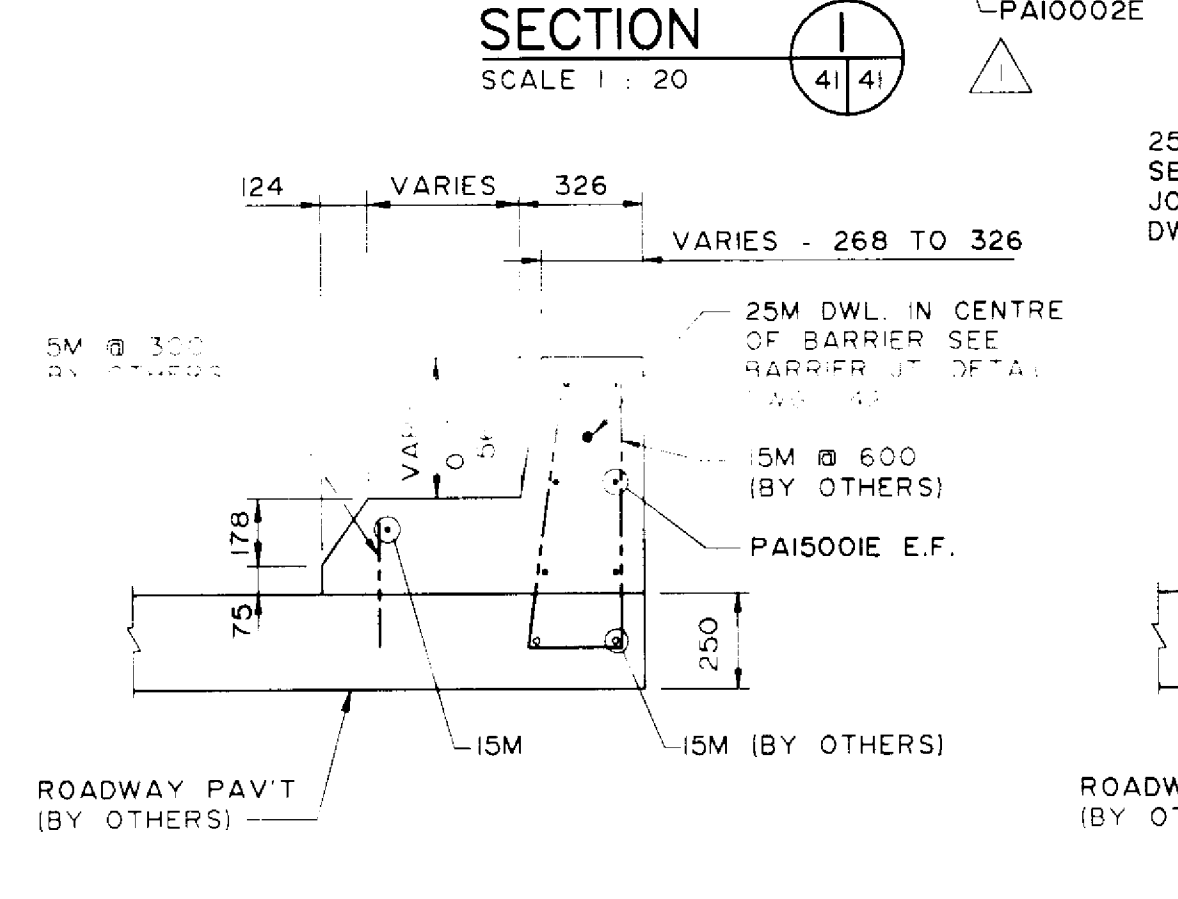
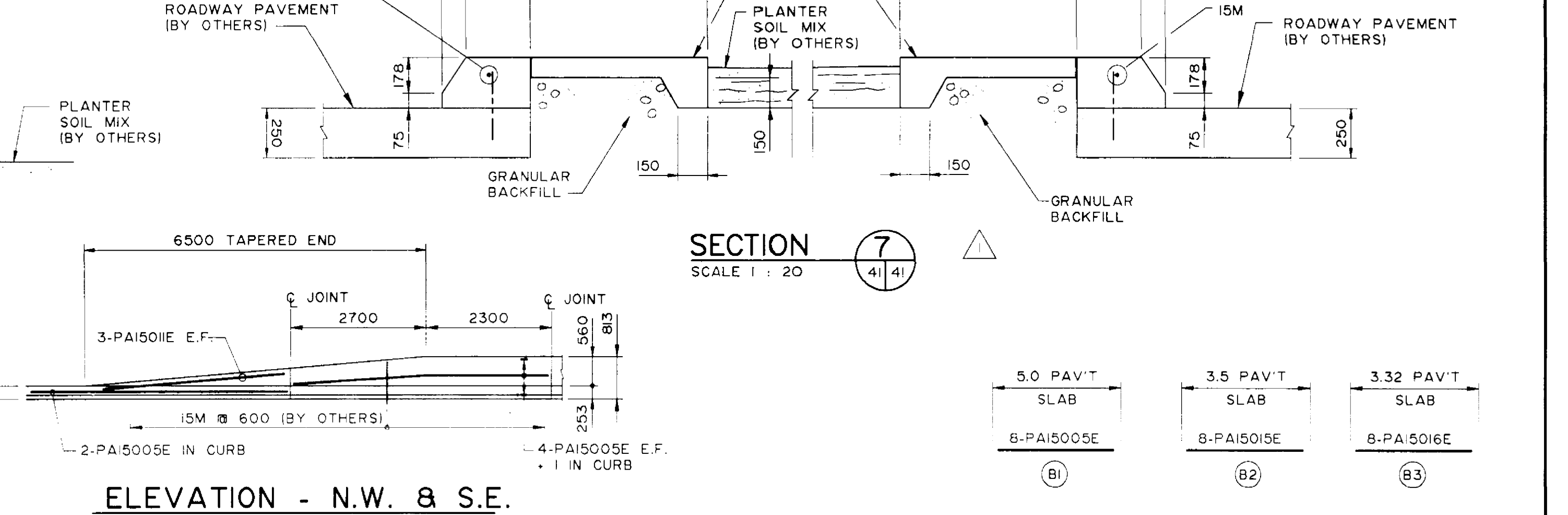
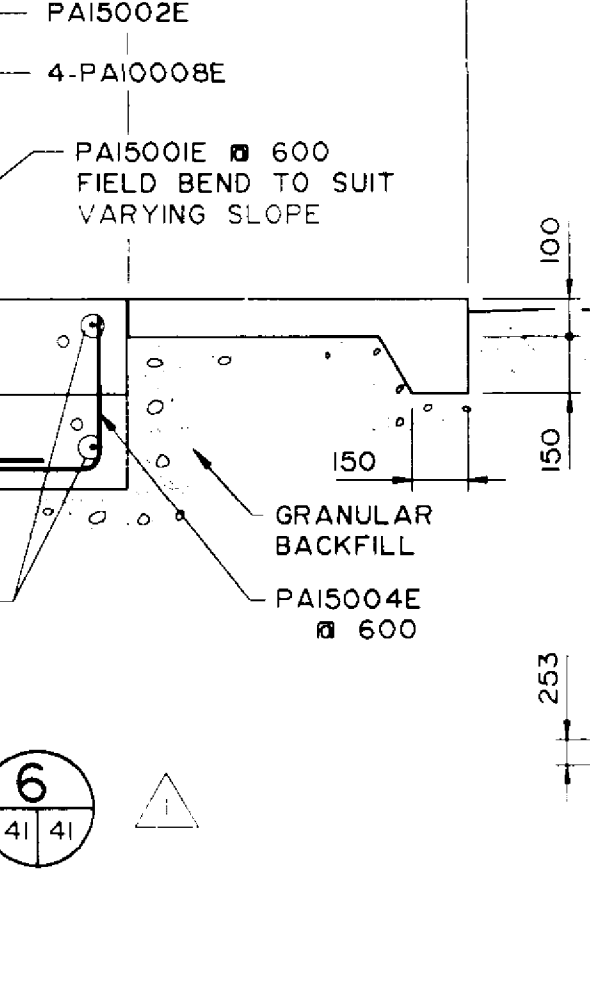
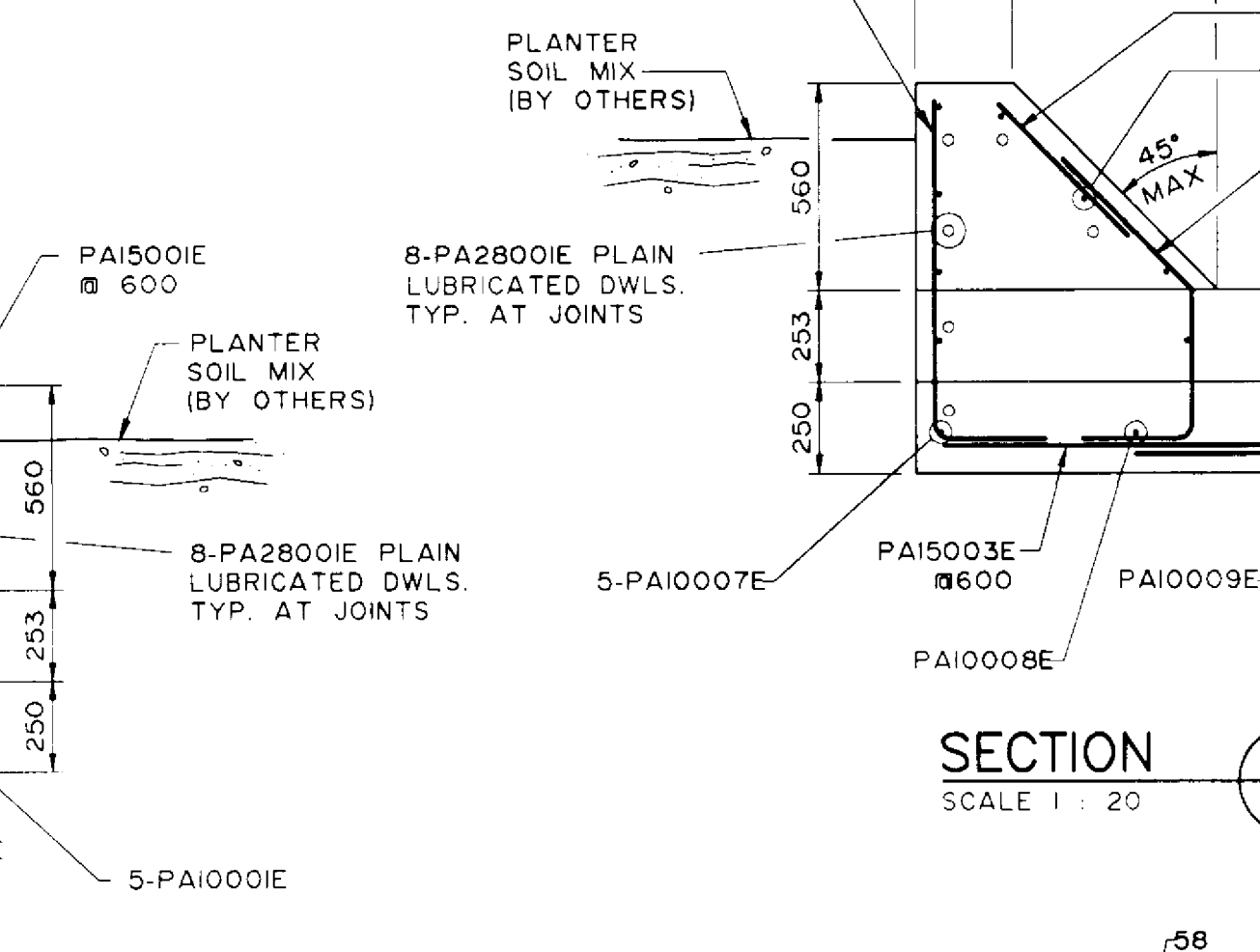
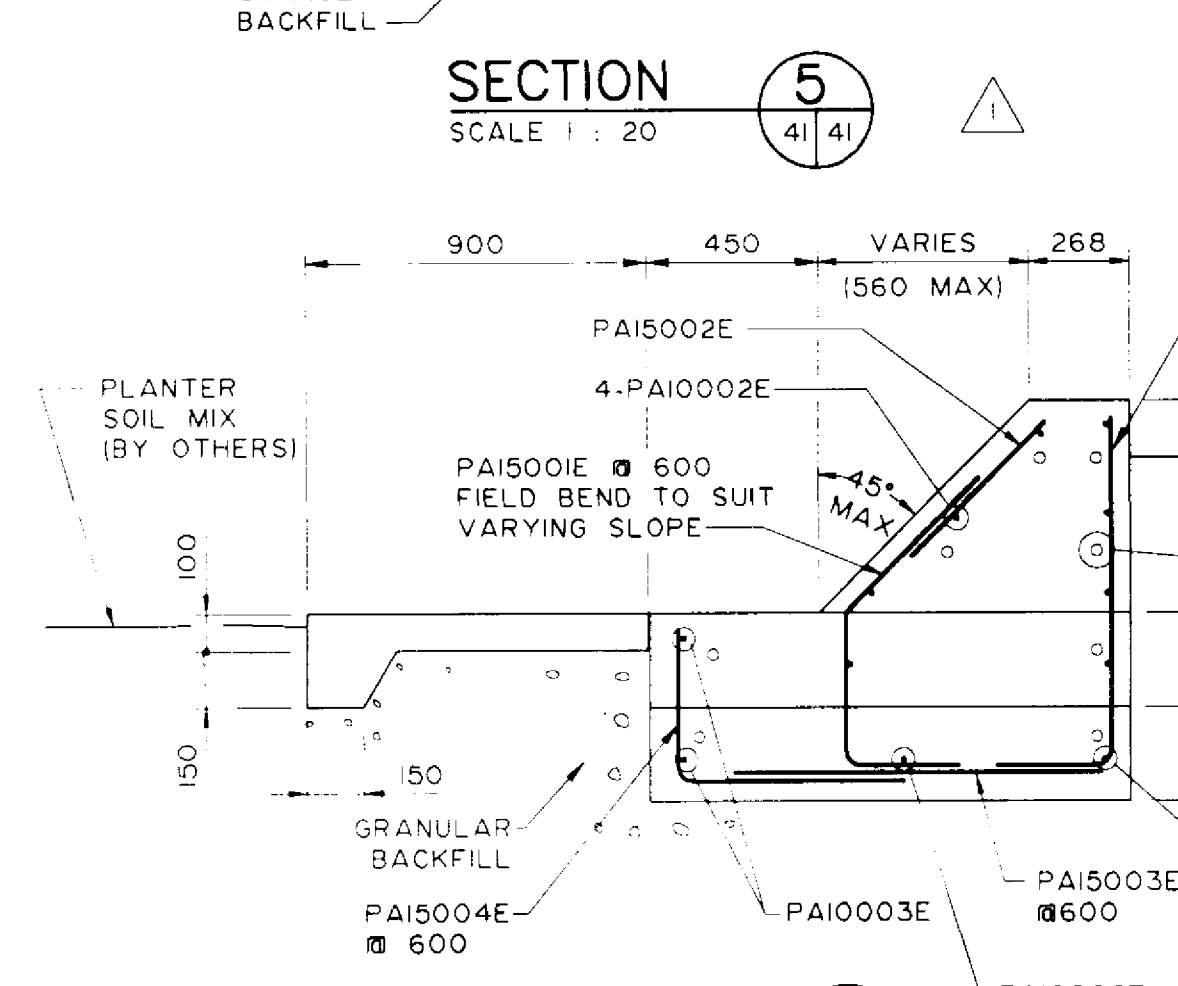
SECTION 5
SCALE 1: 20



SECTION 6
SCALE 1: 20



SECTION 8
SCALE 1: 20



SECTION 2
SCALE 1: 20

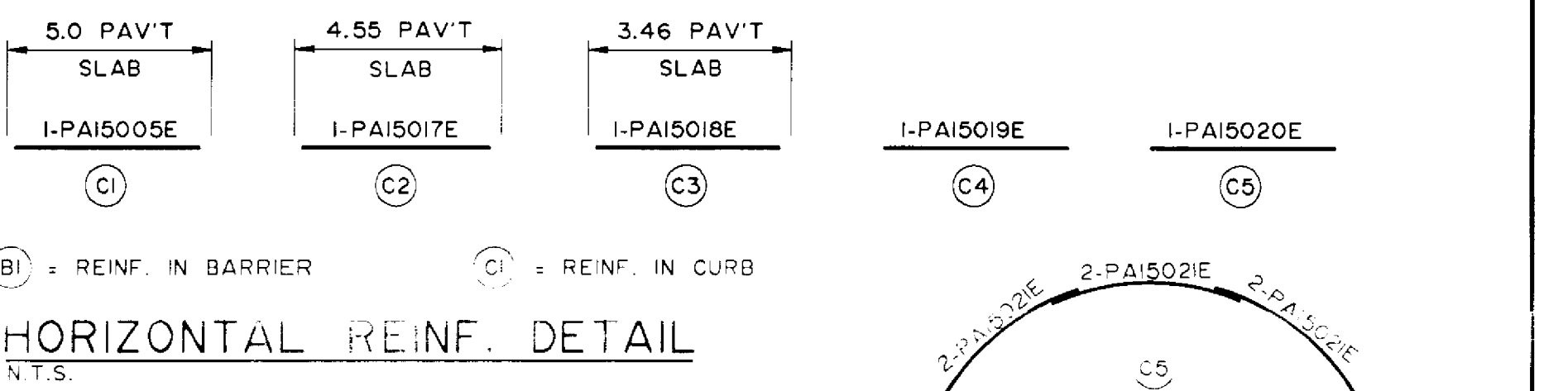
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SCALE 1: 20

SECTION 4
SCALE 1: 20

SECTION 7
SCALE 1: 20

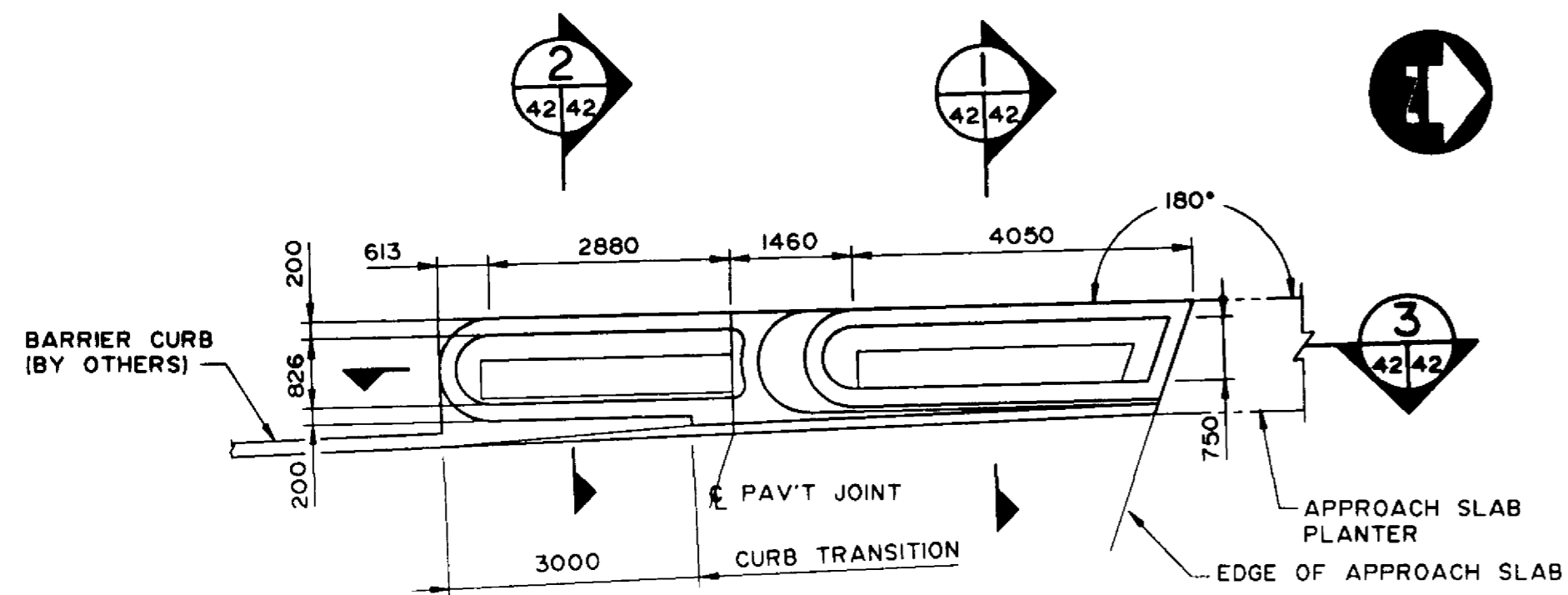
ELEVATION - N.W. & S.E. TRAFFIC BARRIER TRANSITION
SCALE 1: 75

RECORD DRAWING
APPROVED BY: [Signature] DATE: 20/10/94



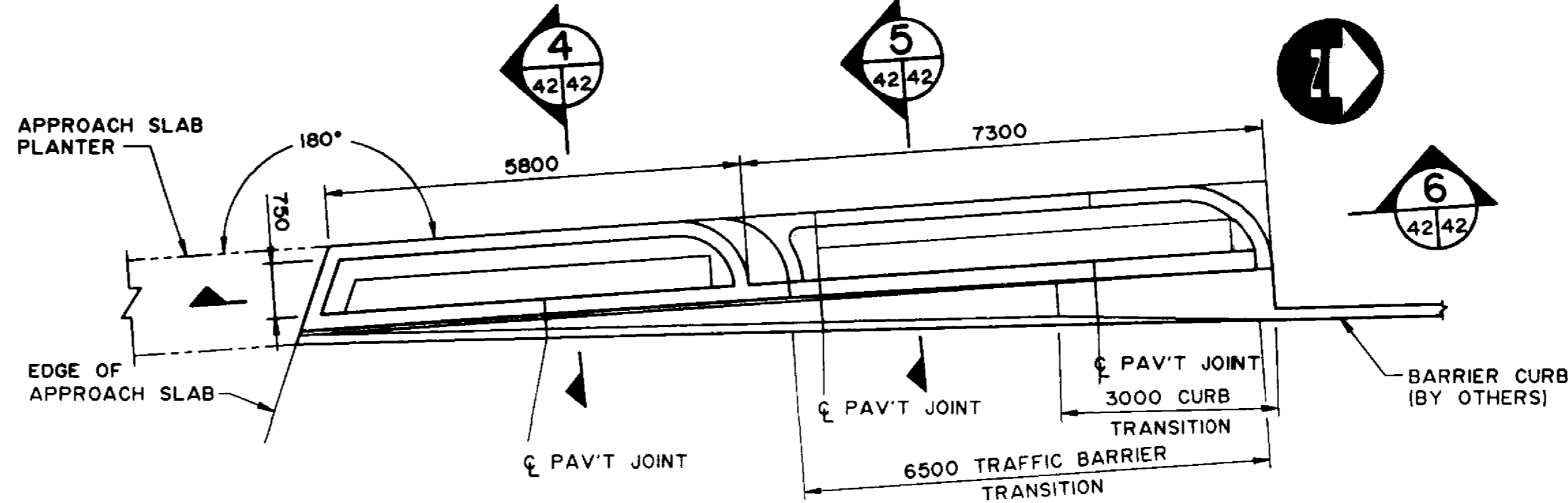
HORIZONTAL REINF. DETAIL
N.T.S.

B.M. ELEV. DESIGNED BY: S.K.B./W.P.S. CHECKED BY: S.S.R. DRAWN BY: S.K.B. APPROVED BY: AUTHORIZED BY: DATE HORIZ. SCALE: AS NOTED VERTICAL SCALE: AS NOTED GENERAL REVISIONS: 96-05-10 P.S. NO. REVISIONS: DATE BY DATE	DILLON Consulting Engineers - Planners Environmental Scientists	ENGINEER'S SEAL PROVINCE OF MANITOBA ORIGINAL STAMPED BY S.S. RIHAL 94/12/22 REGISTERED PROFESSIONAL ENGINEER	B-6021-41 THE CITY OF WINNIPEG WORKS AND OPERATIONS DIVISION STREETS AND TRANSPORTATION DEPARTMENT		
			PEMBINA HIGHWAY SOUTH CITY LIMIT RUE DES TRAPPISTES PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER		CITY DRAWING NUMBER B224-95-41
			CONCRETE TRAFFIC BARRIERS & PLANTERS SHEET 3 OF 4		SHEET OF P3072-A-41
			CONSULTANT DRAWING NO. 93-1497-06-41		



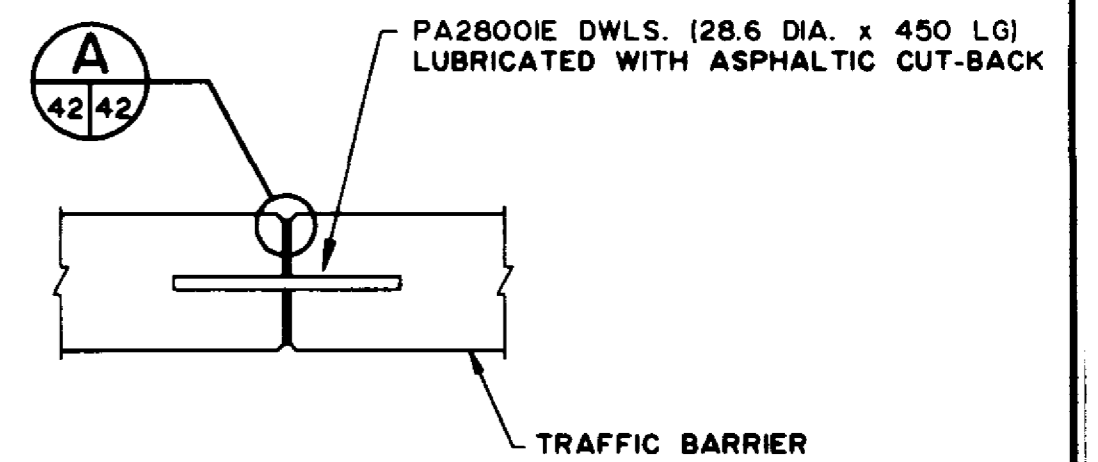
PLAN - S.W. PLANTER

SCALE 1 : 75



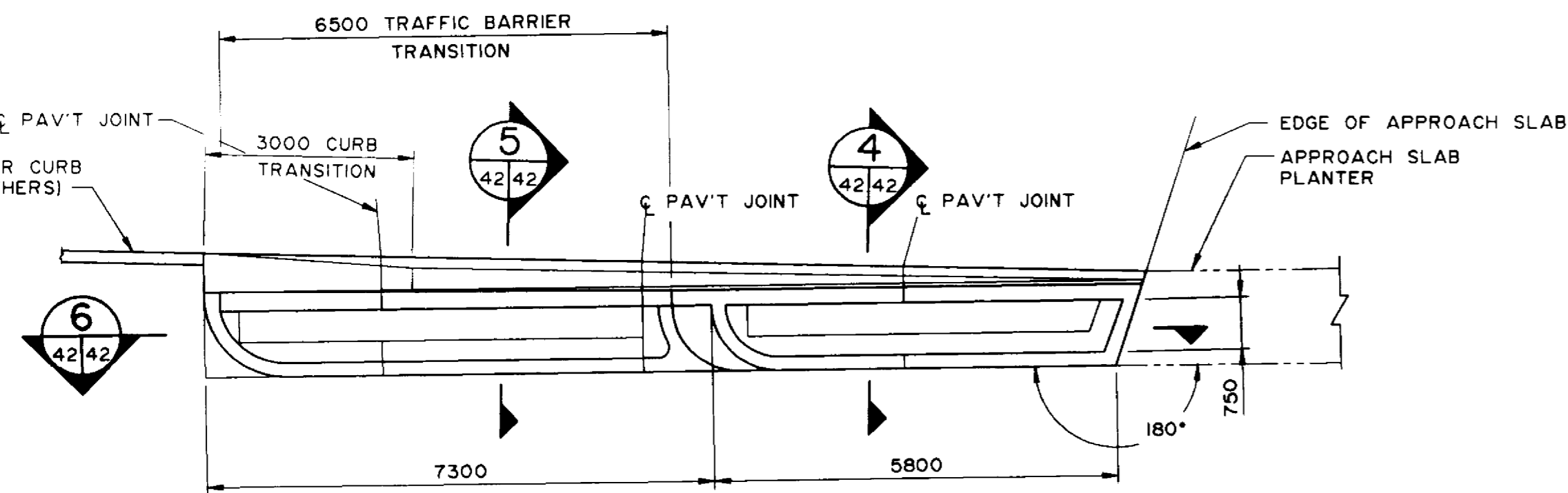
PLAN - N.W. PLANTER

SCALE 1 : 75



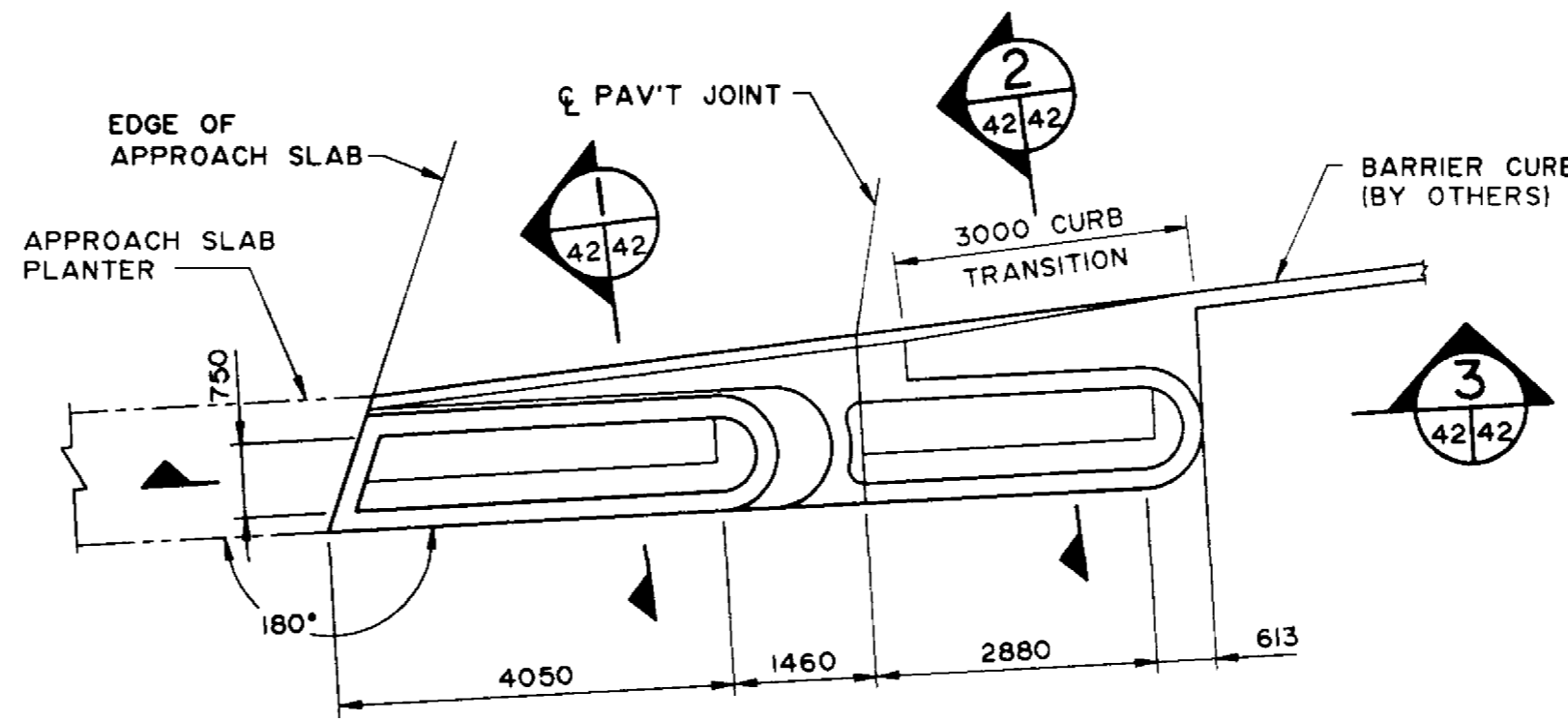
BARRIER JOINT DETAIL

SCALE 1 : 15



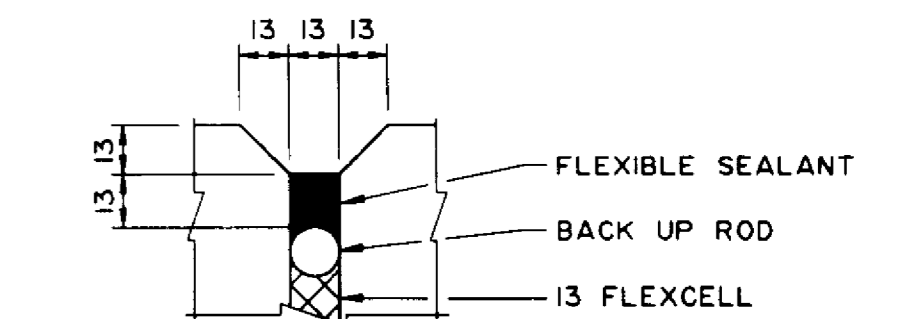
PLAN - S.E. PLANTER

SCALE 1 : 75



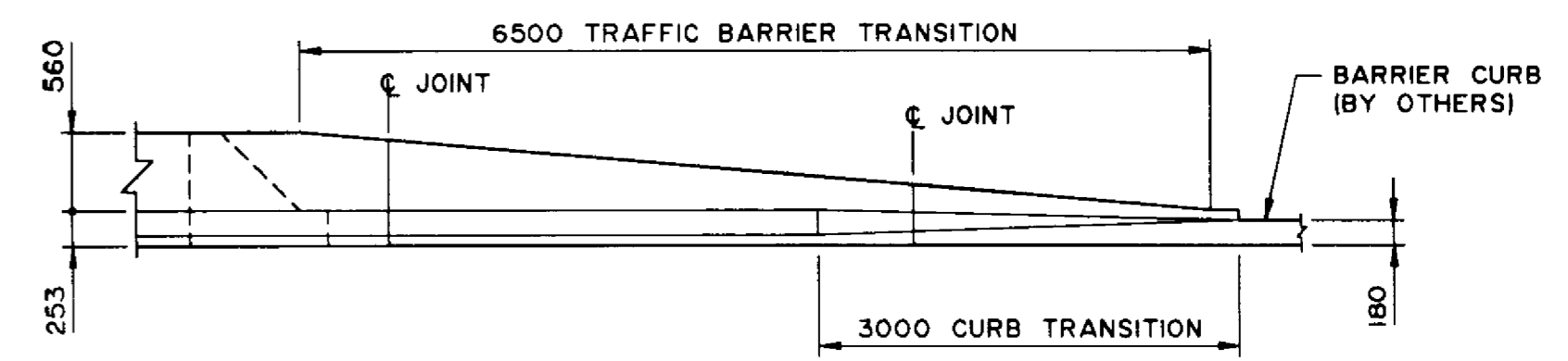
PLAN - N.E. PLANTER

SCALE 1 : 75



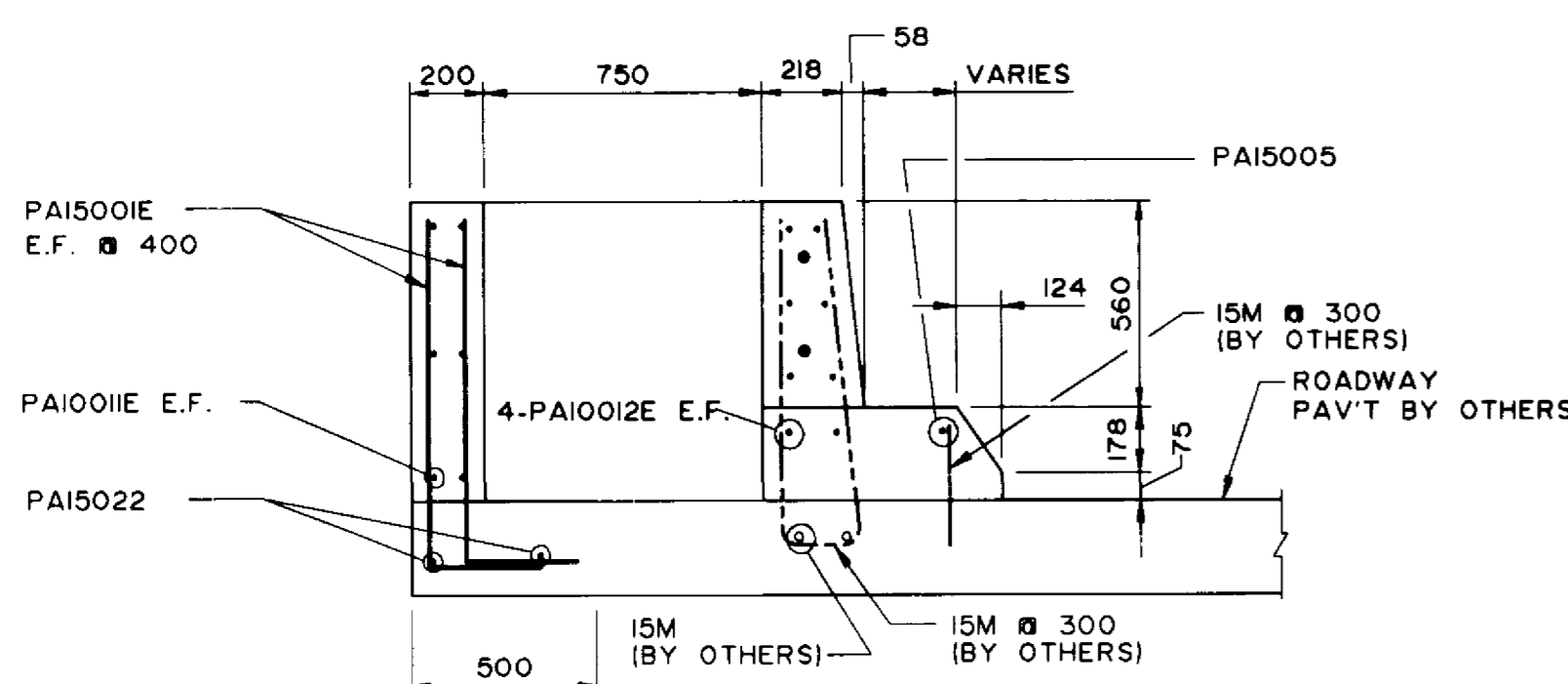
DETAIL A

SCALE 1 : 2



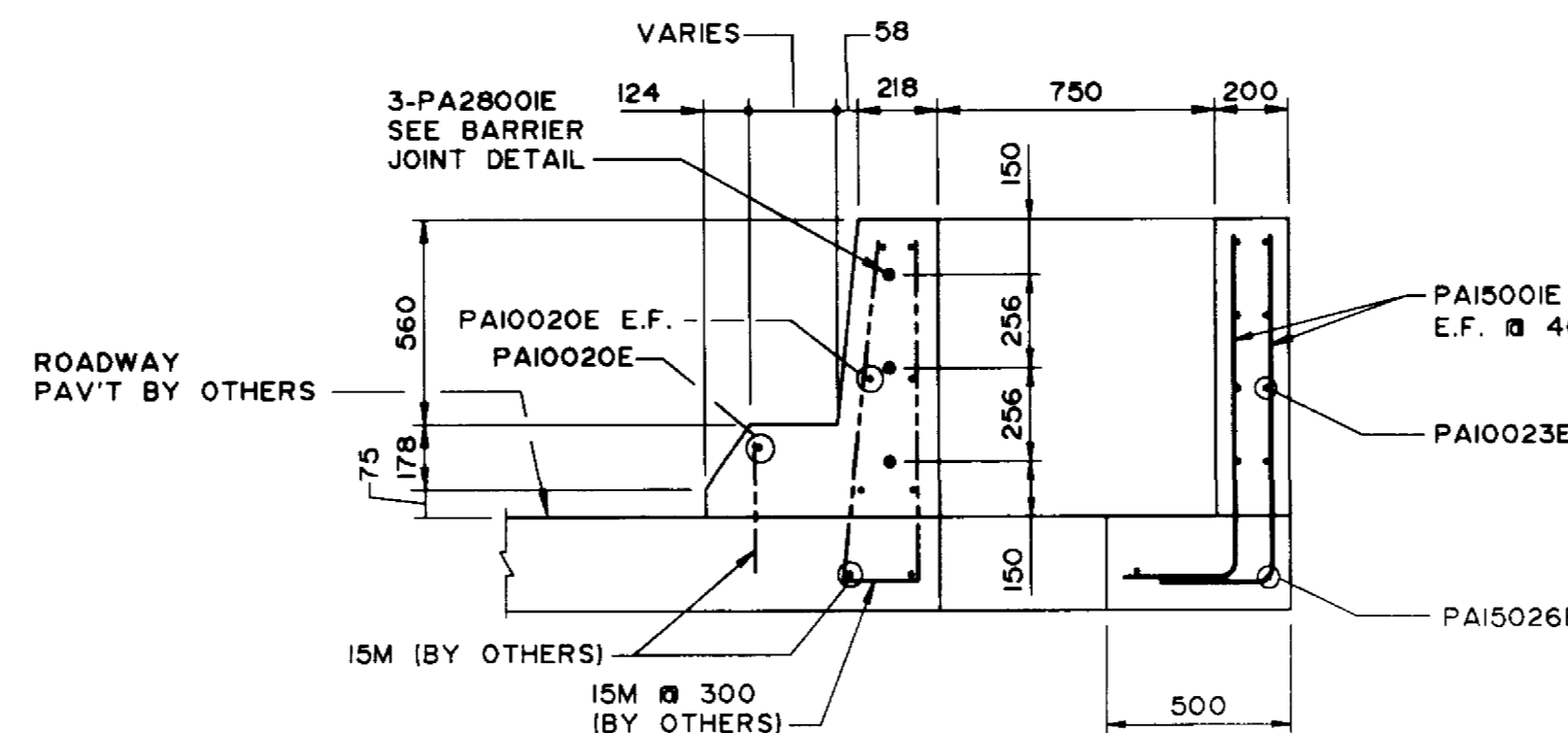
ELEVATION - TRAFFIC BARRIER TRANSITION

SCALE 1 : 50



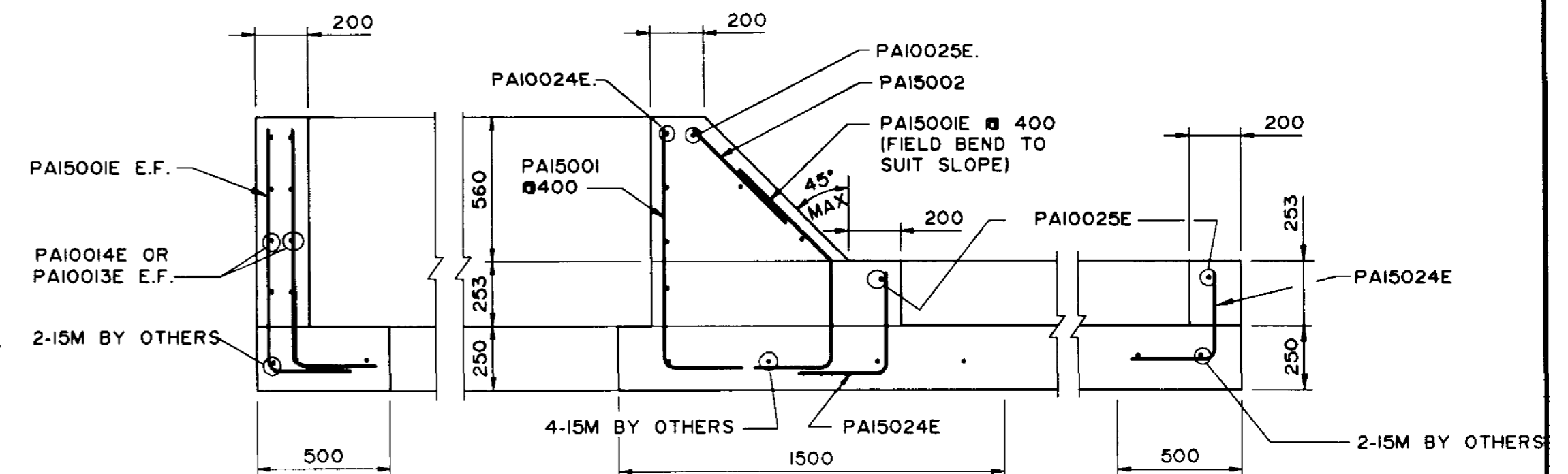
SECTION 1

SCALE 1 : 20



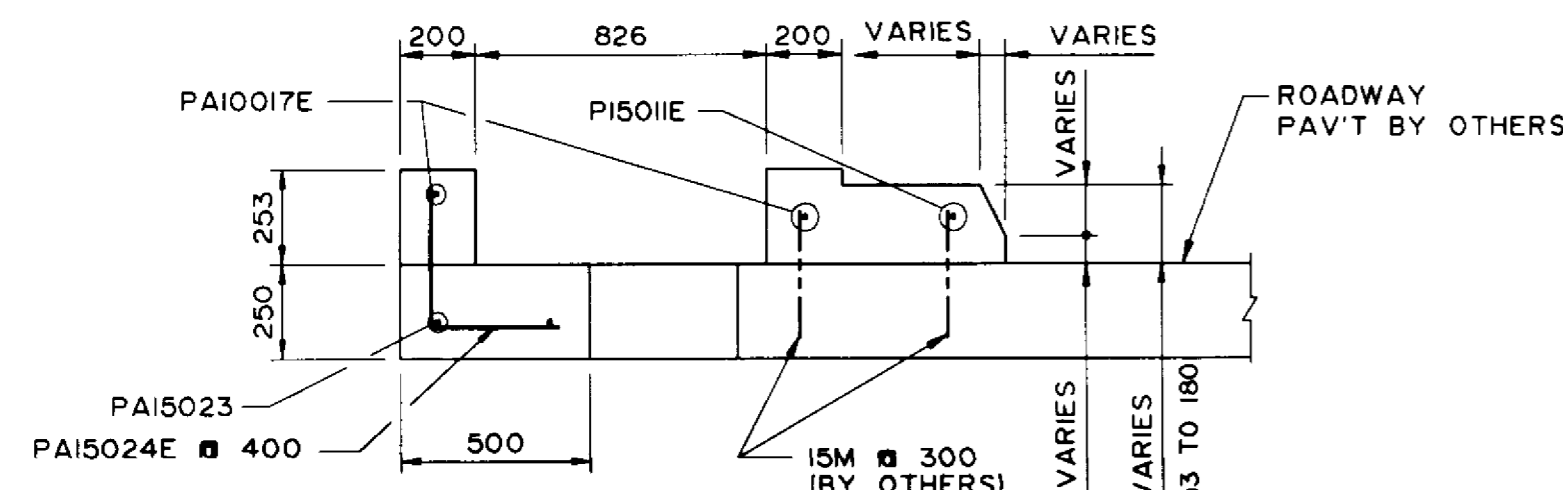
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SCALE 1 : 20



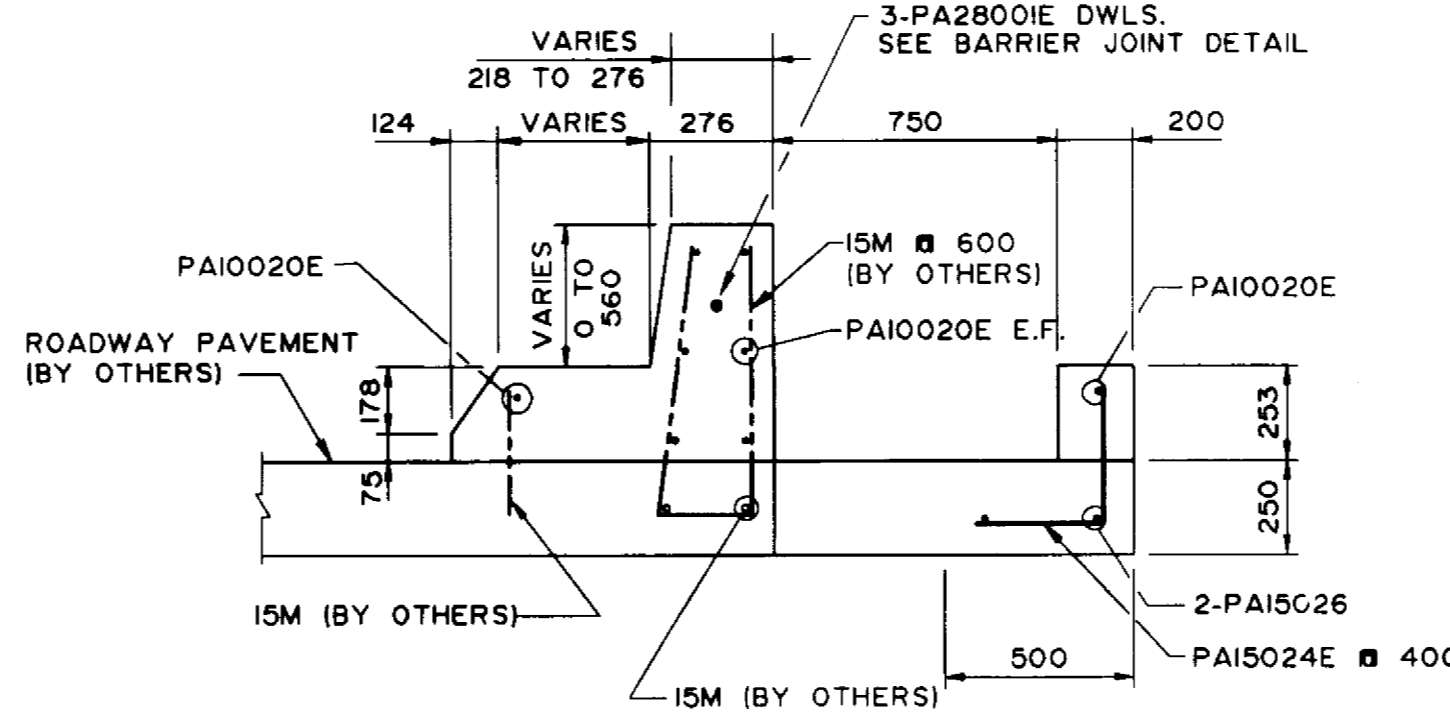
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SCALE 1 : 20



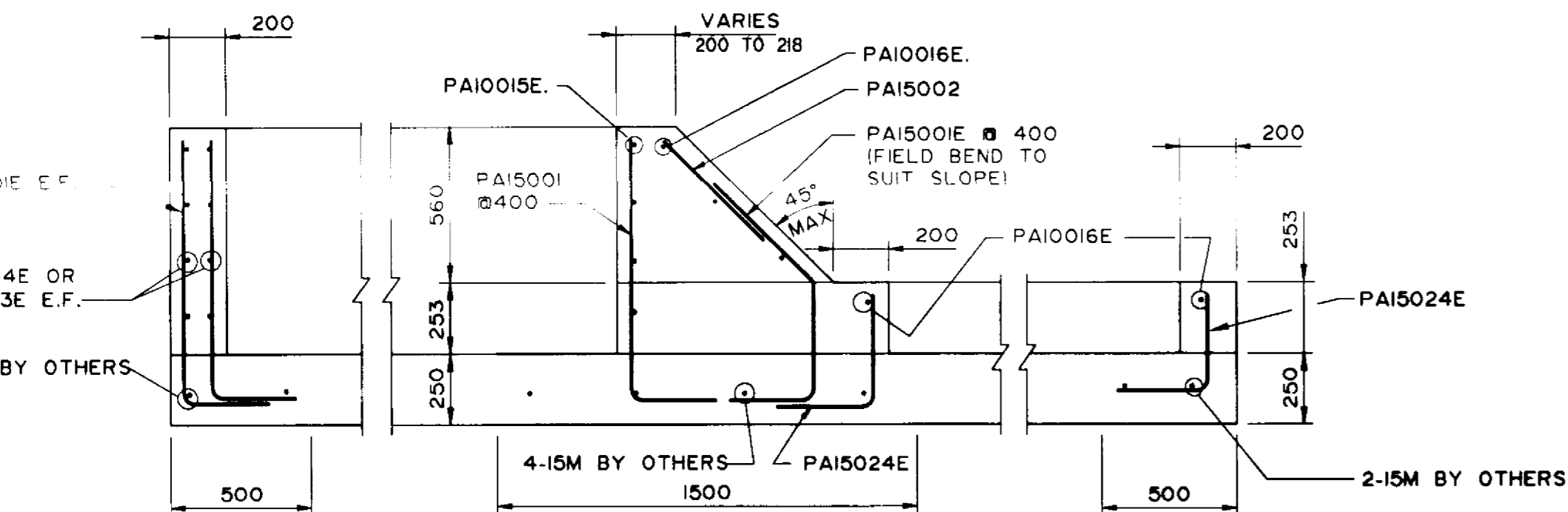
SECTION 2

SCALE 1 : 20



SECTION 5

SCALE 1 : 15



SECTION 3

SCALE 1 : 20

RECORD DRAWING
 APPROVED BY: *[Signature]* DATE: Dec 18/94

B-6021-42

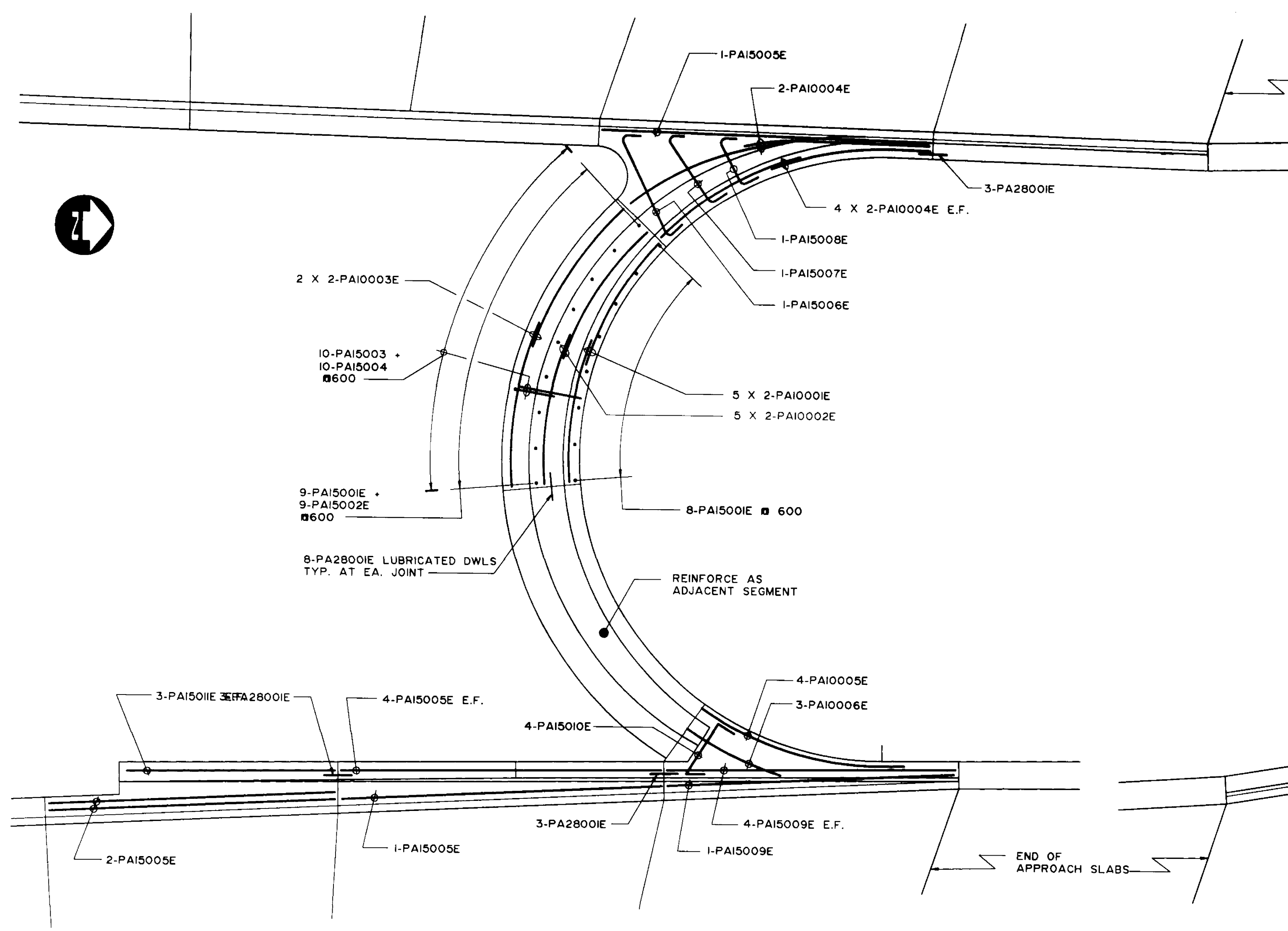
B.M. ELEV.	DILLON Consulting Engineers - Planners Environmental Scientists		ENGINEER'S SEAL PROVINCE OF MANITOBA ORIGINAL STAMPED BY S.S. RIHAL 94/12/22 REGISTERED PROFESSIONAL ENGINEER
DESIGNED BY: S.K.B./W.P.S.	CHECKED BY: S.S.R.	CONSULTANT DRAWING NO. 93-1497-06-42	
DRAWN BY: S.K.B.	APPROVED BY:		
HOR. SCALE: AS NOTED	AUTHORIZED BY: DATE		
VERTICAL SCALE: AS NOTED	ACCEPTED BY: DATE	CONCRETE TRAFFIC BARRIERS & PLANTERS SHEET 4 OF 4	
NO. REVISIONS	DATE	BY	DATE
1	96-05-0	P.S.	NOV. / 94
		B. CRENSPARGER / BRIDGE ENGINEER	

THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

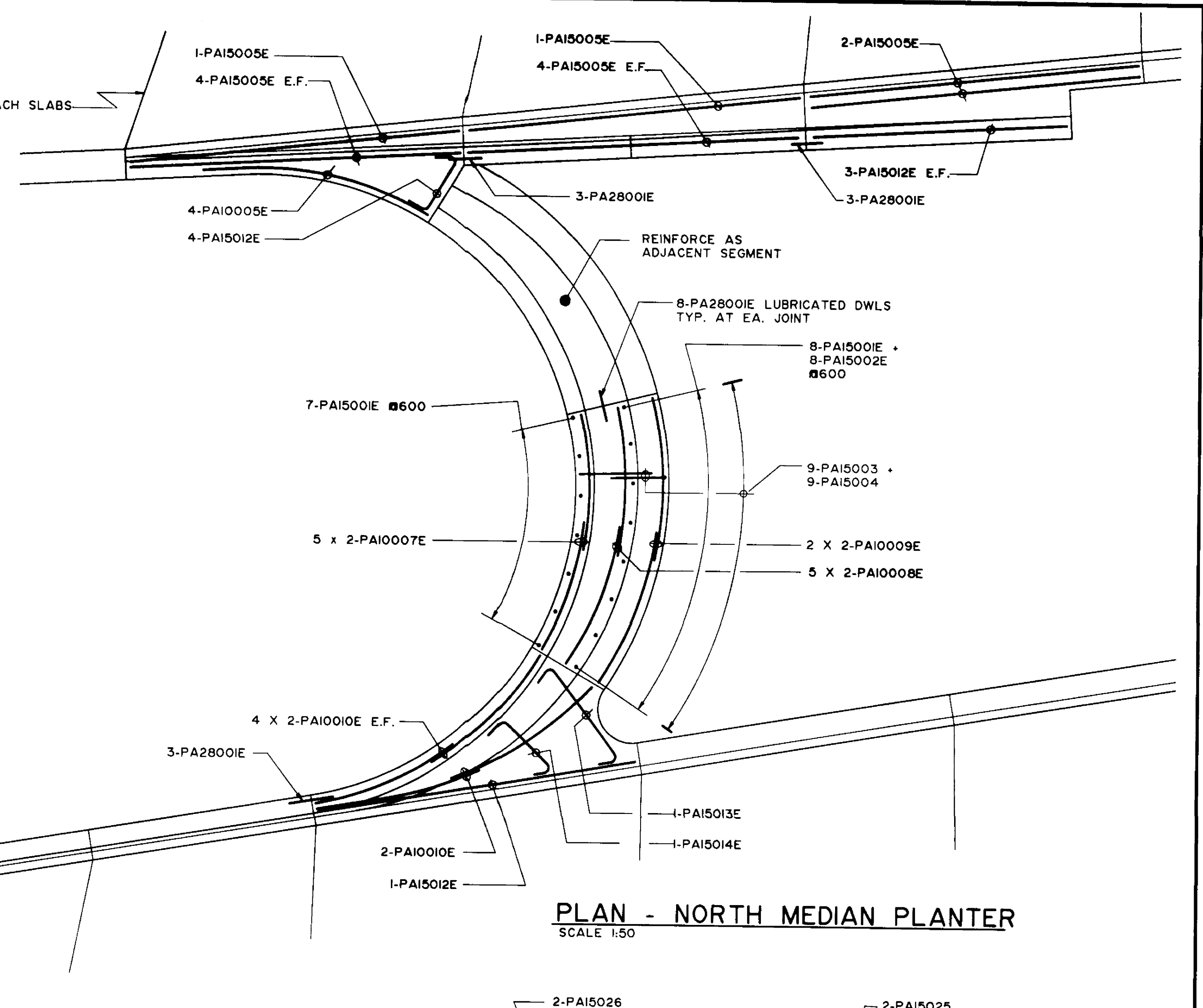
PEMBINA HIGHWAY
SOUTH CITY LIMIT RUE DES TRAPPISTES
PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

CITY DRAWING NUMBER
B224-95-42
SHEET OF

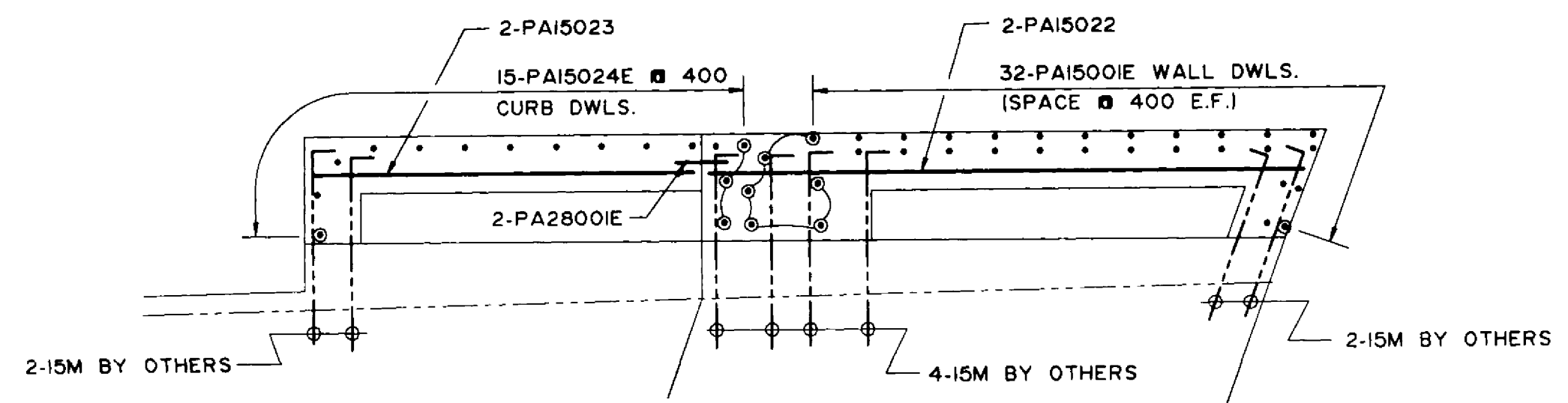
P3072-A-42



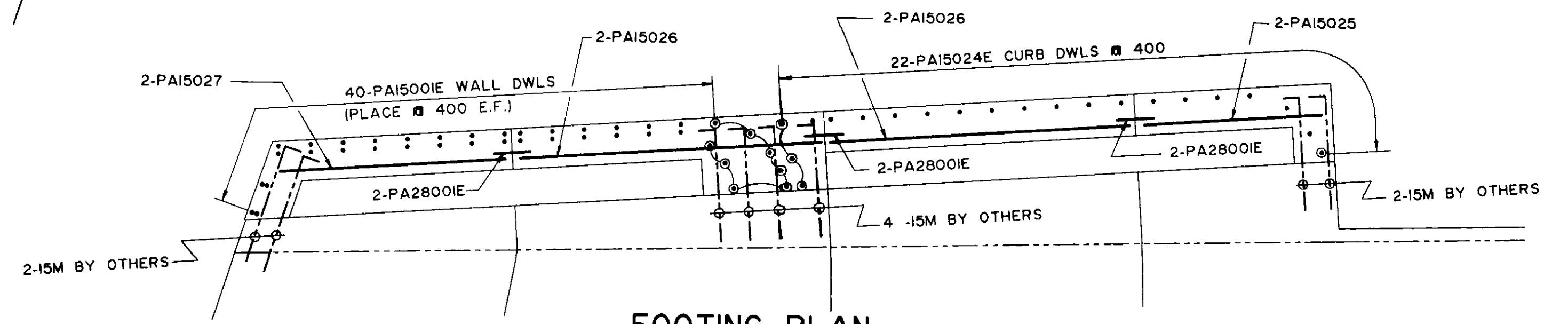
PLAN - SOUTH MEDIAN PLANTER
SCALE 1:50



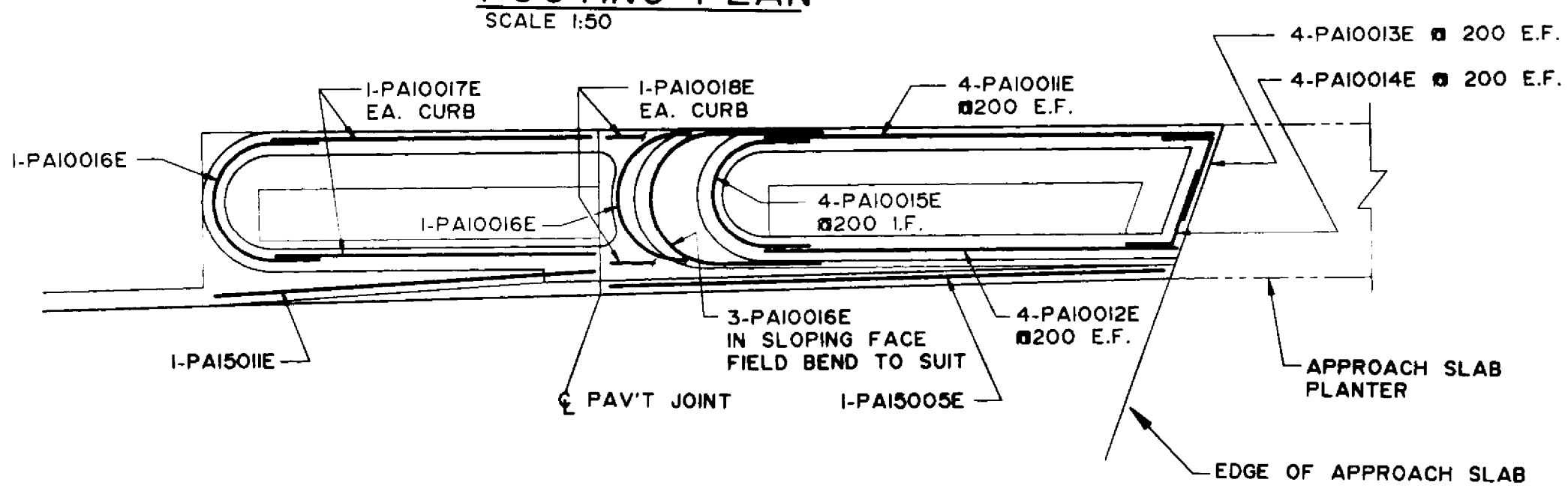
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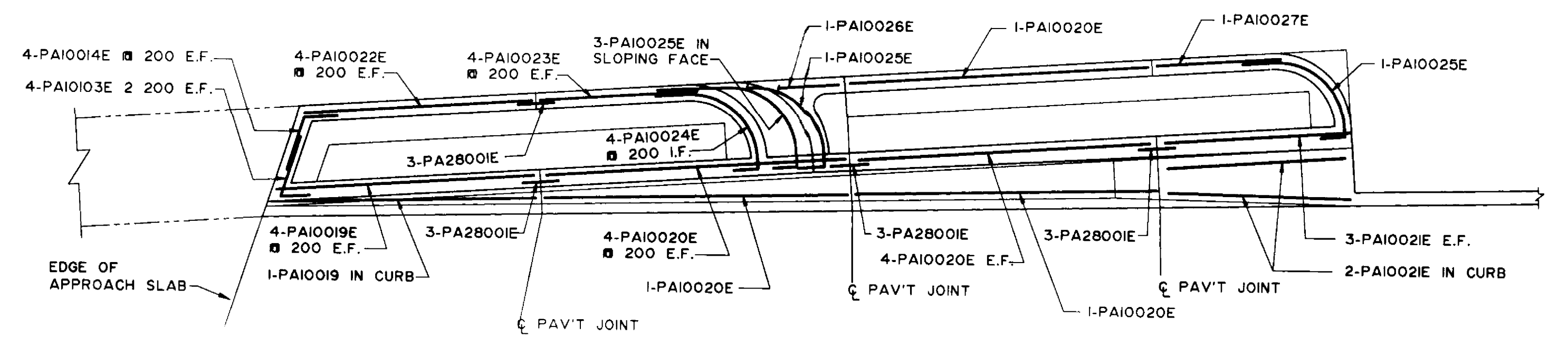
FOOTING PLAN
SCALE 1:50



FOOTING PLAN
SCALE 1:50



PLAN - S.W. PLANTER (N.E. PLANTER SIMILAR)
SCALE 1:50



PLAN - N.W. PLANTER (S.E. PLANTER SIMILAR)
SCALE 1:50

RECORD DRAWING
Alrie *2011/12/02*
 APPROVED BY: DATE:

NO.	REVISIONS	DATE	BY

DESIGNED BY	W.P.S.	CHECKED BY	C.M.R.
DRAWN BY	W.P.S.	APPROVED BY	
HOR. SCALE	AS NOTED	AUTHORIZED BY	DATE
VERTICAL		G.B. SMITH / SENIOR BRIDGE ENGINEER	DATE
		ACCEPTED BY	DATE
		B. SHAWHAN / BRIDGE ENGINEER	DATE

ENGINEER'S SEAL
 PROVINCE OF MANITOBA
 ORIGINAL STAMPED BY
S.S. RIHAL
 96/05
 REGISTERED PROFESSIONAL ENGINEER
 CONSULTANT DRAWING NO.
93-1497-06-42A

B-6021-42A

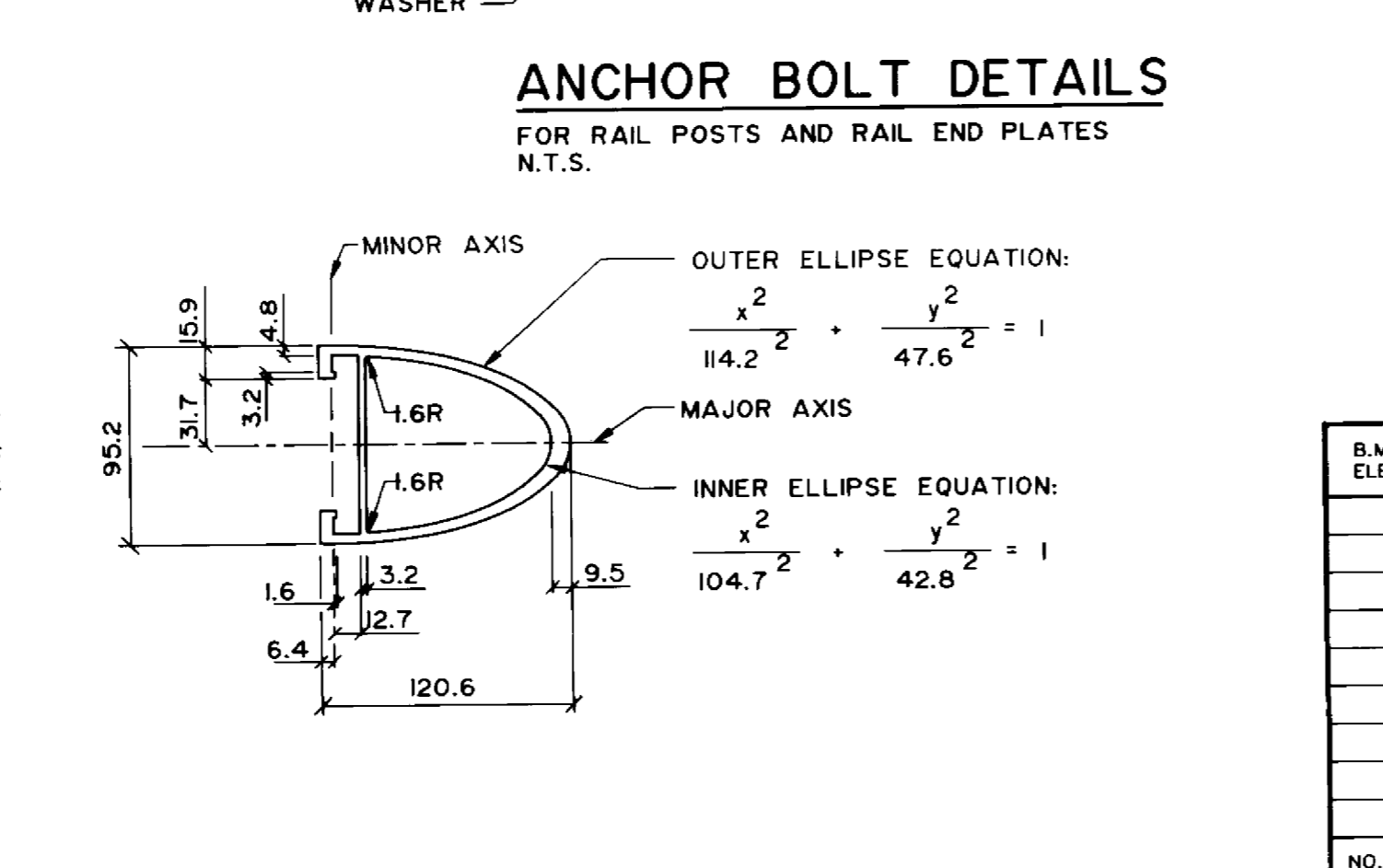
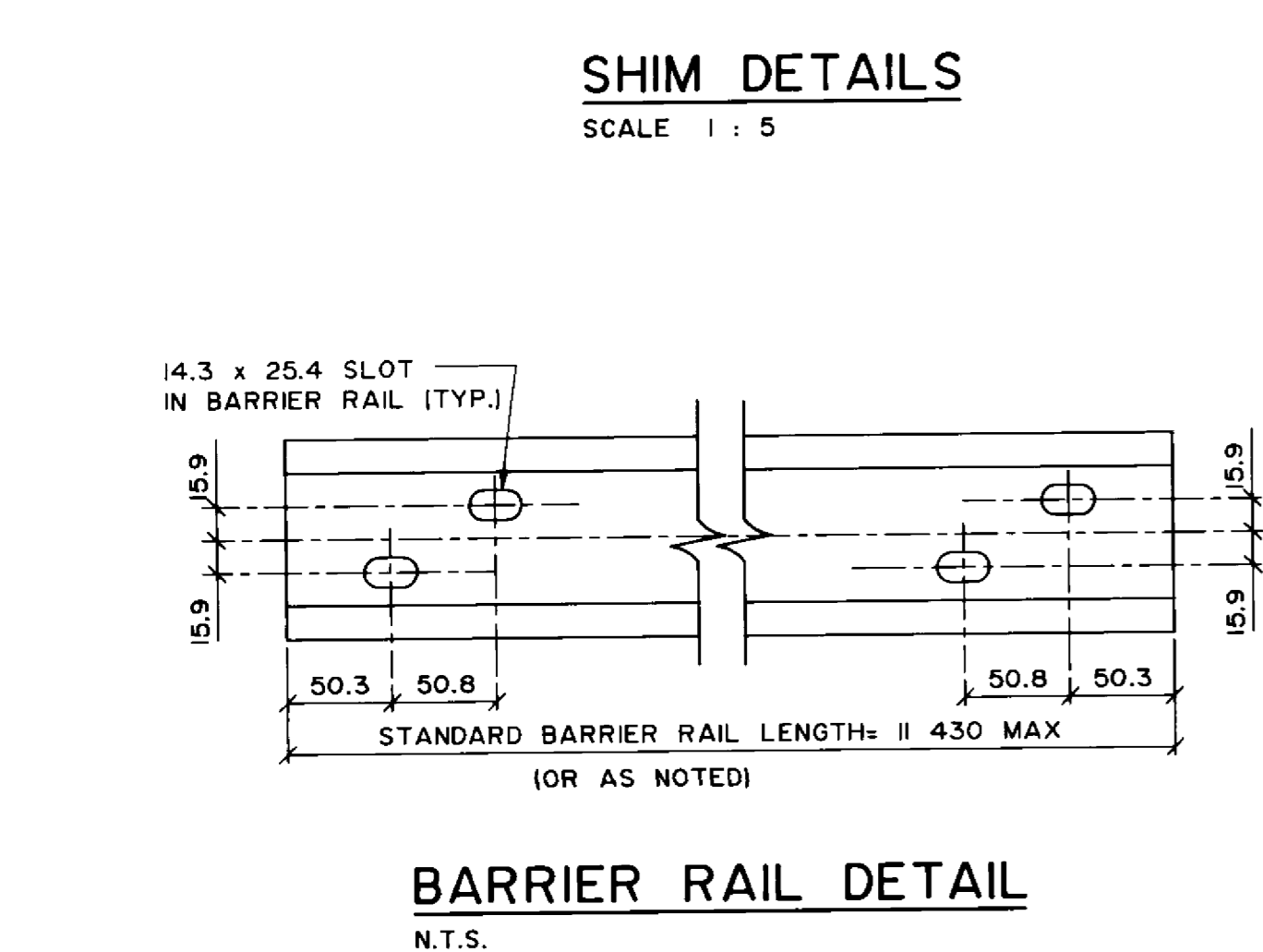
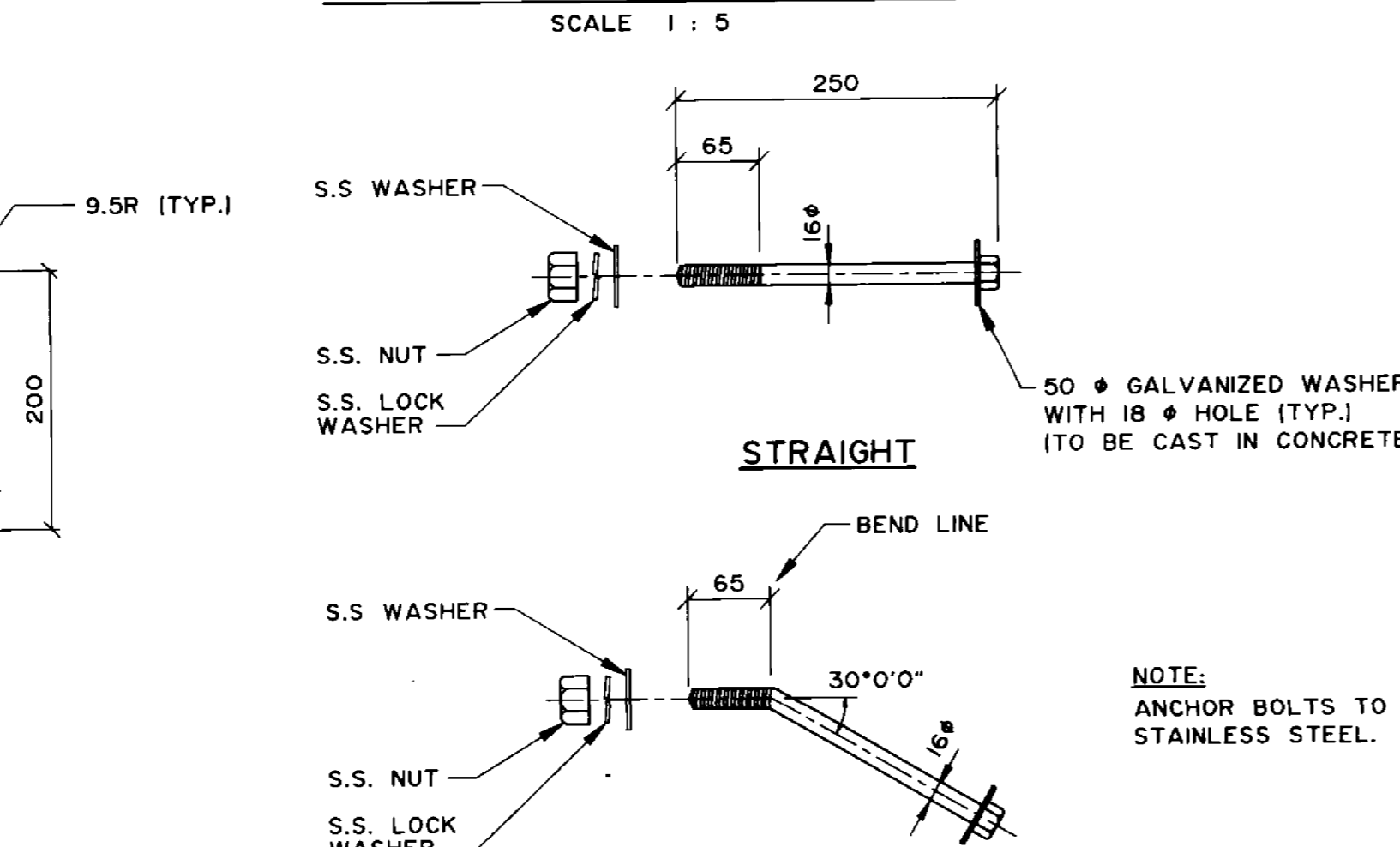
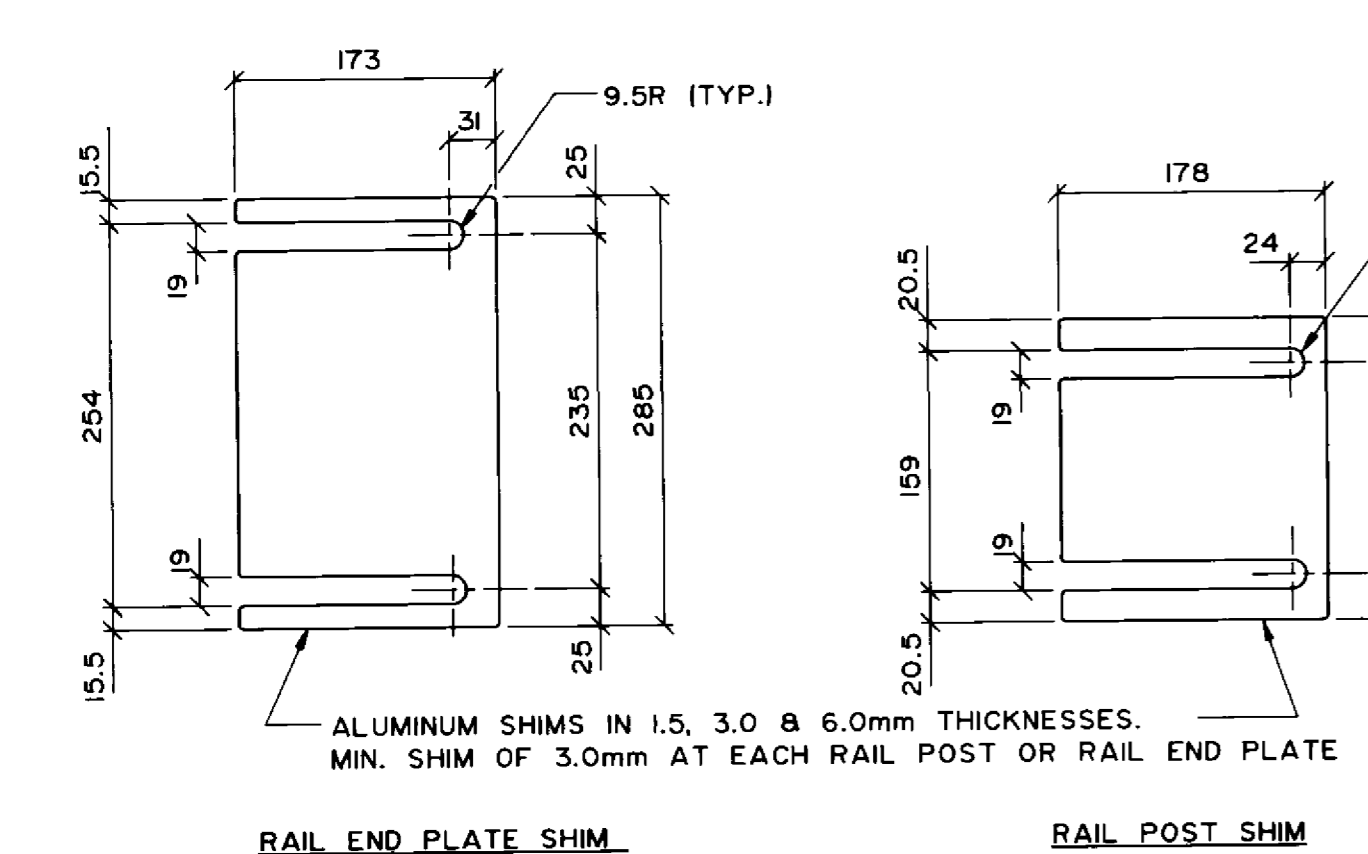
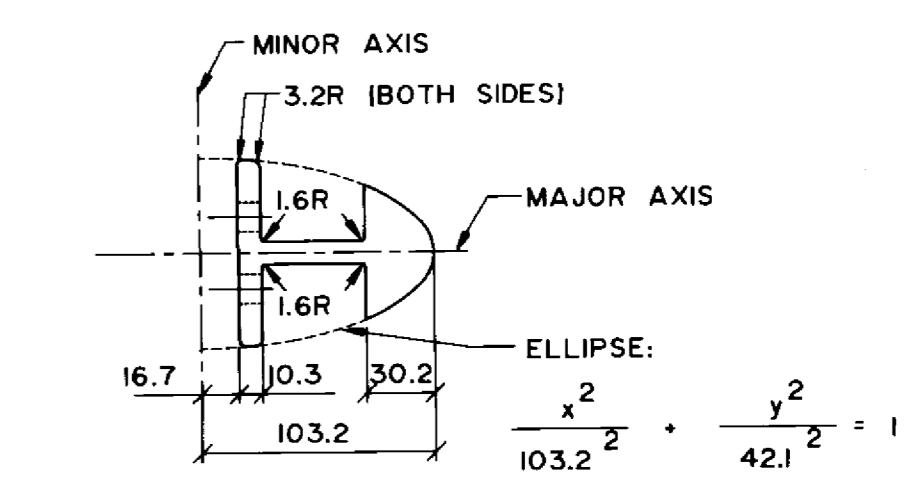
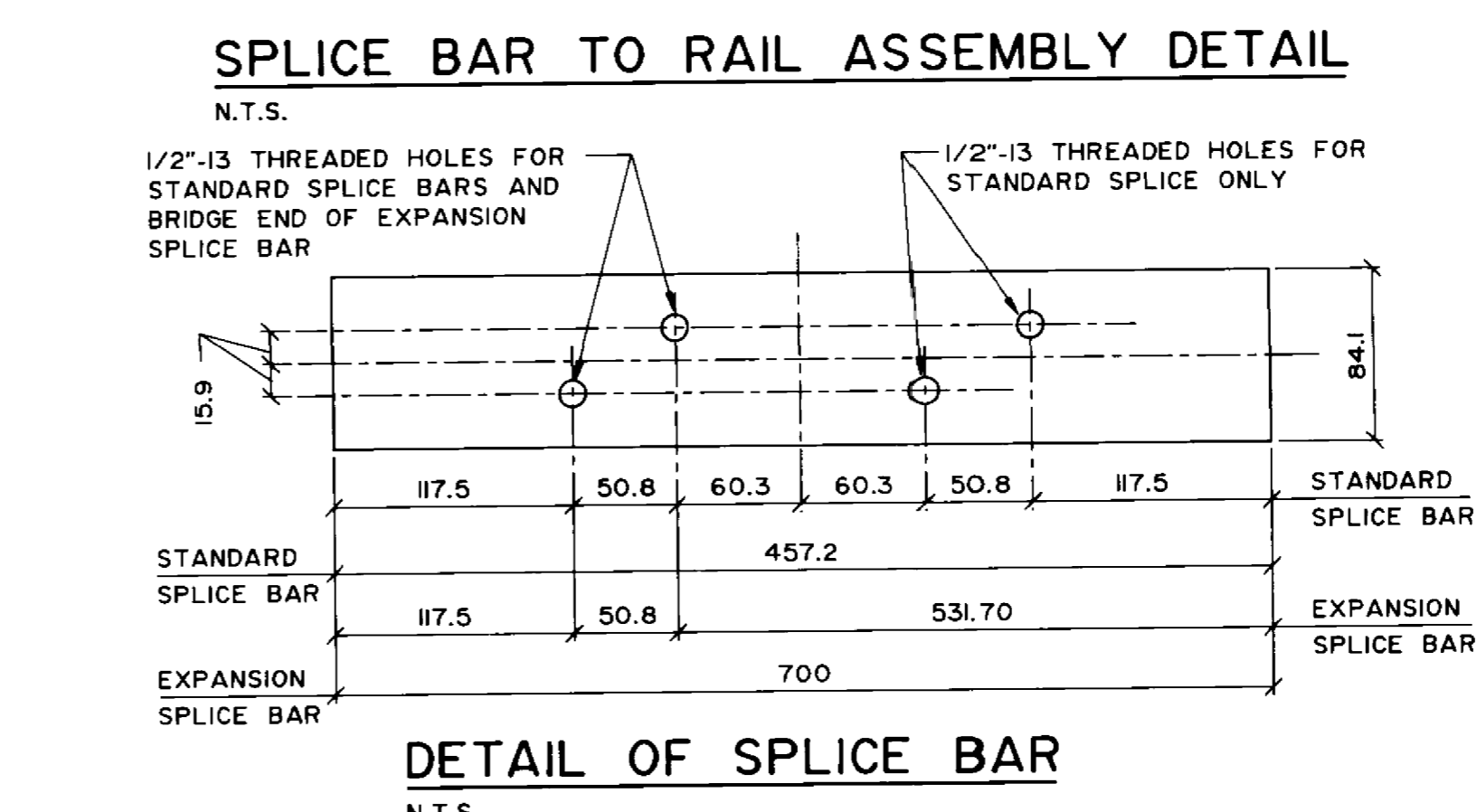
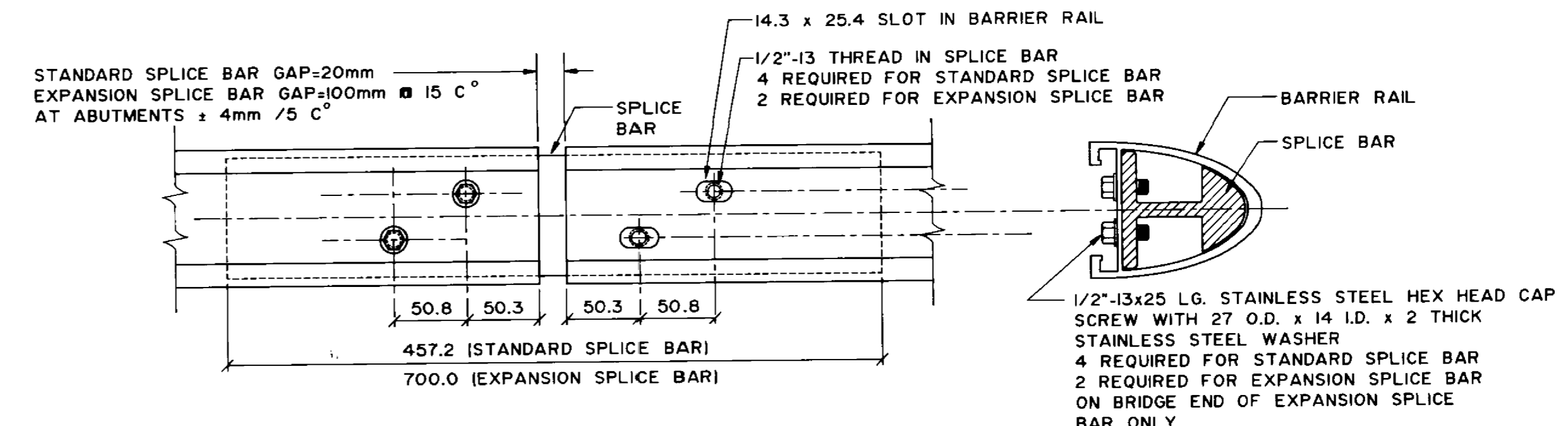
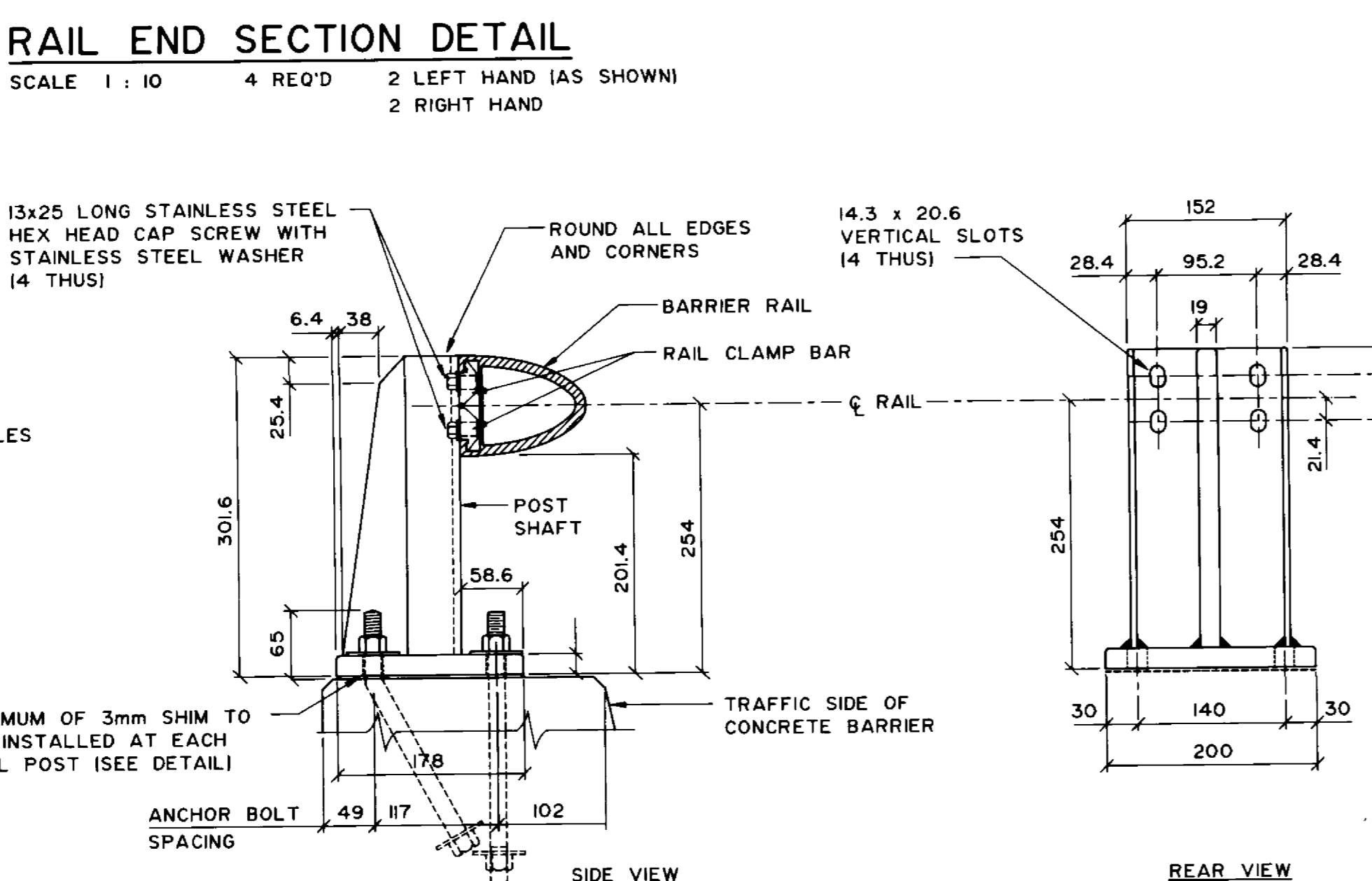
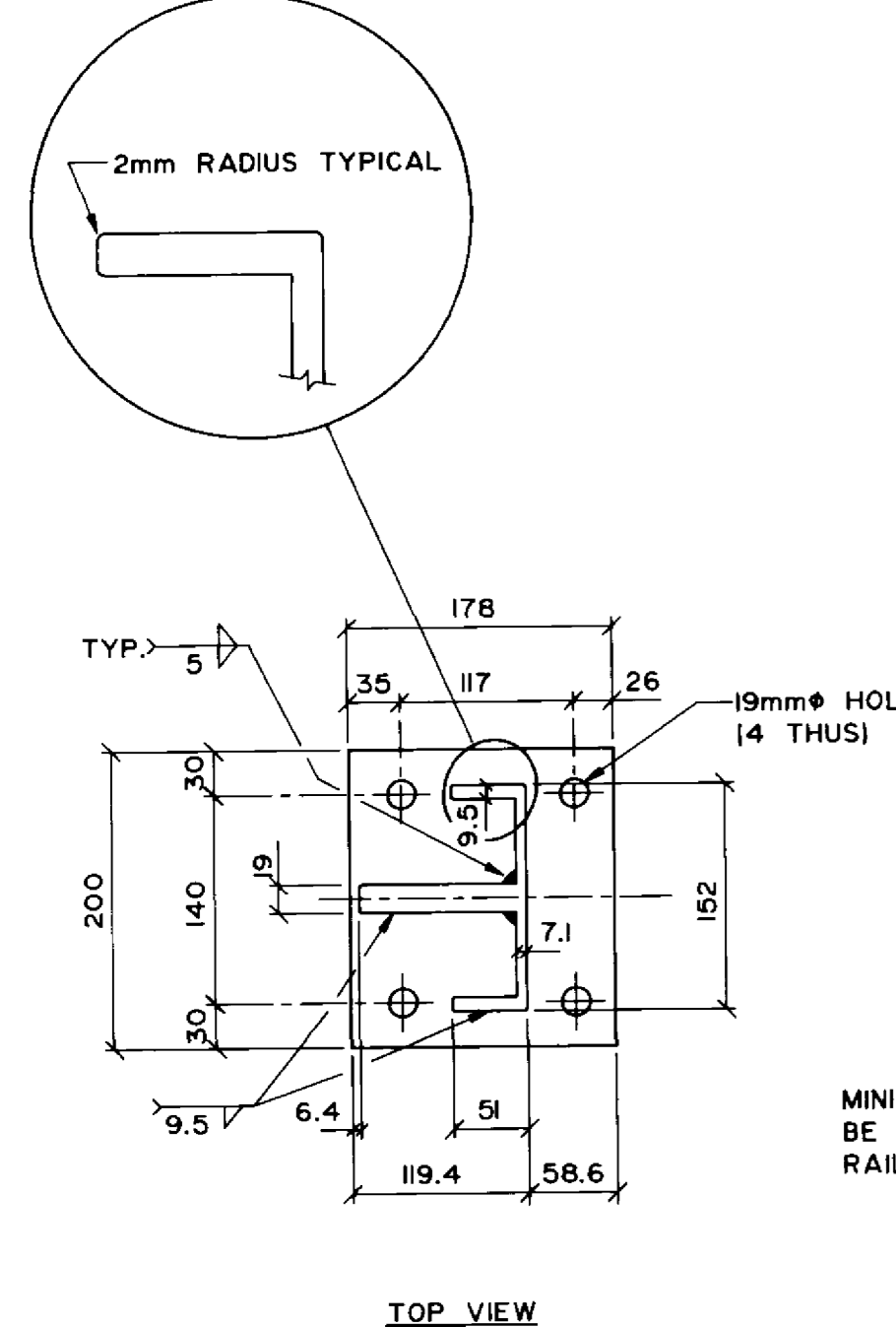
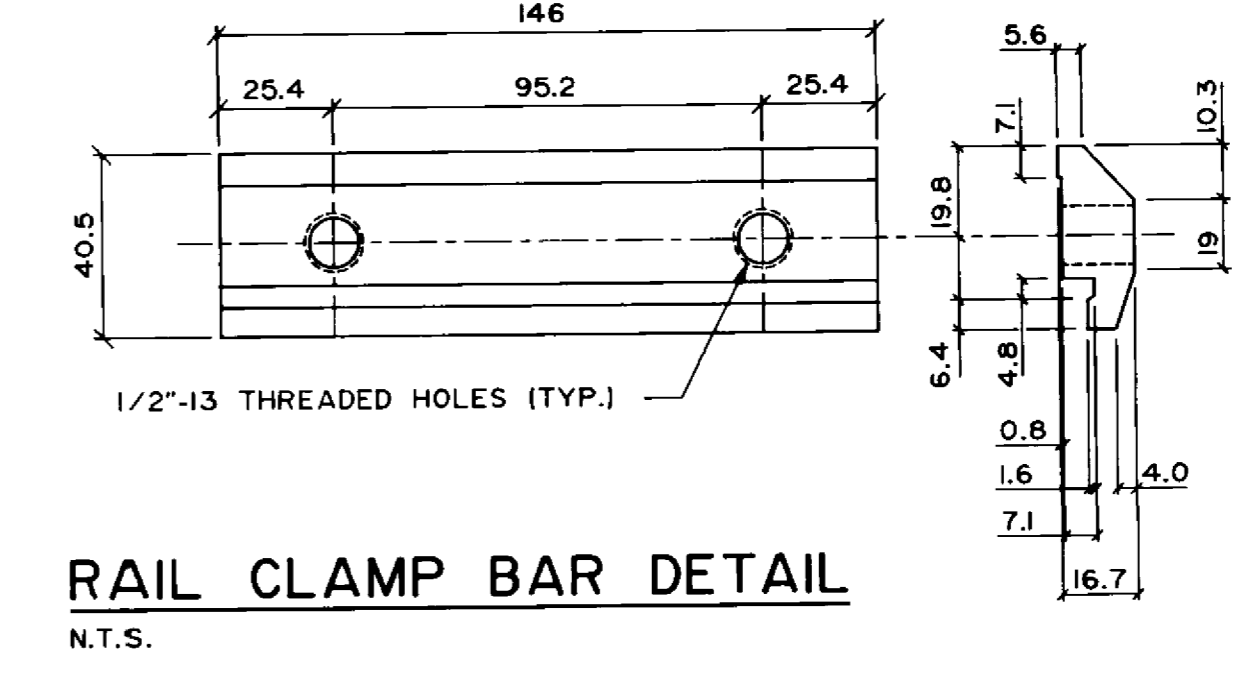
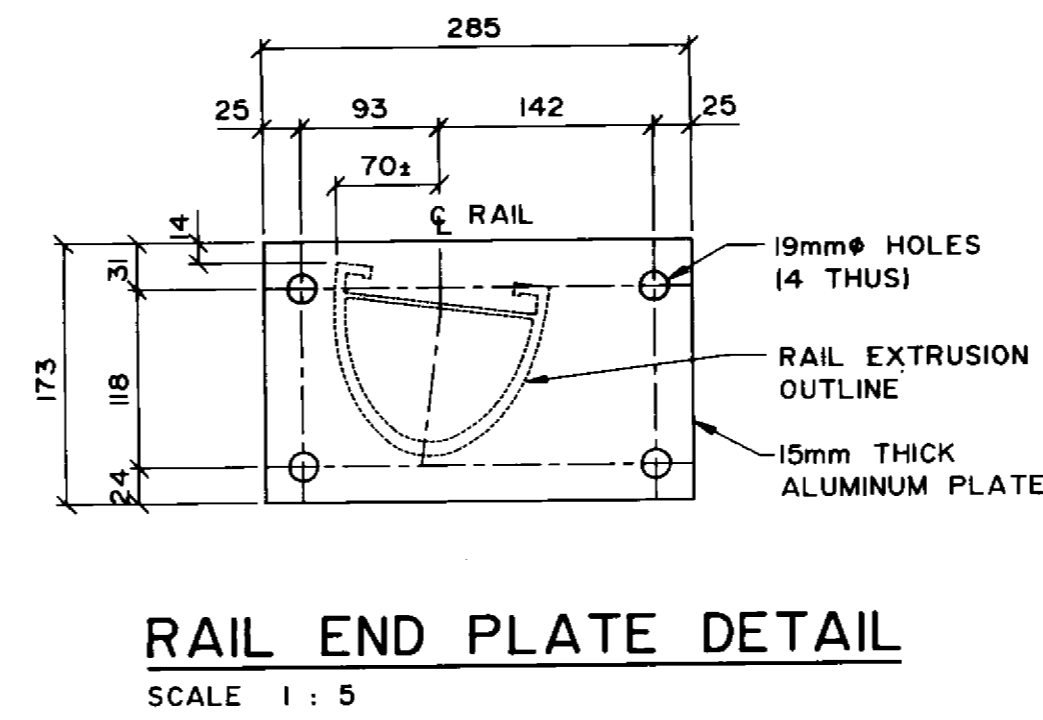
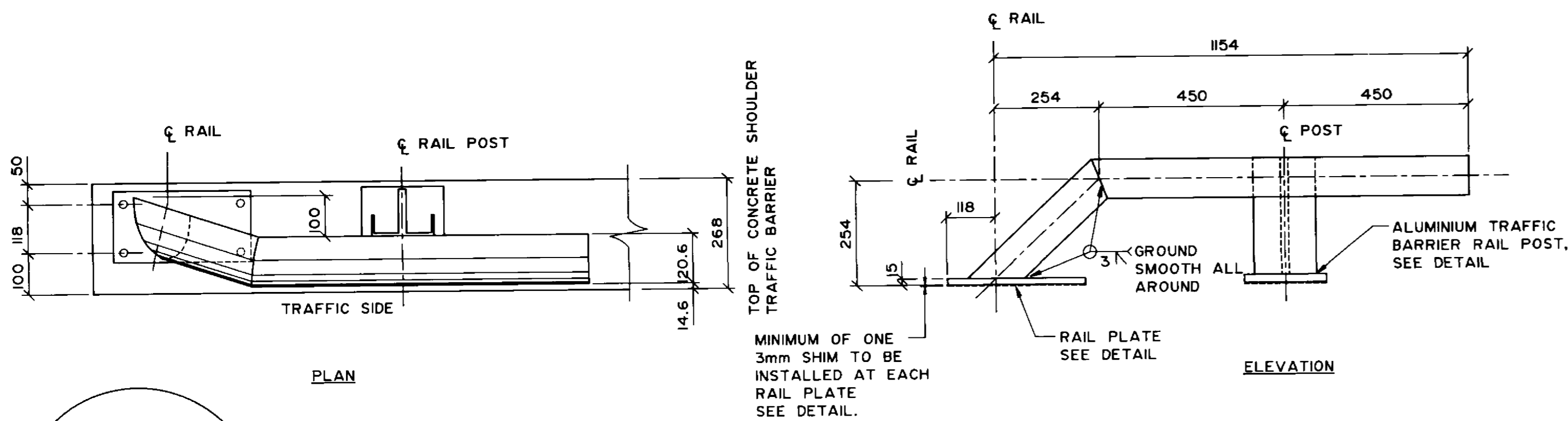
THE CITY OF WINNIPEG
 WORKS AND OPERATIONS DIVISION
 STREETS AND TRANSPORTATION DEPARTMENT

PEMBINA HIGHWAY
 SOUTH CITY LIMIT RUE DES TRAPPISTES
 PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

CITY DRAWING NUMBER
B224-95-42A
 SHEET OF

CONCRETE TRAFFIC BARRIERS & PLANTERS
 REINFORCING LAYOUT

P3072-A-42A

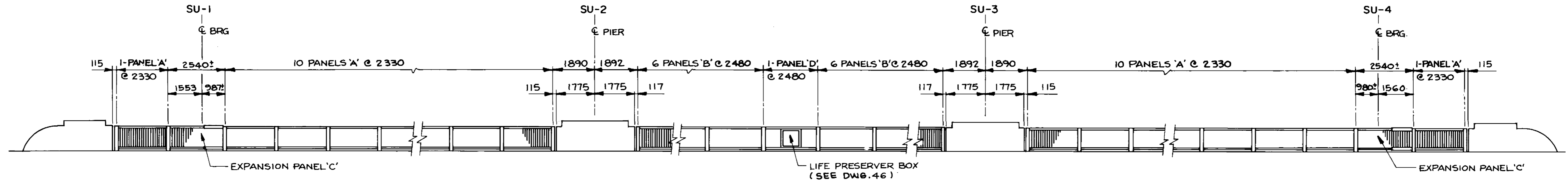


- NOTES:**
- THE 19MM DIA. HOLES (4) IN THE BASE OF THE BARRIER RAIL POSTS AND RAIL PLATES ARE DESIGNED TO ACCOMMODATE 16MM DIA. RAIL POST ANCHOR BOLTS AS DETAILED. SUPPLY WITH EACH ANCHOR BOLT: ONE STAINLESS STEEL PLAIN WASHER, ONE STAINLESS STEEL LOCK WASHER, ONE STAINLESS HEX NUT AND ONE 50MM GALVANIZED PLATE WASHER.
 - A COMBINATION OF 1.5, 3.0 AND/OR 6.0MM THICK ALUMINUM RAIL POST OR END PLATE SHIMS ARE TO BE USED AS REQUIRED TO SET THE BARRIER RAIL TO THE SPECIFIED HEIGHT. (MINIMUM 3.0MM SHIM REQUIRED AT EACH POST OR PLATE).
 - ALL EDGES AND CORNERS OF THE BARRIER POST PLATES AND EXTRUSIONS SHALL BE ROUNDED IN THE SHOP, TO A SMOOTH 2MM RADIUS TO THE SATISFACTION OF THE CONTRACT ADMINISTRATOR.
 - BOTTOM SURFACE OF SHIM (SURFACE IN CONTACT WITH CONCRETE) IS TO BE PAINTED WITH 2 COATS OF ALKALI RESISTANT BITUMINOUS PAINT, EACH COAT BEING IMM IN THICKNESS.
- SPECIFICATIONS:**
- EXTRUDED ALUMINUM SHAPES AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. B221, ALLOY 6061-T6 OR ALLOY 6351-T5 (MINIMUM ELONGATION 10%)
 - THE STAINLESS STEEL HEX HEAD AND SOCKET HEAD CAP SCREWS SHALL MEET THE REQUIREMENTS OF A.S.T.M. A276, TYPE 430, AND THE DIMENSIONAL REQUIREMENTS OF A.N.S.I. B18.3
 - DIMENSIONAL TOLERANCES NOT SHOWN OR IMPLIED ARE INTENDED TO BE THOSE CONSISTENT WITH THE PROPER FUNCTIONING OF THE PART, INCLUDING ITS APPEARANCE, AND ACCEPTED MANUFACTURING PRACTICES.
 - THE POST SHAFT SHALL BE MADE FROM A SINGLE CHANNEL-SHAPE EXTRUSION WELDED TO A PLATE SHAPE. THE POST BASE AND SHAFT SHALL THEN BE WELDED TOGETHER.
 - WELDING SHALL CONFORM TO THE REQUIREMENTS OF CSA STANDARDS S244-1969, WELDED ALUMINUM DESIGN AND WORKMANSHIP AND W47.2-1967, ALUMINUM WELDING QUALIFICATION CODES. ALUMINUM FILLER ALLOY SHALL BE ONE OF THE FOLLOWING: ER4043, ER5183, ER5356, ER5554, ER5556 AND ER5654.
 - THE CONTRACTOR SHALL SUBMIT COMPLETE SHOP DRAWINGS CONSISTING OF THREE PRINTS AND ONE REPRODUCIBLE SEPIA TO THE CONTRACT ADMINISTRATOR FOR APPROVAL PRIOR TO FABRICATION OF ALUMINUM TRAFFIC BARRIER COMPONENTS.
 - ANTI-SEIZE COATING TO BE APPLIED TO ALL THREADED COMPONENTS WHEN BEING ASSEMBLED. I.E. LPS-3 - MANUFACTURED BY HOLT-LLOYD (CANADA) LTD. MARKHAM, ONT. L3R-2Z3.

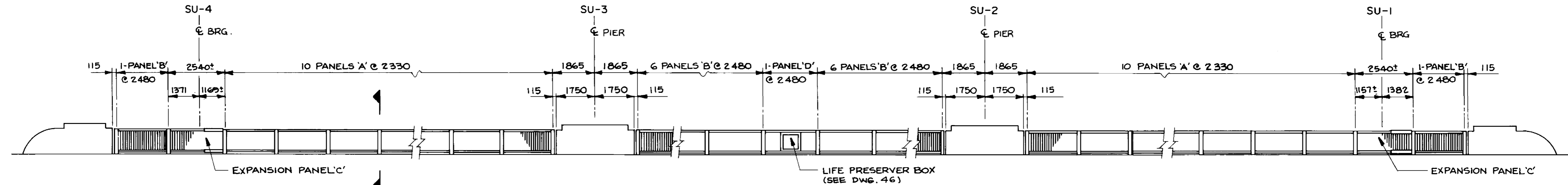
RECORD DRAWING
APPROVED BY: *[Signature]* DATE: *Dec 18/94*

B-6021-43 CW-311

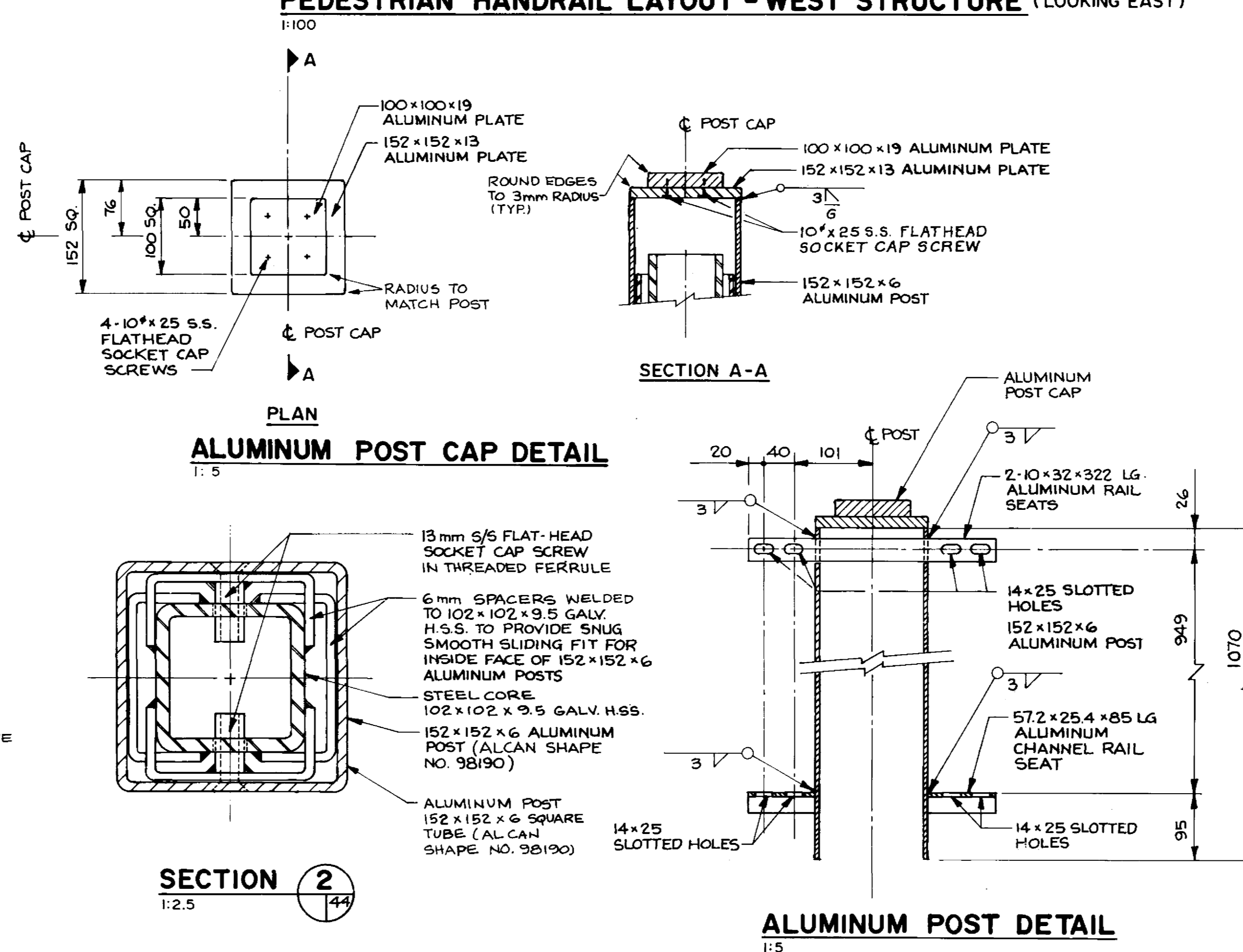
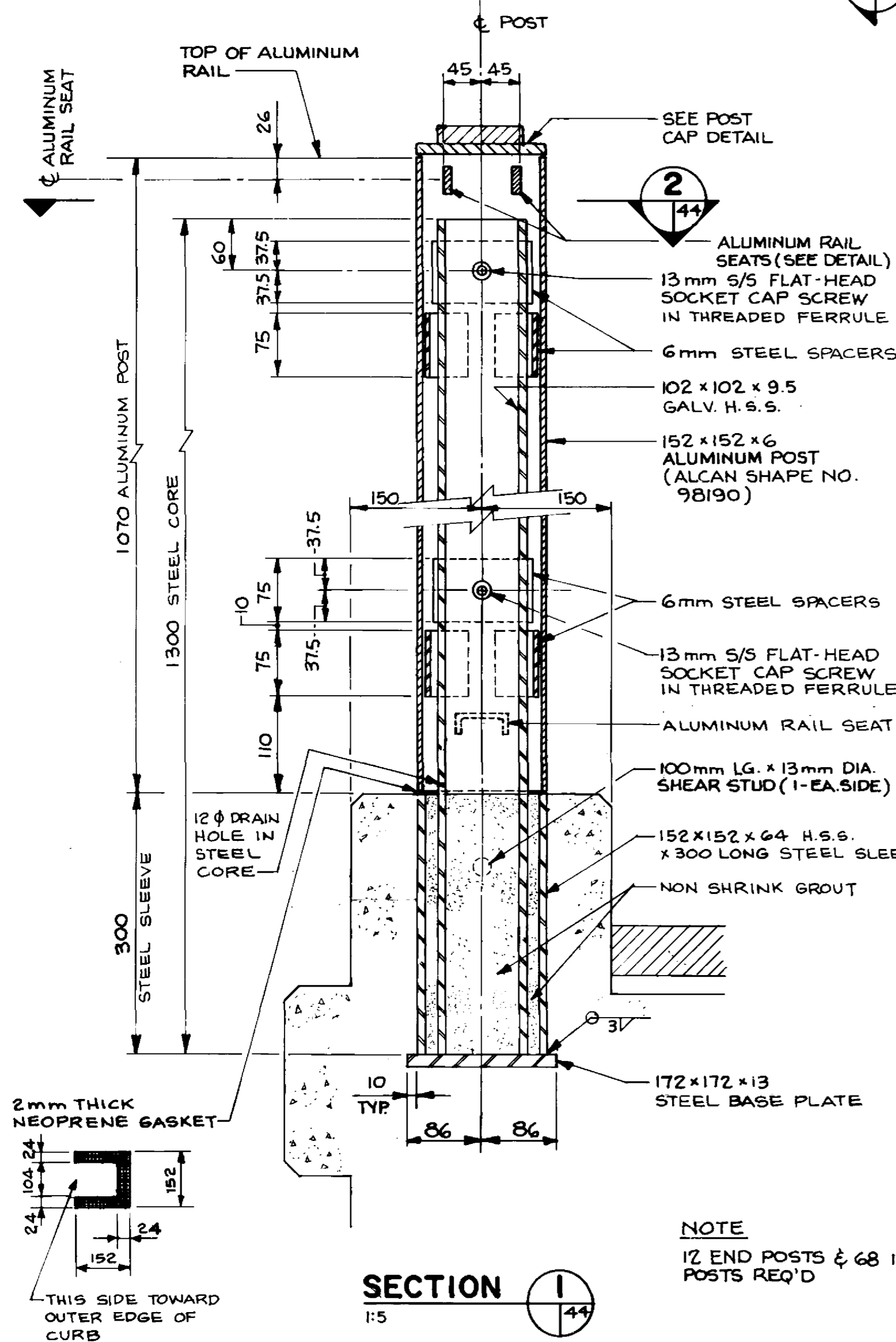
<p>DILLON Consulting Engineers - Planners Environmental Scientists</p>		<p>DESIGNED BY: S.S.R. CHECKED BY: S.S.R. DRAWN BY: S.K.B. APPROVED BY: <i>[Signature]</i> DATE: <i>12/12/94</i> HOR. SCALE: AS SHOWN VERTICAL: AS SHOWN DATE: NOV. / 94</p>	<p>CONSULTANT DRAWING NO. 93-1497-06-43</p>	<p>THE CITY OF WINNIPEG WORKS AND OPERATIONS DIVISION STREETS AND TRANSPORTATION DEPARTMENT</p>	
<p>STANDARD BARRIER RAIL LENGTH= 11430 MAX (OR AS NOTED)</p>				<p>PEMBINA HIGHWAY SOUTH CITY LIMIT TO RUE DES TRAPPISTES PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER</p>	
<p>BARRIER RAIL DETAIL N.T.S.</p>		<p>ALUMINUM TRAFFIC BARRIER RAIL DETAILS</p>		<p>CITY DRAWING NUMBER B224-95-43 SHEET OF P3072-A-43</p>	



PEDESTRIAN HANDRAIL LAYOUT - EAST STRUCTURE (LOOKING WEST)
1:100



PEDESTRIAN HANDRAIL LAYOUT - WEST STRUCTURE (LOOKING EAST)
1:100



NOTES:

- EACH PEDESTRIAN RAIL POST CONSISTS OF 3 BASIC COMPONENTS:
 - THE ALUMINUM POST (152 X 152 SQUARE TUBE)
 - THE GALVANIZED STEEL CORE (100 X 100 H.S.S.) C/W SPACERS
 - THE GALVANIZED STEEL SLEEVE (152 X 152 H.S.S.) C/W BOTTOM PLATE AND STUD ANCHORS
- INSTALLATION PROCEDURE
 - CAST GALVANIZED STEEL SLEEVE INTO CURB AT EACH POST LOCATION
 - GROUT GALVANIZED H.S.S. STEEL CORE INTO EACH SLEEVE. ENSURE THAT EACH CORE IS PLUMB AND PROPERLY SPACED
 - SLIDE ALUMINUM POST OVER STEEL CORE AND SECURE WITH S.S. CAP SCREWS
 - INSTALL ALUMINUM RAIL PANELS
- ALUMINUM POSTS AND RAIL PANELS SHALL BE ANODIZED (BLACK) AS PER SPECIFICATIONS AFTER FABRICATION
- ALUMINUM MATERIALS, WELDING ETC. SEE NOTES ON DRAWING NO. 46
- STEEL SHALL CONFORM TO CSA G40.21M PLATES & BARS - GRADE 300 W H.S.S. - GRADE 350 W
- WELDING TO CSA W59
- ALL STEEL COMPONENTS SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION
- ANTI-SEIZE COATING TO BE APPLIED TO ALL THREADED COMPONENTS WHEN BEING ASSEMBLED.
 - LPS-3 MANUFACTURED BY HOLT LLOYD (CANADA) LTD., MARKHAM, ONTARIO L3R 2Z3

RECORD DRAWING
APPROVED BY: *[Signature]* DATE: *Dec 18/94*

B-6021-44

LOCATION APPROVED UNDERGROUND STRUCTURES	N/A
SUPV. U/G STRUCTURES COMMITTEE	DATE
NOTE:	LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

B.M. ELEV.	
NO. REVISIONS	DATE BY

DILLON
Consulting Engineers - Planners
Environmental Scientists

DESIGNED BY: W.P.S. / M.C.	CHECKED BY: SSR.
DRAWN BY: D.M.W.	APPROVED BY: <i>[Signature]</i>
HOR. SCALE: 1:100	DATE: NOV. 1994
VERTICAL	DATE: NOV. 1994

ENGINEER
S.S. FRIHAL
REGISTERED PROFESSIONAL ENGINEER

CONSULTANT DRAWING NO. 93-1497-06-44

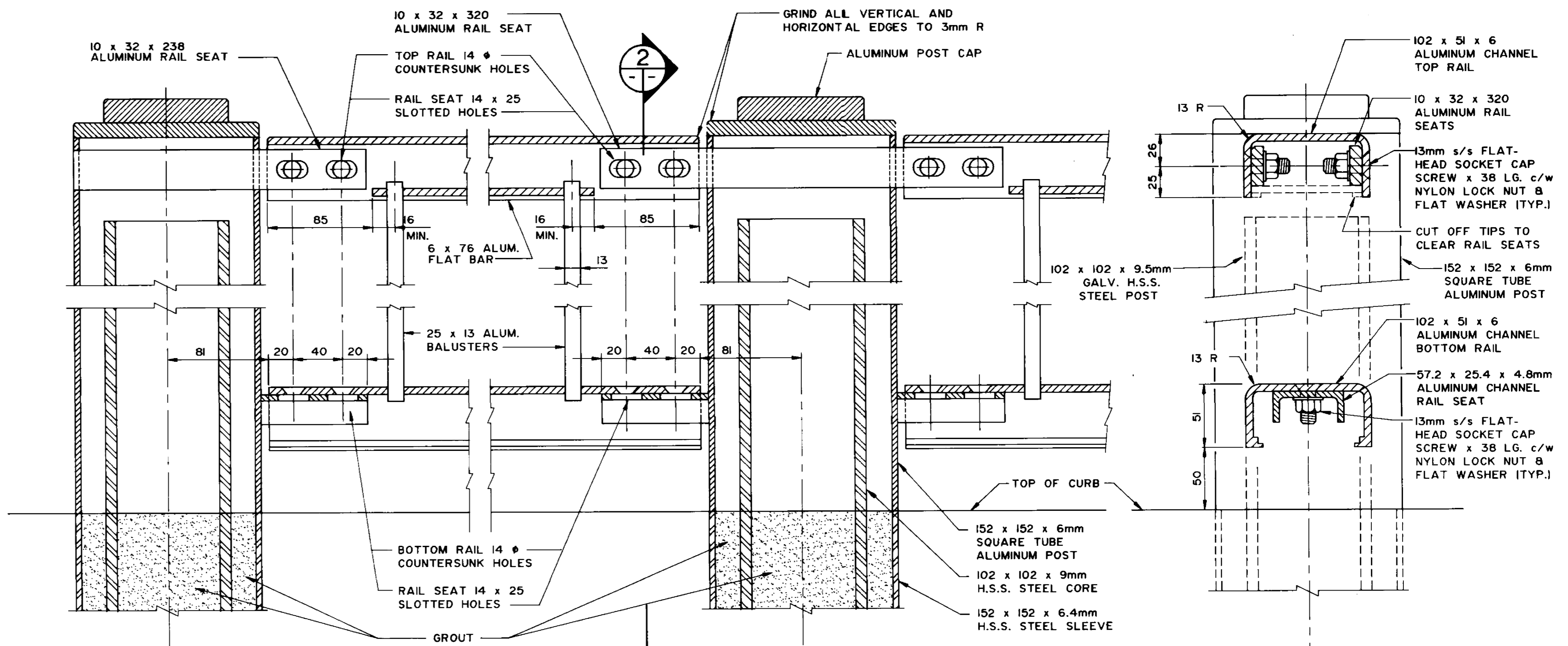
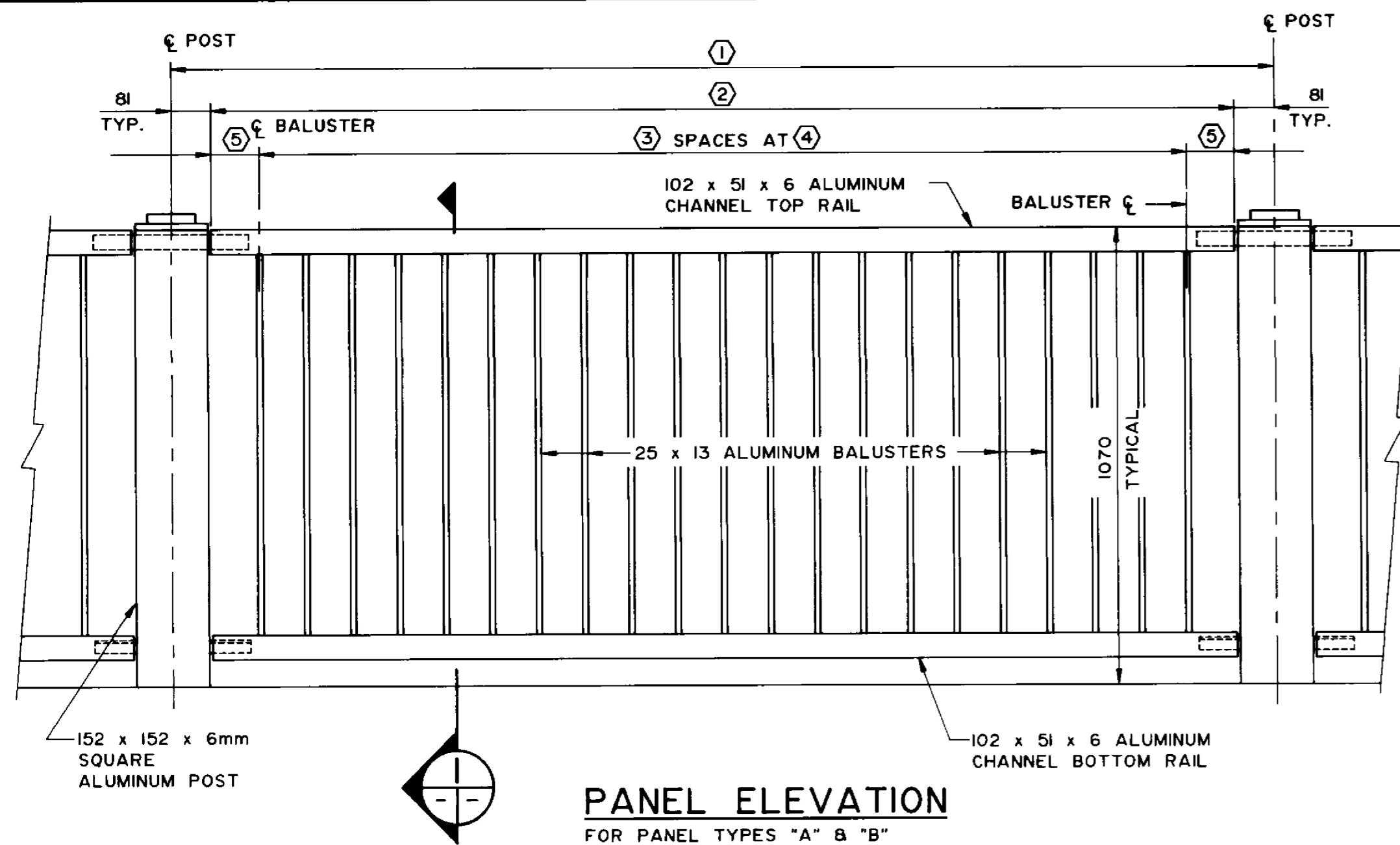
THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

PEMBINA HIGHWAY
SOUTH CITY LIMIT TO RUE DES TRAPPISTES
PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

ALUMINUM PEDESTRIAN HANDRAIL LAYOUT AND POST DETAILS

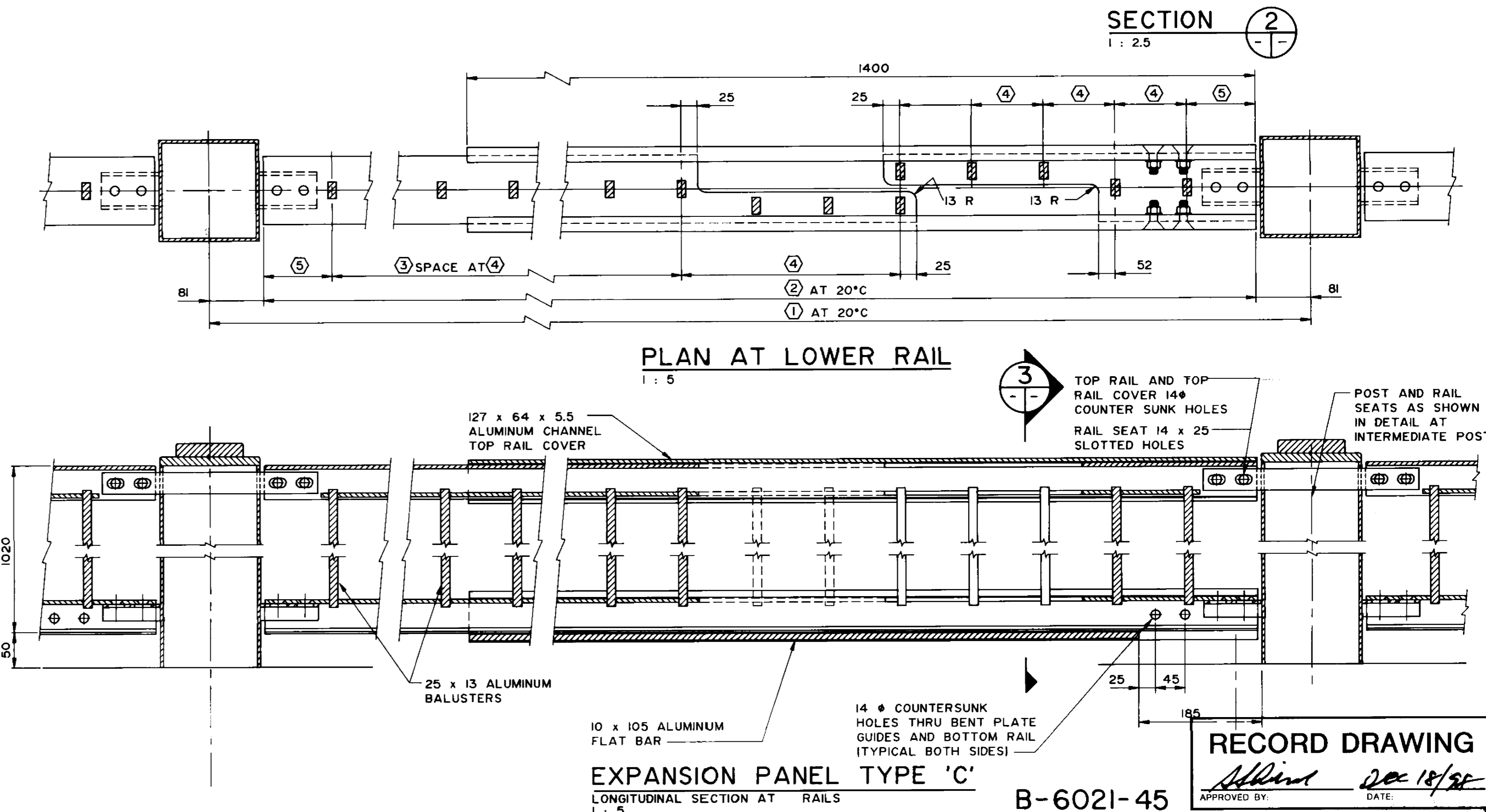
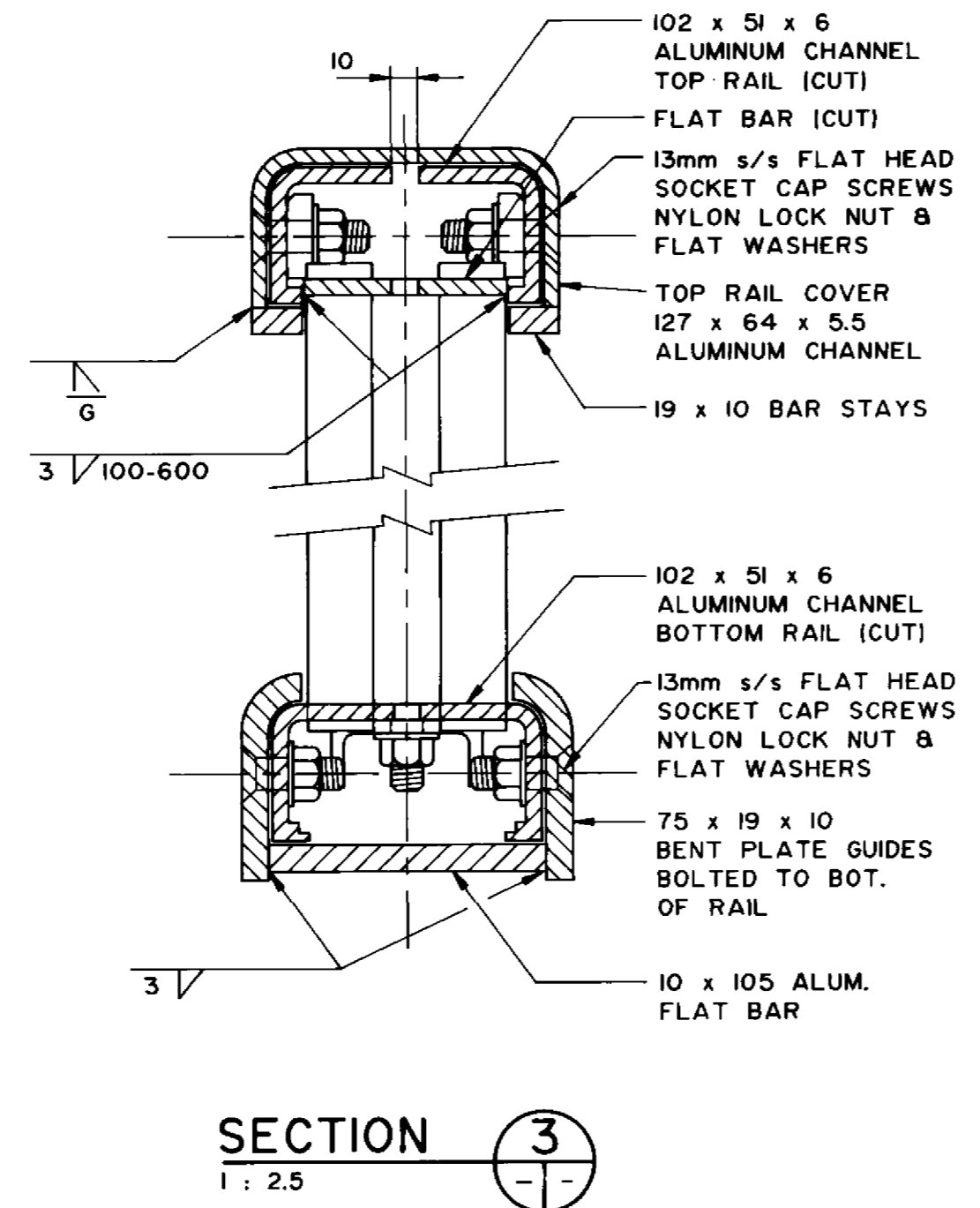
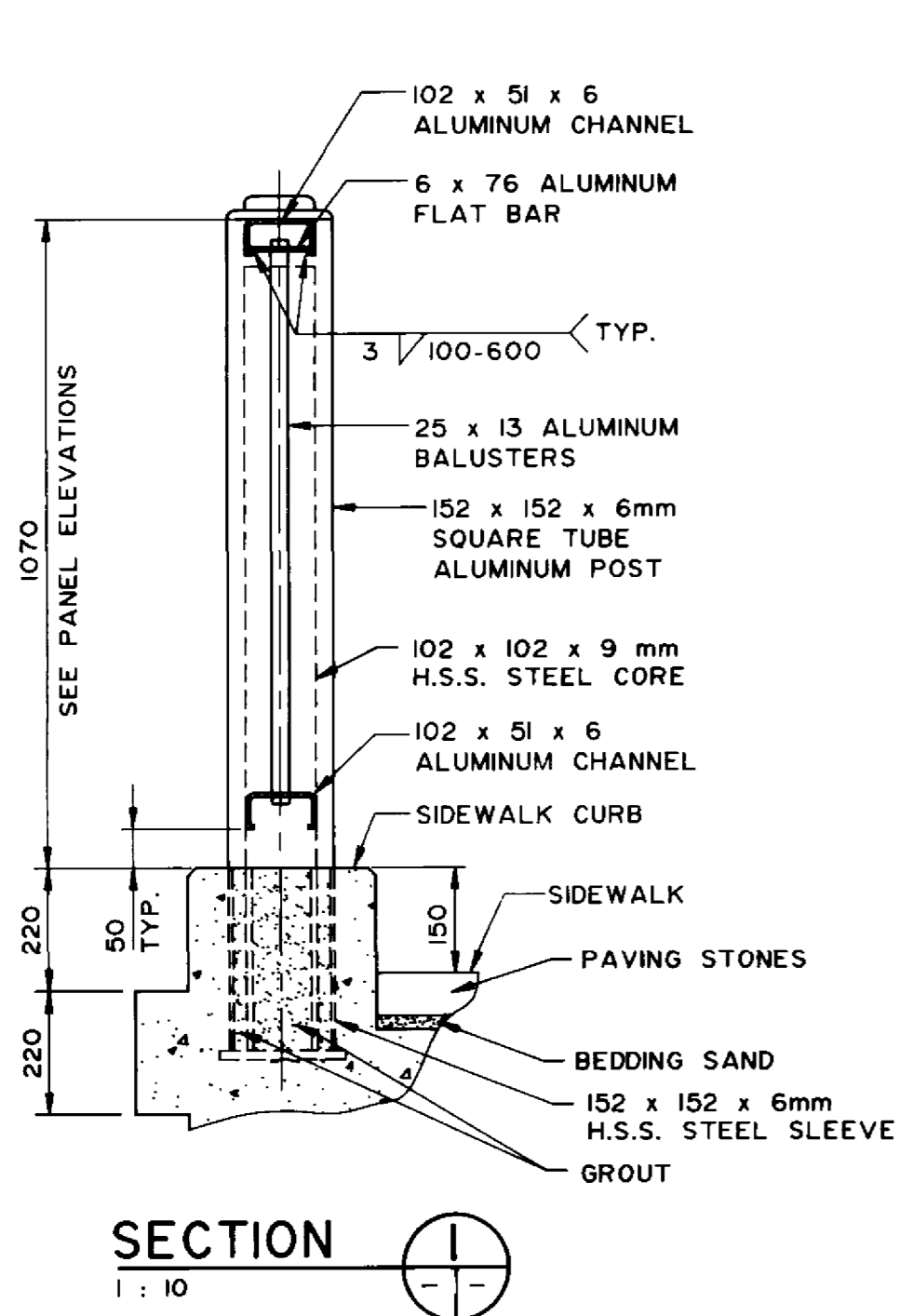
PROJECT NUMBER: B224-95-44
SHEET: OF

P3072-A-44



PEDESTRIAN HANDRAIL PANEL DATA

PANEL	NO. REQ'D	HEIGHT	(1)	(2)	(3)	(4)	(5)
A	42	1070	2330	2168	18	109.2	101
B	26	1070	2480	2318	20	105.8	101
C	4	1070	2540	2380	20	108.9	101
D	2	1070	2480	SEE LIFE PRESERVER ENCLOSURE DRAWING			



- NOTES:**
- ALUMINUM EXTRUSIONS SHALL CONFORM TO ASTM B221 ALLOY 6351-T6. ALUMINUM PLATES SHALL CONFORM TO ASTM B221 ALLOY 5083.
 - THE M.I.G. PROCESS OF WELDING SHALL BE USED.
 - S/S DENOTES STAINLESS STEEL.
 - RAIL POSTS SHALL BE SET VERTICAL.
 - ALUMINUM HANDRAIL PANELS AND POSTS SHALL BE ANODIZED (BLACK) AS PER SPECIFICATIONS, AFTER FABRICATION.

RECORD DRAWING
APPROVED BY: *[Signature]* DATE: Dec 18/94

DILLON
Consulting Engineers - Planners
Environmental Scientists

DESIGNED BY: W.P.S. CHECKED BY: S.S.R.
DRAWN BY: W.J.K. APPROVED BY: *[Signature]*
HOR. SCALE: AS NOTED
VERTICAL: AS NOTED

NO. REVISIONS DATE BY DATE NOV. 1994

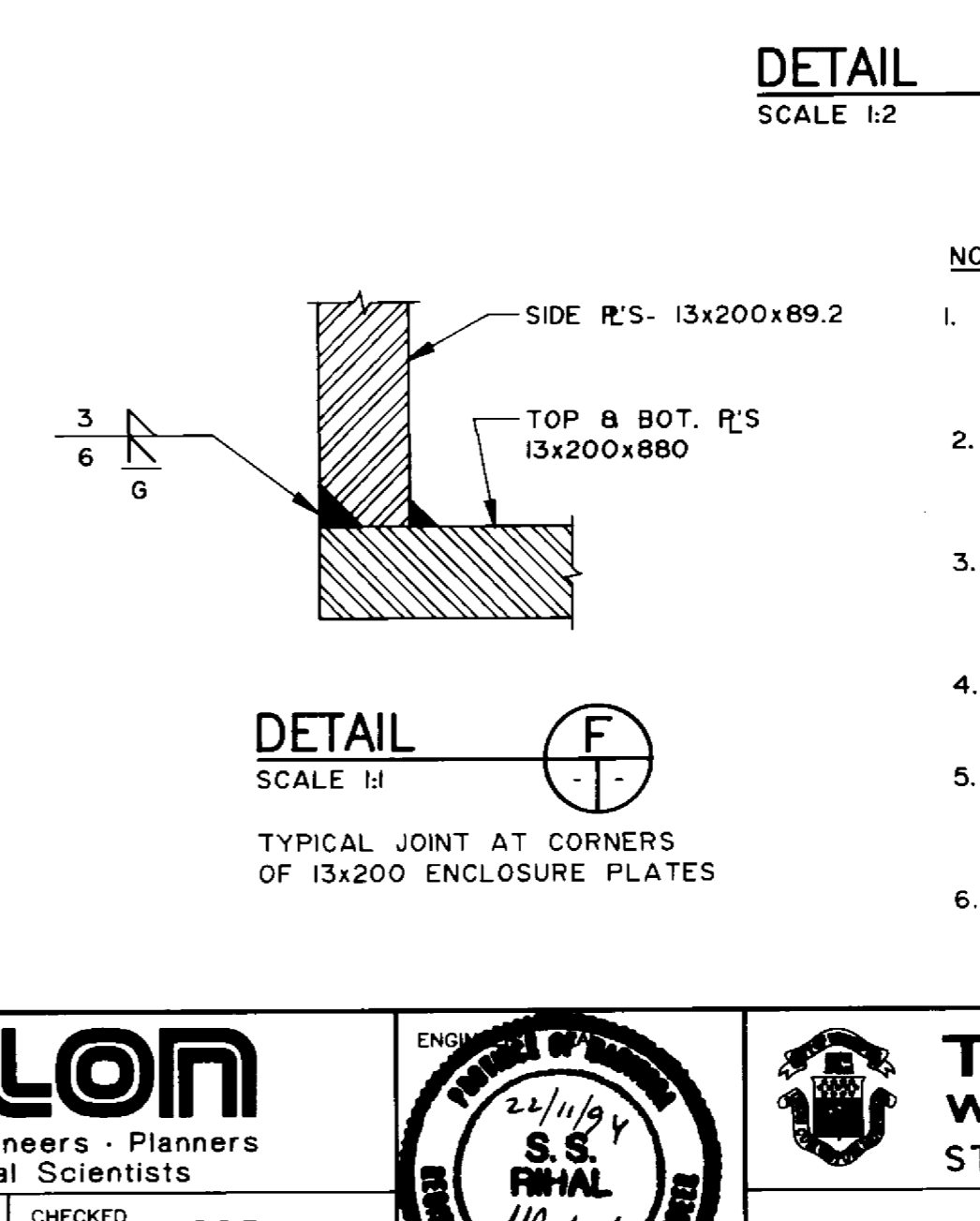
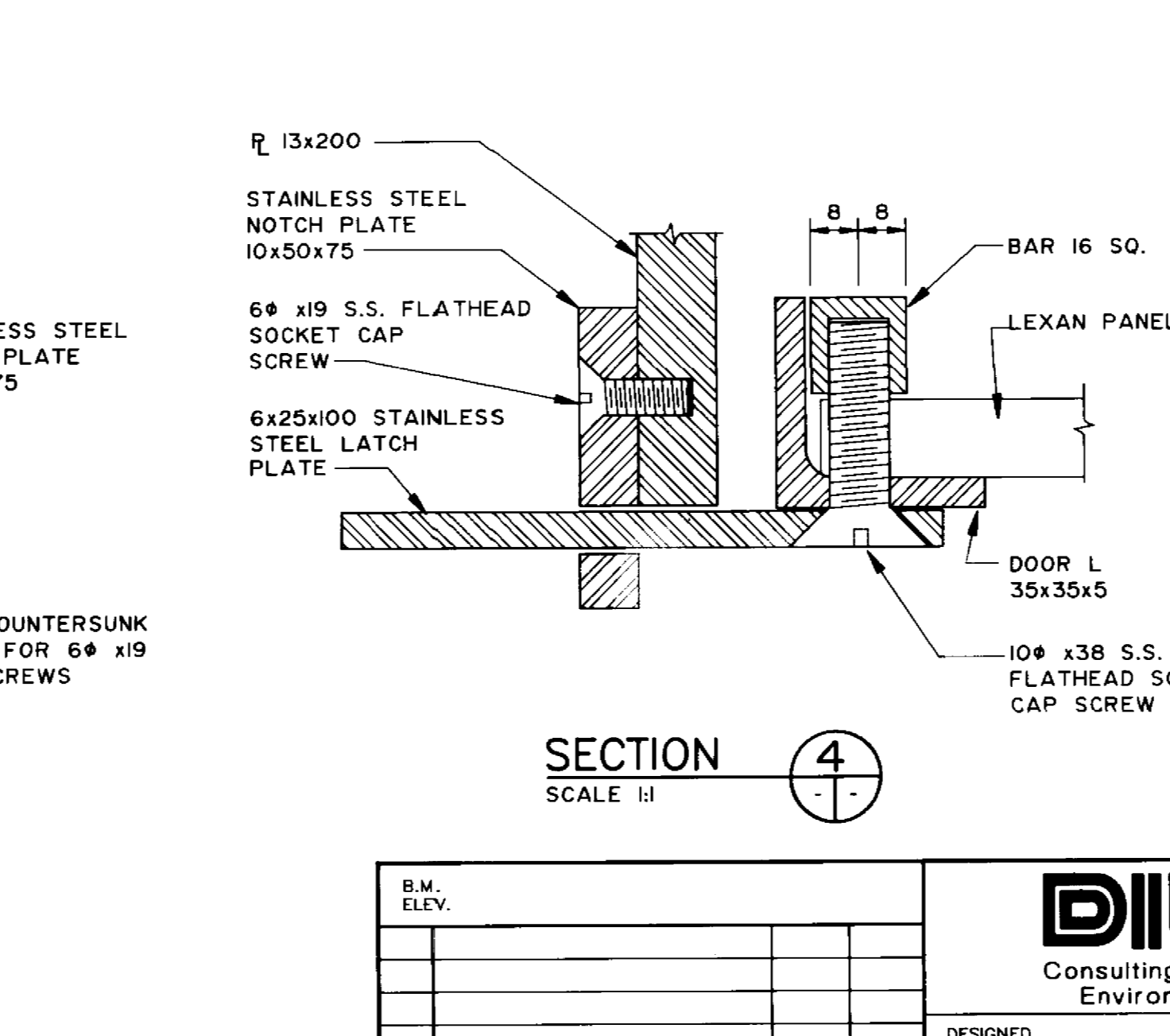
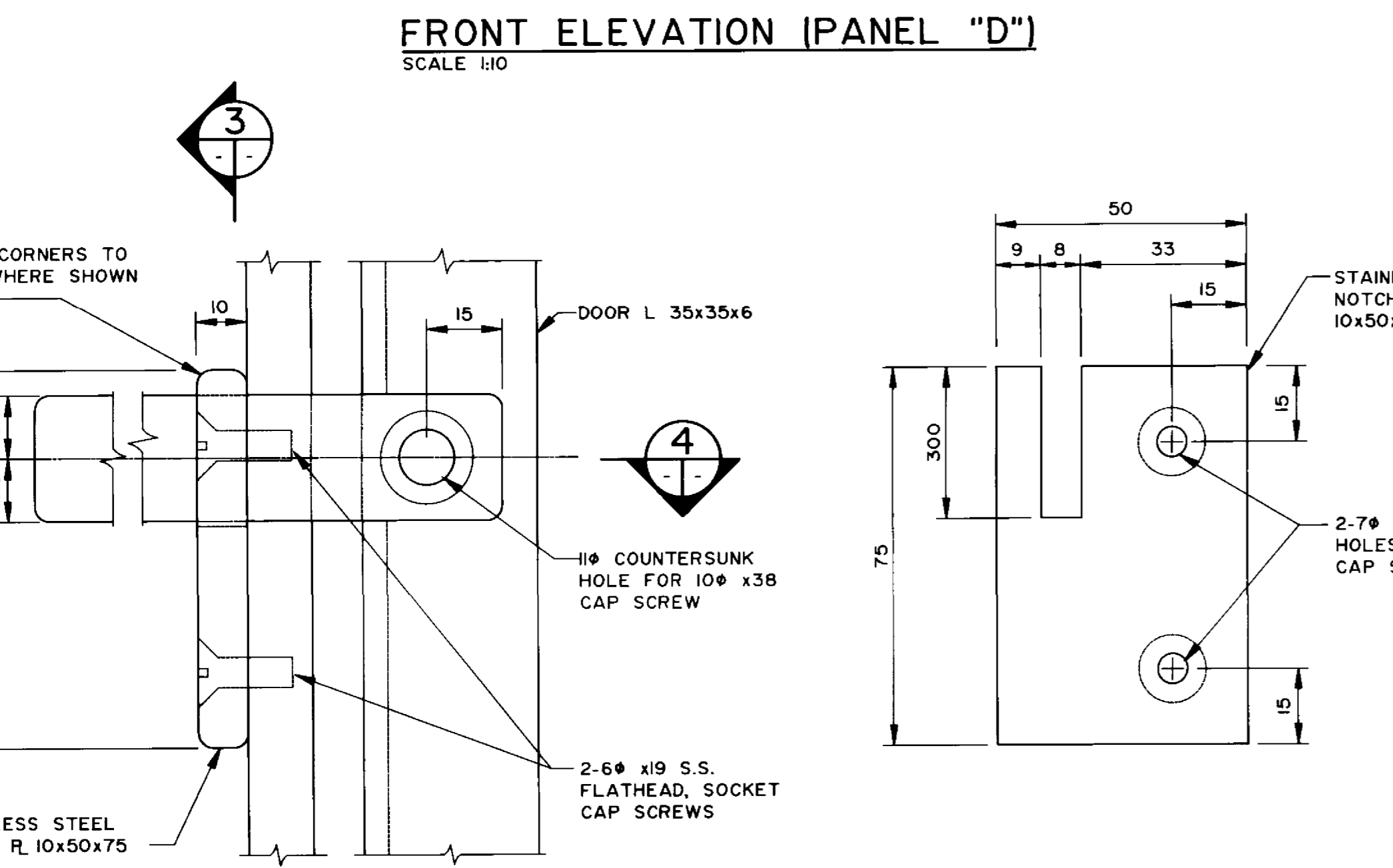
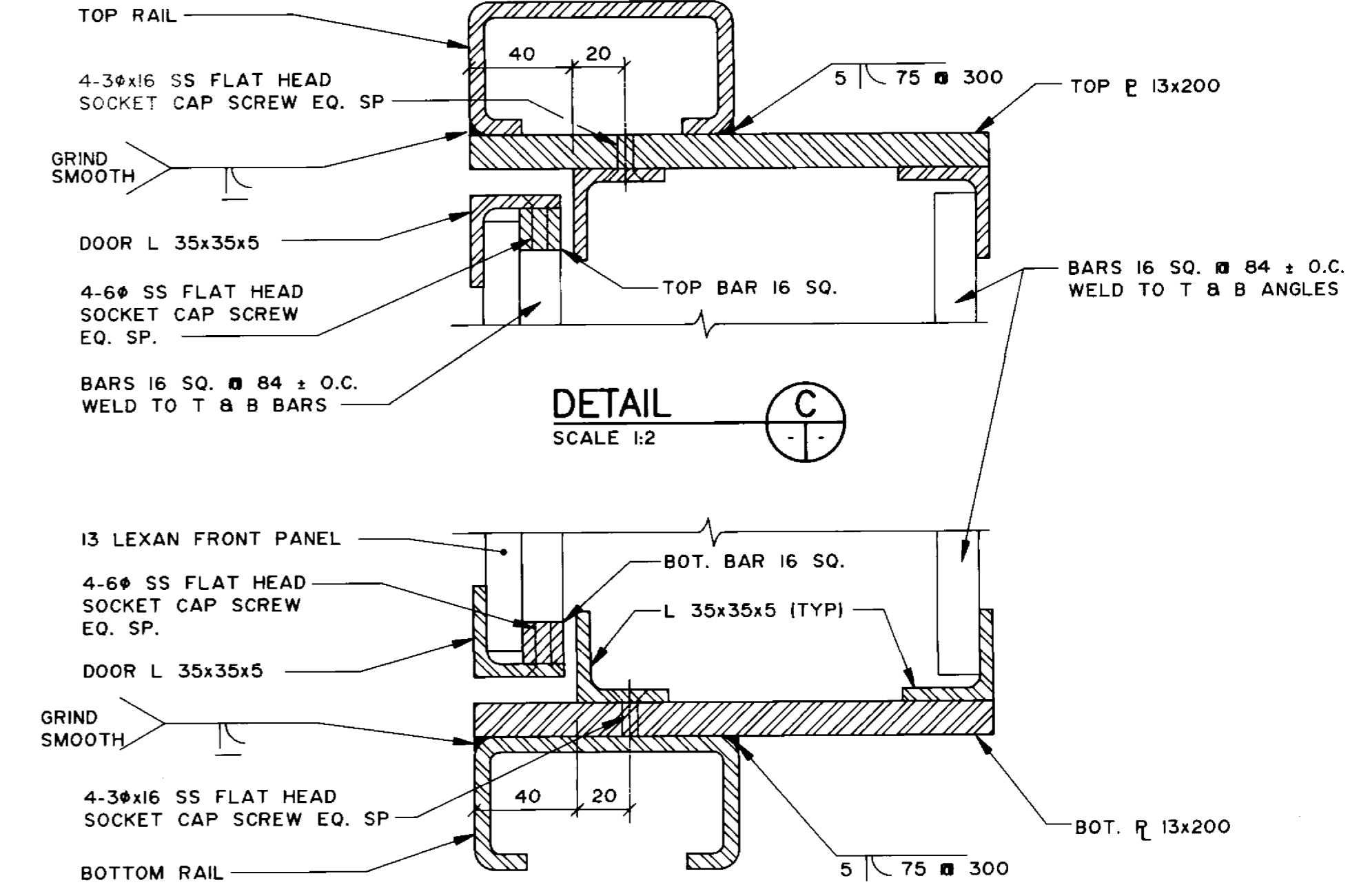
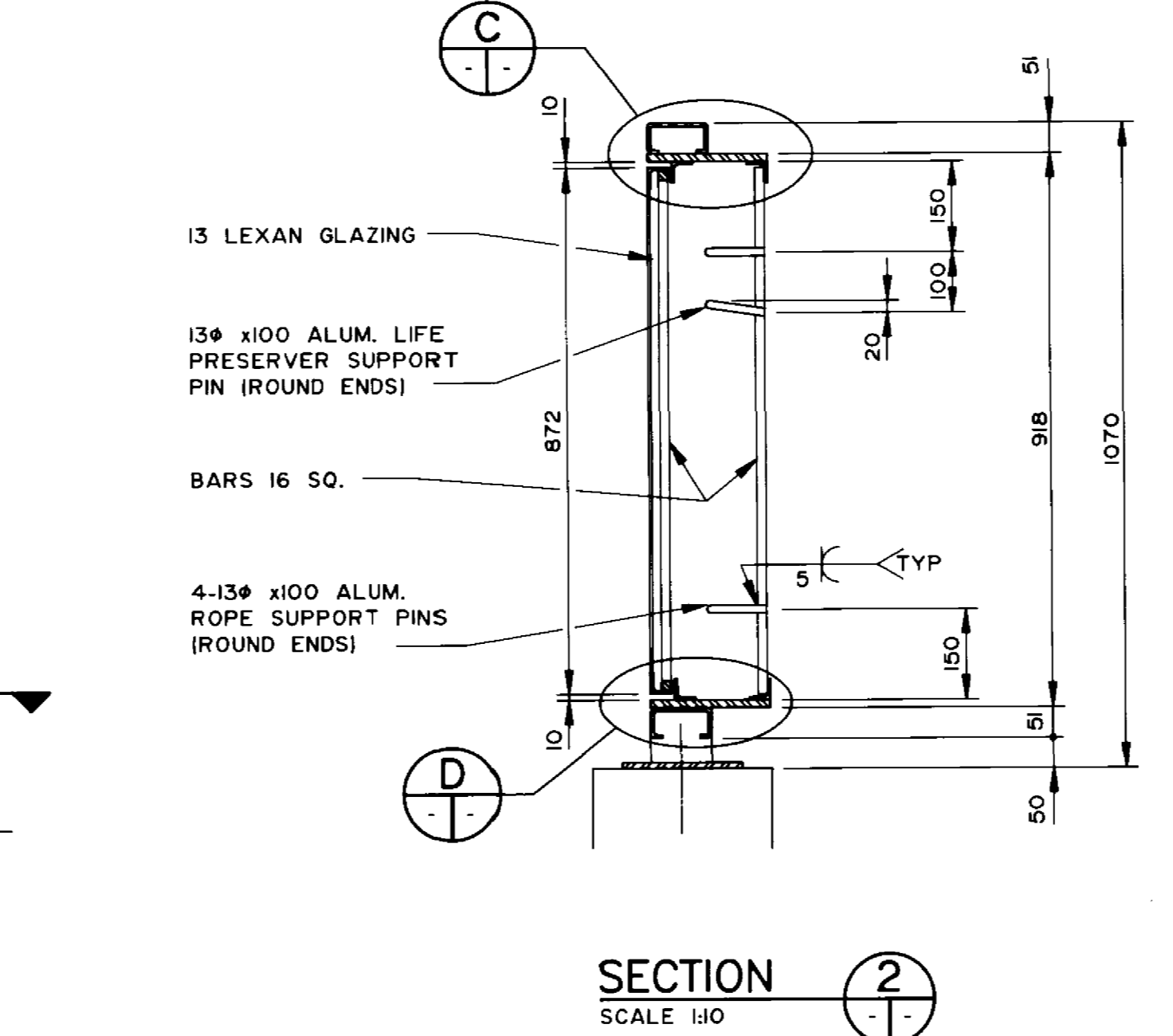
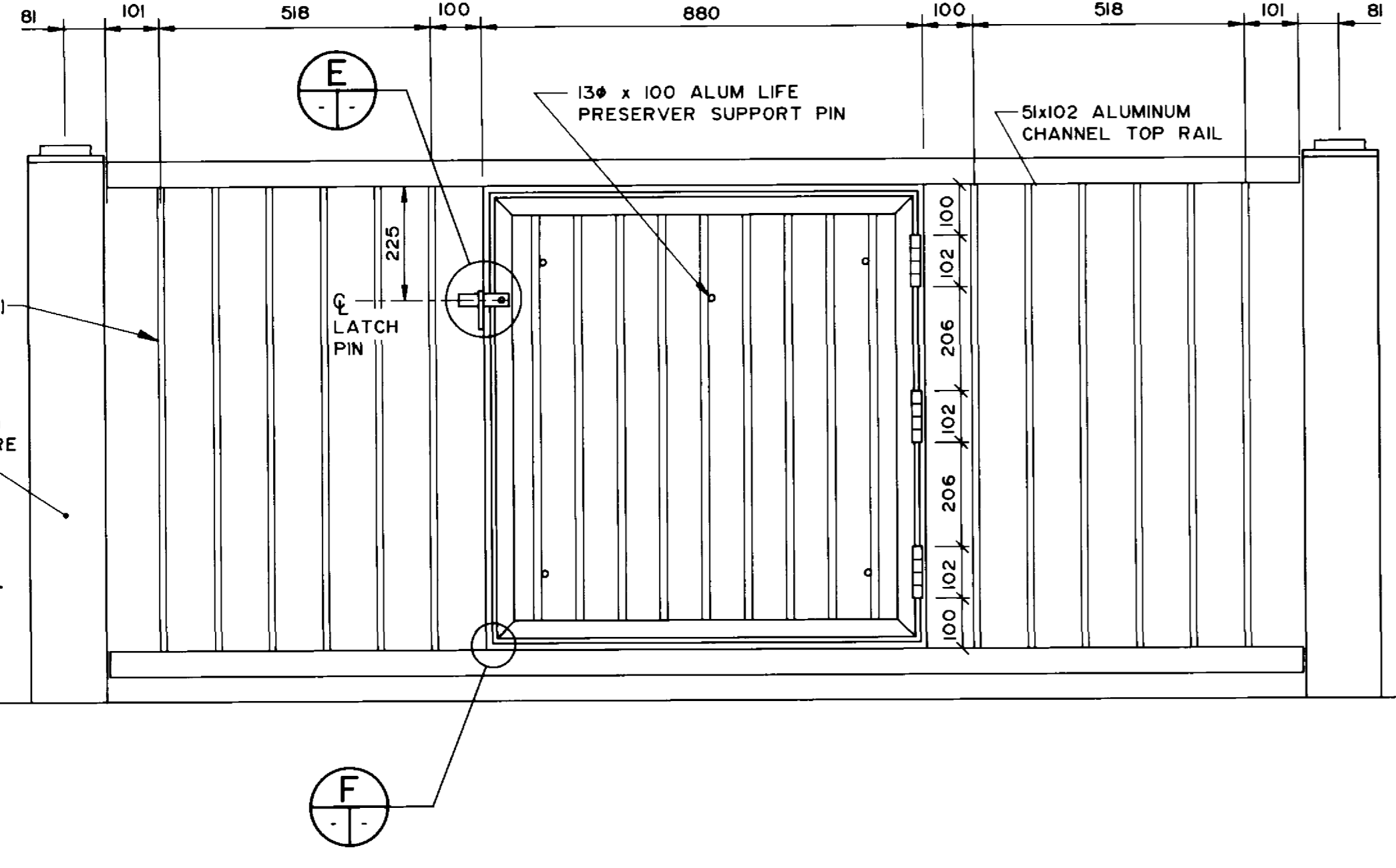
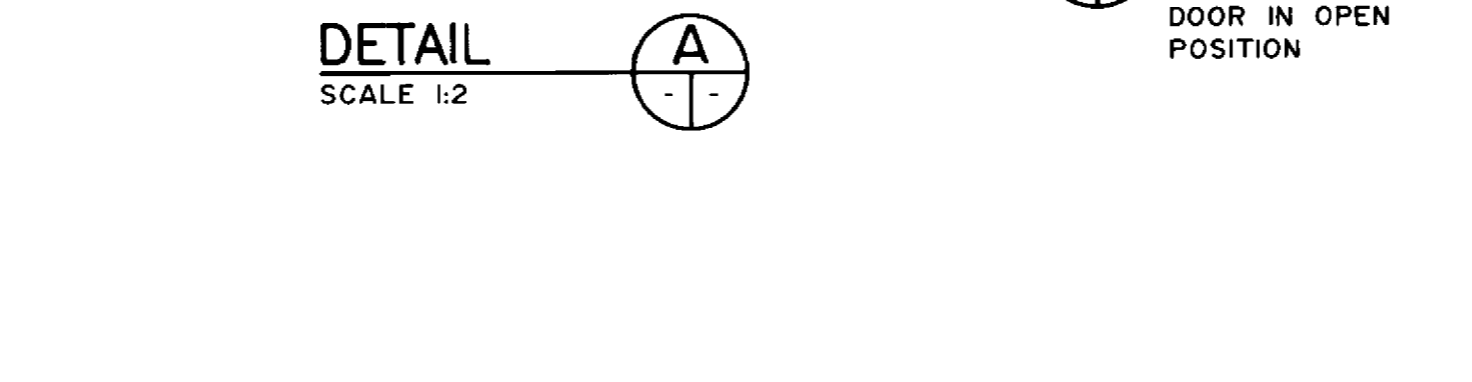
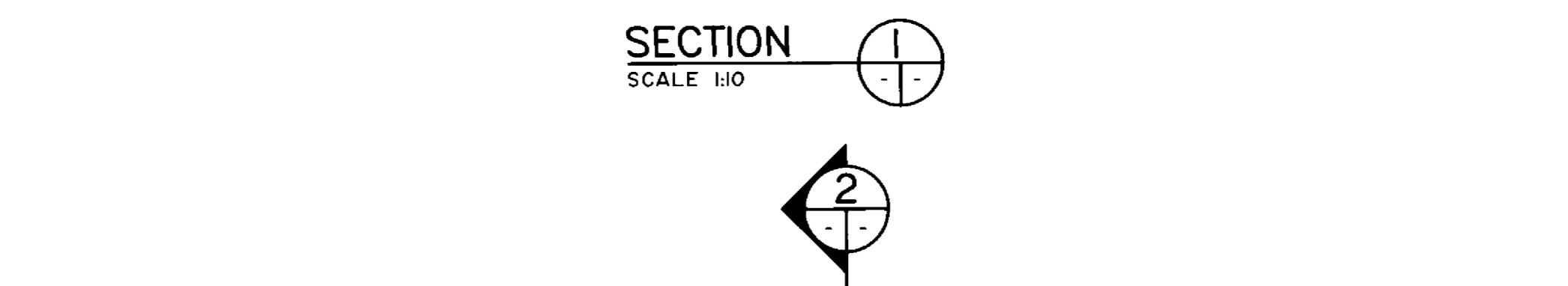
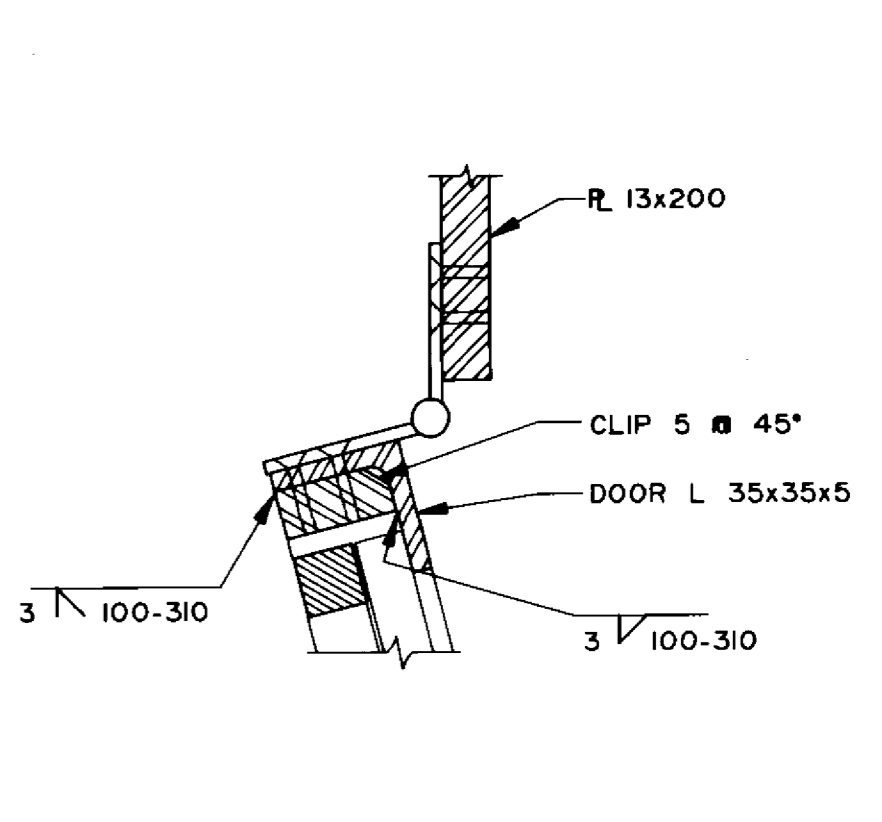
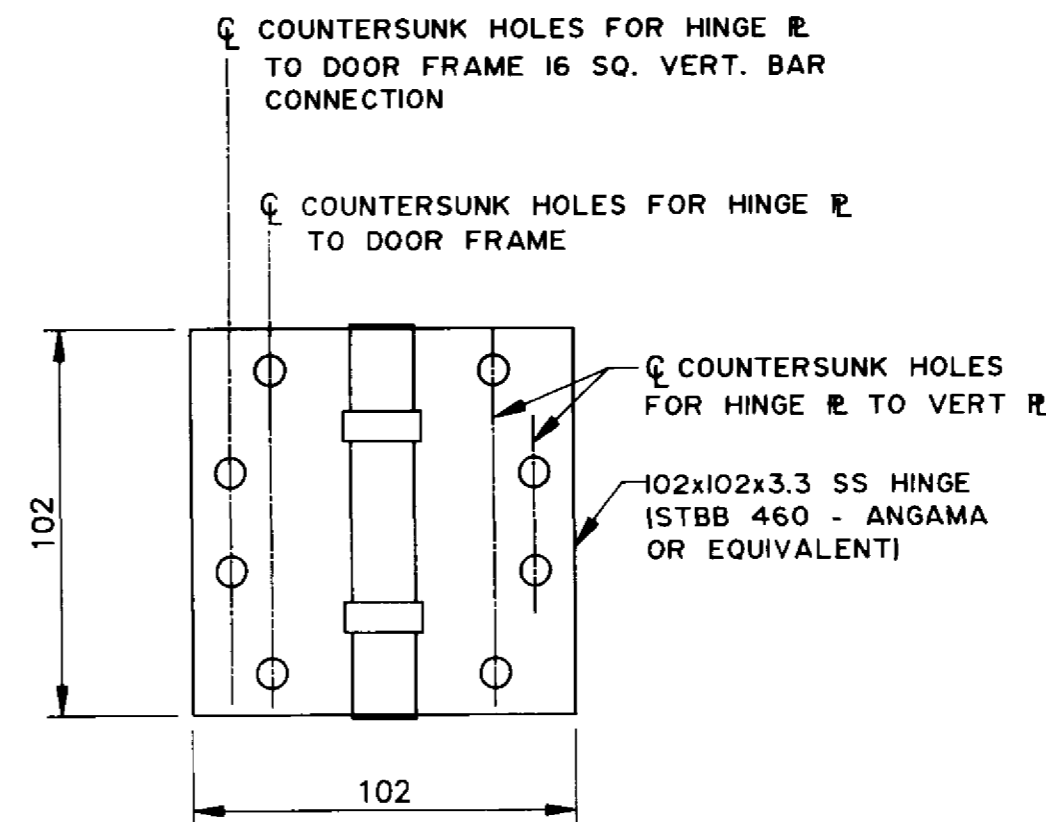
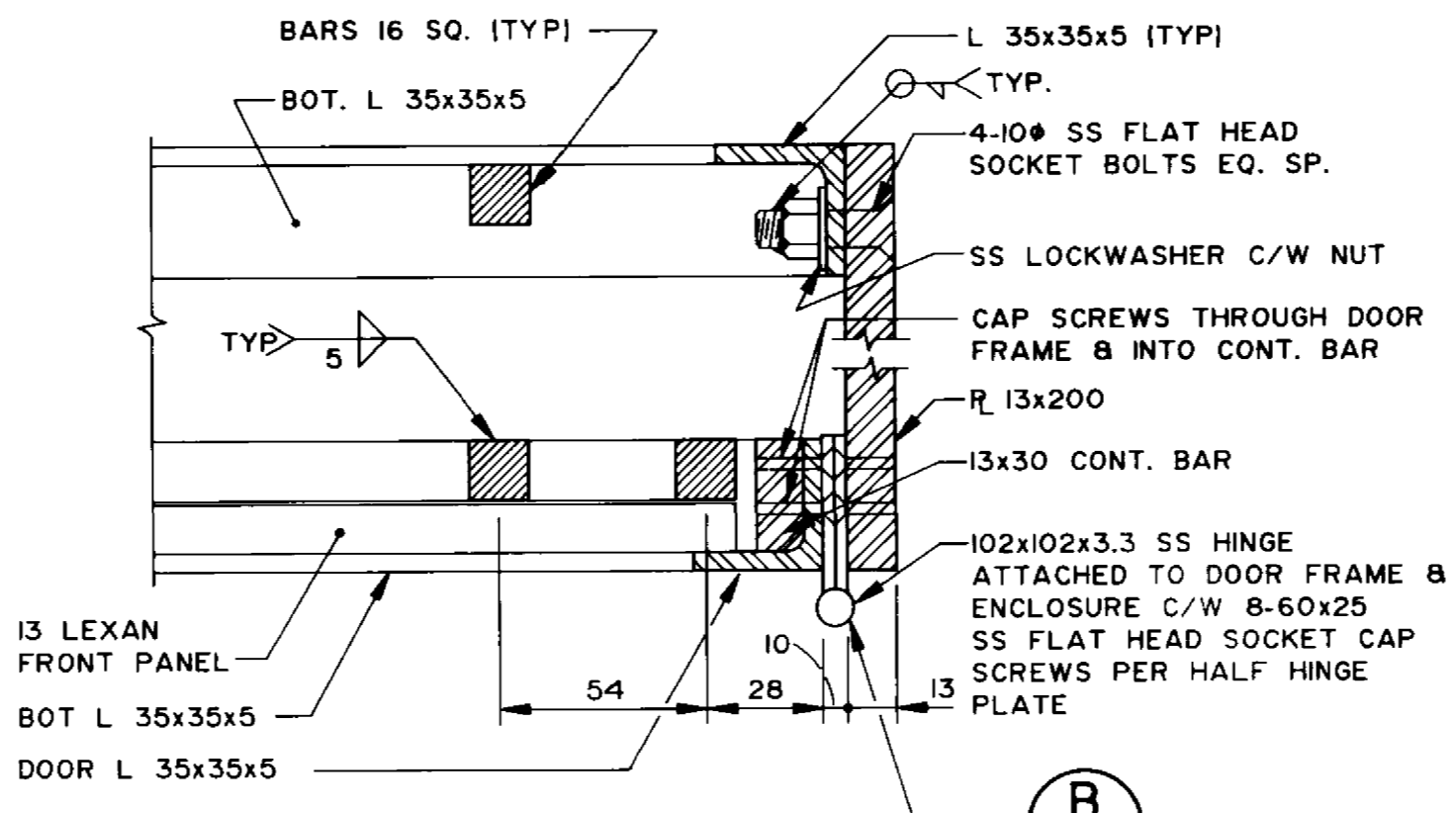
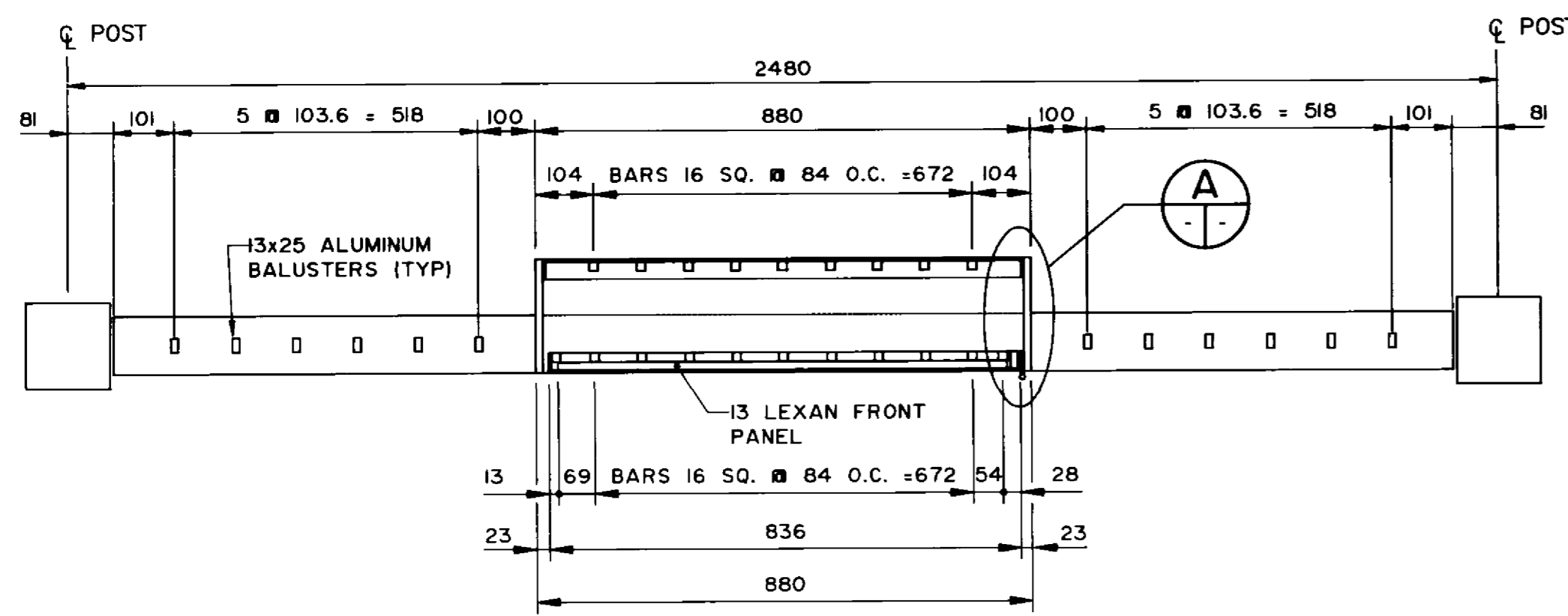
CONSULTANT DRAWING NO. 93-1497-06-45

THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

PEMBINA HIGHWAY
SOUTH CITY LIMIT TO RUE DES TRAPPISTES
PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

ALUMINUM PEDESTRIAN
HANDRAIL DETAILS

CITY DRAWING NUMBER B224-95-45
SHEET OF
P3072-A-45



RECORD DRAWING
APPROVED BY: *[Signature]* DATE: 10/10/94

- NOTES:
- ALUMINUM ALLOY EXTRUDED BAR AND SHAPE SHALL CONFORM TO THE REQUIREMENTS OF ASTM B221M-83 ALLOY 6061-T6 OR ALLOY 6351-T6.
 - ALUMINUM ALLOY SHEET AND PLATE SHALL CONFORM TO THE REQUIREMENTS OF ASTM B209M-83 ALLOY 6061-T6 OR ALLOY 6351-T6.
 - ALUMINUM FILLER ALLOYS FOR WELDED CONSTRUCTION SHALL BE ONE OF THE FOLLOWING: ER4043, ER5183, ER5356, ER5554, ER5556, AND ER5654.
 - DRILL AND TAP HOLES FOR STAINLESS STEEL FLAT HEAD SOCKET CAP SCREWS.
 - INSTALL STAINLESS STEEL CAP SCREWS THROUGH ENTIRE THICKNESS OF ADJOINING MEMBER, THEN CUT AND GRIND FLUSH.
 - ALL ALUMINUM PARTS SHALL BE ANODIZED (BLACK) AS PER SPECIFICATIONS, AFTER FABRICATION.

B-6021-46

NO.	REVISIONS	DATE	BY

DILLON
Consulting Engineers - Planners
Environmental Scientists

DESIGNED BY: W.P.S. CHECKED BY: S.S.R.
DRAWN BY: S.K.B. AUTHORIZED BY: *[Signature]*
HOR. SCALE: AS NOTED DATE: 10/10/94
VERTICAL: DATE: 10/10/94

NOV 1994

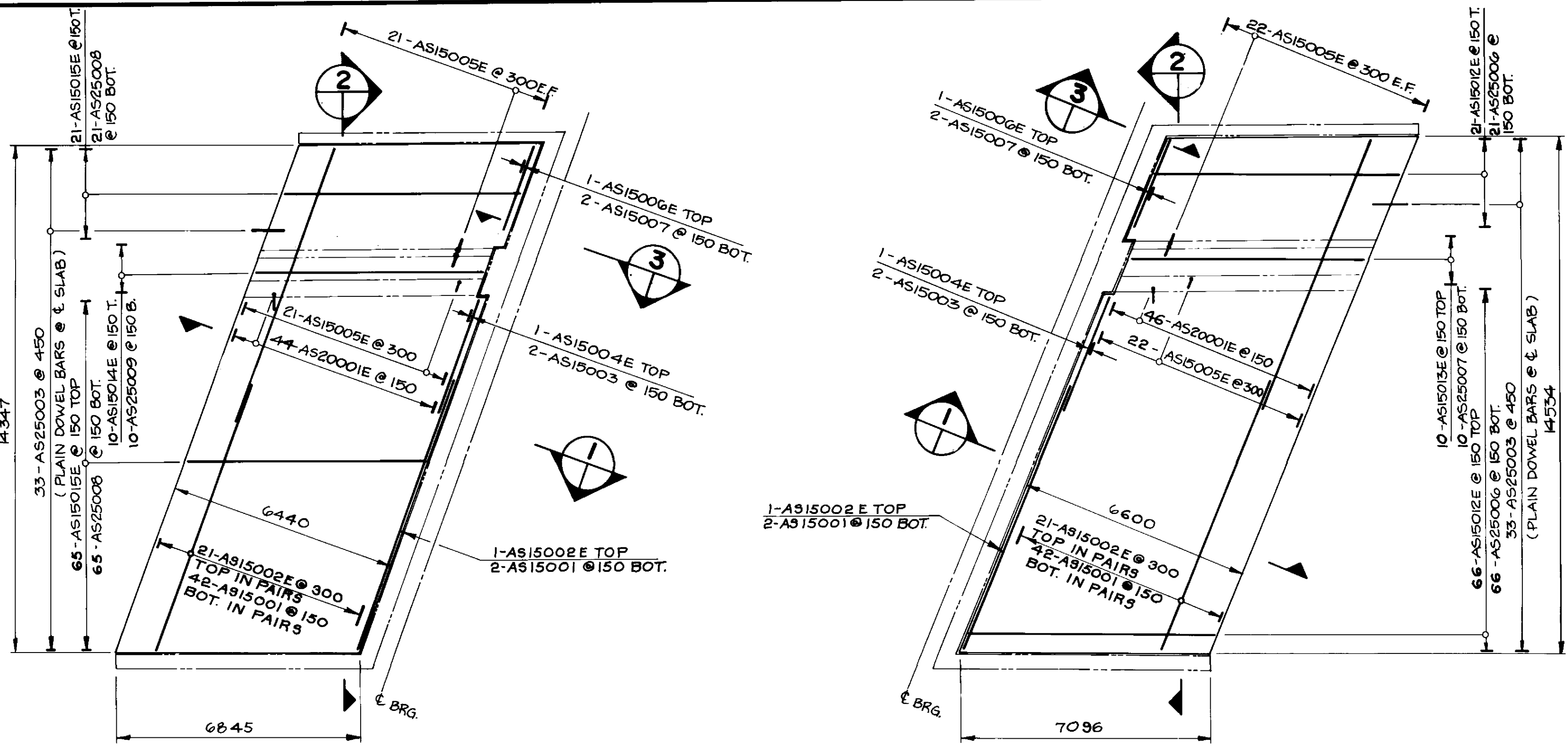
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THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

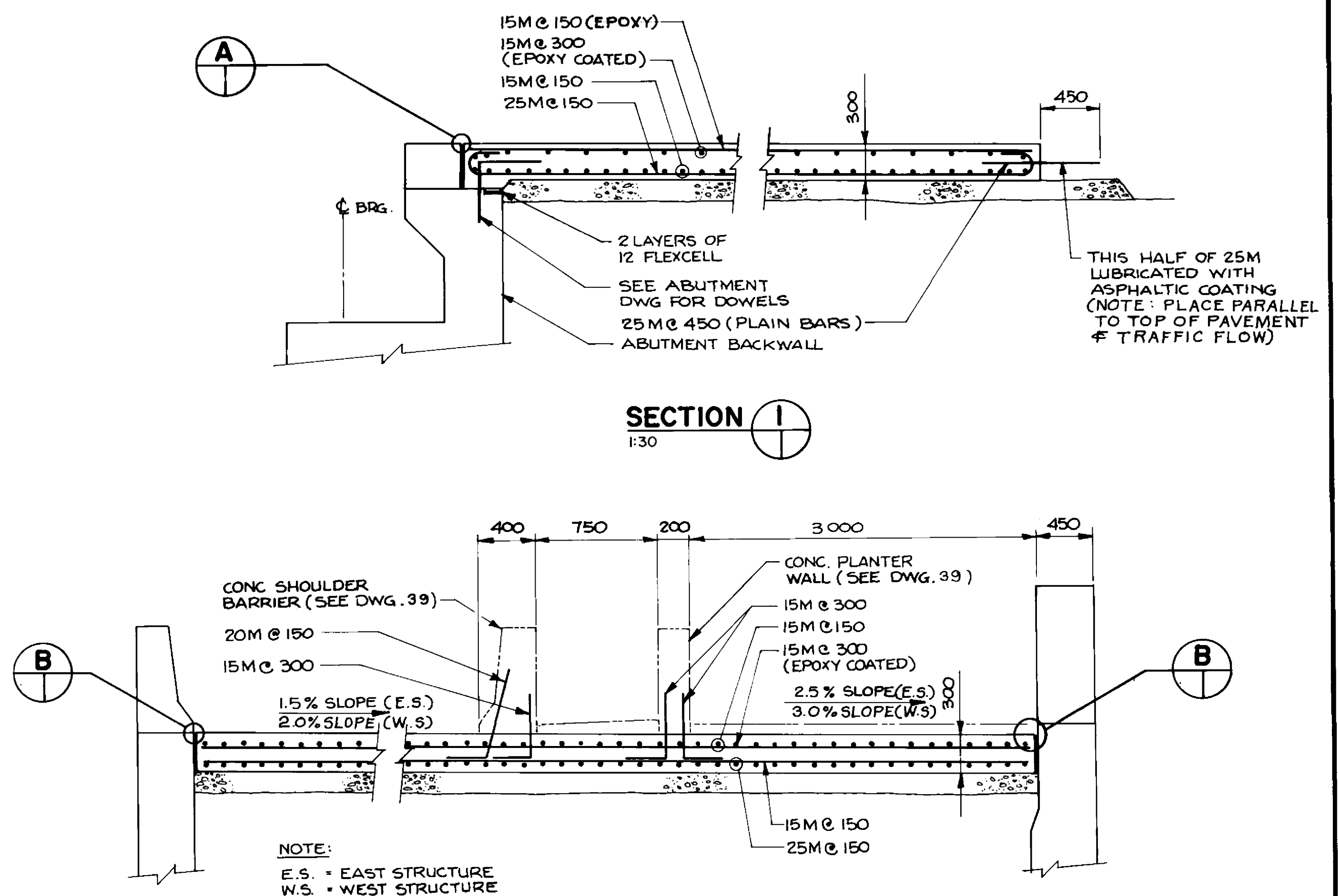
PEMBINA HIGHWAY
SOUTH CITY LIMIT TO RUE DES TRAPPISTES
PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

ALUMINUM PEDESTRIAN
HANDRAIL LIFE PRESERVER ENCLOSURE

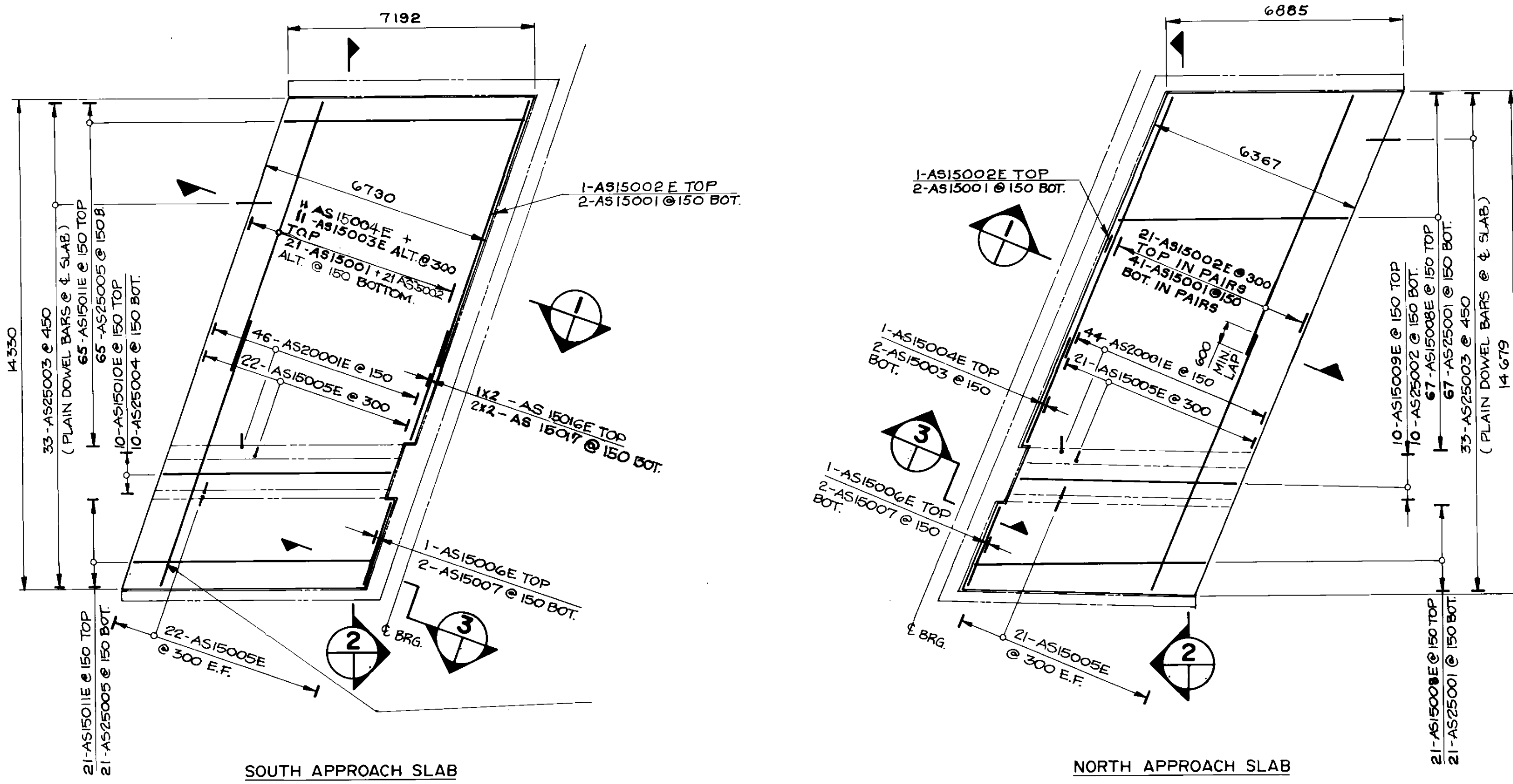
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SHEET OF
P3072-A-46



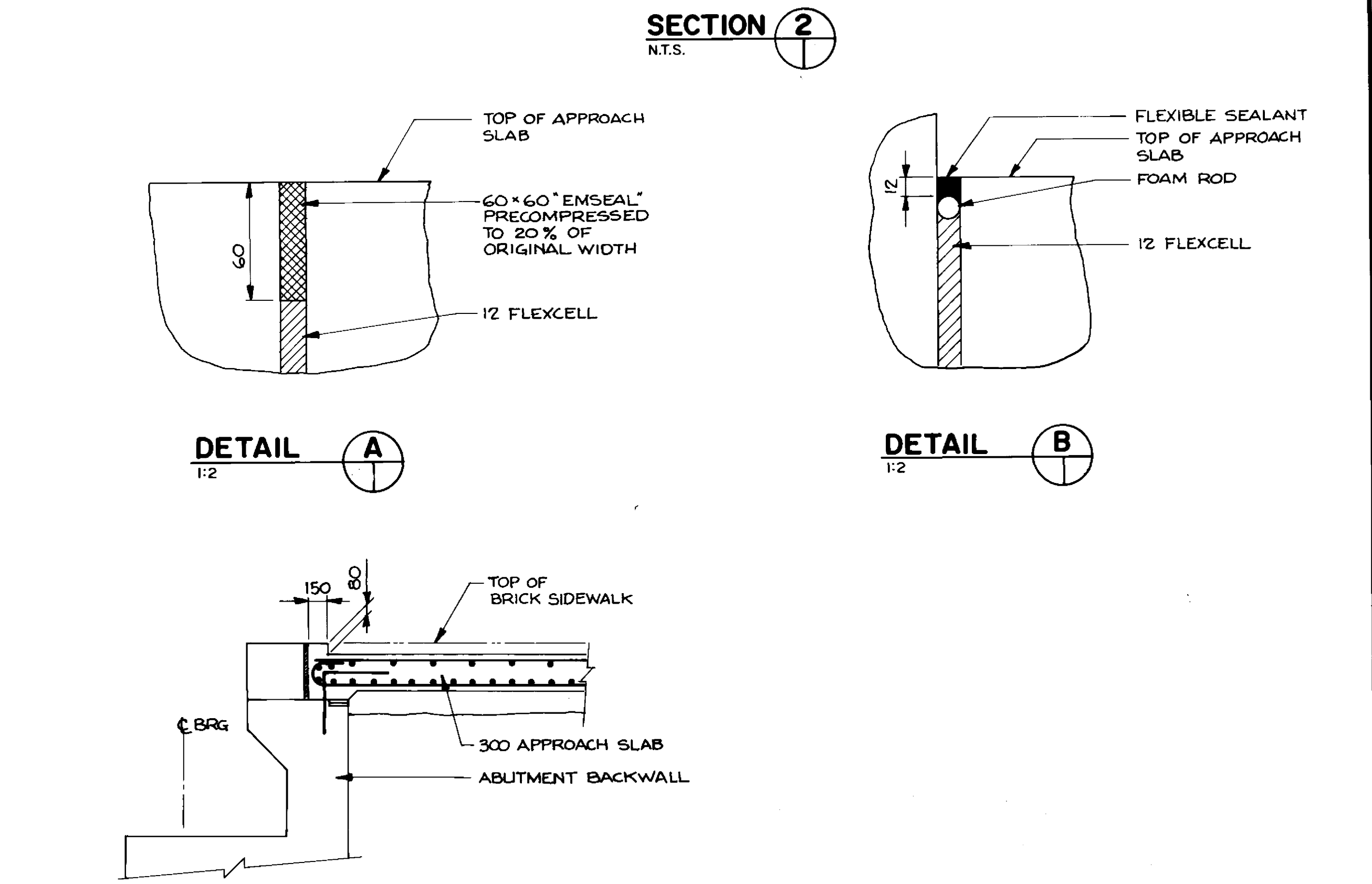
WEST STRUCTURE APPROACH SLABS
1:100



SECTION 1
1:30



EAST STRUCTURE APPROACH SLABS
1:100



SECTION 2
N.T.S.

DETAIL A
1:2

DETAIL B
1:2

SECTION 3
1:2

RECORD DRAWING
APPROVED BY: *[Signature]* DATE: Dec 18/94

B-6021-47

LOCATION APPROVED UNDERGROUND STRUCTURES	B.M. ELEV.
N/A	
SUPV. U/G STRUCTURES DATE COMMITTEE	
NOTE: LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.	
NO. REVISIONS	DATE BY

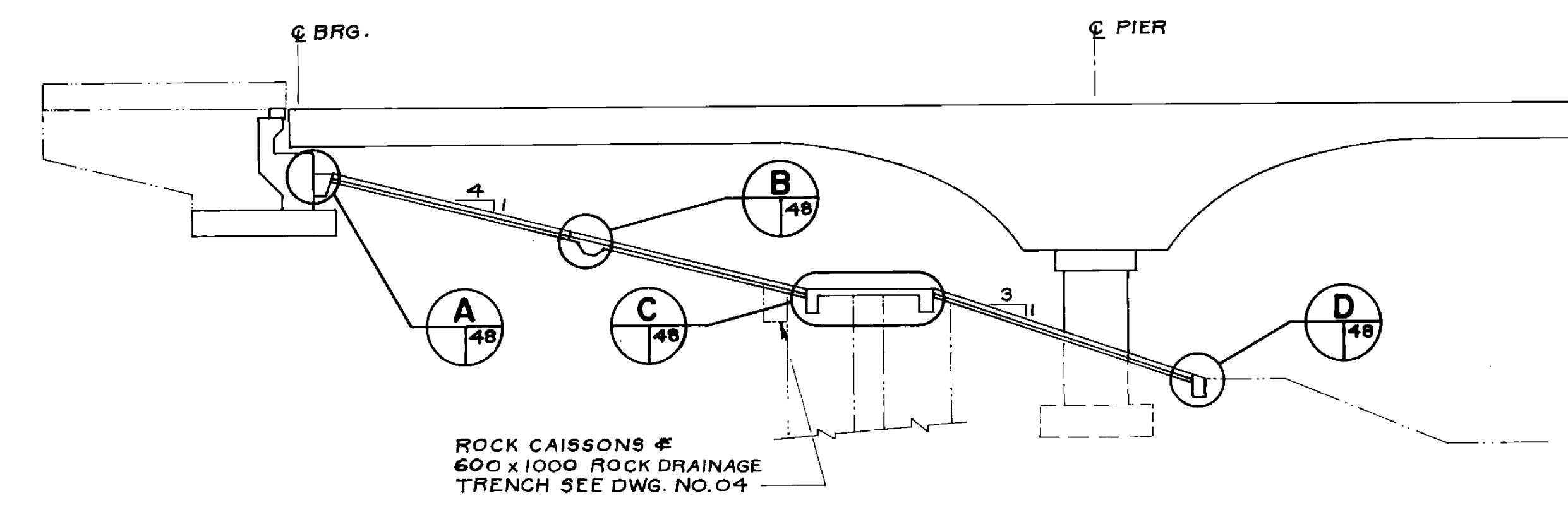
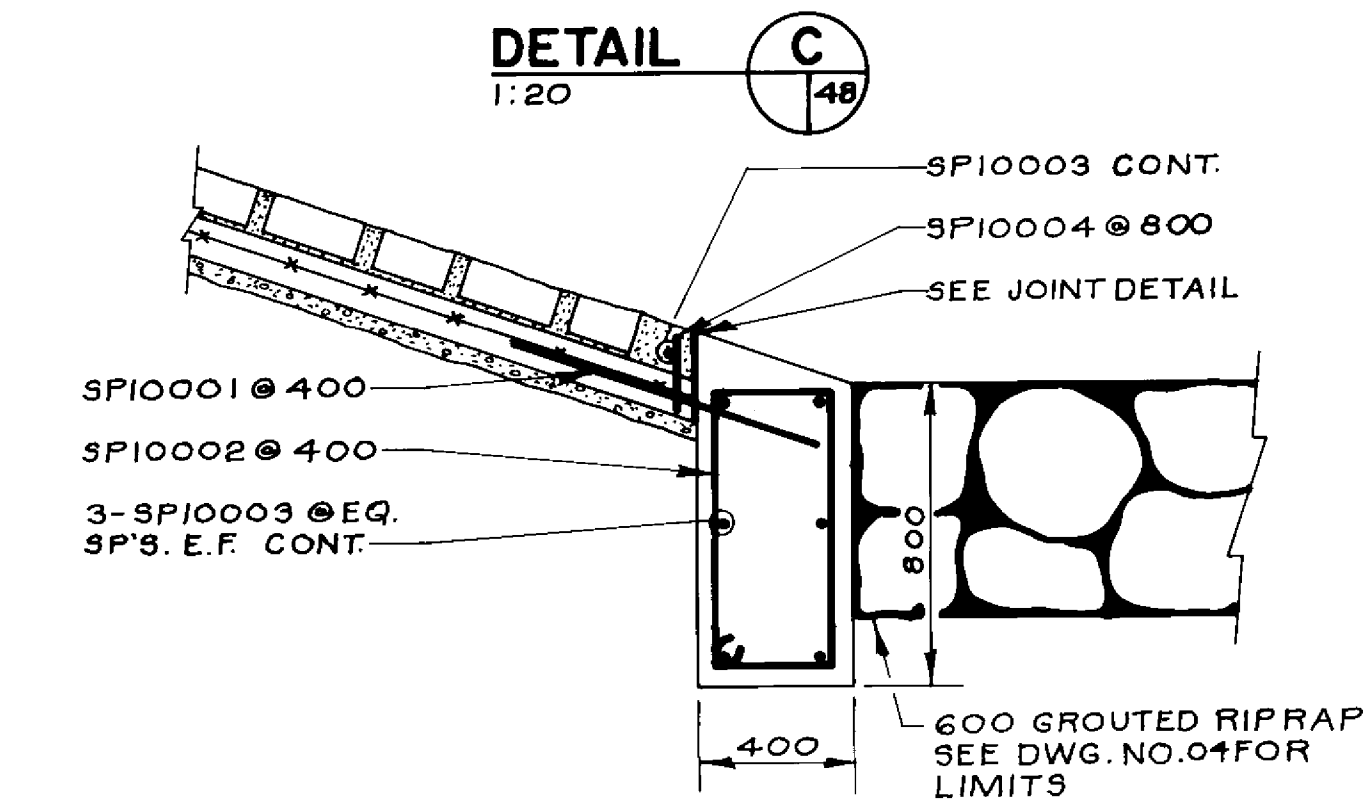
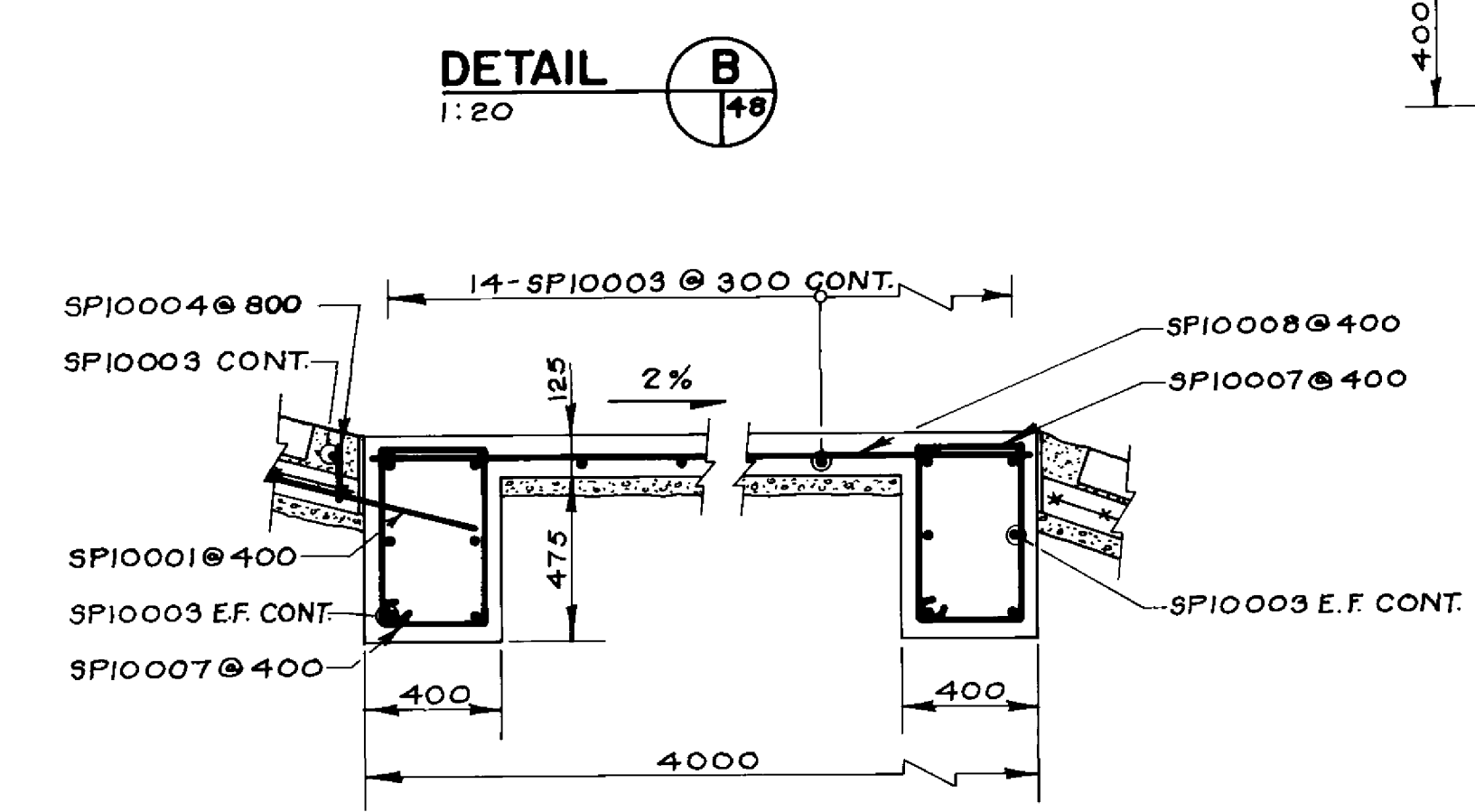
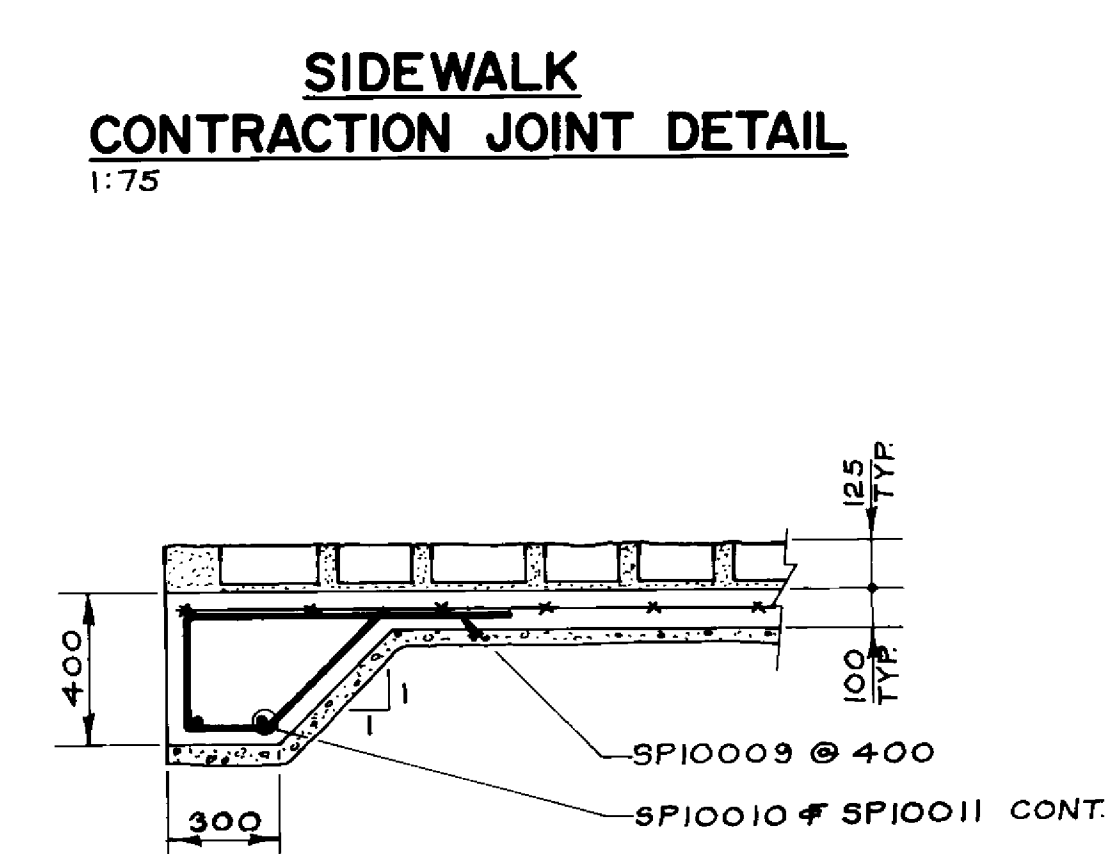
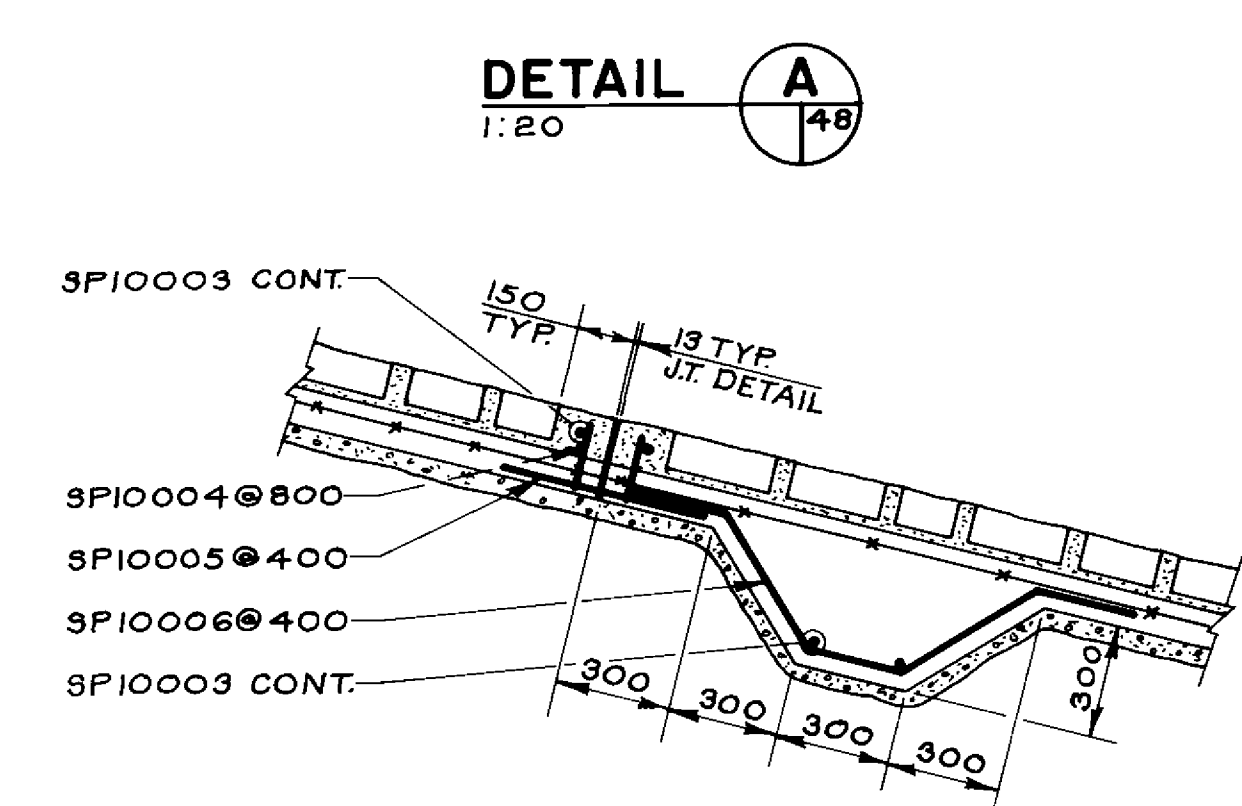
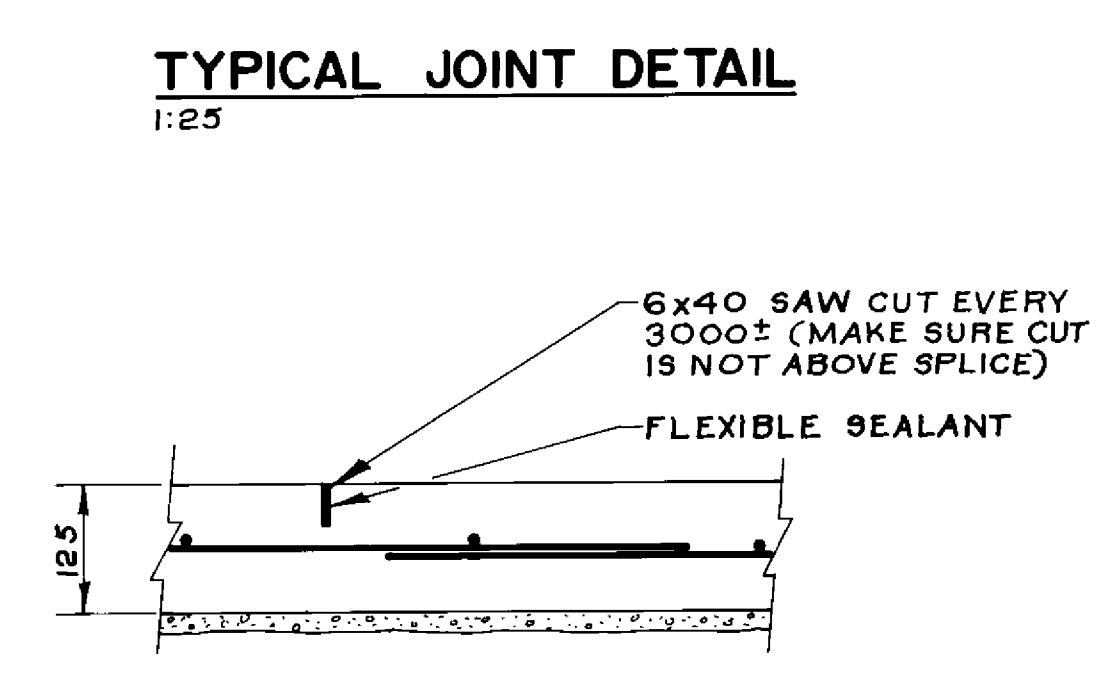
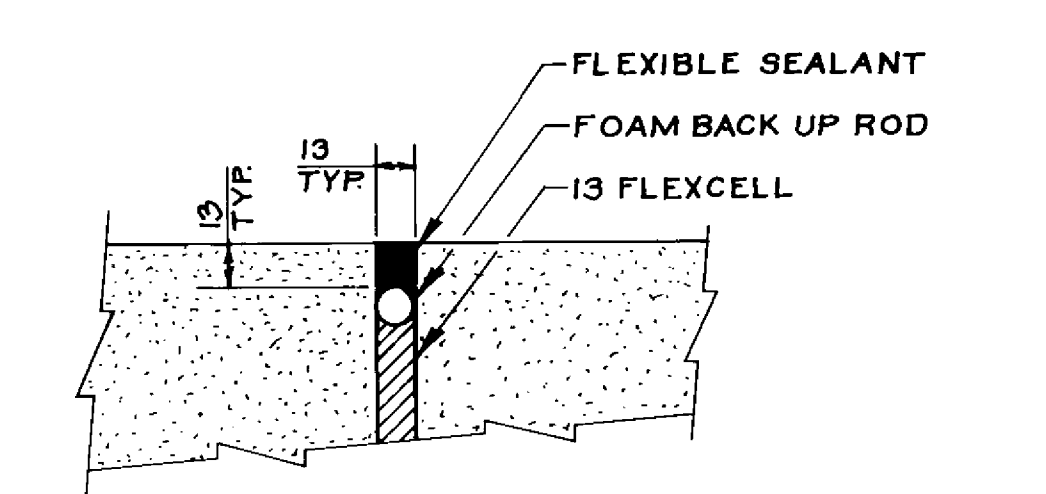
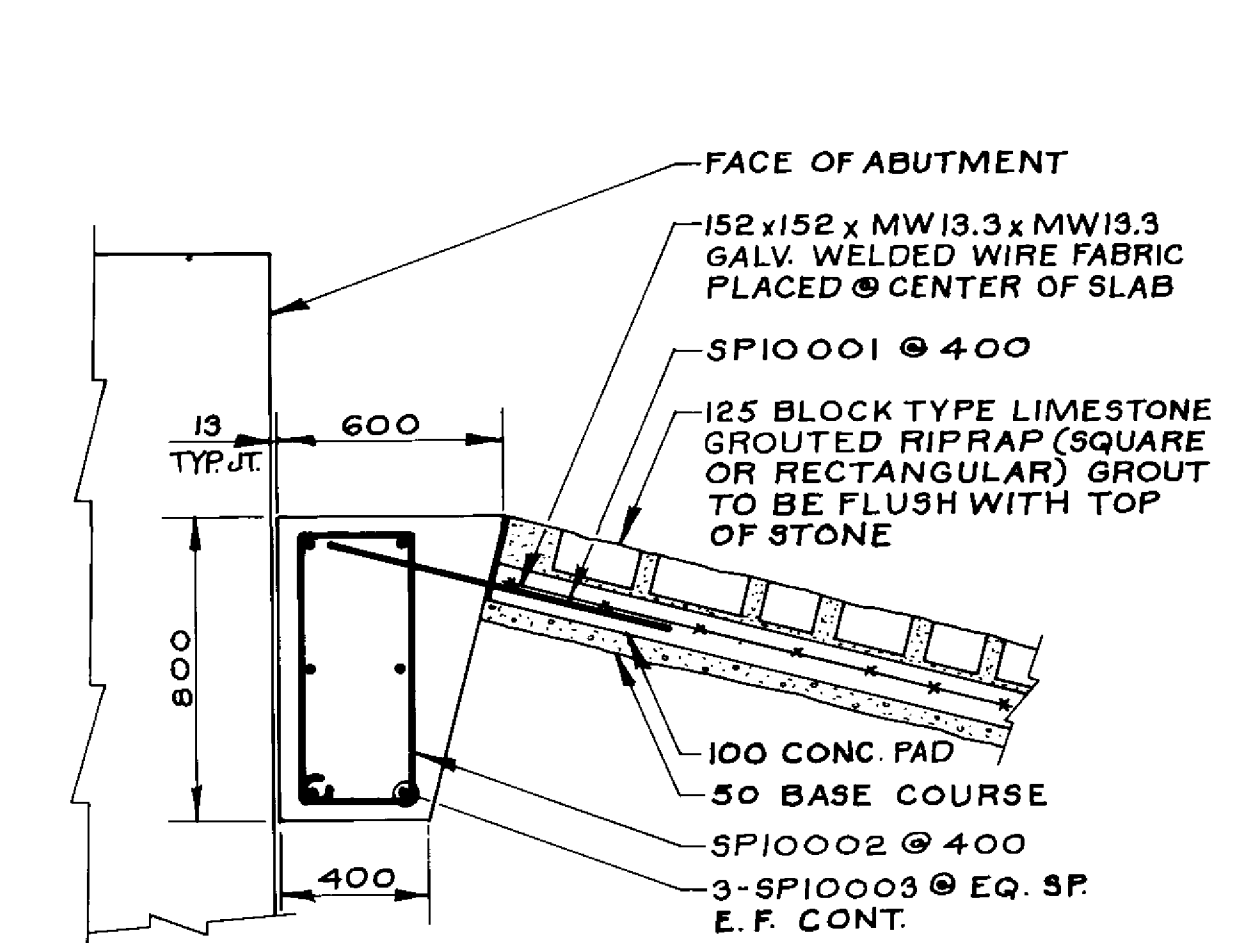
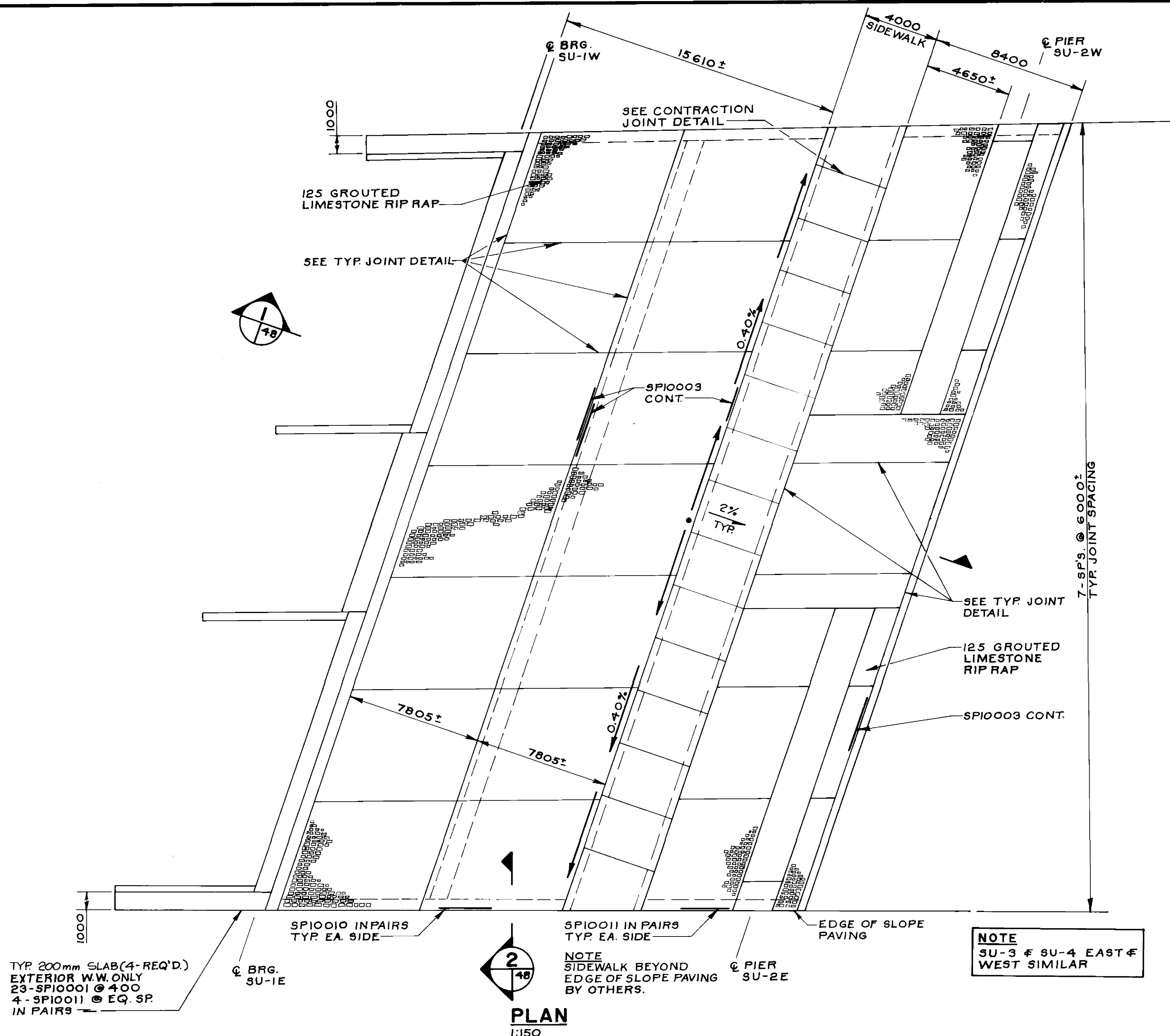
DILLON Consulting Engineers • Planners Environmental Scientists	
DESIGNED BY: M.C.	CHECKED BY: S.S.R.
DRAWN BY: D.W.	APPROVED BY: <i>[Signature]</i>
HOR. SCALE: AS SHOWN	DATE: NOV. 1994
VERTICAL SCALE: AS SHOWN	DATE: NOV. 1994

THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

PEMBINA HIGHWAY
SOUTH CITY LIMIT TO RUE DES TRAPPISTES
PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

APPROACH SLABS

CITY DRAWING NUMBER: B224-95-47
SHEET: 1 OF 1
CONSULTANT DRAWING NO.: 93-1497-06-47
DATE: Dec 18/94



RECORD DRAWING
APPROVED BY: *[Signature]* DATE: Dec 10/98

B-6021-48

LOCATION APPROVED UNDERGROUND STRUCTURES
N/A
SUPV. U/G STRUCTURES COMMITTEE DATE
NOTE:
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION

NO.	REVISIONS	DATE	BY

DILLON
Consulting Engineers - Planners
Environmental Scientists

DESIGNED BY: M.C.
DRAWN BY: C.R.B.
HOR. SCALE: AS NOTED
VERTICAL:

CHECKED BY: SSR.
APPROVED BY: *[Signature]*
DATE: 11/10/98
ACCEPTED BY: *[Signature]*
DATE: 11/10/98

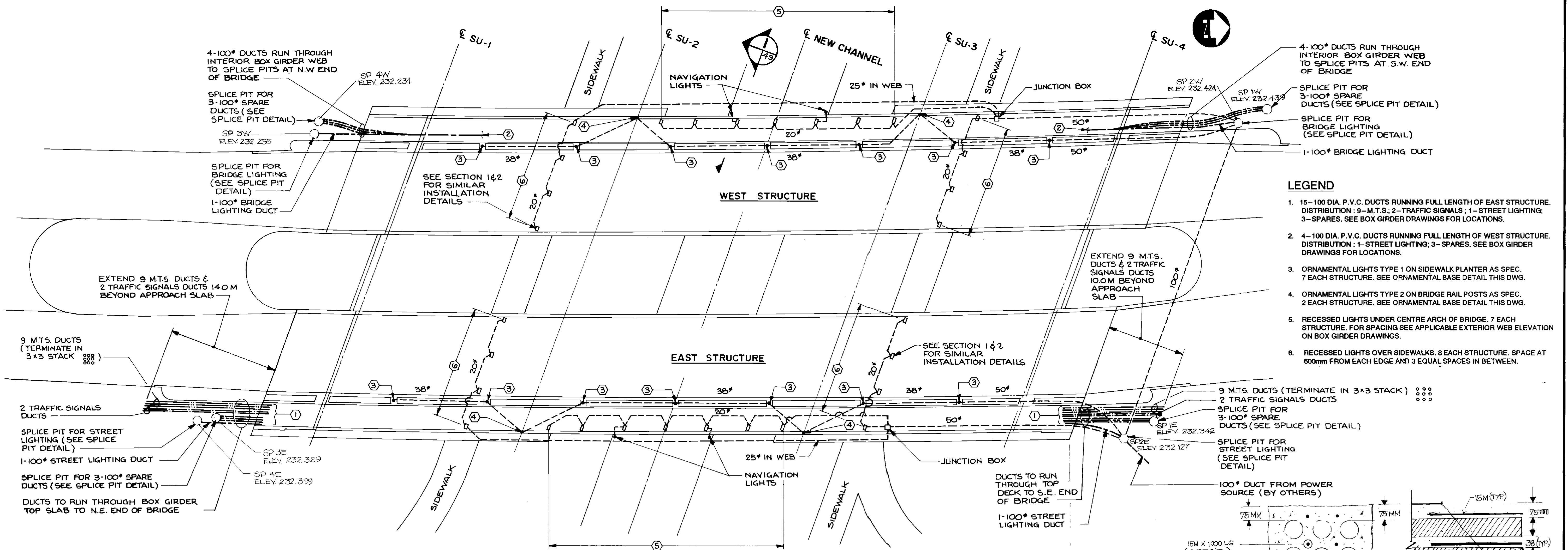
CONSULTANT DRAWING NO.
93-1497-06-48

THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

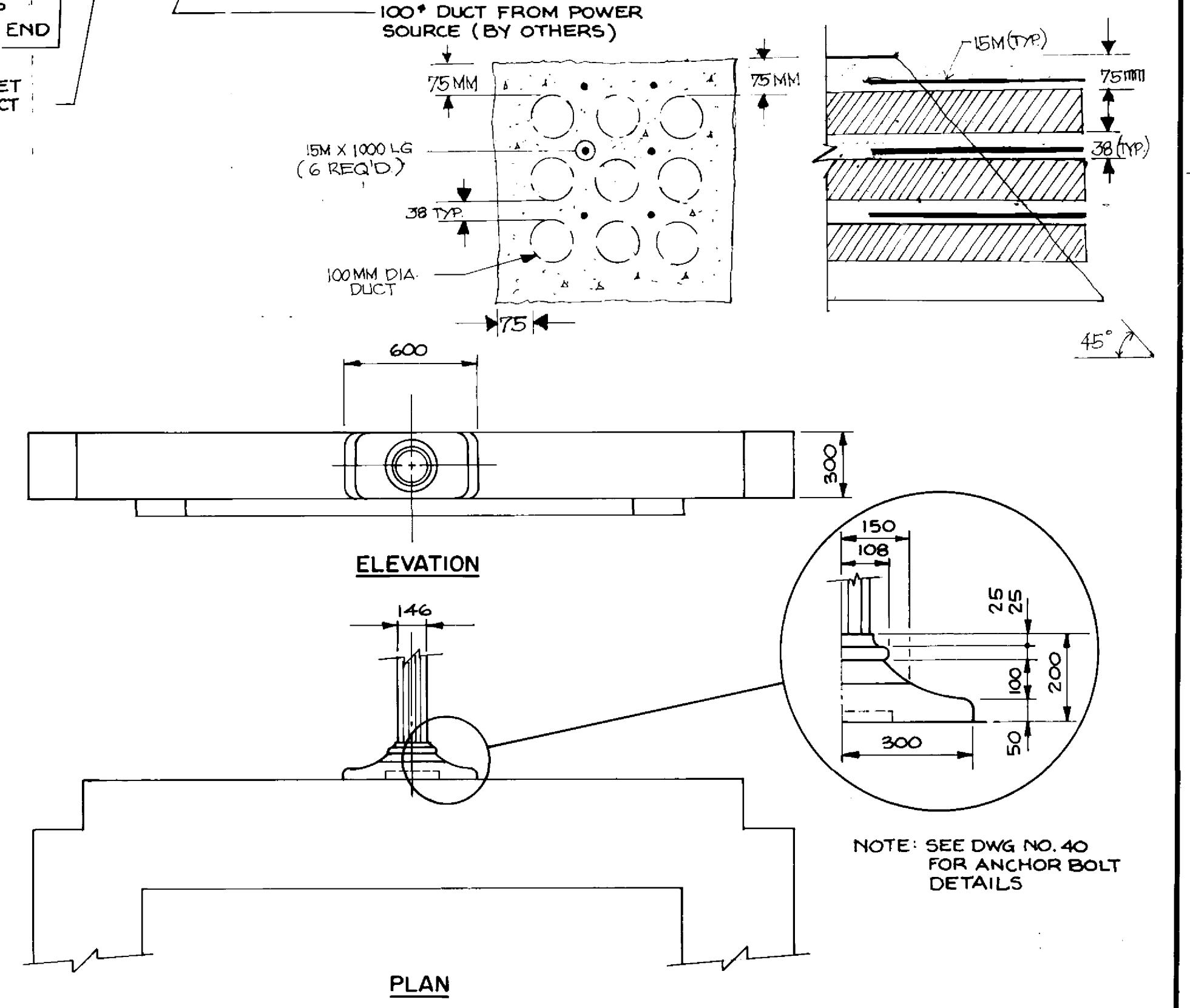
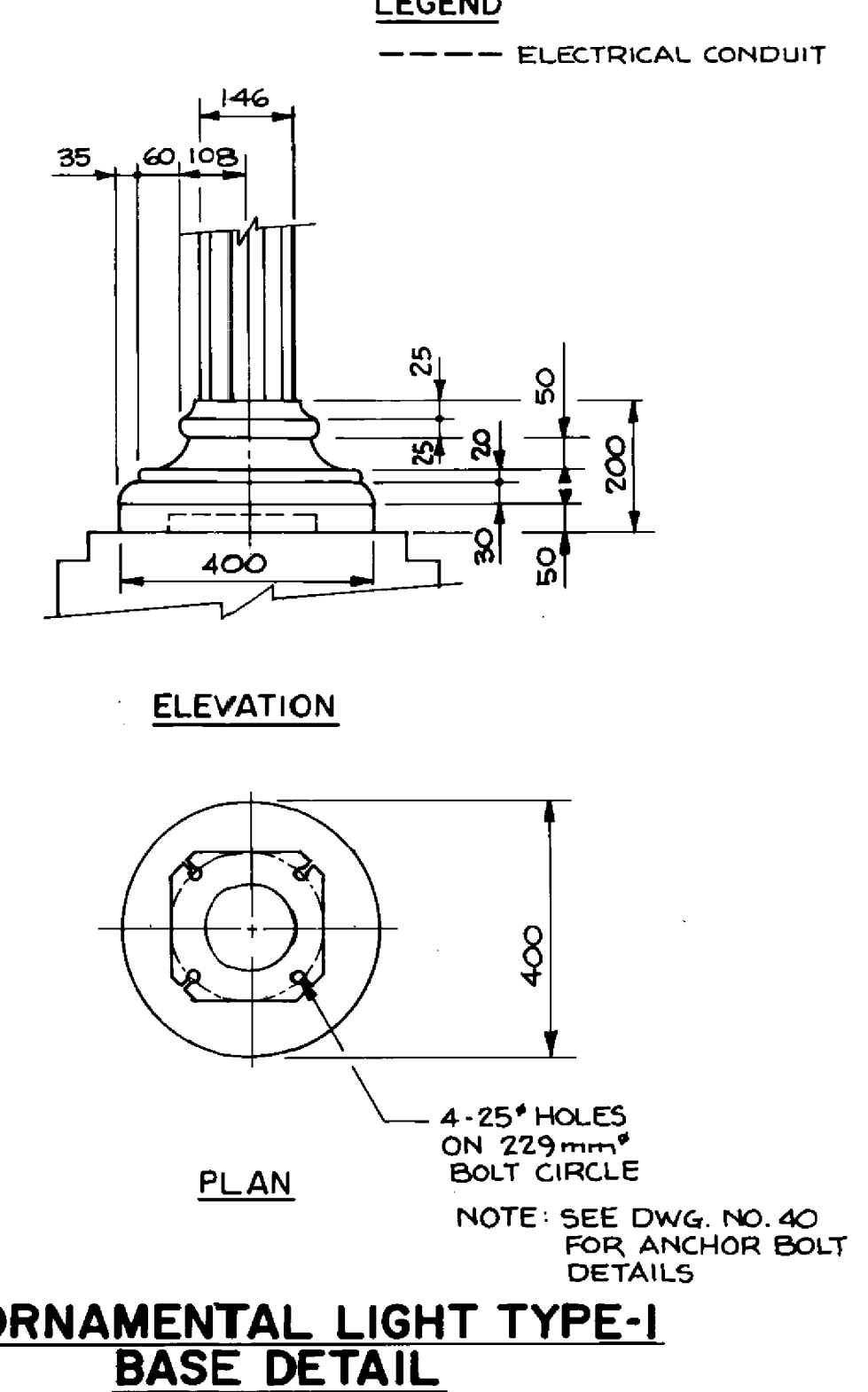
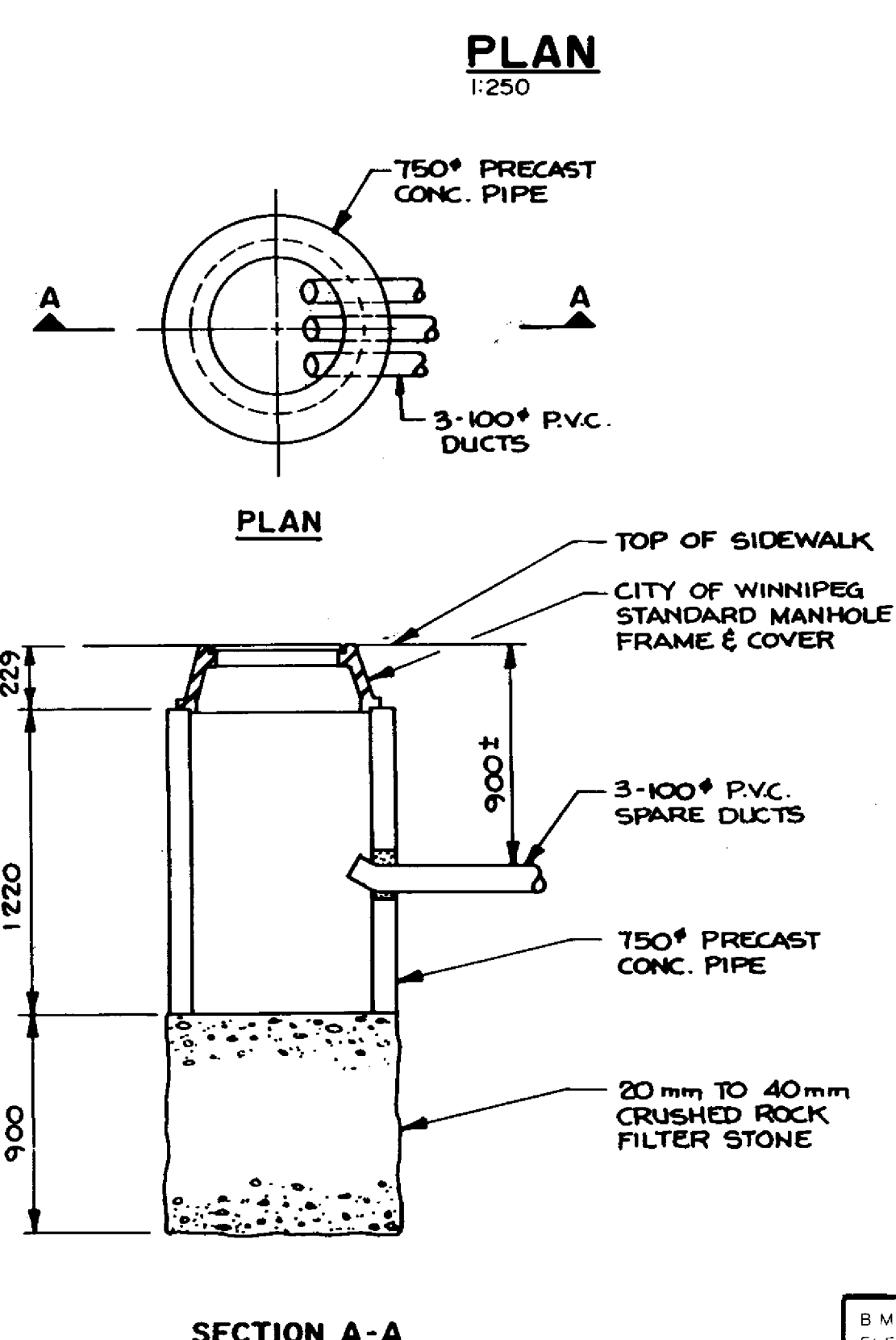
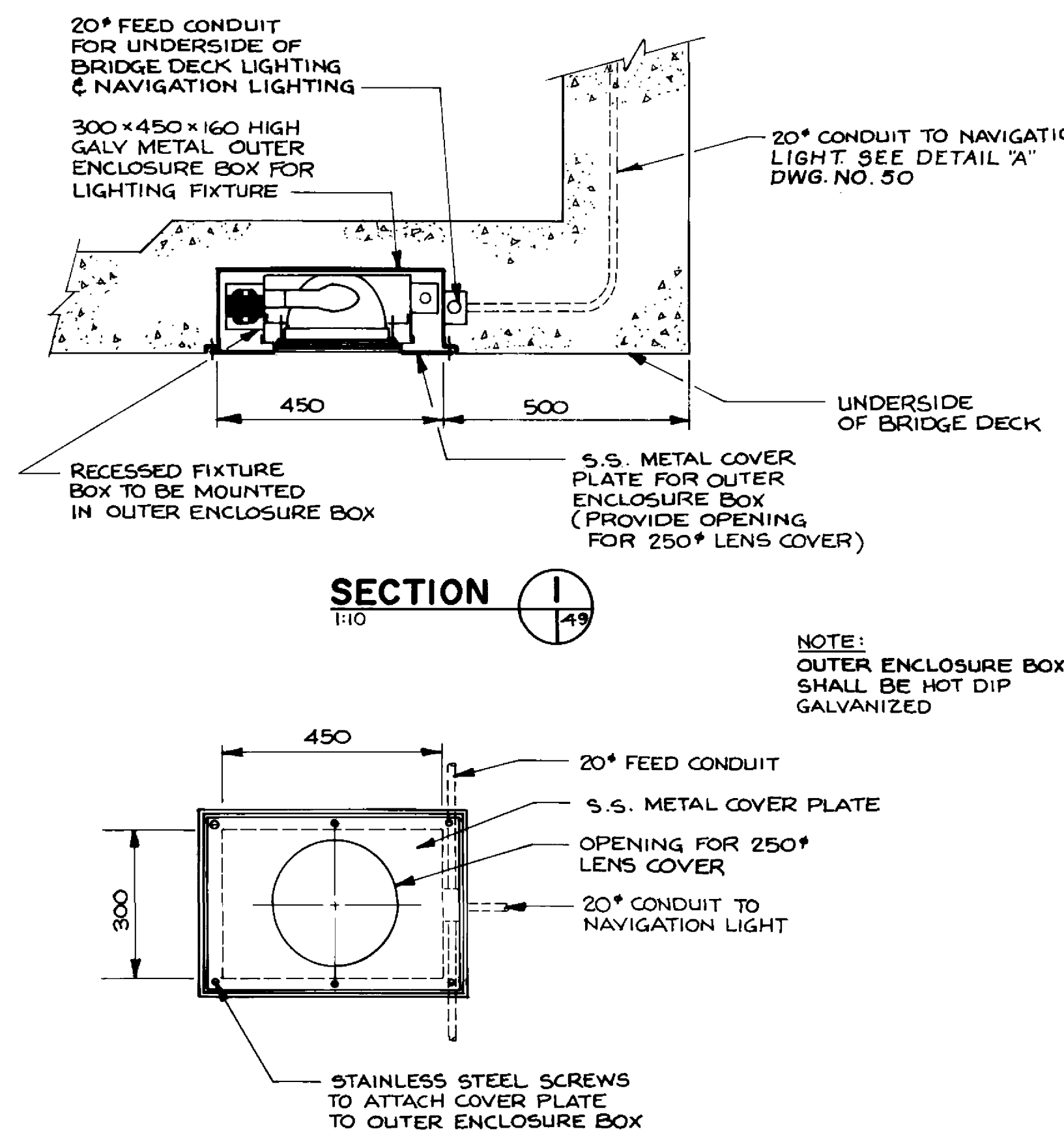
PEMBINA HIGHWAY
SOUTH CITY LIMIT TO RUE DES TRAPPISTES
PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

SLOPE PAVING

CITY DRAWING NUMBER
B224-95-48
SHEET OF
P3072-A-48



- LEGEND**
- 15-100 DIA. P.V.C. DUCTS RUNNING FULL LENGTH OF EAST STRUCTURE. DISTRIBUTION: 9-M.T.S.; 2-TRAFFIC SIGNALS; 1-STREET LIGHTING; 3-SPARES. SEE BOX GIRDER DRAWINGS FOR LOCATIONS.
 - 4-100 DIA. P.V.C. DUCTS RUNNING FULL LENGTH OF WEST STRUCTURE. DISTRIBUTION: 1-STREET LIGHTING; 3-SPARES. SEE BOX GIRDER DRAWINGS FOR LOCATIONS.
 - ORNAMENTAL LIGHTS TYPE 1 ON SIDEWALK PLANTER AS SPEC. 7 EACH STRUCTURE. SEE ORNAMENTAL BASE DETAIL THIS DWG.
 - ORNAMENTAL LIGHTS TYPE 2 ON BRIDGE RAIL POSTS AS SPEC. 2 EACH STRUCTURE. SEE ORNAMENTAL BASE DETAIL THIS DWG.
 - RECESSED LIGHTS UNDER CENTRE ARCH OF BRIDGE. 7 EACH STRUCTURE. FOR SPACING SEE APPLICABLE EXTERIOR WEB ELEVATION ON BOX GIRDER DRAWINGS.
 - RECESSED LIGHTS OVER SIDEWALKS. 8 EACH STRUCTURE. SPACE AT 600mm FROM EACH EDGE AND 3 EQUAL SPACES IN BETWEEN.



RECESSED LIGHT FIXTURE - REFLECTED PLAN
1:10

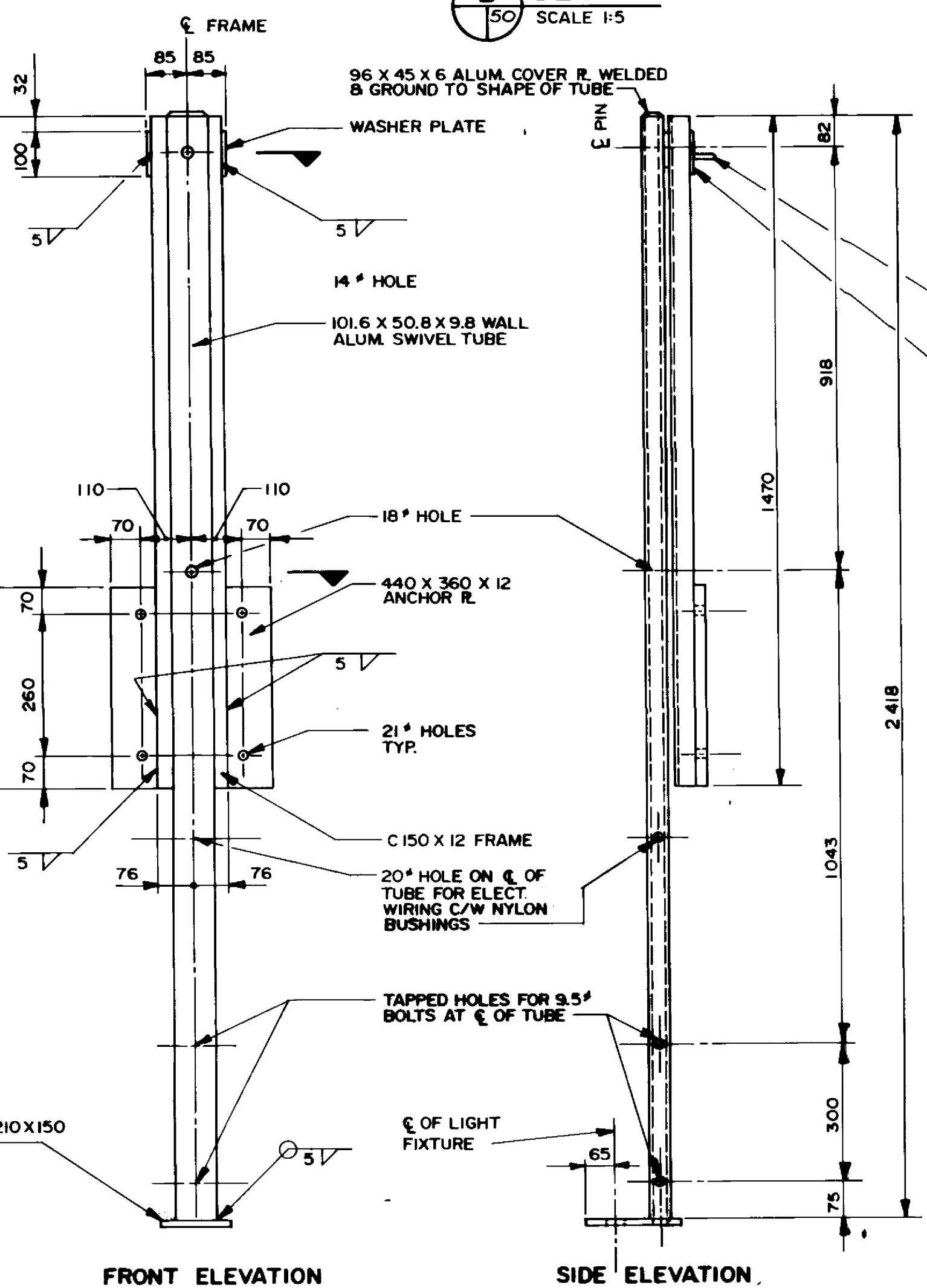
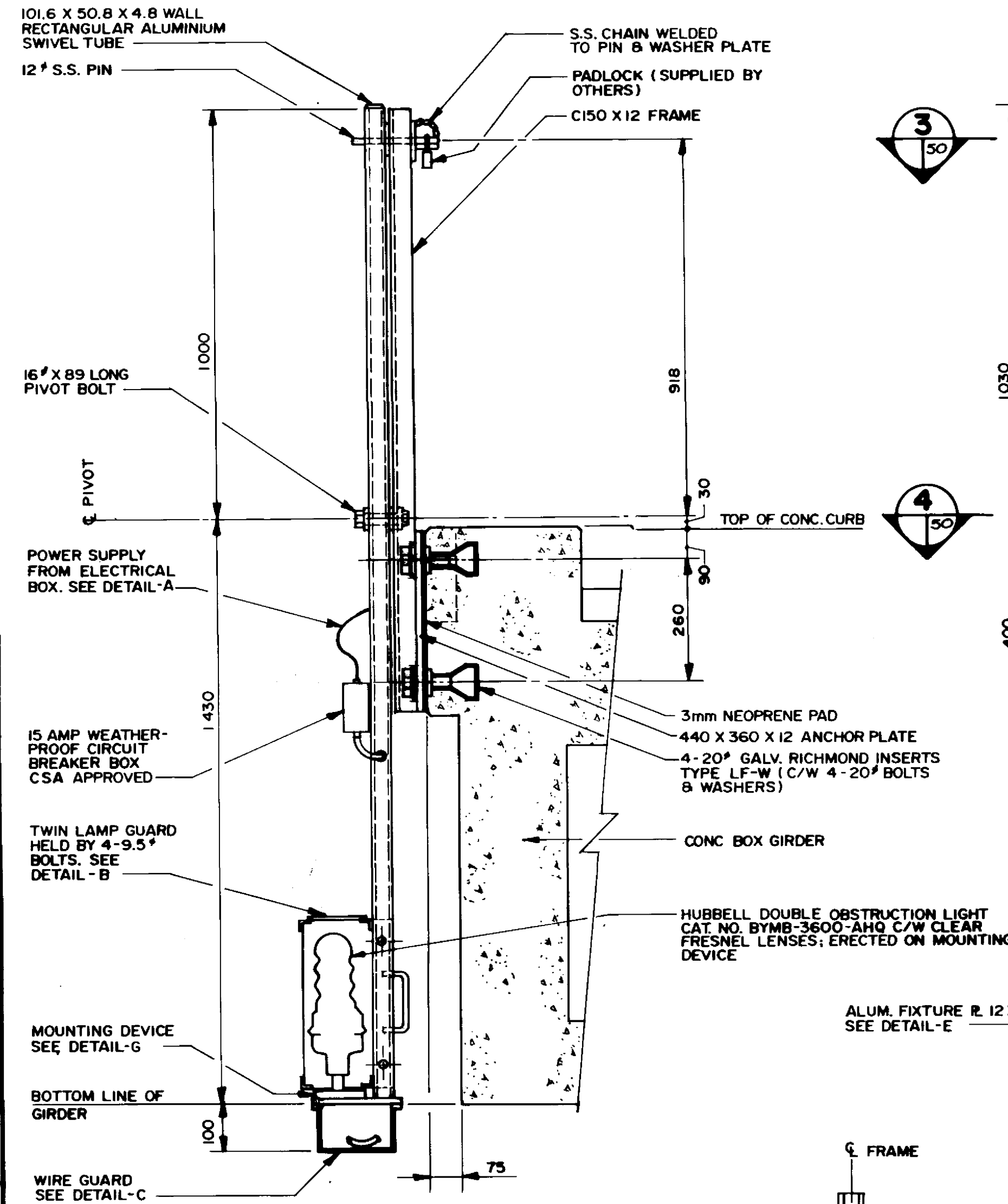
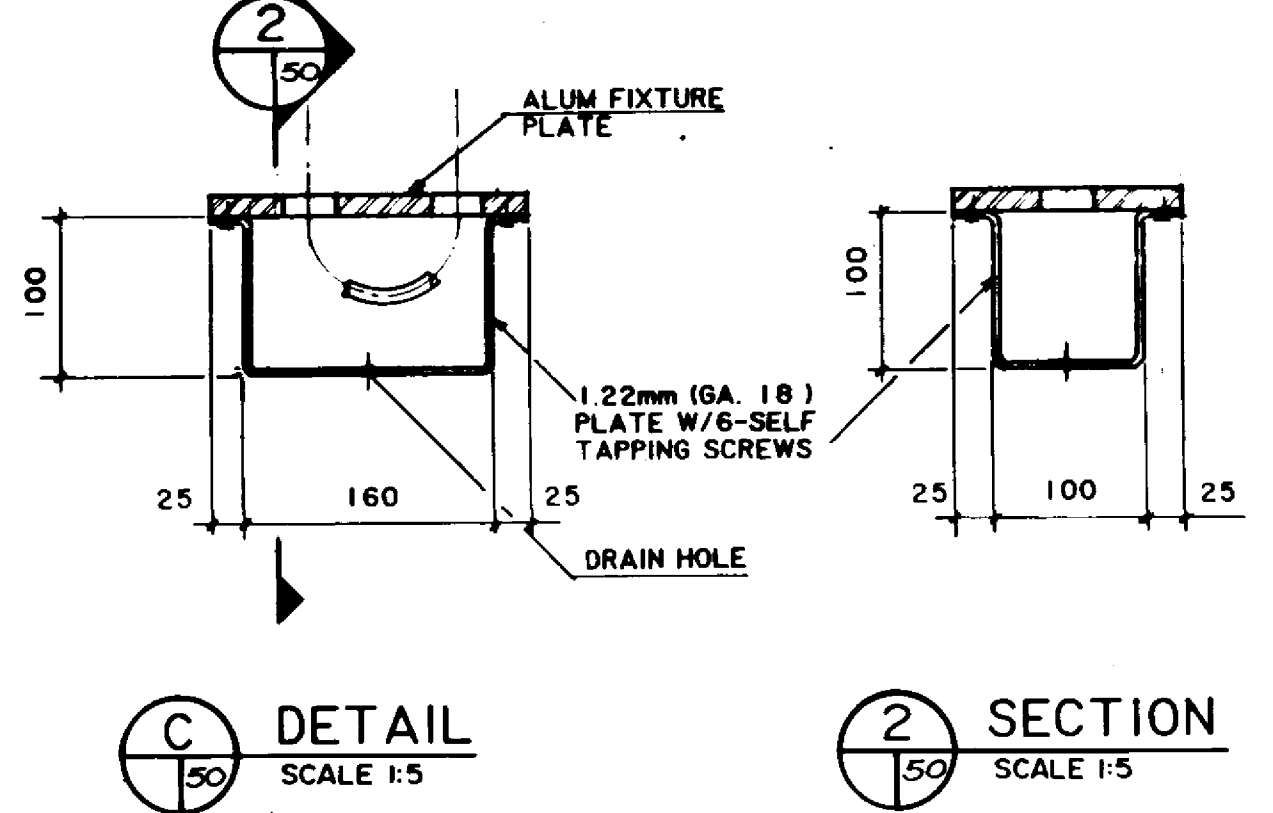
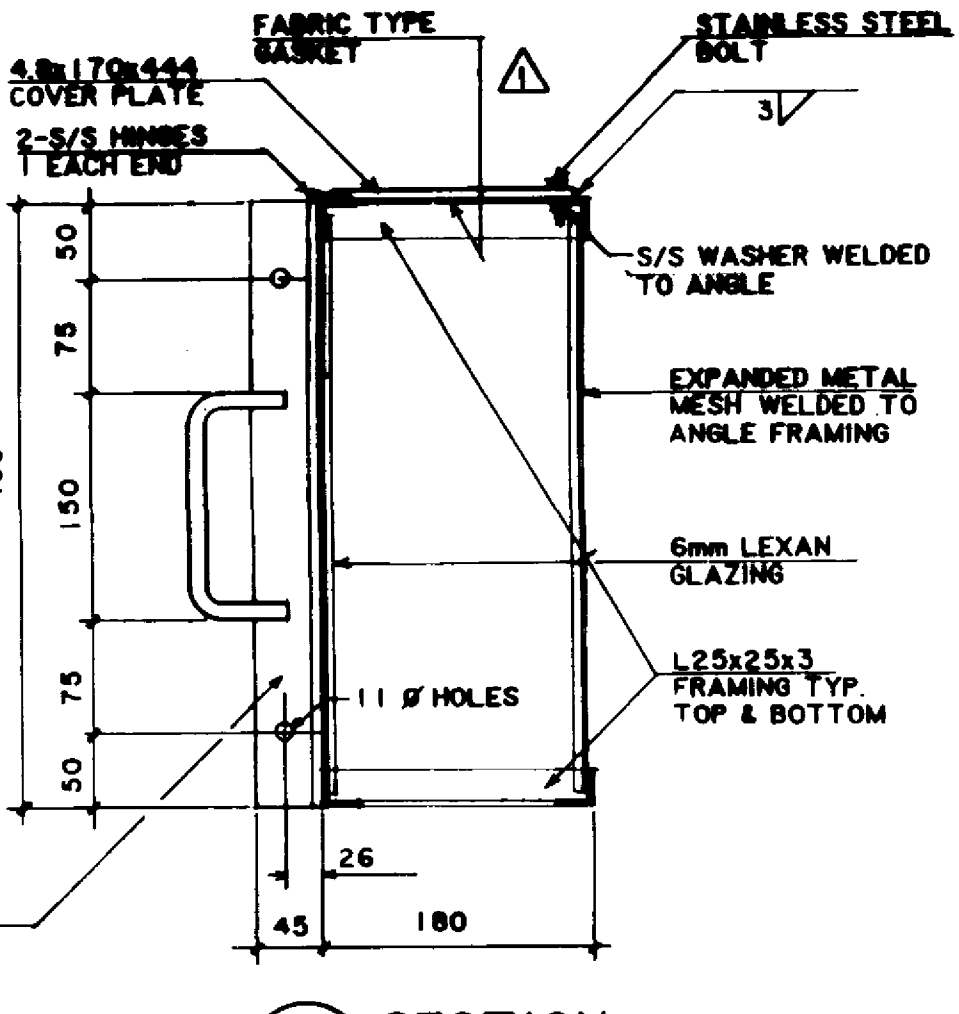
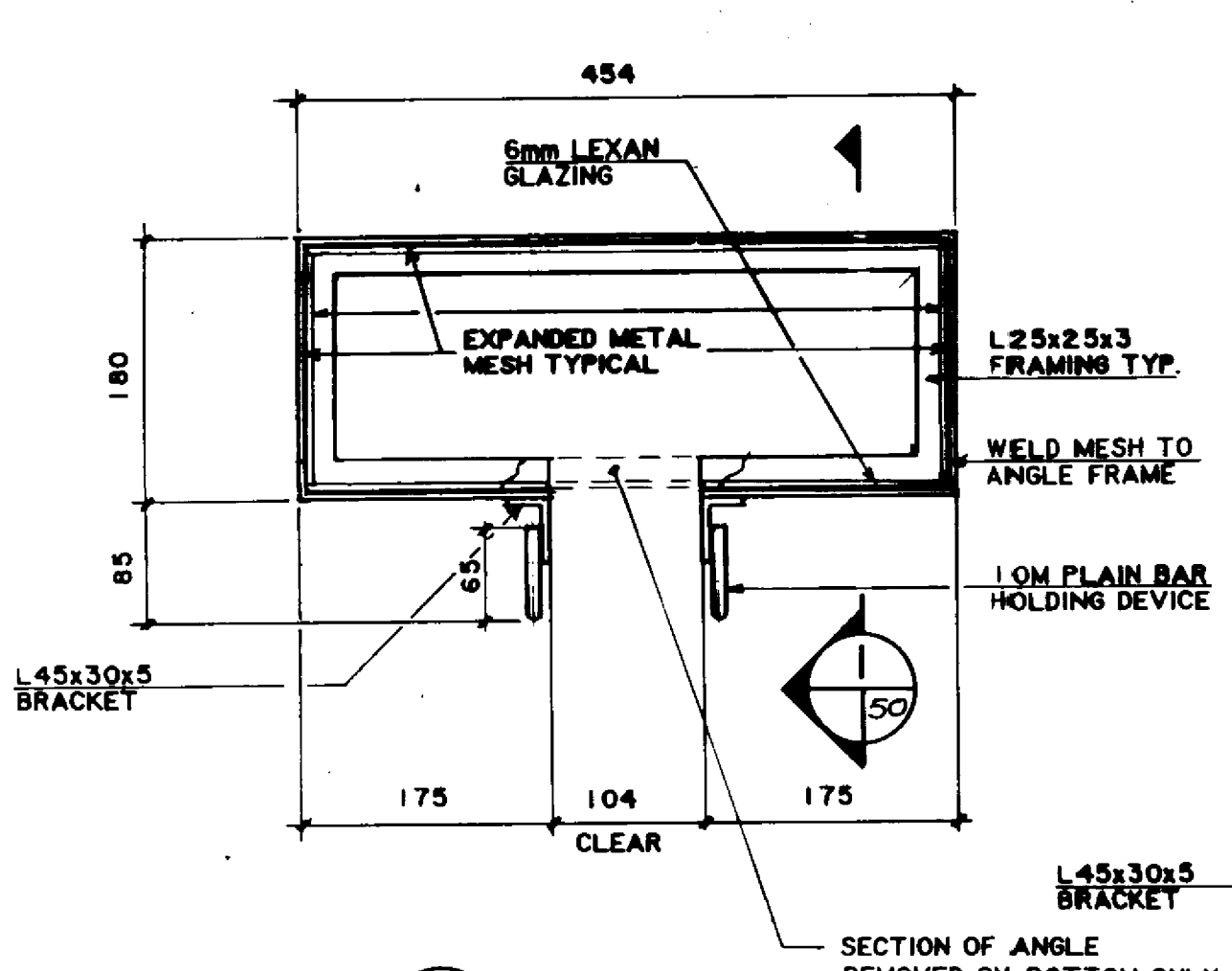
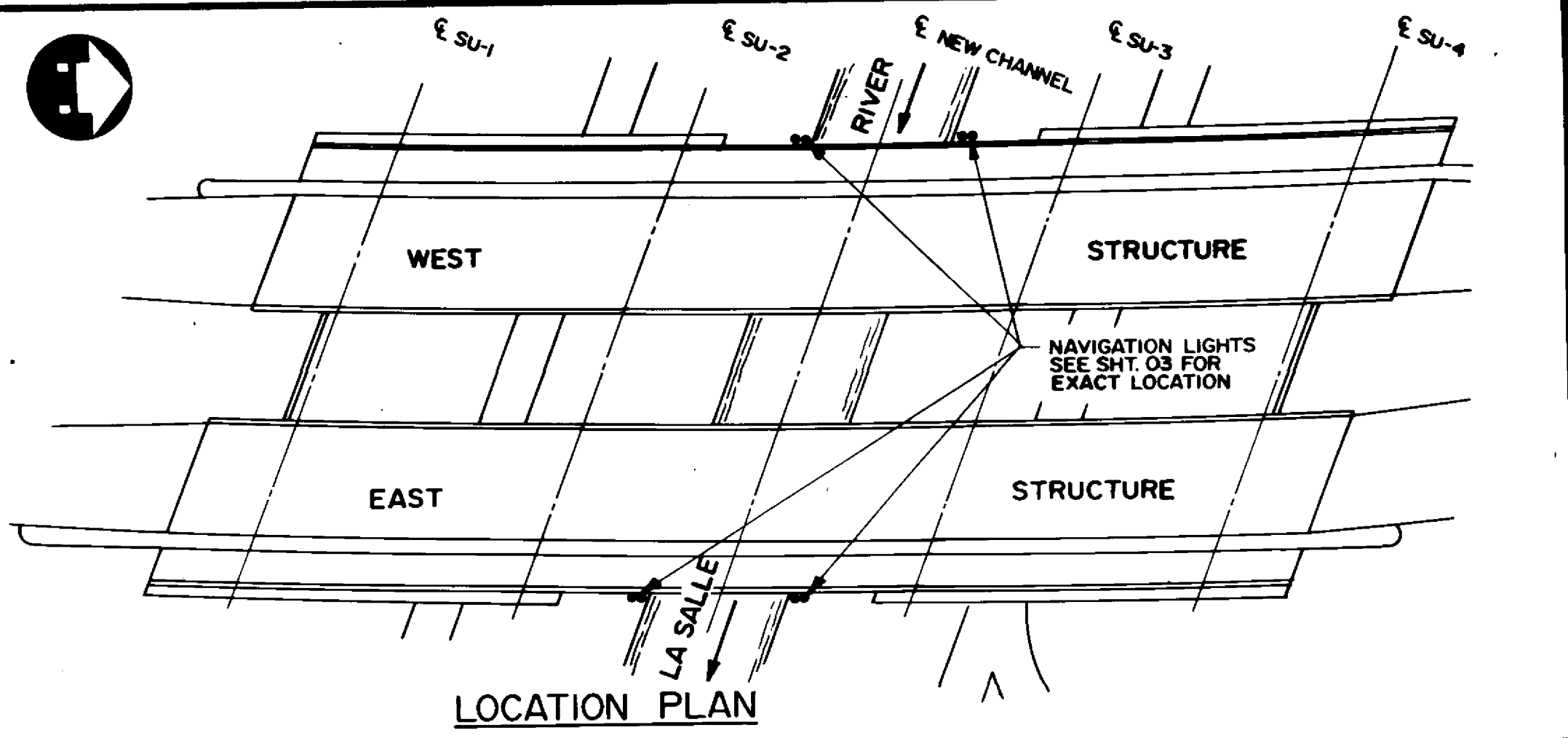
SPICE PIT DETAIL
1:25

ORNAMENTAL LIGHT TYPE-1 BASE DETAIL
1:10

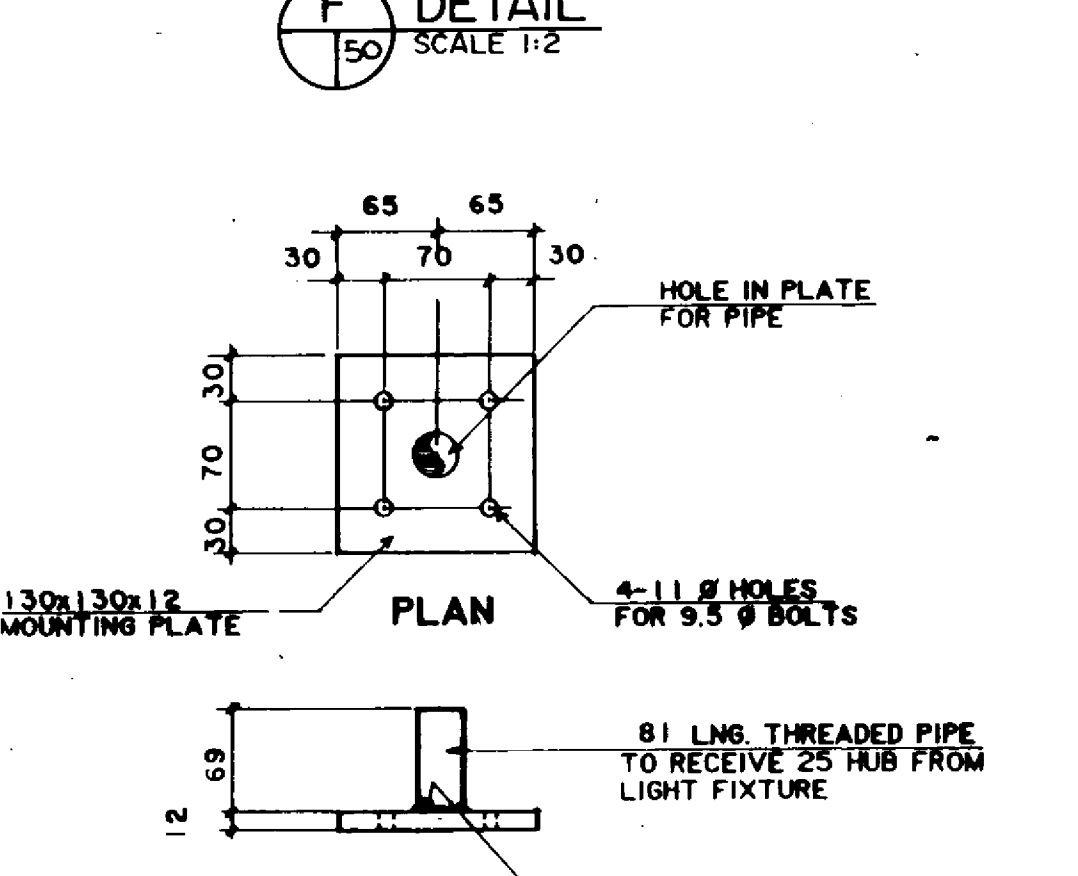
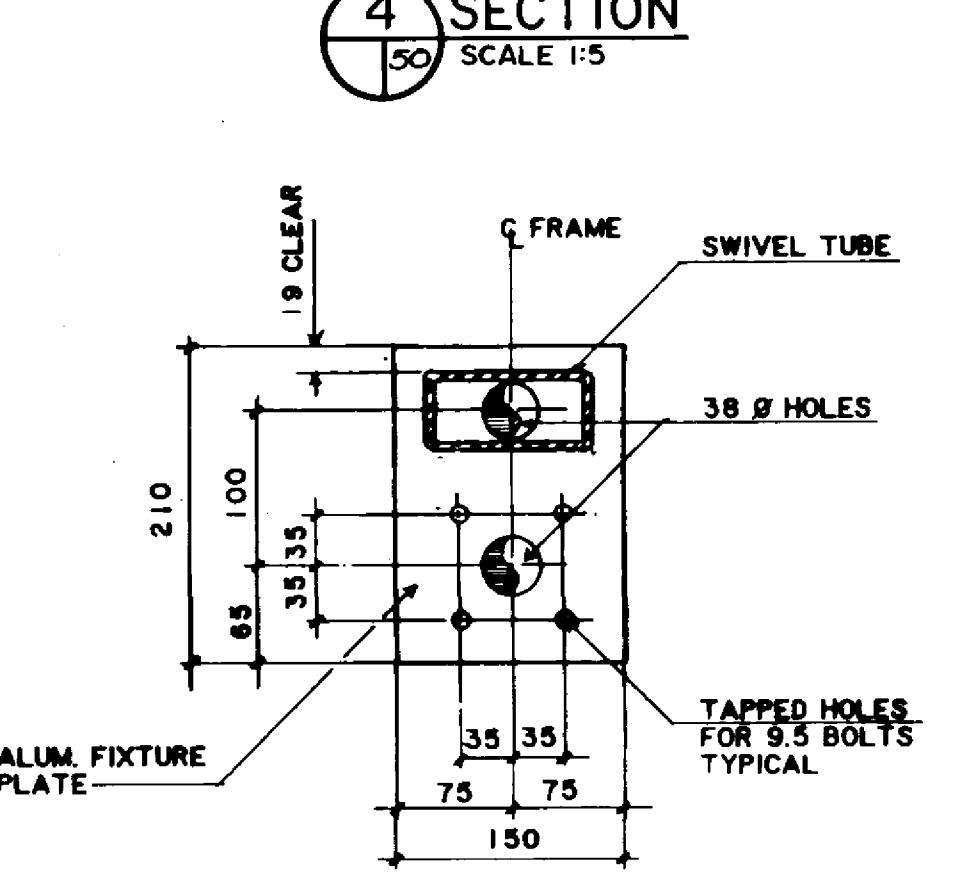
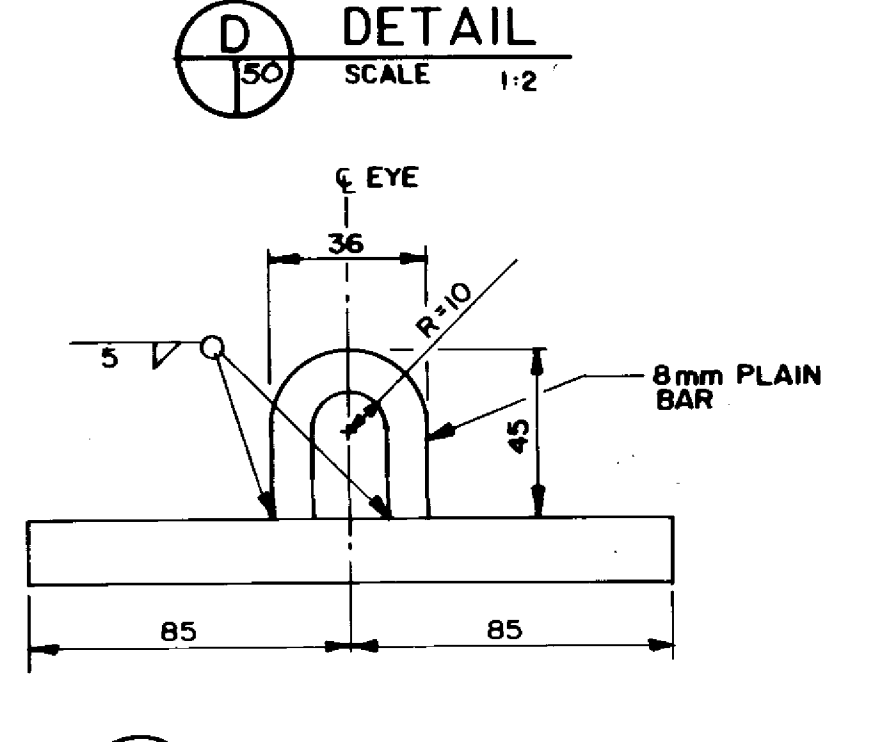
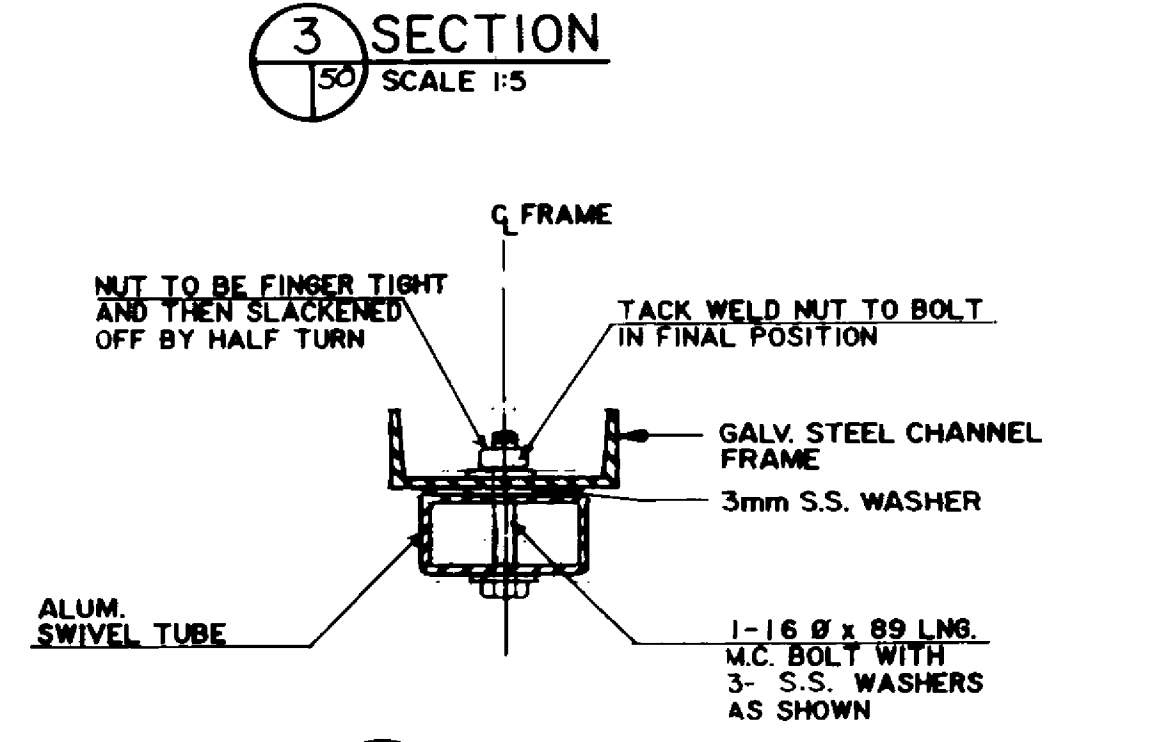
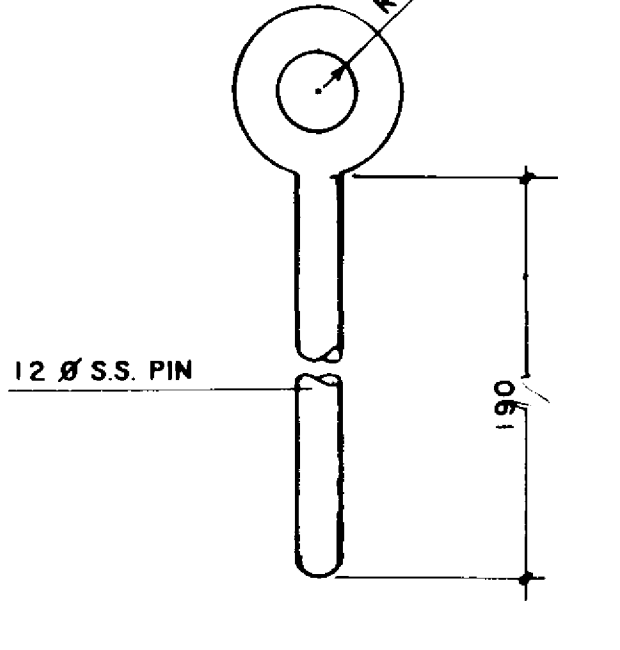
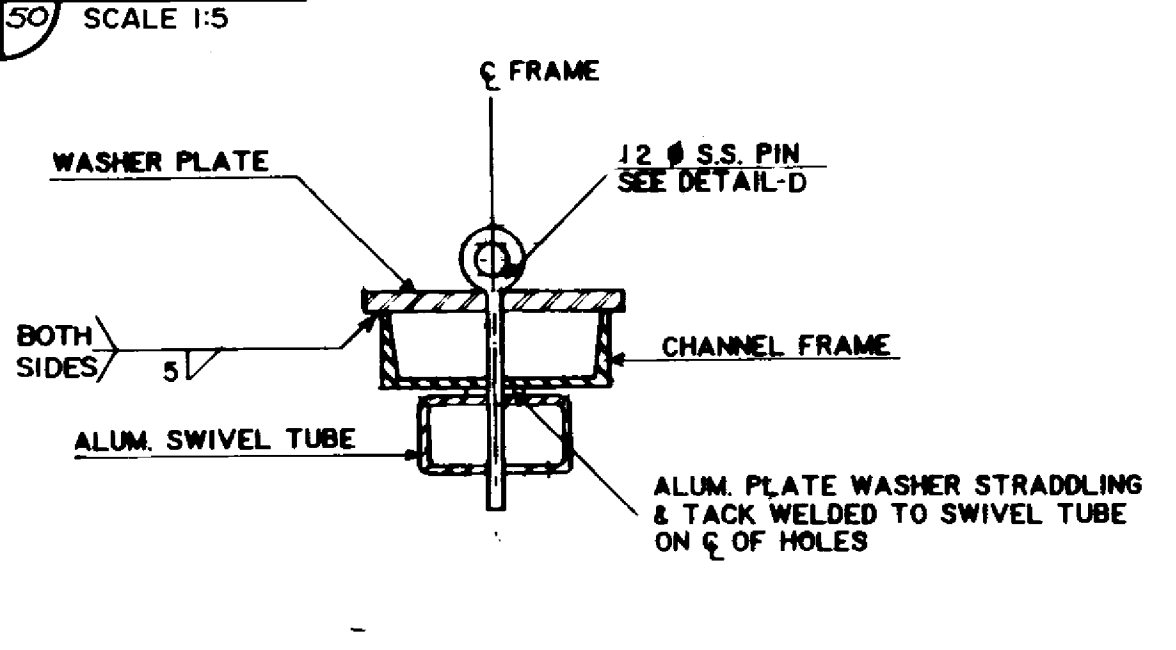
ORNAMENTAL LIGHT TYPE-2 BASE DETAIL
1:10

RECORD DRAWING
APPROVED BY: *[Signature]* DATE: *10/18/94*

<p>DILLON Consulting Engineers • Planners Environmental Scientists</p>		<p>DESIGNED BY: S.S.R./W.P.S. CHECKED BY: S.S.R.</p> <p>DRAWN BY: D.M.W. APPROVED BY: <i>[Signature]</i></p> <p>HOR SCALE: AS NOTED VERTICAL: AS NOTED</p> <p>NO. REVISIONS: DATE: BY: DATE: NOV. 1994</p>		<p>CONSULTANT DRAWING NO. 93-1497-06-49</p>	
<p>THE CITY OF WINNIPEG WORKS AND OPERATIONS DIVISION B-6021-49</p>					
<p>PEMBINA HIGHWAY SOUTH CITY LIMIT TO RUE DES TRAPPISTES PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER</p>					
<p>LIGHTING AND DUCT LAYOUT</p>					
<p>CITY DRAWING NUMBER: B224-95-49 SHEET OF</p> <p>P3072-A-49</p>					



LIGHT FIXTURE FRAME DETAIL
SCALE 1:10



- NOTES:**
1. ALUMINIUM SHALL CONFORM TO AA 6061
 2. STEEL SHALL BE CSA G40.21, 300 W
 3. ALL MATERIALS SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH CSA G64 UNLESS NOTED OTHERWISE
 4. ALL FASTENERS AND HARDWARE SHALL BE STAINLESS STEEL

LOCATION APPROVED UNDERGROUND STRUCTURES		B.M. ELEV.	
N/A			
SUPV. U/G STRUCTURES COMMITTEE	DATE	DESIGNED BY	CHECKED BY
		S.S.R./W.P.S.	S.S.R.
NOTE:		DRAWN BY	APPROVED BY
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION		HOR. SCALE	DATE
		VERTICAL	NOV. 1994
NO. REVISIONS	DATE	BY	

DILLON
Consulting Engineers - Planners
Environmental Scientists

DESIGNED BY: S.S.R./W.P.S.
CHECKED BY: S.S.R.
DRAWN BY: D.M.W.
APPROVED BY: [Signature]
DATE: 11/12/94
AUTHORISED BY: [Signature]
DATE: 11/12/94
ACCEPTED BY: [Signature]
DATE: 11/12/94

ENGINEER'S SEAL
11/12/94
S.S. RINAL
REGISTERED PROFESSIONAL ENGINEER

THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION

PEMBINA HIGHWAY
SOUTH CITY LIMIT TO RUE DES TRAPPISTES
PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

NAVIGATION LIGHT DETAILS

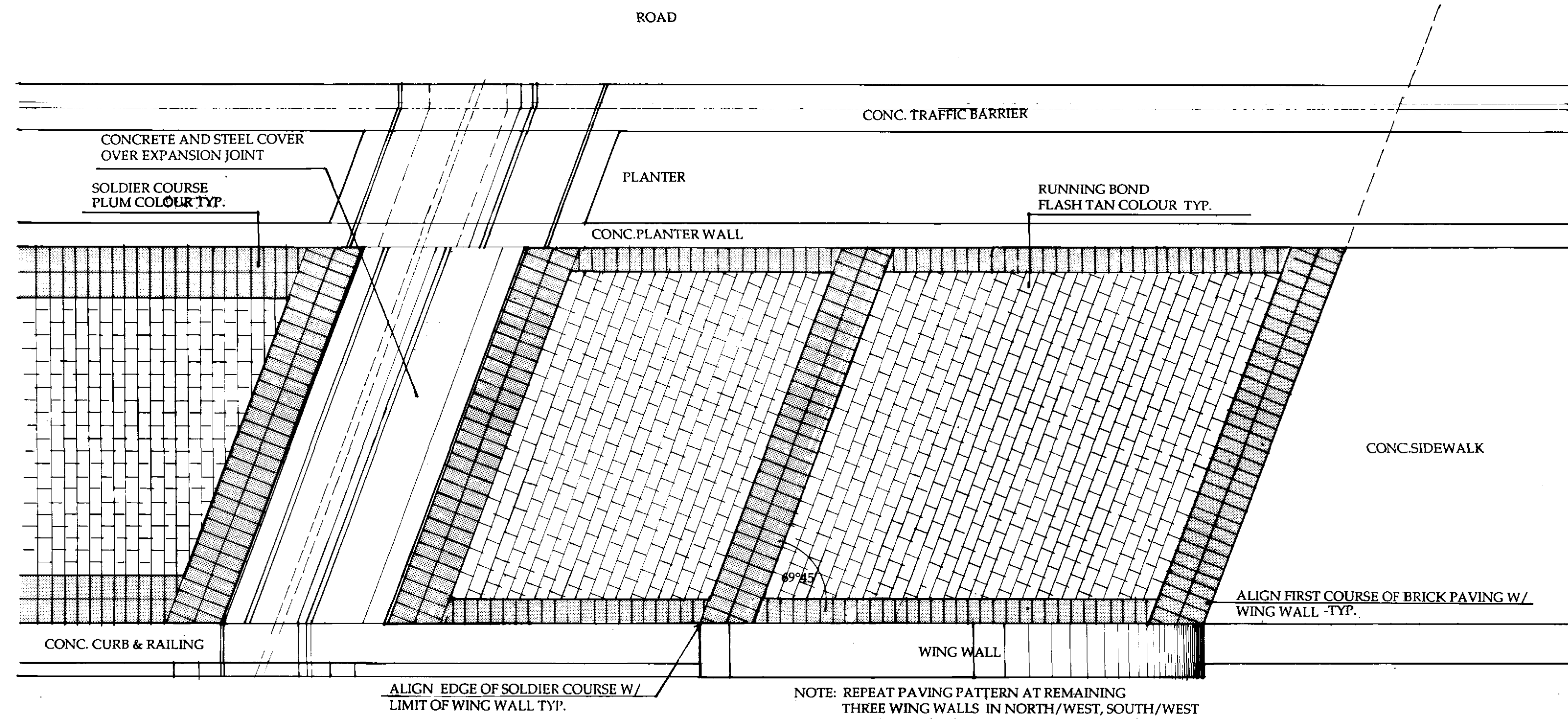
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SHEET: OF

P3072-A-50

RECORD DRAWING
APPROVED BY: [Signature]
DATE: Dec 1994

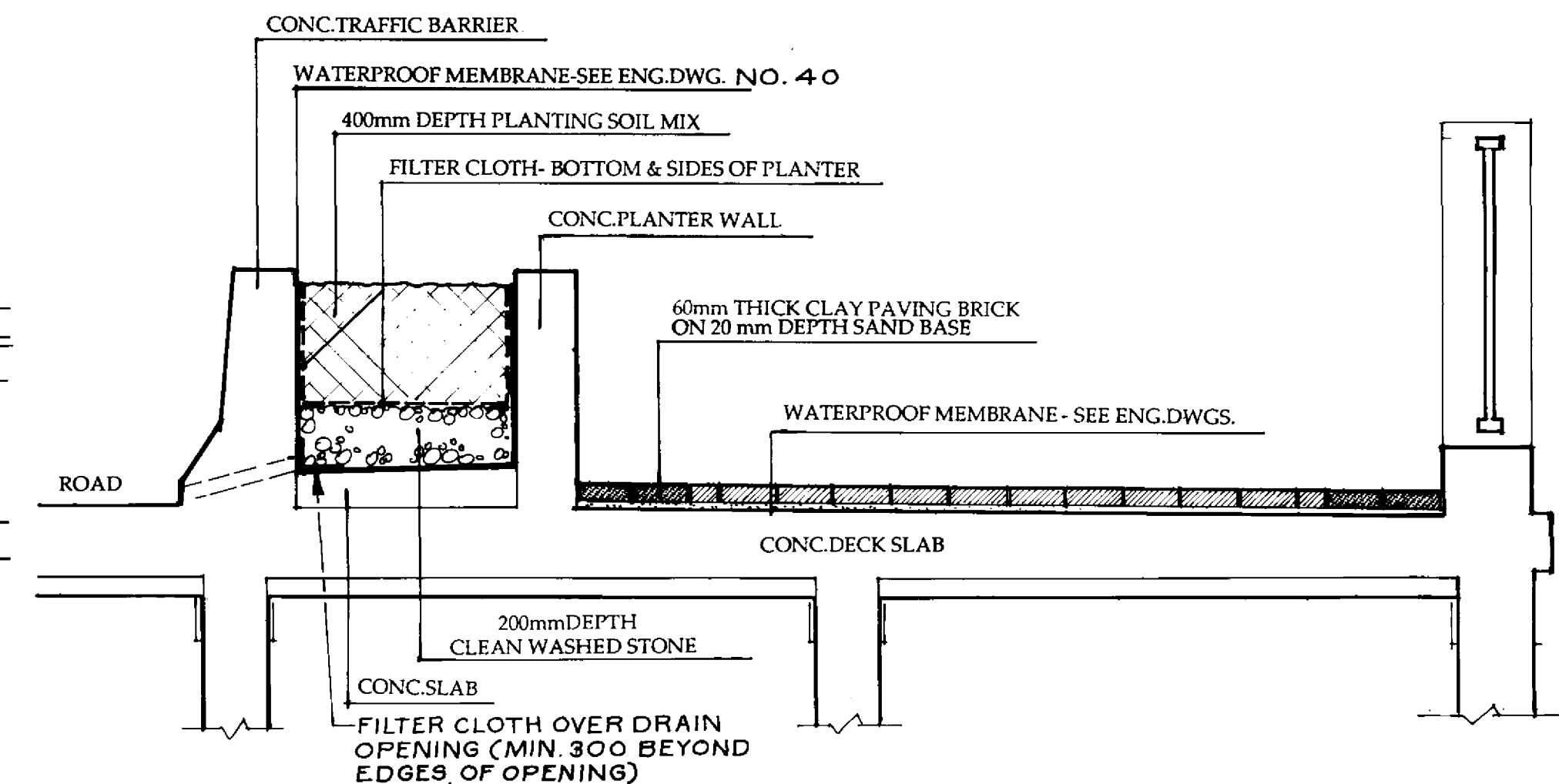
A DETAIL
SCALE 1:25

B-6021-50



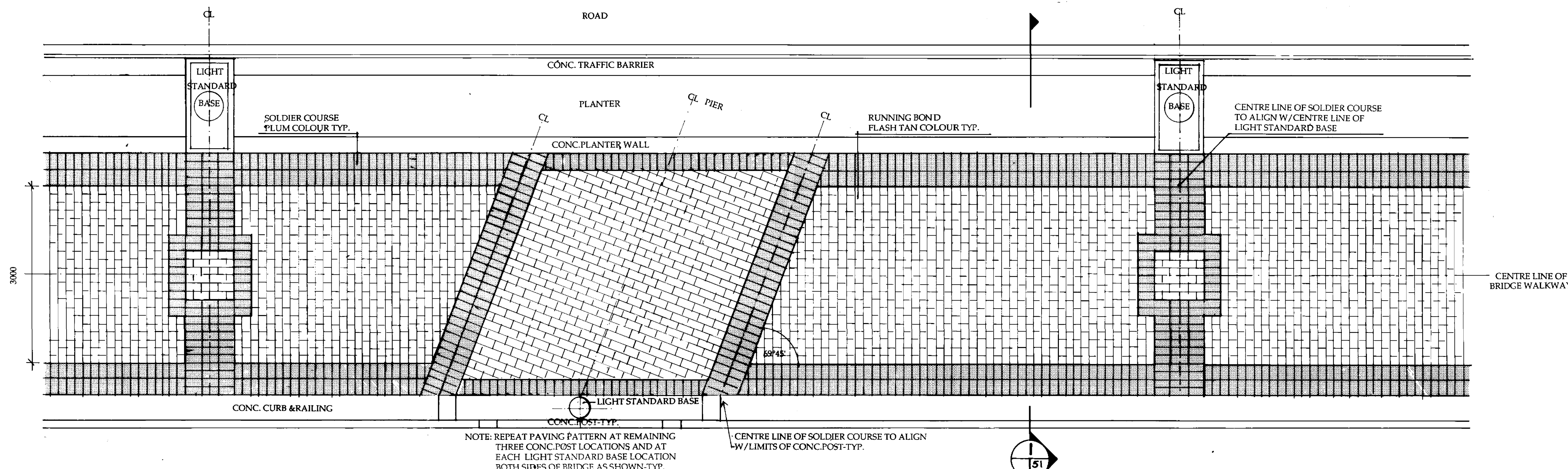
PAVING PATTERN AT NORTH/EAST CORNER OF BRIDGE WALKWAY

SCALE 1:30



SECTION THROUGH PLANTER AND CLAY BRICK PAVING

SCALE 1:20



PAVING PATTERN AT CONC. POST ON EAST SIDE OF BRIDGE WALKWAY

SCALE 1:30

B-6021-51

RECORD DRAWING

APPROVED BY: *[Signature]* DATE: *Dec 18/94*

LOCATION APPROVED UNDERGROUND STRUCTURES

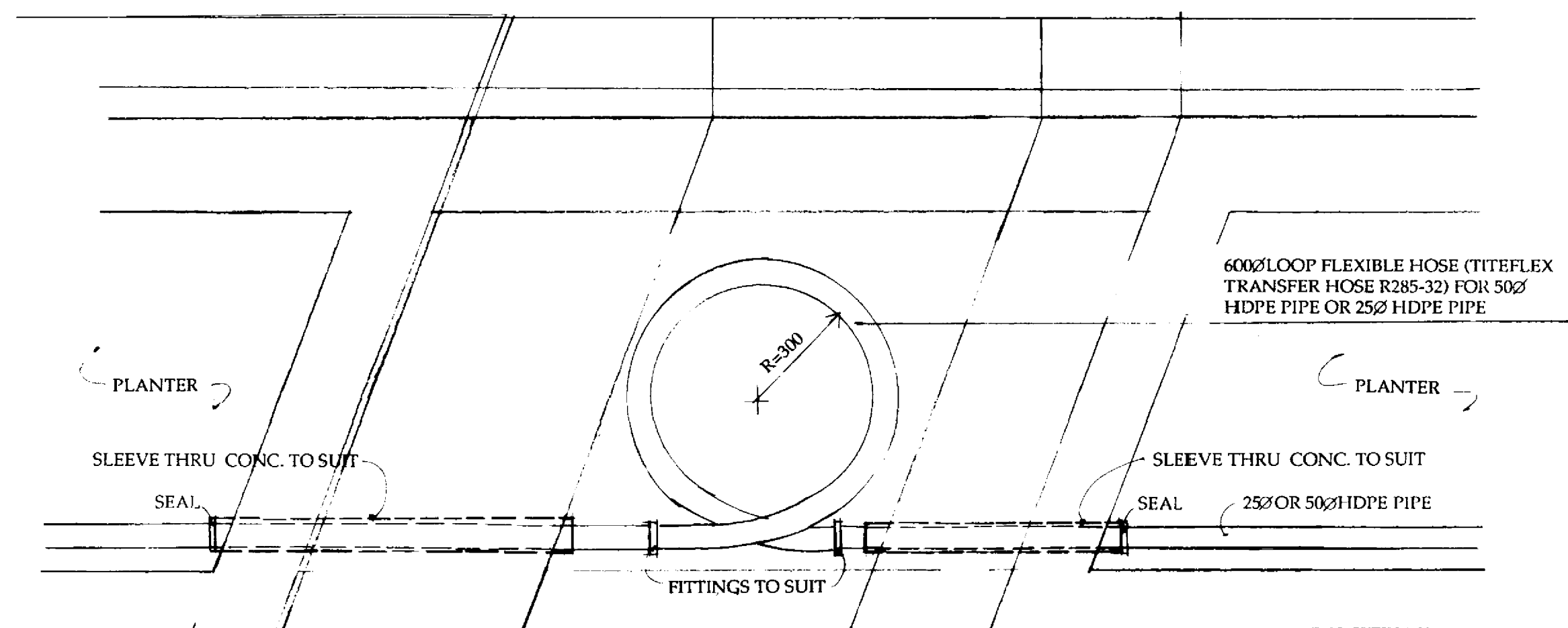
SUPV. U/G STRUCTURES COMMITTEE DATE
 NOTE:
 LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CORROBORATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

NO.	REVISIONS	DATE	BY

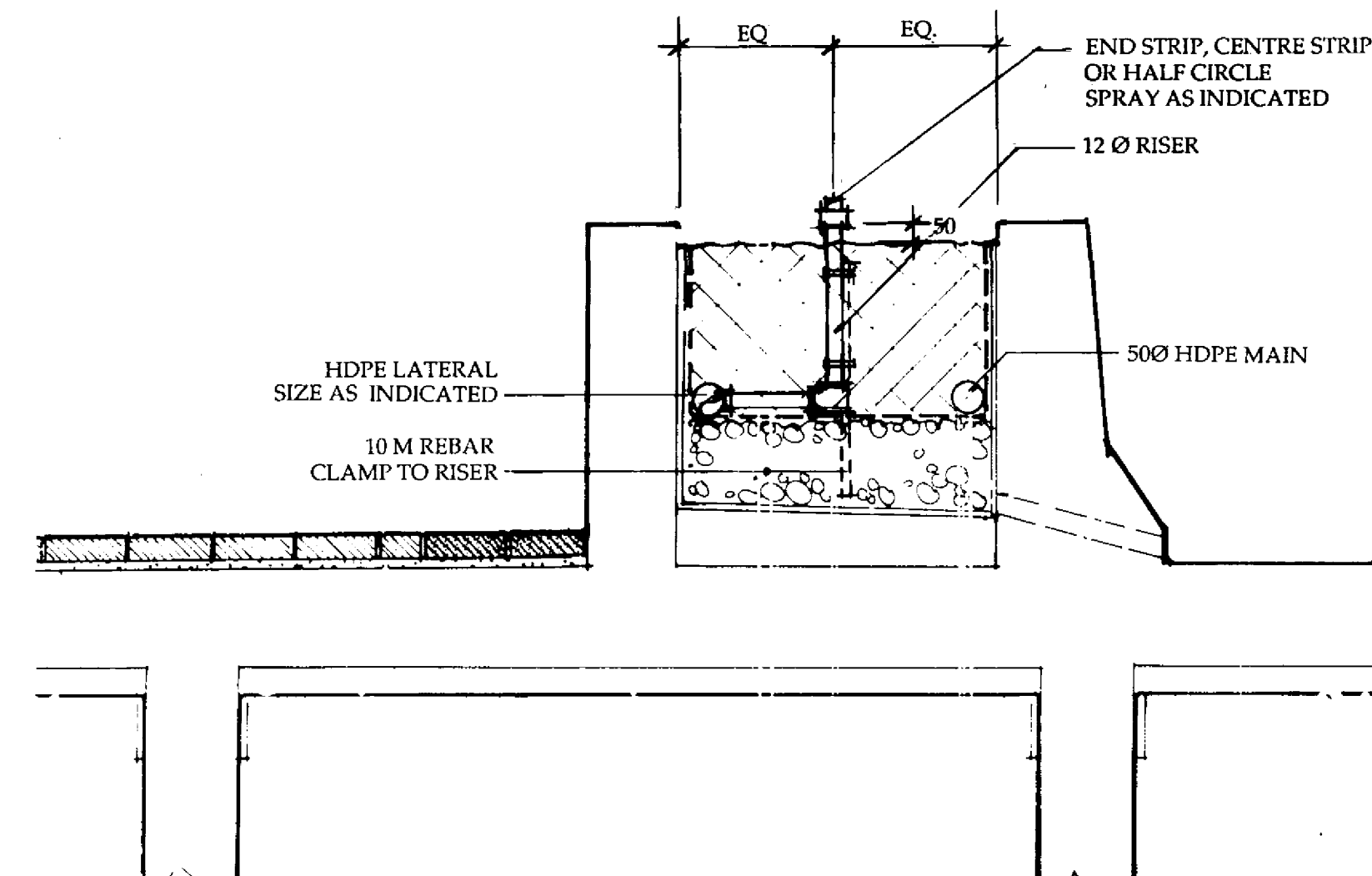
DESIGNED BY	J.F.	CHECKED BY	N.J.
DRAWN BY	J.F.	APPROVED BY	<i>[Signature]</i>
HOR. SCALE	AS NOTED	DATE	NOV / 94
VERTICAL		DATE	

ENGINEER'S SEAL
 THE MANITOBA ASSOCIATION OF PROFESSIONAL ENGINEERS
 G. HILDERMAN
 CONSULTANT DRAWING NO. 93-1497-06-51

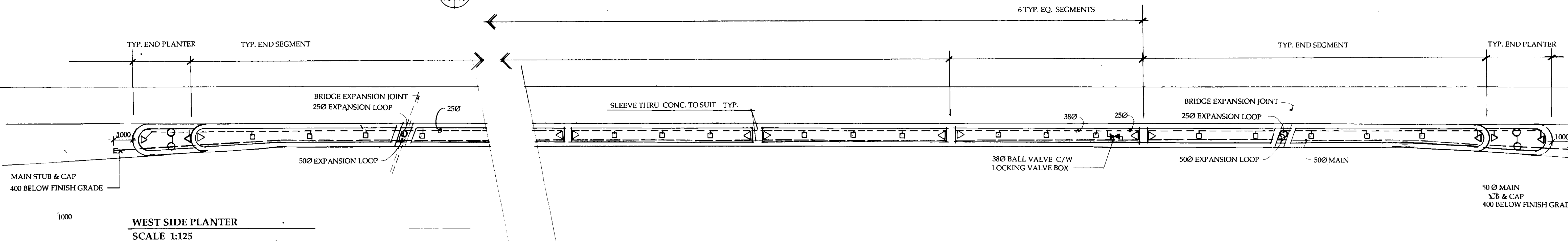
THE CITY OF WINNIPEG
 WORKS AND OPERATIONS DIVISION
 STREETS AND TRANSPORTATION DEPARTMENT
 PEMBINA HIGHWAY
 SOUTH CITY LIMIT TO RUE DES TRAPPISTES
 PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER
 SIDEWALK PAVING BRICK LAYOUT
 SHEET NUMBER: B224-95-51
 SHEET OF:
 P3072-A-51



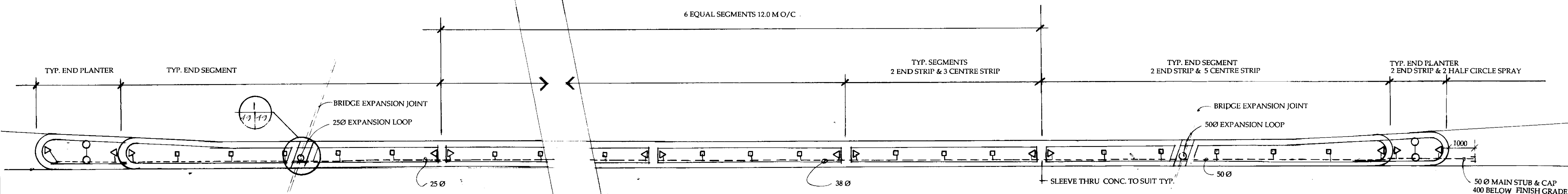
EXPANSION LOOP DETAIL SCALE 1:10



TYPICAL DETAIL SCALE 1:15



WEST SIDE PLANTER SCALE 1:125



EAST SIDE PLANTER SCALE 1:125

RECORD DRAWING

B-6021-52

APPROVED BY: *[Signature]* DATE: Dec 10/94

LOCATION APPROVED UNDERGROUND STRUCTURES

SUPV'G U/G STRUCTURES DATE COMMITTEE

NOTE:
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

NO	REVISIONS	DATE	BY

DESIGNED BY: JF
DRAWN BY: JF
HOR. SCALE: VERTICAL
DATE: NOV. 21, 1994

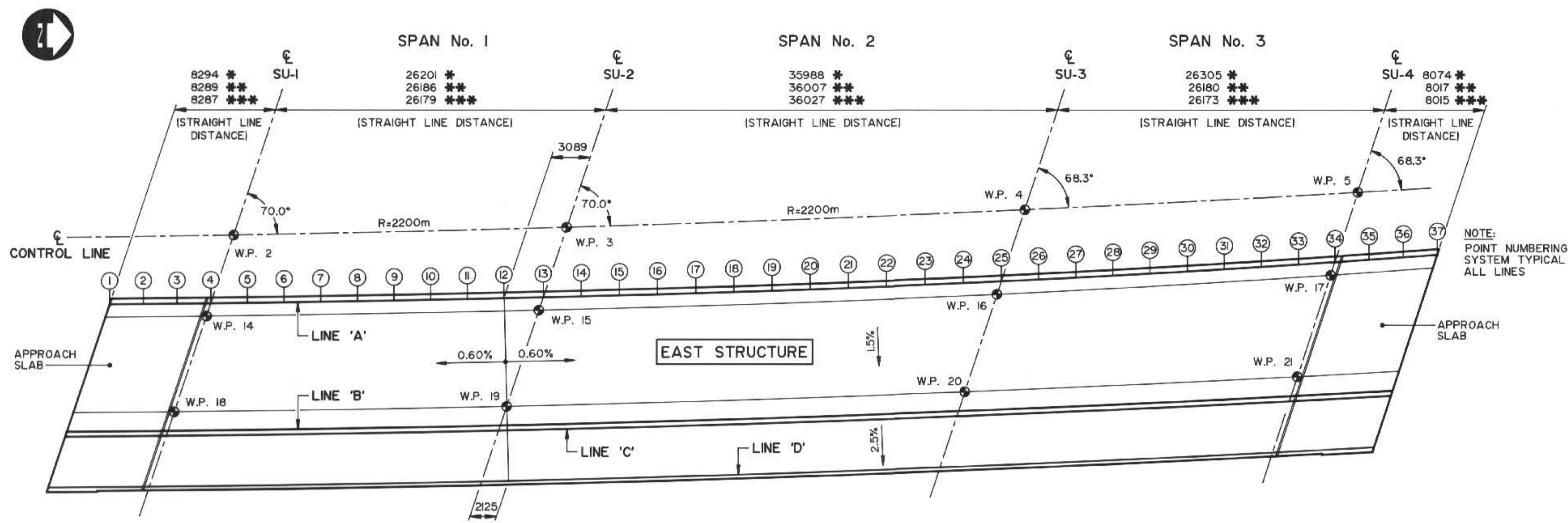
CHECKED BY: *[Signature]*
APPROVED BY: *[Signature]*
DATE: Dec 10, 1994
ACCEPTED BY: *[Signature]*
DATE: Dec 10, 1994

ENGINEER'S SEAL
G. HILDERMAN
MEMBER NO. 1000
CONSULTANT DRAWING NO. 93-1497-06-52

THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

PEMBINA HIGHWAY
SOUTH CITY LIMIT TO RUE DES TRAPPISTES
PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

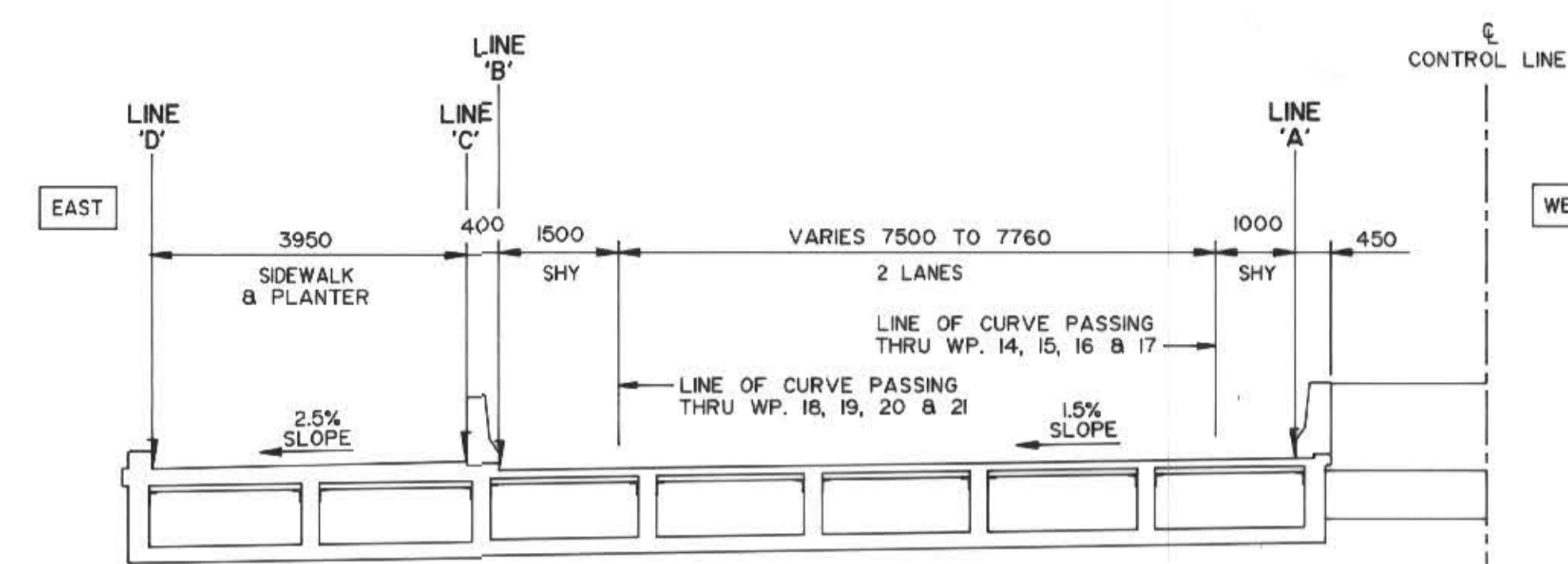
PLANTER IRRIGATION PLAN
CITY DRAWING NUMBER: B224-95-52
SHEET: 01
P3072-A-52



NOTE:

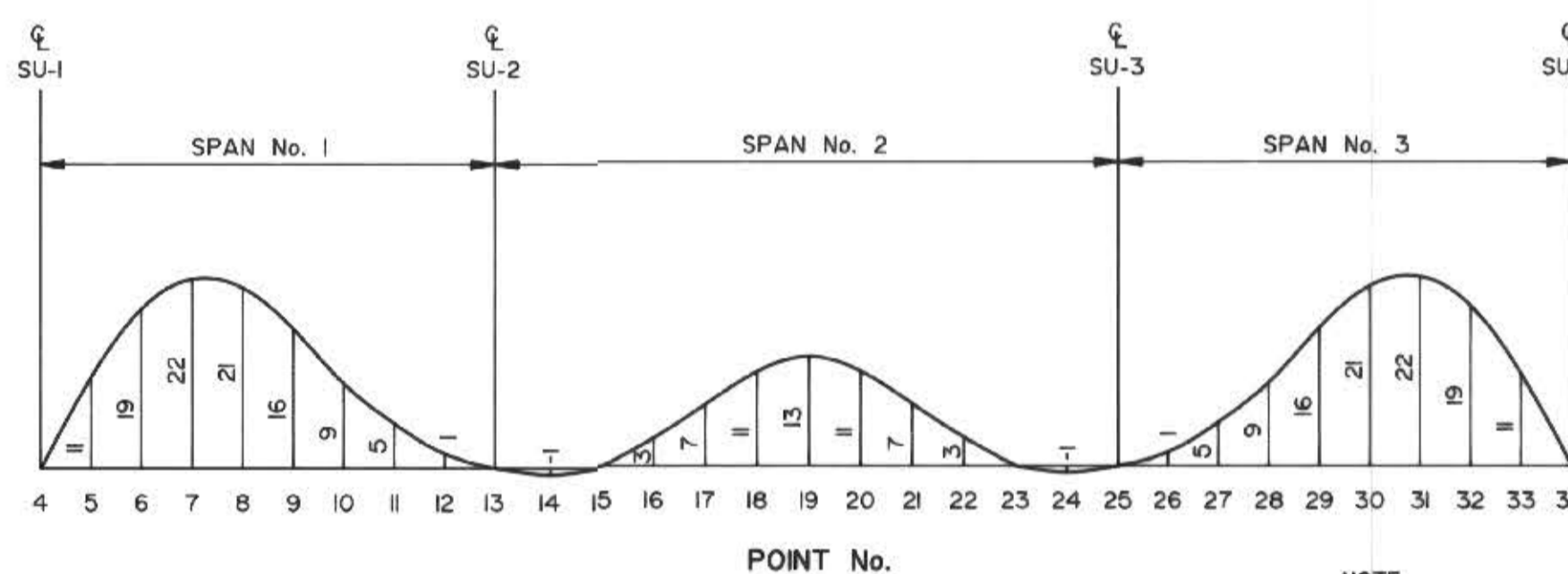
- * LINE 'A'
- ** LINES 'B' & 'C'
- *** LINE 'D'

PLAN
SCALE: 1:250



TYPICAL SECTION
(PERPENDICULAR TO ROADWAY)
SCALE: 1 : 75

POINT	LINE "A"				LINE "B"				LINE "C"				LINE "D"				
	LOCATION ON SPAN (m)	DESIGN ELEVATION (m)	SCREED DLD (mm)	SCREED ELEVATION (m)	LOCATION ON SPAN (m)	DESIGN ELEVATION (m)	SCREED DLD (mm)	SCREED ELEVATION (m)	LOCATION ON SPAN (m)	DESIGN ELEVATION (m)	SCREED DLD (mm)	SCREED ELEVATION (m)	LOCATION ON SPAN (m)	DESIGN ELEVATION (m)	SCREED DLD (mm)	SCREED ELEVATION (m)	
S. APP.	1	0.000	232.819	0	232.819	0.000	232.648	0	232.648	0.000	232.651	0	232.651	0.000	232.543	0	232.543
	2	2.765	232.836	0	232.836	2.763	232.665	0	232.665	2.763	232.668	0	232.668	2.762	232.560	0	232.560
	3	5.529	232.852	0	232.852	5.526	232.681	0	232.681	5.526	232.684	0	232.684	5.525	232.576	0	232.576
	4	0.000	232.729	0	232.729	0.000	232.558	0	232.558	0.000	232.701	0	232.701	0.000	232.593	0	232.593
	5	2.889	232.746	11	232.757	2.910	232.575	11	232.586	2.910	232.718	11	232.729	2.909	232.610	11	232.621
	6	5.778	232.764	19	232.783	5.819	232.593	19	232.612	5.819	232.736	19	232.755	5.818	232.628	19	232.647
	7	8.667	232.781	22	232.803	8.729	232.610	22	232.632	8.729	232.753	22	232.775	8.726	232.645	22	232.667
	8	11.556	232.798	21	232.819	11.638	232.627	21	232.648	11.638	232.770	21	232.791	11.635	232.662	21	232.683
	9	14.445	232.816	16	232.832	14.548	232.645	16	232.661	14.548	232.788	16	232.804	14.544	232.680	16	232.696
	10	17.334	232.833	9	232.842	17.457	232.662	9	232.671	17.457	232.805	9	232.814	17.453	232.697	9	232.706
	11	20.223	232.850	5	232.855	20.367	232.679	5	232.684	20.367	232.822	5	232.827	20.361	232.714	5	232.719
	12	23.112	232.868	2	232.870	23.276	232.697	2	232.699	23.276	232.840	2	232.842	23.270	232.732	2	232.734
	13	0.000	232.849	0	232.849	0.000	232.714	0	232.714	0.000	232.857	0	232.857	0.000	232.749	0	232.749
	14	2.999	232.831	-1	232.830	3.001	232.703	-1	232.702	3.001	232.846	-1	232.846	2.125	232.762	-1	232.761
	15	2.998	232.813	0	232.813	6.001	232.685	0	232.685	6.001	232.829	0	232.829	5.207	232.743	0	232.743
	16	8.997	232.795	3	232.798	9.002	232.667	3	232.670	9.002	232.811	3	232.814	8.289	232.725	3	232.728
	17	11.996	232.777	7	232.784	12.002	232.649	7	232.656	12.002	232.793	7	232.800	11.371	232.706	7	232.713
	18	14.995	232.759	11	232.770	15.003	232.631	11	232.642	15.003	232.775	11	232.786	14.453	232.688	11	232.699
	19	17.994	232.741	13	232.754	18.003	232.613	13	232.626	18.003	232.757	13	232.770	17.535	232.670	13	232.683
	20	20.993	232.723	11	232.734	21.004	232.595	11	232.606	21.004	232.739	11	232.750	20.617	232.651	11	232.662
	21	23.992	232.705	7	232.712	24.005	232.578	7	232.585	24.005	232.722	7	232.729	23.699	232.633	7	232.640
	22	26.991	232.687	3	232.690	30.006	232.560	3	232.563	30.006	232.704	3	232.707	26.781	232.614	3	232.617
	23	29.990	232.669	0	232.669	33.006	232.542	0	232.542	33.006	232.686	0	232.686	29.863	232.596	0	232.596
	24	32.989	232.651	-1	232.650	36.007	232.524	-1	232.523	36.007	232.668	-1	232.668	32.945	232.578	-1	232.577
	25	0.000	232.634	0	232.634	0.000	232.506	0	232.506	0.000	232.650	0	232.650	0.000	232.561	0	232.561
	26	2.932	232.617	1	232.618	2.909	232.489	1	232.490	2.909	232.633	1	232.634	2.908	232.544	1	232.545
	27	5.846	232.600	5	232.605	5.818	232.471	5	232.476	5.818	232.615	5	232.620	5.816	232.526	5	232.531
	28	8.768	232.583	9	232.592	8.727	232.454	9	232.463	8.727	232.598	9	232.607	8.724	232.509	9	232.518
	29	11.691	232.566	16	232.582	11.636	232.437	16	232.453	11.636	232.581	16	232.597	11.632	232.492	16	232.508
	30	14.614	232.549	21	232.570	14.544	232.419	21	232.440	14.544	232.563	21	232.584	14.541	232.474	21	232.495
	31	17.537	232.532	22	232.554	17.453	232.402	22	232.424	17.453	232.546	22	232.568	17.449	232.457	22	232.479
	32	20.459	232.515	19	232.534	20.362	232.385	19	232.404	20.362	232.529	19	232.548	20.357	232.439	19	232.458
	33	23.382	232.498	11	232.509	23.271	232.367	11	232.378	23.271	232.511	11	232.522	23.265	232.422	11	232.433
	34	26.305	232.481	0	232.481	26.180	232.350	0	232.350	26.180	232.494	0	232.494	26.173	232.405	0	232.405
	35	2.691	232.605	0	232.605	2.672	232.474	0	232.474	2.672	232.478	0	232.478	2.672	232.389	0	232.389
	36	5.383	232.589	0	232.589	5.345	232.458	0	232.458	5.345	232.462	0	232.462	5.343	232.373	0	232.373
	37	8.074	232.573	0	232.573	8.017	232.442	0	232.442	8.017	232.446	0	232.446	8.015	232.357	0	232.357



DEAD LOAD DEFLECTION DIAGRAM
N.T.S.

GENERAL NOTES:

- SCREED ELEVATIONS IN TABLE INCLUDE SCREED DLD
- SCREED DLD SHOWN IN TABLE ARE THE ESTIMATED TOTAL DEAD LOAD DEFLECTION IMMEDIATE AND LONGTERM
- TOTAL DEAD LOAD DEFLECTION CALCULATED AS FOLLOWS:
 STAGE 1 - IMMEDIATE DEFLECTION (Δ_1) DUE TO DEAD LOAD OF BOX GIRDERS WITHOUT UPPER LIFT CONCRETE ACTING ON SECTION I (BOX GIRDER WITHOUT UPPER LIFT CONCRETE)
 STAGE 2 - IMMEDIATE DEFLECTION (Δ_2) DUE TO SUPERIMPOSED DEAD LOAD (UPPER LIFT CONCRETE + BARRIERS) ACTING ON SECTION I
 STAGE 3 - LONG TERM (CREEP + SHRINKAGE) DEFLECTION (Δ_3) ACTING ON SECTION II (BOX GIRDER WITH COMPOSITE UPPER LIFT CONCRETE)
 TOTAL DEAD LOAD DEFLECTION = $\Delta_1 + \Delta_2 + \Delta_3$

RECORD DRAWING

B-6021-66

APPROVED BY: *[Signature]* DATE: Dec 18/94

B.M. ELEV.			
NO.	REVISIONS	DATE	BY

DILLON
Consulting Engineers Planners
Environmental Scientists

DESIGNED BY: M.C.R. CHECKED BY: S.S.R.
 DRAWN BY: M.C.R. APPROVED BY: *[Signature]*
 HOR. SCALE: AS SHOWN AUTHORIZED BY: *[Signature]* DATE: 11/19/94
 VERTICAL: AS SHOWN
 ACCEPTED BY: *[Signature]* DATE: 11/19/94

CONSULTANT DRAWING NO. 93-1497-66

THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

PEMBINA HIGHWAY
SOUTH CITY LIMIT RUE DES TRAPPISTES
PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

CITY DRAWING NUMBER: B224-95-66
SHEET OF

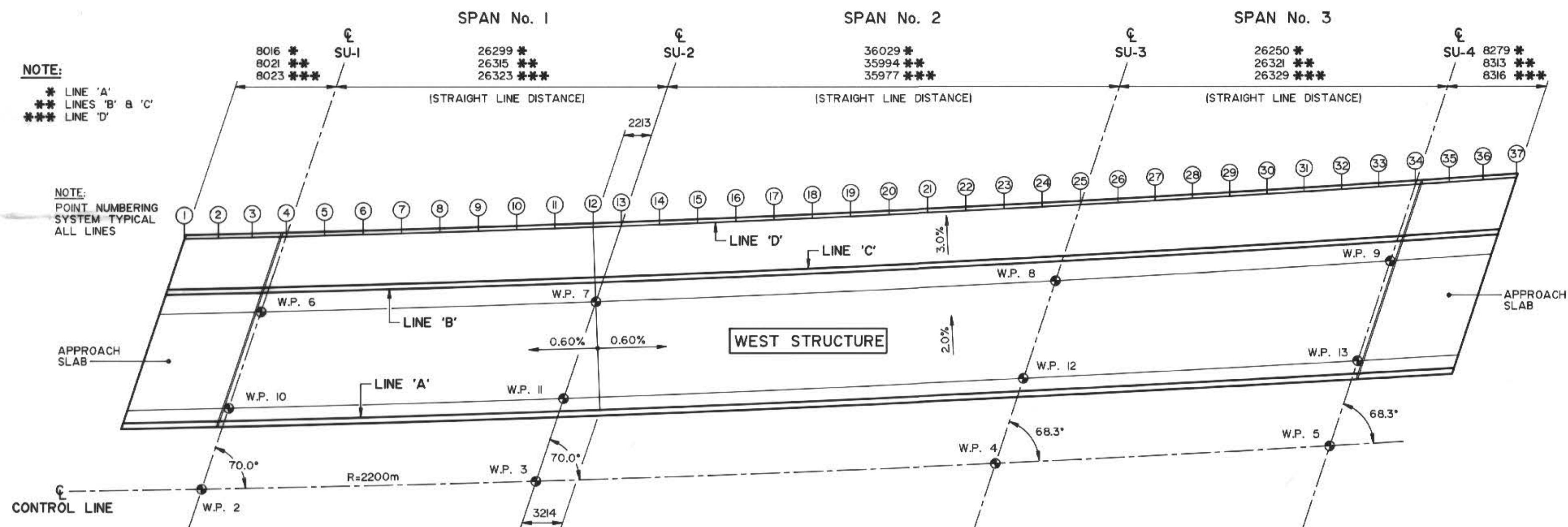
EAST STRUCTURE
SCREED ELEVATIONS

P3072-A-66

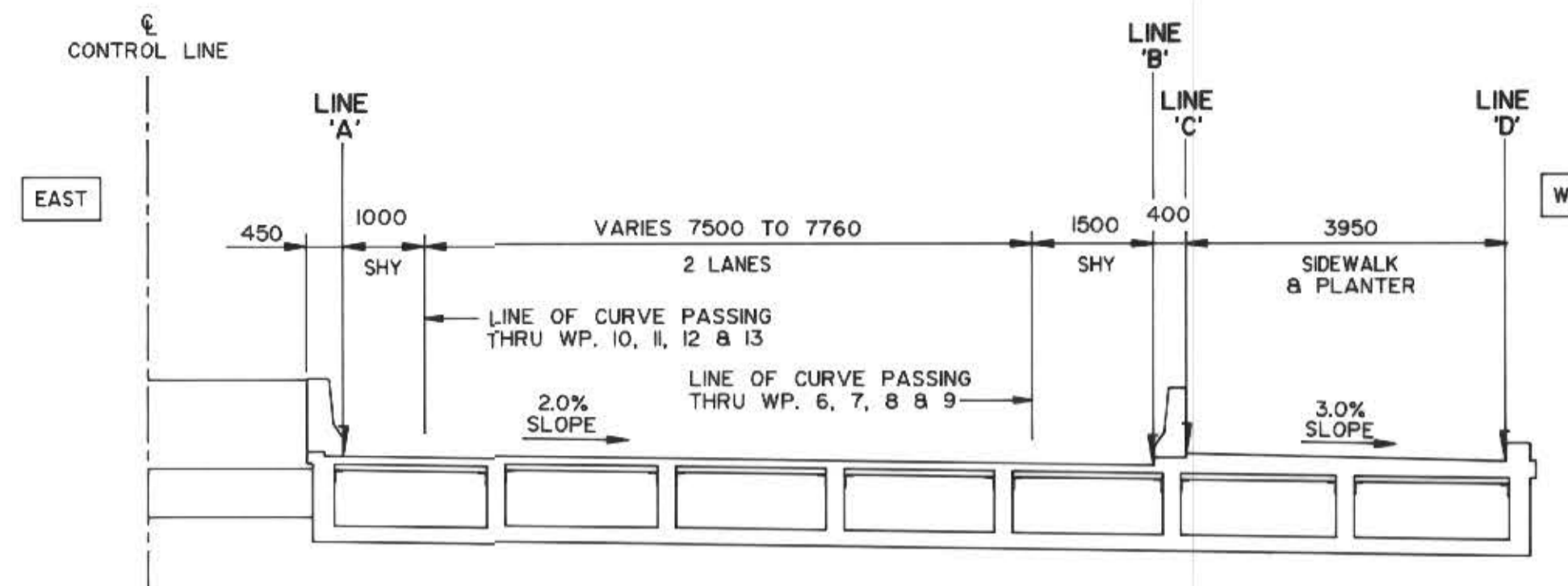


NOTE:
* LINE 'A'
** LINES 'B' & 'C'
*** LINE 'D'

NOTE:
POINT NUMBERING
SYSTEM TYPICAL
ALL LINES



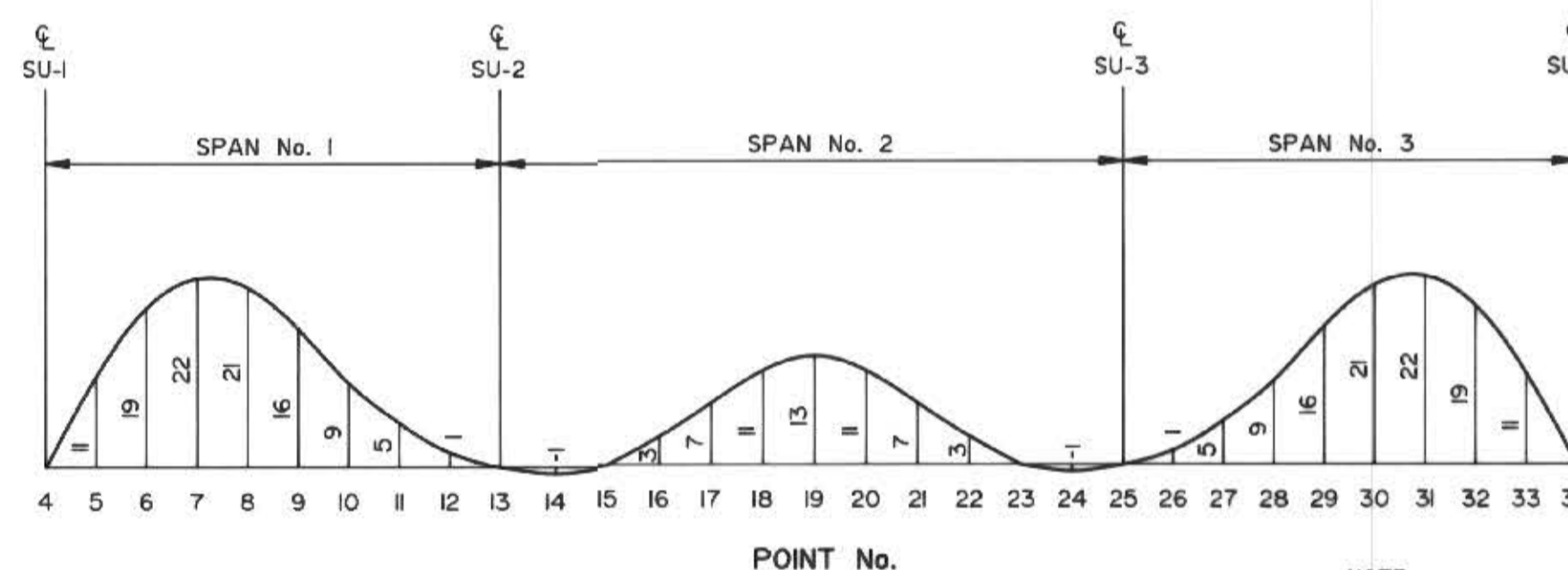
PLAN
SCALE: 1:250



TYPICAL SECTION
(PERPENDICULAR TO ROADWAY)
SCALE: 1:75

SCREED ELEVATIONS & DEFLECTIONS

POINT	LINE "A"				LINE "B"				LINE "C"				LINE "D"			
	LOCATION ON SPAN (m)	DESIGN ELEVATION (m)	SCREED DLD (mm)	SCREED ELEVATION (m)	LOCATION ON SPAN (m)	DESIGN ELEVATION (m)	SCREED DLD (mm)	SCREED ELEVATION (m)	LOCATION ON SPAN (m)	DESIGN ELEVATION (m)	SCREED DLD (mm)	SCREED ELEVATION (m)	LOCATION ON SPAN (m)	DESIGN ELEVATION (m)	SCREED DLD (mm)	SCREED ELEVATION (m)
S. APP. 1	0.000	232.887	0	232.887	0.000	232.708	0	232.708	0.000	232.711	0	232.711	0.000	232.545	0	232.545
2	2.672	232.903	0	232.903	2.674	232.724	0	232.724	2.674	232.727	0	232.727	2.674	232.561	0	232.561
3	5.344	232.919	0	232.919	5.347	232.740	0	232.740	5.347	232.743	0	232.743	5.349	232.577	0	232.577
4	0.000	232.795	0	232.795	0.000	232.616	0	232.616	0.000	232.759	0	232.759	0.000	232.649	0	232.649
5	2.922	232.813	11	232.824	2.924	232.634	11	232.645	2.924	232.777	11	232.788	3.014	232.667	11	232.678
6	5.844	232.830	19	232.849	5.848	232.651	19	232.670	5.848	232.794	19	232.813	6.028	232.685	19	232.704
7	8.766	232.846	22	232.870	8.772	232.669	22	232.691	8.772	232.812	22	232.834	9.041	232.703	22	232.725
8	11.688	232.866	21	232.887	11.696	232.686	21	232.707	11.696	232.829	21	232.850	12.055	232.722	21	232.743
9	14.611	232.883	16	232.899	14.619	232.704	16	232.720	14.619	232.847	16	232.863	15.069	232.740	16	232.756
10	17.533	232.901	9	232.910	17.543	232.721	9	232.730	17.543	232.864	9	232.873	18.083	232.758	9	232.767
11	20.455	232.919	5	232.924	20.467	232.739	5	232.744	20.467	232.882	5	232.887	21.096	232.776	5	232.781
12	23.377	232.936	1	232.937	23.391	232.756	1	232.757	23.391	232.899	1	232.900	24.110	232.794	1	232.795
13	0.000	232.954	0	232.954	0.000	232.769	0	232.769	0.000	232.909	0	232.909	0.000	232.781	0	232.781
14	3.214	232.973	-1	232.972	3.000	232.751	-1	232.750	3.000	232.891	-1	232.890	2.998	232.763	-1	232.762
15	6.197	232.955	0	232.955	5.999	232.733	0	232.733	5.999	232.873	0	232.873	5.996	232.745	0	232.745
16	9.180	232.937	3	232.940	8.999	232.715	3	232.718	8.999	232.855	3	232.858	8.994	232.727	3	232.730
17	12.164	232.919	7	232.926	11.998	232.696	7	232.703	11.998	232.837	7	232.844	11.992	232.709	7	232.716
18	15.147	232.901	11	232.912	14.998	232.678	11	232.689	14.998	232.819	11	232.830	14.990	232.691	11	232.702
19	18.130	232.883	13	232.896	17.997	232.660	13	232.673	17.997	232.801	13	232.814	17.988	232.673	13	232.686
20	21.113	232.865	11	232.876	20.997	232.642	11	232.653	20.997	232.782	11	232.793	20.987	232.654	11	232.665
21	24.096	232.847	7	232.854	23.996	232.624	7	232.631	23.996	232.764	7	232.771	23.985	232.636	7	232.643
22	27.079	232.829	3	232.832	26.996	232.606	3	232.609	26.996	232.746	3	232.749	26.983	232.618	3	232.621
23	30.063	232.811	0	232.811	29.995	232.587	0	232.587	29.995	232.728	0	232.728	29.981	232.600	0	232.600
24	33.046	232.793	-1	232.792	32.995	232.569	-1	232.568	32.995	232.710	-1	232.709	32.979	232.582	-1	232.581
25	0.000	232.775	0	232.775	0.000	232.551	0	232.551	0.000	232.692	0	232.692	0.000	232.564	0	232.564
26	2.917	232.758	1	232.759	2.925	232.533	1	232.534	2.925	232.674	1	232.675	2.925	232.546	1	232.547
27	5.833	232.740	5	232.745	5.849	232.516	5	232.521	5.849	232.657	5	232.662	5.851	232.529	5	232.534
28	8.750	232.723	9	232.732	8.774	232.498	9	232.507	8.774	232.639	9	232.648	8.776	232.511	9	232.520
29	11.667	232.706	16	232.722	11.698	232.480	16	232.496	11.698	232.621	16	232.637	11.702	232.493	16	232.509
30	14.583	232.688	21	232.709	14.623	232.463	21	232.484	14.623	232.604	21	232.625	14.627	232.476	21	232.497
31	17.500	232.671	22	232.693	17.547	232.445	22	232.467	17.547	232.586	22	232.608	17.553	232.458	22	232.480
32	20.417	232.654	19	232.673	20.472	232.427	19	232.446	20.472	232.568	19	232.587	20.478	232.440	19	232.459
33	23.333	232.636	11	232.647	23.396	232.410	11	232.421	23.396	232.551	11	232.562	23.404	232.423	11	232.434
34	26.250	232.619	0	232.619	26.321	232.392	0	232.392	26.321	232.533	0	232.533	26.329	232.405	0	232.405
35	2.760	232.742	0	232.742	2.771	232.515	0	232.515	2.771	232.516	0	232.516	2.772	232.388	0	232.388
36	5.519	232.726	0	232.726	5.542	232.499	0	232.499	5.542	232.500	0	232.500	5.544	232.372	0	232.372
37	8.279	232.709	0	232.709	8.313	232.482	0	232.482	8.313	232.483	0	232.483	8.316	232.355	0	232.355



DEAD LOAD DEFLECTION DIAGRAM
N.T.S.

NOTE:
THESE NUMBERS REPRESENT THE TOTAL
ESTIMATED DEAD LOAD DEFLECTION
(IMMEDIATE PLUS LONG TERM)

GENERAL NOTES:

- SCREED ELEVATIONS IN TABLE INCLUDE SCREED DLD
- SCREED DLD SHOWN IN TABLE ARE THE ESTIMATED TOTAL DEAD LOAD DEFLECTION (IMMEDIATE AND LONGTERM)
- TOTAL DEAD LOAD DEFLECTION CALCULATED AS FOLLOWS:
 STAGE 1 - IMMEDIATE DEFLECTION (Δ_1) DUE TO DEAD LOAD OF BOX GIRDERS WITHOUT UPPER LIFT CONCRETE ACTING ON SECTION I (BOX GIRDER WITHOUT UPPER LIFT CONCRETE)
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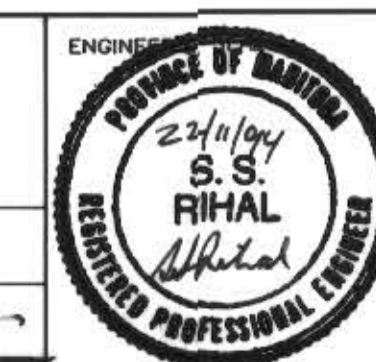
RECORD DRAWING
APPROVED BY: *[Signature]* DATE: Dec 18/98

B-6021-67

B.M. ELEV.			
NO. REVISIONS	DATE	BY	



DESIGNED BY	M.C.R.	CHECKED BY	S.S.R.
DRAWN BY	M.C.R.	APPROVED BY	<i>[Signature]</i>
HOR. SCALE	AS SHOWN	AUTHORIZED BY	<i>[Signature]</i> DATE: 11/12/98
VERTICAL		ACCEPTED BY	<i>[Signature]</i> DATE: 11/12/98



CONSULTANT DRAWING NO.
93-1497-67

THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

PEMBINA HIGHWAY
SOUTH CITY LIMIT RUE DES TRAPPISTES
PEMBINA HIGHWAY BRIDGE OVER LA SALLE RIVER

WEST STRUCTURE
SCREED ELEVATIONS

CITY DRAWING NUMBER B224-95-67
SHEET OF
P3072-A-67