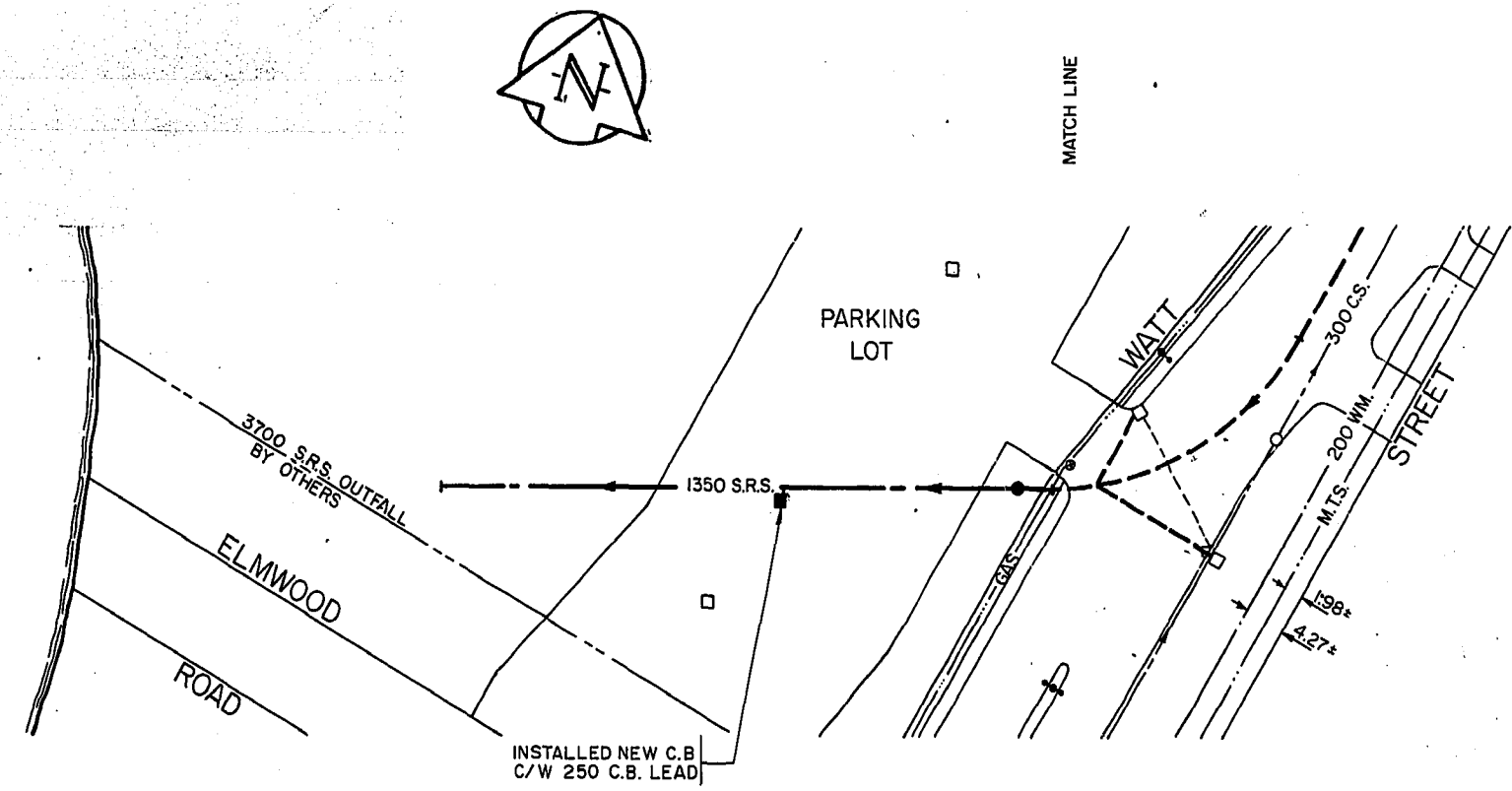
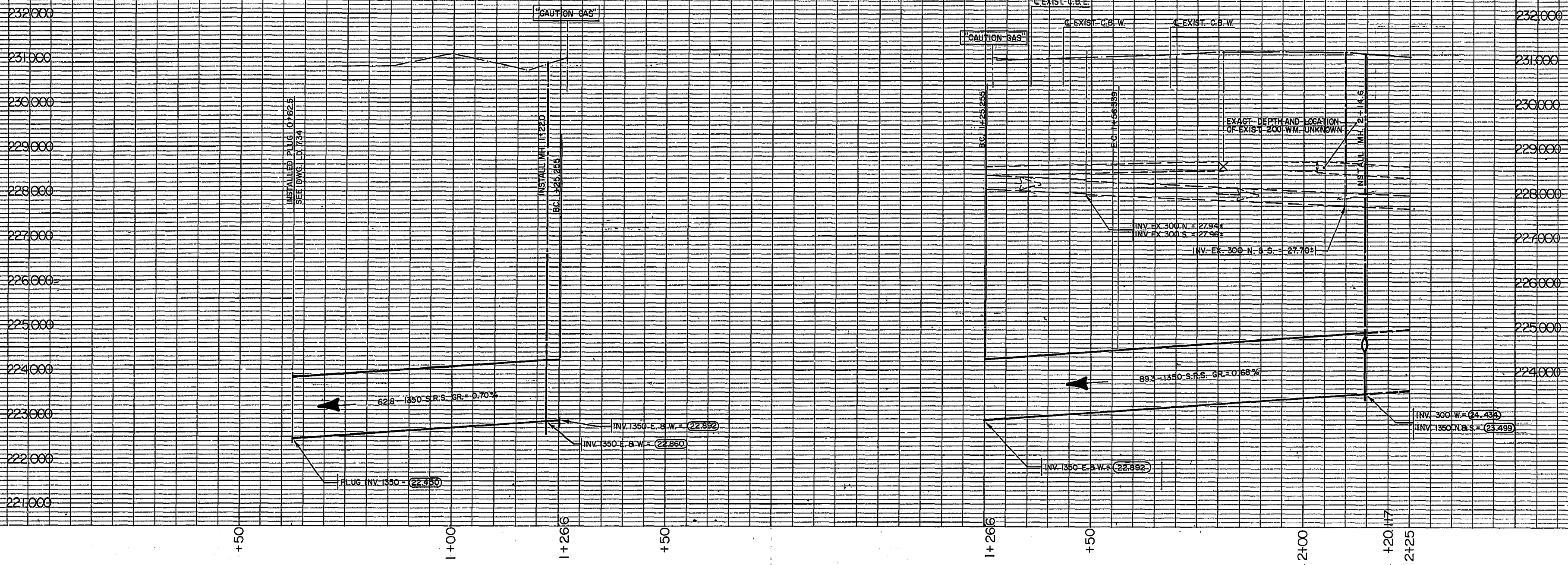
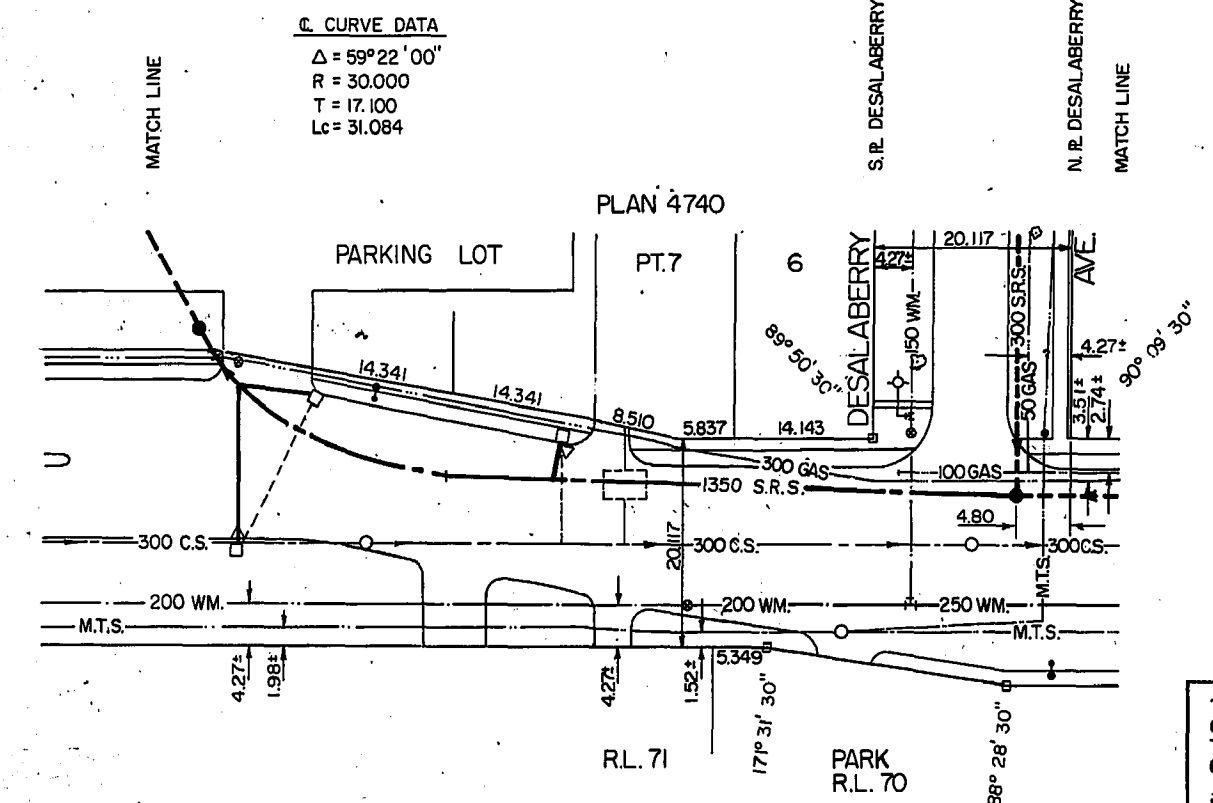


APPENDIX A

RECORD DRAWING INFORMATION



1350 mm STORM RELIEF SEWER



WATT STREET

THE WORK OF THIS CONTRACT WAS CONSTRUCTED IN ACCORDANCE WITH THE SEPTEMBER 1982 STANDARD CONSTRUCTION SPECIFICATIONS BY BORLAND CONSTRUCTION LIMITED DURING THE MONTHS OF JAN. 75 TO AUG. 75

REVISED AS CONSTRUCTED
(APPLIES TO THE STORM RELIEF SEWER AND RELATED CONNECTIONS ONLY)
DATE AUG. 75 BY P.M.S.
CHECKED BY

150 mm W.M.	WATERMAIN	150 mm W.M.	STREET LIGHTING	150 mm W.M.	WATERMAIN	150 mm W.M.	LOCATION APPROVED
HYDRANT VALVE	HYDRANT VALVE	CONCRETE	CONCRETE	HYDRANT VALVE	HYDRANT VALVE	CONCRETE	UNDERGROUND STRUCTURES
300 mm L.D.S.	LAND DRAINAGE SEWER	300 mm L.D.S.	ASPHALT	300 mm L.D.S.	LAND DRAINAGE SEWER	300 mm L.D.S.	
250 mm W.W.S.	WASTE WATER SEWER	250 mm W.W.S.	PROPERTY LINE	250 mm W.W.S.	WASTE WATER SEWER	250 mm W.W.S.	
MANHOLE	MANHOLE	450 mm S.R.S.	SURVEY BAR	450 mm S.R.S.	STORM RELIEF SEWER	450 mm S.R.S.	
CATCH BASIN	CATCH BASIN	450 mm S.R.S.	STORM RELIEF SEWER	450 mm S.R.S.	STORM RELIEF SEWER	450 mm S.R.S.	
CURB INLET	CURB INLET	450 mm S.R.S.	STORM RELIEF SEWER	450 mm S.R.S.	STORM RELIEF SEWER	450 mm S.R.S.	
JUNCTIONS	JUNCTIONS	450 mm S.R.S.	STORM RELIEF SEWER	450 mm S.R.S.	STORM RELIEF SEWER	450 mm S.R.S.	
CULVERT	CULVERT	450 mm S.R.S.	STORM RELIEF SEWER	450 mm S.R.S.	STORM RELIEF SEWER	450 mm S.R.S.	
GAS	GAS	450 mm S.R.S.	STORM RELIEF SEWER	450 mm S.R.S.	STORM RELIEF SEWER	450 mm S.R.S.	
EXISTING	LEGEND-PLAN	PROPOSED	LEGEND-PLAN	PROPOSED	EXISTING	LEGEND-PROFILE	PROPOSED

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.

DESIGNED BY: G.S. & W.R.D. DRAWN BY: G.G.P.

CHECKED BY: W.R.D. & R.R.F. DATE: 84-10-01

APPROVED BY: R.R. Foster DATE: 84-10-15

THE CITY OF WINNIPEG

WORKS & OPERATIONS DIVISION

WATERWORKS, WASTE & DISPOSAL DEPARTMENT

MUNROE, ROLAND & HART SEWER RELIEF PROJECT - CONTRACT 2

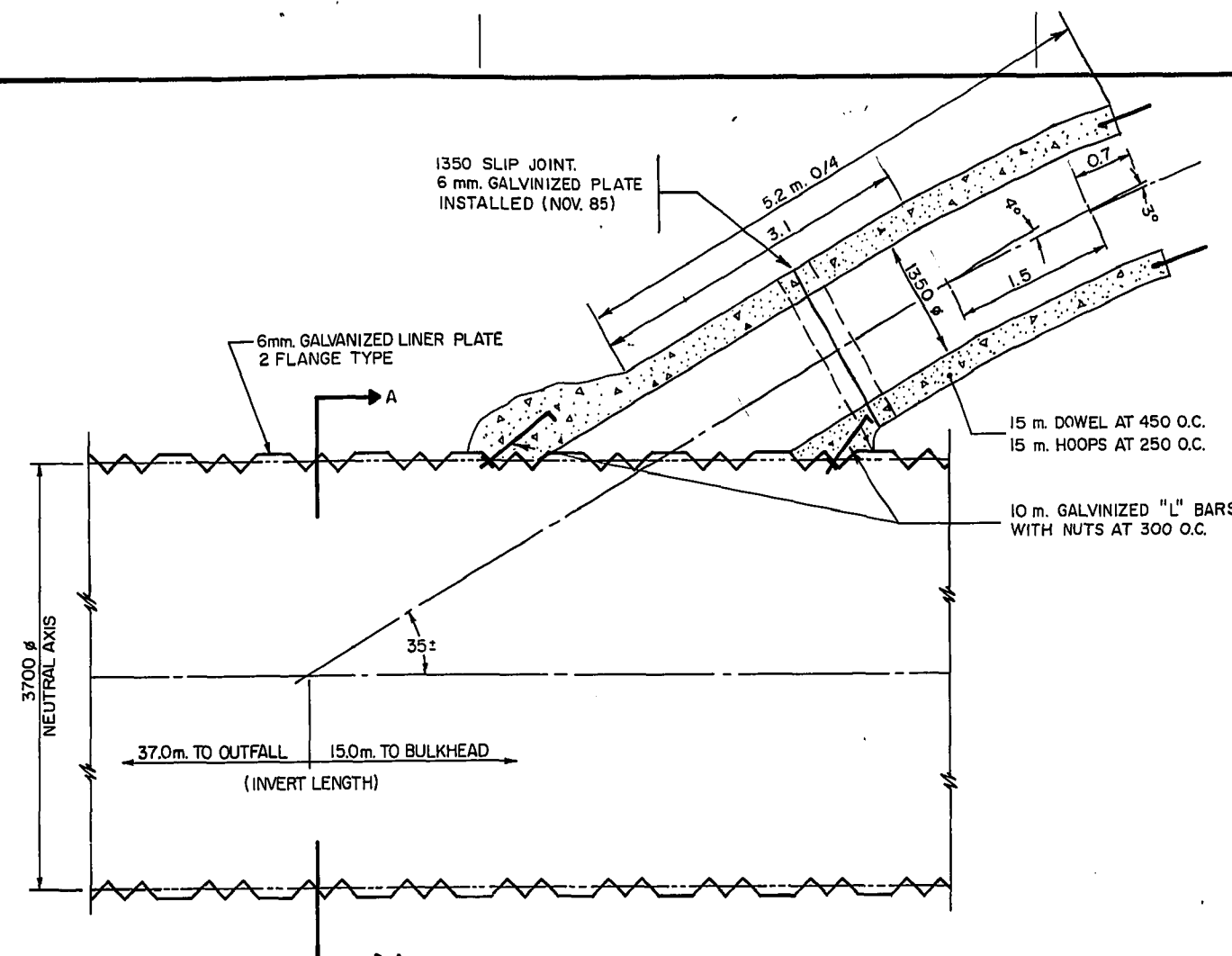
1350mm STORM RELIEF SEWER PROPOSED OUTFALL TO WATT STREET

WATT STREET 30 METRES SOUTH OF DESALABERRY AVE. TO DESALABERRY AVE.

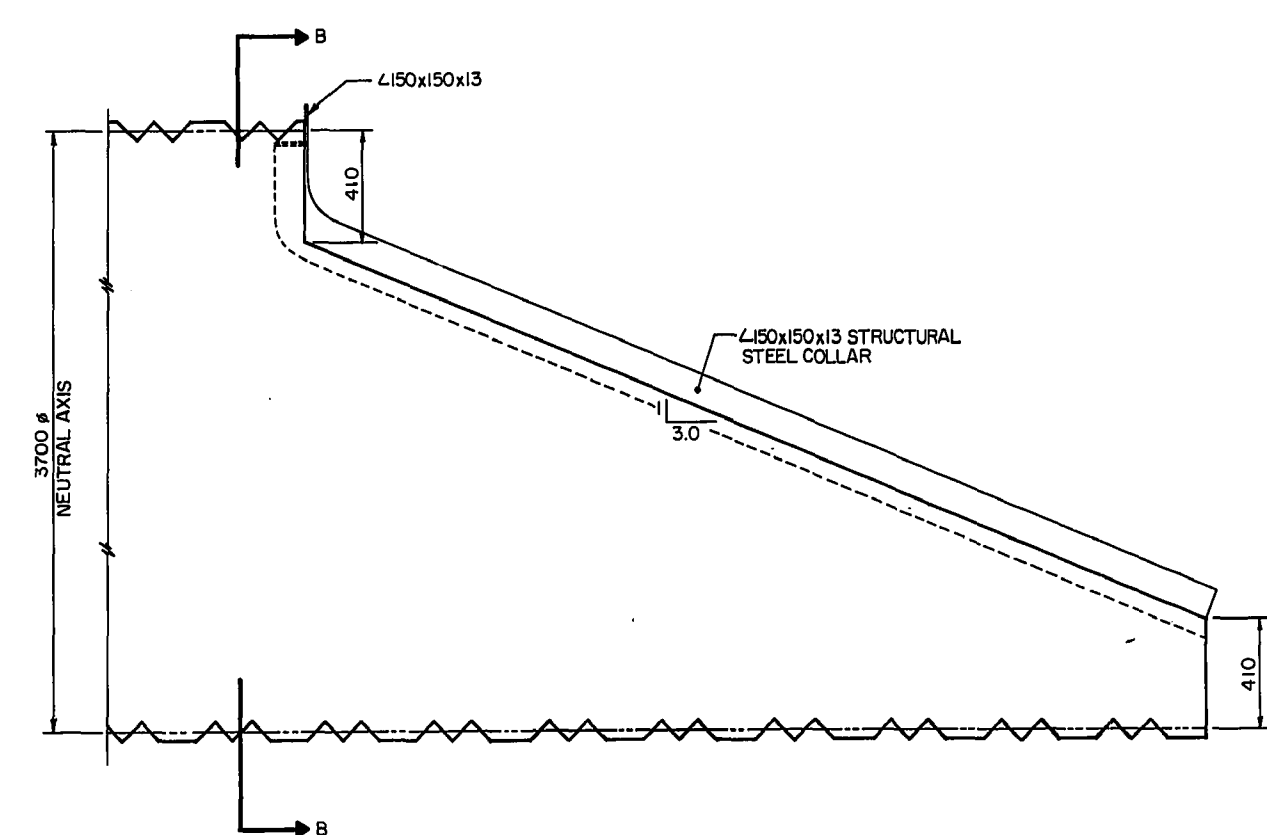
RELEASED FOR CONSTRUCTION: DATE: 84.11.08

SCALE: HORIZ. 1:500 VERT. 1:50

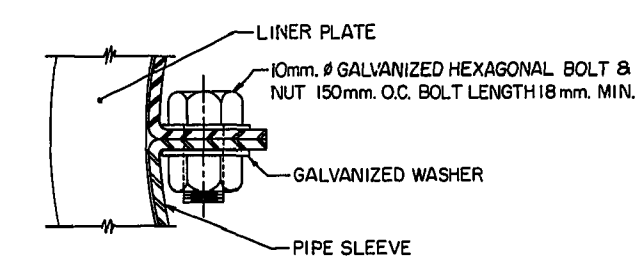
DRAWING NO: LD-722



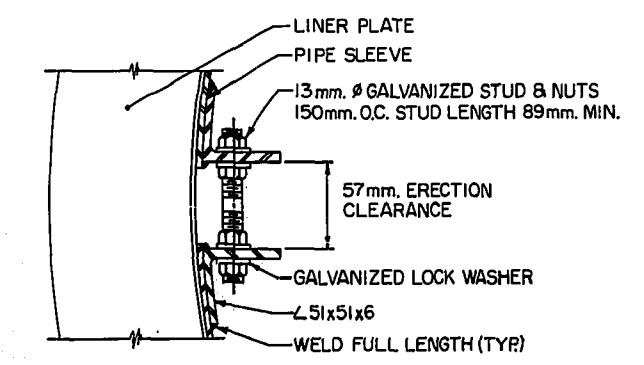
MONOLITHIC 'WYE' DETAIL



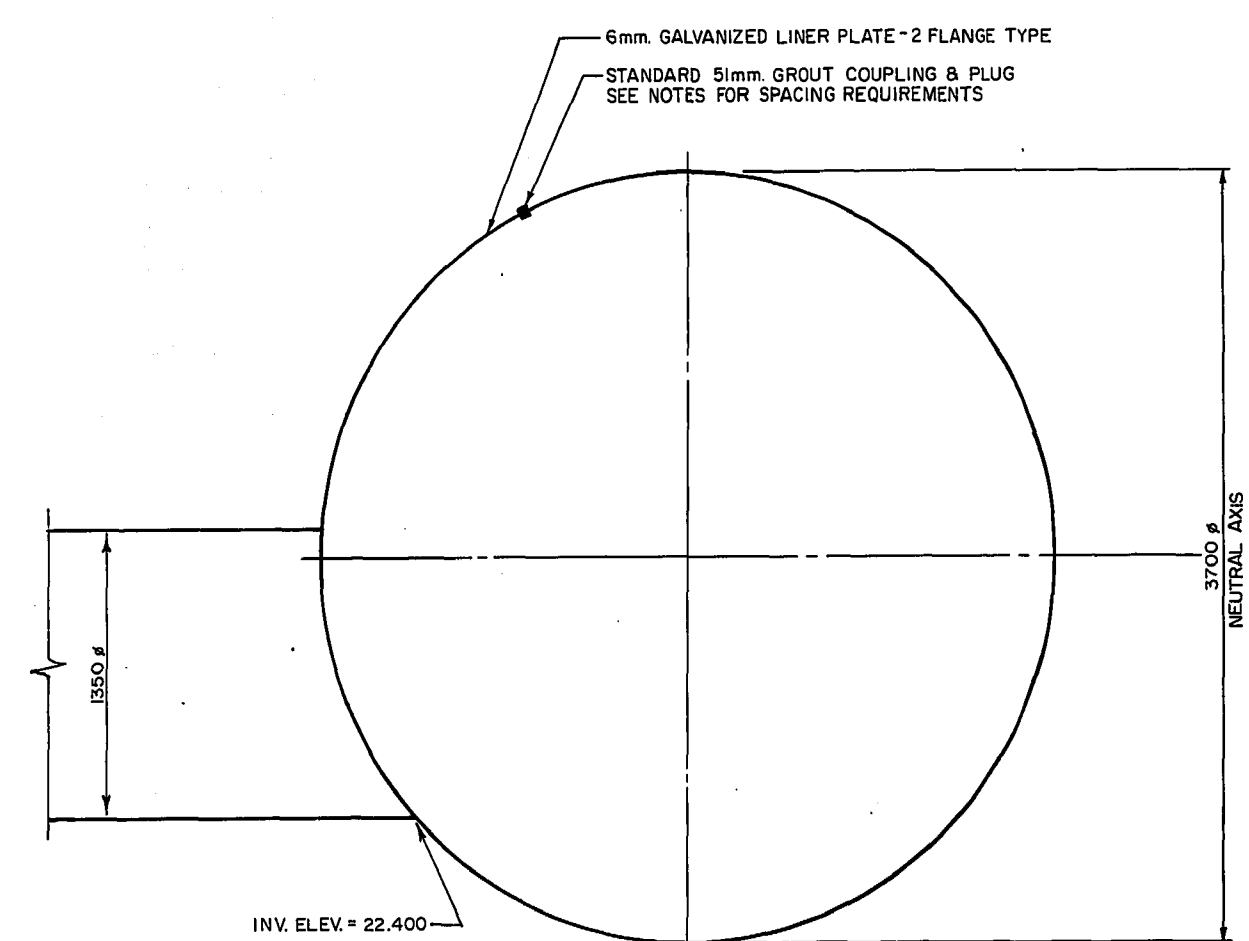
OUTFALL END SECTION



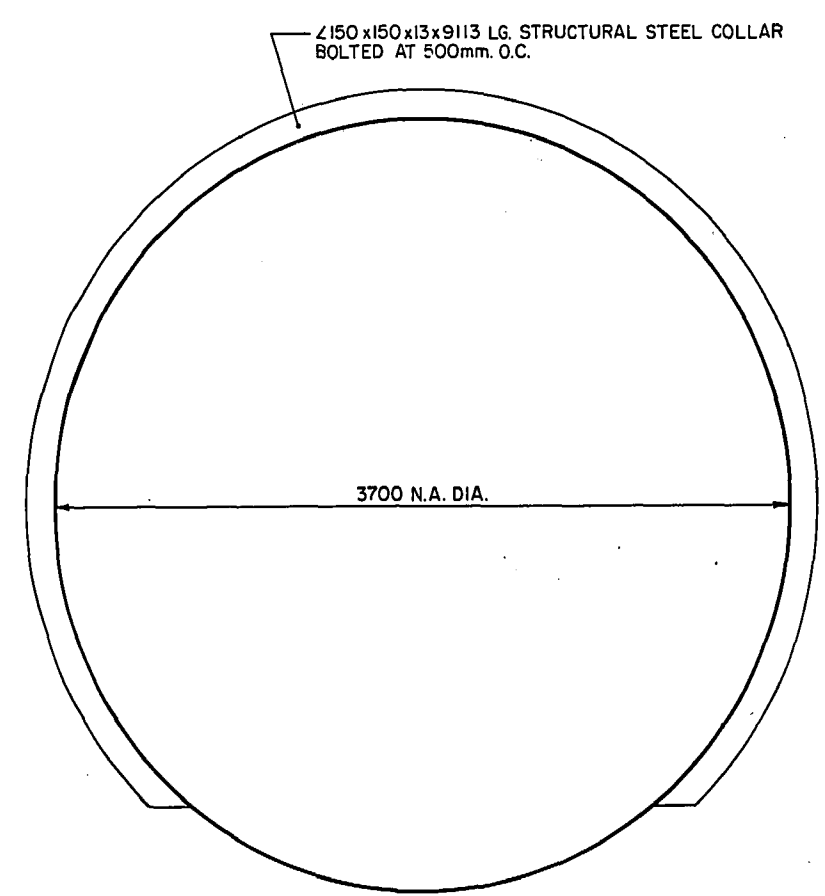
DETAIL A



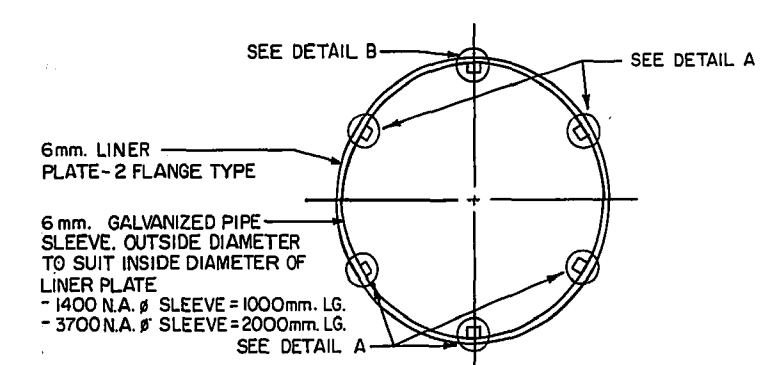
DETAIL B



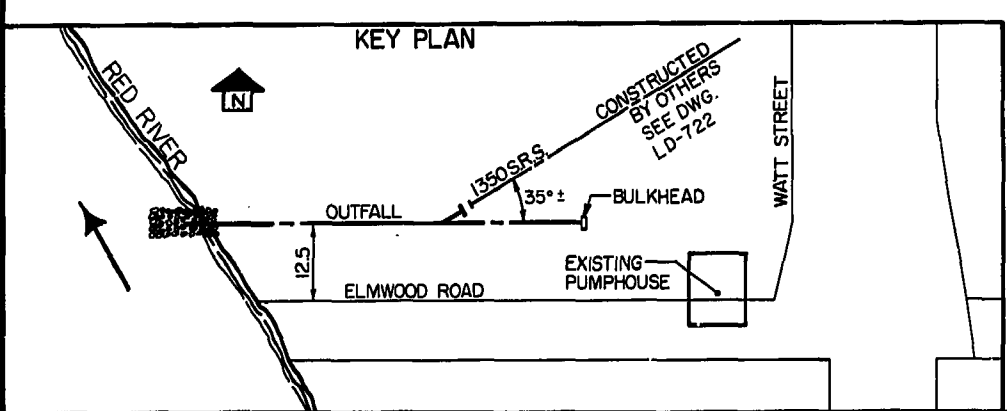
SECTION A-A



SECTION B-B



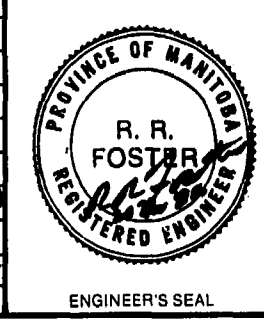
CIRCULAR SLIP JOINT DETAIL



NOTES:

1. N.A. - NEUTRAL AXIS
2. ALL MATERIALS GALVANIZED
3. GROUT HOLE SPACING AND ARRANGEMENT NO LESS THAN ONE HOLE PER QUADRANT FOR EACH 3.0m. MEASURED ALONG AXIS OF SEWER
4. NUTS AND BOLTS CONFORM TO SAE GRADE 5 SPECIFICATIONS AND ASTM A-449 STANDARDS

NO.	REVISIONS	DATE	APP.
2	REVISED AS CONSTRUCTED	85-07-28	
1	PIPE GEOMETRICS REVISED		
	AS PER ADDENDUM NO. 1		
	CONTRACT 5A	84-12-14	
0	ISSUED FOR TENDER	84-11-23	
0	ISSUED FOR APPROVAL	84-11-20	
NO	REVISIONS	DATE	APP.



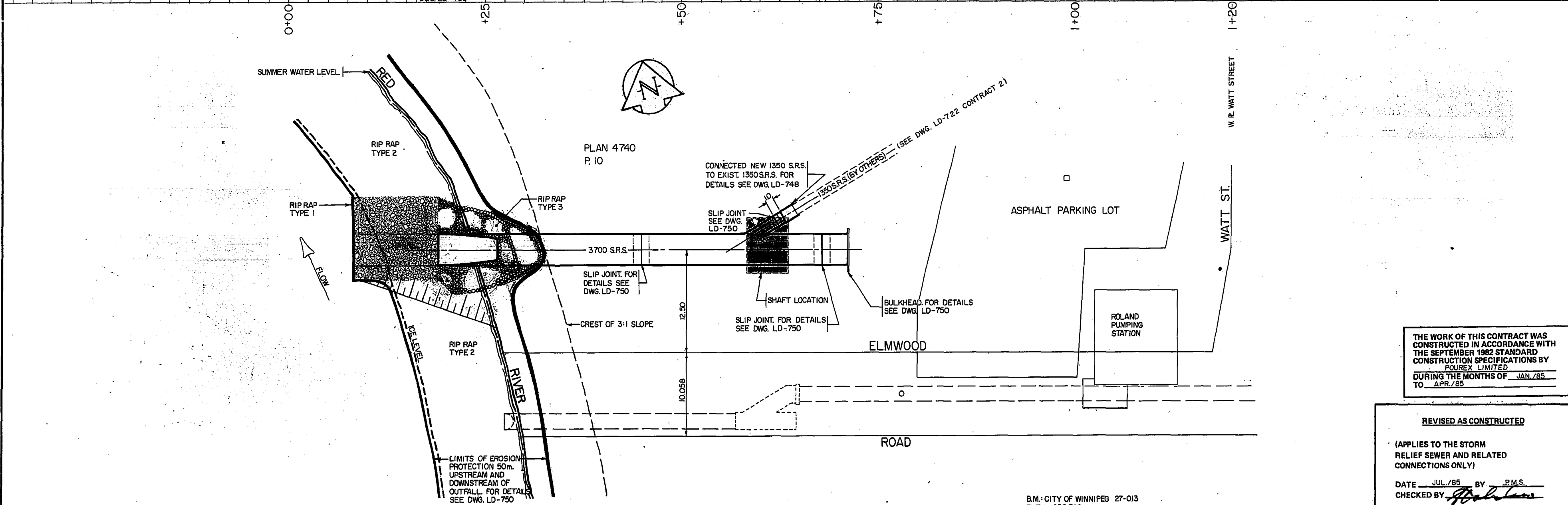
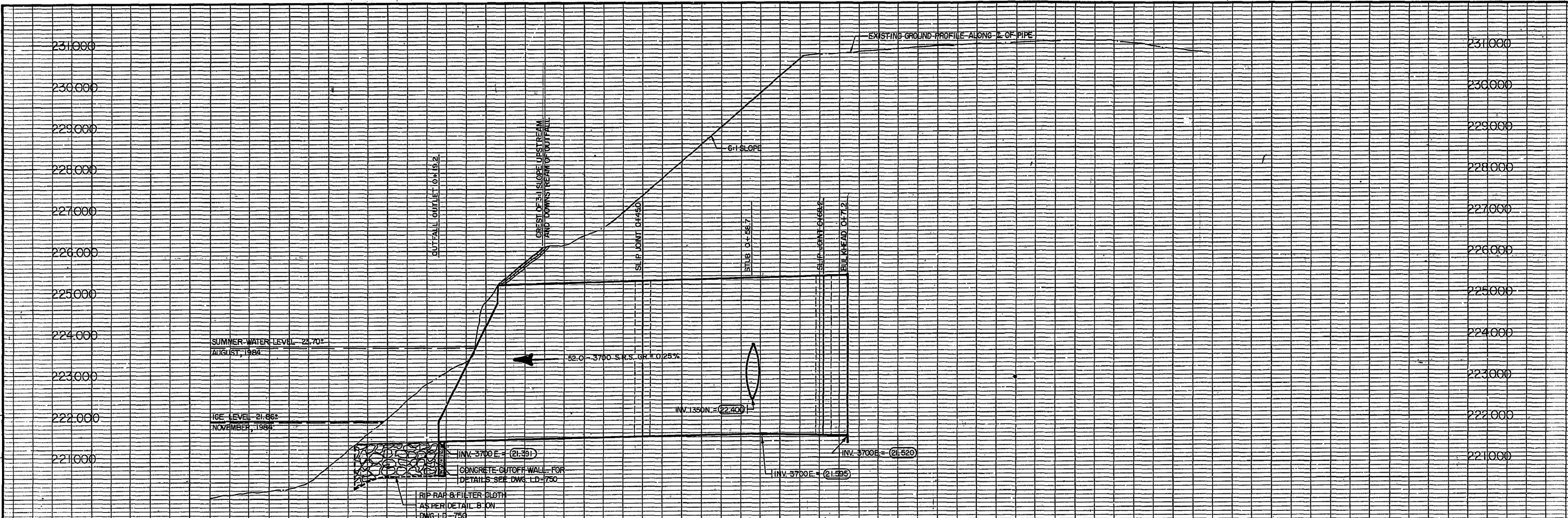
W. L. WARDROP & ASSOCIATES LTD. ENGINEERING CONSULTANTS	
DESIGNED BY: G.P.H. & W.R.D.	DRAWN BY: G.G.P.
CHECKED BY: W.R.D. & R.R.F.	DATE: 84-11-19
APPROVED BY: R.R. Foster	DATE: 20 Nov '84

THE WORK OF THIS CONTRACT WAS CONSTRUCTED IN ACCORDANCE WITH THE SEPTEMBER 1982 STANDARD CONSTRUCTION SPECIFICATIONS BY POREX LIMITED DURING THE MONTHS OF JAN/85 TO APR/85

REVISED AS CONSTRUCTED
(APPLIES TO THE STORM RELIEF SEWER AND RELATED CONNECTIONS ONLY)
DATE JUL/85 BY P.M.S.
CHECKED BY *[Signature]*

THE CITY OF WINNIPEG
WORKS & OPERATIONS DIVISION
WATERWORKS, WASTE & DISPOSAL DEPARTMENT

MUNROE, ROLAND & HART - CONTRACT 5A
SEWER RELIEF PROJECT
OUTFALL PIPING LINER PLATE DETAILS
RELEASED FOR CONSTRUCTION: *[Signature]* DATE: 1984 11 23
SCALE: NOT TO SCALE
DRAWING NO: LD-748



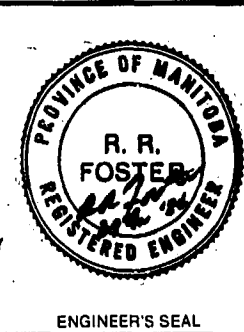
THE WORK OF THIS CONTRACT WAS
CONSTRUCTED IN ACCORDANCE WITH
THE SEPTEMBER 1982 STANDARD
CONSTRUCTION SPECIFICATIONS BY
POUREX LIMITED
DURING THE MONTHS OF JAN /85
TO APR /85

REVISED AS CONSTRUCTED
(APPLIES TO THE STORM
RELIEF SEWER AND RELATED
CONNECTIONS ONLY)
DATE JUL /85 BY P.M.S.
CHECKED BY *[Signature]*

150 mm W.M.	WATERMAIN	150 mm W.M.	STREET LIGHTING	150 mm W.M.	WATERMAIN
HYDRANT	HYDRANT	CONCRETE	M.T.S.	HYDRANT	HYDRANT
VALVE	VALVE	ASPHALT	CONCRETE	VALVE	VALVE
300 mm L.D.S.	LAND DRAINAGE SEWER	250 mm W.W.S.	PROPERTY LINE	300 mm L.D.S.	LAND DRAINAGE SEWER
250 mm W.W.S.	WASTE WATER SEWER	450 mm S.R.S.	SURVEY BAR	250 mm W.W.S.	WASTE WATER SEWER
MANHOLE	MANHOLE	450 mm S.R.S.	STORM RELIEF SEWER	450 mm S.R.S.	STORM RELIEF SEWER
CATCH BASIN	CATCH BASIN	450 mm S.R.S.	(SRS(REFERENCE ONLY))	450 mm S.R.S.	STORM RELIEF SEWER
CURB INLET	CURB INLET	TRAFFIC SENSOR	TRAFFIC SENSOR	450 mm S.R.S.	STORM RELIEF SEWER
JUNCTIONS	JUNCTIONS	TRAFFIC SIGNAL	TRAFFIC SIGNAL	450 mm S.R.S.	STORM RELIEF SEWER
CULVERT	CULVERT			450 mm S.R.S.	STORM RELIEF SEWER
GAS	GAS			450 mm S.R.S.	STORM RELIEF SEWER
EXISTING	LEGEND-PLAN	PROPOSED	EXISTING	LEGEND-PROFILE	PROPOSED

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.
CONFIRMATION OF EXISTENCE AND EXACT
LOCATION OF ALL SERVICES MUST BE
OBTAINED FROM THE INDIVIDUAL UTILITIES
BEFORE PROCEEDING WITH CONSTRUCTION.

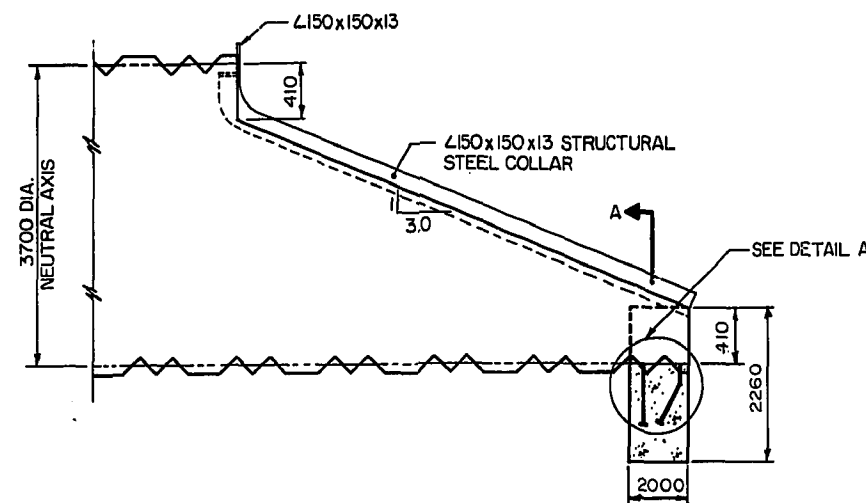
2	REVISED AS CONSTRUCTED	85-07-29	
1	REVISED TO CIRCULAR S.R.S.		
	AS PER ADDENDUM NO. 1	84-12-14	
0	ISSUED FOR TENDER	84-12-07	
0	ISSUED FOR APPROVAL	84-11-28	
NO	REVISIONS	DATE	APP.



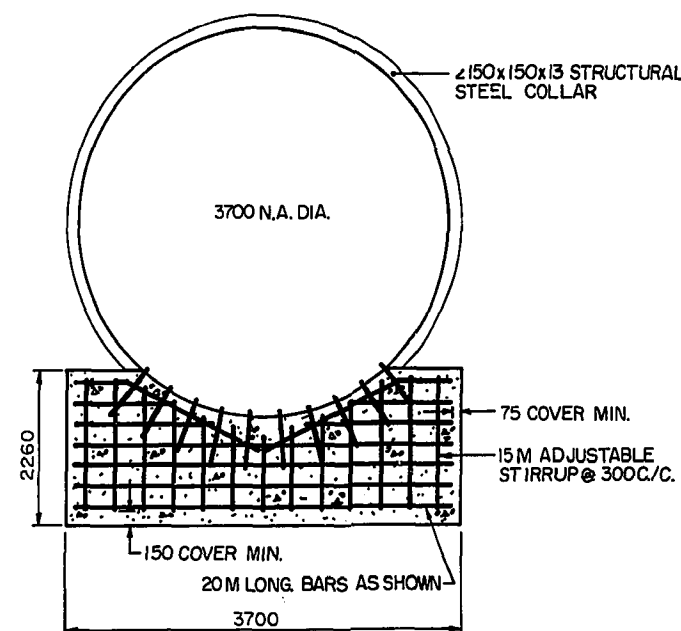
W. L. WARDROP & ASSOCIATES LTD.
ENGINEERING CONSULTANTS
DESIGNED BY: G.R.H. & W.R.D.
DRAWN BY: G.G.P.
CHECKED BY: W.R.D. & R.R.F.
DATE: 84-11-23
APPROVED BY: *[Signature]*
DATE: 84-11-28

THE CITY
OF
WINNIPEG
WATERWORKS, WASTE
& DISPOSAL DEPARTMENT
WORKS & OPERATIONS
DIVISION

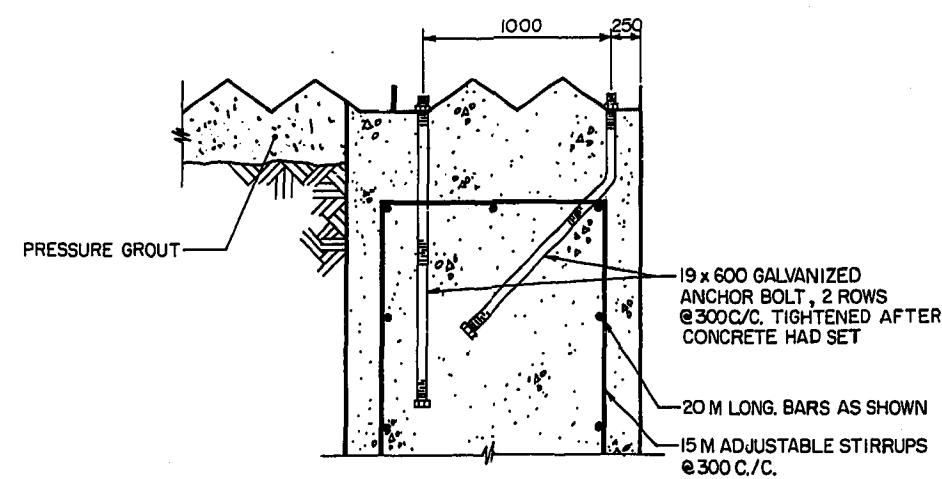
MUNROE, ROLAND & HART
SEWER RELIEF PROJECT - CONTRACT 5A
3700mm. OUTFALL
RED RIVER TO WATT STREET
STATION 0+00 TO STATION 1+20
RELEASED FOR CONSTRUCTION: *[Signature]* DATE: 84-12-07
SCALE: HORIZ: 1:250 VERT: 1:50
DRAWING NO: LD-749



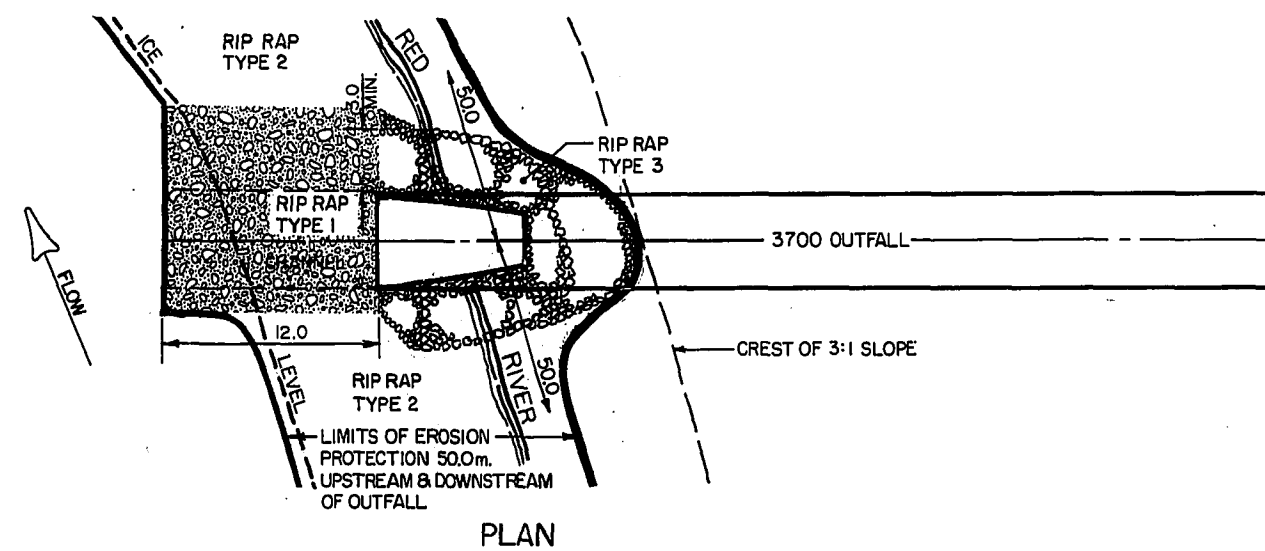
OUTFALL END SECTION



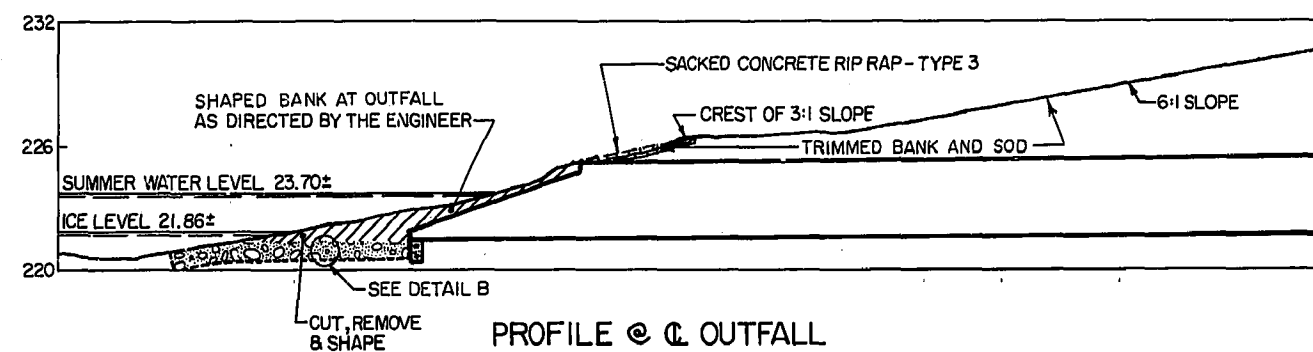
SECTION A



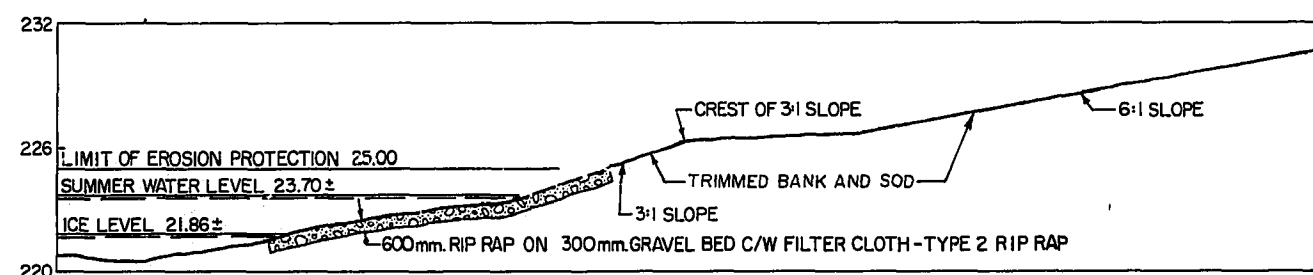
DETAIL A



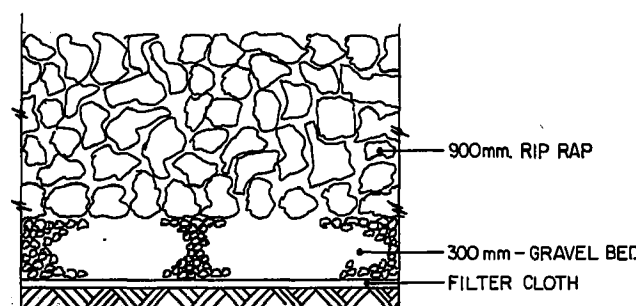
PLAN



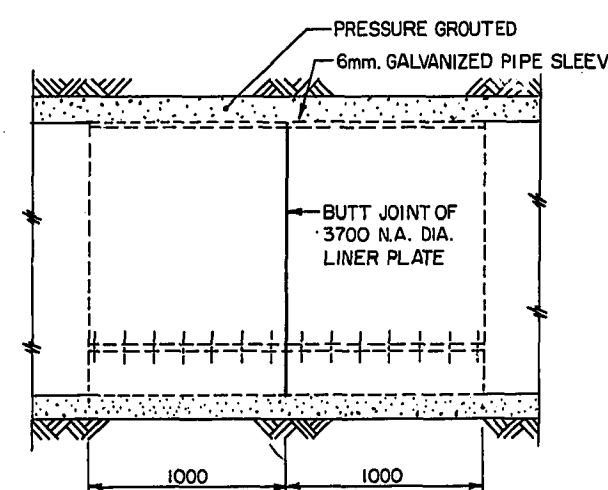
PROFILE @ OUTFALL



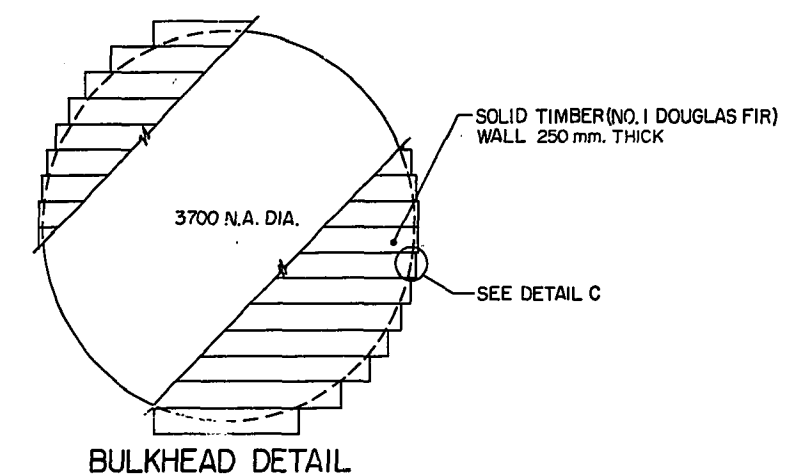
PROFILE 50m UPSTREAM & DOWNSTREAM OF OUTFALL



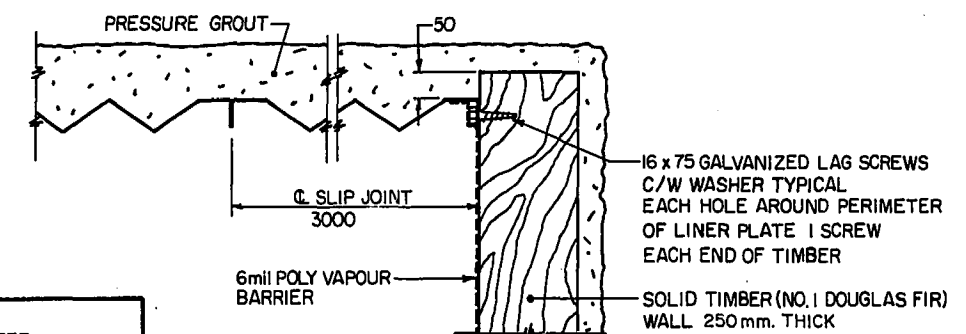
DETAIL B
TYPE I RIP RAP



SLIP JOINT DETAIL



BULKHEAD DETAIL



DETAIL C

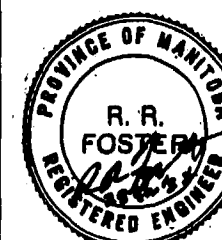
REVISED AS CONSTRUCTED

(APPLIES TO THE STORM
RELIEF SEWER AND RELATED
CONNECTIONS ONLY)

DATE JUL/85 BY P.M.S.
CHECKED BY *[Signature]*

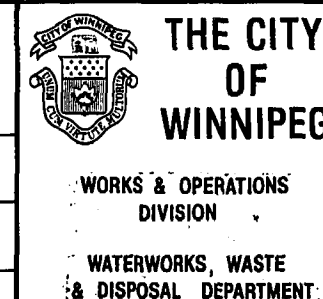
THE WORK OF THIS CONTRACT WAS
CONSTRUCTED IN ACCORDANCE WITH
THE SEPTEMBER 1982 STANDARD
CONSTRUCTION SPECIFICATIONS BY
POUREX LIMITED
DURING THE MONTHS OF JAN/85
TO APR/85

NO.	REVISIONS	DATE	APP.
2	REVISED AS CONSTRUCTED	85-07-25	
1	REVISED TO CIRCULAR S.R.S.		
	AS PER ADDENDUM NO.1	84-12-14	
0	ISSUED FOR TENDER	84-12-07	
0	ISSUED FOR APPROVAL	84-11-28	

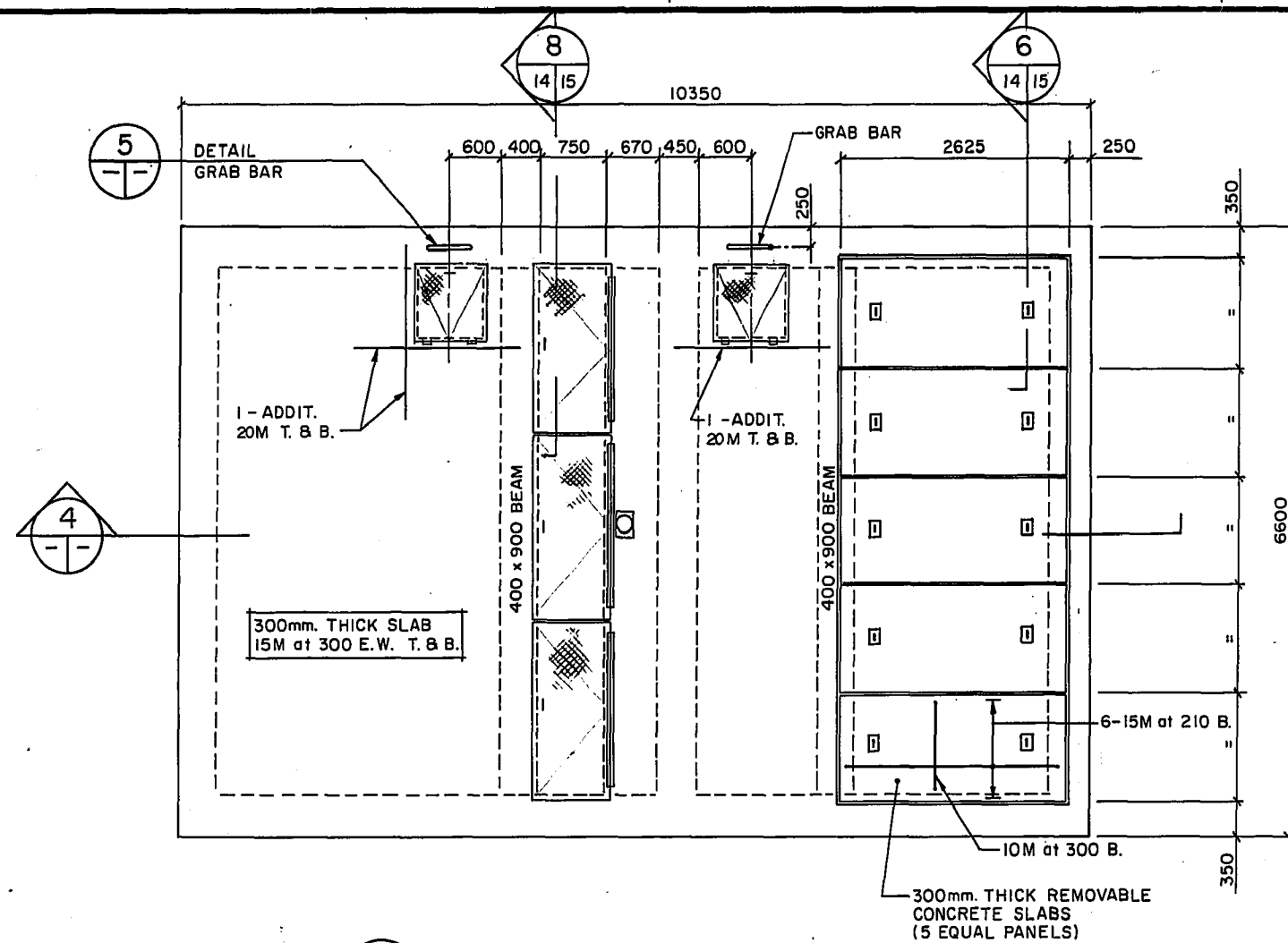


ENGINEER'S SEAL

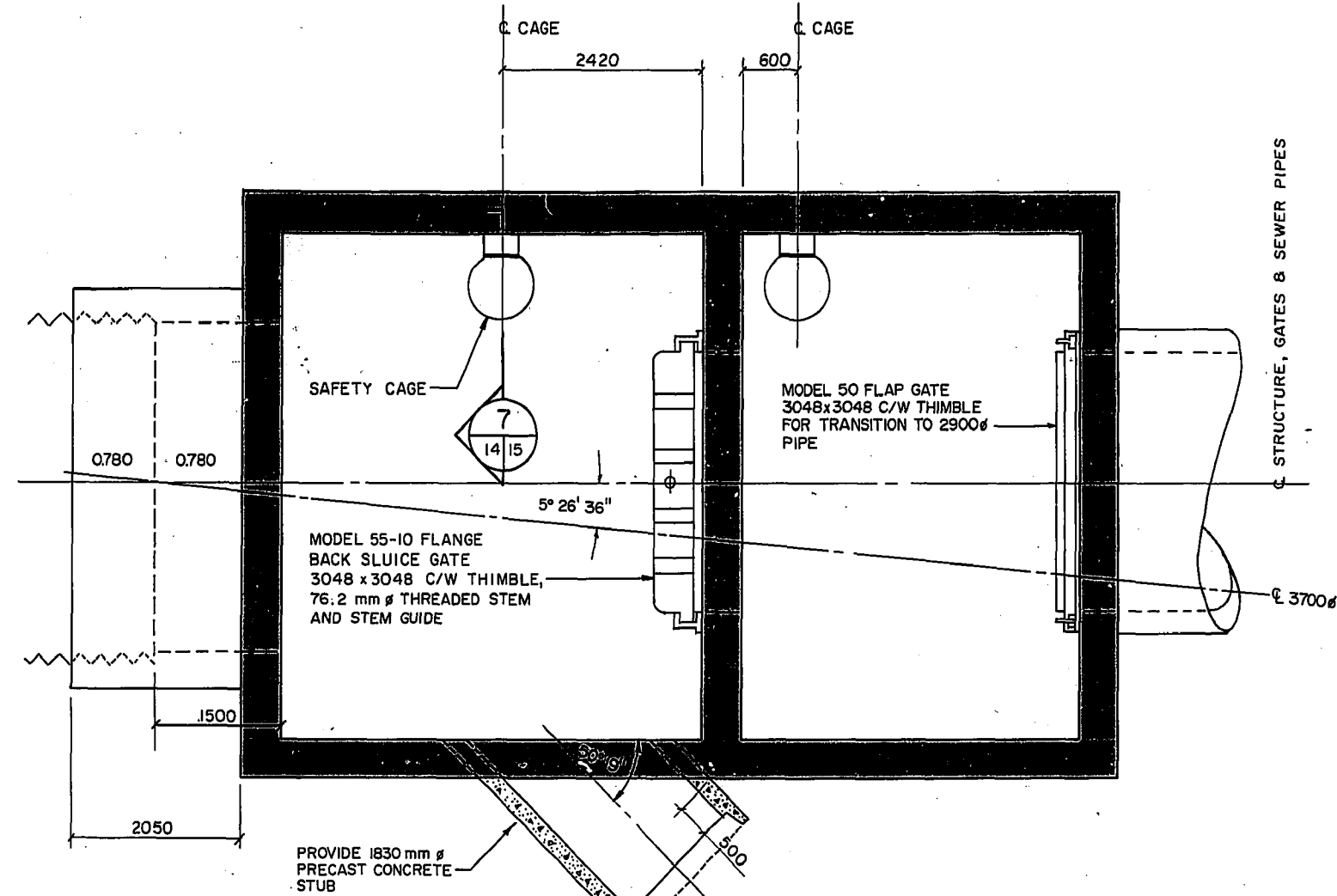
W. L. WARDROP & ASSOCIATES LTD. ENGINEERING CONSULTANTS	
DESIGNED BY: C.D.S., G.R.H. & W.R.D.	DRAWN BY: G.G.P.
CHECKED BY: W.R.D. & R.R.F.	DATE: 84-11-20
APPROVED BY: <i>[Signature]</i>	DATE: 29 Nov '84



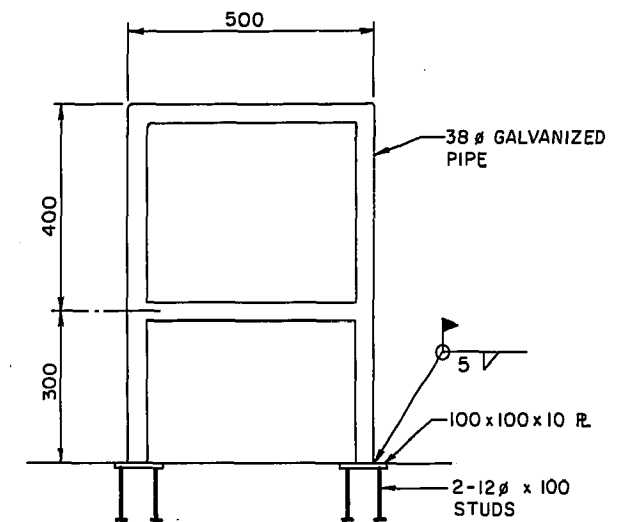
MUNROE, ROLAND & HART SEWER RELIEF PROJECT - CONTRACT 5A	
STORM OUTFALL MISCELLANEOUS DETAILS	
RELEASE FOR CONSTRUCTION: <i>[Signature]</i>	DATE: 84-12-07
SCALE: NOT TO SCALE	DRAWING NO: LD-750



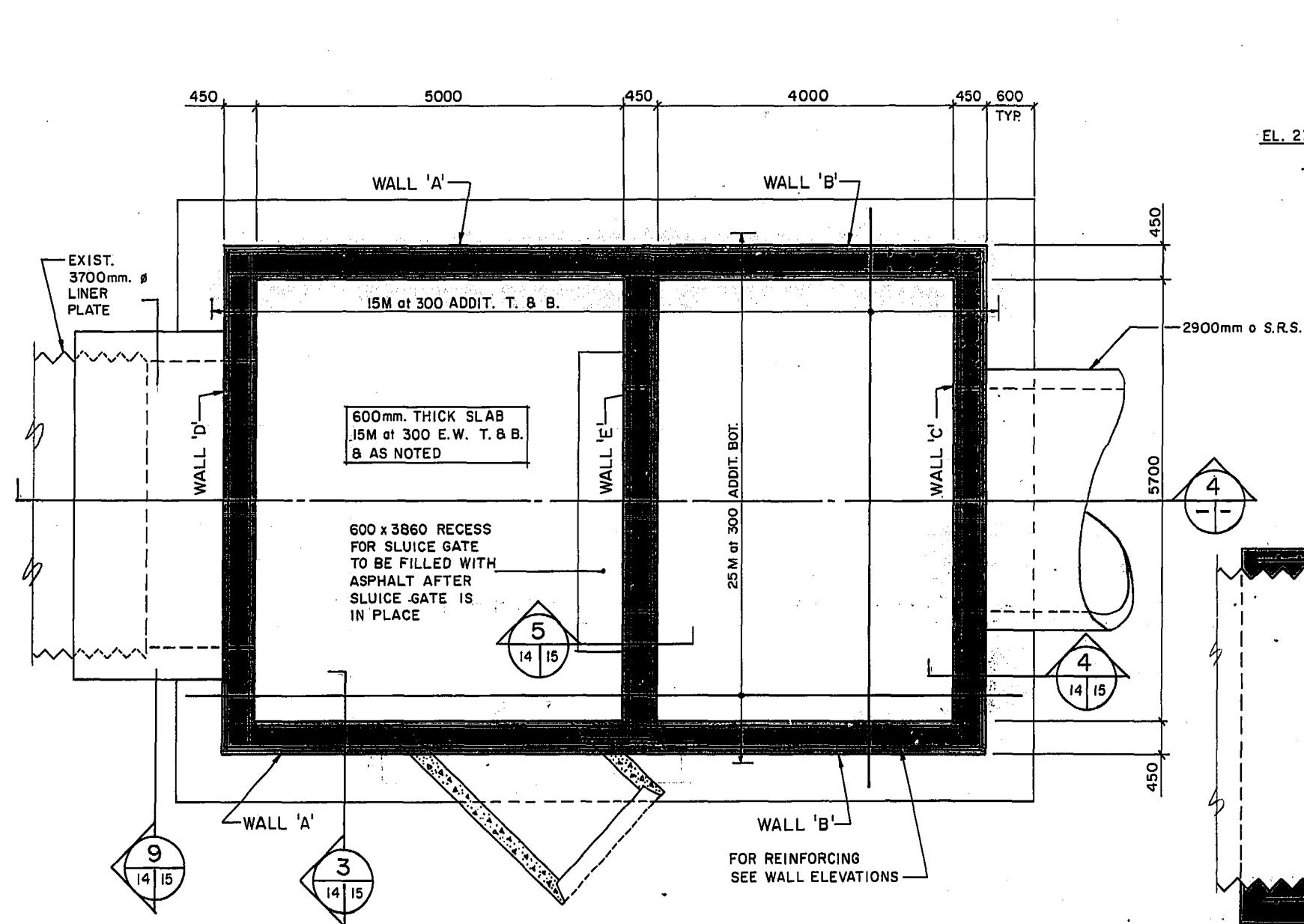
PLAN



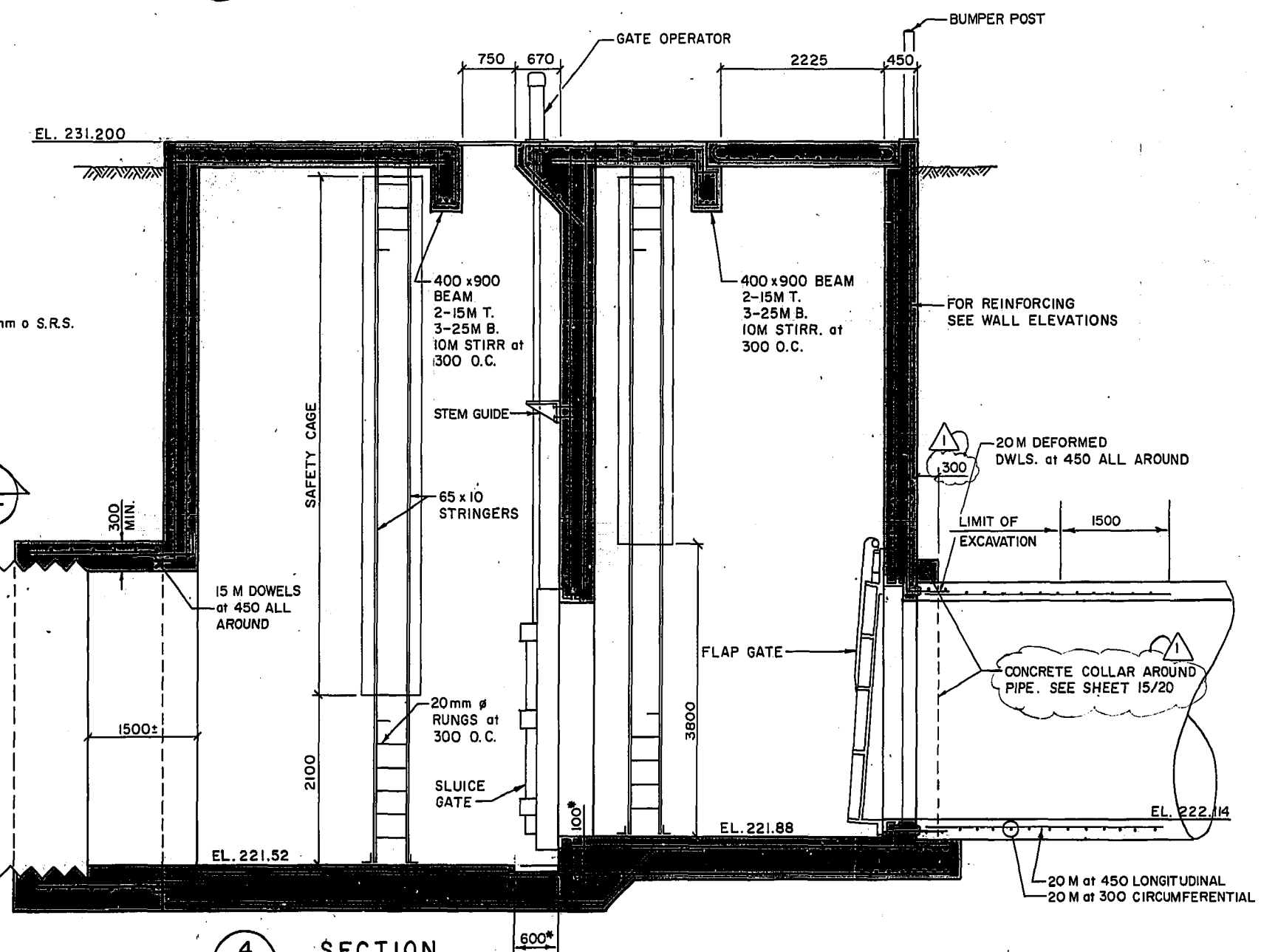
3 PLAN - SECTION
SHOWING GATES & CAGES



5 DETAIL - GRAB BAR
N.T.S.



2 PLAN - SECTION
GATES & CAGES NOT SHOWN



4 SECTION

* DIMENSION TO BE VERIFIED WITH
GATE MANUFACTURER'S CERTIFIED
SHOP DRAWINGS

LOCATION APPROVED
UNDERGROUND STRUCTURES

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 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. CITY OF WINNIPEG 28-017
ELEV. 230.814

NO.	REVISIONS	DATE	BY
2	REVISED AS CONSTRUCTED	87-11-23	W.D.
1	REVISED & ISSUED WITH PCN #2	86-8-5	W.D.
0	ISSUED FOR TENDER	85-10-11	W.D.
0	ISSUED FOR APPROVAL	85-9-16	W.D.

WARDROP ENGINEERING CONSULTANTS

DESIGNED BY D.H.R. G.S.

DRAWN BY T.O.

HOR. SCALE: 1:50

VERTICAL: 1:50

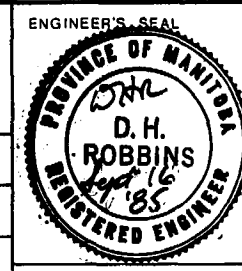
DATE 85-08

CHECKED BY W.R.D.

APPROVED BY R.R.F.

RELEASED FOR CONSTRUCTION

DATE 85-10-09



CONSULTANT DRAWING NO.

THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
WATERWORKS, WASTE AND DISPOSAL DEPARTMENT

MUNROE, ROLAND & HART
SEWER RELIEF PROJECT - CONTRACT 6

GATE CHAMBER
PLAN AND SECTIONS

CITY DRAWING NUMBER
LD-773

SHEET 14 OF 20

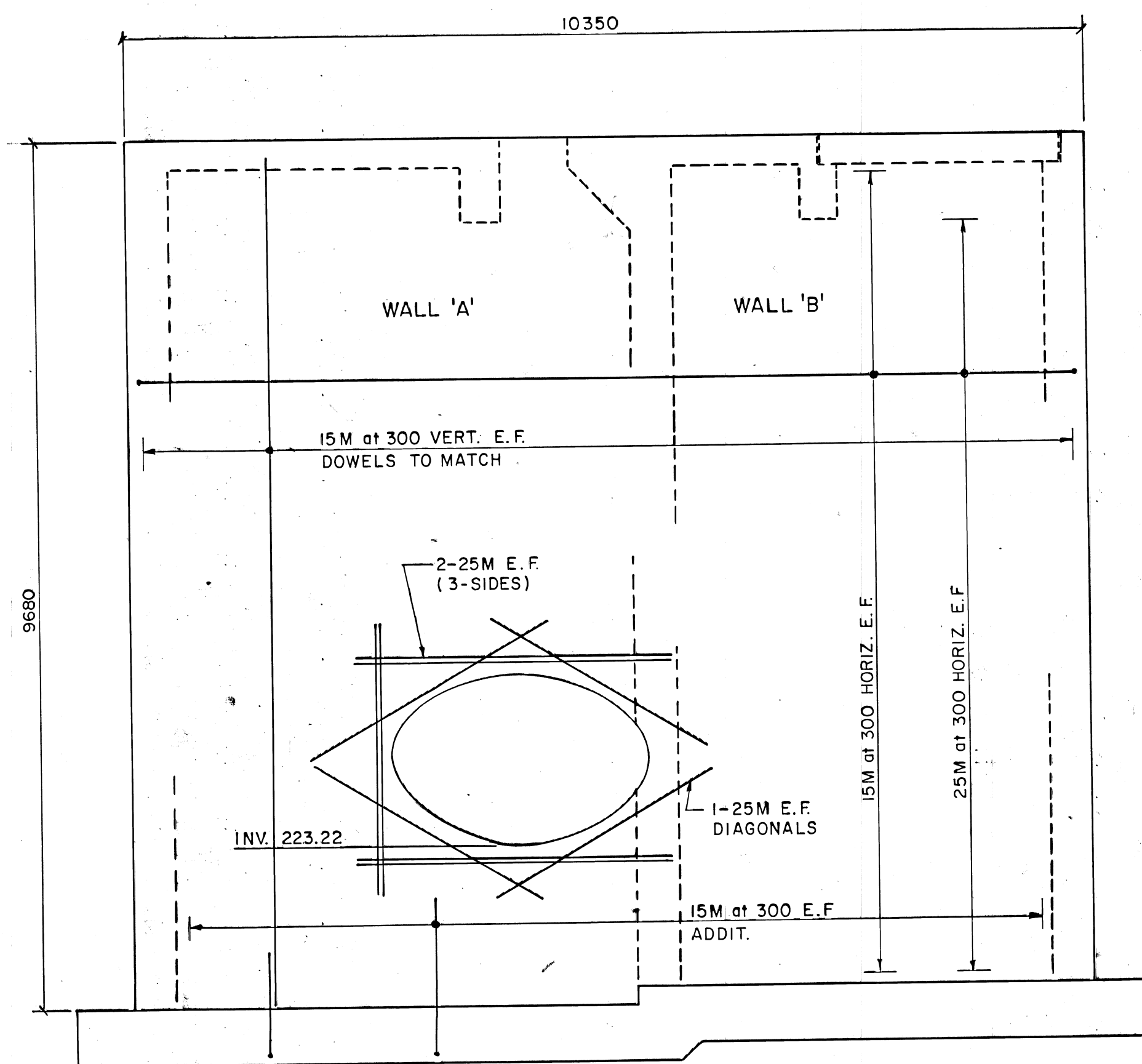
THE WORK OF THIS CONTRACT WAS
CONSTRUCTED IN ACCORDANCE WITH
THE NOVEMBER 1986 STANDARD
CONSTRUCTION SPECIFICATIONS BY
BORL AND CONSTRUCTION LIMITED
DURING THE MONTHS OF MARCH 1986
TO AUGUST 1987

REVISED AS CONSTRUCTED

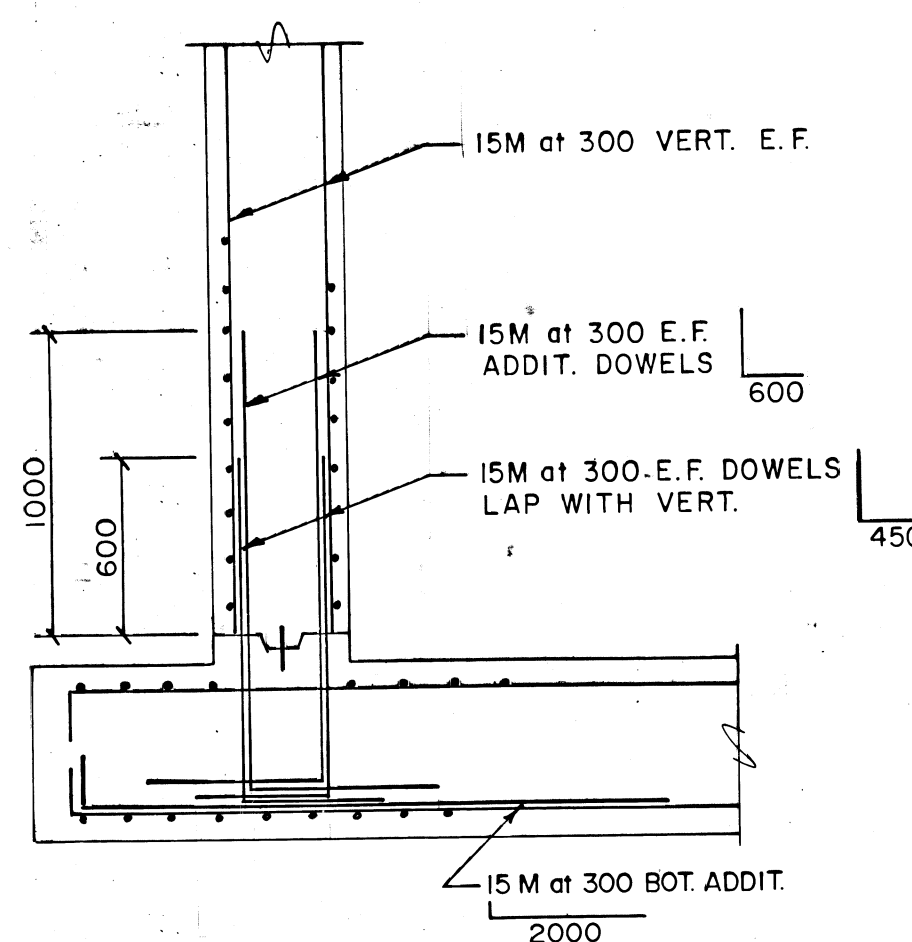
(APPLIES TO THE STORM
RELIEF SEWER AND RELATED
CONNECTIONS ONLY)

DATE AUGUST 1987 BY K.S.

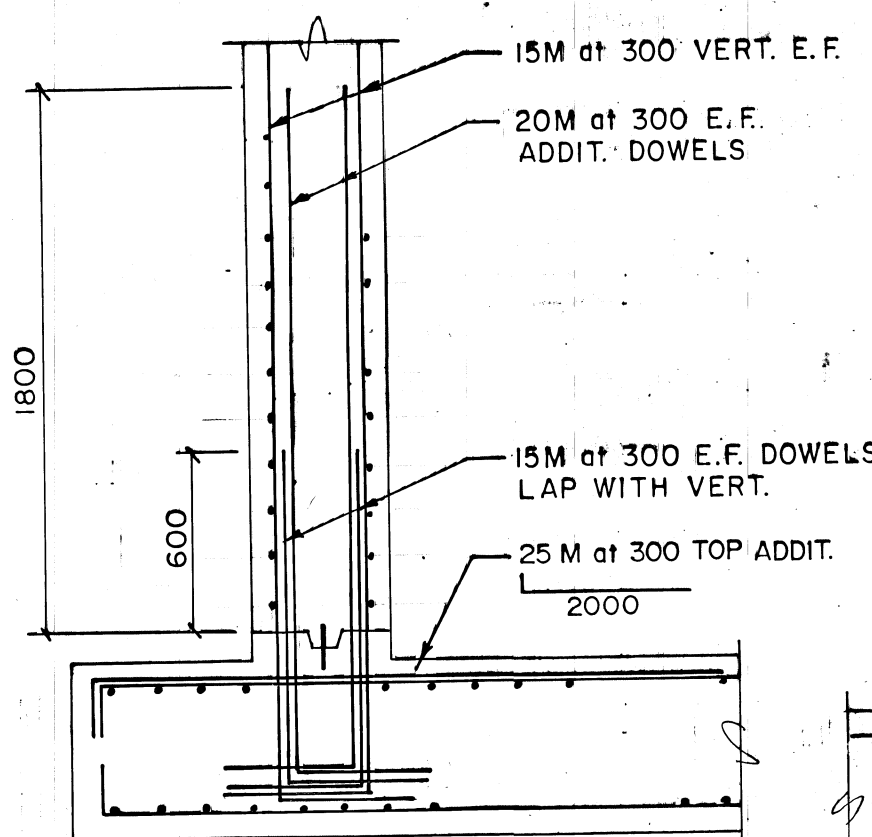
CHECKED BY J.N.



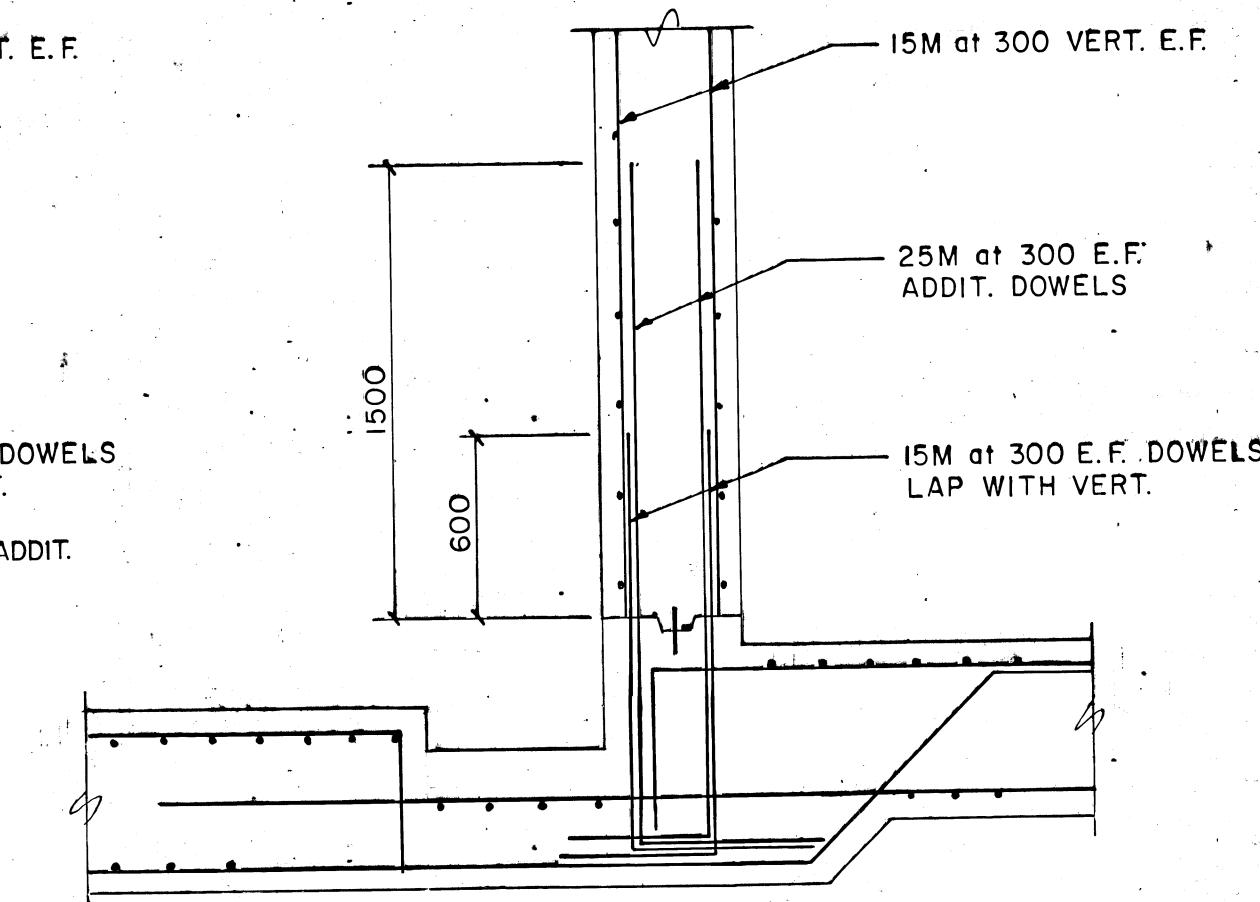
1 ELEV. - WALL 'A' & WALL 'B'
OPPOSITE SIDE SIMILAR - NO OPENINGS
SCALE: 1:50



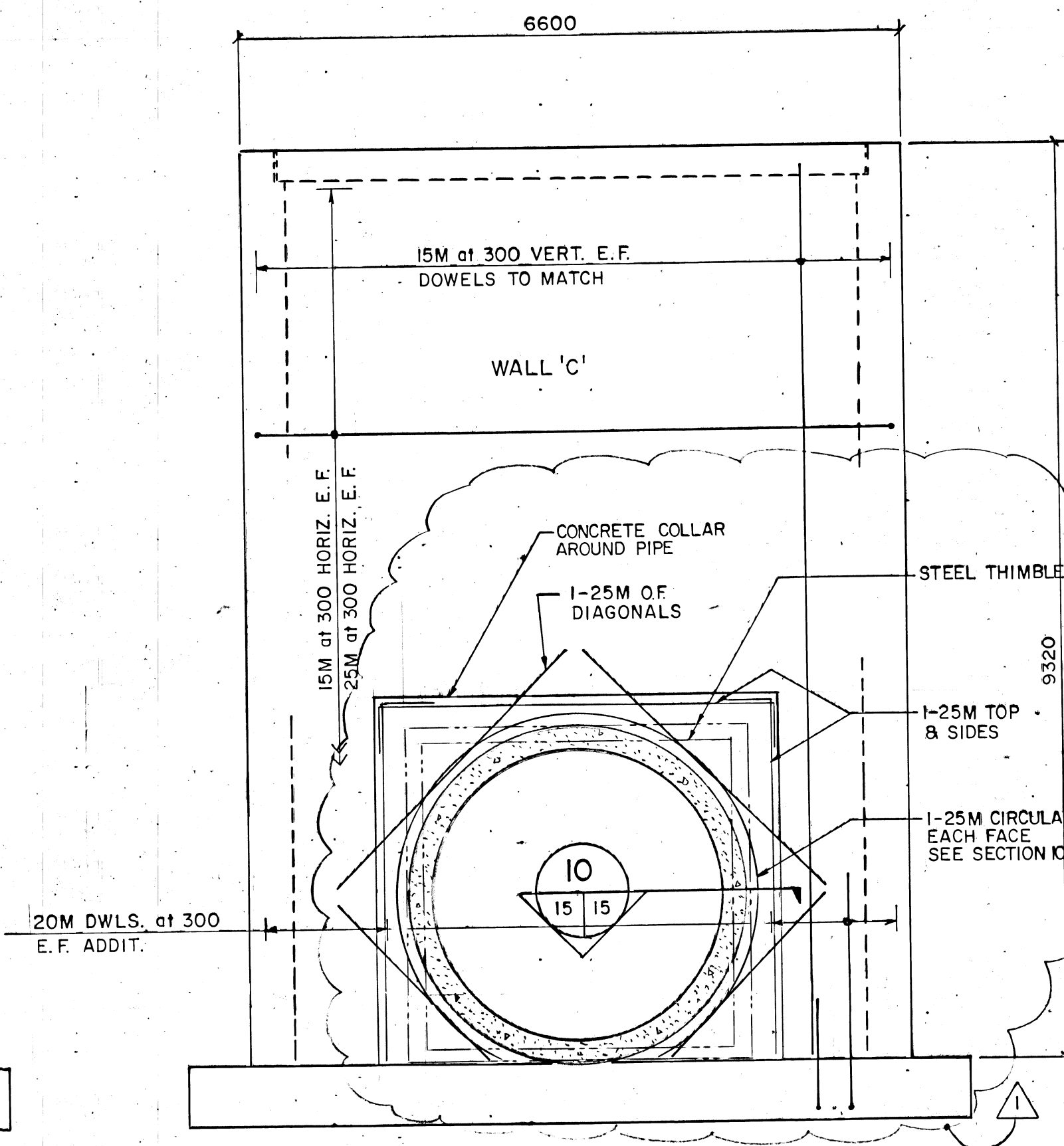
3 DOWELS - WALL 'A' & 'B'
SCALE: 1:25



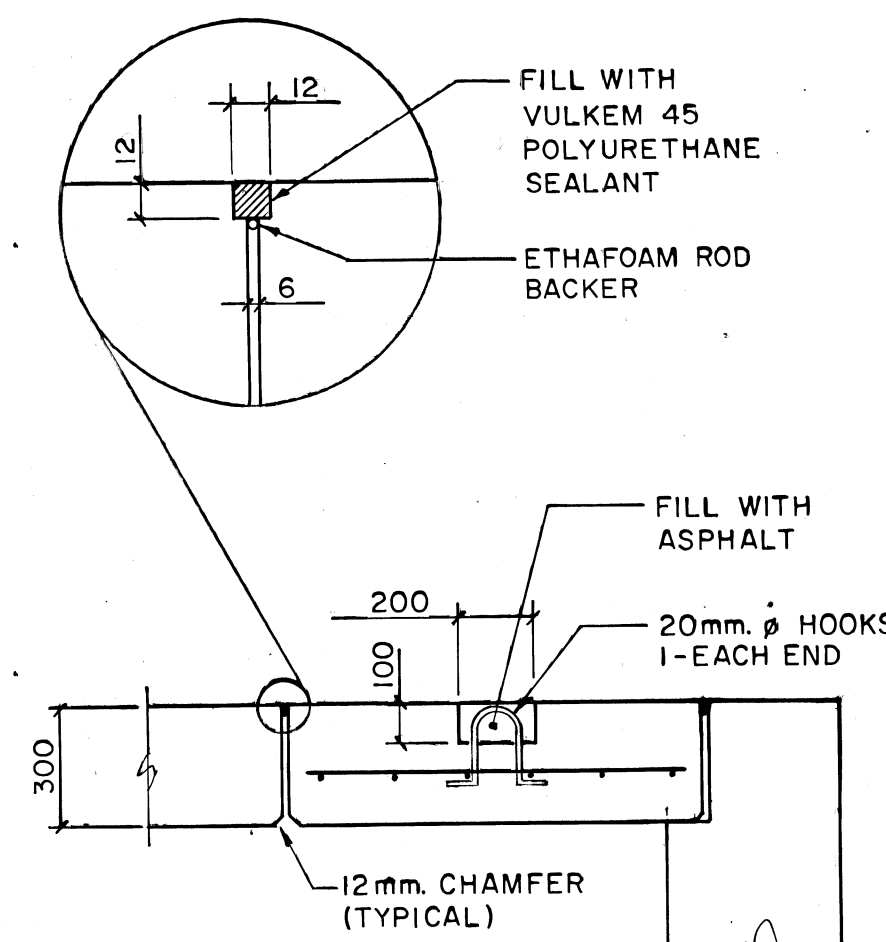
4 DOWELS - WALL 'C' & 'D'
SCALE: 1:25



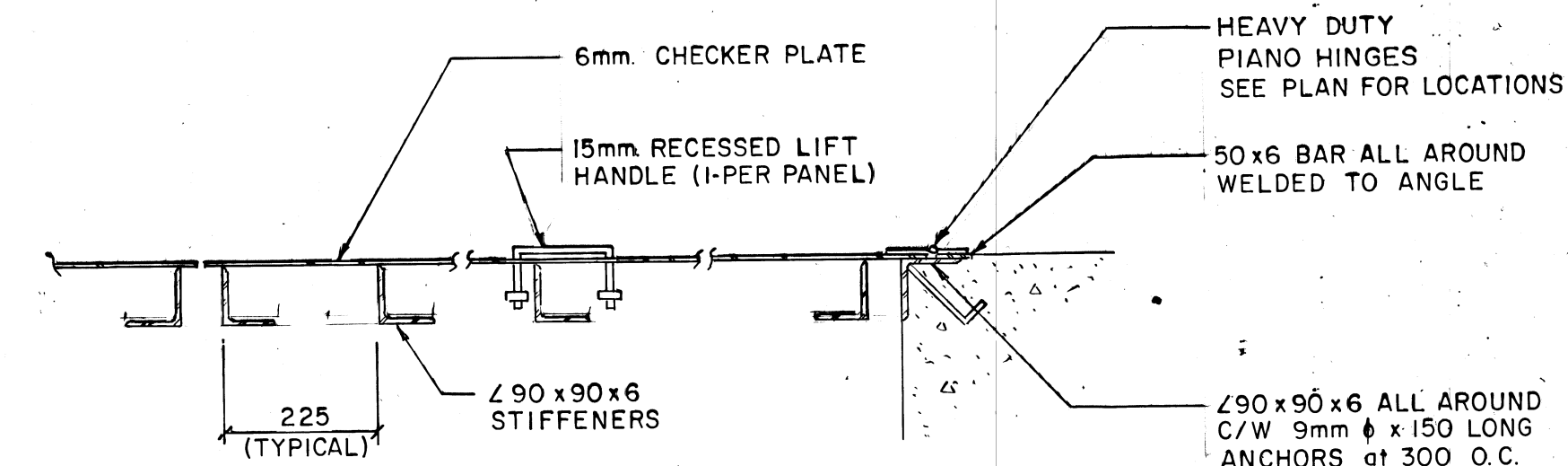
5 DOWELS - WALL 'E'
SCALE: 1:25



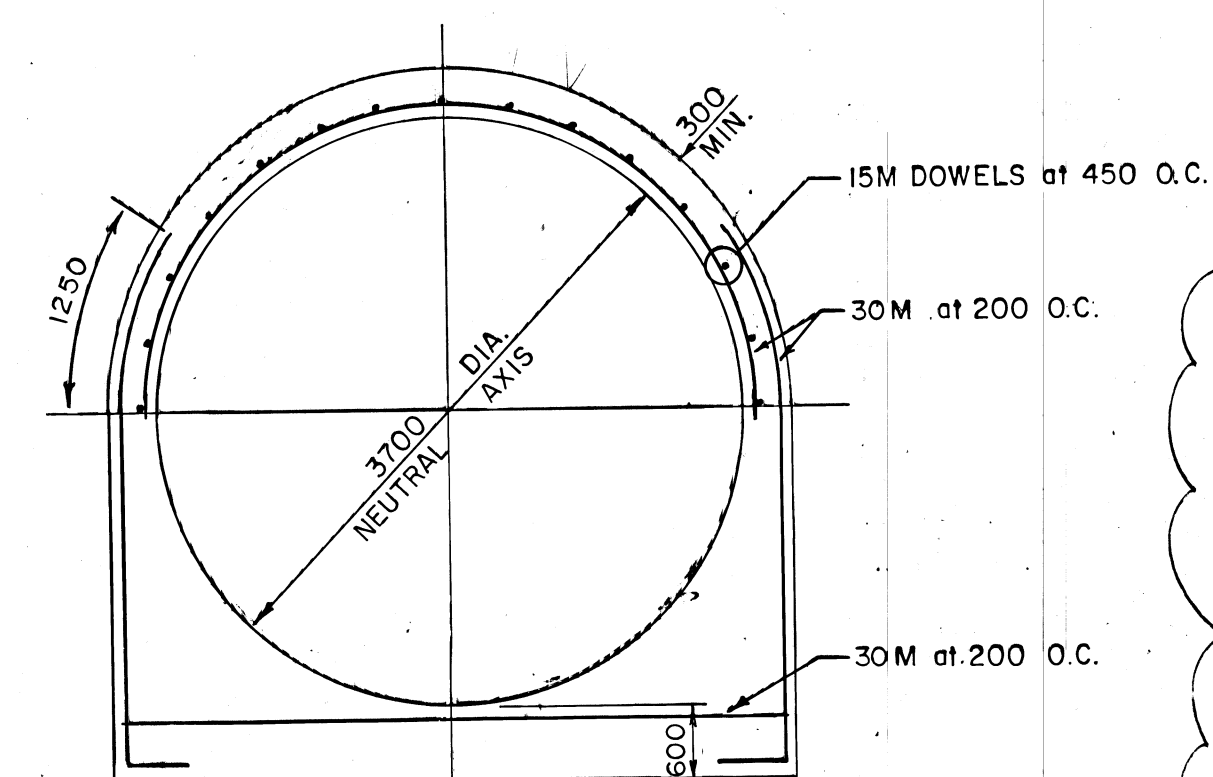
2 ELEV. - WALL 'C'
WALL 'D' SIMILAR



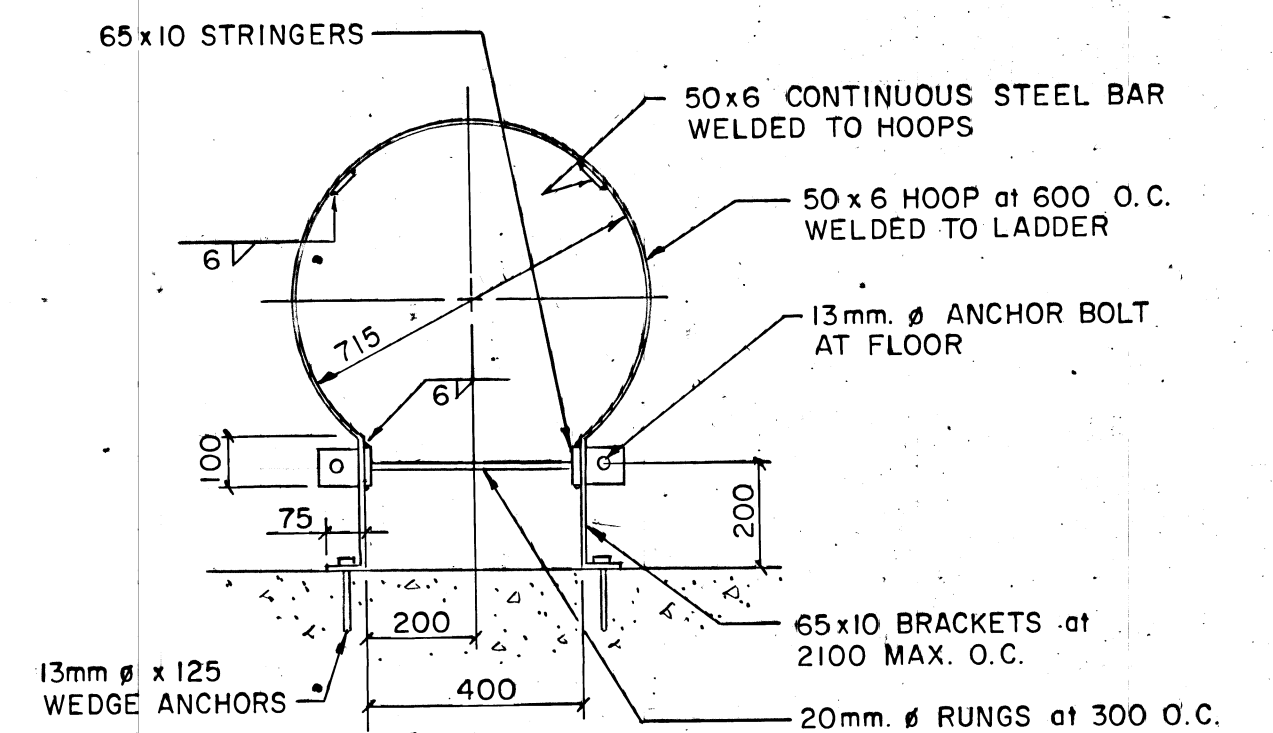
6 SECTION - REMOVABLE COVER
SCALE: 1:50



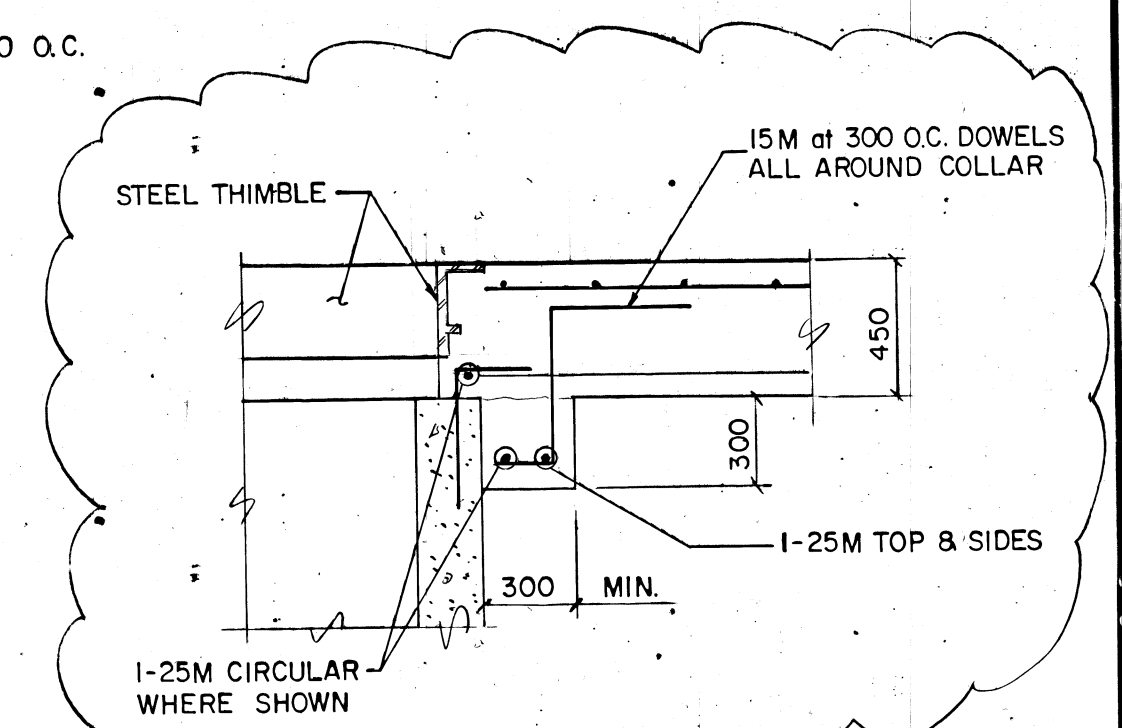
8 SECTION - EQUIPMENT COVER
ACCESS COVERS SIMILAR - NO STIFFENERS
ALL MATERIAL GALVANIZED



9 SECTION
SCALE: 1:50



7 SECTION - SAFETY CAGE
ALL MATERIAL GALVANIZED



10 SECTION
SCALE: 1:25

THE WORK OF THIS CONTRACT WAS CONSTRUCTED IN ACCORDANCE WITH THE NOVEMBER 1986 STANDARD CONSTRUCTION SPECIFICATIONS BY BORN AND CONSTRUCTION LIMITED DURING THE MONTHS OF MARCH 1986 TO AUGUST 1987

REVISED AS CONSTRUCTED

(APPLIES TO THE STORM RELIEF SEWER AND RELATED CONNECTIONS ONLY)

DATE AUGUST 1987 BY K.S.
CHECKED BY J.N.

LOCATION APPROVED
UNDERGROUND STRUCTURES

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

WARDROP ENG. F.B. 1361, 1377, 1402, 1408, 1414, 1415, 1440

B.M. CITY OF WINNIPEG 28-017.
ELEV. 230.814

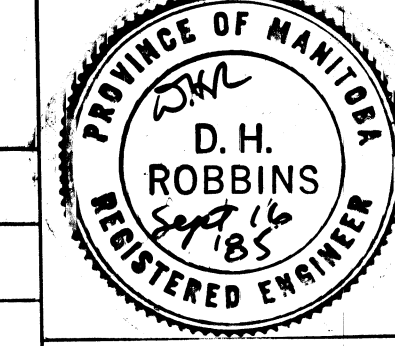
NO.	REVISIONS	DATE	BY
2	REVISED AS CONSTRUCTED	87/11/23	J.N.
1	REVISED & ISSUED WITH PCN #2868-5	86/8/5	J.N.
0	ISSUED FOR TENDER	85/10/11	J.N.
0	ISSUED FOR APPROVAL	85/9/16	J.N.

WARDROP ENGINEERING CONSULTANTS

DESIGNED BY D.H.R. CHECKED BY W.R.D.

DRAWN BY T.O. APPROVED BY R.R.F.
HOR. SCALE: AS SHOWN
VERTICAL: AS SHOWN
DATE 85-08 DATE 85/10/09

ENGINEER'S SEAL



CONSULTANT DRAWING NO.

THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
WATERWORKS, WASTE AND DISPOSAL DEPARTMENT

MUNROE, ROLAND & HART - CONTRACT 6
SEWER RELIEF PROJECT

GATE CHAMBER
DETAILS

CITY DRAWING NUMBER
LD-774

SHEET 15 OF 20
D4 - 914