

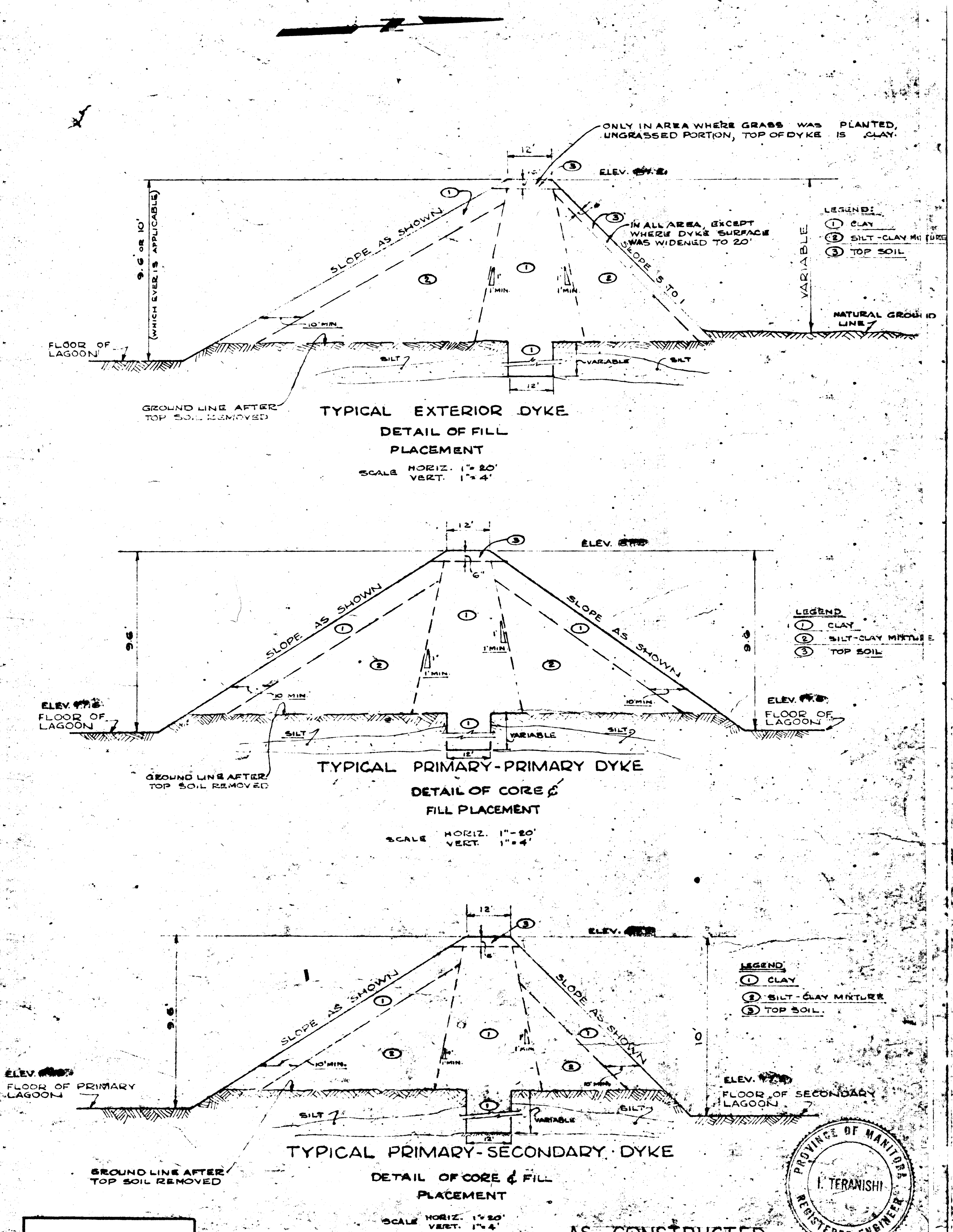
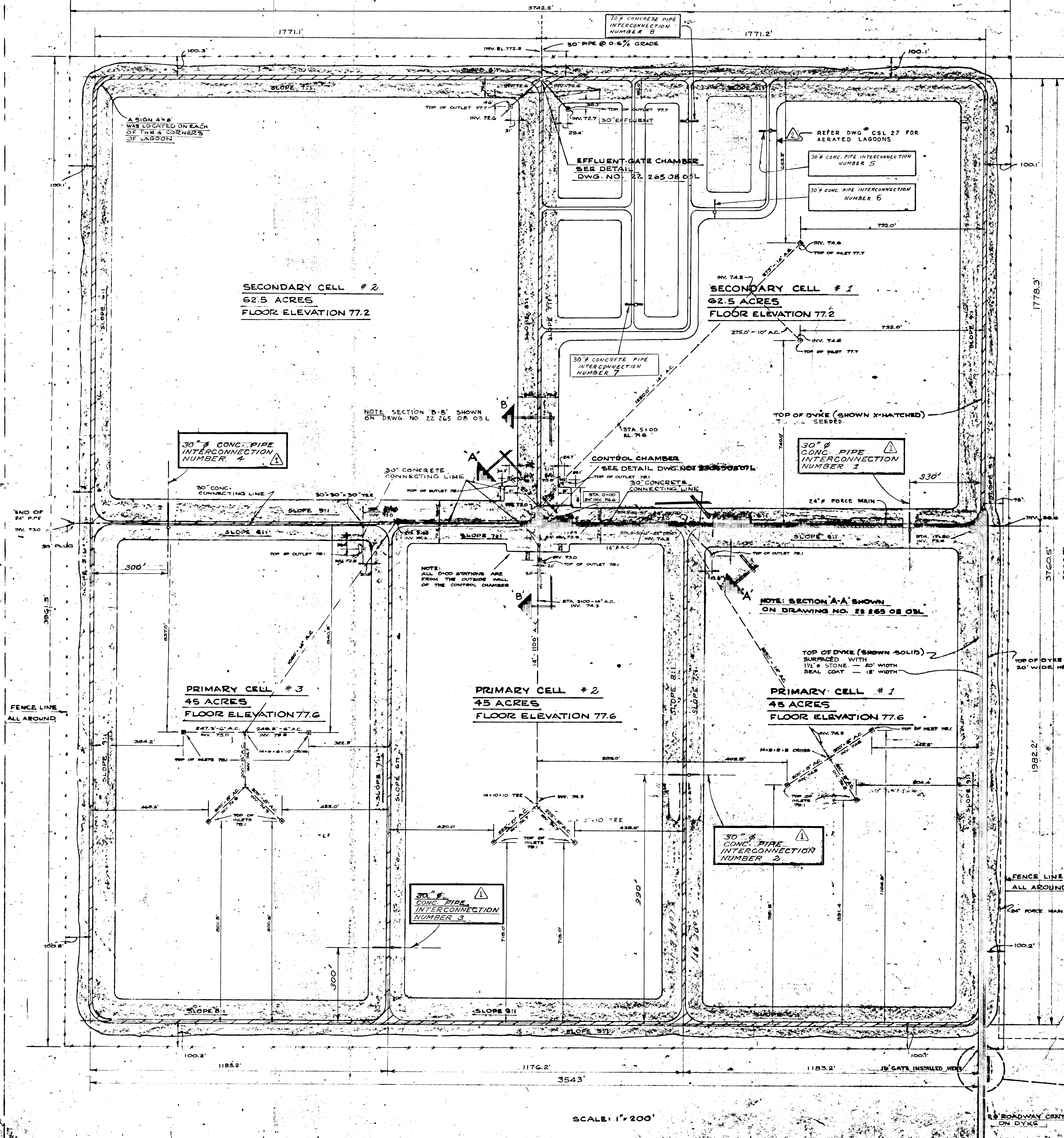
AS CONSTRUCTED

NOTE
THE CONTOURS SHOWN ARE ORIGINAL CONTOURS

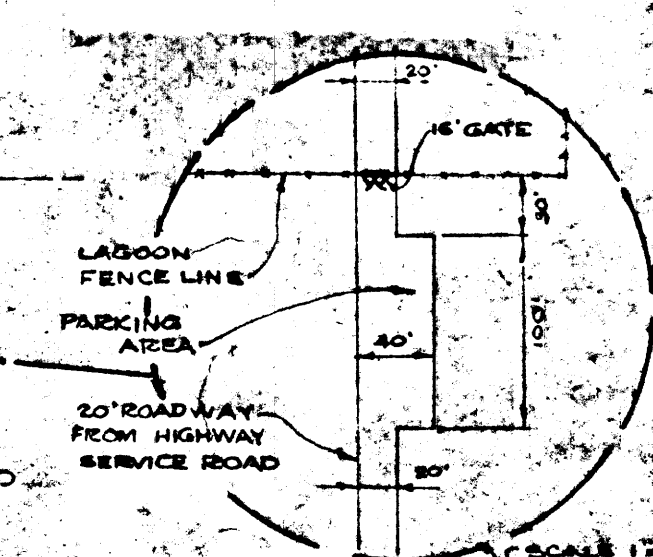
REVISIONS:		THE METROPOLITAN CORPORATION OF GREATER WINNIPEG WATERWORKS AND WASTE DISPOSAL DIVISION	
NO.	DATE	DETAILS	
1	NOV. 1972	REVISED TO DATE	CHARLESWOOD SEWAGE LAGOON
			GENERAL SITE AND CONTOUR PLAN
DRAWN BY: <i>R. J. Clark</i>		APPROVED: <i>[Signature]</i> ENGINEER OF DESIGN	
CHECKED BY: <i>[Signature]</i>		ENGINEER OF WASTE DISPOSAL	
DESIGNED BY: <i>[Signature]</i>		DIRECTOR AND CHIEF ENGINEER	
LAYOUT BY: <i>[Signature]</i>		DATE: MAY 13/65	DRAWING NO. 822 265.08.01
		SCALE: 1" = 400'	SHEET 12 OF 14

CSL-01

File # MS 10865

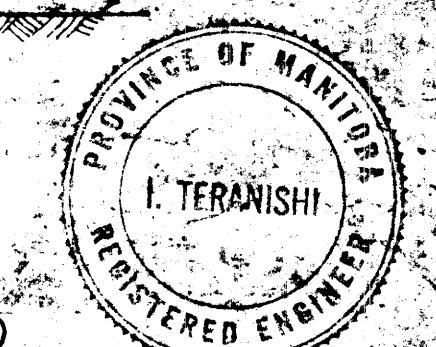


NOTE
 1. FOR DETAILS OF INTERCONNECTIONS SEE DWG. NO. CSL-39 AND CSL-90.



AS CONSTRUCTED

REVISIONS			THE METROPOLITAN CORPORATION OF GREATER WINNIPEG WATERWORKS AND WASTE DISPOSAL DIVISION	
NO.	DATE	DETAILS	CHARLESWOOD SEWAGE LAGOON	
1	TIME 5/9	INTERCONNECTIONS ADDED	LAGOON DETAILS	
2	19/07/76	AERATED LAGOON ADDED		
UNDERWOOD McLELLAN AND ASSOCIATES CONSULTING PROFESSIONAL ENGINEERS CALGARY SASKATOON REGINA WINNIPEG			APPROVED <i>[Signature]</i> ENGINEER OF DESIGN APPROVED <i>[Signature]</i> ENGINEER OF WASTE DISPOSAL APPROVED <i>[Signature]</i> DIRECTOR AND CHIEF ENGINEER	
DRAWN BY: J. G. B. B. B. CHECKED BY: I. T. B. S. DESIGNED BY: I. T. B. S. LAYOUT BY:			DATE: MAY 12, 1965 DRAWING NO.: AB:22-265'DB:02L SCALE: AS SHOWN SHEET 2 OF 14	



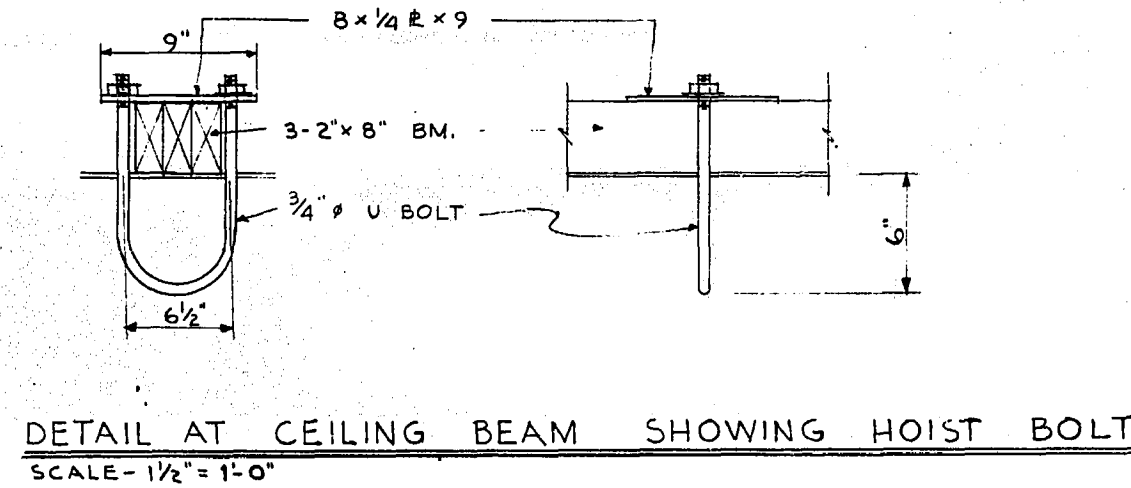
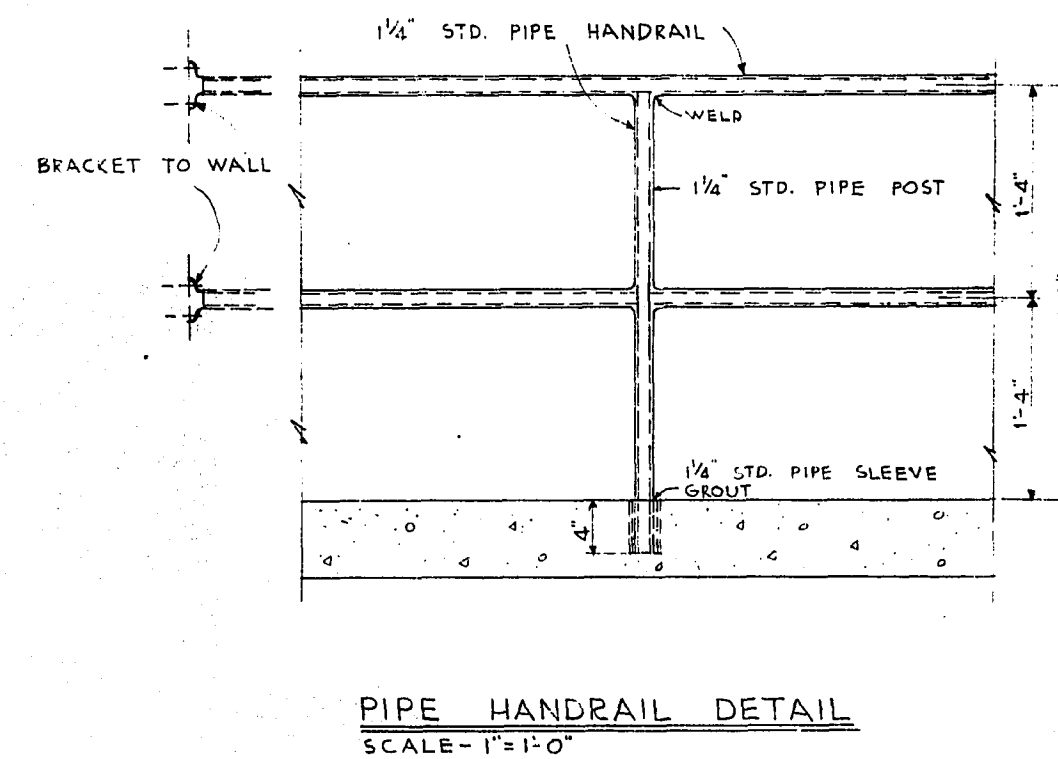
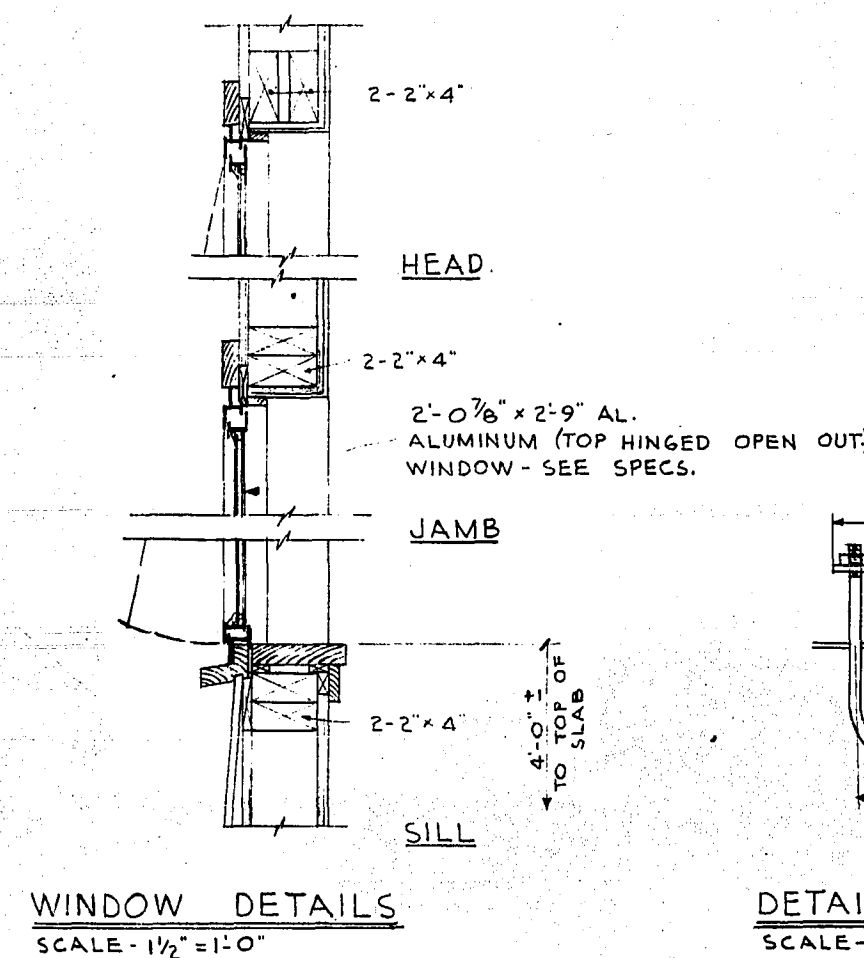
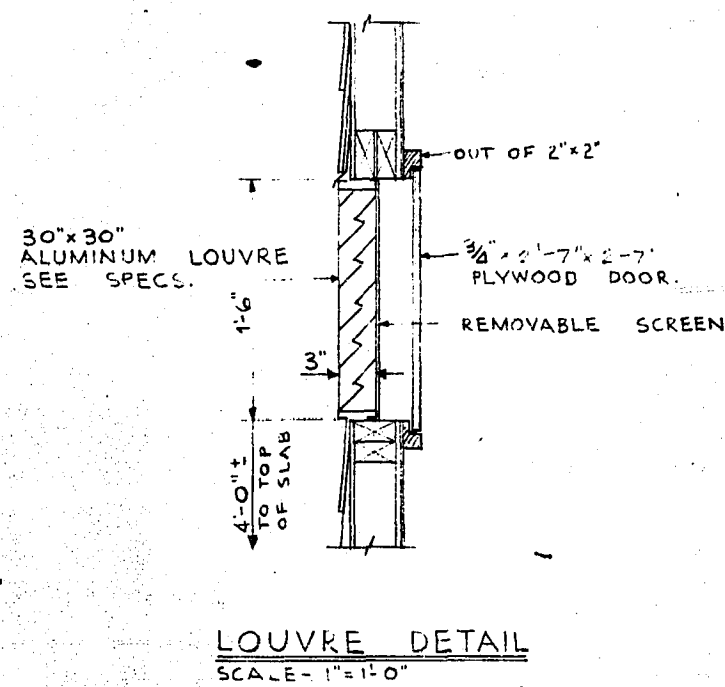
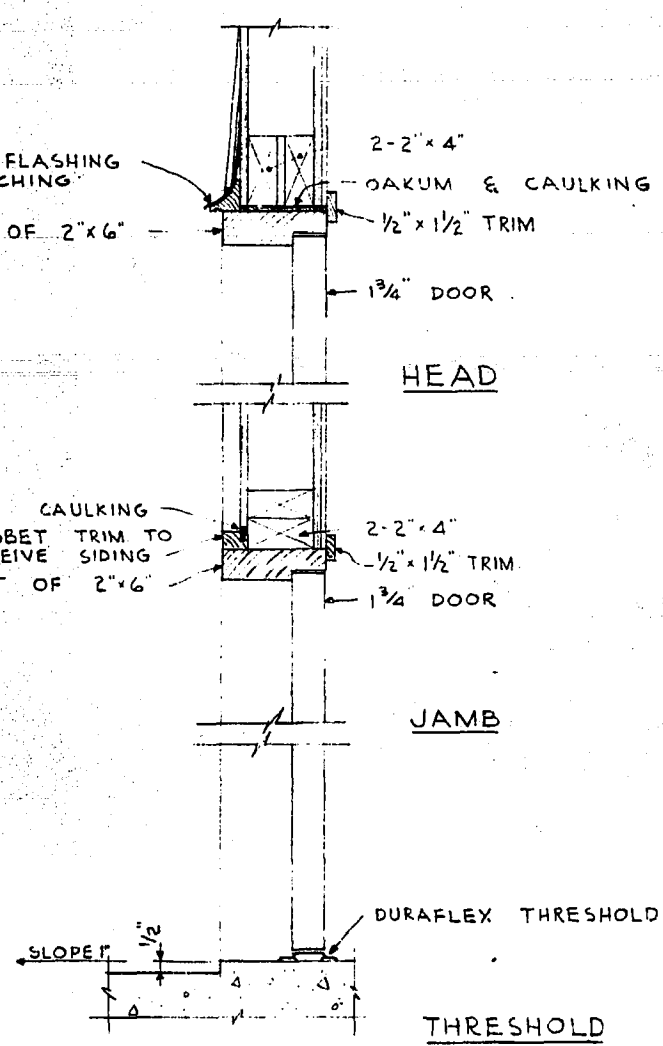
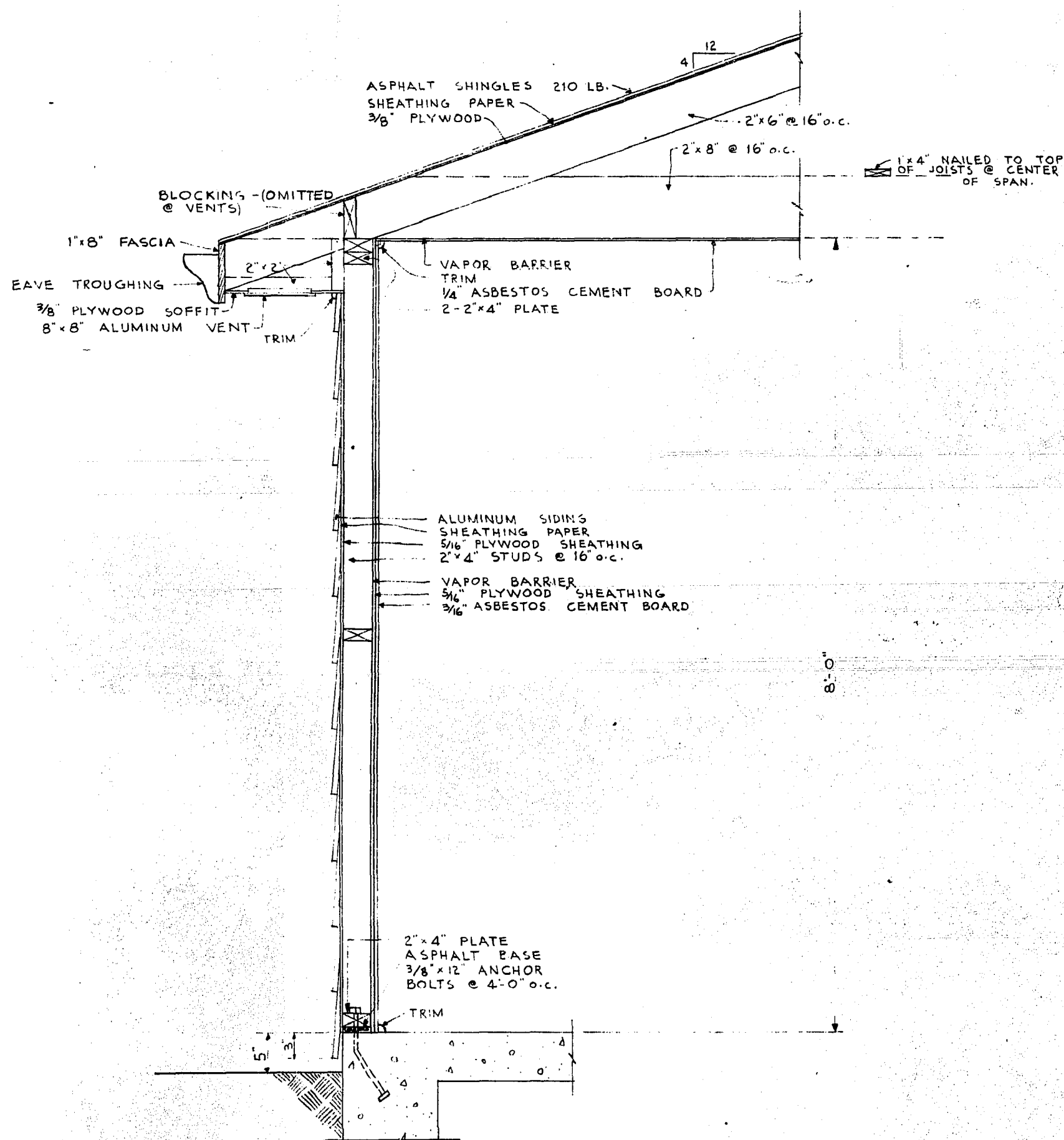
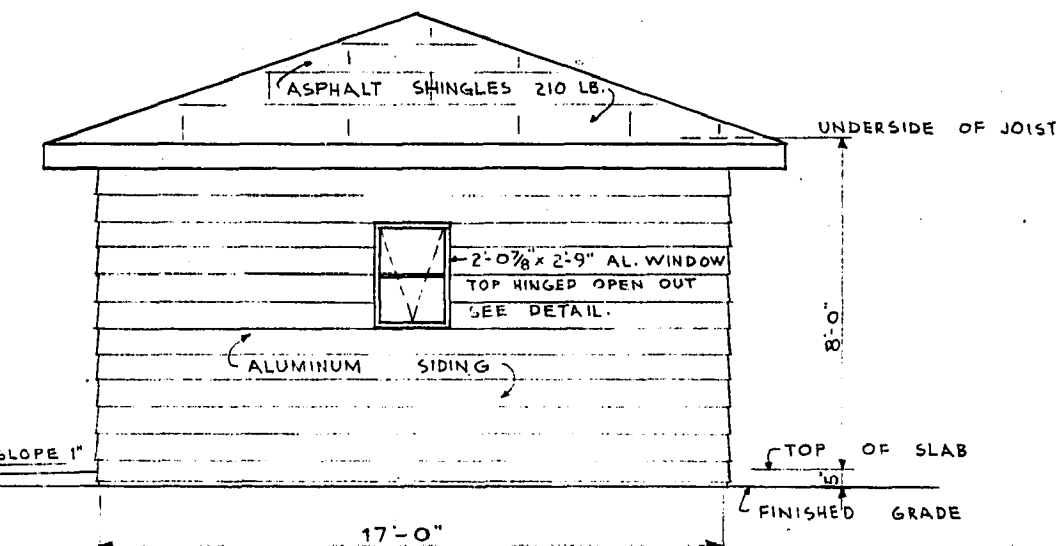
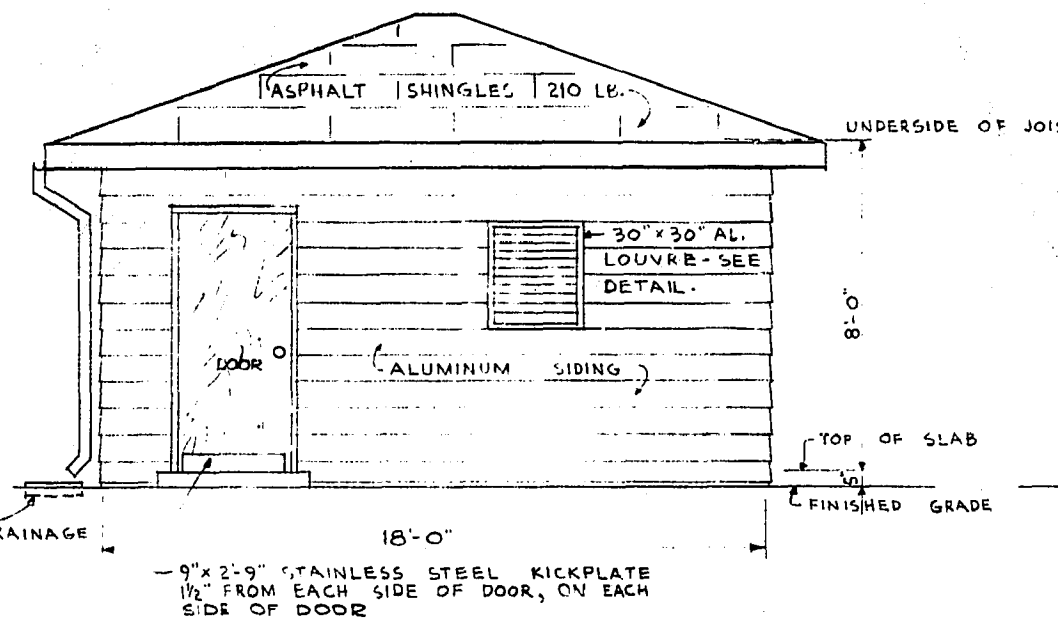
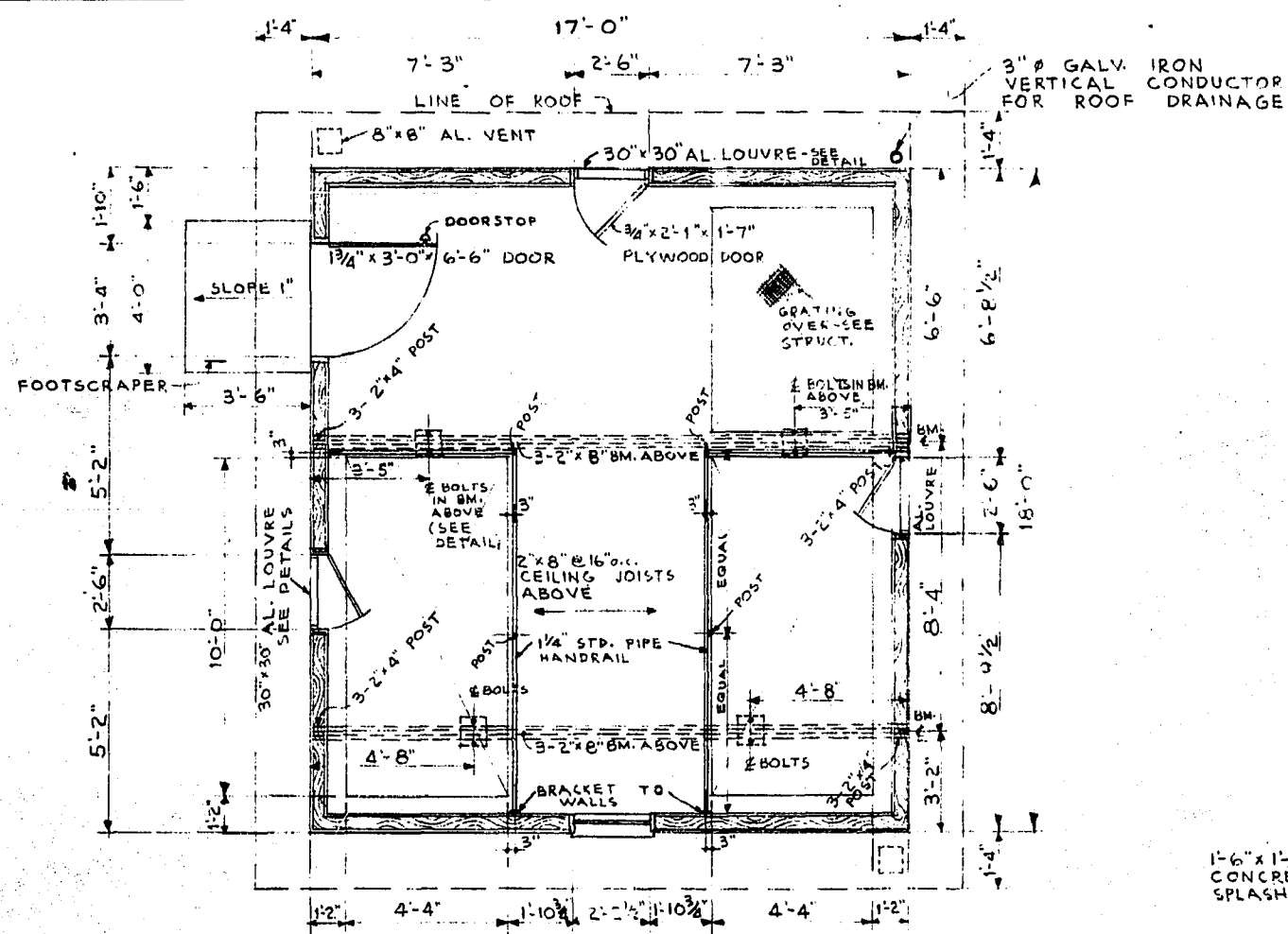
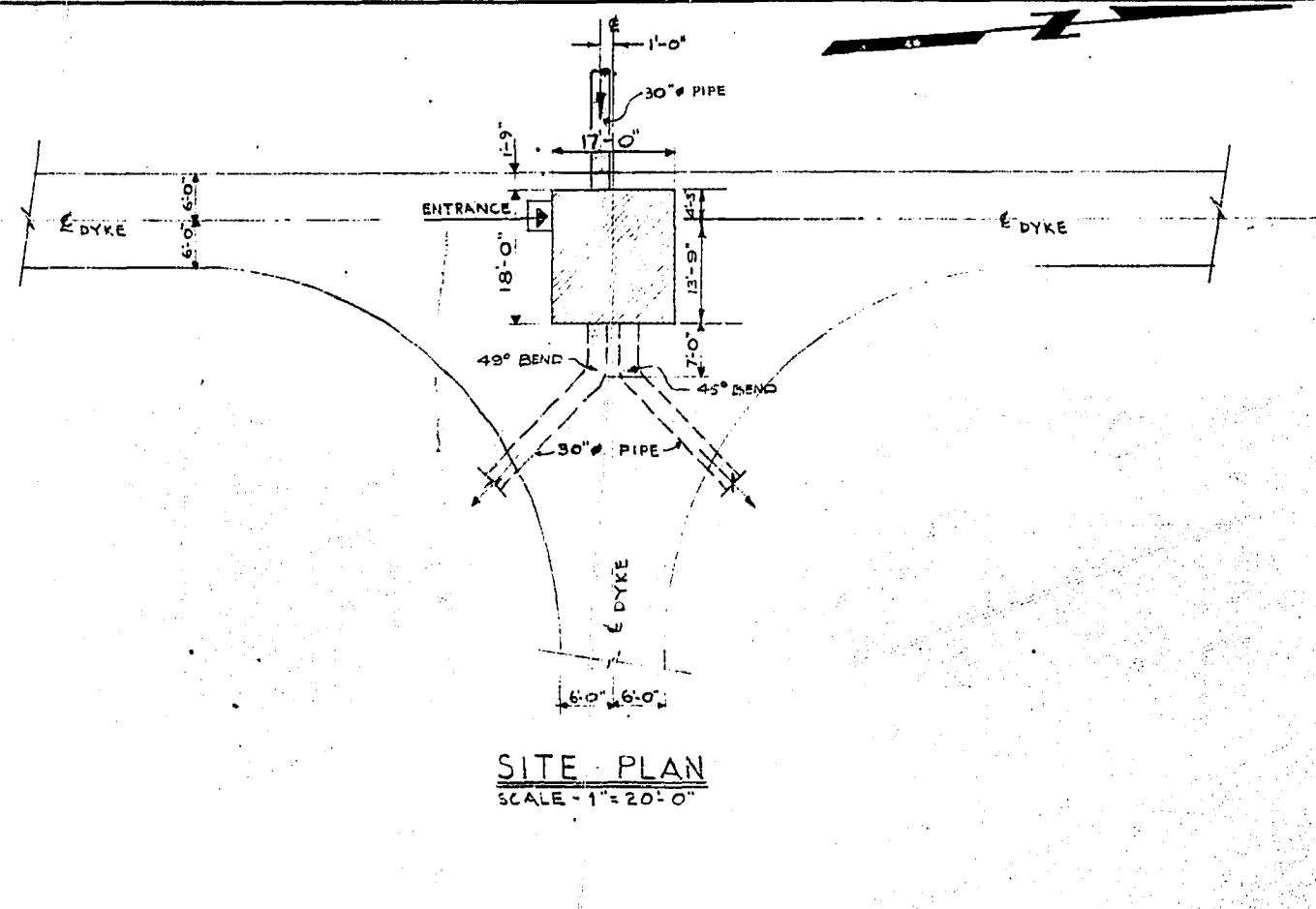
CSL-02

File # MS10867

REF. or DRAWING NO. CSL-4

DETAILS ARCHITECT. SITE PLAN,
FLOOR PLAN, ELEVATIONS,
SECTION & DET.

EFFLUENT GATE CHAMBER



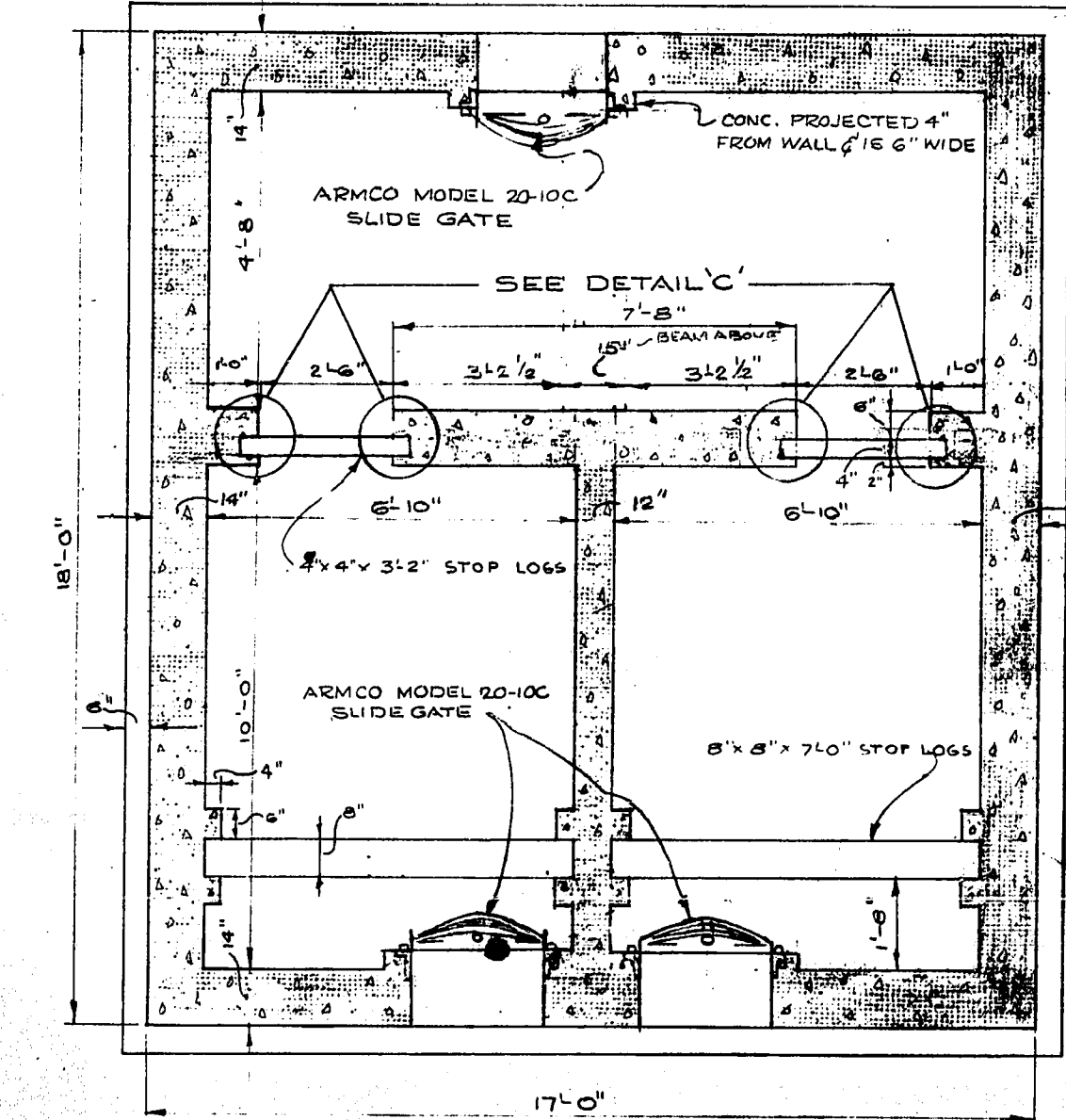
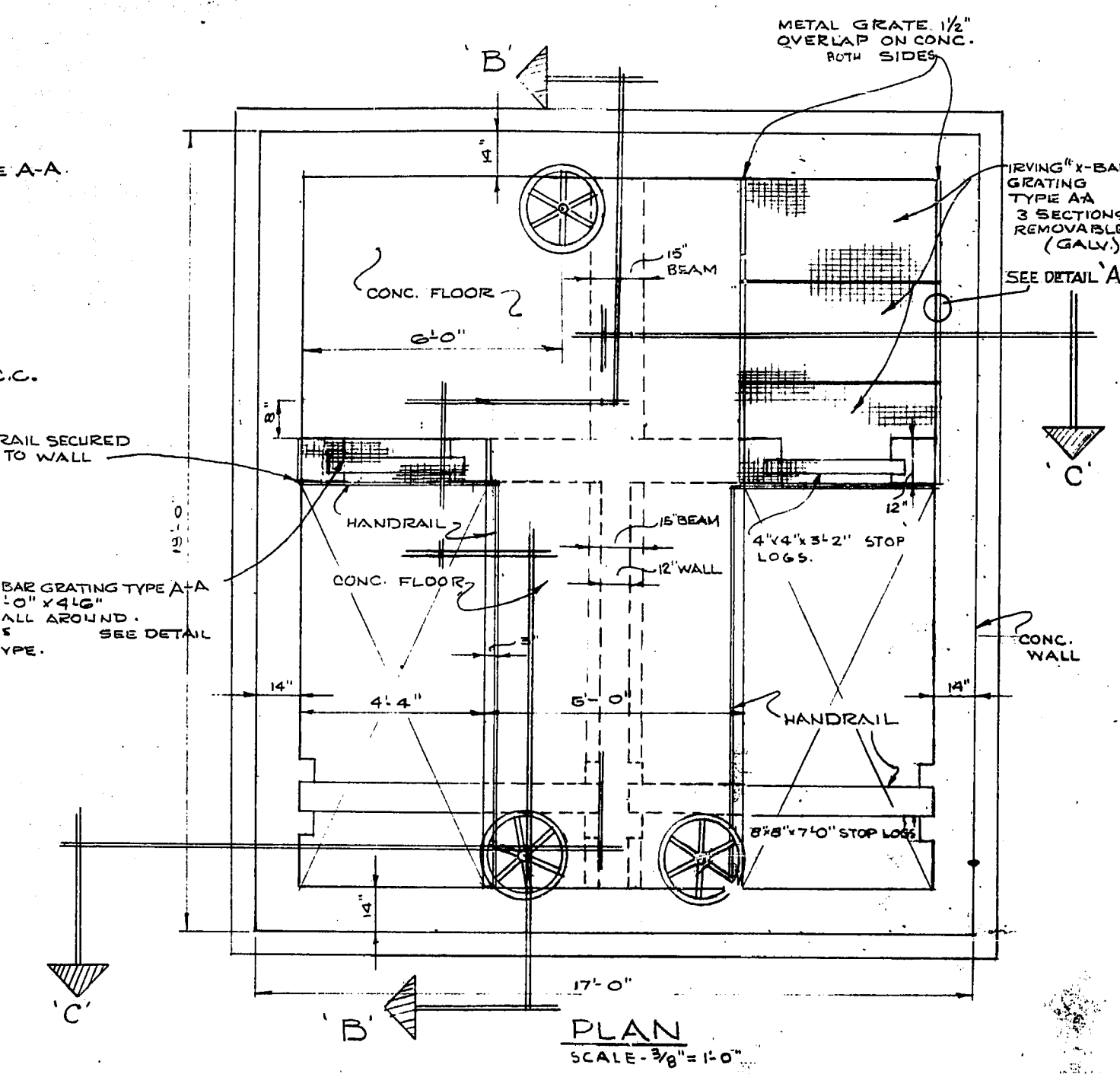
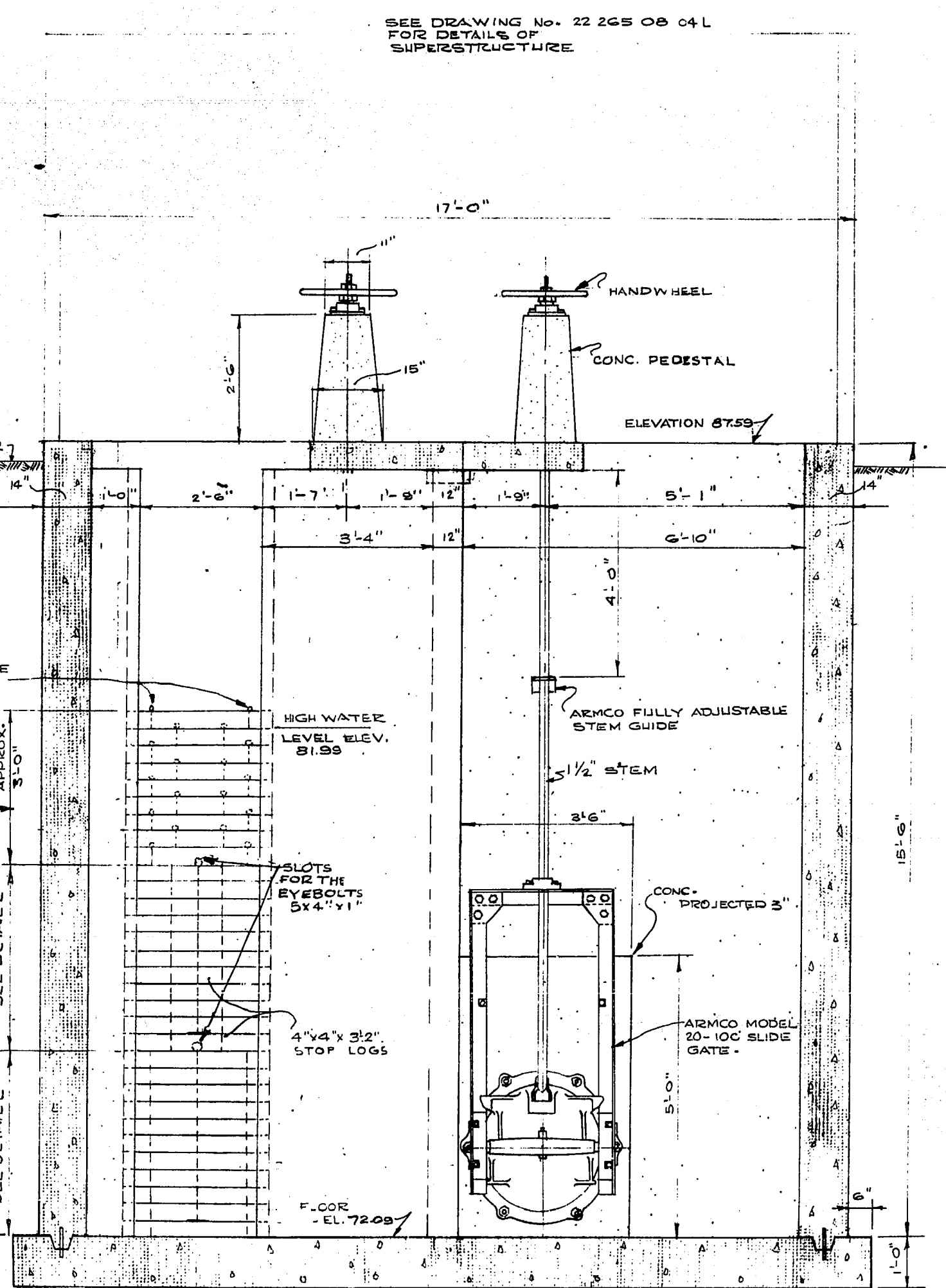
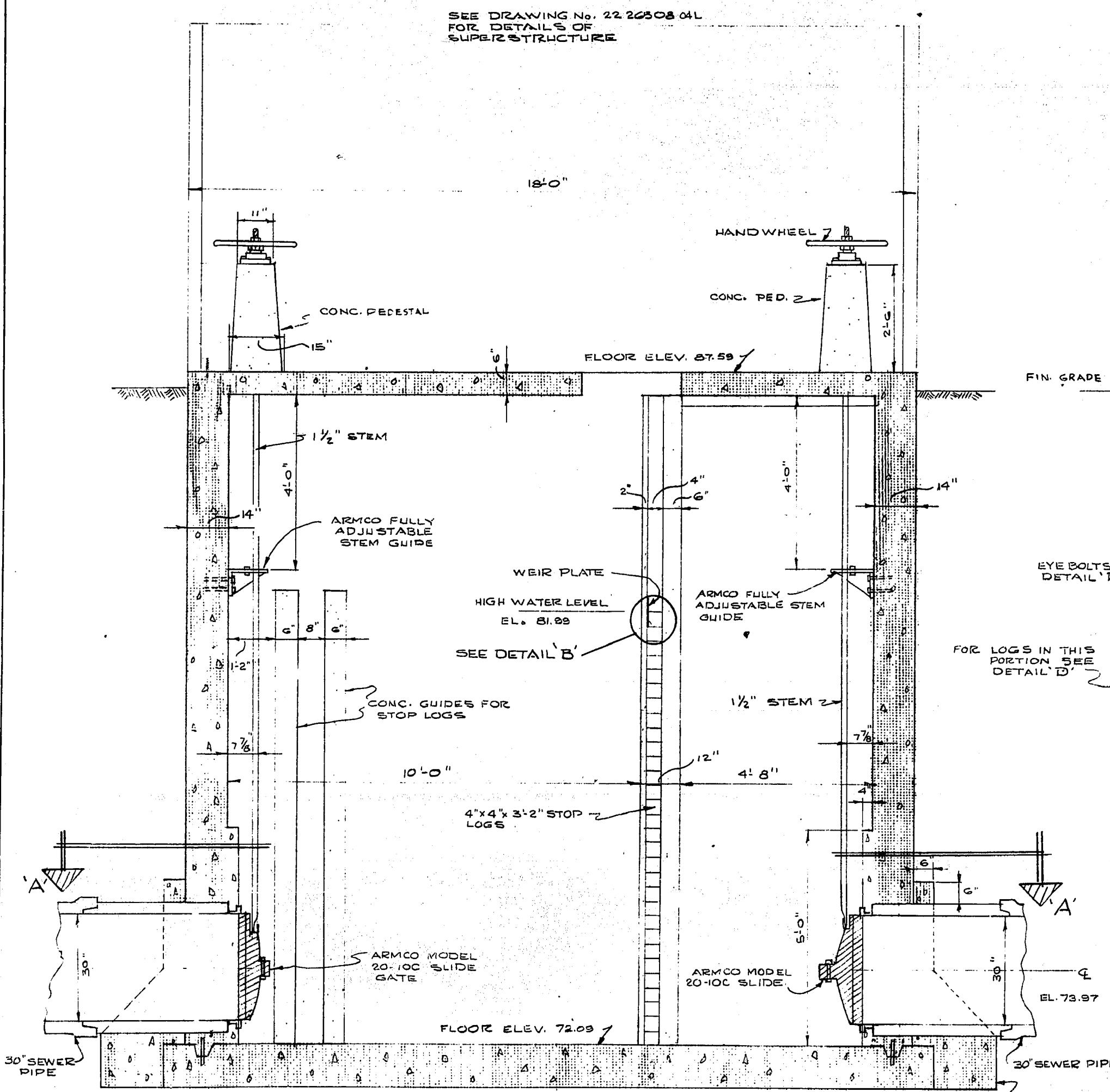
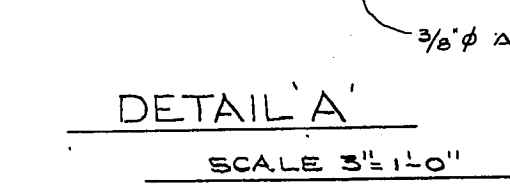
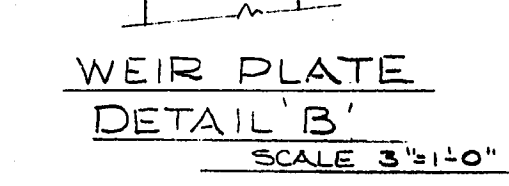
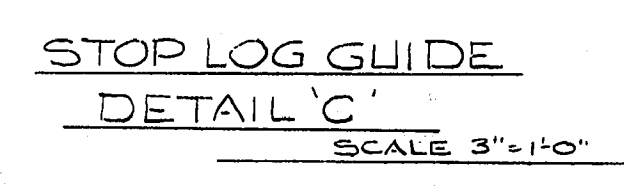
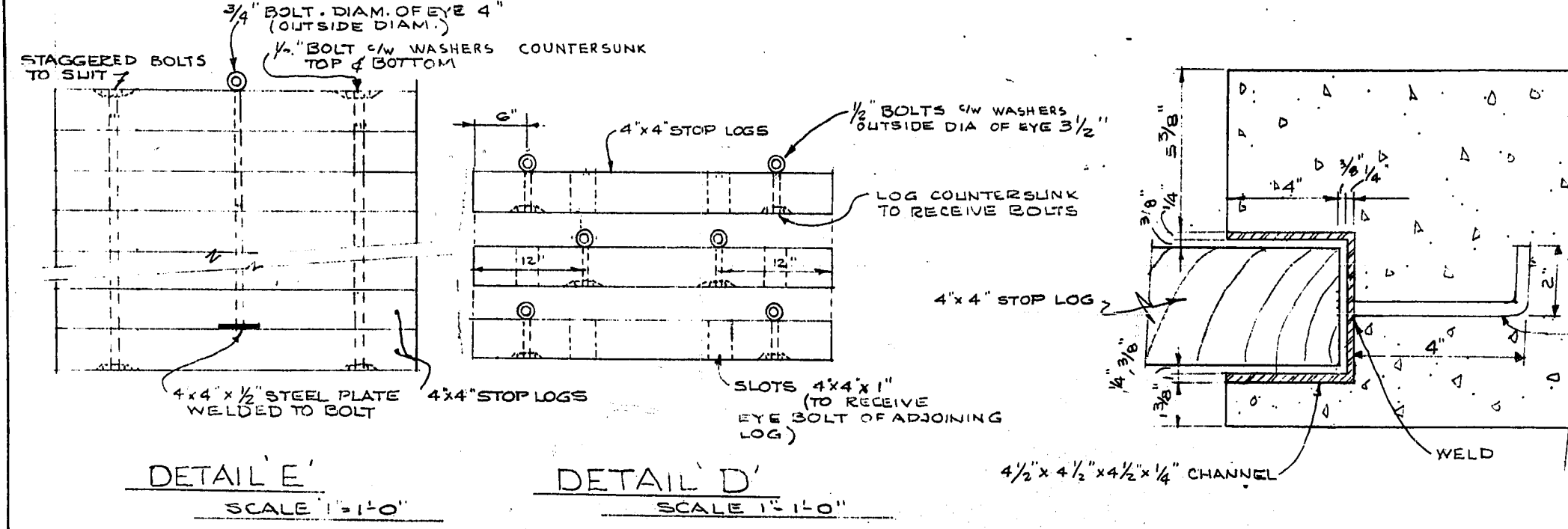
AS CONSTRUCTED

REVISIONS			THE METROPOLITAN CORPORATION OF GREATER WINNIPEG WATERWORKS AND WASTE DISPOSAL DIVISION	
NO.	DATE	DETAILS		
1	10/1/63	CHANGED SIZE OF DOOR AND LOUVRE DETAIL		
			CHARLESWOOD SEWAGE LAGOON	
			ARCHITECTURAL SITE PLAN, FLOOR PLAN, ELEVATIONS, SECTION & DETAILS.	
			EFFLUENT GATE CHAMBER	
			UNDERWOOD McLELLAN AND ASSOCIATES CONSULTING PROFESSIONAL ENGINEERS CALGARY SASKATOON REGINA WINNIPEG	APPROVER <i>W. B. ...</i> ENGINEER OF DESIGN
			<i>R. Hood</i> APPROVED	ENGINEER OF WASTE DISPOSAL <i>A. ...</i> DIRECTOR AND CHIEF ENGINEER
			DATE MAY 13, 1965	DRAWING NO. AB-22-265-08-04L
			SCALE: AS SHOWN	SHEET 4 OF 14



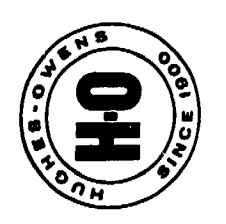
CSL-4

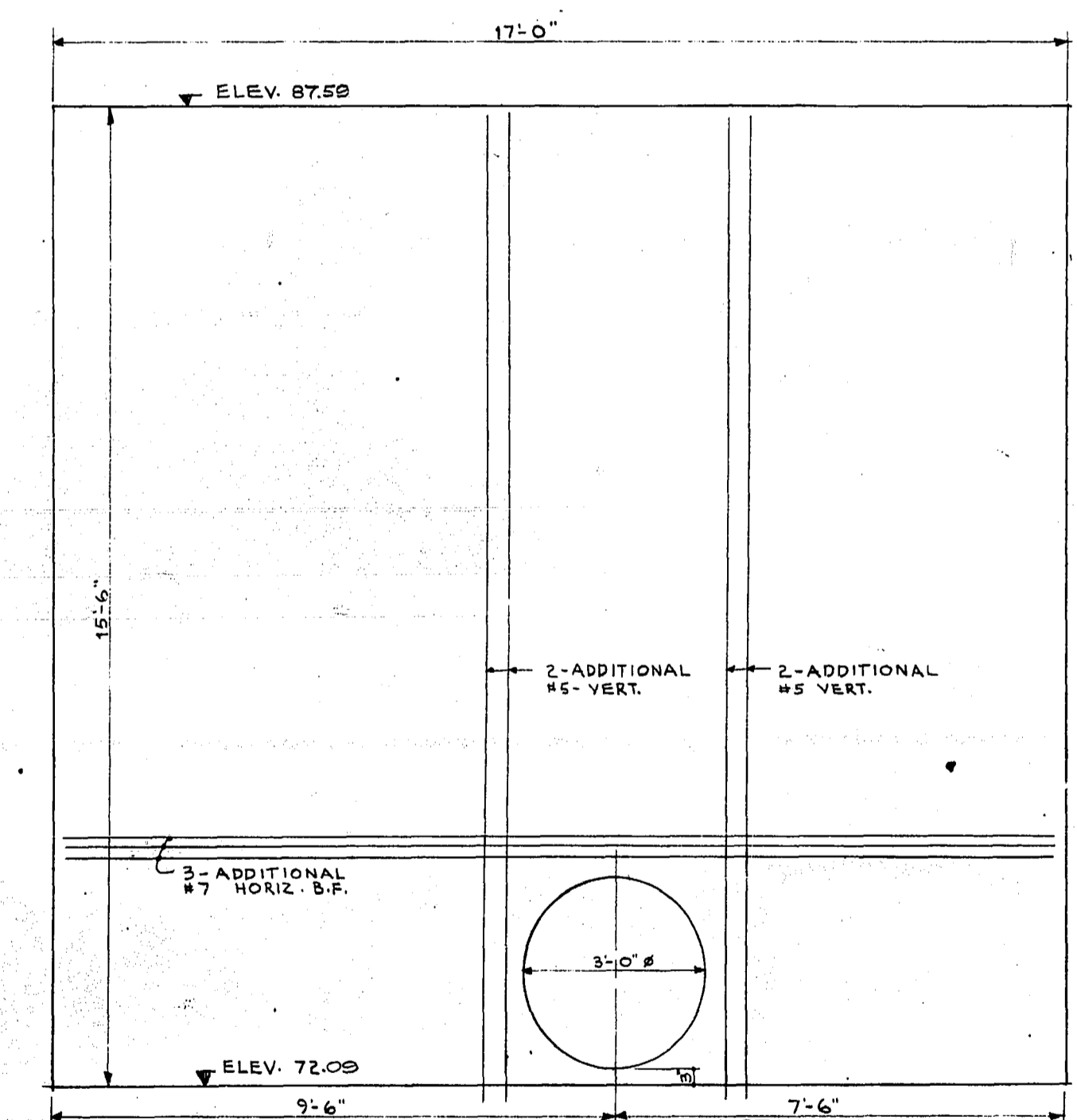
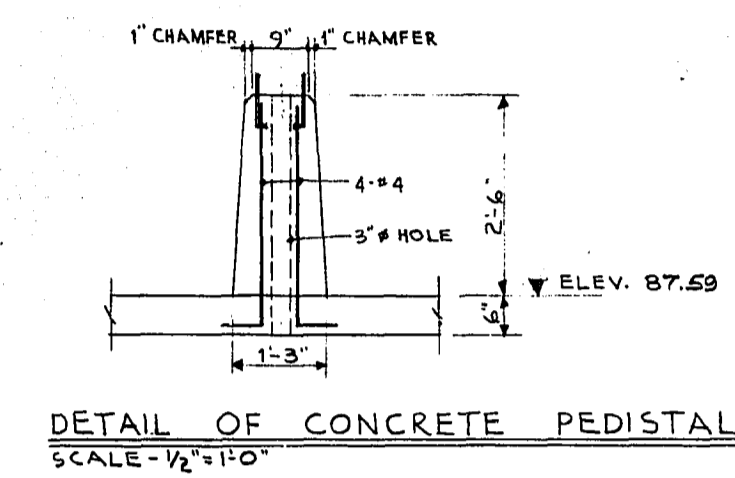
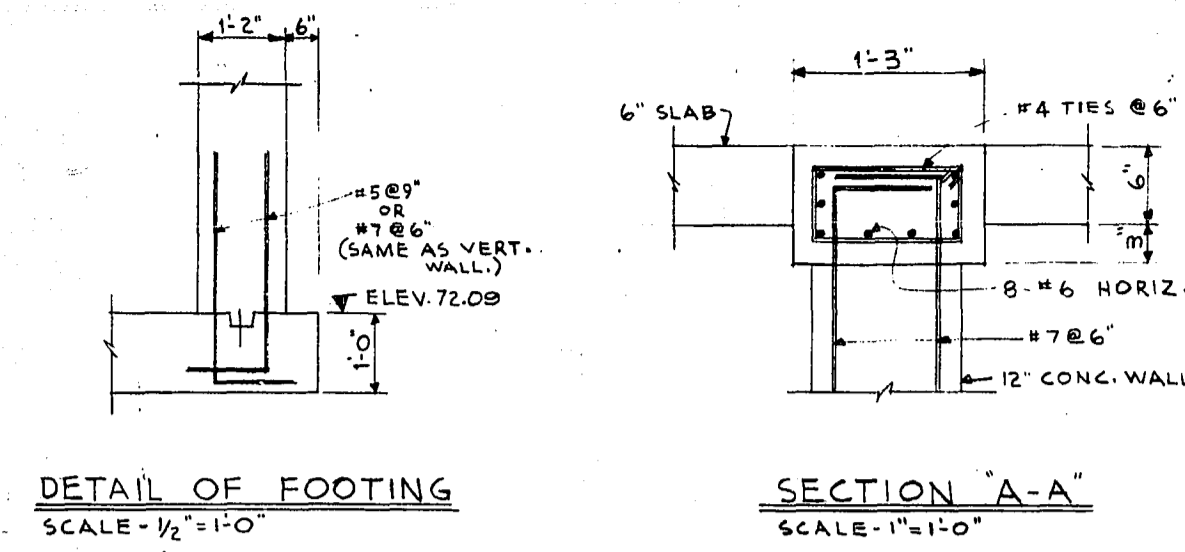
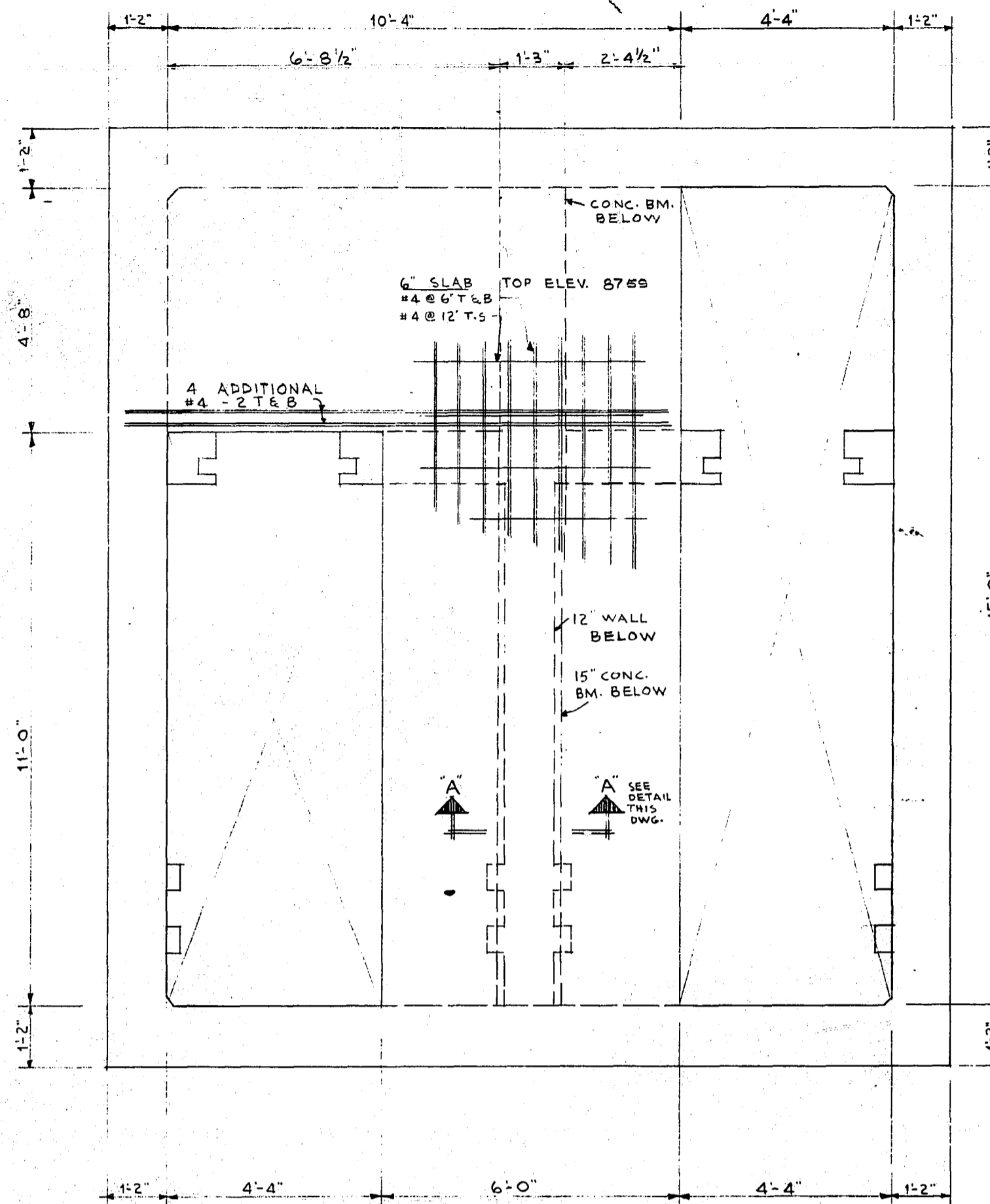
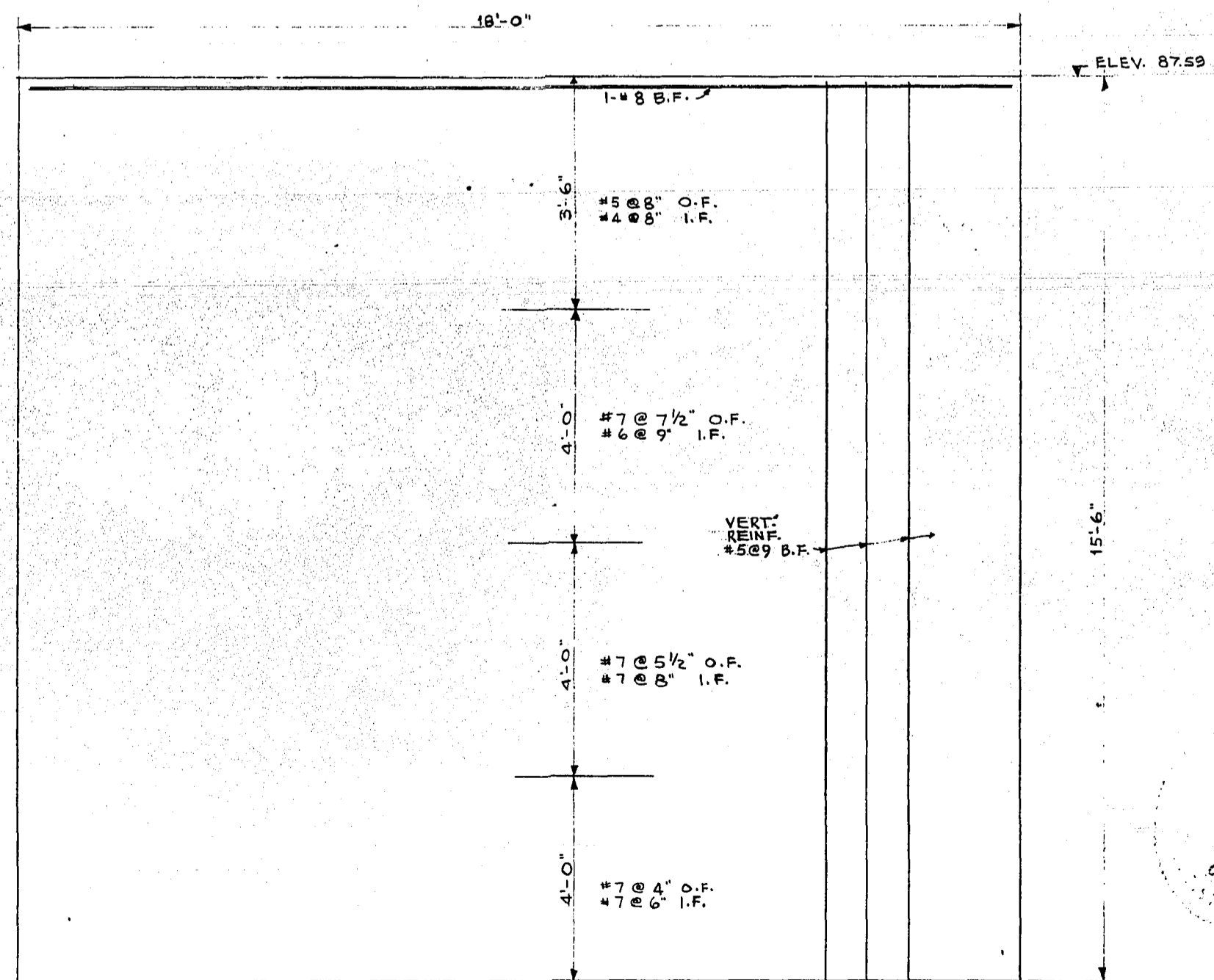
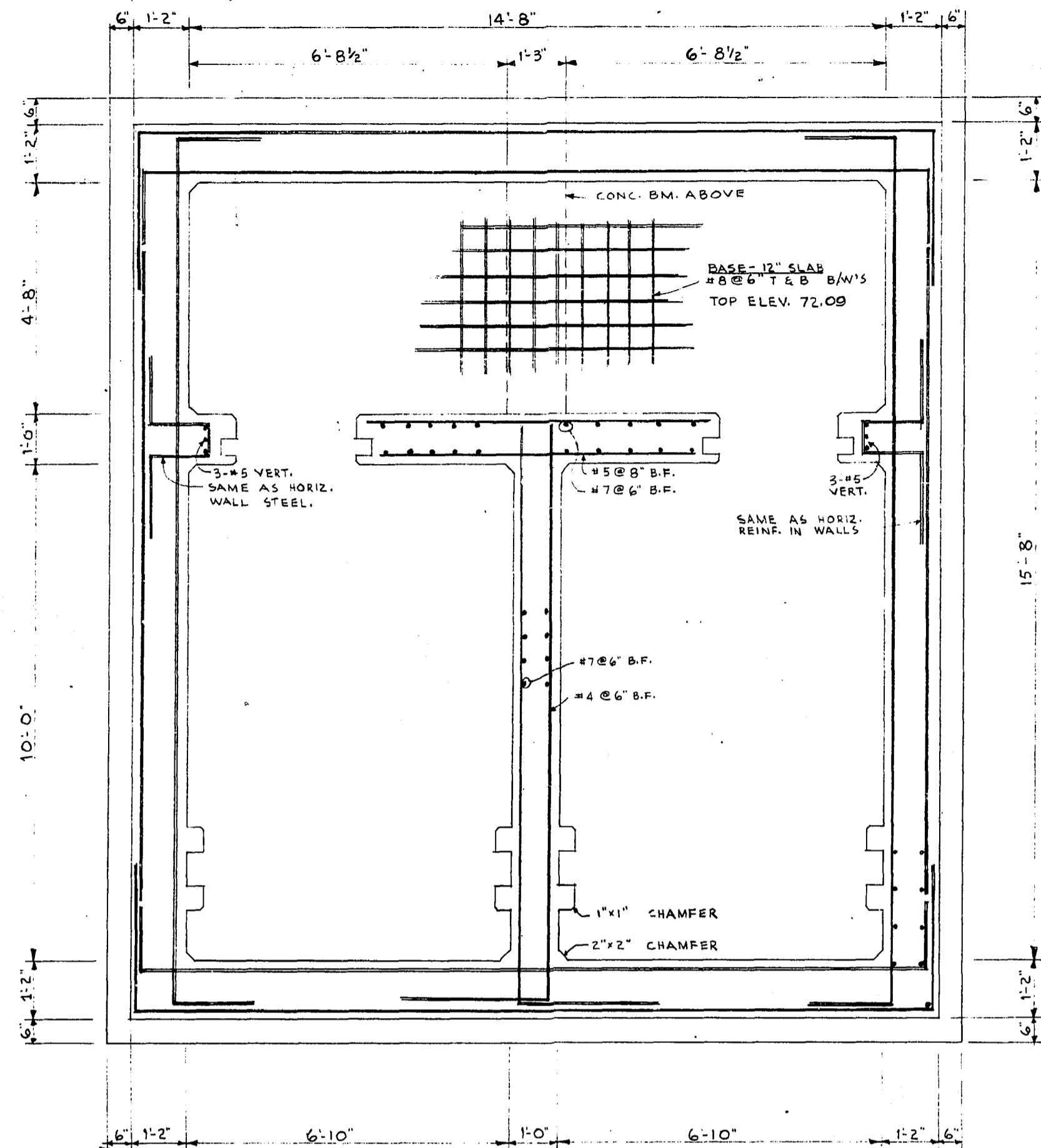
REF. OF DRAWING No. CSL-5
**DETAILS EFFLUENT GATE
 CHAMBER. DET.**



AS CONSTRUCTED

REVISIONS		THE METROPOLITAN CORPORATION OF GREATER WINNIPEG WATERWORKS AND WASTE DISPOSAL DIVISION	
NO.	DATE	DETAILS	
1	10/13/63	REVISED TO SHOW DIMENSIONS FOR 3/8" AND 3/4" BEAMS AND 1/4" ANCHORS	
		CHARLESWOOD SEWAGE LAGOON	
		EFFLUENT GATE CHAMBER DETAILS	
DRAWN BY: <i>S. B. Smith</i>		APPROVED: <i>W. J. McEwan</i> ENGINEER OF DESIGN	
CHECKED BY: I. T.		APPROVED: <i>R. L. Ford</i> ENGINEER OF WASTE DISPOSAL	
DESIGNED BY: I. T.		APPROVED: <i>W. J. McEwan</i> DIRECTOR AND CHIEF ENGINEER	
DATE: MAY 13, 1965		DRAWING NO.: AB-22-265-DB-051	SCALE: AS SHOWN
DRAWN BY:		SHEET 5 OF 14	CSL-5

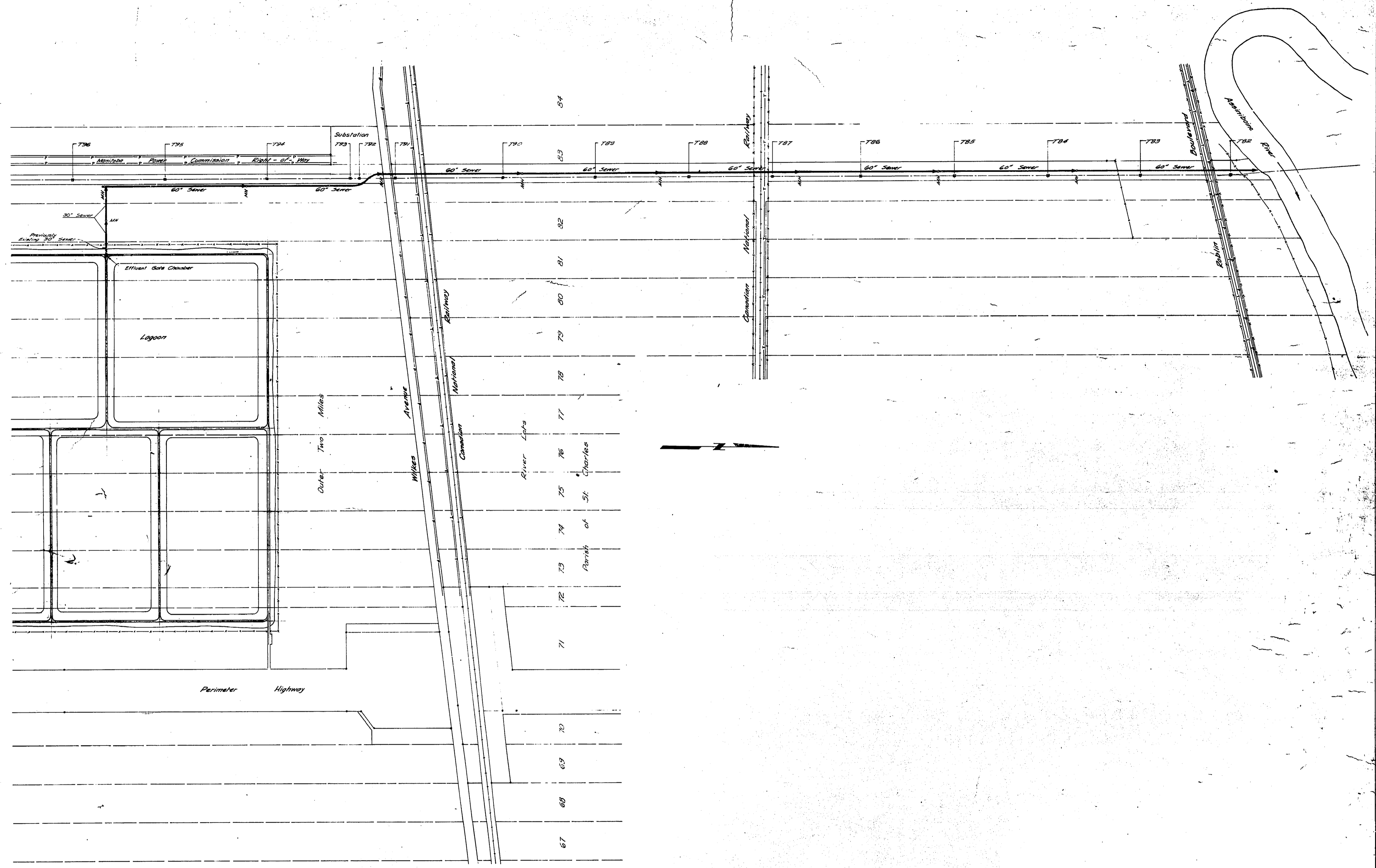




REVISIONS		THE METROPOLITAN CORPORATION OF GREATER WINNIPEG WATERWORKS AND WASTE DISPOSAL DIVISION	
NO.	DATE	DETAILS	

UNDERWOOD McLELLAN AND ASSOCIATES CONSULTING PROFESSIONAL ENGINEERS CALGARY SASKATOON REGINA WINNIPEG		APPROVED ENGINEER OF DESIGN
DRAWN BY: D.B. TRACED BY: CHECKED BY: G.T. DESIGNED BY: G.T. LAYOUT BY:		APPROVED DIRECTOR AND CHIEF ENGINEER
DATE	DRAWING NO.	SCALE: AS SHOWN
MAY 13, 1965	AB-22-265-08-06L	SHEET 6 OF 14

REF. or DRAWING No. **CSL-22**
DETAILS GEN. LAYOUT
 SCALE: 1" = 400'

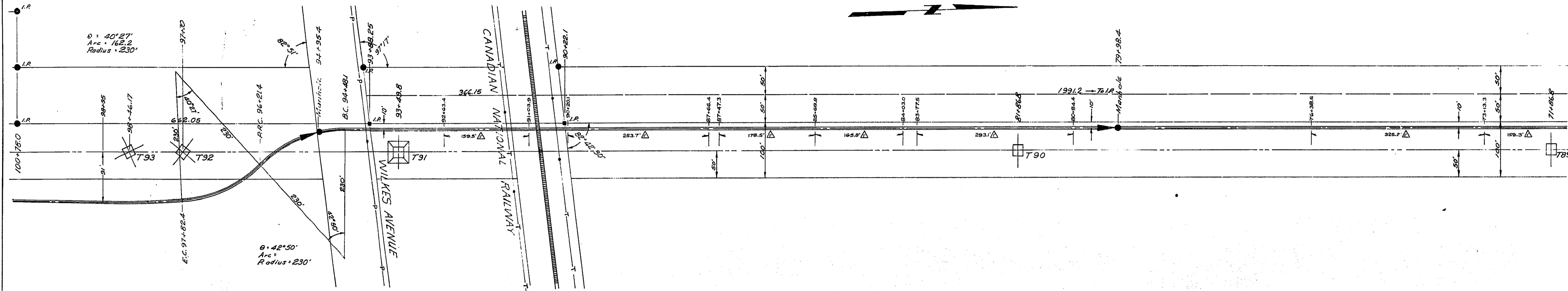


REVISIONS			THE METROPOLITAN CORPORATION OF GREATER WINNIPEG WATERWORKS AND WASTE DISPOSAL DIVISION		
No.	DATE	DETAILS	CHARLESWOOD LAGOON EFFLUENT PIPE LINE		
			GENERAL LAYOUT SCALE: 1" = 400' (AS CONSTRUCTED)		
			UNDERWOOD McLELLAN AND ASSOCIATES CONSULTING PROFESSIONAL ENGINEERS CALGARY SASKATOON REGINA WINNIPEG	APPROVED ENGINEER OF DESIGN	
				ENGINEER OF WASTE DISPOSAL	
				DIRECTOR AND CHIEF ENGINEER	
			DATE: 1 / 2 / 65	DRAWING No.: AB 22-265-08C-01	SCALE: AS SHOWN
			LAYOUT BY:		SHEET 1 OF 5

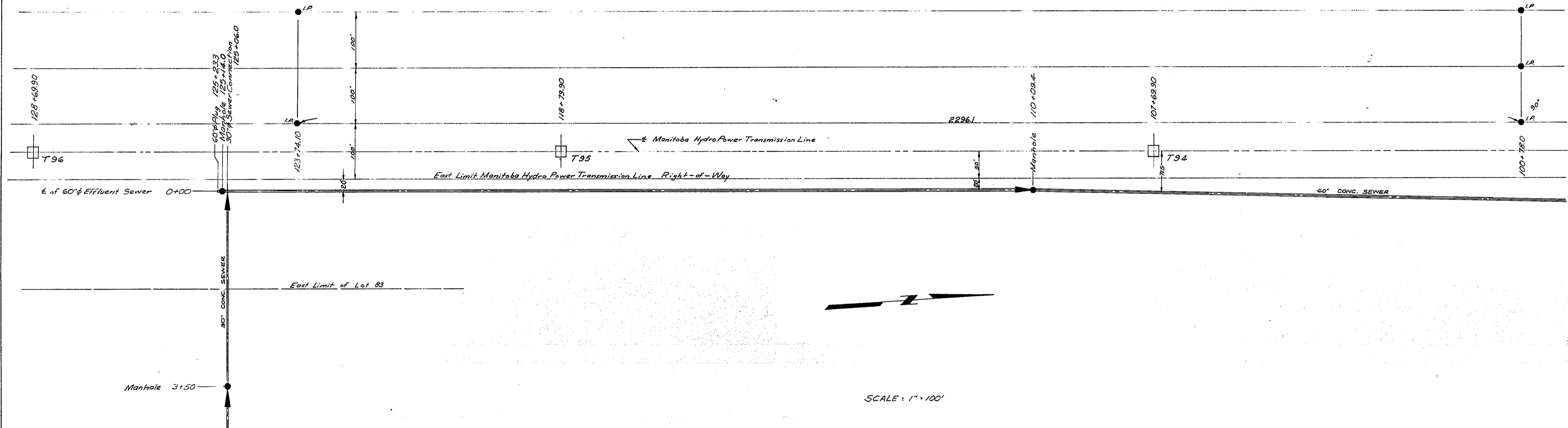


CSL-22

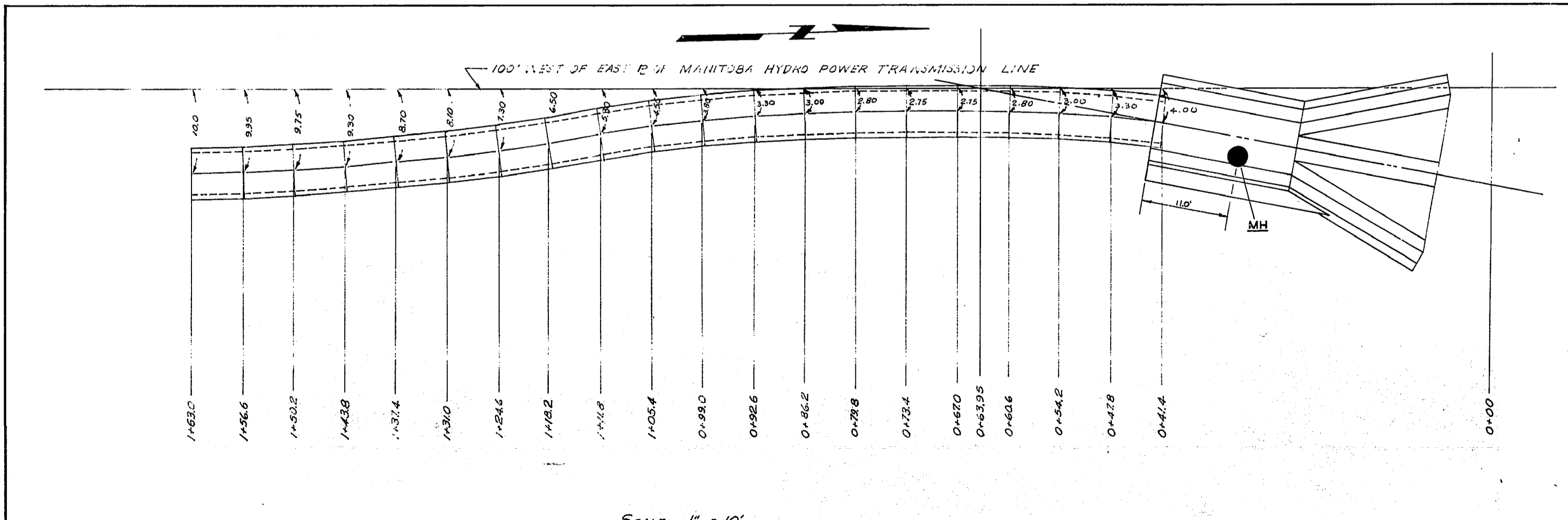
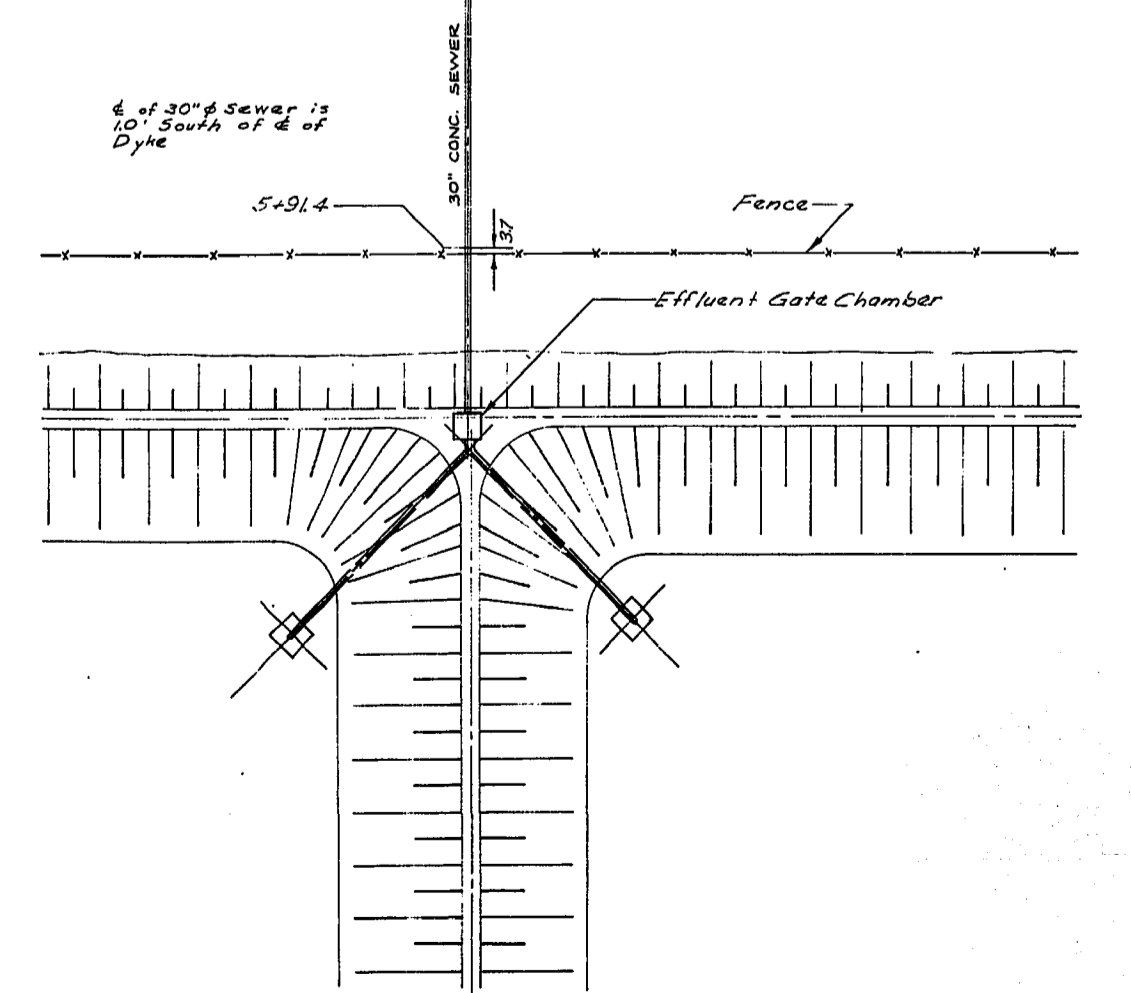
REF. OF DRAWING NO. **CSL-24**
DETAILS CHARLESWOOD LAGOON
EFFLUENT PIPE LINE



SCALE: 1" = 100'



SCALE: 1" = 100'



SCALE: 1" = 10'

TABLE OF MANHOLE INVERT ELEVATIONS

MANHOLE STATION	TOP ELEVATION	INVERTS				FINAL TOP ELEV.
		NORTH	SOUTH	EAST	WEST	
125+140		765.93	765.93	767.18		784.72
110+000		764.62 ⁵	764.62 ⁵			781.63
94+95.4		763.30 ⁵	763.30 ⁵			782.20 ⁶
79+98.4		762.08 ⁴	762.08 ⁴			782.43
3+50	*			770.99	770.99	786.13

NOTES:
 * Manhole @ 43+50 on 30" Sewer Line.
 All chainages are referred to the centerline of the 60" Effluent Sewer.
 Δ - Depth of crushed rock base beneath pipe.

DESCRIPTION	SYMBOL
SANITARY SEWER & MH.	—●—
STORM SEWER & MH.	—○—
CATCH BASINS	—□—
WATER MAIN	—◇—
GATE VALVE, CROSS OR TEE	—X—
FIRE HYDRANT (OFF LINE WITH VALVE)	—●—
FIRE HYDRANT (ON LINE)	—●—
SEWAGE FORCE MAIN	—◇—
CURB STOP	—□—
CURB	—□—
SIDEWALK	—//—
DIRECTION OF DRAINAGE	—>—
AREA PAVED	—//—

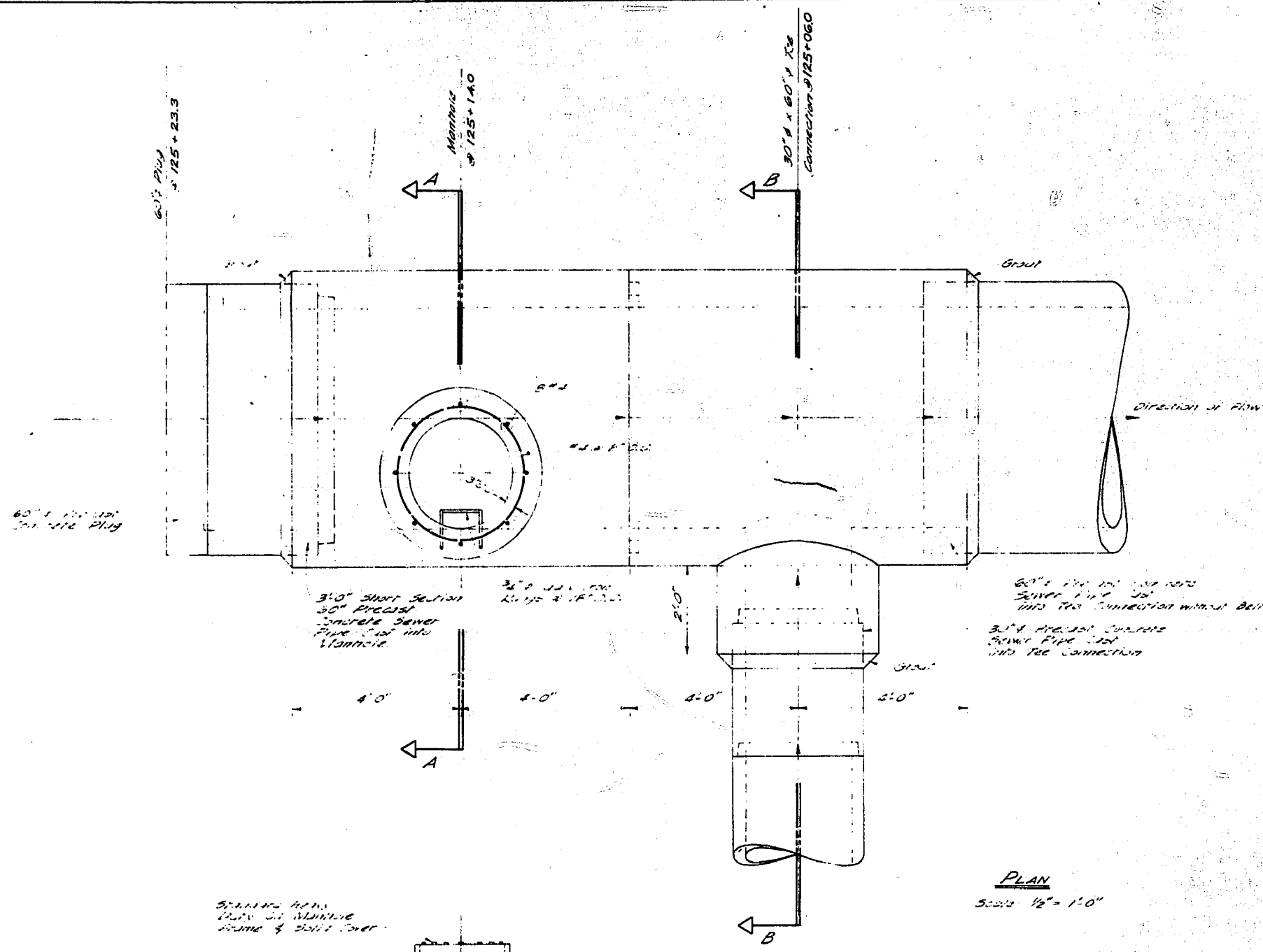
THE METROPOLITAN CORPORATION OF GREATER WINNIPEG
 WATERWORKS AND WASTE DISPOSAL DIVISION

CHARLESWOOD LAGOON EFFLUENT PIPE LINE
 (AS CONSTRUCTED)

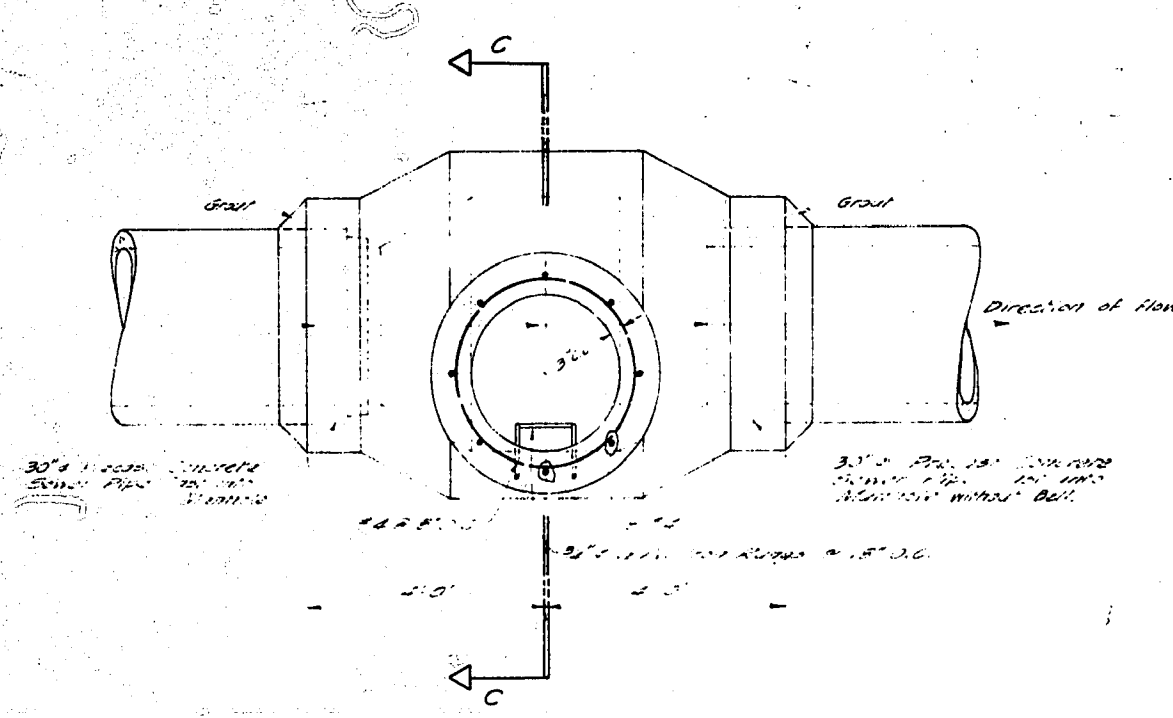
DRAWN BY: E.B.
 TRACED BY: J.H.
 CHECKED BY: J.H.
 SHEET 3 OF 5
 SCALE: AS SHOWN

UNDERWOOD McLELLAN & ASSOCIATES LIMITED
 CONSULTING PROFESSIONAL ENGINEERS
 CALGARY REGINA SASKATOON WINNIPEG
 APPROVED BY: [Signature]
 DATE: 1/2/65
 DWG. No. AB22-265-08C-03

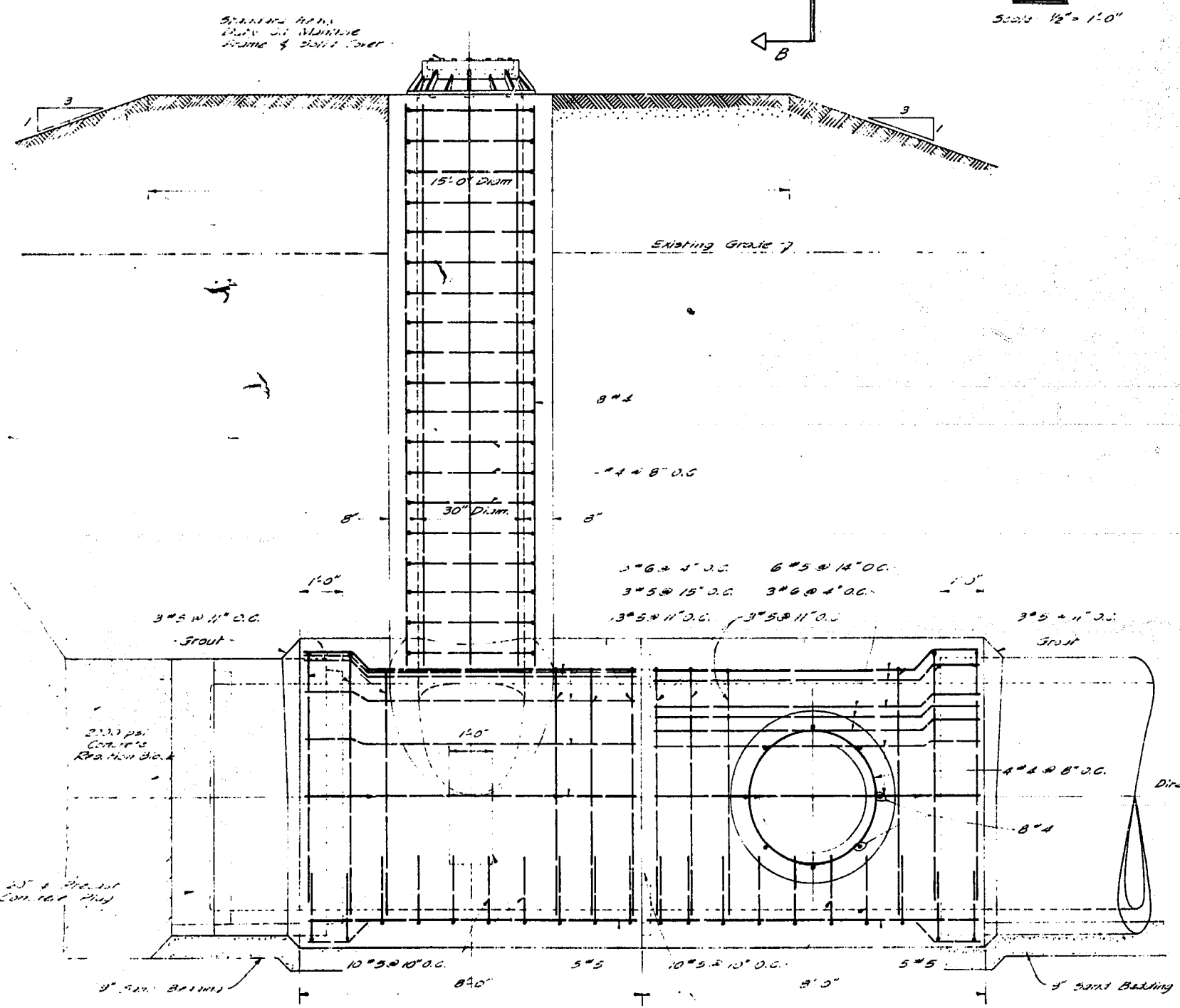
REF. OF DRAWING No. **CSL-25**
DETAILS STAND. MANHOLE
DETAILS



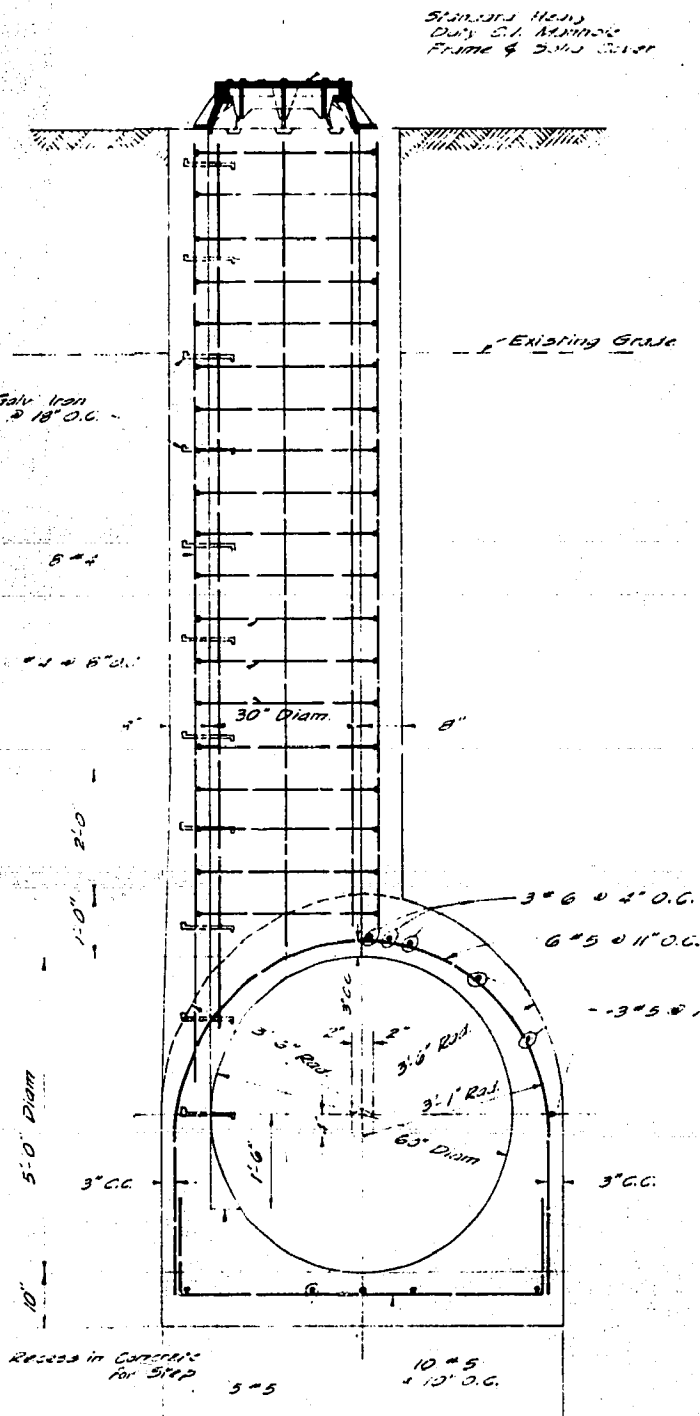
PLAN
 Scale 1/2" = 1'-0"



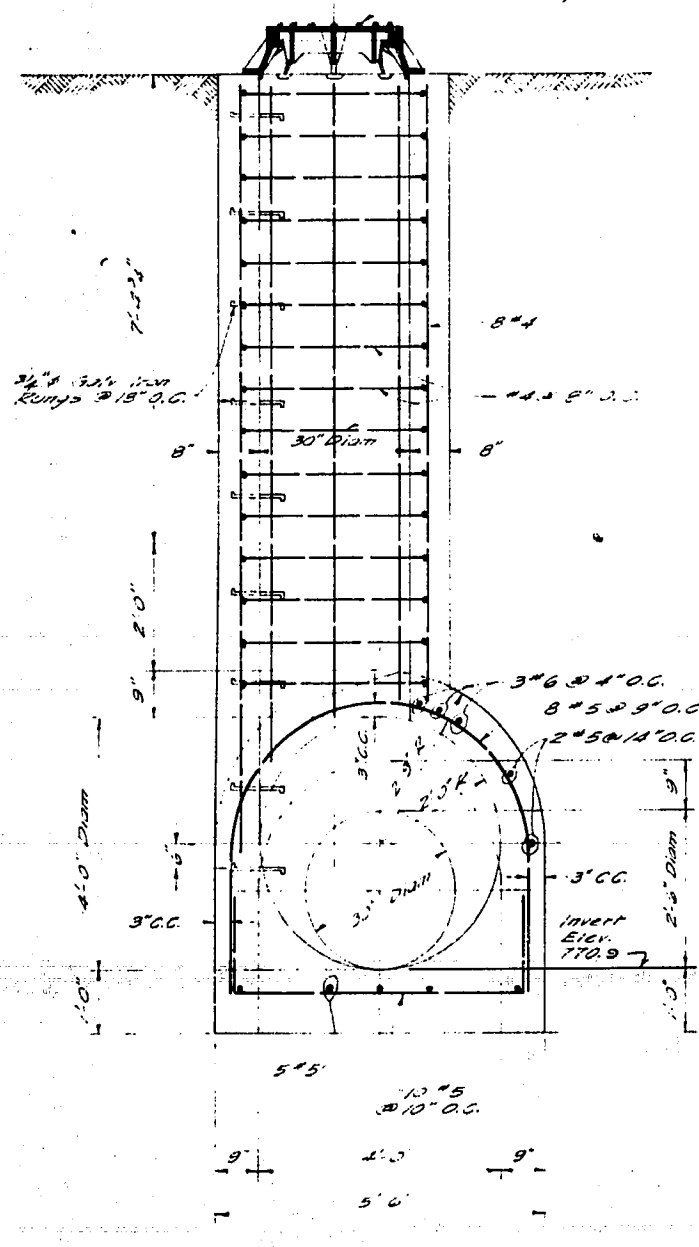
PLAN - MANHOLE AT 3'-50 ON 30" SEWER
 Scale 1/2" = 1'-0"



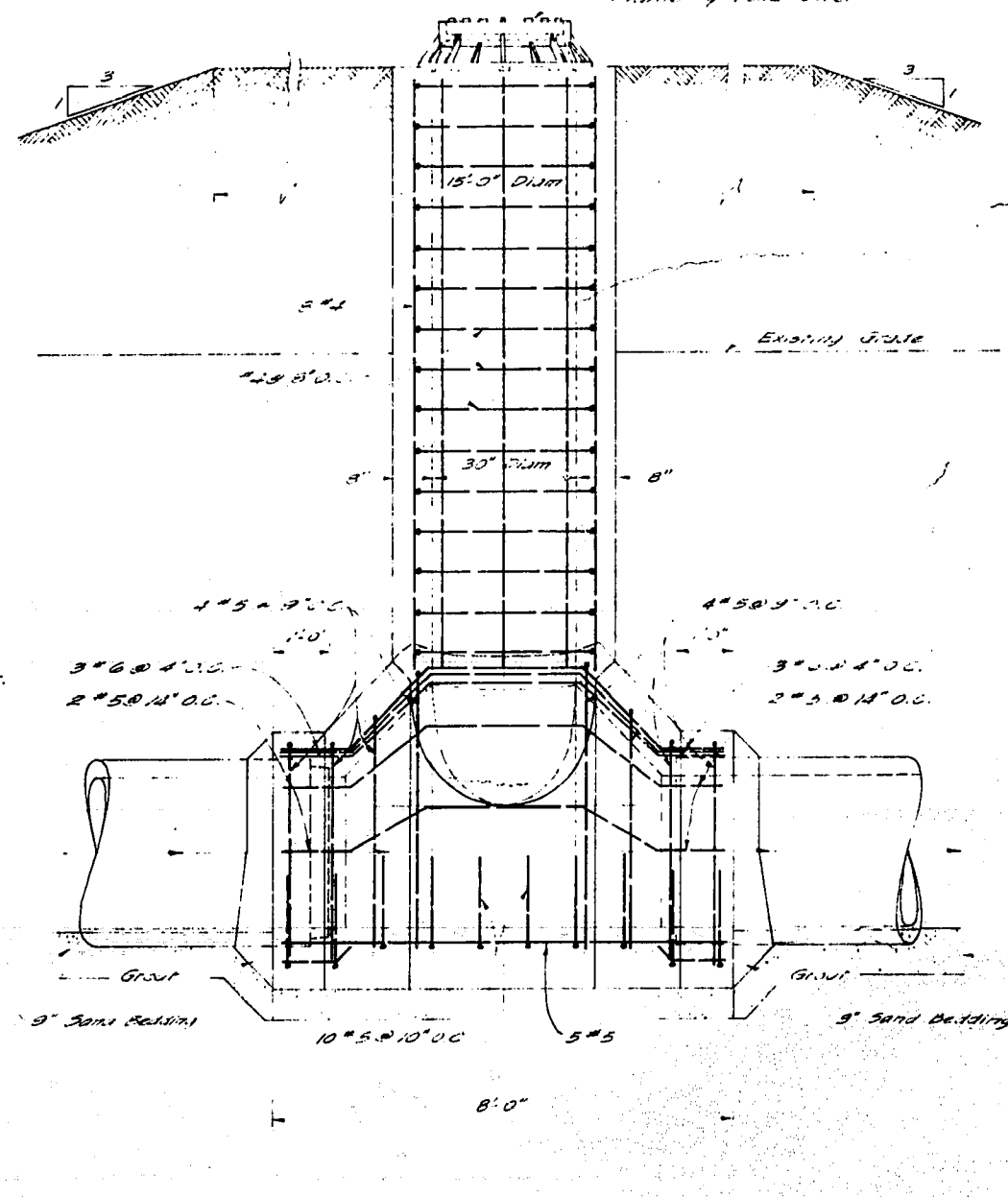
NOTE: TYPICAL MANHOLE ON 30" SEWER
 Similar to shown 4'-0" diameter, but with joints in Precast 40" Sewer in 2002 data.



SECTION A-A THROUGH MANHOLE
 Scale 1/2" = 1'-0"

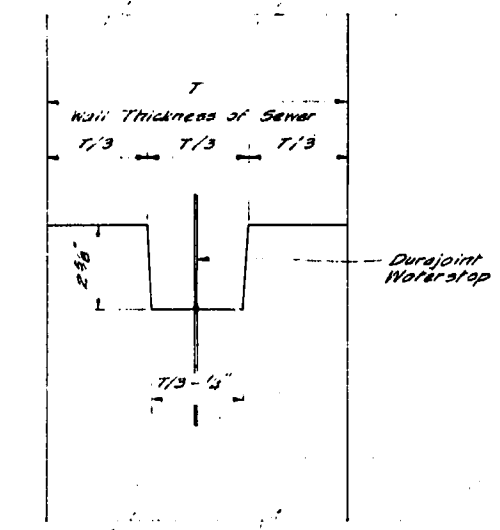


SECTION C-C
 Scale 1/2" = 1'-0"

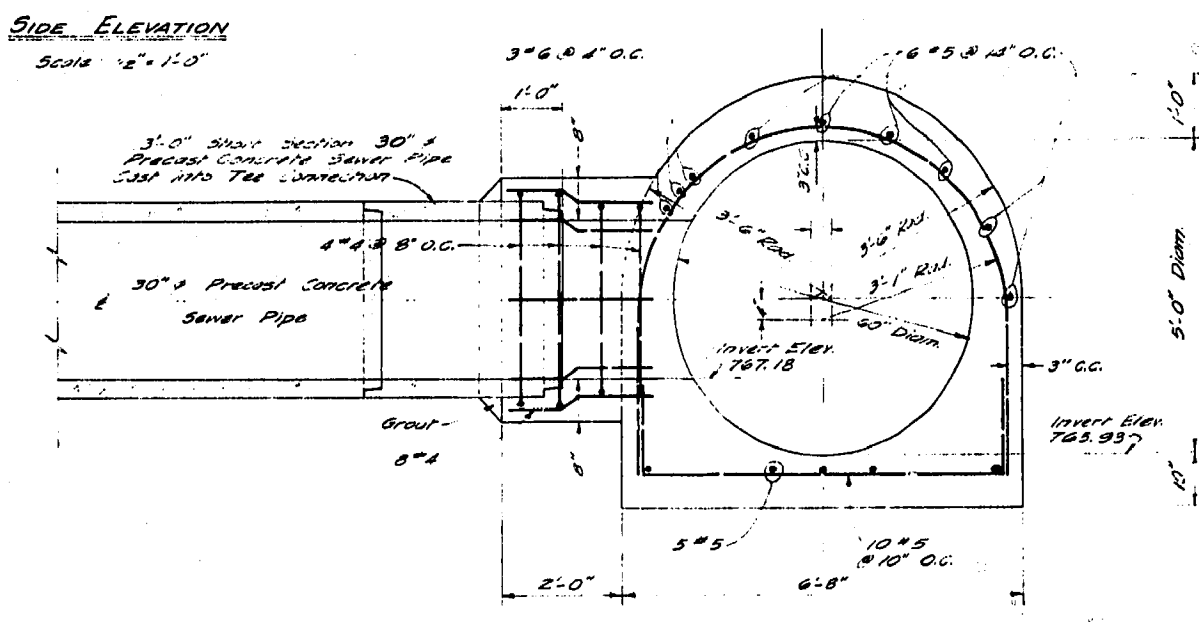


SIDE ELEVATION
 Scale 1/2" = 1'-0"

30" SEWER



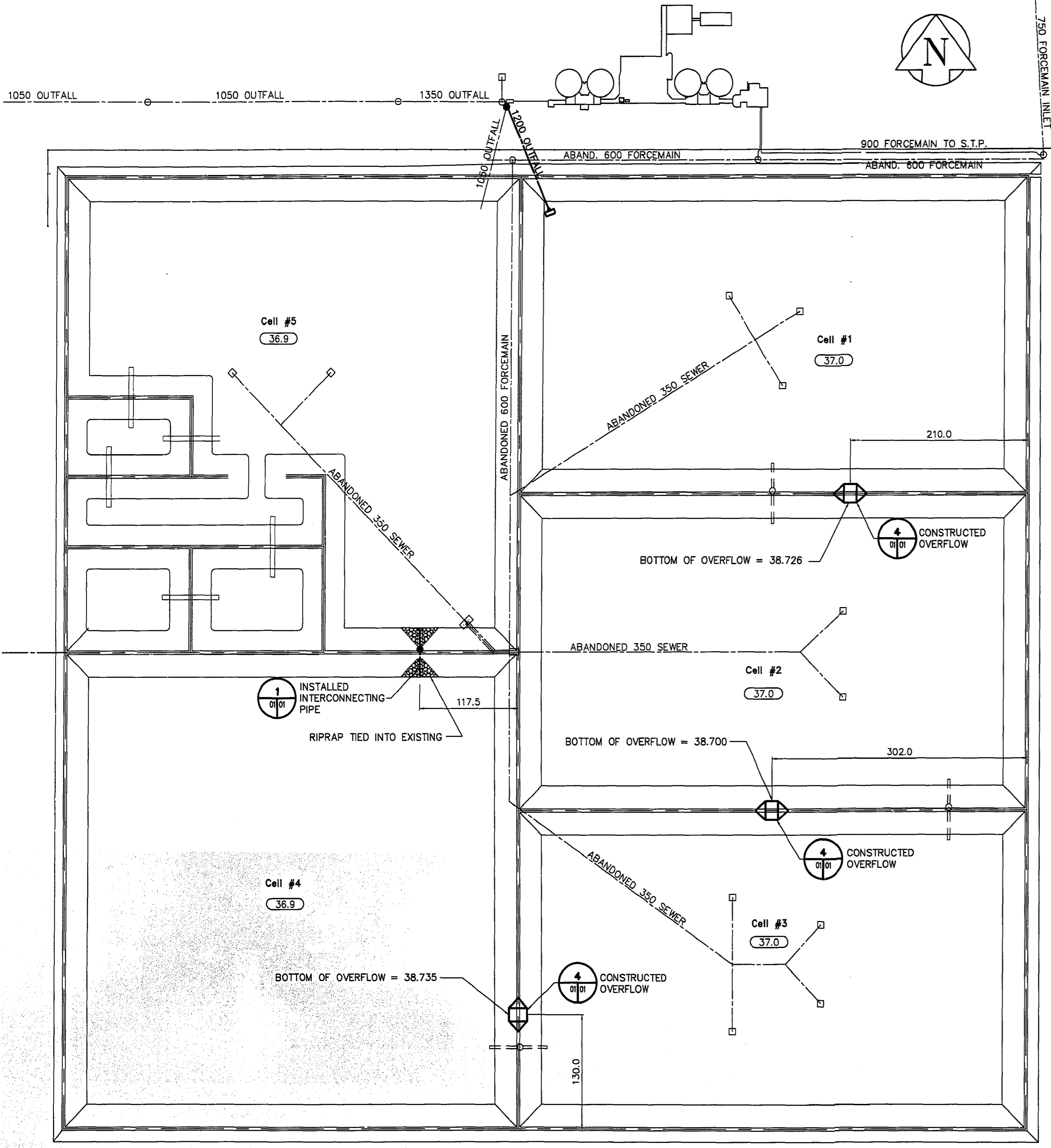
CONSTRUCTION JOINT DETAIL
 Not to Scale



SECTION B-B THROUGH THE CONNECTION
 Scale 1/2" = 1'-0"

60" SEWER

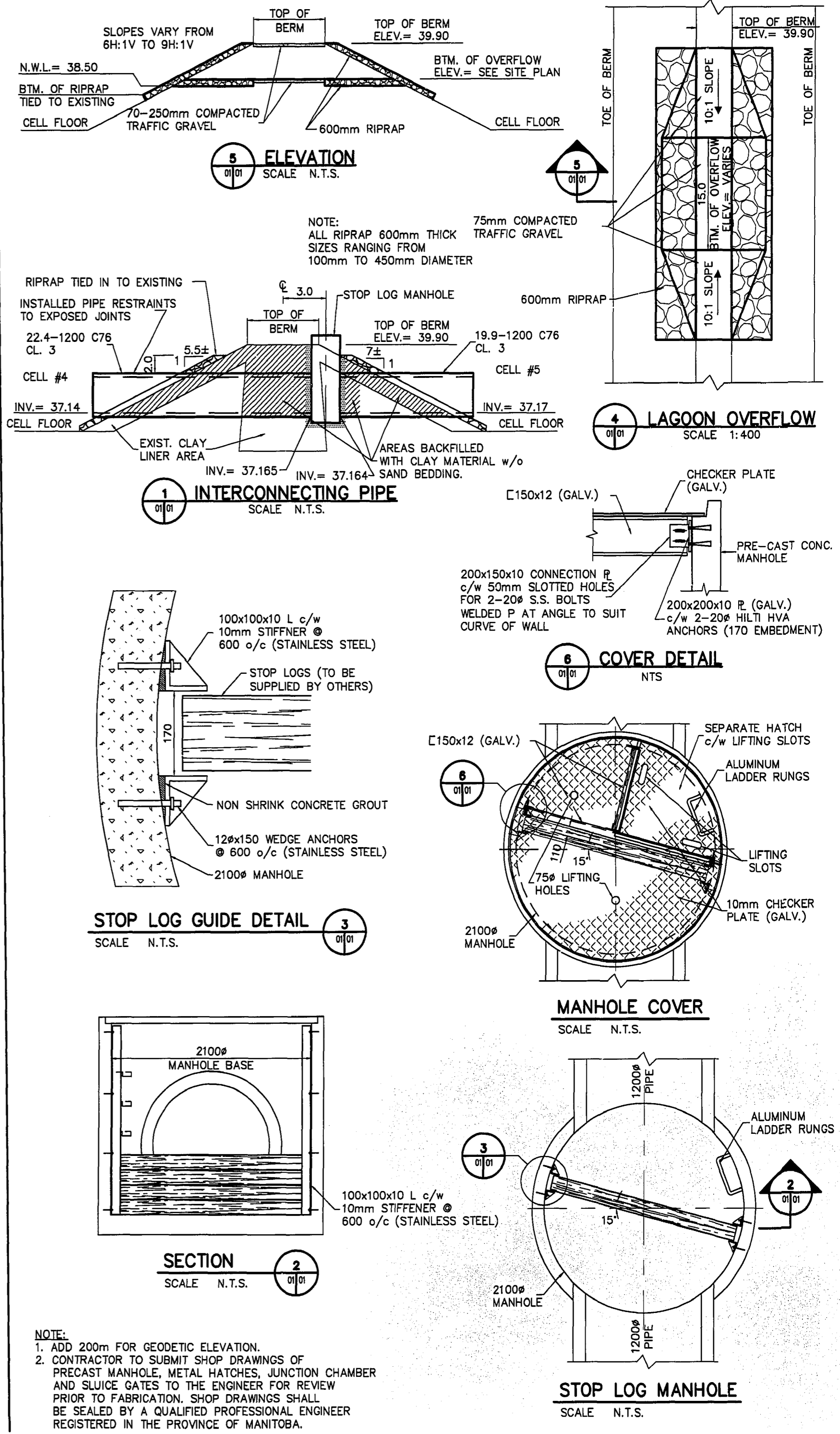
REVISIONS		THE METROPOLITAN CORPORATION OF GREATER WINNIPEG WATERWORKS AND WASTE DISPOSAL DIVISION	
No.	DATE	DETAILS	CHARLEWOOD LAKE EFFLUENT PIPELINE
		STANDARD MANHOLE DETAILS (AS CONSTRUCTED)	
		UNDERWOOD McLELLAN AND ASSOCIATES CONSULTING PROFESSIONAL ENGINEERS CALGARY SASKATOON REGINA WINNIPEG	APPROVED ENGINEER OF DESIGN
			ENGINEER OF WASTE DISPOSAL
DRAWN BY: <i>WED</i>		APPROVED: <i>S. Head</i>	
CHECKED BY: <i>WED</i>		DIRECTOR AND CHIEF ENGINEER	
DATE: 1/2/65	DRAWING No: AB 22-265-08C-04	SCALE: AS SHOWN	SHEET 4 OF 5
DESIGNED BY:		CSL-25	
LAYOUT BY:		W.P.D. 1965	



REID, CROWTHER & PARTNERS LIMITED
WINNIPEG
AS CONSTRUCTED
S.D. *Leitch* DATE: *July 14/98*

SITE PLAN
SCALE 1:3000

BENCH MARK:
W. side of Perimeter Hwy. (P.T.H. No. 100) along service Rd., Btwn. Wilkes Ave. & Four Mile Rd., 19mm x 6.1m I.B. in Valve Box, 192.3m S. of C.L. of main gate to Charleswood Sewage Lagoon & 51.8m W. of W. edge of conc. pav't. of S. bound traffic lane (P.T.H. No. 100) & 457.2m N. of C.L. of 1st. Intersection of service roads, & (P.T.H. No. 100), S. of Wilkes Ave.



NOTE:
1. ADD 200m FOR GEODETIC ELEVATION.
2. CONTRACTOR TO SUBMIT SHOP DRAWINGS OF PRECAST MANHOLE, METAL HATCHES, JUNCTION CHAMBER AND SLUICE GATES TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION. SHOP DRAWINGS SHALL BE SEALED BY A QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA.

EXISTING	LEGEND - PLAN	PROPOSED	EXISTING	LEGEND - PLAN	PROPOSED	EXISTING	LEGEND - PROFILE	PROPOSED
150 mm W.M.	WATERMAIN	150 mm W.M.	HYDRO	150 mm W.M.	WATERMAIN	150 mm W.M.	WATERMAIN	150 mm W.M.
300mm L.D.S.	LAND DRAINAGE SEWER	300mm L.D.S.	CONCRETE ASPHALT	300mm L.D.S.	LAND DRAINAGE SEWER	300mm L.D.S.	LAND DRAINAGE SEWER	300mm L.D.S.
250mm W.W.S.	WASTEWATER SEWER	250mm W.W.S.	PROPERTY LINE	250mm W.W.S.	WASTE WATER SEWER	250mm W.W.S.	WASTE WATER SEWER	250mm W.W.S.
MANHOLE	MANHOLE	MANHOLE	SURVEY BAR	MANHOLE	MANHOLE	MANHOLE	MANHOLE	MANHOLE
CATCH BASIN	CATCH BASIN	CATCH BASIN	ELEVATION	CATCH BASIN	CATCH BASIN	CATCH BASIN	CATCH BASIN	CATCH BASIN
CURB INLET	CURB INLET	CURB INLET	TREE	CURB INLET	CURB INLET	CURB INLET	CURB INLET	CURB INLET
JUNCTIONS	JUNCTIONS	JUNCTIONS	SIDEWALK RAMP	JUNCTIONS	JUNCTIONS	JUNCTIONS	JUNCTIONS	JUNCTIONS
CULVERT	CULVERT	CULVERT	CONCRETE SIDEWALK	CULVERT	CULVERT	CULVERT	CULVERT	CULVERT
GAS	GAS	GAS	FENCE	GAS	GAS	GAS	GAS	GAS

LOCATION APPROVED UNDERGROUND STRUCTURES
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.

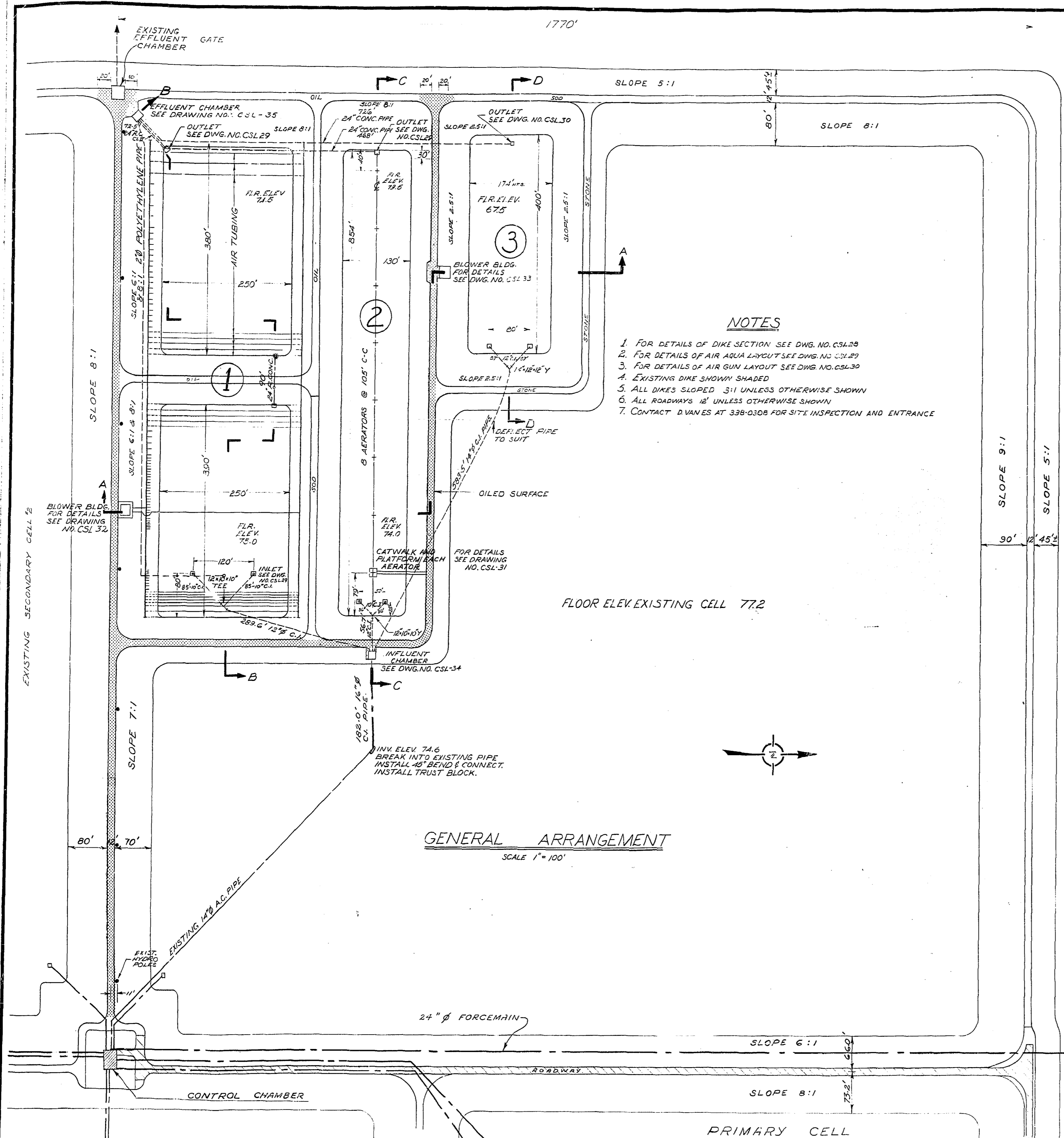
NO.	REVISIONS	DATE	BY
1	AS CONSTRUCTED	98/07/02	TWS
0	ISSUED FOR TENDER	98/03/02	GDL
A	ISSUED FOR REVIEW	98/02/02	GDL

Reid Crowther
Reid Crowther and Partners Limited
Consulting Engineering Worldwide
DESIGNED BY KGM
CHECKED BY
DRAWN BY GDL
APPROVED BY
HOR. SCALE: AS SHOWN
VERTICAL:
DATE 98/01/30
DATE

ENGINEER'S SEAL
PROVINCE OF MANITOBA
ORIGINAL SIGNED AND SEALED
K & G MILLER
DATED 28/02/98
REGISTERED PROFESSIONAL ENGINEER
CONSULTANT DRAWING NO. 60910-06-01

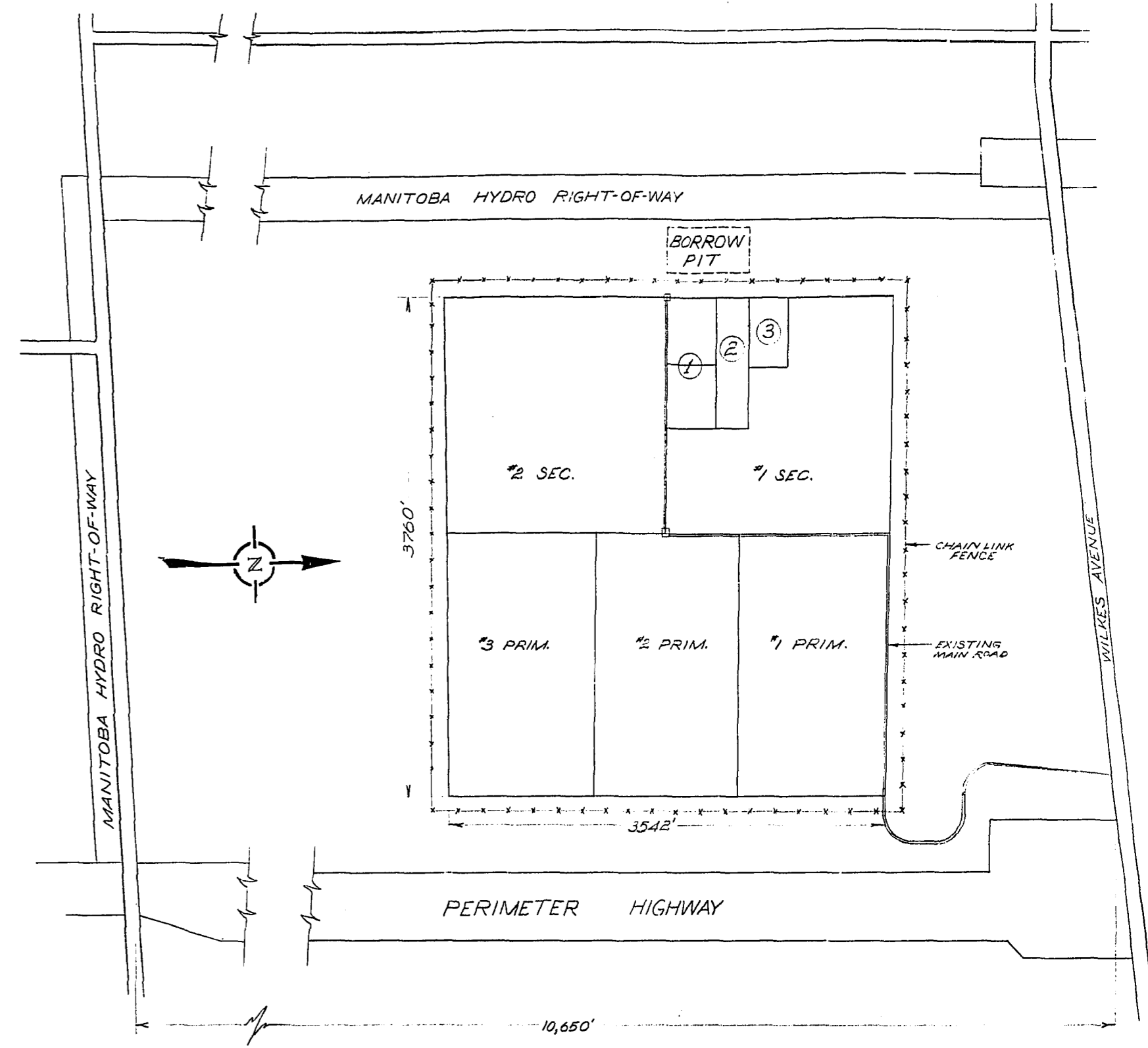
THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
WEST END WATER POLLUTION CONTROL CENTRE LAGOON MODIFICATIONS
OVERFLOW AND INTERCONNECTION PIPE LOCATION PLAN AND TYPICAL DETAILS
CITY DRAWING NUMBER WEP-688
SHEET 1 OF 2

DETAILS AERATED LAGOONS
SITE PLAN



- NOTES**
1. FOR DETAILS OF DIKE SECTION SEE DWG. NO. CSL-28
 2. FOR DETAILS OF AIR AQUA LAYOUT SEE DWG. NO. CSL-29
 3. FOR DETAILS OF AIR GUN LAYOUT SEE DWG. NO. CSL-30
 4. EXISTING DIKE SHOWN SHADED
 5. ALL DIKES SLOPED 3:1 UNLESS OTHERWISE SHOWN
 6. ALL ROADWAYS 12' UNLESS OTHERWISE SHOWN
 7. CONTACT DIVANES AT 338-0308 FOR SITE INSPECTION AND ENTRANCE

GENERAL ARRANGEMENT
SCALE 1" = 100'



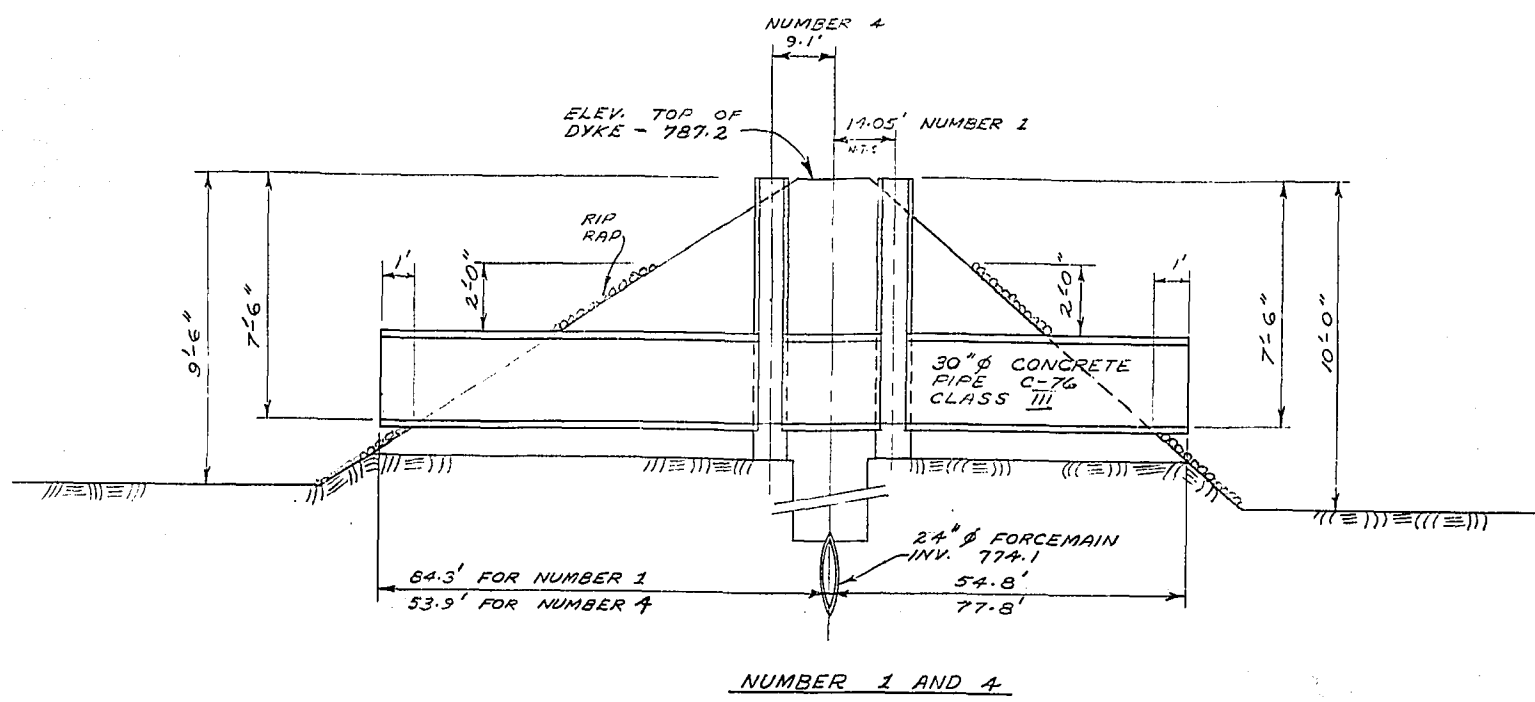
SITE PLAN
SCALE 1" = 800'

- CELL DESCRIPTION**
- ① AIR AQUA
 - ② SURFACE AERATOR
 - ③ AIR GUN

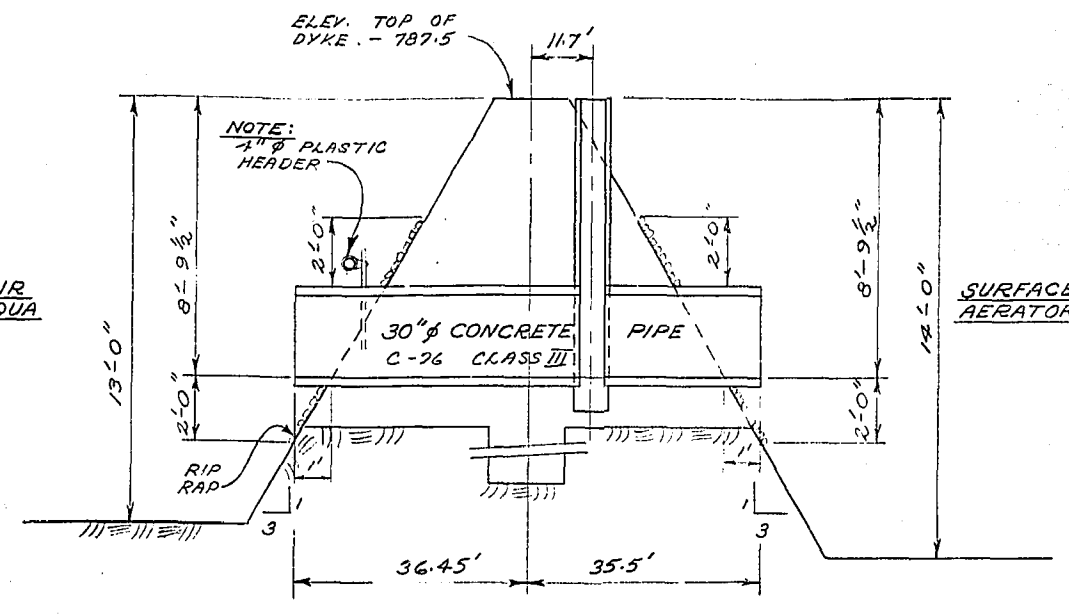
AS CONSTRUCTED AUG 15/68 V.D.
[Signature]



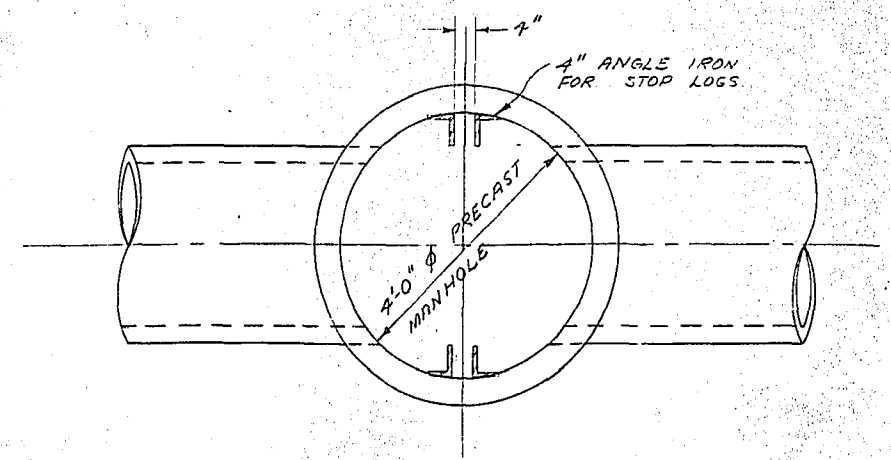
THE METROPOLITAN CORPORATION OF GREATER WINNIPEG WATERWORKS & WASTE DISPOSAL DIVISION A. PENMAN - DIRECTOR	SEWAGE DISPOSAL DEPT.	DES. <i>[Signature]</i> CHK'D. <i>[Signature]</i>	SCALED AS SHOWN
	AERATED LAGOONS CHARLESWOOD	DRN. E.R. DATE June 30/67	DRAWING NO.
	SITE PLAN AND GENERAL ARRANGEMENT	ENG. DES. <i>[Signature]</i>	CSL-27
	APPROVED <i>[Signature]</i>	APP'D. <i>[Signature]</i>	



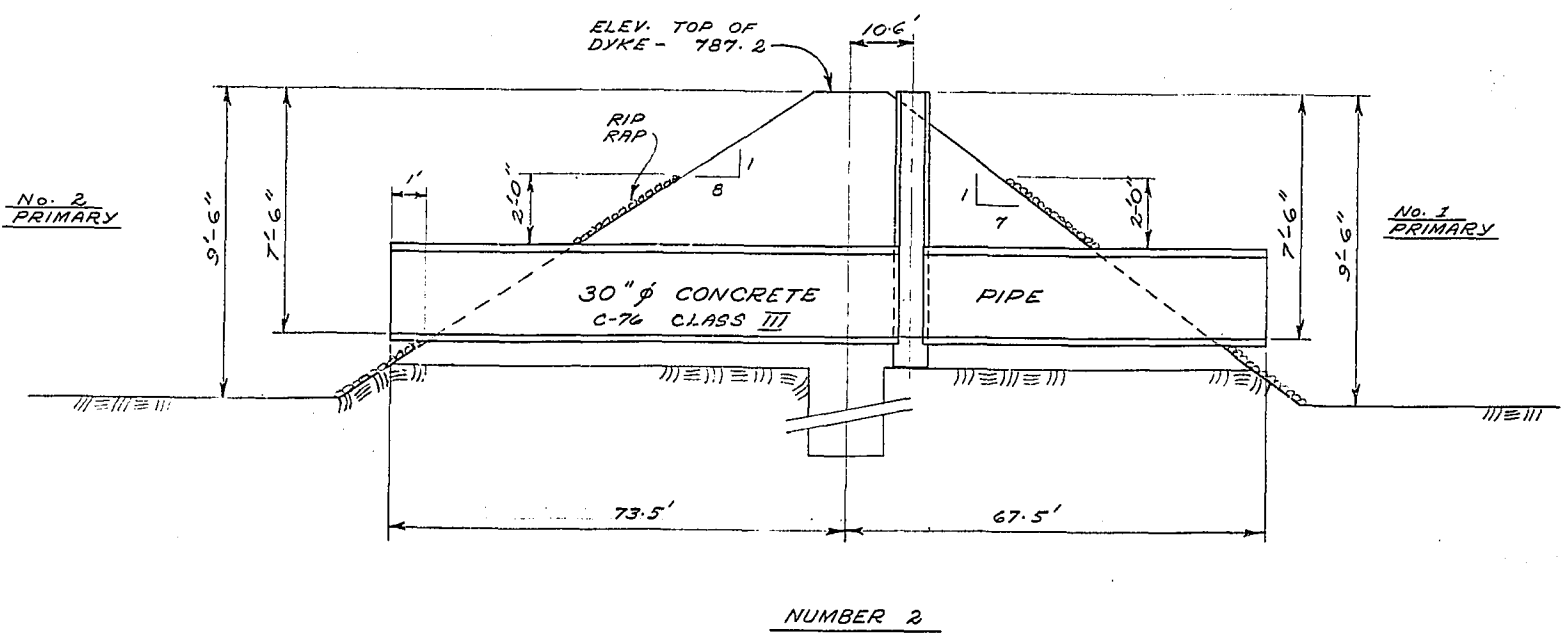
NUMBER 1 AND 4



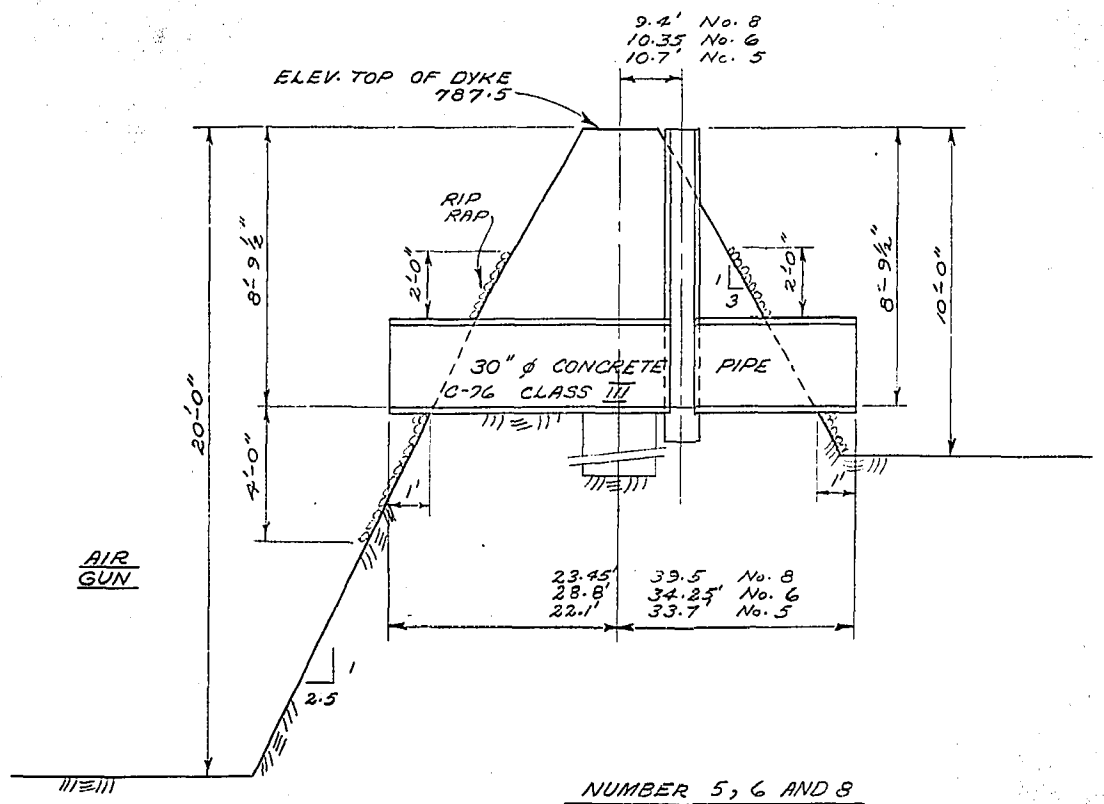
NUMBER 7



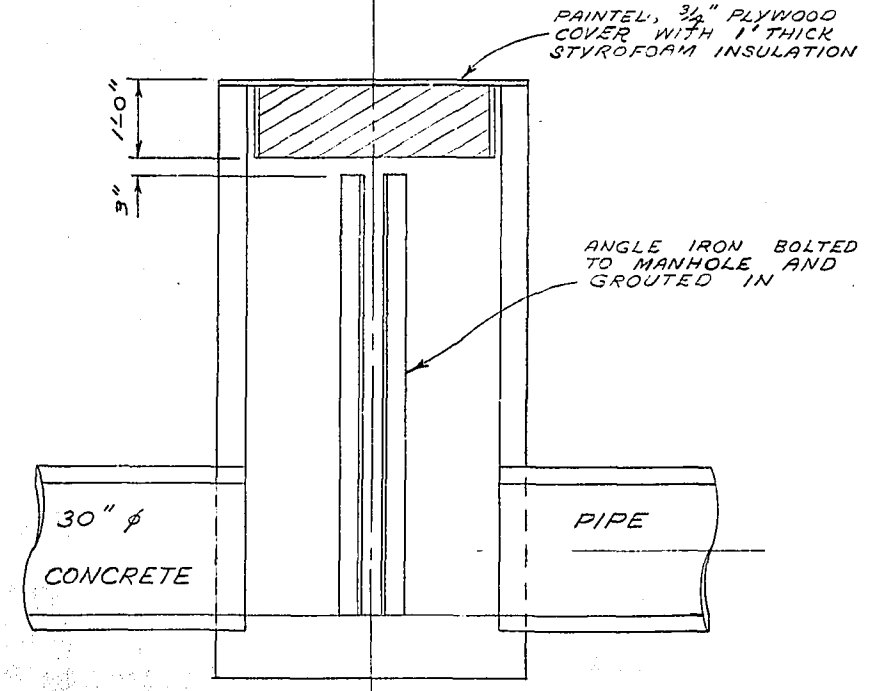
PLAN



NUMBER 2

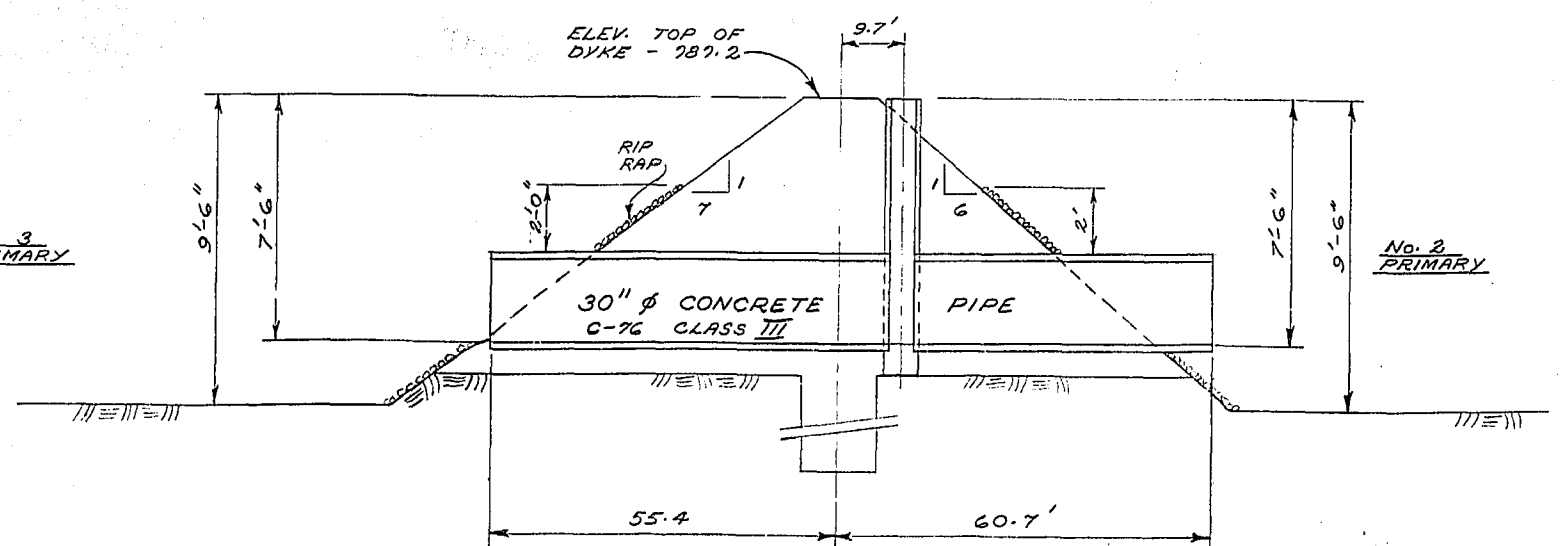
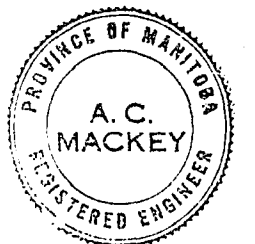


NUMBER 5, 6 AND 8

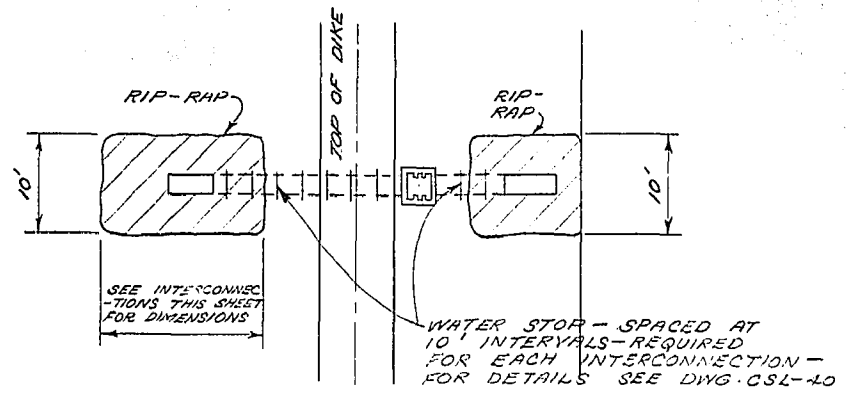


SECTION
MANHOLE DETAIL

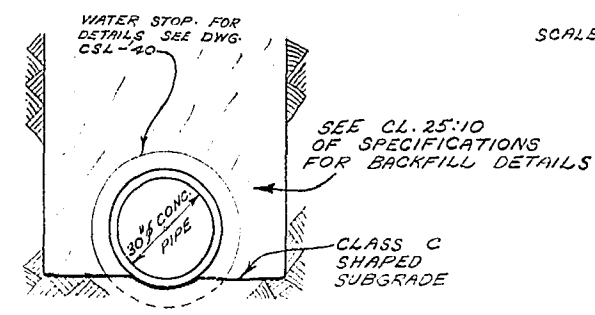
8 REQUIRED
SCALE: 1/2" = 1'-0"



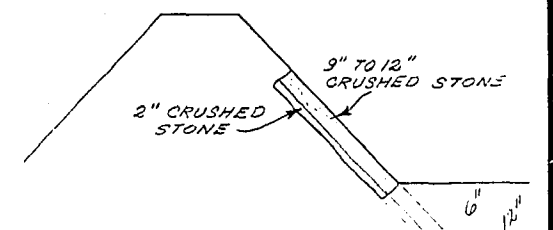
NUMBER 3



TYPICAL PLAN VIEW



TRENCH BEDDING DETAIL



RIP-RAP DETAIL

INTERCONNECTION DETAILS

SCALE: HOR. - 1" = 20'
VERT. - 1" = 4'

SURVEYED & PLAN CHECKED
BY: [Signature]
APPROVED AS SHOWN
MAY 22

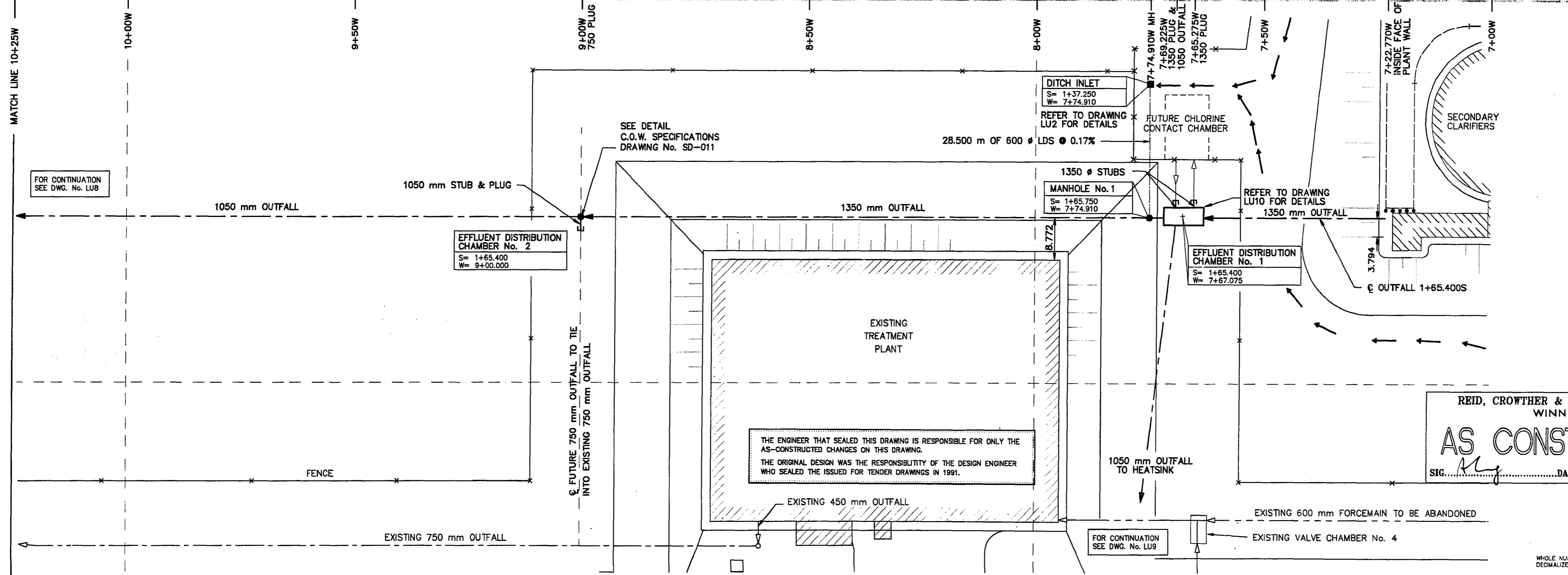
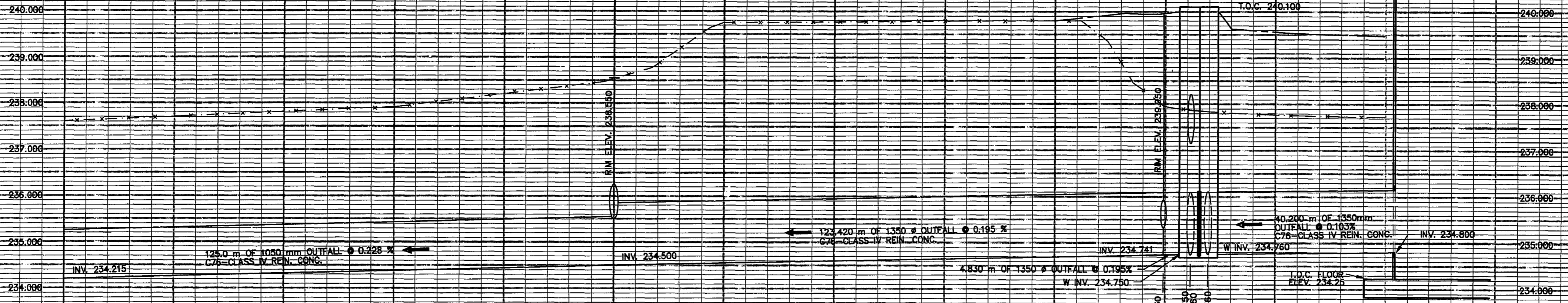
THE METROPOLITAN CORPORATION
OF GREATER WINNIPEG
WATERWORKS & WASTE
DISPOSAL DIVISION
A. PENMAN - DIRECTOR

SEWAGE DISPOSAL
CHARLESWOOD
SEWAGE LAGOONS
INTERCONNECTION
DETAILS

DES. [Signature] CH'KD. [Signature]
DATE: JUNE 12/72
ENG. DES. [Signature]
APPROVED [Signature]

SCALE: AS SHOWN
DRAWING NO. CSL-39

REPRODUCTION APR 12 1979



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REID, CROWTHER & PARTNERS LIMITED
 WINNIPEG
AS CONSTRUCTED
 SIG. *[Signature]* DATE: Nov. 29, 1994

MEWPC-A1
 PUT-LP3
 94-10-31

EXISTING	LEGEND - PLAN	PROPOSED	EXISTING	LEGEND - PLAN	PROPOSED	EXISTING	LEGEND - PROFILE	PROPOSED
	WATERMAIN			HYDRO			WATERMAIN	
	LAND DRAINAGE SEWER			CONCRETE			LAND DRAINAGE SEWER	
	WASTEWATER SEWER			ASPHALT			WASTE WATER SEWER	
	MANHOLE			PROPERTY LINE			FORCEMAIN	
	CATCH BASIN			ELEVATION	(32.750)		OUTFALL	
	CURB INLET			TREE			OUTFALL	
	JUNCTIONS			FORCEMAIN	900 mm FM		OUTFALL	
	CULVERT			OUTFALL	1050 mm OF		OUTFALL	
	GAS			FENCE			OUTFALL	

B.M.	69-006		
ELEV.	237.636 m		
NO.	1	AS CONSTRUCTED	94.09.28 DJT
	0	ISSUED FOR TENDER	91.06.17 PAL

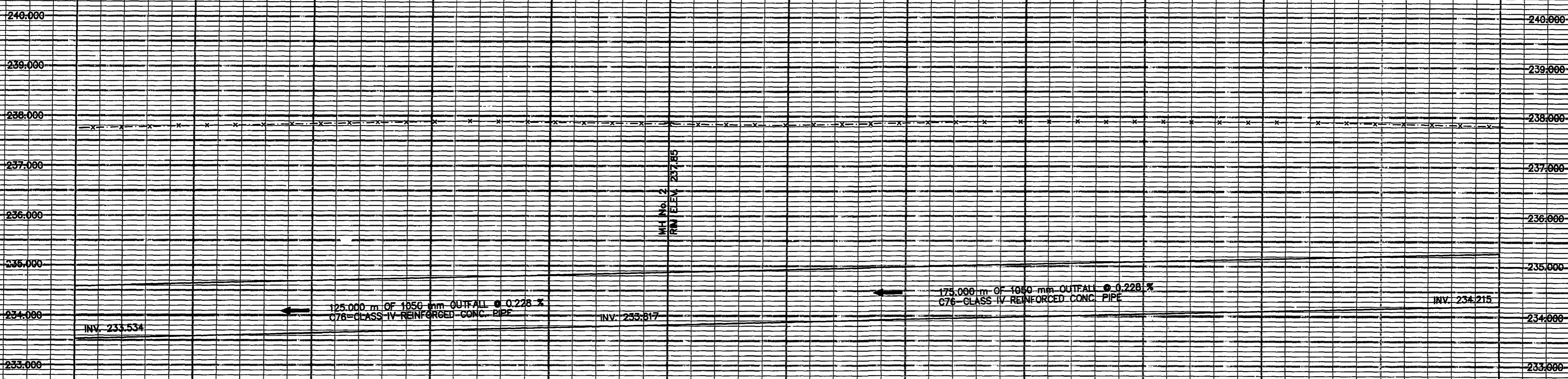
Reid Crowther		DESIGNED BY	WMM	CHECKED BY	
		DRAWN BY	SC	APPROVED BY	
		HOR. SCALE:	1:500	RELEASED FOR CONSTRUCTION:	
		VERTICAL:	1:50		
		DATE	94-10-23	DATE	

ENGINEER'S SEAL

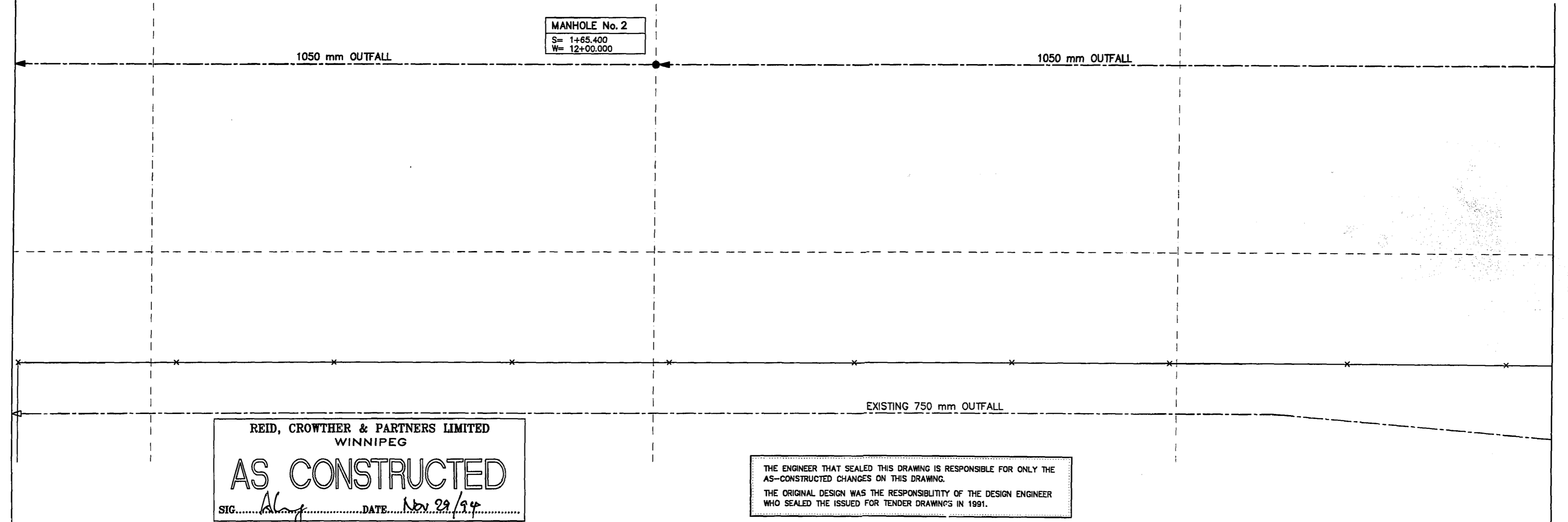
 CONSULTANT DRAWING NO. 60910-LU7

THE CITY OF WINNIPEG
 WORKS AND OPERATIONS DIVISION
 WATERWORKS WASTE AND DISPOSAL DEPT.
 WEST END WATER POLLUTION CONTROL CENTRE
 AREA L - GENERAL AND SITWORKS
 CITY DRAWING NUMBER SHEET OF
 OUTFALL - PLAN PROFILE
 SHEET No. 1
 WEP-46

File # WS10094



MATCH LINE 13+25W 13+00W 12+50W 12+00W MH No. 2 11+50W 11+00W 10+50W MATCH LINE 10+25W

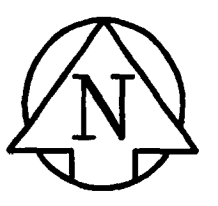


FOR CONTINUATION
SEE DRAWING No. LU9

FOR CONTINUATION
SEE DRAWING No. LU7

REID, CROWTHER & PARTNERS LIMITED
WINNIPEG
AS CONSTRUCTED
SIG. *Almy* DATE *Nov. 29, 1994*

THE ENGINEER THAT SEALED THIS DRAWING IS RESPONSIBLE FOR ONLY THE AS-CONSTRUCTED CHANGES ON THIS DRAWING.
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WEP-47
PU-LS
94-10-31

METRIC
WHOLE NUMBERS INDICATE MILLIMETERS
DECIMALIZED NUMBERS INDICATE METERS

EXISTING	LEGEND - PLAN	PROPOSED	EXISTING	LEGEND - PLAN	PROPOSED	EXISTING	LEGEND - PROFILE	PROPOSED
	WATERMAIN			HYDRO M.T.S.			WATERMAIN HYDRANT VALVE	
	LAND DRAINAGE SEWER			CONCRETE ASPHALT			LAND DRAINAGE SEWER	
	WASTEWATER SEWER			PROPERTY LINE			WASTE WATER SEWER	
	MANHOLE			SURVEY BAR			FORCEMAIN	
	CATCH BASIN			ELEVATION (32.750)			OUTFALL	
	CURB INLET			TREE			OUTFALL	
	JUNCTIONS			FORCEMAIN			OUTFALL	
	CULVERT			FENCE			OUTFALL	
	GAS			FENCE			OUTFALL	

B.M. 69-006 ELEV. 237.636 m			
DESIGNED BY	WMM	CHECKED BY	
DRAWN BY	SC	APPROVED BY	
HOR. SCALE:	1:500	RELEASED FOR CONSTRUCTION:	
VERTICAL:	1:50	DATE	
1 AS CONSTRUCTED	94.09.28	DJT	
0 ISSUED FOR TENDER	91.06.17	PAL	
NO. REVISIONS	DATE	BY	DATE 94-10-22

Reid Crowther

ENGINEER'S SEAL

DESIGNED BY: WMM
CHECKED BY: [Signature]
DRAWN BY: SC
APPROVED BY: [Signature]
HOR. SCALE: 1:500
VERTICAL: 1:50
RELEASED FOR CONSTRUCTION: [Signature]

ENGINEER'S SEAL

PROVINCE OF MANITOBA
REGISTERED PROFESSIONAL ENGINEER
Y. C. LEONG
12-95

CONSULTANT DRAWING NO. 60910-LUB

THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
WATERWORKS WASTE AND DISPOSAL DEPT.

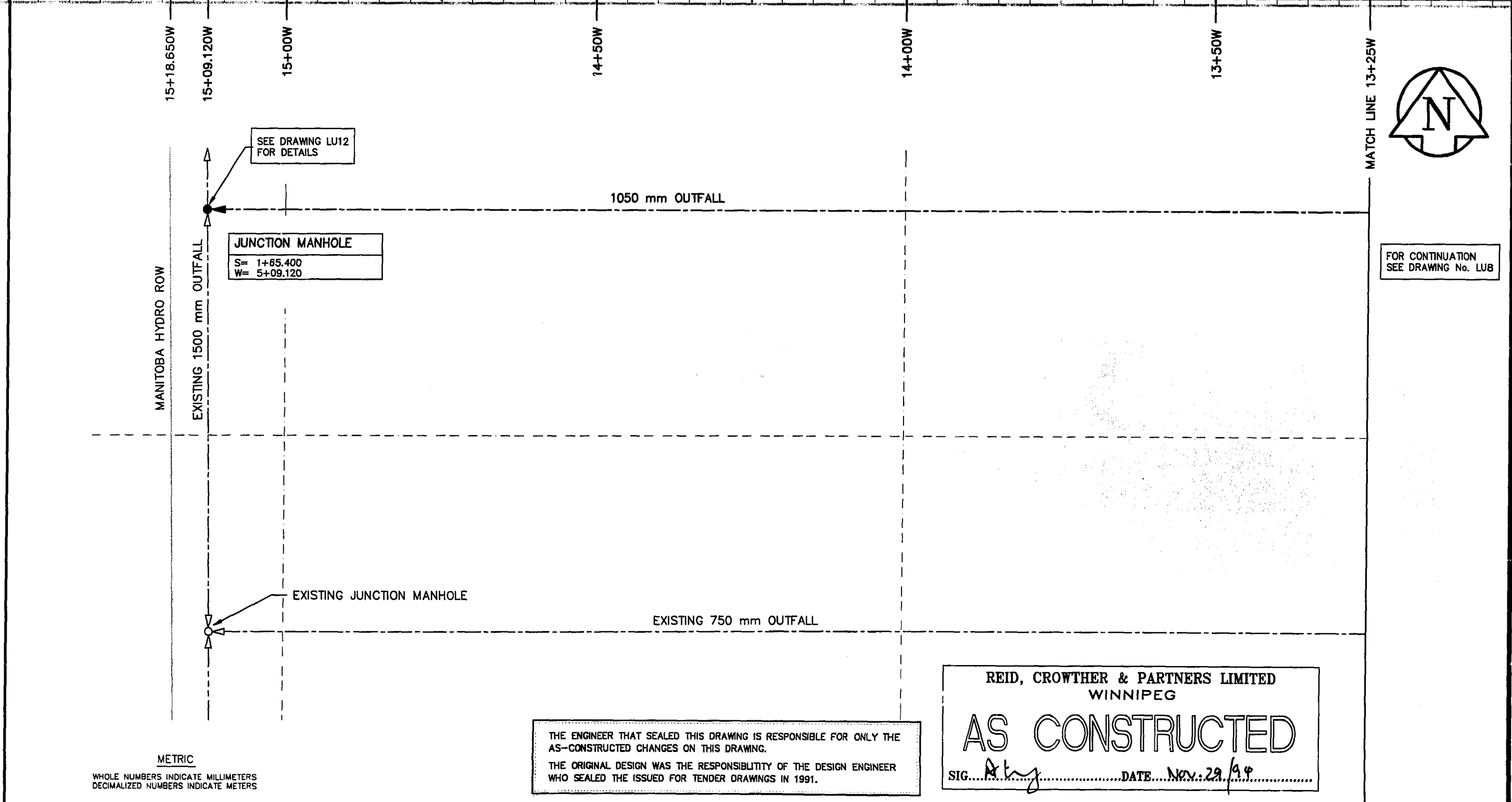
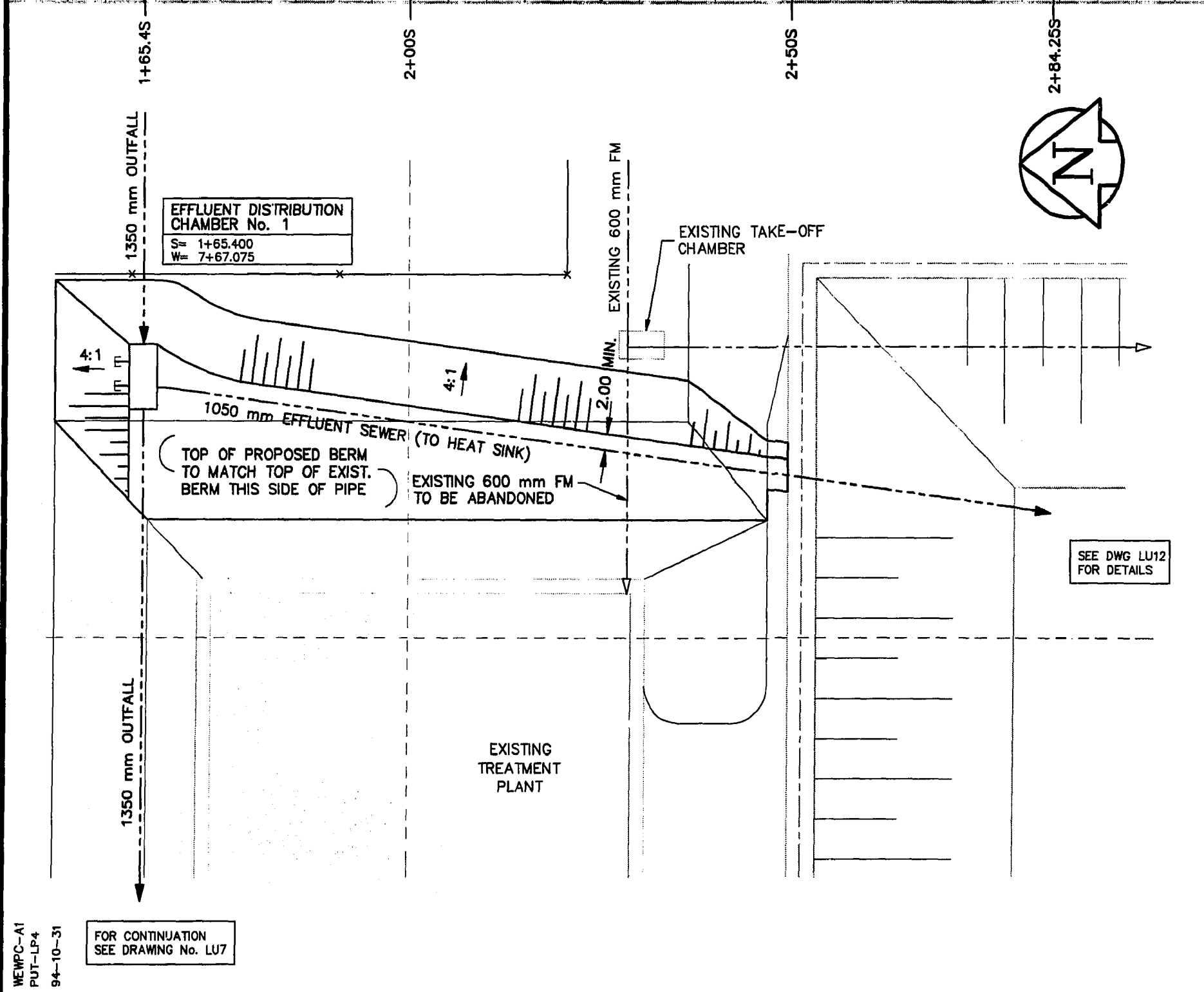
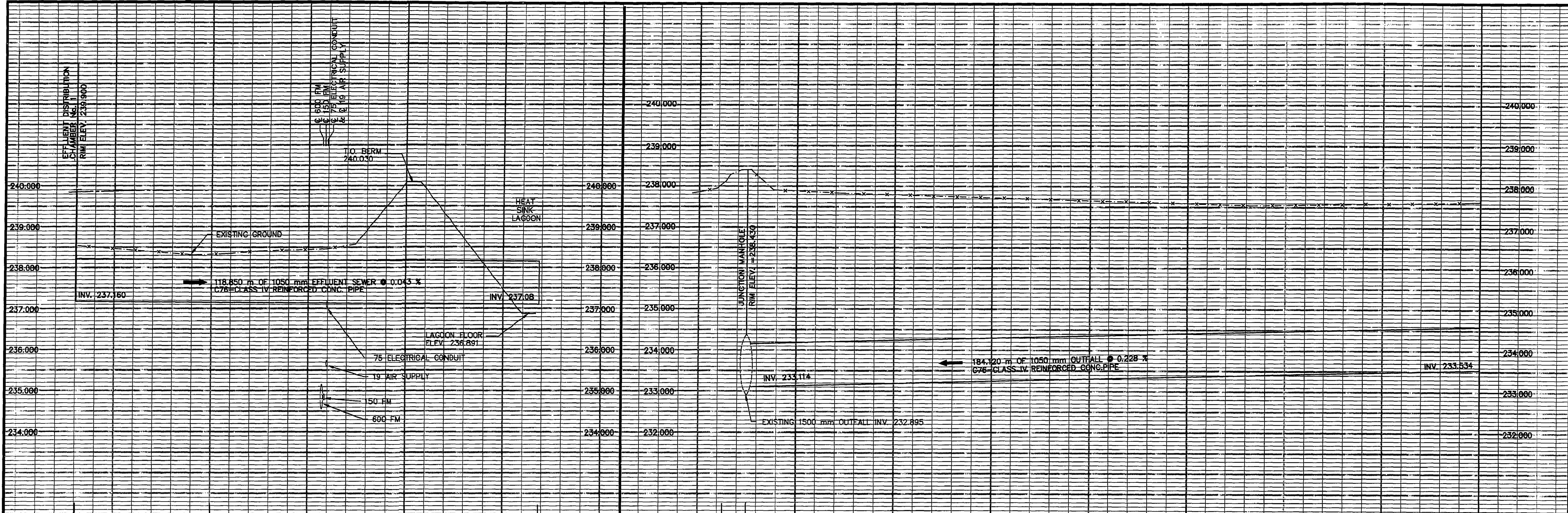
WEST END WATER POLLUTION CONTROL CENTRE
AREA L - GENERAL AND SITEWORKS

CITY DRAWING NUMBER SHEET OF

OUTFALL - PLAN PROFILE
SHEET No. 2

WEP-47

File # WS10095



EXISTING	LEGEND - PLAN	PROPOSED	EXISTING	LEGEND - PLAN	PROPOSED	EXISTING	LEGEND - PROFILE	PROPOSED
150 mm W.M.	WATERMAIN	150 mm W.M.	HYDRO	M.T.S.	150 mm W.M.	WATERMAIN	HYDRANT	
300mm L.D.S.	LAND DRAINAGE SEWER	300mm L.D.S.	CONCRETE	ASPHALT	300mm L.D.S.	LAND DRAINAGE SEWER	VALVE	
250mm W.W.S.	WASTEWATER SEWER	250mm W.W.S.	PROPERTY LINE	SURVEY BAR	250mm W.W.S.	WASTE WATER SEWER	FORCEMAIN	
	MANHOLE		ELEVATION	(32.750)		OUTFALL	1050 mm OF	
	CATCH BASIN		TREE			OUTFALL	1050 mm OF	
	CURB INLET		FORCEMAIN	900 mm FM		OUTFALL	1050 mm OF	
	JUNCTIONS		OUTFALL	1050 mm OF		OUTFALL	1050 mm OF	
	CULVERT		FENCE					
	GAS							

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.

B.M. ELEV.	69-006	237.636 m
NO.	REVISIONS	DATE BY
1	AS CONSTRUCTED	94,09,26 DJT
0	ISSUED FOR TENDER	91,06,17 PAL

Reid Crowther

DESIGNED BY: WMM
DRAWN BY: SC

CHECKED BY:
APPROVED BY:

HOR. SCALE: 1:500
VERTICAL: 1:50

RELEASED FOR CONSTRUCTION: DATE

ENGINEER'S SEAL

Mr. G. LEONG
REGISTERED PROFESSIONAL ENGINEER

CONSULTANT DRAWING NO. 60910-LU9

THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
WATERWORKS WASTE AND DISPOSAL DEPT.

WEST END WATER POLLUTION CONTROL CENTRE
AREA L - GENERAL AND SITEWORKS

CITY DRAWING NUMBER SHEET OF

OUTFALL - PLAN PROFILE
SHEET No. 3

WEP-48

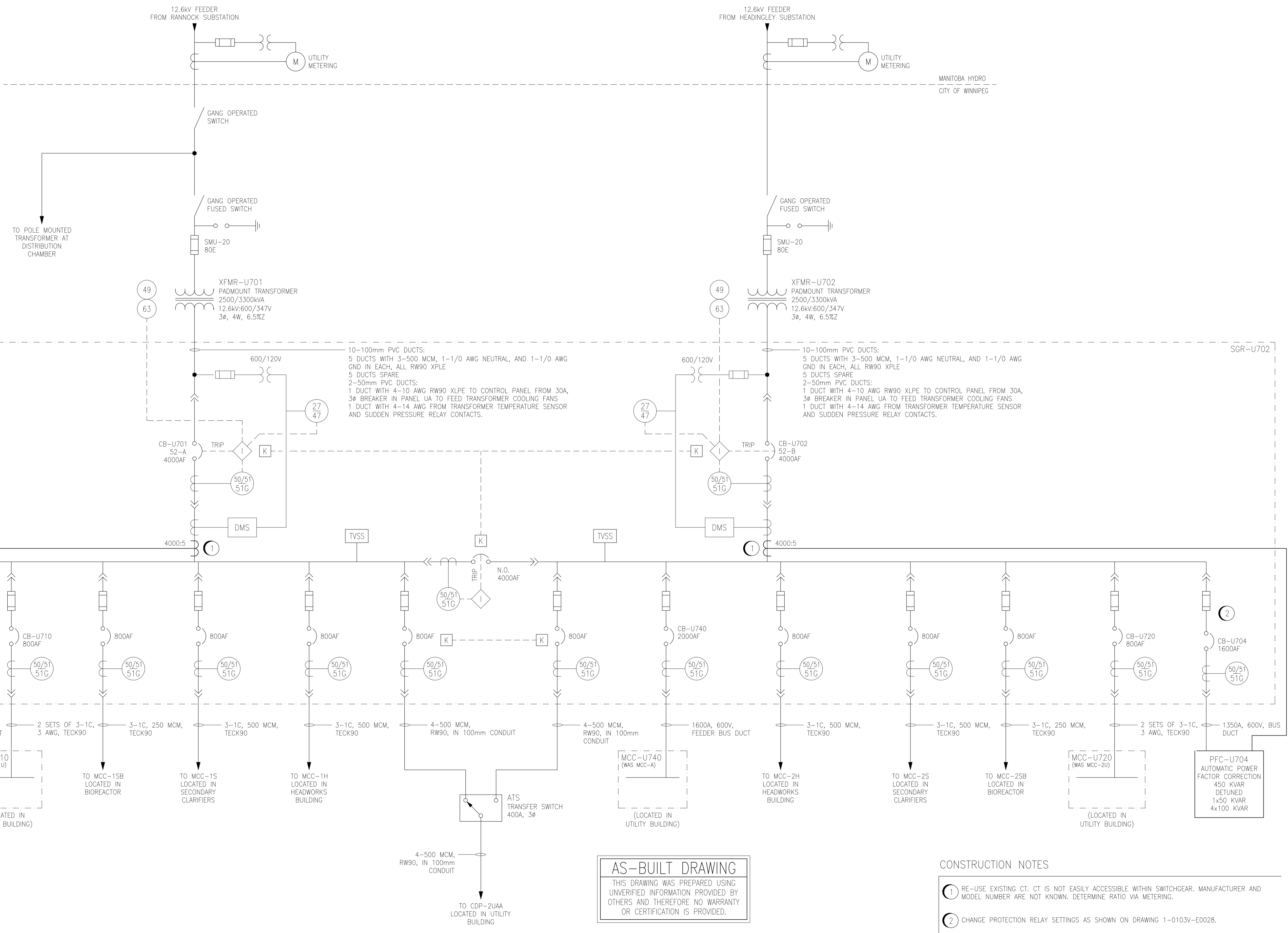
THE ENGINEER THAT SEALED THIS DRAWING IS RESPONSIBLE FOR ONLY THE AS-CONSTRUCTED CHANGES ON THIS DRAWING.
THE ORIGINAL DESIGN WAS THE RESPONSIBILITY OF THE DESIGN ENGINEER WHO SEALED THE ISSUED FOR TENDER DRAWINGS IN 1991.

REID, CROWTHER & PARTNERS LIMITED
WINNIPEG

AS CONSTRUCTED

SIG. *Atty* DATE Nov. 29 94

File # WS 10096



AS-BUILT DRAWING
 THIS DRAWING WAS PREPARED USING UNVERIFIED INFORMATION PROVIDED BY OTHERS AND THEREFORE NO WARRANTY OR CERTIFICATION IS PROVIDED.

- CONSTRUCTION NOTES**
- ① RE-USE EXISTING CT. CT IS NOT EASILY ACCESSIBLE WITHIN SWITCHGEAR. MANUFACTURER AND MODEL NUMBER ARE NOT KNOWN. DETERMINE RATIO VIA METERING.
 - ② CHANGE PROTECTION RELAY SETTINGS AS SHOWN ON DRAWING 1-0103V-E0028.

NOTES:
 1. THIS DRAWING IS BASED ON 1-0103A-E0003-002. ACTUAL CONFIGURATION MAY NOT BE EXACTLY AS SHOWN.



NO.	REVISIONS	DATE	DESIGN	CHECK
01	AS-BUILT. BID OP. 419-2013	2014/06/06	TMC	
00	ISSUED FOR TENDER (BID OP. 419-2013)	2013/06/26	TMC	CJR

SNC-LAVALIN INC. 148 Nature Park Way Winnipeg, MB, Canada R3P 0X7 204-786-8090	
DESIGNED BY: T. CHURCH	CHECKED BY: C. REIMER
DRAWN BY: S. FUNK	APPROVED BY: C. REIMER
SCALE: NTS	RELEASED FOR CONSTRUCTION BY: M. PAETKAU
DATE: 2013/01/08	DATE: 2013/06/26
CONSULTANT NO.:	

ENGINEER'S SEAL

ORIGINAL DRAWING SEALED BY:
 T. M. CHURCH
 SNC-Lavalin
 MEMBER # 32682
 2013/06/26
 REV. 00

THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT

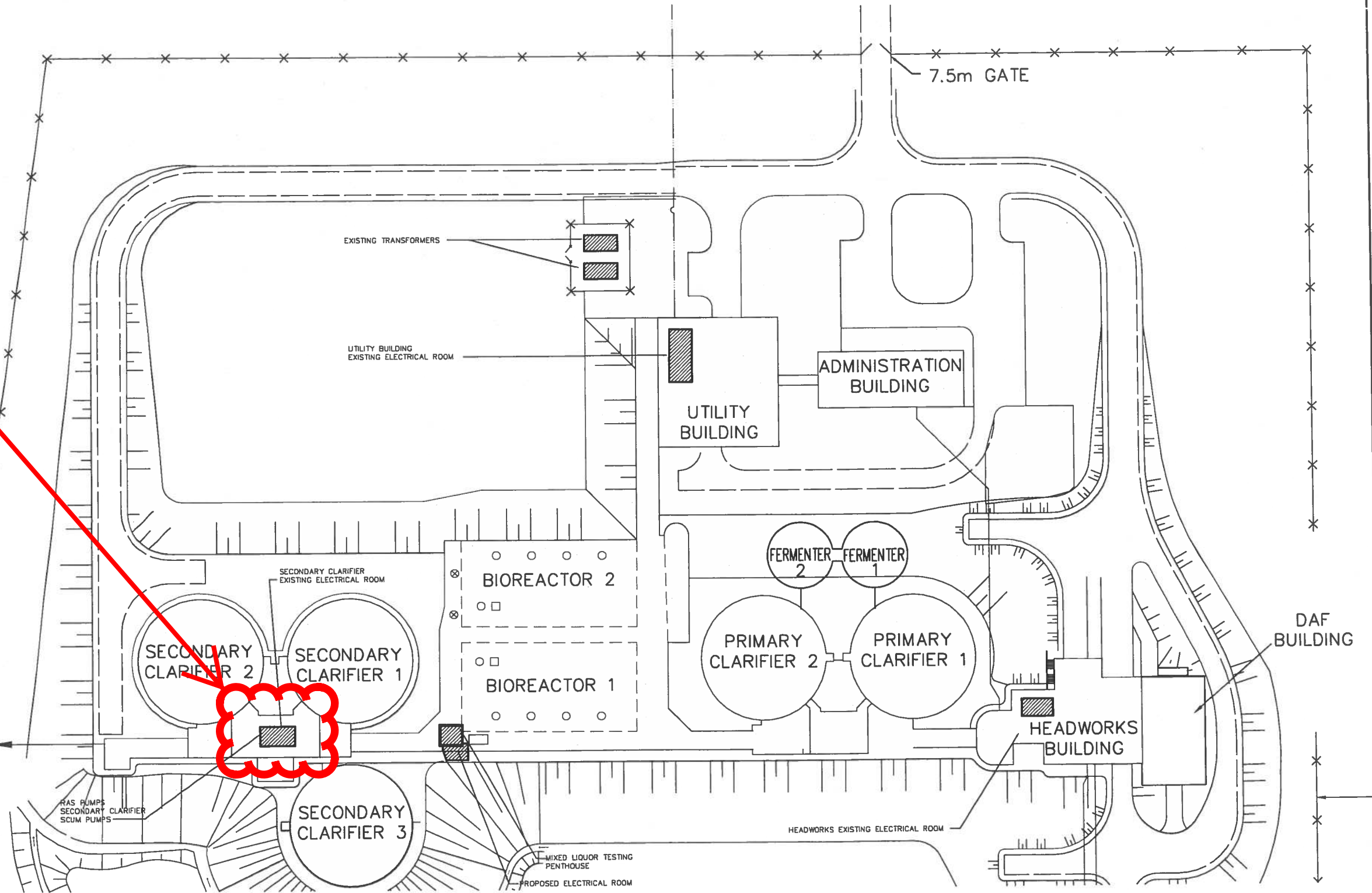
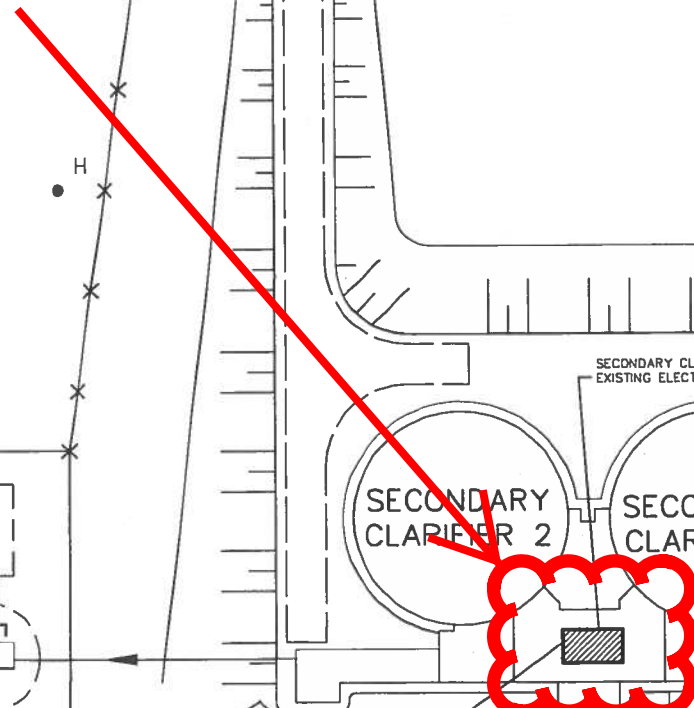
WEST END WATER POLLUTION CONTROL CENTRE
 POWER FACTOR CORRECTION
 SINGLE LINE DIAGRAM
 SWITCHGEAR SGR-U701 AND SGR-U702

CITY DRAWING NUMBER: 1-0103V-E0027
 SHEET: 001
 REV: 01
 SIZE: A1

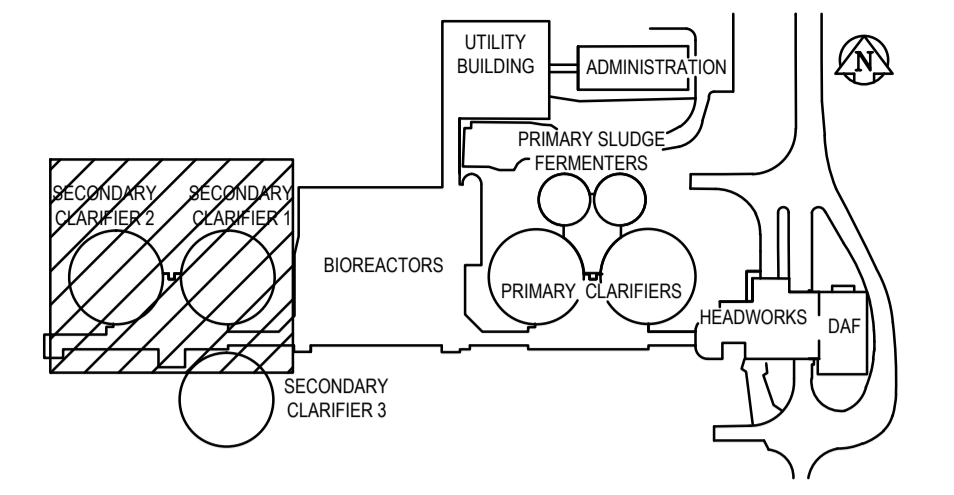
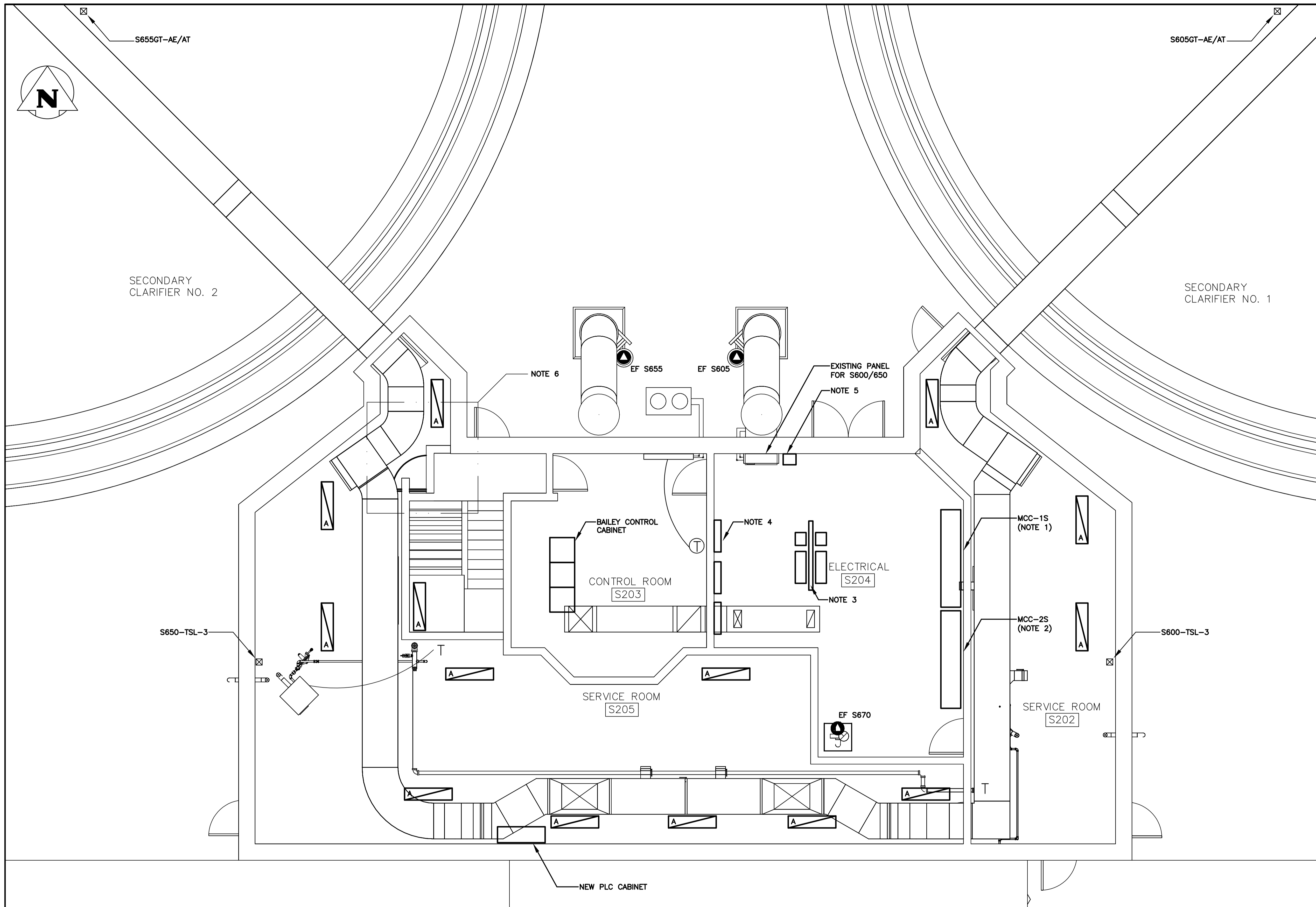
1-0103V-E0028	SGR-U701 AND SGR-U702 PROTECTION SETTINGS
DRAWING NUMBER	REFERENCE DRAWINGS



Approximate location of Control Room 2



B.M. ELEV.		EarthTech A Tyco International Ltd. Company		ENGINEER'S SEAL PRELIMINARY NOT FOR CONSTRUCTION		THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT ENGINEERING DIVISION	
DESIGNED BY PS CHECKED BY PS		DRAWN BY CPG APPROVED BY		CONSULTANT DRAWING NO. L-ED1P		WEWPC BIOLOGICAL NUTRIENT REMOVAL UPGRADE CONTRACT No. 3	
B ISSUED FOR FINAL FDR 05/12/06 CLG A ISSUED FOR DRAFT FDR 05/07/15 C.T.		HOR. SCALE: 1:1000 VERTICAL SCALE:		RELEASED FOR CONSTRUCTION BY:		CITY FILE NUMBER SHEET OF CITY DRAWING NUMBER	
NO. REVISIONS DATE BY		DATE 2005/06/30 DATE		ELECTRICAL BNR UPGRADE SITE BUILDING LAYOUT		PRELIMINARY NOT FOR CONSTRUCTION	



KEY PLAN

- NOTES:**
1. ADD DISCONNECT FOR VFD FOR S605.
 2. ADD DISCONNECT FOR VFD FOR S655.
 3. EXISTING STRUT MOUNT FOR EXISTING VFD'S AND FILTERS. RECONFIGURE AND MOUNT TWO (2) NEW S605 AND S655 IN LOCATION.
 4. EXISTING 120V/208V FEEDS TO S612, S670, S675 AND S680.
 5. MOUNT NEW 120V CONTROL RELAY CABINET WITH H-O-A AND RUN LIGHTS FOR ALL 120V MOTORS.
 6. RECONFIGURE/SUPPORT CABLES AND CONDUIT TO ACCOMMODATE NEW STAIR.
 7. NOT ALL EXISTING ELECTRICAL WIRING AND EQUIPMENT WHICH REQUIRES RELOCATION IS SHOWN IN DETAIL. THE CONTRACTOR SHALL REVIEW ALL TENDER DRAWINGS TO DETERMINE GLOBAL SCOPE OF RELOCATION.

1 AREA S - DISTRIBUTION BUILDING PLAN
SCALE 1:50

APEGN
Certificate of Authorization
KGS Group
No. 245 Date: 10/12/21

KGS GROUP
CONSULTING ENGINEERS

REVISIONS	DATE	BY
01	2012-12-15	REW
00	2010-12-21	REW

ALLIANCE Engineering Services Inc.	
DESIGNED BY: AP	CHECKED BY: DDW
DRAWN BY: GCN	APPROVED BY: REW
HOR. SCALE: -	RELEASED FOR CONSTRUCTION
VERTICAL: -	
DATE: 2010 11 15	DATE:

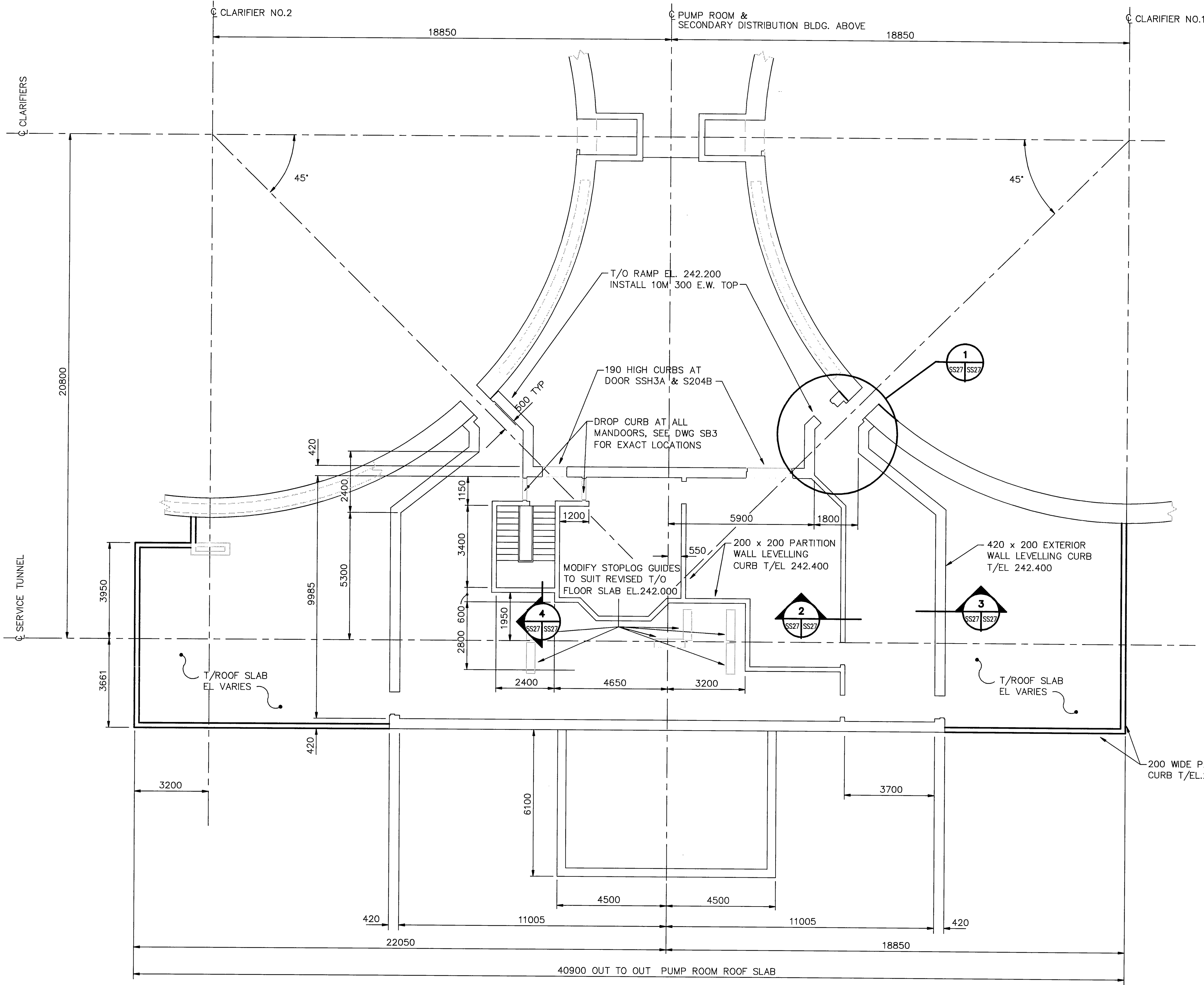
ENGINEER'S SEAL
ORIGINALS SEALED BY
R.E. WILMS P.ENG ON
DEC. 21, 2010
TENDER No. **SE2.2**
FILENAME: 1-0103S-E0015-001.dwg
PLOT DATE: 2015/01/19

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

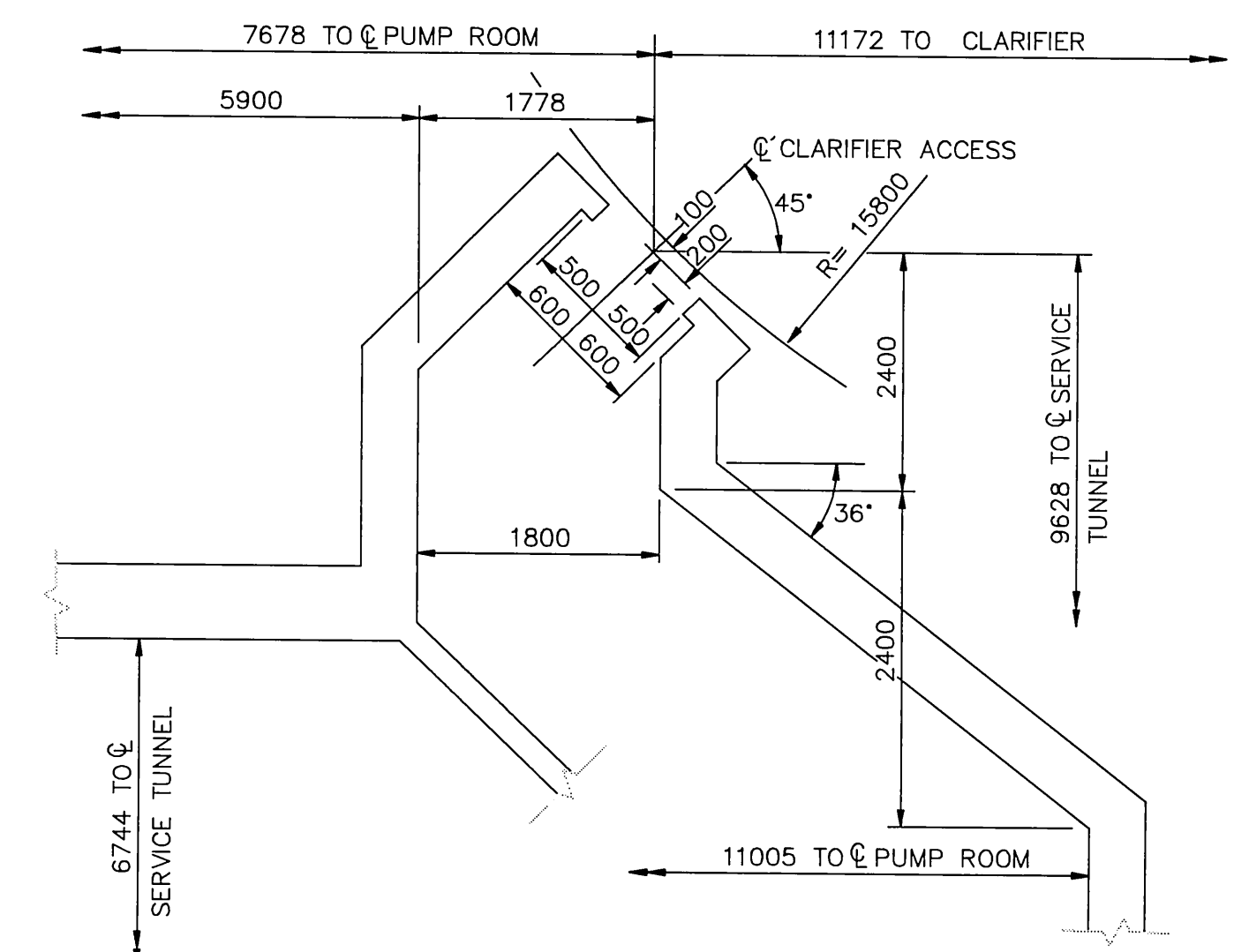
2010 HVAC REPLACEMENT
AND ASSOCIATED WORKS
WEWPCC
AREA S - SECONDARY CLARIFIERS 1 & 2
DISTRIBUTION BUILDING - PLAN - ELECTRICAL

SHEET 1 OF 1
CITY DRAWING NUMBER
1-0103S-E0015-001

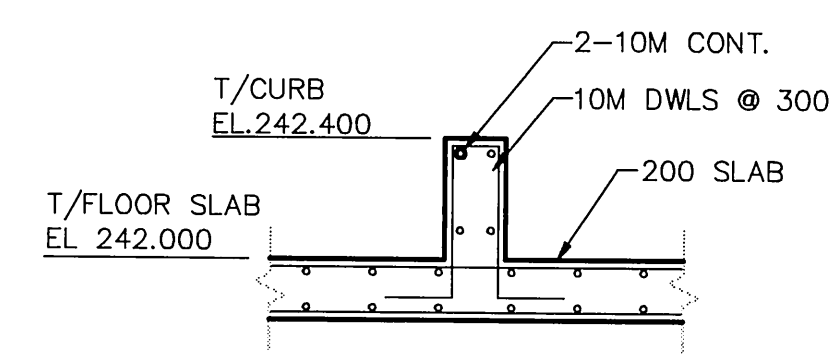
REF. or Drawing No. **WEP-251-A**
DETAILS FILE # **WS 10729**



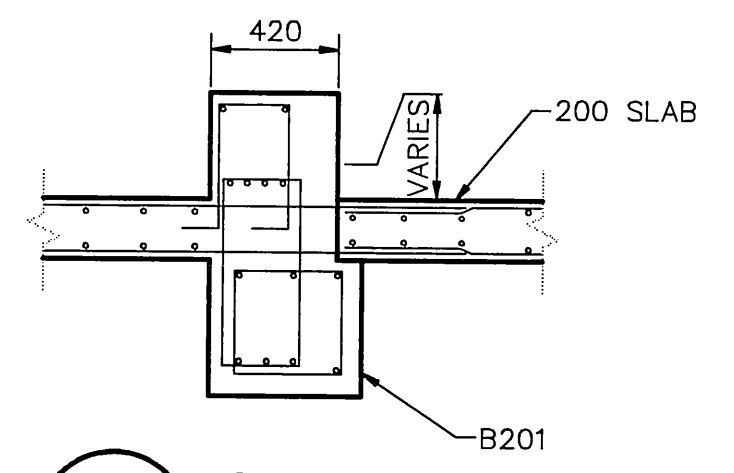
PLAN ABOVE EL 242.000



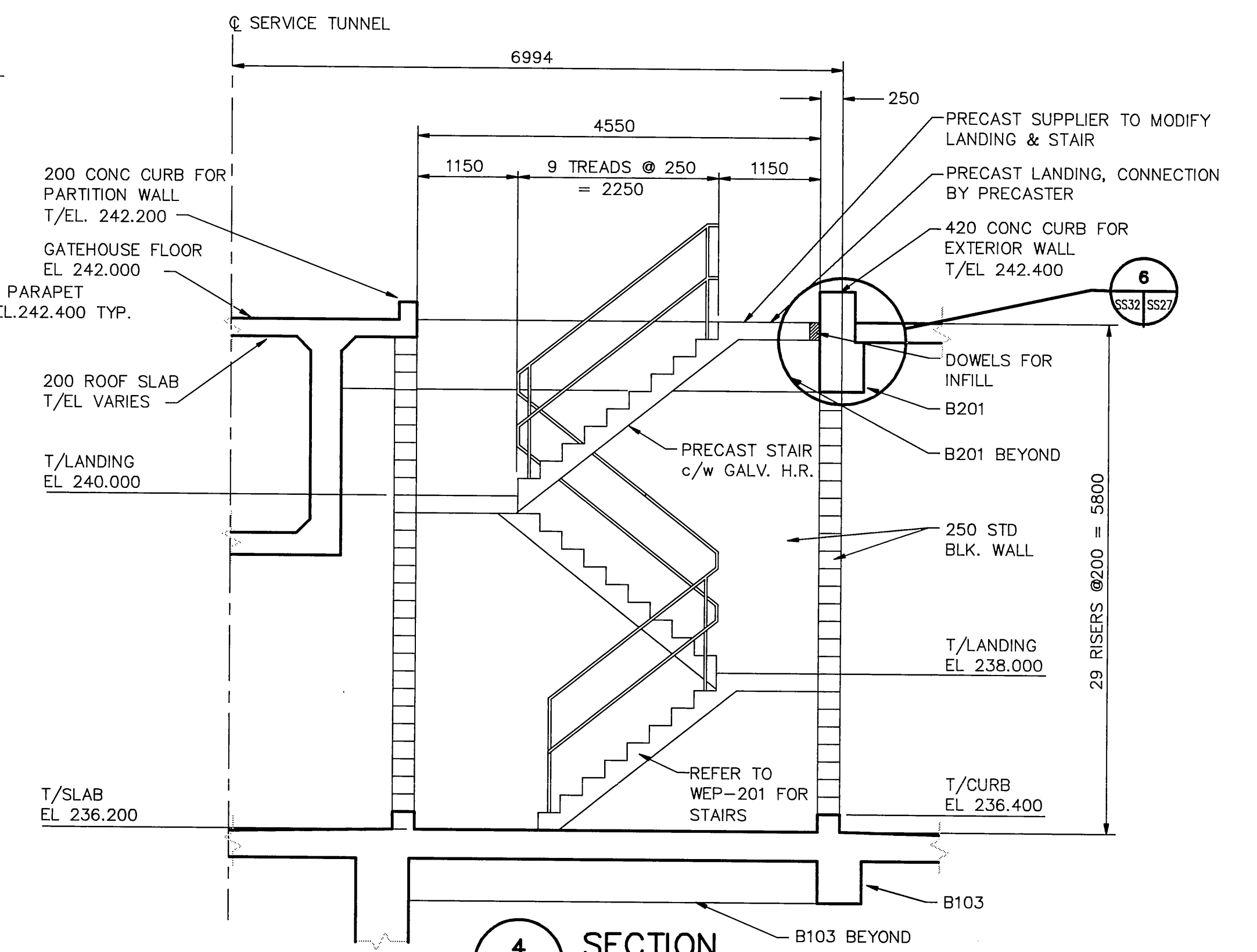
1 DETAIL
SCALE 1:50



2 SECTION
SCALE 1:25



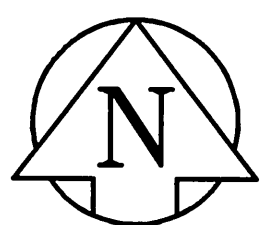
3 SECTION
SCALE 1:25



4 SECTION
SCALE 1:50

REID, CROWTHER & PARTNERS LIMITED
WINNIPEG
AS CONSTRUCTED

detail symbol
A detail number
B drawing where detail shown
C cross reference to drawing where detail taken



B.M. ELEV.	69-006 237.636 m
DESIGNED BY	
CHECKED BY	
DRAWN BY	GAM
APPROVED BY	
HOR. SCALE:	1:100
VERTICAL:	
RELEASED FOR CONSTRUCTION:	
NO. REVISIONS	DATE BY
	DATE 91-03-12

Reid Crowther

ENGINEER'S SEAL	
ORIGINAL SIGNED BY	E.G. MARTIN
	91/06/04
CONSULTANT DRAWING NO.	60910 - SS27

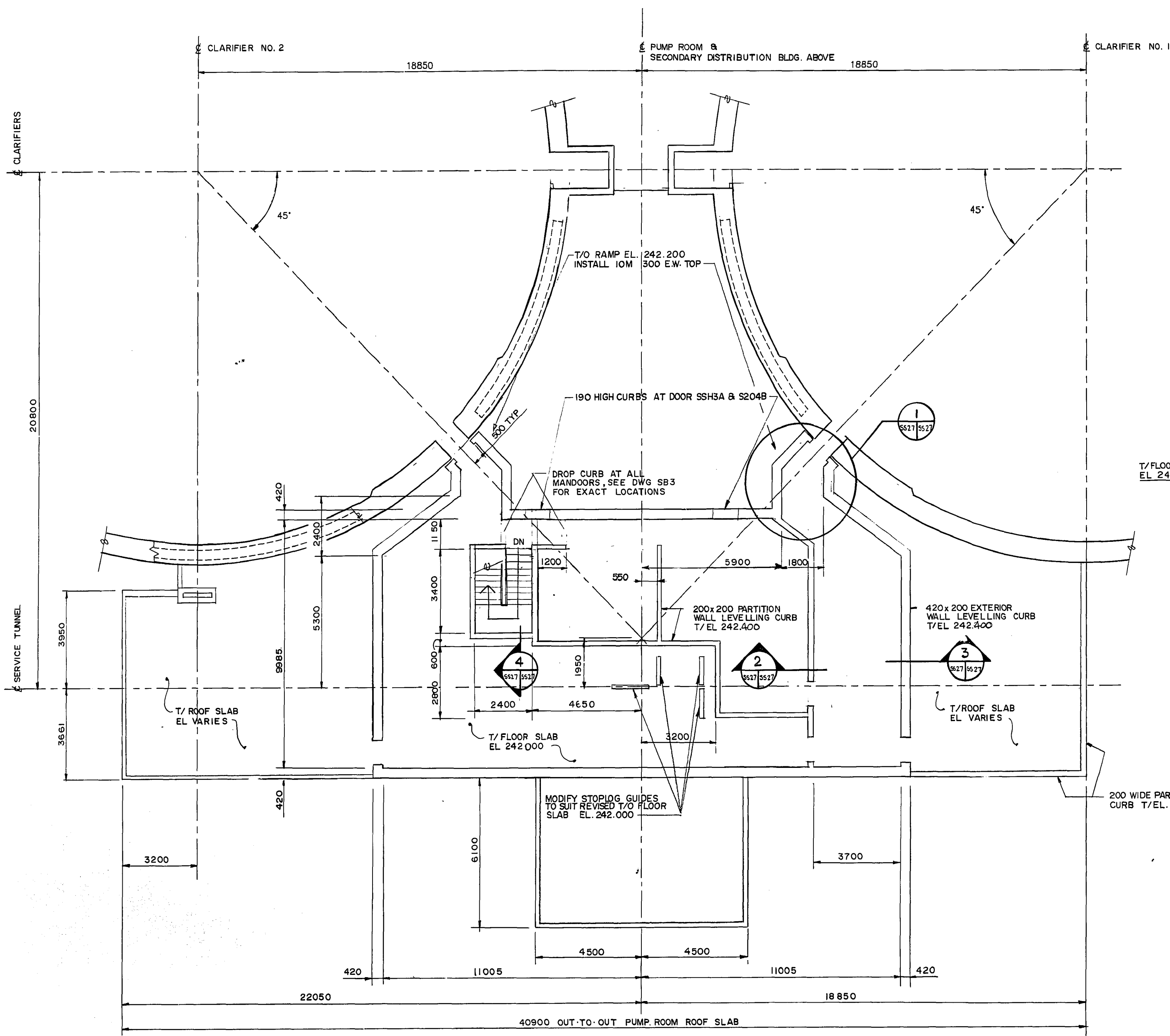
THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
WATERWORKS WASTE AND DISPOSAL DEPT.

WEST END WATER POLLUTION CONTROL CENTRE EXPANSION
AREA S - SECONDARY CLARIFIERS

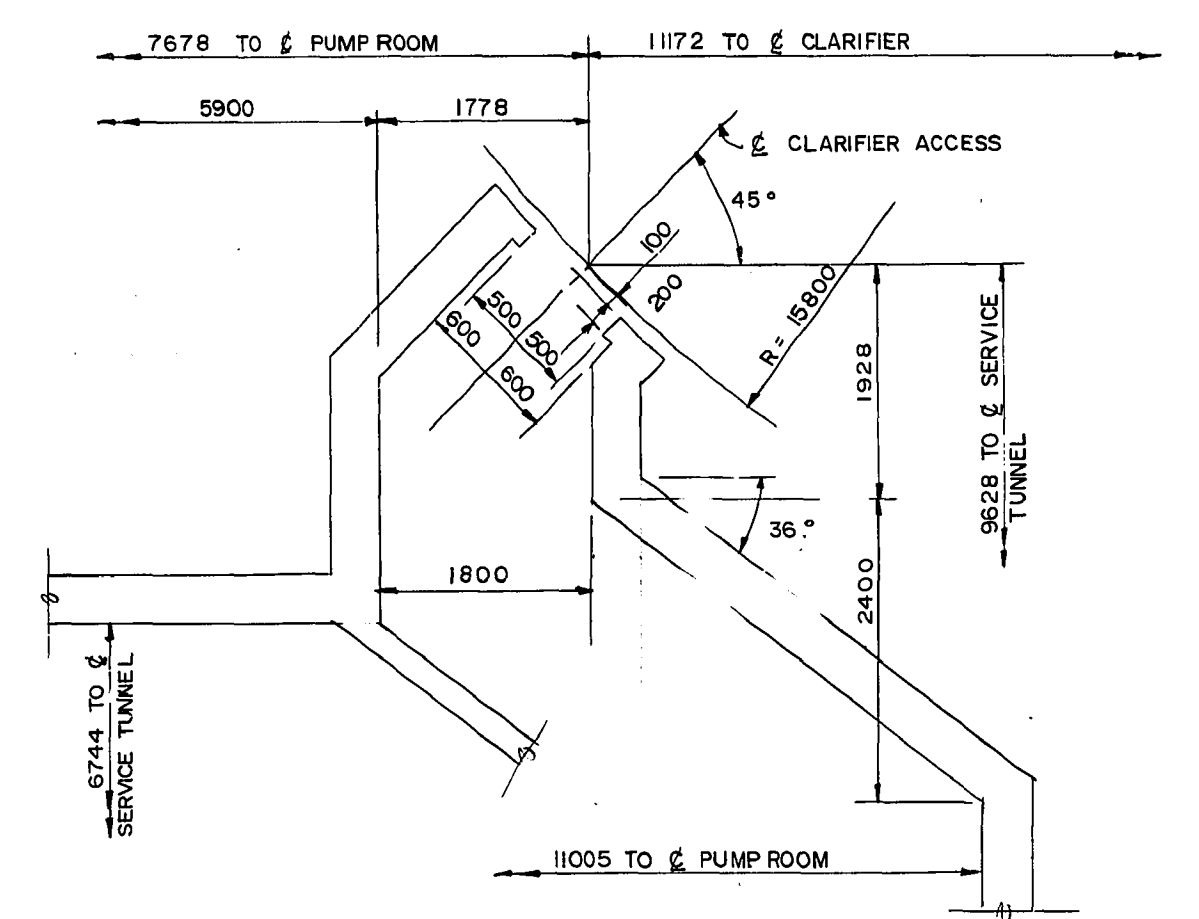
STRUCTURAL
GATEHOUSE CURB LAYOUT

CITY DRAWING NUMBER
SHEET OF

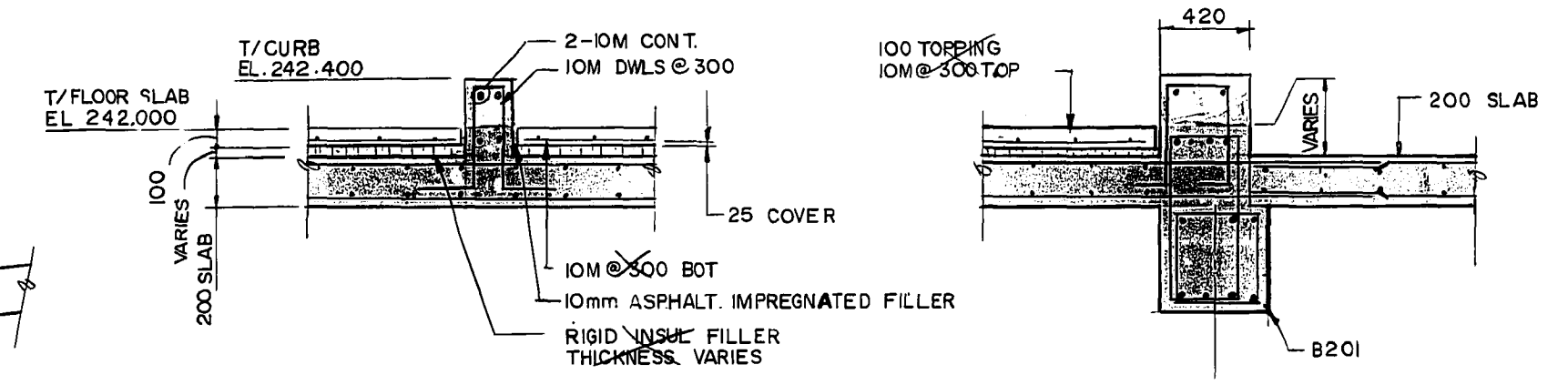
WEP-251-A



PLAN ABOVE EL 242.000

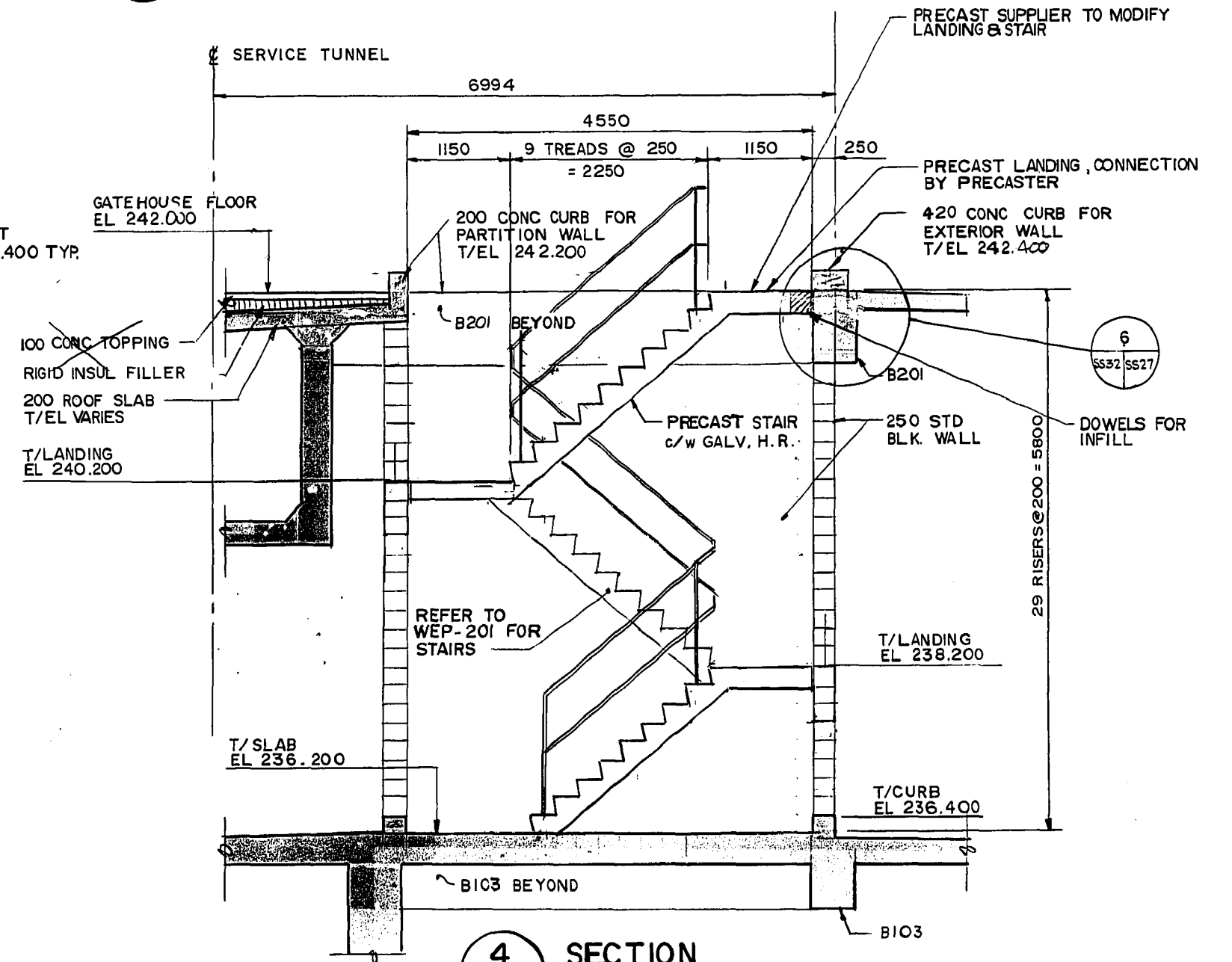


1 DETAIL
SS27/SS27 SCALE 1:50



2 SECTION
SS27/SS27 SCALE 1:25

3 SECTION
SS27/SS27 SCALE 1:25



4 SECTION
SS27/SS27 SCALE 1:50

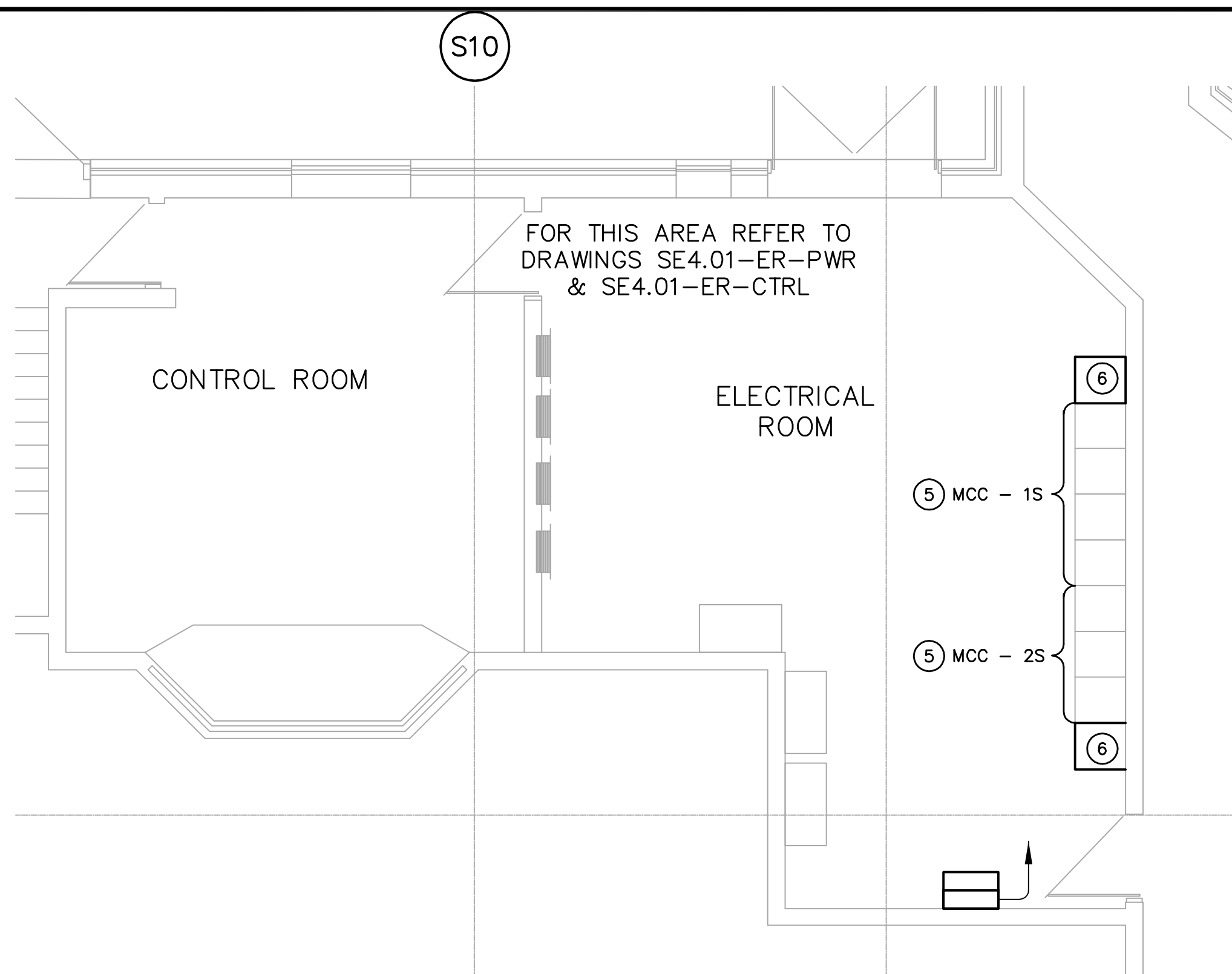
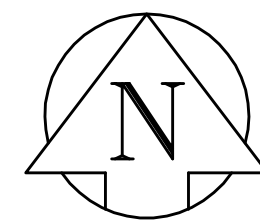
REID, CROWTHER & PARTNERS LIMITED
WINNIPEG
AS CONSTRUCTED
DATE: 01/12

detail symbol
A detail number
B drawing where detail shown
C cross reference to drawing where detail taken



B.M. 69-006 ELEV. 237.636 m		Reid Crowther		ENGINEER'S SEAL E. G. MARTIN 91-06-12		THE CITY OF WINNIPEG WORKS AND OPERATIONS DIVISION WATERWORKS WASTE AND DISPOSAL DEPT.	
DESIGNED BY E.G. MARTIN		CHECKED BY C. H. STANLEY		CONSULTANT DRAWING NO. 60910 - SS27		WEST END WATER POLLUTION CONTROL CENTRE AREA S - SECONDARY CLARIFIERS	
DRAWN BY GAM		APPROVED BY [Signature]		RELEASED FOR CONSTRUCTION DATE 91-06-12		CITY DRAWING NUMBER	
HOR. SCALE: 1:100 U.N.O.		VERTICAL: [Blank]		DATE 91-03-12		SHEET OF	
NO. 2 AS CONSTRUCTED 01/12 EST		NO. 0 ISSUED FOR TENDER		NO. 0 REVISIONS		STRUCTURAL GATEHOUSE CURB LAYOUT	
DATE 01/12		DATE 01/12		DATE 01-06-12		WEP-251	

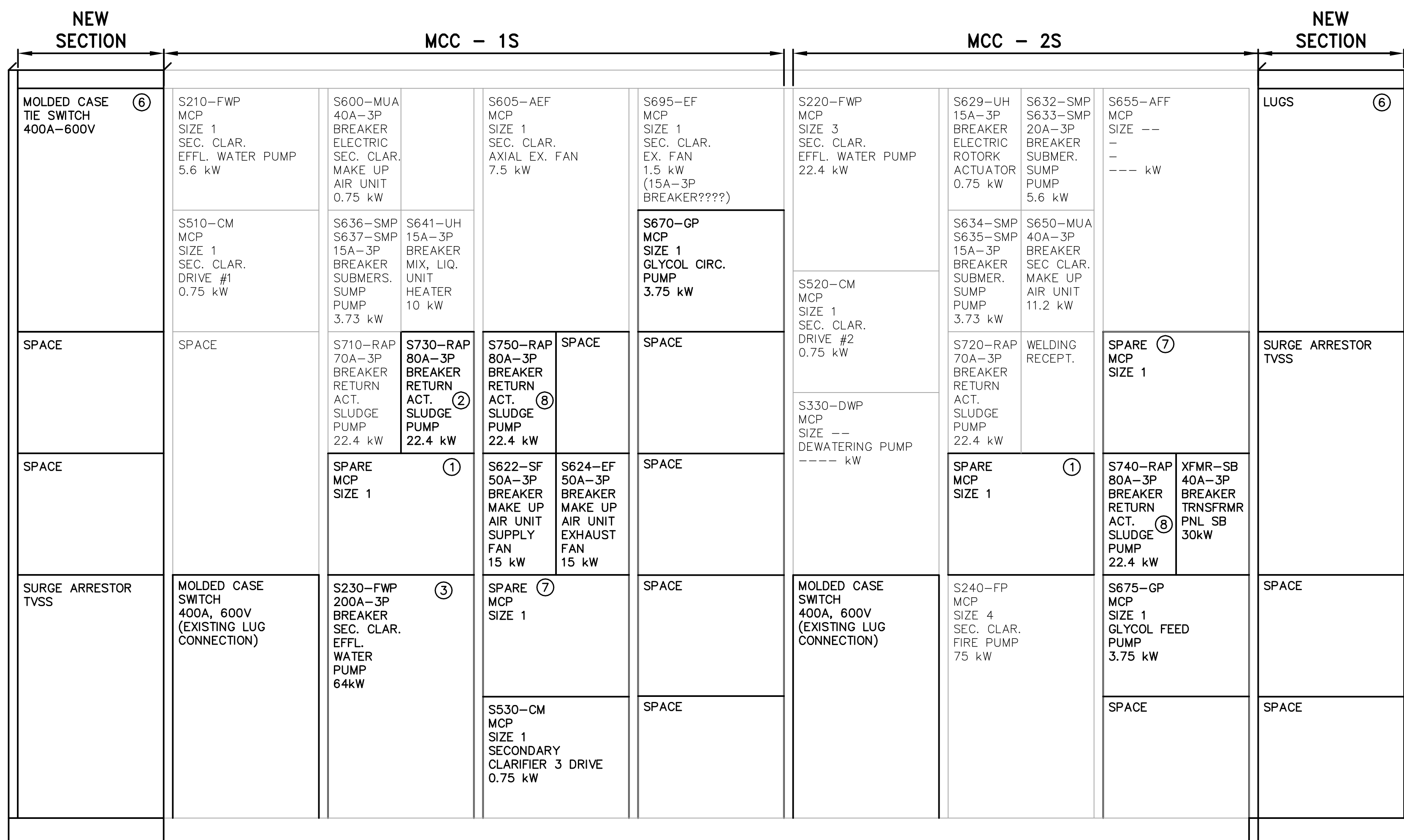
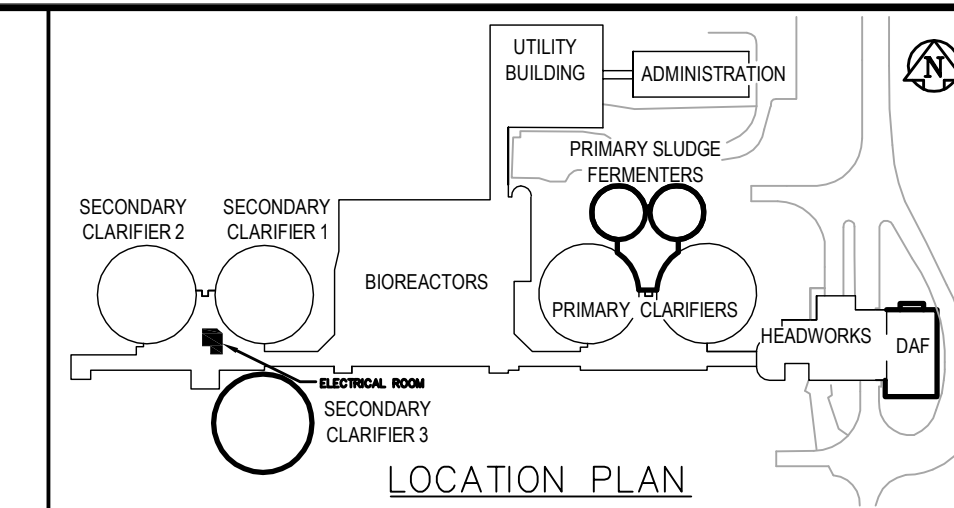
File # WS10306



FLOOR PLAN
SCALE: 1:25

Panel SB												
DESCRIPTION	LOAD	BKR	CCT	A	B	C	CCT	BKR	LOAD	DESCRIPTION		
Receptacles Mech Room	2	15A	1	*			2	15		Glycol Feed Tank S776-GFT		
Receptacles Mech Room	2	15	3	*			4	20		Natural Gas Blower S660-GH		
Receptacles Clairifier#3	3	15	5	*			6	20		Natural Gas Blower S665-GH		
Receptacles Clairifier#3	3	15	7	*			8	15		Supply Fan S690-SF		
Space		15	9	*			10	15		Flow Transmitter S720-FIT		
Space		15	11	*			12	15		Flow Transmitter S710-FIT		
Space		15	13	*			14	15		Flow Transmitter S750-FIT		
Spare to 12x12 in Mechanical Rm		15	15	*			16	-		Flow Transmitter S530 FIT		
Space		15	17	*			18	-		Chem Scan		
Space		15	19	*			20	-		Chem Scan Pump		
Space		15	21	*			22	-		Receptacle by Chem Scan		
Space		15	23	*			24	-		Space		
Control Pnl for S622-AHU		15	25	*			26	-		Space		
Unit Heater S770		15	27	*			28	-		Space		
Space		15	29	*			30	-		Space		
Space		-	31	*			32	-		Space		
Space		-	33	*			34	-		Space		
Space		-	35	*			36	-		Space		
Space		-	37	*			38	-		Space		
Space		-	39	*			40	-		Space		
Space		-	41	*			42	-		Space		

Voltage: 120/208V/3Ø/4 wire	Feeder: 4/C#3 TECK
Mains: 225A	Main Breaker: N/A
Location: Secondary Clarifier Electrical Room	Power Source: Transformer XFMR-SB
Mounting: Surface	



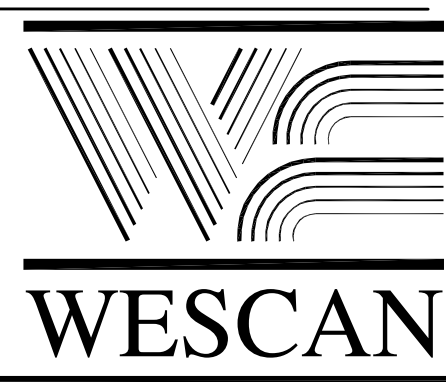
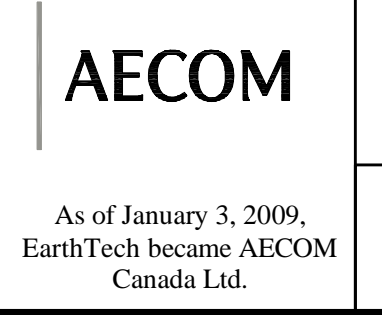
DRAWING NOTES

- MOTOR CONTROL CENTRES 1S & 2S**
- SIZE 1 STARTERS FOR WAS ACTIVATED SLUDGE PUMPS S810-WAP AND S820-WAP SHALL BE DISCONNECTED AND LEFT IN PLACE AS SPARES. EXISTING PUMPS S810-WAP AND S820-WAP SHALL BE DISCONNECTED AND ALL WIRING FROM EXISTING STARTERS TO BE REMOVED. (REFER TO DRAWING SE3.02) MODIFY STARTER LABELS TO SUIT REVISED EQUIPMENT. MODIFY WRAPPER DOOR AS REQUIRED.
 - REMOVE BREAKER (MCC-1S) FOR EXISTING PUMP S730-RAP. REPLACE BREAKER WITH NEW 80A-3P, 600V BREAKER. RECONNECT EXISTING WIRING. REFER TO DRAWING SE3.02.
 - SIZE 3 STARTER (MCC-1S) FOR FLUSHING WATER PUMP S230-FWP SHALL BE DISCONNECTED AND REMOVED. PROVIDE NEW MCC WRAPPER COMPLETE WITH 200A-3P BREAKER. REMOVE EXISTING WIRING FROM EXISTING STARTER TO EXISTING PUMP MOTOR. INSTALL NEW POWER WIRING TO NEW PUMP MOTOR (3/C#1 TECK CABLE). RECONNECT EXISTING CONTROL WIRING FOR S230-FWP AT NEW MOTOR STARTER.
 - PROVIDE NEW STARTER AND BREAKER WRAPPERS IN EXISTING SPACES AS INDICATED ON MCC ELEVATION. MODIFY DOORS TO SUIT NEW STARTERS, CONTROL SWITCHES, INDICATING LIGHTS AND BREAKERS AS REQUIRED.
 - EXISTING MCC'S. REFER TO DETAIL FOR EXISTING DETAILS AND MODIFICATIONS.
 - PROVIDE ADDITIONAL VERTICAL CELL TO EACH END OF MCC. CONNECT TO EXISTING MCC BUS.
 - SIZE 1 STARTERS FOR WAS ACTIVATED SLUDGE PUMPS S850-SP AND S860-SP SHALL BE DISCONNECTED AND LEFT IN PLACE AS SPARES. EXISTING PUMPS S850-SP AND S860-SP SHALL BE DISCONNECTED AND ALL WIRING FROM EXISTING STARTERS TO BE REMOVED. (REFER TO DRAWING SE3.02) MODIFY STARTER LABELS TO SUIT REVISED EQUIPMENT. MODIFY WRAPPER DOOR AS REQUIRED.
 - PROVIDE NEW BREAKER WRAPPERS IN EXISTING SPACES AS INDICATED ON MCC ELEVATION FOR RETURN ACTIVATED SLUDGE PUMPS S740-RAP AND S750-RAP. PROVIDE NEW SIZE R5 VFD'S AS SHOWN ON FLOOR PLAN. INSTALL NEW POWER WIRING TO NEW VFD AND FROM VFD TO PUMP MOTOR (3/C#4 TECK CABLE WITH 100% GROUND WIRE).
 - PANEL SB INSTRUMENT CIRCUITS - REFER TO INSTRUMENTATION AND CONTROL DRAWINGS FOR INSTRUMENTATION LOCATIONS. PROVIDE WIRE AND CABLE AS PER INSTRUMENT CABLE LIST.

GENERAL NOTES

- COORDINATE WITH OTHER TRADES TO PREVENT CONFLICTS.
- USE PVC JACKETED HITECK CABLE FOR ALL POWER WIRING.
- WIRING FOR LIGHTING, RECEPTACLES AND COMMUNICATIONS TO IN RIGID ALUMINUM CONDUIT AND TECH CABLE.
- ALL CONDUIT TO BE 21mmØ MINIMUM UNLESS OTHERWISE NOTED.

1 DETAIL - EXISTING MOTOR CONTROL CENTRE MODIFICATIONS
SCALE 1:25



AS-BUILT DRAWING
Completed By: Doug Lagimodiere
Date: SEPT 09, 2009
1049 LOGAN AVE
WINNIPEG, MANITOBA
TEL: 786-3384
FAX: 783-2750
www.wescan-services.com

NO.	REVISIONS	DATE	BY
03	AS CONSTRUCTED	09/02/19	JBC
02	ISSUED FOR CONSTRUCTION	06/09/22	SRP
01	21-2006 ADDENDUM 3	06/09/15	ERC
00	ISSUED FOR TENDER	06/04/26	ERC

EarthTech
A Tyco International Ltd. Company

DESIGNED BY: GSN	CHECKED BY: PS
DRAWN BY: ERC	APPROVED BY: JEH
HOR. SCALE: NTS	RELEASED FOR CONSTRUCTION BY: J. VEILLEUX
VERTICAL SCALE:	
DATE: 2005/11/22	DATE: 2006/04/26

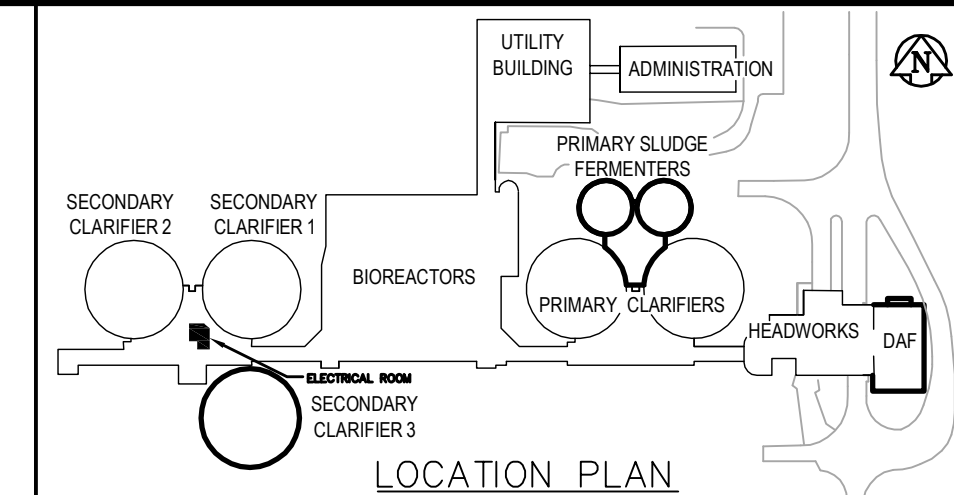
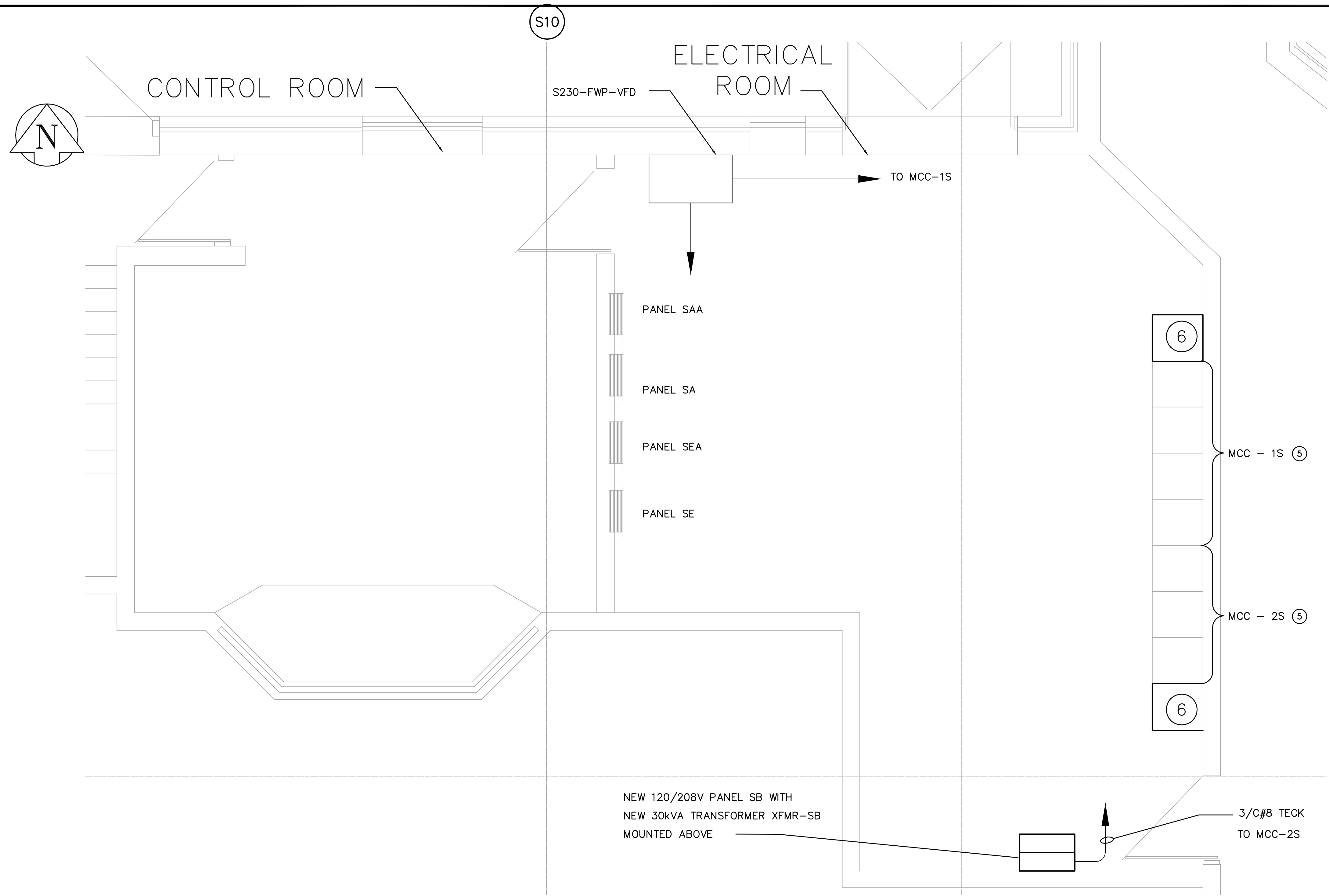
ENGINEER'S SEAL
ORIGINAL SIGNED BY
P. STRYK
2006/04/26
CONSULTANT DRAWING NO.
SE4.01

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
ENGINEERING DIVISION

WEWPCB
BIOLOGICAL NUTRIENT REMOVAL UPGRADE
CONTRACT 3

ELECTRICAL
AREA S - SECONDARY CLARIFIERS
EXISTING ELECTRICAL ROOM DETAILS SHEET 1 OF 7

CITY FILE NUMBER
SHEET 1 OF 7
CITY DRAWING NUMBER
1-01038-E0013-001-03



DRAWING NOTES

- MOTOR CONTROL CENTRES 1S & 2S**
- SIZE 1 STARTERS FOR WAS ACTIVATED SLUDGE PUMPS S810-WAP AND S820-WAP SHALL BE DISCONNECTED AND LEFT IN PLACE AS SPARES. EXISTING PUMPS S810-WAP AND S820-WAP SHALL BE DISCONNECTED AND ALL WIRING FROM EXISTING STARTERS TO BE REMOVED. (REFER TO DRAWING SE3.02) MODIFY STARTER LABELS TO SUIT REVISED EQUIPMENT. MODIFY WRAPPER DOOR AS REQUIRED.
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 - PANEL SB INSTRUMENT CIRCUITS - REFER TO INSTRUMENTATION AND CONTROL DRAWINGS FOR INSTRUMENTATION LOCATIONS. PROVIDE WIRE AND CABLE AS PER INSTRUMENT CABLE LIST.

GENERAL NOTES

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FLOOR PLAN
SCALE: 1:25

1 DETAIL - EXISTING MOTOR CONTROL CENTRE MODIFICATIONS
SCALE 1:25



AS-BUILT DRAWING
Completed By: Doug Legimodere
Date: JAN 6, 2009
1049 LOGAN AVE
WINNIPEG, MANITOBA
TEL: 786-3384
FAX: 783-2750
www.wescan-services.com



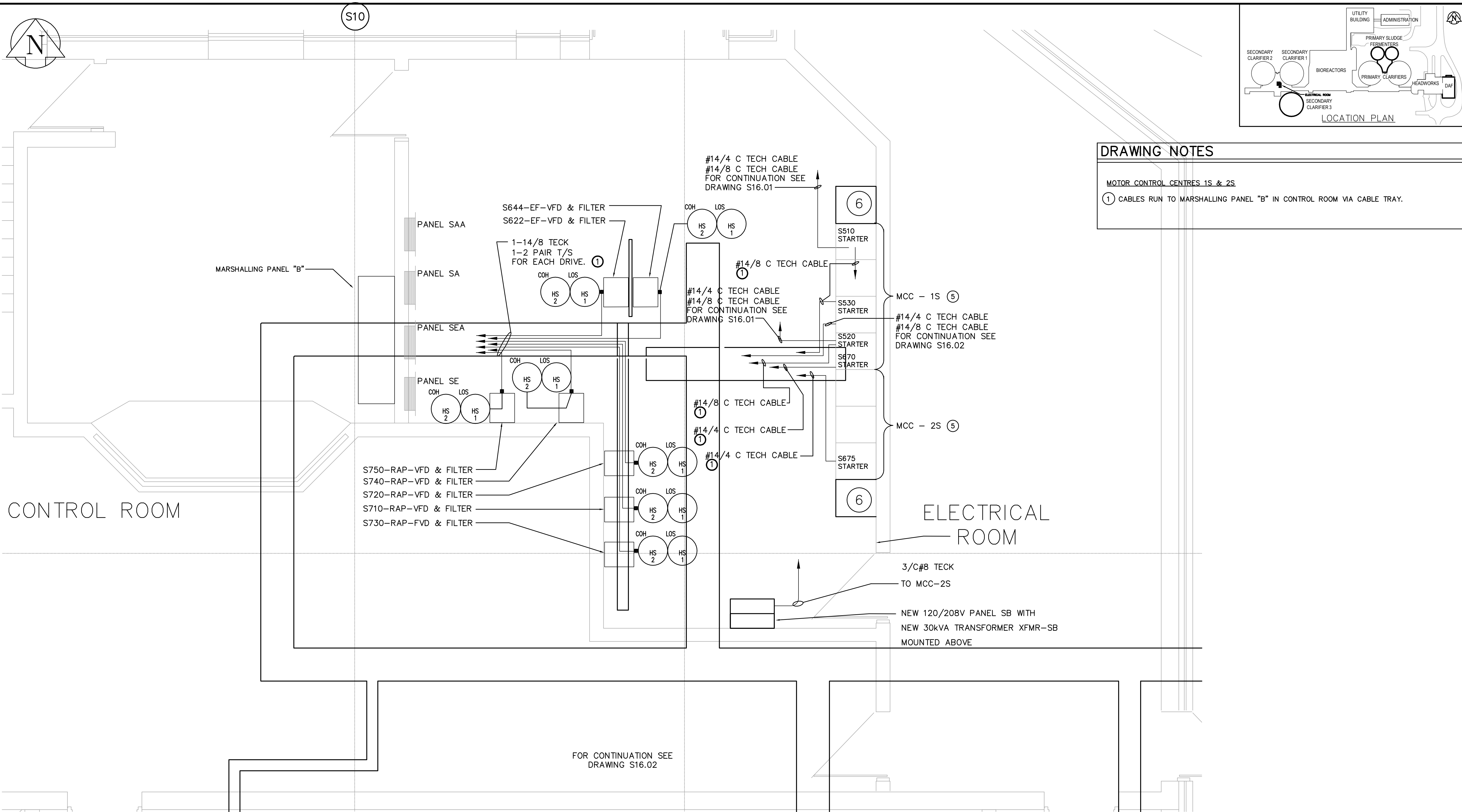
B.M. ELEV.	EarthTech A Tyco International Ltd. Company		ENGINEER'S SEAL
	DESIGNED BY: GSN	CHECKED BY: PS	ORIGINAL SIGNED BY: P. STRYK
	DRAWN BY: ERC	APPROVED BY: JEH	2006/04/26
03 AS CONSTRUCTED 09/01/06 DL	HOR. SCALE: NTS		CONSULTANT DRAWING NO. SE4.01-ER
02 ISSUED FOR CONSTRUCTION 06/09/22 SRP	VERTICAL SCALE:		
01 21-2006 ADDENDUM 3 06/09/15 ERC	RELEASED FOR CONSTRUCTION BY: J. VEILLEUX		
00 ISSUED FOR TENDER 06/04/26 ERC	DATE: 2005/11/22	DATE: 2006/04/26	
NO. REVISIONS	DATE	BY	

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
ENGINEERING DIVISION

WEWPC
BIOLOGICAL NUTRIENT REMOVAL UPGRADE
CONTRACT 3

ELECTRICAL
AREA S - SECONDARY CLARIFIERS
EXISTING ELECTRICAL ROOM DETAILS -SHT 2 OF 7

CITY FILE NUMBER
SHEET OF
CITY DRAWING NUMBER
1-0038-E0013-002-03



DRAWING NOTES

MOTOR CONTROL CENTRES 1S & 2S

① CABLES RUN TO MARSHALLING PANEL "B" IN CONTROL ROOM VIA CABLE TRAY.

FLOOR PLAN
SCALE: 1:25

① **DETAIL - EXISTING MOTOR CONTROL CENTRE MODIFICATIONS**
SCALE: 1:25



AECOM

As of January 3, 2009, EarthTech became AECOM Canada Ltd.

AECOM AS-CONSTRUCTED

SIG: _____ DATE: _____

WESCAN

AS-BUILT DRAWING
Completed By: Doug Lagimodiere
Date: JAN 6, 2009
1049 LOGAN AVE
WINNIPEG, MANITOBA
TEL: 788-3384
FAX: 783-2750
www.wescan-services.com

B.M. ELEV.					
03	AS CONSTRUCTED	09/01/06	DL		
02	ISSUED FOR CONSTRUCTION	06/09/22	SRP		
01	21-2006 ADDENDUM 3	06/09/15	ERC		
00	ISSUED FOR TENDER	06/04/26	ERC		
NO.	REVISIONS	DATE	BY	DATE	2005/11/22
				DATE	2006/04/26

EarthTech
A Tyco International Ltd. Company

DESIGNED BY: GSN
CHECKED BY: PS
DRAWN BY: ERC
APPROVED BY: JEH

HOR. SCALE: NTS
VERTICAL SCALE:

RELEASED FOR CONSTRUCTION BY: J. VEILLEUX

ENGINEER'S SEAL
ORIGINAL SIGNED BY: P. STRYK
2006/04/26

CONSULTANT DRAWING NO. SE4.01-ER-CTRL

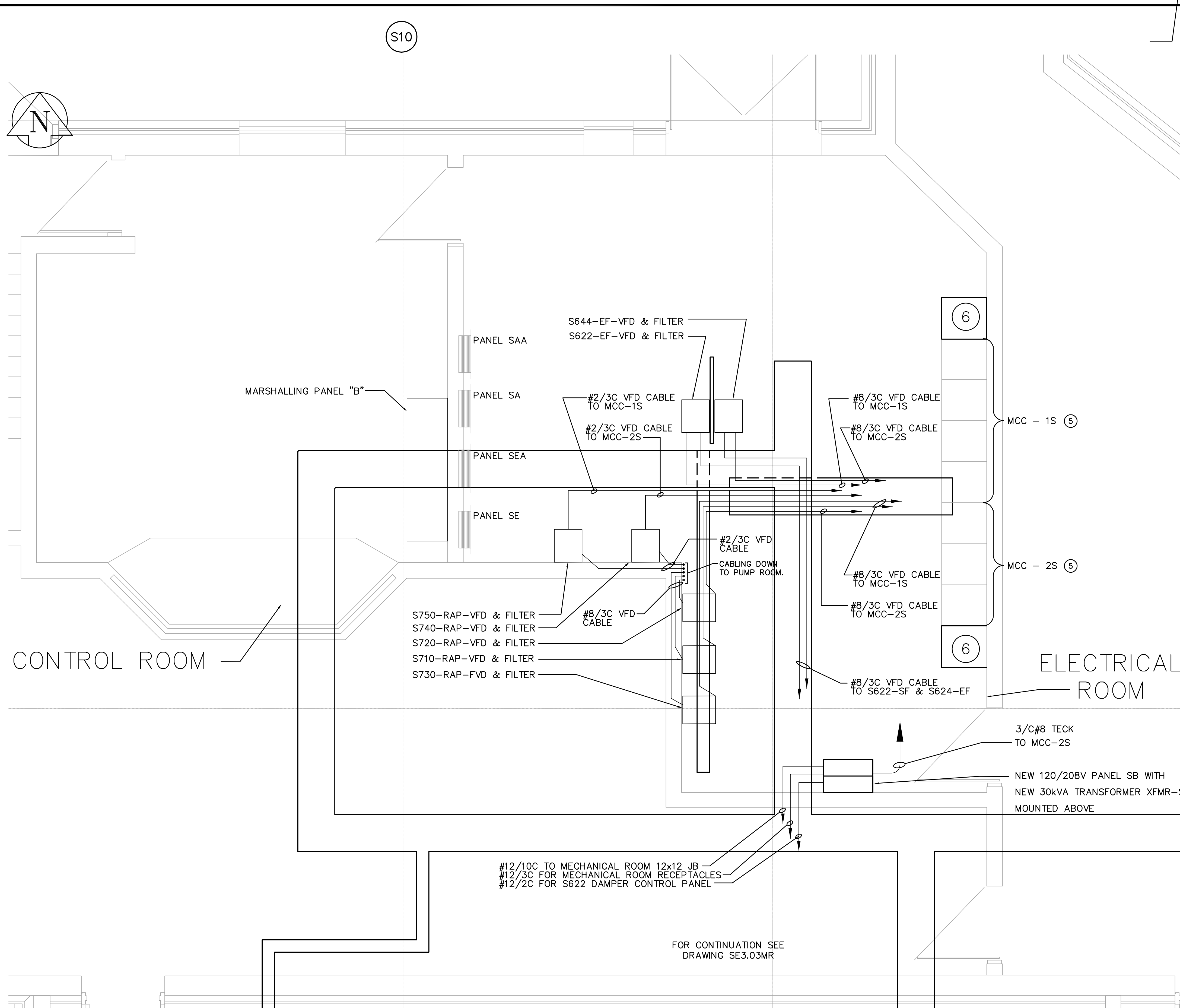
THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
ENGINEERING DIVISION

WEWPC
BIOLOGICAL NUTRIENT REMOVAL UPGRADE
CONTRACT 3

CITY FILE NUMBER
SHEET OF

CITY DRAWING NUMBER
1-0038-E0013-003-03

ELECTRICAL
AREA S - SECONDARY CLARIFIERS
EXISTING ELECTRICAL ROOM DETAILS- SHT 3 OF 7



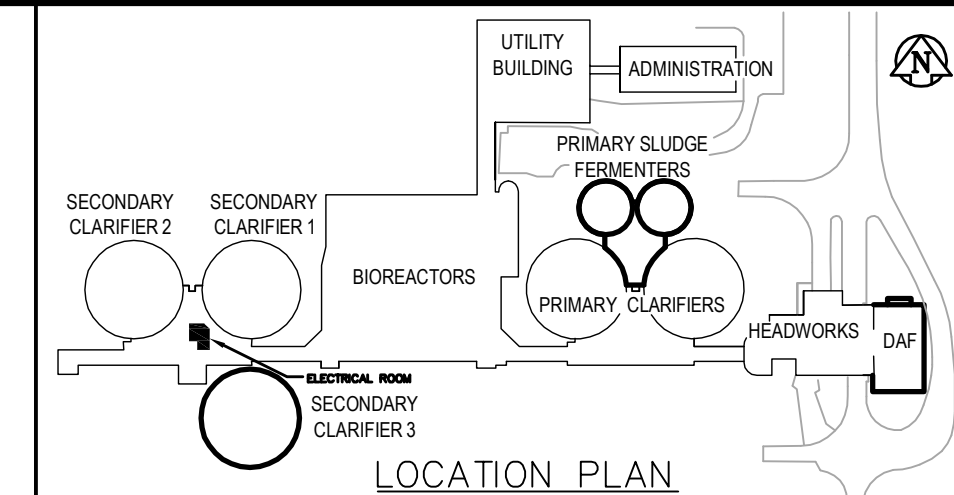
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- ⑨ PANEL SB INSTRUMENT CIRCUITS - REFER TO INSTRUMENTATION AND CONTROL DRAWINGS FOR INSTRUMENTATION LOCATIONS. PROVIDE WIRE AND CABLE AS PER INSTRUMENT CABLE LIST.

GENERAL NOTES

1. COORDINATE WITH OTHER TRADES TO PREVENT CONFLICTS.
2. USE PVC JACKETED HITECK CABLE FOR ALL POWER WIRING.
3. WIRING FOR LIGHTING, RECEPTACLES AND COMMUNICATIONS TO IN RIGID ALUMINUM CONDUIT AND TECK CABLE.
4. ALL CONDUIT TO BE 21mmØ MINIMUM UNLESS OTHERWISE NOTED.



CONTROL ROOM

ELECTRICAL ROOM

S750-RAP-VFD & FILTER
S740-RAP-VFD & FILTER
S720-RAP-VFD & FILTER
S710-RAP-VFD & FILTER
S730-RAP-FVD & FILTER

S644-EF-VFD & FILTER
S622-EF-VFD & FILTER

MARSHALLING PANEL "B"

PANEL SAA

PANEL SA

PANEL SEA

PANEL SE

#2/3C VFD CABLE TO MCC-1S
#2/3C VFD CABLE TO MCC-2S

#8/3C VFD CABLE TO MCC-1S
#8/3C VFD CABLE TO MCC-2S

#8/3C VFD CABLE

#8/3C VFD CABLE TO MCC-1S
#8/3C VFD CABLE TO MCC-2S

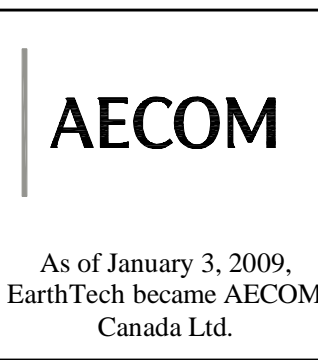
#8/3C VFD CABLE TO S622-SF & S624-EF

#12/10C TO MECHANICAL ROOM 12x12 JB
#12/3C FOR MECHANICAL ROOM RECEPTACLES
#12/2C FOR S622 DAMPER CONTROL PANEL

FOR CONTINUATION SEE DRAWING SE3.03MR

3/C#8 TECK TO MCC-2S

NEW 120/208V PANEL SB WITH NEW 30kVA TRANSFORMER XFMR-SB MOUNTED ABOVE



AECOM AS-CONSTRUCTED



NO.	REVISIONS	DATE	BY	DATE
03	AS CONSTRUCTED	09/01/06	DL	
02	ISSUED FOR CONSTRUCTION	06/09/22	SRP	
01	21-2006 ADDENDUM 3	06/09/15	ERC	
00	ISSUED FOR TENDER	06/04/26	ERC	



DESIGNED BY: GSN	CHECKED BY: PS
DRAWN BY: ERC	APPROVED BY: JEH
HOR. SCALE: NTS	RELEASED FOR CONSTRUCTION BY: J. VEILLEUX
VERTICAL SCALE:	
DATE: 2005/11/22	DATE: 2006/04/26

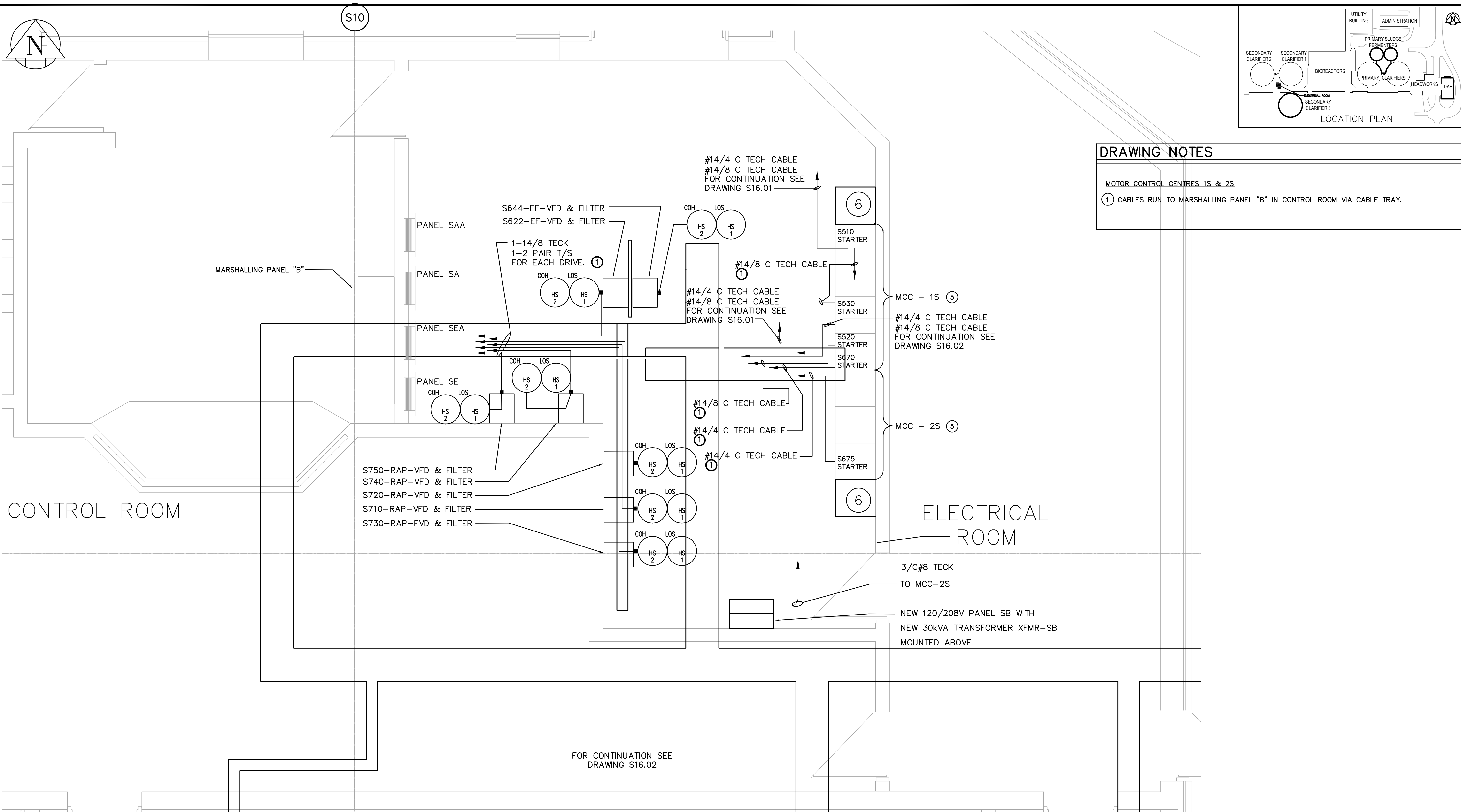
ENGINEER'S SEAL
ORIGINAL SIGNED BY
P. STRYK
2006/04/26
CONSULTANT DRAWING NO.
SE4.01-ER-PWR



WEWPCB BIOLOGICAL NUTRIENT REMOVAL UPGRADE CONTRACT 3
ELECTRICAL AREA S - SECONDARY CLARIFIERS EXISTING ELECTRICAL ROOM DETAILS- SHT 4 OF 7
CITY FILE NUMBER
SHEET OF
CITY DRAWING NUMBER
1-0038-E0013-004-03

FLOOR PLAN
SCALE: 1:25

1 **DETAIL - EXISTING MOTOR CONTROL CENTRE MODIFICATIONS**
SCALE 1:25



DRAWING NOTES

MOTOR CONTROL CENTRES 1S & 2S

① CABLES RUN TO MARSHALLING PANEL "B" IN CONTROL ROOM VIA CABLE TRAY.

FLOOR PLAN
SCALE: 1:25

① **DETAIL — EXISTING MOTOR CONTROL CENTRE MODIFICATIONS**
SCALE 1:25

AECOM
Certificate of Authorization
AECOM Canada Ltd.
Original dated on:
No. 4671 Date: 2006/04/26

AS-BUILT DRAWING
Completed By: Doug Lagimodiere
Date: JAN 6, 2009
1049 LOGAN AVE
WINNIPEG, MANITOBA
TEL: 786-3384
FAX: 783-2750
www.wescan-services.com



B.M. ELEV.					
03 AS CONSTRUCTED	09/02/19	JBC	DESIGNED BY	GSN	CHECKED BY PS
02 ISSUED FOR CONSTRUCTION	06/09/22	SRP	DRAWN BY	ERC	APPROVED BY JEH
01 21-2006 ADDENDUM 3	06/09/15	ERC	HOR. SCALE:	NTS	RELEASED FOR CONSTRUCTION BY: J. VEILLEUX
00 ISSUED FOR TENDER	06/04/26	ERC	VERTICAL SCALE:		
NO. REVISIONS	DATE	BY	DATE	2005/11/22	DATE 2006/04/26



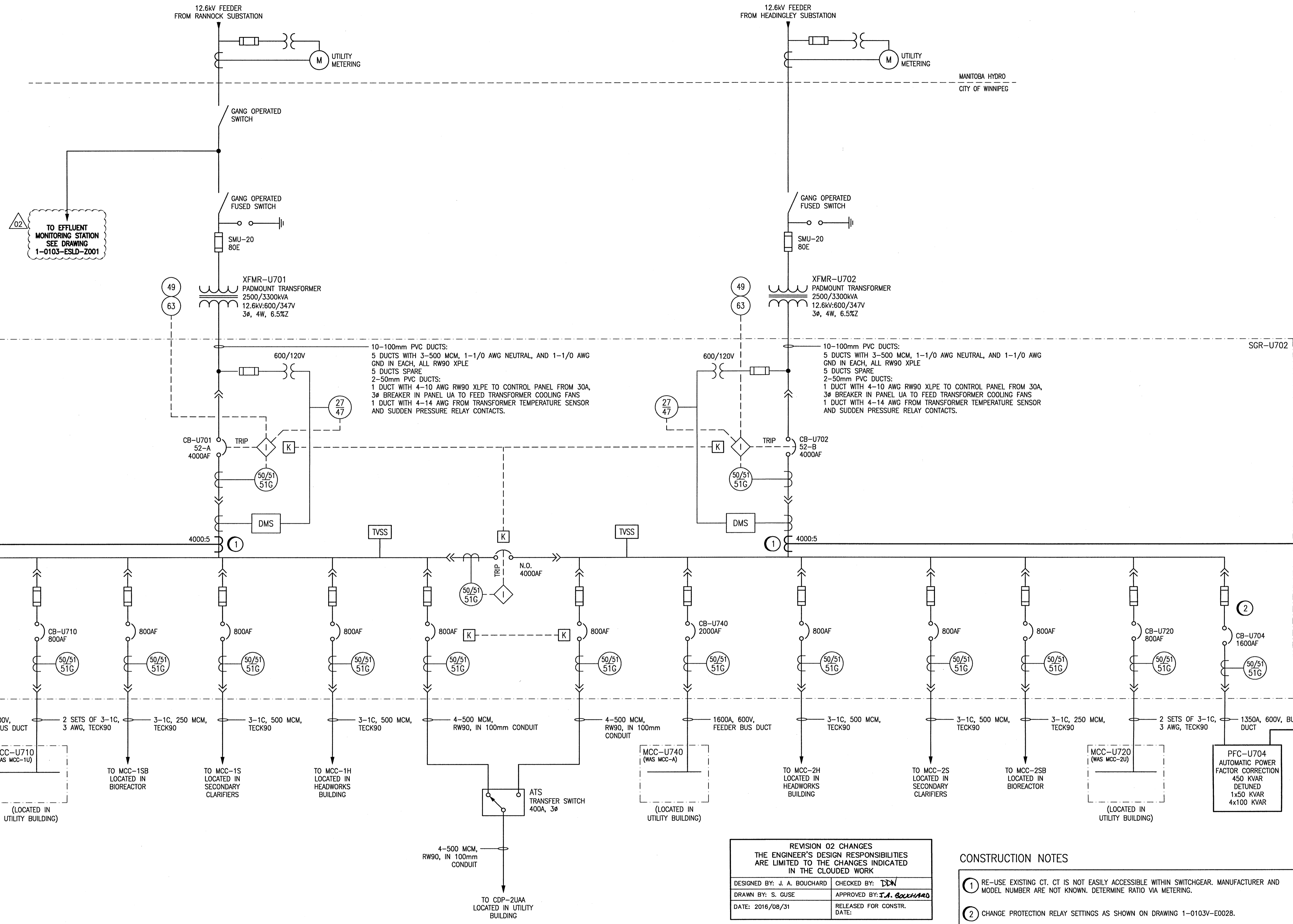
ENGINEER'S SEAL
ORIGINAL SIGNED BY
P. STRYK
2006/04/26
CONSULTANT DRAWING NO.
SE4.03

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
ENGINEERING DIVISION

WEWPC
BIOLOGICAL NUTRIENT REMOVAL UPGRADE
CONTRACT 3
ELECTRICAL
AREA S — SECONDARY CLARIFIERS
EXISTING MCC MODIFICATIONS SHEET 6 OF 7
CITY FILE NUMBER
SHEET 6 OF 7
CITY DRAWING NUMBER
1-01038-E0013-006-03

AECOM
As of January 3, 2009,
EarthTech became AECOM
Canada Ltd.

AECOM AS-CONSTRUCTED
SIG..... DATE.....



NOTES:
 1. THIS DRAWING IS BASED ON 1-0103A-E0003-002. ACTUAL CONFIGURATION MAY NOT BE EXACTLY AS SHOWN.

REVISION 02 CHANGES	
THE ENGINEER'S DESIGN RESPONSIBILITIES ARE LIMITED TO THE CHANGES INDICATED IN THE CLOUDED WORK	
DESIGNED BY: J. A. BOUCHARD	CHECKED BY: <i>J.A. Boucharde</i>
DRAWN BY: S. GUSE	APPROVED BY: <i>J.A. Boucharde</i>
DATE: 2016/08/31	RELEASED FOR CONSTR. DATE:

- CONSTRUCTION NOTES**
- ① RE-USE EXISTING CT. CT IS NOT EASILY ACCESSIBLE WITHIN SWITCHGEAR. MANUFACTURER AND MODEL NUMBER ARE NOT KNOWN. DETERMINE RATIO VIA METERING.
 - ② CHANGE PROTECTION RELAY SETTINGS AS SHOWN ON DRAWING 1-0103V-E0028.

1-0103V-E0028	SGR-U701 AND SGR-U702 PROTECTION SETTINGS
DRAWING NUMBER	REFERENCE DRAWINGS

NO.	REVISIONS	DATE	DESIGN	CHECK
02	ISSUED FOR CONSTRUCTION	2016/09/02	<i>J.A. Boucharde</i>	<i>J.A. Boucharde</i>
01	AS-BUILT. BID OP. 419-2013	2014/06/06	TMC	
00	ISSUED FOR TENDER (BID OP. 419-2013)	2013/06/26	TMC	CJR

DESIGNED BY: I. CHURCH	CHECKED BY: C. REIMER
DRAWN BY: S. FUNK	APPROVED BY: C. REIMER
SCALE: NTS	RELEASED FOR CONSTRUCTION DATE: 2013/01/08
DATE: 2013/01/08	BY: M. PAETKAU
CONSULTANT NO.:	

ENGINEER'S SEAL

ORIGINAL DRAWING SEALED BY: T. M. CHURCH
SNC-LAVALIN MEMBER # 32682
2013/06/26
REV. 00

THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT

WEST END WATER POLLUTION CONTROL CENTRE
 POWER FACTOR CORRECTION
 SINGLE LINE DIAGRAM
 SWITCHGEAR SGR-U701 AND SGR-U702

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0103V-E0027	001	02	