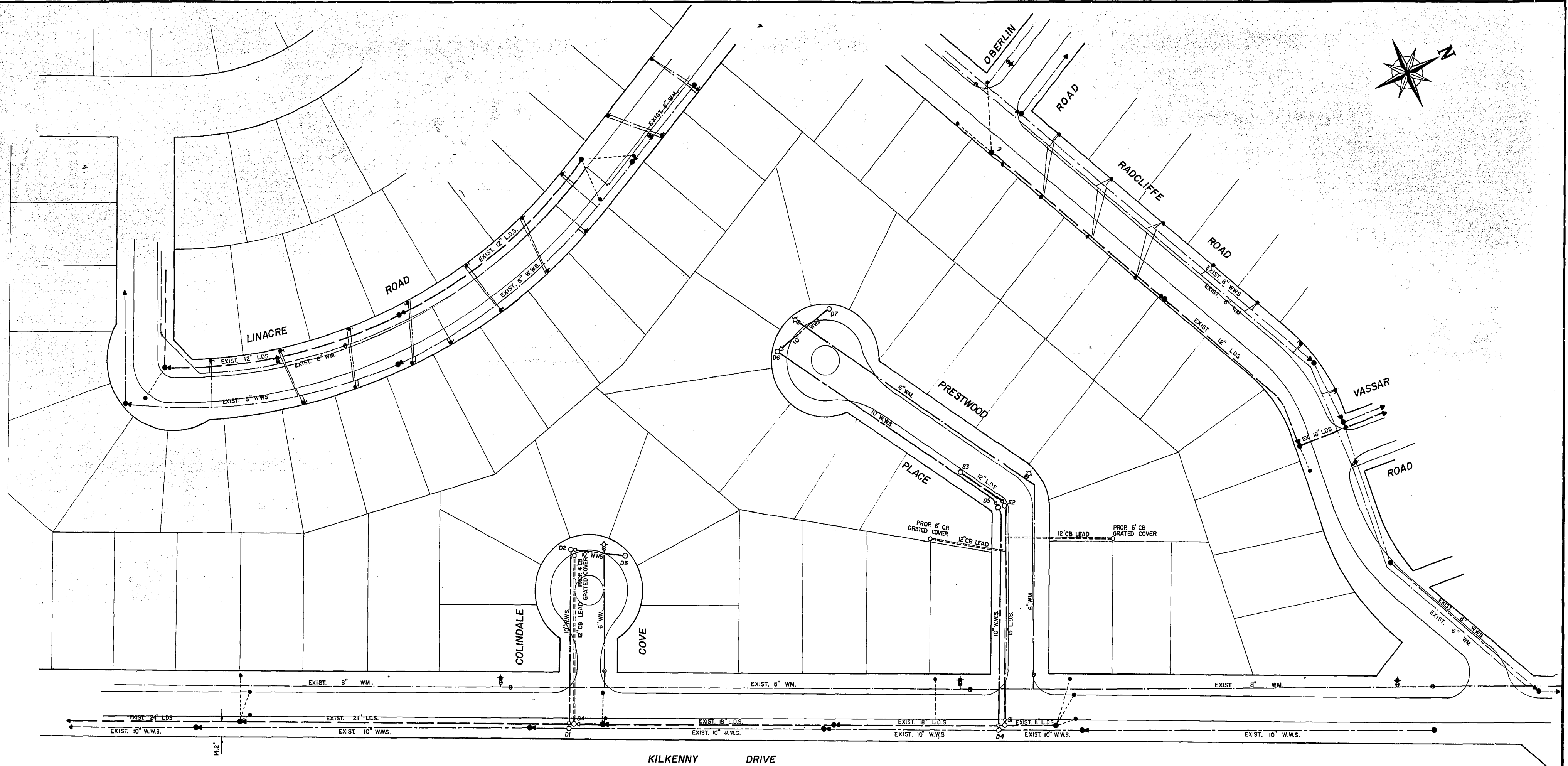
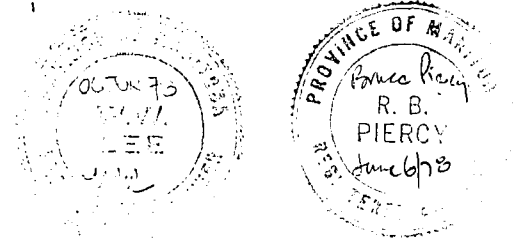


REF. or DRAWING NO. **PRESTWOOD PLACE**
DETAILS KILKENNY DR. TO WEST LIMIT
GENERAL PLAN



NOTE.
 ALL WATERMAINS TO BE 6" UNLESS OTHERWISE SHOWN.
 ALL WASTE WATER SEWERS TO BE 10" UNLESS OTHERWISE SHOWN.
 THAW WIRE REQUIRED ON ALL WATER SERVICES WHERE THE CORPORATION STOP IS UNDER THE PROPOSED PAVEMENT
 PROPOSED LOTS TO BE SERVICED ARE SHOWN SHADED.



NOTE: DETERMINE LOCATION OF UNDERGROUND UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.
 ADVISING-READ THIS BEFORE YOU BEGIN WORK-IF TOWER EQUIPMENT OR EXPLOSIVES ARE TO BE USED FOR THE EXCAVATION AUTHORIZED BY THE ATTACHED PERMIT, NO WORK SHALL BE COMMENCED BEFORE: (1) THE LOCAL OFFICE OF THE GAS COMPANY HAS BEEN NOTIFIED OF THE PROPOSED EXCAVATION AND (2) THE GAS COMPANY HAS MARKED OUT THE LOCATION OF ANY ENDANGERED GAS INSTALLATIONS, OR THE GAS COMPANY HAS ADVISED THAT NO GAS INSTALLATIONS WILL BE ENDANGERED BY THE PROPOSED EXCAVATION. FOR SPECIFIC DETAILS REFER TO MANITOBA REGULATIONS 219/72 MADE UNDER THE GAS PIPE LINE ACT.

LOCATION APPROVED
 UNDERGROUND STRUCTURES COMMITTEE

Date: _____ Supv. E.G. Structures Committee
 LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON BEST INFORMATION AVAILABLE, BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN AND EXACT LOCATIONS OF ALL UNDERGROUND INCLUDING SERVICE CONNECTIONS MUST BE CHECKED WITH THE UTILITY CONCERNED BEFORE PROCEEDING WITH CONSTRUCTION.

LEGEND

WATERMAINS (W.M.)	LANDSCAPE OR BLDG. GRADE	30 50
WASTE WATER SEWER (W.W.S.)	HYDRANT	
LAND DRAINAGE SEWER (L.D.S.)	CULVERT	
WATER VALVE (W.V.), GAS VALVE (G.V.)	WATER VALVE (W.V.), GAS VALVE (G.V.)	
MANHOLE W.T.S. (M), HYDRANT (H), SEWER (S)	MANHOLE W.T.S. (M), HYDRANT (H), SEWER (S)	
CITY SIGNALS (C.S.)	CITY SIGNALS (C.S.)	
GAS	CATCH BASIN	
STREET LIGHTING (S.L.)	BRASS PLUG & SURVEY CONTROL (W)	
TELECOMMUNICATIONS	TRF. HYDRO STEAM HEAT	
WPG. CENTRAL H.T. CO. S.H.	GLY WIRE	
PAVEMENT GRADE	POLE	

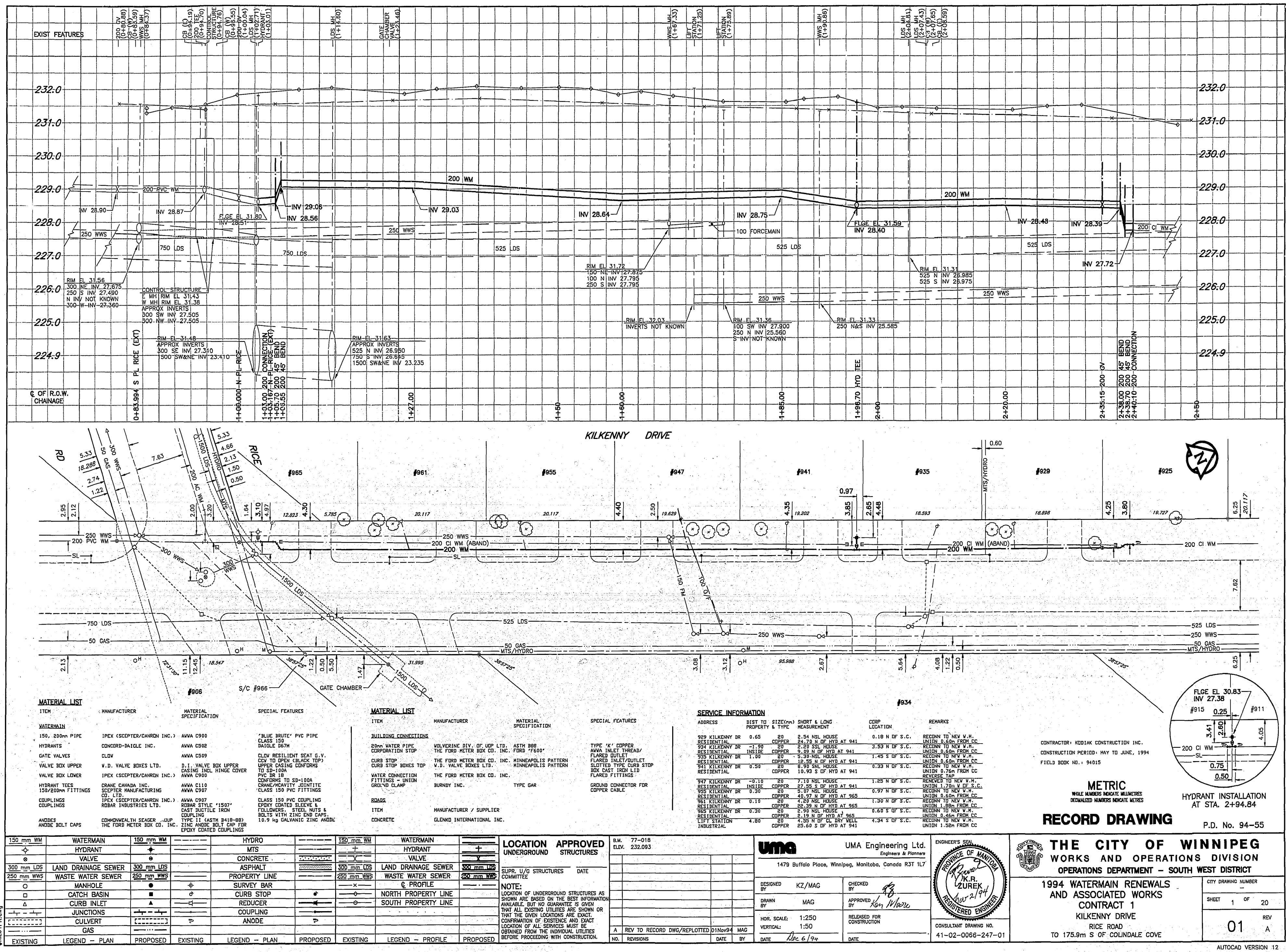
REV.	DESCRIPTION	DWN.	APP.	DATE
1	A. L. V. PROPOSED WATER MAINS (30" W.M.)			22/3/78

Underwood McLellan (1977) Ltd. Consulting Engineers and Planners	
APPROVED BY: <i>[Signature]</i>	DATE: June 6/78
DRAWN BY: <i>[Signature]</i>	DESIGNED BY: A.R.
CHECKED BY: <i>[Signature]</i>	CHECKED BY: <i>[Signature]</i>

THE CITY OF WINNIPEG	
DISTRICT NO. 6	
GENERAL PLAN	
SHEET 1 OF 3	PLATE
DWG. No. 01	REV. 1

REF. or DRAWING NO. **KILKENNY DR.**
DETAILS 94. WM. RENEWAL
RICE RD TO 135th NORTH

34



CONTRACTOR: KODIAK CONSTRUCTION INC.
CONSTRUCTION PERIOD: MAY TO JUNE, 1994
FIELD BOOK NO.: 94015

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

RECORD DRAWING
P.D. No. 94-55

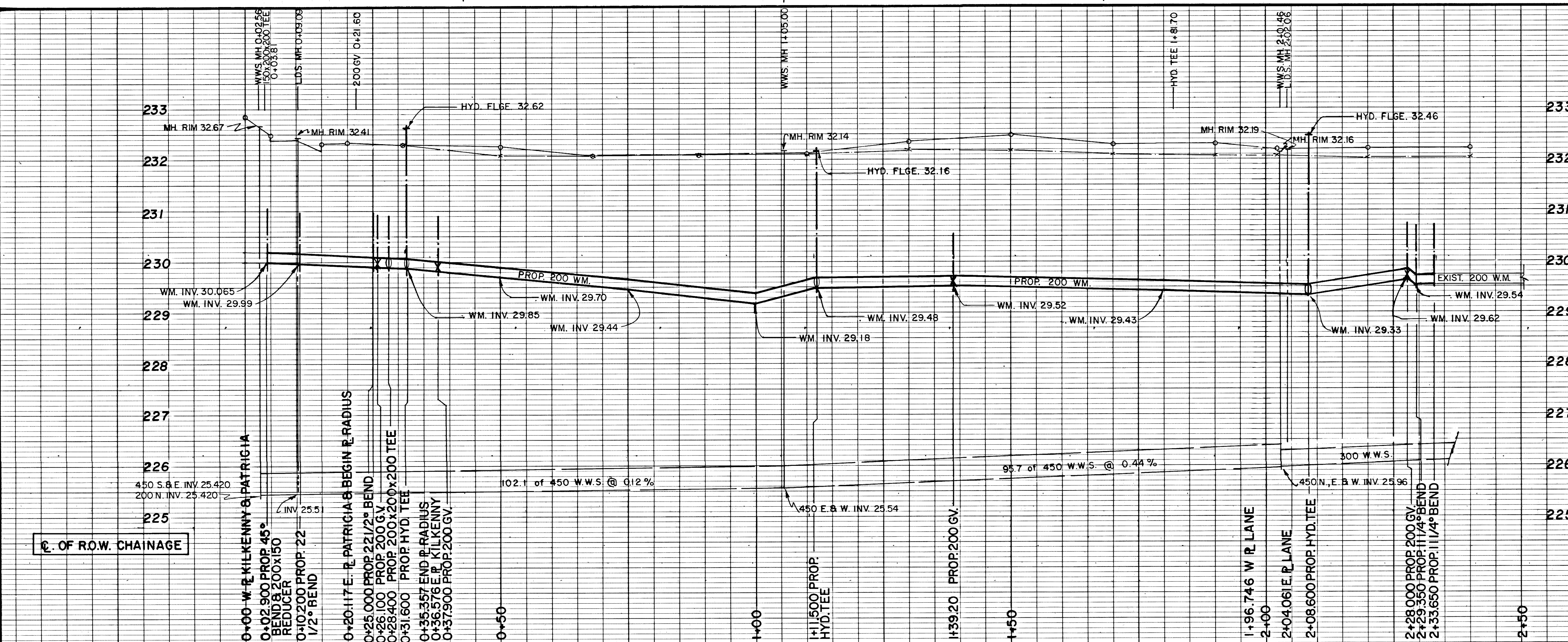
THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
OPERATIONS DEPARTMENT - SOUTH WEST DISTRICT

1994 WATERMAIN RENEWALS AND ASSOCIATED WORKS
CONTRACT 1
KILKENNY DRIVE
RICE ROAD
TO 175.9m S OF COLINDALE COVE

CITY DRAWING NUMBER
SHEET 1 OF 20
REV A

01

AUTOCAD VERSION 12

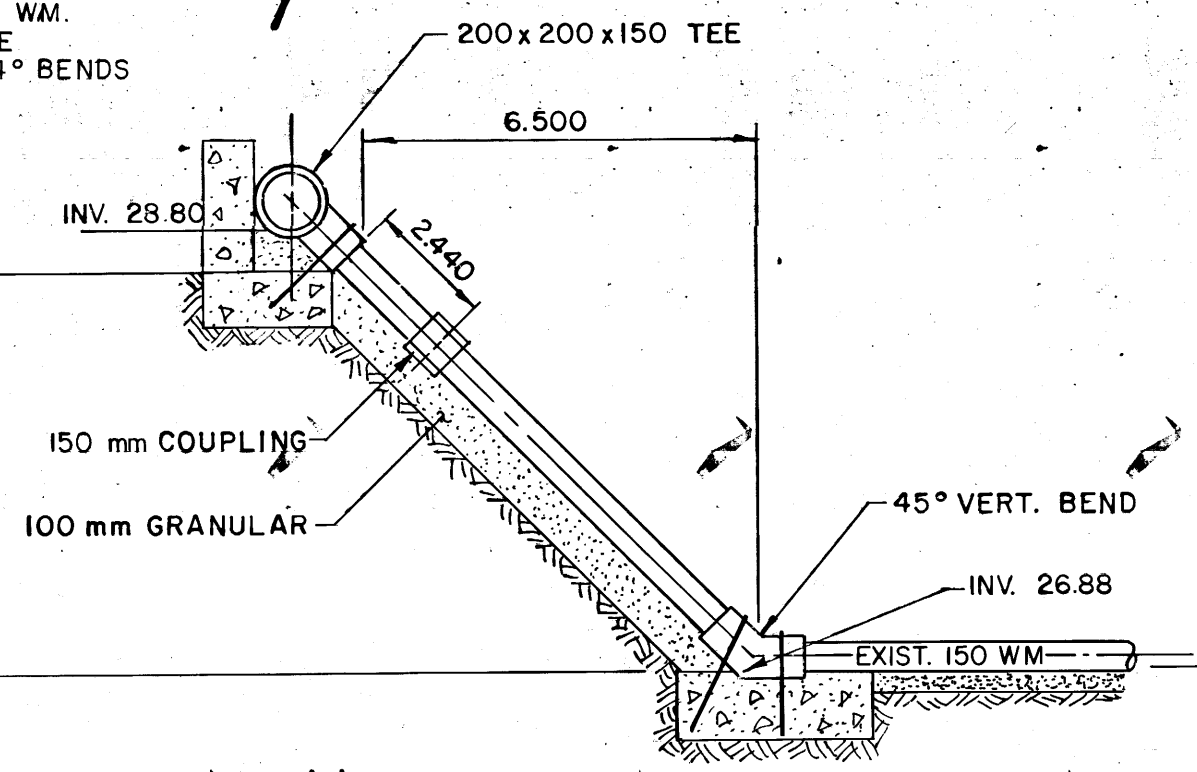
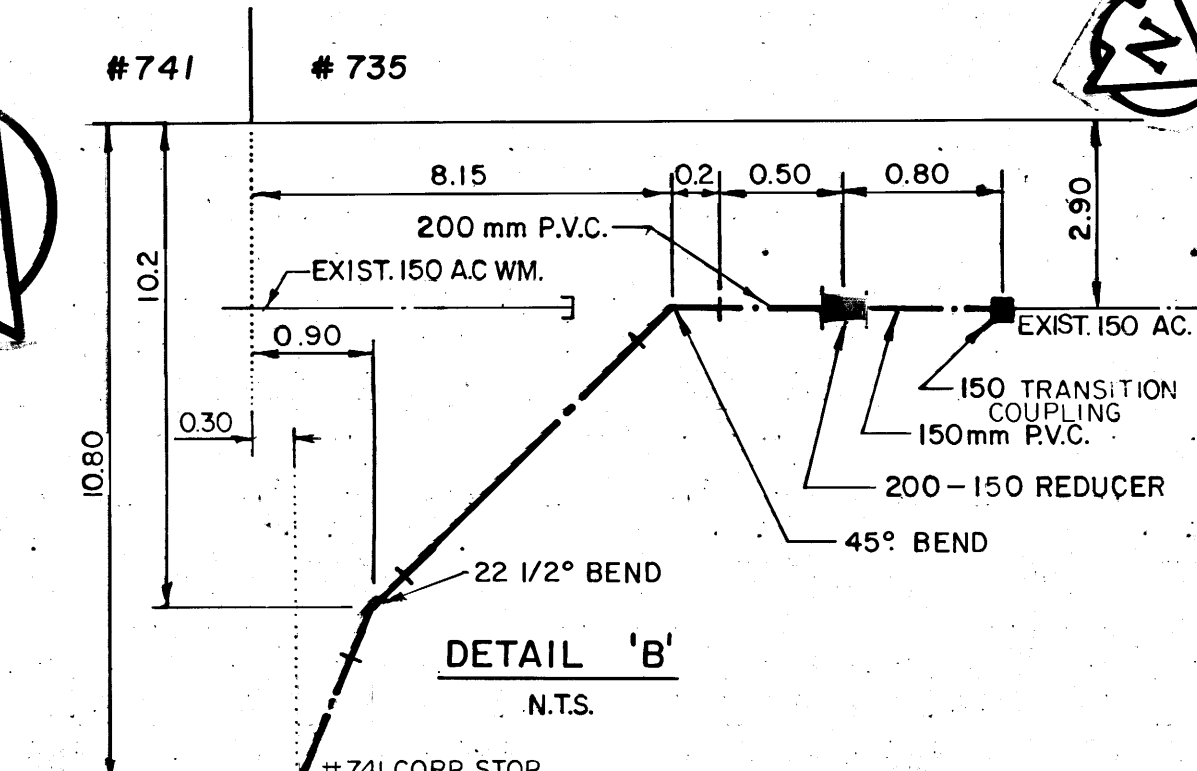
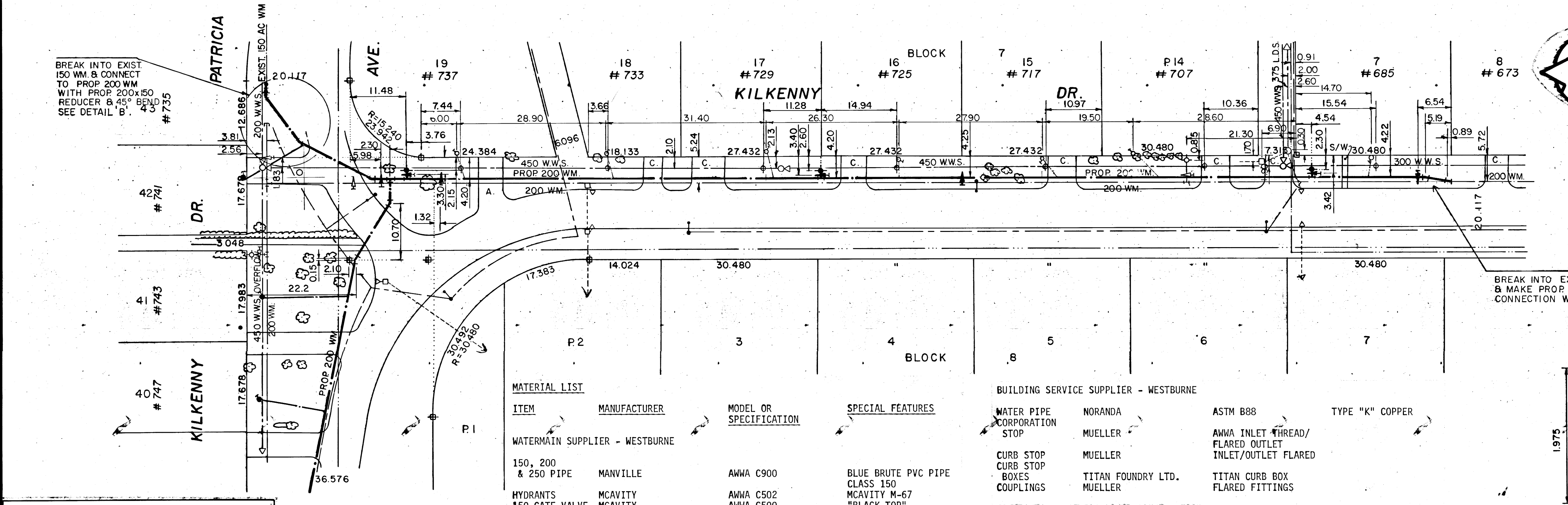


EXISTING

BUILDING SERVICES KILKENNY DRIVE - NORTH LEG		
LOT #	HOUSE #	CORPORATION TIES
19	237	10.2 M EAST OF 1ST HYDRANT EAST OF PATRICIA
18	233	39.8 M EAST OF 1ST HYDRANT EAST OF PATRICIA
17	229	8.9 M WEST OF 2ND HYDRANT EAST OF PATRICIA
16	225	15.4 M EAST OF 2ND HYDRANT EAST OF PATRICIA
15	217	46.2 M EAST OF 2ND HYDRANT EAST OF PATRICIA
P14	707	32.1 M WEST OF 3RD HYDRANT EAST OF PATRICIA
7	685	10.9 M EAST OF 3RD HYDRANT EAST OF PATRICIA

BUILDING SERVICES KILKENNY DRIVE - WEST LEG		
LOT #	HOUSE #	CORPORATION TIES
1	121 RADCLIFFE	33.4 M SOUTH OF 1ST HYDRANT NORTH OF RADCLIFFE
6	801 KILKENNY	9.5 M SOUTH OF 1ST HYDRANT NORTH OF RADCLIFFE
797		18.4 M NORTH OF 1ST HYDRANT NORTH OF RADCLIFFE
793		28.8 M NORTH OF 1ST HYDRANT NORTH OF RADCLIFFE
789		49.9 M NORTH OF 1ST HYDRANT NORTH OF RADCLIFFE
785		69.4 M NORTH OF 1ST HYDRANT NORTH OF RADCLIFFE
34	271	28.6 M NORTH OF 2ND HYDRANT NORTH OF RADCLIFFE
35	267	46.2 M NORTH OF 2ND HYDRANT NORTH OF RADCLIFFE
36	263	28.0 M SOUTH OF 3RD HYDRANT NORTH OF RADCLIFFE
37	265	5.0 M SOUTH OF 3RD HYDRANT NORTH OF RADCLIFFE
38	251	6.2 M NORTH OF 3RD HYDRANT NORTH OF RADCLIFFE
40	247	48.5 M NORTH OF 3RD HYDRANT NORTH OF RADCLIFFE
41	243	72.0 M NORTH OF 3RD HYDRANT NORTH OF RADCLIFFE
42	241	0.3 M NORTH OF THE NORTH LOT LINE OF # 741

PROPOSED



NOTE: DETERMINE LOCATION OF UNDERGROUND UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

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(1) THE LOCAL OFFICE OF THE GAS COMPANY HAS BEEN NOTIFIED OF THE PROPOSED EXCAVATION, AND (2) THE GAS COMPANY HAS MARKED OUT THE LOCATION OF ANY ENDANGERED GAS INSTALLATIONS, OR THE GAS COMPANY HAS ADVISED THAT NO GAS INSTALLATIONS WILL BE ENDANGERED BY THE PROPOSED EXCAVATION. FOR SPECIFIC DETAILS REFER TO MANITOBA REGULATIONS 210/72 MADE UNDER THE GAS PIPE LINE ACT.

150 mm W.M.	WATERMAIN	150 mm W.M.	HYDRO	150 mm W.M.	WATERMAIN	150 mm W.M.
300 mm L.D.S.	LAND DRAINAGE SEWER	300 mm L.D.S.	M.T.S.	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.	CONCRETE	250 mm W.W.S.	WASTE WATER SEWER	250 mm W.W.S.
	MANHOLE		ASPHALT		CONCRETE	
	CATCH BASIN		PROPERTY LINE		W & N.R. PROFILE	
	CURB INLET		SURVEY BAR			
	JUNCTIONS		ASPHALT			
	CULVERT		CONCRETE			
	GAS		TREE			
			RISER			
EXISTING	LEGEND-PLAN	PROPOSED	EXISTING	LEGEND-PLAN	PROPOSED	EXISTING

ITEM	MANUFACTURER	MODEL OR SPECIFICATION	SPECIAL FEATURES
WATERMAIN SUPPLIER - WESTBURNE			
150, 200 & 250 PIPE	MANVILLE	AMWA C900	BLUE BRUTE PVC PIPE CLASS 150
HYDRANTS	MCALVITY	AMWA C502	MCALVITY M-67 "BLACK-TOP"
150 GATE VALVE	MCALVITY		
200 & 250 GATE VALVES	MUELLER	AMWA C500	"BLACK-TOP"
VALVE BOXES	TITAN FOUNDRY LTD.		TITAN VALVE BOX
FITTINGS	TITAN FOUNDRY LTD.		COMPACT FITTINGS
COUPLINGS	ROBAR		STANDARD & TRANSITION COUPLINGS
			TYTON JOINTS
			STAINLESS STEEL NUTS & BOLTS

BUILDING SERVICE SUPPLIER - WESTBURNE

WATER PIPE CORPORATION STOP

CURB STOP

CURB STOP BOXES

COUPLINGS

CONTRACTOR: NELSON RIVER CONSTRUCTION

CONSTRUCTION PERIOD: AUGUST/82 - JANUARY/83

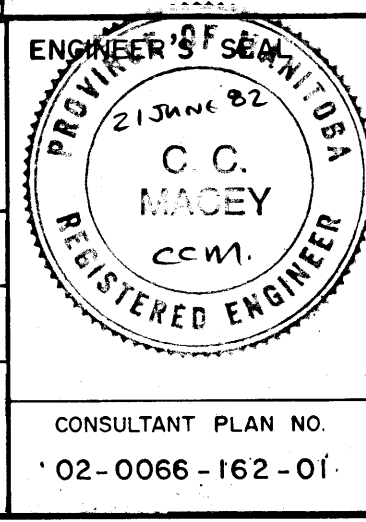
FIELD BOOK NO.: 8241

THIS DRAWING IS METRIC

WHOLE NUMBERS INDICATE MILLIMETRES

DECIMALIZED NUMBERS INDICATE METRES

DESIGNED BY	C.C.M.	CHECKED BY	C.C.M.
DRAWN BY	J.W.T.	DATE	21 JUN 82
APPROVED BY		DATE	21 JUN 82
HOR. SCALE:	1:500	VERTICAL SCALE:	1:50
DETAIL:			



THE CITY OF WINNIPEG

WORKS AND OPERATIONS DIVISION

OPERATIONS DEPARTMENT - DISTRICT 6

CONTRACT 4

1982 WATERMAIN RENEWALS

KILKENNY DR.

NORTH LEG

WEST LEG TO 219 M. EAST OF PATRICIA

P.D. 82-158

RELEASED FOR CONSTRUCTION:

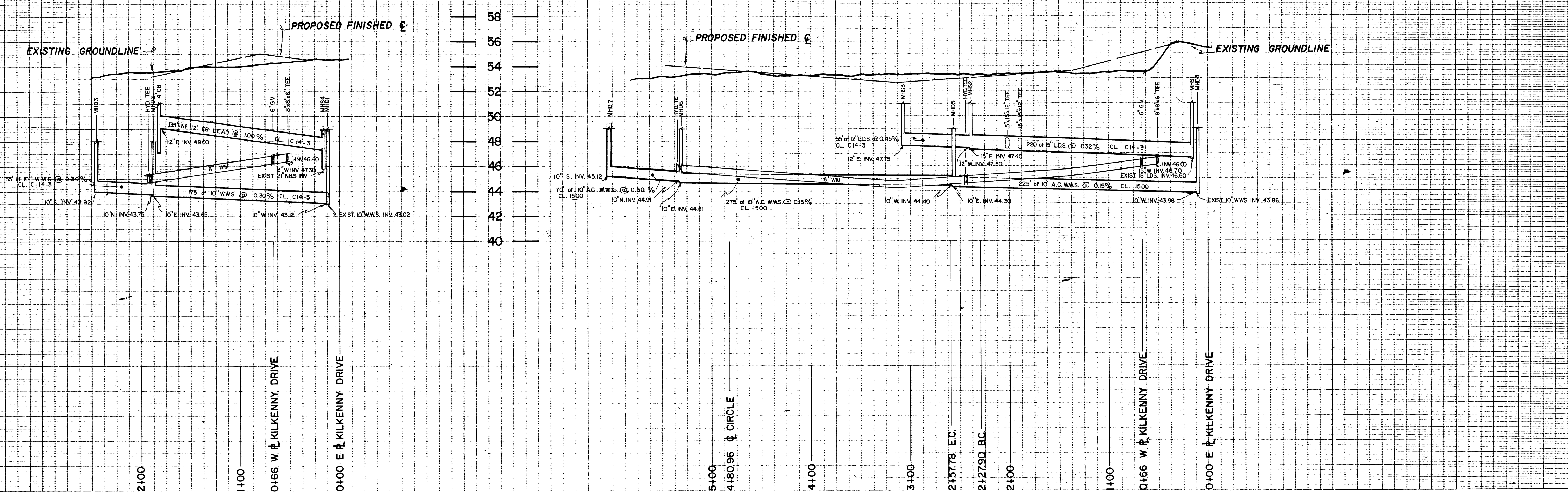
DISTRICT ENGINEER

DATE 1982 07 06

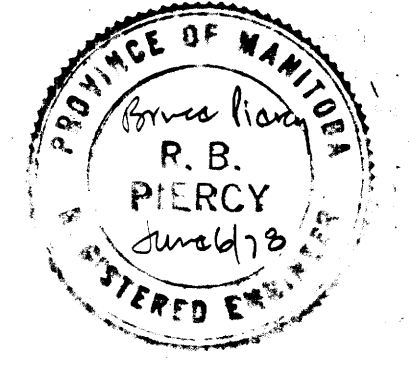
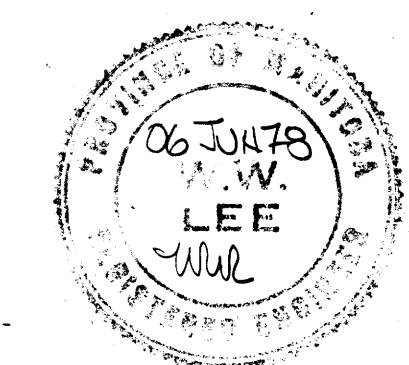
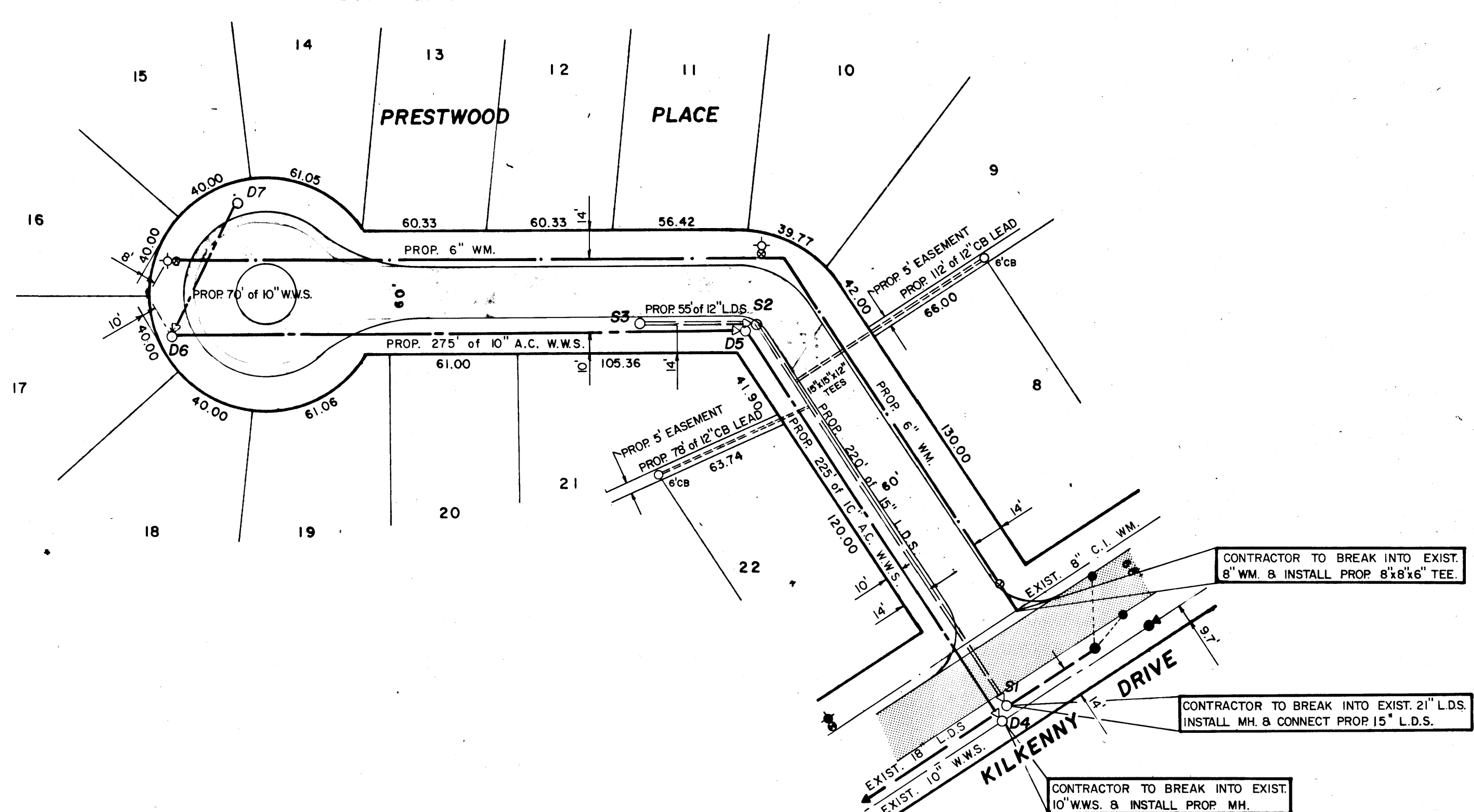
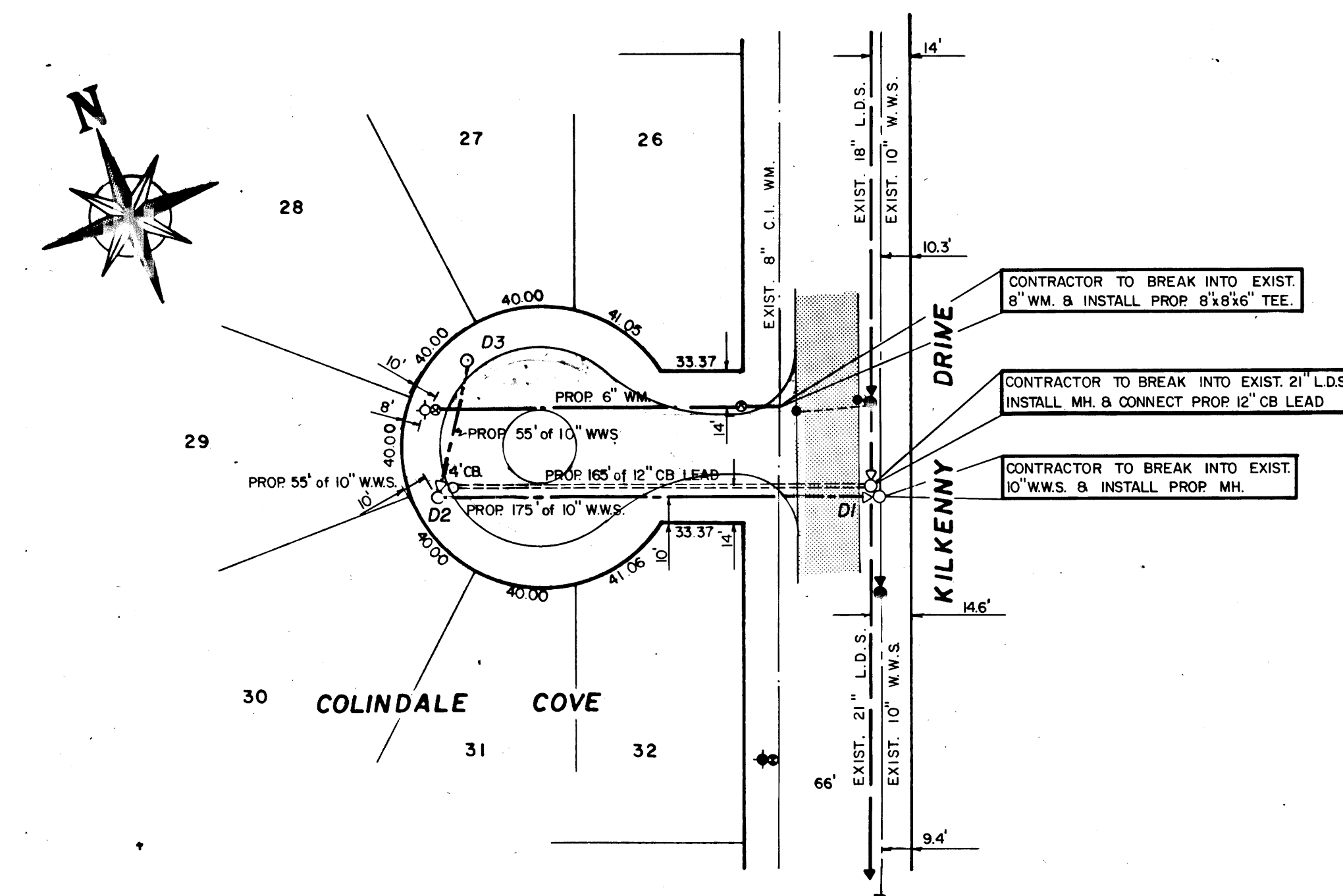
PLAN NO. 01 C

SW-1570

KILKENNY DRIVE

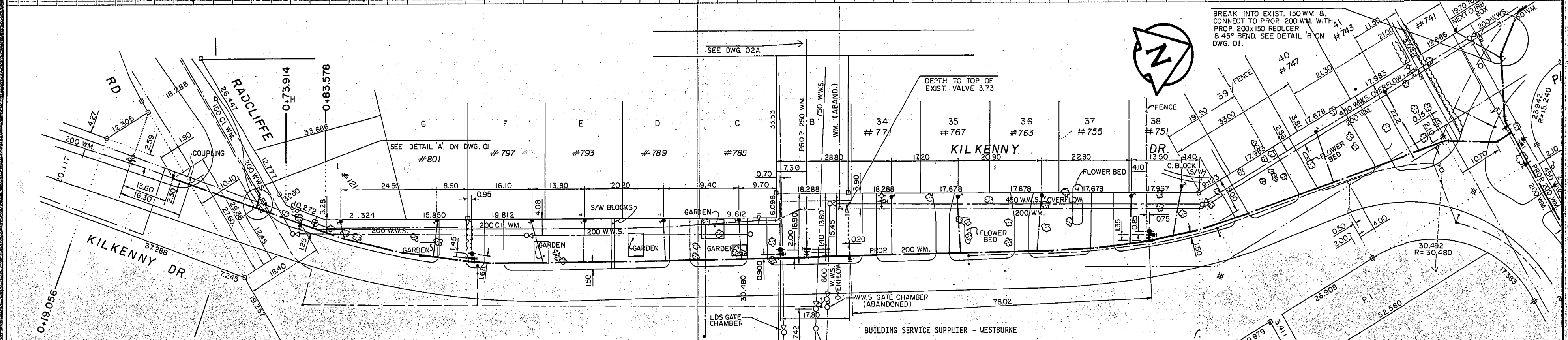
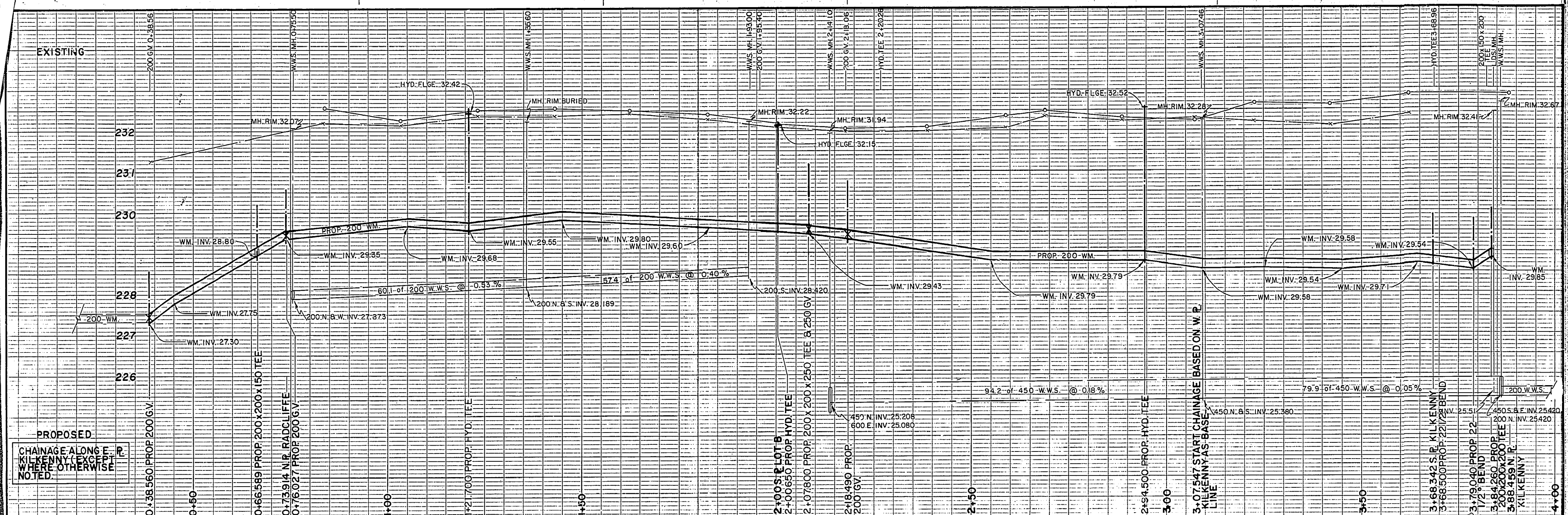


PROFILE
 HORIZ. SCALE: 1" = 50'
 VERT. SCALE: 1" = 4'



LOCATION APPROVED UNDERGROUND STRUCTURES COMMITTEE Date: _____ Supv. U/G Structures Committee: _____ LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON BEST INFORMATION AVAILABLE, BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN AND EXACT LOCATIONS OF ALL UNDERGROUND INCLUDING SERVICE CONNECTIONS MUST BE CHECKED WITH THE UTILITY CONCERNED BEFORE PROCEEDING WITH CONSTRUCTION.		LEGEND LANDSCAPE OR BLDG. GRADE..... (30.50) WATER MAINS (W.M.)..... WASTE WATER SEWER (W.W.S.)..... LAND DRAINAGE SEWER (L.D.S.)..... JUNCTIONS..... MAN. TELEPHONE SYST. (M.T.S.)..... CITY SIGNALS (C.S.)..... STREET LIGHTING (S.L.)..... TELECOMMUNICATIONS..... WFG. HYDRO STEAM HEAT..... WFG. CENTRAL HYG. CO. S.H. PAVEMENT GRADE..... (33.20) LANDSCAPE OR BLDG. GRADE..... (30.50) HYDRANT..... CULVERT..... WATER VALVE (W.V.), GAS VALVE (G.V.)..... MANHOLE N.T.S. (M), HYDRO (H), SEWER (S)..... CURB INLET..... CATCH BASIN..... SURVEY BAR..... BRASS PLUG & SURVEY CONTROL (M)..... TREE..... GLY WIRE..... POLE.....		Underwood McLellan (1977) Ltd. Consulting Engineers and Planners APPROVED BY: <i>R.B. Piercy</i> DATE: <i>June 6/78</i> DRAWN BY: JR RB DESIGNED BY: AR CHECKED BY: <i>R.B. Piercy</i> DATE: <i>June 6/78</i>		THE CITY OF WINNIPEG DISTRICT NO. 6 PROPOSED UNDERGROUND SERVICES COLINDALE COVE, PRESTWOOD PLACE		SCALE 1" = 50' JOB No. 02-0066-099-06 SHEET 2 OF 3 02 PLATE REV. A.	
---	--	--	--	---	--	---	--	---	--

SW-0661
 COLINDALE COVE



MATERIAL LIST			
ITEM	MANUFACTURER	MODEL OR SPECIFICATION	SPECIAL FEATURES
WATERMAIN SUPPLIER - WESTBURNE			
150, 200 & 250 PIPE	MANVILLE	AWMA C900	BLUE BRUTE PVC PIPE CLASS 150
HYDRANTS	MCVITT	AWMA C502	MCVITT M-67 "BLACK-TOP"
150 GATE VALVE	MCVITT	AWMA C500	"BLACK-TOP"
200 & 250 GATE VALVES	MUELLER	AWMA C500	TYTON JOINTS
VALVE BOXES	TITAN FOUNDRY LTD.		STAINLESS STEEL NUTS & BOLTS
FITTINGS	TITAN FOUNDRY LTD.		
COUPLINGS	ROBAR		
WATER PIPE CORPORATION STOP			
CURB STOP	MUELLER		
CURB STOP BOXES	TITAN FOUNDRY LTD.		
COUPLINGS	MUELLER		
CONTRACTOR: NELSON RIVER CONSTRUCTION			
CONSTRUCTION PERIOD: AUGUST/82 - JANUARY/83			
FIELD BOOK NO.: 8241			

NOTE: DETERMINE LOCATION OF UNDERGROUND UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

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150 mm W.M.	WATERMAIN	150 mm W.M.	HYDRO	150 mm W.M.	WATERMAIN	150 mm W.M.
HYDRANT	HYDRANT	CONCRETE	CONCRETE	LAND DRAINAGE SEWER	LAND DRAINAGE SEWER	LAND DRAINAGE SEWER
VALVE	VALVE	ASPHALT	ASPHALT	WASTE WATER SEWER	WASTE WATER SEWER	WASTE WATER SEWER
MANHOLE	MANHOLE	PROPERTY LINE	PROPERTY LINE	CONCRETE	CONCRETE	CONCRETE
CATCH BASIN	CATCH BASIN	SURVEY BAR	SURVEY BAR	PROFILE	PROFILE	PROFILE
CURB INLET	CURB INLET	TREE	TREE	W.B.N.P. PROFILE	W.B.N.P. PROFILE	W.B.N.P. PROFILE
JUNCTIONS	JUNCTIONS					
CULVERT	CULVERT					
GAS	GAS					
EXISTING	LEGEND - PLAN	PROPOSED	LEGEND - PLAN	PROPOSED	LEGEND - PROFILE	PROPOSED

LOCATION APPROVED UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES COMMITTEE

DATE

LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON BEST INFORMATION AVAILABLE, BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN AND EXACT LOCATIONS OF ALL UNDERGROUND INCLUDING SERVICE CONNECTIONS MUST BE CHECKED WITH THE UTILITY CONCERNED BEFORE PROCEEDING WITH CONSTRUCTION.

THIS DRAWING IS METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

DESIGNED BY C.C.M. CHECKED BY C.C.M.

DRAWN BY J.W.T. DATE 21 JUN 82

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

DETAIL:

APPROVED BY [Signature] DATE June 21, 1982

the **umc** group

Underwood McLellan Ltd.
Consulting Engineers and Planners

ENGINEER'S SEAL
PROVINCE OF MANITOBA
C.C. CROSBY
REGISTERED ENGINEER

CONSULTANT PLAN NO. 02-0066-162-01

THE CITY OF WINNIPEG

WORKS AND OPERATIONS DIVISION
OPERATIONS DEPARTMENT - DISTRICT

CONTRACT 4
1982 WATERMAIN RENEWALS

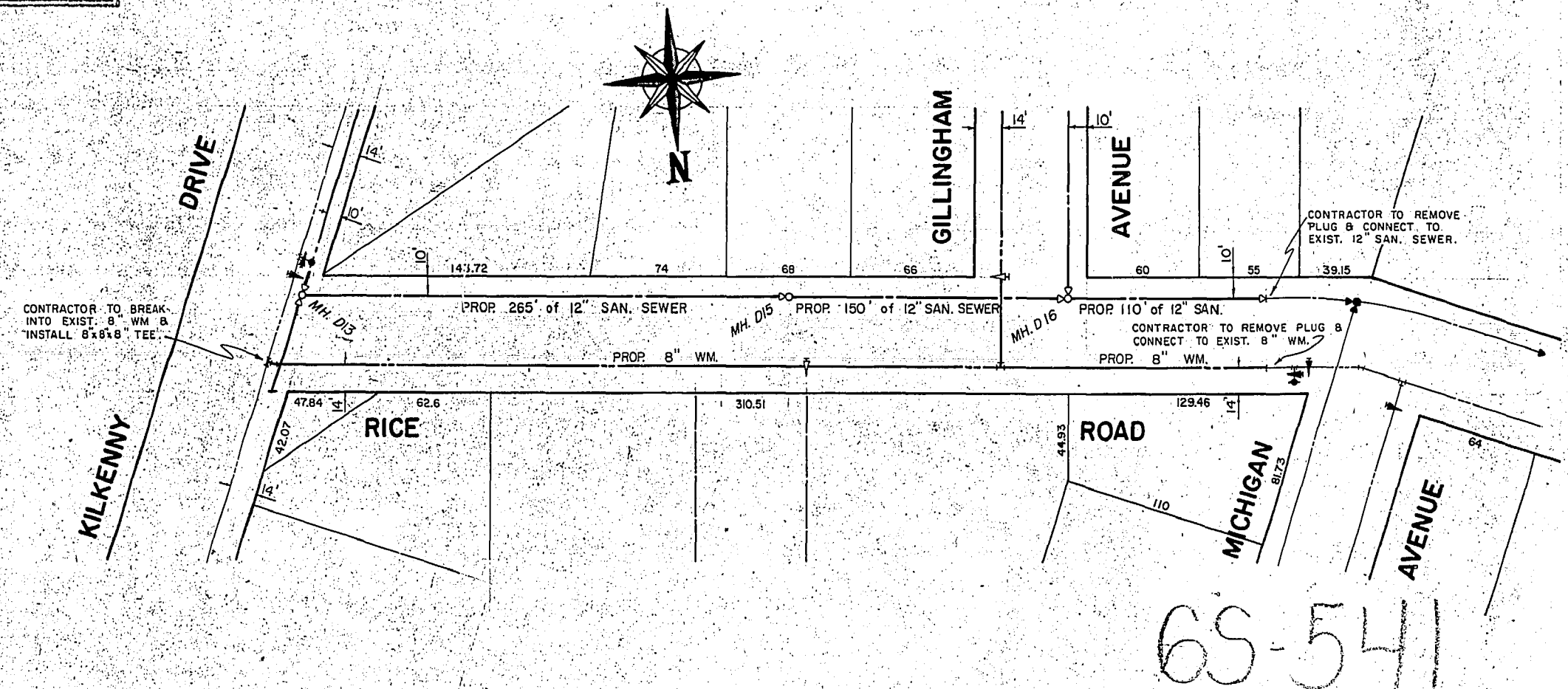
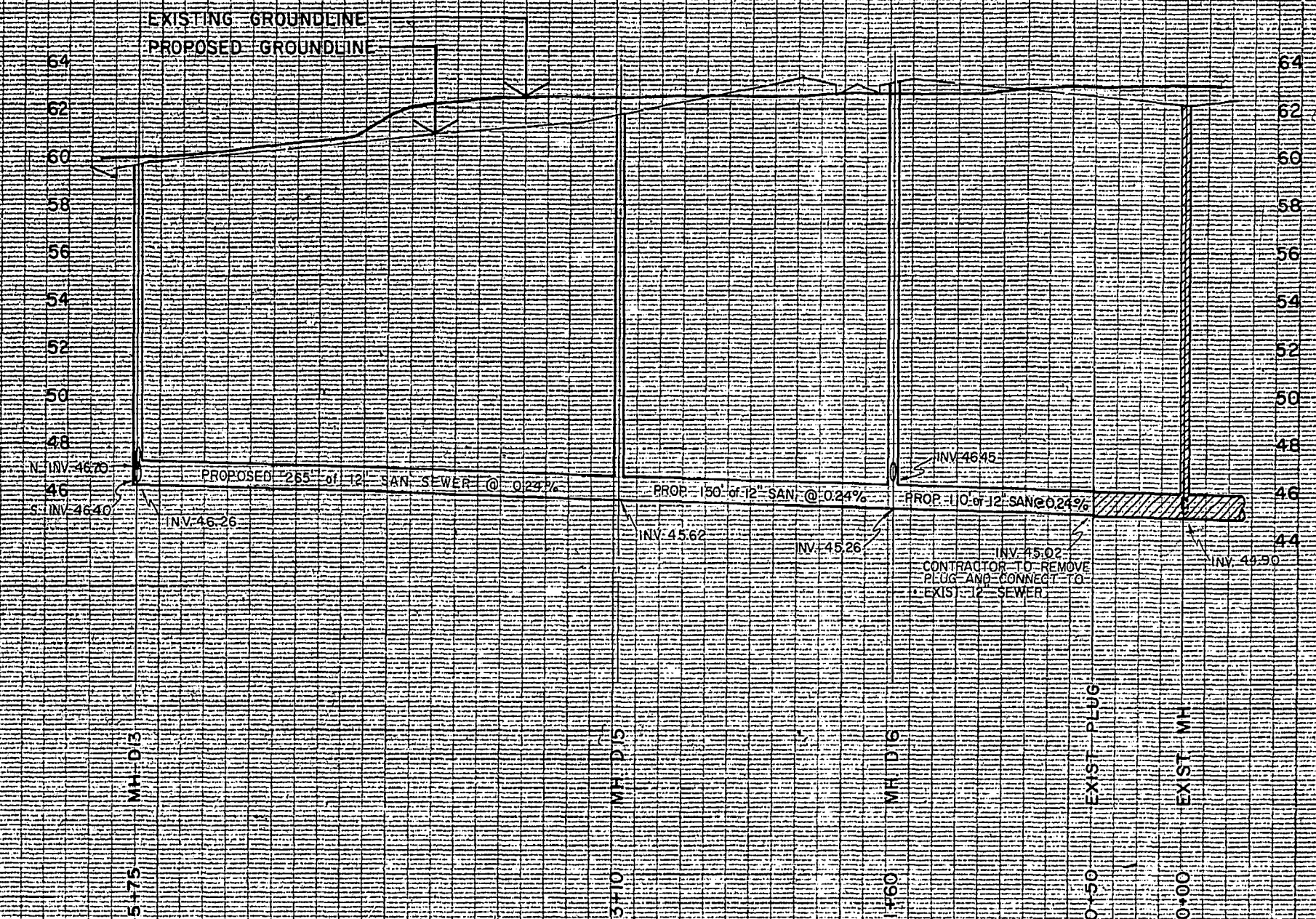
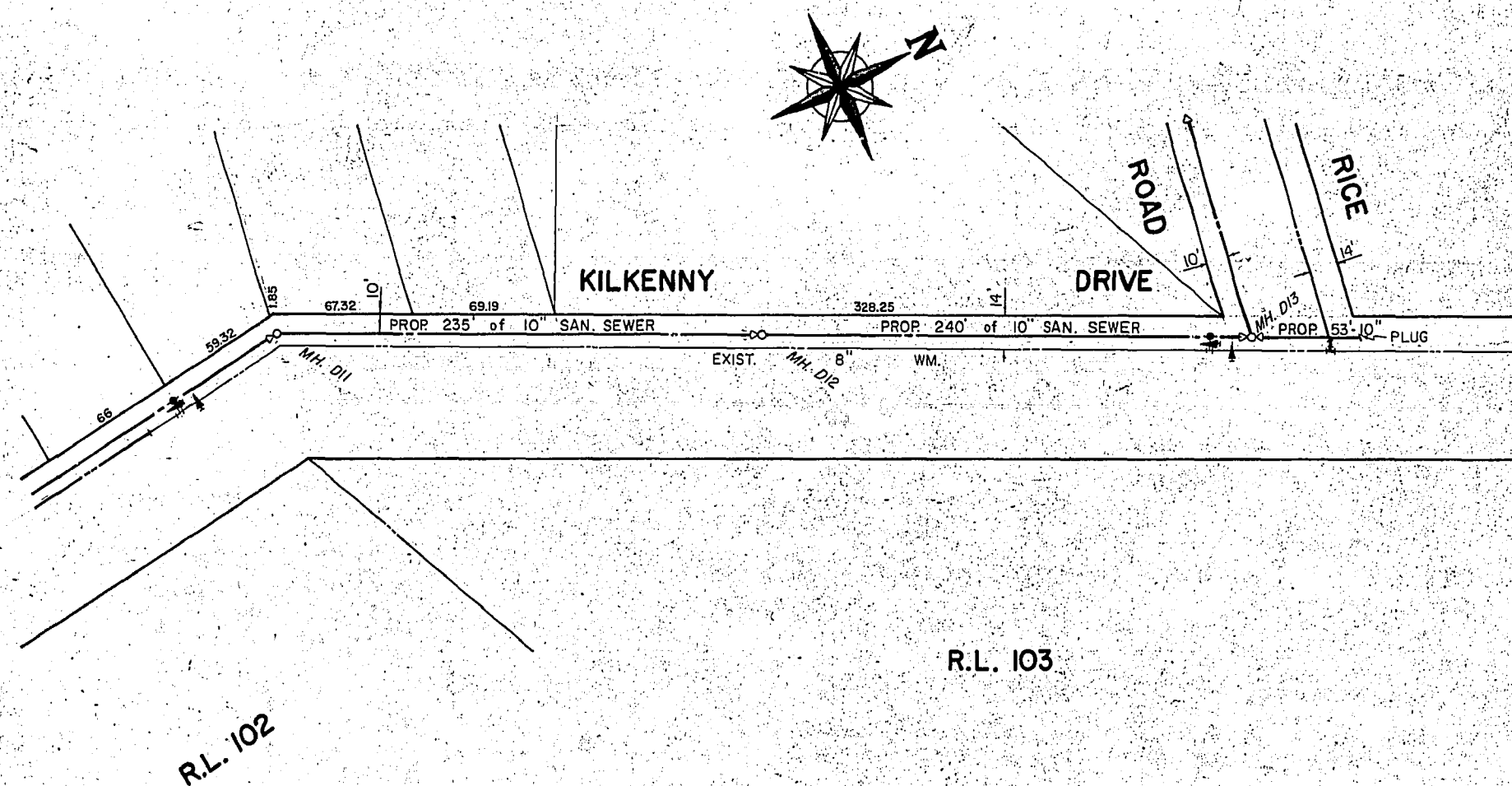
KILKENNY DR.
RADCLIFFE RD. TO PATRICIA AVE.
P.D. 82-158

RELEASED FOR CONSTRUCTION:
[Signature]
DATE 2007 07 06

PLAN NO. 02c

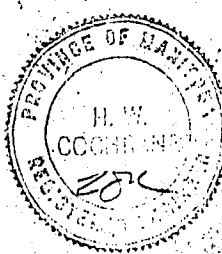


PROFILE
HORIZ. SCALE: 1" = 50'
VERT. SCALE: 1" = 4'

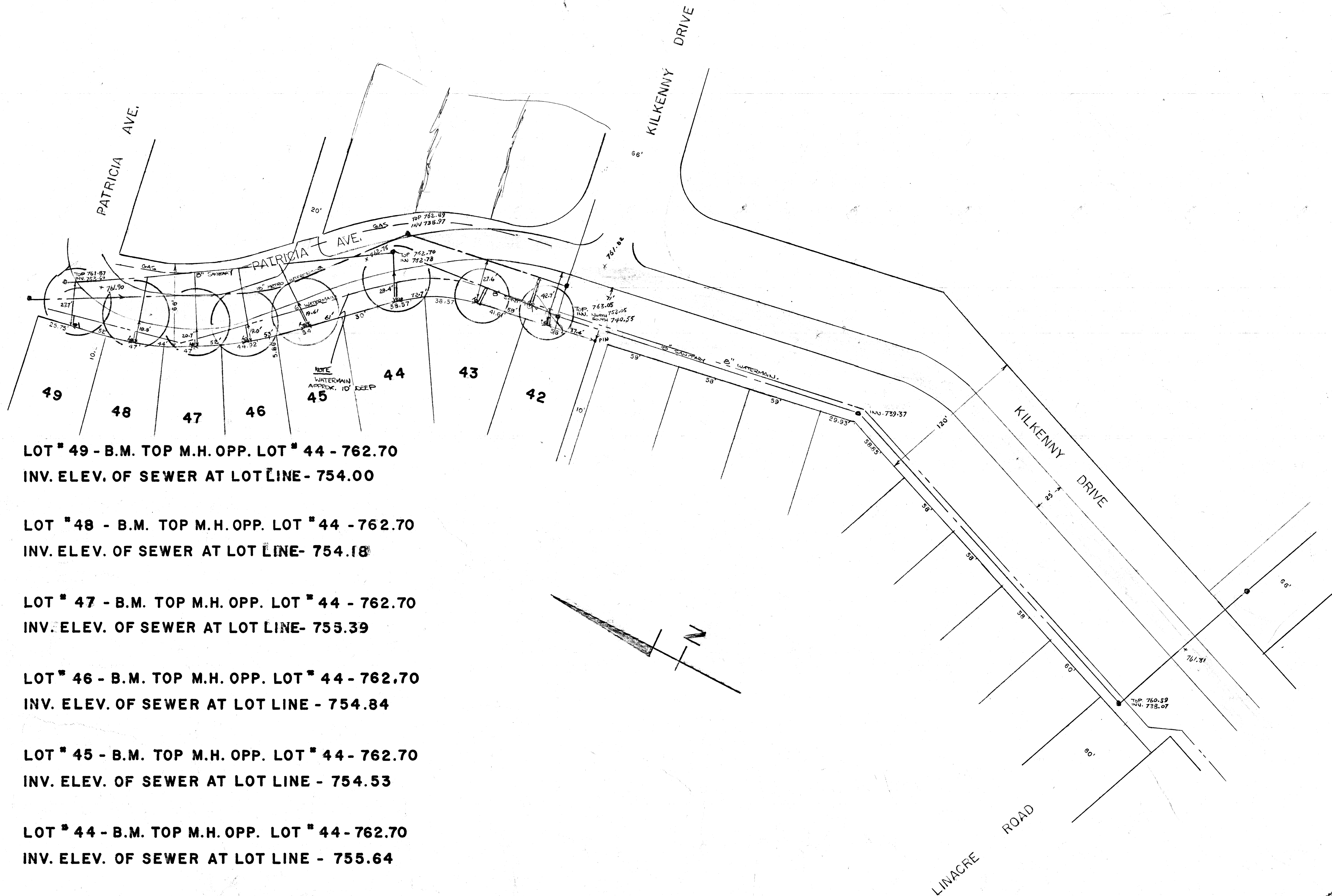


LOCATION OF UNDERGROUND STRUCTURES AS SHOWN, ARE BASED ON BEST INFORMATION AVAILABLE, BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN, AND EXACT LOCATIONS OF ALL UNDERGROUND INCLUDING SERVICE CONNECTIONS, MUST BE CHECKED WITH THE UTILITY CONCERNED BEFORE PROCEEDING WITH CONSTRUCTION.

LOCATION APPROVED
UNDERGROUND STRUCTURES COMMITTEE
DATE 11/6/25
ENGINEER FOR DIST. 6



UNDERWOOD McLELLAN & ASSOCIATES LTD. ENGINEERING & PLANNING CONSULTANTS BRITISH COLUMBIA - ALBERTA - SASKATCHEWAN - MANITOBA - ONTARIO			THE CITY OF WINNIPEG DISTRICT 6 WORKS & OPERATIONS PROPOSED WATERMAINS & SANITARY SEWERS RICE ROAD - EXIST. PLUG TO KILKENNY DRIVE KILKENNY DRIVE	
APPROVED BY: [Signature] DATE: 11/6/25 DRAWN BY: LS DESIGNED BY: HWC CHECKED BY: [Blank] DATE: [Blank]			SCALE: 1" = 50' JOB No. 02-066-99-03 SHEET 4 OF 14 DWG. No. 04	



LOT # 49 - B.M. TOP M.H. OPP. LOT # 44 - 762.70
INV. ELEV. OF SEWER AT LOT LINE - 754.00

LOT # 48 - B.M. TOP M.H. OPP. LOT # 44 - 762.70
INV. ELEV. OF SEWER AT LOT LINE - 754.18

LOT # 47 - B.M. TOP M.H. OPP. LOT # 44 - 762.70
INV. ELEV. OF SEWER AT LOT LINE - 755.39

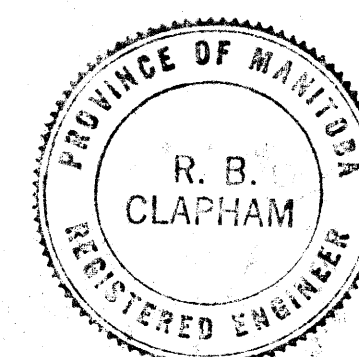
LOT # 46 - B.M. TOP M.H. OPP. LOT # 44 - 762.70
INV. ELEV. OF SEWER AT LOT LINE - 754.84

LOT # 45 - B.M. TOP M.H. OPP. LOT # 44 - 762.70
INV. ELEV. OF SEWER AT LOT LINE - 754.53

LOT # 44 - B.M. TOP M.H. OPP. LOT # 44 - 762.70
INV. ELEV. OF SEWER AT LOT LINE - 755.64

LOT # 43 - B.M. TOP M.H. OPP. LOT # 44 - 762.70
INV. ELEV. OF SEWER AT LOT LINE - 753.65

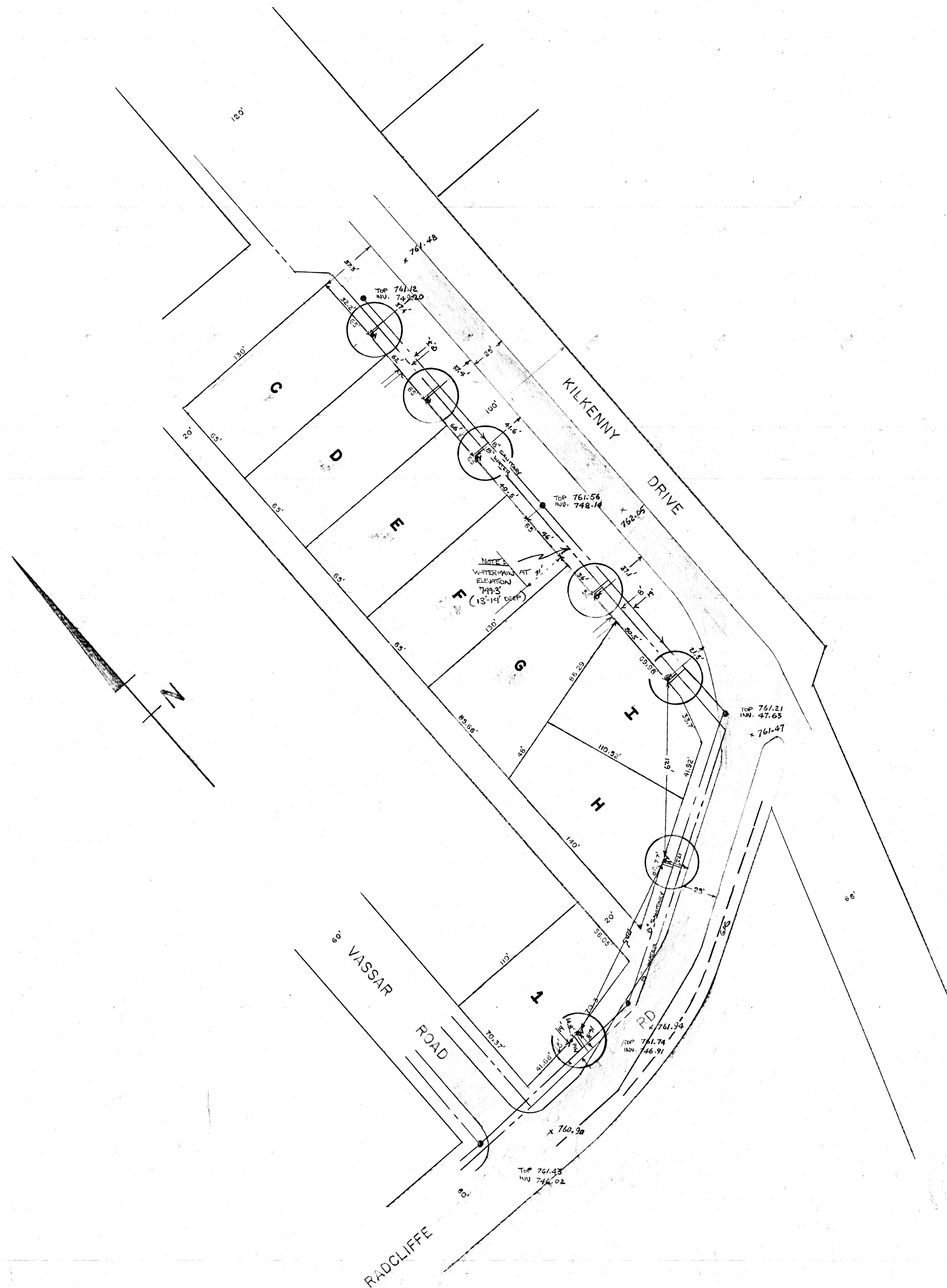
LOT # 42 - B.M. TOP M.H. OPP. LOT # 44 - 762.70
INV. ELEV. OF SEWER AT LOT LINE - 754.81



DESCRIPTION	LEGEND	
	EXISTING	PROPOSED
SANITARY SEWER & M.H.		
STORM SEWER & M.H.		
CATCH BASIN		
WATER MAIN		
GATE VALVE, CROSS OR TEE		
FIRE HYDRANT (OFF LINE) WITH VALVE		
FIRE HYDRANT (ON LINE)		
SEWAGE FORCE MAIN		
CURB STOP		
R. M. OF FORT GARRY ENGINEERING DEPARTMENT		
TITLE: LOT LINE SEWER AND WATER CONNECTIONS - KILKENNY DRIVE		
DRAWN BY: REC	DATE: NOV 25/69	
TRACED BY:		
CHECKED BY: DFB		
APPROVED: REC		
SCALE: 1" = 40' AB	D'WG No: 69-20-01	

Su-1552

KILKENNY DRIVE



LOT[#] C - B.M. IS STEP AT 797 KILKENNY - 765.10
INV. ELEV. OF SEWER AT LOT LINE - 751.44

LOT[#] D - B.M. IS STEP AT 797 KILKENNY - 765.10
INV. ELEV. OF SEWER AT LOT LINE - 752.91

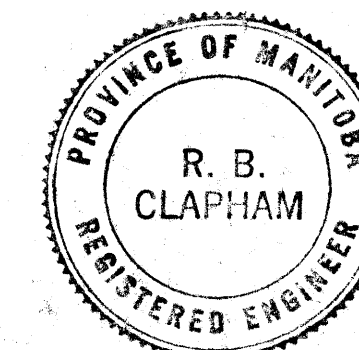
LOT[#] E - B.M. IS STEP AT 797 KILKENNY - 765.10
INV. ELEV. OF SEWER AT LOT LINE - 754.18

LOT[#] G - B.M. ON TOP HYD. AT VASSAR & RADCLIFFE - 763.21
INV. ELEV. OF SEWER AT LOT LINE - 752.17

LOT[#] H - B.M. ON TOP HYD. AT VASSAR & RADCLIFFE - 763.21
INV. ELEV. OF SEWER AT LOT LINE - 752.48

LOT[#] I - B.M. ON TOP HYD. AT VASSAR & RADCLIFFE - 763.21
INV. ELEV. OF SEWER AT LOT LINE - 753.00

LOT[#] 1 - B.M. ON TOP HYD. AT VASSAR & RADCLIFFE - 763.21
INV. ELEV. OF SEWER AT LOT LINE - 752.20



LEGEND		
DESCRIPTION	EXISTING	PROPOSED
SANITARY SEWER & M.H.		
STORM SEWER & M.H.		
CATCH BASIN		
WATER MAIN		
GATE VALVE, CROSS OR TEE		
FIRE HYDRANT (OFF LINE) WITH VALVE		
FIRE HYDRANT (ON LINE)		
SEWAGE FORCE MAIN		
CURB STOP		

R. M. OF FORT GARRY ENGINEERING DEPARTMENT	
TITLE: LOT LINE SEWER AND WATER CONNECTIONS - KILKENNY DRIVE	
DRAWN BY: RBC	DATE: NOV 25/69
CHECKED BY: DFB	
APPROVED: RBC	
SCALE: 1" = 40'	DWG No: 69-20-02

SL-1574

KILKENNY DRIVE

EXIST FEATURES

233.0
232.0
231.0
230.0
229.0
228.0
227.0
226.0

RIM EL 32.682
250 N INV 29.438
250 DROP INV 27.388
250 SE INV 27.230

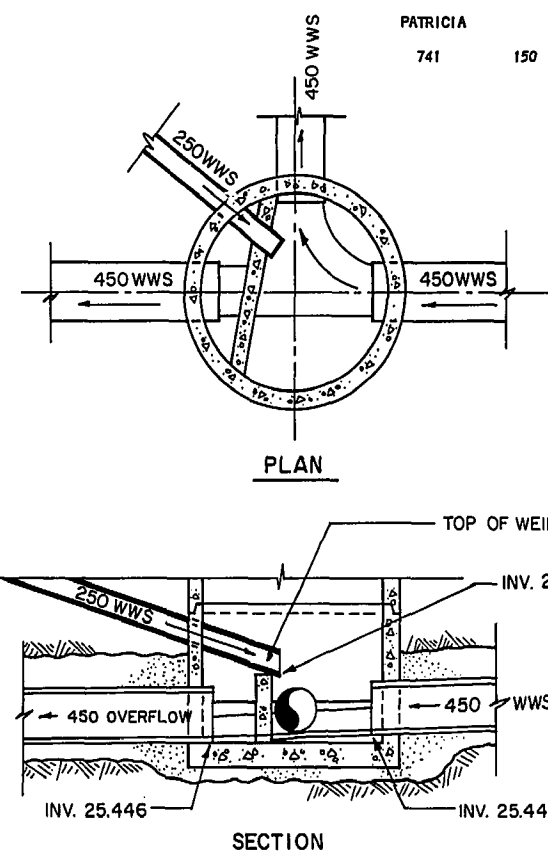
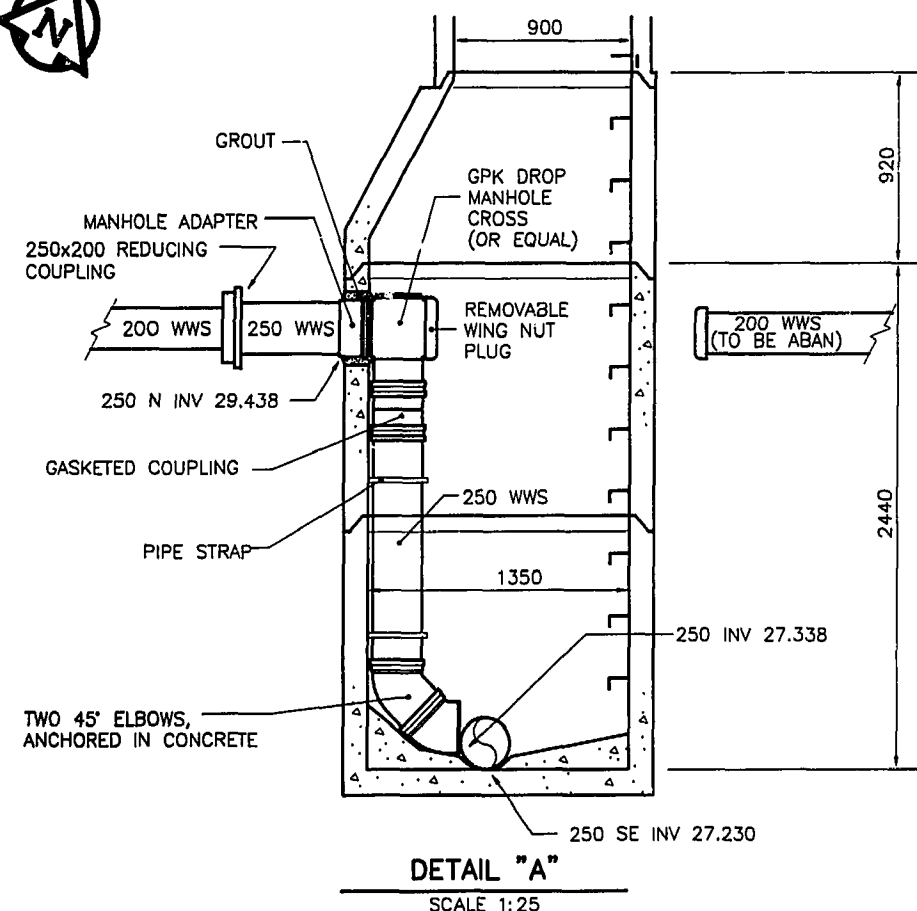
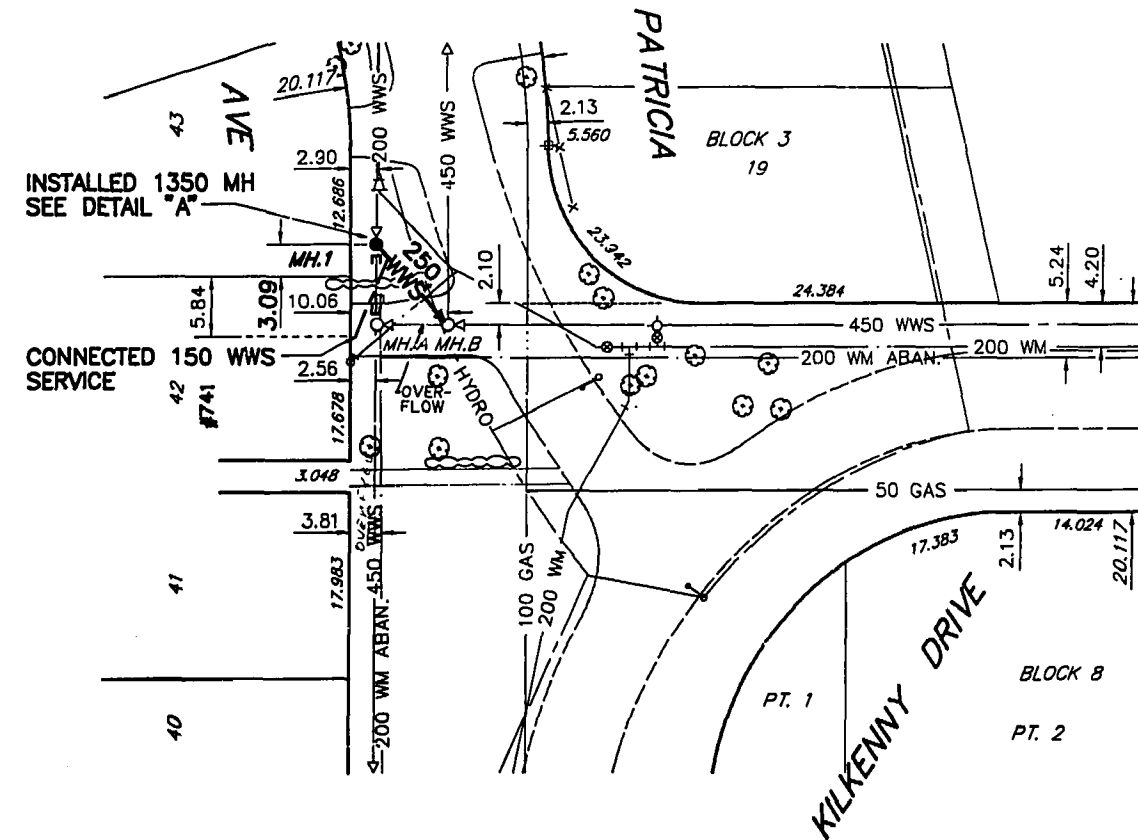
9.8 of 250 WWS @ 13.90%
PVC SDR 35

RIM EL 32.40
250 NW INV 25.396 (SEE DETAIL BELOW)
450 E&W INV 25.446
450 N INV 25.376

RIM EL 32.67
200 N INV 29.150
450 E&W INV 25.420

7.3 of EX 450 OVERFLOW @ 0.12%

N PL KILKENNY
CHAINAGE



250 CONNECTION TO MH. B
N.T.S.

ITEM	MANUFACTURER	MATERIAL SPECIFICATION	SPECIAL FEATURES
2. SEWER PIPE			
250 WASTEWATER	CANON WEST	ASTM D3034	PVC SDR 35
SEWER FITTINGS			
MANHOLES & C.B.'S	SUPERCORE	ASTM C-478	PRECAST CONCRETE
MANHOLE FRAMES	WILKINSON	ASTM A-49 CLASS 20	
WASTEWATER	GPIC PRODUCTS INC.	ASTM D3034	PVC SEWER FITTINGS
SEWER CONNECTION PIPE			
SEWER CONNECTION FITTINGS	GPIC PRODUCTS INC.	ASTM D3034	PVC SEWER FITTINGS
4. ROADS			
CONCRETE	SUPERCORE		

CONTRACTOR: NELSON RIVER CONSTRUCTION
CONSTRUCTION PERIOD: AUGUST 4 - AUGUST 16, 1989
FIELD BOOK NO.: 89097

ADDRESS DESCRIPTION	SIZE (mm)	JUNCTION TIE	RISER LENGTH	LENGTH REMOVED	INVERT AT PL	PL LOCATION (SHORT)
PATRICIA	150	1.2 E OF MH	0.9	10.6	28.973	5.84 SLL

SOURCE OF LEGAL INFORMATION IS CITY OF WINNIPEG SURVEY DEPT ATLAS SHEETS. CHAINAGES ARE BASED UPON SPECIAL SURVEY DISTANCES. LOT DIMENSIONS ARE PLAN DISTANCES AND HAVE NOT BEEN ADJUSTED TO SPECIAL SURVEY.

THIS DRAWING HAS BEEN CREATED ELECTRONICALLY USING COMPUTER AIDED DESIGN AND DRAFTING TECHNIQUES AND EMPLOYING TOTAL STATION SURVEY TECHNOLOGY TO CAPTURE EXISTING FEATURES

METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

RECORD DRAWING

F.D. No. 89-75

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.	CONCRETE	150 mm W.M.	WATERMAIN	150 mm W.M.
300 mm L.D.S.	LAND DRAINAGE SEWER	300 mm L.D.S.	MANHOLE	CATCH BASIN	CURB INLET	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.	JUNCTIONS	CULVERT	GAS	250 mm W.W.S.	WASTE WATER SEWER	250 mm W.W.S.
250 mm W.W.S.	WASTE WATER SEWER	250 mm W.W.S.	PROPERTY LINE	SURVEY BAR		250 mm W.W.S.	WASTE WATER SEWER	250 mm W.W.S.
250 mm W.W.S.	WASTE WATER SEWER	250 mm W.W.S.	PROPERTY LINE	SURVEY BAR		250 mm W.W.S.	WASTE WATER SEWER	250 mm W.W.S.
250 mm W.W.S.	WASTE WATER SEWER	250 mm W.W.S.	PROPERTY LINE	SURVEY BAR		250 mm W.W.S.	WASTE WATER SEWER	250 mm W.W.S.

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.

NO	REVISIONS	DATE	BY
1	REV TO RECORDS/REPLOTTED	22Sep89	BC

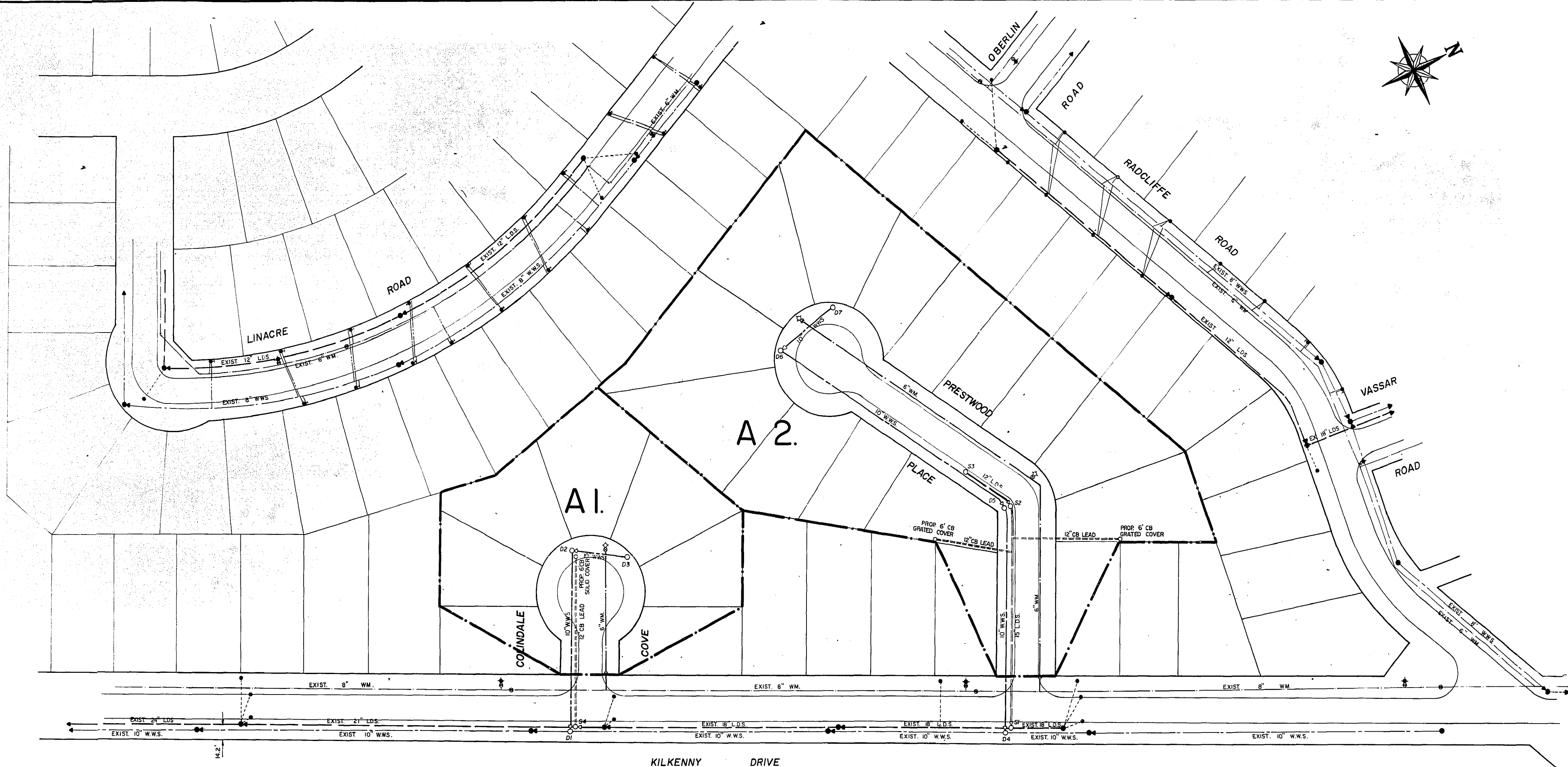
DESIGNED BY	MM	CHECKED BY	MM
DRAWN BY	JWT	APPROVED BY	MM
HOR SCALE	1:500	RELEASED FOR CONSTRUCTION	
VERTICAL	1:50	DATE	

ENGINEER'S SEAL	PROVINCE OF MANITOBA	C.C. MACEY	REGISTERED ENGINEER
CONSULTANT DRAWING NO.	41-02-0066-210-01		

THE CITY OF WINNIPEG	WORKS AND OPERATIONS DIVISION	OPERATIONS DEPARTMENT-DISTRICT 6
1989 COMBINED SEWER RENEWALS	PATRICIA AVENUE	At the INTERSECTION of KILKENNY DR and PATRICIA AVE
SHEET	11	REV 11 A

REF. OF DRAWING NO. PRESTWOOD PLACE

DETAILS KILKENNY DR. TO WEST LIMIT
PLAN OF LAND DRAINAGE SEWERS SERVING AREAS



NOTE:
ALL WATERMAINS TO BE 6" UNLESS OTHERWISE SHOWN.
ALL WASTE WATER SEWERS TO BE 10" UNLESS OTHERWISE SHOWN.
THAW WIRE REQUIRED ON ALL WATER SERVICES WHERE THE CORPORATION STOP IS UNDER THE PROPOSED PAVEMENT
PROPOSED LOTS TO BE SERVICED ARE SHOWN SHADED.

NOTE: DETERMINE LOCATION OF UNDERGROUND UTILITIES BEFORE
PROCEEDING WITH CONSTRUCTION.

LOCATION APPROVED
UNDERGROUND STRUCTURES COMMITTEE

Supp. 1. G. Structures Committee
LOCATION OF UNDERGROUND UTILITIES AS SHOWN
ARE BASED ON BEST INFORMATION AVAILABLE, BUT
NO GUARANTEE IS GIVEN THAT ALL EXISTING
UTILITIES ARE SHOWN AND EXACT LOCATIONS OF
ALL UNDERGROUND INCLUDING SERVICE CONNECTIONS
MUST BE CHECKED WITH THE UTILITY CONCERNED
BEFORE PROCEEDING WITH CONSTRUCTION.

LEGEND

WATERMAINS (C.M.A.)	LANDSCAPE OR BLDG. GRADE
WASTE WATER SEWER (W.W.S.)	HYDRANT
LAND DRAINAGE SEWER (L.D.S.)	WATER VALVE (W.V.)
JUNCTIONS	MANHOLE M.T.S. (M), HYDR. (H), SEWER (S)
MAX. TELEPHONE SYST. (M.T.S.)	CITY SIGNALS
CITY SIGNALS	CATCH BASIN
GAS	SURVEY BAR
STREET LIGHTING	BRASS PLUG & SURVEY CONTROL (M)
TELECOMMUNICATIONS	THREE
WPG. HYDRO STEAM HEAT	GLY WIRE
WPG. CENTRAL HTG. CO. S.H.	POLE
PAVEMENT GRADE	

Underwood McLellan (1977) Ltd.
Consulting Engineers and Planners

APPROVED BY _____ DATE _____
DRAWN BY JAO DESIGNED BY A.R.
CHECKED BY _____ CHECKED BY _____

THE CITY OF WINNIPEG

DISTRICT NO. 6

LAND DRAINAGE SEWERS
SERVICING AREAS

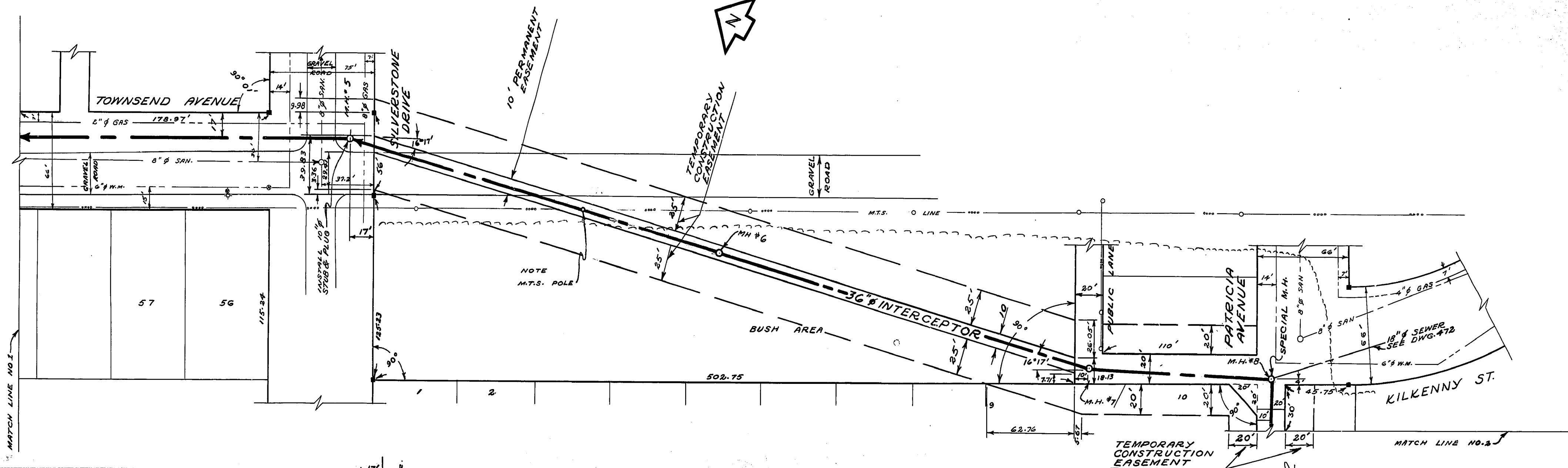
SCALE 1" = 50'

JOB No. 02-066-99-06

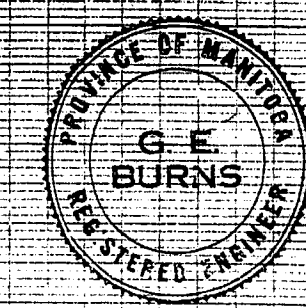
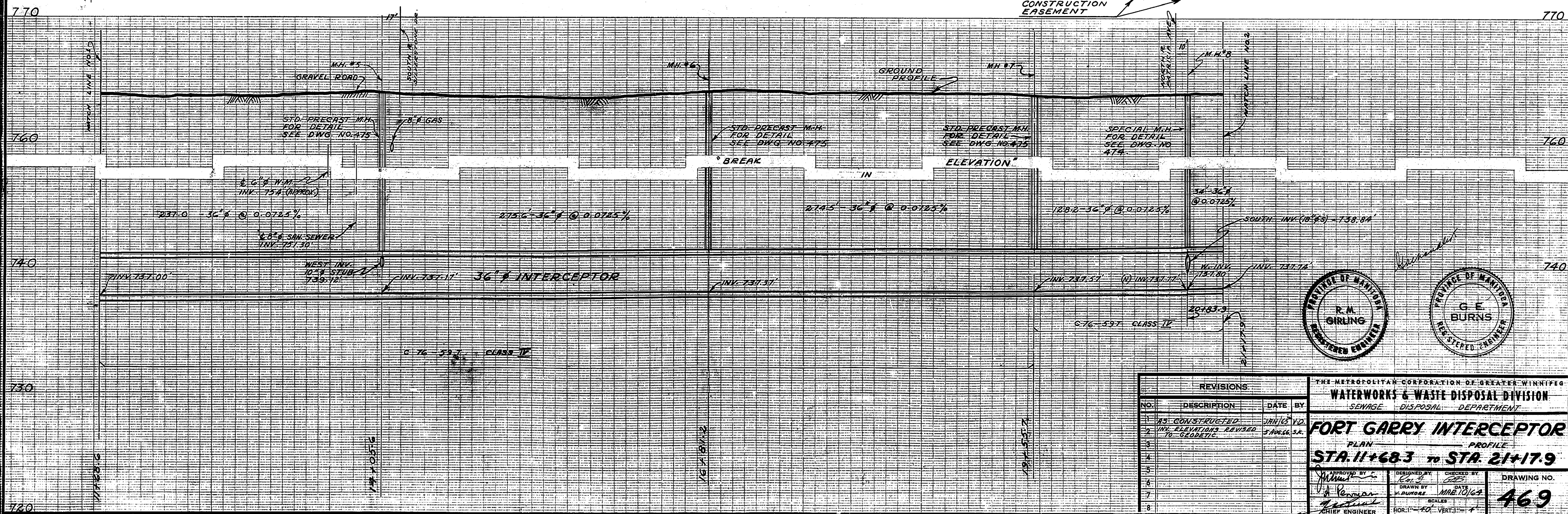
SHEET 2 OF 2

102 PLATE

DWG. No. REV.



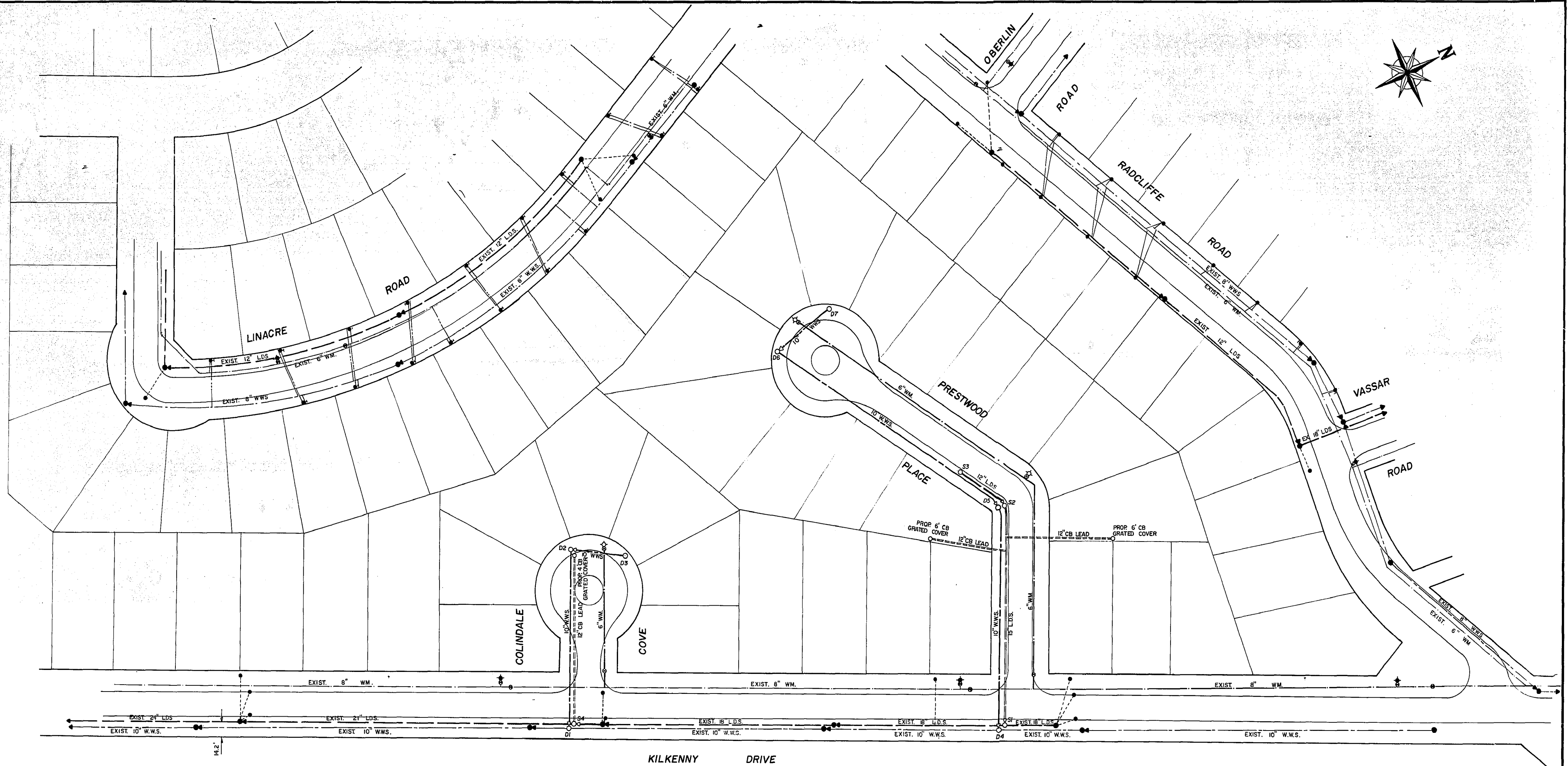
NOTE:
ALL JOINTS TO BE
RUBBER GASKETED



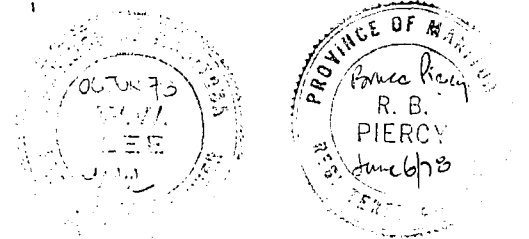
REVISIONS			
NO.	DESCRIPTION	DATE	BY
1	AS CONSTRUCTED	JAN 63	VD
2	INV. ELEVATIONS REVISED TO GEODETIC	3 AUG 66	SK

THE METROPOLITAN CORPORATION OF GREATER WINNIPEG			
WATERWORKS & WASTE DISPOSAL DIVISION			
SEWAGE DISPOSAL DEPARTMENT			
FORT GARRY INTERCEPTOR			
PLAN PROFILE			
STA. 11+68.3 TO STA. 21+17.9			
APPROVED BY	DESIGNED BY	CHECKED BY	DRAWING NO.
<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	469
CHIEF ENGINEER	DRAWN BY	SCALE	
	MRE 10/63	HOR. 1"=40' VERT. 1"=4'	

REF. or DRAWING NO. **PRESTWOOD PLACE**
DETAILS KILKENNY DR. TO WEST LIMIT
GENERAL PLAN



NOTE.
 ALL WATERMAINS TO BE 6" UNLESS OTHERWISE SHOWN.
 ALL WASTE WATER SEWERS TO BE 10" UNLESS OTHERWISE SHOWN.
 THAW WIRE REQUIRED ON ALL WATER SERVICES WHERE THE CORPORATION STOP IS UNDER THE PROPOSED PAVEMENT
 PROPOSED LOTS TO BE SERVICED ARE SHOWN SHADED.



NOTE: DETERMINE LOCATION OF UNDERGROUND UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

WARNING-READ THIS BEFORE YOU BEGIN WORK-IF POWER EQUIPMENT OR EXPLOSIVES ARE TO BE USED FOR THE EXCAVATION AUTHORIZED BY THE ATTACHED PERMIT, NO WORK SHALL BE COMMENCED BEFORE: (1) THE LOCAL OFFICE OF THE GAS COMPANY HAS BEEN NOTIFIED OF THE PROPOSED EXCAVATION AND (2) THE GAS COMPANY HAS MARKED OUT THE LOCATION OF ANY ENDANGERED GAS INSTALLATIONS, OR THE GAS COMPANY HAS ADVISED THAT NO GAS INSTALLATIONS WILL BE ENDANGERED BY THE PROPOSED EXCAVATION. FOR SPECIFIC DETAILS REFER TO MANITOBA REGULATIONS 219/72 MADE UNDER THE GAS PIPE LINE ACT.

LOCATION APPROVED
 UNDERGROUND STRUCTURES COMMITTEE

Date: _____ Supv. E.G. Structures Committee
 LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON BEST INFORMATION AVAILABLE, BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN AND EXACT LOCATIONS OF ALL UNDERGROUND INCLUDING SERVICE CONNECTIONS MUST BE CHECKED WITH THE UTILITY CONCERNED BEFORE PROCEEDING WITH CONSTRUCTION.

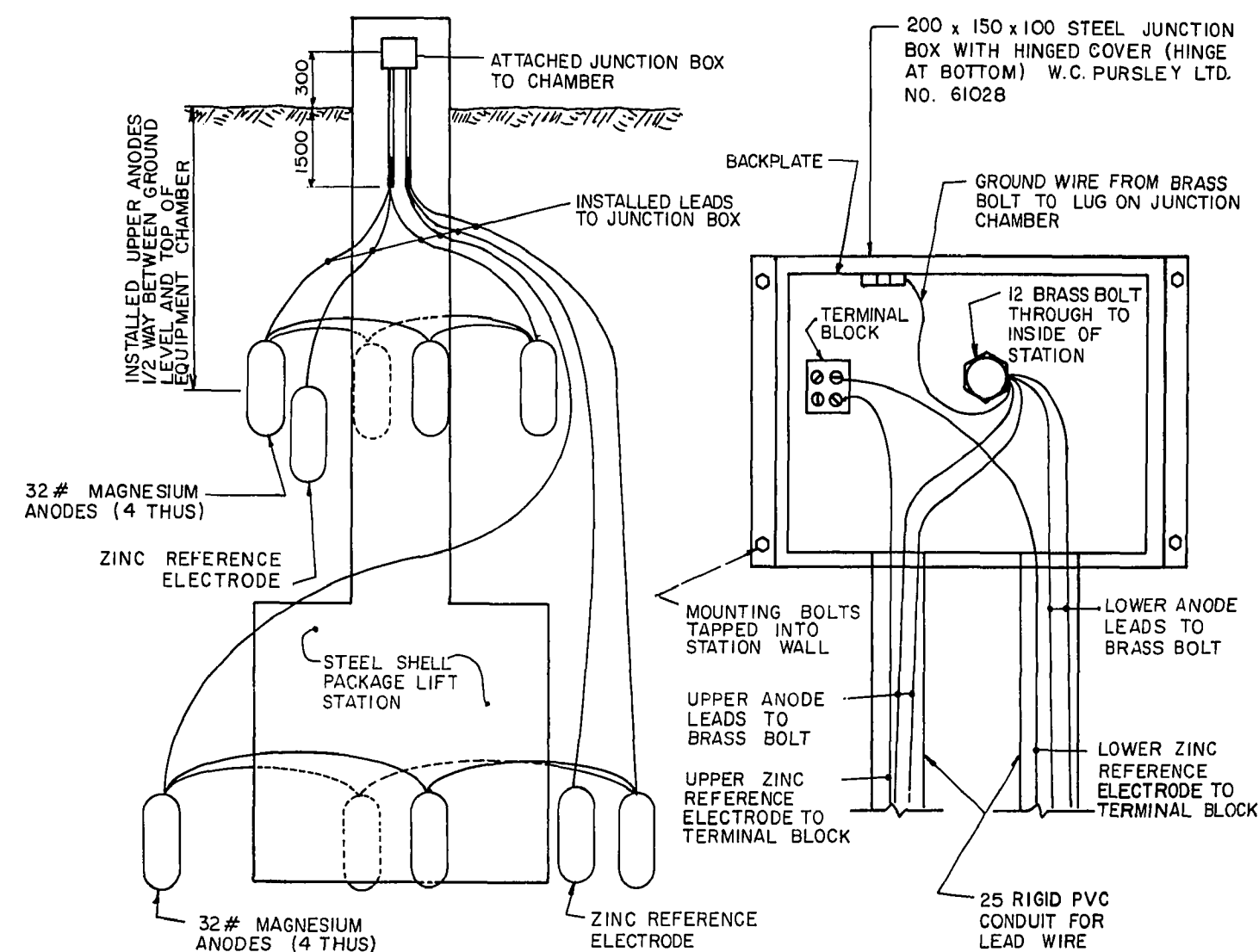
LEGEND

WATERMAINS (W.M.)	LANDSCAPE OR BLDG. GRADE	30 50
WASTE WATER SEWER (W.W.S.)	HYDRANT	
LAND DRAINAGE SEWER (L.D.S.)	CULVERT	
WATER VALVE (W.V.), GAS VALVE (G.V.)	WATER VALVE (W.V.), GAS VALVE (G.V.)	
MANHOLE W.T.S. (M), HYDRANT (H), SEWER (S)	MANHOLE W.T.S. (M), HYDRANT (H), SEWER (S)	
CITY SIGNALS (C.S.)	CITY SIGNALS (C.S.)	
GAS	CATCH BASIN	
STREET LIGHTING (S.L.)	BRASS PLUG & SURVEY CONTROL (W)	
TELECOMMUNICATIONS	TRAIL	
WPG. HYDRO STEAM HEAT	GLY WIRE	
WPG. CENTRAL H.T. CO. S.H.	POLE	
PAVEMENT GRADE		

REV.	DESCRIPTION	DWN.	APP.	DATE
1	A. LEY PHOTOGRAPHIC (SCALE 1:100)	210		22/3/78

Underwood McLellan (1977) Ltd. Consulting Engineers and Planners	
APPROVED BY: _____ DATE: June 6/78	DRAWN BY: J.M. 1/78 DESIGNED BY: A.R.
CHECKED BY: J.M. 7/78	CHECKED BY: J.M. 6/78

THE CITY OF WINNIPEG	
DISTRICT NO. 6	
GENERAL PLAN	
SHEET 1 OF 3	PLATE
DWG. No. 01	REV. 1

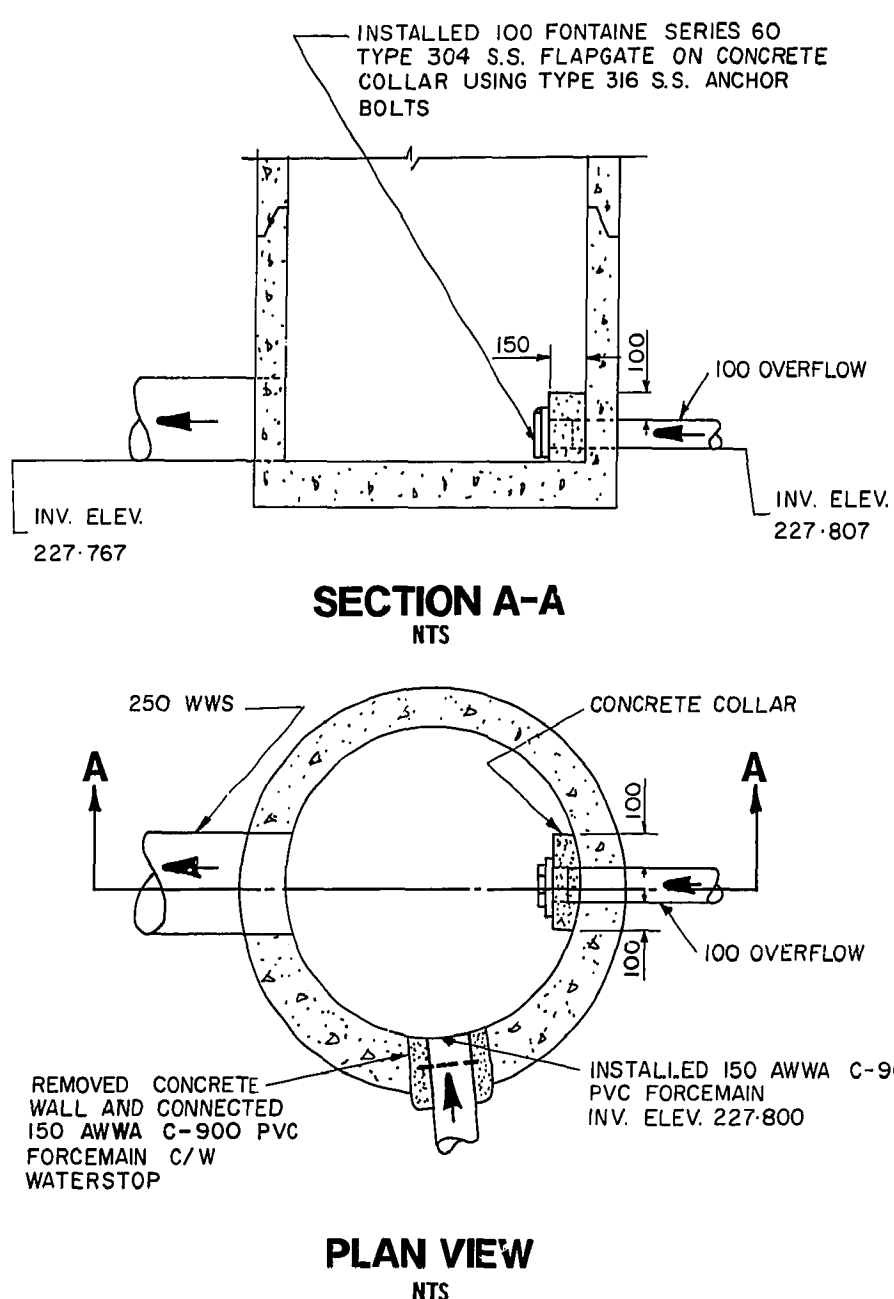


ANODE LAYOUT

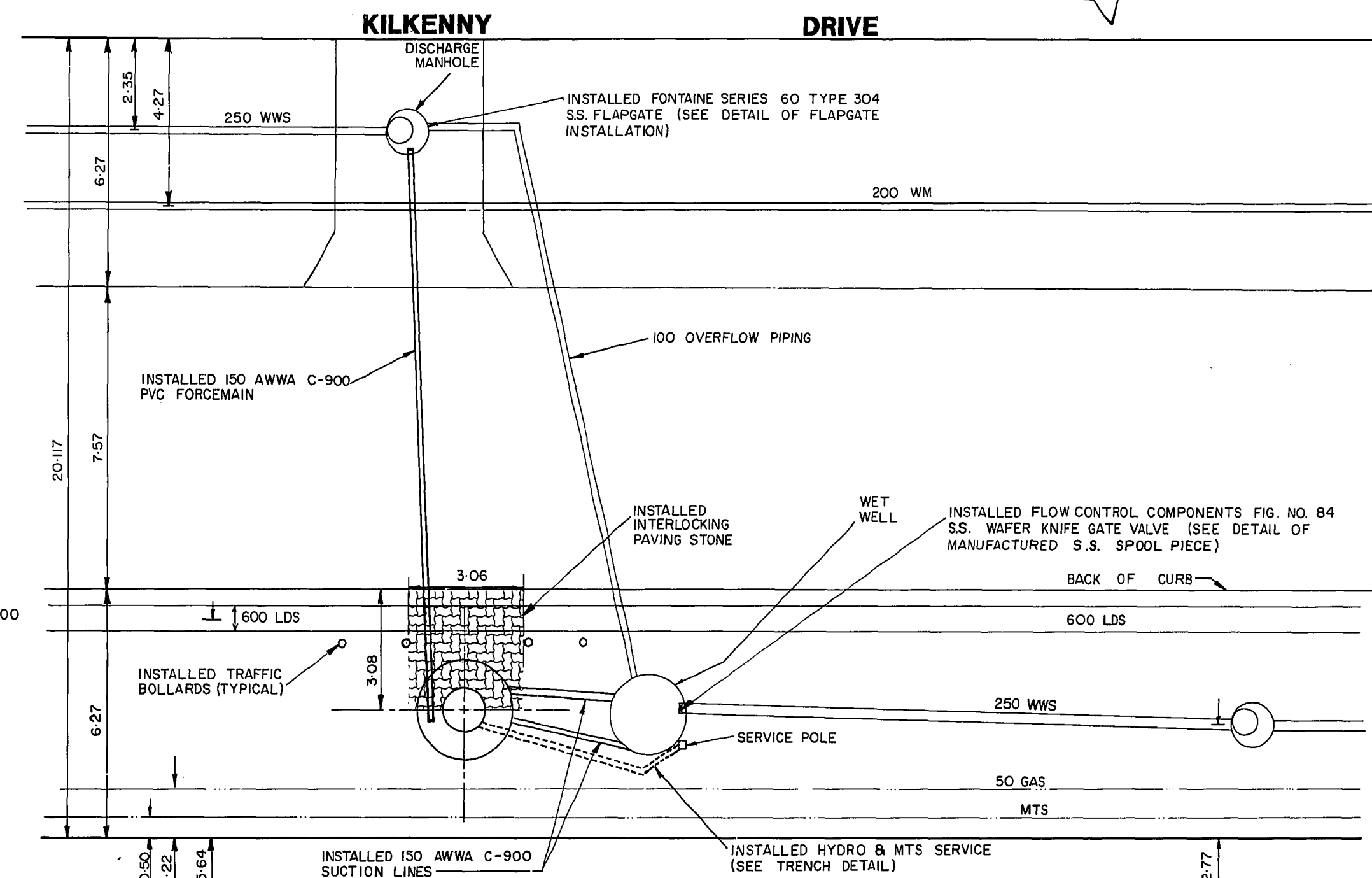
JUNCTION BOX CONNECTIONS

- NOTES:**
- ALL ANODE AND REFERENCE ELECTRODE LEAD WIRES AWG #8 AND MARKED FOR UNDERGROUND USE
 - ALL ANODE LEAD WIRES TAGGED OR IDENTIFIED AS TO UPPER, LOWER OR ZINC REFERENCE
 - ALL ANODE AND REFERENCE ELECTRODE LEAD WIRES FULLY INSULATED
 - ALL SPLICES FOR ANODE LEAD WIRES MADE WITH CABLED SPLICE AND WRAPPED WITH INSULATION TAPE AND PVC ELECTRICAL TAPE USED #8 FULL CIRCLE OR EYELET STAKEON CONNECTORS FOR ANODE LEAD WIRE CONNECTION TO BRASS BOLT
 - COATED ALL MOUNTING BOLTS ON INSIDE OF STATION WITH EPOXY TOUCH-UP KIT SUPPLIED WITH STATION
 - LOWER ANODES INSTALLED AT THE BOTTOM LEVEL OF THE EQUIPMENT CHAMBER
 - ZINC REFERENCE ELECTRODES INSTALLED WITHIN 300 OF THE ACCESS TUBE AND THE EQUIPMENT CHAMBER
 - MAGNESIUM ANODES INSTALLED EQUALLY SPACED ABOUT THE CIRCUMFERENCE ONE METRE FROM THE ACCESS TUBE AND THE EQUIPMENT CHAMBER

ANODE WIRING AND LAYOUT DETAIL

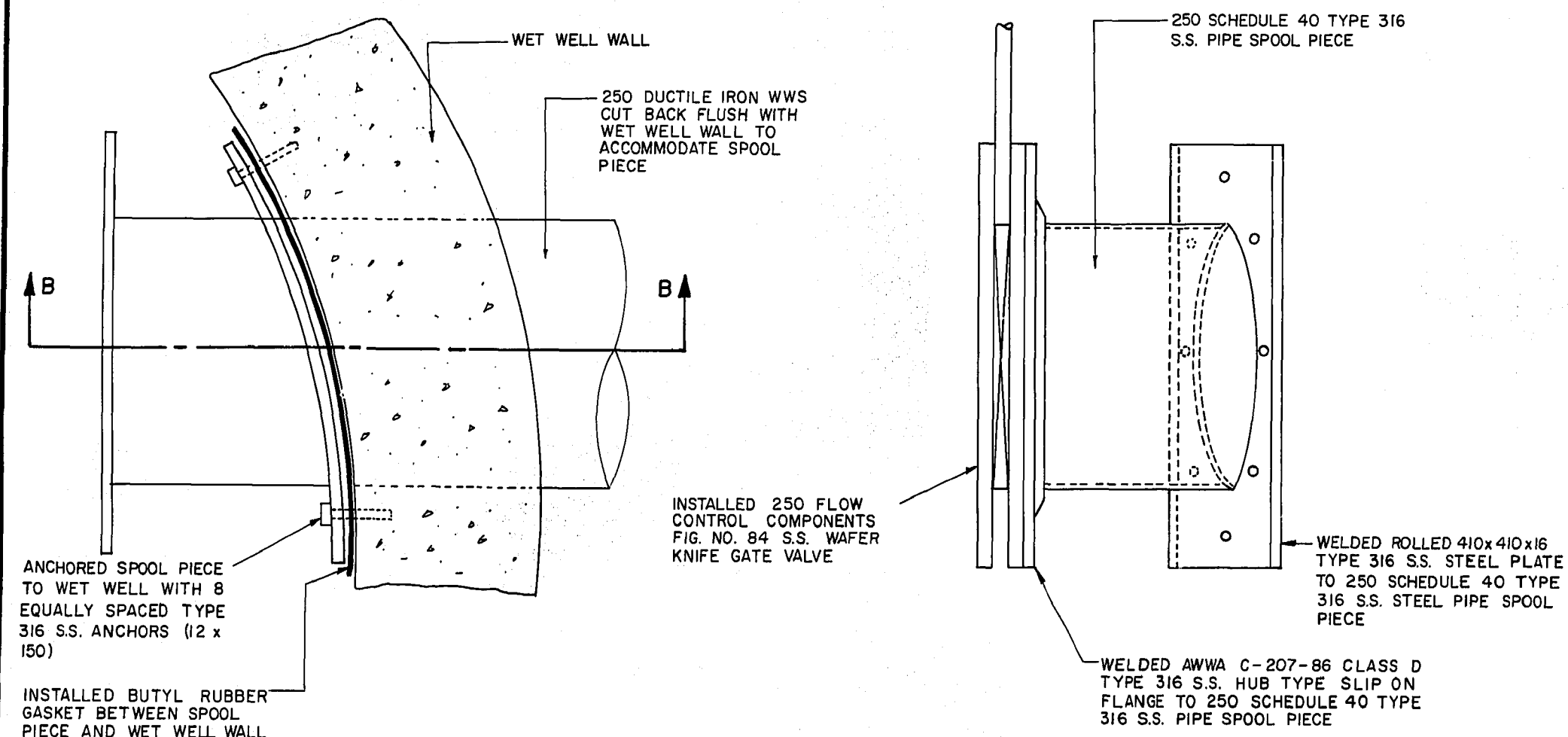


DETAIL OF FLAP GATE INSTALLATION



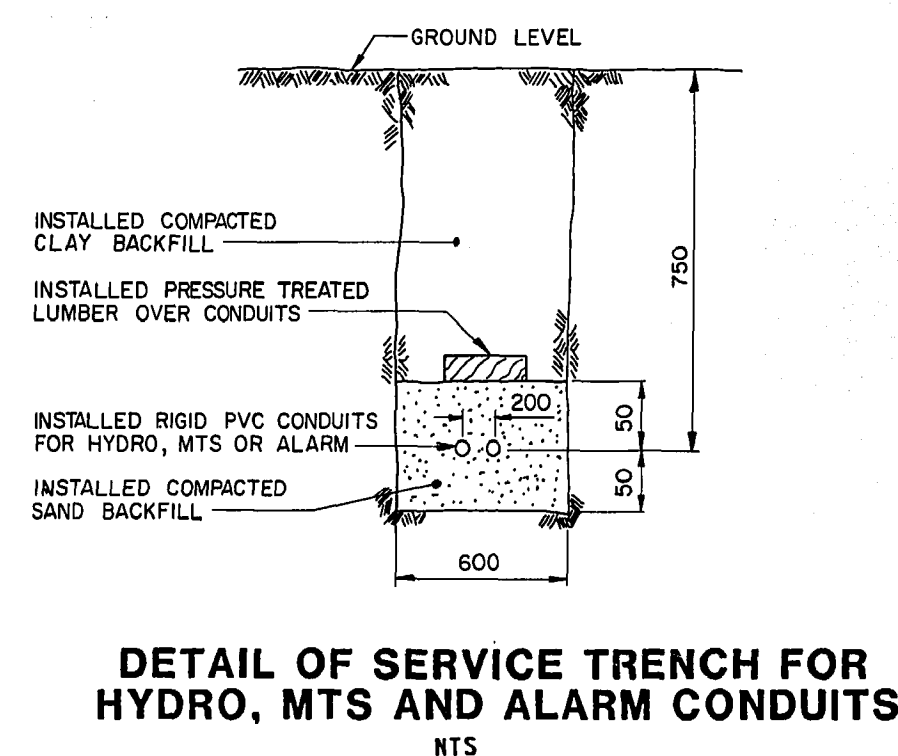
SITE PLAN

SCALE 1:100

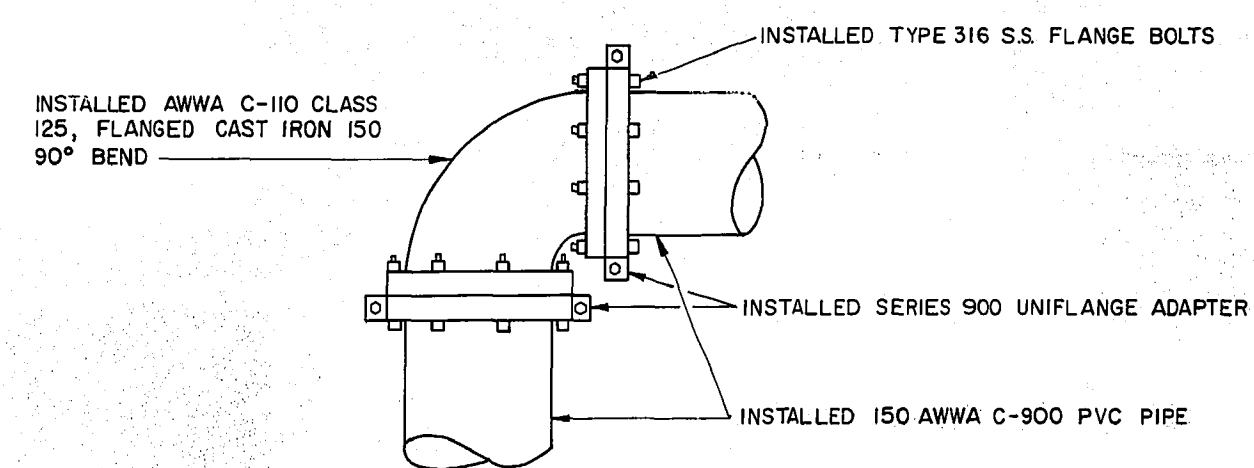


SECTION B-B

**DETAIL OF MANUFACTURED
STAINLESS STEEL SPOOL PIECE**
N.T.S.



DETAIL OF SERVICE TRENCH FOR HYDRO, MTS AND ALARM CONDUITS



DETAIL OF CONNECTION AT FORCEMAIN BEND

N.T.S.

B.M.	77-018	ELEV	232.093
WEST CONC. FOUND. OF GATE CHAMBER S. SIDE KILKENNY DR. @ RICE RD.			
I	REV'D TO AS CONSTRUCTED	01-1989	
NO	REVISIONS	DATE	BY

		WORKS & OPERATIONS DIVISION	
		WATERWORKS, WASTE & DISPOSAL DEPARTMENT	
DESIGNED BY	C.T.	CHECKED BY	R.A.S.
DRAWN BY	M.B.D.	APPROVED BY	<i>Rm. Givley</i>
HOR SCALE VERTICAL	AS NOTED	RELEASED FOR CONSTRUCTION	<i>Rm. Givley</i>
DATE	JANUARY 1960	DATE	88.07.11

ENGINEER

PROVINCE OF MANITOBA

R. A. Sorokowski

R. A.

SOROKOWSKI

REG. 8789

REGISTERED PROFESSIONAL ENGINEER

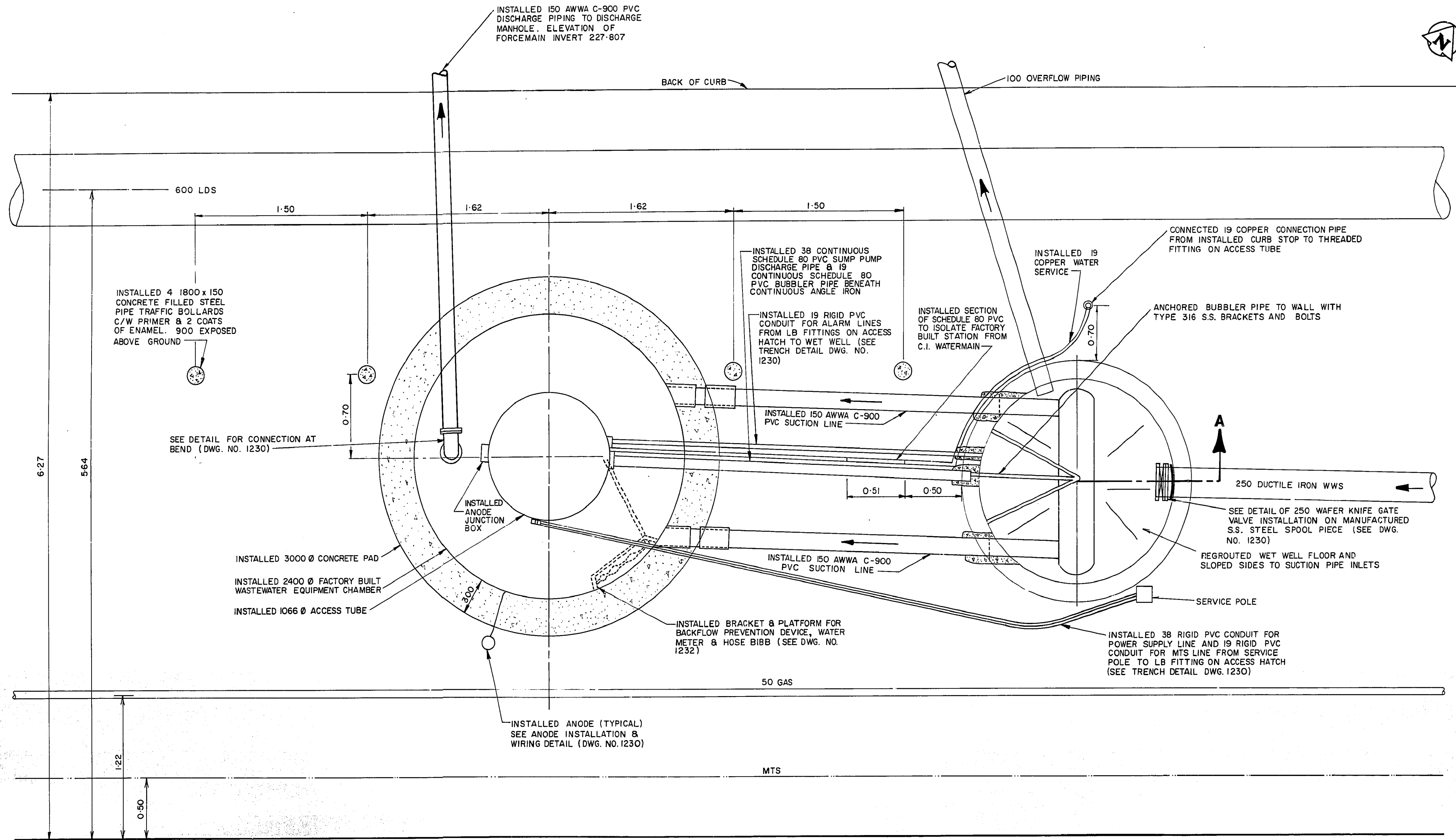
CONSULTANT DRAWING NO.

	THE CITY OF WINNIPEG WORKS AND OPERATIONS DIVISION	
	KILKENNY FACTORY-BUILT WASTEWATER PUMPING STATION	CITY DRAWING NUMBER
		SHEET 4 OF 6
SITE PLAN AND DETAIL SHEET		1230

1231

SEE: DRAWING NO.

DETAILS FILE # SP10527



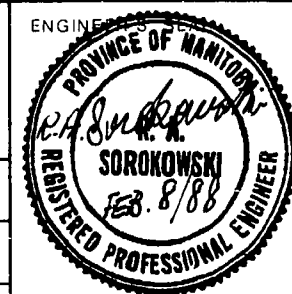
PLAN VIEW
SCALE 1:20

AS-CONSTRUCTED
INSPECTION / SURVEY
TECHNICAL SERVICES
DATE
WATERWORKS, WASTE & DISPOSAL DEPARTMENT

B.M. 77-018 WEST CONC. FOUND. OF GATE CHAMBER ELEV 232.093 S. SIDE KILKENNY DR. & RICE RD.			
DESIGNED BY	C.T.	CHECKED BY	R.A.S.
DRAWN BY	M.B.D.	APPROVED BY	<i>[Signature]</i>
HOR SCALE	AS NOTED	RELEASED FOR CONSTRUCTION	<i>[Signature]</i>
1 REV D TO AS CONSTRUCTED	01-1989	DATE	88-02-11
NO	REVISIONS	DATE	BY



WORKS & OPERATIONS
DIVISION
WATERWORKS, WASTE &
DISPOSAL DEPARTMENT



CONSULTANT DRAWING NO.



THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION

KILKENNY FACTORY-BUILT
WASTEWATER PUMPING
STATION

PLAN VIEW

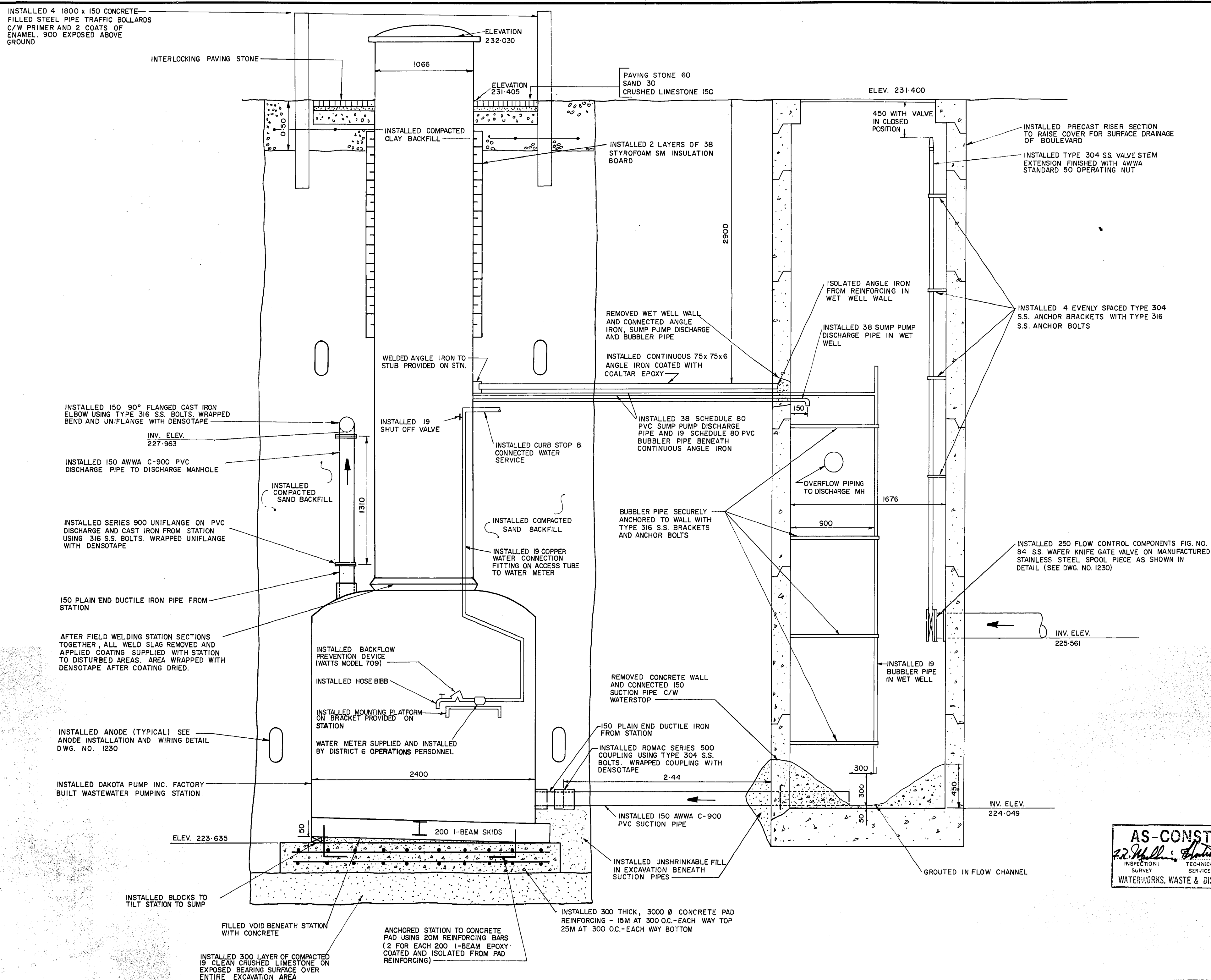
CITY DRAWING NUMBER

SHEET 5 OF 6

1231

FILE # SP10527

REF. or DRAWING No. **1232**
DETAILS FILE # **SP/0528**



AS-CONSTRUCTED
J.R. Mullins *Anthony* 09.02.15
 INSPECTION / TECHNICAL SURVEY SERVICES DATE
 WATERWORKS, WASTE & DISPOSAL DEPARTMENT

SECTION A-A

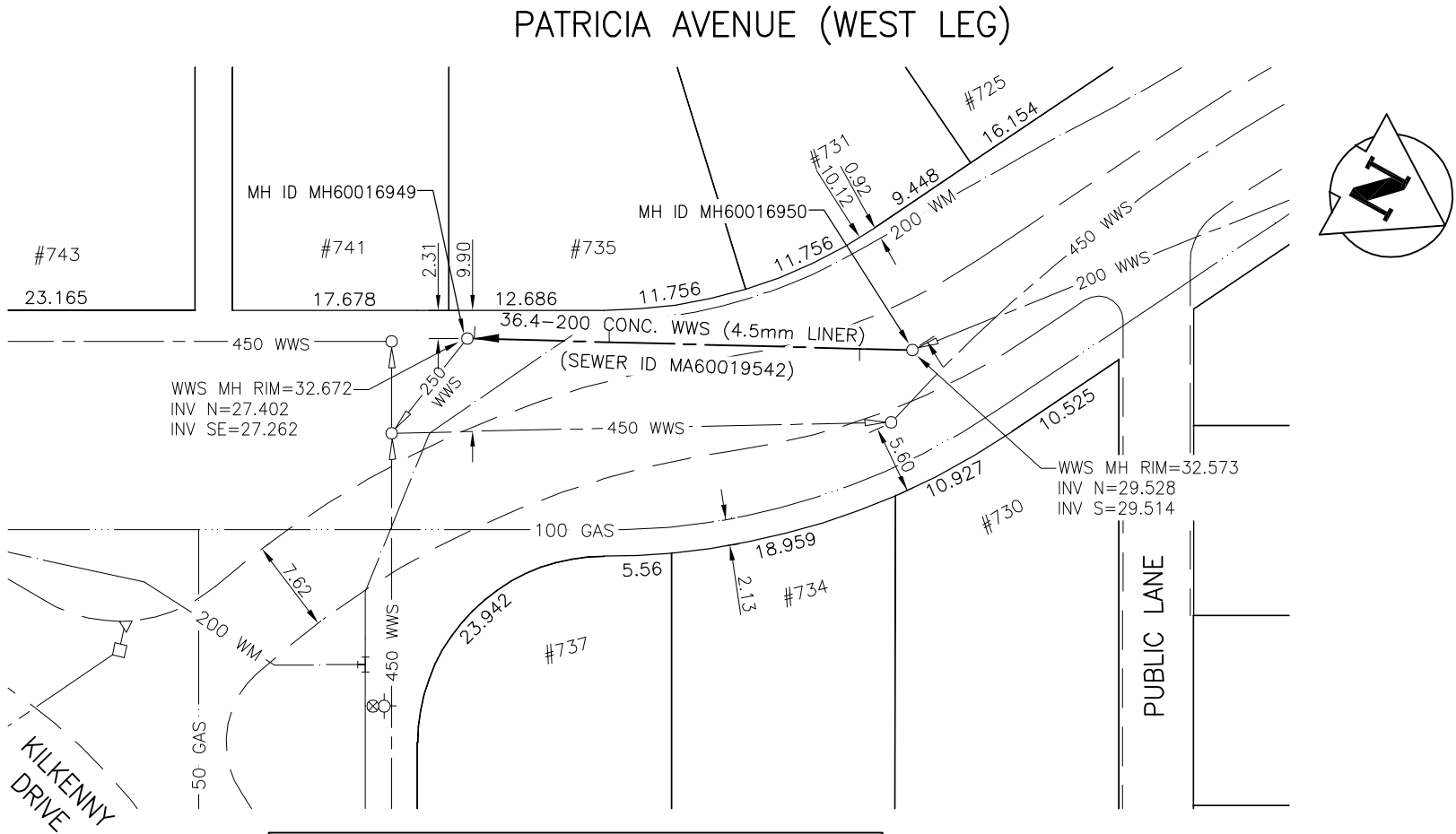
1:20

B.N. 77-018 ELEV 232.093				WEST CONC. FOUND. OF GATE CHAMBER S. SIDE KILKENNY DR. @ RICE RD.								WORKS & OPERATIONS DIVISION WATERWORKS, WASTE & DISPOSAL DEPARTMENT								 THE CITY OF WINNIPEG WORKS AND OPERATIONS DIVISION FILE # SP10528				CITY DRAWING NUMBER			
								DESIGNED BY C.T.				CHECKED BY R.A.S.															
								DRAWN BY M.B.D.				APPROVED BY 															
								HOR SCALE AS NOTED				RELEASED FOR CONSTRUCTION 															
								VERTICAL																			
I REV'D TO AS CONSTRUCTED				01-1989												CONSULTANT DRAWING NO.											
NO REVISIONS				DATE BY				DATE JANUARY 1988				DATE 88-02-11															
																				SECTION A-A				1232			

SEWER JUNCTION INFORMATION
FOR SEWER ID MA60019542
REFERENCE—METERS SOUTH OF MANHOLE MH60016950

DIST. FROM REF. MANHOLE	JUNCTION DIA.	CLOCK REF.	SERVICE TYPE	DESCRIPTION
4.3	150	10	CN	LIVE #734
24.8	150	02	CN	LIVE #735
35.8	200	06	CN	DROP PIPE

ALL JUNCTION INFORMATION
BASED ON CCTV INSPECTION



RECORD DRAWING
BY G.L. DATE 12.02.09
CHECKED BY W.A.

CONSTRUCTION COMPLETION DATE - MAY 2011

MATERIAL LIST			
CONTRACTOR: INSTITUFORM TECHNOLOGIES			
ITEM	MANUFACTURER	MODEL	MATERIAL
RESIN	ASHLAND-102TA	#133646	RESIN
LINER TUBE	INSITUFORM	INSITUTUBE	CIPP LINER

APEGM
Certificate of Authorization
Stantec Consulting Ltd.
No. 1301

METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

BENCH MARK: S. side Kilkenny Dr., W. of Kings Dr., Tblt. in E. Conc. foundation of No. 612 Kilkenny Dr., 7.5 m S. & 0.1 m below stucco of N.E. Cor. of house.

BID OPPORTUNITY 245-2010



V:\1112\urban\1112350\winipeg\K12_dwg\urban\112-735.dwg
2010-08-05 11:02AM By: dstone

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. 76-16 ELEV. 232.103m			
1.	RECORD DRAWING	12.02.09	G.L.
NO.	REVISIONS	DATE	BY



Stantec Consulting Ltd.

905 Waverley Street, Winnipeg, Manitoba
Tel 204-489-5900 Fax 204-453-9012

DESIGNED BY	J.K.H.	CHECKED BY	W.A.B.
DRAWN BY	J.K.H.	APPROVED BY	C.L.D.
HOR. SCALE:	1:500	RELEASED FOR CONSTRUCTION:	
VERTICAL:	N/A	DATE	
DATE	10.06.21		

ENGINEER'S SEAL

ORIGINAL
SEALED BY
C.L. DYCK
P. ENG.
10/08/05

CONSULTANT DRAWING NO.
C-II2



THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

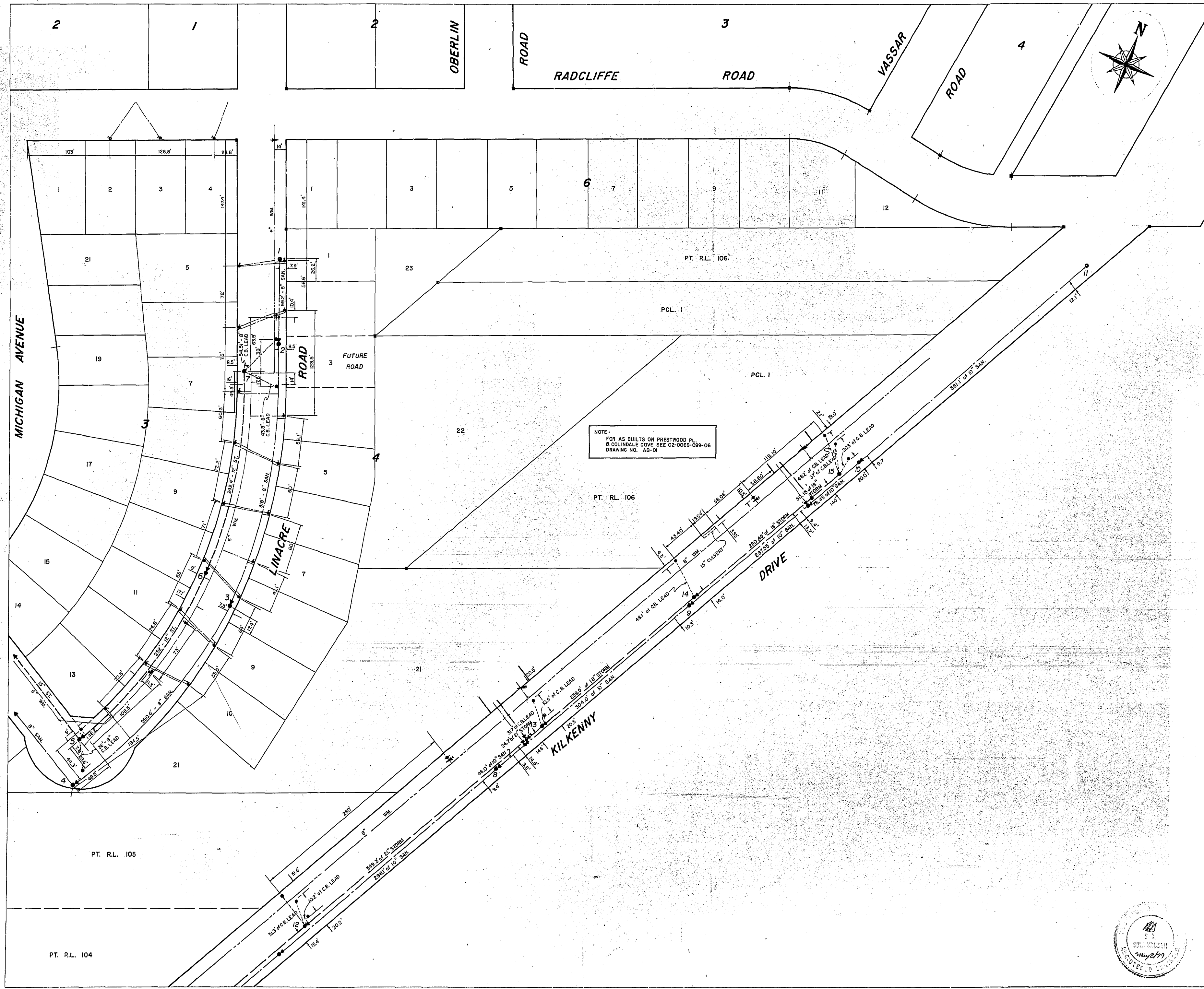
2010 SEWER RENEWALS
BY CIPP LINING - CONTRACT I4
PATRICIA AVENUE (WEST LEG)

2ND MH N. OF KILKENNY DR. TO
1ST MH N. OF KILKENNY DR.

SHEET	OF
12	26
CAD FILE DRAWING NUMBER I2350c-II2-735.dwg	
CITY DRAWING NUMBER 9365	

REF. or DRAWING NO.
DETAILS

KILKENNY DR.



MANHOLE No	TOP ELEV	INVERTS			
		NORTH	SOUTH	EAST	WEST
SANITARY SEWER					
1			52.32		
2	51.93		51.88		
3	50.92		50.92		
4	49.55				49.40
STORM SEWER					
5	51.20				
6	52.76		52.71		
7			54.08		
SANITARY SEWER					
8	54.37	42.27	42.23		
9	53.21	43.06	43.02		
10	52.36	44.23	44.23		
11	56.90		45.80		
STORM SEWER					
12	54.58	45.18	45.18		
13	53.69	45.79	45.73		
14	52.93	46.23	46.23		
15	52.90		46.70		

NOTES:
REVISED: APRIL 3, 1979

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

RECORD DRAWING

APPROVED BY: _____ DATE: _____
MUNICIPALITY OF FT. GARRY
SANITARY, STORM SEWERS & WATERMAINS
LINACRE ROAD

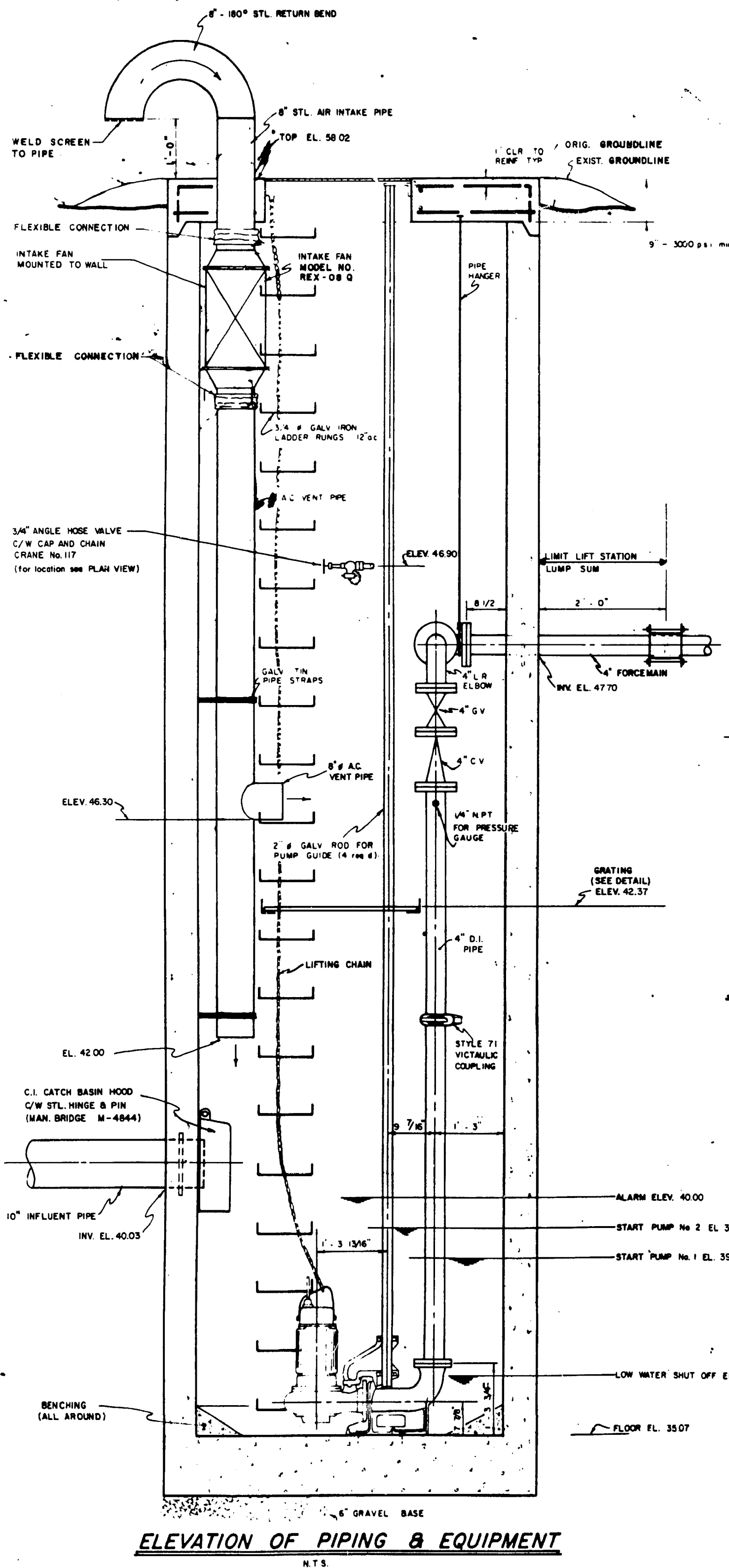
UNDERWOOD McLELLAN & ASSOCIATES LIMITED
CONSULTING PROFESSIONAL ENGINEERS

MANITOBA ONTARIO SASKATCHEWAN ALBERTA
BRITISH COLUMBIA

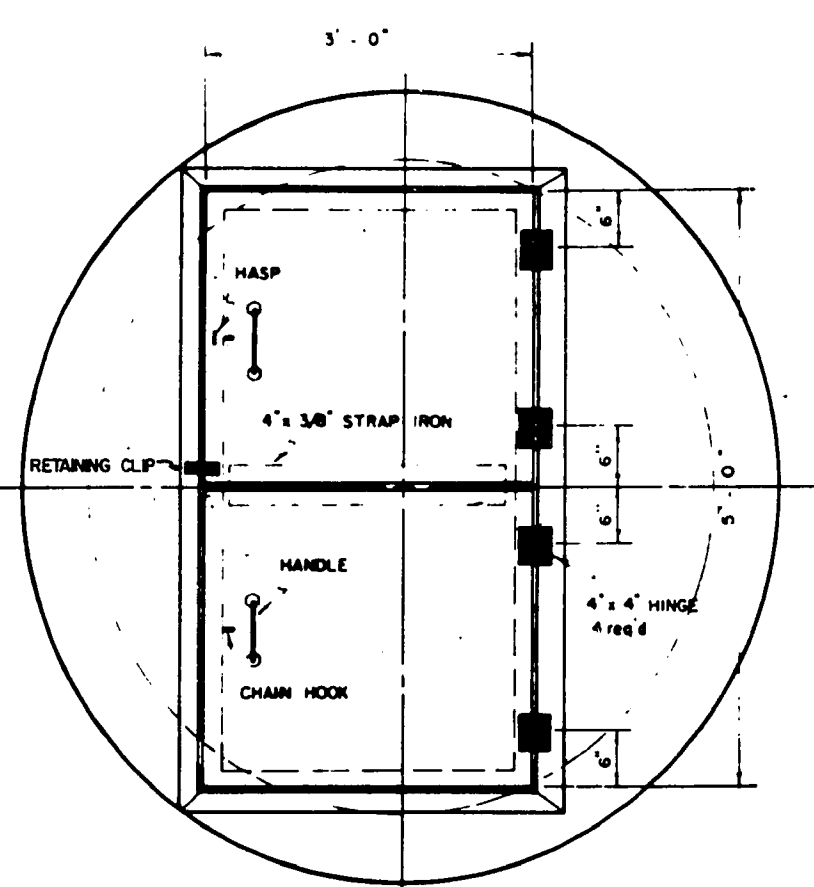
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CHECKED BY: _____ CHECKED BY: _____
DATE DRAWN: JAN. 1973 SCALE: 1" = 50'
JOB NO: 02-066-99-01 DRAWING NO: AB 09
SHEET 9 OF 9

file #
REF. or DRAWING No. 1232 B
DETAILS "FOR INFORMATION ONLY" SP10359

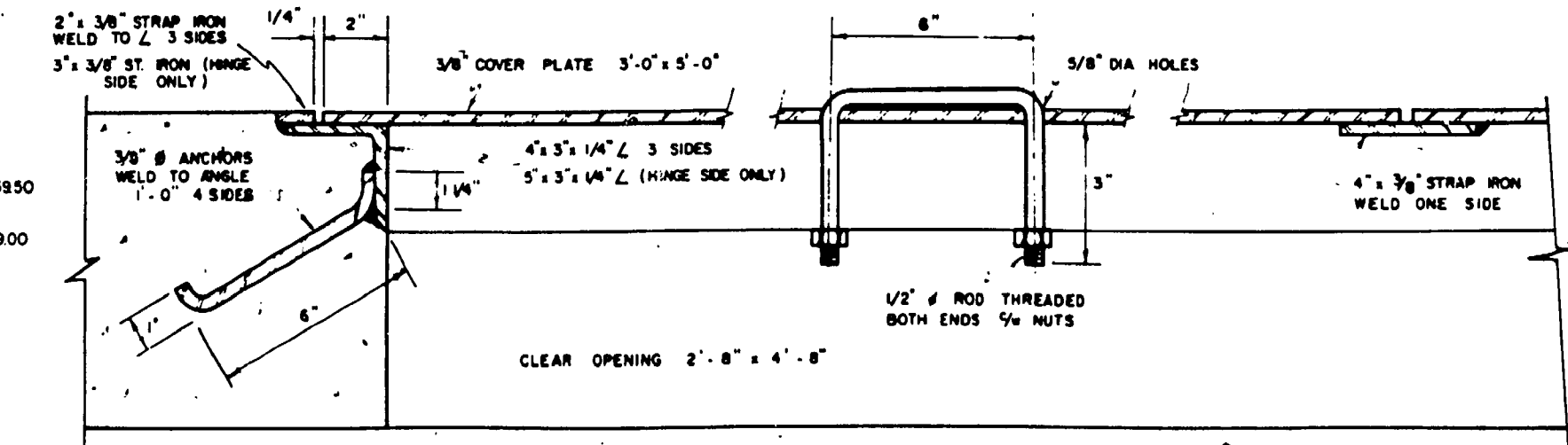
SEE: OF DRAWING NO. 1232 B
DETAILS



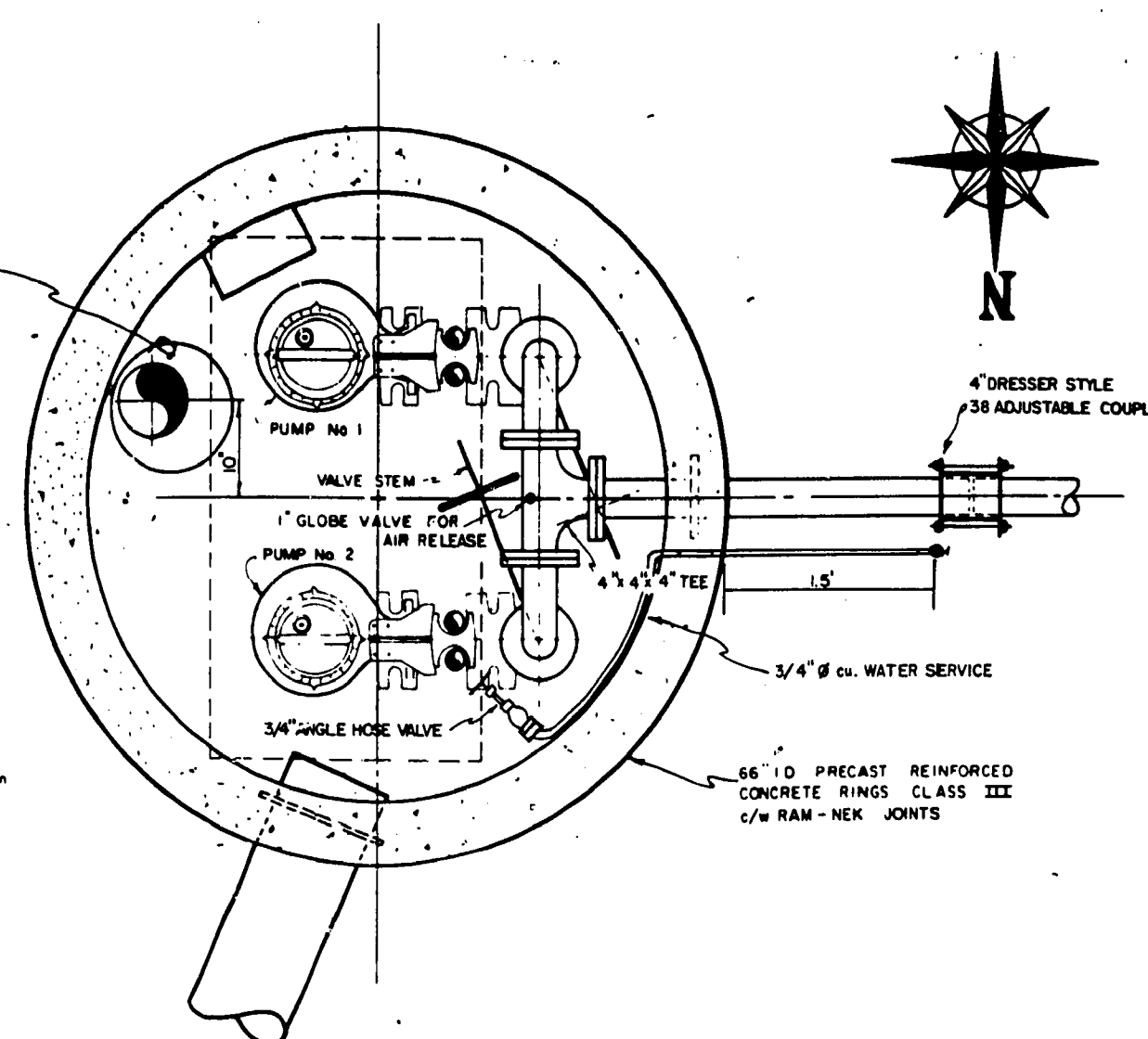
PLAN VIEW OF PIPING & EQUIPMENT
3/4" = 1'-0"



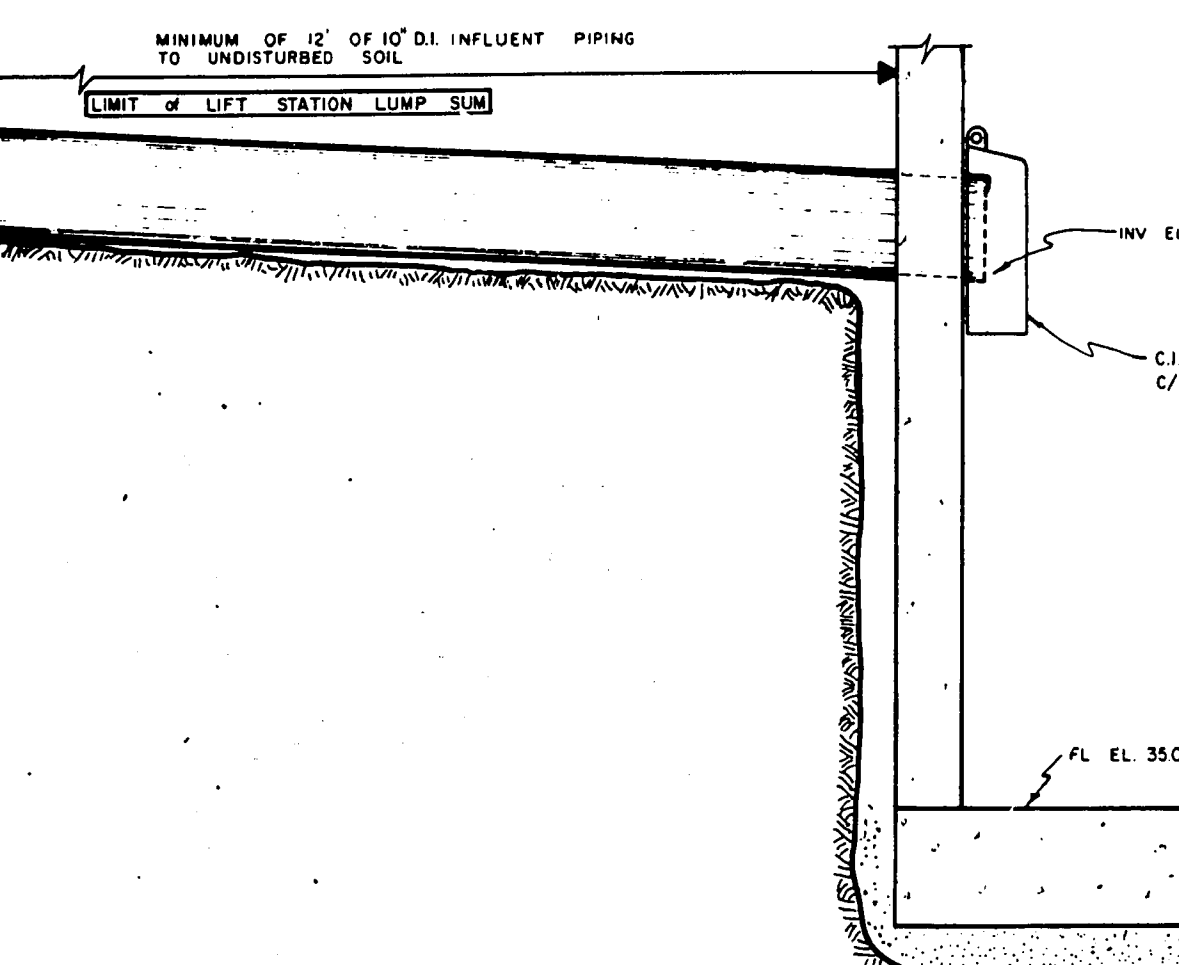
PLAN VIEW OF LIFT STATION COVER
3/4" = 1'-0"



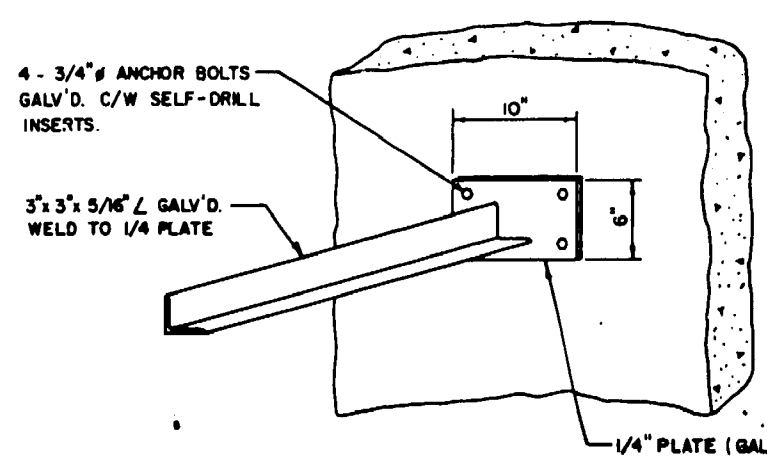
HATCH DETAIL
3" = 1'-0"



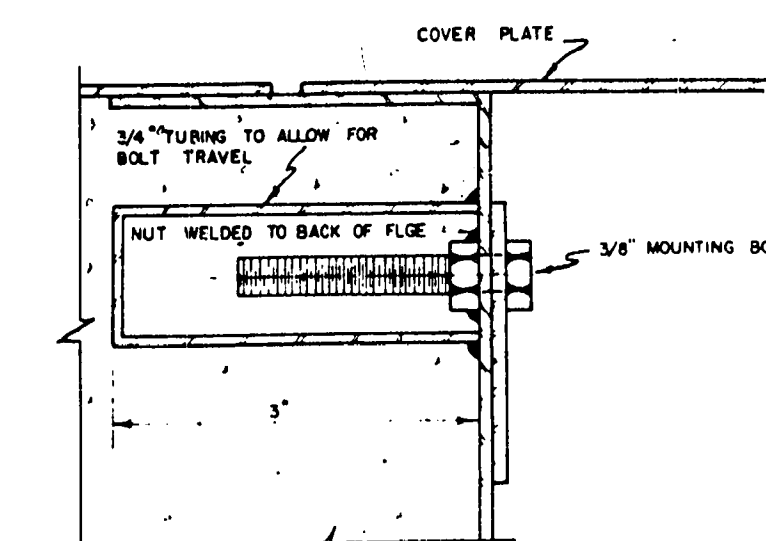
RE-BAR DETAIL FOR PRECAST COVER
3/4" = 1'-0"



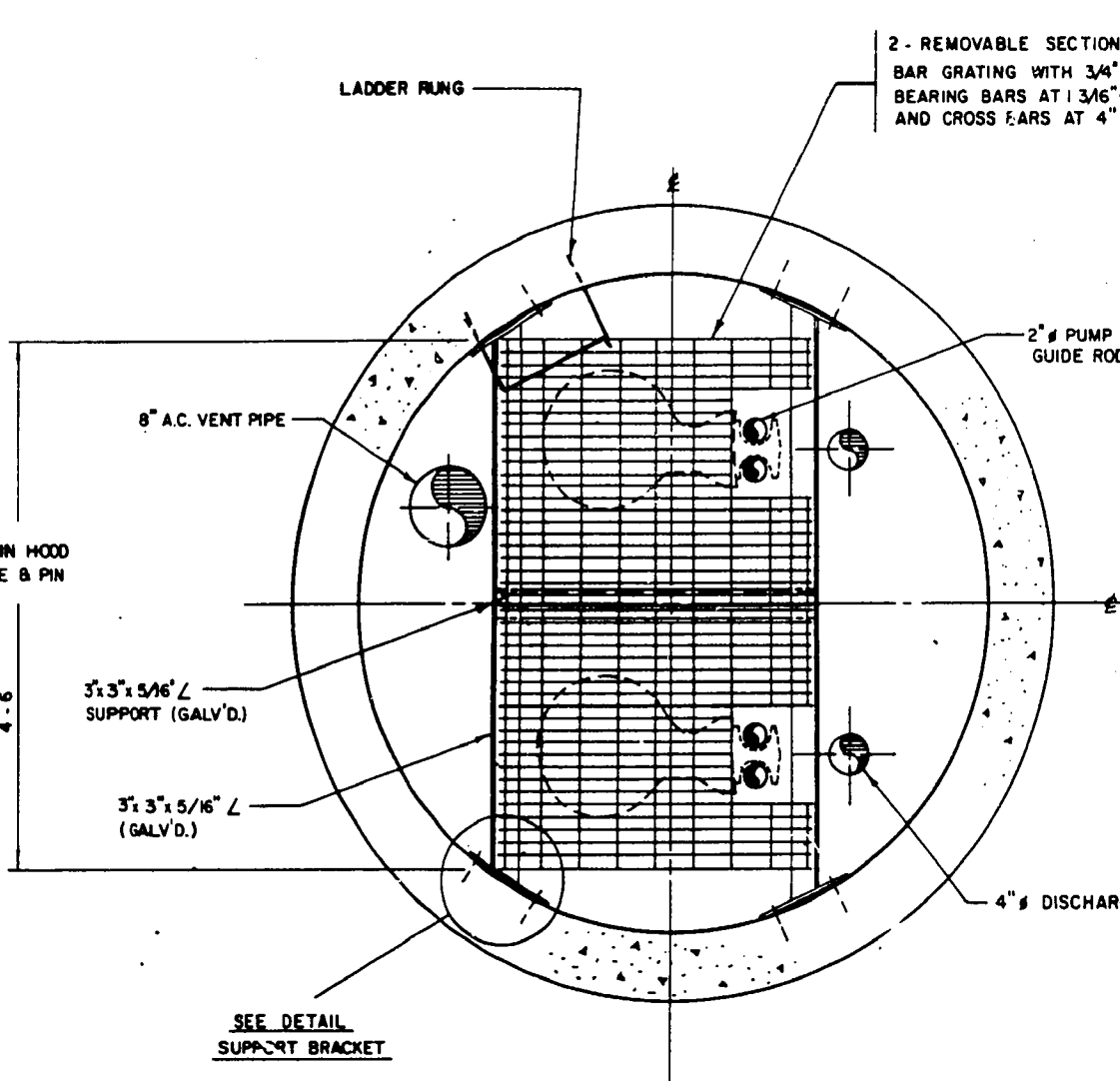
INFLUENT PIPE SUPPORT
3/4" = 1'-0"



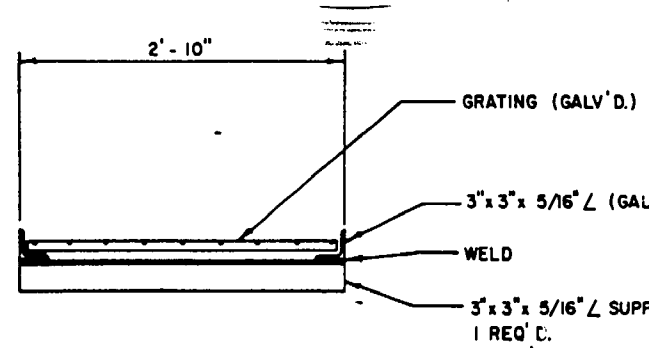
DETAIL SUPPORT BRACKET - 4 REQ'D
N.T.S.



BOLT DETAIL FOR UPPER GUIDE BAR HOLDER
N.T.S.



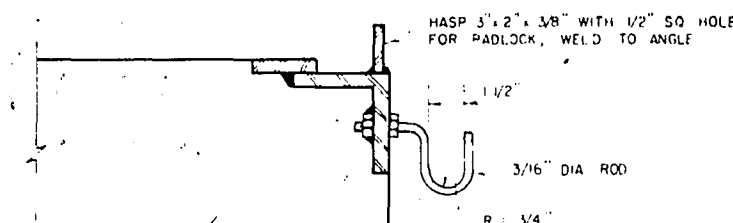
PLAN OF GRATING AT ELEV. 43.0
3/4" = 1'-0"



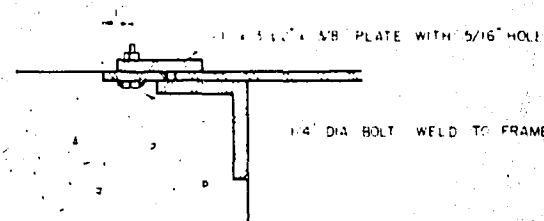
SECTION - GRATING with SUPPORT
3/4" = 1'-0"

"FOR INFORMATION ONLY"

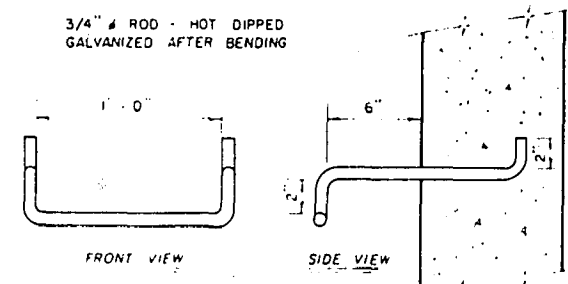
UNDERWOOD McLELLAN & ASSOCIATES LTD. ENGINEERING & PLANNING CONSULTANTS BRITISH COLUMBIA - ALBERTA - SASKATCHEWAN - MANITOBA - ONTARIO			CITY OF WINNIPEG COMMUNITY OF FORT GARRY		SCALE AS SHOWN
APPROVED BY _____ DATE _____			DISTRICT 6 WORKS & OPERATIONS		JOB NO. 02-066-99-04
DRAWN BY D.Z. DESIGNED BY _____			RECORD DRAWING		SHEET 1 OF 2
CHECKED BY _____			LIFT STATION - KILKENNY DRIVE		DWG. No. ABOI
REV. No.	DESCRIPTION	DATE			



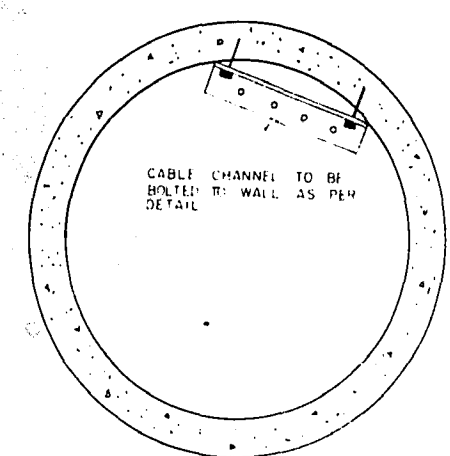
HASP & CHAIN HOOK DETAIL



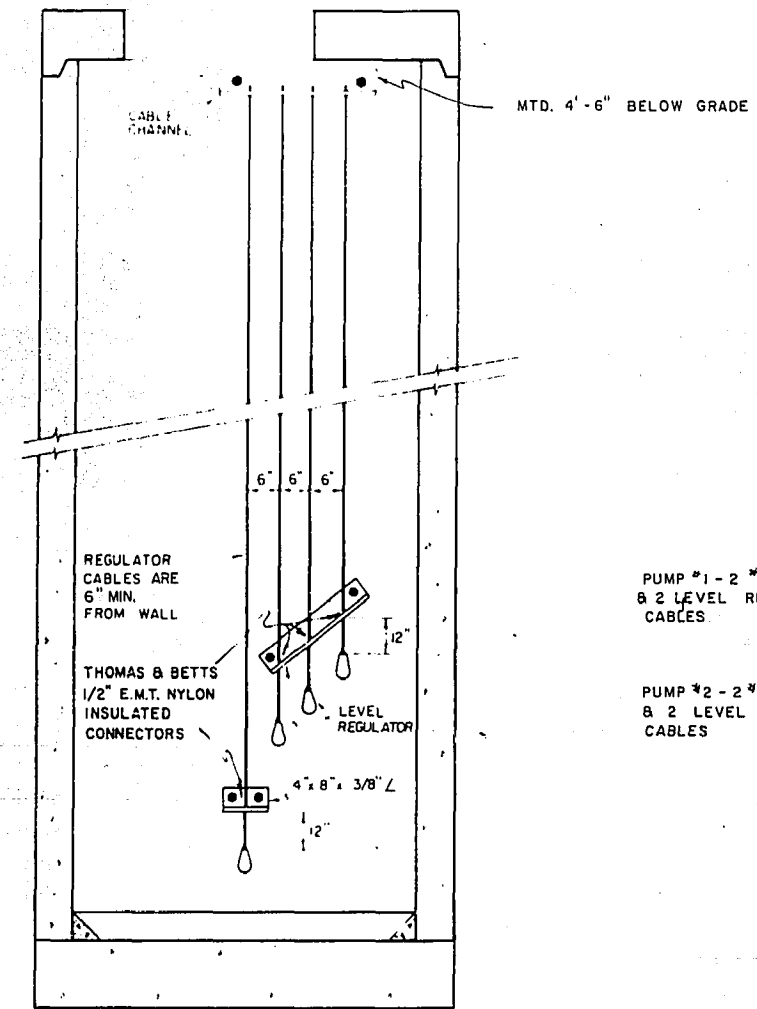
DETAIL OF RETAINING CLIP



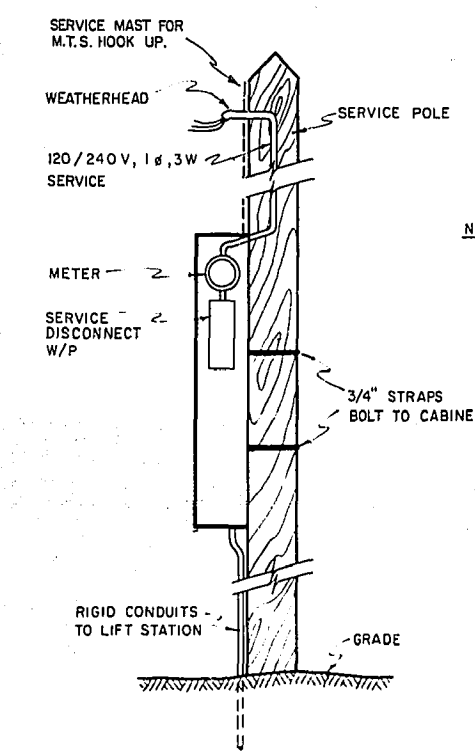
LADDER RUNG DETAIL



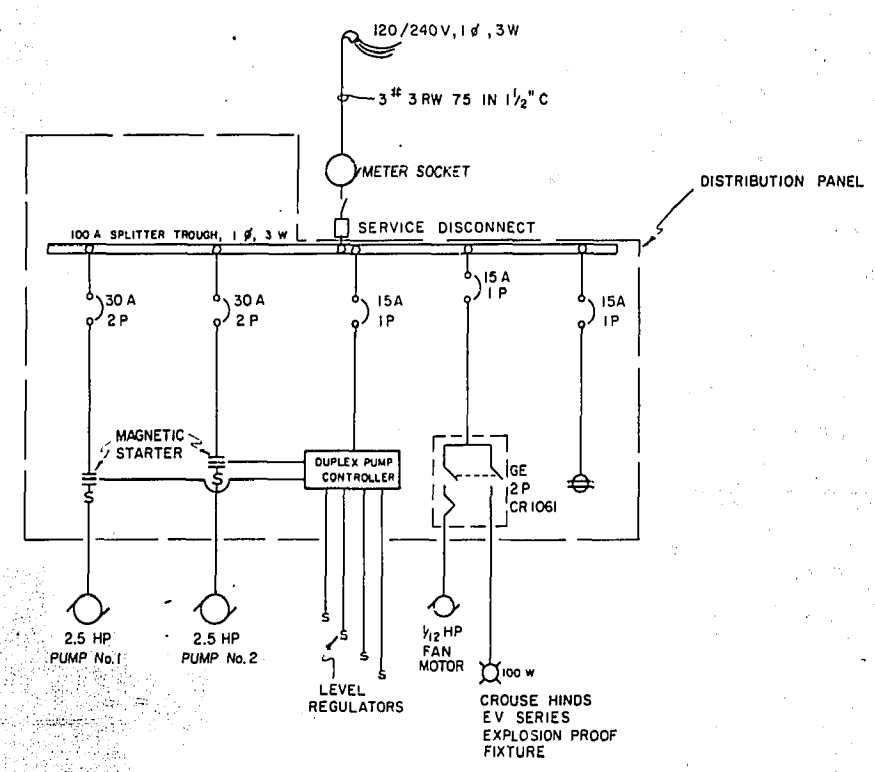
PLAN OF CABLE CHANNEL



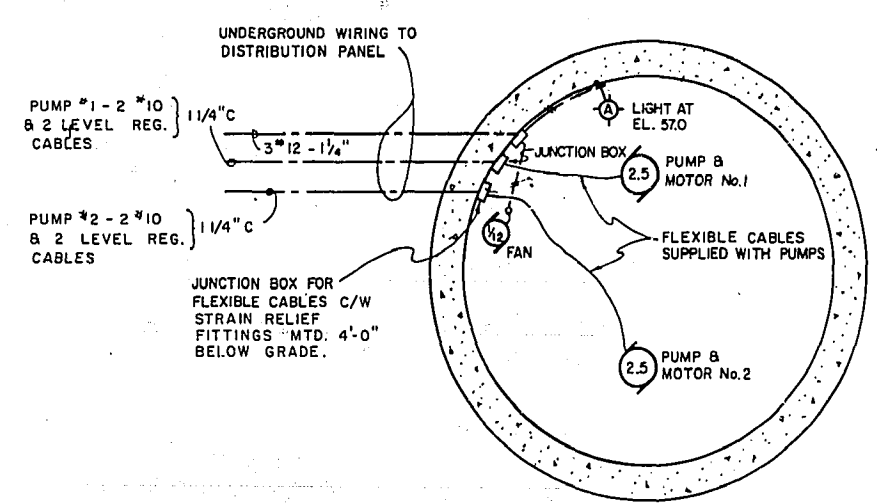
ELEVATION OF LEVEL REGULATOR GUIDE



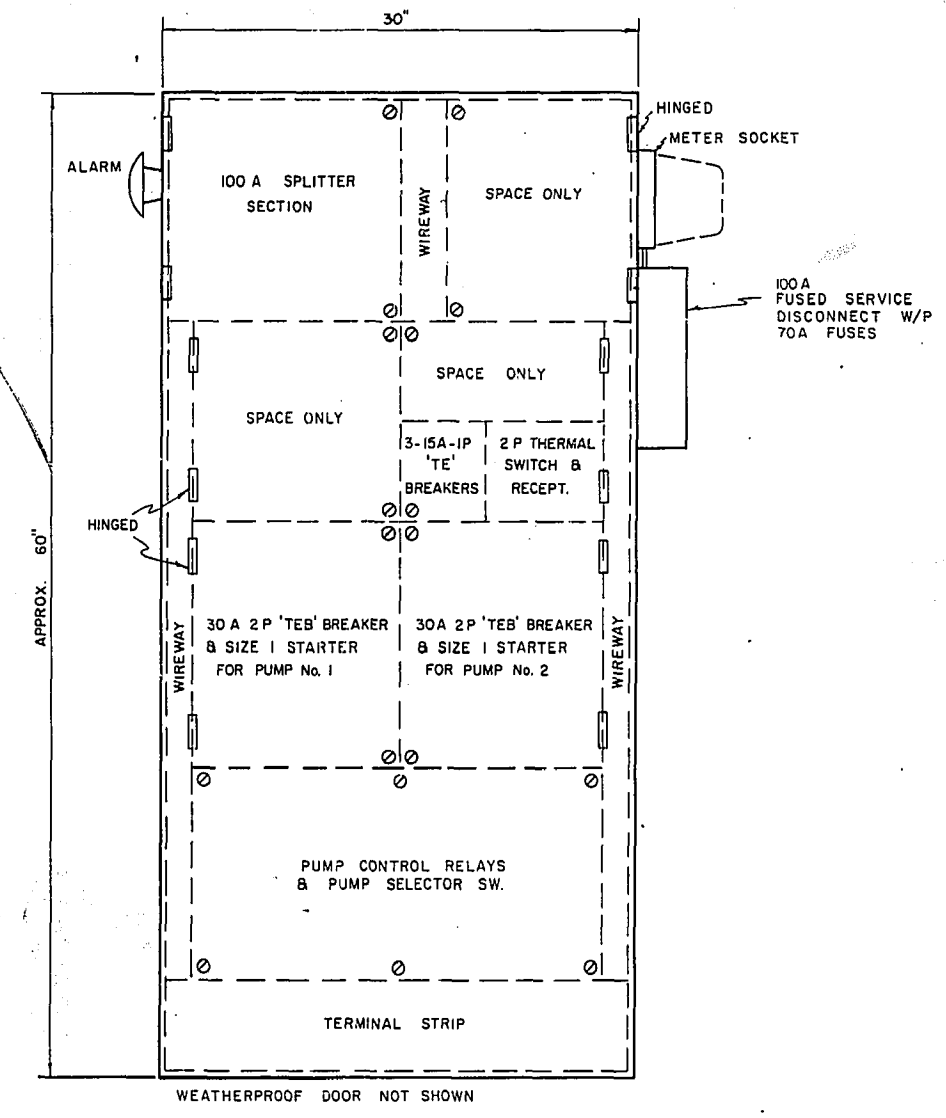
DETAIL OF POWER POLE and CABINET



DISTRIBUTION DIAGRAM

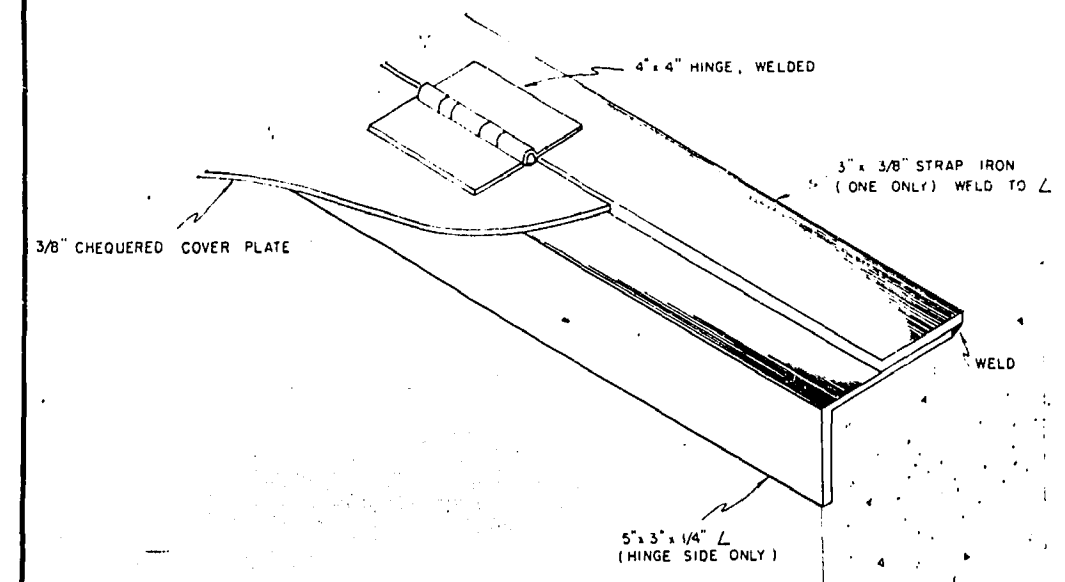


PUMP MOTOR PLAN

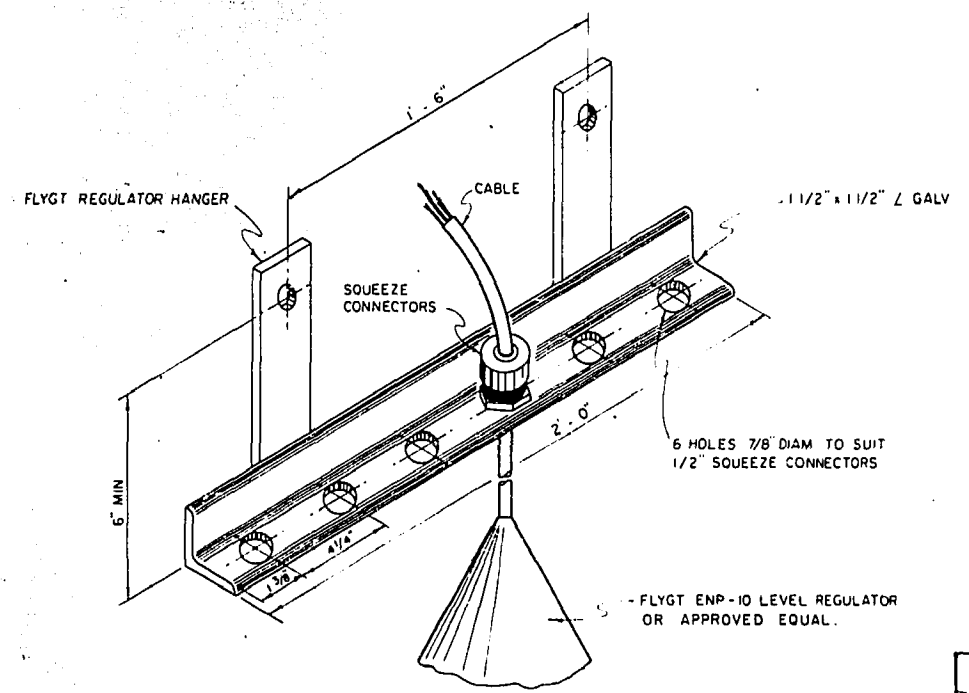


DETAIL OF DISTRIBUTION PANEL

LEGEND	
SYMBOL	DESCRIPTION
	FIXTURE "A", INCAND., WALL MOUNTED
	CONDUIT, EXPOSED - 2 W SHOWN
	CONDUIT, CONCEALED - 3" 12 IN 1" C SHOWN
	MOTOR LOCATION - 2 1/2 HP SHOWN
	FLEXIBLE CABLE



ISOMETRIC ALONG HINGES



LEVEL REGULATOR HANGER

UNDERWOOD McLELLAN & ASSOCIATES LTD. ENGINEERING & PLANNING CONSULTANTS BRITISH COLUMBIA - ALBERTA - SASKATCHEWAN - MANITOBA - ONTARIO			CITY OF WINNIPEG COMMUNITY OF FORT GARRY DISTRICT 6 WORKS & OPERATIONS		SCALE AS SHOWN JOB No. 02-066-99-04
APPROVED BY DATE 1/15/11			DRAWN BY L.S. DESIGNED BY G.H.		SHEET 2 OF 2
CHECKED BY DATE			CHECKED BY JLD		DWG. No. AB 02
RECORD DRAWING LIFT STATION - KILKENNY DRIVE					

LIFT STATION
- KILKENNY DR.
NS

REF. or DRAWING NO.

DETAILS

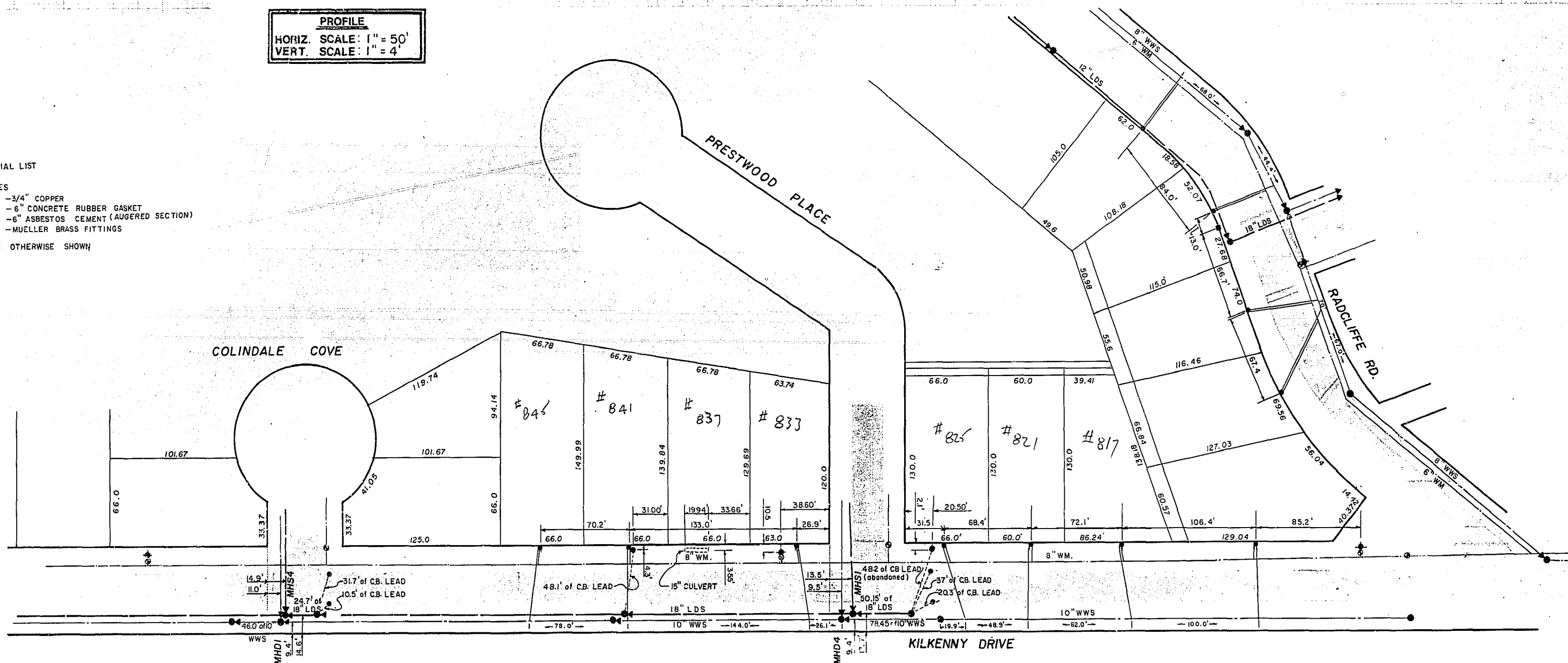
PROFILE
HORIZ. SCALE: 1" = 50'
VERT. SCALE: 1" = 4'

MATERIAL LIST

SERVICES

- 3/4" COPPER
- 6" CONCRETE RUBBER GASKET
- 6" ASBESTOS CEMENT (AUGERED SECTION)
- MUELLER BRASS FITTINGS

UNLESS OTHERWISE SHOWN



RECORD DRAWING

CITY OF WINNIPEG

DISTRICT NO. 6

SERVICE CONNECTIONS

KILKENNY DR. & RADCLIFFE RD.

AB-02

REV.

the
uma
group

Underwood McLellan (1977) Ltd.
Consulting Engineers and Planners

APPROVED BY: [Signature] DATE: [Signature]

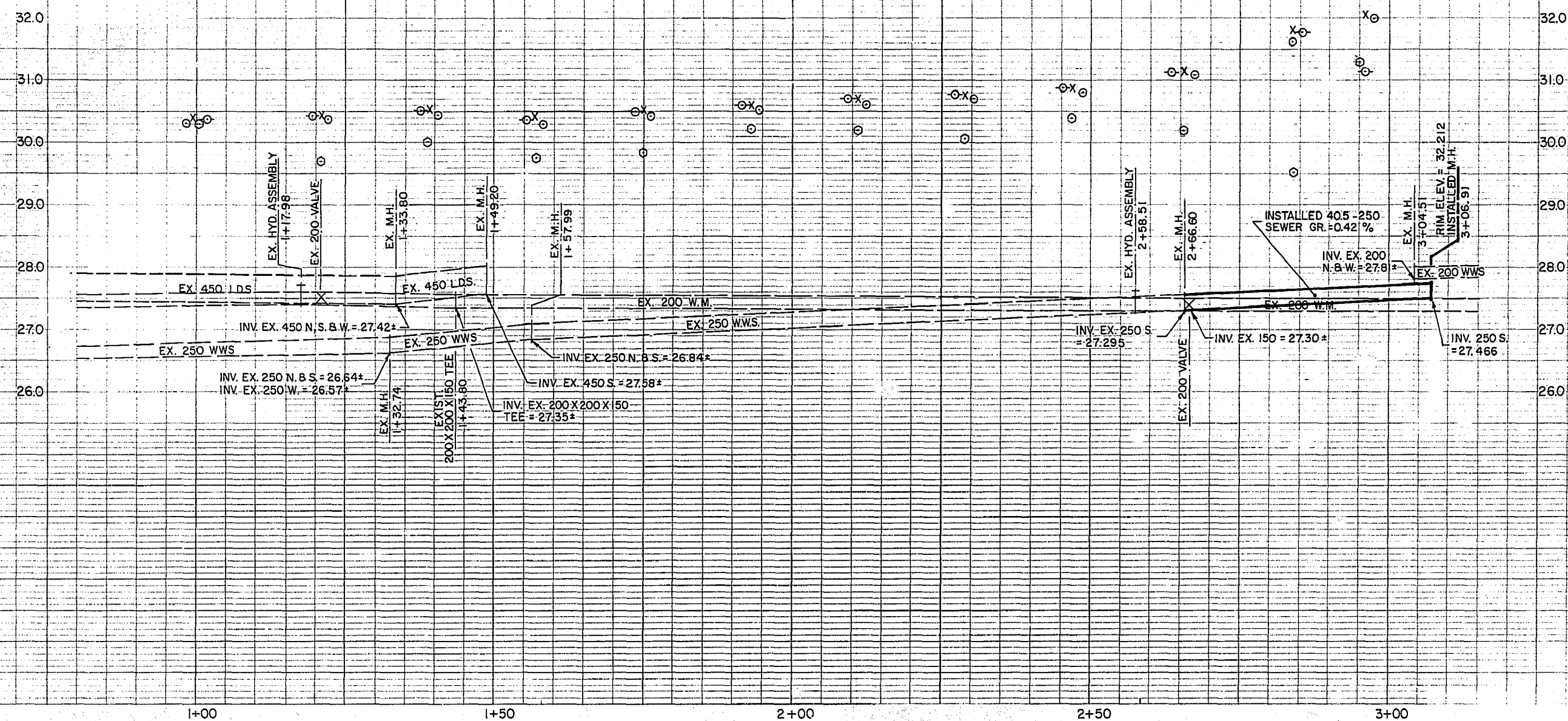
DRAWN BY: M.B.D. DESIGNED BY:

CHECKED BY: [Signature] CHECKED BY:

SCALE: 1" = 50' JOB No. 02-0066-099-06

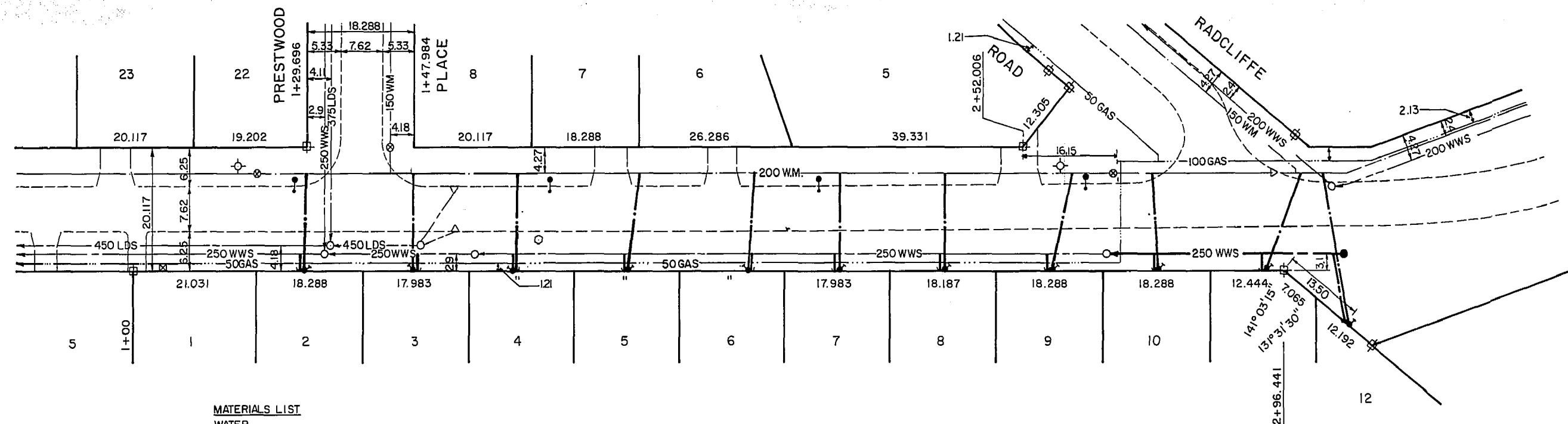
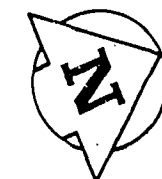
REV	DESCRIPTION	DWN.	APR.	DATE
1	REVISION C.B. LEAD ABANDONED	NK	12/7/77	SEAL

LEGEND	
WATERMAIN (WM)	LANDSCAPE OR BLDG. GRADE
WASTE WATER SEWER (WWS)	HYDRANT
LAND DRAINAGE SEWER (LDS)	GATE VALVE
MAN. TELEPHONE SYSTEM (MTS)	CULVERT
CITY SIGNALS (C.S.)	MANHOLE
GAS	CURB INLET
STREET LIGHTING (S.L.)	CATCH BASIN
TELECOMMUNICATIONS	SURVEY BAR
WPG. HYDRO STEAM HEAT (S.H.)	TREE
WPG. CENTRAL HTG CO.	POLE
PAVEMENT GRADE	GUY WIRE



K I L K E N N Y

DRIVE



MATERIALS LIST

WATER
HOUSE SERVICE-19mm COPPER NORANDA
STOPS AND CORPS - MUELLER
SERVICE BOXES - W.D. POOLLES
SEWER
250 SEWERMAIN - CANRON S.D.R. 35 P.V.C.
MANHOLE - SUPERCRETE INC.
FRAME AND COVER - TITAN FOUNDRY

BENCH MARK : 83R543 - E. side Kilkenny Dr. at
Radcliffe Rd., Tblt. on top of
0.05m. dia. x 2.4m. iron pipe, 7.1m.
E. of C.L. Conc. Pavt. Kilkenny Dr.
produced from the S. & 16.4m. S. of
S. wall of No. 121 Radcliffe Rd.
ELEV. = 232.071m.

REVISÉ AS CONSTRUCTED

DATE 31/5/88 BY A.L.A.
CHECKED BY R.M.

SEWER CONNECTION DATA

DWG. NO. D6-11-423

REFERENCE	.JCT .LOC	P/L LOC.	OFFSET FR MAIN	INV. AT P/L
Manhole 1+32.74 Lot 2 E	3.31 S	3.62 S	2.9	27.11
Manhole 1+57.99 Lot 3 E	10.29 S	10.49 S	2.9	27.16
Lot 4 E	7.30 N	7.30 N	2.9	27.06
Lot 5 E	27.58 N	27.33 N	2.9	27.31
Lot 6 E	47.26 N	47.16 N	2.9	27.46
Lot 7 E	61.54 N	60.89 N	2.9	27.41
Manhole 2+66.60 Lot 8 E	28.67 S	28.42 S	2.9	27.51
Lot 9 E	10.09 S	9.99 S	2.9	27.56
Lot 10 E	7.51 N	8.11 N	2.9	27.16
Lot 11 E	26.00 N	25.54 N	2.9	28.01
Lot 12 E	38.94 N	40.34 N	11.59	

WATER CONNECTION DATA

DWG. NO. D6-11-423

REFERENCE	CORP. LOC.	STOP LOC.	STOP OFFSET FR. MAIN
Hydrant 1+17.98			
Lot 2 E	11.5 N	11.14 N	15.85
Lot 3 E	29.4 N	29.52 N	15.85
Hydrant 2+58.513			
Lot 4 E	93.0 S	93.23 S	15.85
Lot 5 E	72.0 S	73.20 S	15.42
Lot 6 E	52.5 S	53.36 S	15.22
Lot 7 E	38.5 S	39.63 S	15.12
Lot 8 E	20.2 S	20.33 S	15.22
Lot 9 E	2.1 N	1.90 S	15.22
Lot 10 E	15.4 N	16.20 N	15.22
Lot 11 E	40.2 N	33.63 N	15.22
Lot 12 E	44.9 N	48.43 N	23.71

WARNING

IF POWER EQUIPMENT OR EXPLOSIVES ARE TO BE USED FOR EXCAVATION ON THIS PROJECT THE CONTRACTOR MUST.

- 1) NOTIFY THE GAS COMPANY OF THE PROPOSED LOCATION OF EXCAVATION.
- 2) TAKE PRECAUTION TO AVOID DAMAGE TO GAS COMPANY INSTALLATIONS.

SEE PROVINCIAL REGULATION 210/72 FOR DETAILS

METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

150 mm W.M.	WATERMAIN	150 mm W.M.		HYDRO	150 mm W.M.	WATERMAIN	
	HYDRANT			M.T.S.		HYDRANT	
	VALVE			CONCRETE		VALVE	
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			SURVEY BAR		MANHOLE	
	CATCH BASIN			LIGHT STANDARD		EAST GUTTER	
	CURB INLET			HYDRO PEDESTAL		EAST TOP OF CURB	
	JUNCTIONS			CURB STOP		EAST R	
	CULVERT			19mm. W.M.			
	GAS			150 mm. W.W.S.			
EXISTING	LEGEND—PLAN	PROPOSED	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 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.	77-033
ELEV	232.071m

[illegible]

IPE I.D. ENGINEERING CANADA INC.
Professional Engineers
WINNIPEG, MANITOBA

DESIGNED BY	C.A.B.	CHECKED BY	C.A.B.
DRAWN BY	G.L.	APPROVED BY	C.A.B.
HOR SCALE 1:500 VERTICAL 1:50		RELEASED FOR CONSTRUCTION	
DATE OCT. 8, 1987		DATE	

ENGINEER'S SEAL

PROVINCE OF MANITOBA

C.A. Baron

C. A.
BARON

Dec. 15/87

REGISTERED PROFESSIONAL ENGINEER

CONSULTANT DRAWING NO.

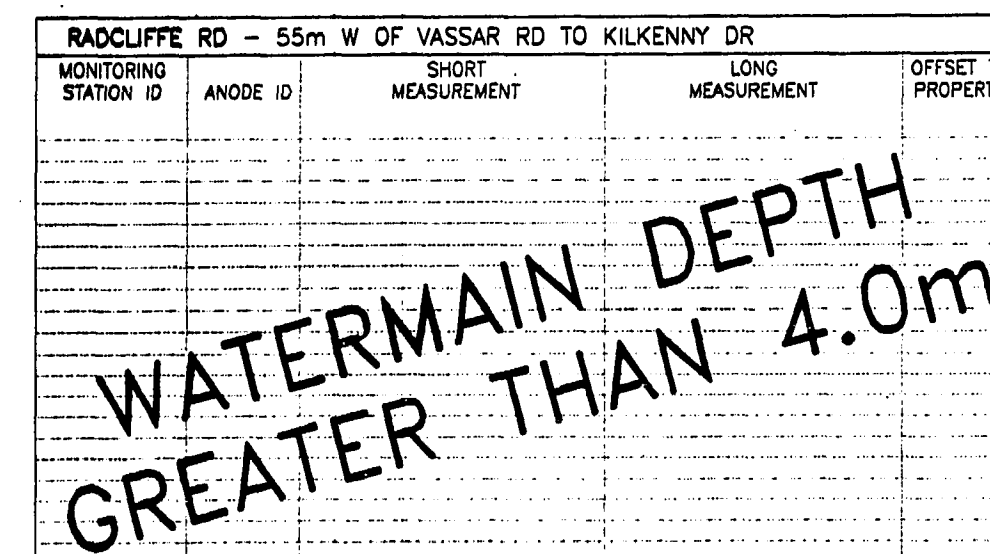
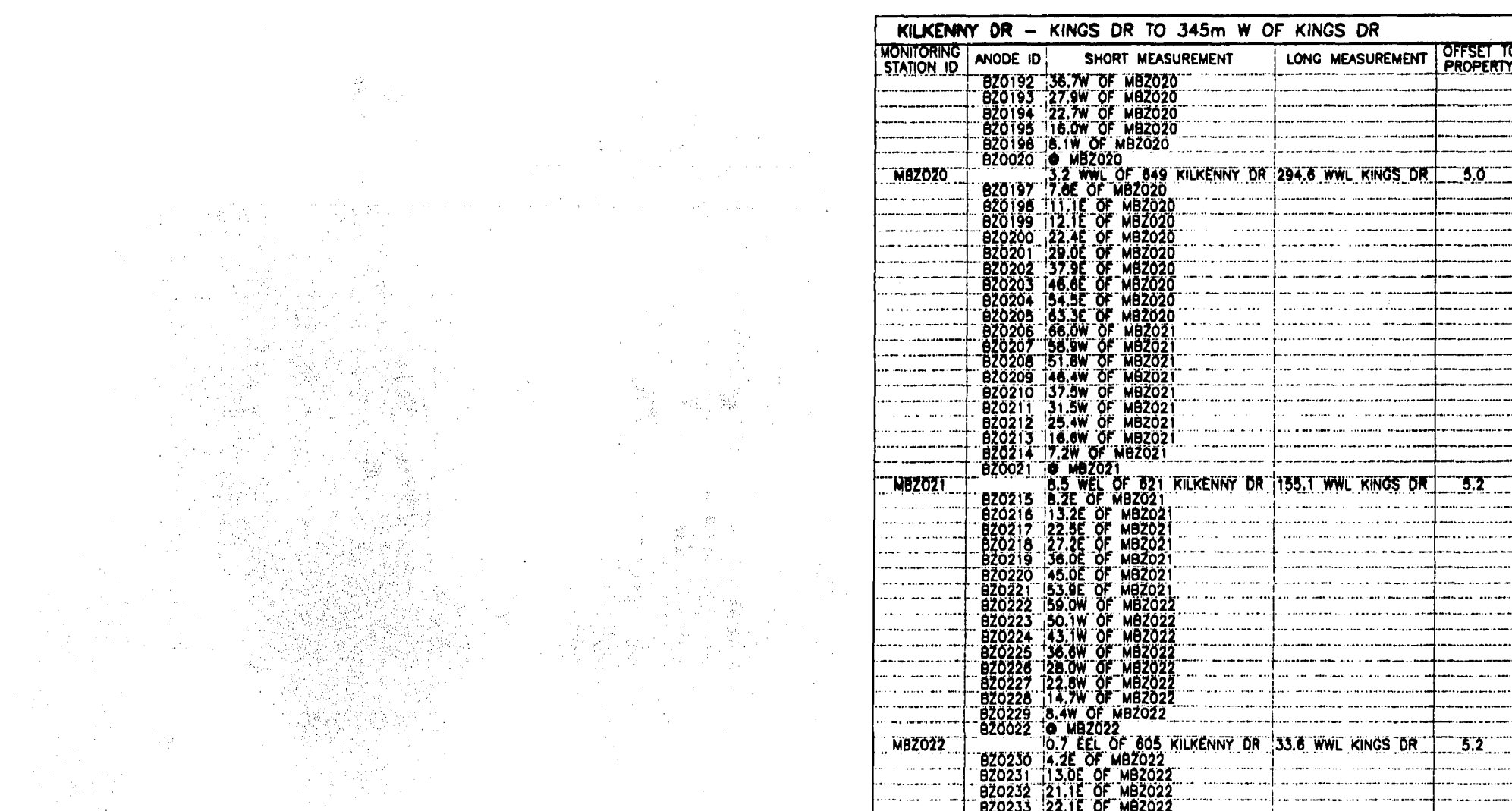
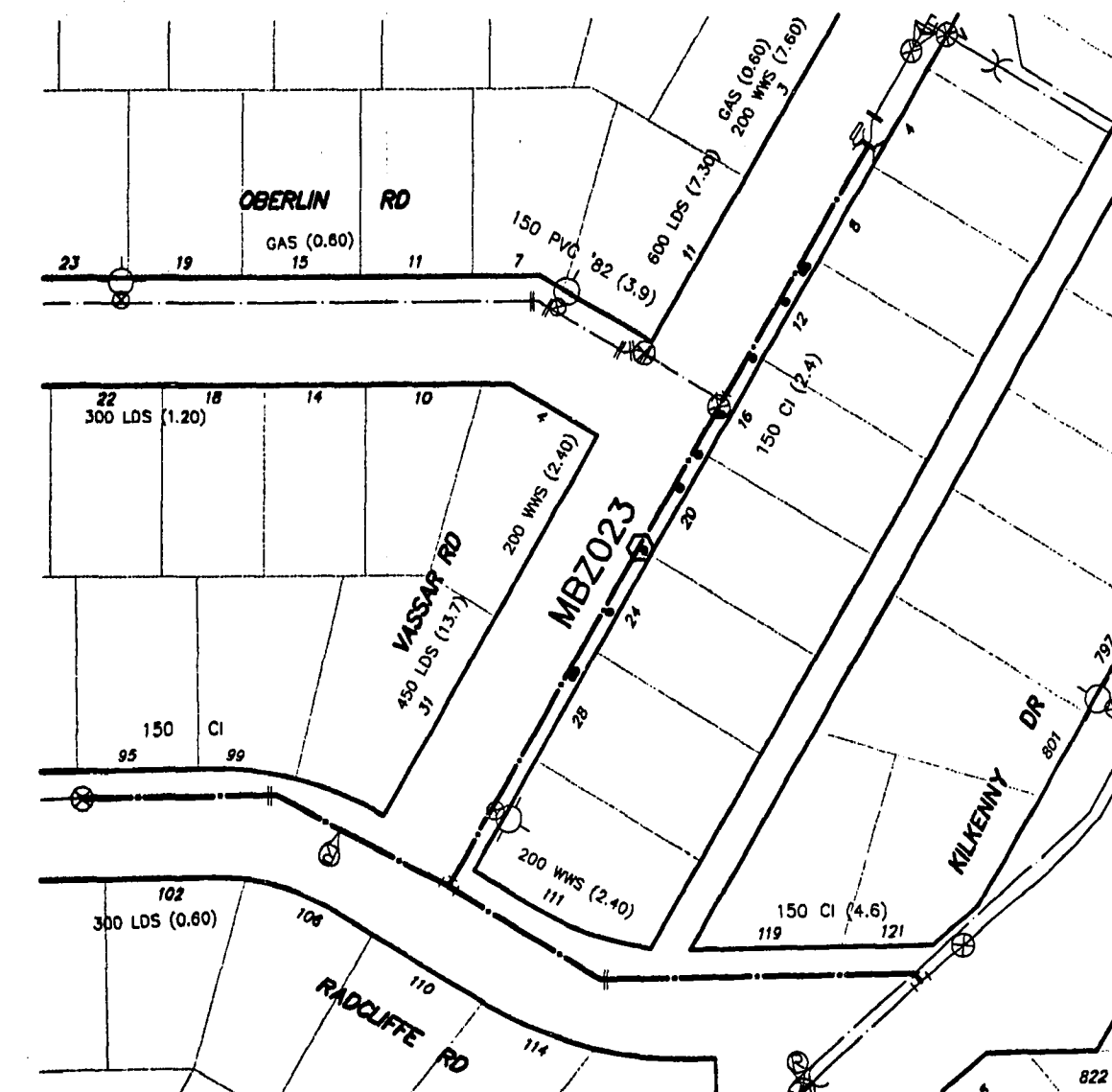
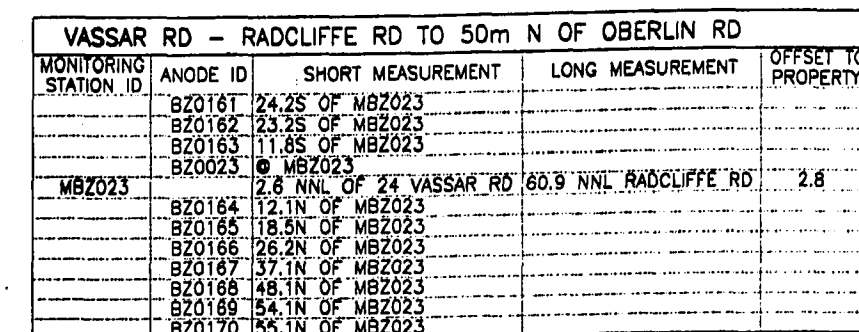
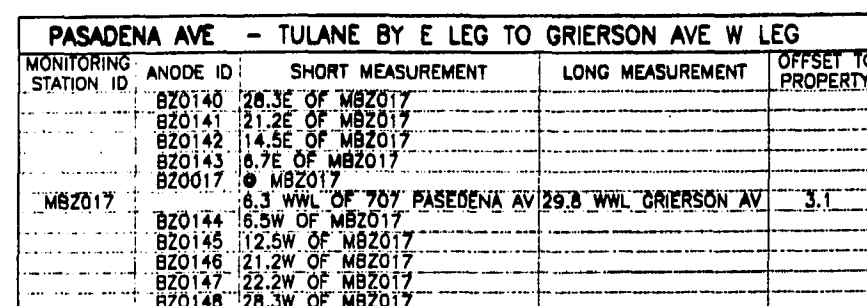
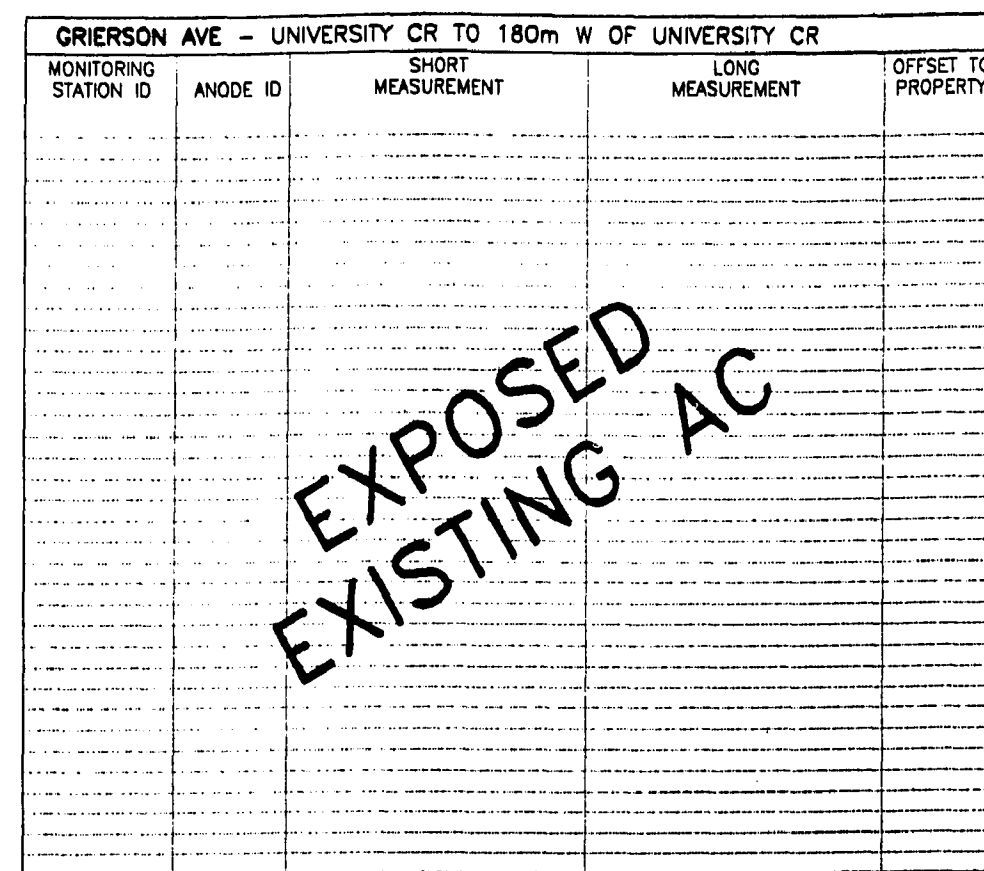
D6-11-423

 **THE CITY OF WINNIPEG**
WORKS AND OPERATIONS DIVISION
OPERATIONS DEPARTMENT - DISTRICT 6

KILKENNY DRIVE
STA. 1+00 TO RADCLIFFE ROAD

FILE DRAWING NUMBER

SHEET OF



CONSTRUCTION INFORMATION

CONTRACTOR: BEAVER SEWER & WATER SERVICES LTD
SUBSTANTIAL PERFORMANCE: AUGUST 29, 2003
CONSTRUCTION PERIOD: JUNE - AUGUST, 2003

MATERIAL LIST

ANODES

BARE ANODE	CANADA METAL CO. LTD
ANODE BACKFILL	BEL PECAL
PVC MONITORING STATION	W. D. SPECIALTY PLASTICS LTD

RECORD DRAWING	
DATE Y/M/D	04.01.13
DRAFTED BY	G.E.L.
FIELD INFO BY	G.E.L.
CHECKED BY	H.A.K.

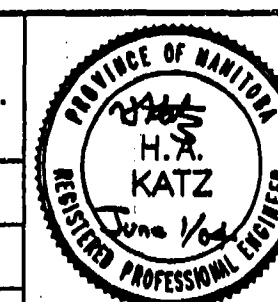
APECM
Certificate of Authorization
Wardrop Engineering Inc.
No. 195 Expiry: April 30, 2005

MAXIMUM SPACING	
PIPE DIAMETER	ANODE SPACING
150mm	12.0m
200mm	9.0m
250mm	7.0m

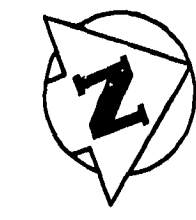
_____	SEWER	_____	_____	WATERMAIN	_____	LOCATION APPROVED UNDERGROUND STRUCTURES
_____	GAS	OMBZ01	_____	MONITORING STATION	OMBZ01	
_____	HYDRO	5"	_____	ANODE	_____	SUPV. U/G STRUCTURES DATE COMMITTEE
_____	M.T.S./CABLE	⊕	_____	HYDRANT	_____	
_____		•	_____	VALVE	_____	
_____		⊕	_____	REPAIR	⊕	
_____		▷	_____	REDUCER	_____	
_____		X	_____	COUPLING	_____	
_____		[	_____	PLUG	_____	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. CORRECTION OF EXISTENCE AND EXACT LOCATION OF ALL REPAIRS MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.
_____		⊕ BOB	_____	SURVEY BAR	_____	
EXISTING	LEGEND	PROPOSED	EXISTING	LEGEND	PROPOSED	

[illegible]

WARDROP		Engineering Inc	
DESIGNED BY G.E.L.		CHECKED BY H.A.K.	
DRAWN BY N.L.		APPROVED BY	
HOR. SCALE: 1:1000		RELEASED FOR CONSTRUCTION	
VERTICAL:			
DATE 03.04.10		DATE	

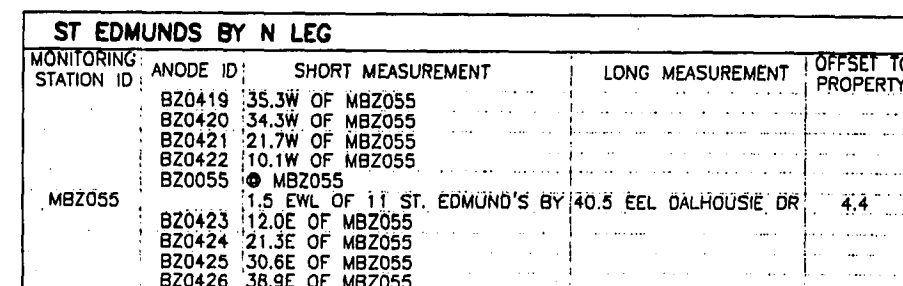


 THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT	
INSTALLATION OF CATHODIC PROTECTION MONITORING STATIONS AND ANODES ON CAST IRON WATERMAINS 2003 PROGRAM - AREAS BW, BY, BZ, BP, BQ & BR - CONTRACT NO. 17	
CITY DRAWING NUMBER D-8164	SHEET 9 OF 33
GRIERSON AVE-UNIVERSITY CR TO 180m W OF UNIVERSITY CR PASADENA AVE-TULANE BY E LEG TO GRIERSON AVE W LEG KILKENNY DR-KINGS DR TO 345m W OF KINGS DR VASSAR RD-RADCLIFFE RD TO 50m N OF OBERLIN RD RADCLIFFE RD-55m W OF VASSAR RD TO KILKENNY DR	
C-BZ102	

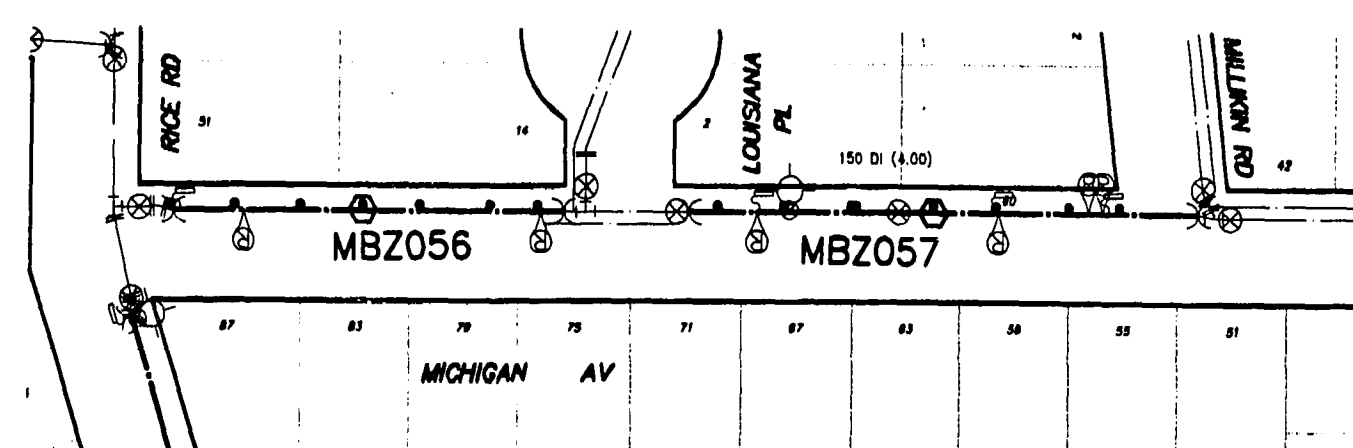


DALHOUSIE DR - ST EDMUNDS BY S LEG TO RICE RD				
MONITORING STATION ID	ANODE ID	SHORT MEASUREMENT	LONG MEASUREMENT	OFFSET PROPERTY
MB2048	BZ0331	23.3S OF MB2048		
	BZ0332	22.3S OF MB2048		
	BZ0333	12.4S OF MB2048		
	BZ0334	11.4S OF MB2048		
	BZ0047	0.5S OF MB2048		
	BZ0048	7.9 NNL OF 75 ST EDMUND'S BY	31.1 NNL ST. EDMUNDS BY - S. LEG	4.5
	BZ0335	0.5N OF MB2048		
	BZ0336	11.3N OF MB2048		
	BZ0336	12.3N OF MB2048		
	BZ0337	19.8N OF MB2048		
	BZ0338	20.8N OF MB2048		
	BZ0339	28.1N OF MB2048		
	BZ0340	29.1N OF MB2048		
	BZ0341	35.5N OF MB2048		
	BZ0342	36.5N OF MB2048		
	BZ0343	37.5N OF MB2048		
	BZ0344	41.3S OF MB2050		
	BZ0345	40.3S OF MB2050		
	BZ0346	29.2S OF MB2050		
	BZ0347	28.2S OF MB2050		
	BZ0348	18.4S OF MB2050		
	BZ0349	17.4S OF MB2050		
	BZ0350	11.8S OF MB2050		
	BZ0351	10.8S OF MB2050		
	BZ0049	0.5S OF MB2050		
MB2050		8.6 SSL OF RICE RD	27.4 SSL RICE RD	4.2
	BZ0050	0.5N OF MB2050		
	BZ0352	11.2N OF MB2050		
	BZ0353	12.2N OF MB2050		
	BZ0354	20.0N OF MB2050		

KILKENNY DR - 175m S OF COLINDALE CV TO RADCLIFFE RD				
MONITORING STATION ID	ANODE ID	SHORT MEASUREMENT	LONG MEASUREMENT	OFFSET TO PROPERTY
MBZ061	BZ0234	44.2N OF MBZ061		
	BZ0235	43.2N OF MBZ061		
	BZ0236	35.6N OF MBZ061		
	BZ0237	29.4N OF MBZ061		
	BZ0238	24.1N OF MBZ061		
	BZ0239	16.2N OF MBZ061		
	BZ0240	7.5N OF MBZ061		
	BZ0061	0 MBZ061		
		7.7>NNL OF B17 KILKENNY DR	63.7>NNL PRESTWOOD PL	5.0
	BZ0241	7.3S OF MBZ061		
	BZ0242	14.5S OF MBZ061		
	BZ0243	19.2S OF MBZ061		
	BZ0244	26.0S OF MBZ061		
	BZ0245	34.8S OF MBZ061		
	BZ0246	42.5S OF MBZ061		
MBZ060	BZ0247	48.5S OF MBZ061		
	BZ0248	57.1S OF MBZ061		
	BZ0249	63.9S OF MBZ061		
	BZ0250	64.9S OF MBZ061		
	BZ0251	72.2N OF MBZ060		
	BZ0252	71.2N OF MBZ060		
	BZ0253	65.7N OF MBZ060		
	BZ0254	58.7N OF MBZ060		
	BZ0255	50.5N OF MBZ060		
	BZ0256	41.5N OF MBZ060		
	BZ0257	32.9N OF MBZ060		
	BZ0258	27.6N OF MBZ060		
	BZ0259	18.9N OF MBZ060		
	BZ0260	17.9N OF MBZ060		
	BZ0261	18.6N OF MBZ060		
MBZ059	BZ0060	0 MBZ060		
		5.3>NNL OF B45 KILKENNY DR	47.5>NNL COLINDALE CV	4.6
	BZ0262	7.8S OF MBZ060		
	BZ0263	16.6S OF MBZ060		
	BZ0264	22.6S OF MBZ060		
	BZ0265	30.3S OF MBZ060		
	BZ0266	39.1S OF MBZ060		
	BZ0267	47.3S OF MBZ060		
	BZ0268	48.3S OF MBZ060		
	BZ0269	31.7N OF MBZ059		
	BZ0270	30.7N OF MBZ059		
	BZ0271	22.3N OF MBZ059		
	BZ0272	13.5N OF MBZ059		
	BZ0273	7.7N OF MBZ059		
	BZ0059	0 MBZ059		
MBZ058		0>NNL F B81 KILKENNY DR	31.3>NNL COLINDALE CV	4.4
	BZ0274	8.1S OF MBZ059		
	BZ0275	16.2S OF MBZ059		
	BZ0276	22.3S OF MBZ059		
	BZ0277	23.3S OF MBZ059		
	BZ0278	35.3S OF MBZ059		
	BZ0279	36.3S OF MBZ059		
	BZ0280	44.9S OF MBZ059		
	BZ0281	51.0S OF MBZ059		
	BZ0282	54.0N OF MBZ058		
	BZ0283	45.9N OF MBZ058		
	BZ0284	44.9N OF MBZ058		
	BZ0285	31.8N OF MBZ058		
	BZ0286	30.8N OF MBZ058		
	BZ0287	25.9N OF MBZ058		
MBZ057	BZ0288	14.8N OF MBZ058		
	BZ0289	13.8N OF MBZ058		
	BZ0290	7.1N OF MBZ058		
	BZ0058	0 MBZ058		
		4.5>NNL OF 917 KILKENNY DR	145.0>NNL COLINDALE CV	4.4
	BZ0291	8.6S OF MBZ058		
	BZ0292	14.6S OF MBZ058		
	BZ0293	20.2S OF MBZ058		
	BZ0294	28.4S OF MBZ058		



DALHOUSIE DR - RICE RD TO MILLIKIN RD				
MONITORING STATION ID	ANODE ID	SHORT MEASUREMENT	LONG MEASUREMENT	OFFSET PROPER
	BZ0356	28.6S OF MBZ052		
	BZ0357	27.6S OF MBZ052		
	BZ0358	19.4S OF MBZ052		
	BZ0359	18.4S OF MBZ052		
	BZ0360	10.4S OF MBZ052		
	BZ0361	9.4S OF MBZ052		
	BZ0051	1.5S OF MBZ052		
MBZ052		8.8 SSL OF 2 EMORY RD	33.6 SSL EMORY RD	4.3
	BZ0362	0.5N OF MBZ052		
	BZ0363	12.7N OF MBZ052		
	BZ0364	23.6N OF MBZ052		
	BZ0365	24.6N OF MBZ052		
	BZ0366	32.3N OF MBZ052		
	BZ0367	33.3N OF MBZ052		
	BZ0368	34.3N OF MBZ052		
	BZ0369	40.1S OF MBZ054		
	BZ0370	39.1S OF MBZ054		
	BZ0371	24.2S OF MBZ054		
	BZ0372	23.2S OF MBZ054		
	BZ0373	12.2S OF MBZ054		
	BZ0374	11.2S OF MBZ054		
	BZ0053	0.5S OF MBZ054		
MBZ054		6.0 SSL OF 2 MILLIKIN RD	27.1 SSL MILLIKIN RD	4.4
	BZ0054	0.5N OF MBZ054		
	BZ0375	10.1N OF MBZ054		
	BZ0376	11.1N OF MBZ054		
	BZ0377	18.1N OF MBZ054		
	BZ0378	19.1N OF MBZ054		

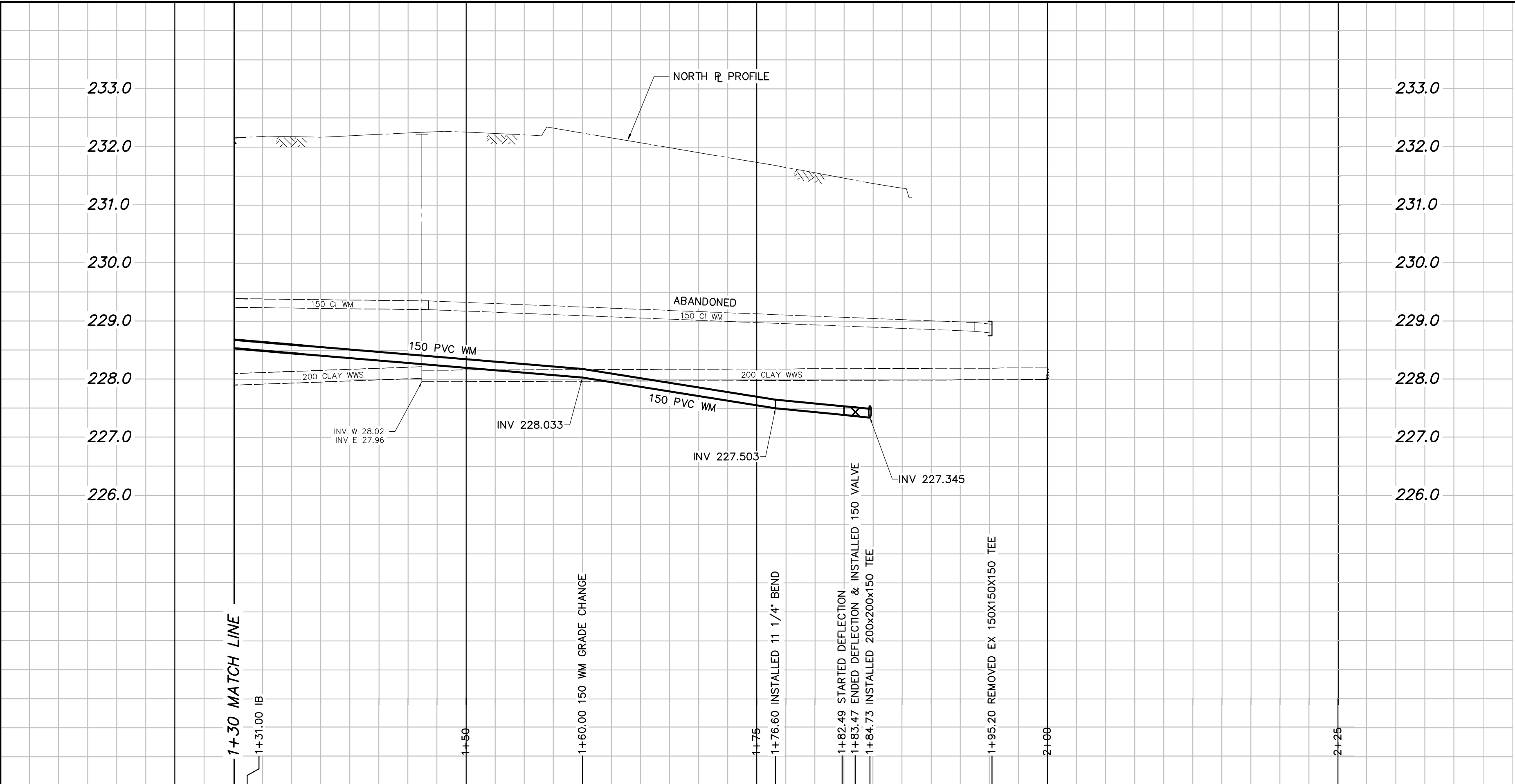


MATERIAL LIST

CHECKED BY H.A.K.

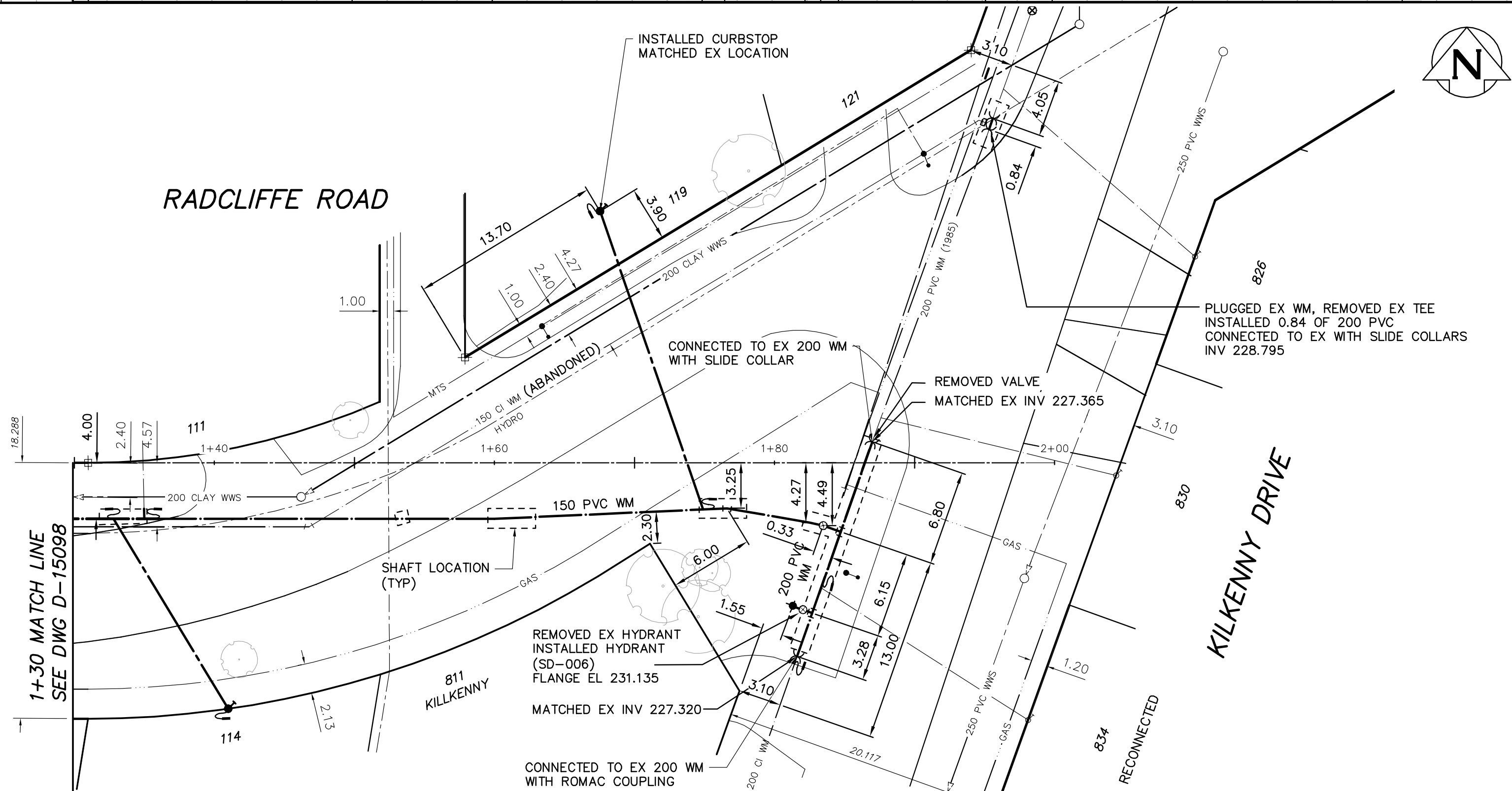


C-BZ104



MATERIALS LIST						
WATER						
ITEM	MANUFACTURER	MODEL	DIMENSION RATIO	PRESSURE CLASS	MATERIAL	TYPE
150, 200 WM PIPES	IPEX	BLUE BRUTE	18	235	PVC	AWWA C900
150, 200 FITTINGS	IPEX	BLUE BRUTE	18	235	PVC	INJECTION MOLDED
200 COUPLINGS	ROMAC INDUSTRIES	MACRO HP			DUCTILE IRON	
19 SERVICE PIPE	GREAT LAKES COPPER INC.	TYPE K			COPPER	FLARED END
19 CURB STOPS	CAMBRIDGE BRASS	202NL-H3H3			BRASS	MINNEAPOLIS
19 CORPORATION STOPS	CAMBRIDGE BRASS	301NL-A3H3			BRASS	
19 COUPLINGS	CAMBRIDGE BRASS	119NL-H3H3			BRASS	
GALVANIC ZINC ANODES	INTERPROVINCIAL CORROSION CONTROL CO.				ZINC	
150 GATE VALVES	MUELLER CANADA / MUELLER CO.	2361 SERIES			CAST IRON	RESILIENT SEATED GATE
150 HYDRANTS	CLOW CANADA / CLOW VALVE CO.	M67B - BRIGADIER			CAST IRON	

WATER SERVICE INFORMATION					
ADDRESS	SIZE (mm) MATERIAL (STREET)	SIZE (mm) MATERIAL (PROP.)	SHORT & LONG MEASUREMENT	CORP. LOCATION	REMARKS
111 RADCLIFFE RD RESIDENTIAL	20 COPPER	20 COPPER	17.16 W/ELL 16.625 E/EL VASSAR	0.16 E/SC	RECONNECTED UNION 3.4 S/PL
114 RADCLIFFE RD RESIDENTIAL	20 COPPER	20 COPPER	10.02 E/WLL 22.273 E/EL VASSAR	8.2 W/SC	RENEWED TO PL
119 RADCLIFFE RD RESIDENTIAL	20 COPPER	20 COPPER	13.67 E/WLL 28.607 W/WL KILKENNY	6.9 E/SC	RENEWED TO 3.9 N/PL
834 KILKENNY RD RESIDENTIAL	20 COPPER	20 COPPER	8.44 S/NLL 109.002 N/NL PRESTWOOD	4.2 N/SC	RECONNECTED



RECORD DRAWING

DATE	YY.MM.DD	19.01.25
DRAFTED BY		NL
FIELD INFO BY		ML
CHECKED BY		KJM/ML

DATE OF SUBSTANTIAL PERFORMANCE:
September 5, 2018
CONSTRUCTION PERIOD:
June 18, 2018 TO

CONTRACTOR:
AL-SAN UNDERGROUND Ltd.

NOTE: CHAINAGE IS ALONG NORTH R
EXTENSION OF RADCLIFFE ROAD.

NOTE: ALL VALVES
CLOCKWISE TO CLOSE



METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

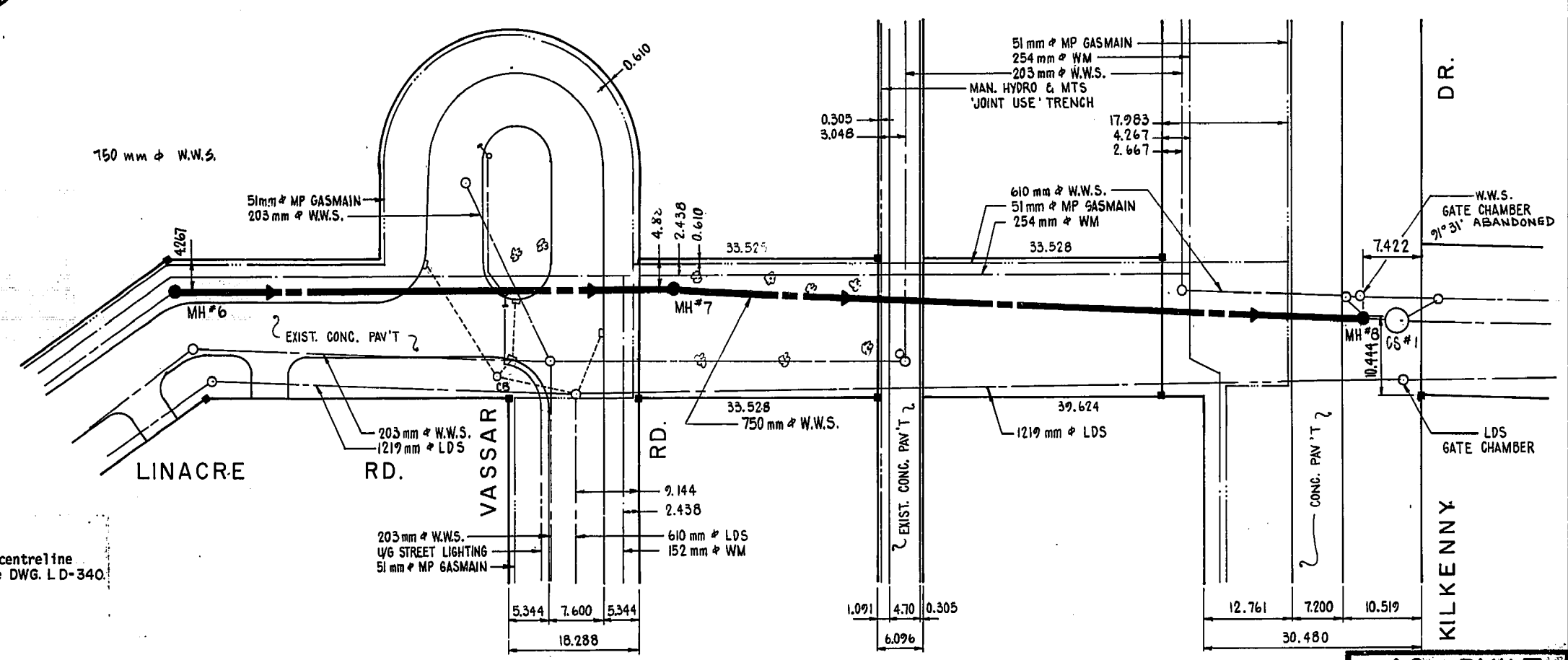
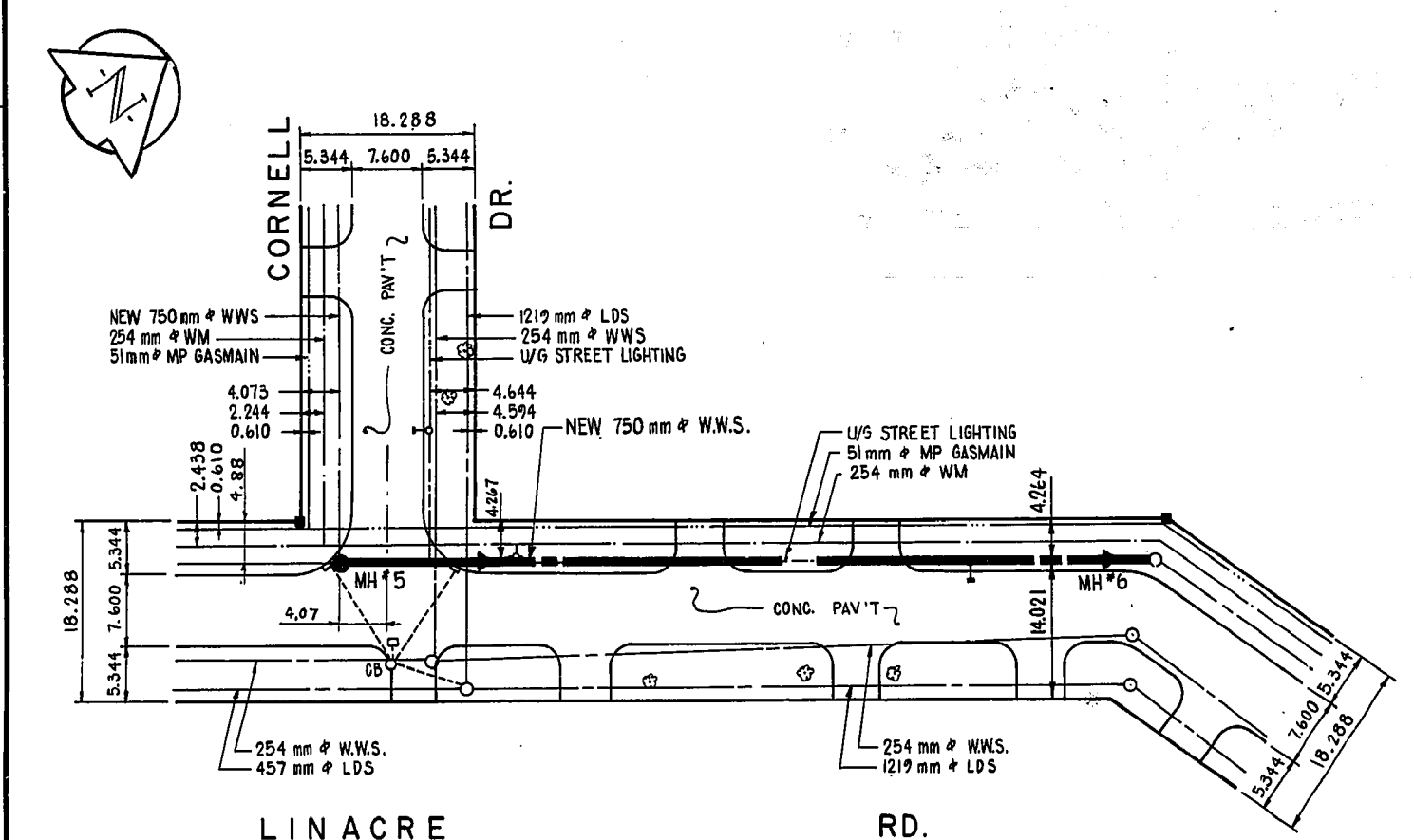
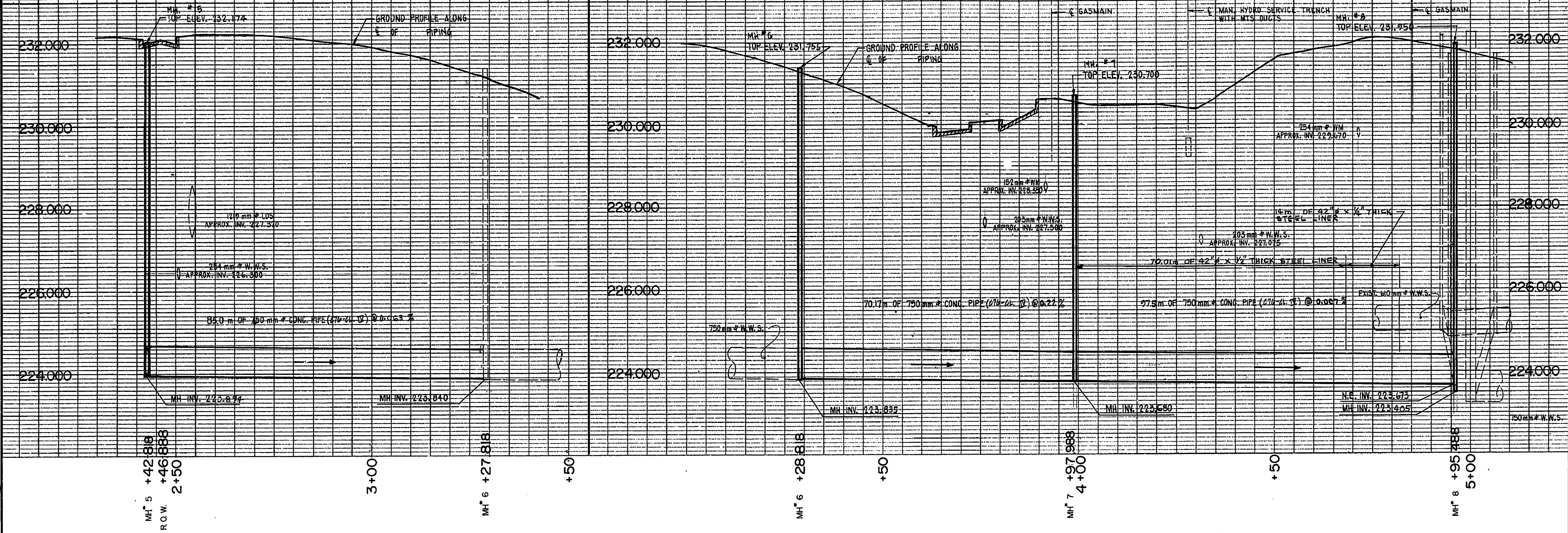
**ENGINEERS
GEOSCIENTISTS
MANITOBA**
Certificate of Authorization
Tetra Tech Canada Inc.
No. 6499

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 TO RECORD DRAWING	19/01/25	KJM
1	ISSUED FOR CONSTRUCTION	18/06/06	KJM
0	ISSUED FOR TENDER	18/04/17	KJM
No.	REVISIONS	DATE	BY

TETRA TECH			
DESIGNED BY	MAL	CHECKED BY	TRC
DRAWN BY	GMD	APPROVED BY	KJM
SCALE:	HORIZONTAL 1:250 VERTICAL 1:50	RELEASED FOR CONSTRUCTION	KAS ZUREK
DATE	2019 02 20	DATE	18/04/16

ENGINEER'S SEAL
ORIGINAL DRAWING REVISION "2" SEALED BY K.J. McRAE 19/01/25
CONSULTANT DRAWING NUMBER 1800120500-DWG-C0014

THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT ENGINEERING DIVISION	
2018 WATERMAIN RENEWALS CONTRACT 8 RADCLIFFE ROAD 12m EAST OF VASSAR ROAD TO KILKENNY DRIVE	
SHEET 15 OF 17 CITY DRAWING NUMBER D-15099	

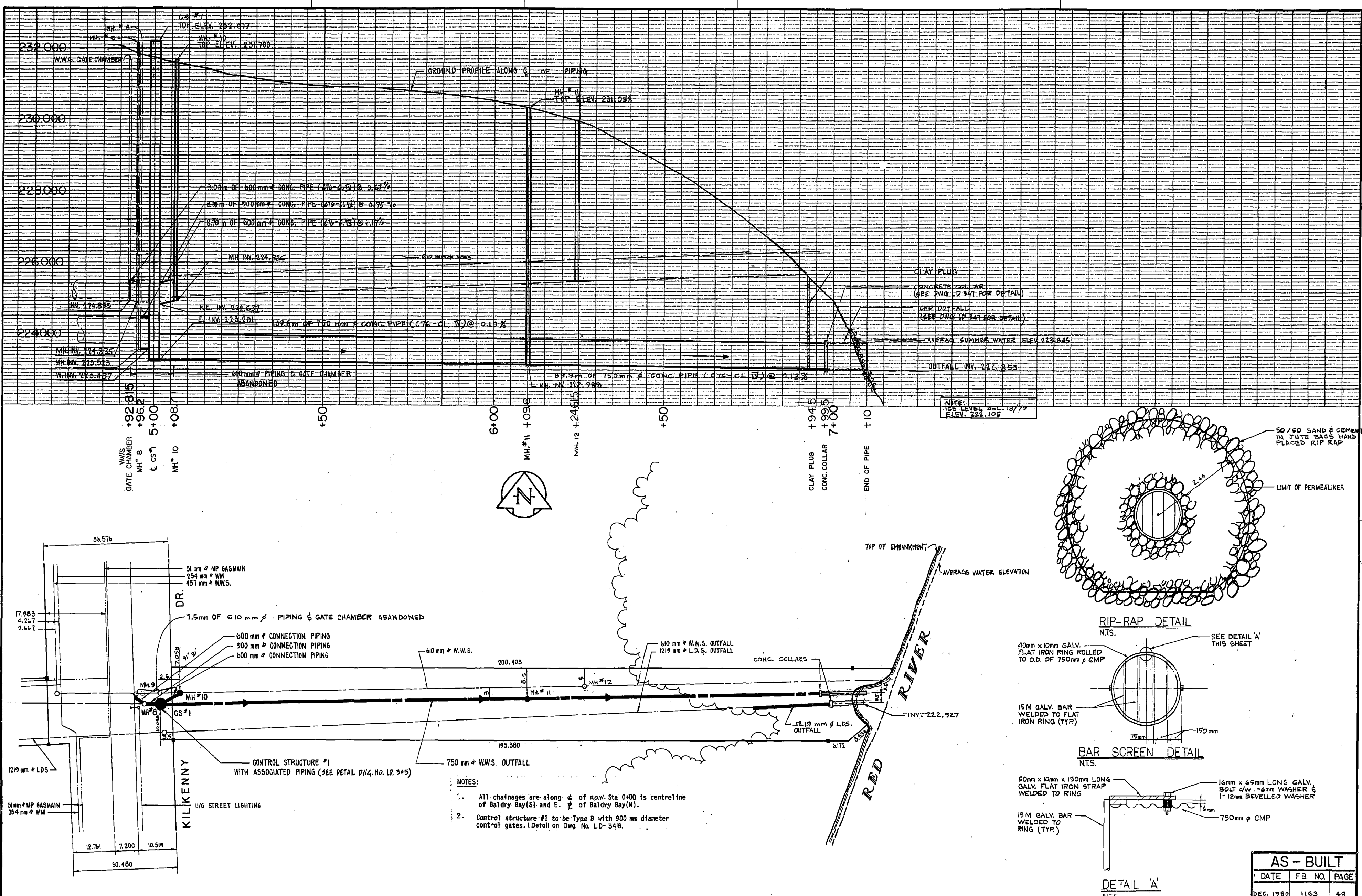


NOTES:
 1. All chainages are along the R.O.W. Sta 0+00 is centreline of Baldry Bay(S) and E. of Baldry Bay(W). See DWG. LD-340.

NOTE: ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SPECIFIED.

EXISTING FEATURES SEWER, STORM RELIEF SEWER WATERMAIN GAS WINNIPEG HYDRO MANITOBA HYDRO STREET LIGHTING MANITOBA TELEPHONE SYSTEM TRAFFIC SIGNALS C.N.R. TELEGRAPHS WINNIPEG HYDRO STEAM HEAT WINNIPEG CENTRAL HTG. CO. POLE FENCE TREE SIGN VALVE		NEW FEATURES SEWER, STORM RELIEF SEWER WATERMAIN MANHOLE CATCH BASIN & LEAD DIRECTION OF FLOW CURB INLET COMBINATION INLET CURB INLET & LEAD ALL ELEVATIONS ARE BASED ON GEODETIC DATUM (1929 ADJ.) FIELD BOOK(S) 1194 REC'D PLAN(S) 9020 BENCH MARK (ELEVATION & DESCRIPTION) SEE DRAWING LD 79-		UNDERGROUND STRUCTURES MAIN LINE VALVE, TEE & BEND VALVE CHAMBER HYDRANT & CONNECTING VALVE CULVERT (CMP) ROAD EDGE & CURB SIDEWALK LOCATIONS 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.		PROVINCE OF MANITOBA C.D. TORPEY REGISTERED ENGINEER		W.L. WARDROP & ASSOCIATES LTD. ENGINEERING CONSULTANTS DESIGNED BY CDT DRAWN BY GAM CHECKED BY WRD DATE AUG., 1979 APPROVED BY		THE CITY OF WINNIPEG WORKS & OPERATIONS DEPARTMENT WATERWORKS, WASTE & DISPOSAL DIVISION		WASTEWATER RELIEF SEWER LINACRE RD. - CORNELL DR. TO KILKENNY DR. AUTHORIZED BY SCALE HORIZ. 1:500 VERT. 1:50		DATE 79-09-26 DRAWING NO. LD-341	
REVISIONS No. 1 AS BUILT COMPLETED No. 0 ISSUED FOR TENDER No. 0 ISSUED FOR APPROVAL		DATE DEC./80 SEPT./79 SEPT./79		APP. CDT CDT CDT											

AS-BUILT
 DATE DEC. 1980
 FB. NO. 1163
 PAGE 47



NOTE: ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SPECIFIED.

EXISTING FEATURES

- SEWER, STORM RELIEF SEWER
- WATERMAIN
- GAS
- WINNIPEG HYDRO
- MANITOBA HYDRO
- STREET LIGHTING
- MANITOBA TELEPHONE SYSTEM
- TRAFFIC SIGNALS
- C.R.R. TELEGRAPHS
- WINNIPEG HYDRO STEAM HEAT
- WINNIPEG CENTRAL HTG. CO.
- POLE
- FENCE
- TREE
- SIGN
- VALVE

NEW FEATURES

- SEWER, STORM RELIEF SEWER
- WATERMAIN
- MANHOLE
- CATCH BASIN & LEAD
- DIRECTION OF FLOW
- CURB INLET
- COMBINATION INLET
- CURB INLET & LEAD
- MAIN LINE VALVE
- TEE & BEND
- VALVE CHAMBER
- HYDRANT & CONNECTING VALVE
- CULVERT (CMP)
- ROAD EDGE & CURB
- SIDEWALK

UNDERGROUND STRUCTURES

LOCATIONS 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	APP.
1	AS BUILT COMPLETED	DEC/80	CDT
0	ISSUED FOR TENDER	SEPT/79	CDT
0	ISSUED FOR APPROVAL	SEPT/79	CDT

W.L. WARDROP & ASSOCIATES LTD.
ENGINEERING CONSULTANTS

DESIGNED BY	CDT	DRAWN BY	GAM
CHECKED BY	WRD	DATE	AUG., 1979
APPROVED BY			

THE CITY OF WINNIPEG

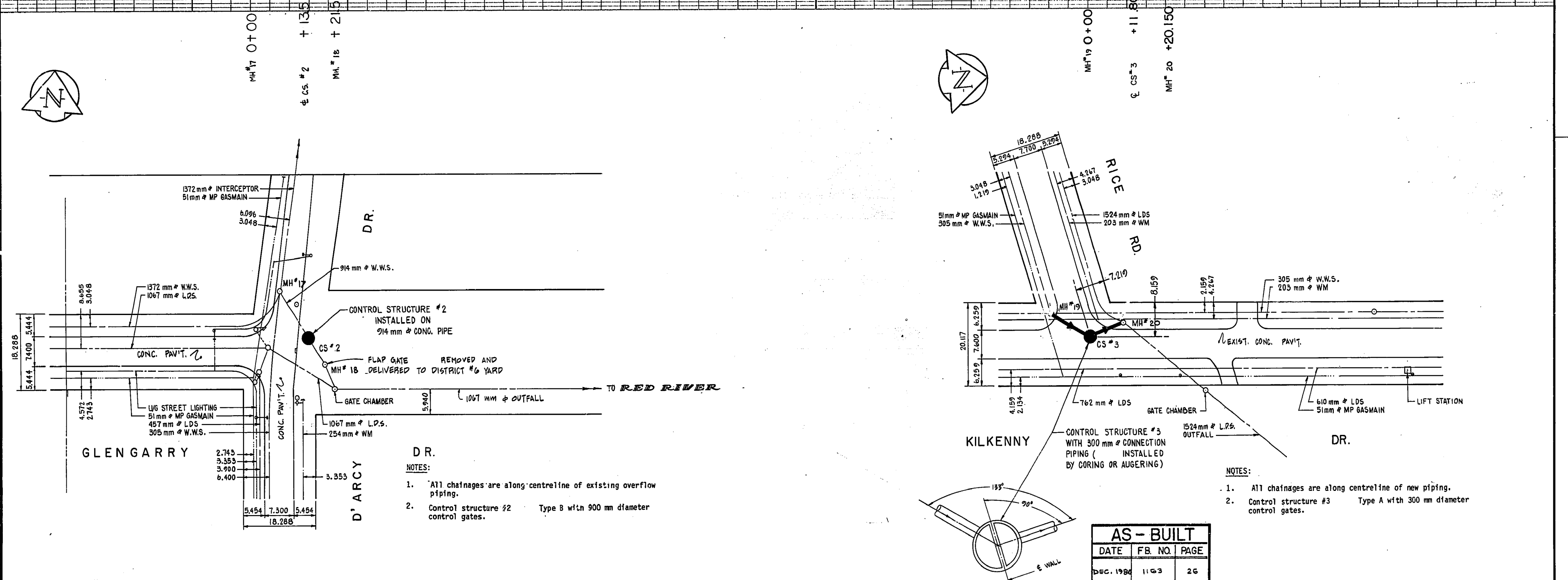
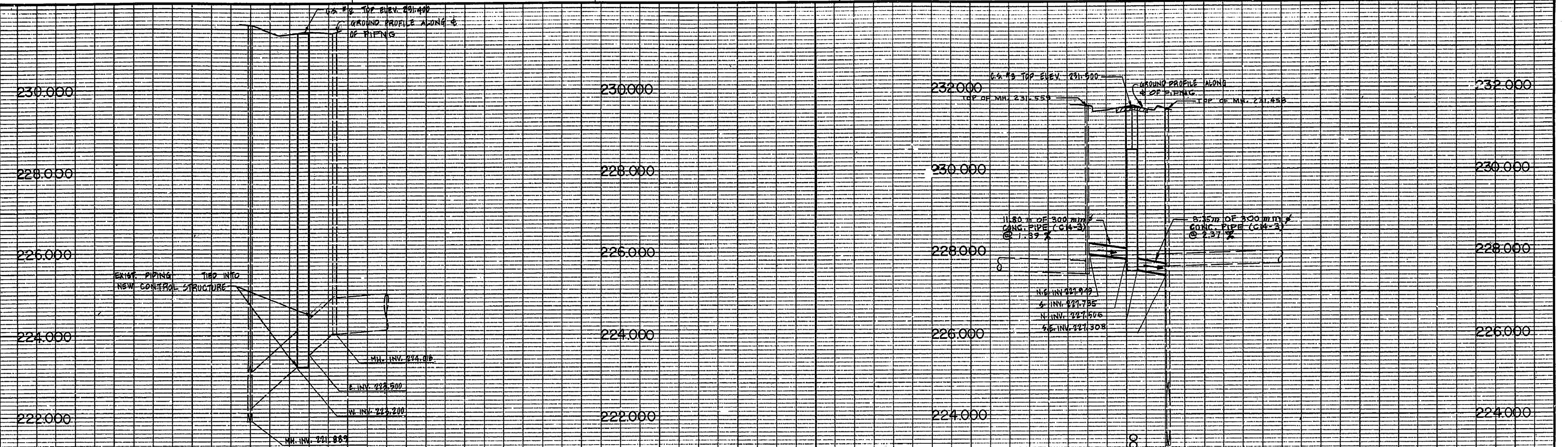
WORKS & OPERATIONS
DEPARTMENT

WATERWORKS, WASTE &
DISPOSAL DIVISION

WASTEWATER RELIEF SEWER
EASEMENT - KILKENNY DR.
TO RED RIVER

AUTHORIZED BY	DATE
	79-09-26
SCALE	DRAWING NO.
HORIZ. 1:500 VERT. 1:50	LD-342

AS - BUILT		
DATE	FB. NO.	PAGE
DEC. 1980	1163	48



EXISTING FEATURES

- SEWER, STORM RELIEF SEWER
- WATERMAIN
- GAS
- WINNIPEG HYDRO
- MANITOBA HYDRO
- STREET LIGHTING
- MANITOBA TELEPHONE SYSTEM
- TRAFFIC SIGNALS
- C.N.R. TELEGRAPHS
- WINNIPEG HYDRO STEAM HEAT
- WINNIPEG CENTRAL HTG. CO.
- POLE
- FENCE
- TREE
- SIGN
- VALVE

NEW FEATURES

- SEWER, STORM RELIEF SEWER
- WATERMAIN
- MANHOLE
- CATCH BASIN & LEAD
- DIRECTION OF FLOW
- CURB INLET
- COMBINATION INLET
- CURB INLET & LEAD
- MAIN LINE VALVE, TEE & BEND
- VALVE CHAMBER
- HYDRANT & CONNECTING VALVE
- CULVERT (C.M.P.)
- ROAD EDGE & CURB
- SIDEWALK

ALL ELEVATIONS ARE BASED ON GEODETIC DATUM (1929 ADJ.) FIELD BOOK(S)

BENCH MARK (ELEVATION & DESCRIPTION)

AS SHOWN ABOVE

UNDERGROUND STRUCTURES

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No.	REVISIONS	DATE	APP.
1	AS BUILT COMPLETED	DEC/80	CDT
0	ISSUED FOR TENDER	SEPT/79	CDT
0	ISSUED FOR APPROVAL	SEPT/79	CDT

W.L. WARDROP & ASSOCIATES LTD.
ENGINEERING CONSULTANTS

DESIGNED BY: CDT
CHECKED BY: WRD
APPROVED BY: [Signature]

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

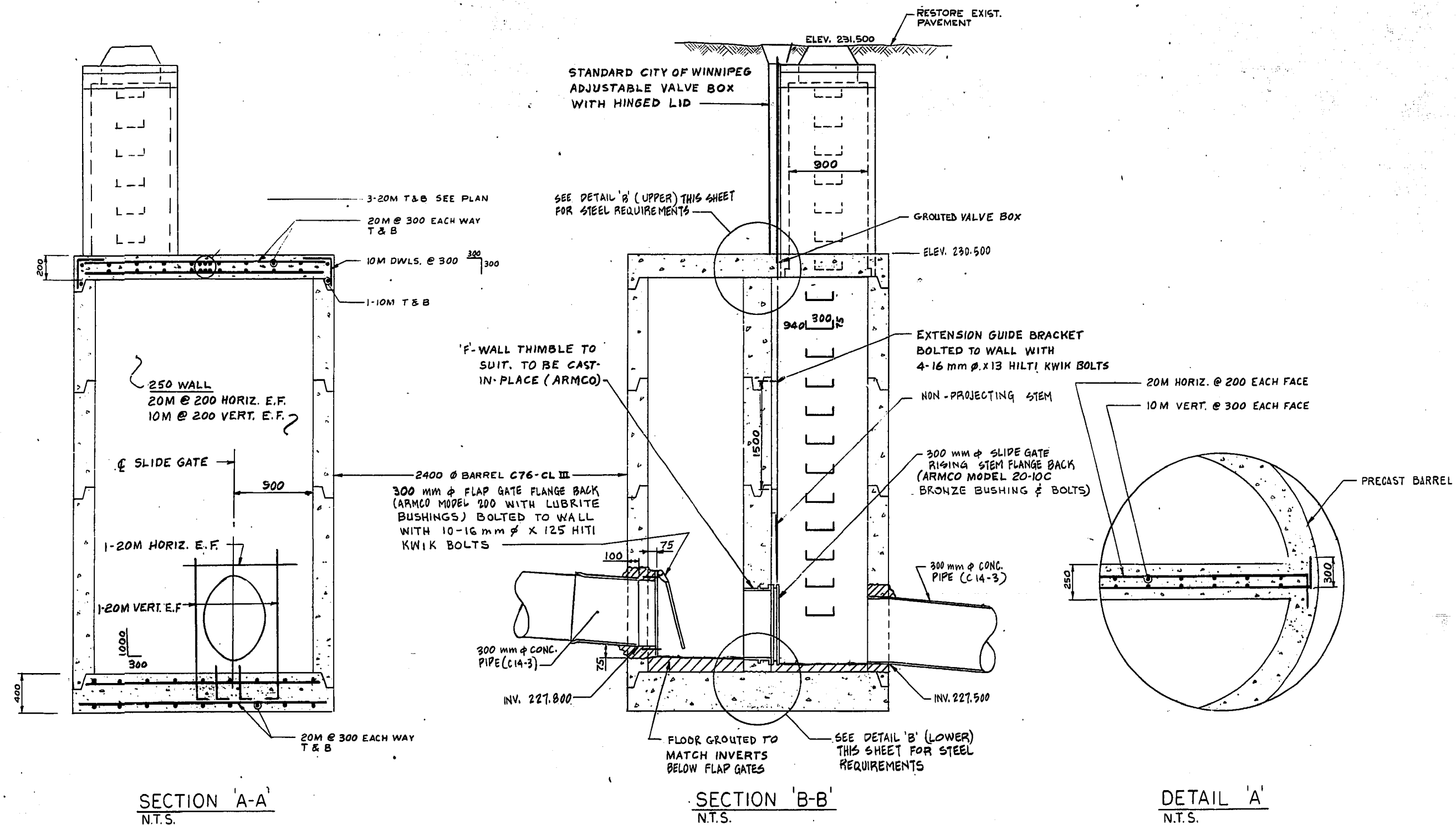
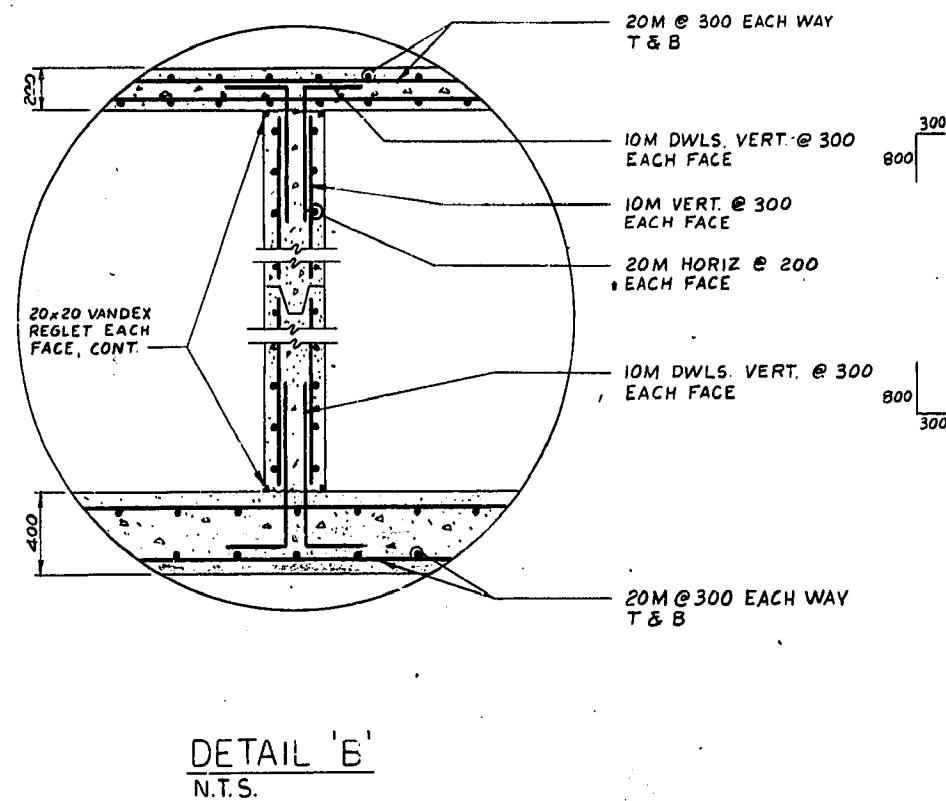
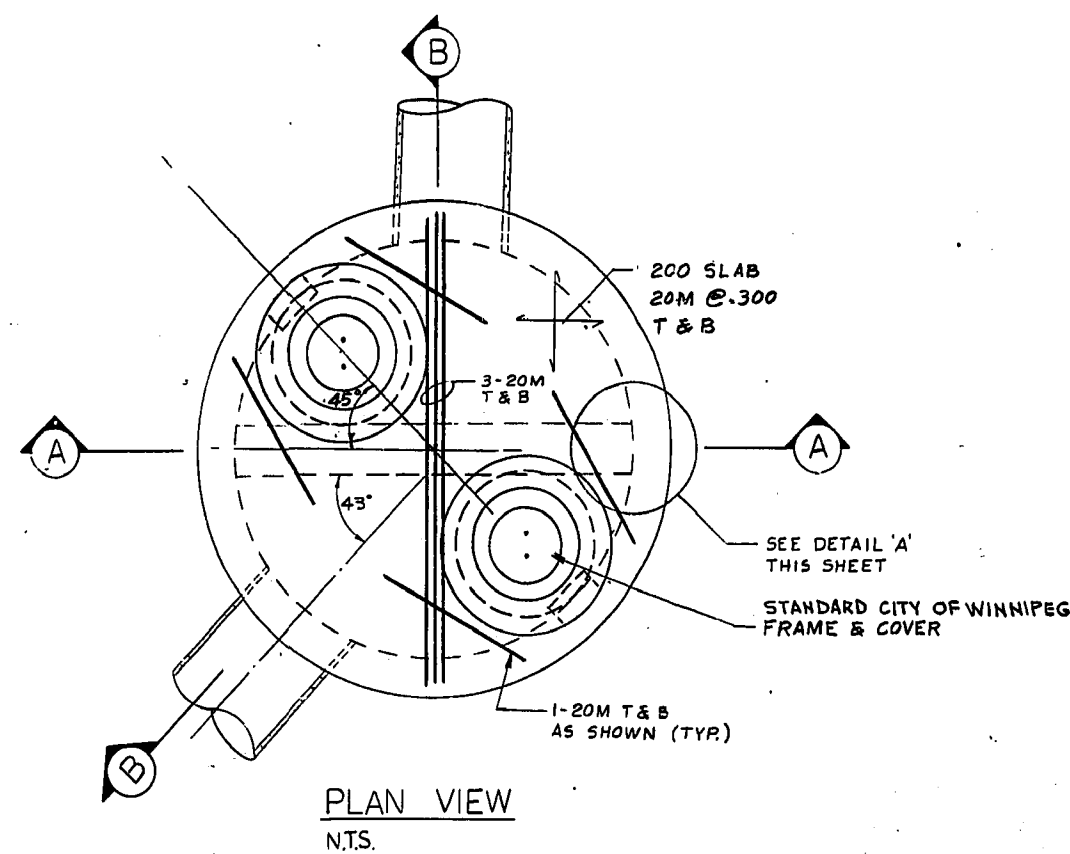
CONTROL STRUCTURE #2
GLENGARRY DR. AT D'ARCY DR.

CONTROL STRUCTURE #3
KILKENNY DR. AT RICE RD.

AUTHORIZED BY: [Signature]
DATE: 79-09-26

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

DRAWING NO. LD-344



NOTES:

I. Precast Pipe

1. Precast pipe used for the wall of the control structures was C76-CL III, conforming to ASTM C76, complete with 20 mm diameter galvanized ladder rungs as indicated. Cement sulphate resistant cement Type 50, conforming to CAN 3-A5-M77.
2. Joint gaskets were RAM-NEK

II. Cast-In-Place Concrete

1. All materials and workmanship did conform to CAN 3-A23.1-77.
2. Cement was sulphate resistant cement Type 50, conforming to CAN 3-A5-M77.
3. Concrete:
 - Minimum compressive strength @ 28 days 30 Mpa
 - Exposure class B
 - Maximum aggregate size 20 mm
 - Slump 80 mm $\pm$ 20 mm
4. Reinforcing steel did conform to CSA G30.12-M1977, Grade 400.
5. Reinforcing steel in accordance with latest ACI Detailing Manual.
6. Concrete cover to reinforcing was as follows:
 - Unformed surface in contact with earth 75 mm
 - Wall and slab surfaces 50 mm
7. All slab surfaces did receive a float finish.

III. Miscellaneous Metal and Structure Steel

1. All structural steel shapes were G40.21 Grade 44W material.
2. Welding did conform to CSA W59. Welders CNB approved.
3. Fabrication done in accordance with CSA S16.
4. All steel shapes, grating, checker plate and bolts were hot dip galvanized with a minimum zinc coating of 600 gm/m².
5. Where field welding was necessary or surfaces were scratched or burnt, steel touched up with 2 coats of "Mobilzinc 4" paint.
6. Checker plates were 6 mm thick and had a skid resistant raised pattern.
7. Concrete expansion anchors were cadmium plated Hilti Kwik bolts

IV. Grout

1. Grout was Sternson's M-Bed or approved equal.
2. Grouted all openings after pipes, conduits and gates are in place as required.
3. Grouting was in accordance with manufacturer's instructions.

V. Control Gates

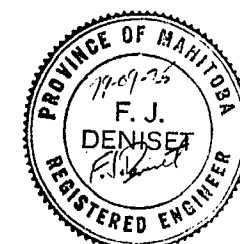
1. All flap gates have spigot backs, bronze hinge bolts and bronze bushed hinges. (Armco Model 200 with Lubrite bushings)
2. Slide gates have flange backs and bronze seat facings and lift nuts. All gates were supplied with non-projecting stem extensions and the appropriate length thimble for mounting. (Armco Model 20-10C)

NOTE: ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.

UNDERGROUND STRUCTURES

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No.	REVISIONS	DATE	APP.
1	AS BUILT COMPLETED	DEC. /80 CPT	
0	ISSUED FOR TENDER	SEPT. 79 CPT	
0	SUBMITTED FOR APPROVAL	SEPT. 79 CPT	

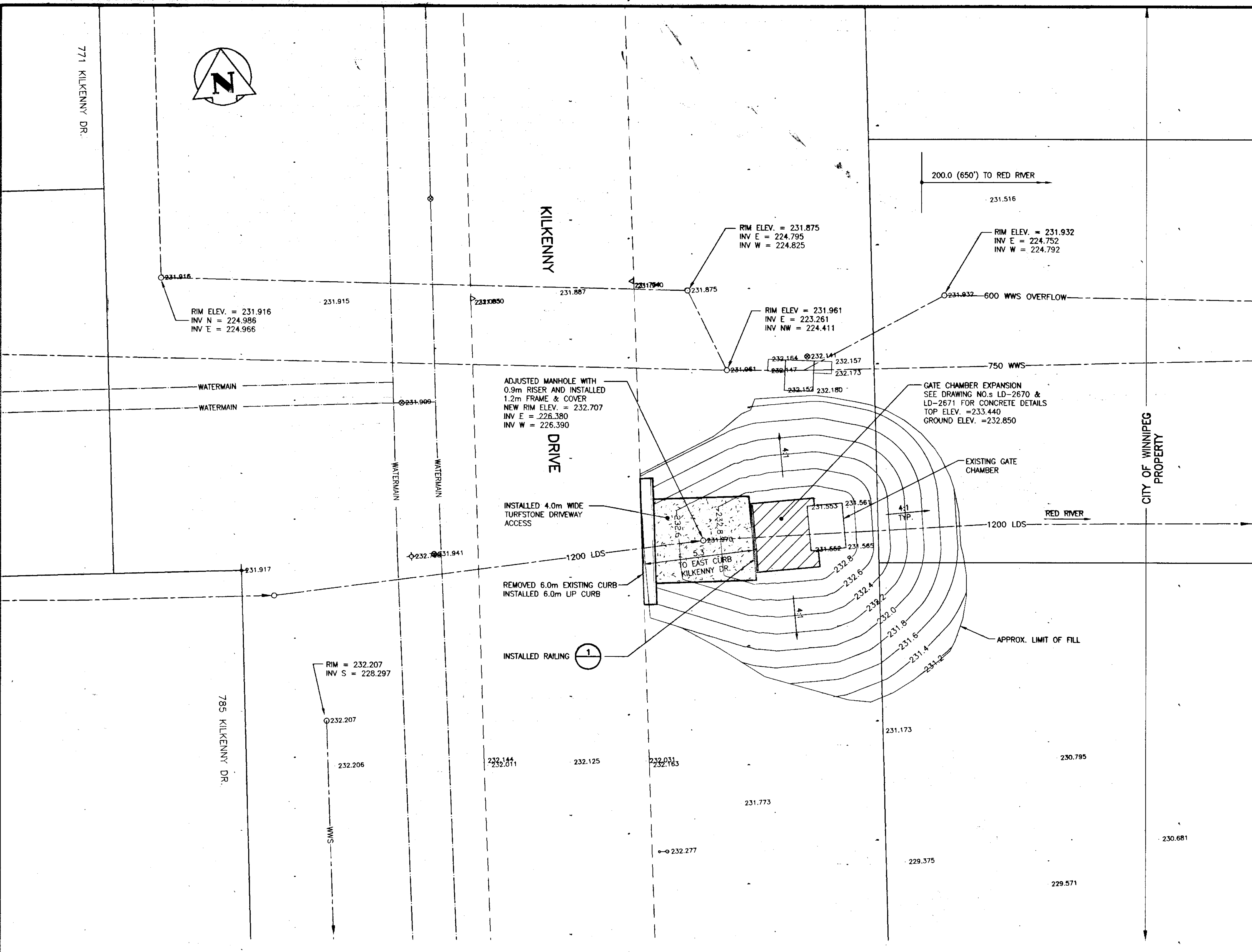
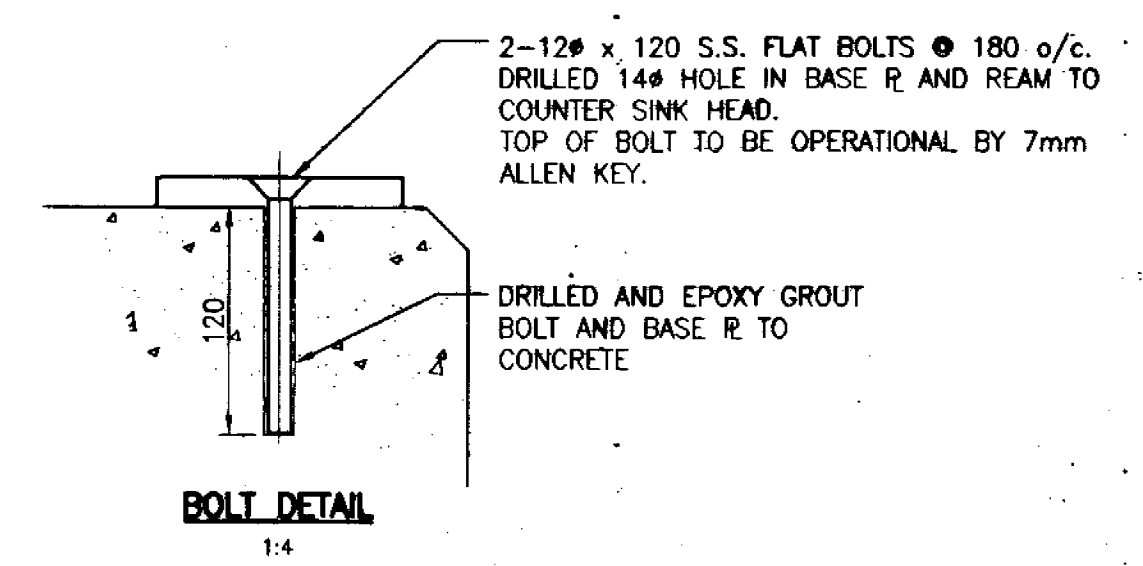
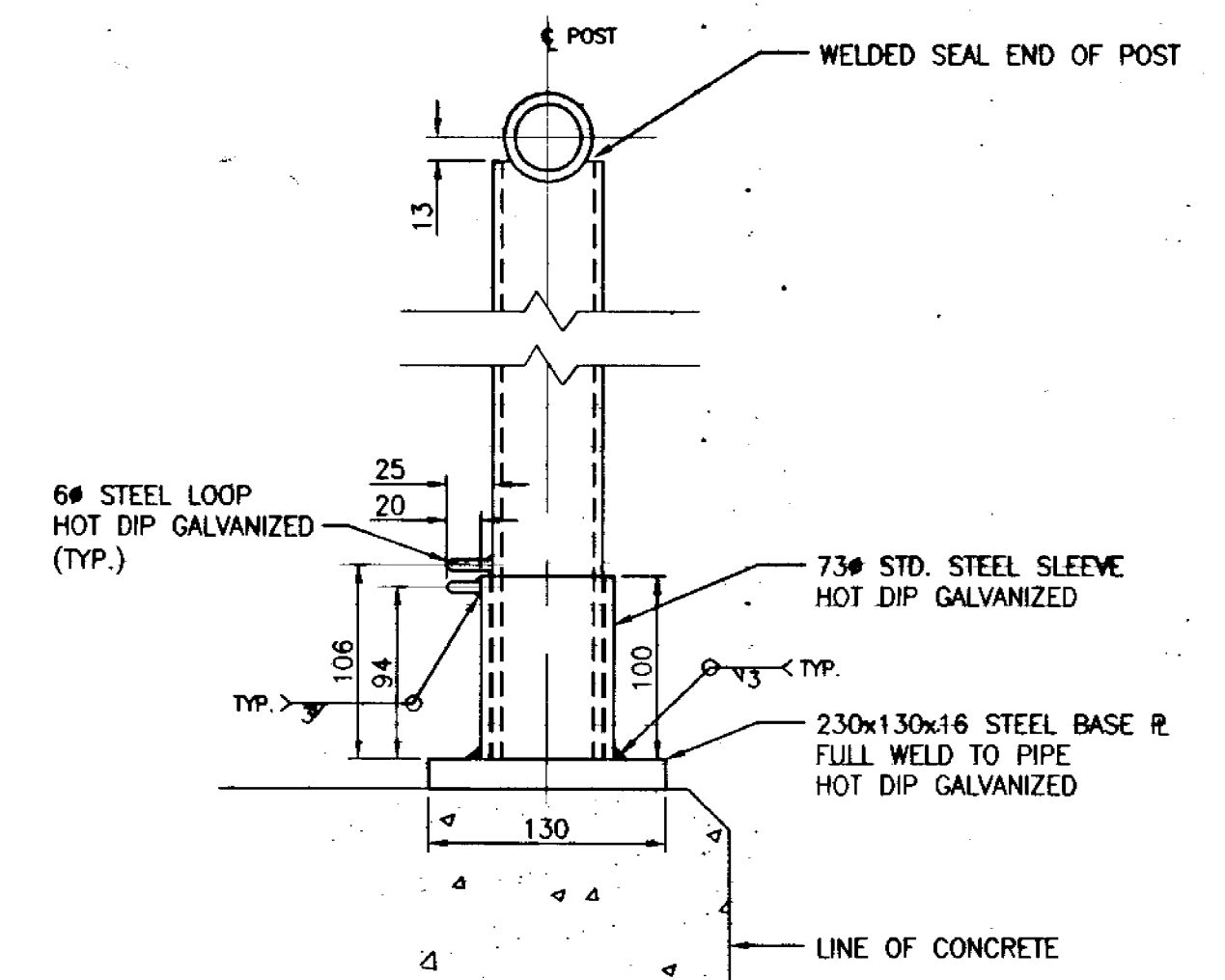
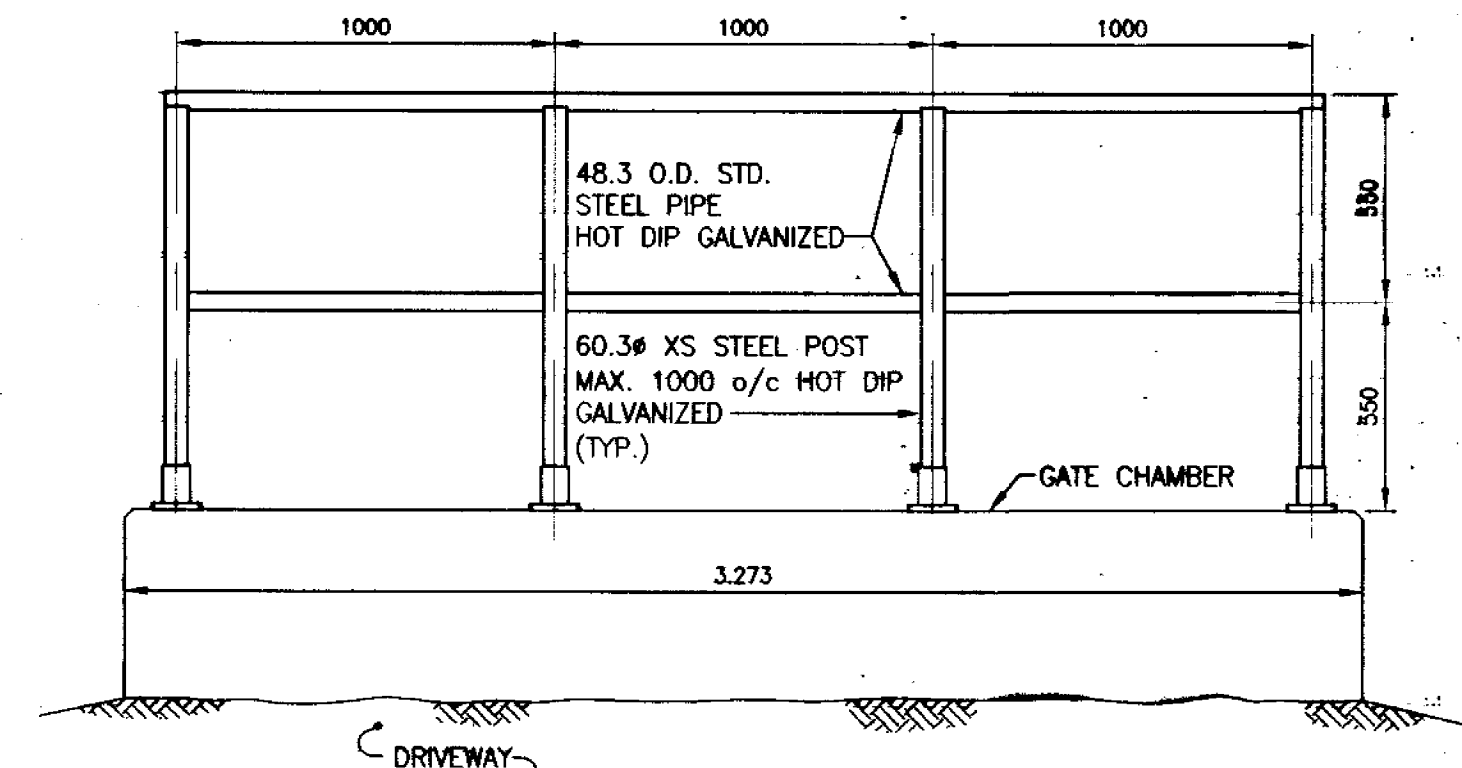
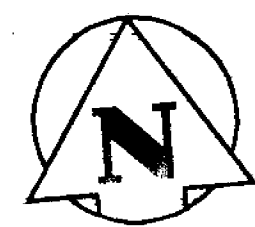


W.L. WARDROP & ASSOCIATES LTD. ENGINEERING CONSULTANTS WINNIPEG - THUNDER BAY - REGINA - SASKATOON - EDMONTON	
DESIGNED BY FJD	DRAWN BY SB, GAM
CHECKED BY WRD	DATE SEPT., 1979
APPROVED BY <i>[Signature]</i>	DATE

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

CONTROL STRUCTURE #3 DETAILS	
AUTHORIZED BY <i>[Signature]</i>	DATE 79-09-26
SCALE N.T.S.	DRAWING NO. LD-346

AS - BUILT		
DATE	FB. NO.	PAGE
DEC, 1980	-	-



BENCHMARK
83R544 - S. Side Kilkenny Dr. @ Patricia Ave.,
Tbt on top of 0.05m dia. x 2.4m iron pipe,
7.5m S. of asphalt Pav't. of Kilkenny Dr.
produced from the E. & 0.6m E. of E. wall of
attached garage of No. 737 Kilkenny Dr.

- METAL FABRICATIONS:**
1. PROVIDED SHOP DRAWINGS BEARING SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA PRIOR TO CONSTRUCTION.
 2. MATERIAL: GALVANIZED STEEL
 3. WELDING: STEEL TO CSA W59-M1989
 4. STEEL SECTIONS AND PLATES: TO CAN/SCA-040.21-M92 GRADE 300 W
 5. STEEL PIPE: TO ASTM A53
 6. BOLTS AND ANCHOR BOLTS: TO ASTM A307-76B FOR STEEL

CONSTRUCTION COMPLETION DATE - MAY 2003

150 WM	WATERMAIN	150 WM	HYDRO	150 WM	HYDRO
◇	HYDRANT	◇	M.T.S.	◇	M.T.S.
○	VALVE	○	CONCRETE	○	CONCRETE
300 LDS	LAND DRAINAGE SEWER	300 LDS	ASPHALT	300 LDS	ASPHALT
250 WWS	WASTE WATER SEWER	250 WWS	SIDEWALK	250 WWS	SIDEWALK
○	MANHOLE	○	PROPERTY LINE	○	PROPERTY LINE
□	CATCH BASIN	□	SURVEY BAR	□	SURVEY BAR
▽	CURB INLET	▽	DITCH	▽	DITCH
+	JUNCTIONS	+	ELEVATION	+	ELEVATION
+	CULVERT	+		+	
+	GAS	+		+	
EXISTING	LEGEND-PLAN	PROPOSED	EXISTING	LEGEND-PLAN	PROPOSED

LOCATION APPROVED UNDERGROUND STRUCTURES

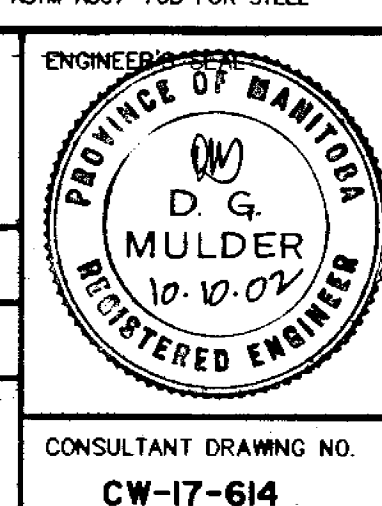
SUPV. U/G STRUCTURES COMMITTEE DATE

NOTE:
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NO.	REVISIONS	DATE	BY
1	REVISED AS CONSTRUCTED	11.08.03	O.S.

Stantec Consulting Ltd.
905 Waverley Street, Winnipeg, Manitoba
Tel 204-489-5900 Fax 204-453-9012

DESIGNED BY	D.G.M.	CHECKED BY	D.G.M.
DRAWN BY	S.R., O.S.	APPROVED BY	E.L.W.
HOR. SCALE:	1:100	RELEASED FOR CONSTRUCTION:	
VERTICAL:		DATE	AUGUST, 2002



THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
ENGINEERING DIVISION

2002 OUTFALL GATE CHAMBER UPGRADES
RADCLIFFE ROAD

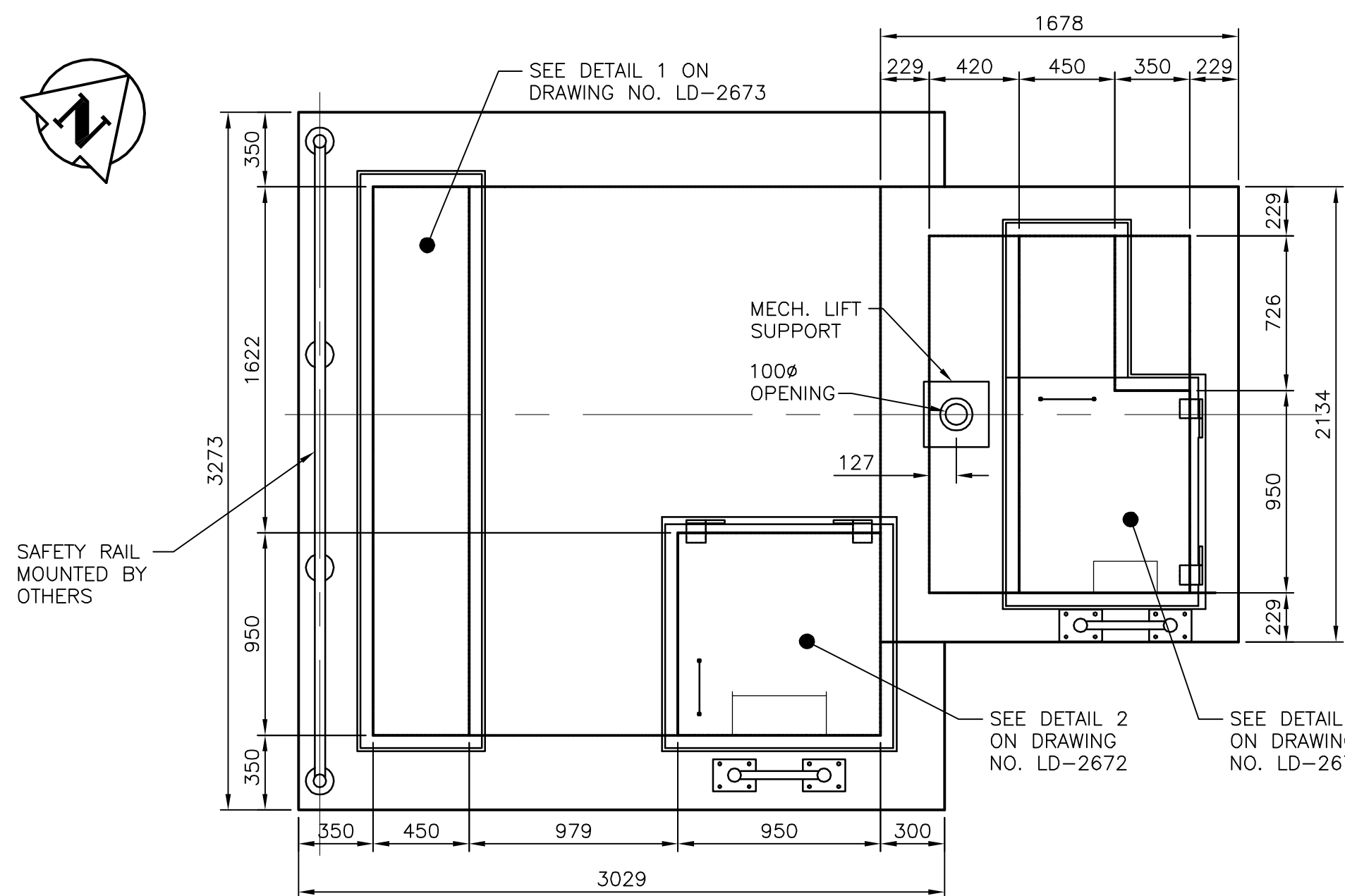
SHEET 17 OF 26
CAD FILE DRAWING NUMBER
RADCLIFFE-SITE.DWG
CITY DRAWING NUMBER
LD-2669

CONSULTANT DRAWING NO.
CW-17-614

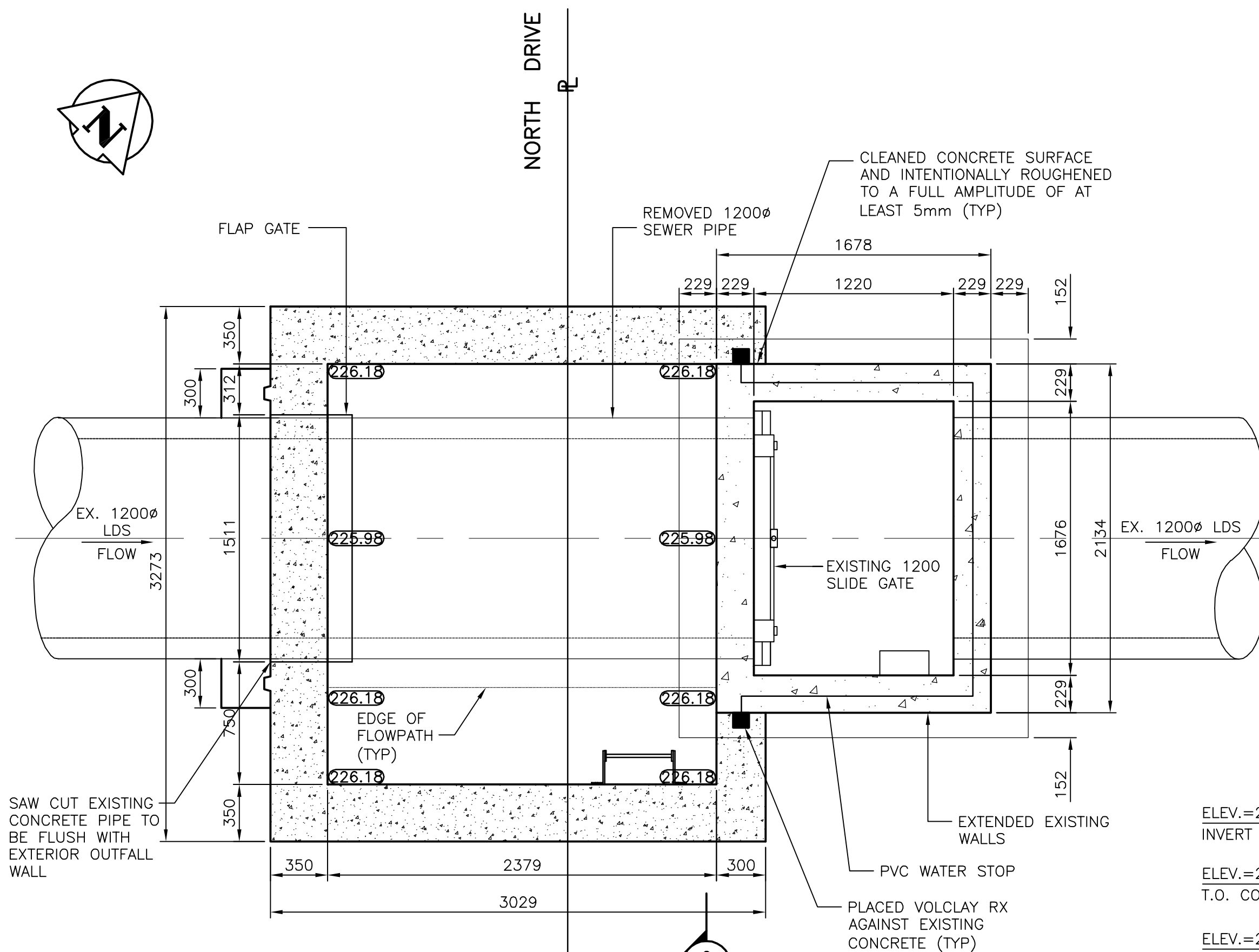
SITE PLAN

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

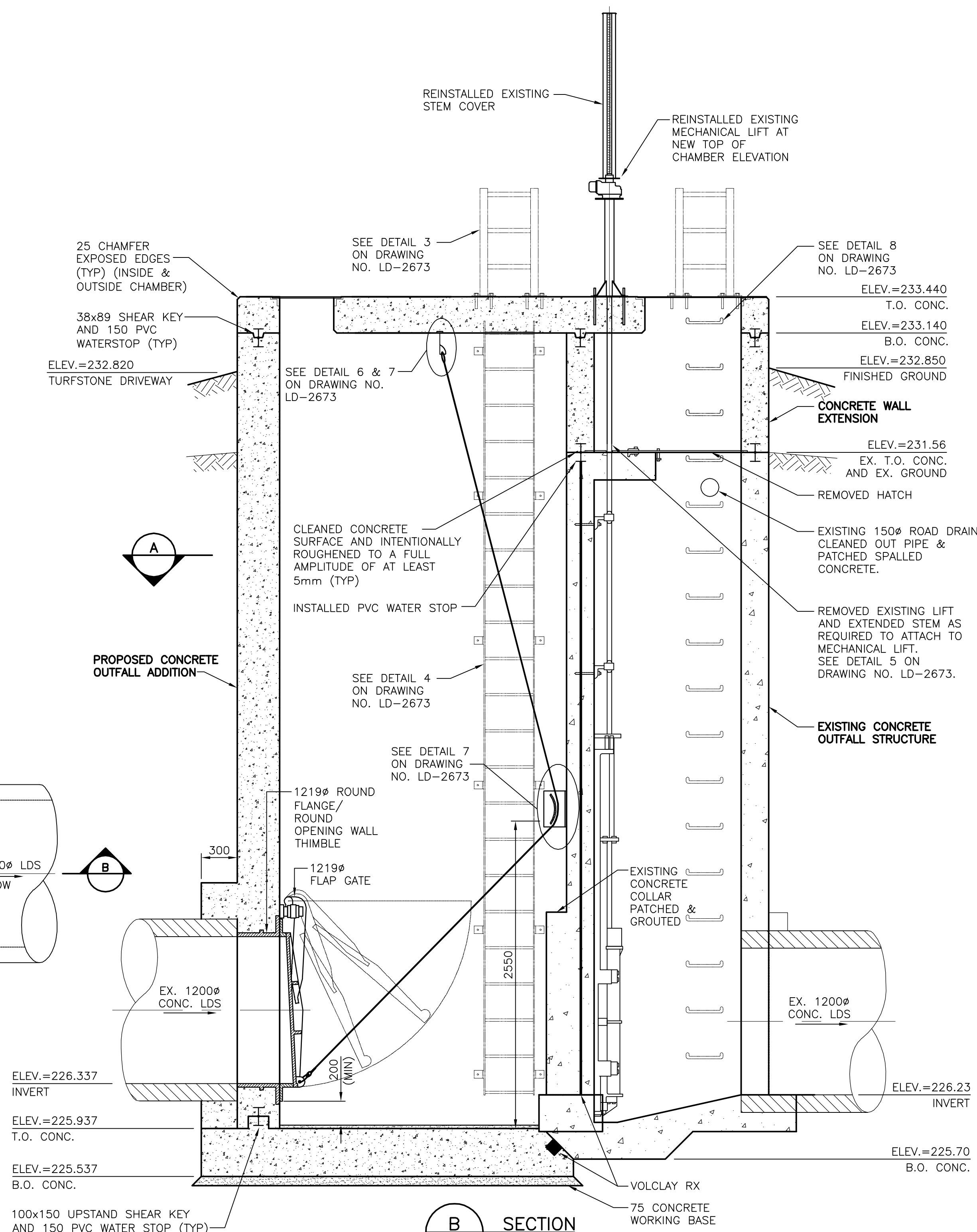
REVISED AS CONSTRUCTED
BY O. SCHARF DATE 11/08/03
CHECKED BY K. RAMNARACE



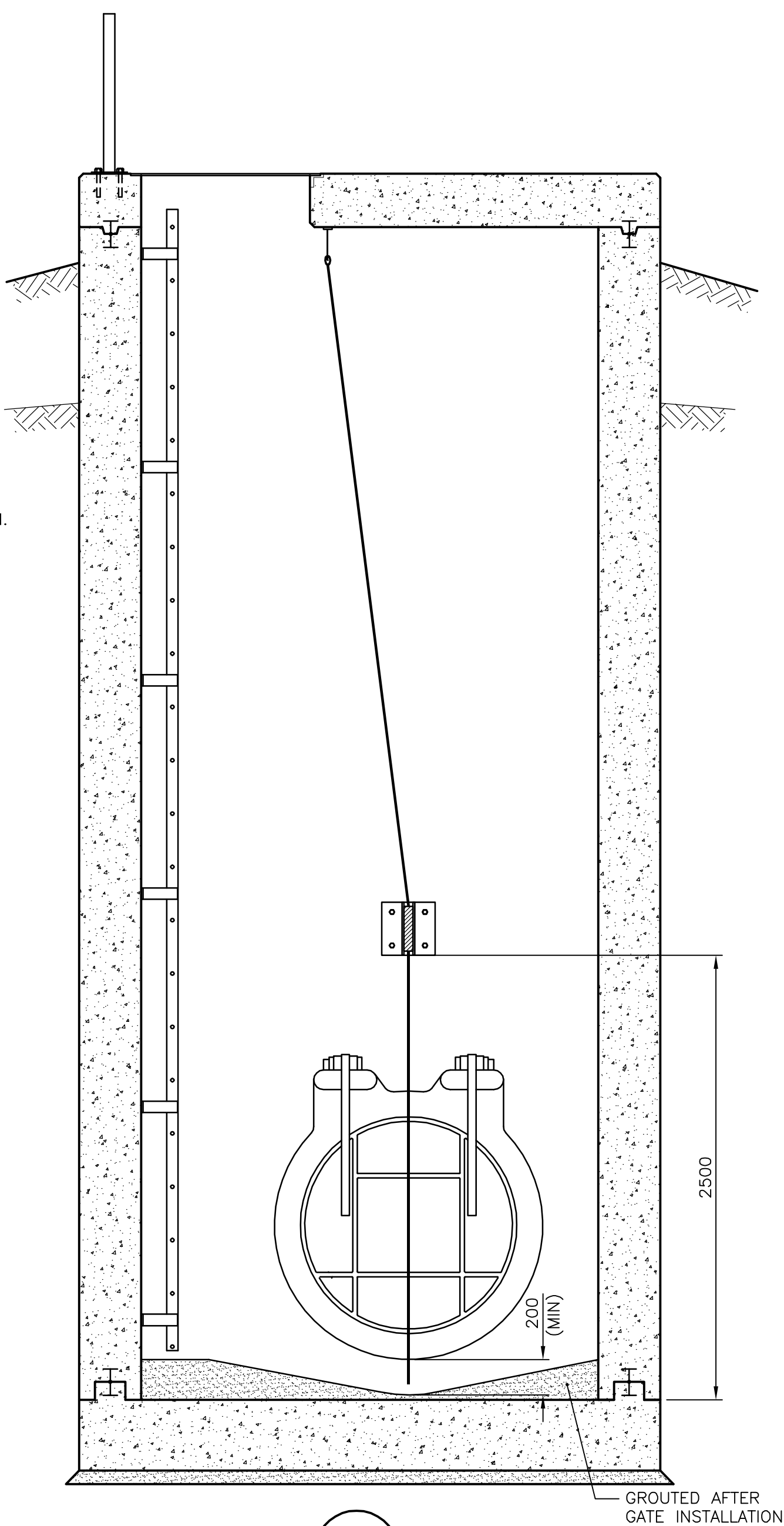
PLAN
1:25



A SECTION
1:25



B SECTION
1:25



C SECTION
1:25

- NOTES:**
1. LOCATION AND SEWER DETAILS ARE SHOWN ON DRAWING NO. LD-2669
 2. ALL STEEL NUTS AND BOLTS ARE #316 STAINLESS STEEL
 3. ALL EXPOSED CONCRETE EDGES ARE CHAMFERED 25mm
 4. ALL ALUMINUM IN CONTACT WITH CONCRETE IS PAINTED WITH BITUMINOUS ISOLATION COATING AT THE ALUMINUM/CONCRETE INTERFACE

FLOOD PROTECTION LEVEL = 232.23m
300 YEAR FLOOD ELEV. = 233.45m
DESIGN HEAD ON 305mm FLAP GATE = 7.8m

REVISED AS CONSTRUCTED
BY O. SCHARF DATE 11/08/03
CHECKED BY W. BURAK

APEGM
Certificate of Authorization
Stantec Consulting Ltd.
No. 1301 Expiry: April 30, 2004

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.	NO.	REVISIONS	DATE	BY
	1	REVISED AS CONSTRUCTED	11.08.03	O.S.

Stantec Consulting Ltd.
905 Waverley Street, Winnipeg, Manitoba
Tel 204-489-5900 Fax 204-453-9012

DESIGNED BY	D.G.M.	CHECKED BY	D.G.M.
DRAWN BY	O.S.	APPROVED BY	E.L.W.
HOR. SCALE:	1:25	RELEASED FOR CONSTRUCTION:	
VERTICAL:		DATE	August 2002

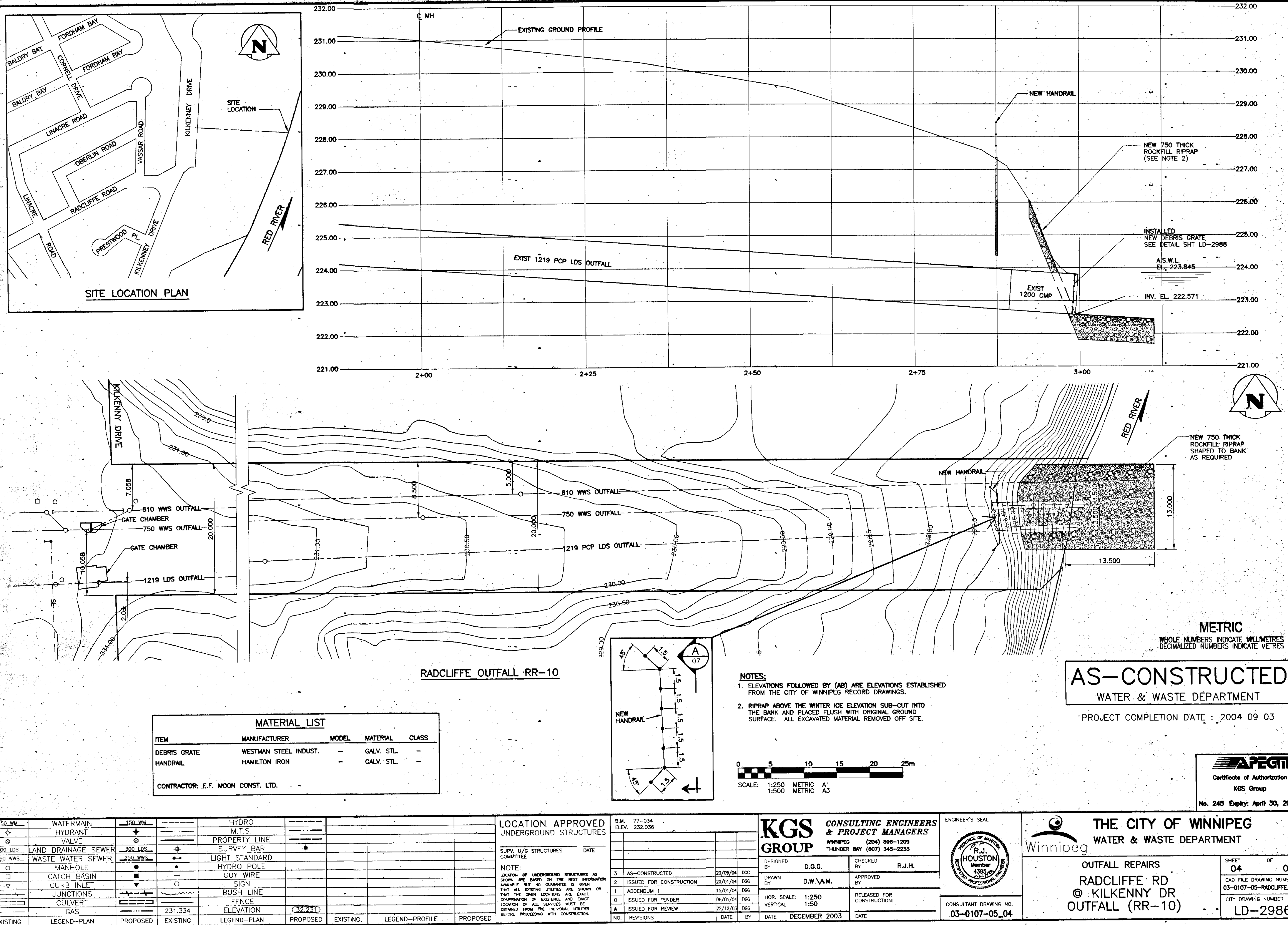
ENGINEER'S SEAL
CONSULTANT DRAWING NO.
CW-18-614

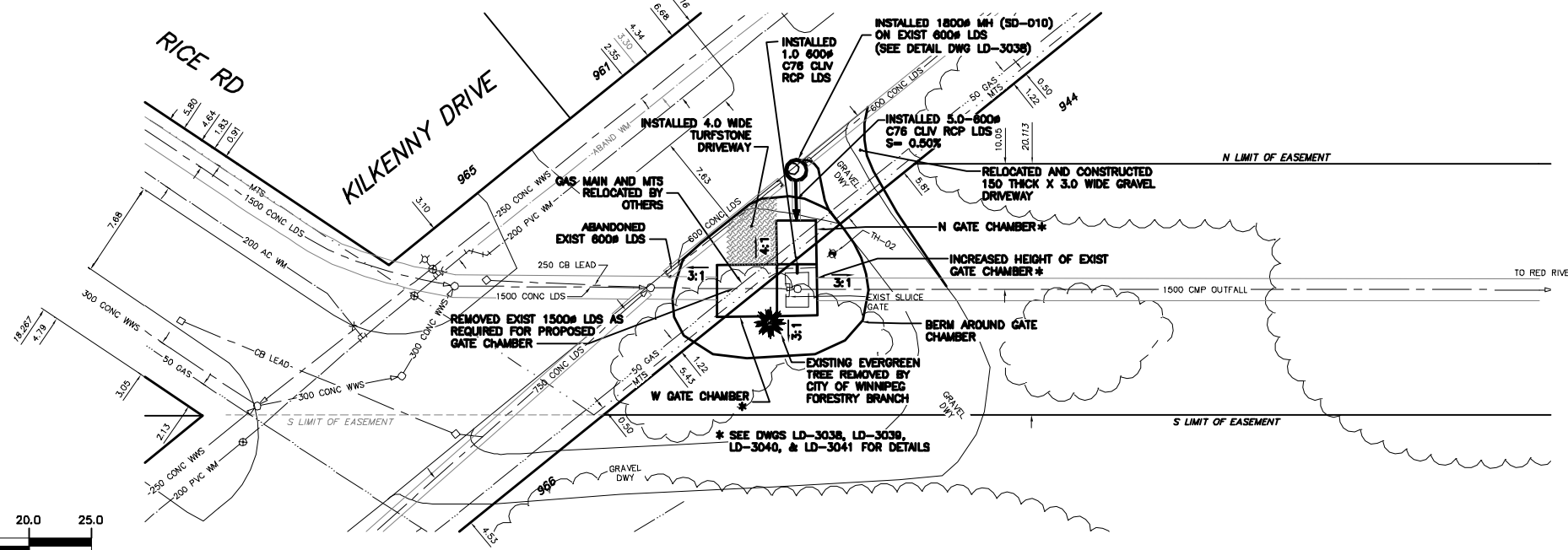
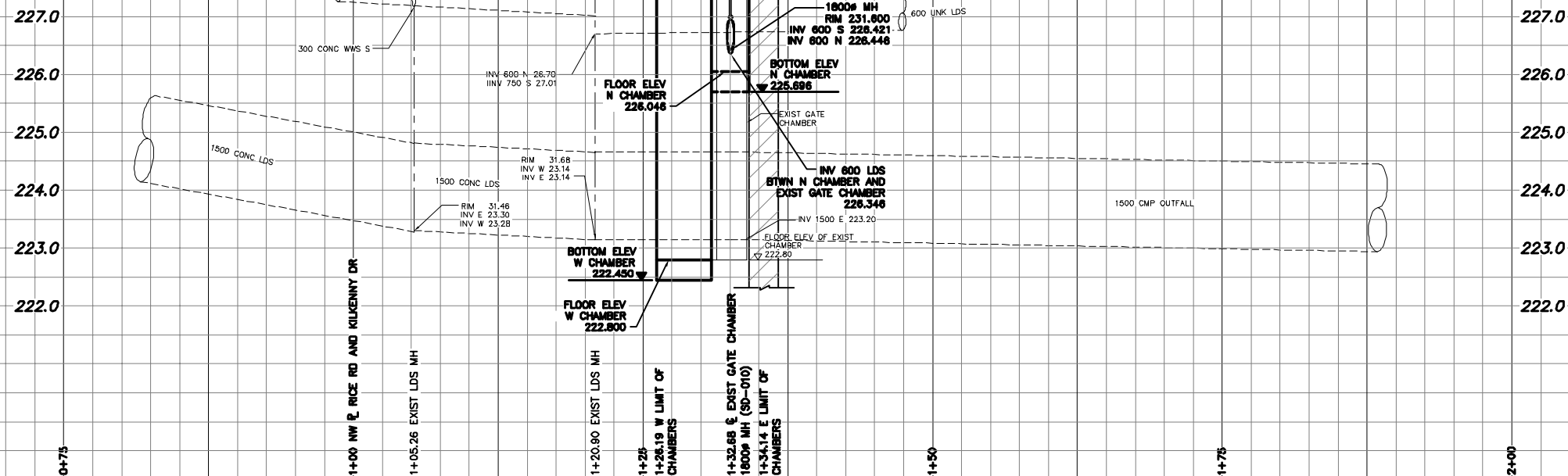
THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
ENGINEERING DIVISION

2002 OUTFALL GATE CHAMBER UPGRADES
RADCLIFFE ROAD
CONCRETE REINFORCING DETAILS

SHEET	18	OF	26
CAD FILE DRAWING NUMBER	LD-2670.DWG		
CITY DRAWING NUMBER	LD-2670		

CONSTRUCTION COMPLETION DATE - MAY 2003





METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

INFORMATION ONLY

	WATERMAIN		-----	SL, HYDRO		WATERMAIN	
	HYDRANT		-----	MTS		HYDRANT	
	VALVE		-----	TRAFFIC SIGNALS		VALVE	
	LAND DRAINAGE SEWER		50 GAS	GAS		LAND DRAINAGE SEWER	
	WASTEWATER SEWER			SURVEY BAR		WASTEWATER SEWER	
	MANHOLE			FENCE		GROUND ABOVE PIPE	
	CATCH BASIN			POLE - HYDRO, MTS			
	CURB INLET			CURB STOP		? DITCH (NORTH & WEST)	
	JUNCTIONS			GUY ANCHOR		? DITCH (SOUTH & EAST)	
	CULVERT			LIGHT STANDARD		GUTTER (NORTH & WEST)	
	ANODE			TREE		GUTTER (SOUTH & EAST)	
EXISTING	LEGEND-PLAN	PROPOSED	EXISTING	LEGEND-PLAN	PROPOSED	EXISTING	PROPOSED

LOCATION APPROVED
UNDERGROUND STRUCTURES

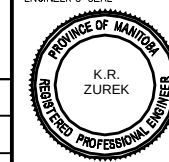
SUPV. U/O STRUCTURES COMMITTEE	DATE
NOTE:	
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE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

B.M. ELEV.	FIELD BOOK #		
	POSTED TO LBIS		
	1	REVISED TO RECORD DRAWING	09.01.12
NO.	REVISIONS	DATE	BY

CITY OF WINNIPEG
WATER AND WASTE
ENGINEERING DIVISION

DESIGNED BY	DGS	CHECKED BY	TW
DRAWN BY	WKT/CJH	APPROVED BY	KZ
HOR. SCALE	1:250	RELEASED FOR CONSTRUCTION	
VERTICAL	1:50		
DATE	2004.09.01	DATE	

ENGINEER'S SEAL



BID OPPORTUNITY: 416-2004
FILENAME : LD-3037.DWG
PLOT DATE: 2010 03 23



Winnipeg

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

2004 OUTFALL GATE
CHAMBER UPGRADES
RICE ROAD LDS OUTFALL
GATE CHAMBER EXPANSION
SITE PLAN

SHEET 4 OF 12

CITY DRAWING NUMBER

LD-3037

PROPERTY LIMITS DELINEATION

DELINEATION OF PROPERTY LIMITS AS SHOWN ON THIS DWG DOES NOT REPRESENT A "LEGAL SURVEY". KGS GROUP MAKES NO REPRESENTATION OR WARRANTY AS TO THE ACCURACY OF PROPERTY LIMITS DELINEATED ON THIS DWG, NOR ON THE DIMENSIONAL ACCURACY OF DWG FEATURES RELATIVE TO THOSE PROPERTY LIMITS.

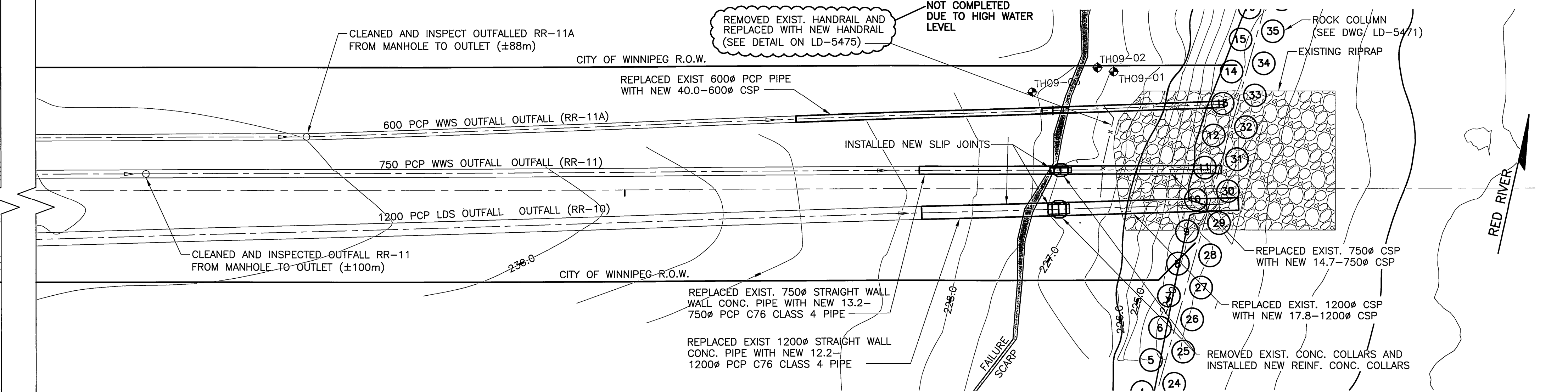
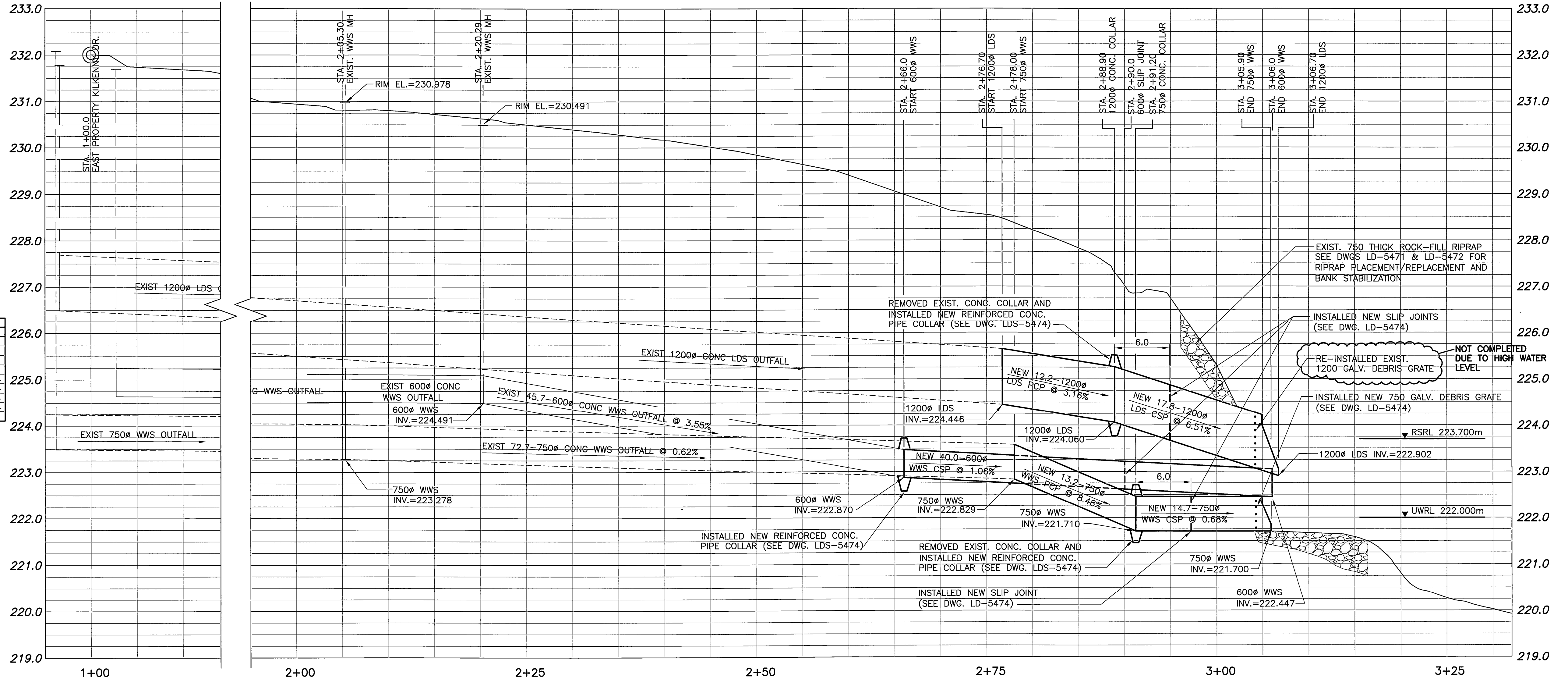
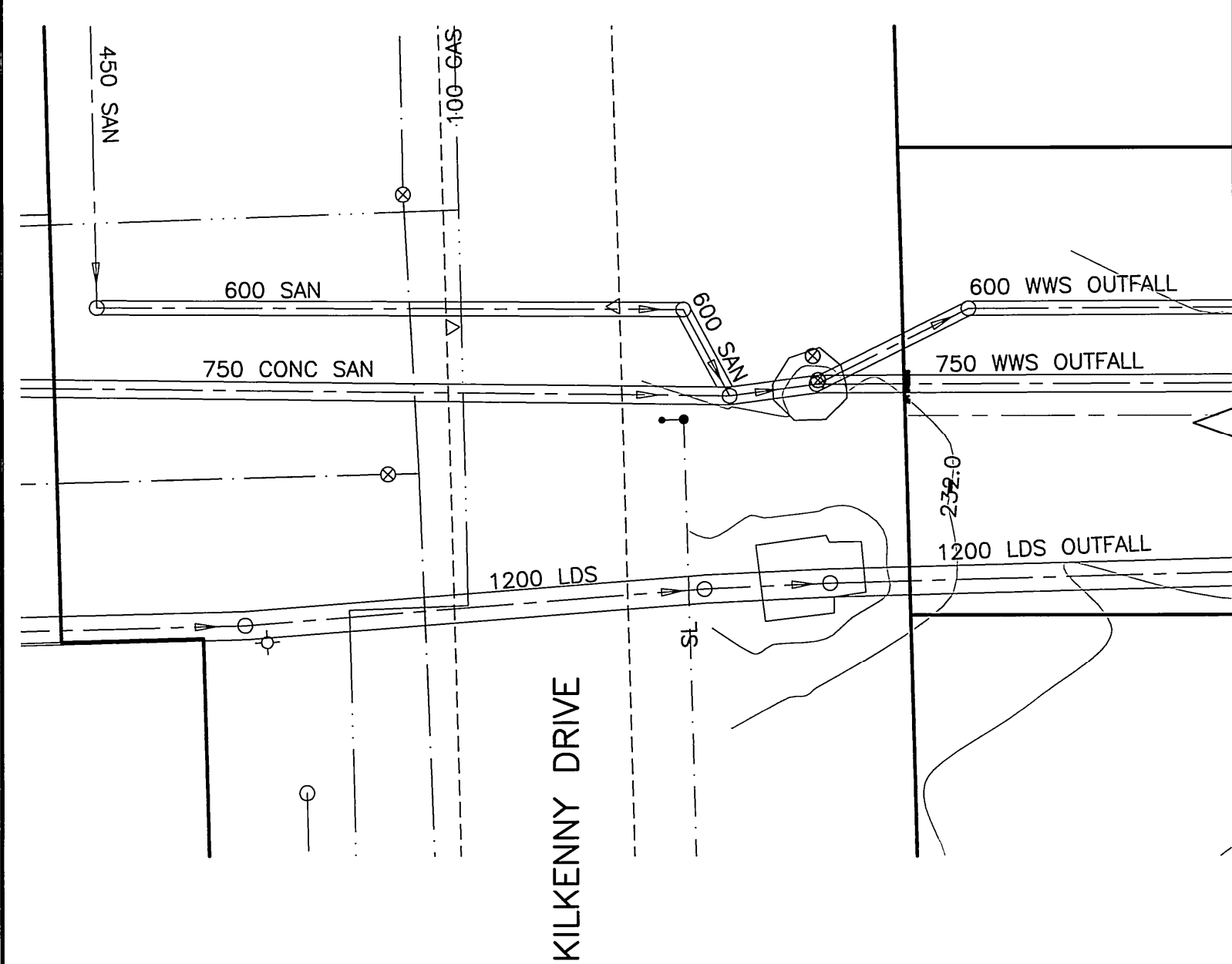
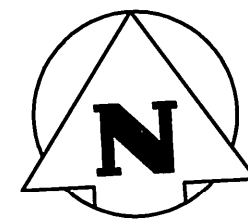
METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

NOTES:

- EXISTING PIPE ELEVATIONS ESTABLISHED FROM CITY OF WINNIPEG RECORD DRAWINGS.

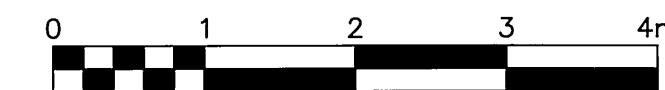
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600# CSP	ARMTEC	
750# CSP	ARMTEC	
1200# CSP	ARMTEC	
600# SLIP JOINT	ARMTEC	SEE DWG LD-5474
750# SLIP JOINT	ARMTEC	SEE DWG LD-5474
1200# SLIP JOINT	ARMTEC	SEE DWG LD-5474
750# DEBRIS GRATE	ARMTEC	SEE DWG LD-5474



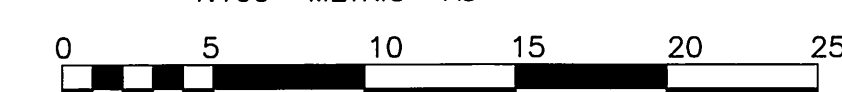
AS-CONSTRUCTED

WATER & WASTE DEPARTMENT

PROJECT COMPLETION DATE 10/03/20
CONTRACTOR - NELSON RIVER CONSTRUCTION



SCALE: 1:50 METRIC A1
1:100 METRIC A3



SCALE: 1:250 METRIC A1
1:500 METRIC A3



Certificate of Authorization
KGS Group

No. 245 Date: May 25/11

150 WM	WATERMAIN	150 WM	HYDRO	150 WM	WATERMAIN	150 WM
+	HYDRANT	+	M.T.S.	+	HYDRANT, VALVE	+
+	VALVE	+	CONCRETE	+	LAND DRAINAGE SEWER	+
300 LDS	LAND DRAINAGE SEWER	300 LDS	ASPHALT	250 WWS	WASTE WATER SEWER	250 WWS
250 WWS	WASTE WATER SEWER	250 WWS	SIDEWALK	X	Q. PROFILE	X
o	MANHOLE	o	KGS TEST HOLE	o	NORTH/WEST GUTTER	o
□	CATCH BASIN	□	PROPERTY LINE	□	SOUTH/EAST GUTTER	□
▽	CURB INLET	▽	SURVEY BAR	▽	N/W, S/E P'S	▽
+	JUNCTIONS	+	DITCH	+	N/W, S/E TOP/CURB	+
---	CULVERT	---	ELEVATION	---	SOUTH/EAST DITCH	---
---	GAS	---		---		---
EXISTING	LEGEND-PLAN	PROPOSED	EXISTING	LEGEND-PLAN	PROPOSED	EXISTING

LOCATION APPROVED UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES COMMITTEE DATE

NOTE:

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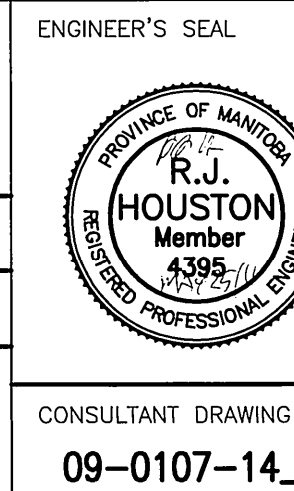
B.M. KGS BASE ELEV. -

DWGS BASED ON C.S.R.S. NAD 83 SYSTEM, UTM GRID

NO.	REVISIONS	DATE	BY
1	AS-CONSTRUCTED	11/05/25	RJH
0	ISSUED FOR TENDER	09/12/04	RJH



DESIGNED BY	RBO	CHECKED BY	RJH
DRAWN BY	GEL	APPROVED BY	
HOR. SCALE:	1:250	RELEASED FOR CONSTRUCTION:	
VERTICAL:	1:50		
DATE	09/11/25	DATE	



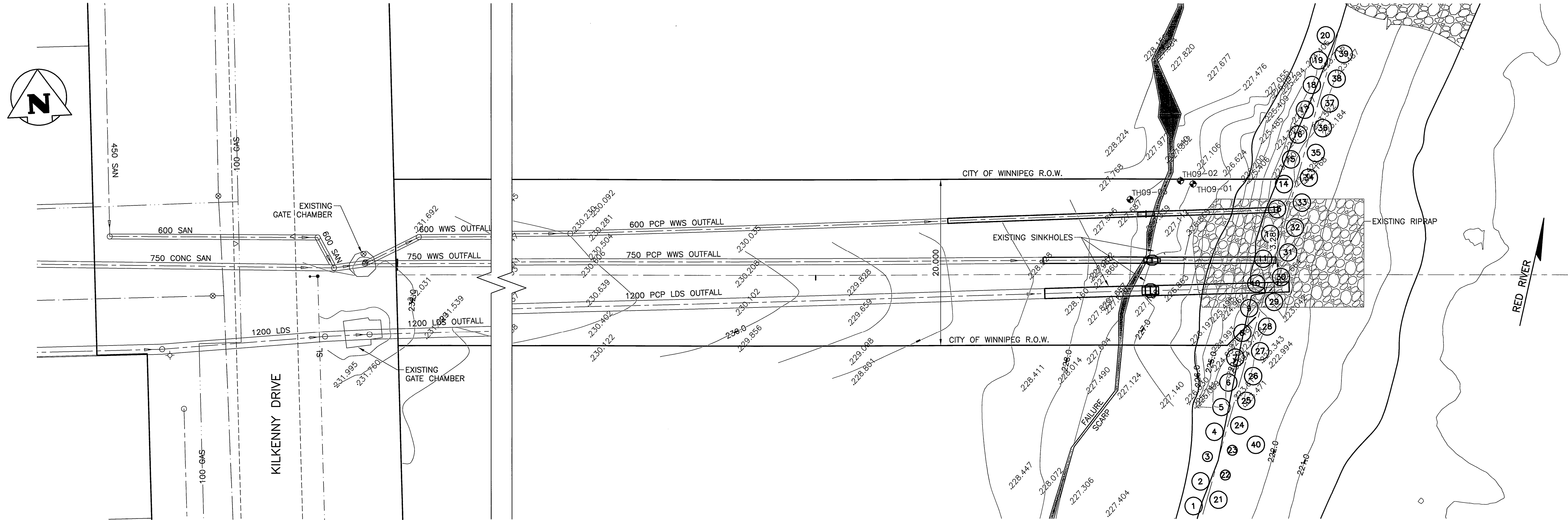
CONSULTANT DRAWING NO.
09-0107-14_01



PROJECT TITLE
2009 OUTFALL MAINTENANCE PROGRAM
RADCLIFFE ROAD
PLAN & PROFILE OUTFALLS
(RR-10, RR-11 & RR-11A)

SHEET 01 OF 07
COMPUTER FILE NAME
09-0107-14
CITY DRAWING NUMBER
LD-5469

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COWLEGG



NOTES:

1. TOPOGRAPHY BASED ON KGS GROUP SURVEY OF NOVEMBER, 2009.
2. RIVER BOTTOM CONTOURS BASED ON KGS GROUP BATHYMETRIC SURVEY OF OCTOBER, 2009.

PROPERTY LIMITS DELINEATION

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WARNING

1. NOTIFY THE GAS COMPANY OF THE PROPOSED LOCATION OF EXCAVATION.
2. TAKE PRECAUTION TO AVOID DAMAGE TO GAS COMPANY INSTALLATIONS.
3. SEE PROVINCIAL REGULATION 210/72 FOR DETAILS.

METRIC

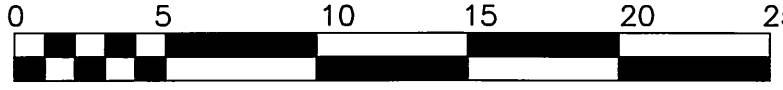
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

AS-CONSTRUCTED
WATER & WASTE DEPARTMENT

PROJECT COMPLETION DATE 10/03/20
CONTRACTOR - NELSON RIVER CONSTRUCTION



SCALE: 1:50 METRIC A1
1:100 METRIC A3



SCALE: 1:250 METRIC A1
1:500 METRIC A3



Certificate of Authorization
KGS Group

No. 245 Date: MAY 25/11

150 WM	WATERMAIN	150 WM	HYDRO	150 WM	WATERMAIN	150 WM
HYDRANT	HYDRANT	HYDRANT	M.T.S.	HYDRANT, VALVE	HYDRANT, VALVE	HYDRANT, VALVE
VALVE	VALVE	VALVE	CONCRETE	LAND DRAINAGE SEWER	LAND DRAINAGE SEWER	LAND DRAINAGE SEWER
300 LDS	LAND DRAINAGE SEWER	300 LDS	ASPHALT	WASTE WATER SEWER	WASTE WATER SEWER	WASTE WATER SEWER
250 WWS	WASTE WATER SEWER	250 WWS	SIDEWALK	Q. PROFILE	Q. PROFILE	Q. PROFILE
MANHOLE	MANHOLE	MANHOLE	KGS TEST HOLE	NORTH/WEST GUTTER	NORTH/WEST GUTTER	NORTH/WEST GUTTER
CATCH BASIN	CATCH BASIN	CATCH BASIN	PROPERTY LINE	SOUTH/EAST GUTTER	SOUTH/EAST GUTTER	SOUTH/EAST GUTTER
CURB INLET	CURB INLET	CURB INLET	SURVEY BAR	N/W, S/E P'S	N/W, S/E P'S	N/W, S/E P'S
JUNCTIONS	JUNCTIONS	JUNCTIONS	DITCH	N/W, S/E TOP/CURB	N/W, S/E TOP/CURB	N/W, S/E TOP/CURB
CULVERT	CULVERT	CULVERT	ELEVATION	NORTH/WEST DITCH	NORTH/WEST DITCH	NORTH/WEST DITCH
GAS	GAS	GAS		SOUTH/EAST DITCH	SOUTH/EAST DITCH	SOUTH/EAST DITCH
EXISTING	LEGEND-PLAN	PROPOSED	EXISTING	LEGEND-PLAN	PROPOSED	EXISTING

LOCATION APPROVED
UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES COMMITTEE DATE

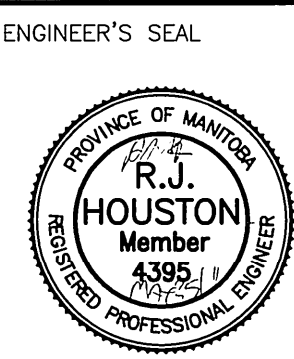
NOTE:
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B.M. KGS BASE ELEV. -
DWGS BASED ON C.S.R.S. NAD 83 SYSTEM, UTM GRID

NO.	REVISIONS	DATE	BY
1	AS CONSTRUCTED	11/05/25	RJH
0	ISSUED FOR TENDER	09/12/04	RJH



DESIGNED BY RBO
CHECKED BY RJH
DRAWN BY GEL
APPROVED BY
SCALE: 1:250
RELEASED FOR CONSTRUCTION:
DATE 09/11/25



CONSULTANT DRAWING NO.
09-0107-14_02



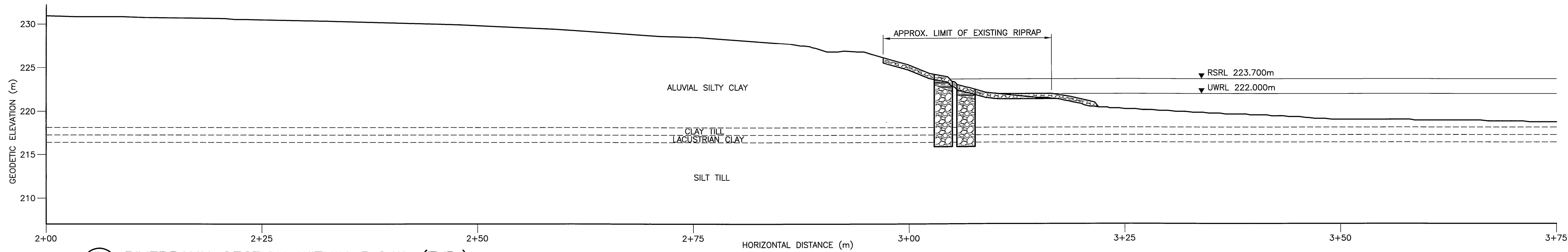
THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

PROJECT TITLE
2009 OUTFALL MAINTENANCE PROGRAM
RADCLIFFE ROAD

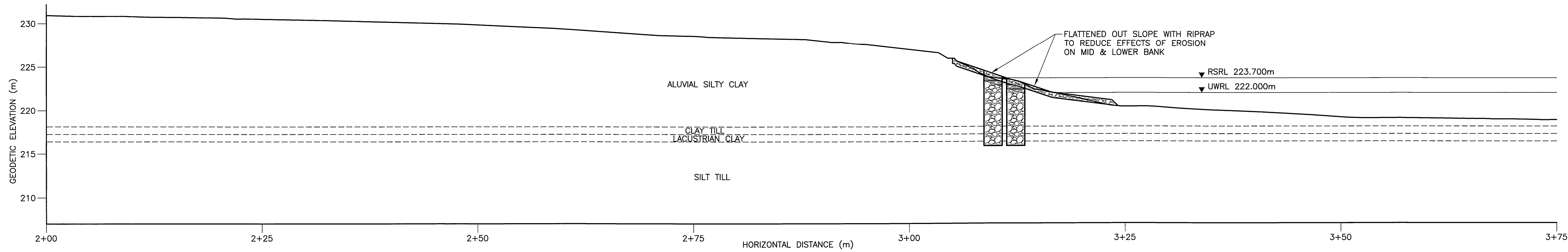
EXISTING SITE CONDITIONS

SHEET OF
02 07
COMPUTER FILE NAME
09-0107-14
CITY DRAWING NUMBER
LD-5470

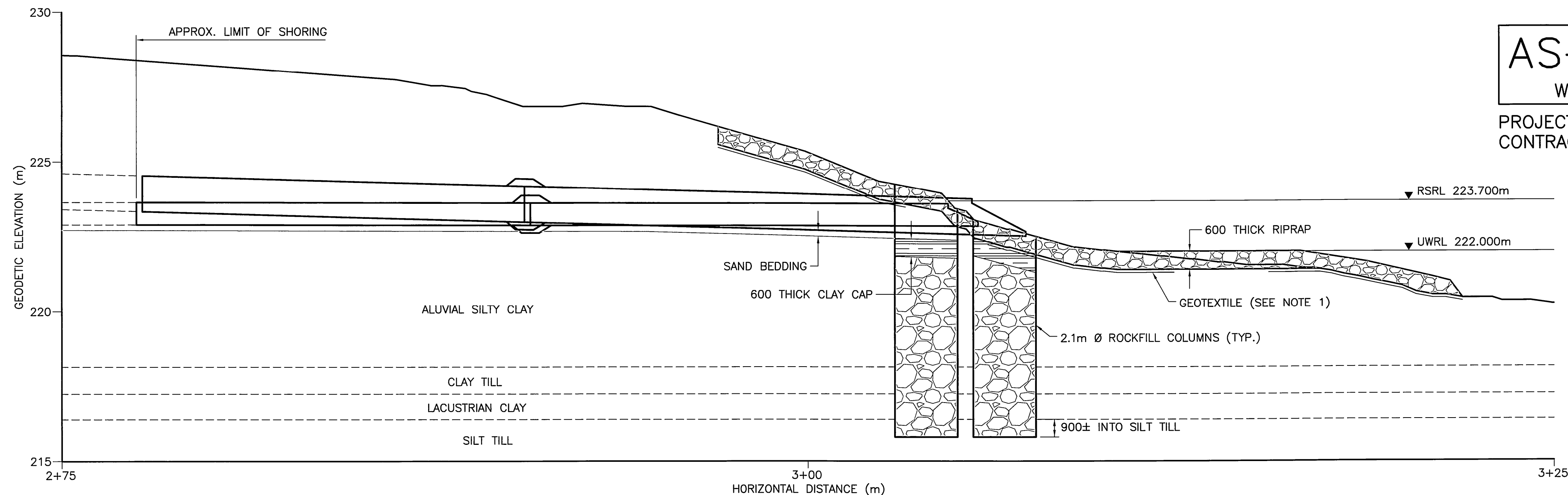
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C:\Users\jmc\Documents\Projects\2009\09-0107-14\DocControl\ToBeIssued\DWG\LD-5472-Rev 1.dwg



A RIVERBANK SECTION WITHIN R.O.W. (TYP.)
LD-5741 SCALE: 1:250



B RIVERBANK SECTION BEYOND R.O.W. (TYP.)
LD-5741 SCALE: 1:250



RIVERBANK SECTION THRU OUTFALLS
SCALE: 1:100

AS-CONSTRUCTED

WATER & WASTE DEPARTMENT

PROJECT COMPLETION DATE 10/03/20
CONTRACTOR - NELSON RIVER CONSTRUCTION

LEGEND

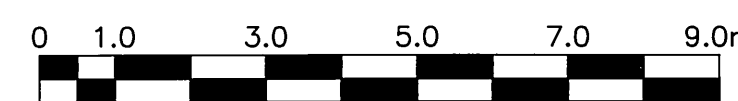
RSRL REGULATED SUMMER RIVER LEVEL
UWRL UNREGULATED WINTER RIVER LEVEL
--- ASSUMED STRATIGRAPHIC CONTACT

NOTES:

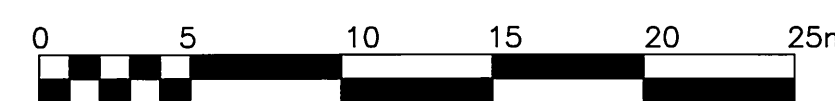
1. THE CONTRACTOR PLACED THE GEOTEXTILE SUCH THAT THE PIPE GRANULAR BACKFILL WAS COMPLETELY COVERED AND THE FABRIC EXTENDED A MINIMUM OF 1.0m ONTO THE ADJACENT CLAY SOILS. THE FABRIC WAS WRAPPED AROUND THE OUTFALL PIPE AND HELDED IN PLACE WITH THE OVERLYING RIPRAP.
2. RIPRAP ABOVE THE UWRL WITHIN THE CITY R.O.W. WAS SUBCUT INTO THE BANK AND PLACED FLUSH WITH ORIGINAL GROUND SURFACE. ALL EXCAVATED MATERIAL WAS REMOVED OFF SITE.

METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES



SCALE 1:100 METRIC A1
1:200 METRIC A3



SCALE: 1:250 METRIC A1
1:500 METRIC A3



Certificate of Authorization

KGS Group

No. 245 Date:

150 WM	WATERMAIN	150 WM	HYDRO	150 WM	WATERMAIN	150 WM
+	HYDRANT	+	M.T.S.	+	HYDRANT, VALVE	+
+	VALVE	+	CONCRETE	+	LAND DRAINAGE SEWER	+
300 LBS	LAND DRAINAGE SEWER	300 LBS	ASPHALT	300 LBS	WASTE WATER SEWER	300 LBS
250 WWS	WASTE WATER SEWER	250 WWS	SIDEWALK	250 WWS	Q PROFILE	250 WWS
○	MANHOLE	○	PLANING	○	NORTH/WEST GUTTER	○
□	CATCH BASIN	□	PROPERTY LINE	□	SOUTH/EAST GUTTER	□
▽	CURB INLET	▽	SURVEY BAR	▽	N/W, S/E R'S	▽
+	JUNCTIONS	+	DITCH	+	N/W, S/E TOP/CURB	+
---	CULVERT	---	ELEVATION	---	NORTH/WEST DITCH	---
---	GAS	---		---	SOUTH/EAST DITCH	---
EXISTING	LEGEND-PLAN	PROPOSED	EXISTING	LEGEND-PLAN	PROPOSED	EXISTING

LOCATION APPROVED UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES COMMITTEE DATE

NOTE:

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B.M. KGS BASE ELEV. -

DWGS BASED ON C.S.R.S. NAD 83 SYSTEM, UTM GRID

NO.	REVISIONS	DATE	BY
1	AS CONSTRUCTED	11/05/25	RJK
0	ISSUED FOR TENDER	09/12/04	RJK



DESIGNED BY	RMK	CHECKED BY	CWC
DRAWN BY	GEL	APPROVED BY	

SCALE: AS NOTED
DATE 09/11/25

ENGINEER'S SEAL



CONSULTANT DRAWING NO. 09-0107-14_04



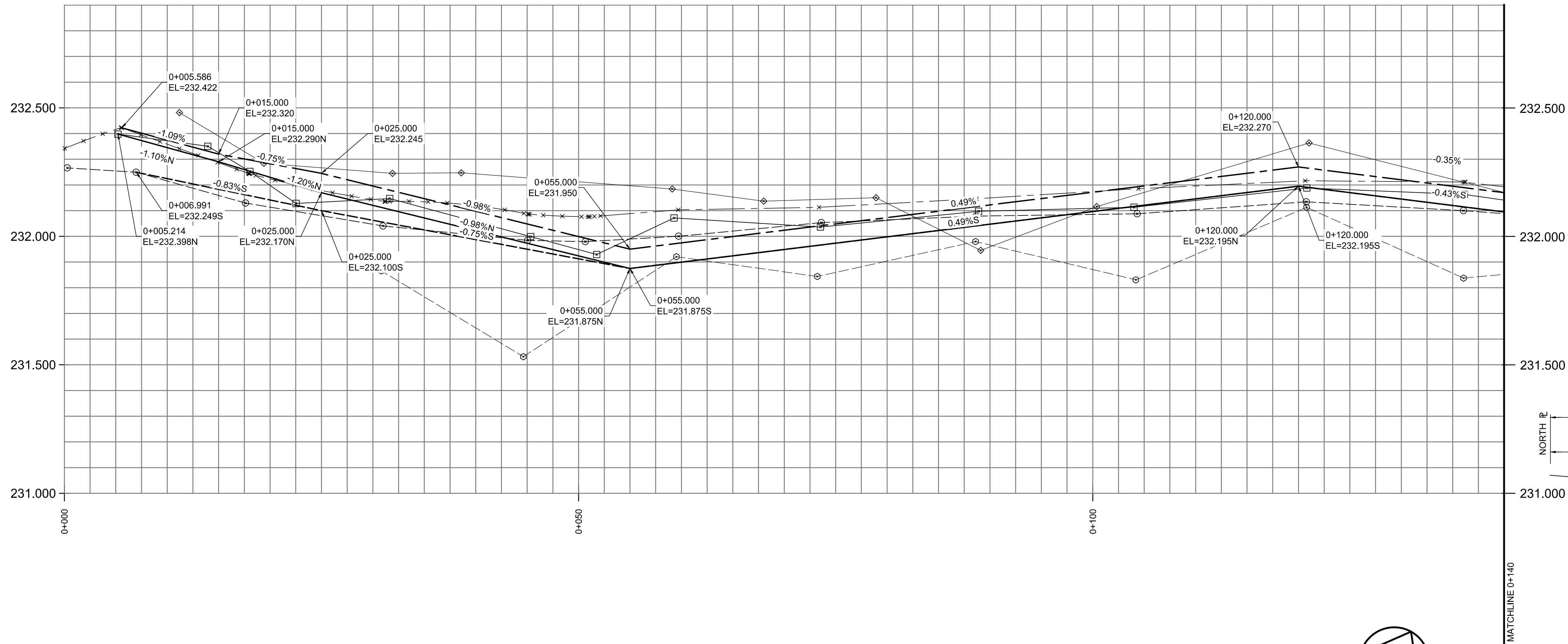
THE CITY OF WINNIPEG

WATER AND WASTE DEPARTMENT

PROJECT TITLE
2009 OUTFALL MAINTENANCE PROGRAM
RADCLIFFE ROAD

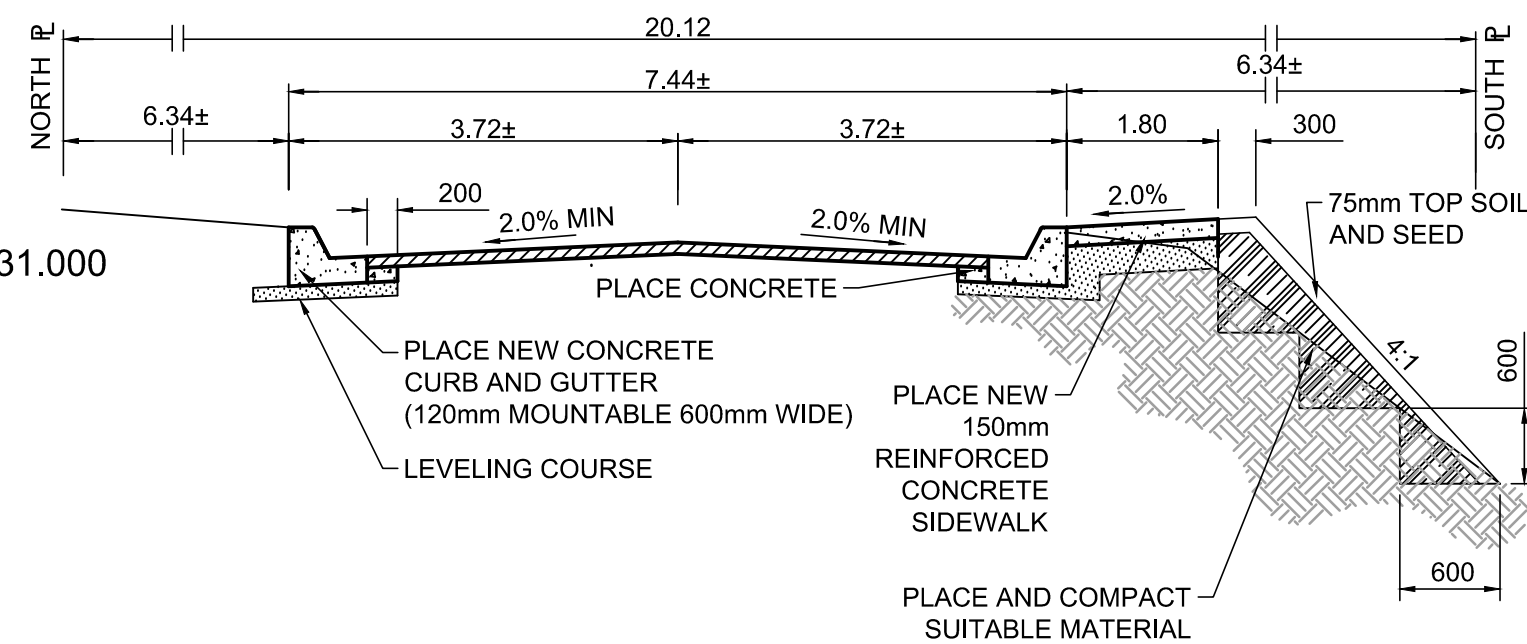
SECTIONS AND DETAILS

SHEET OF	04 OF 07
COMPUTER FILE NAME	09-0107-14
CITY DRAWING NUMBER	LD-5472



MATERIALS LIST (SURFACE WORKS)	
TYPE	MANUFACTURER
CONCRETE	BUILDING PRODUCTS
ASPHALT	BITUMINEX
RECYCLED BASE (50mm)	ROCKY ROAD RECYCLING
RECYCLED BASE (20mm)	ROCKY ROAD RECYCLING

MATERIALS LIST (UNDERGROUND)	
TYPE	MANUFACTURER
PVC LDS PIPE	NORTHERN PIPE
BENDS	PLASTIC TRENDS INC
TEES	PLASTIC TRENDS INC
COUPLINGS	DS DALLAS SPECIALTY
CATCHBASINS/RISERS	INLAND
FRAMES & COVERS	TITAN FOUNDRY LTD.



TYPICAL PAVEMENT RECONSTRUCTION CROSS SECTION

REFERENCE NOTES

- PAVEMENT DIMENSIONS ARE TO BACK OF CURB
- BASELINE IS CENTRE LINE RIGHT-OF-WAY
- PROPERTY LINES OBTAINED FROM CITY OF WINNIPEG L.B.I.S., AND NO SCALE FACTOR WAS APPLIED
- REFER TO AECOM FIELD BOOK NO. 4923

CONSTRUCTION NOTES

- PLANED EXISTING ASPHALT AND INSTALLED NEW ASPHALTIC PAVEMENT TYPE 1A (AVG THICKNESS 85mm)
- REMOVED EXISTING ASPHALT PAVEMENT AND CONSTRUCTED NEW ASPHALTIC PAVEMENT PATCH (225mm OF 20mm LIMESTONE SUB BASE AND 50mm OF NEW TYPE 1A ASPHALTIC PAVEMENT) c/w AVG THICKNESS 85mm TYPE 1A ASPHALTIC PAVEMENT OVERLAY
- CUT EXISTING ASPHALT PAVEMENT, REMOVED EXISTING CURB AND GUTTER, AND CONSTRUCTED NEW CONCRETE CURB AND GUTTER (150mm HT.)
- REMOVED EXISTING CONCRETE/ASPHALTIC PAVEMENT AND CONSTRUCTED NEW 150mm REINFORCED CONCRETE PAVEMENT
- CONSTRUCTED NEW CONCRETE LIP CURB AND GUTTER (40mm HT. INTEGRAL)
- REMOVED EXISTING CATCHBASIN
- REMOVED EXISTING CATCHPIT
- INSTALLED NEW CURB AND GUTTER INLET c/w 1200mm CATCHBASIN (SD-024) AND CONNECTED NEW LEAD TO NEW CATCHBASIN
- INSTALLED NEW CURB AND GUTTER INLET c/w 1800mm CATCHBASIN (SD-024) AND CONNECTED LEAD TO DITCH
- INSTALLED NEW CURB AND GUTTER INLET c/w CATCHPIT (SD-023) AND CONNECTED TO EXISTING CATCHBASIN
- CONSTRUCTED NEW 100mm CONCRETE SIDEWALK 1.8m WIDE
- CONSTRUCTED NEW CONCRETE RAMP CURB AND GUTTER (10mm HT. INTEGRAL)
- ADJUSTED EXISTING WATER VALVE TO GRADE
- ADJUSTED EXISTING MANHOLE/CATCHBASIN TO GRADE
- INSTALLED NEW MANHOLE FRAME AND COVER (AP-004 & AP-005)
- INSTALLED NEW CAST IRON MANHOLE RISER RING
- REMOVED AND REINSTALLED EXISTING PAVING STONES c/w 150 CONCRETE CURB EDGING
- REMOVED EXISTING LIGHT STANDARD AND INSTALLED NEW LIGHT STANDARD
- RENEWED EXISTING ASPHALT SIDEWALK
- INSTALLED DETECTABLE WARNING SURFACE TILE

RECORD DRAWING

**ENGINEERS
GEOSCIENTISTS
MANITOBA**
Certificate of Authorization
AECOM Canada Ltd.
No. 4671 Date: 04/20/2016

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

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.	HYDRO	X	C PROFILE	
300mm L.D.S.	LAND DRAINAGE SEWER	300mm L.D.S.	CONCRETE	CONCRETE	CONCRETE	□	OUTSIDE GUTTER	
250mm W.W.S.	WASTEWATER SEWER	250mm W.W.S.	ASPHALT	ASPHALT	ASPHALT	○	INSIDE GUTTER	
○	MANHOLE	○	SURVEY BAR	SURVEY BAR	SURVEY BAR	◇	N/W PROPERTY LINE	
□	CATCH BASIN	□	ELEVATION	ELEVATION	ELEVATION	○	S/E PROPERTY LINE	
▽	CATCH PIT	▽	TREE	TREE	TREE			
+	JUNCTIONS	+	SIDEWALK RAMP	SIDEWALK RAMP	SIDEWALK RAMP			
+	CULVERT	+	CONCRETE SIDEWALK	CONCRETE SIDEWALK	CONCRETE SIDEWALK			
+	GAS	+	FENCE	FENCE	FENCE			

LOCATION APPROVED UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES COMMITTEE DATE

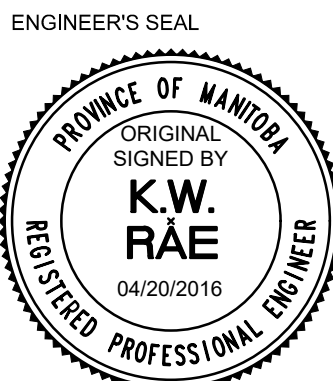
NOTE:
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE. BUT NO GUARANTEE IS GIVEN THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

B.M. 77 - 035 83R064 Bolt on pipe, E side Kings Dr & Kilkenny Dr. 21.9m S of S wall, & 27.2m E of E wall of #603 Kilkenny Dr

NO.	REVISIONS	DATE	BY
1	ISSUED FOR TENDER	04/20/2016	BC
0	ISSUED FOR TENDER	04/20/2016	BC
A	ISSUED FOR REVIEW	04/15/16	BC

AECOM

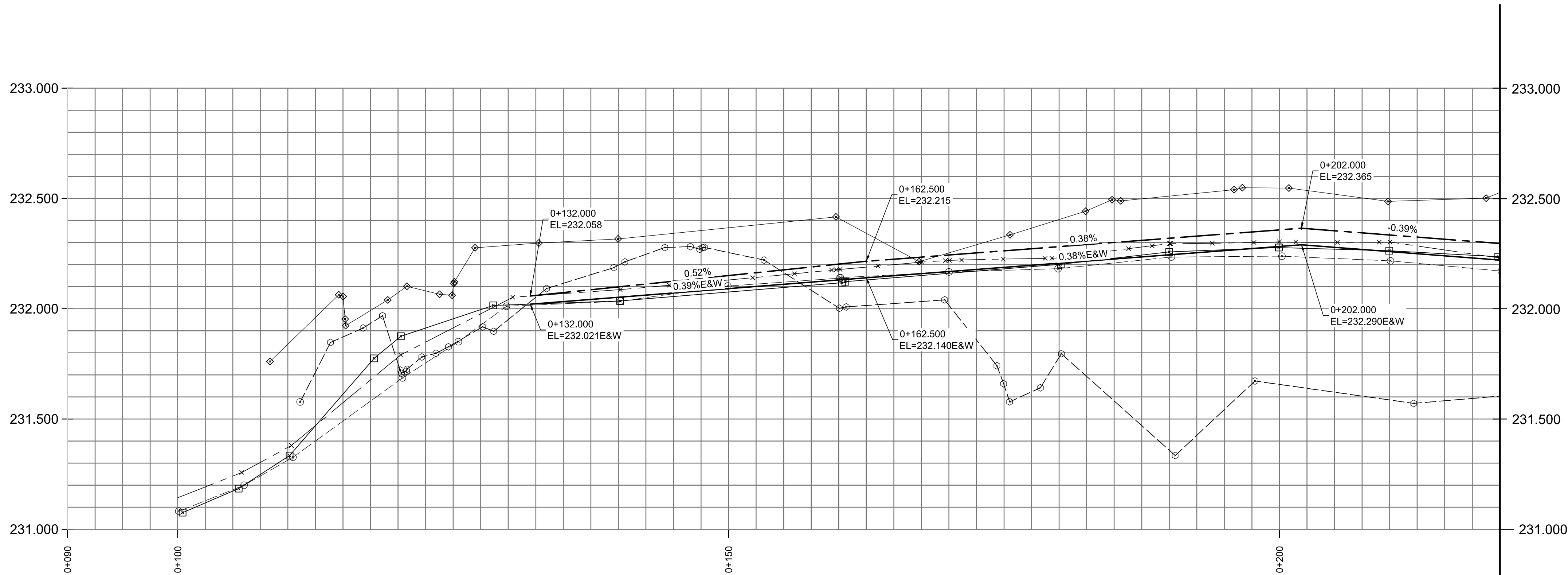
DESIGNED BY	SS	CHECKED BY	KWR
DRAWN BY	JC/SF	APPROVED BY	
HOR. SCALE:	1:250	RELEASED FOR CONSTRUCTION BY:	COLIN TITCHKOSKY 04/20/2016
VERTICAL:	1:10		



CONSULTANT DRAWING NO. AT-10

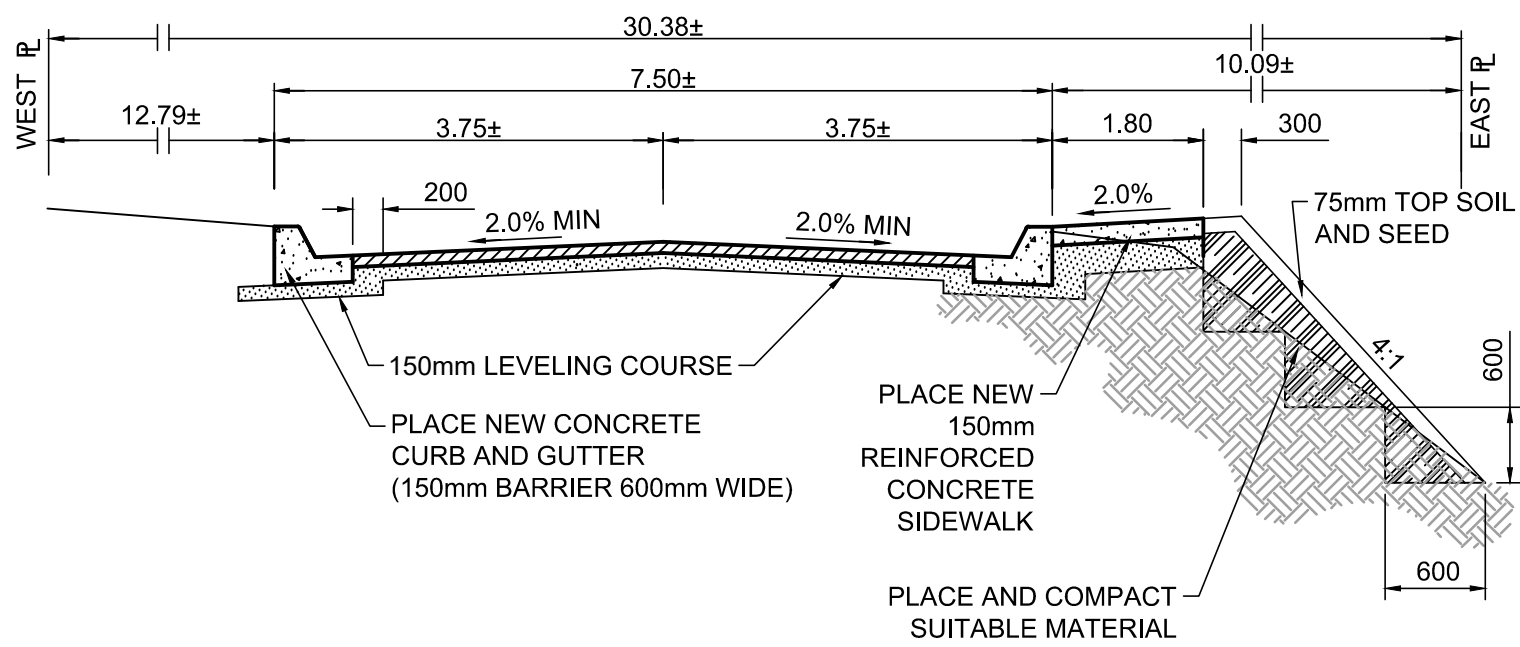
THE CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

2016 LOCAL STREET RENEWAL PROGRAM	CITY DRAWING NUMBER
KILKENNY DRIVE - PATRICIA AVENUE TO KINGS DRIVE PAVEMENT RECONSTRUCTION PATRICIA AVENUE TO STATION 0+140	SHEET 10 OF 28 LD-12669



MATERIALS LIST (SURFACE WORKS)	
TYPE	MANUFACTURER
CONCRETE	BUILDING PRODUCTS
ASPHALT	BITUMINEX
RECYCLED BASE (50mm)	ROCKY ROAD RECYCLING
RECYCLED BASE (20mm)	ROCKY ROAD RECYCLING

MATERIALS LIST (UNDERGROUND)	
TYPE	MANUFACTURER
PVC LDS PIPE	NORTHERN PIPE
BENDS	PLASTIC TRENDS INC
TEES	PLASTIC TRENDS INC
COUPLINGS	DS DALLAS SPECIALTY
CATCHBASINS/RISERS	INLAND
FRAMES & COVERS	TITAN FOUNDRY LTD.



TYPICAL PAVEMENT RECONSTRUCTION CROSS SECTION

REFERENCE NOTES

- PAVEMENT DIMENSIONS ARE TO BACK OF CURB
- BASELINE IS CENTRE LINE RIGHT-OF-WAY
- PROPERTY LINES OBTAINED FROM CITY OF WINNIPEG L.B.I.S., AND NO SCALE FACTOR WAS APPLIED
- REFER TO AECOM FIELD BOOK NO. 4923

CONSTRUCTION NOTES

- REMOVED EXISTING ASPHALT AND INSTALLED NEW ASPHALTIC PAVEMENT TYPE 1A (AVG THICKNESS 100mm) c/w BASE COURSE LEVELING COURSE 150mm MAX DEPTH
- REMOVED EXISTING ASPHALT PAVEMENT AND CONSTRUCTED NEW TYPE 1A ASPHALTIC PAVEMENT OVERLAY
- REMOVED EXISTING CURB AND GUTTER, AND CONSTRUCTED NEW CONCRETE CURB AND GUTTER (150mm HT.)
- REMOVED EXISTING CONCRETE/ASPHALTIC PAVEMENT AND CONSTRUCTED NEW 150mm REINFORCED CONCRETE PAVEMENT
- CONSTRUCTED NEW CONCRETE LIP CURB AND GUTTER (40mm HT. INTEGRAL)
- CONSTRUCTED NEW 150mm CONCRETE SIDEWALK 1.8m WIDE
- ADJUSTED EXISTING MANHOLE/CATCHBASIN TO GRADE
- REMOVED EXISTING CATCHPIT AND PLUGGED THE LEAD

RECORD DRAWING

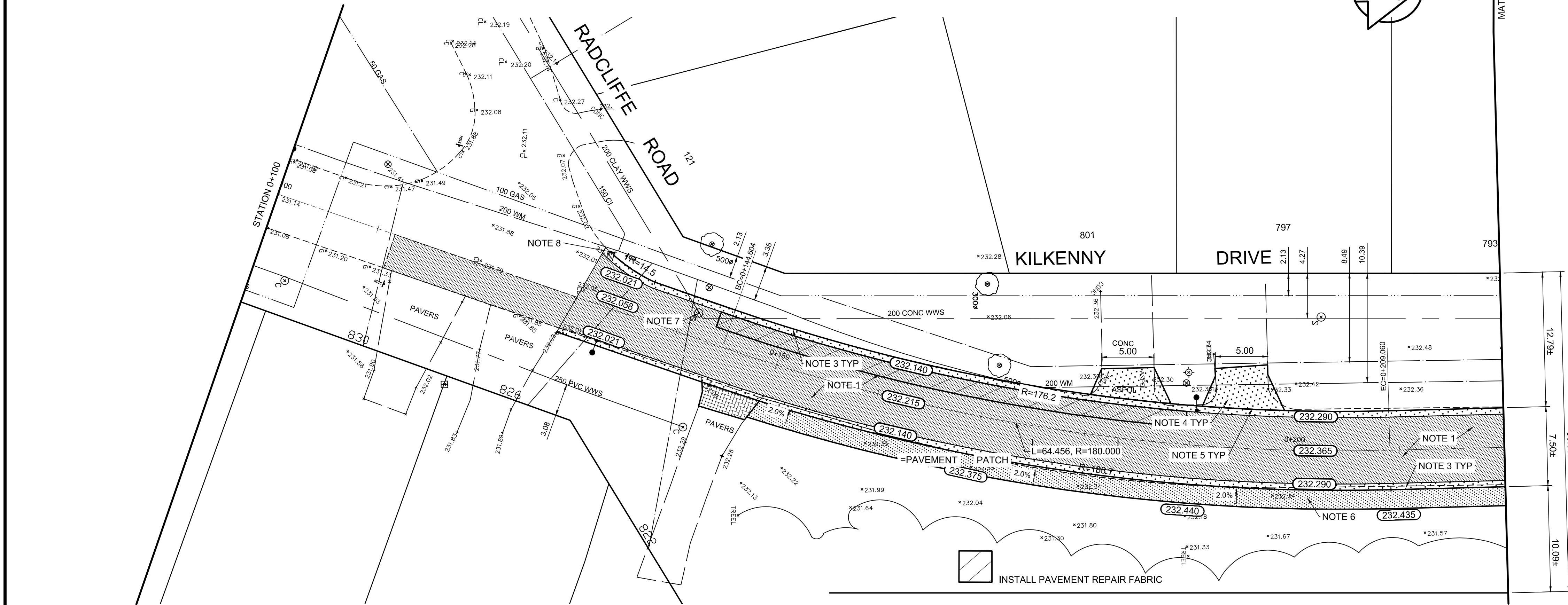


Certificate of Authorization
AECOM Canada Ltd.

No. 4671 Date: 04/20/2016

METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES



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.	HYDRO	C PROFILE	WEST GUTTER	
300mm L.D.S.	LAND DRAINAGE SEWER	300mm L.D.S.	CONCRETE	CONCRETE	CONCRETE	EAST GUTTER		
250mm W.W.S.	WASTEWATER SEWER	250mm W.W.S.	ASPHALT	ASPHALT	ASPHALT	N/W PROPERTY LINE		
MANHOLE	MANHOLE	MANHOLE	PROPERTY LINE	PROPERTY LINE	PROPERTY LINE	S/E PROPERTY LINE		
CATCH BASIN	CATCH BASIN	CATCH BASIN	SURVEY BAR	SURVEY BAR	SURVEY BAR			
CATCH PIT	CATCH PIT	CATCH PIT	ELEVATION	ELEVATION	ELEVATION			
JUNCTIONS	JUNCTIONS	JUNCTIONS	TREE	TREE	TREE			
CULVERT	CULVERT	CULVERT	SIDEWALK RAMP	SIDEWALK RAMP	SIDEWALK RAMP			
GAS	GAS	GAS	CONCRETE SIDEWALK	CONCRETE SIDEWALK	CONCRETE SIDEWALK			
			FENCE	FENCE	FENCE			

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. 77 - 035 83R064 Tilt on pipe, E side Kings Dr & Kilkenny Dr. 21.9m S of S wall, & 27.2m E of E wall of #603 Kilkenny Dr

NO.	REVISIONS	DATE	BY
1	ISSUED FOR RECORDS	12/19/2016	BC
0	ISSUED FOR TENDER	09/28/2016	BC
A	ISSUED FOR REVIEW	09/28/2016	BC

AECOM

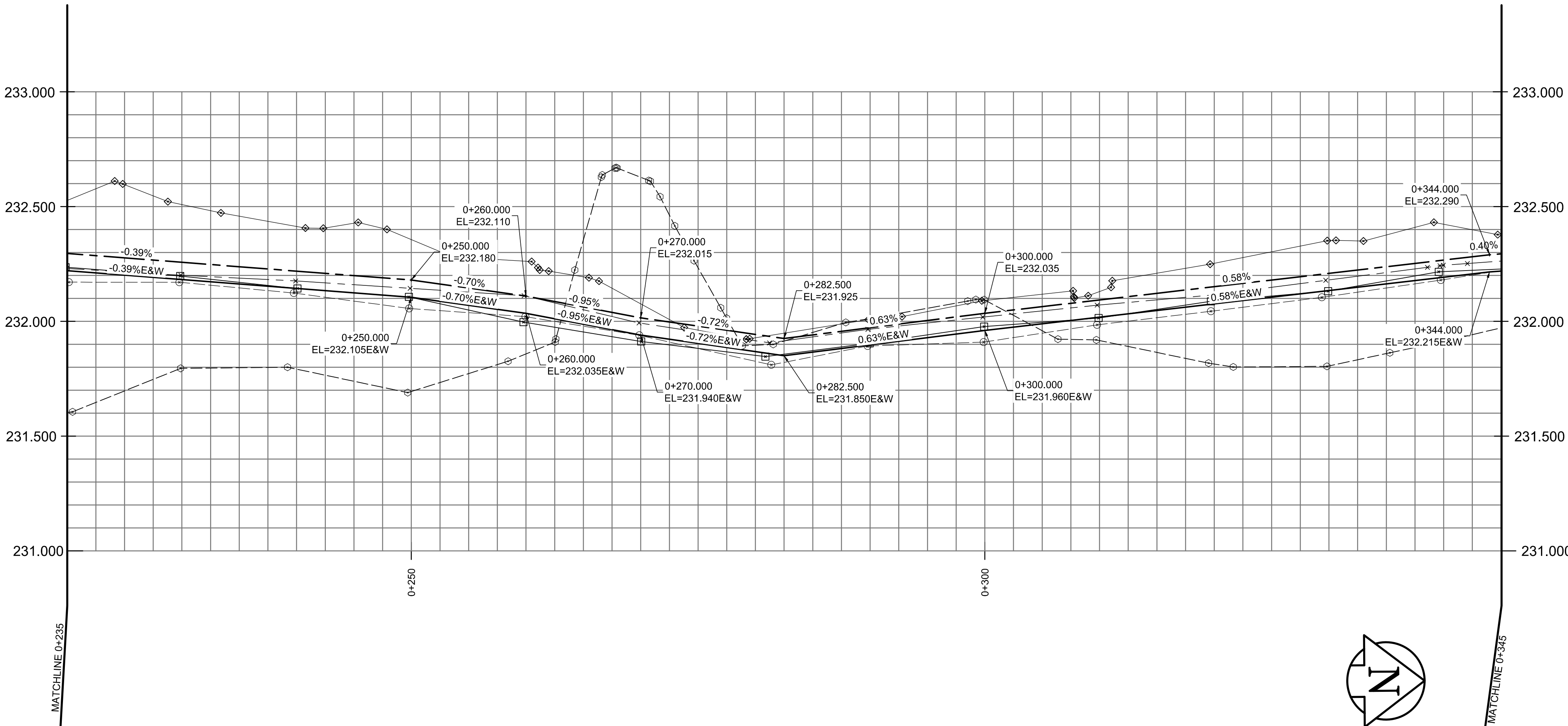
DESIGNED BY	SS	CHECKED BY	KWR
DRAWN BY	JC/SF	APPROVED BY	
HOR. SCALE:	1:250	RELEASED FOR CONSTRUCTION BY:	COLIN TITCHKOSKY 04/20/2016
VERTICAL:	1:10		



CONSULTANT DRAWING NO. AT-14

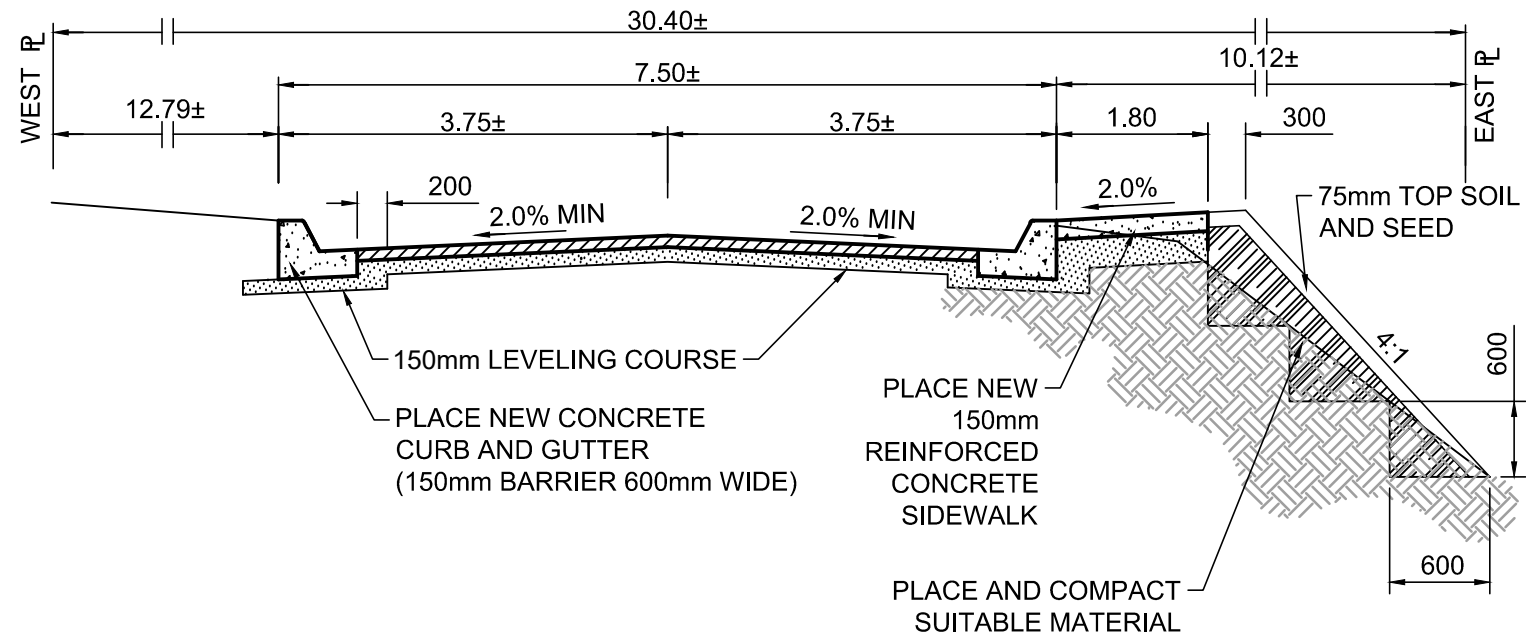
THE CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

2016 LOCAL STREET RENEWAL PROGRAM	CITY DRAWING NUMBER
KILKENNY DRIVE - RADCLIFFE DRIVE TO PATRICIA AVENUE PAVEMENT RECONSTRUCTION RADCLIFFE DRIVE TO STATION 0+220	SHEET 14 OF 28 LD-12673



MATERIALS LIST (SURFACE WORKS)	
TYPE	MANUFACTURER
CONCRETE	BUILDING PRODUCTS
ASPHALT	BITUMINEX
RECYCLED BASE (50mm)	ROCKY ROAD RECYCLING
RECYCLED BASE (20mm)	ROCKY ROAD RECYCLING

MATERIALS LIST (UNDERGROUND)	
TYPE	MANUFACTURER
PVC LDS PIPE	NORTHERN PIPE
BENDS	PLASTIC TRENDS INC
TEES	PLASTIC TRENDS INC
COUPLINGS	DS DALLAS SPECIALTY
CATCHBASINS/RISERS	INLAND
FRAMES & COVERS	TITAN FOUNDRY LTD.



TYPICAL PAVEMENT RECONSTRUCTION CROSS SECTION

- REFERENCE NOTES
- A. PAVEMENT DIMENSIONS ARE TO BACK OF CURB
 - B. BASELINE IS CENTRE LINE RIGHT-OF-WAY
 - C. PROPERTY LINES OBTAINED FROM CITY OF WINNIPEG L.B.I.S., AND NO SCALE FACTOR WAS APPLIED
 - D. REFER TO AECOM FIELD BOOK NO. 4923

- CONSTRUCTION NOTES
- 1. REMOVED EXISTING ASPHALT AND INSTALLED NEW ASPHALTIC PAVEMENT TYPE 1A (AVG THICKNESS 100mm) c/w BASE COURSE LEVELING COURSE 150mm MAX DEPTH
 - 2. REMOVED EXISTING ASPHALT PAVEMENT AND CONSTRUCTED NEW TYPE 1A ASPHALTIC PAVEMENT OVERLAY
 - 3. REMOVED EXISTING CURB AND GUTTER, AND CONSTRUCTED NEW CONCRETE CURB AND GUTTER (150mm HT.)
 - 4. REMOVED EXISTING CONCRETE/ASPHALTIC PAVEMENT AND CONSTRUCTED NEW 150mm REINFORCED CONCRETE PAVEMENT
 - 5. CONSTRUCTED NEW CONCRETE LIP CURB AND GUTTER (40mm HT. INTEGRAL)
 - 6. REMOVED EXISTING CATCHPIT
 - 7. INSTALLED NEW CURB AND GUTTER INLET c/w CATCHPIT (SD-023) AND CONNECTED NEW LEAD TO NEW CATCHBASIN
 - 8. INSTALLED NEW CURB AND GUTTER INLET c/w 1200mm CATCHBASIN (SD-024) AND CONNECTED TO EXISTING MANHOLE
 - 9. CONSTRUCTED NEW 150mm CONCRETE SIDEWALK 1.8m WIDE
 - 10. ADJUSTED EXISTING MANHOLE/CATCHBASIN TO GRADE
 - 11. REMOVED AND REINSTALLED EXISTING PAVING STONES c/w 150mm CONCRETE CURB EDGING
 - 12. RELOCATED EXISTING LIGHT STANDARD

RECORD DRAWING

ENGINEERS
GEOSCIENTISTS
MANITOBA
Certificate of Authorization
AECOM Canada Ltd.
No. 4671 Date: 04/20/2016

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

150 mm W.M.	WATERMAIN	150 mm W.M.	HYDRO	— X —	C PROFILE	—
HYDRANT	—	CONCRETE	M.T.S.	—	WEST GUTTER	—
VALVE	—	ASPHALT	CONCRETE	—	EAST GUTTER	—
LAND DRAINAGE SEWER	—	PROPERTY LINE	ASPHALT	—	N/W PROPERTY LINE	—
WASTEWATER SEWER	—	SURVEY BAR	—	—	S/E PROPERTY LINE	—
MANHOLE	—	ELEVATION	—	—		
CATCH BASIN	—	TREE	—	—		
CATCH PIT	—	SIDEWALK RAMP	—	—		
JUNCTIONS	—	CONCRETE SIDEWALK	—	—		
CULVERT	—	FENCE	—	—		
GAS	—		—	—		
EXISTING	LEGEND - PLAN	PROPOSED	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.

B.M.	77 - 035	83R064	Tilt on pipe, E side Kings Dr & Kilkenny Dr.
ELEV.	231.594	21.9m S of S wall, & 27.2m E of E wall of #603 Kilkenny Dr	
1	ISSUED FOR RECORDS	12/19/2016	BC
0	ISSUED FOR TENDER	09/28/2016	BC
A	ISSUED FOR REVIEW	09/28/2016	BC
NO.	REVISIONS	DATE	BY

AECOM

DESIGNED BY	SS	CHECKED BY	KWR
DRAWN BY	JC/SF	APPROVED BY	
HOR. SCALE:	1:250	RELEASED FOR CONSTRUCTION BY:	COLIN TITCHKOSKY 04/20/2016
VERTICAL:	1:10		
DATE		DATE	

ENGINEER'S SEAL

PROVINCE OF MANITOBA
ORIGINAL SIGNED BY
K.W. RAE
04/20/2016
REGISTERED PROFESSIONAL ENGINEER

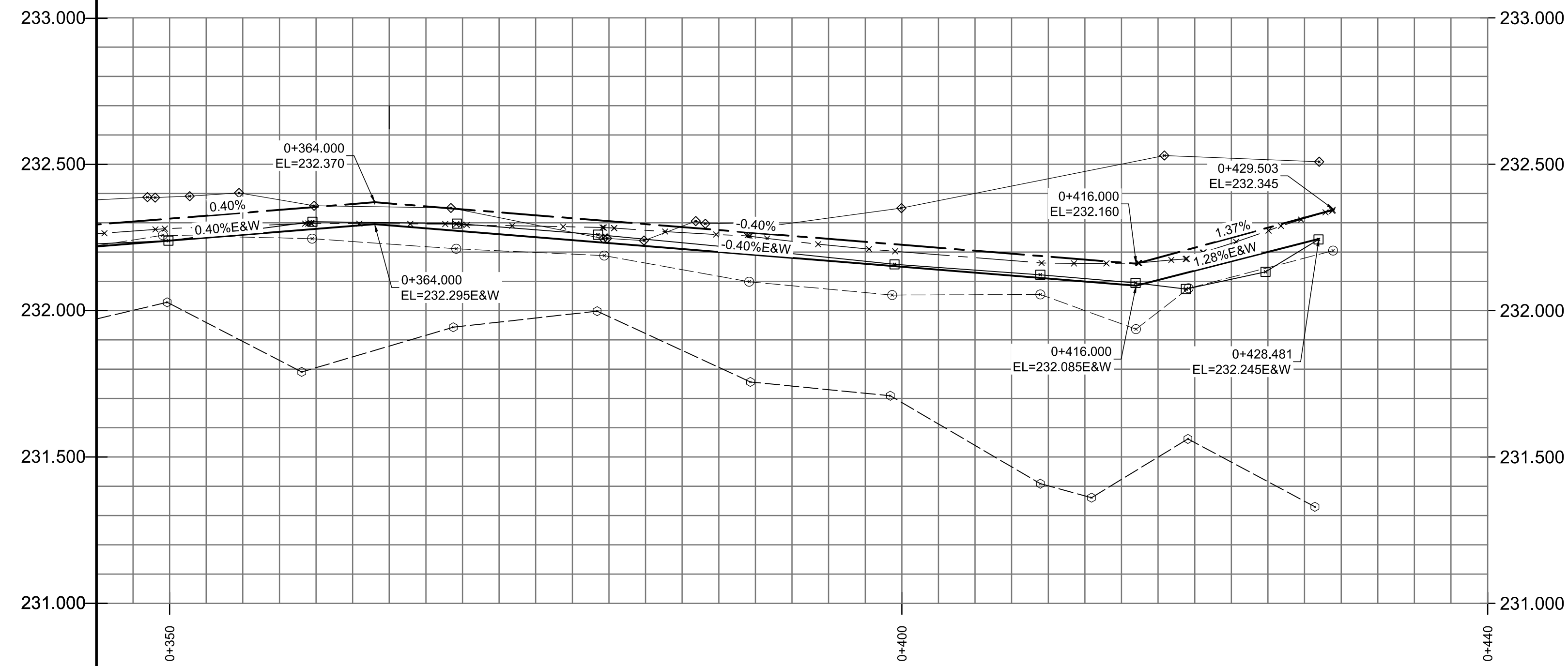
CONSULTANT DRAWING NO.
AT-15

THE CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

2016 LOCAL STREET
RENEWAL PROGRAM

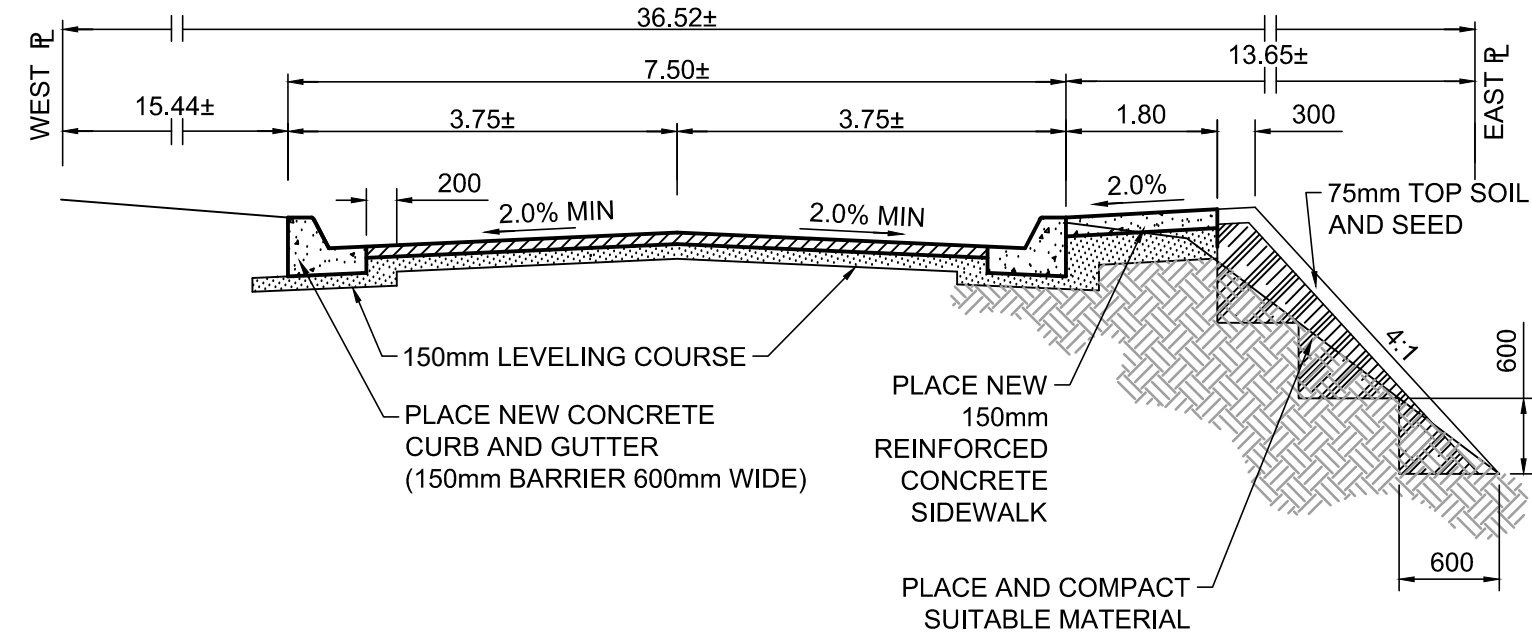
KILKENNY DRIVE - RADCLIFFE DRIVE TO PATRICIA AVENUE
PAVEMENT RECONSTRUCTION
STATION 0+220 TO STATION 0+345

CITY DRAWING NUMBER
SHEET 15 OF 28
LD-12674



MATERIALS LIST (SURFACE WORKS)	
TYPE	MANUFACTURER
CONCRETE	BUILDING PRODUCTS
ASPHALT	BITUMINEX
RECYCLED BASE (50mm)	ROCKY ROAD RECYCLING
RECYCLED BASE (20mm)	ROCKY ROAD RECYCLING

MATERIALS LIST (UNDERGROUND)	
TYPE	MANUFACTURER
PVC LDS PIPE	NORTHERN PIPE
BENDS	PLASTIC TRENDS INC
TEES	PLASTIC TRENDS INC
COUPLINGS	DS DALLAS SPECIALTY
CATCHBASINS/RISERS	INLAND
FRAMES & COVERS	TITAN FOUNDRY LTD.



TYPICAL PAVEMENT RECONSTRUCTION CROSS SECTION

REFERENCE NOTES

- PAVEMENT DIMENSIONS ARE TO BACK OF CURB
- BASELINE IS CENTRE LINE RIGHT-OF-WAY
- PROPERTY LINES OBTAINED FROM CITY OF WINNIPEG L.B.I.S., AND NO SCALE FACTOR WAS APPLIED
- REFER TO AECOM FIELD BOOK NO. 4923

CONSTRUCTION NOTES

- REMOVED EXISTING ASPHALT AND INSTALLED NEW ASPHALTIC PAVEMENT TYPE 1A (AVG THICKNESS 100mm) c/w BASE COURSE LEVELING COURSE 150mm MAX DEPTH
- REMOVED EXISTING ASPHALT PAVEMENT AND CONSTRUCTED NEW TYPE 1A ASPHALTIC PAVEMENT OVERLAY
- REMOVED EXISTING CURB AND GUTTER, AND CONSTRUCTED NEW CONCRETE CURB AND GUTTER (150mm HT.)
- REMOVED EXISTING CONCRETE/ASPHALTIC PAVEMENT AND CONSTRUCTED NEW 150mm REINFORCED CONCRETE PAVEMENT
- CONSTRUCTED NEW CONCRETE LIP CURB AND GUTTER (40mm HT. INTEGRAL)
- REMOVED EXISTING CATCHBASIN
- REMOVED EXISTING CATCHPIT
- INSTALLED NEW CURB AND GUTTER INLET c/w CATCHPIT (SD-023) AND CONNECTED NEW LEAD TO NEW CATCHBASIN
- INSTALLED NEW CURB AND GUTTER INLET c/w 1800mm CATCHBASIN (SD-024) AND CONNECTED LEAD TO DITCH
- CONSTRUCTED NEW 150mm CONCRETE SIDEWALK 1.8m WIDE

RECORD DRAWING



Certificate of Authorization
AECOM Canada Ltd.

No. 4671 Date: 04/20/2016

METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

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

LOCATION APPROVED
UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES
COMMITTEE

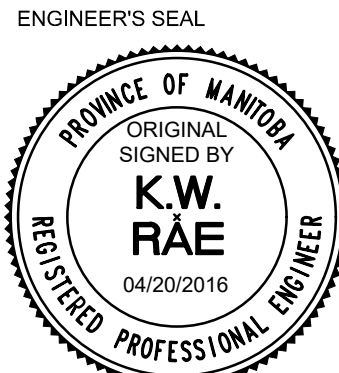
NOTE:
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B.M. 77 - 035 83R064 Tbolt on pipe, E side Kings Dr & Kilkenny Dr. 21.9m S of S wall, & 27.2m E of E wall of #603 Kilkenny Dr

NO.	REVISIONS	DATE	BY
1	ISSUED FOR RECORDS	12/19/2016	BC
0	ISSUED FOR TENDER	09/28/2016	BC
A	ISSUED FOR REVIEW	09/28/2016	BC

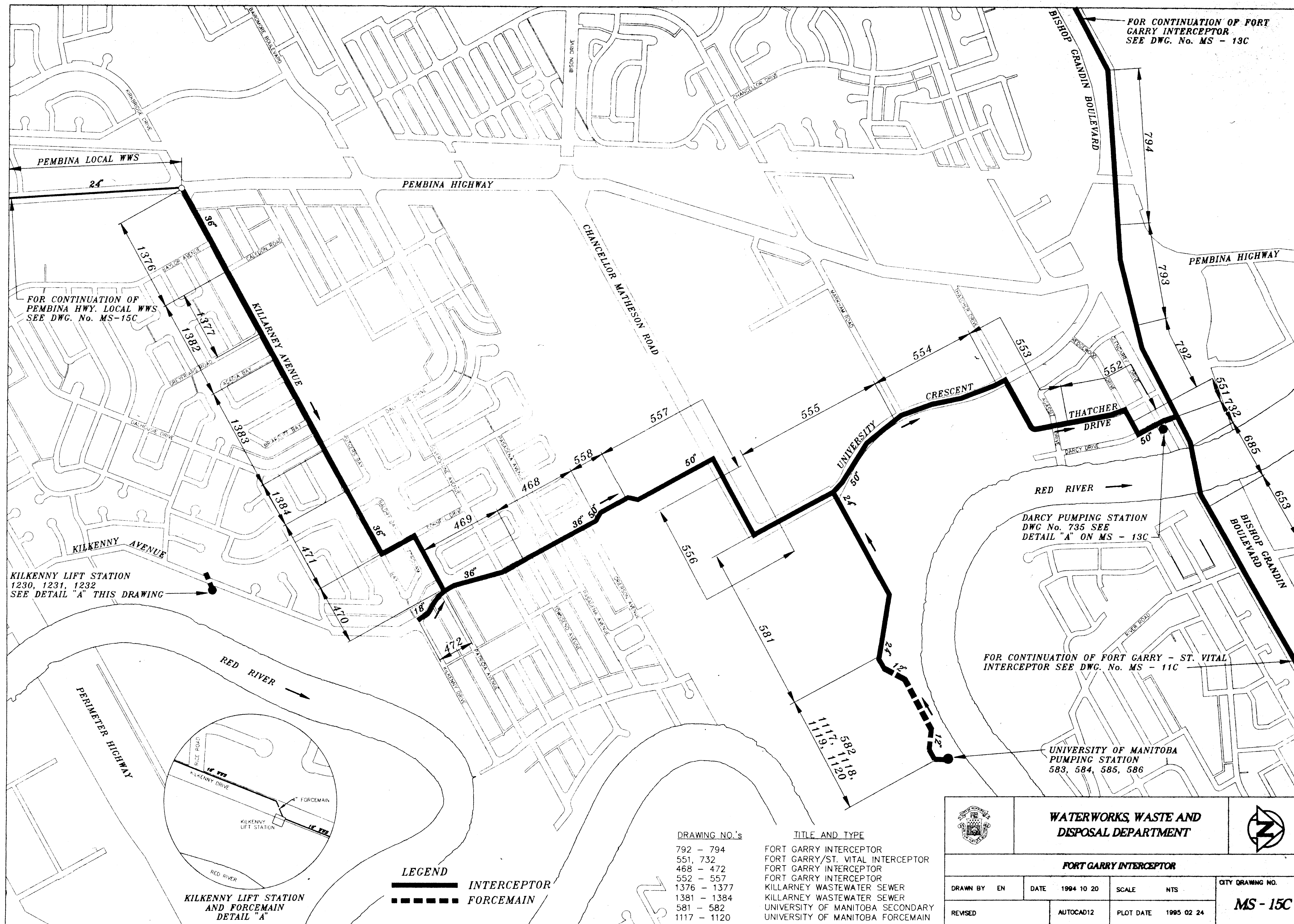
AECOM

DESIGNED BY	SS	CHECKED BY	KWR
DRAWN BY	JC/SF	APPROVED BY	
HOR. SCALE:	1:250	RELEASED FOR CONSTRUCTION BY:	COLIN TITCHKOSKY 04/20/2016
VERTICAL:	1:10		



THE CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

2016 LOCAL STREET RENEWAL PROGRAM	CITY DRAWING NUMBER
KILKENNY DRIVE - RADCLIFFE DRIVE TO PATRICIA AVENUE PAVEMENT RECONSTRUCTION STATION 0+345 to STATION 0+429 @PATRICIA AVENUE	SHEET 16 OF 28 LD-12675



GRANDMONT LIFT STATION
SEE DRAWING No. 1160
SEE DETAIL "D" THIS DRAWING

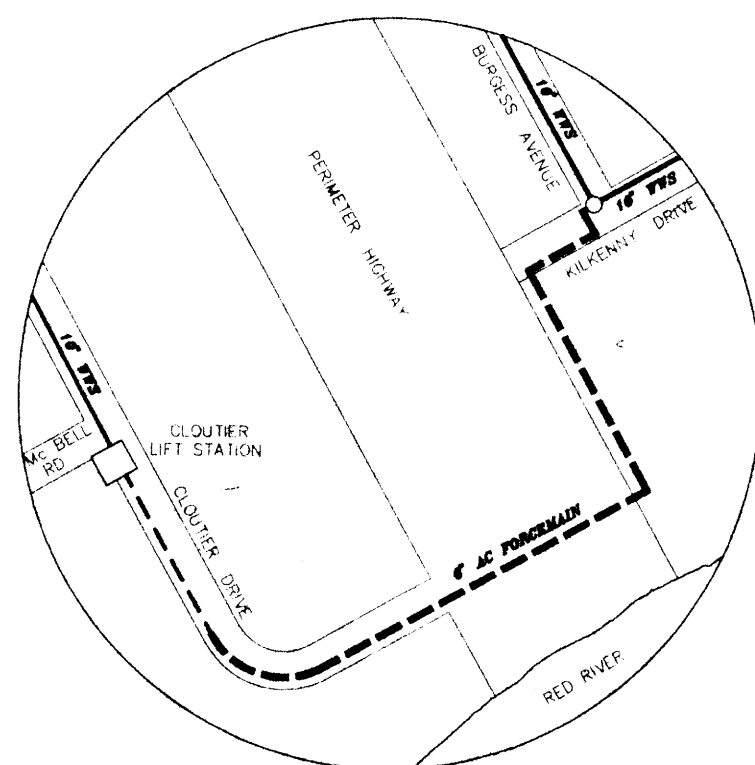
TRAPPISTES LIFT STATION
SEE DWG. No. 1252, 1253, 1254

ST NORBERT LIFT STATION
SEE DRAWING No. 730, 1306
SEE DETAIL "C" THIS DRAWING

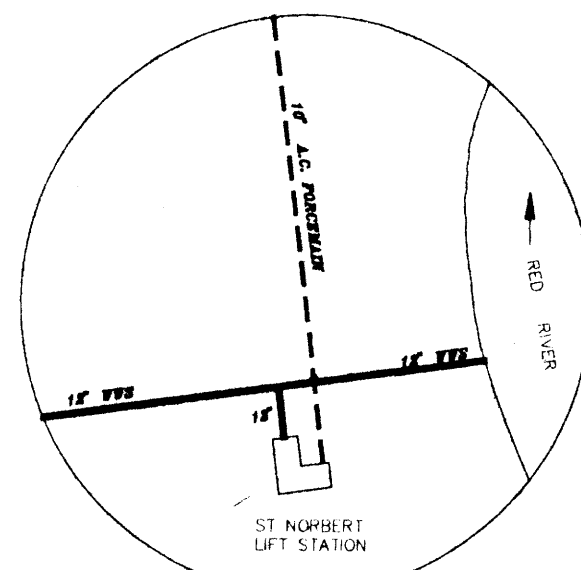
CLOUTIER LIFT STATION
SEE DWG. No. 1187, 1188, 1209, 1210
SEE DETAIL "B" THIS DRAWING

KILKENNY LIFT STATION
SEE DWG. No. 1230, 1231, 1232
SEE DETAIL "A" MS - 15C

FOR CONTINUATION OF FORT
GARRY INTERCEPTOR
SEE DWG. No. MS - 15C



CLOUTIER LIFT STATION
AND FORCEMAIN
DETAIL "B"

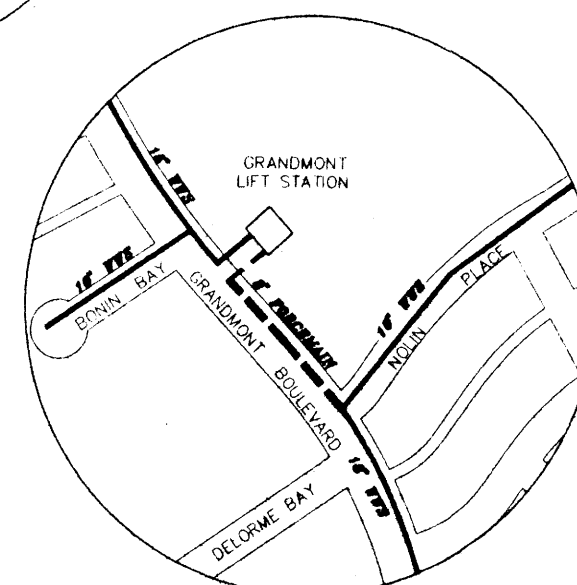


ST NORBERT LIFT STATION
AND FORCEMAIN
DETAIL "C"

LEGEND
———— INTERCEPTOR
- - - - - FORCEMAIN

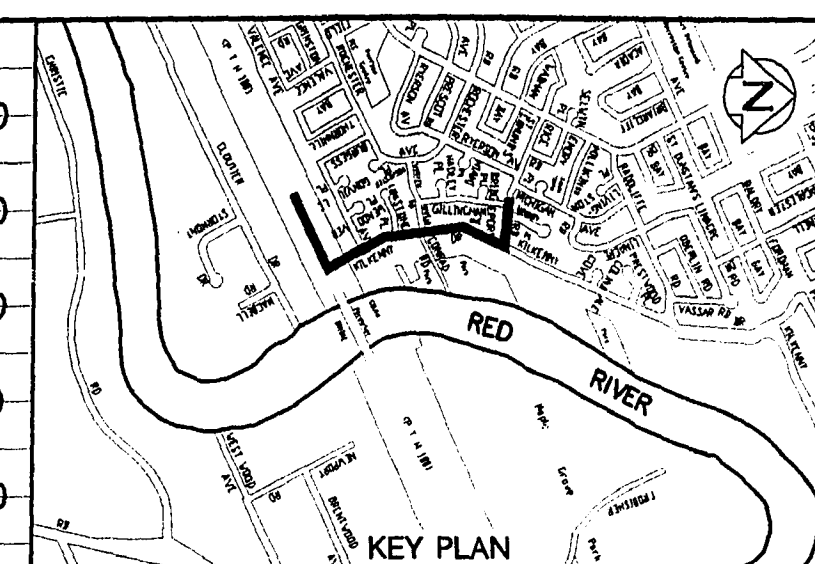
DRAWING NO.'s
728 - 730
468 - 472
1376 - 1377
1381 - 1384
FG-557 - FG-567

TITLE AND TYPE
ST NORBERT LIFT STATION
AND FORCEMAIN
FORT GARRY INTERCEPTOR
KILLARNEY WASTEWATER SEWER
KILLARNEY WASTEWATER SEWER
PEMBINA HIGHWAY LOCAL
WASTEWATER SEWER

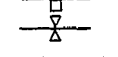


GRANDMONT LIFT STATION
AND FORCEMAIN
DETAIL "D"

		WATERWORKS, WASTE AND DISPOSAL DEPARTMENT			
FORT GARRY INTERCEPTOR/ST NORBERT FORCEMAIN					
DRAWN BY TM		DATE 1994 10 20		SCALE NTS	
REVISED		AUTOCAD12		PLOT DATE 1995 02 24	
CITY DRAWING NO. MS - 16C					



CATCHBASIN		
CURB INLET		
SEWERS (COMBINED, FORCEMAIN, LAND DRAINAGE, STORM RELIEF AND WASTEWATER)		
<u>FLOOD PROTECTION LEVEL</u>	229.94	
RIVER CROSS SECTION NO.	108	
RIM ELEVATION	231.2	



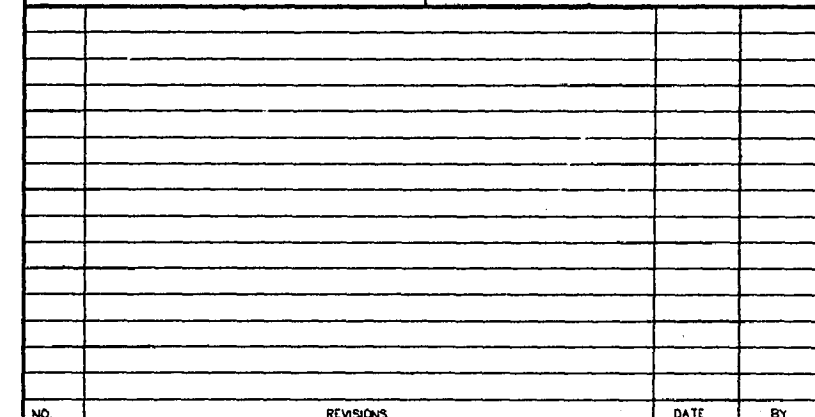
METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

NOTES:

1. DOES NOT NECESSARILY REPRESENT UP-TO-DATE AND/OR COMPLETELY ACCURATE AS-BUILT INFORMATION
2. ALL CHAINAGES ARE ALONG CENTRE LINE OF RIGHT-OF-WAY
3. USE THE FOLLOWING SCALES FOR THE APPROPRIATE DRAWING SIZE

	"A1" SIZE	"C" SIZE
HORIZONTAL	1:2000	1:3000
VERTICAL	1:50	1:75





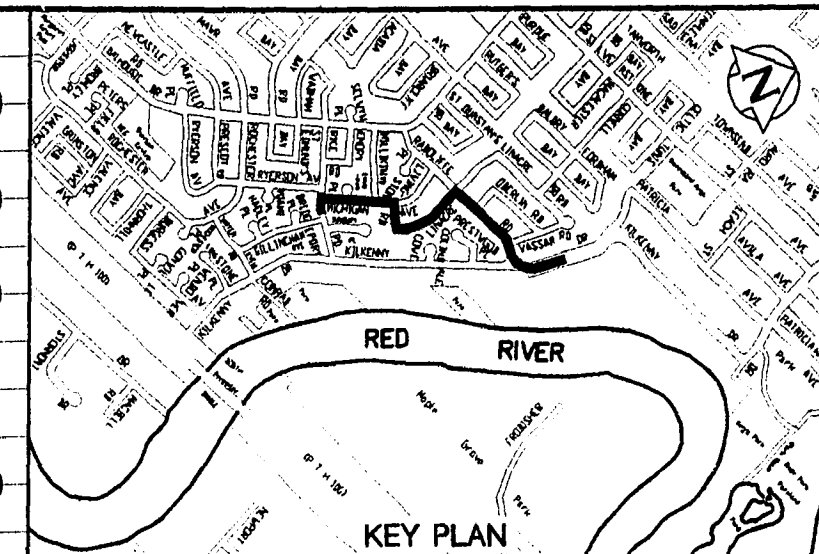
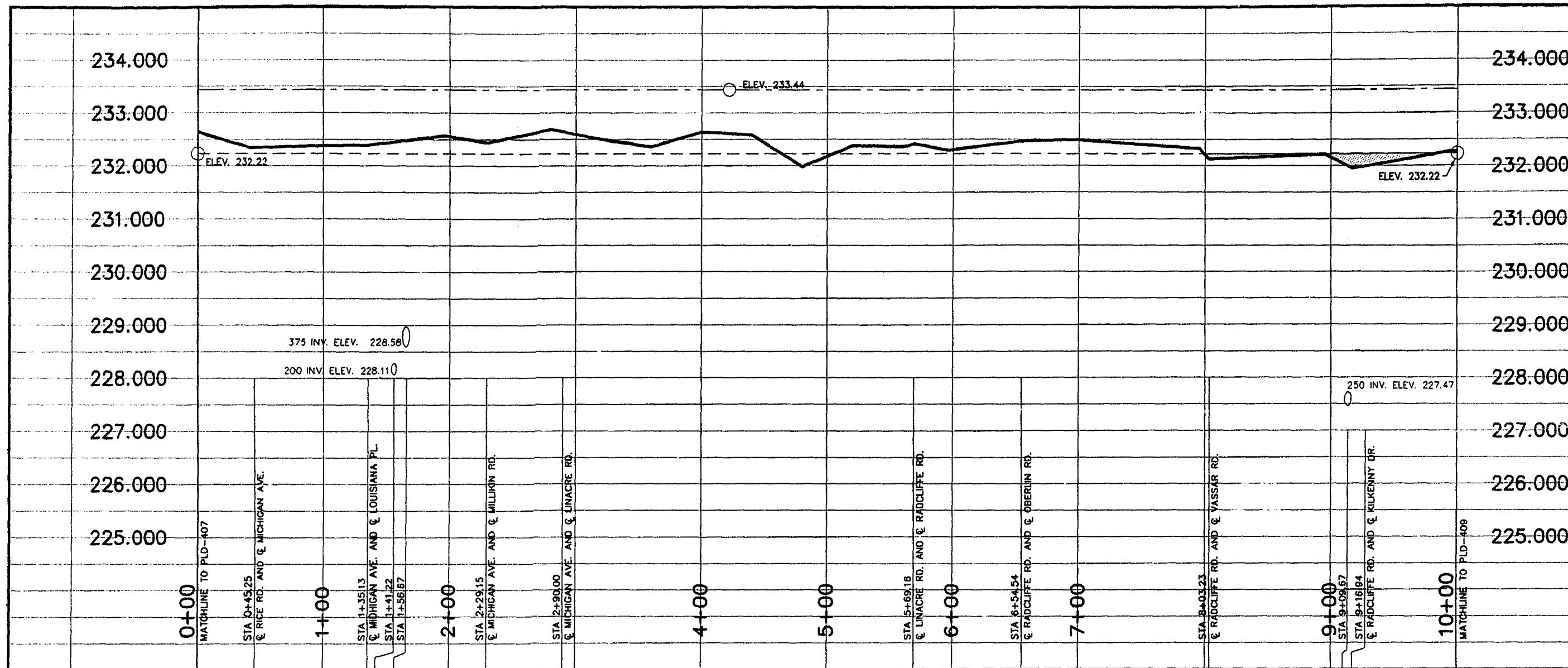
THE CITY OF WINNIPEG

WATER AND WASTE DEPARTMENT

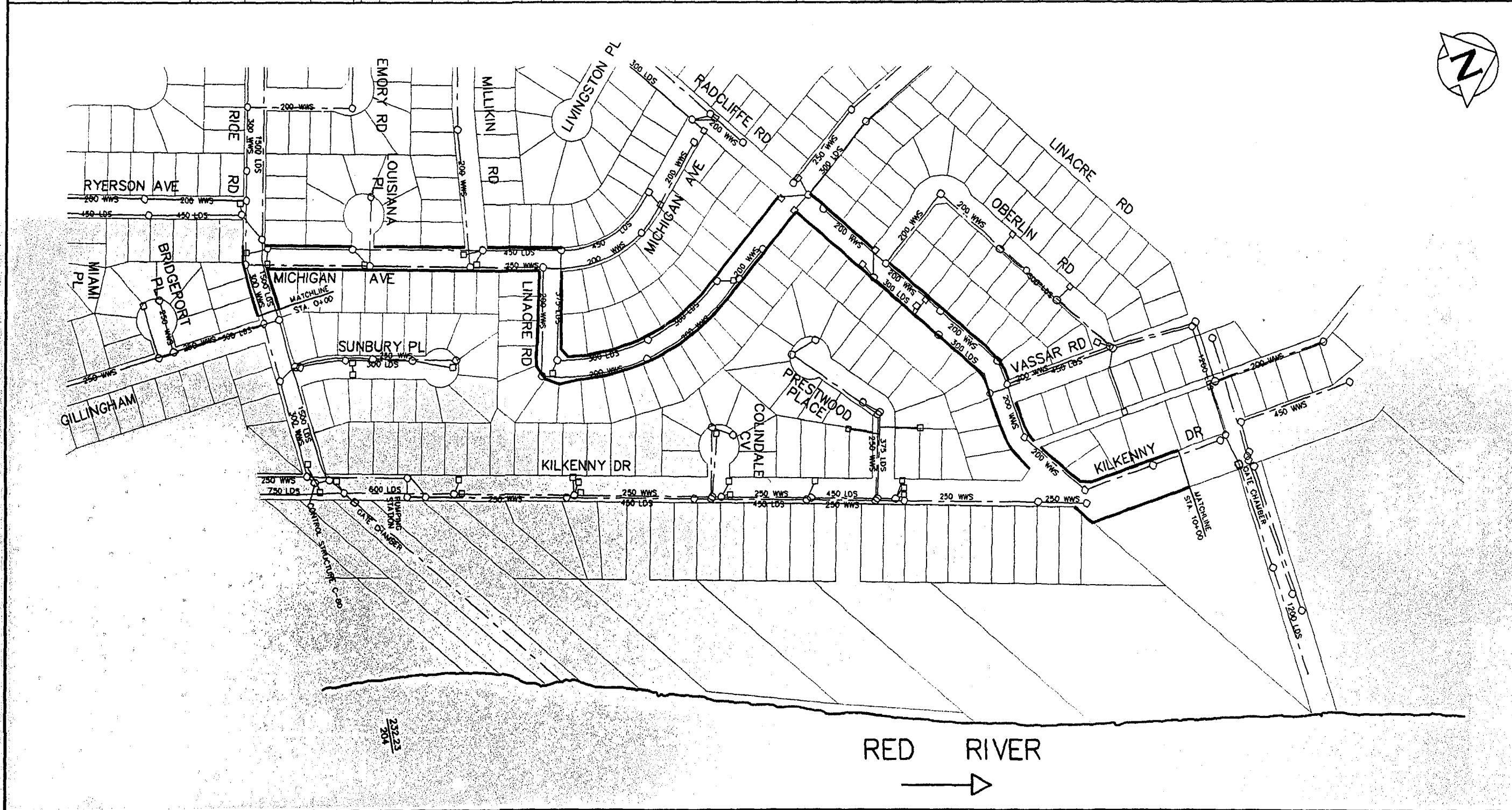
**PRIMARY LINE OF DEFENCE
SERIES 400**

**ON PERIMETER, KILKENNY AND RICE
FROM 263.84 m WEST OF KILKENNY DR.
TO 12.70 m WEST OF GILLINGHAM AVE.**

NOTE : ALL SURVEY BASED ON THE LATEST CITY OF WINNIPEG GEODETIC BENCHMARK DATUM, AVAILABLE AT THE TIME.		CAD VERSION : AUTOCAD 14
		CAD FILE : PLD - 407.DWG
	DESIGNED BY A.E.D.	PLOT DATE 2000 03 31
	DRAWN BY M.S.D.	SHEET 7 OF 28
	CHECKED BY K.M.D.	CITY DRAWING NUMBER
	HOR. SCALE VERTICAL SEE NOTE #3	PLD-407
	DATE 2000 03 31	



LEGEND—PROFILE	SYMBOL	VOLUME OF "COMPACTED" MATERIAL REQUIRED TO RAISE PRIMARY DYKE TO THE FOLLOWING JAMES AVE. STAGES. THE VOLUMES ARE CUMULATIVE AND CALCULATED USING 2:1 SIDESLOPES.
PRIMARY DYKE LEVEL (PDL)	---	
FLOOD PROTECTION LEVEL (FPL)	---	
PLD DYKE	---	
DEFICIENCIES BELOW FPL	---	
		JAMES' STAGE (ft.)
		GEODETIC ELEVATION (m)
		CUMULATIVE VOLUME (m3)
		PDL 31.83 233.44 7310
		31.00 233.19 6100
		30.00 232.88 4310
		29.00 232.58 2190
		28.00 232.27 640
		FPL 27.83 232.22 490
		27.00 231.97 90
		26.00 231.66 10
		25.00 231.36 0
		24.00 231.05 0
		23.00 230.75 0
		22.00 230.44 0
		21.00 230.14 0
		20.00 229.83 0



LEGEND—PLAN	SYMBOL
MANHOLE	○
CATCHBASIN	□
CURB INLET	△
SEWERS (COMBINED, FORCEMAIN, LAND DRAINAGE, STORM RELIEF AND WASTEWATER)	---
FLOOD PROTECTION LEVEL	229.94
RIVER CROSS SECTION NO.	108
RIM ELEVATION	231.2

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

PRIMARY LINE OF DEFENCE
SERIES 400

ON RICE, MICHIGAN, RADCLIFFE AND KILKENNY
FROM 45.25 m EAST OF MICHIGAN AVE.
TO 83.06 m NORTH OF RADCLIFFE RD.

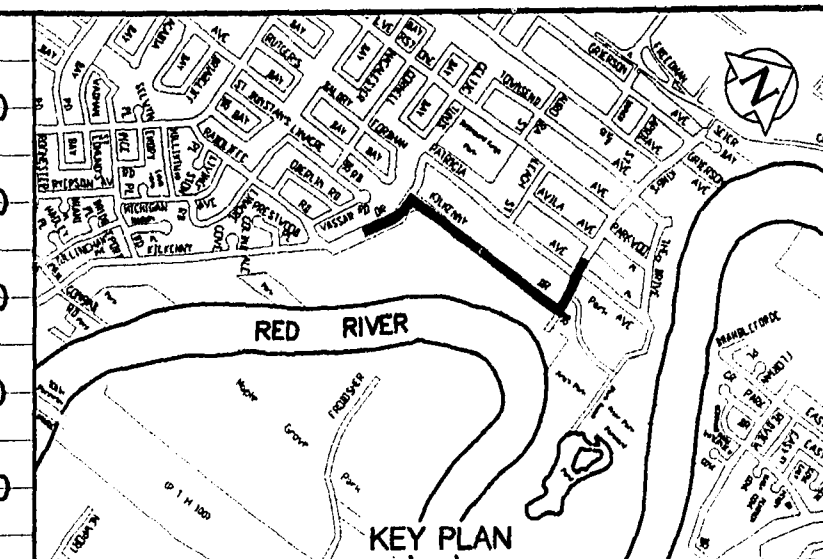
NOTE: ALL SURVEY BASED ON THE LATEST CITY OF WINNIPEG GEODETIC BENCHMARK DATUM, AVAILABLE AT THE TIME.

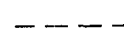
CAD VERSION: AUTOCAD 14
CAD FILE: PLD-408.DWG

ENGINEER'S SEAL: D.D. McNEIL, Aug 2000

DESIGNED BY: A.E.D.
DRAWN BY: M.B.D.
CHECKED BY: K.M.D.
HOR. SCALE: SEE NOTE #3
VERTICAL: SEE NOTE #3
DATE: 2000 03 31

PLOT DATE: 2000 03 31
SHEET: 8 OF 28
CITY DRAWING NUMBER: PLD-408



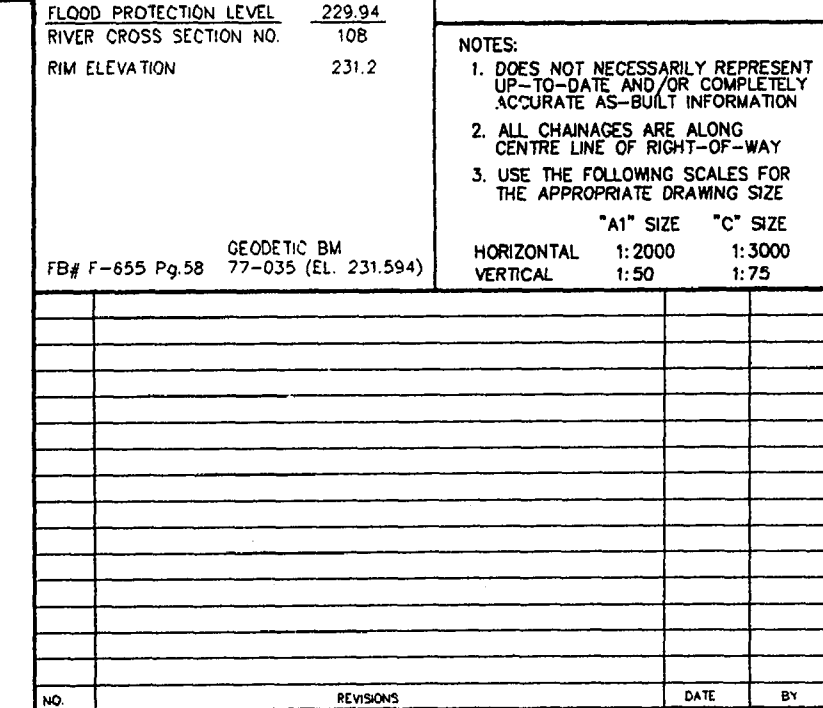
LEGEND—PROFILE	SYMBOL	VOLUME OF "COMPACTED" MATERIAL REQUIRED TO RAISE PRIMARY DYKE TO THE FOLLOWING JAMES AVE STAGES. THE VOLUMES ARE CUMULATIVE AND CALCULATED USING 2:1 SIDESLOPES
PRIMARY DYKE LEVEL (PDL)	---	
FLOOD PROTECTION LEVEL (FPL)	---	
PLD DYKE		
DEFICIENCIES BELOW FPL		
LEGEND—PLAN	SYMBOL	JAMES' STAGE (ft.)
MANHOLE		GEODETIC ELEVATION (m)
CATCH BASIN		CUMULATIVE VOLUME (m3)
		PDL 31.83 233.38 9140
		31.00 233.13 7930
		30.00 232.82 6130
		29.00 232.52 3970
		28.00 232.21 1450
		FPL 27.25 232.16 1040
		27.00 231.91 80
		26.00 231.60 0
		25.00 231.30 0
		24.00 230.99 0
		23.00 230.69 0
		22.00 230.38 0
		21.00 230.08 0
		20.00 229.77 0

CATCHBASIN		METRIC WHOLE NUMBERS INDICATE MILLIMETRES DECIMALIZED NUMBERS INDICATE METRES
CURB INLET		
SEWERS (COMBINED, FORCEMAIN, LAND DRAINAGE, STORM RELIEF AND WASTEWATER)		
		

NOTES:

1. DOES NOT NECESSARILY REPRESENT UP-TO-DATE AND/OR COMPLETELY ACCURATE AS-BUILT INFORMATION
2. ALL CHAINAGES ARE ALONG CENTRE LINE OF RIGHT-OF-WAY
3. USE THE FOLLOWING SCALES FOR THE APPROPRIATE DRAWING SIZE

	"A1" SIZE	"C" SIZE
HORIZONTAL	1:2000	1:3000
VERTICAL	1:50	1:75



THE CITY OF WINNIPEG

WATER AND WASTE DEPARTMENT

PRIMARY LINE OF DEFENCE SERIES 400

ON KILKENNY AND KINGS FROM 231.53 m
SOUTH OF PATRICIA AVE. (WEST LEG) TO
82.05 m NORTH OF PATRICIA AVE. (NORTH LEG)

NOTE : ALL SURVEY BASED ON THE LATEST CITY OF
WINNIPEG GEODETIC BENCHMARK DATUM, AVAILABLE
AT THE TIME.

CAD VERSION : AUTOCAD 14
CAD FILE : PLD-409.DWG

ENGINEER'S SEAL

DESIGNED
BY A.E.D.

PLOT DATE 2000 03 31

DRAWN
BY M.B.D.

SHEET 9 OF 28

CHECKED
BY K.M.D.

CITY DRAWING NUMBER

HOR. SCALE
VERTICAL SEE NOTE #3

PLD-409

DATE 2000 03 31