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Consultants

Legend

EXISTING	LEGEND-PLAN	PROPOSED
150 WM	WATERMAIN	150 WM
⊗	HYDRANT	⊗
⊙	VALVE	⊙
300 LDS	LAND DRAINAGE SEWER	300 LDS
250 WWS	WASTE WATER SEWER	250 WWS
○	MAINTENANCE HOLE	●
□	CATCH BASIN	■
▨	SOD	▨
▨	ASPHALT	▨
▨	PROPERTY LINE	▨
x231.05	ELEVATION	x231.30
→	OVERLAND FLOW	1.5%
▨	25 YEAR PONDING LIMIT	x31.84

Revision	By	Appd.	YY.MM.DD
E			
D			
C	PERMIT & CONSTRUCTION	DB	JFK 23.05.29
B	FOR PERMIT AND CONSTRUCTION	DB	JFK 23.05.10
A	FOR PERMIT AND CONSTRUCTION	DB	JFK 23.04.18
Issued		By Appd.	YY.MM.DD
File Name: 20790c-101	WA	DB	23.05.29
	Dwn.	Chkd.	Dsgn.
			YY.MM.DD

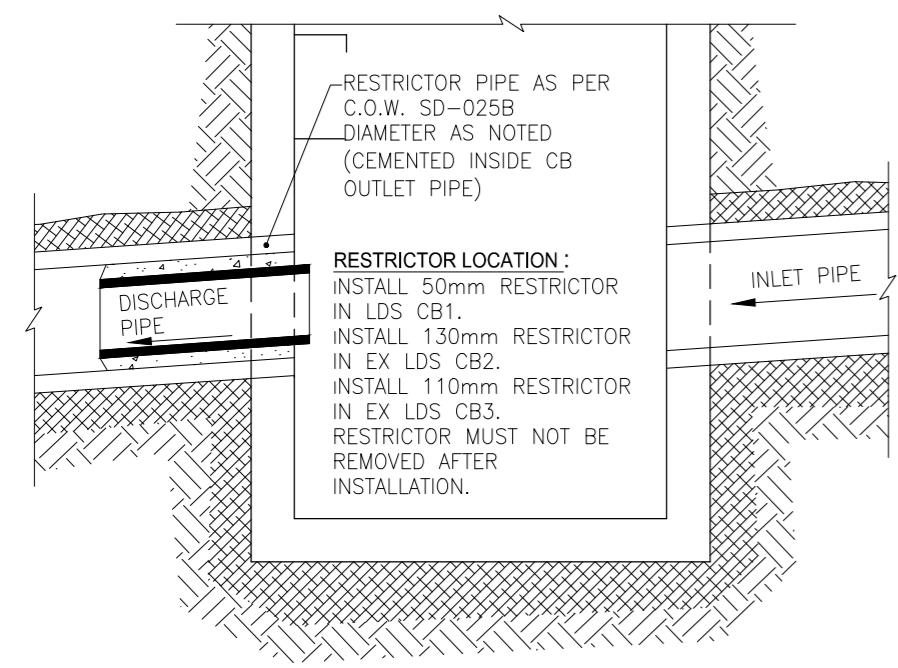
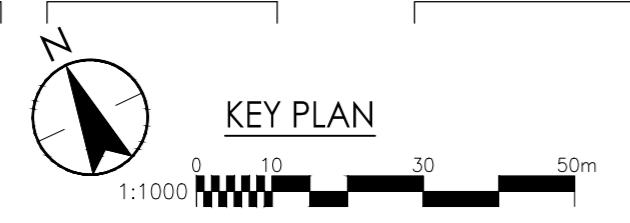
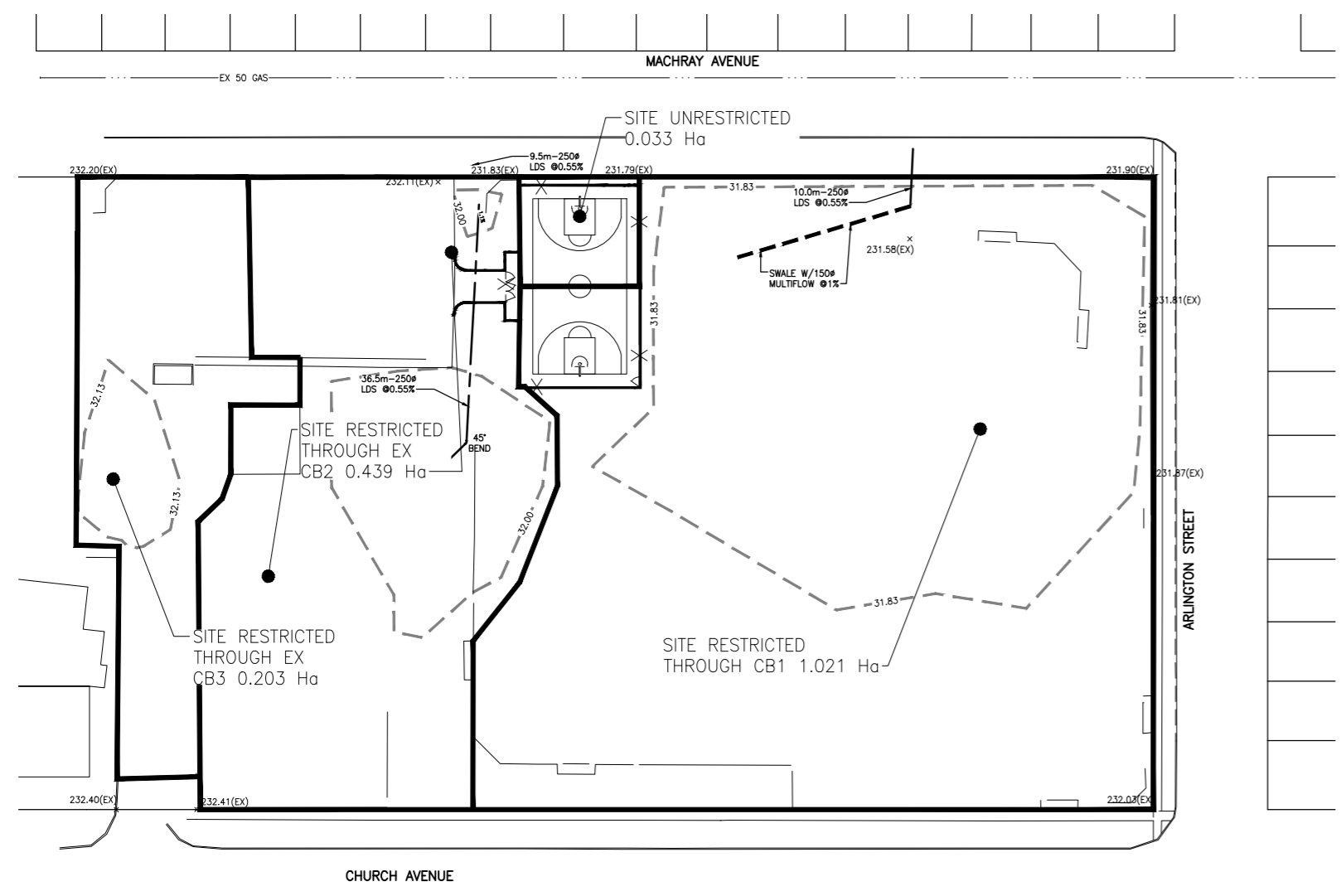
Client/Project
**CITY OF WINNIPEG
 PARKS DEVELOPMENT**
**SINCLAIR PARK
 BASKETBALL COURT CONSTRUCTION**
 490 SINCLAIR ST, Winnipeg MB

Title
DETAILS

Project No. 11120790 Scale AS SHOWN
 Drawing No. C-501 Sheet 2 of 2 Revision 0

STORM WATER DISCHARGE CRITERIA

1. ALLOWABLE SITE RUNOFF			
C'	=	0.20	
Tc	=	10 min	
A	=	1.697 ha	
ALLOWED(S)	=	102.4 l/s	
TOTAL IMPERVIOUS AREA = 0.333 ha			
2. SITE RUNOFF UNRESTRICTED			
C'	=	0.887	
Tc	=	10 min	
i25	=	1842/(1+9) ^{0.842}	
	=	154 mm/hr	
A	=	0.033 ha	
QPOST(25)	=	12.7 l/s	
2. SITE RESTRICTED THROUGH LDS CB1			
A	=	1.021 ha	
% IMPERVIOUS	=	9%	
RESTRICTOR DIAMETER	=	0.050 m	INSTALLED AT OUTLET OF LDS CB1
RESTRICTOR INVERT	=	29.900 m	
HWL25	=	31.83 m	
TAILWATER	=	29.90 m	
HYDRAULIC HEAD	=	1.90 m	
DISCHARGE COEFFICIENT	=	0.60	
QRESTRICTED	=	7.2 l/s	
3. SITE RESTRICTED THROUGH LDS CB2			
A	=	0.439 ha	
% IMPERVIOUS	=	26%	
RESTRICTOR DIAMETER	=	0.130 m	INSTALLED AT OUTLET OF LDS CB2
RESTRICTOR INVERT	=	30.700 m	
HWL25	=	32.00 m	
TAILWATER	=	30.70 m	
HYDRAULIC HEAD	=	1.23 m	
DISCHARGE COEFFICIENT	=	0.60	
QRESTRICTED	=	39.2 l/s	
4. SITE RESTRICTED THROUGH LDS CB3			
A	=	0.203 ha	
% IMPERVIOUS	=	94%	
RESTRICTOR DIAMETER	=	0.110 m	INSTALLED AT OUTLET OF LDS CB3
RESTRICTOR INVERT	=	29.760 m	
HWL25	=	32.13 m	
TAILWATER	=	29.76 m	
HYDRAULIC HEAD	=	2.31 m	
DISCHARGE COEFFICIENT	=	0.60	
QRESTRICTED	=	38.4 l/s	
5. TOTAL SITE DISCHARGE			
QUNRESTRICTED	=	12.7 l/s	
QRESTRICTED	=	84.8 l/s	
QTOTAL	=	97.5 l/s	
6. ONSITE STORAGE (REQUIRED BY THE ISOCHRONOUS METHOD)			
SUBCATCHMENT	AREA	DESIGN DISCHARGE RATE	REQUIRED STORAGE AVAILABLE STORAGE
CB1	1.021 ha	7.2 l/s	505.7 m ³ 593.2 m ³
CB2	0.439 ha	39.2 l/s	108.2 m ³ 108.6 m ³
CB3	0.203 ha	38.4 l/s	28.2 m ³ 35.3 m ³
TOTAL			642.1 m ³ 737.2 m ³
7. ADDITIONAL NOTES			
INSTALL 50 mm RESTRICTOR IN OUTLET OF LDS CB1			
INSTALL 130 mm RESTRICTOR IN OUTLET OF EX LDS CB2			
INSTALL 110 mm RESTRICTOR IN OUTLET OF EX LDS CB3			
8. CLAUSE 8 TABLE			
	PREDEVELOPMENT	POST DEVELOPMENT	
Q25 STORM	= 188.8 l/s	97.5 l/s	
QWWS(PKAW)(PWWF)	= 0.0 l/s	0.0 l/s	
QPEAK TO CS	= 188.8 l/s	97.5 l/s	



1 RESTRICTOR DETAIL
 C101 N.T.S.

- GENERAL NOTES:**
- CONTRACTOR TO VERIFY LOCATION, INVERTS AND TYPE OF ALL EXISTING BURIED UTILITIES PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
 - ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE CITY OF WINNIPEG STANDARD CONSTRUCTION SPECIFICATION.
 - LDS PIPES TO BE PVC OR CONCRETE. WWS PIPE TO BE PVC SDR 35. MAINTENANCE HOLES TO BE BENCHES AS PER CITY OF WINNIPEG SD-010. ALL LDS CULVERTS TO BE CSP 1.6mm GAUGE OR APPROVED EQUIVALENT.
 - A MINIMUM PIPE SEPARATION OF 0.5m, MEASURED FROM OUTSIDE DIAMETER OF PIPES, SHALL BE PROVIDED BETWEEN ANY PROPOSED WORKS AND ANY OTHER PROPOSED WORKS, EXISTING WATER PIPE OR SEWER PIPE UNLESS OTHERWISE NOTED.
 - ALL TRENCH, MAINTENANCE HOLE AND CATCH BASIN BACKFILL FOR WATER, SEWER AND PVC CONDUIT INSTALLATIONS SHALL BE CLASS B SAND BEDDING WITH CLASS 2 BACKFILL WHEN WITHIN 1.0m OR UNDER NEW OR PROPOSED PAVEMENT AREAS AND CLASS 4 BACKFILL IN LANDSCAPED AREAS.
 - FOR LIGHT STANDARD BASES, ELECTRICAL CONDUITS AND WIRING, SEE ELECTRICAL DRAWINGS.
 - THE CONTRACTOR SHALL CLEAN AND VIDEO INSPECT ALL WWS AND LDS SEWERS PRIOR TO FINAL INSPECTION. THE CONTRACTOR SHALL SUBMIT (2) TWO COPIES OF THE WRITTEN REPORT AND VIDEO TO THE SITE SERVICING CONSULTANT.
 - ALL CATCH BASINS AND LDS MAINTENANCE HOLES TO BE NYLOPLAST DRAIN BASINS WITH STANDARD GRATE ASSEMBLY-TYPE 'B' COVER OR APPROVED EQUIVALENT.
 - ALL CATCH BASINS TO HAVE 250MM DIA. LEADS UNLESS OTHERWISE NOTED.
 - ALL CONCRETE CURBS TO BE 0.15m IN HEIGHT UNLESS OTHERWISE NOTED.

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 140/92 FOR DETAILS

METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
 DECIMALIZED NUMBERS INDICATE METRES

**ENGINEERS
 GEOSCIENTISTS
 MANITOBA**
 Certificate of Authorization
 Stantec Consulting Ltd.
 No. 1301

PROVINCE OF MANITOBA
J. F. KALMAR
 20 May 2023
 Member
 32203
 REGISTERED PROFESSIONAL ENGINEER