

METRIC
WHOLE NUMBERS INDICATE MILLIMETERS,
DECIMAL NUMBERS INDICATE METERS.

150 WM	WATERMAIN	150 WM
250 WWS	WASTEWATER	150 WWS
300 LDS	LAND DRAINAGE SEWER	300 LDS
⊙	HYDRANT ASSEMBLY	⊙
⊗	GATE VALVE	⊗
⊘	CURB STOP	⊘
⊠	REDUCER	⊠
○	MANHOLE	●
□	CATCH BASIN	■
⊕	SURVEY BAR	
⊖	SIGN	
⊙	UTILITY POLE	
⊗	UTILITY PEDESTAL	
—	HYDRO	
—	GAS	
—	MTS	
>>>>	SWALE	>>>>
→	DIRECTION OF FLOW	←
+235.38	SURVEY ELEVATION	
(235.400)	PAVEMENT ELEVATION	(235.400)
235.38	GROUND ELEVATION	235.38
(235.38)	DITCH / SWALE ELEVATION	(235.38)
---	PROPERTY LINE	
---	EXISTING	---
---	LEGEND	---
---	PROPOSED	---

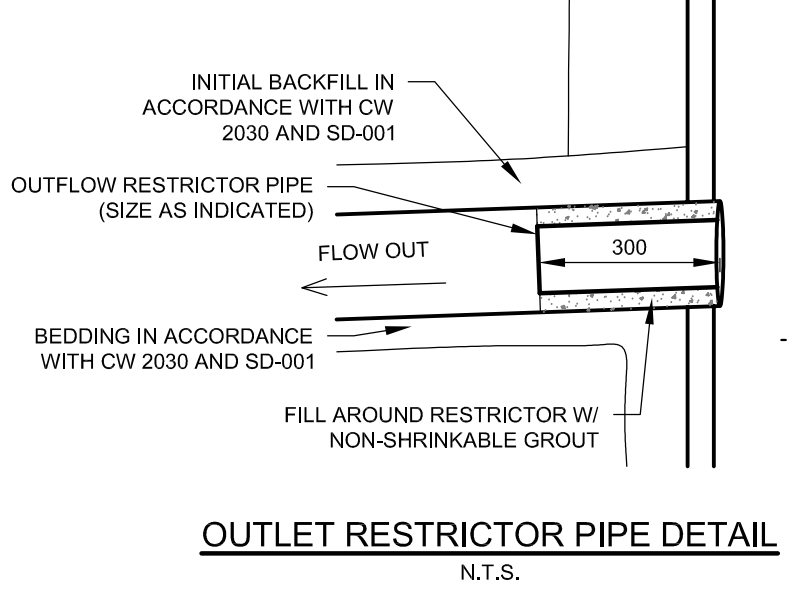
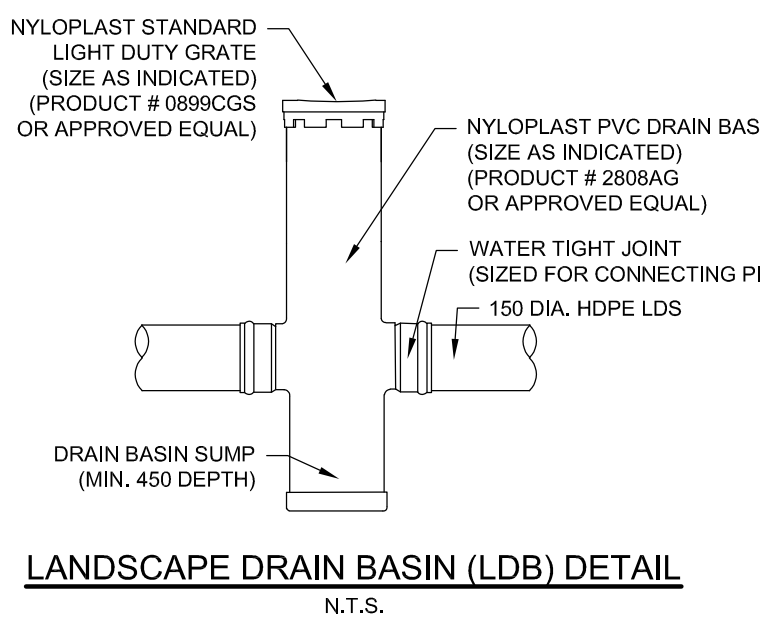
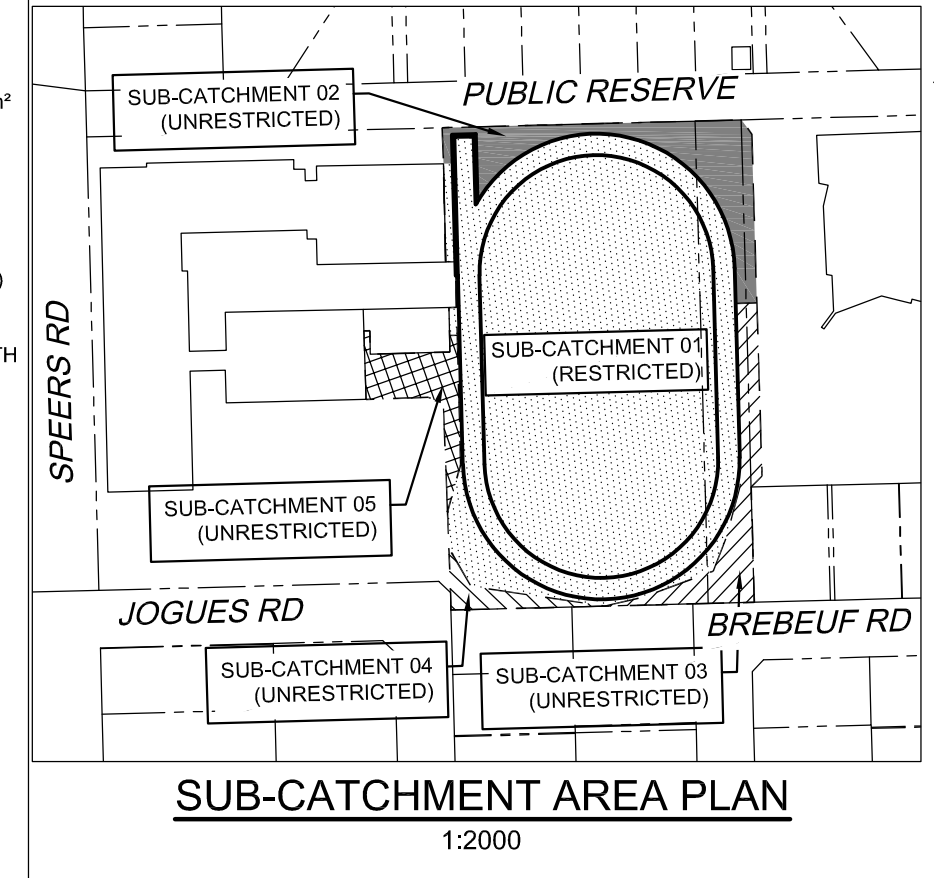
GENERAL NOTES:

1. ALL CONSTRUCTION AND MATERIALS INCORPORATED IN THE WORK SHALL CONFORM TO THE LATEST EDITION OF THE CITY OF WINNIPEG "STANDARD DESIGN AND CONSTRUCTION SPECIFICATIONS", UNLESS NOTED OTHERWISE.
2. 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, EXACT LOCATION AND DEPTH OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.
3. LOCATIONS OF PROPERTY LIMITS AND EXISTING AND/OR PROPOSED FEATURES RELATIVE TO THESE LIMITS AS SHOWN DO NOT REPRESENT A LEGAL SURVEY. SBC INC. MAKES NO REPRESENTATION OR GUARANTEE THAT THE PROPERTY LIMIT INFORMATION SHOWN IS ACCURATE, AND ACCEPTS NO RESPONSIBILITY FOR ANY DAMAGES SUFFERED BY ANY THIRD PARTY AS A RESULT OF DECISIONS OR ACTIONS BASED ON THIS DRAWING.
4. ALL SURFACES AND ANY EXISTING UTILITIES DAMAGED OR DISTURBED BY CONSTRUCTION SHALL BE RESTORED TO ITS ORIGINAL CONDITION OR BETTER, OR REPLACED, AT THE CONTRACTOR'S EXPENSE.

LAND DRAINAGE SEWER NOTES:

1. TRENCHLESS INSTALLATION OR COMPACTED CLASS 2 BACKFILL SHALL BE USED WITHIN 2.0m OF ALL EXISTING AND PROPOSED PAVEMENT SURFACES.
 2. LAND DRAINAGE SEWER (LDS) PIPE SHALL BE PVC SDR35, INSTALLED IN ACCORDANCE TO CW 2130. LAND DRAINAGE SEWER CATCH PITS (CP) SHOWN SHALL BE CONSTRUCTED WITH THE FOLLOWING BASE DIAMETERS AND COVER TYPES:
- | | BASE DIA. | COVER |
|------|-----------|--------------|
| CP01 | 900 | GRADED COVER |
3. DRAINAGE PIPE SHALL BE CONTINUOUS HDPE PERFORATED PIPE, INSTALLED IN ACCORDANCE TO CW 3120. ALL DRAINAGE PIPE SHALL BE ENCLOSED WITH A CONTINUOUS DRAINAGE TRENCH, AS PER DETAIL SHOWN ON L3.1.
 4. LAND DRAINAGE SEWER LANDSCAPE DRAIN BASINS (LDB) SHALL BE PVC WITH INTEGRATED DUCTILE IRON GRATE COVERS MANUFACTURED BY NYLOPLAST, OR APPROVED EQUAL, WITH THE FOLLOWING BASE DIAMETERS AND COVER TYPES:
- | | BASE DIA. | COVER |
|----------------|-----------|----------------------|
| LDB01 to LDB06 | 200 | STANDARD FLAT GRATED |
5. VIDEO INSPECTION OF ALL INSTALLED LAND DRAINAGE SEWERS SHALL BE COMPLETED IN ACCORDANCE TO CW 2145 AND SUBMITTED TO THE CONTRACT ADMINISTRATOR FOR REVIEW.

STORM WATER MANAGEMENT CRITERIA
CATCHMENTS LIMITS AREA = 10,690 m²
C_{ALL} ALLOWABLE = 0.20 (ASSIGNED BY CITY OF WINNIPEG)
Q₁₀ = 103.5 m³/hr; T_c = 10 min
Q_{SY} ALLOWABLE = 0.065 m³/s (BASED ON RATIONAL METHOD)
TOTAL IMPERVIOUS AREA = 2,180 m² TOTAL PERVIOUS AREA = 8,500 m²
AREA = 8,540 m²
IMPERVIOUS = 1,815 m² PERVIOUS = 6,725 m²
Q_{UNRESTRICTED} = C_iA(2gh)^{0.5} C_r=0.6 A=0.007854 m² g=9.81m/s² h=1.615m
Q_{RESTRICTED} = 0.027 m³/s (USING 100 DIA. RESTRICTOR AT OUTLET OF CP01)
STORAGE REQUIRED = 323 m³
STORAGE AVAILABLE = 875 m³ (PONDING AREA = 7,291 m², PONDING DEPTH = 0.36m)
SUB-CATCHMENT 02 - RUNOFF TO PUBLIC RESERVE:
AREA = 935 m² IMPERVIOUS = 35 m² PERVIOUS = 900 m²
Q_{UNRESTRICTED} = 0.007 m³/s
SUB-CATCHMENT 03 - RUNOFF TO BREBEUF RD:
AREA = 625 m² IMPERVIOUS = 0 m² PERVIOUS = 625 m²
Q_{UNRESTRICTED} = 0.004 m³/s
STORAGE REQUIRED = 0 m³ STORAGE AVAILABLE = 0 m³
SUB-CATCHMENT 04 - RUNOFF TO JOGUES RD:
AREA = 170 m² IMPERVIOUS = 20 m² PERVIOUS = 150 m²
Q_{UNRESTRICTED} = 0.002 m³/s
SUB-CATCHMENT 05 - RUNOFF TO LDB01:
AREA = 410 m² IMPERVIOUS = 310 m² PERVIOUS = 100 m²
Q_{UNRESTRICTED} = 0.013 m³/s
Q_{TOTAL} = 0.027 + 0.007 + 0.004 + 0.002 + 0.013 = 0.053 m³/s < Q_{SY} ALLOWABLE



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PROJECT NO.	24755
DATE	2024 06 11
DRAWN BY	ML
CHECKED BY	RC
DESIGNED BY	ML
CLIENT	CITY OF WINNIPEG ASSETS AND PROJECT MANAGEMENT
PROJECT TITLE	COLLEGE BELVEAU TRACK REFURBISHMENT
CONTENTS	SITE SERVICING PLAN
DRAWING	C1.1