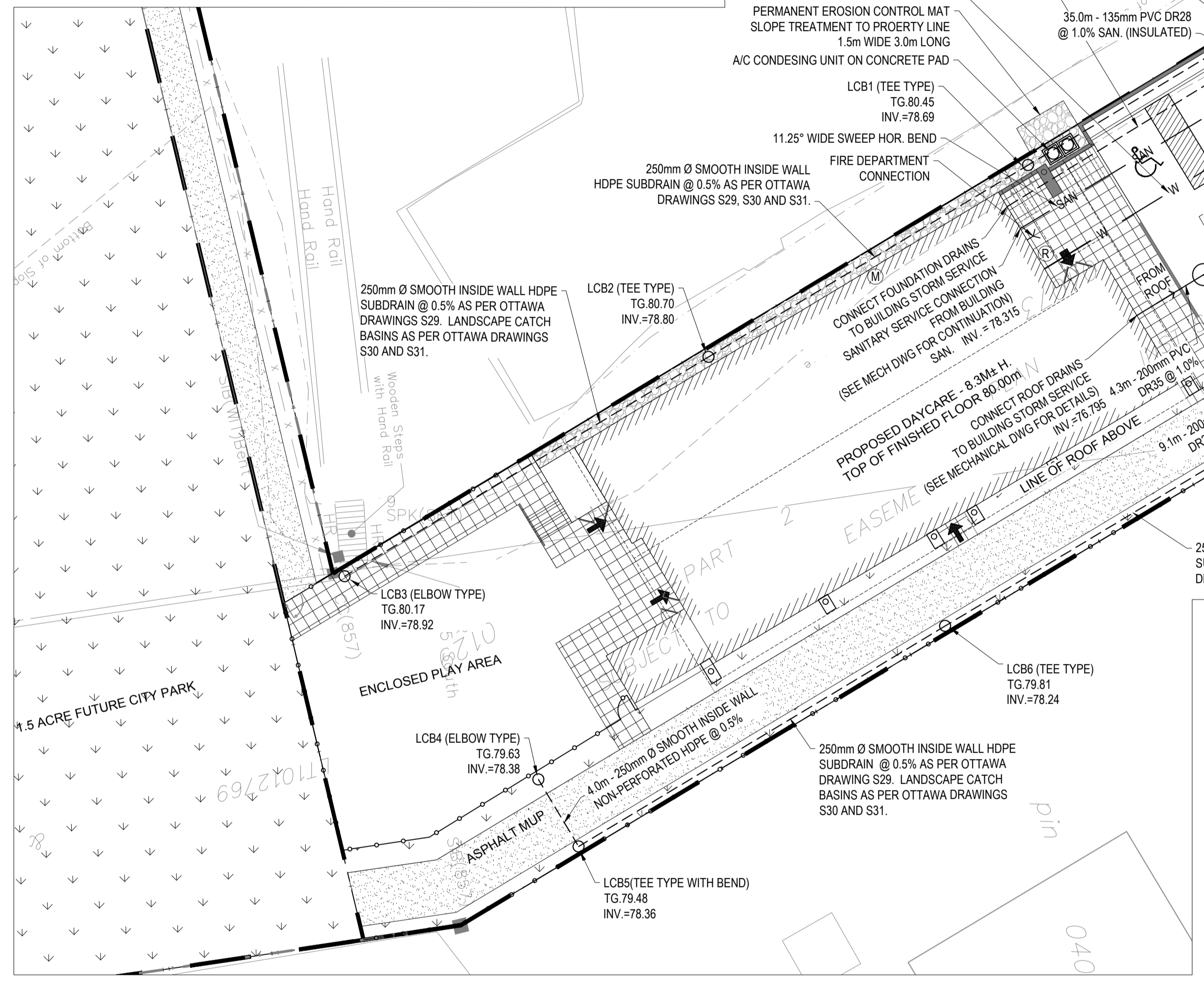


| No. | PIPE | INVERT (m) | CLEARANCE (m) | OBVERT (m) | EX. PIPE |
|-----|----------------|------------|---------------|------------|--------------------|
| 1 | 135mm DIA. SAN | 77.80 | 0.50 OVER | 77.30 | EX. 203mm DIA. WM |
| 2 | 135mm DIA. SAN | 77.83 | 3.11 OVER | 74.72 | EX. 600mm DIA. SAN |
| 3 | 135mm DIA. SAN | 77.86 | 1.22 OVER | 76.64 | EX. 450mm DIA. STM |
| 4 | 150mm DIA. WM | 76.91 | 2.19 OVER | 74.72 | EX. 600mm DIA. SAN |
| 5 | 150mm DIA. WM | 76.94 | 0.30 OVER | 76.64 | EX. 450mm DIA. STM |
| 6 | 135mm DIA. SAN | 77.99 | 0.30 OVER | 77.69 | 200mm CB LEAD |
| 7 | 135mm DIA. SAN | 78.00 | 0.73 OVER | 77.27 | 200mm CB LEAD |
| 8 | 150mm DIA. WM | 76.80 | 0.58 UNDER | 77.33 | 200mm CB LEAD |
| 9 | 135mm DIA. SAN | 78.07 | 0.79 OVER | 77.28 | 100mm DIA. WM |

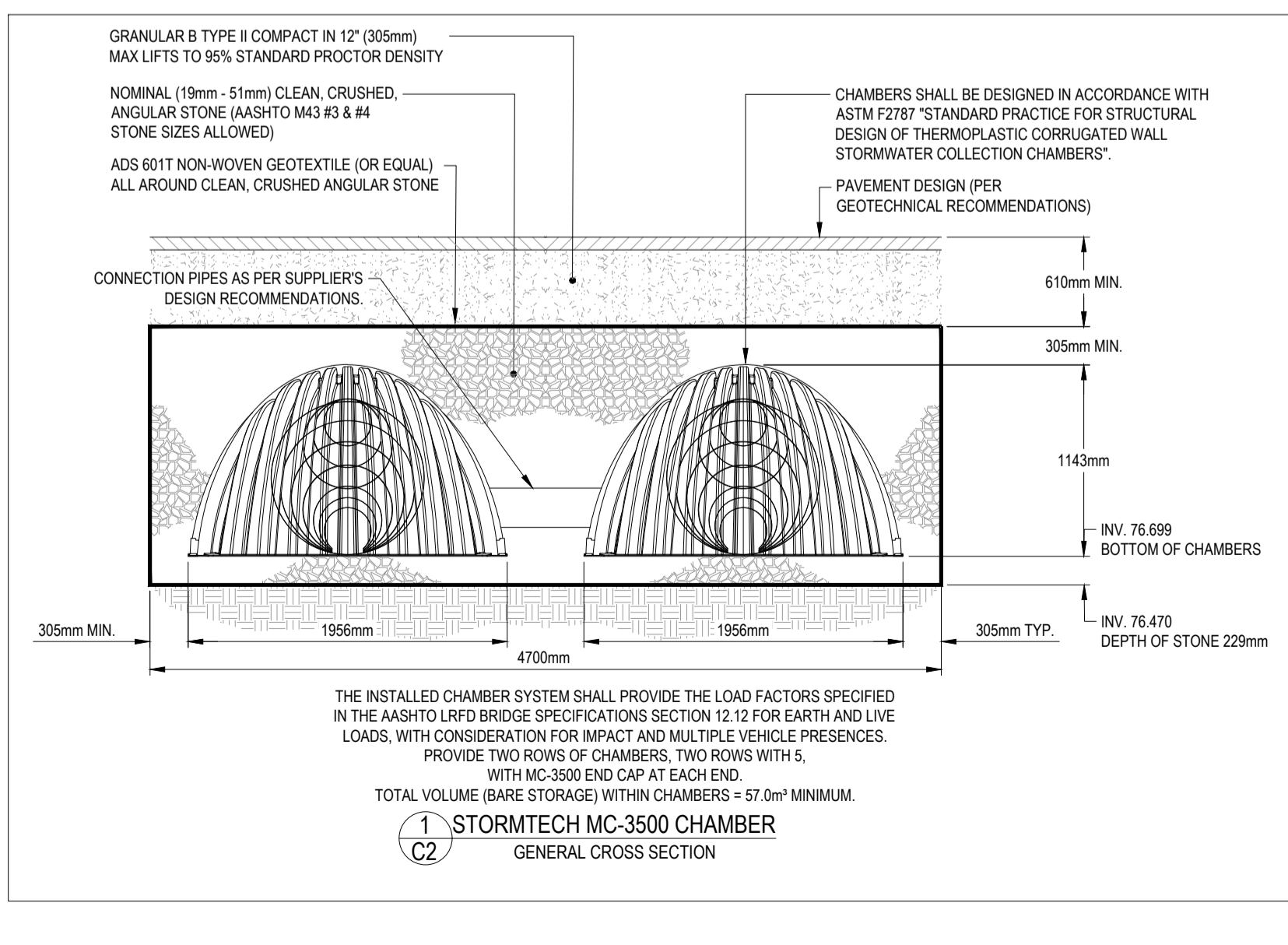
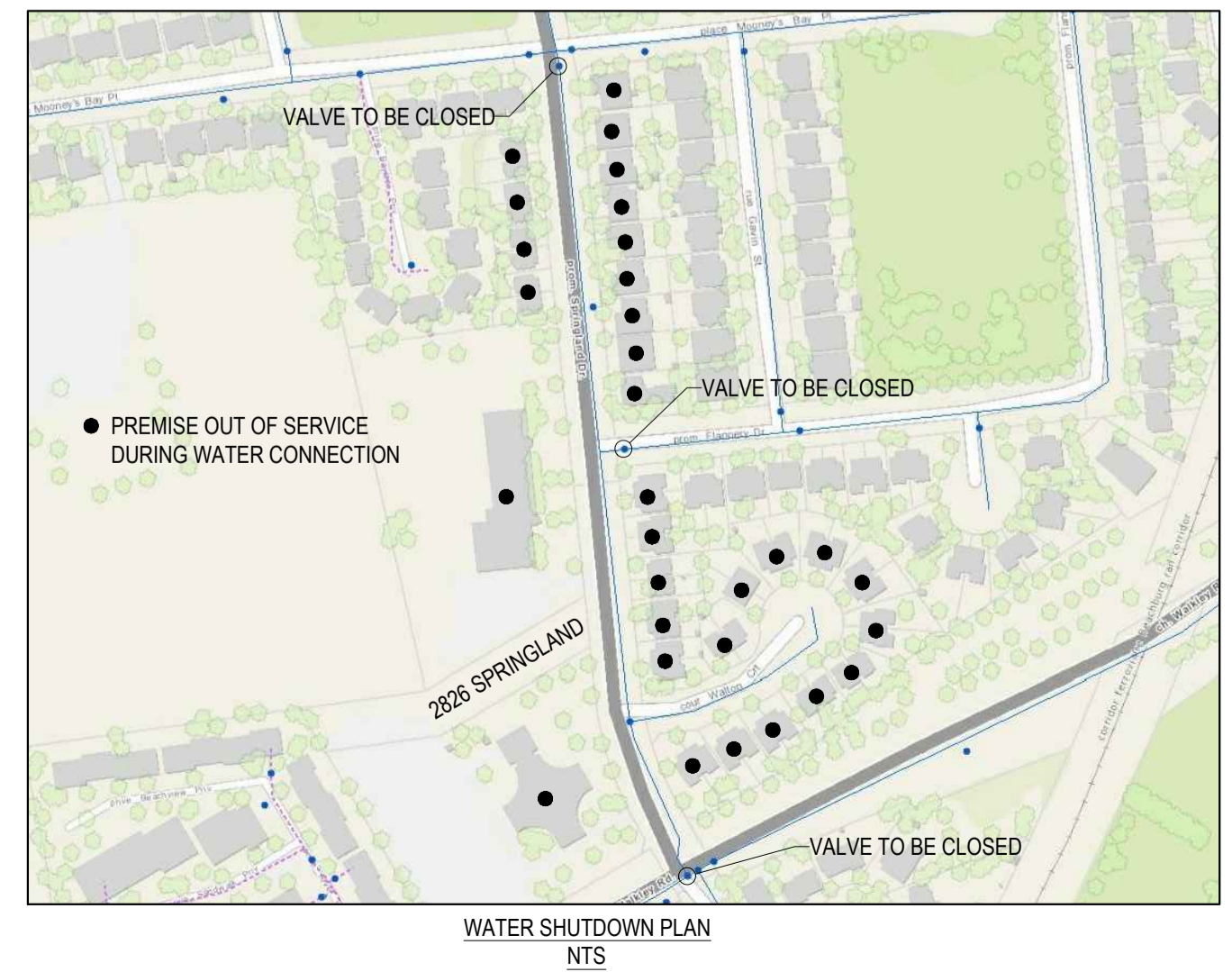
| CROSSING NUMBER | STATION | DESCRIPTION | FINISHED GRADE | TOP OF WATERMAIN | INSULATION REQUIRED | COVER |
|-----------------|---------|------------------------|----------------|------------------|---------------------|-------|
| 4 | 0+000 | 200 x 150mm TEE | 79.43 | 77.30 | YES | 2.13 |
| 5 | 0+004 | CROSSING OVER EX. SAN | 79.46 | 77.09 | YES | 2.37 |
| 6 | 0+005.5 | CROSSING OVER EX. STM | 79.42 | 77.09 | YES | 2.33 |
| 7 | 0+013 | 150mm VALVE & BOX | 79.44 | 77.04 | | 2.40 |
| 8 | 0+014 | HYDRANT TEE | 79.37 | 76.97 | | 2.40 |
| 9 | 0+014.5 | CROSSING UNDER CB LEAD | 79.42 | 76.95 | | 2.47 |
| 10 | 0+016 | 150 x 100mm REDUCER | 79.34 | 76.94 | | 2.40 |
| 11 | 0+024.4 | CROSSING UNDER SAN | 79.68 | 77.28 | | 2.40 |
| 12 | 0+048 | BUILDING ENTRY | 79.96 | 77.56 | | 2.40 |



1 SERVICES PLAN
SCALE= 1:200

- SEWER NOTES**
- CONSTRUCT SEWERS AND APPURTENANCES AS PER OTTAWA AND MINISTRY OF THE ENVIRONMENT STANDARDS. CONFIRM EXISTING TIE IN ELEVATIONS PRIOR TO CONSTRUCTION. SEWER TRENCH SHALL INCLUDE CLASS 'B' BEDDING AS PER OTTAWA S6 AND S7. COMPACTION TO BE A MINIMUM OF 95% SPMD FOR PIPE AND DRAINAGE STRUCTURE BEDDING AND BACKFILL.
 - PVC STORM SEWERS AND CATCH BASIN LEADS TO BE PVC DR 35 CERTIFIED TO CAN/CSA-B182.2. PVC SANITARY SERVICE TO BE DR28 TO CAN/CSA B182.2.
 - PROVIDE FLEXIBLE BOOT CONNECTION FOR ALL PVC SEWER CONNECTIONS AT MANHOLES. PROVIDE RUBBER CONNECTORS IN ACCORDANCE WITH CSA A257.3-09 FOR CONCRETE PIPE CONNECTORS TO MANHOLES.
 - CATCHBASIN SUMP TO BE 600mm.
 - SEWERS AND SERVICES SHALL BE CONSTRUCTED WITH A MINIMUM CLEARANCE OF 2.0m FROM TREES.
 - STORM MANHOLES TO HAVE 300mm MINIMUM SUMP BELOW LOW INVERT. SANITARY MANHOLES TO BE BENCHMARKED AS PER OPSD 701.021.
 - PROVIDE CAMERA INSPECTION OF ALL SEWERS FOLLOWING COMPLETION OF CONSTRUCTION AND PROVIDE TO ENGINEER. MAINTAIN SEWERS IN CLEAN CONDITION UNTIL OWNER ACCEPTANCE.
 - TEMPORARY FLOW CONTROLS TO BE PLACED ON SEWER OUTLETS AS PER OTTAWA TECHNICAL BULLETIN ISD 2010-1. INLET CONTROL DEVICE PLACEMENT TO BE CERTIFIED BY QUALITY VERIFICATION ENGINEER RETAINED BY CONTRACTOR.
 - PROVIDE 50mm THICK HIGH DENSITY GRADE POLYSTYRENE INSULATION ACROSS WIDTH OF TRENCH (MINIMUM 1200mm) AT 150mm ABOVE SANITARY SEWER.
 - PERFORM LEAKAGE TESTING OF SANITARY SEWERS IN ACCORDANCE WITH OPSD 410.07.15 AND 407.07.25. TESTING SHALL BE OBSERVED BY AN ONTARIO REGISTERED PROFESSIONAL ENGINEER, RETAINED BY THE CONTRACTOR, WHO SHALL SUBMIT A CERTIFIED COPY OF THE TEST RESULTS.

| STRUCTURE ID | TOP OF GRATE ELEVATION | INVERT IN | INVERT IN | INVERT OUT | SIZE | DESCRIPTION | COVER |
|--------------|------------------------|-------------|-----------|------------|-------------|----------------------------|-------|
| LCB1 | 80.45 | 78.690 | | 78.690 | 300mm | S29 & S31 | S30 |
| LCB2 | 80.70 | 78.800 | | 78.800 | 300mm | S29 & S31 | S30 |
| LCB3 | 80.17 | 78.800 | | 78.920 | 300mm | S29 & S31 | S31 |
| LCB4 | 79.63 | 78.380 | | 78.380 | 300mm | S29 & S31 | S31 |
| LCB6 | 79.81 | 78.240 | | 78.240 | 300mm | S29 & S31 | S30 |
| LCB5 | 79.48 | 78.360 | | 78.360 | 300mm | S29 & S31 | S30 |
| CB1 | 79.90 | 78.130 | 77.701 | 77.701 | 600x600mm | OPSD-705.010 | S19.1 |
| CB2 | 79.60 | 78.550 | 77.590 | 77.590 | 600x600mm | OPSD-705.010 | S19.1 |
| CB3 | 79.29 | 78.086 | 77.086 | 77.086 | 600x600mm | OPSD-705.010 | S19.1 |
| CBMH1 | 79.71 | 76.752 | 77.610 | 76.732 | 1200mm DIA. | OPSD-701.101 | S28.1 |
| CBMH2 | 79.38 | 77.050 | 76.671 | 76.651 | 1200mm DIA. | OPSD-701.010 | S28.1 |
| STMH3/OGS | 79.45 | 76.588 | 76.588 | 76.588 | 1200mm DIA. | HYDRO INTERNATIONAL FD-4HC | S24.1 |
| SAN MH1 | 79.44 | 77.965 | 77.935 | 77.935 | 1200mm DIA. | OPSD-701.010 | S24 |
| SAN MH2 | 79.36 | 77.78/76.78 | 76.55 | 76.54 | 1200mm DIA. | OPSD-701.010 | S24 |



LEGEND

- + 79.81 EXISTING GRADE ELEVATION
- CB EXISTING STORM CATCHBASIN
- MH-ST EXISTING STORM MANHOLE
- MH-S EXISTING SANITARY MANHOLE
- ST EXISTING STORM SEWER
- S EXISTING SANITARY SEWER
- W EXISTING WATERMAIN
- 81.43 PROPOSED GRADE ELEVATION
- 79.98TC PROPOSED TOP & BOTTOM OF CURB
- 79.91 PROPOSED TOP OF GRATE
- 80.50TW PROPOSED TOP OF WALL
- 80.55(S) PROPOSED SWALE ELEVATION
- 3% PROPOSED GRADE SLOPE
- PROPOSED 3H:1V TERRACE SLOPE
- W PROPOSED WATER SERVICE
- SAN PROPOSED SANITARY SEWER
- STM PROPOSED STORM SEWER
- PROPOSED STORM SUBDRAIN
- STM MH1 PROPOSED STORM MANHOLE
- CB1 PROPOSED STORM CATCHBASIN
- LCB1 PROPOSED LANDSCAPE CATCHBASIN
- SAN MH1 PROPOSED SANITARY MANHOLE
- VB PROPOSED VALVE AND BOX
- FH PROPOSED FIRE HYDRANT
- PROPOSED REDUCER
- PROPOSED FIRE DEPARTMENT CONNECTION
- REMOTE WATER METER READER
- WATER METER LOCATION

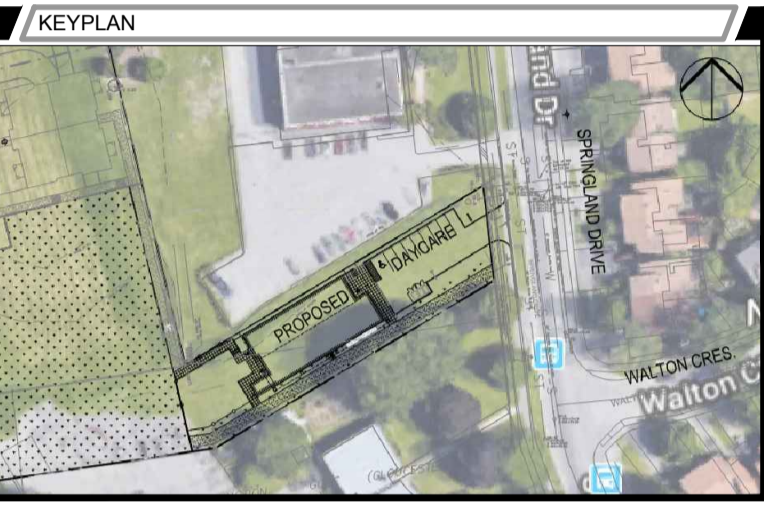
- WATER NOTES**
- ALL WATER SERVICE AND VALVE MATERIALS TO CONFORM WITH CITY OF OTTAWA STANDARDS. SITE WATER SERVICE AND MAIN TO BE PVC DR18.
 - OBTAIN AND PAY FOR WATER PERMIT FROM CITY OF OTTAWA. HYDROSTATIC AND BACTERIOLOGICAL TESTING REQUIRED AS PER OTTAWA STANDARDS. ALL MATERIALS, EXCAVATION, BACKFILL, LABOUR AND REINSTATEMENT BY CONTRACTOR. CITY PROVIDED SERVICES WILL BE PAID UNDER THE WATER PERMIT.
 - COMPLY WITH THE FOLLOWING OTTAWA STANDARD DRAWINGS:
 - W17 STANDARD TRENCH DETAIL
 - W18 HYDRANT LOCATION
 - W22 THERMAL INSULATION FOR WATERMANS IN SHALLOW TRENCHES
 - W23 THERMAL INSULATION OF WATERMANS AT OPEN STRUCTURES - APPLICABLE AT CB3
 - W24 VALVE BOX ASSEMBLY
 - W25-3 CONCRETE THRUST BLOCKS
 - W25-4 THRUST BLOCK DIMENSION TABLES
 - W25-5 RESTRAINING AND RETAINING RINGS
 - W25-6 TABLES OF RESTRAINED LENGTHS
 - W25 WATERMAIN CROSSING BELOW SEWER - MIN. CLEARANCE
 - W36 TRACER WIRE INSTALLATION
 - W40 CATHODIC PROTECTION
 - W42 TYPICAL ANODE INSTALLATION
 - PROVIDE MINIMUM 2.4m COVER, IF NOT ACHIEVABLE, PROVIDE THERMAL INSULATION TO THE SATISFACTION OF THE CITY, AND IN ACCORDANCE WITH OTTAWA DRAWINGS W22 AND W23.
 - PROVIDE FLOW TESTING FOR NEW FIRE HYDRANT AND PAINT HYDRANT BASED ON FLOW RATING IN ACCORDANCE WITH CITY OF OTTAWA REQUIREMENTS FOR PRIVATE HYDRANTS.

wsp
300-2611 QUEENSWAY DRIVE
OTTAWA ONTARIO CANADA K2B 8K2
TEL: 1-613-829-2800 | FAX: 1-613-829-8299 | WWW.WSPGROUP.COM

CLIENT

DEVELOPER:
CANOE BAY DEVELOPMENT INC.
51 CORTLEIGH DRIVE, OTTAWA,
ONTARIO K2J 3Z8
613-447-0208

OWNER:
ANDREW FLECK CHILD SERVICES



PROFESSIONAL ENGINEER
J. C. JOHNSTON
2019-07-31
PROVINCE OF ONTARIO

| No. | ISSUE NOTES | DATE |
|-----|----------------------------------|------------|
| 8 | | |
| 7 | | |
| 6 | | |
| 5 | | |
| 4 | REVISED PER SITE PLAN CHANGES | 2019-07-31 |
| 3 | REVISED PER SITE PLAN CHANGES | 2019-07-26 |
| 2 | REVISED PER CITY COMMENTS | 2019-07-23 |
| 1 | ISSUED FOR SITE PLAN APPLICATION | 2019-05-10 |

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PROJECT NAME / NOM DU PROJET
RIVERSIDE PARK EARLY LEARNING CENTRE
2826 SPRINGLAND DRIVE
OTTAWA, ONTARIO

DRAWING TITLE / TITRE DU DESSIN
CIVIL SERVICES PLAN

INFORMATION

Designed by: JJ
Drawn by: BN
Reviewed by: JJ
Approved by: JJ
Scale: AS SHOWN
Date: 2019-03-22
Project No.: 191-03236-00
Client Plan#: NA

SHEET No. / No. PAGE
C2

FILENAME: P:\2019\Projects\191-03236-00_Riverside Park NS, Ottawa - New Daycare Centre\CHS3_Drawing\Working Drawings\Sheets\191-03236-00_C.dwg
PLOT DATE: Jul 31, 2019 - 11:28am, caw/058741

D07-12-19-0081