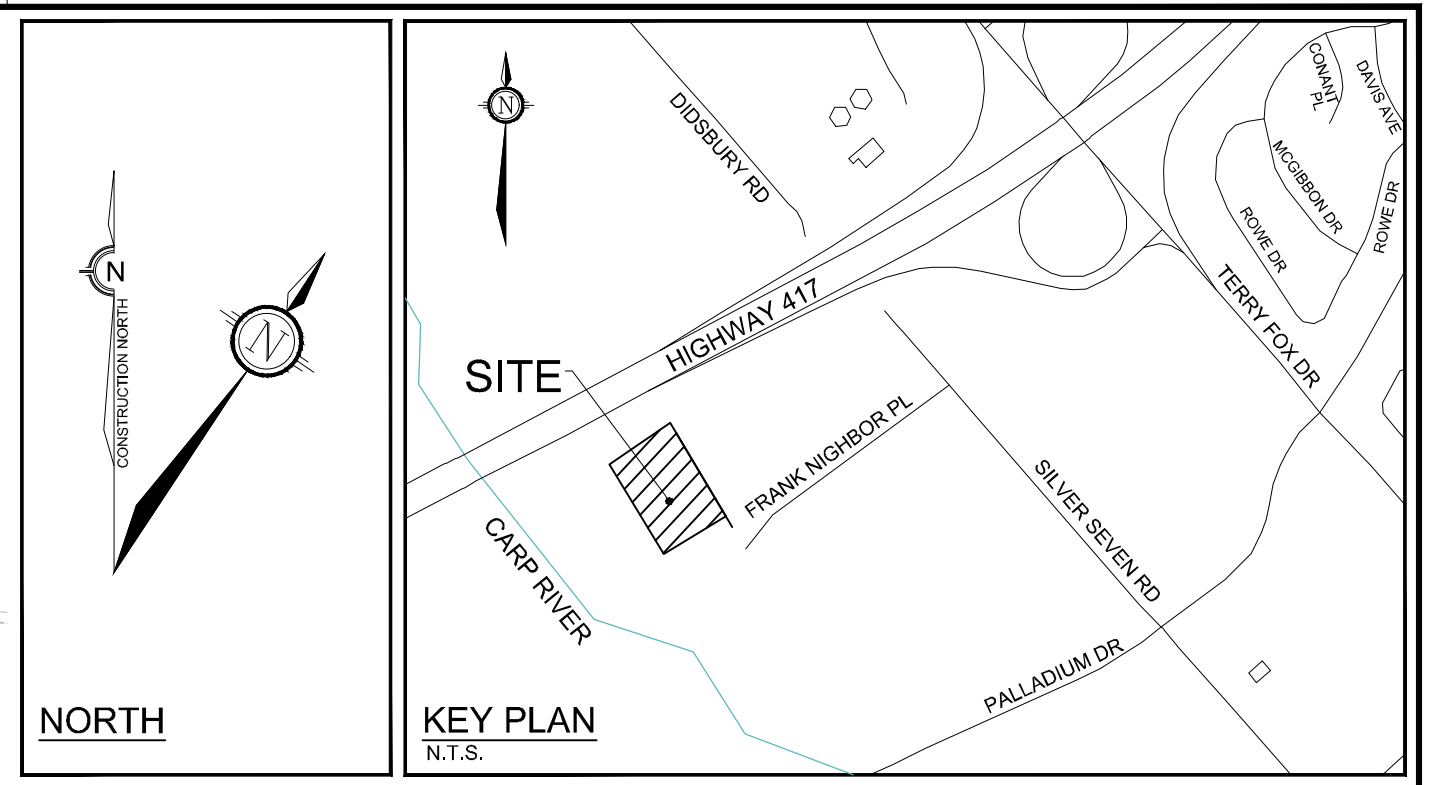
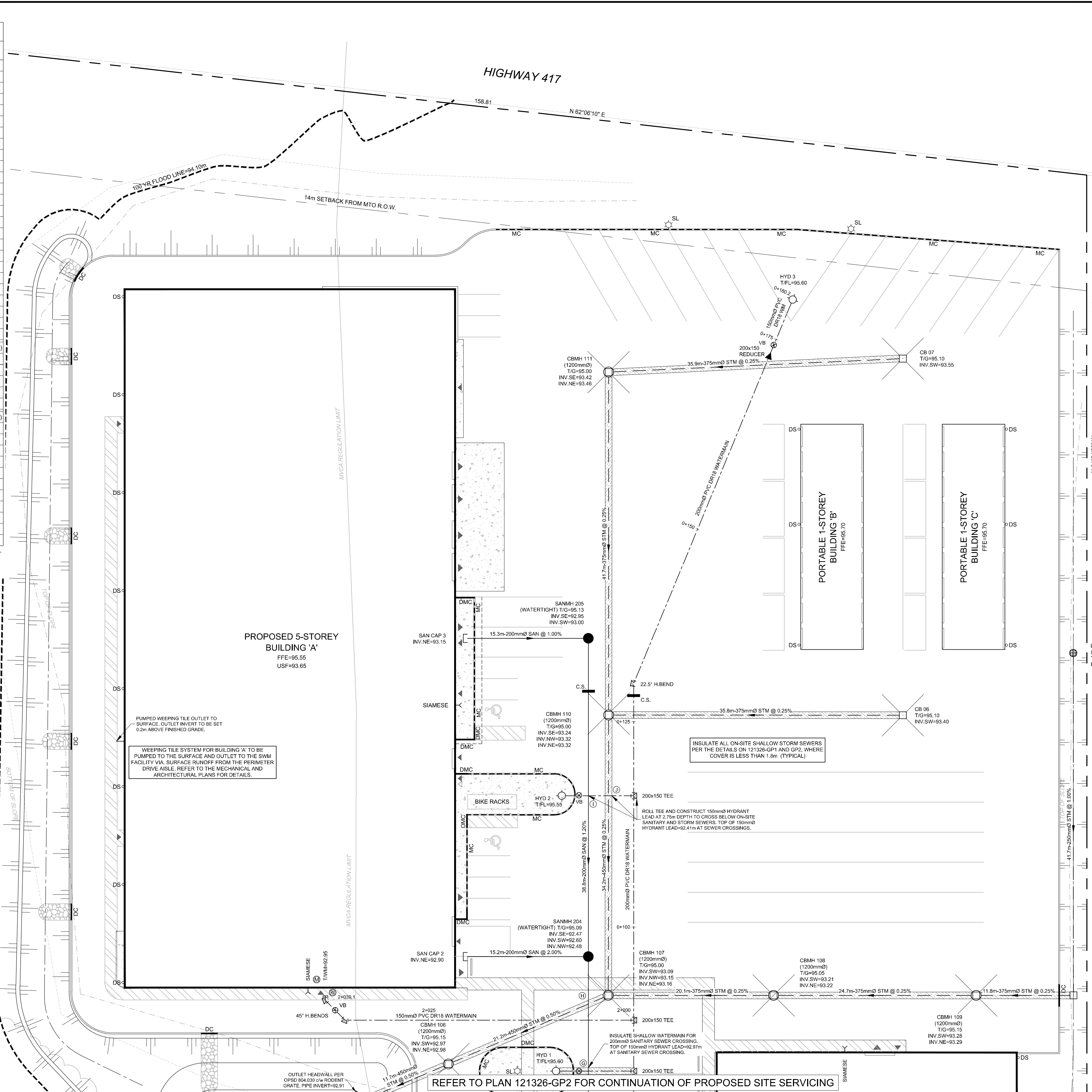


PROPOSED 200mmØ / 150mmØ WATERMAIN TABLE			
STATION	SURFACE ELEVATION	T/W/M ELEVATION	COMMENTS
0+000	94.88	91.10*	CONNECTION FROM ABOVE TO EX. 300mmØ WM
0+002.5	94.89	93.64**	45° VERTICAL BEND
0+003.3	94.98	93.65**	CROSS ABOVE EX. 450Ø SAN (±1.8m CLEARANCE)
0+005.0	95.01	93.67**	CROSS BELOW EX. 1050Ø STM (±0.2m CLEARANCE)
0+005.5	94.93	93.67**	45° VERTICAL BEND
0+006.1	94.94	93.16**	45° VERTICAL BEND
0+006.4	94.95	93.15**	200mmØ VALVE AND VALVE BOX
0+007.4	95.04	93.12**	11.25° HORIZONTAL BEND
0+025.9	95.02	92.62	CROSS BELOW 375mmØ STM (±0.55m CLEARANCE)
0+027.4	95.07	92.67	CROSS ABOVE 200mmØ SAN (±0.4m CLEARANCE)
0+029.9	95.15	92.75	200 x 200 x 200 TEE FOR BLDG 'D' SERVICE (1+000)
0+050	95.18	92.78	---
0+075	95.21	92.81	---
0+082.4	95.14	92.74	200 x 200 x 150 TEE FOR HYDRANT No.1
0+088.6	95.08	92.68	200 x 200 x 150 TEE FOR BLDG 'A' SERVICE (2+000)
0+091.6	95.04	92.64	CROSS BELOW 375mmØ STM (±0.5m CLEARANCE)
0+100	95.12	92.62	---
0+116.0	95.14	92.47	200 x 200 x 150 TEE FOR HYDRANT No.2
0+126.0	95.04	92.64	CROSS BELOW 375mmØ STM (±0.65m CLEARANCE)
0+129.6	95.07	92.67	22.5° HORIZONTAL BEND
0+150	95.35	92.95	---
0+170.7	95.31	92.91	CROSS BELOW 375mmØ STM (±0.6m CLEARANCE)
0+173.2	95.32	92.92	200 x 150 REDUCER
0+174.2	95.34	92.94	150mmØ VALVE AND VALVE BOX
0+180.2	95.41	93.00	FIRE HYDRANT No.3
1+000	95.15	92.75	200 x 200 x 200 TEE FOR BLDG 'D' SERVICE (0+029.9)
1+003.0	95.14	92.74	200mmØ VALVE AND VALVE BOX
1+025.0	95.02	92.62	CROSS BELOW 375mmØ STM (±0.7m CLEARANCE)
1+033.7	95.10	92.70	45° HORIZONTAL BEND
1+037.1	95.18	92.78	45° HORIZONTAL BEND
1+042.2	95.48	92.95	CAP 1.0m FROM BLDG 'D' FOUNDATION WALL
2+000	95.08	92.68	200 x 200 x 150 TEE FOR BLDG 'A' SERVICE (0+088.6)
2+002.5	95.09	92.67	22.5° VERTICAL BEND
2+004.4	95.10	91.88	22.5° VERTICAL BEND
2+005.5	95.06	91.88	CROSS BELOW 200mmØ SAN (±0.5m CLEARANCE)
2+006.6	95.12	91.88	22.5° VERTICAL BEND
2+008.3	95.18	92.58	22.5° VERTICAL BEND
2+010.1	95.19	92.60	CROSS BELOW 375mmØ STM (±0.5m CLEARANCE)
2+025	95.33	92.93	---
2+035.1	95.37	92.93	45° HORIZONTAL BEND
2+038.8	95.40	92.95	150mmØ VALVE AND VALVE BOX
2+038.5	95.49	92.95	45° HORIZONTAL BEND
2+039.1	95.52	92.95	CAP 1.0m FROM BLDG 'A' FOUNDATION WALL

\* 300mm x 300mm x 200mm CONNECTION TO EXISTING 300mmØ WATERMAIN BY CITY FORCES. EXACT ELEVATION TO BE FIELD DETERMINED.

\*\* PROVIDE THERMAL INSULATION AS PER CITY OF OTTAWA DETAIL W22 IN SHALLOW TRENCHES AND/OR CITY OF OTTAWA DETAIL W23 ADJACENT TO OPEN STRUCTURES.



- LEGEND**
- PROPERTY LINE
  - SAN MH 201: PROPOSED SANITARY MH & SEWER
  - CBMH 104: PROPOSED CATCHBASIN MANHOLE & SEWER (c/w 3.0m RADIAL SUBDRAINS PER GEOTECH)
  - STM MH 103: PROPOSED STORM MANHOLE & SEWER
  - CB 03: PROPOSED CATCHBASIN AND LEAD (c/w 3.0m RADIAL SUBDRAINS PER GEOTECH)
  - HYD 2: PROPOSED HYDRANT AND VALVE
  - DC: PROPOSED BARRIER CURB (15cm CURB HEIGHT)
  - MC: PROPOSED MOUNTABLE CURB (5cm CURB HEIGHT)
  - DMC: PROPOSED MOUNTABLE CURB (0cm CURB HEIGHT)
  - 200mmØ: PROPOSED WATERMAIN AND DIAMETER
  - VB: PROPOSED VALVE AND VALVEBOX
  - BEND: PROPOSED BEND AND THRUSTBLOCK (11.25°, 22.5°, 45° or TEE)
  - (M) (R): PROPOSED WATER METER AND REMOTE METER
  - PROPOSED CAP
  - RESTRICTOR PIPE: PROPOSED RESTRICTOR PIPE / INLET CONTROL DEVICE
  - DS: PROPOSED DOWNSPOUT LOCATION
  - THERMAL INSULATION FOR SHALLOW SEWERS
  - PROPOSED BUILDING ENTRANCE
  - C.S.: PROPOSED CLAY SEAL SEEPAGE BARRIER (PER GEOTECHNICAL REPORT)
  - SL: PROPOSED SITE LIGHTING POLE (REFER TO ELEC)
  - PROPOSED TRANSFORMER
  - EXISTING CONCRETE CURB AND SEWER
  - EXISTING SANITARY MANHOLE AND SEWER
  - EXISTING CATCHBASIN MANHOLE
  - EXISTING STORM MANHOLE AND SEWER
  - EXISTING CATCHBASIN C/W CATCHBASIN LEAD
  - EXISTING HYDRANT
  - EXISTING UTILITY POLE C/W GUY WIRES
  - EXISTING WATERMAIN
  - EXISTING HYDRANT C/W VALVE & LEAD
  - EXISTING LIGHT STANDARD
  - EXISTING FENCE
  - EXISTING OVERHEAD UTILITY WIRES

**BENCHMARK INFO:**

CUT CROSS LOCATED ON THE TOP OF THE EXISTING CONCRETE HEADWALL NEAR THE WEST LIMIT OF THE MUNICIPAL STORM SEWER OUTFALL TO THE CARP RIVER. GEODETIC ELEVATION = 93.77m.

ALL ELEVATIONS ARE REFERRED TO THE CGVD28-78 GEODETIC DATUM, DERIVED FROM VERTICAL CONTROL MONUMENT NO. 00119883075 HAVING A PUBLISHED ELEVATION OF 90.12 METRES. BEARINGS ARE GRID, DERIVED FROM THE OBSERVATIONS USING REAL TIME NETWORK (RTN) OBSERVATIONS AND ARE REFERRED TO THE CENTRAL MERIDIAN OF MTM ZONE 9, NAD-83 (CSRS)(2010).

THE EXISTING GRADES SHOWN ON THE PLANS ARE TAKEN DIRECTLY FROM TOPOGRAPHICAL SURVEY PLAN (Ref. # 21-10-026-00), PREPARED BY J.D. BARNES LIMITED COMPLETED ON APRIL 8, 2021.

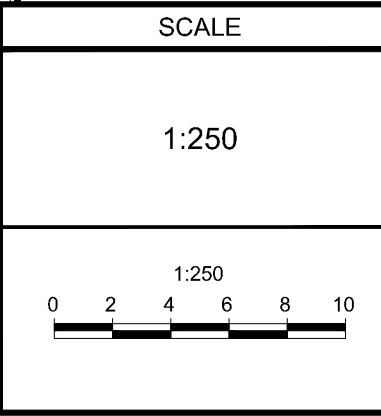
SURROUNDING BACKGROUND TOPO INFORMATION BEYOND THE LIMITS OF THE SITE SURVEY ARE SHOWN FROM CITY OF OTTAWA 1:2000 MAPPING FOR CONTEXT ONLY.

REFER TO PLAN 121326-NDT1 AND 121326-NDT2 FOR CIVIL NOTES, DETAILS AND TABLES

**NOTE:**  
THE POSITION OF ALL POLE LINES, CONDUITS, WATERMANS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, DETERMINE THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

**OWNER INFORMATION**  
U-HAUL CANADA  
3636 INNES ROAD  
OTTAWA, ONTARIO, K1C 1T1  
DAVID POLLOCK  
PHONE: 1-602-263-6555  
david\_pollock@uhaul.com

No.	REVISION	DATE	BY
2	REVISED PER CITY COMMENTS	AUG 30/22	FST
1	ISSUED FOR SITE PLAN APPROVAL	MAY 20/22	FST



FOR REVIEW ONLY

DESIGN: SM / FST  
CHECKED: FST  
DRAWN: SM  
CHECKED: SM / FST  
APPROVED: FST

**PROFESSIONAL ENGINEER**  
M.J. HRCHORIAK  
100212356  
AUG 30/22  
PROVINCE OF ONTARIO

**PROFESSIONAL ENGINEER**  
F.S. THAUETTE  
100041399  
AUG 30, 2022  
PROVINCE OF ONTARIO

**NOVATECH**  
Engineers, Planners & Landscape Architects  
Suite 200, 240 Michael Cowpland Drive  
Ottawa, Ontario, Canada K2M 1P6  
Telephone: (613) 254-9643  
Facsimile: (613) 254-5867  
Website: www.novatech-eng.com

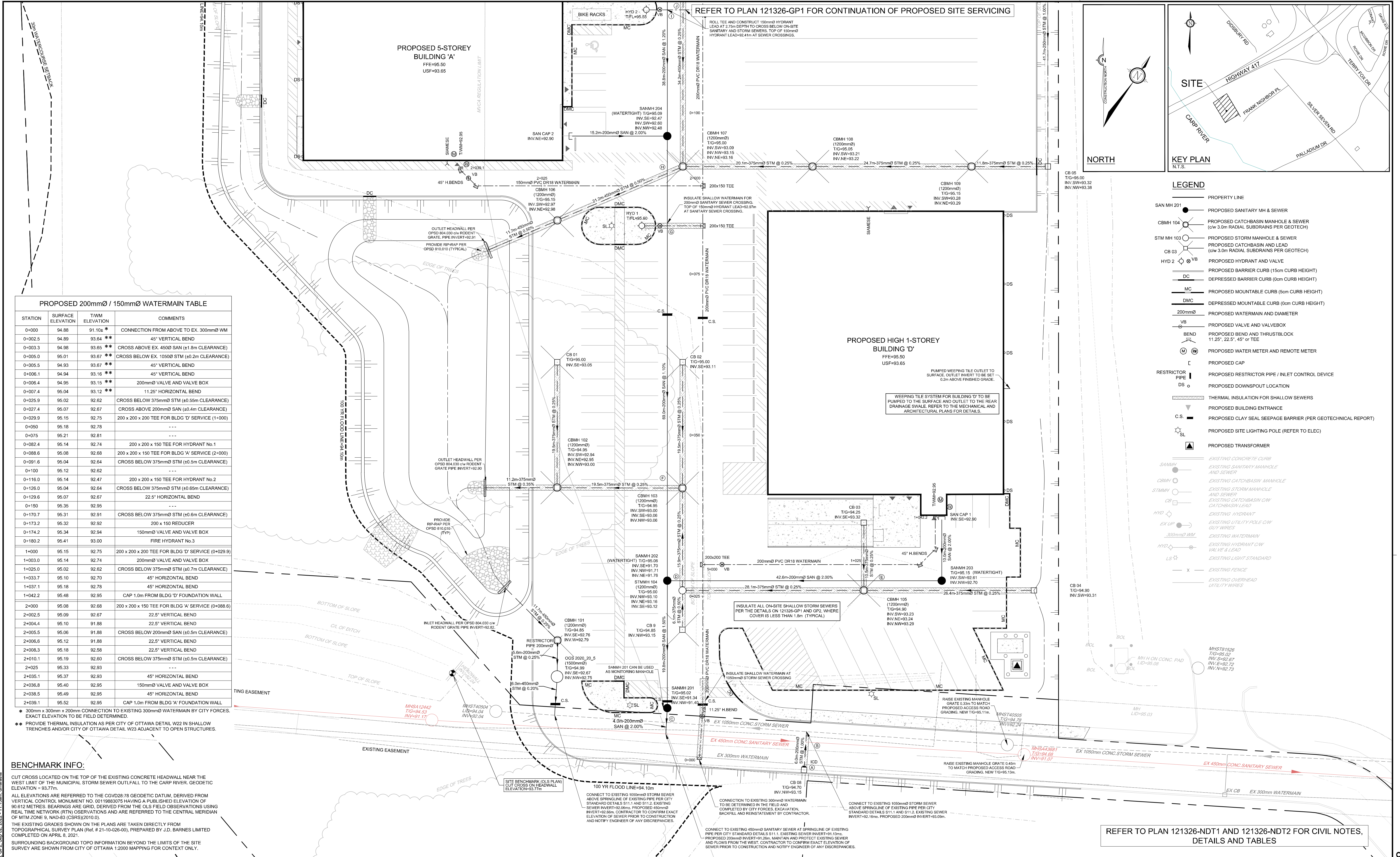
LOCATION: CITY OF OTTAWA  
30 FRANK NIGHBOR PLACE: U-HAUL SITE

DRAWING NAME: GENERAL PLAN OF SERVICES

PROJECT NO.: 121326  
REV: REV # 2  
DRAWING NO.: 121326-GP1  
Plan #18798

M:\2021\121326-GP2\Design\121326-GP1.dwg, GP1, Sep 02, 2022, 11:11am, dmantha

D07-12-22-0088



**PROPOSED 200mmØ / 150mmØ WATERMAIN TABLE**

STATION	SURFACE ELEVATION	T.W.M. ELEVATION	COMMENTS
0+000	94.88	91.10g *	CONNECTION FROM ABOVE TO EX. 300mmØ WM
0+002.5	94.89	93.64 **	45° VERTICAL BEND
0+003.3	94.98	93.65 **	CROSS ABOVE EX. 450Ø SAN (±1.8m CLEARANCE)
0+005.0	95.01	93.67 **	CROSS BELOW EX. 105Ø STM (±0.2m CLEARANCE)
0+005.5	94.93	93.67 **	45° VERTICAL BEND
0+006.1	94.94	93.16 **	45° VERTICAL BEND
0+006.4	94.95	93.15 **	200mmØ VALVE AND VALVE BOX
0+007.4	95.04	93.12 **	11.25° HORIZONTAL BEND
0+025.9	95.02	92.62	CROSS BELOW 375mmØ STM (±0.55m CLEARANCE)
0+027.4	95.07	92.67	CROSS ABOVE 200mmØ SAN (±0.4m CLEARANCE)
0+029.9	95.15	92.75	200 x 200 x 200 TEE FOR BLDG 'D' SERVICE (1+000)
0+050	95.18	92.78	---
0+075	95.21	92.81	---
0+082.4	95.14	92.74	200 x 200 x 150 TEE FOR HYDRANT No. 1
0+088.6	95.08	92.68	200 x 200 x 150 TEE FOR BLDG 'A' SERVICE (2+000)
0+091.6	95.04	92.64	CROSS BELOW 375mmØ STM (±0.5m CLEARANCE)
0+100	95.12	92.62	---
0+116.0	95.14	92.47	200 x 200 x 150 TEE FOR HYDRANT No. 2
0+126.0	95.04	92.64	CROSS BELOW 375mmØ STM (±0.65m CLEARANCE)
0+129.6	95.07	92.67	22.5° HORIZONTAL BEND
0+150	95.35	92.95	---
0+170.7	95.31	92.91	CROSS BELOW 375mmØ STM (±0.6m CLEARANCE)
0+173.2	95.32	92.92	200 x 150 REDUCER
0+174.2	95.34	92.94	150mmØ VALVE AND VALVE BOX
0+180.2	95.41	93.00	FIRE HYDRANT No. 3
1+000	95.15	92.75	200 x 200 x 200 TEE FOR BLDG 'D' SERVICE (0+029.9)
1+003.0	95.14	92.74	200mmØ VALVE AND VALVE BOX
1+025.0	95.02	92.62	CROSS BELOW 375mmØ STM (±0.7m CLEARANCE)
1+033.7	95.10	92.70	45° HORIZONTAL BEND
1+037.1	95.18	92.78	45° HORIZONTAL BEND
1+042.2	95.48	92.95	CAP 1.0m FROM BLDG 'D' FOUNDATION WALL
2+000	95.08	92.68	200 x 200 x 150 TEE FOR BLDG 'A' SERVICE (0+088.6)
2+002.5	95.09	92.67	22.5° VERTICAL BEND
2+004.4	95.10	91.88	22.5° VERTICAL BEND
2+005.5	95.06	91.88	CROSS BELOW 200mmØ SAN (±0.5m CLEARANCE)
2+006.6	95.12	91.88	22.5° VERTICAL BEND
2+008.3	95.18	92.58	22.5° VERTICAL BEND
2+010.1	95.19	92.60	CROSS BELOW 375mmØ STM (±0.5m CLEARANCE)
2+025	95.33	92.93	---
2+035.1	95.37	92.93	45° HORIZONTAL BEND
2+036.8	95.40	92.95	150mmØ VALVE AND VALVE BOX
2+038.5	95.49	92.95	45° HORIZONTAL BEND
2+039.1	95.52	92.95	CAP 1.0m FROM BLDG 'A' FOUNDATION WALL

\* 300mm x 300mm x 200mm CONNECTION TO EXISTING 300mmØ WATERMAIN BY CITY FORCES. EXACT ELEVATION TO BE FIELD DETERMINED.

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**BENCHMARK INFO:**

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SURROUNDING BACKGROUND TOPO INFORMATION BEYOND THE LIMITS OF THE SITE SURVEY ARE SHOWN FROM CITY OF OTTAWA 1:2000 MAPPING FOR CONTEXT ONLY.

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**OWNER INFORMATION**

U-HAUL CANADA  
3636 INNES ROAD  
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DAVID POLLOCK  
PHONE: 1-602-263-6555  
david\_pollock@uhhaul.com

No.	REVISION	DATE	BY
2	REVISED PER CITY COMMENTS	AUG 30/22	FST
1	ISSUED FOR SITE PLAN APPROVAL	MAY 20/22	FST

**SCALE**

1:250

0 2 4 6 8 10

**FOR REVIEW ONLY**

DESIGN: SM / FST  
CHECKED: FST  
DRAWN: SM  
CHECKED: SM / FST  
APPROVED: FST

**PROFESSIONAL ENGINEER**  
M.J. HRDORNAK  
100212535  
AUG 30/22  
PROVINCE OF ONTARIO

**PROFESSIONAL ENGINEER**  
F.S. THAUETTE  
100041399  
AUG 30, 2022  
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**LOCATION**  
CITY OF OTTAWA  
30 FRANK NIGHBOR PLACE: U-HAUL SITE

**DRAWING NAME**  
GENERAL PLAN OF SERVICES

PROJECT No. 121326  
REV # 2  
DRAWING No. 121326-GP2  
Plan #18789

D07-12-22-0088