

Station	FIG ELEVATION	TOP OF WATERMAIN	COVER	DESCRIPTION
1+000.00	93.13	90.73	2.40	CONNECT TO EXISTING
1+008.93	93.17	90.77	2.40	22.5' H. BEND
1+020.15	93.12	90.72	2.40	HYD3 CONNECTION
1+022.01	93.12	90.72	2.40	22.5' H. BEND
1+025.00	93.11	90.71	2.40	-
1+049.26	93.29	90.89	2.40	VB1
1+050.00	93.30	90.90	2.40	-
1+051.26	93.32	90.92	2.40	200 x 200 TEE
1+054.31	93.37	90.97	2.40	11.25' H. BEND
1+075.00	93.21	90.81	2.40	-
1+085.04	93.25	90.85	2.40	22.5' H. BEND
1+090.45	93.27	90.87	2.40	HYD2 CONNECTION
1+095.26	93.35	90.95	2.40	200 TO 150 REDUCER
1+100.00	93.22	90.82	2.40	-
1+100.07	93.22	90.82	2.40	22.5' H. BEND
1+102.02	93.23	90.83	2.40	SP5
1+116.61	93.51	91.11	2.40	45' H. BEND
1+117.70	93.57	91.17	2.40	CAP
2+000.00	93.32	90.92	2.40	200 x 200 TEE
2+002.00	93.31	90.91	2.40	VB2
2+007.85	93.28	90.88	2.40	45' V. BEND
2+008.59	93.28	90.30	1.66	45' V. BEND
2+009.44	93.27	90.30	1.65	45' V. BEND
2+010.18	93.27	90.87	2.40	45' V. BEND
2+025.00	93.59	91.19	2.40	-
2+025.27	93.59	91.19	2.40	SP1 CONNECTION
2+027.86	93.56	91.16	2.40	SP4 CONNECTION
2+042.53	93.32	90.92	2.40	45' H. BEND
2+048.26	93.41	91.01	2.40	45' H. BEND
2+050.00	93.26	90.86	2.40	-
2+050.31	93.25	90.85	2.40	45' V. BEND
2+050.74	93.25	91.07	2.18	45' V. BEND
2+051.71	93.25	91.07	2.18	45' V. BEND
2+052.14	93.25	90.85	2.40	45' V. BEND
2+072.84	93.34	90.94	2.40	SP2 CONNECTION
2+073.84	93.32	90.92	2.40	SP3 CONNECTION
2+075.00	93.30	90.90	2.40	-
2+096.23	92.93	90.53	2.40	45' H. BEND
2+099.23	92.91	90.51	2.40	45' H. BEND
2+100.00	92.89	90.49	2.40	-
2+101.23	92.88	90.48	2.40	HYD1 CONNECTION
2+125.00	92.77	90.37	2.40	-
2+150.00	92.82	90.42	2.40	-
2+152.68	92.80	90.40	2.40	CONNECT TO EXISTING

STRUCTURE ID	T/G ELEVATION	INVERT	I.C.D.	HEAD (m)	RELEASE RATE (L/s)
7	93.23	93.23	Tempest LMF Vortex 69	2.46	6.4
CBMH1	92.95	NW=90.70 SW=90.70	Tempest LMF Vortex 78	2.38	6.1
CBMH2	92.95	N=91.19 SW=91.19	Tempest LMF Vortex 70	2.02	6.0
CBMH3	92.60	SW=90.48 NE=90.68	Tempest LMF Vortex 86	2.37	9.8
CBMH6	92.95	SE=90.70 NW=90.70	Tempest LMF Vortex 72	2.53	7.1

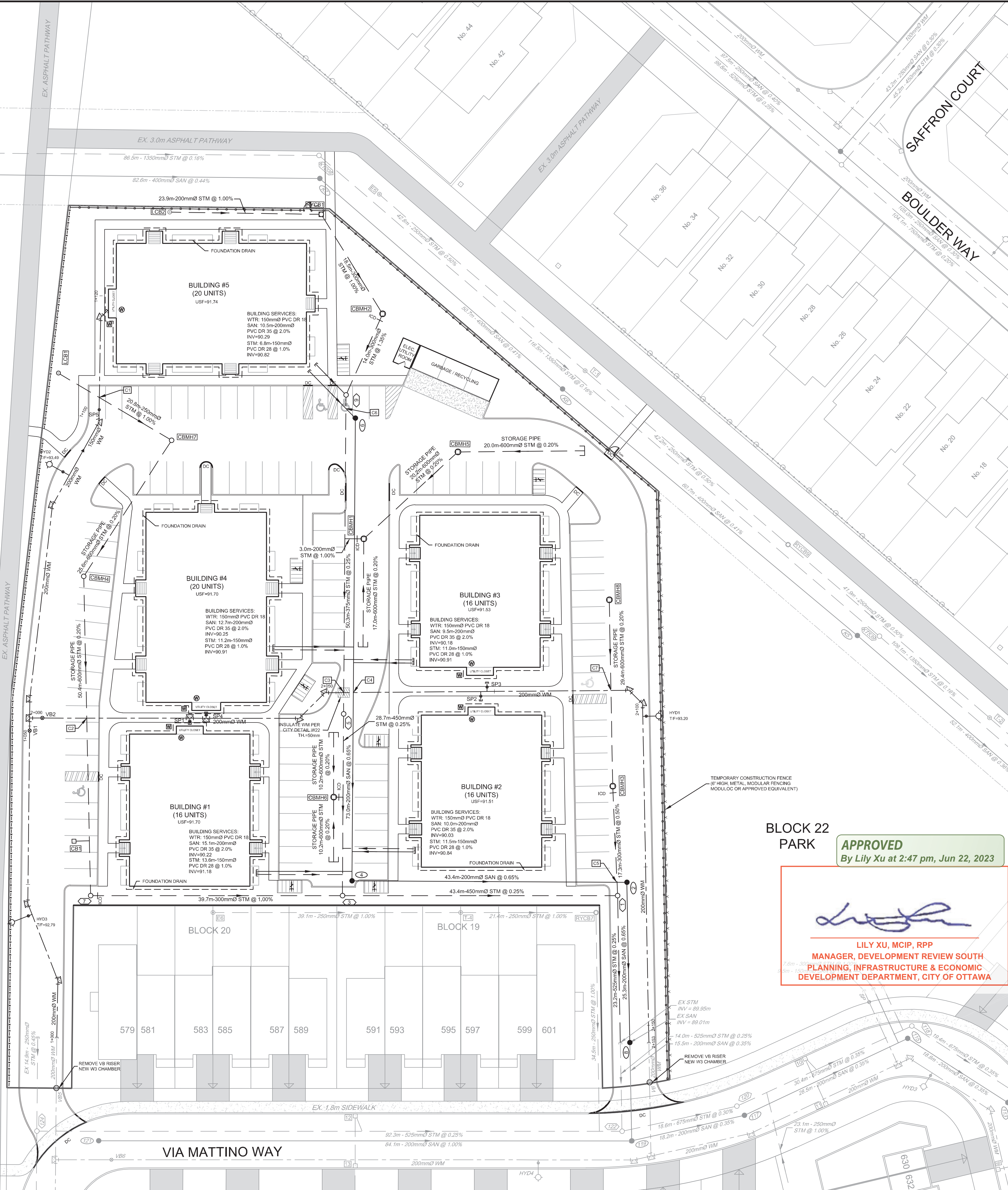
LOCATION	ELEVATIONS	CLEARANCE
C1	STM INV=91.37 WM CBV=90.87	0.50m
C2	STM INV=90.80 WM CBV=90.30	0.50m
C3	WM INV=91.30 STM CBV=91.00	0.30m
C4	WM INV=90.85 SAN CBV=89.97	0.68m
C5	STM INV=90.40 SAN CBV=89.45	0.95m
C6	STM INV=90.52 SAN CBV=90.32	0.20m
C7	STM INV=90.71 WM CBV=90.21	0.50m

MANHOLE ID	SIZE (mm)	T/G ELEV (m)	INVERT (m)	PIPE DIAMETER (mm)
2	12000	92.76	NW=89.24 SW=89.18	NW=200 SW=200
4	12000	93.23	NE=89.58 SE=89.52	NE=200 SE=200
6	12000	93.19	N=90.08 SW=90.05	N=200 SW=200
8	12000	92.81	NE=89.02 SW=89.01	NE=200 SW=200
119	12000	92.87	E=88.90 NW=88.97 NE=88.96	E=200 NW=200 NE=200

CB ID	T/G ELEVATION	INVERT	I.C.D.
CB1	92.95	91.18	-
LCB1	93.18	91.45	-
LCB2	93.41	92.01	-
RVCB1	93.17	91.37	-

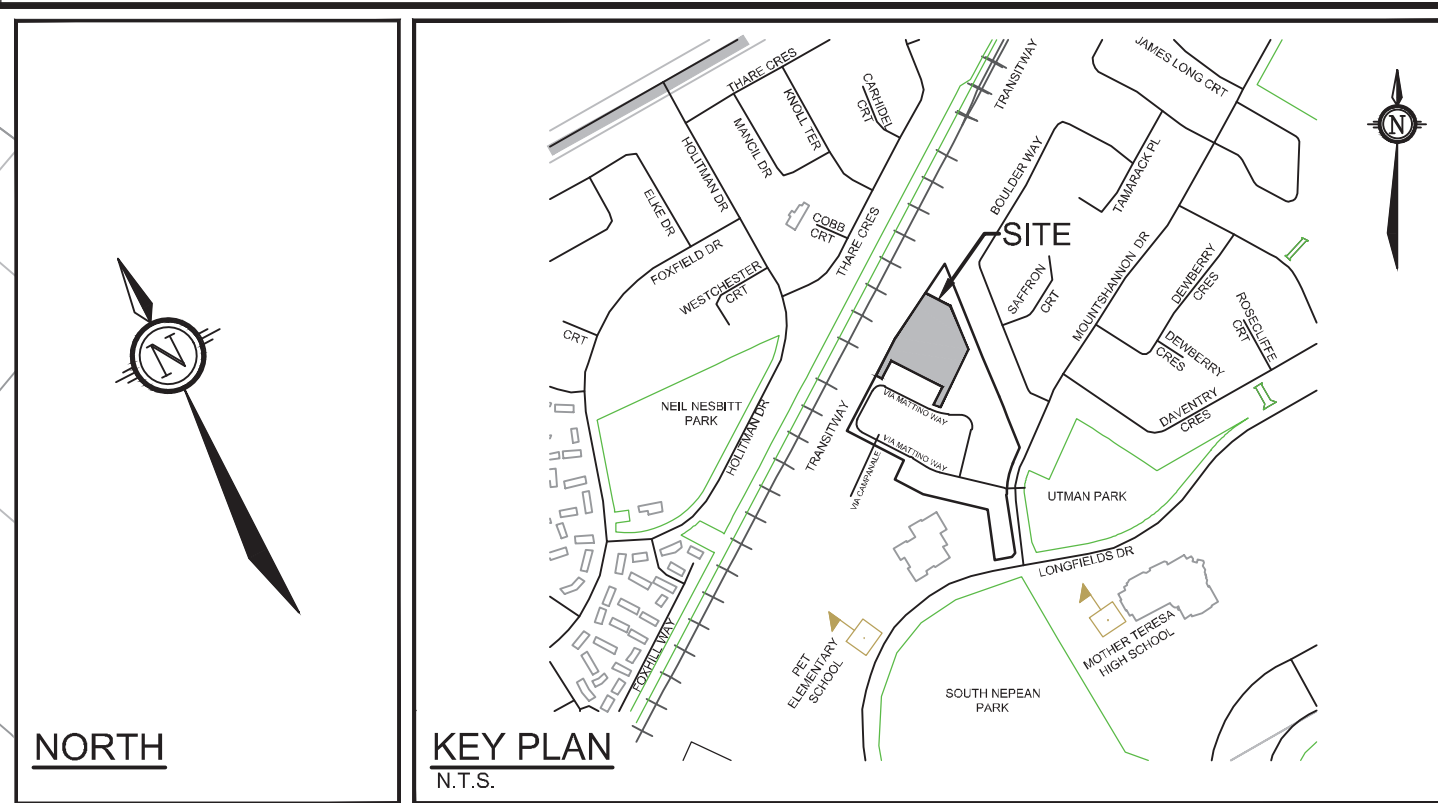
MANHOLE ID	SIZE (mm)	T/G ELEV (m)	INVERT (m)	PIPE DIAMETER (mm)	I.C.D.
1	15000	92.75	NW=90.08 SW=90.01 NE=90.39	NW=450 SW=525 NE=300	-
3	12000	93.42	NE=90.25 SE=90.19 NW=90.34	NE=450 SE=450 NW=300	-
5	12000	93.24	NE=90.40 SW=90.32	NE=375 SW=450	-
7	12000	93.23	NE=90.74 SE=90.74	NE=600 SE=300	Tempest LMF Vortex 69
9	12000	93.23	SW=90.52 N=90.75 NE=91.00	SW=375 N=150 NE=300	-
122	18000	92.85	E=88.77 NE=89.92 NW=89.92	E=675 NE=525 NW=525	-
CBMH1	15000	92.95	NW=90.70 E=90.70 SW=90.70	NW=200 E=600 SW=600	Tempest LMF Vortex 78
CBMH2	12000	92.95	N=91.19 SW=91.19	N=300 SW=300	Tempest LMF Vortex 70
CBMH3	12000	92.60	SW=90.48 NE=90.68	SW=300 NE=600	Tempest LMF Vortex 86
CBMH4	15000	92.95	SW=90.84 NE=90.84	SW=600 NE=600	-
CBMH5	15000	92.85	W=90.74 SE=90.74	W=600 SE=600	-
CBMH6	12000	92.95	SE=90.70 SW=90.70 NE=90.70	SE=200 SW=600 NE=600	Tempest LMF Vortex 72
CBMH7	12000	92.95	SW=90.89 NW=91.24	SW=600 NW=250	-
CBMH8	12000	92.60	SW=90.74	SW=600	-

**MATTINO DEVELOPMENTS INC.**  
 515 Via Mattino Way  
 Ottawa, Ontario K2J 6B7  
 Telephone: (613) 440-3767



**BLOCK 22 PARK**  
**APPROVED**  
 By Lily Xu at 2:47 pm, Jun 22, 2023

LILY XU, MCIP, RPP  
 MANAGER, DEVELOPMENT REVIEW SOUTH  
 PLANNING, INFRASTRUCTURE & ECONOMIC  
 DEVELOPMENT DEPARTMENT, CITY OF OTTAWA



- LEGEND**
- SANITARY MANHOLE, SEWER & DIRECTION OF FLOW
  - STORM MANHOLE, SEWER & DIRECTION OF FLOW
  - WATERMAIN AND DIAMETER
  - VALVE & VALVE BOX
  - GATE VALVE CHAMBER PER W3
  - ROAD CATCHBASIN
  - SITE LEGAL BOUNDARY
  - EXISTING PROPERTY & ROW LINES
  - HYD TF=100.00
  - HYDRANT C/W VALVE & LEAD TF= TOP OF FLANGE ELEVATION
  - THRUST BLOCK AND BEND
  - WATER METER
  - REMOTE WATER METER
  - LANDSCAPE TYPE CATCHBASIN
  - REAR YARD CATCH BASIN
  - CATCH BASIN MANHOLE
  - STORAGE CHAMBER SUBDRAIN
  - TEMPORARY CONSTRUCTION FENCING

- GENERAL NOTES:**
- DIMENSIONS AND LAYOUT INFORMATION SHALL BE CONFIRMED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
  - THE ORIGINAL TOPOGRAPHY AND GROUND ELEVATIONS, SERVING AND SURVEY INFORMATION SHOWN ON THIS PLAN ARE SUPPLIED FOR INFORMATION PURPOSES ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE ACCURACY OF ALL INFORMATION OBTAINED FROM THIS PLAN.
  - CO-ORDINATE AND SCHEDULE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
  - BEFORE COMMENCING CONSTRUCTION, PROVIDE PROOF OF COMPREHENSIVE RISK AND OPERATIONAL LIABILITY INSURANCE INCLUDING BLASTING, INSURANCE POLICY TO NAME THE OWNER, ENGINEER AND THE CITY AS CO-INSURED.
  - CONNECT TO EXISTING SYSTEMS AS DETAILED, INCLUDING ALL RESTORATION WORK NECESSARY TO REINSTATE SURFACES TO EXISTING CONDITIONS OR BETTER.
  - DETERMINE THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. PROTECT AND ASSUME RESPONSIBILITY FOR ALL EXISTING UTILITIES WHETHER OR NOT SHOWN ON THESE DRAWINGS.
  - OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS BEFORE COMMENCING CONSTRUCTION.
  - RESTORE ALL TRENCHES AND SURFACE FEATURES TO EXISTING CONDITIONS OR BETTER AND TO THE SATISFACTION OF MUNICIPAL AUTHORITIES.
  - REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER. EXCAVATE AND REMOVE FROM SITE ALL ORGANIC MATERIAL AND DEBRIS UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER.
  - ALL ELEVATIONS ARE GEODETIC AND UTILIZE METRIC UNITS.
  - REFER TO GEOTECHNICAL INVESTIGATION PROJECT: PG2306-R (JANUARY 31, 2013), PREPARED BY PATERSON GROUP FOR SUBSURFACE CONDITIONS AND CONSTRUCTION RECOMMENDATIONS.
  - PERFORATED PIPE SUB-DRAINS TO BE PROVIDED AT SUBGRADE LEVEL EXTENDING FROM THE ROADSIDE CATCHBASIN FOR A DISTANCE OF 3.0m, PARALLEL TO THE CURB IN TWO DIRECTIONS.

- SEWER NOTES:**
- SPECIFICATIONS:  
 ITEM: CATCHBASIN (600x600mm) SPEC. No. 705.010 REFERENCE: OPSD  
 STORM / SANITARY MANHOLE (12000) 701.010 OPSD  
 ROADSIDE CB FRAME & COVER S2 & S19 CITY OF OTTAWA  
 STORM / SANITARY MH FRAME & COVER S24.1 / S24 & S25 CITY OF OTTAWA  
 STORM SEWER PVC DR 35 OR CONC. (CLASS SPECIFIED ON PROFILE DRAWINGS)  
 SANITARY SEWER PVC DR 35  
 CATCHBASIN LEAD PVC DR 35
  - INSULATE ALL PIPES (SAN/STM) THAT HAVE LESS THAN 1.5m COVER WITH 50mmx1200mm HI-40 INSULATION. PROVIDE 150mm CLEARANCE BETWEEN PIPE AND INSULATION.
  - SERVICES ARE TO BE CONSTRUCTED TO 1.0m FROM BUILDING FACE AT MINIMUM SLOPE OF 1.0% (2.0% IS PREFERRED).
  - PIPE BEDDING, COVER AND BACKFILL ARE TO BE COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. THE USE OF CLEAR CRUSHED STONE AS A BEDDING LAYER SHALL NOT BE PERMITTED.
  - SEWER SERVICE CONNECTIONS PER CITY OF OTTAWA DETAILS S11 AND S11.1.
  - BACKWATER VALVES ARE TO BE INSTALLED ON SERVICES AS PER CITY STANDARDS (S14, S14.1, S14.2).
  - THE SITE SERVING CONTRACTOR SHALL PERFORM FIELD TESTS FOR QUALITY CONTROL OF ALL SANITARY SEWERS. LEAKAGE TESTING SHALL BE COMPLETED IN ACCORDANCE WITH OPSD 410.07.18 AND 407.07.24. DYE TESTING IS TO BE COMPLETED ON ALL SANITARY SERVICES TO CONFIRM PROPER CONNECTION TO THE SANITARY SEWER MAIN. THE FIELD TESTS SHALL BE PERFORMED IN THE PRESENCE OF THE ENGINEER.
  - STORM MANHOLES AND CBMHs SHALL HAVE 300mm SLUMPS UNLESS OTHERWISE INDICATED.
  - CONTRACTOR TO TELETYPE (CCTV) ALL PROPOSED SEWERS, 200mmØ OR GREATER PRIOR TO CONNECTING THE PROPOSED SEWERS. UPON COMPLETION OF CONTRACT, THE CONTRACTOR IS RESPONSIBLE TO FLUSH AND CLEAN ALL SEWERS & APPURTENANCES.
  - ALL CATCH BASIN LEADS SHALL BE 200mmØ @ 1.0% (MIN.) UNLESS SHOWN OTHERWISE.
  - ALL CATCH BASINS SHALL HAVE 600mm SLUMPS UNLESS INDICATED OTHERWISE.

- WATERMAIN NOTES:**
- GENERAL:  
 ITEM: WATERMAIN TRENCHING DETAIL No. W17 REFERENCE: CITY OF OTTAWA  
 THERMAL INSULATION IN SHALLOW TRENCHES W22 / W23 CITY OF OTTAWA  
 WATERMAIN CROSSING BELOW SEWER / OVER SEWER W25 / W25.2 CITY OF OTTAWA  
 THRUST BLOCK W25.3 CITY OF OTTAWA
  - THE WATERMAIN SHALL BE PVC DR 18 IN ACCORDANCE WITH MATERIAL SPECIFICATION MW-18.1, UNLESS OTHERWISE INDICATED. COMPLETE WITH TRACING WIRE AND CATHODIC PROTECTION.
  - SUPPLY AND CONSTRUCT ALL WATERMANS AND APPURTENANCES IN ACCORDANCE WITH THE CITY OF OTTAWA STANDARDS AND SPECIFICATIONS. EXCAVATION, INSTALLATION, BACKFILL AND RESTORATION OF ALL WATERMANS BY THE CONTRACTOR. CONNECTIONS AND SHUT-OFFS AT THE MAIN AND CHLORINATION OF THE WATER SYSTEM SHALL BE PERFORMED BY CITY OFFICIALS.
  - WATERMAIN SHALL BE MINIMUM 2.4m DEPTH BELOW GRADE UNLESS OTHERWISE INDICATED.
  - PROVIDE MINIMUM 0.30m CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL CROSSINGS.
  - HORIZONTAL CLEARANCE BETWEEN WATERMAIN AND SEWERS IS 2.5m (MIN.).
  - CONNECTION TO EXISTING WATERMAIN BY CITY FORCES. CITY CONTRACTOR TO EXCAVATE TRENCH, PLACE BEDDING, BACKFILL AND REINSTATE SURFACE TO EXISTING CONDITIONS OR BETTER.
  - FIRE HYDRANT INSTALLATION PER CITY DETAIL W19.
  - THERMAL INSULATION FOR WATERMANS IN SHALLOW TRENCHES PER W22
  - THERMAL INSULATION OF WATERMANS AT OPEN STRUCTURES PER W23
  - WATERMAIN CROSSING BELOW SEWER PER W25
  - WATERMAIN CROSSING OVER SEWER PER W25.2

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.

No.	REVISION	DATE	BY
6.	REVISED PER CITY COMMENTS	DEC 21/22	MAB
5.	CITY SUBMISSION	OCT 5/22	MAB
4.	CITY SUBMISSION	AUG 5/22	MAB
3.	CITY SUBMISSION	JUL 2/20	MAB
2.	REVISED PER CITY COMMENTS	MAR 4/20	MAB
1.	ISSUED FOR APPROVAL	NOV 1/19	MAB

SCALE: 1:300

FOR REVIEW ONLY

LRW: [Signature]  
 MAB: [Signature]  
 DTD: [Signature]  
 MAB: [Signature]  
 JGR: [Signature]

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CITY OF OTTAWA  
 LONGFIELDS CENTRAL - BLOCK 21  
 605 VIA MATTINO WAY

PROJECT No.: 112021-10  
 REV: REV # 6  
 DRAWING No.: 112021-10-GP