SEWER NOTES

1. CONSTRUCT ALL SEWERS AND APPURTENANCES TO CITY STANDARDS (IF AVAILABLE) OR AS PER OPSD STANDARDS.
2. SEWER TRENCHING AND BEDDING SHALL CONFORM TO OPSD 802.010 AND 802.013 UNLESS NOTED OTHERWISE.
3. BEDDING SHALL BE A MINIMUM 150mm OF GRANULAR "A", COMPACTED TO MINIMUM 95% STANDARD PROCTOR DRY DENSITY. CLEAR STONE BEDDING SHALL NOT BE PERMITTED.
4. SUB-BEDDING, IF REQUIRED SHALL BE AS PER THE DIRECTION OF A GEOTECHNICAL ENGINEER.
5. BACKFILL TO AT LEAST 300mm ABOVE TOP OF PIPE WITH GRANULAR "A" OR SAND.
6. TO MINIMIZE DIFFERENTIAL FROST HEAVING, TRENCH BACKFILL (FROM PAVEMENT SUBGRADE TO 2.0m BELOW FINISHED GRADE) SHALL MATCH EXISTING SOIL CONDITIONS.
7. SEWERS AND CONNECTIONS 150mm DIAMETER AND SMALLER TO BE PVC SDR 28 OR APPROVED EQUIVALENT. SEWERS AND CONNECTIONS 200mm DIAMETER AND LARGER TO BE PVC SDR 35 OR APPROVED EQUIVALENT.
8. INSULATE ALL SEWERS AND/OR SERVICES THAT HAVE LESS THAN 1.5m OF COVER WITH THERMAL INSULATION AS PER CITY OF OTTAWA STANDARD W22.
9. SUPPLY AND INSTALL ALL PIPING AND APPURTENANCES AS SHOWN AND DETAILED TO WITHIN 1.0m OF BUILDING. ALL ENDS OF SERVICES TO BE PROPERLY CAPPED AND LOCATED WITH 2"x4"x8' LONG MARKER.
10. CONTRACTOR TO TELEVISE (CCTV) ALL PROPOSED SEWERS ONSITE, OUTLET CONNECTION TO THE MAIN AND PIPES 150mmØ OR GREATER PRIOR TO BASE COURSE ASPHALT. UPON COMPLETION OF CONTRACT, THE CONTRACTOR IS RESPONSIBLE TO FLUSH AND CLEAN ALL SEWERS & APPURTENANCES.
11. DYE TESTING IS TO BE COMPLETED ON SANITARY SERVICE TO CONFIRM PROPER CONNECTION TO THE SANITARY SEWER MAIN.

WATERMAIN NOTES

1. CONSTRUCT ALL WATERMAINS AND APPURTENANCES IN ACCORDANCE WITH CITY STANDARDS (IF AVAILABLE) OR AS PER OPSD STANDARDS.
2. INDUSTRIAL/COMMERCIAL SERVICE CONNECTIONS TO BE 50mm COPPER PIPING AND SHALL CONFORM TO ASTM B88 TYPE 'K' SOFT.
3. WATERMAINS AND/OR WATER SERVICES ARE TO HAVE A MINIMUM COVER OF 2.4m. OTHERWISE THERMAL INSULATION IS REQUIRED AS PER CITY STANDARDS (IF AVAILABLE) OR OPSD 1109.030.
4. IF THE WATERMAIN MUST BE DEFLECTED TO MEET ALIGNMENT, ENSURE THAT THE AMOUNT OF DEFLECTION USED IS EQUAL TO OR LESS THAN THAT WHICH IS RECOMMENDED BY THE MANUFACTURER.
5. USE APPROVED SADDLE CONNECTION WITH MAIN (CORPORATION) STOP AS PER CITY OF OTTAWA STANDARD DRAWING 'W26'.
6. CONNECTION TO EXISTING BY CITY FORCES. EXCAVATION, BACKFILLING AND REINSTATEMENT IS TO BE COMPLETED BY THE CONTRACTOR.
7. SWABING, CHLORINATION AND CONTINUITY TESTING FOR PROPOSED WATER SERVICES IS TO FOLLOW CITY OF OTTAWA SPECIAL PROVISIONS #SP-4491 & SP-4494.

EROSION AND SEDIMENT CONTROL

1. THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES, TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE, DURING CONSTRUCTION ACTIVITIES. THIS INCLUDES LIMITING THE AMOUNT OF EXPOSED SOIL, TEMPORARY SEDIMENT CONTROL (GEOSOCK INSERTS WITH AN OVERFLOW UNDER GRATE OR COVER) TO BE IMPLEMENTED DURING CONSTRUCTION ON ALL PROPOSED ROAD CATCHBASINS, REARYARD CATCHBASINS AND CATCHBASIN MANHOLES AND OTHER SEDIMENT TRAPS. NO RECYCLED GEOSOCK MATERIAL SHALL BE PERMITTED FOR USE ON SITE.
2. AT THE DISCRETION OF THE PROJECT MANAGER OR MUNICIPAL STAFF, ADDITIONAL SILT CONTROL DEVICES SHALL BE INSTALLED AT DESIGNATED LOCATIONS.
3. FOR SILT FENCE BARRIER, USE OPSD 219.110. GEOTEXTILE FOR SILT FENCE AS PER OPSS 1860, TABLE 3.
4. EXCEPT AS PROVIDED IN PARAGRAPHS 4.1., and 4.2. BELOW, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS FEASIBLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED.
   - 4.1. WHERE THE INITIATION OF STABILIZATION MEASURES BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY OR PERMANENTLY CEASE IS PRECLUDED BY SNOW COVER, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS FEASIBLE.
   - 4.2. WHERE CONSTRUCTION ACTIVITY WILL RESUME ON A PORTION OF THE SITE WITHIN 21 DAYS FROM WHEN ACTIVITIES CEASED, (E.G. THE TOTAL TIME PERIOD THAT CONSTRUCTION ACTIVITY IS TEMPORARILY CEASED IS LESS THAN 21 DAYS) THEN STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF SITE BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY CEASED.
5. SEDIMENT THAT IS ACCUMULATED BY THE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED IN A MANNER THAT AVOIDS ESCAPE OF THE SEDIMENT TO THE DOWNSTREAM SIDE OF THE CONTROL MEASURE AND AVOIDS DAMAGE TO THE CONTROL MEASURE. SEDIMENT SHALL BE REMOVED TO THE LEVEL OF THE GRADE EXISTING AT THE TIME THE CONTROL MEASURE WAS CONSTRUCTED AND BE ACCORDING TO THE FOLLOWING:
   - 5.1. FOR LIGHT-DUTY SEDIMENT BARRIERS, ACCUMULATED SEDIMENT SHALL BE REMOVED ONCE IT REACHES THE LESSER OF THE FOLLOWING:
     - 5.1.1. A DEPTH OF ONE-HALF THE EFFECTIVE HEIGHT OF THE CONTROL MEASURE.
     - 5.1.2. A DEPTH OF 300 MM IMMEDIATELY UPSTREAM OF THE CONTROL MEASURE.
   - 5.2. FOR ALL CONTROL MEASURES, ACCUMULATED SEDIMENT SHALL BE REMOVED AS NECESSARY TO PERFORM MAINTENANCE REPAIRS.
   - 5.3. ACCUMULATED SEDIMENT SHALL BE REMOVED PRIOR TO THE REMOVAL OF THE CONTROL MEASURE.
   - 5.4. ACCUMULATED SEDIMENT IS TO BE REMOVED AND DISPOSED OF AS PER OPSS 180.
6. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MONITORED TO ENSURE THEY ARE IN EFFECTIVE WORKING ORDER. THE CONDITION OF THE CONTROL MEASURES SHALL BE MONITORED PRIOR TO ANY FORECAST STORM EVENT AND FOLLOWING A STORM EVENT.
7. DUST CONTROL MEASURES SHOULD BE CONSIDERED PRIOR TO CLEARING AND GRADING. THE USE OF WATER, CALCIUM CHLORIDE FLAKES/SOLUTION OR MAGNESIUM CHLORIDE FLAKES/SOLUTION SHALL BE USED AS DUST SUPPRESSANTS AS PER OPSS 506. THIS IS TO LIMIT WIND EROSION OF SOILS WHICH MAY TRANSPORT SEDIMENTS OFFSITE, WHERE THEY MAY BE WASHED INTO THE RECEIVING WATER BY THE NEXT RAINSTORM.
8. ALL 'GREEN AREAS' TO BE TREATED WITH 150mm TOPSOIL AND SOD AS SOON AS FEASIBLE, AS PER OPSS 570.
9. TOPSOIL TO BE STRIPPED AND STOCKPILED FOR REHABILITATION. CLEAN FILL TO BE PLACED IN FILL AREAS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.
10. ALL DISTURBED AREAS TO BE RESTORED TO ORIGINAL CONDITION OR BETTER UNLESS OTHERWISE SPECIFIED.
11. STOCKPILED MATERIAL IS TO BE STORED AWAY FROM POTENTIAL RECEIVERS (E.G. STORM CATCHBASINS, MANHOLES), AND BE SURROUNDED BY EROSION CONTROL MEASURES WHERE MATERIAL IS LEFT IN PLACE IN EXCESS OF 14 DAYS.
12. IF REQUIRED, DEWATERING/SETTLING BASINS SHALL BE CONSTRUCTED AS PER OPSD 219.240 AND LOCATED ON FLAT GRADE UPSTREAM OF OTHER EXISTING MITIGATION MEASURES. WATERCOURSES SHALL NOT BE DIVERTED, OR BLOCKED, AND TEMPORARY WATERCOURSES CROSSINGS SHALL NOT BE CONSTRUCTED OR UTILIZED, UNLESS OTHERWISE SPECIFIED IN THE CONTRACT. IF CLOSURE OF ANY PERMANENT WATER PASSAGE IS NECESSARY, THE CONTRACTOR SHALL RELEASE ANY STRANDED FISH TO THE OPEN PORTION OF THE WATERCOURSE WITHOUT HARM.
13. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL CONFORM TO OPSS 577
14. WHERE DEWATERING IS REQUIRED, THE DISCHARGED WATER SHALL BE CONTROLLED IN ACCORDANCE WITH OPSS 518.
15. ALL SETTLING/FILTRATION BASINS SHALL BE EQUIPPED WITH TERRAFIX 270R GEOTEXTILE (OR APPROVED EQUIVALENT) AND SHALL BE CLEANED AND REPLACED AS REQUIRED.
16. ALL SEDIMENT AND EROSION CONTROL MEASURES MAY BE MODIFIED IN THE FIELD AT THE DISCRETION OF THE CITY OF OTTAWA SITE INSPECTOR OR CONSERVATION AUTHORITY

ROOF DRAIN (B1)

TYPE OF CONTROL DEVICE	WATTS DRAINAGE RD-100-A-ADJ (FULLY EXPOSED)	
NUMBER OF ROOF DRAINS	2	
	5-YEAR	100-YR
ROOFTOP STORAGE (m^3)	14.36	26.67
DEPTH OF FLOW (m)	0.035	0.065
FLOW PER ROOF DRAIN (L/s)	0.44	0.82
TOTAL FLOW	0.88	1.64

ROOF DRAIN (B2)

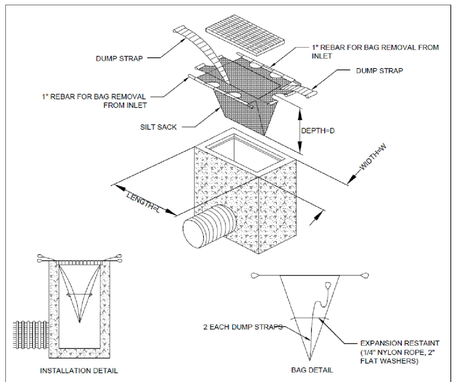
TYPE OF CONTROL DEVICE	WATTS DRAINAGE RD-100-A-ADJ (FULLY EXPOSED)	
NUMBER OF ROOF DRAINS	2	
	5-YEAR	100-YR
ROOFTOP STORAGE (m^3)	4.57	7.61
DEPTH OF FLOW (m)	0.030	0.050
FLOW PER ROOF DRAIN (L/s)	0.38	0.63
TOTAL FLOW	0.76	1.26

ROOF DRAIN (B3)

TYPE OF CONTROL DEVICE	WATTS DRAINAGE RD-100-A-ADJ (FULLY EXPOSED)	
NUMBER OF ROOF DRAINS	2	
	5-YEAR	100-YR
ROOFTOP STORAGE (m^3)	4.51	7.51
DEPTH OF FLOW (m)	0.030	0.050
FLOW PER ROOF DRAIN (L/s)	0.38	0.63
TOTAL FLOW	0.76	1.26

ROOF DRAIN (B4)

TYPE OF CONTROL DEVICE	WATTS DRAINAGE RD-100-A-ADJ (FULLY EXPOSED)	
NUMBER OF ROOF DRAINS	2	
	5-YEAR	100-YR
ROOFTOP STORAGE (m^3)	1.06	1.86
DEPTH OF FLOW (m)	0.020	0.035
FLOW PER ROOF DRAIN (L/s)	0.25	0.44
TOTAL FLOW	0.50	0.88



INLET SEDIMENT CONTROL DEVICE

N.T.S.

GENERAL NOTES

1. THE ORIGINAL TOPOGRAPHY, GROUND ELEVATION AND SURVEY DATA SHOWN ARE SUPPLIED FOR INFORMATION PURPOSES ONLY, AND IMPLY NO GUARANTEE OF ACCURACY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL INFORMATION SHOWN.
2. THIS PLAN IS NOT A CADASTRAL SURVEY SHOWING LEGAL PROPERTY BOUNDARIES AND EASEMENTS. THE PROPERTY BOUNDARIES SHOWN HEREON HAVE BEEN DERIVED INFORMATION SUPPLIED BY (OR SHOWN ON) FAIRHALL, MOFFATT, WOODLAND LTD. SURVEY PLAN #8-31326, DATED AUGUST 15, 2018 AND CANNOT BE RELIED UPON TO BE ACCURATE OR COMPLETE. THE PRECISE LOCATION OF THE CURRENT PROPERTY BOUNDARIES AND EASEMENTS CAN ONLY BE DETERMINED BY AN UP-TO-DATE LAND TITLES SEARCH AND A SUBSEQUENT CADASTRAL SURVEY PERFORMED AND CERTIFIED BY AN ONTARIO LAND SURVEYOR.
3. THE CONTRACTOR IS TO OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY BEFORE COMMENCING CONSTRUCTION.
4. THE CONTRACTOR IS RESPONSIBLE FOR ALL LAYOUT.
5. THE CONTRACTOR IS TO DETERMINE THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. PROTECT AND ASSUME ALL RESPONSIBILITY FOR EXISTING UTILITIES WHETHER OR NOT SHOWN ON THESE DRAWINGS. IF THERE IS ANY DISCREPANCY THE CONTRACTOR IS TO NOTIFY THE ENGINEER PROMPTLY.
6. RESTORE ALL TRENCHES AND SURFACES OF PUBLIC ROAD ALLOWANCES TO CONDITION EQUAL OR BETTER THAN ORIGINAL CONDITION AND TO THE SATISFACTION OF THE CITY AUTHORITIES.
7. EXCAVATE AND DISPOSE OF ALL EXCESS EXCAVATED MATERIAL, SUCH AS ASPHALT, CURBING AND DEBRIS, OFF SITE AS DIRECTED BY THE ENGINEER AND THE CITY.
8. TOPSOIL TO BE STRIPPED AND STOCKPILED FOR REHABILITATION. CLEAN FILL TO BE PLACED IN FILL AREAS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.
9. ALL DISTURBED AREAS TO BE RESTORED TO ORIGINAL CONDITION OR BETTER UNLESS OTHERWISE SPECIFIED.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL AND SAFETY MEASURES DURING THE CONSTRUCTION PERIOD, INCLUDING THE SUPPLY, INSTALLATION, AND REMOVAL OF ALL NECESSARY SIGNAGE, DELINEATORS, MARKERS AND BARRIERS.
11. DO NOT ALTER GRADING OF THE SITE WITHOUT PRIOR APPROVAL OF THE CITY.
12. ALL ROADWAY, PARKING LOT, AND GRADING WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH CITY STANDARDS AND SPECIFICATIONS. THE CONTRACTOR IS TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE BUILDING.
13. CONTACT THE CITY FOR INSPECTION OF ROUGH GRADING OF PARKING LOTS, ROADWAYS AND LANDSCAPED AREAS PRIOR TO PLACEMENT OF ASPHALT AND TOPSOIL. ALL DEFICIENCIES NOTED SHALL BE RECTIFIED TO THE CITY SATISFACTION PRIOR TO PLACEMENT OF ANY ASPHALT, TOPSOIL, SEED & MULCH AND/OR SOD.
14. ALL DIMENSIONS AND INVERTS MUST BE VERIFIED PRIOR TO CONSTRUCTION, IF THERE IS ANY DISCREPANCY THE CONTRACTOR IS TO NOTIFY THE ENGINEER PROMPTLY.
15. ELECTRICAL, GAS, TELEPHONE AND TELEVISION SERVICE LOCATIONS ARE SUBJECT TO THE INDIVIDUAL AGENCY:
    - ELECTRICAL SERVICE - HYDRO OTTAWA,
    - GAS SERVICE - ENBRIDGE,
    - TELEPHONE SERVICE - BELL CANADA,
    - TELEVISION SERVICE - ROGERS.
17. INSTALLATION TO BE IN ACCORDANCE WITH CURRENT CODES AND STANDARDS OF APPROVAL AGENCIES HYDRO OTTAWA, BELL AND THE CITY.
18. ALL PROPOSED CURB SHALL BE CONCRETE BARRIER CURB UNLESS SPECIFIED.
19. ALL EXISTING REDUNDANT PRIVATE APPROACHES FRONTING THIS DEVELOPMENT MUST BE REMOVED TO THE SATISFACTION OF THE CITY.
20. NO EXCESS DRAINAGE, EITHER DURING OR AFTER CONSTRUCTION, IS TO BE DIRECTED TOWARDS NEIGHBORING PROPERTIES.
21. NO ALTERATION OF EXISTING GRADES AND DRAINAGE PATTERNS ON PROPERTY BOUNDARIES.

SAN STRUCTURE TABLE

NAME	RIM ELEV.	INVERT IN	INVERT OUT	DESCRIPTION
MH1A	72.80	NW71.630	SE71.630	COVER CITY STD S24 FRAME CITY STD S25 STRUC. OPSD 701.010

NOTE: ALL COVER FRAMES LOCATED OUTSIDE OF PAVEMENT SURFACE TO BE ANCHORED TO THE TOP OF THE PRECAST CONCRETE TOP AS PER CITY OF OTTAWA S.P. NO.F-4070.

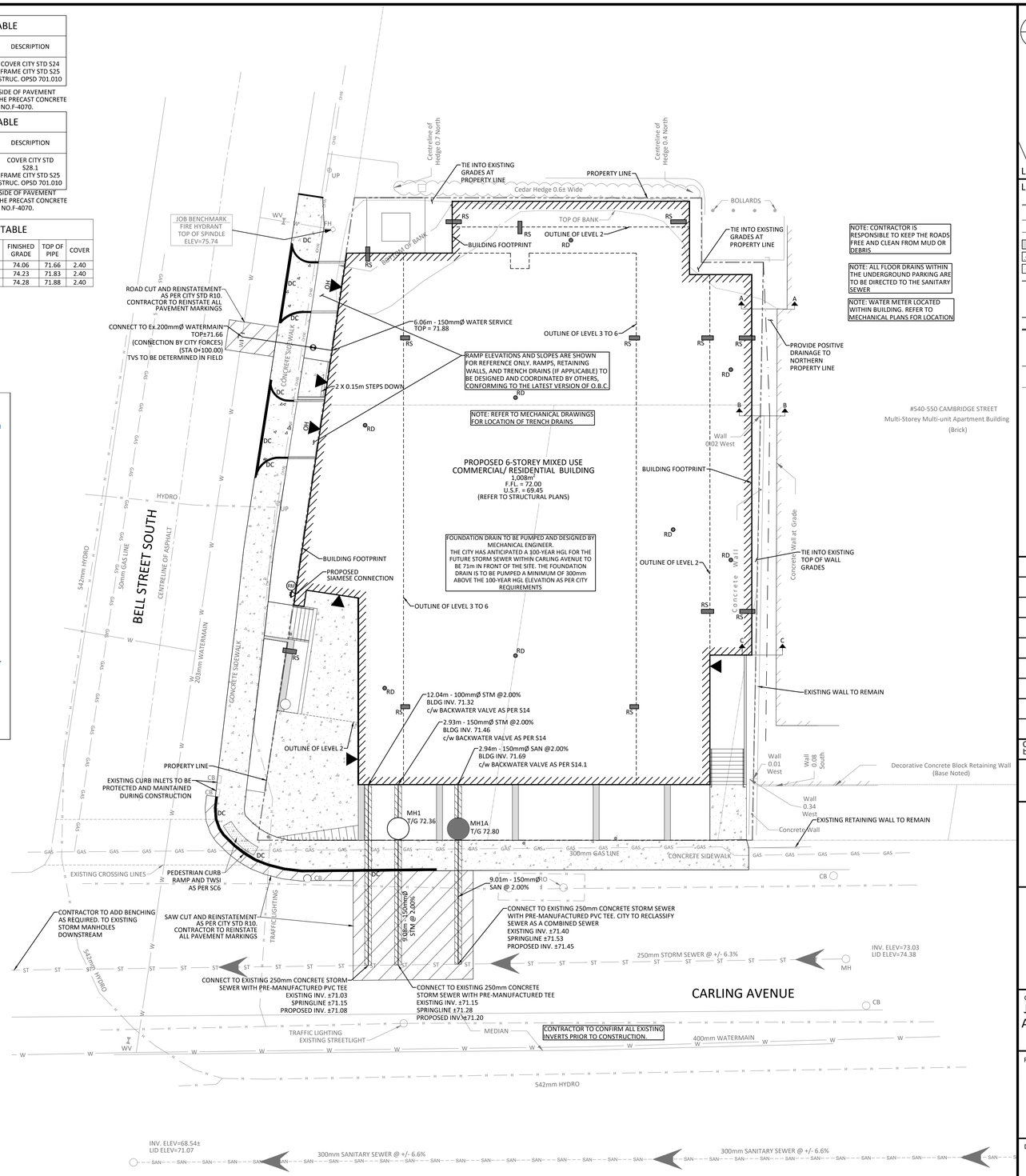
STM STRUCTURE TABLE

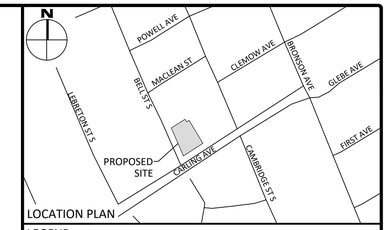
NAME	RIM ELEV.	INVERT IN	INVERT OUT	DESCRIPTION
MH1	72.36	NW71.400	SE71.381	COVER CITY STD S28.1 FRAME CITY STD S25 STRUC. OPSD 701.010

NOTE: ALL COVER FRAMES LOCATED OUTSIDE OF PAVEMENT SURFACE TO BE ANCHORED TO THE TOP OF THE PRECAST CONCRETE TOP AS PER CITY OF OTTAWA S.P. NO.F-4070.

WATER COVER TABLE

LOCATION	STATION	FINISHED GRADE	TOP OF PIPE	COVER
A - 200 X 150 TEE	0+100.00	74.06	71.66	2.40
VALVE	0+104.78	74.23	71.83	2.40
BULDING	0+106.06	74.28	71.88	2.40





LOCATION PLAN

LEGEND

- BARRIER CURB / CURB DEPRESION
- MOUNTABLE CURB
- EASEMENT
- RETAINING WALL
- CONCRETE SIDEWALK
- PAVING STONE
- STORM MANHOLE
- CATCHBASIN OR DITCH INLET
- LANDSCAPE CATCHBASIN
- SANITARY MANHOLE
- PERFORATED PIPE IN SWALES
- WATER VAVLE/CHAMBER
- FIRE HYDRANT
- CENTRELINE OF SWALE
- SLOPING AT 3:1 (UNLESS SPECIFIED)
- 95.94 / 93.20 — PROPOSED ELEVATION / EXISTING ELEVATION
- 95.94 (S) — SWALE ELEVATION
- 100.50 T/W, 90.50 B/W — TOP OF WALL ELEVATION / BOTTOM OF WALL ELEVATION
- 100.50 T/C, 100.35 B/C — TOP OF CURB ELEVATION / BOTTOM OF CURB ELEVATION
- EMERGENCY OVERLAND FLOW ROUTE
- SILT FENCE (AS PER OPSD 219.130)
- STRAW BALE CHECK DAM (AS PER OPSD 219.180)
- BUILDING ENTRANCES (MAIN, SIDE, OVERHEAD)
- INSULATION (PER W22)

FOR REVIEW ONLY
NOT FOR CONSTRUCTION

No.	Revisions	Date
3	REVISED AS PER CITY COMMENTS	JAN. 22, 2020
2	UPDATED AS PER CITY COMMENTS	NOV. 01, 2019
1	ISSUED FOR SITE PLAN CONTROL	AUG. 16, 2019

Check and verify all dimensions before proceeding with the work — Do not scale drawings

SCALE 1 : 150 (0, 5, 10, 15 Metres)

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Stamp: LICENSED PROFESSIONAL ENGINEER T. D. FERGUSON 100225917 2020/01/22 PROVINCE OF ONTARIO

Client:
JOHN HOWARD SOCIETY c/o PBC DEVELOPMENT AND CONSTRUCTION MANAGEMENT GROUP INC.
485 BANK STREET, SUITE 205
OTTAWA, ON K2P 1Z2

Project:
NEW MIXED USE OFFICE & APARTMENT BUILDING
289 CARLING AVENUE
OTTAWA, ON K1S 4K5

Drawing Title:
SITE SERVICING AND SEDIMENT & EROSION CONTROL PLAN

Scale: 1:150	Project Number: CP-19-0007
Drawn By: N.B.V.	
Checked By: T.D.F.	Drawing Number: C102
Designed By: N.B.V.	

D07-12--19-0147

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