

DRAWING NOTES

1.0 GENERAL

- 1.1 CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.
- 1.2 DO NOT SCALE DRAWINGS.
- 1.3 CONTRACTOR TO REPORT ALL DISCOVERIES OF ERRORS, OMISSIONS OR DISCREPANCIES TO THE ARCHITECT OR DESIGN ENGINEER AS APPLICABLE.
- 1.4 USE ONLY THE LATEST REVISED DRAWINGS OR THOSE THAT ARE MARKED "ISSUED FOR CONSTRUCTION".
- 1.5 ALL CONSTRUCTION SHALL COMPLY WITH CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.
- 1.6 THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL RELEVANT DRAWINGS AND SPECIFICATIONS.
- 1.7 FOR LEGAL SURVEY INFORMATION REFER TO REGISTERED PLAN FROM J.D. BARNES LTD.
- 1.8 REFER TO SITE PLAN BY M. DAVID BLAKLEY ARCHITECTS INC.
- 1.9 CONTRACTOR TO IMPLEMENT EROSION AND SEDIMENT CONTROL MEASURES AS IDENTIFIED IN THE EROSION AND SEDIMENT CONTROL PLAN TO THE SATISFACTION OF THE CITY OF OTTAWA. PRIOR TO UNDERTAKING ANY SITE ALTERATIONS (FILLING, GRADING, REMOVAL OF VEGETATION, ETC.) DURING ALL PHASES OF THE SITE PREPARATION AND CONSTRUCTION THE MEASURES ARE TO BE MAINTAINED TO THE SATISFACTION OF THE ENGINEER AND CITY OF OTTAWA IN ACCORDANCE WITH THE BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL. SHOULD ANY ADDITIONAL MEASURES BE REQUIRED TO ADDRESS FIELD CONDITIONS THEY SHALL BE INSTALLED AS DIRECTED BY THE ENGINEER OR THE CITY OF OTTAWA. SUCH ADDITIONAL MEASURES MAY INCLUDE BUT NOT BE LIMITED TO INSTALLATION OF SEDIMENT CAPTURE FILTER SOCKS WITHIN MANHOLES AND CATCHBASINS TO PREVENT SEDIMENT FROM ENTERING THE STRUCTURE AND INSTALLATION AND MAINTENANCE OF A LIGHT DUTY SILT FENCE BARRIER AS REQUIRED.
- 1.10 ALL IRON WORK ELEVATIONS SHOWN ARE APPROXIMATE AND ARE SUBJECT TO MINOR ADJUSTMENTS AS DETERMINED BY THE ENGINEER.
- 1.11 ALL CONCRETE CURBS AND SIDEWALKS TO CONFORM TO O.P.S. AND CONSTRUCTED TO CITY STANDARDS. ALL ON-SITE CURBS TO BE BARKER TYPE WITH DEPRESSIONS AS NOTED.
- 1.12 ALL CURBS SHALL BE "NORMAL PORTLAND CEMENT" IN ACCORDANCE WITH O.P.S.S. 1390 AND SHALL ACHIEVE A MINIMUM STRENGTH OF 30MPa AT 28 DAYS.
- 1.13 ALL CONSTRUCTION TRAFFIC TO ACCESS SITE FROM ROTARY WAY.
- 1.14 FOR GEOTECHNICAL REPORT SEE GEOTECHNICAL INVESTIGATION BY GOLDER ASSOCIATES LTD.
- 1.15 CONTRACTOR TO PROTECT EXISTING INFRASTRUCTURE AND PROPERTY SUCH AS TREES, PARKING METERS, SIDEWALKS, CURBS, ASPHALT, AND STREET SIGNS FROM DAMAGE DURING CONSTRUCTION. CONTRACTOR TO PAY THE COST TO REPAIR OR REPLACE ANY DAMAGED INFRASTRUCTURE OR PROPERTY TO THE SATISFACTION OF THE CITY.
- 1.16 THE POSITION OF POLE LINES, CONDUITS, WATERMAIN, SEWERS, AND OTHER UNDERGROUND AND ABOVEGROUND UTILITIES AND STRUCTURES ARE 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 THE CONTRACTOR SHALL INFORM ITSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, SHALL PROTECT ALL UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM.
- 1.17 CONTRACTOR TO SUPPLY SUITABLE FILL MATERIAL WHERE REQUIRED TO ROUGH GRADE THE SITE. ALL IMPORTED FILL MATERIAL TO BE CERTIFIED AS ACCEPTABLE BY THE GEOTECHNICAL ENGINEER.
- 1.18 CONTRACTOR TO HAUL EXCESS MATERIAL OFFSITE AS NECESSARY TO GRADE SITE TO MEET THE PROPOSED GRADES. ALL EXCESS MATERIAL TO BE HAULED OFFSITE AND DISPOSED OF AT AN APPROVED DUMP SITE. SHOULD THE CONTRACTOR DISCOVER ANY HAZARDOUS MATERIAL, CONTRACTOR IS TO NOTIFY ENGINEER, ENGINEER TO DETERMINE APPROPRIATE DISPOSAL METHODOLOGY.
- 1.19 FILL MATERIAL WITHIN THE PARKING LOT AND BUILDING PAD AREAS, AND SURROUNDING BUILDING FOUNDATIONS SHALL BE COMPACTED TO 90% STANDARD MODIFIED PROCTOR DENSITY AND TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER.
- 1.20 ALL COMPACTION METHODS TO BE PERFORMED TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER TO INCLUDE BUT NOT BE LIMITED TO THE THICKNESS OF LIFTS, AND COMPACTION EQUIPMENT USED.
- 1.21 ALL DISTURBED BOULEVARDES TO BE REINSTATED WITH SOD ON 100mm TOPSOIL.
- 1.22 UTILITY DUCTS TO BE INSTALLED PRIOR TO ROAD BASE CONSTRUCTION.
- 1.23 CLAY DIKES TO BE INSTALLED WHERE INDICATED ON THE DRAWINGS OR AS APPROVED AND DIRECTED BY THE GEOTECHNICAL ENGINEER ALL IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.
- 1.24 BACKWATER VALVES, PER CITY STANDARDS S14, S14.1 AND S14.2 RE TO BE INSTALLED FOR ALL STORM AND SANITARY SERVICE CONNECTIONS.

2.0 SANITARY

- 2.1 ALL SANITARY SEWER MAINS TO BE CSA CERTIFIED, BELL AND SPIGOT TYPE. ONLY FACTORY FITTINGS TO BE USED. SEWER TO BE INSTALLED AS PER OPSD 100.01. SANITARY SEWER MATERIALS TO BE 250mmØ AND SMALLER - PVC DR 35.
- 2.2 ALL SANITARY MAINTENANCE HOLES TO BE 1.2m DIAMETER AS PER CITY OF OTTAWA STANDARDS COMPLETE WITH BENCHING, RUNGS, FRAME AND COVER, DROP PIPES AND LANDINGS WHERE NEEDED.
- 2.3 SANITARY MANHOLE COVERS TO BE CITY OF OTTAWA STD. S25 (MOQ. OPSD 401.020). SANITARY MANHOLE COVER TO BE CLOSED COVER TYPE, AS PER CITY STANDARD S24.
- 2.4 SANITARY SEWER LEAKAGE TEST AND OCTV INSPECTION SHALL BE COMPLETED AS PER CITY SPECIFICATIONS PRIOR TO INSTALLATION OF BASE COURSE ASPHALT.
- 2.5 ANY SANITARY SEWER WITH LESS THAN 2.0m COVER REQUIRES THERMAL INSULATION AS PER CITY OF OTTAWA STANDARD W22, OR AS APPROVED BY THE ENGINEER.
- 2.6 CONNECTION TO THE EXISTING SANITARY SEWER TO BE INCLUDED IN THE COST FOR SANITARY SEWER INSTALLATION. THIS INCLUDES REINSTATEMENT OF ROAD CUTS TO CITY STANDARDS.
- 2.7 ALL SANITARY CONNECTION TO INCLUDE BACKWATER VALVE TYPE 1 PER CITY STANDARD S14.1

3.0 STORM

- 3.1 ALL STORM SEWERS TO BE CSA CERTIFIED, BELL AND SPIGOT TYPE. ALL STORM SEWERS TO BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS. ONLY FACTORY FITTINGS TO BE USED. STORM SEWER MATERIALS TO BE 375mmØ AND SMALLER - PVC DR 35 - 450mmØ AND LARGER - 100% REINFORCED CONCRETE. UNLESS NOTED OTHERWISE.
- 3.2 ALL STORM MAINTENANCE HOLES TO BE SIZED IN ACCORDANCE WITH THE PLANS AND AS PER CITY OF OTTAWA STANDARDS COMPLETE WITH BENCHING, RUNGS, FRAME AND COVER.
- 3.3 STORM MA COVERS TO BE OPEN TYPE, AS PER CITY STANDARD S24. FRAMES TO BE PER CITY OF OTTAWA STD. S25. CONTRACTOR TO INSTALL FILTER FABRIC UNDER STORM MA COVER UNTIL SODDING IS COMPLETE.
- 3.4 STORM MAINTENANCE HOLES TO BE OPSD, SIZE AS SPECIFIED, TAPER TOP.
- 3.5 ALL CATCH BASINS TO BE AS PER OPSD 705.010. FRAME & FISH TYPE GRATE AS PER CITY OF OTTAWA STD. S19.1.
- 3.6 3m 150mm DIAMETER SOCK-WRAPPED PERFORATED PVC SUBDRAINS TO BE INSTALLED ALL CBS. TO EXTEND PARALLEL TO CURB IN CBS ADJACENT TO CURB AND IN 4 DIRECTIONS FOR CBS IN CENTER OF PARKING LOT. SUBDRAINS TO DISCHARGE TO CBS.
- 3.7 ANY STORM SEWER WITH LESS THAN 2.0m COVER REQUIRES THERMAL INSULATION AS PER CITY OF OTTAWA STANDARD W22, OR AS APPROVED BY THE ENGINEER.
- 3.8 CONNECTION TO THE EXISTING STORM SEWER TO BE INCLUDED IN THE COST FOR STORM SEWER INSTALLATION. THIS INCLUDES REINSTATEMENT OF ROAD CUT TO CITY STANDARDS.
- 3.9 CONTRACTOR TO PROVIDE IPEX-TEMPER MFH ICDS SHOP DRAWINGS, OR EQUIVALENT, FOR ENGINEERS REVIEW PRIOR TO ORDERING ICDS.
- 3.10 ALL STORM CONNECTION TO INCLUDE FOUNDATION BACKWATER VALVE TYPE 1 PER CITY STANDARD S14.1
- 3.11 LANDSCAPE SUBDRAIN AND APPURTENANCES TO BE INSTALLED PER CITY OF OTTAWA STANDARDS INCLUDING BUT NOT LIMITED TO S29, S30, S31.
- 3.12 ALL WATERMANS 100mmØ OR GREATER TO BE PVC DR 18, LESS THAN 100mmØ TO BE COPPER OR APPROVED EQUAL WITH MINIMUM COVER OF 2.4m AND INSTALLED PER CITY OF OTTAWA STANDARDS. ALL DOMESTIC WATER SERVICES ARE TO BE 25mmØ.
- 4.2 THRUST BLOCKS TO BE INSTALLED AT ALL BENDS, TEES, AND CAPS ALL AS PER OPSD 1103.01 AND 1103.02.
- 4.3 CONTRACTOR TO CONDUCT PRESSURE AND LEAKAGE TESTING OF ALL WATERMANS AND DISINFECT AND CHLORINATE ALL WATERMANS TO THE SATISFACTION OF M.O.E. AND THE CITY OF OTTAWA.
- 4.4 TRACER WIRE TO BE INSTALLED ALONG THE FULL LENGTH OF WATERMAIN AND ATTACHED TO EACH MAIN STOP AS PER CITY OF OTTAWA STANDARDS.
- 4.5 ALL COMPONENTS OF THE WATER DISTRIBUTION SYSTEM SHALL BE CATHODICALLY PROTECTED AS PER CITY OF OTTAWA STANDARDS.
- 4.6 ALL VALVES & VALVE BOXES AND CHAMBERS, HYDRANTS, AND HYDRANT VALVES AND ASSEMBLIES SHALL BE INSTALLED AS PER CITY OF OTTAWA STANDARDS.
- 4.7 ANY WATERMAIN WITH LESS THAN 2.4m COVER REQUIRES THERMAL INSULATION AS PER CITY OF OTTAWA STANDARD W22, OR AS APPROVED BY THE ENGINEER.
- 4.8 CONTRACTOR IS RESPONSIBLE FOR ACQUIRING THE WATER PERMIT FROM THE CITY OF OTTAWA AND PAYMENT OF ANY FEES ASSOCIATED WITH SECURING THE WATER PERMIT. OWNER IS RESPONSIBLE FOR REIMBURSING THE CONTRACTOR FOR THE ACTUAL COST OF ACQUIRING THE WATER PERMIT.
- 4.9 CONNECTION TO EXISTING WATERMAIN TO BE INCLUDED IN THE COST FOR THE WATERMAIN INSTALLATION. THIS COST INCLUDES REINSTATEMENT OF ROAD CUTS TO CITY STANDARDS.
- 4.10 ALL WATERMAIN CROSSINGS TO BE COMPLETED AS PER CITY OF OTTAWA STANDARDS W25 AND W25.2

4.0 WATER

- 4.1 ALL WATERMANS 100mmØ OR GREATER TO BE PVC DR 18, LESS THAN 100mmØ TO BE COPPER OR APPROVED EQUAL WITH MINIMUM COVER OF 2.4m AND INSTALLED PER CITY OF OTTAWA STANDARDS. ALL DOMESTIC WATER SERVICES ARE TO BE 25mmØ.
- 4.2 THRUST BLOCKS TO BE INSTALLED AT ALL BENDS, TEES, AND CAPS ALL AS PER OPSD 1103.01 AND 1103.02.
- 4.3 CONTRACTOR TO CONDUCT PRESSURE AND LEAKAGE TESTING OF ALL WATERMANS AND DISINFECT AND CHLORINATE ALL WATERMANS TO THE SATISFACTION OF M.O.E. AND THE CITY OF OTTAWA.
- 4.4 TRACER WIRE TO BE INSTALLED ALONG THE FULL LENGTH OF WATERMAIN AND ATTACHED TO EACH MAIN STOP AS PER CITY OF OTTAWA STANDARDS.
- 4.5 ALL COMPONENTS OF THE WATER DISTRIBUTION SYSTEM SHALL BE CATHODICALLY PROTECTED AS PER CITY OF OTTAWA STANDARDS.
- 4.6 ALL VALVES & VALVE BOXES AND CHAMBERS, HYDRANTS, AND HYDRANT VALVES AND ASSEMBLIES SHALL BE INSTALLED AS PER CITY OF OTTAWA STANDARDS.
- 4.7 ANY WATERMAIN WITH LESS THAN 2.4m COVER REQUIRES THERMAL INSULATION AS PER CITY OF OTTAWA STANDARD W22, OR AS APPROVED BY THE ENGINEER.
- 4.8 CONTRACTOR IS RESPONSIBLE FOR ACQUIRING THE WATER PERMIT FROM THE CITY OF OTTAWA AND PAYMENT OF ANY FEES ASSOCIATED WITH SECURING THE WATER PERMIT. OWNER IS RESPONSIBLE FOR REIMBURSING THE CONTRACTOR FOR THE ACTUAL COST OF ACQUIRING THE WATER PERMIT.
- 4.9 CONNECTION TO EXISTING WATERMAIN TO BE INCLUDED IN THE COST FOR THE WATERMAIN INSTALLATION. THIS COST INCLUDES REINSTATEMENT OF ROAD CUTS TO CITY STANDARDS.
- 4.10 ALL WATERMAIN CROSSINGS TO BE COMPLETED AS PER CITY OF OTTAWA STANDARDS W25 AND W25.2

5.0 PARKING LOT AND WORK IN PUBLIC RIGHTS OF WAY

- 5.1 CONTRACTOR TO REINSTATE ROAD CUTS PER CITY OF OTTAWA STANDARD R-10.
- 5.2 THE CONTRACTOR SHALL PREPARE A TRAFFIC MANAGEMENT PLAN FOR REVIEW AND APPROVAL BY THE CITY OF OTTAWA. CONTRACTOR TO MAINTAIN TRAFFIC FLOW DURING THE ENTIRE CONSTRUCTION PERIOD. MAINTENANCE OF ROAD CUTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. PROVISION OF FLAGMEN, DETOURS AS NECESSARY, BARRICADES AND SIGNS TO THE FULL SATISFACTION OF THE ENGINEER AND ROAD AUTHORITY SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
- 5.3 CONTRACTOR TO PREPARE SUBGRADE, INCLUDING PROFILING, TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER PRIOR TO THE COMMENCEMENT OF PLACEMENT OF GRANULAR B MATERIAL.
- 5.4 FILL TO BE PLACED AND COMPACTED PER THE GEOTECHNICAL REPORT REQUIREMENTS.
- 5.5 CONTRACTOR TO SUPPLY, PLACE AND COMPACT GRANULAR B MATERIAL IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER. CONTRACTOR TO PROVIDE ENGINEER WITH SAMPLES OF GRANULAR B MATERIAL FOR TESTING AND CERTIFICATION FROM THE GEOTECHNICAL ENGINEER THAT THE MATERIAL MEETS THE GRADATION REQUIREMENTS SPECIFIED IN THE GEOTECHNICAL REPORT.
- 5.6 GRANULAR A MATERIAL TO BE PLACED ONLY UPON APPROVAL BY THE GEOTECHNICAL ENGINEER OF GRANULAR B PLACEMENT.
- 5.7 ASPHALT MATERIAL TO BE PLACED ONLY UPON APPROVAL BY THE GEOTECHNICAL ENGINEER OF GRANULAR A PLACEMENT.
- 5.8 CONTRACTOR TO SUPPLY, PLACE AND COMPACT ASPHALT MATERIAL IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER. CONTRACTOR TO PROVIDE ENGINEER WITH SAMPLES OF ASPHALT MATERIAL FOR TESTING AND CERTIFICATION FROM THE GEOTECHNICAL ENGINEER THAT THE MATERIAL MEETS THE REQUIREMENTS SPECIFIED IN THE GEOTECHNICAL REPORT.
- 5.9 CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING LINE AND GRADE IN ACCORDANCE WITH THE PLANS, AND FOR PROVIDING THE ENGINEER WITH VERIFICATION PRIOR TO PLACEMENT.
- 5.10 DITCHES AND CULVERTS DISTURBED DURING ARE TO BE REINSTATED TO THEIR ORIGINAL CONDITION AND FLOWLINE GRADES.
- 5.11 PAVEMENT STRUCTURE (MATERIAL TYPES AND THICKNESSES) FOR HEAVY DUTY AND LIGHT DUTY AREAS TO BE AS SPECIFIED IN THE GEOTECHNICAL REPORT AND SHOWN ON THE PLANS.

STM STRUCTURE TABLE

NAME	RIM ELEV.	INVERT IN	INVERT IN AS-BUILT	INVERT OUT	INVERT OUT AS-BUILT	DESCRIPTION
CBMH10	104.65	SW102.170 SE102.170		SE102.045		1200Ø OPSD 701.010
CBMH11	104.65	SE102.270		NE102.150		1200Ø OPSD 701.010
MH1	104.96	S102.650		NE102.400		1200Ø OPSD 701.010
MH2	105.01	SW102.276 SE102.800 NE102.327		NW102.127		1200Ø OPSD 701.010
MH3	104.98	SE101.750 SW101.890		NE101.690		1200Ø OPSD 701.010
MH4	104.75	NW101.919		NE101.936		1200Ø OPSD 701.010
MH5	104.70	SW101.616		NW101.450		1200Ø OPSD 701.010
MH6	104.84	SE101.324		NW100.989		1200Ø OPSD 701.010
MH7	104.65	SE100.568 SW100.568		NE100.568		1200Ø OPSD 701.010
MH8	104.68	NW102.000 SE103.029		NE101.900		1200Ø OPSD 701.010
MH12	104.75	SE102.370		NE102.270		1200Ø OPSD 701.010
MH13	104.94	NE102.507	SW102.382			1200Ø OPSD 701.010
MH14	104.89	SW102.600		SE102.500		1200Ø OPSD 701.010
XMH100	106.17			NE101.170		1200Ø OPSD 701.010
XMH101	106.78	SW100.925		NE100.650		1200Ø OPSD 701.010
XMH102	105.82	SW100.490				1200Ø OPSD 701.010

PAVEMENT STRUCTURE **

CAR ONLY PARKING AREAS:
50mm WEAR COURSE - HL-3 OR SUPERPAVE 12.5 ASPHALTIC CONCRETE
150mm BASE - OPSS GRANULAR GRANULAR "A" CRUSHED STONE
300mm SUBBASE - OPSS GRANULAR "B" TYPE I OR II
SUBGRADE - IN SITU SOIL OR OPSS GRANULAR "B" TYPE I OR II
MATERIAL PLACED OVER IN SITU SOIL.

HEAVY TRUCK PARKING AREAS AND ACCESS LANES:
40mm WEAR COURSE - HL-3 OR SUPERPAVE 12.5 ASPHALTIC CONCRETE
50mm BINDER COURSE - HL-8 OR SUPERPAVE 19.0 ASPHALTIC CONCRETE
150mm BASE COURSE - OPSS GRANULAR "A" CRUSHED STONE
450mm SUBBASE - OPSS GRANULAR "B" TYPE II
SUBGRADE - IN SITU SOIL OR OPSS GRANULAR "B" TYPE I OR II
MATERIAL PLACED OVER IN SITU SOIL.

CROSSING SCHEDULE

1	450 mm Ø STM	0.230 m	CLEARANCE OVER	200 mm Ø SAN
2	300 mm Ø W/M	0.576 m	CLEARANCE OVER	450 mm Ø STM
3	300 mm Ø W/M	1.331 m	CLEARANCE OVER	200 mm Ø SAN
4	250 mm Ø W/M	0.345 m	CLEARANCE OVER	200 mm Ø SAN
5	200 mm Ø SAN	0.312 m	CLEARANCE OVER	450 mm Ø STM
6	250 mm Ø W/M	0.849 m	CLEARANCE OVER	450 mm Ø STM
7	250 mm Ø W/M	0.325 m	CLEARANCE OVER	450 mm Ø STM
8	200 mm Ø SAN	0.283 m	CLEARANCE OVER	450 mm Ø STM
9	250 mm Ø W/M	1.033 m	CLEARANCE OVER	200 mm Ø STM
10	250 mm Ø W/M	0.804 m	CLEARANCE OVER	200 mm Ø SAN
11	200 mm Ø STM	0.804 m	CLEARANCE OVER	200 mm Ø STM
12	450 mm Ø STM	0.324 m	CLEARANCE OVER	200 mm Ø SAN
13	450 mm Ø STM	0.317 m	CLEARANCE OVER	200 mm Ø SAN
14	250 mm Ø W/M	1.261 m	CLEARANCE OVER	200 mm Ø SAN
15	250 mm Ø W/M	0.305 m	CLEARANCE OVER	450 mm Ø STM
16	250 mm Ø W/M	0.698 m	CLEARANCE OVER	200 mm Ø SAN
17	200 mm Ø STM	1.429 m	CLEARANCE OVER	200 mm Ø SAN
18	200 mm Ø STM	0.369 m	CLEARANCE OVER	250 mm Ø W/M
19	250 mm Ø STM	2.044 m	CLEARANCE OVER	200 mm Ø SAN
20	100 mm Ø W/M	0.828 m	CLEARANCE OVER	200 mm Ø SAN
21	250 mm Ø STM	0.515 m	CLEARANCE OVER	100 mm Ø W/M
22	250 mm Ø STM	0.675 m	CLEARANCE OVER	200 mm Ø SAN
23	250 mm Ø STM	0.461 m	CLEARANCE OVER	450 mm Ø STM
24	200 mm Ø STM	1.185 m	CLEARANCE OVER	200 mm Ø SAN
25	200 mm Ø STM	0.369 m	CLEARANCE OVER	250 mm Ø W/M
26	200 mm Ø STM	1.344 m	CLEARANCE OVER	200 mm Ø SAN
27	200 mm Ø STM	0.532 m	CLEARANCE OVER	250 mm Ø W/M
28	100 mm Ø W/M	0.312 m	CLEARANCE OVER	200 mm Ø SAN
29	100 mm Ø W/M	0.339 m	CLEARANCE OVER	450 mm Ø STM
30	200 mm Ø STM	1.106 m	CLEARANCE OVER	200 mm Ø SAN
31	200 mm Ø STM	0.351 m	CLEARANCE OVER	250 mm Ø W/M
32	250 mm Ø W/M	0.750 m	CLEARANCE OVER	200 mm Ø SAN
33	250 mm Ø W/M	0.311 m	CLEARANCE OVER	200 mm Ø SAN
34	200 mm Ø STM	0.472 m	CLEARANCE OVER	200 mm Ø SAN
35	100 mm Ø W/M	0.305 m	CLEARANCE OVER	200 mm Ø SAN

SAN STRUCTURE TABLE

NAME	RIM ELEV.	INVERT IN	INVERT IN AS-BUILT	INVERT OUT	INVERT OUT AS-BUILT	DESCRIPTION
MH1A	105.17	SW101.908		NW101.848		1200Ø OPSD 701.010
MH2A	105.16	SW101.889		SE101.829		1200Ø OPSD 701.010
MH3A	104.93	SW100.841		NW100.781		1200Ø OPSD 701.010
MH4A	104.85	SE100.657 SW102.170		NW100.637		1200Ø OPSD 701.010
MH5A	104.69	SW100.391 SE100.541		NE100.391		1200Ø OPSD 701.010
MH6A	104.99	SE102.532		NE102.432		1200Ø OPSD 701.010
MH7A	104.79	NE102.570		SE102.510		1200Ø OPSD 701.010
MH8A	104.81	NW102.389		NE102.329		1200Ø OPSD 701.010
MH9A	104.97	NW102.518		SW102.458		1200Ø OPSD 701.010
MH10A	104.70	NE102.199		NW102.139		1200Ø OPSD 701.010
MH11A	104.88	SE101.974 NE102.015		NW101.954		1200Ø OPSD 701.010
MH12A	104.78	SE101.431		NE101.391		1200Ø OPSD 701.010
MH13A	104.80	SW101.236 SE101.276		NE101.216		1200Ø OPSD 701.010
MH14A	104.98	SW101.142 SE101.102		NW101.082		1200Ø OPSD 701.010
MH15A	104.99	NE102.410		NW102.356		1200Ø OPSD 701.010
MH16A	104.85	SW101.901		NW101.841		1200Ø OPSD 701.010
MH17A	105.01	SE102.326		SW102.268		1200Ø OPSD 701.010
MH18A	103.59	SW102.085 SE101.002		NE100.942		1200Ø OPSD 701.010
MH24A	103.67	SW101.349		NE101.319		1200Ø OPSD 701.010
MH25A	103.38	SE101.574 NW101.574		SW101.514		1200Ø OPSD 701.010
MH26A	103.59	SE102.081 NE101.383		NW101.323		1200Ø OPSD 701.010
XMH101A	100.82			NE100.600		1200Ø OPSD 701.010
XMH102A	100.45	SW100.230				1200Ø OPSD 701.010

WATERMAIN SCHEDULE

Station	Description	Finished	Top of	As Built
A 0+000.00	TEE 300mmx250mm	104.82	102.22	
0+005.45	11.25' BEND 250mm	104.79	102.22	
0+009.03	VB 250mm	104.85	102.45	
0+011.36	DMA	104.84	102.44	
0+013.81	V-BEND 250mm	104.84	102.44	
0+014.11	V-BEND 250mm	104.84	102.44	
B 0+017.21	TEE 250mm	104.84	103.00	
0+019.03	V-BEND 250mm	104.83	103.00	
0+019.33	V-BEND 250mm	104.88	102.28	
0+028.11	V-BEND 250mm	104.77	102.37	
C 0+028.71	V-BEND 250mm	104.77	102.37	
0+030.01	V-BEND 250mm	104.77	102.55	
0+041.21	V-BEND 250mm	104.75	102.55	
0+041.51	V-BEND 250mm	104.75	102.35	
0+048.17	45' BEND 250mm	104.70	102.30	
0+050.17	22.5' BEND 250mm	104.69	102.29	
0+064.35	22.5' BEND 250mm	104.80	102.40	
0+066.85	45' BEND 250mm	104.98	102.58	
D 0+069.10	TEE 250mm	105.12	102.72	
0+070.46	REDUCER 250mm-100mm	105.10	102.70	
0+076.57	SERVICE TEE	105.09	102.69	
0+081.25	SERVICE TEE	105.12	102.72	
0+084.86	SERVICE TEE	105.09	102.69	
0+089.54	SERVICE TEE	105.09	102.69	
E 0+114.90	TEE 100mm	105.09	102.69	
0+124.27	SERVICE TEE	105.12	102.72	
0+128.95	SERVICE TEE	105.18	102.78	
0+142				