

GENERAL NOTES:

1. AN REVISIONS TO THESE DRAWINGS MUST BE APPROVED BY THE DESIGN ENGINEER, WHO SHALL REVIEW ANY CHANGES WITH THE MUNICIPAL ENGINEER.
2. W.C.B. IS TO BE NOTIFIED PRIOR TO THE START OF CONSTRUCTION.
3. CONSTRUCTION MAY NOT COMMENCE PRIOR TO THE ISSUANCE OF FORM F1 TITLED "PERMISSION TO CONSTRUCT". 48 HOURS NOTICE IS TO BE GIVEN TO THE MUNICIPAL INSPECTOR PRIOR TO THE INITIAL CONSTRUCTION COMMENCEMENT. THE MUNICIPAL INSPECTOR IS TO BE NOTIFIED OF ANY START OF CONSTRUCTION WHERE THE WORK HAS BEEN STOPPED FOR 72 HOURS OR LONGER.
4. EXISTING UNDERGROUND UTILITIES ARE TO BE LOCATED PRIOR TO INSTALLING ANY NEW UNDERGROUND SERVICES. ANY DISCREPANCY IN ELEVATION OR LOCATION IS TO BE REFERRED TO THE DESIGN ENGINEER.
5. ADJECENT BUSINESSES AFFECTED BY THE PROPOSED CONSTRUCTION ARE TO BE NOTIFIED BY THE CONTRACTOR IN WRITING 48 HOURS PRIOR TO THE START OF CONSTRUCTION AND PROVIDED WITH THE CONTRACTORS PHONE NUMBER AND SCHEDULE.
6. THE DEVELOPER AND CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE REPAIR OF ANY DAMAGE CAUSE TO EXISTING STREETS OR SERVICES BY CONSTRUCTION EQUIPMENT AND/OR TRUCKS HAULING MATERIALS TO THE SITE. THIS WILL INCLUDE DAILY CLEANING OR SWEEPING EXISTING ROADS OF DIRT AND DEBRIS CAUSED BY CONSTRUCTION ACTIVITY.
7. TRAFFIC CONTROL IS TO BE MAINTAINED AT ALL TIMES WHEN WORKING ON MUNICIPAL RIGHT-OF-WAYS (SIGNS, BARRICADES, FLAGPERSONS). A HIGHWAY USE PERMIT MUST BE OBTAINED FROM THE CITY OF LANGLEY ENGINEERING DEPARTMENT PRIOR TO WORKS WITHIN THE MUNICIPAL RIGHT-OF-WAY.
8. CONSTRUCTION IN AND ABOUT A WATERCOURSE MUST RECEIVE PRIOR APPROVAL FROM THE PROVINCIAL MINISTRY OF ENVIRONMENT AND/OR THE FEDERAL DEPT. OF FISHERIES AND OCEANS, WHERE APPLICABLE.
9. PERMANENT STREET, TRAFFIC AND ADVISORY SIGNS, PAVEMENT MARKINGS AND GUARDRAILS REQUIRED BUT NOT NECESSARILY SHOWN ON THE DRAWINGS, SHALL BE INSTALLED BY THE CITY OF LANGLEY AND ALL COSTS CHARGED TO DEVELOPER.
10. LEGAL SURVEY POSTS MONUMENTS ARE TO BE REPLACED IF DESTROYED OR DAMAGED DURING CONSTRUCTION; THIS WORK IS TO BE UNDERTAKEN BY A B.C. LAND SURVEYOR.
11. LANGLEY'S SURVEY MONUMENTS ARE TO BE PROTECTED. SHOULD THEY REQUIRE RAISING OR RELOCATING, THE CONTRACTOR MUST NOTIFY THE MUNICIPAL INSPECTOR AT LEAST 72 HOURS IN ADVANCE OF SCHEDULING WORK AFFECTING THEM.
12. MATERIAL SUPPLIED AND CONSTRUCTION PERFORMED ARE TO BE IN ACCORDANCE WITH THE CITY OF LANGLEY SUBDIVISION AND DEVELOPMENT CONTROL BYLAW AND MMS. SPECIFICATIONS AND APPLICABLE DESIGN CRITERIA AND SPECIFICATION STANDARD DRAWINGS.
13. ONLY THOSE MATERIALS SPECIFIED WITHIN THE MASTER MUNICIPAL SPECIFICATIONS MAY BE USED IN THE WORKS.
14. APPROVED PIT RUN MUST BE USED FOR BACKFILL IN TRENCHES WHEN INSIDE ROAD LIMITS, APPROVED NATIVE MATERIAL MAY BE USED AS DIRECTED BY THE ENGINEER.
15. WHERE UTILITY OR SERVICE CROSSINGS ARE REQUIRED ACROSS EXISTING PAVEMENT, AUGURING AND JACKING ARE REQUIRED UNLESS THE DEVELOPER'S CONTRACTOR RECEIVES APPROVAL FROM THE MUNICIPAL ENGINEER FRO OPEN CUT OPERATIONS. ALL EXISTING PAVEMENT, BOULEVARDS, DRIVEWAYS, ETC. WHICH ARE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION WHERE NO IMPROVEMENT IS OTHERWISE PROPOSED UNDER THIS CONTRACT. EXISTING DRIVEWAYS SHALL BE SHAPED ACROSS THE WIDTH OF BOULEVARD TO FORM A SMOOTH TRANSITION WITH NEW PAVEMENT. THE FINISHED PAVEMENT SURFACE OVER TRENCH EXCAVATIONS SHALL BLEND IN SMOOTHLY WITH EXISTING PAVEMENT.
16. WHERE INFILLING OF EXISTING DITCHES, ETC. IS REQUIRED OR PROPOSED, AND WHERE SERVICES ARE CONSTRUCTED IN FILL SECTIONS, THE FILL MATERIAL IS TO BE APPROVED GRANULAR MATERIAL. PLACED IN LIFTS NOT EXCEEDING 300mm AND COMPACTED TO 95% MODIFIED PROCTOR DENSITY.
17. FIGURED DIMENSIONS SHALL GOVERN OVER SCALED DIMENSIONS.

LOT GRADING:

1. GRADING IS TO MEET EXISTING GROUND ELEVATIONS AT PROPERTY LINES COMMON WITH ADJOINING PROPERTIES UNLESS OTHERWISE NOTED. WHERE GRADING DOES NOT MEET, APPROPRIATE PROTECTION IS REQUIRED.
2. AREAS MARKED WITH THE "FILL" SYMBOL/SHADING ARE SUBJECT TO BUILDING DEPARTMENT REVIEW AND MAY REQUIRE ENGINEERED FOUNDATIONS/FOOTINGS DESIGN BY A QUALIFIED GEOTECHNICAL ENGINEER.
3. FINISHED FLOOR ELEVATIONS (F.F.) FOR LOTS ARE SET IN ACCORDANCE WITH THE SUBDIVISION AND DEVELOPMENT CONTROL BYLAW.
4. THE CONTRACTOR IS RESPONSIBLE FOR FINAL LOT GRADING WHICH MAY INCLUDE CONSTRUCTION OF INDIVIDUAL SWALES ON EACH LOT AS NOTED. ALL DEVELOPERS SWALES ARE TO BE RESTORED TO LINE AND GRADE AND SHALL BE-SODDED IF REQUIRED.
5. F.F. (FINISHED FLOOR ELEVATION) MEANS THE ELEVATION OF THE LOWEST FLOOR SLAB IN A BUILDING.
6. ALL F.F.'S SHOWN HAVE BEEN ESTABLISHED A MIN. OF 0.6m ABOVE THE 100YR. HYDRAULIC GRADE LINE.
7. ALL CATCH BASINS TO BE 600mm DIAMETER.
8. ALL LAWN BASINS TO BE 300mm DIAMETER, UNLESS SHOWN OTHERWISE. LEADS TO HAVE A 1.00% MIN. GRADE.
9. DEVELOPER'S CONTRACTOR IS RESPONSIBLE FOR:
 - a.) GRADING OF LOTS TO WITHIN 100mm OF DESIGN ELEVATIONS, AND FOR PROPOSED 300mmØ LAWN BASINS AND THEIR LEADS, AND SWALES IN EASEMENTS ON PRIVATE LOTS WHERE SHOWN OR UNLESS NOTED OTHERWISE.
 - b.) GRADING OF GREENWAYS TO WITHIN 100mm OF DESIGN ELEVATIONS AND DRAINAGE OF GREENWAYS INCLUDING SWALES, BERMS, CULVERTS, HEADWALLS, ETC.
10. ALL ROOF LEADERS TO DISCHARGE TO STORM SEWER VIA BUILDING SUMP.
11. TOE OF FILL OR CUT ON THE PROPOSED LOTS SHALL NOT EXTEND ONTO ADJACENT PRIVATE LANDS UNLESS SHOWN OTHERWISE AND THE SUBJECT AREA IS WITHIN WORKING EASEMENT.
12. LOT FILL MATERIAL UNDERNEATH THE 300mm THICK LAYER OF TOPSOIL, WHERE REQUIRED, TO BE NATIVE OR IMPORTED MATERIAL APPROVED BY THE ENGINEER-OF-RECORD DURING CONSTRUCTION AND COMPACTED TO 90% MPD.
13. ALL SWALES TO BE GRADED AT MINIMUM 1.0%.
14. SURPLUS EXCAVATED MATERIAL FROM EXCAVATIONS SHALL BE DISPOSED OF OFFSITE BY CONTRACTOR. SEE C.O.L. ENGINEERING DEPT. FOR PERMIT.
15. DEVELOPER TO CONSULT SOILS CONSULTING FIRM FOR FOUNDATION RECOMMENDATIONS.
16. CONTRACTOR IS RESPONSIBLE FOR INSTALLING CONCRETE PULL BOXES AND CAST IRON COVERS (AS PER LANGLEY STANDARDS) AS PROTECTION FOR SANITARY I.C. AND/OR WATER CURB STOPS WHERE LOCATED IN PAVEMENT.

SANITARY SEWER

1. SANITARY SEWER MATERIALS SHALL CONFORM TO THE MASTER MUNICIPAL SPECIFICATIONS (SECTION 02731)
2. FOR MANHOLE DETAILS SEE MMCD STANDARD DETAIL DRAWINGS S1, S5.
3. FOR TYPICAL DETAILS OF ALL SEWER CONNECTIONS SEE MMCD STANDARD DETAIL DWG. S7.
4. FOR TYPICAL TRENCH SECTIONS DETAILS SEE MMCD STANDARD DETAIL DRAWING G4
5. MANHOLE DIAMETERS SHALL CONFORM TO STANDARD DETAIL DRAWING S1
6. NEW SEWER LINES TIED INTO EXISTING LINES MUST BE PLUGGED UNTIL THEY ARE TESTED AND FLUSHED.
7. SERVICE CONNECTIONS SHALL BE MADE TO THE MAIN WHEREVER POSSIBLE. SHOULD A CONNECTION HAVE TO BE MADE TO A MANHOLE, IT SHALL BE AT A HIGHER ELEVATION THAN THE CROWN OF THE HIGHEST SEWER MAIN ENTERING THERE MANHOLE.
8. TIE-INS OF PROPOSED MAINS TO EXISTING SANITARY SEWER MAINS ARE TO BE PERFORMED BY THE CITY OF LANGLEY UNLESS OTHERWISE DIRECTED. TESTING (AIR TEST & VIDEO INSPECTION) IS THE RESPONSIBILITY OF THE CONTRACTOR
9. WHERE APPLICABLE ALL SANITARY SEWER CONNECTIONS ARE TO BE MARKED BY ALL OF THE FOLLOWING – 2mm DEEP SAW CUT ON CURB, 50mm x 100mm STAKE (PAINTED RED) AT END OF PIPE, AND THE END OF THE PIPE TO BE PAINTED RED.

ROAD WORKS

1. THE CONTRACTOR SHALL ENGAGE A GEOTECHNICAL ENGINEER TO PERFORM IN-PLACE TESTING DURING THE PREPARATION OF THE SUBGRADE AND CONSTRUCTION OF THE ROAD AND PARKING STRUCTURE TO VERIFY THE ADEQUACY OF THE PROPOSED AND EXISTING ROAD STRUCTURE AND SUBRADE. SELECTION OF THE SOILS CONSULTING FIRM MUST BE THE ACCEPTANCE OF THE ENGINEER.
2. SEE GRADING & WATER DRAWING FOR TYPICAL PAVEMENT CROSS-SECTION.
3. CHANGES OF GRADE ARE TO BE FORMED BY SMOOTH VERTICAL CURVES.
4. LOOSE OR ORGANIC MATERIAL IS TO BE EXCAVATED FROM ROADWAY.
5. SUB-BASE AND GRANULAR BASE MATERIALS SHALL BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY.
6. THE ROAD BASE SHALL EXTEND A MINIMUM OF 0.3m BEYOND THE SIDEWALK AND/OR CURB & GUTTER.
7. CATCH BASIN ELEVATIONS GIVEN ARE FOR TOP OF RIM.
8. EXISTING VALVE BOXES, MANHOLES, ETC. WITHIN THE ROAD R/W ARE TO BE ADJUSTED TO FINISHED GRADE.
9. PLACEMENT OF ASPHALTIC CONCRETE AND P.C. CONCRETE SHALL BE UNDERTAKEN ONLY WHEN WEATHER CONDITIONS ARE IN CONFORMANCE WITH CITY OF LANGLEY SPECIFICATIONS.
10. UNLESS OTHERWISE APPROVED, ASPHALTIC CONCRETE SHALL BE LAID IN 2 LIFTS.
11. TIE-INS TO EXISTING PAVEMENT SHALL BE MADE BY CUTTING BACK THE EXISTING PAVEMENT TO SOUND MATERIAL AS NECESSARY TO PRODUCE A NEAT, VERTICAL FACE. PRIOR TO PLACING ASPHALTIC CONCRETE, EXPOSED PAVEMENT FACES AND OTHER ABUTTING STRUCTURES SHALL BE TACK COATED WITH ASPHALT EMULSION.

WATER WORKS

1. FOR TYPICAL TRENCH SECTION DETAILS SEE MMCD STANDARD DETAIL DRAWING G4
2. WATERMAIN MATERIALS SHALL CONFORM TO THE MASTER MUNICIPAL SPECIFICATIONS, (SECTION 02666).
3. THE MINIMUM VERTICAL CLEARANCE OF WATERMANS FROM SANITARY AND STORM SEWERS SHALL BE 500mm; MINIMUM HORIZONTAL SEPARATION SHALL BE 3.0, WHERE THE SEPARATION IS LESS, THE WATERMAIN SHALL BE PROTECTED IN ACCORDANCE WITH THE MINISTRY OF HEALTH REGULATIONS.
4. MINIMUM GRADE ON WATERMAIN SHALL BE 0.10%
5. PIPE JOINTS SHALL NOT BE DEFLECTED MORE THAN 1/2 OF THE MANUFACTURER'S RECOMMENDED DEFLECTION.
6. TIE-INS OF PROPOSED MAINS TO EXISTING WATERMANS WILL BE PERFORMED BY THE CITY AT THE DEVELOPERS EXPENSE, UNLESS DIRECTED OTHERWISE.
7. MINIMUM COVER ON WATERMANS SHALL BE 1.2m.
8. WATER SERVICE CONNECTIONS SHALL BE SET SO THAT AN ADJUSTMENT OF 200mm ABOVE FINAL GRADE IS AVAILABLE BY THE TELESCOPING BURY-BOX, MINIMUM DEPTH 0.80m, MAXIMUM DEPTH 1.0m.
9. HYDRANTS SHALL BE SUPPLIED WITH THE CORRECT DEPTH OF BURY TO MEET FINAL BOULEVARD GRADES. FOR HYDRANT DETAILS, SEE MMCD STD. DETAIL DWG. W4.
10. FOR VALVE-BOX DETAILS AND VALVE INSTALLATION DETAILS SEE MMCD STANDARD DRAWING W3.
11. THRUST BLOCKS AS SHOWN ON MMCD STANDARD DRAWING W1 ARE TO BE LOCATED AT ALL FITTING LOCATIONS.
12. DURING CONSTRUCTION AND, AT ANY TIME PRIOR TO ACCEPTANCE OF WATERMANS BY THE CITY, THE DEVELOPER'S CONTRACTOR SHALL INSTALL 300mm x 300mm SQUARE 19mm SHEET OF PLYWOOD (PAINTED WHITE) OVER THE PUMPER NOZZLE OF EACH HYDRANT TO INDICATE THAT THE HYDRANT IS NOT IN SERVICE.
13. THE CONTRACTOR SHALL ENSURE THAT ALL SECTIONS OF LINES HAVE TEST POINTS AND TEMPORARY BLOW-OFFS SUITABLE TO ENSURE ADEQUATE PRESSURE TESTING, PERMITTED INTO DITCHES, STORM SEWERS OR WATERCOURSES.
14. TESTING AND CHLORINATION OF WATERMANS IS THE RESPONSIBILITY OF THE CONTRACTOR WITH INSPECTION AUTHORIZED BY THE DIRECTOR OF ENGINEERING.
15. SERVICE CONNECTION PIPE SHALL BE TYPE "K" COPPER SERVICE PIPE, EXCEPT AS ACCEPTED BY THE ENGINEER. THE TYPE OF CURB STOP AND BURY BOX SHOWN ON THE APPROVED DRAWING SHALL BE USED IN ALL CASES, UNLESS AN ALTERNATIVE IS ACCEPTED BY THE ENGINEER.

STORM SEWER

- 1.
2. STORM SEWER MATERIALS SHALL CONFORM TO THE MASTER MUNICIPAL SPECIFICATIONS (SECTION 02721).
3. FOR TYPICAL TRENCH SECTION DETAILS SEE MMCD STANDARD DETAIL DRAWING G4.
4. SILTATION CONTROLS TO THE ACCEPTANCE OF THE MUNICIPAL ENGINEER MUST BE USED AT ALL DRAINAGE OUTLETS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AS REQUIRED.
5. FOR TYPICAL CATCH BASIN DETAILS SEE MMCD STANDARD DETAIL DRAWING S11.
6. FOR TYP. DETAILS OF ALL SEWER CONNECTIONS SEE MMCD STANDARD DETAIL DRAWING S8.
7. ALL SINGLE CATCH BASIN LEADS ARE TO BE MINIMUM 150mm DIAMETER. ALL DOUBLE CATCH BASIN LEADS ARE TO BE A MINIMUM 200mm DIAMETER.
8. ALL STORM SEWER SERVICE CONNECTIONS ARE TO BE MINIMUM 100mm DIAMETER.
9. DIAMETER OF ALL STORM SEWER MANHOLES SHALL CONFORM TO THE MMCD. STANDARD DETAIL DRAWINGS S1 UNLESS OTHERWISE NOTED.
10. TIE-INS OF MAINS TO EXISTING STORM SEWER SYSTEM ARE TO BE PERFORMED BY THE CITY OF LANGLEY.
12. MANUFACTURED WYES ARE TO BE USED ON STORM PIPE UNDER 450mm DIAMETER OR APPROVED ALTERNATIVE
13. STORM SEWERS ARE TO BE CONSTRUCTED WITH SEALED JOINTS UNLESS OTHERWISE SPECIFIED ON THE DESIGN DRAWINGS.

WHERE APPLICABLE ALL STORM SEWER CONNECTIONS ARE TO BE MARKED BY ALL OF THE FOLLOWING – 2mm DEEP SAW CUT ON CURB, 50mm x 100mm STAKE (PAINTED GREEN) AT END OF PIPE, AND THE END OF THE PIPE TO BE PAINTED GREEN.

ALL STORM SEWER SHALL BE VIDEO INSPECTED.

CONSULTANT



CONSULTANT SEAL

CONTRACTOR SHALL VERIFY ALL DIMENSIONS ON SITE. DRAWINGS SHALL NOT BE SCALED.

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PROJECT
LANGLEY BYPASS

20670 LANGLEY BYPASS, LANGLEY, BC

DRAWING

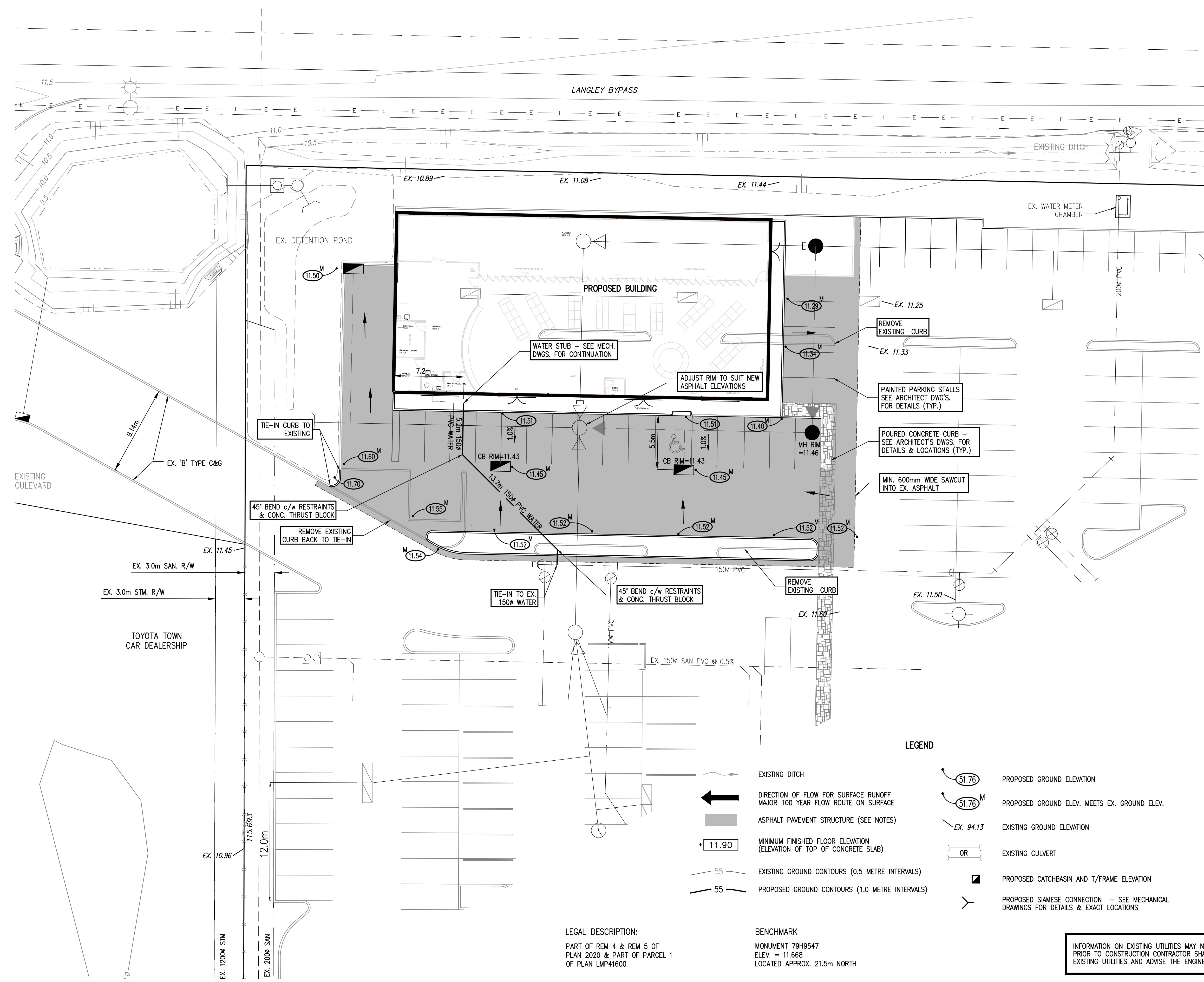
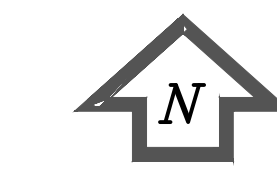
NOTES

PROJECT NUMBER DRAWING NUMBER

1889 C1

SCALE 1:200

DATE 2017-03-17 REVISION 0



- NOTES: (SEE DRAWING C1 FOR ADDITIONAL NOTES)**
1. WATER CONNECTIONS SHALL BE CLASS 200 PIPE CONFORMING TO AWWA C900 AND CERTIFIED TO CSA B 137.3 WITH APPROPRIATE VALVES, STOPS, FITTINGS AND SADDLES.
 2. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH MASTER MUNICIPAL CONSTRUCTION DOCUMENTS AND CITY OF LANGLEY'S SUBDIVISION AND DEVELOPMENT CONTROL BYLAW.
 3. MINIMUM COVER OVER WATERMANS SHALL BE 1.20m
 4. PIPE BEDDING SHALL BE GRANULAR PIPE BEDDING AND SURROUND MATERIAL CONFORMING TO MMCD CLAUSE 2.7, SECTION 02226.
 5. PIPE BACKFILL SHALL BE 100mm PIT RUN GRAVEL MATERIAL CONFORMING TO MMCD CLAUSE 2.3, SECTION 02226.
 6. WHEN THE WATERMAIN CROSSES A STORM OR SANITARY SEWER, WITH VERTICAL SEPARATION OF LESS THAN 0.50m, THE WATERMAIN MUST BE PLACED IN SUCH A MANNER TO ACCOMMODATE THE CROSSING AT MIDPOINT BETWEEN THE ENDS OF A FULL LENGTH PIPE. IF THIS IS NOT ATTAINABLE, THE WATERMAIN JOINTS SHALL BE WRAPPED IN HEAT SHRINK PLASTIC TO AWWA C209, TO MINIMUM 3.0m EACH SIDE OF THE PROPOSED CROSSING.
 7. ALL WATER FITTINGS AND JOINTS TO BE MECHANICALLY RESTRAINED.
 8. ALL HYDRANTS SHALL BE EQUIPPED WITH A 100mm QUICK CONNECT "STORZ" NOZZLE AND CAP AT PUMPER OUTLET.
 9. CERTAINTIED FITTINGS SHALL BE USED AT ALL VERTICAL & HORIZONTAL DEFLECTIONS OF WATERMANS WHERE STANDARD FITTINGS WILL BE NOT BE USED.
 10. GRADING "BUBBLES" SHOWN ON PARKING SURFACE ARE FOR ACTUAL FINISHED ASPHALT ELEVATIONS.
 11. CONSTRUCTION OF FUTURE OFFSITE MEDIAN MAY REQUIRE CONTRACTOR COORDINATION.
 12. PAVEMENT STRUCTURE ONSITE TO BE AS FOLLOWS:
 MIN. 75mm ASPHALT (IN TWO LIFTS)
 - 35mm CL A MIX (13mm)
 - 40mm CL B MIX (25mm)
 MIN. 100mm CRUSHED GRAVEL BASE (<19mm)
 MIN. 200mm PITRUN SUB-BASE (<100mm)
 APPROVED SUBGRADE & ALL BASE MATERIALS TO BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY)

- TESTING**
1. ALL TESTING TO BE PERFORMED BY A CSA OR CCIL (CANADIAN CERTIFIED TESTING LABORATORIES) CERTIFIED LABORATORY.
 2. FREQUENCY OF DENSITY TESTS FOR EXCAVATING, TRENCHING AND BACKFILLING SHALL BE ONE TEST PER 50 LINEAL METRES OR TRENCH PER METRE OF DEPTH. MATERIAL TO BE COMPACTED IN 300mm LIFTS.
 3. FREQUENCY OF DENSITY TESTS FOR ROADWAY EXCAVATION, EMBANKMENT (SUB-GRADE FILL) AND COMPACTION SHALL BE ONE TEST PER 250m² PER 300mm LIFT.
 4. FREQUENCY OF DENSITY TESTS FOR GRANULAR BASE AND SUB-BASE SHALL BE ONE TEST PER 30 LINEAL METRES OF LANE WIDTH STAGGERED EACH SIDE OF CENTRELINE PER 150mm LIFT OR OF SPECIFIED THICKNESS.
 5. FREQUENCY OF DENSITY TESTS FOR SIDEWALK BASE SHALL BE ONE TEST PER 30 LINEAL METRES WITHIN SIDEWALK AND DRIVEWAY AREA.
 6. FREQUENCY OF DENSITY TESTS FOR CURB BASE SHALL BE ONE TEST PER 100 LINEAL METRES.
 7. FREQUENCY OF MARSHALL TESTS FOR HOT-MIX ASPHALT CONCRETE PAVING SHALL BE ONE TEST PER 500 TONNES OF MIX PLACED OR ONE TEST FOR EACH TYPE OF ASPHALT MIX, MINIMUM ONE PER DAY.
 8. FOR STREET PAVING, CORE LOCATIONS WILL BE SELECTED FOR EACH PASS OF THE PAVING MACHINE AS FOLLOWS:
 8.1. ACROSS THE WIDTH, CORE LOCATIONS WILL BE SELECTED RANDOMLY FROM ONE-SIXTH INCREMENTS.
 8.2. ALONG THE LENGTH, CORE LOCATIONS WILL HAVE A RANDOMLY SELECTED START WITH CORES AT A SPACING OF APPROXIMATELY, BUT NOT TO EXCEED 30 METRES.
 8.3. FOR OTHER PAVING OPERATIONS, A MINIMUM OF ONE CORE FOR EVERY 250 SQUARE METRES OF ASPHALT MIX PLACED.
 9. FREQUENCY OF PLASTIC CONCRETE TESTS FOR SIDEWALK SHALL BE ONE TEST PER 150 LINEAL METRES OR A MINIMUM OF ONE PER DAY.
 10. FREQUENCY OF PLASTIC CONCRETE TESTS FOR CURB AND GUTTER SHALL BE ONE TEST PER 300 LINEAL METRES OF A MINIMUM OF ONE PER DAY.

- LEGEND**
- EXISTING DITCH
 - DIRECTION OF FLOW FOR SURFACE RUNOFF MAJOR 100 YEAR FLOW ROUTE ON SURFACE
 - ASPHALT PAVEMENT STRUCTURE (SEE NOTES)
 - MINIMUM FINISHED FLOOR ELEVATION (ELEVATION OF TOP OF CONCRETE SLAB)
 - 55 EXISTING GROUND CONTOURS (0.5 METRE INTERVALS)
 - 55 PROPOSED GROUND CONTOURS (1.0 METRE INTERVALS)
 - 51.76 PROPOSED GROUND ELEVATION
 - 51.76 M PROPOSED GROUND ELEV. MEETS EX. GROUND ELEV.
 - EX. 94.13 EXISTING GROUND ELEVATION
 - OR EXISTING CULVERT
 - PROPOSED CATCHBASIN AND T/FRAME ELEVATION
 - PROPOSED SIAMESE CONNECTION - SEE MECHANICAL DRAWINGS FOR DETAILS & EXACT LOCATIONS

LEGAL DESCRIPTION:
PART OF REM 4 & REM 5 OF PLAN 2020 & PART OF PARCEL 1 OF PLAN LMP41600

BENCHMARK:
MONUMENT 79H9547
ELEV. = 11.668
LOCATED APPROX. 21.5m NORTH

INFORMATION ON EXISTING UTILITIES MAY NOT BE COMPLETE OR ACCURATE. PRIOR TO CONSTRUCTION CONTRACTOR SHALL EXPOSE LOCATIONS OF ALL EXISTING UTILITIES AND ADVISE THE ENGINEER OF POTENTIAL CONFLICTS.

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CONTRACTOR SHALL VERIFY ALL DIMENSIONS ON SITE. DRAWINGS SHALL NOT BE SCALED.

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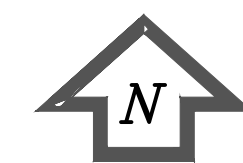
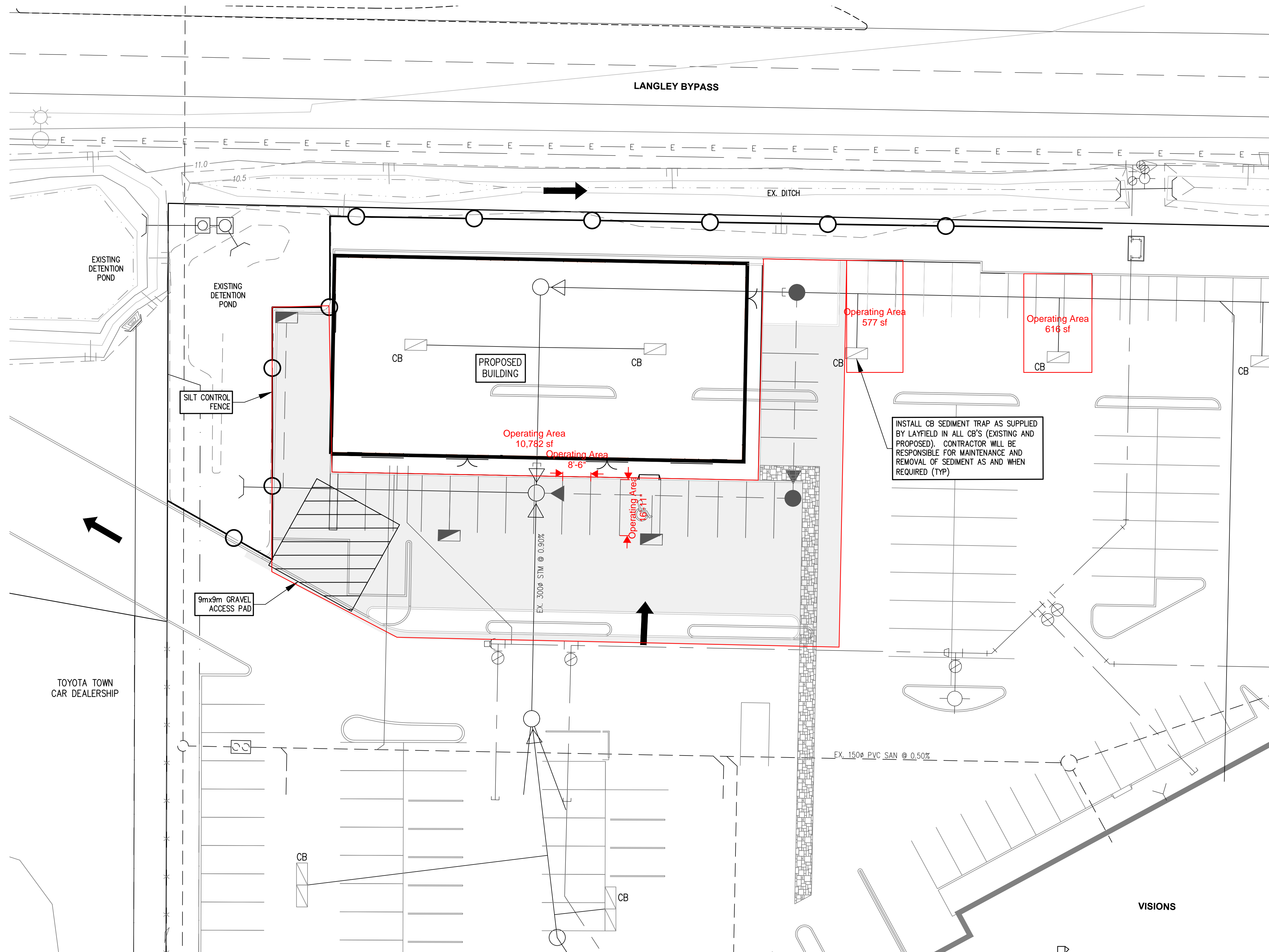
PROJECT
LANGLEY BYPASS
20670 LANGLEY BYPASS, LANGLEY, BC

DRAWING
GRADING & WATER

PROJECT NUMBER DRAWING NUMBER
1889 C3
SCALE: 1:200
DATE: 2017-03-17 REVISION: 0

STORMWATER MANAGEMENT PLAN

REVISION
MARCH 29, 2017 - BP ISSUE



- LEGEND**
- EXISTING DITCH
 - DIRECTION OF FLOW FOR SURFACE RUNOFF AND MAJOR 100 YEAR FLOW ROUTE ON SURFACE
 - 55 EXISTING GROUND CONTOURS
 - EXISTING CULVERT
 - PROPOSED CULVERT
 - SILTATION CONTROL FENCE

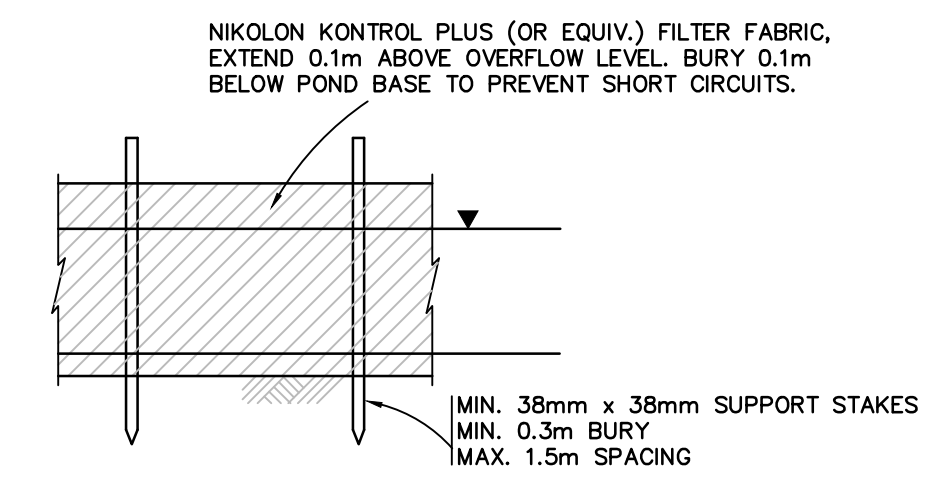
SEDIMENT CONTROL NOTES:

1. DEVELOPER'S CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE SITE SILTATION CONTROL AS NECESSARY TO PREVENT THE RELEASE OF SILT LADEN WATERS FROM ENTERING ANY STORM SEWER AND DITCH SYSTEM DURING CONSTRUCTION.
2. DEVELOPER'S CONTRACTOR TO INSTALL TEMPORARY SITE SILTATION CONTROL TRAPS AND FENCES AT EACH CATCHBASIN AND LAWN DRAIN WHICH ACCEPTS ANY SILT LADEN WATERS.
3. DEVELOPER'S CONTRACTOR TO MAINTAIN SITE SILTATION CONTROL TRAPS AS NECESSARY TO ENSURE PROPER OPERATION UNTIL ALL CONSTRUCTION IS COMPLETED. AT TIME OF FINAL INSPECTION, CONTRACTOR TO CAP PIPE LEADS TO CATCHBASINS AND INFILL TRAPS, SWALES AND TO INSTALL ASPHALT CATCH BASIN SEDIMENT TRAPS.
4. **GRAVEL PARKING PAD**
VEHICULAR AND DELIVERY ACCESS TO THE LOT MUST BE MADE VIA A GRAVEL PARKING PAD. THIS GRAVEL PARKING PAD SHOULD BE CONSTRUCTED BY REMOVING OVERBURDEN, AND REPLACING IT WITH MINIMUM 150mm LAYER OF CRUSHED 19mm DRAIN ROCK. THIS WILL GREATLY REDUCE THE AMOUNT OF SEDIMENT TRACKED ONTO THE ROAD BY VEHICLES. THIS PAD AREA MUST BE MAINTAINED SO THAT NO SEDIMENT IS TRANSPORTED FROM THE SITE ON TO THE ROADWAY.
5. ALL CONSTRUCTION & SILT MAINTENANCE TO CONFORM TO MOELP REQUIREMENTS FOR THIS PROJECT.
6. FILTER FABRIC FOR CONSTRUCTION OF SILT FENCE WAS NICOLON "KONTROL PLUS" OR EQUIVALENT.
7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONSTRUCT AND MAINTAIN THE SILTATION AND EROSION CONTROL WORKS DURING SITE CONSTRUCTION.
8. ALL SILT CONTROL WORKS TO BE CONSTRUCTED PRIOR TO COMMENCEMENT OF FOUNDATION EXCAVATION AND UNCAPPING OF THE STORM SERVICE CONNECTION CAP AND DISCHARGING INTO THE STORM SEWER SYSTEM.
9. THE ONLY ACCESS TO THE SITE TO BE VIA THE SITE ACCESS PAD. ANY SILTATIOUS OR OTHER DELETERIOUS MATERIALS DEPOSITED ON THE ROADS MUST BE CLEANED UP IMMEDIATELY. GRANULAR MATERIAL AT CURB OR SIDEWALK SHOULD BE PROPERLY COMPACTED TO A POINT AT LEAST LEVEL WITH THE TOP EDGE OF THE CONCRETE IN ORDER TO PROVIDE ADEQUATE SUPPORT FOR THE CURB OR SIDEWALK.
10. NO SILT LADEN WATER FROM EXCAVATIONS SHALL BE PUMPED OUT OR OTHERWISE DIRECTLY DISCHARGED TO A STORM SEWER SYSTEM THUS BYPASSING THE SEDIMENT CONTROL FACILITY(S).
9. SEDIMENT TRAP TO REMAIN IN OPERATION UNTIL THE FOUNDATIONS ARE BACKFILLED AND STOCKPILED EXCAVATED MATERIAL IS DISPOSED OF OFFSITE OR ROUGH GRADED ON THE SITE.
10. ROAD MAINTENANCE - EACH CONTRACTOR MUST MAKE EVERY EFFORT TO MINIMIZE THE AMOUNT OF SOIL TRANSPORTED FROM THE BUILDING SITE ONTO THE ROADWAY. THIS IS PARTICULARLY IMPORTANT WHEN HEAVY MACHINERY, DUMP TRUCKS AND CONCRETE TRUCKS ARE ACCESSING THE SITE. THE PAVED ROAD SURFACE MUST BE REGULARLY CLEANED OF ACCUMULATIONS OF SOIL BY THE BUILDER. NO SOIL, SAND OR OTHER MATERIAL WITH A HIGH SEDIMENT CONTENT SHALL BE DEPOSITED OR PILED OUTSIDE OF THE PROPERTY BOUNDARIES, PARTICULARLY ON THE PAVED ROAD SURFACE. NO MATERIAL OF ANY TYPE IS TO BE DEPOSITED IN SUCH A WAY THAT IT INTERFERES WITH THE FLOW WATER ALONG THE CURBS OR INTO CATCH BASINS. ROADS SHOULD BE SWEEPED NOT WASHED WITH WATER DIRECTED TO STORM SEWER.

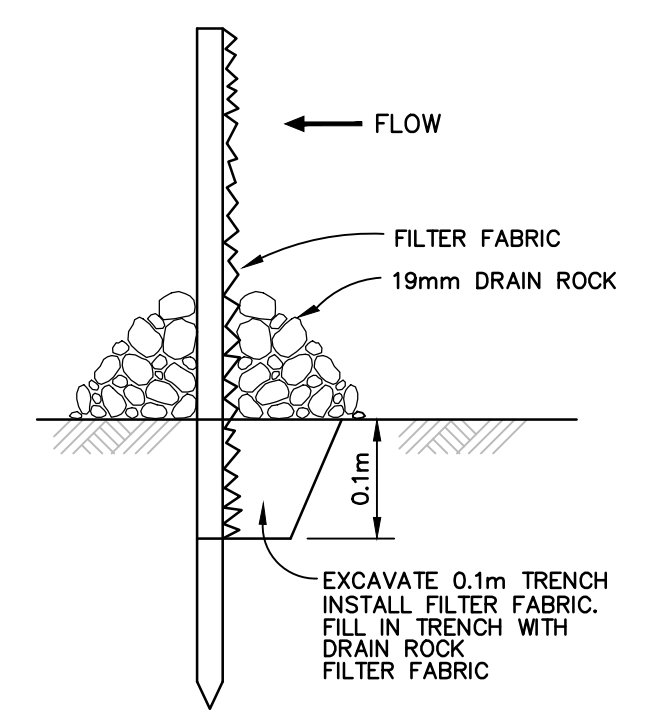
LEGAL DESCRIPTION:
PART OF REM 4 & REM 5 OF
PLAN 2020 & PART OF PARCEL 1
OF PLAN LMP41600

BENCHMARK
MONUMENT 79H9547
ELEV. = 11.668
LOCATED APPROX. 21.5m NORTH
OF NORTHWEST CORNER OF SITE

INFORMATION ON EXISTING UTILITIES ARE MAY NOT BE COMPLETE OR ACCURATE. PRIOR TO CONSTRUCTION CONTRACTOR SHALL EXPOSE LOCATIONS OF ALL EXISTING UTILITIES AND ADVISE THE ENGINEER OF POTENTIAL CONFLICTS.



SILT FENCE PROFILE @ STORM CONNECTION
N.T.S.



SILT FENCE SECTION
TO BE LOCATED AS DIRECTED BY THE ENGINEER OF RECORD. NO SILT LADEN WATER TO LEAVE SITE.
N.T.S.

CONSULTANT

CoreGroup
CONSULTANTS
LAND DEVELOPMENT SERVICES
320-8988 FRASERTON COURT
BURNABY, BC V5J 5H8
tel. (604)299 0605 fax. (604)299 0629

CONSULTANT SEAL

CONTRACTOR SHALL VERIFY ALL DIMENSIONS ON SITE. DRAWINGS SHALL NOT BE SCALED.

ARCHITECT

LOVICK SCOTT
ARCHITECTS

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DRAWN BY DB APPROVED CN

PROJECT
LANGLEY BYPASS
20670 LANGLEY BYPASS, LANGLEY, BC

DRAWING
**STORMWATER
MANAGEMENT PLAN**

PROJECT NUMBER DRAWING NUMBER
1889 **C4**
SCALE 1:200
DATE 2017-03-17 REVISION 0