

LEGEND

EXISTING

- EX TEST PIT & DRILL HOLE
- EX BENCHMARK & SURVEY MUSE
- EX IP's & JSM's
- EX LEGAL LINE
- EX LEGAL R.O.V.I. & EASEMENT
- EX SANITARY & MANHOLE
- EX CULVERT
- EX FIRE HYDRANT & VALVE ASSEMBLY
- EX WATERMAIN & VALVE
- EX BLOW-OFF ASSEMBLY
- EX CURB STOP
- EX ROAD & SIDEWALK
- EX ROAD SIGN(S)
- EX SHOULDER
- EX TOP OF SLOPE
- EX TOE OF SLOPE
- EX DITCH or SWALE
- EX FENCE
- EX OVERHEAD LINES
- EX UNDERGROUND LINES
- EX POWER POLE & ANCHOR
- EX GAS MAIN

PROPOSED

- PR LEGAL LINE
- PR LEGAL R.O.V.I. & EASEMENT

NO.	DATE	ISSUED FOR CONSTRUCTION	JPA

L&M
ENGINEERING LIMITED

1210 FOURTH AVENUE
PRINCE GEORGE, B.C.
V2L 3J4
TEL. (250) 562-1977
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DRAWN:	JPA
CHECKED:	TAF
ENGINEER:	TAF
SURVEY FILE:	
DRAWING FILE:	C3020_1509-18_BASE.dwg
CORRESPONDENCE:	
GRID:	
DATE:	01/08/19
SCALE:	HALF: 1:500 FULL: 1:250

KIDD REAL ESTATE HOLDINGS LTD.
PROPOSED 3 LOT SUBDIVISION
SABYAM ROAD
GRADING PLAN

CONSULTANTS PROJECT No.
1509-18

DRAWING No.
C004

SHEET No.	REV. No.
4 OF 6	0

PROFESSIONAL
PROVINCE OF
T.A. FJELLSTROM
20194
BRITISH COLUMBIA
ENGINEER

SEP 13 2019

ISSUED FOR CONSTRUCTION

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City of Prince George
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1. ALL WORKS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF PRINCE GEORGE SUBDIVISION AND DEVELOPMENT SERVICING BYLAW #8618, 2014 (BYLAW #8618).

2. THE LOCATION OF EXISTING UTILITIES, AS SHOWN ON THE DESIGN DRAWINGS, ARE APPROXIMATE ONLY AND MAY NOT BE FULLY ACCURATE OR COMPLETE. THE CONTRACTOR IS RESPONSIBLE FOR A BC ONE CALL. THE CONTRACTOR SHALL EXPOSE ALL TIE-IN LOCATIONS AND POTENTIAL POINTS OF CONFLICT AND CONFIRM DESIGN ELEVATIONS PRIOR TO COMMENCING CONSTRUCTION. IN THE EVENT OF A CONFLICT, THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY FOR DIRECTION. THE CONTRACTOR SHALL ASSUME ALL COSTS AND EXPENSES THAT MAY ARISE FROM DAMAGES AND REPAIR TO SUCH UTILITIES.

3. FOR ANY MATERIAL SUBSTITUTION OR CHANGE TO THE DESIGN, THE CONTRACTOR MUST OBTAIN WRITTEN APPROVAL FROM THE ENGINEER PRIOR TO COMMENCING CONSTRUCTION.

4. THE LOCATION OF THE SURVEY CONTROL MONUMENTS SHALL BE PROVIDED BY THE ENGINEER. ALL SURVEY MONUMENTS, BENCHMARKS, AND LEGAL PINS MUST BE PROTECTED AND ANY DAMAGE CAUSED BY NEGLIGENCE OF THE CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

5. ENVIRONMENTAL PROTECTION SHALL CONFORM TO SECTION 01561 - ENVIRONMENTAL PROTECTION OF BYLAW 8618 AND SECTION 02225 - SITEWORK. DEMOLITION AND REMOVAL OF BYLAW 8618. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL PREPARE AN E.S.C.P.

6. CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN ACCESS ROADS TO PREVENT ACCUMULATION OF MUD, DIRT, SAND, GRAVEL OR DEBRIS ON CITY ROADS, CITY LANDS OR PROVINCIAL HIGHWAYS AS PER SECTION 02311 - LOT AND SITE GRADING OF THE BYLAW 8618 AND SECTION 4.01 (c) OF THE HIGHWAYS BYLAW 8065.

1. SITEWORK DEMOLITION AND REMOVAL SHALL CONFORM TO SECTION 02225 OF THE BYLAW #8618.

2. REMOVAL OF EXISTING ASPHALT PAVEMENT SHALL CONFORM TO SECTION 02226 OF THE BYLAW #8618.

3. CLEARING, GRUBBING & STRIPPING SHALL CONFORM TO SECTION 02231 OF THE BYLAW 8618. THE AVERAGE DEPTH OF STRIPPING IS ESTIMATED TO BE 150mm. CONTRACTOR TO TAKE MEASURES TO PREVENT DUST FROM LEAVING THE SITE AS PER CoPG CLEAN AIR BYLAW 8622.

4. LOT AND SITE GRADING SHALL CONFORM TO SECTION 02311 OF THE BYLAW 8618. LOT GRADING SHALL BE CONSTRUCTED TO THE DESIGN GRADES AS SHOWN ON DRAWING C004.

5. EXCAVATION, TRENCHING, AND BACKFILLING (CoPG DRAWING G5) SHALL CONFORM TO SECTION 02315 OF THE BYLAW #8618. TRENCH BACKFILL FOR ALL WATER, AND SANITARY SERVICES SHALL CONSIST OF TYPE "3" FILL (APPROVED NATIVE MATERIAL), COMPACTED IN 200mm (LOOSE) THICK LIFTS TO 98% STANDARD PROCTOR MAXIMUM DRY DENSITY. THE TOP 600mm OF SUBGRADE IN ALL UTILITY TRENCHES SHALL BE COMPACTED IN 200mm (LOOSE) LIFTS TO 100% STANDARD PROCTOR MAXIMUM DRY DENSITY. CONTRARY TO SECTION 02701 2.4.1 THE PIPE BEDDING AND SURROUND MATERIAL WILL CONFORM TO THE PIPE MANUFACTURERS RECOMMENDATIONS.

6. EXCAVATION AND EMBANKMENT SHALL CONFORM TO SECTION 02317 OF THE BYLAW #8618. ALL EXCAVATED NATIVE MATERIALS WHICH ARE USED FOR EMBANKMENT SHALL BE PLACED IN LIFTS NOT EXCEEDING 200mm IN LOOSE THICKNESS, AND UNIFORMLY COMPACTED TO 88% STANDARD PROCTOR MAXIMUM DRY DENSITY. THE TOP 600mm OF SUBGRADE SHALL BE COMPACTED IN 200mm (LOOSE) LIFTS TO 100% STANDARD PROCTOR MAXIMUM DRY DENSITY.

7. WATER MAINS SHALL CONFORM TO SECTION 02511 OF THE BYLAW #8618.

a) WATER SERVICE CONNECTIONS (CoPg DRAWING W2 AND G4) SHALL BE 19mm DIAMETER COPPER TUBING TO ASTM B88M, TYPE K, ANNEALED. WATER SERVICES SHALL MAINTAIN A MINIMUM COVER OF 2.25m. WATER SERVICE CONNECTIONS SHALL BE INSTALLED WITH A DOUBLE STAINLESS STEEL BRONZE STRAP TAPPING SADDLE AT THE MAIN LINE COMPLETE WITH CORPORATION STOP AND CURB STOP. THE WATER SERVICE SHALL INCLUDE A No. 2 INSULATED COPPER THAW WIRE AS PER CoPg DRAWING No. W2. ALL WATER SERVICE CONNECTIONS SHALL EXTEND 3.0m INSIDE THE PROPERTY LINE AND THE LOCATION SHALL BE MARKED WITH A 50mmX100mm WOOD MARKER STAKE PAINTED BLUE.

b) IF THE WATERMAIN INVERT AT THE CROSSING OF A SANITARY OR STORM SEWER IS NOT 0.5m CLEAR ABOVE THE OBVERT OF THE SANITARY OR STORM SEWER THEN ALL JOINTS WITHIN 3.0m OF THE CROSSING ARE TO BE WRAPPED WITH HEAT SHRINK PLASTIC OR PACKED WITH COMPOUND AND WRAPPED WITH PETROLATUM TAPE IN ACCORDANCE WITH THE LATEST VERSION OF THE AWWA STANDARDS C217, C214, OR C209.

8. SANITARY SEWER GRAVITY MAINS SHALL CONFORM TO SECTION 02530 OF THE BYLAW #8618.

a) **SANITARY SERVICES.** ALL SANITARY SERVICE CONNECTIONS SHALL BE INSTALLED AS PER SECTION 02530 OF THE BYLAW #8618. (COPG DRAWING S10 AND G4) SHALL BE 100mm DIAMETER TYPE PSM POLY VINYL CHLORIDE (PVC, WHITE IN COLOR) TO CANCSA-B182.2 STANDARDS WITH A MINIMUM SDR 28 SPECIFICATION. ALL SANITARY SERVICE CONNECTIONS SHALL BE INSTALLED AS PER SECTION 02530 OF THE BYLAW #7652. A MINIMUM GRADE OF 2.0% AND 2.0m COVER SHALL BE MAINTAINED FROM THE MAINLINE TO 3.0m INSIDE THE PROPERTY LINE. ALL CONNECTIONS TO EXISTING MAIN SHALL BE MADE WITH A STANDARD TEE OR WYE FITTING OR APPROVED SADDLE. ALL SERVICE MAIN JOINTS ARE TO BE WRAPPED WITH PETROLATUM TAPE. ALL SERVICES SHALL BE CAPPED AT THE UPSTREAM END AND MARKED WITH A 50mmx100mm TREATED MARKER STAKE PAINTED WHITE AND MARKED WITH THE BLOCK LETTER 'S'. THE DEPTH FROM INVERT TO A REFERENCE LINE ON THE STAKE SHALL BE MARKED IN METERS TO 2 DECIMAL PLACES. THE SERVICE SHALL INCLUDE A CROWL C30 CAST IRON SERVICE CLEANOUT CAP.

9. MANHOLES, CATCHBASINS, AND VALVE BOXES SHALL CONFORM TO SECTION 02631 OF THE BYLAW #8618.

a) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THE THE FINISHED RIM ELEVATION OF ALL SEWER MANHOLES AND VALVE BOXES ARE SET 8mm TO 15mm BELOW FINISHED ASPHALT GRADE.

10. ROAD SUBGRADE SHALL CONFORM TO SECTION 02317 OF THE BYLAW #8618. FOLLOWING THE INSTALLATION OF ALL UNDER-GROUND UTILITIES AND SERVICE CONNECTIONS, THE TOP 600mm OF SUBGRADE IS TO BE COMPACTED TO 100% STANDARD PROCTOR MAXIMUM DRY DENSITY. THE ENGINEER MAY ACCEPT SATISFACTORY PROOF ROLLING AS EVIDENCE OF ACCEPTABLE COMPACTION OF UNDISTURBED NATIVE SUBGRADE. DO NOT PLACE GRANULAR SUB-BASE UNTIL THE SUBGRADE IS INSPECTED AND APPROVED BY THE ENGINEER.

11. GRANULAR SUBBASE SHALL CONFORM TO SECTION 02723 OF THE BYLAW #8618. THE 750mm THICK LAYER OF 75mm MINUS GRANULAR SUBBASE MATERIAL SHALL BE PLACED IN LIFTS NOT EXCEEDING 200mm MEASURED IN LOOSE THICKNESS AND COMPACTED TO 100% STANDARD PROCTOR MAXIMUM DRY DENSITY.

12. GRANULAR BASE COURSE SHALL CONFORM TO SECTION 02721 OF THE BYLAW #8618. THE 80mm THICK LAYER OF 19mm MINUS GRANULAR BASE COURSE MATERIAL SHALL BE COMPACTED TO 100% STANDARD PROCTOR MAXIMUM DRY DENSITY.

13. HOT-MIX ASPHALT CONCRETE PAVING SHALL CONFORM TO SECTION 02741 OF THE BYLAW #8618. THE ASPHALT SURFACE SHALL CONSIST OF A MINIMUM THICKNESS OF 65mm OF MIX 'C' INSTALLED IN ONE LIFT. THE CONTRACTOR SHALL SUBMIT THE ASPHALT CONCRETE MIX DESIGN AND TRIAL MIX TEST RESULTS TO THE ENGINEER FOR REVIEW AT LEAST TWO WEEKS PRIOR TO COMMENCING WORK.

14. TOP SOIL - SHALL CONFORM TO SECTION 02911 OF THE BYLAW #8618. ALL BOULEVARD AND DISTURBED AREAS ARE TO BE FINISHED WITH 100mm THICK TOP SOIL.

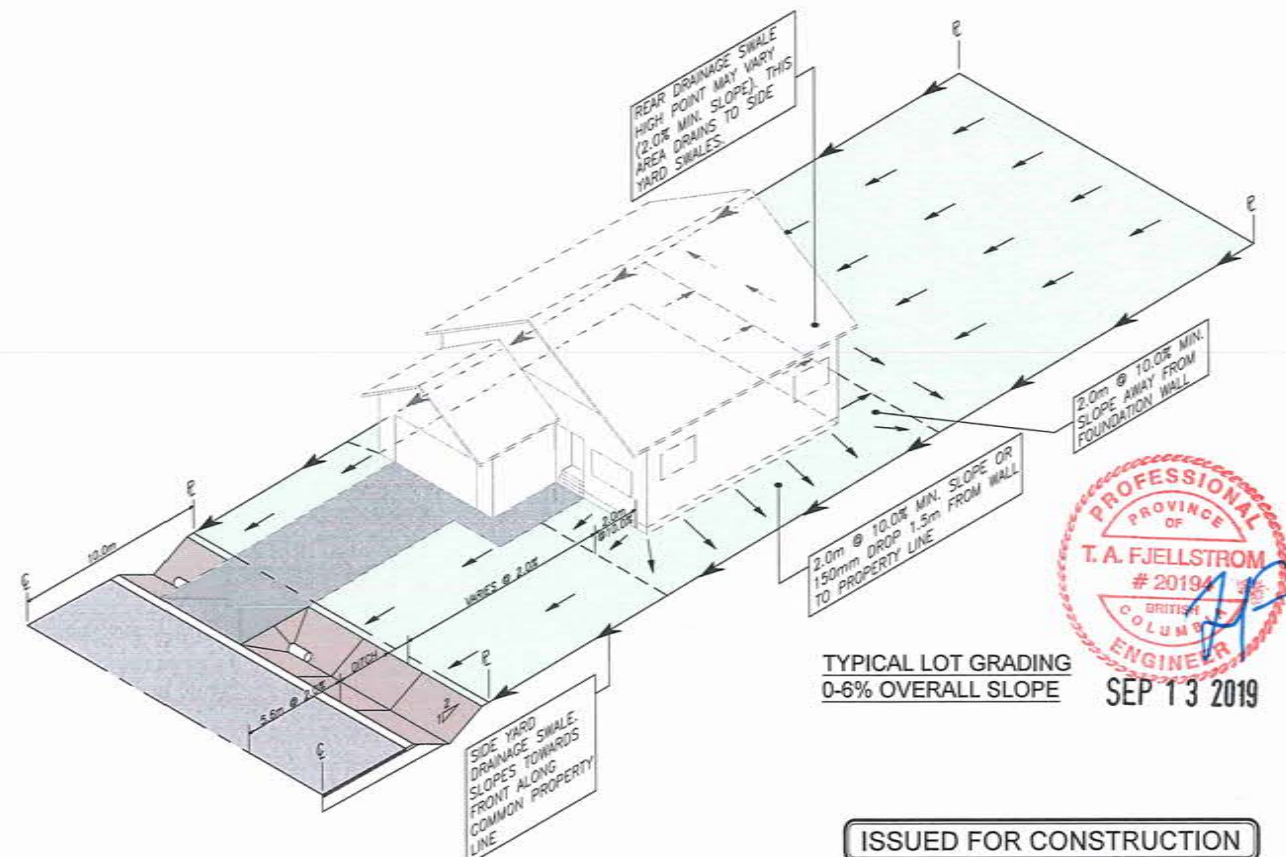
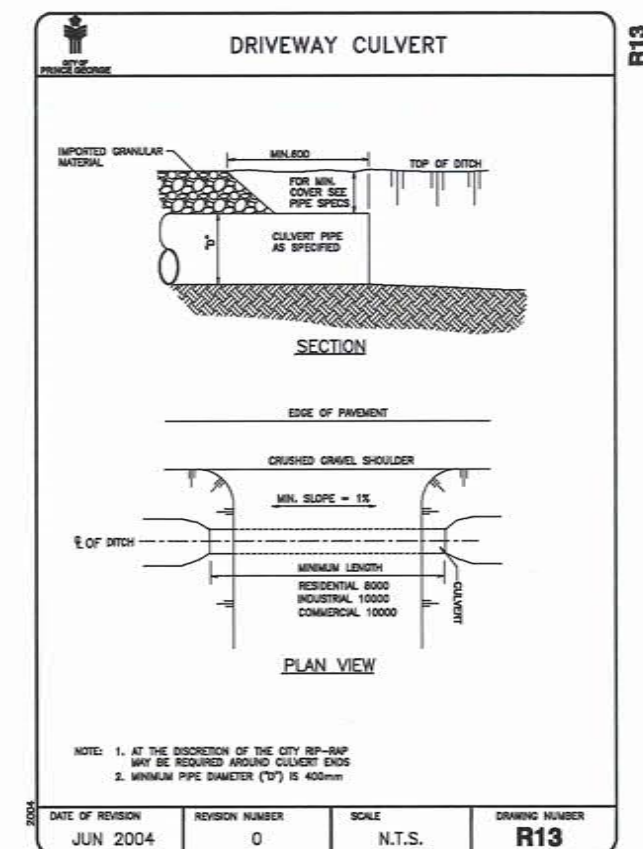
15. **HYDRO-SEED** - THE CONTRACTOR SHALL HYDRO-SEED ALL BOULEVARD AND DISTURBED AREAS. THE FOLLOWING SPECIFICATIONS SHALL BE USED FOR THE HYDRO-SEEDING. HYDRO-SEEDING MATERIALS SHALL INCLUDE: EVERGRO QUICK START FERTILIZER 13-26-6 AND EVERGRO TOTAL 23-3-23; GRASS SEED AS SPECIFIED ABOVE; HYDRO-SEEDING MULCH SPECIFICALLY DESIGNED FOR HYDRAULIC SEEDING AND DYED GREEN; M-BINDER TACKIFIER OR APPROVED EQUIVALENT.

- A. NON-IRRIGATED AREA - 32% INTERMEDIATE WHEATGRASS, 20% ALFALFA, 15% PERENNIAL RYEGRASS, 15% ANNUAL RYEGRASS, 10% HARD FESCUE, 5% DUTCH WHITE CLOVER, 2% CANADIAN BLUEGRASS, 1% RED TOP

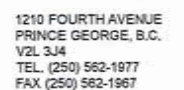
16. ALL WORK SHALL BE IN ACCORDANCE WITH CURRENT WORK SAFE B.C. REGULATIONS

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KIDD REAL ESTATE HOLDINGS LTD.
PROPOSED 3 LOT SUBDIVISION
SABYAM ROAD
GENERAL CONSTRUCTION NOTES
& DETAILS

CONSULTANTS PROJECT No.
1509-18
DRAWING No.
C005

SHEET No.	REV. No.
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